Part 3 of 4

Final Environmental Impact Report

Tenth Avenue Marine Terminal Redevelopment Plan and Demolition and Initial Rail Component

PREPARED FOR:
San Diego Unified Port District
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Unified Port of San Diego

ICF

December 2016

(UPD# EIR-2015-39 SCH# 2015-031046)

Attachment 3
Revised Draft Environmental Impact Report
Technical Appendices

Volume II of III

Draft Environmental Impact Report

Tenth Avenue Marine Terminal Redevelopment Plan and Demolition and Initial Rail Component

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DRAFT

ENVIRONMENTAL IMPACT REPORT
TENTH AVENUE MARINE TERMINAL REDEVELOPMENT PLAN AND DEMOLITION AND INITIAL RAIL COMPONENT

VOLUME II: APPENDICES A THROUGH I

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~~June~~ December 2016

ICF International. 2016. Environmental Impact Report, Tenth Avenue Marine Terminal Redevelopment Plan and Demolition and Initial Rail Component. Draft. ~~June~~December. (ICF 165.14) San Diego, CA. Prepared for San Diego Unified Port District, San Diego, CA.

Appendix A
Initial Study, Environmental Checklist, and Notice of Preparation

San Diego Unified Port District
P.O. Box 120488
San Diego, California 92112-0488
(619) 686-6283

NOTICE OF PREPARATION of a DRAFT ENVIRONMENTAL IMPACT REPORT

PROJECT TITLE: **TENTH AVENUE MARINE TERMINAL REDEVELOPMENT PLAN (UPD #EIR-2015-39)**

APPLICANT: San Diego Unified Port District

LOCATION: 687 Switzer Street, City of San Diego, 92101, in San Diego County, CA

REFERENCE: California Code of Regulations, Title 14, Sections 15082(a), 15103, 15375.

The San Diego Unified Port District (District) will be the Lead Agency in preparing an Environmental Impact Report (EIR) for the project (Proposed Project or Project) identified above. The District is soliciting input and feedback from various agencies, stakeholders, and the public pertaining to the scope and content of the environmental information that will be included in the EIR. For certain agencies, this may be germane to statutory responsibilities in connection with the Proposed Project. An agency may need to use the Proposed Project's EIR when considering its permit or other approval for the Project. The Project description, location, and possible environmental effects of the Proposed Project are contained in the attached materials.

Due to the time limits mandated by state law, your comments must be sent at the earliest possible date but no later than 30 days after receiving this notice. **Comments regarding environmental concerns will be accepted until 5:00 p.m. on Tuesday, April 14, 2015,** and should be mailed to: San Diego Unified Port District, Environmental & Land Use Management Department, 3165 Pacific Highway, San Diego, CA 92101 or emailed to: lhofreiter@portofsandiego.org.

A public scoping meeting regarding the proposed EIR will be held on Wednesday, March 18, 2015 at 5:30 p.m. at the San Diego Unified Port District Administration Building, Training Room, 3165 Pacific Highway, San Diego, CA 92101.

For questions on this Notice of Preparation, please contact Larry Hofreiter, Senior Redevelopment Planner, at 619-686-6257.

Signature: Jason A. Giffen
Jason H. Giffen
Director, Environmental & Land Use Management

Date: MARCH 6, 2015

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NOTICE OF PREPARATION
of a
DRAFT ENVIRONMENTAL IMPACT REPORT
for the
TENTH AVENUE MARINE TERMINAL REDEVELOPMENT PLAN
(UPD #EIR-2015-39)

Publication of this Notice of Preparation (NOP) initiates the San Diego Unified Port District's (District's) compliance with the California Environmental Quality Act (CEQA) for the proposed project. The NOP is the first step in the Environmental Impact Report (EIR) process. It describes the proposed project and is distributed to responsible agencies, trustee agencies, cooperating federal agencies, and the general public. As stated in CEQA Guidelines, Section 15375, the purpose of the NOP is "to solicit guidance from those agencies as to the scope and content of the environmental information to be included in the EIR." The District is the CEQA lead agency and District's Maritime Division is the project applicant.

PROJECT SUMMARY
The Tenth Avenue Marine Terminal (hereafter "Terminal" or "TAMT" or "project site") Redevelopment Plan (hereafter "Redevelopment Plan" or "Plan") would replace an existing 2008 Maritime Business Plan (hereafter "2008 Plan") to meet current and future market conditions at the terminal. Depending on market opportunities, some improvements identified in the Plan may occur within a 5- to 10-year (Year 2025) planning horizon, whereas others may not occur until the 10- to 20-year (Year 2035) planning horizon. The proposed Plan includes a variety of infrastructure investments and improvements that may be undertaken over the long-term to accommodate a need to increase the terminal's capabilities and capacity. These include up to five gantry cranes, additional and consolidated dry bulk storage capacity, enhancements to the existing conveyor system, demolition of the molasses tanks and Warehouse C, additional open storage space, and on-dock intermodal rail facilities. One component of the project would be analyzed at the project-level. This component, referred to as the Demolition and Initial Rail Component, would demolish Transit Sheds #1 and #2, relocate an existing dry bulk tenant from Transit Shed #2 to the consolidated dry bulk facility, provide on-terminal rail upgrades, add a modular office with restroom facilities to replace the office that would be demolished as part of Transit Shed #2.

PROJECT LOCATION
The 96-acre TAMT site is located at 687 Switzer Street in San Deigo, CA 92101. It is located along San Diego Bay, south of downtown San Diego, east of the San Diego Convention Center and Hilton Bayfront Hotel, and west adjacent to the San Diego community of Barrio Logan. Harbor Drive is located near the northern boundary of the TAMT. Site access from Harbor Drive is provided at two locations:

- Primary: from Cesar E. Chavez Parkway; this becomes Crosby Road as it approaches the terminal.

- Secondary: at the southern end of the Hilton hotel parking facility, adjacent to the backlands of the Dole container facility.

Major circulation facilities in the area include State Route 75, also known as the Coronado Bridge, located approximately 0.25 mile to the south, and Interstate 5, located about 0.5 mile to the north. Figure 1 shows the location of the project site.

BACKGROUND

The San Diego Unified Port District's (hereafter "District") 2012–2017 COMPASS Strategic Plan establishes the goal of providing a "thriving and modern maritime seaport." The District has two cargo terminals: The TAMT and the National City Marine Terminal (hereafter "NCMT"). The NCMT is managed under a long-term operating agreement with District tenant Pasha Automotive Services, while the TAMT is managed with multiple tenant leaseholds and open/covered terminal spaces for handling diverse cargos.

The District's maritime strategy is currently guided by the 2008 Plan. The 2008 Plan, which used economic and market data collected during 2006 and 2007 and covered marketing activities at both the TAMT and NCMT, was to be used to present a "vision for maritime activity through 2030." However, because of the dynamic nature of cargo markets, as well as the impact of the Great Recession of 2008 and 2009, the 2008 Plan no longer reflects existing and future market conditions for the cargos that the TAMT is ideally positioned to handle. District staff has determined that an update of the business plan for the TAMT, as well as planning for the redevelopment/infrastructure to implement the update, is appropriate. Accordingly, in June 2013, the District embarked on drafting the Plan.

PROJECT DESCRIPTION

The proposed project is the Redevelopment Plan, which includes the near-term implementation of the Demolition and Rail Infrastructure Component of the Plan. Both the proposed Plan and the Demolition and Rail Infrastructure Component are described in further detail below.

Proposed Plan

The proposed Plan would establish the following nodes and infrastructure improvements:

- Dry Bulk: The dry bulk node would be located in the general area of the southeastern portion of the terminal, also referred to as terminal "backlands." This node would be served by Berth 10-5/10-6 and Berth 10-7/10-8. Infrastructure improvements would include adding a consolidated dry bulk discharge facility, upgrades to the existing bulk cargo handling and conveyor system, and new semi-permanent storage facilities for dry bulk products.

- Liquid Bulk: The liquid bulk node and associated terminal infrastructure would be acknowledged by the proposed Plan, but no changes in location, capacity or infrastructure improvements are proposed. Preferred berths would be 10-1/10-2.

- Refrigerated Container: The refrigerated container node would be located on the northern portion of the terminal and served by Berths 10-3/10-4, and overflow would be handled at Berths 10-5/10-6. The boundary between the refrigerated container node and the multi-purpose general cargo node would be imprecise by design. This open area would allow the terminal to be used for the handling of diverse cargos as market conditions and vessel schedules permit. As such, construction of the refrigerated container node and Neo bulk /

Break Bulk / Multi-purpose General Cargo node would happen simultaneously. Infrastructure improvements would include one 100-foot mobile harbor crane at Berths 10-1/10-2 and up to three 100-foot electrical cranes at Berths 10-3/10-4 including associated electrical utility improvements to operate the cranes.

- Neo Bulk / Break Bulk / Multi-purpose General Cargo: The Neo bulk / Break bulk / Multi-purpose General Cargo node would include an intermodal rail facility and would be located on the southern portion of the terminal in the area that is currently occupied by the eastern portion of Warehouse C and it would share Berths 10-3/10-4 and 10-5/10-6 with the refrigerated container node. Similar to the refrigerated container node, the boundary would be imprecise by design. This open area would allow the terminal to be used for the handling of diverse cargos as market conditions and vessel schedules permit. As such, construction of the refrigerated container and multi-purpose nodes would happen simultaneously. Infrastructure improvements include two gantry cranes at Berths 10-5/10-6 as well as various intermodal yard and backland improvements. Intermodal yard and backland improvements could include a bridge crane, full wheel container module with gantry cranes, rubber tired cranes for load-on and load off, straddle carrier (stacked for the intermodal facility), additional paving to 600-per-square-foot live load and container handling equipment to handle 100kip wheel live load. Improvements would include upgrades to shore-side power capabilities to provide shore power to two vessels at the same time

- Central Gate Facility: The Central gate facility is the fifth redevelopment node contemplated by the proposed Plan. It would create a common gate facility, with a new truck weigh station, in the general location of the existing gate. It would be utilized by all terminal tenants and customers.

The TAMT Redevelopment plan also includes two additional conceptual options that will not be analyzed as part of this PEIR. They are:

- Full Refrigerated and Dry Container Build-Out: with an estimated total MPC of 5.8 million MT of container cargo, and

- Full Dry Container Build-Out: with an estimated total MPC of 6.0 million MT of container cargo.

Both of these development concepts exclude Neo Bulk and/ Break Bulk cargo from consideration, resulting in zero volume for these commodity types. However, the District has a longstanding commitment to handling neo bulk, break bulk and roll-on/roll-off cargos. Additionally, the additional metric tonnage potential for a full- container scenario is not significant to justify the exclusion of non-containerized commodities. Finally, the market for container vessels suitable to TAMT is clearly defined; focusing exclusively on a few carriers would represent a departure from an established and successful business development strategy. For these reasons, it was determined that the PEIR would focus on the first three redevelopment concepts as the primary options for analysis.

Table 3-1 below compares the TAMT's existing environmental baseline condition by cargo type with the MPCs identified in the 2008 Plan and the proposed Redevelopment Plan. The TAMT's existing environmental baseline condition is based on actual throughput calculations from July 2013 to June 2014, with June 2014 being the point in time at which the environmental analysis was initiated. The 2008 Plan identifies a MPC scenario if no infrastructure improvements are made. By contrast, the last column shows the increased capacity that may result from implementation of the proposed Redevelopment Plan.

Table 3-1. TAMT Cargo Throughput Comparisons in Metric Tons

	Baseline Conditions Actual Cargo Throughput in MT July 2013-June 2014	TAMT Redevelopment Plan[a] 2035 Maximum Practical Capacities in MT	TAMT Redevelopment Plan 2035 Market Forecast in MT
Dry Bulk	289,864[b]	2,650,000	2,146,645[c]
Liquid Bulk	31,520	239,017	154,000[d]
Refrigerated Containers	577,326	1,799,893[e]	1,790,155
Neo-Bulk/Breakbulk	85,131[f]	629,650[g]	114,824
Total	**983,841**	**5,318,560**[h]	**4,205,624**

Notes:

[a] Construction of the infrastructure improvements identified in the Plan are required to attain the MPCs identified.

[b] Vessels brought in approximately 158,205 metric tons of dry bulk, whereas dry bulk tenants trucked in approximately 131,659.57 metric tons of dry bulk.

c For the purposes of the analysis, two additional dry bulk customers were assumed over existing tenant volume,which resulted in a forecast of approximately 2,146,645 MT. However, as noted in the previous column, the MPC indicates that additional dry bulk volume could be accommodated.

d The Redevelopment Plan acknowledges the existing liquid bulk facility, however it does not suggest any operational or infrastructure changes to the facility. Current capacity is sufficient to handle market demand and operations at the MPC, and is projected to remain sufficient throughout the plan horizon

e For ease of understanding, District staff calculated an average based on the three potential MPC's for the refrigerated container node, which may shift depending on the cargo mix handled at the adjacent Neo Bulk node. The 1,799,893 MT average is based on averaging three Refrigerated Container Cargo MPC figures: 2,288,000, 1,555,840 MT and 1,555,840 MT, which are based on different scenarios. Development Concept #1 assumes the terminal attains an MPC of 2,288,000 MT of refrigerated container cargo, which results in a 327,700 MT MPC for the Neo Bulk / Break Bulk node. Development Concept #2 assumes a MPC of 1,555,840 MT of refrigerated container cargo, which results in a 977,400 MT MPC for Neo Bulk / Break Bulk. Finally, Development Concept #3 assumes a MPC of 1,555,840 MT of refrigerated container cargo, which results in a MPC of 583,850 MT for Roll-on / Roll-off Neo Bulk cargo.

f In addition to 33,666 metric tons of neo-bulk material, the TAMT also processed 51,465 metric revenue tons of other miscellaneous cargo, yielding a total of 85,131 metric tons.

g . The total is an average of the three development concepts identified in the Redevelopment Plan, which looked at different cargo mixes pursued at this node. The 629,650 MT average is based on averaging the following three Neo Bulk MPC figures: 327,700 MT for special non-containerized break bulk cargo, 977,400 MT for dry container cargo and 583,850 MT for roll-on / roll-off cargo, including automobiles and other wheeled vehicles.

h The total is an average of the three development concepts identified in the TAMT Redevelopment Plan, which looked at different cargo types for the Neo Bulk and Break Bulk node, as outlined above. Development Concept #1 results in 5,504,717 MT, Development Concept #2 results in 5,422,257 MT, and Development Concept #3 results in 5,028,707 MT.

For the purposes of the environmental analysis, the MPC identified in the three development concepts contained within the TAMT Redevelopment Plan will be compared to the environmental baseline conditions established by actual cargo throughput that occurred between July 2013 and June 2014. As noted earlier, the maximum throughput associated with each cargo type that could theoretically be accommodated once the TAMT Redevelopment Plan is fully implemented represents the “worst case”[1] scenario. As such, the Plan identifies the TAMT’s total MPC to be between 5 million and 5.5 million metric tons, depending on the type and mix of cargo types.

Conversely, the Redevelopment Plan’s 2035 Forecast listed in the third column in Table 3-1 identifies a more realistic planning scenario based on discussions with current tenants, potential tenants, and knowledge of industry trends. The Plan’s 2035 Forecast is estimated to be approximately 4.2 million metric tons annually.

It is important to reiterate that the MPC’s identified in the three development concepts in the TAMT Redevelopment Plan would only be reached if its infrastructure improvements are constructed and if market conditions allow. The District determined that the environmental analysis should assume favorable market conditions because this approach would be the most conservative (i.e., all improvements would be constructed and MPC would be reached), and it would provide the District with the most flexibility with respect to pursuing future opportunities. The environmental document also analyzes potential environmental impacts associated with the construction and operation of the infrastructure improvements contemplated by the Plan.

Table 3-2 summarizes maximum practical throughput based on the maximum capacity by cargo type, as well as the infrastructure improvements and operational enhancements that would be needed to attain such throughput levels.

Table 3-2. Maximum Practical Cargo Throughput Capacity and Associated Infrastructure for the “Worst Case” Development Scenario

Node	Size	Maximum Practical Capacity in Metric Tons (MT)	Capital Investments and Infrastructure Upgrades
Dry Bulk	~ 15 acres	Up to 2,650,000	• Operate primarily at Berths 10-5/10-6 and 10-7/10-8 • Upgrade the existing conveyor system to handle multiple bulk commodities, such as cement, bauxite or soda ash. • Maintain approximately 5 acres of open-storage space between Water Street and Terminal Street. • Add a consolidated bulk discharge unloader using a 200 metric ton per hour vacuum for cementatious materials at Berth 10-7/10-8 (either a Kovaco, Siwertell or similar type system). • Demolish existing molasses tanks once new dry bulk storage has been established. • Relocate existing bulk tenants from Warehouse C and Transit Shed 2 to the consolidated dry bulk facility prior to Transit Shed and Warehouse C demolition. • Establish a consolidated Multipurpose Dry bulk facility with two cement terminals and construct new semi-permanent (e.g. a Rubb style of building (www.rubb.com) storage facility (up to a total of

[1] Note that “worst case” refers to the development concept, or scenario, that would have the greatest potential impact on the environment.

Table 3-2. Maximum Practical Cargo Throughput Capacity and Associated Infrastructure for the "Worst Case" Development Scenario

Node	Size	Maximum Practical Capacity in Metric Tons (MT)	Capital Investments and Infrastructure Upgrades
			100,000 square feet) to store dry bulk products. The following options have been identified[2]: o Six 9,000 MT silos at each terminal to store 54,000 MT of bulk cement. o Two domes at each terminal that would each store 54,000 MT of bulk cement. o Any combination of silos and domes to allow 108,000 MT of bulk cement storage capacity.
Liquid Bulk	~ 3 acres	239,017	• The proposed Plan does not identify any infrastructure improvements or facility upgrades for liquid bulk. The location and capacity would remain as it is today.
Refrigerated Container	~ 40 acres	1,799,893 [b] *Development Concept #1* *2,288,000 MT* *Development Concept #2* *1,555,840 MT* *Development Concept #3* *1,155,840*	• Operate primarily at Berths 10-1/10-2, 10-3/10-4, with overflow at 10-5/10-6. • Maintain a 200,000 square feet of cold storage facility (Warehouse B). • Two 100-foot gantry cranes at Berths 10-3 and 10-4.
Neo Bulk / Break Bulk / Multi-purpose General Cargo	~ 30 acres	629,650 [c] *Development Concept #1* *327,700 MT* *Development Concept #2* *977,400 MT* *Development Concept #3* *583,850 MT*	• Operate primarily at Berths 10-3/10-4, and share Berth 10-5/10-6 with refrigerated cargo node. • Install two to three gantry cranes at Berths 10-5/10-6. • Demolish Warehouse C. • Up to 20 acres of open storage space. • Upgrade shore-side power capabilities to provide shore power to two vessels at the same time. • Intermodal yard and backland improvements could include: o Bridge crane, o Full wheel container module with gantry cranes, o Rubber-tired cranes for load-on and load-off (LO/LO) o Straddle carrier (stacked) for intermodal facility, o Additional paving of backland area to handle 600-per-square-foot (psf) live load, and o Container handling equipment to handle 100 kipa[d] wheel live load, o Generator and accompanying housing structure.
Central Gate Estimated Size	~ 8 acres	Not applicable	• New truck weigh station.

Table 3-2. Maximum Practical Cargo Throughput Capacity and Associated Infrastructure for the "Worst Case" Development Scenario

Node	Size	Maximum Practical Capacity in Metric Tons (MT)	Capital Investments and Infrastructure Upgrades
Total	**96 acres**	**5,318,560** [e] *Development Concept #1* *5,504,717 MT* *Development Concept #2* *5,422,257 MT* *Development Concept #3* *5,028,707 MT*	

Note:

[a] Cement Report 2014 by Phillip Caldwell

[b] This is an average based on the three cargo scenarios identified in the Plan. The amount of refrigerated container cargo that could be processed depends on the type of cargo processed in the Neo Bulk / Break Bulk node, as described below. The average was attained by adding the total metric tons for each development concept and diving by three.

[c] Neo Bulk / Break Bulk cargo that could be processed depends on the type of cargo that is ultimately pursued.

[d] kip = a unit of weight equal to 1,000 pounds; used to express deadweight load.

[e] This is an average based on the three development concepts in the plan.

Demolition and Initial Rail Components of the Plan

The Demolition and Initial Rail Component is anticipated to occur in 2016 or when funding becomes available and will take approximately 29 weeks to complete. Total earthwork would consist of excavating 19,350 cubic yards (cy) of soil in an area of 144,000 square feet (sf) for Transit Shed #1 and 21,333 cy in an area of 192,000 sf for transit shed #2. Total excavation would be 40,683 cy over an area of 336,000 sf. Of the 40,683 cy, approximately 12,443 cy would be exported off-site in accordance with the approved soils management plan, which may require disposal in an appropriate hazardous waste facility if the soils are determined to be contaminated. The remaining soil would be treated on-site and re-compacted at the site of the excavation.

Phasing would include demolition, grading, and paving. Construction equipment would include excavators, loaders, forklifts and scissor lifts, water trucks, dump trucks, backhoes, dozers, saw cutting equipment, and air compressors.

Employment during construction is anticipated to result in 128 direct jobs and 39 indirect jobs. In addition, it should induce approximately 65 jobs, for a total of 232 construction-related jobs.
The Demolition and Initial Rail Component of the Plan would include the following project features:

- Relocation of an existing dry bulk terminal tenant, currently located in the southern half of Transit Shed #2. This tenant would remain on the terminal and is anticipated to be relocated to the consolidated dry bulk facility.
- Demolition of Transit Sheds #1 and #2, consisting of seven warehouse bays, restroom facilities, and office space, as identified in Figure 3-1. Transit Shed #1 includes 145,000 square feet of space, comprising Bays A, B, and C. Transit Shed #2 includes approximately

200,000 square feet of warehouse space, comprising Bays E, F, G, and H. Demolition would also involve the proper removal of any asbestos, lead, polychlorinated biphenyls (PCBs), or other potentially hazardous materials that may be present in the transit sheds, followed by removal of the existing fire and electrical systems. Once completed, soil excavation and grading would occur, followed by paving and leveling across the site. The existing 90-foot-tall light poles at the loading docks and around the transit shed perimeter would be replaced.

- On-terminal rail facility upgrades, which would include installation of a rail lubricator and a compressed air system on the existing track, thereby increasing safety and efficiency. Manual lubrication would be eliminated and replaced with automated lubrication to accommodate a sharp curve in the existing track. The compressed air system would include a compressed air generator with an accompanying housing structure, and piping to several rails within the terminal.
- A temporary modular office with restroom facilities. Underground water, sewer, and electrical utilities would be installed to support the proposed modular structures.
- An updated 100-year floodplain boundary that accurately depicts potential flooding hazards on the TAMT project site.

An increase in cargo throughput within the existing terminal footprint is an expected outcome of the Demolition and Initial Rail Component. Although the on-dock intermodal rail facility would enable cargo to move more efficiently between vessel and rail, which may offset some truck trips with rail trips, at least initially, the Demolition and Initial Rail is generally assumed to result in a net increase cargo throughput. As such, long-term employment is anticipated to increase by 290 direct jobs and 57 indirect jobs. In addition, it should induce another 112 jobs, for a total of 459. Once the existing underutilized infrastructure is removed, cargo nodes could be developed, as recommended by the proposed Plan, based on cargo type and market conditions. To ensure market conditions are favorable, the Plan does not recommend making any infrastructure improvements until the cargo node reaches 70% of the maximum practical capacity identified in the 2008 Plan.

Proposed Plan Demolition and Construction Actions

Table 3-3 below identifies each proposed component or planned node, describes the existing structures, and summarizes the potential improvements in that node.

Table 3-3. Proposed Plan Demolition and Construction Actions

Component (node)	Infrastructure	Proposed Action/Description
Demolition and Initial Rail Component (Near-term; prior to nodes being established)	Transit Shed #1	Demolish, grade, and repave site
	Transit Shed #2	Demolish, grade, and repave site
	On-dock rail	Install compressed air system
	Utilities	Trench and install water, sewer, and electrical lines
	Generator and accompanying housing structure	Install
	Modular office/restroom	Install
Proposed Plan (Dry Bulk)	Molasses tanks	Demolish, grade, and repave
	Consolidated multi-purpose dry bulk facility	Create
	Dry bulk silos	Convert or expand all or a portion

	Bulk cargo ground-storage facility	Construct a new structure to provide cover for ground-stored bulk products. Structure may consist of a dome, silo or other structure and be permanent or semi-permanent.
	Warehouse	Demolish, grade and repave site
	Berths 10-7/10-8 unloading systems	Modernize
Proposed Plan (Liquid Bulk)	No changes	No changes
Proposed Plan (Refrigerated Bulk)	Gantry cranes	Install two new electrical gantry cranes (100-foot gauge)
Proposed Plan (Neo-Bulk)	Warehouse C	Demolish
Centralized Common Gate	Gate Facilities	Modernize and upgrade
	Weigh Station	Install

ENVIRONMENTAL CONSIDERATIONS

The EIR will address the following potential project-related and cumulative environmental effects of the proposed project: Aesthetics and Visual Resources, Air Quality/Health Risk, Biological Resources, Cultural Resources, Geology and Soils, Greenhouse Gas Emissions/Sea Level Rise, Hazards and Hazardous Materials, Hydrology and Water Quality, Noise, Transportation and Traffic, and Utilities/Energy, and other potential impacts identified during the scoping process. The EIR will also address feasible mitigation measures and a reasonable range of alternatives, as well as the additional mandatory sections required by CEQA. The District will also prepare a mitigation monitoring and reporting program to address the potential significant impacts of the proposed project.

The Initial Study – Environmental Checklist is attached.

COMMENTS

This NOP is available for a 30-day public review period that **starts on Thursday, March 12, 2015 and ends at 5:00 p.m. on Tuesday, April 14, 2015**. Comments regarding the scope and content of the environmental information that should be included in the EIR and other environmental concerns should be mailed to:

San Diego Unified Port District
Environmental & Land Use Management Department
Attn: Larry Hofreiter
3165 Pacific Highway
San Diego, CA 92101

or emailed to lhofreiter@portofsandiego.org

PUBLIC SCOPING MEETING

A public scoping meeting to solicit comments on the scope and content of the EIR for the proposed project will be held on **Wednesday, March 18, 2015, at 5:30 p.m. at the San Diego Unified Port District Administration Building, Training Room, 3165 Pacific Highway, San Diego, CA 92101.**

The District, as Lead Agency pursuant to CEQA, will review the public comments on the NOP to determine what issues should be addressed in the EIR.

Other opportunities for the public to comment on the environmental effects of the proposed project include:

- A minimum 45-day public review and comment period for the Draft EIR
- A public hearing for the Board of Port Commissioners to consider certification of the EIR

For questions regarding this NOP, please contact Larry Hofreiter, Senior Redevelopment Planner, at 619.686.6257.

ATTACHMENTS

Figure 1 – Regional Map
Figure 2 – Tenth Avenue Marine Terminal (TAMT) Aerial Map
Figure 3 – TAMT Long Term Full Build Out Development Plan Map
Initial Study/Environmental Checklist
Executive Summary for the Tenth Avenue Martine Terminal (TAMT) Redevelopment Plan

Regional Map

Figure 1

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Tenth Avenue Marine Terminal (TAMT) Aerial Photo

Figure 2

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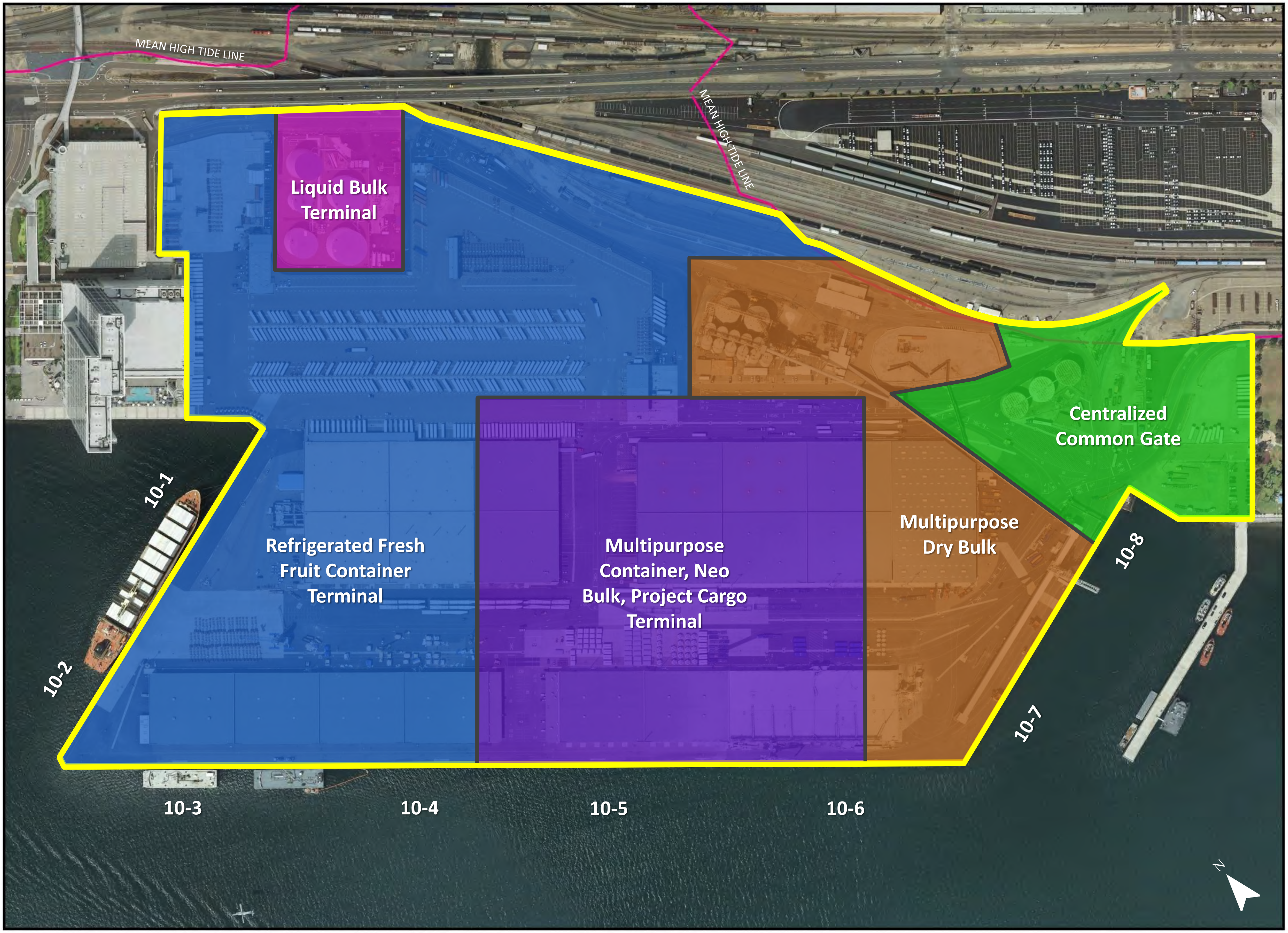

TAMT Long Term Full Build Out Development Plan

Figure 3

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TENTH AVENUE MARINE TERMINAL (TAMT) REDEVELOPMENT PLAN

INITIAL STUDY / ENVIRONMENTAL CHECKLIST CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

Prepared by:

ICF INTERNATIONAL

MARCH 2015

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Contents

Acronyms and Abbreviations

AB	Assembly Bill
ALUCP	Airport Land Use Compatibility Plan
BMPs	best management practices
CARB	California Air Resources Board
CCA	California Coastal Act
CEQA	California Environmental Quality Act
CMP	Congestion Management Plan
DTSC	Department of Toxic Substances Control
EIR	environmental impact report
FAA	Federal Aviation Administration
GHG	greenhouse gas
HPD	Harbor Police Department
MHPA	Multi-Habitat Planning Area
MLLW	mean lower low-water
MSCP	Multiple Species Conservation Program
MTS	Metropolitan Transit System
NAAQS	National Ambient Air Quality Standards
OES	Office of Emergency Services
PAHs	polycyclic aromatic hydrocarbons
Plan	Tenth Avenue Marine Terminal Redevelopment Plan
PM10	particulate matter 10 microns in diameter or less
PM2.5	particulate matter 2.5 microns in diameter or less
PMP	Port Master Plan
PRC	Public Resources Code
RAQS	Regional Air Quality Strategy
SANDAG	San Diego Association of Governments
SDAPCD	San Diego Air Pollution Control District
SDFD	San Diego Fire-Rescue Department
SDIA	San Diego International Airport
SDPD	San Diego Police Department
SDUSD	San Diego Unified School District
SIP	State Implementation Plan
SR	State Route
SUSMP	Standard Urban Stormwater Mitigation Plan
SVOCs	semi-volatile organic compounds
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAMT	Tenth Avenue Marine Terminal
TIA	traffic impact analysis
VOCs	volatile organic compounds

Initial Study/Environmental Checklist

1.	Project Title:	Tenth Avenue Marine Terminal Redevelopment Plan (Plan)
2.	Lead Agency Name and Address:	San Diego Unified Port District 3165 Pacific Highway San Diego, CA 92101
3.	Contact Person and Phone Number:	Larry Hofreiter, (858) 686-6257
4.	Project Location:	Within the San Diego Unified Port District—at the Tenth Avenue Marine Terminal. The nearest major intersection is Harbor Drive and Cesar E. Chavez Parkway (see Figure 2-1 of the Notice of Preparation)
5.	Project Sponsor's Name and Address:	San Diego Unified Port District 3165 Pacific Highway San Diego, CA 92101
6.	Port Master Plan Designation:	Marine Terminal, Marine Related
7.	Zoning:	See Port Master Plan Designation
8.	Description of Project:	Approve a long-range redevelopment plan to accommodate anticipated economic activity at the Tenth Avenue Marine Terminal and near-term implementation of a component of the plan by demolishing two obsolete and underutilized transit sheds and installing a rail lubricator and compressed air system on the existing track to improve rail operations (see the project description in the NOP and the attached Executive Summary).
9.	Surrounding Land Uses and Setting:	North: Rail yards, stadium (Petco Park), and tourism/commercial (San Diego Convention Center and Hilton Hotel) East: Rail yards, Crosby Street Park, ship yards (NASSCO), and the Barrio Logan community South: San Diego Bay West: San Diego Bay
10.	Other Public Agencies Whose Approval Is Required:	Federal Emergency Management Agency for modifying floodplain boundary; City of San Diego for ministerial permits (grading, building, etc.)

Environmental Factors Potentially Affected

The environmental factors checked below could be affected by this Project (i.e., the Project would involve at least one impact that is a "potentially significant impact"), as indicated by the checklist on the following pages.

☒ Aesthetics	☐ Agriculture and Forestry Resources	☒ Air Quality
☒ Biological Resources	☒ Cultural Resources	☒ Geology and Soils
☒ Greenhouse Gas Emissions	☒ Hazards and Hazardous Materials	☒ Hydrology and Water Quality
☐ Land Use and Planning	☐ Mineral Resources	☒ Noise
☐ Population and Housing	☐ Public Services	☐ Recreation
☒ Transportation and Traffic	☒ Utilities, Service Systems, and Energy	☒ Mandatory Findings of Significance

Determination

On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☐ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions to the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☒ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have an impact on the environment that is "potentially significant" or "potentially significant unless mitigated" but at least one effect (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards and (2) has been addressed by mitigation measures based on the earlier analysis, as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier ENVIRONMENTAL IMPACT REPORT or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier ENVIRONMENTAL IMPACT REPORT or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the project, nothing further is required.

Jason H. Giffen (signature)	March 12, 2015
Signature	Date
Jason H. Giffen	San Diego Unified Port District
Printed Name	For

Evaluation of Environmental Impacts

1. A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a Lead Agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects such as the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained if it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
2. All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
3. Once the Lead Agency has determined that a particular physical impact may occur, the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an Environmental Impact Report (EIR) is required.
4. "Negative Declaration: Less than Significant with Mitigation Incorporated" applies when the incorporation of mitigation measures has reduced an effect from a "Potentially Significant Impact" to a "Less-than-Significant Impact." The Lead Agency must describe the mitigation measures and briefly explain how they reduce the effect to a less-than-significant level.
5. Earlier analyses may be used if, pursuant to tiering, program EIR, or other California Environmental Quality Act (CEQA) process, an effect has been adequately analyzed in an earlier EIR or negative declaration [Section 15063(c)(3)(D)]. In this case, a brief discussion should identify the following:
   a. Earlier Analysis Used. Identify and state where earlier analyses are available for review.
   b. Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards and state whether such effects were addressed by mitigation measures based on the earlier analysis.
   c. Mitigation Measures. For effects that are "Less than Significant with Mitigation Incorporated," describe the mitigation measures that were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, when appropriate, include a reference to the page or pages where the statement is substantiated.
7. Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

8. This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.
9. The explanation of each issue should identify:
   a. The significance criteria or threshold, if any, used to evaluate each question; and
   b. The mitigation measure identified, if any, to reduce the impact to a less-than-significant level.

I. Aesthetics	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a. Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐
b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings along a scenic highway?	☐	☐	☒	☐
c. Substantially degrade the existing visual character or quality of the site and its surroundings?	☒	☐	☐	☐
d. Create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area?	☒	☐	☐	☐

a. Have a substantial adverse effect on a scenic vista?

Less than Significant. The project site is located in the District's jurisdiction, within the urban setting of downtown San Diego. The visual character of the project site and surrounding area is defined by the existing Tenth Avenue Marine Terminal (TAMT), proximity to Coronado and the San Diego–Coronado Bay Bridge, and the commercial and residential uses in the downtown San Diego community of Barrio Logan. Views of the TAMT from nearby surrounding areas include large cargo ships, liquid bulk storage tanks, security fencing, lighting, cranes, utility poles and cables, trucks, trains, and stored cargo.

Scenic vistas within the project vicinity are generally designated by the District in its Port Master Plan (PMP); however, other public viewing areas may also be considered scenic or locally important views that are enjoyed by the public. The PMP considers the scenic quality of the land within its jurisdiction and establishes District policies for maintenance of important views. Within many of its precise plans, the District has identified vista areas—key viewpoints from which to enjoy the scenic beauty of the Bay and other visible District features. Vista areas within the District's jurisdiction are identified on the PMP's precise plans by arrow symbols, which are placed on the vista areas and pointed toward the intended view. The Public Recreation portion of Section III of the PMP explains that these symbols identify "points of natural visual beauty, photo vantage points, and other panoramas. It is the intent of [the PMP] to guide the arrangement of development on those sites to preserve and enhance such vista points."

The PMP does not identify any designated vista areas in Planning District 4 (TAMT). The nearest designated vista areas are located in Planning District 3 (Centre City/Embarcadero) and Planning District 6 (Coronado Bayfront). Within Planning District 3, there is a designated vista area near the San Diego Convention Center that faces west, toward the harbor and Coronado. The project site is located south of this designated vista area. No views of the project site exist, and none would be affected by the proposed project. Impacts would not occur. Areas near First Street and Orange Avenue with westerly views of downtown San Diego from Coronado have been designated as vista areas. The potential exists for views of the project site from Coronado to be affected with the introduction of pole lighting, cranes, and utility structures. However, views from designated scenic vistas originating from Coronado already include the TAMT and all of the maritime operations such as pole lighting, cranes, and utility structures. Moreover, the 96-acre TAMT is only a small portion of the viewshed from Coronado with TAMT dwarfed by the high-rise towers of downtown San Diego and in character with the naval shipyards to the southeast. Therefore, the existing views from Coronado would not substantially change if the project is implemented and the plan is adopted. Impacts on scenic vistas would be less than significant and no further discussion in the EIR is warranted.

b. Substantially damage scenic resources, including, but not limited to trees, rock outcroppings, and historic buildings along a scenic highway?

Less than Significant Impact. The San Diego–Coronado Bay Bridge (State Route [SR] 75) is a California State-designated scenic highway, located just south of the project area, that spans the Bay, connecting the City of San Diego to the City of Coronado. Existing long-distance views of the project site and the downtown area from the San Diego–Coronado Bay Bridge are dominated by a mix of high-rise residential, commercial, and urban developments as well as a variety of maritime industrial facilities (such as storage structures, large vessels, docks, piers, cranes, trucks, and other large pieces of shipping equipment). From SR-75, the project site appears in front of the downtown skyline of San Diego and behind the water of San Diego Bay. Ships, silos, warehouses, and heavy industrial machinery are visible under existing conditions. Views of the site include transit sheds, warehouses, cargo, and associated equipment at the terminal.

Implementation of the project is not anticipated to damage scenic resources, such as trees or rock outcroppings, because there are no such resources at the project site. Visual changes associated with the project would include internal terminal reconfiguration, including up to two new gantry cranes, and increased cargo throughput. The increased cargo throughput would include additional vessel, rail, and truck operations. Although these visual changes would be at least partly visible from portions of SR-75, they would not be striking or noticeable because of the distance between the site and SR-75. Additionally, the site would continue to be industrial in nature. Furthermore, motorists traveling on SR-75 would generally be focused on the roadway in front of them. Their northerly views while traveling westbound or eastbound would not be prolonged, and viewer sensitivity to the proposed changes would be low. Removal of the potentially historic transit sheds would affect two existing single-story industrial buildings that are not particularly noticeable or striking while traveling on SR-75. The proposed additions at the project site would be similar in size, color, and scale to elements of the existing developed site, which would continue to appear as a working marine terminal. The effect on SR-75, a designated scenic highway, would not be substantial for reasons discussed. Therefore, the impact on designated scenic highways would be less than significant and no further discussion in the EIR is warranted.

c. Substantially degrade the existing visual character or quality of the site and its surroundings?

Potentially Significant Impact. The proposed project would reconfigure and improve import and export operations at an existing marine terminal in an industrial and maritime area along San Diego Bay. In general, views of the project site from surrounding areas are limited because of the site's location along San Diego Bay and the limited visibility from adjacent roadways; however, intermittent and fleeting westerly views are available from northbound or southbound vehicles on Harbor Drive. The proposed project would remove two transit sheds and introduce new visual elements (such as silos, large cargo stacks in open storage areas, a modular office, unloading systems, and up to two gantry cranes), and although their introduction would be compatible and consistent with the existing industrial and shipping-related visual character that exists at the site, further discussion and analysis is warranted in the EIR.

d. Create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area?

Potentially Significant Impact. The proposed project would include the replacement of existing light poles on the project site, which could adversely affect daytime or nighttime views in the area. Further discussion of potentially significant impacts related to substantial light or glare that would adversely affect daytime or nighttime views in the area will be included in the EIR.

II. Agriculture and Forestry Resources	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
In determining whether impacts on agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts on forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the State's inventory of forestland, including the Forest and Range Assessment Project, the Forest Legacy Assessment Project, and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the Project:				
a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use?	☐	☐	☐	☒
b. Conflict with existing zoning for agricultural use or conflict with a Williamson Act contract?	☐	☐	☐	☒
c. Conflict with existing zoning for, or cause rezoning of, forestland (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?	☐	☐	☐	☒
d. Result in the loss of forestland or conversion of forestland to nonforest use?	☐	☐	☐	☒
e. Involve other changes to the existing environment that, because of their location or nature, could result in the conversion of Farmland to nonagricultural use or the conversion of forestland to nonforest use?	☐	☐	☐	☒

a. ***Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use?***

No Impact. The project site does not contain any Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency. As such, there is no potential for any actions to convert Farmland resources to a nonagricultural use. No impact would occur, and mitigation measures are not necessary. Further discussion in the EIR is not warranted.

b. ***Conflict with existing zoning for agricultural use or conflict with a Williamson Act contract?***

No Impact. The project site is not zoned for agricultural use, nor is there a Williamson Act contract for the site. Therefore, the proposed project would not conflict with existing zoning for agricultural use or a Williamson Act contract, and no impact would occur. Further discussion in the EIR is not warranted.

c. ***Conflict with existing zoning for, or cause rezoning of, forestland (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?***

No Impact. No land that has been zoned as forestland or timberland exists within the boundaries of the project site. No impact would occur and further discussion of this topic in the EIR is not warranted.

d. ***Result in the loss of forestland or conversion of forestland to nonforest use?***

No Impact. As discussed in Item IIc, no land that has been zoned as forestland or timberland exists within the boundaries of the project site. Approval of the proposed plan would not result in a loss of forestland or the conversion of forestland to other uses; no impact would occur and further discussion of this topic in the EIR is not warranted.

e. ***Involve other changes to the existing environment that, because of their location or nature, could result in the conversion of Farmland to nonagricultural use or the conversion of forestland to nonforest use?***

No Impact. See Item IIa. No agricultural land, forestland, or timberland exists in the vicinity of the project site, which is part of the Port of San Diego, near downtown San Diego. The proposed project would not involve changes to the existing environment that, because of their location or nature, could result in the conversion of Farmland to nonagricultural use or forestland to nonforest use; no impact would occur and further discussion in the EIR is not warranted.

III. Air Quality/Health Risk	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a. Conflict with or obstruct implementation of the applicable air quality plan?	☒	☐	☐	☐
b. Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☒	☐	☐	☐
c. Result in a cumulatively considerable net increase in any criteria pollutant for which the project region is in nonattainment for an applicable Federal or State ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)?	☒	☐	☐	☐
d. Expose sensitive receptors to substantial pollutant concentrations?	☒	☐	☐	☐
e. Create objectionable odors that would affect a substantial number of people?	☒	☐	☐	☐

a. Conflict with or obstruct implementation of the applicable air quality plan?

Potentially Significant Impact. The San Diego Air Pollution Control District (SDAPCD) is required, pursuant to the federal and state Clean Air Acts, to reduce emissions of criteria pollutants for which the County is in nonattainment (i.e., ozone, particulate matter of 10 microns in diameter or smaller [PM10], and particulate matter of 2.5 microns in diameter or smaller [PM2.5]). The most recent SDAPCD air quality attainment plans are the 2009 Regional Air Quality Strategy (RAQS) and the 2002 and 2012 ozone maintenance plans. The RAQS outlines SDAPCD's plans and control measures designed to attain the state air quality standards for ozone, while the 2002 and 2012 maintenance plans include the SDAPCD's plans and control measures for attaining the National Ambient Air Quality Standards (NAAQS) for ozone. The 2009 RAQS projects future emissions and determines the strategies necessary for the reduction of stationary source emissions through regulatory controls. The federal Clean Air Act also mandates that the state submit and implement a State Implementation Plan (SIP) for local areas not meeting those standards. California Air Resources Board (CARB) mobile source emission projections and San Diego Association of Governments (SANDAG) growth projections are based on population and vehicle trends and land use plans developed by local agencies. As such, projects that propose development that is consistent with the growth anticipated by the relevant land use plans that were used in the formulation of the RAQS and SIP would be consistent with the RAQS and SIP. The PMP is the governing land use document for physical development under the jurisdiction of the Port District. Therefore, projects that propose development consistent with growth anticipated by the current PMP are considered consistent with the RAQS and SIP. Moreover, in the event that a project proposes development that is less dense than anticipated within a general plan (or other governing land use document such as the PMP), the project would likewise be consistent with the RAQS and SIP because emissions would be less than estimated for the existing PMP. If a project proposes development that is greater than that anticipated in the PMP and SANDAG's growth projections, the project would be in conflict with the RAQS and SIP, and might have a potentially significant impact on air quality because emissions would exceed those estimated for the existing PMP. This situation would warrant further analysis to determine if a project would exceed the growth projections used in the RAQS for a specific subregional area. Further discussion will be provided in the EIR.

b. ***Violate any air quality standard or contribute substantially to an existing or projected air quality violation?***

Potentially Significant Impact. Construction of the proposed project has the potential to create air quality impacts through the use of heavy-duty construction equipment, construction worker vehicle trips, truck haul and material delivery trips, off-gassing from paving activities, and fugitive dust from demolition and grading activities. Mobile-source criteria pollutant emissions would result from the use of construction equipment and vehicles, and paving operations would result in emissions of volatile organic compounds (VOCs) associated with off-gassing. Operation of the proposed project has the potential to create air quality impacts primarily associated with truck trips, rail activity, vessel activity, worker commutes, cargo on- and offloading and drayage, and minor increases in area sources associated with periodic painting of paved surfaces and structures. As such, the project has the potential to significantly contribute to the violation of an air quality standard or significantly contribute to an existing or projected air quality violation, and this issue area will be analyzed in the EIR.

c. ***Result in a cumulatively considerable net increase in any criteria pollutant for which the project region is in nonattainment for an applicable Federal or State ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)?***

Potentially Significant Impact. The San Diego Air Basin is in nonattainment status for ozone (8-hour standard) at the federal and state level and in nonattainment status for ozone (1-hour standard), particulate matter less than or equal to 10 micrometers in diameter, and particulate matter less than or equal to 2.5 micrometers in diameter at the State level. The proposed project could result in a cumulatively considerable net increase in these criteria pollutants. Further discussion will be provided in the EIR.

d. ***Expose sensitive receptors to substantial pollutant concentrations?***

Potentially Significant Impact. Sensitive receptors in the area are primarily the residential areas east of the project site in the Barrio Logan neighborhood. Technical air quality analyses will be prepared and summarized within an air quality technical study to evaluate short-, medium-, and long-term pollutant emissions and concentrations. Further discussion will be provided in the EIR.

e. ***Create objectionable odors that would affect a substantial number of people?***

Potentially Significant Impact. According to the California Air Resources Board's 2005 *CEQA Air Quality and Land Use Handbook*, land uses associated with odor complaints typically include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting facilities, refineries, landfills, dairies, and fiberglass molding facilities. The proposed project does not include any uses identified by the California Air Resources Board as being associated with odors. However, potential odor emitters during construction activities include diesel exhaust, asphalt paving, and the use of any architectural coatings. Potential odor emitters during operations would include diesel exhaust from truck and train activity as well as the use of any architectural coatings. This topic will be discussed further in the EIR.

IV. Biological Resources	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☒	☐	☐	☐
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☐	☐	☒
c. Have a substantial adverse effect on federally protected wetlands, as defined by Section 404 of the Clean Water Act (including, but not limited to, marshes, vernal pools, coastal wetlands, etc.), through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒
d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites?	☐	☐	☐	☒
e. Conflict with any local policies or ordinances to protect biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒
f. Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or State habitat conservation plan?	☐	☐	☐	☒

a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

Potentially Significant Impact. The California Natural Diversity Database was reviewed to identify special-status species that are known to occur within 1 mile of the project site. Seven special-status plant species and eight special-status wildlife species have been recorded within 1 mile of the project site. Of these, no special-status plant species have the potential to occur within the project site. However, the potential exists for three special-status wildlife species to occur within the project site. These include the western yellow bat (*Lasiurus xanthinus*), pocketed free-tailed bat (*Nyctinomops femorosaccus*), and big free-tailed bat (*Nyctinomops macrotis*). Future demolition activities at the TAMT could result in a significant impact on these three special-status wildlife species.

Per the Migratory Bird Treaty Act and similar provisions in Sections 1600–1616 of the California Fish and Game Code, the District would require qualified biologists to conduct preconstruction (i.e., prior to building-disturbing activities) nesting bird surveys during the nesting season (February 15 through September 15). Prior to commencement of building-disturbing activities during this timeframe, a qualified biologist would perform a preconstruction survey to determine whether nests are present in or around the project area. If a nest is found, an appropriate buffer would be established by the qualified biologist. No construction or other activities would be allowed to occur within the buffer until the young have fledged or the nest becomes inactive. The results of the preconstruction nesting bird survey would be provided to the District prior to the issuance of construction permits.

Because the transit sheds that planned for demolition may provide suitable habitat for special-status bats, a full analysis will be provided in the EIR to determine if a significant impact would occur.

b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

No Impact. The project site consists entirely of developed land; there are no sensitive vegetation communities or areas of riparian habitat on-site. Eelgrass beds are not known to occur in the area of the Bay where the project would occur, and the depth of the Bay at the project site significantly reduces the potential for growth. As such, no riparian or other sensitive natural community would be affected by project activities and no further discussion in the EIR is warranted.

c. Have a substantial adverse effect on federally protected wetlands, as defined by Section 404 of the Clean Water Act (including, but not limited to, marshes, vernal pools, coastal wetlands, etc.), through direct removal, filling, hydrological interruption, or other means?

No Impact. The project site consists entirely of developed land. No federally protected wetlands, as identified under Sections 401 and 404 of the Clean Water Act or the California Coastal Act, are located within or immediately adjacent to the project site. Future construction and operations at the TAMT would adhere to Stormwater Pollution Prevention Plans (SWPPPs) and Urban Stormwater Management Programs, as required, and no dredging, fill, or other waterside construction would occur within the Bay. As such, no federally protected wetlands would be affected by project activities and no further discussion in the EIR is warranted.

d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites?

No Impact. The project site consists entirely of developed land. Native species present on-site are limited to those that commonly occur in heavily developed areas. Such species would not be substantially affected by the project. Additionally, the site is not a wildlife corridor or a nursery site. No further discussion in the EIR is warranted.

e. ***Conflict with any local policies or ordinances to protect biological resources, such as a tree preservation policy or ordinance?***

No Impact. The City of San Diego Multiple Species Conservation Program (MSCP) and the City of San Diego Multi-Habitat Planning Area (MHPA) do not apply to projects within the jurisdiction of the District. Additionally, the project site is several miles outside the boundary of the MHPA, which is the planned habitat preserve within the MSCP Subarea. Therefore, the proposed project does not conflict with any local policies or ordinances to protect biological resources, such as a tree preservation policy or ordinance. No impact would occur and no further discussion in the EIR is warranted.

f. ***Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or State habitat conservation plan?***

No Impact. The project site is within the boundary of the City of San Diego MSCP but is several miles from the City of San Diego MHPA. The project area is not inside the jurisdiction of any other adopted plan. As such, no conflict would occur.

V. Cultural Resources	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a. Cause a substantial adverse change in the significance of a historical resource, as defined in Section 15064.5?	☒	☐	☐	☐
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	☒	☐	☐	☐
c. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☒	☐
d. Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☒	☐

a. Cause a substantial adverse change in the significance of a historical resource, as defined in Section 15064.5?

Potentially Significant Impact. Several structures on the project site are more than 45 years old and have the potential to qualify as historical resources, per State CEQA Guidelines Section 15064.5. A historical buildings survey will be completed at the TAMT property, and any potential impacts will be identified. In addition, mitigation measures will be proposed, if feasible. This resource topic will be further evaluated in the EIR.

b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?

Potentially Significant Impact. State CEQA Guidelines Section 15064.5 defines an archaeological resource as any artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that the resource:

- Contains information, with demonstrable public interest in that information, needed to answer important scientific research questions; or
- Has a special and particular quality, such as being the oldest of its type or the best available example of its type; or
- Is directly associated with a scientifically recognized important prehistoric or historic event or person.

A record search performed at the South Coastal Information Center on June 15, 2014, indicated that no archaeological resources have been identified in the project area. However, an archaeological site is located 100 feet east of the southeast corner of the project site. CA-SDI-5931 consists of stone tools, ground stone, shell, nonhuman bones, and a human burial. The record notes that additional cultural materials could be located outside the areas tested in 1993. Given the results of the records search, an area within the project site has been identified as an area where archaeological resources could be discovered. Although project-related activities involving ground disturbance are anticipated to be limited to areas near the existing transit sheds, any trenching or other ground disturbance within a specific area in the northern portion of the site would require monitoring. Further discussion will be provided in the EIR.

c. ***Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?***

Less than Significant Impact. The project area rests on the Bay Point Formation, which is a near-shore marine sedimentary deposit that dates from the late to middle Pleistocene, roughly 10,000 to 600,000 years ago. A tremendous variety of invertebrate and vertebrate fossils have been found in this deposit, including both marine and terrestrial animals, with mammoth and whale remains being some of the most significant. The formation is assigned high resource sensitivity by the City of San Diego; however, the City of San Diego's CEQA Significance Determination Thresholds state that potential significant impacts on the Bay Point Formation could occur if project-related activities reach depths greater than 10 feet and remove more than 1,000 cubic yards of soil. Utility work near the transit sheds would occur between 5 and 10 feet below the ground; no other project-related activities would affect areas beneath the terminal surface. Digging and trenching activities on the project site are not anticipated to go deeper than 10 feet, and the project would not directly destroy a unique paleontological resource, site, or unique geologic feature.

d. ***Disturb any human remains, including those interred outside of formal cemeteries?***

Less than Significant Impact. No evidence in the historical record indicates that human remains were buried on-site. It is highly unlikely that human remains would be encountered during construction of the proposed project. The upper levels of the project site occur in filled lands that date from the late 1800s to the 1940s. Most of this fill came from trash deposits or Bay dredging. Bay Point Formation deposits that are marine in origin and date from 10,000 to 600,000 years ago underlie these fill layers. However, if human remains should be discovered during construction, however unlikely, they would be treated in accordance with applicable codes and regulations, notably Public Resources Code (PRC) Section 5097 and Health and Safety Code Section 7050.5, which would ensure that impacts would be less than significant.

VI. Geology and Soils	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
1. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☒	☐	☐	☐
2. Strong seismic ground shaking?	☒	☐	☐	☐
3. Seismically related ground failure, including liquefaction?	☒	☐	☐	☐
4. Landslides?	☐	☐	☐	☒
b. Result in substantial soil erosion or the loss of topsoil?	☐	☐	☐	☒
c. Be located on a geologic unit or soil that is unstable or that would become unstable as a result of the project and potentially result in an on-site or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	☒	☐	☐	☐
d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	☒	☐
e. Have soils that would be incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems in areas where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒

a. ***Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:***

a1. ***Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.***

Potentially Significant Impact. The City of San Diego Seismic Safety Geologic Hazards and Faults map (City of San Diego 2008) shows that the southeastern half of the project site is located within an active Alquist-Priolo Earthquake Fault Zone, an area associated with the Rose Canyon fault. This fault, located about 1.4 miles north of the project site, represents the most significant seismic hazard in the San Diego area. A preliminary geotechnical evaluation will be prepared, which will provide findings, conclusions, and recommendations that address issues related to future development at the TAMT site and determine the potential for earthquake fault rupture to expose people or structures to potentially significant impacts. This issue will be further evaluated in the EIR.

a2. ***Strong seismic ground shaking?***

Potentially Significant Impact. Historically, the area surrounding San Diego Bay has experienced moderate earthquake activity; however, surface rupture has not been recorded during any instance of seismic activity. There are seven active faults within a 50-mile radius of the project site, the nearest being the Rose Canyon fault, about 1.4 miles north of the site. Increased ground motion resulting from an earthquake represents a potentially significant impact. As discussed above for Item a1, a preliminary geotechnical evaluation will be prepared that will provide findings, conclusions, and recommendations that address issues related to future development at the TAMT site. This issue will be further evaluated in the EIR.

a3. ***Seismically related ground failure, including liquefaction?***

Potentially Significant Impact. The preliminary geotechnical evaluation to be prepared for the project would evaluate the potential for seismically related ground failure, including liquefaction. The potential for liquefaction to occur at the project site is considered to be high because of the low density of the underlying loose to medium-dense sands and silty sands in the shallow groundwater. This issue will be further evaluated in the EIR.

a4. ***Landslides?***

No Impact. Landslide activity generally occurs in areas that lack vegetation and have steep slopes (typically, with grades of 30% or more). The project site occurs on fill areas that are flat and completely developed. No portion of the project site would be susceptible to landslides. Therefore, impacts are not anticipated. Further discussion of landslides is not warranted in the EIR.

b. ***Result in substantial soil erosion or the loss of topsoil?***

No Impact. The paved project site is an existing marine terminal that was constructed on artificial fill in the mid-twentieth century. None of the actions associated with the proposed project would disrupt any native soil or topsoil. Soil erosion is not anticipated to occur as a result of construction or future operations at the project site. No impact would occur, and further discussion in the EIR is not warranted.

c. ***Be located on a geologic unit or soil that is unstable or that would become unstable as a result of the project and potentially result in an on-site or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?***

Potentially Significant Impact. Bay deposits and fill layers that underlie the project site could be unstable because of their liquefaction potential. The project site occurs on undocumented fill that ranges from saturated sand to silty sand; this fill is compressible and liquefiable. This issue will be further discussed in the EIR.

d. ***Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?***

Less-than-Significant Impact. Expansive soils are fine-grained soils (generally, high-plasticity clays) that can undergo a significant increase in volume with an increase in water content or, conversely, a significant decrease in volume with a decrease in water content. Changes in the water content of an expansive soil can result in severe distress to structures that have been built on the soil. As mentioned above, expansive soils are generally high-plasticity clays, while liquefiable soils are generally cohesionless sands. Also, although both conditions are influenced by the presence of groundwater, soil expansion differs from soil liquefaction in that soil expansion is not seismically induced. The majority of surficial soils throughout the project site are silty sands that have a low potential for expansion, as defined by Table 18-1-B of the Uniform Building Code. Therefore, construction of the proposed project would not result in substantial risks to life or property as a result of being located on expansive soils. Impacts would be less than significant.

e. ***Have soils that would be incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems in areas where sewers are not available for the disposal of wastewater?***

No Impact. No septic tanks or alternative wastewater disposal systems are proposed; therefore, no impact would occur.

VII. **Greenhouse Gas Emissions**		Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:					
a.	Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☒	☐	☐	☐
b.	Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☒	☐	☐	☐

a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Potentially Significant Impact. The project would provide a plan that could be implemented to increase marine terminal operations. Increased terminal operations would increase greenhouse gas (GHG) emissions associated with vessel calls, truck trips and increased rail activity, worker trips, and energy and water use. This increase in GHG emissions could potentially, either directly or indirectly, have a significant impact on the environment by exceeding established thresholds for GHG emissions. Further discussion will be provided in the EIR.

b. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Potentially Significant Impact. The Port District has enacted a variety of policies and plans to reduce GHG emissions as part of its Climate Action Plan, including the implementation of shore power, equipment and truck replacement/retrofits, vessel speed reductions, and the Clean Truck Program. The project would increase GHG emissions at TAMT because of the greater throughput that is forecasted with the project and may therefore conflict with or impede implementation of plans, policies, or regulations that were adopted to reduce the emissions of GHG. In addition, sea level rise will be discussed and the most current published guidance will be consulted to determine if the project would be adversely affected. Therefore, these issues will be analyzed in the EIR.

VIII. Hazards and Hazardous Materials	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☒	☐	☐	☐
b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☒	☐	☐	☐
c. Emit hazardous emissions or involve handling hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?	☒	☐	☐	☐
d. Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment?	☒	☐	☐	☐
e. Be located within an airport land use plan area or, where such a plan has not been adopted, be within 2 miles of a public airport or public use airport and result in a safety hazard for people residing or working in the project area?	☐	☐	☒	☐
f. Be located within the vicinity of a private airstrip and result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
g. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
h. Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including in areas where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☐	☒

a. ***Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?***

Potentially Significant Impact. The potential exists for the project to create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials during the construction or operational phases of the project, depending on the types of cargo that are stored on-site or transported to and from the site. This potentially significant impact will be further discussed in the EIR.

b. ***Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?***

Potentially Significant Impact. A previous site assessment indicates that petroleum hydrocarbons, benzene, toluene, polycyclic aromatic hydrocarbons (PAHs), semi-volatile organic compounds (SVOCs), and metals may be present in soil within portions of the project area. The presence of these hazardous materials could create a significant hazard to the public or the environment if they were to be disrupted during construction activities and released into the environment. This impact will be further discussed in the EIR.

c. ***Emit hazardous emissions or involve handling hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?***

Potentially Significant Impact. The closest school is about 0.25 mile east of the project site. Because the potential exists for hazardous materials to be released during project construction, impacts are considered to be potentially significant. Further discussion will be provided in the EIR.

d. ***Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment?***

Potentially Significant Impact. Pursuant to a check of the California Department of Toxic Substances Control (DTSC) database (EnviroStor), it was determined that the project site is not included on a list of hazardous material sites (DTSC 2014). The State Water Resources Control Board (SWRCB) site (GeoTracker) identifies two open sites within the terminal, a diesel fuel spill site (Case #H24706-002) beneath the bulk loader facility and a non-specified site (Case #9000000537) near the center of the terminal (SWRCB 2014). A previous site assessment indicates that petroleum hydrocarbons, benzene, toluene, PAHs, SVOCs, and metals may be present in soil within portions of the project area. The potential exists for the project to result in a significant hazard to the public or the environment. This is considered to be a potentially significant impact, which will be mitigated by the measures included in the Soil Management Plan. Further discussion will be provided in the EIR.

e. ***For a project within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?***

Less-than-Significant Impact. The project site is about 2 miles south of San Diego International Airport (SDIA). The site is within Review Area 2 of the Airport Influence Area, per the Airport Land Use Compatibility Plan (ALUCP) for this airport (SDIA 2014). It is not anticipated that the project would result in a safety hazard for people residing or working in the area; however, the Federal Aviation Administration (FAA) would be notified at least 45 days prior to construction because of the proximity of the site to a navigation facility. Although a final determination has not been made by the FAA, this impact is anticipated to be less than significant. In the event that the FAA requires changes to the project, the changes will be reflected in the Project Description section of the EIR, thereby ensuring that impacts related to a safety hazard for people residing or working in the project area would not occur. There are no other airports or ALUCPs in the vicinity of the project site. Further discussion of this impact is not required in the EIR.

f. For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?

No Impact. The project is not located within the vicinity of a private airstrip. No hazard impacts related to private airstrips would occur with implementation of the proposed project, and further discussion of this threshold is not warranted in the EIR.

g. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Less-than-Significant Impact. Emergency response and evacuation is the responsibility of the police and fire service providers, as detailed in Section XIV, Public Services. Redevelopment of the TAMT site would involve the removal of existing buildings and improving operational efficiencies by eliminating underperforming elements of the terminal and preparing for future expansion. The result would be an increase in cargo throughput. Transport of the cargo both to and from the terminal would continue in a planned and controlled manner that would not cause an impairment of executing the approved emergency response plan.

The proposed project would be required to comply with applicable requirements set forth by the County of San Diego Office of Emergency Services (OES) Operational Area Emergency Plan, the City of San Diego Police Department, and the City of San Diego Fire Department. OES coordinates emergency response at the local level in the event of a disaster, including fires. This emergency response coordination is facilitated by the Operational Area Emergency Operations Center and responding agencies to the proposed project site, the City of San Diego Police and Fire Departments and San Diego Harbor Police Department. Impacts would be less than significant, and no further discussion is warranted in the EIR.

h. Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including in areas where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

No Impact. The project site is located on San Diego Bay, near downtown San Diego, and completely covered with impermeable surfaces. There are no wildlands or heavily vegetated areas in proximity to the TAMT property, and as such, redevelopment of the terminal would not expose people or structures to a significant risk of loss, injury, or death involving wildland fires. No impacts would occur, and further discussion is not warranted in the EIR.

IX. Hydrology and Water Quality		Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:					
a.	Violate any water quality standards or waste discharge requirements?	☒	☐	☐	☐
b.	Substantially deplete groundwater supplies or interfere substantially with groundwater recharge, resulting in a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☒	☐
c.	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on-site or off-site?	☐	☐	☒	☐
d.	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on-site or off-site?	☐	☐	☒	☐
e.	Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☒	☐
f.	Otherwise substantially degrade water quality?	☐	☐	☒	☐
g.	Place housing within a 100-year flood hazard area, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	☒
h.	Place within a 100-year flood hazard area structures that would impede or redirect floodflows?	☒	☐	☐	☐
i.	Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☒	☐
j.	Contribute to inundation by seiche, tsunami, or mudflow?	☐	☐	☒	☐

a. ***Violate any water quality standards or waste discharge requirements?***

Potentially Significant Impact. The potential impacts of construction activities on water quality concern primarily sediments, turbidity, and pollutants associated with sediments. Construction-related activities that expose and move soils are responsible primarily for sediment releases. The proposed project would involve soil disturbance from activities such as excavation for replacement light poles and utility work as well as concrete removal, grading, and repaving related to building demolition and construction. Demolition includes abatement associated with hazardous materials on-site, removal of existing structures, removal of any concrete slabs, removal of any utilities, and repaving the project site with asphalt concrete pavement. These project activities could result in wind and rain erosion of on-site soil. They could also increase the amount of suspended solids contained in storm flows resulting from erosion of exposed soil during construction. Other pollutants of concern are toxic chemicals from heavy equipment or construction-related materials. Non-sediment contaminants that could enter runoff from the construction site include metals, petroleum products, and trash. Concrete, soap, trash, and sanitary wastes are other common sources of potentially harmful materials on construction sites. Wash water from equipment and tools and other waste dumped or spilled on the construction site can lead to seepage of pollutants into watercourses. Also, construction chemicals may be accidentally spilled into watercourses. The impact of toxic construction-related materials on water quality would vary, depending on the duration and timing of activities. All of these contaminants could contribute to the degradation of water quality. The proposed area of land disturbance is approximately 50 to 60 feet from the shoreline of the Bay and direct discharges into the Bay from construction activities are less likely than discharges to storm drains that lead to the Bay. Because there is a potentially significant impact related to water quality during construction, this subject will be discussed in the EIR.

Potential pollutants that may be generated at the TAMT during operation of the proposed project include gross pollutants, metals, nutrients, oil and grease, organics, sediment, and trash (San Diego Unified Port District 2008). As part of the proposed project, cargo would be kept outside on the terminal, within containers (i.e., silos or domes), as opposed to stored in existing terminal sheds. Although the dry bulk storage area would not have a roof, it would be contained within walls, which would prevent contaminants from being discharged. Operations at the port would also include routine maintenance activities; waste storage, handling, and disposal; outdoor parking; as well as vehicle and equipment storage, washing, and maintenance. Because the project would have the potential to create a significant water quality impact during operations, this issue will be further discussed in the EIR.

b. ***Substantially deplete groundwater supplies or interfere substantially with groundwater recharge, resulting in a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)?***

Less-than-Significant Impact. Although the proposed project would involve demolition and repaving of existing impervious surfaces, it would result in no change to the amount of impervious area. Given the depth of grading and trenching anticipated, dewatering is not likely. Should dewatering activities be necessary, such activities would be short-term and require only minimal volumes of water for the installation of underground utility lines. Because of the proximity to the Bay, groundwater at the project site is saline from saltwater intrusion, and therefore, it is not used for drinking water and consequently would not impact drinking water. Impacts related to lowering the groundwater table and groundwater recharge would be less than significant.

c. ***Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on-site or off-site?***

Less-than-Significant Impact. Topography at the project site is flat or sloping slightly downward from east to west to the point where it meets the existing wharf. The existing storm drain system includes catch basins that have been equipped with filter inserts and a water treatment system on the main 36-inch-diameter storm drain discharge lines. The proposed project would most likely require additional storm drains as a result of the transit sheds' removal; the additional storm drains would be appropriately sized and able to carry stormwater during a rain event, thereby preventing on-site drainage issues. Because of the largely impervious nature of the site, erosion and siltation are unlikely. As a result, impacts related to changes in the drainage pattern, including erosion and/or siltation, would be less than significant.

d. ***Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on-site or off-site?***

Less-than-Significant Impact. The existing drainage patterns would be left intact; no streams or rivers exist on-site. As a result, no substantial changes in drainage patterns would occur, and the project would not cause surface runoff to result in flooding on- or off-site. Therefore, impacts would be less than significant.

e. ***Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?***

Less-than-Significant Impact. The proposed project would not result in an increase in the volume of runoff water that would exceed the capacity of the existing or planned stormwater drainage system. The existing system would be evaluated for compliance with the County of San Diego Standard Urban Stormwater Mitigation Plan (SUSMP) and upgraded as necessary to ensure its effectiveness and compliance with appropriate regulations. In accordance with the County's MS4 permit, stormwater specialists from the District's Environmental and Land Use Management Department review all engineering projects for compliance with the SUSMP. A summary report on the projects and their SUSMP compliance determinations is submitted with the District's annual SUSMP compliance monitoring report to the SDRWQCB. In addition, the District performs a regular inspection of catch basins with filters to evaluate the condition of the catch basin filter inserts. Inserts are cleaned and maintained or replaced, as required; catch basins are cleaned of all debris and sediment semiannually or more frequently, as required. The storm drain clarifier units are inspected and cleaned regularly by the District's Environmental and Land Use Management Department and its contractors. Reports of these best management practice (BMP) maintenance activities are submitted to the State Water Resources Control Board in accordance with the terminal's Industrial Stormwater Permit.

The proposed project would include additional storm drains, the design and placement of which would be subject to the District's engineering review. The drains would be appropriately sized and able to carry stormwater during a rain event, thereby preventing on-site drainage issues. Consequently, the project would not contribute additional sources of polluted runoff during operation. Therefore, the proposed project would not create runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. Impacts would be less than significant.

f. ***Otherwise substantially degrade water quality?***

Potentially Significant Impact. As described in Item IXa, short-term construction impacts and long-term operational impacts on water quality would be potentially significant. Therefore, the project's potential to degrade water quality will be discussed in the EIR.

g. ***Place housing within a 100-year flood hazard area, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?***

No Impact. The majority of the project site is located outside the 100-year floodplain; a small area north of the project site is located within 100-year Flood Zone A. However, no housing is proposed on the project site. Therefore, no impacts would occur.

h. ***Place within a 100-year flood hazard area structures that would impede or redirect floodflows?***

Potentially Significant Impact. The project proposes construction of a modular office building, with an area of approximately 6,800 square feet and height of approximately 32 feet (12 feet above mean lower low-water [MLLW] tide). Over the long-term, additional structures may also be constructed within the 100-year flood area. As part of the proposed project, the District expects to work with the necessary federal agencies to update the 100-year floodplain boundary to more accurately reflect potential flooding hazards. Therefore, this issue will be further discussed in the EIR.

i. ***Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?***

Less-than-Significant Impact. Dam failures are rated as a low-probability, high-loss event. Only two major dam failures have been recorded in San Diego County. These occurred in 1916 and were caused by a flood event (County of San Diego 2010). The project site is not identified within a risk zone of a potential dam failure (County of San Diego 2010). Thus, it is highly unlikely that the proposed project would expose people or structures to a significant risk of loss, injury, or death involving flooding as a result of the failure of a levee or dam. Impacts would be less than significant.

j. ***Contribute to inundation by seiche, tsunami, or mudflow?***

Less-than-Significant Impact. Although the project site is within a designated high-risk zone for a tsunami, the likelihood that an event would occur during the 29-week construction period is low. If such an event were to occur, the likelihood that it would affect the project site is also low. The project site is located on the Bayfront but approximately 2 miles from the Pacific Ocean. Coronado is located between the site and the ocean. Moreover, the project site is located at approximately 10 feet MLLW. Therefore, considering the distance from the ocean, the buffering provided by landmass, and the height above sea level, the potential for hazards associated with direct wave action in the event of a storm surge, tsunami, or seiche is low. Conditions under the proposed project would be similar to the existing conditions and would not increase the potential of site inundation. Although inundation from a tsunami or seiche is possible, it is unlikely; if it were to occur, damage would most likely be limited to ground-floor water damage. People would be given sufficient warning to evacuate the project site by the West Coast and Alaska Tsunami Warning Center, which monitors earthquakes and issues tsunami warnings when a tsunami is forecast to occur. Consequently, although inundation from a tsunami or seiche is reasonably foreseeable, any associated impacts would be less than significant.

The potential for large-scale slope instability at the site that could lead to mudflow is not present at the project site. The project site is located on flat topography. Impacts would be less than significant.

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X. Land Use and Planning	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a. Physically divide an established community?	☐	☐	☐	☒
b. Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, a general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒
c. Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒

a. Physically divide an established community?

No Impact. The proposed project would redevelop an existing marine terminal on San Diego Bay but would not expand the physical boundaries of the terminal or develop areas outside of its current boundaries. Therefore, the project would not physically divide an established community, and impacts would not occur.

b. Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, a general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

No Impact. The PMP is the guiding land use policy document for all areas under the District's jurisdiction. The proposed project is located within Planning District 4, which has been identified as the only area in the entire San Diego region with an established waterfront industrial shipping operation, which cannot be easily created or replaced. However, the TAMT is experiencing a shortage of space. The proposed project would result in the adoption of near-term improvements and a redevelopment plan for the TAMT site. This would allow the TAMT to continue its present use as a marine terminal but would not result in any changes in land use. Project approval would be consistent with the provisions of the California Coastal Act (CCA). The project site, which has been used for industrial shipping operations since the early 1900s, exists for the benefit of water dependent commerce, which is consistent with the CCA and the Public Trust Doctrine. Project-related actions would involve the removal and demolition of existing structures and the rearrangement of existing and future tenants at the TAMT. None of the project-related actions would present new barriers or obstacles related to coastal access. The TAMT site would continue to be unavailable to the general public, and no new impacts or changes regarding coastal access would result upon project implementation. As such, the proposed project would not conflict with the PMP, CCA, or the Public Trust Doctrine or any other land use document adopted for the purpose of avoiding or mitigating an environmental effect. Impacts would not occur, and this issue will not be further discussed in the EIR.

c. ***Conflict with any applicable habitat conservation plan or natural community conservation plan?***

No Impact. As discussed under Item IVf, the proposed project would occur outside the boundaries of the City of San Diego MSCP and the City of San Diego MHPA. Therefore, the proposed project would not be in conflict with a habitat conservation plan or natural community conservation plan.

XI. Mineral Resources	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State?	☐	☐	☐	☒
b. Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	☐	☐	☐	☒

a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State?

No Impact. The project site, an area characterized by industrial marine-related activities, does not contain any known mineral resources. In addition, the project site is underlain by artificial fill material. No commercial mining operations exist on the project sites or in the immediate vicinity. The project site and the surrounding area are not designated or zoned as land with the availability of mineral resources. In addition, the project sites do not contain aggregate resources and are not located in a mineral resource zone that contains important resources, as designated by the California Department of Conservation Division of Mines and Geology. Therefore, the proposed project would not result in a loss of known mineral resources. No impact would occur.

b. Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?

No Impact. See Item Xia, above. The project site is underlain by artificial fill material. The PMP does not identify any mineral resources in the area or designated plans for mineral resource extraction. The project site and the surrounding area do not contain locally important mineral resources. Therefore, implementation of the project would not result in the loss of availability of a locally important mineral resource recovery site, and no impact would occur.

XII. Noise	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a. Expose persons to or generate noise levels in excess of standards established in a local general plan or noise ordinance or applicable standards of other agencies?	☒	☐	☐	☐
b. Expose persons to or generate excessive ground-borne vibration or ground-borne noise levels?	☒	☐	☐	☐
c. Result in a substantial permanent increase in ambient noise levels in the project vicinity, above levels existing without the project?	☒	☐	☐	☐
d. Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity, above levels existing without the project?	☒	☐	☐	☐
e. Be located within an airport land use plan area, or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport and expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒
f. Be located in the vicinity of a private airstrip and expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

a. Expose persons to or generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Potentially Significant Impact. The potential exists for construction and additional operations at the project site to result in significant impacts. Existing noise conditions will be documented and compared with projected noise conditions with implementation of additional operations at the project site. Noise levels during project construction and operation will be evaluated in the EIR.

b. Exposure of persons to or generation of excessive ground-borne vibration or ground-borne noise levels?

Potentially Significant Impact. Limited ground disturbance related to the proposed project is anticipated to occur. Although ground-borne vibration or noise generated by project actions would most likely not travel to surrounding residential uses or other sensitive receptors, vibration levels during project construction and operation will be evaluated in the EIR.

c. ***A substantial permanent increase in ambient noise levels in the project vicinity, above levels existing without the project?***

Potentially Significant Impact. As described in Item XIIa, the proposed project could increase permanent ambient noise levels during construction and operation. As a result, impacts are potentially significant and will be evaluated in the EIR.

d. ***A substantial temporary or periodic increase in ambient noise levels in the project vicinity, above levels existing without the project?***

Potentially Significant Impact. As described in Item XIIa, site preparation–related activities could result in a temporary or periodic increase in ambient noise levels. Therefore, impacts from noise are potentially significant and will be evaluated in the EIR.

e. ***Fo*r *a project located within an airport land use land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?***

No Impact. The proposed project would not construct any habitable structures and would not attract large numbers of people to the project site. In addition, the project site is not located within the Forecast Noise Exposure areas identified in Exhibit 2-1 of the SDIA ALUCP (May 2014). Therefore, the project would not expose people residing or working in the project area to excessive airport noise levels and no further discussion in the EIR is warranted.

f. ***For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?***

No Impact. The project is not located within the vicinity of a private airstrip. No impacts related to private airstrips would occur with implementation of the proposed project, and further discussion of this threshold is not warranted in the EIR.

XIII. Population and Housing	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a. Induce substantial population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)?	☐	☐	☒	☐
b. Displace a substantial number of existing housing units, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
c. Displace a substantial number of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

a. ***Induce substantial population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure?***

Less-than-Significant Impact. The proposed project would not construct any homes or businesses or extend roads; however, additional employees and construction workers are anticipated to work at the TAMT as a result of near-term optimization improvements and future redevelopment activities. As stated above in the Project Description, approximately 232 jobs (direct, indirect, and induced) would be created during the near-term construction period, and a total of 459 long-term (through the life of the plan) direct and indirect jobs would be created as a result of the proposed redevelopment plan.

Although implementation of the proposed project would require up to 459 new employees and temporarily increase the number of construction workers in the area, the introduction of additional employees would not result in a significant increase in the local population and would not induce substantial population growth. The additional jobs are expected to be filled by residents who currently live in the San Diego region. Furthermore, the permanent jobs would occur over an extended period of time, and the workers could be accommodated with existing housing stock. The jobs would not result in the relocation of any population. Therefore, the proposed project would not directly or indirectly induce substantial population growth through the creation of new homes or businesses in the San Diego region. Impacts would be less than significant, and no further discussion is warranted in the EIR.

b. ***Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?***

No Impact. No housing would be displaced with implementation of the proposed project. No impact would occur, and no further discussion is warranted in the EIR.

c. ***Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?***

No Impact. The project site is a working marine terminal on San Diego Bay and does not include residential housing. Proposed project actions are concerned with redevelopment of the marine terminal to accommodate market-driven cargo operations. It would not displace people or require the construction of replacement housing elsewhere. No impact would occur, and further discussion is not warranted in the EIR.

XIV. Public Services	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a. Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or a need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services:				
1. Fire protection?	☐	☐	☒	☐
2. Police protection?	☐	☐	☒	☐
3. Schools?	☐	☐	☐	☒
4. Parks?	☐	☐	☒	☐
5. Other public facilities?	☐	☐	☐	☒

a1. Fire protection?

Less-than-Significant Impact. The project site is served by the City of San Diego Fire-Rescue Department (SDFD) and by the San Diego Harbor Police Department (HPD) for fireboat operations. Each department is discussed below.

City of San Diego Fire-Rescue Department

Four SDFD fire stations, including Fire Stations 1, 4, 7, and 11, are located within the project vicinity and could respond in the event of an emergency; however, Fire Station 7 is the immediate responder for the proposed project. Fire Station 7 is located at 944 Cesar E. Chavez Parkway, about 0.87 mile northeast of the project site.

Although not first responders, Fire Stations 1, 4, and 11 could also respond to the project site. Fire Station 1 is located at 1222 1st Avenue, about 1.1 miles north of the project site. Fire Station 4 is located at 404 8th Avenue, about 1 mile west of the project site. Lastly, Fire Station 11 is located at 945 25th Street, about 1.5 miles northeast of the project. Although redevelopment activities would occur at the project site through 2035, no physical expansion of the terminal's boundaries would occur. The SDFD would continue to provide emergency services at the project site. No significant impacts are anticipated, and further discussion is not warranted in the EIR.

San Diego Harbor Police Department

The HPD provides law enforcement and marine firefighting services in and around San Diego Bay. Three HPD offices serve the project area: downtown San Diego, Airport, and Shelter Island (HPD 2014). The downtown San Diego office is located at 3380 North Harbor Drive and serves as the headquarters and administration building. The Airport and Shelter Island offices serve as dispatch centers; these offices would serve the project site in the event of an emergency in the Bay. The HPD has two departments for fire protection and emergency response: marine firefighting and vessel patrol (Port of San Diego 2014). Marine firefighter officers with the HPD are cross-trained as both land and marine firefighters. Their patrol boats also serve as firefighting boats that can respond to fire emergencies along the Bay. The vessels are staffed 24 hours a day and in all types of weather. The HPD patrols San Diego Bay, its associated waterways, and coastal areas similar to the way in which it patrols on land. Its primary function is to respond to all types of law enforcement–related issues. However, part of its fleet is designed to respond to fire and rescue calls.

Under the proposed project, a new redevelopment plan, which would provide for future improvements at the TAMT, would be adopted. Proposed operations at the TAMT site would be similar to existing operations in terms of the need for fire protection services. Therefore, the proposed project would not result in increased demand that would require new or physically altered fire protection facilities; impacts would be less than significant. No further discussion in the EIR is warranted.

a2. Police protection?

Less-than-Significant Impact. The HPD is the primary responder to calls for police protection services at the project site; the San Diego Police Department (SDPD) is a secondary responder.

Harbor Police Department

As of July 2014, the HPD had 122 sworn law enforcement officers, all of whom are cross-trained as firefighters and police officers (HPD 2014). HPD vehicle patrols monitor all land activity around the Bay. The units that could be dispatched to the project site, in addition to vehicle patrols, include the bicycle team, dive team, investigations unit, and reserve senior volunteer patrol.

City of San Diego Police Department

The SDPD provides law enforcement services for areas within District jurisdiction that generate tax revenue for the City of San Diego (e.g., TAMT, hotels, restaurants). The proposed project is in the SDPD's Central Division, the headquarters for which is at 2501 Imperial Avenue, San Diego. The division serves a population of 103,524 and encompasses 9.7 square miles, extending beyond the boundaries of the Downtown Community Plan (City of San Diego 2014).

Similar to the SDFD and HPD, SDPD police protection is evaluated by tracking average response time to an emergency call. There is also a Citywide goal for the SDPD to have 1.45 officers per 1,000 residents. With a City population of approximately 1,345,895 as of April 2014 (California Department of Finance 2014) and 2,775 sworn police officers as of May 22, 2014 (AreaVibes 2014), the current ratio of SDPD officers per 1,000 residents is 2.06.

The proposed project would adopt a new redevelopment plan that would include various improvements to the terminal. Although operations would increase under the proposed project, the TAMT is a monitored environment that has controlled access and active security. Operations under the proposed project would be similar to operations under existing conditions in terms of the need for police protection services given the restricted access and the available security services. Therefore, the proposed project would not result in increased demand that would require new or physically altered police protection facilities; no impact would occur. No further discussion in the EIR is warranted.

a3. Schools?

No Impact. The project site is within the boundary of the San Diego Unified School District (SDUSD), the second-largest school district in California. SDUSD schools within the project vicinity include Perkins Elementary School, located 0.25 mile east of the project site; Washington Elementary School, located approximately 2 miles to the northeast; and Logan Elementary School, located 1.7 miles to the east. High schools near the project site include Garfield High School, located about 1.5 miles north of the project site, and San Diego High School, located about 1.6 miles north of the project site. There are no other public schools within 2 miles of the project site.

The proposed project would not result in adverse impacts on schools. Physical impacts on school facilities and services are usually associated with in-migration and population growth, which increase the demand for schools and result in the new for new or expanded facilities. The proposed project would have no effect on population growth and school demand. Therefore, the proposed project would not result in increased demand that would require the need for new or physically altered school facilities; no impact would occur. No further discussion in the EIR is warranted.

a4. Parks?

Less-than-Significant Impact. The project site does not contain any parks. The closest park is Cesar Chavez Park, located immediately adjacent to the TAMT at 1449 Cesar E. Chavez Parkway. This park offers arbors, bike paths, gazebos, picnic tables, play equipment, public art, and restrooms. The next-closest park is Embarcadero Marina Park South, located 0.25 mile west of the project site at 200 Marina Park Way. This park offers arbors, bike parking, bike paths, concessions, exercise stations, a fishing pier, gazebos, picnic tables, public art, restrooms, and telephones.

Although the proposed project would have a negligible effect on population growth, it is possible that use of recreational facilities in the vicinity of the project sites could increase slightly due to the increase in employees, particularly at lunch breaks.

However, this insignificant increase in use would result in very light use of the park (e.g. sitting at benches eating lunch) and would not substantially degrade the existing facilities. Therefore, the proposed project would not result in an increased demand requiring the need for new or physically altered park facilities, and any related impact would be less than significant. No further discussion in the EIR is warranted.

a5. Other public facilities?

No Impact. The proposed project would not result in adverse impacts on other public facilities. As discussed above, physical impacts on public services are usually associated with in-migration and population growth, which increase the demand for public services and facilities. The proposed project would not increase the local population. Although additional employees are anticipated during construction and operation, they are not expected to increase the use of existing public facilities. Therefore, the proposed project would not result in increased demand that would require the need for new or physically altered public facilities. No impact would occur, and further discussion in the EIR is not warranted.

XV. Recreation	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a. Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☒	☐
b. Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	☐	☐	☒	☐

a. Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

Less-than-Significant Impact. An increase in the use of existing parks and recreational facilities typically results from an increase in the number of housing units or residents in an area. The proposed project would not result in an increase in the number of housing units or residents in the vicinity. Although additional employees are anticipated during construction and operation, they are not expected to heavily use the existing neighborhood or regional parks or any other recreational facilities. Impacts would be less than significant, and no further discussion is warranted in the EIR.

b. Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?

Less-than-Significant Impact. The proposed project does not include the development of any recreational facilities. The proposed project would redevelop portions of the TAMT. In addition, as described in Item XVa, the project would not result in significant impacts on or require expansion of existing recreational facilities. Therefore, the proposed project would not require construction or expansion of recreational facilities that might have an adverse physical effect on the environment. As a result, impacts related to recreation would be less than significant, and no further discussion is warranted in the EIR.

XVI. Transportation/Traffic	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a. Conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation, including mass transit and nonmotorized travel, and relevant components of the circulation system, including, but not limited to, intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	☒	☐	☐	☐
b. Conflict with an applicable congestion management program, including, but not limited to, level-of-service standards and travel demand measures or other standards established by the county congestion management agency for designated roads or highways?	☒	☐	☐	☐
c. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that would result in substantial safety risks?	☐	☐	☒	☐
d. Substantially increase hazards because of a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☒	☐	☐	☐
e. Result in inadequate emergency access?	☐	☐	☐	☒
f. Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities or otherwise decrease the performance or safety of such facilities?	☒	☐	☐	☐

a. Conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation, including mass transit and nonmotorized travel, and relevant components of the circulation system, including, but not limited to, intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?

Potentially Significant Impact. Project operations would increase truck and automobile traffic and could conflict with local policies that measure the effectiveness of the circulation system. A transportation impact analysis (TIA) will be prepared for the proposed project and summarized in the EIR.

b. ***Conflict with an applicable congestion management program, including, but not limited to, level-of-service standards and travel demand measures or other standards established by the county congestion management agency for designated roads or highways?***

Potentially Significant Impact. The designated congestion management agency for the San Diego region is SANDAG, which is responsible for preparing the Regional Transportation Plan, of which the Congestion Management Plan (CMP) is an element to monitor transportation system performance, develop programs to address near- and long-term congestion, and better integrate land use and transportation planning decisions. The CMP includes a requirement for enhanced CEQA review applicable to certain large developments that generate an equivalent of 2,400 or more average daily vehicle trips or 200 or more peak hour vehicle trips. These large projects must complete a traffic analysis that identifies the project's impacts on CMP system roadways, their associated costs, and appropriate mitigation. Early coordination with affected public agencies, such as the Metropolitan Transit System (MTS), is required to ensure that the impacts of new development on the CMP performance measures are identified. This issue area will be analyzed in the EIR.

c. ***Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that would result in substantial safety risks?***

Less-than-Significant Impact. The project site is about 2 miles south of SDIA. The site is within Review Area 2 of the Airport Influence Area, per the ALUCP (SDIA 2014). The FAA would be notified at least 45 days prior to construction because of the proximity of the site to a navigation facility. Although a final determination has not been made by the FAA, this impact is anticipated to be less than significant. In the unlikely event that the FAA requires changes to the project (e.g. height restrictions), the changes will be reflected in the Project Description section of the EIR, thereby ensuring that impacts related to a safety hazard for people residing or working in the project area would not occur. There are no other airports or ALUCPs in the vicinity of the project site. Further discussion of this issue is not required in the EIR.

d. ***Substantially increase hazards because of a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?***

Potentially Significant Impact. A new entrance gate would be constructed to replace the existing gate on Crosby Road. The TIA may determine road improvements and/or other changes to the circulation network are required by the project. Therefore, this issue will be discussed in the EIR.

e. ***Result in inadequate emergency access?***

No Impact. Existing access to the TAMT is from an entrance gate on Crosby Road, near the southeastern portion of the project site. Traffic arriving at the entrance gate is inspected by security personnel prior to admittance. Under the proposed project, an updated gate complex would be installed as part of the redevelopment plan. Final plans would be reviewed for safety and would comply with fire access regulations, which ensure adequate access in the event of an emergency. Approval of the emergency access plans would be required by the Harbor Police, and the City's police and fire departments. No impact would occur, and further discussion in the EIR is not warranted.

f. ***Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities or otherwise decrease the performance or safety of such facilities?***

Potentially Significant Impact. See Item XVIa. The project site occurs at an operating marine terminal with restricted access. While there are no public transit, bicycle, or pedestrian facilities within the project site, the proposed project will be evaluated to determine if its implementation would result in conflicts with any adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities. Further discussion will be included in the EIR.

XVII. Utilities, Service Systems, and Energy	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☒	☐	☐	☐
b. Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☒	☐	☐	☐
c. Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☒	☐	☐	☐
d. Have sufficient water supplies available to serve the project from existing entitlements and resources, or would new or expanded entitlements be needed?	☒	☐	☐	☐
e. Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☒	☐
f. Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☒	☐
g. Comply with Federal, State, and local statutes and regulations related to solid waste?	☐	☐	☐	☒
h. Result in the wasteful, inefficient, and unnecessary consumption of energy?	☒	☐	☐	☐

a. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

Potentially Significant Impact. The project would generate additional wastewater compared with existing conditions due to the increase in the number of employees anticipated. Although it is not anticipated that the additional wastewater would exceed the requirements of the Regional Water Quality Control Board, this impact will be further discussed in the EIR.

b. Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Potentially Significant Impact. The project would result in an increase in water demand related to more employees being onsite and more cargo being processed. Further discussion of the need for new or expanded water infrastructure will be discussed in the EIR. Wastewater generated at the TAMT would be minimal and conveyed by the existing sewer system, with some upgrades to connect the sewer to the restrooms at the proposed modular office. A new sewer lateral from the modular restroom would extend to the existing sewer system, which parallels Berths 10-3/10-4 and extends to an existing manhole between the transit sheds. This issue will be further discussed in the EIR.

c. ***Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?***

Potentially Significant Impact. The project site consists almost entirely of impervious surfaces; no new impervious surfaces would be created with implementation of the project. As part of the near-term optimization improvements, the transit sheds would be removed and their footprints regraded and paved to match the surrounding contour, with some slope for drainage. The existing storm drain system and water quality treatment devices will be evaluated and modified to ensure sufficient flow capacity and effective treatment of any contaminants from activities on the new paved areas. Further discussion will be provided in the EIR.

d. ***Have sufficient water supplies available to serve the project from existing entitlements and resources, or would new or expanded entitlements be needed?***

Potentially Significant Impact. The proposed project would likely result in an increase in water demand related to cargo and site washing as well as employee restroom and break room use. The project's additional water demand will be discussed in the EIR.

e. ***Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?***

Potentially Significant Impact. The proposed project would generate some additional wastewater related to restroom and break room use as more employees will be working at TAMT in the future. Further discussion of wastewater generation will be included in the EIR.

f. ***Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?***

Potentially Significant Impact. During site preparation, concrete would be exported off-site to an approved facility for recycling. Nine facilities in San Diego County accept concrete for recycling (Recycle San Diego 2014).[1] During operations, very small amounts of waste, associated with the additional permanent employees, would be generated. However, further discussion in the EIR is warranted.

g. ***Comply with Federal, State, and local statutes and regulations related to solid waste?***

Less-than-Significant Impact. Assembly Bill (AB) 939 requires each city and county in the state to divert at least 50% of its solid waste from landfill disposal through measures such as source reduction, recycling, and composting. AB 939 mandates the reduction of solid waste disposal in landfills and a minimum 50% diversion goal, and also requires cities and counties to prepare Source Reduction Recycling Elements in their General Plans. Concrete and building materials associated with

[1] Recycle San Diego. 2014. *Recycling Concrete*. Available: <http://recyclesandiego.org/item/concrete/>. Accessed: April 30, 2014.

demolition of the transit sheds and any other demolition that would occur during the life of the redevelopment plan would be exported and recycled at one of several approved facilities in San Diego County. During operations, the project would generate waste associated with the additional employees, which would consist primarily of food and beverage packaging that would be disposed of on site in appropriate waste and recycling receptacles. Therefore, the proposed project would have a less-than-significant impact related to compliance with federal, state, and local statutes and regulations related to solid waste.

h. Result in the wasteful, inefficient, and unnecessary consumption of energy?

Potentially Significant Impact. The proposed project would increase cargo throughput at the TAMT. This would be partly accomplished by improving infrastructure at the TAMT including adding two gantry cranes, more lighting, and additional open area storage by demolishing two transit sheds. Therefore, the project could require additional energy beyond what is currently used at the TAMT.

According to Appendix F, Energy Conservation, of the State CEQA Guidelines, a project has the potential to result in wasteful, inefficient, and unnecessary consumption of energy when considering:

- The project's energy requirements and its energy-use efficiencies by amount and fuel type for each stage of the project, including construction, operation, maintenance, and/or removal.
- The effects of the project on local and regional energy supplies and requirements for additional capacity.
- The effects of the project on peak- and base-period demands for electricity and other forms of energy.
- The degree to which the project complies with existing energy standards.
- The effects of the project on energy resources.

Considering the proposed project's increase in energy demand, impacts associated with the consumption of energy are considered potentially significant and will be further analyzed in the EIR.

Further discussion in the EIR is warranted.

XVIII. Mandatory Findings of Significance		Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
a.	Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	☒	☐	☐	☐
b.	Does the project have impacts that are individually limited but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	☒	☐	☐	☐
c.	Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	☒	☐	☐	☐

a. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?

Potentially Significant Impact. The project site does not support any special-status plant species but may support suitable habitat for special-status bats. Further evaluation will be provided in the EIR. No in-water work would occur in the Bay, which would avoid any impacts on a fish and marine mammal species. Additionally, because the site was not created until the mid-twentieth century using fill materials, there is no potential for any prehistoric resources to be affected. However, given the age of the buildings on the project site, the potential exists for impacts on historical buildings. As such, this issue will be further evaluated in the EIR.

b. Does the project have impacts that are individually limited but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)

Potentially Significant Impact. A cumulative impact could occur for a given resource area if the project were to result in an incrementally considerable contribution to a significant cumulative impact that has resulted from past, present, and reasonably foreseeable future projects. As discussed in Sections I though XVII, the proposed project could result in potentially significant impacts. Even issues that were found to be less than significant with implementation of the project could contribute to a cumulatively significant impact. As such, the potential cumulative impact from all resource issues will be evaluated in the EIR.

c. ***Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?***

Potentially Significant Impact. Given the analysis provided in Sections III (Air Quality), IV (Geology and Soils), VII (Greenhouse Gas Emissions), VIII (Hazards and Hazardous Materials), IX (Hydrology and Water Quality), XII (Noise), and XVI (Transportation/Traffic), the proposed project could result in a potentially significant impact that could cause substantial adverse effects on human beings, either directly or indirectly. Therefore, this issue will be further discussed in the EIR.

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Personal Communication

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This summary to the Tenth Avenue Marine Terminal Redevelopment Plan has been co-authored the Vickerman & Associates ("V&A") team and the San Diego Unified Port District ("SDUPD" and "the District") staff to inform the preparation of a Programmatic Environmental Impact Report (PEIR) for three Redevelopment concepts on the Tenth Avenue Marine Terminal.

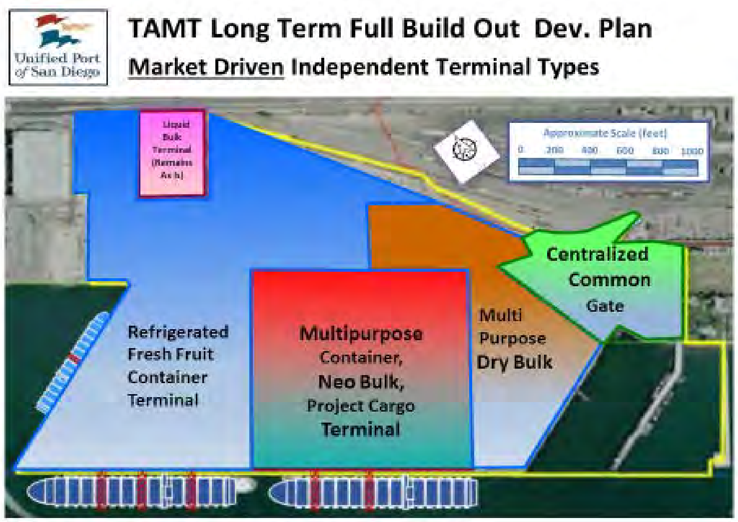
The District commissioned the Vickerman and Associates team to update a maritime business plan ("2008 Business Plan") that was published in December 2008 by the Port of San Diego. Cargo patterns and industry economics have changed since the 2008 economic baseline was established. The global cargo market is recovering following the 2008 global recession. At this time, future growth in both the container and non-container cargo markets are projected, which is creating potential opportunities to handle additional volume at TAMT. However, although potential market opportunities continue to increase, the terminal infrastructure presents challenges to serve additional cargo volumes. An update to the 2008 Maritime Business Plan and review of potential redevelopment concepts were warranted for these reasons.

The overall objective of the Tenth Avenue Marine Terminal Redevelopment Plan ("Redevelopment Plan" or "the Plan") is to provide the District with a series of market-driven port terminal development concepts for the Tenth Avenue Marine Terminal (TAMT), which will appropriately position the Port of San Diego to maximize cargo growth while maintaining sustainable and environmentally responsible cargo operations. While the Plan developed by Vickerman & Associates was not intended to become the foundation of an Environmental Impact Review document, as these development concepts were further refined and various infrastructure improvements became apparent, the District concluded that a formal environmental analysis under the California Environmental Quality Act (CEQA) would be necessary. As a result, the District decided to prepare a Programmatic Environmental Impact Report (PEIR). The PEIR will analyze the three most likely Redevelopment Plan concepts based on customer and cargo mix, core business strengths, and terminal footprint. These three development concepts encompass a variety of cargos, including refrigerated and dry containers. The remaining two concepts, which will not be advanced for full analysis, require the terminal be converted nearly entirely to container operations. A full-container model is not consistent with the District's core maritime cargo strengths, and represents a departure from the existing markets and cargo mix served at TAMT. For these reasons, the decision was made to proceed with an analysis of the "most impactful" volumes generated by the three primary terminal redevelopment concepts. This document highlights the Redevelopment Plans development concepts, as well as other pertinent data, that will be used to evaluate potential environmental impacts associated with its implementation.

The TAMT Redevelopment Plan establishes an overall business framework to help make project level decisions based on long range market needs to 2035. It includes an analysis of emerging industry-wide maritime and intermodal trends. It also includes a review of the actual TAMT cargo throughput, market assessments and forecasts, and proposes various infrastructure and transportation improvements that should be implemented as market conditions allow[1]. It identifies development and improvement concepts by dividing the TAMT into like operating nodes or modules. These nodes should be viewed as flexible "bladders" with similar operational cargo characteristics capable of expanding or contracting to meet operational and market conditions. The Plan identifies a Centralized Gate Complex as a tenant-in-common planning node, and the following four operating nodes:

[1] A final determination on a specific investment should only be considered after a complete and full financial and Return-On-Investment (ROI) analysis. This analysis needs to itemize all capital costs, ongoing District expenses, revenues and provide a detailed cash flow. For planning purposes, however, the Redevelopment Plan suggests improvements should be considered when each node reaches 70% of the MPC identified in the 2008 Maritime Business Plan.

1. Consolidated Dry Bulk
2. Liquid Bulk (existing operations to remain as-is over the plan-horizon year)
3. Refrigerated Container / Fresh Fruit
4. Neo Bulk / Break Bulk / General Container Cargo



Source: Vickerman & Associates 2014

Within these nodes, the Plan identifies two distinct types of cargo throughput measurements. The first measurement is related to the terminal's maximum practical capacity (MPC), which is the highest theoretical activity level at which the terminal, or node, could operate if all physical improvements were made and if market conditions allowed. The second measurement is the Redevelopment Plan's 2035 Forecast that was developed through discussions with current tenants, potential tenants, and knowledge of industry trends. The Plan includes a cursory GDP Market Cargo Forecast overview for the District and integrates the forecast results into the Plan[2].

The MPC for the Neo Bulk / Break Bulk / General Cargo node varies based on the specific type of cargo that is ultimately pursued, and this in turn affects the MPC that can be accommodated at the Refrigerated Container node. The Plan updates the MPC to a 2035 horizon by looking at five distinct market driven development concepts, three of which will be analyzed in the PEIR.

Development Concepts #1-3 are described in detail below, and per the Redevelopment Plan, estimate a "most impactful" MPC of 5.5 million metric tons of cargo, in which containers would be handled in conjunction with neo bulk and break bulk cargos. The remaining two concepts are as follows:

- Development Concept #4: Full Refrigerated & Dry Containers, with an estimated total MPC of 5.8 million MT of container cargo
- Development Concept #5: Dry Container Full Build-out, with an estimated total MPC of 6.0 million MT of container cargo

Both of these development concepts exclude Neo Bulk and Break Bulk cargo from consideration, resulting in zero volume for these commodity types. However, the District has a longstanding commitment to handling neo bulk, break bulk and roll-on/roll-off cargos. Additionally, the additional metric tonnage potential for a full-container scenario is not significant to justify the exclusion of non-containerized commodities. Finally, the

[2] The GDP market forecast is a measurement of trade within the San Diego area using U.S. state and local GDP figures.

market for container vessels suitable to TAMT is clearly defined; focusing exclusively on a few carriers would represent a departure from an established and successful business development strategy. For these reasons, it was determined that the PEIR would focus on the first three redevelopment concepts as the primary options for analysis.

For the purposes of the environmental analysis, the maximum practical capacity (MPC) is used to determine the "worst case", or most impactful, environmental scenario. This scenario assumes all potential improvements identified in the Plan are constructed and that market conditions enable the terminal to operate at its MPC. Depending on the commodity mix handled and ultimately pursued at the terminal, the MPC for the three development concepts to be analyzed at TAMT ranges between 5 and 5.5 million metric tons annually[3]. Conversely, the Plan's 2035 Forecast identifies a more realistic planning scenario based on information obtained from existing and potential tenants, as well as current maritime trends. A realistic forecast is estimated to be approximately 4.2 million metric tons annually. The Plan's maximum practical capacities and 2035 forecasts for each of the four operating nodes are summarized below:

	2035 Maximum Practical Capacity (MPC) [1]	Redevelopment Plan's 2035 Forecast
Dry Bulk	2,650,000	2,146,645 [2]
Liquid Bulk	239,017	154,000 [3]
Refrigerated Container	1,799,893 [4]	1,790,155
Neo Bulk / Break Bulk / General Container Cargo(Omni)	629,650 [5]	114,824
TOTAL	**5,318,560** [6]	**4,205,624**

Notes:

1 Construction of the infrastructure improvements identified in the Plan are required to attain the MPCs identified.

2 For the purposes of the analysis, two additional dry bulk customers were assumed over existing tenant volume, which resulted in a forecast of approximately 2,146,645 MT. However, as noted in the previous column, the MPC indicates that additional dry bulk volume could be accommodated.

3 The Redevelopment Plan acknowledges the existing liquid bulk facility, however it does not suggest any operational or infrastructure changes to the facility. Current capacity is sufficient to handle market demand and operations at the MPC, and is projected to remain sufficient throughout the plan horizon.

4 For ease of understanding, District staff calculated an average based on all of the potential MPC's for the refrigerated container node, which may shift depending on the cargo mix handled at the adjacent Neo-bulk node. The 1,799,893 MT average is based on averaging three Refrigerated Container Cargo MPC figures: 2,288,000, 1,555,840 MT and 1,555,840 MT, which are based on differentdevelopment concepts. Development Concept #1 assumes the terminal attains an MPC of 2,288,000 MT of refrigerated container cargo, which results in a 327,700 MT MPC for the Neo Bulk / Break Bulk / General Container Cargo node. Development Concept #2 assumes a MPC of 1,555,840 MT of refrigerated container cargo, which results in a 977,400 MT MPC for Neo Bulk / Break Bulk / General Container Cargo. Finally, Development Concept #3 assumes a MPC of 1,555,840 MT of refrigerated container cargo, which results in a MPC of 583,850 MT for Roll-on / Roll-off Neo Bulk cargo.

5 District staff also t identified a 629,650 MT average for the Neo Bulk / Break Bulk / General Container Cargo MPC that is based on three distinct cargo types that could be pursued at this node, as well as the MPC of the adjacent Refrigerated Container cargo node. The 629,650 MT average is based on averaging the following three Neo Bulk MPC figures: 327,700 MT for special non-containerized break bulk cargo, 977,400 MT for dry container cargo and 583,850 MT for roll-on / roll-off cargo, including automobiles and other wheeled vehicles.

6 The total is an average of the three cargo development concepts identified in the TAMT Redevelopment Plan, which looked at different cargo types for the Neo

[3] Although the Redevelopment Plan identifies four cargo handling nodes, two of the nodes (e.g. the Refrigerated Container Node and Neo Bulk Node) result in different MPC's depending on the type of cargo that is pursued. For comparison purposes, an average MPC was identified for the Refrigerated Container node and the Neo Bulk / Break Bulk / General Container Cargo. For more information on the three cargo development concepts and how the average MPC was derived, please see pages 6 and 7 of the Executive Summary.

Bulk and Break Bulk node, as outlined above. Development Concept #1 results in 5,504,717 MT, Development Concept #2 results in 5,422,257 MT, and Development Concept #3 results in 5,028,707 MT. For more information, see pages 8 through 10 of the Executive Summary.
Source: San Diego Unified Port District

A description of the centralized gate facilities, as well as each of the four operating nodes, is summarized below. The summary includes the nodes' approximate location, the berth that serves the cargo in those nodes, and any infrastructure improvements that would be needed to attain the maximum practical capacities (MPC's) identified in the Redevelopment Plan. It also identifies the Plan's 2035 Forecast for each operating node. To help ensure that future improvements are market-driven, the Redevelopment Plan suggests waiting to make any improvements until the node reaches 70% of the MPC that was identified in the 2008 Maritime Business Plan, as described below.

Central Gate Facilities: This node involves the creation of a common gate facility, with a new truck weigh station, in the general location of the existing gate[4]. It would be utilized by all terminal tenants and customers.

Dry Bulk: This node includes products that are delivered in bulk or supersacks (also known as bulk-bags) to the ground, flat storage, silo's, and/or through a new consolidated facility. Dry bulk products include (but are not limited to) cement, Fly-Ash, Slag, Bauxite, Chemical NEC, Potassium-Nitrate, Soda Ash, and other non-hazardous bulk materials. The market forecast assumed a Compound Annual Growth Rate (CAGR) for cement between 9% and 15% to year 2020, and a 3% CAGR thereafter. It also assumed a 1% CAGR for export potash and a 2% CAGR for other dry bulk commodities. The Plan's 2035 Forecast for Dry Bulk is expected to be approximately 2,146,645 MT annually. The Dry bulk node would be located in the general area of the southeastern portion of the terminal, also referred to as terminal "backlands." This node would be served by Berth 10-7/10-8, with overflow capacity handled at Berth 10-5/10-6. Under existing conditions, the dry bulk node has a maximum practical capacity of 2,250,000. Therefore, the Plan recommends that infrastructure improvements should not be considered until dry bulk throughput reaches 1,575,000 metric tons annually. With the following infrastructure improvements identified in the Redevelopment Plan, the Dry Bulk Node, would have a **maximum practical capacity of 2,650,000 metric tons**:

- Establishing a consolidated Multi-purpose Dry-bulk facility with two cement handling facilities, including a new semi-permanent storage facility (e.g. a Rubb style of building or equivalent) up to a total of 100,000 square feet, to store dry bulk products.
- Demolishing the existing inactive liquid-Molasses tanks once a new bulk storage facility has been established, creating space that can be configured to serve dry bulk commodities.
- Demolishing Warehouse C and transferring any dry bulk tenants to the proposed multi-purpose Dry-bulk facility.
- Upgrading or adding a new conveyor system to handle bauxite or soda ash, and connecting the new semi-permanent dry bulk storage facilities to berths 10-5/10-6 and 10-7/10-8.
- Adding a consolidated bulk discharge unloader using a 200 metric ton per hour vacuum (or better) for cementatious materials at Berth 10-7/10-8 (either a Kovaco, Siwertell or similar type system).
- Establishing approximately 5 acres of open-storage space between Water Street and Terminal Street for various operational purposes.

[4] The Redevelopment Plan acknowledges that there may be interest in developing an Alternate Central Gate complex. However, there have been no preliminary engineering studies or other technical work performed to evaluate its technical feasibility or assess its potential environmental impacts. Therefore, the Alternate Central Gate complex is not identified in the project description for the PEIR. However, if the PEIR finds that an Alternate Central Gate could help alleviate certain environmental impacts, than it may be incorporated into the PEIR as a mitigation measure and/or as a project alternative.

Liquid Bulk: Liquid bulk commodities currently handled at the TAMT include petroleum products and fuel for vessels and the airport[5]. The Liquid bulk node and its existing infrastructure are acknowledged by the proposed Redevelopment Plan, but the Plan does not propose any changes to its current location or any infrastructure improvements. Preferred berths would continue to be 10-1/10-2 and 10-3/10-4. The current maximum practical capacity according to the 2008 Business Plan is 220,000 metric tons of liquid bulk cargo. The Redevelopment Plan estimates that the existing infrastructure is capable of handling slightly more than what was identified in the 2008 Business Plan, and updates the **maximum practical capacity to 239,017 metric tons** for liquid bulk cargo. However, the plan acknowledges that, based on market fluctuations in the price of liquid fuels, it is best practice to maintain a minimum level of fuel in storage. Should the market dictate storing fuel in levels above 70% of capacity, the liquid bulk facility operator has indicated barges would be employed to supplement the operation on a short term basis. As such, no changes to infrastructure or customer base are recommended for the liquid bulk facility. For the purposes of the environmental analysis, the District and Vickerman & Associates have determined that an annual figure of 154,000 MT of Liquid Bulk would be an appropriate estimate for the Plan's 2035 Forecast. This figure is 70% of the 220,000 MT MPC that was identified in the 2008 Business Plan.

Refrigerated Container: The Refrigerated container node would include refrigerated and frozen perishable commodities, and other containerized cargo that may or may not need to be refrigerated. It would be located on the northern portion of the terminal and served by Berths 10-3/10-4, and overflow would be handled at Berths 10-1/10-2 and 10-5/10-6, depending on vessel size and operational requirements. According to the 2008 Business Plan, the refrigerated container facility has a maximum practical capacity of approximately 730,000 metric tons. The future boundary between the proposed refrigerated container node and the proposed multi-purpose general cargo node would be imprecise by design. The Redevelopment Plan calls for these two areas of the terminal to be used for the handling of diverse cargos as market conditions and vessel schedules permit. As such, construction of the refrigerated container node and Neo Bulk / Break Bulk / General Container Cargo node would happen simultaneously.

The Redevelopment Plan forecasts substantial growth in the refrigerated container market. With the improvements identified in the Plan, the Plan's 2035 forecast for the refrigerated container cargo node is 1,790,893 MT. The Plan's forecast assumes that the terminals current tenant (Dole Fresh Fruit Company) would continue to operate through the year 2035 and that a new customer, specializing in refrigerated container cargo would begin sometime in calendar year 2016. The Plan's forecast assumes a second refrigerated container carrier's vessels would have a capacity of 350 forty-foot equivalent units (FEU) in 2016, a 500 FEU capacity in 2021, and a 700 FEU capacity in 2030[6]

Based on the three potential development concepts identified in the Redevelopment Plan, the District has calculated an **average maximum practical capacity of 1,799,893 metric tons for the Refrigerated**

[5] Historically, molasses products were also handled at the TAMT. However, TAMT has not handled molasses for several years and the Redevelopment Plan recommends demolition of the existing molasses tanks.

[6] The Redevelopment Plan is not intended to address tenant projects or maintenance at the terminal, as these types of projects have independent utility and do not rely on the adoption of the Redevelopment Plan. However, these types of projects will be included as part of the cumulative analysis in the EIR. Therefore, it should be noted that the Dole Fresh Fruits Company (Dole) has submitted an application to construct an additional 94 refrigerated racks within its leasehold. The project is intended to help Dole accommodate additional cargo volume by increasing its on-site refrigerated storage capabilities. The District has determined that the Dole project will require the issuance of a non-appealable Coastal Development Permit (CDP), as well as a stand-alone environmental document, both of which will be processed independently of the proposed TAMT Redevelopment Plan. The TAMT Redevelopment Plan, and its programmatic environmental analysis, will assume Dole, or another similar type of tenant, will remain a tenant and that its proposed infrastructure improvements will be made to its leasehold to accommodate additional cargo volume. By disclosing these assumptions, the Redevelopment Plan can more accurately forecast market conditions for the refrigerated container node, and the District can more easily comply with the provisions of the California Environmental Quality Act (CEQA).

Container node. The three development concepts affecting the MPC for the Refrigerated Cargo nodes are summarized below:

1. The first MPC development concept assumes that the Neo Bulk / Break Bulk / General Container Cargo node would continue to process large, heavy break-bulk items that are “high” and “wide”. Under this development concept, the Refrigerated Container node would have a MPC of approximately 2,288,000 MT; or
2. Under the second MPC development concept, the Refrigerated Container node would have a MPC of approximately 1,555,840 MT, if the Neo Bulk / Break Bulk / General Container Cargo node processed some break bulk cargo and was supplemented with dry container cargo; or
3. Under the third MPC development concept, the Refrigerated Container node would also have a MPC of approximately 1,555,840 MT, if Roll-on / Roll-off cargo (e.g. automobiles) were processed at the Neo Bulk / Break Bulk / General Container Cargo node.

Both estimates (the 2035 MPC and the Plan’s 2035 Forecast) would require the following infrastructure improvements to be made within this node:

- The demolition of Transit Sheds #1 and #2.
- Constructing two to three 100 foot Gantry Cranes (intended to serve containerized cargo) at Berths 10-3 and 10-4, and the infrastructure required to support those cranes.
- Maintaining Warehouse B (200,000 sq. ft.) as a cold storage facility.

Neo Bulk / Break Bulk with General Container Cargo: The Neo Bulk / Break Bulk / General Container Cargo node includes the broadest range of cargo types including rolling vehicles, bagged and palletized products, and large, heavy break-bulk items that cannot move in standard containers. The Neo Bulk / Break Bulk / General Container Cargo node would be centrally located in the terminal, in the vicinity of portion of what is currently Transit Shed #1, Transit Shed #2, and Warehouse C. This facility could also include an intermodal rail facility, which would be located on the southern portion of the terminal in the area that is currently occupied by the eastern portion of Warehouse C. The Neo-Bulk node would be primarily served by berth 10-5/10-6, with overflow handled at Berths 10-3/10-4. As discussed above, it would share a boundary with the Refrigerated Container node, which would be imprecise by design to allow flexibility for the area of the two nodes. The area is intended to remain open to allow for the handling of diverse cargos as market conditions and vessel schedules permit.

The Redevelopment Plan forecasts moderate growth in Neo Bulk / Break Bulk / General Container cargo. Based in part on gross domestic product projections and market trends, as well as accounting for a broad array of cargo types, the Plan’s 2035 Forecast estimates approximately 114,824 MT of Neo Bulk / Break Bulk / General Container cargo.

Conversely, the District identified an **average maximum practical capacity for the Neo Bulk / Break Bulk / General Container Cargo node is 629,650 metric tons**, based on the development concepts presented in the Redevelopment Plan. Similar to the Refrigerated Container node, the MPC for the Neo Bulk / Break Bulk / General Container Cargo node varies based on what development concept, or cargo type, is ultimately pursued, assuming the various infrastructure improvements identified in the Redevelopment Plan are realized. The first development concept assessed the capacity of the terminal to continue to process “high” and “wide” break bulk items that cannot move in standard containers. Under this development concept, the MPC of the Neo Bulk / Break Bulk / General Container Cargo node would be approximately 327,700 MT annually. The second development concept assessed the capability of the Neo Bulk / Break Bulk / General Container Cargo node to process some break bulk cargo that would be supplemented with dry containers. Under this development concept, the MPC of the Neo Bulk / Break Bulk / General Container Cargo would be approximately 977,400 MT annually. Finally, the third development concept assessed the capacity of the Neo Bulk / Break Bulk / General Container Cargo node to process roll-on / roll-off cargo, which could include automobiles. Under this development concept, the MPC of the Neo Bulk / Break Bulk / General Container Cargo node would be 583,850 MT of cargo annually.

Although all three Neo Bulk / Break Bulk / General Container Cargo development concepts would result in a different maximum practical capacity, for planning purposes, all three concepts were assumed to require following infrastructure improvements identified in the Redevelopment Plan:

The Redevelopment Plan identifies three separate development concepts for the Neo Bulk / Break Bulk / General Container Cargo node, all of which would result in different maximum practical throughput capacities. However, for planning purposes, all three development concepts were assumed to require following infrastructure improvements to attain the maximum practical capacities identified in the Redevelopment Plan:

- Installing two to three gantry cranes (intended to serve containerized cargo) at Berths 10-5/10-6, including associated infrastructure to support those cranes.
- Demolition of Warehouse C and Transit Sheds #1 and #2, creating up to 20 acres of open storage space.
- Upgrades to the existing on-dock rail infrastructure
- Installation of additional rail infrastructure to create an on-dock intermodal rail facility in the vicinity of what is currently the eastern portion of Warehouse C
- Various intermodal yard and backland improvements, which could include:
  - Bridge crane.
  - Full wheel container module with gantry cranes.
  - Rubber-tired cranes for load-on and load-off (LO/LO).
  - Straddled carrier (stacked) for intermodal facility.
  - Additional paving of backland area to hand (at least) a 600-per-square-foot (psf) live load.
  - Container handling equipment to handle 100 kipa wheel live load.
  - Generator and accompanying housing structure.
  - Temporary or semi-permanent office space for staff and support personnel

The maximum practical capacities for the three Neo Bulk / Break-bulk node cargo mix alternatives are summarized in the following tables. Including Roll-on / Roll-off cargo and general dry containers in this mode requires additional operating space such as to limit the MPC of the adjacent refrigerated container node. Limiting operations to only break-bulk cargos in this node increases the MPC of the adjacent refrigerated container node.

Development Concept #1: Neo Bulk / Break Bulk / General Container Cargo	
Maximum 2035 Maximum Practical Capacity (MPC)	
Refrigerated Container	2,288,000 MT
Neo Bulk / Break Bulk / General Container Cargo	327,700 MT
TOTAL OF REFRIGERATED CONTAINER AND NEO-BULK NODE WITH BREAK-BULK:	**2,615,7000 MT**
Source: San Diego Unified Port District	

Development Concept #2: Neo Bulk / Break Bulk / General Container Cargo	
Maximum 2035 Maximum Practical Capacity (MPC)	
Refrigerated Container	1,555,840 MT
Neo Bulk / Dry Containers	977,400 MT
TOTAL OF REFRIGERATED CONTAINER AND NEW-BULK NODE WITH ADDTL CONTAINERS:	**2,533,240 MT**
Source: San Diego Unified Port District	

Development Concept #3: Neo Bulk / General Cargo with Automobiles, Ro-Ro	
Maximum 2035 Maximum Practical Capacity (MPC)	
Refrigerated Container	1,555,840 MT
Neo Bulk Roll-on / Roll-off	583,850 MT
TOTAL OF REFRIGERATED CONTAINER AND NEO-BULK NODE WITH RO-RO:	**2,139,690 MT**
Source: San Diego Unified Port District	

The following chart shows the maximum practical capacity of the terminal in annual metric tons, based on the nodes as outlined above. An average tonnage is used to represent the neo-bulk and refrigerated container nodes, acknowledging the MPC will be affected by the cargo commodity mix that is ultimately handled in those areas. This average calculation is not a reflection of a potential development concept contained in the Redevelopment Plan, but rather for ease of understanding and quantifying variations in potential cargo tonnage based on changes in cargo mix:

SUMMARY OF 2035 MPC Development Concepts AND AVERAGE METRIC TON CALCULATIONS					
Cargo Node:	**Dry Bulk** (no variation)	**Liquid Bulk** (no variation)	**Refrigerated Containers**	**Neo Bulk and Break Bulk** (includes Dry Containers & Roll-on / Roll-off)	**Total in MTs**
Development Concept #1	2,650,000 MT	239,017 MT	2,288,000 MT	327,700[1] MT	5,504,717 MT
Development Concept #2	2,650,000 MT	239,017 MT	1,555,840 MT	977,400[2] MT	5,422,257 MT
Development Concept #3	2,650,000 MT	239,017 MT	1,555,840 MT	583,850[3] MT	5,028,707 MT
Total	7,950,000 MT	717,051 MT	5,399,680 MT	1,888,950 MT	15,955,681 MT
Divided by # of Concepts	3	3	3	3	3
Average (MT) per Node:	2,650,000	239,017	1,799,893	629,650	**5,318,560**
Source: San Diego Unified Port District					

[1] Development Concept #1 assumes that the Neo Bulk node would continue to specialize in non-containerized break-bulk cargo.

[2] Development Concept #2 assumes that the Neo Bulk node would include dry container cargo.

[3] Development Concept #3 assumes that the Neo Bulk node would pursue roll-on / roll-off cargo, including automobiles and other wheeled vehicles.

The Redevelopment Plan identifies the following key principles and recommendations to be implemented in conjunction with the various optimum development and improvement concepts discussed above.

1. Improvements need to be market-driven. The Redevelopment Plan includes a cursory market forecast to 2035, but these forecasts may need to be updated as the 2035 horizon year approaches and/or as market conditions change. The need for infrastructure improvements can be illustrated and quantified using the (N = F – C) formula where forecast minus capacity equals need.
2. Demolition of Transit Sheds # 1 and # 2 is a high priority and will remove notable operational constraints.
3. Improvements should maximize cargo throughput capabilities and efficiencies, be consistent with the District's Climate Action Plan goals, policies and measures, and provide the District with competitive financial returns on the District's investments.
4. All District marine-oriented industrial uses, such as TAMT, should be encouraged to modernize to meet the present day expectations and requirements of the maritime industry. All of the development concepts identified in the Redevelopment Plan rely on the Modular Operating Grid System (MOGS), which involves standardized infrastructure improvements and large, open-storage space areas that can accommodate a wide variety of cargo types. The Modular Operating Grid System (MOGS) should be used in the planning, design and construction of improvements.
5. Employ a Central Gate node, in cooperation with TAMT users and tenants, and establish a practical "freight only" gate complex. TAMT should also maintain a secondary access gate for emergency egress situations.
6. When the market will sustain it, TAMT should employ on-dock intermodal operations to maximize freight rail utilization for general cargo container operations and reduce annual truck trips from TAMT.
7. While the District continues its efforts to secure near-term maritime opportunities, it should also anticipate long-term future cargo opportunities for TAMT. Although the actual booking of cargo remains the responsibility of the carriers and customers, the District should continue to monitor long-term market trends and work with carriers and customers to identify mutually beneficial terminal infrastructure improvements based on market conditions.
8. While dredging all berths to 42 feet MLLW may be beneficial, the Plan does not recommend dredging 10-1 and 10-2 due to operational and financial constraints. This may need to be reassessed in future plans.

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Appendix B
Notice of Preparation Letters

ELUM 23 MAR '15 AM 11:09

STATE OF CALIFORNIA

Governor's Office of Planning and Research

State Clearinghouse and Planning Unit

Edmund G. Brown Jr.
Governor

Ken Alex
Director

Notice of Preparation

March 12, 2015

To: Reviewing Agencies

Re: Tenth Avenue Marine Terminal (TAMT) Redevelopment Plan
SCH# 2015031046

Attached for your review and comment is the Notice of Preparation (NOP) for the Tenth Avenue Marine Terminal (TAMT) Redevelopment Plan draft Environmental Impact Report (EIR).

Responsible agencies must transmit their comments on the scope and content of the NOP, focusing on specific information related to their own statutory responsibility, within 30 days of receipt of the NOP from the Lead Agency. This is a courtesy notice provided by the State Clearinghouse with a reminder for you to comment in a timely manner. We encourage other agencies to also respond to this notice and express their concerns early in the environmental review process.

Please direct your comments to:

Larry Hofreiter
San Diego Unified Port District
3165 Pacific Highway
San Diego, CA 92101

with a copy to the State Clearinghouse in the Office of Planning and Research. Please refer to the SCH number noted above in all correspondence concerning this project.

If you have any questions about the environmental document review process, please call the State Clearinghouse at (916) 445-0613.

Sincerely,

Scott Morgan
Director, State Clearinghouse

Attachments
cc: Lead Agency

Document Details Report
State Clearinghouse Data Base

SCH# **2015031046**
Project Title Tenth Avenue Marine Terminal (TAMT) Redevelopment Plan
Lead Agency San Diego Unified Port District

Type **NOP** Notice of Preparation

Description The project is a long-range Redevelopment Plan and near-term project improvements to accommodate anticipated economic activity at the Tenth Avenue Marine Terminal. The development concepts and infrastructure improvements identified in the Redevelopment Plan would result in a maximum practical capacity (MPC) at TAMT in 2035 between 5 million and 5.5 million metric tons annually. The near-term, project level component of the plan would demolish two obsolete/under utilized transit sheds and would improve rail operations by installing a rail lubricator and compressed air system on the existing track. The near-term project level improvements are anticipate to occur in 2016 (or when funding is available) and will take ~29 weeks. The long range development concepts would occur over several years as market conditions allow.

Lead Agency Contact

Name Larry Hofreiter
Agency San Diego Unified Port District
Phone 619-686-6257 **Fax**
email
Address 3165 Pacific Highway
City San Diego **State** CA **Zip** 92101

Project Location

County San Diego
City San Diego
Region
Cross Streets Harbor Drive and Cesar Chavez Parkway (687 Switzer Street)
Lat / Long 32° 41' 57" N / 117° 9' 22" W
Parcel No. 020-183; 020-091; 020-025; 020-039
Township **Range** **Section** **Base**

Proximity to:

Highways I-5
Airports
Railways BNSF
Waterways San Diego Bay
Schools Perkins Elementary
Land Use Port Master Plan designates the 96-acre area as either Marine Terminal or Marine Related.

Project Issues Aesthetic/Visual; Air Quality; Archaeologic-Historic; Biological Resources; Coastal Zone; Drainage/Absorption; Flood Plain/Flooding; Geologic/Seismic; Noise; Public Services; Schools/Universities; Soil Erosion/Compaction/Grading; Toxic/Hazardous; Traffic/Circulation; Water Quality; Cumulative Effects

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Reviewing Agencies Resources Agency; Department of Parks and Recreation; Department of Fish and Wildlife, Region 5; Native American Heritage Commission; Caltrans, District 11; Air Resources Board; Regional Water Quality Control Board, Region 9; State Lands Commission; State Water Resources Control Board, Division of Water Quality; Department of Toxic Substances Control; California Coastal Commission; Caltrans, Division of Aeronautics

Note: Blanks in data fields result from insufficient information provided by lead agency.

Document Details Report
State Clearinghouse Data Base

Date Received 03/12/2015 ***Start of Review*** 03/12/2015 ***End of Review*** 04/10/2015

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NOP Distribution List | **County:** San Diego | **SCH#** 2015031046

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  Environmental Services Division
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  Tiffany Ellis
  Habitat Conservation Program
- [ ] **Fish & Wildlife Region 6 I/M**
  Heidi Sickler
  Inyo/Mono, Habitat Conservation Program
- [ ] **Dept. of Fish & Wildlife M**
  George Isaac
  Marine Region

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  Dept. of Food and Agriculture
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  Public School Construction
- [ ] **Dept. of General Services**
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  Environmental Services Section
- [ ] **Delta Stewardship Council**
  Kevan Samsam
- [ ] **Housing & Comm. Dev.**
  CEQA Coordinator
  Housing Policy Division

Independent Commissions, Boards

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  Cherry Jacques

Cal State Transportation Agency CalSTA

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  Philip Crimmins
- [ ] **Caltrans – Planning HQ LD-IGR**
  Terri Pencovic
- [ ] **California Highway Patrol**
  Suzann Ikeuchi
  Office of Special Projects

Dept. of Transportation

- [ ] **Caltrans, District 1**
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- [ ] **Caltrans, District 2**
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  Tom Dumas
- [x] **Caltrans, District 11**
  Jacob Armstrong
- [ ] **Caltrans, District 12**
  Maureen El Harake

Cal EPA

Air Resources Board

- [x] All Other Projects
  Cathi Slaminski
  - [ ] Transportation Projects
    Nesamani Kalandiyur
  - [ ] Industrial/Energy Projects
    Mike Tollstrup
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  Regional Programs Unit
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- [ ] **State Water Resources Control Board**
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  Division of Drinking Water
- [ ] **State Water Resources Control Board**
  Student Intern, 401 Water Quality Certification Unit
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- [ ] **RWQCB 1**
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  San Francisco Bay Region (2)
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- [ ] **RWQCB 8**
  Santa Ana Region (8)
- [ ] **RWQCB 9**
  San Diego Region (9)

- [ ] **Other** ____________
- [ ] ____________
  Conservancy

Last Updated 10/13/2014

DEPARTMENT OF TRANSPORTATION
DISTRICT 11
PLANNING DIVISION
4050 TAYLOR STREET, M.S. 240
SAN DIEGO, CA 92110
PHONE (619) 688-6960
FAX (619) 688-4299
TTY 711

Serious drought.
Help save water!

ELUM 1 APR '15 AM 7:58

March 24, 2015

11-SD-5
PM 14.12
NOP TAMT

Mr. Larry Hofreiter
Port of San Diego
3165 Pacific Highway
San Diego, CA 92101

Dear Mr. Hofreiter:

The California Department of Transportation (Caltrans) appreciates the opportunity to have reviewed the Notice of Preparation (NOP) for the 10th Avenue Marine Terminal (TAMT) Redevelopment Plan to take primary access at Cesar E. Chavez Parkway. The development is located nearest to Interstate 5 (I-5) and State Route 75 (SR-75) within the community of Barrio Logan. Caltrans has the following comments:

A traffic impact study (TIS) is necessary to determine this proposed project's near-term and long-term impacts to the State facilities – existing and proposed – and to propose appropriate mitigation measures. The study should use as a guideline the *Caltrans Guide for the Preparation of Traffic Impact Studies*. Minimum contents of the traffic impact study are listed in Appendix "A" of the TIS guide. www.dot.ca.gov/hq/tpp/offices/ocp/igr_ceqa_files/tis**guide**.pdf

The Level of Service (LOS) for operating State highway facilities is based upon Measures of Effectiveness (MOE) identified in the Highway Capacity Manual (HCM). Caltrans endeavors to maintain a target LOS at the transition between LOS "C" and LOS "D" on State highway facilities; however, Caltrans acknowledges that this may not always be feasible and recommends that the lead agency consult with Caltrans to determine the appropriate target LOS. If an existing State highway facility is operating at less than this target LOS, the existing MOE should be maintained. In general, the region-wide goal for an acceptable LOS on all freeways, roadway segments, and intersections is "D". For undeveloped or not densely developed locations, the goal may be to achieve LOS "C".

All State-owned signalized intersections affected by this project should be analyzed using the intersecting lane vehicle (ILV) procedure from the Caltrans Highway Design Manual, Topic 406, page 400-21.

The geographic area examined in the traffic study should include as a minimum all regionally significant arterial system segments and intersections, including State highway facilities where the project will add over 100 peak hour trips. State highway facilities that are experiencing noticeable delays should be analyzed in the scope of the traffic study for projects that add 50 to 100 peak hour trips.

All freeway entrance and exit ramps where a proposed project will add a significant number of peak-hour trips that may cause any traffic queues to exceed storage capacities should be analyzed. If ramp metering is to occur, a ramp queue analysis for all nearby Caltrans metered on-ramps is required to identify the delay to motorists using the on-ramps and the storage necessary to accommodate the queuing. The effects of ramp metering should be analyzed in the traffic study. For metered freeway ramps, LOS does not apply. However, ramp meter delays above 15 minutes are considered excessive.

The data used in the TIS should not be more than 2 years old.

Caltrans endeavors that any direct and cumulative impacts to the State Highway System be eliminated or reduced to a level of insignificance pursuant to the California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA) standards.

Mitigation measures to State facilities should be included in TIS. Mitigation identified in the traffic study, subsequent environmental documents, and mitigation monitoring reports, should be coordinated with Caltrans to identify and implement the appropriate mitigation. This includes the actual implementation and collection of any "fair share" monies, as well as the appropriate timing of the mitigation. Mitigation improvements should be compatible with Caltrans concepts.

Mitigation measures for proposed intersection modifications are subject to the Caltrans Intersection Control Evaluation (ICE) policy (Traffic Operation Policy Directive 13-02). Alternative intersection design(s) will need to be considered in accordance with the ICE policy; therefore, please refer to the policy for more information and requirements.
http://www.dot.ca.gov/hq/traffops/signtech/signdel/policy/13-02.pdf

The lead agency should monitor impacts to insure that roadway segments and intersections remain at an acceptable LOS. Should the LOS reach unacceptable levels, the lead agency should delay the issuance of building permits for any project until the appropriate impact mitigation is implemented.

Mitigation conditioned as part of a local agency's development approval for improvements to State facilities can be implemented either through a Cooperative Agreement between Caltrans and the lead agency, or by the project proponent entering into an agreement directly with Caltrans for the mitigation. When that occurs, Caltrans will negotiate and execute a Traffic Mitigation Agreement.

Any work performed within Caltrans right-of-way (R/W) will require discretionary review and approval by Caltrans and an encroachment permit will be required for any work within the Caltrans R/W prior to construction.

As part of the encroachment permit process, the applicant must provide an approved final environmental document including the California Environmental Quality Act (CEQA) determination addressing any environmental impacts within the Caltrans' R/W, and any corresponding technical studies. If these materials are not included with the encroachment permit application, the applicant will be required to acquire and provide these to Caltrans before the permit application will be accepted. Identification of avoidance and/or mitigation measures will be a condition of the encroachment permit approval as well as procurement of any necessary regulatory and resource agency permits. Encroachment permit submittals that are incomplete can result in significant delays in permit approval.

Improvement plans for construction within State Highway R/W must include the appropriate engineering information consistent with the state code and signed and stamped by a professional engineer registered in the State of California. Caltrans Permit Manual contains a listing of typical information required for project plans. All design and construction must be in conformance with the Americans with Disabilities Act (ADA) requirements.

Additional information regarding encroachment permits may be obtained by contacting the Caltrans Permits Office at (619) 688-6158. Early coordination with Caltrans is strongly advised for all encroachment permits.

If you have any questions, or require further information, please contact Trent Clark, at (619) 688-3140 or email at Trent_Clark@dot.ca.gov.

Sincerely,

JACOB M. ARMSTRONG, Chief
Development Review Branch

STATE OF CALIFORNIA EDMUND G. BROWN JR., *Governor*

PUBLIC UTILITIES COMMISSION
320 WEST 4TH STREET, SUITE 500
LOS ANGELES, CA 90013

April 7, 2015

Larry Hofreiter
San Diego Unified Port District
3165 Pacific Highway
San Diego, CA 92101

ELUM 7 APR '15 AM 11:54

Re: SCH 2015031046 – Tenth Avenue Marine Terminal (TAMT) Redevelopment Plan

Dear Mr. Hofreiter:

The California Public Utilities Commission (Commission) has jurisdiction over the safety of highway-rail crossings (crossings) in California. The California Public Utilities Code requires Commission approval for the construction or alteration of crossings and grants the Commission exclusive power on the design, alteration and closure of crossings. The Commission's Rail Crossings and Engineering Branch (RCEB) is in receipt of the *Notice of Preparation (NOP) for the Tenth Avenue Marine Terminal (TAMT) Redevelopment Plan draft Environmental Impact Report*. The San Diego Unified Port District (District) is the lead agency.

There are railroad and light rail transit tracks and crossings present in the vicinity of the project. Pedestrian and vehicular violations should be reviewed as part of the draft EIR. Any development adjacent to or near the railroad right-of-way (ROW) should be planned with the safety of the rail corridor in mind.

Additional traffic at intersections near highway-rail crossings may impact the ability of vehicles to move away from the tracks as a train is approaching. The need for traffic signal improvements or other improvements should be considered at those locations.

Modification to an existing public rail crossing requires authorization from the Commission. RCEB representatives are available for consultation on any potential safety impacts or concerns at crossings. Please continue to keep RCEB informed of the project's development. More information can be found at: http://www.cpuc.ca.gov/PUC/safety/Rail/Crossings/index.htm.

If you have any questions, please contact me at kevin.schumacher@cpuc.ca.gov or 415-310-9807.

Sincerely,

Kevin Schumacher
Utilities Engineer
Rail Crossings and Engineering Branch
Safety and Enforcement Division

CC: State Clearinghouse, P.O. Box 3044, Sacramento, CA 95812-3044

Air Resources Board

Mary D. Nichols, Chair
1001 I Street • P.O. Box 2815
Sacramento, California 95812 • www.arb.ca.gov

Matthew Rodriquez
Secretary for Environmental Protection

Edmund G. Brown Jr.
Governor

October 22, 2015

Mr. Larry Hofreiter
San Diego Unified Port District
3165 Pacific Highway
San Diego, California 92101

Dear Mr. Hofreiter:

Thank you for providing the California Air Resources Board (ARB) the opportunity to comment on the Notice of Preparation (NOP) for the Tenth Avenue Marine Terminal (TAMT) Redevelopment Plan (Plan) draft Environmental Impact Report (EIR). This new proposed Plan provides an opportunity to create a terminal that promotes the use of the cleanest technologies and practices available during both the construction phase and full project build-out.

The proposed Plan includes a number of features that begin to mitigate the air quality impacts of the proposed project. These features include 100-foot electrical cranes, electrical utility improvements, and on-terminal rail facility upgrades. However, the increase in cargo throughput from baseline conditions to 2035 is substantial. The long-term operation of diesel vehicles and equipment will likely have a significant impact in the region, especially given the proximity to residences and sensitive receptors. Should the project have significant impacts, the project features need to maximize the use of existing and emerging zero and near-zero emission technology for the vehicles and equipment that will serve the facility. Additionally, a full health risk assessment should be conducted and the air quality and health risk assessment should use both the existing conditions baseline and a future conditions baseline.

ARB staff concludes that it is extremely likely the proposed Plan will increase the health risk in the immediate area. Should the results of the EIR analysis finds this to be the case, the proposed Plan should utilize all existing and emerging zero-emission technology and implement land use decisions that minimize diesel particulate matter (PM) exposure to the neighboring community. ARB staff believes that technology capable of zero and near-zero emissions is available now and will be available for additional applications in the early years of full project build-out. The final project conditions should provide for the use of those technologies now and in the future. This will serve to better protect the health of nearby residents from the harmful effects of fine particle pollution, including diesel PM, and help achieve emission reductions required to attain air quality standards for all pollutants and reduce greenhouse gases.

We recognize the critical role the proposed Plan will play in keeping the San Diego Unified Port District (Port) competitive well into the future. The scale of the proposed Plan provides the City of San Diego and the Port an opportunity to set a benchmark for environmental leadership for freight transport in California while expanding economic opportunities.

Background

The proposed Plan covers 96 acres along the San Diego Bay (near downtown San Diego and the San Diego community of Barrio Logan). The proposed Plan replaces the existing 2008 Maritime Business Plan to meet current and future market conditions at the terminal. The proposed Plan includes a variety of infrastructure investments and improvements to accommodate a need to increase the terminal's capabilities and capacity within a 2025 and 2035 planning horizon.

Proposed improvements include up to five gantry cranes (some of which are electric), additional and consolidated dry bulk storage capacity, enhancements to the existing conveyor system, additional open storage space, a refrigerator container node, and on-dock intermodal rail facilities. Development Scenario 1 in the Notice of Preparation, states that the proposed Plan can result in a throughput of 5,504,717 Metric Tons of cargo annually, an increase of 4,520,876 Metric Tons from baseline conditions.

Existing land uses surrounding the TAMT include several sensitive receptors: Cesar Chavez Park, Perkins Elementary School, and Mercado Head Start Preschool, as well as the residences, schools, childcare facilities, and healthcare facilities along the truck routes that would be used by the additional trucks entering and leaving the TAMT. Also adjacent is the San Diego community of Barrio Logan, which is already determined by the California Environmental Protection Agency (CalEPA) to be among the worst five percent in the State for cumulative pollution burden.[1]

Project Design Features for Consideration

The majority of the probable localized cancer risk for the proposed Plan will likely be attributable to an increase in diesel PM from the construction and long-term operation of the facility. Consequently, ARB staff recommends actions to support the deployment of zero and near-zero emission technology to reduce localized health risk and regional

[1] Office of Environmental Health Hazard Assessment, "CalEnviro Screen Version 2.0," November, 10, 2014, <http://oehha.ca.gov/ej/ces2.html>, accessed April 30, 2015.

emissions. If analysis shows significant health or air quality impacts, consider implementing the following project features:

1) Incorporate zero and near-zero emission technologies that are commercially available over the course of project development and by full build-out in 2035. We believe that use of these technologies is feasible within the build-out years of the Plan[2]. Support the deployment of these technologies including utilizing zero emission (such as battery electric or fuel cell electric) forklifts, electrified rail mounted gantry cranes, and battery electric and hybrid electric medium-duty trucks to the fullest extent feasible. These technologies are commercially available today. Additional advancements, especially for on-road trucks, are expected in the next three to five years; well before project build-out in 2035. ARB's Technology and Fuels Assessments provide information on the current and projected development of mobile source technologies and fuels, including current and anticipated costs at widespread deployment. The assessments can be found at http://www.arb.ca.gov/msprog/tech/tech.htm.

2) Implement, and plan accordingly for, the necessary infrastructure to support the zero emission and near-zero emission technology vehicles and equipment that will be operating at the TAMT at full build-out. This includes physical (e.g. needed footprint), energy, and fueling infrastructure for construction equipment, on-site vehicles and equipment, and medium-heavy and heavy-heavy duty trucks.

3) Ensure that the berths providing shore power can accommodate changes to vessel sizes and various berthing configurations. Additionally, consider installing shore power or equivalent alternate control techniques at all berths at the terminal in order to eliminate emissions to the greatest extent possible. ARB's Sustainable Freight: Pathways to Zero and Near-Zero Emissions Discussion Document has identified the development and proposal of amendments to the At-Berth Regulation as an action that will be pursued over the next few years and implemented before 2035, if approved by the Air Resources Board.

4) Ensure that the terminal will continue to be plug-in equipped for the volumes expected at project build-out. If not already implemented, eliminate the amount of time that a transport refrigeration system powered by a fossil-fueled internal combustion engine can operate utilizing the combustion system while at the TAMT. Use of zero emission all-electric plug-in transport refrigeration systems,

[2] For the purposes of CEQA, "feasible" means capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors. (California Code of Regulations, title 14, section 15364)

hydrogen fuel cell transport refrigeration, and cryogenic transport refrigeration would be encouraged. We applaud the important work the Port has already done to make the terminal's cold storage and refrigerated container facilities state-of-the-art by including refrigerated container plugs and encourage continuing that practice.

5) Install an electronic gate access system (using Radio Frequency Identification tags for example) at the centralized common gate. This will allow for more efficient movement through the gate and will improve compliance with current regulations and programs for on-road trucks.

6) Ensure the cleanest possible construction practices and equipment are utilized. This should include eliminating idling of diesel powered equipment, requiring the use of zero and near-zero emission equipment and tools to the greatest extent feasible, and providing the necessary infrastructure, like electric hookups, to support that equipment. In addition, require all construction fleets be in compliance with current air quality regulations for off-road equipment. ARB is available to provide assistance in implementing this recommendation.

7) Ensure all tenants be in compliance and monitor compliance with all current air quality regulations for on-road trucks including ARB's Heavy-Duty Greenhouse Gas Regulation and Truck and Bus Regulation. ARB is available to provide assistance in implementing this recommendation.

Air Quality Analysis and Health Risk Assessment

Health Risk Guidance and Tools

ARB strongly recommends that a full health risk assessment is conducted. The health risk assessment should utilize the most current Office of Environmental Health Hazard Assessment (OEHHA) guidance for that assessment, which is presently the 2015 Air Toxics Hot Spots Program Guidance Manual for Preparation of Heath Risk Assessments found at http://oehha.ca.gov/air/hot_spots/hotspots2015.html.

Use of Current and Future Baseline in Health Risk and Air Quality Analysis

ARB also recommends that the health risk and air quality analysis use both the existing conditions baseline (current conditions) and a future conditions baseline (full build out year, without the project.) This analysis will be useful to the public in understanding the full impacts of the project. *Neighbors for Smart Rail v Exposition Metro Line Construction Authority* (2013) 57 C4th 439 confirmed the scope of a lead agency's discretion on how to best define a baseline under the circumstances of rapidly changing environmental conditions, and confirmed that a project may be reviewed using both an existing conditions and future conditions baseline. In this situation, the project site is located in a non-attainment area for several State and federal criteria pollutants and is adjacent to residential areas, sensitive receptors, and the community of Barrio Logan. Additionally, full build out of the proposed Plan will not occur until 2035, when environmental conditions may be significantly different from current conditions due to full implementation of existing regulation and policy. For those reasons, it is important to ensure that the public has a complete understanding of the environmental impacts of the proposed Plan, as compared to both existing conditions and future conditions.

Use of Highest Cargo Throughput Scenario in Analysis

When developing the health risk assessment, use the scenario with the highest cargo throughput for the analysis of project impacts. Table 3.2 in the Notice of Preparation indicates that Development Scenario 1 would generate the highest volume increase in cargo throughput. This scenario should be used unless preliminary analysis indicates that the Development Scenario 2 or 3 would generate more significant impacts.

Other Recommendations

Coordinate and consult with the community on truck traffic circulation

We recognize the important work the Port has previously done in collaborating with the community to identify truck routes that divert truck traffic away from neighborhood streets. We request that you continue that coordination and consultation with the community, especially Barrio Logan, while considering truck traffic impacts and circulation that will result from this project.

Develop and consider a project design alternative that is the cleanest feasible

ARB requests the lead agency to develop and analyze a project design alternative that uses the cleanest feasible technologies, which also poses the lowest possible air quality and health risk impacts. That alternative should include all of the mitigation measures and project design features outlined in this letter.

Closing

ARB staff appreciates the opportunity to comment on the Notice of Preparation for the proposed Plan. Given the scale of the terminal and the risk associated with the increase in diesel PM, it is critical that the draft EIR incorporate the use of zero and near-zero emission technologies as they become commercially available. We are pleased to provide assistance for successful implementation and deployment of a state-of-the-art facility that serves the region's distribution and air quality needs, while protecting public health.

If you would like to understand more about ARB's freight related work, please see our Sustainable Freight: Pathways to Zero and Near-Zero Emissions Discussion Document at http://www.arb.ca.gov/gmp/sfti/sfti.htm. Please include the Air Resources Board to your State Clearinghouse list of selected State agencies that will receive the Draft EIR as part of the comment period. If you have questions, please contact Ms. Kelly Lier, Air Pollution Specialist, Freight Transport Branch, at (916) 322-7194 or Kelly.Lier@arb.ca.gov

Sincerely,

Heather Arias

Heather Arias, Chief
Freight Transport Branch
Transportation & Toxics Division

cc: State Clearinghouse
P.O. Box 3044
Sacramento, California 95812-3044

Mr. Andy Hamilton
Section Supervisor
San Diego County Air Pollution Control District
10124 Old Grove Road
San Diego, California 92131-1649

Ms. Michelle White
Environmental Policy Manager
San Diego Unified Port District
3165 Pacific Highway
San Diego, California 92101-1128

Continued next page.

cc: (continued)

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Air Quality Specialist
San Diego County Air Pollution Control District
10124 Old Grove Road
San Diego, California 92131-1649

Ms. Jeanne Geselbracht
U.S. Environmental Protection Agency, Region IX
75 Hawthorne St., ENF-4-2
San Francisco, California 94105

Mr. Bill Figge
Deputy District Director of Planning, District 11
California Department of Transportation
4050 Taylor Street
San Diego, California 92110

Ms. Dawn Cheser
Acting Chief, Office of Freight Planning
California Department of Transportation
Division of Transportation Planning, MS #32
P.O. Box 942874
Sacramento, California 94274-0001

Kelly Lier
Air Pollution Specialist
Freight Transport Branch

ELUM 14 APR '15PM4:57

SANDAG

401 B Street, Suite 800
San Diego, CA 92101-4231
(619) 699-1900
Fax (619) 699-1905
sandag.org

April 14, 2015

File Number 3330300

Mr. Larry Hofreiter
Environmental & Land Use Management Department
San Diego Unified Port District
3165 Pacific Highway
San Diego, CA 92101

Dear Mr. Hofreiter:

SUBJECT: Comments on the Notice of Preparation (NOP) of an Environmental Impact Report (EIR) for the Tenth Avenue Marine Terminal (TAMT) Redevelopment Plan

Thank you for the opportunity to comment on the NOP for the TAMT Redevelopment Plan (UPD #EIR-2015-39).

Our comments are based on policies included in the Regional Comprehensive Plan (RCP) and the 2050 Regional Transportation Plan and its Sustainable Communities Strategy (2050 RTP/SCS) and are submitted from a regional perspective, emphasizing the need for land use and transportation coordination, and implementation of smart growth and sustainable development principles. The goal of these regional plans is to focus housing and job growth in urbanized areas where there is existing and planned transportation infrastructure to create a more sustainable region.

The 2050 RTP/SCS sets forth a multimodal approach to meeting the region's transportation needs. Therefore, it is recommended that the traffic analysis consider the needs of motorists, transit riders, pedestrians, and bicyclists, and the implementation of a robust Transportation Demand Management (TDM) Program. The San Diego Association of Governments (SANDAG) recommends that the following comments be addressed:

Multi-Modal Transportation Considerations

Harbor Drive is a critical local connector road for both Port terminals and is impacted by multiple traffic generators, including Naval Base San Diego and other working waterfront enterprises. SANDAG strongly encourages early and close coordination with the City of San Diego as this roadway is under their jurisdiction. Harbor Drive is a multimodal facility that includes part of the Bayshore Bikeway; please take this regional bikeway into consideration.

The TAMT Redevelopment Plan NOP states that improvements could result in a Maximum Practical Capacity (MPC) between 5 million and 5.5 million metric tons (MT), in comparison to the existing baseline condition of nearly 1 million MT. If this increase in supply should result in an increase in vehicle trips or an altered vehicle configuration, an in-depth traffic analysis should be developed that considers the impacts to site access and other related traffic impacts.

Long term employment is estimated to increase by nearly 460 jobs. Please consider methods of deterring single-occupancy car trips, such as local pedestrian/bicycle treatments and improvements that enhance access to the 12th and Imperial Transit Center.

Sidewalks along Harbor Drive alongside the project area and access to the Transit Center are limited. Please consider the safety and security of workers and other pedestrians, especially alongside major freight improvements, and consider providing alternative mode choices such as transit, biking, and walking to and from the site.

Goods Movement

Please ensure that, as needed, mitigation for potential impacts in relation to goods movement, especially air quality, greenhouse gas (GHG) emissions, and local transportation circulation, are adequately addressed.

Air Quality

Please note that the Port should refer to prevailing California Air Resources Board (CARB) regulations as well as CARB's evolving Sustainable Freight Pathways to Zero and Near-Zero Emissions documents, including technical appendices when assessing air quality and GHG-related impacts (see link below).

http://www.arb.ca.gov/gmp/sfti/Sustainable_Freight_Draft_4-3-2015.pdf

Aggregate Considerations

Please consider exploring opportunities for an aggregate off-loading, storage, and distribution facilities to serve redevelopment efforts in central San Diego area. It is can be expensive to truck aggregate from outside the region and could be advantageous to have an aggregate supply facility located at the 10th Avenue Terminal. Below is a link to an example from the Port of Richmond.

http://www.polarismaterials.com/operations-projects/richmond-terminal/Transportation

Transportation Demand Management

To address potentially significant transportation and greenhouse gas emissions impacts anticipated as a result of the Tenth Avenue Marine Terminal Redevelopment Plan, please consider the implementation of transportation demand management (TDM) strategies as mitigation. Given the projected increase in employment during and after construction, TDM programs and services can reduce single-occupancy vehicle trips to and from the site. Examples of TDM measures that could be considered include designation of a transportation coordinator for industrial tenants and their employees, promotion of the Regional Vanpool Program and ridematching system to encourage carpooling among employees; subsidized transit passes for industrial tenants and their employees;

employee shuttle service; enhanced bicycle and pedestrian facilities that connect residents to regional bicycle facilities and transit service off Harbor Drive; bicycle amenities like secure and convenient bicycle parking, locker rooms and showers, and bike repair stands.

Please also consider a parking management plan to assist in reducing parking demand while encouraging the use of transportation alternatives to reduce traffic congestion. The SANDAG TDM division, iCommute, can assist with efforts to promote and implement TDM measures and parking management strategies as part of this project.

Other Considerations

We appreciate the opportunity to comment on the NOP for the TAMT Redevelopment Plan.

We encourage, where appropriate, consideration of the following tools in evaluating this project based on these SANDAG publications (which can be found on our website at sandag.org/igr):

1. Designing for Smart Growth, Creating Great Places in the San Diego Region
2. Planning and Designing for Pedestrians, Model Guidelines for the San Diego Region
3. Trip Generation for Smart Growth
4. Parking Strategies for Smart Growth
5. Regional Multimodal Transportation Analysis: Alternative Approaches for Preparing Multimodal Transportation Analysis in Environmental Impact Reports
6. Integrating Transportation Demand Management into the Planning and Development Process - A Reference for Cities
7. Riding to 2050, the San Diego Regional Bike Plan
8. SANDAG Regional Parking Management Toolbox

If you have any questions or concerns regarding this letter, please contact me at (619) 699-1943 or susan.baldwin@sandag.org.

Sincerely,

Susan Baldwin

SUSAN BALDWIN
Senior Regional Planner

SBA/SST/

From: Hower, Sean P
To: Larry Hofreiter
Cc: "sharon@sdpta.com"
Subject: NOP for Draft EIR Commentary
Date: Tuesday, April 14, 2015 10:52:52 AM

Hello Mr. Hofreiter,

The TAMT redevelopment plan forecast calls for a large amount of freight growth. Please keep in mind that, in supporting this growth, the port must also support rail capacity. Any portion of the growth that does not use rail infrastructure will add truck traffic on San Diego streets. The port needs to adopt a position of active rail advocacy in San Diego.

Best,
Sean

Sean Hower | Director, Port Business Development - PSW | *BNSF* Railway Company | *Office* 323-267-4151 | *Mobile* 817-676-6913 | ✉ sean.hower@bnsf.com

ENVIRONMENTAL HEALTH COALITION

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San Diego Unified Port District
Environmental & Land Use Management Department
Attn: Larry Hofreiter
3165 Pacific Highway
San Diego, CA 92101
Via email to: lhofreiter@portofsandiego.org

April 14, 2015

Re: EHC Comments on Notice of Preparation of an Environmental Impact Report for the Tenth Avenue Marine Terminal Redevelopment Plan

Dear Mr. Hofreiter:

Environmental Health Coalition is (EHC) is a 35-year-old nonprofit organization. EHC builds grassroots campaigns to confront the unjust consequences of toxic pollution, discriminatory land use, and unsustainable energy policies. Through leader development, organizing and advocacy, EHC improves the health of children, families, neighborhoods and the natural environment in the San Diego/Tijuana region.

EHC appreciates the opportunity to review the Notice of Preparation (NOP) for the programmatic Environmental Impact Report (EIR) for the Tenth Avenue Marine Terminal (TAMT) Redevelopment Plan. We concur with the conclusion that a full EIR is required for this potentially massive increase in cargo throughput, and we offer the following comments to ensure that the project impacts are fully analyzed and mitigated.

I. PROJECT DESCRIPTION

A. Project Objectives

The Project Description provided in the NOP does not specify the project objectives. EHC suggests the project objectives for this long-range redevelopment plan should include the following objectives on energy, air quality, consistency with the California Air Resources Board (ARB) Sustainable Freight Strategy, greenhouse gas (GHG) emissions, and reduction of community impacts.

- Minimize or eliminate air pollution, traffic, and other environmental impacts on adjacent communities.
- Use cleanest available technologies for moving freight and powering equipment, vehicles and buildings for new and expanded or increased activities and operations on the TAMT, in order to reduce harmful impacts while allowing growth of terminal activity.

- Align the TAMT Redevelopment Plan and any expansion of throughput with the current proposed goals of the ARB Sustainable Freight Strategy to:
    i. Move goods more efficiently with zero/near zero emissions;
    ii. Transition to cleaner, renewable transportation energy sources;
    iii. Provide reliable velocity and expanded system capacity;
    iv. Integrate with national and international freight transportation systems; and,
    v. Support healthy, livable communities.[1]
- Comply with or exceed the greenhouse gas reduction goals of the Port of San Diego's Climate Action Plan (10% below 2006 levels by 2020) and California's Executive Order S-3-05 (80% below 1990 levels by 2050). (See, *Sierra Club v. County of San Diego, Case No. D064243*; see also, Cal Health & Saf Code § 38551(b) ["It is the intent of the Legislature that the statewide greenhouse gas emissions limit continue in existence and be used to maintain and continue reductions in emissions of greenhouse gases beyond 2020."]).
- When storage of cargo is necessary, all cargo must be stored on TAMT, rather than off-tidelands, in order to minimize trucking, air quality, safety, and noise impacts on residences.

B. Worst Case Scenario

Table 3.2 on page 7 of the NOP indicates the development scenario that would generate the highest volume increase in cargo throughput is Development Scenario 1 at 5,504,717 MT. This is the true worst case scenario and should be the one used for analysis of project impacts, *unless* preliminary analysis indicates that Scenario 2 or 3 would generate more truck trips, air emissions, or other significant impacts.

C. Liquid Bulk Volume

The analysis must use the maximum capacity (239,017 MT). If maximum capacity is not analyzed, the Port should implement a cap on new liquid imports or exports and analyzed the maximum capped amount. Given that the bulk liquids in question are flammable or combustible fuels, a large increase in import or export volumes has very significant health and safety impacts, which should be fully analyzed and mitigated in the EIR.

D. Project Location

Table 3-2 refers to new silos and domes for bulk storage "at each terminal." This should be amended to say, "....at each cargo node" if that is what is intended. Port staff indicated to us that

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[1] Memo from Andre Boutos to ARB on California Freight Mobility Plan and National Freight Network Update, March 20, 2014.

"cargo nodes" is correct, rather than "at each terminal"[2]; however, we formally request this change.

E. Project Scenarios Not Analyzed

The Redevelopment Plan in its current iteration contains two development scenarios that the Port does not consider to be potentially feasible. Thus, these alternatives need not be analyzed in the EIR. (CEQA Guideline §15126.6(a); *South County Citizens for Smart Growth v. County of Nevada* (2013) 221 Cal App. 4th 316, 327). Pursuant to CEQA, the Port must analyze feasible alternatives which are capable of being implemented. (*Id.*). Further, the Port should take its responsibility to analyze a reasonable range of project alternatives that avoid or substantially lessen environmental impacts. (CEQA Guideline §15126.6(b)). In doing so, EHC encourages the Port to study an alternative that meets the project objectives, but sets a cap on future throughput in order to lessen environmental impacts.

II. ANALYSIS OF ENVIRONMENTAL IMPACTS IN EIR

EHC concurs that a full EIR is needed for this redevelopment plan that will potentially increase cargo throughput by 550%. We offer recommendations below on baselines and significance thresholds to use in the analysis, as well as on specific environmental effects to analyze.

A. Baselines

- The baselines for both air emissions and GHGs should be based on the 2013 Air Emission Inventory **and** the implementation of shorepower at Dole.
- Regarding baseline cargo throughput, use of the cargo throughput that corresponds with the 2013 Air Emissions inventory rather than the timeframe of July 2013 through June of 2014 would facilitate analysis of increased emissions over the baseline.

B. Thresholds of Significance

- The thresholds of significance for criteria, toxic, or diesel pollutants should be set at No Net Increase. The San Diego air basin is out of attainment with the federal 8-hour ozone standard, and is out of attainment with state ozone and PM standards as well. The Lead Agency for a project has the legal authority and, in fact, is encouraged under CEQA Guidelines §15064.7 to develop and publish its own thresholds of significance. In determining whether an effect will be adverse or beneficial, **the lead agency shall consider the views held by members of the public in all areas affected as expressed in the whole record before the lead agency.** (§ 15064.7(c)) Lead agencies may also consider thresholds of significance previously adopted or recommended by other public agencies, or recommended by experts, **provided the decision of**

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[2] Email from Larry Hofreiter to Joy Williams, March 23, 2015

the lead agency to adopt such thresholds is supported by substantial evidence. (§15064.7(b))

- GHG emissions should be calculated as both an annual summation and a cumulative total because GHGs are persistent in the environment for decades.
- The threshold for significance for GHGs should be any level of emission that will cause a violation of the state's GHG reduction goal of 80% below 1990 levels by 2050, originally set by Executive Order S-3-05. (See, *Sierra Club v. County of San Diego*, *Case No. D064243*; see also, Cal Health & Saf Code § 38551(b) ["It is the intent of the Legislature that the statewide greenhouse gas emissions limit continue in existence and be used to maintain and continue reductions in emissions of greenhouse gases beyond 2020."]).

C. AIR QUALITY/HEALTH RISK

We agree with the Initial Study assessment that all aspects of air quality are potentially significant and must be analyzed in the EIR. As identified in the Initial Study, construction and operation of the project both have the potential to increase emissions of ozone-forming VOCs and particulate matter, criteria pollutants for which the region is out of attainment.

(a) Additional Air Quality Impacts

In addition to the criteria pollutants, it is important that the EIR include analysis of the following air quality/health risk factors:

- Potential increases in emissions of toxic air contaminants, including diesel exhaust and other mobile source pollutants. The analysis should be based on currently adopted regulations for cleaner engines and fuels, and not include any assumptions that fleets will get cleaner beyond current requirements. The analysis should assume a moderate level of noncompliance with rules for construction equipment and other non-drayage trucks, unless the Port adopts a general truck rule that prohibits any vehicles that are not in compliance with California's On-Road Heavy-Duty Bus and Truck Rule.
- Potential fugitive dust emissions resulting from bulk cargos in dry form, such as cement, soda ash, or bauxite. Cesar Chavez Park users—who are generally vulnerable populations including children, families, and homeless individuals-- have had previous experience with airborne soda ash pollution originating at TAMT and are concerned that increases in import or export of similar materials would impact air quality at the park.
- Fugitive dusts containing toxic contaminants from past land uses, released as a result of construction and new ongoing operations. According to the Initial Study, petroleum hydrocarbons, benzene, toluene, PAHs, SVOCs, and metals may be present in soil within portions of the site.
- Impacts, both positive and negative, of possible mode shifts between trucks and rail, and between barges and trucks (such as for cement coming into the region by barge rather than being trucked in).

- Impacts of any potential shifts of cargo to or from the National City Marine Terminal or National Distribution Center as a result of this plan, including impacts to National City residents.
- Impacts of cargo transportation to warehouses off-tidelands, within communities in the region. The analysis and plan should specify where additional cargo is to be stored and how it is to be transported. Communities adjacent to the cargo terminals remain concerned that cargo warehouses, such as the former Dole warehouse on Main Street in Barrio Logan, may be sited in residential neighborhoods and produce additional truck traffic, idling, and safety impacts. The Port should require that any storage of cargo be done on-tidelands, not off-tidelands near residences.
- Impacts of emissions associated with generation of electricity for new or expanded use of shorepower, new electric cargo handling equipment, and electric or hybrid electric commercial harbor craft.

(b) Sensitive Receptors

Air quality impacts should be analyzed at both a regional level and a local level. Potential pollution hot spots should be identified. Sensitive receptors include the following.

- Children and adults using Cesar Chavez Park.
- Perkins Elementary School, including the property across Main Street from the current Perkins parcel. The San Diego Unified School District has already made a clear commitment to purchase this property and use it to expand the school footprint, and the analysis must include evaluation of impacts to schoolchildren and school staff at this site.
- Residences, schools, and childcare and healthcare facilities within 500 feet of the truck routes that would be used by the additional trucks entering and leaving TAMT.
- The San Diego Continuing Education Center
- The Mercado Apartments
- Mercado Head Start PreSchool
- Workers at TAMT
- Potential residents in the Barrio Logan transition zone south of Main Street. Since the June 2014 citywide referendum overturned the Barrio Logan Community Plan adopted by the San Diego City Council in the fall of 2013, residential development in the transition zone is possible; analysis of impacts to residents must assume that residences may be present closer to TAMT than are current residences.

(c) Consider Location Specific Factors in Analysis of Impacts

CEQA Guidelines recognize that the level of impacts and their significance depends upon a multitude of factors such as project setting, design, construction, etc. CEQA Guidelines also call for careful judgment based on scientific and factual data to the extent possible and explain, "For example, an activity which may not be significant in an urban area may be significant in a rural area." (§ 15064(b)) Similarly, emissions of 100 lbs per day of particulate matter in the middle of Barrio Logan—an urban low-income community of color already determined by the California Environmental Protection Agency (CalEPA) to be among the worst 5% in the state for cumulative pollution burden[3] — could potentially be more significant than 100 lbs per day of particulate matter in the middle of the desert with no nearby sensitive receptors.

Accordingly, the EIR must acknowledge that the project location sits directly adjacent to an area (Barrio Logan) identified by CalEPA as having a cumulative pollution burden that is among the worst 5% of zipcodes in the state.[4]

Further, available monitoring data indicate ambient air in the Barrio Logan area is more impacted by diesel particulate matter than is air in other communities. The following table compares the percentage of elemental carbon (EC) in total carbon fine particulate matter in three areas of the region. Because diesel exhaust, compared to gasoline, has relatively more EC as a percentage of total carbon, the higher percentages of EC indicate that more of the particulate matter in Barrio Logan originated from diesel engines. All three of these communities are traffic-impacted areas, with levels of PM2.5 higher than background levels[5]; however, the PM2.5 in Barrio Logan may be more harmful to health.

Table 1. Elemental Carbon (EC) as a Percentage of Total PM2.5 Carbon, 2012

Air Monitor	Average EC Percent	Maximum EC Percent
Barrio Logan (Beardsley)	21.9	44.3
El Cajon	14.6	24.5
Escondido	15.2	24.7

Source of data: US EPA, Air Data, from monitoring data submitted by SD APCD. Percentages compiled by EHC.
US EPA Air Data website: https://ofmext.epa.gov/AQDMRS/aqdmrs.html

Finally, on top of the many other public health and safety consequences of this pollution, children in Barrio Logan visit the ER for asthma-related incidents almost three times as often as children in the rest of the County.[6] The evidence is undeniable and substantial.

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[3] http://www.oehha.ca.gov/ej/ces2.html
[4] http://www.oehha.ca.gov/ej/ces2.html
[5] Average annual PM2.5 levels in Barrio Logan ("Downtown San Diego"), El Cajon, and Escondido in 2013 were 10.3, 10.6, and 10.3 micrograms per cubic meter, respectively, versus 8.3 ug/m3 at the Kearny Mesa monitor. http://www.sdapcd.org/info/reports/5-year-summary.pdf.
[6] Data on children's Emergency Department visits with diagnoses of asthma are from the California Office of Statewide Health Planning and Development. Rates are generated using SANDAG current estimates of population by age for zipcodes in San Diego County. The most current data year is 2013.

The EIR air quality analysis must account for these local adverse conditions in assessing the impacts of additional emissions and the fact that any increase in air pollution would result in a cumulatively significant impact to the adjacent community and region.

(d) Consistency with Port Master Plan

The NOP acknowledges "if a project proposes development that is greater than that anticipated in the PMP and SANDAG's growth projections, the project would be in conflict with the RAQS and SIP, and might have a potentially significant impact on air quality because emissions would exceed those estimated for the existing PMP. This situation would warrant further analysis to determine if a project would exceed growth projections used in the RAQS." (NOP Initial Study, p11). We agree the project proposes extreme growth that may be in conflict with the Port Master Plan (PMP) and further study. The extreme growth proposed by this project and the proposed removal of the transit sheds both do not appear to be described in the PMP, would therefore be considered new and different from the approved PMP. As such, California Coastal Commission analysis and approval may also be warranted.

(e) Mitigations for Air Quality Impacts

Mitigations to reduce air quality impacts should include all of the following:

- Electric cargo handling equipment
- Hybrid tugboats
- Zero emission freight technologies as demonstration or pilot projects initially, and as requirements once they are commercially available
- Tier 4 or cleaner locomotives on terminal
- Shorepower or equivalent technologies for ships, including for ships that are not required to shorepower under California law
- Solar power on rooftops on and off the terminal
- Enforcement of California's On-Road, Heavy-Duty Truck and Bus Rule
- Subsidize alternative transportation for workers
- Realignment infrastructure on Harbor Drive to support truck route

D. Greenhouse Gas Emissions

EHC concurs that greenhouse gas (GHG) emissions will increase to the extent that ship calls, truck trips and increased rail activity, worker trips, and energy and water use increase. Our recommendations for analysis and mitigation of these impacts are as follows:

(a) Assessment of GHG Impacts Should Be Cumulative

Unlike other air pollutants that have limited atmospheric lifetimes, greenhouse gases remain in the atmosphere for years, decades, or centuries. To fully assess and mitigate the GHG impacts of the project on the Earth's climate systems, the full atmospheric lifetimes of the greenhouse gases must be factored into the quantification of these gases over the project lifetime and beyond.

(b) Mitigation of GHGs: Projected Emissions Cannot Assume Reductions from Voluntary Policies

The Port's Climate Action Plan (CAP) may not be cited in the EIR as mitigation for the project's GHG impacts, as the CAP does not include any enforceable measures. Therefore the EIR cannot assume the project's compliance with the Port's CAP, unless specific actions are expressly required as an enforceable mitigation measure to this project.

(c) Mitigate GHG from Electricity Generation

If shorepowering is proposed as a mitigation measure for air quality, the EIR should also analyze the GHGs associated with the additional electricity needed and require that amount be offset by renewable energy. Renewable energy (on-site or nearby) should also be considered as a mitigation to offset other electricity use associated with the project.

(d) Threshold of Significance for GHGs Should Be Zero

The GHG significance threshold should examine the project's consistency with (a) the Port's CAP goal to reduce port-wide GHGs by 25% below 2006 levels by 2035[7] and (b) State Executive Order S-3-05, which mandates statewide GHG emissions reductions of 80 percent below 1990 levels by 2050. Compliance with S-3-05 should be of particular legal concern given the precedent set in the SANDAG RTP lawsuit and the San Diego County Climate Action Plan. Further, in light of the Redevelopment Plan's 20-year planning horizon, compliance with AB 32 or the CARB Scoping Plan will not address the full extent of the Project's emissions (i.e. beyond 2020).

One method recommended by CAPCOA is to use a zero emissions threshold, which the CAPCOA explains "has merit" because:

> *"Both large and small GHG generators cause the impact. While it may be true that many GHG sources are individually too small to make any noticeable difference to climate changes, it is also true that the countless small sources around the globe combine to produce a very substantial portion of the total GHG emissions. A zero threshold approach is based on a belief that, 1) all GHG emissions contribute to global climate change and could be considered significant, and 2) not controlling emissions from smaller sources would neglect a major portion of the GHG inventory."*[8]

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[7] Port of San Diego, Climate Action Plan, 2013, GHG Reduction Goals, p4 (does *NOT* state goal is for "new projects" anywhere)

[8] CA Air Pollution Control Officers Association (CAPCOA), *CEQA and Climate Change- Evaluating and Addressing Greenhouse Gas Emissions From Projects Subject to the California Environmental Quality Act,* January 2008, p27

Whatever approach is taken, the Port must comply with foundational CEQA requirements, including an appropriate description of the baseline for purposes assessing the significance of the project's impacts and the appropriate level of mitigation.

Applying a business as usual ("BAU") threshold, as the Port proposed in the recent SDRS Draft MND, would be inappropriate, as the measure of the significance of the Project's GHG emissions must be against the baseline existing conditions (Guideline §15125(a)). (*Communities for a Better Environment v. South Coast Air Quality Management District* (2010) 48 Cal.4th 310, 322 ("*CBE v. SCAQMD*")). Further, the California Supreme Court is currently reviewing a challenge to the often-used and inappropriate "business as usual" approach. (*Center For Biological Diversity V. Department Of Fish And Wildlife (Newhall Land And Farming Company*), Case: S217763, Supreme Court of California).

CEQA GHG analysis is governed by Guideline section 15064.4, which states a lead agency should consider three factors, among others, when assessing the significance of impacts from GHG emissions on the environment, including the "extent to which the project may increase or reduce greenhouse gas emissions as compared to the existing environmental setting." (Guideline §15064.4(b)(1), emphasis added). The environmental setting (the existing physical environment) will "normally constitute the baseline physical conditions by which a lead agency determines whether an impact is significant." (Guideline §15125(a)).

As the California Supreme Court held in *CBE v. SCAQMD*, "using hypothetical allowable conditions as the baseline results in 'illusory' comparisons that 'can only mislead the public as to the reality of the impacts and subvert full consideration of the actual environmental impacts,' a result at direct odds with CEQA's intent." (*CBE v. SCAQMD* (2010) 48 Cal.4th 310, 322 [citation omitted]).

E. Hazardous Materials

EHC concurs that hazardous materials impacts are potentially significant. We recommend an additional impact, not identified in the NOP, that should be analyzed is the potential for release of toxic and hazardous materials from the project site into the bay and adjacent communities under future conditions of higher sea levels, storm surges, and tsunamis. We recommend the EIR include analysis of this hazard.

F. Land Use

(a) Port Transition Zone Policy Consistency

We recommend the EIR analyze whether the project impacts, such as the potential for additional trucks, warehouses, and other supporting uses in adjacent neighborhoods, would be consistent with the Port's Transition Zone Policy. In order to ensure compliance with the Port's Transition Zone Policy and minimize impacts to local residents, the Port should require that cargo storage, warehousing, and distribution be done on-Tidelands.

(b) Port Master Plan Potential Inconsistency

We disagree with the NOP's statement that "the project would not conflict with the PMP, CCA, or the Public Trust Doctrine or any other land use document adopted for the purpose of avoiding or mitigating an environmental effect".[9] The PMP does not appear to describe the extreme growth proposed by this project, nor the proposed removal of the transit sheds to use the space for open storage rather than closed; therefore the project would therefore be considered new and different from the approved PMP and warrant further study in the EIR. The project's impacts on public access, safe and healthy enjoyment of Cesar Chavez Park, and water quality are also yet unknown and potentially significant. For all of these reasons, California Coastal Commission analysis and approval may also be warranted.

G. Light Pollution

EHC agrees that analysis of light pollution must be included in the EIR. Light pollution is widely acknowledged as an impact of living near ports. In addition to sleep disruption and annoyance, light pollution has the potential to disrupt circadian rhythms and hormone levels, and increase cancer risk for hormone-related cancers such as breast and prostate.

Circadian rhythms affect physiological processes including brain wave patterns, hormone production, cell regulation, and other biologic activities. Disruption of the circadian clock is linked to several medical disorders in humans, including depression, insomnia, cardiovascular disease, and cancer.[10]

Excess light at night is also linked in epidemiologic studies to increases in breast cancer risk among night shift workers, and IARC in 2007 declared night shift work to be a Group 2A Probable Human Carcinogen. Researchers believe the increased cancer risk is linked to decreases in melatonin – a hormone secreted at night. Decreases in melatonin in turn produce a range of physiologic consequences including increased levels of estrogen.[11] The health risk appears not to be limited to night shift workers. A 2013 case-control study of patients with breast cancer in the state of Georgia found that high light exposure at night, as measured by satellite imaging, was associated with increased risk of breast cancer.[12]

Light pollution issues specific to residential areas near ports include general night time light, and flashing lights from straddle carriers and forklifts, as noted by the Natural Resources Defense Council.[13]

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[9] NOP Initial Study, p29

[10] *Environmental Health Perspectives*, Vol. 117, Number 1, January 2009. Pp. A20-A27.

[11] Ibid., p.A26.

[12] *International Journal of Health Geographics* 2013, **12**:23 doi:10.1186/1476-072X-12-23.

[13] http://www.nrdc.org/air/pollution/ports1/overview.asp.

Mitigations for light pollution may include:

- Use of energy efficient lighting;
- Use of guidelines such as those put forward by LEED or the International Dark-Sky Association for limiting total lumens and shielding light so that light pollution is minimized.
- Black out shades for Barrio Logan homes.

H. Noise

EHC concurs that noise impacts could be significant and should be analyzed. It is important to consider night time noise as well as daytime noise, and impacts to workers as well as to residents. Assessment of noise should consider cumulative noise impacts, including truck traffic noise on surface streets and train noise, as well as noise generated by operations on the terminal. Residential noise standards should be used as the threshold of significance for noise impacts, not industrial or commercial levels, given that the impacted community is predominantly a residential neighborhood that includes schools, parks, and residences.

Potential mitigations for noise pollution include the following.

- Use of electric engines in place of fossil fueled engines throughout the terminal;
- Terminal design features such as quieter pavements;
- Sound barriers, such as a sound wall or trees, to insulate residential neighborhoods from TAMT noise;
- Constraints on night time construction or operations that generate noise at night.
- Regulate operation hours to morning to early evening time.

I. Public Services

We believe that impacts to public services are potentially significant, and that this impact should be analyzed in the EIR. Potential impacts of significance include parks and firefighting resources.

(a) Impacts to Cesar Chavez Park

The project will impose impacts on the park, including dust, diesel emissions, noise, and additional traffic on Cesar Chavez Parkway south of Harbor. TAMT workers may use the parking area for their vehicles, making it more difficult for park users to find parking. Project mitigations could include upgrades to the park.

(b) Impacts to Firefighting Resources

Given that the project proposes a large-volume increase in the capacity for storage of liquid fuels on the terminal, the level of preparedness for a major fire event at the terminal should be assessed to determine the potential impact on firefighting resources of the region of a major fire. Potential mitigations for impacts to firefighting resources include:

- Storage of firefighting foam onsite at TAMT;
- Secondary containment for flammable liquids;

- A warning system for workers and the surrounding community in the event of a major fire or other disaster.

J. Transportation/Traffic

(a) Analysis of Impacts

We agree that impacts to transportation and traffic could be significant. The Traffic Impact Analysis should include estimates of additional truck trips to and from terminal and the potential impact of mode shifts. Impacts of additional employee transportation on traffic levels and on parking space within the Barrio Logan community should also be assessed.

(b) Mitigations

Potential mitigations for transportation and traffic impacts include the following.

- A multi-story parking structure for employees of industrial waterfront and terminal.
- Mode shifting from truck transport of cargo to rail and/or barge, to reduce truck trips through the community.
- Incentives to TAMT employees to carpool, use transit or bicycle, and/or park on the terminal rather than in the community.
- Ensure cargo is stored and handled at the terminal rather than at warehouses off-tidelands, near residences or other sensitive receptors within the community.
- Ensure established truck routes around the community are followed and enforced at all times.
- Implement and fund Harbor Drive infrastructure improvements for truck, pedestrian, and biking circulation.

K. Water and wastewater

EHC concurs that impacts on water quality are potentially significant. We recommend the site be designed to retain onsite the pollutants contained in the volume of storm water runoff produced from a 24-hour 85^{th} percentile storm event (design capture volume), as required under the 2013 MS4 permit for Priority Development Projects (PDPs). In addition, permeable pavement in place of impervious pavement would increase the capacity of the site to retain stormwater and reduce runoff. For all water quality and hydrology mitigation measures, the EIR and project permits must specify what maintenance will be required, how often, and who will have the responsibility for this maintenance.

Further, impacts to water quality based on substantial additional sources of polluted runoff will likely result in a significant impact. The most recent Tenth Avenue Marine Terminal monitoring reports under the General Industrial Stormwater Permit indicate the routine presence of an oily sheen during quarterly observations and violations of water quality limits (including the California Toxics Rule). By increasing output substantially, the project is likely (if not certain) to provide substantial additional sources of existing and new pollutants.

L. Utilities, Service Systems, and Energy

EHC concurs that increased energy use is potentially a significant impact and must be analyzed. Mitigations could include the following:

- Offset new electricity requirements with additional renewable energy resources either on or off the terminal, for example, solar PV at Perkins Elementary School.
- Offset new electricity requirements with electricity use reduction through efficiency measures elsewhere on-Tidelands or off-Tidelands, for example, retrofitting or retro commissioning buildings.
- Ensure all ships that call at TAMT are compliant with MARPOL Annex VI (2011 amendments) requirements for ship energy efficiency management, as verified by International Energy Efficiency certificates onboard.
- Pursuant to the CEQA requirement to describe feasible mitigation measures which could minimize significant adverse impacts, including inefficient and unnecessary consumption of energy, the Port should include and analyze the suggest mitigation measures in the EIR. (CEQA Guideline §15126.4(a)(1)).

M. Mandatory Findings of Significance

(a) Other Projects that Add to Cumulative Impacts

EHC concurs the project has impacts that could be cumulatively significant. Projects that could add to the cumulative burden of impacts on adjacent communities include the BAE expansion and plans by both Dole and Pasha to bring in more and/or larger ships with additional cargo tonnages. Impacts may extend to the National City community if increases in cargo throughput at TAMT result in shifting of cargo storage or distribution to NCMT.

(b) Environmental Justice

An additional issue related to the cumulative significance of the project is that, as noted above, the project area is already identified as a high-ranking area in California's screening model for cumulative environmental and social vulnerability, CalEnviroScreen. The project location sits directly adjacent to an area (Barrio Logan) identified by the California Environmental Protection Agency as having a cumulative pollution burden that is among the worst 5% of zipcodes in the state.[14] This potentially massive project can have hugely detrimental impacts on the adjacent vulnerable communities, or it can enhance air quality, health, and the efficiency and economic vitality of maritime commerce if done in compliance with our recommended mitigation measures and with Port's Environmental Justice Guiding Principle for integrated planning:

> "Seek to achieve environmental justice which shall be defined as: working to reduce the cumulative health burdens on neighboring communities and ensure fair treatment of people of all races, cultures, and incomes in developing, adopting, implementing, and enforcing environmental laws, regulations, and policies."

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[14] http://www.oehha.ca.gov/ej/ces2.html

N. MITIGATIONS

(a) Local hire provisions.

The project is expected to provide up to 232 direct and indirect jobs in the construction phase and 459 direct and indirect jobs from operation of the expanded terminal. Local hire provides benefits to the community and also reduces impacts from worker travel to site and the need for worker housing in the region. We recommend local hire and job quality, safety, and training standards, and other community benefits be required in a Community Benefits Agreement.

A Community Benefits Agreement is especially important for this project in light of the fact that it will precede the development and final approval of the Port Master Plan Update, which will be the Port's broader visioning policy as influenced by public input. "Everyone rises with the tide. This is not happening today because of the 'piecemeal planning process' that is occurring which prevents a larger vision from being implemented and often results in litigation." (San Diego Port Master Plan Update Assessment Report Vision Statement and Guiding Principles, p. 10). Thus, because the TAMT Redevelopment Plan is undergoing the precise piecemeal planning process the Master Plan Update is intended to avoid, the Port should focus in particular on a Community Benefits Agreement which will ensure the broader goals of the Update are not frustrated by the TAMT Redevelopment Plan. As evidenced by the success of the Chula Vista Bayfront Master Plan, community cooperation and buy-in is integral to this type of project planning.

(b) Increased funding to MIIF. The Marine Industrial Impacts Fund is intended to reduce off-terminal impacts of on-terminal operations. Potential increases of over 500% in cargo throughput require corresponding increases in the magnitude of funding for the MIIF. The MIIF should not be relied upon as a funding source for mitigation of the TAMT project at this time; the project funding itself should pay for mitigating any anticipated impacts. Rather, the MIIF could be used for mitigation of future unanticipated impacts.

III. PUBLIC COMMENT PROCESS

We would like to thank Port staff for holding a second public scoping meeting on Wednesday, April 8, as the first scoping meeting conflicted with the Barrio Logan Community Planning group meeting. We appreciate staff's efforts and actions to ensure Barrio Logan residents (and National City residents and other stakeholders) were able to learn about the project in person and provide feedback in person, and we appreciate the provision of Spanish translation.

We are concerned, however, by a statement made by Port staff Jerine Rosato at the April 8 meeting that verbal comments would *not* be considered in the environmental review process and that all comments *must* be written to be a part of the record and influence the process. This appears to be in conflict the Port's policies values of transparency and public input. For example, the Port's Compass Strategic plan sets as a value:

"Transparency is a commitment to our partners, stakeholders, and the community to enhance openness, public participation, access to information, outreach, and collaboration. Transparency promotes accountability, increased public trust, and a more efficient, effective and public-focused organization.

The Port's Compass Strategic plan also sets as a goal to be "A port that the public understands, trusts and values" including the strategy to "Solicit Feedback from stakeholders and respond to input."

Given that not all stakeholders have the capacity to provide written comments, it would be good public policy and consistent with the Port's own policies to allow, encourage, and consider stakeholder input in multiple formats, including verbal comments made at a public scoping meeting. We urge you to take into consideration the verbal comments that were made at both scoping meetings and allow and encourage multiple kinds of public input on future projects as well.

Thank you for the opportunity to comment on this NOP and the EIR that will be developed for redevelopment of TAMT.

Sincerely,

Joy Williams
Research Director
joy@environmentalhealth.org
O. 619-474-0220 x110

Kayla Race
Policy Advocate
kaylar@environmentalhealth.org
O. 619-474-0220 x133
M. 617-909-8819

Georgette Gómez
Associate Director
georgetteg@environmentalhealth.org
O. 619-474-0220 x104
M. (619) 952-4589

CC: Mayra Medel, Associate Redevelopment Planner, mmedel@portofsandiego.org
Rebecca Harrington, Attorney, rharrington@portofsandiego.org
Tom Russell, Port Attorney, trussell@portofsandiego.org

ENVIRONMENTAL HEALTH COALITION
2727 HOOVER AVE., SUITE 202 · NATIONAL CITY, CA 91950 · (619) 474-0220 · WWW.ENVIRONMENTALHEALTH.ORG

April 22, 2014

Chair Bob Nelson and Port Commissioners
San Diego Unified Port District
Via Email

RE: Environmental Health Coalition comments on next steps for the TAMT PEIR analysis

Dear Chair Nelson and Commissioners:

Environmental Health Coalition (EHC) appreciates the additions by staff to the Scope of Work for the Programmatic Environmental Impact Report (PEIR) last month and the early briefing on the Business Plan for the Tenth Avenue Marine Terminal (TAMT). We also appreciate the opportunity to offer additional comments and suggestions on various aspects of the TAMT PEIR analysis. Please find our recommendations for the PEIR below.

Project Objectives:

1. The project objectives should include an objective on energy, air quality (no net increases), consistency with the Air Resources Board (ARB) Sustainable Freight Strategy, and reduction of community impacts such as:
    a. Minimize or eliminate air pollution, traffic, and other environmental impacts on adjacent communities.
    b. New and expanded or increased activities and operations on the TAMT will promote and use cleanest available technologies in order to reduce harmful impacts while allowing growth of terminal activity.
    c. The TAMT expansion of through-put will align with the current proposed goals of the ARB Sustainable Freight Strategy to:
        i. Move goods more efficiently with zero/near zero emissions;
        ii. Transition to cleaner, renewable transportation energy sources;
        iii. Provide reliable velocity and expanded system capacity;
        iv. Integrate with national and international freight transportation systems; and,
        v. Support healthy, liveable communities.[1]

[1] Memo from Andre Boutos to ARB on California Freight Mobility Plan and National Freight Network Update, March 20, 2014.

Baselines:

2. The baseline for both the air quality and GHGs should be based on the 2013 Air Emission Inventory **and** the implementation of showerpower at Dole, which is already reducing local air emissions.
3. As ARB Resolution 14-2 notes, freight-related emissions, "...*are a public health concern at both* ***regional and community levels*** *and also contribute to global warming."*(emphasis added)[2] In the TAMT PEIR analysis it will be important to include local hot spots analysis (Diesel Particulate Matter and Carbon Monoxide especially) as well as regional impacts.

Thresholds of Significance:

4. The thresholds of significance for Particulate Matter (PM) and NOx should be set at No Net Increase, especially since both are currently out of attainment in our air basin.
5. The thresholds of significance for criteria, toxic, or diesel pollutants should be set at No Net Increase.
6. GHG emissions should be calculated as both an annual summation and a cumulative total because GHGs are persistent in the environment.
7. The threshold for significance for GHGs should be any level of emission that will cause a violation of the state's GHG reduction goal of 80% below 1990 levels by 2050. This requirement is based on the best available science. This goal has been reaffirmed as a state goal by Executive Order B-16-2012.[3]

Analysis:

8. We recommend that the Preferred Alternative (or a fully analyzed alternative) plan for all TAMT cargo activity to remain on TAMT so that the use of the National Distribution Center (NDC) for transfer be ended or significantly reduced.
9. If all containers and other cargo are not or cannot all be handled on the TAMT, then the resulting expected increased use and activity at the NDC, impacts from that facility and traffic between the two facilities must be analyzed in this PEIR as the two are directly related.
10. In addition, any increases at the NDC should be a cumulative project for the NCMT Master Planning EIR.
11. Analysis should include future land uses as well as current land use and assume Barrio Logan Community Plan Update (BLCPU) zoning and a Perkins School playground on Main Street. Analysis of health impacts must also include potential residential exposure in the transition zone if the Tenants' referendum succeeds in overturning the BLCPU, as this would mean that no action to alter zoning could be

---

[2] Sustainable Freight Strategy Update, Air Resources Board Resolution 14-2, January 23, 2-14
[3] Ibid, p.2

taken for one year and, moving forward, the current zoning allowing residences in the immediate vicinity of TAMT would remain.

12. We request an analysis of an alternative central gate location to determine if it can reduce truck trips, shorten distances, and ensures that the school, parks, and other sensitive uses are not more impacted.
13. We object to the finding of FONSI by the consultants when they have not even begun the analysis. Our cursory analysis demonstrates that this finding is premature.
14. Last, we fully support the action on the part of the Port to do a full EIR at this stage. The example mentioned at the April Port meeting of the South Bay Power plant demo is not comparable for several reasons. If the staff moves away from this level of analysis, we request the opportunity to respond with additional comments.

We will have several comments related to the mitigation measures that will need to be adopted to mitigate the impacts of this project over the next 20 years.

Thank you for the opportunity to comment on this important issue.

Sincerely,

Laura Hunter Joy Williams Kayla Race

Laura Hunter	Joy Williams	Kayla Race
Policy Advocate	Research Director	Policy Advocate

cc.
Joel Valenzula
Larry Hofreiter
Rebecca Harrington

Melissa Hocanson

From: Melissa Hocanson
Sent: Friday, April 17, 2015 3:21 PM
To: Melissa Hocanson
Subject: FW: CRM item #3033844 FW: Letter to the Port District, Environment and Land Use Department

Importance: High

From: CustomerServiceCenter
Sent: Friday, April 17, 2015 10:49 AM
To: Joely Habib
Cc: Laura Nicholson; Annette Walton
Subject: FW: Letter to the Port District, Environment and Land Use Department

Good morning,

Please review and update the following BP:

3033844 / 62339

From: kragand@cox.net [mailto:kragand@cox.net]
Sent: Thursday, April 16, 2015 11:02 PM
To: CustomerServiceCenter
Subject: Letter to the Port District, Environment and Land Use Department

Would you please see that the appropriate department receives the attached letter?
Thank you,
Kay Ragan, President
League of Women Voters San Diego
kragand@cox.net

ELUM 17 APR '15 PM 12:53

May 16, 2015

To: San Diego United Port District, Environmental and Land Use Department

From: The League of Women Voters of San Diego

Regarding comments on the proposed Tenth Avenue Marine Terminal Redevelopment Plan (UPI) #EIR-2015-39

The League of Women Voters of San Diego supports the protection of the natural environment as a primary responsibility of the San Diego United Port District as well as recreation for the general public, maintenance of a balance of maritime comments and accountability and responsiveness to member cities and to the public. Furthermore, the Port District should promote clean air, healthy communities and environmental justice to reduce the cumulative health burdens on neighboring communities.

We are concerned about emissions this project could generate, that are associated with vessel calls, truck trips, increased rail activity, worker trips, energy and water use that could exceed established thresholds for greenhouse gas emissions (GHO) and the City of San Diego's Climate Action Plan.

CHG emissions that WOULD ALLOW A 400-500% increase generated by TAMT's proposed Redevelopment Plan could greatly impact the adjacent community of Barrio Logan, the Convention Center visitors and Downtown resident's air quality, resulting in health risks and a degraded environment.

We find it troubling that this project is being proposed as an unappeasable Coastal Development Permit and not subject to Costal Commission review. What authority or circumstance can you cite that will grant unappeasable approval of the TAMT project?

We urge you to address our comments on your website and respond to them in the Draft EIR.

Thank you for the opportunity to comment. We look forward to your response on these issues.

Respectfully Yours,

Kay Ragan
President, LWVSD

Cathy O'Leary
Port District Observer, LWVSD

ELUM 14 APR '15 PM 4:58

Environmental Impact Report for Tenth Avenue Marine Terminal (TAMT) Proposal

The following is to be included to public input on the potential environmental effects of a proposed modernization plan for TAMT, located off Harbor Drive and Cesar Chavez Parkway:

In analyzing and comparing current tonnage and truck moves to Port's 2035 market forecast contained in the draft EIR report, the following are comments and questions:

1) The Port's current 95,232 truck moves falls within existing EIR in 2000, what is the maximum truck moves - verify if this is 110,000 truck moves, or if this was revised at some point subsequent to the 2000 EIR

2) The Port's 2035 forecast will create 405,162 truck moves, or 4 times current truck moves

3) Are there plans to directly connect TAMT with Hwy 5? There would be approximately 405,000 more trucks will be moving on Harbor Dr. by Barrio Logan community

Calculations are: 1,306 trucks/day in 2035 (based on 310 days/yr.), compared to 307 trucks/day in 2013-14, for an increase of 1,000 trucks/day by Barrio Logan

4) Even if the Port could get Caltrans funding to build overpass direct connect to Hwy 5, it is still 405,000 trucks moving a top Barrio Logan rooftops - is there another plan to mitigate this?
-

5) In analyzing other methods to transfer cargo off of TAMT besides trucks, has the Port reviewed the BNSF railroad's current cargo volume? What is the BNSF's capacity for the San Diego region? How will the proposed changes and upgrades to TAMT affect the existing BNSF rail line?

6) How was the projected cargo volume increases calculated? What were the assumptions made about future business/trade development? Is there any new firm cargo commitments to the Port that would pay for the proposed infrastructure changes/ modifications?

7) Has the Port prepared a preliminary cost-benefit analysis so it would support the proposed changes to TAMT?

8) Has the Port reviewed previous engineering reports that analyzed the installation of the gantry cranes? If so, have the cost estimates been reviewed?

9) What is the current cold storage facility cargo volume and will an increase to the future cargo volumes mean that the facility will have to be upgraded as well?

Prepared by: Mike VandenBergh
Mikejvandenbergh@aol.com

4-8-15

TO THE PORT DISTRICT,

As a native San Diegan, I've been interested in the growth of our city for many years.

Please feel free to keep and analize these sketches of ideas for downtown.

(Location; South of 500ft height limit.)

John Karpinski
12071 Alta Carmel Ct Unit 103
San Diego CA 92128-3816

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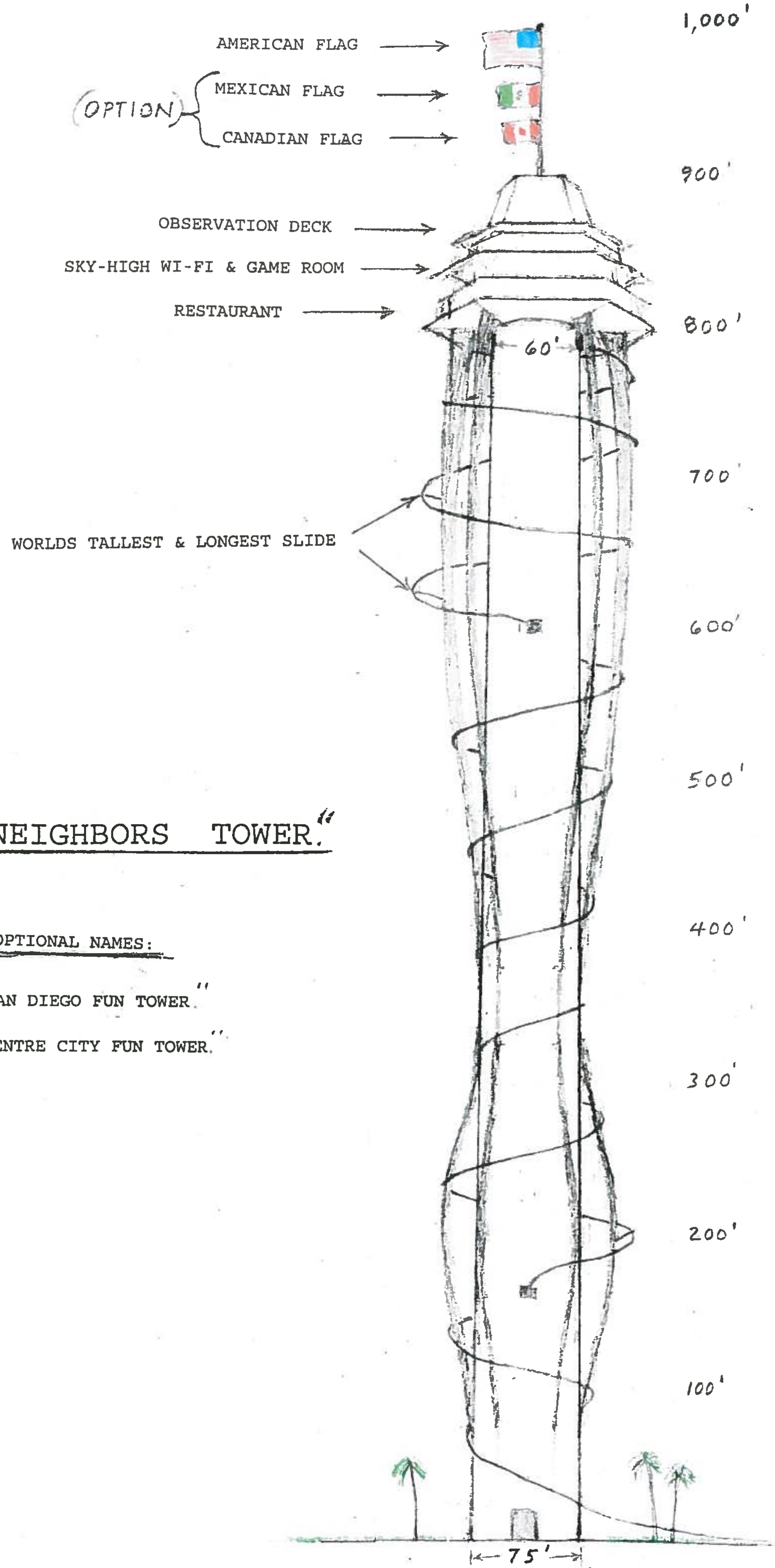
APR 08 2015
Env & Land Use Plng



"NEIGHBORS TOWER."

OPTIONAL NAMES:

"SAN DIEGO FUN TOWER."

"CENTRE CITY FUN TOWER."

1" = 100'

John Karpinski
12071 Alta Carmel Ct Unit 103
San Diego, CA 92128-3816

Downtown San Diego has everything except an amusement park. Here is a sketch of a "Fun Zone" for Downtown.

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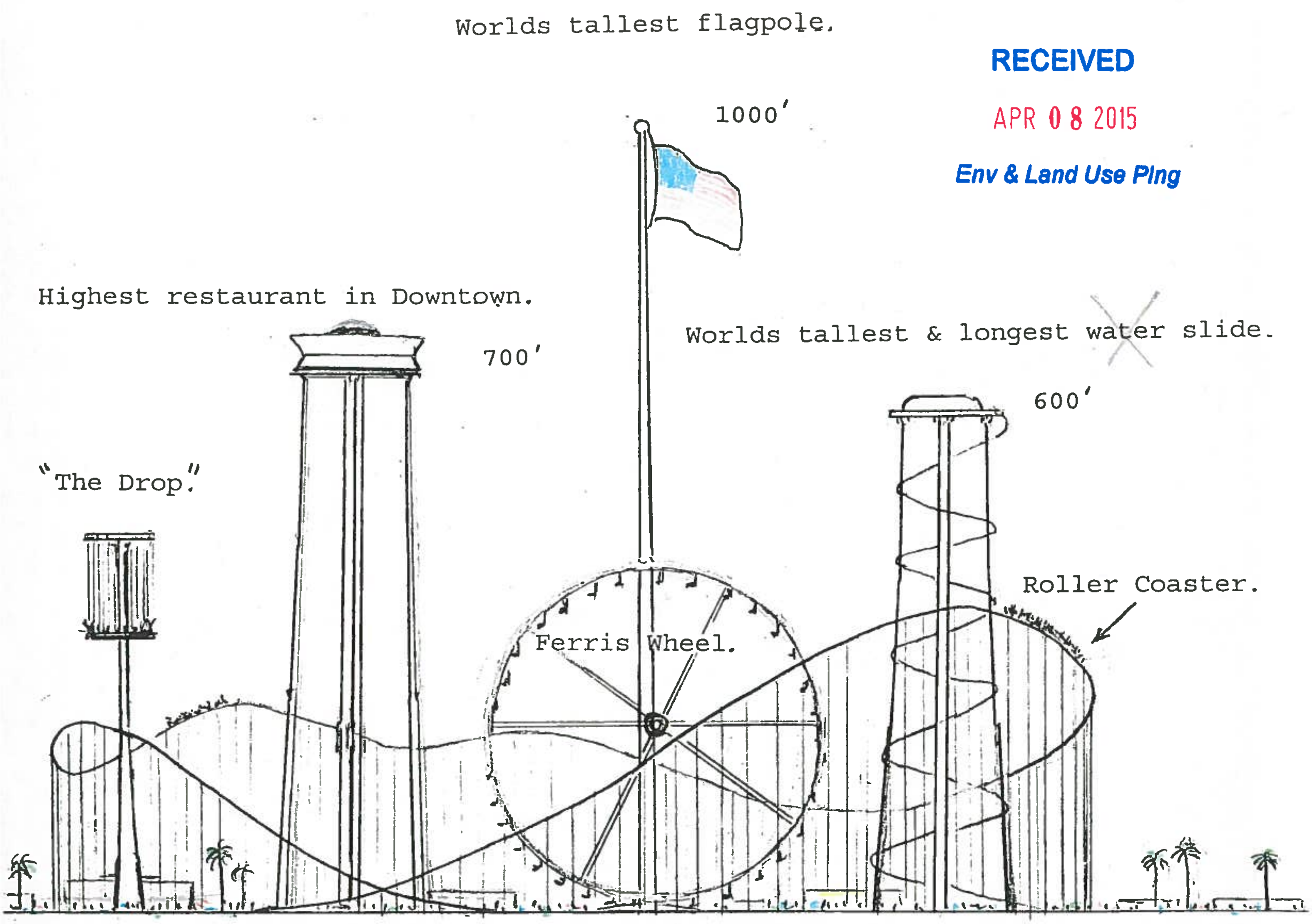
Env & Land Use Plng



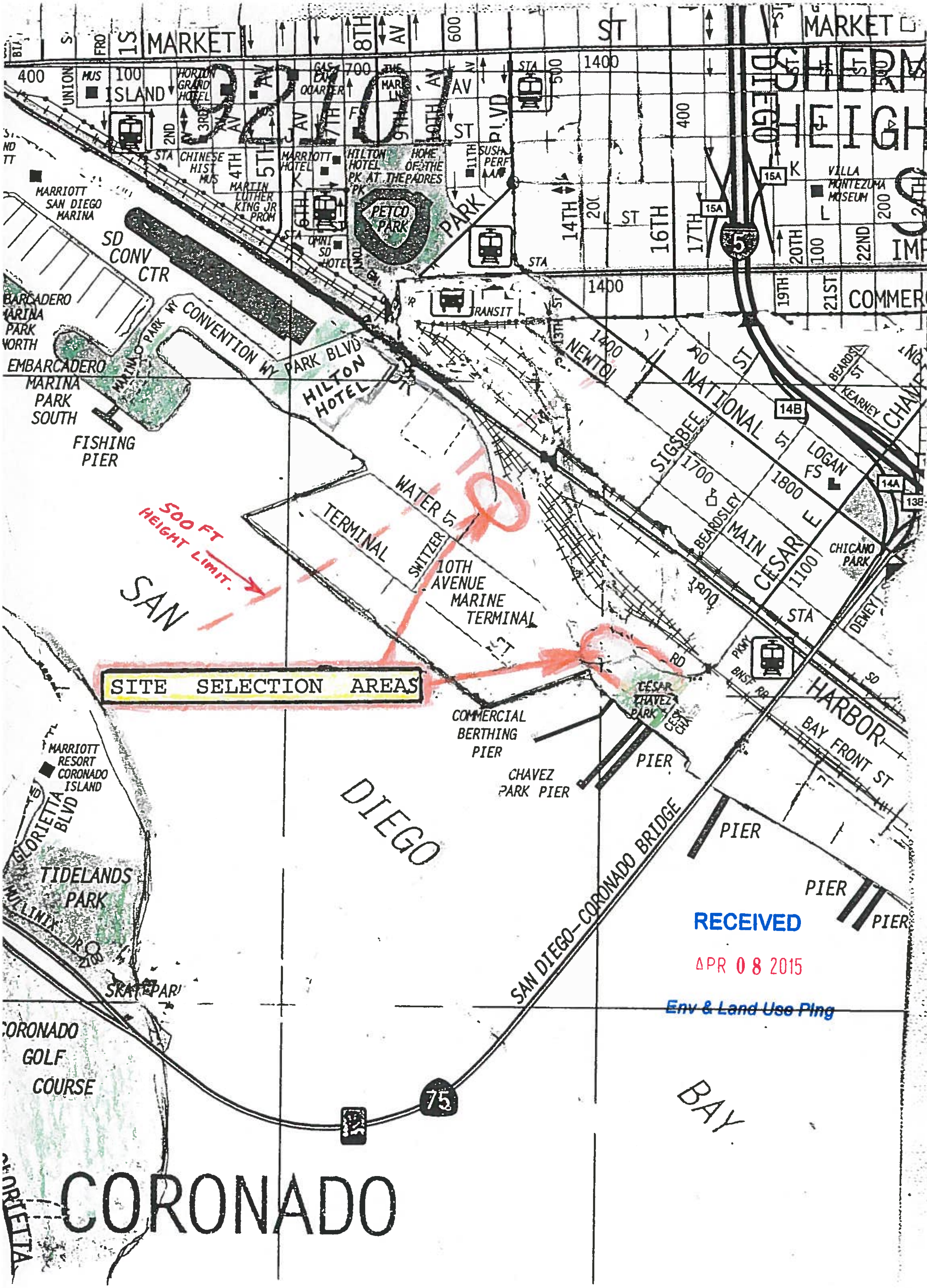
"CENTRE CITY FUN" or; "SAN DIEGO FUN" Amusement Park.

Location; South of 500ft height limit.

← to Convention Center. NW ←→ SE to Coronado Bridge. →

1" = 200'

John Karpinski
12071 Alta Carmel Ct Unit 103
San Diego, CA 92128-3816


MARKET
ISLAND
SD CONV CTR
CONVENTION WY
PARK BLVD
HILTON HOTEL
PETCO PARK
MARRIOTT SAN DIEGO MARINA
EMBARCADERO MARINA PARK NORTH
EMBARCADERO MARINA PARK SOUTH
FISHING PIER
500 FT HEIGHT LIMIT.
SITE SELECTION AREAS
WATER ST
TERMINAL
SWITZER
10TH AVENUE MARINE TERMINAL
COMMERCIAL BERTHING PIER
CHAVEZ PARK PIER
CESAR CHAVEZ PARK
PIER
NATIONAL
SIGSBEE
MAIN
CESAR E CHAVEZ
LOGAN
CHICANO PARK
HARBOR
BAY FRONT ST
TRANSIT
SHERMAN HEIGHTS
VILLA MONTEZUMA MUSEUM
COMMERCIAL
SAN DIEGO BAY
SAN DIEGO-CORONADO BRIDGE
MARRIOTT RESORT CORONADO ISLAND
GLORIETTA BLVD
TIDELANDS PARK
CORONADO GOLF COURSE
CORONADO
92101
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Unified Port of San Diego

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Tenth Avenue Marine Terminal Redevelopment Plan (EIR)

COMMENTS REGARDING EIR SCOPE

PLEASE PRINT CLEARLY

NAME & ORGANIZATION: Bryan Constantino → Resident

MAILING ADDRESS: 1970 Julian Ave
San Diego, CA 92113

EMAIL ADDRESS: bryan-acteal@hotmail.com

Your checklist seemed to not be looking into certain features of the neighborhood and its residents. Why is that? Shouldn't we have more benefits or importance to the residents?

~~We~~ Our port will make people more money, and it is leaving our neighborhood. Why should we care about others when we get nothing in return?

Please use back side of sheet for additional comments...

Comments will be accepted in writing until **5:00 pm** on **Tuesday, April 14, 2015**.
Please submit via email to: lhofreiter@portofsandiego.org, via fax to: 619.686.6508,
OR via personal delivery or mail service to:
Larry Hofreiter, ELUM Dept.
Port of San Diego
3165 Pacific Highway
San Diego, CA 92101

From: Cathy OLeary Carey
To: Larry Hofreiter
Subject: Tenth avenue Marine Terminal Redevelopment Plan, comments
Date: Monday, April 13, 2015 10:21:53 PM

April 13. 2015

To: The San Diego Unified Port District, Environmental and Land Use Department
Regarding: the Proposed Tenth Avenue Marine Terminal Redevelopment Project
(UPD # EIR 2015-39)

We are concerned about the proposed Tenth Avenue Marine Redevelopment (TAMT) proposal because of its potential to further degrade the quality of the close environment, namely, Downtown San Diego, which has become increasingly residential, the San Diego Convention Center and Hilton Bayfront Hotel visitors and tourists, and the adjacent community of Barrio Logan.

We believe that the environmental factors considered in the Districts NOP may have a significant impact on the surrounding environment .
Therefore, if emissions from this project harm humans, nature and wildlife we oppose the TAMT Redevelopment project.

Lives and livelihoods that could be in harms way or at risk from the projects increased emissions must have priority over the Port’s priority of increased profit margins and market shares.

We appreciate the opportunity to comment on this proposal.

Thank you,

Cathy O’Leary Carey and John Carey
cathycaper@sbcglobal.net
Tel # 858-385-0419

Cathy OLeary Carey

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MAR 18 2015

Env & Land Use Plng

Unified Port of San Diego

Tenth Avenue Marine Terminal Redevelopment Plan (EIR)

COMMENTS REGARDING EIR SCOPE

PLEASE PRINT CLEARLY

NAME & ORGANIZATION: Dan Wood, various groups

MAILING ADDRESS: 4539 Lee Avenue

La Mesa, CA. 91941

EMAIL ADDRESS: dwood8@cox.net

---

1) When was the current Tenth Avenue Marine Terminal Redevelopment plan commissioned?
2) Which consultant was hired to develop the ~~current~~ 2008 plan?
3) How was this consultant selected; open bidding or sole source?
4) What public input was received by the Port and the consultant, prior to the writing of the plan?
5) Who was consulted by the lead consultant as the plan was being written?
6) What TAMT plan was updated as part of the current plan update?
7) Were the current TAMT tenants consulted?
8) Were the freight, shipping lines consulted?
9) Were Barrio Logan stakeholders like EHC consulted?
10) Was the Barrio Logan Planning Committee consulted?
11) Was the City of San Diego planning dept consulted?
12) Was the SD County Air Quality District consulted?
13) If the answer is no, when will these parties be consulted?

Please use back side of sheet for additional comments...

Comments will be accepted in writing until **5:00 pm** on **Tuesday, April 14, 2015**.
Please submit via email to: lhofreiter@portofsandiego.org, via fax to: 619.686.6508, OR via personal delivery or mail service to:
Larry Hofreiter, ELUM Dept.
Port of San Diego
3165 Pacific Highway
San Diego, CA 92101

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Tenth Avenue Marine Terminal Redevelopment Plan (EIR)

COMMENTS REGARDING EIR SCOPE

PLEASE PRINT CLEARLY

NAME & ORGANIZATION: Don Wood, NBCC, C-3, ETC.

MAILING ADDRESS: 4539 LEE AVENUE
LA MESA, CA. 91941

EMAIL ADDRESS: dwood8@cox.net

Is this individual project going to become a component of the ongoing long term comprehensive planning process the Port is currently pursuing? How will this project fit into that larger planning process? How would implementation of this TAMT redevelopment project affect all the other components of the long range comprehensive plan?

Does the Port plan to ask the California Coastal Commission as a component of the comprehensive plan, or is this being considered as a separate piecemeal project planning effort?

Please use back side of sheet for additional comments...

Comments will be accepted in writing until **5:00 pm** on **Tuesday, April 14, 2015**.
Please submit via email to: lhofreiter@portofsandiego.org, via fax to: 619.686.6508,
OR via personal delivery or mail service to:
Larry Hofreiter, ELUM Dept.
Port of San Diego
3165 Pacific Highway
San Diego, CA 92101

Unified Port of San Diego

RECEIVED
MAR 18 2015
Env & Land Use Plng

Tenth Avenue Marine Terminal Redevelopment Plan (EIR)

COMMENTS REGARDING EIR SCOPE

PLEASE PRINT CLEARLY

NAME & ORGANIZATION: Dan Wood

MAILING ADDRESS: 4539 LEE AVE
LA MESA

EMAIL ADDRESS: DWOOD8@COX.NET

Please Post 2008 business plan and VICKERS + ASSOCIATES TAMT REDEVELOPMENT plan on the Port's website and email me a link to those web pages.

Please use back side of sheet for additional comments...

Comments will be accepted in writing until **5:00 pm** on **Tuesday, April 14, 2015**.
Please submit via email to: lhofreiter@portofsandiego.org, via fax to: 619.686.6508,
OR via personal delivery or mail service to:
Larry Hofreiter, ELUM Dept.
Port of San Diego
3165 Pacific Highway
San Diego, CA 92101

RECEIVED
MAR 18 2015
Env & Land Use Plng

March 18, 2015

To: San Diego Unified Port District, Environmental & Land Use Department

From: Donald Wood

Subject: Initial Scoping Comments on proposed Tenth Avenue Marine Terminal Redevelopment Project (UPD #EIR 2015-39)

My name is Don Wood, and I have been involved in downtown San Diego waterfront planning issues since 1982. These initial comments respond to the Port's Notice of Preparation of a Draft Environmental Impact Report and Notice of Public Scoping Meeting mailed out on March 11, 2015.

In addition to the factors listed in the above notice, please add a full assessment of the potential impacts on existing public access and public views that might be created by this proposed project. In addition, the draft EIR should identify all potential impacts to air quality affecting the terminal and the nearby Bario Logan neighborhood, examine each of those potential impacts in detail, and fully describe actions the Port proposes to take to fully mitigate those impacts.

The draft EIR should examine a wide range of alternative uses for this property that might have less impact on surrounding neighborhoods. One key alternative that should be fully examined in the draft EIR must be moving existing cruise ship operations from the North Embarcadero down to the Tenth Avenue Marine Terminal (TAMT). This should include berthing cruise ships at TAMT, or moving them to berths along a longer version of the existing pier west of the Bayfront Hilton, thereby freeing up the B Street Pier and Broadway Pier for more public uses, including new restaurants and expansion of berthing for the vessels of the San Diego Maritime Museum.

I may supplement these initial comments after seeing the staff presentation this evening, but in any case please post these initial comments on your project website and fully respond to them in the draft EIR.

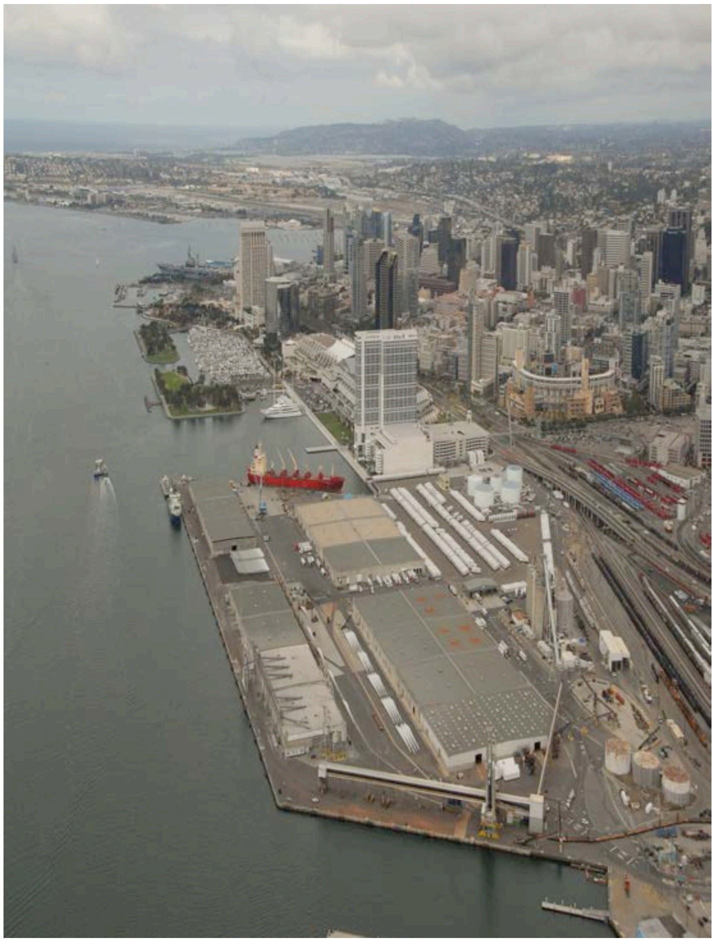
Thank you.

Don Wood

Don Wood
619-463-9035
Dwood8@cox.net

Appendix C
Tenth Avenue Marine Terminal Redevelopment Plan

UPDATED 12/8/16



Unified Port of San Diego

FINAL REPORT December 2014

DRAFT

VICKERMAN & ASSOCIATES, LLC

AMENDED BY DISTRICT STAFF NOVEMBER 2016

Tenth Avenue Marine Terminal (TAMT) Redevelopment Plan

]

DRAFT

Final Report

Date: December 14, 2014

AMENDED BY DISTRICT STAFF NOVEMBER 2016

(SDUPD Consultant Agreement Document No. 60457, dated June 10, 2013, Incorporating Amendments No. 1 through No. 4, and Amendments)

Prepared for:

Unified Port of San Diego

Prepared by

VICKERMAN & ASSOCIATES, LLC

ABSTRACT

The San Diego Unified Port District ("SDUPD" and "the District") commissioned Vickerman and Associates ("V&A") team update the San Diego Unified Port District Maritime Business Plan ("2008 Business Plan") published in December 2008 by the Port of San Diego. The overall objective of the Tenth Avenue Marine Terminal Redevelopment Plan ("Redevelopment Plan" or "the Plan") is to provide the District with a series of market driven port terminal development concepts for the Tenth Avenue Marine Terminal (TAMT).

The Plan updates the maximum practical capacities to meet potential 2035 needs and provides an overall flexible strategic market direction. It establishes an overall business framework within which project decisions should be made. The Plan's total MPC for TAMT depends on the overall business framework, and it is estimated to be between 5,000,000 and 6,000,000 metric tons.

Table 1. V&A Estimated Maximum Practical Capacity in Metric Tons[1]

Multipurpose Alternative	Neo Bulk and Break Bulk	Reefer & Dry Containers	Dry Bulk	Liquid Bulk	Total
Auto / Truck Terminal	583,850	1,555,840	2,650,000	239,017	5,028,707
General Cargo Omni Ro/Ro Terminal	977,400	1,555,840	2,650,000	239,017	5,422,257
Break-bulk and Neo-bulk Omni Type Terminal	327,700	2,288,000	2,650,000	239,017	5,504,717
Full Container Refrigerated & Dry	0	2,960,840	2,650,000	239,017	5.849,857
Dry Container Full Build Out	0	3,155,840	2,650,000	239,017	6,044,857

The Redevelopment Plan relies on the SDUPD Climate Action Plan for findings and recommendations associated with "Sustainability".

The Redevelopment Plan's optimum development concepts recommend that the District's focus should be on the following key strategic development issues:

1. *Improvements need to be market-driven and follow a market forecast (Market Forecast Demand Minus Current Terminal Capacity Equals Justifiable Terminal Needs and Requirements). A Modular Operating Grid System (MOGS) should be used in the planning, design and construction of improvements .*
2. *Improvements need to maximize cargo throughput capabilities and efficiencies, meet the District's Climate Action Plan policies and procedures, and provide the District with competitive financial return on the District's investment*
3. *District's marine-oriented industrial uses (TAMT and NCMT) need to be modernize to meet the present day pressures of the maritime industry.*

[1] The Redevelopment Plan uses metric tons for consistency throughout the report. However, the District maintains tonnage reports using metric revenue tons (unit of measure used in calculating wharfage). Cargo can be measured by either weight (metric tons) or by size and measurement (cubic meters).

4. *Successful implementation of any improvement needs to focus on the recommended operating nodes: Multipurpose Dry Bulk Cargo, Containerized Fresh Fruit, Liquid Bulk, and Multipurpose General Cargo Neo-bulk and Containerized Cargoes operations.*
5. *The cargoes associated with these operating nodes remain a good fit for TAMT into the future.*
6. *The 2008 Business Plan recommendation to demolition Transit Sheds # 1 and # 2 is a high priority to remove notable operational constraints.*
7. *Employ a Central Gate planning node to provide tenant-in-common services and establish a practical "freight only" gate complex. Implementation needs to be in cooperation with all users of TAMT. TAMT needs to maintain a second access and egress gate for emergency situations.*
8. *When the market requires, employ on-dock intermodal operations to help reduce annual truck trips from TAMT.*
9. *The District needs to commit to near-term maritime opportunities and anticipate long-term future terminal opportunities. The District's Maritime marketing and sales cooperation to facilitate the growth of the current tenants and cargo base, including locally based project cargo, should remain, but the actual booking of cargo remains the responsibility of the carriers and customers.*
10. *While dredging all berths to 42 feet MLLW may be beneficial, the Plan does not recommend dredging 10-1 and 10-2 due to operational and financial constraints.*

Sustainable Terminal Capacity Scenario (November 2016)

Based, in part, on comments received as part of the Tenth Avenue Marine Terminal (TAMT) Redevelopment Plan's Draft EIR public review period (June 30, 2016 to August 18, 2016), District staff looked at various additional strategies that could substantially reduce environmental impacts associated with long-term build out of the Tenth Avenue Marine Terminal. In addition to increasing the amount of mitigation that would be required throughout the life of the plan (which are identified in the TAMT Redevelopment Plan's Final EIR), District staff also determined that the TAMT Redevelopment Plan should include a Sustainable Terminal Capacity (STC) development concept as an additional alternative.

The Maximum Practical Capacity (MPC) is the highest theoretical activity level at which the terminal could operate if all physical improvements were made and if market conditions allowed, whereas the STC is an industry standard that tends to be a much more realistic development scenario. STC is typically 75% of a marine terminal's MPC. For TAMT, the STC development concept would include all of the same infrastructure improvements identified in the MPC scenario but would limit operations to 75% of MPC.

District staff is confident that the STC development concept establishes the necessary business framework to assess future business opportunities, and maintains adequate flexibility to adjust to various market conditions over the plan's 20-year time horizon. Total cargo throughput associated with the STC development concept would be 4,675,567 metric tons annually, which would be allocated to the various cargo nodes shown below:

- Dry Bulk: 1,987,500 MT
- Refrigerated Containers: 1,716,000 MT
- Multi-Purpose / General Cargo: 733,050 MT
- Liquid Bulk (No Change): 239,017 MT

Tenth Avenue Marine Terminal (TAMT) Redevelopment Plan

Executive Summary

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TAMT is a 96-acre deep-water marine terminal located along the San Diego Bay, west of Harbor Drive, between San Diego and the Coronado Bay Bridge, and immediately adjacent to the Barrio Logan neighborhood and north of three water-dependent shipyards. A BNSF rail facility is located between the terminal and Harbor Drive. There are terminal rail spurs serving facilities on TAMT and on-dock rail adjacent to the berths.

The Redevelopment Plan is an analysis of TAMT development opportunities with particular attention paid to infrastructure and transportation improvements that maximize cargo growth.

Intent of the TAMT Redevelopment Plan:

The Plan includes a discussion of emerging industry-wide maritime and intermodal trends, a review of the TAMT actual cargo throughput, and a market assessment and forecast. The Plan uses the 2008 Business Plan's **Maximum Practical Capacity ("MPC")** calculations.

Table 2. 2008 Business Plan Maximum Practical Capacity Calculations (Metric Tons)

Cargo Handling Mode	Berth MPC Metric Tons (MTs)	Storage MPC Metric Tons (MTs)
Neo bulk and Break bulk	**940,000**	**1,670,000**
Containers	**730,000**	**730,000**
Dry Bulk	**2,650.000**	**2,250,000**
Liquid Bulk	**220,000**	**220,000**
Total Cargo Handling Mode MPC	**4,540,000**	**4,870,000**

The Plan updates the above maximum practical capacities to meet potential 2035 needs and provides an overall flexible strategic market direction. Most important it establishes an overall business framework within which project decisions should be made. The Plan has a range for TAMT's total MPC depending on the overall business framework between 5,000,000 and 6,000,000 metric tons

Order of Magnitude and Cost Estimates:

Whenever cost estimates are presented or referenced, they are to be considered as an order of magnitude "*Opinion of Probable Cost*". The improvement costs are not guarantee maximum figures.

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Navigation Channels in San Diego Bay:

The Federal navigational entrance channel characteristics in the San Diego Bay, with regards to the mean lower low water (MLLW) datum remain unchanged by the Redevelopment Plan.

Tenth Avenue Marine Terminal Berths:

TAMT has eight (8) operating berths totaling 4,620 linear feet on three separate waterfronts:

Table 3. Length, Depth, and Special Characteristics

Berths	Length	Depth Berth-side	Primary Customer	Special Characteristics
10 -1 & 10-2	1,118 lf	30 ' MLLW	Dole	Fuel, Water, Vessel Electricity
10-3, 10-4, 10-5 & 10-6	2,580 lf	42 ' MLLW	CEMEX with Siwertell Bulk Loading at 5 & 6	Fuel, Water, Vessel Electricity (3&4)
10-7 & 10-8	650 lf	36 ' MLLW	Searles Valley Minerals Bulk Unloading System	Fuel, Water

Aerial Photo of TAMT

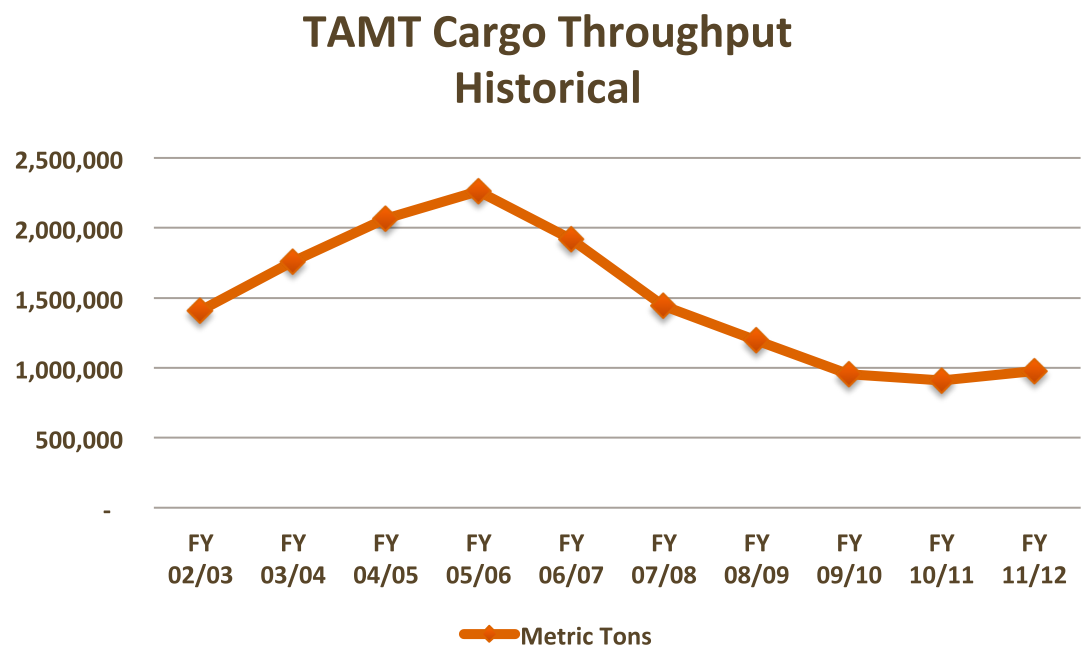
Source: SDUPD

Tenth Avenue Marine Terminal Commodities:

Tenants at TAMT handle containerized fruit, break-bulk fruit, dry bulk, liquid bulk, and project cargo ("neo-bulk"). TAMT offers dockside cool or frozen storage, break bulk transit sheds, dry bulk unloading and storage capabilities (silo and flat storage), and open terminal area for project cargo. Over the years, principal inbound cargoes have been refrigerated commodities (bananas, pineapples and other tropical fruits), dry bulk commodities (fertilizers, bauxite, sand, and cement), liquid bulk products (molasses and petroleum products), break-bulk commodities (bagged and palletized products) and neo-bulk commodities (rolls of newsprint, yachts, steel products, and wind energy components). Export cargoes include much of the same commodities but in smaller quantities.

Historic Cargo Tonnage Throughput:

Cargo throughput and trend for TAMT from FY 02/03 to FY 11/12 is shown below:



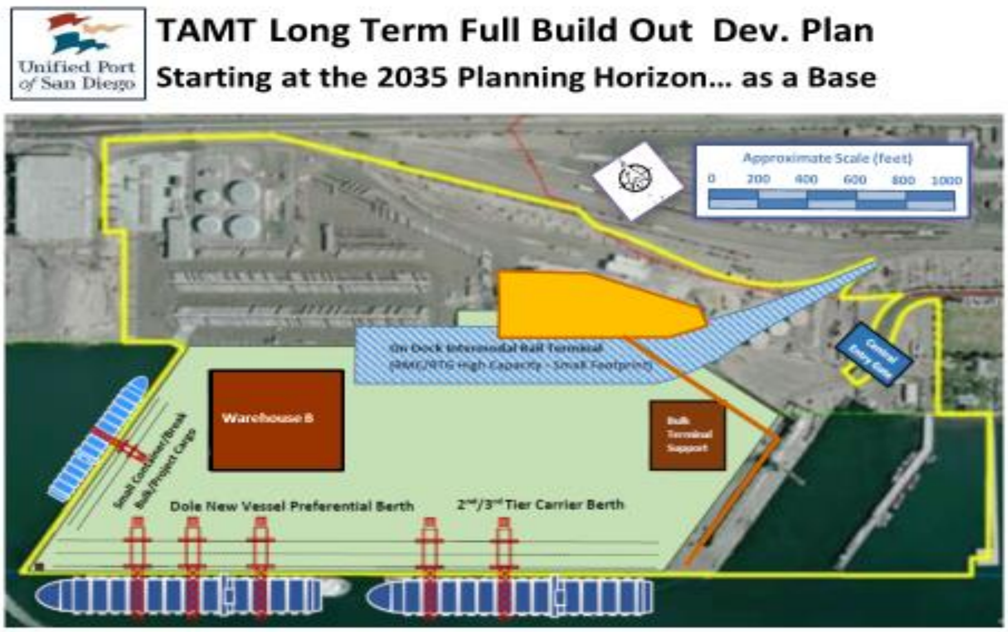
Source - SDUPD Maritime Division Cargo Report 9/11/12

II. Vickerman & Associates Scope of Work:

In response to the SDUPD RFQ # 566886, V&A was commissioned by the District on June 10, 2013, Document # 60457, to assist the District with a Tenth Avenue Marine Terminal ("TAMT") Redevelopment Plan. The scope of work involved a process that has been successful in 67 of the 90 North American deep-water general cargo ports that have benefited from the V&A strategic planning process. The steps in this process were the assessment of existing terminal conditions and a terminal cargo throughput analysis and terminal needs assessment resulting in a terminal facilities initial building program solution.

The TAMT Working Team, consisting of V&A and SDUPD Staff, employed a process referred to as "SITE WEEK" (SITE is an acronym for System of Intensive Team Effort). SITE WEEK for this project occurred June 4th to 7th, 2013. An important product of SITE was the preparation of a long-term concept for the redevelopment of the terminal.

Illustration. Long Term S.I.T.E. Optimum Development Concept



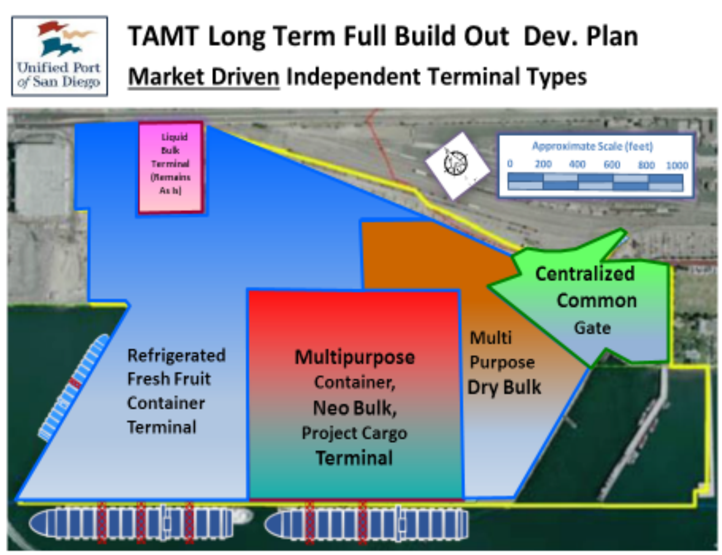
Source: Vickerman & Associates 2014

III. Approach and Methodology:

The TAMT Redevelopment Plan methodology used data from a variety of sources including business and market factors. Sources include:

- Previous reports and forecasts prepared for the District
- The maximum practical cargo estimates calculated in the 2008 Business Plan.
- A market forecast using US, State and Regional GDP's
- A facility needs assessment with staff and customer input
- Customers' cargo forecasts and market assessments

The Plan's market-driven approach is summarized by the formula "***Forecast less Capacity equals Need***" (F less C = N). Market conditions will change, therefore the phasing for individual opportunities and projects are suggested for ***general planning purposes***. The fundamental building blocks for the Plan divide TAMT into four (4) operating nodes and one (1) planning node.



Source: Vickerman & Associates 2014

The Operating nodes are the Multi Purpose Dry Bulk, Liquid Bulk Terminal, Refrigerated Fresh Fruit Container Terminal, and Multipurpose Container, Neo Bulk, Project Cargo Terminal. The Planning node is the Centralized Common Gate.

IV. SDUPD Planning Documents and Prior Studies:

SDUPD CLIMATE ACTION PLAN ("CAP"):

The SDUPD developed a comprehensive Climate Action Plan ("CAP") in 2013. The CAP served as a framework for the preparation of the Redevelopment Plan. While the Redevelopment Plan does not discuss specific implementation, tracking, and monitoring of the CAPS's measure, the Plan does attempt to follow the CAP;s guiding principles and overarching policies.

The CAP policies and measures are companion measures and should be read as companion documents with the Redevelopment Plan. Some of the principles that apply to the recommendations and findings of the Redevelopment Plan include:

- Encourage uses of alternative fueled cargo handling equipment and terminal and stationary equipment.
- Implement appropriate roadway management systems on access and egress roads serving TAMT.
- The on-dock and near-dock rail freight system should be used, when and where, appropriate and feasible.
- Terminal improvements must incorporate energy performance standards, achieve reduction in energy usage and employ state-of-the-art technology, when practical and feasible.
- High mast terminal lighting should include low energy bulbs and should incorporate standards and measures to meet OSHA and marine terminal standards consistent with the CAP.
- TAMT improvements and operations should attempt to capture and use recycled water and meet the highest standard for capture and discharge of storm water run-off.
- Improvements should include water conservation measures during construction and CAP standards for water conservation during operations.
- Where practical and feasible, implement renewable energy sources for TAMT operations and establish a "Smart Grid" to allow management and automatic adjustments for the electrical demands associated with the refrigerated containers and the on-term cold storage facility.
- Reduce waste and encourage recycling.

SDUPD Master Plan adopted March 18, 1984:

An important Port Master Plan guideline is: "***Existing, established marine-oriented industrial areas that have been devoted to transportation, commerce, industry and manufacturing are encouraged to modernize and to construct necessary facilities within these established areas in order to minimize or eliminate the necessity for future dredging and filling in new areas***."

The Redevelopment Plan is not an amendment or modification to the Port District's approved and certified Port Master Plan.

SDUPD, Final Report, Maritime Business Plan Update, TEC Inc. December 2008:

The San Diego Unified Port District engaged TEC Inc. in August 2006, to update a 1999 Port of San Diego Marine Terminal Business Plan. The Redevelopment Plan is intended to update this Plan.

Port Development Compared to a Pipeline:

Factors that influence a terminals throughput include:

- Vessel and Berth Activities
- Ship-to-Apron Transfer
- Apron-to Storage Transfer
- Storage
- Intermodal Transfer

Since physical factors at TAMT have not changed since the 2008 Business Plan, the Redevelopment Plan relies on the berth, storage and customer MPC's calculated by that Report.

Table 4. Maximum Practical Capacity as Calculated in 2008 (Metric Tons per Year)

Cargo Mode	TEC Berth MPC	TEC Storage MPC	TEC Customer MPC
Break Bulk	940,000	1,670,000	1,295,000
Containers	730,000	730,000	730,000
Dry Bulk	2,650,000	2,250,000	2,625,000
Liquid Bulk	220,000	220,000	220,000
TOTAL	**4,540,000**	**4,870,000**	**4,870,000**

Table 5. Maximum Practical Capacity as Calculated in 2008 based upon Customers

Tenant	***Maximum Practical Throughput Capacity***	***Notable Constraints***
CEMEX	750,000 mt	storage capacity, ship unloader undersized; reclaim to truck station inefficient
Future Cement (CEMEX).	375,000 mt	Future, potential throughput if additional CEMEX cement storage is provided
Searles Valley - Soda Ash, etc. Searles Valley - Sand	1,000,000 mt (silos) 500,000 mt (open)	N/A (silo complex inactive) Dry bulk open-air storage capacity; truck loading system
Dole Fresh Fruit Co.	730,000 mt (115,000 TEUs)	Container storage capacity, vessel discharge times
San Diego Refrigerated Services (SDRS)	400,000 mt	Cold storage capacity, cargo transfer berth to storage
The Copley Press, Inc.	130,000 mt	Cargo transfer berth to Warehouse C
Star Shipping & Misc. Break-bulk cargo – Open Storage	280,000 mt	Open-air storage capacity
Spot Cargo, Misc. Breakbulk.-Covered Storage	350,000 mt	Cargo consistency / reliability
Windmills and Project Cargo	135,000 mt[(1)]	Open-air storage; cargo transfer berth to storage behind transit sheds
The Jankovich Co.	220,000 mt	None noted
TOTALS	**4,870,000 mt / year**	

[(1)]Project Cargo (ie. windmill parts) is represented in revenue tons, because these items can not accurately be translated into metric tons.

Source: TEC 2008 Business Plan Update

Illustration: 2008 Proposed Preferred Concept Scenario 2 for TAMT

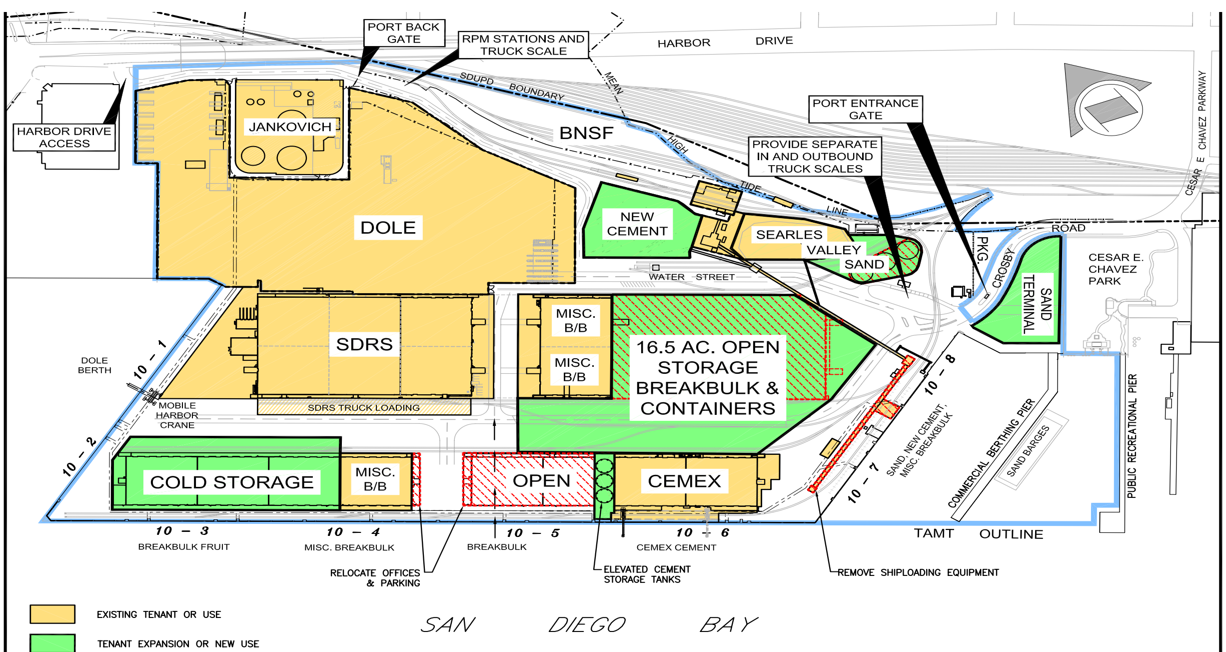
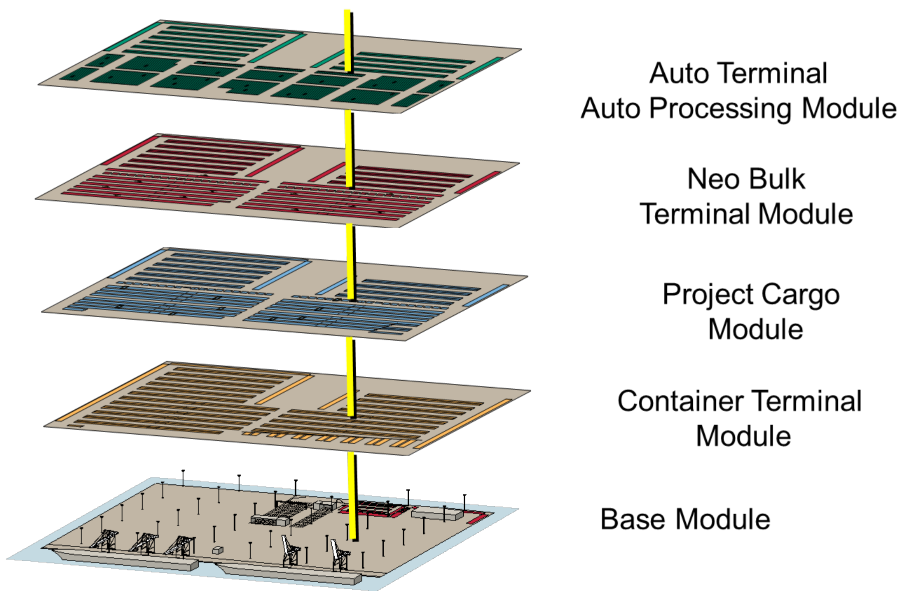


Figure 5.4-2
Scenario TAMT-2

Rather than focusing the current TAMT Redevelopment Plan on individual parcels of land, the Plan's focus is on a flexible market drive cargo handling operating nodes. When the District desires to implement a specific element of the Plan, it is recommended that the District use a Modular Grid Overlay System (MGOS)

.

Illustration: Modular Operating Grid Overlay System Concept



Other Reports and Studies Reviewed:

- Economic and Financial Value of TAMT (Martin Associates – 2011)
- Operating Model Study of TAMT (Martin Associates – 2012)
- Assessment of Gantry Cranes for TAMT – Mercator International, July 29, 2013
- Port of San Diego, Container Marketing Plan Study, Charles Labitan, June 13, 2013
- COMPASS, Strategic Plan 2012 – 2017 (SDUPD)

V. Evolving Pressures in the Maritime and Intermodal Industry:

"A port cannot be planned or designed as an arbitrary arrangement of independent terminals. It cannot even be planned as an independent whole, because the arteries connecting the port to the sea and to the hinterland are as important as the port itself. A port should always be studied and planned in its true node in a complex system." [2]

Nowhere is this principle more important than at TAMT with its collection of lease agreements, easements, tidelands use and occupancy permits and other land permits that encumber the 96 acres.

The Redevelopment Plan has a "*bifocal*" vision. This vision is intended to enable the District to have the ability to commit to near term opportunities and to anticipate future operational efficiencies.

[2] Source: Guidelines for Port Planning published by the International Association of Ports and Harbors (IAPH).

The Plan must be read and understood as a document created to be flexible to changing market conditions.

In evaluating new market opportunities the District needs to focus on the following:

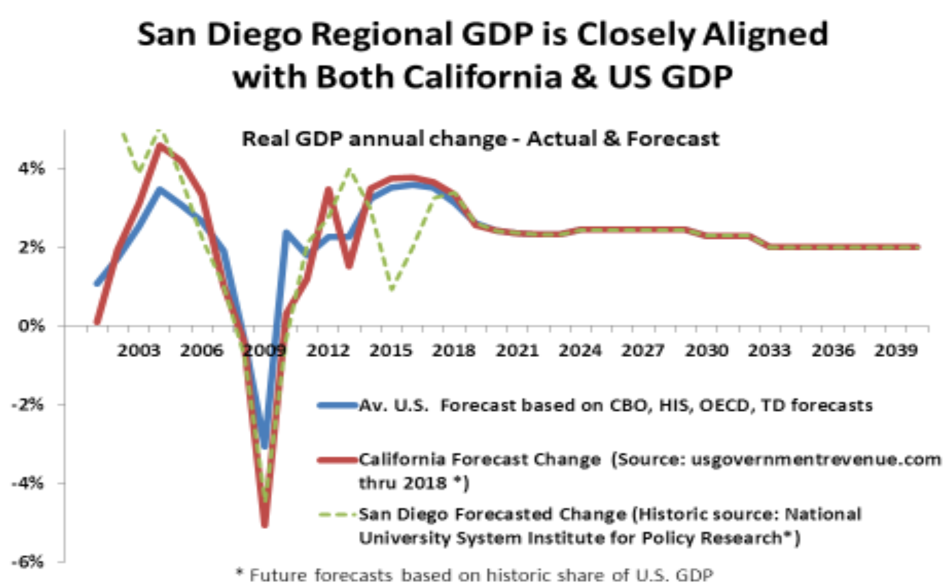
- Changing Maritime Customer
- Growth in Containerization
- Reliance on Intermodal Rail
- Need for Concentrated Logistics Support Services

Market Forecast Demand Minus Current Terminal Capacity Equals Justifiable Terminal Needs and Requirements:

The Redevelopment Plan's concepts rely heavily on previous work performed by the District Staff. The Plan's findings and recommendations are optimum modernization and development concepts using previous data reviewed and assessed. The concepts discussed are market driven and implementation must follow a successful marketing approach. The Plan builds upon the existing terminal conditions, compares existing throughput to terminal capacity, and suggests future customers needs.

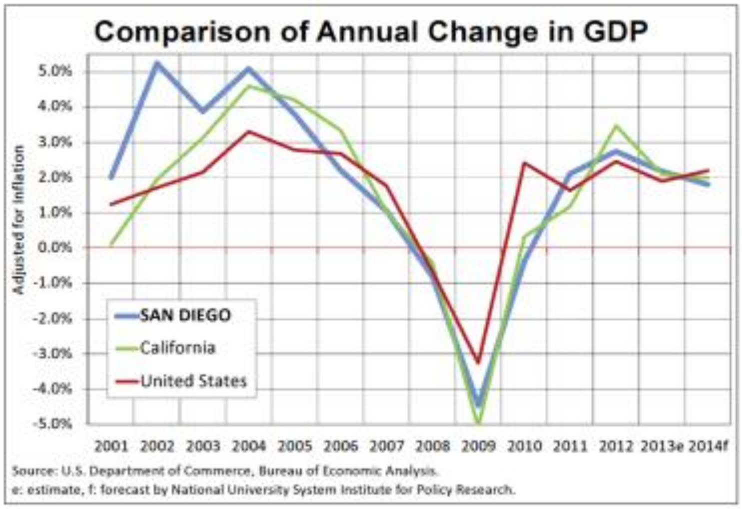
VI. Market Forecast Based on US, State and Regional Gross Domestic Product (GDP) Methodology

The Redevelopment Plan includes a cursory GDP Market Cargo Forecast for the Port of San Diego and it integrates the forecast results into the Plan. The forecast includes review and collection of relevant North American, US and US Southern California regional area, port, truck, and railroad data from private and public sources. The forecast was based on publically available GDP trade and transportation existing information and project data on a national, state, regional and metropolitan basis. On average both historically and looking ahead, the San Diego GDP is closely aligned to both the California and U.S. forecasted GDP growth as evidenced in the chart below.



Historic comparison of the actual GDP for San Diego vs. both California and the U.S. exhibiting close alignment is illustrated below.

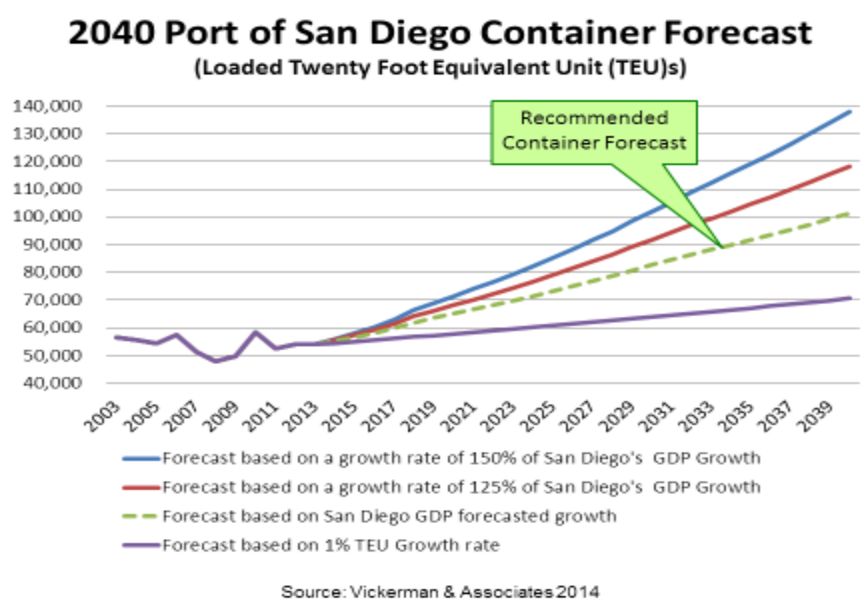
Historic Comparison of the Actual GDP for San Diego vs. Both California and the U.S.



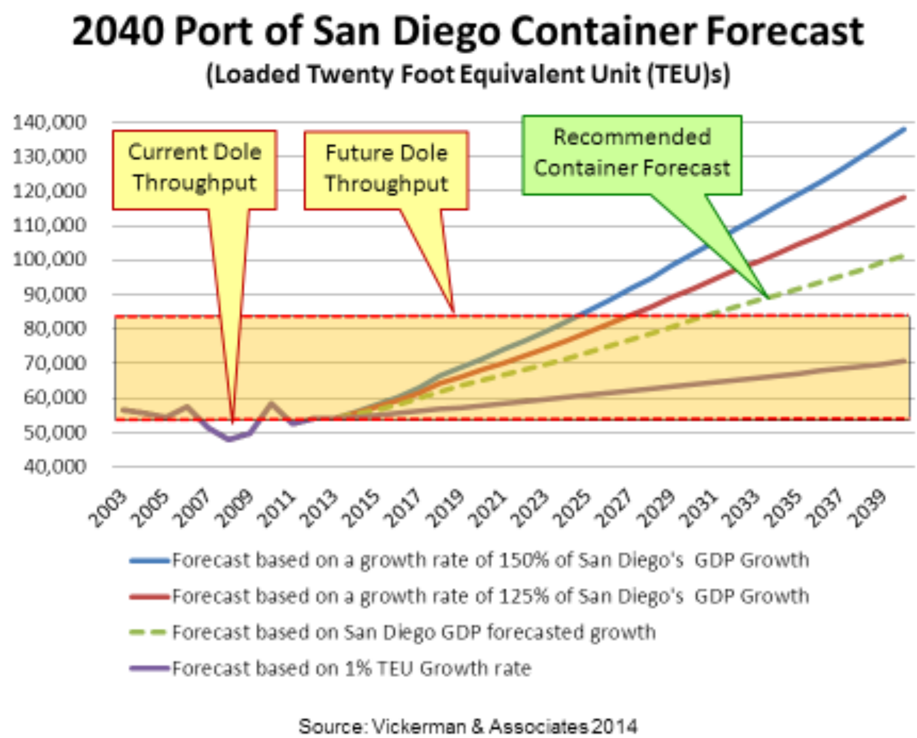
An Industrial Production forecast prepared by the California Department of Transportation, Office of State Planning, shows the real industrial production forecast is to grow almost 4% annually for both San Diego and the State of California. This again has a positive impact on San Diego's future trade growth.

2040 GDP Port of San Diego Container Forecast:

Four cargo market forecast scenarios were prepared as indicated below. The dotted green line represents the recommended container forecast for the Port of San Diego.

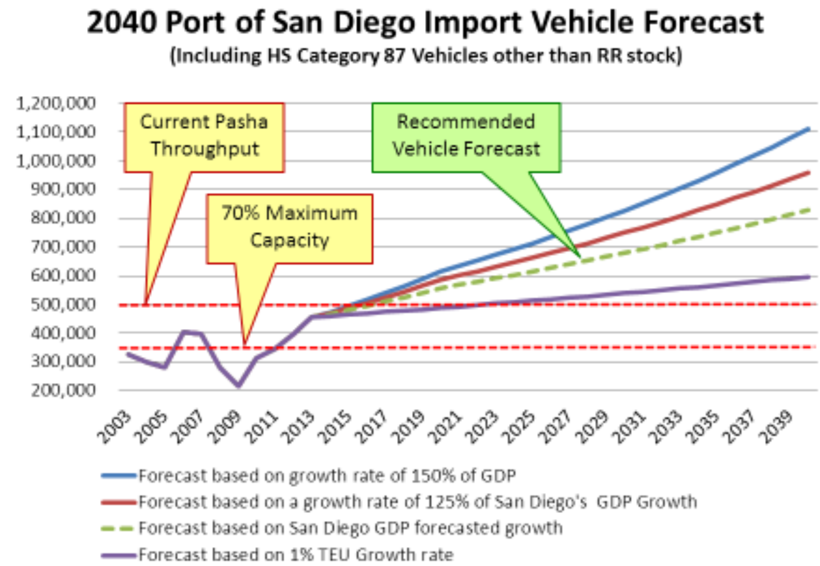


Superimposing TAMT Refrigerated Fresh Fruit Terminal capacity over the forecast results in the following graphic analysis:



2040 Port of San Diego Import Vehicle Forecast

Superimposing the National City Terminal (Pasha) approximate capacity over the forecast results was also used to verify the GDP findings. The cursory GDP market forecast anticipates positive future growth for the Port of San Diego, particularly in import containers and import vehicles for the foreseeable future. V&A elected to use a planning horizon for TAMT Operational Nodes of 2035.



Source: Vickerman & Associates 2014

For the operating nodes, the Compounded Annual Growth Rate (CAGR) used is based on both the GDP forecast and on any industrial indexes and forecasts available for specific cargo.

VII. Water Side Access and Navigational Issues:

The Federal navigational entrance channel characteristics in the San Diego Bay, with regards to the mean lower low water (MLLW) datum, are as follows:

- 55 ft. from Buoy 4 to Buoys 9/10 for a width of 800 ft.;
- 47 ft. to the carrier turning basin for a width of 600–800 ft.;
- 50 ft. in the channel turning basin;
- 42 ft. in Central Bay first section for a width of 600-1,900 ft. from the turning basin up to and including TAMT at the San Diego-Coronado Bridge; and
- 35 ft. in Central Bay second section for a width of 600-1,900 ft. from the San Diego-Coronado Bridge south along the face of the Naval Station piers up to and including NCMT.

The mean tidal range is four (4) feet (1.22 meters) and a tidal range of about ten (10) feet (3.05 meters) may be experienced during maximum tides. The channel has a soft bay mud deposit on top of a 14-foot bay silt formation. This type of soft bay bottom may offer future potential opportunities for larger vessels without the need for additional major dredging.

V&A specifically looked at the potential dredging of 10-1 and 10-2 to a depth equal to the other berths. While it is acknowledged that dredging all berths to 42 feet MLLW may be beneficial to the SDUPD, Dredging 10-1 and 10-2 below the current design depths will require significant investment to add a sheet-pile wall below the current design depth. Since the Plan recognizes that Return-on-Investment (ROI) is an important criteria and use of limited resources a critical factor to a successful Plan, the expenditure of funds for dredging 10-1 and 10-2 at this time was determined not to be a priority need. Additionally, use of 10-1 and 10-2 for potential new container opportunities will create operational constraints on both 10-1 and 10-2 as well as 10-3 and 10-4.

VII. Tenants and Berth Occupancy Analysis:

A critical factor for evaluating berth occupancy is contractual obligation placed on the berth. During the preparation of the Plan, the following non-exclusive preferential berth assignments were either in place or being considered:

- Dole Fresh Fruit Company ("Dole") has the non-exclusive preferential use of Berths 10-1 and 10-2. When the new Dole vessels are in operation, the non-exclusive preferential assignment will occupy Berths 10-3 and 10-4. (In Place)
- Searles Valley Minerals ("SVM") has a non-exclusive preferential use of Berth 10-7. With additional bulk opportunities at TAMT (e.g. two to three cement operators with SVM), Berths 10-7 and 10-8 may experience congestion and will have limited use for other spot cargo opportunities. (In Place)
- During preparation of the Redevelopment Plan, San Diego Refrigerated Services ("SDRS") was in the process of completing a new agreement with the District. A provision of that agreement may include a non-exclusive, preferential berth assignment at Berth 10-4 under specified conditions. (Being Considered)

The Redevelopment Plan finds that current TAMT navigational conditions, berth features and the preferential berth assignments do not restrict current tenant operations or their future operations. It is recommended, however, that the Port re-number the berths so that the numbering system recognizes the larger standards for vessels.

New customers will require assurances and guarantees of a berth upon their vessel arrival. It is suggested that language be incorporated in new agreements that provide for a specific schedule of notices be provided in exchange for the preferential assignment.

TAMT Berth Occupancy Comparison:

The 2008 Business Plan's berth occupancy factors used fiscal year 2005 / 2006 actuals. The Redevelopment Plan's berth occupancy uses fiscal year 2012 / 2013 and a "Berth Utilization Report" provided by the District. The Redevelopment Plan recommends that the District ensure that non-cargo operations that occur at TAMT be factor into future berth utilization requirements and needs.

Table 6. Berth Occupancy by Vessel Types and Days

Plan / Report	Day	Vessel	Barge
2008 Business Plan (Pre-Recession)	889 days	181	146
Redevelopment Plan	328 days	142	28

Source: Berth Utilization Report

Table 7. Percentage of Berth Occupancy (using 352 days)

BERTH	2008 BUSINESS PLAN OCCUPANCY	2014 REDEVELOPMENT PLAN OCCUPANCY
10-1	35%	0%
10-2	60%	37%
10-3	58%	14%
10-4	18%	16%
10-5	9%	15%
10-6	44%	1%
10-7	12%	8%
10-8	17%	0%
TOTAL ALL BERTHS	32%	11.4%

Source: Berth Utilization Report

In the Berth Utilization Report a vessel assigned to a single berth may overlap or occupy more than one berth. Additionally, the percentages of Berth Occupancy are based on 352 days used in the 2008 Business Plan Update. V&A prefers to use 300 days rather than the 352 days. Using a 300 day availability factor, the Plan calculates that total occupancy of all berth's is 13.5%.

TAMT Berth Capacity Findings:

- TAMT continues to have berth capacity capable to support additional cargo and customers.
- New capital investment, to expand or extend the current berthing configuration, is not necessary.
- The District needs to continue to monitor and evaluate the structural integrity of the wharves and berths as part of an asset management program.
- There are significant non-cargo activities, identified in the Maritime Division's "Berth Utilization Report". While these transactions are small, they do represent important business activities for users of the Port of San Diego.

IX. TAMT Cargo Throughput and Capacity Analysis:

Since there have been few changes to the physical facilities of TAMT since the 2008 Business Plan, the TAMT "***Maximum Practical Terminal Capacity***" ***(MPC***) throughput calculated for storage and customers of 4,870,000 metric tons was used in the Redevelopment Plan. The use of the Maximum Practical Capacity (MPC) methodology is a planning tool and metric for making decision regarding when to undertake specific terminal improvements.

Maximum Practical Terminal Capacity is the capacity which is achieved under a practical operating scenario and with the best conditions in place and assumed. MPC is independent of most market forces. However, it is governed by terminal equipment, equipment conditions, operations and vessel/train/truck arrival and departure schedules. MPC can be achieved or even exceeded for short periods. However, a terminal operator will seldom tolerate this level of stress on the terminal system for very long.

Sustainable Terminal Capacity (STC) is that capacity which is most reasonable and profitable to the operator. STC is most accurately determined by a thorough economic analysis of a terminal's operations. However, for purpose of the Redevelopment Plan, STC is estimated to occur at 70% of MPC. If the STC is exceeded for long, the Port and/or terminal operator should generally consider making improvements to upgrade the terminal's throughput capabilities.

Therefore, in the TAMT Redevelopment Plan, improvements to capacity are not recommended until the terminal's storage and cargo handling capabilities generally reach 70% of the MPC. By making the improvements at the 70% level, it ensures that the terminal is able to increase its capabilities at the same time as expected cargo growth and the terminal's capacity remains equal to the throughput.

Dry Bulk Cargo Analysis:

In the 2008 Business Plan, dry bulk cargoes had the largest MPC throughput. This was based upon linkage to housing starts and construction in the San Diego region. The 2008 Business Plan used a 3% CAGR for dry bulk cargo, and there were two forecasts; one was without a new customer and one was with a new customer. Without a new customer, dry bulk commodities were forecasted to continuously grow and reach the 70% of MPC level in FY 2020 and reach the MPC in FY 2030. With a new customer, dry bulk commodities were projected to reach the 70% level by FY 2010 and to reach and exceed the MPC by FY 2025. The recession, which dramatically impacted construction and housing, was not forecasted.

Shown below the actual throughput for recent years is well below the 2008 low forecast and well below the 70% MPC metric.

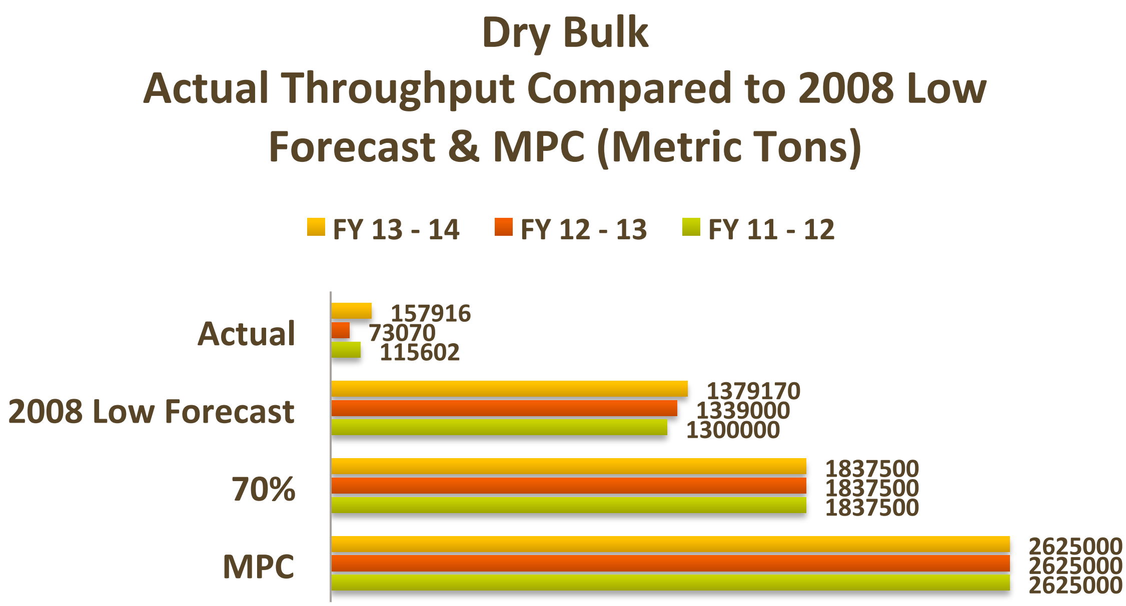
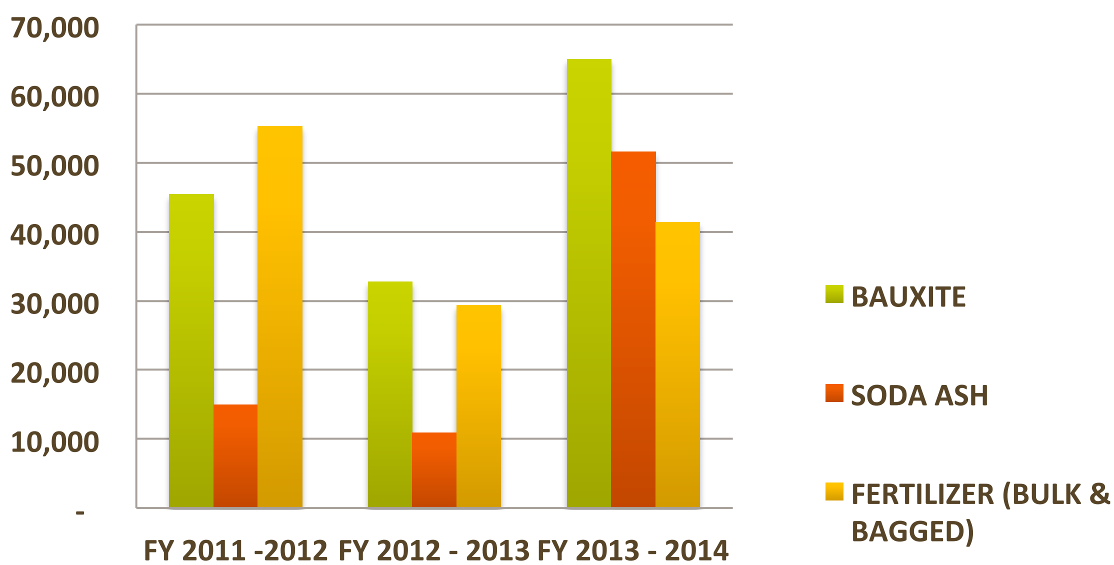


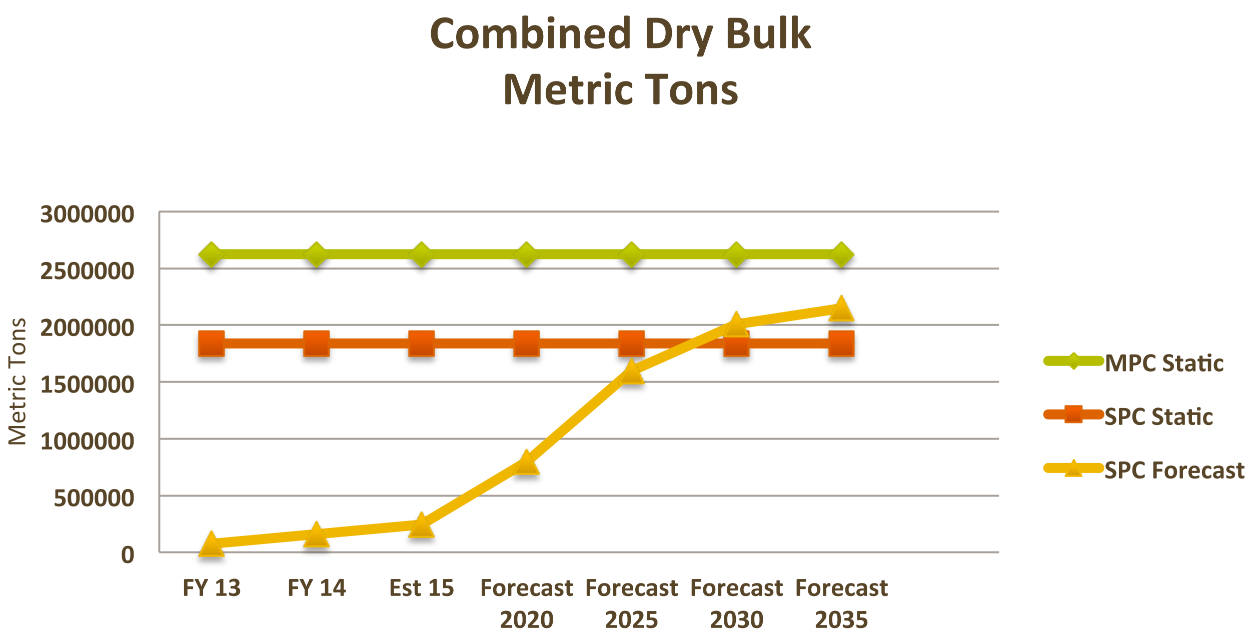
Table 8 All Dry Bulk Forecast is based upon Waterborne / Vessel Operations

Tab



Product Mix of Dry Bulk Cargo by Vessel

Table 9 Dry Bulk MPC, SPC and Forecast



Redevelopment Plan Dry Bulk Cargo Findings:

The actual waterborne dry bulk cargo handled at TAMT is well below the MPC. There appears to be ample capacity to handle additional waterborne dry bulk cargo. The low level of dry bulk cargo is a carryover from the recession years.

- The past relocation of SVM products to the Port of Long Beach, identified in the 2008 Business Plan, was done to reduce inland transportation costs. This relocation limited rail service to the Union Pacific and permitted rail car storage at a Port of Long Beach facility. SVM desires to maintain facilities at the Port of San Diego, and is initiating new potash exports that will utilize their existing leased facilities with smaller shipments for to Mexico.
- The current cement customer (CEMEX) indicates that waterborne cement may restart at TAMT after 2015 and based upon market conditions improving.
- A second cement customer has expressed interest to develop a new cement handling facility to accommodate imports.
- Dry bulk customers provide a guaranteed revenue stream to the SDUPD based upon contract revenue guarantees, however, the direct and indirect economic benefits from the vessel and cargo handling have diminished since the 2008 Business Plan.
- Dry bulk commodities that are low-value provide a greater business risk to the District than commodities that have either a high value (e.g. Bauxite) or a solid private investment. Dry bulk customers that have an integrated supply chain are preferred over those that sell products at TAMT.
- Establishing a multi-purpose consolidated facility in backland locations away from other general cargo and refrigerated terminal areas will improve TAMT operations for other non-bulk cargoes.
- Marketing to “high value” commodities and customers for greater spot business

opportunities better utilizes the non-exclusive terminal space (covered and open storage areas). These products can be handled in super-sacks (1.2 to 1.5 MTs per sack or direct bulk discharge).

Liquid Bulk Cargo Analysis:

There are two Liquid Bulk cargo facilities at TAMT. The Jankovich Fuel Farm facility is located on 3.3 acres at the northeast corner with fuel transfer equipment and five storage tanks up to 40 ft. in height and 100 ft. in diameter containing 20,000 barrels-diesel fuel; 55,000 barrels-bunker fuel; and 139,000 barrels-jet fuel. Five pipelines ranging from 8 to 12 inches in diameter connect the facility to Berth's 10-1 through 10-4 for the receipt or discharge of diesel and bunker fuels. An additional pipeline is connected to San Diego International Airport for the transfer of jet fuel. The other terminal is on a 59,000 square feet parcel located near the southeast entrance to TAMT. It has three storage tanks each 32 ft. high and 73 ft. in diameter with a capacity of one million gallons each. Connected to Berth's 10-6 through 10-8 by three pipelines ranging from 6 to 14 inches in diameter that have been used to receive various bulk liquids including palm oil and molasses. This latter facility remains inactive.

Liquid Bulk Cargo Findings:

- The fuel facility operations are essential support services for the Port's maritime operations (both cargo and cruise).
- The fuel facility is included in all concepts for TAMT.
- The unused Molasses storage tanks should be demolished and the parcel is to be incorporated into the Consolidated Dry Bulk Operating Node.

Break-Bulk and Neo-Bulk Cargo Analysis:

Generally cargo that is bagged[3] and palletized, large sized project cargo (e.g. wind energy components), and non-containerized commodities are characterized as break-bulk and/or neo-bulk cargo. The 2008 Business Plan evaluated this type of cargo by commodity types. The cargo growth for this market segment was between 1% and 3% CAGR, and it included a new service for break bulk fresh fruit (e.g. palletized).

The Redevelopment Plan evaluates break bulk and neo-bulk as a multi-purpose general cargo operation use. In today's market, the pure break bulk operators that were once looking for a dedicated berth and transit sheds have shifted to a multi-purpose operation generally unloading charter vessels or operating with a series of roll on and roll off vessels. Charter vessels calls are "induced calls", requested by the importer/exporter, rather than regularly scheduled calls on a liner service basis.

The facilities and storage MPC calculated by the 2008 Business Plan for break bulk and neo bulk was 895,000 metric tons. The 2008 Business Plan forecast suggested that break-bulk and neo-bulk capabilities were able to handle projected growth to FY 2025. The former Business Plan also identified a new palletized fresh fruit customer by FY 2010, and if added to TAMT the forecast exceeded the 70% metric mark in the FY 2010 to FY 2015 time frame. Accordingly, a new cold

[3] The TAMT Redevelopment Plan includes bagged, super sack, bulk cargo under the Dry Bulk Operating Node.

storage transit shed was recommended in the 2008 Business Plan. The Redevelopment Plan compared the 2008 Business Plan forecast for break bulk and neo bulk to the actual throughput.

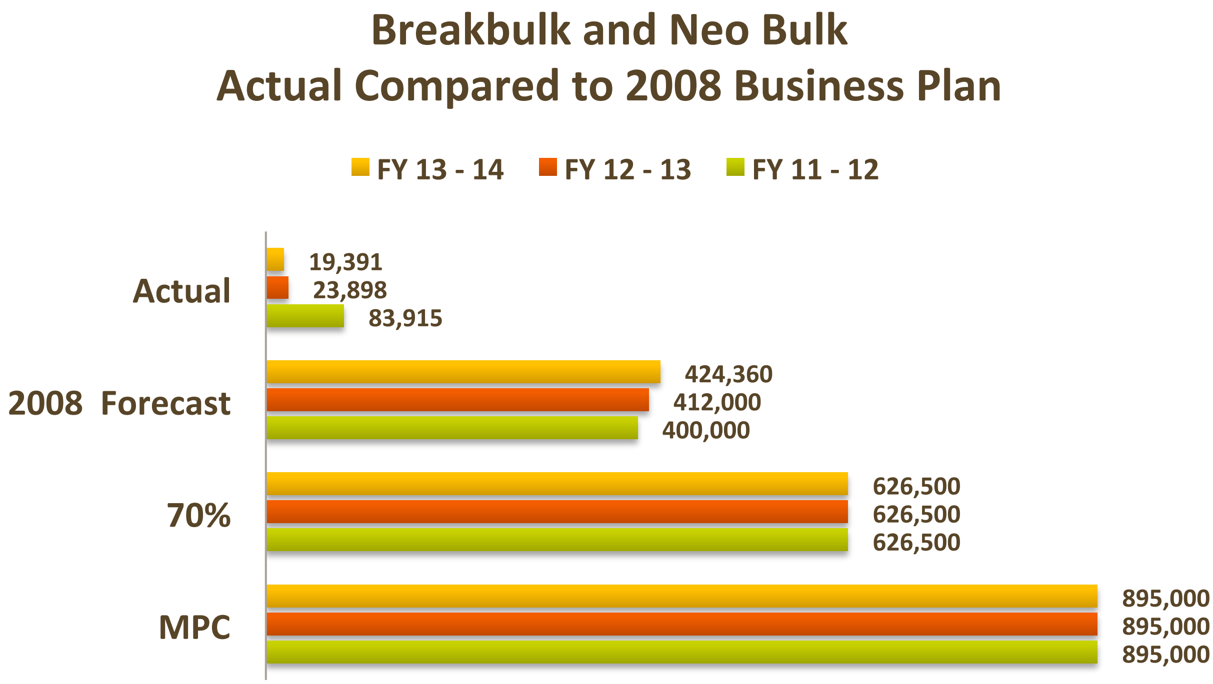


Table 10. Breakbulk and Neobulk cargo based upon metric tons

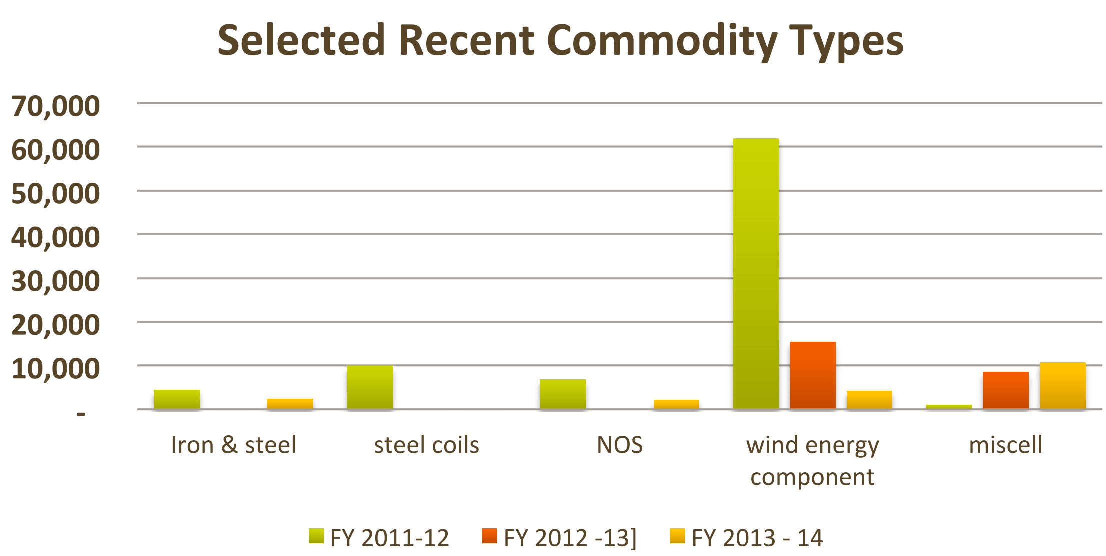
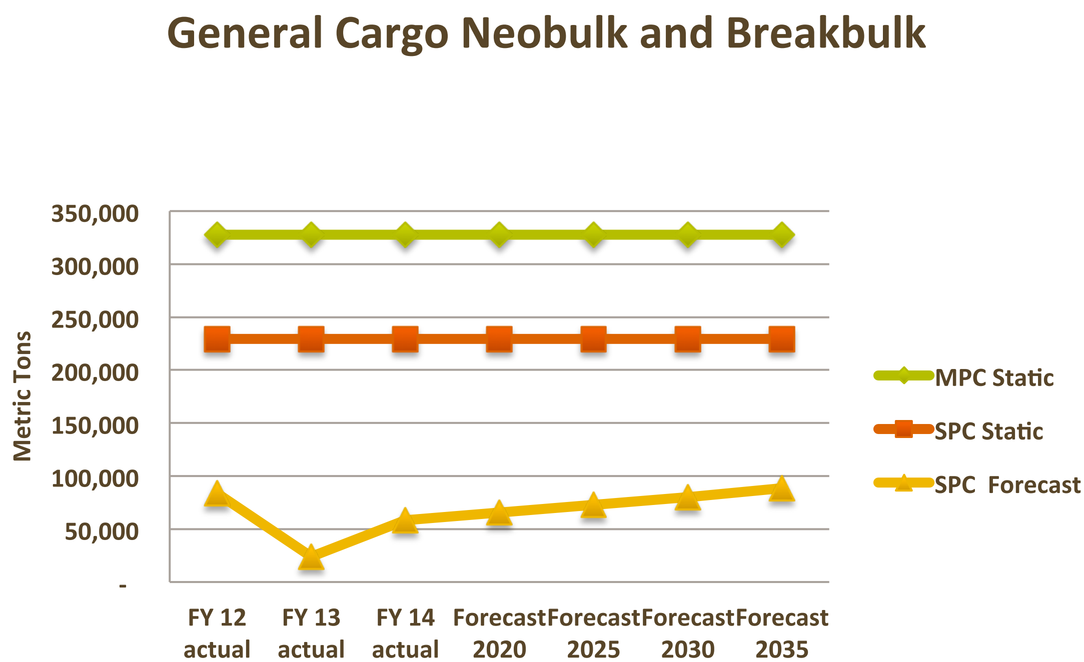


Table 11. Multipurpose Operating Node Alternative 1 with a 2% CAGR[4]



The trend and future forecast identified in the Plan for break-bulk and neo-bulk business is included with multipurpose carriers, including roll on and roll off vessels ("Ro/Ro") and small niche container vessels.

Break-Bulk and Neo-Bulk Cargo Findings:

The actual throughput for FY 2011-12 and FY 2012 – 13 is well below the projections forecasted in the 2008 Business Plan and the 70% MPC threshold. Currently, break-bulk and neo-bulk cargo is moving through TAMT on an inducement basis. This market remains a good fit for TAMT.

- Continue to market to local importers and exporters to develop inducement calls (such as local shipyards).
- A new palletized banana importer, or a new break-bulk liner service, is unlikely.
- There are a seasonal fresh fruit opportunities from Chile and Peru. Some of these imports require fumigation at the terminal. Fumigation is not a permitted operation at TAMT. This removes this market segment as a viable opportunity until changes are made by the importers by either pre-clearing and fumigating fruit prior to arrival in U.S. or changing the methods used to protect the fruit from pests.
- Break-bulk and neo-bulk vessels and commodities represent a low risk cargo for TAMT, but this market is declining. While TAMT has an excellent record for handling these types of commodities and has a small loyal customer base, the Redevelopment Plan recognizes it as

[4] After the preparation of the Redevelopment Plan, the PASHA Hawaii Direct service had a number of vessel calls at TAMT. The Fiscal Year 2013-2014 includes these domestic cargo vessel calls. The breakbulk and neobulk SPC forecast would be much higher if the PASHA Hawaii Direct Service called at TAMT on a regular schedule service.

a declining market.

- The existing transit sheds continue to be an operational constraint. Today break-bulk and neo-bulk facilities are more dependent upon open storage areas than the traditional covered storage.
- Removal of the remaining Transit Shed # 1 and Transit Shed # 2 removes notable constraints.
- Existing spot market customers may be attract to TAMT with a new, or existing, Ro/Ro Liner Service customer.
- A public - private partnership with an existing provider of terminal services that has an existing book of business may induce cargo to TAMT. The intent of this partnership is to provide competitive terminal services to all users. The attraction of this type of partnership is to continue to offer spot and inducement calls to carriers and at the same time providing the benefits of the existing TAMT book of business.

Refrigerated Fresh Fruit Container Cargo Analysis:

The containerized cargo throughput in the 2008 Business Plan was identified with the Dole Fresh Fruit weekly service having a three-ship rotation between San Diego and Ecuador. Dole unloads mostly bananas, but they also carry pineapples and other tropical fruits. The current Dole vessel has a refrigerated container capacity of 982 TEUs (491 FEUs).

Dole vessels generally arrive on Sunday and depart on Tuesday. Dole uses the on-dock cold storage warehouse to strip containers for future delivery by truck to consignees. Pineapples are moved directly from the terminal to a cold storage facility located in Fullerton (CA) for delivery to consignees in the Greater Los Angeles markets. Dole uses a portion of the off-dock warehouse in National City. Each voyage loads some southbound cargo destined for Latin America, but repositioning empty containers back to the plantations is the primary purpose of the southbound voyage.

The Redevelopment Plan estimates Dole's current annual discharge to be 51,064 TEUs (25,532 FEUs). On August 14, 2012, Dole Fresh Fruit and SDUPD agreed to extend its agreement with the Port in order to facilitate the loading and unloading of new Dole vessels being built by Dole. These new vessels have a capacity between 1,540 and 1,600 TEUs (770 and 800 FEUs). The annual discharge on a weekly basis will be between 80,000 to 83,200 TEUs (40,000 to 41,600 FEUs).

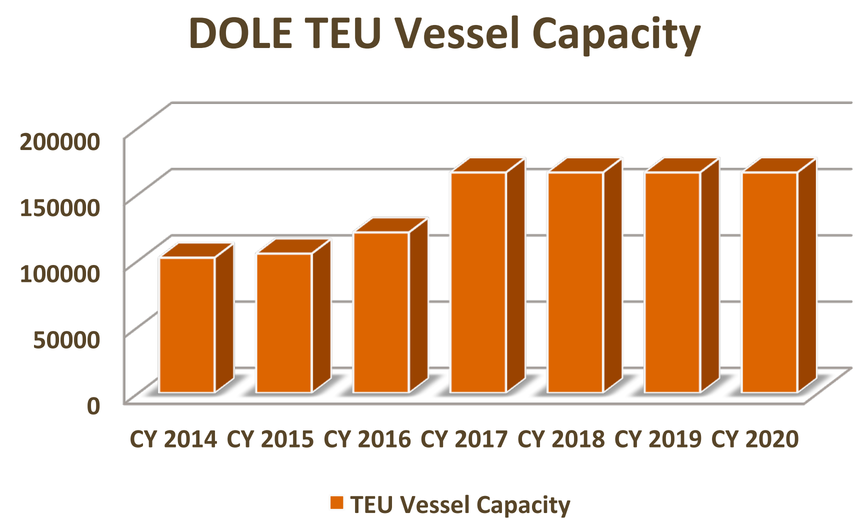
To begin building the northbound markets, Dole has recently augmented their regular vessel calls with a special charter vessel. Dole has chartered this vessel for six (6) discharges of 500 TEUs (250 FEUs) every two-week schedule over a six-week schedule. This increases Dole's annual discharge by 3,000 TEUs (1,500 FEUs).

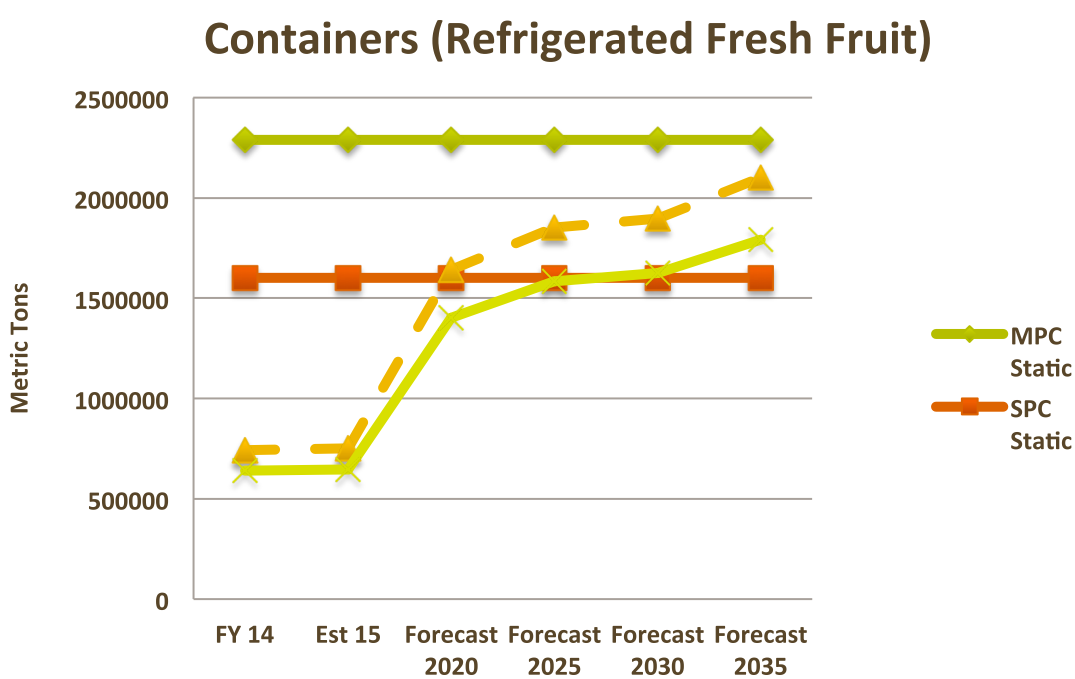
Dole intends to accommodate all of the increase in cargo throughput within their existing 20.5 acres, and they will relocate their non-exclusive preferential berths from 10-1 and 10-2 to 10-3 and 10-4 to accommodate the larger vessels as they enter service.

The 2008 Business Plan MPC established a berth capacity for Dole in excess of 1,000,000 metric tons, however, Dole's current leased terminal and operations was calculated at 710,000 metric tons. Because the storage and facility MPC is the constraining factor, the Redevelopment Plan uses the lower of the two MPC. For FY 2005 / 2006, Dole's throughput was 651,514 metric tons.

The Redevelopment Plan assumes that 100% of northbound vessel capacity will be full loads (83% bananas, 10% pineapples, and 7% other), and the Dole terminal is capable of handling increased loads without additional land.

Table 12. Estimated based upon reported vessel capabilities





The dashed forecast line above include empties at 4 metric revenue tons. The solid forecast line is without empties.

The Plan also assumes that the new larger vessels will be in full operation by 2017, and Dole will have a 100% unloading and loading per vessel call at 3,200 TEUs (1,600 FEUs). Unloaded cargo will be full at 20 metric tons per container, but loaded containers returning will mostly be empties.

A second containerized banana / fresh fruit customer was identified in the 2008 Business Plan, the Martin Associates' Economic and Financial Value Report, the Mercator Assessment for TAMT Gantry Cranes, and the Labitan Report. The Redevelopment Plan agrees. The Plan's assumptions are a weekly discharge with the same ratio of cargo to empties and a vessel call later in the week to avoid conflicts with Dole. This new customer's vessel capacity will begin with 700 TEUs (350 FEUs), grow to 1,000 TEUs (500 FEU), and eventual grow to 1,400 TEUs (700 FEUs).

Refrigerated Fresh Fruit Container Cargo Findings:

- The containerized fresh fruit business sector is a good long-term sustainable opportunity for TAMT. It is a low risk business opportunity since the Port has an excellent track record with Dole.
- Dole's new vessels will increase TAMT's fresh fruit market share. Likewise, the larger Dole vessel provides a "third party cargo" opportunity for northbound fresh fruit products. This third party capability offers the Port a regular service to TAMT.
- A cargo circulation plan is needed from Berths 10-3 and10-4 to the Dole Terminal to avoid potential conflicts and congestions with, and without, Transit Shed # 1.
- Demolition Transit Shed # 1 to create an improved backland area adjacent to berths 10-3 and 10-4 to accommodate potential new refrigerated container opportunities.
- Include 100-foot gauge gantry crane rail infrastructure in the pavement reconstruction as Transit Shed # 1 is removed. The purchase of gantry cranes are market driven and are intended to support future cargo handling capabilities.

X. TAMT Optimum Terminal Development Concept Schematic Nodes

The development and improvement concepts suggested by the Redevelopment Plan are not fixed and determined capital investment projects at a fixed point in time, but rather they are directions towards the most optimum solutions from a market driven standpoint. A final determination on a specific investment should only be considered after a complete and full financial and Return-on-Investment (ROI) analysis. This analysis needs to itemize all capital costs, on-going District expenses, revenues and provide a detailed cash flow.

Approach:

The Plan divides the TAMT into like operating nodes or modules, these nodes are to be viewed as flexible "*bladders*" with similar operational cargo characteristics being able to expand or contract to meet operational and market conditions and not as rigid boundaries for specific terminal operations. An underlying theme is "*cast the widest possible*" net to attract the widest potential customers and strategic partners.

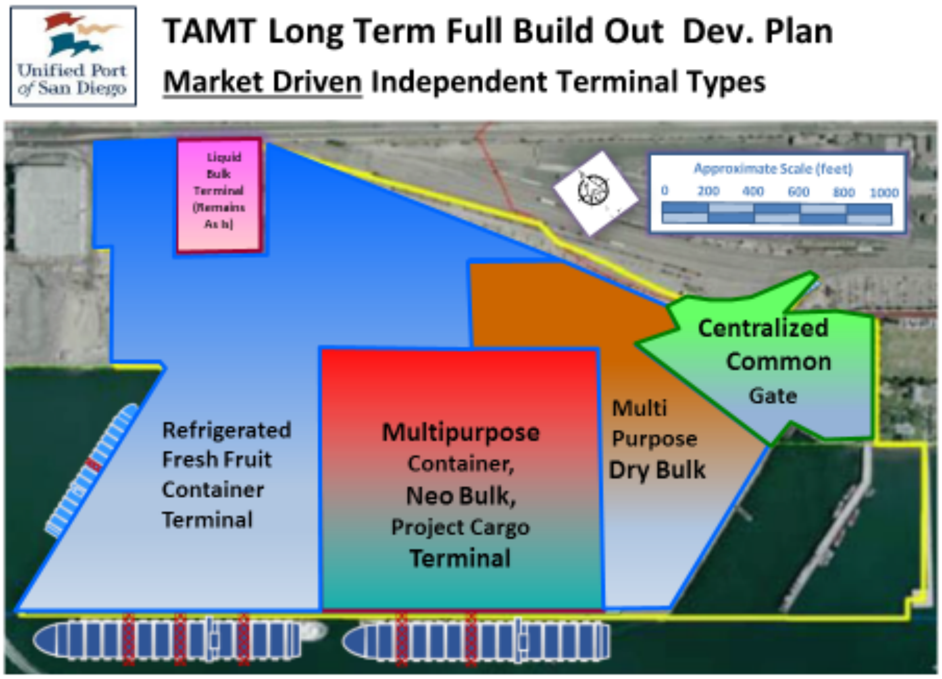
The four (4) operating nodes or modules are:

1. Multi-Purpose Consolidated Dry Bulk Terminal
2. Liquid Bulk Terminal (existing operations to remain as is over the planning horizon)
3. Refrigerated Fresh Fruit Container Terminal

4. Multipurpose General Cargo Terminal (neo bulk, break bulk, roll on / roll off, and container)

There is one (1) planning node or module; it is "*Centralized Gate Complex*", a tenant-In-common service area.

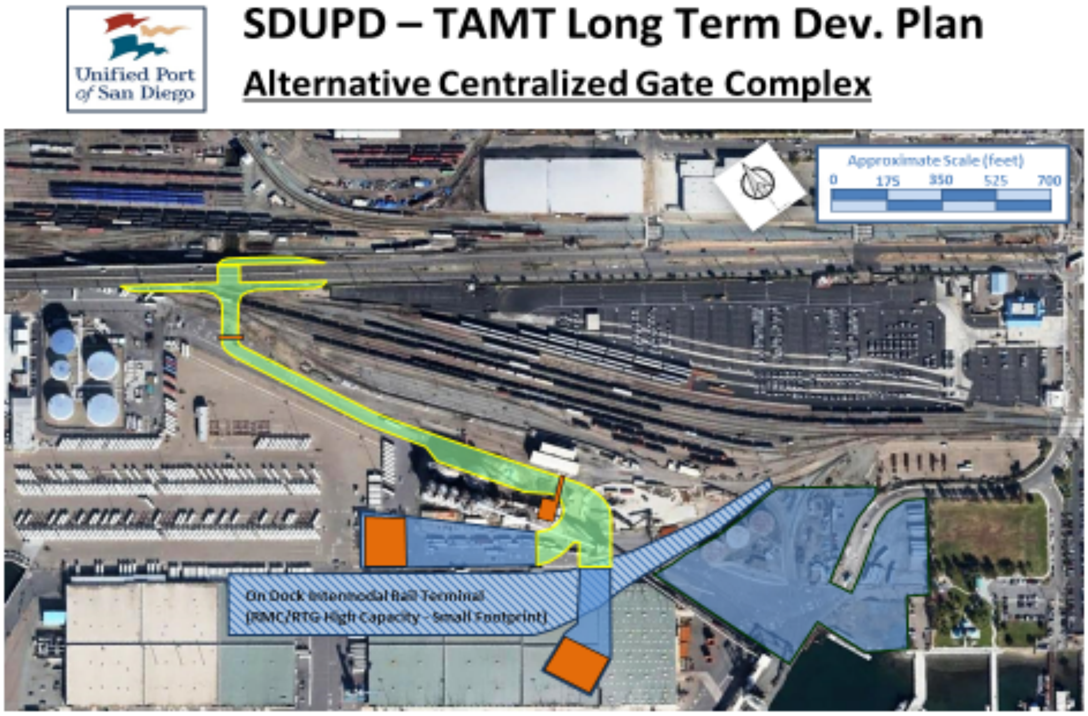
TAMT Operational Nodes and Conceptual Layout:



Source: Vickerman & Associates 2014

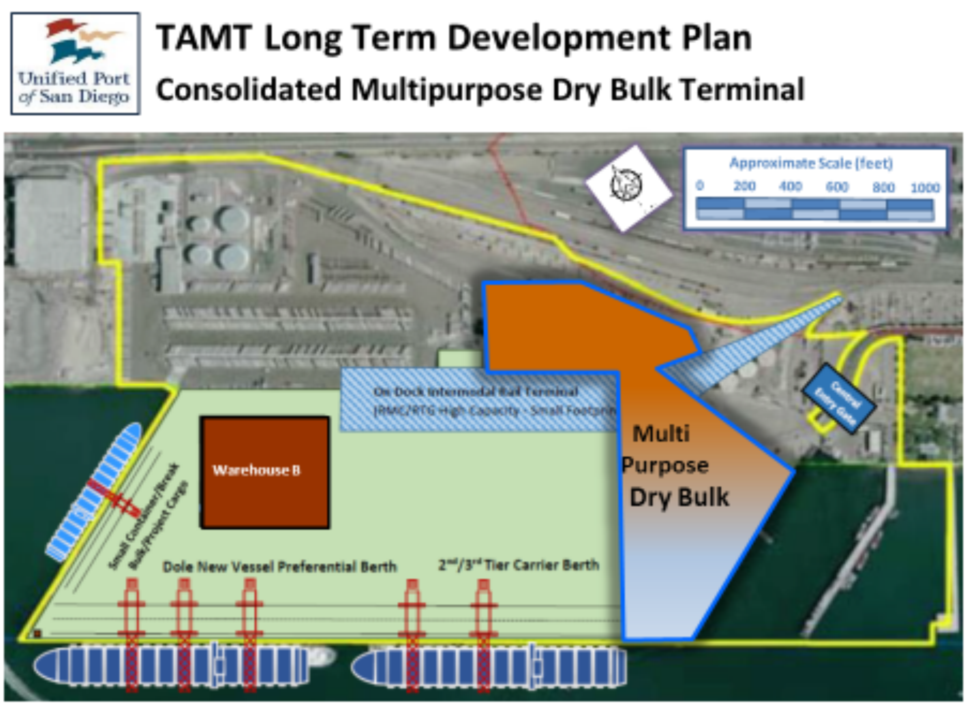
The above TAMT conceptual site plan illustrates the general location of all the nodes recommended by the Plan. The general geographic areas are flexible and expandable. The Multi-Purpose Consolidated Dry Bulk Terminal consolidates all bulk terminal functions into one area supported by "back of the house" storage and operation areas. The Refrigerated Fresh Fruit Container Terminal Node incorporates the entire leasehold area of Dole Fresh Fruit and San Diego Refrigerated Services (SDRS) with expansion in the backlands of Berth 10-1, 10-2, 10-3 and 10-4. The Multi-Purpose General Cargo Terminal has project cargo, neo bulk, break bulk, RO/RO, and Container Cargo capability. An optional On-Dock Intermodal Rail Terminal Concept (not shown above) could produce significant benefits in future long-term container handling opportunities.

The Centralized Gate Complex functions as an automated entry/exit gate for all tenants. As a result of discussions with stakeholders, the Redevelopment Plan identifies an alternative gate concept envisioned for "freight only" movements for the Refrigerated Fresh Fruit Container Terminal and the Multi-Purpose General Cargo Terminal. This alternative would leave the Dole Gate complex in its current location. The Consolidated Multi-Purpose bulk terminal continues to use the existing TAMT entry gate particularly for domestic bulk shipments..



XI. TAMT Modular Operational Nodes

Overview of Long Term Multi-Purpose Dry Bulk Operating Node:



Source: Vickerman & Associates 2014

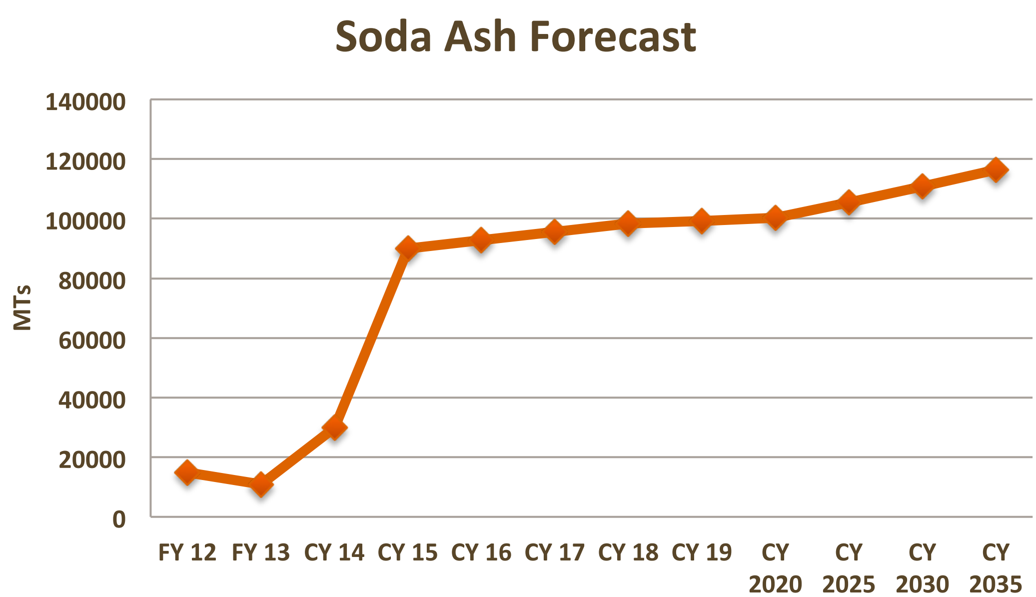
Multi-Purpose Dry Bulk Operating Node Description, Characteristics, and Opportunities	
Node Size	Approximately 15 acres
Maximum Practical Capacity	Range 2,250,000 to 2,650,000 Metric Tons per year
Berth	Berth 10-7 and 10-8 Depth and Approach: 42 feet MLLW
Commodities To Be Handled	Cement, Fly-Ash, Slag, Bauxite, Chemical NEC, Potassium-Nitrate, Soda Ash, and other non-hazardous bulk materials
Vessel Size	Up to 40,000 dwt
Cargo Transfer	Ship loader and un-loader at the berth with conveyor system(s) or ships gear for lift-on and lift off
Inland Transportation	Primary mode is truck and secondary mode rail
Existing customer Base	CEMEX, Searles Valley Materials, YARA, and International Materials Inc.
New customer Opportunities	TBD
Opportunities / Forecast	The Portland Cement Association (PCA) forecast for near-term is 9% CAGR and based upon other demand factors, there appears to be a sufficient near-term demand for new import/export facilities in San Diego. The GDP trade forecast for TAMT has a 3% CAGR. The Business Plan Update is constructed on a combined PCA and GDP forecast.

Dry Bulk Terminal Development Approach:

In discussing the dry bulk cargo opportunities, the Redevelopment Plan examines the optimum concepts through existing customers and their specific commodity types and future market opportunities.

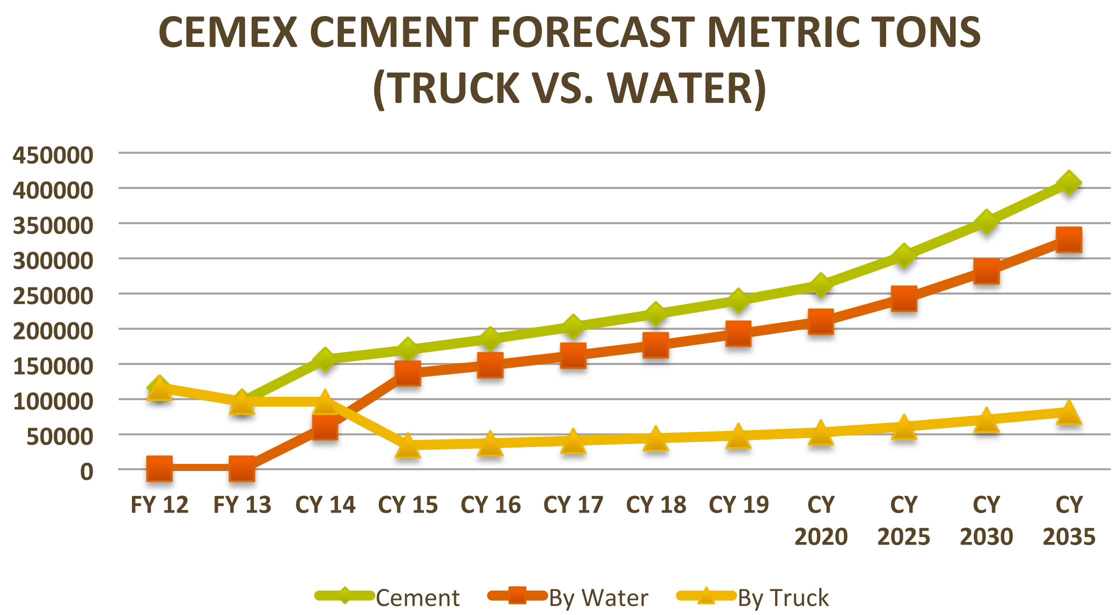
Soda Ash (Searles Valley Minerals):

Searles Valley Minerals (SVM) has the lease on approximately 4.57 acres of tideland area, 708 square-feet rail/truck scale area, and 17,146 square-feet of air space and footing areas for a conveyor system. This lease expires in 2017. Soda ash exports to Mexico are scheduled to commence in the near term. The short-term soda ash opportunity is approximately 100,000 MTs annually with 17 to 18 vessel calls per annum. The vessels are 20,000 DWT, and the average export load will be 5,000 MTs per call. The existing ship-to-apron components will remain unchanged. The SVM export soda ash cargo forecast shows a dramatic jump in calendar year 2014 and 2015 as the Mexico service comes on line. The projected increases are conservative (3% CAGR through 2018 and 1% CAGR thereafter).



Cement (CEMEX and New Customer):

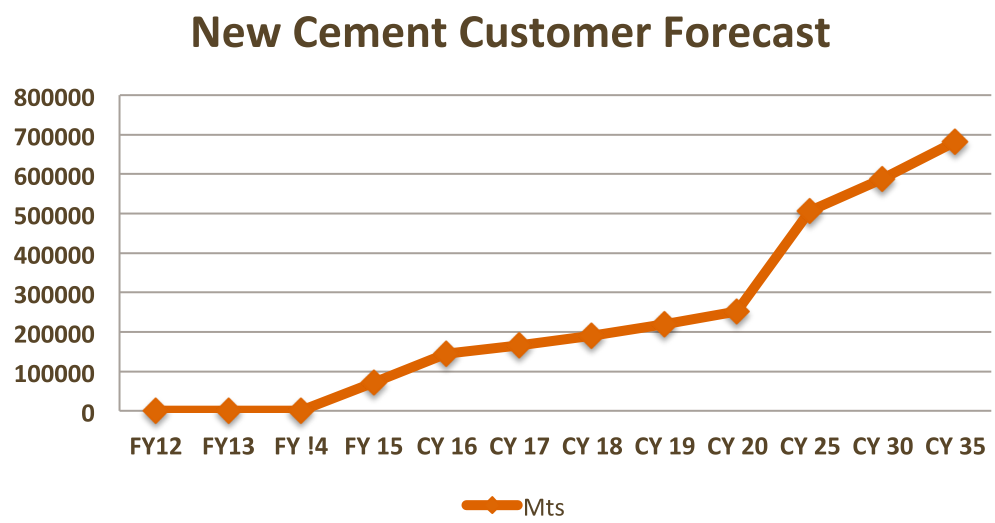
The Redevelopment Plan forecast for CEMEX's imports shows a gradual increase from 96,000 MTs to over 400,000 MTs by 2035. It needs to be noted that the 2035 level remains below the average of the five highest years prior to the recession (600,000 MTs). The Redevelopment Plan also separates the forecast by water (vessels) and by truck using an 80:20 ratio of water to truck. CEMEX assumptions include water service that will resume in calendar year 2014 - 2015 with two 30,000 MTs vessel calls and the amount of truck product remains at 96,000 MTs; commencing 2015, the truck mode will be reduced to the 80:20 fixed ratio of water to truck; and for the period 2015 through 2020,the forecast uses the PCA 9% CAGR; after 2020, the forecast uses a 3% CAGR.

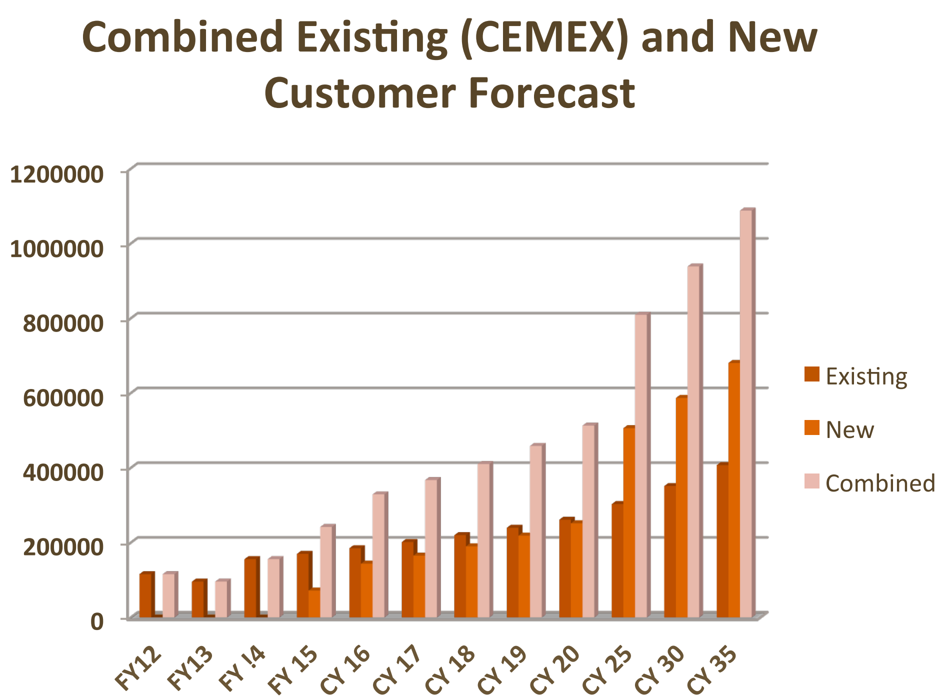


The Plan forecasts a second cement operator. The capacity and assumptions are:

- Import up to 500,000 MTs per year.
- Cement will be pneumatically unloaded into a "Flat Storage Type Facility" using a 200 metric ton per hour mobile vacuum un-loader.
- Storage capability would be approximately 33,000 metric ton.
- 100% of the product will be trucked away. There will be one truck loading rack with two 200 metric ton silos with appropriate dust controls.
- Initial year of operations will be 144,000 metric tons.
- CAGR is 15% up to 500,000 metric tons.
- 30,000 to 40,000 metric tons to be unloaded at each vessel call.
- The vessel will call at Berth 10-7 and 10-8 shared with SVM.

The forecast shows the maximum 500,000 metric tons may be achieved by FY 2025, and if the cement continues to grow then improvements to the capacity and capabilities may be required after FY 2025.

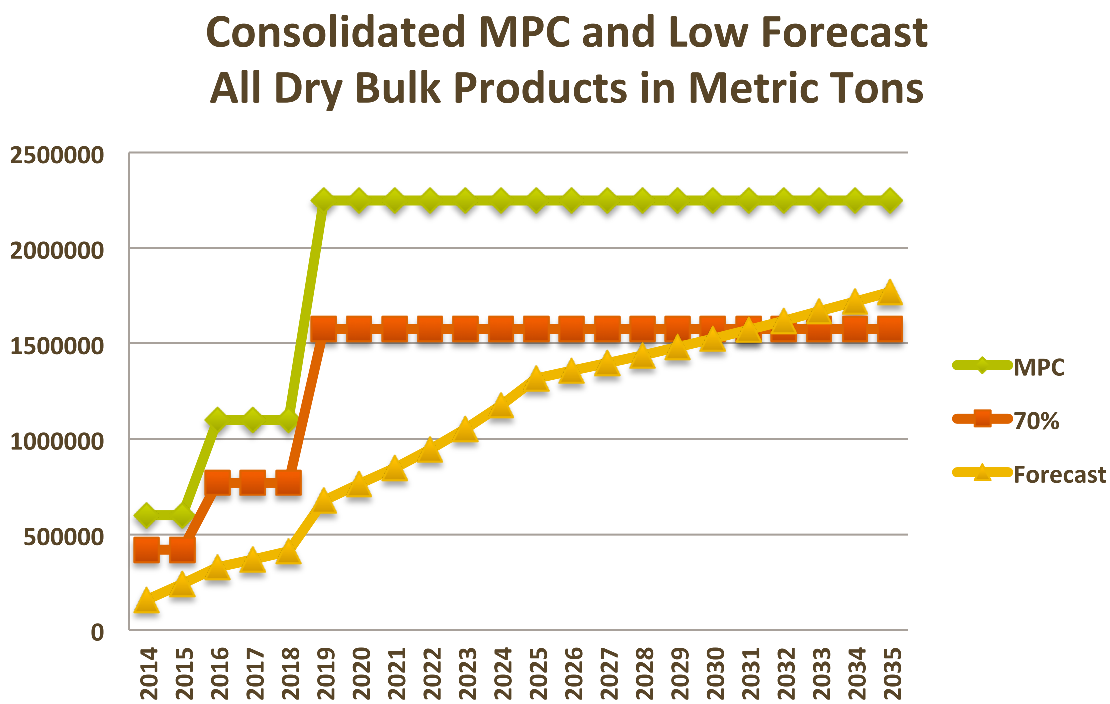




The combined cement forecast above shows a growth in waterborne delivery of cement from zero in FY 2013 to over 1,000,000 MTs by FY 2035. The forecast suggests that TAMT will exceed the 2008 Business Plan actual throughput in FY 2025.

Other Dry Bulk Commodities:

In addition to soda ash and cement, TAMT serves other water dependent customers as spot business. These products include Bauxite, Chemicals NEC, Calcium Nitrate, and Potassium Nitrate. The Redevelopment Plan suggests that the District maintain the existing dry bulk spot business, and the Plan uses a conservative 2% CAGR.



Multipurpose Dry Bulk Recommendations:

- Maintain the dry bulk berth and storage capacity for TAMT at 2,650,000 million metric tons per year.
- When the market allows, implement the consolidation into a Multipurpose Dry Bulk Facility
- TS # 2 should be removed the sooner of the market demands additional capacity for dry bulk cargo throughput or the beginning of implementation of the Multipurpose General Cargo Node.
- The Plan assumes 80% of the cargo will arrive by vessels and 20% by either rail or trucks
- The largest import dry bulk commodity will be cement products used in the regional construction industry. Cement products include Portland cement, slag, fly ash and other types of similar types of dry bulk products.
- Exports will account for a small percentage of the cargo, but they should remain a priority for TAMT.
- Dry Bulk Cargo vessels will be handled at Berths 10-5 and 10-6 and at Berths 10-7 and 10-8. Dry Bulk operations at Berths 10-5 and 10-6 will end, the sooner of either the development of the Multipurpose General Cargo Node or the construction of a Consolidated Multipurpose Dry Bulk Facility.
- Due to a sluggish construction economy, the near term Redevelopment Plan's forecast is conservative. To achieve the higher volumes the existing unloading/loading system at 10-7 and 10-8 may need to be modernized to increase capabilities. These improvements should be made in association with the development of the Consolidated Multipurpose Dry Bulk Facility.
- Demolition and removal of existing Molasses Tanks.
- Maintain the area between the apron area and Terminal Street and between Terminal Street

and Water Street as non-exclusive open storage areas. Both of these areas will be adjacent to the proposed new Multipurpose General Cargo Node.

- The District should consider conversion of the existing dry bulk silo's for the potential implementation of the Consolidated Multipurpose Dry Bulk Facility.
- As part of the Consolidated Multipurpose Dry Bulk Facility, to accommodate other dry bulk products, such as bauxite or super-sacks) construct or maintain a semi-permanent (**e.g. a Rubb style of building – see www.rubb.com**) storage facility (70,000 to 100,000 square feet) for the storage of bulk products.

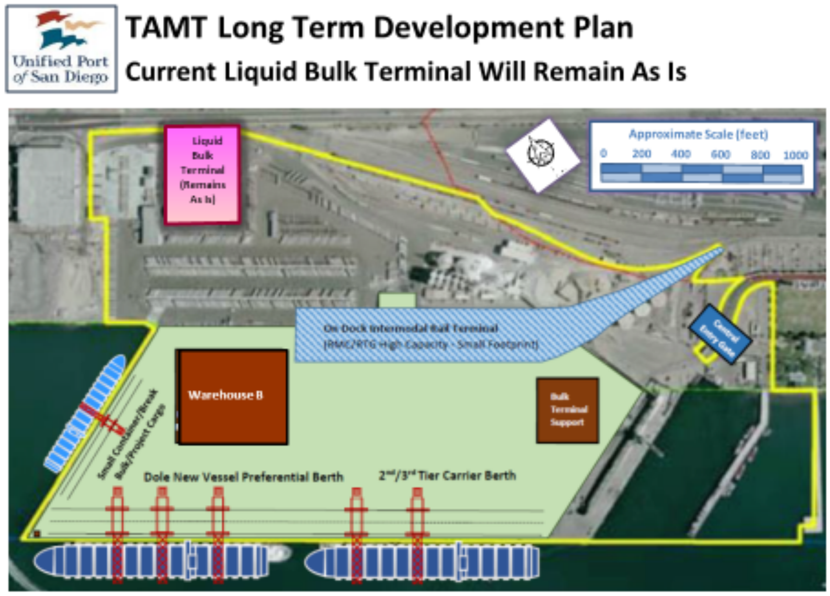
Sustainability Recommendations:

- No hazardous dry bulk materials should be handled at the facility. Dry Bulk customers should be required to provide the Maritime Division copies of Material Safety Data Sheets (MSDS) handled at the facilities.
- Improvements to existing facilities and construction of new facilities are to meet the SDUPD standards for reduced air emissions, energy efficiencies, and comply with the policies of the "Climate Action Plan".
- Trucks picking up bulk cargo or delivery bulk cargo to TAMT are to meet the SDUPD Clean Truck Program; where practical and feasible, customers should explore transportation alternatives that will reduce the number of trucks required by their operations. Customers need to explore and implement any new air emission reduction programs to reduce truck emissions.

Dry Bulk Cargo Throughput Redevelopment Plan Forecasts

Dry Bulk Commodities	2017	2020	2035
Soda Ash	**95481**	**100362**	**116317**
Cement (without new customers)	**202025**	**261628**	**407607**
Other Bulk Materials	**67298**	**71417**	**96118**
Total	**364804**	**433407**	**620043**
Soda Ash	**95481**	**100362**	**116517**
Cement (with new customers)	**367625**	**765341**	**1769194**
Other Bulk Materials	**67298**	**71417**	**96118**
Total	**530404**	**937120**	**1981829**

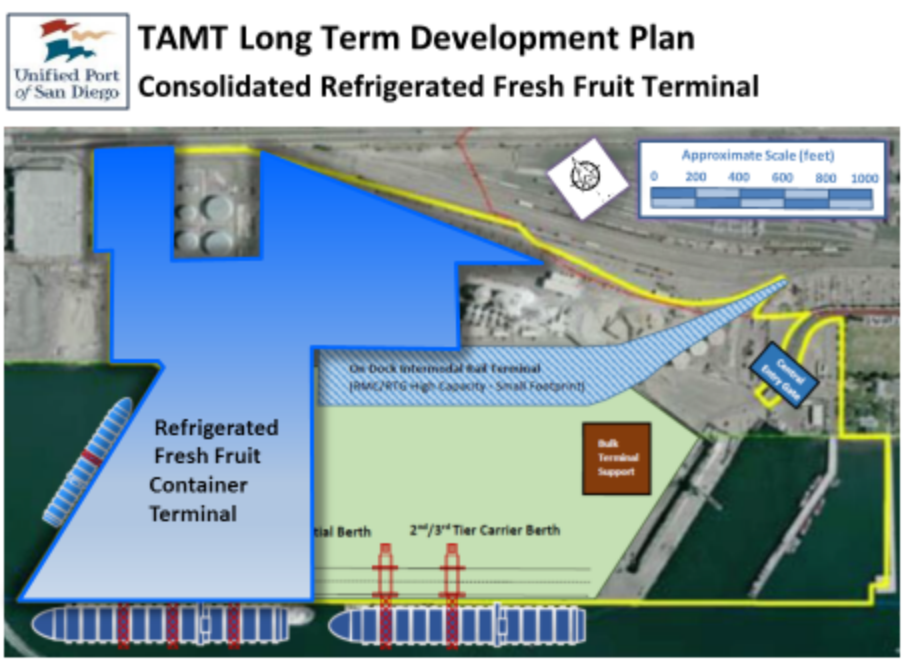
Liquid Bulk Operating Node (Jankovich Fuel Facility):



Source: Vickerman & Associates 2014

The Redevelopment Plan recommends no changes to the TAMT Fuel Farm and the Jankovich operations. The Plan recommends that the former Molasses Tanks be removed as part of the Multipurpose Dry Bulk node.

Refrigerated Fresh Fruit Container Terminal Operating Node (Dole and New Customer):



Source: Vickerman & Associates 2014

Refrigerated Fresh Fruit Container Terminal Operating Node Description, Characteristics, and Opportunities	
Size	Approximately 40 Acres including existing Dole Terminal, SDRS Lease Premises, and the area where TS # 1 will be removed (approximately 10-12 acres).
Maximum Practical Capacity	2,288,000 MTs includes bananas, tropical fruits, and other general containerized cargo. 312,000 TEUs or 156,000 FEUs with the existing Customer having 166,400 TEUs and a new customer with 145,600 TEUs.
Berth	10 -1 and 10-2 Depth and Approach: 30 feet MLLW 10- 3 and 10-4 Depth and Approach: 42 feet MLLW Berths are subject to the Dole preferential assignment.
Commodities To Be Handled	Bananas, Tropical Fruits and General Cargo
Vessel Size	Vessels up to 1,600 – 1,700 TEUs
Cargo Transfer	Ships Gear to chassis with current Mobile Harbor Crane. Future demand may include up to two (2) 100 ft. gauge gantry cranes. Backland storage will include a combination of wheeled chassis operations and grounded operations requiring top picks for handling of containers.
Inland Transportation	Truck
Customer base	Dole Fresh Fruit, San Diego Refrigerated Services, and New Banana and Tropical Fruit account
Forecast	While the existing refrigerated terminal will get a boost in capacity due to the next and larger vessels being employed by Dole, the CAGR applied to this terminal is 3%. This is consistent with the GDP trade forecast and the potential population increases within the market served by the fresh fruit importers.

The proposed Refrigerated Fresh Fruit Container Terminal builds upon Dole's operations and the anticipation of their new vessels. A marketing effort with other banana companies, seasonal melon importers, and carriers that have a book of business within the fresh fruit liner services is recommended. The removal of TS #1 provides 8 to 12 additional acres for new and improved open terminal operations.

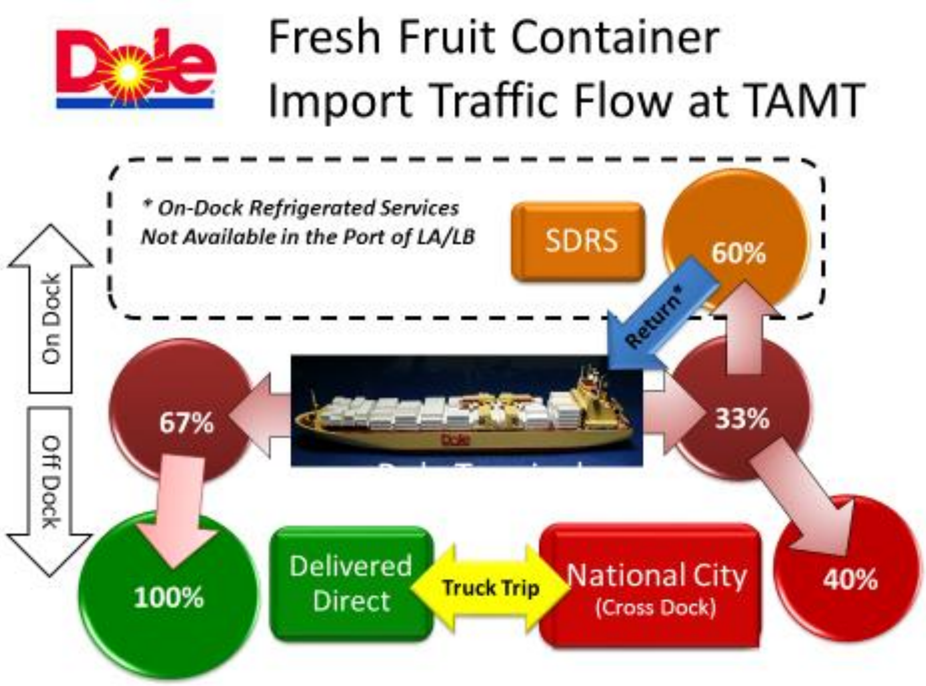
Refrigerated Fresh Fruit Container Terminal Optimum Development:

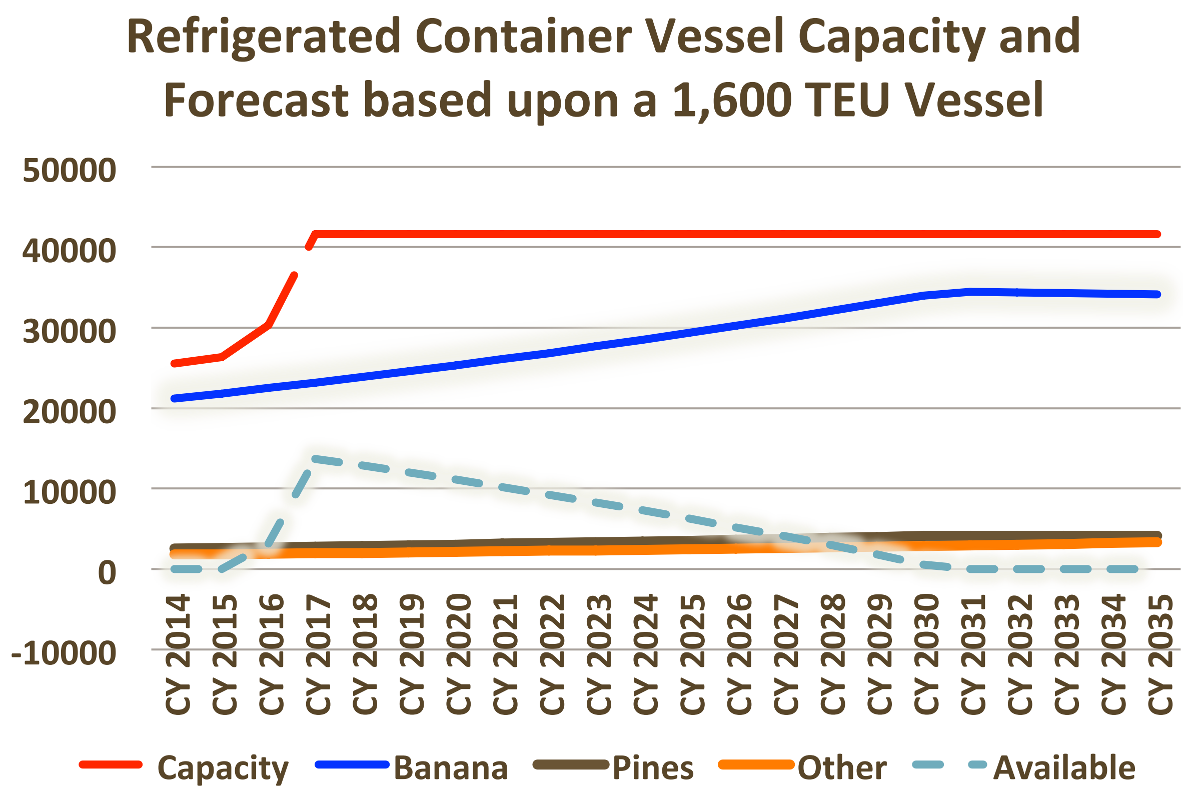
The Refrigerated Fresh Fruit Container Terminal optimum development concept examines the existing customers (Dole and SDRS) commodity types and future market opportunities. In the past five years, Dole's TEUs have increased from 96,126 in FY 2008 / 2009 to over 100,000. The current vessel capacity is 982 TEUs. With Dole's weekly service, Dole is discharging a full load and returning with a full load or 1,964 TEUs weekly. This rotation is 102,128 TEUs annually. Based upon Dole's FY 2012/2013 throughput, the vessel deployment and capabilities are reaching 100%

of their terminal's MPC. Dole is therefore building new vessels to enter the West Coast service. The Redevelopment Plan assumes Dole's vessels will have a 1,600 TEU / 800 FEU capacity, and these vessels will be in full service by CY 2017. Therefore, Redevelopment Plan assumptions for Dole are:

- For calendar year 2015, total capability remains at 105,192 TEUs (52,596 FEUs).
- For calendar year 2016, total capability begins to increase as the new vessels come on line. For purposes of the Plan, it was assumed that the new vessels will have 17 calls and the existing vessels will have 34 vessel calls. The CY 2016 capacity increases to 121,176 TEUs (60,588 FEUs).

For calendar year 2017 and beyond, the vessel capacity will be 166,400 TEUs (83,200 FEUs). For the current Dole Fresh Fruit service, the Redevelopment Plan assumes northbound loads will have 83% of the containers for bananas, 10% for pineapples, and 7% for other tropical and/or general refrigerated cargo. For southbound loads, the Plan assumes 2% of these loads will be full (general cargo) and 98% empty. One of the most important features of the Dole operations is the ability to unload containers at TAMT into the SDRS cold storage warehouse where required and necessary federal inspections occur. The cargo flow for Dole suggests that approximately 67% of the northbound loads will be sold and delivered directly at the terminal. Regional grocery chain or fresh fruit broker pick up the fruit at the terminal and truck it to its final destination. The remaining 33% will either be unloaded directly into the cold storage facility or moved to another location to be unloaded and reloaded into domestic over-the-road carriers.





NOTE: The graph above uses FEUs since the banana trade is generally exclusively 40 foot containers.

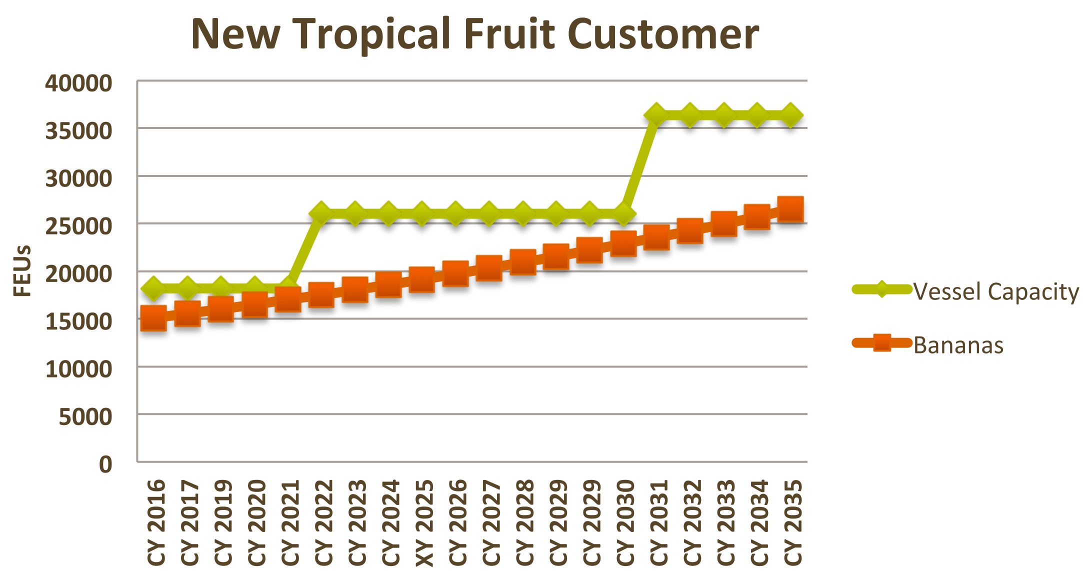
With the increase in the Dole vessel capabilities, a new market opportunity exists for Dole Liner Service to solicit third party cargo to the terminal utilizing the Dole vessel capacity. While it is unlikely, the third party capability will include banana imports by a major importer, it does provide opportunities for "niche" seasonal products such as melons from Central America.

New Containerized Fresh Fruit (Bananas):

The Redevelopment Plan's approach to a new fresh fruit opportunity is supported by previous reports and is based upon the removal of the remaining portions of Transit Shed # 1 and repaving the backland areas to support stacked container operations. The level of investment in the infrastructure needs to be based upon a specific agreement with the user/operator. The Plan **does not** suggest a "***build it and they shall come***" approach. Potential customers should be approached with the proposed Redevelopment Plan's operational concepts.

The Redevelopment Plan recommends that the operating nodes have flexible borders ("expandable bladders") so that additional areas can be added from the adjacent Multipurpose General Cargo Node. The Plan assumes that the new operator will operate similarly to Dole with 60% of the inbound loads going directly by truck and the remaining 40% will go to either a cold store or a cross-dock facility.

The forecast for the new fresh fruit container service commences in FY 2016. The initial northbound vessel has a capability of 700 TEUs (350 FEUs). The plan forecasts that after five years, the vessel capability will increase to 1,000 TEUs (500 FEUs) and by 2030 will increase to 1,400 TEUs (700 FEUs). The 2030 capacity is 36,500 FEUs.



Note: FEUs are used since this is the primary container used in the banana trade.

Refrigerated Fresh Fruit Container Terminal Optimum Planning Recommendations:

The Redevelopment Plan recommends the following:

- Increase the existing refrigerated container capacity to support larger and additional cargo capabilities by demolishing existing transit sheds to create more open space. At the earliest time frame, add additional open space and better unloading circulation on the backlands of berths 10-3 and 10-4.
- Pursue the opportunity to serve the refrigerated fresh fruit container terminal with consolidated terminal services in order to utilize the same equipment and labor throughout the terminal to provide the greatest level of efficiency.
- Infrastructure improvements (e.g. reefer plugs, crane rails, etc.) should be added when the market demands.
- The largest refrigerated cargo commodity will remain bananas from Latin America. The southbound empties provide the District with limited potential export opportunities.
- The immediate excess capacity on the larger Dole vessel provides a new opportunity to offer northbound vessel services for the time that vessel capacity exceeds the banana demand.
- Refrigerated Fresh Fruit Container vessels will be handled at Berths 10-3 and 10-4. Dole's non-exclusive, preferential berth assignment encumbers this berth. Seasonal "niche" carriers that have spot business associated with the non-containerized trade shall have access to 10-1 and 10-2 at its current operating depth. Overflow use of 10-5 and 10-6 will be used to support any operations that otherwise cannot be handled at 10-3 and 10-4. Fresh fruit operating vessels should be provided a priority use of TAMT berths subject to appropriate and reasonable notice provisions.
- Gantry cranes should be considered in association with a combined terminal services provider. The District's responsibility should be to provide necessary infrastructure while the private sector should provide the gantry cranes.

SUSTAINABILITY

- Although new season refrigerated container services may fall below the California Air Resources Board criteria for “ship-to-shore power” requirements, refrigerated vessel operators should be required to meet the shore-side power requirements.
- Products leaving by or arriving by trucks at TAMT are to meet the SDUPD Clean Truck Program. Where practical and feasible, customers should explore transportation and operational alternatives that will reduce the number of trucks required by their operations.
- All new terminal equipment, including Gantry Cranes, need to meet the highest level of energy efficiency with the lowest level of air emissions.

There are three alternatives, not mutually inconsistent concepts, for proceeding with the Refrigerated Fresh Fruit market:

Development Concept for Immediate Cargo Opportunity:

- Transit Shed # 1 is removed in order to make between 8 and 10 acres of available open storage backland area.
- The remainder of the Terminal area remains the same.
- While marketing for new fresh fruit opportunities, the open non-exclusive terminal space is used to support the Dole new vessel operations (e.g. circulation and staging) and spot project cargo opportunities.

Development Concept for New Seasonal or Year-Around Customer:

- Transit Shed # 1 is removed in order to make between 8 and 10 acres of available open storage backland area.
- Subject to the needs and requirements of the seasonal or year-round customer, improvements to accommodate either a stacked or wheeled operations are to be made in the 8 to 10 acre terminal area.
- The Dole terminal circulation plan will accommodate the unloading and loading operations at Berths 10-3 and 10-4.
- As needed, expanded capabilities for the storage of palletized cargo unloaded from the containers may be required within the SDRS facilities.
- The Multipurpose General Cargo Node adjacent to the Refrigerated Fresh Fruit Container Terminal will be designed to permit flexibility for expansion and overflow cargo requirements.

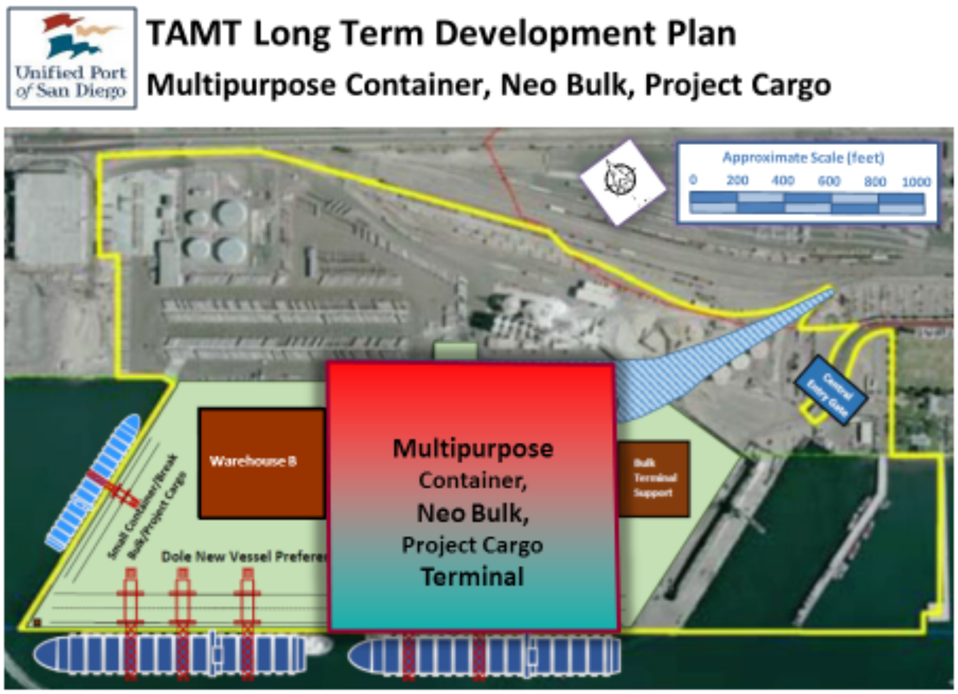
Full Build Out of Refrigerated Fresh Fruit Container Facilities with Gantry Cranes:

- Transit Shed # 1 is removed in order to make between 8 and 10 acres available open storage backland area.
- Subject to the needs and requirements of the customer, improvements to accommodate either a stacked or wheeled operations are to be made in the 8 to 10 acre terminal area, or alternately to the adjacent Multipurpose General Cargo Node.
- When vessel capacity for refrigerated container vessels begins to exceed 1,300 lifts (number of containers lifted on and lifted off) weekly, the SDUPD, in association with its customer, may wish to consider implementation of gantry cranes to support vessel productivity.
- The minimum recommendation for gantry cranes is two (2) new, 100-foot gauge, electrical

gantry cranes. Prior to approval of the gantry cranes, the selected cranes are to meet the San Diego Climate Action Plan for sustainability over the life of the crane.

- The future use of a Mobile Harbor Crane (MHC) will be on Berths 10-1 and 10-2 to support "niche" seasonal fresh fruit vessel operations.

Multipurpose General Cargo Node to support Neo-bulk, Break-bulk, Container and/or Project Cargo Terminal Operations:



Source: Vickerman & Associates 2014

There are three optimum development concepts for this Multi-Purpose General Cargo Terminal. They are:

- Multi-Purpose General Cargo with Automobiles
- Multi-Purpose General Cargo with Containers (Dry and Refrigerated)
- Multi-Purpose General Cargo with Project Cargo, Neo Bulk, and Break Bulk

While each of the development concepts can handle levels of automobiles, containers, neo bulk, and break bulk cargoes, the distinction is the emphasis placed on the operating mode and the customer's needs. Full utilization and improvement of this Multipurpose General Cargo Node requires:

- Relocation or termination of the existing Dry Bulk operations inside of Transit Shed # 2.
- Relocation or termination of uses in Warehouse C.
- Demolition of Transit Sheds # 1, # 2, and Warehouse C.

With the demolition and removal of the existing structures, the Redevelopment Plan recommends that the "Modular Grid Overlay System" be employed.

Since an open storage area can have multiple throughput capacities based on use, the Redevelopment Plan identifies three (3) maximum practical capacities are for this Multipurpose General Cargo node.

Import / Export Automobile and Truck Terminal:

The primarily use is the handling of automobile imports and exports. Unless needed for the development of the Fresh Fruit Node, the backland area behind 10-3 and 10-4 is available to support placement of automobiles and project cargo, and the covered storage area inside of the SDRS facility can be used to support other general cargo.

Operating Node Description, Characteristics, and Opportunities Automobile & Truck Terminal	
Size	Approximately 30 acres with a total static storage capacity for 5,000 units.
Maximum Practical Capacity	420,000 Metric Tons or 300,000 units.
Berth	Berths 10-5 and 10-6. Secondary use of Dole's 10-3 and 10-4. Depth alongside the berth 42 feet MLLW
Commodities To Be Handled	Automobile and Truck imports and exports. General project cargo compatible for Roll On and Roll Off vessel operations.
Vessel Size	Standard Pure Car and Truck Carriers.
Cargo Transfer	Roll On and Roll Off operations
Inland Transportation	Truck and Rail
Customer Base	TBD
Forecast	The CAGR applied to this terminal is 3%. The cursory GDP market results anticipate positive future growth.

The proposed MPC is computed based upon the customer building in velocity to the overall operations. The dwell time for the inbound first-point-of rest (FPR) cannot exceed a 7-day dwell, and preferably should be closer to 3 to 4 days. The inbound First Point of Rest is planned with a "blocked stow" storage pattern (approximately 10 cars per row). The vehicle distribution / processing center is located away from the TAMT on industrial property in close proximity to the Port. The industrial land could take advantage of a Foreign Trade Zone designation. Working with these operational parameters and a five-year forecast to initiate service, the Redevelopment Plan's forecast is 156,000 to 260,000 units during year one and by applying the 3% CAGR, by year five the volume may grow to over 175,000 and 290,000 units.

Container Terminal (Dry and Refrigerated on the Multi-purpose General Cargo Node):

There are two alternatives for the Multipurpose General Cargo Container Node: a 30-acre facility with general cargo dry container using the backland of 10-5 and 10-6, and if available the backland area behind 10-3 and 10-4. And, the second alternative is to combine all the 10-3 and 10-4 backland to the Multipurpose General Cargo Node to provide for a 40-acre container terminal. The Redevelopment Plan shows this 40-acre terminal as a full service refrigerated and general cargo terminal to accommodate carriers identified in recent reports associated with the Latin American market.

Operating Node Description, Characteristics, and Opportunities **Alternative 1 – Dry Containers**	
Size	Approximately 30 acres
Maximum Practical Capacity	120,000 TEUs annually. The Plan assumes 10 metric tons per TEU.
Berth	10 -3 and 10 – 4 subject to Dole's preferential rights and 10 - 5 and 10 – 6 as the primary non-exclusive preferential berth. Depth and Approach: 42 feet MLLW
Commodities To Be Handled	Containerized general cargo transshipped from Latin America or on a "niche" trade route.
Vessel Size	C-7 or C-8 class container vessel
Cargo Transfer	Need for a minimum of two (2) gantry cranes with a 100 ft gauge. Terminal handling may include high speed, low emission, lifting equipment.
Inland Transportation	Truck and Rail
Customer Base	TBD
Opportunities / Forecast	The 3% CAGR has been applied. The GDP market forecast anticipates positive future growth.

The Redevelopment Plan anticipates marketing and development of Alternative 1 for the Dry Container Node will take approximately five (5) years. Therefore, the forecast for the full container starts in CY 2020 and projected for a fifteen-year term to CY 2035. The initial container service at the Multipurpose General Cargo Container terminal forecasts approximately 60,000 lifts of 100,000 TEUs. Using a throughput of 4,000 TEUs per acre (based upon a wheeled operation), the dry container node has a potential to increase to 120,000 TEUs per annum or 1,200,000 metric tons. By utilizing high-speed, low emission, stacking capabilities, the terminal can greatly increase its handling efficiencies.

Operating Node Description, Characteristics, and Opportunities

Alternative 2– Refrigerated and General Cargo Containers

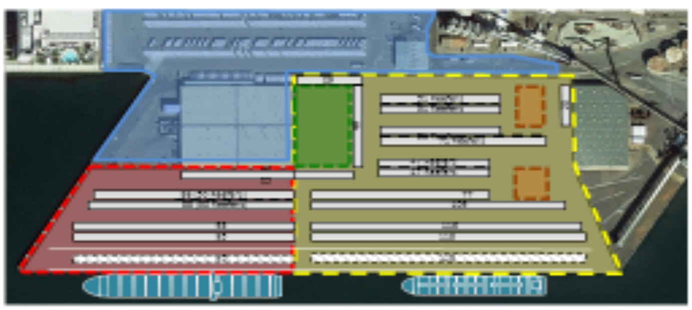
In June 2014, the District requested V&A to prepare a detailed conceptual schematic terminal layout using the Multi-Purpose General Cargo Terminal Operating Node area as a combined refrigerated and dry container terminal. The conceptual schematic terminal layout combines the backlands areas adjacent to Berths: 10-1, 10-2, 10-3, 10-4, 10-5 and 10-6 into a large multi-tenant, multi-berth, state-of-the-art refrigerated container complex. The terminal layout uses chassis container operations and maximizes the available backlands area for container yard storage. The layout includes the ability to accommodate the Alternative TAMT Gate concepts. The following terminal layout is based upon V&A's current understanding of operational requirements by current liner services calling between Latin America and Southern California.

Unified Port of San Diego

Multipurpose Container Terminal Schematic with Refrigerated Fresh Fruit Capabilities

(Schematic Container Yard Layout – CY Chassis Storage Layout)

Terminal Chassis Capacity Characteristics & Throughput



Exclusive Lease Area (Yellow)

Approx. Acreage:	28.4
Reefer Slots:	318
Dry Ground Slots:	632*
(* 118 Ground Slots used in the Absence of Gantry Crane Operations)	
Total Ground Slots:	**950**

Non - Exclusive Lease Area (Red)

Approx. Acreage:	12.4
Reefer Slots:	100
Dry Ground Slots:	407*
(* 95 Ground Slots used in the Absence of Gantry Crane Operations)	
Total Ground Slots:	**507**

Approximate Annual Terminal Throughput

(Based on a Maximum of 4,000 TEU/acre/year Throughput)

Exclusive Lease Area (Yellow)
Chassis Storage Throughput = 113,600 TEUs/Year

Non- Exclusive Lease Area (Red)
Chassis Storage Throughput = 49,600 TEUs/Year

Total Terminal area Lease Area (Red + Yellow)
Chassis Storage Throughput = 163,200 TEUs/Year

Container, Project Cargo, Neo Bulk and Break Bulk (Omni) Terminal:

The term Omni is used in the Redevelopment Plan for this concept because the terminal is capable of handling break bulk, neo bulk, and containers.

Operating Node Description, Characteristics, and Opportunities **Alternative 1 – General Cargo Project, Neo Bulk and Break Bulk (Lift On & Lift Off Vessels)**	
Size	Approximately 20 acres
Maximum Practical Capacity	327,700 Metric Tons
Berth	10 - 5 and 10 – 6 as the primary berths but no non-exclusive preferential berth. Depth and Approach: 42 feet MLLW
Commodities To Be Handled	Various General Cargo (e.g. steel, wind energy components, yachts, and other neo bulk and break bulk cargo) with a small volume of on-deck containers.
Vessel Size	Star Class Vessel
Cargo Transfer	Ships Gear and use of Mobile Harbor Crane.
Inland Transportation	Truck with rail for specialized cargo
Customer Base	Existing and new
Opportunities / Forecast	The 2% CAGR has been applied.

Operating Node Description, Characteristics, and Opportunities **Alternative 2 – General Cargo Project, Neo Bulk and Break Bulk (Roll On & Roll Off Vessels)**	
Size	Up to 40 Acres
Maximum Practical Capacity	977,400 Metric Tons
Berth	10 - 5 and 10 – 6 as the primary berths with non-exclusive preferential berth. 10-3 and 10-4 as the secondary berths subject to Dole's preferential berth. Depth and Approach: 42 feet MLLW
Commodities To Be Handled	Various General Cargo in all cargo modes both international and domestic trade opportunities.
Vessel Size	Roll On and Roll Off Vessels with on deck containers
Cargo Transfer	Roll On and Roll Off Operations. On deck containers may require Gantry Cranes.
Inland Transportation	Truck with rail for specialized cargo

Customer Base	TBD
Opportunities / Forecast	The 3% CAGR has been applied.

Multi-Purpose General Cargo Terminal Optimum Planning Recommendations:

- Increase the TAMT open storage capacity for neo-bulk, break-bulk, containers, and project cargo.
- For the Multipurpose General Cargo Container Node incorporate refrigerated cargo commodities.
- The excess capacity on the larger Dole vessel offers a new short-term opportunity to offer northbound vessel services for the time that vessel capacity exceeds the banana demand.
- Addition of gantry cranes should be considered in association with a single terminal operator.
- Incorporate domestic and coastwise shipping alternatives within the Multi-Purpose General Cargo Terminal.

SUSTAINABILITY

- The Multipurpose General Cargo Terminal, for container and reefer vessels, will require a shore side power capability in order to provide power for two vessels at the same time.
- Where practical and feasible, customers should explore transportation and operational alternatives that will reduce the number of trucks required by their operations.
- Use of terminal equipment, including gantry cranes, should be limited to low-emission technology and need to meet the District's "Climate Action Plan" criteria for energy usage.

XII. Summary of the Updated Business Plan and TAMT Redevelopment Plan*:*

The 2008 Business Plan Update estimated that TAMT Maximum Practical Capacity (MPC) between 4,540,000 and 4,870,000 metric tons.

Terminal Type	TEC Berth MPC	TEC Storage MPC
Neo Bulk/Break Bulk	940,000	1,670,000
Containers	730,000	730,000
Dry Bulk	2,650,000	2,250,000
Liquid Bulk	220,000	220,000
TOTAL	4,540,000	4,870,000

In summary the Redevelopment Plan maintains the MPC for dry bulk at 2,250,000 metric tons; it slightly increases the Liquid Bulk based upon improvements made to the terminal since 2008 to 239,017; it decreases neo bulk and break bulk cargo and increases the container capabilities of

TAMT. The table bellows shows various alternative capacities based upon different Multipurpose Node uses previously discussed..

Multipurpose Alternative	Neo Bulk and Break Bulk	Reefer & Dry Containers	Dry Bulk	Liquid Bulk	Total
Auto / Truck Terminal	583,850	1,555,840	2,650,000	239,017	5,028,707
General Cargo Omni Ro/Ro Terminal	977,400	1,555,840	2,650,000	239,017	5,422,257
Break-bulk and Neo-bulk Omni Type Terminal	327,700	2,288,000	2,650,000	239,017	5,504,717
Full Container Refrigerated & Dry	0	2,960,840	2,650,000	239,017	5.849,857
Dry Container Full Build Out	0	3,155,840	2,650,000	239,017	6,044,857

END OF DOCUMENT

Appendix D
Chula Vista Parcels for Soil Export

CHULA VISTA BAYFRONT
SWEETWATER & HARBOR DISTRICTS

GRAPHIC SCALE 1" = 200'

If soils are found appropriate for reuse, they may be used as fill material on the following Chula Vista Bayfront Harbor District parcels as an option to raise surface elevations. The following parcels are not environmentally sensitive areas and they have been cleared through the environmental review process to be used as streets, surface parking, and to support subsequent development. The soil may be placed on any of these parcels during grading (or immediately after grading) and/or once the District confirms placement would not result in any new biological impacts to the affected parcel(s).Therefore, the soil could be temporarily stored at: HP-1(S), H-3,or H-21; whereas final reuse of the soil could be placed at any one of the following parcels:Streets, HP-1(S)(N),HP-3A, H-3, H-8, H-9, H-23, H-21, HP-3C, HP-6, HP-7, HP-14, HP-15, O-1, O-3A, O-3B, OP-1A, OP-1B, O-4A, and O-4B.

RICK ENGINEERING COMPANY
5620 FRIARS ROAD
SAN DIEGO, CA 92110
619.291.0707
(FAX)619.291.4165

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APRIL 2014

CHULA VISTA BAYFRONT

OTAY DISTRICT

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Appendix E
Cargo Conversion Factors

Appendix E: Conversion Matrix to Common Throughput Measurement

Table 1. Conversion Matrix for Multi-Purpose General Cargo

Neo-Bulk July 2013 to June 2014	Tonnage (metric tons)	Units	CBMs	TEUs	FEUs	MBF	Total Tonnage
Base Data	33,666	19,429	18,987	55	253	18.58	NA
Conversion	N/A	Variable [1]	1 CBM = 1 MRT	1 TEU = 10 MRT	1 FEU = 20 MRT	1 MBF = 1 MRT	NA
Metric Revenue Tons (MRT)	**33,666**	**26,848**	**18,987**	**550**	**5,060**	**19**	**85,131**

Notes:
[1] See Table 2-5 for an explanation of how "unit" cargo was converted to a format that permits estimating MRT.

Table 2. Conversion Matrix for Multi-Purpose General Cargo Initially Measured in Units

Commodity	Units	MRT
Vehicles 1 unit = 1.4 MRT	18,821	26,349
Empty Trailers 1 unit = 3.3 MRT	63	208
Van Pacs 1 unit = 0.53 MRT	545	290
TOTAL	**19,429**	**26,848**

Appendix F
Air Quality and Greenhouse Gas Calculations (Revised)

- **CAP and Executive Order Targets**
- **Operation Emission Calculation Sheets**
  - **Vessels Methodology**
  - **Vessels, Tugs, and Shore Power**
  - **Trucks and Workers**
  - **Freight Rail**
  - **Cargo Handling Equipment**
  - **Bulk Loading Dust**
  - **Electricity and Water**
  - **Refrigerants**
- **Construction Emission Calculation Sheets**
- **Health Risk Assessment Sheets**
  - **Risk Calculation Sheets**
  - **AERMOD outputs (upon request)**
- **Sea Level Rise Calculation Sheet**

CAP and Executive Order Targets

Executive Order Target Interpolation

Calculations of Percent below BAU Emissions Needed to Meet AB 32 and B-30-15 Targets

Metric	MMTC02e	Notes
1990 emissions	431.00	Actual statewide emissions, excluding sinks
2013 emissions	459.28	Actual emissions, excluding sinks
2006	485.69	Actual emissions, excluding sinks
Calculation of Percent below 2020 BAU Target		
2020 BAU emissions	539	2014 forecast, excludes Pavley/LCFS.
2020 target	431	1990 emissions (from above)
% < 2006	11%	Calculation
% < 2013	6%	Calculation
% < 2020 BAU	20%	Calculation
Calculation of Percent below 2030 BAU Target		
2030 BAU emissions	500.23	CA Pathways Forecast
2030 target	258.6	40% below 1990
% < 2006	47%	
% < 2013	44%	Calculation
% < 2030 BAU	48%	Calculation

Interpolating BAU targets at interim years

Year	BAU Target (non-adjusted 2020 target)	adjusted to 2013 base	adjusted to 2006 base
2030	40%	48%	47%
2031	42%	50%	49%
2032	44%	52%	50%
2033	46%	54%	52%
2034	48%	55%	54%
2035	50%	57%	56%
2036	52%	59%	57%
2037	54%	61%	59%
2038	56%	62%	61%
2039	58%	64%	63%
2040	60%	66%	65%
2041	62%	68%	66%
2042	64%	69%	68%
2043	66%	71%	70%
2044	68%	73%	72%
2045	70%	75%	73%
2046	72%	76%	75%
2047	74%	78%	77%
2048	76%	80%	79%
2049	78%	82%	80%
2050	80%	83%	82%

CAP EMISSIONS TABLE

		GHG Emissions Summary by Category and Activity Type CAP Table ES-2				Percent Reductions	
Category	**Activity**	**2006**	**2020 BAU**	**2020 with state**	**2020 target (1990)**	**Below Existing**	**Below 2020 BAU**
Port Operations	--	*37,164*	*38,930*	*30,044*	*33,533*	*10%*	*14%*
Maritime	**Ocean Going Vessels**	55,162	72,786	62,365	49,773	*10%*	*32%*
	Recreational Boating	80,441	118,252	106,391	72,583	*10%*	*39%*
	Other Terminal Activity	89,242	109,859	92,000	80,524	*10%*	*27%*
	Total Maritime	*224,845*	*300,897*	*260,756*	*202,880*	*10%*	*33%*
Other	**Industrial**	137,426	138,258	131,725	124,001	*10%*	*10%*
	Shipbuilding	123,725	123,545	90,187	111,638	*10%*	*10%*
	Lodging	137,429	249,852	197,750	124,004	*10%*	*50%*
	Other	165,840	188,217	145,025	149,639	*10%*	*20%*
	Total Other	564,420	699,872	564,687	509,282	*10%*	*27%*
TOTAL		826,429	1,039,699	855,487	745,695	*10%*	*28%*

Note:
2020 Business As Usual (BAU) inventory does not account for reductions due to currently approved regulations.
2020, 2035, and 2050 with state emissions include:
- Renewables Portfolio Standards (RPS) - 33%
- Pavley Vehicle Standards - in EMFAC
- Low Carbon Fuel Standard (LCFS) - 10% across the board for all transporation fuels
- Heavy Duty (Tractor-Trailer) GHG Regulation - Phase 1 only
- Ocean Going Vessels (OGV) Fuel Switch Regulation - 0.1% sulfur

Operation Emission Calculation Sheets

- **Vessels, Tugs, and Shore Power**
- **Trucks and Workers**
- **Freight Rail**
- **Cargo Handling Equipment**
- **Bulk Loading Dust**
- **Electricity and Water**
- **Refrigerants**

Tenth Avenue Marine Terminal Vessel Emissions Methodology

Ocean Going Vessel emissions inventories are generally calculated by using energy-based emission factors together with activity profiles for each vessel. The bulk of the work involves determining representative engine power ratings for each vessel and the development of activity profiles for each ship call. Using this information, ships are binned by ship type, engine type, deadweight tonnage (DWT), and emissions for each mode are calculated for propulsion and auxiliary engines and auxiliary boilers using the general equation below.

$$E = P \times LF \times A \times EF$$

Where E = Emissions (grams [g])

P = Maximum Continuous Rating Power (kilowatts [kW])

LF = Load Factor (percent of vessel's total power)

A = Activity (hours [h]) (hours/call * # of calls)

EF = Emission Factor (grams per kilowatt-hour [g/kWh])

The emission factor is in terms of emissions per unit of energy from the engine. It is multiplied by the energy needed to move the ship or perform another particular activity.

The next several sections describe (1) vessel characteristics, (2) activity profiles, (3) load factors, and (4) emissions factors for ocean going vessels.

1) Vessel Characteristics

Existing vessel activity was based on July 2013 to June 2014 vessel calls as obtained from the District. There were a total of 100 vessel calls at TAMT made by 38 different vessels. Vessel type, engine type, engine tier, engine size, service speed, and hotel time are presented in **Table 1**.

Table 1. Vessel Descriptions

				Vessel Averages			
Ship Type	Engine Type[a]	Emission Tier	Calls	Propulsion (Main) Power (kW)	Auxiliary Power (kW)	Service Speed	Hotel Hours
Auto Carrier	SSD	1	8	11,060	2,760	20.00	27.6
Bulk Carrier	MSD	1	2	9,100	2,973	16.65	37.9
	SSD	0	2	8,139	2,325	14.60	28.7
		1	5	10,705	2,250	15.92	37.8
		2	2	9,140	2,393	15.00	85.1
Heavy Load Carrier	MSD	0	2	5,738	1,950	13.00	114.0
Container Ship	SSD	0	49	14,948	7,158	20.03	61.4
		1	8	13,055	3,676	18.93	60.8
General Cargo	MSD	0	1	5,738	1,950	13.00	123.0
		1	5	6,400	2,367	15.34	62.5
	SSD	0	3	9,268	2,557	15.23	86.3
		1	11	12,430	2,920	16.98	45.5
		2	2	8,630	2,048	14.90	50.9
Total			**100**	**12,627**	**4,904**	**18.43**	**57.3**

[a] SSD = Slow speed diesel, MSD = Medium speed diesel

2) Activity Profiles

Vessel emissions generally result from three activities: transiting, maneuvering, and hoteling. The study area for analyzing vessel emissions is defined as 24 nm from shore (or what NOAA refers to as the California Baseline), consistent with the ARB rulemaking as well and is identical to the NOAA contiguous zone. The boundary of the vessel speed reduction (VSR) zone is defined as 20 nautical miles (nm) from the tip of Point Loma[1].

Transit: Transit emissions occur in open water within both the outer unrestricted speed zone and within the vessel speed reduction zone. Vessels that call on TAMT arrive from and depart to the north, south, and west. Guatemala is the most frequent last port of call, while Guatemala and Ecuador are the most frequent next port of call. Vessel transit distances are longest on calls to and from the north because the air basin starts at the Orange County line, about 48.9 nautical miles from Point Loma. Vessels that arrive from and depart to the south travel approximately 11.5 nautical miles from Point Loma to the international border; thus, vessel call transit is shortest from the south and occur completely within the vessel speed reduction zone. Vessels from the west actually transit to Point Loma from the northwest and take a path similar to the "outer-south" path denoted in the District's air emissions inventory, which is about 35.3 nautical miles from Point Loma. During transit, the propulsion and auxiliary engines operate and the auxiliary boilers are off unless propulsion engine load drops below 20% at reduced speeds, as described below.

Vessels entering and leaving the port comply with the VSR on a voluntary basis. Compliance is deemed at operating within the VSR at 12 knots or less. **Table 2** shows the compliance percentage and speeds for both arrival and departure. Some frequent vessel operators, including Transfrut Express Ltd (46 calls, 85% compliant) and Arkas Denizcilik ve Nakliyat (6 calls, 92% compliant), currently exceed the voluntary target of 80%.

Table 2. Vessel Compliance with VSR

Ship Type	Engine Type	Emission Tier	Arrival				Departure			
			Comp (%)	Distance (nm)	Speed (kts)		Comp (%)	Distance (nm)	Speed (kts)	
					Comp	NC			Comp	NC
Auto Carrier	SSD	1	0%	35.30	12.00	16.06	0%	35.30	12.00	15.24
Bulk Carrier	MSD	1	50%	30.20	11.00	13.60	50%	23.40	11.20	13.60
	SSD	0	100%	30.20	10.70	14.60	100%	30.20	12.45	14.60
		1	60%	33.94	11.13	13.10	40%	26.46	11.90	13.07
		2	100%	11.50	11.05	15.00	100%	48.90	12.50	15.00
Heavy Load Carrier	MSD	0	100%	5.75	9.45	13.00	100%	24.45	9.45	13.00
Container Ship	SSD	0	90%	11.99	11.57	14.78	73%	12.26	11.83	16.06
		1	63%	11.50	12.08	16.03	75%	11.50	12.53	15.40
General Cargo	MSD	0	100%	11.50	10.10	13.00	100%	48.90	10.10	13.00
		1	60%	35.98	12.57	13.20	60%	23.74	12.20	15.10
	SSD	0	100%	23.97	12.07	15.23	100%	36.43	12.30	15.23
		1	91%	26.95	11.77	13.10	45%	34.06	11.86	15.23
		2	100%	42.10	10.95	14.90	100%	30.20	11.00	14.90
		Averages	**78%**	**19.31**	**11.60**	**14.57**	**65%**	**20.74**	**11.87**	**15.41**

[1] Tip of Point Loma reference location is 32° 39'54" N, 117° 14'33" W.

Maneuvering: Maneuvering emissions occur as vessels operate at slow speed while in-port areas. Based on the ARB's methodology, maneuvering time was calculated as the distance traveled during maneuvering divided by speed, plus 15 minutes each for docking or undocking. Maneuvering is assumed to begin at the point where the pilot boards the vessel and ended at the berth. In San Diego, pilots board the vessel near the near the Whistle Buoy, which is located approximately 2.5 nautical miles south of the tip of Point Loma. During maneuvering, vessels slow to slow speeds, dropping main engine load below 20%, so the propulsion, auxiliary engines, and auxiliary boilers all operate. For purposes of calculating propulsion load factors, maneuvering speeds are assumed to be 7 knots.

Hoteling: Per the ARB, hoteling time can be defined as beginning when a ship ties up at a berth, and ends when it leaves that berth. Likewise, anchorage is defined as beginning when a ship drops anchor and ends when the anchor is raised and the ship begins moving again. Similar to the District's inventory, hoteling time and emissions includes at-berth and at-anchor. During hoteling, vehicle cargo is loaded and unloaded. The propulsion engine is shut off, the auxiliary engines operate to power onboard ventilation lights, equipment, container refrigeration, while boilers operate primarily for fuel heating. Average hoteling time for current TAMT calls is 57.3 hours per call. Hoteling time by ship type are shown in **Table 1**.

3) Load Factors

Load factors are expressed as a percent of the vessel's total propulsion or auxiliary power. At service or cruise speed, the propulsion load factor is assumed to be 82.5 percent. At lower speeds, the Propeller Law is used to estimate ship propulsion loads, based on the theory that propulsion power varies by the cube of speed as shown in the equation below.

$$\mathbf{LF = (AS/MS)^3}$$

Where **LF** = Load Factor (percent)
AS = Actual Speed (knots)
MS = Maximum Speed (knots)

Maximum speed is calculated from service speed. Service speed is 93.7 percent of maximum speed.[2] While load factors will be calculated using the above propeller law, load factors below 2 percent will be set to 2 percent as a minimum.[3] At main engine loads of less than 20%, engine emissions are multiplied by an adjustment factor which accounts for higher emission rates at low loads. The low engine loads occur during reduced vessel speeds (in VSR) and while maneuvering.

Load factors for auxiliary engines vary by operating mode. Load factors for auxiliary engines vary by operating mode from the 2011 ARB OGV methodology. Hoteling load factor for container ships was modified from the ARB methodology to account for the high amount of refrigerated containers on the Dole ships. Auxiliary engine load factors used to estimate emission are presented in **Table 3.** [3]

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[2] California Air Resources Board, Emissions Estimation Methodology for Ocean-Going Vessels, May 2011 http://www.arb.ca.gov/regact/2011/ogv11/ogv11appd.pdf

[3] Starcrest Consulting Group LLC, Update to the Commercial Marine Inventory for Texas to Review Emission Factors, Consider a Ton-Mile EI Method, and Revised Emissions for the Beaumont-Port Arthur Non-Attainment Area, prepared for the Houston Advanced Research Center, January 2004

Table 3. Auxiliary Engine Load Factors

Ship Type	Transit	Maneuver	Hotel
Auto Carrier	0.15	0.45	0.26
Bulk Carrier	0.17	0.45	0.10
Heavy-Load Carrier	0.17	0.45	0.10
Container Ship	0.13	0.50	0.35
General Cargo	0.17	0.45	0.10

Vessel boiler loads for auto carriers were taken from the 2014 Port of Long Beach Inventory[4] and are presented in **Table 4**. Boilers are typically not used during transit at sea since many vessels are equipped with an exhaust gas recovery system or economizers that uses heat of the main engine exhaust for heating fuel or water. However, when main engine speed drops, so does the load factor, which makes the economizers less effective. When main engine load drops below 20% during maneuvering and transit, boilers are assumed to operate. Boiler emissions are included in the transit emission calculations for VSR-compliant calls since main engine loads drop below 20% during complaint trips and all maneuvering trips.

Table 4. Boiler Loads (kW)

Ship Type	Ship Size	Transit	Maneuver	Hotel
Auto Carrier	All	351	351	351
Bulk Carrier	All	132	132	132
Heavy-Load Carrier	All	132	132	132
Container Ship	0 - 1000 TEU	241	241	241
	1000 – 2000 TEU	325	325	325
	2000 – 3000 TEU	474	474	474
General Cargo	All	135	135	135

4) Emission Factors

The emission factors used from this analysis come from the 2011 ARB OGV methodology[5] and the EPA's Category 3 Engine Rulemaking[6]. Tier 0 Emission factors are shown in **Table 5.** The emission factors take into account use of 0.1% sulfur marine distillate fuel which is required in California starting January 1, 2014. Tier 1 and 2 NOx emission factors for propulsion and auxiliary engines are shown in Table 6.

[4] Starcrest Consulting Group, Port of Long Beach Inventory of Air Emissions – September 2014 http://www.polb.com/environment/air/emissions.asp

[5] ARB. 2011. Emissions Estimation Methodology for Ocean-Going Vessels. http://www.arb.ca.gov/regact/2011/ogv11/ogv11appd.pdf

[6] EPA 2011. Regulatory Impact Analysis: Control of Emissions of Air Pollution from Locomotive Engines and Marine Compression Ignition Engines Less than 30 Liters Per Cylinder. https://www.regulations.gov/document?D=EPA-HQ-OAR-2003-0190-0938

Table 5. Tier 0 Emission Factors (g/kWh)

Engine Type	NOx	DPM	$PM_{2.5}$	ROG	CO	SOx	CO_2	CH_4	N_2O
SSD Propulsion	17.0	0.25	0.23	0.78	1.10	0.36	588	0.07	0.018
MSD Propulsion	13.2	0.25	0.23	0.65	1.10	0.40	645	0.08	0.018
Auxiliary	13.9	0.25	0.23	0.52	1.10	0.40	690	0.08	0.018
Boiler	2.0	0.13	0.12	0.11	0.20	0.58	922	0.03	0.013

Table 6. Tier 1 and Tier 2 NOx Emission Factors (g/kWh)

Engine Type	Tier 1	Tier 2
SSD Propulsion	15.1	12.6
MSD Propulsion	11.7	9.2
Auxiliary	12.4	9.9

Emission factors are considered to be constant down to about 20 percent load. Below that threshold, emission factors tend to increase as the load decreases. This trend results because diesel engines are less efficient at low loads and the brake-specific fuel consumption (BSFC) tends to increase. Thus, while mass emissions (grams per hour) decrease with low loads, the engine power tends to decrease more quickly, thereby increasing the emission factor (grams per engine power) as load decreases. Energy and Environmental Analysis Inc. (EEA) demonstrated this effect in a study prepared for EPA in 2000.[7] The low-load emission factor adjustment factors were developed based upon the concept that the BSFC increases as load decreases below about 20 percent load.

During transit without speed reduction, load factors are above 20 percent so no low load adjustment factor is applied to propulsion engines. During VSR-complaint transit, however, some load factors drop below 20 percent, so a low load adjustment factor needs to be applied to propulsion engine emission factors for those cases. Low load adjustment factors are shown in **Table 7**.[7] There is no need for a low load adjustment factor for auxiliary engines, because they are generally operated in banks. When only low loads are needed, one or more engines are shut off, allowing the remaining engines to operate at a more efficient level.

While EEA does not directly develop low load adjustment factors for CH_4 and N_2O emissions, CH_4 adjustment factors are the same as for ROG while N_2O adjustment factors are the same as for NOx. This is the same methodology that Starcrest used in the Port of Los Angeles and Port of Long Beach inventories.[4] Low load adjustment factors are multiplied by the emission factors in **Table 5 and Table 6**.

Greenhouse gas emission factors also are weighted by global warming potential. The global warming potential for GHG emissions used in this analysis are shown in **Table 8** and are taken from AR4.

[7] Energy and Environmental Analysis Inc., *Analysis of Commercial Marine Vessels Emissions and Fuel Consumption Data*, EPA420-R-00-002, February 2000. http://www.epa.gov/otaq/models/nonrdmdl/c-marine/r00002.pdf

Table 7. Propulsion Engine Low Load Adjustment Factors

Load	NOx	DPM	$PM_{2.5}$	ROG	CO	SOx	CO_2	CH_4	N_2O
2%	4.63	7.29	7.29	21.18	9.68	3.36	3.28	21.18	4.63
3%	2.92	4.33	4.33	11.68	6.46	2.49	2.44	11.68	2.92
4%	2.21	3.09	3.09	7.71	4.86	2.05	2.01	7.71	2.21
5%	1.83	2.44	2.44	5.61	3.89	1.79	1.76	5.61	1.83
6%	1.60	2.04	2.04	4.35	3.25	1.61	1.59	4.35	1.60
7%	1.45	1.79	1.79	3.52	2.79	1.49	1.47	3.52	1.45
8%	1.35	1.61	1.61	2.95	2.45	1.39	1.38	2.95	1.35
9%	1.27	1.48	1.48	2.52	2.18	1.32	1.31	2.52	1.27
10%	1.22	1.38	1.38	2.20	1.96	1.26	1.25	2.20	1.22
11%	1.17	1.30	1.30	1.96	1.79	1.21	1.21	1.96	1.17
12%	1.14	1.24	1.24	1.76	1.64	1.18	1.17	1.76	1.14
13%	1.11	1.19	1.19	1.60	1.52	1.14	1.14	1.60	1.11
14%	1.08	1.15	1.15	1.47	1.41	1.11	1.11	1.47	1.08
15%	1.06	1.11	1.11	1.36	1.32	1.09	1.08	1.36	1.06
16%	1.05	1.08	1.08	1.26	1.24	1.07	1.06	1.26	1.05
17%	1.03	1.06	1.06	1.18	1.17	1.05	1.04	1.18	1.03
18%	1.02	1.04	1.04	1.11	1.11	1.03	1.03	1.11	1.02
19%	1.01	1.02	1.02	1.05	1.05	1.01	1.01	1.05	1.01
20%	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Table 8. Global Warming Potential

Pollutant	GWP
CO_2	1
CH_4	25
N_2O	298

5) 2020 Project and 2035 Plan Assumptions

Calls are increased based upon cargo throughput increases and known changes in capacity associated with the new Dole vessels. Throughput increases by commodity type are shown in **Table 9**.

Table 9. Commodity Throughput Ratios for 2020 and 2035 over Baseline

Commodity	2020	2035/MPC	2035/STC
Dry Bulk	(no change)	9.14	6.86
Liquid Bulk	(no change)	(no change)	(no change)
Refrigerated Containers	1.08	3.59	2.69
Multi-Purpose General Cargo	1.46	11.48	8.61
Total	**1.08**	**5.89**	**4.48**

Using the commodities listed in the call data provided by the Port and the matchings shown in **Table 10**, the cargo throughput ratios by ship type/engine type/emission tier are shown in **Table 11**.

Table 10. Commodity breakout by Ship Type/Engine Type/Emission Tier

Ship Type	Engine Type	Engine Tier	Commodity Type	Percent of Emissions
Auto Carrier	SSD	1	Multi-Purpose General Cargo	100%
Bulk Carrier	MSD	1	Dry Bulk	46%
			Multi-Purpose General Cargo	54%
	SSD	0	Dry Bulk	100%
		1	Dry Bulk	100%
		2	Dry Bulk	100%
Heavy Load Carrier	MSD	0	Multi-Purpose General Cargo	100%
Container Ship	SSD	0	Refrigerated Containers	100%
		1	Refrigerated Containers	100%
General Cargo	MSD	0	Multi-Purpose General Cargo	100%
		1	Multi-Purpose General Cargo	100%
	SSD	0	Dry Bulk	72%
			Multi-Purpose General Cargo	28%
		1	Dry Bulk	16%
			Multi-Purpose General Cargo	84%
		2	Dry Bulk	62%
			Multi-Purpose General Cargo	38%

Table 11. Commodity Throughput Ratios for 2020 and 2035 over Baseline by Ship Type/Engine Type/Emission Tier

Ship Type	Engine Type	Engine Tier	2020	2035/MPC	2035/ STC
Auto Carrier	SSD	1	1.46	11.48	8.61
Bulk Carrier	MSD	1	1.23	10.31	7.73
	SSD	0	1.00	9.14	6.86
		1	1.00	9.14	6.86
		2	1.00	9.14	6.86
Heavy Load Carrier	MSD	0	1.46	11.48	8.61
Container Ship	SSD	0	--	--	--
		1	--	--	--
		2	1.08	3.59	2.69
General Cargo	MSD	0	1.46	11.48	8.61
		1	1.46	11.48	8.61
	SSD	0	1.15	9.92	7.44
		1	1.37	11.06	8.29
		2	1.23	10.31	7.73

In all cases except container ships, calls at future years were multiplied by the ratios given in Table 11. For container ships, calls were revised because the current container ships are being replaced by newer (Tier 2) vessels with more capacity. To calculate new calls for container ships for 2020 and 2035, baseline refrigerated container TEUs were multiplied by the ratios given in Table 11 and then divided by the TEUs of the new ships (1560 TEUs). This resulted in 50 container ship calls in 2020 and 120 in 2035 under the MPC scenario and 90 in

2035 under the STC alternative. Hoteling time was set at 92.3 hours per the Dole EIR. In addition, since the new ships were built to utilize shore power, it was assumed that 100% of the container ship calls used shore power. It was estimated when shore power is used that during the first and last 1.5 hours of hoteling the auxiliary engines ran while the cables were being connected or disconnected.

Baseline

3 peak 20 VSR Distance

Ships

						Service	Total Transit				Transit - Arrival						Transit - Departure				Time		Boiler		NOx			DPM		
	Engine	Emission		Power (kW)		Speed	Distance (nm)		Comp	Distance	Speed (kts)		Main Load Factor		Comp	Distance	Speed (kts)		Main Load Factor		(hrs)		Load (kW)							
Ship Type	Type	Tier	Calls	Main	Aux	(kts)	Arrival	Depart	(%)	(nm)	Comp	NC	Comp	NC	(%)	(nm)	Comp	NC	Comp	NC		Aux		Main	Aux	Boiler	Main	Aux	Boiler	Main
AUTO CARRIER	SSD	1	0.24	11,060	2,760	20.00	35.30	35.30	0%	15.30	12.00	20.00	0.18	0.82	0%	15.30	12.00	20.00	0.18	0.82	1.53	0.15	351	111.22	4.16	-	1.84	0.08	-	1.69
BULK CARRIER	MSD	1	0.06	9,100	2,973	16.65	30.20	23.40	0%	10.20	11.00	16.65	0.24	0.82	0%	3.40	11.20	16.65	0.25	0.82	0.82	0.17	-	9.46	0.68	-	0.20	0.01	-	0.19
	SSD	0	0.06	8,139	2,325	14.60	30.20	30.20	0%	10.20	10.70	14.60	0.32	0.82	0%	10.20	12.45	14.60	0.51	0.82	1.40	0.17	-	21.04	1.02	-	0.31	0.02	-	0.28
		1	0.15	10,705	2,250	15.92	33.94	26.46	0%	13.94	11.13	15.92	0.28	0.82	0%	6.46	11.90	15.92	0.34	0.82	1.28	0.17	-	56.35	2.01	-	0.93	0.04	-	0.86
		2	0.06	9,140	2,393	15.00	11.50	48.90	0%	-	11.05	15.00	0.33	0.82	0%	28.90	12.50	15.00	0.48	0.82	1.93	0.17	-	24.14	1.03	-	0.48	0.03	-	0.44
BULK CARRIER, HL	MSD	0	0.06	5,738	1,950	13.00	5.75	24.45	0%	-	9.45	13.00	0.32	0.82	0%	4.45	9.45	13.00	0.32	0.82	0.34	0.17	-	2.82	0.21	-	0.05	0.00	-	0.05
CONTAINER SHIP	SSD	0	1.47	14,948	7,158	20.03	11.99	12.26	0%	-	11.57	20.03	0.16	0.82	0%	-	11.83	20.03	0.17	0.82	-	0.13	132	-	-	-	-	-	-	-
		1	0.24	13,055	3,676	18.93	11.50	11.50	0%	-	12.08	18.93	0.21	0.82	0%	-	12.53	18.93	0.24	0.82	-	0.13	-	-	-	-	-	-	-	-
GENERAL CARGO	MSD	0	0.03	5,738	1,950	13.00	11.50	48.90	0%	-	10.10	13.00	0.39	0.82	0%	28.90	10.10	13.00	0.39	0.82	2.22	0.17	-	9.16	0.68	-	0.17	0.01	-	0.16
		1	0.15	6,400	2,367	15.34	35.98	23.74	0%	15.98	12.57	15.34	0.45	0.82	0%	3.74	12.20	15.34	0.41	0.82	1.29	0.17	-	26.19	2.12	-	0.56	0.04	-	0.51
	SSD	0	0.09	9,268	2,557	15.23	23.97	36.43	0%	3.97	12.07	15.23	0.41	0.82	0%	16.43	12.30	15.23	0.43	0.82	1.34	0.17	-	34.44	1.61	-	0.51	0.03	-	0.47
		1	0.33	12,430	2,920	16.98	26.95	34.06	0%	6.95	11.77	16.98	0.27	0.82	0%	14.06	11.86	16.98	0.28	0.82	1.24	0.17	-	139.08	5.54	-	2.30	0.11	-	2.12
		2	0.06	8,630	2,048	14.90	42.10	30.20	0%	22.10	10.95	14.90	0.33	0.82	0%	10.20	11.00	14.90	0.33	0.82	2.17	0.17	-	25.65	0.99	-	0.51	0.02	-	0.47
Grand Total			3.00	12,627	4,904	18.43	19.31	20.74	0%	4.45	11.60	18.43	0.22	0.82	0%	5.21	11.87	18.43	0.24	0.82	0.58	0.15	93	459.55	20.03	-	7.87	0.41	-	7.24
			1.06																											

Harborcraft

			Tug Running Emissions (lbs)																				Hoteling Emi							
			NOx		DPM		PM2.5		ROG		CO		SOx		CO2		CH4		N2O		Hours		NOx		DPM		PM2.5		ROG	
Tug/Barge	Calls	Hours	Main	Aux	Main	Aux	Main	Aux	Main	Aux	Main	Aux	Main	Aux	Main	Aux	Main	Aux	Main	Aux	Tug	Barge	Tug	Barge	Tug	Barge	Tug	Barge	Tug	Barge
Robyn J (Barge Jake J)	0.11	16.4	22.26	1.04	0.76	0.04	0.74	0.04	2.10	0.18	16.72	0.79	0.02	0.00	1,963	97	0.039	0.003	0.088	0.004	1.0	4.5	0.06	0.85	0.00	0.05	0.00	0.04	0.01	0.14
Robyn J (Barge Payton J)	2.44	16.4	489.77	22.86	16.71	0.83	16.21	0.81	46.12	3.86	367.75	17.39	0.48	0.02	43,180	2,142	0.858	0.076	1.946	0.097	1.0	4.8	1.39	20.08	0.05	1.08	0.05	1.05	0.24	3.41
Robyn J (Barge Tori J)	0.44	16.4	89.05	4.16	3.04	0.15	2.95	0.15	8.39	0.70	66.86	3.16	0.09	0.00	7,851	389	0.156	0.014	0.354	0.018	1.0	5.3	0.25	4.03	0.01	0.22	0.01	0.21	0.04	0.68
Grand Total	3.00	16.4	601.08	28.05	20.51	1.02	19.90	0.99	56.60	4.74	451.33	21.34	0.59	0.03	52,993	2,628	1.053	0.093	2.389	0.118	1.0	4.9	1.71	24.95	0.06	1.35	0.06	1.31	0.29	4.24

Assist Tugs

						Tug Running Emissions (lbs)																	
		Hours per Call		Load Factors		NOx		DPM		PM2.5		ROG		CO		SOx		CO2		CH4		N2O	
Tug	Calls	Main	Aux	Main	Aux	Main	Aux	Main	Aux	Main	Aux	Main	Aux	Main	Aux	Main	Aux	Main	Aux	Main	Aux	Main	Aux
Scout	3.00	0.70	1.00	0.31	0.43	30.05	2.97	0.66	0.07	0.64	0.06	3.58	0.48	28.53	3.16	0.04	0.00	3,350	389	0.067	0.009	0.151	0.018
Tioga	3.00	0.70	1.00	0.31	0.43	30.05	2.37	0.66	0.09	0.64	0.09	3.58	0.40	28.53	1.81	0.04	0.00	3,350	223	0.067	0.008	0.151	0.010
Grand Total	6.00	0.70	1.00	0.31	0.43	60.10	5.34	1.33	0.16	1.29	0.15	7.16	0.89	57.06	4.97	0.08	0.01	6,700	612	0.133	0.017	0.302	0.028

Demo/Rail Project - 2020

Ships

						Service	Total Transit				Transit - Arrival						Transit - Departure				Time		NC Boiler		NOx			DPM		
	Engine	Emission		Power (kW)		Speed	Distance (nm)		Comp	Distance	Speed (kts)		Main Load Factor		Comp	Distance	Speed (kts)		Main Load Factor		(hrs)		Load (kW)							
Ship Type	Type	Tier	Calls	Main	Aux	(kts)	Arrival	Depart	(%)	(nm)	Comp	NC	Comp	NC	(%)	(nm)	Comp	NC	Comp	NC		Aux		Main	Aux	Boiler	Main	Aux	Boiler	Main
AUTO CARRIER	SSD	1	0.35	11,060	2,760	20.00	35.30	35.30	0%	15.30	12.00	20.00	0.18	0.82	0%	15.30	12.00	20.00	0.18	0.82	1.53	0.15	351	162.10	6.06	-	2.68	0.12	-	2.47
BULK CARRIER	MSD	1	0.06	9,100	2,973	16.65	30.20	23.40	0%	10.20	11.00	16.65	0.24	0.82	0%	3.40	11.20	16.65	0.25	0.82	0.82	0.17	-	9.46	0.68	-	0.20	0.01	-	0.19
	SSD	0	0.06	8,139	2,325	14.60	30.20	30.20	0%	10.20	10.70	14.60	0.32	0.82	0%	10.20	12.45	14.60	0.51	0.82	1.40	0.17	-	21.04	1.02	-	0.31	0.02	-	0.28
		1	0.15	10,705	2,250	15.92	33.94	26.46	0%	13.94	11.13	15.92	0.28	0.82	0%	6.46	11.90	15.92	0.34	0.82	1.28	0.17	-	56.35	2.01	-	0.93	0.04	-	0.86
		2	0.06	9,140	2,393	15.00	11.50	48.90	0%	-	11.05	15.00	0.33	0.82	0%	28.90	12.50	15.00	0.48	0.82	1.93	0.17	-	24.14	1.03	-	0.48	0.03	-	0.44
BULK CARRIER, HL	MSD	0	0.09	5,738	1,950	13.00	5.75	24.45	0%	-	9.45	13.00	0.32	0.82	0%	4.45	9.45	13.00	0.32	0.82	0.34	0.17	-	4.23	0.31	-	0.08	0.01	-	0.07
CONTAINER SHIP	SSD	2	1.50	19,420	11,320	19.50	11.92	12.16	0%	-	11.64	19.50	0.18	0.82	0%	-	11.93	19.50	0.19	0.82	-	0.13	132	-	-	-	-	-	-	-
GENERAL CARGO	MSD	0	0.03	5,738	1,950	13.00	11.50	48.90	0%	-	10.10	13.00	0.39	0.82	0%	28.90	10.10	13.00	0.39	0.82	2.22	0.17	-	9.16	0.68	-	0.17	0.01	-	0.16
		1	0.21	6,400	2,367	15.34	35.98	23.74	0%	15.98	12.57	15.34	0.45	0.82	0%	3.74	12.20	15.34	0.41	0.82	1.29	0.17	-	36.66	2.97	-	0.78	0.06	-	0.72
	SSD	0	0.09	9,268	2,557	15.23	23.97	36.43	0%	3.97	12.07	15.23	0.41	0.82	0%	16.43	12.30	15.23	0.43	0.82	1.34	0.17	-	34.44	1.61	-	0.51	0.03	-	0.47
		1	0.45	12,430	2,920	16.98	26.95	34.06	0%	6.95	11.77	16.98	0.27	0.82	0%	14.06	11.86	16.98	0.28	0.82	1.24	0.17	-	189.65	7.56	-	3.14	0.15	-	2.89
		2	0.06	8,630	2,048	14.90	42.10	30.20	0%	22.10	10.95	14.90	0.33	0.82	0%	10.20	11.00	14.90	0.33	0.82	2.17	0.17	-	25.65	0.99	-	0.51	0.02	-	0.47
Grand Total			3.1098	14,524	6,799	18.04	20.86	22.44	0%	5.41	11.62	18.04	0.24	0.82	0%	6.22	11.85	18.04	0.25	0.82	0.69	0.15	103	572.89	24.90	-	9.80	0.50	-	9.02

1.03659959 =scaling factor for baseline to 2020 (Baseline x 6% increase in annual calls)

Harborcraft

			Tug Running Emissions (lbs)																				Hoteling Emi							
			NOx		DPM		PM2.5		ROG		CO		SOx		CO2		CH4		N2O		Hours		NOx		DPM		PM2.5		ROG	
Tug/Barge	Calls	Hours	Main	Aux	Main	Aux	Main	Aux	Main	Aux	Main	Aux	Main	Aux	Main	Aux	Main	Aux	Main	Aux	Tug	Barge	Tug	Barge	Tug	Barge	Tug	Barge	Tug	Barge
Robyn J (Barge Jake J)	0.12	16.4	23.08	1.08	0.79	0.04	0.76	0.04	2.17	0.18	17.33	0.82	0.02	0.00	2,035	101	0.040	0.004	0.092	0.005	1.0	4.5	0.07	0.88	0.00	0.05	0.00	0.05	0.01	0.15
Robyn J (Barge Payton J)	2.53	16.4	507.70	23.69	17.33	0.86	16.81	0.84	47.81	4.00	381.21	18.03	0.50	0.02	44,760	2,220	0.890	0.078	2.018	0.100	1.0	4.8	1.45	20.81	0.05	1.12	0.05	1.09	0.24	3.54
Robyn J (Barge Tori J)	0.46	16.4	92.31	4.31	3.15	0.16	3.06	0.15	8.69	0.73	69.31	3.28	0.09	0.00	8,138	404	0.162	0.014	0.367	0.018	1.0	5.3	0.26	4.17	0.01	0.23	0.01	0.22	0.04	0.71
Grand Total	3.11	16.4	623.08	29.08	21.26	1.06	20.62	1.03	58.67	4.91	467.84	22.12	0.62	0.03	54,933	2,725	1.092	0.096	2.476	0.123	1.0	4.9	1.77	25.86	0.06	1.40	0.06	1.35	0.30	4.39

Assist Tugs

														Tug Running Emissions (lbs)									
		Hours per Call		Load Factors		NOx		DPM		PM2.5		ROG		CO		SOx		CO2		CH4		N2O	
Tug	Calls	Main	Aux	Main	Aux	Main	Aux	Main	Aux	Main	Aux	Main	Aux	Main	Aux	Main	Aux	Main	Aux	Main	Aux	Main	Aux
Scout	3.11	0.70	1.00	0.31	0.43	31.15	3.08	0.69	0.07	0.67	0.07	3.71	0.50	29.57	3.28	0.04	0.00	3,473	404	0.069	0.010	0.157	0.018
Tioga	3.11	0.70	1.00	0.31	0.43	31.15	2.46	0.69	0.10	0.67	0.09	3.71	0.42	29.57	1.87	0.04	0.00	3,473	231	0.069	0.008	0.157	0.010
Grand Total	6.22	0.70	1.00	0.31	0.43	62.30	5.54	1.38	0.16	1.34	0.16	7.42	0.92	59.15	5.15	0.08	0.01	6,945	634	0.138	0.018	0.313	0.029

Baseline

Ships

			Transit Emissions (lbs)																			
	Engine	Emission	PM2.5			ROG			CO			SOx			CO2			CH4			N2O	
Ship Type	Type	Tier	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler
AUTO CARRIER	SSD	1	0.08	-	5.75	0.17	-	8.10	0.37	-	2.65	0.13	-	4,331	231	-	0.516	0.027	-	0.133	0.006	-
BULK CARRIER	MSD	1	0.01	-	0.53	0.03	-	0.89	0.06	-	0.32	0.02	-	522	38	-	0.065	0.004	-	0.015	0.001	-
	SSD	0	0.02	-	0.97	0.04	-	1.36	0.08	-	0.45	0.03	-	728	50	-	0.087	0.006	-	0.022	0.001	-
		1	0.04	-	2.91	0.08	-	4.11	0.18	-	1.34	0.06	-	2,194	112	-	0.261	0.013	-	0.067	0.003	-
		2	0.02	-	1.49	0.05	-	2.11	0.11	-	0.69	0.04	-	1,127	72	-	0.134	0.008	-	0.034	0.002	-
BULK CARRIER, HL	MSD	0	0.00	-	0.14	0.01	-	0.24	0.02	-	0.09	0.01	-	138	10	-	0.017	0.001	-	0.004	0.000	-
CONTAINER SHIP	SSD	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GENERAL CARGO	MSD	0	0.01	-	0.45	0.03	-	0.76	0.05	-	0.28	0.02	-	448	34	-	0.056	0.004	-	0.012	0.001	-
		1	0.04	-	1.45	0.09	-	2.46	0.19	-	0.90	0.07	-	1,444	118	-	0.179	0.014	-	0.040	0.003	-
	SSD	0	0.03	-	1.58	0.06	-	2.23	0.13	-	0.73	0.05	-	1,191	80	-	0.142	0.009	-	0.036	0.002	-
		1	0.10	-	7.18	0.23	-	10.13	0.49	-	3.32	0.18	-	5,416	308	-	0.645	0.036	-	0.166	0.008	-
		2	0.02	-	1.59	0.05	-	2.24	0.11	-	0.73	0.04	-	1,197	69	-	0.143	0.008	-	0.037	0.002	-
Grand Total			0.37	-	24.04	0.85	-	34.63	1.79	-	11.49	0.65	-	18,734	1,122	-	2.243	0.130	-	0.567	0.029	-

					VSR - Arrival						VSR - Departure	
	Engine	Emission	Comp	Distance	Speed (kts)		Main Load Factor		Comp	Distance	Speed (kts)	
Ship Type	Type	Tier	(%)	(nm)	Comp	NC	Comp	NC	(%)	(nm)	Comp	NC
AUTO CARRIER	SSD	1	0%	20.00	12.00	16.06	0.18	0.43	0%	20.00	12.00	15.24
BULK CARRIER	MSD	1	50%	20.00	11.00	13.60	0.24	0.45	50%	20.00	11.20	13.60
	SSD	0	100%	20.00	10.70	14.60	0.32	0.82	100%	20.00	12.45	14.60
		1	60%	20.00	11.13	13.10	0.28	0.46	40%	20.00	11.90	13.07
		2	100%	11.50	11.05	15.00	0.33	0.82	100%	20.00	12.50	15.00
BULK CARRIER, HL	MSD	0	100%	5.75	9.45	13.00	0.32	0.82	100%	20.00	9.45	13.00
CONTAINER SHIP	SSD	0	90%	11.99	11.57	14.78	0.16	0.33	73%	12.26	11.83	16.06
		1	63%	11.50	12.08	16.03	0.21	0.50	75%	11.50	12.53	15.40
GENERAL CARGO	MSD	0	100%	11.50	10.10	13.00	0.39	0.82	100%	20.00	10.10	13.00
		1	60%	20.00	12.57	13.20	0.45	0.52	60%	20.00	12.20	15.10
	SSD	0	100%	20.00	12.07	15.23	0.41	0.82	100%	20.00	12.30	15.23
		1	91%	20.00	11.77	13.10	0.27	0.38	45%	20.00	11.86	15.23
		2	100%	20.00	10.95	14.90	0.33	0.82	100%	20.00	11.00	14.90
Grand Total			78%	14.85	11.60	14.57	0.22	0.43	65%	15.53	11.87	15.41

Harborcraft

			ssions (lbs)									
			CO		SOx		CO2		CH4		N2O	
Tug/Barge	Calls	Hours	Tug	Barge	Tug	Barge	Tug	Barge	Tug	Barge	Tug	Barge
Robyn J (Barge Jake J)	0.11	16.4	0.05	0.67	0.00	0.00	6	77	0.000	0.003	0.000	0.004
Robyn J (Barge Payton J)	2.44	16.4	1.06	15.82	0.00	0.02	131	1,810	0.005	0.062	0.006	0.084
Robyn J (Barge Tori J)	0.44	16.4	0.19	3.17	0.00	0.00	24	363	0.001	0.012	0.001	0.017
Grand Total	3.00	16.4	1.30	19.66	0.00	0.03	160	2,249	0.006	0.077	0.007	0.105

Assist Tugs

		Hours
Tug	Calls	Main
Scout	3.00	0.70
Tioga	3.00	0.70
Grand Total	6.00	0.70

Demo/Rail Project - 2020

Ships

			Transit Emissions (lbs)																			
	Engine	Emission	PM2.5			ROG			CO			SOx			CO2			CH4			N2O	
Ship Type	Type	Tier	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler
AUTO CARRIER	SSD	1	0.11	-	8.37	0.25	-	11.81	0.54	-	3.86	0.20	-	6,312	337	-	0.751	0.039	-	0.193	0.009	-
BULK CARRIER	MSD	1	0.01	-	0.53	0.03	-	0.89	0.06	-	0.32	0.02	-	522	38	-	0.065	0.004	-	0.015	0.001	-
	SSD	0	0.02	-	0.97	0.04	-	1.36	0.08	-	0.45	0.03	-	728	50	-	0.087	0.006	-	0.022	0.001	-
		1	0.04	-	2.91	0.08	-	4.11	0.18	-	1.34	0.06	-	2,194	112	-	0.261	0.013	-	0.067	0.003	-
		2	0.02	-	1.49	0.05	-	2.11	0.11	-	0.69	0.04	-	1,127	72	-	0.134	0.008	-	0.034	0.002	-
BULK CARRIER, HL	MSD	0	0.01	-	0.21	0.01	-	0.35	0.02	-	0.13	0.01	-	207	16	-	0.026	0.002	-	0.006	0.000	-
CONTAINER SHIP	SSD	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GENERAL CARGO	MSD	0	0.01	-	0.45	0.03	-	0.76	0.05	-	0.28	0.02	-	448	34	-	0.056	0.004	-	0.012	0.001	-
		1	0.06	-	2.04	0.12	-	3.45	0.26	-	1.25	0.10	-	2,021	165	-	0.251	0.019	-	0.056	0.004	-
	SSD	0	0.03	-	1.58	0.06	-	2.23	0.13	-	0.73	0.05	-	1,191	80	-	0.142	0.009	-	0.036	0.002	-
		1	0.14	-	9.80	0.32	-	13.82	0.67	-	4.52	0.24	-	7,385	421	-	0.879	0.049	-	0.226	0.011	-
		2	0.02	-	1.59	0.05	-	2.24	0.11	-	0.73	0.04	-	1,197	69	-	0.143	0.008	-	0.037	0.002	-
Grand Total			0.46	-	29.93	1.05	-	43.12	2.22	-	14.31	0.81	-	23,331	1,392	-	2.793	0.161	-	0.706	0.036	-

					VSR - Arrival						VSR - Departure	
	Engine	Emission	Comp	Distance	Speed (kts)		Main Load Factor		Comp	Distance	Speed (kts)	
Ship Type	Type	Tier	(%)	(nm)	Comp	NC	Comp	NC	(%)	(nm)	Comp	NC
AUTO CARRIER	SSD	1	0%	20.00	12.00	16.06	0.18	0.43	0%	20.00	12.00	15.24
BULK CARRIER	MSD	1	50%	20.00	11.00	13.60	0.24	0.45	50%	20.00	11.20	13.60
	SSD	0	100%	20.00	10.70	14.60	0.32	0.82	100%	20.00	12.45	14.60
		1	60%	20.00	11.13	13.10	0.28	0.46	40%	20.00	11.90	13.07
		2	100%	11.50	11.05	15.00	0.33	0.82	100%	20.00	12.50	15.00
BULK CARRIER, HL	MSD	0	100%	5.75	9.45	13.00	0.32	0.82	100%	20.00	9.45	13.00
CONTAINER SHIP	SSD	2	86%	11.92	11.64	14.78	0.18	0.36	74%	12.16	11.93	16.06
GENERAL CARGO	MSD	0	100%	11.50	10.10	13.00	0.39	0.82	100%	20.00	10.10	13.00
		1	60%	20.00	12.57	13.20	0.45	0.52	60%	20.00	12.20	15.10
	SSD	0	100%	20.00	12.07	15.23	0.41	0.82	100%	20.00	12.30	15.23
		1	91%	20.00	11.77	13.10	0.27	0.38	45%	20.00	11.86	15.23
		2	100%	20.00	10.95	14.90	0.33	0.82	100%	20.00	11.00	14.90
Grand Total			75%	15.44	11.62	14.42	0.24	0.44	62%	16.22	11.85	15.38

Harborcraft

			ssions (lbs)									
			CO		SOx		CO2		CH4		N2O	
Tug/Barge	Calls	Hours	Tug	Barge	Tug	Barge	Tug	Barge	Tug	Barge	Tug	Barge
Robyn J (Barge Jake J)	0.12	16.4	0.05	0.69	0.00	0.00	6	79	0.000	0.003	0.000	0.004
Robyn J (Barge Payton J)	2.53	16.4	1.10	16.40	0.00	0.02	135	1,876	0.005	0.064	0.006	0.087
Robyn J (Barge Tori J)	0.46	16.4	0.20	3.29	0.00	0.00	25	376	0.001	0.013	0.001	0.018
Grand Total	3.11	16.4	1.35	20.38	0.00	0.03	166	2,332	0.006	0.080	0.007	0.108

Assist Tugs

		Hours
Tug	Calls	Main
Scout	3.11	0.70
Tioga	3.11	0.70
Grand Total	6.22	0.70

Baseline

Ships

								VSR Emissions (lbs)																							
	Engine	Emission	Main Load Factor		Time		Boiler		NOx			DPM			PM2.5			ROG			CO			SOx			CO2			CH4	
Ship Type	Type	Tier	Comp	NC	(hrs)	Aux	Load (kW)	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler
AUTO CARRIER	SSD	1	0.18	0.36	2.56	0.15	351	89.08	6.95	-	1.47	0.14	-	1.36	0.13	-	4.60	0.29	-	6.49	0.62	-	2.12	0.22	-	3,469	387	-	0.413	0.045	-
BULK CARRIER	MSD	1	0.25	0.45	3.27	0.17		15.47	2.71	-	0.33	0.05	-	0.30	0.05	-	0.86	0.11	-	1.45	0.24	-	0.53	0.09	-	853	151	-	0.106	0.018	-
	SSD	0	0.51	0.82	3.48	0.17	-	26.07	2.53	-	0.38	0.05	-	0.35	0.04	-	1.20	0.09	-	1.69	0.20	-	0.55	0.07	-	902	125	-	0.107	0.015	-
		1	0.34	0.45	3.28	0.17	-	65.85	5.14	-	1.09	0.10	-	1.00	0.10	-	3.40	0.22	-	4.80	0.46	-	1.57	0.17	-	2,564	286	-	0.305	0.033	-
		2	0.48	0.82	2.64	0.17	-	16.82	1.41	-	0.33	0.04	-	0.31	0.03	-	1.04	0.07	-	1.47	0.16	-	0.48	0.06	-	785	98	-	0.093	0.011	-
BULK CARRIER, HL	MSD	0	0.32	0.82	2.72	0.17	-	8.63	1.66	-	0.16	0.03	-	0.15	0.03	-	0.42	0.06	-	0.72	0.13	-	0.26	0.05	-	422	82	-	0.052	0.010	-
CONTAINER SHIP	SSD	0	0.17	0.42	1.98	0.13	132	330.30	82.87	1.44	4.96	1.49	0.10	4.56	1.37	0.09	17.06	3.10	0.08	23.83	6.56	0.14	7.09	2.38	0.42	11,503	4,114	667	1.531	0.477	0.023
		1	0.24	0.44	1.74	0.13	-	53.09	5.45	-	0.88	0.11	-	0.81	0.10	-	2.74	0.23	-	3.87	0.48	-	1.27	0.18	-	2,068	303	-	0.246	0.035	-
GENERAL CARGO	MSD	0	0.39	0.82	3.12	0.17	-	6.03	0.95	-	0.11	0.02	-	0.11	0.02	-	0.30	0.04	-	0.50	0.08	-	0.18	0.03	-	295	47	-	0.037	0.005	-
		1	0.41	0.78	3.07	0.17	-	38.93	5.07	-	0.83	0.10	-	0.77	0.09	-	2.16	0.21	-	3.66	0.45	-	1.33	0.16	-	2,146	282	-	0.266	0.033	-
	SSD	0	0.43	0.82	3.28	0.17	-	43.20	3.94	-	0.64	0.07	-	0.58	0.07	-	1.98	0.15	-	2.80	0.31	-	0.91	0.11	-	1,494	195	-	0.178	0.023	-
		1	0.28	0.59	3.17	0.17	-	152.46	14.18	-	2.52	0.29	-	2.32	0.26	-	7.88	0.59	-	11.11	1.26	-	3.63	0.46	-	5,937	789	-	0.707	0.091	-
		2	0.33	0.82	3.64	0.17	-	17.23	1.66	-	0.34	0.04	-	0.31	0.04	-	1.07	0.09	-	1.50	0.18	-	0.49	0.07	-	804	116	-	0.096	0.013	-
Grand Total			0.24	0.51	2.42	0.15	93	863.17	134.51	1.44	14.06	2.53	0.10	12.94	2.33	0.09	44.71	5.26	0.08	63.88	11.12	0.14	20.43	4.04	0.42	33,241	6,976	667	4.137	0.809	0.023

Harborcraft

Tug/Barge	Calls	Hours
Robyn J (Barge Jake J)	0.11	16.4
Robyn J (Barge Payton J)	2.44	16.4
Robyn J (Barge Tori J)	0.44	16.4
Grand Total	3.00	16.4

Assist Tugs

		Hours
Tug	Calls	Main
Scout	3.00	0.70
Tioga	3.00	0.70
Grand Total	6.00	0.70

Demo/Rail Project - 2020

Ships

								VSR Emissions (lbs)																							
							NC																								
	Engine	Emission	Main Load Factor		Time		Boiler		NOx			DPM			PM2.5			ROG			CO			SOx			CO2			CH4	
Ship Type	Type	Tier	Comp	NC	(hrs)	Aux	Load (kW)	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler
AUTO CARRIER	SSD	1	0.18	0.36	2.56	0.15	351	129.84	10.13	-	2.15	0.20	-	1.98	0.19	-	6.71	0.42	-	9.46	0.90	-	3.10	0.33	-	5,056	563	-	0.602	0.065	-
BULK CARRIER	MSD	1	0.25	0.45	3.27	0.17	-	15.47	2.71	-	0.33	0.05	-	0.30	0.05	-	0.86	0.11	-	1.45	0.24	-	0.53	0.09	-	853	151	-	0.106	0.018	-
	SSD	0	0.51	0.82	3.48	0.17	-	26.07	2.53	-	0.38	0.05	-	0.35	0.04	-	1.20	0.09	-	1.69	0.20	-	0.55	0.07	-	902	125	-	0.107	0.015	-
		1	0.34	0.45	3.28	0.17	-	65.85	5.14	-	1.09	0.10	-	1.00	0.10	-	3.40	0.22	-	4.80	0.46	-	1.57	0.17	-	2,564	286	-	0.305	0.033	-
		2	0.48	0.82	2.64	0.17	-	16.82	1.41	-	0.33	0.04	-	0.31	0.03	-	1.04	0.07	-	1.47	0.16	-	0.48	0.06	-	785	98	-	0.093	0.011	-
BULK CARRIER, HL	MSD	0	0.32	0.82	2.72	0.17	-	12.94	2.49	-	0.25	0.04	-	0.23	0.04	-	0.64	0.09	-	1.08	0.20	-	0.39	0.07	-	632	124	-	0.078	0.014	-
CONTAINER SHIP	SSD	2	0.19	0.46	1.94	0.13	325	353.35	93.62	3.50	7.11	2.36	0.23	6.54	2.17	0.21	23.78	4.92	0.19	33.32	10.40	0.35	10.17	3.78	1.02	16,548	6,525	1,615	2.134	0.757	0.056
GENERAL CARGO	MSD	0	0.39	0.82	3.12	0.17	-	6.03	0.95	-	0.11	0.02	-	0.11	0.02	-	0.30	0.04	-	0.50	0.08	-	0.18	0.03	-	295	47	-	0.037	0.005	-
		1	0.41	0.78	3.07	0.17	-	54.51	7.10	-	1.16	0.14	-	1.07	0.13	-	3.03	0.30	-	5.12	0.63	-	1.86	0.23	-	3,005	395	-	0.373	0.046	-
	SSD	0	0.43	0.82	3.28	0.17	-	43.20	3.94	-	0.64	0.07	-	0.58	0.07	-	1.98	0.15	-	2.80	0.31	-	0.91	0.11	-	1,494	195	-	0.178	0.023	-
		1	0.28	0.59	3.17	0.17	-	207.90	19.33	-	3.44	0.39	-	3.17	0.36	-	10.74	0.81	-	15.14	1.71	-	4.96	0.62	-	8,096	1,076	-	0.964	0.125	-
		2	0.33	0.82	3.64	0.17	-	17.23	1.66	-	0.34	0.04	-	0.31	0.04	-	1.07	0.09	-	1.50	0.18	-	0.49	0.07	-	804	116	-	0.096	0.013	-
Grand Total			0.25	0.54	2.50	0.15	196	949.21	151.00	3.50	17.34	3.52	0.23	15.95	3.23	0.21	54.73	7.31	0.19	78.33	15.47	0.35	25.20	5.62	1.02	41,033	9,702	1,615	5.073	1.125	0.056

Harborcraft

Tug/Barge	Calls	Hours
Robyn J (Barge Jake J)	0.12	16.4
Robyn J (Barge Payton J)	2.53	16.4
Robyn J (Barge Tori J)	0.46	16.4
Grand Total	3.11	16.4

Assist Tugs

		Hours
Tug	Calls	Main
Scout	3.11	0.70
Tioga	3.11	0.70
Grand Total	6.22	0.70

Baseline

Ships

Ship Type	Engine Type	Emission Tier	N2O Main	N2O Aux	N2O Boiler	Maneuvering Speed (kts)	Maneuvering Time (hrs)	Maneuvering Load Factors Main	Maneuvering Load Factors Aux	Maneuvering Boiler Load (kW)	NOx Main	NOx Aux	NOx Boiler	DPM Main	DPM Aux	DPM Boiler	PM2.5 Main	PM2.5 Aux	PM2.5 Boiler	ROG Main	ROG Aux	ROG Boiler	CO Main	CO Aux	CO Boiler	SOx Main	SOx Aux	SOx Boiler	CO2 Main	CO2 Aux	CO2 Boiler	CH4 Main	CH4 Aux
											Maneuvering Emissions (lbs)																						
AUTO CARRIER	SSD	1	0.106	0.010	-	7.00	2.41	0.04	0.45	351	16.63	19.67	0.89	0.38	0.40	0.06	0.35	0.36	0.05	3.00	0.82	0.05	2.66	1.75	0.09	0.37	0.63	0.26	589	1,095	413	0.269	0.127
BULK CARRIER	MSD	1	0.024	0.004	-	7.00	2.41	0.06	0.45	132	3.75	5.30	0.08	0.09	0.11	0.01	0.08	0.10	0.01	0.50	0.22	0.00	0.64	0.47	0.01	0.11	0.17	0.02	182	295	39	0.062	0.034
	SSD	0	0.028	0.003	-	7.00	2.41	0.09	0.45	132	5.09	4.64	0.08	0.09	0.08	0.01	0.08	0.08	0.01	0.46	0.17	0.00	0.57	0.37	0.01	0.11	0.13	0.02	182	231	39	0.042	0.027
		1	0.078	0.007	-	7.00	2.41	0.07	0.45	132	13.09	10.02	0.21	0.27	0.20	0.01	0.25	0.19	0.01	1.64	0.42	0.01	1.83	0.89	0.02	0.32	0.32	0.06	517	558	97	0.147	0.065
		2	0.024	0.003	-	7.00	2.41	0.08	0.45	132	4.15	3.40	0.08	0.10	0.09	0.01	0.09	0.08	0.01	0.56	0.18	0.00	0.66	0.38	0.01	0.12	0.14	0.02	198	237	39	0.050	0.028
BULK CARRIER, HL	MSD	0	0.012	0.002	-	7.00	2.41	0.13	0.45	132	3.45	3.47	0.08	0.07	0.07	0.01	0.06	0.06	0.01	0.24	0.15	0.00	0.39	0.31	0.01	0.11	0.11	0.02	173	193	39	0.030	0.022
CONTAINER SHIP	SSD	0	0.350	0.107	0.009	7.00	2.41	0.04	0.50	241	154.27	389.21	3.76	3.17	7.00	0.25	2.92	6.44	0.23	24.69	14.56	0.21	21.95	30.80	0.38	3.03	11.20	1.09	4,853	19,320	1,738	2.216	2.240
		1	0.063	0.008	-	7.00	2.41	0.04	0.50	362	23.17	29.11	0.92	0.54	0.59	0.06	0.49	0.54	0.06	4.18	1.22	0.05	3.71	2.58	0.09	0.51	0.94	0.27	821	1,620	426	0.375	0.188
GENERAL CARGO	MSD	0	0.008	0.001	-	7.00	2.41	0.13	0.45	135	1.53	1.74	0.04	0.04	0.04	0.00	0.03	0.03	0.00	0.15	0.07	0.00	0.20	0.15	0.00	0.05	0.06	0.01	79	97	20	0.013	0.011
		1	0.060	0.007	-	7.00	2.41	0.08	0.45	135	6.31	10.54	0.22	0.16	0.21	0.01	0.15	0.20	0.01	0.92	0.44	0.01	1.08	0.94	0.02	0.20	0.34	0.06	324	587	99	0.082	0.068
	SSD	0	0.046	0.005	-	7.00	2.41	0.08	0.45	135	8.13	6.83	0.13	0.14	0.14	0.01	0.13	0.13	0.01	0.82	0.29	0.01	0.96	0.61	0.01	0.18	0.22	0.04	288	380	60	0.073	0.044
		1	0.182	0.021	-	7.00	2.41	0.06	0.45	135	30.42	28.61	0.47	0.64	0.58	0.03	0.59	0.53	0.03	4.27	1.20	0.03	4.50	2.54	0.05	0.73	0.92	0.14	1,177	1,592	219	0.383	0.185
		2	0.025	0.003	-	7.00	2.41	0.09	0.45	135	3.76	3.65	0.09	0.09	0.07	0.01	0.08	0.07	0.01	0.46	0.15	0.00	0.56	0.32	0.01	0.11	0.12	0.03	181	203	40	0.041	0.024
Grand Total			1.005	0.182	0.009	7.00	2.41	0.05	0.48	222	273.75	516.22	7.07	5.77	9.57	0.47	5.31	8.80	0.43	41.89	19.90	0.39	39.71	42.10	0.71	5.95	15.31	2.06	9,563	26,408	3,267	3.785	3.062

Harborcraft

Tug/Barge	Calls	Hours
Robyn J (Barge Jake J)	0.11	16.4
Robyn J (Barge Payton J)	2.44	16.4
Robyn J (Barge Tori J)	0.44	16.4
Grand Total	3.00	16.4

Assist Tugs

Tug	Calls	Hours Main
Scout	3.00	0.70
Tioga	3.00	0.70
Grand Total	6.00	0.70

Demo/Rail Project - 2020

Ships

Ship Type	Engine Type	Emission Tier	N2O Main	N2O Aux	N2O Boiler	Maneuvering Speed (kts)	Maneuvering Time (hrs)	Maneuvering Load Factors Main	Maneuvering Load Factors Aux	Maneuvering Boiler Load (kW)	NOx Main	NOx Aux	NOx Boiler	DPM Main	DPM Aux	DPM Boiler	PM2.5 Main	PM2.5 Aux	PM2.5 Boiler	ROG Main	ROG Aux	ROG Boiler	CO Main	CO Aux	CO Boiler	SOx Main	SOx Aux	SOx Boiler	CO2 Main	CO2 Aux	CO2 Boiler	CH4 Main	CH4 Aux
											Maneuvering Emissions (lbs)																						
AUTO CARRIER	SSD	1	0.155	0.015	-	7.00	2.41	0.04	0.45	351	24.24	28.67	1.30	0.56	0.58	0.09	0.52	0.53	0.08	4.37	1.20	0.07	3.88	2.54	0.13	0.54	0.92	0.38	858	1,596	602	0.392	0.185
BULK CARRIER	MSD	1	0.024	0.004	-	7.00	2.41	0.06	0.45	135	3.75	5.30	0.09	0.09	0.11	0.01	0.08	0.10	0.01	0.50	0.22	0.00	0.64	0.47	0.01	0.11	0.17	0.03	182	295	40	0.062	0.034
	SSD	0	0.028	0.003	-	7.00	2.41	0.09	0.45	132	5.09	4.64	0.08	0.09	0.08	0.01	0.08	0.08	0.01	0.46	0.17	0.00	0.57	0.37	0.01	0.11	0.13	0.02	182	231	39	0.042	0.027
		1	0.078	0.007	-	7.00	2.41	0.07	0.45	132	13.09	10.02	0.21	0.27	0.20	0.01	0.25	0.19	0.01	1.64	0.42	0.01	1.83	0.89	0.02	0.32	0.32	0.06	517	558	97	0.147	0.065
		2	0.024	0.003	-	7.00	2.41	0.08	0.45	132	4.15	3.40	0.08	0.10	0.09	0.01	0.09	0.08	0.01	0.56	0.18	0.00	0.66	0.38	0.01	0.12	0.14	0.02	198	237	39	0.050	0.028
BULK CARRIER, HL	MSD	0	0.018	0.003	-	7.00	2.41	0.13	0.45	132	5.17	5.21	0.13	0.11	0.11	0.01	0.10	0.10	0.01	0.37	0.22	0.01	0.59	0.46	0.01	0.16	0.17	0.04	260	290	58	0.045	0.034
CONTAINER SHIP	SSD	2	0.505	0.170	0.023	7.00	2.41	0.04	0.50	325	164.30	447.36	5.18	4.56	11.30	0.35	4.19	10.39	0.32	35.48	23.50	0.29	31.54	49.71	0.52	4.35	18.08	1.50	6,973	31,180	2,391	3.184	3.615
GENERAL CARGO	MSD	0	0.008	0.001	-	7.00	2.41	0.13	0.45	132	1.53	1.74	0.04	0.04	0.04	0.00	0.03	0.03	0.00	0.15	0.07	0.00	0.20	0.15	0.00	0.05	0.06	0.01	79	97	19	0.013	0.011
		1	0.084	0.010	-	7.00	2.41	0.08	0.45	135	8.83	14.76	0.30	0.23	0.30	0.02	0.21	0.27	0.02	1.29	0.62	0.02	1.51	1.31	0.03	0.28	0.48	0.09	454	821	139	0.115	0.095
	SSD	0	0.046	0.005	-	7.00	2.41	0.08	0.45	135	8.13	6.83	0.13	0.14	0.14	0.01	0.13	0.13	0.01	0.82	0.29	0.01	0.96	0.61	0.01	0.18	0.22	0.04	288	380	60	0.073	0.044
		1	0.248	0.028	-	7.00	2.41	0.06	0.45	135	41.48	39.02	0.65	0.88	0.79	0.04	0.81	0.72	0.04	5.83	1.64	0.04	6.14	3.46	0.06	1.00	1.26	0.19	1,605	2,171	298	0.523	0.252
		2	0.025	0.003	-	7.00	2.41	0.09	0.45	135	3.76	3.65	0.09	0.09	0.07	0.01	0.08	0.07	0.01	0.46	0.15	0.00	0.56	0.32	0.01	0.11	0.12	0.03	181	203	40	0.041	0.024
Grand Total			1.241	0.253	0.023	7.00	2.41	0.05	0.47	251	283.52	570.62	8.27	7.13	13.79	0.55	6.56	12.69	0.51	51.92	28.68	0.46	49.07	60.67	0.83	7.33	22.06	2.41	11,776	38,058	3,822	4.689	4.413

Harborcraft

Tug/Barge	Calls	Hours
Robyn J (Barge Jake J)	0.12	16.4
Robyn J (Barge Payton J)	2.53	16.4
Robyn J (Barge Tori J)	0.46	16.4
Grand Total	3.11	16.4

Assist Tugs

Tug	Calls	Hours Main
Scout	3.11	0.70
Tioga	3.11	0.70
Grand Total	6.22	0.70

Baseline

13/14 SP avg of 21% - idle time

Ships

							Hotel	Aux	Hotelling		Hotelling Emissions (lbs)																	
	Engine	Emission			N2O		Time	Time	Auxiliary	Boiler	NOx		DPM		PM2.5		ROG		CO		SOx		CO2		CH4		N2O	
Ship Type	Type	Tier	Boiler	Main	Aux	Boiler	(hr)	(hr)	LF	Load (kW)	Aux	Boiler	Aux	Boiler	Aux	Boiler	Aux	Boiler	Aux	Boiler	Aux	Boiler	Aux	Boiler	Aux	Boiler	Aux	Boiler
AUTO CARRIER	SSD	1	0.014	0.020	0.029	0.006	24.0	24.0	0.26	351	112.99	8.89	2.28	0.59	2.10	0.55	4.74	0.49	10.02	0.89	3.64	2.59	6,288	4,107	0.729	0.143	0.164	0.058
BULK CARRIER	MSD	1	0.001	0.005	0.008	0.001	24.0	24.0	0.10	132	11.70	0.84	0.24	0.06	0.22	0.05	0.49	0.05	1.04	0.08	0.38	0.24	651	386	0.076	0.013	0.017	0.005
	SSD	0	0.001	0.005	0.006	0.001	24.0	24.0	0.10	132	10.26	0.84	0.18	0.06	0.17	0.05	0.38	0.05	0.81	0.08	0.30	0.24	509	386	0.059	0.013	0.013	0.005
		1	0.003	0.016	0.015	0.001	24.0	24.0	0.10	132	22.14	2.09	0.45	0.14	0.41	0.13	0.93	0.12	1.96	0.21	0.71	0.61	1,232	965	0.143	0.034	0.032	0.014
		2	0.001	0.006	0.006	0.001	24.0	24.0	0.10	132	7.52	0.84	0.19	0.06	0.17	0.05	0.39	0.05	0.84	0.08	0.30	0.24	524	386	0.061	0.013	0.014	0.005
BULK CARRIER, HL	MSD	0	0.001	0.005	0.005	0.001	24.0	24.0	0.10	132	8.60	0.84	0.15	0.06	0.14	0.05	0.32	0.05	0.68	0.08	0.25	0.24	427	386	0.050	0.013	0.011	0.005
CONTAINER SHIP	SSD	0	0.060	0.163	0.504	0.025	24.0	18.9	0.35	241	2,115.56	37.40	38.05	2.49	35.01	2.29	79.14	2.06	167.42	3.75	60.88	10.87	105,017	17,273	12.176	0.600	2.740	0.244
		1	0.015	0.028	0.042	0.006	24.0	24.0	0.35	362	200.45	9.18	4.04	0.61	3.72	0.56	8.41	0.51	17.78	0.92	6.47	2.67	11,154	4,239	1.293	0.147	0.291	0.060
GENERAL CARGO	MSD	0	0.001	0.002	0.003	0.000	24.0	24.0	0.10	135	3.84	0.43	0.08	0.03	0.07	0.03	0.16	0.02	0.34	0.04	0.12	0.12	214	197	0.025	0.007	0.006	0.003
		1	0.003	0.010	0.015	0.001	24.0	24.0	0.10	135	23.29	2.14	0.47	0.14	0.43	0.13	0.98	0.12	2.07	0.21	0.75	0.62	1,296	987	0.150	0.034	0.034	0.014
	SSD	0	0.002	0.009	0.010	0.001	24.0	24.0	0.10	135	16.92	1.28	0.30	0.09	0.28	0.08	0.63	0.07	1.34	0.13	0.49	0.37	840	592	0.097	0.021	0.022	0.008
		1	0.008	0.036	0.042	0.003	24.0	24.0	0.10	135	63.21	4.70	1.27	0.31	1.17	0.29	2.65	0.26	5.61	0.47	2.04	1.37	3,517	2,172	0.408	0.075	0.092	0.031
		2	0.001	0.005	0.005	0.001	24.0	24.0	0.10	135	6.44	0.86	0.16	0.06	0.15	0.05	0.34	0.05	0.72	0.09	0.26	0.25	449	395	0.052	0.014	0.012	0.006
Grand Total			0.113	0.310	0.689	0.046	24.0	18.3	0.25	222	2,602.92	70.30	47.87	4.69	44.04	4.31	99.57	3.88	210.62	7.05	76.59	20.44	132,118	32,473	15.318	1.128	3.447	0.458

Harborcraft

18.888

Tug/Barge	Calls	Hours
Robyn J (Barge Jake J)	0.11	16.4
Robyn J (Barge Payton J)	2.44	16.4
Robyn J (Barge Tori J)	0.44	16.4
Grand Total	3.00	16.4

Assist Tugs

Tug	Calls	Hours Main
Scout	3.00	0.70
Tioga	3.00	0.70
Grand Total	6.00	0.70

Demo/Rail Project - 2020

Reduction in hoteling time 0%

Ships

							Hotel	Aux	Hotelling		Hotelling Emissions (lbs)																	
	Engine	Emission			N2O		Time	Time	Auxiliary	Boiler	NOx		DPM		PM2.5		ROG		CO		SOx		CO2		CH4		N2O	
Ship Type	Type	Tier	Boiler	Main	Aux	Boiler	(hr)	(hr)	LF	Load (kW)	Aux	Boiler	Aux	Boiler	Aux	Boiler	Aux	Boiler	Aux	Boiler	Aux	Boiler	Aux	Boiler	Aux	Boiler	Aux	Boiler
AUTO CARRIER	SSD	1	0.021	0.029	0.042	0.008	24.0	24.0	0.26	351	164.69	12.96	3.32	0.86	3.05	0.79	6.91	0.71	14.61	1.30	5.31	3.77	9,164	5,986	1.062	0.208	0.239	0.084
BULK CARRIER	MSD	1	0.001	0.005	0.008	0.001	24.0	24.0	0.10	135	11.70	0.86	0.24	0.06	0.22	0.05	0.49	0.05	1.04	0.09	0.38	0.25	651	395	0.076	0.014	0.017	0.006
	SSD	0	0.001	0.005	0.006	0.001	24.0	24.0	0.10	132	10.26	0.84	0.18	0.06	0.17	0.05	0.38	0.05	0.81	0.08	0.30	0.24	509	386	0.059	0.013	0.013	0.005
		1	0.003	0.016	0.015	0.001	24.0	24.0	0.10	132	22.14	2.09	0.45	0.14	0.41	0.13	0.93	0.12	1.96	0.21	0.71	0.61	1,232	965	0.143	0.034	0.032	0.014
		2	0.001	0.006	0.006	0.001	24.0	24.0	0.10	132	7.52	0.84	0.19	0.06	0.17	0.05	0.39	0.05	0.84	0.08	0.30	0.24	524	386	0.061	0.013	0.014	0.005
BULK CARRIER, HL	MSD	0	0.002	0.007	0.008	0.001	24.0	24.0	0.10	132	12.91	1.25	0.23	0.08	0.21	0.08	0.48	0.07	1.02	0.13	0.37	0.36	641	579	0.074	0.020	0.017	0.008
CONTAINER SHIP	SSD	2	0.083	0.235	0.813	0.034	24.0	8.2	0.35	325	1,046.70	51.46	26.43	3.43	24.32	3.16	54.98	2.84	116.30	5.16	42.29	14.96	72,952	23,769	8.458	0.825	1.903	0.335
GENERAL CARGO	MSD	0	0.001	0.002	0.003	0.000	24.0	24.0	0.10	132	3.84	0.42	0.08	0.03	0.07	0.03	0.16	0.02	0.34	0.04	0.12	0.12	214	193	0.025	0.007	0.006	0.003
		1	0.005	0.014	0.021	0.002	24.0	24.0	0.10	135	32.61	2.99	0.66	0.20	0.60	0.18	1.37	0.17	2.89	0.30	1.05	0.87	1,815	1,382	0.210	0.048	0.047	0.020
	SSD	0	0.002	0.009	0.010	0.001	24.0	24.0	0.10	135	16.92	1.28	0.30	0.09	0.28	0.08	0.63	0.07	1.34	0.13	0.49	0.37	840	592	0.097	0.021	0.022	0.008
		1	0.010	0.049	0.057	0.004	24.0	24.0	0.10	135	86.20	6.41	1.74	0.43	1.60	0.39	3.61	0.35	7.65	0.64	2.78	1.86	4,797	2,962	0.556	0.103	0.125	0.042
		2	0.001	0.005	0.005	0.001	24.0	24.0	0.10	135	6.44	0.86	0.16	0.06	0.15	0.05	0.34	0.05	0.72	0.09	0.26	0.25	449	395	0.052	0.014	0.012	0.006
Grand Total			0.133	0.382	0.993	0.054	24.0	16.4	0.24	251	1,421.92	82.25	33.98	5.48	31.26	5.04	70.68	4.54	149.51	8.25	54.37	23.91	93,787	37,992	10.874	1.319	2.447	0.536

Harborcraft

Tug/Barge	Calls	Hours
Robyn J (Barge Jake J)	0.12	16.4
Robyn J (Barge Payton J)	2.53	16.4
Robyn J (Barge Tori J)	0.46	16.4
Grand Total	3.11	16.4

Assist Tugs

Tug	Calls	Hours Main
Scout	3.11	0.70
Tioga	3.11	0.70
Grand Total	6.22	0.70

TAMT Plan- 2035

Ships

Ship Type	Engine Type	Emission Tier	Calls	Power (kW) Main	Power (kW) Aux	Service Speed (kts)	Total Transit Distance (nm) Arrival	Total Transit Distance (nm) Depart	Transit - Arrival Comp (%)	Transit - Arrival Distance (nm)	Transit - Arrival Speed (kts) Comp	Transit - Arrival Speed (kts) NC	Transit - Arrival Main Load Factor Comp	Transit - Arrival Main Load Factor NC
AUTO CARRIER	SSD	1	0.45	11,060	2,760	20.00	35.30	35.30	0%	15.30	12.00	20.00	0.18	0.82
BULK CARRIER	MSD	1	0.08	9,100	2,973	16.65	30.20	23.40	0%	10.20	11.00	16.65	0.24	0.82
	SSD	0	0.08	8,139	2,325	14.60	30.20	30.20	0%	10.20	10.70	14.60	0.32	0.82
		1	0.19	10,705	2,250	15.92	33.94	26.46	0%	13.94	11.13	15.92	0.28	0.82
		2	0.08	9,140	2,393	15.00	11.50	48.90	0%	-	11.05	15.00	0.33	0.82
BULK CARRIER, HL	MSD	0	0.12	5,738	1,950	13.00	5.75	24.45	0%	-	9.45	13.00	0.32	0.82
CONTAINER SHIP	SSD	2	1.93	19,420	11,320	19.50	11.92	12.16	0%	-	11.64	19.50	0.18	0.82
GENERAL CARGO	MSD	0	0.04	5,738	1,950	13.00	11.50	48.90	0%	-	10.10	13.00	0.39	0.82
		1	0.27	6,400	2,367	15.34	35.98	23.74	0%	15.98	12.57	15.34	0.45	0.82
	SSD	0	0.12	9,268	2,557	15.23	23.97	36.43	0%	3.97	12.07	15.23	0.41	0.82
		1	0.58	12,430	2,920	16.98	26.95	34.06	0%	6.95	11.77	16.98	0.27	0.82
		2	0.08	8,630	2,048	14.90	42.10	30.20	0%	22.10	10.95	14.90	0.33	0.82
Grand Total			4.00	14,524	6,799	18.04	20.86	22.44	0%	5.41	11.62	18.04	0.24	0.82

Ship Type	Engine Type	Emission Tier	Transit - Departure Comp (%)	Transit - Departure Distance (nm)	Transit - Departure Speed (kts) Comp	Transit - Departure Speed (kts) NC	Transit - Departure Main Load Factor Comp	Transit - Departure Main Load Factor NC	Time (hrs)	Aux	NC Boiler Load (kW)	NOx Main	NOx Aux	NOx Boiler	DPM Main	DPM Aux	DPM Boiler	PM2.5 Main
AUTO CARRIER	SSD	1	0%	15.30	12.00	20.00	0.18	0.82	1.53	0.15	351	208.50	7.79	-	3.45	0.16	-	3.18
BULK CARRIER	MSD	1	0%	3.40	11.20	16.65	0.25	0.82	0.82	0.17	-	12.17	0.87	-	0.26	0.02	-	0.24
	SSD	0	0%	10.20	12.45	14.60	0.51	0.82	1.40	0.17	-	27.06	1.31	-	0.40	0.02	-	0.37
		1	0%	6.46	11.90	15.92	0.34	0.82	1.28	0.17	-	72.48	2.58	-	1.20	0.05	-	1.10
		2	0%	28.90	12.50	15.00	0.48	0.82	1.93	0.17	-	31.06	1.32	-	0.62	0.03	-	0.57
BULK CARRIER, HL	MSD	0	0%	4.45	9.45	13.00	0.32	0.82	0.34	0.17	-	5.44	0.40	-	0.10	0.01	-	0.09
CONTAINER SHIP	SSD	2	0%	-	11.93	19.50	0.19	0.82	-	0.13	132	-	-	-	-	-	-	-
GENERAL CARGO	MSD	0	0%	28.90	10.10	13.00	0.39	0.82	2.22	0.17	-	11.78	0.87	-	0.22	0.02	-	0.21
		1	0%	3.74	12.20	15.34	0.41	0.82	1.29	0.17	-	47.16	3.82	-	1.01	0.08	-	0.93
	SSD	0	0%	16.43	12.30	15.23	0.43	0.82	1.34	0.17	-	44.30	2.06	-	0.65	0.04	-	0.60
		1	0%	14.06	11.86	16.98	0.28	0.82	1.24	0.17	-	243.94	9.72	-	4.04	0.20	-	3.72
		2	0%	10.20	11.00	14.90	0.33	0.82	2.17	0.17	-	32.99	1.27	-	0.65	0.03	-	0.60
Grand Total			0%	6.22	11.85	18.04	0.25	0.82	0.69	0.15	103	736.88	32.02	-	12.60	0.65	-	11.60

(Labels printed above the emission columns: NOx, NOx, NOx, DPM, DPM, DPM, PM2.5)

1.28625686 =scaling factor for 2020 to 2035 (4 max daily calls / 2020 max daily calls

Harborcraft

Tug Running Emissions (lbs)

Tug/Barge	Calls	Hours	NOx Main	NOx Aux	DPM Main	DPM Aux	PM2.5 Main	PM2.5 Aux	ROG Main	ROG Aux	CO Main	CO Aux	SOx Main	SOx Aux	CO2 Main	CO2 Aux	CH4 Main	CH4 Aux	N2O Main	N2O Aux
Robyn J (Barge Jake J)	0.15	16.4	29.683	1.385	1.013	0.050	0.983	0.049	2.795	0.234	22.288	1.054	0.029	0.001	2,617	130	0.052	0.005	0.118	0.006
Robyn J (Barge Payton J)	3.26	16.4	653.029	30.474	22.285	1.110	21.616	1.077	61.490	5.150	490.328	23.186	0.645	0.032	57,573	2,856	1.144	0.101	2.595	0.129
Robyn J (Barge Tori J)	0.59	16.4	118.733	5.541	4.052	0.202	3.930	0.196	11.180	0.936	89.151	4.216	0.117	0.006	10,468	519	0.208	0.018	0.472	0.023
Grand Total	4.00	16.4	801.445	37.400	27.349	1.362	26.529	1.321	75.465	6.320	601.767	28.455	0.792	0.039	70,658	3,505	1.404	0.124	3.185	0.158
			874.39																	

Hoteling Emi

Tug/Barge	Hours Tug	Hours Barge	NOx Tug	NOx Barge	DPM Tug	DPM Barge	PM2.5 Tug	PM2.5 Barge	ROG Tug	ROG Barge
Robyn J (Barge Jake J)	1.0	4.5	0.08	1.13	0.00	0.06	0.00	0.06	0.01	0.19
Robyn J (Barge Payton J)	1.0	4.8	1.86	26.77	0.07	1.44	0.07	1.40	0.31	4.55
Robyn J (Barge Tori J)	1.0	5.3	0.34	5.37	0.01	0.29	0.01	0.28	0.06	0.91
Grand Total	1.0	4.9	2.282	33.267	0.083	1.796	0.081	1.742	0.386	5.651

Assist Tugs

Tug	Calls	Hours per Call Main	Hours per Call Aux	Load Factors Main	Load Factors Aux
Scout	4.00	0.70	1.00	0.31	0.43
Tioga	4.00	0.70	1.00	0.31	0.43
Grand Total	8.00	0.70	1.00	0.31	0.43

Tug Running Emissions (lbs)

Tug	NOx Main	NOx Aux	DPM Main	DPM Aux	PM2.5 Main	PM2.5 Aux	ROG Main	ROG Aux	CO Main	CO Aux	SOx Main	SOx Aux	CO2 Main	CO2 Aux	CH4 Main	CH4 Aux	N2O Main	N2O Aux
Scout	40.07	3.96	0.89	0.09	0.86	0.09	4.77	0.65	38.04	4.22	0.05	0.01	4,467	519	0.089	0.013	0.201	0.023
Tioga	40.07	3.17	0.89	0.12	0.86	0.12	4.77	0.54	38.04	2.41	0.05	0.00	4,467	297	0.089	0.010	0.201	0.013
Grand Total	80.13	7.12	1.77	0.21	1.72	0.21	9.54	1.18	76.08	6.62	0.10	0.01	8,933	816	0.178	0.023	0.403	0.037

TAMT Plan- 2035

Ships

			PM2.5	PM2.5	ROG	ROG	ROG	CO	CO	CO	SOx	SOx	SOx	CO2	CO2	CO2	CH4	CH4	CH4	N2O	N2O	N2O
			Transit Emissions (lbs)																			
	Engine	Emission	PM2.5			ROG			CO			SOx			CO2			CH4			N2O	
Ship Type	**Type**	**Tier**	**Aux**	**Boiler**	**Main**	**Aux**	**Boiler**	**Main**	**Aux**	**Boiler**	**Main**	**Aux**	**Boiler**	**Main**	**Aux**	**Boiler**	**Main**	**Aux**	**Boiler**	**Main**	**Aux**	**Boiler**
AUTO CARRIER	SSD	1	0.14	-	10.77	0.33	-	15.19	0.69	-	4.97	0.25	-	8,119	434	-	0.967	0.050	-	0.249	0.011	-
BULK CARRIER	MSD	1	0.02	-	0.68	0.04	-	1.14	0.08	-	0.42	0.03	-	671	48	-	0.083	0.006	-	0.019	0.001	-
	SSD	0	0.02	-	1.24	0.05	-	1.75	0.10	-	0.57	0.04	-	936	65	-	0.111	0.008	-	0.029	0.002	-
		1	0.05	-	3.74	0.11	-	5.28	0.23	-	1.73	0.08	-	2,822	144	-	0.336	0.017	-	0.086	0.004	-
		2	0.03	-	1.92	0.07	-	2.71	0.15	-	0.89	0.05	-	1,449	92	-	0.173	0.011	-	0.044	0.002	-
BULK CARRIER, HL	MSD	0	0.01	-	0.27	0.02	-	0.45	0.03	-	0.16	0.01	-	266	20	-	0.033	0.002	-	0.007	0.001	-
CONTAINER SHIP	SSD	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GENERAL CARGO	MSD	0	0.01	-	0.58	0.03	-	0.98	0.07	-	0.36	0.03	-	576	43	-	0.071	0.005	-	0.016	0.001	-
		1	0.07	-	2.62	0.16	-	4.43	0.34	-	1.61	0.12	-	2,600	213	-	0.322	0.025	-	0.073	0.006	-
	SSD	0	0.03	-	2.03	0.08	-	2.87	0.16	-	0.94	0.06	-	1,532	102	-	0.182	0.012	-	0.047	0.003	-
		1	0.18	-	12.60	0.41	-	17.77	0.86	-	5.82	0.31	-	9,499	541	-	1.131	0.063	-	0.291	0.014	-
		2	0.03	-	2.04	0.07	-	2.88	0.14	-	0.94	0.05	-	1,540	89	-	0.183	0.010	-	0.047	0.002	-
Grand Total			0.60	-	38.50	1.35	-	55.46	2.85	-	18.41	1.04	-	30,010	1,791	-	3.593	0.208	-	0.908	0.047	-

			VSR - Arrival						VSR - Departure			
	Engine	Emission	Comp	Distance	Speed (kts)		Main Load Factor		Comp	Distance	Speed (kts)	
Ship Type	**Type**	**Tier**	**(%)**	**(nm)**	**Comp**	**NC**	**Comp**	**NC**	**(%)**	**(nm)**	**Comp**	**NC**
AUTO CARRIER	SSD	1	0%	20.00	12.00	16.06	0.18	0.43	0%	20.00	12.00	15.24
BULK CARRIER	MSD	1	50%	20.00	11.00	13.60	0.24	0.45	50%	20.00	11.20	13.60
	SSD	0	100%	20.00	10.70	14.60	0.32	0.82	100%	20.00	12.45	14.60
		1	60%	20.00	11.13	13.10	0.28	0.46	40%	20.00	11.90	13.07
		2	100%	11.50	11.05	15.00	0.33	0.82	100%	20.00	12.50	15.00
BULK CARRIER, HL	MSD	0	100%	5.75	9.45	13.00	0.32	0.82	100%	20.00	9.45	13.00
CONTAINER SHIP	SSD	2	86%	11.92	11.64	14.78	0.18	0.36	74%	12.16	11.93	16.06
GENERAL CARGO	MSD	0	100%	11.50	10.10	13.00	0.39	0.82	100%	20.00	10.10	13.00
		1	60%	20.00	12.57	13.20	0.45	0.52	60%	20.00	12.20	15.10
	SSD	0	100%	20.00	12.07	15.23	0.41	0.82	100%	20.00	12.30	15.23
		1	91%	20.00	11.77	13.10	0.27	0.38	45%	20.00	11.86	15.23
		2	100%	20.00	10.95	14.90	0.33	0.82	100%	20.00	11.00	14.90
Grand Total			75%	15.44	11.62	14.42	0.24	0.44	62%	16.22	11.85	15.38

Harborcraft

			ssions (lbs)									
			CO		SOx		CO2		CH4		N2O	
Tug/Barge	**Calls**	**Hours**	**Tug**	**Barge**	**Tug**	**Barge**	**Tug**	**Barge**	**Tug**	**Barge**	**Tug**	**Barge**
Robyn J (Barge Jake J)	0.15	16.4	0.06	0.89	0.00	0.00	8	102	0.000	0.003	0.000	0.005
Robyn J (Barge Payton J)	3.26	16.4	1.42	21.10	0.00	0.03	174	2,413	0.006	0.083	0.008	0.112
Robyn J (Barge Tori J)	0.59	16.4	0.26	4.23	0.00	0.01	32	484	0.001	0.017	0.001	0.023
Grand Total	4.00	16.4	1.737	26.219	0.002	0.034	213.88	2,999.05	0.008	0.103	0.010	0.140

Assist Tugs

		Hours
Tug	**Calls**	**Main**
Scout	4.00	0.70
Tioga	4.00	0.70
Grand Total	8.00	0.70

TAMT Plan- 2035

Ships

VSR Emissions (lbs)

Ship Type	Engine Type	Emission Tier	Main Load Factor Comp	Main Load Factor NC	Time (hrs)	Aux	NC Boiler Load (kW)	NOx Main	NOx Aux	NOx Boiler	DPM Main	DPM Aux	DPM Boiler	PM2.5 Main	PM2.5 Aux	PM2.5 Boiler
AUTO CARRIER	SSD	1	0.18	0.36	2.56	0.15	351	167.00	13.02	-	2.76	0.26	-	2.54	0.24	-
BULK CARRIER	MSD	1	0.25	0.45	3.27	0.17	-	19.90	3.49	-	0.43	0.07	-	0.39	0.06	-
	SSD	0	0.51	0.82	3.48	0.17	-	33.54	3.25	-	0.49	0.06	-	0.45	0.05	-
		1	0.34	0.45	3.28	0.17	-	84.70	6.61	-	1.40	0.13	-	1.29	0.12	-
		2	0.48	0.82	2.64	0.17	-	21.63	1.81	-	0.43	0.05	-	0.39	0.04	-
BULK CARRIER, HL	MSD	0	0.32	0.82	2.72	0.17	-	16.64	3.20	-	0.32	0.06	-	0.29	0.05	-
CONTAINER SHIP	SSD	2	0.19	0.46	1.94	0.13	325	454.50	120.42	4.50	9.14	3.04	0.30	8.41	2.80	0.28
GENERAL CARGO	MSD	0	0.39	0.82	3.12	0.17	-	7.75	1.22	-	0.15	0.02	-	0.14	0.02	-
		1	0.41	0.78	3.07	0.17	-	70.11	9.13	-	1.50	0.18	-	1.38	0.17	-
	SSD	0	0.43	0.82	3.28	0.17	-	55.56	5.06	-	0.82	0.09	-	0.75	0.08	-
		1	0.28	0.59	3.17	0.17	-	267.41	24.87	-	4.43	0.50	-	4.07	0.46	-
		2	0.33	0.82	3.64	0.17	-	22.17	2.14	-	0.44	0.05	-	0.40	0.05	-
Grand Total			0.25	0.54	2.50	0.15	196	1,220.92	194.23	4.50	22.30	4.52	0.30	20.52	4.16	0.28

Ship Type	Engine Type	Emission Tier	ROG Main	ROG Aux	ROG Boiler	CO Main	CO Aux	CO Boiler	SOx Main	SOx Aux	SOx Boiler	CO2 Main	CO2 Aux	CO2 Boiler	CH4 Main	CH4 Aux	CH4 Boiler
AUTO CARRIER	SSD	1	8.63	0.55	-	12.17	1.16	-	3.98	0.42	-	6,503	725	-	0.774	0.084	-
BULK CARRIER	MSD	1	1.11	0.15	-	1.87	0.31	-	0.68	0.11	-	1,097	194	-	0.136	0.023	-
	SSD	0	1.54	0.12	-	2.17	0.26	-	0.71	0.09	-	1,160	161	-	0.138	0.019	-
		1	4.38	0.28	-	6.17	0.59	-	2.02	0.21	-	3,298	368	-	0.393	0.043	-
		2	1.34	0.10	-	1.89	0.20	-	0.62	0.07	-	1,009	126	-	0.120	0.015	-
BULK CARRIER, HL	MSD	0	0.82	0.12	-	1.39	0.25	-	0.50	0.09	-	813	159	-	0.101	0.018	-
CONTAINER SHIP	SSD	2	30.59	6.32	0.25	42.85	13.38	0.45	13.08	4.87	1.31	21,285	8,393	2,078	2.745	0.973	0.072
GENERAL CARGO	MSD	0	0.38	0.05	-	0.65	0.10	-	0.23	0.04	-	379	61	-	0.047	0.007	-
		1	3.89	0.38	-	6.59	0.81	-	2.40	0.29	-	3,865	508	-	0.479	0.059	-
	SSD	0	2.55	0.19	-	3.60	0.40	-	1.18	0.15	-	1,922	251	-	0.229	0.029	-
		1	13.81	1.04	-	19.48	2.21	-	6.38	0.80	-	10,413	1,384	-	1.240	0.160	-
		2	1.37	0.11	-	1.94	0.24	-	0.63	0.09	-	1,034	149	-	0.123	0.017	-
Grand Total			70.40	9.40	0.25	100.75	19.89	0.45	32.41	7.23	1.31	52,779	12,479	2,078	6.525	1.447	0.072

Harborcraft

Tug/Barge	Calls	Hours
Robyn J (Barge Jake J)	0.15	16.4
Robyn J (Barge Payton J)	3.26	16.4
Robyn J (Barge Tori J)	0.59	16.4
Grand Total	4.00	16.4

Assist Tugs

Tug	Calls	Hours Main
Scout	4.00	0.70
Tioga	4.00	0.70
Grand Total	8.00	0.70

TAMT Plan- 2035

Ships

			N2O	N2O	N2O					
								Maneuvering		
	Engine	Emission		N2O		Speed	Time	Load Factors		Boiler
Ship Type	Type	Tier	Main	Aux	Boiler	(kts)	(hrs)	Main	Aux	Load (kW)
AUTO CARRIER	SSD	1	0.199	0.019	-	7.00	2.41	0.04	0.45	351
BULK CARRIER	MSD	1	0.031	0.005	-	7.00	2.41	0.06	0.45	135
	SSD	0	0.036	0.004	-	7.00	2.41	0.09	0.45	132
		1	0.101	0.010	-	7.00	2.41	0.07	0.45	132
		2	0.031	0.003	-	7.00	2.41	0.08	0.45	132
BULK CARRIER, HL	MSD	0	0.023	0.004	-	7.00	2.41	0.13	0.45	132
CONTAINER SHIP	SSD	2	0.649	0.219	0.029	7.00	2.41	0.04	0.50	325
GENERAL CARGO	MSD	0	0.011	0.002	-	7.00	2.41	0.13	0.45	132
		1	0.108	0.013	-	7.00	2.41	0.08	0.45	135
	SSD	0	0.059	0.007	-	7.00	2.41	0.08	0.45	135
		1	0.319	0.036	-	7.00	2.41	0.06	0.45	135
		2	0.032	0.004	-	7.00	2.41	0.09	0.45	135
Grand Total			1.597	0.326	0.029	7.00	2.41	0.05	0.47	251

			NOx	NOx	NOx	DPM	DPM	DPM	PM2.5	PM2.5	PM2.5	ROG	ROG	ROG	CO	CO	CO	SOx	SOx	SOx	CO2	CO2	CO2	CH4	CH4
			Maneuvering Emissions (lbs)																						
	Engine	Emission		NOx			DPM			PM2.5			ROG			CO			SOx			CO2			CH4
Ship Type	Type	Tier	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux
AUTO CARRIER	SSD	1	31.18	36.88	1.68	0.72	0.74	0.11	0.66	0.68	0.10	5.62	1.55	0.09	4.99	3.27	0.17	0.69	1.19	0.49	1,104	2,052	775	0.504	0.238
BULK CARRIER	MSD	1	4.83	6.81	0.11	0.12	0.14	0.01	0.11	0.13	0.01	0.65	0.29	0.01	0.82	0.60	0.01	0.15	0.22	0.03	234	379	51	0.080	0.044
	SSD	0	6.54	5.97	0.11	0.11	0.11	0.01	0.10	0.10	0.01	0.60	0.22	0.01	0.73	0.47	0.01	0.14	0.17	0.03	233	297	50	0.053	0.034
		1	16.83	12.89	0.27	0.34	0.26	0.02	0.32	0.24	0.02	2.11	0.54	0.01	2.36	1.14	0.03	0.41	0.42	0.08	665	717	125	0.189	0.083
		2	5.34	4.38	0.11	0.13	0.11	0.01	0.12	0.10	0.01	0.72	0.23	0.01	0.85	0.49	0.01	0.16	0.18	0.03	255	305	50	0.065	0.035
BULK CARRIER, HL	MSD	0	6.65	6.70	0.16	0.14	0.14	0.01	0.12	0.12	0.01	0.47	0.28	0.01	0.76	0.59	0.02	0.21	0.22	0.05	334	373	75	0.058	0.043
CONTAINER SHIP	SSD	2	211.33	575.42	6.66	5.86	14.53	0.44	5.39	13.37	0.41	45.64	30.22	0.37	40.57	63.94	0.67	5.60	23.25	1.94	8,969	40,105	3,075	4.096	4.650
GENERAL CARGO	MSD	0	1.97	2.23	0.05	0.05	0.05	0.00	0.04	0.04	0.00	0.19	0.09	0.00	0.25	0.20	0.01	0.06	0.07	0.02	101	124	25	0.017	0.014
		1	11.36	18.99	0.39	0.29	0.38	0.03	0.27	0.35	0.02	1.65	0.80	0.02	1.94	1.68	0.04	0.36	0.61	0.11	584	1,057	179	0.149	0.122
	SSD	0	10.46	8.79	0.17	0.18	0.18	0.01	0.17	0.16	0.01	1.05	0.37	0.01	1.23	0.78	0.02	0.23	0.28	0.05	370	489	77	0.094	0.057
		1	53.35	50.19	0.83	1.13	1.01	0.06	1.04	0.93	0.05	7.49	2.10	0.05	7.89	4.45	0.08	1.28	1.62	0.24	2,065	2,793	383	0.672	0.324
		2	4.84	4.69	0.11	0.11	0.09	0.01	0.10	0.09	0.01	0.59	0.20	0.01	0.73	0.42	0.01	0.14	0.15	0.03	233	261	51	0.053	0.030
Grand Total			364.68	733.96	10.64	9.17	17.74	0.71	8.44	16.32	0.65	66.78	36.89	0.59	63.11	78.04	1.07	9.43	28.38	3.09	15,147	48,953	4,916	6.031	5.676

Harborcraft

Tug/Barge	Calls	Hours
Robyn J (Barge Jake J)	0.15	16.4
Robyn J (Barge Payton J)	3.26	16.4
Robyn J (Barge Tori J)	0.59	16.4
Grand Total	4.00	16.4

Assist Tugs

		Hours
Tug	Calls	Main
Scout	4.00	0.70
Tioga	4.00	0.70
Grand Total	8.00	0.70

TAMT 2013-2014_unmit
Daily Summary

TAMT Plan- 2035

Reduction in hoteling time 0%

Ships

			CH4	N2O	N2O	N2O					NOx	NOx	DPM	DPM	PM2.5	PM2.5	ROG	ROG	CO	CO	SOx	SOx	CO2	CO2	CH4	CH4	N2O	N2O
							Hotel	Aux	Hotelling		Hotelling Emissions (lbs)																	
	Engine	Emission			N2O		Time	Time	Auxiliary	Boiler	NOx		DPM		PM2.5		ROG		CO		SOx		CO2		CH4		N2O	
Ship Type	**Type**	**Tier**	**Boiler**	**Main**	**Aux**	**Boiler**	**(hr)**	**(hr)**	**LF**	**Load (kW)**	**Aux**	**Boiler**	**Aux**	**Boiler**	**Aux**	**Boiler**	**Aux**	**Boiler**	**Aux**	**Boiler**	**Aux**	**Boiler**	**Aux**	**Boiler**	**Aux**	**Boiler**	**Aux**	**Boiler**
AUTO CARRIER	SSD	1	0.027	0.037	0.054	0.011	24.0	24.0	0.26	351	211.83	16.67	4.27	1.11	3.93	1.02	8.88	0.92	18.79	1.67	6.83	4.85	11,787	7,700	1.367	0.267	0.307	0.109
BULK CARRIER	MSD	1	0.002	0.007	0.010	0.001	24.0	24.0	0.10	135	15.05	1.10	0.30	0.07	0.28	0.07	0.63	0.06	1.34	0.11	0.49	0.32	838	508	0.097	0.018	0.022	0.007
	SSD	0	0.002	0.007	0.008	0.001	24.0	24.0	0.10	132	13.20	1.08	0.24	0.07	0.22	0.07	0.49	0.06	1.04	0.11	0.38	0.31	655	497	0.076	0.017	0.017	0.007
		1	0.004	0.020	0.019	0.002	24.0	24.0	0.10	132	28.48	2.69	0.57	0.18	0.53	0.16	1.19	0.15	2.53	0.27	0.92	0.78	1,585	1,242	0.184	0.043	0.041	0.018
		2	0.002	0.008	0.008	0.001	24.0	24.0	0.10	132	9.67	1.08	0.24	0.07	0.22	0.07	0.51	0.06	1.07	0.11	0.39	0.31	674	497	0.078	0.017	0.018	0.007
BULK CARRIER, HL	MSD	0	0.003	0.009	0.010	0.001	24.0	24.0	0.10	132	16.60	1.61	0.30	0.11	0.27	0.10	0.62	0.09	1.31	0.16	0.48	0.47	824	745	0.096	0.026	0.021	0.011
CONTAINER SHIP	SSD	2	0.107	0.302	1.046	0.043	24.0	8.2	0.35	325	1,346.33	66.19	34.00	4.41	31.28	4.06	70.72	3.65	149.59	6.64	54.40	19.24	93,835	30,573	10.879	1.062	2.448	0.431
GENERAL CARGO	MSD	0	0.001	0.003	0.003	0.000	24.0	24.0	0.10	132	4.94	0.54	0.10	0.04	0.09	0.03	0.21	0.03	0.44	0.05	0.16	0.16	275	248	0.032	0.009	0.007	0.004
		1	0.006	0.017	0.028	0.003	24.0	24.0	0.10	135	41.94	3.85	0.85	0.26	0.78	0.24	1.76	0.21	3.72	0.39	1.35	1.12	2,334	1,778	0.271	0.062	0.061	0.025
	SSD	0	0.003	0.011	0.013	0.001	24.0	24.0	0.10	135	21.77	1.65	0.39	0.11	0.36	0.10	0.81	0.09	1.72	0.17	0.63	0.48	1,081	762	0.125	0.026	0.028	0.011
		1	0.013	0.064	0.073	0.005	24.0	24.0	0.10	135	110.87	8.25	2.24	0.55	2.06	0.51	4.65	0.45	9.84	0.83	3.58	2.40	6,170	3,810	0.715	0.132	0.161	0.054
		2	0.002	0.007	0.007	0.001	24.0	24.0	0.10	135	8.28	1.10	0.21	0.07	0.19	0.07	0.43	0.06	0.92	0.11	0.33	0.32	577	508	0.067	0.018	0.015	0.007
Grand Total			0.171	0.491	1.277	0.069	24.0	16.4	0.24	251	1,828.96	105.79	43.71	7.05	40.21	6.49	90.91	5.83	192.31	10.61	69.93	30.76	120,634	48,867	13.987	1.697	3.147	0.689

Harborcraft

Tug/Barge	Calls	Hours
Robyn J (Barge Jake J)	0.15	16.4
Robyn J (Barge Payton J)	3.26	16.4
Robyn J (Barge Tori J)	0.59	16.4
Grand Total	4.00	16.4

Assist Tugs

Tug	Calls	Hours Main
Scout	4.00	0.70
Tioga	4.00	0.70
Grand Total	8.00	0.70

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Annual Summary

Baseline 20 VSR Distance

Ships

Ship Type	Engine Type	Emission Tier	Calls	Power (kW) Main	Power (kW) Aux	Service Speed (kts)	Total Transit Distance (nm) Arrival	Total Transit Distance (nm) Depart	Transit - Arrival Comp (%)	Transit - Arrival Distance (nm)	Transit - Arrival Speed (kts) Comp	Transit - Arrival Speed (kts) NC	Transit - Arrival Main Load Factor Comp	Transit - Arrival Main Load Factor NC	Transit - Departure Comp (%)	Transit - Departure Distance (nm)	Transit - Departure Speed (kts) Comp	Transit - Departure Speed (kts) NC	Transit - Departure Main Load Factor Comp	Transit - Departure Main Load Factor NC	Time (hrs)	Aux	NC Boiler Load (kW)	NOx Main	NOx Aux	NOx Boiler	DPM Main	DPM Aux	DPM Boiler	PM2.5 Main	PM2.5 Aux
AUTO CARRIER	SSD	1	8	11,060	2,760	20.00	35.30	35.30	0%	15.30	12.00	20.00	0.18	0.82	0%	15.30	12.00	20.00	0.18	0.82	1.53	0.15	351	1.854	0.069	-	0.031	0.001	-	0.028	0.001
BULK CARRIER	MSD	1	2	9,100	2,973	16.65	30.20	23.40	0%	10.20	11.00	16.65	0.24	0.82	0%	3.40	11.20	16.65	0.25	0.82	0.82	0.17	-	0.158	0.011	-	0.003	0.000	-	0.003	0.000
	SSD	0	2	8,139	2,325	14.60	30.20	30.20	0%	10.20	10.70	14.60	0.32	0.82	0%	10.20	12.45	14.60	0.51	0.82	1.40	0.17	-	0.351	0.017	-	0.005	0.000	-	0.005	0.000
		1	5	10,705	2,250	15.92	33.94	26.46	0%	13.94	11.13	15.92	0.28	0.82	0%	6.46	11.90	15.92	0.34	0.82	1.28	0.17	-	0.939	0.033	-	0.016	0.001	-	0.014	0.001
		2	2	9,140	2,393	15.00	11.50	48.90	0%	-	11.05	15.00	0.33	0.82	0%	28.90	12.50	15.00	0.48	0.82	1.93	0.17	-	0.402	0.017	-	0.008	0.000	-	0.007	0.000
BULK CARRIER, HL	MSD	0	2	5,738	1,950	13.00	5.75	24.45	0%	-	9.45	13.00	0.32	0.82	0%	4.45	9.45	13.00	0.32	0.82	0.34	0.17	-	0.047	0.003	-	0.001	0.000	-	0.001	0.000
CONTAINER SHIP	SSD	0	49	14,948	7,158	20.03	11.99	12.26	0%	-	11.57	20.03	0.16	0.82	0%	-	11.83	20.03	0.17	0.82	-	0.13	132	-	-	-	-	-	-	-	-
		1	8	13,055	3,676	18.93	11.50	11.50	0%	-	12.08	18.93	0.21	0.82	0%	-	12.53	18.93	0.24	0.82	-	0.13	-	-	-	-	-	-	-	-	-
GENERAL CARGO	MSD	0	1	5,738	1,950	13.00	11.50	48.90	0%	-	10.10	13.00	0.39	0.82	0%	28.90	10.10	13.00	0.39	0.82	2.22	0.17	-	0.153	0.011	-	0.003	0.000	-	0.003	0.000
		1	5	6,400	2,367	15.34	35.98	23.74	0%	15.98	12.57	15.34	0.45	0.82	0%	3.74	12.20	15.34	0.41	0.82	1.29	0.17	-	0.436	0.035	-	0.009	0.001	-	0.009	0.001
	SSD	0	3	9,268	2,557	15.23	23.97	36.43	0%	3.97	12.07	15.23	0.41	0.82	0%	16.43	12.30	15.23	0.43	0.82	1.34	0.17	-	0.574	0.027	-	0.008	0.000	-	0.008	0.000
		1	11	12,430	2,920	16.98	26.95	34.06	0%	6.95	11.77	16.98	0.27	0.82	0%	14.06	11.86	16.98	0.28	0.82	1.24	0.17	-	2.318	0.092	-	0.038	0.002	-	0.035	0.002
		2	2	8,630	2,048	14.90	42.10	30.20	0%	22.10	10.95	14.90	0.33	0.82	0%	10.20	11.00	14.90	0.33	0.82	2.17	0.17	-	0.428	0.016	-	0.008	0.000	-	0.008	0.000
Grand Total			100	12,627	4,904	18.43	19.31	20.74	0%	4.45	11.60	18.43	0.22	0.82	0%	5.21	11.87	18.43	0.24	0.82	0.58	0.15	93	7.659	0.334	-	0.131	0.007	-	0.121	0.006
																								150.59			2.88				

Harborcraft

Tug/Barge	Calls	Hours	Tug Running Emissions (tons) NOx Main	NOx Aux	DPM Main	DPM Aux	PM2.5 Main	PM2.5 Aux	ROG Main	ROG Aux	CO Main	CO Aux	SOx Main	SOx Aux	CO2 Main	CO2 Aux	CH4 Main	CH4 Aux	N2O Main	N2O Aux	Hours Tug	Hours Barge	Hoteling Emissions (tons) NOx Tug	NOx Barge	DPM Tug	DPM Barge	PM2.5 Tug	PM2.5 Barge	ROG Tug	ROG Barge	C Tug
Robyn J (Barge Jake J)	1	16.4	0.100	0.005	0.003	0.000	0.003	0.000	0.009	0.001	0.075	0.004	0.000	0.000	8.83	0.44	0.000	0.000	0.000	0.000	1.0	4.5	0.000	0.004	0.000	0.000	0.000	0.000	0.000	0.001	0.000
Robyn J (Barge Payton J)	22	16.4	2.204	0.103	0.075	0.004	0.073	0.004	0.208	0.017	1.655	0.078	0.002	0.000	194.31	9.64	0.004	0.000	0.009	0.000	1.0	4.8	0.006	0.090	0.000	0.005	0.000	0.005	0.001	0.015	0.005
Robyn J (Barge Tori J)	4	16.4	0.401	0.019	0.014	0.001	0.013	0.001	0.038	0.003	0.301	0.014	0.000	0.000	35.33	1.75	0.001	0.000	0.002	0.000	1.0	5.3	0.001	0.018	0.000	0.001	0.000	0.001	0.000	0.003	0.001
Grand Total	27	16.4	2.705	0.126	0.092	0.005	0.090	0.004	0.255	0.021	2.031	0.096	0.003	0.000	238.47	11.83	0.005	0.000	0.011	0.001	1.0	4.9	0.008	0.112	0.000	0.006	0.000	0.006	0.001	0.019	0.006

Assist Tugs

Tug	Calls	Hours per Call Main	Hours per Call Aux	Load Factors Main	Load Factors Aux	Tug Running Emissions (tons) NOx Main	NOx Aux	DPM Main	DPM Aux	PM2.5 Main	PM2.5 Aux	ROG Main	ROG Aux	CO Main	CO Aux	SOx Main	SOx Aux	CO2 Main	CO2 Aux	CH4 Main	CH4 Aux	N2O Main	N2O Aux
Scout	100	0.70	1.00	0.31	0.43	0.501	0.049	0.011	0.001	0.011	0.001	0.060	0.008	0.476	0.053	0.001	0.000	55.83	6.49	0.001	0.000	0.003	0.000
Tioga	100	0.70	1.00	0.31	0.43	0.501	0.040	0.011	0.002	0.011	0.001	0.060	0.007	0.476	0.030	0.001	0.000	55.83	3.71	0.001	0.000	0.003	0.000
Grand Total	200	0.70	1.00	0.31	0.43	1.002	0.089	0.022	0.003	0.021	0.003	0.119	0.015	0.951	0.083	0.001	0.000	111.67	10.20	0.002	0.000	0.005	0.000

Project - 2020

Ships

Ship Type	Engine Type	Emission Tier	Calls	Power (kW) Main	Power (kW) Aux	Service Speed (kts)	Total Transit Distance (nm) Arrival	Total Transit Distance (nm) Depart	Transit - Arrival Comp (%)	Transit - Arrival Distance (nm)	Transit - Arrival Speed (kts) Comp	Transit - Arrival Speed (kts) NC	Transit - Arrival Main Load Factor Comp	Transit - Arrival Main Load Factor NC	Transit - Departure Comp (%)	Transit - Departure Distance (nm)	Transit - Departure Speed (kts) Comp	Transit - Departure Speed (kts) NC	Transit - Departure Main Load Factor Comp	Transit - Departure Main Load Factor NC	Time (hrs)	Aux	NC Boiler Load (kW)	NOx Main	NOx Aux	NOx Boiler	DPM Main	DPM Aux	DPM Boiler	PM2.5 Main	PM2.5 Aux
AUTO CARRIER	SSD	1	11.66	11,060	2,760	20.00	35.30	35.30	0%	15.30	12.00	20.00	0.18	0.82	0%	15.30	12.00	20.00	0.18	0.82	1.53	0.15	351	2.702	0.101	-	0.045	0.002	-	0.041	0.002
BULK CARRIER	MSD	1	2.00	9,100	2,973	16.65	30.20	23.40	0%	10.20	11.00	16.65	0.24	0.82	0%	3.40	11.20	16.65	0.25	0.82	0.82	0.17	-	0.158	0.011	-	0.003	0.000	-	0.003	0.000
	SSD	0	2.00	8,139	2,325	14.60	30.20	30.20	0%	10.20	10.70	14.60	0.32	0.82	0%	10.20	12.45	14.60	0.51	0.82	1.40	0.17	-	0.351	0.017	-	0.005	0.000	-	0.005	0.000
		1	5.00	10,705	2,250	15.92	33.94	26.46	0%	13.94	11.13	15.92	0.28	0.82	0%	6.46	11.90	15.92	0.34	0.82	1.28	0.17	-	0.939	0.033	-	0.016	0.001	-	0.014	0.001
		2	2.00	9,140	2,393	15.00	11.50	48.90	0%	-	11.05	15.00	0.33	0.82	0%	28.90	12.50	15.00	0.48	0.82	1.93	0.17	-	0.402	0.017	-	0.008	0.000	-	0.007	0.000
BULK CARRIER, HL	MSD	0	3.00	5,738	1,950	13.00	5.75	24.45	0%	-	9.45	13.00	0.32	0.82	0%	4.45	9.45	13.00	0.32	0.82	0.34	0.17	-	0.071	0.005	-	0.001	0.000	-	0.001	0.000
CONTAINER SHIP	SSD	2	50.00	19,420	11,320	19.50	11.92	12.16	0%	-	11.64	19.50	0.18	0.82	0%	-	11.93	19.50	0.19	0.82	-	0.13	132	-	-	-	-	-	-	-	-
GENERAL CARGO	MSD	0	1.00	5,738	1,950	13.00	11.50	48.90	0%	-	10.10	13.00	0.39	0.82	0%	28.90	10.10	13.00	0.39	0.82	2.22	0.17	-	0.153	0.011	-	0.003	0.000	-	0.003	0.000
		1	7.00	6,400	2,367	15.34	35.98	23.74	0%	15.98	12.57	15.34	0.45	0.82	0%	3.74	12.20	15.34	0.41	0.82	1.29	0.17	-	0.611	0.049	-	0.013	0.001	-	0.012	0.001
	SSD	0	3.00	9,268	2,557	15.23	23.97	36.43	0%	3.97	12.07	15.23	0.41	0.82	0%	16.43	12.30	15.23	0.43	0.82	1.34	0.17	-	0.574	0.027	-	0.008	0.000	-	0.008	0.000
		1	15.00	12,430	2,920	16.98	26.95	34.06	0%	6.95	11.77	16.98	0.27	0.82	0%	14.06	11.86	16.98	0.28	0.82	1.24	0.17	-	3.161	0.126	-	0.052	0.003	-	0.048	0.002
		2	2.00	8,630	2,048	14.90	42.10	30.20	0%	22.10	10.95	14.90	0.33	0.82	0%	10.20	11.00	14.90	0.33	0.82	2.17	0.17	-	0.428	0.016	-	0.008	0.000	-	0.008	0.000
Grand Total			103.66	14,524	6,799	18.04	20.86	22.44	0%	5.41	11.62	18.04	0.24	0.82	0%	6.22	11.85	18.04	0.25	0.82	0.69	0.15	103	9.548	0.415	-	0.163	0.008	-	0.150	0.008
			0.74	1																											

Harborcraft

Tug/Barge	Calls	Hours	Tug Running Emissions (tons) NOx Main	NOx Aux	DPM Main	DPM Aux	PM2.5 Main	PM2.5 Aux	ROG Main	ROG Aux	CO Main	CO Aux	SOx Main	SOx Aux	CO2 Main	CO2 Aux	CH4 Main	CH4 Aux	N2O Main	N2O Aux	Hours Tug	Hours Barge	Hoteling Emissions (tons) NOx Tug	NOx Barge	DPM Tug	DPM Barge	PM2.5 Tug	PM2.5 Barge	ROG Tug	ROG Barge	C Tug
Robyn J (Barge Jake J)	1	16.4	0.100	0.005	0.003	0.000	0.003	0.000	0.009	0.001	0.075	0.004	0.000	0.000	8.83	0.44	0.000	0.000	0.000	0.000	1.0	4.5	0.000	0.004	0.000	0.000	0.000	0.000	0.000	0.001	0.000
Robyn J (Barge Payton J)	23	16.4	2.304	0.108	0.079	0.004	0.076	0.004	0.217	0.018	1.730	0.082	0.002	0.000	203.14	10.08	0.004	0.000	0.009	0.000	1.0	4.8	0.007	0.094	0.000	0.005	0.000	0.005	0.001	0.016	0.005
Robyn J (Barge Tori J)	4	16.4	0.401	0.019	0.014	0.001	0.013	0.001	0.038	0.003	0.301	0.014	0.000	0.000	35.33	1.75	0.001	0.000	0.002	0.000	1.0	5.3	0.001	0.018	0.000	0.001	0.000	0.001	0.000	0.003	0.001
Grand Total	28	16.4	2.805	0.131	0.096	0.005	0.093	0.005	0.264	0.022	2.106	0.100	0.003	0.000	247.30	12.27	0.005	0.000	0.011	0.001	1.0	4.9	0.008	0.116	0.000	0.006	0.000	0.006	0.001	0.020	0.006

Assist Tugs

Tug	Calls	Hours per Call Main	Hours per Call Aux	Load Factors Main	Load Factors Aux	Tug Running Emissions (tons) NOx Main	NOx Aux	DPM Main	DPM Aux	PM2.5 Main	PM2.5 Aux	ROG Main	ROG Aux	CO Main	CO Aux	SOx Main	SOx Aux	CO2 Main	CO2 Aux	CH4 Main	CH4 Aux	N2O Main	N2O Aux
Scout	103.66	0.70	1.00	0.31	0.43	0.519	0.051	0.011	0.001	0.011	0.001	0.062	0.008	0.493	0.055	0.001	0.000	57.88	6.73	0.001	0.000	0.003	0.000
Tioga	103.66	0.70	1.00	0.31	0.43	0.519	0.041	0.011	0.002	0.011	0.002	0.062	0.007	0.493	0.031	0.001	0.000	57.88	3.84	0.001	0.000	0.003	0.000
Grand Total	207.32	0.70	1.00	0.31	0.43	1.038	0.092	0.023	0.003	0.022	0.003	0.124	0.015	0.986	0.086	0.001	0.000	115.75	10.57	0.002	0.000	0.005	0.000

Baseline

Ships

			Transit Emissions (tons)																		
	Engine	Emission			ROG			CO			SOx			CO2			CH4			N2O	
Ship Type	Type	Tier	Boiler	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler
AUTO CARRIER	SSD	1	-	0.096	0.003	-	0.135	0.006	-	0.044	0.002	-	72.18	3.85	-	0.009	0.000	-	0.002	0.000	-
BULK CARRIER	MSD	1	-	0.009	0.000	-	0.015	0.001	-	0.005	0.000	-	8.70	0.63	-	0.001	0.000	-	0.000	0.000	-
	SSD	0	-	0.016	0.001	-	0.023	0.001	-	0.007	0.000	-	12.13	0.84	-	0.001	0.000	-	0.000	0.000	-
		1	-	0.049	0.001	-	0.068	0.003	-	0.022	0.001	-	36.57	1.86	-	0.004	0.000	-	0.001	0.000	-
		2	-	0.025	0.001	-	0.035	0.002	-	0.011	0.001	-	18.78	1.19	-	0.002	0.000	-	0.001	0.000	-
BULK CARRIER, HL	MSD	0	-	0.002	0.000	-	0.004	0.000	-	0.001	0.000	-	2.30	0.17	-	0.000	0.000	-	0.000	0.000	-
CONTAINER SHIP	SSD	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GENERAL CARGO	MSD	0	-	0.008	0.000	-	0.013	0.001	-	0.005	0.000	-	7.46	0.56	-	0.001	0.000	-	0.000	0.000	-
		1	-	0.024	0.001	-	0.041	0.003	-	0.015	0.001	-	24.06	1.97	-	0.003	0.000	-	0.001	0.000	-
	SSD	0	-	0.026	0.001	-	0.037	0.002	-	0.012	0.001	-	19.85	1.33	-	0.002	0.000	-	0.001	0.000	-
		1	-	0.120	0.004	-	0.169	0.008	-	0.055	0.003	-	90.26	5.14	-	0.011	0.001	-	0.003	0.000	-
		2	-	0.026	0.001	-	0.037	0.002	-	0.012	0.001	-	19.95	1.15	-	0.002	0.000	-	0.001	0.000	-
Grand Total			-	0.401	0.014	-	0.577	0.030	-	0.192	0.011	-	312.24	18.69	-	0.037	0.002	-	0.009	0.000	-

			VSR - Arrival						VSR - Departure				
	Engine	Emission	Comp	Distance	Speed (kts)		Main Load Factor		Comp	Distance	Speed (kts)		Main Lo
Ship Type	Type	Tier	(%)	(nm)	Comp	NC	Comp	NC	(%)	(nm)	Comp	NC	Comp
AUTO CARRIER	SSD	1	0%	20.00	12.00	16.06	0.18	0.43	0%	20.00	12.00	15.24	0.18
BULK CARRIER	MSD	1	50%	20.00	11.00	13.60	0.24	0.45	50%	20.00	11.20	13.60	0.25
	SSD	0	100%	20.00	10.70	14.60	0.32	0.82	100%	20.00	12.45	14.60	0.51
		1	60%	20.00	11.13	13.10	0.28	0.46	40%	20.00	11.90	13.07	0.34
		2	100%	11.50	11.05	15.00	0.33	0.82	100%	20.00	12.50	15.00	0.48
BULK CARRIER, HL	MSD	0	100%	5.75	9.45	13.00	0.32	0.82	100%	20.00	9.45	13.00	0.32
CONTAINER SHIP	SSD	0	90%	11.99	11.57	14.78	0.16	0.33	73%	12.26	11.83	16.06	0.17
		1	63%	11.50	12.08	16.03	0.21	0.50	75%	11.50	12.53	15.40	0.24
GENERAL CARGO	MSD	0	100%	11.50	10.10	13.00	0.39	0.82	100%	20.00	10.10	13.00	0.39
		1	60%	20.00	12.57	13.20	0.45	0.52	60%	20.00	12.20	15.10	0.41
	SSD	0	100%	20.00	12.07	15.23	0.41	0.82	100%	20.00	12.30	15.23	0.43
		1	91%	20.00	11.77	13.10	0.27	0.38	45%	20.00	11.86	15.23	0.28
		2	100%	20.00	10.95	14.90	0.33	0.82	100%	20.00	11.00	14.90	0.33
Grand Total			78%	14.85	11.60	14.57	0.22	0.43	65%	15.53	11.87	15.41	0.24

Harborcraft

			O		SOx		CO2		CH4		N2O	
Tug/Barge	Calls	Hours	Barge	Tug	Barge	Tug	Barge	Tug	Barge	Tug	Barge	
Robyn J (Barge Jake J)	1	16.4	0.003	0.000	0.000	0.03	0.34	0.000	0.000	0.000	0.000	
Robyn J (Barge Payton J)	22	16.4	0.071	0.000	0.000	0.59	8.14	0.000	0.000	0.000	0.000	
Robyn J (Barge Tori J)	4	16.4	0.014	0.000	0.000	0.11	1.63	0.000	0.000	0.000	0.000	
Grand Total	27	16.4	0.088	0.000	0.000	0.72	10.12	0.000	0.000	0.000	0.000	

Assist Tugs

		Hours
Tug	Calls	Main
Scout	100	0.70
Tioga	100	0.70
Grand Total	200	0.70

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Ships

			Transit Emissions (tons)																		
	Engine	Emission			ROG			CO			SOx			CO2			CH4			N2O	
Ship Type	Type	Tier	Boiler	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler
AUTO CARRIER	SSD	1	-	0.140	0.004	-	0.197	0.009	-	0.064	0.003	-	105.21	5.62	-	0.013	0.001	-	0.003	0.000	-
BULK CARRIER	MSD	1	-	0.009	0.000	-	0.015	0.001	-	0.005	0.000	-	8.70	0.63	-	0.001	0.000	-	0.000	0.000	-
	SSD	0	-	0.016	0.001	-	0.023	0.001	-	0.007	0.000	-	12.13	0.84	-	0.001	0.000	-	0.000	0.000	-
		1	-	0.049	0.001	-	0.068	0.003	-	0.022	0.001	-	36.57	1.86	-	0.004	0.000	-	0.001	0.000	-
		2	-	0.025	0.001	-	0.035	0.002	-	0.011	0.001	-	18.78	1.19	-	0.002	0.000	-	0.001	0.000	-
BULK CARRIER, HL	MSD	0	-	0.003	0.000	-	0.006	0.000	-	0.002	0.000	-	3.45	0.26	-	0.000	0.000	-	0.000	0.000	-
CONTAINER SHIP	SSD	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GENERAL CARGO	MSD	0	-	0.008	0.000	-	0.013	0.001	-	0.005	0.000	-	7.46	0.56	-	0.001	0.000	-	0.000	0.000	-
		1	-	0.034	0.002	-	0.057	0.004	-	0.021	0.002	-	33.68	2.75	-	0.004	0.000	-	0.001	0.000	-
	SSD	0	-	0.026	0.001	-	0.037	0.002	-	0.012	0.001	-	19.85	1.33	-	0.002	0.000	-	0.001	0.000	-
		1	-	0.163	0.005	-	0.230	0.011	-	0.075	0.004	-	123.08	7.01	-	0.015	0.001	-	0.004	0.000	-
		2	-	0.026	0.001	-	0.037	0.002	-	0.012	0.001	-	19.95	1.15	-	0.002	0.000	-	0.001	0.000	-
Grand Total			-	0.499	0.017	-	0.719	0.037	-	0.238	0.013	-	388.86	23.20	-	0.047	0.003	-	0.012	0.001	-

			VSR - Arrival						VSR - Departure				
	Engine	Emission	Comp	Distance	Speed (kts)		Main Load Factor		Comp	Distance	Speed (kts)		Main Lo
Ship Type	Type	Tier	(%)	(nm)	Comp	NC	Comp	NC	(%)	(nm)	Comp	NC	Comp
AUTO CARRIER	SSD	1	0%	20.00	12.00	16.06	0.18	0.43	0%	20.00	12.00	15.24	0.18
BULK CARRIER	MSD	1	50%	20.00	11.00	13.60	0.24	0.45	50%	20.00	11.20	13.60	0.25
	SSD	0	100%	20.00	10.70	14.60	0.32	0.82	100%	20.00	12.45	14.60	0.51
		1	60%	20.00	11.13	13.10	0.28	0.46	40%	20.00	11.90	13.07	0.34
		2	100%	11.50	11.05	15.00	0.33	0.82	100%	20.00	12.50	15.00	0.48
BULK CARRIER, HL	MSD	0	100%	5.75	9.45	13.00	0.32	0.82	100%	20.00	9.45	13.00	0.32
CONTAINER SHIP	SSD	2	86%	11.92	11.64	14.78	0.18	0.36	74%	12.16	11.93	16.06	0.19
GENERAL CARGO	MSD	0	100%	11.50	10.10	13.00	0.39	0.82	100%	20.00	10.10	13.00	0.39
		1	60%	20.00	12.57	13.20	0.45	0.52	60%	20.00	12.20	15.10	0.41
	SSD	0	100%	20.00	12.07	15.23	0.41	0.82	100%	20.00	12.30	15.23	0.43
		1	91%	20.00	11.77	13.10	0.27	0.38	45%	20.00	11.86	15.23	0.28
		2	100%	20.00	10.95	14.90	0.33	0.82	100%	20.00	11.00	14.90	0.33
Grand Total			75%	15.44	11.62	14.42	0.24	0.44	62%	16.22	11.85	15.38	0.25

Harborcraft

			O		SOx		CO2		CH4		N2O	
Tug/Barge	Calls	Hours	Barge	Tug	Barge	Tug	Barge	Tug	Barge	Tug	Barge	
Robyn J (Barge Jake J)	1	16.4	0.003	0.000	0.000	0.03	0.34	0.000	0.000	0.000	0.000	
Robyn J (Barge Payton J)	23	16.4	0.074	0.000	0.000	0.61	8.51	0.000	0.000	0.000	0.000	
Robyn J (Barge Tori J)	4	16.4	0.014	0.000	0.000	0.11	1.63	0.000	0.000	0.000	0.000	
Grand Total	28	16.4	0.092	0.000	0.000	0.75	10.49	0.000	0.000	0.000	0.000	

Assist Tugs

		Hours
Tug	Calls	Main
Scout	103.66	0.70
Tioga	103.66	0.70
Grand Total	207.32	0.70

Baseline

Ships

VSR Emissions (tons)

Ship Type	Engine Type	Emission Tier	ıd Factor NC	Time (hrs)	Aux	NC Boiler Load (kW)	NOx Main	NOx Aux	NOx Boiler	DPM Main	DPM Aux	DPM Boiler	PM2.5 Main	PM2.5 Aux	PM2.5 Boiler	ROG Main	ROG Aux	ROG Boiler	CO Main	CO Aux	CO Boiler	SOx Main	SOx Aux	SOx Boiler	CO2 Main	CO2 Aux	CO2 Boiler	CH4 Main	CH4 Aux	CH4 Boiler	N2O Main	N2O Aux
AUTO CARRIER	SSD	1	0.36	2.56	0.15	351	1.485	0.116	-	0.025	0.002	-	0.023	0.002	-	0.077	0.005	-	0.108	0.010	-	0.035	0.004	-	57.81	6.44	-	0.007	0.001	-	0.002	0.000
BULK CARRIER	MSD	1	0.45	3.27	0.17		0.258	0.045	-	0.006	0.001	-	0.005	0.001	-	0.014	0.002	-	0.024	0.004	-	0.009	0.001	-	14.21	2.52	-	0.002	0.000	-	0.000	0.000
	SSD	0	0.82	3.48	0.17	-	0.435	0.042	-	0.006	0.001	-	0.006	0.001	-	0.020	0.002	-	0.028	0.003	-	0.009	0.001	-	15.03	2.09	-	0.002	0.000	-	0.000	0.000
		1	0.45	3.28	0.17	-	1.098	0.086	-	0.018	0.002	-	0.017	0.002	-	0.057	0.004	-	0.080	0.008	-	0.026	0.003	-	42.74	4.77	-	0.005	0.001	-	0.001	0.000
		2	0.82	2.64	0.17	-	0.280	0.023	-	0.006	0.001	-	0.005	0.001	-	0.017	0.001	-	0.024	0.003	-	0.008	0.001	-	13.08	1.63	-	0.002	0.000	-	0.000	0.000
BULK CARRIER, HL	MSD	0	0.82	2.72	0.17	-	0.144	0.028	-	0.003	0.000	-	0.003	0.000	-	0.007	0.001	-	0.012	0.002	-	0.004	0.001	-	7.03	1.37	-	0.001	0.000	-	0.000	0.000
CONTAINER SHIP	SSD	0	0.42	1.98	0.13	132	5.505	1.381	0.024	0.083	0.025	0.002	0.076	0.023	0.001	0.284	0.052	0.001	0.397	0.109	0.002	0.118	0.040	0.007	191.72	68.56	11.11	0.026	0.008	0.000	0.006	0.002
		1	0.44	1.74	0.13	-	0.885	0.091	-	0.015	0.002	-	0.013	0.002	-	0.046	0.004	-	0.064	0.008	-	0.021	0.003	-	34.46	5.06	-	0.004	0.001	-	0.001	0.000
GENERAL CARGO	MSD	0	0.82	3.12	0.17	-	0.100	0.016	-	0.002	0.000	-	0.002	0.000	-	0.005	0.001	-	0.008	0.001	-	0.003	0.000	-	4.91	0.79	-	0.001	0.000	-	0.000	0.000
		1	0.78	3.07	0.17	-	0.649	0.085	-	0.014	0.002	-	0.013	0.002	-	0.036	0.004	-	0.061	0.007	-	0.022	0.003	-	35.77	4.70	-	0.004	0.001	-	0.001	0.000
	SSD	0	0.82	3.28	0.17	-	0.720	0.066	-	0.011	0.001	-	0.010	0.001	-	0.033	0.002	-	0.047	0.005	-	0.015	0.002	-	24.90	3.26	-	0.003	0.000	-	0.001	0.000
		1	0.59	3.17	0.17	-	2.541	0.236	-	0.042	0.005	-	0.039	0.004	-	0.131	0.010	-	0.185	0.021	-	0.061	0.008	-	98.95	13.15	-	0.012	0.002	-	0.003	0.000
		2	0.82	3.64	0.17	-	0.287	0.028	-	0.006	0.001	-	0.005	0.001	-	0.018	0.001	-	0.025	0.003	-	0.008	0.001	-	13.40	1.93	-	0.002	0.000	-	0.000	0.000
Grand Total			0.51	2.42	0.15	93	14.386	2.242	0.024	0.234	0.042	0.002	0.216	0.039	0.001	0.745	0.088	0.001	1.065	0.185	0.002	0.340	0.067	0.007	554.02	116.27	11.11	0.069	0.013	0.000	0.017	0.003

Harborcraft

Tug/Barge	Calls	Hours
Robyn J (Barge Jake J)	1	16.4
Robyn J (Barge Payton J)	22	16.4
Robyn J (Barge Tori J)	4	16.4
Grand Total	27	16.4

Assist Tugs

Tug	Calls	Hours Main
Scout	100	0.70
Tioga	100	0.70
Grand Total	200	0.70

Project - 2020

Ships

VSR Emissions (tons)

Ship Type	Engine Type	Emission Tier	ıd Factor NC	Time (hrs)	Aux	NC Boiler Load (kW)	NOx Main	NOx Aux	NOx Boiler	DPM Main	DPM Aux	DPM Boiler	PM2.5 Main	PM2.5 Aux	PM2.5 Boiler	ROG Main	ROG Aux	ROG Boiler	CO Main	CO Aux	CO Boiler	SOx Main	SOx Aux	SOx Boiler	CO2 Main	CO2 Aux	CO2 Boiler	CH4 Main	CH4 Aux	CH4 Boiler	N2O Main	N2O Aux
AUTO CARRIER	SSD	1	0.36	2.56	0.15	351	2.164	0.169	-	0.036	0.003	-	0.033	0.003	-	0.112	0.007	-	0.158	0.015	-	0.052	0.005	-	84.26	9.39	-	0.010	0.001	-	0.003	0.000
BULK CARRIER	MSD	1	0.45	3.27	0.17	-	0.258	0.045	-	0.006	0.001	-	0.005	0.001	-	0.014	0.002	-	0.024	0.004	-	0.009	0.001	-	14.21	2.52	-	0.002	0.000	-	0.000	0.000
	SSD	0	0.82	3.48	0.17	-	0.435	0.042	-	0.006	0.001	-	0.006	0.001	-	0.020	0.002	-	0.028	0.003	-	0.009	0.001	-	15.03	2.09	-	0.002	0.000	-	0.000	0.000
		1	0.45	3.28	0.17	-	1.098	0.086	-	0.018	0.002	-	0.017	0.002	-	0.057	0.004	-	0.080	0.008	-	0.026	0.003	-	42.74	4.77	-	0.005	0.001	-	0.001	0.000
		2	0.82	2.64	0.17	-	0.280	0.023	-	0.006	0.001	-	0.005	0.001	-	0.017	0.001	-	0.024	0.003	-	0.008	0.001	-	13.08	1.63	-	0.002	0.000	-	0.000	0.000
BULK CARRIER, HL	MSD	0	0.82	2.72	0.17	-	0.216	0.042	-	0.004	0.001	-	0.004	0.001	-	0.011	0.002	-	0.018	0.003	-	0.007	0.001	-	10.54	2.06	-	0.001	0.000	-	0.000	0.000
CONTAINER SHIP	SSD	2	0.46	1.94	0.13	325	5.889	1.560	0.058	0.118	0.039	0.004	0.109	0.036	0.004	0.396	0.082	0.003	0.555	0.173	0.006	0.169	0.063	0.017	275.80	108.75	26.92	0.036	0.013	0.001	0.008	0.003
GENERAL CARGO	MSD	0	0.82	3.12	0.17	-	0.100	0.016	-	0.002	0.000	-	0.002	0.000	-	0.005	0.001	-	0.008	0.001	-	0.003	0.000	-	4.91	0.79	-	0.001	0.000	-	0.000	0.000
		1	0.78	3.07	0.17	-	0.908	0.118	-	0.019	0.002	-	0.018	0.002	-	0.050	0.005	-	0.085	0.010	-	0.031	0.004	-	50.08	6.59	-	0.006	0.001	-	0.001	0.000
	SSD	0	0.82	3.28	0.17	-	0.720	0.066	-	0.011	0.001	-	0.010	0.001	-	0.033	0.002	-	0.047	0.005	-	0.015	0.002	-	24.90	3.26	-	0.003	0.000	-	0.001	0.000
		1	0.59	3.17	0.17	-	3.465	0.322	-	0.057	0.006	-	0.053	0.006	-	0.179	0.014	-	0.252	0.029	-	0.083	0.010	-	134.93	17.93	-	0.016	0.002	-	0.004	0.000
		2	0.82	3.64	0.17	-	0.287	0.028	-	0.006	0.001	-	0.005	0.001	-	0.018	0.001	-	0.025	0.003	-	0.008	0.001	-	13.40	1.93	-	0.002	0.000	-	0.000	0.000
Grand Total			0.54	2.50	0.15	196	15.820	2.517	0.058	0.289	0.059	0.004	0.266	0.054	0.004	0.912	0.122	0.003	1.306	0.258	0.006	0.420	0.094	0.017	683.89	161.70	26.92	0.085	0.019	0.001	0.021	0.004

Harborcraft

Tug/Barge	Calls	Hours
Robyn J (Barge Jake J)	1	16.4
Robyn J (Barge Payton J)	23	16.4
Robyn J (Barge Tori J)	4	16.4
Grand Total	28	16.4

Assist Tugs

Tug	Calls	Hours Main
Scout	103.66	0.70
Tioga	103.66	0.70
Grand Total	207.32	0.70

TAMT 2013-2014_unmit
Annual Summary

Baseline

Ships

						Maneuvering																Maneuvering Emissions (tons)											
	Engine	Emission		Speed	Time	Load Factors		Boiler		NOx			DPM			PM2.5			ROG			CO			SOx			CO2			CH4		
Ship Type	Type	Tier	Boiler	(kts)	(hrs)	Main	Aux	Load (kW)	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler	Main
AUTO CARRIER	SSD	1	-	7.00	2.41	0.04	0.45	351	0.277	0.328	0.015	0.006	0.007	0.001	0.006	0.006	0.001	0.050	0.014	0.001	0.044	0.029	0.001	0.006	0.011	0.004	9.82	18.25	6.89	0.004	0.002	0.000	0.000
BULK CARRIER	MSD	1	-	7.00	2.41	0.06	0.45	132	0.063	0.088	0.001	0.002	0.002	0.000	0.001	0.002	0.000	0.008	0.004	0.000	0.011	0.008	0.000	0.002	0.003	0.000	3.04	4.91	0.65	0.001	0.001	0.000	0.000
	SSD	0	-	7.00	2.41	0.09	0.45	132	0.085	0.077	0.001	0.001	0.001	0.000	0.001	0.001	0.000	0.008	0.003	0.000	0.009	0.006	0.000	0.002	0.002	0.000	3.03	3.84	0.65	0.001	0.000	0.000	0.000
		1	-	7.00	2.41	0.07	0.45	132	0.218	0.167	0.004	0.004	0.003	0.000	0.004	0.003	0.000	0.027	0.007	0.000	0.031	0.015	0.000	0.005	0.005	0.001	8.61	9.29	1.62	0.002	0.001	0.000	0.000
		2	-	7.00	2.41	0.08	0.45	132	0.069	0.057	0.001	0.002	0.001	0.000	0.002	0.001	0.000	0.009	0.003	0.000	0.011	0.006	0.000	0.002	0.002	0.000	3.30	3.95	0.65	0.001	0.000	0.000	0.000
BULK CARRIER, HL	MSD	0	-	7.00	2.41	0.13	0.45	132	0.057	0.058	0.001	0.001	0.001	0.000	0.001	0.001	0.000	0.004	0.002	0.000	0.007	0.005	0.000	0.002	0.002	0.000	2.88	3.22	0.65	0.001	0.000	0.000	0.000
CONTAINER SHIP	SSD	0	0.000	7.00	2.41	0.04	0.50	241	2.571	6.487	0.063	0.053	0.117	0.004	0.049	0.107	0.004	0.412	0.243	0.003	0.366	0.513	0.006	0.051	0.187	0.018	80.89	322.01	28.96	0.037	0.037	0.001	0.003
		1	-	7.00	2.41	0.04	0.50	362	0.386	0.485	0.015	0.009	0.010	0.001	0.008	0.009	0.001	0.070	0.020	0.001	0.062	0.043	0.002	0.009	0.016	0.004	13.68	27.00	7.11	0.006	0.003	0.000	0.000
GENERAL CARGO	MSD	0	-	7.00	2.41	0.13	0.45	135	0.025	0.029	0.001	0.001	0.001	0.000	0.001	0.001	0.000	0.002	0.001	0.000	0.003	0.003	0.000	0.001	0.001	0.000	1.31	1.61	0.33	0.000	0.000	0.000	0.000
		1	-	7.00	2.41	0.08	0.45	135	0.105	0.176	0.004	0.003	0.004	0.000	0.002	0.003	0.000	0.015	0.007	0.000	0.018	0.016	0.000	0.003	0.006	0.001	5.40	9.78	1.66	0.001	0.001	0.000	0.000
	SSD	0	-	7.00	2.41	0.08	0.45	135	0.136	0.114	0.002	0.002	0.002	0.000	0.002	0.002	0.000	0.014	0.005	0.000	0.016	0.010	0.000	0.003	0.004	0.001	4.79	6.34	0.99	0.001	0.001	0.000	0.000
		1	-	7.00	2.41	0.06	0.45	135	0.507	0.477	0.008	0.011	0.010	0.001	0.010	0.009	0.000	0.071	0.020	0.000	0.075	0.042	0.001	0.012	0.015	0.002	19.62	26.54	3.64	0.006	0.003	0.000	0.001
		2	-	7.00	2.41	0.09	0.45	135	0.063	0.061	0.001	0.001	0.001	0.000	0.001	0.001	0.000	0.008	0.003	0.000	0.009	0.005	0.000	0.002	0.002	0.000	3.02	3.38	0.66	0.001	0.000	0.000	0.000
Grand Total			0.000	7.00	2.41	0.05	0.48	222	4.562	8.604	0.118	0.096	0.159	0.008	0.089	0.147	0.007	0.698	0.332	0.006	0.662	0.702	0.012	0.099	0.255	0.034	159.38	440.13	54.44	0.063	0.051	0.002	0.005

Harborcraft

Tug/Barge	Calls	Hours
Robyn J (Barge Jake J)	1	16.4
Robyn J (Barge Payton J)	22	16.4
Robyn J (Barge Tori J)	4	16.4
Grand Total	27	16.4

Assist Tugs

		Hours
Tug	Calls	Main
Scout	100	0.70
Tioga	100	0.70
Grand Total	200	0.70

Project - 2020

Ships

						Maneuvering																Maneuvering Emissions (tons)											
	Engine	Emission		Speed	Time	Load Factors		Boiler		NOx			DPM			PM2.5			ROG			CO			SOx			CO2			CH4		
Ship Type	Type	Tier	Boiler	(kts)	(hrs)	Main	Aux	Load (kW)	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler	Main
AUTO CARRIER	SSD	1	-	7.00	2.41	0.04	0.45	351	0.404	0.478	0.022	0.009	0.010	0.001	0.009	0.009	0.001	0.073	0.020	0.001	0.065	0.042	0.002	0.009	0.015	0.006	14.31	26.59	10.04	0.007	0.003	0.000	0.000
BULK CARRIER	MSD	1	-	7.00	2.41	0.06	0.45	135	0.063	0.088	0.001	0.002	0.002	0.000	0.001	0.002	0.000	0.008	0.004	0.000	0.011	0.008	0.000	0.002	0.003	0.000	3.04	4.91	0.66	0.001	0.001	0.000	0.000
	SSD	0	-	7.00	2.41	0.09	0.45	132	0.085	0.077	0.001	0.001	0.001	0.000	0.001	0.001	0.000	0.008	0.003	0.000	0.009	0.006	0.000	0.002	0.002	0.000	3.03	3.84	0.65	0.001	0.000	0.000	0.000
		1	-	7.00	2.41	0.07	0.45	132	0.218	0.167	0.004	0.004	0.003	0.000	0.004	0.003	0.000	0.027	0.007	0.000	0.031	0.015	0.000	0.005	0.005	0.001	8.61	9.29	1.62	0.002	0.001	0.000	0.000
		2	-	7.00	2.41	0.08	0.45	132	0.069	0.057	0.001	0.002	0.001	0.000	0.002	0.001	0.000	0.009	0.003	0.000	0.011	0.006	0.000	0.002	0.002	0.000	3.30	3.95	0.65	0.001	0.000	0.000	0.000
BULK CARRIER, HL	MSD	0	-	7.00	2.41	0.13	0.45	132	0.086	0.087	0.002	0.002	0.002	0.000	0.002	0.002	0.000	0.006	0.004	0.000	0.010	0.008	0.000	0.003	0.003	0.001	4.33	4.83	0.97	0.001	0.001	0.000	0.000
CONTAINER SHIP	SSD	2	0.000	7.00	2.41	0.04	0.50	325	2.738	7.456	0.086	0.076	0.188	0.006	0.070	0.173	0.005	0.591	0.392	0.005	0.526	0.828	0.009	0.073	0.301	0.025	116.22	519.66	39.85	0.053	0.060	0.001	0.004
GENERAL CARGO	MSD	0	-	7.00	2.41	0.13	0.45	132	0.025	0.029	0.001	0.001	0.001	0.000	0.001	0.001	0.000	0.002	0.001	0.000	0.003	0.003	0.000	0.001	0.001	0.000	1.31	1.61	0.32	0.000	0.000	0.000	0.000
		1	-	7.00	2.41	0.08	0.45	135	0.147	0.246	0.005	0.004	0.005	0.000	0.003	0.005	0.000	0.021	0.010	0.000	0.025	0.022	0.001	0.005	0.008	0.001	7.56	13.69	2.32	0.002	0.002	0.000	0.000
	SSD	0	-	7.00	2.41	0.08	0.45	135	0.136	0.114	0.002	0.002	0.002	0.000	0.002	0.002	0.000	0.014	0.005	0.000	0.016	0.010	0.000	0.003	0.004	0.001	4.79	6.34	0.99	0.001	0.001	0.000	0.000
		1	-	7.00	2.41	0.06	0.45	135	0.691	0.650	0.011	0.015	0.013	0.001	0.013	0.012	0.001	0.097	0.027	0.001	0.102	0.058	0.001	0.017	0.021	0.003	26.75	36.19	4.97	0.009	0.004	0.000	0.001
		2	-	7.00	2.41	0.09	0.45	135	0.063	0.061	0.001	0.001	0.001	0.000	0.001	0.001	0.000	0.008	0.003	0.000	0.009	0.005	0.000	0.002	0.002	0.000	3.02	3.38	0.66	0.001	0.000	0.000	0.000
Grand Total			0.000	7.00	2.41	0.05	0.47	251	4.725	9.510	0.138	0.119	0.230	0.009	0.109	0.211	0.008	0.865	0.478	0.008	0.818	1.011	0.014	0.122	0.368	0.040	196.27	634.30	63.70	0.078	0.074	0.002	0.006

Harborcraft

Tug/Barge	Calls	Hours
Robyn J (Barge Jake J)	1	16.4
Robyn J (Barge Payton J)	23	16.4
Robyn J (Barge Tori J)	4	16.4
Grand Total	28	16.4

Assist Tugs

		Hours
Tug	Calls	Main
Scout	103.66	0.70
Tioga	103.66	0.70
Grand Total	207.32	0.70

Baseline

Ships

Ship Type	Engine Type	Emission Tier	N2O Aux	N2O Boiler	Hotel Time (hr)	Aux Time (hr)	Hotelling Auxiliary LF	Hotelling Boiler Load (kW)	NOx Aux	NOx Boiler	DPM Aux	DPM Boiler	PM2.5 Aux	PM2.5 Boiler	ROG Aux	ROG Boiler	CO Aux	CO Boiler	SOx Aux	SOx Boiler	CO2 Aux	CO2 Boiler	CH4 Aux	CH4 Boiler	N2O Aux	N2O Boiler	Cold Iron CO2e
									Hotelling Emissions (tons)																		
AUTO CARRIER	SSD	1	0.000	0.000	27.6	27.6	0.26	351	2.163	0.170	0.044	0.011	0.040	0.010	0.091	0.009	0.192	0.017	0.070	0.049	120.36	78.62	0.014	0.003	0.003	0.001	-
BULK CARRIER	MSD	1	0.000	0.000	37.9	37.9	0.10	132	0.308	0.022	0.006	0.001	0.006	0.001	0.013	0.001	0.027	0.002	0.010	0.006	17.14	10.16	0.002	0.000	0.000	0.000	
	SSD	0	0.000	0.000	28.7	28.7	0.10	132	0.205	0.017	0.004	0.001	0.003	0.001	0.008	0.001	0.016	0.002	0.006	0.005	10.17	7.71	0.001	0.000	0.000	0.000	-
		1	0.000	0.000	37.8	37.8	0.10	132	0.581	0.055	0.012	0.004	0.011	0.003	0.024	0.003	0.052	0.005	0.019	0.016	32.31	25.32	0.004	0.001	0.001	0.000	-
		2	0.000	0.000	85.1	85.1	0.10	132	0.444	0.049	0.011	0.003	0.010	0.003	0.023	0.003	0.049	0.005	0.018	0.014	30.96	22.81	0.004	0.001	0.001	0.000	-
BULK CARRIER, HL	MSD	0	0.000	0.000	114.0	114.0	0.10	132	0.681	0.066	0.012	0.004	0.011	0.004	0.025	0.004	0.054	0.007	0.020	0.019	33.82	30.57	0.004	0.001	0.001	0.000	-
CONTAINER SHIP	SSD	0	0.008	0.000	61.4	49.7	0.35	241	92.482	1.595	1.663	0.106	1.530	0.098	3.460	0.088	7.319	0.160	2.661	0.464	4,590.83	736.92	0.532	0.026	0.120	0.010	1,099
		1	0.001	0.000	60.8	60.8	0.35	362	8.468	0.388	0.171	0.026	0.157	0.024	0.355	0.021	0.751	0.039	0.273	0.113	471.18	179.07	0.055	0.006	0.012	0.003	-
GENERAL CARGO	MSD	0	0.000	0.000	123.0	123.0	0.10	135	0.328	0.037	0.007	0.002	0.006	0.002	0.014	0.002	0.029	0.004	0.011	0.011	18.24	16.87	0.002	0.001	0.000	0.000	
		1	0.000	0.000	62.5	62.5	0.10	135	1.011	0.093	0.020	0.006	0.019	0.006	0.042	0.005	0.090	0.009	0.033	0.027	56.26	42.85	0.007	0.001	0.001	0.001	-
	SSD	0	0.000	0.000	86.3	86.3	0.10	135	1.015	0.077	0.018	0.005	0.017	0.005	0.038	0.004	0.080	0.008	0.029	0.022	50.37	35.52	0.006	0.001	0.001	0.001	-
		1	0.001	0.000	45.5	45.5	0.10	135	1.996	0.149	0.040	0.010	0.037	0.009	0.084	0.008	0.177	0.015	0.064	0.043	111.09	68.60	0.013	0.002	0.003	0.001	-
		2	0.000	0.000	50.9	50.9	0.10	135	0.227	0.030	0.006	0.002	0.005	0.002	0.012	0.002	0.025	0.003	0.009	0.009	15.85	13.96	0.002	0.000	0.000	0.000	-
Grand Total			0.011	0.001	57.3	51.6	0.25	222	109.909	2.747	2.014	0.183	1.853	0.169	4.189	0.151	8.861	0.275	3.222	0.799	5,558.57	1,268.99	0.644	0.044	0.145	0.018	1,099

Harborcraft

Tug/Barge	Calls	Hours
Robyn J (Barge Jake J)	1	16.4
Robyn J (Barge Payton J)	22	16.4
Robyn J (Barge Tori J)	4	16.4
Grand Total	27	16.4

0.80894
0.868903

Assist Tugs

Tug	Calls	Hours Main
Scout	100	0.70
Tioga	100	0.70
Grand Total	200	0.70

Project - 2020

Reduction in hoteling time 0%

Ships

Ship Type	Engine Type	Emission Tier	N2O Aux	N2O Boiler	Hotel Time (hr)	Aux Time (hr)	Hotelling Auxiliary LF	Hotelling Boiler Load (kW)	NOx Aux	NOx Boiler	DPM Aux	DPM Boiler	PM2.5 Aux	PM2.5 Boiler	ROG Aux	ROG Boiler	CO Aux	CO Boiler	SOx Aux	SOx Boiler	CO2 Aux	CO2 Boiler	CH4 Aux	CH4 Boiler	N2O Aux	N2O Boiler	Cold Iron CO2e
									Hotelling Emissions (tons)																		
AUTO CARRIER	SSD	1	0.001	0.000	27.6	27.6	0.26	351	3.152	0.248	0.064	0.017	0.058	0.015	0.132	0.014	0.280	0.025	0.102	0.072	175.42	114.59	0.020	0.004	0.005	0.002	-
BULK CARRIER	MSD	1	0.000	0.000	37.9	37.9	0.10	135	0.308	0.023	0.006	0.002	0.006	0.001	0.013	0.001	0.027	0.002	0.010	0.007	17.14	10.39	0.002	0.000	0.000	0.000	
	SSD	0	0.000	0.000	28.7	28.7	0.10	132	0.205	0.017	0.004	0.001	0.003	0.001	0.008	0.001	0.016	0.002	0.006	0.005	10.17	7.71	0.001	0.000	0.000	0.000	-
		1	0.000	0.000	37.8	37.8	0.10	132	0.581	0.055	0.012	0.004	0.011	0.003	0.024	0.003	0.052	0.005	0.019	0.016	32.31	25.32	0.004	0.001	0.001	0.000	-
		2	0.000	0.000	85.1	85.1	0.10	132	0.444	0.049	0.011	0.003	0.010	0.003	0.023	0.003	0.049	0.005	0.018	0.014	30.96	22.81	0.004	0.001	0.001	0.000	-
BULK CARRIER, HL	MSD	0	0.000	0.000	114.0	114.0	0.10	132	1.022	0.099	0.018	0.007	0.017	0.006	0.038	0.005	0.081	0.010	0.029	0.029	50.73	45.86	0.006	0.002	0.001	0.001	-
CONTAINER SHIP	SSD	2	0.014	0.001	88.9	77.2	0.35	325	165.203	3.176	4.172	0.212	3.838	0.195	8.677	0.175	18.356	0.318	6.675	0.923	11,514.15	1,467.21	1.335	0.051	0.300	0.021	1,645
GENERAL CARGO	MSD	0	0.000	0.000	123.0	123.0	0.10	132	0.328	0.036	0.007	0.002	0.006	0.002	0.014	0.002	0.029	0.004	0.011	0.010	18.24	16.49	0.002	0.001	0.000	0.000	
		1	0.000	0.000	62.5	62.5	0.10	135	1.415	0.130	0.029	0.009	0.026	0.008	0.059	0.007	0.126	0.013	0.046	0.038	78.76	60.00	0.009	0.002	0.002	0.001	-
	SSD	0	0.000	0.000	86.3	86.3	0.10	135	1.015	0.077	0.018	0.005	0.017	0.005	0.038	0.004	0.080	0.008	0.029	0.022	50.37	35.52	0.006	0.001	0.001	0.001	-
		1	0.001	0.000	45.5	45.5	0.10	135	2.722	0.203	0.055	0.014	0.050	0.012	0.114	0.011	0.242	0.020	0.088	0.059	151.49	93.55	0.018	0.003	0.004	0.001	-
		2	0.000	0.000	50.9	50.9	0.10	135	0.227	0.030	0.006	0.002	0.005	0.002	0.012	0.002	0.025	0.003	0.009	0.009	15.85	13.96	0.002	0.000	0.000	0.000	-
Grand Total			0.017	0.001	69.5	63.9	0.24	251	176.623	4.142	4.401	0.276	4.049	0.254	9.153	0.228	19.363	0.415	7.041	1.204	12,145.58	1,913.40	1.408	0.066	0.317	0.027	1,645

Harborcraft

Tug/Barge	Calls	Hours
Robyn J (Barge Jake J)	1	16.4
Robyn J (Barge Payton J)	23	16.4
Robyn J (Barge Tori J)	4	16.4
Grand Total	28	16.4

Assist Tugs

Tug	Calls	Hours Main
Scout	103.66	0.70
Tioga	103.66	0.70
Grand Total	207.32	0.70

Project - 2035

Ships

																								NOx	NOx	NOx	DPM	DPM	DPM	PM2.5	PM2.5
							Total Transit				Transit - Arrival						Transit - Departure														
	Engine	Emission		Power (kW)		Service	Distance (nm)		Comp	Distance	Speed (kts)		Main Load Factor		Comp	Distance	Speed (kts)		Main Load Factor		Time		NC Boiler		NOx			DPM			PM2.5
Ship Type	Type	Tier	Calls	Main	Aux	Speed (kts)	Arrival	Depart	(%)	(nm)	Comp	NC	Comp	NC	(%)	(nm)	Comp	NC	Comp	NC	(hrs)	Aux	Load (kW)	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux
AUTO CARRIER	SSD	1	92	11,060	2,760	20.00	35.30	35.30	0%	15.30	12.00	20.00	0.18	0.82	0%	15.30	12.00	20.00	0.18	0.82	1.53	0.15	351	21.317	0.797	-	0.353	0.016	-	0.325	0.015
BULK CARRIER	MSD	1	21	9,100	2,973	16.65	30.20	23.40	0%	10.20	11.00	16.65	0.24	0.82	0%	3.40	11.20	16.65	0.25	0.82	0.82	0.17	-	1.656	0.118	-	0.035	0.002	-	0.033	0.002
	SSD	0	18	8,139	2,325	14.60	30.20	30.20	0%	10.20	10.70	14.60	0.32	0.82	0%	10.20	12.45	14.60	0.51	0.82	1.40	0.17	-	3.155	0.152	-	0.046	0.003	-	0.043	0.003
		1	46	10,705	2,250	15.92	33.94	26.46	0%	13.94	11.13	15.92	0.28	0.82	0%	6.46	11.90	15.92	0.34	0.82	1.28	0.17	-	8.641	0.308	-	0.143	0.006	-	0.132	0.006
		2	18	9,140	2,393	15.00	11.50	48.90	0%	-	11.05	15.00	0.33	0.82	0%	28.90	12.50	15.00	0.48	0.82	1.93	0.17	-	3.622	0.154	-	0.072	0.004	-	0.066	0.004
BULK CARRIER, HL	MSD	0	23	5,738	1,950	13.00	5.75	24.45	0%	-	9.45	13.00	0.32	0.82	0%	4.45	9.45	13.00	0.32	0.82	0.34	0.17	-	0.541	0.040	-	0.010	0.001	-	0.009	0.001
CONTAINER SHIP	SSD	2	120	19,420	11,320	19.50	11.92	12.16	0%	-	11.64	19.50	0.18	0.82	0%	-	11.93	19.50	0.19	0.82	-	0.13	132	-	-	-	-	-	-	-	-
GENERAL CARGO	MSD	0	11	5,738	1,950	13.00	11.50	48.90	0%	-	10.10	13.00	0.39	0.82	0%	28.90	10.10	13.00	0.39	0.82	2.22	0.17	-	1.680	0.124	-	0.032	0.002	-	0.029	0.002
		1	57	6,400	2,367	15.34	35.98	23.74	0%	15.98	12.57	15.34	0.45	0.82	0%	3.74	12.20	15.34	0.41	0.82	1.29	0.17	-	4.976	0.403	-	0.106	0.008	-	0.098	0.007
	SSD	0	30	9,268	2,557	15.23	23.97	36.43	0%	3.97	12.07	15.23	0.41	0.82	0%	16.43	12.30	15.23	0.43	0.82	1.34	0.17	-	5.740	0.268	-	0.084	0.005	-	0.078	0.004
		1	122	12,430	2,920	16.98	26.95	34.06	0%	6.95	11.77	16.98	0.27	0.82	0%	14.06	11.86	16.98	0.28	0.82	1.24	0.17	-	25.708	1.025	-	0.426	0.021	-	0.392	0.019
		2	21	8,630	2,048	14.90	42.10	30.20	0%	22.10	10.95	14.90	0.33	0.82	0%	10.20	11.00	14.90	0.33	0.82	2.17	0.17	-	4.489	0.173	-	0.089	0.004	-	0.082	0.004
Grand Total			579	14,524	6,799	18.04	20.86	22.44	0%	5.41	11.62	18.04	0.24	0.82	0%	6.22	11.85	18.04	0.25	0.82	0.69	0.15	103	81.523	3.562	-	1.397	0.072	-	1.285	0.066

Harborcraft

			Tug Running Emissions (tons)																		Hoteling Emissions (tons)										
			NOx		DPM		PM2.5		ROG		CO		SOx		CO2		CH4		N2O		Hours		NOx		DPM		PM2.5		ROG		C
Tug/Barge	Calls	Hours	Main	Aux	Main	Aux	Main	Aux	Main	Aux	Main	Aux	Main	Aux	Main	Aux	Main	Aux	Main	Aux	Tug	Barge	Tug	Barge	Tug	Barge	Tug	Barge	Tug	Barge	Tug
Robyn J (Barge Jake J)	6	16.4	0.601	0.028	0.021	0.001	0.020	0.001	0.057	0.005	0.451	0.021	0.001	0.000	52.99	2.63	0.001	0.000	0.002	0.000	1.0	4.5	0.002	0.023	0.000	0.001	0.000	0.001	0.000	0.004	0.001
Robyn J (Barge Payton J)	127	16.4	12.723	0.594	0.434	0.022	0.421	0.021	1.198	0.100	9.553	0.452	0.013	0.001	1,121.70	55.64	0.022	0.002	0.051	0.003	1.0	4.8	0.036	0.522	0.001	0.028	0.001	0.027	0.006	0.089	0.028
Robyn J (Barge Tori J)	23	16.4	2.304	0.108	0.079	0.004	0.076	0.004	0.217	0.018	1.730	0.082	0.002	0.000	203.14	10.08	0.004	0.000	0.009	0.000	1.0	5.3	0.007	0.104	0.000	0.006	0.000	0.005	0.001	0.018	0.005
Grand Total	156	16.4	15.628	0.729	0.533	0.027	0.517	0.026	1.472	0.123	11.734	0.555	0.015	0.001	1,377.83	68.34	0.027	0.002	0.062	0.003	1.0	4.9	0.045	0.649	0.002	0.035	0.002	0.034	0.008	0.110	0.034

Assist Tugs

						Tug Running Emissions (tons)																	
		Hours per Call		Load Factors		NOx		DPM		PM2.5		ROG		CO		SOx		CO2		CH4		N2O	
Tug	Calls	Main	Aux	Main	Aux	Main	Aux	Main	Aux	Main	Aux	Main	Aux	Main	Aux	Main	Aux	Main	Aux	Main	Aux	Main	Aux
Scout	579	0.70	1.00	0.31	0.43	2.900	0.286	0.064	0.006	0.062	0.006	0.345	0.047	2.753	0.305	0.004	0.000	323.27	37.58	0.006	0.001	0.015	0.002
Tioga	579	0.70	1.00	0.31	0.43	2.900	0.229	0.064	0.009	0.062	0.009	0.345	0.039	2.753	0.174	0.004	0.000	323.27	21.47	0.006	0.001	0.015	0.001
Grand Total	1158	0.70	1.00	0.31	0.43	5.799	0.515	0.128	0.015	0.124	0.015	0.691	0.085	5.506	0.479	0.007	0.001	646.54	59.05	0.013	0.002	0.029	0.003

Project - 2035

Ships

			PM2.5	ROG	ROG	ROG	CO	CO	CO	SOx	SOx	SOx
			Transit Emissions (tons)									
	Engine	Emission			ROG			CO			SOx	
Ship Type	**Type**	**Tier**	**Boiler**	**Main**	**Aux**	**Boiler**	**Main**	**Aux**	**Boiler**	**Main**	**Aux**	**Boiler**
AUTO CARRIER	SSD	1	-	1.101	0.033	-	1.553	0.071	-	0.508	0.026	-
BULK CARRIER	MSD	1	-	0.092	0.005	-	0.156	0.011	-	0.057	0.004	-
	SSD	0	-	0.145	0.006	-	0.204	0.012	-	0.067	0.004	-
		1	-	0.446	0.013	-	0.629	0.027	-	0.206	0.010	-
		2	-	0.224	0.008	-	0.316	0.017	-	0.103	0.006	-
BULK CARRIER, HL	MSD	0	-	0.027	0.001	-	0.045	0.003	-	0.016	0.001	-
CONTAINER SHIP	SSD	2	-	-	-	-	-	-	-	-	-	-
GENERAL CARGO	MSD	0	-	0.083	0.005	-	0.140	0.010	-	0.051	0.004	-
		1	-	0.276	0.017	-	0.468	0.036	-	0.170	0.013	-
	SSD	0	-	0.263	0.010	-	0.371	0.021	-	0.122	0.008	-
		1	-	1.328	0.043	-	1.873	0.091	-	0.613	0.033	-
		2	-	0.278	0.009	-	0.392	0.019	-	0.128	0.007	-
Grand Total			-	4.263	0.150	-	6.147	0.318	-	2.041	0.116	-

			CO2	CO2	CO2	CH4	CH4	CH4	N2O	N2O	N2O
	Engine	Emission		CO2			CH4			N2O	
Ship Type	**Type**	**Tier**	**Main**	**Aux**	**Boiler**	**Main**	**Aux**	**Boiler**	**Main**	**Aux**	**Boiler**
AUTO CARRIER	SSD	1	830.09	44.32	-	0.099	0.005	-	0.025	0.001	-
BULK CARRIER	MSD	1	91.30	6.59	-	0.011	0.001	-	0.003	0.000	-
	SSD	0	109.14	7.56	-	0.013	0.001	-	0.003	0.000	-
		1	336.47	17.15	-	0.040	0.002	-	0.010	0.000	-
		2	169.01	10.73	-	0.020	0.001	-	0.005	0.000	-
BULK CARRIER, HL	MSD	0	26.42	1.99	-	0.003	0.000	-	0.001	0.000	-
CONTAINER SHIP	SSD	2	-	-	-	-	-	-	-	-	-
GENERAL CARGO	MSD	0	82.07	6.17	-	0.010	0.001	-	0.002	0.000	-
		1	274.29	22.42	-	0.034	0.003	-	0.008	0.001	-
	SSD	0	198.53	13.28	-	0.024	0.002	-	0.006	0.000	-
		1	1,001.08	57.02	-	0.119	0.007	-	0.031	0.001	-
		2	209.48	12.05	-	0.025	0.001	-	0.006	0.000	-
Grand Total			3,327.88	199.28	-	0.399	0.023	-	0.101	0.005	-

			VSR - Arrival						VSR - Departure				
	Engine	Emission	Comp	Distance	Speed (kts)		Main Load Factor		Comp	Distance	Speed (kts)		Main Loa
Ship Type	**Type**	**Tier**	**(%)**	**(nm)**	**Comp**	**NC**	**Comp**	**NC**	**(%)**	**(nm)**	**Comp**	**NC**	**Comp**
AUTO CARRIER	SSD	1	0%	20.00	12.00	16.06	0.18	0.43	0%	20.00	12.00	15.24	0.18
BULK CARRIER	MSD	1	50%	20.00	11.00	13.60	0.24	0.45	50%	20.00	11.20	13.60	0.25
	SSD	0	100%	20.00	10.70	14.60	0.32	0.82	100%	20.00	12.45	14.60	0.51
		1	60%	20.00	11.13	13.10	0.28	0.46	40%	20.00	11.90	13.07	0.34
		2	100%	11.50	11.05	15.00	0.33	0.82	100%	20.00	12.50	15.00	0.48
BULK CARRIER, HL	MSD	0	100%	5.75	9.45	13.00	0.32	0.82	100%	20.00	9.45	13.00	0.32
CONTAINER SHIP	SSD	2	86%	11.92	11.64	14.78	0.18	0.36	74%	12.16	11.93	16.06	0.19
GENERAL CARGO	MSD	0	100%	11.50	10.10	13.00	0.39	0.82	100%	20.00	10.10	13.00	0.39
		1	60%	20.00	12.57	13.20	0.45	0.52	60%	20.00	12.20	15.10	0.41
	SSD	0	100%	20.00	12.07	15.23	0.41	0.82	100%	20.00	12.30	15.23	0.43
		1	91%	20.00	11.77	13.10	0.27	0.38	45%	20.00	11.86	15.23	0.28
		2	100%	20.00	10.95	14.90	0.33	0.82	100%	20.00	11.00	14.90	0.33
Grand Total			75%	15.44	11.62	14.42	0.24	0.44	62%	16.22	11.85	15.38	0.25

Harborcraft

			O	SOx		CO2		CH4		N2O	
Tug/Barge	**Calls**	**Hours**	**Barge**	**Tug**	**Barge**	**Tug**	**Barge**	**Tug**	**Barge**	**Tug**	**Barge**
Robyn J (Barge Jake J)	6	16.4	0.018	0.000	0.000	0.16	2.07	0.000	0.000	0.000	0.000
Robyn J (Barge Payton J)	127	16.4	0.411	0.000	0.001	3.40	47.02	0.000	0.002	0.000	0.002
Robyn J (Barge Tori J)	23	16.4	0.082	0.000	0.000	0.61	9.39	0.000	0.000	0.000	0.000
Grand Total	156	16.4	0.511	0.000	0.001	4.17	58.47	0.000	0.002	0.000	0.003

Assist Tugs

		Hours
Tug	**Calls**	**Main**
Scout	579	0.70
Tioga	579	0.70
Grand Total	1158	0.70

Project - 2035

Ships

VSR Emissions (tons)

Ship Type	Engine Type	Emission Tier	ıd Factor NC	Time (hrs)	Aux	NC Boiler Load (kW)	NOx Main	NOx Aux	NOx Boiler	DPM Main	DPM Aux	DPM Boiler	PM2.5 Main	PM2.5 Aux	PM2.5 Boiler
AUTO CARRIER	SSD	1	0.36	2.56	0.15	351	17.074	1.332	-	0.283	0.027	-	0.260	0.025	-
BULK CARRIER	MSD	1	0.45	3.27	0.17	-	2.707	0.475	-	0.058	0.010	-	0.053	0.009	-
	SSD	0	0.82	3.48	0.17	-	3.911	0.379	-	0.058	0.007	-	0.053	0.006	-
		1	0.45	3.28	0.17	-	10.097	0.788	-	0.167	0.016	-	0.154	0.015	-
		2	0.82	2.64	0.17	-	2.523	0.211	-	0.050	0.005	-	0.046	0.005	-
BULK CARRIER, HL	MSD	0	0.82	2.72	0.17	-	1.653	0.318	-	0.031	0.006	-	0.029	0.005	-
CONTAINER SHIP	SSD	2	0.46	1.94	0.13	325	14.134	3.745	0.140	0.284	0.095	0.009	0.262	0.087	0.009
GENERAL CARGO	MSD	0	0.82	3.12	0.17	-	1.105	0.174	-	0.021	0.003	-	0.019	0.003	-
		1	0.78	3.07	0.17	-	7.397	0.964	-	0.158	0.019	-	0.145	0.018	-
	SSD	0	0.82	3.28	0.17	-	7.200	0.656	-	0.106	0.012	-	0.097	0.011	-
		1	0.59	3.17	0.17	-	28.182	2.621	-	0.467	0.053	-	0.429	0.049	-
		2	0.82	3.64	0.17	-	3.016	0.291	-	0.060	0.007	-	0.055	0.007	-
Grand Total			0.54	2.50	0.15	196	99.000	11.953	0.140	1.742	0.259	0.009	1.603	0.239	0.009

Ship Type	Engine Type	Emission Tier	ROG Main	ROG Aux	ROG Boiler	CO Main	CO Aux	CO Boiler	SOx Main	SOx Aux	SOx Boiler	CO2 Main	CO2 Aux	CO2 Boiler	CH4 Main	CH4 Aux	CH4 Boiler	N2O Main	N2O Aux
AUTO CARRIER	SSD	1	0.882	0.056	-	1.244	0.118	-	0.407	0.043	-	664.87	74.09	-	0.079	0.009	-	0.020	0.002
BULK CARRIER	MSD	1	0.150	0.020	-	0.255	0.042	-	0.093	0.015	-	149.25	26.42	-	0.019	0.003	-	0.004	0.001
	SSD	0	0.179	0.014	-	0.253	0.030	-	0.083	0.011	-	135.28	18.81	-	0.016	0.002	-	0.004	0.000
		1	0.522	0.033	-	0.736	0.070	-	0.241	0.025	-	393.19	43.88	-	0.047	0.005	-	0.012	0.001
		2	0.156	0.011	-	0.220	0.023	-	0.072	0.009	-	117.72	14.70	-	0.014	0.002	-	0.004	0.000
BULK CARRIER, HL	MSD	0	0.081	0.012	-	0.138	0.025	-	0.050	0.009	-	80.79	15.80	-	0.010	0.002	-	0.002	0.000
CONTAINER SHIP	SSD	2	0.951	0.197	0.008	1.333	0.416	0.014	0.407	0.151	0.041	661.92	261.00	64.61	0.085	0.030	0.002	0.020	0.007
GENERAL CARGO	MSD	0	0.054	0.007	-	0.092	0.014	-	0.033	0.005	-	53.99	8.65	-	0.007	0.001	-	0.002	0.000
		1	0.411	0.040	-	0.695	0.085	-	0.253	0.031	-	407.80	53.63	-	0.051	0.006	-	0.011	0.001
	SSD	0	0.330	0.025	-	0.466	0.052	-	0.152	0.019	-	249.02	32.56	-	0.030	0.004	-	0.008	0.001
		1	1.456	0.110	-	2.053	0.232	-	0.672	0.085	-	1,097.42	145.82	-	0.131	0.017	-	0.034	0.004
		2	0.187	0.015	-	0.263	0.032	-	0.086	0.012	-	140.75	20.26	-	0.017	0.002	-	0.004	0.001
Grand Total			5.360	0.539	0.008	7.747	1.141	0.014	2.549	0.415	0.041	4,152.00	715.62	64.61	0.504	0.083	0.002	0.125	0.019

37.103

Harborcraft

Tug/Barge	Calls	Hours
Robyn J (Barge Jake J)	6	16.4
Robyn J (Barge Payton J)	127	16.4
Robyn J (Barge Tori J)	23	16.4
Grand Total	156	16.4

Assist Tugs

Tug	Calls	Hours Main
Scout	579	0.70
Tioga	579	0.70
Grand Total	1158	0.70

Project - 2035

Ships

Ship Type	Engine Type	Emission Tier	Boiler (N2O)	Maneuvering Speed (kts)	Maneuvering Time (hrs)	Load Factors Main	Load Factors Aux	Boiler Load (kW)
AUTO CARRIER	SSD	1	-	7.00	2.41	0.04	0.45	351
BULK CARRIER	MSD	1	-	7.00	2.41	0.06	0.45	135
	SSD	0	-	7.00	2.41	0.09	0.45	132
		1	-	7.00	2.41	0.07	0.45	132
		2	-	7.00	2.41	0.08	0.45	132
BULK CARRIER, HL	MSD	0	-	7.00	2.41	0.13	0.45	132
CONTAINER SHIP	SSD	2	0.001	7.00	2.41	0.04	0.50	325
GENERAL CARGO	MSD	0	-	7.00	2.41	0.13	0.45	132
		1	-	7.00	2.41	0.08	0.45	135
	SSD	0	-	7.00	2.41	0.08	0.45	135
		1	-	7.00	2.41	0.06	0.45	135
		2	-	7.00	2.41	0.09	0.45	135
Grand Total			0.001	7.00	2.41	0.05	0.47	251

Maneuvering Emissions (tons)

Ship Type	Engine Type	Emission Tier	NOx Main	NOx Aux	NOx Boiler	DPM Main	DPM Aux	DPM Boiler	PM2.5 Main	PM2.5 Aux	PM2.5 Boiler
AUTO CARRIER	SSD	1	3.187	3.771	0.171	0.074	0.076	0.011	0.068	0.070	0.011
BULK CARRIER	MSD	1	0.657	0.927	0.015	0.016	0.019	0.001	0.015	0.017	0.001
	SSD	0	0.763	0.697	0.013	0.013	0.013	0.001	0.012	0.012	0.001
		1	2.007	1.537	0.032	0.041	0.031	0.002	0.038	0.029	0.002
		2	0.623	0.511	0.013	0.015	0.013	0.001	0.014	0.012	0.001
BULK CARRIER, HL	MSD	0	0.661	0.666	0.016	0.013	0.013	0.001	0.012	0.012	0.001
CONTAINER SHIP	SSD	2	6.572	17.894	0.207	0.182	0.452	0.014	0.168	0.416	0.013
GENERAL CARGO	MSD	0	0.280	0.319	0.008	0.006	0.006	0.001	0.006	0.006	0.000
		1	1.199	2.003	0.041	0.031	0.040	0.003	0.028	0.037	0.003
	SSD	0	1.355	1.139	0.022	0.024	0.023	0.001	0.022	0.021	0.001
		1	5.623	5.289	0.087	0.119	0.107	0.006	0.109	0.098	0.005
		2	0.658	0.639	0.015	0.015	0.013	0.001	0.014	0.012	0.001
Grand Total			23.584	35.391	0.640	0.549	0.806	0.043	0.505	0.741	0.039

Ship Type	Engine Type	Emission Tier	ROG Main	ROG Aux	ROG Boiler	CO Main	CO Aux	CO Boiler	SOx Main	SOx Aux	SOx Boiler	CO2 Main	CO2 Aux	CO2 Boiler	CH4 Main	CH4 Aux	CH4 Boiler	N2O Main
AUTO CARRIER	SSD	1	0.574	0.158	0.009	0.511	0.334	0.017	0.070	0.122	0.050	112.88	209.82	79.19	0.052	0.024	0.003	0.004
BULK CARRIER	MSD	1	0.088	0.039	0.001	0.111	0.082	0.002	0.020	0.030	0.004	31.88	51.59	6.95	0.011	0.006	0.000	0.001
	SSD	0	0.069	0.026	0.001	0.085	0.055	0.001	0.017	0.020	0.004	27.23	34.58	5.83	0.006	0.004	0.000	0.001
		1	0.252	0.064	0.002	0.281	0.136	0.003	0.049	0.050	0.009	79.22	85.51	14.89	0.023	0.010	0.001	0.002
		2	0.084	0.027	0.001	0.099	0.057	0.001	0.018	0.021	0.004	29.70	35.59	5.83	0.008	0.004	0.000	0.001
BULK CARRIER, HL	MSD	0	0.047	0.028	0.001	0.075	0.059	0.002	0.021	0.021	0.005	33.17	37.06	7.45	0.006	0.004	0.000	0.001
CONTAINER SHIP	SSD	2	1.419	0.940	0.011	1.262	1.988	0.021	0.174	0.723	0.060	278.93	1,247.19	95.64	0.127	0.145	0.003	0.009
GENERAL CARGO	MSD	0	0.027	0.013	0.000	0.036	0.028	0.001	0.009	0.010	0.002	14.46	17.72	3.56	0.002	0.002	0.000	0.000
		1	0.175	0.084	0.002	0.205	0.178	0.004	0.038	0.065	0.012	61.58	111.48	18.87	0.016	0.013	0.001	0.002
	SSD	0	0.136	0.048	0.001	0.159	0.101	0.002	0.030	0.037	0.006	47.92	63.38	9.93	0.012	0.007	0.000	0.001
		1	0.790	0.222	0.005	0.832	0.469	0.009	0.135	0.171	0.025	217.58	294.33	40.39	0.071	0.034	0.001	0.007
		2	0.081	0.027	0.001	0.099	0.057	0.002	0.020	0.021	0.004	31.69	35.53	6.95	0.007	0.004	0.000	0.001
Grand Total			3.742	1.676	0.035	3.754	3.545	0.064	0.600	1.289	0.186	966.25	2,223.77	295.48	0.340	0.258	0.010	0.030

Harborcraft

Tug/Barge	Calls	Hours
Robyn J (Barge Jake J)	6	16.4
Robyn J (Barge Payton J)	127	16.4
Robyn J (Barge Tori J)	23	16.4
Grand Total	156	16.4

Assist Tugs

Tug	Calls	Hours Main
Scout	579	0.70
Tioga	579	0.70
Grand Total	1158	0.70

Project - 2035 Reduction in hoteling time 0%

Ships

			N2O	N2O					NOx	NOx	DPM	DPM	PM2.5	PM2.5	ROG	ROG	CO	CO	SOx	SOx	CO2	CO2	CH4	CH4	N2O	N2O	
					Hotel	**Aux**	**Hotelling**		**Hotelling Emissions (tons)**																		
	Engine	**Emission**	**N2O**		**Time**	**Time**	**Auxiliary**	**Boiler**	**NOx**		**DPM**		**PM2.5**		**ROG**		**CO**		**SOx**		**CO2**		**CH4**		**N2O**		**Cold Iron**
Ship Type	**Type**	**Tier**	**Aux**	**Boiler**	**(hr)**	**(hr)**	**LF**	**Load (kW)**	**Aux**	**Boiler**	**Aux**	**Boiler**	**Aux**	**Boiler**	**Aux**	**Boiler**	**Aux**	**Boiler**	**Aux**	**Boiler**	**Aux**	**Boiler**	**Aux**	**Boiler**	**Aux**	**Boiler**	**CO2e**
AUTO CARRIER	SSD	1	0.005	0.001	27.6	27.6	0.26	351	24.874	1.957	0.501	0.130	0.461	0.120	1.043	0.108	2.207	0.196	0.802	0.569	1,384.10	904.15	0.160	0.031	0.036	0.013	-
BULK CARRIER	MSD	1	0.001	0.000	37.9	37.9	0.10	135	3.234	0.236	0.065	0.016	0.060	0.014	0.136	0.013	0.287	0.024	0.104	0.069	179.97	109.14	0.021	0.004	0.005	0.002	
	SSD	0	0.001	0.000	28.7	28.7	0.10	132	1.843	0.150	0.033	0.010	0.030	0.009	0.069	0.008	0.146	0.015	0.053	0.044	91.49	69.37	0.011	0.002	0.002	0.001	-
		1	0.002	0.000	37.8	37.8	0.10	132	5.342	0.504	0.108	0.034	0.099	0.031	0.224	0.028	0.474	0.051	0.172	0.147	297.25	232.93	0.034	0.008	0.008	0.003	-
		2	0.001	0.000	85.1	85.1	0.10	132	3.997	0.444	0.101	0.030	0.093	0.027	0.210	0.025	0.444	0.045	0.162	0.129	278.60	205.28	0.032	0.007	0.007	0.003	-
BULK CARRIER, HL	MSD	0	0.001	0.000	114.0	114.0	0.10	132	7.835	0.761	0.141	0.051	0.130	0.047	0.293	0.042	0.620	0.076	0.225	0.221	388.93	351.61	0.045	0.012	0.010	0.005	-
CONTAINER SHIP	SSD	2	0.033	0.001	88.9	77.2	0.35	325	396.487	7.623	10.012	0.508	9.211	0.468	20.826	0.420	44.054	0.764	16.020	2.216	27,633.96	3,521.30	3.204	0.122	0.721	0.050	3,949
GENERAL CARGO	MSD	0	0.000	0.000	123.0	123.0	0.10	132	3.606	0.393	0.073	0.026	0.067	0.024	0.151	0.022	0.320	0.039	0.116	0.114	200.67	181.41	0.023	0.006	0.005	0.003	
		1	0.003	0.000	62.5	62.5	0.10	135	11.525	1.058	0.232	0.071	0.214	0.065	0.483	0.058	1.022	0.106	0.372	0.307	641.34	488.54	0.074	0.017	0.017	0.007	-
	SSD	0	0.002	0.000	86.3	86.3	0.10	135	10.148	0.769	0.183	0.051	0.168	0.047	0.380	0.042	0.803	0.077	0.292	0.224	503.74	355.23	0.058	0.012	0.013	0.005	-
		1	0.008	0.001	45.5	45.5	0.10	135	22.142	1.647	0.446	0.110	0.411	0.101	0.929	0.091	1.964	0.165	0.714	0.479	1,232.09	760.84	0.143	0.026	0.032	0.011	-
		2	0.001	0.000	50.9	50.9	0.10	135	2.388	0.317	0.060	0.021	0.055	0.019	0.125	0.017	0.265	0.032	0.096	0.092	166.40	146.53	0.019	0.005	0.004	0.002	-
Grand Total			0.058	0.004	69.493	63.9	0.24	251	493.421	15.861	11.956	1.057	11.000	0.973	24.868	0.875	52.606	1.590	19.130	4.611	32,998.54	7,326.34	3.826	0.254	0.861	0.103	3,949

Harborcraft

Tug/Barge	**Calls**	**Hours**
Robyn J (Barge Jake J)	6	16.4
Robyn J (Barge Payton J)	127	16.4
Robyn J (Barge Tori J)	23	16.4
Grand Total	156	16.4

21%

Assist Tugs

Tug	**Calls**	**Hours Main**
Scout	579	0.70
Tioga	579	0.70
Grand Total	1158	0.70

TAMT Plan- 2035 - with CAP

Ships

							Total Transit		Transit - Arrival						Transit - Departure									NOx	NOx	NOx	DPM	DPM	DPM	PM2.5	PM2.5	PM2.5
	Engine	Emission		Power (kW)		Service	Distance (nm)		Comp	Distance	Speed (kts)		Main Load Factor		Comp	Distance	Speed (kts)		Main Load Factor		Time		NC Boiler	NOx			DPM			PM2.5		
Ship Type	Type	Tier	Calls	Main	Aux	Speed (kts)	Arrival	Depart	(%)	(nm)	Comp	NC	Comp	NC	(%)	(nm)	Comp	NC	Comp	NC	(hrs)	Aux	Load (kW)	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler
AUTO CARRIER	SSD	1	0.45	11,060	2,760	20.00	35.30	35.30	0%	15.30	12.00	20.00	0.18	0.82	0%	15.30	12.00	20.00	0.18	0.82	1.53	0.15	351	208.50	7.79	-	3.45	0.16	-	3.18	0.14	-
BULK CARRIER	MSD	1	0.08	9,100	2,973	16.65	30.20	23.40	0%	10.20	11.00	16.65	0.24	0.82	0%	3.40	11.20	16.65	0.25	0.82	0.82	0.17	-	12.17	0.87	-	0.26	0.02	-	0.24	0.02	-
		0	0.08	8,139	2,325	14.60	30.20	30.20	0%	10.20	10.70	14.60	0.32	0.82	0%	10.20	12.45	14.60	0.51	0.82	1.40	0.17	-	27.06	1.31	-	0.40	0.02	-	0.37	0.02	-
	SSD	1	0.19	10,705	2,250	15.92	33.94	26.46	0%	13.94	11.13	15.92	0.28	0.82	0%	6.46	11.90	15.92	0.34	0.82	1.28	0.17	-	72.48	2.58	-	1.20	0.05	-	1.10	0.05	-
		2	0.08	9,140	2,393	15.00	11.50	48.90	0%	-	11.05	15.00	0.33	0.82	0%	28.90	12.50	15.00	0.48	0.82	1.93	0.17	-	31.06	1.32	-	0.62	0.03	-	0.57	0.03	-
BULK CARRIER, HL	MSD	0	0.12	5,738	1,950	13.00	5.75	24.45	0%	-	9.45	13.00	0.32	0.82	0%	4.45	9.45	13.00	0.32	0.82	0.34	0.17	-	5.44	0.40	-	0.10	0.01	-	0.09	0.01	-
CONTAINER SHIP	SSD	2	1.93	19,420	11,320	19.50	11.92	12.16	0%	-	11.64	19.50	0.18	0.82	0%	-	11.93	19.50	0.19	0.82	-	0.13	132	-	-	-	-	-	-	-	-	-
GENERAL CARGO	MSD	0	0.04	5,738	1,950	13.00	11.50	48.90	0%	-	10.10	13.00	0.39	0.82	0%	28.90	10.10	13.00	0.39	0.82	2.22	0.17	-	11.78	0.87	-	0.22	0.02	-	0.21	0.01	-
		1	0.27	6,400	2,367	15.34	35.98	23.74	0%	15.98	12.57	15.34	0.45	0.82	0%	3.74	12.20	15.34	0.41	0.82	1.29	0.17	-	47.16	3.82	-	1.01	0.08	-	0.93	0.07	-
		0	0.12	9,268	2,557	15.23	23.97	36.43	0%	3.97	12.07	15.23	0.41	0.82	0%	16.43	12.30	15.23	0.43	0.82	1.34	0.17	-	44.30	2.06	-	0.65	0.04	-	0.60	0.03	-
	SSD	1	0.58	12,430	2,920	16.98	26.95	34.06	0%	6.95	11.77	16.98	0.27	0.82	0%	14.06	11.86	16.98	0.28	0.82	1.24	0.17	-	243.94	9.72	-	4.04	0.20	-	3.72	0.18	-
		2	0.08	8,630	2,048	14.90	42.10	30.20	0%	22.10	10.95	14.90	0.33	0.82	0%	10.20	11.00	14.90	0.33	0.82	2.17	0.17	-	32.99	1.27	-	0.65	0.03	-	0.60	0.03	-
Grand Total			4.00	14,524	6,799	18.04	20.86	22.44	0%	5.41	11.62	18.04	0.24	0.82	0%	6.22	11.85	18.04	0.25	0.82	0.69	0.15	103	736.88	32.02	-	12.60	0.65	-	11.60	0.60	-

3.8587706 =scaling factor for 2020 to 2035 (4 max daily calls / 2020 max daily calls)

Harborcraft

			Tug Running Emissions (lbs)																		Hoteling Emissions (lbs)											
			NOx		DPM		PM2.5		ROG		CO		SOx		CO2		CH4		N2O		Hours		NOx		DPM		PM2.5		ROG		CO	
Tug/Barge	Calls	Hours	Main	Aux	Main	Aux	Main	Aux	Main	Aux	Main	Aux	Main	Aux	Main	Aux	Main	Aux	Main	Aux	Tug	Barge	Tug	Barge	Tug	Barge	Tug	Barge	Tug	Barge	Tug	Barge
Robyn J (Barge Jake J)	0.14	16.4	27.612	1.289	0.942	0.047	0.914	0.046	2.600	0.218	20.733	0.980	0.027	0.001	2,434	121	0.048	0.004	0.110	0.005	1.0	4.5	0.08	1.05	0.00	0.06	0.00	0.06	0.01	0.18	0.06	0.83
Robyn J (Barge Payton J)	3.17	16.4	635.086	29.637	21.672	1.079	21.022	1.047	59.801	5.008	476.856	22.549	0.628	0.031	55,991	2,777	1.113	0.098	2.524	0.125	1.0	4.8	1.81	26.03	0.07	1.41	0.06	1.36	0.31	4.42	1.38	20.52
Robyn J (Barge Tori J)	0.55	16.4	110.450	5.154	3.769	0.188	3.656	0.182	10.400	0.871	82.931	3.922	0.109	0.005	9,738	483	0.194	0.017	0.439	0.022	1.0	5.3	0.31	4.99	0.01	0.27	0.01	0.26	0.05	0.85	0.24	3.93
Grand Total	3.86	16.4	773.148	36.079	26.384	1.314	25.592	1.275	72.801	6.097	580.520	27.451	0.764	0.038	68,163	3,381	1.355	0.119	3.072	0.152	1.0	4.9	2.202	32.078	0.080	1.732	0.078	1.680	0.372	5.449	1.675	25.282

Assist Tugs

						Tug Running Emissions (lbs)																
		Hours per Call		Load Factors		NOx		DPM		PM2.5		ROG		CO		SOx		CO2		CH4		N2O	
Tug	Calls	Main	Aux	Main	Aux	Main	Aux	Main	Aux	Main	Aux	Main	Aux	Main	Aux	Main	Aux	Main	Aux	Main	Aux	Main	Aux
Scout	4.00	0.70	1.00	0.31	0.43	40.07	3.96	0.89	0.09	0.86	0.09	4.77	0.65	38.04	4.22	0.05	0.01	4,467	519	0.089	0.013	0.201	0.023
Tioga	4.00	0.70	1.00	0.31	0.43	40.07	3.17	0.89	0.12	0.86	0.12	4.77	0.54	38.04	2.41	0.05	0.00	4,467	297	0.089	0.010	0.201	0.013
Grand Total	8.00	0.70	1.00	0.31	0.43	80.13	7.12	1.77	0.21	1.72	0.21	9.54	1.18	76.08	6.62	0.10	0.01	8,933	816	0.178	0.023	0.403	0.037

TAMT Plan- 2035 - with CAP

Ships

Ships			ROG	ROG	ROG	CO	CO	CO	SOx	SOx	SOx	CO2	CO2	CO2	CH4	CH4	CH4	N2O	N2O	N2O
			Transit Emissions (lbs)																	
	Engine	Emission		ROG			CO			SOx			CO2			CH4			N2O	
Ship Type	Type	Tier	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler
AUTO CARRIER	SSD	1	10.77	0.33	-	15.19	0.69	-	4.97	0.25	-	8,119	434	-	0.967	0.050	-	0.249	0.011	-
BULK CARRIER	MSD	1	0.68	0.04	-	1.14	0.08	-	0.42	0.03	-	671	48	-	0.083	0.006	-	0.019	0.001	-
	SSD	0	1.24	0.05	-	1.75	0.10	-	0.57	0.04	-	936	65	-	0.111	0.008	-	0.029	0.002	-
		1	3.74	0.11	-	5.28	0.23	-	1.73	0.08	-	2,822	144	-	0.336	0.017	-	0.086	0.004	-
		2	1.92	0.07	-	2.71	0.15	-	0.89	0.05	-	1,449	92	-	0.173	0.011	-	0.044	0.002	-
BULK CARRIER, HL	MSD	0	0.27	0.02	-	0.45	0.03	-	0.16	0.01	-	266	20	-	0.033	0.002	-	0.007	0.001	-
CONTAINER SHIP	SSD	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GENERAL CARGO	MSD	0	0.58	0.03	-	0.98	0.07	-	0.36	0.03	-	576	43	-	0.071	0.005	-	0.016	0.001	-
		1	2.62	0.16	-	4.43	0.34	-	1.61	0.12	-	2,600	213	-	0.322	0.025	-	0.073	0.006	-
	SSD	0	2.03	0.08	-	2.87	0.16	-	0.94	0.06	-	1,532	102	-	0.182	0.012	-	0.047	0.003	-
		1	12.60	0.41	-	17.77	0.86	-	5.82	0.31	-	9,499	541	-	1.131	0.063	-	0.291	0.014	-
		2	2.04	0.07	-	2.88	0.14	-	0.94	0.05	-	1,540	89	-	0.183	0.010	-	0.047	0.002	-
Grand Total			38.50	1.35	-	55.46	2.85	-	18.41	1.04	-	30,010	1,791	-	3.593	0.208	-	0.908	0.047	-

			VSR - Arrival						VSR - Departure							
	Engine	Emission	Comp	Distance	Speed (kts)		Main Load Factor		Comp	Distance	Speed (kts)		Main Load Factor		Time	
Ship Type	Type	Tier	(%)	(nm)	Comp	NC	Comp	NC	(%)	(nm)	Comp	NC	Comp	NC	(hrs)	Aux
AUTO CARRIER	SSD	1	80%	20.00	12.00	16.06	0.18	0.43	80%	20.00	12.00	15.24	0.18	0.36	3.18	0.15
BULK CARRIER	MSD	1	80%	20.00	11.00	13.60	0.24	0.45	80%	20.00	11.20	13.60	0.25	0.45	3.47	0.17
	SSD	0	100%	20.00	10.70	14.60	0.32	0.82	100%	20.00	12.45	14.60	0.51	0.82	3.48	0.17
		1	80%	20.00	11.13	13.10	0.28	0.46	80%	20.00	11.90	13.07	0.34	0.45	3.39	0.17
		2	100%	11.50	11.05	15.00	0.33	0.82	100%	20.00	12.50	15.00	0.48	0.82	2.64	0.17
BULK CARRIER, HL	MSD	0	100%	5.75	9.45	13.00	0.32	0.82	100%	20.00	9.45	13.00	0.32	0.82	2.72	0.17
CONTAINER SHIP	SSD	2	88%	11.92	11.64	14.78	0.18	0.36	80%	12.16	11.93	16.06	0.19	0.46	1.97	0.13
GENERAL CARGO	MSD	0	100%	11.50	10.10	13.00	0.39	0.82	100%	20.00	10.10	13.00	0.39	0.82	3.12	0.17
		1	80%	20.00	12.57	13.20	0.45	0.52	80%	20.00	12.20	15.10	0.41	0.78	3.15	0.17
	SSD	0	100%	20.00	12.07	15.23	0.41	0.82	100%	20.00	12.30	15.23	0.43	0.82	3.28	0.17
		1	91%	20.00	11.77	13.10	0.27	0.38	80%	20.00	11.86	15.23	0.28	0.59	3.30	0.17
		2	100%	20.00	10.95	14.90	0.33	0.82	100%	20.00	11.00	14.90	0.33	0.82	3.64	0.17
Grand Total			88%	15.44	11.62	14.42	0.24	0.44	83%	16.22	11.85	15.38	0.25	0.54	2.62	0.15

Harborcraft

			SOx		CO2		CH4		N2O	
Tug/Barge	Calls	Hours	Tug	Barge	Tug	Barge	Tug	Barge	Tug	Barge
Robyn J (Barge Jake J)	0.14	16.4	0.00	0.00	7	95	0.000	0.003	0.000	0.004
Robyn J (Barge Payton J)	3.17	16.4	0.00	0.03	169	2,347	0.006	0.080	0.008	0.109
Robyn J (Barge Tori J)	0.55	16.4	0.00	0.01	29	450	0.001	0.015	0.001	0.021
Grand Total	3.86	16.4	0.002	0.032	206.33	2,892	0.007	0.099	0.009	0.135

Assist Tugs

		Hours
Tug	Calls	Main
Scout	4.00	0.70
Tioga	4.00	0.70
Grand Total	8.00	0.70

TAMT Plan- 2035 - with CAP

Ships				NOx	NOx	NOx	DPM	DPM	DPM	PM2.5	PM2.5	PM2.5	ROG	ROG	ROG	CO	CO	CO	SOx	SOx	SOx	CO2	CO2	CO2	CH4	CH4	CH4	N2O	N2O	N2O			
			NC	VSR Emissions (lbs)																											Maneuverin		
	Engine	Emission	Boiler		NOx			DPM			PM2.5			ROG			CO			SOx			CO2			CH4			N2O		Speed	Time	Load F
Ship Type	Type	Tier	Load (kW)	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler	(kts)	(hrs)	Main
AUTO CARRIER	SSD	1	351	113.47	16.18	1.85	1.90	0.33	0.12	1.75	0.30	0.11	6.23	0.68	0.10	8.78	1.44	0.19	2.72	0.52	0.54	4,449	901	856	0.559	0.104	0.030	0.135	0.023	0.012	7.00	2.41	0.04
BULK CARRIER	MSD	1	-	17.51	3.70	-	0.37	0.07	-	0.34	0.07	-	0.97	0.16	-	1.65	0.33	-	0.60	0.12	-	965	206	-	0.120	0.024	-	0.027	0.005	-	7.00	2.41	0.06
	SSD	0	-	33.54	3.25	-	0.49	0.06	-	0.45	0.05	-	1.54	0.12	-	2.17	0.26	-	0.71	0.09	-	1,160	161	-	0.138	0.019	-	0.036	0.004	-	7.00	2.41	0.09
		1	-	78.76	6.84	-	1.30	0.14	-	1.20	0.13	-	4.07	0.29	-	5.74	0.61	-	1.88	0.22	-	3,067	381	-	0.365	0.044	-	0.094	0.010	-	7.00	2.41	0.07
		2	-	21.63	1.81	-	0.43	0.05	-	0.39	0.04	-	1.34	0.10	-	1.89	0.20	-	0.62	0.07	-	1,009	126	-	0.120	0.015	-	0.031	0.003	-	7.00	2.41	0.08
BULK CARRIER, HL	MSD	0	-	16.64	3.20	-	0.32	0.06	-	0.29	0.05	-	0.82	0.12	-	1.39	0.25	-	0.50	0.09	-	813	159	-	0.101	0.018	-	0.023	0.004	-	7.00	2.41	0.13
CONTAINER SHIP	SSD	2	325	441.80	121.77	4.74	8.90	3.08	0.32	8.18	2.83	0.29	29.89	6.40	0.26	41.86	13.53	0.48	12.72	4.92	1.38	20,694	8,487	2,192	2.682	0.984	0.076	0.631	0.221	0.031	7.00	2.41	0.04
GENERAL CARGO	MSD	0	-	7.75	1.22	-	0.15	0.02	-	0.14	0.02	-	0.38	0.05	-	0.65	0.10	-	0.23	0.04	-	379	61	-	0.047	0.007	-	0.011	0.002	-	7.00	2.41	0.13
		1	-	66.23	9.37	-	1.42	0.19	-	1.30	0.17	-	3.68	0.39	-	6.23	0.83	-	2.26	0.30	-	3,651	521	-	0.453	0.060	-	0.102	0.014	-	7.00	2.41	0.08
	SSD	0	-	55.56	5.06	-	0.82	0.09	-	0.75	0.08	-	2.55	0.19	-	3.60	0.40	-	1.18	0.15	-	1,922	251	-	0.229	0.029	-	0.059	0.007	-	7.00	2.41	0.08
		1	-	241.99	25.88	-	4.01	0.52	-	3.69	0.48	-	12.50	1.09	-	17.63	2.30	-	5.77	0.83	-	9,423	1,440	-	1.122	0.167	-	0.288	0.038	-	7.00	2.41	0.06
		2	-	22.17	2.14	-	0.44	0.05	-	0.40	0.05	-	1.37	0.11	-	1.94	0.24	-	0.63	0.09	-	1,034	149	-	0.123	0.017	-	0.032	0.004	-	7.00	2.41	0.09
Grand Total			196	1,117.04	200.43	6.60	20.54	4.65	0.44	18.90	4.28	0.40	65.34	9.68	0.36	93.50	20.47	0.66	29.83	7.45	1.92	48,567	12,843	3,047	6.059	1.489	0.106	1.468	0.335	0.043	7.00	2.41	0.05

Harborcraft

Tug/Barge	Calls	Hours
Robyn J (Barge Jake J)	0.14	16.4
Robyn J (Barge Payton J)	3.17	16.4
Robyn J (Barge Tori J)	0.55	16.4
Grand Total	3.86	16.4

Assist Tugs

		Hours
Tug	Calls	Main
Scout	4.00	0.70
Tioga	4.00	0.70
Grand Total	8.00	0.70

TAMT Plan- 2035 - with CAP

Reduction in hoteling time 0%

Ships

Ship Type	Engine Type	Emission Tier	g actors Aux	Boiler Load (kW)	NOx Main	NOx Aux	NOx Boiler	DPM Main	DPM Aux	DPM Boiler	PM2.5 Main	PM2.5 Aux	PM2.5 Boiler	ROG Main	ROG Aux	ROG Boiler	CO Main	CO Aux	CO Boiler	SOx Main	SOx Aux	SOx Boiler	CO2 Main	CO2 Aux	CO2 Boiler	CH4 Main	CH4 Aux	CH4 Boiler	N2O Main	N2O Aux	N2O Boiler	Hotel Time (hr)	Aux Time (hr)	Hote Auxiliary LF
					NOx	NOx	NOx	DPM	DPM	DPM	PM2.5	PM2.5	PM2.5	ROG	ROG	ROG	CO	CO	CO	SOx	SOx	SOx	CO2	CO2	CO2	CH4	CH4	CH4	N2O	N2O	N2O			
					Maneuvering Emissions (lbs)																													
AUTO CARRIER	SSD	1	0.45	351	31.18	36.88	1.68	0.72	0.74	0.11	0.66	0.68	0.10	5.62	1.55	0.09	4.99	3.27	0.17	0.69	1.19	0.49	1,104	2,052	775	0.504	0.238	0.027	0.037	0.054	0.011	24.0	24.0	0.26
BULK CARRIER	MSD	1	0.45	135	4.83	6.81	0.11	0.12	0.14	0.01	0.11	0.13	0.01	0.65	0.29	0.01	0.82	0.60	0.01	0.15	0.22	0.03	234	379	51	0.080	0.044	0.002	0.007	0.010	0.001	24.0	24.0	0.10
	SSD	0	0.45	132	6.54	5.97	0.11	0.11	0.11	0.01	0.10	0.10	0.01	0.60	0.22	0.01	0.73	0.47	0.01	0.14	0.17	0.03	233	297	50	0.053	0.034	0.002	0.007	0.008	0.001	24.0	24.0	0.10
		1	0.45	132	16.83	12.89	0.27	0.34	0.26	0.02	0.32	0.24	0.02	2.11	0.54	0.01	2.36	1.14	0.03	0.41	0.42	0.08	665	717	125	0.189	0.083	0.004	0.020	0.019	0.002	24.0	24.0	0.10
		2	0.45	132	5.34	4.38	0.11	0.13	0.11	0.01	0.12	0.10	0.01	0.72	0.23	0.01	0.85	0.49	0.01	0.16	0.18	0.03	255	305	50	0.065	0.035	0.002	0.008	0.008	0.001	24.0	24.0	0.10
BULK CARRIER, HL	MSD	0	0.45	132	6.65	6.70	0.16	0.14	0.14	0.01	0.12	0.12	0.01	0.47	0.28	0.01	0.76	0.59	0.02	0.21	0.22	0.05	334	373	75	0.058	0.043	0.003	0.009	0.010	0.001	24.0	24.0	0.10
CONTAINER SHIP	SSD	2	0.50	325	211.33	575.42	6.66	5.86	14.53	0.44	5.39	13.37	0.41	45.64	30.22	0.37	40.57	63.94	0.67	5.60	23.25	1.94	8,969	40,105	3,075	4.096	4.650	0.107	0.302	1.046	0.043	24.0	8.2	0.35
GENERAL CARGO	MSD	0	0.45	132	1.97	2.23	0.05	0.05	0.05	0.00	0.04	0.04	0.00	0.19	0.09	0.00	0.25	0.20	0.01	0.06	0.07	0.02	101	124	25	0.017	0.014	0.001	0.003	0.003	0.000	24.0	24.0	0.10
		1	0.45	135	11.36	18.99	0.39	0.29	0.38	0.03	0.27	0.35	0.02	1.65	0.80	0.02	1.94	1.68	0.04	0.36	0.61	0.11	584	1,057	179	0.149	0.122	0.006	0.017	0.028	0.003	24.0	24.0	0.10
	SSD	0	0.45	135	10.46	8.79	0.17	0.18	0.18	0.01	0.17	0.16	0.01	1.05	0.37	0.01	1.23	0.78	0.02	0.23	0.28	0.05	370	489	77	0.094	0.057	0.003	0.011	0.013	0.001	24.0	24.0	0.10
		1	0.45	135	53.35	50.19	0.83	1.13	1.01	0.06	1.04	0.93	0.05	7.49	2.10	0.05	7.89	4.45	0.08	1.28	1.62	0.24	2,065	2,793	383	0.672	0.324	0.013	0.064	0.073	0.005	24.0	24.0	0.10
		2	0.45	135	4.84	4.69	0.11	0.11	0.09	0.01	0.10	0.09	0.01	0.59	0.20	0.01	0.73	0.42	0.01	0.14	0.15	0.03	233	261	51	0.053	0.030	0.002	0.007	0.007	0.001	24.0	24.0	0.10
Grand Total			0.47	251	364.68	733.96	10.64	9.17	17.74	0.71	8.44	16.32	0.65	66.78	36.89	0.59	63.11	78.04	1.07	9.43	28.38	3.09	15,147	48,953	4,916	6.031	5.676	0.171	0.491	1.277	0.069	24.0	16.4	0.24

Harborcraft

Tug/Barge	Calls	Hours
Robyn J (Barge Jake J)	0.14	16.4
Robyn J (Barge Payton J)	3.17	16.4
Robyn J (Barge Tori J)	0.55	16.4
Grand Total	3.86	16.4

Assist Tugs

Tug	Calls	Hours Main
Scout	4.00	0.70
Tioga	4.00	0.70
Grand Total	8.00	0.70

TAMT Plan- 2035 - with CAP

Ships

				NOx	NOx	DPM	DPM	PM2.5	PM2.5	ROG	ROG	CO	CO	SOx	SOx	CO2	CO2	CH4	CH4	N2O	N2O	
			ɛlling									Hotelling Emissions (lbs)										
	Engine	Emission	Boiler	NOx		DPM		PM2.5		ROG		CO		SOx		CO2		CH4		N2O		Cold Iron
Ship Type	**Type**	**Tier**	**Load (kW)**	**Aux**	**Boiler**	**Aux**	**Boiler**	**Aux**	**Boiler**	**Aux**	**Boiler**	**Aux**	**Boiler**	**Aux**	**Boiler**	**Aux**	**Boiler**	**Aux**	**Boiler**	**Aux**	**Boiler**	**CO2e**
AUTO CARRIER	SSD	1	351	211.83	16.67	4.27	1.11	3.93	1.02	8.88	0.92	18.79	1.67	6.83	4.85	11,787	7,700	1.367	0.267	0.307	0.109	-
BULK CARRIER	MSD	1	135	15.05	1.10	0.30	0.07	0.28	0.07	0.63	0.06	1.34	0.11	0.49	0.32	838	508	0.097	0.018	0.022	0.007	
	SSD	0	132	13.20	1.08	0.24	0.07	0.22	0.07	0.49	0.06	1.04	0.11	0.38	0.31	655	497	0.076	0.017	0.017	0.007	-
		1	132	28.48	2.69	0.57	0.18	0.53	0.16	1.19	0.15	2.53	0.27	0.92	0.78	1,585	1,242	0.184	0.043	0.041	0.018	-
		2	132	9.67	1.08	0.24	0.07	0.22	0.07	0.51	0.06	1.07	0.11	0.39	0.31	674	497	0.078	0.017	0.018	0.007	-
BULK CARRIER, HL	MSD	0	132	16.60	1.61	0.30	0.11	0.27	0.10	0.62	0.09	1.31	0.16	0.48	0.47	824	745	0.096	0.026	0.021	0.011	-
CONTAINER SHIP	SSD	2	325	1,346.33	66.19	34.00	4.41	31.28	4.06	70.72	3.65	149.59	6.64	54.40	19.24	93,835	30,573	10.879	1.062	2.448	0.431	184,799
GENERAL CARGO	MSD	0	132	4.94	0.54	0.10	0.04	0.09	0.03	0.21	0.03	0.44	0.05	0.16	0.16	275	248	0.032	0.009	0.007	0.004	
		1	135	41.94	3.85	0.85	0.26	0.78	0.24	1.76	0.21	3.72	0.39	1.35	1.12	2,334	1,778	0.271	0.062	0.061	0.025	-
	SSD	0	135	21.77	1.65	0.39	0.11	0.36	0.10	0.81	0.09	1.72	0.17	0.63	0.48	1,081	762	0.125	0.026	0.028	0.011	-
		1	135	110.87	8.25	2.24	0.55	2.06	0.51	4.65	0.45	9.84	0.83	3.58	2.40	6,170	3,810	0.715	0.132	0.161	0.054	-
		2	135	8.28	1.10	0.21	0.07	0.19	0.07	0.43	0.06	0.92	0.11	0.33	0.32	577	508	0.067	0.018	0.015	0.007	-
Grand Total			251	1,828.96	105.79	43.71	7.05	40.21	6.49	90.91	5.83	192.31	10.61	69.93	30.76	120,634	48,867	13.987	1.697	3.147	0.689	184,799

Harborcraft

Tug/Barge	Calls	Hours
Robyn J (Barge Jake J)	0.14	16.4
Robyn J (Barge Payton J)	3.17	16.4
Robyn J (Barge Tori J)	0.55	16.4
Grand Total	3.86	16.4

Assist Tugs

Tug	Calls	Hours Main
Scout	4.00	0.70
Tioga	4.00	0.70
Grand Total	8.00	0.70

TAMT 2013-2014_CAP
Annual Summary

TAMT Plan- 2035 - with CAP

Ships

Ship Type	Engine Type	Emission Tier	Calls	Power (kW) Main	Power (kW) Aux	Service Speed (kts)	Total Transit Distance (nm) Arrival	Total Transit Distance (nm) Depart	Transit - Arrival Comp (%)	Distance (nm)	Speed (kts) Comp	Speed (kts) NC	Main Load Factor Comp	Main Load Factor NC
AUTO CARRIER	SSD	1	92	11,060	2,760	20.00	35.30	35.30	0%	15.30	12.00	20.00	0.18	0.82
BULK CARRIER	MSD	1	21	9,100	2,973	16.65	30.20	23.40	0%	10.20	11.00	16.65	0.24	0.82
	SSD	0	18	8,139	2,325	14.60	30.20	30.20	0%	10.20	10.70	14.60	0.32	0.82
		1	46	10,705	2,250	15.92	33.94	26.46	0%	13.94	11.13	15.92	0.28	0.82
		2	18	9,140	2,393	15.00	11.50	48.90	0%	-	11.05	15.00	0.33	0.82
BULK CARRIER, HL	MSD	0	23	5,738	1,950	13.00	5.75	24.45	0%	-	9.45	13.00	0.32	0.82
CONTAINER SHIP	SSD	2	120	19,420	11,320	19.50	11.92	12.16	0%	-	11.64	19.50	0.18	0.82
GENERAL CARGO	MSD	0	11	5,738	1,950	13.00	11.50	48.90	0%	-	10.10	13.00	0.39	0.82
		1	57	6,400	2,367	15.34	35.98	23.74	0%	15.98	12.57	15.34	0.45	0.82
	SSD	0	30	9,268	2,557	15.23	23.97	36.43	0%	3.97	12.07	15.23	0.41	0.82
		1	122	12,430	2,920	16.98	26.95	34.06	0%	6.95	11.77	16.98	0.27	0.82
		2	21	8,630	2,048	14.90	42.10	30.20	0%	22.10	10.95	14.90	0.33	0.82
Grand Total			579	14,512	6,785	18.04	20.90	22.48	0%	5.45	11.62	18.04	0.24	0.82

Ship Type	Engine Type	Emission Tier	Transit - Departure Comp (%)	Distance (nm)	Speed (kts) Comp	Speed (kts) NC	Main Load Factor Comp	Main Load Factor NC	Time (hrs)	Aux	NC Boiler Load (kW)	NOx Main	NOx Aux	NOx Boiler	DPM Main	DPM Aux	DPM Boiler	PM2.5 Main	PM2.5 Aux	PM2.5 Boiler	ROG Main
												NOx	NOx	NOx	DPM	DPM	DPM	PM2.5	PM2.5	PM2.5	ROG
AUTO CARRIER	SSD	1	0%	15.30	12.00	20.00	0.18	0.82	1.53	0.15	351	21.317	0.797	-	0.353	0.016	-	0.325	0.015	-	1.101
BULK CARRIER	MSD	1	0%	3.40	11.20	16.65	0.25	0.82	0.82	0.17	-	1.656	0.118	-	0.035	0.002	-	0.033	0.002	-	0.092
	SSD	0	0%	10.20	12.45	14.60	0.51	0.82	1.40	0.17	-	3.155	0.152	-	0.046	0.003	-	0.043	0.003	-	0.145
		1	0%	6.46	11.90	15.92	0.34	0.82	1.28	0.17	-	8.641	0.308	-	0.143	0.006	-	0.132	0.006	-	0.446
		2	0%	28.90	12.50	15.00	0.48	0.82	1.93	0.17	-	3.622	0.154	-	0.072	0.004	-	0.066	0.004	-	0.224
BULK CARRIER, HL	MSD	0	0%	4.45	9.45	13.00	0.32	0.82	0.34	0.17	-	0.541	0.040	-	0.010	0.001	-	0.009	0.001	-	0.027
CONTAINER SHIP	SSD	2	0%	-	11.93	19.50	0.19	0.82	-	0.13	132	-	-	-	-	-	-	-	-	-	-
GENERAL CARGO	MSD	0	0%	28.90	10.10	13.00	0.39	0.82	2.22	0.17	-	1.680	0.124	-	0.032	0.002	-	0.029	0.002	-	0.083
		1	0%	3.74	12.20	15.34	0.41	0.82	1.29	0.17	-	4.976	0.403	-	0.106	0.008	-	0.098	0.007	-	0.276
	SSD	0	0%	16.43	12.30	15.23	0.43	0.82	1.34	0.17	-	5.740	0.268	-	0.084	0.005	-	0.078	0.004	-	0.263
		1	0%	14.06	11.86	16.98	0.28	0.82	1.24	0.17	-	25.708	1.025	-	0.426	0.021	-	0.392	0.019	-	1.328
		2	0%	10.20	11.00	14.90	0.33	0.82	2.17	0.17	-	4.489	0.173	-	0.089	0.004	-	0.082	0.004	-	0.278
Grand Total			0%	6.25	11.85	18.04	0.25	0.82	0.69	0.15	104	81.523	3.562	-	1.397	0.072	-	1.285	0.066	-	4.263

Harborcraft

Tug Running Emissions (tons)

Tug/Barge	Calls	Hours	NOx Main	NOx Aux	DPM Main	DPM Aux	PM2.5 Main	PM2.5 Aux	ROG Main	ROG Aux	CO Main	CO Aux	SOx Main	SOx Aux	CO2 Main	CO2 Aux	CH4 Main	CH4 Aux	N2O Main	N2O Aux
Robyn J (Barge Jake J)	6	16.4	0.601	0.028	0.021	0.001	0.020	0.001	0.057	0.005	0.451	0.021	0.001	0.000	52.99	2.63	0.001	0.000	0.002	0.000
Robyn J (Barge Payton J)	127	16.4	12.723	0.594	0.434	0.022	0.421	0.021	1.198	0.100	9.553	0.452	0.013	0.001	1,121.70	55.64	0.022	0.002	0.051	0.003
Robyn J (Barge Tori J)	23	16.4	2.304	0.108	0.079	0.004	0.076	0.004	0.217	0.018	1.730	0.082	0.002	0.000	203.14	10.08	0.004	0.000	0.009	0.000
Grand Total	156	16.4	15.628	0.729	0.533	0.027	0.517	0.026	1.472	0.123	11.734	0.555	0.015	0.001	1,377.83	68.34	0.027	0.002	0.062	0.003

Hoteling Emissions (tons)

Tug/Barge	Hours Tug	Hours Barge	NOx Tug	NOx Barge	DPM Tug	DPM Barge	PM2.5 Tug	PM2.5 Barge	ROG Tug	ROG Barge	CO Tug	CO Barge	SC Tug
Robyn J (Barge Jake J)	1.0	4.5	0.002	0.023	0.000	0.001	0.000	0.001	0.000	0.004	0.001	0.018	0.000
Robyn J (Barge Payton J)	1.0	4.8	0.036	0.522	0.001	0.028	0.001	0.027	0.006	0.089	0.028	0.411	0.000
Robyn J (Barge Tori J)	1.0	5.3	0.007	0.104	0.000	0.006	0.000	0.005	0.001	0.018	0.005	0.082	0.000
Grand Total	1.0	4.9	0.045	0.649	0.002	0.035	0.002	0.034	0.008	0.110	0.034	0.511	0.000

Assist Tugs

Tug Running Emissions (tons)

Tug	Calls	Hours per Call Main	Hours per Call Aux	Load Factors Main	Load Factors Aux	NOx Main	NOx Aux	DPM Main	DPM Aux	PM2.5 Main	PM2.5 Aux	ROG Main	ROG Aux	CO Main	CO Aux	SOx Main	SOx Aux	CO2 Main	CO2 Aux	CH4 Main	CH4 Aux	N2O Main	N2O Aux
Scout	579	0.70	1.00	0.31	0.43	2.900	0.286	0.064	0.006	0.062	0.006	0.345	0.047	2.753	0.305	0.004	0.000	323.27	37.58	0.006	0.001	0.015	0.002
Tioga	579	0.70	1.00	0.31	0.43	2.900	0.229	0.064	0.009	0.062	0.009	0.345	0.039	2.753	0.174	0.004	0.000	323.27	21.47	0.006	0.001	0.015	0.001
Grand Total	1158	0.70	1.00	0.31	0.43	5.799	0.515	0.128	0.015	0.124	0.015	0.691	0.085	5.506	0.479	0.007	0.001	646.54	59.05	0.013	0.002	0.029	0.003

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Ships

Transit Emissions (tons)

Ship Type	Engine Type	Emission Tier	ROG Aux	ROG Boiler	CO Main	CO Aux	CO Boiler	SOx Main	SOx Aux	SOx Boiler	CO2 Main	CO2 Aux	CO2 Boiler	CH4 Main	CH4 Aux	CH4 Boiler	N2O Main	N2O Aux	N2O Boiler
AUTO CARRIER	SSD	1	0.033	-	1.553	0.071	-	0.508	0.026	-	830.09	44.32	-	0.099	0.005	-	0.025	0.001	-
BULK CARRIER	MSD	1	0.005	-	0.156	0.011	-	0.057	0.004	-	91.30	6.59	-	0.011	0.001	-	0.003	0.000	-
	SSD	0	0.006	-	0.204	0.012	-	0.067	0.004	-	109.14	7.56	-	0.013	0.001	-	0.003	0.000	-
		1	0.013	-	0.629	0.027	-	0.206	0.010	-	336.47	17.15	-	0.040	0.002	-	0.010	0.000	-
		2	0.008	-	0.316	0.017	-	0.103	0.006	-	169.01	10.73	-	0.020	0.001	-	0.005	0.000	-
BULK CARRIER, HL	MSD	0	0.001	-	0.045	0.003	-	0.016	0.001	-	26.42	1.99	-	0.003	0.000	-	0.001	0.000	-
CONTAINER SHIP	SSD	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GENERAL CARGO	MSD	0	0.005	-	0.140	0.010	-	0.051	0.004	-	82.07	6.17	-	0.010	0.001	-	0.002	0.000	-
		1	0.017	-	0.468	0.036	-	0.170	0.013	-	274.29	22.42	-	0.034	0.003	-	0.008	0.001	-
	SSD	0	0.010	-	0.371	0.021	-	0.122	0.008	-	198.53	13.28	-	0.024	0.002	-	0.006	0.000	-
		1	0.043	-	1.873	0.091	-	0.613	0.033	-	1,001.08	57.02	-	0.119	0.007	-	0.031	0.001	-
		2	0.009	-	0.392	0.019	-	0.128	0.007	-	209.48	12.05	-	0.025	0.001	-	0.006	0.000	-
Grand Total			0.150	-	6.147	0.318	-	2.041	0.116	-	3,327.88	199.28	-	0.399	0.023	-	0.101	0.005	-

Ship Type	Engine Type	Emission Tier	VSR - Arrival Comp (%)	VSR - Arrival Distance (nm)	VSR - Arrival Speed (kts) Comp	VSR - Arrival Speed (kts) NC	VSR - Arrival Main Load Factor Comp	VSR - Arrival Main Load Factor NC	VSR - Departure Comp (%)	VSR - Departure Distance (nm)	VSR - Departure Speed (kts) Comp	VSR - Departure Speed (kts) NC	VSR - Departure Main Load Factor Comp	VSR - Departure Main Load Factor NC	Time (hrs)	Aux	NC Boiler Load (kW)
AUTO CARRIER	SSD	1	80%	20.00	12.00	16.06	0.18	0.43	80%	20.00	12.00	15.24	0.18	0.36	3.18	0.15	351
BULK CARRIER	MSD	1	80%	20.00	11.00	13.60	0.24	0.45	80%	20.00	11.20	13.60	0.25	0.45	3.47	0.17	-
	SSD	0	100%	20.00	10.70	14.60	0.32	0.82	100%	20.00	12.45	14.60	0.51	0.82	3.48	0.17	-
		1	80%	20.00	11.13	13.10	0.28	0.46	80%	20.00	11.90	13.07	0.34	0.45	3.39	0.17	-
		2	100%	11.50	11.05	15.00	0.33	0.82	100%	20.00	12.50	15.00	0.48	0.82	2.64	0.17	-
BULK CARRIER, HL	MSD	0	100%	5.75	9.45	13.00	0.32	0.82	100%	20.00	9.45	13.00	0.32	0.82	2.72	0.17	-
CONTAINER SHIP	SSD	2	88%	11.92	11.64	14.78	0.18	0.36	80%	12.16	11.93	16.06	0.19	0.46	1.97	0.13	325
GENERAL CARGO	MSD	0	100%	11.50	10.10	13.00	0.39	0.82	100%	20.00	10.10	13.00	0.39	0.82	3.12	0.17	-
		1	80%	20.00	12.57	13.20	0.45	0.52	80%	20.00	12.20	15.10	0.41	0.78	3.15	0.17	-
	SSD	0	100%	20.00	12.07	15.23	0.41	0.82	100%	20.00	12.30	15.23	0.43	0.82	3.28	0.17	-
		1	91%	20.00	11.77	13.10	0.27	0.38	80%	20.00	11.86	15.23	0.28	0.59	3.30	0.17	-
		2	100%	20.00	10.95	14.90	0.33	0.82	100%	20.00	11.00	14.90	0.33	0.82	3.64	0.17	-
Grand Total			88%	15.46	11.62	14.42	0.24	0.44	83%	16.23	11.85	15.38	0.25	0.53	2.62	0.15	197

Harborcraft

Tug/Barge	Calls	Hours	ɔx Barge	CO2 Tug	CO2 Barge	CH4 Tug	CH4 Barge	N2O Tug	N2O Barge
Robyn J (Barge Jake J)	6	16.4	0.000	0.16	2.07	0.000	0.000	0.000	0.000
Robyn J (Barge Payton J)	127	16.4	0.001	3.40	47.02	0.000	0.002	0.000	0.002
Robyn J (Barge Tori J)	23	16.4	0.000	0.61	9.39	0.000	0.000	0.000	0.000
Grand Total	156	16.4	0.001	4.17	58.47	0.000	0.002	0.000	0.003

Assist Tugs

Tug	Calls	Hours p Main
Scout	579	0.70
Tioga	579	0.70
Grand Total	1158	0.70

TAMT Plan- 2035 - with CAP

Ships			NOx	NOx	NOx	DPM	DPM	DPM	PM2.5	PM2.5	PM2.5	ROG	ROG	ROG	CO	CO	CO
			VSR Emissions (tons)														
	Engine	Emission	NOx			DPM			PM2.5			ROG			CO		
Ship Type	Type	Tier	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler
AUTO CARRIER	SSD	1	11.601	1.655	0.189	0.195	0.033	0.013	0.179	0.031	0.012	0.637	0.069	0.010	0.898	0.147	0.019
BULK CARRIER	MSD	1	2.382	0.504	-	0.051	0.010	-	0.047	0.009	-	0.132	0.021	-	0.224	0.045	-
	SSD	0	3.911	0.379	-	0.058	0.007	-	0.053	0.006	-	0.179	0.014	-	0.253	0.030	-
		1	9.389	0.816	-	0.155	0.016	-	0.143	0.015	-	0.485	0.034	-	0.684	0.072	-
		2	2.523	0.211	-	0.050	0.005	-	0.046	0.005	-	0.156	0.011	-	0.220	0.023	-
BULK CARRIER, HL	MSD	0	1.653	0.318	-	0.031	0.006	-	0.029	0.005	-	0.081	0.012	-	0.138	0.025	-
CONTAINER SHIP	SSD	2	13.739	3.787	0.148	0.277	0.096	0.010	0.255	0.088	0.009	0.930	0.199	0.008	1.302	0.421	0.015
GENERAL CARGO	MSD	0	1.105	0.174	-	0.021	0.003	-	0.019	0.003	-	0.054	0.007	-	0.092	0.014	-
		1	6.988	0.988	-	0.149	0.020	-	0.137	0.018	-	0.388	0.041	-	0.657	0.088	-
	SSD	0	7.200	0.656	-	0.106	0.012	-	0.097	0.011	-	0.330	0.025	-	0.466	0.052	-
		1	25.502	2.727	-	0.422	0.055	-	0.388	0.051	-	1.317	0.114	-	1.858	0.242	-
		2	3.016	0.291	-	0.060	0.007	-	0.055	0.007	-	0.187	0.015	-	0.263	0.032	-
Grand Total			89.009	12.506	0.337	1.575	0.271	0.022	1.449	0.249	0.021	4.877	0.563	0.019	7.055	1.191	0.034

Ships			SOx	SOx	SOx	CO2	CO2	CO2	CH4	CH4	CH4	N2O	N2O	N2O					
			VSR Emissions (tons)												Maneuvering				
	Engine	Emission	SOx			CO2			CH4			N2O			Speed	Time	Load Factors		Boiler
Ship Type	Type	Tier	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler	(kts)	(hrs)	Main	Aux	Load (kW)
AUTO CARRIER	SSD	1	0.278	0.053	0.055	454.86	92.07	87.47	0.057	0.011	0.003	0.014	0.002	0.001	7.00	2.41	0.04	0.45	351
BULK CARRIER	MSD	1	0.081	0.016	-	131.31	28.02	-	0.016	0.003	-	0.004	0.001	-	7.00	2.41	0.06	0.45	135
	SSD	0	0.083	0.011	-	135.28	18.81	-	0.016	0.002	-	0.004	0.000	-	7.00	2.41	0.09	0.45	132
		1	0.224	0.026	-	365.62	45.40	-	0.044	0.005	-	0.011	0.001	-	7.00	2.41	0.07	0.45	132
		2	0.072	0.009	-	117.72	14.70	-	0.014	0.002	-	0.004	0.000	-	7.00	2.41	0.08	0.45	132
BULK CARRIER, HL	MSD	0	0.050	0.009	-	80.79	15.80	-	0.010	0.002	-	0.002	0.000	-	7.00	2.41	0.13	0.45	132
CONTAINER SHIP	SSD	2	0.395	0.153	0.043	643.54	263.94	68.15	0.083	0.031	0.002	0.020	0.007	0.001	7.00	2.41	0.04	0.50	325
GENERAL CARGO	MSD	0	0.033	0.005	-	53.99	8.65	-	0.007	0.001	-	0.002	0.000	-	7.00	2.41	0.13	0.45	132
		1	0.239	0.032	-	385.22	54.99	-	0.048	0.006	-	0.011	0.001	-	7.00	2.41	0.08	0.45	135
	SSD	0	0.152	0.019	-	249.02	32.56	-	0.030	0.004	-	0.008	0.001	-	7.00	2.41	0.08	0.45	135
		1	0.608	0.088	-	993.07	151.76	-	0.118	0.018	-	0.030	0.004	-	7.00	2.41	0.06	0.45	135
		2	0.086	0.012	-	140.75	20.26	-	0.017	0.002	-	0.004	0.001	-	7.00	2.41	0.09	0.45	135
Grand Total			2.303	0.433	0.098	3,751.18	746.97	155.62	0.460	0.087	0.005	0.113	0.019	0.002	7.00	2.41	0.05	0.47	251

Harborcraft

Tug/Barge	Calls	Hours
Robyn J (Barge Jake J)	6	16.4
Robyn J (Barge Payton J)	127	16.4
Robyn J (Barge Tori J)	23	16.4
Grand Total	156	16.4

Assist Tugs

		Hours p
Tug	Calls	Main
Scout	579	0.70
Tioga	579	0.70
Grand Total	1158	0.70

TAMT Plan- 2035 - with CAP

Reduction in hoteling time 0%

Ships

Maneuvering Emissions (tons)

Ship Type	Engine Type	Emission Tier	NOx Main	NOx Aux	NOx Boiler	DPM Main	DPM Aux	DPM Boiler	PM2.5 Main	PM2.5 Aux	PM2.5 Boiler	ROG Main	ROG Aux	ROG Boiler	CO Main	CO Aux	CO Boiler
AUTO CARRIER	SSD	1	3.187	3.771	0.171	0.074	0.076	0.011	0.068	0.070	0.011	0.574	0.158	0.009	0.511	0.334	0.017
BULK CARRIER	MSD	1	0.657	0.927	0.015	0.016	0.019	0.001	0.015	0.017	0.001	0.088	0.039	0.001	0.111	0.082	0.002
	SSD	0	0.763	0.697	0.013	0.013	0.013	0.001	0.012	0.012	0.001	0.069	0.026	0.001	0.085	0.055	0.001
		1	2.007	1.537	0.032	0.041	0.031	0.002	0.038	0.029	0.002	0.252	0.064	0.002	0.281	0.136	0.003
		2	0.623	0.511	0.013	0.015	0.013	0.001	0.014	0.012	0.001	0.084	0.027	0.001	0.099	0.057	0.001
BULK CARRIER, HL	MSD	0	0.661	0.666	0.016	0.013	0.013	0.001	0.012	0.012	0.001	0.047	0.028	0.001	0.075	0.059	0.002
CONTAINER SHIP	SSD	2	6.572	17.894	0.207	0.182	0.452	0.014	0.168	0.416	0.013	1.419	0.940	0.011	1.262	1.988	0.021
GENERAL CARGO	MSD	0	0.280	0.319	0.008	0.006	0.006	0.001	0.006	0.006	0.000	0.027	0.013	0.000	0.036	0.028	0.001
		1	1.199	2.003	0.041	0.031	0.040	0.003	0.028	0.037	0.003	0.175	0.084	0.002	0.205	0.178	0.004
	SSD	0	1.355	1.139	0.022	0.024	0.023	0.001	0.022	0.021	0.001	0.136	0.048	0.001	0.159	0.101	0.002
		1	5.623	5.289	0.087	0.119	0.107	0.006	0.109	0.098	0.005	0.790	0.222	0.005	0.832	0.469	0.009
		2	0.658	0.639	0.015	0.015	0.013	0.001	0.014	0.012	0.001	0.081	0.027	0.001	0.099	0.057	0.002
Grand Total			23.584	35.391	0.640	0.549	0.806	0.043	0.505	0.741	0.039	3.742	1.676	0.035	3.754	3.545	0.064

Ship Type	Engine Type	Emission Tier	SOx Main	SOx Aux	SOx Boiler	CO2 Main	CO2 Aux	CO2 Boiler	CH4 Main	CH4 Aux	CH4 Boiler	N2O Main	N2O Aux	N2O Boiler	Hotel Time (hr)	Aux Time (hr)	Hotelling Auxiliary LF	Hotelling Boiler Load (kW)	NOx Aux
AUTO CARRIER	SSD	1	0.070	0.122	0.050	112.88	209.82	79.19	0.052	0.024	0.003	0.004	0.005	0.001	27.6	27.6	0.26	351	24.874
BULK CARRIER	MSD	1	0.020	0.030	0.004	31.88	51.59	6.95	0.011	0.006	0.000	0.001	0.001	0.000	37.9	37.9	0.10	135	3.234
	SSD	0	0.017	0.020	0.004	27.23	34.58	5.83	0.006	0.004	0.000	0.001	0.001	0.000	28.7	28.7	0.10	132	1.843
		1	0.049	0.050	0.009	79.22	85.51	14.89	0.023	0.010	0.001	0.002	0.002	0.000	37.8	37.8	0.10	132	5.342
		2	0.018	0.021	0.004	29.70	35.59	5.83	0.008	0.004	0.000	0.001	0.001	0.000	85.1	85.1	0.10	132	3.997
BULK CARRIER, HL	MSD	0	0.021	0.021	0.005	33.17	37.06	7.45	0.006	0.004	0.000	0.001	0.001	0.000	114.0	114.0	0.10	132	7.835
CONTAINER SHIP	SSD	2	0.174	0.723	0.060	278.93	1,247.19	95.64	0.127	0.145	0.003	0.009	0.033	0.001	88.9	8.2	0.35	325	41.868
GENERAL CARGO	MSD	0	0.009	0.010	0.002	14.46	17.72	3.56	0.002	0.002	0.000	0.000	0.000	0.000	123.0	123.0	0.10	132	3.606
		1	0.038	0.065	0.012	61.58	111.48	18.87	0.016	0.013	0.001	0.002	0.003	0.000	62.5	62.5	0.10	135	11.525
	SSD	0	0.030	0.037	0.006	47.92	63.38	9.93	0.012	0.007	0.000	0.001	0.002	0.000	86.3	86.3	0.10	135	10.148
		1	0.135	0.171	0.025	217.58	294.33	40.39	0.071	0.034	0.001	0.007	0.008	0.001	45.5	45.5	0.10	135	22.142
		2	0.020	0.021	0.004	31.69	35.53	6.95	0.007	0.004	0.000	0.001	0.001	0.000	50.9	50.9	0.10	135	2.388
Grand Total			0.600	1.289	0.186	966.25	2,223.77	295.48	0.340	0.258	0.010	0.030	0.058	0.004	69.4	30.5	0.24	251	138.802

Harborcraft

Tug/Barge	Calls	Hours
Robyn J (Barge Jake J)	6	16.4
Robyn J (Barge Payton J)	127	16.4
Robyn J (Barge Tori J)	23	16.4
Grand Total	156	16.4

Assist Tugs

Tug	Calls	Hours p Main
Scout	579	0.70
Tioga	579	0.70
Grand Total	1158	0.70

TAMT Plan- 2035 - with CAP

Ships

Ship Type	Engine Type	Emission Tier	NOx Boiler	DPM Aux	DPM Boiler	PM2.5 Aux	PM2.5 Boiler	ROG Aux	ROG Boiler	CO Aux	CO Boiler	SOx Aux	SOx Boiler	CO2 Aux	CO2 Boiler	CH4 Aux	CH4 Boiler	N2O Aux	N2O Boiler	Cold Iron CO2e
			Hotelling Emissions (tons)																	
AUTO CARRIER	SSD	1	1.957	0.501	0.130	0.461	0.120	1.043	0.108	2.207	0.196	0.802	0.569	1,384.10	904.15	0.160	0.031	0.036	0.013	-
BULK CARRIER	MSD	1	0.236	0.065	0.016	0.060	0.014	0.136	0.013	0.287	0.024	0.104	0.069	179.97	109.14	0.021	0.004	0.005	0.002	
	SSD	0	0.150	0.033	0.010	0.030	0.009	0.069	0.008	0.146	0.015	0.053	0.044	91.49	69.37	0.011	0.002	0.002	0.001	-
		1	0.504	0.108	0.034	0.099	0.031	0.224	0.028	0.474	0.051	0.172	0.147	297.25	232.93	0.034	0.008	0.008	0.003	-
		2	0.444	0.101	0.030	0.093	0.027	0.210	0.025	0.444	0.045	0.162	0.129	278.60	205.28	0.032	0.007	0.007	0.003	-
BULK CARRIER, HL	MSD	0	0.761	0.141	0.051	0.130	0.047	0.293	0.042	0.620	0.076	0.225	0.221	388.93	351.61	0.045	0.012	0.010	0.005	-
CONTAINER SHIP	SSD	2	7.623	1.057	0.508	0.973	0.468	2.199	0.420	4.652	0.764	1.692	2.216	2,918.09	3,521.30	0.338	0.122	0.076	0.050	20,416
GENERAL CARGO	MSD	0	0.393	0.073	0.026	0.067	0.024	0.151	0.022	0.320	0.039	0.116	0.114	200.67	181.41	0.023	0.006	0.005	0.003	
		1	1.058	0.232	0.071	0.214	0.065	0.483	0.058	1.022	0.106	0.372	0.307	641.34	488.54	0.074	0.017	0.017	0.007	-
	SSD	0	0.769	0.183	0.051	0.168	0.047	0.380	0.042	0.803	0.077	0.292	0.224	503.74	355.23	0.058	0.012	0.013	0.005	-
		1	1.647	0.446	0.110	0.411	0.101	0.929	0.091	1.964	0.165	0.714	0.479	1,232.09	760.84	0.143	0.026	0.032	0.011	-
		2	0.317	0.060	0.021	0.055	0.019	0.125	0.017	0.265	0.032	0.096	0.092	166.40	146.53	0.019	0.005	0.004	0.002	-
Grand Total			15.861	3.001	1.057	2.761	0.973	6.242	0.875	13.204	1.590	4.802	4.611	8,282.67	7,326.34	0.960	0.254	0.216	0.103	20,416

Harborcraft

Tug/Barge	Calls	Hours
Robyn J (Barge Jake J)	6	16.4
Robyn J (Barge Payton J)	127	16.4
Robyn J (Barge Tori J)	23	16.4
Grand Total	156	16.4

Assist Tugs

Tug	Calls	Hours p Main
Scout	579	0.70
Tioga	579	0.70
Grand Total	1158	0.70

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Ships

Ship Type	Engine Type	Emission Tier	Calls	Power (kW) Main	Power (kW) Aux	Service Speed (kts)	Total Transit Distance (nm) Arrival	Total Transit Distance (nm) Depart	Transit - Arrival Comp (%)	Transit - Arrival Distance (nm)	Transit - Arrival Speed (kts) Comp	Transit - Arrival Speed (kts) NC	Transit - Arrival Main Load Factor Comp	Transit - Arrival Main Load Factor NC
AUTO CARRIER	SSD	1	0.45	11,060	2,760	20.00	35.30	35.30	90%	-	12.00	20.00	0.18	0.82
BULK CARRIER	MSD	1	0.08	9,100	2,973	16.65	30.20	23.40	90%	-	11.00	16.65	0.24	0.82
	SSD	0	0.08	8,139	2,325	14.60	30.20	30.20	100%	-	10.70	14.60	0.32	0.82
		1	0.19	10,705	2,250	15.92	33.94	26.46	90%	-	11.13	15.92	0.28	0.82
		2	0.08	9,140	2,393	15.00	11.50	48.90	100%	-	11.05	15.00	0.33	0.82
BULK CARRIER, HL	MSD	0	0.12	5,738	1,950	13.00	5.75	24.45	100%	-	9.45	13.00	0.32	0.82
CONTAINER SHIP	SSD	2	1.93	19,420	11,320	19.50	11.92	12.16	90%	-	11.64	19.50	0.18	0.82
GENERAL CARGO	MSD	0	0.04	5,738	1,950	13.00	11.50	48.90	100%	-	10.10	13.00	0.39	0.82
		1	0.27	6,400	2,367	15.34	35.98	23.74	90%	-	12.57	15.34	0.45	0.82
	SSD	0	0.12	9,268	2,557	15.23	23.97	36.43	100%	-	12.07	15.23	0.41	0.82
		1	0.58	12,430	2,920	16.98	26.95	34.06	91%	-	11.77	16.98	0.27	0.82
		2	0.08	8,630	2,048	14.90	42.10	30.20	100%	2.10	10.95	14.90	0.33	0.82
Grand Total			4.00	14,524	6,799	18.04	20.86	22.44	91%	0.04	11.62	18.04	0.24	0.82

Ship Type	Engine Type	Emission Tier	Transit - Departure Comp (%)	Transit - Departure Distance (nm)	Transit - Departure Speed (kts) Comp	Transit - Departure Speed (kts) NC	Transit - Departure Main Load Factor Comp	Transit - Departure Main Load Factor NC	Time (hrs)	Aux	NC Boiler Load (kW)	NOx Main	NOx Aux	NOx Boiler	DPM Main	DPM Aux	DPM Boiler	PM2.5 Main	PM2.5 Aux	PM2.5 Boiler
AUTO CARRIER	SSD	1	90%	-	12.00	20.00	0.18	0.82	-	0.15	351	-	-	-	-	-	-	-	-	-
BULK CARRIER	MSD	1	90%	-	11.20	16.65	0.25	0.82	-	0.17	-	-	-	-	-	-	-	-	-	-
	SSD	0	100%	-	12.45	14.60	0.51	0.82	-	0.17	-	-	-	-	-	-	-	-	-	-
		1	90%	-	11.90	15.92	0.34	0.82	-	0.17	-	-	-	-	-	-	-	-	-	-
		2	100%	8.90	12.50	15.00	0.48	0.82	0.71	0.17	-	6.64	0.49	-	0.13	0.01	-	0.12	0.01	-
BULK CARRIER, HL	MSD	0	100%	-	9.45	13.00	0.32	0.82	-	0.17	-	-	-	-	-	-	-	-	-	-
CONTAINER SHIP	SSD	2	90%	-	11.93	19.50	0.19	0.82	-	0.13	132	-	-	-	-	-	-	-	-	-
GENERAL CARGO	MSD	0	100%	8.90	10.10	13.00	0.39	0.82	0.88	0.17	-	2.19	0.35	-	0.04	0.01	-	0.04	0.01	-
		1	90%	-	12.20	15.34	0.41	0.82	-	0.17	-	-	-	-	-	-	-	-	-	-
	SSD	0	100%	-	12.30	15.23	0.43	0.82	-	0.17	-	-	-	-	-	-	-	-	-	-
		1	90%	-	11.86	16.98	0.28	0.82	-	0.17	-	-	-	-	-	-	-	-	-	-
		2	100%	-	11.00	14.90	0.33	0.82	0.19	0.17	-	1.16	0.11	-	0.02	0.00	-	0.02	0.00	-
Grand Total			91%	0.26	11.85	18.04	0.25	0.82	0.03	0.15	103	9.99	0.95	-	0.20	0.02	-	0.18	0.02	-

3.85877057 =scaling factor for 2020 to 2035 (4 max daily calls / 2020 max daily calls)

Harborcraft

Tug Running Emissions (lbs)

Tug/Barge	Calls	Hours	NOx Main	NOx Aux	DPM Main	DPM Aux	PM2.5 Main	PM2.5 Aux	ROG Main	ROG Aux	CO Main	CO Aux	SOx Main	SOx Aux	CO2 Main	CO2 Aux	CH4 Main	CH4 Aux	N2O Main	N2O Aux
Robyn J (Barge Jake J)	0.14	16.4	27.612	1.289	0.942	0.047	0.914	0.046	2.600	0.218	20.733	0.980	0.027	0.001	2,434	121	0.048	0.004	0.110	0.005
Robyn J (Barge Payton J)	3.17	16.4	635.086	29.637	21.672	1.079	21.022	1.047	59.801	5.008	476.856	22.549	0.628	0.031	55,991	2,777	1.113	0.098	2.524	0.125
Robyn J (Barge Tori J)	0.55	16.4	110.450	5.154	3.769	0.188	3.656	0.182	10.400	0.871	82.931	3.922	0.109	0.005	9,738	483	0.194	0.017	0.439	0.022
Grand Total	3.86	16.4	773.148	36.079	26.384	1.314	25.592	1.275	72.801	6.097	580.520	27.451	0.764	0.038	68,163	3,381	1.355	0.119	3.072	0.152

Hoteling Emissions (lbs)

Tug/Barge	Hours Tug	Hours Barge	NOx Tug	NOx Barge	DPM Tug	DPM Barge	PM2.5 Tug	PM2.5 Barge	ROG Tug	ROG Barge	CO Tug	CO Barge
Robyn J (Barge Jake J)	1.0	4.5	0.08	1.05	0.00	0.06	0.00	0.06	0.01	0.18	0.06	0.83
Robyn J (Barge Payton J)	1.0	4.8	1.81	26.03	0.07	1.41	0.06	1.36	0.31	4.42	1.38	20.52
Robyn J (Barge Tori J)	1.0	5.3	0.31	4.99	0.01	0.27	0.01	0.26	0.05	0.85	0.24	3.93
Grand Total	1.0	4.9	2.202	32.078	0.080	1.732	0.078	1.680	0.372	5.449	1.675	25.282

Assist Tugs

Tug Running Emissions (lbs)

Tug	Calls	Hours per Call Main	Hours per Call Aux	Load Factors Main	Load Factors Aux	NOx Main	NOx Aux	DPM Main	DPM Aux	PM2.5 Main	PM2.5 Aux	ROG Main	ROG Aux	CO Main	CO Aux	SOx Main	SOx Aux	CO2 Main	CO2 Aux	CH4 Main	CH4 Aux	N2O Main	N2O Aux
Scout	4.00	0.70	1.00	0.31	0.43	40.07	3.96	0.89	0.09	0.86	0.09	4.77	0.65	38.04	4.22	0.05	0.01	4,467	519	0.089	0.013	0.201	0.023
Tioga	4.00	0.70	1.00	0.31	0.43	40.07	3.17	0.89	0.12	0.86	0.12	4.77	0.54	38.04	2.41	0.05	0.00	4,467	297	0.089	0.010	0.201	0.013
Grand Total	8.00	0.70	1.00	0.31	0.43	80.13	7.12	1.77	0.21	1.72	0.21	9.54	1.18	76.08	6.62	0.10	0.01	8,933	816	0.178	0.023	0.403	0.037

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Ships

			ROG	ROG	ROG	CO	CO	CO	SOx	SOx	SOx	CO2	CO2	CO2	CH4	CH4	CH4	N2O	N2O	N2O
			Transit Emissions (lbs)																	
	Engine	Emission	ROG			CO			SOx			CO2			CH4			N2O		
Ship Type	**Type**	**Tier**	**Main**	**Aux**	**Boiler**	**Main**	**Aux**	**Boiler**	**Main**	**Aux**	**Boiler**	**Main**	**Aux**	**Boiler**	**Main**	**Aux**	**Boiler**	**Main**	**Aux**	**Boiler**
AUTO CARRIER	SSD	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BULK CARRIER	MSD	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SSD	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		2	0.41	0.03	-	0.58	0.05	-	0.19	0.02	-	310	34	-	0.037	0.004	-	0.009	0.001	-
BULK CARRIER, HL	MSD	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CONTAINER SHIP	SSD	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GENERAL CARGO	MSD	0	0.11	0.01	-	0.18	0.03	-	0.07	0.01	-	107	17	-	0.013	0.002	-	0.003	0.000	-
		1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SSD	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		2	0.07	0.01	-	0.10	0.01	-	0.03	0.00	-	54	8	-	0.006	0.001	-	0.002	0.000	-
Grand Total			0.59	0.04	-	0.86	0.09	-	0.29	0.03	-	471	59	-	0.057	0.007	-	0.014	0.002	-

			VSR - Arrival						VSR - Departure						
	Engine	Emission	Comp	Distance	Speed (kts)		Main Load Factor		Comp	Distance	Speed (kts)		Main Load Factor		Time
Ship Type	**Type**	**Tier**	**(%)**	**(nm)**	**Comp**	**NC**	**Comp**	**NC**	**(%)**	**(nm)**	**Comp**	**NC**	**Comp**	**NC**	**(hrs)**
AUTO CARRIER	SSD	1	90%	35.30	12.00	16.06	0.18	0.43	90%	35.30	12.00	15.24	0.18	0.36	5.75
BULK CARRIER	MSD	1	90%	30.20	11.00	13.60	0.24	0.45	90%	23.40	11.20	13.60	0.25	0.45	4.75
	SSD	0	100%	30.20	10.70	14.60	0.32	0.82	100%	30.20	12.45	14.60	0.51	0.82	5.25
		1	90%	33.94	11.13	13.10	0.28	0.46	90%	26.46	11.90	13.07	0.34	0.45	5.21
		2	100%	11.50	11.05	15.00	0.33	0.82	100%	40.00	12.50	15.00	0.48	0.82	4.24
BULK CARRIER, HL	MSD	0	100%	5.75	9.45	13.00	0.32	0.82	100%	24.45	9.45	13.00	0.32	0.82	3.20
CONTAINER SHIP	SSD	2	90%	11.92	11.64	14.78	0.18	0.36	90%	12.16	11.93	16.06	0.19	0.46	1.99
GENERAL CARGO	MSD	0	100%	11.50	10.10	13.00	0.39	0.82	100%	40.00	10.10	13.00	0.39	0.82	5.10
		1	90%	35.98	12.57	13.20	0.45	0.52	90%	23.74	12.20	15.10	0.41	0.78	4.76
	SSD	0	100%	23.97	12.07	15.23	0.41	0.82	100%	36.43	12.30	15.23	0.43	0.82	4.95
		1	91%	26.95	11.77	13.10	0.27	0.38	90%	34.06	11.86	15.23	0.28	0.59	5.08
		2	100%	40.00	10.95	14.90	0.33	0.82	100%	30.20	11.00	14.90	0.33	0.82	6.40
Grand Total			91%	20.82	11.62	14.42	0.24	0.44	91%	22.18	11.85	15.38	0.25	0.54	3.60

Harborcraft

			SOx		CO2		CH4		N2O	
Tug/Barge	**Calls**	**Hours**	**Tug**	**Barge**	**Tug**	**Barge**	**Tug**	**Barge**	**Tug**	**Barge**
Robyn J (Barge Jake J)	0.14	16.4	0.00	0.00	7	95	0.000	0.003	0.000	0.004
Robyn J (Barge Payton J)	3.17	16.4	0.00	0.03	169	2,347	0.006	0.080	0.008	0.109
Robyn J (Barge Tori J)	0.55	16.4	0.00	0.01	29	450	0.001	0.015	0.001	0.021
Grand Total	3.86	16.4	0.002	0.032	206.33	2,891.87	0.007	0.099	0.009	0.135

Assist Tugs

		Hours
Tug	**Calls**	**Main**
Scout	4.00	0.70
Tioga	4.00	0.70
Grand Total	8.00	0.70

TAMT Plan- 2035 - VSR Beyond CAP

Ships					NOx	NOx	NOx	DPM	DPM	DPM	PM2.5	PM2.5	PM2.5	ROG	ROG	ROG	CO	CO	CO	SOx	SOx	SOx	CO2	CO2	CO2	CH4	CH4	CH4	N2O	N2O	N2O	
				NC	VSR Emissions (lbs)																											
	Engine	Emission		Boiler	NOx			DPM			PM2.5			ROG			CO			SOx			CO2			CH4			N2O			Speed
Ship Type	Type	Tier	Aux	Load (kW)	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler	(kts)
AUTO CARRIER	SSD	1	0.15	351	188.46	29.26	3.68	3.17	0.59	0.25	2.92	0.54	0.23	10.46	1.23	0.20	14.75	2.60	0.37	4.53	0.94	1.07	7,399	1,628	1,699	0.939	0.189	0.059	0.225	0.042	0.024	7.00
BULK CARRIER	MSD	1	0.17	-	22.35	5.06	-	0.48	0.10	-	0.44	0.09	-	1.24	0.21	-	2.10	0.45	-	0.76	0.16	-	1,232	282	-	0.153	0.033	-	0.034	0.007	-	7.00
	SSD	0	0.17	-	50.64	4.91	-	0.74	0.09	-	0.69	0.08	-	2.32	0.18	-	3.28	0.39	-	1.07	0.14	-	1,752	244	-	0.209	0.028	-	0.054	0.006	-	7.00
		1	0.17	-	114.85	10.50	-	1.90	0.21	-	1.75	0.19	-	5.93	0.44	-	8.37	0.93	-	2.74	0.34	-	4,472	584	-	0.532	0.068	-	0.137	0.015	-	7.00
		2	0.17	-	36.56	2.91	-	0.73	0.07	-	0.67	0.07	-	2.26	0.15	-	3.19	0.32	-	1.04	0.12	-	1,706	202	-	0.203	0.023	-	0.052	0.005	-	7.00
BULK CARRIER, HL	MSD	0	0.17	-	19.52	3.76	-	0.37	0.07	-	0.34	0.06	-	0.96	0.14	-	1.63	0.30	-	0.59	0.11	-	954	187	-	0.118	0.022	-	0.027	0.005	-	7.00
CONTAINER SHIP	SSD	2	0.13	325	424.10	123.61	5.07	8.55	3.12	0.34	7.87	2.87	0.31	28.88	6.49	0.28	40.44	13.73	0.51	12.21	4.99	1.47	19,870	8,615	2,342	2.592	0.999	0.081	0.606	0.225	0.033	7.00
GENERAL CARGO	MSD	0	0.17	-	12.68	2.00	-	0.24	0.04	-	0.22	0.03	-	0.62	0.07	-	1.06	0.16	-	0.38	0.06	-	619	99	-	0.077	0.012	-	0.017	0.003	-	7.00
		1	0.17	-	96.15	14.14	-	2.05	0.28	-	1.89	0.26	-	5.34	0.59	-	9.04	1.25	-	3.29	0.46	-	5,301	787	-	0.657	0.091	-	0.148	0.021	-	7.00
	SSD	0	0.17	-	84.23	7.63	-	1.24	0.14	-	1.14	0.13	-	3.86	0.29	-	5.45	0.60	-	1.78	0.22	-	2,913	379	-	0.347	0.044	-	0.089	0.010	-	7.00
		1	0.17	-	359.09	39.88	-	5.95	0.80	-	5.47	0.74	-	18.55	1.67	-	26.16	3.54	-	8.56	1.29	-	13,983	2,219	-	1.665	0.257	-	0.428	0.058	-	7.00
		2	0.17	-	38.88	3.75	-	0.77	0.09	-	0.71	0.09	-	2.41	0.20	-	3.39	0.42	-	1.11	0.15	-	1,814	261	-	0.216	0.030	-	0.056	0.007	-	7.00
Grand Total			0.15	196	1,447.51	247.40	8.75	26.19	5.61	0.58	24.10	5.16	0.54	82.85	11.67	0.48	118.85	24.69	0.88	38.08	8.98	2.54	62,016	15,487	4,041	7.708	1.796	0.140	1.872	0.404	0.057	7.00

Harborcraft

Tug/Barge	Calls	Hours
Robyn J (Barge Jake J)	0.14	16.4
Robyn J (Barge Payton J)	3.17	16.4
Robyn J (Barge Tori J)	0.55	16.4
Grand Total	3.86	16.4

Assist Tugs

Tug	Calls	Hours Main
Scout	4.00	0.70
Tioga	4.00	0.70
Grand Total	8.00	0.70

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Reduction in hoteling time

Ships

							NOx	NOx	NOx	DPM	DPM	DPM	PM2.5	PM2.5	PM2.5	ROG	ROG	ROG	CO	CO	CO	SOx	SOx	SOx	CO2	CO2	CO2	CH4	CH4	CH4	N2O	N2O	N2O	
			Maneuvering				Maneuvering Emissions (lbs)																											Hotel
	Engine	Emission	Time	Load Factors		Boiler	NOx			DPM			PM2.5			ROG			CO			SOx			CO2			CH4			N2O			Time
Ship Type	Type	Tier	(hrs)	Main	Aux	Load (kW)	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler	(hr)
AUTO CARRIER	SSD	1	2.41	0.04	0.45	351	31.18	36.88	1.68	0.72	0.74	0.11	0.66	0.68	0.10	5.62	1.55	0.09	4.99	3.27	0.17	0.69	1.19	0.49	1,104	2,052	775	0.504	0.238	0.027	0.037	0.054	0.011	24.0
BULK CARRIER	MSD	1	2.41	0.06	0.45	135	4.83	6.81	0.11	0.12	0.14	0.01	0.11	0.13	0.01	0.65	0.29	0.01	0.82	0.60	0.01	0.15	0.22	0.03	234	379	51	0.080	0.044	0.002	0.007	0.010	0.001	24.0
	SSD	0	2.41	0.09	0.45	132	6.54	5.97	0.11	0.11	0.11	0.01	0.10	0.10	0.01	0.60	0.22	0.01	0.73	0.47	0.01	0.14	0.17	0.03	233	297	50	0.053	0.034	0.002	0.007	0.008	0.001	24.0
		1	2.41	0.07	0.45	132	16.83	12.89	0.27	0.34	0.26	0.02	0.32	0.24	0.02	2.11	0.54	0.01	2.36	1.14	0.03	0.41	0.42	0.08	665	717	125	0.189	0.083	0.004	0.020	0.019	0.002	24.0
		2	2.41	0.08	0.45	132	5.34	4.38	0.11	0.13	0.11	0.01	0.12	0.10	0.01	0.72	0.23	0.01	0.85	0.49	0.01	0.16	0.18	0.03	255	305	50	0.065	0.035	0.002	0.008	0.008	0.001	24.0
BULK CARRIER, HL	MSD	0	2.41	0.13	0.45	132	6.65	6.70	0.16	0.14	0.14	0.01	0.12	0.12	0.01	0.47	0.28	0.01	0.76	0.59	0.02	0.21	0.22	0.05	334	373	75	0.058	0.043	0.003	0.009	0.010	0.001	24.0
CONTAINER SHIP	SSD	2	2.41	0.04	0.50	325	211.33	575.42	6.66	5.86	14.53	0.44	5.39	13.37	0.41	45.64	30.22	0.37	40.57	63.94	0.67	5.60	23.25	1.94	8,969	40,105	3,075	4.096	4.650	0.107	0.302	1.046	0.043	24.0
GENERAL CARGO	MSD	0	2.41	0.13	0.45	132	1.97	2.23	0.05	0.05	0.05	0.00	0.04	0.04	0.00	0.19	0.09	0.00	0.25	0.20	0.01	0.06	0.07	0.02	101	124	25	0.017	0.014	0.001	0.003	0.003	0.000	24.0
		1	2.41	0.08	0.45	135	11.36	18.99	0.39	0.29	0.38	0.03	0.27	0.35	0.02	1.65	0.80	0.02	1.94	1.68	0.04	0.36	0.61	0.11	584	1,057	179	0.149	0.122	0.006	0.017	0.028	0.003	24.0
	SSD	0	2.41	0.08	0.45	135	10.46	8.79	0.17	0.18	0.18	0.01	0.17	0.16	0.01	1.05	0.37	0.01	1.23	0.78	0.02	0.23	0.28	0.05	370	489	77	0.094	0.057	0.003	0.011	0.013	0.001	24.0
		1	2.41	0.06	0.45	135	53.35	50.19	0.83	1.13	1.01	0.06	1.04	0.93	0.05	7.49	2.10	0.05	7.89	4.45	0.08	1.28	1.62	0.24	2,065	2,793	383	0.672	0.324	0.013	0.064	0.073	0.005	24.0
		2	2.41	0.09	0.45	135	4.84	4.69	0.11	0.11	0.09	0.01	0.10	0.09	0.01	0.59	0.20	0.01	0.73	0.42	0.01	0.14	0.15	0.03	233	261	51	0.053	0.030	0.002	0.007	0.007	0.001	24.0
Grand Total			2.41	0.05	0.47	251	364.68	733.96	10.64	9.17	17.74	0.71	8.44	16.32	0.65	66.78	36.89	0.59	63.11	78.04	1.07	9.43	28.38	3.09	15,147	48,953	4,916	6.031	5.676	0.171	0.491	1.277	0.069	24.0

Harborcraft

Tug/Barge	Calls	Hours
Robyn J (Barge Jake J)	0.14	16.4
Robyn J (Barge Payton J)	3.17	16.4
Robyn J (Barge Tori J)	0.55	16.4
Grand Total	3.86	16.4

Assist Tugs

Tug	Calls	Hours Main
Scout	4.00	0.70
Tioga	4.00	0.70
Grand Total	8.00	0.70

TAMT Plan- 2035 - VSR Beyond CAP   0%

Ships

						NOx	NOx	DPM	DPM	PM2.5	PM2.5	ROG	ROG	CO	CO	SOx	SOx	CO2	CO2	CH4	CH4	N2O	N2O	
			Aux	Hotelling		Hotelling Emissions (lbs)																		
	Engine	Emission	Time	Auxiliary	Boiler	NOx		DPM		PM2.5		ROG		CO		SOx		CO2		CH4		N2O		Cold Iron
Ship Type	**Type**	**Tier**	**(hr)**	**LF**	**Load (kW)**	**Aux**	**Boiler**	**Aux**	**Boiler**	**Aux**	**Boiler**	**Aux**	**Boiler**	**Aux**	**Boiler**	**Aux**	**Boiler**	**Aux**	**Boiler**	**Aux**	**Boiler**	**Aux**	**Boiler**	**CO2e**
AUTO CARRIER	SSD	1	24.0	0.26	351	211.83	16.67	4.27	1.11	3.93	1.02	8.88	0.92	18.79	1.67	6.83	4.85	11,787	7,700	1.367	0.267	0.307	0.109	-
BULK CARRIER	MSD	1	24.0	0.10	135	15.05	1.10	0.30	0.07	0.28	0.07	0.63	0.06	1.34	0.11	0.49	0.32	838	508	0.097	0.018	0.022	0.007	
	SSD	0	24.0	0.10	132	13.20	1.08	0.24	0.07	0.22	0.07	0.49	0.06	1.04	0.11	0.38	0.31	655	497	0.076	0.017	0.017	0.007	-
		1	24.0	0.10	132	28.48	2.69	0.57	0.18	0.53	0.16	1.19	0.15	2.53	0.27	0.92	0.78	1,585	1,242	0.184	0.043	0.041	0.018	-
		2	24.0	0.10	132	9.67	1.08	0.24	0.07	0.22	0.07	0.51	0.06	1.07	0.11	0.39	0.31	674	497	0.078	0.017	0.018	0.007	-
BULK CARRIER, HL	MSD	0	24.0	0.10	132	16.60	1.61	0.30	0.11	0.27	0.10	0.62	0.09	1.31	0.16	0.48	0.47	824	745	0.096	0.026	0.021	0.011	-
CONTAINER SHIP	SSD	2	8.2	0.35	325	1,346.33	66.19	34.00	4.41	31.28	4.06	70.72	3.65	149.59	6.64	54.40	19.24	93,835	30,573	10.879	1.062	2.448	0.431	184,799
GENERAL CARGO	MSD	0	24.0	0.10	132	4.94	0.54	0.10	0.04	0.09	0.03	0.21	0.03	0.44	0.05	0.16	0.16	275	248	0.032	0.009	0.007	0.004	
		1	24.0	0.10	135	41.94	3.85	0.85	0.26	0.78	0.24	1.76	0.21	3.72	0.39	1.35	1.12	2,334	1,778	0.271	0.062	0.061	0.025	-
	SSD	0	24.0	0.10	135	21.77	1.65	0.39	0.11	0.36	0.10	0.81	0.09	1.72	0.17	0.63	0.48	1,081	762	0.125	0.026	0.028	0.011	-
		1	24.0	0.10	135	110.87	8.25	2.24	0.55	2.06	0.51	4.65	0.45	9.84	0.83	3.58	2.40	6,170	3,810	0.715	0.132	0.161	0.054	-
		2	24.0	0.10	135	8.28	1.10	0.21	0.07	0.19	0.07	0.43	0.06	0.92	0.11	0.33	0.32	577	508	0.067	0.018	0.015	0.007	-
Grand Total			16.4	0.24	251	1,828.96	105.79	43.71	7.05	40.21	6.49	90.91	5.83	192.31	10.61	69.93	30.76	120,634	48,867	13.987	1.697	3.147	0.689	184,799

Harborcraft

Tug/Barge	Calls	Hours
Robyn J (Barge Jake J)	0.14	16.4
Robyn J (Barge Payton J)	3.17	16.4
Robyn J (Barge Tori J)	0.55	16.4
Grand Total	3.86	16.4

Assist Tugs

Tug	Calls	Hours Main
Scout	4.00	0.70
Tioga	4.00	0.70
Grand Total	8.00	0.70

TAMT Plan- 2035 - VSR Beyond CAP

Ships

Ship Type	Engine Type	Emission Tier	Calls	Power (kW) Main	Power (kW) Aux	Service Speed (kts)	Total Transit Distance (nm) Arrival	Total Transit Distance (nm) Depart	Transit - Arrival Comp (%)	Transit - Arrival Distance (nm)	Transit - Arrival Speed (kts) Comp	Transit - Arrival Speed (kts) NC	Transit - Arrival Main Load Factor Comp	Transit - Arrival Main Load Factor NC
AUTO CARRIER	SSD	1	92	11,060	2,760	20.00	35.30	35.30	0%	-	12.00	20.00	0.18	0.82
BULK CARRIER	MSD	1	21	9,100	2,973	16.65	30.20	23.40	0%	-	11.00	16.65	0.24	0.82
	SSD	0	18	8,139	2,325	14.60	30.20	30.20	0%	-	10.70	14.60	0.32	0.82
		1	46	10,705	2,250	15.92	33.94	26.46	0%	-	11.13	15.92	0.28	0.82
		2	18	9,140	2,393	15.00	11.50	48.90	0%	-	11.05	15.00	0.33	0.82
BULK CARRIER, HL	MSD	0	23	5,738	1,950	13.00	5.75	24.45	0%	-	9.45	13.00	0.32	0.82
CONTAINER SHIP	SSD	2	120	19,420	11,320	19.50	11.92	12.16	0%	-	11.64	19.50	0.18	0.82
GENERAL CARGO	MSD	0	11	5,738	1,950	13.00	11.50	48.90	0%	-	10.10	13.00	0.39	0.82
		1	57	6,400	2,367	15.34	35.98	23.74	0%	-	12.57	15.34	0.45	0.82
	SSD	0	30	9,268	2,557	15.23	23.97	36.43	0%	-	12.07	15.23	0.41	0.82
		1	122	12,430	2,920	16.98	26.95	34.06	0%	-	11.77	16.98	0.27	0.82
		2	21	8,630	2,048	14.90	42.10	30.20	0%	2.10	10.95	14.90	0.33	0.82
Grand Total			579	14,524	6,799	18.04	20.86	22.44	0%	0.04	11.62	18.04	0.24	0.82

Ship Type	Engine Type	Emission Tier	Transit - Departure Comp (%)	Transit - Departure Distance (nm)	Transit - Departure Speed (kts) Comp	Transit - Departure Speed (kts) NC	Transit - Departure Main Load Factor Comp	Transit - Departure Main Load Factor NC	Time (hrs)	Aux	NC Boiler Load (kW)	NOx Main	NOx Aux	NOx Boiler	DPM Main	DPM Aux	DPM Boiler	PM2.5 Main	PM2.5 Aux	PM2.5 Boiler
AUTO CARRIER	SSD	1	0%	-	12.00	20.00	0.18	0.82	-	0.15	351	-	-	-	-	-	-	-	-	-
BULK CARRIER	MSD	1	0%	-	11.20	16.65	0.25	0.82	-	0.17	-	-	-	-	-	-	-	-	-	-
	SSD	0	0%	-	12.45	14.60	0.51	0.82	-	0.17	-	-	-	-	-	-	-	-	-	-
		1	0%	-	11.90	15.92	0.34	0.82	-	0.17	-	-	-	-	-	-	-	-	-	-
		2	0%	8.90	12.50	15.00	0.48	0.82	0.59	0.17	-	1.115	0.047	-	0.022	0.001	-	0.020	0.001	-
BULK CARRIER, HL	MSD	0	0%	-	9.45	13.00	0.32	0.82	-	0.17	-	-	-	-	-	-	-	-	-	-
CONTAINER SHIP	SSD	2	0%	-	11.93	19.50	0.19	0.82	-	0.13	132	-	-	-	-	-	-	-	-	-
GENERAL CARGO	MSD	0	0%	8.90	10.10	13.00	0.39	0.82	0.68	0.17	-	0.517	0.038	-	0.010	0.001	-	0.009	0.001	-
		1	0%	-	12.20	15.34	0.41	0.82	-	0.17	-	-	-	-	-	-	-	-	-	-
	SSD	0	0%	-	12.30	15.23	0.43	0.82	-	0.17	-	-	-	-	-	-	-	-	-	-
		1	0%	-	11.86	16.98	0.28	0.82	-	0.17	-	-	-	-	-	-	-	-	-	-
		2	0%	-	11.00	14.90	0.33	0.82	0.14	0.17	-	0.292	0.011	-	0.006	0.000	-	0.005	0.000	-
Grand Total			0%	0.26	11.85	18.04	0.25	0.82	0.02	0.15	103	1.924	0.097	-	0.038	0.002	-	0.035	0.002	-

Harborcraft

Tug Running Emissions (tons)

Tug/Barge	Calls	Hours	NOx Main	NOx Aux	DPM Main	DPM Aux	PM2.5 Main	PM2.5 Aux	ROG Main	ROG Aux	CO Main	CO Aux	SOx Main	SOx Aux	CO2 Main	CO2 Aux	CH4 Main	CH4 Aux	N2O Main	N2O Aux
Robyn J (Barge Jake J)	6	16.4	0.601	0.028	0.021	0.001	0.020	0.001	0.057	0.005	0.451	0.021	0.001	0.000	52.99	2.63	0.001	0.000	0.002	0.000
Robyn J (Barge Payton J)	127	16.4	12.723	0.594	0.434	0.022	0.421	0.021	1.198	0.100	9.553	0.452	0.013	0.001	1,121.70	55.64	0.022	0.002	0.051	0.003
Robyn J (Barge Tori J)	23	16.4	2.304	0.108	0.079	0.004	0.076	0.004	0.217	0.018	1.730	0.082	0.002	0.000	203.14	10.08	0.004	0.000	0.009	0.000
Grand Total	156	16.4	15.628	0.729	0.533	0.027	0.517	0.026	1.472	0.123	11.734	0.555	0.015	0.001	1,377.83	68.34	0.027	0.002	0.062	0.003

Hoteling Emissions (tons)

Tug/Barge	Hours Tug	Hours Barge	NOx Tug	NOx Barge	DPM Tug	DPM Barge	PM2.5 Tug	PM2.5 Barge	ROG Tug	ROG Barge	CO Tug	CO Barge
Robyn J (Barge Jake J)	1.0	4.5	0.002	0.023	0.000	0.001	0.000	0.001	0.000	0.004	0.001	0.018
Robyn J (Barge Payton J)	1.0	4.8	0.036	0.522	0.001	0.028	0.001	0.027	0.006	0.089	0.028	0.411
Robyn J (Barge Tori J)	1.0	5.3	0.007	0.104	0.000	0.006	0.000	0.005	0.001	0.018	0.005	0.082
Grand Total	1.0	4.9	0.045	0.649	0.002	0.035	0.002	0.034	0.008	0.110	0.034	0.511

Assist Tugs

Tug Running Emissions (tons)

Tug	Calls	Hours per Call Main	Hours per Call Aux	Load Factors Main	Load Factors Aux	NOx Main	NOx Aux	DPM Main	DPM Aux	PM2.5 Main	PM2.5 Aux	ROG Main	ROG Aux	CO Main	CO Aux	SOx Main	SOx Aux	CO2 Main	CO2 Aux	CH4 Main	CH4 Aux	N2O Main	N2O Aux
Scout	579	0.70	1.00	0.31	0.43	2.900	0.286	0.064	0.006	0.062	0.006	0.345	0.047	2.753	0.305	0.004	0.000	323.27	37.58	0.006	0.001	0.015	0.002
Tioga	579	0.70	1.00	0.31	0.43	2.900	0.229	0.064	0.009	0.062	0.009	0.345	0.039	2.753	0.174	0.004	0.000	323.27	21.47	0.006	0.001	0.015	0.001
Grand Total	1158	0.70	1.00	0.31	0.43	5.799	0.515	0.128	0.015	0.124	0.015	0.691	0.085	5.506	0.479	0.007	0.001	646.54	59.05	0.013	0.002	0.029	0.003

TAMT Plan- 2035 - VSR Beyond CAP

Ships

			ROG	ROG	ROG	CO	CO	CO	SOx	SOx	SOx	CO2	CO2	CO2	CH4	CH4	CH4	N2O	N2O	N2O
			Transit Emissions (tons)																	
	Engine	Emission		ROG			CO			SOx			CO2			CH4			N2O	
Ship Type	**Type**	**Tier**	**Main**	**Aux**	**Boiler**	**Main**	**Aux**	**Boiler**	**Main**	**Aux**	**Boiler**	**Main**	**Aux**	**Boiler**	**Main**	**Aux**	**Boiler**	**Main**	**Aux**	**Boiler**
AUTO CARRIER	SSD	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BULK CARRIER	MSD	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SSD	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		2	0.069	0.002	-	0.097	0.005	-	0.032	0.002	-	52.05	3.30	-	0.006	0.000	-	0.002	0.000	-
BULK CARRIER, HL	MSD	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CONTAINER SHIP	SSD	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GENERAL CARGO	MSD	0	0.025	0.001	-	0.043	0.003	-	0.016	0.001	-	25.27	1.90	-	0.003	0.000	-	0.001	0.000	-
		1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SSD	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		2	0.018	0.001	-	0.025	0.001	-	0.008	0.000	-	13.62	0.78	-	0.002	0.000	-	0.000	0.000	-
Grand Total			0.113	0.005	-	0.166	0.010	-	0.056	0.003	-	90.94	5.99	-	0.011	0.001	-	0.003	0.000	-

			VSR - Arrival						VSR - Departure					
	Engine	Emission	Comp	Distance	Speed (kts)		Main Load Factor		Comp	Distance	Speed (kts)		Main Load Factor	
Ship Type	**Type**	**Tier**	**(%)**	**(nm)**	**Comp**	**NC**	**Comp**	**NC**	**(%)**	**(nm)**	**Comp**	**NC**	**Comp**	**NC**
AUTO CARRIER	SSD	1	90%	35.30	12.00	16.06	0.18	0.43	90%	20.00	12.00	15.24	0.18	0.36
BULK CARRIER	MSD	1	90%	30.20	11.00	13.60	0.24	0.45	90%	20.00	11.20	13.60	0.25	0.45
	SSD	0	100%	30.20	10.70	14.60	0.32	0.82	100%	20.00	12.45	14.60	0.51	0.82
		1	90%	33.94	11.13	13.10	0.28	0.46	90%	20.00	11.90	13.07	0.34	0.45
		2	100%	11.50	11.05	15.00	0.33	0.82	100%	20.00	12.50	15.00	0.48	0.82
BULK CARRIER, HL	MSD	0	100%	5.75	9.45	13.00	0.32	0.82	100%	20.00	9.45	13.00	0.32	0.82
CONTAINER SHIP	SSD	2	90%	11.92	11.64	14.78	0.18	0.36	90%	12.16	11.93	16.06	0.19	0.46
GENERAL CARGO	MSD	0	100%	11.50	10.10	13.00	0.39	0.82	100%	20.00	10.10	13.00	0.39	0.82
		1	90%	35.98	12.57	13.20	0.45	0.52	90%	20.00	12.20	15.10	0.41	0.78
	SSD	0	100%	23.97	12.07	15.23	0.41	0.82	100%	20.00	12.30	15.23	0.43	0.82
		1	91%	26.95	11.77	13.10	0.27	0.38	90%	20.00	11.86	15.23	0.28	0.59
		2	100%	40.00	10.95	14.90	0.33	0.82	100%	20.00	11.00	14.90	0.33	0.82
Grand Total			91%	20.82	11.62	14.42	0.24	0.44	91%	16.22	11.85	15.38	0.25	0.54

Harborcraft

			SOx		CO2		CH4		N2O	
Tug/Barge	**Calls**	**Hours**	**Tug**	**Barge**	**Tug**	**Barge**	**Tug**	**Barge**	**Tug**	**Barge**
Robyn J (Barge Jake J)	6	16.4	0.000	0.000	0.16	2.07	0.000	0.000	0.000	0.000
Robyn J (Barge Payton J)	127	16.4	0.000	0.001	3.40	47.02	0.000	0.002	0.000	0.002
Robyn J (Barge Tori J)	23	16.4	0.000	0.000	0.61	9.39	0.000	0.000	0.000	0.000
Grand Total	156	16.4	0.000	0.001	4.17	58.47	0.000	0.002	0.000	0.003

Assist Tugs

		Hours p
Tug	**Calls**	**Main**
Scout	579	0.70
Tioga	579	0.70
Grand Total	1158	0.70

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Ships						NOx	NOx	NOx	DPM	DPM	DPM	PM2.5	PM2.5	PM2.5	ROG	ROG	ROG	CO	CO	CO	SOx	SOx	SOx	CO2	CO2	CO2	CH4	CH4	CH4	N2O	N2O	N2O
					NC	VSR Emissions (tons)																										
	Engine	Emission	Time		Boiler		NOx			DPM			PM2.5			ROG			CO			SOx			CO2			CH4			N2O	
Ship Type	Type	Tier	(hrs)	Aux	Load (kW)	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler
AUTO CARRIER	SSD	1	4.50	0.15	351	15.126	2.342	0.295	0.255	0.047	0.020	0.234	0.043	0.018	0.839	0.098	0.016	1.184	0.208	0.030	0.364	0.076	0.086	593.88	130.32	136.04	0.075	0.015	0.005	0.018	0.003	0.002
BULK CARRIER	MSD	1	4.45	0.17	-	2.844	0.645	-	0.061	0.013	-	0.056	0.012	-	0.158	0.027	-	0.267	0.057	-	0.097	0.021	-	156.80	35.90	-	0.019	0.004	-	0.004	0.001	-
	SSD	0	4.43	0.17	-	4.759	0.483	-	0.070	0.009	-	0.064	0.008	-	0.218	0.018	-	0.308	0.038	-	0.101	0.014	-	164.59	23.97	-	0.020	0.003	-	0.005	0.001	-
		1	4.67	0.17	-	12.131	1.123	-	0.201	0.023	-	0.185	0.021	-	0.627	0.047	-	0.884	0.100	-	0.289	0.036	-	472.40	62.46	-	0.056	0.007	-	0.014	0.002	-
		2	2.64	0.17	-	2.523	0.211	-	0.050	0.005	-	0.046	0.005	-	0.156	0.011	-	0.220	0.023	-	0.072	0.009	-	117.72	14.70	-	0.014	0.002	-	0.004	0.000	-
BULK CARRIER, HL	MSD	0	2.72	0.17	-	1.653	0.318	-	0.031	0.006	-	0.029	0.005	-	0.081	0.012	-	0.138	0.025	-	0.050	0.009	-	80.79	15.80	-	0.010	0.002	-	0.002	0.000	-
CONTAINER SHIP	SSD	2	1.99	0.13	325	13.189	3.844	0.158	0.266	0.097	0.011	0.245	0.089	0.010	0.898	0.202	0.009	1.258	0.427	0.016	0.380	0.155	0.046	617.90	267.92	72.83	0.081	0.031	0.003	0.019	0.007	0.001
GENERAL CARGO	MSD	0	3.12	0.17	-	1.105	0.174	-	0.021	0.003	-	0.019	0.003	-	0.054	0.007	-	0.092	0.014	-	0.033	0.005	-	53.99	8.65	-	0.007	0.001	-	0.002	0.000	-
		1	4.46	0.17	-	9.517	1.397	-	0.203	0.028	-	0.187	0.026	-	0.529	0.059	-	0.895	0.124	-	0.325	0.045	-	524.64	77.75	-	0.065	0.009	-	0.015	0.002	-
	SSD	0	3.61	0.17	-	7.900	0.722	-	0.116	0.013	-	0.107	0.012	-	0.362	0.027	-	0.511	0.057	-	0.167	0.021	-	273.24	35.82	-	0.033	0.004	-	0.008	0.001	-
		1	3.92	0.17	-	28.904	3.243	-	0.479	0.065	-	0.440	0.060	-	1.493	0.136	-	2.106	0.288	-	0.689	0.105	-	1,125.52	180.44	-	0.134	0.021	-	0.034	0.005	-
		2	5.47	0.17	-	4.517	0.436	-	0.090	0.011	-	0.082	0.010	-	0.280	0.023	-	0.394	0.048	-	0.129	0.018	-	210.80	30.42	-	0.025	0.004	-	0.006	0.001	-
Grand Total			3.10	0.15	196	104.167	14.938	0.452	1.842	0.320	0.030	1.695	0.295	0.028	5.696	0.666	0.025	8.256	1.410	0.045	2.697	0.513	0.131	4,392.29	884.16	208.87	0.539	0.103	0.007	0.132	0.023	0.003
						333.836			7.648			7.036			18.957									5,582								

Harborcraft

Tug/Barge	Calls	Hours
Robyn J (Barge Jake J)	6	16.4
Robyn J (Barge Payton J)	127	16.4
Robyn J (Barge Tori J)	23	16.4
Grand Total	156	16.4

Assist Tugs

Tug	Calls	Hours p Main
Scout	579	0.70
Tioga	579	0.70
Grand Total	1158	0.70

TAMT Plan- 2035 - VSR Beyond CAP

Ships

Ship Type	Engine Type	Emission Tier	Maneuvering Speed (kts)	Maneuvering Time (hrs)	Maneuvering Load Factors Main	Maneuvering Load Factors Aux	Maneuvering Boiler Load (kW)	NOx Main	NOx Aux	NOx Boiler	DPM Main	DPM Aux	DPM Boiler	PM2.5 Main	PM2.5 Aux	PM2.5 Boiler
AUTO CARRIER	SSD	1	7.00	2.41	0.04	0.45	351	3.187	3.771	0.171	0.074	0.076	0.011	0.068	0.070	0.011
BULK CARRIER	MSD	1	7.00	2.41	0.06	0.45	135	0.657	0.927	0.015	0.016	0.019	0.001	0.015	0.017	0.001
	SSD	0	7.00	2.41	0.09	0.45	132	0.763	0.697	0.013	0.013	0.013	0.001	0.012	0.012	0.001
		1	7.00	2.41	0.07	0.45	132	2.007	1.537	0.032	0.041	0.031	0.002	0.038	0.029	0.002
		2	7.00	2.41	0.08	0.45	132	0.623	0.511	0.013	0.015	0.013	0.001	0.014	0.012	0.001
BULK CARRIER, HL	MSD	0	7.00	2.41	0.13	0.45	132	0.661	0.666	0.016	0.013	0.013	0.001	0.012	0.012	0.001
CONTAINER SHIP	SSD	2	7.00	2.41	0.04	0.50	325	6.572	17.894	0.207	0.182	0.452	0.014	0.168	0.416	0.013
GENERAL CARGO	MSD	0	7.00	2.41	0.13	0.45	132	0.280	0.319	0.008	0.006	0.006	0.001	0.006	0.006	0.000
		1	7.00	2.41	0.08	0.45	135	1.199	2.003	0.041	0.031	0.040	0.003	0.028	0.037	0.003
	SSD	0	7.00	2.41	0.08	0.45	135	1.355	1.139	0.022	0.024	0.023	0.001	0.022	0.021	0.001
		1	7.00	2.41	0.06	0.45	135	5.623	5.289	0.087	0.119	0.107	0.006	0.109	0.098	0.005
		2	7.00	2.41	0.09	0.45	135	0.658	0.639	0.015	0.015	0.013	0.001	0.014	0.012	0.001
Grand Total			7.00	2.41	0.05	0.47	251	23.584	35.391	0.640	0.549	0.806	0.043	0.505	0.741	0.039

Maneuvering Emissions (tons)

Ship Type	Engine Type	Emission Tier	ROG Main	ROG Aux	ROG Boiler	CO Main	CO Aux	CO Boiler	SOx Main	SOx Aux	SOx Boiler	CO2 Main	CO2 Aux	CO2 Boiler	CH4 Main	CH4 Aux	CH4 Boiler	N2O Main
AUTO CARRIER	SSD	1	0.574	0.158	0.009	0.511	0.334	0.017	0.070	0.122	0.050	112.88	209.82	79.19	0.052	0.024	0.003	0.004
BULK CARRIER	MSD	1	0.088	0.039	0.001	0.111	0.082	0.002	0.020	0.030	0.004	31.88	51.59	6.95	0.011	0.006	0.000	0.001
	SSD	0	0.069	0.026	0.001	0.085	0.055	0.001	0.017	0.020	0.004	27.23	34.58	5.83	0.006	0.004	0.000	0.001
		1	0.252	0.064	0.002	0.281	0.136	0.003	0.049	0.050	0.009	79.22	85.51	14.89	0.023	0.010	0.001	0.002
		2	0.084	0.027	0.001	0.099	0.057	0.001	0.018	0.021	0.004	29.70	35.59	5.83	0.008	0.004	0.000	0.001
BULK CARRIER, HL	MSD	0	0.047	0.028	0.001	0.075	0.059	0.002	0.021	0.021	0.005	33.17	37.06	7.45	0.006	0.004	0.000	0.001
CONTAINER SHIP	SSD	2	1.419	0.940	0.011	1.262	1.988	0.021	0.174	0.723	0.060	278.93	1,247.19	95.64	0.127	0.145	0.003	0.009
GENERAL CARGO	MSD	0	0.027	0.013	0.000	0.036	0.028	0.001	0.009	0.010	0.002	14.46	17.72	3.56	0.002	0.002	0.000	0.000
		1	0.175	0.084	0.002	0.205	0.178	0.004	0.038	0.065	0.012	61.58	111.48	18.87	0.016	0.013	0.001	0.002
	SSD	0	0.136	0.048	0.001	0.159	0.101	0.002	0.030	0.037	0.006	47.92	63.38	9.93	0.012	0.007	0.000	0.001
		1	0.790	0.222	0.005	0.832	0.469	0.009	0.135	0.171	0.025	217.58	294.33	40.39	0.071	0.034	0.001	0.007
		2	0.081	0.027	0.001	0.099	0.057	0.002	0.020	0.021	0.004	31.69	35.53	6.95	0.007	0.004	0.000	0.001
Grand Total			3.742	1.676	0.035	3.754	3.545	0.064	0.600	1.289	0.186	966.25	2,223.77	295.48	0.340	0.258	0.010	0.030

Harborcraft

Tug/Barge	Calls	Hours
Robyn J (Barge Jake J)	6	16.4
Robyn J (Barge Payton J)	127	16.4
Robyn J (Barge Tori J)	23	16.4
Grand Total	156	16.4

Assist Tugs

Tug	Calls	Hours p Main
Scout	579	0.70
Tioga	579	0.70
Grand Total	1158	0.70

TAMT Plan- 2035 - VSR Beyond CAP Reduction in hoteling time 0%

Ships			N2O	N2O					NOx	NOx	DPM	DPM	PM2.5	PM2.5	ROG	ROG	CO	CO	SOx	SOx	CO2	CO2	CH4	CH4	N2O	N2O	
					Hotel	**Aux**	**Hotelling**		**Hotelling Emissions (tons)**																		
	Engine	**Emission**	**N2O**		**Time**	**Time**	**Auxiliary**	**Boiler**	**NOx**		**DPM**		**PM2.5**		**ROG**		**CO**		**SOx**		**CO2**		**CH4**		**N2O**		**Cold Iron**
Ship Type	**Type**	**Tier**	**Aux**	**Boiler**	**(hr)**	**(hr)**	**LF**	**Load (kW)**	**Aux**	**Boiler**	**Aux**	**Boiler**	**Aux**	**Boiler**	**Aux**	**Boiler**	**Aux**	**Boiler**	**Aux**	**Boiler**	**Aux**	**Boiler**	**Aux**	**Boiler**	**Aux**	**Boiler**	**CO2e**
AUTO CARRIER	SSD	1	0.005	0.001	27.6	27.6	0.26	351	24.874	1.957	0.501	0.130	0.461	0.120	1.043	0.108	2.207	0.196	0.802	0.569	1,384.10	904.15	0.160	0.031	0.036	0.013	-
BULK CARRIER	MSD	1	0.001	0.000	37.9	37.9	0.10	135	3.234	0.236	0.065	0.016	0.060	0.014	0.136	0.013	0.287	0.024	0.104	0.069	179.97	109.14	0.021	0.004	0.005	0.002	
	SSD	0	0.001	0.000	28.7	28.7	0.10	132	1.843	0.150	0.033	0.010	0.030	0.009	0.069	0.008	0.146	0.015	0.053	0.044	91.49	69.37	0.011	0.002	0.002	0.001	-
		1	0.002	0.000	37.8	37.8	0.10	132	5.342	0.504	0.108	0.034	0.099	0.031	0.224	0.028	0.474	0.051	0.172	0.147	297.25	232.93	0.034	0.008	0.008	0.003	-
		2	0.001	0.000	85.1	85.1	0.10	132	3.997	0.444	0.101	0.030	0.093	0.027	0.210	0.025	0.444	0.045	0.162	0.129	278.60	205.28	0.032	0.007	0.007	0.003	-
BULK CARRIER, HL	MSD	0	0.001	0.000	114.0	114.0	0.10	132	7.835	0.761	0.141	0.051	0.130	0.047	0.293	0.042	0.620	0.076	0.225	0.221	388.93	351.61	0.045	0.012	0.010	0.005	-
CONTAINER SHIP	SSD	2	0.033	0.001	88.9	8.2	0.35	325	41.868	7.623	1.057	0.508	0.973	0.468	2.199	0.420	4.652	0.764	1.692	2.216	2,918.09	3,521.30	0.338	0.122	0.076	0.050	20,416
GENERAL CARGO	MSD	0	0.000	0.000	123.0	123.0	0.10	132	3.606	0.393	0.073	0.026	0.067	0.024	0.151	0.022	0.320	0.039	0.116	0.114	200.67	181.41	0.023	0.006	0.005	0.003	
		1	0.003	0.000	62.5	62.5	0.10	135	11.525	1.058	0.232	0.071	0.214	0.065	0.483	0.058	1.022	0.106	0.372	0.307	641.34	488.54	0.074	0.017	0.017	0.007	-
	SSD	0	0.002	0.000	86.3	86.3	0.10	135	10.148	0.769	0.183	0.051	0.168	0.047	0.380	0.042	0.803	0.077	0.292	0.224	503.74	355.23	0.058	0.012	0.013	0.005	-
		1	0.008	0.001	45.5	45.5	0.10	135	22.142	1.647	0.446	0.110	0.411	0.101	0.929	0.091	1.964	0.165	0.714	0.479	1,232.09	760.84	0.143	0.026	0.032	0.011	-
		2	0.001	0.000	50.9	50.9	0.10	135	2.388	0.317	0.060	0.021	0.055	0.019	0.125	0.017	0.265	0.032	0.096	0.092	166.40	146.53	0.019	0.005	0.004	0.002	-
Grand Total			0.058	0.004	69.5	30.6	0.24	251	138.802	15.861	3.001	1.057	2.761	0.973	6.242	0.875	13.204	1.590	4.802	4.611	8,282.67	7,326.34	0.960	0.254	0.216	0.103	20,416

Harborcraft

Tug/Barge	**Calls**	**Hours**
Robyn J (Barge Jake J)	6	16.4
Robyn J (Barge Payton J)	127	16.4
Robyn J (Barge Tori J)	23	16.4
Grand Total	156	16.4

Assist Tugs

		Hours p
Tug	**Calls**	**Main**
Scout	579	0.70
Tioga	579	0.70
Grand Total	1158	0.70

TAMT Plan- 2035 - with AMECS

0%

Ships

										NOx	NOx	DPM	DPM	PM2.5	PM2.5	ROG	ROG	CO	CO	SOx	SOx	CO2	CO2	CH4	CH4	N2O	N2O
						Hotel	Aux	Hotelling		Hotelling Emissions (lbs)																	
	Engine	Emission		Power (kW)		Time	Time	Auxiliary	Boiler	NOx		DPM		PM2.5		ROG		CO		SOx		CO2		CH4		N2O	
Ship Type	Type	Tier	Calls	Main	Aux	(hr)	(hr)	LF	Load (kW)	Aux	Boiler	Aux	Boiler	Aux	Boiler	Aux	Boiler	Aux	Boiler	Aux	Boiler	Aux	Boiler	Aux	Boiler	Aux	Boiler
AUTO CARRIER	SSD	1	0.45	11,060	2,760	24.0	24.0	0.26	351	159.08	16.67	3.16	1.11	2.90	1.02	6.71	0.92	18.79	1.67	5.03	4.85	12,348.35	7,699.93	1.37	0.27	0.31	0.11
BULK CARRIER	MSD	1	0.08	9,100	2,973	24.0	24.0	0.10	135	11.20	1.10	0.22	0.07	0.21	0.07	0.50	0.06	1.34	0.11	0.35	0.32	961.94	507.98	0.10	0.02	0.02	0.01
	SSD	0	0.08	8,139	2,325	24.0	24.0	0.10	132	9.82	1.08	0.17	0.07	0.16	0.07	0.39	0.06	1.04	0.11	0.28	0.31	752.27	496.69	0.08	0.02	0.02	0.01
		1	0.19	10,705	2,250	24.0	24.0	0.10	132	21.18	2.69	0.42	0.18	0.39	0.16	0.94	0.15	2.53	0.27	0.67	0.78	1,819.69	1,241.73	0.18	0.04	0.04	0.02
		2	0.08	9,140	2,393	24.0	24.0	0.10	132	7.19	1.08	0.18	0.07	0.17	0.07	0.40	0.06	1.07	0.11	0.28	0.31	774.11	496.69	0.08	0.02	0.02	0.01
BULK CARRIER, HL	MSD	0	0.12	5,738	1,950	24.0	24.0	0.10	132	12.35	1.61	0.22	0.11	0.20	0.10	0.49	0.09	1.31	0.16	0.35	0.47	946.41	745.04	0.10	0.03	0.02	0.01
CONTAINER SHIP	SSD	2	1.93	19,420	11,320	24.0	8.2	0.35	325	1,346.33	66.19	34.00	4.41	31.28	4.06	70.72	3.65	149.59	6.64	54.40	19.24	93,835.20	30,572.85	10.88	1.06	2.45	0.43
GENERAL CARGO	MSD	0	0.04	5,738	1,950	24.0	24.0	0.10	132	3.67	0.54	0.07	0.04	0.07	0.03	0.16	0.03	0.44	0.05	0.12	0.16	311.18	248.35	0.03	0.01	0.01	0.00
		1	0.27	6,400	2,367	24.0	24.0	0.10	135	31.17	3.85	0.62	0.26	0.57	0.24	1.37	0.21	3.72	0.39	0.98	1.12	2,643.88	1,777.93	0.27	0.06	0.06	0.03
	SSD	0	0.12	9,268	2,557	24.0	24.0	0.10	135	16.18	1.65	0.29	0.11	0.26	0.10	0.64	0.09	1.72	0.17	0.45	0.48	1,223.99	761.97	0.13	0.03	0.03	0.01
		1	0.58	12,430	2,920	24.0	24.0	0.10	135	82.39	8.25	1.64	0.55	1.51	0.51	3.63	0.45	9.84	0.83	2.60	2.40	6,988.81	3,809.85	0.72	0.13	0.16	0.05
		2	0.08	8,630	2,048	24.0	24.0	0.10	135	6.15	1.10	0.15	0.07	0.14	0.07	0.34	0.06	0.92	0.11	0.24	0.32	653.49	507.98	0.07	0.02	0.02	0.01
Grand Total			4.00	14,524	6,799	24.0	16.4	0.24	251	1,706.71	105.79	41.14	7.05	37.86	6.49	86.29	5.83	192.31	10.61	65.75	30.76	123,259	48,867	13.987	1.697	3.147	0.689

Multipliers

		NOx Aux	NOx Boiler	DPM Aux	DPM Boiler	PM2.5 Aux	PM2.5 Boiler	ROG Aux	ROG Boiler	CO Aux	CO Boiler	SOx Aux	SOx Boiler	CO2 Aux	CO2 Boiler	CH4 Aux	CH4 Boiler	N2O Aux	N2O Boiler
AUTO CARRIER	*5*	25%	100%	22%	100%	22%	100%	27%	100%	100%	100%	21%	100%	114%	100%	100%	100%	100%	100%
BULK CARRIER	*6*	23%	100%	20%	100%	21%	100%	36%	100%	100%	100%	18%	100%	145%	100%	100%	100%	100%	100%
BULK CARRIER	*6*	23%	100%	20%	100%	21%	100%	36%	100%	100%	100%	18%	100%	145%	100%	100%	100%	100%	100%
BULK CARRIER	*6*	23%	100%	20%	100%	21%	100%	36%	100%	100%	100%	18%	100%	145%	100%	100%	100%	100%	100%
BULK CARRIER	*6*	23%	100%	20%	100%	21%	100%	36%	100%	100%	100%	18%	100%	145%	100%	100%	100%	100%	100%
BULK CARRIER, HL	*6*	23%	100%	20%	100%	21%	100%	36%	100%	100%	100%	18%	100%	145%	100%	100%	100%	100%	100%
CONTAINER SHIP	*7*	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
GENERAL CARGO	*8*	23%	100%	20%	100%	20%	100%	34%	100%	100%	100%	18%	100%	140%	100%	100%	100%	100%	100%
GENERAL CARGO	*8*	23%	100%	20%	100%	20%	100%	34%	100%	100%	100%	18%	100%	140%	100%	100%	100%	100%	100%
GENERAL CARGO	*8*	23%	100%	20%	100%	20%	100%	34%	100%	100%	100%	18%	100%	140%	100%	100%	100%	100%	100%
GENERAL CARGO	*8*	23%	100%	20%	100%	20%	100%	34%	100%	100%	100%	18%	100%	140%	100%	100%	100%	100%	100%
GENERAL CARGO	*8*	23%	100%	20%	100%	20%	100%	34%	100%	100%	100%	18%	100%	140%	100%	100%	100%	100%	100%

TAMT Plan- 2035 - with AMECS

										NOx	NOx	DPM	DPM	PM2.5	PM2.5	ROG	ROG	CO	CO	SOx	SOx	CO2	CO2	CH4	CH4	N2O	N2O
						Hotel	Aux	Hotelling		Hotelling Emissions (tons)																	
	Engine	Emission		Power (kW)		Time	Time	Auxiliary	Boiler	NOx		DPM		PM2.5		ROG		CO		SOx		CO2		CH4		N2O	
Ship Type	Type	Tier	Calls	Main	Aux	(hr)	(hr)	LF	Load (kW)	Aux	Boiler	Aux	Boiler	Aux	Boiler	Aux	Boiler	Aux	Boiler	Aux	Boiler	Aux	Boiler	Aux	Boiler	Aux	Boiler
AUTO CARRIER	SSD	1	92	11,060	2,760	27.6	27.6	0.26	351	17.43	1.957	0.34	0.130	0.32	0.120	0.74	0.108	2.207	0.196	0.55	0.569	1,463.30	904	0.11	0.031	0.03	0.013
BULK CARRIER	MSD	1	21	9,100	2,973	37.9	37.9	0.10	135	2.24	0.236	0.04	0.016	0.04	0.014	0.10	0.013	0.287	0.024	0.07	0.069	212.08	109	0.02	0.004	0.00	0.002
	SSD	0	18	8,139	2,325	28.7	28.7	0.10	132	1.28	0.150	0.02	0.010	0.02	0.009	0.05	0.008	0.146	0.015	0.04	0.044	107.81	69	0.01	0.002	0.00	0.001
		1	46	10,705	2,250	37.8	37.8	0.10	132	3.70	0.504	0.07	0.034	0.07	0.031	0.17	0.028	0.474	0.051	0.12	0.147	350.28	233	0.03	0.008	0.01	0.003
		2	18	9,140	2,393	85.1	85.1	0.10	132	2.77	0.444	0.07	0.030	0.06	0.027	0.16	0.025	0.444	0.045	0.11	0.129	328.31	205	0.02	0.007	0.01	0.003
BULK CARRIER, HL	MSD	0	23	5,738	1,950	114.0	114.0	0.10	132	5.42	0.761	0.10	0.051	0.09	0.047	0.22	0.042	0.620	0.076	0.15	0.221	458.32	352	0.03	0.012	0.01	0.005
CONTAINER SHIP	SSD	2	120	19,420	11,320	88.9	8.2	0.35	325	41.87	7.623	1.06	0.508	0.97	0.468	2.20	0.420	4.652	0.764	1.69	2.216	2,918.09	3,521	0.34	0.122	0.08	0.050
GENERAL CARGO	MSD	0	11	5,738	1,950	123.0	123.0	0.10	132	2.49	0.393	0.05	0.026	0.05	0.024	0.11	0.022	0.320	0.039	0.08	0.114	232.70	181	0.02	0.006	0.00	0.003
		1	57	6,400	2,367	62.5	62.5	0.10	135	7.97	1.058	0.16	0.071	0.15	0.065	0.36	0.058	1.022	0.106	0.25	0.307	743.72	489	0.05	0.017	0.01	0.007
	SSD	0	30	9,268	2,557	86.3	86.3	0.10	135	7.01	0.769	0.12	0.051	0.11	0.047	0.28	0.042	0.803	0.077	0.20	0.224	584.16	355	0.04	0.012	0.01	0.005
		1	122	12,430	2,920	45.5	45.5	0.10	135	15.30	1.647	0.30	0.110	0.28	0.101	0.68	0.091	1.964	0.165	0.48	0.479	1,428.79	761	0.11	0.026	0.02	0.011
		2	21	8,630	2,048	50.9	50.9	0.10	135	1.65	0.317	0.04	0.021	0.04	0.019	0.09	0.017	0.265	0.032	0.06	0.092	192.97	147	0.01	0.005	0.00	0.002
Grand Total			579	14,524	6,799	69.493	30.6	0.24	251	109.118	15.861	2.382	1.057	2.192	0.973	5.153	0.875	13.204	1.590	3.788	4.611	9,020.52	7,326.34	0.793	0.254	0.173	0.103

Multipliers	AUTO CARRIER	*5*	25%	100%	22%	100%	22%	100%	27%	100%	100%	100%	21%	100%	114%	100%	27%	100%	25%	100%
	BULK CARRIER	*6*	23%	100%	20%	100%	21%	100%	36%	100%	100%	100%	18%	100%	145%	100%	36%	100%	23%	100%
	BULK CARRIER	*6*	23%	100%	20%	100%	21%	100%	36%	100%	100%	100%	18%	100%	145%	100%	36%	100%	23%	100%
	BULK CARRIER	*6*	23%	100%	20%	100%	21%	100%	36%	100%	100%	100%	18%	100%	145%	100%	36%	100%	23%	100%
	BULK CARRIER	*6*	23%	100%	20%	100%	21%	100%	36%	100%	100%	100%	18%	100%	145%	100%	36%	100%	23%	100%
	BULK CARRIER, HL	*6*	23%	100%	20%	100%	21%	100%	36%	100%	100%	100%	18%	100%	145%	100%	36%	100%	23%	100%
	CONTAINER SHIP	*6*	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
	GENERAL CARGO	*8*	23%	100%	20%	100%	20%	100%	34%	100%	100%	100%	18%	100%	140%	100%	34%	100%	23%	100%
	GENERAL CARGO	*8*	23%	100%	20%	100%	20%	100%	34%	100%	100%	100%	18%	100%	140%	100%	34%	100%	23%	100%
	GENERAL CARGO	*8*	23%	100%	20%	100%	20%	100%	34%	100%	100%	100%	18%	100%	140%	100%	34%	100%	23%	100%
	GENERAL CARGO	*8*	23%	100%	20%	100%	20%	100%	34%	100%	100%	100%	18%	100%	140%	100%	34%	100%	23%	100%
	GENERAL CARGO	*8*	23%	100%	20%	100%	20%	100%	34%	100%	100%	100%	18%	100%	140%	100%	34%	100%	23%	100%

STC 2035 - Unmitigated

Ships

Ship Type	Engine Type	Emission Tier	Calls	Power (kW) Main	Power (kW) Aux	Service Speed (kts)	Total Transit Distance (nm) Arrival	Total Transit Distance (nm) Depart	Transit - Arrival Comp (%)	Transit - Arrival Distance (nm)	Transit - Arrival Speed (kts) Comp	Transit - Arrival Speed (kts) NC	Transit - Arrival Main Load Factor Comp	Transit - Arrival Main Load Factor NC
AUTO CARRIER	SSD	1	0.45	11,060	2,760	20.00	35.30	35.30	0%	15.30	12.00	20.00	0.18	0.82
BULK CARRIER	MSD	1	0.08	9,100	2,973	16.65	30.20	23.40	0%	10.20	11.00	16.65	0.24	0.82
	SSD	0	0.08	8,139	2,325	14.60	30.20	30.20	0%	10.20	10.70	14.60	0.32	0.82
		1	0.19	10,705	2,250	15.92	33.94	26.46	0%	13.94	11.13	15.92	0.28	0.82
		2	0.08	9,140	2,393	15.00	11.50	48.90	0%	-	11.05	15.00	0.33	0.82
BULK CARRIER, HL	MSD	0	0.12	5,738	1,950	13.00	5.75	24.45	0%	-	9.45	13.00	0.32	0.82
CONTAINER SHIP	SSD	2	1.93	19,420	11,320	19.50	11.92	12.16	0%	-	11.64	19.50	0.18	0.82
GENERAL CARGO	MSD	0	0.04	5,738	1,950	13.00	11.50	48.90	0%	-	10.10	13.00	0.39	0.82
		1	0.27	6,400	2,367	15.34	35.98	23.74	0%	15.98	12.57	15.34	0.45	0.82
	SSD	0	0.12	9,268	2,557	15.23	23.97	36.43	0%	3.97	12.07	15.23	0.41	0.82
		1	0.58	12,430	2,920	16.98	26.95	34.06	0%	6.95	11.77	16.98	0.27	0.82
		2	0.08	8,630	2,048	14.90	42.10	30.20	0%	22.10	10.95	14.90	0.33	0.82
Grand Total			4.00	14,524	6,799	18.04	20.86	22.44	0%	5.41	11.62	18.04	0.24	0.82

Ship Type	Engine Type	Emission Tier	Transit - Departure Comp (%)	Transit - Departure Distance (nm)	Transit - Departure Speed (kts) Comp	Transit - Departure Speed (kts) NC	Transit - Departure Main Load Factor Comp	Transit - Departure Main Load Factor NC	Time (hrs)	Aux	NC Boiler Load (kW)	NOx Main	NOx Aux	NOx Boiler	DPM Main	DPM Aux	DPM Boiler	PM2.5 Main
AUTO CARRIER	SSD	1	0%	15.30	12.00	20.00	0.18	0.82	1.53	0.15	351	208.50	7.79	-	3.45	0.16	-	3.18
BULK CARRIER	MSD	1	0%	3.40	11.20	16.65	0.25	0.82	0.82	0.17	-	12.17	0.87	-	0.26	0.02	-	0.24
	SSD	0	0%	10.20	12.45	14.60	0.51	0.82	1.40	0.17	-	27.06	1.31	-	0.40	0.02	-	0.37
		1	0%	6.46	11.90	15.92	0.34	0.82	1.28	0.17	-	72.48	2.58	-	1.20	0.05	-	1.10
		2	0%	28.90	12.50	15.00	0.48	0.82	1.93	0.17	-	31.06	1.32	-	0.62	0.03	-	0.57
BULK CARRIER, HL	MSD	0	0%	4.45	9.45	13.00	0.32	0.82	0.34	0.17	-	5.44	0.40	-	0.10	0.01	-	0.09
CONTAINER SHIP	SSD	2	0%	-	11.93	19.50	0.19	0.82	-	0.13	132	-	-	-	-	-	-	-
GENERAL CARGO	MSD	0	0%	28.90	10.10	13.00	0.39	0.82	2.22	0.17	-	11.78	0.87	-	0.22	0.02	-	0.21
		1	0%	3.74	12.20	15.34	0.41	0.82	1.29	0.17	-	47.16	3.82	-	1.01	0.08	-	0.93
	SSD	0	0%	16.43	12.30	15.23	0.43	0.82	1.34	0.17	-	44.30	2.06	-	0.65	0.04	-	0.60
		1	0%	14.06	11.86	16.98	0.28	0.82	1.24	0.17	-	243.94	9.72	-	4.04	0.20	-	3.72
		2	0%	10.20	11.00	14.90	0.33	0.82	2.17	0.17	-	32.99	1.27	-	0.65	0.03	-	0.60
Grand Total			0%	6.22	11.85	18.04	0.25	0.82	0.69	0.15	103	736.88	32.02	-	12.60	0.65	-	11.60

1.28625686 =scaling factor for 2020 to 2035 (4 max daily calls / 2020 max daily calls

Harborcraft

Tug Running Emissions (lbs)

Tug/Barge	Calls	Hours	NOx Main	NOx Aux	DPM Main	DPM Aux	PM2.5 Main	PM2.5 Aux	ROG Main	ROG Aux	CO Main	CO Aux	SOx Main	SOx Aux	CO2 Main	CO2 Aux	CH4 Main	CH4 Aux	N2O Main	N2O Aux
Robyn J (Barge Jake J)	0.15	16.4	29.683	1.385	1.013	0.050	0.983	0.049	2.795	0.234	22.288	1.054	0.029	0.001	2,617	130	0.052	0.005	0.118	0.006
Robyn J (Barge Payton J)	3.26	16.4	653.029	30.474	22.285	1.110	21.616	1.077	61.490	5.150	490.328	23.186	0.645	0.032	57,573	2,856	1.144	0.101	2.595	0.129
Robyn J (Barge Tori J)	0.59	16.4	118.733	5.541	4.052	0.202	3.930	0.196	11.180	0.936	89.151	4.216	0.117	0.006	10,468	519	0.208	0.018	0.472	0.023
Grand Total	4.00	16.4	801.445	37.400	27.349	1.362	26.529	1.321	75.465	6.320	601.767	28.455	0.792	0.039	70,658	3,505	1.404	0.124	3.185	0.158

Hoteling Emi

Tug/Barge	Hours Tug	Hours Barge	NOx Tug	NOx Barge	DPM Tug	DPM Barge	PM2.5 Tug	PM2.5 Barge	ROG Tug	ROG Barge
Robyn J (Barge Jake J)	1.0	4.5	0.08	1.13	0.00	0.06	0.00	0.06	0.01	0.19
Robyn J (Barge Payton J)	1.0	4.8	1.86	26.77	0.07	1.44	0.07	1.40	0.31	4.55
Robyn J (Barge Tori J)	1.0	5.3	0.34	5.37	0.01	0.29	0.01	0.28	0.06	0.91
Grand Total	1.0	4.9	2.282	33.267	0.083	1.796	0.081	1.742	0.386	5.651

Assist Tugs

Tug Running Emissions (lbs)

Tug	Calls	Hours per Call Main	Hours per Call Aux	Load Factors Main	Load Factors Aux	NOx Main	NOx Aux	DPM Main	DPM Aux	PM2.5 Main	PM2.5 Aux	ROG Main	ROG Aux	CO Main	CO Aux	SOx Main	SOx Aux	CO2 Main	CO2 Aux	CH4 Main	CH4 Aux	N2O Main	N2O Aux
Scout	4.00	0.70	1.00	0.31	0.43	40.07	3.96	0.89	0.09	0.86	0.09	4.77	0.65	38.04	4.22	0.05	0.01	4,467	519	0.089	0.013	0.201	0.023
Tioga	4.00	0.70	1.00	0.31	0.43	40.07	3.17	0.89	0.12	0.86	0.12	4.77	0.54	38.04	2.41	0.05	0.00	4,467	297	0.089	0.010	0.201	0.013
Grand Total	8.00	0.70	1.00	0.31	0.43	80.13	7.12	1.77	0.21	1.72	0.21	9.54	1.18	76.08	6.62	0.10	0.01	8,933	816	0.178	0.023	0.403	0.037

STC 2035 - Unmitigated

Ships

Transit Emissions (lbs)

Ship Type	Engine Type	Emission Tier	PM2.5 Aux	PM2.5 Boiler	ROG Main	ROG Aux	ROG Boiler	CO Main	CO Aux	CO Boiler	SOx Main	SOx Aux	SOx Boiler	CO2 Main	CO2 Aux	CO2 Boiler	CH4 Main	CH4 Aux	CH4 Boiler	N2O Main	N2O Aux	N2O Boiler
AUTO CARRIER	SSD	1	0.14	-	10.77	0.33	-	15.19	0.69	-	4.97	0.25	-	8,119	434	-	0.967	0.050	-	0.249	0.011	-
BULK CARRIER	MSD	1	0.02	-	0.68	0.04	-	1.14	0.08	-	0.42	0.03	-	671	48	-	0.083	0.006	-	0.019	0.001	-
	SSD	0	0.02	-	1.24	0.05	-	1.75	0.10	-	0.57	0.04	-	936	65	-	0.111	0.008	-	0.029	0.002	-
		1	0.05	-	3.74	0.11	-	5.28	0.23	-	1.73	0.08	-	2,822	144	-	0.336	0.017	-	0.086	0.004	-
		2	0.03	-	1.92	0.07	-	2.71	0.15	-	0.89	0.05	-	1,449	92	-	0.173	0.011	-	0.044	0.002	-
BULK CARRIER, HL	MSD	0	0.01	-	0.27	0.02	-	0.45	0.03	-	0.16	0.01	-	266	20	-	0.033	0.002	-	0.007	0.001	-
CONTAINER SHIP	SSD	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GENERAL CARGO	MSD	0	0.01	-	0.58	0.03	-	0.98	0.07	-	0.36	0.03	-	576	43	-	0.071	0.005	-	0.016	0.001	-
		1	0.07	-	2.62	0.16	-	4.43	0.34	-	1.61	0.12	-	2,600	213	-	0.322	0.025	-	0.073	0.006	-
	SSD	0	0.03	-	2.03	0.08	-	2.87	0.16	-	0.94	0.06	-	1,532	102	-	0.182	0.012	-	0.047	0.003	-
		1	0.18	-	12.60	0.41	-	17.77	0.86	-	5.82	0.31	-	9,499	541	-	1.131	0.063	-	0.291	0.014	-
		2	0.03	-	2.04	0.07	-	2.88	0.14	-	0.94	0.05	-	1,540	89	-	0.183	0.010	-	0.047	0.002	-
Grand Total			0.60	-	38.50	1.35	-	55.46	2.85	-	18.41	1.04	-	30,010	1,791	-	3.593	0.208	-	0.908	0.047	-

Ship Type	Engine Type	Emission Tier	VSR - Arrival Comp (%)	VSR - Arrival Distance (nm)	VSR - Arrival Speed (kts) Comp	VSR - Arrival Speed (kts) NC	Main Load Factor Comp	Main Load Factor NC	VSR - Departure Comp (%)	VSR - Departure Distance (nm)	VSR - Departure Speed (kts) Comp	VSR - Departure Speed (kts) NC
AUTO CARRIER	SSD	1	0%	20.00	12.00	16.06	0.18	0.43	0%	20.00	12.00	15.24
BULK CARRIER	MSD	1	50%	20.00	11.00	13.60	0.24	0.45	50%	20.00	11.20	13.60
	SSD	0	100%	20.00	10.70	14.60	0.32	0.82	100%	20.00	12.45	14.60
		1	60%	20.00	11.13	13.10	0.28	0.46	40%	20.00	11.90	13.07
		2	100%	11.50	11.05	15.00	0.33	0.82	100%	20.00	12.50	15.00
BULK CARRIER, HL	MSD	0	100%	5.75	9.45	13.00	0.32	0.82	100%	20.00	9.45	13.00
CONTAINER SHIP	SSD	2	86%	11.92	11.64	14.78	0.18	0.36	74%	12.16	11.93	16.06
GENERAL CARGO	MSD	0	100%	11.50	10.10	13.00	0.39	0.82	100%	20.00	10.10	13.00
		1	60%	20.00	12.57	13.20	0.45	0.52	60%	20.00	12.20	15.10
	SSD	0	100%	20.00	12.07	15.23	0.41	0.82	100%	20.00	12.30	15.23
		1	91%	20.00	11.77	13.10	0.27	0.38	45%	20.00	11.86	15.23
		2	100%	20.00	10.95	14.90	0.33	0.82	100%	20.00	11.00	14.90
Grand Total			75%	15.44	11.62	14.42	0.24	0.44	62%	16.22	11.85	15.38

Harborcraft

ssions (lbs)

Tug/Barge	Calls	Hours	CO Tug	CO Barge	SOx Tug	SOx Barge	CO2 Tug	CO2 Barge	CH4 Tug	CH4 Barge	N2O Tug	N2O Barge
Robyn J (Barge Jake J)	0.15	16.4	0.06	0.89	0.00	0.00	8	102	0.000	0.003	0.000	0.005
Robyn J (Barge Payton J)	3.26	16.4	1.42	21.10	0.00	0.03	174	2,413	0.006	0.083	0.008	0.112
Robyn J (Barge Tori J)	0.59	16.4	0.26	4.23	0.00	0.01	32	484	0.001	0.017	0.001	0.023
Grand Total	4.00	16.4	1.737	26.219	0.002	0.034	213.88	2,999.05	0.008	0.103	0.010	0.140

Assist Tugs

Tug	Calls	Hours Main
Scout	4.00	0.70
Tioga	4.00	0.70
Grand Total	8.00	0.70

STC 2035 - Unmitigated

Ships

VSR Emissions (lbs)

Ship Type	Engine Type	Emission Tier	Main Load Factor Comp	Main Load Factor NC	Time (hrs)	Aux	NC Boiler Load (kW)	NOx Main	NOx Aux	NOx Boiler	DPM Main	DPM Aux	DPM Boiler	PM2.5 Main	PM2.5 Aux	PM2.5 Boiler
AUTO CARRIER	SSD	1	0.18	0.36	2.56	0.15	351	167.00	13.02	-	2.76	0.26	-	2.54	0.24	-
BULK CARRIER	MSD	1	0.25	0.45	3.27	0.17	-	19.90	3.49	-	0.43	0.07	-	0.39	0.06	-
	SSD	0	0.51	0.82	3.48	0.17	-	33.54	3.25	-	0.49	0.06	-	0.45	0.05	-
		1	0.34	0.45	3.28	0.17	-	84.70	6.61	-	1.40	0.13	-	1.29	0.12	-
		2	0.48	0.82	2.64	0.17	-	21.63	1.81	-	0.43	0.05	-	0.39	0.04	-
BULK CARRIER, HL	MSD	0	0.32	0.82	2.72	0.17	-	16.64	3.20	-	0.32	0.06	-	0.29	0.05	-
CONTAINER SHIP	SSD	2	0.19	0.46	1.94	0.13	325	454.50	120.42	4.50	9.14	3.04	0.30	8.41	2.80	0.28
GENERAL CARGO	MSD	0	0.39	0.82	3.12	0.17	-	7.75	1.22	-	0.15	0.02	-	0.14	0.02	-
		1	0.41	0.78	3.07	0.17	-	70.11	9.13	-	1.50	0.18	-	1.38	0.17	-
	SSD	0	0.43	0.82	3.28	0.17	-	55.56	5.06	-	0.82	0.09	-	0.75	0.08	-
		1	0.28	0.59	3.17	0.17	-	267.41	24.87	-	4.43	0.50	-	4.07	0.46	-
		2	0.33	0.82	3.64	0.17	-	22.17	2.14	-	0.44	0.05	-	0.40	0.05	-
Grand Total			0.25	0.54	2.50	0.15	196	1,220.92	194.23	4.50	22.30	4.52	0.30	20.52	4.16	0.28

Ship Type	Engine Type	Emission Tier	ROG Main	ROG Aux	ROG Boiler	CO Main	CO Aux	CO Boiler	SOx Main	SOx Aux	SOx Boiler	CO2 Main	CO2 Aux	CO2 Boiler	CH4 Main	CH4 Aux	CH4 Boiler	N2O Main
AUTO CARRIER	SSD	1	8.63	0.55	-	12.17	1.16	-	3.98	0.42	-	6,503	725	-	0.774	0.084	-	0.199
BULK CARRIER	MSD	1	1.11	0.15	-	1.87	0.31	-	0.68	0.11	-	1,097	194	-	0.136	0.023	-	0.031
	SSD	0	1.54	0.12	-	2.17	0.26	-	0.71	0.09	-	1,160	161	-	0.138	0.019	-	0.036
		1	4.38	0.28	-	6.17	0.59	-	2.02	0.21	-	3,298	368	-	0.393	0.043	-	0.101
		2	1.34	0.10	-	1.89	0.20	-	0.62	0.07	-	1,009	126	-	0.120	0.015	-	0.031
BULK CARRIER, HL	MSD	0	0.82	0.12	-	1.39	0.25	-	0.50	0.09	-	813	159	-	0.101	0.018	-	0.023
CONTAINER SHIP	SSD	2	30.59	6.32	0.25	42.85	13.38	0.45	13.08	4.87	1.31	21,285	8,393	2,078	2.745	0.973	0.072	0.649
GENERAL CARGO	MSD	0	0.38	0.05	-	0.65	0.10	-	0.23	0.04	-	379	61	-	0.047	0.007	-	0.011
		1	3.89	0.38	-	6.59	0.81	-	2.40	0.29	-	3,865	508	-	0.479	0.059	-	0.108
	SSD	0	2.55	0.19	-	3.60	0.40	-	1.18	0.15	-	1,922	251	-	0.229	0.029	-	0.059
		1	13.81	1.04	-	19.48	2.21	-	6.38	0.80	-	10,413	1,384	-	1.240	0.160	-	0.319
		2	1.37	0.11	-	1.94	0.24	-	0.63	0.09	-	1,034	149	-	0.123	0.017	-	0.032
Grand Total			70.40	9.40	0.25	100.75	19.89	0.45	32.41	7.23	1.31	52,779	12,479	2,078	6.525	1.447	0.072	1.597

Harborcraft

Tug/Barge	Calls	Hours
Robyn J (Barge Jake J)	0.15	16.4
Robyn J (Barge Payton J)	3.26	16.4
Robyn J (Barge Tori J)	0.59	16.4
Grand Total	4.00	16.4

Assist Tugs

Tug	Calls	Hours Main
Scout	4.00	0.70
Tioga	4.00	0.70
Grand Total	8.00	0.70

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Ships

Ship Type	Engine Type	Emission Tier	N2O Aux	N2O Boiler	Maneuvering Speed (kts)	Maneuvering Time (hrs)	Load Factors Main	Load Factors Aux	Boiler Load (kW)	NOx Main	NOx Aux	NOx Boiler	DPM Main	DPM Aux	DPM Boiler
			N2O	N2O						NOx	NOx	NOx	DPM	DPM	DPM
AUTO CARRIER	SSD	1	0.019	-	7.00	2.41	0.04	0.45	351	31.18	36.88	1.68	0.72	0.74	0.11
BULK CARRIER	MSD	1	0.005	-	7.00	2.41	0.06	0.45	135	4.83	6.81	0.11	0.12	0.14	0.01
	SSD	0	0.004	-	7.00	2.41	0.09	0.45	132	6.54	5.97	0.11	0.11	0.11	0.01
		1	0.010	-	7.00	2.41	0.07	0.45	132	16.83	12.89	0.27	0.34	0.26	0.02
		2	0.003	-	7.00	2.41	0.08	0.45	132	5.34	4.38	0.11	0.13	0.11	0.01
BULK CARRIER, HL	MSD	0	0.004	-	7.00	2.41	0.13	0.45	132	6.65	6.70	0.16	0.14	0.14	0.01
CONTAINER SHIP	SSD	2	0.219	0.029	7.00	2.41	0.04	0.50	325	211.33	575.42	6.66	5.86	14.53	0.44
GENERAL CARGO	MSD	0	0.002	-	7.00	2.41	0.13	0.45	132	1.97	2.23	0.05	0.05	0.05	0.00
		1	0.013	-	7.00	2.41	0.08	0.45	135	11.36	18.99	0.39	0.29	0.38	0.03
	SSD	0	0.007	-	7.00	2.41	0.08	0.45	135	10.46	8.79	0.17	0.18	0.18	0.01
		1	0.036	-	7.00	2.41	0.06	0.45	135	53.35	50.19	0.83	1.13	1.01	0.06
		2	0.004	-	7.00	2.41	0.09	0.45	135	4.84	4.69	0.11	0.11	0.09	0.01
Grand Total			0.326	0.029	7.00	2.41	0.05	0.47	251	364.68	733.96	10.64	9.17	17.74	0.71

Maneuvering Emissions (lbs)

Ship Type	Engine Type	Emission Tier	PM2.5 Main	PM2.5 Aux	PM2.5 Boiler	ROG Main	ROG Aux	ROG Boiler	CO Main	CO Aux	CO Boiler	SOx Main	SOx Aux	SOx Boiler	CO2 Main	CO2 Aux	CO2 Boiler	CH4 Main	CH4 Aux	CH4 Boiler
			PM2.5	PM2.5	PM2.5	ROG	ROG	ROG	CO	CO	CO	SOx	SOx	SOx	CO2	CO2	CO2	CH4	CH4	CH4
AUTO CARRIER	SSD	1	0.66	0.68	0.10	5.62	1.55	0.09	4.99	3.27	0.17	0.69	1.19	0.49	1,104	2,052	775	0.504	0.238	0.027
BULK CARRIER	MSD	1	0.11	0.13	0.01	0.65	0.29	0.01	0.82	0.60	0.01	0.15	0.22	0.03	234	379	51	0.080	0.044	0.002
	SSD	0	0.10	0.10	0.01	0.60	0.22	0.01	0.73	0.47	0.01	0.14	0.17	0.03	233	297	50	0.053	0.034	0.002
		1	0.32	0.24	0.02	2.11	0.54	0.01	2.36	1.14	0.03	0.41	0.42	0.08	665	717	125	0.189	0.083	0.004
		2	0.12	0.10	0.01	0.72	0.23	0.01	0.85	0.49	0.01	0.16	0.18	0.03	255	305	50	0.065	0.035	0.002
BULK CARRIER, HL	MSD	0	0.12	0.12	0.01	0.47	0.28	0.01	0.76	0.59	0.02	0.21	0.22	0.05	334	373	75	0.058	0.043	0.003
CONTAINER SHIP	SSD	2	5.39	13.37	0.41	45.64	30.22	0.37	40.57	63.94	0.67	5.60	23.25	1.94	8,969	40,105	3,075	4.096	4.650	0.107
GENERAL CARGO	MSD	0	0.04	0.04	0.00	0.19	0.09	0.00	0.25	0.20	0.01	0.06	0.07	0.02	101	124	25	0.017	0.014	0.001
		1	0.27	0.35	0.02	1.65	0.80	0.02	1.94	1.68	0.04	0.36	0.61	0.11	584	1,057	179	0.149	0.122	0.006
	SSD	0	0.17	0.16	0.01	1.05	0.37	0.01	1.23	0.78	0.02	0.23	0.28	0.05	370	489	77	0.094	0.057	0.003
		1	1.04	0.93	0.05	7.49	2.10	0.05	7.89	4.45	0.08	1.28	1.62	0.24	2,065	2,793	383	0.672	0.324	0.013
		2	0.10	0.09	0.01	0.59	0.20	0.01	0.73	0.42	0.01	0.14	0.15	0.03	233	261	51	0.053	0.030	0.002
Grand Total			8.44	16.32	0.65	66.78	36.89	0.59	63.11	78.04	1.07	9.43	28.38	3.09	15,147	48,953	4,916	6.031	5.676	0.171

Harborcraft

Tug/Barge	Calls	Hours
Robyn J (Barge Jake J)	0.15	16.4
Robyn J (Barge Payton J)	3.26	16.4
Robyn J (Barge Tori J)	0.59	16.4
Grand Total	4.00	16.4

Assist Tugs

Tug	Calls	Hours Main
Scout	4.00	0.70
Tioga	4.00	0.70
Grand Total	8.00	0.70

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Reduction in hoteling time 0%

Ships

			N2O	N2O	N2O				
						Hotel	Aux	Hotelling	
	Engine	Emission		N2O		Time	Time	Auxiliary	Boiler
Ship Type	Type	Tier	Main	Aux	Boiler	(hr)	(hr)	LF	Load (kW)
AUTO CARRIER	SSD	1	0.037	0.054	0.011	24.0	24.0	0.26	351
BULK CARRIER	MSD	1	0.007	0.010	0.001	24.0	24.0	0.10	135
	SSD	0	0.007	0.008	0.001	24.0	24.0	0.10	132
		1	0.020	0.019	0.002	24.0	24.0	0.10	132
		2	0.008	0.008	0.001	24.0	24.0	0.10	132
BULK CARRIER, HL	MSD	0	0.009	0.010	0.001	24.0	24.0	0.10	132
CONTAINER SHIP	SSD	2	0.302	1.046	0.043	24.0	8.2	0.35	325
GENERAL CARGO	MSD	0	0.003	0.003	0.000	24.0	24.0	0.10	132
		1	0.017	0.028	0.003	24.0	24.0	0.10	135
	SSD	0	0.011	0.013	0.001	24.0	24.0	0.10	135
		1	0.064	0.073	0.005	24.0	24.0	0.10	135
		2	0.007	0.007	0.001	24.0	24.0	0.10	135
Grand Total			0.491	1.277	0.069	24.0	16.4	0.24	251

			NOx	NOx	DPM	DPM	PM2.5	PM2.5	ROG	ROG	CO	CO	SOx	SOx	CO2	CO2	CH4	CH4	N2O	N2O
			Hotelling Emissions (lbs)																	
	Engine	Emission	NOx		DPM		PM2.5		ROG		CO		SOx		CO2		CH4		N2O	
Ship Type	Type	Tier	Aux	Boiler	Aux	Boiler	Aux	Boiler	Aux	Boiler	Aux	Boiler	Aux	Boiler	Aux	Boiler	Aux	Boiler	Aux	Boiler
AUTO CARRIER	SSD	1	211.83	16.67	4.27	1.11	3.93	1.02	8.88	0.92	18.79	1.67	6.83	4.85	11,787	7,700	1.367	0.267	0.307	0.109
BULK CARRIER	MSD	1	15.05	1.10	0.30	0.07	0.28	0.07	0.63	0.06	1.34	0.11	0.49	0.32	838	508	0.097	0.018	0.022	0.007
	SSD	0	13.20	1.08	0.24	0.07	0.22	0.07	0.49	0.06	1.04	0.11	0.38	0.31	655	497	0.076	0.017	0.017	0.007
		1	28.48	2.69	0.57	0.18	0.53	0.16	1.19	0.15	2.53	0.27	0.92	0.78	1,585	1,242	0.184	0.043	0.041	0.018
		2	9.67	1.08	0.24	0.07	0.22	0.07	0.51	0.06	1.07	0.11	0.39	0.31	674	497	0.078	0.017	0.018	0.007
BULK CARRIER, HL	MSD	0	16.60	1.61	0.30	0.11	0.27	0.10	0.62	0.09	1.31	0.16	0.48	0.47	824	745	0.096	0.026	0.021	0.011
CONTAINER SHIP	SSD	2	1,346.33	66.19	34.00	4.41	31.28	4.06	70.72	3.65	149.59	6.64	54.40	19.24	93,835	30,573	10.879	1.062	2.448	0.431
GENERAL CARGO	MSD	0	4.94	0.54	0.10	0.04	0.09	0.03	0.21	0.03	0.44	0.05	0.16	0.16	275	248	0.032	0.009	0.007	0.004
		1	41.94	3.85	0.85	0.26	0.78	0.24	1.76	0.21	3.72	0.39	1.35	1.12	2,334	1,778	0.271	0.062	0.061	0.025
	SSD	0	21.77	1.65	0.39	0.11	0.36	0.10	0.81	0.09	1.72	0.17	0.63	0.48	1,081	762	0.125	0.026	0.028	0.011
		1	110.87	8.25	2.24	0.55	2.06	0.51	4.65	0.45	9.84	0.83	3.58	2.40	6,170	3,810	0.715	0.132	0.161	0.054
		2	8.28	1.10	0.21	0.07	0.19	0.07	0.43	0.06	0.92	0.11	0.33	0.32	577	508	0.067	0.018	0.015	0.007
Grand Total			1,828.96	105.79	43.71	7.05	40.21	6.49	90.91	5.83	192.31	10.61	69.93	30.76	120,634	48,867	13.987	1.697	3.147	0.689

Harborcraft

Tug/Barge	Calls	Hours
Robyn J (Barge Jake J)	0.15	16.4
Robyn J (Barge Payton J)	3.26	16.4
Robyn J (Barge Tori J)	0.59	16.4
Grand Total	4.00	16.4

Assist Tugs

		Hours
Tug	Calls	Main
Scout	4.00	0.70
Tioga	4.00	0.70
Grand Total	8.00	0.70

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Ships

							Total Transit				Transit - Arrival							Transit - Departure								NOx	NOx	NOx	DPM	DPM	DPM	PM2.5
	Engine	Emission		Power (kW)		Service	Distance (nm)		Comp	Distance	Speed (kts)		Main Load Factor		Comp	Distance	Speed (kts)		Main Load Factor		Time		NC Boiler		NOx			DPM		PM2
Ship Type	Type	Tier	Calls	Main	Aux	Speed (kts)	Arrival	Depart	(%)	(nm)	Comp	NC	Comp	NC	(%)	(nm)	Comp	NC	Comp	NC	(hrs)	Aux	Load (kW)	Main	Aux	Boiler	Main	Aux	Boiler	Main
AUTO CARRIER	SSD	1	69	11,060	2,760	20.00	35.30	35.30	0%	15.30	12.00	20.00	0.18	0.82	0%	15.30	12.00	20.00	0.18	0.82	1.53	0.15	351	15.988	0.597	-	0.265	0.012	-	0.244
BULK CARRIER	MSD	1	15	9,100	2,973	16.65	30.20	23.40	0%	10.20	11.00	16.65	0.24	0.82	0%	3.40	11.20	16.65	0.25	0.82	0.82	0.17	-	1.183	0.085	-	0.025	0.002	-	0.023
	SSD	0	14	8,139	2,325	14.60	30.20	30.20	0%	10.20	10.70	14.60	0.32	0.82	0%	10.20	12.45	14.60	0.51	0.82	1.40	0.17	-	2.454	0.118	-	0.036	0.002	-	0.033
		1	34	10,705	2,250	15.92	33.94	26.46	0%	13.94	11.13	15.92	0.28	0.82	0%	6.46	11.90	15.92	0.34	0.82	1.28	0.17	-	6.386	0.228	-	0.106	0.005	-	0.097
		2	14	9,140	2,393	15.00	11.50	48.90	0%	-	11.05	15.00	0.33	0.82	0%	28.90	12.50	15.00	0.48	0.82	1.93	0.17	-	2.817	0.120	-	0.056	0.003	-	0.051
BULK CARRIER, HL	MSD	0	17	5,738	1,950	13.00	5.75	24.45	0%	-	9.45	13.00	0.32	0.82	0%	4.45	9.45	13.00	0.32	0.82	0.34	0.17	-	0.400	0.030	-	0.008	0.001	-	0.007
CONTAINER SHIP	SSD	2	90	19,420	11,320	19.50	11.92	12.16	0%	-	11.64	19.50	0.18	0.82	0%	-	11.93	19.50	0.19	0.82	-	0.13	132	-	-	-	-	-	-	-
GENERAL CARGO	MSD	0	9	5,738	1,950	13.00	11.50	48.90	0%	-	10.10	13.00	0.39	0.82	0%	28.90	10.10	13.00	0.39	0.82	2.22	0.17	-	1.374	0.102	-	0.026	0.002	-	0.024
		1	43	6,400	2,367	15.34	35.98	23.74	0%	15.98	12.57	15.34	0.45	0.82	0%	3.74	12.20	15.34	0.41	0.82	1.29	0.17	-	3.753	0.304	-	0.080	0.006	-	0.074
	SSD	0	22	9,268	2,557	15.23	23.97	36.43	0%	3.97	12.07	15.23	0.41	0.82	0%	16.43	12.30	15.23	0.43	0.82	1.34	0.17	-	4.209	0.196	-	0.062	0.004	-	0.057
		1	91	12,430	2,920	16.98	26.95	34.06	0%	6.95	11.77	16.98	0.27	0.82	0%	14.06	11.86	16.98	0.28	0.82	1.24	0.17	-	19.176	0.764	-	0.317	0.015	-	0.292
		2	15	8,630	2,048	14.90	42.10	30.20	0%	22.10	10.95	14.90	0.33	0.82	0%	10.20	11.00	14.90	0.33	0.82	2.17	0.17	-	3.206	0.124	-	0.064	0.003	-	0.059
Grand Total			433	14,524	6,799	18.04	20.86	22.44	0%	5.41	11.62	18.04	0.24	0.82	0%	6.22	11.85	18.04	0.25	0.82	0.69	0.15	103	60.947	2.667	-	1.044	0.054	-	0.961

Harborcraft

			Tug Running Emissions (tons)																		Hoteling Emissions (tons)									
			NOx		DPM		PM2.5		ROG		CO		SOx		CO2		CH4		N2O		Hours		NOx		DPM		PM2.5		ROG	
Tug/Barge	Calls	Hours	Main	Aux	Main	Aux	Main	Aux	Main	Aux	Main	Aux	Main	Aux	Main	Aux	Main	Aux	Main	Aux	Tug	Barge	Tug	Barge	Tug	Barge	Tug	Barge	Tug	Barge
Robyn J (Barge Jake J)	4	16.4	0.401	0.019	0.014	0.001	0.013	0.001	0.038	0.003	0.301	0.014	0.000	0.000	35.33	1.75	0.001	0.000	0.002	0.000	1.0	4.5	0.001	0.015	0.000	0.001	0.000	0.001	0.000	0.003
Robyn J (Barge Payton J)	95	16.4	9.517	0.444	0.325	0.016	0.315	0.016	0.896	0.075	7.146	0.338	0.009	0.000	839.06	41.62	0.017	0.001	0.038	0.002	1.0	4.8	0.027	0.390	0.001	0.021	0.001	0.020	0.005	0.066
Robyn J (Barge Tori J)	17	16.4	1.703	0.079	0.058	0.003	0.056	0.003	0.160	0.013	1.279	0.060	0.002	0.000	150.15	7.45	0.003	0.000	0.007	0.000	1.0	5.3	0.005	0.077	0.000	0.004	0.000	0.004	0.001	0.013
Grand Total	116	16.4	11.621	0.542	0.397	0.020	0.385	0.019	1.094	0.092	8.726	0.413	0.011	0.001	1,024.54	50.82	0.020	0.002	0.046	0.002	1.0	4.9	0.033	0.482	0.001	0.026	0.001	0.025	0.006	0.082

Assist Tugs

						Tug Running Emissions (tons)																	
		Hours per Call		Load Factors		NOx		DPM		PM2.5		ROG		CO		SOx		CO2		CH4		N2O	
Tug	Calls	Main	Aux	Main	Aux	Main	Aux	Main	Aux	Main	Aux	Main	Aux	Main	Aux	Main	Aux	Main	Aux	Main	Aux	Main	Aux
Scout	433	0.70	1.00	0.31	0.43	2.169	0.214	0.048	0.005	0.047	0.005	0.258	0.035	2.059	0.228	0.003	0.000	241.75	28.10	0.005	0.001	0.011	0.001
Tioga	433	0.70	1.00	0.31	0.43	2.169	0.171	0.048	0.007	0.047	0.006	0.258	0.029	2.059	0.130	0.003	0.000	241.75	16.06	0.005	0.001	0.011	0.001
Grand Total	866	0.70	1.00	0.31	0.43	4.337	0.385	0.096	0.011	0.093	0.011	0.516	0.064	4.118	0.359	0.005	0.000	483.51	44.16	0.010	0.001	0.022	0.002

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Ships			PM2.5	PM2.5	ROG	ROG	ROG	CO	CO	CO	SOx	SOx	SOx	CO2	CO2	CO2	CH4	CH4	CH4	N2O	N2O	N2O										
			Transit Emissions (tons)																						VSR - Arrival						VSR - Departure	
	Engine	Emission	.5			ROG			CO			SOx			CO2			CH4			N2O		Comp	Distance	Speed (kts)		Main Load Factor		Comp	Distance	Speed (kts)	
Ship Type	Type	Tier	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler	(%)	(nm)	Comp	NC	Comp	NC	(%)	(nm)	Comp	NC
AUTO CARRIER	SSD	1	0.011	-	0.826	0.025	-	1.165	0.053	-	0.381	0.019	-	622.57	33.24	-	0.074	0.004	-	0.019	0.001	-	0%	20.00	12.00	16.06	0.18	0.43	0%	20.00	12.00	15.24
BULK CARRIER	MSD	1	0.002	-	0.066	0.004	-	0.111	0.008	-	0.040	0.003	-	65.21	4.71	-	0.008	0.001	-	0.002	0.000	-	50%	20.00	11.00	13.60	0.24	0.45	50%	20.00	11.20	13.60
	SSD	0	0.002	-	0.113	0.004	-	0.159	0.009	-	0.052	0.003	-	84.89	5.88	-	0.010	0.001	-	0.003	0.000	-	100%	20.00	10.70	14.60	0.32	0.82	100%	20.00	12.45	14.60
		1	0.004	-	0.330	0.010	-	0.465	0.020	-	0.152	0.007	-	248.69	12.67	-	0.030	0.001	-	0.008	0.000	-	60%	20.00	11.13	13.10	0.28	0.46	40%	20.00	11.90	13.07
		2	0.003	-	0.174	0.006	-	0.246	0.013	-	0.080	0.005	-	131.45	8.34	-	0.016	0.001	-	0.004	0.000	-	100%	11.50	11.05	15.00	0.33	0.82	100%	20.00	12.50	15.00
BULK CARRIER, HL	MSD	0	0.000	-	0.020	0.001	-	0.033	0.002	-	0.012	0.001	-	19.53	1.47	-	0.002	0.000	-	0.001	0.000	-	100%	5.75	9.45	13.00	0.32	0.82	100%	20.00	9.45	13.00
CONTAINER SHIP	SSD	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	86%	11.92	11.64	14.78	0.18	0.36	74%	12.16	11.93	16.06
GENERAL CARGO	MSD	0	0.002	-	0.068	0.004	-	0.115	0.008	-	0.042	0.003	-	67.15	5.04	-	0.008	0.001	-	0.002	0.000	-	100%	11.50	10.10	13.00	0.39	0.82	100%	20.00	10.10	13.00
		1	0.006	-	0.209	0.013	-	0.353	0.027	-	0.128	0.010	-	206.92	16.92	-	0.026	0.002	-	0.006	0.000	-	60%	20.00	12.57	13.20	0.45	0.52	60%	20.00	12.20	15.10
	SSD	0	0.003	-	0.193	0.007	-	0.272	0.016	-	0.089	0.006	-	145.59	9.74	-	0.017	0.001	-	0.004	0.000	-	100%	20.00	12.07	15.23	0.41	0.82	100%	20.00	12.30	15.23
		1	0.014	-	0.991	0.032	-	1.397	0.068	-	0.457	0.025	-	746.70	42.53	-	0.089	0.005	-	0.023	0.001	-	91%	20.00	11.77	13.10	0.27	0.38	45%	20.00	11.86	15.23
		2	0.003	-	0.198	0.006	-	0.280	0.014	-	0.092	0.005	-	149.63	8.61	-	0.018	0.001	-	0.005	0.000	-	100%	20.00	10.95	14.90	0.33	0.82	100%	20.00	11.00	14.90
Grand Total			0.050	-	3.186	0.112	-	4.596	0.238	-	1.526	0.086	-	2,488.33	149.15	-	0.298	0.017	-	0.075	0.004	-	75%	15.44	11.62	14.42	0.24	0.44	62%	16.22	11.85	15.38

Harborcraft

			CO		SOx		CO2		CH4		N2O	
Tug/Barge	Calls	Hours	Tug	Barge	Tug	Barge	Tug	Barge	Tug	Barge	Tug	Barge
Robyn J (Barge Jake J)	4	16.4	0.001	0.012	0.000	0.000	0.11	1.38	0.000	0.000	0.000	0.000
Robyn J (Barge Payton J)	95	16.4	0.021	0.307	0.000	0.000	2.54	35.17	0.000	0.001	0.000	0.002
Robyn J (Barge Tori J)	17	16.4	0.004	0.061	0.000	0.000	0.45	6.94	0.000	0.000	0.000	0.000
Grand Total	116	16.4	0.025	0.380	0.000	0.000	3.10	43.49	0.000	0.001	0.000	0.002

Assist Tugs

		Hours
Tug	Calls	Main
Scout	433	0.70
Tioga	433	0.70
Grand Total	866	0.70

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Ships

VSR Emissions (tons)

Ship Type	Engine Type	Emission Tier	Main Load Factor Comp	Main Load Factor NC	Time (hrs)	Aux	NC Boiler Load (kW)	NOx Main	NOx Aux	NOx Boiler	DPM Main	DPM Aux	DPM Boiler	PM2.5 Main	PM2.5 Aux	PM2.5 Boiler
AUTO CARRIER	SSD	1	0.18	0.36	2.56	0.15	351	12.806	0.999	-	0.212	0.020	-	0.195	0.019	-
BULK CARRIER	MSD	1	0.25	0.45	3.27	0.17	-	1.934	0.339	-	0.041	0.007	-	0.038	0.006	-
	SSD	0	0.51	0.82	3.48	0.17	-	3.042	0.295	-	0.045	0.005	-	0.041	0.005	-
		1	0.34	0.45	3.28	0.17	-	7.463	0.583	-	0.124	0.012	-	0.114	0.011	-
		2	0.48	0.82	2.64	0.17	-	1.962	0.164	-	0.039	0.004	-	0.036	0.004	-
BULK CARRIER, HL	MSD	0	0.32	0.82	2.72	0.17	-	1.222	0.235	-	0.023	0.004	-	0.021	0.004	-
CONTAINER SHIP	SSD	2	0.19	0.46	1.94	0.13	325	10.601	2.809	0.105	0.213	0.071	0.007	0.196	0.065	0.006
GENERAL CARGO	MSD	0	0.39	0.82	3.12	0.17	-	0.904	0.143	-	0.017	0.003	-	0.016	0.002	-
		1	0.41	0.78	3.07	0.17	-	5.580	0.727	-	0.119	0.015	-	0.110	0.013	-
	SSD	0	0.43	0.82	3.28	0.17	-	5.280	0.481	-	0.078	0.009	-	0.071	0.008	-
		1	0.28	0.59	3.17	0.17	-	21.021	1.955	-	0.348	0.039	-	0.320	0.036	-
		2	0.33	0.82	3.64	0.17	-	2.154	0.208	-	0.043	0.005	-	0.039	0.005	-
Grand Total			0.25	0.54	2.50	0.15	196	73.969	8.936	0.105	1.302	0.194	0.007	1.198	0.178	0.006

Ship Type	Engine Type	Emission Tier	ROG Main	ROG Aux	ROG Boiler	CO Main	CO Aux	CO Boiler	SOx Main	SOx Aux	SOx Boiler	CO2 Main	CO2 Aux	CO2 Boiler	CH4 Main	CH4 Aux	CH4 Boiler	N2O Main
AUTO CARRIER	SSD	1	0.661	0.042	-	0.933	0.089	-	0.305	0.032	-	498.65	55.57	-	0.059	0.006	-	0.015
BULK CARRIER	MSD	1	0.107	0.014	-	0.182	0.030	-	0.066	0.011	-	106.61	18.87	-	0.013	0.002	-	0.003
	SSD	0	0.140	0.011	-	0.197	0.023	-	0.064	0.008	-	105.22	14.63	-	0.013	0.002	-	0.003
		1	0.386	0.024	-	0.544	0.052	-	0.178	0.019	-	290.62	32.43	-	0.035	0.004	-	0.009
		2	0.121	0.009	-	0.171	0.018	-	0.056	0.007	-	91.56	11.44	-	0.011	0.001	-	0.003
BULK CARRIER, HL	MSD	0	0.060	0.009	-	0.102	0.019	-	0.037	0.007	-	59.72	11.68	-	0.007	0.001	-	0.002
CONTAINER SHIP	SSD	2	0.713	0.148	0.006	0.999	0.312	0.011	0.305	0.113	0.030	496.44	195.75	48.45	0.064	0.023	0.002	0.015
GENERAL CARGO	MSD	0	0.045	0.005	-	0.075	0.011	-	0.027	0.004	-	44.18	7.08	-	0.005	0.001	-	0.001
		1	0.310	0.030	-	0.525	0.064	-	0.191	0.023	-	307.64	40.46	-	0.038	0.005	-	0.009
	SSD	0	0.242	0.018	-	0.342	0.038	-	0.112	0.014	-	182.61	23.88	-	0.022	0.003	-	0.006
		1	1.086	0.082	-	1.531	0.173	-	0.501	0.063	-	818.56	108.77	-	0.097	0.013	-	0.025
		2	0.133	0.011	-	0.188	0.023	-	0.062	0.008	-	100.53	14.47	-	0.012	0.002	-	0.003
Grand Total			4.005	0.403	0.006	5.789	0.853	0.011	1.905	0.310	0.030	3,102.34	535.02	48.45	0.377	0.062	0.002	0.094

Harborcraft

Tug/Barge	Calls	Hours
Robyn J (Barge Jake J)	4	16.4
Robyn J (Barge Payton J)	95	16.4
Robyn J (Barge Tori J)	17	16.4
Grand Total	116	16.4

Assist Tugs

Tug	Calls	Hours Main
Scout	433	0.70
Tioga	433	0.70
Grand Total	866	0.70

STC 2035 - Unmitigated

Ships

Ship Type	Engine Type	Emission Tier	N2O Aux	N2O Boiler	Maneuvering Speed (kts)	Maneuvering Time (hrs)	Load Factors Main	Load Factors Aux	Boiler Load (kW)	NOx Main	NOx Aux	NOx Boiler	DPM Main	DPM Aux	DPM Boiler
AUTO CARRIER	SSD	1	0.001	-	7.00	2.41	0.04	0.45	351	2.390	2.828	0.129	0.055	0.057	0.009
BULK CARRIER	MSD	1	0.000	-	7.00	2.41	0.06	0.45	135	0.469	0.662	0.011	0.011	0.013	0.001
	SSD	0	0.000	-	7.00	2.41	0.09	0.45	132	0.594	0.542	0.010	0.010	0.010	0.001
		1	0.001	-	7.00	2.41	0.07	0.45	132	1.483	1.136	0.024	0.030	0.023	0.002
		2	0.000	-	7.00	2.41	0.08	0.45	132	0.484	0.397	0.010	0.011	0.010	0.001
BULK CARRIER, HL	MSD	0	0.000	-	7.00	2.41	0.13	0.45	132	0.489	0.492	0.012	0.010	0.010	0.001
CONTAINER SHIP	SSD	2	0.005	0.001	7.00	2.41	0.04	0.50	325	4.929	13.421	0.155	0.137	0.339	0.010
GENERAL CARGO	MSD	0	0.000	-	7.00	2.41	0.13	0.45	132	0.229	0.261	0.006	0.005	0.005	0.000
		1	0.001	-	7.00	2.41	0.08	0.45	135	0.904	1.511	0.031	0.023	0.030	0.002
	SSD	0	0.001	-	7.00	2.41	0.08	0.45	135	0.994	0.835	0.016	0.017	0.017	0.001
		1	0.003	-	7.00	2.41	0.06	0.45	135	4.194	3.945	0.065	0.089	0.080	0.004
		2	0.000	-	7.00	2.41	0.09	0.45	135	0.470	0.456	0.011	0.011	0.009	0.001
Grand Total			0.014	0.001	7.00	2.41	0.05	0.47	251	17.630	26.487	0.479	0.410	0.603	0.032

Maneuvering Emissions (tons)

Ship Type	Engine Type	Emission Tier	PM2.5 Main	PM2.5 Aux	PM2.5 Boiler	ROG Main	ROG Aux	ROG Boiler	CO Main	CO Aux	CO Boiler	SOx Main	SOx Aux	SOx Boiler	CO2 Main	CO2 Aux	CO2 Boiler	CH4 Main	CH4 Aux
AUTO CARRIER	SSD	1	0.051	0.052	0.008	0.431	0.119	0.007	0.383	0.251	0.013	0.053	0.091	0.037	84.66	157.36	59.39	0.039	0.018
BULK CARRIER	MSD	1	0.010	0.012	0.001	0.063	0.028	0.001	0.079	0.059	0.001	0.014	0.021	0.003	22.77	36.85	4.97	0.008	0.004
	SSD	0	0.009	0.009	0.001	0.054	0.020	0.001	0.066	0.043	0.001	0.013	0.016	0.003	21.18	26.90	4.53	0.005	0.003
		1	0.028	0.021	0.001	0.186	0.048	0.001	0.208	0.101	0.002	0.036	0.037	0.007	58.55	63.20	11.01	0.017	0.007
		2	0.011	0.009	0.001	0.066	0.021	0.001	0.077	0.044	0.001	0.014	0.016	0.003	23.10	27.68	4.53	0.006	0.003
BULK CARRIER, HL	MSD	0	0.009	0.009	0.001	0.035	0.021	0.001	0.056	0.044	0.001	0.015	0.016	0.003	24.52	27.39	5.50	0.004	0.003
CONTAINER SHIP	SSD	2	0.126	0.312	0.010	1.064	0.705	0.009	0.946	1.491	0.016	0.131	0.542	0.045	209.20	935.39	71.73	0.096	0.108
GENERAL CARGO	MSD	0	0.005	0.005	0.000	0.022	0.011	0.000	0.030	0.023	0.001	0.007	0.008	0.002	11.83	14.50	2.91	0.002	0.002
		1	0.021	0.028	0.002	0.132	0.063	0.002	0.154	0.134	0.003	0.029	0.049	0.009	46.45	84.10	14.24	0.012	0.010
	SSD	0	0.016	0.015	0.001	0.100	0.035	0.001	0.117	0.074	0.002	0.022	0.027	0.005	35.14	46.48	7.28	0.009	0.005
		1	0.081	0.073	0.004	0.589	0.165	0.004	0.621	0.350	0.007	0.101	0.127	0.019	162.29	219.54	30.13	0.053	0.025
		2	0.010	0.008	0.001	0.058	0.019	0.001	0.070	0.040	0.001	0.014	0.015	0.003	22.64	25.38	4.97	0.005	0.003
Grand Total			0.378	0.555	0.029	2.798	1.255	0.026	2.806	2.654	0.048	0.449	0.965	0.139	722.34	1,664.77	221.19	0.254	0.193

Harborcraft

Tug/Barge	Calls	Hours
Robyn J (Barge Jake J)	4	16.4
Robyn J (Barge Payton J)	95	16.4
Robyn J (Barge Tori J)	17	16.4
Grand Total	116	16.4

Assist Tugs

Tug	Calls	Hours Main
Scout	433	0.70
Tioga	433	0.70
Grand Total	866	0.70

STC 2035 - Unmitigated Reduction in hoteling time 0%

Ships

			CH4	N2O	N2O	N2O					NOx	NOx	DPM	DPM	PM2.5	PM2.5	ROG	ROG	CO	CO	SOx	SOx	CO2	CO2	CH4	CH4	N2O	N2O	
							Hotel	Aux	Hotelling		Hotelling Emissions (tons)																		
	Engine	Emission			N2O		Time	Time	Auxiliary	Boiler	NOx		DPM		PM2.5		ROG		CO		SOx		CO2		CH4		N2O		Cold Iron
Ship Type	Type	Tier	Boiler	Main	Aux	Boiler	(hr)	(hr)	LF	Load (kW)	Aux	Boiler	Aux	Boiler	Aux	Boiler	Aux	Boiler	Aux	Boiler	Aux	Boiler	Aux	Boiler	Aux	Boiler	Aux	Boiler	CO2e
AUTO CARRIER	SSD	1	0.002	0.003	0.004	0.001	27.6	27.6	0.26	351	18.655	1.468	0.376	0.098	0.346	0.090	0.782	0.081	1.655	0.147	0.602	0.427	1,038.08	678.11	0.120	0.024	0.027	0.010	-
BULK CARRIER	MSD	1	0.000	0.001	0.001	0.000	37.9	37.9	0.10	135	2.310	0.169	0.047	0.011	0.043	0.010	0.097	0.009	0.205	0.017	0.075	0.049	128.55	77.96	0.015	0.003	0.003	0.001	
	SSD	0	0.000	0.001	0.001	0.000	28.7	28.7	0.10	132	1.433	0.117	0.026	0.008	0.024	0.007	0.054	0.006	0.113	0.012	0.041	0.034	71.16	53.95	0.008	0.002	0.002	0.001	-
		1	0.000	0.002	0.002	0.000	37.8	37.8	0.10	132	3.948	0.373	0.080	0.025	0.073	0.023	0.166	0.021	0.350	0.037	0.127	0.108	219.70	172.17	0.025	0.006	0.006	0.002	-
		2	0.000	0.001	0.001	0.000	85.1	85.1	0.10	132	3.109	0.346	0.079	0.023	0.072	0.021	0.163	0.019	0.345	0.035	0.126	0.100	216.69	159.67	0.025	0.006	0.006	0.002	-
BULK CARRIER, HL	MSD	0	0.000	0.001	0.001	0.000	114.0	114.0	0.10	132	5.791	0.563	0.104	0.038	0.096	0.035	0.217	0.031	0.458	0.056	0.167	0.164	287.47	259.89	0.033	0.009	0.007	0.004	-
CONTAINER SHIP	SSD	2	0.002	0.007	0.024	0.001	88.9	77.2	0.35	325	297.365	5.718	7.509	0.381	6.908	0.351	15.619	0.315	33.041	0.573	12.015	1.662	20,725.47	2,640.97	2.403	0.092	0.541	0.037	2,962
GENERAL CARGO	MSD	0	0.000	0.000	0.000	0.000	123.0	123.0	0.10	132	2.951	0.321	0.059	0.021	0.055	0.020	0.124	0.018	0.262	0.032	0.095	0.093	164.18	148.43	0.019	0.005	0.004	0.002	
		1	0.000	0.001	0.002	0.000	62.5	62.5	0.10	135	8.695	0.798	0.175	0.053	0.161	0.049	0.365	0.044	0.771	0.080	0.280	0.232	483.81	368.55	0.056	0.013	0.013	0.005	-
	SSD	0	0.000	0.001	0.001	0.000	86.3	86.3	0.10	135	7.442	0.564	0.134	0.038	0.123	0.035	0.278	0.031	0.589	0.057	0.214	0.164	369.41	260.50	0.043	0.009	0.010	0.004	-
		1	0.001	0.005	0.006	0.000	45.5	45.5	0.10	135	16.516	1.229	0.333	0.082	0.306	0.075	0.693	0.068	1.465	0.123	0.533	0.357	919.02	567.51	0.107	0.020	0.024	0.008	-
		2	0.000	0.001	0.001	0.000	50.9	50.9	0.10	135	1.705	0.227	0.043	0.015	0.040	0.014	0.090	0.012	0.189	0.023	0.069	0.066	118.86	104.66	0.014	0.004	0.003	0.001	-
Grand Total			0.008	0.023	0.043	0.003	69.493	63.9	0.24	251	369.921	11.891	8.965	0.793	8.247	0.729	18.646	0.656	39.444	1.192	14.343	3.457	24,742.41	5,492.37	2.869	0.191	0.645	0.077	2,962

Harborcraft

Tug/Barge	Calls	Hours
Robyn J (Barge Jake J)	4	16.4
Robyn J (Barge Payton J)	95	16.4
Robyn J (Barge Tori J)	17	16.4
Grand Total	116	16.4

Assist Tugs

		Hours
Tug	Calls	Main
Scout	433	0.70
Tioga	433	0.70
Grand Total	866	0.70

STC 2035 - with CAP

Ships

Ship Type	Engine Type	Emission Tier	Calls	Power (kW) Main	Power (kW) Aux	Service Speed (kts)	Total Transit Distance (nm) Arrival	Total Transit Distance (nm) Depart	Transit - Arrival Comp (%)	Transit - Arrival Distance (nm)	Transit - Arrival Speed (kts) Comp	Transit - Arrival Speed (kts) NC	Transit - Arrival Main Load Factor Comp	Transit - Arrival Main Load Factor NC
AUTO CARRIER	SSD	1	0.45	11,060	2,760	20.00	35.30	35.30	0%	15.30	12.00	20.00	0.18	0.82
BULK CARRIER	MSD	1	0.08	9,100	2,973	16.65	30.20	23.40	0%	10.20	11.00	16.65	0.24	0.82
	SSD	0	0.08	8,139	2,325	14.60	30.20	30.20	0%	10.20	10.70	14.60	0.32	0.82
		1	0.19	10,705	2,250	15.92	33.94	26.46	0%	13.94	11.13	15.92	0.28	0.82
		2	0.08	9,140	2,393	15.00	11.50	48.90	0%	-	11.05	15.00	0.33	0.82
BULK CARRIER, HL	MSD	0	0.12	5,738	1,950	13.00	5.75	24.45	0%	-	9.45	13.00	0.32	0.82
CONTAINER SHIP	SSD	2	1.93	19,420	11,320	19.50	11.92	12.16	0%	-	11.64	19.50	0.18	0.82
GENERAL CARGO	MSD	0	0.04	5,738	1,950	13.00	11.50	48.90	0%	-	10.10	13.00	0.39	0.82
		1	0.27	6,400	2,367	15.34	35.98	23.74	0%	15.98	12.57	15.34	0.45	0.82
	SSD	0	0.12	9,268	2,557	15.23	23.97	36.43	0%	3.97	12.07	15.23	0.41	0.82
		1	0.58	12,430	2,920	16.98	26.95	34.06	0%	6.95	11.77	16.98	0.27	0.82
		2	0.08	8,630	2,048	14.90	42.10	30.20	0%	22.10	10.95	14.90	0.33	0.82
Grand Total			4.00	14,524	6,799	18.04	20.86	22.44	0%	5.41	11.62	18.04	0.24	0.82

Ship Type	Engine Type	Emission Tier	Transit - Departure Comp (%)	Transit - Departure Distance (nm)	Transit - Departure Speed (kts) Comp	Transit - Departure Speed (kts) NC	Transit - Departure Main Load Factor Comp	Transit - Departure Main Load Factor NC	Time (hrs)	Aux	NC Boiler Load (kW)	NOx Main	NOx Aux	NOx Boiler	DPM Main	DPM Aux	DPM Boiler	PM2.5 Main	PM2.5 Aux	PM2.5 Boiler
AUTO CARRIER	SSD	1	0%	15.30	12.00	20.00	0.18	0.82	1.53	0.15	351	208.50	7.79	-	3.45	0.16	-	3.18	0.14	-
BULK CARRIER	MSD	1	0%	3.40	11.20	16.65	0.25	0.82	0.82	0.17	-	12.17	0.87	-	0.26	0.02	-	0.24	0.02	-
	SSD	0	0%	10.20	12.45	14.60	0.51	0.82	1.40	0.17	-	27.06	1.31	-	0.40	0.02	-	0.37	0.02	-
		1	0%	6.46	11.90	15.92	0.34	0.82	1.28	0.17	-	72.48	2.58	-	1.20	0.05	-	1.10	0.05	-
		2	0%	28.90	12.50	15.00	0.48	0.82	1.93	0.17	-	31.06	1.32	-	0.62	0.03	-	0.57	0.03	-
BULK CARRIER, HL	MSD	0	0%	4.45	9.45	13.00	0.32	0.82	0.34	0.17	-	5.44	0.40	-	0.10	0.01	-	0.09	0.01	-
CONTAINER SHIP	SSD	2	0%	-	11.93	19.50	0.19	0.82	-	0.13	132	-	-	-	-	-	-	-	-	-
GENERAL CARGO	MSD	0	0%	28.90	10.10	13.00	0.39	0.82	2.22	0.17	-	11.78	0.87	-	0.22	0.02	-	0.21	0.01	-
		1	0%	3.74	12.20	15.34	0.41	0.82	1.29	0.17	-	47.16	3.82	-	1.01	0.08	-	0.93	0.07	-
	SSD	0	0%	16.43	12.30	15.23	0.43	0.82	1.34	0.17	-	44.30	2.06	-	0.65	0.04	-	0.60	0.03	-
		1	0%	14.06	11.86	16.98	0.28	0.82	1.24	0.17	-	243.94	9.72	-	4.04	0.20	-	3.72	0.18	-
		2	0%	10.20	11.00	14.90	0.33	0.82	2.17	0.17	-	32.99	1.27	-	0.65	0.03	-	0.60	0.03	-
Grand Total			0%	6.22	11.85	18.04	0.25	0.82	0.69	0.15	103	736.88	32.02	-	12.60	0.65	-	11.60	0.60	-

3.8587706 =scaling factor for 2020 to 2035 (4 max daily calls / 2020 max daily calls)

Harborcraft

Tug Running Emissions (lbs)

Tug/Barge	Calls	Hours	NOx Main	NOx Aux	DPM Main	DPM Aux	PM2.5 Main	PM2.5 Aux	ROG Main	ROG Aux	CO Main	CO Aux	SOx Main	SOx Aux	CO2 Main	CO2 Aux	CH4 Main	CH4 Aux	N2O Main	N2O Aux
Robyn J (Barge Jake J)	0.15	16.4	29.683	1.385	1.013	0.050	0.983	0.049	2.795	0.234	22.288	1.054	0.029	0.001	2,617	130	0.052	0.005	0.118	0.006
Robyn J (Barge Payton J)	3.26	16.4	653.029	30.474	22.285	1.110	21.616	1.077	61.490	5.150	490.328	23.186	0.645	0.032	57,573	2,856	1.144	0.101	2.595	0.129
Robyn J (Barge Tori J)	0.59	16.4	118.733	5.541	4.052	0.202	3.930	0.196	11.180	0.936	89.151	4.216	0.117	0.006	10,468	519	0.208	0.018	0.472	0.023
Grand Total	4.00	16.4	801.445	37.400	27.349	1.362	26.529	1.321	75.465	6.320	601.767	28.455	0.792	0.039	70,658	3,505	1.404	0.124	3.185	0.158

Hoteling Emissions (lbs)

Tug/Barge	Hours Tug	Hours Barge	NOx Tug	NOx Barge	DPM Tug	DPM Barge	PM2.5 Tug	PM2.5 Barge	ROG Tug	ROG Barge	CO Tug	CO Barge
Robyn J (Barge Jake J)	1.0	4.5	0.08	1.13	0.00	0.06	0.00	0.06	0.01	0.19	0.06	0.89
Robyn J (Barge Payton J)	1.0	4.8	1.86	26.77	0.07	1.44	0.07	1.40	0.31	4.55	1.42	21.10
Robyn J (Barge Tori J)	1.0	5.3	0.34	5.37	0.01	0.29	0.01	0.28	0.06	0.91	0.26	4.23
Grand Total	1.0	4.9	2.282	33.267	0.083	1.796	0.081	1.742	0.386	5.651	1.737	26.219

Assist Tugs

Tug Running Emissions (lbs)

Tug	Calls	Hours per Call Main	Hours per Call Aux	Load Factors Main	Load Factors Aux	NOx Main	NOx Aux	DPM Main	DPM Aux	PM2.5 Main	PM2.5 Aux	ROG Main	ROG Aux	CO Main	CO Aux	SOx Main	SOx Aux	CO2 Main	CO2 Aux	CH4 Main	CH4 Aux	N2O Main	N2O Aux
Scout	4.00	0.70	1.00	0.31	0.43	40.07	3.96	0.89	0.09	0.86	0.09	4.77	0.65	38.04	4.22	0.05	0.01	4,467	519	0.089	0.013	0.201	0.023
Tioga	4.00	0.70	1.00	0.31	0.43	40.07	3.17	0.89	0.12	0.86	0.12	4.77	0.54	38.04	2.41	0.05	0.00	4,467	297	0.089	0.010	0.201	0.013
Grand Total	8.00	0.70	1.00	0.31	0.43	80.13	7.12	1.77	0.21	1.72	0.21	9.54	1.18	76.08	6.62	0.10	0.01	8,933	816	0.178	0.023	0.403	0.037

STC 2035 - with CAP

Ships

Transit Emissions (lbs)

Ship Type	Engine Type	Emission Tier	ROG Main	ROG Aux	ROG Boiler	CO Main	CO Aux	CO Boiler	SOx Main	SOx Aux	SOx Boiler	CO2 Main	CO2 Aux	CO2 Boiler	CH4 Main	CH4 Aux	CH4 Boiler	N2O Main	N2O Aux	N2O Boiler
AUTO CARRIER	SSD	1	10.77	0.33	-	15.19	0.69	-	4.97	0.25	-	8,119	434	-	0.967	0.050	-	0.249	0.011	-
BULK CARRIER	MSD	1	0.68	0.04	-	1.14	0.08	-	0.42	0.03	-	671	48	-	0.083	0.006	-	0.019	0.001	-
	SSD	0	1.24	0.05	-	1.75	0.10	-	0.57	0.04	-	936	65	-	0.111	0.008	-	0.029	0.002	-
		1	3.74	0.11	-	5.28	0.23	-	1.73	0.08	-	2,822	144	-	0.336	0.017	-	0.086	0.004	-
		2	1.92	0.07	-	2.71	0.15	-	0.89	0.05	-	1,449	92	-	0.173	0.011	-	0.044	0.002	-
BULK CARRIER, HL	MSD	0	0.27	0.02	-	0.45	0.03	-	0.16	0.01	-	266	20	-	0.033	0.002	-	0.007	0.001	-
CONTAINER SHIP	SSD	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GENERAL CARGO	MSD	0	0.58	0.03	-	0.98	0.07	-	0.36	0.03	-	576	43	-	0.071	0.005	-	0.016	0.001	-
		1	2.62	0.16	-	4.43	0.34	-	1.61	0.12	-	2,600	213	-	0.322	0.025	-	0.073	0.006	-
	SSD	0	2.03	0.08	-	2.87	0.16	-	0.94	0.06	-	1,532	102	-	0.182	0.012	-	0.047	0.003	-
		1	12.60	0.41	-	17.77	0.86	-	5.82	0.31	-	9,499	541	-	1.131	0.063	-	0.291	0.014	-
		2	2.04	0.07	-	2.88	0.14	-	0.94	0.05	-	1,540	89	-	0.183	0.010	-	0.047	0.002	-
Grand Total			38.50	1.35	-	55.46	2.85	-	18.41	1.04	-	30,010	1,791	-	3.593	0.208	-	0.908	0.047	-

Ship Type	Engine Type	Emission Tier	VSR - Arrival Comp (%)	Distance (nm)	Speed (kts) Comp	Speed (kts) NC	Main Load Factor Comp	Main Load Factor NC	VSR - Departure Comp (%)	Distance (nm)	Speed (kts) Comp	Speed (kts) NC	Main Load Factor Comp	Main Load Factor NC	Time (hrs)	Aux
AUTO CARRIER	SSD	1	80%	20.00	12.00	16.06	0.18	0.43	80%	20.00	12.00	15.24	0.18	0.36	3.18	0.15
BULK CARRIER	MSD	1	80%	20.00	11.00	13.60	0.24	0.45	80%	20.00	11.20	13.60	0.25	0.45	3.47	0.17
	SSD	0	100%	20.00	10.70	14.60	0.32	0.82	100%	20.00	12.45	14.60	0.51	0.82	3.48	0.17
		1	80%	20.00	11.13	13.10	0.28	0.46	80%	20.00	11.90	13.07	0.34	0.45	3.39	0.17
		2	100%	11.50	11.05	15.00	0.33	0.82	100%	20.00	12.50	15.00	0.48	0.82	2.64	0.17
BULK CARRIER, HL	MSD	0	100%	5.75	9.45	13.00	0.32	0.82	100%	20.00	9.45	13.00	0.32	0.82	2.72	0.17
CONTAINER SHIP	SSD	2	88%	11.92	11.64	14.78	0.18	0.36	80%	12.16	11.93	16.06	0.19	0.46	1.97	0.13
GENERAL CARGO	MSD	0	100%	11.50	10.10	13.00	0.39	0.82	100%	20.00	10.10	13.00	0.39	0.82	3.12	0.17
		1	80%	20.00	12.57	13.20	0.45	0.52	80%	20.00	12.20	15.10	0.41	0.78	3.15	0.17
	SSD	0	100%	20.00	12.07	15.23	0.41	0.82	100%	20.00	12.30	15.23	0.43	0.82	3.28	0.17
		1	91%	20.00	11.77	13.10	0.27	0.38	80%	20.00	11.86	15.23	0.28	0.59	3.30	0.17
		2	100%	20.00	10.95	14.90	0.33	0.82	100%	20.00	11.00	14.90	0.33	0.82	3.64	0.17
Grand Total			88%	15.44	11.62	14.42	0.24	0.44	83%	16.22	11.85	15.38	0.25	0.54	2.62	0.15

Harborcraft

Tug/Barge	Calls	Hours	SOx Tug	SOx Barge	CO2 Tug	CO2 Barge	CH4 Tug	CH4 Barge	N2O Tug	N2O Barge
Robyn J (Barge Jake J)	0.15	16.4	0.00	0.00	8	102	0.000	0.003	0.000	0.005
Robyn J (Barge Payton J)	3.26	16.4	0.00	0.03	174	2,413	0.006	0.083	0.008	0.112
Robyn J (Barge Tori J)	0.59	16.4	0.00	0.01	32	484	0.001	0.017	0.001	0.023
Grand Total	4.00	16.4	0.002	0.034	213.88	2,999	0.008	0.103	0.010	0.140

Assist Tugs

Tug	Calls	Hours Main
Scout	4.00	0.70
Tioga	4.00	0.70
Grand Total	8.00	0.70

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Ships

Ship Type	Engine Type	Emission Tier	NC Boiler Load (kW)	NOx Main	NOx Aux	NOx Boiler	DPM Main	DPM Aux	DPM Boiler	PM2.5 Main	PM2.5 Aux	PM2.5 Boiler	ROG Main	ROG Aux	ROG Boiler
				VSR Emissions (lbs)											
AUTO CARRIER	SSD	1	351	113.47	16.18	1.85	1.90	0.33	0.12	1.75	0.30	0.11	6.23	0.68	0.10
BULK CARRIER	MSD	1	-	17.51	3.70	-	0.37	0.07	-	0.34	0.07	-	0.97	0.16	-
	SSD	0	-	33.54	3.25	-	0.49	0.06	-	0.45	0.05	-	1.54	0.12	-
		1	-	78.76	6.84	-	1.30	0.14	-	1.20	0.13	-	4.07	0.29	-
		2	-	21.63	1.81	-	0.43	0.05	-	0.39	0.04	-	1.34	0.10	-
BULK CARRIER, HL	MSD	0	-	16.64	3.20	-	0.32	0.06	-	0.29	0.05	-	0.82	0.12	-
CONTAINER SHIP	SSD	2	325	441.80	121.77	4.74	8.90	3.08	0.32	8.18	2.83	0.29	29.89	6.40	0.26
GENERAL CARGO	MSD	0	-	7.75	1.22	-	0.15	0.02	-	0.14	0.02	-	0.38	0.05	-
		1	-	66.23	9.37	-	1.42	0.19	-	1.30	0.17	-	3.68	0.39	-
	SSD	0	-	55.56	5.06	-	0.82	0.09	-	0.75	0.08	-	2.55	0.19	-
		1	-	241.99	25.88	-	4.01	0.52	-	3.69	0.48	-	12.50	1.09	-
		2	-	22.17	2.14	-	0.44	0.05	-	0.40	0.05	-	1.37	0.11	-
Grand Total			196	1,117.04	200.43	6.60	20.54	4.65	0.44	18.90	4.28	0.40	65.34	9.68	0.36

Ship Type	Engine Type	Emission Tier	CO Main	CO Aux	CO Boiler	SOx Main	SOx Aux	SOx Boiler	CO2 Main	CO2 Aux	CO2 Boiler	CH4 Main	CH4 Aux	CH4 Boiler	N2O Main	N2O Aux	N2O Boiler	Maneuverin Speed (kts)	Time (hrs)	Load F Main
			VSR Emissions (lbs)																	
AUTO CARRIER	SSD	1	8.78	1.44	0.19	2.72	0.52	0.54	4,449	901	856	0.559	0.104	0.030	0.135	0.023	0.012	7.00	2.41	0.04
BULK CARRIER	MSD	1	1.65	0.33	-	0.60	0.12	-	965	206	-	0.120	0.024	-	0.027	0.005	-	7.00	2.41	0.06
	SSD	0	2.17	0.26	-	0.71	0.09	-	1,160	161	-	0.138	0.019	-	0.036	0.004	-	7.00	2.41	0.09
		1	5.74	0.61	-	1.88	0.22	-	3,067	381	-	0.365	0.044	-	0.094	0.010	-	7.00	2.41	0.07
		2	1.89	0.20	-	0.62	0.07	-	1,009	126	-	0.120	0.015	-	0.031	0.003	-	7.00	2.41	0.08
BULK CARRIER, HL	MSD	0	1.39	0.25	-	0.50	0.09	-	813	159	-	0.101	0.018	-	0.023	0.004	-	7.00	2.41	0.13
CONTAINER SHIP	SSD	2	41.86	13.53	0.48	12.72	4.92	1.38	20,694	8,487	2,192	2.682	0.984	0.076	0.631	0.221	0.031	7.00	2.41	0.04
GENERAL CARGO	MSD	0	0.65	0.10	-	0.23	0.04	-	379	61	-	0.047	0.007	-	0.011	0.002	-	7.00	2.41	0.13
		1	6.23	0.83	-	2.26	0.30	-	3,651	521	-	0.453	0.060	-	0.102	0.014	-	7.00	2.41	0.08
	SSD	0	3.60	0.40	-	1.18	0.15	-	1,922	251	-	0.229	0.029	-	0.059	0.007	-	7.00	2.41	0.08
		1	17.63	2.30	-	5.77	0.83	-	9,423	1,440	-	1.122	0.167	-	0.288	0.038	-	7.00	2.41	0.06
		2	1.94	0.24	-	0.63	0.09	-	1,034	149	-	0.123	0.017	-	0.032	0.004	-	7.00	2.41	0.09
Grand Total			93.50	20.47	0.66	29.83	7.45	1.92	48,567	12,843	3,047	6.059	1.489	0.106	1.468	0.335	0.043	7.00	2.41	0.05

Harborcraft

Tug/Barge	Calls	Hours
Robyn J (Barge Jake J)	0.15	16.4
Robyn J (Barge Payton J)	3.26	16.4
Robyn J (Barge Tori J)	0.59	16.4
Grand Total	4.00	16.4

Assist Tugs

Tug	Calls	Hours Main
Scout	4.00	0.70
Tioga	4.00	0.70
Grand Total	8.00	0.70

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Reduction in hoteling time 0%

Ships

			g		NOx	NOx	NOx	DPM	DPM	DPM	PM2.5	PM2.5	PM2.5	ROG	ROG	ROG
	Engine	Emission	actors	Boiler		NOx			DPM			PM2.5			ROG	
Ship Type	Type	Tier	Aux	Load (kW)	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler
AUTO CARRIER	SSD	1	0.45	351	31.18	36.88	1.68	0.72	0.74	0.11	0.66	0.68	0.10	5.62	1.55	0.09
BULK CARRIER	MSD	1	0.45	135	4.83	6.81	0.11	0.12	0.14	0.01	0.11	0.13	0.01	0.65	0.29	0.01
	SSD	0	0.45	132	6.54	5.97	0.11	0.11	0.11	0.01	0.10	0.10	0.01	0.60	0.22	0.01
		1	0.45	132	16.83	12.89	0.27	0.34	0.26	0.02	0.32	0.24	0.02	2.11	0.54	0.01
		2	0.45	132	5.34	4.38	0.11	0.13	0.11	0.01	0.12	0.10	0.01	0.72	0.23	0.01
BULK CARRIER, HL	MSD	0	0.45	132	6.65	6.70	0.16	0.14	0.14	0.01	0.12	0.12	0.01	0.47	0.28	0.01
CONTAINER SHIP	SSD	2	0.50	325	211.33	575.42	6.66	5.86	14.53	0.44	5.39	13.37	0.41	45.64	30.22	0.37
GENERAL CARGO	MSD	0	0.45	132	1.97	2.23	0.05	0.05	0.05	0.00	0.04	0.04	0.00	0.19	0.09	0.00
		1	0.45	135	11.36	18.99	0.39	0.29	0.38	0.03	0.27	0.35	0.02	1.65	0.80	0.02
	SSD	0	0.45	135	10.46	8.79	0.17	0.18	0.18	0.01	0.17	0.16	0.01	1.05	0.37	0.01
		1	0.45	135	53.35	50.19	0.83	1.13	1.01	0.06	1.04	0.93	0.05	7.49	2.10	0.05
		2	0.45	135	4.84	4.69	0.11	0.11	0.09	0.01	0.10	0.09	0.01	0.59	0.20	0.01
Grand Total			0.47	251	364.68	733.96	10.64	9.17	17.74	0.71	8.44	16.32	0.65	66.78	36.89	0.59

Maneuvering Emissions (lbs)

				CO	CO	CO	SOx	SOx	SOx	CO2	CO2	CO2	CH4	CH4	CH4	N2O	N2O	N2O	Hotel	Aux	Hote
					CO			SOx			CO2			CH4			N2O		Time	Time	Auxiliary
Ship Type	Engine Type	Emission Tier		Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler	(hr)	(hr)	LF
AUTO CARRIER	SSD	1		4.99	3.27	0.17	0.69	1.19	0.49	1,104	2,052	775	0.504	0.238	0.027	0.037	0.054	0.011	24.0	24.0	0.26
BULK CARRIER	MSD	1		0.82	0.60	0.01	0.15	0.22	0.03	234	379	51	0.080	0.044	0.002	0.007	0.010	0.001	24.0	24.0	0.10
	SSD	0		0.73	0.47	0.01	0.14	0.17	0.03	233	297	50	0.053	0.034	0.002	0.007	0.008	0.001	24.0	24.0	0.10
		1		2.36	1.14	0.03	0.41	0.42	0.08	665	717	125	0.189	0.083	0.004	0.020	0.019	0.002	24.0	24.0	0.10
		2		0.85	0.49	0.01	0.16	0.18	0.03	255	305	50	0.065	0.035	0.002	0.008	0.008	0.001	24.0	24.0	0.10
BULK CARRIER, HL	MSD	0		0.76	0.59	0.02	0.21	0.22	0.05	334	373	75	0.058	0.043	0.003	0.009	0.010	0.001	24.0	24.0	0.10
CONTAINER SHIP	SSD	2		40.57	63.94	0.67	5.60	23.25	1.94	8,969	40,105	3,075	4.096	4.650	0.107	0.302	1.046	0.043	24.0	8.2	0.35
GENERAL CARGO	MSD	0		0.25	0.20	0.01	0.06	0.07	0.02	101	124	25	0.017	0.014	0.001	0.003	0.003	0.000	24.0	24.0	0.10
		1		1.94	1.68	0.04	0.36	0.61	0.11	584	1,057	179	0.149	0.122	0.006	0.017	0.028	0.003	24.0	24.0	0.10
	SSD	0		1.23	0.78	0.02	0.23	0.28	0.05	370	489	77	0.094	0.057	0.003	0.011	0.013	0.001	24.0	24.0	0.10
		1		7.89	4.45	0.08	1.28	1.62	0.24	2,065	2,793	383	0.672	0.324	0.013	0.064	0.073	0.005	24.0	24.0	0.10
		2		0.73	0.42	0.01	0.14	0.15	0.03	233	261	51	0.053	0.030	0.002	0.007	0.007	0.001	24.0	24.0	0.10
Grand Total				63.11	78.04	1.07	9.43	28.38	3.09	15,147	48,953	4,916	6.031	5.676	0.171	0.491	1.277	0.069	24.0	16.4	0.24

Harborcraft

Tug/Barge	Calls	Hours
Robyn J (Barge Jake J)	0.15	16.4
Robyn J (Barge Payton J)	3.26	16.4
Robyn J (Barge Tori J)	0.59	16.4
Grand Total	4.00	16.4

Assist Tugs

		Hours
Tug	Calls	Main
Scout	4.00	0.70
Tioga	4.00	0.70
Grand Total	8.00	0.70

STC 2035 - with CAP

Ships

				NOx	NOx	DPM	DPM	PM2.5	PM2.5	ROG	ROG	CO	CO	SOx	SOx	CO2	CO2	CH4	CH4	N2O	N2O	
			ɫlling	Hotelling Emissions (lbs)																		
	Engine	Emission	Boiler	NOx		DPM		PM2.5		ROG		CO		SOx		CO2		CH4		N2O		Cold Iron
Ship Type	Type	Tier	Load (kW)	Aux	Boiler	Aux	Boiler	Aux	Boiler	Aux	Boiler	Aux	Boiler	Aux	Boiler	Aux	Boiler	Aux	Boiler	Aux	Boiler	CO2e
AUTO CARRIER	SSD	1	351	211.83	16.67	4.27	1.11	3.93	1.02	8.88	0.92	18.79	1.67	6.83	4.85	11,787	7,700	1.367	0.267	0.307	0.109	-
BULK CARRIER	MSD	1	135	15.05	1.10	0.30	0.07	0.28	0.07	0.63	0.06	1.34	0.11	0.49	0.32	838	508	0.097	0.018	0.022	0.007	
	SSD	0	132	13.20	1.08	0.24	0.07	0.22	0.07	0.49	0.06	1.04	0.11	0.38	0.31	655	497	0.076	0.017	0.017	0.007	-
		1	132	28.48	2.69	0.57	0.18	0.53	0.16	1.19	0.15	2.53	0.27	0.92	0.78	1,585	1,242	0.184	0.043	0.041	0.018	-
		2	132	9.67	1.08	0.24	0.07	0.22	0.07	0.51	0.06	1.07	0.11	0.39	0.31	674	497	0.078	0.017	0.018	0.007	-
BULK CARRIER, HL	MSD	0	132	16.60	1.61	0.30	0.11	0.27	0.10	0.62	0.09	1.31	0.16	0.48	0.47	824	745	0.096	0.026	0.021	0.011	-
CONTAINER SHIP	SSD	2	325	1,346.33	66.19	34.00	4.41	31.28	4.06	70.72	3.65	149.59	6.64	54.40	19.24	93,835	30,573	10.879	1.062	2.448	0.431	184,799
GENERAL CARGO	MSD	0	132	4.94	0.54	0.10	0.04	0.09	0.03	0.21	0.03	0.44	0.05	0.16	0.16	275	248	0.032	0.009	0.007	0.004	
		1	135	41.94	3.85	0.85	0.26	0.78	0.24	1.76	0.21	3.72	0.39	1.35	1.12	2,334	1,778	0.271	0.062	0.061	0.025	-
	SSD	0	135	21.77	1.65	0.39	0.11	0.36	0.10	0.81	0.09	1.72	0.17	0.63	0.48	1,081	762	0.125	0.026	0.028	0.011	-
		1	135	110.87	8.25	2.24	0.55	2.06	0.51	4.65	0.45	9.84	0.83	3.58	2.40	6,170	3,810	0.715	0.132	0.161	0.054	-
		2	135	8.28	1.10	0.21	0.07	0.19	0.07	0.43	0.06	0.92	0.11	0.33	0.32	577	508	0.067	0.018	0.015	0.007	-
Grand Total			251	1,828.96	105.79	43.71	7.05	40.21	6.49	90.91	5.83	192.31	10.61	69.93	30.76	120,634	48,867	13.987	1.697	3.147	0.689	184,799

Harborcraft

Tug/Barge	Calls	Hours
Robyn J (Barge Jake J)	0.15	16.4
Robyn J (Barge Payton J)	3.26	16.4
Robyn J (Barge Tori J)	0.59	16.4
Grand Total	4.00	16.4

Assist Tugs

		Hours
Tug	Calls	Main
Scout	4.00	0.70
Tioga	4.00	0.70
Grand Total	8.00	0.70

STC 2035 - with CAP

Ships

Ship Type	Engine Type	Emission Tier	Calls	Power (kW) Main	Power (kW) Aux	Service Speed (kts)	Total Transit Distance (nm) Arrival	Total Transit Distance (nm) Depart	Transit - Arrival Comp (%)	Transit - Arrival Distance (nm)	Transit - Arrival Speed (kts) Comp	Transit - Arrival Speed (kts) NC	Transit - Arrival Main Load Factor Comp	Transit - Arrival Main Load Factor NC
AUTO CARRIER	SSD	1	69	11,060	2,760	20.00	35.30	35.30	0%	15.30	12.00	20.00	0.18	0.82
BULK CARRIER	MSD	1	15	9,100	2,973	16.65	30.20	23.40	0%	10.20	11.00	16.65	0.24	0.82
	SSD	0	14	8,139	2,325	14.60	30.20	30.20	0%	10.20	10.70	14.60	0.32	0.82
		1	34	10,705	2,250	15.92	33.94	26.46	0%	13.94	11.13	15.92	0.28	0.82
		2	14	9,140	2,393	15.00	11.50	48.90	0%	-	11.05	15.00	0.33	0.82
BULK CARRIER, HL	MSD	0	17	5,738	1,950	13.00	5.75	24.45	0%	-	9.45	13.00	0.32	0.82
CONTAINER SHIP	SSD	2	90	19,420	11,320	19.50	11.92	12.16	0%	-	11.64	19.50	0.18	0.82
GENERAL CARGO	MSD	0	9	5,738	1,950	13.00	11.50	48.90	0%	-	10.10	13.00	0.39	0.82
		1	43	6,400	2,367	15.34	35.98	23.74	0%	15.98	12.57	15.34	0.45	0.82
	SSD	0	22	9,268	2,557	15.23	23.97	36.43	0%	3.97	12.07	15.23	0.41	0.82
		1	91	12,430	2,920	16.98	26.95	34.06	0%	6.95	11.77	16.98	0.27	0.82
		2	15	8,630	2,048	14.90	42.10	30.20	0%	22.10	10.95	14.90	0.33	0.82
Grand Total			433	14,512	6,785	18.04	20.90	22.48	0%	5.45	11.62	18.04	0.24	0.82

Ship Type	Engine Type	Emission Tier	Transit - Departure Comp (%)	Transit - Departure Distance (nm)	Transit - Departure Speed (kts) Comp	Transit - Departure Speed (kts) NC	Transit - Departure Main Load Factor Comp	Transit - Departure Main Load Factor NC	Time (hrs)	Aux	NC Boiler Load (kW)	NOx Main	NOx Aux	NOx Boiler	DPM Main	DPM Aux	DPM Boiler	PM2.5 Main	PM2.5 Aux	PM2.5 Boiler	ROG Main
AUTO CARRIER	SSD	1	0%	15.30	12.00	20.00	0.18	0.82	1.53	0.15	351	15.988	0.597	-	0.265	0.012	-	0.244	0.011	-	0.826
BULK CARRIER	MSD	1	0%	3.40	11.20	16.65	0.25	0.82	0.82	0.17	-	1.183	0.085	-	0.025	0.002	-	0.023	0.002	-	0.066
	SSD	0	0%	10.20	12.45	14.60	0.51	0.82	1.40	0.17	-	2.454	0.118	-	0.036	0.002	-	0.033	0.002	-	0.113
		1	0%	6.46	11.90	15.92	0.34	0.82	1.28	0.17	-	6.386	0.228	-	0.106	0.005	-	0.097	0.004	-	0.330
		2	0%	28.90	12.50	15.00	0.48	0.82	1.93	0.17	-	2.817	0.120	-	0.056	0.003	-	0.051	0.003	-	0.174
BULK CARRIER, HL	MSD	0	0%	4.45	9.45	13.00	0.32	0.82	0.34	0.17	-	0.400	0.030	-	0.008	0.001	-	0.007	0.000	-	0.020
CONTAINER SHIP	SSD	2	0%	-	11.93	19.50	0.19	0.82	-	0.13	132	-	-	-	-	-	-	-	-	-	-
GENERAL CARGO	MSD	0	0%	28.90	10.10	13.00	0.39	0.82	2.22	0.17	-	1.374	0.102	-	0.026	0.002	-	0.024	0.002	-	0.068
		1	0%	3.74	12.20	15.34	0.41	0.82	1.29	0.17	-	3.753	0.304	-	0.080	0.006	-	0.074	0.006	-	0.209
	SSD	0	0%	16.43	12.30	15.23	0.43	0.82	1.34	0.17	-	4.209	0.196	-	0.062	0.004	-	0.057	0.003	-	0.193
		1	0%	14.06	11.86	16.98	0.28	0.82	1.24	0.17	-	19.176	0.764	-	0.317	0.015	-	0.292	0.014	-	0.991
		2	0%	10.20	11.00	14.90	0.33	0.82	2.17	0.17	-	3.206	0.124	-	0.064	0.003	-	0.059	0.003	-	0.198
Grand Total			0%	6.25	11.85	18.04	0.25	0.82	0.69	0.15	104	60.947	2.667	-	1.044	0.054	-	0.961	0.050	-	3.186

Harborcraft

Tug Running Emissions (tons)

Tug/Barge	Calls	Hours	NOx Main	NOx Aux	DPM Main	DPM Aux	PM2.5 Main	PM2.5 Aux	ROG Main	ROG Aux	CO Main	CO Aux	SOx Main	SOx Aux	CO2 Main	CO2 Aux	CH4 Main	CH4 Aux	N2O Main	N2O Aux
Robyn J (Barge Jake J)	4	16.4	0.401	0.019	0.014	0.001	0.013	0.001	0.038	0.003	0.301	0.014	0.000	0.000	35.33	1.75	0.001	0.000	0.002	0.000
Robyn J (Barge Payton J)	95	16.4	9.517	0.444	0.325	0.016	0.315	0.016	0.896	0.075	7.146	0.338	0.009	0.000	839.06	41.62	0.017	0.001	0.038	0.002
Robyn J (Barge Tori J)	17	16.4	1.703	0.079	0.058	0.003	0.056	0.003	0.160	0.013	1.279	0.060	0.002	0.000	150.15	7.45	0.003	0.000	0.007	0.000
Grand Total	116	16.4	11.621	0.542	0.397	0.020	0.385	0.019	1.094	0.092	8.726	0.413	0.011	0.001	1,024.54	50.82	0.020	0.002	0.046	0.002

Hoteling Emissions (tons)

Tug/Barge	Hours Tug	Hours Barge	NOx Tug	NOx Barge	DPM Tug	DPM Barge	PM2.5 Tug	PM2.5 Barge	ROG Tug	ROG Barge	CO Tug	CO Barge	SC Tug
Robyn J (Barge Jake J)	1.0	4.5	0.001	0.015	0.000	0.001	0.000	0.001	0.000	0.003	0.001	0.012	0.000
Robyn J (Barge Payton J)	1.0	4.8	0.027	0.390	0.001	0.021	0.001	0.020	0.005	0.066	0.021	0.307	0.000
Robyn J (Barge Tori J)	1.0	5.3	0.005	0.077	0.000	0.004	0.000	0.004	0.001	0.013	0.004	0.061	0.000
Grand Total	1.0	4.9	0.033	0.482	0.001	0.026	0.001	0.025	0.006	0.082	0.025	0.380	0.000

Assist Tugs

Tug Running Emissions (tons)

Tug	Calls	Hours per Call Main	Hours per Call Aux	Load Factors Main	Load Factors Aux	NOx Main	NOx Aux	DPM Main	DPM Aux	PM2.5 Main	PM2.5 Aux	ROG Main	ROG Aux	CO Main	CO Aux	SOx Main	SOx Aux	CO2 Main	CO2 Aux	CH4 Main	CH4 Aux	N2O Main	N2O Aux
Scout	433	0.70	1.00	0.31	0.43	2.169	0.214	0.048	0.005	0.047	0.005	0.258	0.035	2.059	0.228	0.003	0.000	241.75	28.10	0.005	0.001	0.011	0.001
Tioga	433	0.70	1.00	0.31	0.43	2.169	0.171	0.048	0.007	0.047	0.006	0.258	0.029	2.059	0.130	0.003	0.000	241.75	16.06	0.005	0.001	0.011	0.001
Grand Total	866	0.70	1.00	0.31	0.43	4.337	0.385	0.096	0.011	0.093	0.011	0.516	0.064	4.118	0.359	0.005	0.000	483.51	44.16	0.010	0.001	0.022	0.002

STC 2035 - with CAP

Ships

			ROG	ROG	CO	CO	CO	SOx	SOx	SOx	CO2	CO2	CO2	CH4	CH4	CH4	N2O	N2O	N2O
			Transit Emissions (tons)																
	Engine	Emission	ROG			CO			SOx			CO2			CH4			N2O	
Ship Type	Type	Tier	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler
AUTO CARRIER	SSD	1	0.025	-	1.165	0.053	-	0.381	0.019	-	622.57	33.24	-	0.074	0.004	-	0.019	0.001	-
BULK CARRIER	MSD	1	0.004	-	0.111	0.008	-	0.040	0.003	-	65.21	4.71	-	0.008	0.001	-	0.002	0.000	-
	SSD	0	0.004	-	0.159	0.009	-	0.052	0.003	-	84.89	5.88	-	0.010	0.001	-	0.003	0.000	-
		1	0.010	-	0.465	0.020	-	0.152	0.007	-	248.69	12.67	-	0.030	0.001	-	0.008	0.000	-
		2	0.006	-	0.246	0.013	-	0.080	0.005	-	131.45	8.34	-	0.016	0.001	-	0.004	0.000	-
BULK CARRIER, HL	MSD	0	0.001	-	0.033	0.002	-	0.012	0.001	-	19.53	1.47	-	0.002	0.000	-	0.001	0.000	-
CONTAINER SHIP	SSD	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GENERAL CARGO	MSD	0	0.004	-	0.115	0.008	-	0.042	0.003	-	67.15	5.04	-	0.008	0.001	-	0.002	0.000	-
		1	0.013	-	0.353	0.027	-	0.128	0.010	-	206.92	16.92	-	0.026	0.002	-	0.006	0.000	-
	SSD	0	0.007	-	0.272	0.016	-	0.089	0.006	-	145.59	9.74	-	0.017	0.001	-	0.004	0.000	-
		1	0.032	-	1.397	0.068	-	0.457	0.025	-	746.70	42.53	-	0.089	0.005	-	0.023	0.001	-
		2	0.006	-	0.280	0.014	-	0.092	0.005	-	149.63	8.61	-	0.018	0.001	-	0.005	0.000	-
Grand Total			0.112	-	4.596	0.238	-	1.526	0.086	-	2,488.33	149.15	-	0.298	0.017	-	0.075	0.004	-

			VSR - Arrival						VSR - Departure							
	Engine	Emission	Comp	Distance	Speed (kts)		Main Load Factor		Comp	Distance	Speed (kts)		Main Load Factor		Time	
Ship Type	Type	Tier	(%)	(nm)	Comp	NC	Comp	NC	(%)	(nm)	Comp	NC	Comp	NC	(hrs)	Aux
AUTO CARRIER	SSD	1	80%	20.00	12.00	16.06	0.18	0.43	80%	20.00	12.00	15.24	0.18	0.36	3.18	0.15
BULK CARRIER	MSD	1	80%	20.00	11.00	13.60	0.24	0.45	80%	20.00	11.20	13.60	0.25	0.45	3.47	0.17
	SSD	0	100%	20.00	10.70	14.60	0.32	0.82	100%	20.00	12.45	14.60	0.51	0.82	3.48	0.17
		1	80%	20.00	11.13	13.10	0.28	0.46	80%	20.00	11.90	13.07	0.34	0.45	3.39	0.17
		2	100%	11.50	11.05	15.00	0.33	0.82	100%	20.00	12.50	15.00	0.48	0.82	2.64	0.17
BULK CARRIER, HL	MSD	0	100%	5.75	9.45	13.00	0.32	0.82	100%	20.00	9.45	13.00	0.32	0.82	2.72	0.17
CONTAINER SHIP	SSD	2	88%	11.92	11.64	14.78	0.18	0.36	80%	12.16	11.93	16.06	0.19	0.46	1.97	0.13
GENERAL CARGO	MSD	0	100%	11.50	10.10	13.00	0.39	0.82	100%	20.00	10.10	13.00	0.39	0.82	3.12	0.17
		1	80%	20.00	12.57	13.20	0.45	0.52	80%	20.00	12.20	15.10	0.41	0.78	3.15	0.17
	SSD	0	100%	20.00	12.07	15.23	0.41	0.82	100%	20.00	12.30	15.23	0.43	0.82	3.28	0.17
		1	91%	20.00	11.77	13.10	0.27	0.38	80%	20.00	11.86	15.23	0.28	0.59	3.30	0.17
		2	100%	20.00	10.95	14.90	0.33	0.82	100%	20.00	11.00	14.90	0.33	0.82	3.64	0.17
Grand Total			88%	15.46	11.62	14.42	0.24	0.44	83%	16.23	11.85	15.38	0.25	0.53	2.62	0.15

Harborcraft

			ɔx	CO2		CH4		N2O	
Tug/Barge	Calls	Hours	Barge	Tug	Barge	Tug	Barge	Tug	Barge
Robyn J (Barge Jake J)	4	16.4	0.000	0.11	1.38	0.000	0.000	0.000	0.000
Robyn J (Barge Payton J)	95	16.4	0.000	2.54	35.17	0.000	0.001	0.000	0.002
Robyn J (Barge Tori J)	17	16.4	0.000	0.45	6.94	0.000	0.000	0.000	0.000
Grand Total	116	16.4	0.000	3.10	43.49	0.000	0.001	0.000	0.002

Assist Tugs

		Hours p
Tug	Calls	Main
Scout	433	0.70
Tioga	433	0.70
Grand Total	866	0.70

STC 2035 - with CAP

Ships

VSR Emissions (tons)

Ship Type	Engine Type	Emission Tier	NC Boiler Load (kW)	NOx Main	NOx Aux	NOx Boiler	DPM Main	DPM Aux	DPM Boiler	PM2.5 Main	PM2.5 Aux	PM2.5 Boiler	ROG Main	ROG Aux	ROG Boiler
AUTO CARRIER	SSD	1	351	8.700	1.241	0.142	0.146	0.025	0.009	0.134	0.023	0.009	0.477	0.052	0.008
BULK CARRIER	MSD	1	-	1.701	0.360	-	0.036	0.007	-	0.033	0.007	-	0.095	0.015	-
	SSD	0	-	3.042	0.295	-	0.045	0.005	-	0.041	0.005	-	0.140	0.011	-
		1	-	6.940	0.603	-	0.115	0.012	-	0.106	0.011	-	0.358	0.025	-
		2	-	1.962	0.164	-	0.039	0.004	-	0.036	0.004	-	0.121	0.009	-
BULK CARRIER, HL	MSD	0	-	1.222	0.235	-	0.023	0.004	-	0.021	0.004	-	0.060	0.009	-
CONTAINER SHIP	SSD	2	325	10.304	2.840	0.111	0.207	0.072	0.007	0.191	0.066	0.007	0.697	0.149	0.006
GENERAL CARGO	MSD	0	-	0.904	0.143	-	0.017	0.003	-	0.016	0.002	-	0.045	0.005	-
		1	-	5.271	0.746	-	0.113	0.015	-	0.104	0.014	-	0.293	0.031	-
	SSD	0	-	5.280	0.481	-	0.078	0.009	-	0.071	0.008	-	0.242	0.018	-
		1	-	19.022	2.034	-	0.315	0.041	-	0.290	0.038	-	0.983	0.085	-
		2	-	2.154	0.208	-	0.043	0.005	-	0.039	0.005	-	0.133	0.011	-
Grand Total			197	66.504	9.349	0.253	1.177	0.202	0.017	1.083	0.186	0.015	3.644	0.421	0.014
				236.548			5.482			5.044			13.491		

Ship Type	Engine Type	Emission Tier	CO Main	CO Aux	CO Boiler	SOx Main	SOx Aux	SOx Boiler	CO2 Main	CO2 Aux	CO2 Boiler	CH4 Main	CH4 Aux	CH4 Boiler	N2O Main	N2O Aux	N2O Boiler	Speed (kts)	Time (hrs)	Maneuverin Load F Main
AUTO CARRIER	SSD	1	0.673	0.110	0.014	0.209	0.040	0.041	341.14	69.05	65.60	0.043	0.008	0.002	0.010	0.002	0.001	7.00	2.41	0.04
BULK CARRIER	MSD	1	0.160	0.032	-	0.058	0.012	-	93.80	20.02	-	0.012	0.002	-	0.003	0.001	-	7.00	2.41	0.06
	SSD	0	0.197	0.023	-	0.064	0.008	-	105.22	14.63	-	0.013	0.002	-	0.003	0.000	-	7.00	2.41	0.09
		1	0.506	0.053	-	0.165	0.019	-	270.24	33.56	-	0.032	0.004	-	0.008	0.001	-	7.00	2.41	0.07
		2	0.171	0.018	-	0.056	0.007	-	91.56	11.44	-	0.011	0.001	-	0.003	0.000	-	7.00	2.41	0.08
BULK CARRIER, HL	MSD	0	0.102	0.019	-	0.037	0.007	-	59.72	11.68	-	0.007	0.001	-	0.002	0.000	-	7.00	2.41	0.13
CONTAINER SHIP	SSD	2	0.976	0.316	0.011	0.297	0.115	0.032	482.66	197.95	51.11	0.063	0.023	0.002	0.015	0.005	0.001	7.00	2.41	0.04
GENERAL CARGO	MSD	0	0.075	0.011	-	0.027	0.004	-	44.18	7.08	-	0.005	0.001	-	0.001	0.000	-	7.00	2.41	0.13
		1	0.496	0.066	-	0.180	0.024	-	290.61	41.49	-	0.036	0.005	-	0.008	0.001	-	7.00	2.41	0.08
	SSD	0	0.342	0.038	-	0.112	0.014	-	182.61	23.88	-	0.022	0.003	-	0.006	0.001	-	7.00	2.41	0.08
		1	1.386	0.180	-	0.454	0.066	-	740.73	113.20	-	0.088	0.013	-	0.023	0.003	-	7.00	2.41	0.06
		2	0.188	0.023	-	0.062	0.008	-	100.53	14.47	-	0.012	0.002	-	0.003	0.000	-	7.00	2.41	0.09
Grand Total			5.272	0.890	0.025	1.721	0.324	0.073	2,803.00	558.44	116.72	0.343	0.065	0.004	0.084	0.015	0.002	7.00	2.41	0.05
			16.485				9,019.929		6,116											

Harborcraft

Tug/Barge	Calls	Hours
Robyn J (Barge Jake J)	4	16.4
Robyn J (Barge Payton J)	95	16.4
Robyn J (Barge Tori J)	17	16.4
Grand Total	116	16.4

Assist Tugs

Tug	Calls	Hours p Main
Scout	433	0.70
Tioga	433	0.70
Grand Total	866	0.70

TAMT 2013-2014_CAP_STC
Annual Summary

STC 2035 - with CAP

Reduction in hoteling time 0%

Ships

Maneuvering Emissions (tons)

Ship Type	Engine Type	Emission Tier	g actors Aux	Boiler Load (kW)	NOx Main	NOx Aux	NOx Boiler	DPM Main	DPM Aux	DPM Boiler	PM2.5 Main	PM2.5 Aux	PM2.5 Boiler	ROG Main	ROG Aux	ROG Boiler
AUTO CARRIER	SSD	1	0.45	351	2.390	2.828	0.129	0.055	0.057	0.009	0.051	0.052	0.008	0.431	0.119	0.007
BULK CARRIER	MSD	1	0.45	135	0.469	0.662	0.011	0.011	0.013	0.001	0.010	0.012	0.001	0.063	0.028	0.001
	SSD	0	0.45	132	0.594	0.542	0.010	0.010	0.010	0.001	0.009	0.009	0.001	0.054	0.020	0.001
		1	0.45	132	1.483	1.136	0.024	0.030	0.023	0.002	0.028	0.021	0.001	0.186	0.048	0.001
		2	0.45	132	0.484	0.397	0.010	0.011	0.010	0.001	0.011	0.009	0.001	0.066	0.021	0.001
BULK CARRIER, HL	MSD	0	0.45	132	0.489	0.492	0.012	0.010	0.010	0.001	0.009	0.009	0.001	0.035	0.021	0.001
CONTAINER SHIP	SSD	2	0.50	325	4.929	13.421	0.155	0.137	0.339	0.010	0.126	0.312	0.010	1.064	0.705	0.009
GENERAL CARGO	MSD	0	0.45	132	0.229	0.261	0.006	0.005	0.005	0.000	0.005	0.005	0.000	0.022	0.011	0.000
		1	0.45	135	0.904	1.511	0.031	0.023	0.030	0.002	0.021	0.028	0.002	0.132	0.063	0.002
	SSD	0	0.45	135	0.994	0.835	0.016	0.017	0.017	0.001	0.016	0.015	0.001	0.100	0.035	0.001
		1	0.45	135	4.194	3.945	0.065	0.089	0.080	0.004	0.081	0.073	0.004	0.589	0.165	0.004
		2	0.45	135	0.470	0.456	0.011	0.011	0.009	0.001	0.010	0.008	0.001	0.058	0.019	0.001
Grand Total			0.47	251	17.630	26.487	0.479	0.410	0.603	0.032	0.378	0.555	0.029	2.798	1.255	0.026

Ship Type	Engine Type	Emission Tier	CO Main	CO Aux	CO Boiler	SOx Main	SOx Aux	SOx Boiler	CO2 Main	CO2 Aux	CO2 Boiler	CH4 Main	CH4 Aux	CH4 Boiler	N2O Main	N2O Aux	N2O Boiler	Hotel Time (hr)	Aux Time (hr)
AUTO CARRIER	SSD	1	0.383	0.251	0.013	0.053	0.091	0.037	84.66	157.36	59.39	0.039	0.018	0.002	0.003	0.004	0.001	27.6	27.6
BULK CARRIER	MSD	1	0.079	0.059	0.001	0.014	0.021	0.003	22.77	36.85	4.97	0.008	0.004	0.000	0.001	0.001	0.000	37.9	37.9
	SSD	0	0.066	0.043	0.001	0.013	0.016	0.003	21.18	26.90	4.53	0.005	0.003	0.000	0.001	0.001	0.000	28.7	28.7
		1	0.208	0.101	0.002	0.036	0.037	0.007	58.55	63.20	11.01	0.017	0.007	0.000	0.002	0.002	0.000	37.8	37.8
		2	0.077	0.044	0.001	0.014	0.016	0.003	23.10	27.68	4.53	0.006	0.003	0.000	0.001	0.001	0.000	85.1	85.1
BULK CARRIER, HL	MSD	0	0.056	0.044	0.001	0.015	0.016	0.003	24.52	27.39	5.50	0.004	0.003	0.000	0.001	0.001	0.000	114.0	114.0
CONTAINER SHIP	SSD	2	0.946	1.491	0.016	0.131	0.542	0.045	209.20	935.39	71.73	0.096	0.108	0.002	0.007	0.024	0.001	88.9	8.2
GENERAL CARGO	MSD	0	0.030	0.023	0.001	0.007	0.008	0.002	11.83	14.50	2.91	0.002	0.002	0.000	0.000	0.000	0.000	123.0	123.0
		1	0.154	0.134	0.003	0.029	0.049	0.009	46.45	84.10	14.24	0.012	0.010	0.000	0.001	0.002	0.000	62.5	62.5
	SSD	0	0.117	0.074	0.002	0.022	0.027	0.005	35.14	46.48	7.28	0.009	0.005	0.000	0.001	0.001	0.000	86.3	86.3
		1	0.621	0.350	0.007	0.101	0.127	0.019	162.29	219.54	30.13	0.053	0.025	0.001	0.005	0.006	0.000	45.5	45.5
		2	0.070	0.040	0.001	0.014	0.015	0.003	22.64	25.38	4.97	0.005	0.003	0.000	0.001	0.001	0.000	50.9	50.9
Grand Total			2.806	2.654	0.048	0.449	0.965	0.139	722.34	1,664.77	221.19	0.254	0.193	0.008	0.023	0.043	0.003	69.4	30.5

Harborcraft

Tug/Barge	Calls	Hours
Robyn J (Barge Jake J)	4	16.4
Robyn J (Barge Payton J)	95	16.4
Robyn J (Barge Tori J)	17	16.4
Grand Total	116	16.4

Assist Tugs

Tug	Calls	Hours p Main
Scout	433	0.70
Tioga	433	0.70
Grand Total	866	0.70

STC 2035 - with CAP

Ships

					NOx	NOx	DPM	DPM	PM2.5	PM2.5	ROG	ROG	CO	CO	SOx	SOx	CO2	CO2	CH4	CH4	N2O	N2O	
			Hotelling		Hotelling Emissions (tons)																		
	Engine	Emission	Auxiliary	Boiler	NOx		DPM		PM2.5		ROG		CO		SOx		CO2		CH4		N2O		Cold Iron
Ship Type	Type	Tier	LF	Load (kW)	Aux	Boiler	Aux	Boiler	Aux	Boiler	Aux	Boiler	Aux	Boiler	Aux	Boiler	Aux	Boiler	Aux	Boiler	Aux	Boiler	CO2e
AUTO CARRIER	SSD	1	0.26	351	18.655	1.468	0.376	0.098	0.346	0.090	0.782	0.081	1.655	0.147	0.602	0.427	1,038.08	678.11	0.120	0.024	0.027	0.010	-
BULK CARRIER	MSD	1	0.10	135	2.310	0.169	0.047	0.011	0.043	0.010	0.097	0.009	0.205	0.017	0.075	0.049	128.55	77.96	0.015	0.003	0.003	0.001	
	SSD	0	0.10	132	1.433	0.117	0.026	0.008	0.024	0.007	0.054	0.006	0.113	0.012	0.041	0.034	71.16	53.95	0.008	0.002	0.002	0.001	-
		1	0.10	132	3.948	0.373	0.080	0.025	0.073	0.023	0.166	0.021	0.350	0.037	0.127	0.108	219.70	172.17	0.025	0.006	0.006	0.002	-
		2	0.10	132	3.109	0.346	0.079	0.023	0.072	0.021	0.163	0.019	0.345	0.035	0.126	0.100	216.69	159.67	0.025	0.006	0.006	0.002	-
BULK CARRIER, HL	MSD	0	0.10	132	5.791	0.563	0.104	0.038	0.096	0.035	0.217	0.031	0.458	0.056	0.167	0.164	287.47	259.89	0.033	0.009	0.007	0.004	-
CONTAINER SHIP	SSD	2	0.35	325	31.401	5.718	0.793	0.381	0.730	0.351	1.649	0.315	3.489	0.573	1.269	1.662	2,188.56	2,640.97	0.254	0.092	0.057	0.037	15,312
GENERAL CARGO	MSD	0	0.10	132	2.951	0.321	0.059	0.021	0.055	0.020	0.124	0.018	0.262	0.032	0.095	0.093	164.18	148.43	0.019	0.005	0.004	0.002	
		1	0.10	135	8.695	0.798	0.175	0.053	0.161	0.049	0.365	0.044	0.771	0.080	0.280	0.232	483.81	368.55	0.056	0.013	0.013	0.005	-
	SSD	0	0.10	135	7.442	0.564	0.134	0.038	0.123	0.035	0.278	0.031	0.589	0.057	0.214	0.164	369.41	260.50	0.043	0.009	0.010	0.004	-
		1	0.10	135	16.516	1.229	0.333	0.082	0.306	0.075	0.693	0.068	1.465	0.123	0.533	0.357	919.02	567.51	0.107	0.020	0.024	0.008	-
		2	0.10	135	1.705	0.227	0.043	0.015	0.040	0.014	0.090	0.012	0.189	0.023	0.069	0.066	118.86	104.66	0.014	0.004	0.003	0.001	-
Grand Total			0.24	251	104.0	11.891	2.248	0.793	2.069	0.729	4.677	0.656	9.893	1.192	3.597	3.457	6,205.50	5,492.37	0.719	0.191	0.162	0.077	15,312

Harborcraft

Tug/Barge	Calls	Hours
Robyn J (Barge Jake J)	4	16.4
Robyn J (Barge Payton J)	95	16.4
Robyn J (Barge Tori J)	17	16.4
Grand Total	116	16.4

Assist Tugs

Tug	Calls	Hours p Main
Scout	433	0.70
Tioga	433	0.70
Grand Total	866	0.70

Vessel and Call Info

SHIP_TYPE	MAIN_ENGIN	Tier	Count of CALL	Average of MAIN_KW	Average of Aux_KW	Average of SPEED	Average of Trans_Hrs	Average of Tran_Spd	Average of Hrs/Min	Average of Shore Pwr	Ave Trans Dist
			Data								
AUTO CARRIER	SSD	1	8	11,060	2,760	20.00	4.54	15.57798784	27.56	-	70.75
BULK CARRIER	MSD	1	2	9,100	2,973	16.65	4.46	12.31876353	37.90	-	54.90
	SSD	0	2	8,139	2,325	14.60	5.31	11.39361971	28.74	-	60.53
		1	5	10,705	2,250	15.92	4.87	12.44709378	37.77	-	60.60
		2	2	9,140	2,393	15.00	4.96	12.19299606	85.06	-	60.43
BULK CARRIER, HL	MSD	0	2	5,738	1,950	13.00	3.28	9.2	114.02	-	30.20
CONTAINER SHIP	SSD	0	49	14,948	7,158	20.03	1.98	12.3363013	61.44	11.65	24.48
		1	8	13,055	3,676	18.93	1.75	13.37557698	60.83	-	23.41
GENERAL CARGO	MSD	0	1	5,738	1,950	13.00	5.98	10.1	123.00	-	60.40
		1	5	6,400	2,367	15.34	4.60	12.85842213	62.50	-	59.14
	SSD	0	3	9,268	2,557	15.23	4.88	12.37316492	86.35	-	60.43
		1	11	12,430	2,920	16.98	4.76	12.80065367	45.48	-	60.96
		2	2	8,630	2,048	14.90	6.48	10.92174852	50.88	-	70.78
Grand Total			100	12,627	4,904	18.43	3.17	12.66177578	57.34	5.71	

Count of CALL			
SHIP_TYPE	Tier	DWT_R	Total
CONTAINER SHIP	0	< 1000 1	49
	1	1000 - 2	6
		2000 - 3	2
Grand Total			57

Count of CALL						
SHIP_TYPE	MAIN_ENGIN	Tier	Commodity	Total	2020 Ratio	2035 Ratio
AUTO CARRIER	SSD	1	Vehicles	8	146%	1148%
		1 Total		8	146%	1148%
BULK CARRIER	MSD	1	Soda Ash	1	100%	914%
			Yachts	1	146%	1148%
		1 Total		2	123%	1031%
	SSD	0	Fertilizer	1	100%	914%
			Soda Ash	1	100%	914%
		0 Total		2	100%	914%
		1	Bauxite	2	100%	914%
			Soda Ash	3	100%	914%
		1 Total		5	100%	914%
		2	Bauxite	1	100%	914%
			Soda Ash	1	100%	914%
		2 Total		2	100%	914%
BULK CARRIER, HL	MSD	0	Military	2	146%	1148%
		0 Total		2	146%	1148%
CONTAINER SHIP	SSD	0	Bananas	49	108%	359%
		0 Total		49	108%	359%
		1	Bananas	8	108%	359%
		1 Total		8	108%	359%
GENERAL CARGO	MSD	0	Containers	1	146%	1148%
		0 Total		1	146%	1148%
		1	Project Cargo	2	146%	1148%
			Windmill Compo	2	146%	1148%
			Yachts	1	146%	1148%
		1 Total		5	146%	1148%
	SSD	0	Fertilizer	2	100%	914%
			Steel Pipe	1	146%	1148%
		0 Total		3	115%	992%
		1	Calcium Nitrate	1	100%	914%
			Fertilizer	1	100%	914%
			Project Cargo	5	146%	1148%
			Windmill Compo	3	146%	1148%
			Yachts	1	146%	1148%
		1 Total		11	137%	1106%
		2	Calcium Nitrate	1	100%	914%
			Iron & Steel	1	146%	1148%
		2 Total		2	123%	1031%
Grand Total				100	117%	663%

			MPC		75% STC
SHIP_TYPE	MAIN_ENGIN	Tier	2020	2035	2035
AUTO CARRIER	SSD	1	146%	1148%	861%
BULK CARRIER	MSD	1	123%	1031%	773%
	SSD	0	100%	914%	686%
		1	100%	914%	686%
		2	100%	914%	686%
BULK CARRIER, HL	MSD	0	146%	1148%	861%
CONTAINER SHIP	SSD	2	108%	359%	269%
GENERAL CARGO	MSD	0	146%	1148%	861%
		1	146%	1148%	861%
	SSD	0	115%	992%	744%
		1	137%	1106%	829%
		2	123%	1031%	773%

Match to Throughput Metrics	
Windmill Components	Multi-Purpose General Cargo
Soda Ash	Dry Bulk
Bananas	Refrigerated Containers
Vehicles	Multi-Purpose General Cargo
Bauxite	Dry Bulk
Fuel	Liquid Bulk
Iron & Steel	Multi-Purpose General Cargo
Project Cargo	Multi-Purpose General Cargo
Calcium Nitrate	Dry Bulk
Repairs	Multi-Purpose General Cargo
fertilizer	Dry Bulk
Military	Multi-Purpose General Cargo
Steel Pipe	Multi-Purpose General Cargo
Yachts	Multi-Purpose General Cargo
Containers	Multi-Purpose General Cargo

Container Ships					
				Calls	
2014	51,359		Total TEUs Shipped	57	
		901	Average TEUs/Ship		
2020 Buildout	80,080		Total TEUs Shipped		
TEUs per New Ship	1540				
2020 New Container Cal	50				
2035 Buildout	184,204		Total TEUs Shipped	138,153	
TEUs per New Ship	1540			1540	
2035 New Container Cal	120		MPC	90	STC
New Ship Hoteling Time	88.89		24.00	hrs	
Aux time for Dole - 100% SP	3.36		3.36	hrs	
Aux time for Dole - 80% SP	21.13		8.16		
Idle time for Dole - existing SP/new vessels	88.89		22.30		

Arrival Compliance

	Column Labels								
	No			Yes			Total Average of Arr_	Total Count of VESSNAI	Total Average of Arr_D
Row Labels	Average of Arr_Speed	Count o	Average of Arr_I	Average of Arr_Speed	Count of VESSNAME	Average of Arr_Dist			
AUTO CARRIER	**16.0625**	**8**	**35.3**				**16.0625**	**8**	**35.3**
SSD	**16.0625**	**8**	**35.3**				**16.0625**	**8**	**35.3**
1	16.0625	8	35.3				16.0625	8	35.3
BULK CARRIER	**13.26666667**	**3**	**36.43333333**	**10.9875**	**8**	**25.525**	**11.60909091**	**11**	**28.5**
MSD	**13.6**	**1**	**11.5**	**11**	**1**	**48.9**	**12.3**	**2**	**30.2**
1	13.6	1	11.5	11	1	48.9	12.3	2	30.2
SSD	**13.1**	**2**	**48.9**	**10.98571429**	**7**	**22.18571429**	**11.45555556**	**9**	**28.12222222**
0				10.7	2	30.2	10.7	2	30.2
1	13.1	2	48.9	11.13333333	3	23.96666667	11.92	5	33.94
2				11.05	2	11.5	11.05	2	11.5
BULK CARRIER, HL				**9.45**	**2**	**5.75**	**9.45**	**2**	**5.75**
MSD				**9.45**	**2**	**5.75**	**9.45**	**2**	**5.75**
0				9.45	2	5.75	9.45	2	5.75
CONTAINER SHIP	**15.25**	**8**	**11.5**	**11.6244898**	**49**	**11.98571429**	**12.13333333**	**57**	**11.91754386**
SSD	**15.25**	**8**	**11.5**	**11.6244898**	**49**	**11.98571429**	**12.13333333**	**57**	**11.91754386**
0	14.78	5	11.5	11.57272727	44	12.04090909	11.9	49	11.98571429
1	16.03333333	3	11.5	12.08	5	11.5	13.5625	8	11.5
GENERAL CARGO	**13.16666667**	**3**	**31.9**	**11.76842105**	**19**	**28.85789474**	**11.95909091**	**22**	**29.27272727**
MSD	**13.2**	**2**	**42.1**	**11.95**	**4**	**26.8**	**12.36666667**	**6**	**31.9**
0				10.1	1	11.5	10.1	1	11.5
1	13.2	2	42.1	12.56666667	3	31.9	12.82	5	35.98
SSD	**13.1**	**1**	**11.5**	**11.72**	**15**	**29.40666667**	**11.80625**	**16**	**28.2875**
0				12.06666667	3	23.96666667	12.06666667	3	23.96666667
1	13.1	1	11.5	11.77	10	28.5	11.89090909	11	26.95454545
2				10.95	2	42.1	10.95	2	42.1
Grand Total	**14.99090909**	**22**	**26.33636364**	**11.53846154**	**78**	**17.32435897**	**12.298**	**100**	**19.307**

Departure Compliance

	Column Labels								
	No			Yes			Total Average of Dep	Total Count of VESSNAI	Total Average of Dep_I
Row Labels	Average of Dep_Speed	Count o	Average of Dep_	Average of Dep_Speed	Count of VESSNAME	Average of Dep_Dist			
AUTO CARRIER	**15.2375**	**8**	**35.3**				**15.2375**	**8**	**35.3**
SSD	**15.2375**	**8**	**35.3**				**15.2375**	**8**	**35.3**
1	15.2375	8	35.3				15.2375	8	35.3
BULK CARRIER	**13.2**	**4**	**26.8**	**12.12857143**	**7**	**32.87142857**	**12.51818182**	**11**	**30.66363636**
MSD	**13.6**	**1**	**35.3**	**11.2**	**1**	**11.5**	**12.4**	**2**	**23.4**
1	13.6	1	35.3	11.2	1	11.5	12.4	2	23.4
SSD	**13.06666667**	**3**	**23.96666667**	**12.28333333**	**6**	**36.43333333**	**12.54444444**	**9**	**32.27777778**
0				12.45	2	30.2	12.45	2	30.2
1	13.06666667	3	23.96666667	11.9	2	30.2	12.6	5	26.46
2				12.5	2	48.9	12.5	2	48.9
BULK CARRIER, HL				**9.45**	**2**	**24.45**	**9.45**	**2**	**24.45**
MSD				**9.45**	**2**	**24.45**	**9.45**	**2**	**24.45**
0				9.45	2	24.45	9.45	2	24.45
CONTAINER SHIP	**15.97333333**	**15**	**11.5**	**11.92857143**	**42**	**12.39047619**	**12.99298246**	**57**	**12.15614035**
SSD	**15.97333333**	**15**	**11.5**	**11.92857143**	**42**	**12.39047619**	**12.99298246**	**57**	**12.15614035**
0	16.06153846	13	11.5	11.82777778	36	12.53888889	12.95102041	49	12.26326531
1	15.4	2	11.5	12.53333333	6	11.5	13.25	8	11.5
GENERAL CARGO	**15.2**	**8**	**33.175**	**11.77857143**	**14**	**31.9**	**13.02272727**	**22**	**32.36363636**
MSD	**15.1**	**2**	**30.2**	**11.675**	**4**	**26.8**	**12.81666667**	**6**	**27.93333333**
0				10.1	1	48.9	10.1	1	48.9
1	15.1	2	30.2	12.2	3	19.43333333	13.36	5	23.74
SSD	**15.23333333**	**6**	**34.16666667**	**11.82**	**10**	**33.94**	**13.1**	**16**	**34.025**
0				12.3	3	36.43333333	12.3	3	36.43333333
1	15.23333333	6	34.16666667	11.86	5	33.94	13.7	11	34.06363636
2				11	2	30.2	11	2	30.2
Grand Total	**15.31142857**	**35**	**23.64285714**	**11.84153846**	**65**	**19.16923077**	**13.056**	**100**	**20.735**

STC 2035 - VSR Beyond CAP

Ships

																								NOx	NOx	NOx	DPM	DPM	DPM	PM2.5	PM2.5	PM2.5
						Service	Total Transit				Transit - Arrival						Transit - Departure															
	Engine	Emission		Power (kW)		Speed	Distance (nm)		Comp	Distance	Speed (kts)		Main Load Factor		Comp	Distance	Speed (kts)		Main Load Factor		Time		NC Boiler		NOx			DPM			PM2.5	
Ship Type	Type	Tier	Calls	Main	Aux	(kts)	Arrival	Depart	(%)	(nm)	Comp	NC	Comp	NC	(%)	(nm)	Comp	NC	Comp	NC	(hrs)	Aux	Load (kW)	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler
AUTO CARRIER	SSD	1	0.45	11,060	2,760	20.00	35.30	35.30	90%	-	12.00	20.00	0.18	0.82	90%	-	12.00	20.00	0.18	0.82	-	0.15	351	-	-	-	-	-	-	-	-	-
BULK CARRIER	MSD	1	0.08	9,100	2,973	16.65	30.20	23.40	90%	-	11.00	16.65	0.24	0.82	90%	-	11.20	16.65	0.25	0.82	-	0.17	-	-	-	-	-	-	-	-	-	-
	SSD	0	0.08	8,139	2,325	14.60	30.20	30.20	100%	-	10.70	14.60	0.32	0.82	100%	-	12.45	14.60	0.51	0.82	-	0.17	-	-	-	-	-	-	-	-	-	-
		1	0.19	10,705	2,250	15.92	33.94	26.46	90%	-	11.13	15.92	0.28	0.82	90%	-	11.90	15.92	0.34	0.82	-	0.17	-	-	-	-	-	-	-	-	-	-
		2	0.08	9,140	2,393	15.00	11.50	48.90	100%	-	11.05	15.00	0.33	0.82	100%	8.90	12.50	15.00	0.48	0.82	0.71	0.17	-	6.64	0.49	-	0.13	0.01	-	0.12	0.01	-
BULK CARRIER, HL	MSD	0	0.12	5,738	1,950	13.00	5.75	24.45	100%	-	9.45	13.00	0.32	0.82	100%	-	9.45	13.00	0.32	0.82	-	0.17	-	-	-	-	-	-	-	-	-	-
CONTAINER SHIP	SSD	2	1.93	19,420	11,320	19.50	11.92	12.16	90%	-	11.64	19.50	0.18	0.82	90%	-	11.93	19.50	0.19	0.82	-	0.13	132	-	-	-	-	-	-	-	-	-
GENERAL CARGO	MSD	0	0.04	5,738	1,950	13.00	11.50	48.90	100%	-	10.10	13.00	0.39	0.82	100%	8.90	10.10	13.00	0.39	0.82	0.88	0.17	-	2.19	0.35	-	0.04	0.01	-	0.04	0.01	-
		1	0.27	6,400	2,367	15.34	35.98	23.74	90%	-	12.57	15.34	0.45	0.82	90%	-	12.20	15.34	0.41	0.82	-	0.17	-	-	-	-	-	-	-	-	-	-
	SSD	0	0.12	9,268	2,557	15.23	23.97	36.43	100%	-	12.07	15.23	0.41	0.82	100%	-	12.30	15.23	0.43	0.82	-	0.17	-	-	-	-	-	-	-	-	-	-
		1	0.58	12,430	2,920	16.98	26.95	34.06	91%	-	11.77	16.98	0.27	0.82	90%	-	11.86	16.98	0.28	0.82	-	0.17	-	-	-	-	-	-	-	-	-	-
		2	0.08	8,630	2,048	14.90	42.10	30.20	100%	2.10	10.95	14.90	0.33	0.82	100%	-	11.00	14.90	0.33	0.82	0.19	0.17	-	1.16	0.11	-	0.02	0.00	-	0.02	0.00	-
Grand Total			4.00	14,524	6,799	18.04	20.86	22.44	91%	0.04	11.62	18.04	0.24	0.82	91%	0.26	11.85	18.04	0.25	0.82	0.03	0.15	103	9.99	0.95	-	0.20	0.02	-	0.18	0.02	-

3.85877057 =scaling factor for 2020 to 2035 (4 max daily calls / 2020 max daily calls)

Harborcraft

			Tug Running Emissions (lbs)																		Hoteling Emissions (lbs)											
			NOx		DPM		PM2.5		ROG		CO		SOx		CO2		CH4		N2O		Hours		NOx		DPM		PM2.5		ROG		CO	
Tug/Barge	Calls	Hours	Main	Aux	Main	Aux	Main	Aux	Main	Aux	Main	Aux	Main	Aux	Main	Aux	Main	Aux	Main	Aux	Tug	Barge	Tug	Barge	Tug	Barge	Tug	Barge	Tug	Barge	Tug	Barge
Robyn J (Barge Jake J)	0.15	16.4	29.683	1.385	1.013	0.050	0.983	0.049	2.795	0.234	22.288	1.054	0.029	0.001	2,617	130	0.052	0.005	0.118	0.006	1.0	4.5	0.08	1.13	0.00	0.06	0.00	0.06	0.01	0.19	0.06	0.89
Robyn J (Barge Payton J)	3.26	16.4	653.029	30.474	22.285	1.110	21.616	1.077	61.490	5.150	490.328	23.186	0.645	0.032	57,573	2,856	1.144	0.101	2.595	0.129	1.0	4.8	1.86	26.77	0.07	1.44	0.07	1.40	0.31	4.55	1.42	21.10
Robyn J (Barge Tori J)	0.59	16.4	118.733	5.541	4.052	0.202	3.930	0.196	11.180	0.936	89.151	4.216	0.117	0.006	10,468	519	0.208	0.018	0.472	0.023	1.0	5.3	0.34	5.37	0.01	0.29	0.01	0.28	0.06	0.91	0.26	4.23
Grand Total	4.00	16.4	801.445	37.400	27.349	1.362	26.529	1.321	75.465	6.320	601.767	28.455	0.792	0.039	70,658	3,505	1.404	0.124	3.185	0.158	1.0	4.9	2.282	33.267	0.083	1.796	0.081	1.742	0.386	5.651	1.737	26.219

Assist Tugs

						Tug Running Emissions (lbs)																	
		Hours per Call		Load Factors		NOx		DPM		PM2.5		ROG		CO		SOx		CO2		CH4		N2O	
Tug	Calls	Main	Aux	Main	Aux	Main	Aux	Main	Aux	Main	Aux	Main	Aux	Main	Aux	Main	Aux	Main	Aux	Main	Aux	Main	Aux
Scout	4.00	0.70	1.00	0.31	0.43	40.07	3.96	0.89	0.09	0.86	0.09	4.77	0.65	38.04	4.22	0.05	0.01	4,467	519	0.089	0.013	0.201	0.023
Tioga	4.00	0.70	1.00	0.31	0.43	40.07	3.17	0.89	0.12	0.86	0.12	4.77	0.54	38.04	2.41	0.05	0.00	4,467	297	0.089	0.010	0.201	0.013
Grand Total	8.00	0.70	1.00	0.31	0.43	80.13	7.12	1.77	0.21	1.72	0.21	9.54	1.18	76.08	6.62	0.10	0.01	8,933	816	0.178	0.023	0.403	0.037

STC 2035 - VSR Beyond CAP

Ships

			ROG	ROG	ROG	CO	CO	CO	SOx	SOx	SOx	CO2	CO2	CO2	CH4	CH4	CH4	N2O	N2O	N2O
			Transit Emissions (lbs)																	
	Engine	Emission	ROG			CO			SOx			CO2			CH4			N2O		
Ship Type	Type	Tier	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler
AUTO CARRIER	SSD	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BULK CARRIER	MSD	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SSD	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		2	0.41	0.03	-	0.58	0.05	-	0.19	0.02	-	310	34	-	0.037	0.004	-	0.009	0.001	-
BULK CARRIER, HL	MSD	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CONTAINER SHIP	SSD	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GENERAL CARGO	MSD	0	0.11	0.01	-	0.18	0.03	-	0.07	0.01	-	107	17	-	0.013	0.002	-	0.003	0.000	-
		1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SSD	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		2	0.07	0.01	-	0.10	0.01	-	0.03	0.00	-	54	8	-	0.006	0.001	-	0.002	0.000	-
Grand Total			0.59	0.04	-	0.86	0.09	-	0.29	0.03	-	471	59	-	0.057	0.007	-	0.014	0.002	-

			VSR - Arrival						VSR - Departure						
			Comp	Distance	Speed (kts)		Main Load Factor		Comp	Distance	Speed (kts)		Main Load Factor		Time
Ship Type	Engine Type	Emission Tier	(%)	(nm)	Comp	NC	Comp	NC	(%)	(nm)	Comp	NC	Comp	NC	(hrs)
AUTO CARRIER	SSD	1	90%	35.30	12.00	16.06	0.18	0.43	90%	35.30	12.00	15.24	0.18	0.36	5.75
BULK CARRIER	MSD	1	90%	30.20	11.00	13.60	0.24	0.45	90%	23.40	11.20	13.60	0.25	0.45	4.75
	SSD	0	100%	30.20	10.70	14.60	0.32	0.82	100%	30.20	12.45	14.60	0.51	0.82	5.25
		1	90%	33.94	11.13	13.10	0.28	0.46	90%	26.46	11.90	13.07	0.34	0.45	5.21
		2	100%	11.50	11.05	15.00	0.33	0.82	100%	40.00	12.50	15.00	0.48	0.82	4.24
BULK CARRIER, HL	MSD	0	100%	5.75	9.45	13.00	0.32	0.82	100%	24.45	9.45	13.00	0.32	0.82	3.20
CONTAINER SHIP	SSD	2	90%	11.92	11.64	14.78	0.18	0.36	90%	12.16	11.93	16.06	0.19	0.46	1.99
GENERAL CARGO	MSD	0	100%	11.50	10.10	13.00	0.39	0.82	100%	40.00	10.10	13.00	0.39	0.82	5.10
		1	90%	35.98	12.57	13.20	0.45	0.52	90%	23.74	12.20	15.10	0.41	0.78	4.76
	SSD	0	100%	23.97	12.07	15.23	0.41	0.82	100%	36.43	12.30	15.23	0.43	0.82	4.95
		1	91%	26.95	11.77	13.10	0.27	0.38	90%	34.06	11.86	15.23	0.28	0.59	5.08
		2	100%	40.00	10.95	14.90	0.33	0.82	100%	30.20	11.00	14.90	0.33	0.82	6.40
Grand Total			91%	20.82	11.62	14.42	0.24	0.44	91%	22.18	11.85	15.38	0.25	0.54	3.60

Harborcraft

			SOx		CO2		CH4		N2O	
Tug/Barge	Calls	Hours	Tug	Barge	Tug	Barge	Tug	Barge	Tug	Barge
Robyn J (Barge Jake J)	0.15	16.4	0.00	0.00	8	102	0.000	0.003	0.000	0.005
Robyn J (Barge Payton J)	3.26	16.4	0.00	0.03	174	2,413	0.006	0.083	0.008	0.112
Robyn J (Barge Tori J)	0.59	16.4	0.00	0.01	32	484	0.001	0.017	0.001	0.023
Grand Total	4.00	16.4	0.002	0.034	213.88	2,999.05	0.008	0.103	0.010	0.140

Assist Tugs

		Hours
Tug	Calls	Main
Scout	4.00	0.70
Tioga	4.00	0.70
Grand Total	8.00	0.70

STC 2035 - VSR Beyond CAP

Ships					NOx	NOx	NOx	DPM	DPM	DPM	PM2.5	PM2.5	PM2.5	ROG	ROG	ROG	CO	CO	CO	SOx	SOx	SOx	CO2	CO2	CO2	CH4	CH4	CH4	N2O	N2O	N2O	
				NC	VSR Emissions (lbs)																											
	Engine	Emission		Boiler		NOx			DPM			PM2.5			ROG			CO			SOx			CO2			CH4			N2O		Speed
Ship Type	Type	Tier	Aux	Load (kW)	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler	(kts)
AUTO CARRIER	SSD	1	0.15	351	188.46	29.26	3.68	3.17	0.59	0.25	2.92	0.54	0.23	10.46	1.23	0.20	14.75	2.60	0.37	4.53	0.94	1.07	7,399	1,628	1,699	0.939	0.189	0.059	0.225	0.042	0.024	7.00
BULK CARRIER	MSD	1	0.17	-	22.35	5.06	-	0.48	0.10	-	0.44	0.09	-	1.24	0.21	-	2.10	0.45	-	0.76	0.16	-	1,232	282	-	0.153	0.033	-	0.034	0.007	-	7.00
	SSD	0	0.17	-	50.64	4.91	-	0.74	0.09	-	0.69	0.08	-	2.32	0.18	-	3.28	0.39	-	1.07	0.14	-	1,752	244	-	0.209	0.028	-	0.054	0.006	-	7.00
		1	0.17	-	114.85	10.50	-	1.90	0.21	-	1.75	0.19	-	5.93	0.44	-	8.37	0.93	-	2.74	0.34	-	4,472	584	-	0.532	0.068	-	0.137	0.015	-	7.00
		2	0.17	-	36.56	2.91	-	0.73	0.07	-	0.67	0.07	-	2.26	0.15	-	3.19	0.32	-	1.04	0.12	-	1,706	202	-	0.203	0.023	-	0.052	0.005	-	7.00
BULK CARRIER, HL	MSD	0	0.17	-	19.52	3.76	-	0.37	0.07	-	0.34	0.06	-	0.96	0.14	-	1.63	0.30	-	0.59	0.11	-	954	187	-	0.118	0.022	-	0.027	0.005	-	7.00
CONTAINER SHIP	SSD	2	0.13	325	424.10	123.61	5.07	8.55	3.12	0.34	7.87	2.87	0.31	28.88	6.49	0.28	40.44	13.73	0.51	12.21	4.99	1.47	19,870	8,615	2,342	2.592	0.999	0.081	0.606	0.225	0.033	7.00
GENERAL CARGO	MSD	0	0.17	-	12.68	2.00	-	0.24	0.04	-	0.22	0.03	-	0.62	0.07	-	1.06	0.16	-	0.38	0.06	-	619	99	-	0.077	0.012	-	0.017	0.003	-	7.00
		1	0.17	-	96.15	14.14	-	2.05	0.28	-	1.89	0.26	-	5.34	0.59	-	9.04	1.25	-	3.29	0.46	-	5,301	787	-	0.657	0.091	-	0.148	0.021	-	7.00
	SSD	0	0.17	-	84.23	7.63	-	1.24	0.14	-	1.14	0.13	-	3.86	0.29	-	5.45	0.60	-	1.78	0.22	-	2,913	379	-	0.347	0.044	-	0.089	0.010	-	7.00
		1	0.17	-	359.09	39.88	-	5.95	0.80	-	5.47	0.74	-	18.55	1.67	-	26.16	3.54	-	8.56	1.29	-	13,983	2,219	-	1.665	0.257	-	0.428	0.058	-	7.00
		2	0.17	-	38.88	3.75	-	0.77	0.09	-	0.71	0.09	-	2.41	0.20	-	3.39	0.42	-	1.11	0.15	-	1,814	261	-	0.216	0.030	-	0.056	0.007	-	7.00
Grand Total			0.15	196	1,447.51	247.40	8.75	26.19	5.61	0.58	24.10	5.16	0.54	82.85	11.67	0.48	118.85	24.69	0.88	38.08	8.98	2.54	62,016	15,487	4,041	7.708	1.796	0.140	1.872	0.404	0.057	7.00

Harborcraft

Tug/Barge	Calls	Hours
Robyn J (Barge Jake J)	0.15	16.4
Robyn J (Barge Payton J)	3.26	16.4
Robyn J (Barge Tori J)	0.59	16.4
Grand Total	4.00	16.4

Assist Tugs

		Hours
Tug	Calls	Main
Scout	4.00	0.70
Tioga	4.00	0.70
Grand Total	8.00	0.70

STC 2035 - VSR Beyond CAP

Reduction in hoteling time

Ships

Ship Type	Engine Type	Emission Tier	Maneuvering Time (hrs)	Load Factors Main	Load Factors Aux	Boiler Load (kW)	NOx Main	NOx Aux	NOx Boiler	DPM Main	DPM Aux	DPM Boiler	PM2.5 Main	PM2.5 Aux	PM2.5 Boiler	ROG Main	ROG Aux	ROG Boiler
AUTO CARRIER	SSD	1	2.41	0.04	0.45	351	31.18	36.88	1.68	0.72	0.74	0.11	0.66	0.68	0.10	5.62	1.55	0.09
BULK CARRIER	MSD	1	2.41	0.06	0.45	135	4.83	6.81	0.11	0.12	0.14	0.01	0.11	0.13	0.01	0.65	0.29	0.01
BULK CARRIER	SSD	0	2.41	0.09	0.45	132	6.54	5.97	0.11	0.11	0.11	0.01	0.10	0.10	0.01	0.60	0.22	0.01
BULK CARRIER	SSD	1	2.41	0.07	0.45	132	16.83	12.89	0.27	0.34	0.26	0.02	0.32	0.24	0.02	2.11	0.54	0.01
BULK CARRIER	SSD	2	2.41	0.08	0.45	132	5.34	4.38	0.11	0.13	0.11	0.01	0.12	0.10	0.01	0.72	0.23	0.01
BULK CARRIER, HL	MSD	0	2.41	0.13	0.45	132	6.65	6.70	0.16	0.14	0.14	0.01	0.12	0.12	0.01	0.47	0.28	0.01
CONTAINER SHIP	SSD	2	2.41	0.04	0.50	325	211.33	575.42	6.66	5.86	14.53	0.44	5.39	13.37	0.41	45.64	30.22	0.37
GENERAL CARGO	MSD	0	2.41	0.13	0.45	132	1.97	2.23	0.05	0.05	0.05	0.00	0.04	0.04	0.00	0.19	0.09	0.00
GENERAL CARGO	MSD	1	2.41	0.08	0.45	135	11.36	18.99	0.39	0.29	0.38	0.03	0.27	0.35	0.02	1.65	0.80	0.02
GENERAL CARGO	SSD	0	2.41	0.08	0.45	135	10.46	8.79	0.17	0.18	0.18	0.01	0.17	0.16	0.01	1.05	0.37	0.01
GENERAL CARGO	SSD	1	2.41	0.06	0.45	135	53.35	50.19	0.83	1.13	1.01	0.06	1.04	0.93	0.05	7.49	2.10	0.05
GENERAL CARGO	SSD	2	2.41	0.09	0.45	135	4.84	4.69	0.11	0.11	0.09	0.01	0.10	0.09	0.01	0.59	0.20	0.01
Grand Total			2.41	0.05	0.47	251	364.68	733.96	10.64	9.17	17.74	0.71	8.44	16.32	0.65	66.78	36.89	0.59

Maneuvering Emissions (lbs) (continued)

Ship Type	Engine Type	Emission Tier	CO Main	CO Aux	CO Boiler	SOx Main	SOx Aux	SOx Boiler	CO2 Main	CO2 Aux	CO2 Boiler	CH4 Main	CH4 Aux	CH4 Boiler	N2O Main	N2O Aux	N2O Boiler	Hotel Time (hr)
AUTO CARRIER	SSD	1	4.99	3.27	0.17	0.69	1.19	0.49	1,104	2,052	775	0.504	0.238	0.027	0.037	0.054	0.011	24.0
BULK CARRIER	MSD	1	0.82	0.60	0.01	0.15	0.22	0.03	234	379	51	0.080	0.044	0.002	0.007	0.010	0.001	24.0
BULK CARRIER	SSD	0	0.73	0.47	0.01	0.14	0.17	0.03	233	297	50	0.053	0.034	0.002	0.007	0.008	0.001	24.0
BULK CARRIER	SSD	1	2.36	1.14	0.03	0.41	0.42	0.08	665	717	125	0.189	0.083	0.004	0.020	0.019	0.002	24.0
BULK CARRIER	SSD	2	0.85	0.49	0.01	0.16	0.18	0.03	255	305	50	0.065	0.035	0.002	0.008	0.008	0.001	24.0
BULK CARRIER, HL	MSD	0	0.76	0.59	0.02	0.21	0.22	0.05	334	373	75	0.058	0.043	0.003	0.009	0.010	0.001	24.0
CONTAINER SHIP	SSD	2	40.57	63.94	0.67	5.60	23.25	1.94	8,969	40,105	3,075	4.096	4.650	0.107	0.302	1.046	0.043	24.0
GENERAL CARGO	MSD	0	0.25	0.20	0.01	0.06	0.07	0.02	101	124	25	0.017	0.014	0.001	0.003	0.003	0.000	24.0
GENERAL CARGO	MSD	1	1.94	1.68	0.04	0.36	0.61	0.11	584	1,057	179	0.149	0.122	0.006	0.017	0.028	0.003	24.0
GENERAL CARGO	SSD	0	1.23	0.78	0.02	0.23	0.28	0.05	370	489	77	0.094	0.057	0.003	0.011	0.013	0.001	24.0
GENERAL CARGO	SSD	1	7.89	4.45	0.08	1.28	1.62	0.24	2,065	2,793	383	0.672	0.324	0.013	0.064	0.073	0.005	24.0
GENERAL CARGO	SSD	2	0.73	0.42	0.01	0.14	0.15	0.03	233	261	51	0.053	0.030	0.002	0.007	0.007	0.001	24.0
Grand Total			63.11	78.04	1.07	9.43	28.38	3.09	15,147	48,953	4,916	6.031	5.676	0.171	0.491	1.277	0.069	24.0

Harborcraft

Tug/Barge	Calls	Hours
Robyn J (Barge Jake J)	0.15	16.4
Robyn J (Barge Payton J)	3.26	16.4
Robyn J (Barge Tori J)	0.59	16.4
Grand Total	4.00	16.4

Assist Tugs

Tug	Calls	Hours Main
Scout	4.00	0.70
Tioga	4.00	0.70
Grand Total	8.00	0.70

TAMT 2013-2014_VSR_STC
Daily Summary

STC 2035 - VSR Beyond CAP 0%

Ships

						NOx	NOx	DPM	DPM	PM2.5	PM2.5	ROG	ROG	CO	CO	SOx	SOx	CO2	CO2	CH4	CH4	N2O	N2O	
			Aux	**Hotelling**		**Hotelling Emissions (lbs)**																		
	Engine	**Emission**	**Time**	**Auxiliary**	**Boiler**	**NOx**		**DPM**		**PM2.5**		**ROG**		**CO**		**SOx**		**CO2**		**CH4**		**N2O**		**Cold Iron**
Ship Type	**Type**	**Tier**	**(hr)**	**LF**	**Load (kW)**	**Aux**	**Boiler**	**Aux**	**Boiler**	**Aux**	**Boiler**	**Aux**	**Boiler**	**Aux**	**Boiler**	**Aux**	**Boiler**	**Aux**	**Boiler**	**Aux**	**Boiler**	**Aux**	**Boiler**	**CO2e**
AUTO CARRIER	SSD	1	24.0	0.26	351	211.83	16.67	4.27	1.11	3.93	1.02	8.88	0.92	18.79	1.67	6.83	4.85	11,787	7,700	1.367	0.267	0.307	0.109	-
BULK CARRIER	MSD	1	24.0	0.10	135	15.05	1.10	0.30	0.07	0.28	0.07	0.63	0.06	1.34	0.11	0.49	0.32	838	508	0.097	0.018	0.022	0.007	
	SSD	0	24.0	0.10	132	13.20	1.08	0.24	0.07	0.22	0.07	0.49	0.06	1.04	0.11	0.38	0.31	655	497	0.076	0.017	0.017	0.007	-
		1	24.0	0.10	132	28.48	2.69	0.57	0.18	0.53	0.16	1.19	0.15	2.53	0.27	0.92	0.78	1,585	1,242	0.184	0.043	0.041	0.018	-
		2	24.0	0.10	132	9.67	1.08	0.24	0.07	0.22	0.07	0.51	0.06	1.07	0.11	0.39	0.31	674	497	0.078	0.017	0.018	0.007	-
BULK CARRIER, HL	MSD	0	24.0	0.10	132	16.60	1.61	0.30	0.11	0.27	0.10	0.62	0.09	1.31	0.16	0.48	0.47	824	745	0.096	0.026	0.021	0.011	-
CONTAINER SHIP	SSD	2	8.2	0.35	325	1,346.33	66.19	34.00	4.41	31.28	4.06	70.72	3.65	149.59	6.64	54.40	19.24	93,835	30,573	10.879	1.062	2.448	0.431	184,799
GENERAL CARGO	MSD	0	24.0	0.10	132	4.94	0.54	0.10	0.04	0.09	0.03	0.21	0.03	0.44	0.05	0.16	0.16	275	248	0.032	0.009	0.007	0.004	
		1	24.0	0.10	135	41.94	3.85	0.85	0.26	0.78	0.24	1.76	0.21	3.72	0.39	1.35	1.12	2,334	1,778	0.271	0.062	0.061	0.025	-
	SSD	0	24.0	0.10	135	21.77	1.65	0.39	0.11	0.36	0.10	0.81	0.09	1.72	0.17	0.63	0.48	1,081	762	0.125	0.026	0.028	0.011	-
		1	24.0	0.10	135	110.87	8.25	2.24	0.55	2.06	0.51	4.65	0.45	9.84	0.83	3.58	2.40	6,170	3,810	0.715	0.132	0.161	0.054	-
		2	24.0	0.10	135	8.28	1.10	0.21	0.07	0.19	0.07	0.43	0.06	0.92	0.11	0.33	0.32	577	508	0.067	0.018	0.015	0.007	-
Grand Total			16.4	0.24	251	1,828.96	105.79	43.71	7.05	40.21	6.49	90.91	5.83	192.31	10.61	69.93	30.76	120,634	48,867	13.987	1.697	3.147	0.689	184,799

Harborcraft

Tug/Barge	**Calls**	**Hours**
Robyn J (Barge Jake J)	0.15	16.4
Robyn J (Barge Payton J)	3.26	16.4
Robyn J (Barge Tori J)	0.59	16.4
Grand Total	4.00	16.4

Assist Tugs

		Hours
Tug	**Calls**	**Main**
Scout	4.00	0.70
Tioga	4.00	0.70
Grand Total	8.00	0.70

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Ships

Ship Type	Engine Type	Emission Tier	Calls	Power (kW) Main	Power (kW) Aux	Service Speed (kts)	Total Transit Distance (nm) Arrival	Total Transit Distance (nm) Depart	Transit - Arrival Comp (%)	Transit - Arrival Distance (nm)	Transit - Arrival Speed (kts) Comp	Transit - Arrival Speed (kts) NC	Transit - Arrival Main Load Factor Comp	Transit - Arrival Main Load Factor NC
AUTO CARRIER	SSD	1	69	11,060	2,760	20.00	35.30	35.30	0%	-	12.00	20.00	0.18	0.82
BULK CARRIER	MSD	1	15	9,100	2,973	16.65	30.20	23.40	0%	-	11.00	16.65	0.24	0.82
	SSD	0	14	8,139	2,325	14.60	30.20	30.20	0%	-	10.70	14.60	0.32	0.82
		1	34	10,705	2,250	15.92	33.94	26.46	0%	-	11.13	15.92	0.28	0.82
		2	14	9,140	2,393	15.00	11.50	48.90	0%	-	11.05	15.00	0.33	0.82
BULK CARRIER, HL	MSD	0	17	5,738	1,950	13.00	5.75	24.45	0%	-	9.45	13.00	0.32	0.82
CONTAINER SHIP	SSD	2	90	19,420	11,320	19.50	11.92	12.16	0%	-	11.64	19.50	0.18	0.82
GENERAL CARGO	MSD	0	9	5,738	1,950	13.00	11.50	48.90	0%	-	10.10	13.00	0.39	0.82
		1	43	6,400	2,367	15.34	35.98	23.74	0%	-	12.57	15.34	0.45	0.82
	SSD	0	22	9,268	2,557	15.23	23.97	36.43	0%	-	12.07	15.23	0.41	0.82
		1	91	12,430	2,920	16.98	26.95	34.06	0%	-	11.77	16.98	0.27	0.82
		2	15	8,630	2,048	14.90	42.10	30.20	0%	2.10	10.95	14.90	0.33	0.82
Grand Total			433	14,524	6,799	18.04	20.86	22.44	0%	0.04	11.62	18.04	0.24	0.82

Ship Type	Engine Type	Emission Tier	Transit - Departure Comp (%)	Transit - Departure Distance (nm)	Transit - Departure Speed (kts) Comp	Transit - Departure Speed (kts) NC	Transit - Departure Main Load Factor Comp	Transit - Departure Main Load Factor NC	Time (hrs)	Aux	NC Boiler Load (kW)	NOx Main	NOx Aux	NOx Boiler	DPM Main	DPM Aux	DPM Boiler	PM2.5 Main	PM2.5 Aux	PM2.5 Boiler
AUTO CARRIER	SSD	1	0%	-	12.00	20.00	0.18	0.82	-	0.15	351	-	-	-	-	-	-	-	-	-
BULK CARRIER	MSD	1	0%	-	11.20	16.65	0.25	0.82	-	0.17	-	-	-	-	-	-	-	-	-	-
	SSD	0	0%	-	12.45	14.60	0.51	0.82	-	0.17	-	-	-	-	-	-	-	-	-	-
		1	0%	-	11.90	15.92	0.34	0.82	-	0.17	-	-	-	-	-	-	-	-	-	-
		2	0%	8.90	12.50	15.00	0.48	0.82	0.59	0.17	-	0.867	0.037	-	0.017	0.001	-	0.016	0.001	-
BULK CARRIER, HL	MSD	0	0%	-	9.45	13.00	0.32	0.82	-	0.17	-	-	-	-	-	-	-	-	-	-
CONTAINER SHIP	SSD	2	0%	-	11.93	19.50	0.19	0.82	-	0.13	132	-	-	-	-	-	-	-	-	-
GENERAL CARGO	MSD	0	0%	8.90	10.10	13.00	0.39	0.82	0.68	0.17	-	0.423	0.031	-	0.008	0.001	-	0.007	0.001	-
		1	0%	-	12.20	15.34	0.41	0.82	-	0.17	-	-	-	-	-	-	-	-	-	-
	SSD	0	0%	-	12.30	15.23	0.43	0.82	-	0.17	-	-	-	-	-	-	-	-	-	-
		1	0%	-	11.86	16.98	0.28	0.82	-	0.17	-	-	-	-	-	-	-	-	-	-
		2	0%	-	11.00	14.90	0.33	0.82	0.14	0.17	-	0.208	0.008	-	0.004	0.000	-	0.004	0.000	-
Grand Total			0%	0.26	11.85	18.04	0.25	0.82	0.02	0.15	103	1.499	0.076	-	0.029	0.002	-	0.027	0.002	-

Harborcraft

Tug Running Emissions (tons)

Tug/Barge	Calls	Hours	NOx Main	NOx Aux	DPM Main	DPM Aux	PM2.5 Main	PM2.5 Aux	ROG Main	ROG Aux	CO Main	CO Aux	SOx Main	SOx Aux	CO2 Main	CO2 Aux	CH4 Main	CH4 Aux	N2O Main	N2O Aux
Robyn J (Barge Jake J)	4	16.4	0.401	0.019	0.014	0.001	0.013	0.001	0.038	0.003	0.301	0.014	0.000	0.000	35.33	1.75	0.001	0.000	0.002	0.000
Robyn J (Barge Payton J)	95	16.4	9.517	0.444	0.325	0.016	0.315	0.016	0.896	0.075	7.146	0.338	0.009	0.000	839.06	41.62	0.017	0.001	0.038	0.002
Robyn J (Barge Tori J)	17	16.4	1.703	0.079	0.058	0.003	0.056	0.003	0.160	0.013	1.279	0.060	0.002	0.000	150.15	7.45	0.003	0.000	0.007	0.000
Grand Total	116	16.4	11.621	0.542	0.397	0.020	0.385	0.019	1.094	0.092	8.726	0.413	0.011	0.001	1,024.54	50.82	0.020	0.002	0.046	0.002

Hoteling Emissions (tons)

Tug/Barge	Hours Tug	Hours Barge	NOx Tug	NOx Barge	DPM Tug	DPM Barge	PM2.5 Tug	PM2.5 Barge	ROG Tug	ROG Barge	CO Tug	CO Barge
Robyn J (Barge Jake J)	1.0	4.5	0.001	0.015	0.000	0.001	0.000	0.001	0.000	0.003	0.001	0.012
Robyn J (Barge Payton J)	1.0	4.8	0.027	0.390	0.001	0.021	0.001	0.020	0.005	0.066	0.021	0.307
Robyn J (Barge Tori J)	1.0	5.3	0.005	0.077	0.000	0.004	0.000	0.004	0.001	0.013	0.004	0.061
Grand Total	1.0	4.9	0.033	0.482	0.001	0.026	0.001	0.025	0.006	0.082	0.025	0.380

Assist Tugs

Tug Running Emissions (tons)

Tug	Calls	Hours per Call Main	Hours per Call Aux	Load Factors Main	Load Factors Aux	NOx Main	NOx Aux	DPM Main	DPM Aux	PM2.5 Main	PM2.5 Aux	ROG Main	ROG Aux	CO Main	CO Aux	SOx Main	SOx Aux	CO2 Main	CO2 Aux	CH4 Main	CH4 Aux	N2O Main	N2O Aux
Scout	433	0.70	1.00	0.31	0.43	2.169	0.214	0.048	0.005	0.047	0.005	0.258	0.035	2.059	0.228	0.003	0.000	241.75	28.10	0.005	0.001	0.011	0.001
Tioga	433	0.70	1.00	0.31	0.43	2.169	0.171	0.048	0.007	0.047	0.006	0.258	0.029	2.059	0.130	0.003	0.000	241.75	16.06	0.005	0.001	0.011	0.001
Grand Total	866	0.70	1.00	0.31	0.43	4.337	0.385	0.096	0.011	0.093	0.011	0.516	0.064	4.118	0.359	0.005	0.000	483.51	44.16	0.010	0.001	0.022	0.002

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Ships

Transit Emissions (tons)

Ship Type	Engine Type	Emission Tier	ROG Main	ROG Aux	ROG Boiler	CO Main	CO Aux	CO Boiler	SOx Main	SOx Aux	SOx Boiler	CO2 Main	CO2 Aux	CO2 Boiler	CH4 Main	CH4 Aux	CH4 Boiler	N2O Main	N2O Aux	N2O Boiler
AUTO CARRIER	SSD	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BULK CARRIER	MSD	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SSD	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		2	0.054	0.002	-	0.076	0.004	-	0.025	0.001	-	40.48	2.57	-	0.005	0.000	-	0.001	0.000	-
BULK CARRIER, HL	MSD	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CONTAINER SHIP	SSD	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GENERAL CARGO	MSD	0	0.021	0.001	-	0.035	0.002	-	0.013	0.001	-	20.68	1.55	-	0.003	0.000	-	0.001	0.000	-
		1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SSD	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		2	0.013	0.000	-	0.018	0.001	-	0.006	0.000	-	9.73	0.56	-	0.001	0.000	-	0.000	0.000	-
Grand Total			0.087	0.004	-	0.129	0.007	-	0.044	0.003	-	70.89	4.68	-	0.009	0.001	-	0.002	0.000	-

Ship Type	Engine Type	Emission Tier	VSR - Arrival Comp (%)	VSR - Arrival Distance (nm)	VSR - Arrival Speed (kts) Comp	VSR - Arrival Speed (kts) NC	VSR - Arrival Main Load Factor Comp	VSR - Arrival Main Load Factor NC	VSR - Departure Comp (%)	VSR - Departure Distance (nm)	VSR - Departure Speed (kts) Comp	VSR - Departure Speed (kts) NC	VSR - Departure Main Load Factor Comp	VSR - Departure Main Load Factor NC
AUTO CARRIER	SSD	1	90%	35.30	12.00	16.06	0.18	0.43	90%	20.00	12.00	15.24	0.18	0.36
BULK CARRIER	MSD	1	90%	30.20	11.00	13.60	0.24	0.45	90%	20.00	11.20	13.60	0.25	0.45
	SSD	0	100%	30.20	10.70	14.60	0.32	0.82	100%	20.00	12.45	14.60	0.51	0.82
		1	90%	33.94	11.13	13.10	0.28	0.46	90%	20.00	11.90	13.07	0.34	0.45
		2	100%	11.50	11.05	15.00	0.33	0.82	100%	20.00	12.50	15.00	0.48	0.82
BULK CARRIER, HL	MSD	0	100%	5.75	9.45	13.00	0.32	0.82	100%	20.00	9.45	13.00	0.32	0.82
CONTAINER SHIP	SSD	2	90%	11.92	11.64	14.78	0.18	0.36	90%	12.16	11.93	16.06	0.19	0.46
GENERAL CARGO	MSD	0	100%	11.50	10.10	13.00	0.39	0.82	100%	20.00	10.10	13.00	0.39	0.82
		1	90%	35.98	12.57	13.20	0.45	0.52	90%	20.00	12.20	15.10	0.41	0.78
	SSD	0	100%	23.97	12.07	15.23	0.41	0.82	100%	20.00	12.30	15.23	0.43	0.82
		1	91%	26.95	11.77	13.10	0.27	0.38	90%	20.00	11.86	15.23	0.28	0.59
		2	100%	40.00	10.95	14.90	0.33	0.82	100%	20.00	11.00	14.90	0.33	0.82
Grand Total			91%	20.82	11.62	14.42	0.24	0.44	91%	16.22	11.85	15.38	0.25	0.54

Harborcraft

Tug/Barge	Calls	Hours	SOx Tug	SOx Barge	CO2 Tug	CO2 Barge	CH4 Tug	CH4 Barge	N2O Tug	N2O Barge
Robyn J (Barge Jake J)	4	16.4	0.000	0.000	0.11	1.38	0.000	0.000	0.000	0.000
Robyn J (Barge Payton J)	95	16.4	0.000	0.000	2.54	35.17	0.000	0.001	0.000	0.002
Robyn J (Barge Tori J)	17	16.4	0.000	0.000	0.45	6.94	0.000	0.000	0.000	0.000
Grand Total	116	16.4	0.000	0.000	3.10	43.49	0.000	0.001	0.000	0.002

Assist Tugs

Tug	Calls	Hours p Main
Scout	433	0.70
Tioga	433	0.70
Grand Total	866	0.70

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Ships

Ship Type	Engine Type	Emission Tier	Time (hrs)	Aux	NC Boiler Load (kW)	NOx	NOx	NOx	DPM	DPM	DPM	PM2.5	PM2.5	PM2.5	ROG	ROG	ROG
						VSR Emissions (tons)											
						Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler
AUTO CARRIER	SSD	1	4.50	0.15	351	11.345	1.756	0.221	0.191	0.035	0.015	0.176	0.033	0.014	0.630	0.074	0.012
BULK CARRIER	MSD	1	4.45	0.17	-	2.032	0.461	-	0.043	0.009	-	0.040	0.009	-	0.113	0.019	-
	SSD	0	4.43	0.17	-	3.701	0.375	-	0.054	0.007	-	0.050	0.006	-	0.170	0.014	-
		1	4.67	0.17	-	8.967	0.830	-	0.148	0.017	-	0.137	0.015	-	0.463	0.035	-
		2	2.64	0.17	-	1.962	0.164	-	0.039	0.004	-	0.036	0.004	-	0.121	0.009	-
BULK CARRIER, HL	MSD	0	2.72	0.17	-	1.222	0.235	-	0.023	0.004	-	0.021	0.004	-	0.060	0.009	-
CONTAINER SHIP	SSD	2	1.99	0.13	325	9.891	2.883	0.118	0.199	0.073	0.008	0.183	0.067	0.007	0.674	0.151	0.007
GENERAL CARGO	MSD	0	3.12	0.17	-	0.904	0.143	-	0.017	0.003	-	0.016	0.002	-	0.045	0.005	-
		1	4.46	0.17	-	7.179	1.054	-	0.153	0.021	-	0.141	0.020	-	0.399	0.044	-
	SSD	0	3.61	0.17	-	5.793	0.529	-	0.085	0.010	-	0.078	0.009	-	0.266	0.020	-
		1	3.92	0.17	-	21.559	2.419	-	0.357	0.049	-	0.328	0.045	-	1.114	0.101	-
		2	5.47	0.17	-	3.227	0.312	-	0.064	0.008	-	0.059	0.007	-	0.200	0.016	-
Grand Total			3.10	0.15	196	77.782	11.161	0.339	1.375	0.239	0.023	1.265	0.220	0.021	4.253	0.498	0.019
						249.725			5.724			5.266			14.181		

Ship Type	Engine Type	Emission Tier	CO	CO	CO	SOx	SOx	SOx	CO2	CO2	CO2	CH4	CH4	CH4	N2O	N2O	N2O
			Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler	Main	Aux	Boiler
AUTO CARRIER	SSD	1	0.888	0.156	0.022	0.273	0.057	0.064	445.41	97.74	102.03	0.056	0.011	0.004	0.014	0.003	0.001
BULK CARRIER	MSD	1	0.191	0.041	-	0.069	0.015	-	112.00	25.64	-	0.014	0.003	-	0.003	0.001	-
	SSD	0	0.239	0.030	-	0.078	0.011	-	128.01	18.64	-	0.015	0.002	-	0.004	0.000	-
		1	0.653	0.074	-	0.214	0.027	-	349.16	46.17	-	0.042	0.005	-	0.011	0.001	-
		2	0.171	0.018	-	0.056	0.007	-	91.56	11.44	-	0.011	0.001	-	0.003	0.000	-
BULK CARRIER, HL	MSD	0	0.102	0.019	-	0.037	0.007	-	59.72	11.68	-	0.007	0.001	-	0.002	0.000	-
CONTAINER SHIP	SSD	2	0.943	0.320	0.012	0.285	0.116	0.034	463.43	200.94	54.62	0.060	0.023	0.002	0.014	0.005	0.001
GENERAL CARGO	MSD	0	0.075	0.011	-	0.027	0.004	-	44.18	7.08	-	0.005	0.001	-	0.001	0.000	-
		1	0.675	0.094	-	0.245	0.034	-	395.78	58.65	-	0.049	0.007	-	0.011	0.002	-
	SSD	0	0.375	0.042	-	0.123	0.015	-	200.38	26.27	-	0.024	0.003	-	0.006	0.001	-
		1	1.571	0.215	-	0.514	0.078	-	839.53	134.59	-	0.100	0.016	-	0.026	0.004	-
		2	0.282	0.035	-	0.092	0.013	-	150.57	21.73	-	0.018	0.003	-	0.005	0.001	-
Grand Total			6.165	1.053	0.034	2.014	0.383	0.099	3,279.73	660.57	156.65	0.402	0.077	0.005	0.099	0.017	0.002
									4,173								

Harborcraft

Tug/Barge	Calls	Hours
Robyn J (Barge Jake J)	4	16.4
Robyn J (Barge Payton J)	95	16.4
Robyn J (Barge Tori J)	17	16.4
Grand Total	116	16.4

Assist Tugs

Tug	Calls	Hours p Main
Scout	433	0.70
Tioga	433	0.70
Grand Total	866	0.70

STC 2035 - VSR Beyond CAP

Reduction

Ships

Ship Type	Engine Type	Emission Tier	Speed (kts)	Maneuvering Time (hrs)	Load Factors Main	Load Factors Aux	Boiler Load (kW)	NOx Main	NOx Aux	NOx Boiler	DPM Main	DPM Aux	DPM Boiler	PM2.5 Main	PM2.5 Aux	PM2.5 Boiler
								NOx	NOx	NOx	DPM	DPM	DPM	PM2.5	PM2.5	PM2.5
AUTO CARRIER	SSD	1	7.00	2.41	0.04	0.45	351	2.390	2.828	0.129	0.055	0.057	0.009	0.051	0.052	0.008
BULK CARRIER	MSD	1	7.00	2.41	0.06	0.45	135	0.469	0.662	0.011	0.011	0.013	0.001	0.010	0.012	0.001
	SSD	0	7.00	2.41	0.09	0.45	132	0.594	0.542	0.010	0.010	0.010	0.001	0.009	0.009	0.001
		1	7.00	2.41	0.07	0.45	132	1.483	1.136	0.024	0.030	0.023	0.002	0.028	0.021	0.001
		2	7.00	2.41	0.08	0.45	132	0.484	0.397	0.010	0.011	0.010	0.001	0.011	0.009	0.001
BULK CARRIER, HL	MSD	0	7.00	2.41	0.13	0.45	132	0.489	0.492	0.012	0.010	0.010	0.001	0.009	0.009	0.001
CONTAINER SHIP	SSD	2	7.00	2.41	0.04	0.50	325	4.929	13.421	0.155	0.137	0.339	0.010	0.126	0.312	0.010
GENERAL CARGO	MSD	0	7.00	2.41	0.13	0.45	132	0.229	0.261	0.006	0.005	0.005	0.000	0.005	0.005	0.000
		1	7.00	2.41	0.08	0.45	135	0.904	1.511	0.031	0.023	0.030	0.002	0.021	0.028	0.002
	SSD	0	7.00	2.41	0.08	0.45	135	0.994	0.835	0.016	0.017	0.017	0.001	0.016	0.015	0.001
		1	7.00	2.41	0.06	0.45	135	4.194	3.945	0.065	0.089	0.080	0.004	0.081	0.073	0.004
		2	7.00	2.41	0.09	0.45	135	0.470	0.456	0.011	0.011	0.009	0.001	0.010	0.008	0.001
Grand Total			7.00	2.41	0.05	0.47	251	17.630	26.487	0.479	0.410	0.603	0.032	0.378	0.555	0.029

Maneuvering Emissions (tons)

Ship Type	Engine Type	Emission Tier	ROG Main	ROG Aux	ROG Boiler	CO Main	CO Aux	CO Boiler	SOx Main	SOx Aux	SOx Boiler	CO2 Main	CO2 Aux	CO2 Boiler	CH4 Main	CH4 Aux	CH4 Boiler	N2O Main	N2O Aux
			ROG	ROG	ROG	CO	CO	CO	SOx	SOx	SOx	CO2	CO2	CO2	CH4	CH4	CH4	N2O	N2O
AUTO CARRIER	SSD	1	0.431	0.119	0.007	0.383	0.251	0.013	0.053	0.091	0.037	84.66	157.36	59.39	0.039	0.018	0.002	0.003	0.004
BULK CARRIER	MSD	1	0.063	0.028	0.001	0.079	0.059	0.001	0.014	0.021	0.003	22.77	36.85	4.97	0.008	0.004	0.000	0.001	0.001
	SSD	0	0.054	0.020	0.001	0.066	0.043	0.001	0.013	0.016	0.003	21.18	26.90	4.53	0.005	0.003	0.000	0.001	0.001
		1	0.186	0.048	0.001	0.208	0.101	0.002	0.036	0.037	0.007	58.55	63.20	11.01	0.017	0.007	0.000	0.002	0.002
		2	0.066	0.021	0.001	0.077	0.044	0.001	0.014	0.016	0.003	23.10	27.68	4.53	0.006	0.003	0.000	0.001	0.001
BULK CARRIER, HL	MSD	0	0.035	0.021	0.001	0.056	0.044	0.001	0.015	0.016	0.003	24.52	27.39	5.50	0.004	0.003	0.000	0.001	0.001
CONTAINER SHIP	SSD	2	1.064	0.705	0.009	0.946	1.491	0.016	0.131	0.542	0.045	209.20	935.39	71.73	0.096	0.108	0.002	0.007	0.024
GENERAL CARGO	MSD	0	0.022	0.011	0.000	0.030	0.023	0.001	0.007	0.008	0.002	11.83	14.50	2.91	0.002	0.002	0.000	0.000	0.000
		1	0.132	0.063	0.002	0.154	0.134	0.003	0.029	0.049	0.009	46.45	84.10	14.24	0.012	0.010	0.000	0.001	0.002
	SSD	0	0.100	0.035	0.001	0.117	0.074	0.002	0.022	0.027	0.005	35.14	46.48	7.28	0.009	0.005	0.000	0.001	0.001
		1	0.589	0.165	0.004	0.621	0.350	0.007	0.101	0.127	0.019	162.29	219.54	30.13	0.053	0.025	0.001	0.005	0.006
		2	0.058	0.019	0.001	0.070	0.040	0.001	0.014	0.015	0.003	22.64	25.38	4.97	0.005	0.003	0.000	0.001	0.001
Grand Total			2.798	1.255	0.026	2.806	2.654	0.048	0.449	0.965	0.139	722.34	1,664.77	221.19	0.254	0.193	0.008	0.023	0.043

Harborcraft

Tug/Barge	Calls	Hours
Robyn J (Barge Jake J)	4	16.4
Robyn J (Barge Payton J)	95	16.4
Robyn J (Barge Tori J)	17	16.4
Grand Total	116	16.4

Assist Tugs

Tug	Calls	Hours p Main
Scout	433	0.70
Tioga	433	0.70
Grand Total	866	0.70

TAMT 2013-2014_VSR_STC
Annual Summary

STC 2035 - VSR Beyond CAP in hoteling time 0%

Ships			N2O					NOx	NOx	DPM	DPM	PM2.5	PM2.5	ROG	ROG	CO	CO	SOx	SOx	CO2	CO2	CH4	CH4	N2O	N2O	
				Hotel	**Aux**	**Hotelling**		**Hotelling Emissions (tons)**																		
	Engine	**Emission**		**Time**	**Time**	**Auxiliary**	**Boiler**	**NOx**		**DPM**		**PM2.5**		**ROG**		**CO**		**SOx**		**CO2**		**CH4**		**N2O**		**Cold Iron**
Ship Type	**Type**	**Tier**	**Boiler**	**(hr)**	**(hr)**	**LF**	**Load (kW)**	**Aux**	**Boiler**	**Aux**	**Boiler**	**Aux**	**Boiler**	**Aux**	**Boiler**	**Aux**	**Boiler**	**Aux**	**Boiler**	**Aux**	**Boiler**	**Aux**	**Boiler**	**Aux**	**Boiler**	**CO2e**
AUTO CARRIER	SSD	1	0.001	27.6	27.6	0.26	351	18.655	1.468	0.376	0.098	0.346	0.090	0.782	0.081	1.655	0.147	0.602	0.427	1,038.08	678.11	0.120	0.024	0.027	0.010	-
BULK CARRIER	MSD	1	0.000	37.9	37.9	0.10	135	2.310	0.169	0.047	0.011	0.043	0.010	0.097	0.009	0.205	0.017	0.075	0.049	128.55	77.96	0.015	0.003	0.003	0.001	
	SSD	0	0.000	28.7	28.7	0.10	132	1.433	0.117	0.026	0.008	0.024	0.007	0.054	0.006	0.113	0.012	0.041	0.034	71.16	53.95	0.008	0.002	0.002	0.001	-
		1	0.000	37.8	37.8	0.10	132	3.948	0.373	0.080	0.025	0.073	0.023	0.166	0.021	0.350	0.037	0.127	0.108	219.70	172.17	0.025	0.006	0.006	0.002	-
		2	0.000	85.1	85.1	0.10	132	3.109	0.346	0.079	0.023	0.072	0.021	0.163	0.019	0.345	0.035	0.126	0.100	216.69	159.67	0.025	0.006	0.006	0.002	-
BULK CARRIER, HL	MSD	0	0.000	114.0	114.0	0.10	132	5.791	0.563	0.104	0.038	0.096	0.035	0.217	0.031	0.458	0.056	0.167	0.164	287.47	259.89	0.033	0.009	0.007	0.004	-
CONTAINER SHIP	SSD	2	0.001	88.9	8.2	0.35	325	31.401	5.718	0.793	0.381	0.730	0.351	1.649	0.315	3.489	0.573	1.269	1.662	2,188.56	2,640.97	0.254	0.092	0.057	0.037	15,312
GENERAL CARGO	MSD	0	0.000	123.0	123.0	0.10	132	2.951	0.321	0.059	0.021	0.055	0.020	0.124	0.018	0.262	0.032	0.095	0.093	164.18	148.43	0.019	0.005	0.004	0.002	
		1	0.000	62.5	62.5	0.10	135	8.695	0.798	0.175	0.053	0.161	0.049	0.365	0.044	0.771	0.080	0.280	0.232	483.81	368.55	0.056	0.013	0.013	0.005	-
	SSD	0	0.000	86.3	86.3	0.10	135	7.442	0.564	0.134	0.038	0.123	0.035	0.278	0.031	0.589	0.057	0.214	0.164	369.41	260.50	0.043	0.009	0.010	0.004	-
		1	0.000	45.5	45.5	0.10	135	16.516	1.229	0.333	0.082	0.306	0.075	0.693	0.068	1.465	0.123	0.533	0.357	919.02	567.51	0.107	0.020	0.024	0.008	-
		2	0.000	50.9	50.9	0.10	135	1.705	0.227	0.043	0.015	0.040	0.014	0.090	0.012	0.189	0.023	0.069	0.066	118.86	104.66	0.014	0.004	0.003	0.001	-
Grand Total			0.003	69.5	30.6	0.24	251	103.956	11.891	2.248	0.793	2.069	0.729	4.677	0.656	9.893	1.192	3.597	3.457	6,205.50	5,492.37	0.719	0.191	0.162	0.077	15,312

Harborcraft

Tug/Barge	**Calls**	**Hours**
Robyn J (Barge Jake J)	4	16.4
Robyn J (Barge Payton J)	95	16.4
Robyn J (Barge Tori J)	17	16.4
Grand Total	116	16.4

Assist Tugs

		Hours p
Tug	**Calls**	**Main**
Scout	433	0.70
Tioga	433	0.70
Grand Total	866	0.70

STC 2035 - AMECS 0%

Ships						Mitigated, with AMECS				NOx	NOx	DPM	DPM	PM2.5	PM2.5	ROG	ROG	CO	CO	SOx	SOx	CO2	CO2	CH4	CH4	N2O	N2O
						Hotel	Aux	Hotelling		Hotelling Emissions (lbs)																	
	Engine	Emission		Power (kW)		Time	Time	Auxiliary	Boiler	NOx		DPM		PM2.5		ROG		CO		SOx		CO2		CH4		N2O	
Ship Type	Type	Tier	Calls	Main	Aux	(hr)	(hr)	LF	Load (kW)	Aux	Boiler	Aux	Boiler	Aux	Boiler	Aux	Boiler	Aux	Boiler	Aux	Boiler	Aux	Boiler	Aux	Boiler	Aux	Boiler
AUTO CARRIER	SSD	1	0.00	11,060	2,760	24.0	24.0	0.26	351	159.08	16.67	3.16	1.11	2.90	1.02	6.71	0.92	18.79	1.67	5.03	4.85	12,348.35	7,699.93	1.03	0.27	0.23	0.11
BULK CARRIER	MSD	1	0.00	9,100	2,973	24.0	24.0	0.10	135	11.20	1.10	0.22	0.07	0.21	0.07	0.50	0.06	1.34	0.11	0.35	0.32	961.94	507.98	0.08	0.02	0.02	0.01
	SSD	0	0.00	8,139	2,325	24.0	24.0	0.10	132	9.82	1.08	0.17	0.07	0.16	0.07	0.39	0.06	1.04	0.11	0.28	0.31	752.27	496.69	0.06	0.02	0.01	0.01
		1	0.00	10,705	2,250	24.0	24.0	0.10	132	21.18	2.69	0.42	0.18	0.39	0.16	0.94	0.15	2.53	0.27	0.67	0.78	1,819.69	1,241.73	0.14	0.04	0.03	0.02
		2	0.00	9,140	2,393	24.0	24.0	0.10	132	7.19	1.08	0.18	0.07	0.17	0.07	0.40	0.06	1.07	0.11	0.28	0.31	774.11	496.69	0.06	0.02	0.01	0.01
BULK CARRIER, HL	MSD	0	0.00	5,738	1,950	24.0	24.0	0.10	132	12.35	1.61	0.22	0.11	0.20	0.10	0.49	0.09	1.31	0.16	0.35	0.47	946.41	745.04	0.08	0.03	0.02	0.01
CONTAINER SHIP	SSD	2	0.00	19,420	11,320	24.0	8.2	0.35	325	1,346.33	66.19	34.00	4.41	31.28	4.06	70.72	3.65	149.59	6.64	54.40	19.24	93,835.20	30,572.85	10.88	1.06	2.45	0.43
GENERAL CARGO	MSD	0	0.00	5,738	1,950	24.0	24.0	0.10	132	3.67	0.54	0.07	0.04	0.07	0.03	0.16	0.03	0.44	0.05	0.12	0.16	311.18	248.35	0.02	0.01	0.01	0.00
		1	0.00	6,400	2,367	24.0	24.0	0.10	135	31.17	3.85	0.62	0.26	0.57	0.24	1.37	0.21	3.72	0.39	0.98	1.12	2,643.88	1,777.93	0.21	0.06	0.05	0.03
	SSD	0	0.00	9,268	2,557	24.0	24.0	0.10	135	16.18	1.65	0.29	0.11	0.26	0.10	0.64	0.09	1.72	0.17	0.45	0.48	1,223.99	761.97	0.10	0.03	0.02	0.01
		1	0.00	12,430	2,920	24.0	24.0	0.10	135	82.39	8.25	1.64	0.55	1.51	0.51	3.63	0.45	9.84	0.83	2.60	2.40	6,988.81	3,809.85	0.56	0.13	0.12	0.05
		2	0.00	8,630	2,048	24.0	24.0	0.10	135	6.15	1.10	0.15	0.07	0.14	0.07	0.34	0.06	0.92	0.11	0.24	0.32	653.49	507.98	0.05	0.02	0.01	0.01
Grand Total			0.00	#DIV/0!	#DIV/0!	24.0	16.4	0.24	251	1,706.71	105.79	41.14	7.05	37.86	6.49	86.29	5.83	192.31	10.61	65.75	30.76	123,259	48,867	13.275	1.697	2.970	0.689

AUTO CARRIER	*5*	25%	100%	22%	100%	22%	100%	27%	100%	100%	100%	21%	100%	114%	100%	27%	100%	25%	100%
BULK CARRIER	*6*	23%	100%	20%	100%	21%	100%	36%	100%	100%	100%	18%	100%	145%	100%	36%	100%	23%	100%
BULK CARRIER	*6*	23%	100%	20%	100%	21%	100%	36%	100%	100%	100%	18%	100%	145%	100%	36%	100%	23%	100%
BULK CARRIER	*6*	23%	100%	20%	100%	21%	100%	36%	100%	100%	100%	18%	100%	145%	100%	36%	100%	23%	100%
BULK CARRIER	*6*	23%	100%	20%	100%	21%	100%	36%	100%	100%	100%	18%	100%	145%	100%	36%	100%	23%	100%
BULK CARRIER, HL	*6*	23%	100%	20%	100%	21%	100%	36%	100%	100%	100%	18%	100%	145%	100%	36%	100%	23%	100%
CONTAINER SHIP	*7*	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
GENERAL CARGO	*8*	23%	100%	20%	100%	20%	100%	34%	100%	100%	100%	18%	100%	140%	100%	34%	100%	23%	100%
GENERAL CARGO	*8*	23%	100%	20%	100%	20%	100%	34%	100%	100%	100%	18%	100%	140%	100%	34%	100%	23%	100%
GENERAL CARGO	*8*	23%	100%	20%	100%	20%	100%	34%	100%	100%	100%	18%	100%	140%	100%	34%	100%	23%	100%
GENERAL CARGO	*8*	23%	100%	20%	100%	20%	100%	34%	100%	100%	100%	18%	100%	140%	100%	34%	100%	23%	100%
GENERAL CARGO	*8*	23%	100%	20%	100%	20%	100%	34%	100%	100%	100%	18%	100%	140%	100%	34%	100%	23%	100%

Sp 80%

STC - 2035 - with AEMCS

0%

Ships — **Mitigated, with AMECS**

Ship Type	Engine Type	Emission Tier	Calls	Power (kW) Main	Power (kW) Aux	Hotel Time (hr)	Aux Time (hr)	Hotelling Auxiliary LF	Hotelling Boiler Load (kW)	NOx Aux	NOx Boiler	DPM Aux	DPM Boiler	PM2.5 Aux	PM2.5 Boiler	ROG Aux	ROG Boiler	CO Aux	CO Boiler	SOx Aux	SOx Boiler	CO2 Aux	CO2 Boiler	CH4 Aux	CH4 Boiler	N2O Aux	N2O Boiler
										NOx	NOx	DPM	DPM	PM2.5	PM2.5	ROG	ROG	CO	CO	SOx	SOx	CO2	CO2	CH4	CH4	N2O	N2O
										Hotelling Emissions (tons)																	
AUTO CARRIER	SSD	1	69	11,060	2,760	27.6	27.6	0.26	351	11.34	1.468	0.22	0.098	0.20	0.090	0.48	0.081	1.655	0.147	0.35	0.427	1,115.87	678.110	0.07	0.024	0.02	0.010
BULK CARRIER	MSD	1	15	9,100	2,973	37.9	37.9	0.10	135	1.38	0.169	0.03	0.011	0.02	0.010	0.06	0.009	0.205	0.017	0.04	0.049	158.58	77.957	0.01	0.003	0.00	0.001
	SSD	0	14	8,139	2,325	28.7	28.7	0.10	132	0.86	0.117	0.02	0.008	0.01	0.007	0.04	0.006	0.113	0.012	0.02	0.034	87.78	53.952	0.01	0.002	0.00	0.001
		1	34	10,705	2,250	37.8	37.8	0.10	132	2.36	0.373	0.05	0.025	0.04	0.023	0.11	0.021	0.350	0.037	0.07	0.108	271.03	172.169	0.02	0.006	0.00	0.002
		2	14	9,140	2,393	85.1	85.1	0.10	132	1.85	0.346	0.05	0.023	0.04	0.021	0.11	0.019	0.345	0.035	0.07	0.100	267.32	159.666	0.02	0.006	0.00	0.002
BULK CARRIER, HL	MSD	0	17	5,738	1,950	114.0	114.0	0.10	132	3.46	0.563	0.06	0.038	0.06	0.035	0.14	0.031	0.458	0.056	0.09	0.164	354.64	259.886	0.02	0.009	0.00	0.004
CONTAINER SHIP	SSD	2	90	19,420	11,320	88.9	8.2	0.35	325	31.40	5.718	0.79	0.381	0.73	0.351	1.65	0.315	3.489	0.573	1.27	1.662	2,188.56	2,640.973	0.25	0.092	0.06	0.037
GENERAL CARGO	MSD	0	9	5,738	1,950	123.0	123.0	0.10	132	1.76	0.321	0.03	0.021	0.03	0.020	0.08	0.018	0.262	0.032	0.05	0.093	198.51	148.427	0.01	0.005	0.00	0.002
		1	43	6,400	2,367	62.5	62.5	0.10	135	5.18	0.798	0.10	0.053	0.09	0.049	0.24	0.044	0.771	0.080	0.16	0.232	584.97	368.551	0.04	0.013	0.01	0.005
	SSD	0	22	9,268	2,557	86.3	86.3	0.10	135	4.43	0.564	0.08	0.038	0.07	0.035	0.18	0.031	0.589	0.057	0.12	0.164	446.64	260.502	0.03	0.009	0.01	0.004
		1	91	12,430	2,920	45.5	45.5	0.10	135	9.84	1.229	0.19	0.082	0.18	0.075	0.45	0.068	1.465	0.123	0.30	0.357	1,111.16	567.514	0.07	0.020	0.01	0.008
		2	15	8,630	2,048	50.9	50.9	0.10	135	1.02	0.227	0.02	0.015	0.02	0.014	0.06	0.012	0.189	0.023	0.04	0.066	143.71	104.663	0.01	0.004	0.00	0.001
Grand Total			433	14,524	6,799	69.493	30.6	0.24	251	74.859	11.891	1.641	0.793	1.511	0.729	3.609	0.656	9.893	1.192	2.603	3.457	6,928.77	5,492.37	0.555	0.191	0.120	0.077

Multipliers			NOx Aux	NOx Boiler	DPM Aux	DPM Boiler	PM2.5 Aux	PM2.5 Boiler	ROG Aux	ROG Boiler	CO Aux	CO Boiler	SOx Aux	SOx Boiler	CO2 Aux	CO2 Boiler	CH4 Aux	CH4 Boiler	N2O Aux	N2O Boiler
	AUTO CARRIER	*5*	25%	100%	22%	100%	22%	100%	27%	100%	100%	100%	21%	100%	114%	100%	27%	100%	25%	100%
	BULK CARRIER	*6*	23%	100%	20%	100%	21%	100%	36%	100%	100%	100%	18%	100%	145%	100%	36%	100%	23%	100%
	BULK CARRIER	*6*	23%	100%	20%	100%	21%	100%	36%	100%	100%	100%	18%	100%	145%	100%	36%	100%	23%	100%
	BULK CARRIER	*6*	23%	100%	20%	100%	21%	100%	36%	100%	100%	100%	18%	100%	145%	100%	36%	100%	23%	100%
	BULK CARRIER	*6*	23%	100%	20%	100%	21%	100%	36%	100%	100%	100%	18%	100%	145%	100%	36%	100%	23%	100%
	BULK CARRIER, HL	*6*	23%	100%	20%	100%	21%	100%	36%	100%	100%	100%	18%	100%	145%	100%	36%	100%	23%	100%
	CONTAINER SHIP	*6*	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
	GENERAL CARGO	*8*	23%	100%	20%	100%	20%	100%	34%	100%	100%	100%	18%	100%	140%	100%	34%	100%	23%	100%
	GENERAL CARGO	*8*	23%	100%	20%	100%	20%	100%	34%	100%	100%	100%	18%	100%	140%	100%	34%	100%	23%	100%
	GENERAL CARGO	*8*	23%	100%	20%	100%	20%	100%	34%	100%	100%	100%	18%	100%	140%	100%	34%	100%	23%	100%
	GENERAL CARGO	*8*	23%	100%	20%	100%	20%	100%	34%	100%	100%	100%	18%	100%	140%	100%	34%	100%	23%	100%
	GENERAL CARGO	*8*	23%	100%	20%	100%	20%	100%	34%	100%	100%	100%	18%	100%	140%	100%	34%	100%	23%	100%

Emission Factors

Tier 0 Emission Factors (g/kWh)

Engine	NOx	DPM	PM2.5	ROG	CO	SOx	CO2	CH4	N2O
SSD	17.0	0.25	0.23	0.78	1.10	0.36	588	0.07	0.018
MSD	13.2	0.25	0.23	0.65	1.10	0.40	645	0.08	0.018
Auxiliary	13.9	0.25	0.23	0.52	1.10	0.40	690	0.08	0.018
Boiler	1.995	0.133	0.122	0.11	0.2	0.58	921.5	0.032	0.013

From Table II-6, 11-8, and II-9 ARB 2011
California Air Resources Board, *Emissions Estimation Methodology for Ocean-Going Vessels*, May 2011
http://www.arb.ca.gov/regact/2011/ogv11/ogv11appd.pdf

Higher Tier NOX Emission Factors

Engine	1	2	3
SSD	15.1	12.6	3.0
MSD	11.7	9.2	2.3
Auxiliary	12.4	9.9	2.5

From EPA C3 RIA
U.S. Environmental Protection Agency, *Regulatory Impact Analysis: Control of Emissions of Air Pollution from Category 3 Marine Diesel Engines,* EPA Report EPA-420-R-09-019, December 2009.
http://www.epa.gov/otaq/regs/nonroad/marine/ci/420r09019.pdf

Low Load Adjustment Factors (multiplied by emission factors)

Load	NOx	DPM	PM2.5	ROG	CO	SOx	CO2	CH4	N2O
2%	4.63	7.29	7.29	21.18	9.68	3.36	3.28	21.18	4.63
3%	2.92	4.33	4.33	11.68	6.46	2.49	2.44	11.68	2.92
4%	2.21	3.09	3.09	7.71	4.86	2.05	2.01	7.71	2.21
5%	1.83	2.44	2.44	5.61	3.89	1.79	1.76	5.61	1.83
6%	1.60	2.04	2.04	4.35	3.25	1.61	1.59	4.35	1.60
7%	1.45	1.79	1.79	3.52	2.79	1.49	1.47	3.52	1.45
8%	1.35	1.61	1.61	2.95	2.45	1.39	1.38	2.95	1.35
9%	1.27	1.48	1.48	2.52	2.18	1.32	1.31	2.52	1.27
10%	1.22	1.38	1.38	2.20	1.96	1.26	1.25	2.20	1.22
11%	1.17	1.30	1.30	1.96	1.79	1.21	1.21	1.96	1.17
12%	1.14	1.24	1.24	1.76	1.64	1.18	1.17	1.76	1.14
13%	1.11	1.19	1.19	1.60	1.52	1.14	1.14	1.60	1.11
14%	1.08	1.15	1.15	1.47	1.41	1.11	1.11	1.47	1.08
15%	1.06	1.11	1.11	1.36	1.32	1.09	1.08	1.36	1.06
16%	1.05	1.08	1.08	1.26	1.24	1.07	1.06	1.26	1.05
17%	1.03	1.06	1.06	1.18	1.17	1.05	1.04	1.18	1.03
18%	1.02	1.04	1.04	1.11	1.11	1.03	1.03	1.11	1.02
19%	1.01	1.02	1.02	1.05	1.05	1.01	1.01	1.05	1.01
20%	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Auxiliary Engine Load Factors

	Transit	Maneuver	Hotel	
				From Table II-5 ARB 2011
Auto	0.15	0.45	0.26	
Bulk	0.17	0.45	0.10	
Bulk, HL	0.17	0.45	0.10	
Container	0.13	0.50	0.35	Hotel load for container sh
General	0.17	0.45	0.10	
Reefer	0.15	0.45	0.32	

Service Speed/Maximum Speed 0.937

One way Distances

South	11.5 nm	
West	35.3 nm	
North	48.9 nm	
Maneuver	6.7 nm	From Google Earth

Speeds

Maneuver	7 kts
Transit	From VSR report

Berthing time per call 0.5 hrs

Boiler Loads (kW)

	Transit	Maneuver	Hotel	
Auto	351	351	351	
Bulk	132	132	132	Transit only applied if LF le
Bulk, HL	132	132	132	
Container	241	241	241	0 - 1000 TEU
Container	325	325	325	1000 - 2000 TEU
Container	474	474	474	2000 - 3000 TEU
General	135	135	135	

Transit only applied if LF less than 20%
From 2014 Port of Long Beach Inventory
Starcrest Consulting Group, *Port of Long Beach Air Emissions Inventory -- 201*
http://www.polb.com/civica/filebank/blobdload.asp?BlobID=13033

Cold Ironing CO2e Emission Rate

2013/14 average	700	lbs CO2e/MWh
2010 RPS (20%)	745	lbs CO2e/MWh
2020 RPS (33%)	654	lbs CO2e/MWh
2030 RPS (50%)	488	lbs CO2e/MWh

Tug and Barge Emission Factor Calculations

Taken from 2013 Port of Long Beach Inventory

Zero Hour Tug Emission Factors (g/kWh)

Tug	Engine	NOx	DPM	PM2.5	ROG	CO	SOx	CO2	CH4	N2O
Robyn J	Propulsion	7.41	0.27	0.26	0.91	5.00	0.17	652	0.018	0.031
	Auxiliary	7.13	0.29	0.28	1.58	5	0.17	652	0.032	0.031
Scout	Propulsion	5.86	0.13	0.13	0.91	5.00	0.17	652	0.018	0.031
	Auxiliary	5.09	0.12	0.12	1.09	5	0.17	652	0.022	0.031
Tioga	Propulsion	5.86	0.13	0.13	0.91	5.00	0.17	652	0.018	0.031
	Auxiliary	7.13	0.29	0.28	1.58	5	0.17	652	0.032	0.031

Zero Hour Barge Emission Factors (g/kWh)

Barge	NOx	DPM	PM2.5	ROG	CO	SOx	CO2	CH4	N2O
Payton J	7.13	0.40	0.39	1.58	5.00	0.17	652.00	0.031	0.032
Jake J	7.13	0.40	0.39	1.58	5.00	0.17	652.00	0.031	0.032
Tori J	7.13	0.40	0.39	1.58	5.00	0.17	652.00	0.031	0.032

Harborcraft ULSD Correction Factors

Years	NOx	DPM	PM2.5	ROG	CO	SOx	CO2	CH4	N2O
Pre-1995	0.930	0.720	0.720	0.720	1.000	0.043	1.000	0.720	0.930
1996-2010	0.948	0.800	0.800	0.720	1.000	0.043	1.000	0.720	0.948
2011 +	0.948	0.852	0.852	0.720	1.000	0.043	1.000	0.720	0.948

ULSD Tug Emission Factors (g/kWh)

Tug	Engine	NOx	DPM	PM2.5	ROG	CO	SOx	CO2	CH4	N2O
Robyn J	Propulsion	7.02	0.22	0.21	0.66	5.00	0.01	652	0.013	0.029
	Auxiliary	6.76	0.23	0.23	1.14	5.00	0.01	652	0.023	0.029
Scout	Propulsion	5.56	0.11	0.11	0.66	5.00	0.01	652	0.013	0.029
	Auxiliary	4.83	0.10	0.10	0.78	5.00	0.01	652	0.016	0.029
Tioga	Propulsion	5.56	0.11	0.11	0.66	5.00	0.01	652	0.013	0.029
	Auxiliary	6.76	0.25	0.24	1.14	5.00	0.01	652	0.023	0.029

ULSD Barge Emission Factors (g/kWh)

Barge	NOx	DPM	PM2.5	ROG	CO	SOx	CO2	CH4	N2O
Payton J	6.76	0.32	0.31	1.14	5.00	0.01	652	0.022	0.030
Jake J	6.76	0.32	0.31	1.14	5.00	0.01	652	0.022	0.030
Tori J	6.76	0.32	0.31	1.14	5.00	0.01	652	0.022	0.030

Engine	Useful Life	Annual Hours	Det Cap Years
Propulsion	21	2274	5.28
Auxiliary	23	2486	4.83
Pump	21		10.50

Taken from ARB CHC Methodology

Engine Deterioration Factor

KW Range	NOx	PM	CO	ROG
< 186	0.14	0.44	0.28	0.16
> 186	0.21	0.67	0.44	0.25

Fully Deterioriated Tug Emission Factors (g/kWh)

Tug	Engine	NOx	DPM	PM2.5	ROG	CO	SOx	CO2	CH4	N2O	LF
Robyn J	Propulsion	7.40	0.25	0.24	0.70	5.55	0.01	652	0.013	0.029	0.50
	Auxiliary	6.96	0.25	0.25	1.18	5.29	0.01	652	0.023	0.029	0.31
Scout	Propulsion	5.85	0.13	0.13	0.70	5.55	0.01	652	0.013	0.029	0.31
	Auxiliary	4.97	0.11	0.11	0.81	5.29	0.01	652	0.016	0.029	0.43
Tioga	Propulsion	5.85	0.13	0.13	0.70	5.55	0.01	652	0.013	0.029	0.31
	Auxiliary	6.96	0.27	0.26	1.18	5.29	0.01	652	0.023	0.029	0.43

Fully Deterioriated Barge Emission Factors (g/kWh)

Barge	NOx	DPM	PM2.5	ROG	CO	SOx	CO2	CH4	N2O	LF
Payton J	7.23	0.39	0.38	1.23	5.70	0.01	652	0.022	0.030	0.71
Jake J	7.23	0.39	0.38	1.23	5.70	0.01	652	0.022	0.030	0.71
Tori J	7.23	0.39	0.38	1.23	5.70	0.01	652	0.022	0.030	0.71

Baseline Call Information

Trip Ref	Vessel Name	Last Port of Call	Next Port of Call	Arrived	Sailed	Hrs/Min	Berth	Vessel Type	Commodity
14-0025	Dole Ecuador	Puerto Quetzal, Guatemala	Puerto Quetzal, Guatemala	07/14/13 20:00	07/16/13 19:06	47.10	Berth 10-02	Container	Bananas
14-0058	Dole Ecuador	Puerto Quetzal, Guatemala	Puerto Quetzal, Guatemala	8/4/2013 3:12	8/6/2013 17:10	61.97	Berth 10-02	Container	Bananas
14-0085	Dole Ecuador	Puerto Quetzal, Guatemala	Guayaquil, Equador	8/25/2013 0:58	8/27/2013 16:35	63.62	Berth 10-02	Container	Bananas
14-0119	Dole Ecuador	Puerto Quetzal, Guatemala	Puerto Quetzal, Guatemala	9/15/2013 1:00	9/17/2013 17:33	64.55	Berth 10-02	Container	Bananas
14-0161	Dole Ecuador	Puerto Quetzal, Guatemala	Guayaquil, Equador	10/6/2013 3:55	10/8/2013 16:10	60.25	Berth 10-02	Container	Bananas
14-0270	Dole Ecuador	Puerto Quetzal, Guatemala	Puerto Quetzal, Guatemala	12/1/2013 0:57	12/3/2013 18:53	65.93	Berth 10-02	Container	Bananas
14-0312	Dole Ecuador	Puerto Quetzal, Guatemala	Puerto Quetzal, Guatemala	12/22/2013 1:22	12/24/2013 18:00	64.63	Berth 10-02	Container	Bananas
14-0339	Dole Ecuador	Puerto Quetzal, Guatemala	Puerto Quetzal, Guatemala	1/12/2014 16:52	1/14/2014 19:05	50.22	Berth 10-02	Container	Bananas
14-0380	Dole Ecuador	Puerto Quetzal, Guatemala	Puerto Quetzal, Guatemala	2/2/2014 4:32	2/4/2014 17:40	61.13	Berth 10-02	Container	Bananas
14-0412	Dole Ecuador	Puerto Quetzal, Guatemala	Puerto Quetzal, Guatemala	2/23/2014 3:30	2/25/2014 21:30	66.00	Berth 10-02	Container	Bananas
14-0434	Dole Ecuador	Puerto Quetzal, Guatemala	Puerto Quetzal, Guatemala	3/16/2014 6:18	3/18/2014 17:25	59.12	Berth 10-02	Container	Bananas
14-0473	Dole Ecuador	Puerto Quetzal, Guatemala	Puerto Quetzal, Guatemala	4/6/2014 3:20	4/8/2014 18:40	63.33	Berth 10-02	Container	Bananas
14-0511	Dole Ecuador	Puerto Quetzal, Guatemala	Puerto Quetzal, Guatemala	4/26/2014 20:25	4/29/2014 17:56	69.52	Berth 10-02	Container	Bananas
14-0554	Dole Ecuador	Puerto Quetzal, Guatemala	Guayaquil, Equador	5/17/2014 23:50	5/20/2014 16:37	64.78	Berth 10-02	Container	Bananas
14-0599	Dole Ecuador	Puerto Quetzal, Guatemala	Guayaquil, Equador	6/8/2014 6:51	6/10/2014 17:24	58.55	Berth 10-02	Container	Bananas
14-0012	Dole California	Puerto Quetzal, Guatemala	Guayaquil, Equador	07/07/13 03:56	07/09/13 18:35	62.65	Berth 10-02	Container	Bananas
14-0040	Dole California	Puerto Quetzal, Guatemala	Guayaquil, Equador	07/28/13 05:15	07/30/13 18:26	61.18	Berth 10-02	Container	Bananas
14-0074	Dole California	Puerto Quetzal, Guatemala	Puerto Quetzal, Guatemala	8/18/2013 5:05	8/20/2013 16:10	59.08	Berth 10-02	Container	Bananas
14-0108	Dole California	Puerto Quetzal, Guatemala	Puerto Quetzal, Guatemala	9/8/2013 5:22	9/10/2013 16:42	59.33	Berth 10-02	Container	Bananas
14-0148	Dole California	Puerto Quetzal, Guatemala	Guayaquil, Equador	9/29/2013 5:20	10/1/2013 16:38	59.30	Berth 10-02	Container	Bananas
14-0184	Dole California	Puerto Quetzal, Guatemala	Guayaquil, Equador	10/20/2013 5:30	10/22/2013 16:31	59.02	Berth 10-02	Container	Bananas
14-0223	Dole California	Puerto Quetzal, Guatemala	Puerto Quetzal, Guatemala	11/10/2013 5:30	11/12/2013 17:47	60.28	Berth 10-02	Container	Bananas
14-0322	Dole California	Puerto Quetzal, Guatemala	Puerto Quetzal, Guatemala	12/28/2013 23:55	12/31/2013 16:58	65.05	Berth 10-02	Container	Bananas
14-0354	Dole California	Puerto Quetzal, Guatemala	Guayaquil, Equador	1/19/2014 4:45	1/22/2014 4:00	71.25	Berth 10-02	Container	Bananas
14-0390	Dole California	Puerto Quetzal, Guatemala	Puerto Quetzal, Guatemala	2/9/2014 5:30	2/11/2014 16:43	59.22	Berth 10-02	Container	Bananas
14-0418	Dole California	Caldera, Costa Rica	Guayaquil, Equador	3/2/2014 3:18	3/4/2014 18:40	63.37	Berth 10-02	Container	Bananas
14-0443	Dole California	Ulsan, Korea	Port Hueneme, CA	3/24/2014 6:45	3/25/2014 19:33	36.80	Berth 10-02	Container	Bananas
14-0486	Dole California	Puerto Quetzal, Guatemala	Guayaquil, Equador	4/13/2014 6:20	4/15/2014 16:57	58.62	Berth 10-02	Container	Bananas
14-0536	Dole California	Puerto Quetzal, Guatemala	Puerto Quetzal, Guatemala	5/5/2014 6:25	5/6/2014 18:35	36.17	Berth 10-02	Container	Bananas
14-0569	Dole California	Puerto Quetzal, Guatemala	Guayaquil, Equador	5/25/2014 1:57	5/27/2014 16:33	62.60	Berth 10-02	Container	Bananas
14-0608	Dole California	Puerto Quetzal, Guatemala	Guayaquil, Equador	6/15/2014 6:45	6/17/2014 19:05	60.33	Berth 10-02	Container	Bananas
14-0032	Dole Honduras	Puerto Quetzal, Guatemala	Puerto Quetzal, Guatemala	07/21/13 16:50	07/23/13 16:42	47.87	Berth 10-02	Container	Bananas
14-0066	Dole Honduras	Puerto Quetzal, Guatemala	Puerto Quetzal, Guatemala	8/10/2013 23:45	8/13/2013 17:20	65.58	Berth 10-02	Container	Bananas
14-0101	Dole Honduras	Puerto Quetzal, Guatemala	Puerto Quetzal, Guatemala	9/1/2013 17:15	9/4/2013 16:00	70.75	Berth 10-02	Container	Bananas
14-0127	Dole Honduras	Puerto Quetzal, Guatemala	Paita, Peru	9/22/2013 4:48	9/24/2013 18:55	62.12	Berth 10-04	Container	Bananas
14-0174	Dole Honduras	Puerto Quetzal, Guatemala	Guayaquil, Equador	10/13/2013 5:55	10/15/2013 16:41	58.77	Berth 10-02	Container	Bananas
14-0212	Dole Honduras	Puerto Quetzal, Guatemala	Puerto Quetzal, Guatemala	11/3/2013 2:15	11/5/2013 16:30	62.25	Berth 10-02	Container	Bananas
14-0257	Dole Honduras	Puerto Quetzal, Guatemala	Guayaquil, Equador	11/24/2013 5:12	11/26/2013 16:30	59.30	Berth 10-02	Container	Bananas
14-0302	Dole Honduras	Puerto Quetzal, Guatemala	Guayaquil, Equador	12/16/2013 15:49	12/18/2013 2:06	34.28	Berth 10-02	Container	Bananas
14-0334	Dole Honduras	Puerto Quetzal, Guatemala	Puerto Quetzal, Guatemala	1/5/2014 5:47	1/7/2014 18:50	61.05	Berth 10-02	Container	Bananas
14-0370	Dole Honduras	Puerto Quetzal, Guatemala	Puerto Quetzal, Guatemala	1/26/2014 4:48	1/28/2014 18:00	61.20	Berth 10-02	Container	Bananas
14-0405	Dole Honduras	Puerto Quetzal, Guatemala	Puerto Quetzal, Guatemala	2/16/2014 4:00	2/18/2014 18:57	62.95	Berth 10-02	Container	Bananas
14-0428	Dole Honduras	Puerto Quetzal, Guatemala	Puerto Quetzal, Guatemala	3/9/2014 5:09	3/11/2014 17:06	59.95	Berth 10-02	Container	Bananas
14-0452	Dole Honduras	Puerto Quetzal, Guatemala	Puerto Quetzal, Guatemala	3/30/2014 4:06	4/1/2014 17:55	61.82	Berth 10-02	Container	Bananas

Baseline Call Information

Trip Ref	Commodity Type	LR/IMO#	Shore Pwr	IMO	CALL	SHIP_TYPE	KEEL	MAIN_KW	DESIGN	DESIGNATIO	DISP	MAIN_ENGIN
14-0025	Refrigerated Containers	8513479	0	8513479	C6FX6	CONTAINER SHIP	1985	15,189	Sulzer	7RTA68	726.3	SSD
14-0058	Refrigerated Containers	8513479	0	8513479	C6FX6	CONTAINER SHIP	1985	15,189	Sulzer	7RTA68	726.3	SSD
14-0085	Refrigerated Containers	8513479	0	8513479	C6FX6	CONTAINER SHIP	1985	15,189	Sulzer	7RTA68	726.3	SSD
14-0119	Refrigerated Containers	8513479	0	8513479	C6FX6	CONTAINER SHIP	1985	15,189	Sulzer	7RTA68	726.3	SSD
14-0161	Refrigerated Containers	8513479	0	8513479	C6FX6	CONTAINER SHIP	1985	15,189	Sulzer	7RTA68	726.3	SSD
14-0270	Refrigerated Containers	8513479	0	8513479	C6FX6	CONTAINER SHIP	1985	15,189	Sulzer	7RTA68	726.3	SSD
14-0312	Refrigerated Containers	8513479	0	8513479	C6FX6	CONTAINER SHIP	1985	15,189	Sulzer	7RTA68	726.3	SSD
14-0339	Refrigerated Containers	8513479	0	8513479	C6FX6	CONTAINER SHIP	1985	15,189	Sulzer	7RTA68	726.3	SSD
14-0380	Refrigerated Containers	8513479	0	8513479	C6FX6	CONTAINER SHIP	1985	15,189	Sulzer	7RTA68	726.3	SSD
14-0412	Refrigerated Containers	8513479	28.8	8513479	C6FX6	CONTAINER SHIP	1985	15,189	Sulzer	7RTA68	726.3	SSD
14-0434	Refrigerated Containers	8513479	57	8513479	C6FX6	CONTAINER SHIP	1985	15,189	Sulzer	7RTA68	726.3	SSD
14-0473	Refrigerated Containers	8513479	60.4	8513479	C6FX6	CONTAINER SHIP	1985	15,189	Sulzer	7RTA68	726.3	SSD
14-0511	Refrigerated Containers	8513479	28.2	8513479	C6FX6	CONTAINER SHIP	1985	15,189	Sulzer	7RTA68	726.3	SSD
14-0554	Refrigerated Containers	8513479	63.1	8513479	C6FX6	CONTAINER SHIP	1985	15,189	Sulzer	7RTA68	726.3	SSD
14-0599	Refrigerated Containers	8513479	56.9	8513479	C6FX6	CONTAINER SHIP	1985	15,189	Sulzer	7RTA68	726.3	SSD
14-0012	Refrigerated Containers	8513467	0	8513467	C6FY2	CONTAINER SHIP	1985	15,189	Sulzer	7RTA68	726.3	SSD
14-0040	Refrigerated Containers	8513467	0	8513467	C6FY2	CONTAINER SHIP	1985	15,189	Sulzer	7RTA68	726.3	SSD
14-0074	Refrigerated Containers	8513467	0	8513467	C6FY2	CONTAINER SHIP	1985	15,189	Sulzer	7RTA68	726.3	SSD
14-0108	Refrigerated Containers	8513467	0	8513467	C6FY2	CONTAINER SHIP	1985	15,189	Sulzer	7RTA68	726.3	SSD
14-0148	Refrigerated Containers	8513467	0	8513467	C6FY2	CONTAINER SHIP	1985	15,189	Sulzer	7RTA68	726.3	SSD
14-0184	Refrigerated Containers	8513467	0	8513467	C6FY2	CONTAINER SHIP	1985	15,189	Sulzer	7RTA68	726.3	SSD
14-0223	Refrigerated Containers	8513467	0	8513467	C6FY2	CONTAINER SHIP	1985	15,189	Sulzer	7RTA68	726.3	SSD
14-0322	Refrigerated Containers	8513467	0	8513467	C6FY2	CONTAINER SHIP	1985	15,189	Sulzer	7RTA68	726.3	SSD
14-0354	Refrigerated Containers	8513467	0	8513467	C6FY2	CONTAINER SHIP	1985	15,189	Sulzer	7RTA68	726.3	SSD
14-0390	Refrigerated Containers	8513467	0	8513467	C6FY2	CONTAINER SHIP	1985	15,189	Sulzer	7RTA68	726.3	SSD
14-0418	Refrigerated Containers	8513467	34.2	8513467	C6FY2	CONTAINER SHIP	1985	15,189	Sulzer	7RTA68	726.3	SSD
14-0443	Refrigerated Containers	8513467	33.8	8513467	C6FY2	CONTAINER SHIP	1985	15,189	Sulzer	7RTA68	726.3	SSD
14-0486	Refrigerated Containers	8513467	56.5	8513467	C6FY2	CONTAINER SHIP	1985	15,189	Sulzer	7RTA68	726.3	SSD
14-0536	Refrigerated Containers	8513467	33.9	8513467	C6FY2	CONTAINER SHIP	1985	15,189	Sulzer	7RTA68	726.3	SSD
14-0569	Refrigerated Containers	8513467	60.8	8513467	C6FY2	CONTAINER SHIP	1985	15,189	Sulzer	7RTA68	726.3	SSD
14-0608	Refrigerated Containers	8513467	57.4	8513467	C6FY2	CONTAINER SHIP	1985	15,189	Sulzer	7RTA68	726.3	SSD
14-0032	Refrigerated Containers	9181479	0	8900323	C6FX7	CONTAINER SHIP	1990	15,190	Sulzer	7RTA68	726.3	SSD
14-0066	Refrigerated Containers	9181479	0	8900323	C6FX7	CONTAINER SHIP	1990	15,190	Sulzer	7RTA68	726.3	SSD
14-0101	Refrigerated Containers	9181479	0	8900323	C6FX7	CONTAINER SHIP	1990	15,190	Sulzer	7RTA68	726.3	SSD
14-0127	Refrigerated Containers	9181479	0	8900323	C6FX7	CONTAINER SHIP	1990	15,190	Sulzer	7RTA68	726.3	SSD
14-0174	Refrigerated Containers	9181479	0	8900323	C6FX7	CONTAINER SHIP	1990	15,190	Sulzer	7RTA68	726.3	SSD
14-0212	Refrigerated Containers	9181479	0	8900323	C6FX7	CONTAINER SHIP	1990	15,190	Sulzer	7RTA68	726.3	SSD
14-0257	Refrigerated Containers	9181479	0	8900323	C6FX7	CONTAINER SHIP	1990	15,190	Sulzer	7RTA68	726.3	SSD
14-0302	Refrigerated Containers	9181479	0	8900323	C6FX7	CONTAINER SHIP	1990	15,190	Sulzer	7RTA68	726.3	SSD
14-0334	Refrigerated Containers	8900323	0	8900323	C6FX7	CONTAINER SHIP	1990	15,190	Sulzer	7RTA68	726.3	SSD
14-0370	Refrigerated Containers	8900323	0	8900323	C6FX7	CONTAINER SHIP	1990	15,190	Sulzer	7RTA68	726.3	SSD
14-0405	Refrigerated Containers	8900323	0	8900323	C6FX7	CONTAINER SHIP	1990	15,190	Sulzer	7RTA68	726.3	SSD
14-0428	Refrigerated Containers	8900323	0	8900323	C6FX7	CONTAINER SHIP	1990	15,190	Sulzer	7RTA68	726.3	SSD
14-0452	Refrigerated Containers	8900323	0	8900323	C6FX7	CONTAINER SHIP	1990	15,190	Sulzer	7RTA68	726.3	SSD

Baseline Call Information

Trip Ref	CATEGORY	Aux_KW	LL_FLAG	SPEED	TEUS	GT	DWT	DWT_CATEGO	DWT_RANGE	OPERATOR	STATUS	Tier
14-0025	3	7,220	BAH	20.00	910	16,488	11,613	1	< 1000 TEU	Transfrut Express Ltd	In Service/Commission	0
14-0058	3	7,220	BAH	20.00	910	16,488	11,613	1	< 1000 TEU	Transfrut Express Ltd	In Service/Commission	0
14-0085	3	7,220	BAH	20.00	910	16,488	11,613	1	< 1000 TEU	Transfrut Express Ltd	In Service/Commission	0
14-0119	3	7,220	BAH	20.00	910	16,488	11,613	1	< 1000 TEU	Transfrut Express Ltd	In Service/Commission	0
14-0161	3	7,220	BAH	20.00	910	16,488	11,613	1	< 1000 TEU	Transfrut Express Ltd	In Service/Commission	0
14-0270	3	7,220	BAH	20.00	910	16,488	11,613	1	< 1000 TEU	Transfrut Express Ltd	In Service/Commission	0
14-0312	3	7,220	BAH	20.00	910	16,488	11,613	1	< 1000 TEU	Transfrut Express Ltd	In Service/Commission	0
14-0339	3	7,220	BAH	20.00	910	16,488	11,613	1	< 1000 TEU	Transfrut Express Ltd	In Service/Commission	0
14-0380	3	7,220	BAH	20.00	910	16,488	11,613	1	< 1000 TEU	Transfrut Express Ltd	In Service/Commission	0
14-0412	3	7,220	BAH	20.00	910	16,488	11,613	1	< 1000 TEU	Transfrut Express Ltd	In Service/Commission	0
14-0434	3	7,220	BAH	20.00	910	16,488	11,613	1	< 1000 TEU	Transfrut Express Ltd	In Service/Commission	0
14-0473	3	7,220	BAH	20.00	910	16,488	11,613	1	< 1000 TEU	Transfrut Express Ltd	In Service/Commission	0
14-0511	3	7,220	BAH	20.00	910	16,488	11,613	1	< 1000 TEU	Transfrut Express Ltd	In Service/Commission	0
14-0554	3	7,220	BAH	20.00	910	16,488	11,613	1	< 1000 TEU	Transfrut Express Ltd	In Service/Commission	0
14-0599	3	7,220	BAH	20.00	910	16,488	11,613	1	< 1000 TEU	Transfrut Express Ltd	In Service/Commission	0
14-0012	3	7,220	BAH	20.00	910	16,488	11,800	1	< 1000 TEU	Transfrut Express Ltd	In Service/Commission	0
14-0040	3	7,220	BAH	20.00	910	16,488	11,800	1	< 1000 TEU	Transfrut Express Ltd	In Service/Commission	0
14-0074	3	7,220	BAH	20.00	910	16,488	11,800	1	< 1000 TEU	Transfrut Express Ltd	In Service/Commission	0
14-0108	3	7,220	BAH	20.00	910	16,488	11,800	1	< 1000 TEU	Transfrut Express Ltd	In Service/Commission	0
14-0148	3	7,220	BAH	20.00	910	16,488	11,800	1	< 1000 TEU	Transfrut Express Ltd	In Service/Commission	0
14-0184	3	7,220	BAH	20.00	910	16,488	11,800	1	< 1000 TEU	Transfrut Express Ltd	In Service/Commission	0
14-0223	3	7,220	BAH	20.00	910	16,488	11,800	1	< 1000 TEU	Transfrut Express Ltd	In Service/Commission	0
14-0322	3	7,220	BAH	20.00	910	16,488	11,800	1	< 1000 TEU	Transfrut Express Ltd	In Service/Commission	0
14-0354	3	7,220	BAH	20.00	910	16,488	11,800	1	< 1000 TEU	Transfrut Express Ltd	In Service/Commission	0
14-0390	3	7,220	BAH	20.00	910	16,488	11,800	1	< 1000 TEU	Transfrut Express Ltd	In Service/Commission	0
14-0418	3	7,220	BAH	20.00	910	16,488	11,800	1	< 1000 TEU	Transfrut Express Ltd	In Service/Commission	0
14-0443	3	7,220	BAH	20.00	910	16,488	11,800	1	< 1000 TEU	Transfrut Express Ltd	In Service/Commission	0
14-0486	3	7,220	BAH	20.00	910	16,488	11,800	1	< 1000 TEU	Transfrut Express Ltd	In Service/Commission	0
14-0536	3	7,220	BAH	20.00	910	16,488	11,800	1	< 1000 TEU	Transfrut Express Ltd	In Service/Commission	0
14-0569	3	7,220	BAH	20.00	910	16,488	11,800	1	< 1000 TEU	Transfrut Express Ltd	In Service/Commission	0
14-0608	3	7,220	BAH	20.00	910	16,488	11,800	1	< 1000 TEU	Transfrut Express Ltd	In Service/Commission	0
14-0032	3	7,220	BAH	20.00	910	16,657	16,337	1	< 1000 TEU	Transfrut Express Ltd	In Service/Commission	0
14-0066	3	7,220	BAH	20.00	910	16,657	16,337	1	< 1000 TEU	Transfrut Express Ltd	In Service/Commission	0
14-0101	3	7,220	BAH	20.00	910	16,657	16,337	1	< 1000 TEU	Transfrut Express Ltd	In Service/Commission	0
14-0127	3	7,220	BAH	20.00	910	16,657	16,337	1	< 1000 TEU	Transfrut Express Ltd	In Service/Commission	0
14-0174	3	7,220	BAH	20.00	910	16,657	16,337	1	< 1000 TEU	Transfrut Express Ltd	In Service/Commission	0
14-0212	3	7,220	BAH	20.00	910	16,657	16,337	1	< 1000 TEU	Transfrut Express Ltd	In Service/Commission	0
14-0257	3	7,220	BAH	20.00	910	16,657	16,337	1	< 1000 TEU	Transfrut Express Ltd	In Service/Commission	0
14-0302	3	7,220	BAH	20.00	910	16,657	16,337	1	< 1000 TEU	Transfrut Express Ltd	In Service/Commission	0
14-0334	3	7,220	BAH	20.00	910	16,657	16,337	1	< 1000 TEU	Transfrut Express Ltd	In Service/Commission	0
14-0370	3	7,220	BAH	20.00	910	16,657	16,337	1	< 1000 TEU	Transfrut Express Ltd	In Service/Commission	0
14-0405	3	7,220	BAH	20.00	910	16,657	16,337	1	< 1000 TEU	Transfrut Express Ltd	In Service/Commission	0
14-0428	3	7,220	BAH	20.00	910	16,657	16,337	1	< 1000 TEU	Transfrut Express Ltd	In Service/Commission	0
14-0452	3	7,220	BAH	20.00	910	16,657	16,337	1	< 1000 TEU	Transfrut Express Ltd	In Service/Commission	0

Baseline Call Information

Trip Ref	Vessel Name	Last Port of Call	Next Port of Call	Arrived	Sailed	Hrs/Min	Berth	Vessel Type	Commodity
14-0496	Dole Honduras	Puerto Quetzal, Guatemala	Puerto Quetzal, Guatemala	4/20/2014 6:13	4/22/2014 18:08	59.92	Berth 10-02	Container	Bananas
14-0548	Dole Honduras	Puerto Quetzal, Guatemala	Guayaquil, Equador	5/11/2014 11:14	5/13/2014 17:05	53.85	Berth 10-02	Container	Bananas
14-0205	Ditlev Reefer	Puerto Quetzal, Guatemala	Puerto Quetzal, Guatemala	10/27/2013 5:20	10/30/2013 18:18	84.97	Berth 10-02	Container	Bananas
14-0231	Ditlev Reefer	Puerto Quetzal, Guatemala	Guayaquil, Equador	11/18/2013 4:11	11/21/2013 18:30	86.32	Berth 10-02	Container	Bananas
14-0289	Ditlev Reefer	Puerto Quetzal, Guatemala	Puerto Quetzal, Guatemala	12/10/2013 7:40	12/14/2013 14:06	102.43	Berth 10-02	Container	Bananas
14-0408	Auriga J	Puerto Quetzal, Guatemala	Puerto Quetzal, Guatemala	2/19/2014 5:05	2/21/2014 19:00	61.92	Berth 10-02	Container	Bananas
14-0422	Auriga J	Puerto Quetzal, Guatemala	Puerto Quetzal, Guatemala	3/4/2014 23:18	3/7/2014 4:09	52.85	Berth 10-02	Container	Bananas
14-0439	Auriga J	Puerto Quetzal, Guatemala	Guayaquil, Equador	3/18/2014 22:36	3/21/2014 2:02	51.43	Berth 10-02	Container	Bananas
14-0460	Auriga J	Puerto Quetzal, Guatemala	Puerto Quetzal, Guatemala	4/2/2014 5:35	4/4/2014 5:18	47.72	Berth 10-02	Container	Bananas
14-0490	Auriga J	Puerto Quetzal, Guatemala	Puerto Quetzal, Guatemala	4/16/2014 4:45	4/17/2014 23:53	43.13	Berth 10-02	Container	Bananas
14-0516	Auriga J	Puerto Quetzal, Guatemala	Puerto Quetzal, Guatemala	4/30/2014 5:05	5/2/2014 0:04	42.98	Berth 10-02	Container	Bananas
14-0577	O.M. Agarum	Puerto Quetzal, Guatemala	Guayaquil, Equador	5/31/2014 12:23	6/3/2014 19:00	78.62	Berth 10-02	Container	Bananas
14-0620	O.M. Agarum	Puerto Quetzal, Guatemala	Guayaquil, Equador	6/22/2014 6:15	6/26/2014 18:15	108.00	Berth 10-02	Container	Bananas
14-0150	Solin	Australia	Redwood City, Ca	10/1/2013 7:45	10/3/2013 22:12	62.45	Berth 10-07	Bulk Carrier	Bauxite
14-0348	Durban Bay	Weipa, Australia	Redwood City, Ca	1/16/2014 21:37	1/19/2014 19:35	69.97	Berth 10-07	Bulk Carrier	Bauxite
14-0565	LA Carita	Guaymas	Redwood City, Ca	5/22/2014 9:45	5/24/2014 12:10	50.42	Berth 10-07	Bulk Carrier	Bauxite
14-0186	Star Kirkenes	Puerto Quetzal, Guatemala	Los Angeles, CA	10/20/2013 11:30	10/23/2013 7:53	68.38	Berth 10-04	General Cargo	Calcium Nitrate
14-0472	Star Lofoten	Lazaro Cardenas, Mexico	Los Angeles, CA	4/5/2014 16:36	4/7/2014 14:02	45.43	Berth 10-05	General Cargo	Calcium Nitrate
14-0323	Eide Transporter	Bahrain	Unknown	12/29/2013 11:35	1/3/2014 14:35	123.00	Berth 10-06	General Cargo	Containers
14-0037	Star Eagle	Panama Canal	Los Angeles, CA	07/25/13 05:22	07/26/13 23:00	41.63	Berth 10-05	General Cargo	Fertilizer
14-0626	Star Fuji	Corinto, Nicaragua	Los Angeles, CA	6/26/2014 14:50	6/28/2014 5:11	38.35	Berth 10-04	Bulk Carrier	Fertilizer
14-0510	Star Japan	Lazaro Cardenas, Mexico	Los Angeles, CA	4/25/2014 16:40	4/26/2014 15:55	23.25	Berth 10-07	General Cargo	fertilizer
14-0570	Star Istind	Lazaro Cardenas, Mexico	Los Angeles, CA	5/25/2014 14:35	5/26/2014 17:50	27.25	Berth 10-04	General Cargo	fertilizer
14-0415	ISUZU	South Korea	Costa Rica	2/25/2014 9:40	2/27/2014 18:00	56.33	Berth 10-07	General Cargo	Iron & Steel
14-0559	Eide Transporter	Unknown	Unknown	5/20/2014 8:20	5/27/2014 12:05	171.75	Berth 10-03	Barge Carrier	Military
14-0576	Eide Transporter	Local	Local	5/29/2014 7:43	5/31/2014 16:00	56.28	Berth 10-03	Barge Carrier	Military
14-0462	Palabora	Manzanillo, Mexico	Tacoma,Wa	4/2/2014 6:31	4/5/2014 17:10	82.65	Berth 10-07	General Cargo	Project Cargo
14-0239	Clipper Aurora	China	Topolobambo, Mexico	11/20/2013 21:30	11/22/2013 21:02	47.53	Berth 10-07	General Cargo	Project Cargo
14-0189	Rickmers Shanghai	Kobe, Japan	Houston, Texas	10/22/2013 5:30	10/23/2013 21:50	40.33	Berth 10-04	General Cargo	Project Cargo
14-0080	Fidelio	Manzanillo, Mexico	Port Hueneme, CA	8/23/2013 6:26	8/23/2013 22:32	16.10	Berth 10-04	General Cargo	Project Cargo
14-0321	Fidelio	Port Hueneme, CA	Tacoma,Wa	12/27/2013 15:40	12/27/2013 22:00	6.33	Berth 10-04	General Cargo	Project Cargo
14-0610	Kraszewski	South Korea	Puerto Bolivar, Colombia	6/16/2014 13:50	6/18/2014 14:04	48.23	Berth 10-04	General Cargo	Project Cargo
14-0297	Port Maubert	Vladivostok, Russia	Unknown	12/13/2013 23:13	12/15/2013 16:02	40.82	Berth 10-04	General Cargo	Project Cargo
14-0333	Happy Dover	Colombia	China	1/4/2014 16:05	1/6/2014 22:00	53.92	Berth 10-07	Bulk Carrier	Soda Ash
14-0603	Valdivia	Vancouver, B.C. Canada	Manzanillo, Mexico	6/11/2014 5:45	6/11/2014 18:30	12.75	Berth 10-07	Bulk Carrier	Soda Ash
14-0534	Daiwan Wisdom	New Westminster, B.C.	Mexico	5/5/2014 5:02	5/6/2014 20:54	39.87	Berth 10-07	Bulk Carrier	Soda Ash
14-0052	Pine Arrow	New Westminster, B.C.	Manzanillo, Mexico	8/1/2013 15:37	8/2/2013 10:45	19.13	Berth 10-07	Bulk Carrier	Soda Ash
14-0410	Star Lima	Topolobambo, Mexico	Los Angeles, CA	2/20/2014 17:35	2/25/2014 5:15	107.67	Berth 10-07	Bulk Carrier	Soda Ash
14-0049	Tenca Arrow	Long Beach, CA	Manzanillo, Mexico	07/31/13 14:10	08/01/13 06:00	15.83	Berth 10-07	Bulk Carrier	Soda Ash
14-0612	Daebo Yeosu	Los Angeles, CA	Houston, Texas	6/17/2014 8:32	6/25/2014 6:42	190.17	Berth 10-07	General Cargo	Steel Pipe
14-0315	Jean Anne	Hawaii	Hawaii	12/23/2013 16:35	12/24/2013 16:20	23.75	Berth 10-04	Auto Carrier	Vehicles
14-0336	Jean Anne	Hawaii	Hawaii	1/7/2014 16:13	1/8/2014 19:02	26.82	Berth 10-04	Auto Carrier	Vehicles
14-0359	Jean Anne	Hawaii	Hawaii	1/21/2014 14:06	1/22/2014 18:13	28.12	Berth 10-04	Auto Carrier	Vehicles
14-0383	Jean Anne	Hawaii	Hawaii	2/4/2014 23:57	2/6/2014 3:07	27.17	Berth 10-04	Auto Carrier	Vehicles

Baseline Call Information

Trip Ref	Commodity Type	LR/IMO#	Shore Pwr	IMO	CALL	SHIP_TYPE	KEEL	MAIN_KW	DESIGN	DESIGNATIO	DISP	MAIN_ENGIN
14-0496	Refrigerated Containers	8900323	0	8900323	C6FX7	CONTAINER SHIP	1990	15,190	Sulzer	7RTA68	726.3	SSD
14-0548	Refrigerated Containers	8900323	0	8900323	C6FX7	CONTAINER SHIP	1990	15,190	Sulzer	7RTA68	726.3	SSD
14-0205	Refrigerated Containers	8819926	0	8819926	C6ZP7	CONTAINER SHIP	1989	11,250	B&W	6L60MC	549.7	SSD
14-0231	Refrigerated Containers	8819926	0	8819926	C6ZP7	CONTAINER SHIP	1989	11,250	B&W	6L60MC	549.7	SSD
14-0289	Refrigerated Containers	8819926	0	8819926	C6ZP7	CONTAINER SHIP	1989	11,250	B&W	6L60MC	549.7	SSD
14-0408	Refrigerated Containers	9242302	0	9242302	V2BF9	CONTAINER SHIP	2000	11,060	B&W	7S50MC-C	392.7	SSD
14-0422	Refrigerated Containers	9242302	0	9242302	V2BF9	CONTAINER SHIP	2000	11,060	B&W	7S50MC-C	392.7	SSD
14-0439	Refrigerated Containers	9242302	0	9242302	V2BF9	CONTAINER SHIP	2000	11,060	B&W	7S50MC-C	392.7	SSD
14-0460	Refrigerated Containers	9242302	0	9242302	V2BF9	CONTAINER SHIP	2000	11,060	B&W	7S50MC-C	392.7	SSD
14-0490	Refrigerated Containers	9242302	0	9242302	V2BF9	CONTAINER SHIP	2000	11,060	B&W	7S50MC-C	392.7	SSD
14-0516	Refrigerated Containers	9242302	0	9242302	V2BF9	CONTAINER SHIP	2000	11,060	B&W	7S50MC-C	392.7	SSD
14-0577	Refrigerated Containers	9339856	0	9339856	A8PN6	CONTAINER SHIP	2006	19,040	B&W	8S60ME-C	678.6	SSD
14-0620	Refrigerated Containers	9339856	0	9339856	A8PN6	CONTAINER SHIP	2006	19,040	B&W	8S60ME-C	678.6	SSD
14-0150	Dry Bulk	9629483	0	9629483	9AA8522	BULK CARRIER	2011	7500	B&W	6S50MC-C8	392.7	SSD
14-0348	Dry Bulk	9531662	0	9531662	3FEY2	BULK CARRIER	2010	8100	B&W	6S50MC-C8	392.7	SSD
14-0565	Dry Bulk	9440930	0	9440930	3FNI2	BULK CARRIER	2008	8400	B&W	6S50MC-C	392.7	SSD
14-0186	Dry Bulk	9396127	0	9396127	LAHR7	GENERAL CARGO	2009	11,300	B&W	5S60MC-C	678.6	SSD
14-0472	Dry Bulk	9593892	0	9593892	LAQL7	GENERAL CARGO	2013	10780	B&W	5S60ME-C8	678.6	SSD
14-0323	Multi-Purpose General Cargo	8030130	0	8030130	C6OC2	GENERAL CARGO	1981	5,738	Pielstick	6PC2-5L-400	57.8	MSD
14-0037	Dry Bulk	8005109	0	8005109	LAWO2	GENERAL CARGO	1981	9,635	B&W	6L67GFCA	599.4	SSD
14-0626	Dry Bulk	8309830	0	8309830	LAVX4	BULK CARRIER	1984	7,377	B&W	7L60MCE	549.7	SSD
14-0510	Dry Bulk	9254654	0	9254654	LAZV5	GENERAL CARGO	2003	10,519	B&W	6S60MC	648.0	SSD
14-0570	Dry Bulk	9182954	0	9182954	LAMP5	GENERAL CARGO	1998	10,519	B&W	6S60MC	648.0	SSD
14-0415	Multi-Purpose General Cargo	9624902	0	9624902	3FSN6	GENERAL CARGO	2010	6480	B&W	6S42MC	244.4	SSD
14-0559	Multi-Purpose General Cargo	8030130	0	8030130	C6OC2	BULK CARRIER, HL	1981	5,738	Pielstick	6PC2-5L-400	57.8	MSD
14-0576	Multi-Purpose General Cargo	8030130	0	8030130	C6OC2	BULK CARRIER, HL	1981	5,738	Pielstick	6PC2-5L-400	57.8	MSD
14-0462	Multi-Purpose General Cargo	9501875	0	9501875	V2ES2	GENERAL CARGO	2008	7200	MAN	6L48/60B	108.6	MSD
14-0239	Multi-Purpose General Cargo	9367073	0	9367073	PHJP	GENERAL CARGO	2004	6,000	MaK	6M43	88.6	MSD
14-0189	Multi-Purpose General Cargo	9244544	0	9244544	V7EE3	GENERAL CARGO	2002	15,785	B&W	7S60MC-C	678.6	SSD
14-0080	Multi-Purpose General Cargo	9332937	0	9332937	SLKR	GENERAL CARGO	2007	15,820	B&W	7S60MC-C	678.6	SSD
14-0321	Multi-Purpose General Cargo	9332937	0	9332937	SLKR	GENERAL CARGO	2007	15,820	B&W	7S60MC-C	678.6	SSD
14-0610	Multi-Purpose General Cargo	9432153	0	9432153	5BKF3	GENERAL CARGO	2010	16520	Sulzer	7RT-flex60C	636.2	SSD
14-0297	Multi-Purpose General Cargo	9358864	0	9358864	V7NL2	GENERAL CARGO	2007	9,480	B&W	6S50MC-C	392.7	SSD
14-0333	Dry Bulk	9551959	0	9551959	PBXH	BULK CARRIER	2009	8400	Wartsila	8L46	96.4	MSD
14-0603	Dry Bulk	9333395	0	9333395	V7LJ5	BULK CARRIER	2004	16,980	B&W	6L70ME-C	908.2	SSD
14-0534	Dry Bulk	9427134	0	9427134	3FWQ8	BULK CARRIER	2008	7470	Mitsubishi	6UEC45LSE	292.6	SSD
14-0052	Dry Bulk	9107306	0	9107306	C6NZ3	BULK CARRIER	1995	8,900	B&W	5S60MC	648.0	SSD
14-0410	Dry Bulk	9593866	0	9593866	LAPE7	BULK CARRIER	2012	10780	B&W	5S60ME-C8	678.6	SSD
14-0049	Dry Bulk	9385489	0	9385489	C6YC3	BULK CARRIER	2006	12,577	B&W	6S60ME-C8	678.6	SSD
14-0612	Multi-Purpose General Cargo	9083275	0	9083275	DSPZ3	GENERAL CARGO	1994	7,649	Sulzer	6RTA52U	382.3	SSD
14-0315	Multi-Purpose General Cargo	9233167	0	9233167	WDC3786	AUTO CARRIER	2000	11,060	B&W	7S50MC-C	392.7	SSD
14-0336	Multi-Purpose General Cargo	9233167	0	9233167	WDC3786	AUTO CARRIER	2000	11,060	B&W	7S50MC-C	392.7	SSD
14-0359	Multi-Purpose General Cargo	9233167	0	9233167	WDC3786	AUTO CARRIER	2000	11,060	B&W	7S50MC-C	392.7	SSD
14-0383	Multi-Purpose General Cargo	9233167	0	9233167	WDC3786	AUTO CARRIER	2000	11,060	B&W	7S50MC-C	392.7	SSD

Baseline Call Information

Trip Ref	CATEGORY	Aux_KW	LL_FLAG	SPEED	TEUS	GT	DWT	DWT_CATEGO	DWT_RANGE	OPERATOR	STATUS	Tier
14-0496	3	7,220	BAH	20.00	910	16,657	16,337	1	< 1000 TEU	Transfrut Express Ltd	In Service/Commission	0
14-0548	3	7,220	BAH	20.00	910	16,657	16,337	1	< 1000 TEU	Transfrut Express Ltd	In Service/Commission	0
14-0205	3	6,200	BAH	20.50	480	14,406	16,950	1	< 1000 TEU	NYKCool AB	In Service/Commission	0
14-0231	3	6,200	BAH	20.50	480	14,406	16,950	1	< 1000 TEU	NYKCool AB	In Service/Commission	0
14-0289	3	6,200	BAH	20.50	480	14,406	16,950	1	< 1000 TEU	NYKCool AB	In Service/Commission	0
14-0408	3	2,960	TRK	18.30	1,150	14,062	18,400	2	1000 - 2000 TEU	Arkas Denizcilik ve Nakliyat	In Service/Commission	1
14-0422	3	2,960	TRK	18.30	1,150	14,062	18,400	2	1000 - 2000 TEU	Arkas Denizcilik ve Nakliyat	In Service/Commission	1
14-0439	3	2,960	TRK	18.30	1,150	14,062	18,400	2	1000 - 2000 TEU	Arkas Denizcilik ve Nakliyat	In Service/Commission	1
14-0460	3	2,960	TRK	18.30	1,150	14,062	18,400	2	1000 - 2000 TEU	Arkas Denizcilik ve Nakliyat	In Service/Commission	1
14-0490	3	2,960	TRK	18.30	1,150	14,062	18,400	2	1000 - 2000 TEU	Arkas Denizcilik ve Nakliyat	In Service/Commission	1
14-0516	3	2,960	TRK	18.30	1,150	14,062	18,400	2	1000 - 2000 TEU	Arkas Denizcilik ve Nakliyat	In Service/Commission	1
14-0577	3	5,824	LIB	20.80	2,015	23,633	27,131	3	2000 - 3000 TEU	Sea Consortium Pte Ltd	In Service/Commission	1
14-0620	3	5,824	LIB	20.80	2,015	23,633	27,131	3	2000 - 3000 TEU	Sea Consortium Pte Ltd	In Service/Commission	1
14-0150	3	2,190	CRO	14.50	-	30,092	51,545	4	45,000 - 90,000	Jadroplov International Mtme	In Service/Commission	2
14-0348	3	1,500	PAN	14.20	-	32,726	58,186	4	45,000 - 90,000	Doun Kisen KK	In Service/Commission	1
14-0565	3	1,440	PAN	14.50	-	32,415	58,707	4	45,000 - 90,000	Kambara Kisen Co Ltd	In Service/Commission	1
14-0186	3	3,450	NIS	16.00	1,453	37,158	49,924	4	45,000 - 90,000	Grieg Star Shipping AS	In Service/Commission	1
14-0472	3	2,595	NIS	15.50	1,411	37,447	50,728	4	45,000 - 90,000	Grieg Star AS	In Service/Commission	2
14-0323	3	1,950	BAH	13.00	-	19,579	11,434	1	< 25,000	Eide Marine Services AS	In Service/Commission	0
14-0037	3	2,400	NIS	15.00	1,448	24,479	39,749	3	35,000 - 45,000	Grieg Star Shipping AS	In Service/Commission	0
14-0626	3	2,250	NIS	15.00	1,064	25,345	40,850	3	35,000 - 45,000	Atlantic Cargo Services AB	In Service/Commission	0
14-0510	3	3,500	NIS	16.55	2,070	32,844	44,807	3	35,000 - 45,000	Grieg Star Shipping AS	In Service/Commission	1
14-0570	3	3,320	NIS	16.20	2,096	32,628	46,428	4	45,000 - 90,000	Grieg Star Shipping AS	In Service/Commission	0
14-0415	3	1,500	PAN	14.30	568	14,122	20,352	1	< 25,000	NYK Bulk & Projects Carriers	In Service/Commission	2
14-0559	3	1,950	BAH	13.00	-	19,579	11,434	1	< 25,000	Eide Marine Services AS	In Service/Commission	0
14-0576	3	1,950	BAH	13.00	-	19,579	11,434	1	< 25,000	Eide Marine Services AS	In Service/Commission	0
14-0462	3	2,930	ABB	16.20	604	11,473	10,052	1	< 25,000	Combi Lift GmbH	In Service/Commission	1
14-0239	3	2,290	NTH	12.50	684	8,999	12,000	1	< 25,000	CT Drent Beheer BV	In Service/Commission	1
14-0189	3	3,030	MAI	18.00	1,888	23,119	30,095	2	25,000 - 35,000	Rickmers-Linie	In Service/Commission	1
14-0080	3	3,838	SWD	19.00	-	71,583	30,137	2	25,000 - 35,000	Wallenius Wilhelmsen Logistics	In Service/Commission	1
14-0321	3	3,838	SWD	19.00	-	71,583	30,137	2	25,000 - 35,000	Wallenius Wilhelmsen Logistics	In Service/Commission	1
14-0610	3	2,880	CYP	19.20	1,904	24,221	30,435	2	25,000 - 35,000	CHIPOLBROK	In Service/Commission	1
14-0297	3	2,040	MAI	14.70	-	32,486	53,828	4	45,000 - 90,000	Stella Navigation GmbH & Co KG	In Service/Commission	1
14-0333	3	2,896	NTH	15.80	1,049	14,784	18,074	1	< 25,000	BigLift Shipping BV	In Service/Commission	1
14-0603	3	3,800	MAI	21.00	1,875	17,360	22,229	1	< 25,000	MCC Transport Singapore Pte	In Service/Commission	1
14-0534	3	1,360	PAN	14.40	-	19,825	31,833	2	25,000 - 35,000	Wisdom Marine Lines SA	In Service/Commission	1
14-0052	3	2,400	BAH	14.20	1,556	32,520	48,041	4	45,000 - 90,000	Gearbulk Pool Ltd	In Service/Commission	0
14-0410	3	2,595	NIS	15.50	1,411	37,447	50,761	4	45,000 - 90,000	Grieg Star AS	In Service/Commission	2
14-0049	3	3,148	BAH	15.50	445	44,684	72,863	4	45,000 - 90,000	Gearbulk Pool Ltd	In Service/Commission	1
14-0612	3	1,950	KRS	14.50	-	26,823	46,601	4	45,000 - 90,000	Daebo Shipmanagement Co Ltd	In Service/Commission	0
14-0315	3	2,760	USA	20.00	-	37,548	12,561	2	10,000 - 20,000	Pasha Group	In Service/Commission	1
14-0336	3	2,760	USA	20.00	-	37,548	12,561	2	10,000 - 20,000	Pasha Group	In Service/Commission	1
14-0359	3	2,760	USA	20.00	-	37,548	12,561	2	10,000 - 20,000	Pasha Group	In Service/Commission	1
14-0383	3	2,760	USA	20.00	-	37,548	12,561	2	10,000 - 20,000	Pasha Group	In Service/Commission	1

Baseline Call Information

Trip Ref	Vessel Name	Last Port of Call	Next Port of Call	Arrived	Sailed	Hrs/Min	Berth	Vessel Type	Commodity
14-0407	Jean Anne	Hawaii	Hawaii	2/18/2014 13:25	2/19/2014 17:08	27.72	Berth 10-04	Auto Carrier	Vehicles
14-0421	Jean Anne	Hawaii	Hawaii	3/4/2014 7:15	3/5/2014 13:35	30.33	Berth 10-04	Auto Carrier	Vehicles
14-0438	Jean Anne	Hawaii	Hawaii	3/18/2014 8:10	3/19/2014 15:57	31.78	Berth 10-04	Auto Carrier	Vehicles
14-0461	Jean Anne	Hawaii	Hawaii	4/2/2014 7:15	4/3/2014 8:05	24.83	Berth 10-04	Auto Carrier	Vehicles
14-0244	BBC Bahrain	Chile	Ulsan, Korea	11/21/2013 22:15	11/25/2013 6:29	80.23	Berth 10-05	General Cargo	indmill Componer
14-0497	Ocean Giant	Unknown	Unknown	4/20/2014 5:00	4/23/2014 21:12	88.20	Berth 10-05	General Cargo	indmill Componer
14-0327	AAL Dalian	Nantong, China	Los Angeles, CA	1/2/2014 12:00	1/4/2014 16:54	52.90	Berth 10-04	General Cargo	indmill Componer
14-0229	AAL Hong Kong	Los Angeles, CA	Los Angeles, CA	11/14/2013 14:00	11/16/2013 14:00	48.00	Berth 10-07	General Cargo	indmill Componer
14-0326	Lucia	Nakhodka	Galveston, Texas	1/2/2014 5:15	1/2/2014 19:00	13.75	Berth 10-07	General Cargo	indmill Componer
14-0630	BBC Kimberley	China	Port Everglades, Florida	6/30/2014 4:16	6/30/2014 18:10	13.90	Berth 10-07	General Cargo	Yachts
14-0313	Ocean Giant	Portland	Unknown	12/22/2013 16:20	12/23/2013 14:13	21.88	Berth 10-05	Bulk Carrier	Yachts
14-0061	Maersk Texas	Houston, Texas	Guam	8/6/2013 19:50	8/12/2013 18:00	142.17	Berth 10-07	General Cargo	Yachts

Baseline Call Information

Trip Ref	**Commodity Type**	**LR/IMO#**	**Shore Pwr**	IMO	CALL	SHIP_TYPE	KEEL	MAIN_KW	DESIGN	DESIGNATIO	DISP	MAIN_ENGIN
14-0407	Multi-Purpose General Cargo	9233167	0	9233167	WDC3786	AUTO CARRIER	2000	11,060	B&W	7S50MC-C	392.7	SSD
14-0421	Multi-Purpose General Cargo	9233167	0	9233167	WDC3786	AUTO CARRIER	2000	11,060	B&W	7S50MC-C	392.7	SSD
14-0438	Multi-Purpose General Cargo	9233167	0	9233167	WDC3786	AUTO CARRIER	2000	11,060	B&W	7S50MC-C	392.7	SSD
14-0461	Multi-Purpose General Cargo	9233167	0	9233167	WDC3786	AUTO CARRIER	2000	11,060	B&W	7S50MC-C	392.7	SSD
14-0244	Multi-Purpose General Cargo	9578751	0	9578751	V2FY2	GENERAL CARGO	2008	3000	MaK	6M32C	38.6	MSD
14-0497	Multi-Purpose General Cargo	9437335	0	9437335	WDG4379	GENERAL CARGO	2009	9800	MAN	7L58/64CD	169.1	MSD
14-0327	Multi-Purpose General Cargo	9498470	0	9498470	V7CO2	GENERAL CARGO	2009	11640	Sulzer	7RT-flex50	402.5	SSD
14-0229	Multi-Purpose General Cargo	9498468	0	9498468	V7BD5	GENERAL CARGO	2009	11640	Sulzer	7RT-flex50	402.5	SSD
14-0326	Multi-Purpose General Cargo	9331749	0	9331749	9V3224	GENERAL CARGO	2007	9,481	B&W	6S50MC-C	392.7	SSD
14-0630	Multi-Purpose General Cargo	9407586	0	9407586	V2ED5	GENERAL CARGO	2008	6,000	MaK	6M43C	88.6	MSD
14-0313	Multi-Purpose General Cargo	9437335	0	9437335	WDG4379	BULK CARRIER	2009	9800	MAN	7L58/64CD	169.1	MSD
14-0061	Multi-Purpose General Cargo	9469780	0	9469780	V7DX5	GENERAL CARGO	2008	8730	Sulzer	6RTA48T	361.9	SSD

Baseline Call Information

Trip Ref	CATEGORY	Aux_KW	LL_FLAG	SPEED	TEUS	GT	DWT	DWT_CATEGO	DWT_RANGE	OPERATOR	STATUS	Tier
14-0407	3	2,760	USA	20.00	-	37,548	12,561	2	10,000 - 20,000	Pasha Group	In Service/Commission	1
14-0421	3	2,760	USA	20.00	-	37,548	12,561	2	10,000 - 20,000	Pasha Group	In Service/Commission	1
14-0438	3	2,760	USA	20.00	-	37,548	12,561	2	10,000 - 20,000	Pasha Group	In Service/Commission	1
14-0461	3	2,760	USA	20.00	-	37,548	12,561	2	10,000 - 20,000	Pasha Group	In Service/Commission	1
14-0244	3	1,664	ABB	14.00	459	6,309	8,000	1	< 25,000	BBC Chartering & Logistic GmbH	In Service/Commission	1
14-0497	3	3,050	USA	17.50	1,011	15,549	18,389	1	< 25,000	Intermarine LLC	In Service/Commission	1
14-0327	3	2,850	MAI	16.80	2,029	23,930	31,000	2	25,000 - 35,000	Austral Asia Line BV	In Service/Commission	1
14-0229	3	2,850	MAI	16.80	2,029	23,930	32,124	2	25,000 - 35,000	Austral Asia Line BV	In Service/Commission	1
14-0326	3	2,040	LIB	14.70	-	32,578	53,000	4	45,000 - 90,000	Columbia Shipmanagement-SNG	In Service/Commission	1
14-0630	3	1,900	ABB	16.50	636	8,750	10,293	1	< 25,000	BBC Chartering & Logistic GmbH	In Service/Commission	1
14-0313	3	3,050	USA	17.50	1,011	15,549	18,389	1	< 25,000	Intermarine LLC	In Service/Commission	1
14-0061	3	1,800	MAI	16.00	964	13,816	19,638	1	< 25,000	Thorco Shipping A/S	In Service/Commission	1

Baseline Tug/Fuel Barge Calls

Trip Ref .	Vessel Name	Last Port of Call	Next Port of Call	Arrived	Sailed	Hrs/Min	Berth	Vessel Type	Commodity
14-0121	Robyn J (Barge Jake J)	San Pedro, CA	San Pedro, CA	9/15/2013 20:40	09/18/2013 15:05	66.42	Berth 10-03	Tug	Fuel
14-0044	Robyn J (Barge Payton J)	San Pedro, CA	San Pedro, CA	7/17/2013 21:30	07/22/2013 23:50	122.33	Berth 10-03	Tug	Fuel
14-0056	Robyn J (Barge Payton J)	San Pedro, CA	San Pedro, CA	8/1/2013 0:30	08/06/2013 22:02	141.53	Berth 10-03	Tug	Fuel
14-0105	Robyn J (Barge Payton J)	San Pedro, CA	San Pedro, CA	9/7/2013 16:45	09/10/2013 10:30	65.75	Berth 10-03	Tug	Fuel
14-0105	Robyn J (Barge Payton J)	San Pedro, CA	San Pedro, CA	9/12/2013 10:55	09/14/2013 08:25	45.50	Berth 10-03	Tug	Fuel
14-0155	Robyn J (Barge Payton J)	San Pedro, CA	San Pedro, CA	10/12/2013 7:35	10/15/2013 20:00	84.42	Berth 10-03	Tug	Fuel
14-0155	Robyn J (Barge Payton J)	San Pedro, CA	San Pedro, CA	10/31/2013 6:15	11/05/2013 18:16	132.02	Berth 10-03	Tug	Fuel
14-0216	Robyn J (Barge Payton J)	San Pedro, CA	San Pedro, CA	11/2/2013 22:35	11/6/2013 12:25	85.83	Berth 10-03	Tug	Fuel
14-0216	Robyn J (Barge Payton J)	San Pedro, CA	San Pedro, CA	11/9/2013 7:35	11/14/2013 9:05	121.50	Berth 10-03	Tug	Fuel
14-0216	Robyn J (Barge Payton J)	San Pedro, CA	San Pedro, CA	11/16/2013 1:45	11/16/2013 19:55	18.17	Berth 10-03	Tug	Fuel
14-0216	Robyn J (Barge Payton J)	San Pedro, CA	San Pedro, CA	11/27/2013 3:00	11/28/2013 0:45	21.75	Berth 10-03	Tug	Fuel
14-0216	Robyn J (Barge Payton J)	San Pedro, CA	San Pedro, CA	11/30/2013 8:30	11/30/2013 13:35	5.08	Berth 10-03	Tug	Fuel
14-0261	Robyn J (Barge Payton J)	San Pedro, CA	San Pedro, CA	12/2/2013 4:45	12/12/2013 12:00	247.25	Berth 10-03	Tug	Fuel
14-0261	Robyn J (Barge Payton J)	San Pedro, CA	San Pedro, CA	12/15/2013 7:30	12/16/2013 21:30	38.00	Berth 10-03	Tug	Fuel
14-0261	Robyn J (Barge Payton J)	San Pedro, CA	San Pedro, CA	12/19/2013 10:35	12/26/2013 13:30	170.92	Berth 10-03	Tug	Fuel
14-0329	Robyn J (Barge Payton J)	San Pedro, CA	San Pedro, CA	1/17/2014 4:25	1/17/2014 8:30	4.08	Berth 10-03	Tug	Fuel
14-0329	Robyn J (Barge Payton J)	San Pedro, CA	San Pedro, CA	1/19/2014 11:10	1/21/2014 17:05	53.92	Berth 10-03	Tug	Fuel
14-0329	Robyn J (Barge Payton J)	San Pedro, CA	San Pedro, CA	1/20/2014 13:55	1/23/2014 3:55	62.00	Berth 10-03	Tug	Fuel
14-0329	Robyn J (Barge Payton J)	San Pedro, CA	San Pedro, CA	2/1/2014 0:39	2/5/2014 23:15	118.60	Berth 10-03	Tug	Fuel
14-0329	Robyn J (Barge Payton J)	San Pedro, CA	San Pedro, CA	2/7/2014 21:33	2/9/2014 13:52	40.32	Berth 10-03	Tug	Fuel
14-0329	Robyn J (Barge Payton J)	San Pedro, CA	San Pedro, CA	2/13/2014 7:31	2/16/2014 18:45	83.23	Berth 10-03	Tug	Fuel
14-0329	Robyn J (Barge Payton J)	San Pedro, CA	San Pedro, CA	3/3/2014 7:00	3/4/2014 18:45	35.75	Berth 10-03	Tug	Fuel
14-0329	Robyn J (Barge Payton J)	San Pedro, CA	San Pedro, CA	3/15/2014 9:00	3/16/2014 12:45	27.75	Berth 10-03	Tug	Fuel
14-0329	Robyn J (Barge Payton J)	San Pedro, CA	San Pedro, CA	3/18/2014 6:00	3/19/2014 15:45	33.75	Berth 10-03	Tug	Fuel
14-0329	Robyn J (Barge Payton J)	San Pedro, CA	San Pedro, CA	3/22/2014 15:00	3/23/2014 12:45	21.75	Berth 10-03	Tug	Fuel
14-0329	Robyn J (Barge Payton J)	San Pedro, CA	San Pedro, CA	3/29/2014 11:00	3/30/2014 17:45	30.75	Berth 10-03	Tug	Fuel
14-0329	Robyn J (Barge Payton J)	San Pedro, CA	San Pedro, CA	4/1/2014 13:00	4/3/2014 4:00	39.00	Berth 10-03	Tug	Fuel
14-0329	Robyn J (Barge Payton J)	San Pedro, CA	San Pedro, CA	4/13/2014 19:45	4/16/2014 12:10	64.42	Berth 10-03	Tug	Fuel
14-0329	Robyn J (Barge Payton J)	San Pedro, CA	San Pedro, CA	4/18/2014 11:15	4/19/2014 4:20	17.08	Berth 10-03	Tug	Fuel
14-0329	Robyn J (Barge Payton J)	San Pedro, CA	San Pedro, CA	4/27/2014 20:15	4/28/2014 12:05	15.83	Berth 10-03	Tug	Fuel
14-0329	Robyn J (Barge Payton J)	San Pedro, CA	San Pedro, CA	4/30/2014 8:35	4/30/2014 19:00	10.42	Berth 10-03	Tug	Fuel
14-0329	Robyn J (Barge Payton J)	San Pedro, CA	San Pedro, CA	5/3/2014 3:05	5/8/2014 12:10	129.08	Berth 10-03	Tug	Fuel
14-0329	Robyn J (Barge Payton J)	San Pedro, CA	San Pedro, CA	5/13/2014 3:00	5/14/2014 15:10	36.17	Berth 10-03	Tug	Fuel
14-0329	Robyn J (Barge Payton J)	San Pedro, CA	San Pedro, CA	5/17/2014 5:25	5/17/2014 13:25	8.00	Berth 10-03	Tug	Fuel
14-0329	Robyn J (Barge Payton J)	San Pedro, CA	San Pedro, CA	5/20/2014 5:25	5/20/2014 16:55	11.50	Berth 10-03	Tug	Fuel
14-0579	Robyn J (Barge Payton J)	San Pedro, CA	San Pedro, CA	6/3/2014 8:05	6/5/2014 12:10	52.08	Berth 10-03	Tug	Fuel
14-0579	Robyn J (Barge Payton J)	San Pedro, CA	San Pedro, CA	6/13/2014 7:30	6/15/2014 18:45	59.25	Berth 10-03	Tug	Fuel
14-0579	Robyn J (Barge Payton J)	San Pedro, CA	San Pedro, CA	6/25/2014 4:30	6/26/2014 19:30	39.00	Berth 10-03	Tug	Fuel
14-0129	Robyn J (Barge Tori J)	San Pedro, CA	San Pedro, CA	9/21/2013 19:45	09/24/2013 09:00	61.25	Berth 10-03	Tug	Fuel
14-0160	Robyn J (Barge Tori J)	San Pedro, CA	San Pedro, CA	10/03/2013 10:55	10/07/2013 13:15	98.33	Berth 10-03	Tug	Fuel
14-0160	Robyn J (Barge Tori J)	San Pedro, CA	San Pedro, CA	10/15/2013 02:25	10/17/2013 12:35	58.17	Berth 10-03	Tug	Fuel
14-0216	Robyn J (Barge Tori J)	San Pedro, CA	San Pedro, CA	11/18/2013 13:30	11/20/2013 20:15	54.75	Berth 10-03	Tug	Fuel
14-0271	Robyn J (Barge Tori J)	San Pedro, CA	San Pedro, CA	12/8/2013 12:45	12/10/2013 23:45	59.00	Berth 10-03	Tug	Fuel
14-0271	Robyn J (Barge Tori J)	San Pedro, CA	San Pedro, CA	12/29/2013 22:10	12/31/2013 5:30	31.33	Berth 10-03	Tug	Fuel

Calls that can use non-shore power emissions capture system (AMECS/Bonnet)

max daily calls is 4
Dole is part of max daily; cold irons
3 other calls a mix of bulk and general cargo
bonnet only fits 1 vessel at a time
on 4/call peak day, 2 vessels will no have no at-berth control
3 vessels/day happened 5x under baseline conditions
assuming this increases linearly with annual calls and throughput, would increase with calls to 29/year under MPC and 22/year under STC
other than peak day, average day assumed
bulk and cargo carriers stay at berth up to 2.2 days at a time

Peak days	MPC	STC				
days with 4 calls	29	22		4	calls	
calls on these peak days	116	87		1	SP	
calls mitigated with amecs	29	22		3	non-sp	same for MPC and STC
calls shore powered	29	22	amecs	1	33%	3
calls uncontrolled	58	43	non-amecs	2	67%	1.5
other average days						
days w/ average calls	336	343				
total calls on these days, all nodes	463	346				
total calls on these days, Dry Bulk and Multi	372	278				
total calls on these days, Refrigerated	91	68				
average non-Dole hotel hours/call	52.03	52.03	2.2	2.2	days	
calls mitigated with amecs	155	158	*0.33463753*	*0.4571918*		
calls uncontrolled	217	120				
calls shore powered	91	68				
total calls/year						
calls	579	433				
calls mitigated with amecs	184	180				
calls shore powered	120	90				
calls uncontrolled	275	163				
total dry bulk and multi calls	459	343				
amecs	40%	52%				
no amecs	60%	48%				

	Annual		Peak Daily	
Total Calls	Dry Bulk + Multi-Purpose	Refrigerated Containers	Dry Bulk + Multi-Purpose	Refrigerated Containers
MPC				
Total Calls	459	120	3	1
Shore Powered	-	120	-	1
AMECS applied	184	-	1	-
No controls	275	-	2	-
STC				
Total Calls	343	90	3	1
Shore Powered	-	90		1
AMECS applied	180	-	1	-
No controls	163	-	2	-

AMECS/Bonnet Reduction Calculations

Nonroad Emission factors for Diesel Generator Set with Tier 4F engine

	g/hp-hr			lb/hp-hr
	NOx	PM	THC	BSFC
	0.28	0.0092	0.13	0.367

Barge Diesel Generato
240 kW
0.43 Load Factor

103 kW Diesel generator load for Bonnet system

1.34102 hp/kW

TAMT calls by vessel type	MPC calls	of all MPC c	AUX avg kw	load	hotel load	Hoteling Time	Tier
AUTO CARRIER	92	16%	2760	26%	718	28	1.0
BULK CARRIER	126	22%	2347	10%	235	57	0.8
CONTAINER SHIP	120	21%	11320	35%	3920	89	2.0
GENERAL CARGO	241	42%	2623	10%	262	59	0.9
All average (includes container)	579				1678	0	1.1

by cargo node	Hotel Load	Tier	Hotel Time
Dry Bulk	235	1	57.2
Refrigerated Containers	3920	2	88.9
Multi-Purpose General Cargo	388	1	50.0

Average Hotelling Time

			Stacks
Dry Bulk	57.2	hrs	1
Refrigerated Containers	92.3	hrs	2
Multi-Purpose General Cargo	50.0	hrs	1

Bonnet placement/removal
2 hrs
Barge Auxiliary engine start up/shut down
1 hr

Figure 2 hours to connect/disconnect bonnet that ship auxiliaries not controlled by bonnet and that the bonnet generators are not controlled by bonnet

Capture Eff	90%	1 stack
Capture Eff	80%	2 stacks
NOx Reduct	90%	
Other Reducts	95%	

Uncontrolled Emission Rates (g/hr)

NOx	**PM10**	**PM2.5**	**HC**	**BC**	**SO2**	**CO2**
38.8	1.27	1.24	17.99	0.124	0.495	73,436

Auxiliary Engine Emission Rates (g/kWh)

Tier	**NOx**	**PM10**	**PM2.5**	**HC**	**BC**	**SO2**	**CO2**
0	13.90	0.18	0.17	0.40	0.010	0.424	691
1	12.40	0.18	0.17	0.40	0.010	0.424	691
2	9.90	0.18	0.17	0.40	0.010	0.424	691
3	2.50	0.18	0.17	0.40	0.010	0.424	691

Other emissions include PM, HC, SO2, and BC
CO2 emissions include both auxiliary engine and bonnet generators
Emissions Multipliers during Hotelling due to Bonnet Use

Emission Reduction Percents for TAMT

		NOx	**PM10**	**PM2.5**	**HC**	**BC**	**SO2**	**CO2**	**Tier**	**Stacks**
	Dry Bulk	77%	80%	79%	64%	77%	82%	-45%	1	1
Avg by cargo node	Refrigerated Containers	70%	74%	74%	73%	74%	74%	-3%	2	1
	Multi-Purpose General Cargo	77%	80%	80%	71%	79%	82%	-27%	1	1
Avg by vessel type	AUTO CARRIER	75%	78%	78%	73%	78%	79%	-14%	1	1
	BULK CARRIER	77%	80%	79%	64%	77%	82%	-45%	1	1
	CONTAINER SHIP	70%	74%	74%	73%	74%	74%	-3%	2	2
	GENERAL CARGO	77%	80%	80%	66%	78%	82%	-40%	1	1

Truck Trip Emissions

Condition	Year	cargo	location	Speed	VMT per trip (or idle hrs)	Daily ADT/VMT			Daily Emissions (pounds)							Annual ADT/VMT		Annual Emissions (Tons)						Annual Emissions (MT)				Annual Gallons	CO2e With Phase 2
						Trip Gen	Trips per	VMT (idle) per day	ROG	NOX	CO	SOX	PM10	PM2.5	DPM	Trips/Yr	VMT (idle) per year	ROG	NOX	CO	SOX	PM10	PM2.5	CO2	CH4	N2O	CO2e		
Baseline	2013/2014	Dry Bulk	Regional	aggregate	62	28	2	3472	1.45	77.84	4.76	0.13	2.16	0.95	0.46	10080	1,249,920	0.26	14.01	0.86	0.02	0.08	0.08	2201	0.01102	0.07	2222	215604	1689
Baseline	2013/2014	Dry Bulk	Onsite	10	0.5	28	2	28	0.08	1.44	0.18	0.00	0.02	0.01	0.01	10080	10,080	0.01	0.26	0.03	0.00	0.00	0.00	32	0.00062	0.00	33	3167	25
Baseline	2013/2014	Dry Bulk	on Harbor	40	1.6	28	2	89.6	0.03	1.94	0.11	0.00	0.05	0.02	0.01	10080	32,256	0.01	0.35	0.02	0.00	0.00	0.00	56	0.00024	0.00	57	5492	43
Baseline	2013/2014	Dry Bulk	on Cesar Chavez	25	0.3	28	2	16.8	0.01	0.44	0.04	0.00	0.01	0.00	0.00	10080	6,048	0.00	0.08	0.01	0.00	0.00	0.00	12	9.4E-05	0.00	13	1217	10
Baseline	2013/2014	Dry Bulk	on 28th	25	0.3	28	2	16.8	0.01	0.44	0.04	0.00	0.01	0.00	0.00	10080	6,048	0.00	0.08	0.01	0.00	0.00	0.00	12	9.4E-05	0.00	13	1217	10
Baseline	2013/2014	Dry Bulk	idling	idling	0.25	28	2	14	0.04	2.56	0.20	0.00	0.01	0.00	0.00	10080	5,040	0.01	0.46	0.04	0.00	0.00	0.00	36	0.00033	0.00	36	3508	36
Baseline	2013/2014	Refrigerated Containers	Regional	aggregate	62	62	2	7688	3.22	172.36	10.54	0.28	4.78	2.10	1.01	24120	2,990,880	0.63	33.53	2.05	0.06	0.20	0.19	5266	0.02637	0.17	5317	515910	4041
Baseline	2013/2014	Refrigerated Containers	Onsite	10	0.5	62	2	62	0.18	3.19	0.40	0.00	0.05	0.03	0.02	24120	24,120	0.03	0.62	0.08	0.00	0.00	0.00	77	0.00147	0.00	78	7578	59
Baseline	2013/2014	Refrigerated Containers	on Harbor	40	1.6	62	2	198.4	0.07	4.29	0.24	0.01	0.12	0.05	0.02	24120	77,184	0.01	0.83	0.05	0.00	0.00	0.00	134	0.00057	0.00	135	13142	103
Baseline	2013/2014	Refrigerated Containers	on Cesar Chavez	25	0.3	62	2	37.2	0.03	0.97	0.09	0.00	0.02	0.01	0.01	24120	14,472	0.01	0.19	0.02	0.00	0.00	0.00	30	0.00023	0.00	30	2913	23
Baseline	2013/2014	Refrigerated Containers	on 28th	25	0.3	62	2	37.2	0.03	0.97	0.09	0.00	0.02	0.01	0.01	24120	14,472	0.01	0.19	0.02	0.00	0.00	0.00	30	0.00023	0.00	30	2913	23
Baseline	2013/2014	Refrigerated Containers	idling	idling	0.25	62	2	31	0.10	5.67	0.44	0.00	0.02	0.01	0.01	24120	12,060	0.02	1.10	0.09	0.00	0.00	0.00	86	0.00079	0.00	87	8393	87
Baseline	2013/2014	Neo-Bulk	Regional	aggregate	62	3	2	372	0.16	8.34	0.51	0.01	0.23	0.10	0.05	1800	223,200	0.05	2.50	0.15	0.00	0.01	0.01	393	0.00197	0.01	397	38501	302
Baseline	2013/2014	Neo-Bulk	Onsite	10	0.5	3	2	3	0.01	0.15	0.02	0.00	0.002	0.001	0.001	1800	1,800	0.00	0.05	0.01	0.00	0.00	0.00	6	0.00011	0.00	6	565	4
Baseline	2013/2014	Neo-Bulk	on Harbor	40	1.6	3	2	9.6	0.00	0.21	0.01	0.00	0.006	0.002	0.001	1800	5,760	0.00	0.06	0.00	0.00	0.00	0.00	10	4.3E-05	0.00	10	981	8
Baseline	2013/2014	Neo-Bulk	on Cesar Chavez	25	0.3	3	2	1.8	0.00	0.05	0.00	0.00	0.001	0.000	0.000	1800	1,080	0.00	0.01	0.00	0.00	0.00	0.00	2	1.7E-05	0.00	2	217	2
Baseline	2013/2014	Neo-Bulk	on 28th	25	0.3	3	2	1.8	0.00	0.05	0.00	0.00	0.001	0.000	0.000	1800	1,080	0.00	0.01	0.00	0.00	0.00	0.00	2	1.7E-05	0.00	2	217	2
Baseline	2013/2014	Neo-Bulk	idling	idling	0.25	3	2	1.5	0.00	0.27	0.02	0.00	0.001	0.000	0.000	1800	900	0.00	0.08	0.01	0.00	0.00	0.00	6	5.9E-05	0.00	6	626	6
Project Increment	2020	Dry Bulk	Regional	aggregate	62	0	2	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	0	0	0
Project Increment	2020	Dry Bulk	Onsite	10	0.5	0	2	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	0	0	0
Project Increment	2020	Dry Bulk	on Harbor	40	1.6	0	2	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	0	0	0
Project Increment	2020	Dry Bulk	on Cesar Chavez	25	0.3	0	2	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	0	0	0
Project Increment	2020	Dry Bulk	on 28th	25	0.3	0	2	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	0	0	0
Project Increment	2020	Dry Bulk	idling	idling	0.25	0	2	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	0	0	0
Project Increment	2020	Refrigerated Containers	Regional	aggregate	62	5	2	620	0.24	6.73	0.90	0.02	0.33	0.12	0.03	1800	223,200	0.04	1.21	0.16	0.00	0.01	0.01	372	0.00179	0.01	376	36495	286
Project Increment	2020	Refrigerated Containers	Onsite	10	0.5	5	2	5	0.01	0.18	0.04	0.00	0.00	0.00	0.00	1800	1,800	0.00	0.03	0.01	0.00	0.00	0.00	5	8.6E-05	0.00	5	507	4
Project Increment	2020	Refrigerated Containers	on Harbor	40	1.6	5	2	16	0.01	0.16	0.02	0.00	0.01	0.00	0.00	1800	5,760	0.00	0.03	0.00	0.00	0.00	0.00	10	4.1E-05	0.00	10	939	7
Project Increment	2020	Refrigerated Containers	on Cesar Chavez	25	0.3	5	2	3	0.00	0.04	0.01	0.00	0.00	0.00	0.00	1800	1,080	0.00	0.01	0.00	0.00	0.00	0.00	2	1.9E-05	0.00	2	206	2
Project Increment	2020	Refrigerated Containers	on 28th	25	0.3	5	2	3	0.00	0.04	0.01	0.00	0.00	0.00	0.00	1800	1,080	0.00	0.01	0.00	0.00	0.00	0.00	2	1.9E-05	0.00	2	206	2
Project Increment	2020	Refrigerated Containers	idling	idling	0.25	5	2	2.5	0.01	0.19	0.03	0.00	0.00	0.00	0.00	1800	900	0.00	0.03	0.00	0.00	0.00	0.00	6	5.3E-05	0.00	6	593	6
Project Increment	2020	Neo-Bulk	Regional	aggregate	62	2	2	248	0.09	2.69	0.36	0.01	0.13	0.05	0.01	720	89,280	0.02	0.48	0.06	0.00	0.00	0.00	149	0.00072	0.00	150	14598	114
Project Increment	2020	Neo-Bulk	Onsite	10	0.5	2	2	2	0.00	0.07	0.02	0.00	0.00	0.00	0.00	720	720	0.00	0.01	0.00	0.00	0.00	0.00	2	3.5E-05	0.00	2	203	2
Project Increment	2020	Neo-Bulk	on Harbor	40	1.6	2	2	6.4	0.00	0.07	0.01	0.00	0.00	0.00	0.00	720	2,304	0.00	0.01	0.00	0.00	0.00	0.00	4	1.7E-05	0.00	4	375	3
Project Increment	2020	Neo-Bulk	on Cesar Chavez	25	0.3	2	2	1.2	0.00	0.02	0.00	0.00	0.00	0.00	0.00	720	432	0.00	0.00	0.00	0.00	0.00	0.00	1	7.7E-06	0.00	1	82	1
Project Increment	2020	Neo-Bulk	on 28th	25	0.3	2	2	1.2	0.00	0.02	0.00	0.00	0.00	0.00	0.00	720	432	0.00	0.00	0.00	0.00	0.00	0.00	1	7.7E-06	0.00	1	82	1
Project Increment	2020	Neo-Bulk	idling	idling	0.25	2	2	1	0.00	0.07	0.01	0.00	0.00	0.00	0.00	720	360	0.00	0.01	0.00	0.00	0.00	0.00	2	2.1E-05	0.00	2	237	2
Program Increment	2035	Dry Bulk	Regional	aggregate	62	227	2	28148	5.22	89.38	30.79	0.86	14.16	4.49	0.38	81720	10,133,280	0.94	16.09	5.54	0.16	0.07	0.07	14790	0.03955	0.48	14934	1449083	11350
Program Increment	2035	Dry Bulk	Onsite	10	0.5	227	2	227	0.25	8.51	1.48	0.01	0.12	0.04	0.01	81720	81,720	0.05	1.53	0.27	0.00	0.00	0.00	202	0.00191	0.01	204	19772	155
Program Increment	2035	Dry Bulk	on Harbor	40	1.6	227	2	726.4	0.12	1.37	0.71	0.02	0.37	0.12	0.01	81720	261,504	0.02	0.25	0.13	0.00	0.00	0.00	380	0.00091	0.01	384	37243	292
Program Increment	2035	Dry Bulk	on Cesar Chavez	25	0.3	227	2	136.2	0.06	0.90	0.33	0.00	0.07	0.02	0.00	81720	49,032	0.01	0.16	0.06	0.00	0.00	0.00	82	0.00043	0.00	83	8025	63
Program Increment	2035	Dry Bulk	on 28th	25	0.3	227	2	136.2	0.06	0.90	0.33	0.00	0.07	0.02	0.00	81720	49,032	0.01	0.16	0.06	0.00	0.00	0.00	82	0.00043	0.00	83	8025	63
Program Increment	2035	Dry Bulk	idling	idling	0.25	227	2	113.5	0.13	3.88	0.47	0.01	0.06	0.02	0.00	81720	40,860	0.02	0.70	0.08	0.00	0.00	0.00	227	0.00097	0.01	230	22279	230
Program Increment	2035	Refrigerated Containers	Regional	aggregate	62	159	2	19716	3.65	62.61	21.57	0.61	9.92	3.15	0.27	57240	7,097,760	0.66	11.27	3.88	0.11	0.05	0.05	10360	0.02771	0.34	10461	1014996	7950
Program Increment	2035	Refrigerated Containers	Onsite	10	0.5	159	2	159	0.18	5.96	1.04	0.01	0.08	0.03	0.00	57240	57,240	0.03	1.07	0.19	0.00	0.00	0.00	141	0.00133	0.00	143	13849	108
Program Increment	2035	Refrigerated Containers	on Harbor	40	1.6	159	2	508.8	0.08	0.96	0.50	0.02	0.26	0.08	0.01	57240	183,168	0.02	0.17	0.09	0.00	0.00	0.00	266	0.00064	0.01	269	26087	204
Program Increment	2035	Refrigerated Containers	on Cesar Chavez	25	0.3	159	2	95.4	0.04	0.63	0.23	0.00	0.05	0.02	0.00	57240	34,344	0.01	0.11	0.04	0.00	0.00	0.00	57	0.0003	0.00	58	5621	44
Program Increment	2035	Refrigerated Containers	on 28th	25	0.3	159	2	95.4	0.04	0.63	0.23	0.00	0.05	0.02	0.00	57240	34,344	0.01	0.11	0.04	0.00	0.00	0.00	57	0.0003	0.00	58	5621	44
Program Increment	2035	Refrigerated Containers	idling	idling	0.25	159	2	79.5	0.09	2.72	0.33	0.01	0.04	0.01	0.00	57240	28,620	0.02	0.49	0.06	0.00	0.00	0.00	159	0.00068	0.01	161	15605	161
Program Increment	2035	Neo-Bulk	Regional	aggregate	62	31	2	3844	0.71	12.21	4.21	0.12	1.93	0.61	0.05	11160	1,383,840	0.13	2.20	0.76	0.02	0.01	0.01	2020	0.0054	0.07	2039	197892	1550
Program Increment	2035	Neo-Bulk	Onsite	10	0.5	31	2	31	0.03	1.16	0.20	0.00	0.02	0.01	0.00	11160	11,160	0.01	0.21	0.04	0.00	0.00	0.00	28	0.00026	0.00	28	2700	21
Program Increment	2035	Neo-Bulk	on Harbor	40	1.6	31	2	99.2	0.02	0.19	0.10	0.00	0.05	0.02	0.00	11160	35,712	0.00	0.03	0.02	0.00	0.00	0.00	52	0.00012	0.00	52	5086	40
Program Increment	2035	Neo-Bulk	on Cesar Chavez	25	0.3	31	2	18.6	0.01	0.12	0.05	0.00	0.01	0.00	0.00	11160	6,696	0.00	0.02	0.01	0.00	0.00	0.00	11	5.8E-05	0.00	11	1096	9
Program Increment	2035	Neo-Bulk	on 28th	25	0.3	31	2	18.6	0.01	0.12	0.05	0.00	0.01	0.00	0.00	11160	6,696	0.00	0.02	0.01	0.00	0.00	0.00	11	5.8E-05	0.00	11	1096	9
Program Increment	2035	Neo-Bulk	idling	idling	0.25	31	2	15.5	0.02	0.53	0.06	0.00	0.01	0.00	0.00	11160	5,580	0.00	0.10	0.01	0.00	0.00	0.00	31	0.00013	0.00	31	3043	31
STC Increment	2035	Dry Bulk	Regional	aggregate	62	163	2	20212	3.74	64.18	22.11	0.62	10.17	3.23	0.27	58680	7,276,320	0.67	11.55	3.98	0.11	0.05	0.05	10620	0.0284	0.35	10724	1040531	8150
STC Increment	2035	Dry Bulk	Onsite	10	0.5	163	2	163	0.18	6.11	1.07	0.01	0.08	0.03	0.00	58680	58,680	0.03	1.10	0.19	0.00	0.00	0.00	145	0.00137	0.00	146	14197	111
STC Increment	2035	Dry Bulk	on Harbor	40	1.6	163	2	521.6	0.09	0.98	0.51	0.02	0.26	0.08	0.01	58680	187,776	0.02	0.18	0.09	0.00	0.00	0.00	273	0.00065	0.01	276	26743	209
STC Increment	2035	Dry Bulk	on Cesar Chavez	25	0.3	163	2	97.8	0.04	0.65	0.24	0.00	0.05	0.02	0.00	58680	35,208	0.01	0.12	0.04	0.00	0.00	0.00	59	0.00031	0.00	59	5762	45
STC Increment	2035	Dry Bulk	on 28th	25	0.3	163	2	97.8	0.04	0.65	0.24	0.00	0.05	0.02	0.00	58680	35,208	0.01	0.12	0.04	0.00	0.00	0.00	59	0.00031	0.00	59	5762	45
STC Increment	2035	Dry Bulk	idling	idling	0.25	163	2	81.5	0.09	2.79	0.34	0.01	0.04	0.01	0.00	58680	29,340	0.02	0.50	0.06	0.00	0.00	0.00	163	0.00069	0.01	165	15998	125
STC Increment	2035	Refrigerated Containers	Regional	aggregate	62.00	104	2	12896	2.39	40.95	14.11	0.40	6.49	2.06	0.17	37440	4,642,560	0.43	7.37	2.54	0.07	0.03	0.03	6776	0.01812	0.22	6842	663897	5200
STC Increment	2035	Refrigerated Containers	Onsite	10	0.50	104	2	104	0.12	3.90	0.68	0.01	0.05	0.02	0.00	37440	37,440	0.02	0.70	0.12	0.00	0.00	0.00	92	0.00087	0.00	93	9058	71
STC Increment	2035	Refrigerated Containers	on Harbor	40	1.60	104	2	332.8	0.06	0.63	0.33	0.01	0.17	0.05	0.00	37440	119,808	0.01	0.11	0.06	0.00	0.00	0.00	174	0.00042	0.01	176	17063	134
STC Increment	2035	Refrigerated Containers	on Cesar Chavez	25	0.30	104	2	62.4	0.03	0.41	0.15	0.00	0.03	0.01	0.00	37440	22,464	0.00	0.07	0.03	0.00	0.00	0.00	38	0.0002	0.00	38	3677	29
STC Increment	2035	Refrigerated Containers	on 28th	25	0.30	104	2	62.4	0.03	0.41	0.15	0.00	0.03	0.01	0.00	37440	22,464	0.00	0.07	0.03	0.00	0.00	0.00	38	0.0002	0.00	38	3677	29
STC Increment	2035	Refrigerated Containers	idling	idling	0.25	104	2	52	0.06	1.78	0.22	0.01	0.03	0.01	0.00	37440	18,720	0.01	0.32	0.04	0.00	0.00	0.00	104	0.00044	0.00	105	10207	80
STC Increment	2035	Neo-Bulk	Regional	aggregate	62.00	23	2	2852	0.53	9.06	3.12	0.09	1.43	0.46	0.04	8280	1,026,720	0.10	1.63	0.56	0.02	0.01	0.01	1499	0.00401	0.05	1513	146823	1150
STC Increment	2035	Neo-Bulk	Onsite	10	0.50	23	2	23	0.03	0.86	0.15	0.00	0.01	0.00	0.00	8280	8,280	0.00	0.16	0.03	0.00	0.00	0.00	20	0.00019	0.00	21	2003	16
STC Increment	2035	Neo-Bulk	on Harbor	40	1.60	23	2	73.6	0.01	0.14	0.07	0.00	0.04	0.01	0.00	8280	26,496	0.00	0.02	0.01	0.00	0.00	0.00	39	9.2E-05	0.00	39	3774	30
STC Increment	2035	Neo-Bulk	on Cesar Chavez	25	0.30	23	2	13.8	0.01	0.09	0.03	0.00	0.01	0.00	0.00	8280	4,968	0.00	0.02	0.01	0.00	0.00	0.00	8	4.3E-05	0.00	8	813	6
STC Increment	2035	Neo-Bulk	on 28th	25	0.30	23	2	13.8	0.01	0.09	0.03	0.00	0.01	0.00	0.00	8280	4,968	0.00	0.02	0.01	0.00	0.00	0.00	8	4.3E-05	0.00	8	813	6
STC Increment	2035	Neo-Bulk	idling	idling	0.25	23	2	11.5	0.01	0.39	0.05	0.00	0.01	0.00	0.00	8280	4,140	0.00	0.07	0.01	0.00	0.00	0.00	23	9.8E-05	0.00	23	2257	18

Worker Trip Emissions

Condition	Year	cargo	location	Speed	VMT per trip (or idle hrs)	Daily ADT/VMT Trip Gen	Trips per	VMT (idle) per day	Daily Emissions (pounds) ROG	NOX	CO	SOX	PM10	PM2.5	Annual ADT/VMT Trips/Yr	VMT (idle) per year	Annual Emissions (tons) ROG	NOX	CO	SOX	PM10	PM2.5	Annual Emissions (MT) CO2	CH4	N2O	CO2e	Annual Gallons
Baseline	2013	Dry Bulk	Regional	aggregate	9.5	87	3	2491.516	0.37	1.22	11.02	0.02	1.48	0.48	31472	896,946	0.066	0.220	1.984	0.004	0.047	0.020	349	0.01	0.01	352	39806
Baseline	2013	Liquid Bulk	Regional	aggregate	9.5	0	3	0	0.00	0.00	0.00	0.00	0.00	0.00	3422	97,534	0.007	0.024	0.216	0.000	0.005	0.002	38	0.00	0.00	38	4329
Baseline	2013	Refrigerated Containers	Regional	aggregate	9.5	192	3	5483.314	0.81	2.69	24.26	0.05	3.26	1.05	69263	1,973,993	0.146	0.484	4.367	0.009	0.104	0.044	769	0.03	0.02	775	87604
Baseline	2013	Neo-Bulk	Regional	aggregate	9.5	26	3	731.7406	0.11	0.36	3.24	0.01	0.44	0.14	9243	263,427	0.019	0.065	0.583	0.001	0.014	0.006	103	0.00	0.00	103	11691
Project Increment	2020	Dry Bulk	Regional	aggregate	9.5	0	3	0	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.000	0.000	0.000	0.000	0.000	0.000	0	0.00	0.00	0	0
Project Increment	2020	Liquid Bulk	Regional	aggregate	9.5	0	3	0	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.000	0.000	0.000	0.000	0.000	0.000	0	0.00	0.00	0	0
Project Increment	2020	Refrigerated Containers	Regional	aggregate	9.5	51	3	1447.503	0.07	0.32	2.90	0.01	0.86	0.28	18284	521,101	0.013	0.058	0.522	0.002	0.027	0.011	170	0.01	0.00	171	19358
Project Increment	2020	Neo-Bulk	Regional	aggregate	9.5	41	3	1174.497	0.06	0.26	2.35	0.01	0.70	0.22	14836	422,819	0.010	0.047	0.423	0.002	0.022	0.009	138	0.00	0.00	138	15707
Program Increment	2035	Dry Bulk	Regional	aggregate	9.5	274	3	7804.418	0.15	0.63	6.75	0.04	4.61	1.47	98582	2,809,591	0.027	0.114	1.216	0.007	0.142	0.058	592	0.01	0.00	594	67477
Program Increment	2035	Liquid Bulk	Regional	aggregate	9.5	0	3	0	0.00	0.00	0.00	0.00	0.00	0.00	8308	236,777	0.002	0.010	0.102	0.001	0.012	0.005	50	0.00	0.00	50	5687
Program Increment	2035	Refrigerated Containers	Regional	aggregate	9.5	120	3	3406.157	0.06	0.28	2.95	0.02	2.01	0.64	43025	1,226,216	0.012	0.050	0.531	0.003	0.062	0.025	258	0.01	0.00	259	29450
Program Increment	2035	Neo-Bulk	Regional	aggregate	9.5	108	3	3065.711	0.06	0.25	2.65	0.01	1.81	0.58	38725	1,103,656	0.010	0.045	0.478	0.003	0.056	0.023	233	0.01	0.00	233	26506
STC Increment	2035	Dry Bulk	Regional	aggregate	9.5	274	3	7804.418	0.15	0.63	6.75	0.04	4.61	1.47	98582	2,809,591	0.027	0.114	1.216	0.007	0.142	0.058	592	0.01	0.00	594	67477
STC Increment	2035	Liquid Bulk	Regional	aggregate	9.5	0	3	0	0.00	0.00	0.00	0.00	0.00	0.00	8308	236,777	0.002	0.010	0.102	0.001	0.012	0.005	50	0.00	0.00	50	5687
STC Increment	2035	Refrigerated Containers	Regional	aggregate	9.5	120	3	3406.157	0.06	0.28	2.95	0.02	2.01	0.64	43025	1,226,216	0.012	0.050	0.531	0.003	0.062	0.025	258	0.01	0.00	259	29450
STC Increment	2035	Neo-Bulk	Regional	aggregate	9.5	108	3	3065.711	0.06	0.25	2.65	0.01	1.81	0.58	38725	1,103,656	0.010	0.045	0.478	0.003	0.056	0.023	233	0.01	0.00	233	26506

Emission Factor Summary

		speed	metric	year		ROG	NOX	CO	SOX	PM10	PM2.5	CO2	CH4	N2O
Trucks	regional	aggregate	g/vmt	2013/2014	aggregate2013/2014	0.19	10.17	0.62	0.02	0.06	0.06	1760.56	0.009	calculated off fuel in calcs
	travel on Harbor Dr	40	g/vmt	2013/2014	402013/2014	0.16	9.80	0.56	0.02	0.0517	0.05	1737.89	0.007	
	travel on Cesar Chavez	25	g/vmt	2013/2014	252013/2014	0.34	11.77	1.06	0.02	0.0616	0.06	2054.17	0.016	
	travel on 28th St	25	g/vmt	2013/2014	252013/2014	0.34	11.77	1.06	0.02	0.0616	0.06	2054.17	0.016	
	onsite	10	g/vmt	2013/2014	102013/2014	1.31	23.35	2.91	0.03	0.13	0.12	3206.53	0.061	
	idling	idling	g/idle-hr	2013/2014	idling2013/2014	1.41	83.01	6.42	0.07	0.08	0.08	7103.03	0.065	
	regional	aggregate	g/vmt	2020	aggregate2020	0.17	4.93	0.66	0.02	0.02	0.02	1668.84	0.008	
	travel on Harbor Dr	40	g/vmt	2020	402020	0.15	4.63	0.58	0.02	0.0231	0.02	1663.11	0.007	
	travel on Cesar Chavez	25	g/vmt	2020	252020	0.38	6.70	1.45	0.02	0.0288	0.03	1946.65	0.018	
	travel on 28th St	25	g/vmt	2020	252020	0.38	6.70	1.45	0.02	0.0288	0.03	1946.65	0.018	
	onsite	10	g/vmt	2020	102020	1.03	16.29	3.89	0.03	0.04	0.04	2875.40	0.048	
	idling	idling	g/idle-hr	2020	idling2020	1.27	33.79	5.03	0.06	0.01	0.01	6724.03	0.059	
	regional	aggregate	g/vmt	2035	aggregate2035	0.08	1.44	0.50	0.01	0.01	0.01	1459.55	0.004	
	travel on Harbor Dr	40	g/vmt	2035	402035	0.08	0.85	0.44	0.01	0.01	0.01	1453.61	0.003	
	travel on Cesar Chavez	25	g/vmt	2035	252035	0.19	3.00	1.11	0.02	0.01	0.01	1670.43	0.009	
	travel on 28th St	25	g/vmt	2035	252035	0.19	3.00	1.11	0.02	0.01	0.01	1670.43	0.009	
	onsite	10	g/vmt	2035	102035	0.50	17.01	2.96	0.02	0.01	0.01	2469.38	0.023	
	idling	idling	g/idle-hr	2035	idling2035	0.51	15.51	1.88	0.05	0.00	0.00	5565.14	0.024	
	All travel	bwtw	g/vmt	All						0.098	0.035			
	All travel	road dust	g/vmt	All						0.124	0.031			
Employees	regional	aggregate	g/vmt	2013	aggregate2013	0.07	0.22	2.01	0.00	0.05	0.02	389.54	0.01	0.009
	regional	aggregate	g/vmt	2020	aggregate2020	0.02	0.10	0.91	0.00	0.05	0.02	326.07	0.01	0.004
	regional	aggregate	g/vmt	2035	aggregate2035	0.01	0.04	0.39	0.00	0.05	0.02	210.81	0.005	0.002

Metrics

0.001	kW to MW	
52	weeks/yr	
360	days/year	
24	hours/day	
10.76391	m2 to ft2	
0.001	kw to mw	
1000	kg/mt	
0.002204623	grams to pounds	
1.00E-06	g to MT	
0.000453592	lbs to MT	
0.0005	lbs to ton	
1.10E-06	grams to ton	
0.000025	N2O_CO2 Diesel Equipment	Climate Registry 2015
0.000057	CH4_CO2 Diesel Equipment	Climate Registry 2015
2	trips per truck	
3	trips per empoyee	
9.5	employee trip length	Caleemod, C-W, urban SD
8.7775	kg CO2/gallon gas	Climate Registry 2016
10.21	kg CO2/gallon diesel	Climate Registry 2016
25	GWP CH4	
298	GWP N2O	
0.1243374	road dust ef (g/vmt) PM10	
0.03108435	road dust ef (g/vmt) Pm2.5	
0.3316	N2O g/gallon - diesel	http://www.arb.ca.gov/msei/emfac2011-faq.htm#emfac2011_web_db_qstn07
4.16%	N2O - fraction of NOX	

Phase 2 Truck Standards - GHG Reduction Calc

EMFAC Output

EMFAC2014 (v1.0.7) Emission Rates
Region Type: County
Region: San Diego
Calendar Year: 2035
Season: Annual
Vehicle Classification: EMFAC2011 Categories
Units: miles/day for VMT, trips/day for Trips, g/mile for RUNEX, PMBW and PMTW, g/trip for STREX, HTSK and RUNLS, g/vehicle/day for IDLEX, RE

Region	CalYr	VehClass	MdlYr	Speed	Fuel	Population	VMT	Trips	CO2_RUNEX
San Diego	2035	T7 other port	2018	Aggregated	DSL	1	119	0	1459.550752
San Diego	2035	T7 other port	2019	Aggregated	DSL	3	314	0	1459.550752
San Diego	2035	T7 other port	2020	Aggregated	DSL	7	796	0	1459.550752
San Diego	2035	T7 other port	2021	Aggregated	DSL	10	1332	0	1459.550752
San Diego	2035	T7 other port	2022	Aggregated	DSL	15	2003	0	1459.550752
San Diego	2035	T7 other port	2023	Aggregated	DSL	158	23209	0	1459.550752
San Diego	2035	T7 other port	2024	Aggregated	DSL	62	9699	0	1459.550752
San Diego	2035	T7 other port	2025	Aggregated	DSL	74	12405	0	1459.550752
San Diego	2035	T7 other port	2026	Aggregated	DSL	83	14958	0	1459.550752
San Diego	2035	T7 other port	2027	Aggregated	DSL	87	16992	0	1459.550752
San Diego	2035	T7 other port	2028	Aggregated	DSL	82	17156	0	1459.550752
San Diego	2035	T7 other port	2029	Aggregated	DSL	62	13981	0	1459.550752
San Diego	2035	T7 other port	2030	Aggregated	DSL	8	1862	0	1459.550752
San Diego	2035	T7 other port	2031	Aggregated	DSL	2	599	0	1459.550752
San Diego	2035	T7 other port	2032	Aggregated	DSL	1	221	0	1459.550752
San Diego	2035	T7 other port	2033	Aggregated	DSL	0	132	0	1459.550752
San Diego	2035	T7 other port	2034	Aggregated	DSL	3	955	0	1459.550752
San Diego	2035	T7 other port	2035	Aggregated	DSL	4	1117	0	1459.550752

VMT		
	T7 other port	117849.0847
	All T7	2418443.088

CO2 calc

MY	VMT	%of VMT	Phase 2 reduction	CO2 run w/o ph2 (from EMFAC)	CO2 run w ph2	
2018	119	0%	0	1459.550752	1459.551	
2019	314	0%	0	1459.550752	1459.551	
2020	796	1%	0	1459.550752	1459.551	
2021	1332	1%	10%	1459.550752	1306.657	
2022	2003	2%	10%	1459.550752	1306.657	
2023	23209	20%	10%	1459.550752	1306.657	
2024	9699	8%	15%	1459.550752	1236.494	
2025	12405	11%	15%	1459.550752	1236.494	
2026	14958	13%	15%	1459.550752	1236.494	
2027	16992	14%	19%	1459.550752	1177.158	
2028	17156	15%	19%	1459.550752	1177.158	
2029	13981	12%	19%	1459.550752	1177.158	
2030	1862	2%	19%	1459.550752	1177.158	
2031	599	1%	19%	1459.550752	1177.158	
2032	221	0%	19%	1459.550752	1177.158	
2033	132	0%	19%	1459.550752	1177.158	
2034	955	1%	19%	1459.550752	1177.158	
2035	1117	1%	19%	1459.550752	1177.158	
2036	0	0%	19%	0	0	(no 2036 MY assumed)
	117849	100%		1459.550752	1227.932	g/vmt
	TRUE				15.9%	=reduction in 2035

All		MY 2021 and older
	T7 other port	1.0%
	All T7	4.1%

phase 2 reduction based on MDHD EIS; compiled by ICF

Table 2.2.2-3. Alternative 3 – Preferred Classes 7–8 Tractor Standards

	Day Cab		Sleeper Cab	Heavy-Haul
2021–2023 Model Year CO_2 Grams per Ton-Mile				
	Class 7	**Class 8**	**Class 8**	**Class 8**
Low Roof	105.5	80.5	72.3	52.4
Mid Roof	113.2	85.4	78	
High Roof	113.5	85.6	75.7	
2021–2023 Model Year Gallons of Fuel per 1,000 Ton-Mile				
	Day Cab		**Sleeper Cab**	**Heavy-Haul**
	Class 7	**Class 8**	**Class 8**	**Class 8**
Low Roof	10.36346	7.90766	7.10216	5.14735
Mid Roof	11.11984	8.389	7.66208	
High Roof	11.14931	8.40864	7.43615	
2024–2026 Model Year CO_2 Grams per Ton-Mile				
	Day Cab		**Sleeper Cab**	**Heavy-Haul**
	Class 7	**Class 8**	**Class 8**	**Class 8**
Low Roof	99.8	76.2	68	50.2
Mid Roof	107.1	80.9	73.5	
High Roof	106.6	80.4	70.7	
2024–2026 Model Year Gallons of Fuel per 1,000 Ton-Mile				
	Day Cab		**Sleeper Cab**	**Heavy-Haul**
	Class 7	**Class 8**	**Class 8**	**Class 8**
Low Roof	9.80354	7.48527	6.67976	4.93124
Mid Roof	10.52063	7.94695	7.22004	
High Roof	10.47151	7.89784	6.94499	
2027 Model Year and Later CO_2 Grams per Ton-Mile				
	Day Cab		**Sleeper Cab**	**Heavy-Haul**
	Class 7	**Class 8**	**Class 8**	**Class 8**
Low Roof	96.2	73.4	64.1	48.3
Mid Roof	103.4	78	69.6	
High Roof	100	75.7	64.3	
2027 Model Year and Later Gallons of Fuel per 1,000 Ton-Mile				
	Day Cab		**Sleeper Cab**	**Heavy-Haul**
	Class 7	**Class 8**	**Class 8**	**Class 8**
Low Roof	9.4499	7.21022	6.29666	4.7446
Mid Roof	10.15717	7.66208	6.83694	
High Roof	9.82318	7.43615	6.31631	

	Class 7	Class 8	Class 8	Class 8	
	10%	10%	12%	10%	
	10%	10%	12%		
	10%	10%	12%		avg
avg	**10%**	**10%**	**12%**	**10%**	10%
	% better				
	15%	15%	17%	14%	
	15%	15%	17%		
	16%	16%	18%		avg
avg	**15%**	**15%**	**17%**	**14%**	15%
	18%	18%	22%	17%	
	18%	18%	21%		
	21%	20%	25%		avg
avg	**19%**	**19%**	**23%**	**17%**	19%

EMFAC Run just for Truck Model Year

EMFAC2014 (v1.0.7) Emissions Inventory
Region Type: County
Region: San Diego
Calendar Year: 2016
Season: Annual
Vehicle Classification: EMFAC2011 Categories
Units: miles/day for VMT, trips/day for Trips, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

Region	CalYr	VehClass	MdlYr	Speed	Fuel	Population	VMT	*pop %, for weighting*
San Diego	2016	T7 other port	2008	Aggregatec	DSL	93.8848	14839.65	*24%*
San Diego	2016	T7 other port	2009	Aggregatec	DSL	79.33749	13510.55	*20%*
San Diego	2016	T7 other port	2010	Aggregatec	DSL	54.64592	9998.812	*14%*
San Diego	2016	T7 other port	2011	Aggregatec	DSL	27.96575	5468.021	*7%*
San Diego	2016	T7 other port	2012	Aggregatec	DSL	26.35865	5461.131	*7%*
San Diego	2016	T7 other port	2013	Aggregatec	DSL	26.35865	5720.318	*7%*
San Diego	2016	T7 other port	2014	Aggregatec	DSL	26.35865	5902.053	*7%*
San Diego	2016	T7 other port	2015	Aggregatec	DSL	26.35865	5972.404	*7%*
San Diego	2016	T7 other port	2016	Aggregatec	DSL	26.35865	5972.404	*7%*
						387.6272	72845.35	2011 = average model year

Line-haul and Switching Emission Calculations

Daily

		Existing												
2013		Emission Rates							Pounds per Day					
Activity	Node	hp-hrs	ROG	NOX	CO	PM10	PM2.5	SO2	ROG	NOX	CO	PM10	PM2.5	SO2
Line Haul	Bulk	21,099	0.20	5.30	0.63	0.13	0.13	0.02	9.1	246.6	29.4	6.2	6.0	1.1
	Intermodal+Auto	21,099	0.20	5.30	0.63	0.13	0.13	0.02	9.1	246.6	29.4	6.2	6.0	1.1
	total line haul	*42,198*							*18.3*	*493.3*	*58.9*	*12.3*	*12.0*	*2.1*
Switcher	Bulk	1,231	0.43	10.6	0.4	0.16	0.16	0.01	1.2	28.8	1.1	0.4	0.4	0.0
	Intermodal+Auto	2,633	0.43	10.6	0.4	0.16	0.16	0.01	2.5	61.5	2.3	0.9	0.9	0.0
	total switching	*3,864*							*3.7*	*90.3*	*3.4*	*1.4*	*1.3*	*0.1*

		Project 2020												
2020		Emission Rates							Pounds per Day					
Activity	Node	hp-hrs	ROG	NOX	CO	PM10	PM2.5	SO2	ROG	NOX	CO	PM10	PM2.5	SO2
Line Haul	Bulk	21,099	0.17	4.55	0.54	0.11	0.11	0.02	7.9	211.7	25.3	5.3	5.2	1.1
	Intermodal+Auto	21,099	0.17	4.55	0.54	0.11	0.11	0.02	7.9	211.7	25.3	5.3	5.2	1.1
	total line haul								*15.8*	*423.4*	*50.6*	*10.7*	*10.3*	*2.1*
Switcher	Bulk	1,231	0.43	10.6	0.4	0.16	0.16	0.01	1.2	28.8	1.1	0.4	0.4	0.0
	Intermodal+Auto	2,633	0.43	10.6	0.4	0.16	0.16	0.01	2.5	61.5	2.3	0.9	0.9	0.0
	total switching								*3.7*	*90.3*	*3.4*	*1.4*	*1.3*	*0.1*

		Plan 2035, MPC												
2035		Emission Rates							Pounds per Day					
Activity	Node	hp-hrs	ROG	NOX	CO	PM10	PM2.5	SO2	ROG	NOX	CO	PM10	PM2.5	SO2
Line Haul	Bulk	21,099	0.10	3.05	0.29	0.07	0.06	0.02	4.7	141.9	13.3	3.1	3.0	1.1
	Intermodal+Auto	36,961	0.10	3.05	0.29	0.07	0.06	0.02	8.3	248.5	23.2	5.5	5.3	1.9
	total line haul	*58,060*							*13.1*	*390.4*	*36.5*	*8.6*	*8.3*	*2.9*
Switcher	Bulk	1,231	0.43	10.6	0.4	0.16	0.16	0.01	1.2	28.8	1.1	0.4	0.4	0.0
	Intermodal+Auto	2,633	0.43	10.6	0.4	0.16	0.16	0.01	2.5	61.5	2.3	0.9	0.9	0.0
	total switching	*3,864*							*3.7*	*90.3*	*3.4*	*1.4*	*1.3*	*0.1*

		Plan 2035, STC												
2035		Emission Rates							Pounds per Day					
Activity	Node	hp-hrs	ROG	NOX	CO	PM10	PM2.5	SO2	ROG	NOX	CO	PM10	PM2.5	SO2
Line Haul	Bulk	21,099	0.10	3.05	0.29	0.07	0.06	0.02	4.7	141.9	13.3	3.1	3.0	1.1
	Intermodal+Auto	36,961	0.10	3.05	0.29	0.07	0.06	0.02	8.3	248.5	23.2	5.5	5.3	1.9
	total line haul	*58,060*							*13.1*	*390.4*	*36.5*	*8.6*	*8.3*	*2.9*
Switcher	Bulk	1,231	0.43	10.6	0.4	0.16	0.16	0.01	1.2	28.8	1.1	0.4	0.4	0.0
	Intermodal+Auto	2,633	0.43	10.6	0.4	0.16	0.16	0.01	2.5	61.5	2.3	0.9	0.9	0.0
	total switching	*3,864*							*3.7*	*90.3*	*3.4*	*1.4*	*1.3*	*0.1*

Line-haul and Switching Emission Calculations

Annual

			Existing									
2013			Tons per Year						MT per year			
Activity	Node	hp-hrs	ROG	NOX	CO	PM10	PM2.5	SO2	CO2	CH4	N2O	CO2eq
Line Haul	Bulk	464,179	0.1	2.7	0.3	0.1	0.1	0.0	229.3	0.0	0.0	232
	Intermodal+Auto	250,931	0.1	1.5	0.2	0.0	0.0	0.0	124.0	0.0	0.0	125
	total line haul		*0.2*	*4.2*	*0.5*	*0.1*	*0.1*	*0.0*	*353.3*	*0.0*	*0.0*	*357*
Switcher	Bulk	27,082	0.0	0.3	0.0	0.0	0.0	0.0	18.4	0.0	0.0	19
	Intermodal+Auto	36,861	0.0	0.4	0.0	0.0	0.0	0.0	25.0	0.0	0.0	25
	total switching		*0.0*	*0.7*	*0.0*	*0.0*	*0.0*	*0.0*	*43.4*	*0.0*	*0.0*	*44*

			Project 2020									
2020			Tons per Year						MT per year			
Activity	Node	hp-hrs	ROG	NOX	CO	PM10	PM2.5	SO2	CO2	CH4	N2O	CO2eq
Line Haul	Bulk	464,179	0.1	2.3	0.3	0.1	0.1	0.0	229.3	0.0	0.0	232
	Intermodal+Auto	338,117	0.1	1.7	0.2	0.0	0.0	0.0	167.0	0.0	0.0	169
	total line haul		*0.2*	*4.0*	*0.5*	*0.1*	*0.1*	*0.0*	*396.3*	*0.0*	*0.0*	*400*
Switcher	Bulk	27,082	0.0	0.3	0.0	0.0	0.0	0.0	18.4	0.0	0.0	19
	Intermodal+Auto	50,026	0.0	0.6	0.0	0.0	0.0	0.0	33.9	0.0	0.0	34
	total switching		*0.0*	*0.9*	*0.0*	*0.0*	*0.0*	*0.0*	*52.3*	*0.0*	*0.0*	*53*

			Plan 2035, MPC									
2035			Tons per Year						MT per year			
Activity	Node	hp-hrs	ROG	NOX	CO	PM10	PM2.5	SO2	CO2	CH4	N2O	CO2eq
Line Haul	Bulk	4,219,806	0.5	14.2	1.3	0.3	0.3	0.1	2084.6	0.2	0.1	2105
	Intermodal+Auto	2,535,838	0.3	8.5	0.8	0.2	0.2	0.1	1252.7	0.1	0.0	1265
	total line haul		*0.8*	*22.7*	*2.1*	*0.5*	*0.5*	*0.2*	*3337.3*	*0.3*	*0.1*	*3370*
Switcher	Bulk	246,197	0.1	2.9	0.1	0.0	0.0	0.0	166.9	0.0	0.0	168
	Intermodal+Auto	373,877	0.2	4.4	0.2	0.1	0.1	0.0	253.5	0.0	0.0	256
	total switching		*0.3*	*7.2*	*0.3*	*0.1*	*0.1*	*0.0*	*420.4*	*0.0*	*0.0*	*424*

			Plan 2035, STC									
2035			Tons per Year						MT per year			
Activity	Node	hp-hrs	ROG	NOX	CO	PM10	PM2.5	SO2	CO2	CH4	N2O	CO2eq
Line Haul	Bulk	3,164,855	0.4	10.6	1.0	0.2	0.2	0.1	1563.4	0.1	0.0	1579
	Intermodal+Auto	1,901,878	0.2	6.4	0.6	0.1	0.1	0.0	939.5	0.1	0.0	949
	total line haul		*0.6*	*17.0*	*1.6*	*0.4*	*0.4*	*0.1*	*2503.0*	*0.2*	*0.1*	*2528*
Switcher	Bulk	184,648	0.1	2.2	0.1	0.0	0.0	0.0	125.2	0.0	0.0	126
	Intermodal+Auto	280,408	0.1	3.3	0.1	0.0	0.0	0.0	190.1	0.0	0.0	192
	total switching		*0.2*	*5.4*	*0.2*	*0.1*	*0.1*	*0.0*	*315.3*	*0.0*	*0.0*	*318*

Railcar Mover

	ROG	NOX	CO	PM10	PM2.5	SO2
g/hp-hr	0.04	2.91	1.36	0.12	0.12	4.881E-05

daily

MPC		lbs per day					
	hp-hrs	ROG	NOX	CO	PM10	PM2.5	SO2
Bulk	600	0.05	3.85	1.79	0.16	0.15	0.00
Intermodal+Auto	300	0.03	1.92	0.90	0.08	0.08	0.00
total railcar MPC		*0.08*	*5.77*	*2.69*	*0.24*	*0.23*	*0.00*
STC	600	0.05	3.85	1.79	0.16	0.15	0.00
	300	0.03	1.92	0.90	0.08	0.08	0.00
total railcar STC		*0.08*	*5.77*	*2.69*	*0.24*	*0.23*	*0.00*
existing							
Bulk	300	0.03	1.92	0.90	0.08	0.08	0.00
Intermodal+Auto	300	0.03	1.92	0.90	0.08	0.08	0.00
total railcar existing		*0.05*	*3.85*	*1.79*	*0.16*	*0.15*	*0.00*
Project 2020							
Bulk	300	0.03	1.92	0.90	0.08	0.08	0.00
Intermodal+Auto	300	0.03	1.92	0.90	0.08	0.08	0.00
total railcar Project 2020		*0.05*	*3.85*	*1.79*	*0.16*	*0.15*	*0.00*

Railcar Mover

	ROG	NOX	CO	PM10	PM2.5	SO2	CO2	CH4	N2O
g/hp-hr	0.04	2.91	1.36	0.12	0.12	0.00	530.91	0.03	0.01

annual

MPC		Tons per Year									
	hp-hrs	ROG	NOX	CO	PM10	PM2.5	SO2	CO2	CH4	N2O	CO2eq
Bulk	120000	0.01	0.38	0.18	0.02	0.02	0.00	64	0.00	0.00	64
Intermodal+Auto	85200	0.00	0.27	0.13	0.01	0.01	0.00	45	0.00	0.00	46
total railcar MPC		*0.01*	*0.66*	*0.31*	*0.03*	*0.03*	*0.00*	*109*	*0.01*	*0.00*	*110*
STC	90000	0.00	0.29	0.13	0.01	0.01	0.00	48	0.00	0.00	48
	63900	0.00	0.20	0.10	0.01	0.01	0.00	34	0.00	0.00	34
total railcar STC		*0.01*	*0.49*	*0.23*	*0.02*	*0.02*	*0.00*	*82*	*0.00*	*0.00*	*82*
existing											
Bulk	13200	0.00	0.04	0.02	0.00	0.00	0.00	7	0.00	0.00	7
Intermodal+Auto	8400	0.00	0.03	0.01	0.00	0.00	0.00	4	0.00	0.00	4
total railcar existing		*0.00*	*0.07*	*0.03*	*0.00*	*0.00*	*0.00*	*11*	*0.00*	*0.00*	*12*
Project 2020											
Bulk	13200	0.00	0.04	0.02	0.00	0.00	0.00	7	0.00	0.00	7
Intermodal+Auto	11400	0.00	0.04	0.02	0.00	0.00	0.00	6	0.00	0.00	6
total railcar Project 2020		*0.00*	*0.08*	*0.04*	*0.00*	*0.00*	*0.00*	*13*	*0.00*	*0.00*	*13*

Line Haul Activity Calcs

node	in/outbound			# of locomotives active	idle	time (hrs)	loco HP	Load active (line-haul)	idling	Hp-hrs per trip	Trips per Year Existing	Project	Plan	Trips per Day Existing	Project	Plan	Hp-hrs per year Existing	Project	Plan	Hp-hrs per day Existing	Project	Plan	hp-hrs/yr STC	hp-hrs/day STC
Bulk	inbound	Without Dist Power	loaded	4	0	2.16	4,400	27.8%	0.4%	10,550	22	22	200	1	1	1	232,089	232,089	2,109,903	10,550	10,550	10,550	1,582,427	10,550
	outbound	Without Dist Power	loaded	4	0	2.16	4,400	27.8%	0.4%	10,550	22	22	200	1	1	1	232,089	232,089	2,109,903	10,550	10,550	10,550	1,582,427	10,550
	inbound	Without Dist Power	empty	1	3	2.16	4,400	27.8%	0.4%	2,751	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	outbound	Without Dist Power	empty	1	3	2.16	4,400	27.8%	0.4%	2,751	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Container	inbound	Without Dist Power	loaded	4	0	2.16	4,400	27.8%	0.4%	10,550	4	5	38	1	1	1	42,198	52,748	400,882	10,550	10,550	10,550	300,661	10,550
	outbound	Without Dist Power	loaded	4	0	2.16	4,400	27.8%	0.4%	10,550	7	9	70	1	1	1	73,847	94,946	738,466	10,550	10,550	10,550	553,850	10,550
	inbound	Without Dist Power	empty	3	1	2.16	4,400	27.8%	0.4%	7,950	3	4	32	1	1	1	23,850	31,801	254,405	7,950	7,950	7,950	190,804	7,950
	outbound	Without Dist Power	empty	2	2	2.16	4,400	27.8%	0.4%	5,351	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Auto	inbound	Without Dist Power	loaded	4	0	2.16	4,400	27.8%	0.4%	10,550	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	outbound	Without Dist Power	loaded	3	0	2.16	4,400	27.8%	0.4%	7,912	7	10	72	1	1	1	55,385	79,121	569,674	7,912	7,912	7,912	427,255	7,912
	inbound	Without Dist Power	empty	3	1	2.16	4,400	27.8%	0.4%	7,950	7	10	72	1	1	1	55,651	79,502	572,411	7,950	7,950	7,950	429,308	7,950
	outbound	Without Dist Power	empty	3	0	2.16	4,400	27.8%	0.4%	7,912	0	0	0	0	0	0	0	0	0	0	0	0	0	0
										round trips ->	72	82	684	1.0	1.0	2.0					modeling without dist power			
													612			1.5								
														12 per week										
											0.21		1.75	avg day										
													1.31											

Time = 1.6 miles from terminal to Ash ave at 10 mph; 60 miles from Ash Ave to OC

HP = always 4,400

Load = See LF calcs

Hp-hrs = weighted sum of active and idle locomotives

Switching Activity Calcs

node	in/outbound	active	time (hrs)	HP	Load	Hp-hrs per trip	Trips per Year Existing	Project	Plan	Trips per Day (rounded up) Existing	Project	Plan	Hp-hrs per year Existing	Project	Plan	Hp-hrs per day Existing	Project	Plan	hp-hrs/yr STC	hrs/day STC
Bulk	inbound	2	1	3,600	8.5%	615	22	22	200	1	1	1	13,541	13,541	123,098	615	615	615	92,324	615
	outbound	2	1	3,600	8.5%	615	22	22	200	1	1	1	13,541	13,541	123,098	615	615	615	92,324	615
Intermodal and Auto	inbound	4	1	4,400	8.5%	1,505	14	19	142	1	1	1	21,064	28,586	213,644	1,505	1,505	1,505	160,233	1,505
	outbound	3	1	4,400	8.5%	1,128	14	19	142	1	1	1	15,798	21,440	160,233	1,128	1,128	1,128	120,175	1,128
							72	82	684	1.0	1.0	2.0	63,943	77,107	620,074	3,864	3,864	3,864	465,055	3,864
									513											
350 work days/year																				
Railcar Mover																				
Bulk	both	1	1	300	100%	300	44	44	400	1	1	2	13,200	13,200	120,000	300	300	600	90,000	600
Intermodal and Auto	both	1	1	300	100%	300	28	38	284	1	1	1	8,400	11,400	85,200	300	300	300	63,900	300

Locomotive Emission Factors

	Name	Tier	HP	year	conc	NOX	PM10	ROG	CO	PM2.5	SO2	CO2	CH4	N2O	source
						Emission Factors (in g/bhp-hr)									
Switcher	GP-60	precont	3,600	2013	Switcher2013	10.6	0.16	0.43	0.4	0.16	0.01	678	0.05	0.02	NOX, CO, PM, HC from EPA cert data; others from POLB for tier 0 switchers
Line Haul		BNSF mix		2013	Line Haul2013	5.30	0.13	0.20	0.63	0.13	0.02	494	0.04	0.01	NOX, CO, PM, HC from EPA cert data; others from POLB for line-haul
Line Haul		BNSF mix		2020	Line Haul2020	4.55	0.11	0.17	0.54	0.11	0.02	494	0.04	0.01	NOX, CO, PM, HC from EPA cert data; others from POLB for line-haul
Line Haul		BNSF mix		2035	Line Haul2035	3.05	0.07	0.10	0.29	0.06	0.02	494	0.04	0.01	NOX, CO, PM, HC from EPA cert data; others from POLB for line-haul
Switcher	GP-60	precont	3,600	2020	Switcher2020	10.6	0.16	0.43	0.4	0.16	0.01	678	0.05	0.02	same as 2013, just for lookup (may change if fleet turnover assumed)
Switcher	GP-60	precont	3,600	2035	Switcher2035	10.6	0.16	0.43	0.4	0.16	0.01	678	0.05	0.02	same as 2013, just for lookup (may change if fleet turnover assumed)

Emission Factor Calculation by Year - Line Haul

BNSF Fleet Composition; California Air Resources Board web page
http://www.arb.ca.gov/railyard/1998agree/1998agree.htm
Railroad fleet turnover time (40 years); Environmental Protection Agency, Locomotive Emissions
Standards Regulatory Support Document, April 1998, page 15

		0	1	2	3	4		weighted g/bhp-hr									weighted grams per gallon								
	Pre Tier 0	Tier 0	Tier 1	Tier 2	Tier 3	Tier 4	Total	NOX	PM10	ROG	CO	PM2.5	SO2	CO2	CH4	N2O	NOX	PM10	ROG	CO	PM2.5	SO2	CO2	CH4	N2O
2013	0.2%	5.1%	24.0%	58.2%	12.5%	0.0%	100%	5.39	0.13	0.20	0.63	0.13	0.02	494	0.04	0.013	112.2	2.8	4.1	13.2	2.7	0.5	10275	0.8	0.3
2014	0.1%	4.7%	25.3%	53.9%	16.0%	0.0%	100%	5.21	0.13	0.20	0.63	0.13	0.02	494	0.04	0.013	108.4	2.8	4.1	13.2	2.7	0.5	10275	0.8	0.3
2015	0%	5%	25%	53%	16%	2%	100%	5.11	0.13	0.19	0.62	0.13	0.02	494	0.04	0.013	106.2	2.7	4.0	12.9	2.6	0.5	10275	0.8	0.3
2016	0%	4%	24%	52%	15%	4%	100%	4.99	0.13	0.19	0.61	0.12	0.02	494	0.04	0.013	103.8	2.6	3.9	12.6	2.6	0.5	10275	0.8	0.3
2017	0%	2%	24%	52%	15%	7%	100%	4.88	0.12	0.18	0.59	0.12	0.02	494	0.04	0.013	101.4	2.6	3.8	12.3	2.5	0.5	10275	0.8	0.3
2018	0%	1%	24%	51%	15%	9%	100%	4.77	0.12	0.18	0.58	0.12	0.02	494	0.04	0.013	99.1	2.5	3.7	12.0	2.4	0.5	10275	0.8	0.3
2019	0%	0%	24%	50%	15%	11%	100%	4.66	0.12	0.17	0.56	0.11	0.02	494	0.04	0.013	96.9	2.4	3.6	11.7	2.4	0.5	10275	0.8	0.3
2020	0%	0%	23%	50%	15%	13%	100%	4.55	0.11	0.17	0.54	0.11	0.02	494	0.04	0.013	94.7	2.4	3.5	11.3	2.3	0.5	10275	0.8	0.3
2021	0%	0%	21%	50%	15%	15%	100%	4.44	0.11	0.17	0.52	0.11	0.02	494	0.04	0.013	92.5	2.3	3.4	10.9	2.2	0.5	10275	0.8	0.3
2022	0%	0%	19%	50%	15%	17%	100%	4.34	0.11	0.16	0.50	0.10	0.02	494	0.04	0.013	90.3	2.2	3.3	10.5	2.2	0.5	10275	0.8	0.3
2023	0%	0%	17%	49%	15%	19%	100%	4.24	0.10	0.16	0.48	0.10	0.02	494	0.04	0.013	88.1	2.2	3.2	10.1	2.1	0.5	10275	0.8	0.3
2024	0%	0%	15%	49%	15%	21%	100%	4.13	0.10	0.15	0.47	0.10	0.02	494	0.04	0.013	86.0	2.1	3.1	9.7	2.0	0.5	10275	0.8	0.3
2025	0%	0%	14%	49%	15%	23%	100%	4.03	0.10	0.15	0.45	0.09	0.02	494	0.04	0.013	83.8	2.0	3.0	9.3	2.0	0.5	10275	0.8	0.3
2026	0%	0%	12%	49%	14%	25%	100%	3.93	0.09	0.14	0.43	0.09	0.02	494	0.04	0.013	81.7	2.0	2.9	8.9	1.9	0.5	10275	0.8	0.3
2027	0%	0%	10%	49%	14%	27%	100%	3.83	0.09	0.14	0.41	0.09	0.02	494	0.04	0.013	79.6	1.9	2.8	8.5	1.8	0.5	10275	0.8	0.3
2028	0%	0%	9%	48%	14%	29%	100%	3.73	0.09	0.13	0.39	0.09	0.02	494	0.04	0.013	77.5	1.8	2.7	8.1	1.8	0.5	10275	0.8	0.3
2029	0%	0%	7%	48%	14%	31%	100%	3.63	0.08	0.13	0.37	0.08	0.02	494	0.04	0.013	75.5	1.8	2.6	7.7	1.7	0.5	10275	0.8	0.3
2030	0%	0%	5%	48%	14%	32%	100%	3.53	0.08	0.12	0.35	0.08	0.02	494	0.04	0.013	73.4	1.7	2.5	7.4	1.6	0.5	10275	0.8	0.3
2031	0%	0%	4%	48%	14%	34%	100%	3.43	0.08	0.12	0.34	0.08	0.02	494	0.04	0.013	71.4	1.6	2.4	7.0	1.6	0.5	10275	0.8	0.3
2032	0%	0%	2%	48%	14%	36%	100%	3.33	0.08	0.11	0.32	0.07	0.02	494	0.04	0.013	69.3	1.6	2.4	6.6	1.5	0.5	10275	0.8	0.3
2033	0%	0%	0%	47%	14%	38%	100%	3.24	0.07	0.11	0.30	0.07	0.02	494	0.04	0.013	67.3	1.5	2.3	6.2	1.5	0.5	10275	0.8	0.3
2034	0%	0%	0%	45%	14%	40%	100%	3.14	0.07	0.11	0.29	0.07	0.02	494	0.04	0.013	65.4	1.4	2.2	6.0	1.4	0.5	10275	0.8	0.3
2035	0%	0%	0%	43%	14%	43%	100%	3.05	0.07	0.10	0.29	0.06	0.02	494	0.04	0.013	63.4	1.4	2.1	5.9	1.4	0.5	10275	0.8	0.3
2036	0%	0%	0%	40%	15%	46%	100%	2.95	0.06	0.10	0.28	0.06	0.02	494	0.04	0.013	61.4	1.3	2.1	5.8	1.3	0.5	10275	0.8	0.3
2037	0%	0%	0%	37%	15%	49%	100%	2.85	0.06	0.10	0.27	0.06	0.02	494	0.04	0.013	59.3	1.3	2.0	5.7	1.2	0.5	10275	0.8	0.3
2038	0%	0%	0%	34%	15%	51%	100%	2.75	0.06	0.09	0.27	0.06	0.02	494	0.04	0.013	57.2	1.2	1.9	5.6	1.2	0.5	10275	0.8	0.3
2039	0%	0%	0%	30%	15%	54%	100%	2.64	0.06	0.09	0.26	0.05	0.02	494	0.04	0.013	55.0	1.2	1.8	5.4	1.1	0.5	10275	0.8	0.3
2040	0%	0%	0%	27%	16%	57%	100%	2.53	0.05	0.08	0.25	0.05	0.02	494	0.04	0.013	52.7	1.1	1.8	5.3	1.1	0.5	10275	0.8	0.3

from POLB, Table 5.5 (SO2) and 5.6 (GHGs). Constant over time.

	Pre Tier 0	Tier 0	Tier 1	Tier 2	Tier 3	Tier 4	
Avg./MW	2.82	25.43	44.67	93.89	55.26	55.26	
g/bhphr	Pre Tier 0	Tier 0	Tier 1	Tier 2	Tier 3	Tier 4	
NOX	13	7.7	6.4	4.6	4.6	1.00	pre-0 to Tier 3 from MOU webpage; Tier 4 from EPA technical highlights
PM	0.32	0.2	0.2	0.11	0.08	0.02	Tier 2-4 based on testing; other based on EPA technical highlights
HC	0.48	0.3	0.29	0.15	0.11	0.04	Tier 2-3 based on testing; other based on EPA technical highlights
CO	1.28	1.28	1.28	0.4	0.2	0.2	Tier 2-4 based on testing; other based on EPA technical highlights

conversions

HC to ROG	1.053	EPA 40 CFR part 1033 Technical Highlights
PM10 to PM2.5	0.97	EPA 40 CFR part 1033 Technical Highlights
g/hp-hr to g/gallon conve	20.8	EPA 40 CFR part 1033 Technical Highlights

References
EPA 40 CFR part 1033 Technical Highlights
http://www3.epa.gov/nonroad/locomotv/420f09025.pdf
EPA locmotive emission standards
http://www3.epa.gov/otaq/standards/nonroad/locomotives.htm
Port of Long Beach Inventory, Locomotives
http://www.polb.com/civica/filebank/blobdload.asp?BlobID=12245
EPA Certification Data
http://www3.epa.gov/otaq/certdata.htm#locomotive

Load Factor Calculations

% of full power in notch from POLB. Differs from RSD since RSD assigned no power to DB and idle (Table 5.8 of POLB)

http://www.polb.com/civica/filebank/blobdload.asp?BlobID=13033

Time in notch for line haul and swtich from RSD, and matches POLB and 2012 rulemaking

http://www3.epa.gov/otaq/documents/420r98101.pdf

https://www.law.cornell.edu/cfr/text/40/1033.530

Load by activity -->		Switching		Regional, SDR to OC (Line-Haul)		Regional, SDR to Ash Ave (Line-Haul,Notch 2)		Idling Only	
Notch	**% of Full Power in Notch**	**% of Operating Time in Notch**	**% Full Power x % Time**	**% of Operating Time in Notch**	**% Full Power x % Time**	**% of Operating Time in Notch**	**% Full Power x % Time**	**% of Operating Time in Notch**	**% Full Power x % Time**
DB	2.1%	0.0%	0.0%	12.5%	0.3%	0.0%	0.0%	0.0%	0.0%
Idle	0.4%	59.8%	0.2%	38.0%	0.2%	0.0%	0.0%	100.0%	0.4%
1	5.0%	12.4%	0.6%	6.5%	0.3%	0.0%	0.0%	0.0%	0.0%
2	11.4%	12.3%	1.4%	6.5%	0.7%	100.0%	11.4%	0.0%	0.0%
3	23.5%	5.8%	1.4%	5.2%	1.2%	0.0%	0.0%	0.0%	0.0%
4	34.3%	3.6%	1.2%	4.4%	1.5%	0.0%	0.0%	0.0%	0.0%
5	48.1%	3.6%	1.7%	3.8%	1.8%	0.0%	0.0%	0.0%	0.0%
6	64.3%	1.5%	1.0%	3.9%	2.5%	0.0%	0.0%	0.0%	0.0%
7	86.6%	0.2%	0.2%	3.0%	2.6%	0.0%	0.0%	0.0%	0.0%
8	102.5%	0.8%	0.8%	16.2%	16.6%	0.0%	0.0%	0.0%	0.0%
		average load -->	**8.5%**		**27.8%**		**11.4%**		**0.4%**

Conversions

0.002204623	grams to pounds
0.00000100	g to MT
0.00000110	grams to ton
350	workdays per year
25	AR4 GWP, CH_4
298	AR4 GWP, N_2O
0.16	hours from TAMT to Ash Av (10 mph speed zone)
2.16	hours for entire trip, TAMT to OC border

Distances

268.8	mile marker, MTDB Yard
267.2	mile marker, CP Ash
1.6	mile distance from TAMT to Sante Fe Depot, limited to 10mph
267.2	mile marker, CP Ash
207.4	mile marker, OC County line
59.8	mile distance from Sante Fe Depot to OC Border, line-haul
61.4	entire length

source for mile markers:

http://www.socalrailfan.com/subdivisions/bnsf_sd_sub.html

10	mph speed til Ash Ave
0.5	NCMT to TAMT, hours
2.5	hours from NCMT to OC

TAMT CHE Emissions

Emissions based on POSD Inventory for 2012 year at TAMT (in tons)		days	360
Converted to daily based on360 days per year; average daily		lbs/ton	2000
Apportioned to each cargo type by percentage of throughput		tons to MT	0.907184741
Increased for Project and Plan based on increase in throughput for each cargo type			

TAMT CHE Emissions from Inventory, Table 4-5

Terminal		ROG	CO	NOx	SO2	PM a 10	PM2.5	CO2	CH4	N Ob 2	CO2e
CST		0.02	0.26	0.39	0.00	0.01	0.00	49	0.00	0.00	49
TAMT		0.68	4.00	7.59	0.01	0.19	0.17	1,172	0.21	0.00	1,176
NCMT		0.42	5.49	3.94	0.00	0.08	0.08	453	0.11	0.00	455
Total		1.12	9.75	11.92	0.02	0.28	0.25	1,674	0.32	0.00	1,680

Calculation of Average Daily at the terminal, apportioned into cargo types

ANNUAL TONS		**ROG**	**CO**	**NOx**	**SO2**	**PM10**	**PM2.5**	**CO2**	**CH4**	**N2O**	**MT CO2e**	**% of total**
baseline		**0.7**	**4.0**	**7.6**	**0.0**	**0.19**	**0.2**	**1172.0**	**0.2**	**0.0**	**1066.8**	-
Dry Bulk	*Dry Bulkbaseline*	*0.2*	*1.1*	*2.2*	*0.0*	*0.1*	*0.0*	*335.4*	*0.1*	*0.0*	*305.3*	29%
Liquid Bulk	*Liquid Bulkbaseline*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	0%
Refrigerated Containers	*Refrigerated Containersbaseline*	*0.4*	*2.5*	*4.8*	*0.0*	*0.1*	*0.1*	*738.1*	*0.1*	*0.0*	*671.9*	63%
Multi-Purpose General Cargo	*ulti-Purpose General Cargobaseline*	*0.1*	*0.3*	*0.6*	*0.0*	*0.0*	*0.0*	*98.5*	*0.0*	*0.0*	*89.7*	8%
project buildout		**0.7**	**4.3**	**8.2**	**0.0**	**0.2**	**0.2**	**1269.6**	**0.2**	**0.0**	**1155.7**	
Dry Bulk	*Dry Bulkproject buildout*	*0.2*	*1.1*	*2.2*	*0.0*	*0.1*	*0.0*	*335.4*	*0.1*	*0.0*	*305.3*	26%
Liquid Bulk	*Liquid Bulkproject buildout*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	0%
Refrigerated Containers	*gerated Containersproject buildout*	*0.5*	*2.7*	*5.1*	*0.0*	*0.1*	*0.1*	*791.8*	*0.1*	*0.0*	*720.7*	62%
Multi-Purpose General Cargo	*pose General Cargoproject buildout*	*0.1*	*0.5*	*0.9*	*0.0*	*0.0*	*0.0*	*143.2*	*0.0*	*0.0*	*130.4*	11%
Plan buildout		**4.0**	**23.6**	**44.7**	**0.1**	**1.12**	**1.0**	**6906.0**	**1.2**	**0.0**	**6286.4**	
Dry Bulk	*Dry BulkPlan buildout*	*1.8*	*10.6*	*20.0*	*0.0*	*0.5*	*0.4*	*3093.8*	*0.6*	*0.0*	*2816.2*	45%
Liquid Bulk	*Liquid BulkPlan buildout*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	0%
Refrigerated Containers	*frigerated ContainersPlan buildout*	*1.5*	*9.1*	*17.3*	*0.0*	*0.4*	*0.4*	*2671.2*	*0.5*	*0.0*	*2431.5*	39%
Multi-Purpose General Cargo	*urpose General CargoPlan buildout*	*0.7*	*3.9*	*7.4*	*0.0*	*0.2*	*0.2*	*1141.1*	*0.2*	*0.0*	*1038.7*	17%

DAILY POUNDS		**ROG**	**CO**	**NOx**	**SO2**	**PM10**	**PM2.5**	**CO2**	**CH4**	**N2O**	**CO2e**	**% of total**
baseline		**3.8**	**22.2**	**42.2**	**0.1**	**1.1**	**0.9**	**6511.1**	**1.2**	**0.0**	**6533.3**	-
Dry Bulk	*Dry Bulkbaseline*	*1.1*	*6.4*	*12.1*	*0.0*	*0.3*	*0.3*	*1863.3*	*0.3*	*0.0*	*1869.6*	29%
Liquid Bulk	*Liquid Bulkbaseline*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	0%
Refrigerated Containers	*Refrigerated Containersbaseline*	*2.4*	*14.0*	*26.6*	*0.0*	*0.7*	*0.6*	*4100.6*	*0.7*	*0.0*	*4114.6*	63%
Multi-Purpose General Cargo	*ulti-Purpose General Cargobaseline*	*0.3*	*1.9*	*3.5*	*0.0*	*0.1*	*0.1*	*547.2*	*0.1*	*0.0*	*549.1*	8%
project buildout		**4.1**	**24.1**	**45.7**	**0.1**	**1.1**	**1.0**	**7053.1**	**1.3**	**0.0**	**7077.2**	
Dry Bulk	*Dry Bulkproject buildout*	*1.1*	*6.3*	*12.0*	*0.0*	*0.3*	*0.3*	*1858.8*	*0.3*	*0.0*	*1865.2*	26%
Liquid Bulk	*Liquid Bulkproject buildout*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	0%
Refrigerated Containers	*gerated Containersproject buildout*	*2.6*	*15.0*	*28.5*	*0.0*	*0.7*	*0.6*	*4398.7*	*0.8*	*0.0*	*4413.7*	62%
Multi-Purpose General Cargo	*pose General Cargoproject buildout*	*0.5*	*2.7*	*5.2*	*0.0*	*0.1*	*0.1*	*795.7*	*0.1*	*0.0*	*798.4*	11%
Plan buildout		**22.3**	**130.9**	**248.5**	**0.3**	**6.2**	**5.6**	**38366.8**	**6.9**	**0.0**	**38498**	
Dry Bulk	*Dry BulkPlan buildout*	*10.0*	*58.7*	*111.3*	*0.1*	*2.8*	*2.5*	*17187.7*	*3.1*	*0.0*	*17246.4*	45%
Liquid Bulk	*Liquid BulkPlan buildout*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	0%
Refrigerated Containers	*frigerated ContainersPlan buildout*	*8.6*	*50.6*	*96.1*	*0.1*	*2.4*	*2.2*	*14839.8*	*2.7*	*0.0*	*14890.4*	39%
Multi-Purpose General Cargo	*urpose General CargoPlan buildout*	*3.7*	*21.6*	*41.1*	*0.1*	*1.0*	*0.9*	*6339.3*	*1.1*	*0.0*	*6361.0*	17%

ANNUAL TONS												
STC buildout		***3.0***	***17.9***	***34.0***	***0.0***	***0.9***	***0.8***	***5246.6***	***0.9***	***0.0***	***4775.9***	**% of total**
Dry Bulk	*Dry BulkSTC buildout*	*1.4*	*8.0*	*15.2*	*0.0*	*0.4*	*0.3*	*2350.4*	*0.4*	*0.0*	*2139.5*	45%
Liquid Bulk	*Liquid BulkSTC buildout*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	0%
Refrigerated Containers	*efrigerated ContainersSTC buildout*	*1.2*	*6.9*	*13.1*	*0.0*	*0.3*	*0.3*	*2029.3*	*0.4*	*0.0*	*1847.2*	39%
Multi-Purpose General Cargo	*Purpose General CargoSTC buildout*	*0.5*	*3.0*	*5.6*	*0.0*	*0.1*	*0.1*	*866.9*	*0.2*	*0.0*	*789.1*	17%
DAILY POUNDS												
STC buildout		***16.9***	***99.5***	***188.8***	***0.2***	***4.7***	***4.2***	***29147.6***	***5.2***	***0.0***	***29247***	
Dry Bulk	*Dry BulkSTC buildout*	*7.6*	*44.6*	*84.6*	*0.1*	*2.1*	*1.9*	*13057.7*	*2.3*	*0.0*	*13102.2*	45%
Liquid Bulk	*Liquid BulkSTC buildout*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	0%
Refrigerated Containers	*efrigerated ContainersSTC buildout*	*6.5*	*38.5*	*73.0*	*0.1*	*1.8*	*1.6*	*11273.9*	*2.0*	*0.0*	*11312.4*	39%
Multi-Purpose General Cargo	*Purpose General CargoSTC buildout*	*2.8*	*16.4*	*31.2*	*0.0*	*0.8*	*0.7*	*4816.1*	*0.9*	*0.0*	*4832.5*	17%

Table 4-1. Cargo handling equipment - population by type.

Equipment Type	Equip Population	% Total
CHE		
Container Handling Equipment	7	6%
Forklift	91	77%
Yard Tractor	15	13%
OFFROAD		
Aerial Lifts	1	1%
Rubber Tired Loaders	3	3%
Sweepers/Scrubbers	1	1%
Total	**118**	**100%**

Table 4-2. Cargo handling equipment - Average horsepower and actual hours of operation by equipment type and horsepower range.

Equipment Type	HP Bin	Equipment Population	Average HP	Average Annual Operation (Hours)
CHE				
Container Handling Equipment	100	1	99	245
	300	2	253	190
	600	4	353	485
Forklift	75	11	69	429
	100	7	85	868
	175	73	133	301
Yard Tractor	300	15	200	959
OFFROAD				
Aerial Lifts	75	1	70	240
Rubber Tired Loaders	300	3	238	431
Sweepers/Scrubbers	50	1	34	240

Gantry Crane Calculations

			avg my	kw	hp		LF		hrs/day	annual hrs	kwhrs/day	kwhrs/yr
YTI	RTG	Crane	2005	336	451	diesel	0.2	YTI	119	26,803	7,997	#######
TAMT	RTG	Crane	2005	336	451	diesel	0.2	YTI	24	8,640	1,613	580,608

	g/kwhr										lbs/day					
	pm10	pm2.5	dpm	nox	sox	co	voc	co2	ch4	n2o	pm10	pm2.5	dpm	nox	sox	co
YTI	0.03	0.02	0.03	2.9	0.01	1.49	0.29	761	0.01	0.01	1	0	1	51	0	26
TAMT	0.03	0.02	0.03	2.9	0.01	1.49	0.29	761	0.01	0.01	0	0	0	10	0	5

MT/YR

co2	ch4	n2o	co2e	
1371	0.018	0.02		
442	0.006	0.01	444	MPC
			333	STC

Electric crane from YTI EIR

3.84	kwhr/teu	YTI
29	mt per teu	TIA
0.132413793	kwhr/mt	

				2013	2020	2030		
		MT refrig	kwhr					
ELECTRIC CRANE calc	sdge ef			321.13369	283.11178	211.277	g/kwhr	
	ex	637,931	0	0	0	0	1,000,000	g per mt
	project	685,931	0	0	0	0		
	plan	2,288,000	302,963	97	86	64		
	STC	1716000	227,222	73	64	48		
		MT mutli						
	ex	85,131	0	0	0	0		
	project	124,078	0	0	0	0		
	plan	977,400	129,421	42	37	27		
	STC	733050	97,066	31	27	21		

RTG 1 diesel RTG, 451 hp, 24 hours of use per day, 360 days/yr
e-Grar 1 e crane, 3.84 kwhr/teu, based on annual throughput

Electric CHE Estimates

average yard truck in CHE methods for 4 socal ports (LA, LB, Hueneme, SD) is 8 years old. 2012-8 = 2004/2005 MY. Probably around Tier 2 based on phase-in; tier 2 2003; tier 3 2006
Assuming existing yard trucks are Tier 2

	MY	Tier	HP	No. in 2020	No. in 2025	No. in 2030	Load	Days/year/each	hrs/day/each	
yard truck	2007	3	191	3	20	-	0.65	180	8	
reach stacker	2007	3	450	-	-	3	0.59	116	8	(116 is average of 52 ad 180 from Maritime for container and neo nodes)
Forklift	1995	1	134	-	-	10	0.3	255	8	

average yard truck in CHE Acess Database for SD is 7 years old. 2014-7 = 2007; probably around Tier 2/3 based on phase-in; tier 2 2003; tier 3 2006; assumed avg of tier 2 and 3 (no change in PM between the 2, just NOX)
average container handler/stacker in CHE Acess Database for SD is 7 years old. 2014-7 = 2007; probably around Tier 2/3 based on phase-in; tier 2 2003; tier 3 2006;assumed avg of tier 2 and 3 (no change in PM between the 2, just NOX)
average forklift in CHE Acess Database for SD is 19 years old. 2014-19 = 1995; probably pre Tier 0

	Equip	fuel	metric	Tier	ROG	NOX	CO	SOX	PM10	PM2.5	CO2	CH4	N2O	
Emission Factors	Yard Truck	diesel	g/hp-hr	2	0.12	4.15	2.2	0.00005	0.088	0.088	531	0.03	0.01	
	Yard Truck	diesel	g/hp-hr	3	0.12	2.32	2.2	0.00005	0.088	0.088	531	0.03	0.01	
	Yard Truck	diesel	g/hp-hr	2/3 avg	0.12	3.24	2.2	0.00005	0.088	0.088	531	0.03	0.01	
	reach stacker	diesel	g/hp-hr	2	0.12	3.79	2.2	0.00005	0.088	0.088	531	0.03	0.01	
	reach stacker	diesel	g/hp-hr	3	0.12	2.32	2.2	0.00005	0.088	0.088	531	0.03	0.01	
	reach stacker	diesel	g/hp-hr	2/3 avg	0.12	3.06	2.2	0.00005	0.088	0.088	531	0.03	0.01	
	forklift	diesel	g/hp-hr	1	0.82	6.54	2.2	0.00005	0.274	0.274	531	0.03	0.01	
	Yard Truck	electric	g/kw-hr	2020	0	0	0	0	0	0	296	0	0	(actually co2e)
	Yard Truck	electric	g/kw-hr	2025	0	0	0	0	0	0	259	0	0	(actually co2e)
	reach stacker	electric	g/kw-hr	2030	0	0	0	0	0	0	221	0	0	(actually co2e)
	forklift	electric	g/kw-hr	2030	0	0	0	0	0	0	221	0	0	(actually co2e)

2020

replace 1 piece in each node; assume yard truck

	Equip	fuel	metric	pieces	ROG	NOX	CO	SOX	PM10	PM2.5	CO2	CH4	N2O	hp- or kw-hrs
	Yard Truck	diesel	lbs/day	3	0.79	21.30	14.49	0.00	0.58	0.58	3494	0.20	0.09	2,987
		electric	lbs/day	3	0.00	0.00	0.00	0.00	0.00	0.00	1456	0.00	0.00	2,227.45
				reduction	*-0.79*	*-21.30*	*-14.49*	*0.00*	*-0.58*	*-0.58*	*-2039*	*-0.20*	*-0.09*	
	Yard Truck	diesel	tons/yr (MT for GHG)	3	0.07	2.46	1.30	0.00	0.05	0.05	285	0.02	0.01	537,671
		electric		3	0.00	0.00	0.00	0.00	0.00	0.00	119	0.00	0.00	400,941
	for each node; x3 total			*reduction*	*-0.07*	*-2.46*	*-1.30*	*0.00*	*-0.05*	*-0.05*	*-166*	*-0.02*	*-0.01*	

2025

	Equip	fuel	metric	pieces	ROG	NOX	CO	SOX	PM10	PM2.5	CO2	CH4	N2O	hp- or kw-hrs
Pounds per Day	Yard Truck	diesel	lbs/day	20	5.27	142.02	96.59	0.00	3.86	3.86	23294.87	1.32	0.59	19,914
	Yard Truck	electric	lbs/day	2025	0.00	0.00	0.00	0.00	0.00	0.00	8473.11	0.00	0.00	14,850
Tons per year (AQ); MT per year (GHG)	Yard Truck	diesel	tons/yr (MT for GHG)	2	0.47	16.40	8.69	0.00	0.35	0.35	1901.95	0.11	0.05	3,584,473
	Yard Truck	electric	tons/yr (MT for GHG)	2025	0.00	0.00	0.00	0.00	0.00	0.00	762.58	0.00	0.00	2,672,941
Net Reduction; electric - diesel	Yard Truck	diesel	lbs/day	2	-5.27	-142.02	-96.59	0.00	-3.86	-3.86	-14822	-1.32	-0.59	daily
	Yard Truck	diesel	tons/yr (MT for GHG)	2	-0.47	-16.40	-8.69	0.00	-0.35	-0.35	-1139.37	-0.11	-0.05	annual

2030

Equip	fuel	metric	pieces	ROG	NOX	CO	SOX	PM10	PM2.5	CO2	CH4	N2O	hp- or kw-hrs
reach stacker	diesel	lbs/day	3	1.69	42.92	30.91	0.00	1.24	1.24	7453.89	0.42	0.19	6372
forklift	diesel	lbs/day	10	5.83	46.48	15.64	0.00	1.95	1.95	3771.10	0.21	0.10	3224
reach stacker	electric	lbs/day	3	0.00	0.00	0.00	0.00	0.00	0.00	2317.29	0.00	0.00	4752
forklift	electric	lbs/day	10	0.00	0.00	0.00	0.00	0.00	0.00	1172.37	0.00	0.00	2404
			reduction	*-7.51*	*-89.40*	*-46.54*	*0.00*	*-3.18*	*-3.18*	*-7735.34*	*-0.64*	*-0.29*	
reach stacker	diesel	tons/yr (MT for GHG)	3	0.10	2.49	1.79	0.00	0.07	0.07	392.20	0.02	0.01	739152
forklift	diesel	tons/yr (MT for GHG)	10	0.74	5.93	1.99	0.00	0.25	0.25	436.19	0.02	0.01	822054
reach stacker	electric	tons/yr (MT for GHG)	3	0.00	0.00	0.00	0.00	0.00	0.00	121.93	0.00	0.00	551186
forklift	electric	tons/yr (MT for GHG)	10	0.00	0.00	0.00	0.00	0.00	0.00	135.60	0.00	0.00	613006
			reduction	*-0.84*	*-8.42*	*-3.79*	*0.00*	*-0.32*	*-0.32*	*-570.86*	*-0.05*	*-0.02*	

Horsepower and Equipment Age Calculation
Based on ARB CHE Model and Activity Profile Sheets

Horsepower

Location	Vehicle ID	ARB Equipment Type	HP	Age	ModelYear	AvgOfBHP	PercentByHp	VehiclePop	O2Pop	DOCPop	NGPop	OnRdPop	HP
San Diego Port & Railyard	1	Construction Equipment	175	1	2005	173	1	1	0	0	0	0	173
San Diego Port & Railyard	2	Container Handling Equipment	300	11	1995	250	0.5	1	0	0	0	0	450
San Diego Port & Railyard	2	Container Handling Equipment	600	4	2002	330	0.5	1	0	0	0	0	
San Diego Port & Railyard	3	Forklift	75	22	1984	72	0.258064516	8	0	0	0	0	18.5806452
San Diego Port & Railyard	3	Forklift	100	8	1998	91	0.032258065	1	0	0	0	0	2.93548387
San Diego Port & Railyard	3	Forklift	175	0	2006	139.8125	0.516129032	1	0	0	0	0	4.51008065
San Diego Port & Railyard	3	Forklift	175	2	2004	139.8125	0.516129032	1	0	0	0	0	4.51008065
San Diego Port & Railyard	3	Forklift	175	3	2003	139.8125	0.516129032	1	0	0	0	0	4.51008065
San Diego Port & Railyard	3	Forklift	175	10	1996	139.8125	0.516129032	1	0	0	0	0	4.51008065
San Diego Port & Railyard	3	Forklift	175	22	1984	139.8125	0.516129032	2	0	0	0	0	9.02016129
San Diego Port & Railyard	3	Forklift	175	25	1981	139.8125	0.516129032	3	0	0	0	0	13.5302419
San Diego Port & Railyard	3	Forklift	175	27	1979	139.8125	0.516129032	1	0	0	0	0	4.51008065
San Diego Port & Railyard	3	Forklift	175	31	1975	139.8125	0.516129032	1	0	0	0	0	4.51008065
San Diego Port & Railyard	3	Forklift	175	34	1972	139.8125	0.516129032	3	0	0	0	0	13.5302419
San Diego Port & Railyard	3	Forklift	175	36	1970	139.8125	0.516129032	1	0	0	0	0	4.51008065
San Diego Port & Railyard	3	Forklift	175	37	1969	139.8125	0.516129032	1	0	0	0	0	4.51008065
San Diego Port & Railyard	3	Forklift	300	0	2006	210	0.193548387	1	0	0	0	0	6.77419355
San Diego Port & Railyard	3	Forklift	300	3	2003	210	0.193548387	3	0	0	0	0	20.3225806
San Diego Port & Railyard	3	Forklift	300	4	2002	210	0.193548387	1	0	0	0	0	6.77419355
San Diego Port & Railyard	3	Forklift	300	6	2000	210	0.193548387	1	0	0	0	0	6.77419355
San Diego Port & Railyard	4	Other General Industrial Equipment	50	4	2002	18	0.888888889	8	0	0	0	0	16
San Diego Port & Railyard	4	Other General Industrial Equipment	300	19	1987	200	0.111111111	1	0	0	0	0	22.2222222
San Diego Port & Railyard	6	Yard Tractor	175	8	1998	174	0.173913043	4	0	0	0	0	30.2608696
San Diego Port & Railyard	6	Yard Tractor	300	4	2002	195.1578947	0.826086957	15	0	0	0	0	127.276888
San Diego Port & Railyard	6	Yard Tractor	300	11	1995	195.1578947	0.826086957	0.6	0	0	0	0	5.09107551
San Diego Port & Railyard	6	Yard Tractor	300	12	1994	195.1578947	0.826086957	0.6	0	0	0	0	5.09107551
San Diego Port & Railyard	6	Yard Tractor	300	13	1993	195.1578947	0.826086957	0.6	0	0	0	0	5.09107551
San Diego Port & Railyard	6	Yard Tractor	300	14	1992	195.1578947	0.826086957	0.6	0	0	0	0	5.09107551
San Diego Port & Railyard	6	Yard Tractor	300	15	1991	195.1578947	0.826086957	1.6	0	0	0	0	13.5762014

access model; just SD Port
removed equipment with 0 population
averaged by equipment

https://www.arb.ca.gov/ports/cargo/cheamd2011.htm

	HP
Construction Equipment	173
Container Handling Equipment	450
Forklift	134
Other General Industrial Equipment	38
Yard Tractor	191

Model Year/CHE age
Activity Profile excel sheet
https://www.arb.ca.gov/ports/cargo/cheamd2011.htm

Vehicle ID	Location	ARB Equipment Type	Lookup	AvgAge	2014 CY
1	Port of San D	Construction Equipment	Port of San Dieg	1	2013
2	Port of San D	Container Handling Equipment	Port of San Dieg	7.5	2007
3	Port of San D	Forklift	Port of San Dieg	18.7	1995
4	Port of San D	Other General Industrial Equipment	Port of San Dieg	5.7	2008
6	Port of San D	Yard Tractor	Port of San Dieg	6.7	2007

Cargo Handling Equipment Emission Rates

From Carl Moyer
Table D-12
Controlled Off-Road Diesel Engines
Emission Factors (g/bhp-hr)

Horsepower	Tier		NOx	ROG	PM10	PM2.5	CO	SOX	CO2	CH4	N2O
25-49	1		5.26	1.74	0.480	0.480	2.2	4.87782E-05	530.607	0.0301422	0.0135
	2		4.63	0.29	0.280	0.280	2.2	4.87782E-05	530.607	0.0301422	0.0135
	4i		4.55	0.12	0.128	0.128	2.2	4.87782E-05	530.607	0.0301422	0.0135
	4f		2.75	0.12	0.008	0.008	2.2	4.87782E-05	530.607	0.0301422	0.0135
50-74	1		6.54	1.19	0.552	0.552	2.2	4.87782E-05	530.607	0.0301422	0.0135
	2		4.75	0.23	0.192	0.192	2.2	4.87782E-05	530.607	0.0301422	0.0135
	3(b)		2.74	0.12	0.192	0.192	2.2	4.87782E-05	530.607	0.0301422	0.0135
	4i		2.74	0.12	0.112	0.112	2.2	4.87782E-05	530.607	0.0301422	0.0135
	4f		2.74	0.12	0.008	0.008	2.2	4.87782E-05	530.607	0.0301422	0.0135
75-99	1		6.54	1.19	0.552	0.552	2.2	4.87782E-05	530.607	0.0301422	0.0135
	2		4.75	0.23	0.192	0.192	2.2	4.87782E-05	530.607	0.0301422	0.0135
	3		2.74	0.12	0.192	0.192	2.2	4.87782E-05	530.607	0.0301422	0.0135
	4 Phase-Out		2.74	0.12	0.008	0.008	2.2	4.87782E-05	530.607	0.0301422	0.0135
	4i		2.14	0.11	0.008	0.008	2.2	4.87782E-05	530.607	0.0301422	0.0135
	4f		0.26	0.06	0.008	0.008	2.2	4.87782E-05	530.607	0.0301422	0.0135
100-174	1	Forklift1	6.54	0.82	0.274	0.274	2.2	4.87782E-05	530.607	0.0301422	0.0135
	2	Forklift2	4.17	0.19	0.128	0.128	2.2	4.87782E-05	530.607	0.0301422	0.0135
	3	Forklift3	2.32	0.12	0.112	0.112	2.2	4.87782E-05	530.607	0.0301422	0.0135
	4 Phase-Out	Forklift4 Phase-Out	2.32	0.12	0.008	0.008	2.2	4.87782E-05	530.607	0.0301422	0.0135
	4i	Forklift4i	2.15	0.06	0.008	0.008	2.2	4.87782E-05	530.607	0.0301422	0.0135
	4f	Forklift4f	0.26	0.06	0.008	0.008	2.2	4.87782E-05	530.607	0.0301422	0.0135
175-299	1	Yard Truck1	5.93	0.38	0.108	0.108	2.2	4.87782E-05	530.607	0.0301422	0.0135
	2	Yard Truck2	4.15	0.12	0.088	0.088	2.2	4.87782E-05	530.607	0.0301422	0.0135
	3	Yard Truck3	2.32	0.12	0.088	0.088	2.2	4.87782E-05	530.607	0.0301422	0.0135
	4 Phase-Out	Yard Truck4 Phase-Out	2.32	0.12	0.008	0.008	2.2	4.87782E-05	530.607	0.0301422	0.0135
	4i	Yard Truck4i	1.29	0.08	0.008	0.008	2.2	4.87782E-05	530.607	0.0301422	0.0135
	4f	Yard Truck4f	0.26	0.06	0.008	0.008	2.2	4.87782E-05	530.607	0.0301422	0.0135
300-750	1	Reach Stacker1	5.93	0.38	0.108	0.108	2.2	4.87782E-05	530.607	0.0301422	0.0135
	2	Reach Stacker2	3.79	0.12	0.088	0.088	2.2	4.87782E-05	530.607	0.0301422	0.0135
	3	Reach Stacker3	2.32	0.12	0.088	0.088	2.2	4.87782E-05	530.607	0.0301422	0.0135
	4 Phase-Out	Reach Stacker4 Phase-Out	2.32	0.12	0.008	0.008	2.2	4.87782E-05	530.607	0.0301422	0.0135
	4i	Reach Stacker4i	1.29	0.08	0.008	0.008	2.2	4.87782E-05	530.607	0.0301422	0.0135
	4f	Reach Stacker4f	0.26	0.06	0.008	0.008	2.2	4.87782E-05	530.607	0.0301422	0.0135
751+	1	1	5.93	0.38	0.108	0.108	2.2	4.87782E-05	530.607	0.0301422	0.0135
	2	2	3.79	0.12	0.088	0.088	2.2	4.87782E-05	530.607	0.0301422	0.0135
	4i	4i	2.24	0.12	0.048	0.048	2.2	4.87782E-05	530.607	0.0301422	0.0135
	4f	4f	2.24	0.06	0.016	0.016	2.2	4.87782E-05	530.607	0.0301422	0.0135

NOX, ROG, and PM10 from Carl Moyer
CO from EPA nonroad
CO2 and SOX based on equations in EPA nonroad standards:
http://www.epa.gov/oms/models/nonrdmdl/nonrdmdl2010/420r10018.pdf
CH4 and N2O based on CR 2015 ratio

Dry Bulk Operations Emissions

MPC to STC = **75%**

soda ash imported by train. Moderate controls assumed.
bauxite in by vessel and clamshell drop bauxite into trucks for onsite storage or taken offsite. No controls assumed
added STC

Dry Bulk Throughput (metric tons)	Existing	Project	MPC	STC
Total Throughput	289,864	289,864	2,650,000	1,987,500
by vessel	*158,205*	*158,205*	*1,446,345*	*1,084,758*
by truck	*131,659*	*131,659*	*1,203,655*	*902,742*

Existing by vessel and truck from PD; No change in 2020 due to rail and demo project and based; 2035 plan throughput based on increases shown in PD (914%), assuming similar vessel/truck split

Throughput by commodity (MT)	Existing	Project	Plan	75%		*% of throughput, 2013/2014 avg*	
soda ash	70,243	70,243	642,178	481,633		*24%*	
bauxite	104,920	104,920	959,202	719,402		*36%*	
cement	0	0	108,000	81,000	75% of full tamt cement storage	-	810
fertilizers		no dust emissions					

Emission Factor

all in lbs PM10 per ton	uncontrolled	controlled	
Soda ash	5.2	0.0051	Soda ash storage/loading and unloadingc (SCC 3-01-023-99)
Bauxite	1.1	0.055	material handling and transfer--bauxite/alumina (SCC 3-03-024-04); low moisture ore; applies to each loading and unloading. Assume 2 dumps (from vessel to truck, truck to storage
cement	1.1	0.0049	Cement supplement unloading to elevated storage silo (pneumatic)

PM2.5/PM10 ratio

Soda ash	1.0	PM2.5 = PM10; cannot find reference that says otherwise
Bauxite loading	0.292	loading/unloading of bulk mineral products
cement	0.161	AP-42 Table 11.12-3, ratio of unconrolled PM2.5 to PM10 k factors from Truck Loading

Emission Calculation

	Uncontrolled						Controlled						STC			
	PM10 annual tons			PM10 Daily Pounds			PM10 annual tons			PM10 Daily Pounds			uncontrolled		controlled	
													PM10	PM10	PM10	PM10
	Existing	Project	Plan	Existing	Project	Plan	Existing	Project	Plan	Existing	Project	Plan	tons	lbs	tons	lbs
soda ash	331	331	3029	1841	1841	16830	0.3	0.3	3.0	2	2	17	2272	12622	2	12
bauxite	105	105	957	582	582	5318	5	5	48	29	29	266	718	3988	36	199
cement	0	0	108	0	0	599	0	0	0.5	0	0	3	81	449	0.4	2
	436	*436*	*4094*	*2423*	*2423*	*22746*	*6*	*6*	*51*	*31*	*31*	*285*				

	PM2.5 annual tons			PM2.5 Daily Pounds			PM2.5 annual tons			PM2.5 Daily Pounds			uncontrolled		controlled	
	Existing	Project	Plan	Existing	Project	Plan	Existing	Project	Plan	Existing	Project	Plan	PM10	PM10	PM10	PM10
soda ash	331	331	3029	1841	1841	16830	0	0	3	2	2	17	2272	12622	2	12
bauxite	31	31	279	170	170	1553	2	2	14	8	8	78	210	1165	10	58
cement	0	0	17	0	0	97	0	0	0	0	0	0.4	13	72	0	0.3
	362	*362*	*3326*	*2011*	*2011*	*18479*	*2*	*2*	*17*	*10*	*10*	*95*				

Increase in dry bulk, project	0%	from PD	Increase in dry bulk, STC
Increase in dry bulk, plan	914%	from PD	686%
ton to mt	0.907184741		
lbs per ton	2000		
days per year	360		
2035 cement storage	108,000	MT per PD	
transfers on-site	2		

Emission Factors for each dry bulk type

Soda Ash	AP-42, 8.12	https://www3.epa.gov/ttnchie1/ap42/ch08/final/c08s12.pdf		
Table 8.12-2	total PM per ton, uncontrolled		total PM per ton, controlled	
	lb/ton, filterable	lb/ton, total	lb/ton, filterable	lb/ton, total
Soda ash storage/loading and unloadingc (SCC 3-01-023-99)	-	5.2	0.0041	0.0051

Bauxite	AP-42, 11.24	https://www3.epa.gov/ttnchie1/ap42/ch11/final/c11s24.pdf			
	total PM per ton, uncontrolled		total PM per ton, controlled		
Table 11.24-2, low moisture ore	filterable PM	filterable PM10	filterable PM	filterable PM10	
Material handling and transfer--bauxite/alumina (SCC 3-03-024-04)g,h	1.1	1.1	0.055	0.055	0.33
control efficiency - existing			70%	70%	
control efficiency - project			*95%*	*95%*	
no conrolled "rates", but text says between 70-99% decrease from controls					
assumed 95%					

Cement	AP-42, 11.12	https://www3.epa.gov/ttnchie1/ap42/ch11/final/c11s12.pdf		
	PM10 per ton			to silo
Table 11.12-2	Uncontrolled	Controlled from ap42	controlled from WRAP	
Cement supplement unloading to elevated storage silo (pneumatic) [b,c]	1.1	0.0049	0.092	
Cement unloading to elevated storage silo (pneumatic) [c]	0.47	0.00034	0.0005	
PM2.5 = PM10 = PM			lowest from WRAP; loading for truck mix	
		99.6%		
		99.9%		

Table 11-8. PM10 Control Efficiencies for Mineral Processing Operations

Mineral Products Industry	Source	Control Device	PM10 Control Efficiency (%)	
Cement batching	Unloading into silo	Wet scrubber	99.9	
	Mixer loading (central mix)	Wet scrubber	96.5	
	Truck loading (truck mix)	Wet scrubber	91.6	
		min	91.60	0.92

http://www.wrapair.org/forums/dejf/fdh/content/FDHandbook_Rev_06.pdf

http://www.baaqmd.gov/~/media/files/engineering/bact-tbact-workshop/miscellaneous-sources/29-1.pdf?la=en

Electricity Calculations

Tenant	cargo type	Baseline kwh	Baseline therms	Project Buildout 2020 % inc. over baseline	Project Buildout 2020 kwh	Project Buildout 2020 therms	Plan Buildout 2035 % inc. over baseline	Plan Buildout 2035 kwh	Plan Buildout 2035 therms	SP		
Serless Valley	dry bulk	255,403		100%	255,403		914%	2,334,950				
Cemex	dry bulk	350,028		100%	350,028		914%	3,200,032		Shore power kwh		
Dole	refrigerated containers	4,110,100		108%	4,419,357		359%	14,741,263		baseline	unmit	mit
~~Port~~	~~total~~	~~1,458,525~~	~~531~~	~~108%~~	~~1,579,943~~	~~575~~	~~589%~~	~~8,594,385~~	3,129	1,425,607	5,481,762	37,977,764
		into mmbtu	*56*			*60*		*20,276*	*328*			

conv	
1	therm
0.1047	mmbtu
360	days per ye
0.000453592	lbs to MT
25	ch4
298	n2o
0.001	kwh to mwl

for refrigerated, minus out shore power

Emission Factors

0.746268657

Electricity	2013	2020	2030	2035	
lbs/mwh of CO2e	708	624	466	466	(includes non-co2)
g/kwh	321	283	211	211	(includes non-co2)
% RPS	*24%*	*33%*	*50%*	*50%*	

Natural Gas

	ROG	NOX	CO2	SO2	PM10	PM2.5	Co2	Ch4	N2O	CO2e
from Caleemod, lbs/mmbtu	0.0108	0.0980	0.0824	0.0006	0.0075	0.0075	117.6471	0.0023	0.0022	

Emission Calculations

Baseline
CP in lbs/day; GHGs in MT/yr

Electricity	Daily mwh	Annual mwh	ROG	NOX	CO2	SO2	PM10	PM2.5	CO2	Ch4	N2O	CO2e 2013	2020	2035
dry bulk	2	605	-	-	-	-	s23	-	-	-	-	194	171	128
refrigerated containers	11	4,110	-	-	-	-	-	-	-	-	-	1,320	1,164	868
multi-purpose	0	0	-	-	-	-	-	-	-	-	-	0	0	0
port ops	0	0	-	-	-	-	-	-	-	-	-	0	0	0

Project Buildout 2020
CP in lbs/day; GHGs in MT/yr

	Daily mwh	Annual mwh	ROG	NOX	CO2	SO2	PM10	PM2.5	CO2	Ch4	N2O	CO2e 2013	2020	2035
dry bulk	2	605	-	-	-	-	-	-	-	-	-	194	171	128
refrigerated containers	12	4,419	-	-	-	-	-	-	-	-	-	1,419	1,251	934
multi-purpose	0	0	-	-	-	-	-	-	-	-	-	0	0	0
port ops	0	0	-	-	-	-	-	-	-	-	-	0	0	0

Plan Buildout 2035
CP in lbs/day; GHGs in MT/yr

	Daily mwh	Annual mwh	ROG	NOX	CO2	SO2	PM10	PM2.5	CO2	Ch4	N2O	CO2e 2013	2020	2035
dry bulk	15	5,535	-	-	-	-	-	-	-	-	-	1,778	1,567	1,169
refrigerated containers	41	14,741	-	-	-	-	-	-	-	-	-	4,734	4,173	3,115
multi-purpose	0	0	-	-	-	-	-	-	-	-	-	0	0	0
port ops	0	0	-	-	-	-	-	-	-	-	-	0	0	0

WATER

for Vessels

City of SD UWMP 2010:
1 SF Home=255 gal/day   Water demand project=500 SF homes

Cargo Type	Gallons Existing	Scaling Factor 2020	Gallons 2020	Scaling Factor 2035	Gallons 2035	Equivalent to # of SF Homes Year 2020	Equivalent to # of SF Homes Year 2035	kwh
Refrigerated Containers	703,114	108%	756,019	359%	2,521,785	8.1226815	27.09411773	
Multi-Purpose General Cargo	89,480	146%	130,417	1148%	1,027,331	1.401199521	11.03767317	
Dry Bulk	0	100%	0	914%	0			
Liquid Bulk	0	100%	0	100%	0			
Total Gallons for all Project Baseline vessels	'92,594		386,435		3,549,116	9.523881021	38.1317909	
						13 homes with Demo and Initial I	41 homes with TAMT buildout	

kwh	Existing	2020	2035	
Refrigerated Containers	7,812	8,399	28,017	*outdoor*
Multi-Purpose General Cargo	994	1,449	11,414	
Dry Bulk	-	-	-	
Liquid Bulk	-	-	-	

mtco2e	Existing	2020	2035	
Refrigerated Containers	2.48	2.49	6.20	*outdoor*
Multi-Purpose General Cargo	0.32	0.43	2.52	
Dry Bulk	-	-	-	
Liquid Bulk	-	-	-	

Employees	Existing	2020	2035
Employees	315	407	839.00
Program's avg daily water use per employee	50	50	50
Daily gallons	15750	20,466	42,189.00

	existing EF			adjusted EF		STC	
	Existing	2020	2035	2020	2035	existing sf	adjusted
Dry Bulk	56.92	56.92	236.54	53.17	164.91	177.40	123.6854
Liquid Bulk	6.19	6.19	21.33	5.78	14.87	21.33	14.87
Refrigerated Containers	127.74	137.35	210.42	128.32	146.71	157.82	110.0302
Multi-Purpose General Cargo	17.03	24.82	89.77	23.19	62.59	67.33	46.93913
	207.87	225.28	558.07			423.88	295.53
	2	3	4				

Searles Valley SDG&E Usage		Cemex, 10th Ave	Dole	Port Ops	
Month	**kWh**	**kWh**	**kWh**	**kWh**	
07/01/13	30,065	25,771	382,396		
08/01/13	31,148	29,769	352,948		
09/01/13	19,674	23,651	387,616		
10/01/13	13,279	28,162	361,664		
11/01/13	14,846	28,490	324,168		
12/01/13	13,977	19,176	314,616		
01/01/14	24,563	25,426	444,696		
02/01/14	21,147	27,081	336,280		
03/01/14	26,628	34,706	282,308		
04/01/14	11,808	33,512	328,308		
05/01/14	22,540	38,193	259,396		
06/01/14	25,729	36,091	335,704		
total	255,403	350,028	4,110,100	1458525	
mwh	255.403	350.028	4110.1	1459	mwh
				531	therms

total kwh	6,174,056
total therms	531

HFC emissions from refrigerated units

HFC Emission Factors

Equipment Type	Unit	Refrigerant	GWP	Average Charge Size (kg)	Average Annual Leak (Loss) Rate	Dwell time (days)	Dwell time (percent of year)	Annual HFC Emissions (kg) per container	Annual CO2e Emissions (MT) per container
Refrigerated unit - Carrier	per unit	R-134a	1430	4.54	5%	2.8	0.007671233	0.002	0.002
Refrigerated unit - Starcool	per unit	R-134a	1430	4.5	5%	2.8	0.007671233	0.002	0.002
Refrigerated unit - Thermoking	per unit	R-404A	3922	4.0	5%	2.8	0.007671233	0.002	0.006

Existing HFC Emissions

Equipment Type	Number of units	Annual HFC Emissions per unit (kg)	Annual CO2e Emissions per unit (MT)	Annual HFC Emissions (MT)	Annual CO2e Emissions (MT)
Refrigerated unit - Carrier	1560	0.002	0.002	0.003	3.885
Refrigerated unit - Starcool	220	0.002	0.002	0.000	0.543
Refrigerated unit - Thermoking	1746	0.002	0.006	0.003	10.506
Total Existing	**3526**	-	-	**0.006**	**14.934**

Project 2020 HFC Emissions

Increase = 108%

Equipment Type	Number of units	Annual HFC Emissions per unit (kg)	Annual CO2e Emissions per unit (MT)	Annual HFC Emissions (MT)	Annual CO2e Emissions (MT)
Refrigerated unit - Carrier	1677	0.002	0.002	0.003	4.177
Refrigerated unit - Starcool	237	0.002	0.002	0.000	0.584
Refrigerated unit - Thermoking	1877	0.002	0.006	0.003	11.297
Total With Project	**3791**	-	-	**0.006**	**16.058**
			Net	***0.000***	***1.124***

Plan 2035 HFC Emissions

Increase = 359%

Equipment Type	Number of units	Annual HFC Emissions per unit (kg)	Annual CO2e Emissions per unit (MT)	Annual HFC Emissions (MT)	Annual CO2e Emissions (MT)
Refrigerated unit - Carrier	5595	0.002	0.002	0.010	13.933
Refrigerated unit - Starcool	789	0.002	0.002	0.001	1.948
Refrigerated unit - Thermoking	6262	0.002	0.006	0.010	37.682
Total With Project	**12646**	-	-	**0.021**	**53.562**
			Net	***0.015***	***38.628***

STC

Number of units	Annual HFC Emissions (MT)	Annual CO2e Emissions (MT)
4196	0.007	10.449
592	0.001	1.461
4697	0.007	28.261
9485	**0.02**	**40.171**
	0.010	***25.237***

Table S4: Input Factors for Emission Calculations, Refrigeration and AC (stationary, transport refrigerated units, and refrigerated shipping containers), 2008

Equipment Type or Emissions sub-sector	Units in CA	Ave. Charge (amount) of F-gas in lbs.	Ave. Annual Leak (loss) Rate	Annual Loss in lbs. (units* charge* loss rate)	EOL units in CA	Ave. Charge (amount) in lbs. at EOL	Ave. EOL Loss Rate	EOL Loss in lbs. (units* charge* loss rate)	total loss in lbs. (annual + EOL)
Refrigeration Large Centralized System ≥ 907.2 kg (2,000 lbs.)	1,090	2,486	21.0%	568,914	62	2,486	20%	30,908	599,822
Refrigeration Medium Centralized System 90.7-< 907.2 kg (200-< 2,000 lbs.)	33,269	704	15.0%	3,513,168	1,924	704	20%	270,845	3,784,013
AC Large Centrifugal Chiller ≥ 907.2 kg (2,000 lbs.)	4,231	3,978	2.4%	403,915	177	3,883	20%	137,808	542,000
AC Medium Centrifugal Chiller 90.7-< 907.2 kg (200-< 2,000 lbs.)	1,330	1,007	1.4%	18,751	56	993	20%	11,108	30,000
AC Chiller - Packaged 90.7-< 907.2 kg (200-< 2,000 lbs.)	8,379	526	6.9%	304,111	352	490	20%	34,505	339,000
Refrigeration Large Cold Storage ≥ 907.2 kg (2,000 lbs.)	1,166	7,546	21.6%	1,899,770	48	5,509	16%	42,581	1,942,000
Refrigeration Medium Cold Storage 90.7-< 907.2 kg (200-< 2,000 lbs.)	4,806	565	28.8%	782,075	202	362	16%	11,660	794,000
Refrigeration Process Cooling ≥ 907.2 kg (2,000 lbs.)	395	3,640	6.8%	97,798	17	3,393	20%	11,322	109,120
Refrigerated Condensing units 22.7-≤ 90.7 kg (50-≤ 200 lbs.)	65,154	122	14.5%	1,152,583	2,738	122	20%	66,817	1,219,000
Unitary AC 22.7-≤ 90.7 kg (50-≤ 200 lbs.)	65,265	100	11.3%	737,490	3,708	77	20%	57,106	795,000
Refrigerated Condensing Units ≤ 22.7 kg (50-lbs. or less) (a)	262,854	31.4	15%	1,238,043	11,010	22	34%	82,351	1,320,394
Refrigerated stand-alone display cases (a)	577,457	7.1	0%	0	24,446	7	100%	173,566	173,566
Refrigerated vending machines (a)	452,086	0.66	0%	0	25,524	0.66	100%	16,846	16,846
Unitary A/C ≤ 22.7 kg (50-lbs. or less) (central) (b)	2,367,328	15.1	10%	3,574,665	133,608	12	56%	905,326	4,480,000
Unitary A/C ≤ 22.7 kg (50- lbs. or less) (window unit) (b)	639,511	1.54	2%	19,697	50,929	1.2	100%	59,587	79,000
Residential Appliance (refrigerator-freezer)	16,189,879	0.5	1%	80,949	946,725	0.4	77%	313,461	394,000
Residential A/C (central) (b)	5,994,796	7.5	10%	4,496,097	322,452	6	56%	1,083,440	5,580,000
Residential A/C (window unit) (b)	3,558,891	1.54	2%	109,614	283,422	1.2	100%	331,604	441,000
Transport Refrigerated Units (TRUs)	57,603	20.7	18.3%	218,208	4,580	17.4	15%	11,953	230,161
Refrigerated Shipping Containers	42,941	33.1	5%	71,068	12,853	33.1	19%	80,835	151,903

Supporting Information document for Manuscript:
"High-global Warming Potential F-gas Emissions in California: Comparison of Ambient-based versus Inventory-based Emission Estimates, and Implications of Refined Estimates".

Container Dwell Times

Vessels arrive weekly and discharge Sunday/Monday/Tuesday.

Weekly dispatch from the terminal resembles an inverted bell curve.

Monday 25%, Tuesday 25%, Wednesday 15%, Thursday 15% and Friday 20%.

Average container dwell time in days calculated based on maximum possible dwell time assuming a Sunday arrival and departure per day based on % provided by applicant.

	Su	M	T	W	Th	F	Sa	total	
Arrival	33%	33%	33%						
Departure		25%	25%	15%	15%	20%			
Max dwell time (days)	-	1	2	3	4	5	6		
weighting (departure % (x) max dwell time)		0.25	0.5	0.45	0.6	1	0	2.8	days

Container Refrigerant Info

Container	Charge size (kg)	Source	Rerigerant	GWP	Source
carrier	4.54	http://www.flex-box.com/common/documents/T-362.pdf	R134A	1430	EPA and ARB ScopingPlan (from AR4)
starcool	4.5	Specs from applicant	R134A	1430	EPA and ARB Scoping Plan (from AR4)
thermoking	4.0	Specs from applicant	R404A	3922	EPA (AR4)

Sources:

Global Warming Potentials and Ozone Depletion Potentials of Some Ozone-Depleting Substances and Alternatives Listed by the SNAP Program

http://www.epa.gov/ozone/snap/subsgwps.html#Table 3

AB32 First Update

http://www.arb.ca.gov/cc/scopingplan/2013_update/first_update_climate_change_scoping_plan.pdf

Construction Emission Calculation Sheets

Construction Summary - Daily

Phase	Pounds per day										Metric tons per day			
	ROG	**NOX**	**CO**	**PM10**	**PM10 D**	**PM10 T**	**PM2.5**	**PM2.5 D**	**PM2.5 T**	**SO2**	**CO2**	**CH4**	**N2O**	**CO2e**
TS#1Demolition of Roofing and Steel	4	44	36	2	2	4	2	0	3	0	3	0	0	3
TS#1Demolition of Concrete Walls	6	59	48	4	2	5	3	0	4	0	4	0	0	4
TS#1Demolition of Asphalt, Foundati	5	54	24	2	3	6	2	1	3	0	3	0	0	3
TS#1Demolition and Removal of Asb	1	7	7	0	2	2	0	0	1	0	1	0	0	1
TS#1Earthwork & Grading	8	100	48	4	2	5	4	0	4	0	5	0	0	6
TS#1Paving	3	19	10	1	1	1	1	0	1	0	1	0	0	1
TS#1Utilities, Lighting, Misc.	2	21	17	1	0	2	1	0	1	0	1	0	0	1
TS#2Demolition of Roofing and Steel	4	40	38	2	2	4	2	0	2	0	3	0	0	3
TS#2Demolition of Concrete Walls	6	56	51	3	2	5	3	0	3	0	4	0	0	4
TS#2Demolition of Asphalt, Foundati	5	53	24	2	4	6	2	1	3	0	3	0	0	3
TS#2Demolition and Removal of Asb	0	4	6	0	2	2	0	0	1	0	0	0	0	0
TS#2Earthwork & Grading	8	94	44	3	2	5	3	0	4	0	6	0	0	6
TS#2Paving	3	18	10	1	1	1	1	0	1	0	1	0	0	1
TS#2Utilities, Lighting, Misc.	2	19	17	1	0	1	1	0	1	0	1	0	0	1
Rail Install	0	3	3	0	0	0	0	0	0	0	0	0	0	0

Construction Summary - Annual

Phase		Tons per year								Metric tons per year			
		ROG	NOX	CO	PM10	PM2.5	PM10 D	PM2.5 D	SO2	CO2	CH4	N2O	CO2e
TS#1Demolition of Roofing and Steel	2017	0	0	0	0	0	0	0	0	61	1.49E-02	1.56E-03	62
TS#1Demolition of Concrete Walls	2017	0	1	1	0	0	0	0	0	97	2.09E-02	2.47E-03	98
TS#1Demolition of Asphalt, Foundati	2017	0	0	0	0	0	0	0	0	31	5.86E-03	7.93E-04	32
TS#1Demolition and Removal of Asbe	2017	0	0	0	0	0	0	0	0	11	2.20E-03	2.80E-04	11
TS#1Earthwork & Grading	2017	0	1	0	0	0	0	0	0	92	1.49E-02	2.34E-03	93
TS#1Paving	2017	0	0	0	0	0	0	0	0	13	1.56E-03	3.26E-04	13
TS#1Utilities, Lighting, Misc.	2017	0	0	0	0	0	0	0	0	19	4.17E-03	4.69E-04	19
TS#2Demolition of Roofing and Steel	2018	0	1	0	0	0	0	0	0	76	1.99E-02	1.93E-03	77
TS#2Demolition of Concrete Walls	2018	0	1	1	0	0	0	0	0	132	3.09E-02	3.37E-03	134
TS#2Demolition of Asphalt, Foundati	2018	0	0	0	0	0	0	0	0	44	7.86E-03	1.12E-03	45
TS#2Demolition and Removal of Asbe	2018	0	0	0	0	0	0	0	0	11	2.68E-03	2.68E-04	11
TS#2Earthwork & Grading	2018	0	1	0	0	0	0	0	0	112	1.55E-02	2.86E-03	114
TS#2Paving	2018	0	0	0	0	0	0	0	0	16	1.85E-03	3.92E-04	16
TS#2Utilities, Lighting, Misc.	2018	0	0	0	0	0	0	0	0	24	5.21E-03	6.12E-04	25
Rail Install	2019	0	0	0	0	0	0	0	0	3	3.27E-04	6.46E-05	3

Year	Tons per year								Metric tons per year			
	ROG	NOX	CO	PM10	PM2.5	PM10 D	PM2.5 D	SO2	CO2	CH4	N2O	CO2e
2017	0.3	2.7	1.7	0.1	0.1	0.1	0.0	0.0	325	0.1	0.0	329
2018	0.3	3.1	2.2	0.1	0.1	0.2	0.0	0.0	416	0.1	0.0	421
2019	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3	0.0	0.0	3
Total	0.6	5.8	3.9	0.3	0.3	0.3	0.1	0.0	743	0.1	0.0	752

Offroad Emissions Calculations

											Pounds per day						Metric tons per day				Tons per year						Metric tons per year			
Building	Phase	Year	Days	Equip	#/day	hrs/day	CMOD	HP Bin	HP	LF	ROG	NOX	CO	PM10	PM2.5	SO2	CO2	CH4	N2O	CO2e	ROG	NOX	CO	PM10	PM2.5	SO2	CO2	CH4	N2O	CO2e
TS#1	Demolition of Roofing and Steel Frame	2017	15	Excavator-Shear	2	8	Excavators	175	163	0.38	0.7	8.1	6.9	0.4	0.4	0.0	0.5	0.0	0.0	0.5	0.0	0.1	0.1	0.0	0.0	0.0	7.4	0.0	0.0	7.5
TS#1	Demolition of Roofing and Steel Frame	2017	20	Excavator	1	8	Excavators	175	163	0.38	0.4	4.0	3.4	0.2	0.2	0.0	0.2	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	4.9	0.0	0.0	5.0
TS#1	Demolition of Roofing and Steel Frame	2017	20	Loader CAT 977	2	8	Tractors/Loaders/Backhoes	120	190	0.37	1.2	11.9	9.4	0.9	0.8	0.0	0.6	0.0	0.0	0.6	0.0	0.1	0.1	0.0	0.0	0.0	11.3	0.0	0.0	11.5
TS#1	Demolition of Roofing and Steel Frame	2017	25	Skid Steer Loader CAT 246	3	8	Skid Steer Loaders	120	80	0.37	0.4	5.1	5.2	0.3	0.3	0.0	0.4	0.0	0.0	0.4	0.0	0.1	0.1	0.0	0.0	0.0	8.9	0.0	0.0	9.0
TS#1	Demolition of Roofing and Steel Frame	2017	25	Forklift	3	8	Forklifts	120	89	0.2	0.6	5.5	3.7	0.5	0.4	0.0	0.2	0.0	0.0	0.2	0.0	0.1	0.0	0.0	0.0	0.0	5.3	0.0	0.0	5.4
TS#1	Demolition of Roofing and Steel Frame	2017	25	Manlift	5	8	aerial lifts	120	63	0.31	0.2	4.1	5.5	0.1	0.1	0.0	0.4	0.0	0.0	0.4	0.0	0.1	0.1	0.0	0.0	0.0	9.7	0.0	0.0	9.9
TS#1	Demolition of Concrete Walls	2017	35	Backhoe	1	8	Tractors/Loaders/Backhoes	120	190	0.37	0.6	6.0	4.7	0.4	0.4	0.0	0.3	0.0	0.0	0.3	0.0	0.1	0.1	0.0	0.0	0.0	9.9	0.0	0.0	10.0
TS#1	Demolition of Concrete Walls	2017	15	Excavator-Breaker (pneumatic)	2	8	Excavators	175	163	0.38	0.7	8.1	6.9	0.4	0.4	0.0	0.5	0.0	0.0	0.5	0.0	0.1	0.1	0.0	0.0	0.0	7.4	0.0	0.0	7.5
TS#1	Demolition of Concrete Walls	2017	35	Loader CAT 977	2	8	Tractors/Loaders/Backhoes	120	190	0.37	1.2	11.9	9.4	0.9	0.8	0.0	0.6	0.0	0.0	0.6	0.0	0.2	0.2	0.0	0.0	0.0	19.8	0.0	0.0	20.1
TS#1	Demolition of Concrete Walls	2017	20	Excavator - pulverizer	2	8	Excavators	175	163	0.38	0.7	8.1	6.9	0.4	0.4	0.0	0.5	0.0	0.0	0.5	0.0	0.1	0.1	0.0	0.0	0.0	9.9	0.0	0.0	10.0
TS#1	Demolition of Concrete Walls	2017	25	Crusher	3	8	Crushing/Proc. Equipment	120	85	0.78	2.3	14.9	13.3	1.2	1.2	0.0	0.9	0.0	0.0	0.9	0.0	0.2	0.2	0.0	0.0	0.0	22.6	0.0	0.0	22.8
TS#1	Demolition of Concrete Walls	2017	35	Skid Steer Loader CAT 246	3	8	Skid Steer Loaders	120	80	0.37	0.4	5.1	5.2	0.3	0.3	0.0	0.4	0.0	0.0	0.4	0.0	0.1	0.1	0.0	0.0	0.0	12.4	0.0	0.0	12.6
TS#1	Demolition of Asphalt, Foundation, and Pile Caps	2017	10	Dozer CAT D-9	1	8	Rubber Tired Dozers	250	464	0.4	2.3	25.1	8.7	1.2	1.1	0.0	0.7	0.0	0.0	0.8	0.0	0.1	0.0	0.0	0.0	0.0	7.4	0.0	0.0	7.6
TS#1	Demolition of Asphalt, Foundation, and Pile Caps	2017	10	Blade CAT 140	1	6	Tractors/Loaders/Backhoes	120	190	0.37	0.5	4.5	3.5	0.3	0.3	0.0	0.2	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	2.1	0.0	0.0	2.2
TS#1	Demolition of Asphalt, Foundation, and Pile Caps	2017	15	Loader CAT 980	1	8	Rubber Tired Loaders	250	270	0.36	0.6	8.2	2.4	0.3	0.3	0.0	0.4	0.0	0.0	0.4	0.0	0.1	0.0	0.0	0.0	0.0	5.8	0.0	0.0	5.9
TS#1	Demolition of Asphalt, Foundation, and Pile Caps	2017	5	Saw Cut Equipment	1	8	Concrete/Industrial Saws	120	81	0.73	0.6	4.3	3.7	0.3	0.3	0.0	0.3	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	1.4
TS#1	Demolition of Asphalt, Foundation, and Pile Caps	2017	10	Air Compressor (Ingersoll-Rand C-185)	1	6	Air Compressors	120	48	0.48	0.2	1.3	1.1	0.1	0.1	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.8
TS#1	Demolition of Asphalt, Foundation, and Pile Caps	2017	10	Excavator-Breaker (CAT 330)	1	8	Excavators	175	163	0.38	0.4	4.0	3.4	0.2	0.2	0.0	0.2	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	2.5	0.0	0.0	2.5
TS#1	Demolition and Removal of Asbestos/ Lead / Hazardous Waste	2017	20	Scissor Lifts	4	8	aerial lifts	120	63	0.31	0.2	3.3	4.4	0.1	0.1	0.0	0.3	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	6.2	0.0	0.0	6.3
TS#1	Demolition and Removal of Asbestos/ Lead / Hazardous Waste	2017	20	Air Compressor (Ingersoll-Rand C-185)	1	8	Air Compressors	120	48	0.48	0.3	1.8	1.5	0.1	0.1	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	2.1	0.0	0.0	2.1
TS#1	Earthwork & Grading	2017	25	Dozer CAT D-9	1	8	Rubber Tired Dozers	250	464	0.4	2.3	25.1	8.7	1.2	1.1	0.0	0.7	0.0	0.0	0.8	0.0	0.3	0.1	0.0	0.0	0.0	18.6	0.0	0.0	18.9
TS#1	Earthwork & Grading	2017	7	Scarper CAT 637	2	8	Scrapers	500	450	0.48	3.2	40.7	25.4	1.6	1.5	0.0	1.7	0.0	0.0	1.7	0.0	0.1	0.1	0.0	0.0	0.0	12.1	0.0	0.0	12.2
TS#1	Earthwork & Grading	2017	25	Blade CAT 140	1	6	Tractors/Loaders/Backhoes	120	190	0.37	0.5	4.5	3.5	0.3	0.3	0.0	0.2	0.0	0.0	0.2	0.0	0.1	0.0	0.0	0.0	0.0	5.3	0.0	0.0	5.4
TS#1	Earthwork & Grading	2017	7	Compactor CAT CB54	1	8	Plate Compactors	15	137	0.43	0.7	4.3	3.6	0.2	0.2	0.0	0.3	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	1.9	0.0	0.0	1.9
TS#1	Earthwork & Grading	2017	25	Loader CAT 950	1	8	Rubber Tired Loaders	250	270	0.36	0.6	8.2	2.4	0.3	0.3	0.0	0.4	0.0	0.0	0.4	0.0	0.1	0.0	0.0	0.0	0.0	9.6	0.0	0.0	9.8
TS#1	Earthwork & Grading	2017	25	Air Compressor (Ingersoll-Rand C-185)	1	8	Air Compressors	120	48	0.48	0.3	1.8	1.5	0.1	0.1	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	2.6	0.0	0.0	2.6
TS#1	Paving	2017	10	Spreader Finisher AC	1	8	paving equipment	120	131	0.36	0.5	4.3	3.1	0.3	0.3	0.0	0.2	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	1.9	0.0	0.0	1.9
TS#1	Paving	2017	10	Vibratory Steel Roller	1	8	Rollers	120	81	0.38	0.3	2.9	2.0	0.2	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.0	1.3
TS#1	Paving	2017	10	Finish Roller	1	8	Rollers	120	81	0.38	0.3	2.9	2.0	0.2	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.0	1.3
TS#1	Paving	2017	8	Air Compressor	1	8	Air Compressors	120	48	0.48	0.3	1.8	1.5	0.1	0.1	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.8
TS#1	Utilities, Lighting, Misc.	2017	20	Excavator	1	8	Excavators	175	163	0.38	0.4	4.0	3.4	0.2	0.2	0.0	0.2	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	4.9	0.0	0.0	5.0
TS#1	Utilities, Lighting, Misc.	2017	20	Loader	1	8	Tractors/Loaders/Backhoes	120	190	0.37	0.6	6.0	4.7	0.4	0.4	0.0	0.3	0.0	0.0	0.3	0.0	0.1	0.0	0.0	0.0	0.0	5.7	0.0	0.0	5.7
TS#1	Utilities, Lighting, Misc.	2017	10	Manlift	1	8	aerial lifts	120	63	0.31	0.0	0.8	1.1	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.8
TS#1	Utilities, Lighting, Misc.	2017	5	Saw Cut Equipment	1	8	Concrete/Industrial Saws	120	81	0.73	0.6	4.3	3.7	0.3	0.3	0.0	0.3	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	1.4
TS#1	Utilities, Lighting, Misc.	2017	15	Compactor	1	8	Plate Compactors	15	137	0.43	0.7	4.3	3.6	0.2	0.2	0.0	0.3	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	4.0	0.0	0.0	4.1
TS#2	Demolition of Roofing and Steel Frame	2018	20	Excavator-Shear	3	8	Excavators	175	163	0.38	0.9	9.6	10.1	0.5	0.4	0.0	0.7	0.0	0.0	0.7	0.0	0.1	0.1	0.0	0.0	0.0	14.6	0.0	0.0	14.8
TS#2	Demolition of Roofing and Steel Frame	2018	25	Excavator	1	8	Excavators	175	163	0.38	0.3	3.2	3.4	0.2	0.1	0.0	0.2	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	6.1	0.0	0.0	6.2
TS#2	Demolition of Roofing and Steel Frame	2018	25	Loader CAT 977	2	8	Tractors/Loaders/Backhoes	120	190	0.37	1.0	10.3	9.2	0.7	0.7	0.0	0.6	0.0	0.0	0.6	0.0	0.1	0.1	0.0	0.0	0.0	13.9	0.0	0.0	14.1
TS#2	Demolition of Roofing and Steel Frame	2018	30	Skid Steer Loader CAT 246	3	8	Skid Steer Loaders	120	80	0.37	0.3	4.5	5.1	0.2	0.2	0.0	0.3	0.0	0.0	0.4	0.0	0.1	0.1	0.0	0.0	0.0	10.4	0.0	0.0	10.6
TS#2	Demolition of Roofing and Steel Frame	2018	30	Forklift	3	8	Forklifts	120	89	0.2	0.5	4.7	3.6	0.4	0.3	0.0	0.2	0.0	0.0	0.2	0.0	0.1	0.1	0.0	0.0	0.0	6.3	0.0	0.0	6.4
TS#2	Demolition of Roofing and Steel Frame	2018	30	Manlift	5	8	aerial lifts	120	63	0.31	0.2	3.6	5.5	0.1	0.1	0.0	0.4	0.0	0.0	0.4	0.0	0.1	0.1	0.0	0.0	0.0	11.5	0.0	0.0	11.7
TS#2	Demolition of Concrete Walls	2018	40	Backhoe	1	8	Tractors/Loaders/Backhoes	120	190	0.37	0.5	5.2	4.6	0.4	0.3	0.0	0.3	0.0	0.0	0.3	0.0	0.1	0.1	0.0	0.0	0.0	11.1	0.0	0.0	11.3
TS#2	Demolition of Concrete Walls	2018	40	Excavator-Breaker (pneumatic)	2	8	Excavators	175	163	0.38	0.6	6.4	6.8	0.3	0.3	0.0	0.5	0.0	0.0	0.5	0.0	0.1	0.1	0.0	0.0	0.0	19.5	0.0	0.0	19.8
TS#2	Demolition of Concrete Walls	2018	40	Loader CAT 977	3	8	Tractors/Loaders/Backhoes	120	190	0.37	1.6	15.5	13.7	1.1	1.0	0.0	0.8	0.0	0.0	0.8	0.0	0.3	0.3	0.0	0.0	0.0	33.3	0.0	0.0	33.9
TS#2	Demolition of Concrete Walls	2018	25	Excavator - pulverizer	2	8	Excavators	175	163	0.38	0.6	6.4	6.8	0.3	0.3	0.0	0.5	0.0	0.0	0.5	0.0	0.1	0.1	0.0	0.0	0.0	12.2	0.0	0.0	12.3
TS#2	Demolition of Concrete Walls	2018	30	Crusher	3	8	Crushing/Proc. Equipment	120	85	0.78	2.0	13.6	13.2	1.0	1.0	0.0	0.9	0.0	0.0	0.9	0.0	0.2	0.2	0.0	0.0	0.0	27.1	0.0	0.0	27.4
TS#2	Demolition of Concrete Walls	2018	40	Skid Steer Loader CAT 246	3	8	Skid Steer Loaders	120	80	0.37	0.3	4.5	5.1	0.2	0.2	0.0	0.3	0.0	0.0	0.4	0.0	0.1	0.1	0.0	0.0	0.0	13.9	0.0	0.0	14.1
TS#2	Demolition of Asphalt, Foundation, and Pile Caps	2018	15	Dozer CAT D-9	1	8	Rubber Tired Dozers	250	464	0.4	2.2	23.6	8.2	1.1	1.1	0.0	0.7	0.0	0.0	0.7	0.0	0.2	0.1	0.0	0.0	0.0	11.0	0.0	0.0	11.2
TS#2	Demolition of Asphalt, Foundation, and Pile Caps	2018	15	Blade CAT 140	1	6	Tractors/Loaders/Backhoes	120	190	0.37	0.4	3.9	3.4	0.3	0.3	0.0	0.2	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	3.1	0.0	0.0	3.2
TS#2	Demolition of Asphalt, Foundation, and Pile Caps	2018	15	Loader CAT 980	1	8	Rubber Tired Loaders	250	270	0.36	0.6	7.1	2.3	0.2	0.2	0.0	0.4	0.0	0.0	0.4	0.0	0.1	0.0	0.0	0.0	0.0	5.7	0.0	0.0	5.8
TS#2	Demolition of Asphalt, Foundation, and Pile Caps	2018	10	Saw Cut Equipment	1	8	Concrete/Industrial Saws	120	81	0.73	0.5	3.9	3.7	0.3	0.3	0.0	0.3	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	2.7	0.0	0.0	2.7
TS#2	Demolition of Asphalt, Foundation, and Pile Caps	2018	15	Air Compressor (Ingersoll-Rand C-185)	1	6	Air Compressors	120	48	0.48	0.2	1.2	1.1	0.1	0.1	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.0	1.2
TS#2	Demolition of Asphalt, Foundation, and Pile Caps	2018	15	Excavator-Breaker (CAT 330)	1	8	Excavators	175	163	0.38	0.3	3.2	3.4	0.2	0.1	0.0	0.2	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	3.6	0.0	0.0	3.7
TS#2	Demolition and Removal of Asbestos/ Lead / Hazardous Waste	2018	25	Scissor Lifts	4	8	aerial lifts	120	63	0.31	0.2	2.8	4.4	0.1	0.1	0.0	0.3	0.0	0.0	0.3	0.0	0.0	0.1	0.0	0.0	0.0	7.7	0.0	0.0	7.8
TS#2	Demolition and Removal of Asbestos/ Lead / Hazardous Waste	2018	25	Air Compressor (Ingersoll-Rand C-185)	1	8	Air Compressors	120	48	0.48	0.2	1.6	1.5	0.1	0.1	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	2.6	0.0	0.0	2.6
TS#2	Earthwork & Grading	2018	25	Dozer CAT D-9	1	8	Rubber Tired Dozers	250	464	0.4	2.2	23.6	8.2	1.1	1.1	0.0	0.7	0.0	0.0	0.7	0.0	0.3	0.1	0.0	0.0	0.0	18.3	0.0	0.0	18.6
TS#2	Earthwork & Grading	2018	8	Scarper CAT 637	2	8	Scrapers	500	450	0.48	2.8	34.8	21.5	1.4	1.3	0.0	1.7	0.0	0.0	1.7	0.0	0.1	0.1	0.0	0.0	0.0	13.6	0.0	0.0	13.8
TS#2	Earthwork & Grading	2018	25	Blade CAT 140	1	6	Tractors/Loaders/Backhoes	120	190	0.37	0.4	3.9	3.4	0.3	0.3	0.0	0.2	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	5.2	0.0	0.0	5.3
TS#2	Earthwork & Grading	2018	8	Compactor CAT CB54	1	8	Plate Compactors	15	137	0.43	0.7	4.3	3.6	0.2	0.2	0.0	0.3	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	2.1	0.0	0.0	2.2
TS#2	Earthwork & Grading	2018	25	Loader CAT 950	1	8	Rubber Tired Loaders	250	270	0.36	0.6	7.1	2.3	0.2	0.2	0.0	0.4	0.0	0.0	0.4	0.0	0.1	0.0	0.0	0.0	0.0	9.5	0.0	0.0	9.6
TS#2	Earthwork & Grading	2018	25	Air Compressor (Ingersoll-Rand C-185)	1	8	Air Compressors	120	48	0.48	0.2	1.6	1.5	0.1	0.1	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	2.6	0.0	0.0	2.6
TS#2	Paving	2018	12	Spreader Finisher AC	1	8	paving equipment	120	131	0.36	0.4	3.6	3.0	0.3	0.2	0.0	0.2	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	2.2	0.0	0.0	2.3
TS#2	Paving	2018	12	Vibratory Steel Roller	1	8	Rollers	120	81	0.38	0.3	2.5	2.0	0.2	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0	1.5
TS#2	Paving	2018	12	Finish Roller	1	8	Rollers	120	81	0.38	0.3	2.5	2.0	0.2	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0	1.5
TS#2	Paving	2018	10	Air Compressor	1	8	Air Compressors	120	48	0.48	0.2	1.6	1.5	0.1	0.1	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.1
TS#2	Utilities, Lighting, Misc.	2018	25	Excavator	1	8	Excavators	175	163	0.38	0.3	3.2	3.4	0.2	0.1	0.0	0.2	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	6.1	0.0	0.0	6.2
TS#2	Utilities, Lighting, Misc.	2018	25	Loader	1	8	Tractors/Loaders/Backhoes	120	190	0.37	0.5	5.2	4.6	0.4	0.3	0.0	0.3	0.0	0.0	0.3	0.0	0.1	0.1	0.0	0.0	0.0	6.9	0.0	0.0	7.1
TS#2	Utilities, Lighting, Misc.	2018	10	Man Lift	1	8	aerial lifts	120	63	0.31	0.0	0.7	1.1	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.8
TS#2	Utilities, Lighting, Misc.	2018	10	Saw Cut Equipment	1	8	Concrete/Industrial Saws	120	81	0.73	0.5	3.9	3.7	0.3	0.3	0.0	0.3	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	2.7	0.0	0.0	2.7
TS#2	Utilities, Lighting, Misc.	2018	20	Compactor	1	8	Plate Compactors	15	137	0.43	0.7	4.3	3.6	0.2	0.2	0.0	0.3	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	5.4	0.0	0.0	5.4
Rail Install		2019	10	Forklift	1	8	Forklifts	120	89	0.2	0.2	1.4	1.2	0.1	0.1	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.7
Rail Install		2019	10	Air Compressor	1	8	Air Compressors	120	48	0.48	0.2	1.5	1.5	0.1	0.1	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.1

Onroad Emissions Calculations

Building	Phase	Year	Concat	Vehicle	Days	Employ Trip/Day	Truck Trip/Day	Truck Trip/Yr	Hrs Day	Daily VMT	Annual VMT	Vehicle	Pounds per day								Tons per year								Metric tons per year			
													ROG	NOX	CO	PM10	PM2.5	PM10 D	PM2.5 D	SO2	ROG	NOX	CO	PM10	PM2.5	PM10 D	PM2.5 D	SO2	CO2	CH4	N2O	CO2e
TS#1	Demolition of Roofing and Steel Frame	2017	LDA/LDT2017	Employee	25	45				428	10,688	LDA/LDT	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1	0.0	0.0	1
TS#1	Demolition of Concrete Walls	2017	LDA/LDT2017	Employee	35	45				428	14,963	LDA/LDT	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2	0.0	0.0	2
TS#1	Demolition of Asphalt, Foundation, and Pile Caps	2017	LDA/LDT2017	Employee	15	45				428	6,413	LDA/LDT	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1	0.0	0.0	1
TS#1	Demolition and Removal of Asbestos/ Lead / Hazardous Waste	2017	LDA/LDT2017	Employee	20	15				143	2,850	LDA/LDT	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0.0	0.0	0
TS#1	Earthwork & Grading	2017	LDA/LDT2017	Employee	25	60				570	14,250	LDA/LDT	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2	0.0	0.0	2
TS#1	Paving	2017	LDA/LDT2017	Employee	10	40				380	3,800	LDA/LDT	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0.0	0.0	0
TS#1	Utilities, Lighting, Misc.	2017	LDA/LDT2017	Employee	20	50				475	9,500	LDA/LDT	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1	0.0	0.0	1
TS#2	Demolition of Roofing and Steel Frame	2018	LDA/LDT2018	Employee	30	45				428	12,825	LDA/LDT	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1	0.0	0.0	1
TS#2	Demolition of Concrete Walls	2018	LDA/LDT2018	Employee	40	45				428	17,100	LDA/LDT	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2	0.0	0.0	2
TS#2	Demolition of Asphalt, Foundation, and Pile Caps	2018	LDA/LDT2018	Employee	15	45				428	6,413	LDA/LDT	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1	0.0	0.0	1
TS#2	Demolition and Removal of Asbestos/ Lead / Hazardous Waste	2018	LDA/LDT2018	Employee	25	15				143	3,563	LDA/LDT	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0.0	0.0	0
TS#2	Earthwork & Grading	2018	LDA/LDT2018	Employee	25	53				503	12,574	LDA/LDT	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1	0.0	0.0	1
TS#2	Paving	2018	LDA/LDT2018	Employee	12	35				335	4,024	LDA/LDT	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0.0	0.0	0
TS#2	Utilities, Lighting, Misc.	2018	LDA/LDT2018	Employee	25	44				419	10,478	LDA/LDT	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1	0.0	0.0	1
Rail Install	-	2019	LDA/LDT2019	Employee	10	18				168	1,676	LDA/LDT	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0.0	0.0	0
TS#1	Demolition of Roofing and Steel Frame	2017	T7Hwy2017	End Dump (16 Ton)	20		10	204		204	4,085	T7Hwy	0.1	2.5	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7	0.0	0.0	7
TS#1	Demolition of Concrete Walls	2017	T7Hwy2017	End Dump (16 Ton)	25		7	170		136	3,404	T7Hwy	0.1	1.6	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6	0.0	0.0	6
TS#1	Demolition of Asphalt, Foundation, and Pile Caps	2017	T7Hwy2017	Dump Truck (20 Ton)	15		14	204		272	4,085	T7Hwy	0.1	3.3	0.4	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7	0.0	0.0	7
TS#1	Demolition and Removal of Asbestos/ Lead / Hazardous Waste	2017	T7Hwy2017	Dump Truck (16 Ton)	10		3	34		68	681	T7Hwy	0.0	0.8	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1	0.0	0.0	1
TS#1	Earthwork & Grading to Landfill (not used)	2017	T7Hwy2017	Dump Truck (20 Ton)	20		53	1,050		1,050	21,000	T7Hwy	0.4	12.6	1.4	0.1	0.1	0.2	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	34	0.0	0.0	35
TS#1	Paving	2017	T7Hwy2017	Dump Truck (20 Ton)	10		10	100		200	2,000	T7Hwy	0.1	2.4	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3	0.0	0.0	3
TS#2	Demolition of Roofing and Steel Frame	2018	T7Hwy2018	End Dump (16 Ton)	25		5	135		108	2,709	T7Hwy	0.0	1.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5	0.0	0.0	5
TS#2	Demolition of Concrete Walls	2018	T7Hwy2018	End Dump (16 Ton)	32		4	116		72	2,312	T7Hwy	0.0	0.9	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4	0.0	0.0	4
TS#2	Demolition of Asphalt, Foundation, and Pile Caps	2018	T7Hwy2018	Dump Truck (16 Ton)	16		2	29		36	578	T7Hwy	0.0	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1	0.0	0.0	1
TS#2	Demolition of Asphalt, Foundation, and Pile Caps	2018	T7Hwy2018	Dump Truck (20 Ton)	15		18	271		361	5,418	T7Hwy	0.1	4.3	0.5	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9	0.0	0.0	9
TS#2	Earthwork & Grading to Landfill (not used)	2018	T7Hwy2018	Dump Truck (20Ton)	25		65	1,631		1,305	32,625	T7Hwy	0.5	15.6	1.8	0.1	0.1	0.3	0.1	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	55	0.0	0.0	55
TS#2	Paving	2018	T7Hwy2018	Dump Truck (20 Ton)	12		10	120		200	2,400	T7Hwy	0.1	2.4	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4	0.0	0.0	4
TS#1	Earthwork & Grading	2017	T7Hwy2017	Dump Truck (20 Ton)	20		53	1050		1050	21000	T7Hwy	0.4	12.6	1.4	0.1	0.1	0.2	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	34	0.0	0.0	35
TS#2	Earthwork & Grading	2017	T7Hwy2017	Dump Truck (20 Ton)	25		65	1631		1305	32625	T7Hwy	0.5	15.7	1.8	0.1	0.1	0.3	0.1	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	53	0.0	0.0	54
TS#1	Demolition of Roofing and Steel Frame	2017	T7onsite2017	End Dump (16 Ton)	20		-	-	8	40	800	T7onsite	0.1	1.6	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3	0.0	0.0	3
TS#1	Demolition of Concrete Walls	2017	T7onsite2017	End Dump (16 Ton)	25		-	-	8	40	1,000	T7onsite	0.1	1.6	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3	0.0	0.0	3
TS#1	Demolition of Asphalt, Foundation, and Pile Caps	2017	T7onsite2017	Dump Truck (20 Ton)	15		-	-	8	40	600	T7onsite	0.1	1.6	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2	0.0	0.0	2
TS#1	Demolition and Removal of Asbestos/ Lead / Hazardous Waste	2017	T7onsite2017	Dump Truck (16 Ton)	10		-	-	8	40	400	T7onsite	0.1	1.6	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1	0.0	0.0	1
TS#1	Earthwork & Grading	2017	T7onsite2017	Dump Truck (20 Ton)	20		-	-	8	40	800	T7onsite	0.1	1.6	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3	0.0	0.0	3
TS#1	Paving	2017	T7onsite2017	Dump Truck (20 Ton)	10		-	-	8	40	400	T7onsite	0.1	1.6	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1	0.0	0.0	1
TS#2	Demolition of Roofing and Steel Frame	2018	T7onsite2018	End Dump (16 Ton)	25		-	-	8	40	1,000	T7onsite	0.1	1.7	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3	0.0	0.0	3
TS#2	Demolition of Concrete Walls	2018	T7onsite2018	End Dump (16 Ton)	32		-	-	8	40	1,280	T7onsite	0.1	1.7	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4	0.0	0.0	4
TS#2	Demolition of Asphalt, Foundation, and Pile Caps	2018	T7onsite2018	Dump Truck (16 Ton)	16		-	-	8	40	640	T7onsite	0.1	1.7	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2	0.0	0.0	2
TS#2	Demolition of Asphalt, Foundation, and Pile Caps	2018	T7onsite2018	Dump Truck (20 Ton)	15		-	-	8	40	600	T7onsite	0.1	1.7	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2	0.0	0.0	2
TS#2	Earthwork & Grading	2018	T7onsite2018	Dump Truck (20Ton)	25		-	-	8	40	1,000	T7onsite	0.1	1.7	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3	0.0	0.0	3
TS#2	Paving	2018	T7onsite2018	Dump Truck (20 Ton)	12		-	-	8	40	480	T7onsite	0.1	1.7	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2	0.0	0.0	2
TS#1	Paving	2017	T7Hwy2017	Asphalt Distributor Truck	10		1	10		20	200	T7Hwy	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0.0	0.0	0
TS#2	Paving	2018	T7Hwy2018	Asphalt Distributor Truck	12		1	12		20	240	T7Hwy	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0.0	0.0	0
TS#1	Paving	2017	T7onsite2017	Asphalt Distributor Truck	10		1	10	8	40	400	T7onsite	0.1	1.6	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1	0.0	0.0	1
TS#2	Paving	2018	T7onsite2018	Asphalt Distributor Truck	12		1	12	8	40	480	T7onsite	0.1	1.7	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2	0.0	0.0	2
TS#1	Demolition of Roofing and Steel Frame	2017	T7onsite2017	Water Truck (5000 Gallon)	25		-	-	8	40	1,000	T7onsite	0.1	1.6	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3	0.0	0.0	3
TS#1	Demolition of Concrete Walls	2017	T7onsite2017	Water Truck (5000 Gallon)	35		-	-	8	40	1,400	T7onsite	0.1	1.6	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5	0.0	0.0	5
TS#1	Demolition of Asphalt, Foundation, and Pile Caps	2017	T7onsite2017	Water Truck (5000 Gallons)	15		-	-	8	40	600	T7onsite	0.1	1.6	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2	0.0	0.0	2
TS#1	Earthwork & Grading	2017	T7onsite2017	Water Truck (5000 Gallons)	25		-	-	8	40	1,000	T7onsite	0.1	1.6	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3	0.0	0.0	3
TS#1	Paving	2017	T7onsite2017	Water Truck	8		-	-	8	40	320	T7onsite	0.1	1.6	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1	0.0	0.0	1
TS#1	Utilities, Lighting, Misc.	2017	T7onsite2017	Water Truck	10		-	-	6	30	300	T7onsite	0.1	1.2	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1	0.0	0.0	1
TS#2	Demolition of Roofing and Steel Frame	2018	T7onsite2018	Water Truck (5000 Gallon)	30		-	-	8	40	1,200	T7onsite	0.1	1.7	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4	0.0	0.0	4
TS#2	Demolition of Concrete Walls	2018	T7onsite2018	Water Truck (5000 Gallon)	40		-	-	8	40	1,600	T7onsite	0.1	1.7	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5	0.0	0.0	5
TS#2	Demolition of Asphalt, Foundation, and Pile Caps	2018	T7onsite2018	Water Truck (5000 Gallons)	15		-	-	8	40	600	T7onsite	0.1	1.7	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2	0.0	0.0	2
TS#2	Earthwork & Grading	2018	T7onsite2018	Water Truck (5000 Gallons)	25		-	-	8	40	1,000	T7onsite	0.1	1.7	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3	0.0	0.0	3
TS#2	Paving	2018	T7onsite2018	Water Truck	10		-	-	8	40	400	T7onsite	0.1	1.7	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1	0.0	0.0	1
TS#2	Utilities, Lighting, Misc.	2018	T7onsite2018	Water Truck	15		-	-	6	30	450	T7onsite	0.1	1.2	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1	0.0	0.0	1
Rail Install	-	2019	T7Hwy2019	Delivery Truck	10		2	20		40	400	T7Hwy	*0.0*	*0.5*	*0.1*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.7*	*0.0*	*0.0*	*0.7*

Re-entrained Paved Road Dust Emission Factor Calculation

Methodology

Calculation Methodology: USEPA AP-42, Paved Roads, Section 13.2.1, Revised January 2011:

http://www.epa.gov/ttn/chief/ap42/ch13/final/c13s0201.pdf

Precip days:

http://www.wrcc.dri.edu/cgi-bin/cliGCStP.pl?ca7740

Avg Vehicle Weight from ARB's method update (2014):

http://www.arb.ca.gov/ei/areasrc/fullpdf/full7-9_2014.pdf

Emission Factor Calculation

$$E_{ext} = [\, k\,(sL)^{0.91} \times (W)^{1.02} \,]\,(1 - P/4N)$$

Pollutant	Variables					Factor (g per mi)
	k	sL	W	P	N	
PM_{10}	1.00	0.1	2.4	43.0	365	0.29163
$PM_{2.5}$	0.25	0.1	2.4	43.0	365	0.07291

E = particulate emission factor (grams of particulate matter/VMT)
k = particle size multiplier (lb/VMT) — *default from AP-42*
sL = roadway silt loading (g/m2) — *Caleemod default*
W = average weight of vehicles on the road (tons) — *ARB 2014*
P = number of wet days with at least 0.254mm of precipitation — *WRCC for SAN airport*
N = number of days in the averaging period — *annual days (365)*

PM Emissions (daily)

Phase	Year	Pounds per Day		Daily VMT
		PM10	PM2.5	
TS#1Demolition of Roofing and Steel Frame	2017	0.46	0.11	712
TS#1Demolition of Concrete Walls	2017	0.41	0.10	644
TS#1Demolition of Asphalt, Foundation, and Pile Caps	2017	0.50	0.13	780
TS#1Demolition and Removal of Asbestos/ Lead / Hazardous Waste	2017	0.16	0.04	251
TS#1Earthwork & Grading	2017	1.09	0.27	1,700
TS#1Paving	2017	0.46	0.12	720
TS#1Utilities, Lighting, Misc.	2017	0.32	0.08	505
TS#2Demolition of Roofing and Steel Frame	2018	0.40	0.10	616
TS#2Demolition of Concrete Walls	2018	0.37	0.09	580
TS#2Demolition of Asphalt, Foundation, and Pile Caps	2018	0.61	0.15	945
TS#2Demolition and Removal of Asbestos/ Lead / Hazardous Waste	2018	0.09	0.02	143
TS#2Earthwork & Grading	2018	1.21	0.30	1,888
TS#2Paving	2018	0.43	0.11	675
TS#2Utilities, Lighting, Misc.	2018	0.29	0.07	449
Rail Install	2019	0.13	0.03	208

PM Emissions (annual)

Phase	Year	Tons per Year		Annual VMT
		PM10	PM2.5	
TS#1Demolition of Roofing and Steel Frame	2017	0.01	0.00	16,572
TS#1Demolition of Concrete Walls	2017	0.01	0.00	20,767
TS#1Demolition of Asphalt, Foundation, and Pile Caps	2017	0.00	0.00	11,697
TS#1Demolition and Removal of Asbestos/ Lead / Hazardous Waste	2017	0.00	0.00	3,931
TS#1Earthwork & Grading	2017	0.01	0.00	37,050
TS#1Paving	2017	0.00	0.00	7,120
TS#1Utilities, Lighting, Misc.	2017	0.00	0.00	9,800
TS#2Demolition of Roofing and Steel Frame	2018	0.01	0.00	17,734
TS#2Demolition of Concrete Walls	2018	0.01	0.00	22,292
TS#2Demolition of Asphalt, Foundation, and Pile Caps	2018	0.00	0.00	14,248
TS#2Demolition and Removal of Asbestos/ Lead / Hazardous Waste	2018	0.00	0.00	3,563
TS#2Earthwork & Grading	2018	0.02	0.00	47,199
TS#2Paving	2018	0.00	0.00	8,024
TS#2Utilities, Lighting, Misc.	2018	0.00	0.00	10,928
Rail Install	2019	1.34	0.33	2,076

Fugitive Dust from Earhtwork/grading/demo

	days	Grading acres	Exca tons	Demo tons	Paving acres	Emission factors PM10	PM2.5		PM10	PM2.5	
TS#1Demolition of Roofing and Steel Frame	25			1702		0.02143896	0.0032499	lbs/ton			
TS#1Demolition of Concrete Walls	35			1702		0.02143896	0.0032499	lbs/ton			
TS#1Demolition of Asphalt, Foundation, and Pile Caps	15			1702		0.02143896	0.0032499	lbs/ton			
TS#1Demolition and Removal of Asbestos/ Lead / Hazardous Waste	20			1702		0.02143896	0.0032499	lbs/ton			
TS#1Earthwork & Grading	25	5.7392	35143.82			1.0605000	0.1145000	lbs/acre	3.89593E-05	5.89954E-06	lbs/ton
TS#1Paving	10				5.7392			lbs/acre			
TS#1Utilities, Lighting, Misc.	20										
TS#2Demolition of Roofing and Steel Frame	30			2311.5		0.02143896	0.0032499	lbs/ton			
TS#2Demolition of Concrete Walls	40			2311.5		0.02143896	0.0032499	lbs/ton			
TS#2Demolition of Asphalt, Foundation, and Pile Caps	15			2311.5		0.02143896	0.0032499	lbs/ton			
TS#2Demolition and Removal of Asbestos/ Lead / Hazardous Waste	25			2311.5		0.02143896	0.0032499	lbs/ton			
TS#2Earthwork & Grading	25	7.346176	45004.317			1.0605000	0.1145000	lbs/acre	3.89593E-05	5.89954E-06	lbs/ton
TS#2Paving	12				7.346176			lbs/acre			
TS#2Utilities, Lighting, Misc.	25										

demo rate including both demo and loadig

demo tons split evenly

Volumes for dust and truck haul

	earthwork	export	grading	paving		demo			
	CY	CY	ft2	ft2	acres	L	W	ft2	
Transit Shed #1	27,800	16,400	250,000	250,000	5.7	740	200	148,000	(inlcudes 7,000 sf headhouse)
Transit Shed #2	35,600	21,500	320,000	320,000	7.3	970	200	194,000	
Head House								7,000	
Warehouse C									

	excavation	export
TS1	18500	16400
TS2	24200	21500
stormwater	9200	9200
	51900	47100

Trucks	ts1 earth	ts2 earth	ts1 demo	ts2 demo		to CV
vol to export	*21000*	*26100*	6808	9246		*47100*
truck size	16	16	20	20		16
truck loads	1313	1631	340	462		2944
	CY	CY	tons	tons		CY
days	25	25	10	16		50
trucks/day	53	65	34	29	(use this)	59
given by applciant	*20*	*20*	*10*	*16*		*20*

truck capacity
16 CY, or
20 tons

	trips/day from applicant	trips/day here		
TS#1Demolition of Roofing and Steel Frame	3	10		
TS#1Demolition of Concrete Walls	2	7		
TS#1Demolition of Asphalt, Foundation, and Pile Caps	4	14		
TS#1Demolition and Removal of Asbestos/ Lead / Hazardous Waste	1	3	*10*	*34*
TS#1Earthwork & Grading	20	53		
TS#1Paving		12		
TS#1Utilities, Lighting, Misc.		0	*20*	*65*
TS#2Demolition of Roofing and Steel Frame	3	5		
TS#2Demolition of Concrete Walls	2	4		
TS#2Demolition of Asphalt, Foundation, and Pile Caps	1	2		
TS#2Demolition and Removal of Asbestos/ Lead / Hazardous Waste	10	18	*16*	*29*
TS#2Earthwork & Grading	20	65		
TS#2Paving		12		
TS#2Utilities, Lighting, Misc.		0		
Rail Install		2	*20*	*79*

	overall		for soils	
was	53	68	41	54
now	65	79	53	65

in calcs, revised demo and earthwork daily truck loads based on info in green. Trips were higher when calculated.

PAVING	Pounds per day	Tons per year			
	ROG	ROG		*metrics*	
TS#1Demolition of Roofing and Steel Frame					
TS#1Demolition of Concrete Walls					
TS#1Demolition of Asphalt, Foundation, and Pile Caps					
#1Demolition and Removal of Asbestos/ Lead / Hazardous Waste					
TS#1Earthwork & Grading			days	acres	EF
TS#1Paving	1.50	0.0075	10	5.7392	2.62
TS#1Utilities, Lighting, Misc.					
TS#2Demolition of Roofing and Steel Frame					
TS#2Demolition of Concrete Walls					
TS#2Demolition of Asphalt, Foundation, and Pile Caps					
#2Demolition and Removal of Asbestos/ Lead / Hazardous Waste					
TS#2Earthwork & Grading					
TS#2Paving	1.60	0.0096	12	7.346176	2.62
TS#2Utilities, Lighting, Misc.					
Rail Install					

General Assumptions

N2O_CO2 Diesel Equipment	0.000026	Climate Registry 2015	
CH4_CO2 Diesel Equipment	0.000057	Climate Registry 2015	
N2O_NOX Gasoline	0.041600	ARB EMFAC FAQs	
lbs/gram	0.002204623		
kg/mt	1000		
mt/gram	0.000001		
mt/lbs	0.000453592		
ton/lbs	0.0005		
ton/gram	1.10E-06		
ton per cy conversion	1.2641662	CalEEMod	
ton per SF conversion	0.046	CalEEMod	
acre per SF conversion	2.30E-05		
CH4 GWP	25	AR4	
N2O GWP	298	AR4	
Employee Trip Milage	9.5	CalEEMod (H-W, SD)	
Haul Truck Mileage (landfill)	20	Default	
Haul Truck Mileage (middle CV Bayfront) - not used	15	7.5 mi one-way per google	
Haul Truck Mileage (southern end of CV Bayfront)	20	10 mi one-way to per google	
Water Truck	5	mph on-site travel	
Employee per Piece of Equipment	1.25	Caleemod default	
Rail Delivery Mileage	20	(same as haul)	
Paving ROG EF	2.62	lbs/acre	CalEEMod (no mitigation)
Grading PM10 EF	1.0605	lbs/acre	CalEEMod (no mitigation)
Grading PM2.5 EF	0.1145	lbs/acre	CalEEMod (no mitigation)
Bulldozing PM10 EF	0.752760759	lbs/hr	CalEEMod (no mitigation)
Bulldozing PM2.5 EF	0.413778428	lbs/hr	CalEEMod (no mitigation)
Truck loading PM10 EF	0.000039	lb/ton	CalEEMod (no mitigation)
Truck loading PM2.5 EF	0.000006	lb/ton	CalEEMod (no mitigation)
Demo PM10 EF	0.021400	lb/ton	CalEEMod (no mitigation, includes loading)
Demo PM2.5 EF	0.003244	lb/ton	CalEEMod (no mitigation, includes loading)
Max Daily Employees	50	apportion into phases by equipment	
Trips per employee	3	TIA	

Phase	Start Date	End Date	Working Days
TS#1Demolition of Roofing and Steel Frame	7/1/2017	8/3/2017	25
TS#1Demolition of Concrete Walls	8/4/2017	9/22/2017	35
TS#1Demolition of Asphalt, Foundation, and Pile Caps	9/23/2017	10/14/2017	15
TS#1Demolition and Removal of Asbestos/ Lead / Hazardous Waste	10/15/2017	11/11/2017	20
TS#1Earthwork & Grading	11/12/2017	12/15/2017	25
TS#1Paving	12/16/2017	12/30/2017	10
TS#1Utilities, Lighting, Misc.	12/30/2017	1/26/2018	20
TS#2Demolition of Roofing and Steel Frame	1/27/2018	3/7/2018	30
TS#2Demolition of Concrete Walls	3/8/2018	5/2/2018	40
TS#2Demolition of Asphalt, Foundation, and Pile Caps	5/3/2018	5/25/2018	15
TS#2Demolition and Removal of Asbestos/ Lead / Hazardous Waste	5/26/2018	6/28/2018	25
TS#2Earthwork & Grading	6/29/2018	8/1/2018	25
TS#2Paving	8/2/2018	8/19/2018	12
TS#2Utilities, Lighting, Misc.	8/20/2018	9/23/2018	25
Rail Install	1/1/2019	1/13/2019	10

EMFAC Emission Rates

Model	Year	Concat	ROG	NOX	CO	PM10	PM2.5	PM10D	PM2.5D	SO2	CO2(pav)	CH4	N2O
LDA/LDT	2017	LDA/LDT2017	0.01	0.04	0.33	0.00	0.00	0.02	0.01	0.00	113.55	1.33E-02	1.56E-03
LDA/LDT	2018	LDA/LDT2018	0.01	0.03	0.29	0.00	0.00	0.02	0.01	0.00	110.82	1.20E-02	1.41E-03
LDA/LDT	2019	LDA/LDT2019	0.01	0.03	0.27	0.00	0.00	0.02	0.01	0.00	107.72	1.09E-02	1.28E-03
LDA/LDT	2020	LDA/LDT2020	0.01	0.03	0.25	0.00	0.00	0.02	0.01	0.00	104.46	9.85E-03	1.17E-03
T7Hwy	2017	T7Hwy2017	0.18	5.45	0.61	0.03	0.02	0.09	0.03	0.02	1630.53	8.59E-03	4.18E-02
T7Hwy	2018	T7Hwy2018	0.18	5.42	0.64	0.02	0.02	0.10	0.04	0.02	1683.48	8.35E-03	4.31E-02
T7Hwy	2019	T7Hwy2019	0.19	5.55	0.68	0.03	0.02	0.10	0.04	0.02	1763.55	8.22E-03	4.52E-02
T7Hwy	2020	T7Hwy2020	0.19	5.61	0.72	0.03	0.02	0.11	0.04	0.02	1833.58	8.03E-03	4.70E-02
T7Onsite	2017	T7Onsite2017	1.37	18.24	4.63	0.05	0.05	0.09	0.03	0.03	3304.10	6.36E-02	8.46E-02
T7Onsite	2018	T7Onsite2018	1.33	18.78	4.69	0.05	0.05	0.10	0.04	0.03	3274.86	6.18E-02	8.39E-02
T7Onsite	2019	T7Onsite2019	1.31	19.40	4.78	0.05	0.05	0.10	0.04	0.03	3260.70	6.08E-02	8.35E-02
T7Onsite	2020	T7Onsite2020	1.28	20.00	4.81	0.05	0.04	0.11	0.04	0.03	3235.61	5.94E-02	8.29E-02

Equipment HP, Bin, and Load

Equipment	Caleemod	HP	HP Bin	Load	source
Excavator-Shear	Excavators	163	175	0.38	Caleemod default
Excavator	Excavators	163	175	0.38	Caleemod default
Loader CAT 977	Tractors/Loaders/Backhoes	190	250	0.37	Manufacturer specs
Skid Steer Loader CAT 246	Skid Steer Loaders	80	120	0.37	Manufacturer specs
Forklift	Forklifts	89	120	0.2	Caleemod default
Manlift	aerial lifts	63	120	0.31	Caleemod default
Backhoe	Tractors/Loaders/Backhoes	98	120	0.37	Caleemod default
Excavator-Breaker (pneumatic)	Excavators	163	175	0.38	Caleemod default
Excavator - pulverizer	Excavators	163	175	0.38	Caleemod default
Crusher	Crushing/Proc. Equipment	85	120	0.78	Caleemod default
Dozer CAT D-9	Rubber Tired Dozers	464	500	0.40	Manufacturer specs
Blade CAT 140	Tractors/Loaders/Backhoes	185	250	0.37	Manufacturer specs
Loader CAT 980	Rubber Tired Loaders	270	500	0.36	Manufacturer specs
Saw Cut Equipment	Concrete/Industrial Saws	81	120	0.73	Caleemod default
Air Compressor (Ingersoll-Rand C-185)	Air Compressors	48	50	0.48	Manufacturer specs
Excavator-Breaker (CAT 330)	Excavators	270	250	0.38	Manufacturer specs
Scissor Lifts	aerial lifts	63	120	0.31	Caleemod default
Scarper CAT 637	Scrapers	450	500	0.48	Manufacturer specs
Compactor CAT CB54	Plate Compactors	137	175	0.43	Manufacturer specs
Loader CAT 950	Rubber Tired Loaders	130	175	0.36	Manufacturer specs
Spreader Finisher AC	paving equipment	131	120	0.36	Caleemod default
Vibratory Steel Roller	Rollers	81	120	0.38	Caleemod default
Finish Roller	Rollers	81	120	0.38	Caleemod default
Air Compressor	Air Compressors	78	120	0.48	Caleemod default
Loader	Tractors/Loaders/Backhoes	98	120	0.37	Caleemod default
Compactor	Plate Compactors	8	15	0.43	Caleemod default
Man Lift	aerial lifts	63	120	0.31	Caleemod default

Health Risk Assessment Sheets

- o **Risk Calculation Sheets**
- o **AERMOD outputs (upon request)**

Emission Rate Calculations

	DPM									
	Baseline		**Full TAMT Plan**				**STC Buildout**			
			Unmit		Full Mitigated		Unmit		Full Mitigated	
	tons/year	g/s	tons/year	g/s	tons/year	g/s	tons/year	g/s	tons/year	g/s
Dry Bulk										
Vessel Transit (in harbor)	0.04	1.10E-03	0.40	1.14E-02	0.40	1.14E-02	0.30	8.52E-03	0.30	8.52E-03
Vessel Hoteling	0.12	3.53E-03	1.29	3.72E-02	0.97	2.79E-02	0.97	2.78E-02	0.65	1.88E-02
Assist Tug Transit	0.00	1.07E-04	0.04	1.04E-03	0.04	1.04E-03	0.03	7.76E-04	0.03	7.76E-04
Tug/Barge Transit	0.00	6.16E-05	0.02	5.98E-04	0.02	5.98E-04	0.02	4.43E-04	0.02	4.43E-04
Tug/Barge Hoteling	0.00	2.73E-05	0.01	2.66E-04	0.01	2.66E-04	0.01	1.97E-04	0.01	1.97E-04
Terminal Equipment	0.05	4.33E-09	0.50	3.99E-08	0.21	1.69E-08	0.38	3.03E-08	0.09	7.28E-09
Locomotives	0.00	1.37E-04	0.07	2.16E-03	0.07	2.16E-03	0.06	1.62E-03	0.06	1.62E-03
Truck Travel	-	-	-	-						
Refrigerated Containers										
Vessel Transit (in harbor)	0.19	5.56E-03	0.65	1.86E-02	0.65	1.86E-02	0.49	1.40E-02	0.49	1.40E-02
Vessel Hoteling	1.97	5.65E-02	10.52	3.02E-01	1.57	4.50E-02	7.89	2.27E-01	1.17	3.38E-02
Assist Tug Transit	0.01	4.07E-04	0.03	8.56E-04	0.03	8.56E-04	0.02	6.42E-04	0.02	6.42E-04
Tug/Barge Transit	0.01	2.34E-04	0.02	4.91E-04	0.02	4.91E-04	0.01	3.67E-04	0.01	3.67E-04
Tug/Barge Hoteling	0.00	1.04E-04	0.01	2.18E-04	0.01	2.18E-04	0.01	1.63E-04	0.01	1.63E-04
Terminal Equipment	0.12	9.53E-09	0.43	3.45E-08	0.14	1.14E-08	0.33	2.62E-08	0.04	3.13E-09
Locomotives	-	-	-	-	-	-	-	-	-	-
Truck Travel	-	-	-	-						
Multi-Purpose General Cargo										
Vessel Transit (in harbor)	0.03	9.14E-04	0.35	1.01E-02	0.35	1.01E-02	0.26	7.57E-03	0.26	7.57E-03
Vessel Hoteling	0.11	3.10E-03	1.20	3.45E-02	0.90	2.59E-02	0.90	2.59E-02	0.61	1.75E-02
Assist Tug Transit	0.01	2.00E-04	0.08	2.23E-03	0.08	2.23E-03	0.06	1.67E-03	0.06	1.67E-03
Tug/Barge Transit	0.00	1.15E-04	0.04	1.28E-03	0.04	1.28E-03	0.03	9.54E-04	0.03	9.54E-04
Tug/Barge Hoteling	0.00	5.10E-05	0.02	5.69E-04	0.02	5.69E-04	0.01	4.24E-04	0.01	4.24E-04
Terminal Equipment	0.02	1.27E-09	0.18	1.47E-08	0.00	0.00E+00	0.14	1.12E-08	0.00	0.00E+00
Locomotives	0.01	2.19E-04	0.09	2.54E-03	0.09	2.54E-03	0.07	1.90E-03	0.07	1.90E-03
Truck Travel	-	-	-	-						

Truck Haul Emission Calculations (for AERMOD)

g/s of mass DPM	Existing: Dry Bulk	Existing: Refrigerated Containers	Existing: Multi-Purpose General Cargo	Demo/Rail Unmit: Dry Bulk	Demo/Rail Unmit: Refrigerated Containers	Demo/Rail Unmit: Multi-Purpose General Cargo
on Harbor	5.36184E-05	0.000118726	5.74482E-06	5.36184E-05	0.000122996	7.45249E-06
on Cesar Chavez	1.19827E-05	2.6533E-05	1.28386E-06	1.19827E-05	2.75328E-05	1.68376E-06
on 28th	1.19827E-05	2.6533E-05	1.28386E-06	1.19827E-05	2.75328E-05	1.68376E-06

g/s by roadway	Existing: on Harbor	Existing: on Cesar Chave	Existing: on 28th	Existing: sum	Existing: %	Demo/Rail Unmit: on Harbor	Demo/Rail Unmit: on Cesar Chave	Demo/Rail Unmit: on 28th	Demo/Rail Unmit: sum	Demo/Rail Unmit: %
Dry Bulk	5.36184E-05	1.19827E-05	1.19827E-05	7.75837E-05	30%	5.36184E-05	1.19827E-05	1.19827E-05	7.75837E-05	29%
Refrigerated Containers	0.000118726	2.6533E-05	2.6533E-05	0.000171792	67%	0.000122996	2.75328E-05	2.75328E-05	0.000178061	67%
Multi-Purpose General Cargo	5.74482E-06	1.28386E-06	1.28386E-06	8.31254E-06	3%	7.45249E-06	1.68376E-06	1.68376E-06	1.082E-05	4%
				0.000257689					0.000266465	

g/s for AERMOD segments	TR_28THExisting	TR_BAYMAREXisting	TR_BOSTONExisting	TR_CROSBYExisting	TR_HARBORCHAExisting	TR_HARBORSAMExisting	sumExisting	TR_28THDemo/Rail Unmit	TR_BAYMARDemo/Rail Unmit	TR_BOSTONDemo/Rail Unmit	TR_CROSBYDemo/Rail Unmit	TR_HARBORCHADemo/Rail Unmit	TR_HARBORSAMDemo/Rail Unmit	sumDemo/Rail Unmit
Dry Bulk	3.04708E-06	2.14473E-06	5.62701E-06	1.19827E-05	2.68092E-05	2.68092E-05	7.64198E-05	3.95283E-06	2.14473E-06	5.62701E-06	1.19827E-05	2.68092E-05	2.68092E-05	7.73256E-05
Refrigerated Containers	6.80963E-07	4.74905E-06	1.24598E-05	2.6533E-05	5.93632E-05	5.93632E-05	0.000163149	8.93075E-07	4.91982E-06	1.29293E-05	2.75328E-05	6.14978E-05	6.14978E-05	0.000169271
Multi-Purpose General Cargo	6.80963E-07	2.29793E-07	6.02893E-07	1.28386E-06	2.87241E-06	2.87241E-06	8.54233E-06	8.93075E-07	2.981E-07	7.90687E-07	1.68376E-06	3.72624E-06	3.72624E-06	1.11181E-05
ALL	4.40901E-06	7.12358E-06	1.86897E-05	3.97996E-05	8.90448E-05	8.90448E-05	0.000248111	5.73898E-06	7.36266E-06	1.9347E-05	4.11992E-05	9.20332E-05	9.20332E-05	0.000257714

Truck Haul Emission Calculations (for AERMOD)

g/s of mass DPM	Demo/Rail Mit: Dry Bulk	Demo/Rail Mit: Refrigerated Containers	Demo/Rail Mit: Multi-Purpose General Cargo	Full TAMT Plan Unmit: Dry Bulk	Full TAMT Plan Unmit: Refrigerated Containers	Full TAMT Plan Unmit: Multi-Purpose General Cargo
on Harbor	5.36184E-05	0.000122996	7.45249E-06	7.9675E-05	0.000139112	1.01571E-05
on Cesar Chavez	1.19827E-05	2.75328E-05	1.68376E-06	1.8103E-05	3.13199E-05	2.31963E-06
on 28th	1.19827E-05	2.75328E-05	1.68376E-06	1.8103E-05	3.13199E-05	2.31963E-06

Demo/Rail Mit

g/s by roadway	on Harbor	on Cesar Chave	on 28th	sum	%
Dry Bulk	5.36184E-05	1.19827E-05	1.19827E-05	7.75837E-05	29%
Refrigerated Containers	0.000122996	2.75328E-05	2.75328E-05	0.000178061	67%
Multi-Purpose General Cargo	7.45249E-06	1.68376E-06	1.68376E-06	1.082E-05	4%
				0.000266465	

Full TAMT Plan Unmit

g/s by roadway	on Harbor	on Cesar Chave	on 28th	sum	%
Dry Bulk	7.9675E-05	1.8103E-05	1.8103E-05	0.000115881	35%
Refrigerated Containers	0.000139112	3.13199E-05	3.13199E-05	0.000201752	61%
Multi-Purpose General Cargo	1.01571E-05	2.31963E-06	2.31963E-06	1.47963E-05	4%
				0.000332429	

g/s for AERMOD segments	TR_28THDemo/Rail Mit	TR_BAYMARDemo/Rail Mit	TR_BOSTONDemo/Rail Mit	TR_CROSBYDemo/Rail Mit	TR_HARBORCHADemo/Rail Mit	TR_HARBORSAMDemo/Rail Mit	sumDemo/Rail Mit
Dry Bulk	3.95283E-06	2.14473E-06	5.62701E-06	1.19827E-05	2.68092E-05	2.68092E-05	7.73256E-05
Refrigerated Containers	8.93075E-07	4.91982E-06	1.29293E-05	2.75328E-05	6.14978E-05	6.14978E-05	0.000169271
Multi-Purpose General Cargo	8.93075E-07	2.981E-07	7.90687E-07	1.68376E-06	3.72624E-06	3.72624E-06	1.11181E-05
ALL	5.73898E-06	7.36266E-06	1.9347E-05	4.11992E-05	9.20332E-05	9.20332E-05	0.000257714

g/s for AERMOD segments	TR_28THFull TAMT Plan Unmit	TR_BAYMARFull TAMT Plan Unmit	TR_BOSTONFull TAMT Plan Unmit	TR_CROSBYFull TAMT Plan Unmit	TR_HARBORCHAFull TAMT Plan Unmit	TR_HARBORSAMFull TAMT Plan Unmit	sumFull TAMT Plan Unmit
Dry Bulk	5.38735E-06	3.187E-06	8.50109E-06	1.8103E-05	3.98375E-05	3.98375E-05	0.000114853
Refrigerated Containers	1.23034E-06	5.56448E-06	1.47077E-05	3.13199E-05	6.9556E-05	6.9556E-05	0.000191934
Multi-Purpose General Cargo	1.23034E-06	4.06282E-07	1.08929E-06	2.31963E-06	5.07853E-06	5.07853E-06	1.52026E-05
ALL	7.84803E-06	9.15777E-06	2.4298E-05	5.17425E-05	0.000114472	0.000114472	0.00032199

Truck Haul Emission Calculations (for AERMOD)

g/s of mass DPM	Fully_mitigated Dry Bulk	Fully_mitigated Refrigerated Containers	Fully_mitigated Multi-Purpose General Cargo	STC UNMIT Dry Bulk	STC UNMIT Refrigerated Containers	STC UNMIT Multi-Purpose General Cargo
on Harbor	7.9675E-05	0.000139112	1.01571E-05	7.23E-05	1.33E-04	9.24E-06
on Cesar Chavez	1.8103E-05	3.13199E-05	2.31963E-06	1.64E-05	2.98E-05	2.10E-06
on 28th	1.8103E-05	3.13199E-05	2.31963E-06	1.64E-05	2.98E-05	2.10E-06

g/s by roadway	Fully_mitigated on Harbor	Fully_mitigated on Cesar Chave	Fully_mitigated on 28th	Fully_mitigated sum	Fully_mitigated %	STC UNMIT on Harbor	STC UNMIT on Cesar Chavez	STC UNMIT on 28th	STC UNMIT sum	STC UNMIT %
Dry Bulk	7.9675E-05	1.8103E-05	1.8103E-05	0.000115881	35%	7.23286E-05	1.63774E-05	1.63774E-05	0.000105084	34%
Refrigerated Containers	0.000139112	3.13199E-05	3.13199E-05	0.000201752	61%	0.000132799	2.9837E-05	2.9837E-05	0.000192473	62%
Multi-Purpose General Cargo	1.01571E-05	2.31963E-06	2.31963E-06	1.47963E-05	4%	9.23876E-06	2.10393E-06	2.10393E-06	1.34466E-05	4%
				0.000332429					0.000311003	

g/s for AERMOD segments	TR_28THFully_mitigated	TR_BAYMARFully_mitigated	TR_BOSTONFully_mitigated	TR_CROSBYFully_mitigated	TR_HARBORCHAFully_mitigated	TR_HARBORSAMFully_mitigated	sumFully_mitigated
Dry Bulk	5.38735E-06	3.187E-06	8.50109E-06	1.8103E-05	3.98375E-05	3.98375E-05	0.000114853
Refrigerated Containers	1.23034E-06	5.56448E-06	1.47077E-05	3.13199E-05	6.9556E-05	6.9556E-05	0.000191934
Multi-Purpose General Cargo	1.23034E-06	4.06282E-07	1.08929E-06	2.31963E-06	5.07853E-06	5.07853E-06	1.52026E-05
ALL	7.84803E-06	9.15777E-06	2.4298E-05	5.17425E-05	0.000114472	0.000114472	0.00032199

g/s for AERMOD segments	TR_28THSTC UNMIT	TR_BAYMARSTC UNMIT	TR_BOSTONSTC UNMIT	TR_CROSBYSTC UNMIT	TR_HARBORCHASTC UNMIT	TR_HARBORSAMSTC UNMIT	sumSTC UNMIT
Dry Bulk	4.90E-06	2.89315E-06	7.69078E-06	1.63774E-05	3.61643E-05	3.61643E-05	0.00010419
Refrigerated Containers	1.12E-06	5.31195E-06	1.40113E-05	2.9837E-05	6.63994E-05	6.63994E-05	0.000183075
Multi-Purpose General Cargo	1.12E-06	3.6955E-07	9.87997E-07	2.10393E-06	4.61938E-06	4.61938E-06	1.38162E-05
ALL	7.13215E-06	8.57465E-06	2.26901E-05	4.83183E-05	0.000107183	0.000107183	0.000301081

Truck Haul Emission Calculations (for AERMOD)

STC MIT

g/s of mass DPM	Dry Bulk	Refrigerated Containers	Multi-Purpose General Cargo
on Harbor	7.23E-05	0.0001328	9.23876E-06
on Cesar Chavez	1.63774E-05	2.9837E-05	2.10393E-06
on 28th	1.63774E-05	2.9837E-05	2.10393E-06

g/s by roadway	on Harbor	n Cesar Chave	on 28th	sum	%
Dry Bulk	7.23286E-05	1.6377E-05	1.63774E-05	0.000105084	34%
Refrigerated Containers	0.000132799	2.9837E-05	2.9837E-05	0.000192473	62%
Multi-Purpose General Cargo	9.23876E-06	2.1039E-06	2.10393E-06	1.34466E-05	4%
				0.000311003	

g/s for AERMOD segments	TR_28THSTC MIT	TR_BAYMAR STC MIT	TR_BOSTONSTC MIT	TR_CROSBYSTC MIT	TR_HARBORCH ASTC MIT	TR_HARBORSA MSTC MIT	sumSTC MIT
Dry Bulk	4.90028E-06	2.8931E-06	7.69078E-06	1.63774E-05	3.61643E-05	3.61643E-05	0.00010419
Refrigerated Containers	1.11593E-06	5.312E-06	1.40113E-05	2.9837E-05	6.63994E-05	6.63994E-05	0.000183075
Multi-Purpose General Cargo	1.11593E-06	3.6955E-07	9.87997E-07	2.10393E-06	4.61938E-06	4.61938E-06	1.38162E-05
ALL	7.13215E-06	8.5746E-06	2.26901E-05	4.83183E-05	0.000107183	0.000107183	0.000301081

SCAQMD Goods Movement STudy

2023 NOX tons/day

Source	Baseline	Equal Share	100% Existing Standards	90% Cleaner	ATP1 - 25% Zero / 75% Near-Zero	ATP2 - 50% Zero / 50% Near-Zero	ATP3 - 75% Zero / 25% Near-Zero
Light HD Gas Trucks-1	10.93	3.83	4.22	4.22	3.17	2.11	1.06
Light HD Gas Trucks-2	1.00	0.35	0.48	0.48	0.36	0.24	0.12
Medium HD Gas Trucks	1.08	0.38	0.38	0.04	0.03	0.02	0.01
Heavy HD Gas Trucks	0.86	0.30	0.74	0.07	0.06	0.04	0.02
Light HD Diesel Trucks-1	9.74	3.41	2.12	2.12	1.59	1.06	0.53
Light HD Diesel Trucks-2	3.19	1.12	0.79	0.79	0.59	0.39	0.20
Medium HD Diesel Trucks	4.99	1.75	4.73	0.47	0.35	0.24	0.12
Heavy HD Diesel Trucks	31.39	10.99	28.80	2.88	2.16	1.44	0.72
Total	63.18	22.11	42.25	11.07	8.30	5.53	2.77

2032 NOX tons/day

Source	Baseline	Equal Share	100% Existing Standards	90% Cleaner	ATP1 - 25% Zero / 75% Near-Zero	ATP2 - 50% Zero / 50% Near-Zero	ATP3 - 75% Zero / 25% Near-Zero
Light HD Gas Trucks-1	7.82	2.74	4.58	4.58	3.44	2.29	1.15
Light HD Gas Trucks-2	0.77	0.25	0.52	0.52	0.39	0.26	0.13
Medium HD Gas Trucks	0.71	0.27	0.45	0.05	0.03	0.02	0.01
Heavy HD Gas Trucks	0.93	0.21	0.84	0.08	0.06	0.04	0.02
Light HD Diesel Trucks-1	4.73	2.41	2.31	2.31	1.73	1.15	0.58
Light HD Diesel Trucks-2	1.61	0.8	0.87	0.87	0.65	0.43	0.22
Medium HD Diesel Trucks	5.42	1.25	5.31	0.53	0.40	0.27	0.13
Heavy HD Diesel Trucks	34.41	7.92	33.15	3.32	2.49	1.66	0.83
Total	56.40	15.85	48.04	12.26	9.19	6.13	3.06

Source	Baseline	Equal Share	100% Existing Standards	90% Cleaner	ATP 1 - 25% Zero/ 75% Near-Zero	ATP 2 - 50% Zero/ 50% Near-Zero	ATP 3 - 75% Zero/ 25% Near-Zero
Ocean-Going Vessels	28.51	9.98	13.27	8.80	8.80	8.80	8.80
Freight Locomotives	17.77	6.22	5.48	0.55	0.41	0.28	0.14
Cargo Handling Equipment	2.23	0.78	1.20	0.12	0.09	0.06	0.03
Harbor Craft	5.89	2.06	1.62	1.39	1.39	1.39	1.39
Aircraft	2.03	0.71	0.51	0.51	0.51	0.51	0.51
Total	**56.42**	**19.75**	**22.07**	**11.37**	**11.20**	**11.04**	**10.87**

Source	Baseline	Equal Share	100% Existing Standards	90% Cleaner	ATP 1 - 25% Zero/ 75% Near-Zero	ATP 2 - 50% Zero/ 50% Near-Zero	ATP 3 - 75% Zero/ 25% Near-Zero
Ocean Going Vessels	27.33	7.65	19.71	13.19	13.19	13.19	13.19
Freight Locomotives	14.72	4.12	6.53	0.65	0.49	0.33	0.16
Cargo Handling Equipment	2.38	0.71	1.89	0.19	0.14	0.10	0.05
Harbor Craft	6.68	1.53	1.94	1.26	1.26	1.26	1.26
Aircraft	2.25	0.52	1.13	1.13	1.13	1.13	1.13
Total	53.36	14.54	31.19	16.39	16.12	15.91	15.70

	Scenario -->	1	2	3	4	5	6
Heavy HD Diesel Trucks	-	35%	92%	9%	7%	5%	2%
Ocean-Going Vessels	-	35%	47%	31%	31%	31%	31%
Freight Locomotives	-	35%	31%	3%	2%	2%	1%
Cargo Handling Equipment	-	35%	54%	5%	4%	3%	1%

	Scenario -->	1	2	3	4	5	6
Heavy HD Diesel Trucks	-	77%	4%	90%	93%	95%	98%
Ocean-Going Vessels	-	72%	28%	52%	52%	52%	52%
Freight Locomotives	-	72%	56%	96%	97%	98%	99%
Cargo Handling Equipment	-	70%	21%	92%	94%	96%	98%
LDT	-	65%	41%	41%	56%	71%	85%
Heavy HD Diesel Trucks	**34.41**	**7.92**	**33.15**	**3.32**	**2.49**	**1.66**	**0.83**
Ocean Going Vessels	**27.33**	**7.65**	**19.71**	**13.19**	**13.19**	**13.19**	**13.19**
Freight Locomotives	**14.72**	**4.12**	**6.53**	**0.65**	**0.49**	**0.33**	**0.16**
Cargo Handling Equipment	**2.38**	**0.71**	**1.89**	**0.19**	**0.14**	**0.10**	**0.05**
	78.84	20.40	61.28	17.35	16.31	15.28	14.23
		74%	22%	78%	79%	81%	82%

TAMT_HRA_Existing
TOG_1hr

TAMT Risk Assessment - TOG Toxics for Acute

			AERMOD UNITIZED CONCENTRATIONS								TOG SCALED CONCENTRATIONS									CONCENTRATION BY SPECIES				ACUTE HAZARD BY SPECIES - TOTAL					ACUTE HAZARD BY SPECIES - BY NODE		
										divide by number of sources (or berths) -->	4	4	4	4	2	2	2	2													
											Refrigerated Containers	Refrigerated Containers	Refrigerated Containers	Refrigerated Containers	Multi-Purpose General Cargo	Multi-Purpose General Cargo	Dry Bulk	Dry Bulk											Refrigerated Containers	Multi-Purpose General Cargo	Dry Bulk
AERMOD Output						Source Group in AERMOD				g/s -->	0.0040377	0.0040377	0.0040377	0.0040377	6.323E-05	6.323E-05	0.002645	0.002645	MAX	Benzene	ormaldehyd	Toluene	Xylenes	Benzene	ormaldehyd	Toluene	Xylenes	ALL	0.7488604	0.0058635	0.24527615
			2	4	6	8	10	12	14	16	2	4	6	8	10	12	14	16												TOTAL G/S	
	X	Y	B10_1_BLR	B10_2_BLR	B10_3_BLR	B10_4_BLR	B10_5_BLR	B10_6_BLR	B10_7_BLR	B10_8_BLR	B10_1_BLR	B10_2_BLR	B10_3_BLR	B10_4_BLR	B10_5_BLR	B10_6_BLR	B10_7_BLR	B10_8_BLR	1HR CONC	71432	50000	108883	1330207	71432	50000	108883	1330207	ACUTE			
residential	487479.5	3617251	3.18	3.02	3.02	3.03	3.12	3.18	3.21	3.23	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	1.03E-05	2.34E-07	7.47E-09	1.99E-09	1.05E-05	7.88E-06	6.17E-08	2.58E-06
residential	487504.5	3617251	3.20	2.98	3.01	3.02	3.12	3.18	3.20	3.22	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	1.03E-05	2.35E-07	7.50E-09	1.99E-09	1.06E-05	7.91E-06	6.20E-08	2.59E-06
residential	487529.5	3617251	3.20	2.94	2.99	3.01	3.11	3.17	3.19	3.21	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	1.03E-05	2.35E-07	7.52E-09	2.00E-09	1.06E-05	7.93E-06	6.21E-08	2.60E-06
residential	487554.5	3617251	3.21	2.89	2.97	3.01	3.11	3.16	3.18	3.20	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	1.04E-05	2.35E-07	7.52E-09	2.00E-09	1.06E-05	7.94E-06	6.22E-08	2.60E-06
residential	487579.5	3617251	3.21	2.86	2.95	3.00	3.11	3.15	3.17	3.19	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	1.04E-05	2.35E-07	7.52E-09	2.00E-09	1.06E-05	7.94E-06	6.22E-08	2.60E-06
residential	487604.5	3617251	3.20	2.85	2.93	2.99	3.12	3.14	3.16	3.19	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	1.03E-05	2.35E-07	7.51E-09	2.00E-09	1.06E-05	7.93E-06	6.21E-08	2.60E-06
residential	487629.5	3617251	3.19	2.84	2.91	2.98	3.12	3.13	3.16	3.19	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	1.03E-05	2.35E-07	7.50E-09	1.99E-09	1.06E-05	7.91E-06	6.19E-08	2.59E-06
residential	487654.5	3617251	3.18	2.83	2.88	2.97	3.12	3.12	3.15	3.19	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	1.03E-05	2.34E-07	7.47E-09	1.99E-09	1.05E-05	7.88E-06	6.17E-08	2.58E-06
residential	487679.5	3617251	3.17	2.82	2.86	2.95	3.12	3.11	3.15	3.19	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	1.02E-05	2.33E-07	7.44E-09	1.98E-09	1.05E-05	7.86E-06	6.15E-08	2.57E-06
residential	487704.5	3617251	3.17	2.81	2.84	2.95	3.12	3.10	3.14	3.18	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	1.03E-05	2.33E-07	7.45E-09	1.98E-09	1.05E-05	7.86E-06	6.16E-08	2.57E-06
residential	487729.5	3617251	3.17	2.80	2.83	2.97	3.12	3.12	3.13	3.18	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	1.03E-05	2.33E-07	7.45E-09	1.98E-09	1.05E-05	7.86E-06	6.15E-08	2.57E-06
residential	487754.5	3617251	3.17	2.78	2.82	2.98	3.11	3.13	3.13	3.17	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	1.02E-05	2.33E-07	7.43E-09	1.98E-09	1.05E-05	7.84E-06	6.14E-08	2.57E-06
residential	487779.5	3617251	3.16	2.77	2.81	3.00	3.10	3.14	3.12	3.16	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	1.02E-05	2.32E-07	7.41E-09	1.97E-09	1.04E-05	7.82E-06	6.12E-08	2.56E-06
residential	487804.5	3617251	3.15	2.75	2.81	3.01	3.09	3.16	3.11	3.15	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	1.02E-05	2.31E-07	7.38E-09	1.96E-09	1.04E-05	7.79E-06	6.10E-08	2.55E-06
residential	487829.5	3617251	3.13	2.73	2.80	3.02	3.08	3.17	3.10	3.14	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	1.01E-05	2.30E-07	7.34E-09	1.95E-09	1.03E-05	7.75E-06	6.07E-08	2.54E-06
residential	487854.5	3617251	3.11	2.72	2.79	3.03	3.07	3.18	3.09	3.13	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	1.00E-05	2.28E-07	7.29E-09	1.94E-09	1.03E-05	7.70E-06	6.03E-08	2.52E-06
residential	487479.5	3617270	3.21	2.94	3.01	3.04	3.14	3.18	3.19	3.21	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	1.04E-05	2.36E-07	7.53E-09	2.00E-09	1.06E-05	7.94E-06	6.22E-08	2.60E-06
residential	487504.5	3617270	3.21	2.89	2.99	3.04	3.13	3.18	3.19	3.20	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	1.04E-05	2.36E-07	7.54E-09	2.01E-09	1.06E-05	7.96E-06	6.23E-08	2.61E-06
residential	487529.5	3617270	3.21	2.89	2.97	3.03	3.12	3.16	3.18	3.19	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	1.04E-05	2.36E-07	7.54E-09	2.01E-09	1.06E-05	7.96E-06	6.23E-08	2.61E-06
residential	487554.5	3617270	3.21	2.88	2.94	3.02	3.11	3.15	3.18	3.20	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	1.04E-05	2.36E-07	7.53E-09	2.00E-09	1.06E-05	7.95E-06	6.22E-08	2.60E-06
residential	487579.5	3617270	3.20	2.87	2.92	3.01	3.12	3.14	3.18	3.20	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	1.03E-05	2.35E-07	7.51E-09	2.00E-09	1.06E-05	7.93E-06	6.21E-08	2.60E-06
residential	487604.5	3617270	3.19	2.86	2.90	2.99	3.12	3.13	3.18	3.20	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	1.03E-05	2.34E-07	7.48E-09	1.99E-09	1.05E-05	7.90E-06	6.18E-08	2.59E-06
residential	487629.5	3617270	3.18	2.85	2.88	2.98	3.12	3.12	3.17	3.20	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	1.03E-05	2.34E-07	7.47E-09	1.99E-09	1.05E-05	7.88E-06	6.17E-08	2.58E-06
residential	487654.5	3617270	3.18	2.83	2.87	2.98	3.11	3.12	3.16	3.19	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	1.03E-05	2.34E-07	7.47E-09	1.99E-09	1.05E-05	7.88E-06	6.17E-08	2.58E-06
residential	487679.5	3617270	3.18	2.82	2.86	3.00	3.11	3.14	3.16	3.19	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	1.03E-05	2.34E-07	7.47E-09	1.99E-09	1.05E-05	7.88E-06	6.17E-08	2.58E-06
residential	487704.5	3617270	3.18	2.81	2.86	3.01	3.10	3.15	3.15	3.18	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	1.03E-05	2.33E-07	7.45E-09	1.98E-09	1.05E-05	7.86E-06	6.16E-08	2.58E-06
residential	487729.5	3617270	3.17	2.79	2.85	3.02	3.09	3.17	3.14	3.17	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	1.02E-05	2.32E-07	7.43E-09	1.98E-09	1.05E-05	7.84E-06	6.14E-08	2.57E-06
residential	487754.5	3617270	3.15	2.77	2.84	3.03	3.08	3.17	3.13	3.16	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	1.02E-05	2.31E-07	7.40E-09	1.97E-09	1.04E-05	7.81E-06	6.11E-08	2.56E-06
residential	487779.5	3617270	3.14	2.76	2.83	3.04	3.07	3.18	3.12	3.15	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	1.01E-05	2.30E-07	7.36E-09	1.96E-09	1.04E-05	7.77E-06	6.08E-08	2.54E-06
residential	487804.5	3617270	3.12	2.74	2.82	3.05	3.05	3.19	3.10	3.14	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	1.01E-05	2.29E-07	7.32E-09	1.95E-09	1.03E-05	7.72E-06	6.05E-08	2.53E-06
residential	487829.5	3617270	3.09	2.72	2.82	3.06	3.06	3.19	3.09	3.12	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	1.00E-05	2.27E-07	7.26E-09	1.93E-09	1.02E-05	7.66E-06	6.00E-08	2.51E-06
residential	487854.5	3617270	3.07	2.70	2.83	3.06	3.06	3.20	3.10	3.12	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	9.91E-06	2.25E-07	7.20E-09	1.91E-09	1.01E-05	7.60E-06	5.95E-08	2.49E-06
residential	487479.5	3617289	3.22	2.91	2.98	3.05	3.14	3.17	3.20	3.20	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	1.04E-05	2.36E-07	7.55E-09	2.01E-09	1.06E-05	7.97E-06	6.24E-08	2.61E-06
residential	487504.5	3617289	3.22	2.90	2.96	3.04	3.13	3.16	3.20	3.20	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	1.04E-05	2.36E-07	7.55E-09	2.01E-09	1.06E-05	7.97E-06	6.24E-08	2.61E-06
residential	487529.5	3617289	3.21	2.89	2.94	3.03	3.12	3.15	3.20	3.20	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	1.04E-05	2.35E-07	7.53E-09	2.00E-09	1.06E-05	7.94E-06	6.22E-08	2.60E-06
residential	487554.5	3617289	3.20	2.88	2.91	3.02	3.11	3.14	3.19	3.20	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	1.03E-05	2.35E-07	7.50E-09	1.99E-09	1.06E-05	7.91E-06	6.20E-08	2.59E-06
residential	487579.5	3617289	3.19	2.87	2.91	3.01	3.10	3.12	3.19	3.20	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	1.03E-05	2.34E-07	7.48E-09	1.99E-09	1.05E-05	7.90E-06	6.18E-08	2.59E-06
residential	487604.5	3617289	3.19	2.86	2.90	3.01	3.10	3.14	3.18	3.20	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	1.03E-05	2.34E-07	7.49E-09	1.99E-09	1.06E-05	7.90E-06	6.19E-08	2.59E-06
residential	487629.5	3617289	3.19	2.84	2.90	3.02	3.09	3.15	3.17	3.19	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	1.03E-05	2.34E-07	7.49E-09	1.99E-09	1.05E-05	7.90E-06	6.19E-08	2.59E-06
residential	487654.5	3617289	3.18	2.83	2.89	3.04	3.08	3.16	3.17	3.18	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	1.03E-05	2.34E-07	7.47E-09	1.99E-09	1.05E-05	7.89E-06	6.17E-08	2.58E-06
residential	487679.5	3617289	3.18	2.81	2.88	3.05	3.07	3.17	3.16	3.17	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	1.03E-05	2.33E-07	7.45E-09	1.98E-09	1.05E-05	7.86E-06	6.16E-08	2.58E-06
residential	487704.5	3617289	3.16	2.79	2.87	3.06	3.06	3.18	3.14	3.16	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	1.02E-05	2.32E-07	7.42E-09	1.97E-09	1.05E-05	7.83E-06	6.13E-08	2.56E-06
residential	487729.5	3617289	3.14	2.78	2.86	3.07	3.07	3.19	3.13	3.16	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	1.02E-05	2.31E-07	7.38E-09	1.96E-09	1.04E-05	7.79E-06	6.10E-08	2.55E-06
residential	487754.5	3617289	3.12	2.76	2.85	3.07	3.07	3.20	3.12	3.16	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	1.01E-05	2.29E-07	7.33E-09	1.95E-09	1.03E-05	7.74E-06	6.06E-08	2.53E-06
residential	487779.5	3617289	3.10	2.74	2.86	3.08	3.08	3.20	3.11	3.15	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	1.00E-05	2.28E-07	7.28E-09	1.94E-09	1.03E-05	7.68E-06	6.01E-08	2.52E-06
residential	487804.5	3617289	3.08	2.72	2.87	3.08	3.08	3.20	3.12	3.15	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	9.95E-06	2.26E-07	7.23E-09	1.92E-09	1.02E-05	7.63E-06	5.97E-08	2.50E-06
residential	487829.5	3617289	3.05	2.70	2.89	3.08	3.08	3.20	3.14	3.14	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	9.95E-06	2.26E-07	7.23E-09	1.92E-09	1.02E-05	7.63E-06	5.98E-08	2.50E-06
residential	487854.5	3617289	3.01	2.67	2.90	3.08	3.08	3.20	3.15	3.13	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	9.95E-06	2.26E-07	7.23E-09	1.92E-09	1.02E-05	7.63E-06	5.97E-08	2.50E-06
residential	487479.5	3617309	3.21	2.92	2.95	3.06	3.14	3.15	3.21	3.20	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	1.04E-05	2.36E-07	7.54E-09	2.01E-09	1.06E-05	7.96E-06	6.23E-08	2.61E-06
residential	487504.5	3617309	3.20	2.91	2.95	3.04	3.12	3.14	3.21	3.20	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	1.03E-05	2.35E-07	7.51E-09	2.00E-09	1.06E-05	7.93E-06	6.21E-08	2.60E-06
residential	487529.5	3617309	3.20	2.90	2.94	3.03	3.11	3.12	3.20	3.20	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	1.03E-05	2.35E-07	7.50E-09	1.99E-09	1.06E-05	7.92E-06	6.20E-08	2.59E-06
residential	487554.5	3617309	3.20	2.88	2.94	3.03	3.10	3.14	3.19	3.19	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	1.03E-05	2.35E-07	7.51E-09	2.00E-09	1.06E-05	7.92E-06	6.20E-08	2.59E-06
residential	487579.5	3617309	3.20	2.87	2.93	3.05	3.08	3.15	3.18	3.19	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	1.03E-05	2.35E-07	7.50E-09	2.00E-09	1.06E-05	7.92E-06	6.20E-08	2.59E-06
residential	487604.5	3617309	3.19	2.85	2.92	3.06	3.06	3.16	3.18	3.19	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	1.03E-05	2.34E-07	7.49E-09	1.99E-09	1.06E-05	7.91E-06	6.19E-08	2.59E-06
residential	487629.5	3617309	3.18	2.83	2.91	3.07	3.07	3.17	3.17	3.19	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	1.03E-05	2.34E-07	7.47E-09	1.99E-09	1.05E-05	7.88E-06	6.17E-08	2.58E-06
residential	487654.5	3617309	3.17	2.82	2.90	3.08	3.08	3.18	3.15	3.19	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	1.02E-05	2.33E-07	7.44E-09	1.98E-09	1.05E-05	7.85E-06	6.14E-08	2.57E-06
residential	487679.5	3617309	3.15	2.80	2.89	3.09	3.08	3.18	3.14	3.18	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	1.02E-05	2.31E-07	7.40E-09	1.97E-09	1.04E-05	7.80E-06	6.11E-08	2.56E-06
residential	487704.5	3617309	3.13	2.78	2.88	3.09	3.09	3.19	3.13	3.18	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	1.01E-05	2.30E-07	7.35E-09	1.95E-09	1.04E-05	7.75E-06	6.07E-08	2.54E-06
residential	487729.5	3617309	3.11	2.76	2.89	3.10	3.09	3.19	3.14	3.18	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	1.00E-05	2.28E-07	7.29E-09	1.94E-09	1.03E-05	7.69E-06	6.02E-08	2.52E-06
residential	487754.5	3617309	3.08	2.74	2.91	3.10	3.09	3.19	3.15	3.17	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	1.00E-05	2.27E-07	7.27E-09	1.93E-09	1.02E-05	7.67E-06	6.01E-08	2.51E-06
residential	487779.5	3617309	3.05	2.71	2.93	3.10	3.09	3.19	3.16	3.16	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	1.00E-05	2.27E-07	7.27E-09	1.93E-09	1.02E-05	7.67E-06	6.00E-08	2.51E-06
residential	487804.5	3617309	3.02	2.69	2.94	3.09	3.09	3.18	3.17	3.15	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	1.00E-05	2.27E-07	7.26E-09	1.93E-09	1.02E-05	7.66E-06	6.00E-08	2.51E-06
residential	487829.5	3617309	2.98	2.67	2.95	3.09	3.09	3.18	3.18	3.15	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	9.98E-06	2.27E-07	7.25E-09	1.93E-09	1.02E-05	7.65E-06	5.99E-08	2.51E-06
residential	487854.5	3617309	2.94	2.66	2.96	3.09	3.08	3.18	3.19	3.14	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	9.97E-06	2.26E-07	7.24E-09	1.93E-09	1.02E-05	7.64E-06	5.98E-08	2.50E-06
residential	487479.5	3617328	3.20	2.92	2.97	3.05	3.12	3.12	3.20	3.19	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	1.04E-05	2.35E-07	7.52E-09	2.00E-09	1.06E-05	7.93E-06	6.21E-08	2.60E-06
residential	487504.5	3617328	3.21	2.91	2.97	3.06	3.10	3.12	3.20	3.20	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	1.04E-05	2.35E-07	7.52E-09	2.00E-09	1.06E-05	7.94E-06	6.22E-08	2.60E-06
residential	487529.5	3617328	3.20	2.89	2.96	3.07	3.10	3.13	3.19	3.20	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	1.04E-05	2.35E-07	7.52E-09	2.00E-09	1.06E-05	7.94E-06	6.21E-08	2.60E-06
residential	487554.5	3617328	3.20	2.87	2.95	3.08	3.09	3.14	3.18	3.21	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	1.03E-05	2.35E-07	7.51E-09	2.00E-09	1.06E-05	7.92E-06	6.20E-08	2.59E-06
residential	487579.5	3617328	3.19	2.86	2.94	3.09	3.08	3.15	3.17	3.21	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	1.03E-05	2.34E-07	7.48E-09	1.99E-09	1.05E-05	7.90E-06	6.18E-08	2.59E-06

TAMT Risk Assessment - DPM Cancer and Chronic HI

AERMOD UNITIZED CONCENTRATIONS

DPM SCALED CONCENTRATIONS

AERMOD Output — Source Group in AERMOD

	X	Y	B10_1_AUX	B10_2_AUX	B10_3_AUX	B10_4_AUX	B10_5_AUX	B10_6_AUX	B10_7_AUX	B10_8_AUX	CHE_1	LOC_SWTCH EMP	LOC_SWTCH LOA	OGV_PATH BLR	OGV_PATH _DPM	TR_28TH	TR_BAYMA R	TR_BOSTON	TR_CROSBY	TR_HARBOR CHA	TR_HARBOR SAM	TUG_PATH_ DPM
			1	3	5	7	9	11	13	15	17	18	19	20	21	22	23	24	25	26	27	28
residential	487479	3617251	1.9E-01	1.9E-01	2.1E-01	2.3E-01	2.5E-01	2.8E-01	2.9E-01	3.0E-01	2.1E+05	3.9E-01	4.6E-01	7.9E-02	7.9E-02	2.3E+02	3.9E-02	8.6E+01	1.1E+00	5.9E-01	9.1E+00	9.2E-02
residential	487504	3617251	1.8E-01	1.8E-01	2.1E-01	2.3E-01	2.5E-01	2.8E-01	2.9E-01	3.0E-01	2.0E+05	3.9E-01	4.5E-01	7.9E-02	7.9E-02	1.2E+02	3.9E-02	9.1E+01	1.1E+00	5.9E-01	8.4E+00	9.2E-02
residential	487529	3617251	1.8E-01	1.8E-01	2.1E-01	2.2E-01	2.5E-01	2.7E-01	2.8E-01	3.0E-01	2.0E+05	3.8E-01	4.5E-01	7.8E-02	7.8E-02	7.7E+01	4.0E-02	9.2E+01	1.1E+00	5.8E-01	7.6E+00	9.2E-02
residential	487554	3617251	1.8E-01	1.8E-01	2.0E-01	2.2E-01	2.4E-01	2.7E-01	2.8E-01	2.9E-01	2.0E+05	3.8E-01	4.5E-01	7.7E-02	7.7E-02	5.6E+01	4.0E-02	9.0E+01	1.0E+00	5.8E-01	6.8E+00	9.2E-02
residential	487579	3617251	1.8E-01	1.8E-01	2.0E-01	2.2E-01	2.4E-01	2.6E-01	2.8E-01	2.9E-01	2.0E+05	3.8E-01	4.4E-01	7.7E-02	7.7E-02	4.3E+01	4.0E-02	8.4E+01	1.0E+00	5.7E-01	6.1E+00	9.1E-02
residential	487604	3617251	1.8E-01	1.8E-01	2.0E-01	2.2E-01	2.4E-01	2.6E-01	2.7E-01	2.8E-01	1.9E+05	3.8E-01	4.4E-01	7.6E-02	7.6E-02	3.4E+01	4.1E-02	7.5E+01	1.0E+00	5.7E-01	5.4E+00	9.1E-02
residential	487629	3617251	1.8E-01	1.8E-01	2.0E-01	2.1E-01	2.4E-01	2.6E-01	2.7E-01	2.8E-01	1.9E+05	3.7E-01	4.3E-01	7.6E-02	7.6E-02	2.8E+01	4.1E-02	6.4E+01	9.9E-01	5.6E-01	4.8E+00	9.1E-02
residential	487654	3617251	1.8E-01	1.7E-01	2.0E-01	2.1E-01	2.3E-01	2.5E-01	2.7E-01	2.8E-01	1.9E+05	3.7E-01	4.3E-01	7.5E-02	7.5E-02	2.3E+01	4.1E-02	5.2E+01	9.7E-01	5.6E-01	4.3E+00	9.0E-02
residential	487679	3617251	1.8E-01	1.7E-01	2.0E-01	2.1E-01	2.3E-01	2.5E-01	2.6E-01	2.7E-01	1.9E+05	3.7E-01	4.2E-01	7.5E-02	7.5E-02	2.0E+01	4.2E-02	4.3E+01	9.5E-01	5.6E-01	3.9E+00	9.0E-02
residential	487704	3617251	1.7E-01	1.7E-01	1.9E-01	2.1E-01	2.3E-01	2.5E-01	2.6E-01	2.7E-01	1.9E+05	3.6E-01	4.2E-01	7.5E-02	7.5E-02	1.7E+01	4.2E-02	3.5E+01	9.4E-01	5.5E-01	3.6E+00	8.9E-02
residential	487729	3617251	1.7E-01	1.7E-01	1.9E-01	2.1E-01	2.3E-01	2.4E-01	2.6E-01	2.7E-01	1.8E+05	3.6E-01	4.1E-01	7.4E-02	7.4E-02	1.5E+01	4.3E-02	3.0E+01	9.2E-01	5.5E-01	3.3E+00	8.9E-02
residential	487754	3617251	1.7E-01	1.7E-01	1.9E-01	2.0E-01	2.2E-01	2.4E-01	2.5E-01	2.7E-01	1.8E+05	3.5E-01	4.1E-01	7.4E-02	7.4E-02	1.3E+01	4.3E-02	2.6E+01	9.0E-01	5.4E-01	3.1E+00	8.8E-02
residential	487779	3617251	1.7E-01	1.7E-01	1.9E-01	2.0E-01	2.2E-01	2.4E-01	2.5E-01	2.6E-01	1.8E+05	3.5E-01	4.0E-01	7.3E-02	7.3E-02	1.2E+01	4.4E-02	2.3E+01	8.9E-01	5.4E-01	2.9E+00	8.8E-02
residential	487804	3617251	1.7E-01	1.7E-01	1.9E-01	2.0E-01	2.2E-01	2.4E-01	2.5E-01	2.6E-01	1.8E+05	3.5E-01	4.0E-01	7.3E-02	7.3E-02	1.0E+01	4.5E-02	2.0E+01	8.7E-01	5.3E-01	2.7E+00	8.7E-02
residential	487829	3617251	1.7E-01	1.7E-01	1.9E-01	2.0E-01	2.2E-01	2.3E-01	2.5E-01	2.6E-01	1.7E+05	3.4E-01	3.9E-01	7.3E-02	7.3E-02	9.5E+00	4.5E-02	1.8E+01	8.5E-01	5.3E-01	2.5E+00	8.7E-02

TAMT_HRA_Existing
DPM_annl

TAMT Risk A

	Transit		Terminal Equipment				Locomotives				Trucks				
	Multi-Purpose General CargoExisting	Dry BulkExisting	All	Refrigerated ContainersExisting	Multi-Purpose General CargoExisting	Dry BulkExisting	All	Refrigerated ContainersExisting	Multi-Purpose General CargoExisting	Dry BulkExisting	All	Refrigerated Containers	Multi-Purpose Cargo	Dry Bulk	All
AERMOD Output	28%	15%	100%	63%	8%	29%	100%	0%	61%	39%	100%	67%	3%	30%	
residential	1E-05	6E-06	3E-03	2E-03	3E-04	9E-04	2E-04	0E+00	9E-05	6E-05	4E-03	2E-03	1E-04	1E-03	0.02
residential	1E-05	6E-06	3E-03	2E-03	3E-04	9E-04	1E-04	0E+00	9E-05	6E-05	0.00307	0.00204	9.9E-05	0.00092	0.02
residential	1E-05	6E-06	3E-03	2E-03	3E-04	9E-04	1E-04	0E+00	9E-05	6E-05	0.00284	0.00189	9.2E-05	0.00085	0.02
residential	1E-05	6E-06	3E-03	2E-03	3E-04	9E-04	1E-04	0E+00	9E-05	6E-05	0.00263	0.00175	8.5E-05	0.00079	0.02
residential	1E-05	6E-06	3E-03	2E-03	3E-04	9E-04	1E-04	0E+00	9E-05	6E-05	0.0024	0.0016	7.7E-05	0.00072	0.02
residential	1E-05	6E-06	3E-03	2E-03	2E-04	8E-04	1E-04	0E+00	9E-05	6E-05	0.00213	0.00142	6.9E-05	0.00064	0.02
residential	1E-05	6E-06	3E-03	2E-03	2E-04	8E-04	1E-04	0E+00	9E-05	6E-05	0.00184	0.00123	5.9E-05	0.00055	0.02
residential	1E-05	6E-06	3E-03	2E-03	2E-04	8E-04	1E-04	0E+00	9E-05	5E-05	0.00156	0.00104	5E-05	0.00047	0.02
residential	1E-05	6E-06	3E-03	2E-03	2E-04	8E-04	1E-04	0E+00	9E-05	5E-05	0.00132	0.00088	4.3E-05	0.0004	0.02
residential	1E-05	5E-06	3E-03	2E-03	2E-04	8E-04	1E-04	0E+00	9E-05	5E-05	0.00114	0.00076	3.7E-05	0.00034	0.02
residential	1E-05	5E-06	3E-03	2E-03	2E-04	8E-04	1E-04	0E+00	8E-05	5E-05	0.00101	0.00067	3.2E-05	0.0003	0.02
residential	1E-05	5E-06	3E-03	2E-03	2E-04	8E-04	1E-04	0E+00	8E-05	5E-05	0.0009	0.0006	2.9E-05	0.00027	0.02
residential	1E-05	5E-06	3E-03	2E-03	2E-04	8E-04	1E-04	0E+00	8E-05	5E-05	0.00081	0.00054	2.6E-05	0.00025	0.02
residential	1E-05	5E-06	3E-03	2E-03	2E-04	8E-04	1E-04	0E+00	8E-05	5E-05	0.00074	0.00049	2.4E-05	0.00022	0.02
residential	1E-05	5E-06	3E-03	2E-03	2E-04	8E-04	1E-04	0E+00	8E-05	5E-05	0.00068	0.00045	2.2E-05	0.0002	0.02
residential	1E-05	5E-06	3E-03	2E-03	2E-04	7E-04	1E-04	0E+00	8E-05	5E-05	0.00063	0.00042	2E-05	0.00019	0.02
residential	1E-05	6E-06	3E-03	2E-03	3E-04	9E-04	2E-04	0E+00	1E-04	6E-05	0.00387	0.00258	0.00012	0.00117	0.02
residential	1E-05	6E-06	3E-03	2E-03	3E-04	9E-04	2E-04	0E+00	9E-05	6E-05	0.00349	0.00233	0.00011	0.00105	0.02
residential	1E-05	6E-06	3E-03	2E-03	3E-04	9E-04	2E-04	0E+00	9E-05	6E-05	0.00333	0.00222	0.00011	0.001	0.02
residential	1E-05	6E-06	3E-03	2E-03	3E-04	9E-04	2E-04	0E+00	9E-05	6E-05	0.00316	0.00211	0.0001	0.00095	0.02
residential	1E-05	6E-06	3E-03	2E-03	3E-04	9E-04	1E-04	0E+00	9E-05	6E-05	0.00293	0.00196	9.5E-05	0.00088	0.02
residential	1E-05	6E-06	3E-03	2E-03	3E-04	9E-04	1E-04	0E+00	9E-05	6E-05	0.00263	0.00175	8.5E-05	0.00079	0.02
residential	1E-05	6E-06	3E-03	2E-03	2E-04	8E-04	1E-04	0E+00	9E-05	6E-05	0.00226	0.0015	7.3E-05	0.00068	0.02
residential	1E-05	6E-06	3E-03	2E-03	2E-04	8E-04	1E-04	0E+00	9E-05	6E-05	0.00187	0.00124	6E-05	0.00056	0.02
residential	1E-05	6E-06	3E-03	2E-03	2E-04	8E-04	1E-04	0E+00	9E-05	6E-05	0.00154	0.00103	5E-05	0.00046	0.02
residential	1E-05	6E-06	3E-03	2E-03	2E-04	8E-04	1E-04	0E+00	9E-05	5E-05	0.0013	0.00087	4.2E-05	0.00039	0.02
residential	1E-05	6E-06	3E-03	2E-03	2E-04	8E-04	1E-04	0E+00	9E-05	5E-05	0.00112	0.00075	3.6E-05	0.00034	0.02
residential	1E-05	5E-06	3E-03	2E-03	2E-04	8E-04	1E-04	0E+00	8E-05	5E-05	0.00099	0.00066	3.2E-05	0.0003	0.02
residential	1E-05	5E-06	3E-03	2E-03	2E-04	8E-04	1E-04	0E+00	8E-05	5E-05	0.00088	0.00059	2.8E-05	0.00026	0.02
residential	1E-05	5E-06	3E-03	2E-03	2E-04	8E-04	1E-04	0E+00	8E-05	5E-05	0.00079	0.00053	2.5E-05	0.00024	0.02
residential	1E-05	5E-06	3E-03	2E-03	2E-04	8E-04	1E-04	0E+00	8E-05	5E-05	0.00071	0.00048	2.3E-05	0.00021	0.02
residential	1E-05	5E-06	3E-03	2E-03	2E-04	8E-04	1E-04	0E+00	8E-05	5E-05	0.00065	0.00043	2.1E-05	0.0002	0.02
residential	1E-05	6E-06	3E-03	2E-03	3E-04	9E-04	2E-04	0E+00	1E-04	6E-05	0.00441	0.00294	0.00014	0.00133	0.02
residential	1E-05	6E-06	3E-03	2E-03	3E-04	9E-04	2E-04	0E+00	1E-04	6E-05	0.00418	0.00279	0.00013	0.00126	0.02
residential	1E-05	6E-06	3E-03	2E-03	3E-04	9E-04	2E-04	0E+00	1E-04	6E-05	0.00412	0.00275	0.00013	0.00124	0.02
residential	1E-05	6E-06	3E-03	2E-03	3E-04	9E-04	2E-04	0E+00	9E-05	6E-05	0.00401	0.00268	0.00013	0.00121	0.02
residential	1E-05	6E-06	3E-03	2E-03	3E-04	9E-04	2E-04	0E+00	9E-05	6E-05	0.0038	0.00254	0.00012	0.00115	0.02
residential	1E-05	6E-06	3E-03	2E-03	3E-04	9E-04	2E-04	0E+00	9E-05	6E-05	0.00346	0.00231	0.00011	0.00104	0.02
residential	1E-05	6E-06	3E-03	2E-03	3E-04	9E-04	1E-04	0E+00	9E-05	6E-05	0.00296	0.00197	9.6E-05	0.00089	0.02
residential	1E-05	6E-06	3E-03	2E-03	2E-04	8E-04	1E-04	0E+00	9E-05	6E-05	0.00237	0.00158	7.6E-05	0.00071	0.02
residential	1E-05	6E-06	3E-03	2E-03	2E-04	8E-04	1E-04	0E+00	9E-05	6E-05	0.00187	0.00124	6E-05	0.00056	0.02
residential	1E-05	6E-06	3E-03	2E-03	2E-04	8E-04	1E-04	0E+00	9E-05	6E-05	0.00152	0.00101	4.9E-05	0.00046	0.02
residential	1E-05	6E-06	3E-03	2E-03	2E-04	8E-04	1E-04	0E+00	9E-05	5E-05	0.00127	0.00085	4.1E-05	0.00038	0.02
residential	1E-05	6E-06	3E-03	2E-03	2E-04	8E-04	1E-04	0E+00	9E-05	5E-05	0.00109	0.00073	3.5E-05	0.00033	0.02
residential	1E-05	5E-06	3E-03	2E-03	2E-04	8E-04	1E-04	0E+00	8E-05	5E-05	0.00095	0.00063	3.1E-05	0.00029	0.02
residential	1E-05	5E-06	3E-03	2E-03	2E-04	8E-04	1E-04	0E+00	8E-05	5E-05	0.00084	0.00056	2.7E-05	0.00025	0.02
residential	1E-05	5E-06	3E-03	2E-03	2E-04	8E-04	1E-04	0E+00	8E-05	5E-05	0.00075	0.0005	2.4E-05	0.00023	0.02
residential	1E-05	5E-06	3E-03	2E-03	2E-04	8E-04	1E-04	0E+00	8E-05	5E-05	0.00068	0.00045	2.2E-05	0.0002	0.02
residential	1E-05	6E-06	3E-03	2E-03	3E-04	9E-04	2E-04	0E+00	1E-04	6E-05	0.00533	0.00355	0.00017	0.0016	0.02
residential	1E-05	6E-06	3E-03	2E-03	3E-04	9E-04	2E-04	0E+00	1E-04	6E-05	0.00541	0.00361	0.00017	0.00163	0.02
residential	1E-05	6E-06	3E-03	2E-03	3E-04	9E-04	2E-04	0E+00	1E-04	6E-05	0.00553	0.00369	0.00018	0.00166	0.02
residential	1E-05	6E-06	3E-03	2E-03	3E-04	9E-04	2E-04	0E+00	1E-04	6E-05	0.0055	0.00367	0.00018	0.00166	0.02
residential	1E-05	6E-06	3E-03	2E-03	3E-04	9E-04	2E-04	0E+00	1E-04	6E-05	0.00534	0.00356	0.00017	0.00161	0.02
residential	1E-05	6E-06	3E-03	2E-03	3E-04	9E-04	2E-04	0E+00	9E-05	6E-05	0.00499	0.00332	0.00016	0.0015	0.02
residential	1E-05	6E-06	3E-03	2E-03	3E-04	9E-04	2E-04	0E+00	9E-05	6E-05	0.00431	0.00287	0.00014	0.0013	0.02
residential	1E-05	6E-06	3E-03	2E-03	3E-04	9E-04	1E-04	0E+00	9E-05	6E-05	0.0033	0.0022	0.00011	0.00099	0.02
residential	1E-05	6E-06	3E-03	2E-03	2E-04	8E-04	1E-04	0E+00	9E-05	6E-05	0.00239	0.00159	7.7E-05	0.00072	0.02
residential	1E-05	6E-06	3E-03	2E-03	2E-04	8E-04	1E-04	0E+00	9E-05	6E-05	0.00182	0.00121	5.9E-05	0.00055	0.02
residential	1E-05	6E-06	3E-03	2E-03	2E-04	8E-04	1E-04	0E+00	9E-05	6E-05	0.00145	0.00097	4.7E-05	0.00044	0.02
residential	1E-05	6E-06	3E-03	2E-03	2E-04	8E-04	1E-04	0E+00	9E-05	5E-05	0.0012	0.0008	3.9E-05	0.00036	0.02
residential	1E-05	6E-06	3E-03	2E-03	2E-04	8E-04	1E-04	0E+00	9E-05	5E-05	0.00102	0.00068	3.3E-05	0.00031	0.02
residential	1E-05	5E-06	3E-03	2E-03	2E-04	8E-04	1E-04	0E+00	8E-05	5E-05	0.00088	0.00059	2.8E-05	0.00027	0.02
residential	1E-05	5E-06	3E-03	2E-03	2E-04	8E-04	1E-04	0E+00	8E-05	5E-05	0.00078	0.00052	2.5E-05	0.00023	0.02
residential	1E-05	5E-06	3E-03	2E-03	2E-04	8E-04	1E-04	0E+00	8E-05	5E-05	0.0007	0.00046	2.2E-05	0.00021	0.02
residential	1E-05	6E-06	3E-03	2E-03	3E-04	1E-03	2E-04	0E+00	1E-04	6E-05	0.00728	0.00485	0.00023	0.00219	0.03
residential	1E-05	6E-06	3E-03	2E-03	3E-04	9E-04	2E-04	0E+00	1E-04	6E-05	0.00811	0.0054	0.00026	0.00244	0.03
residential	1E-05	6E-06	3E-03	2E-03	3E-04	9E-04	2E-04	0E+00	1E-04	6E-05	0.0085	0.00567	0.00027	0.00256	0.03
residential	1E-05	6E-06	3E-03	2E-03	3E-04	9E-04	2E-04	0E+00	1E-04	6E-05	0.0086	0.00573	0.00028	0.00259	0.03
residential	1E-05	6E-06	3E-03	2E-03	3E-04	9E-04	2E-04	0E+00	1E-04	6E-05	0.00851	0.00568	0.00027	0.00256	0.03
residential	1E-05	6E-06	3E-03	2E-03	3E-04	9E-04	2E-04	0E+00	1E-04	6E-05	0.00821	0.00548	0.00026	0.00247	0.03
residential	1E-05	6E-06	3E-03	2E-03	3E-04	9E-04	2E-04	0E+00	9E-05	6E-05	0.00739	0.00493	0.00024	0.00222	0.02
residential	1E-05	6E-06	3E-03	2E-03	3E-04	9E-04	2E-04	0E+00	9E-05	6E-05	0.00546	0.00364	0.00018	0.00164	0.02
residential	1E-05	6E-06	3E-03	2E-03	2E-04	9E-04	2E-04	0E+00	9E-05	6E-05	0.0033	0.0022	0.00011	0.00099	0.02
residential	1E-05	6E-06	3E-03	2E-03	2E-04	8E-04	1E-04	0E+00	9E-05	6E-05	0.00221	0.00147	7.1E-05	0.00066	0.02
residential	1E-05	6E-06	3E-03	2E-03	2E-04	8E-04	1E-04	0E+00	9E-05	6E-05	0.00163	0.00109	5.3E-05	0.00049	0.02
residential	1E-05	6E-06	3E-03	2E-03	2E-04	8E-04	1E-04	0E+00	9E-05	6E-05	0.00129	0.00086	4.2E-05	0.00039	0.02
residential	1E-05	6E-06	3E-03	2E-03	2E-04	8E-04	1E-04	0E+00	9E-05	6E-05	0.00107	0.00071	3.4E-05	0.00032	0.02
residential	1E-05	6E-06	3E-03	2E-03	2E-04	8E-04	1E-04	0E+00	9E-05	5E-05	0.00091	0.00061	2.9E-05	0.00027	0.02
residential	1E-05	5E-06	3E-03	2E-03	2E-04	8E-04	1E-04	0E+00	9E-05	5E-05	0.0008	0.00053	2.6E-05	0.00024	0.02
residential	1E-05	5E-06	3E-03	2E-03	2E-04	8E-04	1E-04	0E+00	8E-05	5E-05	0.00071	0.00047	2.3E-05	0.00021	0.02
residential	1E-05	6E-06	3E-03	2E-03	3E-04	1E-03	2E-04	0E+00	1E-04	6E-05	0.01408	0.00939	0.00045	0.00424	0.03
residential	1E-05	6E-06	3E-03	2E-03	3E-04	9E-04	2E-04	0E+00	1E-04	6E-05	0.01684	0.01123	0.00054	0.00507	0.03
residential	1E-05	6E-06	3E-03	2E-03	3E-04	9E-04	2E-04	0E+00	1E-04	6E-05	0.01757	0.01171	0.00057	0.00529	0.04
residential	1E-05	6E-06	3E-03	2E-03	3E-04	9E-04	2E-04	0E+00	1E-04	6E-05	0.01782	0.01188	0.00057	0.00536	0.04
residential	1E-05	6E-06	3E-03	2E-03	3E-04	9E-04	2E-04	0E+00	1E-04	6E-05	0.01788	0.01192	0.00058	0.00538	0.03
residential	1E-05	6E-06	3E-03	2E-03	3E-04	9E-04	2E-04	0E+00	1E-04	6E-05	0.0177	0.0118	0.00057	0.00533	0.03
residential	1E-05	6E-06	3E-03	2E-03	3E-04	9E-04	2E-04	0E+00	1E-04	6E-05	0.01698	0.01132	0.00055	0.00511	0.03
residential	1E-05	6E-06	3E-03	2E-03	3E-04	9E-04	2E-04	0E+00	9E-05	6E-05	0.01393	0.00928	0.00045	0.00419	0.03
residential	1E-05	6E-06	3E-03	2E-03	3E-04	9E-04	2E-04	0E+00	9E-05	6E-05	0.00476	0.00317	0.00015	0.00143	0.02
residential	1E-05	6E-06	3E-03	2E-03	2E-04	8E-04	2E-04	0E+00	9E-05	6E-05	0.00254	0.00169	8.2E-05	0.00076	0.02
residential	1E-05	6E-06	3E-03	2E-03	2E-04	8E-04	1E-04	0E+00	9E-05	6E-05	0.00175	0.00117	5.6E-05	0.00053	0.02
residential	1E-05	6E-06	3E-03	2E-03	2E-04	8E-04	1E-04	0E+00	9E-05	6E-05	0.00134	0.0009	4.3E-05	0.0004	0.02
residential	1E-05	6E-06	3E-03	2E-03	2E-04	8E-04	1E-04	0E+00	9E-05	6E-05	0.00109	0.00073	3.5E-05	0.00033	0.02
residential	1E-05	6E-06	3E-03	2E-03	2E-04	8E-04	1E-04	0E+00	9E-05	6E-05	0.00093	0.00062	3E-05	0.00028	0.02
residential	1E-05	6E-06	3E-03	2E-03	2E-04	8E-04	1E-04	0E+00	9E-05	5E-05	0.00081	0.00054	2.6E-05	0.00024	0.02
residential	1E-05	6E-06	3E-03	2E-03	2E-04	8E-04	1E-04	0E+00	9E-05	5E-05	0.00071	0.00048	2.3E-05	0.00021	0.02
residential	1E-05	6E-06	3E-03	2E-03	3E-04	1E-03	2E-04	0E+00	1E-04	7E-05	0.00764	0.0051	0.00025	0.0023	0.03
residential	1E-05	6E-06	3E-03	2E-03	3E-04	1E-03	2E-04	0E+00	1E-04	7E-05	0.012	0.008	0.00039	0.00361	0.03
residential	1E-05	6E-06	3E-03	2E-03	3E-04	1E-03	2E-04	0E+00	1E-04	6E-05	0.01323	0.00882	0.00043	0.00398	0.03
residential	1E-05	6E-06	3E-03	2E-03	3E-04	9E-04	2E-04	0E+00	1E-04	6E-05	0.0137	0.00913	0.00044	0.00413	0.03
residential	1E-05	6E-06	3E-03	2E-03	3E-04	9E-04	2E-04	0E+00	1E-04	6E-05	0.01386	0.00924	0.00045	0.00417	0.03
residential	1E-05	6E-06	3E-03	2E-03	3E-04	9E-04	2E-04	0E+00	1E-04	6E-05	0.0139	0.00927	0.00045	0.00419	0.03
residential	1E-05	6E-06	3E-03	2E-03	3E-04	9E-04	2E-04	0E+00	1E-04	6E-05	0.01391	0.00927	0.00045	0.00419	0.03
residential	1E-05	6E-06	3E-03	2E-03	3E-04	9E-04	2E-04	0E+00	1E-04	6E-05	0.01379	0.00919	0.00044	0.00415	0.03
residential	1E-05	6E-06	3E-03	2E-03	3E-04	9E-04	2E-04	0E+00	1E-04	6E-05	0.01349	0.00899	0.00044	0.00406	0.03
residential	1E-05	6E-06	3E-03	2E-03	3E-04	9E-04	2E-04	0E+00	1E-04	6E-05	0.01285	0.00857	0.00041	0.00387	0.03
residential	1E-05	6E-06	3E-03	2E-03	3E-04	1E-03	2E-04	0E+00	1E-04	7E-05	0.00367	0.00244	0.00012	0.0011	0.02
residential	1E-05	6E-06	3E-03	2E-03	3E-04	1E-03	2E-04	0E+00	1E-04	7E-05	0.00477	0.00318	0.00015	0.00144	0.02
residential	1E-05	6E-06	3E-03	2E-03	3E-04	1E-03	2E-04	0E+00	1E-04	7E-05	0.0056	0.00373	0.00018	0.00168	0.02
residential	1E-05	6E-06	3E-03	2E-03	3E-04	1E-03	2E-04	0E+00	1E-04	6E-05	0.0061	0.00407	0.0002	0.00184	0.02
residential	1E-05	6E-06	3E-03	2E-03	3E-04	9E-04	2E-04	0E+00	1E-04	6E-05	0.00622	0.00415	0.0002	0.00187	0.02
residential	1E-05	6E-06	3E-03	2E-03	3E-04	9E-04	2E-04	0E+00	1E-04	6E-05	0.00627	0.00418	0.0002	0.00189	0.02
residential	1E-05	6E-06	3E-03	2E-03	3E-04	9E-04	2E-04	0E+00	1E-04	6E-05	0.0064	0.00427	0.00021	0.00193	0.02
residential	1E-05	6E-06	3E-03	2E-03	3E-04	9E-04	2E-04	0E+00	1E-04	6E-05	0.00642	0.00428	0.00021	0.00193	0.02
residential	1E-05	6E-06	3E-03	2E-03	3E-04	9E-04	2E-04	0E+00	1E-04	6E-05	0.00632	0.00421	0.0002	0.0019	0.02
residential	1E-05	6E-06	3E-03	2E-03	3E-04	9E-04	2E-04	0E+00	1E-04	6E-05	0.00611	0.00407	0.0002	0.00184	0.02
residential	1E-05	6E-06	3E-03	2E-03	3E-04	1E-03	2E-04	0E+00	1E-04	7E-05	0.00281	0.00188	9.1E-05	0.00085	0.02
residential	1E-05	6E-06	3E-03	2E-03	3E-04	1E-03	2E-04	0E+00	1E-04	7E-05	0.00303	0.00202	9.8E-05	0.00091	0.02
residential	1E-05	6E-06	3E-03	2E-03	3E-04	1E-03	2E-04	0E+00	1E-04	7E-05	0.00346	0.00231	0.00011	0.00104	0.02
residential	1E-05	6E-06	3E-03	2E-03	3E-04	1E-03	2E-04	0E+00	1E-04	7E-05	0.00383	0.00255	0.00012	0.00115	0.02
residential	1E-05	6E-06	3E-03	2E-03	3E-04	1E-03	2E-04	0E+00	1E-04	7E-05	0.00398	0.00265	0.00013	0.0012	0.02
residential	1E-05	6E-06	3E-03	2E-03	3E-04	9E-04	2E-04	0E+00	1E-04	6E-05	0.00406	0.00271	0.00013	0.00122	0.02
residential	1E-05	6E-06	3E-03	2E-03	3E-04	9E-04	2E-04	0E+00	1E-04	6E-05	0.00418	0.00279	0.00013	0.00126	0.02
residential	1E-05	6E-06	4E-03	2E-03	3E-04	1E-03	2E-04	0E+00	1E-04	7E-05	0.00242	0.00162	7.8E-05	0.00073	0.02
residential	1E-05	6E-06	3E-03	2E-03	3E-04	1E-03	2E-04	0E+00	1E-04	7E-05	0.00233	0.00155	7.5E-05	0.0007	0.02
residential	1E-05	6E-06	3E-03	2E-03	3E-04	1E-03	2E-04	0E+00	1E-04	7E-05	0.00248	0.00166	8E-05	0.00075	0.02
residential	1E-05	6E-06	4E-03	2E-03	3E-04	1E-03	2E-04	0E+00	1E-04	7E-05	0.00224	0.00149	7.2E-05	0.00067	0.02
residential	1E-05	6E-06	3E-03	2E-03	3E-04	9E-04	2E-04	0E+00	1E-04	6E-05	0.00966	0.00644	0.00031	0.00291	0.03
recreational	3E-05	1E-05	4E-02	2E-02	3E-03	1E-02	1E-03	0E+00	8E-04	5E-04	0.01975	0.01317	0.00064	0.00595	0.09
recreational	3E-05	1E-05	4E-02	2E-02	3E-03	1E-02	1E-03	0E+00	7E-04	4E-04	0.00505	0.00337	0.00016	0.00152	0.08
recreational	2E-05	1E-05	2E-02	1E-02	2E-03	7E-03	9E-04	0E+00	6E-04	3E-04	0.00407	0.00271	0.00013	0.00122	0.06
recreational	3E-05	1E-05	3E-02	2E-02	3E-03	9E-03	1E-03	0E+00	7E-04	4E-04	0.00679	0.00453	0.00022	0.00204	0.07
recreational	3E-05	2E-05	4E-02	2E-02	3E-03	1E-02	1E-03	0E+00	7E-04	4E-04	0.00315	0.0021	0.0001	0.00095	0.07
recreational	3E-05	1E-05	2E-02	1E-02	2E-03	7E-03	9E-04	0E+00	5E-04	3E-04	0.00274	0.00183	8.8E-05	0.00083	0.06
recreational	3E-05	1E-05	3E-02	2E-02	3E-03	9E-03	1E-03	0E+00	7E-04	4E-04	0.01962	0.01308	0.00063	0.00591	0.09
recreational	2E-05	1E-05	2E-02	2E-02	2E-03	7E-03	1E-03	0E+00	6E-04	4E-04	0.01278	0.00852	0.00041	0.00385	0.07
residential	2E-05	1E-05	1E-02	7E-03	1E-03	3E-03	7E-04	0E+00	4E-04	3E-04	0.00217	0.00145	7E-05	0.00065	0.04
residential	2E-05	1E-05	1E-02	7E-03	9E-04	3E-03	6E-04	0E+00	4E-04	2E-04	0.00209	0.00139	6.7E-05	0.00063	0.04
residential	2E-05	1E-05	1E-02	6E-03	8E-04	3E-03	6E-04	0E+00	3E-04	2E-04	0.00202	0.00135	6.5E-05	0.00061	0.04
residential	2E-05	9E-06	1E-02	6E-03	8E-04	3E-03	5E-04	0E+00	3E-04	2E-04	0.00202	0.00135	6.5E-05	0.00061	0.04
residential	2E-05	9E-06	9E-03	6E-03	7E-04	3E-03	5E-04	0E+00	3E-04	2E-04	0.00145	0.00097	4.7E-05	0.00044	0.03
residential	2E-05	1E-05	1E-02	6E-03	8E-04	3E-03	6E-04	0E+00	3E-04	2E-04	0.0015	0.001	4.8E-05	0.00045	0.04
residential	2E-05	1E-05	1E-02	7E-03	9E-04	3E-03	6E-04	0E+00	4E-04	2E-04	0.00154	0.00103	5E-05	0.00046	0.04
residential	2E-05	1E-05	1E-02	7E-03	9E-04	3E-03	7E-04	0E+00	4E-04	3E-04	0.00158	0.00105	5.1E-05	0.00047	0.04
school	1E-05	7E-06	4E-03	2E-03	3E-04	1E-03	2E-04	0E+00	1E-04	8E-05	0.0004	0.00027	1.3E-05	0.00012	0.02
school	1E-05	7E-06	3E-03	2E-03	3E-04	1E-03	2E-04	0E+00	1E-04	7E-05	0.0004	0.00027	1.3E-05	0.00012	0.02
school	1E-05	6E-06	3E-03	2E-03	3E-04	9E-04	2E-04	0E+00	1E-04	7E-05	0.00048	0.00032	1.5E-05	0.00014	0.02
school	1E-05	6E-06	3E-03	2E-03	2E-04	8E-04	2E-04	0E+00	1E-04	6E-05	0.00042	0.00028	1.3E-05	0.00013	0.02
residential	2E-06	1E-06	3E-04	2E-04	2E-05	8E-05	2E-05	0E+00	9E-06	6E-06	0.00023	0.00015	7.3E-06	6.9E-05	0.00
school	2E-06	1E-06	3E-04	2E-04	2E-05	8E-05	2E-05	0E+00	1E-05	6E-06	0.0001	7E-05	3.4E-06	3.2E-05	0.00
school	2E-06	1E-06	3E-04	2E-04	2E-05	8E-05	2E-05	0E+00	1E-05	6E-06	0.00011	7.2E-05	3.5E-06	3.3E-05	0.00

Refrigerated Containers

Dose Inhalation | Risk (Residential 30-yr; school 9-yr; park 15-yr)

ug/m3	3rd tri	0<2	2<9	2<16	16<30	3rd tri	0<2	2<9	2<16	16<30	Summed Risk	Cases Per Million	Chronic HI
0.01673	6E-06	2E-05	1E-05	9E-06	4E-06	2E-07	5E-06	0E+00	6E-06	9E-07	1.3E-05	12.704	0.00335

Multi-Purpose General Cargo

Dose Inhalation | Risk (Residential 30-yr; school 9-yr; park 15-yr)

ug/m3	3rd tri	0<2	2<9	2<16	16<30	3rd tri	0<2	2<9	2<16	16<30	Summed Risk	Cases Per Million	Chronic HI

Dry Bulk

Dose Inhalation | Risk (Residential 30-yr; school 9-yr; park 15-yr)

ug/m3	3rd tri	0<2	2<9	2<16	16<30	3rd tri	0<2	2<9	2<16	16<30	Summed Risk	Cases Per Million	Chronic HI

TAMT_HRA_Existing
DPM_annl

AERMOD Output — Source Group in AERMOD

	X	Y	B10_1_AUX	B10_2_AUX	B10_3_AUX	B10_4_AUX	B10_5_AUX	B10_6_AUX	B10_7_AUX	B10_8_AUX	CHE_1	LOC_SWTCH EMP	LOC_SWTCH LOA	OGV_PATH _BLR	OGV_PATH _DPM	TR_28TH	TR_BAYMA R	TR_BOSTON	TR_CROSBY	TR_HARBOR CHA	TR_HARBOR SAM	TUG_PATH_ DPM
			1	3	5	7	9	11	13	15	17	18	19	20	21	22	23	24	25	26	27	28
residential	485331	3615425	1.7E-01	1.6E-01	1.8E-01	2.0E-01	2.2E-01	2.4E-01	2.5E-01	2.5E-01	1.7E+05	2.6E-01	2.8E-01	7.5E-02	7.5E-02	6.0E-01	3.4E-02	5.7E-01	7.6E-01	5.2E-01	7.8E-01	7.6E-02
residential	485431	3615425	1.6E-01	1.6E-01	1.8E-01	1.9E-01	2.2E-01	2.4E-01	2.5E-01	2.5E-01	1.6E+05	2.5E-01	2.8E-01	7.3E-02	7.3E-02	6.3E-01	3.5E-02	5.9E-01	7.4E-01	5.0E-01	8.1E-01	7.4E-02
residential	485531	3615425	1.6E-01	1.6E-01	1.8E-01	1.9E-01	2.1E-01	2.4E-01	2.4E-01	2.4E-01	1.5E+05	2.5E-01	2.8E-01	7.2E-02	7.2E-02	6.6E-01	3.6E-02	6.3E-01	7.1E-01	4.8E-01	8.4E-01	7.1E-02
residential	485231	3615525	1.8E-01	1.7E-01	2.0E-01	2.1E-01	2.4E-01	2.6E-01	2.6E-01	2.6E-01	1.9E+05	2.7E-01	3.0E-01	7.9E-02	7.9E-02	5.8E-01	3.2E-02	5.5E-01	8.3E-01	5.7E-01	7.8E-01	8.2E-02
residential	485331	3615525	1.7E-01	1.7E-01	1.9E-01	2.1E-01	2.3E-01	2.6E-01	2.6E-01	2.6E-01	1.8E+05	2.7E-01	3.0E-01	7.7E-02	7.7E-02	6.2E-01	3.3E-02	5.8E-01	8.2E-01	5.6E-01	8.2E-01	8.0E-02
residential	485431	3615525	1.7E-01	1.6E-01	1.9E-01	2.0E-01	2.2E-01	2.5E-01	2.5E-01	2.6E-01	1.7E+05	2.7E-01	3.0E-01	7.5E-02	7.5E-02	6.5E-01	3.3E-02	6.1E-01	8.0E-01	5.4E-01	8.6E-01	7.8E-02
residential	485531	3615525	1.7E-01	1.6E-01	1.8E-01	1.9E-01	2.2E-01	2.4E-01	2.5E-01	2.5E-01	1.6E+05	2.7E-01	3.0E-01	7.3E-02	7.3E-02	6.9E-01	3.4E-02	6.5E-01	7.7E-01	5.2E-01	8.9E-01	7.6E-02
residential	485031	3615625	2.0E-01	1.9E-01	2.2E-01	2.3E-01	2.6E-01	2.8E-01	2.8E-01	2.7E-01	2.3E+05	2.9E-01	3.1E-01	8.7E-02	8.7E-02	5.3E-01	3.0E-02	5.0E-01	8.8E-01	6.4E-01	7.4E-01	9.0E-02
residential	485131	3615625	1.9E-01	1.8E-01	2.1E-01	2.3E-01	2.5E-01	2.8E-01	2.8E-01	2.7E-01	2.2E+05	2.9E-01	3.2E-01	8.5E-02	8.5E-02	5.6E-01	3.0E-02	5.3E-01	8.9E-01	6.3E-01	7.8E-01	8.8E-02
residential	485231	3615625	1.9E-01	1.8E-01	2.1E-01	2.2E-01	2.5E-01	2.8E-01	2.8E-01	2.7E-01	2.1E+05	2.9E-01	3.2E-01	8.2E-02	8.2E-02	6.0E-01	3.1E-02	5.6E-01	8.9E-01	6.1E-01	8.2E-01	8.6E-02

	X	Y	B10_1_AUX	B10_2_AUX	B10_3_AUX	B10_4_AUX	B10_5_AUX	B10_6_AUX	B10_7_AUX	B10_8_AUX	CHE_1	LOC_SWTCHE MP	LOC_SWTCHL OA	OGV_PATH_ DPM	TR_28TH	TR_BAYMAR	TR_BOSTON	TR_CROSBY	TR_HARBOR CHA	TR_HARBOR SAM	TUG_PATH_D PM
			Refrigerated ContainersExisting	Refrigerated ContainersExisting	Refrigerated ContainersExisting	Refrigerated ContainersExisting	Multi-Purpose General CargoExisting	Multi-Purpose General CargoExisting	Dry BulkExisting	Dry BulkExisting	AllExisting	AllExisting	AllExisting	AllExisting	TR_28THExisting	TR_BAYMAR Existing	TR_BOSTON Existing	TR_CROSBY Existing	TR_HARBOR CHAExisting	TR_HARBOR SAMExisting	AllExisting
		g/s -->	1.4E-02	1.4E-02	1.4E-02	1.4E-02	1.6E-03	1.6E-03	1.8E-03	1.8E-03	1.5E-08	1.8E-04	1.8E-04	7.6E-03	4.4E-06	7.1E-06	1.9E-05	4.0E-05	8.9E-05	8.9E-05	4.1E-04
			1	3	5	7	9	11	13	15	17	18	19	21	22	23	24	25	26	27	28
residential	485331	3615425	2.4E-03	2.3E-03	2.6E-03	2.8E-03	3.4E-04	3.8E-04	4.4E-04	4.4E-04	2.6E-03	4.6E-05	5.0E-05	5.7E-04	2.6E-06	2.5E-07	1.1E-05	3.0E-05	4.6E-05	6.9E-05	3.1E-05
residential	485431	3615425	2.3E-03	2.2E-03	2.5E-03	2.7E-03	3.3E-04	3.7E-04	4.3E-04	4.3E-04	2.5E-03	4.5E-05	4.9E-05	5.6E-04	2.8E-06	2.5E-07	1.1E-05	2.9E-05	4.5E-05	7.2E-05	3.0E-05
residential	485531	3615425	2.3E-03	2.2E-03	2.5E-03	2.7E-03	3.3E-04	3.7E-04	4.3E-04	4.3E-04	2.3E-03	4.5E-05	4.9E-05	5.5E-04	2.9E-06	2.5E-07	1.2E-05	2.8E-05	4.3E-05	7.5E-05	2.9E-05
residential	485231	3615525	2.5E-03	2.4E-03	2.8E-03	3.0E-03	3.7E-04	4.1E-04	4.7E-04	4.6E-04	2.9E-03	4.9E-05	5.3E-05	6.0E-04	2.6E-06	2.3E-07	1.0E-05	3.3E-05	5.1E-05	7.0E-05	3.3E-05
residential	485331	3615525	2.5E-03	2.4E-03	2.7E-03	2.9E-03	3.6E-04	4.0E-04	4.6E-04	4.6E-04	2.8E-03	4.9E-05	5.3E-05	5.9E-04	2.7E-06	2.3E-07	1.1E-05	3.3E-05	5.0E-05	7.3E-05	3.3E-05
residential	485431	3615525	2.4E-03	2.3E-03	2.6E-03	2.8E-03	3.5E-04	3.9E-04	4.5E-04	4.5E-04	2.6E-03	4.8E-05	5.3E-05	5.7E-04	2.9E-06	2.4E-07	1.1E-05	3.2E-05	4.8E-05	7.6E-05	3.2E-05
residential	485531	3615525	2.3E-03	2.2E-03	2.5E-03	2.7E-03	3.3E-04	3.7E-04	4.4E-04	4.4E-04	2.5E-03	4.8E-05	5.3E-05	5.5E-04	3.0E-06	2.4E-07	1.2E-05	3.1E-05	4.6E-05	7.9E-05	3.1E-05
residential	485031	3615625	2.8E-03	2.7E-03	3.1E-03	3.3E-03	4.0E-04	4.4E-04	4.9E-04	4.8E-04	3.5E-03	5.2E-05	5.6E-05	6.6E-04	2.3E-06	2.1E-07	9.4E-06	3.5E-05	5.7E-05	6.6E-05	3.7E-05
residential	485131	3615625	2.7E-03	2.6E-03	3.0E-03	3.2E-03	4.0E-04	4.4E-04	4.9E-04	4.8E-04	3.3E-03	5.2E-05	5.6E-05	6.4E-04	2.5E-06	2.2E-07	9.9E-06	3.5E-05	5.6E-05	6.9E-05	3.6E-05
residential	485231	3615625	2.6E-03	2.5E-03	2.9E-03	3.1E-03	3.9E-04	4.3E-04	4.9E-04	4.8E-04	3.2E-03	5.2E-05	5.7E-05	6.2E-04	2.6E-06	2.2E-07	1.0E-05	3.6E-05	5.5E-05	7.3E-05	3.5E-05

	X	Y	All	Refrigerated ContainersExisting	Multi-Purpose General CargoExisting	Dry BulkExisting	All	Refrigerated ContainersExisting	Multi-Purpose General CargoExisting	Dry BulkExisting	All	Refrigerated ContainersExisting
			100%	89%	5%	6%	100%	73%	12%	15%	100%	57%
residential	485331	3615425	1E-02	1E-02	6E-04	6E-04	6E-04	4E-04	7E-05	8E-05	3E-05	2E-05
residential	485431	3615425	1E-02	1E-02	6E-04	6E-04	6E-04	4E-04	7E-05	8E-05	3E-05	2E-05
residential	485531	3615425	1E-02	1E-02	6E-04	6E-04	5E-04	4E-04	7E-05	8E-05	3E-05	2E-05
residential	485231	3615525	1E-02	1E-02	6E-04	7E-04	6E-04	4E-04	7E-05	9E-05	3E-05	2E-05
residential	485331	3615525	1E-02	1E-02	6E-04	7E-04	6E-04	4E-04	7E-05	9E-05	3E-05	2E-05
residential	485431	3615525	1E-02	1E-02	6E-04	7E-04	6E-04	4E-04	7E-05	8E-05	3E-05	2E-05
residential	485531	3615525	1E-02	1E-02	6E-04	6E-04	6E-04	4E-04	7E-05	8E-05	3E-05	2E-05
residential	485031	3615625	1E-02	1E-02	7E-04	8E-04	7E-04	5E-04	8E-05	1E-04	4E-05	2E-05
residential	485131	3615625	1E-02	1E-02	7E-04	7E-04	6E-04	5E-04	8E-05	9E-05	4E-05	2E-05
residential	485231	3615625	1E-02	1E-02	6E-04	7E-04	6E-04	5E-04	8E-05	9E-05	4E-05	2E-05

TAMT_HRA_Existing
DPM_annl

AERMOD Output	Multi-Purpose General CargoExisting	Dry BulkExisting	All	Refrigerated ContainersExisting	Multi-Purpose General CargoExisting	Dry BulkExisting	All	Refrigerated ContainersExisting	Multi-Purpose General CargoExisting	Dry BulkExisting	All	Refrigerated Containers	Multi-Purpose General Cargo	Dry Bulk	All	Dose Inhalation ug/m3
	28%	15%	100%	63%	8%	29%	100%	0%	61%	39%	100%	67%	3%	30%		
residential	9E-06	5E-06	3E-03	2E-03	2E-04	7E-04	1E-04	0E+00	6E-05	4E-05	0.00016	0.00011	5.1E-06	4.8E-05	0.02	0.01255
residential	8E-06	5E-06	2E-03	2E-03	2E-04	7E-04	9E-05	0E+00	6E-05	4E-05	0.00016	0.00011	5.2E-06	4.8E-05	0.01	0.01234
residential	8E-06	4E-06	2E-03	1E-03	2E-04	7E-04	9E-05	0E+00	6E-05	4E-05	0.00016	0.00011	5.2E-06	4.8E-05	0.01	0.01208
residential	9E-06	5E-06	3E-03	2E-03	2E-04	8E-04	1E-04	0E+00	6E-05	4E-05	0.00017	0.00011	5.4E-06	5E-05	0.02	0.01357
residential	9E-06	5E-06	3E-03	2E-03	2E-04	8E-04	1E-04	0E+00	6E-05	4E-05	0.00017	0.00011	5.4E-06	5.1E-05	0.02	0.01316
residential	9E-06	5E-06	3E-03	2E-03	2E-04	8E-04	1E-04	0E+00	6E-05	4E-05	0.00017	0.00011	5.5E-06	5.1E-05	0.02	0.01275
residential	9E-06	5E-06	2E-03	2E-03	2E-04	7E-04	1E-04	0E+00	6E-05	4E-05	0.00017	0.00011	5.5E-06	5.2E-05	0.01	0.01234
residential	1E-05	6E-06	3E-03	2E-03	3E-04	1E-03	1E-04	0E+00	7E-05	4E-05	0.00017	0.00011	5.5E-06	5.1E-05	0.02	0.015
residential	1E-05	5E-06	3E-03	2E-03	3E-04	1E-03	1E-04	0E+00	7E-05	4E-05	0.00017	0.00012	5.6E-06	5.2E-05	0.02	0.01466
residential	1E-05	5E-06	3E-03	2E-03	3E-04	9E-04	1E-04	0E+00	7E-05	4E-05	0.00018	0.00012	5.7E-06	5.3E-05	0.02	0.01423
residential	1E-05	5E-06	3E-03	2E-03	3E-04	9E-04	1E-04	0E+00	7E-05	4E-05	0.00018	0.00012	5.8E-06	5.4E-05	0.02	0.0138
residential	9E-06	5E-06	3E-03	2E-03	2E-04	8E-04	1E-04	0E+00	7E-05	4E-05	0.00018	0.00012	5.8E-06	5.4E-05	0.02	0.01335
residential	1E-05	6E-06	4E-03	2E-03	3E-04	1E-03	1E-04	0E+00	7E-05	4E-05	0.00018	0.00012	5.9E-06	5.5E-05	0.02	0.01536
residential	1E-05	6E-06	3E-03	2E-03	3E-04	1E-03	1E-04	0E+00	7E-05	4E-05	0.00019	0.00012	6E-06	5.6E-05	0.02	0.01496
residential	1E-05	5E-06	3E-03	2E-03	3E-04	9E-04	1E-04	0E+00	7E-05	4E-05	0.00019	0.00013	6.1E-06	5.7E-05	0.02	0.01448
residential	1E-05	6E-06	4E-03	2E-03	3E-04	1E-03	1E-04	0E+00	8E-05	5E-05	0.0002	0.00013	6.4E-06	6E-05	0.02	0.0157
residential	4E-06	2E-06	8E-04	5E-04	7E-05	2E-04	3E-05	0E+00	2E-05	1E-05	5E-05	3.3E-05	1.6E-06	1.5E-05	0.01	0.00545
residential	5E-06	3E-06	8E-04	5E-04	7E-05	2E-04	4E-05	0E+00	2E-05	1E-05	5.6E-05	3.7E-05	1.8E-06	1.7E-05	0.01	0.00577
residential	5E-06	2E-06	8E-04	5E-04	7E-05	2E-04	4E-05	0E+00	2E-05	1E-05	5.5E-05	3.7E-05	1.8E-06	1.7E-05	0.01	0.00571
residential	5E-06	3E-06	9E-04	6E-04	8E-05	3E-04	4E-05	0E+00	2E-05	1E-05	6.3E-05	4.2E-05	2E-06	1.9E-05	0.01	0.00612
residential	5E-06	3E-06	9E-04	6E-04	7E-05	3E-04	4E-05	0E+00	2E-05	1E-05	6.2E-05	4.1E-05	2E-06	1.9E-05	0.01	0.00605
residential	5E-06	3E-06	9E-04	6E-04	7E-05	3E-04	4E-05	0E+00	2E-05	1E-05	6.2E-05	4.1E-05	2E-06	1.9E-05	0.01	0.00598
residential	5E-06	3E-06	1E-03	6E-04	8E-05	3E-04	4E-05	0E+00	3E-05	2E-05	7.2E-05	4.8E-05	2.3E-06	2.2E-05	0.01	0.00661
residential	5E-06	3E-06	1E-03	6E-04	8E-05	3E-04	4E-05	0E+00	3E-05	2E-05	7.1E-05	4.7E-05	2.3E-06	2.1E-05	0.01	0.00652
residential	5E-06	3E-06	1E-03	6E-04	8E-05	3E-04	4E-05	0E+00	2E-05	2E-05	7E-05	4.7E-05	2.3E-06	2.1E-05	0.01	0.00644
residential	5E-06	3E-06	9E-04	6E-04	8E-05	3E-04	4E-05	0E+00	2E-05	2E-05	7E-05	4.6E-05	2.2E-06	2.1E-05	0.01	0.00634
residential	5E-06	3E-06	9E-04	6E-04	8E-05	3E-04	4E-05	0E+00	2E-05	1E-05	6.9E-05	4.6E-05	2.2E-06	2.1E-05	0.01	0.00626
residential	6E-06	3E-06	1E-03	7E-04	9E-05	3E-04	5E-05	0E+00	3E-05	2E-05	8.3E-05	5.5E-05	2.7E-06	2.5E-05	0.01	0.00705
residential	5E-06	3E-06	1E-03	7E-04	9E-05	3E-04	5E-05	0E+00	3E-05	2E-05	8.2E-05	5.5E-05	2.6E-06	2.5E-05	0.01	0.00694
residential	5E-06	3E-06	1E-03	7E-04	9E-05	3E-04	4E-05	0E+00	3E-05	2E-05	8.1E-05	5.4E-05	2.6E-06	2.4E-05	0.01	0.00684
residential	5E-06	3E-06	1E-03	6E-04	9E-05	3E-04	4E-05	0E+00	3E-05	2E-05	7.9E-05	5.3E-05	2.6E-06	2.4E-05	0.01	0.00675
residential	5E-06	3E-06	1E-03	6E-04	9E-05	3E-04	4E-05	0E+00	3E-05	2E-05	7.8E-05	5.2E-05	2.5E-06	2.3E-05	0.01	0.00664
residential	5E-06	3E-06	1E-03	6E-04	8E-05	3E-04	4E-05	0E+00	3E-05	2E-05	7.7E-05	5.1E-05	2.5E-06	2.3E-05	0.01	0.00653
residential	6E-06	3E-06	1E-03	7E-04	1E-04	3E-04	5E-05	0E+00	3E-05	2E-05	9.7E-05	6.5E-05	3.1E-06	2.9E-05	0.01	0.00749
residential	6E-06	3E-06	1E-03	7E-04	1E-04	3E-04	5E-05	0E+00	3E-05	2E-05	9.5E-05	6.4E-05	3.1E-06	2.9E-05	0.01	0.00738
residential	6E-06	3E-06	1E-03	7E-04	1E-04	3E-04	5E-05	0E+00	3E-05	2E-05	9.3E-05	6.2E-05	3E-06	2.8E-05	0.01	0.00729
residential	6E-06	3E-06	1E-03	7E-04	9E-05	3E-04	5E-05	0E+00	3E-05	2E-05	9.1E-05	6.1E-05	2.9E-06	2.7E-05	0.01	0.00718
residential	6E-06	3E-06	1E-03	7E-04	9E-05	3E-04	5E-05	0E+00	3E-05	2E-05	8.9E-05	5.9E-05	2.9E-06	2.7E-05	0.01	0.00705
residential	5E-06	3E-06	1E-03	7E-04	9E-05	3E-04	4E-05	0E+00	3E-05	2E-05	8.7E-05	5.8E-05	2.8E-06	2.6E-05	0.01	0.00695
residential	5E-06	3E-06	1E-03	7E-04	9E-05	3E-04	4E-05	0E+00	3E-05	2E-05	8.4E-05	5.6E-05	2.7E-06	2.5E-05	0.01	0.00683
residential	6E-06	3E-06	1E-03	8E-04	1E-04	4E-04	6E-05	0E+00	3E-05	2E-05	0.00012	7.9E-05	3.8E-06	3.6E-05	0.01	0.00823
residential	6E-06	3E-06	1E-03	8E-04	1E-04	4E-04	5E-05	0E+00	3E-05	2E-05	0.00012	7.7E-05	3.7E-06	3.5E-05	0.01	0.00807
residential	6E-06	3E-06	1E-03	8E-04	1E-04	4E-04	6E-05	0E+00	3E-05	2E-05	0.00011	7.5E-05	3.6E-06	3.4E-05	0.01	0.00792
residential	6E-06	3E-06	1E-03	8E-04	1E-04	3E-04	5E-05	0E+00	3E-05	2E-05	0.00011	7.3E-05	3.5E-06	3.3E-05	0.01	0.00779
residential	6E-06	3E-06	1E-03	7E-04	1E-04	3E-04	5E-05	0E+00	3E-05	2E-05	0.00011	7.1E-05	3.4E-06	3.2E-05	0.01	0.00766
residential	6E-06	3E-06	1E-03	7E-04	1E-04	3E-04	5E-05	0E+00	3E-05	2E-05	0.0001	6.8E-05	3.3E-06	3.1E-05	0.01	0.00752
residential	6E-06	3E-06	1E-03	7E-04	1E-04	3E-04	5E-05	0E+00	3E-05	2E-05	9.9E-05	6.6E-05	3.2E-06	3E-05	0.01	0.00739
residential	6E-06	3E-06	1E-03	7E-04	1E-04	3E-04	5E-05	0E+00	3E-05	2E-05	9.6E-05	6.4E-05	3.1E-06	2.9E-05	0.01	0.00724
residential	6E-06	3E-06	1E-03	7E-04	9E-05	3E-04	5E-05	0E+00	3E-05	2E-05	9.2E-05	6.1E-05	3E-06	2.8E-05	0.01	0.0071
residential	6E-06	3E-06	1E-03	9E-04	1E-04	4E-04	6E-05	0E+00	4E-05	2E-05	0.00015	9.8E-05	4.7E-06	4.4E-05	0.01	0.00887
residential	6E-06	3E-06	1E-03	9E-04	1E-04	4E-04	6E-05	0E+00	4E-05	2E-05	0.00014	9.4E-05	4.5E-06	4.2E-05	0.01	0.00871
residential	6E-06	3E-06	1E-03	9E-04	1E-04	4E-04	6E-05	0E+00	3E-05	2E-05	0.00014	9E-05	4.4E-06	4.1E-05	0.01	0.00853
residential	6E-06	3E-06	1E-03	8E-04	1E-04	4E-04	6E-05	0E+00	3E-05	2E-05	0.00013	8.7E-05	4.2E-06	3.9E-05	0.01	0.00835
residential	6E-06	3E-06	1E-03	8E-04	1E-04	4E-04	5E-05	0E+00	3E-05	2E-05	0.00012	8.3E-05	4E-06	3.7E-05	0.01	0.00818
residential	6E-06	3E-06	1E-03	8E-04	1E-04	4E-04	5E-05	0E+00	3E-05	2E-05	0.00012	7.9E-05	3.8E-06	3.6E-05	0.01	0.00802
residential	6E-06	3E-06	1E-03	8E-04	1E-04	4E-04	5E-05	0E+00	3E-05	2E-05	0.00011	7.6E-05	3.7E-06	3.4E-05	0.01	0.00785
residential	6E-06	3E-06	1E-03	8E-04	1E-04	3E-04	5E-05	0E+00	3E-05	2E-05	0.00011	7.2E-05	3.5E-06	3.3E-05	0.01	0.00769
residential	6E-06	3E-06	1E-03	8E-04	1E-04	3E-04	5E-05	0E+00	3E-05	2E-05	0.0001	6.9E-05	3.3E-06	3.1E-05	0.01	0.00752
residential	6E-06	3E-06	1E-03	8E-04	1E-04	3E-04	5E-05	0E+00	3E-05	2E-05	9.9E-05	6.6E-05	3.2E-06	3E-05	0.01	0.00737
residential	6E-06	3E-06	2E-03	1E-03	1E-04	4E-04	7E-05	0E+00	4E-05	3E-05	0.00018	0.00012	6E-06	5.6E-05	0.01	0.0097
residential	7E-06	3E-06	2E-03	1E-03	1E-04	4E-04	6E-05	0E+00	4E-05	2E-05	0.00017	0.00012	5.6E-06	5.3E-05	0.01	0.00939
residential	7E-06	3E-06	1E-03	9E-04	1E-04	4E-04	6E-05	0E+00	4E-05	2E-05	0.00017	0.00011	5.3E-06	5E-05	0.01	0.00916
residential	6E-06	3E-06	1E-03	9E-04	1E-04	4E-04	6E-05	0E+00	4E-05	2E-05	0.00016	0.0001	5E-06	4.7E-05	0.01	0.00895
residential	6E-06	3E-06	1E-03	9E-04	1E-04	4E-04	6E-05	0E+00	4E-05	2E-05	0.00015	9.8E-05	4.7E-06	4.4E-05	0.01	0.00874
residential	6E-06	3E-06	1E-03	9E-04	1E-04	4E-04	6E-05	0E+00	3E-05	2E-05	0.00014	9.3E-05	4.5E-06	4.2E-05	0.01	0.00855
residential	6E-06	3E-06	1E-03	8E-04	1E-04	4E-04	5E-05	0E+00	3E-05	2E-05	0.00013	8.7E-05	4.2E-06	3.9E-05	0.01	0.00837
residential	6E-06	3E-06	1E-03	8E-04	1E-04	4E-04	5E-05	0E+00	3E-05	2E-05	0.00012	8.3E-05	4E-06	3.7E-05	0.01	0.00819
residential	6E-06	3E-06	1E-03	8E-04	1E-04	4E-04	5E-05	0E+00	3E-05	2E-05	0.00012	7.8E-05	3.8E-06	3.5E-05	0.01	0.00798
residential	6E-06	3E-06	1E-03	8E-04	1E-04	4E-04	5E-05	0E+00	3E-05	2E-05	0.00011	7.4E-05	3.6E-06	3.4E-05	0.01	0.0078
residential	6E-06	3E-06	1E-03	8E-04	1E-04	4E-04	5E-05	0E+00	3E-05	2E-05	0.00011	7E-05	3.4E-06	3.2E-05	0.01	0.00762
recreational	3E-05	1E-05	1E-02	6E-03	9E-04	3E-03	2E-04	0E+00	1E-04	8E-05	0.00022	0.00015	7.1E-06	6.6E-05	0.04	0.02895
recreational	2E-05	1E-05	1E-02	7E-03	9E-04	3E-03	2E-04	0E+00	1E-04	8E-05	0.00024	0.00016	7.7E-06	7.2E-05	0.04	0.03095
residential	7E-06	4E-06	2E-03	1E-03	1E-04	5E-04	8E-05	0E+00	5E-05	3E-05	0.00024	0.00016	7.9E-06	7.3E-05	0.01	0.01026
residential	7E-06	4E-06	2E-03	1E-03	1E-04	5E-04	7E-05	0E+00	4E-05	3E-05	0.00022	0.00015	7.2E-06	6.7E-05	0.01	0.01006
residential	7E-06	4E-06	2E-03	1E-03	1E-04	5E-04	7E-05	0E+00	4E-05	3E-05	0.00021	0.00014	6.6E-06	6.2E-05	0.01	0.00984
residential	7E-06	4E-06	2E-03	1E-03	1E-04	4E-04	7E-05	0E+00	4E-05	3E-05	0.00019	0.00013	6.1E-06	5.7E-05	0.01	0.00959
residential	7E-06	4E-06	2E-03	1E-03	1E-04	4E-04	6E-05	0E+00	4E-05	2E-05	0.00018	0.00012	5.7E-06	5.3E-05	0.01	0.00936
residential	7E-06	3E-06	1E-03	9E-04	1E-04	4E-04	6E-05	0E+00	4E-05	2E-05	0.00016	0.00011	5.3E-06	4.9E-05	0.01	0.00913
residential	6E-06	3E-06	1E-03	9E-04	1E-04	4E-04	6E-05	0E+00	4E-05	2E-05	0.00015	0.0001	4.9E-06	4.6E-05	0.01	0.00891
recreational	3E-05	1E-05	1E-02	6E-03	9E-04	3E-03	2E-04	0E+00	1E-04	8E-05	0.00021	0.00014	6.7E-06	6.2E-05	0.04	0.02925
recreational	3E-05	2E-05	1E-02	7E-03	9E-04	3E-03	2E-04	0E+00	1E-04	8E-05	0.00023	0.00015	7.3E-06	6.8E-05	0.04	0.03039
residential	8E-06	4E-06	2E-03	1E-03	2E-04	6E-04	9E-05	0E+00	5E-05	3E-05	0.00039	0.00026	1.3E-05	0.00012	0.01	0.01145
residential	8E-06	4E-06	2E-03	1E-03	2E-04	6E-04	9E-05	0E+00	5E-05	3E-05	0.00033	0.00022	1.1E-05	0.0001	0.01	0.01115
residential	8E-06	4E-06	2E-03	1E-03	2E-04	5E-04	8E-05	0E+00	5E-05	3E-05	0.00029	0.00019	9.4E-06	8.8E-05	0.01	0.01083
residential	7E-06	4E-06	2E-03	1E-03	1E-04	5E-04	8E-05	0E+00	5E-05	3E-05	0.00026	0.00017	8.4E-06	7.8E-05	0.01	0.01055
residential	7E-06	4E-06	2E-03	1E-03	1E-04	5E-04	7E-05	0E+00	4E-05	3E-05	0.00023	0.00016	7.5E-06	7E-05	0.01	0.01027
residential	6E-06	3E-06	2E-03	1E-03	1E-04	5E-04	7E-05	0E+00	4E-05	3E-05	0.00021	0.00014	6.8E-06	6.4E-05	0.01	0.01011
residential	7E-06	4E-06	2E-03	1E-03	1E-04	5E-04	6E-05	0E+00	4E-05	2E-05	0.00019	0.00013	6.2E-06	5.8E-05	0.01	0.00975
residential	7E-06	4E-06	2E-03	1E-03	1E-04	4E-04	6E-05	0E+00	4E-05	2E-05	0.00018	0.00012	5.7E-06	5.3E-05	0.01	0.00949
residential	6E-06	3E-06	1E-03	8E-04	1E-04	4E-04	5E-05	0E+00	3E-05	2E-05	0.00012	7.7E-05	3.7E-06	3.5E-05	0.01	0.00807
recreational	3E-05	2E-05	1E-02	6E-03	8E-04	3E-03	2E-04	0E+00	1E-04	7E-05	0.00019	0.00013	6.2E-06	5.8E-05	0.04	0.0294
recreational	3E-05	2E-05	1E-02	7E-03	9E-04	3E-03	2E-04	0E+00	1E-04	8E-05	0.00021	0.00014	6.7E-06	6.3E-05	0.04	0.03063
recreational	3E-05	2E-05	1E-02	8E-03	1E-03	3E-03	2E-04	0E+00	1E-04	9E-05	0.00023	0.00015	7.4E-06	6.9E-05	0.04	0.03239
residential	8E-06	5E-06	2E-03	1E-03	2E-04	6E-04	1E-04	0E+00	6E-05	4E-05	0.00062	0.00041	2E-05	0.00019	0.02	0.01251
residential	8E-06	4E-06	2E-03	1E-03	2E-04	6E-04	1E-04	0E+00	6E-05	4E-05	0.00048	0.00032	1.5E-05	0.00014	0.01	0.01212
residential	8E-06	4E-06	2E-03	1E-03	2E-04	6E-04	9E-05	0E+00	6E-05	4E-05	0.00039	0.00026	1.3E-05	0.00012	0.01	0.01176
residential	8E-06	4E-06	2E-03	1E-03	2E-04	6E-04	9E-05	0E+00	5E-05	3E-05	0.00034	0.00022	1.1E-05	0.0001	0.01	0.01141
residential	8E-06	4E-06	2E-03	1E-03	2E-04	6E-04	8E-05	0E+00	5E-05	3E-05	0.00029	0.00019	9.4E-06	8.8E-05	0.01	0.01108
residential	8E-06	4E-06	2E-03	1E-03	2E-04	6E-04	9E-05	0E+00	5E-05	3E-05	0.00026	0.00017	8.3E-06	7.8E-05	0.01	0.01066
residential	7E-06	4E-06	2E-03	1E-03	2E-04	5E-04	7E-05	0E+00	5E-05	3E-05	0.00023	0.00015	7.4E-06	6.9E-05	0.01	0.01045
residential	6E-06	3E-06	1E-03	9E-04	1E-04	4E-04	5E-05	0E+00	3E-05	2E-05	0.00013	8.4E-05	4.1E-06	3.8E-05	0.01	0.0085
residential	6E-06	3E-06	1E-03	8E-04	1E-04	4E-04	5E-05	0E+00	3E-05	2E-05	0.00012	7.9E-05	3.8E-06	3.6E-05	0.01	0.00825
residential	3E-05	2E-05	9E-03	5E-03	7E-04	2E-03	2E-04	0E+00	1E-04	7E-05	0.00016	0.00011	5.1E-06	4.8E-05	0.03	0.0272
recreational	3E-05	2E-05	1E-02	6E-03	8E-04	3E-03	2E-04	0E+00	1E-04	7E-05	0.00017	0.00012	5.6E-06	5.2E-05	0.04	0.02888
recreational	3E-05	2E-05	1E-02	7E-03	9E-04	3E-03	2E-04	0E+00	1E-04	8E-05	0.00019	0.00013	6.2E-06	5.7E-05	0.04	0.03043
recreational	3E-05	2E-05	1E-02	7E-03	1E-03	3E-03	2E-04	0E+00	1E-04	8E-05	0.00021	0.00014	6.8E-06	6.3E-05	0.04	0.03204
recreational	3E-05	2E-05	1E-02	8E-03	1E-03	4E-03	2E-04	0E+00	1E-04	9E-05	0.00023	0.00015	7.4E-06	6.9E-05	0.04	0.0337
residential	8E-06	4E-06	2E-03	1E-03	2E-04	6E-04	9E-05	0E+00	5E-05	3E-05	0.00024	0.00016	7.8E-06	7.3E-05	0.01	0.01069
residential	7E-06	4E-06	2E-03	1E-03	1E-04	5E-04	7E-05	0E+00	4E-05	3E-05	0.00022	0.00014	7E-06	6.5E-05	0.01	0.01043
residential	8E-06	4E-06	2E-03	1E-03	1E-04	5E-04	8E-05	0E+00	5E-05	3E-05	0.00018	0.00012	5.8E-06	5.4E-05	0.01	0.00967
residential	7E-06	4E-06	2E-03	1E-03	1E-04	5E-04	6E-05	0E+00	4E-05	2E-05	0.00015	9.9E-05	4.8E-06	4.5E-05	0.01	0.00919
residential	7E-06	4E-06	2E-03	1E-03	1E-04	4E-04	7E-05	0E+00	4E-05	3E-05	0.00014	9.2E-05	4.4E-06	4.2E-05	0.01	0.00889
residential	7E-06	4E-06	1E-03	9E-04	1E-04	4E-04	6E-05	0E+00	4E-05	3E-05	0.00013	8.5E-05	4.1E-06	3.9E-05	0.01	0.00862
residential	6E-06	3E-06	1E-03	8E-04	1E-04	4E-04	5E-05	0E+00	3E-05	2E-05	0.00012	7.9E-05	3.8E-06	3.6E-05	0.01	0.00841
residential	3E-05	2E-05	8E-03	5E-03	7E-04	2E-03	2E-04	0E+00	1E-04	6E-05	0.00014	9.5E-05	4.6E-06	4.3E-05	0.03	0.02608
residential	3E-05	2E-05	9E-03	6E-03	7E-04	3E-03	2E-04	0E+00	1E-04	7E-05	0.00016	0.0001	5E-06	4.7E-05	0.03	0.02773
recreational	3E-05	2E-05	1E-02	6E-03	8E-04	3E-03	2E-04	0E+00	1E-04	7E-05	0.00017	0.00011	5.5E-06	5.2E-05	0.04	0.02948
recreational	3E-05	2E-05	1E-02	7E-03	9E-04	3E-03	2E-04	0E+00	1E-04	8E-05	0.00019	0.00013	6.1E-06	5.7E-05	0.04	0.03123
recreational	4E-05	2E-05	1E-02	8E-03	1E-03	4E-03	2E-04	0E+00	1E-04	9E-05	0.00021	0.00014	6.7E-06	6.3E-05	0.04	0.03298
recreational	4E-05	2E-05	1E-02	9E-03	1E-03	4E-03	2E-04	0E+00	1E-04	9E-05	0.00023	0.00015	7.4E-06	6.9E-05	0.04	0.0347
recreational	4E-05	2E-05	2E-02	1E-02	1E-03	5E-03	3E-04	0E+00	2E-04	1E-04	0.00026	0.00017	8.3E-06	7.7E-05	0.05	0.03694
residential	1E-05	6E-06	3E-03	2E-03	3E-04	1E-03	2E-04	0E+00	1E-04	6E-05	0.0019	0.00127	6.1E-05	0.00057	0.02	0.01675
residential	1E-05	6E-06	3E-03	2E-03	3E-04	9E-04	2E-04	0E+00	1E-04	6E-05	0.00197	0.00131	6.4E-05	0.00059	0.02	0.01625
residential	1E-05	6E-06	3E-03	2E-03	3E-04	9E-04	2E-04	0E+00	9E-05	6E-05	0.00264	0.00176	8.5E-05	0.0008	0.02	0.01624
residential	9E-06	5E-06	2E-03	1E-03	2E-04	6E-04	1E-04	0E+00	7E-05	4E-05	0.00028	0.00019	9.2E-06	8.6E-05	0.01	0.01114
residential	8E-06	4E-06	2E-03	1E-03	2E-04	6E-04	9E-05	0E+00	6E-05	4E-05	0.00025	0.00017	8E-06	7.5E-05	0.01	0.01093
residential	8E-06	4E-06	2E-03	1E-03	2E-04	6E-04	9E-05	0E+00	5E-05	3E-05	0.00022	0.00015	7.1E-06	6.6E-05	0.01	0.0106
residential	7E-06	4E-06	2E-03	1E-03	1E-04	5E-04	7E-05	0E+00	4E-05	3E-05	0.00015	9.9E-05	4.8E-06	4.5E-05	0.01	0.0093
residential	7E-06	4E-06	2E-03	1E-03	1E-04	5E-04	7E-05	0E+00	5E-05	3E-05	0.00014	9.2E-05	4.5E-06	4.2E-05	0.01	0.00895
residential	7E-06	4E-06	2E-03	1E-03	1E-04	4E-04	7E-05	0E+00	4E-05	3E-05	0.00013	8.6E-05	4.2E-06	3.9E-05	0.01	0.00867
residential	7E-06	4E-06	1E-03	9E-04	1E-04	4E-04	7E-05	0E+00	4E-05	3E-05	0.00012	8E-05	3.9E-06	3.6E-05	0.01	0.00844
residential	4E-05	2E-05	6E-03	4E-03	5E-04	2E-03	1E-04	0E+00	9E-05	6E-05	0.00012	7.7E-05	3.7E-06	3.5E-05	0.03	0.02272
residential	4E-05	2E-05	7E-03	4E-03	6E-04	2E-03	2E-04	0E+00	1E-04	6E-05	0.00013	8.4E-05	4.1E-06	3.8E-05	0.03	0.02435
residential	4E-05	2E-05	8E-03	5E-03	7E-04	2E-03	2E-04	0E+00	1E-04	6E-05	0.00014	9.2E-05	4.4E-06	4.1E-05	0.03	0.02639
residential	4E-05	2E-05	9E-03	6E-03	8E-04	3E-03	2E-04	0E+00	1E-04	7E-05	0.00015	0.0001	4.9E-06	4.5E-05	0.03	0.0281
residential	4E-05	2E-05	1E-02	6E-03	9E-04	3E-03	2E-04	0E+00	1E-04	7E-05	0.00017	0.00011	5.4E-06	5E-05	0.04	0.02985
recreational	4E-05	2E-05	1E-02	7E-03	1E-03	3E-03	2E-04	0E+00	1E-04	8E-05	0.00018	0.00012	5.9E-06	5.5E-05	0.04	0.03169
recreational	4E-05	2E-05	1E-02	8E-03	1E-03	4E-03	2E-04	0E+00	1E-04	9E-05	0.0002	0.00014	6.6E-06	6.2E-05	0.04	0.03357
recreational	4E-05	2E-05	2E-02	1E-02	1E-03	4E-03	3E-04	0E+00	2E-04	1E-04	0.00023	0.00015	7.4E-06	6.9E-05	0.04	0.03539
recreational	4E-05	2E-05	2E-02	1E-02	1E-03	5E-03	3E-04	0E+00	2E-04	1E-04	0.00025	0.00017	8.2E-06	7.7E-05	0.05	0.03743
residential	1E-05	7E-06	4E-03	3E-03	4E-04	1E-03	2E-04	0E+00	1E-04	8E-05	0.00176	0.00117	5.7E-05	0.00053	0.02	0.01861
residential	1E-05	7E-06	4E-03	3E-03	3E-04	1E-03	2E-04	0E+00	1E-04	8E-05	0.0014	0.00093	4.5E-05	0.00042	0.02	0.01771
residential	1E-05	6E-06	4E-03	2E-03	3E-04	1E-03	2E-04	0E+00	1E-04	7E-05	0.00128	0.00085	4.1E-05	0.00039	0.02	0.01704
residential	1E-05	6E-06	4E-03	2E-03	3E-04	1E-03	2E-04	0E+00	1E-04	7E-05	0.00145	0.00096	4.7E-05	0.00044	0.02	0.01655
residential	1E-05	6E-06	3E-03	2E-03	3E-04	1E-03	2E-04	0E+00	1E-04	7E-05	0.00314	0.0021	0.0001	0.00095	0.02	0.01704
residential	1E-05	5E-06	3E-03	2E-03	2E-04	7E-04	1E-04	0E+00	8E-05	5E-05	0.00053	0.00036	1.7E-05	0.00016	0.02	0.01265
residential	1E-05	5E-06	2E-03	2E-03	2E-04	7E-04	1E-04	0E+00	8E-05	5E-05	0.00041	0.00027	1.3E-05	0.00012	0.01	0.01214
residential	1E-05	5E-06	2E-03	1E-03	2E-04	7E-04	1E-04	0E+00	7E-05	5E-05	0.00033	0.00022	1.1E-05	0.0001	0.01	0.01168
residential	9E-06	5E-06	2E-03	1E-03	2E-04	6E-04	1E-04	0E+00	7E-05	4E-05	0.00028	0.00019	9.1E-06	8.5E-05	0.01	0.01134
residential	9E-06	5E-06	2E-03	1E-03	2E-04	6E-04	1E-04	0E+00	7E-05	4E-05	0.00025	0.00016	7.9E-06	7.4E-05	0.01	0.01094
residential	8E-06	4E-06	2E-03	1E-03	1E-04	5E-04	8E-05	0E+00	5E-05	3E-05	0.00015	9.8E-05	4.7E-06	4.4E-05	0.01	0.00933
residential	8E-06	4E-06	2E-03	1E-03	1E-04	5E-04	8E-05	0E+00	5E-05	3E-05	0.00014	9.1E-05	4.4E-06	4.1E-05	0.01	0.00899
residential	8E-06	4E-06	2E-03	1E-03	1E-04	4E-04	8E-05	0E+00	5E-05	3E-05	0.00013	8.5E-05	4.1E-06	3.8E-05	0.01	0.00868
residential	7E-06	4E-06	1E-03	9E-04	1E-04	4E-04	6E-05	0E+00	4E-05	2E-05	0.00012	7.8E-05	3.8E-06	3.5E-05	0.01	0.00855

TAMT_HRA_Existing
DPM_annl

AERMOD Output — Source Group in AERMOD

	X	Y	1 B10_1_AUX	3 B10_2_AUX	5 B10_3_AUX	7 B10_4_AUX	9 B10_5_AUX	11 B10_6_AUX	13 B10_7_AUX	15 B10_8_AUX	17 CHE_1	18 LOC_SWTCH EMP	19 LOC_SWTCH LOA	20 OGV_PATH _BLR	21 OGV_PATH _DPM	22 TR_28TH	23 TR_BAYMA R	24 TR_BOSTON	25 TR_CROSBY	26 TR_HARBOR CHA	27 TR_HARBOR SAM	28 TUG_PATH_ DPM
residential	483631	3617425	2.8E-01	3.2E-01	2.9E-01	2.6E-01	2.2E-01	1.9E-01	1.8E-01	1.7E-01	3.3E+05	3.6E-01	3.3E-01	2.2E-01	2.2E-01	1.3E-01	1.3E-02	1.2E-01	4.0E-01	6.5E-01	1.9E-01	3.1E-01
residential	483731	3617425	2.9E-01	3.3E-01	3.0E-01	2.7E-01	2.4E-01	2.0E-01	1.9E-01	1.8E-01	3.6E+05	3.9E-01	3.6E-01	2.3E-01	2.3E-01	1.3E-01	1.3E-02	1.3E-01	4.4E-01	7.1E-01	2.0E-01	3.2E-01
residential	483831	3617425	3.1E-01	3.5E-01	3.2E-01	2.9E-01	2.5E-01	2.1E-01	2.0E-01	1.9E-01	4.1E+05	4.3E-01	3.9E-01	2.3E-01	2.3E-01	1.4E-01	1.3E-02	1.3E-01	4.8E-01	7.8E-01	2.1E-01	3.3E-01
residential	483931	3617425	3.3E-01	3.7E-01	3.4E-01	3.1E-01	2.7E-01	2.3E-01	2.2E-01	2.1E-01	4.6E+05	4.6E-01	4.2E-01	2.4E-01	2.4E-01	1.4E-01	1.4E-02	1.4E-01	5.3E-01	8.5E-01	2.3E-01	3.4E-01
residential	484031	3617425	3.5E-01	4.0E-01	3.7E-01	3.4E-01	3.0E-01	2.5E-01	2.4E-01	2.3E-01	5.2E+05	4.8E-01	4.4E-01	2.5E-01	2.5E-01	1.5E-01	1.4E-02	1.5E-01	5.8E-01	9.3E-01	2.4E-01	3.4E-01
residential	484131	3617425	3.7E-01	4.1E-01	3.9E-01	3.6E-01	3.2E-01	2.7E-01	2.6E-01	2.4E-01	5.9E+05	5.2E-01	4.8E-01	2.5E-01	2.5E-01	1.6E-01	1.4E-02	1.5E-01	6.5E-01	1.0E+00	2.6E-01	3.5E-01
residential	484231	3617425	3.9E-01	4.2E-01	4.0E-01	3.8E-01	3.4E-01	2.9E-01	2.7E-01	2.6E-01	6.8E+05	5.7E-01	5.3E-01	2.6E-01	2.6E-01	1.7E-01	1.4E-02	1.6E-01	7.3E-01	1.1E+00	2.8E-01	3.6E-01
recreational	484331	3617425	4.1E-01	4.3E-01	4.1E-01	4.0E-01	3.6E-01	3.0E-01	2.9E-01	2.8E-01	7.8E+05	6.2E-01	5.7E-01	2.6E-01	2.6E-01	1.7E-01	1.4E-02	1.7E-01	8.2E-01	1.3E+00	3.0E-01	3.7E-01
recreational	484431	3617425	4.3E-01	4.4E-01	4.2E-01	4.1E-01	3.7E-01	3.2E-01	3.1E-01	3.0E-01	9.1E+05	6.9E-01	6.4E-01	2.7E-01	2.7E-01	1.8E-01	1.4E-02	1.8E-01	9.4E-01	1.4E+00	3.3E-01	3.8E-01
residential	484531	3617425	4.4E-01	4.4E-01	4.2E-01	4.1E-01	3.8E-01	3.4E-01	3.3E-01	3.2E-01	1.1E+06	7.6E-01	7.1E-01	2.8E-01	2.8E-01	1.9E-01	1.5E-02	1.9E-01	1.1E+00	1.6E+00	3.6E-01	4.0E-01
[illegible]																						

	X	Y	Refrigerated ContainersExisting g/s 1.4E-02, 1 B10_1_AUX	Refrigerated ContainersExisting 1.4E-02, 3 B10_2_AUX	Refrigerated ContainersExisting 1.4E-02, 5 B10_3_AUX	Refrigerated ContainersExisting 1.4E-02, 7 B10_4_AUX	Multi-Purpose General CargoExisting 1.6E-03, 9 B10_5_AUX	Multi-Purpose General CargoExisting 1.6E-03, 11 B10_6_AUX	Dry BulkExisting 1.8E-03, 13 B10_7_AUX	Dry BulkExisting 1.8E-03, 15 B10_8_AUX	AllExisting 1.5E-08, 17 CHE_1	AllExisting 1.8E-04, 18 LOC_SWTCHEMP	AllExisting 1.8E-04, 19 LOC_SWTCHLOA	AllExisting 7.6E-03, 21 OGV_PATH_DPM	TR_28THExisting 4.4E-06, 22 TR_28TH	TR_BAYMARExisting 7.1E-06, 23 TR_BAYMAR	TR_BOSTON Existing 1.9E-05, 24 TR_BOSTON	TR_CROSBY Existing 4.0E-05, 25 TR_CROSBY	TR_HARBOR CHAExisting 8.9E-05, 26 TR_HARBOR CHA	TR_HARBOR SAMExisting 8.9E-05, 27 TR_HARBOR SAM	AllExisting 4.1E-04, 28 TUG_PATH_DPM	All 100%	Refrigerated ContainersExisting 89%	Multi-Purpose General CargoExisting 5%	Dry BulkExisting 6%	All 100%	Refrigerated ContainersExisting 73%	Multi-Purpose General CargoExisting 12%	Dry BulkExisting 15%	All 100%	Refrigerated ContainersExisting 57%
residential	483631	3617425	3.9E-03	4.5E-03	4.0E-03	3.7E-03	3.5E-04	2.9E-04	3.2E-04	3.0E-04	4.9E-03	6.4E-05	5.9E-05	1.7E-03	5.6E-07	9.3E-08	2.3E-06	1.6E-05	5.8E-05	1.7E-05	1.3E-04	2E-02	2E-02	9E-04	1E-03	2E-03	1E-03	2E-04	2E-04	1E-04	7E-05
residential	483731	3617425	4.1E-03	4.7E-03	4.2E-03	3.9E-03	3.6E-04	3.1E-04	3.3E-04	3.2E-04	5.5E-03	7.0E-05	6.4E-05	1.7E-03	5.8E-07	9.2E-08	2.4E-06	1.7E-05	6.4E-05	1.8E-05	1.3E-04	2E-02	2E-02	9E-04	1E-03	2E-03	1E-03	2E-04	2E-04	1E-04	8E-05
residential	483831	3617425	4.4E-03	5.0E-03	4.5E-03	4.1E-03	3.9E-04	3.3E-04	3.6E-04	3.4E-04	6.2E-03	7.6E-05	6.9E-05	1.8E-03	6.1E-07	9.5E-08	2.5E-06	1.9E-05	6.9E-05	1.9E-05	1.4E-04	2E-02	2E-02	1E-03	1E-03	2E-03	1E-03	2E-04	3E-04	1E-04	8E-05
residential	483931	3617425	4.6E-03	5.2E-03	4.8E-03	4.4E-03	4.2E-04	3.5E-04	3.9E-04	3.7E-04	6.9E-03	8.1E-05	7.5E-05	1.8E-03	6.4E-07	9.8E-08	2.6E-06	2.1E-05	7.6E-05	2.0E-05	1.4E-04	2E-02	2E-02	1E-03	1E-03	2E-03	1E-03	2E-04	3E-04	1E-04	8E-05
residential	484031	3617425	5.0E-03	5.6E-03	5.2E-03	4.8E-03	4.6E-04	3.9E-04	4.2E-04	4.0E-04	7.9E-03	8.5E-05	7.9E-05	1.9E-03	6.6E-07	9.9E-08	2.7E-06	2.3E-05	8.3E-05	2.2E-05	1.4E-04	2E-02	2E-02	1E-03	1E-03	2E-03	1E-03	2E-04	3E-04	1E-04	8E-05
residential	484131	3617425	5.3E-03	5.8E-03	5.5E-03	5.1E-03	4.9E-04	4.1E-04	4.5E-04	4.3E-04	9.0E-03	9.3E-05	8.6E-05	1.9E-03	7.0E-07	1.0E-07	2.8E-06	2.6E-05	9.2E-05	2.3E-05	1.4E-04	2E-02	2E-02	1E-03	1E-03	2E-03	1E-03	2E-04	3E-04	1E-04	8E-05
residential	484231	3617425	5.5E-03	6.0E-03	5.7E-03	5.4E-03	5.2E-04	4.4E-04	4.8E-04	4.6E-04	1.0E-02	1.0E-04	9.4E-05	1.9E-03	7.3E-07	1.0E-07	3.0E-06	2.9E-05	1.0E-04	2.5E-05	1.5E-04	2E-02	2E-02	1E-03	1E-03	2E-03	1E-03	2E-04	3E-04	1E-04	8E-05
recreational	484331	3617425	5.8E-03	6.1E-03	5.9E-03	5.6E-03	5.5E-04	4.7E-04	5.2E-04	4.9E-04	1.2E-02	1.1E-04	1.0E-04	2.0E-03	7.7E-07	1.0E-07	3.1E-06	3.3E-05	1.1E-04	2.7E-05	1.5E-04	3E-02	2E-02	1E-03	1E-03	2E-03	1E-03	2E-04	3E-04	2E-04	9E-05
recreational	484431	3617425	6.0E-03	6.2E-03	6.0E-03	5.7E-03	5.8E-04	5.0E-04	5.5E-04	5.3E-04	1.4E-02	1.2E-04	1.1E-04	2.0E-03	8.1E-07	1.0E-07	3.3E-06	3.7E-05	1.3E-04	2.9E-05	1.6E-04	3E-02	2E-02	1E-03	1E-03	2E-03	1E-03	2E-04	3E-04	2E-04	9E-05
residential	484531	3617425	6.2E-03	6.2E-03	6.0E-03	5.8E-03	6.0E-04	5.2E-04	5.8E-04	5.6E-04	1.6E-02	1.4E-04	1.3E-04	2.1E-03	8.5E-07	1.0E-07	3.5E-06	4.3E-05	1.4E-04	3.2E-05	1.6E-04	3E-02	2E-02	1E-03	1E-03	2E-03	2E-03	3E-04	3E-04	2E-04	9E-05
[illegible]																															

TAMT_HRA_Existing
DPM_annl

AERMOD Output	Multi-Purpose General CargoExisting 28%	Dry BulkExisting 15%	All 100%	Refrigerated ContainersExisting 63%	Multi-Purpose General CargoExisting 8%	Dry BulkExisting 29%	All 100%	Refrigerated ContainersExisting 0%	Multi-Purpose General CargoExisting 61%	Dry BulkExisting 39%	All 100%	Refrigerated Containers 67%	Multi-Purpose General Cargo 3%	Dry Bulk 30%	All
residential	4E-05	2E-05	5E-03	3E-03	4E-04	1E-03	1E-04	0E+00	8E-05	5E-05	9.4E-05	6.3E-05	3E-06	2.8E-05	0.02
residential	4E-05	2E-05	5E-03	3E-03	5E-04	2E-03	1E-04	0E+00	8E-05	5E-05	0.0001	6.8E-05	3.3E-06	3.1E-05	0.03
residential	4E-05	2E-05	6E-03	4E-03	5E-04	2E-03	1E-04	0E+00	9E-05	6E-05	0.00011	7.4E-05	3.6E-06	3.3E-05	0.03
residential	4E-05	2E-05	7E-03	4E-03	6E-04	2E-03	2E-04	0E+00	1E-04	6E-05	0.00012	8E-05	3.9E-06	3.6E-05	0.03
residential	4E-05	2E-05	8E-03	5E-03	7E-04	2E-03	2E-04	0E+00	1E-04	6E-05	0.00013	8.8E-05	4.2E-06	4E-05	0.03
residential	4E-05	2E-05	9E-03	6E-03	8E-04	3E-03	2E-04	0E+00	1E-04	7E-05	0.00014	9.7E-05	4.7E-06	4.4E-05	0.03
residential	4E-05	2E-05	1E-02	6E-03	9E-04	3E-03	2E-04	0E+00	1E-04	8E-05	0.00016	0.00011	5.2E-06	4.8E-05	0.04
recreational	4E-05	2E-05	1E-02	7E-03	1E-03	3E-03	2E-04	0E+00	1E-04	8E-05	0.00018	0.00012	5.7E-06	5.4E-05	0.04
recreational	4E-05	2E-05	1E-02	9E-03	1E-03	4E-03	2E-04	0E+00	1E-04	9E-05	0.0002	0.00013	6.4E-06	6E-05	0.04
residential	5E-05	2E-05	2E-02	1E-02	1E-03	5E-03	3E-04	0E+00	2E-04	1E-04	0.00022	0.00015	7.2E-06	6.7E-05	0.05
residential	1E-05	7E-06	5E-03	3E-03	4E-04	1E-03	3E-04	0E+00	2E-04	1E-04	0.00158	0.00105	5.1E-05	0.00048	0.02
residential	1E-05	7E-06	5E-03	3E-03	4E-04	1E-03	2E-04	0E+00	1E-04	9E-05	0.00121	0.00081	3.9E-05	0.00037	0.02

ug/m3	3rd tri	0<2	2<9	2<16	16<30	3rd tri	0<2	2<9	2<16	16<30	Summed Risk	Cases Per Million	Chronic HI
0.02008	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
0.0212	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
0.02266	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
0.02436	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
0.02645	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
0.02819	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
0.02994	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
0.03182	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
0.03374	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
0.03558	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
0.02028	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
0.01922	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

TAMT_HRA_Existing
DPM_annl

AERMOD Output

Receptor	X	Y	B10_1_AUX	B10_2_AUX	B10_3_AUX	B10_4_AUX	B10_5_AUX	B10_6_AUX	B10_7_AUX	B10_8_AUX	CHE_1	LOC_SWTCH EMP	LOC_SWTCH LOA	OGV_PATH BLR	OGV_PATH DPM	TR_28TH	TR_BAYMAR	TR_BOSTON	TR_CROSBY	TR_HARBOR CHA	TR_HARBOR SAM	TUG_PATH_DPM
Source Group in AERMOD			1	3	5	7	9	11	13	15	17	18	19	20	21	22	23	24	25	26	27	28
residential	487131	3617825	2.6E-01	2.3E-01	2.5E-01	2.6E-01	2.6E-01	2.6E-01	2.8E-01	3.1E-01	3.2E+05	7.7E-01	8.5E-01	9.4E-02	9.4E-02	1.1E+00	2.9E-02	6.9E-01	1.6E+00	1.4E+00	3.4E+00	1.2E-01
residential	487231	3617825	2.5E-01	2.2E-01	2.4E-01	2.4E-01	2.5E-01	2.4E-01	2.7E-01	2.9E-01	2.9E+05	7.0E-01	7.6E-01	9.1E-02	9.1E-02	1.5E+00	3.0E-02	9.5E-01	1.4E+00	1.3E+00	3.0E+00	1.2E-01
residential	487331	3617825	2.4E-01	2.1E-01	2.3E-01	2.3E-01	2.4E-01	2.3E-01	2.5E-01	2.8E-01	2.7E+05	6.4E-01	6.9E-01	8.8E-02	8.8E-02	2.4E+00	3.1E-02	1.4E+00	1.3E+00	1.2E+00	2.8E+00	1.1E-01
residential	487431	3617825	2.3E-01	2.0E-01	2.2E-01	2.2E-01	2.2E-01	2.2E-01	2.4E-01	2.6E-01	2.5E+05	5.9E-01	6.3E-01	8.5E-02	8.5E-02	4.4E+00	3.3E-02	2.2E+00	1.1E+00	1.0E+00	2.5E+00	1.1E-01
school	487531	3617825	2.2E-01	1.9E-01	2.1E-01	2.1E-01	2.1E-01	2.1E-01	2.3E-01	2.5E-01	2.3E+05	5.4E-01	5.8E-01	8.3E-02	8.3E-02	7.4E+00	3.4E-02	3.8E+00	9.9E-01	9.4E-01	2.3E+00	1.1E-01
school	487631	3617825	2.1E-01	1.8E-01	2.0E-01	2.0E-01	2.0E-01	2.0E-01	2.2E-01	2.3E-01	2.1E+05	5.0E-01	5.3E-01	8.1E-02	8.1E-02	8.1E+00	3.6E-02	5.7E+00	9.0E-01	8.6E-01	2.0E+00	1.0E-01
school	487731	3617825	2.0E-01	1.8E-01	1.9E-01	1.9E-01	1.9E-01	1.9E-01	2.1E-01	2.2E-01	2.0E+05	4.7E-01	4.9E-01	7.8E-02	7.8E-02	7.4E+00	3.8E-02	6.7E+00	8.2E-01	7.9E-01	1.8E+00	1.0E-01
school	487831	3617825	1.9E-01	1.7E-01	1.8E-01	1.8E-01	1.9E-01	1.8E-01	2.0E-01	2.1E-01	1.9E+05	4.4E-01	4.6E-01	7.6E-02	7.6E-02	6.1E+00	3.9E-02	6.8E+00	7.5E-01	7.3E-01	1.7E+00	9.8E-02
residential	487931	3617825	1.8E-01	1.6E-01	1.7E-01	1.8E-01	1.8E-01	1.8E-01	1.9E-01	2.0E-01	1.8E+05	4.1E-01	4.3E-01	7.5E-02	7.5E-02	4.9E+00	4.1E-02	6.3E+00	7.0E-01	6.8E-01	1.5E+00	9.5E-02
residential	488031	3617825	1.8E-01	1.6E-01	1.7E-01	1.7E-01	1.7E-01	1.7E-01	1.8E-01	2.0E-01	1.7E+05	3.8E-01	4.0E-01	7.4E-02	7.4E-02	3.9E+00	4.4E-02	5.3E+00	6.6E-01	6.4E-01	1.3E+00	9.1E-02
school	488131	3617825	1.8E-01	1.6E-01	1.7E-01	1.7E-01	1.7E-01	1.7E-01	1.8E-01	2.0E-01	1.6E+05	3.4E-01	3.6E-01	7.3E-02	7.3E-02	3.1E+00	4.7E-02	4.2E+00	6.2E-01	5.9E-01	1.2E+00	8.5E-02
school	488231	3617825	1.7E-01	1.5E-01	1.6E-01	1.7E-01	1.7E-01	1.7E-01	1.8E-01	1.9E-01	1.5E+05	3.2E-01	3.3E-01	7.1E-02	7.1E-02	2.4E+00	4.9E-02	3.3E+00	5.8E-01	5.5E-01	1.0E+00	8.1E-02
residential	488331	3617825	1.7E-01	1.5E-01	1.6E-01	1.6E-01	1.6E-01	1.6E-01	1.7E-01	1.8E-01	1.4E+05	2.9E-01	3.0E-01	7.0E-02	7.0E-02	2.0E+00	5.1E-02	2.5E+00	5.4E-01	5.1E-01	9.1E-01	7.7E-02
residential	488431	3617825	1.6E-01	1.5E-01	1.6E-01	1.6E-01	1.6E-01	1.6E-01	1.7E-01	1.8E-01	1.3E+05	2.3E-01	2.4E-01	6.8E-02	6.8E-02	1.6E+00	5.3E-02	2.0E+00	5.1E-01	4.6E-01	8.0E-01	6.8E-02
residential	488531	3617825	1.6E-01	1.4E-01	1.5E-01	1.5E-01	1.6E-01	1.6E-01	1.7E-01	1.8E-01	1.2E+05	2.2E-01	2.3E-01	6.7E-02	6.7E-02	1.4E+00	5.5E-02	1.6E+00	4.7E-01	4.4E-01	7.1E-01	6.7E-02
residential	488631	3617825	1.5E-01	1.4E-01	1.5E-01	1.5E-01	1.5E-01	1.5E-01	1.6E-01	1.7E-01	1.2E+05	2.0E-01	2.2E-01	6.5E-02	6.5E-02	1.2E+00	5.8E-02	1.4E+00	4.5E-01	4.1E-01	6.3E-01	6.1E-02
residential	488731	3617825	1.4E-01	1.3E-01	1.3E-01	1.4E-01	1.4E-01	1.4E-01	1.5E-01	1.6E-01	1.2E+05	2.4E-01	2.5E-01	6.4E-02	6.4E-02	1.1E+00	6.1E-02	1.2E+00	4.2E-01	4.1E-01	5.7E-01	7.1E-02
residential	488831	3617825	1.4E-01	1.2E-01	1.3E-01	1.3E-01	1.3E-01	1.3E-01	1.4E-01	1.5E-01	1.1E+05	2.4E-01	2.5E-01	6.2E-02	6.2E-02	9.4E-01	6.6E-02	1.0E+00	3.9E-01	3.9E-01	5.2E-01	7.3E-02
residential	488931	3617825	1.3E-01	1.2E-01	1.2E-01	1.2E-01	1.3E-01	1.3E-01	1.3E-01	1.4E-01	1.0E+05	2.3E-01	2.4E-01	6.0E-02	6.0E-02	8.4E-01	7.1E-02	9.0E-01	3.7E-01	3.7E-01	4.7E-01	7.2E-02
residential	489031	3617825	1.3E-01	1.1E-01	1.2E-01	1.2E-01	1.2E-01	1.2E-01	1.3E-01	1.3E-01	1.0E+05	2.2E-01	2.3E-01	5.9E-02	5.9E-02	7.6E-01	7.6E-02	7.9E-01	3.5E-01	3.5E-01	4.4E-01	7.0E-02
residential	489131	3617825	1.2E-01	1.1E-01	1.2E-01	1.2E-01	1.2E-01	1.2E-01	1.2E-01	1.3E-01	9.6E+04	2.1E-01	2.2E-01	5.8E-02	5.8E-02	6.9E-01	8.2E-02	7.4E-01	3.3E-01	3.3E-01	4.1E-01	6.9E-02
residential	482831	3617925	1.6E-01	1.8E-01	1.5E-01	1.3E-01	1.1E-01	9.7E-02	9.5E-02	9.2E-02	1.1E+05	1.8E-01	1.6E-01	2.5E-01	2.5E-01	6.9E-02	1.1E-02	6.8E-02	1.5E-01	2.6E-01	8.7E-02	3.1E-01
residential	482931	3617925	1.7E-01	1.9E-01	1.6E-01	1.4E-01	1.2E-01	1.0E-01	9.8E-02	9.6E-02	1.1E+05	1.9E-01	1.7E-01	2.5E-01	2.5E-01	7.1E-02	1.1E-02	7.0E-02	1.6E-01	2.8E-01	9.0E-02	3.2E-01
residential	483031	3617925	1.8E-01	2.0E-01	1.7E-01	1.5E-01	1.2E-01	1.1E-01	1.0E-01	1.0E-01	1.2E+05	2.0E-01	1.8E-01	2.6E-01	2.6E-01	7.3E-02	1.1E-02	7.2E-02	1.7E-01	3.0E-01	9.3E-02	3.3E-01
residential	483131	3617925	2.0E-01	2.1E-01	1.7E-01	1.5E-01	1.3E-01	1.1E-01	1.1E-01	1.0E-01	1.3E+05	2.2E-01	1.9E-01	2.6E-01	2.6E-01	7.5E-02	1.1E-02	7.4E-02	1.7E-01	3.2E-01	9.6E-02	3.4E-01
residential	483231	3617925	2.1E-01	2.3E-01	1.9E-01	1.6E-01	1.4E-01	1.2E-01	1.1E-01	1.1E-01	1.5E+05	2.3E-01	2.1E-01	2.7E-01	2.7E-01	7.7E-02	1.1E-02	7.6E-02	1.8E-01	3.5E-01	1.0E-01	3.5E-01
residential	483331	3617925	2.2E-01	2.4E-01	2.0E-01	1.7E-01	1.4E-01	1.2E-01	1.2E-01	1.1E-01	1.6E+05	2.5E-01	2.2E-01	2.7E-01	2.7E-01	8.0E-02	1.1E-02	7.8E-02	1.9E-01	3.8E-01	1.0E-01	3.7E-01
residential	483431	3617925	2.4E-01	2.6E-01	2.1E-01	1.8E-01	1.5E-01	1.3E-01	1.2E-01	1.2E-01	1.8E+05	2.7E-01	2.4E-01	2.8E-01	2.8E-01	8.2E-02	1.2E-02	8.0E-02	2.0E-01	4.1E-01	1.1E-01	3.8E-01
residential	483531	3617925	2.5E-01	2.8E-01	2.2E-01	1.9E-01	1.6E-01	1.3E-01	1.3E-01	1.3E-01	1.9E+05	2.9E-01	2.6E-01	2.9E-01	2.9E-01	8.5E-02	1.2E-02	8.3E-02	2.2E-01	4.4E-01	1.1E-01	4.0E-01
residential	483631	3617925	2.7E-01	2.9E-01	2.4E-01	2.0E-01	1.7E-01	1.4E-01	1.4E-01	1.3E-01	2.2E+05	3.2E-01	2.8E-01	2.9E-01	2.9E-01	8.7E-02	1.2E-02	8.5E-02	2.3E-01	4.9E-01	1.2E-01	4.2E-01
residential	483731	3617925	2.9E-01	3.1E-01	2.5E-01	2.2E-01	1.8E-01	1.5E-01	1.4E-01	1.4E-01	2.4E+05	3.4E-01	3.0E-01	3.0E-01	3.0E-01	9.0E-02	1.2E-02	8.8E-02	2.4E-01	5.3E-01	1.2E-01	4.4E-01
residential	483831	3617925	3.0E-01	3.3E-01	2.7E-01	2.3E-01	1.9E-01	1.5E-01	1.5E-01	1.5E-01	2.7E+05	3.7E-01	3.3E-01	3.1E-01	3.1E-01	9.3E-02	1.2E-02	9.1E-02	2.6E-01	5.9E-01	1.3E-01	4.6E-01
residential	483931	3617925	3.3E-01	3.4E-01	2.8E-01	2.4E-01	2.0E-01	1.6E-01	1.6E-01	1.6E-01	3.1E+05	4.1E-01	3.6E-01	3.3E-01	3.3E-01	9.6E-02	1.2E-02	9.4E-02	2.8E-01	6.6E-01	1.3E-01	4.9E-01
residential	484031	3617925	3.5E-01	3.5E-01	2.9E-01	2.6E-01	2.1E-01	1.7E-01	1.7E-01	1.6E-01	3.6E+05	4.5E-01	3.9E-01	3.4E-01	3.4E-01	1.0E-01	1.2E-02	9.8E-02	3.0E-01	7.3E-01	1.4E-01	5.2E-01
residential	484131	3617925	3.7E-01	3.6E-01	3.2E-01	2.8E-01	2.3E-01	1.9E-01	1.8E-01	1.8E-01	4.2E+05	4.9E-01	4.2E-01	3.6E-01	3.6E-01	1.0E-01	1.2E-02	1.0E-01	3.2E-01	8.3E-01	1.5E-01	5.4E-01
residential	486331	3617925	4.1E-01	3.7E-01	4.0E-01	4.0E-01	3.8E-01	3.4E-01	3.7E-01	4.1E-01	9.0E+05	2.2E+00	2.8E+00	1.3E-01	1.3E-01	2.9E-01	2.1E-02	2.7E-01	1.3E+01	9.9E+00	8.2E+00	1.8E-01
residential	486431	3617925	3.9E-01	3.4E-01	3.7E-01	3.8E-01	3.6E-01	3.3E-01	3.6E-01	4.0E-01	7.6E+05	1.9E+00	2.3E+00	1.3E-01	1.3E-01	3.1E-01	2.2E-02	2.9E-01	7.0E+00	6.2E+00	6.8E+00	1.7E-01
residential	486531	3617925	3.7E-01	3.2E-01	3.5E-01	3.5E-01	3.4E-01	3.2E-01	3.4E-01	3.8E-01	6.5E+05	1.6E+00	1.9E+00	1.2E-01	1.2E-01	3.4E-01	2.2E-02	3.1E-01	4.6E+00	4.5E+00	5.7E+00	1.6E-01
residential	486631	3617925	3.5E-01	3.0E-01	3.3E-01	3.3E-01	3.2E-01	3.0E-01	3.3E-01	3.6E-01	5.5E+05	1.4E+00	1.6E+00	1.2E-01	1.2E-01	3.7E-01	2.3E-02	3.3E-01	3.4E+00	3.4E+00	4.9E+00	1.5E-01
residential	486731	3617925	3.3E-01	2.8E-01	3.0E-01	3.1E-01	3.0E-01	2.9E-01	3.2E-01	3.5E-01	4.7E+05	1.2E+00	1.3E+00	1.1E-01	1.1E-01	4.1E-01	2.4E-02	3.2E-01	2.6E+00	2.7E+00	4.1E+00	1.5E-01
residential	486831	3617925	3.1E-01	2.7E-01	2.9E-01	2.9E-01	2.9E-01	2.7E-01	3.0E-01	3.3E-01	4.2E+05	1.1E+00	1.2E+00	1.0E-01	1.0E-01	4.7E-01	2.5E-02	3.5E-01	2.2E+00	2.3E+00	3.7E+00	1.4E-01
residential	487031	3617925	2.8E-01	2.4E-01	2.5E-01	2.6E-01	2.6E-01	2.5E-01	2.7E-01	3.0E-01	3.3E+05	8.5E-01	9.0E-01	9.7E-02	9.7E-02	6.5E-01	2.7E-02	4.7E-01	1.5E+00	1.6E+00	3.0E+00	1.3E-01
residential	487131	3617925	2.6E-01	2.3E-01	2.4E-01	2.4E-01	2.4E-01	2.4E-01	2.6E-01	2.8E-01	3.0E+05	7.6E-01	8.0E-01	9.3E-02	9.3E-02	8.6E-01	2.8E-02	6.1E-01	1.3E+00	1.4E+00	2.7E+00	1.2E-01
residential	487231	3617925	2.5E-01	2.2E-01	2.3E-01	2.3E-01	2.3E-01	2.3E-01	2.4E-01	2.7E-01	2.8E+05	6.9E-01	7.2E-01	9.0E-02	9.0E-02	1.2E+00	2.9E-02	8.4E-01	1.2E+00	1.3E+00	2.5E+00	1.2E-01
residential	487331	3617925	2.4E-01	2.1E-01	2.2E-01	2.2E-01	2.2E-01	2.2E-01	2.3E-01	2.5E-01	2.6E+05	6.3E-01	6.6E-01	8.8E-02	8.8E-02	1.8E+00	3.1E-02	1.2E+00	1.1E+00	1.1E+00	2.4E+00	1.1E-01
residential	487431	3617925	2.3E-01	2.0E-01	2.1E-01	2.1E-01	2.1E-01	2.1E-01	2.2E-01	2.4E-01	2.4E+05	5.8E-01	6.0E-01	8.5E-02	8.5E-02	3.1E+00	3.2E-02	1.7E+00	9.4E-01	1.0E+00	2.2E+00	1.1E-01
school	487531	3617925	2.2E-01	1.9E-01	2.0E-01	2.0E-01	2.0E-01	2.0E-01	2.1E-01	2.3E-01	2.2E+05	5.3E-01	5.5E-01	8.3E-02	8.3E-02	4.8E+00	3.4E-02	2.8E+00	8.5E-01	9.2E-01	2.0E+00	1.1E-01
school	487631	3617925	2.1E-01	1.8E-01	1.9E-01	1.9E-01	1.9E-01	1.9E-01	2.0E-01	2.2E-01	2.0E+05	5.0E-01	5.1E-01	8.0E-02	8.0E-02	5.5E+00	3.5E-02	4.0E+00	7.8E-01	8.5E-01	1.8E+00	1.0E-01
school	487731	3617925	2.0E-01	1.7E-01	1.8E-01	1.8E-01	1.8E-01	1.8E-01	1.9E-01	2.1E-01	1.9E+05	4.6E-01	4.7E-01	7.8E-02	7.8E-02	5.4E+00	3.7E-02	4.7E+00	7.1E-01	7.8E-01	1.6E+00	1.0E-01
school	487831	3617925	1.9E-01	1.7E-01	1.7E-01	1.8E-01	1.8E-01	1.7E-01	1.8E-01	2.0E-01	1.8E+05	4.3E-01	4.4E-01	7.6E-02	7.6E-02	5.0E+00	3.9E-02	5.0E+00	6.6E-01	7.2E-01	1.5E+00	9.8E-02
residential	487931	3617925	1.8E-01	1.6E-01	1.7E-01	1.7E-01	1.7E-01	1.7E-01	1.8E-01	1.9E-01	1.7E+05	4.0E-01	4.1E-01	7.6E-02	7.6E-02	4.3E+00	4.1E-02	5.0E+00	6.3E-01	6.8E-01	1.4E+00	9.4E-02
residential	488031	3617925	1.8E-01	1.6E-01	1.7E-01	1.7E-01	1.7E-01	1.7E-01	1.8E-01	1.9E-01	1.6E+05	3.7E-01	3.8E-01	7.4E-02	7.4E-02	3.6E+00	4.3E-02	4.5E+00	6.0E-01	6.3E-01	1.3E+00	9.0E-02
school	488131	3617925	1.8E-01	1.6E-01	1.6E-01	1.7E-01	1.7E-01	1.7E-01	1.8E-01	1.9E-01	1.6E+05	3.4E-01	3.5E-01	7.3E-02	7.3E-02	2.9E+00	4.6E-02	3.8E+00	5.7E-01	5.8E-01	1.1E+00	8.4E-02
school	488231	3617925	1.7E-01	1.5E-01	1.6E-01	1.6E-01	1.6E-01	1.6E-01	1.7E-01	1.8E-01	1.5E+05	3.2E-01	3.3E-01	7.1E-02	7.1E-02	2.4E+00	4.7E-02	3.2E+00	5.2E-01	5.5E-01	1.0E+00	8.4E-02
residential	488331	3617925	1.6E-01	1.5E-01	1.5E-01	1.5E-01	1.5E-01	1.5E-01	1.6E-01	1.7E-01	1.4E+05	3.0E-01	3.1E-01	7.0E-02	7.0E-02	2.0E+00	5.0E-02	2.6E+00	5.0E-01	5.1E-01	8.8E-01	8.0E-02
residential	488431	3617925	1.6E-01	1.4E-01	1.5E-01	1.5E-01	1.5E-01	1.5E-01	1.6E-01	1.7E-01	1.3E+05	2.4E-01	2.6E-01	6.8E-02	6.8E-02	1.6E+00	5.1E-02	2.0E+00	4.7E-01	4.6E-01	7.9E-01	7.0E-02
residential	488531	3617925	1.6E-01	1.4E-01	1.5E-01	1.5E-01	1.5E-01	1.5E-01	1.6E-01	1.7E-01	1.2E+05	2.2E-01	2.3E-01	6.7E-02	6.7E-02	1.4E+00	5.4E-02	1.7E+00	4.4E-01	4.3E-01	7.0E-01	6.8E-02
residential	488631	3617925	1.5E-01	1.4E-01	1.4E-01	1.4E-01	1.5E-01	1.5E-01	1.5E-01	1.6E-01	1.2E+05	2.1E-01	2.2E-01	6.5E-02	6.5E-02	1.2E+00	5.6E-02	1.4E+00	4.2E-01	4.1E-01	6.2E-01	6.2E-02
residential	488731	3617925	1.4E-01	1.3E-01	1.3E-01	1.4E-01	1.4E-01	1.4E-01	1.4E-01	1.5E-01	1.1E+05	2.2E-01	2.3E-01	6.4E-02	6.4E-02	1.0E+00	5.9E-02	1.2E+00	3.9E-01	3.9E-01	5.6E-01	6.7E-02
residential	488831	3617925	1.4E-01	1.2E-01	1.3E-01	1.3E-01	1.3E-01	1.3E-01	1.4E-01	1.5E-01	1.1E+05	2.2E-01	2.2E-01	6.2E-02	6.2E-02	9.0E-01	6.3E-02	1.0E+00	3.7E-01	3.8E-01	5.1E-01	6.7E-02
residential	488931	3617925	1.3E-01	1.2E-01	1.2E-01	1.2E-01	1.3E-01	1.3E-01	1.3E-01	1.4E-01	1.0E+05	2.1E-01	2.2E-01	6.1E-02	6.1E-02	8.0E-01	6.8E-02	8.9E-01	3.5E-01	3.6E-01	4.7E-01	6.8E-02
residential	489031	3617925	1.3E-01	1.1E-01	1.2E-01	1.2E-01	1.2E-01	1.2E-01	1.2E-01	1.3E-01	9.8E+04	2.1E-01	2.2E-01	5.9E-02	5.9E-02	7.2E-01	7.4E-02	8.0E-01	3.3E-01	3.4E-01	4.3E-01	6.9E-02
residential	489131	3617925	1.2E-01	1.1E-01	1.1E-01	1.1E-01	1.1E-01	1.1E-01	1.2E-01	1.3E-01	9.3E+04	2.1E-01	2.1E-01	5.8E-02	5.8E-02	6.6E-01	8.0E-02	7.2E-01	3.1E-01	3.3E-01	3.9E-01	6.8E-02
residential	482931	3618025	1.7E-01	1.8E-01	1.5E-01	1.3E-01	1.1E-01	9.7E-02	9.4E-02	9.2E-02	1.1E+05	1.8E-01	1.6E-01	2.6E-01	2.6E-01	6.6E-02	1.1E-02	6.5E-02	1.4E-01	2.6E-01	8.3E-02	3.3E-01
residential	483031	3618025	1.8E-01	1.9E-01	1.6E-01	1.4E-01	1.2E-01	1.0E-01	9.8E-02	9.6E-02	1.1E+05	2.0E-01	1.8E-01	2.7E-01	2.7E-01	6.8E-02	1.1E-02	6.7E-02	1.5E-01	2.8E-01	8.5E-02	3.5E-01
residential	483131	3618025	1.9E-01	2.0E-01	1.7E-01	1.4E-01	1.2E-01	1.0E-01	1.0E-01	1.0E-01	1.2E+05	2.1E-01	1.9E-01	2.7E-01	2.7E-01	7.0E-02	1.1E-02	6.9E-02	1.6E-01	3.0E-01	8.8E-02	3.6E-01
residential	483231	3618025	2.0E-01	2.2E-01	1.7E-01	1.5E-01	1.3E-01	1.1E-01	1.1E-01	1.0E-01	1.3E+05	2.2E-01	2.0E-01	2.8E-01	2.8E-01	7.2E-02	1.1E-02	7.1E-02	1.6E-01	3.2E-01	9.1E-02	3.7E-01
residential	483331	3618025	2.1E-01	2.3E-01	1.8E-01	1.6E-01	1.3E-01	1.1E-01	1.1E-01	1.1E-01	1.4E+05	2.4E-01	2.2E-01	2.9E-01	2.9E-01	7.4E-02	1.1E-02	7.3E-02	1.7E-01	3.4E-01	9.5E-02	3.9E-01
residential	483431	3618025	2.2E-01	2.4E-01	2.0E-01	1.7E-01	1.4E-01	1.2E-01	1.2E-01	1.1E-01	1.6E+05	2.6E-01	2.3E-01	2.9E-01	2.9E-01	7.6E-02	1.1E-02	7.5E-02	1.8E-01	3.7E-01	9.8E-02	4.1E-01
residential	483531	3618025	2.4E-01	2.6E-01	2.1E-01	1.8E-01	1.5E-01	1.3E-01	1.2E-01	1.2E-01	1.7E+05	2.8E-01	2.5E-01	3.0E-01	3.0E-01	7.9E-02	1.1E-02	7.7E-02	1.9E-01	4.1E-01	1.0E-01	4.3E-01
residential	483631	3618025	2.6E-01	2.8E-01	2.2E-01	1.9E-01	1.6E-01	1.3E-01	1.3E-01	1.2E-01	1.9E+05	3.0E-01	2.7E-01	3.1E-01	3.1E-01	8.1E-02	1.1E-02	7.9E-02	2.0E-01	4.4E-01	1.1E-01	4.5E-01
residential	483731	3618025	2.7E-01	2.9E-01	2.3E-01	2.0E-01	1.6E-01	1.4E-01	1.3E-01	1.3E-01	2.1E+05	3.3E-01	2.9E-01	3.2E-01	3.2E-01	8.3E-02	1.2E-02	8.2E-02	2.1E-01	4.9E-01	1.1E-01	4.8E-01
residential	483831	3618025	2.9E-01	3.1E-01	2.5E-01	2.1E-01	1.7E-01	1.4E-01	1.4E-01	1.4E-01	2.4E+05	3.6E-01	3.2E-01	3.4E-01	3.4E-01	8.6E-02	1.2E-02	8.4E-02	2.3E-01	5.4E-01	1.1E-01	5.0E-01
residential	483931	3618025	3.1E-01	3.2E-01	2.6E-01	2.3E-01	1.9E-01	1.5E-01	1.5E-01	1.5E-01	2.7E+05	3.9E-01	3.4E-01	3.5E-01	3.5E-01	8.9E-02	1.2E-02	8.7E-02	2.4E-01	5.9E-01	1.2E-01	5.3E-01
residential	486231	3618025	4.6E-01	3.8E-01	4.0E-01	3.9E-01	3.5E-01	3.3E-01	3.6E-01	4.0E-01	1.0E+06	2.8E+00	3.2E+00	1.4E-01	1.4E-01	2.3E-01	2.0E-02	2.2E-01	1.6E+01	1.6E+01	2.5E+00	1.9E-01
residential	486331	3618025	4.3E-01	3.6E-01	3.7E-01	3.6E-01	3.4E-01	3.2E-01	3.4E-01	3.7E-01	8.5E+05	2.3E+00	2.6E+00	1.3E-01	1.3E-01	2.4E-01	2.1E-02	2.3E-01	1.2E+01	9.4E+00	4.0E+00	1.8E-01
residential	486431	3618025	4.0E-01	3.3E-01	3.5E-01	3.4E-01	3.2E-01	3.0E-01	3.3E-01	3.5E-01	7.1E+05	1.9E+00	2.1E+00	1.3E-01	1.3E-01	2.6E-01	2.1E-02	2.4E-01	7.4E+00	5.9E+00	4.3E+00	1.7E-01
residential	486531	3618025	3.7E-01	3.1E-01	3.3E-01	3.2E-01	3.0E-01	2.9E-01	3.1E-01	3.4E-01	6.1E+05	1.6E+00	1.7E+00	1.2E-01	1.2E-01	2.8E-01	2.2E-02	2.6E-01	4.5E+00	4.3E+00	4.1E+00	1.6E-01
residential	486631	3618025	3.5E-01	2.9E-01	3.1E-01	3.0E-01	2.9E-01	2.8E-01	3.0E-01	3.3E-01	5.2E+05	1.4E+00	1.5E+00	1.1E-01	1.1E-01	3.1E-01	2.3E-02	2.8E-01	3.0E+00	3.3E+00	3.7E+00	1.5E-01
residential	486931	3618025	2.9E-01	2.5E-01	2.6E-01	2.5E-01	2.5E-01	2.4E-01	2.6E-01	2.9E-01	3.4E+05	9.1E-01	9.3E-01	1.0E-01	1.0E-01	4.5E-01	2.6E-02	3.4E-01	1.5E+00	1.8E+00	2.7E+00	1.3E-01
residential	487031	3618025	2.7E-01	2.3E-01	2.4E-01	2.4E-01	2.4E-01	2.3E-01	2.5E-01	2.7E-01	3.1E+05	8.1E-01	8.2E-01	9.6E-02	9.6E-02	5.8E-01	2.7E-02	4.3E-01	1.3E+00	1.5E+00	2.5E+00	1.3E-01
residential	487131	3618025	2.6E-01	2.2E-01	2.3E-01	2.3E-01	2.2E-01	2.2E-01	2.4E-01	2.6E-01	2.8E+05	7.3E-01	7.4E-01	9.3E-02	9.3E-02	7.6E-01	2.8E-02	5.6E-01	1.1E+00	1.3E+00	2.3E+00	1.2E-01
residential	487231	3618025	2.5E-01	2.1E-01	2.2E-01	2.2E-01	2.1E-01	2.1E-01	2.3E-01	2.5E-01	2.6E+05	6.7E-01	6.7E-01	9.0E-02	9.0E-02	1.0E+00	2.9E-02	7.5E-01	1.0E+00	1.2E+00	2.2E+00	1.2E-01
residential	487331	3618025	2.3E-01	2.0E-01	2.1E-01	2.1E-01	2.0E-01	2.0E-01	2.1E-01	2.3E-01	2.4E+05	6.1E-01	6.1E-01	8.7E-02	8.7E-02	1.5E+00	3.0E-02	1.0E+00	9.2E-01	1.1E+00	2.0E+00	1.1E-01
residential	487431	3618025	2.2E-01	1.9E-01	2.0E-01	2.0E-01	1.9E-01	1.9E-01	2.0E-01	2.2E-01	2.2E+05	5.6E-01	5.6E-01	8.4E-02	8.4E-02	2.3E+00	3.1E-02	1.4E+00	8.3E-01	9.7E-01	1.9E+00	1.1E-01
school	487531	3618025	2.1E-01	1.8E-01	1.9E-01	1.9E-01	1.9E-01	1.8E-01	2.0E-01	2.1E-01	2.0E+05	5.1E-01	5.1E-01	8.2E-02	8.2E-02	3.4E+00	3.3E-02	2.1E+00	7.5E-01	8.8E-01	1.7E+00	1.1E-01
school	487631	3618025	2.0E-01	1.7E-01	1.8E-01	1.8E-01	1.8E-01	1.8E-01	1.9E-01	2.0E-01	1.9E+05	4.8E-01	4.8E-01	8.0E-02	8.0E-02	3.9E+00	3.4E-02	3.0E+00	6.9E-01	8.1E-01	1.6E+00	1.0E-01
school	487731	3618025	1.9E-01	1.7E-01	1.7E-01	1.7E-01	1.7E-01	1.7E-01	1.8E-01	1.9E-01	1.8E+05	4.4E-01	4.4E-01	7.8E-02	7.8E-02	4.0E+00	3.6E-02	3.5E+00	6.4E-01	7.4E-01	1.5E+00	1.0E-01
school	487831	3618025	1.8E-01	1.6E-01	1.7E-01	1.7E-01	1.7E-01	1.6E-01	1.7E-01	1.9E-01	1.7E+05	4.1E-01	4.1E-01	7.6E-02	7.6E-02	4.0E+00	3.8E-02	3.7E+00	5.9E-01	6.9E-01	1.4E+00	9.7E-02
residential	487931	3618025	1.8E-01	1.6E-01	1.6E-01	1.6E-01	1.6E-01	1.6E-01	1.7E-01	1.8E-01	1.7E+05	3.9E-01	4.0E-01	7.6E-02	7.6E-02	3.7E+00	4.0E-02	4.0E+00	5.7E-01	6.6E-01	1.3E+00	9.4E-02
residential	488031	3618025	1.8E-01	1.6E-01	1.6E-01	1.6E-01	1.6E-01	1.6E-01	1.7E-01	1.8E-01	1.6E+05	3.6E-01	3.7E-01	7.4E-02	7.4E-02	3.2E+00	4.2E-02	3.8E+00	5.4E-01	6.1E-01	1.2E+00	9.0E-02
residential	488131	3618025	1.7E-01	1.5E-01	1.5E-01	1.5E-01	1.5E-01	1.5E-01	1.6E-01	1.7E-01	1.5E+05	3.4E-01	3.5E-01	7.3E-02	7.3E-02	2.8E+00	4.4E-02	3.4E+00	5.0E-01	5.7E-01	1.1E+00	8.7E-02
residential	488231	3618025	1.6E-01	1.4E-01	1.5E-01	1.5E-01	1.5E-01	1.4E-01	1.5E-01	1.6E-01	1.4E+05	3.2E-01	3.3E-01	7.0E-02	7.0E-02	2.3E+00	4.6E-02	2.9E+00	4.7E-01	5.3E-01	9.5E-01	8.6E-02
residential	488331	3618025	1.6E-01	1.4E-01	1.5E-01	1.5E-01	1.5E-01	1.5E-01	1.5E-01	1.6E-01	1.3E+05	3.0E-01	3.0E-01	7.0E-02	7.0E-02	2.0E+00	4.9E-02	2.5E+00	4.5E-01	5.0E-01	8.6E-01	8.0E-02
residential	488431	3618025	1.6E-01	1.4E-01	1.5E-01	1.5E-01	1.5E-01	1.5E-01	1.6E-01	1.7E-01	1.3E+05	2.4E-01	2.5E-01	6.8E-02	6.8E-02	1.6E+00	5.0E-02	2.0E+00	4.4E-01	4.6E-01	7.7E-01	7.0E-02
residential	488531	3618025	1.5E-01	1.4E-01	1.4E-01	1.4E-01	1.4E-01	1.4E-01	1.5E-01	1.6E-01	1.2E+05	2.3E-01	2.4E-01	6.7E-02	6.7E-02	1.4E+00	5.2E-02	1.7E+00	4.1E-01	4.3E-01	6.9E-01	6.8E-02
residential	488631	3618025	1.5E-01	1.3E-01	1.4E-01	1.4E-01	1.4E-01	1.4E-01	1.5E-01	1.6E-01	1.1E+05	2.1E-01	2.1E-01	6.5E-02	6.5E-02	1.2E+00	5.5E-02	1.4E+00	3.9E-01	4.1E-01	6.2E-01	6.2E-02
residential	488731	3618025	1.4E-01	1.3E-01	1.3E-01	1.3E-01	1.3E-01	1.3E-01	1.4E-01	1.4E-01	1.1E+05	2.3E-01	2.3E-01	6.4E-02	6.4E-02	1.0E+00	5.8E-02	1.2E+00	3.7E-01	3.9E-01	5.5E-01	6.9E-02
residential	488831	3618025	1.3E-01	1.2E-01	1.2E-01	1.2E-01	1.2E-01	1.2E-01	1.2E-01	1.3E-01	1.0E+05	2.3E-01	2.3E-01	6.1E-02	6.1E-02	9.0E-01	6.3E-02	9.8E-01	3.3E-01	3.7E-01	4.9E-01	7.4E-02
residential	488931	3618025	1.2E-01	1.1E-01	1.1E-01	1.1E-01	1.1E-01	1.1E-01	1.2E-01	1.2E-01	9.7E+04	2.2E-01	2.2E-01	6.0E-02	6.0E-02	7.9E-01	6.7E-02	8.3E-01	3.1E-01	3.5E-01	4.4E-01	7.2E-02
residential	489031	3618025	1.2E-01	1.1E-01	1.1E-01	1.2E-01	1.2E-01	1.2E-01	1.2E-01	1.3E-01	9.5E+04	2.1E-01	2.1E-01	5.9E-02	5.9E-02	7.1E-01	7.2E-02	7.8E-01	3.1E-01	3.3E-01	4.2E-01	6.8E-02
residential	489131	3618025	1.2E-01	1.1E-01	1.1E-01	1.1E-01	1.1E-01	1.1E-01	1.1E-01	1.2E-01	9.0E+04	2.0E-01	2.0E-01	5.8E-02	5.8E-02	6.4E-01	7.8E-02	6.6E-01	2.8E-01	3.2E-01	3.8E-01	6.9E-02
residential	482931	3618125	1.6E-01	1.7E-01	1.4E-01	1.3E-01	1.1E-01	9.3E-02	9.1E-02	8.9E-02	9.6E+04	1.8E-01	1.6E-01	2.8E-01	2.8E-01	6.2E-02	1.1E-02	6.1E-02	1.3E-01	2.4E-01	7.6E-02	3.4E-01
residential	483031	3618125	1.7E-01	1.8E-01	1.5E-01	1.3E-01	1.1E-01	9.6E-02	9.3E-02	9.1E-02	1.0E+05	1.9E-01	1.7E-01	2.8E-01	2.8E-01	6.4E-02	1.1E-02	6.3E-02	1.3E-01	2.5E-01	7.8E-02	3.6E-01
residential	483131	3618125	1.8E-01	1.9E-01	1.6E-01	1.4E-01	1.2E-01	9.9E-02	9.7E-02	9.5E-02	1.1E+05	2.0E-01	1.8E-01	2.9E-01	2.9E-01	6.5E-02	1.1E-02	6.4E-02	1.4E-01	2.7E-01	8.1E-02	3.8E-01
residential	483231	3618125	1.9E-01	2.0E-01	1.6E-01	1.4E-01	1.2E-01	1.0E-01	1.0E-01	9.9E-02	1.2E+05	2.2E-01	1.9E-01	2.9E-01	2.9E-01	6.7E-02	1.1E-02	6.6E-02	1.5E-01	2.9E-01	8.4E-02	4.0E-01
residential	483331	3618125	2.0E-01	2.2E-01	1.7E-01	1.5E-01	1.3E-01	1.1E-01	1.0E-01	1.0E-01	1.3E+05	2.3E-01	2.1E-01	3.0E-01	3.0E-01	6.9E-02	1.1E-02	6.8E-02	1.5E-01	3.1E-01	8.6E-02	4.1E-01
residential	483431	3618125	2.1E-01	2.3E-01	1.8E-01	1.6E-01	1.3E-01	1.1E-01	1.1E-01	1.1E-01	1.4E+05	2.5E-01	2.2E-01	3.1E-01	3.1E-01	7.1E-02	1.1E-02	7.0E-02	1.6E-01	3.4E-01	8.9E-02	4.4E-01
residential	483531	3618125	2.3E-01	2.4E-01	1.9E-01	1.7E-01	1.4E-01	1.2E-01	1.1E-01	1.1E-01	1.5E+05	2.7E-01	2.4E-01	3.2E-01	3.2E-01	7.3E-02	1.1E-02	7.2E-02	1.7E-01	3.7E-01	9.2E-02	4.6E-01
residential	483631	3618125	2.5E-01	2.6E-01	2.1E-01	1.8E-01	1.5E-01	1.3E-01	1.2E-01	1.2E-01	1.7E+05	2.9E-01	2.6E-01	3.4E-01	3.4E-01	7.5E-02	1.1E-02	7.4E-02	1.8E-01	4.0E-01	9.6E-02	4.7E-01
school	486031	3618125	5.3E-01	4.2E-01	4.1E-01	3.7E-01	3.4E-01	4.0E-01	4.6E-01	5.7E-01	1.7E+06	4.5E+00	4.6E+00	1.6E-01	1.6E-01	1.8E-01	1.8E-02	1.7E-01	7.5E+00	2.5E+01	5.0E-01	2.2E-01
school	486131	3618125	4.9E-01	3.9E-01	3.8E-01	3.6E-01	3.3E-01	3.6E-01	4.0E-01	4.8E-01	1.3E+06	3.4E+00	3.4E+00	1.5E-01	1.5E-01	1.9E-01	1.9E-02	1.8E-01	9.3E+00	1.7E+01	7.9E-01	2.0E-01
residential	486231	3618125	4.5E-01	3.6E-01	3.6E-01	3.4E-01	3.2E-01	3.3E-01	3.6E-01	4.1E-01	9.9E+05	2.7E+00	2.7E+00	1.4E-01	1.4E-01	2.0E-01	2.0E-02	1.9E-01	9.9E+00	1.2E+01	1.5E+00	1.9E-01
residential	486331	3618125	4.2E-01	3.4E-01	3.4E-01	3.2E-01	3.0E-01	3.1E-01	3.4E-01	3.7E-01	7.9E+05	2.2E+00	2.2E+00	1.3E-01	1.3E-01	2.1E-01	2.0E-02	2.0E-01	8.8E+00	7.9E+00	2.3E+00	1.8E-01
residential	486431	3618125	3.9E-01	3.2E-01	3.2E-01	3.1E-01	2.9E-01	2.9E-01	3.2E-01	3.4E-01	6.6E+05	1.8E+00	1.8E+00	1.3E-01	1.3E-01	2.2E-01	2.1E-02	2.1E-01	6.8E+00	5.5E+00	2.8E+00	1.7E-01
residential	486531	3618125	3.6E-01	3.0E-01	3.0E-01	2.9E-01	2.8E-01	2.8E-01	3.0E-01	3.3E-01	5.5E+05	1.5E+00	1.5E+00	1.2E-01	1.2E-01	2.4E-01	2.2E-02	2.2E-01	4.8E+00	3.9E+00	3.0E+00	1.6E-01
residential	486831	3618125	3.0E-01	2.5E-01	2.5E-01	2.5E-01	2.4E-01	2.4E-01	2.6E-01	2.8E-01	3.6E+05	9.7E-01	9.4E-01	1.0E-01	1.0E-01	3.4E-01	2.5E-02	2.7E-01	1.7E+00	1.9E+00	2.5E+00	1.4E-01
residential	486931	3618125	2.8E-01	2.3E-01	2.4E-01	2.3E-01	2.3E-01	2.3E-01	2.5E-01	2.7E-01	3.2E+05	8.4E-01	8.2E-01	9.9E-02	9.9E-02	4.2E-01	2.5E-02	3.2E-01	1.4E+00	1.6E+00	2.3E+00	1.3E-01
residential	487031	3618125	2.7E-01	2.2E-01	2.3E-01	2.2E-01	2.2E-01	2.2E-01	2.3E-01	2.6E-01	2.8E+05	7.5E-01	7.3E-01	9.5E-02	9.5E-02	5.3E-01	2.6E-02	4.0E-01	1.2E+00	1.4E+00	2.1E+00	1.3E-01
residential	487131	3618125	2.5E-01	2.1E-01	2.1E-01	2.1E-01	2.1E-01	2.1E-01	2.2E-01	2.4E-01	2.6E+05	6.8E-01	6.6E-01	9.2E-02	9.2E-02	6.8E-01	2.7E-02	5.2E-01	1.0E+00	1.2E+00	2.0E+00	1.2E-01
residential	487231	3618125	2.4E-01	2.0E-01	2.0E-01	2.0E-01	2.0E-01	2.0E-01	2.1E-01	2.3E-01	2.4E+05	6.2E-01	6.0E-01	8.9E-02	8.9E-02	8.8E-01	2.8E-02	6.6E-01	9.1E-01	1.1E+00	1.9E+00	1.2E-01
residential	487331	3618125	2.3E-01	1.9E-01	1.9E-01	1.9E-01	1.9E-01	1.9E-01	2.0E-01	2.2E-01	2.2E+05	5.6E-01	5.5E-01	8.6E-02	8.6E-02	1.2E+00	3.0E-02	8.5E-01	8.3E-01	9.9E-01	1.8E+00	1.1E-01
residential	487431	3618125	2.1E-01	1.8E-01	1.9E-01	1.8E-01	1.8E-01	1.8E-01	1.9E-01	2.1E-01	2.0E+05	5.2E-01	5.1E-01	8.4E-02	8.4E-02	1.9E+00	3.1E-02	1.2E+00	7.5E-01	9.0E-01	1.7E+00	1.1E-01
school	487531	3618125	2.0E-01	1.7E-01	1.8E-01	1.8E-01	1.7E-01	1.7E-01	1.8E-01	2.0E-01	1.9E+05	4.8E-01	4.7E-01	8.1E-02	8.1E-02	2.6E+00	3.2E-02	1.7E+00	6.9E-01	8.2E-01	1.6E+00	1.1E-01
school	487631	3618125	1.9E-01	1.7E-01	1.7E-01	1.7E-01	1.7E-01	1.6E-01	1.8E-01	1.9E-01	1.7E+05	4.4E-01	4.3E-01	7.9E-02	7.9E-02	2.8E+00	3.4E-02	2.3E+00	6.2E-01	7.4E-01	1.4E+00	1.0E-01
school	487731	3618125	1.9E-01	1.6E-01	1.6E-01	1.6E-01	1.6E-01	1.6E-01	1.7E-01	1.8E-01	1.7E+05	4.1E-01	4.1E-01	7.7E-02	7.7E-02	3.0E+00	3.5E-02	2.6E+00	5.8E-01	6.9E-01	1.3E+00	9.9E-02
school	487831	3618125	1.8E-01	1.6E-01	1.6E-01	1.6E-01	1.6E-01	1.5E-01	1.6E-01	1.7E-01	1.6E+05	3.9E-01	3.8E-01	7.5E-02	7.5E-02	3.1E+00	3.7E-02	2.8E+00	5.5E-01	6.5E-01	1.3E+00	9.7E-02
residential	487931	3618125	1.7E-01	1.5E-01	1.5E-01	1.5E-01	1.5E-01	1.5E-01	1.6E-01	1.7E-01	1.5E+05	3.7E-01	3.7E-01	7.5E-02	7.5E-02	3.1E+00	3.9E-02	3.1E+00	5.2E-01	6.2E-01	1.2E+00	9.4E-02
residential	488031	3618125	1.7E-01	1.5E-01	1.5E-01	1.5E-01	1.5E-01	1.5E-01	1.6E-01	1.7E-01	1.5E+05	3.5E-01	3.5E-01	7.4E-02	7.4E-02	2.8E+00	4.1E-02	3.1E+00	5.0E-01	5.9E-01	1.1E+00	9.0E-02
residential	488131	3618125	1.6E-01	1.4E-01	1.5E-01	1.5E-01	1.5E-01	1.4E-01	1.5E-01	1.6E-01	1.4E+05	3.3E-01	3.3E-01	7.2E-02	7.2E-02	2.5E+00	4.3E-02	2.9E+00	4.7E-01	5.5E-01	1.0E+00	8.7E-02
residential	488231	3618125	1.6E-01	1.4E-01	1.4E-01	1.4E-01	1.4E-01	1.4E-01	1.4E-01	1.5E-01	1.3E+05	3.1E-01	3.1E-01	7.0E-02	7.0E-02	2.2E+00	4.5E-02	2.6E+00	4.3E-01	5.1E-01	9.1E-01	8.6E-02
residential	488331	3618125	1.5E-01	1.4E-01	1.4E-01	1.4E-01	1.4E-01	1.4E-01	1.4E-01	1.5E-01	1.3E+05	2.9E-01	2.9E-01	6.9E-02	6.9E-02	1.9E+00	4.7E-02	2.3E+00	4.1E-01	4.8E-01	8.3E-01	8.1E-02
residential	488431	3618125	1.5E-01	1.4E-01	1.4E-01	1.4E-01	1.4E-01	1.4E-01	1.5E-01	1.6E-01	1.2E+05	2.5E-01	2.6E-01	6.8E-02	6.8E-02	1.6E+00	4.9E-02	2.0E+00	4.1E-01	4.5E-01	7.6E-01	7.3E-02
residential	488531	3618125	1.5E-01	1.3E-01	1.4E-01	1.4E-01	1.4E-01	1.4E-01	1.4E-01	1.5E-01	1.2E+05	2.3E-01	2.4E-01	6.7E-02	6.7E-02	1.4E+00	5.1E-02	1.7E+00	3.8E-01	4.2E-01	6.8E-01	6.9E-02
residential	488631	3618125	1.4E-01	1.3E-01	1.3E-01	1.3E-01	1.3E-01	1.3E-01	1.4E-01	1.5E-01	1.1E+05	2.0E-01	2.1E-01	6.5E-02	6.5E-02	1.2E+00	5.4E-02	1.4E+00	3.6E-01	4.0E-01	6.1E-01	6.5E-02
residential	488731	3618125	1.3E-01	1.2E-01	1.2E-01	1.2E-01	1.2E-01	1.2E-01	1.3E-01	1.4E-01	1.1E+05	2.3E-01	2.3E-01	6.3E-02	6.3E-02	1.0E+00	5.7E-02	1.2E+00	3.4E-01	3.8E-01	5.5E-01	7.1E-02
residential	488831	3618125	1.2E-01	1.1E-01	1.1E-01	1.1E-01	1.1E-01	1.1E-01	1.2E-01	1.2E-01	9.7E+04	2.3E-01	2.2E-01	6.1E-02	6.1E-02	9.1E-01	6.1E-02	1.0E+00	3.0E-01	3.5E-01	4.8E-01	7.4E-02
residential	488931	3618125	1.2E-01	1.1E-01	1.1E-01	1.1E-01	1.1E-01	1.1E-01	1.1E-01	1.2E-01	9.3E+04	2.2E-01	2.1E-01	6.0E-02	6.0E-02	8.0E-01	6.6E-02	8.7E-01	2.9E-01	3.4E-01	4.4E-01	7.2E-02
residential	489031	3618125	1.2E-01	1.1E-01	1.1E-01	1.1E-01	1.1E-01	1.1E-01	1.1E-01	1.2E-01	9.1E+04	2.1E-01	2.0E-01	5.9E-02	5.9E-02	7.1E-01	7.0E-02	7.8E-01	2.8E-01	3.2E-01	4.1E-01	7.0E-02
residential	489131	3618125	1.2E-01	1.0E-01	1.1E-01	1.1E-01	1.1E-01	1.1E-01	1.1E-01	1.2E-01	8.7E+04	2.0E-01	2.0E-01	5.8E-02	5.8E-02	6.3E-01	7.5E-02	7.0E-01	2.7E-01	3.1E-01	3.8E-01	6.8E-02
residential	483031	3618225	1.6E-01	1.7E-01	1.4E-01	1.2E-01	1.0E-01	9.0E-02	8.9E-02	8.7E-02	9.2E+04	1.8E-01	1.6E-01	2.9E-01	2.9E-01	6.0E-02	1.0E-02	5.9E-02	1.2E-01	2.3E-01	7.2E-02	3.8E-01
residential	483131	3618225	1.7E-01	1.8E-01	1.5E-01	1.3E-01	1.1E-01	9.4E-02	9.2E-02	9.0E-02	9.8E+04	2.0E-01	1.7E-01	3.0E-01	3.0E-01	6.1E-02	1.0E-02	6.0E-02	1.3E-01	2.5E-01	7.4E-02	4.0E-01
residential	483231	3618225	1.8E-01	1.9E-01	1.5E-01	1.3E-01	1.1E-01	9.7E-02	9.5E-02	9.3E-02	1.1E+05	2.1E-01	1.9E-01	3.1E-01	3.1E-01	6.3E-02	1.1E-02	6.2E-02	1.3E-01	2.6E-01	7.6E-02	4.2E-01
residential	483331	3618225	1.9E-01	2.0E-01	1.7E-01	1.4E-01	1.2E-01	1.0E-01	1.0E-01	9.9E-02	1.1E+05	2.2E-01	2.0E-01	3.2E-01	3.2E-01	6.4E-02	1.1E-02	6.3E-02	1.4E-01	2.8E-01	7.9E-02	4.3E-01
school	485931	3618225	5.3E-01	4.1E-01	3.7E-01	3.4E-01	3.7E-01	4.3E-01	4.7E-01	5.1E-01	2.0E+06	5.1E+00	5.5E+00	1.7E-01	1.7E-01	1.5E-01	1.7E-02	1.4E-01	3.7E+00	2.2E+01	3.2E-01	2.3E-01
school	486031	3618225	5.0E-01	3.8E-01	3.6E-01	3.3E-01	3.4E-01	4.0E-01	4.4E-01	5.0E-01	1.5E+06	3.8E+00	4.0E+00	1.6E-01	1.6E-01	1.6E-01	1.8E-02	1.5E-01	5.0E+00	1.6E+01	4.5E-01	2.1E-01
residential	486131	3618225	4.6E-01	3.5E-01	3.4E-01	3.2E-01	3.2E-01	3.7E-01	4.1E-01	4.7E-01	1.2E+06	2.9E+00	3.0E+00	1.5E-01	1.5E-01	1.6E-01	1.9E-02	1.6E-01	6.3E+00	1.2E+01	6.5E-01	2.0E-01
residential	486231	3618225	4.2E-01	3.3E-01	3.2E-01	3.0E-01	3.0E-01	3.4E-01	3.8E-01	4.2E-01	9.2E+05	2.3E+00	2.3E+00	1.4E-01	1.4E-01	1.7E-01	2.0E-02	1.6E-01	6.8E+00	8.9E+00	1.1E+00	1.9E-01
residential	486331	3618225	3.9E-01	3.1E-01	3.0E-01	2.9E-01	2.9E-01	3.2E-01	3.5E-01	3.9E-01	7.4E+05	1.9E+00	1.9E+00	1.3E-01	1.3E-01	1.8E-01	2.0E-02	1.7E-01	6.5E+00	6.6E+00	1.6E+00	1.8E-01
residential	486431	3618225	3.7E-01	2.9E-01	2.9E-01	2.8E-01	2.7E-01	3.0E-01	3.2E-01	3.5E-01	6.1E+05	1.6E+00	1.6E+00	1.2E-01	1.2E-01	2.0E-01	2.1E-02	1.8E-01	5.7E+00	4.9E+00	2.0E+00	1.7E-01
residential	486731	3618225	3.0E-01	2.5E-01	2.5E-01	2.4E-01	2.4E-01	2.5E-01	2.6E-01	2.9E-01	3.9E+05	1.0E+00	9.8E-01	1.1E-01	1.1E-01	2.9E-01	2.4E-02	2.3E-01	2.6E+00	2.3E+00	2.3E+00	1.4E-01
residential	486831	3618225	2.9E-01	2.3E-01	2.3E-01	2.3E-01	2.3E-01	2.3E-01	2.5E-01	2.7E-01	3.4E+05	9.0E-01	8.6E-01	1.0E-01	1.0E-01	3.4E-01	2.4E-02	2.6E-01	1.9E+00	1.8E+00	2.2E+00	1.4E-01
residential	486931	3618225	2.7E-01	2.2E-01	2.2E-01	2.2E-01	2.1E-01	2.2E-01	2.4E-01	2.6E-01	3.0E+05	7.8E-01	7.5E-01	9.9E-02	9.9E-02	4.0E-01	2.5E-02	3.1E-01	1.5E+00	1.5E+00	2.1E+00	1.3E-01
residential	487031	3618225	2.5E-01	2.1E-01	2.1E-01	2.1E-01	2.0E-01	2.1E-01	2.3E-01	2.4E-01	2.6E+05	6.9E-01	6.5E-01	9.5E-02	9.5E-02	4.9E-01	2.6E-02	3.9E-01	1.2E+00	1.3E+00	1.9E+00	1.3E-01

Receptor	X	Y	B10_1_AUX	B10_2_AUX	B10_3_AUX	B10_4_AUX	B10_5_AUX	B10_6_AUX	B10_7_AUX	B10_8_AUX	CHE_1	LOC_SWTCH EMP	LOC_SWTCHL OA	OGV_PATH_DPM	TR_28TH	TR_BAYMAR	TR_BOSTON	TR_CROSBY	TR_HARBOR CHA	TR_HARBOR SAM	TUG_PATH_DPM
Group			Refrigerated ContainersExisting	Refrigerated ContainersExisting	Refrigerated ContainersExisting	Refrigerated ContainersExisting	Multi-Purpose General CargoExisting	Multi-Purpose General CargoExisting	Dry BulkExisting	Dry BulkExisting	AllExisting	AllExisting	AllExisting	AllExisting	TR_28THExisting	TR_BAYMAR Existing	TR_BOSTON Existing	TR_CROSBY Existing	TR_HARBOR CHAExisting	TR_HARBOR SAMExisting	AllExisting
g/s -->			1.4E-02	1.4E-02	1.4E-02	1.4E-02	1.6E-03	1.6E-03	1.8E-03	1.8E-03	1.5E-08	1.8E-04	1.8E-04	7.6E-03	4.4E-06	7.1E-06	1.9E-05	4.0E-05	8.9E-05	8.9E-05	4.1E-04
			1	3	5	7	9	11	13	15	17	18	19	21	22	23	24	25	26	27	28
residential	487131	3617825	3.7E-03	3.3E-03	3.6E-03	3.7E-03	4.1E-04	4.0E-04	5.0E-04	5.5E-04	4.8E-03	1.4E-04	1.5E-04	7.1E-04	4.7E-06	2.1E-07	1.3E-05	6.5E-05	1.3E-04	3.0E-04	5.1E-05
residential	487231	3617825	3.5E-03	3.1E-03	3.4E-03	3.5E-03	3.8E-04	3.8E-04	4.7E-04	5.2E-04	4.4E-03	1.2E-04	1.4E-04	6.9E-04	6.6E-06	2.1E-07	1.8E-05	5.6E-05	1.1E-04	2.7E-04	4.9E-05
residential	487331	3617825	3.4E-03	3.0E-03	3.2E-03	3.3E-03	3.7E-04	3.6E-04	4.4E-04	4.9E-04	4.1E-03	1.1E-04	1.2E-04	6.7E-04	1.0E-05	2.2E-07	2.6E-05	5.0E-05	1.0E-04	2.5E-04	4.7E-05
residential	487431	3617825	3.2E-03	2.9E-03	3.0E-03	3.1E-03	3.5E-04	3.4E-04	4.2E-04	4.6E-04	3.7E-03	1.0E-04	1.1E-04	6.5E-04	1.9E-05	2.3E-07	4.1E-05	4.4E-05	9.2E-05	2.2E-04	4.5E-05
school	487531	3617825	3.1E-03	2.7E-03	2.9E-03	3.0E-03	3.3E-04	3.3E-04	4.0E-04	4.4E-04	3.4E-03	9.7E-05	1.0E-04	6.3E-04	3.3E-05	2.4E-07	7.1E-05	4.0E-05	8.4E-05	2.0E-04	4.4E-05
school	487631	3617825	2.9E-03	2.6E-03	2.8E-03	2.8E-03	3.1E-04	3.1E-04	3.8E-04	4.1E-04	3.2E-03	9.0E-05	9.5E-05	6.1E-04	3.6E-05	2.6E-07	1.1E-04	3.6E-05	7.7E-05	1.8E-04	4.3E-05
school	487731	3617825	2.8E-03	2.5E-03	2.7E-03	2.7E-03	3.0E-04	3.0E-04	3.6E-04	3.9E-04	3.0E-03	8.3E-05	8.8E-05	5.9E-04	3.3E-05	2.7E-07	1.3E-04	3.3E-05	7.1E-05	1.6E-04	4.1E-05
school	487831	3617825	2.7E-03	2.4E-03	2.5E-03	2.6E-03	2.9E-04	2.9E-04	3.5E-04	3.8E-04	2.8E-03	7.8E-05	8.1E-05	5.8E-04	2.7E-05	2.8E-07	1.3E-04	3.0E-05	6.5E-05	1.5E-04	4.0E-05
residential	487931	3617825	2.6E-03	2.3E-03	2.4E-03	2.5E-03	2.8E-04	2.7E-04	3.3E-04	3.6E-04	2.6E-03	7.3E-05	7.6E-05	5.7E-04	2.2E-05	2.9E-07	1.2E-04	2.8E-05	6.0E-05	1.3E-04	3.9E-05
residential	488031	3617825	2.5E-03	2.3E-03	2.4E-03	2.4E-03	2.7E-04	2.7E-04	3.3E-04	3.5E-04	2.5E-03	6.8E-05	7.1E-05	5.6E-04	1.7E-05	3.1E-07	9.9E-05	2.6E-05	5.7E-05	1.2E-04	3.7E-05
school	488131	3617825	2.5E-03	2.2E-03	2.4E-03	2.4E-03	2.7E-04	2.7E-04	3.2E-04	3.5E-04	2.4E-03	6.1E-05	6.4E-05	5.5E-04	1.3E-05	3.3E-07	7.8E-05	2.5E-05	5.3E-05	1.1E-04	3.5E-05
school	488231	3617825	2.4E-03	2.2E-03	2.3E-03	2.3E-03	2.6E-04	2.6E-04	3.1E-04	3.4E-04	2.3E-03	5.6E-05	5.9E-05	5.4E-04	1.1E-05	3.5E-07	6.1E-05	2.3E-05	4.9E-05	9.2E-05	3.3E-05
residential	488331	3617825	2.3E-03	2.1E-03	2.2E-03	2.3E-03	2.5E-04	2.5E-04	3.1E-04	3.3E-04	2.1E-03	5.1E-05	5.4E-05	5.3E-04	8.8E-06	3.6E-07	4.7E-05	2.2E-05	4.5E-05	8.1E-05	3.1E-05
residential	488431	3617825	2.3E-03	2.1E-03	2.2E-03	2.2E-03	2.5E-04	2.5E-04	3.0E-04	3.2E-04	2.0E-03	4.1E-05	4.3E-05	5.2E-04	7.2E-06	3.8E-07	3.7E-05	2.0E-05	4.1E-05	7.1E-05	2.8E-05
residential	488531	3617825	2.2E-03	2.0E-03	2.1E-03	2.1E-03	2.4E-04	2.4E-04	2.9E-04	3.1E-04	1.9E-03	3.9E-05	4.1E-05	5.1E-04	6.1E-06	3.9E-07	3.0E-05	1.9E-05	3.9E-05	6.3E-05	2.7E-05
residential	488631	3617825	2.2E-03	2.0E-03	2.1E-03	2.1E-03	2.4E-04	2.4E-04	2.9E-04	3.0E-04	1.8E-03	3.6E-05	3.8E-05	4.9E-04	5.2E-06	4.1E-07	2.5E-05	1.8E-05	3.7E-05	5.6E-05	2.5E-05
residential	488731	3617825	2.0E-03	1.8E-03	1.9E-03	1.9E-03	2.2E-04	2.2E-04	2.6E-04	2.7E-04	1.7E-03	4.3E-05	4.4E-05	4.8E-04	4.6E-06	4.4E-07	2.2E-05	1.7E-05	3.6E-05	5.1E-05	2.9E-05
residential	488831	3617825	1.9E-03	1.7E-03	1.8E-03	1.8E-03	2.0E-04	2.0E-04	2.4E-04	2.6E-04	1.7E-03	4.3E-05	4.4E-05	4.7E-04	4.1E-06	4.7E-07	1.9E-05	1.6E-05	3.4E-05	4.6E-05	3.0E-05
residential	488931	3617825	1.8E-03	1.7E-03	1.7E-03	1.8E-03	1.9E-04	1.9E-04	2.3E-04	2.5E-04	1.6E-03	4.1E-05	4.2E-05	4.6E-04	3.7E-06	5.0E-07	1.7E-05	1.5E-05	3.3E-05	4.2E-05	3.0E-05
residential	489031	3617825	1.8E-03	1.6E-03	1.7E-03	1.7E-03	1.9E-04	1.9E-04	2.2E-04	2.4E-04	1.5E-03	3.9E-05	4.0E-05	4.5E-04	3.4E-06	5.4E-07	1.5E-05	1.4E-05	3.1E-05	3.9E-05	2.9E-05
residential	489131	3617825	1.7E-03	1.6E-03	1.6E-03	1.6E-03	1.8E-04	1.8E-04	2.2E-04	2.3E-04	1.4E-03	3.8E-05	3.8E-05	4.4E-04	3.1E-06	5.8E-07	1.4E-05	1.3E-05	3.0E-05	3.7E-05	2.8E-05
residential	482831	3617925	2.3E-03	2.5E-03	2.1E-03	1.9E-03	1.7E-04	1.5E-04	1.7E-04	1.6E-04	1.6E-03	3.2E-05	2.8E-05	1.9E-03	3.0E-07	7.8E-08	1.3E-06	6.0E-06	2.3E-05	7.7E-06	1.3E-04
residential	482931	3617925	2.5E-03	2.7E-03	2.2E-03	1.9E-03	1.8E-04	1.6E-04	1.7E-04	1.7E-04	1.7E-03	3.4E-05	3.0E-05	1.9E-03	3.1E-07	7.9E-08	1.3E-06	6.3E-06	2.5E-05	8.0E-06	1.3E-04
residential	483031	3617925	2.6E-03	2.9E-03	2.3E-03	2.1E-03	1.9E-04	1.6E-04	1.8E-04	1.8E-04	1.9E-03	3.6E-05	3.2E-05	1.9E-03	3.2E-07	7.9E-08	1.3E-06	6.6E-06	2.7E-05	8.3E-06	1.4E-04
residential	483131	3617925	2.8E-03	3.0E-03	2.5E-03	2.2E-03	2.0E-04	1.7E-04	1.9E-04	1.8E-04	2.0E-03	3.8E-05	3.4E-05	2.0E-03	3.3E-07	8.0E-08	1.4E-06	6.9E-06	2.9E-05	8.6E-06	1.4E-04
residential	483231	3617925	2.9E-03	3.2E-03	2.6E-03	2.3E-03	2.1E-04	1.8E-04	2.0E-04	1.9E-04	2.2E-03	4.1E-05	3.7E-05	2.0E-03	3.4E-07	8.1E-08	1.4E-06	7.3E-06	3.1E-05	8.9E-06	1.5E-04
residential	483331	3617925	3.1E-03	3.4E-03	2.8E-03	2.4E-03	2.2E-04	1.9E-04	2.1E-04	2.0E-04	2.4E-03	4.4E-05	4.0E-05	2.1E-03	3.5E-07	8.1E-08	1.5E-06	7.7E-06	3.3E-05	9.3E-06	1.5E-04
residential	483431	3617925	3.3E-03	3.7E-03	3.0E-03	2.6E-03	2.3E-04	2.0E-04	2.2E-04	2.1E-04	2.7E-03	4.8E-05	4.3E-05	2.1E-03	3.6E-07	8.2E-08	1.5E-06	8.1E-06	3.6E-05	9.6E-06	1.6E-04
residential	483531	3617925	3.5E-03	3.9E-03	3.1E-03	2.7E-03	2.5E-04	2.1E-04	2.3E-04	2.2E-04	2.9E-03	5.2E-05	4.6E-05	2.2E-03	3.7E-07	8.3E-08	1.5E-06	8.6E-06	4.0E-05	1.0E-05	1.6E-04
residential	483631	3617925	3.8E-03	4.1E-03	3.3E-03	2.9E-03	2.6E-04	2.2E-04	2.4E-04	2.3E-04	3.3E-03	5.6E-05	5.0E-05	2.2E-03	3.9E-07	8.4E-08	1.6E-06	9.1E-06	4.3E-05	1.0E-05	1.7E-04
residential	483731	3617925	4.0E-03	4.4E-03	3.5E-03	3.0E-03	2.7E-04	2.3E-04	2.5E-04	2.5E-04	3.7E-03	6.1E-05	5.4E-05	2.3E-03	4.0E-07	8.4E-08	1.6E-06	9.7E-06	4.8E-05	1.1E-05	1.8E-04
residential	483831	3617925	4.3E-03	4.6E-03	3.8E-03	3.2E-03	2.9E-04	2.4E-04	2.7E-04	2.6E-04	4.1E-03	6.6E-05	5.8E-05	2.4E-03	4.1E-07	8.5E-08	1.7E-06	1.0E-05	5.3E-05	1.1E-05	1.9E-04
residential	483931	3617925	4.6E-03	4.8E-03	4.0E-03	3.4E-03	3.1E-04	2.5E-04	2.8E-04	2.7E-04	4.7E-03	7.2E-05	6.4E-05	2.5E-03	4.3E-07	8.6E-08	1.8E-06	1.1E-05	5.8E-05	1.2E-05	2.0E-04
residential	484031	3617925	4.9E-03	5.0E-03	4.2E-03	3.6E-03	3.2E-04	2.7E-04	3.0E-04	2.9E-04	5.4E-03	7.9E-05	6.9E-05	2.6E-03	4.4E-07	8.7E-08	1.8E-06	1.2E-05	6.5E-05	1.2E-05	2.1E-04
residential	484131	3617925	5.3E-03	5.1E-03	4.5E-03	3.9E-03	3.5E-04	2.9E-04	3.3E-04	3.2E-04	6.3E-03	8.7E-05	7.6E-05	2.8E-03	4.6E-07	8.8E-08	1.9E-06	1.3E-05	7.4E-05	1.3E-05	2.2E-04
residential	486331	3617925	5.9E-03	5.2E-03	5.7E-03	5.7E-03	5.9E-04	5.3E-04	6.5E-04	7.3E-04	1.4E-02	3.9E-04	5.0E-04	1.0E-03	1.3E-06	1.5E-07	5.1E-06	5.3E-04	8.8E-04	7.3E-04	7.3E-05
residential	486431	3617925	5.5E-03	4.8E-03	5.3E-03	5.3E-03	5.6E-04	5.1E-04	6.3E-04	7.0E-04	1.1E-02	3.3E-04	4.0E-04	9.6E-04	1.4E-06	1.5E-07	5.4E-06	2.8E-04	5.5E-04	6.1E-04	6.9E-05
residential	486531	3617925	5.2E-03	4.6E-03	4.9E-03	5.0E-03	5.3E-04	4.9E-04	6.1E-04	6.7E-04	9.8E-03	2.9E-04	3.4E-04	9.2E-04	1.5E-06	1.6E-07	5.8E-06	1.8E-04	4.0E-04	5.1E-04	6.6E-05
residential	486631	3617925	4.9E-03	4.3E-03	4.6E-03	4.6E-03	5.0E-04	4.7E-04	5.8E-04	6.4E-04	8.4E-03	2.5E-04	2.8E-04	8.7E-04	1.6E-06	1.7E-07	6.2E-06	1.4E-04	3.1E-04	4.4E-04	6.3E-05
residential	486731	3617925	4.6E-03	4.0E-03	4.3E-03	4.4E-03	4.7E-04	4.5E-04	5.6E-04	6.3E-04	7.1E-03	2.2E-04	2.4E-04	8.2E-04	1.8E-06	1.7E-07	6.0E-06	1.0E-04	2.4E-04	3.6E-04	6.0E-05
residential	486831	3617925	4.4E-03	3.8E-03	4.0E-03	4.1E-03	4.4E-04	4.3E-04	5.3E-04	5.9E-04	6.3E-03	1.9E-04	2.1E-04	7.9E-04	2.1E-06	1.8E-07	6.6E-06	8.6E-05	2.0E-04	3.3E-04	5.7E-05
residential	487031	3617925	3.9E-03	3.4E-03	3.6E-03	3.6E-03	4.0E-04	3.9E-04	4.8E-04	5.3E-04	5.0E-03	1.5E-04	1.6E-04	7.3E-04	2.9E-06	1.9E-07	8.7E-06	6.1E-05	1.5E-04	2.7E-04	5.3E-05
residential	487131	3617925	3.7E-03	3.2E-03	3.4E-03	3.5E-03	3.8E-04	3.7E-04	4.5E-04	5.0E-04	4.6E-03	1.4E-04	1.4E-04	7.1E-04	3.8E-06	2.0E-07	1.1E-05	5.3E-05	1.3E-04	2.4E-04	5.1E-05
residential	487231	3617925	3.5E-03	3.1E-03	3.2E-03	3.3E-03	3.6E-04	3.5E-04	4.3E-04	4.7E-04	4.2E-03	1.2E-04	1.3E-04	6.8E-04	5.4E-06	2.1E-07	1.6E-05	4.7E-05	1.1E-04	2.3E-04	4.9E-05
residential	487331	3617925	3.4E-03	2.9E-03	3.1E-03	3.1E-03	3.4E-04	3.3E-04	4.1E-04	4.5E-04	3.9E-03	1.1E-04	1.2E-04	6.6E-04	8.0E-06	2.2E-07	2.2E-05	4.2E-05	1.0E-04	2.1E-04	4.7E-05
residential	487431	3617925	3.2E-03	2.8E-03	2.9E-03	3.0E-03	3.2E-04	3.2E-04	3.9E-04	4.3E-04	3.6E-03	1.0E-04	1.1E-04	6.4E-04	1.4E-05	2.3E-07	3.3E-05	3.7E-05	9.1E-05	1.9E-04	4.5E-05
school	487531	3617925	3.0E-03	2.7E-03	2.8E-03	2.8E-03	3.1E-04	3.0E-04	3.7E-04	4.0E-04	3.3E-03	9.5E-05	9.8E-05	6.3E-04	2.1E-05	2.4E-07	5.2E-05	3.4E-05	8.2E-05	1.8E-04	4.4E-05
school	487631	3617925	2.9E-03	2.6E-03	2.7E-03	2.7E-03	3.0E-04	2.9E-04	3.6E-04	3.9E-04	3.1E-03	8.8E-05	9.1E-05	6.1E-04	2.4E-05	2.5E-07	7.5E-05	3.1E-05	7.5E-05	1.6E-04	4.3E-05
school	487731	3617925	2.8E-03	2.5E-03	2.6E-03	2.6E-03	2.8E-04	2.8E-04	3.4E-04	3.7E-04	2.9E-03	8.2E-05	8.4E-05	5.9E-04	2.4E-05	2.6E-07	8.8E-05	2.8E-05	6.9E-05	1.5E-04	4.1E-05
school	487831	3617925	2.7E-03	2.4E-03	2.5E-03	2.5E-03	2.7E-04	2.7E-04	3.3E-04	3.5E-04	2.7E-03	7.6E-05	7.8E-05	5.8E-04	2.2E-05	2.7E-07	9.3E-05	2.6E-05	6.4E-05	1.3E-04	4.0E-05
residential	487931	3617925	2.6E-03	2.3E-03	2.4E-03	2.4E-03	2.7E-04	2.6E-04	3.2E-04	3.4E-04	2.6E-03	7.2E-05	7.4E-05	5.7E-04	1.9E-05	2.9E-07	9.4E-05	2.5E-05	6.0E-05	1.3E-04	3.9E-05
residential	488031	3617925	2.5E-03	2.2E-03	2.3E-03	2.4E-03	2.6E-04	2.6E-04	3.1E-04	3.3E-04	2.5E-03	6.6E-05	6.8E-05	5.6E-04	1.6E-05	3.1E-07	8.5E-05	2.4E-05	5.6E-05	1.1E-04	3.7E-05
school	488131	3617925	2.5E-03	2.2E-03	2.3E-03	2.3E-03	2.6E-04	2.6E-04	3.1E-04	3.3E-04	2.3E-03	6.0E-05	6.2E-05	5.5E-04	1.3E-05	3.3E-07	7.1E-05	2.3E-05	5.2E-05	1.0E-04	3.4E-05
school	488231	3617925	2.4E-03	2.1E-03	2.2E-03	2.2E-03	2.4E-04	2.4E-04	2.9E-04	3.1E-04	2.2E-03	5.8E-05	5.9E-05	5.4E-04	1.1E-05	3.4E-07	5.9E-05	2.1E-05	4.9E-05	8.9E-05	3.4E-05
residential	488331	3617925	2.3E-03	2.1E-03	2.1E-03	2.2E-03	2.4E-04	2.4E-04	2.9E-04	3.0E-04	2.1E-03	5.3E-05	5.5E-05	5.3E-04	8.8E-06	3.5E-07	4.8E-05	2.0E-05	4.5E-05	7.9E-05	3.3E-05
residential	488431	3617925	2.3E-03	2.0E-03	2.1E-03	2.2E-03	2.4E-04	2.4E-04	2.9E-04	3.1E-04	2.0E-03	4.3E-05	4.5E-05	5.2E-04	7.2E-06	3.7E-07	3.8E-05	1.9E-05	4.1E-05	7.0E-05	2.9E-05
residential	488531	3617925	2.2E-03	2.0E-03	2.1E-03	2.1E-03	2.3E-04	2.3E-04	2.8E-04	3.0E-04	1.8E-03	4.0E-05	4.2E-05	5.1E-04	6.0E-06	3.8E-07	3.1E-05	1.8E-05	3.9E-05	6.2E-05	2.8E-05
residential	488631	3617925	2.1E-03	1.9E-03	2.0E-03	2.0E-03	2.3E-04	2.3E-04	2.7E-04	2.9E-04	1.8E-03	3.7E-05	3.8E-05	4.9E-04	5.1E-06	4.0E-07	2.6E-05	1.7E-05	3.7E-05	5.5E-05	2.6E-05
residential	488731	3617925	2.0E-03	1.8E-03	1.9E-03	1.9E-03	2.1E-04	2.1E-04	2.6E-04	2.7E-04	1.7E-03	3.9E-05	4.0E-05	4.8E-04	4.5E-06	4.2E-07	2.2E-05	1.6E-05	3.5E-05	5.0E-05	2.7E-05
residential	488831	3617925	1.9E-03	1.8E-03	1.8E-03	1.8E-03	2.0E-04	2.0E-04	2.4E-04	2.6E-04	1.6E-03	3.9E-05	4.0E-05	4.7E-04	4.0E-06	4.5E-07	1.9E-05	1.5E-05	3.3E-05	4.5E-05	2.8E-05
residential	488931	3617925	1.9E-03	1.7E-03	1.7E-03	1.8E-03	1.9E-04	1.9E-04	2.3E-04	2.5E-04	1.6E-03	3.8E-05	3.9E-05	4.6E-04	3.5E-06	4.8E-07	1.7E-05	1.4E-05	3.2E-05	4.2E-05	2.8E-05
residential	489031	3617925	1.8E-03	1.6E-03	1.7E-03	1.7E-03	1.8E-04	1.8E-04	2.2E-04	2.3E-04	1.5E-03	3.8E-05	3.8E-05	4.5E-04	3.2E-06	5.2E-07	1.5E-05	1.3E-05	3.1E-05	3.8E-05	2.8E-05
residential	489131	3617925	1.7E-03	1.5E-03	1.6E-03	1.6E-03	1.8E-04	1.8E-04	2.1E-04	2.2E-04	1.4E-03	3.7E-05	3.7E-05	4.4E-04	2.9E-06	5.7E-07	1.3E-05	1.2E-05	2.9E-05	3.5E-05	2.8E-05
residential	482931	3618025	2.4E-03	2.6E-03	2.1E-03	1.9E-03	1.7E-04	1.5E-04	1.7E-04	1.6E-04	1.6E-03	3.3E-05	2.9E-05	2.0E-03	2.9E-07	7.7E-08	1.2E-06	5.7E-06	2.3E-05	7.4E-06	1.4E-04
residential	483031	3618025	2.5E-03	2.7E-03	2.2E-03	1.9E-03	1.8E-04	1.6E-04	1.7E-04	1.7E-04	1.7E-03	3.5E-05	3.1E-05	2.0E-03	3.0E-07	7.7E-08	1.3E-06	5.9E-06	2.5E-05	7.6E-06	1.4E-04
residential	483131	3618025	2.6E-03	2.9E-03	2.3E-03	2.0E-03	1.9E-04	1.6E-04	1.8E-04	1.8E-04	1.9E-03	3.7E-05	3.3E-05	2.1E-03	3.1E-07	7.8E-08	1.3E-06	6.2E-06	2.6E-05	7.9E-06	1.5E-04
residential	483231	3618025	2.8E-03	3.0E-03	2.5E-03	2.1E-03	2.0E-04	1.7E-04	1.9E-04	1.8E-04	2.0E-03	4.0E-05	3.6E-05	2.1E-03	3.2E-07	7.9E-08	1.3E-06	6.5E-06	2.8E-05	8.1E-06	1.5E-04
residential	483331	3618025	3.0E-03	3.2E-03	2.6E-03	2.3E-03	2.1E-04	1.8E-04	2.0E-04	1.9E-04	2.2E-03	4.3E-05	3.8E-05	2.2E-03	3.3E-07	7.9E-08	1.4E-06	6.9E-06	3.1E-05	8.4E-06	1.6E-04
residential	483431	3618025	3.2E-03	3.4E-03	2.8E-03	2.4E-03	2.2E-04	1.8E-04	2.1E-04	2.0E-04	2.4E-03	4.7E-05	4.1E-05	2.2E-03	3.4E-07	8.0E-08	1.4E-06	7.2E-06	3.3E-05	8.7E-06	1.7E-04
residential	483531	3618025	3.4E-03	3.7E-03	2.9E-03	2.5E-03	2.3E-04	1.9E-04	2.2E-04	2.1E-04	2.6E-03	5.0E-05	4.5E-05	2.3E-03	3.5E-07	8.1E-08	1.4E-06	7.6E-06	3.6E-05	9.1E-06	1.7E-04
residential	483631	3618025	3.6E-03	3.9E-03	3.1E-03	2.7E-03	2.4E-04	2.0E-04	2.3E-04	2.2E-04	2.9E-03	5.4E-05	4.8E-05	2.4E-03	3.6E-07	8.2E-08	1.5E-06	8.0E-06	3.9E-05	9.4E-06	1.8E-04
residential	483731	3618025	3.9E-03	4.1E-03	3.3E-03	2.8E-03	2.6E-04	2.1E-04	2.4E-04	2.3E-04	3.2E-03	5.9E-05	5.2E-05	2.5E-03	3.7E-07	8.2E-08	1.5E-06	8.5E-06	4.3E-05	9.8E-06	2.0E-04
residential	483831	3618025	4.1E-03	4.3E-03	3.5E-03	3.0E-03	2.7E-04	2.2E-04	2.5E-04	2.4E-04	3.6E-03	6.4E-05	5.6E-05	2.6E-03	3.8E-07	8.3E-08	1.6E-06	9.0E-06	4.8E-05	1.0E-05	2.1E-04
residential	483931	3618025	4.4E-03	4.5E-03	3.7E-03	3.2E-03	2.9E-04	2.4E-04	2.6E-04	2.6E-04	4.1E-03	7.0E-05	6.1E-05	2.7E-03	3.9E-07	8.4E-08	1.6E-06	9.5E-06	5.3E-05	1.1E-05	2.2E-04
residential	486231	3618025	6.4E-03	5.4E-03	5.6E-03	5.5E-03	5.4E-04	5.2E-04	6.3E-04	7.1E-04	1.6E-02	5.0E-04	5.8E-04	1.1E-03	1.0E-06	1.4E-07	4.1E-06	6.3E-04	1.5E-03	2.2E-04	7.8E-05
residential	486331	3618025	6.0E-03	5.0E-03	5.3E-03	5.1E-03	5.2E-04	4.9E-04	6.0E-04	6.5E-04	1.3E-02	4.1E-04	4.6E-04	1.0E-03	1.1E-06	1.5E-07	4.3E-06	4.7E-04	8.4E-04	3.6E-04	7.3E-05
residential	486431	3618025	5.6E-03	4.7E-03	4.9E-03	4.8E-03	5.0E-04	4.7E-04	5.7E-04	6.2E-04	1.1E-02	3.4E-04	3.7E-04	9.6E-04	1.2E-06	1.5E-07	4.5E-06	2.9E-04	5.3E-04	3.9E-04	6.9E-05
residential	486531	3618025	5.3E-03	4.4E-03	4.6E-03	4.5E-03	4.7E-04	4.5E-04	5.5E-04	6.0E-04	9.2E-03	2.9E-04	3.1E-04	9.1E-04	1.2E-06	1.6E-07	4.8E-06	1.8E-04	3.8E-04	3.6E-04	6.6E-05
residential	486631	3618025	4.9E-03	4.1E-03	4.3E-03	4.3E-03	4.5E-04	4.3E-04	5.3E-04	5.8E-04	7.9E-03	2.5E-04	2.6E-04	8.7E-04	1.4E-06	1.6E-07	5.2E-06	1.2E-04	2.9E-04	3.3E-04	6.3E-05
residential	486931	3618025	4.1E-03	3.5E-03	3.6E-03	3.6E-03	3.9E-04	3.8E-04	4.6E-04	5.1E-04	5.2E-03	1.6E-04	1.6E-04	7.5E-04	2.0E-06	1.8E-07	6.4E-06	6.1E-05	1.6E-04	2.4E-04	5.5E-05
residential	487031	3618025	3.9E-03	3.3E-03	3.4E-03	3.4E-03	3.7E-04	3.6E-04	4.4E-04	4.8E-04	4.7E-03	1.4E-04	1.5E-04	7.3E-04	2.5E-06	1.9E-07	8.0E-06	5.2E-05	1.4E-04	2.2E-04	5.2E-05
residential	487131	3618025	3.7E-03	3.1E-03	3.2E-03	3.2E-03	3.5E-04	3.4E-04	4.2E-04	4.6E-04	4.3E-03	1.3E-04	1.3E-04	7.0E-04	3.4E-06	2.0E-07	1.0E-05	4.6E-05	1.2E-04	2.1E-04	5.0E-05
residential	487231	3618025	3.5E-03	3.0E-03	3.1E-03	3.1E-03	3.3E-04	3.2E-04	4.0E-04	4.3E-04	3.9E-03	1.2E-04	1.2E-04	6.8E-04	4.6E-06	2.1E-07	1.4E-05	4.1E-05	1.1E-04	1.9E-04	4.9E-05
residential	487331	3618025	3.3E-03	2.8E-03	2.9E-03	2.9E-03	3.2E-04	3.1E-04	3.8E-04	4.1E-04	3.6E-03	1.1E-04	1.1E-04	6.6E-04	6.5E-06	2.1E-07	1.9E-05	3.6E-05	9.5E-05	1.8E-04	4.7E-05
residential	487431	3618025	3.1E-03	2.7E-03	2.8E-03	2.8E-03	3.0E-04	3.0E-04	3.6E-04	3.9E-04	3.3E-03	9.9E-05	9.9E-05	6.4E-04	1.0E-05	2.2E-07	2.6E-05	3.3E-05	8.6E-05	1.7E-04	4.5E-05
school	487531	3618025	3.0E-03	2.6E-03	2.7E-03	2.7E-03	2.9E-04	2.8E-04	3.5E-04	3.7E-04	3.1E-03	9.1E-05	9.1E-05	6.2E-04	1.5E-05	2.3E-07	4.0E-05	3.0E-05	7.8E-05	1.6E-04	4.4E-05
school	487631	3618025	2.8E-03	2.5E-03	2.5E-03	2.5E-03	2.8E-04	2.7E-04	3.3E-04	3.6E-04	2.9E-03	8.5E-05	8.5E-05	6.1E-04	1.7E-05	2.5E-07	5.6E-05	2.7E-05	7.2E-05	1.4E-04	4.2E-05
school	487731	3618025	2.7E-03	2.4E-03	2.4E-03	2.4E-03	2.7E-04	2.6E-04	3.2E-04	3.4E-04	2.7E-03	7.9E-05	7.9E-05	5.9E-04	1.8E-05	2.6E-07	6.5E-05	2.5E-05	6.6E-05	1.3E-04	4.1E-05
school	487831	3618025	2.6E-03	2.3E-03	2.4E-03	2.4E-03	2.6E-04	2.5E-04	3.1E-04	3.3E-04	2.6E-03	7.4E-05	7.4E-05	5.8E-04	1.7E-05	2.7E-07	7.0E-05	2.4E-05	6.1E-05	1.2E-04	4.0E-05
residential	487931	3618025	2.6E-03	2.3E-03	2.3E-03	2.3E-03	2.5E-04	2.5E-04	3.0E-04	3.2E-04	2.5E-03	7.0E-05	7.0E-05	5.7E-04	1.6E-05	2.9E-07	7.5E-05	2.3E-05	5.9E-05	1.2E-04	3.8E-05
residential	488031	3618025	2.5E-03	2.2E-03	2.3E-03	2.3E-03	2.5E-04	2.4E-04	3.0E-04	3.1E-04	2.4E-03	6.5E-05	6.6E-05	5.6E-04	1.4E-05	3.0E-07	7.0E-05	2.2E-05	5.5E-05	1.1E-04	3.7E-05
residential	488131	3618025	2.4E-03	2.1E-03	2.2E-03	2.2E-03	2.4E-04	2.4E-04	2.8E-04	3.0E-04	2.2E-03	6.1E-05	6.1E-05	5.5E-04	1.2E-05	3.1E-07	6.3E-05	2.0E-05	5.1E-05	9.6E-05	3.6E-05
residential	488231	3618025	2.3E-03	2.0E-03	2.1E-03	2.1E-03	2.3E-04	2.2E-04	2.7E-04	2.9E-04	2.1E-03	5.7E-05	5.8E-05	5.3E-04	1.0E-05	3.3E-07	5.5E-05	1.9E-05	4.7E-05	8.4E-05	3.5E-05
residential	488331	3618025	2.2E-03	2.0E-03	2.1E-03	2.1E-03	2.3E-04	2.2E-04	2.7E-04	2.9E-04	2.0E-03	5.3E-05	5.4E-05	5.3E-04	8.7E-06	3.5E-07	4.6E-05	1.8E-05	4.4E-05	7.7E-05	3.3E-05
residential	488431	3618025	2.2E-03	2.0E-03	2.1E-03	2.1E-03	2.3E-04	2.3E-04	2.8E-04	2.9E-04	1.9E-03	4.3E-05	4.5E-05	5.2E-04	7.2E-06	3.6E-07	3.8E-05	1.7E-05	4.1E-05	6.9E-05	2.9E-05
residential	488531	3618025	2.2E-03	1.9E-03	2.0E-03	2.0E-03	2.2E-04	2.2E-04	2.7E-04	2.8E-04	1.8E-03	4.1E-05	4.2E-05	5.1E-04	6.1E-06	3.7E-07	3.2E-05	1.6E-05	3.8E-05	6.1E-05	2.8E-05
residential	488631	3618025	2.1E-03	1.9E-03	1.9E-03	2.0E-03	2.2E-04	2.2E-04	2.6E-04	2.8E-04	1.7E-03	3.6E-05	3.8E-05	4.9E-04	5.2E-06	3.9E-07	2.6E-05	1.6E-05	3.6E-05	5.5E-05	2.6E-05
residential	488731	3618025	2.0E-03	1.8E-03	1.8E-03	1.8E-03	2.0E-04	2.0E-04	2.4E-04	2.6E-04	1.7E-03	4.0E-05	4.1E-05	4.8E-04	4.5E-06	4.1E-07	2.3E-05	1.5E-05	3.5E-05	4.9E-05	2.8E-05
residential	488831	3618025	1.8E-03	1.6E-03	1.7E-03	1.7E-03	1.8E-04	1.8E-04	2.2E-04	2.3E-04	1.5E-03	4.2E-05	4.2E-05	4.6E-04	4.0E-06	4.5E-07	1.8E-05	1.3E-05	3.3E-05	4.3E-05	3.0E-05
residential	488931	3618025	1.7E-03	1.6E-03	1.6E-03	1.6E-03	1.8E-04	1.8E-04	2.1E-04	2.2E-04	1.5E-03	4.0E-05	4.0E-05	4.5E-04	3.5E-06	4.8E-07	1.6E-05	1.2E-05	3.1E-05	3.9E-05	3.0E-05
residential	489031	3618025	1.8E-03	1.6E-03	1.6E-03	1.6E-03	1.8E-04	1.8E-04	2.1E-04	2.2E-04	1.4E-03	3.7E-05	3.7E-05	4.5E-04	3.1E-06	5.1E-07	1.5E-05	1.2E-05	3.0E-05	3.7E-05	2.8E-05
residential	489131	3618025	1.7E-03	1.5E-03	1.5E-03	1.5E-03	1.7E-04	1.7E-04	2.0E-04	2.1E-04	1.4E-03	3.6E-05	3.6E-05	4.4E-04	2.8E-06	5.5E-07	1.2E-05	1.1E-05	2.8E-05	3.4E-05	2.8E-05
residential	482931	3618125	2.3E-03	2.4E-03	2.0E-03	1.8E-03	1.7E-04	1.4E-04	1.6E-04	1.6E-04	1.5E-03	3.2E-05	2.8E-05	2.1E-03	2.7E-07	7.5E-08	1.1E-06	5.1E-06	2.1E-05	6.8E-06	1.4E-04
residential	483031	3618125	2.4E-03	2.6E-03	2.1E-03	1.8E-03	1.7E-04	1.5E-04	1.7E-04	1.6E-04	1.6E-03	3.4E-05	3.0E-05	2.1E-03	2.8E-07	7.6E-08	1.2E-06	5.3E-06	2.3E-05	7.0E-06	1.5E-04
residential	483131	3618125	2.5E-03	2.7E-03	2.2E-03	1.9E-03	1.8E-04	1.5E-04	1.7E-04	1.7E-04	1.7E-03	3.6E-05	3.2E-05	2.2E-03	2.9E-07	7.6E-08	1.2E-06	5.6E-06	2.4E-05	7.2E-06	1.6E-04
residential	483231	3618125	2.7E-03	2.9E-03	2.3E-03	2.0E-03	1.9E-04	1.6E-04	1.8E-04	1.7E-04	1.8E-03	3.9E-05	3.4E-05	2.2E-03	3.0E-07	7.7E-08	1.2E-06	5.8E-06	2.6E-05	7.4E-06	1.6E-04
residential	483331	3618125	2.8E-03	3.0E-03	2.4E-03	2.1E-03	2.0E-04	1.7E-04	1.9E-04	1.8E-04	1.9E-03	4.2E-05	3.7E-05	2.3E-03	3.0E-07	7.8E-08	1.3E-06	6.1E-06	2.8E-05	7.7E-06	1.7E-04
residential	483431	3618125	3.0E-03	3.2E-03	2.6E-03	2.2E-03	2.0E-04	1.7E-04	1.9E-04	1.9E-04	2.1E-03	4.5E-05	4.0E-05	2.4E-03	3.1E-07	7.8E-08	1.3E-06	6.4E-06	3.0E-05	7.9E-06	1.8E-04
residential	483531	3618125	3.2E-03	3.4E-03	2.7E-03	2.4E-03	2.2E-04	1.8E-04	2.0E-04	2.0E-04	2.3E-03	4.8E-05	4.3E-05	2.4E-03	3.2E-07	7.9E-08	1.3E-06	6.7E-06	3.3E-05	8.2E-06	1.9E-04
residential	483631	3618125	3.5E-03	3.7E-03	3.0E-03	2.6E-03	2.3E-04	1.9E-04	2.2E-04	2.1E-04	2.5E-03	5.2E-05	4.6E-05	2.6E-03	3.3E-07	8.0E-08	1.4E-06	7.0E-06	3.6E-05	8.5E-06	1.9E-04
school	486031	3618125	7.4E-03	5.9E-03	5.8E-03	5.2E-03	5.3E-04	6.1E-04	8.1E-04	1.0E-03	2.5E-02	7.9E-04	8.2E-04	1.2E-03	7.9E-07	1.3E-07	3.2E-06	3.0E-04	2.2E-03	4.4E-05	8.9E-05
school	486131	3618125	6.9E-03	5.5E-03	5.4E-03	5.0E-03	5.1E-04	5.6E-04	7.1E-04	8.5E-04	1.9E-02	6.1E-04	6.1E-04	1.1E-03	8.3E-07	1.4E-07	3.3E-06	3.7E-04	1.5E-03	7.0E-05	8.3E-05
residential	486231	3618125	6.4E-03	5.1E-03	5.1E-03	4.8E-03	4.9E-04	5.2E-04	6.4E-04	7.3E-04	1.5E-02	4.8E-04	4.8E-04	1.1E-03	8.7E-07	1.4E-07	3.5E-06	3.9E-04	1.0E-03	1.3E-04	7.8E-05
residential	486331	3618125	5.9E-03	4.7E-03	4.8E-03	4.5E-03	4.7E-04	4.9E-04	6.0E-04	6.6E-04	1.2E-02	3.9E-04	3.8E-04	1.0E-03	9.3E-07	1.4E-07	3.7E-06	3.5E-04	7.0E-04	2.1E-04	7.3E-05
residential	486431	3618125	5.5E-03	4.5E-03	4.5E-03	4.3E-03	4.5E-04	4.6E-04	5.6E-04	6.1E-04	1.0E-02	3.2E-04	3.2E-04	9.5E-04	9.9E-07	1.5E-07	3.9E-06	2.7E-04	4.9E-04	2.5E-04	6.9E-05
residential	486531	3618125	5.1E-03	4.2E-03	4.2E-03	4.1E-03	4.3E-04	4.3E-04	5.3E-04	5.8E-04	8.4E-03	2.7E-04	2.7E-04	9.0E-04	1.1E-06	1.6E-07	4.1E-06	1.9E-04	3.5E-04	2.6E-04	6.6E-05
residential	486831	3618125	4.2E-03	3.5E-03	3.6E-03	3.5E-03	3.7E-04	3.7E-04	4.6E-04	5.0E-04	5.4E-03	1.7E-04	1.7E-04	7.8E-04	1.5E-06	1.7E-07	5.1E-06	6.9E-05	1.7E-04	2.2E-04	5.7E-05
residential	486931	3618125	4.0E-03	3.3E-03	3.4E-03	3.3E-03	3.6E-04	3.6E-04	4.4E-04	4.8E-04	4.8E-03	1.5E-04	1.5E-04	7.5E-04	1.8E-06	1.8E-07	6.0E-06	5.5E-05	1.4E-04	2.0E-04	5.4E-05
residential	487031	3618125	3.8E-03	3.1E-03	3.2E-03	3.1E-03	3.4E-04	3.4E-04	4.1E-04	4.5E-04	4.3E-03	1.3E-04	1.3E-04	7.2E-04	2.3E-06	1.9E-07	7.5E-06	4.7E-05	1.2E-04	1.9E-04	5.2E-05
residential	487131	3618125	3.5E-03	3.0E-03	3.0E-03	3.0E-03	3.2E-04	3.2E-04	3.9E-04	4.3E-04	3.9E-03	1.2E-04	1.2E-04	7.0E-04	3.0E-06	1.9E-07	9.6E-06	4.1E-05	1.1E-04	1.8E-04	5.0E-05
residential	487231	3618125	3.4E-03	2.8E-03	2.9E-03	2.9E-03	3.1E-04	3.1E-04	3.7E-04	4.0E-04	3.6E-03	1.1E-04	1.1E-04	6.7E-04	3.9E-06	2.0E-07	1.2E-05	3.6E-05	9.7E-05	1.7E-04	4.8E-05
residential	487331	3618125	3.2E-03	2.7E-03	2.7E-03	2.7E-03	2.9E-04	2.9E-04	3.6E-04	3.8E-04	3.3E-03	1.0E-04	9.8E-05	6.5E-04	5.4E-06	2.1E-07	1.6E-05	3.3E-05	8.8E-05	1.6E-04	4.6E-05
residential	487431	3618125	3.0E-03	2.6E-03	2.6E-03	2.6E-03	2.8E-04	2.8E-04	3.4E-04	3.7E-04	3.1E-03	9.3E-05	9.1E-05	6.3E-04	8.2E-06	2.2E-07	2.2E-05	3.0E-05	8.0E-05	1.5E-04	4.5E-05
school	487531	3618125	2.9E-03	2.5E-03	2.5E-03	2.5E-03	2.7E-04	2.7E-04	3.2E-04	3.5E-04	2.9E-03	8.6E-05	8.4E-05	6.2E-04	1.1E-05	2.3E-07	3.2E-05	2.7E-05	7.3E-05	1.4E-04	4.3E-05
school	487631	3618125	2.7E-03	2.4E-03	2.4E-03	2.4E-03	2.6E-04	2.5E-04	3.1E-04	3.3E-04	2.6E-03	7.8E-05	7.7E-05	6.0E-04	1.3E-05	2.4E-07	4.2E-05	2.5E-05	6.6E-05	1.3E-04	4.2E-05
school	487731	3618125	2.6E-03	2.3E-03	2.3E-03	2.3E-03	2.5E-04	2.5E-04	3.0E-04	3.2E-04	2.5E-03	7.4E-05	7.2E-05	5.8E-04	1.3E-05	2.5E-07	4.9E-05	2.3E-05	6.1E-05	1.2E-04	4.1E-05
school	487831	3618125	2.5E-03	2.2E-03	2.2E-03	2.2E-03	2.4E-04	2.4E-04	2.9E-04	3.1E-04	2.4E-03	7.0E-05	6.8E-05	5.7E-04	1.4E-05	2.6E-07	5.3E-05	2.2E-05	5.8E-05	1.1E-04	4.0E-05
residential	487931	3618125	2.5E-03	2.1E-03	2.2E-03	2.2E-03	2.4E-04	2.3E-04	2.8E-04	3.0E-04	2.3E-03	6.7E-05	6.6E-05	5.7E-04	1.4E-05	2.8E-07	5.8E-05	2.1E-05	5.5E-05	1.1E-04	3.9E-05
residential	488031	3618125	2.4E-03	2.1E-03	2.2E-03	2.2E-03	2.4E-04	2.3E-04	2.8E-04	3.0E-04	2.3E-03	6.2E-05	6.3E-05	5.6E-04	1.2E-05	2.9E-07	5.8E-05	2.0E-05	5.2E-05	1.0E-04	3.7E-05
residential	488131	3618125	2.3E-03	2.0E-03	2.1E-03	2.1E-03	2.3E-04	2.2E-04	2.7E-04	2.9E-04	2.1E-03	5.9E-05	5.9E-05	5.5E-04	1.1E-05	3.1E-07	5.4E-05	1.9E-05	4.9E-05	9.1E-05	3.6E-05
residential	488231	3618125	2.2E-03	1.9E-03	2.0E-03	2.0E-03	2.2E-04	2.1E-04	2.6E-04	2.7E-04	2.0E-03	5.5E-05	5.5E-05	5.3E-04	9.8E-06	3.2E-07	4.9E-05	1.7E-05	4.5E-05	8.1E-05	3.5E-05
residential	488331	3618125	2.2E-03	1.9E-03	2.0E-03	2.0E-03	2.1E-04	2.1E-04	2.5E-04	2.7E-04	1.9E-03	5.2E-05	5.2E-05	5.2E-04	8.4E-06	3.4E-07	4.3E-05	1.6E-05	4.3E-05	7.4E-05	3.3E-05
residential	488431	3618125	2.2E-03	1.9E-03	2.0E-03	2.0E-03	2.2E-04	2.2E-04	2.6E-04	2.7E-04	1.9E-03	4.5E-05	4.6E-05	5.2E-04	7.1E-06	3.5E-07	3.7E-05	1.6E-05	4.0E-05	6.7E-05	3.0E-05
residential	488531	3618125	2.1E-03	1.9E-03	1.9E-03	1.9E-03	2.1E-04	2.1E-04	2.5E-04	2.7E-04	1.8E-03	4.2E-05	4.3E-05	5.0E-04	6.1E-06	3.6E-07	3.2E-05	1.5E-05	3.7E-05	6.1E-05	2.8E-05
residential	488631	3618125	2.0E-03	1.8E-03	1.9E-03	1.9E-03	2.1E-04	2.1E-04	2.5E-04	2.6E-04	1.7E-03	3.6E-05	3.8E-05	4.9E-04	5.3E-06	3.8E-07	2.7E-05	1.4E-05	3.5E-05	5.4E-05	2.7E-05
residential	488731	3618125	1.9E-03	1.7E-03	1.7E-03	1.7E-03	1.9E-04	1.9E-04	2.3E-04	2.4E-04	1.6E-03	4.1E-05	4.1E-05	4.8E-04	4.6E-06	4.1E-07	2.3E-05	1.3E-05	3.4E-05	4.9E-05	2.9E-05
residential	488831	3618125	1.8E-03	1.6E-03	1.6E-03	1.6E-03	1.8E-04	1.7E-04	2.1E-04	2.2E-04	1.5E-03	4.0E-05	4.0E-05	4.6E-04	4.0E-06	4.4E-07	1.9E-05	1.2E-05	3.1E-05	4.3E-05	3.0E-05
residential	488931	3618125	1.7E-03	1.5E-03	1.6E-03	1.6E-03	1.7E-04	1.7E-04	2.0E-04	2.1E-04	1.4E-03	3.8E-05	3.8E-05	4.5E-04	3.5E-06	4.7E-07	1.6E-05	1.2E-05	3.0E-05	3.9E-05	3.0E-05
residential	489031	3618125	1.7E-03	1.5E-03	1.5E-03	1.5E-03	1.7E-04	1.7E-04	2.0E-04	2.1E-04	1.4E-03	3.7E-05	3.6E-05	4.5E-04	3.1E-06	5.0E-07	1.5E-05	1.1E-05	2.9E-05	3.6E-05	2.9E-05
residential	489131	3618125	1.6E-03	1.5E-03	1.5E-03	1.5E-03	1.6E-04	1.6E-04	1.9E-04	2.0E-04	1.3E-03	3.5E-05	3.5E-05	4.4E-04	2.8E-06	5.4E-07	1.3E-05	1.1E-05	2.7E-05	3.3E-05	2.8E-05
residential	483031	3618225	2.3E-03	2.4E-03	2.0E-03	1.7E-03	1.6E-04	1.4E-04	1.6E-04	1.5E-04	1.4E-03	3.2E-05	2.9E-05	2.2E-03	2.6E-07	7.4E-08	1.1E-06	4.8E-06	2.1E-05	6.4E-06	1.6E-04
residential	483131	3618225	2.4E-03	2.5E-03	2.1E-03	1.8E-03	1.7E-04	1.5E-04	1.6E-04	1.6E-04	1.5E-03	3.5E-05	3.1E-05	2.3E-03	2.7E-07	7.5E-08	1.1E-06	5.0E-06	2.2E-05	6.6E-06	1.6E-04
residential	483231	3618225	2.5E-03	2.7E-03	2.2E-03	1.9E-03	1.8E-04	1.5E-04	1.7E-04	1.7E-04	1.6E-03	3.7E-05	3.3E-05	2.3E-03	2.8E-07	7.5E-08	1.2E-06	5.2E-06	2.4E-05	6.8E-06	1.7E-04
residential	483331	3618225	2.7E-03	2.9E-03	2.3E-03	2.0E-03	1.9E-04	1.6E-04	1.8E-04	1.8E-04	1.7E-03	4.0E-05	3.5E-05	2.4E-03	2.8E-07	7.6E-08	1.2E-06	5.4E-06	2.5E-05	7.0E-06	1.8E-04
school	485931	3618225	7.6E-03	5.8E-03	5.2E-03	4.8E-03	5.7E-04	6.6E-04	8.3E-04	9.0E-04	3.1E-02	9.1E-04	9.7E-04	1.3E-03	6.6E-07	1.2E-07	2.7E-06	1.5E-04	2.0E-03	2.9E-05	9.4E-05
school	486031	3618225	7.0E-03	5.4E-03	5.0E-03	4.7E-03	5.3E-04	6.2E-04	7.8E-04	8.9E-04	2.3E-02	6.7E-04	7.2E-04	1.2E-03	6.9E-07	1.3E-07	2.8E-06	2.0E-04	1.4E-03	4.0E-05	8.8E-05
residential	486131	3618225	6.5E-03	5.0E-03	4.7E-03	4.5E-03	5.0E-04	5.8E-04	7.3E-04	8.3E-04	1.8E-02	5.1E-04	5.3E-04	1.1E-03	7.2E-07	1.3E-07	2.9E-06	2.5E-04	1.0E-03	5.8E-05	8.3E-05
residential	486231	3618225	6.0E-03	4.7E-03	4.5E-03	4.3E-03	4.7E-04	5.3E-04	6.7E-04	7.5E-04	1.4E-02	4.1E-04	4.1E-04	1.0E-03	7.6E-07	1.4E-07	3.1E-06	2.7E-04	7.9E-04	9.5E-05	7.8E-05
residential	486331	3618225	5.6E-03	4.4E-03	4.3E-03	4.1E-03	4.5E-04	4.9E-04	6.1E-04	6.8E-04	1.1E-02	3.4E-04	3.3E-04	9.9E-04	8.1E-07	1.4E-07	3.2E-06	2.6E-04	5.9E-04	1.4E-04	7.3E-05
residential	486431	3618225	5.2E-03	4.1E-03	4.1E-03	3.9E-03	4.2E-04	4.6E-04	5.7E-04	6.2E-04	9.3E-03	2.8E-04	2.8E-04	9.4E-04	8.8E-07	1.5E-07	3.4E-06	2.3E-04	4.4E-04	1.8E-04	6.9E-05
residential	486731	3618225	4.3E-03	3.5E-03	3.5E-03	3.4E-03	3.7E-04	3.8E-04	4.7E-04	5.0E-04	5.9E-03	1.8E-04	1.7E-04	8.2E-04	1.3E-06	1.7E-07	4.4E-06	1.0E-04	2.0E-04	2.0E-04	5.9E-05
residential	486831	3618225	4.0E-03	3.3E-03	3.3E-03	3.2E-03	3.5E-04	3.6E-04	4.4E-04	4.8E-04	5.2E-03	1.6E-04	1.5E-04	7.9E-04	1.5E-06	1.7E-07	4.9E-06	7.7E-05	1.6E-04	2.0E-04	5.7E-05
residential	486931	3618225	3.8E-03	3.1E-03	3.1E-03	3.1E-03	3.3E-04	3.4E-04	4.2E-04	4.5E-04	4.5E-03	1.4E-04	1.3E-04	7.5E-04	1.8E-06	1.8E-07	5.9E-06	5.8E-05	1.4E-04	1.8E-04	5.4E-05
residential	487031	3618225	3.6E-03	3.0E-03	3.0E-03	2.9E-03	3.2E-04	3.3E-04	4.0E-04	4.3E-04	4.0E-03	1.2E-04	1.2E-04	7.2E-04	2.2E-06	1.8E-07	7.2E-06	4.6E-05	1.1E-04	1.7E-04	5.2E-05

Receptor	X	Y	All	Refrigerated ContainersExisting	Multi-Purpose General CargoExisting	Dry BulkExisting	All	Refrigerated ContainersExisting	Multi-Purpose General CargoExisting	Dry BulkExisting	All	Refrigerated ContainersExisting
			100%	89%	5%	6%	100%	73%	12%	15%	100%	57%
residential	487131	3617825	2E-02	1E-02	8E-04	9E-04	7E-04	5E-04	9E-05	1E-04	5E-05	3E-05
residential	487231	3617825	2E-02	1E-02	7E-04	9E-04	7E-04	5E-04	8E-05	1E-04	5E-05	3E-05
residential	487331	3617825	1E-02	1E-02	7E-04	8E-04	7E-04	5E-04	8E-05	1E-04	5E-05	3E-05
residential	487431	3617825	1E-02	1E-02	7E-04	8E-04	6E-04	5E-04	8E-05	9E-05	5E-05	3E-05
school	487531	3617825	1E-02	1E-02	6E-04	7E-04	6E-04	5E-04	8E-05	9E-05	4E-05	3E-05
school	487631	3617825	1E-02	1E-02	6E-04	7E-04	6E-04	4E-04	7E-05	9E-05	4E-05	2E-05
school	487731	3617825	1E-02	1E-02	6E-04	7E-04	6E-04	4E-04	7E-05	9E-05	4E-05	2E-05
school	487831	3617825	1E-02	1E-02	6E-04	6E-04	6E-04	4E-04	7E-05	8E-05	4E-05	2E-05
residential	487931	3617825	1E-02	1E-02	5E-04	6E-04	6E-04	4E-04	7E-05	8E-05	4E-05	2E-05
residential	488031	3617825	1E-02	1E-02	5E-04	6E-04	6E-04	4E-04	7E-05	8E-05	4E-05	2E-05
school	488131	3617825	1E-02	1E-02	5E-04	6E-04	6E-04	4E-04	7E-05	8E-05	3E-05	2E-05
school	488231	3617825	1E-02	9E-03	5E-04	6E-04	5E-04	4E-04	7E-05	8E-05	3E-05	2E-05
residential	488331	3617825	1E-02	9E-03	5E-04	6E-04	5E-04	4E-04	6E-05	8E-05	3E-05	2E-05
residential	488431	3617825	1E-02	9E-03	5E-04	6E-04	5E-04	4E-04	6E-05	8E-05	3E-05	2E-05
residential	488531	3617825	1E-02	9E-03	5E-04	5E-04	5E-04	4E-04	6E-05	7E-05	3E-05	2E-05
residential	488631	3617825	9E-03	8E-03	5E-04	5E-04	5E-04	4E-04	6E-05	7E-05	2E-05	1E-05
residential	488731	3617825	9E-03	8E-03	4E-04	5E-04	5E-04	4E-04	6E-05	7E-05	3E-05	2E-05
residential	488831	3617825	8E-03	7E-03	4E-04	5E-04	5E-04	3E-04	6E-05	7E-05	3E-05	2E-05
residential	488931	3617825	8E-03	7E-03	4E-04	4E-04	5E-04	3E-04	6E-05	7E-05	3E-05	2E-05
residential	489031	3617825	8E-03	7E-03	4E-04	4E-04	4E-04	3E-04	5E-05	6E-05	3E-05	2E-05
residential	489131	3617825	7E-03	7E-03	4E-04	4E-04	4E-04	3E-04	5E-05	6E-05	3E-05	2E-05
residential	482831	3617925	9E-03	8E-03	5E-04	5E-04	2E-03	1E-03	2E-04	3E-04	1E-04	7E-05
residential	482931	3617925	1E-02	9E-03	5E-04	6E-04	2E-03	1E-03	2E-04	3E-04	1E-04	8E-05
residential	483031	3617925	1E-02	9E-03	5E-04	6E-04	2E-03	1E-03	2E-04	3E-04	1E-04	8E-05
residential	483131	3617925	1E-02	1E-02	5E-04	6E-04	2E-03	1E-03	2E-04	3E-04	1E-04	8E-05
residential	483231	3617925	1E-02	1E-02	6E-04	7E-04	2E-03	1E-03	2E-04	3E-04	1E-04	8E-05
residential	483331	3617925	1E-02	1E-02	6E-04	7E-04	2E-03	2E-03	2E-04	3E-04	2E-04	9E-05
residential	483431	3617925	1E-02	1E-02	7E-04	7E-04	2E-03	2E-03	3E-04	3E-04	2E-04	9E-05
residential	483531	3617925	1E-02	1E-02	7E-04	8E-04	2E-03	2E-03	3E-04	3E-04	2E-04	9E-05
residential	483631	3617925	2E-02	1E-02	7E-04	8E-04	2E-03	2E-03	3E-04	3E-04	2E-04	1E-04
residential	483731	3617925	2E-02	1E-02	8E-04	9E-04	2E-03	2E-03	3E-04	3E-04	2E-04	1E-04
residential	483831	3617925	2E-02	2E-02	8E-04	9E-04	2E-03	2E-03	3E-04	3E-04	2E-04	1E-04
residential	483931	3617925	2E-02	2E-02	9E-04	1E-03	2E-03	2E-03	3E-04	4E-04	2E-04	1E-04
residential	484031	3617925	2E-02	2E-02	9E-04	1E-03	3E-03	2E-03	3E-04	4E-04	2E-04	1E-04
residential	484131	3617925	2E-02	2E-02	1E-03	1E-03	3E-03	2E-03	3E-04	4E-04	2E-04	1E-04
residential	486331	3617925	2E-02	2E-02	1E-03	1E-03	1E-03	7E-04	1E-04	1E-04	7E-05	4E-05
residential	486431	3617925	2E-02	2E-02	1E-03	1E-03	1E-03	7E-04	1E-04	1E-04	7E-05	4E-05
residential	486531	3617925	2E-02	2E-02	1E-03	1E-03	9E-04	7E-04	1E-04	1E-04	7E-05	4E-05
residential	486631	3617925	2E-02	2E-02	1E-03	1E-03	9E-04	6E-04	1E-04	1E-04	6E-05	4E-05
residential	486731	3617925	2E-02	2E-02	1E-03	1E-03	8E-04	6E-04	1E-04	1E-04	6E-05	3E-05
residential	486831	3617925	2E-02	2E-02	9E-04	1E-03	8E-04	6E-04	1E-04	1E-04	6E-05	3E-05
residential	487031	3617925	2E-02	1E-02	8E-04	9E-04	7E-04	5E-04	9E-05	1E-04	5E-05	3E-05
residential	487131	3617925	2E-02	1E-02	8E-04	9E-04	7E-04	5E-04	9E-05	1E-04	5E-05	3E-05
residential	487231	3617925	1E-02	1E-02	7E-04	8E-04	7E-04	5E-04	8E-05	1E-04	5E-05	3E-05
residential	487331	3617925	1E-02	1E-02	7E-04	8E-04	7E-04	5E-04	8E-05	1E-04	5E-05	3E-05
residential	487431	3617925	1E-02	1E-02	7E-04	7E-04	6E-04	5E-04	8E-05	9E-05	5E-05	3E-05
school	487531	3617925	1E-02	1E-02	6E-04	7E-04	6E-04	5E-04	8E-05	9E-05	4E-05	3E-05
school	487631	3617925	1E-02	1E-02	6E-04	7E-04	6E-04	4E-04	7E-05	9E-05	4E-05	2E-05
school	487731	3617925	1E-02	1E-02	6E-04	7E-04	6E-04	4E-04	7E-05	9E-05	4E-05	2E-05
school	487831	3617925	1E-02	1E-02	5E-04	6E-04	6E-04	4E-04	7E-05	8E-05	4E-05	2E-05
residential	487931	3617925	1E-02	1E-02	5E-04	6E-04	6E-04	4E-04	7E-05	8E-05	4E-05	2E-05
residential	488031	3617925	1E-02	1E-02	5E-04	6E-04	6E-04	4E-04	7E-05	8E-05	4E-05	2E-05
school	488131	3617925	1E-02	9E-03	5E-04	6E-04	6E-04	4E-04	7E-05	8E-05	3E-05	2E-05
school	488231	3617925	1E-02	9E-03	5E-04	6E-04	5E-04	4E-04	7E-05	8E-05	3E-05	2E-05
residential	488331	3617925	1E-02	9E-03	5E-04	5E-04	5E-04	4E-04	6E-05	8E-05	3E-05	2E-05
residential	488431	3617925	1E-02	9E-03	5E-04	5E-04	5E-04	4E-04	6E-05	8E-05	3E-05	2E-05
residential	488531	3617925	9E-03	8E-03	5E-04	5E-04	5E-04	4E-04	6E-05	7E-05	3E-05	2E-05
residential	488631	3617925	9E-03	8E-03	4E-04	5E-04	5E-04	4E-04	6E-05	7E-05	3E-05	1E-05
residential	488731	3617925	9E-03	8E-03	4E-04	5E-04	5E-04	4E-04	6E-05	7E-05	3E-05	2E-05
residential	488831	3617925	8E-03	7E-03	4E-04	5E-04	5E-04	3E-04	6E-05	7E-05	3E-05	2E-05
residential	488931	3617925	8E-03	7E-03	4E-04	4E-04	5E-04	3E-04	6E-05	7E-05	3E-05	2E-05
residential	489031	3617925	8E-03	7E-03	4E-04	4E-04	5E-04	3E-04	5E-05	7E-05	3E-05	2E-05
residential	489131	3617925	7E-03	6E-03	4E-04	4E-04	4E-04	3E-04	5E-05	6E-05	3E-05	2E-05
residential	482931	3618025	1E-02	9E-03	5E-04	5E-04	2E-03	1E-03	2E-04	3E-04	1E-04	8E-05
residential	483031	3618025	1E-02	9E-03	5E-04	6E-04	2E-03	1E-03	2E-04	3E-04	1E-04	8E-05
residential	483131	3618025	1E-02	9E-03	5E-04	6E-04	2E-03	2E-03	2E-04	3E-04	1E-04	8E-05
residential	483231	3618025	1E-02	1E-02	5E-04	6E-04	2E-03	2E-03	3E-04	3E-04	2E-04	9E-05
residential	483331	3618025	1E-02	1E-02	6E-04	7E-04	2E-03	2E-03	3E-04	3E-04	2E-04	9E-05
residential	483431	3618025	1E-02	1E-02	6E-04	7E-04	2E-03	2E-03	3E-04	3E-04	2E-04	1E-04
residential	483531	3618025	1E-02	1E-02	7E-04	7E-04	2E-03	2E-03	3E-04	3E-04	2E-04	1E-04
residential	483631	3618025	1E-02	1E-02	7E-04	8E-04	2E-03	2E-03	3E-04	3E-04	2E-04	1E-04
residential	483731	3618025	2E-02	1E-02	7E-04	8E-04	2E-03	2E-03	3E-04	4E-04	2E-04	1E-04
residential	483831	3618025	2E-02	1E-02	8E-04	9E-04	3E-03	2E-03	3E-04	4E-04	2E-04	1E-04
residential	483931	3618025	2E-02	2E-02	8E-04	9E-04	3E-03	2E-03	3E-04	4E-04	2E-04	1E-04
residential	486231	3618025	3E-02	2E-02	1E-03	1E-03	1E-03	8E-04	1E-04	2E-04	8E-05	4E-05
residential	486331	3618025	2E-02	2E-02	1E-03	1E-03	1E-03	7E-04	1E-04	1E-04	7E-05	4E-05
residential	486431	3618025	2E-02	2E-02	1E-03	1E-03	1E-03	7E-04	1E-04	1E-04	7E-05	4E-05
residential	486531	3618025	2E-02	2E-02	1E-03	1E-03	9E-04	7E-04	1E-04	1E-04	7E-05	4E-05
residential	486631	3618025	2E-02	2E-02	1E-03	1E-03	9E-04	6E-04	1E-04	1E-04	6E-05	4E-05
residential	486931	3618025	2E-02	1E-02	8E-04	9E-04	8E-04	6E-04	9E-05	1E-04	5E-05	3E-05
residential	487031	3618025	2E-02	1E-02	8E-04	9E-04	7E-04	5E-04	9E-05	1E-04	5E-05	3E-05
residential	487131	3618025	1E-02	1E-02	7E-04	8E-04	7E-04	5E-04	8E-05	1E-04	5E-05	3E-05
residential	487231	3618025	1E-02	1E-02	7E-04	8E-04	7E-04	5E-04	8E-05	1E-04	5E-05	3E-05
residential	487331	3618025	1E-02	1E-02	7E-04	7E-04	7E-04	5E-04	8E-05	1E-04	5E-05	3E-05
residential	487431	3618025	1E-02	1E-02	6E-04	7E-04	6E-04	5E-04	8E-05	9E-05	5E-05	3E-05
school	487531	3618025	1E-02	1E-02	6E-04	7E-04	6E-04	5E-04	7E-05	9E-05	4E-05	2E-05
school	487631	3618025	1E-02	1E-02	6E-04	7E-04	6E-04	4E-04	7E-05	9E-05	4E-05	2E-05
school	487731	3618025	1E-02	1E-02	5E-04	6E-04	6E-04	4E-04	7E-05	9E-05	4E-05	2E-05
school	487831	3618025	1E-02	1E-02	5E-04	6E-04	6E-04	4E-04	7E-05	8E-05	4E-05	2E-05
residential	487931	3618025	1E-02	9E-03	5E-04	6E-04	6E-04	4E-04	7E-05	8E-05	4E-05	2E-05
residential	488031	3618025	1E-02	9E-03	5E-04	6E-04	6E-04	4E-04	7E-05	8E-05	4E-05	2E-05
residential	488131	3618025	1E-02	9E-03	5E-04	6E-04	5E-04	4E-04	7E-05	8E-05	4E-05	2E-05
residential	488231	3618025	9E-03	8E-03	5E-04	5E-04	5E-04	4E-04	6E-05	8E-05	4E-05	2E-05
residential	488331	3618025	9E-03	8E-03	5E-04	5E-04	5E-04	4E-04	6E-05	8E-05	3E-05	2E-05
residential	488431	3618025	9E-03	8E-03	5E-04	5E-04	5E-04	4E-04	6E-05	8E-05	3E-05	2E-05
residential	488531	3618025	9E-03	8E-03	4E-04	5E-04	5E-04	4E-04	6E-05	7E-05	3E-05	2E-05
residential	488631	3618025	9E-03	8E-03	4E-04	5E-04	5E-04	4E-04	6E-05	7E-05	3E-05	1E-05
residential	488731	3618025	8E-03	7E-03	4E-04	5E-04	5E-04	4E-04	6E-05	7E-05	3E-05	2E-05
residential	488831	3618025	8E-03	7E-03	4E-04	4E-04	5E-04	3E-04	6E-05	7E-05	3E-05	2E-05
residential	488931	3618025	7E-03	7E-03	4E-04	4E-04	5E-04	3E-04	5E-05	7E-05	3E-05	2E-05
residential	489031	3618025	7E-03	7E-03	4E-04	4E-04	5E-04	3E-04	5E-05	7E-05	3E-05	2E-05
residential	489131	3618025	7E-03	6E-03	3E-04	4E-04	4E-04	3E-04	5E-05	6E-05	3E-05	2E-05
residential	482931	3618125	9E-03	8E-03	4E-04	5E-04	2E-03	2E-03	3E-04	3E-04	1E-04	8E-05
residential	483031	3618125	1E-02	9E-03	5E-04	5E-04	2E-03	2E-03	3E-04	3E-04	1E-04	8E-05
residential	483131	3618125	1E-02	9E-03	5E-04	6E-04	2E-03	2E-03	3E-04	3E-04	2E-04	9E-05
residential	483231	3618125	1E-02	9E-03	5E-04	6E-04	2E-03	2E-03	3E-04	3E-04	2E-04	9E-05
residential	483331	3618125	1E-02	1E-02	5E-04	6E-04	2E-03	2E-03	3E-04	3E-04	2E-04	1E-04
residential	483431	3618125	1E-02	1E-02	6E-04	7E-04	2E-03	2E-03	3E-04	3E-04	2E-04	1E-04
residential	483531	3618125	1E-02	1E-02	6E-04	7E-04	2E-03	2E-03	3E-04	4E-04	2E-04	1E-04
residential	483631	3618125	1E-02	1E-02	7E-04	8E-04	3E-03	2E-03	3E-04	4E-04	2E-04	1E-04
school	486031	3618125	3E-02	2E-02	1E-03	2E-03	1E-03	9E-04	1E-04	2E-04	9E-05	5E-05
school	486131	3618125	3E-02	2E-02	1E-03	1E-03	1E-03	8E-04	1E-04	2E-04	8E-05	5E-05
residential	486231	3618125	2E-02	2E-02	1E-03	1E-03	1E-03	8E-04	1E-04	2E-04	8E-05	4E-05
residential	486331	3618125	2E-02	2E-02	1E-03	1E-03	1E-03	7E-04	1E-04	1E-04	7E-05	4E-05
residential	486431	3618125	2E-02	2E-02	1E-03	1E-03	1E-03	7E-04	1E-04	1E-04	7E-05	4E-05
residential	486531	3618125	2E-02	2E-02	1E-03	1E-03	9E-04	7E-04	1E-04	1E-04	7E-05	4E-05
residential	486831	3618125	2E-02	1E-02	8E-04	9E-04	8E-04	6E-04	9E-05	1E-04	6E-05	3E-05
residential	486931	3618125	2E-02	1E-02	8E-04	9E-04	7E-04	5E-04	9E-05	1E-04	5E-05	3E-05
residential	487031	3618125	1E-02	1E-02	7E-04	8E-04	7E-04	5E-04	9E-05	1E-04	5E-05	3E-05
residential	487131	3618125	1E-02	1E-02	7E-04	8E-04	7E-04	5E-04	8E-05	1E-04	5E-05	3E-05
residential	487231	3618125	1E-02	1E-02	7E-04	7E-04	7E-04	5E-04	8E-05	1E-04	5E-05	3E-05
residential	487331	3618125	1E-02	1E-02	6E-04	7E-04	7E-04	5E-04	8E-05	9E-05	5E-05	3E-05
residential	487431	3618125	1E-02	1E-02	6E-04	7E-04	6E-04	5E-04	8E-05	9E-05	4E-05	3E-05
school	487531	3618125	1E-02	1E-02	6E-04	6E-04	6E-04	5E-04	7E-05	9E-05	4E-05	2E-05
school	487631	3618125	1E-02	1E-02	5E-04	6E-04	6E-04	4E-04	7E-05	9E-05	4E-05	2E-05
school	487731	3618125	1E-02	9E-03	5E-04	6E-04	6E-04	4E-04	7E-05	8E-05	4E-05	2E-05
school	487831	3618125	1E-02	9E-03	5E-04	6E-04	6E-04	4E-04	7E-05	8E-05	4E-05	2E-05
residential	487931	3618125	1E-02	9E-03	5E-04	6E-04	6E-04	4E-04	7E-05	8E-05	4E-05	2E-05
residential	488031	3618125	1E-02	9E-03	5E-04	6E-04	6E-04	4E-04	7E-05	8E-05	4E-05	2E-05
residential	488131	3618125	1E-02	9E-03	5E-04	5E-04	5E-04	4E-04	7E-05	8E-05	4E-05	2E-05
residential	488231	3618125	9E-03	8E-03	4E-04	5E-04	5E-04	4E-04	6E-05	8E-05	4E-05	2E-05
residential	488331	3618125	9E-03	8E-03	4E-04	5E-04	5E-04	4E-04	6E-05	8E-05	3E-05	2E-05
residential	488431	3618125	9E-03	8E-03	4E-04	5E-04	5E-04	4E-04	6E-05	7E-05	3E-05	2E-05
residential	488531	3618125	9E-03	8E-03	4E-04	5E-04	5E-04	4E-04	6E-05	7E-05	3E-05	2E-05
residential	488631	3618125	9E-03	8E-03	4E-04	5E-04	5E-04	4E-04	6E-05	7E-05	3E-05	2E-05
residential	488731	3618125	8E-03	7E-03	4E-04	4E-04	5E-04	4E-04	6E-05	7E-05	3E-05	2E-05
residential	488831	3618125	7E-03	7E-03	4E-04	4E-04	5E-04	3E-04	6E-05	7E-05	3E-05	2E-05
residential	488931	3618125	7E-03	6E-03	3E-04	4E-04	5E-04	3E-04	5E-05	7E-05	3E-05	2E-05
residential	489031	3618125	7E-03	6E-03	3E-04	4E-04	4E-04	3E-04	5E-05	6E-05	3E-05	2E-05
residential	489131	3618125	7E-03	6E-03	3E-04	4E-04	4E-04	3E-04	5E-05	6E-05	3E-05	2E-05
residential	483031	3618225	9E-03	8E-03	4E-04	5E-04	2E-03	2E-03	3E-04	3E-04	2E-04	9E-05
residential	483131	3618225	9E-03	8E-03	5E-04	5E-04	2E-03	2E-03	3E-04	3E-04	2E-04	9E-05
residential	483231	3618225	1E-02	9E-03	5E-04	6E-04	2E-03	2E-03	3E-04	3E-04	2E-04	1E-04
residential	483331	3618225	1E-02	1E-02	5E-04	6E-04	2E-03	2E-03	3E-04	4E-04	2E-04	1E-04
school	485931	3618225	3E-02	2E-02	1E-03	1E-03	1E-03	9E-04	2E-04	2E-04	9E-05	5E-05
school	486031	3618225	2E-02	2E-02	1E-03	1E-03	1E-03	9E-04	1E-04	2E-04	9E-05	5E-05
residential	486131	3618225	2E-02	2E-02	1E-03	1E-03	1E-03	8E-04	1E-04	2E-04	8E-05	5E-05
residential	486231	3618225	2E-02	2E-02	1E-03	1E-03	1E-03	8E-04	1E-04	2E-04	8E-05	4E-05
residential	486331	3618225	2E-02	2E-02	1E-03	1E-03	1E-03	7E-04	1E-04	1E-04	7E-05	4E-05
residential	486431	3618225	2E-02	2E-02	1E-03	1E-03	9E-04	7E-04	1E-04	1E-04	7E-05	4E-05
residential	486731	3618225	2E-02	1E-02	8E-04	9E-04	8E-04	6E-04	1E-04	1E-04	6E-05	3E-05
residential	486831	3618225	2E-02	1E-02	8E-04	9E-04	8E-04	6E-04	9E-05	1E-04	6E-05	3E-05
residential	486931	3618225	1E-02	1E-02	7E-04	8E-04	8E-04	6E-04	9E-05	1E-04	5E-05	3E-05
residential	487031	3618225	1E-02	1E-02	7E-04	8E-04	7E-04	5E-04	9E-05	1E-04	5E-05	3E-05

TAMT_HRA_Existing
DPM_annl

AERMOD Output	Multi-Purpose General CargoExisting	Dry BulkExisting	All	Refrigerated ContainersExisting	Multi-Purpose General CargoExisting	Dry BulkExisting	All	Refrigerated ContainersExisting	Multi-Purpose General CargoExisting	Dry BulkExisting	All	Refrigerated Containers	Multi-Purpose General Cargo	Dry Bulk	All		Dose Inhallation					Risk (Residential 30-yr; school 9-yr; park 15-year)							
	28%	15%	100%	63%	8%	29%	100%	0%	61%	39%	100%	67%	3%	30%		ug/m3	3rd tri	0<2	2<9	2<16	16<30	3rd tri	0<2	2<9	2<16	16<30	Summed Risk	Cases Per Million	Chronic HI
residential	1E-05	8E-06	5E-03	3E-03	4E-04	1E-03	3E-04	0E+00	2E-04	1E-04	0.00051	0.00034	1.6E-05	0.00015	0.02	0.01831	6.34E-06	1.91E-05	1.11E-05	1E-05	4.58E-06	2.5E-07	6E-06	0	6.6E-06	1E-06	1.39E-05	13.8973	0.00366
residential	1E-05	7E-06	4E-03	3E-03	4E-04	1E-03	3E-04	0E+00	2E-04	1E-04	0.00046	0.00031	1.5E-05	0.00014	0.02	0.01725	5.97E-06	1.8E-05	1.04E-05	9.46E-06	4.32E-06	2.3E-07	5.7E-06	0	6.2E-06	9.5E-07	1.31E-05	13.0981	0.00345
residential	1E-05	7E-06	4E-03	3E-03	3E-04	1E-03	2E-04	0E+00	1E-04	9E-05	0.00044	0.00029	1.4E-05	0.00013	0.02	0.01633	5.65E-06	1.71E-05	9.88E-06	8.96E-06	4.09E-06	2.2E-07	5.4E-06	0	5.9E-06	9E-07	1.24E-05	12.3983	0.00327
residential	1E-05	7E-06	4E-03	2E-03	3E-04	1E-03	2E-04	0E+00	1E-04	8E-05	0.00042	0.00028	1.4E-05	0.00013	0.02	0.01548	5.36E-06	1.62E-05	9.37E-06	8.49E-06	3.87E-06	2.1E-07	5.1E-06	0	5.6E-06	8.5E-07	1.175E-05	11.7505	0.0031
school	1E-05	7E-06	3E-03	2E-03	3E-04	1E-03	2E-04	0E+00	1E-04	8E-05	0.00043	0.00029	1.4E-05	0.00013	0.02	0.01472	0	2.18E-06	1.16E-06	9.44E-07	4.35E-07	0	0	1.3E-06	3E-07	0	1.587E-06	1.58654	0.00294
school	1E-05	6E-06	3E-03	2E-03	3E-04	9E-04	2E-04	0E+00	1E-04	7E-05	0.00044	0.00029	1.4E-05	0.00013	0.02	0.01404	0	2.08E-06	1.11E-06	9E-07	4.15E-07	0	0	1.2E-06	2.9E-07	0	1.514E-06	1.51363	0.00281
school	1E-05	6E-06	3E-03	2E-03	3E-04	9E-04	2E-04	0E+00	1E-04	7E-05	0.00043	0.00028	1.4E-05	0.00013	0.02	0.01341	0	1.98E-06	1.06E-06	8.59E-07	3.97E-07	0	0	1.2E-06	2.7E-07	0	1.445E-06	1.44507	0.00268
school	1E-05	6E-06	3E-03	2E-03	2E-04	8E-04	2E-04	0E+00	1E-04	6E-05	0.0004	0.00026	1.3E-05	0.00012	0.02	0.01281	0	1.9E-06	1.01E-06	8.21E-07	3.79E-07	0	0	1.1E-06	2.6E-07	0	1.381E-06	1.38104	0.00256
residential	1E-05	6E-06	3E-03	2E-03	2E-04	8E-04	1E-04	0E+00	9E-05	6E-05	0.00036	0.00024	1.2E-05	0.00011	0.01	0.01228	4.25E-06	1.28E-05	7.43E-06	6.73E-06	3.07E-06	1.7E-07	4E-06	0	4.4E-06	6.8E-07	9.32E-06	9.32049	0.00246
residential	1E-05	6E-06	3E-03	2E-03	2E-04	7E-04	1E-04	0E+00	9E-05	5E-05	0.00032	0.00021	1E-05	9.6E-05	0.01	0.01194	4.13E-06	1.25E-05	7.23E-06	6.55E-06	2.99E-06	1.6E-07	3.9E-06	0	4.3E-06	6.6E-07	9.066E-06	9.06564	0.00239
school	1E-05	5E-06	2E-03	2E-03	2E-04	7E-04	1E-04	0E+00	8E-05	5E-05	0.00028	0.00018	8.9E-06	8.3E-05	0.01	0.0117	0	1.73E-06	9.23E-07	7.5E-07	3.46E-07	0	0	1E-06	2.4E-07	0	1.262E-06	1.26161	0.00234
school	9E-06	5E-06	2E-03	1E-03	2E-04	7E-04	1E-04	0E+00	7E-05	4E-05	0.00024	0.00016	7.6E-06	7.1E-05	0.01	0.0113	0	1.67E-06	8.92E-07	7.25E-07	3.35E-07	0	0	9.9E-07	2.3E-07	0	1.219E-06	1.21867	0.00226
residential	9E-06	5E-06	2E-03	1E-03	2E-04	6E-04	1E-04	0E+00	6E-05	4E-05	0.0002	0.00014	6.6E-06	6.1E-05	0.01	0.01093	3.78E-06	1.14E-05	6.61E-06	5.99E-06	2.73E-06	1.5E-07	3.6E-06	0	4E-06	6E-07	8.295E-06	8.29488	0.00219
residential	8E-06	4E-06	2E-03	1E-03	2E-04	6E-04	8E-05	0E+00	5E-05	3E-05	0.00018	0.00012	5.7E-06	5.3E-05	0.01	0.01065	3.69E-06	1.11E-05	6.44E-06	5.84E-06	2.67E-06	1.4E-07	3.5E-06	0	3.9E-06	5.9E-07	8.086E-06	8.08596	0.00213
residential	8E-06	4E-06	2E-03	1E-03	2E-04	5E-04	8E-05	0E+00	5E-05	3E-05	0.00016	0.00011	5.1E-06	4.8E-05	0.01	0.01023	3.54E-06	1.07E-05	6.19E-06	5.61E-06	2.56E-06	1.4E-07	3.4E-06	0	3.7E-06	5.6E-07	7.766E-06	7.76625	0.00205

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AERMOD Output

	X	Y	B10_1_AUX	B10_2_AUX	B10_3_AUX	B10_4_AUX	B10_5_AUX	B10_6_AUX	B10_7_AUX	B10_8_AUX	CHE_1	LOC_SWTCH EMP	LOC_SWTCH LOA	OGV_PATH _BLR	OGV_PATH _DPM	TR_28TH	TR_BAYMA R	TR_BOSTON	TR_CROSBY	TR_HARBOR CHA	TR_HARBOR SAM	TUG_PATH_ DPM
Source Group in AERMOD			1	3	5	7	9	11	13	15	17	18	19	20	21	22	23	24	25	26	27	28
residential	487131	3618225	2.4E-01	2.0E-01	2.0E-01	2.0E-01	2.0E-01	2.0E-01	2.1E-01	2.3E-01	2.4E+05	6.1E-01	5.8E-01	9.1E-02	9.1E-02	6.1E-01	2.7E-02	4.7E-01	9.7E-01	1.1E+00	1.8E+00	1.2E-01
residential	487231	3618225	2.3E-01	1.9E-01	1.9E-01	1.9E-01	1.9E-01	1.9E-01	2.0E-01	2.2E-01	2.2E+05	5.5E-01	5.3E-01	8.8E-02	8.8E-02	7.6E-01	2.8E-02	5.8E-01	8.4E-01	9.8E-01	1.6E+00	1.2E-01
residential	487331	3618225	2.2E-01	1.8E-01	1.8E-01	1.8E-01	1.8E-01	1.8E-01	1.9E-01	2.1E-01	2.0E+05	5.2E-01	5.0E-01	8.6E-02	8.6E-02	1.0E+00	2.9E-02	7.5E-01	7.7E-01	9.1E-01	1.6E+00	1.1E-01
residential	487431	3618225	2.1E-01	1.7E-01	1.8E-01	1.7E-01	1.7E-01	1.7E-01	1.8E-01	2.0E-01	1.9E+05	4.8E-01	4.6E-01	8.3E-02	8.3E-02	1.5E+00	3.0E-02	1.0E+00	7.0E-01	8.3E-01	1.5E+00	1.1E-01
residential	487531	3618225	1.9E-01	1.7E-01	1.7E-01	1.6E-01	1.6E-01	1.6E-01	1.7E-01	1.9E-01	1.7E+05	4.4E-01	4.2E-01	8.0E-02	8.0E-02	2.0E+00	3.2E-02	1.4E+00	6.2E-01	7.4E-01	1.4E+00	1.0E-01
residential	487631	3618225	1.9E-01	1.6E-01	1.6E-01	1.6E-01	1.6E-01	1.6E-01	1.7E-01	1.8E-01	1.6E+05	4.1E-01	3.9E-01	7.8E-02	7.8E-02	2.3E+00	3.3E-02	1.8E+00	5.7E-01	6.8E-01	1.3E+00	1.0E-01
residential	487731	3618225	1.8E-01	1.5E-01	1.5E-01	1.5E-01	1.5E-01	1.5E-01	1.6E-01	1.7E-01	1.5E+05	3.8E-01	3.7E-01	7.6E-02	7.6E-02	2.4E+00	3.5E-02	2.1E+00	5.4E-01	6.4E-01	1.2E+00	9.8E-02
residential	487831	3618225	1.7E-01	1.5E-01	1.5E-01	1.5E-01	1.5E-01	1.5E-01	1.5E-01	1.6E-01	1.5E+05	3.6E-01	3.5E-01	7.5E-02	7.5E-02	2.5E+00	3.6E-02	2.2E+00	5.1E-01	6.0E-01	1.2E+00	9.6E-02
residential	487931	3618225	1.7E-01	1.5E-01	1.5E-01	1.5E-01	1.4E-01	1.4E-01	1.5E-01	1.6E-01	1.5E+05	3.5E-01	3.4E-01	7.4E-02	7.4E-02	2.6E+00	3.8E-02	2.5E+00	4.9E-01	5.8E-01	1.1E+00	9.3E-02
residential	488031	3618225	1.6E-01	1.4E-01	1.5E-01	1.4E-01	1.4E-01	1.4E-01	1.5E-01	1.6E-01	1.4E+05	3.4E-01	3.3E-01	7.3E-02	7.3E-02	2.5E+00	4.0E-02	2.6E+00	4.7E-01	5.5E-01	1.1E+00	9.0E-02
residential	488131	3618225	1.6E-01	1.4E-01	1.4E-01	1.4E-01	1.4E-01	1.4E-01	1.4E-01	1.5E-01	1.3E+05	3.2E-01	3.1E-01	7.1E-02	7.1E-02	2.3E+00	4.2E-02	2.5E+00	4.4E-01	5.1E-01	9.7E-01	8.7E-02
residential	488231	3618225	1.5E-01	1.3E-01	1.3E-01	1.3E-01	1.3E-01	1.3E-01	1.4E-01	1.4E-01	1.2E+05	3.0E-01	2.9E-01	6.9E-02	6.9E-02	2.0E+00	4.3E-02	2.3E+00	4.0E-01	4.7E-01	8.7E-01	8.6E-02

	X	Y	Refrigerated ContainersExisting	Refrigerated ContainersExisting	Refrigerated ContainersExisting	Refrigerated ContainersExisting	Multi-Purpose General CargoExisting	Multi-Purpose General CargoExisting	Dry BulkExisting	Dry BulkExisting	AllExisting	AllExisting	AllExisting	AllExisting	TR_28THExisting	TR_BAYMAR Existing	TR_BOSTON Existing	TR_CROSBY Existing	TR_HARBOR CHAExisting	TR_HARBOR SAMExisting	AllExisting
g/s -->			1.4E-02	1.4E-02	1.4E-02	1.4E-02	1.6E-03	1.6E-03	1.8E-03	1.8E-03	1.5E-08	1.8E-04	1.8E-04	7.6E-03	4.4E-06	7.1E-06	1.9E-05	4.0E-05	8.9E-05	8.9E-05	4.1E-04
			1	3	5	7	9	11	13	15	17	18	19	21	22	23	24	25	26	27	28
			B10_1_AUX	B10_2_AUX	B10_3_AUX	B10_4_AUX	B10_5_AUX	B10_6_AUX	B10_7_AUX	B10_8_AUX	CHE_1	LOC_SWTCHEMP	LOC_SWTCHLOA	OGV_PATH_DPM	TR_28TH	TR_BAYMAR	TR_BOSTON	TR_CROSBY	TR_HARBOR CHA	TR_HARBOR SAM	TUG_PATH_DPM
residential	487131	3618225	3.4E-03	2.8E-03	2.8E-03	2.8E-03	3.0E-04	3.1E-04	3.8E-04	4.1E-04	3.6E-03	1.1E-04	1.0E-04	6.9E-04	2.7E-06	1.9E-07	8.8E-06	3.9E-05	9.9E-05	1.6E-04	4.9E-05
residential	487231	3618225	3.2E-03	2.7E-03	2.7E-03	2.7E-03	2.9E-04	2.9E-04	3.6E-04	3.9E-04	3.3E-03	9.9E-05	9.4E-05	6.6E-04	3.4E-06	2.0E-07	1.1E-05	3.4E-05	8.7E-05	1.5E-04	4.7E-05
residential	487331	3618225	3.0E-03	2.6E-03	2.6E-03	2.5E-03	2.8E-04	2.8E-04	3.4E-04	3.6E-04	3.1E-03	9.3E-05	8.9E-05	6.5E-04	4.6E-06	2.1E-07	1.4E-05	3.1E-05	8.1E-05	1.4E-04	4.6E-05
residential	487431	3618225	2.9E-03	2.5E-03	2.5E-03	2.4E-03	2.7E-04	2.7E-04	3.2E-04	3.5E-04	2.9E-03	8.6E-05	8.3E-05	6.3E-04	6.7E-06	2.2E-07	1.9E-05	2.8E-05	7.4E-05	1.4E-04	4.5E-05
residential	487531	3618225	2.7E-03	2.3E-03	2.4E-03	2.3E-03	2.5E-04	2.5E-04	3.1E-04	3.3E-04	2.6E-03	7.8E-05	7.5E-05	6.1E-04	8.9E-06	2.2E-07	2.6E-05	2.5E-05	6.6E-05	1.2E-04	4.3E-05
residential	487631	3618225	2.6E-03	2.2E-03	2.3E-03	2.2E-03	2.4E-04	2.4E-04	2.9E-04	3.1E-04	2.5E-03	7.2E-05	7.0E-05	5.9E-04	9.9E-06	2.3E-07	3.4E-05	2.3E-05	6.0E-05	1.1E-04	4.1E-05
residential	487731	3618225	2.5E-03	2.2E-03	2.2E-03	2.2E-03	2.3E-04	2.3E-04	2.8E-04	3.0E-04	2.3E-03	6.8E-05	6.6E-05	5.8E-04	1.0E-05	2.5E-07	3.9E-05	2.1E-05	5.7E-05	1.1E-04	4.0E-05
residential	487831	3618225	2.4E-03	2.1E-03	2.1E-03	2.1E-03	2.3E-04	2.3E-04	2.7E-04	2.9E-04	2.2E-03	6.5E-05	6.3E-05	5.7E-04	1.1E-05	2.6E-07	4.2E-05	2.0E-05	5.3E-05	1.0E-04	3.9E-05
residential	487931	3618225	2.4E-03	2.1E-03	2.1E-03	2.1E-03	2.2E-04	2.2E-04	2.7E-04	2.8E-04	2.2E-03	6.3E-05	6.1E-05	5.6E-04	1.1E-05	2.7E-07	4.6E-05	2.0E-05	5.2E-05	1.0E-04	3.8E-05
residential	488031	3618225	2.3E-03	2.0E-03	2.1E-03	2.0E-03	2.2E-04	2.2E-04	2.6E-04	2.8E-04	2.1E-03	6.0E-05	5.9E-05	5.6E-04	1.1E-05	2.9E-07	4.8E-05	1.9E-05	4.9E-05	9.6E-05	3.7E-05
residential	488131	3618225	2.2E-03	1.9E-03	2.0E-03	2.0E-03	2.1E-04	2.1E-04	2.5E-04	2.7E-04	2.0E-03	5.6E-05	5.5E-05	5.4E-04	1.0E-05	3.0E-07	4.6E-05	1.7E-05	4.6E-05	8.7E-05	3.6E-05
residential	488231	3618225	2.1E-03	1.9E-03	1.9E-03	1.9E-03	2.0E-04	2.0E-04	2.4E-04	2.5E-04	1.9E-03	5.3E-05	5.2E-05	5.2E-04	9.0E-06	3.1E-07	4.3E-05	1.6E-05	4.2E-05	7.7E-05	3.5E-05

	X	Y	All 100%	Refrigerated ContainersExisting 89%	Multi-Purpose General CargoExisting 5%	Dry BulkExisting 6%	All 100%	Refrigerated ContainersExisting 73%	Multi-Purpose General CargoExisting 12%	Dry BulkExisting 15%	All 100%	Refrigerated ContainersExisting 57%
residential	487131	3618225	1E-02	1E-02	6E-04	7E-04	7E-04	5E-04	8E-05	1E-04	5E-05	3E-05
residential	487231	3618225	1E-02	1E-02	6E-04	7E-04	7E-04	5E-04	8E-05	1E-04	5E-05	3E-05
residential	487331	3618225	1E-02	1E-02	6E-04	7E-04	6E-04	5E-04	8E-05	9E-05	5E-05	3E-05
residential	487431	3618225	1E-02	1E-02	6E-04	6E-04	6E-04	5E-04	8E-05	9E-05	4E-05	3E-05
residential	487531	3618225	1E-02	1E-02	5E-04	6E-04	6E-04	4E-04	7E-05	9E-05	4E-05	2E-05
residential	487631	3618225	1E-02	9E-03	5E-04	6E-04	6E-04	4E-04	7E-05	9E-05	4E-05	2E-05
residential	487731	3618225	1E-02	9E-03	5E-04	6E-04	6E-04	4E-04	7E-05	8E-05	4E-05	2E-05
residential	487831	3618225	1E-02	9E-03	5E-04	5E-04	6E-04	4E-04	7E-05	8E-05	4E-05	2E-05
residential	487931	3618225	1E-02	9E-03	5E-04	5E-04	6E-04	4E-04	7E-05	8E-05	4E-05	2E-05
residential	488031	3618225	9E-03	8E-03	5E-04	5E-04	6E-04	4E-04	7E-05	8E-05	4E-05	2E-05
residential	488131	3618225	9E-03	8E-03	4E-04	5E-04	5E-04	4E-04	7E-05	8E-05	4E-05	2E-05
residential	488231	3618225	9E-03	8E-03	4E-04	5E-04	5E-04	4E-04	6E-05	8E-05	4E-05	2E-05

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AERMOD Output	Multi-Purpose General CargoExisting 28%	Dry BulkExisting 15%	All 100%	Refrigerated ContainersExisting 63%	Multi-Purpose General CargoExisting 8%	Dry BulkExisting 29%	All 100%	Refrigerated ContainersExisting 0%	Multi-Purpose General CargoExisting 61%	Dry BulkExisting 39%	All 100%	Refrigerated Containers 67%	Multi-Purpose General Cargo 3%	Dry Bulk 30%	All	ug/m3
residential	2E-05	1E-05	1E-02	7E-03	9E-04	3E-03	6E-04	0E+00	4E-04	2E-04	0.00049	0.00033	1.6E-05	0.00015	0.03	0.02339
residential	2E-05	1E-05	9E-03	6E-03	8E-04	3E-03	5E-04	0E+00	3E-04	2E-04	0.00046	0.00031	1.5E-05	0.00014	0.03	0.02151
residential	2E-05	1E-05	8E-03	5E-03	7E-04	2E-03	5E-04	0E+00	3E-04	2E-04	0.00043	0.00029	1.4E-05	0.00013	0.03	0.01972
residential	2E-05	9E-06	7E-03	4E-03	6E-04	2E-03	4E-04	0E+00	2E-04	2E-04	0.0004	0.00027	1.3E-05	0.00012	0.02	0.01822
residential	2E-05	9E-06	6E-03	4E-03	5E-04	2E-03	3E-04	0E+00	2E-04	1E-04	0.00038	0.00025	1.2E-05	0.00011	0.02	0.01697
residential	2E-05	9E-06	5E-03	3E-03	4E-04	1E-03	3E-04	0E+00	2E-04	1E-04	0.00035	0.00024	1.1E-05	0.00011	0.02	0.01588
residential	2E-05	8E-06	4E-03	3E-03	4E-04	1E-03	3E-04	0E+00	2E-04	1E-04	0.00033	0.00022	1.1E-05	9.8E-05	0.02	0.01487
residential	1E-05	8E-06	4E-03	2E-03	3E-04	1E-03	2E-04	0E+00	1E-04	9E-05	0.0003	0.0002	9.8E-06	9.1E-05	0.02	0.01399
residential	1E-05	7E-06	3E-03	2E-03	3E-04	1E-03	2E-04	0E+00	1E-04	8E-05	0.00028	0.00019	9E-06	8.4E-05	0.02	0.01318
residential	1E-05	7E-06	3E-03	2E-03	3E-04	9E-04	2E-04	0E+00	1E-04	7E-05	0.00026	0.00017	8.3E-06	7.8E-05	0.02	0.01247
residential	1E-05	7E-06	3E-03	2E-03	2E-04	8E-04	2E-04	0E+00	1E-04	6E-05	0.00024	0.00016	7.7E-06	7.2E-05	0.01	0.01184
residential	1E-05	7E-06	3E-03	2E-03	2E-04	8E-04	1E-04	0E+00	9E-05	6E-05	0.00022	0.00015	7.3E-06	6.8E-05	0.01	0.01127
residential	1E-05	6E-06	2E-03	2E-03	2E-04	7E-04	1E-04	0E+00	8E-05	5E-05	0.00021	0.00014	6.9E-06	6.4E-05	0.01	0.01075
residential	1E-05	6E-06	2E-03	1E-03	2E-04	6E-04	1E-04	0E+00	8E-05	5E-05	0.0002	0.00014	6.5E-06	6.1E-05	0.01	0.01029
residential	1E-05	6E-06	2E-03	1E-03	2E-04	6E-04	1E-04	0E+00	7E-05	5E-05	0.00019	0.00013	6.3E-06	5.8E-05	0.01	0.00987
residential	1E-05	6E-06	2E-03	1E-03	2E-04	6E-04	1E-04	0E+00	7E-05	4E-05	0.00018	0.00012	6E-06	5.6E-05	0.01	0.00946
residential	1E-05	6E-06	2E-03	1E-03	2E-04	5E-04	1E-04	0E+00	6E-05	4E-05	0.00018	0.00012	5.7E-06	5.3E-05	0.01	0.0091
residential	1E-05	6E-06	2E-03	1E-03	1E-04	5E-04	1E-04	0E+00	6E-05	4E-05	0.00017	0.00011	5.4E-06	5E-05	0.01	0.00875
residential	1E-05	5E-06	2E-03	1E-03	1E-04	5E-04	9E-05	0E+00	6E-05	4E-05	0.00016	0.00011	5.1E-06	4.8E-05	0.01	0.00844
residential	1E-05	5E-06	2E-03	1E-03	1E-04	5E-04	9E-05	0E+00	5E-05	3E-05	0.00015	0.0001	4.9E-06	4.6E-05	0.01	0.00814
residential	9E-06	5E-06	2E-03	9E-04	1E-04	4E-04	8E-05	0E+00	5E-05	3E-05	0.00014	9.6E-05	4.7E-06	4.4E-05	0.01	0.00787
residential	8E-06	4E-06	1E-03	9E-04	1E-04	4E-04	7E-05	0E+00	5E-05	3E-05	0.00013	8.4E-05	4.1E-06	3.8E-05	0.01	0.00777

TAMT_HRA_Existing
DPM_annl

AERMOD Output — Source Group in AERMOD

	X	Y	B10_1_AUX	B10_2_AUX	B10_3_AUX	B10_4_AUX	B10_5_AUX	B10_6_AUX	B10_7_AUX	B10_8_AUX	CHE_1	LOC_SWTCH EMP	LOC_SWTCH LOA	OGV_PATH _BLR	OGV_PATH _DPM	TR_28TH	TR_BAYMA R	TR_BOSTON	TR_CROSBY	TR_HARBOR CHA	TR_HARBOR SAM	TUG_PATH_ DPM
			1	3	5	7	9	11	13	15	17	18	19	20	21	22	23	24	25	26	27	28
residential	488631	3618625	1.2E-01	1.1E-01	1.1E-01	1.1E-01	1.1E-01	1.1E-01	1.1E-01	1.2E-01	8.9E+04	2.0E-01	2.0E-01	6.3E-02	6.3E-02	1.1E+00	4.8E-02	1.2E+00	2.8E-01	3.3E-01	5.7E-01	6.7E-02
recreational	484231	3618725	1.7E-01	1.5E-01	1.4E-01	1.3E-01	1.1E-01	9.5E-02	9.4E-02	9.4E-02	9.5E+04	3.1E-01	2.6E-01	4.4E-01	4.4E-01	5.6E-02	1.1E-02	5.6E-02	1.1E-01	2.6E-01	6.7E-02	8.0E-01
recreational	484331	3618725	1.7E-01	1.6E-01	1.4E-01	1.3E-01	1.2E-01	1.0E-01	1.0E-01	9.9E-02	1.0E+05	3.3E-01	2.8E-01	4.1E-01	4.1E-01	5.8E-02	1.1E-02	5.7E-02	1.1E-01	2.8E-01	6.9E-02	7.0E-01
recreational	484631	3618725	1.7E-01	1.8E-01	1.5E-01	1.4E-01	1.3E-01	1.1E-01	1.1E-01	1.1E-01	1.4E+05	4.3E-01	3.4E-01	3.3E-01	3.3E-01	6.2E-02	1.2E-02	6.1E-02	1.2E-01	3.5E-01	7.4E-02	5.1E-01
recreational	484731	3618725	1.7E-01	2.2E-01	1.6E-01	1.4E-01	1.3E-01	1.1E-01	1.1E-01	1.1E-01	1.7E+05	4.7E-01	3.7E-01	3.1E-01	3.1E-01	6.3E-02	1.2E-02	6.3E-02	1.3E-01	3.8E-01	7.5E-02	4.7E-01
recreational	484831	3618725	1.8E-01	2.9E-01	1.7E-01	1.5E-01	1.3E-01	1.2E-01	1.1E-01	1.1E-01	2.1E+05	5.1E-01	4.0E-01	2.9E-01	2.9E-01	6.5E-02	1.2E-02	6.4E-02	1.4E-01	4.1E-01	7.7E-02	4.4E-01
recreational	484931	3618725	2.1E-01	3.8E-01	2.0E-01	1.7E-01	1.4E-01	1.2E-01	1.2E-01	1.2E-01	2.7E+05	5.6E-01	4.4E-01	2.7E-01	2.7E-01	6.7E-02	1.2E-02	6.6E-02	1.5E-01	4.6E-01	8.0E-02	4.1E-01
residential	485031	3618725	2.9E-01	4.4E-01	2.5E-01	1.9E-01	1.5E-01	1.3E-01	1.2E-01	1.2E-01	3.6E+05	6.1E-01	4.7E-01	2.6E-01	2.6E-01	6.8E-02	1.3E-02	6.7E-02	1.7E-01	5.1E-01	8.3E-02	3.8E-01
residential	485131	3618725	4.1E-01	4.6E-01	3.0E-01	2.2E-01	1.7E-01	1.4E-01	1.3E-01	1.3E-01	5.0E+05	6.7E-01	5.1E-01	2.5E-01	2.5E-01	7.0E-02	1.3E-02	6.9E-02	1.9E-01	6.1E-01	8.6E-02	3.5E-01
residential	485231	3618725	5.2E-01	4.5E-01	3.5E-01	2.6E-01	1.9E-01	1.5E-01	1.4E-01	1.3E-01	7.2E+05	7.4E-01	5.6E-01	2.3E-01	2.3E-01	7.2E-02	1.3E-02	7.1E-02	2.3E-01	8.1E-01	9.1E-02	3.3E-01
residential	485331	3618725	5.5E-01	4.1E-01	3.8E-01	3.0E-01	2.2E-01	1.7E-01	1.5E-01	1.4E-01	1.0E+06	8.5E-01	6.2E-01	2.2E-01	2.2E-01	7.4E-02	1.4E-02	7.3E-02	2.9E-01	1.2E+00	9.7E-02	3.1E-01
residential	485831	3618725	3.3E-01	3.0E-01	3.4E-01	3.6E-01	3.4E-01	2.9E-01	2.7E-01	2.5E-01	1.2E+06	2.1E+00	1.4E+00	1.7E-01	1.7E-01	8.8E-02	1.7E-02	8.4E-02	8.8E-01	4.7E+00	2.0E-01	2.2E-01
residential	485931	3618725	3.2E-01	2.8E-01	3.3E-01	3.5E-01	3.5E-01	3.1E-01	2.9E-01	2.7E-01	1.1E+06	2.1E+00	1.6E+00	1.6E-01	1.6E-01	9.3E-02	1.7E-02	8.8E-02	1.2E+00	4.5E+00	2.4E-01	2.1E-01

	X	Y	Refrigerated ContainersExisting	Refrigerated ContainersExisting	Refrigerated ContainersExisting	Refrigerated ContainersExisting	Multi-Purpose General CargoExisting	Multi-Purpose General CargoExisting	Dry BulkExisting	Dry BulkExisting	AllExisting	AllExisting	AllExisting	AllExisting	TR_28THExisting	TR_BAYMAR Existing	TR_BOSTON Existing	TR_CROSBY Existing	TR_HARBOR CHAExisting	TR_HARBOR SAMExisting	AllExisting
		g/s -->	1.4E-02	1.4E-02	1.4E-02	1.4E-02	1.6E-03	1.6E-03	1.8E-03	1.8E-03	1.5E-08	1.8E-04	1.8E-04	7.6E-03	4.4E-06	7.1E-06	1.9E-05	4.0E-05	8.9E-05	8.9E-05	4.1E-04
			1	3	5	7	9	11	13	15	17	18	19	21	22	23	24	25	26	27	28
			B10_1_AUX	B10_2_AUX	B10_3_AUX	B10_4_AUX	B10_5_AUX	B10_6_AUX	B10_7_AUX	B10_8_AUX	CHE_1	LOC_SWTCHEMP	LOC_SWTCHLOA	OGV_PATH_DPM	TR_28TH	TR_BAYMAR	TR_BOSTON	TR_CROSBY	TR_HARBOR CHA	TR_HARBOR SAM	TUG_PATH_DPM
residential	488631	3618625	1.7E-03	1.5E-03	1.5E-03	1.5E-03	1.7E-04	1.7E-04	2.0E-04	2.1E-04	1.4E-03	3.5E-05	3.5E-05	4.7E-04	4.6E-06	3.4E-07	2.2E-05	1.1E-05	2.9E-05	5.1E-05	2.8E-05
recreational	484231	3618725	2.4E-03	2.2E-03	2.0E-03	1.8E-03	1.7E-04	1.5E-04	1.7E-04	1.7E-04	1.4E-03	5.6E-05	4.6E-05	3.4E-03	2.5E-07	7.7E-08	1.0E-06	4.3E-06	2.3E-05	6.0E-06	3.3E-04
recreational	484331	3618725	2.4E-03	2.2E-03	2.0E-03	1.9E-03	1.8E-04	1.6E-04	1.8E-04	1.8E-04	1.6E-03	6.0E-05	4.9E-05	3.1E-03	2.5E-07	7.8E-08	1.1E-06	4.5E-06	2.5E-05	6.1E-06	2.9E-04
recreational	484631	3618725	2.4E-03	2.6E-03	2.1E-03	2.0E-03	2.0E-04	1.7E-04	1.9E-04	1.9E-04	2.2E-03	7.6E-05	6.1E-05	2.5E-03	2.7E-07	8.3E-08	1.1E-06	4.9E-06	3.1E-05	6.5E-06	2.1E-04
recreational	484731	3618725	2.3E-03	3.2E-03	2.2E-03	2.0E-03	2.0E-04	1.7E-04	2.0E-04	1.9E-04	2.6E-03	8.3E-05	6.6E-05	2.3E-03	2.8E-07	8.5E-08	1.2E-06	5.2E-06	3.4E-05	6.7E-06	1.9E-04
recreational	484831	3618725	2.5E-03	4.2E-03	2.5E-03	2.1E-03	2.0E-04	1.8E-04	2.0E-04	2.0E-04	3.1E-03	9.1E-05	7.1E-05	2.2E-03	2.9E-07	8.6E-08	1.2E-06	5.5E-06	3.7E-05	6.9E-06	1.8E-04
recreational	484931	3618725	2.9E-03	5.3E-03	2.9E-03	2.4E-03	2.2E-04	1.9E-04	2.1E-04	2.0E-04	4.1E-03	1.0E-04	7.8E-05	2.1E-03	2.9E-07	8.8E-08	1.2E-06	6.0E-06	4.1E-05	7.1E-06	1.7E-04
residential	485031	3618725	4.0E-03	6.2E-03	3.5E-03	2.7E-03	2.4E-04	2.0E-04	2.2E-04	2.1E-04	5.5E-03	1.1E-04	8.4E-05	2.0E-03	3.0E-07	9.1E-08	1.3E-06	6.7E-06	4.6E-05	7.3E-06	1.6E-04
residential	485131	3618725	5.7E-03	6.6E-03	4.2E-03	3.2E-03	2.6E-04	2.2E-04	2.3E-04	2.2E-04	7.6E-03	1.2E-04	9.0E-05	1.9E-03	3.1E-07	9.3E-08	1.3E-06	7.7E-06	5.5E-05	7.7E-06	1.4E-04
residential	485231	3618725	7.3E-03	6.3E-03	4.9E-03	3.7E-03	3.0E-04	2.4E-04	2.5E-04	2.3E-04	1.1E-02	1.3E-04	1.0E-04	1.8E-03	3.2E-07	9.6E-08	1.3E-06	9.3E-06	7.2E-05	8.1E-06	1.4E-04
residential	485331	3618725	7.8E-03	5.8E-03	5.4E-03	4.3E-03	3.4E-04	2.7E-04	2.7E-04	2.5E-04	1.5E-02	1.5E-04	1.1E-04	1.7E-03	3.3E-07	9.9E-08	1.4E-06	1.1E-05	1.1E-04	8.7E-06	1.3E-04
residential	485831	3618725	4.7E-03	4.2E-03	4.9E-03	5.1E-03	5.3E-04	4.5E-04	4.8E-04	4.4E-04	1.8E-02	3.7E-04	2.5E-04	1.3E-03	3.9E-07	1.2E-07	1.6E-06	3.5E-05	4.2E-04	1.8E-05	9.1E-05
residential	485931	3618725	4.5E-03	4.0E-03	4.6E-03	4.9E-03	5.4E-04	4.7E-04	5.2E-04	4.8E-04	1.6E-02	3.8E-04	2.8E-04	1.2E-03	4.1E-07	1.2E-07	1.6E-06	4.8E-05	4.0E-04	2.1E-05	8.5E-05

	X	Y	All	Refrigerated ContainersExisting	Multi-Purpose General CargoExisting	Dry BulkExisting	All	Refrigerated ContainersExisting	Multi-Purpose General CargoExisting	Dry BulkExisting	All	Refrigerated ContainersExisting
			100%	89%	5%	6%	100%	73%	12%	15%	100%	57%
residential	488631	3618625	7E-03	6E-03	3E-04	4E-04	5E-04	3E-04	6E-05	7E-05	3E-05	2E-05
recreational	484231	3618725	9E-03	8E-03	4E-04	5E-04	3E-03	2E-03	4E-04	5E-04	3E-04	2E-04
recreational	484331	3618725	9E-03	8E-03	5E-04	5E-04	3E-03	2E-03	4E-04	5E-04	3E-04	2E-04
recreational	484631	3618725	1E-02	9E-03	5E-04	5E-04	2E-03	2E-03	3E-04	4E-04	2E-04	1E-04
recreational	484731	3618725	1E-02	9E-03	5E-04	6E-04	2E-03	2E-03	3E-04	3E-04	2E-04	1E-04
recreational	484831	3618725	1E-02	1E-02	6E-04	7E-04	2E-03	2E-03	3E-04	3E-04	2E-04	1E-04
recreational	484931	3618725	1E-02	1E-02	7E-04	8E-04	2E-03	2E-03	2E-04	3E-04	2E-04	1E-04
residential	485031	3618725	2E-02	2E-02	9E-04	1E-03	2E-03	1E-03	2E-04	3E-04	2E-04	9E-05
residential	485131	3618725	2E-02	2E-02	1E-03	1E-03	2E-03	1E-03	2E-04	3E-04	1E-04	8E-05
residential	485231	3618725	2E-02	2E-02	1E-03	1E-03	2E-03	1E-03	2E-04	3E-04	1E-04	8E-05
residential	485331	3618725	2E-02	2E-02	1E-03	1E-03	2E-03	1E-03	2E-04	2E-04	1E-04	7E-05
residential	485831	3618725	2E-02	2E-02	1E-03	1E-03	1E-03	9E-04	2E-04	2E-04	9E-05	5E-05
residential	485931	3618725	2E-02	2E-02	1E-03	1E-03	1E-03	9E-04	1E-04	2E-04	8E-05	5E-05

TAMT_HRA_Existing
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AERMOD Output

Dry Bulk 30%	All	ug/m3	3rd tri	0<2	2<9	2<16	16<30	3rd tri	0<2	2<9	2<16	16<30	Summed Risk	Cases Per Million	Chronic HI
		Dose Inhallation						Risk (Residential 30-yr; school 9-yr; park 15-year)							
8.9E-05	0.02	0.01723	5.96E-06	1.8E-05	1.04E-05	9.45E-06	4.31E-06	2.3E-07	5.7E-06	0	6.2E-06	9.5E-07	1.308E-05	13.0815	0.00345
8.9E-05	0.02	0.01615	5.59E-06	1.69E-05	9.77E-06	8.86E-06	4.04E-06	2.2E-07	5.3E-06	0	5.8E-06	8.9E-07	1.226E-05	12.2598	0.00323
8.6E-05	0.02	0.01511	5.23E-06	1.58E-05	9.14E-06	8.29E-06	3.78E-06	2.1E-07	5E-06	0	5.5E-06	8.3E-07	1.147E-05	11.4732	0.00302
8.1E-05	0.02	0.01414	4.89E-06	1.48E-05	8.55E-06	7.75E-06	3.54E-06	1.9E-07	4.6E-06	0	5.1E-06	7.8E-07	1.073E-05	10.7325	0.00283
7.6E-05	0.02	0.01321	4.57E-06	1.38E-05	7.99E-06	7.25E-06	3.31E-06	1.8E-07	4.3E-06	0	4.8E-06	7.3E-07	1.003E-05	10.0278	0.00264
7.2E-05	0.02	0.01242	4.3E-06	1.3E-05	7.52E-06	6.81E-06	3.11E-06	1.7E-07	4.1E-06	0	4.5E-06	6.8E-07	9.432E-06	9.43213	0.00248
6.8E-05	0.01	0.01179	4.08E-06	1.23E-05	7.13E-06	6.46E-06	2.95E-06	1.6E-07	3.9E-06	0	4.3E-06	6.5E-07	8.948E-06	8.94799	0.00236
6.4E-05	0.01	0.01115	3.86E-06	1.17E-05	6.75E-06	6.12E-06	2.79E-06	1.5E-07	3.7E-06	0	4E-06	6.1E-07	8.465E-06	8.46476	0.00223
6.1E-05	0.01	0.01058	3.66E-06	1.11E-05	6.4E-06	5.8E-06	2.65E-06	1.4E-07	3.5E-06	0	3.8E-06	5.8E-07	8.033E-06	8.03269	0.00212
5.7E-05	0.01	0.01004	3.47E-06	1.05E-05	6.07E-06	5.51E-06	2.51E-06	1.4E-07	3.3E-06	0	3.6E-06	5.5E-07	7.621E-06	7.6206	0.00201
5.4E-05	0.01	0.00957	3.31E-06	1E-05	5.79E-06	5.25E-06	2.39E-06	1.3E-07	3.1E-06	0	3.5E-06	5.3E-07	7.263E-06	7.26316	0.00191
5.2E-05	0.01	0.00918	3.18E-06	9.6E-06	5.56E-06	5.04E-06	2.3E-06	1.2E-07	3E-06	0	3.3E-06	5.1E-07	6.972E-06	6.97153	0.00184
5E-05	0.01	0.00885	3.07E-06	9.25E-06	5.36E-06	4.86E-06	2.22E-06	1.2E-07	2.9E-06	0	3.2E-06	4.9E-07	6.722E-06	6.72198	0.00177
4.8E-05	0.01	0.0085	2.94E-06	8.88E-06	5.14E-06	4.66E-06	2.13E-06	1.2E-07	2.8E-06	0	3.1E-06	4.7E-07	6.453E-06	6.45338	0.0017
4.5E-05	0.01	0.00817	2.83E-06	8.54E-06	4.94E-06	4.48E-06	2.04E-06	1.1E-07	2.7E-06	0	3E-06	4.5E-07	6.203E-06	6.2031	0.00163
4.3E-05	0.01	0.00786	2.72E-06	8.21E-06	4.75E-06	4.31E-06	1.97E-06	1.1E-07	2.6E-06	0	2.8E-06	4.3E-07	5.965E-06	5.96516	0.00157
4.1E-05	0.01	0.00759	2.63E-06	7.93E-06	4.59E-06	4.16E-06	1.9E-06	1E-07	2.5E-06	0	2.7E-06	4.2E-07	5.759E-06	5.75891	0.00152
3.9E-05	0.01	0.00735	2.54E-06	7.68E-06	4.44E-06	4.03E-06	1.84E-06	1E-07	2.4E-06	0	2.7E-06	4E-07	5.577E-06	5.57667	0.00147
3.7E-05	0.01	0.00711	2.46E-06	7.44E-06	4.3E-06	3.9E-06	1.78E-06	9.7E-08	2.3E-06	0	2.6E-06	3.9E-07	5.401E-06	5.40114	0.00142
3.7E-05	0.01	0.00743	2.57E-06	7.77E-06	4.5E-06	4.08E-06	1.86E-06	1E-07	2.4E-06	0	2.7E-06	4.1E-07	5.641E-06	5.64131	0.00149
1.7E-06	0.00	0.00224	7.74E-07	2.34E-06	1.35E-06	1.23E-06	5.6E-07	3E-08	7.3E-07	0	8.1E-07	1.2E-07	1.698E-06	1.69751	0.00045
1.8E-06	0.00	0.0024	8.33E-07	2.51E-06	1.46E-06	1.32E-06	6.02E-07	3.3E-08	7.9E-07	0	8.7E-07	1.3E-07	1.826E-06	1.82577	0.00048
7.4E-06	0.01	0.01018	0	9.76E-07	5.2E-07	4.23E-07	1.95E-07	0	3.1E-07	1.7E-07	0	1.8E-08	4.968E-07	0.49682	0.00204
7.7E-06	0.01	0.00989	0	9.48E-07	5.06E-07	4.11E-07	1.9E-07	0	3E-07	1.7E-07	0	1.8E-08	4.826E-07	0.48262	0.00198
8.7E-06	0.01	0.01007	0	9.65E-07	5.15E-07	4.18E-07	1.93E-07	0	3E-07	1.7E-07	0	1.8E-08	4.915E-07	0.49147	0.00201
9.1E-06	0.01	0.01033	0	9.91E-07	5.28E-07	4.29E-07	1.98E-07	0	3.1E-07	1.7E-07	0	1.9E-08	5.045E-07	0.50448	0.00207
9.6E-06	0.01	0.01082	0	1.04E-06	5.53E-07	4.5E-07	2.08E-07	0	3.3E-07	1.8E-07	0	2E-08	5.283E-07	0.5283	0.00216
1E-05	0.01	0.0116	4.02E-06	1.21E-05	7.02E-06	6.37E-06	2.9E-06	1.6E-07	3.8E-06	0	4.2E-06	6.4E-07	8.81E-06	8.81001	0.00232
1.1E-05	0.02	0.01291	4.47E-06	1.35E-05	7.81E-06	7.08E-06	3.23E-06	1.8E-07	4.2E-06	0	4.7E-06	7.1E-07	9.8E-06	9.79952	0.00258
1.2E-05	0.02	0.0146	5.05E-06	1.53E-05	8.83E-06	8.01E-06	3.65E-06	2E-07	4.8E-06	0	5.3E-06	8E-07	1.108E-05	11.0821	0.00292
1.4E-05	0.02	0.01677	5.8E-06	1.75E-05	1.01E-05	9.2E-06	4.2E-06	2.3E-07	5.5E-06	0	6.1E-06	9.2E-07	1.273E-05	12.7294	0.00335
1.7E-05	0.02	0.01934	6.69E-06	2.02E-05	1.17E-05	1.06E-05	4.84E-06	2.6E-07	6.4E-06	0	7E-06	1.1E-06	1.468E-05	14.6788	0.00387
2.1E-05	0.03	0.02201	7.62E-06	2.3E-05	1.33E-05	1.21E-05	5.51E-06	3E-07	7.2E-06	0	8E-06	1.2E-06	1.671E-05	16.7109	0.0044
2.8E-05	0.03	0.02473	8.56E-06	2.58E-05	1.5E-05	1.36E-05	6.19E-06	3.4E-07	8.1E-06	0	9E-06	1.4E-06	1.877E-05	18.771	0.00495
4E-05	0.03	0.0267	9.24E-06	2.79E-05	1.62E-05	1.46E-05	6.68E-06	3.6E-07	8.8E-06	0	9.7E-06	1.5E-06	2.027E-05	20.2661	0.00534
5.6E-05	0.04	0.02805	9.71E-06	2.93E-05	1.7E-05	1.54E-05	7.02E-06	3.8E-07	9.2E-06	0	1E-05	1.5E-06	2.13E-05	21.298	0.00561
9E-05	0.04	0.0276	9.56E-06	2.89E-05	1.67E-05	1.51E-05	6.91E-06	3.8E-07	9.1E-06	0	1E-05	1.5E-06	2.096E-05	20.9559	0.00552
9.5E-05	0.03	0.02637	9.13E-06	2.76E-05	1.6E-05	1.45E-05	6.6E-06	3.6E-07	8.7E-06	0	9.5E-06	1.5E-06	2.002E-05	20.019	0.00527
9.6E-05	0.03	0.0245	8.48E-06	2.56E-05	1.48E-05	1.34E-05	6.13E-06	3.3E-07	8E-06	0	8.9E-06	1.3E-06	1.86E-05	18.6022	0.0049
9.1E-05	0.03	0.02127	7.36E-06	2.22E-05	1.29E-05	1.17E-05	5.32E-06	2.9E-07	7E-06	0	7.7E-06	1.2E-06	1.615E-05	16.1475	0.00425
8.1E-05	0.02	0.01969	6.82E-06	2.06E-05	1.19E-05	1.08E-05	4.93E-06	2.7E-07	6.5E-06	0	7.1E-06	1.1E-06	1.495E-05	14.9476	0.00394
7.7E-05	0.02	0.01825	6.32E-06	1.91E-05	1.1E-05	1E-05	4.57E-06	2.5E-07	6E-06	0	6.6E-06	1E-06	1.386E-05	13.858	0.00365
7.4E-05	0.02	0.01692	5.86E-06	1.77E-05	1.02E-05	9.28E-06	4.24E-06	2.3E-07	5.6E-06	0	6.1E-06	9.3E-07	1.285E-05	12.8461	0.00338
7.7E-05	0.02	0.01588	5.5E-06	1.66E-05	9.61E-06	8.71E-06	3.97E-06	2.2E-07	5.2E-06	0	5.7E-06	8.7E-07	1.206E-05	12.057	0.00318
7.8E-05	0.02	0.01494	5.17E-06	1.56E-05	9.04E-06	8.19E-06	3.74E-06	2E-07	4.9E-06	0	5.4E-06	8.2E-07	1.134E-05	11.3387	0.00299
7.4E-05	0.02	0.01394	4.82E-06	1.46E-05	8.43E-06	7.64E-06	3.49E-06	1.9E-07	4.6E-06	0	5E-06	7.7E-07	1.058E-05	10.5793	0.00279
7E-05	0.02	0.01303	4.51E-06	1.36E-05	7.88E-06	7.15E-06	3.26E-06	1.8E-07	4.3E-06	0	4.7E-06	7.2E-07	9.891E-06	9.89146	0.00261
6.6E-05	0.02	0.01224	4.24E-06	1.28E-05	7.41E-06	6.71E-06	3.06E-06	1.7E-07	4E-06	0	4.4E-06	6.7E-07	9.292E-06	9.2924	0.00245
6.2E-05	0.01	0.01146	3.97E-06	1.2E-05	6.93E-06	6.28E-06	2.87E-06	1.6E-07	3.8E-06	0	4.1E-06	6.3E-07	8.699E-06	8.69857	0.00229
5.8E-05	0.01	0.01078	3.73E-06	1.13E-05	6.52E-06	5.91E-06	2.7E-06	1.5E-07	3.5E-06	0	3.9E-06	5.9E-07	8.183E-06	8.18263	0.00216
5.6E-05	0.01	0.01027	3.56E-06	1.07E-05	6.21E-06	5.63E-06	2.57E-06	1.4E-07	3.4E-06	0	3.7E-06	5.7E-07	7.797E-06	7.79746	0.00205
5.4E-05	0.01	0.00981	3.4E-06	1.03E-05	5.94E-06	5.38E-06	2.46E-06	1.3E-07	3.2E-06	0	3.6E-06	5.4E-07	7.448E-06	7.44821	0.00196
5.2E-05	0.01	0.00934	3.23E-06	9.76E-06	5.65E-06	5.12E-06	2.34E-06	1.3E-07	3.1E-06	0	3.4E-06	5.1E-07	7.089E-06	7.08856	0.00187
5E-05	0.01	0.00898	3.11E-06	9.39E-06	5.44E-06	4.93E-06	2.25E-06	1.2E-07	3E-06	0	3.3E-06	4.9E-07	6.82E-06	6.81983	0.0018
4.8E-05	0.01	0.00866	3E-06	9.05E-06	5.24E-06	4.75E-06	2.17E-06	1.2E-07	2.8E-06	0	3.1E-06	4.8E-07	6.576E-06	6.57613	0.00173
4.6E-05	0.01	0.00833	2.88E-06	8.71E-06	5.04E-06	4.57E-06	2.08E-06	1.1E-07	2.7E-06	0	3E-06	4.6E-07	6.324E-06	6.32419	0.00167
4.3E-05	0.01	0.00798	2.76E-06	8.34E-06	4.83E-06	4.37E-06	2E-06	1.1E-07	2.6E-06	0	2.9E-06	4.4E-07	6.055E-06	6.05499	0.0016
4.1E-05	0.01	0.00766	2.65E-06	8E-06	4.63E-06	4.2E-06	1.92E-06	1E-07	2.5E-06	0	2.8E-06	4.2E-07	5.813E-06	5.81291	0.00153
3.9E-05	0.01	0.00737	2.55E-06	7.7E-06	4.46E-06	4.04E-06	1.84E-06	1E-07	2.4E-06	0	2.7E-06	4.1E-07	5.592E-06	5.59217	0.00147
3.7E-05	0.01	0.00712	2.46E-06	7.44E-06	4.31E-06	3.9E-06	1.78E-06	9.7E-08	2.3E-06	0	2.6E-06	3.9E-07	5.402E-06	5.40214	0.00142
3.6E-05	0.01	0.0069	2.39E-06	7.21E-06	4.17E-06	3.78E-06	1.73E-06	9.4E-08	2.3E-06	0	2.5E-06	3.8E-07	5.238E-06	5.23802	0.00138
1.2E-06	0.00	0.00137	4.73E-07	1.43E-06	8.26E-07	7.49E-07	3.42E-07	1.9E-08	4.5E-07	0	4.9E-07	7.5E-08	1.036E-06	1.03646	0.00027
1.3E-06	0.00	0.0015	5.19E-07	1.57E-06	9.07E-07	8.22E-07	3.75E-07	2E-08	4.9E-07	0	5.4E-07	8.3E-08	1.138E-06	1.13811	0.0003
1.5E-06	0.00	0.0017	5.88E-07	1.78E-06	1.03E-06	9.32E-07	4.25E-07	2.3E-08	5.6E-07	0	6.1E-07	9.4E-08	1.289E-06	1.28944	0.00034
1.5E-06	0.00	0.00182	6.3E-07	1.9E-06	1.1E-06	9.99E-07	4.56E-07	2.5E-08	6E-07	0	6.6E-07	1E-07	1.383E-06	1.38257	0.00036
1.6E-06	0.00	0.00192	6.64E-07	2E-06	1.16E-06	1.05E-06	4.8E-07	2.6E-08	6.3E-07	0	6.9E-07	1.1E-07	1.455E-06	1.4553	0.00038
1.6E-06	0.00	0.00203	7.01E-07	2.12E-06	1.23E-06	1.11E-06	5.07E-07	2.8E-08	6.7E-07	0	7.3E-07	1.1E-07	1.537E-06	1.53737	0.00041
1.7E-06	0.00	0.00215	7.44E-07	2.25E-06	1.3E-06	1.18E-06	5.38E-07	2.9E-08	7.1E-07	0	7.8E-07	1.2E-07	1.631E-06	1.63105	0.00043
1.7E-06	0.00	0.00231	8E-07	2.42E-06	1.4E-06	1.27E-06	5.78E-07	3.1E-08	7.6E-07	0	8.4E-07	1.3E-07	1.754E-06	1.7544	0.00046
1.8E-06	0.00	0.00267	0	2.56E-07	1.37E-07	1.11E-07	5.13E-08	0	8.1E-08	4.5E-08	0	4.8E-09	1.305E-07	0.1305	0.00053
1.8E-06	0.00	0.00284	0	2.73E-07	1.45E-07	1.18E-07	5.45E-08	0	8.6E-08	4.8E-08	0	5.1E-09	1.388E-07	0.13879	0.00057
1.8E-06	0.00	0.00301	0	2.89E-07	1.54E-07	1.25E-07	5.77E-08	0	9.1E-08	5.1E-08	0	5.4E-09	1.469E-07	0.14689	0.0006
6.4E-06	0.01	0.00906	0	8.69E-07	4.63E-07	3.77E-07	1.74E-07	0	2.7E-07	1.5E-07	0	1.6E-08	4.424E-07	0.44243	0.00181
6.6E-06	0.01	0.00913	0	8.76E-07	4.67E-07	3.8E-07	1.75E-07	0	2.8E-07	1.5E-07	0	1.7E-08	4.459E-07	0.44595	0.00183
6.8E-06	0.01	0.00902	0	8.65E-07	4.61E-07	3.75E-07	1.73E-07	0	2.7E-07	1.5E-07	0	1.6E-08	4.404E-07	0.4404	0.0018
7.1E-06	0.01	0.00911	0	8.73E-07	4.66E-07	3.78E-07	1.75E-07	0	2.7E-07	1.5E-07	0	1.6E-08	4.447E-07	0.44468	0.00182
7.3E-06	0.01	0.00933	0	8.95E-07	4.77E-07	3.88E-07	1.79E-07	0	2.8E-07	1.6E-07	0	1.7E-08	4.556E-07	0.45562	0.00187
7.6E-06	0.01	0.00908	0	8.71E-07	4.64E-07	3.77E-07	1.74E-07	0	2.7E-07	1.5E-07	0	1.6E-08	4.434E-07	0.44336	0.00182
8E-06	0.01	0.00986	3.41E-06	1.03E-05	5.97E-06	5.41E-06	2.47E-06	1.3E-07	3.2E-06	0	3.6E-06	5.4E-07	7.488E-06	7.48795	0.00197
8.5E-06	0.01	0.01043	3.61E-06	1.09E-05	6.31E-06	5.72E-06	2.61E-06	1.4E-07	3.4E-06	0	3.8E-06	5.7E-07	7.921E-06	7.92124	0.00209

ug/m3	3rd tri	0<2	2<9	2<16	16<30	3rd tri	0<2	2<9	2<16	16<30	Summed Risk	Cases Per Million	Chronic HI
Dose Inhallation						Risk (Residential 30-yr; school 9-yr; park 15-year)							
6E-04	2E-07	6E-07	3E-07	3E-07	1E-07	8E-09	2E-07	0E+00	2E-07	3E-08	4.3E-07	0.431	0.00011
1E-03	0E+00	1E-07	6E-08	5E-08	2E-08	0E+00	3E-08	2E-08	0E+00	2E-09	5.5E-08	0.055	0.00022
1E-03	0E+00	1E-07	6E-08	5E-08	2E-08	0E+00	3E-08	2E-08	0E+00	2E-09	5.4E-08	0.054	0.00022
1E-03	0E+00	1E-07	6E-08	5E-08	2E-08	0E+00	3E-08	2E-08	0E+00	2E-09	5.4E-08	0.054	0.00022
1E-03	0E+00	1E-07	6E-08	5E-08	2E-08	0E+00	4E-08	2E-08	0E+00	2E-09	5.7E-08	0.057	0.00023
1E-03	0E+00	1E-07	7E-08	5E-08	2E-08	0E+00	4E-08	2E-08	0E+00	2E-09	6.2E-08	0.062	0.00025
1E-03	0E+00	1E-07	7E-08	6E-08	3E-08	0E+00	4E-08	2E-08	0E+00	3E-09	7.1E-08	0.071	0.00029
2E-03	6E-07	2E-06	1E-06	9E-07	4E-07	2E-08	6E-07	0E+00	6E-07	9E-08	1.3E-06	1.301	0.00034
2E-03	7E-07	2E-06	1E-06	1E-06	5E-07	3E-08	7E-07	0E+00	7E-07	1E-07	1.6E-06	1.559	0.00041
2E-03	8E-07	3E-06	1E-06	1E-06	6E-07	3E-08	8E-07	0E+00	9E-07	1E-07	1.9E-06	1.857	0.00049
3E-03	1E-06	3E-06	2E-06	2E-06	7E-07	4E-08	9E-07	0E+00	1E-06	2E-07	2.2E-06	2.183	0.00058
3E-03	1E-06	3E-06	2E-06	2E-06	8E-07	4E-08	1E-06	0E+00	1E-06	2E-07	2.4E-06	2.375	0.00063
3E-03	1E-06	3E-06	2E-06	2E-06	7E-07	4E-08	1E-06	0E+00	1E-06	2E-07	2.2E-06	2.230	0.00059
3E-03	9E-07	3E-06	2E-06	1E-06	7E-07	4E-08	9E-07	0E+00	1E-06	1E-07	2.0E-06	2.029	0.00053
2E-03	7E-07	2E-06	1E-06	1E-06	5E-07	3E-08	7E-07	0E+00	8E-07	1E-07	1.6E-06	1.630	0.00043
2E-03	7E-07	2E-06	1E-06	1E-06	5E-07	3E-08	6E-07	0E+00	7E-07	1E-07	1.5E-06	1.473	0.00039
2E-03	6E-07	2E-06	1E-06	1E-06	4E-07	2E-08	6E-07	0E+00	6E-07	1E-07	1.3E-06	1.344	0.00035
2E-03	6E-07	2E-06	1E-06	9E-07	4E-07	2E-08	5E-07	0E+00	6E-07	9E-08	1.2E-06	1.217	0.00032
1E-03	5E-07	2E-06	9E-07	8E-07	4E-07	2E-08	5E-07	0E+00	5E-07	8E-08	1.1E-06	1.114	0.00029
1E-03	5E-07	1E-06	8E-07	7E-07	3E-07	2E-08	4E-07	0E+00	5E-07	7E-08	1.0E-06	1.022	0.00027
1E-03	4E-07	1E-06	7E-07	7E-07	3E-07	2E-08	4E-07	0E+00	4E-07	7E-08	9.4E-07	0.938	0.00025
1E-03	4E-07	1E-06	7E-07	6E-07	3E-07	2E-08	4E-07	0E+00	4E-07	6E-08	8.7E-07	0.866	0.00023
1E-03	4E-07	1E-06	6E-07	6E-07	3E-07	1E-08	3E-07	0E+00	4E-07	6E-08	8.0E-07	0.803	0.00021
1E-03	3E-07	1E-06	6E-07	5E-07	2E-07	1E-08	3E-07	0E+00	4E-07	5E-08	7.5E-07	0.750	0.0002
9E-04	3E-07	1E-06	6E-07	5E-07	2E-07	1E-08	3E-07	0E+00	3E-07	5E-08	7.0E-07	0.704	0.00019
9E-04	3E-07	9E-07	5E-07	5E-07	2E-07	1E-08	3E-07	0E+00	3E-07	5E-08	6.6E-07	0.661	0.00017
8E-04	3E-07	9E-07	5E-07	5E-07	2E-07	1E-08	3E-07	0E+00	3E-07	5E-08	6.2E-07	0.624	0.00016
8E-04	3E-07	8E-07	5E-07	4E-07	2E-07	1E-08	3E-07	0E+00	3E-07	4E-08	5.9E-07	0.592	0.00016
7E-04	3E-07	8E-07	5E-07	4E-07	2E-07	1E-08	2E-07	0E+00	3E-07	4E-08	5.7E-07	0.567	0.00015
7E-04	2E-07	7E-07	4E-07	4E-07	2E-07	1E-08	2E-07	0E+00	3E-07	4E-08	5.4E-07	0.541	0.00014
7E-04	2E-07	7E-07	4E-07	4E-07	2E-07	9E-09	2E-07	0E+00	2E-07	4E-08	5.2E-07	0.517	0.00014
7E-04	2E-07	7E-07	4E-07	4E-07	2E-07	9E-09	2E-07	0E+00	2E-07	4E-08	5.0E-07	0.496	0.00013
6E-04	2E-07	7E-07	4E-07	3E-07	2E-07	9E-09	2E-07	0E+00	2E-07	3E-08	4.8E-07	0.477	0.00013
6E-04	2E-07	6E-07	4E-07	3E-07	2E-07	8E-09	2E-07	0E+00	2E-07	3E-08	4.6E-07	0.459	0.00012
6E-04	2E-07	6E-07	4E-07	3E-07	1E-07	8E-09	2E-07	0E+00	2E-07	3E-08	4.4E-07	0.444	0.00012
6E-04	2E-07	6E-07	3E-07	3E-07	1E-07	8E-09	2E-07	0E+00	2E-07	3E-08	4.3E-07	0.432	0.00011
6E-04	2E-07	6E-07	4E-07	3E-07	1E-07	8E-09	2E-07	0E+00	2E-07	3E-08	4.4E-07	0.444	0.00012
6E-04	2E-07	6E-07	3E-07	3E-07	1E-07	8E-09	2E-07	0E+00	2E-07	3E-08	4.3E-07	0.429	0.00011
1E-03	0E+00	1E-07	5E-08	4E-08	2E-08	0E+00	3E-08	2E-08	0E+00	2E-09	5.1E-08	0.051	0.00021
1E-03	0E+00	1E-07	5E-08	4E-08	2E-08	0E+00	3E-08	2E-08	0E+00	2E-09	4.9E-08	0.049	0.0002
1E-03	0E+00	1E-07	5E-08	4E-08	2E-08	0E+00	3E-08	2E-08	0E+00	2E-09	5.0E-08	0.050	0.00021
1E-03	0E+00	1E-07	6E-08	4E-08	2E-08	0E+00	3E-08	2E-08	0E+00	2E-09	5.3E-08	0.053	0.00022
1E-03	4E-07	1E-06	7E-07	6E-07	3E-07	2E-08	4E-07	0E+00	4E-07	6E-08	8.9E-07	0.891	0.00023
1E-03	5E-07	1E-06	8E-07	7E-07	3E-07	2E-08	4E-07	0E+00	5E-07	7E-08	1.0E-06	1.005	0.00026
2E-03	5E-07	2E-06	9E-07	8E-07	4E-07	2E-08	5E-07	0E+00	6E-07	8E-08	1.2E-06	1.160	0.00031
2E-03	6E-07	2E-06	1E-06	1E-06	4E-07	2E-08	6E-07	0E+00	6E-07	1E-07	1.4E-06	1.354	0.00036
2E-03	7E-07	2E-06	1E-06	1E-06	5E-07	3E-08	7E-07	0E+00	7E-07	1E-07	1.6E-06	1.557	0.00041
2E-03	8E-07	2E-06	1E-06	1E-06	6E-07	3E-08	8E-07	0E+00	9E-07	1E-07	1.8E-06	1.801	0.00047
3E-03	9E-07	3E-06	2E-06	1E-06	7E-07	4E-08	9E-07	0E+00	1E-06	1E-07	2.0E-06	2.032	0.00054
3E-03	1E-06	3E-06	2E-06	2E-06	7E-07	4E-08	9E-07	0E+00	1E-06	2E-07	2.1E-06	2.130	0.00056
3E-03	9E-07	3E-06	2E-06	1E-06	7E-07	4E-08	9E-07	0E+00	1E-06	1E-07	2.0E-06	2.031	0.00054
2E-03	9E-07	3E-06	2E-06	1E-06	6E-07	3E-08	8E-07	0E+00	9E-07	1E-07	1.9E-06	1.887	0.0005
2E-03	7E-07	2E-06	1E-06	1E-06	5E-07	3E-08	7E-07	0E+00	7E-07	1E-07	1.5E-06	1.550	0.00041
2E-03	6E-07	2E-06	1E-06	1E-06	5E-07	3E-08	6E-07	0E+00	7E-07	1E-07	1.4E-06	1.396	0.00037
2E-03	6E-07	2E-06	1E-06	9E-07	4E-07	2E-08	6E-07	0E+00	6E-07	9E-08	1.3E-06	1.276	0.00034
2E-03	5E-07	2E-06	9E-07	8E-07	4E-07	2E-08	5E-07	0E+00	6E-07	8E-08	1.2E-06	1.169	0.00031
1E-03	5E-07	1E-06	9E-07	8E-07	4E-07	2E-08	5E-07	0E+00	5E-07	8E-08	1.1E-06	1.087	0.00029
1E-03	5E-07	1E-06	8E-07	7E-07	3E-07	2E-08	4E-07	0E+00	5E-07	7E-08	1.0E-06	1.001	0.00026
1E-03	4E-07	1E-06	7E-07	7E-07	3E-07	2E-08	4E-07	0E+00	4E-07	7E-08	9.2E-07	0.920	0.00024
1E-03	4E-07	1E-06	7E-07	6E-07	3E-07	2E-08	4E-07	0E+00	4E-07	6E-08	8.4E-07	0.844	0.00022
1E-03	4E-07	1E-06	6E-07	6E-07	3E-07	1E-08	3E-07	0E+00	4E-07	6E-08	7.8E-07	0.783	0.00021
1E-03	3E-07	1E-06	6E-07	5E-07	2E-07	1E-08	3E-07	0E+00	4E-07	5E-08	7.3E-07	0.735	0.00019
9E-04	3E-07	9E-07	5E-07	5E-07	2E-07	1E-08	3E-07	0E+00	3E-07	5E-08	6.9E-07	0.687	0.00018
9E-04	3E-07	9E-07	5E-07	5E-07	2E-07	1E-08	3E-07	0E+00	3E-07	5E-08	6.5E-07	0.646	0.00017
8E-04	3E-07	8E-07	5E-07	4E-07	2E-07	1E-08	3E-07	0E+00	3E-07	4E-08	6.1E-07	0.607	0.00016
8E-04	3E-07	8E-07	5E-07	4E-07	2E-07	1E-08	2E-07	0E+00	3E-07	4E-08	5.7E-07	0.575	0.00015
7E-04	3E-07	8E-07	4E-07	4E-07	2E-07	1E-08	2E-07	0E+00	3E-07	4E-08	5.5E-07	0.549	0.00014
7E-04	2E-07	7E-07	4E-07	4E-07	2E-07	9E-09	2E-07	0E+00	3E-07	4E-08	5.3E-07	0.527	0.00014
7E-04	2E-07	7E-07	4E-07	4E-07	2E-07	9E-09	2E-07	0E+00	2E-07	4E-08	5.0E-07	0.503	0.00013
6E-04	2E-07	7E-07	4E-07	3E-07	2E-07	9E-09	2E-07	0E+00	2E-07	3E-08	4.8E-07	0.482	0.00013
6E-04	2E-07	6E-07	4E-07	3E-07	2E-07	8E-09	2E-07	0E+00	2E-07	3E-08	4.6E-07	0.462	0.00012
6E-04	2E-07	6E-07	4E-07	3E-07	1E-07	8E-09	2E-07	0E+00	2E-07	3E-08	4.4E-07	0.444	0.00012
6E-04	2E-07	6E-07	3E-07	3E-07	1E-07	8E-09	2E-07	0E+00	2E-07	3E-08	4.3E-07	0.429	0.00011
5E-04	2E-07	6E-07	3E-07	3E-07	1E-07	7E-09	2E-07	0E+00	2E-07	3E-08	4.1E-07	0.415	0.00011
6E-04	2E-07	6E-07	3E-07	3E-07	1E-07	8E-09	2E-07	0E+00	2E-07	3E-08	4.3E-07	0.429	0.00011
3E-04	9E-08	3E-07	2E-07	1E-07	6E-08	3E-09	8E-08	0E+00	9E-08	1E-08	1.9E-07	0.190	5E-05
3E-04	9E-08	3E-07	2E-07	2E-07	7E-08	4E-09	9E-08	0E+00	1E-07	2E-08	2.1E-07	0.208	5.5E-05
1E-03	0E+00	1E-07	5E-08	4E-08	2E-08	0E+00	3E-08	2E-08	0E+00	2E-09	4.8E-08	0.048	0.0002
9E-04	0E+00	9E-08	5E-08	4E-08	2E-08	0E+00	3E-08	2E-08	0E+00	2E-09	4.6E-08	0.046	0.00019
9E-04	0E+00	9E-08	5E-08	4E-08	2E-08	0E+00	3E-08	2E-08	0E+00	2E-09	4.5E-08	0.045	0.00018
9E-04	0E+00	9E-08	5E-08	4E-08	2E-08	0E+00	3E-08	2E-08	0E+00	2E-09	4.6E-08	0.046	0.00019
1E-03	0E+00	9E-08	5E-08	4E-08	2E-08	0E+00	3E-08	2E-08	0E+00	2E-09	4.7E-08	0.047	0.00019
1E-03	4E-07	1E-06	6E-07	6E-07	3E-07	1E-08	3E-07	0E+00	4E-07	6E-08	7.7E-07	0.773	0.0002
1E-03	4E-07	1E-06	7E-07	6E-07	3E-07	2E-08	4E-07	0E+00	4E-07	6E-08	8.4E-07	0.840	0.00022
1E-03	4E-07	1E-06	7E-07	7E-07	3E-07	2E-08	4E-07	0E+00	4E-07	7E-08	9.3E-07	0.931	0.00025
1E-03	5E-07	1E-06	8E-07	8E-07	3E-07	2E-08	5E-07	0E+00	5E-07	8E-08	1.1E-06	1.053	0.00028
2E-03	6E-07	2E-06	1E-06	9E-07	4E-07	2E-08	5E-07	0E+00	6E-07	9E-08	1.2E-06	1.207	0.00032
2E-03	6E-07	2E-06	1E-06	1E-06	5E-07	2E-08	6E-07	0E+00	7E-07	1E-07	1.4E-06	1.377	0.00036
2E-03	7E-07	2E-06	1E-06	1E-06	5E-07	3E-08	7E-07	0E+00	8E-07	1E-07	1.6E-06	1.576	0.00042
2E-03	8E-07	2E-06	1E-06	1E-06	6E-07	3E-08	7E-07	0E+00	8E-07	1E-07	1.7E-06	1.732	0.00046
2E-03	8E-07	3E-06	1E-06	1E-06	6E-07	3E-08	8E-07	0E+00	9E-07	1E-07	1.9E-06	1.863	0.00049
3E-03	9E-07	3E-06	2E-06	1E-06	6E-07	3E-08	8E-07	0E+00	9E-07	1E-07	1.9E-06	1.923	0.00051
2E-03	8E-07	3E-06	1E-06	1E-06	6E-07	3E-08	8E-07	0E+00	9E-07	1E-07	1.9E-06	1.858	0.00049
2E-03	8E-07	2E-06	1E-06	1E-06	6E-07	3E-08	8E-07	0E+00	8E-07	1E-07	1.7E-06	1.742	0.00046
2E-03	7E-07	2E-06	1E-06	1E-06	5E-07	3E-08	6E-07	0E+00	7E-07	1E-07	1.5E-06	1.488	0.00039
2E-03	6E-07	2E-06	1E-06	1E-06	4E-07	2E-08	6E-07	0E+00	6E-07	1E-07	1.3E-06	1.335	0.00035
2E-03	6E-07	2E-06	1E-06	9E-07	4E-07	2E-08	5E-07	0E+00	6E-07	9E-08	1.2E-06	1.218	0.00032
1E-03	5E-07	2E-06	9E-07	8E-07	4E-07	2E-08	5E-07	0E+00	5E-07	8E-08	1.1E-06	1.113	0.00029
1E-03	5E-07	1E-06	8E-07	8E-07	3E-07	2E-08	5E-07	0E+00	5E-07	8E-08	1.1E-06	1.055	0.00028
1E-03	5E-07	1E-06	8E-07	7E-07	3E-07	2E-08	4E-07	0E+00	5E-07	7E-08	9.9E-07	0.987	0.00026
1E-03	4E-07	1E-06	7E-07	7E-07	3E-07	2E-08	4E-07	0E+00	4E-07	7E-08	9.1E-07	0.906	0.00024
1E-03	4E-07	1E-06	7E-07	6E-07	3E-07	1E-08	4E-07	0E+00	4E-07	6E-08	8.3E-07	0.834	0.00022
1E-03	4E-07	1E-06	6E-07	6E-07	3E-07	1E-08	3E-07	0E+00	4E-07	6E-08	7.7E-07	0.773	0.0002
9E-04	3E-07	1E-06	6E-07	5E-07	2E-07	1E-08	3E-07	0E+00	3E-07	5E-08	7.1E-07	0.713	0.00019
9E-04	3E-07	9E-07	5E-07	5E-07	2E-07	1E-08	3E-07	0E+00	3E-07	5E-08	6.6E-07	0.662	0.00017
8E-04	3E-07	9E-07	5E-07	5E-07	2E-07	1E-08	3E-07	0E+00	3E-07	5E-08	6.3E-07	0.627	0.00017
8E-04	3E-07	8E-07	5E-07	4E-07	2E-07	1E-08	3E-07	0E+00	3E-07	4E-08	5.9E-07	0.595	0.00016
7E-04	3E-07	8E-07	4E-07	4E-07	2E-07	1E-08	2E-07	0E+00	3E-07	4E-08	5.6E-07	0.562	0.00015
7E-04	2E-07	7E-07	4E-07	4E-07	2E-07	1E-08	2E-07	0E+00	3E-07	4E-08	5.4E-07	0.538	0.00014
7E-04	2E-07	7E-07	4E-07	4E-07	2E-07	9E-09	2E-07	0E+00	2E-07	4E-08	5.2E-07	0.516	0.00014
7E-04	2E-07	7E-07	4E-07	4E-07	2E-07	9E-09	2E-07	0E+00	2E-07	4E-08	4.9E-07	0.494	0.00013
6E-04	2E-07	6E-07	4E-07	3E-07	2E-07	8E-09	2E-07	0E+00	2E-07	3E-08	4.7E-07	0.471	0.00012
6E-04	2E-07	6E-07	4E-07	3E-07	1E-07	8E-09	2E-07	0E+00	2E-07	3E-08	4.5E-07	0.450	0.00012
6E-04	2E-07	6E-07	3E-07	3E-07	1E-07	8E-09	2E-07	0E+00	2E-07	3E-08	4.3E-07	0.432	0.00011
5E-04	2E-07	6E-07	3E-07	3E-07	1E-07	7E-09	2E-07	0E+00	2E-07	3E-08	4.2E-07	0.416	0.00011
5E-04	2E-07	6E-07	3E-07	3E-07	1E-07	7E-09	2E-07	0E+00	2E-07	3E-08	4.0E-07	0.402	0.00011
1E-04	5E-08	1E-07	8E-08	7E-08	3E-08	2E-09	4E-08	0E+00	5E-08	7E-09	1.0E-07	0.101	2.7E-05
1E-04	5E-08	2E-07	9E-08	8E-08	4E-08	2E-09	5E-08	0E+00	5E-08	8E-09	1.1E-07	0.114	3E-05
2E-04	6E-08	2E-07	1E-07	1E-07	4E-08	2E-09	6E-08	0E+00	6E-08	1E-08	1.3E-07	0.133	3.5E-05
2E-04	7E-08	2E-07	1E-07	1E-07	5E-08	3E-09	6E-08	0E+00	7E-08	1E-08	1.5E-07	0.146	3.8E-05
2E-04	7E-08	2E-07	1E-07	1E-07	5E-08	3E-09	7E-08	0E+00	7E-08	1E-08	1.6E-07	0.156	4.1E-05
2E-04	8E-08	2E-07	1E-07	1E-07	6E-08	3E-09	7E-08	0E+00	8E-08	1E-08	1.7E-07	0.168	4.4E-05
2E-04	8E-08	2E-07	1E-07	1E-07	6E-08	3E-09	8E-08	0E+00	9E-08	1E-08	1.8E-07	0.181	4.8E-05
3E-04	9E-08	3E-07	2E-07	1E-07	7E-08	4E-09	9E-08	0E+00	9E-08	1E-08	2.0E-07	0.198	5.2E-05
3E-04	0E+00	3E-08	2E-08	1E-08	6E-09	0E+00	1E-08	5E-09	0E+00	6E-10	1.6E-08	0.016	6.4E-05
3E-04	0E+00	3E-08	2E-08	1E-08	7E-09	0E+00	1E-08	6E-09	0E+00	6E-10	1.7E-08	0.017	6.9E-05
4E-04	0E+00	4E-08	2E-08	2E-08	7E-09	0E+00	1E-08	6E-09	0E+00	7E-10	1.8E-08	0.018	7.5E-05
9E-04	0E+00	9E-08	5E-08	4E-08	2E-08	0E+00	3E-08	2E-08	0E+00	2E-09	4.4E-08	0.044	0.00018
9E-04	0E+00	9E-08	5E-08	4E-08	2E-08	0E+00	3E-08	1E-08	0E+00	2E-09	4.3E-08	0.043	0.00018
9E-04	0E+00	8E-08	4E-08	4E-08	2E-08	0E+00	3E-08	1E-08	0E+00	2E-09	4.2E-08	0.042	0.00017
9E-04	0E+00	8E-08	4E-08	4E-08	2E-08	0E+00	3E-08	1E-08	0E+00	2E-09	4.2E-08	0.042	0.00017
9E-04	0E+00	8E-08	4E-08	4E-08	2E-08	0E+00	3E-08	1E-08	0E+00	2E-09	4.2E-08	0.042	0.00017
8E-04	0E+00	8E-08	4E-08	3E-08	2E-08	0E+00	2E-08	1E-08	0E+00	1E-09	4.0E-08	0.040	0.00017
9E-04	3E-07	9E-07	5E-07	5E-07	2E-07	1E-08	3E-07	0E+00	3E-07	5E-08	6.7E-07	0.670	0.00018
9E-04	3E-07	1E-06	6E-07	5E-07	2E-07	1E-08	3E-07	0E+00	3E-07	5E-08	7.0E-07	0.697	0.00018

ug/m3	3rd tri	0<2	2<9	2<16	16<30	3rd tri	0<2	2<9	2<16	16<30	Summed Risk	Cases Per Million	Chronic HI
Dose Inhallation						Risk (Residential 30-yr; school 9-yr; park 15-year)							
9E-04	3E-07	1E-06	6E-07	5E-07	2E-07	1E-08	3E-07	0E+00	3E-07	5E-08	6.9E-07	0.693	0.00018
2E-03	0E+00	1E-07	8E-08	6E-08	3E-08	0E+00	5E-08	3E-08	0E+00	3E-09	7.3E-08	0.073	0.0003
2E-03	0E+00	1E-07	8E-08	6E-08	3E-08	0E+00	5E-08	3E-08	0E+00	3E-09	7.4E-08	0.074	0.0003
2E-03	0E+00	2E-07	8E-08	7E-08	3E-08	0E+00	5E-08	3E-08	0E+00	3E-09	8.0E-08	0.080	0.00033
2E-03	0E+00	2E-07	9E-08	7E-08	3E-08	0E+00	5E-08	3E-08	0E+00	3E-09	8.6E-08	0.086	0.00035
2E-03	0E+00	2E-07	1E-07	8E-08	4E-08	0E+00	6E-08	3E-08	0E+00	4E-09	9.8E-08	0.098	0.0004
2E-03	0E+00	2E-07	1E-07	1E-07	5E-08	0E+00	7E-08	4E-08	0E+00	4E-09	1.2E-07	0.116	0.00047
3E-03	1E-06	3E-06	2E-06	2E-06	7E-07	4E-08	1E-06	0E+00	1E-06	2E-07	2.2E-06	2.232	0.00059
4E-03	1E-06	4E-06	2E-06	2E-06	9E-07	5E-08	1E-06	0E+00	1E-06	2E-07	2.8E-06	2.837	0.00075
5E-03	2E-06	5E-06	3E-06	3E-06	1E-06	7E-08	2E-06	0E+00	2E-06	3E-07	3.6E-06	3.637	0.00096
6E-03	2E-06	6E-06	4E-06	3E-06	2E-06	8E-08	2E-06	0E+00	2E-06	3E-07	4.6E-06	4.638	0.00122
7E-03	2E-06	7E-06	4E-06	4E-06	2E-06	9E-08	2E-06	0E+00	3E-06	4E-07	5.3E-06	5.288	0.00139
6E-03	2E-06	7E-06	4E-06	3E-06	2E-06	9E-08	2E-06	0E+00	2E-06	3E-07	4.8E-06	4.818	0.00127
6E-03	2E-06	6E-06	3E-06	3E-06	1E-06	8E-08	2E-06	0E+00	2E-06	3E-07	4.2E-06	4.239	0.00112
4E-03	1E-06	4E-06	3E-06	2E-06	1E-06	6E-08	1E-06	0E+00	2E-06	2E-07	3.2E-06	3.216	0.00085
4E-03	1E-06	4E-06	2E-06	2E-06	9E-07	5E-08	1E-06	0E+00	1E-06	2E-07	2.9E-06	2.853	0.00075
3E-03	1E-06	4E-06	2E-06	2E-06	8E-07	5E-08	1E-06	0E+00	1E-06	2E-07	2.6E-06	2.567	0.00068
3E-03	1E-06	3E-06	2E-06	2E-06	8E-07	4E-08	1E-06	0E+00	1E-06	2E-07	2.3E-06	2.289	0.0006
3E-03	9E-07	3E-06	2E-06	1E-06	7E-07	4E-08	9E-07	0E+00	1E-06	2E-07	2.1E-06	2.069	0.00055
2E-03	9E-07	3E-06	1E-06	1E-06	6E-07	3E-08	8E-07	0E+00	9E-07	1E-07	1.9E-06	1.871	0.00049
2E-03	8E-07	2E-06	1E-06	1E-06	6E-07	3E-08	7E-07	0E+00	8E-07	1E-07	1.7E-06	1.693	0.00045
2E-03	7E-07	2E-06	1E-06	1E-06	5E-07	3E-08	7E-07	0E+00	7E-07	1E-07	1.5E-06	1.541	0.00041
2E-03	6E-07	2E-06	1E-06	1E-06	5E-07	3E-08	6E-07	0E+00	7E-07	1E-07	1.4E-06	1.412	0.00037
2E-03	6E-07	2E-06	1E-06	9E-07	4E-07	2E-08	6E-07	0E+00	6E-07	9E-08	1.3E-06	1.304	0.00034
2E-03	6E-07	2E-06	1E-06	9E-07	4E-07	2E-08	5E-07	0E+00	6E-07	9E-08	1.2E-06	1.212	0.00032
1E-03	5E-07	2E-06	9E-07	8E-07	4E-07	2E-08	5E-07	0E+00	5E-07	8E-08	1.1E-06	1.127	0.0003
1E-03	5E-07	1E-06	8E-07	8E-07	3E-07	2E-08	5E-07	0E+00	5E-07	8E-08	1.1E-06	1.055	0.00028
1E-03	5E-07	1E-06	8E-07	7E-07	3E-07	2E-08	4E-07	0E+00	5E-07	7E-08	9.9E-07	0.995	0.00026
1E-03	4E-07	1E-06	8E-07	7E-07	3E-07	2E-08	4E-07	0E+00	5E-07	7E-08	9.5E-07	0.946	0.00025
1E-03	4E-07	1E-06	7E-07	6E-07	3E-07	2E-08	4E-07	0E+00	4E-07	7E-08	9.0E-07	0.899	0.00024
1E-03	4E-07	1E-06	7E-07	6E-07	3E-07	2E-08	4E-07	0E+00	4E-07	6E-08	8.5E-07	0.854	0.00023
1E-03	4E-07	1E-06	7E-07	6E-07	3E-07	1E-08	4E-07	0E+00	4E-07	6E-08	8.2E-07	0.816	0.00022
1E-03	4E-07	1E-06	6E-07	6E-07	3E-07	1E-08	3E-07	0E+00	4E-07	6E-08	7.8E-07	0.782	0.00021
1E-03	3E-07	1E-06	6E-07	5E-07	2E-07	1E-08	3E-07	0E+00	4E-07	5E-08	7.5E-07	0.749	0.0002
1E-03	3E-07	1E-06	6E-07	5E-07	2E-07	1E-08	3E-07	0E+00	3E-07	5E-08	7.2E-07	0.723	0.00019
9E-04	3E-07	1E-06	6E-07	5E-07	2E-07	1E-08	3E-07	0E+00	3E-07	5E-08	7.0E-07	0.700	0.00018
9E-04	3E-07	1E-06	6E-07	5E-07	2E-07	1E-08	3E-07	0E+00	3E-07	5E-08	7.2E-07	0.717	0.00019
9E-04	3E-07	9E-07	5E-07	5E-07	2E-07	1E-08	3E-07	0E+00	3E-07	5E-08	6.9E-07	0.690	0.00018
1E-03	0E+00	1E-07	7E-08	6E-08	3E-08	0E+00	4E-08	2E-08	0E+00	2E-09	6.7E-08	0.067	0.00027
1E-03	0E+00	1E-07	7E-08	6E-08	3E-08	0E+00	4E-08	2E-08	0E+00	3E-09	6.9E-08	0.069	0.00028
1E-03	0E+00	1E-07	8E-08	6E-08	3E-08	0E+00	4E-08	3E-08	0E+00	3E-09	7.3E-08	0.073	0.0003
2E-03	0E+00	2E-07	8E-08	7E-08	3E-08	0E+00	5E-08	3E-08	0E+00	3E-09	7.9E-08	0.079	0.00032
2E-03	6E-07	2E-06	1E-06	1E-06	5E-07	2E-08	6E-07	0E+00	7E-07	1E-07	1.4E-06	1.378	0.00036
2E-03	7E-07	2E-06	1E-06	1E-06	5E-07	3E-08	7E-07	0E+00	8E-07	1E-07	1.6E-06	1.617	0.00043
3E-03	9E-07	3E-06	2E-06	1E-06	6E-07	3E-08	8E-07	0E+00	9E-07	1E-07	2.0E-06	1.954	0.00051
3E-03	1E-06	3E-06	2E-06	2E-06	8E-07	4E-08	1E-06	0E+00	1E-06	2E-07	2.4E-06	2.407	0.00063
4E-03	1E-06	4E-06	2E-06	2E-06	1E-06	5E-08	1E-06	0E+00	1E-06	2E-07	2.9E-06	2.935	0.00077
5E-03	2E-06	5E-06	3E-06	3E-06	1E-06	6E-08	2E-06	0E+00	2E-06	3E-07	3.6E-06	3.628	0.00096
6E-03	2E-06	6E-06	3E-06	3E-06	1E-06	8E-08	2E-06	0E+00	2E-06	3E-07	4.3E-06	4.339	0.00114
6E-03	2E-06	6E-06	4E-06	3E-06	2E-06	8E-08	2E-06	0E+00	2E-06	3E-07	4.6E-06	4.614	0.00122
6E-03	2E-06	6E-06	3E-06	3E-06	1E-06	8E-08	2E-06	0E+00	2E-06	3E-07	4.3E-06	4.304	0.00113
5E-03	2E-06	5E-06	3E-06	3E-06	1E-06	7E-08	2E-06	0E+00	2E-06	3E-07	3.9E-06	3.903	0.00103
4E-03	1E-06	4E-06	2E-06	2E-06	1E-06	5E-08	1E-06	0E+00	1E-06	2E-07	3.0E-06	3.030	0.0008
3E-03	1E-06	4E-06	2E-06	2E-06	9E-07	5E-08	1E-06	0E+00	1E-06	2E-07	2.7E-06	2.652	0.0007
3E-03	1E-06	3E-06	2E-06	2E-06	8E-07	4E-08	1E-06	0E+00	1E-06	2E-07	2.4E-06	2.392	0.00063
3E-03	1E-06	3E-06	2E-06	2E-06	7E-07	4E-08	9E-07	0E+00	1E-06	2E-07	2.2E-06	2.167	0.00057
3E-03	9E-07	3E-06	2E-06	1E-06	7E-07	4E-08	9E-07	0E+00	1E-06	1E-07	2.0E-06	2.005	0.00053
2E-03	8E-07	3E-06	1E-06	1E-06	6E-07	3E-08	8E-07	0E+00	9E-07	1E-07	1.8E-06	1.827	0.00048
2E-03	8E-07	2E-06	1E-06	1E-06	5E-07	3E-08	7E-07	0E+00	8E-07	1E-07	1.7E-06	1.657	0.00044
2E-03	7E-07	2E-06	1E-06	1E-06	5E-07	3E-08	6E-07	0E+00	7E-07	1E-07	1.5E-06	1.499	0.00039
2E-03	6E-07	2E-06	1E-06	1E-06	5E-07	2E-08	6E-07	0E+00	7E-07	1E-07	1.4E-06	1.374	0.00036
2E-03	6E-07	2E-06	1E-06	9E-07	4E-07	2E-08	6E-07	0E+00	6E-07	9E-08	1.3E-06	1.278	0.00034
2E-03	5E-07	2E-06	9E-07	9E-07	4E-07	2E-08	5E-07	0E+00	6E-07	9E-08	1.2E-06	1.183	0.00031
1E-03	5E-07	2E-06	9E-07	8E-07	4E-07	2E-08	5E-07	0E+00	5E-07	8E-08	1.1E-06	1.101	0.00029
1E-03	5E-07	1E-06	8E-07	7E-07	3E-07	2E-08	4E-07	0E+00	5E-07	7E-08	1.0E-06	1.026	0.00027
1E-03	4E-07	1E-06	8E-07	7E-07	3E-07	2E-08	4E-07	0E+00	5E-07	7E-08	9.6E-07	0.964	0.00025
1E-03	4E-07	1E-06	7E-07	7E-07	3E-07	2E-08	4E-07	0E+00	4E-07	7E-08	9.2E-07	0.915	0.00024
1E-03	4E-07	1E-06	7E-07	6E-07	3E-07	2E-08	4E-07	0E+00	4E-07	6E-08	8.7E-07	0.874	0.00023
1E-03	4E-07	1E-06	7E-07	6E-07	3E-07	1E-08	4E-07	0E+00	4E-07	6E-08	8.3E-07	0.831	0.00022
1E-03	4E-07	1E-06	6E-07	6E-07	3E-07	1E-08	3E-07	0E+00	4E-07	6E-08	7.9E-07	0.792	0.00021
1E-03	3E-07	1E-06	6E-07	5E-07	2E-07	1E-08	3E-07	0E+00	4E-07	5E-08	7.6E-07	0.755	0.0002
1E-03	3E-07	1E-06	6E-07	5E-07	2E-07	1E-08	3E-07	0E+00	3E-07	5E-08	7.2E-07	0.724	0.00019
9E-04	3E-07	1E-06	6E-07	5E-07	2E-07	1E-08	3E-07	0E+00	3E-07	5E-08	7.0E-07	0.697	0.00018
9E-04	3E-07	9E-07	5E-07	5E-07	2E-07	1E-08	3E-07	0E+00	3E-07	5E-08	6.7E-07	0.671	0.00018
9E-04	3E-07	9E-07	5E-07	5E-07	2E-07	1E-08	3E-07	0E+00	3E-07	5E-08	6.9E-07	0.690	0.00018
3E-04	1E-07	3E-07	2E-07	2E-07	8E-08	4E-09	1E-07	0E+00	1E-07	2E-08	2.3E-07	0.235	6.2E-05
3E-04	1E-07	4E-07	2E-07	2E-07	8E-08	5E-09	1E-07	0E+00	1E-07	2E-08	2.6E-07	0.257	6.8E-05
1E-03	0E+00	1E-07	6E-08	5E-08	2E-08	0E+00	4E-08	2E-08	0E+00	2E-09	6.2E-08	0.062	0.00025
1E-03	0E+00	1E-07	6E-08	5E-08	2E-08	0E+00	4E-08	2E-08	0E+00	2E-09	6.0E-08	0.060	0.00025
1E-03	0E+00	1E-07	6E-08	5E-08	2E-08	0E+00	4E-08	2E-08	0E+00	2E-09	6.2E-08	0.062	0.00025
1E-03	0E+00	1E-07	7E-08	5E-08	3E-08	0E+00	4E-08	2E-08	0E+00	2E-09	6.4E-08	0.064	0.00026
1E-03	0E+00	1E-07	7E-08	6E-08	3E-08	0E+00	4E-08	2E-08	0E+00	3E-09	6.8E-08	0.068	0.00028
2E-03	5E-07	2E-06	9E-07	8E-07	4E-07	2E-08	5E-07	0E+00	5E-07	8E-08	1.1E-06	1.143	0.0003
2E-03	6E-07	2E-06	1E-06	9E-07	4E-07	2E-08	6E-07	0E+00	6E-07	9E-08	1.3E-06	1.283	0.00034
2E-03	7E-07	2E-06	1E-06	1E-06	5E-07	3E-08	6E-07	0E+00	7E-07	1E-07	1.5E-06	1.476	0.00039
2E-03	8E-07	2E-06	1E-06	1E-06	6E-07	3E-08	8E-07	0E+00	8E-07	1E-07	1.7E-06	1.744	0.00046
3E-03	1E-06	3E-06	2E-06	2E-06	7E-07	4E-08	9E-07	0E+00	1E-06	2E-07	2.1E-06	2.098	0.00055
3E-03	1E-06	3E-06	2E-06	2E-06	8E-07	5E-08	1E-06	0E+00	1E-06	2E-07	2.5E-06	2.525	0.00067
4E-03	1E-06	4E-06	2E-06	2E-06	1E-06	5E-08	1E-06	0E+00	1E-06	2E-07	3.1E-06	3.062	0.00081
5E-03	2E-06	5E-06	3E-06	3E-06	1E-06	6E-08	2E-06	0E+00	2E-06	3E-07	3.5E-06	3.513	0.00093
5E-03	2E-06	5E-06	3E-06	3E-06	1E-06	7E-08	2E-06	0E+00	2E-06	3E-07	3.9E-06	3.895	0.00103
5E-03	2E-06	6E-06	3E-06	3E-06	1E-06	7E-08	2E-06	0E+00	2E-06	3E-07	4.0E-06	4.044	0.00107
5E-03	2E-06	5E-06	3E-06	3E-06	1E-06	7E-08	2E-06	0E+00	2E-06	3E-07	3.9E-06	3.854	0.00102
5E-03	2E-06	5E-06	3E-06	3E-06	1E-06	6E-08	2E-06	0E+00	2E-06	3E-07	3.5E-06	3.544	0.00093
4E-03	1E-06	4E-06	2E-06	2E-06	1E-06	5E-08	1E-06	0E+00	1E-06	2E-07	2.9E-06	2.896	0.00076
3E-03	1E-06	3E-06	2E-06	2E-06	8E-07	4E-08	1E-06	0E+00	1E-06	2E-07	2.5E-06	2.503	0.00066
3E-03	1E-06	3E-06	2E-06	2E-06	7E-07	4E-08	1E-06	0E+00	1E-06	2E-07	2.2E-06	2.237	0.00059
3E-03	9E-07	3E-06	2E-06	1E-06	7E-07	4E-08	9E-07	0E+00	1E-06	1E-07	2.0E-06	2.013	0.00053
3E-03	9E-07	3E-06	2E-06	1E-06	6E-07	3E-08	8E-07	0E+00	9E-07	1E-07	1.9E-06	1.924	0.00051
2E-03	8E-07	2E-06	1E-06	1E-06	6E-07	3E-08	8E-07	0E+00	9E-07	1E-07	1.8E-06	1.794	0.00047
2E-03	7E-07	2E-06	1E-06	1E-06	5E-07	3E-08	7E-07	0E+00	8E-07	1E-07	1.6E-06	1.626	0.00043
2E-03	7E-07	2E-06	1E-06	1E-06	5E-07	3E-08	6E-07	0E+00	7E-07	1E-07	1.5E-06	1.478	0.00039
2E-03	6E-07	2E-06	1E-06	1E-06	4E-07	2E-08	6E-07	0E+00	6E-07	1E-07	1.4E-06	1.355	0.00036
2E-03	6E-07	2E-06	1E-06	9E-07	4E-07	2E-08	5E-07	0E+00	6E-07	9E-08	1.2E-06	1.232	0.00032
1E-03	5E-07	2E-06	9E-07	8E-07	4E-07	2E-08	5E-07	0E+00	5E-07	8E-08	1.1E-06	1.131	0.0003
1E-03	5E-07	1E-06	8E-07	8E-07	4E-07	2E-08	5E-07	0E+00	5E-07	8E-08	1.1E-06	1.066	0.00028
1E-03	5E-07	1E-06	8E-07	7E-07	3E-07	2E-08	4E-07	0E+00	5E-07	7E-08	1.0E-06	1.005	0.00026
1E-03	4E-07	1E-06	8E-07	7E-07	3E-07	2E-08	4E-07	0E+00	4E-07	7E-08	9.4E-07	0.942	0.00025
1E-03	4E-07	1E-06	7E-07	6E-07	3E-07	2E-08	4E-07	0E+00	4E-07	7E-08	9.0E-07	0.898	0.00024
1E-03	4E-07	1E-06	7E-07	6E-07	3E-07	2E-08	4E-07	0E+00	4E-07	6E-08	8.6E-07	0.857	0.00023
1E-03	4E-07	1E-06	7E-07	6E-07	3E-07	1E-08	4E-07	0E+00	4E-07	6E-08	8.2E-07	0.816	0.00021
1E-03	4E-07	1E-06	6E-07	6E-07	3E-07	1E-08	3E-07	0E+00	4E-07	6E-08	7.7E-07	0.773	0.0002
1E-03	3E-07	1E-06	6E-07	5E-07	2E-07	1E-08	3E-07	0E+00	4E-07	5E-08	7.4E-07	0.736	0.00019
9E-04	3E-07	1E-06	6E-07	5E-07	2E-07	1E-08	3E-07	0E+00	3E-07	5E-08	7.0E-07	0.703	0.00019
9E-04	3E-07	9E-07	5E-07	5E-07	2E-07	1E-08	3E-07	0E+00	3E-07	5E-08	6.7E-07	0.675	0.00018
9E-04	3E-07	9E-07	5E-07	5E-07	2E-07	1E-08	3E-07	0E+00	3E-07	5E-08	6.5E-07	0.650	0.00017
2E-04	6E-08	2E-07	1E-07	9E-08	4E-08	2E-09	6E-08	0E+00	6E-08	9E-09	1.3E-07	0.130	3.4E-05
2E-04	7E-08	2E-07	1E-07	1E-07	5E-08	3E-09	6E-08	0E+00	7E-08	1E-08	1.5E-07	0.146	3.8E-05
2E-04	8E-08	2E-07	1E-07	1E-07	6E-08	3E-09	7E-08	0E+00	8E-08	1E-08	1.7E-07	0.169	4.5E-05
2E-04	8E-08	3E-07	1E-07	1E-07	6E-08	3E-09	8E-08	0E+00	9E-08	1E-08	1.8E-07	0.184	4.9E-05
3E-04	9E-08	3E-07	2E-07	1E-07	6E-08	4E-09	8E-08	0E+00	9E-08	1E-08	2.0E-07	0.196	5.2E-05
3E-04	1E-07	3E-07	2E-07	2E-07	7E-08	4E-09	9E-08	0E+00	1E-07	2E-08	2.1E-07	0.209	5.5E-05
3E-04	1E-07	3E-07	2E-07	2E-07	7E-08	4E-09	1E-07	0E+00	1E-07	2E-08	2.2E-07	0.224	5.9E-05
3E-04	1E-07	3E-07	2E-07	2E-07	8E-08	4E-09	1E-07	0E+00	1E-07	2E-08	2.5E-07	0.245	6.5E-05
4E-04	0E+00	4E-08	2E-08	2E-08	7E-09	0E+00	1E-08	7E-09	0E+00	7E-10	1.9E-08	0.019	7.8E-05
4E-04	0E+00	4E-08	2E-08	2E-08	8E-09	0E+00	1E-08	7E-09	0E+00	8E-10	2.0E-08	0.020	8.4E-05
4E-04	0E+00	4E-08	2E-08	2E-08	9E-09	0E+00	1E-08	8E-09	0E+00	8E-10	2.2E-08	0.022	9E-05
1E-03	0E+00	1E-07	6E-08	5E-08	2E-08	0E+00	3E-08	2E-08	0E+00	2E-09	5.6E-08	0.056	0.00023
1E-03	0E+00	1E-07	6E-08	5E-08	2E-08	0E+00	3E-08	2E-08	0E+00	2E-09	5.5E-08	0.055	0.00023
1E-03	0E+00	1E-07	6E-08	5E-08	2E-08	0E+00	3E-08	2E-08	0E+00	2E-09	5.5E-08	0.055	0.00022
1E-03	0E+00	1E-07	6E-08	5E-08	2E-08	0E+00	3E-08	2E-08	0E+00	2E-09	5.5E-08	0.055	0.00022
1E-03	0E+00	1E-07	6E-08	5E-08	2E-08	0E+00	3E-08	2E-08	0E+00	2E-09	5.6E-08	0.056	0.00023
1E-03	0E+00	1E-07	6E-08	5E-08	2E-08	0E+00	3E-08	2E-08	0E+00	2E-09	5.4E-08	0.054	0.00022
1E-03	4E-07	1E-06	7E-07	7E-07	3E-07	2E-08	4E-07	0E+00	4E-07	7E-08	9.3E-07	0.934	0.00025
1E-03	5E-07	1E-06	8E-07	7E-07	3E-07	2E-08	4E-07	0E+00	5E-07	7E-08	1.0E-06	0.995	0.00026

TAMT_HRA_Existing
DPM_annl

AERMOD Output

Source Group in AERMOD

Receptor	X	Y	B10_1_AUX	B10_2_AUX	B10_3_AUX	B10_4_AUX	B10_5_AUX	B10_6_AUX	B10_7_AUX	B10_8_AUX	CHE_1	LOC_SWTCH EMP	LOC_SWTCH LOA	OGV_PATH BLR	OGV_PATH DPM	TR_28TH	TR_BAYMAR	TR_BOSTON	TR_CROSBY	TR_HARBOR CHA	TR_HARBOR SAM	TUG_PATH_DPM	B10_1_AUX (Refrigerated ContainersExisting)	B10_2_AUX (Refrigerated ContainersExisting)	B10_3_AUX (Refrigerated ContainersExisting)	B10_4_AUX (Refrigerated ContainersExisting)	B10_5_AUX (Multi-Purpose General CargoExisting)	B10_6_AUX (Multi-Purpose General CargoExisting)	B10_7_AUX (Dry BulkExisting)	B10_8_AUX (Dry BulkExisting)	CHE_1 (AllExisting)	LOC_SWTCHEMP (AllExisting)	LOC_SWTCHLOA (AllExisting)	OGV_PATH_DPM (AllExisting)	TR_28TH (TR_28THExisting)	TR_BAYMAR (TR_BAYMAR Existing)	TR_BOSTON (TR_BOSTON Existing)	TR_CROSBY (TR_CROSBY Existing)	TR_HARBOR CHA (TR_HARBOR CHAExisting)	TR_HARBOR SAM (TR_HARBOR SAMExisting)	TUG_PATH_DPM (AllExisting)	All 100%	Refrigerated ContainersExisting 89%	Multi-Purpose General CargoExisting 5%	Dry BulkExisting 6%	All 100%	Refrigerated ContainersExisting 73%	Multi-Purpose General CargoExisting 12%	Dry BulkExisting 15%	All 100%	Refrigerated ContainersExisting 57%
Source group			1	3	5	7	9	11	13	15	17	18	19	20	21	22	23	24	25	26	27	28	1	3	5	7	9	11	13	15	17	18	19	21	22	23	24	25	26	27	28										
g/s -->																							1.4E-02	1.4E-02	1.4E-02	1.4E-02	1.6E-03	1.6E-03	1.8E-03	1.8E-03	1.5E-08	1.8E-04	1.8E-04	7.6E-03	4.4E-06	7.1E-06	1.9E-05	4.0E-05	8.9E-05	8.9E-05	4.1E-04										
residential	487031	3619125	1.6E-01	1.4E-01	1.6E-01	1.7E-01	1.9E-01	2.1E-01	2.3E-01	2.4E-01	1.8E+05	4.3E-01	4.7E-01	8.2E-02	8.2E-02	2.3E-01	2.2E-02	2.0E-01	8.5E-01	7.8E-01	5.7E-01	1.1E-01	2.3E-03	2.0E-03	2.2E-03	2.4E-03	3.0E-04	3.3E-04	4.0E-04	4.3E-04	2.8E-03	7.6E-05	8.4E-05	6.2E-04	1.0E-06	1.6E-07	3.7E-06	3.4E-05	6.9E-05	5.1E-05	4.3E-05	1E-02	9E-03	5E-04	6E-04	6E-04	5E-04	7E-05	9E-05	4E-05	2E-05
residential	487131	3619125	1.5E-01	1.3E-01	1.4E-01	1.6E-01	1.8E-01	1.9E-01	2.1E-01	2.2E-01	1.4E+05	3.3E-01	3.6E-01	7.5E-02	7.5E-02	2.4E-01	2.2E-02	1.9E-01	6.9E-01	6.0E-01	5.1E-01	9.3E-02	2.1E-03	1.8E-03	2.0E-03	2.2E-03	2.7E-04	3.0E-04	3.7E-04	4.0E-04	2.2E-03	5.8E-05	6.5E-05	5.7E-04	1.0E-06	1.6E-07	3.6E-06	2.8E-05	5.4E-05	4.6E-05	3.8E-05	9E-03	8E-03	5E-04	5E-04	6E-04	4E-04	7E-05	8E-05	4E-05	2E-05
residential	487231	3619125	1.4E-01	1.2E-01	1.4E-01	1.5E-01	1.7E-01	1.9E-01	2.0E-01	2.2E-01	1.4E+05	3.3E-01	3.6E-01	7.5E-02	7.5E-02	3.0E-01	2.4E-02	2.4E-01	7.2E-01	6.0E-01	5.7E-01	9.5E-02	2.0E-03	1.8E-03	2.0E-03	2.1E-03	2.6E-04	2.9E-04	3.6E-04	3.8E-04	2.1E-03	5.8E-05	6.5E-05	5.7E-04	1.3E-06	1.7E-07	4.6E-06	2.8E-05	5.3E-05	5.1E-05	3.9E-05	9E-03	8E-03	4E-04	5E-04	6E-04	4E-04	7E-05	8E-05	4E-05	2E-05
residential	487331	3619125	1.4E-01	1.2E-01	1.3E-01	1.4E-01	1.6E-01	1.8E-01	1.9E-01	2.0E-01	1.3E+05	3.1E-01	3.4E-01	7.3E-02	7.3E-02	3.8E-01	2.5E-02	3.0E-01	7.1E-01	5.6E-01	6.0E-01	9.3E-02	1.9E-03	1.7E-03	1.9E-03	2.0E-03	2.5E-04	2.7E-04	3.4E-04	3.6E-04	2.0E-03	5.5E-05	6.1E-05	5.6E-04	1.7E-06	1.8E-07	5.6E-06	2.8E-05	5.0E-05	5.4E-05	3.8E-05	9E-03	8E-03	4E-04	5E-04	6E-04	4E-04	7E-05	8E-05	4E-05	2E-05
residential	487431	3619125	1.3E-01	1.2E-01	1.3E-01	1.4E-01	1.5E-01	1.7E-01	1.8E-01	1.9E-01	1.5E+05	3.3E-01	3.7E-01	7.6E-02	7.6E-02	5.0E-01	2.7E-02	4.0E-01	7.9E-01	6.2E-01	7.2E-01	9.7E-02	1.9E-03	1.7E-03	1.8E-03	2.0E-03	2.4E-04	2.6E-04	3.2E-04	3.4E-04	2.2E-03	5.9E-05	6.6E-05	5.7E-04	2.2E-06	1.9E-07	7.5E-06	3.1E-05	5.5E-05	6.4E-05	4.0E-05	9E-03	8E-03	4E-04	5E-04	6E-04	4E-04	7E-05	8E-05	4E-05	2E-05
residential	487531	3619125	1.3E-01	1.1E-01	1.2E-01	1.3E-01	1.4E-01	1.6E-01	1.7E-01	1.8E-01	1.3E+05	3.0E-01	3.3E-01	7.3E-02	7.3E-02	5.9E-01	2.8E-02	4.9E-01	7.0E-01	5.4E-01	7.0E-01	9.3E-02	1.8E-03	1.6E-03	1.7E-03	1.8E-03	2.2E-04	2.5E-04	3.0E-04	3.2E-04	2.0E-03	5.3E-05	5.9E-05	5.5E-04	2.6E-06	2.0E-07	9.1E-06	2.8E-05	4.8E-05	6.3E-05	3.8E-05	8E-03	7E-03	4E-04	5E-04	6E-04	4E-04	7E-05	8E-05	4E-05	2E-05
residential	487631	3619125	1.2E-01	1.1E-01	1.2E-01	1.2E-01	1.4E-01	1.5E-01	1.6E-01	1.7E-01	1.2E+05	2.7E-01	3.0E-01	7.1E-02	7.1E-02	6.6E-01	2.8E-02	5.8E-01	6.3E-01	4.9E-01	7.0E-01	9.0E-02	1.7E-03	1.5E-03	1.7E-03	1.8E-03	2.1E-04	2.3E-04	2.8E-04	3.0E-04	1.8E-03	4.9E-05	5.4E-05	5.4E-04	2.9E-06	2.0E-07	1.1E-05	2.5E-05	4.4E-05	6.2E-05	3.7E-05	8E-03	7E-03	4E-04	4E-04	5E-04	4E-04	6E-05	8E-05	4E-05	2E-05
residential	487731	3619125	1.2E-01	1.1E-01	1.1E-01	1.2E-01	1.3E-01	1.4E-01	1.5E-01	1.6E-01	1.1E+05	2.6E-01	2.9E-01	6.9E-02	6.9E-02	6.9E-01	3.0E-02	6.5E-01	5.9E-01	4.6E-01	7.0E-01	8.8E-02	1.7E-03	1.5E-03	1.6E-03	1.7E-03	2.0E-04	2.2E-04	2.7E-04	2.8E-04	1.7E-03	4.6E-05	5.1E-05	5.3E-04	3.1E-06	2.1E-07	1.2E-05	2.3E-05	4.1E-05	6.2E-05	3.6E-05	7E-03	7E-03	4E-04	4E-04	5E-04	4E-04	6E-05	8E-05	4E-05	2E-05
residential	487831	3619125	1.2E-01	1.0E-01	1.1E-01	1.1E-01	1.2E-01	1.4E-01	1.4E-01	1.5E-01	1.1E+05	2.5E-01	2.7E-01	6.8E-02	6.8E-02	7.1E-01	3.1E-02	6.9E-01	5.4E-01	4.3E-01	6.9E-01	8.5E-02	1.6E-03	1.5E-03	1.6E-03	1.6E-03	1.9E-04	2.1E-04	2.5E-04	2.7E-04	1.6E-03	4.4E-05	4.8E-05	5.2E-04	3.1E-06	2.2E-07	1.3E-05	2.1E-05	3.8E-05	6.2E-05	3.5E-05	7E-03	6E-03	4E-04	4E-04	5E-04	4E-04	6E-05	8E-05	4E-05	2E-05
residential	487931	3619125	1.1E-01	1.0E-01	1.1E-01	1.1E-01	1.2E-01	1.3E-01	1.4E-01	1.5E-01	1.0E+05	2.4E-01	2.5E-01	6.7E-02	6.7E-02	7.3E-01	3.2E-02	7.1E-01	5.0E-01	4.0E-01	6.8E-01	8.3E-02	1.6E-03	1.4E-03	1.5E-03	1.6E-03	1.9E-04	2.0E-04	2.4E-04	2.6E-04	1.6E-03	4.2E-05	4.5E-05	5.1E-04	3.2E-06	2.3E-07	1.3E-05	2.0E-05	3.6E-05	6.1E-05	3.4E-05	7E-03	6E-03	3E-04	4E-04	5E-04	4E-04	6E-05	7E-05	3E-05	2E-05
residential	488031	3619125	1.1E-01	9.8E-02	1.0E-01	1.1E-01	1.1E-01	1.2E-01	1.3E-01	1.4E-01	9.7E+04	2.2E-01	2.4E-01	6.5E-02	6.5E-02	7.4E-01	3.3E-02	7.1E-01	4.5E-01	3.7E-01	6.6E-01	8.1E-02	1.5E-03	1.4E-03	1.5E-03	1.5E-03	1.8E-04	1.9E-04	2.3E-04	2.4E-04	1.5E-03	3.9E-05	4.2E-05	4.9E-04	3.2E-06	2.4E-07	1.3E-05	1.8E-05	3.3E-05	5.9E-05	3.3E-05	7E-03	6E-03	3E-04	4E-04	5E-04	4E-04	6E-05	7E-05	3E-05	2E-05
residential	488131	3619125	1.1E-01	9.5E-02	9.9E-02	1.0E-01	1.1E-01	1.2E-01	1.2E-01	1.3E-01	9.1E+04	2.1E-01	2.2E-01	6.4E-02	6.4E-02	7.5E-01	3.5E-02	7.2E-01	4.1E-01	3.4E-01	6.4E-01	7.8E-02	1.5E-03	1.3E-03	1.4E-03	1.4E-03	1.7E-04	1.8E-04	2.2E-04	2.3E-04	1.4E-03	3.7E-05	3.9E-05	4.8E-04	3.3E-06	2.5E-07	1.3E-05	1.6E-05	3.0E-05	5.7E-05	3.2E-05	6E-03	6E-03	3E-04	4E-04	5E-04	4E-04	6E-05	7E-05	3E-05	2E-05
residential	476731	3619225	1.5E-02	1.5E-02	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	6.5E+03	1.3E-02	1.2E-02	5.6E-02	5.6E-02	1.2E-02	5.1E-03	1.2E-02	1.5E-02	1.9E-02	1.2E-02	5.6E-02	2.1E-04	2.2E-04	2.0E-04	2.0E-04	2.0E-05	1.9E-05	2.2E-05	2.2E-05	9.9E-05	2.3E-06	2.2E-06	4.2E-04	5.4E-08	3.6E-08	2.2E-07	5.9E-07	1.7E-06	1.1E-06	2.3E-05	9E-04	8E-04	4E-05	5E-05	4E-04	3E-04	5E-05	6E-05	2E-05	1E-05
residential	476831	3619225	1.5E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	6.7E+03	1.3E-02	1.3E-02	5.9E-02	5.9E-02	1.2E-02	5.1E-03	1.2E-02	1.5E-02	1.9E-02	1.3E-02	6.0E-02	2.2E-04	2.2E-04	2.1E-04	2.0E-04	2.1E-05	2.0E-05	2.2E-05	2.2E-05	1.0E-04	2.4E-06	2.3E-06	4.5E-04	5.5E-08	3.7E-08	2.3E-07	6.0E-07	1.7E-06	1.1E-06	2.5E-05	9E-04	8E-04	5E-05	5E-05	4E-04	3E-04	5E-05	7E-05	2E-05	1E-05
residential	476931	3619225	1.6E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	6.7E+03	1.4E-02	1.3E-02	6.1E-02	6.1E-02	1.2E-02	5.1E-03	1.2E-02	1.5E-02	1.9E-02	1.3E-02	6.4E-02	2.2E-04	2.2E-04	2.1E-04	2.0E-04	2.1E-05	2.0E-05	2.3E-05	2.3E-05	1.0E-04	2.4E-06	2.3E-06	4.7E-04	5.5E-08	3.6E-08	2.3E-07	6.0E-07	1.7E-06	1.1E-06	2.6E-05	9E-04	8E-04	5E-05	5E-05	5E-04	3E-04	6E-05	7E-05	3E-05	1E-05
residential	477031	3619225	1.6E-02	1.6E-02	1.5E-02	1.5E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	6.7E+03	1.4E-02	1.3E-02	6.3E-02	6.3E-02	1.2E-02	5.1E-03	1.2E-02	1.5E-02	1.9E-02	1.3E-02	6.7E-02	2.2E-04	2.3E-04	2.1E-04	2.0E-04	2.1E-05	2.0E-05	2.3E-05	2.3E-05	1.0E-04	2.4E-06	2.3E-06	4.8E-04	5.5E-08	3.6E-08	2.3E-07	6.0E-07	1.7E-06	1.1E-06	2.8E-05	1E-03	9E-04	5E-05	5E-05	5E-04	4E-04	6E-05	7E-05	3E-05	2E-05
residential	477131	3619225	1.6E-02	1.6E-02	1.5E-02	1.5E-02	1.4E-02	1.4E-02	1.3E-02	1.3E-02	6.9E+03	1.4E-02	1.3E-02	6.8E-02	6.8E-02	1.3E-02	5.1E-03	1.3E-02	1.5E-02	2.0E-02	1.3E-02	7.3E-02	2.3E-04	2.3E-04	2.2E-04	2.1E-04	2.2E-05	2.1E-05	2.4E-05	2.3E-05	1.0E-04	2.5E-06	2.4E-06	5.1E-04	5.6E-08	3.7E-08	2.3E-07	6.1E-07	1.8E-06	1.2E-06	3.0E-05	1E-03	9E-04	5E-05	5E-05	5E-04	4E-04	6E-05	7E-05	3E-05	2E-05
residential	477231	3619225	1.8E-02	1.8E-02	1.7E-02	1.6E-02	1.5E-02	1.5E-02	1.5E-02	1.4E-02	7.9E+03	1.6E-02	1.5E-02	8.2E-02	8.2E-02	1.4E-02	5.5E-03	1.4E-02	1.7E-02	2.3E-02	1.5E-02	9.1E-02	2.5E-04	2.5E-04	2.4E-04	2.3E-04	2.4E-05	2.3E-05	2.6E-05	2.5E-05	1.2E-04	2.9E-06	2.7E-06	6.2E-04	6.3E-08	3.9E-08	2.6E-07	6.9E-07	2.0E-06	1.3E-06	3.7E-05	1E-03	1E-03	5E-05	6E-05	6E-04	5E-04	8E-05	9E-05	4E-05	2E-05
residential	477331	3619225	1.9E-02	1.9E-02	1.8E-02	1.7E-02	1.6E-02	1.5E-02	1.5E-02	1.5E-02	8.5E+03	1.7E-02	1.6E-02	9.4E-02	9.4E-02	1.5E-02	5.6E-03	1.5E-02	1.9E-02	2.4E-02	1.5E-02	1.1E-01	2.6E-04	2.7E-04	2.5E-04	2.4E-04	2.5E-05	2.4E-05	2.7E-05	2.7E-05	1.3E-04	3.1E-06	2.9E-06	7.1E-04	6.6E-08	4.0E-08	2.8E-07	7.4E-07	2.1E-06	1.4E-06	4.6E-05	1E-03	1E-03	6E-05	6E-05	7E-04	5E-04	9E-05	1E-04	5E-05	3E-05
residential	477431	3619225	1.9E-02	2.0E-02	1.8E-02	1.8E-02	1.7E-02	1.6E-02	1.6E-02	1.6E-02	8.9E+03	1.8E-02	1.7E-02	1.0E-01	1.0E-01	1.5E-02	5.7E-03	1.5E-02	2.0E-02	2.5E-02	1.6E-02	1.3E-01	2.7E-04	2.8E-04	2.6E-04	2.5E-04	2.6E-05	2.5E-05	2.8E-05	2.8E-05	1.3E-04	3.2E-06	3.0E-06	7.9E-04	6.8E-08	4.1E-08	2.9E-07	7.8E-07	2.2E-06	1.4E-06	5.4E-05	1E-03	1E-03	6E-05	7E-05	8E-04	6E-04	1E-04	1E-04	5E-05	3E-05
residential	477531	3619225	2.0E-02	2.1E-02	1.9E-02	1.8E-02	1.7E-02	1.7E-02	1.6E-02	1.6E-02	9.2E+03	1.8E-02	1.7E-02	1.2E-01	1.2E-01	1.6E-02	5.8E-03	1.6E-02	2.0E-02	2.5E-02	1.7E-02	1.5E-01	2.8E-04	2.9E-04	2.7E-04	2.6E-04	2.7E-05	2.6E-05	2.9E-05	2.9E-05	1.4E-04	3.3E-06	3.1E-06	8.7E-04	7.2E-08	4.1E-08	2.9E-07	8.0E-07	2.3E-06	1.5E-06	6.1E-05	1E-03	1E-03	6E-05	7E-05	9E-04	6E-04	1E-04	1E-04	6E-05	3E-05
residential	477631	3619225	2.1E-02	2.1E-02	2.0E-02	1.9E-02	1.8E-02	1.7E-02	1.7E-02	1.7E-02	9.4E+03	1.9E-02	1.8E-02	1.3E-01	1.3E-01	1.7E-02	5.9E-03	1.6E-02	2.1E-02	2.6E-02	1.7E-02	1.7E-01	3.0E-04	3.0E-04	2.8E-04	2.7E-04	2.8E-05	2.7E-05	3.0E-05	3.0E-05	1.4E-04	3.3E-06	3.2E-06	9.6E-04	7.3E-08	4.2E-08	3.1E-07	8.3E-07	2.3E-06	1.5E-06	6.9E-05	1E-03	1E-03	6E-05	7E-05	1E-03	7E-04	1E-04	1E-04	7E-05	4E-05
residential	477731	3619225	2.2E-02	2.2E-02	2.1E-02	2.0E-02	1.9E-02	1.8E-02	1.8E-02	1.7E-02	9.6E+03	1.9E-02	1.8E-02	1.4E-01	1.4E-01	1.7E-02	6.1E-03	1.7E-02	2.2E-02	2.7E-02	1.8E-02	1.9E-01	3.1E-04	3.1E-04	2.9E-04	2.8E-04	2.9E-05	2.7E-05	3.1E-05	3.1E-05	1.5E-04	3.5E-06	3.3E-06	1.1E-03	7.4E-08	4.3E-08	3.1E-07	8.6E-07	2.4E-06	1.6E-06	7.8E-05	1E-03	1E-03	6E-05	7E-05	1E-03	8E-04	1E-04	2E-04	8E-05	4E-05
recreational	478331	3619225	2.5E-02	2.5E-02	2.4E-02	2.3E-02	2.1E-02	2.0E-02	2.0E-02	2.0E-02	1.1E+04	2.3E-02	2.2E-02	2.5E-01	2.5E-01	1.8E-02	6.3E-03	1.8E-02	2.3E-02	3.0E-02	1.9E-02	3.6E-01	3.5E-04	3.6E-04	3.4E-04	3.2E-04	3.3E-05	3.1E-05	3.5E-05	3.5E-05	1.7E-04	4.1E-06	3.9E-06	1.9E-03	7.9E-08	4.5E-08	3.3E-07	9.3E-07	2.7E-06	1.7E-06	1.5E-04	2E-03	1E-03	7E-05	8E-05	2E-03	1E-03	2E-04	3E-04	1E-04	8E-05
recreational	478431	3619225	2.5E-02	2.6E-02	2.4E-02	2.3E-02	2.1E-02	2.0E-02	2.0E-02	2.0E-02	1.2E+04	2.4E-02	2.2E-02	2.7E-01	2.7E-01	1.8E-02	6.3E-03	1.8E-02	2.4E-02	3.1E-02	1.9E-02	4.1E-01	3.6E-04	3.6E-04	3.4E-04	3.2E-04	3.3E-05	3.1E-05	3.5E-05	3.5E-05	1.8E-04	4.2E-06	4.0E-06	2.1E-03	8.0E-08	4.5E-08	3.4E-07	9.4E-07	2.7E-06	1.7E-06	1.7E-04	2E-03	1E-03	7E-05	8E-05	2E-03	2E-03	2E-04	3E-04	2E-04	1E-04
recreational	483831	3619225	1.1E-01	1.1E-01	9.2E-02	8.3E-02	7.3E-02	6.5E-02	6.3E-02	6.3E-02	4.1E+04	1.6E-01	1.4E-01	3.8E-01	3.8E-01	3.8E-02	9.5E-03	3.8E-02	6.0E-02	1.1E-01	4.2E-02	6.1E-01	1.5E-03	1.5E-03	1.3E-03	1.2E-03	1.1E-04	1.0E-04	1.1E-04	1.1E-04	6.2E-04	2.8E-05	2.4E-05	2.9E-03	1.7E-07	6.8E-08	7.1E-07	2.4E-06	9.7E-06	3.7E-06	2.5E-04	6E-03	5E-03	3E-04	3E-04	3E-03	2E-03	3E-04	4E-04	3E-04	1E-04
recreational	483931	3619225	1.1E-01	1.1E-01	9.1E-02	8.3E-02	7.3E-02	6.5E-02	6.4E-02	6.3E-02	4.3E+04	1.7E-01	1.4E-01	3.5E-01	3.5E-01	3.9E-02	9.7E-03	3.9E-02	6.2E-02	1.1E-01	4.2E-02	5.6E-01	1.5E-03	1.5E-03	1.3E-03	1.2E-03	1.1E-04	1.0E-04	1.1E-04	1.1E-04	6.5E-04	3.0E-05	2.6E-05	2.6E-03	1.7E-07	6.9E-08	7.2E-07	2.5E-06	1.0E-05	3.8E-06	2.3E-04	6E-03	5E-03	3E-04	3E-04	3E-03	2E-03	3E-04	4E-04	2E-04	1E-04
recreational	484031	3619225	1.1E-01	1.1E-01	9.4E-02	8.4E-02	7.5E-02	6.6E-02	6.5E-02	6.5E-02	4.6E+04	1.8E-01	1.5E-01	3.3E-01	3.3E-01	4.0E-02	9.9E-03	3.9E-02	6.4E-02	1.2E-01	4.3E-02	5.2E-01	1.5E-03	1.5E-03	1.3E-03	1.2E-03	1.2E-04	1.0E-04	1.2E-04	1.1E-04	7.0E-04	3.2E-05	2.7E-05	2.5E-03	1.8E-07	7.0E-08	7.4E-07	2.5E-06	1.0E-05	3.8E-06	2.1E-04	6E-03	5E-03	3E-04	3E-04	2E-03	2E-03	3E-04	4E-04	2E-04	1E-04
recreational	484131	3619225	1.1E-01	1.1E-01	9.8E-02	8.9E-02	7.8E-02	6.8E-02	6.8E-02	6.7E-02	5.0E+04	1.9E-01	1.6E-01	3.1E-01	3.1E-01	4.1E-02	1.0E-02	4.0E-02	6.6E-02	1.2E-01	4.4E-02	4.8E-01	1.6E-03	1.6E-03	1.4E-03	1.3E-03	1.2E-04	1.1E-04	1.2E-04	1.2E-04	7.6E-04	3.4E-05	2.9E-05	2.3E-03	1.8E-07	7.1E-08	7.5E-07	2.6E-06	1.1E-05	3.9E-06	2.0E-04	6E-03	6E-03	3E-04	4E-04	2E-03	2E-03	3E-04	3E-04	2E-04	1E-04
residential	484231	3619225	1.1E-01	1.2E-01	1.0E-01	9.2E-02	8.1E-02	7.1E-02	6.9E-02	6.9E-02	5.5E+04	2.0E-01	1.7E-01	2.9E-01	2.9E-01	4.1E-02	1.0E-02	4.1E-02	6.9E-02	1.3E-01	4.5E-02	4.5E-01	1.6E-03	1.7E-03	1.4E-03	1.3E-03	1.3E-04	1.1E-04	1.2E-04	1.2E-04	8.3E-04	3.5E-05	3.0E-05	2.2E-03	1.8E-07	7.3E-08	7.6E-07	2.7E-06	1.1E-05	4.0E-06	1.8E-04	6E-03	6E-03	3E-04	4E-04	2E-03	2E-03	3E-04	3E-04	2E-04	1E-04
residential	484331	3619225	1.2E-01	1.3E-01	1.1E-01	9.8E-02	8.5E-02	7.5E-02	7.3E-02	7.2E-02	6.1E+04	2.1E-01	1.8E-01	2.8E-01	2.8E-01	4.2E-02	1.0E-02	4.2E-02	7.2E-02	1.3E-01	4.6E-02	4.2E-01	1.7E-03	1.8E-03	1.5E-03	1.4E-03	1.3E-04	1.2E-04	1.3E-04	1.3E-04	9.3E-04	3.8E-05	3.2E-05	2.1E-03	1.9E-07	7.4E-08	7.8E-07	2.9E-06	1.2E-05	4.1E-06	1.7E-04	7E-03	6E-03	3E-04	4E-04	2E-03	2E-03	3E-04	3E-04	2E-04	1E-04
residential	484431	3619225	1.2E-01	1.3E-01	1.1E-01	9.8E-02	8.6E-02	7.5E-02	7.3E-02	7.1E-02	6.5E+04	2.2E-01	1.8E-01	2.6E-01	2.6E-01	4.3E-02	1.1E-02	4.2E-02	7.7E-02	1.4E-01	4.7E-02	4.0E-01	1.7E-03	1.9E-03	1.5E-03	1.4E-03	1.3E-04	1.2E-04	1.3E-04	1.3E-04	9.8E-04	3.9E-05	3.3E-05	2.0E-03	1.9E-07	7.6E-08	7.9E-07	3.0E-06	1.2E-05	4.2E-06	1.6E-04	7E-03	6E-03	3E-04	4E-04	2E-03	1E-03	2E-04	3E-04	2E-04	9E-05
residential	484531	3619225	1.3E-01	1.5E-01	1.2E-01	1.1E-01	9.1E-02	8.0E-02	7.7E-02	7.6E-02	7.9E+04	2.4E-01	2.0E-01	2.5E-01	2.5E-01	4.4E-02	1.1E-02	4.3E-02	8.2E-02	1.5E-01	4.9E-02	3.7E-01	1.8E-03	2.0E-03	1.7E-03	1.5E-03	1.4E-04	1.2E-04	1.4E-04	1.3E-04	1.2E-03	4.2E-05	3.5E-05	1.9E-03	1.9E-07	7.7E-08	8.1E-07	3.3E-06	1.3E-05	4.4E-06	1.5E-04	8E-03	7E-03	4E-04	4E-04	2E-03	1E-03	2E-04	3E-04	2E-04	9E-05
residential	484631	3619225	1.3E-01	1.6E-01	1.3E-01	1.1E-01	9.5E-02	8.3E-02	8.0E-02	7.7E-02	9.1E+04	2.5E-01	2.1E-01	2.4E-01	2.4E-01	4.5E-02	1.1E-02	4.4E-02	9.0E-02	1.6E-01	5.1E-02	3.6E-01	1.9E-03	2.3E-03	1.8E-03	1.6E-03	1.5E-04	1.3E-04	1.4E-04	1.4E-04	1.4E-03	4.4E-05	3.7E-05	1.8E-03	2.0E-07	7.9E-08	8.2E-07	3.6E-06	1.4E-05	4.5E-06	1.5E-04	8E-03	7E-03	4E-04	5E-04	2E-03	1E-03	2E-04	3E-04	1E-04	8E-05
residential	484731	3619225	1.4E-01	1.8E-01	1.4E-01	1.2E-01	1.0E-01	8.7E-02	8.4E-02	8.1E-02	1.1E+05	2.7E-01	2.2E-01	2.3E-01	2.3E-01	4.5E-02	1.1E-02	4.5E-02	9.9E-02	1.8E-01	5.3E-02	3.4E-01	2.0E-03	2.6E-03	2.0E-03	1.7E-03	1.6E-04	1.4E-04	1.5E-04	1.4E-04	1.6E-03	4.7E-05	3.9E-05	1.8E-03	2.0E-07	8.1E-08	8.4E-07	4.0E-06	1.6E-05	4.7E-06	1.4E-04	9E-03	8E-03	4E-04	5E-04	2E-03	1E-03	2E-04	3E-04	1E-04	8E-05
residential	484831	3619225	1.6E-01	2.0E-01	1.5E-01	1.3E-01	1.1E-01	9.3E-02	8.8E-02	8.4E-02	1.3E+05	2.8E-01	2.3E-01	2.2E-01	2.2E-01	4.6E-02	1.2E-02	4.6E-02	1.1E-01	2.1E-01	5.6E-02	3.2E-01	2.2E-03	2.9E-03	2.2E-03	1.9E-03	1.7E-04	1.4E-04	1.6E-04	1.5E-04	1.9E-03	5.0E-05	4.2E-05	1.7E-03	2.0E-07	8.3E-08	8.5E-07	4.5E-06	1.9E-05	5.0E-06	1.3E-04	1E-02	9E-03	5E-04	5E-04	2E-03	1E-03	2E-04	2E-04	1E-04	7E-05
residential	484931	3619225	1.7E-01	2.3E-01	1.7E-01	1.4E-01	1.2E-01	9.8E-02	9.2E-02	8.7E-02	1.5E+05	2.9E-01	2.4E-01	2.1E-01	2.1E-01	4.8E-02	1.2E-02	4.7E-02	1.3E-01	2.4E-01	6.0E-02	3.1E-01	2.5E-03	3.2E-03	2.4E-03	2.0E-03	1.8E-04	1.5E-04	1.6E-04	1.5E-04	2.3E-03	5.2E-05	4.3E-05	1.6E-03	2.1E-07	8.6E-08	8.7E-07	5.1E-06	2.2E-05	5.3E-06	1.3E-04	1E-02	1E-02	5E-04	6E-04	2E-03	1E-03	2E-04	2E-04	1E-04	7E-05
residential	485031	3619225	2.0E-01	2.5E-01	1.9E-01	1.6E-01	1.3E-01	1.0E-01	9.7E-02	9.1E-02	1.8E+05	3.0E-01	2.5E-01	2.0E-01	2.0E-01	4.9E-02	1.2E-02	4.8E-02	1.5E-01	2.9E-01	6.4E-02	3.0E-01	2.8E-03	3.6E-03	2.7E-03	2.2E-03	2.0E-04	1.6E-04	1.7E-04	1.6E-04	2.8E-03	5.4E-05	4.4E-05	1.6E-03	2.1E-07	8.8E-08	8.9E-07	5.9E-06	2.6E-05	5.7E-06	1.2E-04	1E-02	1E-02	6E-04	7E-04	2E-03	1E-03	2E-04	2E-04	1E-04	7E-05
residential	485131	3619225	2.3E-01	2.7E-01	2.1E-01	1.7E-01	1.4E-01	1.1E-01	1.0E-01	9.6E-02	2.3E+05	3.3E-01	2.6E-01	2.0E-01	2.0E-01	5.0E-02	1.3E-02	4.9E-02	1.7E-01	3.5E-01	7.0E-02	2.8E-01	3.2E-03	3.9E-03	2.9E-03	2.5E-03	2.2E-04	1.8E-04	1.8E-04	1.7E-04	3.4E-03	5.8E-05	4.7E-05	1.5E-03	2.2E-07	9.1E-08	9.2E-07	6.8E-06	3.1E-05	6.2E-06	1.2E-04	1E-02	1E-02	6E-04	7E-04	1E-03	1E-03	2E-04	2E-04	1E-04	7E-05
residential	485231	3619225	2.6E-01	2.9E-01	2.3E-01	1.9E-01	1.5E-01	1.2E-01	1.1E-01	1.0E-01	2.8E+05	3.6E-01	2.9E-01	1.9E-01	1.9E-01	5.2E-02	1.3E-02	5.0E-02	2.0E-01	4.2E-01	7.7E-02	2.7E-01	3.6E-03	4.1E-03	3.2E-03	2.7E-03	2.4E-04	1.9E-04	2.0E-04	1.8E-04	4.2E-03	6.4E-05	5.1E-05	1.4E-03	2.3E-07	9.4E-08	9.4E-07	7.8E-06	3.8E-05	6.9E-06	1.1E-04	1E-02	1E-02	7E-04	8E-04	1E-03	1E-03	2E-04	2E-04	1E-04	6E-05
residential	485331	3619225	2.8E-01	3.1E-01	2.4E-01	2.1E-01	1.7E-01	1.4E-01	1.2E-01	1.1E-01	3.4E+05	4.1E-01	3.1E-01	1.8E-01	1.8E-01	5.4E-02	1.4E-02	5.2E-02	2.2E-01	5.3E-01	8.7E-02	2.6E-01	4.0E-03	4.3E-03	3.4E-03	2.9E-03	2.6E-04	2.1E-04	2.2E-04	2.0E-04	5.2E-03	7.2E-05	5.6E-05	1.4E-03	2.4E-07	9.7E-08	9.7E-07	8.8E-06	4.7E-05	7.7E-06	1.1E-04	2E-02	1E-02	8E-04	9E-04	1E-03	1E-03	2E-04	2E-04	1E-04	6E-05
residential	485431	3619225	3.1E-01	3.1E-01	2.6E-01	2.2E-01	1.8E-01	1.5E-01	1.4E-01	1.2E-01	4.0E+05	4.7E-01	3.5E-01	1.7E-01	1.7E-01	5.6E-02	1.4E-02	5.4E-02	2.5E-01	7.0E-01	9.8E-02	2.5E-01	4.3E-03	4.4E-03	3.7E-03	3.2E-03	2.8E-04	2.3E-04	2.4E-04	2.2E-04	6.1E-03	8.3E-05	6.3E-05	1.3E-03	2.5E-07	1.0E-07	1.0E-06	9.9E-06	6.2E-05	8.7E-06	1.0E-04	2E-02	1E-02	8E-04	9E-04	1E-03	1E-03	2E-04	2E-04	1E-04	6E-05
residential	485531	3619225	3.3E-01	3.2E-01	2.7E-01	2.4E-01	2.0E-01	1.6E-01	1.5E-01	1.4E-01	4.4E+05	5.4E-01	4.0E-01	1.6E-01	1.6E-01	5.9E-02	1.4E-02	5.6E-02	2.8E-01	9.0E-01	1.1E-01	2.4E-01	4.6E-03	4.5E-03	3.9E-03	3.4E-03	3.1E-04	2.5E-04	2.6E-04	2.4E-04	6.7E-03	9.7E-05	7.2E-05	1.2E-03	2.6E-07	1.0E-07	1.0E-06	1.1E-05	8.0E-05	9.8E-06	9.7E-05	2E-02	2E-02	9E-04	1E-03	1E-03	9E-04	1E-04	2E-04	1E-04	6E-05
residential	485731	3619225	3.4E-01	3.0E-01	2.9E-01	2.6E-01	2.2E-01	1.9E-01	1.8E-01	1.6E-01	5.0E+05	7.3E-01	5.5E-01	1.5E-01	1.5E-01	6.6E-02	1.5E-02	6.2E-02	4.0E-01	1.3E+00	1.4E-01	2.1E-01	4.7E-03	4.3E-03	4.1E-03	3.7E-03	3.5E-04	2.9E-04	3.1E-04	2.9E-04	7.6E-03	1.3E-04	9.7E-05	1.1E-03	2.9E-07	1.1E-07	1.2E-06	1.6E-05	1.1E-04	1.2E-05	8.8E-05	2E-02	2E-02	9E-04	1E-03	1E-03	8E-04	1E-04	2E-04	9E-05	5E-05
residential	485831	3619225	3.3E-01	2.9E-01	2.9E-01	2.7E-01	2.4E-01	2.0E-01	1.9E-01	1.8E-01	5.3E+05	8.2E-01	6.2E-01	1.5E-01	1.5E-01	7.1E-02	1.6E-02	6.6E-02	5.0E-01	1.5E+00	1.6E-01	2.0E-01	4.6E-03	4.2E-03	4.1E-03	3.8E-03	3.7E-04	3.1E-04	3.4E-04	3.2E-04	8.0E-03	1.5E-04	1.1E-04	1.1E-03	3.1E-07	1.2E-07	1.2E-06	2.0E-05	1.3E-04	1.4E-05	8.3E-05	2E-02	2E-02	9E-04	1E-03	1E-03	8E-04	1E-04	2E-04	8E-05	5E-05
residential	485931	3619225	3.2E-01	2.8E-01	2.9E-01	2.8E-01	2.5E-01	2.1E-01	2.0E-01	1.9E-01	5.3E+05	8.9E-01	6.9E-01	1.4E-01	1.4E-01	7.8E-02	1.7E-02	7.1E-02	6.4E-01	1.6E+00	1.8E-01	1.9E-01	4.5E-03	4.0E-03	4.1E-03	3.9E-03	3.8E-04	3.3E-04	3.6E-04	3.4E-04	8.0E-03	1.6E-04	1.2E-04	1.1E-03	3.4E-07	1.2E-07	1.3E-06	2.5E-05	1.4E-04	1.6E-05	7.8E-05	2E-02	2E-02	9E-04	1E-03	1E-03	8E-04	1E-04	2E-04	8E-05	4E-05
residential	486031	3619225	3.1E-01	2.7E-01	2.8E-01	2.8E-01	2.5E-01	2.2E-01	2.1E-01	2.0E-01	5.1E+05	9.4E-01	7.4E-01	1.3E-01	1.3E-01	8.6E-02	1.7E-02	7.8E-02	7.8E-01	1.7E+00	2.0E-01	1.8E-01	4.3E-03	3.7E-03	4.0E-03	3.9E-03	3.9E-04	3.4E-04	3.8E-04	3.6E-04	7.8E-03	1.7E-04	1.3E-04	1.0E-03	3.8E-07	1.2E-07	1.5E-06	3.1E-05	1.5E-04	1.8E-05	7.5E-05	2E-02	2E-02	9E-04	1E-03	1E-03	7E-04	1E-04	1E-04	7E-05	4E-05
residential	486231	3619225	2.8E-01	2.3E-01	2.6E-01	2.7E-01	2.6E-01	2.3E-01	2.3E-01	2.3E-01	4.4E+05	9.1E-01	7.7E-01	1.2E-01	1.2E-01	1.1E-01	1.8E-02	9.0E-02	9.0E-01	1.6E+00	2.8E-01	1.6E-01	3.9E-03	3.3E-03	3.7E-03	3.8E-03	4.0E-04	3.6E-04	4.1E-04	4.0E-04	6.7E-03	1.6E-04	1.4E-04	9.0E-04	4.7E-07	1.3E-07	1.7E-06	3.6E-05	1.4E-04	2.5E-05	6.8E-05	2E-02	1E-02	8E-04	9E-04	9E-04	7E-04	1E-04	1E-04	7E-05	4E-05
residential	486331	3619225	2.6E-01	2.2E-01	2.5E-01	2.6E-01	2.6E-01	2.4E-01	2.4E-01	2.4E-01	3.9E+05	8.5E-01	7.4E-01	1.1E-01	1.1E-01	1.1E-01	1.8E-02	9.9E-02	8.7E-01	1.4E+00	3.2E-01	1.5E-01	3.7E-03	3.1E-03	3.6E-03	3.7E-03	4.0E-04	3.7E-04	4.2E-04	4.2E-04	5.9E-03	1.5E-04	1.3E-04	8.5E-04	4.9E-07	1.3E-07	1.8E-06	3.4E-05	1.3E-04	2.9E-05	6.3E-05	2E-02	1E-02	8E-04	9E-04	8E-04	6E-04	1E-04	1E-04	6E-05	4E-05
residential	486431	3619225	2.5E-01	2.1E-01	2.4E-01	2.5E-01	2.6E-01	2.4E-01	2.5E-01	2.5E-01	3.5E+05	7.8E-01	7.0E-01	1.1E-01	1.1E-01	1.2E-01	1.8E-02	1.1E-01	8.2E-01	1.3E+00	3.6E-01	1.4E-01	3.5E-03	2.9E-03	3.4E-03	3.6E-03	4.0E-04	3.8E-04	4.4E-04	4.4E-04	5.2E-03	1.4E-04	1.3E-04	8.0E-04	5.4E-07	1.3E-07	2.0E-06	3.3E-05	1.2E-04	3.2E-05	5.9E-05	2E-02	1E-02	7E-04	8E-04	8E-04	6E-04	1E-04	1E-04	6E-05	3E-05
residential	486531	3619225	2.3E-01	1.9E-01	2.3E-01	2.4E-01	2.5E-01	2.4E-01	2.5E-01	2.6E-01	3.1E+05	7.1E-01	6.7E-01	1.0E-01	1.0E-01	1.3E-01	1.9E-02	1.2E-01	8.2E-01	1.2E+00	3.9E-01	1.3E-01	3.3E-03	2.7E-03	3.2E-03	3.4E-03	3.9E-04	3.8E-04	4.4E-04	4.5E-04	4.7E-03	1.3E-04	1.2E-04	7.6E-04	5.9E-07	1.3E-07	2.2E-06	3.2E-05	1.1E-04	3.5E-05	5.5E-05	1E-02	1E-02	7E-04	8E-04	8E-04	6E-04	9E-05	1E-04	6E-05	3E-05
residential	486631	3619225	2.1E-01	1.8E-01	2.1E-01	2.3E-01	2.4E-01	2.4E-01	2.5E-01	2.6E-01	2.8E+05	6.6E-01	6.4E-01	9.6E-02	9.6E-02	1.5E-01	1.9E-02	1.3E-01	8.4E-01	1.1E+00	4.3E-01	1.3E-01	3.0E-03	2.5E-03	3.0E-03	3.2E-03	3.8E-04	3.7E-04	4.4E-04	4.6E-04	4.3E-03	1.2E-04	1.1E-04	7.3E-04	6.5E-07	1.4E-07	2.4E-06	3.3E-05	9.9E-05	3.8E-05	5.3E-05	1E-02	1E-02	7E-04	8E-04	7E-04	5E-04	9E-05	1E-04	5E-05	3E-05
residential	486731	3619225	2.0E-01	1.7E-01	2.0E-01	2.1E-01	2.3E-01	2.4E-01	2.5E-01	2.6E-01	2.5E+05	5.9E-01	5.9E-01	9.1E-02	9.1E-02	1.6E-01	2.0E-02	1.4E-01	8.3E-01	9.9E-01	4.4E-01	1.2E-01	2.8E-03	2.4E-03	2.8E-03	3.0E-03	3.6E-04	3.7E-04	4.4E-04	4.6E-04	3.7E-03	1.0E-04	1.0E-04	6.9E-04	7.0E-07	1.4E-07	2.6E-06	3.3E-05	8.9E-05	4.0E-05	4.9E-05	1E-02	1E-02	6E-04	7E-04	7E-04	5E-04	8E-05	1E-04	5E-05	3E-05
residential	486831	3619225	1.8E-01	1.6E-01	1.8E-01	2.0E-01	2.2E-01	2.3E-01	2.4E-01	2.5E-01	2.2E+05	5.1E-01	5.3E-01	8.6E-02	8.6E-02	1.7E-01	2.0E-02	1.5E-01	8.3E-01	8.9E-01	4.6E-01	1.1E-01	2.6E-03	2.2E-03	2.6E-03	2.8E-03	3.4E-04	3.5E-04	4.3E-04	4.5E-04	3.3E-03	9.2E-05	9.5E-05	6.5E-04	7.6E-07	1.5E-07	2.8E-06	3.3E-05	7.9E-05	4.1E-05	4.6E-05	1E-02	1E-02	6E-04	7E-04	7E-04	5E-04	8E-05	1E-04	5E-05	3E-05
residential	486931	3619225	1.7E-01	1.5E-01	1.7E-01	1.9E-01	2.1E-01	2.2E-01	2.3E-01	2.4E-01	2.2E+05	5.1E-01	5.4E-01	8.6E-02	8.6E-02	2.0E-01	2.2E-02	1.8E-01	9.0E-01	9.0E-01	5.3E-01	1.1E-01	2.4E-03	2.1E-03	2.4E-03	2.6E-03	3.2E-04	3.4E-04	4.1E-04	4.3E-04	3.3E-03	9.1E-05	9.6E-05	6.5E-04	8.8E-07	1.5E-07	3.3E-06	3.6E-05	8.0E-05	4.7E-05	4.6E-05	1E-02	1E-02	5E-04	6E-04	6E-04	5E-04	8E-05	9E-05	5E-05	3E-05
residential	487031	3619225	1.6E-01	1.4E-01	1.6E-01	1.7E-01	1.9E-01	2.1E-01	2.2E-01	2.4E-01	1.8E+05	4.3E-01	4.6E-01	8.1E-02	8.1E-02	2.2E-01	2.2E-02	1.9E-01	8.0E-01	7.6E-01	5.2E-01	1.0E-01	2.3E-03	2.0E-03	2.3E-03	2.5E-03	3.0E-04	3.2E-04	3.9E-04	4.2E-04	2.8E-03	7.7E-05	8.3E-05	6.1E-04	9.7E-07	1.6E-07	3.5E-06	3.2E-05	6.8E-05	4.7E-05	4.3E-05	1E-02	9E-03	5E-04	6E-04	6E-04	4E-04	7E-05	9E-05	4E-05	2E-05
residential	487131	3619225	1.5E-01	1.3E-01	1.5E-01	1.6E-01	1.8E-01	1.9E-01	2.1E-01	2.2E-01	1.5E+05	3.4E-01	3.7E-01	7.4E-02	7.4E-02	2.3E-01	2.2E-02	1.9E-01	6.6E-01	6.1E-01	4.8E-01	9.3E-02	2.1E-03	1.8E-03	2.1E-03	2.2E-03	2.7E-04	3.0E-04	3.6E-04	3.9E-04	2.2E-03	6.0E-05	6.6E-05	5.6E-04	1.0E-06	1.6E-07	3.5E-06	2.6E-05	5.4E-05	4.3E-05	3.8E-05	9E-03	8E-03	5E-04	5E-04	6E-04	4E-04	7E-05	8E-05	4E-05	2E-05
residential	487231	3619225	1.4E-01	1.3E-01	1.4E-01	1.5E-01	1.7E-01	1.9E-01	2.0E-01	2.1E-01	1.5E+05	3.5E-01	3.8E-01	7.5E-02	7.5E-02	2.9E-01	2.4E-02	2.4E-01	7.0E-01	6.2E-01	5.5E-01	9.6E-02	2.0E-03	1.8E-03	2.0E-03	2.2E-03	2.6E-04	2.9E-04	3.5E-04	3.8E-04	2.3E-03	6.2E-05	6.8E-05	5.7E-04	1.3E-06	1.7E-07	4.5E-06	2.8E-05	5.5E-05	4.9E-05	3.9E-05	9E-03	8E-03	5E-04	5E-04	6E-04	4E-04	7E-05	8E-05	4E-05	2E-05
residential	487331	3619225	1.4E-01	1.2E-01	1.4E-01	1.5E-01	1.6E-01	1.8E-01	1.9E-01	2.0E-01	1.5E+05	3.5E-01	3.9E-01	7.5E-02	7.5E-02	3.7E-01	2.5E-02	3.0E-01	7.6E-01	6.4E-01	6.2E-01	9.7E-02	1.9E-03	1.7E-03	1.9E-03	2.1E-03	2.5E-04	2.8E-04	3.4E-04	3.6E-04	2.3E-03	6.2E-05	6.9E-05	5.7E-04	1.6E-06	1.8E-07	5.6E-06	3.0E-05	5.7E-05	5.5E-05	4.0E-05	9E-03	8E-03	4E-04	5E-04	6E-04	4E-04	7E-05	8E-05	4E-05	2E-05
residential	487431	3619225	1.3E-01	1.2E-01	1.3E-01	1.4E-01	1.5E-01	1.7E-01	1.8E-01	1.9E-01	1.4E+05	3.3E-01	3.7E-01	7.4E-02	7.4E-02	4.6E-01	2.6E-02	3.7E-01	7.5E-01	6.0E-01	6.5E-01	9.5E-02	1.9E-03	1.7E-03	1.8E-03	2.0E-03	2.4E-04	2.6E-04	3.2E-04	3.4E-04	2.2E-03	5.9E-05	6.6E-05	5.6E-04	2.0E-06	1.9E-07	6.9E-06	3.0E-05	5.4E-05	5.8E-05	3.9E-05	8E-03	8E-03	4E-04	5E-04	6E-04	4E-04	7E-05	8E-05	4E-05	2E-05
residential	487531	3619225	1.3E-01	1.1E-01	1.2E-01	1.3E-01	1.4E-01	1.6E-01	1.7E-01	1.8E-01	1.3E+05	2.9E-01	3.3E-01	7.1E-02	7.1E-02	5.4E-01	2.7E-02	4.4E-01	6.7E-01	5.3E-01	6.3E-01	9.0E-02	1.8E-03	1.6E-03	1.7E-03	1.8E-03	2.2E-04	2.5E-04	3.0E-04	3.2E-04	1.9E-03	5.2E-05	5.8E-05	5.4E-04	2.4E-06	1.9E-07	8.2E-06	2.7E-05	4.7E-05	5.6E-05	3.7E-05	8E-03	7E-03	4E-04	4E-04	5E-04	4E-04	6E-05	8E-05	4E-05	2E-05
residential	487631	3619225	1.2E-01	1.1E-01	1.2E-01	1.2E-01	1.4E-01	1.5E-01	1.6E-01	1.7E-01	1.2E+05	2.7E-01	3.0E-01	6.9E-02	6.9E-02	5.9E-01	2.8E-02	5.1E-01	6.1E-01	4.7E-01	6.2E-01	8.7E-02	1.7E-03	1.5E-03	1.6E-03	1.7E-03	2.1E-04	2.3E-04	2.8E-04	3.0E-04	1.8E-03	4.8E-05	5.3E-05	5.2E-04	2.6E-06	2.0E-07	9.6E-06	2.4E-05	4.2E-05	5.5E-05	3.6E-05	8E-03	7E-03	4E-04	4E-04	5E-04	4E-04	6E-05	8E-05	4E-05	2E-05
residential	487731	3619225	1.1E-01	1.0E-01	1.1E-01	1.2E-01	1.3E-01	1.4E-01	1.5E-01	1.6E-01	1.0E+05	2.4E-01	2.6E-01	6.5E-02	6.5E-02	5.9E-01	2.8E-02	5.4E-01	5.3E-01	4.1E-01	5.8E-01	8.3E-02	1.6E-03	1.4E-03	1.6E-03	1.6E-03	2.0E-04	2.2E-04	2.6E-04	2.8E-04	1.6E-03	4.2E-05	4.6E-05	5.0E-04	2.6E-06	2.0E-07	1.0E-05	2.1E-05	3.6E-05	5.2E-05	3.4E-05	7E-03	6E-03	4E-04	4E-04	5E-04	4E-04	6E-05	7E-05	3E-05	2E-05
residential	487831	3619225	1.1E-01	9.9E-02	1.1E-01	1.1E-01	1.2E-01	1.3E-01	1.4E-01	1.5E-01	1.0E+05	2.3E-01	2.6E-01	6.5E-02	6.5E-02	6.2E-01	3.0E-02	6.0E-01	5.1E-01	4.0E-01	6.1E-01	8.3E-02	1.6E-03	1.4E-03	1.5E-03	1.6E-03	1.9E-04	2.1E-04	2.5E-04	2.7E-04	1.6E-03	4.2E-05	4.6E-05	5.0E-04	2.7E-06	2.1E-07	1.1E-05	2.0E-05	3.6E-05	5.4E-05	3.4E-05	7E-03	6E-03	3E-04	4E-04	5E-04	4E-04	6E-05	7E-05	3E-05	2E-05
residential	487931	3619225	1.1E-01	9.8E-02	1.0E-01	1.1E-01	1.2E-01	1.3E-01	1.4E-01	1.5E-01	1.0E+05	2.3E-01	2.5E-01	6.5E-02	6.5E-02	6.5E-01	3.1E-02	6.4E-01	4.9E-01	3.9E-01	6.3E-01	8.2E-02	1.5E-03	1.4E-03	1.5E-03	1.6E-03	1.8E-04	2.0E-04	2.4E-04	2.6E-04	1.5E-03	4.1E-05	4.5E-05	4.9E-04	2.9E-06	2.2E-07	1.2E-05	2.0E-05	3.5E-05	5.6E-05	3.3E-05	7E-03	6E-03	3E-04	4E-04	5E-04	4E-04	6E-05	7E-05	3E-05	2E-05
residential	488031	3619225	1.1E-01	9.6E-02	1.0E-01	1.1E-01	1.1E-01	1.2E-01	1.3E-01	1.4E-01	9.6E+04	2.2E-01	2.4E-01	6.4E-02	6.4E-02	6.6E-01	3.3E-02	6.5E-01	4.6E-01	3.7E-01	6.2E-01	7.9E-02	1.5E-03	1.4E-03	1.4E-03	1.5E-03	1.8E-04	1.9E-04	2.3E-04	2.4E-04	1.5E-03	3.9E-05	4.2E-05	4.9E-04	2.9E-06	2.3E-07	1.2E-05	1.8E-05	3.3E-05	5.5E-05	3.3E-05	7E-03	6E-03	3E-04	4E-04	5E-04	4E-04	6E-05	7E-05	3E-05	2E-05
residential	476731	3619325	1.5E-02	1.5E-02	1.4E-02	1.4E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	6.4E+03	1.3E-02	1.2E-02	5.5E-02	5.5E-02	1.2E-02	5.0E-03	1.2E-02	1.4E-02	1.8E-02	1.2E-02	5.4E-02	2.1E-04	2.1E-04	2.0E-04	1.9E-04	2.0E-05	1.9E-05	2.2E-05	2.2E-05	9.6E-05	2.3E-06	2.2E-06	4.1E-04	5.3E-08	3.6E-08	2.2E-07	5.6E-07	1.6E-06	1.1E-06	2.2E-05	9E-04	8E-04	4E-05	5E-05	4E-04	3E-04	5E-05	6E-05	2E-05	1E-05
residential	476831	3619325	1.5E-02	1.5E-02	1.5E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	1.3E-02	6.5E+03	1.3E-02	1.3E-02	5.7E-02	5.7E-02	1.2E-02	5.0E-03	1.2E-02	1.4E-02	1.9E-02	1.2E-02	5.7E-02	2.2E-04	2.2E-04	2.1E-04	2.0E-04	2.1E-05	2.0E-05	2.2E-05	2.2E-05	9.8E-05	2.3E-06	2.2E-06	4.3E-04	5.3E-08	3.6E-08	2.2E-07	5.7E-07	1.7E-06	1.1E-06	2.3E-05	9E-04	8E-04	5E-05	5E-05	4E-04	3E-04	5E-05	6E-05	2E-05	1E-05
residential	476931	3619325	1.5E-02	1.6E-02	1.5E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	1.3E-02	6.5E+03	1.3E-02	1.3E-02	5.9E-02	5.9E-02	1.2E-02	5.0E-03	1.2E-02	1.4E-02	1.9E-02	1.2E-02	6.0E-02	2.2E-04	2.2E-04	2.1E-04	2.0E-04	2.1E-05	2.0E-05	2.2E-05	2.2E-05	9.8E-05	2.4E-06	2.2E-06	4.5E-04	5.4E-08	3.6E-08	2.2E-07	5.7E-07	1.7E-06	1.1E-06	2.5E-05	9E-04	8E-04	5E-05	5E-05	4E-04	3E-04	5E-05	7E-05	2E-05	1E-05
residential	477031	3619325	1.6E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	6.5E+03	1.3E-02	1.3E-02	6.1E-02	6.1E-02	1.2E-02	5.0E-03	1.2E-02	1.4E-02	1.9E-02	1.2E-02	6.4E-02	2.2E-04	2.2E-04	2.1E-04	2.0E-04	2.1E-05	2.0E-05	2.3E-05	2.3E-05	9.8E-05	2.4E-06	2.3E-06	4.6E-04	5.4E-08	3.5E-08	2.2E-07	5.7E-07	1.7E-06	1.1E-06	2.6E-05	9E-04	8E-04	5E-05	5E-05	5E-04	3E-04	6E-05	7E-05	3E-05	1E-05
residential	477131	3619325	1.6E-02	1.6E-02	1.5E-02	1.5E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	6.7E+03	1.4E-02	1.3E-02	6.5E-02	6.5E-02	1.2E-02	5.0E-03	1.2E-02	1.5E-02	1.9E-02	1.3E-02	6.9E-02	2.3E-04	2.3E-04	2.2E-04	2.1E-04	2.2E-05	2.1E-05	2.3E-05	2.3E-05	1.0E-04	2.5E-06	2.3E-06	4.9E-04	5.5E-08	3.6E-08	2.3E-07	5.9E-07	1.7E-06	1.1E-06	2.8E-05	1E-03	9E-04	5E-05	5E-05	5E-04	4E-04	6E-05	7E-05	3E-05	2E-05
residential	477231	3619325	1.7E-02	1.7E-02	1.6E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	7.5E+03	1.5E-02	1.5E-02	7.7E-02	7.7E-02	1.4E-02	5.3E-03	1.3E-02	1.6E-02	2.1E-02	1.4E-02	8.4E-02	2.4E-04	2.5E-04	2.3E-04	2.2E-04	2.3E-05	2.2E-05	2.5E-05	2.5E-05	1.1E-04	2.8E-06	2.6E-06	5.8E-04	6.1E-08	3.8E-08	2.5E-07	6.5E-07	1.9E-06	1.3E-06	3.4E-05	1E-03	9E-04	5E-05	6E-05	6E-04	4E-04	7E-05	8E-05	3E-05	2E-05
residential	477331	3619325	1.8E-02	1.8E-02	1.7E-02	1.6E-02	1.6E-02	1.5E-02	1.5E-02	1.5E-02	8.0E+03	1.6E-02	1.6E-02	8.6E-02	8.6E-02	1.4E-02	5.4E-03	1.4E-02	1.7E-02	2.3E-02	1.5E-02	9.7E-02	2.5E-04	2.6E-04	2.4E-04	2.3E-04	2.4E-05	2.3E-05	2.6E-05	2.6E-05	1.2E-04	2.9E-06	2.8E-06	6.5E-04	6.3E-08	3.9E-08	2.6E-07	6.9E-07	2.0E-06	1.3E-06	4.0E-05	1E-03	1E-03	5E-05	6E-05	6E-04	5E-04	8E-05	9E-05	4E-05	2E-05
residential	477431	3619325	1.9E-02	1.9E-02	1.8E-02	1.7E-02	1.6E-02	1.5E-02	1.5E-02	1.5E-02	8.4E+03	1.7E-02	1.6E-02	9.6E-02	9.6E-02	1.5E-02	5.5E-03	1.5E-02	1.8E-02	2.4E-02	1.5E-02	1.2E-01	2.6E-04	2.7E-04	2.5E-04	2.4E-04	2.5E-05	2.4E-05	2.7E-05	2.7E-05	1.3E-04	3.1E-06	2.9E-06	7.3E-04	6.5E-08	3.9E-08	2.7E-07	7.3E-07	2.1E-06	1.4E-06	4.8E-05	1E-03	1E-03	6E-05	6E-05	7E-04	5E-04	9E-05	1E-04	5E-05	3E-05
residential	477531	3619325	1.9E-02	2.0E-02	1.9E-02	1.8E-02	1.7E-02	1.6E-02	1.6E-02	1.6E-02	8.7E+03	1.8E-02	1.7E-02	1.1E-01	1.1E-01	1.5E-02	5.7E-03	1.5E-02	1.9E-02	2.4E-02	1.6E-02	1.4E-01	2.7E-04	2.8E-04	2.6E-04	2.5E-04	2.6E-05	2.5E-05	2.8E-05	2.8E-05	1.3E-04	3.2E-06	3.0E-06	8.1E-04	6.8E-08	4.0E-08	2.8E-07	7.6E-07	2.2E-06	1.4E-06	5.6E-05	1E-03	1E-03	6E-05	7E-05	8E-04	6E-04	1E-04	1E-04	6E-05	3E-05
residential	477631	3619325	2.0E-02	2.1E-02	1.9E-02	1.8E-02	1.7E-02	1.7E-02	1.6E-02	1.6E-02	9.0E+03	1.8E-02	1.7E-02	1.2E-01	1.2E-01	1.6E-02	5.7E-03	1.6E-02	2.0E-02	2.5E-02	1.6E-02	1.5E-01	2.8E-04	2.9E-04	2.7E-04	2.6E-04	2.7E-05	2.6E-05	2.9E-05	2.9E-05	1.4E-04	3.2E-06	3.1E-06	8.9E-04	7.1E-08	4.1E-08	2.9E-07	7.9E-07	2.2E-06	1.5E-06	6.3E-05	1E-03	1E-03	6E-05	7E-05	9E-04	7E-04	1E-04	1E-04	6E-05	4E-05
residential	477731	3619325	2.1E-02	2.1E-02	2.0E-02	1.9E-02	1.8E-02	1.7E-02	1.7E-02	1.7E-02	9.2E+03	1.9E-02	1.8E-02	1.3E-01	1.3E-01	1.6E-02	5.9E-03	1.6E-02	2.1E-02	2.6E-02	1.7E-02	1.7E-01	3.0E-04	3.0E-04	2.8E-04	2.7E-04	2.8E-05	2.7E-05	3.0E-05	3.0E-05	1.4E-04	3.3E-06	3.2E-06	9.9E-04	7.2E-08	4.2E-08	3.0E-07	8.2E-07	2.3E-06	1.5E-06	7.1E-05	1E-03	1E-03	6E-05	7E-05	1E-03	7E-04	1E-04	1E-04	7E-05	4E-05
recreational	477831	3619325	2.2E-02	2.3E-02	2.1E-02	2.0E-02	1.9E-02	1.8E-02	1.8E-02	1.8E-02	1.0E+04	2.0E-02	1.9E-02	1.5E-01	1.5E-01	1.6E-02	6.0E-03	1.6E-02	2.1E-02	2.7E-02	1.7E-02	2.0E-01	3.2E-04	3.2E-04	3.0E-04	2.9E-04	3.0E-05	2.8E-05	3.2E-05	3.2E-05	1.5E-04	3.6E-06	3.4E-06	1.2E-03	7.2E-08	4.3E-08	3.0E-07	8.4E-07	2.4E-06	1.5E-06	8.1E-05	1E-03	1E-03	7E-05	8E-05	1E-03	9E-04	1E-04	2E-04	8E-05	5E-05
recreational	478431	3619325	2.5E-02	2.5E-02	2.3E-02	2.2E-02	2.1E-02	2.0E-02	2.0E-02	1.9E-02	1.1E+04	2.3E-02	2.2E-02	2.5E-01	2.5E-01	1.7E-02	6.2E-03	1.7E-02	2.3E-02	3.0E-02	1.8E-02	3.7E-01	3.5E-04	3.5E-04	3.3E-04	3.1E-04	3.3E-05	3.1E-05	3.5E-05	3.4E-05	1.7E-04	4.1E-06	3.9E-06	1.9E-03	7.7E-08	4.4E-08	3.3E-07	9.0E-07	2.6E-06	1.6E-06	1.5E-04	1E-03	1E-03	7E-05	8E-05	2E-03	1E-03	2E-04	3E-04	2E-04	9E-05
recreational	478531	3619325	2.5E-02	2.6E-02	2.4E-02	2.3E-02	2.1E-02	2.0E-02	2.0E-02	2.0E-02	1.1E+04	2.4E-02	2.2E-02	2.8E-01	2.8E-01	1.8E-02	6.3E-03	1.8E-02	2.3E-02	3.0E-02	1.9E-02	4.2E-01	3.5E-04	3.6E-04	3.4E-04	3.2E-04	3.3E-05	3.1E-05	3.5E-05	3.5E-05	1.7E-04	4.2E-06	4.0E-06	2.1E-03	7.8E-08	4.5E-08	3.3E-07	9.1E-07	2.7E-06	1.6E-06	1.7E-04	2E-03	1E-03	7E-05	8E-05	2E-03	2E-03	3E-04	3E-04	2E-04	1E-04
recreational	478631	3619325	2.6E-02	2.7E-02	2.5E-02	2.3E-02	2.2E-02	2.1E-02	2.1E-02	2.0E-02	1.2E+04	2.4E-02	2.3E-02	3.2E-01	3.2E-01	1.8E-02	6.3E-03	1.8E-02	2.3E-02	3.1E-02	1.9E-02	4.7E-01	3.7E-04	3.8E-04	3.5E-04	3.3E-04	3.4E-05	3.2E-05	3.6E-05	3.6E-05	1.7E-04	4.3E-06	4.1E-06	2.4E-03	7.9E-08	4.5E-08	3.3E-07	9.3E-07	2.7E-06	1.7E-06	1.9E-04	2E-03	1E-03	8E-05	9E-05	2E-03	2E-03	3E-04	4E-04	2E-04	1E-04
recreational	483531	3619325	9.1E-02	9.1E-02	7.9E-02	7.2E-02	6.3E-02	5.6E-02	5.6E-02	5.5E-02	3.3E+04	1.3E-01	1.1E-01	4.3E-01	4.3E-01	3.5E-02	9.0E-03	3.4E-02	5.2E-02	9.0E-02	3.8E-02	7.4E-01	1.3E-03	1.3E-03	1.1E-03	1.0E-03	9.8E-05	8.8E-05	9.8E-05	9.7E-05	5.0E-04	2.2E-05	2.0E-05	3.3E-03	1.5E-07	6.4E-08	6.4E-07	2.1E-06	8.0E-06	3.3E-06	3.0E-04	5E-03	5E-03	2E-04	3E-04	3E-03	2E-03	4E-04	5E-04	3E-04	2E-04
recreational	483831	3619325	9.5E-02	9.6E-02	8.3E-02	7.6E-02	6.7E-02	6.0E-02	5.9E-02	5.8E-02	3.8E+04	1.5E-01	1.3E-01	3.4E-01	3.4E-01	3.6E-02	9.4E-03	3.6E-02	5.6E-02	9.8E-02	3.9E-02	5.5E-01	1.3E-03	1.4E-03	1.2E-03	1.1E-03	1.0E-04	9.3E-05	1.0E-04	1.0E-04	5.7E-04	2.6E-05	2.3E-05	2.6E-03	1.6E-07	6.7E-08	6.7E-07	2.2E-06	8.8E-06	3.5E-06	2.3E-04	5E-03	5E-03	3E-04	3E-04	3E-03	2E-03	3E-04	4E-04	2E-04	1E-04
recreational	483931	3619325	1.0E-01	1.0E-01	8.7E-02	7.9E-02	6.9E-02	6.2E-02	6.1E-02	6.0E-02	4.0E+04	1.6E-01	1.3E-01	3.2E-01	3.2E-01	3.7E-02	9.6E-03	3.7E-02	5.8E-02	1.0E-01	4.0E-02	5.1E-01	1.4E-03	1.4E-03	1.2E-03	1.1E-03	1.1E-04	9.6E-05	1.1E-04	1.1E-04	6.1E-04	2.8E-05	2.4E-05	2.5E-03	1.6E-07	6.8E-08	6.9E-07	2.3E-06	9.1E-06	3.5E-06	2.1E-04	6E-03	5E-03	3E-04	3E-04	2E-03	2E-03	3E-04	4E-04	2E-04	1E-04
residential	484031	3619325	1.0E-01	1.0E-01	9.1E-02	8.2E-02	7.2E-02	6.4E-02	6.3E-02	6.2E-02	4.3E+04	1.6E-01	1.4E-01	3.1E-01	3.1E-01	3.8E-02	9.7E-03	3.7E-02	6.0E-02	1.1E-01	4.0E-02	4.7E-01	1.5E-03	1.5E-03	1.3E-03	1.2E-03	1.1E-04	1.0E-04	1.1E-04	1.1E-04	6.5E-04	2.9E-05	2.5E-05	2.3E-03	1.7E-07	6.9E-08	7.0E-07	2.4E-06	9.4E-06	3.6E-06	1.9E-04	6E-03	5E-03	3E-04	3E-04	2E-03	2E-03	3E-04	3E-04	2E-04	1E-04
residential	484131	3619325	1.1E-01	1.1E-01	9.5E-02	8.6E-02	7.5E-02	6.7E-02	6.5E-02	6.4E-02	4.7E+04	1.7E-01	1.5E-01	2.9E-01	2.9E-01	3.8E-02	9.9E-03	3.8E-02	6.2E-02	1.1E-01	4.1E-02	4.4E-01	1.5E-03	1.6E-03	1.3E-03	1.2E-03	1.2E-04	1.0E-04	1.1E-04	1.1E-04	7.1E-04	3.1E-05	2.6E-05	2.2E-03	1.7E-07	7.1E-08	7.1E-07	2.5E-06	9.7E-06	3.7E-06	1.8E-04	6E-03	5E-03	3E-04	3E-04	2E-03	2E-03	3E-04	3E-04	2E-04	1E-04
residential	484231	3619325	1.1E-01	1.1E-01	9.8E-02	8.8E-02	7.7E-02	6.9E-02	6.7E-02	6.5E-02	5.2E+04	1.8E-01	1.6E-01	2.8E-01	2.8E-01	3.9E-02	1.0E-02	3.9E-02	6.5E-02	1.1E-01	4.2E-02	4.1E-01	1.5E-03	1.6E-03	1.4E-03	1.2E-03	1.2E-04	1.1E-04	1.2E-04	1.2E-04	7.9E-04	3.3E-05	2.8E-05	2.1E-03	1.7E-07	7.2E-08	7.2E-07	2.6E-06	1.0E-05	3.8E-06	1.7E-04	6E-03	6E-03	3E-04	3E-04	2E-03	2E-03	3E-04	3E-04	2E-04	1E-04
residential	484331	3619325	1.1E-01	1.2E-01	1.0E-01	9.0E-02	8.0E-02	7.0E-02	6.8E-02	6.6E-02	5.8E+04	2.0E-01	1.7E-01	2.6E-01	2.6E-01	4.0E-02	1.0E-02	3.9E-02	6.9E-02	1.2E-01	4.4E-02	3.9E-01	1.6E-03	1.7E-03	1.4E-03	1.3E-03	1.2E-04	1.1E-04	1.2E-04	1.2E-04	8.8E-04	3.5E-05	3.0E-05	2.0E-03	1.8E-07	7.4E-08	7.3E-07	2.7E-06	1.1E-05	3.9E-06	1.6E-04	6E-03	6E-03	3E-04	4E-04	2E-03	1E-03	2E-04	3E-04	2E-04	9E-05
residential	484431	3619325	1.1E-01	1.3E-01	1.0E-01	9.3E-02	8.1E-02	7.2E-02	7.0E-02	6.8E-02	6.2E+04	2.0E-01	1.7E-01	2.5E-01	2.5E-01	4.0E-02	1.1E-02	4.0E-02	7.4E-02	1.3E-01	4.5E-02	3.7E-01	1.6E-03	1.8E-03	1.5E-03	1.3E-03	1.3E-04	1.1E-04	1.2E-04	1.2E-04	9.4E-04	3.5E-05	3.0E-05	1.9E-03	1.8E-07	7.5E-08	7.5E-07	2.9E-06	1.1E-05	4.0E-06	1.5E-04	7E-03	6E-03	3E-04	4E-04	2E-03	1E-03	2E-04	3E-04	2E-04	9E-05
residential	484531	3619325	1.2E-01	1.4E-01	1.1E-01	9.9E-02	8.5E-02	7.4E-02	7.2E-02	7.0E-02	7.1E+04	2.0E-01	1.7E-01	2.4E-01	2.4E-01	4.1E-02	1.1E-02	4.1E-02	8.0E-02	1.4E-01	4.7E-02	3.6E-01	1.7E-03	2.0E-03	1.6E-03	1.4E-03	1.3E-04	1.1E-04	1.3E-04	1.2E-04	1.1E-03	3.6E-05	3.0E-05	1.8E-03	1.8E-07	7.7E-08	7.6E-07	3.2E-06	1.2E-05	4.2E-06	1.5E-04	7E-03	6E-03	3E-04	4E-04	2E-03	1E-03	2E-04	3E-04	1E-04	8E-05
residential	484631	3619325	1.3E-01	1.5E-01	1.2E-01	1.1E-01	9.0E-02	7.9E-02	7.5E-02	7.3E-02	8.3E+04	2.2E-01	1.8E-01	2.3E-01	2.3E-01	4.2E-02	1.1E-02	4.2E-02	8.8E-02	1.5E-01	4.9E-02	3.4E-01	1.8E-03	2.2E-03	1.7E-03	1.5E-03	1.4E-04	1.2E-04	1.3E-04	1.3E-04	1.3E-03	3.8E-05	3.2E-05	1.7E-03	1.9E-07	7.9E-08	7.8E-07	3.5E-06	1.3E-05	4.3E-06	1.4E-04	8E-03	7E-03	4E-04	4E-04	2E-03	1E-03	2E-04	3E-04	1E-04	8E-05
residential	484731	3619325	1.4E-01	1.7E-01	1.3E-01	1.1E-01	9.7E-02	8.4E-02	7.9E-02	7.7E-02	9.7E+04	2.3E-01	2.0E-01	2.2E-01	2.2E-01	4.3E-02	1.1E-02	4.2E-02	9.8E-02	1.7E-01	5.1E-02	3.2E-01	1.9E-03	2.5E-03	1.9E-03	1.6E-03	1.5E-04	1.3E-04	1.4E-04	1.4E-04	1.5E-03	4.1E-05	3.5E-05	1.7E-03	1.9E-07	8.1E-08	7.9E-07	3.9E-06	1.5E-05	4.6E-06	1.3E-04	8E-03	8E-03	4E-04	5E-04	2E-03	1E-03	2E-04	2E-04	1E-04	7E-05
residential	484831	3619325	1.5E-01	1.9E-01	1.5E-01	1.3E-01	1.0E-01	8.8E-02	8.4E-02	7.9E-02	1.1E+05	2.5E-01	2.0E-01	2.1E-01	2.1E-01	4.4E-02	1.2E-02	4.3E-02	1.1E-01	2.0E-01	5.4E-02	3.1E-01	2.1E-03	2.7E-03	2.1E-03	1.8E-03	1.6E-04	1.4E-04	1.5E-04	1.4E-04	1.7E-03	4.4E-05	3.6E-05	1.6E-03	1.9E-07	8.3E-08	8.1E-07	4.4E-06	1.8E-05	4.8E-06	1.3E-04	9E-03	8E-03	5E-04	5E-04	2E-03	1E-03	2E-04	2E-04	1E-04	7E-05
residential	484931	3619325	1.7E-01	2.1E-01	1.6E-01	1.4E-01	1.1E-01	9.4E-02	8.8E-02	8.3E-02	1.4E+05	2.5E-01	2.1E-01	2.0E-01	2.0E-01	4.5E-02	1.2E-02	4.4E-02	1.3E-01	2.3E-01	5.8E-02	3.0E-01	2.4E-03	3.0E-03	2.3E-03	1.9E-03	1.7E-04	1.5E-04	1.6E-04	1.5E-04	2.1E-03	4.5E-05	3.7E-05	1.5E-03	2.0E-07	8.5E-08	8.3E-07	5.0E-06	2.1E-05	5.2E-06	1.2E-04	1E-02	9E-03	5E-04	6E-04	2E-03	1E-03	2E-04	2E-04	1E-04	7E-05
residential	485031	3619325	1.9E-01	2.3E-01	1.8E-01	1.5E-01	1.2E-01	1.0E-01	9.3E-02	8.7E-02	1.6E+05	2.7E-01	2.2E-01	2.0E-01	2.0E-01	4.6E-02	1.2E-02	4.5E-02	1.4E-01	2.7E-01	6.3E-02	2.8E-01	2.7E-03	3.3E-03	2.5E-03	2.1E-03	1.9E-04	1.6E-04	1.6E-04	1.5E-04	2.5E-03	4.8E-05	3.8E-05	1.5E-03	2.0E-07	8.8E-08	8.5E-07	5.8E-06	2.4E-05	5.6E-06	1.2E-04	1E-02	1E-02	6E-04	6E-04	1E-03	1E-03	2E-04	2E-04	1E-04	7E-05
residential	485131	3619325	2.1E-01	2.5E-01	1.9E-01	1.6E-01	1.3E-01	1.1E-01	1.0E-01	9.2E-02	2.0E+05	2.9E-01	2.3E-01	1.9E-01	1.9E-01	4.8E-02	1.3E-02	4.6E-02	1.6E-01	3.2E-01	6.9E-02	2.7E-01	3.0E-03	3.6E-03	2.7E-03	2.3E-03	2.1E-04	1.7E-04	1.8E-04	1.6E-04	3.0E-03	5.1E-05	4.1E-05	1.4E-03	2.1E-07	9.0E-08	8.7E-07	6.5E-06	2.8E-05	6.2E-06	1.1E-04	1E-02	1E-02	6E-04	7E-04	1E-03	1E-03	2E-04	2E-04	1E-04	6E-05

TAMT_HRA_Existing
DPM_annl

AERMOD Output	Multi-Purpose General CargoExisting 28%	Dry BulkExisting 15%	All 100%	Refrigerated ContainersExisting 63%	Multi-Purpose General CargoExisting 8%	Dry BulkExisting 29%	All 100%	Refrigerated ContainersExisting 0%	Multi-Purpose General CargoExisting 61%	Dry BulkExisting 39%	All 100%	Refrigerated Containers 67%	Multi-Purpose General Cargo 3%	Dry Bulk 30%	All	ug/m3	Dose Inhalation 3rd tri	Dose Inhalation 0<2	Dose Inhalation 2<9	Dose Inhalation 2<16	Dose Inhalation 16<30	Risk (Residential 30-yr; school 9-yr; park 15-year) 3rd tri	Risk 0<2	Risk 2<9	Risk 2<16	Risk 16<30	Summed Risk	Cases Per Million	Chronic HI	ug/m3	Dose Inhalation 3rd tri	Dose Inhalation 0<2	Dose Inhalation 2<9	Dose Inhalation 2<16	Dose Inhalation 16<30	Risk (Residential 30-yr; school 9-yr; park 15-year) 3rd tri	Risk 0<2	Risk 2<9	Risk 2<16	Risk 16<30	Summed Risk	Cases Per Million	Chronic HI	ug/m3	Dose Inhalation 3rd tri	Dose Inhalation 0<2	Dose Inhalation 2<9	Dose Inhalation 2<16	Dose Inhalation 16<30	Risk (Residential 30-yr; school 9-yr; park 15-year) 3rd tri	Risk 0<2	Risk 2<9	Risk 2<16	Risk 16<30	Summed Risk	Cases Per Million	Chronic HI
residential	2E-05	8E-06	4E-03	3E-03	4E-04	1E-03	3E-04	0E+00	2E-04	1E-04	0.00022	0.00015	7.3E-06	6.8E-05	0.02	0.01471	5.09E-06	1.54E-05	8.9E-06	8.07E-06	3.68E-06	2E-07	4.8E-06	0	5.3E-06	8.1E-07	1.116E-05	11.1643	0.00294	1E-03	4E-07	1E-06	8E-07	7E-07	3E-07	2E-08	4E-07	0E+00	5E-07	7E-08	9.6E-07	0.956	0.00025	2E-03	8E-07	2E-06	1E-06	1E-06	6E-07	3E-08	7E-07	0E+00	8E-07	1E-07	1.7E-06	1.718	0.00045
residential	1E-05	8E-06	4E-03	3E-03	3E-04	1E-03	2E-04	0E+00	1E-04	9E-05	0.00022	0.00015	7E-06	6.6E-05	0.02	0.01375	4.76E-06	1.44E-05	8.32E-06	7.54E-06	3.44E-06	1.9E-07	4.5E-06	0	5E-06	7.6E-07	1.044E-05	10.4377	0.00275	1E-03	4E-07	1E-06	7E-07	6E-07	3E-07	2E-08	4E-07	0E+00	4E-07	6E-08	8.8E-07	0.885	0.00023	2E-03	7E-07	2E-06	1E-06	1E-06	5E-07	3E-08	7E-07	0E+00	8E-07	1E-07	1.6E-06	1.574	0.00041
residential	1E-05	7E-06	4E-03	2E-03	3E-04	1E-03	2E-04	0E+00	1E-04	8E-05	0.00021	0.00014	6.8E-06	6.3E-05	0.02	0.01288	4.46E-06	1.35E-05	7.8E-06	7.07E-06	3.22E-06	1.8E-07	4.2E-06	0	4.7E-06	7.1E-07	9.782E-06	9.7817	0.00258	1E-03	4E-07	1E-06	7E-07	6E-07	3E-07	1E-08	4E-07	0E+00	4E-07	6E-08	8.2E-07	0.821	0.00022	2E-03	7E-07	2E-06	1E-06	1E-06	5E-07	3E-08	6E-07	0E+00	7E-07	1E-07	1.4E-06	1.447	0.00038
residential	1E-05	7E-06	3E-03	2E-03	3E-04	9E-04	2E-04	0E+00	1E-04	7E-05	0.00019	0.00013	6.1E-06	5.7E-05	0.01	0.01191	4.12E-06	1.24E-05	7.21E-06	6.53E-06	2.98E-06	1.6E-07	3.9E-06	0	4.3E-06	6.6E-07	9.042E-06	9.04208	0.00238	1E-03	3E-07	1E-06	6E-07	5E-07	2E-07	1E-08	3E-07	0E+00	4E-07	5E-08	7.4E-07	0.740	0.00019	2E-03	6E-07	2E-06	1E-06	9E-07	4E-07	2E-08	6E-07	0E+00	6E-07	9E-08	1.3E-06	1.275	0.00034
residential	1E-05	6E-06	3E-03	2E-03	2E-04	7E-04	1E-04	0E+00	9E-05	6E-05	0.00017	0.00011	5.4E-06	5E-05	0.01	0.01098	3.8E-06	1.15E-05	6.64E-06	6.02E-06	2.75E-06	1.5E-07	3.6E-06	0	4E-06	6E-07	8.334E-06	8.33425	0.0022	9E-04	3E-07	9E-07	5E-07	5E-07	2E-07	1E-08	3E-07	0E+00	3E-07	5E-08	6.7E-07	0.665	0.00018	1E-03	5E-07	2E-06	9E-07	8E-07	4E-07	2E-08	5E-07	0E+00	5E-07	8E-08	1.1E-06	1.119	0.00029
residential	1E-05	6E-06	2E-03	1E-03	2E-04	7E-04	1E-04	0E+00	8E-05	5E-05	0.00017	0.00011	5.4E-06	5E-05	0.01	0.01043	3.61E-06	1.09E-05	6.31E-06	5.72E-06	2.61E-06	1.4E-07	3.4E-06	0	3.8E-06	5.7E-07	7.918E-06	7.91801	0.00209	8E-04	3E-07	9E-07	5E-07	5E-07	2E-07	1E-08	3E-07	0E+00	3E-07	5E-08	6.3E-07	0.632	0.00017	1E-03	5E-07	1E-06	8E-07	8E-07	4E-07	2E-08	5E-07	0E+00	5E-07	8E-08	1.1E-06	1.062	0.00028
residential	1E-05	6E-06	2E-03	1E-03	2E-04	6E-04	1E-04	0E+00	7E-05	5E-05	0.00016	0.0001	5E-06	4.7E-05	0.01	0.0098	3.39E-06	1.02E-05	5.93E-06	5.37E-06	2.45E-06	1.3E-07	3.2E-06	0	3.5E-06	5.4E-07	7.438E-06	7.43837	0.00196	8E-04	3E-07	8E-07	5E-07	4E-07	2E-07	1E-08	3E-07	0E+00	3E-07	4E-08	5.9E-07	0.587	0.00015	1E-03	4E-07	1E-06	8E-07	7E-07	3E-07	2E-08	4E-07	0E+00	5E-07	7E-08	9.8E-07	0.977	0.00026
residential	1E-05	6E-06	2E-03	1E-03	2E-04	6E-04	1E-04	0E+00	8E-05	5E-05	0.00017	0.00011	5.4E-06	5.1E-05	0.01	0.00962	3.33E-06	1.01E-05	5.82E-06	5.27E-06	2.41E-06	1.3E-07	3.2E-06	0	3.5E-06	5.3E-07	7.3E-06	7.30033	0.00192	8E-04	3E-07	8E-07	5E-07	4E-07	2E-07	1E-08	3E-07	0E+00	3E-07	4E-08	5.8E-07	0.583	0.00015	1E-03	4E-07	1E-06	8E-07	7E-07	3E-07	2E-08	4E-07	0E+00	5E-07	7E-08	9.8E-07	0.984	0.00026
residential	1E-05	6E-06	2E-03	1E-03	2E-04	6E-04	1E-04	0E+00	7E-05	4E-05	0.00016	0.00011	5.2E-06	4.9E-05	0.01	0.00916	3.17E-06	9.58E-06	5.54E-06	5.03E-06	2.29E-06	1.2E-07	3E-06	0	3.3E-06	5E-07	6.957E-06	6.95659	0.00183	7E-04	3E-07	8E-07	4E-07	4E-07	2E-07	1E-08	2E-07	0E+00	3E-07	4E-08	5.5E-07	0.552	0.00015	1E-03	4E-07	1E-06	7E-07	7E-07	3E-07	2E-08	4E-07	0E+00	4E-07	7E-08	9.3E-07	0.925	0.00024
residential	1E-05	6E-06	2E-03	1E-03	2E-04	5E-04	1E-04	0E+00	6E-05	4E-05	0.00015	0.0001	4.9E-06	4.6E-05	0.01	0.00867	3E-06	9.06E-06	5.25E-06	4.76E-06	2.17E-06	1.2E-07	2.8E-06	0	3.1E-06	4.8E-07	6.581E-06	6.58145	0.00173	7E-04	2E-07	7E-07	4E-07	4E-07	2E-07	9E-09	2E-07	0E+00	2E-07	4E-08	5.2E-07	0.518	0.00014	1E-03	4E-07	1E-06	7E-07	6E-07	3E-07	2E-08	4E-07	0E+00	4E-07	6E-08	8.6E-07	0.860	0.00023

TAMT_HRA_Existing
DPM_annl

AERMOD Output

	X	Y	B10_1_AUX	B10_2_AUX	B10_3_AUX	B10_4_AUX	B10_5_AUX	B10_6_AUX	B10_7_AUX	B10_8_AUX	CHE_1	LOC_SWTCH EMP	LOC_SWTCH LOA	OGV_PATH _BLR	OGV_PATH _DPM	TR_28TH	TR_BAYMA R	TR_BOSTON	TR_CROSBY	TR_HARBOR CHA	TR_HARBOR SAM	TUG_PATH_ DPM	B10_1_AUX	B10_2_AUX	B10_3_AUX	B10_4_AUX	B10_5_AUX	B10_6_AUX	B10_7_AUX	B10_8_AUX	CHE_1	LOC_SWTCHE MP	LOC_SWTCHL OA	OGV_PATH_ DPM	TR_28TH	TR_BAYMAR	TR_BOSTON	TR_CROSBY	TR_HARBOR CHA	TR_HARBOR SAM	TUG_PATH_D PM	All	Refrigerated ContainersExisting	Multi-Purpose General CargoExisting	Dry BulkExisting	All	Refrigerated ContainersExisting	Multi-Purpose General CargoExisting	Dry BulkExisting	All	Refrigerated ContainersExisting
																						Refrigerated ContainersExisting	Refrigerated ContainersExisting	Refrigerated ContainersExisting	Refrigerated ContainersExisting	Multi-Purpose General CargoExisting	Multi-Purpose General CargoExisting	Dry BulkExisting	Dry BulkExisting	AllExisting	AllExisting	AllExisting	AllExisting	TR_28THExisting	TR_BAYMAR Existing	TR_BOSTON Existing	TR_CROSBY Existing	TR_HARBOR CHAExisting	TR_HARBOR SAMExisting	AllExisting										
			Source Group in AERMOD																		g/s -->	1.4E-02	1.4E-02	1.4E-02	1.4E-02	1.6E-03	1.6E-03	1.8E-03	1.8E-03	1.5E-08	1.8E-04	1.8E-04	7.6E-03	4.4E-06	7.1E-06	1.9E-05	4.0E-05	8.9E-05	8.9E-05	4.1E-04	100%	89%	5%	6%	100%	73%	12%	15%	100%	57%
			1	3	5	7	9	11	13	15	17	18	19	20	21	22	23	24	25	26	27	28	1	3	5	7	9	11	13	15	17	18	19	21	22	23	24	25	26	27	28										
residential	485231	3619325	2.4E-01	2.7E-01	2.1E-01	1.8E-01	1.5E-01	1.2E-01	1.1E-01	9.9E-02	2.5E+05	3.2E-01	2.5E-01	1.8E-01	1.8E-01	4.9E-02	1.3E-02	4.8E-02	1.9E-01	3.8E-01	7.7E-02	2.6E-01	3.4E-03	3.8E-03	3.0E-03	2.5E-03	2.3E-04	1.8E-04	1.9E-04	1.7E-04	3.7E-03	5.7E-05	4.5E-05	1.4E-03	2.2E-07	9.3E-08	8.9E-07	7.4E-06	3.4E-05	6.8E-06	1.1E-04	1E-02	1E-02	7E-04	8E-04	1E-03	1E-03	2E-04	2E-04	1E-04	6E-05
residential	485331	3619325	2.6E-01	2.8E-01	2.3E-01	2.0E-01	1.6E-01	1.3E-01	1.2E-01	1.1E-01	3.0E+05	3.6E-01	2.8E-01	1.7E-01	1.7E-01	5.1E-02	1.3E-02	4.9E-02	2.1E-01	4.7E-01	8.6E-02	2.5E-01	3.7E-03	4.0E-03	3.2E-03	2.8E-03	2.5E-04	2.0E-04	2.1E-04	1.9E-04	4.5E-03	6.4E-05	5.0E-05	1.3E-03	2.3E-07	9.6E-08	9.2E-07	8.3E-06	4.2E-05	7.7E-06	1.0E-04	1E-02	1E-02	7E-04	8E-04	1E-03	1E-03	2E-04	2E-04	1E-04	6E-05
residential	485431	3619325	2.8E-01	2.9E-01	2.4E-01	2.1E-01	1.7E-01	1.4E-01	1.3E-01	1.2E-01	3.4E+05	4.1E-01	3.2E-01	1.6E-01	1.6E-01	5.4E-02	1.4E-02	5.1E-02	2.3E-01	6.1E-01	9.6E-02	2.4E-01	4.0E-03	4.1E-03	3.4E-03	3.0E-03	2.7E-04	2.2E-04	2.3E-04	2.1E-04	5.2E-03	7.4E-05	5.6E-05	1.2E-03	2.4E-07	9.9E-08	9.6E-07	9.3E-06	5.4E-05	8.6E-06	9.8E-05	2E-02	1E-02	8E-04	9E-04	1E-03	9E-04	2E-04	2E-04	1E-04	6E-05
residential	485531	3619325	3.0E-01	3.0E-01	2.5E-01	2.2E-01	1.9E-01	1.5E-01	1.4E-01	1.3E-01	3.8E+05	4.8E-01	3.6E-01	1.6E-01	1.6E-01	5.7E-02	1.4E-02	5.4E-02	2.6E-01	7.6E-01	1.1E-01	2.3E-01	4.3E-03	4.2E-03	3.6E-03	3.1E-03	2.9E-04	2.4E-04	2.5E-04	2.3E-04	5.7E-03	8.5E-05	6.4E-05	1.2E-03	2.5E-07	1.0E-07	1.0E-06	1.1E-05	6.8E-05	9.5E-06	9.3E-05	2E-02	1E-02	8E-04	9E-04	1E-03	9E-04	1E-04	2E-04	9E-05	5E-05
residential	485631	3619325	3.1E-01	3.0E-01	2.6E-01	2.3E-01	2.0E-01	1.7E-01	1.5E-01	1.4E-01	4.1E+05	5.6E-01	4.2E-01	1.5E-01	1.5E-01	6.0E-02	1.5E-02	5.7E-02	3.1E-01	9.2E-01	1.2E-01	2.2E-01	4.4E-03	4.2E-03	3.7E-03	3.3E-03	3.1E-04	2.6E-04	2.7E-04	2.5E-04	6.1E-03	9.9E-05	7.5E-05	1.1E-03	2.7E-07	1.1E-07	1.1E-06	1.2E-05	8.2E-05	1.1E-05	8.9E-05	2E-02	2E-02	8E-04	9E-04	1E-03	8E-04	1E-04	2E-04	9E-05	5E-05
residential	485731	3619325	3.2E-01	2.9E-01	2.7E-01	2.4E-01	2.1E-01	1.8E-01	1.7E-01	1.6E-01	4.3E+05	6.3E-01	4.8E-01	1.5E-01	1.5E-01	6.5E-02	1.5E-02	6.0E-02	3.7E-01	1.1E+00	1.3E-01	2.1E-01	4.5E-03	4.2E-03	3.8E-03	3.5E-03	3.2E-04	2.7E-04	2.9E-04	2.8E-04	6.5E-03	1.1E-04	8.6E-05	1.1E-03	2.9E-07	1.1E-07	1.1E-06	1.5E-05	9.5E-05	1.2E-05	8.5E-05	2E-02	2E-02	8E-04	1E-03	1E-03	8E-04	1E-04	2E-04	8E-05	5E-05
residential	485831	3619325	3.1E-01	2.9E-01	2.8E-01	2.5E-01	2.2E-01	1.9E-01	1.8E-01	1.7E-01	4.6E+05	7.1E-01	5.5E-01	1.4E-01	1.4E-01	7.0E-02	1.6E-02	6.5E-02	4.6E-01	1.2E+00	1.5E-01	2.0E-01	4.4E-03	4.0E-03	3.9E-03	3.6E-03	3.4E-04	2.9E-04	3.2E-04	3.0E-04	6.9E-03	1.3E-04	9.8E-05	1.1E-03	3.1E-07	1.1E-07	1.2E-06	1.8E-05	1.1E-04	1.3E-05	8.0E-05	2E-02	2E-02	8E-04	1E-03	1E-03	8E-04	1E-04	2E-04	8E-05	5E-05
residential	485931	3619325	3.1E-01	2.8E-01	2.8E-01	2.6E-01	2.3E-01	2.0E-01	1.9E-01	1.8E-01	4.6E+05	7.7E-01	6.1E-01	1.4E-01	1.4E-01	7.7E-02	1.7E-02	7.0E-02	5.8E-01	1.4E+00	1.7E-01	1.9E-01	4.4E-03	3.9E-03	3.9E-03	3.7E-03	3.6E-04	3.1E-04	3.4E-04	3.2E-04	7.0E-03	1.4E-04	1.1E-04	1.0E-03	3.4E-07	1.2E-07	1.3E-06	2.3E-05	1.2E-04	1.5E-05	7.6E-05	2E-02	2E-02	8E-04	1E-03	1E-03	8E-04	1E-04	2E-04	8E-05	4E-05
residential	486031	3619325	3.0E-01	2.6E-01	2.7E-01	2.6E-01	2.4E-01	2.1E-01	2.0E-01	1.9E-01	4.5E+05	8.2E-01	6.5E-01	1.3E-01	1.3E-01	8.4E-02	1.7E-02	7.7E-02	7.0E-01	1.4E+00	1.9E-01	1.8E-01	4.2E-03	3.7E-03	3.8E-03	3.7E-03	3.6E-04	3.2E-04	3.5E-04	3.4E-04	6.9E-03	1.5E-04	1.2E-04	9.9E-04	3.7E-07	1.2E-07	1.4E-06	2.8E-05	1.3E-04	1.7E-05	7.3E-05	2E-02	2E-02	8E-04	9E-04	1E-03	7E-04	1E-04	1E-04	7E-05	4E-05
residential	486231	3619325	2.7E-01	2.3E-01	2.6E-01	2.6E-01	2.4E-01	2.2E-01	2.1E-01	2.1E-01	4.0E+05	8.1E-01	6.8E-01	1.2E-01	1.2E-01	1.0E-01	1.8E-02	8.9E-02	8.1E-01	1.4E+00	2.6E-01	1.6E-01	3.9E-03	3.3E-03	3.6E-03	3.6E-03	3.8E-04	3.4E-04	3.8E-04	3.7E-04	6.1E-03	1.4E-04	1.2E-04	8.9E-04	4.6E-07	1.3E-07	1.7E-06	3.2E-05	1.2E-04	2.3E-05	6.6E-05	2E-02	1E-02	8E-04	9E-04	9E-04	6E-04	1E-04	1E-04	7E-05	4E-05
residential	486331	3619325	2.6E-01	2.2E-01	2.5E-01	2.5E-01	2.5E-01	2.2E-01	2.2E-01	2.2E-01	3.6E+05	7.5E-01	6.5E-01	1.1E-01	1.1E-01	1.1E-01	1.8E-02	9.7E-02	7.7E-01	1.3E+00	3.0E-01	1.5E-01	3.7E-03	3.1E-03	3.5E-03	3.6E-03	3.8E-04	3.5E-04	4.0E-04	4.0E-04	5.4E-03	1.3E-04	1.2E-04	8.3E-04	4.8E-07	1.3E-07	1.8E-06	3.1E-05	1.1E-04	2.6E-05	6.1E-05	2E-02	1E-02	8E-04	9E-04	8E-04	6E-04	1E-04	1E-04	6E-05	4E-05
residential	486431	3619325	2.5E-01	2.1E-01	2.4E-01	2.5E-01	2.5E-01	2.3E-01	2.3E-01	2.3E-01	3.2E+05	7.0E-01	6.2E-01	1.0E-01	1.0E-01	1.2E-01	1.8E-02	1.0E-01	7.3E-01	1.2E+00	3.3E-01	1.4E-01	3.5E-03	2.9E-03	3.4E-03	3.5E-03	3.8E-04	3.6E-04	4.1E-04	4.1E-04	4.8E-03	1.2E-04	1.1E-04	7.8E-04	5.2E-07	1.3E-07	1.9E-06	2.9E-05	1.0E-04	2.9E-05	5.7E-05	1E-02	1E-02	7E-04	8E-04	8E-04	6E-04	9E-05	1E-04	6E-05	3E-05
residential	486531	3619325	2.3E-01	1.9E-01	2.3E-01	2.4E-01	2.4E-01	2.3E-01	2.4E-01	2.4E-01	2.9E+05	6.4E-01	5.9E-01	9.7E-02	9.7E-02	1.3E-01	1.9E-02	1.1E-01	7.1E-01	1.1E+00	3.5E-01	1.3E-01	3.3E-03	2.8E-03	3.2E-03	3.4E-03	3.8E-04	3.6E-04	4.2E-04	4.2E-04	4.3E-03	1.1E-04	1.1E-04	7.4E-04	5.6E-07	1.3E-07	2.1E-06	2.8E-05	9.4E-05	3.1E-05	5.3E-05	1E-02	1E-02	7E-04	8E-04	7E-04	5E-04	9E-05	1E-04	5E-05	3E-05
residential	486631	3619325	2.2E-01	1.8E-01	2.1E-01	2.3E-01	2.4E-01	2.3E-01	2.4E-01	2.4E-01	2.6E+05	5.9E-01	5.6E-01	9.3E-02	9.3E-02	1.4E-01	1.9E-02	1.2E-01	7.1E-01	9.7E-01	3.8E-01	1.2E-01	3.1E-03	2.6E-03	3.0E-03	3.2E-03	3.6E-04	3.6E-04	4.2E-04	4.3E-04	3.9E-03	1.1E-04	1.0E-04	7.0E-04	6.0E-07	1.4E-07	2.3E-06	2.8E-05	8.6E-05	3.3E-05	5.0E-05	1E-02	1E-02	7E-04	7E-04	7E-04	5E-04	8E-05	1E-04	5E-05	3E-05
residential	486731	3619325	2.0E-01	1.7E-01	2.0E-01	2.1E-01	2.3E-01	2.3E-01	2.3E-01	2.4E-01	2.3E+05	5.3E-01	5.2E-01	8.8E-02	8.8E-02	1.5E-01	1.9E-02	1.3E-01	7.0E-01	8.8E-01	3.9E-01	1.1E-01	2.8E-03	2.4E-03	2.8E-03	3.0E-03	3.5E-04	3.5E-04	4.1E-04	4.3E-04	3.5E-03	9.4E-05	9.2E-05	6.7E-04	6.5E-07	1.4E-07	2.4E-06	2.8E-05	7.8E-05	3.5E-05	4.7E-05	1E-02	1E-02	6E-04	7E-04	7E-04	5E-04	8E-05	1E-04	5E-05	3E-05

TAMT_HRA_Existing
DPM_annl

AERMOD Output	Multi-Purpose General CargoExisting 28%	Dry BulkExisting 15%	All 100%	Refrigerated ContainersExisting 63%	Multi-Purpose General CargoExisting 8%	Dry BulkExisting 29%	All 100%	Refrigerated ContainersExisting 0%	Multi-Purpose General CargoExisting 61%	Dry BulkExisting 39%	All 100%	Refrigerated Containers 67%	Multi-Purpose General Cargo 3%	Dry Bulk 30%	All	Dose Inhallation ug/m3
recreational	5E-05	3E-05	5E-04	3E-04	5E-05	2E-04	4E-05	0E+00	3E-05	2E-05	1.4E-05	9.1E-06	4.4E-07	4.1E-06	0.01	0.00646
residential	5E-05	2E-05	6E-04	4E-04	5E-05	2E-04	5E-05	0E+00	3E-05	2E-05	1.4E-05	9.4E-06	4.5E-07	4.2E-06	0.01	0.00662
residential	4E-05	2E-05	7E-04	4E-04	5E-05	2E-04	5E-05	0E+00	3E-05	2E-05	1.5E-05	9.7E-06	4.7E-07	4.4E-06	0.01	0.00676
residential	4E-05	2E-05	7E-04	5E-04	6E-05	2E-04	5E-05	0E+00	3E-05	2E-05	1.5E-05	1E-05	4.9E-07	4.6E-06	0.01	0.00688
residential	4E-05	2E-05	8E-04	5E-04	6E-05	2E-04	5E-05	0E+00	3E-05	2E-05	1.6E-05	1.1E-05	5.1E-07	4.8E-06	0.01	0.00687
residential	4E-05	2E-05	9E-04	5E-04	7E-05	2E-04	5E-05	0E+00	3E-05	2E-05	1.7E-05	1.1E-05	5.5E-07	5.1E-06	0.01	0.00726
residential	4E-05	2E-05	1E-03	6E-04	8E-05	3E-04	5E-05	0E+00	3E-05	2E-05	1.9E-05	1.2E-05	6E-07	5.6E-06	0.01	0.00771
residential	3E-05	2E-05	1E-03	7E-04	1E-04	3E-04	6E-05	0E+00	3E-05	2E-05	2.1E-05	1.4E-05	6.7E-07	6.3E-06	0.01	0.0083
residential	3E-05	2E-05	1E-03	8E-04	1E-04	4E-04	5E-05	0E+00	3E-05	2E-05	2.2E-05	1.5E-05	7.3E-07	6.8E-06	0.01	0.00878
residential	3E-05	2E-05	1E-03	9E-04	1E-04	4E-04	6E-05	0E+00	4E-05	2E-05	2.6E-05	1.7E-05	8.3E-07	7.7E-06	0.01	0.00959
residential	3E-05	2E-05	2E-03	1E-03	1E-04	5E-04	6E-05	0E+00	4E-05	2E-05	2.9E-05	1.9E-05	9.3E-07	8.7E-06	0.01	0.01044
residential	3E-05	2E-05	2E-03	1E-03	2E-04	6E-04	7E-05	0E+00	4E-05	3E-05	3.3E-05	2.2E-05	1.1E-06	9.9E-06	0.01	0.01137
residential	3E-05	2E-05	2E-03	2E-03	2E-04	7E-04	7E-05	0E+00	5E-05	3E-05	3.7E-05	2.5E-05	1.2E-06	1.1E-05	0.01	0.0124
residential	3E-05	1E-05	3E-03	2E-03	2E-04	8E-04	8E-05	0E+00	5E-05	3E-05	4.3E-05	2.9E-05	1.4E-06	1.3E-05	0.02	0.01347
residential	3E-05	1E-05	3E-03	2E-03	3E-04	1E-03	9E-05	0E+00	6E-05	4E-05	5E-05	3.3E-05	1.6E-06	1.5E-05	0.02	0.01453
residential	3E-05	1E-05	4E-03	3E-03	3E-04	1E-03	1E-04	0E+00	6E-05	4E-05	5.9E-05	4E-05	1.9E-06	1.8E-05	0.02	0.01551
residential	2E-05	1E-05	4E-03	3E-03	4E-04	1E-03	1E-04	0E+00	7E-05	5E-05	7.1E-05	4.7E-05	2.3E-06	2.1E-05	0.02	0.01635
residential	2E-05	1E-05	5E-03	3E-03	4E-04	1E-03	1E-04	0E+00	9E-05	5E-05	8.3E-05	5.6E-05	2.7E-06	2.5E-05	0.02	0.01701
residential	2E-05	1E-05	5E-03	3E-03	4E-04	1E-03	2E-04	0E+00	1E-04	6E-05	9.6E-05	6.4E-05	3.1E-06	2.9E-05	0.02	0.0175
residential	2E-05	1E-05	5E-03	3E-03	4E-04	1E-03	2E-04	0E+00	1E-04	7E-05	0.00011	7.4E-05	3.6E-06	3.3E-05	0.02	0.0179
residential	2E-05	1E-05	5E-03	3E-03	4E-04	2E-03	2E-04	0E+00	1E-04	7E-05	0.00012	8.2E-05	4E-06	3.7E-05	0.02	0.01807
residential	2E-05	1E-05	5E-03	3E-03	4E-04	1E-03	2E-04	0E+00	1E-04	8E-05	0.00013	8.7E-05	4.2E-06	3.9E-05	0.02	0.01787
residential	2E-05	1E-05	5E-03	3E-03	4E-04	2E-03	2E-04	0E+00	1E-04	8E-05	0.00014	9.6E-05	4.6E-06	4.3E-05	0.02	0.0178
residential	9E-06	5E-06	2E-03	1E-03	1E-04	4E-04	9E-05	0E+00	5E-05	3E-05	0.00011	7E-05	3.4E-06	3.2E-05	0.01	0.00782
residential	5E-06	3E-06	9E-05	5E-05	7E-06	2E-05	4E-06	0E+00	3E-06	2E-06	3.3E-06	2.2E-06	1.1E-07	1E-06	0.00	0.00111
residential	6E-06	3E-06	9E-05	6E-05	7E-06	3E-05	4E-06	0E+00	3E-06	2E-06	3.4E-06	2.2E-06	1.1E-07	1E-06	0.00	0.00114
residential	6E-06	3E-06	9E-05	5E-05	7E-06	2E-05	4E-06	0E+00	3E-06	2E-06	3.4E-06	2.2E-06	1.1E-07	1E-06	0.00	0.00115
residential	6E-06	3E-06	9E-05	6E-05	7E-06	3E-05	4E-06	0E+00	3E-06	2E-06	3.4E-06	2.3E-06	1.1E-07	1E-06	0.00	0.00118
residential	7E-06	4E-06	9E-05	6E-05	8E-06	3E-05	5E-06	0E+00	3E-06	2E-06	3.5E-06	2.3E-06	1.1E-07	1.1E-06	0.00	0.00122
residential	7E-06	4E-06	9E-05	6E-05	8E-06	3E-05	5E-06	0E+00	3E-06	2E-06	3.6E-06	2.4E-06	1.2E-07	1.1E-06	0.00	0.00126

TAMT_HRA_Existing
DPM_annl

AERMOD Output

	X	Y	B10_1_AUX	B10_2_AUX	B10_3_AUX	B10_4_AUX	B10_5_AUX	B10_6_AUX	B10_7_AUX	B10_8_AUX	CHE_1	LOC_SWTCH_EMP	LOC_SWTCH_LOA	OGV_PATH_BLR	OGV_PATH_DPM	TR_28TH	TR_BAYMAR	TR_BOSTON	TR_CROSBY	TR_HARBOR_CHA	TR_HARBOR_SAM	TUG_PATH_DPM
Source Group in AERMOD			1	3	5	7	9	11	13	15	17	18	19	20	21	22	23	24	25	26	27	28
residential	484031	3619725	8.0E-02	8.5E-02	7.3E-02	6.7E-02	6.0E-02	5.4E-02	5.2E-02	5.1E-02	3.7E+04	1.2E-01	1.0E-01	2.4E-01	2.4E-01	3.1E-02	9.4E-03	3.0E-02	5.1E-02	7.6E-02	3.3E-02	3.5E-01
residential	484131	3619725	8.8E-02	9.4E-02	8.0E-02	7.3E-02	6.5E-02	5.7E-02	5.6E-02	5.5E-02	4.1E+04	1.3E-01	1.1E-01	2.3E-01	2.3E-01	3.1E-02	9.6E-03	3.1E-02	5.4E-02	8.1E-02	3.5E-02	3.2E-01
residential	484231	3619725	8.4E-02	9.4E-02	7.9E-02	7.1E-02	6.3E-02	5.6E-02	5.5E-02	5.3E-02	4.3E+04	1.2E-01	1.0E-01	2.2E-01	2.2E-01	3.2E-02	9.8E-03	3.2E-02	5.8E-02	8.7E-02	3.6E-02	3.2E-01
residential	484331	3619725	8.8E-02	1.0E-01	8.3E-02	7.4E-02	6.5E-02	5.8E-02	5.6E-02	5.4E-02	4.8E+04	1.2E-01	1.0E-01	2.1E-01	2.1E-01	3.2E-02	1.0E-02	3.2E-02	6.3E-02	9.2E-02	3.7E-02	3.1E-01
residential	484431	3619725	9.1E-02	1.1E-01	8.7E-02	7.7E-02	6.7E-02	5.9E-02	5.7E-02	5.5E-02	5.3E+04	1.2E-01	1.0E-01	2.0E-01	2.0E-01	3.3E-02	1.0E-02	3.3E-02	6.9E-02	9.9E-02	3.9E-02	3.0E-01
residential	484531	3619725	9.7E-02	1.2E-01	9.4E-02	8.2E-02	7.1E-02	6.2E-02	5.9E-02	5.7E-02	6.0E+04	1.3E-01	1.1E-01	1.9E-01	1.9E-01	3.4E-02	1.1E-02	3.3E-02	7.6E-02	1.1E-01	4.2E-02	2.9E-01
residential	484631	3619725	1.0E-01	1.3E-01	1.0E-01	8.8E-02	7.6E-02	6.5E-02	6.2E-02	5.9E-02	6.7E+04	1.3E-01	1.1E-01	1.9E-01	1.9E-01	3.5E-02	1.1E-02	3.4E-02	8.3E-02	1.2E-01	4.4E-02	2.8E-01
residential	484731	3619725	1.1E-01	1.4E-01	1.1E-01	9.6E-02	8.1E-02	7.0E-02	6.6E-02	6.2E-02	7.5E+04	1.4E-01	1.2E-01	1.8E-01	1.8E-01	3.6E-02	1.1E-02	3.5E-02	9.2E-02	1.4E-01	4.8E-02	2.7E-01
residential	484831	3619725	1.3E-01	1.6E-01	1.2E-01	1.0E-01	8.7E-02	7.4E-02	6.9E-02	6.5E-02	8.5E+04	1.5E-01	1.3E-01	1.7E-01	1.7E-01	3.7E-02	1.1E-02	3.6E-02	1.0E-01	1.6E-01	5.2E-02	2.6E-01
residential	484931	3619725	1.4E-01	1.7E-01	1.3E-01	1.1E-01	9.5E-02	8.0E-02	7.4E-02	6.9E-02	9.9E+04	1.6E-01	1.4E-01	1.7E-01	1.7E-01	3.8E-02	1.2E-02	3.7E-02	1.1E-01	1.8E-01	5.6E-02	2.5E-01
residential	485031	3619725	1.5E-01	1.8E-01	1.4E-01	1.2E-01	1.0E-01	8.5E-02	7.9E-02	7.3E-02	1.1E+05	1.7E-01	1.5E-01	1.6E-01	1.6E-01	3.9E-02	1.2E-02	3.8E-02	1.2E-01	2.1E-01	6.1E-02	2.4E-01
residential	485131	3619725	1.7E-01	1.9E-01	1.6E-01	1.4E-01	1.1E-01	9.3E-02	8.5E-02	7.9E-02	1.3E+05	1.9E-01	1.6E-01	1.6E-01	1.6E-01	4.1E-02	1.2E-02	3.9E-02	1.4E-01	2.4E-01	6.6E-02	2.3E-01
residential	485231	3619725	1.8E-01	2.0E-01	1.7E-01	1.5E-01	1.2E-01	1.0E-01	9.3E-02	8.5E-02	1.6E+05	2.1E-01	1.8E-01	1.5E-01	1.5E-01	4.3E-02	1.3E-02	4.1E-02	1.5E-01	2.7E-01	7.1E-02	2.2E-01
residential	485331	3619725	2.0E-01	2.1E-01	1.8E-01	1.6E-01	1.3E-01	1.1E-01	1.0E-01	9.2E-02	1.8E+05	2.4E-01	2.0E-01	1.5E-01	1.5E-01	4.6E-02	1.3E-02	4.3E-02	1.6E-01	3.2E-01	7.7E-02	2.1E-01
residential	485431	3619725	2.1E-01	2.2E-01	1.9E-01	1.7E-01	1.4E-01	1.2E-01	1.1E-01	1.0E-01	2.1E+05	2.8E-01	2.2E-01	1.4E-01	1.4E-01	4.9E-02	1.4E-02	4.4E-02	1.8E-01	3.8E-01	8.4E-02	2.0E-01
residential	485531	3619725	2.3E-01	2.3E-01	1.9E-01	1.7E-01	1.5E-01	1.3E-01	1.2E-01	1.1E-01	2.3E+05	3.1E-01	2.5E-01	1.3E-01	1.3E-01	5.2E-02	1.4E-02	4.7E-02	2.0E-01	4.6E-01	9.1E-02	1.9E-01
residential	485631	3619725	2.3E-01	2.4E-01	2.0E-01	1.8E-01	1.6E-01	1.3E-01	1.3E-01	1.2E-01	2.4E+05	3.6E-01	2.9E-01	1.3E-01	1.3E-01	5.7E-02	1.4E-02	5.1E-02	2.4E-01	5.4E-01	9.9E-02	1.8E-01
residential	485731	3619725	2.4E-01	2.4E-01	2.1E-01	1.9E-01	1.6E-01	1.4E-01	1.4E-01	1.3E-01	2.6E+05	4.0E-01	3.2E-01	1.3E-01	1.3E-01	6.1E-02	1.5E-02	5.6E-02	2.8E-01	6.3E-01	1.1E-01	1.8E-01
residential	485831	3619725	2.5E-01	2.4E-01	2.1E-01	2.0E-01	1.7E-01	1.5E-01	1.4E-01	1.4E-01	2.7E+05	4.4E-01	3.6E-01	1.2E-01	1.2E-01	6.7E-02	1.5E-02	6.1E-02	3.4E-01	7.1E-01	1.2E-01	1.7E-01
residential	485931	3619725	2.5E-01	2.4E-01	2.2E-01	2.0E-01	1.8E-01	1.6E-01	1.5E-01	1.5E-01	2.8E+05	4.7E-01	3.9E-01	1.2E-01	1.2E-01	7.3E-02	1.6E-02	6.7E-02	4.1E-01	7.7E-01	1.3E-01	1.7E-01
residential	486031	3619725	2.5E-01	2.3E-01	2.2E-01	2.1E-01	1.8E-01	1.6E-01	1.6E-01	1.5E-01	2.8E+05	4.9E-01	4.1E-01	1.2E-01	1.2E-01	8.0E-02	1.6E-02	7.1E-02	4.8E-01	8.1E-01	1.5E-01	1.6E-01
residential	476731	3619825	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	1.1E-02	5.4E+03	1.2E-02	1.1E-02	4.5E-02	4.5E-02	1.1E-02	4.4E-03	1.1E-02	1.3E-02	1.5E-02	1.1E-02	4.1E-02
residential	476831	3619825	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	1.2E-02	5.4E+03	1.2E-02	1.1E-02	4.7E-02	4.7E-02	1.1E-02	4.4E-03	1.1E-02	1.3E-02	1.5E-02	1.2E-02	4.3E-02
residential	476931	3619825	1.4E-02	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	5.4E+03	1.2E-02	1.1E-02	4.8E-02	4.8E-02	1.1E-02	4.4E-03	1.1E-02	1.3E-02	1.5E-02	1.2E-02	4.4E-02
residential	477031	3619825	1.4E-02	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	5.5E+03	1.2E-02	1.1E-02	5.0E-02	5.0E-02	1.1E-02	4.4E-03	1.1E-02	1.3E-02	1.5E-02	1.2E-02	4.6E-02
residential	477131	3619825	1.5E-02	1.5E-02	1.4E-02	1.4E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	5.7E+03	1.2E-02	1.2E-02	5.3E-02	5.3E-02	1.1E-02	4.5E-03	1.1E-02	1.4E-02	1.6E-02	1.2E-02	5.0E-02
residential	477231	3619825	1.5E-02	1.5E-02	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	1.2E-02	5.8E+03	1.3E-02	1.2E-02	5.6E-02	5.6E-02	1.2E-02	4.5E-03	1.2E-02	1.4E-02	1.6E-02	1.2E-02	5.4E-02
residential	477331	3619825	1.5E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	6.0E+03	1.3E-02	1.3E-02	5.9E-02	5.9E-02	1.2E-02	4.6E-03	1.2E-02	1.5E-02	1.7E-02	1.3E-02	5.9E-02
residential	477431	3619825	1.5E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	5.9E+03	1.3E-02	1.3E-02	6.1E-02	6.1E-02	1.2E-02	4.5E-03	1.2E-02	1.4E-02	1.7E-02	1.3E-02	6.1E-02
residential	477531	3619825	1.6E-02	1.6E-02	1.5E-02	1.5E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	6.2E+03	1.4E-02	1.3E-02	6.6E-02	6.6E-02	1.2E-02	4.6E-03	1.2E-02	1.5E-02	1.7E-02	1.3E-02	6.8E-02
residential	477631	3619825	1.7E-02	1.7E-02	1.6E-02	1.5E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	6.8E+03	1.5E-02	1.4E-02	7.5E-02	7.5E-02	1.3E-02	4.9E-03	1.3E-02	1.6E-02	1.9E-02	1.4E-02	8.2E-02
residential	477731	3619825	1.8E-02	1.8E-02	1.7E-02	1.6E-02	1.5E-02	1.5E-02	1.5E-02	1.4E-02	7.2E+03	1.6E-02	1.5E-02	8.5E-02	8.5E-02	1.3E-02	5.1E-03	1.3E-02	1.7E-02	2.0E-02	1.5E-02	1.0E-01
residential	477831	3619825	1.9E-02	1.9E-02	1.8E-02	1.7E-02	1.6E-02	1.6E-02	1.5E-02	1.5E-02	7.6E+03	1.7E-02	1.6E-02	1.0E-01	1.0E-01	1.4E-02	5.3E-03	1.4E-02	1.7E-02	2.1E-02	1.5E-02	1.3E-01
recreational	477931	3619825	2.0E-02	2.1E-02	1.9E-02	1.8E-02	1.8E-02	1.7E-02	1.6E-02	1.6E-02	8.5E+03	1.8E-02	1.7E-02	1.2E-01	1.2E-01	1.4E-02	5.6E-03	1.4E-02	1.8E-02	2.3E-02	1.5E-02	1.6E-01
recreational	478931	3619825	2.4E-02	2.4E-02	2.3E-02	2.2E-02	2.0E-02	1.9E-02	1.9E-02	1.9E-02	9.7E+03	2.3E-02	2.1E-02	2.5E-01	2.5E-01	1.6E-02	5.8E-03	1.6E-02	2.0E-02	2.6E-02	1.6E-02	3.8E-01
recreational	479031	3619825	2.4E-02	2.4E-02	2.3E-02	2.2E-02	2.0E-02	1.9E-02	1.9E-02	1.9E-02	9.9E+03	2.3E-02	2.2E-02	2.7E-01	2.7E-01	1.6E-02	5.9E-03	1.6E-02	2.0E-02	2.6E-02	1.7E-02	4.3E-01
recreational	479131	3619825	2.5E-02	2.5E-02	2.3E-02	2.2E-02	2.1E-02	2.0E-02	2.0E-02	1.9E-02	1.0E+04	2.4E-02	2.3E-02	3.0E-01	3.0E-01	1.6E-02	5.9E-03	1.6E-02	2.0E-02	2.7E-02	1.7E-02	4.8E-01
recreational	483831	3619825	7.1E-02	7.5E-02	6.5E-02	6.0E-02	5.4E-02	4.8E-02	4.7E-02	4.6E-02	3.0E+04	1.0E-01	8.9E-02	2.4E-01	2.4E-01	2.9E-02	9.0E-03	2.8E-02	4.4E-02	6.6E-02	3.1E-02	3.6E-01
recreational	483931	3619825	7.4E-02	7.8E-02	6.8E-02	6.2E-02	5.5E-02	5.0E-02	4.9E-02	4.8E-02	3.2E+04	1.1E-01	9.2E-02	2.4E-01	2.4E-01	2.9E-02	9.2E-03	2.9E-02	4.7E-02	6.9E-02	3.1E-02	3.4E-01
residential	484031	3619825	7.7E-02	8.3E-02	7.1E-02	6.5E-02	5.8E-02	5.2E-02	5.1E-02	4.9E-02	3.6E+04	1.1E-01	9.5E-02	2.3E-01	2.3E-01	2.9E-02	9.3E-03	2.9E-02	5.0E-02	7.3E-02	3.2E-02	3.3E-01
residential	484131	3619825	7.8E-02	8.6E-02	7.3E-02	6.6E-02	5.9E-02	5.3E-02	5.1E-02	5.0E-02	3.7E+04	1.1E-01	9.6E-02	2.2E-01	2.2E-01	3.0E-02	9.5E-03	3.0E-02	5.3E-02	7.7E-02	3.4E-02	3.1E-01
residential	484231	3619825	8.1E-02	9.1E-02	7.6E-02	6.9E-02	6.1E-02	5.4E-02	5.3E-02	5.1E-02	4.2E+04	1.1E-01	9.7E-02	2.1E-01	2.1E-01	3.1E-02	9.8E-03	3.0E-02	5.7E-02	8.4E-02	3.5E-02	3.0E-01
residential	484331	3619825	8.4E-02	9.6E-02	8.0E-02	7.2E-02	6.3E-02	5.6E-02	5.3E-02	5.2E-02	4.6E+04	1.1E-01	9.8E-02	2.0E-01	2.0E-01	3.1E-02	1.0E-02	3.1E-02	6.2E-02	8.9E-02	3.7E-02	2.9E-01
residential	484431	3619825	8.8E-02	1.0E-01	8.4E-02	7.5E-02	6.5E-02	5.7E-02	5.5E-02	5.3E-02	5.1E+04	1.1E-01	9.8E-02	1.9E-01	1.9E-01	3.2E-02	1.0E-02	3.1E-02	6.8E-02	9.7E-02	3.9E-02	2.8E-01
residential	484531	3619825	9.4E-02	1.1E-01	9.0E-02	7.9E-02	6.8E-02	6.0E-02	5.7E-02	5.5E-02	5.7E+04	1.2E-01	1.0E-01	1.8E-01	1.8E-01	3.3E-02	1.1E-02	3.2E-02	7.4E-02	1.1E-01	4.1E-02	2.7E-01
residential	484631	3619825	1.0E-01	1.2E-01	9.8E-02	8.6E-02	7.3E-02	6.3E-02	6.0E-02	5.7E-02	6.3E+04	1.2E-01	1.1E-01	1.8E-01	1.8E-01	3.3E-02	1.1E-02	3.3E-02	8.2E-02	1.2E-01	4.4E-02	2.6E-01
residential	484731	3619825	1.1E-01	1.4E-01	1.1E-01	9.2E-02	7.8E-02	6.7E-02	6.3E-02	6.0E-02	7.1E+04	1.3E-01	1.1E-01	1.7E-01	1.7E-01	3.4E-02	1.1E-02	3.4E-02	8.9E-02	1.4E-01	4.7E-02	2.5E-01
residential	484831	3619825	1.2E-01	1.5E-01	1.2E-01	1.0E-01	8.4E-02	7.1E-02	6.7E-02	6.3E-02	8.0E+04	1.4E-01	1.2E-01	1.7E-01	1.7E-01	3.6E-02	1.1E-02	3.4E-02	9.7E-02	1.5E-01	5.1E-02	2.4E-01
residential	484931	3619825	1.3E-01	1.6E-01	1.3E-01	1.1E-01	9.1E-02	7.6E-02	7.1E-02	6.6E-02	9.1E+04	1.5E-01	1.3E-01	1.6E-01	1.6E-01	3.7E-02	1.2E-02	3.6E-02	1.1E-01	1.7E-01	5.6E-02	2.3E-01
residential	485031	3619825	1.5E-01	1.7E-01	1.4E-01	1.2E-01	9.9E-02	8.3E-02	7.7E-02	7.1E-02	1.1E+05	1.6E-01	1.4E-01	1.6E-01	1.6E-01	3.8E-02	1.2E-02	3.7E-02	1.2E-01	2.0E-01	6.0E-02	2.3E-01
residential	485131	3619825	1.6E-01	1.8E-01	1.5E-01	1.3E-01	1.1E-01	8.9E-02	8.2E-02	7.6E-02	1.2E+05	1.8E-01	1.5E-01	1.5E-01	1.5E-01	4.0E-02	1.2E-02	3.8E-02	1.3E-01	2.2E-01	6.4E-02	2.2E-01
residential	485231	3619825	1.7E-01	1.9E-01	1.6E-01	1.4E-01	1.2E-01	9.7E-02	8.9E-02	8.2E-02	1.5E+05	2.0E-01	1.6E-01	1.4E-01	1.4E-01	4.3E-02	1.3E-02	4.0E-02	1.4E-01	2.5E-01	6.9E-02	2.1E-01
residential	485331	3619825	1.9E-01	2.0E-01	1.7E-01	1.5E-01	1.2E-01	1.0E-01	9.7E-02	8.9E-02	1.7E+05	2.2E-01	1.8E-01	1.4E-01	1.4E-01	4.5E-02	1.3E-02	4.1E-02	1.5E-01	2.9E-01	7.5E-02	2.0E-01
residential	485431	3619825	2.0E-01	2.1E-01	1.8E-01	1.6E-01	1.3E-01	1.1E-01	1.0E-01	9.7E-02	1.9E+05	2.5E-01	2.1E-01	1.3E-01	1.3E-01	4.8E-02	1.3E-02	4.4E-02	1.7E-01	3.5E-01	8.1E-02	1.9E-01
residential	485531	3619825	2.1E-01	2.2E-01	1.8E-01	1.6E-01	1.4E-01	1.2E-01	1.1E-01	1.1E-01	2.1E+05	2.9E-01	2.4E-01	1.3E-01	1.3E-01	5.2E-02	1.4E-02	4.8E-02	2.0E-01	4.3E-01	9.0E-02	1.9E-01
residential	485631	3619825	2.2E-01	2.2E-01	1.9E-01	1.7E-01	1.5E-01	1.3E-01	1.2E-01	1.1E-01	2.2E+05	3.2E-01	2.6E-01	1.3E-01	1.3E-01	5.6E-02	1.4E-02	5.0E-02	2.2E-01	4.9E-01	9.6E-02	1.8E-01
residential	485731	3619825	2.3E-01	2.2E-01	2.0E-01	1.8E-01	1.6E-01	1.4E-01	1.3E-01	1.2E-01	2.3E+05	3.6E-01	3.0E-01	1.2E-01	1.2E-01	6.1E-02	1.5E-02	5.4E-02	2.6E-01	5.7E-01	1.0E-01	1.7E-01
residential	485831	3619825	2.3E-01	2.3E-01	2.0E-01	1.8E-01	1.6E-01	1.4E-01	1.4E-01	1.3E-01	2.4E+05	3.9E-01	3.2E-01	1.2E-01	1.2E-01	6.6E-02	1.5E-02	5.8E-02	3.2E-01	6.2E-01	1.1E-01	1.6E-01
residential	485931	3619825	2.4E-01	2.3E-01	2.1E-01	1.9E-01	1.7E-01	1.5E-01	1.4E-01	1.4E-01	2.5E+05	4.2E-01	3.5E-01	1.2E-01	1.2E-01	7.2E-02	1.5E-02	6.3E-02	3.8E-01	6.8E-01	1.3E-01	1.6E-01
residential	486031	3619825	2.4E-01	2.2E-01	2.1E-01	1.9E-01	1.7E-01	1.5E-01	1.5E-01	1.4E-01	2.5E+05	4.5E-01	3.8E-01	1.1E-01	1.1E-01	7.8E-02	1.6E-02	7.0E-02	4.4E-01	7.3E-01	1.4E-01	1.5E-01
residential	476731	3619925	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.1E-02	1.1E-02	5.3E+03	1.1E-02	1.1E-02	4.3E-02	4.3E-02	1.1E-02	4.4E-03	1.1E-02	1.3E-02	1.5E-02	1.1E-02	3.8E-02
residential	476831	3619925	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	1.1E-02	5.4E+03	1.2E-02	1.1E-02	4.5E-02	4.5E-02	1.1E-02	4.4E-03	1.1E-02	1.3E-02	1.5E-02	1.2E-02	4.1E-02
residential	476931	3619925	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	1.2E-02	5.3E+03	1.2E-02	1.1E-02	4.6E-02	4.6E-02	1.1E-02	4.3E-03	1.1E-02	1.3E-02	1.5E-02	1.2E-02	4.2E-02
residential	477031	3619925	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	1.2E-02	5.3E+03	1.2E-02	1.1E-02	4.7E-02	4.7E-02	1.1E-02	4.3E-03	1.1E-02	1.3E-02	1.5E-02	1.2E-02	4.3E-02
residential	477131	3619925	1.4E-02	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	5.4E+03	1.2E-02	1.1E-02	4.9E-02	4.9E-02	1.1E-02	4.3E-03	1.1E-02	1.3E-02	1.5E-02	1.2E-02	4.6E-02
residential	477231	3619925	1.5E-02	1.5E-02	1.4E-02	1.4E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	5.6E+03	1.2E-02	1.2E-02	5.3E-02	5.3E-02	1.1E-02	4.4E-03	1.1E-02	1.4E-02	1.6E-02	1.2E-02	5.0E-02
residential	477331	3619925	1.5E-02	1.5E-02	1.5E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	1.3E-02	5.9E+03	1.3E-02	1.3E-02	5.7E-02	5.7E-02	1.2E-02	4.5E-03	1.2E-02	1.5E-02	1.7E-02	1.3E-02	5.6E-02
residential	477431	3619925	1.5E-02	1.5E-02	1.5E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	1.3E-02	5.8E+03	1.3E-02	1.2E-02	5.8E-02	5.8E-02	1.2E-02	4.5E-03	1.2E-02	1.4E-02	1.6E-02	1.3E-02	5.8E-02
residential	477531	3619925	1.5E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	5.9E+03	1.3E-02	1.3E-02	6.1E-02	6.1E-02	1.2E-02	4.5E-03	1.2E-02	1.5E-02	1.6E-02	1.3E-02	6.2E-02
residential	477631	3619925	1.6E-02	1.6E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	1.3E-02	6.4E+03	1.4E-02	1.4E-02	6.9E-02	6.9E-02	1.2E-02	4.7E-03	1.2E-02	1.6E-02	1.8E-02	1.4E-02	7.3E-02
residential	477731	3619925	1.7E-02	1.7E-02	1.6E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	6.8E+03	1.5E-02	1.4E-02	7.7E-02	7.7E-02	1.3E-02	4.9E-03	1.3E-02	1.7E-02	1.9E-02	1.4E-02	8.7E-02
residential	477831	3619925	1.8E-02	1.8E-02	1.7E-02	1.7E-02	1.6E-02	1.5E-02	1.5E-02	1.5E-02	7.3E+03	1.6E-02	1.5E-02	9.1E-02	9.1E-02	1.4E-02	5.2E-03	1.3E-02	1.7E-02	2.0E-02	1.4E-02	1.1E-01
recreational	477931	3619925	1.9E-02	2.0E-02	1.8E-02	1.8E-02	1.7E-02	1.6E-02	1.6E-02	1.6E-02	7.7E+03	1.7E-02	1.6E-02	1.1E-01	1.1E-01	1.4E-02	5.5E-03	1.4E-02	1.7E-02	2.2E-02	1.4E-02	1.4E-01
recreational	479031	3619925	2.4E-02	2.4E-02	2.2E-02	2.1E-02	2.0E-02	1.9E-02	1.9E-02	1.9E-02	9.5E+03	2.3E-02	2.1E-02	2.4E-01	2.4E-01	1.5E-02	5.8E-03	1.5E-02	2.0E-02	2.5E-02	1.6E-02	3.8E-01
recreational	479131	3619925	2.4E-02	2.4E-02	2.3E-02	2.2E-02	2.0E-02	1.9E-02	1.9E-02	1.9E-02	9.6E+03	2.3E-02	2.2E-02	2.6E-01	2.6E-01	1.6E-02	5.8E-03	1.6E-02	2.0E-02	2.6E-02	1.6E-02	4.2E-01
recreational	479231	3619925	2.5E-02	2.5E-02	2.3E-02	2.2E-02	2.1E-02	2.0E-02	1.9E-02	1.9E-02	9.8E+03	2.4E-02	2.2E-02	2.9E-01	2.9E-01	1.6E-02	5.8E-03	1.6E-02	2.0E-02	2.6E-02	1.6E-02	4.7E-01
recreational	483531	3619925	6.2E-02	6.4E-02	5.7E-02	5.2E-02	4.7E-02	4.3E-02	4.2E-02	4.2E-02	2.3E+04	8.3E-02	7.4E-02	2.6E-01	2.6E-01	2.6E-02	8.5E-03	2.6E-02	3.8E-02	5.6E-02	2.7E-02	3.9E-01
recreational	483631	3619925	6.5E-02	6.7E-02	6.0E-02	5.5E-02	4.9E-02	4.4E-02	4.4E-02	4.3E-02	2.5E+04	8.7E-02	7.7E-02	2.5E-01	2.5E-01	2.6E-02	8.6E-03	2.6E-02	3.9E-02	5.8E-02	2.8E-02	3.7E-01
recreational	483731	3619925	6.7E-02	7.0E-02	6.1E-02	5.6E-02	5.1E-02	4.6E-02	4.5E-02	4.4E-02	2.7E+04	9.0E-02	8.0E-02	2.4E-01	2.4E-01	2.7E-02	8.8E-03	2.7E-02	4.1E-02	6.0E-02	2.9E-02	3.5E-01
recreational	483831	3619925	6.8E-02	7.1E-02	6.2E-02	5.7E-02	5.1E-02	4.6E-02	4.5E-02	4.4E-02	2.9E+04	9.4E-02	8.3E-02	2.3E-01	2.3E-01	2.7E-02	8.9E-03	2.7E-02	4.3E-02	6.2E-02	2.9E-02	3.4E-01
recreational	483931	3619925	7.1E-02	7.5E-02	6.5E-02	6.0E-02	5.4E-02	4.8E-02	4.7E-02	4.6E-02	3.2E+04	9.8E-02	8.6E-02	2.2E-01	2.2E-01	2.8E-02	9.1E-03	2.7E-02	4.6E-02	6.6E-02	3.0E-02	3.2E-01
residential	484031	3619925	7.3E-02	7.8E-02	6.8E-02	6.2E-02	5.5E-02	5.0E-02	4.8E-02	4.7E-02	3.5E+04	1.0E-01	8.9E-02	2.1E-01	2.1E-01	2.8E-02	9.3E-03	2.8E-02	4.9E-02	7.0E-02	3.1E-02	3.1E-01
residential	484131	3619925	7.5E-02	8.3E-02	7.0E-02	6.4E-02	5.6E-02	5.1E-02	5.0E-02	4.8E-02	3.7E+04	1.0E-01	8.9E-02	2.1E-01	2.1E-01	2.9E-02	9.5E-03	2.8E-02	5.2E-02	7.5E-02	3.3E-02	3.0E-01
residential	484231	3619925	7.7E-02	8.7E-02	7.3E-02	6.6E-02	5.8E-02	5.2E-02	5.0E-02	4.9E-02	4.0E+04	1.0E-01	8.9E-02	2.0E-01	2.0E-01	2.9E-02	9.7E-03	2.9E-02	5.7E-02	8.1E-02	3.4E-02	2.9E-01
residential	484331	3619925	8.0E-02	9.3E-02	7.7E-02	6.9E-02	6.0E-02	5.4E-02	5.1E-02	5.0E-02	4.5E+04	1.0E-01	8.9E-02	1.9E-01	1.9E-01	3.0E-02	9.9E-03	2.9E-02	6.1E-02	8.6E-02	3.6E-02	2.8E-01
residential	484431	3619925	8.5E-02	1.0E-01	8.2E-02	7.3E-02	6.3E-02	5.6E-02	5.3E-02	5.1E-02	4.9E+04	1.0E-01	9.2E-02	1.8E-01	1.8E-01	3.1E-02	1.0E-02	3.0E-02	6.7E-02	9.6E-02	3.8E-02	2.7E-01
residential	484531	3619925	9.0E-02	1.1E-01	8.7E-02	7.7E-02	6.6E-02	5.8E-02	5.5E-02	5.3E-02	5.4E+04	1.1E-01	9.5E-02	1.8E-01	1.8E-01	3.1E-02	1.0E-02	3.1E-02	7.3E-02	1.1E-01	4.1E-02	2.6E-01
residential	484631	3619925	9.8E-02	1.2E-01	9.4E-02	8.3E-02	7.0E-02	6.1E-02	5.8E-02	5.5E-02	6.0E+04	1.1E-01	1.0E-01	1.7E-01	1.7E-01	3.2E-02	1.1E-02	3.2E-02	8.0E-02	1.2E-01	4.4E-02	2.5E-01
residential	484731	3619925	1.1E-01	1.3E-01	1.0E-01	8.9E-02	7.5E-02	6.5E-02	6.1E-02	5.8E-02	6.7E+04	1.2E-01	1.0E-01	1.6E-01	1.6E-01	3.3E-02	1.1E-02	3.2E-02	8.7E-02	1.3E-01	4.7E-02	2.4E-01
residential	484831	3619925	1.2E-01	1.4E-01	1.1E-01	9.7E-02	8.1E-02	6.9E-02	6.5E-02	6.1E-02	7.5E+04	1.3E-01	1.1E-01	1.6E-01	1.6E-01	3.5E-02	1.1E-02	3.3E-02	9.5E-02	1.5E-01	5.1E-02	2.3E-01
residential	484931	3619925	1.3E-01	1.5E-01	1.2E-01	1.1E-01	8.8E-02	7.4E-02	6.9E-02	6.4E-02	8.6E+04	1.4E-01	1.2E-01	1.5E-01	1.5E-01	3.6E-02	1.2E-02	3.5E-02	1.0E-01	1.6E-01	5.5E-02	2.2E-01
residential	485031	3619925	1.4E-01	1.6E-01	1.3E-01	1.1E-01	9.5E-02	8.0E-02	7.4E-02	6.8E-02	9.8E+04	1.5E-01	1.3E-01	1.5E-01	1.5E-01	3.8E-02	1.2E-02	3.6E-02	1.1E-01	1.8E-01	5.9E-02	2.1E-01
residential	485131	3619925	1.5E-01	1.7E-01	1.4E-01	1.2E-01	1.0E-01	8.6E-02	7.9E-02	7.4E-02	1.1E+05	1.7E-01	1.4E-01	1.4E-01	1.4E-01	4.0E-02	1.2E-02	3.7E-02	1.2E-01	2.1E-01	6.3E-02	2.1E-01
residential	485231	3619925	1.7E-01	1.8E-01	1.5E-01	1.3E-01	1.1E-01	9.3E-02	8.6E-02	7.9E-02	1.3E+05	1.9E-01	1.5E-01	1.4E-01	1.4E-01	4.2E-02	1.3E-02	3.8E-02	1.3E-01	2.3E-01	6.8E-02	2.0E-01
residential	485331	3619925	1.8E-01	1.9E-01	1.6E-01	1.4E-01	1.2E-01	1.0E-01	9.3E-02	8.6E-02	1.5E+05	2.1E-01	1.7E-01	1.3E-01	1.3E-01	4.5E-02	1.3E-02	4.1E-02	1.5E-01	2.7E-01	7.3E-02	1.9E-01
residential	485431	3619925	1.9E-01	2.0E-01	1.7E-01	1.5E-01	1.3E-01	1.1E-01	1.0E-01	9.3E-02	1.7E+05	2.3E-01	1.9E-01	1.3E-01	1.3E-01	4.6E-02	1.3E-02	4.3E-02	1.6E-01	3.2E-01	7.9E-02	1.8E-01
residential	485531	3619925	2.0E-01	2.0E-01	1.7E-01	1.6E-01	1.3E-01	1.2E-01	1.1E-01	1.0E-01	1.8E+05	2.6E-01	2.1E-01	1.2E-01	1.2E-01	5.0E-02	1.4E-02	4.6E-02	1.8E-01	3.7E-01	8.4E-02	1.7E-01
residential	485631	3619925	2.1E-01	2.1E-01	1.8E-01	1.6E-01	1.4E-01	1.2E-01	1.2E-01	1.1E-01	1.9E+05	2.9E-01	2.4E-01	1.2E-01	1.2E-01	5.3E-02	1.4E-02	4.9E-02	2.1E-01	4.3E-01	9.1E-02	1.7E-01
residential	485731	3619925	2.1E-01	2.1E-01	1.8E-01	1.7E-01	1.5E-01	1.3E-01	1.2E-01	1.2E-01	2.0E+05	3.2E-01	2.7E-01	1.2E-01	1.2E-01	5.8E-02	1.4E-02	5.3E-02	2.5E-01	5.0E-01	1.0E-01	1.6E-01
residential	485831	3619925	2.2E-01	2.2E-01	1.9E-01	1.7E-01	1.5E-01	1.3E-01	1.3E-01	1.2E-01	2.0E+05	3.4E-01	2.9E-01	1.1E-01	1.1E-01	6.2E-02	1.5E-02	5.7E-02	2.9E-01	5.2E-01	1.1E-01	1.5E-01
residential	485931	3619925	2.2E-01	2.2E-01	1.9E-01	1.8E-01	1.6E-01	1.4E-01	1.4E-01	1.3E-01	2.1E+05	3.7E-01	3.1E-01	1.1E-01	1.1E-01	6.7E-02	1.5E-02	6.2E-02	3.5E-01	5.9E-01	1.2E-01	1.5E-01
residential	486031	3619925	2.2E-01	2.1E-01	2.0E-01	1.8E-01	1.6E-01	1.4E-01	1.4E-01	1.4E-01	2.3E+05	4.1E-01	3.4E-01	1.1E-01	1.1E-01	7.6E-02	1.6E-02	6.8E-02	4.1E-01	6.6E-01	1.4E-01	1.5E-01
residential	476731	3620025	1.3E-02	1.4E-02	1.3E-02	1.2E-02	1.2E-02	1.1E-02	1.1E-02	1.1E-02	5.1E+03	1.1E-02	1.1E-02	4.1E-02	4.1E-02	1.1E-02	4.3E-03	1.0E-02	1.3E-02	1.4E-02	1.1E-02	3.6E-02
residential	476831	3620025	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.1E-02	1.1E-02	5.3E+03	1.2E-02	1.1E-02	4.4E-02	4.4E-02	1.1E-02	4.3E-03	1.1E-02	1.3E-02	1.5E-02	1.2E-02	3.9E-02
residential	476931	3620025	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	1.1E-02	5.3E+03	1.2E-02	1.1E-02	4.5E-02	4.5E-02	1.1E-02	4.3E-03	1.1E-02	1.3E-02	1.5E-02	1.2E-02	4.0E-02
residential	477031	3620025	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	1.2E-02	5.2E+03	1.2E-02	1.1E-02	4.5E-02	4.5E-02	1.1E-02	4.2E-03	1.1E-02	1.3E-02	1.5E-02	1.1E-02	4.1E-02
residential	477131	3620025	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	1.2E-02	5.2E+03	1.2E-02	1.1E-02	4.7E-02	4.7E-02	1.1E-02	4.3E-03	1.1E-02	1.3E-02	1.5E-02	1.2E-02	4.3E-02
residential	477231	3620025	1.4E-02	1.5E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	5.4E+03	1.2E-02	1.2E-02	5.0E-02	5.0E-02	1.1E-02	4.3E-03	1.1E-02	1.4E-02	1.5E-02	1.2E-02	4.6E-02
residential	477331	3620025	1.5E-02	1.5E-02	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	5.7E+03	1.3E-02	1.2E-02	5.4E-02	5.4E-02	1.2E-02	4.5E-03	1.1E-02	1.4E-02	1.6E-02	1.2E-02	5.1E-02
residential	477431	3620025	1.5E-02	1.5E-02	1.5E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	1.3E-02	5.8E+03	1.3E-02	1.2E-02	5.7E-02	5.7E-02	1.2E-02	4.5E-03	1.2E-02	1.5E-02	1.6E-02	1.3E-02	5.6E-02
residential	477531	3620025	1.5E-02	1.5E-02	1.5E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	1.3E-02	5.7E+03	1.3E-02	1.2E-02	5.8E-02	5.8E-02	1.2E-02	4.5E-03	1.1E-02	1.4E-02	1.6E-02	1.2E-02	5.7E-02
residential	477631	3620025	1.6E-02	1.6E-02	1.5E-02	1.5E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	6.0E+03	1.4E-02	1.3E-02	6.3E-02	6.3E-02	1.2E-02	4.6E-03	1.2E-02	1.5E-02	1.7E-02	1.3E-02	6.5E-02
residential	477731	3620025	1.6E-02	1.7E-02	1.6E-02	1.5E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	6.5E+03	1.5E-02	1.4E-02	7.2E-02	7.2E-02	1.2E-02	4.8E-03	1.2E-02	1.6E-02	1.8E-02	1.4E-02	7.8E-02
residential	477831	3620025	1.7E-02	1.8E-02	1.7E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	6.9E+03	1.5E-02	1.5E-02	8.2E-02	8.2E-02	1.3E-02	5.0E-03	1.3E-02	1.7E-02	1.9E-02	1.4E-02	9.8E-02
recreational	477931	3620025	1.8E-02	1.9E-02	1.7E-02	1.7E-02	1.6E-02	1.5E-02	1.5E-02	1.5E-02	7.2E+03	1.6E-02	1.5E-02	9.4E-02	9.4E-02	1.4E-02	5.2E-03	1.3E-02	1.7E-02	2.0E-02	1.4E-02	1.2E-01
recreational	478031	3620025	1.9E-02	2.0E-02	1.8E-02	1.8E-02	1.7E-02	1.6E-02	1.6E-02	1.6E-02	8.0E+03	1.8E-02	1.7E-02	1.1E-01	1.1E-01	1.4E-02	5.4E-03	1.4E-02	1.7E-02	2.1E-02	1.4E-02	1.4E-01
recreational	478531	3620025	2.1E-02	2.2E-02	2.0E-02	2.0E-02	1.8E-02	1.7E-02	1.7E-02	1.7E-02	8.5E+03	2.0E-02	1.8E-02	1.6E-01	1.6E-01	1.4E-02	5.5E-03	1.4E-02	1.8E-02	2.3E-02	1.5E-02	2.2E-01
recreational	479031	3620025	2.3E-02	2.3E-02	2.2E-02	2.1E-02	1.9E-02	1.8E-02	1.8E-02	1.8E-02	9.1E+03	2.2E-02	2.1E-02	2.2E-01	2.2E-01	1.5E-02	5.7E-03	1.5E-02	1.9E-02	2.4E-02	1.6E-02	3.3E-01
recreational	479131	3620025	2.3E-02	2.4E-02	2.2E-02	2.1E-02	2.0E-02	1.9E-02	1.8E-02	1.8E-02	9.2E+03	2.3E-02	2.1E-02	2.3E-01	2.3E-01	1.5E-02	5.7E-03	1.5E-02	1.9E-02	2.5E-02	1.6E-02	3.7E-01
recreational	479231	3620025	2.4E-02	2.4E-02	2.2E-02	2.1E-02	2.0E-02	1.9E-02	1.9E-02	1.9E-02	9.4E+03	2.3E-02	2.2E-02	2.5E-01	2.5E-01	1.5E-02	5.7E-03	1.5E-02	1.9E-02	2.5E-02	1.6E-02	4.1E-01
recreational	483531	3620025	5.9E-02	6.1E-02	5.5E-02	5.0E-02	4.5E-02	4.1E-02	4.0E-02	4.0E-02	2.3E+04	7.8E-02	7.0E-02	2.4E-01	2.4E-01	2.5E-02	8.4E-03	2.5E-02	3.7E-02	5.3E-02	2.6E-02	3.6E-01
recreational	483631	3620025	6.1E-02	6.4E-02	5.6E-02	5.2E-02	4.7E-02	4.3E-02	4.1E-02	4.1E-02	2.4E+04	8.1E-02	7.2E-02	2.3E-01	2.3E-01	2.5E-02	8.5E-03	2.5E-02	3.8E-02	5.5E-02	2.7E-02	3.4E-01
recreational	483731	3620025	6.3E-02	6.7E-02	5.9E-02	5.4E-02	4.8E-02	4.4E-02	4.3E-02	4.2E-02	2.6E+04	8.4E-02	7.5E-02	2.3E-01	2.3E-01	2.6E-02	8.7E-03	2.6E-02	4.0E-02	5.7E-02	2.8E-02	3.3E-01
recreational	483831	3620025	6.4E-02	6.8E-02	6.0E-02	5.5E-02	5.0E-02	4.5E-02	4.4E-02	4.3E-02	2.8E+04	8.7E-02	7.7E-02	2.2E-01	2.2E-01	2.6E-02	8.9E-03	2.6E-02	4.3E-02	6.0E-02	2.9E-02	3.1E-01
recreational	483931	3620025	6.8E-02	7.3E-02	6.3E-02	5.7E-02	5.2E-02	4.7E-02	4.5E-02	4.5E-02	3.1E+04	9.2E-02	8.0E-02	2.1E-01	2.1E-01	2.7E-02	9.0E-03	2.6E-02	4.5E-02	6.3E-02	3.0E-02	3.0E-01

TAMT_HRA_Existing
DPM_annl

AERMOD Output	Multi-Purpose General CargoExisting	Dry BulkExisting	All	Refrigerated ContainersExisting	Multi-Purpose General CargoExisting	Dry BulkExisting	All	Refrigerated ContainersExisting	Multi-Purpose General CargoExisting	Dry BulkExisting	All	Refrigerated Containers	Multi-Purpose General Cargo	Dry Bulk	All
	28%	15%	100%	63%	8%	29%	100%	0%	61%	39%	100%	67%	3%	30%	
residential	3E-05	1E-05	3E-03	2E-03	2E-04	8E-04	8E-05	0E+00	5E-05	3E-05	4E-05	2.7E-05	1.3E-06	1.2E-05	0.02
residential	3E-05	1E-05	3E-03	2E-03	3E-04	9E-04	8E-05	0E+00	5E-05	3E-05	4.6E-05	3.1E-05	1.5E-06	1.4E-05	0.02
residential	2E-05	1E-05	4E-03	2E-03	3E-04	1E-03	1E-04	0E+00	6E-05	4E-05	5.4E-05	3.6E-05	1.7E-06	1.6E-05	0.02
residential	2E-05	1E-05	4E-03	2E-03	3E-04	1E-03	1E-04	0E+00	7E-05	4E-05	6.4E-05	4.3E-05	2.1E-06	1.9E-05	0.02
residential	2E-05	1E-05	4E-03	3E-03	3E-04	1E-03	1E-04	0E+00	8E-05	5E-05	7.5E-05	5E-05	2.4E-06	2.3E-05	0.02
residential	2E-05	1E-05	4E-03	3E-03	4E-04	1E-03	1E-04	0E+00	9E-05	5E-05	8.7E-05	5.8E-05	2.8E-06	2.6E-05	0.02
residential	2E-05	1E-05	5E-03	3E-03	4E-04	1E-03	2E-04	0E+00	1E-04	6E-05	9.8E-05	6.5E-05	3.2E-06	3E-05	0.02
residential	2E-05	1E-05	5E-03	3E-03	4E-04	1E-03	2E-04	0E+00	1E-04	7E-05	0.00011	7.3E-05	3.5E-06	3.3E-05	0.02
residential	2E-05	1E-05	5E-03	3E-03	4E-04	1E-03	2E-04	0E+00	1E-04	7E-05	0.00012	7.7E-05	3.7E-06	3.5E-05	0.02
residential	2E-05	1E-05	5E-03	3E-03	4E-04	1E-03	2E-04	0E+00	1E-04	7E-05	0.00013	8.5E-05	4.1E-06	3.8E-05	0.02

AERMOD Output	ug/m3	Dose Inhalation 3rd tri	0<2	2<9	2<16	16<30	Risk (Residential 30-yr; school 9-yr; park 15-year) 3rd tri	0<2	2<9	2<16	16<30	Summed Risk	Cases Per Million	Chronic HI
residential	0.01264	4.37E-06	1.32E-05	7.65E-06	6.93E-06	3.16E-06	1.7E-07	4.2E-06	0	4.6E-06	7E-07	9.593E-06	9.59277	0.00253
residential	0.01357	4.7E-06	1.42E-05	8.21E-06	7.44E-06	3.4E-06	1.8E-07	4.5E-06	0	4.9E-06	7.5E-07	1.03E-05	10.3008	0.00271
residential	0.01445	5E-06	1.51E-05	8.74E-06	7.92E-06	3.62E-06	2E-07	4.7E-06	0	5.2E-06	8E-07	1.097E-05	10.9686	0.00289
residential	0.0152	5.26E-06	1.59E-05	9.2E-06	8.34E-06	3.8E-06	2.1E-07	5E-06	0	5.5E-06	8.4E-07	1.154E-05	11.539	0.00304
residential	0.0158	5.47E-06	1.65E-05	9.56E-06	8.67E-06	3.96E-06	2.1E-07	5.2E-06	0	5.7E-06	8.7E-07	1.2E-05	11.9972	0.00316
residential	0.0163	5.64E-06	1.7E-05	9.86E-06	8.94E-06	4.08E-06	2.2E-07	5.4E-06	0	5.9E-06	9E-07	1.237E-05	12.371	0.00326
residential	0.01667	5.77E-06	1.74E-05	1.01E-05	9.14E-06	4.17E-06	2.3E-07	5.5E-06	0	6E-06	9.2E-07	1.265E-05	12.6515	0.00333
residential	0.01688	5.84E-06	1.76E-05	1.02E-05	9.26E-06	4.23E-06	2.3E-07	5.5E-06	0	6.1E-06	9.3E-07	1.282E-05	12.8169	0.00338
residential	0.01681	5.82E-06	1.76E-05	1.02E-05	9.22E-06	4.21E-06	2.3E-07	5.5E-06	0	6.1E-06	9.3E-07	1.276E-05	12.7603	0.00336
residential	0.01679	5.81E-06	1.75E-05	1.02E-05	9.21E-06	4.2E-06	2.3E-07	5.5E-06	0	6.1E-06	9.2E-07	1.275E-05	12.7464	0.00336

AERMOD Output	ug/m3	Dose Inhalation 3rd tri	0<2	2<9	2<16	16<30	Risk (Residential 30-yr; school 9-yr; park 15-year) 3rd tri	0<2	2<9	2<16	16<30	Summed Risk	Cases Per Million	Chronic HI
residential	1E-03	3E-07	1E-06	6E-07	5E-07	2E-07	1E-08	3E-07	0E+00	4E-07	5E-08	7.5E-07	0.752	0.0002
residential	1E-03	4E-07	1E-06	6E-07	6E-07	3E-07	1E-08	3E-07	0E+00	4E-07	6E-08	8.1E-07	0.808	0.00021
residential	1E-03	4E-07	1E-06	7E-07	6E-07	3E-07	2E-08	4E-07	0E+00	4E-07	6E-08	8.6E-07	0.862	0.00023
residential	1E-03	4E-07	1E-06	7E-07	7E-07	3E-07	2E-08	4E-07	0E+00	4E-07	7E-08	9.1E-07	0.909	0.00024
residential	1E-03	4E-07	1E-06	8E-07	7E-07	3E-07	2E-08	4E-07	0E+00	5E-07	7E-08	9.5E-07	0.948	0.00025
residential	1E-03	4E-07	1E-06	8E-07	7E-07	3E-07	2E-08	4E-07	0E+00	5E-07	7E-08	9.9E-07	0.985	0.00026
residential	1E-03	5E-07	1E-06	8E-07	7E-07	3E-07	2E-08	4E-07	0E+00	5E-07	7E-08	1.0E-06	1.013	0.00027
residential	1E-03	5E-07	1E-06	8E-07	7E-07	3E-07	2E-08	4E-07	0E+00	5E-07	7E-08	1.0E-06	1.030	0.00027
residential	1E-03	5E-07	1E-06	8E-07	7E-07	3E-07	2E-08	4E-07	0E+00	5E-07	7E-08	1.0E-06	1.018	0.00027
residential	1E-03	5E-07	1E-06	8E-07	7E-07	3E-07	2E-08	4E-07	0E+00	5E-07	7E-08	1.0E-06	1.028	0.00027

AERMOD Output	ug/m3	Dose Inhalation 3rd tri	0<2	2<9	2<16	16<30	Risk (Residential 30-yr; school 9-yr; park 15-year) 3rd tri	0<2	2<9	2<16	16<30	Summed Risk	Cases Per Million	Chronic HI
residential	2E-03	6E-07	2E-06	1E-06	9E-07	4E-07	2E-08	5E-07	0E+00	6E-07	9E-08	1.2E-06	1.227	0.00032
residential	2E-03	6E-07	2E-06	1E-06	1E-06	4E-07	2E-08	6E-07	0E+00	6E-07	1E-07	1.4E-06	1.354	0.00036
residential	2E-03	7E-07	2E-06	1E-06	1E-06	5E-07	3E-08	6E-07	0E+00	7E-07	1E-07	1.5E-06	1.474	0.00039
residential	2E-03	7E-07	2E-06	1E-06	1E-06	5E-07	3E-08	7E-07	0E+00	7E-07	1E-07	1.6E-06	1.572	0.00041
residential	2E-03	8E-07	2E-06	1E-06	1E-06	5E-07	3E-08	7E-07	0E+00	8E-07	1E-07	1.7E-06	1.656	0.00044
residential	2E-03	8E-07	2E-06	1E-06	1E-06	6E-07	3E-08	8E-07	0E+00	8E-07	1E-07	1.7E-06	1.737	0.00046
residential	2E-03	8E-07	2E-06	1E-06	1E-06	6E-07	3E-08	8E-07	0E+00	9E-07	1E-07	1.8E-06	1.796	0.00047
residential	2E-03	8E-07	3E-06	1E-06	1E-06	6E-07	3E-08	8E-07	0E+00	9E-07	1E-07	1.8E-06	1.831	0.00048
residential	2E-03	8E-07	2E-06	1E-06	1E-06	6E-07	3E-08	8E-07	0E+00	9E-07	1E-07	1.8E-06	1.791	0.00047
residential	2E-03	8E-07	3E-06	1E-06	1E-06	6E-07	3E-08	8E-07	0E+00	9E-07	1E-07	1.8E-06	1.829	0.00048

TAMT_HRA_Existing
DPM_annl

AERMOD Output

	X	Y	B10_1_AUX	B10_2_AUX	B10_3_AUX	B10_4_AUX	B10_5_AUX	B10_6_AUX	B10_7_AUX	B10_8_AUX	CHE_1	LOC_SWTCH EMP	LOC_SWTCH LOA	OGV_PATH _BLR	OGV_PATH _DPM	TR_28TH	TR_BAYMA R	TR_BOSTON	TR_CROSBY	TR_HARBOR CHA	TR_HARBOR SAM	TUG_PATH_ DPM	B10_1_AUX	B10_2_AUX	B10_3_AUX	B10_4_AUX	B10_5_AUX	B10_6_AUX	B10_7_AUX	B10_8_AUX	CHE_1	LOC_SWTCHE MP	LOC_SWTCHL OA	OGV_PATH_ DPM	TR_28TH	TR_BAYMAR	TR_BOSTON	TR_CROSBY	TR_HARBOR CHA	TR_HARBOR SAM	TUG_PATH_D PM	All	Refrigerated ContainersExisting	Multi-Purpose General CargoExisting	Dry BulkExisting	All	Refrigerated ContainersExisting	Multi-Purpose General CargoExisting	Dry BulkExisting	All	Refrigerated ContainersExisting
																							Refrigerated ContainersExisting	Refrigerated ContainersExisting	Refrigerated ContainersExisting	Refrigerated ContainersExisting	Multi-Purpose General CargoExisting	Multi-Purpose General CargoExisting	Dry BulkExisting	Dry BulkExisting	AllExisting	AllExisting	AllExisting	AllExisting	TR_28THExisting	TR_BAYMAR Existing	TR_BOSTON Existing	TR_CROSBY Existing	TR_HARBOR CHAExisting	TR_HARBOR SAMExisting	AllExisting										
																						g/s -->	1.4E-02	1.4E-02	1.4E-02	1.4E-02	1.6E-03	1.6E-03	1.8E-03	1.8E-03	1.5E-08	1.8E-04	1.8E-04	7.6E-03	4.4E-06	7.1E-06	1.9E-05	4.0E-05	8.9E-05	8.9E-05	4.1E-04	100%	89%	5%	6%	100%	73%	12%	15%	100%	57%
Source Group in AERMOD			1	3	5	7	9	11	13	15	17	18	19	20	21	22	23	24	25	26	27	28	1	3	5	7	9	11	13	15	17	18	19	21	22	23	24	25	26	27	28										
residential	484031	3620025	7.0E-02	7.6E-02	6.6E-02	6.0E-02	5.3E-02	4.8E-02	4.7E-02	4.6E-02	3.4E+04	9.5E-02	8.4E-02	2.0E-01	2.0E-01	2.7E-02	9.2E-03	2.7E-02	4.8E-02	6.7E-02	3.1E-02	2.9E-01	9.9E-04	1.1E-03	9.3E-04	8.4E-04	8.3E-05	7.4E-05	8.3E-05	8.1E-05	5.2E-04	1.7E-05	1.5E-05	1.5E-03	1.2E-07	6.6E-08	5.0E-07	1.9E-06	6.0E-06	2.7E-06	1.2E-04	4E-03	4E-03	2E-04	2E-04	2E-03	1E-03	2E-04	2E-04	1E-04	7E-05
residential	484131	3620025	7.2E-02	8.0E-02	6.8E-02	6.2E-02	5.5E-02	4.9E-02	4.8E-02	4.6E-02	3.6E+04	9.4E-02	8.3E-02	2.0E-01	2.0E-01	2.8E-02	9.4E-03	2.7E-02	5.2E-02	7.3E-02	3.2E-02	2.8E-01	1.0E-03	1.1E-03	9.6E-04	8.7E-04	8.5E-05	7.6E-05	8.4E-05	8.2E-05	5.4E-04	1.7E-05	1.5E-05	1.5E-03	1.2E-07	6.7E-08	5.1E-07	2.1E-06	6.5E-06	2.9E-06	1.1E-04	4E-03	4E-03	2E-04	2E-04	1E-03	1E-03	2E-04	2E-04	1E-04	7E-05
residential	484231	3620025	7.5E-02	8.4E-02	7.1E-02	6.4E-02	5.6E-02	5.0E-02	4.9E-02	4.8E-02	3.9E+04	9.4E-02	8.3E-02	1.9E-01	1.9E-01	2.8E-02	9.7E-03	2.8E-02	5.6E-02	8.0E-02	3.4E-02	2.7E-01	1.1E-03	1.2E-03	1.0E-03	9.0E-04	8.7E-05	7.8E-05	8.6E-05	8.4E-05	5.9E-04	1.7E-05	1.5E-05	1.4E-03	1.2E-07	6.9E-08	5.2E-07	2.2E-06	7.1E-06	3.0E-06	1.1E-04	4E-03	4E-03	2E-04	3E-04	1E-03	1E-03	2E-04	2E-04	1E-04	6E-05
residential	484331	3620025	7.8E-02	9.0E-02	7.5E-02	6.7E-02	5.9E-02	5.2E-02	5.0E-02	4.8E-02	4.3E+04	9.5E-02	8.4E-02	1.8E-01	1.8E-01	2.9E-02	9.9E-03	2.8E-02	6.1E-02	8.5E-02	3.6E-02	2.6E-01	1.1E-03	1.3E-03	1.1E-03	9.5E-04	9.1E-05	8.1E-05	8.8E-05	8.6E-05	6.5E-04	1.7E-05	1.5E-05	1.4E-03	1.3E-07	7.0E-08	5.3E-07	2.4E-06	7.6E-06	3.2E-06	1.1E-04	5E-03	4E-03	2E-04	3E-04	1E-03	1E-03	2E-04	2E-04	1E-04	6E-05
residential	484431	3620025	8.1E-02	9.6E-02	7.8E-02	6.9E-02	6.1E-02	5.3E-02	5.1E-02	4.9E-02	4.7E+04	9.7E-02	8.5E-02	1.7E-01	1.7E-01	3.0E-02	1.0E-02	2.9E-02	6.6E-02	9.3E-02	3.8E-02	2.5E-01	1.1E-03	1.4E-03	1.1E-03	9.8E-04	9.4E-05	8.3E-05	9.0E-05	8.7E-05	7.1E-04	1.7E-05	1.5E-05	1.3E-03	1.3E-07	7.2E-08	5.4E-07	2.6E-06	8.3E-06	3.4E-06	1.0E-04	5E-03	4E-03	2E-04	3E-04	1E-03	1E-03	2E-04	2E-04	1E-04	6E-05
residential	484531	3620025	8.7E-02	1.0E-01	8.4E-02	7.4E-02	6.4E-02	5.6E-02	5.3E-02	5.1E-02	5.2E+04	1.0E-01	8.9E-02	1.7E-01	1.7E-01	3.0E-02	1.0E-02	3.0E-02	7.2E-02	1.0E-01	4.1E-02	2.4E-01	1.2E-03	1.5E-03	1.2E-03	1.0E-03	9.9E-05	8.7E-05	9.4E-05	9.0E-05	7.8E-04	1.8E-05	1.6E-05	1.3E-03	1.3E-07	7.5E-08	5.5E-07	2.9E-06	9.2E-06	3.6E-06	1.0E-04	5E-03	5E-03	3E-04	3E-04	1E-03	9E-04	2E-04	2E-04	1E-04	6E-05
residential	484631	3620025	9.4E-02	1.1E-01	9.1E-02	8.0E-02	6.8E-02	5.9E-02	5.6E-02	5.3E-02	5.7E+04	1.1E-01	9.4E-02	1.6E-01	1.6E-01	3.1E-02	1.1E-02	3.0E-02	7.8E-02	1.1E-01	4.3E-02	2.4E-01	1.3E-03	1.6E-03	1.3E-03	1.1E-03	1.1E-04	9.2E-05	9.9E-05	9.4E-05	8.7E-04	1.9E-05	1.7E-05	1.2E-03	1.4E-07	7.7E-08	5.7E-07	3.1E-06	1.0E-05	3.9E-06	9.7E-05	6E-03	5E-03	3E-04	3E-04	1E-03	9E-04	1E-04	2E-04	1E-04	6E-05
residential	484731	3620025	1.0E-01	1.2E-01	9.8E-02	8.6E-02	7.3E-02	6.3E-02	5.9E-02	5.6E-02	6.3E+04	1.1E-01	9.8E-02	1.6E-01	1.6E-01	3.2E-02	1.1E-02	3.1E-02	8.4E-02	1.3E-01	4.7E-02	2.3E-01	1.4E-03	1.8E-03	1.4E-03	1.2E-03	1.1E-04	9.7E-05	1.0E-04	9.8E-05	9.6E-04	2.0E-05	1.8E-05	1.2E-03	1.4E-07	7.9E-08	5.9E-07	3.4E-06	1.1E-05	4.2E-06	9.3E-05	6E-03	6E-03	3E-04	3E-04	1E-03	9E-04	1E-04	2E-04	9E-05	5E-05
residential	484831	3620025	1.1E-01	1.3E-01	1.1E-01	9.3E-02	7.8E-02	6.7E-02	6.3E-02	5.9E-02	7.1E+04	1.2E-01	1.0E-01	1.5E-01	1.5E-01	3.4E-02	1.1E-02	3.2E-02	9.2E-02	1.4E-01	5.0E-02	2.2E-01	1.6E-03	1.9E-03	1.5E-03	1.3E-03	1.2E-04	1.0E-04	1.1E-04	1.0E-04	1.1E-03	2.1E-05	1.9E-05	1.2E-03	1.5E-07	8.1E-08	6.1E-07	3.7E-06	1.3E-05	4.5E-06	9.0E-05	7E-03	6E-03	3E-04	4E-04	1E-03	8E-04	1E-04	2E-04	9E-05	5E-05
residential	484931	3620025	1.2E-01	1.4E-01	1.2E-01	1.0E-01	8.4E-02	7.1E-02	6.6E-02	6.2E-02	8.0E+04	1.3E-01	1.1E-01	1.5E-01	1.5E-01	3.5E-02	1.2E-02	3.3E-02	1.0E-01	1.6E-01	5.4E-02	2.1E-01	1.7E-03	2.0E-03	1.6E-03	1.4E-03	1.3E-04	1.1E-04	1.2E-04	1.1E-04	1.2E-03	2.3E-05	2.0E-05	1.1E-03	1.6E-07	8.3E-08	6.2E-07	4.0E-06	1.4E-05	4.8E-06	8.7E-05	7E-03	7E-03	4E-04	4E-04	1E-03	8E-04	1E-04	2E-04	9E-05	5E-05
residential	485031	3620025	1.3E-01	1.5E-01	1.3E-01	1.1E-01	9.1E-02	7.7E-02	7.1E-02	6.6E-02	9.2E+04	1.4E-01	1.2E-01	1.4E-01	1.4E-01	3.7E-02	1.2E-02	3.5E-02	1.1E-01	1.7E-01	5.7E-02	2.0E-01	1.9E-03	2.2E-03	1.8E-03	1.5E-03	1.4E-04	1.2E-04	1.3E-04	1.2E-04	1.4E-03	2.5E-05	2.2E-05	1.1E-03	1.6E-07	8.5E-08	6.5E-07	4.3E-06	1.5E-05	5.1E-06	8.4E-05	8E-03	7E-03	4E-04	4E-04	1E-03	8E-04	1E-04	2E-04	8E-05	5E-05
residential	485131	3620025	1.5E-01	1.6E-01	1.3E-01	1.2E-01	9.9E-02	8.3E-02	7.7E-02	7.1E-02	1.1E+05	1.6E-01	1.3E-01	1.4E-01	1.4E-01	3.9E-02	1.2E-02	3.6E-02	1.2E-01	1.9E-01	6.1E-02	2.0E-01	2.1E-03	2.3E-03	1.9E-03	1.7E-03	1.5E-04	1.3E-04	1.4E-04	1.3E-04	1.6E-03	2.8E-05	2.4E-05	1.0E-03	1.7E-07	8.8E-08	6.7E-07	4.7E-06	1.7E-05	5.5E-06	8.1E-05	8E-03	8E-03	4E-04	5E-04	1E-03	8E-04	1E-04	2E-04	8E-05	5E-05
residential	485231	3620025	1.6E-01	1.7E-01	1.4E-01	1.3E-01	1.1E-01	9.0E-02	8.3E-02	7.7E-02	1.2E+05	1.7E-01	1.5E-01	1.3E-01	1.3E-01	4.1E-02	1.3E-02	3.8E-02	1.3E-01	2.2E-01	6.6E-02	1.9E-01	2.2E-03	2.4E-03	2.0E-03	1.8E-03	1.7E-04	1.4E-04	1.5E-04	1.4E-04	1.9E-03	3.1E-05	2.6E-05	1.0E-03	1.8E-07	9.0E-08	7.1E-07	5.1E-06	2.0E-05	5.9E-06	7.8E-05	9E-03	8E-03	4E-04	5E-04	1E-03	7E-04	1E-04	1E-04	8E-05	4E-05

TAMT_HRA_Existing
DPM_annl

AERMOD Output	Multi-Purpose General CargoExisting 28%	Dry BulkExisting 15%	All 100%	Refrigerated ContainersExisting 63%	Multi-Purpose General CargoExisting 8%	Dry BulkExisting 29%	All 100%	Refrigerated ContainersExisting 0%	Multi-Purpose General CargoExisting 61%	Dry BulkExisting 39%	All 100%	Refrigerated Containers 67%	Multi-Purpose General Cargo 3%	Dry Bulk 30%	All	ug/m3	Dose Inhalation 3rd tri	Dose Inhalation 0<2	Dose Inhalation 2<9	Dose Inhalation 2<16	Dose Inhalation 16<30	Risk (Residential 30-yr; school 9-yr; park 15-year) 3rd tri	Risk 0<2	Risk 2<9	Risk 2<16	Risk 16<30	Summed Risk	Cases Per Million	Chronic HI	ug/m3	Dose Inhalation 3rd tri	Dose Inhalation 0<2	Dose Inhalation 2<9	Dose Inhalation 2<16	Dose Inhalation 16<30	Risk (Residential 30-yr; school 9-yr; park 15-year) 3rd tri	Risk 0<2	Risk 2<9	Risk 2<16	Risk 16<30	Summed Risk	Cases Per Million	Chronic HI	ug/m3	Dose Inhalation 3rd tri	Dose Inhalation 0<2	Dose Inhalation 2<9	Dose Inhalation 2<16	Dose Inhalation 16<30	Risk (Residential 30-yr; school 9-yr; park 15-year) 3rd tri	Risk 0<2	Risk 2<9	Risk 2<16	Risk 16<30	Summed Risk	Cases Per Million	Chronic HI
residential	3E-05	2E-05	5E-04	3E-04	4E-05	1E-04	3E-05	0E+00	2E-05	1E-05	1.1E-05	7.6E-06	3.7E-07	3.4E-06	0.01	0.00526	1.82E-06	5.5E-06	3.18E-06	2.89E-06	1.32E-06	7.2E-08	1.7E-06	0	1.9E-06	2.9E-07	3.994E-06	3.99372	0.00105	5E-04	2E-07	5E-07	3E-07	3E-07	1E-07	7E-09	2E-07	0E+00	2E-07	3E-08	3.7E-07	0.370	9.7E-05	6E-04	2E-07	7E-07	4E-07	4E-07	2E-07	9E-09	2E-07	0E+00	2E-07	4E-08	4.8E-07	0.484	0.00013
residential	3E-05	2E-05	5E-04	3E-04	5E-05	2E-04	3E-05	0E+00	2E-05	1E-05	1.2E-05	8.1E-06	3.9E-07	3.6E-06	0.01	0.00535	1.85E-06	5.59E-06	3.24E-06	2.93E-06	1.34E-06	7.3E-08	1.8E-06	0	1.9E-06	2.9E-07	4.062E-06	4.06213	0.00107	5E-04	2E-07	5E-07	3E-07	3E-07	1E-07	7E-09	2E-07	0E+00	2E-07	3E-08	3.7E-07	0.370	9.7E-05	6E-04	2E-07	7E-07	4E-07	4E-07	2E-07	9E-09	2E-07	0E+00	2E-07	4E-08	4.9E-07	0.489	0.00013
residential	3E-05	2E-05	6E-04	4E-04	5E-05	2E-04	3E-05	0E+00	2E-05	1E-05	1.3E-05	8.7E-06	4.2E-07	3.9E-06	0.01	0.0055	1.91E-06	5.75E-06	3.33E-06	3.02E-06	1.38E-06	7.5E-08	1.8E-06	0	2E-06	3E-07	4.179E-06	4.17892	0.0011	5E-04	2E-07	5E-07	3E-07	3E-07	1E-07	7E-09	2E-07	0E+00	2E-07	3E-08	3.7E-07	0.374	9.9E-05	7E-04	2E-07	7E-07	4E-07	4E-07	2E-07	9E-09	2E-07	0E+00	2E-07	4E-08	5.0E-07	0.502	0.00013
residential	3E-05	2E-05	7E-04	4E-04	5E-05	2E-04	3E-05	0E+00	2E-05	1E-05	1.4E-05	9.3E-06	4.5E-07	4.2E-06	0.01	0.00571	1.98E-06	5.97E-06	3.46E-06	3.13E-06	1.43E-06	7.8E-08	1.9E-06	0	2.1E-06	3.1E-07	4.338E-06	4.33778	0.00114	5E-04	2E-07	5E-07	3E-07	3E-07	1E-07	7E-09	2E-07	0E+00	2E-07	3E-08	3.8E-07	0.382	0.0001	7E-04	2E-07	7E-07	4E-07	4E-07	2E-07	9E-09	2E-07	0E+00	2E-07	4E-08	5.2E-07	0.519	0.00014
residential	3E-05	2E-05	7E-04	4E-04	6E-05	2E-04	3E-05	0E+00	2E-05	1E-05	1.5E-05	1E-05	4.8E-07	4.5E-06	0.01	0.00591	2.04E-06	6.17E-06	3.57E-06	3.24E-06	1.48E-06	8E-08	1.9E-06	0	2.1E-06	3.3E-07	4.483E-06	4.48325	0.00118	5E-04	2E-07	5E-07	3E-07	3E-07	1E-07	7E-09	2E-07	0E+00	2E-07	3E-08	3.9E-07	0.388	0.0001	7E-04	2E-07	7E-07	4E-07	4E-07	2E-07	1E-08	2E-07	0E+00	3E-07	4E-08	5.3E-07	0.535	0.00014
residential	3E-05	2E-05	8E-04	5E-04	7E-05	2E-04	3E-05	0E+00	2E-05	1E-05	1.6E-05	1.1E-05	5.3E-07	4.9E-06	0.01	0.00625	2.16E-06	6.53E-06	3.78E-06	3.43E-06	1.56E-06	8.5E-08	2.1E-06	0	2.3E-06	3.4E-07	4.743E-06	4.74344	0.00125	5E-04	2E-07	6E-07	3E-07	3E-07	1E-07	7E-09	2E-07	0E+00	2E-07	3E-08	4.0E-07	0.402	0.00011	7E-04	3E-07	8E-07	4E-07	4E-07	2E-07	1E-08	2E-07	0E+00	3E-07	4E-08	5.6E-07	0.561	0.00015
residential	3E-05	1E-05	9E-04	5E-04	7E-05	2E-04	4E-05	0E+00	2E-05	1E-05	1.8E-05	1.2E-05	5.8E-07	5.4E-06	0.01	0.00666	2.31E-06	6.97E-06	4.03E-06	3.66E-06	1.67E-06	9.1E-08	2.2E-06	0	2.4E-06	3.7E-07	5.06E-06	5.05973	0.00133	6E-04	2E-07	6E-07	3E-07	3E-07	1E-07	8E-09	2E-07	0E+00	2E-07	3E-08	4.2E-07	0.420	0.00011	8E-04	3E-07	8E-07	5E-07	4E-07	2E-07	1E-08	3E-07	0E+00	3E-07	4E-08	5.9E-07	0.594	0.00016
residential	3E-05	1E-05	1E-03	6E-04	8E-05	3E-04	4E-05	0E+00	2E-05	1E-05	2E-05	1.3E-05	6.3E-07	5.9E-06	0.01	0.00711	2.46E-06	7.43E-06	4.3E-06	3.9E-06	1.78E-06	9.7E-08	2.3E-06	0	2.6E-06	3.9E-07	5.395E-06	5.39487	0.00142	6E-04	2E-07	6E-07	4E-07	3E-07	1E-07	8E-09	2E-07	0E+00	2E-07	3E-08	4.4E-07	0.440	0.00012	8E-04	3E-07	9E-07	5E-07	5E-07	2E-07	1E-08	3E-07	0E+00	3E-07	5E-08	6.3E-07	0.629	0.00017
residential	3E-05	1E-05	1E-03	7E-04	9E-05	3E-04	4E-05	0E+00	2E-05	2E-05	2.2E-05	1.4E-05	7E-07	6.5E-06	0.01	0.00764	2.64E-06	7.98E-06	4.62E-06	4.19E-06	1.91E-06	1E-07	2.5E-06	0	2.8E-06	4.2E-07	5.8E-06	5.79952	0.00153	6E-04	2E-07	6E-07	4E-07	3E-07	2E-07	8E-09	2E-07	0E+00	2E-07	3E-08	4.6E-07	0.465	0.00012	9E-04	3E-07	9E-07	5E-07	5E-07	2E-07	1E-08	3E-07	0E+00	3E-07	5E-08	6.7E-07	0.675	0.00018
residential	2E-05	1E-05	1E-03	8E-04	1E-04	3E-04	4E-05	0E+00	3E-05	2E-05	2.3E-05	1.6E-05	7.6E-07	7.1E-06	0.01	0.00817	2.83E-06	8.54E-06	4.94E-06	4.48E-06	2.04E-06	1.1E-07	2.7E-06	0	3E-06	4.5E-07	6.202E-06	6.20191	0.00163	6E-04	2E-07	7E-07	4E-07	4E-07	2E-07	9E-09	2E-07	0E+00	2E-07	4E-08	4.9E-07	0.490	0.00013	1E-03	3E-07	1E-06	6E-07	5E-07	2E-07	1E-08	3E-07	0E+00	3E-07	5E-08	7.2E-07	0.722	0.00019

TAMT_HRA_Existing
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AERMOD Output	X	Y	1 B10_1_AUX	3 B10_2_AUX	5 B10_3_AUX	7 B10_4_AUX	9 B10_5_AUX	11 B10_6_AUX	13 B10_7_AUX	15 B10_8_AUX	17 CHE_1	18 LOC_SWTCH EMP	19 LOC_SWTCH LOA	20 OGV_PATH_BLR	21 OGV_PATH_DPM	22 TR_28TH	23 TR_BAYMAR	24 TR_BOSTON	25 TR_CROSBY	26 TR_HARBOR CHA	27 TR_HARBOR SAM	28 TUG_PATH_DPM
residential	477031	3620425	1.3E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.1E-02	1.1E-02	1.1E-02	4.9E+03	1.1E-02	1.1E-02	3.9E-02	3.9E-02	1.0E-02	4.2E-03	1.0E-02	1.2E-02	1.4E-02	1.0E-02	3.4E-02
residential	477131	3620425	1.3E-02	1.4E-02	1.3E-02	1.2E-02	1.2E-02	1.1E-02	1.1E-02	1.1E-02	5.0E+03	1.1E-02	1.1E-02	4.1E-02	4.1E-02	1.0E-02	4.2E-03	1.0E-02	1.2E-02	1.4E-02	1.0E-02	3.6E-02
residential	477231	3620425	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	1.2E-02	5.1E+03	1.2E-02	1.1E-02	4.4E-02	4.4E-02	1.1E-02	4.3E-03	1.0E-02	1.3E-02	1.5E-02	1.1E-02	3.9E-02
residential	477331	3620425	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	1.2E-02	5.2E+03	1.2E-02	1.1E-02	4.5E-02	4.5E-02	1.1E-02	4.4E-03	1.0E-02	1.3E-02	1.5E-02	1.1E-02	4.1E-02
residential	477431	3620425	1.4E-02	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	5.4E+03	1.2E-02	1.2E-02	4.8E-02	4.8E-02	1.1E-02	4.5E-03	1.1E-02	1.3E-02	1.5E-02	1.1E-02	4.5E-02
residential	477531	3620425	1.5E-02	1.5E-02	1.4E-02	1.4E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	5.6E+03	1.3E-02	1.2E-02	5.3E-02	5.3E-02	1.1E-02	4.6E-03	1.1E-02	1.3E-02	1.6E-02	1.1E-02	5.1E-02
residential	477631	3620425	1.5E-02	1.5E-02	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	1.3E-02	5.8E+03	1.3E-02	1.2E-02	5.6E-02	5.6E-02	1.1E-02	4.6E-03	1.1E-02	1.3E-02	1.6E-02	1.1E-02	5.6E-02
residential	477731	3620425	1.6E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	6.0E+03	1.3E-02	1.3E-02	6.0E-02	6.0E-02	1.1E-02	4.7E-03	1.1E-02	1.4E-02	1.7E-02	1.2E-02	6.3E-02
residential	477831	3620425	1.6E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	6.0E+03	1.4E-02	1.3E-02	6.3E-02	6.3E-02	1.2E-02	4.7E-03	1.1E-02	1.4E-02	1.7E-02	1.2E-02	6.8E-02
residential	477931	3620425	1.6E-02	1.6E-02	1.5E-02	1.5E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	6.1E+03	1.4E-02	1.3E-02	6.7E-02	6.7E-02	1.2E-02	4.8E-03	1.2E-02	1.4E-02	1.7E-02	1.2E-02	7.5E-02
residential	478031	3620425	1.7E-02	1.7E-02	1.6E-02	1.5E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	6.4E+03	1.4E-02	1.4E-02	7.5E-02	7.5E-02	1.2E-02	4.9E-03	1.2E-02	1.5E-02	1.8E-02	1.2E-02	8.8E-02
residential	478131	3620425	1.7E-02	1.8E-02	1.7E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	6.5E+03	1.5E-02	1.4E-02	8.3E-02	8.3E-02	1.2E-02	5.0E-03	1.2E-02	1.5E-02	1.8E-02	1.3E-02	1.0E-01
residential	478231	3620425	1.8E-02	1.8E-02	1.7E-02	1.6E-02	1.5E-02	1.5E-02	1.5E-02	1.4E-02	6.7E+03	1.5E-02	1.5E-02	9.0E-02	9.0E-02	1.2E-02	5.1E-03	1.2E-02	1.5E-02	1.9E-02	1.3E-02	1.1E-01
residential	478331	3620425	1.8E-02	1.8E-02	1.7E-02	1.7E-02	1.6E-02	1.5E-02	1.5E-02	1.5E-02	6.8E+03	1.6E-02	1.5E-02	9.7E-02	9.7E-02	1.3E-02	5.2E-03	1.3E-02	1.5E-02	1.9E-02	1.3E-02	1.3E-01
recreational	478431	3620425	1.9E-02	1.9E-02	1.8E-02	1.7E-02	1.6E-02	1.5E-02	1.5E-02	1.5E-02	7.3E+03	1.7E-02	1.6E-02	1.1E-01	1.1E-01	1.3E-02	5.2E-03	1.3E-02	1.6E-02	1.9E-02	1.3E-02	1.4E-01
recreational	478531	3620425	1.9E-02	1.9E-02	1.8E-02	1.7E-02	1.7E-02	1.6E-02	1.6E-02	1.6E-02	7.4E+03	1.7E-02	1.6E-02	1.1E-01	1.1E-01	1.3E-02	5.2E-03	1.3E-02	1.6E-02	2.0E-02	1.3E-02	1.6E-01
recreational	478631	3620425	1.9E-02	2.0E-02	1.8E-02	1.8E-02	1.7E-02	1.6E-02	1.6E-02	1.6E-02	7.5E+03	1.8E-02	1.7E-02	1.2E-01	1.2E-01	1.3E-02	5.2E-03	1.3E-02	1.6E-02	2.0E-02	1.3E-02	1.7E-01
recreational	483831	3620425	5.5E-02	6.0E-02	5.2E-02	4.8E-02	4.3E-02	3.9E-02	3.9E-02	3.8E-02	2.6E+04	6.7E-02	6.1E-02	1.7E-01	1.7E-01	2.3E-02	8.7E-03	2.2E-02	4.1E-02	5.4E-02	2.7E-02	2.4E-01
recreational	483931	3620425	5.8E-02	6.4E-02	5.5E-02	5.0E-02	4.5E-02	4.1E-02	4.0E-02	3.9E-02	2.9E+04	7.0E-02	6.3E-02	1.7E-01	1.7E-01	2.3E-02	8.9E-03	2.3E-02	4.3E-02	5.8E-02	2.8E-02	2.3E-01

Source Group in AERMOD; g/s -->

X	Y	B10_1_AUX (Refrigerated ContainersExisting, 1.4E-02, 1)	B10_2_AUX (Refrigerated ContainersExisting, 1.4E-02, 3)	B10_3_AUX (Refrigerated ContainersExisting, 1.4E-02, 5)	B10_4_AUX (Refrigerated ContainersExisting, 1.4E-02, 7)	B10_5_AUX (Multi-Purpose General CargoExisting, 1.6E-03, 9)	B10_6_AUX (Multi-Purpose General CargoExisting, 1.6E-03, 11)	B10_7_AUX (Dry BulkExisting, 1.8E-03, 13)	B10_8_AUX (Dry BulkExisting, 1.8E-03, 15)	CHE_1 (AllExisting, 1.5E-08, 17)	LOC_SWTCHEMP (AllExisting, 1.8E-04, 18)	LOC_SWTCHLOA (AllExisting, 1.8E-04, 19)	OGV_PATH_DPM (AllExisting, 7.6E-03, 21)	TR_28TH (TR_28THExisting, 4.4E-06, 22)	TR_BAYMAR (TR_BAYMAR Existing, 7.1E-06, 23)	TR_BOSTON (TR_BOSTON Existing, 1.9E-05, 24)	TR_CROSBY (TR_CROSBY Existing, 4.0E-05, 25)	TR_HARBOR CHA (TR_HARBOR CHAExisting, 8.9E-05, 26)	TR_HARBOR SAM (TR_HARBOR SAMExisting, 8.9E-05, 27)	TUG_PATH_DPM (AllExisting, 4.1E-04, 28)	All 100%	Refrigerated ContainersExisting 89%	Multi-Purpose General CargoExisting 5%	Dry BulkExisting 6%	All 100%	Refrigerated ContainersExisting 73%	Multi-Purpose General CargoExisting 12%	Dry BulkExisting 15%	All 100%	Refrigerated ContainersExisting 57%
477031	3620425	1.9E-04	1.9E-04	1.8E-04	1.7E-04	1.8E-05	1.7E-05	2.0E-05	1.9E-05	7.4E-05	2.0E-06	1.9E-06	3.0E-04	4.5E-08	3.0E-08	1.9E-07	4.9E-07	1.2E-06	9.2E-07	1.4E-05	8E-04	7E-04	4E-05	4E-05	3E-04	2E-04	4E-05	4E-05	1E-05	8E-06
477131	3620425	1.9E-04	1.9E-04	1.8E-04	1.8E-04	1.8E-05	1.8E-05	2.0E-05	2.0E-05	7.5E-05	2.0E-06	1.9E-06	3.1E-04	4.5E-08	3.0E-08	1.9E-07	4.9E-07	1.3E-06	9.2E-07	1.5E-05	8E-04	7E-04	4E-05	5E-05	3E-04	2E-04	4E-05	5E-05	1E-05	8E-06
477231	3620425	1.9E-04	2.0E-04	1.9E-04	1.8E-04	1.9E-05	1.8E-05	2.0E-05	2.0E-05	7.8E-05	2.1E-06	2.0E-06	3.3E-04	4.6E-08	3.1E-08	1.9E-07	5.0E-07	1.3E-06	9.4E-07	1.6E-05	8E-04	7E-04	4E-05	5E-05	3E-04	2E-04	4E-05	5E-05	2E-05	9E-06
477331	3620425	2.0E-04	2.0E-04	1.9E-04	1.8E-04	1.9E-05	1.8E-05	2.1E-05	2.1E-05	7.8E-05	2.1E-06	2.0E-06	3.4E-04	4.7E-08	3.1E-08	2.0E-07	5.0E-07	1.3E-06	9.4E-07	1.7E-05	8E-04	8E-04	4E-05	5E-05	3E-04	3E-04	4E-05	5E-05	2E-05	9E-06
477431	3620425	2.0E-04	2.0E-04	1.9E-04	1.9E-04	2.0E-05	1.9E-05	2.1E-05	2.1E-05	8.1E-05	2.2E-06	2.1E-06	3.6E-04	4.8E-08	3.2E-08	2.0E-07	5.1E-07	1.3E-06	9.6E-07	1.8E-05	9E-04	8E-04	4E-05	5E-05	4E-04	3E-04	4E-05	5E-05	2E-05	1E-05
477531	3620425	2.1E-04	2.1E-04	2.0E-04	1.9E-04	2.0E-05	1.9E-05	2.2E-05	2.2E-05	8.5E-05	2.3E-06	2.2E-06	4.0E-04	4.9E-08	3.3E-08	2.1E-07	5.3E-07	1.4E-06	9.9E-07	2.1E-05	9E-04	8E-04	4E-05	5E-05	4E-04	3E-04	5E-05	6E-05	2E-05	1E-05
477631	3620425	2.1E-04	2.2E-04	2.0E-04	2.0E-04	2.1E-05	2.0E-05	2.2E-05	2.2E-05	8.8E-05	2.3E-06	2.2E-06	4.2E-04	5.0E-08	3.3E-08	2.1E-07	5.3E-07	1.4E-06	1.0E-06	2.3E-05	9E-04	8E-04	4E-05	5E-05	4E-04	3E-04	5E-05	6E-05	2E-05	1E-05
477731	3620425	2.2E-04	2.2E-04	2.1E-04	2.0E-04	2.1E-05	2.0E-05	2.3E-05	2.3E-05	9.0E-05	2.4E-06	2.3E-06	4.6E-04	5.1E-08	3.4E-08	2.1E-07	5.4E-07	1.5E-06	1.0E-06	2.6E-05	9E-04	8E-04	5E-05	5E-05	5E-04	3E-04	6E-05	7E-05	3E-05	1E-05
477831	3620425	2.2E-04	2.2E-04	2.1E-04	2.0E-04	2.1E-05	2.0E-05	2.3E-05	2.3E-05	9.1E-05	2.4E-06	2.3E-06	4.8E-04	5.1E-08	3.4E-08	2.1E-07	5.5E-07	1.5E-06	1.0E-06	2.8E-05	1E-03	9E-04	5E-05	5E-05	5E-04	4E-04	6E-05	7E-05	3E-05	2E-05
477931	3620425	2.3E-04	2.3E-04	2.2E-04	2.1E-04	2.2E-05	2.1E-05	2.4E-05	2.3E-05	9.3E-05	2.5E-06	2.4E-06	5.1E-04	5.2E-08	3.4E-08	2.2E-07	5.5E-07	1.5E-06	1.0E-06	3.1E-05	1E-03	9E-04	5E-05	5E-05	5E-04	4E-04	6E-05	7E-05	3E-05	2E-05
478031	3620425	2.4E-04	2.4E-04	2.3E-04	2.2E-04	2.3E-05	2.2E-05	2.4E-05	2.4E-05	9.6E-05	2.5E-06	2.4E-06	5.7E-04	5.4E-08	3.5E-08	2.3E-07	5.8E-07	1.6E-06	1.1E-06	3.6E-05	1E-03	9E-04	5E-05	6E-05	6E-04	4E-04	7E-05	8E-05	4E-05	2E-05
478131	3620425	2.5E-04	2.5E-04	2.3E-04	2.2E-04	2.3E-05	2.2E-05	2.5E-05	2.5E-05	9.9E-05	2.6E-06	2.5E-06	6.3E-04	5.5E-08	3.6E-08	2.3E-07	6.0E-07	1.6E-06	1.1E-06	4.1E-05	1E-03	9E-04	5E-05	6E-05	6E-04	5E-04	8E-05	9E-05	4E-05	2E-05
478231	3620425	2.5E-04	2.5E-04	2.4E-04	2.3E-04	2.4E-05	2.3E-05	2.6E-05	2.6E-05	1.0E-04	2.7E-06	2.6E-06	6.8E-04	5.5E-08	3.7E-08	2.3E-07	6.0E-07	1.7E-06	1.1E-06	4.7E-05	1E-03	1E-03	5E-05	6E-05	7E-04	5E-04	8E-05	1E-04	5E-05	3E-05
478331	3620425	2.6E-04	2.6E-04	2.4E-04	2.3E-04	2.4E-05	2.3E-05	2.6E-05	2.6E-05	1.0E-04	2.8E-06	2.7E-06	7.3E-04	5.6E-08	3.7E-08	2.3E-07	6.1E-07	1.7E-06	1.2E-06	5.2E-05	1E-03	1E-03	5E-05	6E-05	7E-04	5E-04	9E-05	1E-04	5E-05	3E-05
478431	3620425	2.6E-04	2.7E-04	2.5E-04	2.4E-04	2.5E-05	2.4E-05	2.7E-05	2.7E-05	1.1E-04	3.0E-06	2.8E-06	8.0E-04	5.6E-08	3.7E-08	2.4E-07	6.2E-07	1.7E-06	1.2E-06	5.8E-05	1E-03	1E-03	6E-05	6E-05	8E-04	6E-04	1E-04	1E-04	6E-05	3E-05
478531	3620425	2.7E-04	2.7E-04	2.6E-04	2.5E-04	2.6E-05	2.4E-05	2.8E-05	2.7E-05	1.1E-04	3.1E-06	2.9E-06	8.7E-04	5.6E-08	3.7E-08	2.4E-07	6.2E-07	1.7E-06	1.2E-06	6.5E-05	1E-03	1E-03	6E-05	6E-05	9E-04	6E-04	1E-04	1E-04	6E-05	4E-05
478631	3620425	2.8E-04	2.8E-04	2.6E-04	2.5E-04	2.6E-05	2.5E-05	2.8E-05	2.8E-05	1.1E-04	3.2E-06	3.0E-06	9.1E-04	5.7E-08	3.7E-08	2.4E-07	6.3E-07	1.8E-06	1.2E-06	6.9E-05	1E-03	1E-03	6E-05	7E-05	9E-04	7E-04	1E-04	1E-04	7E-05	4E-05
483831	3620425	7.8E-04	8.5E-04	7.4E-04	6.8E-04	6.7E-05	6.1E-05	6.8E-05	6.6E-05	4.0E-04	1.2E-05	1.1E-05	1.3E-03	1.0E-07	6.2E-08	4.2E-07	1.6E-06	4.8E-06	2.4E-06	9.9E-05	3E-03	3E-03	2E-04	2E-04	1E-03	1E-03	2E-04	2E-04	1E-04	6E-05
483931	3620425	8.2E-04	9.0E-04	7.8E-04	7.1E-04	7.0E-05	6.3E-05	7.0E-05	6.9E-05	4.3E-04	1.3E-05	1.1E-05	1.3E-03	1.0E-07	6.3E-08	4.3E-07	1.7E-06	5.2E-06	2.5E-06	9.6E-05	3E-03	3E-03	2E-04	2E-04	1E-03	1E-03	2E-04	2E-04	1E-04	5E-05

TAMT_HRA_Existing
DPM_annl

Cases Per Million	Chronic HI	ug/m3	Dose Inhalation 3rd tri	0<2	2<9	2<16	16<30	Risk (Residential 30-yr; school 9-yr; park 15-year) 3rd tri	0<2	2<9	2<16	16<30	Summed Risk	Cases Per Million	Chronic HI	ug/m3	Dose Inhalation 3rd tri	0<2	2<9	2<16	16<30	Risk (Residential 30-yr; school 9-yr; park 15-year) 3rd tri	0<2	2<9	2<16	16<30	Summed Risk	Cases Per Million	Chronic HI
0.7539	0.0002	9E-05	3E-08	9E-08	5E-08	5E-08	2E-08	1E-09	3E-08	0E+00	3E-08	5E-09	6.7E-08	0.067	1.8E-05	1E-04	4E-08	1E-07	7E-08	6E-08	3E-08	2E-09	4E-08	0E+00	4E-08	6E-09	8.6E-08	0.086	2.3E-05
0.77101	0.0002	9E-05	3E-08	9E-08	5E-08	5E-08	2E-08	1E-09	3E-08	0E+00	3E-08	5E-09	6.9E-08	0.069	1.8E-05	1E-04	4E-08	1E-07	7E-08	6E-08	3E-08	2E-09	4E-08	0E+00	4E-08	6E-09	8.9E-08	0.089	2.3E-05
0.79796	0.00021	9E-05	3E-08	1E-07	6E-08	5E-08	2E-08	1E-09	3E-08	0E+00	3E-08	5E-09	7.2E-08	0.072	1.9E-05	1E-04	4E-08	1E-07	7E-08	7E-08	3E-08	2E-09	4E-08	0E+00	4E-08	7E-09	9.3E-08	0.093	2.4E-05
0.81038	0.00021	1E-04	3E-08	1E-07	6E-08	5E-08	2E-08	1E-09	3E-08	0E+00	3E-08	5E-09	7.3E-08	0.073	1.9E-05	1E-04	4E-08	1E-07	8E-08	7E-08	3E-08	2E-09	4E-08	0E+00	4E-08	7E-09	9.4E-08	0.094	2.5E-05
0.84025	0.00022	1E-04	4E-08	1E-07	6E-08	6E-08	3E-08	1E-09	3E-08	0E+00	4E-08	6E-09	7.7E-08	0.077	2E-05	1E-04	5E-08	1E-07	8E-08	7E-08	3E-08	2E-09	4E-08	0E+00	5E-08	7E-09	9.9E-08	0.099	2.6E-05
0.88178	0.00023	1E-04	4E-08	1E-07	7E-08	6E-08	3E-08	1E-09	4E-08	0E+00	4E-08	6E-09	8.2E-08	0.082	2.2E-05	1E-04	5E-08	1E-07	8E-08	8E-08	3E-08	2E-09	5E-08	0E+00	5E-08	8E-09	1.0E-07	0.105	2.8E-05
0.91181	0.00024	1E-04	4E-08	1E-07	7E-08	6E-08	3E-08	2E-09	4E-08	0E+00	4E-08	6E-09	8.6E-08	0.086	2.3E-05	1E-04	5E-08	2E-07	9E-08	8E-08	4E-08	2E-09	5E-08	0E+00	5E-08	8E-09	1.1E-07	0.109	2.9E-05
0.94868	0.00025	1E-04	4E-08	1E-07	7E-08	7E-08	3E-08	2E-09	4E-08	0E+00	4E-08	7E-09	9.0E-08	0.090	2.4E-05	2E-04	5E-08	2E-07	9E-08	8E-08	4E-08	2E-09	5E-08	0E+00	5E-08	8E-09	1.1E-07	0.115	3E-05
0.9721	0.00026	1E-04	4E-08	1E-07	7E-08	7E-08	3E-08	2E-09	4E-08	0E+00	4E-08	7E-09	9.4E-08	0.094	2.5E-05	2E-04	5E-08	2E-07	9E-08	9E-08	4E-08	2E-09	5E-08	0E+00	6E-08	9E-09	1.2E-07	0.119	3.1E-05
1.00197	0.00026	1E-04	4E-08	1E-07	8E-08	7E-08	3E-08	2E-09	4E-08	0E+00	5E-08	7E-09	9.8E-08	0.098	2.6E-05	2E-04	6E-08	2E-07	1E-07	9E-08	4E-08	2E-09	5E-08	0E+00	6E-08	9E-09	1.2E-07	0.123	3.3E-05
1.06828	0.00028	1E-04	5E-08	1E-07	8E-08	8E-08	4E-08	2E-09	5E-08	0E+00	5E-08	8E-09	1.1E-07	0.106	2.8E-05	2E-04	6E-08	2E-07	1E-07	1E-07	4E-08	2E-09	6E-08	0E+00	6E-08	1E-08	1.3E-07	0.133	3.5E-05
1.13189	0.0003	2E-04	5E-08	2E-07	9E-08	8E-08	4E-08	2E-09	5E-08	0E+00	5E-08	8E-09	1.1E-07	0.115	3E-05	2E-04	7E-08	2E-07	1E-07	1E-07	5E-08	3E-09	6E-08	0E+00	7E-08	1E-08	1.4E-07	0.143	3.8E-05
1.1779	0.00031	2E-04	6E-08	2E-07	1E-07	9E-08	4E-08	2E-09	5E-08	0E+00	6E-08	9E-09	1.2E-07	0.121	3.2E-05	2E-04	7E-08	2E-07	1E-07	1E-07	5E-08	3E-09	7E-08	0E+00	7E-08	1E-08	1.5E-07	0.150	4E-05
1.22463	0.00032	2E-04	6E-08	2E-07	1E-07	9E-08	4E-08	2E-09	6E-08	0E+00	6E-08	9E-09	1.3E-07	0.128	3.4E-05	2E-04	7E-08	2E-07	1E-07	1E-07	5E-08	3E-09	7E-08	0E+00	8E-08	1E-08	1.6E-07	0.158	4.2E-05
0.08291	0.00034	2E-04	0E+00	2E-08	9E-09	8E-09	3E-09	0E+00	5E-09	3E-09	0E+00	3E-10	8.8E-09	0.009	3.6E-05	2E-04	0E+00	2E-08	1E-08	9E-09	4E-09	0E+00	7E-09	4E-09	0E+00	4E-10	1.1E-08	0.011	4.5E-05
0.08669	0.00036	2E-04	0E+00	2E-08	1E-08	8E-09	4E-09	0E+00	6E-09	3E-09	0E+00	3E-10	9.4E-09	0.009	3.8E-05	2E-04	0E+00	2E-08	1E-08	1E-08	5E-09	0E+00	7E-09	4E-09	0E+00	4E-10	1.1E-08	0.011	4.7E-05
0.0894	0.00037	2E-04	0E+00	2E-08	1E-08	8E-09	4E-09	0E+00	6E-09	3E-09	0E+00	4E-10	9.8E-09	0.010	4E-05	2E-04	0E+00	2E-08	1E-08	1E-08	5E-09	0E+00	7E-09	4E-09	0E+00	4E-10	1.2E-08	0.012	4.9E-05
0.20733	0.00085	4E-04	0E+00	4E-08	2E-08	2E-08	8E-09	0E+00	1E-08	7E-09	0E+00	7E-10	1.9E-08	0.019	8E-05	5E-04	0E+00	5E-08	3E-08	2E-08	1E-08	0E+00	2E-08	9E-09	0E+00	9E-10	2.5E-08	0.025	0.0001
0.2146	0.00088	4E-04	0E+00	4E-08	2E-08	2E-08	8E-09	0E+00	1E-08	7E-09	0E+00	7E-10	2.0E-08	0.020	8.1E-05	5E-04	0E+00	5E-08	3E-08	2E-08	1E-08	0E+00	2E-08	9E-09	0E+00	1E-09	2.6E-08	0.026	0.00011
3.4046	0.0009	4E-04	1E-07	4E-07	2E-07	2E-07	1E-07	6E-09	1E-07	0E+00	1E-07	2E-08	3.1E-07	0.309	8.1E-05	5E-04	2E-07	6E-07	3E-07	3E-07	1E-07	7E-09	2E-07	0E+00	2E-07	3E-08	4.1E-07	0.409	0.00011
3.44796	0.00091	4E-04	1E-07	4E-07	2E-07	2E-07	1E-07	6E-09	1E-07	0E+00	1E-07	2E-08	3.1E-07	0.309	8.1E-05	5E-04	2E-07	6E-07	3E-07	3E-07	1E-07	7E-09	2E-07	0E+00	2E-07	3E-08	4.1E-07	0.414	0.00011
3.53954	0.00093	4E-04	1E-07	4E-07	2E-07	2E-07	1E-07	6E-09	1E-07	0E+00	1E-07	2E-08	3.1E-07	0.312	8.2E-05	6E-04	2E-07	6E-07	3E-07	3E-07	1E-07	8E-09	2E-07	0E+00	2E-07	3E-08	4.2E-07	0.423	0.00011
3.65766	0.00096	4E-04	1E-07	4E-07	3E-07	2E-07	1E-07	6E-09	1E-07	0E+00	2E-07	2E-08	3.2E-07	0.317	8.3E-05	6E-04	2E-07	6E-07	3E-07	3E-07	1E-07	8E-09	2E-07	0E+00	2E-07	3E-08	4.3E-07	0.433	0.00011
3.83205	0.00101	4E-04	1E-07	4E-07	3E-07	2E-07	1E-07	6E-09	1E-07	0E+00	2E-07	2E-08	3.3E-07	0.326	8.6E-05	6E-04	2E-07	6E-07	4E-07	3E-07	1E-07	8E-09	2E-07	0E+00	2E-07	3E-08	4.5E-07	0.450	0.00012
4.0558	0.00107	4E-04	2E-07	5E-07	3E-07	2E-07	1E-07	6E-09	1E-07	0E+00	2E-07	2E-08	3.4E-07	0.338	8.9E-05	6E-04	2E-07	6E-07	4E-07	3E-07	2E-07	8E-09	2E-07	0E+00	2E-07	3E-08	4.7E-07	0.471	0.00012
4.28708	0.00113	5E-04	2E-07	5E-07	3E-07	3E-07	1E-07	6E-09	2E-07	0E+00	2E-07	3E-08	3.5E-07	0.351	9.2E-05	6E-04	2E-07	7E-07	4E-07	4E-07	2E-07	9E-09	2E-07	0E+00	2E-07	4E-08	4.9E-07	0.493	0.00013
4.54089	0.0012	5E-04	2E-07	5E-07	3E-07	3E-07	1E-07	7E-09	2E-07	0E+00	2E-07	3E-08	3.6E-07	0.364	9.6E-05	7E-04	2E-07	7E-07	4E-07	4E-07	2E-07	9E-09	2E-07	0E+00	2E-07	4E-08	5.2E-07	0.516	0.00014
4.8212	0.00127	5E-04	2E-07	5E-07	3E-07	3E-07	1E-07	7E-09	2E-07	0E+00	2E-07	3E-08	3.8E-07	0.379	1E-04	7E-04	2E-07	7E-07	4E-07	4E-07	2E-07	1E-08	2E-07	0E+00	3E-07	4E-08	5.4E-07	0.540	0.00014
5.14406	0.00136	5E-04	2E-07	5E-07	3E-07	3E-07	1E-07	7E-09	2E-07	0E+00	2E-07	3E-08	4.0E-07	0.398	0.0001	8E-04	3E-07	8E-07	5E-07	4E-07	2E-07	1E-08	2E-07	0E+00	3E-07	4E-08	5.8E-07	0.575	0.00015
5.46889	0.00144	6E-04	2E-07	6E-07	3E-07	3E-07	1E-07	7E-09	2E-07	0E+00	2E-07	3E-08	4.2E-07	0.418	0.00011	8E-04	3E-07	8E-07	5E-07	4E-07	2E-07	1E-08	3E-07	0E+00	3E-07	4E-08	6.1E-07	0.612	0.00016
5.71566	0.00151	6E-04	2E-07	6E-07	3E-07	3E-07	1E-07	8E-09	2E-07	0E+00	2E-07	3E-08	4.3E-07	0.430	0.00011	8E-04	3E-07	9E-07	5E-07	5E-07	2E-07	1E-08	3E-07	0E+00	3E-07	5E-08	6.3E-07	0.632	0.00017
5.9772	0.00157	6E-04	2E-07	6E-07	4E-07	3E-07	1E-07	8E-09	2E-07	0E+00	2E-07	3E-08	4.5E-07	0.447	0.00012	9E-04	3E-07	9E-07	5E-07	5E-07	2E-07	1E-08	3E-07	0E+00	3E-07	5E-08	6.7E-07	0.668	0.00018
6.36524	0.00168	6E-04	2E-07	7E-07	4E-07	3E-07	2E-07	9E-09	2E-07	0E+00	2E-07	3E-08	4.8E-07	0.480	0.00013	1E-03	3E-07	1E-06	6E-07	5E-07	2E-07	1E-08	3E-07	0E+00	4E-07	5E-08	7.3E-07	0.735	0.00019
6.77617	0.00179	7E-04	2E-07	7E-07	4E-07	4E-07	2E-07	9E-09	2E-07	0E+00	2E-07	4E-08	5.2E-07	0.521	0.00014	1E-03	4E-07	1E-06	7E-07	6E-07	3E-07	1E-08	4E-07	0E+00	4E-07	6E-08	8.3E-07	0.828	0.00022
0.44786	0.00183	7E-04	0E+00	7E-08	4E-08	3E-08	1E-08	0E+00	2E-08	1E-08	0E+00	1E-09	3.4E-08	0.034	0.00014	1E-03	0E+00	1E-07	6E-08	5E-08	2E-08	0E+00	3E-08	2E-08	0E+00	2E-09	5.4E-08	0.054	0.00022
0.45114	0.00185	7E-04	0E+00	7E-08	4E-08	3E-08	1E-08	0E+00	2E-08	1E-08	0E+00	1E-09	3.4E-08	0.034	0.00014	1E-03	0E+00	1E-07	6E-08	5E-08	2E-08	0E+00	3E-08	2E-08	0E+00	2E-09	5.3E-08	0.053	0.00022
0.45573	0.00187	7E-04	0E+00	7E-08	4E-08	3E-08	1E-08	0E+00	2E-08	1E-08	0E+00	1E-09	3.4E-08	0.034	0.00014	1E-03	0E+00	1E-07	6E-08	5E-08	2E-08	0E+00	3E-08	2E-08	0E+00	2E-09	5.3E-08	0.053	0.00022
0.46459	0.0019	7E-04	0E+00	7E-08	4E-08	3E-08	1E-08	0E+00	2E-08	1E-08	0E+00	1E-09	3.5E-08	0.035	0.00014	1E-03	0E+00	1E-07	6E-08	5E-08	2E-08	0E+00	3E-08	2E-08	0E+00	2E-09	5.4E-08	0.054	0.00022
0.48833	0.002	8E-04	0E+00	7E-08	4E-08	3E-08	1E-08	0E+00	2E-08	1E-08	0E+00	1E-09	3.7E-08	0.037	0.00015	1E-03	0E+00	1E-07	6E-08	5E-08	2E-08	0E+00	4E-08	2E-08	0E+00	2E-09	5.8E-08	0.058	0.00024
0.75368	0.0002	9E-05	3E-08	9E-08	5E-08	5E-08	2E-08	1E-09	3E-08	0E+00	3E-08	5E-09	6.7E-08	0.067	1.8E-05	1E-04	4E-08	1E-07	7E-08	6E-08	3E-08	2E-09	4E-08	0E+00	4E-08	6E-09	8.6E-08	0.086	2.3E-05
0.77915	0.00021	9E-05	3E-08	1E-07	6E-08	5E-08	2E-08	1E-09	3E-08	0E+00	3E-08	5E-09	7.0E-08	0.070	1.8E-05	1E-04	4E-08	1E-07	7E-08	6E-08	3E-08	2E-09	4E-08	0E+00	4E-08	7E-09	9.0E-08	0.090	2.4E-05
0.79527	0.00021	9E-05	3E-08	1E-07	6E-08	5E-08	2E-08	1E-09	3E-08	0E+00	3E-08	5E-09	7.2E-08	0.072	1.9E-05	1E-04	4E-08	1E-07	7E-08	7E-08	3E-08	2E-09	4E-08	0E+00	4E-08	7E-09	9.2E-08	0.092	2.4E-05
0.80229	0.00021	1E-04	3E-08	1E-07	6E-08	5E-08	2E-08	1E-09	3E-08	0E+00	3E-08	5E-09	7.2E-08	0.072	1.9E-05	1E-04	4E-08	1E-07	7E-08	7E-08	3E-08	2E-09	4E-08	0E+00	4E-08	7E-09	9.3E-08	0.093	2.5E-05
0.82189	0.00022	1E-04	3E-08	1E-07	6E-08	5E-08	2E-08	1E-09	3E-08	0E+00	4E-08	5E-09	7.5E-08	0.075	2E-05	1E-04	4E-08	1E-07	8E-08	7E-08	3E-08	2E-09	4E-08	0E+00	5E-08	7E-09	9.6E-08	0.096	2.5E-05
0.85263	0.00022	1E-04	4E-08	1E-07	6E-08	6E-08	3E-08	1E-09	3E-08	0E+00	4E-08	6E-09	7.9E-08	0.079	2.1E-05	1E-04	5E-08	1E-07	8E-08	7E-08	3E-08	2E-09	4E-08	0E+00	5E-08	7E-09	1.0E-07	0.101	2.7E-05
0.87779	0.00023	1E-04	4E-08	1E-07	7E-08	6E-08	3E-08	1E-09	4E-08	0E+00	4E-08	6E-09	8.2E-08	0.082	2.2E-05	1E-04	5E-08	1E-07	8E-08	8E-08	3E-08	2E-09	5E-08	0E+00	5E-08	8E-09	1.0E-07	0.104	2.7E-05
0.91607	0.00024	1E-04	4E-08	1E-07	7E-08	6E-08	3E-08	2E-09	4E-08	0E+00	4E-08	6E-09	8.7E-08	0.087	2.3E-05	1E-04	5E-08	2E-07	9E-08	8E-08	4E-08	2E-09	5E-08	0E+00	5E-08	8E-09	1.1E-07	0.110	2.9E-05
0.9619	0.00025	1E-04	4E-08	1E-07	7E-08	7E-08	3E-08	2E-09	4E-08	0E+00	4E-08	7E-09	9.3E-08	0.093	2.4E-05	2E-04	5E-08	2E-07	9E-08	8E-08	4E-08	2E-09	5E-08	0E+00	6E-08	9E-09	1.2E-07	0.117	3.1E-05
1.02285	0.00027	1E-04	5E-08	1E-07	8E-08	7E-08	3E-08	2E-09	4E-08	0E+00	5E-08	7E-09	1.0E-07	0.101	2.6E-05	2E-04	6E-08	2E-07	1E-07	9E-08	4E-08	2E-09	5E-08	0E+00	6E-08	9E-09	1.3E-07	0.126	3.3E-05
1.08426	0.00029	1E-04	5E-08	1E-07	9E-08	8E-08	4E-08	2E-09	5E-08	0E+00	5E-08	8E-09	1.1E-07	0.108	2.9E-05	2E-04	6E-08	2E-07	1E-07	1E-07	4E-08	2E-09	6E-08	0E+00	6E-08	1E-08	1.4E-07	0.136	3.6E-05
1.12637	0.0003	2E-04	5E-08	2E-07	9E-08	8E-08	4E-08	2E-09	5E-08	0E+00	5E-08	8E-09	1.1E-07	0.114	3E-05	2E-04	6E-08	2E-07	1E-07	1E-07	5E-08	3E-09	6E-08	0E+00	7E-08	1E-08	1.4E-07	0.142	3.7E-05
1.17569	0.00031	2E-04	6E-08	2E-07	1E-07	9E-08	4E-08	2E-09	5E-08	0E+00	6E-08	9E-09	1.2E-07	0.121	3.2E-05	2E-04	7E-08	2E-07	1E-07	1E-07	5E-08	3E-09	6E-08	0E+00	7E-08	1E-08	1.5E-07	0.150	4E-05
1.22546	0.00032	2E-04	6E-08	2E-07	1E-07	9E-08	4E-08	2E-09	6E-08	0E+00	6E-08	9E-09	1.3E-07	0.129	3.4E-05	2E-04	7E-08	2E-07	1E-07	1E-07	5E-08	3E-09	7E-08	0E+00	8E-08	1E-08	1.6E-07	0.158	4.2E-05
0.08282	0.00034	2E-04	0E+00	2E-08	9E-09	8E-09	3E-09	0E+00	5E-09	3E-09	0E+00	3E-10	8.9E-09	0.009	3.6E-05	2E-04	0E+00	2E-08	1E-08	9E-09	4E-09	0E+00	7E-09	4E-09	0E+00	4E-10	1.1E-08	0.011	4.4E-05
0.08621	0.00035	2E-04	0E+00	2E-08	1E-08	8E-09	4E-09	0E+00	6E-09	3E-09	0E+00	3E-10	9.3E-09	0.009	3.8E-05	2E-04	0E+00	2E-08	1E-08	1E-08	4E-09	0E+00	7E-09	4E-09	0E+00	4E-10	1.1E-08	0.011	4.7E-05
0.20034	0.00082	4E-04	0E+00	4E-08	2E-08	2E-08	7E-09	0E+00	1E-08	6E-09	0E+00	7E-10	1.9E-08	0.019	7.7E-05	5E-04	0E+00	5E-08	3E-08	2E-08	1E-08	0E+00	2E-08	8E-09	0E+00	9E-10	2.4E-08	0.024	0.0001
0.20736	0.00085	4E-04	0E+00	4E-08	2E-08	2E-08	7E-09	0E+00	1E-08	7E-09	0E+00	7E-10	1.9E-08	0.019	7.8E-05	5E-04	0E+00	5E-08	3E-08	2E-08	1E-08	0E+00	2E-08	9E-09	0E+00	9E-10	2.5E-08	0.025	0.0001
3.31312	0.00087	4E-04	1E-07	4E-07	2E-07	2E-07	1E-07	5E-09	1E-07	0E+00	1E-07	2E-08	3.0E-07	0.299	7.9E-05	5E-04	2E-07	6E-07	3E-07	3E-07	1E-07	7E-09	2E-07	0E+00	2E-07	3E-08	4.0E-07	0.400	0.00011
3.31714	0.00087	4E-04	1E-07	4E-07	2E-07	2E-07	1E-07	5E-09	1E-07	0E+00	1E-07	2E-08	3.0E-07	0.296	7.8E-05	5E-04	2E-07	5E-07	3E-07	3E-07	1E-07	7E-09	2E-07	0E+00	2E-07	3E-08	4.0E-07	0.397	0.0001
3.40717	0.0009	4E-04	1E-07	4E-07	2E-07	2E-07	1E-07	5E-09	1E-07	0E+00	1E-07	2E-08	3.0E-07	0.299	7.9E-05	5E-04	2E-07	6E-07	3E-07	3E-07	1E-07	7E-09	2E-07	0E+00	2E-07	3E-08	4.1E-07	0.406	0.00011
3.53508	0.00093	4E-04	1E-07	4E-07	2E-07	2E-07	1E-07	5E-09	1E-07	0E+00	1E-07	2E-08	3.0E-07	0.305	8E-05	5E-04	2E-07	6E-07	3E-07	3E-07	1E-07	7E-09	2E-07	0E+00	2E-07	3E-08	4.2E-07	0.417	0.00011
3.68093	0.00097	4E-04	1E-07	4E-07	2E-07	2E-07	1E-07	6E-09	1E-07	0E+00	1E-07	2E-08	3.1E-07	0.311	8.2E-05	6E-04	2E-07	6E-07	3E-07	3E-07	1E-07	8E-09	2E-07	0E+00	2E-07	3E-08	4.3E-07	0.430	0.00011
3.88585	0.00102	4E-04	1E-07	4E-07	3E-07	2E-07	1E-07	6E-09	1E-07	0E+00	2E-07	2E-08	3.2E-07	0.322	8.5E-05	6E-04	2E-07	6E-07	4E-07	3E-07	1E-07	8E-09	2E-07	0E+00	2E-07	3E-08	4.5E-07	0.449	0.00012
4.11065	0.00108	4E-04	2E-07	5E-07	3E-07	2E-07	1E-07	6E-09	1E-07	0E+00	2E-07	2E-08	3.3E-07	0.335	8.8E-05	6E-04	2E-07	6E-07	4E-07	3E-07	2E-07	8E-09	2E-07	0E+00	2E-07	3E-08	4.7E-07	0.470	0.00012
4.35513	0.00115	5E-04	2E-07	5E-07	3E-07	3E-07	1E-07	6E-09	2E-07	0E+00	2E-07	3E-08	3.5E-07	0.348	9.2E-05	6E-04	2E-07	7E-07	4E-07	4E-07	2E-07	9E-09	2E-07	0E+00	2E-07	4E-08	4.9E-07	0.492	0.00013
4.61861	0.00122	5E-04	2E-07	5E-07	3E-07	3E-07	1E-07	6E-09	2E-07	0E+00	2E-07	3E-08	3.6E-07	0.361	9.5E-05	7E-04	2E-07	7E-07	4E-07	4E-07	2E-07	9E-09	2E-07	0E+00	2E-07	4E-08	5.1E-07	0.514	0.00014
4.91487	0.00129	5E-04	2E-07	5E-07	3E-07	3E-07	1E-07	7E-09	2E-07	0E+00	2E-07	3E-08	3.8E-07	0.380	0.0001	7E-04	2E-07	8E-07	4E-07	4E-07	2E-07	1E-08	2E-07	0E+00	3E-07	4E-08	5.5E-07	0.546	0.00014
5.20571	0.00137	5E-04	2E-07	5E-07	3E-07	3E-07	1E-07	7E-09	2E-07	0E+00	2E-07	3E-08	4.0E-07	0.397	0.0001	8E-04	3E-07	8E-07	5E-07	4E-07	2E-07	1E-08	3E-07	0E+00	3E-07	4E-08	5.8E-07	0.578	0.00015
5.42442	0.00143	5E-04	2E-07	6E-07	3E-07	3E-07	1E-07	7E-09	2E-07	0E+00	2E-07	3E-08	4.1E-07	0.408	0.00011	8E-04	3E-07	8E-07	5E-07	4E-07	2E-07	1E-08	3E-07	0E+00	3E-07	4E-08	6.0E-07	0.599	0.00016
5.63314	0.00148	6E-04	2E-07	6E-07	3E-07	3E-07	1E-07	8E-09	2E-07	0E+00	2E-07	3E-08	4.2E-07	0.421	0.00011	8E-04	3E-07	9E-07	5E-07	5E-07	2E-07	1E-08	3E-07	0E+00	3E-07	5E-08	6.3E-07	0.626	0.00017
5.97596	0.00157	6E-04	2E-07	6E-07	4E-07	3E-07	1E-07	8E-09	2E-07	0E+00	2E-07	3E-08	4.5E-07	0.449	0.00012	9E-04	3E-07	9E-07	5E-07	5E-07	2E-07	1E-08	3E-07	0E+00	3E-07	5E-08	6.8E-07	0.681	0.00018
6.43196	0.00169	7E-04	2E-07	7E-07	4E-07	4E-07	2E-07	9E-09	2E-07	0E+00	2E-07	4E-08	4.9E-07	0.494	0.00013	1E-03	4E-07	1E-06	6E-07	6E-07	3E-07	1E-08	3E-07	0E+00	4E-07	6E-08	7.8E-07	0.780	0.00021
0.42341	0.00173	7E-04	0E+00	6E-08	3E-08	3E-08	1E-08	0E+00	2E-08	1E-08	0E+00	1E-09	3.2E-08	0.032	0.00013	1E-03	0E+00	1E-07	5E-08	4E-08	2E-08	0E+00	3E-08	2E-08	0E+00	2E-09	5.1E-08	0.051	0.00021
0.42877	0.00176	7E-04	0E+00	6E-08	3E-08	3E-08	1E-08	0E+00	2E-08	1E-08	0E+00	1E-09	3.2E-08	0.032	0.00013	1E-03	0E+00	1E-07	5E-08	4E-08	2E-08	0E+00	3E-08	2E-08	0E+00	2E-09	5.1E-08	0.051	0.00021
0.43023	0.00176	7E-04	0E+00	6E-08	3E-08	3E-08	1E-08	0E+00	2E-08	1E-08	0E+00	1E-09	3.2E-08	0.032	0.00013	1E-03	0E+00	1E-07	5E-08	4E-08	2E-08	0E+00	3E-08	2E-08	0E+00	2E-09	5.0E-08	0.050	0.00021
0.43661	0.00179	7E-04	0E+00	6E-08	3E-08	3E-08	1E-08	0E+00	2E-08	1E-08	0E+00	1E-09	3.3E-08	0.033	0.00013	1E-03	0E+00	1E-07	5E-08	4E-08	2E-08	0E+00	3E-08	2E-08	0E+00	2E-09	5.1E-08	0.051	0.00021
0.75959	0.0002	9E-05	3E-08	9E-08	5E-08	5E-08	2E-08	1E-09	3E-08	0E+00	3E-08	5E-09	6.7E-08	0.067	1.8E-05	1E-04	4E-08	1E-07	7E-08	6E-08	3E-08	2E-09	4E-08	0E+00	4E-08	6E-09	8.7E-08	0.087	2.3E-05
0.7808	0.00021	9E-05	3E-08	1E-07	6E-08	5E-08	2E-08	1E-09	3E-08	0E+00	3E-08	5E-09	7.0E-08	0.070	1.8E-05	1E-04	4E-08	1E-07	7E-08	7E-08	3E-08	2E-09	4E-08	0E+00	4E-08	7E-09	9.0E-08	0.090	2.4E-05
0.7808	0.00021	9E-05	3E-08	1E-07	6E-08	5E-08	2E-08	1E-09	3E-08	0E+00	3E-08	5E-09	7.0E-08	0.070	1.8E-05	1E-04	4E-08	1E-07	7E-08	7E-08	3E-08	2E-09	4E-08	0E+00	4E-08	7E-09	9.0E-08	0.090	2.4E-05
0.79144	0.00021	9E-05	3E-08	1E-07	6E-08	5E-08	2E-08	1E-09	3E-08	0E+00	3E-08	5E-09	7.1E-08	0.071	1.9E-05	1E-04	4E-08	1E-07	7E-08	7E-08	3E-08	2E-09	4E-08	0E+00	4E-08	7E-09	9.2E-08	0.092	2.4E-05
0.81619	0.00022	1E-04	3E-08	1E-07	6E-08	5E-08	2E-08	1E-09	3E-08	0E+00	4E-08	5E-09	7.4E-08	0.074	2E-05	1E-04	4E-08	1E-07	8E-08	7E-08	3E-08	2E-09	4E-08	0E+00	5E-08	7E-09	9.5E-08	0.095	2.5E-05
0.85168	0.00022	1E-04	4E-08	1E-07	6E-08	6E-08	3E-08	1E-09	3E-08	0E+00	4E-08	6E-09	7.9E-08	0.079	2.1E-05	1E-04	5E-08	1E-07	8E-08	7E-08	3E-08	2E-09	4E-08	0E+00	5E-08	7E-09	1.0E-07	0.101	2.7E-05
0.8902	0.00023	1E-04	4E-08	1E-07	7E-08	6E-08	3E-08	1E-09	4E-08	0E+00	4E-08	6E-09	8.4E-08	0.084	2.2E-05	1E-04	5E-08	1E-07	8E-08	8E-08	4E-08	2E-09	5E-08	0E+00	5E-08	8E-09	1.1E-07	0.107	2.8E-05
0.93384	0.00025	1E-04	4E-08	1E-07	7E-08	6E-08	3E-08	2E-09	4E-08	0E+00	4E-08	6E-09	8.9E-08	0.089	2.4E-05	1E-04	5E-08	2E-07	9E-08	8E-08	4E-08	2E-09	5E-08	0E+00	5E-08	8E-09	1.1E-07	0.113	3E-05
0.99648	0.00026	1E-04	4E-08	1E-07	8E-08	7E-08	3E-08	2E-09	4E-08	0E+00	5E-08	7E-09	9.7E-08	0.097	2.6E-05	2E-04	6E-08	2E-07	1E-07	9E-08	4E-08	2E-09	5E-08	0E+00	6E-08	9E-09	1.2E-07	0.122	3.2E-05
1.04052	0.00027	1E-04	5E-08	1E-07	8E-08	7E-08	3E-08	2E-09	4E-08	0E+00	5E-08	7E-09	1.0E-07	0.103	2.7E-05	2E-04	6E-08	2E-07	1E-07	9E-08	4E-08	2E-09	6E-08	0E+00	6E-08	9E-09	1.3E-07	0.129	3.4E-05
1.08199	0.00029	1E-04	5E-08	1E-07	9E-08	8E-08	4E-08	2E-09	5E-08	0E+00	5E-08	8E-09	1.1E-07	0.109	2.9E-05	2E-04	6E-08	2E-07	1E-07	1E-07	4E-08	2E-09	6E-08	0E+00	6E-08	1E-08	1.4E-07	0.135	3.6E-05
1.12223	0.0003	2E-04	5E-08	2E-07	9E-08	8E-08	4E-08	2E-09	5E-08	0E+00	5E-08	8E-09	1.1E-07	0.114	3E-05	2E-04	6E-08	2E-07	1E-07	1E-07	5E-08	3E-09	6E-08	0E+00	7E-08	1E-08	1.4E-07	0.142	3.7E-05
1.17926	0.00031	2E-04	6E-08	2E-07	1E-07	9E-08	4E-08	2E-09	5E-08	0E+00	6E-08	9E-09	1.2E-07	0.123	3.2E-05	2E-04	7E-08	2E-07	1E-07	1E-07	5E-08	3E-09	7E-08	0E+00	7E-08	1E-08	1.5E-07	0.151	4E-05
1.23692	0.00033	2E-04	6E-08	2E-07	1E-07	9E-08	4E-08	2E-09	6E-08	0E+00	6E-08	9E-09	1.3E-07	0.131	3.4E-05	2E-04	7E-08	2E-07	1E-07	1E-07	5E-08	3E-09	7E-08	0E+00	8E-08	1E-08	1.6E-07	0.161	4.2E-05
0.08185	0.00034	2E-04	0E+00	2E-08	9E-09	7E-09	3E-09	0E+00	5E-09	3E-09	0E+00	3E-10	8.7E-09	0.009	3.6E-05	2E-04	0E+00	2E-08	1E-08	9E-09	4E-09	0E+00	7E-09	4E-09	0E+00	4E-10	1.1E-08	0.011	4.4E-05
3.23145	0.00085	4E-04	1E-07	4E-07	2E-07	2E-07	1E-07	5E-09	1E-07	0E+00	1E-07	2E-08	2.9E-07	0.291	7.7E-05	5E-04	2E-07	5E-07	3E-07	3E-07	1E-07	7E-09	2E-07	0E+00	2E-07	3E-08	3.9E-07	0.388	0.0001
3.20326	0.00084	4E-04	1E-07	4E-07	2E-07	2E-07	9E-08	5E-09	1E-07	0E+00	1E-07	2E-08	2.8E-07	0.285	7.5E-05	5E-04	2E-07	5E-07	3E-07	3E-07	1E-07	7E-09	2E-07	0E+00	2E-07	3E-08	3.8E-07	0.383	0.0001
3.27823	0.00086	4E-04	1E-07	4E-07	2E-07	2E-07	9E-08	5E-09	1E-07	0E+00	1E-07	2E-08	2.9E-07	0.287	7.6E-05	5E-04	2E-07	5E-07	3E-07	3E-07	1E-07	7E-09	2E-07	0E+00	2E-07	3E-08	3.9E-07	0.390	0.0001
3.40325	0.0009	4E-04	1E-07	4E-07	2E-07	2E-07	1E-07	5E-09	1E-07	0E+00	1E-07	2E-08	2.9E-07	0.293	7.7E-05	5E-04	2E-07	6E-07	3E-07	3E-07	1E-07	7E-09	2E-07	0E+00	2E-07	3E-08	4.0E-07	0.401	0.00011
3.55801	0.00094	4E-04	1E-07	4E-07	2E-07	2E-07	1E-07	5E-09	1E-07	0E+00	1E-07	2E-08	3.0E-07	0.300	7.9E-05	5E-04	2E-07	6E-07	3E-07	3E-07	1E-07	7E-09	2E-07	0E+00	2E-07	3E-08	4.1E-07	0.414	0.00011
3.74095	0.00099	4E-04	1E-07	4E-07	2E-07	2E-07	1E-07	6E-09	1E-07	0E+00	1E-07	2E-08	3.1E-07	0.309	8.2E-05	6E-04	2E-07	6E-07	3E-07	3E-07	1E-07	8E-09	2E-07	0E+00	2E-07	3E-08	4.3E-07	0.430	0.00011
5.00009	0.00132	5E-04	2E-07	5E-07	3E-07	3E-07	1E-07	7E-09	2E-07	0E+00	2E-07	3E-08	3.8E-07	0.383	0.0001	7E-04	3E-07	8E-07	4E-07	4E-07	2E-07	1E-08	2E-07	0E+00	3E-07	4E-08	5.6E-07	0.558	0.00015
5.28663	0.00139	5E-04	2E-07	6E-07	3E-07	3E-07	1E-07	7E-09	2E-07	0E+00	2E-07	3E-08	4.0E-07	0.403	0.00011	8E-04	3E-07	8E-07	5E-07	4E-07	2E-07	1E-08	3E-07	0E+00	3E-07	4E-08	6.0E-07	0.597	0.00016
5.48703	0.00145	5E-04	2E-07	6E-07	3E-07	3E-07	1E-07	7E-09	2E-07	0E+00	2E-07	3E-08	4.1E-07	0.414	0.00011	8E-04	3E-07	9E-07	5E-07	4E-07	2E-07	1E-08	3E-07	0E+00	3E-07	4E-08	6.2E-07	0.620	0.00016
5.75373	0.00152	6E-04	2E-07	6E-07	3E-07	3E-07	1E-07	8E-09	2E-07	0E+00	2E-07	3E-08	4.3E-07	0.435	0.00011	9E-04	3E-07	9E-07	5E-07	5E-07	2E-07	1E-08	3E-07	0E+00	3E-07	5E-08	6.6E-07	0.663	0.00017
6.1521	0.00162	6E-04	2E-07	7E-07	4E-07	3E-07	2E-07	8E-09	2E-07	0E+00	2E-07	3E-08	4.7E-07	0.474	0.00012	1E-03	3E-07	1E-06	6E-07	5E-07	2E-07	1E-08	3E-07	0E+00	4E-07	5E-08	7.5E-07	0.749	0.0002
0.39908	0.00163	6E-04	0E+00	6E-08	3E-08	3E-08	1E-08	0E+00	2E-08	1E-08	0E+00	1E-09	3.0E-08	0.030	0.00012	1E-03	0E+00	9E-08	5E-08	4E-08	2E-08	0E+00	3E-08	2E-08	0E+00	2E-09	4.7E-08	0.047	0.00019
0.40409	0.00166	6E-04	0E+00	6E-08	3E-08	3E-08	1E-08	0E+00	2E-08	1E-08	0E+00	1E-09	3.0E-08	0.030	0.00012	1E-03	0E+00	9E-08	5E-08	4E-08	2E-08	0E+00	3E-08	2E-08	0E+00	2E-09	4.8E-08	0.048	0.00019
0.41489	0.0017	6E-04	0E+00	6E-08	3E-08	3E-08	1E-08	0E+00	2E-08	1E-08	0E+00	1E-09	3.1E-08	0.031	0.00013	1E-03	0E+00	1E-07	5E-08	4E-08	2E-08	0E+00	3E-08	2E-08	0E+00	2E-09	4.9E-08	0.049	0.0002
0.41578	0.0017	6E-04	0E+00	6E-08	3E-08	3E-08	1E-08	0E+00	2E-08	1E-08	0E+00	1E-09	3.1E-08	0.031	0.00013	1E-03	0E+00	1E-07	5E-08	4E-08	2E-08	0E+00	3E-08	2E-08	0E+00	2E-09	4.8E-08	0.048	0.0002
0.76861	0.0002	9E-05	3E-08	9E-08	5E-08	5E-08	2E-08	1E-09	3E-08	0E+00	3E-08	5E-09	6.9E-08	0.069	1.8E-05	1E-04	4E-08	1E-07	7E-08	6E-08	3E-08	2E-09	4E-08	0E+00	4E-08	6E-09	8.9E-08	0.089	2.3E-05
0.77174	0.0002	9E-05	3E-08	1E-07	6E-08	5E-08	2E-08	1E-09	3E-08	0E+00	3E-08	5E-09	6.9E-08	0.069	1.8E-05	1E-04	4E-08	1E-07	7E-08	6E-08	3E-08	2E-09	4E-08	0E+00	4E-08	6E-09	8.9E-08	0.089	2.3E-05
0.77068	0.0002	9E-05	3E-08	1E-07	6E-08	5E-08	2E-08	1E-09	3E-08	0E+00	3E-08	5E-09	6.9E-08	0.069	1.8E-05	1E-04	4E-08	1E-07	7E-08	6E-08	3E-08	2E-09	4E-08	0E+00	4E-08	6E-09	8.9E-08	0.089	2.3E-05
0.79939	0.00021	1E-04	3E-08	1E-07	6E-08	5E-08	2E-08	1E-09	3E-08	0E+00	3E-08	5E-09	7.3E-08	0.073	1.9E-05	1E-04	4E-08	1E-07	7E-08	7E-08	3E-08	2E-09	4E-08	0E+00	4E-08	7E-09	9.3E-08	0.093	2.5E-05
0.84061	0.00022	1E-04	4E-08	1E-07	6E-08	6E-08	3E-08	1E-09	3E-08	0E+00	4E-08	6E-09	7.8E-08	0.078	2E-05	1E-04	5E-08	1E-07	8E-08	7E-08	3E-08	2E-09	4E-08	0E+00	5E-08	7E-09	9.9E-08	0.099	2.6E-05
0.89636	0.00024	1E-04	4E-08	1E-07	7E-08	6E-08	3E-08	2E-09	4E-08	0E+00	4E-08	6E-09	8.4E-08	0.084	2.2E-05	1E-04	5E-08	1E-07	9E-08	8E-08	4E-08	2E-09	5E-08	0E+00	5E-08	8E-09	1.1E-07	0.108	2.8E-05
0.9293	0.00024	1E-04	4E-08	1E-07	7E-08	6E-08	3E-08	2E-09	4E-08	0E+00	4E-08	6E-09	8.9E-08	0.089	2.3E-05	1E-04	5E-08	2E-07	9E-08	8E-08	4E-08	2E-09	5E-08	0E+00	5E-08	8E-09	1.1E-07	0.112	3E-05
0.94398	0.00025	1E-04	4E-08	1E-07	7E-08	7E-08	3E-08	2E-09	4E-08	0E+00	4E-08	7E-09	9.1E-08	0.091	2.4E-05	2E-04	5E-08	2E-07	9E-08	8E-08	4E-08	2E-09	5E-08	0E+00	5E-08	8E-09	1.1E-07	0.115	3E-05
0.9853	0.00026	1E-04	4E-08	1E-07	8E-08	7E-08	3E-08	2E-09	4E-08	0E+00	5E-08	7E-09	9.6E-08	0.096	2.5E-05	2E-04	6E-08	2E-07	1E-07	9E-08	4E-08	2E-09	5E-08	0E+00	6E-08	9E-09	1.2E-07	0.121	3.2E-05
1.04859	0.00028	1E-04	5E-08	1E-07	8E-08	8E-08	3E-08	2E-09	5E-08	0E+00	5E-08	8E-09	1.0E-07	0.104	2.8E-05	2E-04	6E-08	2E-07	1E-07	9E-08	4E-08	2E-09	6E-08	0E+00	6E-08	9E-09	1.3E-07	0.130	3.4E-05
1.09086	0.00029	1E-04	5E-08	2E-07	9E-08	8E-08	4E-08	2E-09	5E-08	0E+00	5E-08	8E-09	1.1E-07	0.110	2.9E-05	2E-04	6E-08	2E-07	1E-07	1E-07	5E-08	2E-09	6E-08	0E+00	7E-08	1E-08	1.4E-07	0.137	3.6E-05
1.13785	0.0003	2E-04	5E-08	2E-07	9E-08	8E-08	4E-08	2E-09	5E-08	0E+00	6E-08	8E-09	1.2E-07	0.117	3.1E-05	2E-04	7E-08	2E-07	1E-07	1E-07	5E-08	3E-09	6E-08	0E+00	7E-08	1E-08	1.4E-07	0.144	3.8E-05
1.188	0.00031	2E-04	6E-08	2E-07	1E-07	9E-08	4E-08	2E-09	5E-08	0E+00	6E-08	9E-09	1.2E-07	0.124	3.3E-05	2E-04	7E-08	2E-07	1E-07	1E-07	5E-08	3E-09	7E-08	0E+00	7E-08	1E-08	1.5E-07	0.153	4E-05
1.23342	0.00032	2E-04	6E-08	2E-07	1E-07	9E-08	4E-08	2E-09	6E-08	0E+00	6E-08	9E-09	1.3E-07	0.131	3.4E-05	2E-04	7E-08	2E-07	1E-07	1E-07	5E-08	3E-09	7E-08	0E+00	8E-08	1E-08	1.6E-07	0.160	4.2E-05
0.11718	0.00048	3E-04	0E+00	3E-08	1E-08	1E-08	6E-09	0E+00	9E-09	5E-09	0E+00	5E-10	1.4E-08	0.014	5.8E-05	3E-04	0E+00	3E-08	2E-08	1E-08	7E-09	0E+00	1E-08	6E-09	0E+00	6E-10	1.7E-08	0.017	6.9E-05
0.15514	0.00064	4E-04	0E+00	3E-08	2E-08	2E-08	7E-09	0E+00	1E-08	6E-09	0E+00	7E-10	1.8E-08	0.018	7.2E-05	4E-04	0E+00	4E-08	2E-08	2E-08	8E-09	0E+00	1E-08	7E-09	0E+00	8E-10	2.1E-08	0.021	8.6E-05
3.0306	0.0008	4E-04	1E-07	4E-07	2E-07	2E-07	9E-08	5E-09	1E-07	0E+00	1E-07	2E-08	2.8E-07	0.275	7.3E-05	5E-04	2E-07	5E-07	3E-07	3E-07	1E-07	7E-09	2E-07	0E+00	2E-07	3E-08	3.7E-07	0.366	9.6E-05
3.07609	0.00081	4E-04	1E-07	4E-07	2E-07	2E-07	9E-08	5E-09	1E-07	0E+00	1E-07	2E-08	2.8E-07	0.276	7.3E-05	5E-04	2E-07	5E-07	3E-07	3E-07	1E-07	7E-09	2E-07	0E+00	2E-07	3E-08	3.7E-07	0.368	9.7E-05
3.09037	0.00081	4E-04	1E-07	4E-07	2E-07	2E-07	9E-08	5E-09	1E-07	0E+00	1E-07	2E-08	2.7E-07	0.274	7.2E-05	5E-04	2E-07	5E-07	3E-07	3E-07	1E-07	7E-09	2E-07	0E+00	2E-07	3E-08	3.7E-07	0.369	9.7E-05
3.16398	0.00083	4E-04	1E-07	4E-07	2E-07	2E-07	9E-08	5E-09	1E-07	0E+00	1E-07	2E-08	2.8E-07	0.276	7.3E-05	5E-04	2E-07	5E-07	3E-07	3E-07	1E-07	7E-09	2E-07	0E+00	2E-07	3E-08	3.7E-07	0.375	9.9E-05
3.27127	0.00086	4E-04	1E-07	4E-07	2E-07	2E-07	9E-08	5E-09	1E-07	0E+00	1E-07	2E-08	2.8E-07	0.280	7.4E-05	5E-04	2E-07	5E-07	3E-07	3E-07	1E-07	7E-09	2E-07	0E+00	2E-07	3E-08	3.8E-07	0.383	0.0001
3.4341	0.0009	4E-04	1E-07	4E-07	2E-07	2E-07	1E-07	5E-09	1E-07	0E+00	1E-07	2E-08	2.9E-07	0.288	7.6E-05	5E-04	2E-07	5E-07	3E-07	3E-07	1E-07	7E-09	2E-07	0E+00	2E-07	3E-08	4.0E-07	0.398	0.0001
3.61384	0.00095	4E-04	1E-07	4E-07	2E-07	2E-07	1E-07	5E-09	1E-07	0E+00	1E-07	2E-08	3.0E-07	0.298	7.8E-05	5E-04	2E-07	6E-07	3E-07	3E-07	1E-07	7E-09	2E-07	0E+00	2E-07	3E-08	4.1E-07	0.414	0.00011
0.75883	0.0002	9E-05	3E-08	9E-08	5E-08	5E-08	2E-08	1E-09	3E-08	0E+00	3E-08	5E-09	6.8E-08	0.068	1.8E-05	1E-04	4E-08	1E-07	7E-08	6E-08	3E-08	2E-09	4E-08	0E+00	4E-08	6E-09	8.7E-08	0.087	2.3E-05
0.74861	0.0002	9E-05	3E-08	9E-08	5E-08	5E-08	2E-08	1E-09	3E-08	0E+00	3E-08	5E-09	6.7E-08	0.067	1.8E-05	1E-04	4E-08	1E-07	7E-08	6E-08	3E-08	2E-09	4E-08	0E+00	4E-08	6E-09	8.6E-08	0.086	2.3E-05
0.78108	0.00021	9E-05	3E-08	1E-07	6E-08	5E-08	2E-08	1E-09	3E-08	0E+00	3E-08	5E-09	7.1E-08	0.071	1.9E-05	1E-04	4E-08	1E-07	7E-08	7E-08	3E-08	2E-09	4E-08	0E+00	4E-08	7E-09	9.1E-08	0.091	2.4E-05
0.82547	0.00022	1E-04	3E-08	1E-07	6E-08	5E-08	3E-08	1E-09	3E-08	0E+00	4E-08	6E-09	7.6E-08	0.076	2E-05	1E-04	4E-08	1E-07	8E-08	7E-08	3E-08	2E-09	4E-08	0E+00	5E-08	7E-09	9.7E-08	0.097	2.6E-05
0.86876	0.00023	1E-04	4E-08	1E-07	6E-08	6E-08	3E-08	1E-09	4E-08	0E+00	4E-08	6E-09	8.1E-08	0.081	2.1E-05	1E-04	5E-08	1E-07	8E-08	7E-08	3E-08	2E-09	4E-08	0E+00	5E-08	8E-09	1.0E-07	0.104	2.7E-05
0.87165	0.00023	1E-04	4E-08	1E-07	7E-08	6E-08	3E-08	1E-09	4E-08	0E+00	4E-08	6E-09	8.2E-08	0.082	2.2E-05	1E-04	5E-08	1E-07	8E-08	8E-08	3E-08	2E-09	5E-08	0E+00	5E-08	8E-09	1.0E-07	0.104	2.8E-05
0.88761	0.00023	1E-04	4E-08	1E-07	7E-08	6E-08	3E-08	2E-09	4E-08	0E+00	4E-08	6E-09	8.4E-08	0.084	2.2E-05	1E-04	5E-08	1E-07	9E-08	8E-08	4E-08	2E-09	5E-08	0E+00	5E-08	8E-09	1.1E-07	0.107	2.8E-05
0.93703	0.00025	1E-04	4E-08	1E-07	7E-08	7E-08	3E-08	2E-09	4E-08	0E+00	4E-08	7E-09	9.0E-08	0.090	2.4E-05	2E-04	5E-08	2E-07	9E-08	8E-08	4E-08	2E-09	5E-08	0E+00	5E-08	8E-09	1.1E-07	0.114	3E-05
1.00981	0.00027	1E-04	5E-08	1E-07	8E-08	7E-08	3E-08	2E-09	4E-08	0E+00	5E-08	7E-09	1.0E-07	0.100	2.6E-05	2E-04	6E-08	2E-07	1E-07	9E-08	4E-08	2E-09	5E-08	0E+00	6E-08	9E-09	1.2E-07	0.125	3.3E-05
1.0549	0.00028	1E-04	5E-08	1E-07	8E-08	8E-08	3E-08	2E-09	5E-08	0E+00	5E-08	8E-09	1.1E-07	0.106	2.8E-05	2E-04	6E-08	2E-07	1E-07	1E-07	4E-08	2E-09	6E-08	0E+00	6E-08	1E-08	1.3E-07	0.132	3.5E-05
1.09969	0.00029	1E-04	5E-08	2E-07	9E-08	8E-08	4E-08	2E-09	5E-08	0E+00	5E-08	8E-09	1.1E-07	0.112	3E-05	2E-04	6E-08	2E-07	1E-07	1E-07	5E-08	2E-09	6E-08	0E+00	7E-08	1E-08	1.4E-07	0.139	3.7E-05
1.14546	0.0003	2E-04	5E-08	2E-07	9E-08	9E-08	4E-08	2E-09	5E-08	0E+00	6E-08	9E-09	1.2E-07	0.119	3.1E-05	2E-04	7E-08	2E-07	1E-07	1E-07	5E-08	3E-09	6E-08	0E+00	7E-08	1E-08	1.5E-07	0.146	3.9E-05
1.1797	0.00031	2E-04	6E-08	2E-07	1E-07	9E-08	4E-08	2E-09	5E-08	0E+00	6E-08	9E-09	1.2E-07	0.124	3.3E-05	2E-04	7E-08	2E-07	1E-07	1E-07	5E-08	3E-09	7E-08	0E+00	7E-08	1E-08	1.5E-07	0.152	4E-05
1.20917	0.00032	2E-04	6E-08	2E-07	1E-07	9E-08	4E-08	2E-09	6E-08	0E+00	6E-08	9E-09	1.3E-07	0.128	3.4E-05	2E-04	7E-08	2E-07	1E-07	1E-07	5E-08	3E-09	7E-08	0E+00	7E-08	1E-08	1.6E-07	0.157	4.1E-05
1.25519	0.00033	2E-04	6E-08	2E-07	1E-07	1E-07	4E-08	2E-09	6E-08	0E+00	6E-08	1E-08	1.3E-07	0.134	3.5E-05	2E-04	7E-08	2E-07	1E-07	1E-07	5E-08	3E-09	7E-08	0E+00	8E-08	1E-08	1.6E-07	0.164	4.3E-05
1.28452	0.00034	2E-04	6E-08	2E-07	1E-07	1E-07	5E-08	2E-09	6E-08	0E+00	7E-08	1E-08	1.4E-07	0.139	3.7E-05	2E-04	8E-08	2E-07	1E-07	1E-07	6E-08	3E-09	7E-08	0E+00	8E-08	1E-08	1.7E-07	0.169	4.5E-05
1.31207	0.00035	2E-04	7E-08	2E-07	1E-07	1E-07	5E-08	3E-09	6E-08	0E+00	7E-08	1E-08	1.4E-07	0.143	3.8E-05	2E-04	8E-08	2E-07	1E-07	1E-07	6E-08	3E-09	8E-08	0E+00	8E-08	1E-08	1.7E-07	0.174	4.6E-05
0.11245	0.00046	3E-04	0E+00	3E-08	1E-08	1E-08	5E-09	0E+00	8E-09	5E-09	0E+00	5E-10	1.3E-08	0.013	5.5E-05	3E-04	0E+00	3E-08	2E-08	1E-08	6E-09	0E+00	1E-08	5E-09	0E+00	6E-10	1.6E-08	0.016	6.5E-05
0.11372	0.00047	3E-04	0E+00	3E-08	1E-08	1E-08	5E-09	0E+00	8E-09	5E-09	0E+00	5E-10	1.4E-08	0.014	5.6E-05	3E-04	0E+00	3E-08	2E-08	1E-08	6E-09	0E+00	1E-08	6E-09	0E+00	6E-10	1.6E-08	0.016	6.6E-05
0.11705	0.00048	3E-04	0E+00	3E-08	1E-08	1E-08	6E-09	0E+00	9E-09	5E-09	0E+00	5E-10	1.4E-08	0.014	5.8E-05	3E-04	0E+00	3E-08	2E-08	1E-08	7E-09	0E+00	1E-08	6E-09	0E+00	6E-10	1.7E-08	0.017	6.8E-05
0.12079	0.00049	3E-04	0E+00	3E-08	2E-08	1E-08	6E-09	0E+00	9E-09	5E-09	0E+00	5E-10	1.5E-08	0.015	6E-05	4E-04	0E+00	3E-08	2E-08	1E-08	7E-09	0E+00	1E-08	6E-09	0E+00	6E-10	1.7E-08	0.017	7.1E-05
0.1234	0.00051	3E-04	0E+00	3E-08	2E-08	1E-08	6E-09	0E+00	9E-09	5E-09	0E+00	6E-10	1.5E-08	0.015	6.1E-05	4E-04	0E+00	3E-08	2E-08	2E-08	7E-09	0E+00	1E-08	6E-09	0E+00	7E-10	1.8E-08	0.018	7.2E-05
0.1254	0.00051	3E-04	0E+00	3E-08	2E-08	1E-08	6E-09	0E+00	9E-09	5E-09	0E+00	6E-10	1.5E-08	0.015	6.2E-05	4E-04	0E+00	4E-08	2E-08	2E-08	7E-09	0E+00	1E-08	6E-09	0E+00	7E-10	1.8E-08	0.018	7.4E-05
0.12571	0.00051	3E-04	0E+00	3E-08	2E-08	1E-08	6E-09	0E+00	9E-09	5E-09	0E+00	6E-10	1.5E-08	0.015	6.3E-05	4E-04	0E+00	4E-08	2E-08	2E-08	7E-09	0E+00	1E-08	6E-09	0E+00	7E-10	1.8E-08	0.018	7.4E-05
0.12891	0.00053	3E-04	0E+00	3E-08	2E-08	1E-08	6E-09	0E+00	1E-08	5E-09	0E+00	6E-10	1.6E-08	0.016	6.5E-05	4E-04	0E+00	4E-08	2E-08	2E-08	7E-09	0E+00	1E-08	6E-09	0E+00	7E-10	1.9E-08	0.019	7.6E-05

TAMT_HRA_Existing
DPM_annl

AERMOD Output	X	Y	B10_1_AUX	B10_2_AUX	B10_3_AUX	B10_4_AUX	B10_5_AUX	B10_6_AUX	B10_7_AUX	B10_8_AUX	CHE_1	LOC_SWTCH EMP	LOC_SWTCH LOA	OGV_PATH _BLR	OGV_PATH _DPM	TR_28TH	TR_BAYMA R	TR_BOSTON	TR_CROSBY	TR_HARBOR CHA	TR_HARBOR SAM	TUG_PATH_ DPM	B10_1_AUX	B10_2_AUX	B10_3_AUX	B10_4_AUX	B10_5_AUX	B10_6_AUX	B10_7_AUX	B10_8_AUX	CHE_1	LOC_SWTCHE MP	LOC_SWTCHL OA	OGV_PATH_ DPM	TR_28TH	TR_BAYMAR	TR_BOSTON	TR_CROSBY	TR_HARBOR CHA	TR_HARBOR SAM	TUG_PATH_D PM	All	Refrigerated ContainersExisting	Multi-Purpose General CargoExisting	Dry BulkExisting	All	Refrigerated ContainersExisting	Multi-Purpose General CargoExisting	Dry BulkExisting	All	Refrigerated ContainersExisting
																							Refrigerated ContainersExisting	Refrigerated ContainersExisting	Refrigerated ContainersExisting	Refrigerated ContainersExisting	Multi-Purpose General CargoExisting	Multi-Purpose General CargoExisting	Dry BulkExisting	Dry BulkExisting	AllExisting	AllExisting	AllExisting	AllExisting	TR_28THExisting	TR_BAYMARExisting	TR_BOSTONExisting	TR_CROSBYExisting	TR_HARBORCHAExisting	TR_HARBORSAMExisting	AllExisting	100%	89%	5%	6%	100%	73%	12%	15%	100%	57%
												Source Group in AERMOD										g/s -->	1.4E-02	1.4E-02	1.4E-02	1.4E-02	1.6E-03	1.6E-03	1.8E-03	1.8E-03	1.5E-08	1.8E-04	1.8E-04	7.6E-03	4.4E-06	7.1E-06	1.9E-05	4.0E-05	8.9E-05	8.9E-05	4.1E-04										
			1	3	5	7	9	11	13	15	17	18	19	20	21	22	23	24	25	26	27	28	1	3	5	7	9	11	13	15	17	18	19	21	22	23	24	25	26	27	28										
recreational	480831	3620825	2.4E-02	2.4E-02	2.3E-02	2.2E-02	2.0E-02	1.9E-02	1.9E-02	1.9E-02	8.3E+03	2.7E-02	2.6E-02	2.2E-01	2.2E-01	1.4E-02	5.7E-03	1.4E-02	1.7E-02	2.2E-02	1.4E-02	3.4E-01	3.4E-04	3.4E-04	3.2E-04	3.1E-04	3.2E-05	3.0E-05	3.4E-05	3.3E-05	1.3E-04	4.9E-06	4.6E-06	1.7E-03	6.2E-08	4.1E-08	2.6E-07	6.8E-07	2.0E-06	1.3E-06	1.4E-04	1E-03	1E-03	7E-05	8E-05	2E-03	1E-03	2E-04	2E-04	1E-04	8E-05
recreational	480931	3620825	2.5E-02	2.5E-02	2.4E-02	2.2E-02	2.1E-02	2.0E-02	2.0E-02	1.9E-02	8.5E+03	2.8E-02	2.6E-02	2.3E-01	2.3E-01	1.4E-02	5.7E-03	1.4E-02	1.7E-02	2.3E-02	1.4E-02	3.4E-01	3.5E-04	3.6E-04	3.3E-04	3.2E-04	3.2E-05	3.0E-05	3.5E-05	3.4E-05	1.3E-04	5.0E-06	4.7E-06	1.7E-03	6.3E-08	4.1E-08	2.7E-07	6.9E-07	2.0E-06	1.3E-06	1.4E-04	1E-03	1E-03	7E-05	8E-05	2E-03	1E-03	2E-04	3E-04	1E-04	8E-05
recreational	481031	3620825	2.6E-02	2.6E-02	2.4E-02	2.3E-02	2.1E-02	2.0E-02	2.0E-02	2.0E-02	8.6E+03	2.9E-02	2.7E-02	2.3E-01	2.3E-01	1.4E-02	5.8E-03	1.4E-02	1.7E-02	2.3E-02	1.5E-02	3.4E-01	3.6E-04	3.6E-04	3.4E-04	3.2E-04	3.3E-05	3.1E-05	3.5E-05	3.5E-05	1.3E-04	5.1E-06	4.7E-06	1.8E-03	6.3E-08	4.1E-08	2.7E-07	6.9E-07	2.0E-06	1.3E-06	1.4E-04	2E-03	1E-03	7E-05	8E-05	2E-03	1E-03	2E-04	3E-04	1E-04	8E-05
recreational	481131	3620825	2.6E-02	2.6E-02	2.4E-02	2.3E-02	2.2E-02	2.0E-02	2.0E-02	2.0E-02	8.7E+03	2.9E-02	2.7E-02	2.3E-01	2.3E-01	1.4E-02	5.8E-03	1.4E-02	1.8E-02	2.3E-02	1.5E-02	3.5E-01	3.7E-04	3.7E-04	3.4E-04	3.3E-04	3.3E-05	3.1E-05	3.6E-05	3.6E-05	1.3E-04	5.1E-06	4.9E-06	1.8E-03	6.4E-08	4.2E-08	2.7E-07	7.0E-07	2.1E-06	1.3E-06	1.4E-04	2E-03	1E-03	8E-05	9E-05	2E-03	1E-03	2E-04	3E-04	1E-04	8E-05
recreational	481231	3620825	2.6E-02	2.7E-02	2.5E-02	2.4E-02	2.2E-02	2.0E-02	2.0E-02	2.0E-02	8.8E+03	3.0E-02	2.8E-02	2.3E-01	2.3E-01	1.5E-02	5.9E-03	1.5E-02	1.8E-02	2.4E-02	1.5E-02	3.5E-01	3.7E-04	3.8E-04	3.5E-04	3.3E-04	3.4E-05	3.2E-05	3.6E-05	3.6E-05	1.3E-04	5.3E-06	4.9E-06	1.8E-03	6.4E-08	4.2E-08	2.7E-07	7.0E-07	2.1E-06	1.3E-06	1.4E-04	2E-03	1E-03	8E-05	9E-05	2E-03	1E-03	2E-04	3E-04	1E-04	8E-05
recreational	481331	3620825	2.7E-02	2.7E-02	2.5E-02	2.4E-02	2.2E-02	2.1E-02	2.1E-02	2.1E-02	8.9E+03	3.0E-02	2.8E-02	2.3E-01	2.3E-01	1.5E-02	5.9E-03	1.5E-02	1.8E-02	2.4E-02	1.5E-02	3.5E-01	3.8E-04	3.8E-04	3.5E-04	3.4E-04	3.4E-05	3.2E-05	3.7E-05	3.7E-05	1.3E-04	5.3E-06	5.0E-06	1.8E-03	6.5E-08	4.2E-08	2.7E-07	7.1E-07	2.1E-06	1.3E-06	1.4E-04	2E-03	1E-03	8E-05	9E-05	2E-03	1E-03	2E-04	3E-04	1E-04	8E-05
recreational	481431	3620825	2.7E-02	2.7E-02	2.5E-02	2.4E-02	2.2E-02	2.1E-02	2.1E-02	2.1E-02	9.0E+03	3.1E-02	2.9E-02	2.3E-01	2.3E-01	1.5E-02	6.0E-03	1.5E-02	1.8E-02	2.4E-02	1.5E-02	3.5E-01	3.8E-04	3.9E-04	3.6E-04	3.4E-04	3.5E-05	3.3E-05	3.7E-05	3.7E-05	1.4E-04	5.4E-06	5.1E-06	1.8E-03	6.6E-08	4.3E-08	2.8E-07	7.2E-07	2.1E-06	1.3E-06	1.4E-04	2E-03	1E-03	8E-05	9E-05	2E-03	1E-03	2E-04	3E-04	1E-04	8E-05
recreational	481531	3620825	2.7E-02	2.7E-02	2.5E-02	2.4E-02	2.2E-02	2.1E-02	2.1E-02	2.1E-02	9.1E+03	3.1E-02	2.9E-02	2.3E-01	2.3E-01	1.5E-02	6.1E-03	1.5E-02	1.8E-02	2.4E-02	1.5E-02	3.5E-01	3.8E-04	3.8E-04	3.6E-04	3.4E-04	3.5E-05	3.3E-05	3.7E-05	3.6E-05	1.4E-04	5.6E-06	5.2E-06	1.7E-03	6.6E-08	4.3E-08	2.8E-07	7.2E-07	2.2E-06	1.3E-06	1.4E-04	2E-03	1E-03	8E-05	9E-05	2E-03	1E-03	2E-04	3E-04	1E-04	8E-05
recreational	481631	3620825	2.7E-02	2.8E-02	2.6E-02	2.4E-02	2.3E-02	2.1E-02	2.1E-02	2.1E-02	9.3E+03	3.2E-02	3.0E-02	2.3E-01	2.3E-01	1.5E-02	6.1E-03	1.5E-02	1.8E-02	2.5E-02	1.5E-02	3.5E-01	3.9E-04	3.9E-04	3.6E-04	3.5E-04	3.5E-05	3.3E-05	3.8E-05	3.7E-05	1.4E-04	5.7E-06	5.3E-06	1.7E-03	6.7E-08	4.4E-08	2.8E-07	7.3E-07	2.2E-06	1.4E-06	1.4E-04	2E-03	1E-03	8E-05	9E-05	2E-03	1E-03	2E-04	2E-04	1E-04	8E-05
recreational	481731	3620825	2.8E-02	2.8E-02	2.6E-02	2.5E-02	2.3E-02	2.2E-02	2.2E-02	2.1E-02	9.4E+03	3.2E-02	3.0E-02	2.2E-01	2.2E-01	1.5E-02	6.2E-03	1.5E-02	1.9E-02	2.5E-02	1.5E-02	3.4E-01	4.0E-04	4.0E-04	3.7E-04	3.5E-04	3.6E-05	3.4E-05	3.8E-05	3.8E-05	1.4E-04	5.8E-06	5.4E-06	1.7E-03	6.8E-08	4.4E-08	2.9E-07	7.4E-07	2.2E-06	1.4E-06	1.4E-04	2E-03	1E-03	8E-05	9E-05	2E-03	1E-03	2E-04	2E-04	1E-04	8E-05
recreational	481831	3620825	2.9E-02	2.9E-02	2.7E-02	2.6E-02	2.4E-02	2.2E-02	2.2E-02	2.2E-02	9.6E+03	3.3E-02	3.1E-02	2.2E-01	2.2E-01	1.5E-02	6.2E-03	1.5E-02	1.9E-02	2.5E-02	1.5E-02	3.4E-01	4.1E-04	4.1E-04	3.8E-04	3.6E-04	3.7E-05	3.5E-05	3.9E-05	3.9E-05	1.5E-04	5.9E-06	5.5E-06	1.7E-03	6.8E-08	4.4E-08	2.9E-07	7.5E-07	2.3E-06	1.4E-06	1.4E-04	2E-03	2E-03	8E-05	1E-04	2E-03	1E-03	2E-04	2E-04	1E-04	8E-05
recreational	481931	3620825	3.0E-02	3.0E-02	2.8E-02	2.6E-02	2.5E-02	2.3E-02	2.3E-02	2.3E-02	9.8E+03	3.4E-02	3.1E-02	2.2E-01	2.2E-01	1.6E-02	6.3E-03	1.6E-02	1.9E-02	2.6E-02	1.6E-02	3.3E-01	4.2E-04	4.3E-04	3.9E-04	3.7E-04	3.8E-05	3.6E-05	4.0E-05	4.0E-05	1.5E-04	6.0E-06	5.5E-06	1.7E-03	6.9E-08	4.5E-08	2.9E-07	7.7E-07	2.3E-06	1.4E-06	1.4E-04	2E-03	2E-03	9E-05	1E-04	2E-03	1E-03	2E-04	2E-04	1E-04	8E-05
recreational	482031	3620825	3.0E-02	3.1E-02	2.8E-02	2.7E-02	2.5E-02	2.3E-02	2.3E-02	2.3E-02	1.0E+04	3.4E-02	3.2E-02	2.2E-01	2.2E-01	1.6E-02	6.4E-03	1.6E-02	2.0E-02	2.6E-02	1.6E-02	3.3E-01	4.2E-04	4.3E-04	4.0E-04	3.8E-04	3.8E-05	3.6E-05	4.1E-05	4.0E-05	1.5E-04	6.1E-06	5.7E-06	1.7E-03	7.0E-08	4.5E-08	2.9E-07	7.8E-07	2.3E-06	1.4E-06	1.3E-04	2E-03	2E-03	9E-05	1E-04	2E-03	1E-03	2E-04	2E-04	1E-04	8E-05
recreational	482131	3620825	3.1E-02	3.1E-02	2.9E-02	2.7E-02	2.5E-02	2.4E-02	2.3E-02	2.3E-02	1.0E+04	3.5E-02	3.2E-02	2.2E-01	2.2E-01	1.6E-02	6.4E-03	1.6E-02	2.0E-02	2.7E-02	1.6E-02	3.2E-01	4.3E-04	4.4E-04	4.1E-04	3.8E-04	3.9E-05	3.7E-05	4.1E-05	4.1E-05	1.5E-04	6.2E-06	5.8E-06	1.6E-03	7.0E-08	4.6E-08	3.0E-07	7.9E-07	2.4E-06	1.4E-06	1.3E-04	2E-03	2E-03	9E-05	1E-04	2E-03	1E-03	2E-04	2E-04	1E-04	8E-05
recreational	482231	3620825	3.0E-02	3.1E-02	2.9E-02	2.7E-02	2.5E-02	2.4E-02	2.3E-02	2.3E-02	1.0E+04	3.5E-02	3.3E-02	2.1E-01	2.1E-01	1.6E-02	6.5E-03	1.6E-02	2.0E-02	2.7E-02	1.6E-02	3.2E-01	4.3E-04	4.4E-04	4.0E-04	3.8E-04	3.9E-05	3.7E-05	4.1E-05	4.1E-05	1.6E-04	6.3E-06	5.8E-06	1.6E-03	7.1E-08	4.6E-08	3.0E-07	8.1E-07	2.4E-06	1.4E-06	1.3E-04	2E-03	2E-03	9E-05	1E-04	2E-03	1E-03	2E-04	2E-04	1E-04	7E-05
recreational	482331	3620825	3.3E-02	3.3E-02	3.1E-02	2.9E-02	2.7E-02	2.5E-02	2.5E-02	2.4E-02	1.1E+04	3.6E-02	3.3E-02	2.1E-01	2.1E-01	1.6E-02	6.6E-03	1.6E-02	2.1E-02	2.8E-02	1.7E-02	3.0E-01	4.6E-04	4.7E-04	4.3E-04	4.1E-04	4.2E-05	3.9E-05	4.3E-05	4.3E-05	1.6E-04	6.5E-06	6.0E-06	1.6E-03	7.2E-08	4.7E-08	3.0E-07	8.3E-07	2.4E-06	1.5E-06	1.2E-04	2E-03	2E-03	1E-04	1E-04	2E-03	1E-03	2E-04	2E-04	1E-04	7E-05
residential	483931	3620825	5.1E-02	5.6E-02	4.9E-02	4.5E-02	4.0E-02	3.6E-02	3.5E-02	3.4E-02	2.6E+04	5.5E-02	5.0E-02	1.4E-01	1.4E-01	2.1E-02	8.7E-03	2.1E-02	4.2E-02	5.6E-02	2.7E-02	1.9E-01	7.2E-04	7.9E-04	6.9E-04	6.3E-04	6.2E-05	5.7E-05	6.2E-05	6.1E-05	4.0E-04	9.8E-06	8.9E-06	1.1E-03	9.3E-08	6.2E-08	3.8E-07	1.7E-06	5.0E-06	2.4E-06	7.8E-05	3E-03	3E-03	2E-04	2E-04	1E-03	8E-04	1E-04	2E-04	8E-05	4E-05
residential	484031	3620825	5.2E-02	5.8E-02	5.0E-02	4.5E-02	4.1E-02	3.7E-02	3.6E-02	3.4E-02	2.7E+04	5.4E-02	5.0E-02	1.4E-01	1.4E-01	2.2E-02	8.9E-03	2.1E-02	4.5E-02	5.8E-02	2.8E-02	1.9E-01	7.3E-04	8.1E-04	7.0E-04	6.4E-04	6.3E-05	5.7E-05	6.3E-05	6.0E-05	4.0E-04	9.7E-06	8.8E-06	1.0E-03	9.6E-08	6.4E-08	4.0E-07	1.8E-06	5.2E-06	2.5E-06	7.7E-05	3E-03	3E-03	2E-04	2E-04	1E-03	8E-04	1E-04	2E-04	8E-05	4E-05
residential	484131	3620825	5.3E-02	6.0E-02	5.1E-02	4.7E-02	4.2E-02	3.7E-02	3.6E-02	3.5E-02	2.8E+04	5.6E-02	5.0E-02	1.3E-01	1.3E-01	2.2E-02	9.2E-03	2.2E-02	4.7E-02	6.2E-02	3.0E-02	1.8E-01	7.5E-04	8.5E-04	7.2E-04	6.6E-04	6.5E-05	5.8E-05	6.3E-05	6.1E-05	4.3E-04	9.9E-06	9.0E-06	1.0E-03	9.9E-08	6.6E-08	4.1E-07	1.9E-06	5.5E-06	2.7E-06	7.6E-05	3E-03	3E-03	2E-04	2E-04	1E-03	7E-04	1E-04	1E-04	8E-05	4E-05
residential	484231	3620825	5.5E-02	6.3E-02	5.3E-02	4.8E-02	4.3E-02	3.9E-02	3.7E-02	3.6E-02	3.0E+04	5.7E-02	5.2E-02	1.3E-01	1.3E-01	2.3E-02	9.5E-03	2.2E-02	4.9E-02	6.6E-02	3.2E-02	1.8E-01	7.8E-04	9.0E-04	7.5E-04	6.8E-04	6.7E-05	6.0E-05	6.5E-05	6.3E-05	4.5E-04	1.0E-05	9.3E-06	9.6E-04	1.0E-07	6.7E-08	4.2E-07	1.9E-06	5.8E-06	2.9E-06	7.3E-05	3E-03	3E-03	2E-04	2E-04	1E-03	7E-04	1E-04	1E-04	7E-05	4E-05
residential	484331	3620825	5.8E-02	6.7E-02	5.6E-02	5.0E-02	4.4E-02	4.0E-02	3.8E-02	3.6E-02	3.1E+04	5.9E-02	5.4E-02	1.2E-01	1.2E-01	2.4E-02	9.7E-03	2.3E-02	5.1E-02	6.9E-02	3.4E-02	1.7E-01	8.1E-04	9.5E-04	7.9E-04	7.1E-04	6.9E-05	6.1E-05	6.7E-05	6.4E-05	4.7E-04	1.1E-05	9.6E-06	9.2E-04	1.0E-07	6.9E-08	4.3E-07	2.0E-06	6.1E-06	3.0E-06	7.0E-05	4E-03	3E-03	2E-04	2E-04	9E-04	7E-04	1E-04	1E-04	7E-05	4E-05
residential	484431	3620825	6.1E-02	7.1E-02	5.9E-02	5.3E-02	4.6E-02	4.1E-02	3.9E-02	3.7E-02	3.2E+04	6.1E-02	5.5E-02	1.2E-01	1.2E-01	2.5E-02	1.0E-02	2.4E-02	5.3E-02	7.2E-02	3.5E-02	1.6E-01	8.6E-04	1.0E-03	8.3E-04	7.5E-04	7.2E-05	6.4E-05	6.8E-05	6.6E-05	4.9E-04	1.1E-05	9.8E-06	8.7E-04	1.1E-07	7.1E-08	4.5E-07	2.1E-06	6.4E-06	3.1E-06	6.6E-05	4E-03	3E-03	2E-04	2E-04	9E-04	6E-04	1E-04	1E-04	7E-05	4E-05
residential	477531	3620925	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.1E-02	1.1E-02	1.1E-02	1.1E-02	4.6E+03	1.1E-02	1.0E-02	3.8E-02	3.8E-02	9.6E-03	4.3E-03	9.4E-03	1.1E-02	1.3E-02	9.8E-03	3.4E-02	1.8E-04	1.8E-04	1.7E-04	1.7E-04	1.8E-05	1.7E-05	1.9E-05	1.9E-05	7.0E-05	1.9E-06	1.8E-06	2.9E-04	4.2E-08	3.0E-08	1.7E-07	4.3E-07	1.1E-06	8.7E-07	1.4E-05	8E-04	7E-04	4E-05	4E-05	3E-04	2E-04	4E-05	4E-05	1E-05	8E-06
residential	477631	3620925	1.3E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.1E-02	1.1E-02	1.1E-02	4.9E+03	1.1E-02	1.1E-02	4.2E-02	4.2E-02	1.0E-02	4.4E-03	9.8E-03	1.2E-02	1.3E-02	1.0E-02	3.8E-02	1.9E-04	1.9E-04	1.8E-04	1.7E-04	1.8E-05	1.7E-05	2.0E-05	2.0E-05	7.4E-05	2.0E-06	1.9E-06	3.2E-04	4.4E-08	3.1E-08	1.8E-07	4.7E-07	1.2E-06	9.3E-07	1.6E-05	8E-04	7E-04	4E-05	5E-05	3E-04	2E-04	4E-05	5E-05	2E-05	9E-06
residential	477731	3620925	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	1.2E-02	5.3E+03	1.2E-02	1.1E-02	4.8E-02	4.8E-02	1.0E-02	4.5E-03	1.0E-02	1.3E-02	1.4E-02	1.1E-02	4.8E-02	2.0E-04	2.0E-04	1.9E-04	1.8E-04	1.9E-05	1.8E-05	2.1E-05	2.1E-05	8.0E-05	2.1E-06	2.0E-06	3.6E-04	4.6E-08	3.2E-08	1.9E-07	5.0E-07	1.3E-06	9.7E-07	2.0E-05	8E-04	8E-04	4E-05	5E-05	4E-04	3E-04	4E-05	5E-05	2E-05	1E-05
residential	477831	3620925	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	1.1E-02	5.1E+03	1.2E-02	1.1E-02	4.7E-02	4.7E-02	1.0E-02	4.5E-03	1.0E-02	1.3E-02	1.4E-02	1.1E-02	4.5E-02	2.0E-04	2.0E-04	1.9E-04	1.8E-04	1.9E-05	1.8E-05	2.0E-05	2.0E-05	7.8E-05	2.1E-06	2.0E-06	3.6E-04	4.5E-08	3.2E-08	1.9E-07	5.0E-07	1.3E-06	9.8E-07	1.9E-05	8E-04	7E-04	4E-05	5E-05	4E-04	3E-04	4E-05	5E-05	2E-05	1E-05
residential	477931	3620925	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	1.2E-02	5.2E+03	1.2E-02	1.1E-02	5.0E-02	5.0E-02	1.0E-02	4.5E-03	1.0E-02	1.3E-02	1.4E-02	1.1E-02	5.0E-02	2.0E-04	2.0E-04	1.9E-04	1.8E-04	1.9E-05	1.8E-05	2.1E-05	2.1E-05	7.9E-05	2.1E-06	2.0E-06	3.8E-04	4.6E-08	3.2E-08	1.9E-07	5.2E-07	1.3E-06	1.0E-06	2.0E-05	8E-04	8E-04	4E-05	5E-05	4E-04	3E-04	5E-05	5E-05	2E-05	1E-05
residential	478031	3620925	1.4E-02	1.4E-02	1.4E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	1.2E-02	5.3E+03	1.2E-02	1.1E-02	5.3E-02	5.3E-02	1.1E-02	4.5E-03	1.0E-02	1.3E-02	1.5E-02	1.2E-02	5.3E-02	2.0E-04	2.0E-04	1.9E-04	1.8E-04	1.9E-05	1.8E-05	2.1E-05	2.1E-05	8.0E-05	2.1E-06	2.0E-06	4.0E-04	4.6E-08	3.2E-08	1.9E-07	5.3E-07	1.3E-06	1.0E-06	2.2E-05	9E-04	8E-04	4E-05	5E-05	4E-04	3E-04	5E-05	6E-05	2E-05	1E-05
residential	478131	3620925	1.5E-02	1.5E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	5.5E+03	1.2E-02	1.2E-02	5.7E-02	5.7E-02	1.1E-02	4.6E-03	1.1E-02	1.4E-02	1.5E-02	1.2E-02	6.1E-02	2.1E-04	2.1E-04	2.0E-04	1.9E-04	2.0E-05	1.9E-05	2.1E-05	2.1E-05	8.3E-05	2.2E-06	2.1E-06	4.3E-04	4.7E-08	3.2E-08	2.0E-07	5.4E-07	1.3E-06	1.0E-06	2.5E-05	9E-04	8E-04	4E-05	5E-05	4E-04	3E-04	5E-05	6E-05	2E-05	1E-05
residential	478231	3620925	1.5E-02	1.5E-02	1.5E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	1.3E-02	5.6E+03	1.3E-02	1.2E-02	6.4E-02	6.4E-02	1.1E-02	4.6E-03	1.1E-02	1.3E-02	1.6E-02	1.1E-02	7.0E-02	2.2E-04	2.2E-04	2.1E-04	2.0E-04	2.1E-05	2.0E-05	2.2E-05	2.2E-05	8.5E-05	2.3E-06	2.1E-06	4.9E-04	4.9E-08	3.2E-08	2.1E-07	5.3E-07	1.4E-06	1.0E-06	2.9E-05	9E-04	8E-04	5E-05	5E-05	5E-04	4E-04	6E-05	7E-05	3E-05	2E-05
residential	478331	3620925	1.6E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	5.7E+03	1.3E-02	1.3E-02	7.0E-02	7.0E-02	1.1E-02	4.8E-03	1.1E-02	1.3E-02	1.6E-02	1.1E-02	8.2E-02	2.3E-04	2.3E-04	2.1E-04	2.0E-04	2.1E-05	2.0E-05	2.3E-05	2.3E-05	8.7E-05	2.4E-06	2.2E-06	5.3E-04	4.9E-08	3.4E-08	2.1E-07	5.3E-07	1.4E-06	1.0E-06	3.4E-05	1E-03	9E-04	5E-05	5E-05	5E-04	4E-04	6E-05	8E-05	3E-05	2E-05
residential	478431	3620925	1.6E-02	1.6E-02	1.5E-02	1.5E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	5.8E+03	1.4E-02	1.3E-02	7.5E-02	7.5E-02	1.1E-02	4.8E-03	1.1E-02	1.3E-02	1.6E-02	1.2E-02	9.1E-02	2.3E-04	2.3E-04	2.2E-04	2.1E-04	2.2E-05	2.1E-05	2.4E-05	2.3E-05	8.8E-05	2.5E-06	2.3E-06	5.7E-04	4.9E-08	3.4E-08	2.1E-07	5.4E-07	1.5E-06	1.0E-06	3.7E-05	1E-03	9E-04	5E-05	5E-05	6E-04	4E-04	7E-05	8E-05	4E-05	2E-05
residential	478531	3620925	1.7E-02	1.7E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	1.4E-02	6.2E+03	1.5E-02	1.4E-02	8.2E-02	8.2E-02	1.1E-02	4.9E-03	1.1E-02	1.4E-02	1.7E-02	1.2E-02	1.0E-01	2.4E-04	2.4E-04	2.2E-04	2.1E-04	2.2E-05	2.1E-05	2.4E-05	2.4E-05	9.4E-05	2.7E-06	2.5E-06	6.2E-04	5.0E-08	3.5E-08	2.1E-07	5.4E-07	1.5E-06	1.0E-06	4.3E-05	1E-03	9E-04	5E-05	6E-05	6E-04	5E-04	7E-05	9E-05	4E-05	2E-05
residential	478631	3620925	1.7E-02	1.7E-02	1.6E-02	1.5E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	6.3E+03	1.5E-02	1.5E-02	8.7E-02	8.7E-02	1.1E-02	4.9E-03	1.1E-02	1.4E-02	1.7E-02	1.2E-02	1.1E-01	2.4E-04	2.4E-04	2.3E-04	2.2E-04	2.3E-05	2.2E-05	2.5E-05	2.5E-05	9.5E-05	2.7E-06	2.6E-06	6.6E-04	5.0E-08	3.5E-08	2.1E-07	5.5E-07	1.5E-06	1.0E-06	4.7E-05	1E-03	9E-04	5E-05	6E-05	7E-04	5E-04	8E-05	1E-04	5E-05	3E-05
residential	478731	3620925	1.7E-02	1.7E-02	1.6E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	6.4E+03	1.6E-02	1.5E-02	9.2E-02	9.2E-02	1.1E-02	4.9E-03	1.1E-02	1.4E-02	1.7E-02	1.2E-02	1.2E-01	2.5E-04	2.5E-04	2.3E-04	2.2E-04	2.3E-05	2.2E-05	2.5E-05	2.5E-05	9.6E-05	2.8E-06	2.6E-06	7.0E-04	5.1E-08	3.5E-08	2.1E-07	5.5E-07	1.5E-06	1.1E-06	5.0E-05	1E-03	9E-04	5E-05	6E-05	7E-04	5E-04	8E-05	1E-04	5E-05	3E-05
residential	478831	3620925	1.8E-02	1.8E-02	1.7E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	6.4E+03	1.6E-02	1.5E-02	9.6E-02	9.6E-02	1.2E-02	4.9E-03	1.2E-02	1.4E-02	1.7E-02	1.2E-02	1.3E-01	2.5E-04	2.5E-04	2.3E-04	2.2E-04	2.3E-05	2.2E-05	2.5E-05	2.5E-05	9.7E-05	2.8E-06	2.7E-06	7.3E-04	5.1E-08	3.5E-08	2.2E-07	5.6E-07	1.5E-06	1.1E-06	5.2E-05	1E-03	9E-04	5E-05	6E-05	7E-04	5E-04	9E-05	1E-04	5E-05	3E-05
residential	478931	3620925	1.8E-02	1.8E-02	1.7E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	6.5E+03	1.6E-02	1.5E-02	1.0E-01	1.0E-01	1.2E-02	5.0E-03	1.2E-02	1.4E-02	1.7E-02	1.2E-02	1.4E-01	2.5E-04	2.5E-04	2.4E-04	2.3E-04	2.4E-05	2.2E-05	2.5E-05	2.5E-05	9.8E-05	2.9E-06	2.7E-06	7.6E-04	5.1E-08	3.5E-08	2.2E-07	5.6E-07	1.5E-06	1.1E-06	5.6E-05	1E-03	1E-03	5E-05	6E-05	8E-04	6E-04	9E-05	1E-04	6E-05	3E-05
residential	479031	3620925	1.8E-02	1.8E-02	1.7E-02	1.6E-02	1.5E-02	1.5E-02	1.5E-02	1.5E-02	6.6E+03	1.7E-02	1.6E-02	1.1E-01	1.1E-01	1.2E-02	5.0E-03	1.2E-02	1.4E-02	1.8E-02	1.2E-02	1.4E-01	2.5E-04	2.6E-04	2.4E-04	2.3E-04	2.4E-05	2.3E-05	2.6E-05	2.6E-05	1.0E-04	3.0E-06	2.8E-06	8.0E-04	5.2E-08	3.5E-08	2.2E-07	5.7E-07	1.6E-06	1.1E-06	5.9E-05	1E-03	1E-03	5E-05	6E-05	8E-04	6E-04	1E-04	1E-04	6E-05	3E-05
residential	479131	3620925	1.8E-02	1.8E-02	1.7E-02	1.6E-02	1.6E-02	1.5E-02	1.5E-02	1.5E-02	6.6E+03	1.7E-02	1.6E-02	1.1E-01	1.1E-01	1.2E-02	5.0E-03	1.2E-02	1.4E-02	1.8E-02	1.2E-02	1.5E-01	2.6E-04	2.6E-04	2.4E-04	2.3E-04	2.4E-05	2.3E-05	2.6E-05	2.6E-05	1.0E-04	3.0E-06	2.8E-06	8.4E-04	5.2E-08	3.6E-08	2.2E-07	5.8E-07	1.6E-06	1.1E-06	6.2E-05	1E-03	1E-03	5E-05	6E-05	8E-04	6E-04	1E-04	1E-04	6E-05	4E-05
residential	479231	3620925	1.8E-02	1.9E-02	1.7E-02	1.7E-02	1.6E-02	1.5E-02	1.5E-02	1.5E-02	6.7E+03	1.7E-02	1.6E-02	1.2E-01	1.2E-01	1.2E-02	5.0E-03	1.2E-02	1.5E-02	1.8E-02	1.2E-02	1.6E-01	2.6E-04	2.6E-04	2.5E-04	2.3E-04	2.4E-05	2.3E-05	2.6E-05	2.6E-05	1.0E-04	3.1E-06	2.9E-06	8.8E-04	5.3E-08	3.6E-08	2.2E-07	5.8E-07	1.6E-06	1.1E-06	6.6E-05	1E-03	1E-03	5E-05	6E-05	9E-04	6E-04	1E-04	1E-04	7E-05	4E-05
recreational	480931	3620925	2.4E-02	2.4E-02	2.3E-02	2.2E-02	2.0E-02	1.9E-02	1.9E-02	1.9E-02	8.1E+03	2.7E-02	2.5E-02	2.1E-01	2.1E-01	1.4E-02	5.7E-03	1.4E-02	1.7E-02	2.2E-02	1.4E-02	3.0E-01	3.4E-04	3.4E-04	3.2E-04	3.0E-04	3.1E-05	2.9E-05	3.3E-05	3.3E-05	1.2E-04	4.8E-06	4.5E-06	1.6E-03	6.1E-08	4.0E-08	2.6E-07	6.6E-07	1.9E-06	1.2E-06	1.2E-04	1E-03	1E-03	7E-05	8E-05	2E-03	1E-03	2E-04	2E-04	1E-04	7E-05
recreational	481031	3620925	2.4E-02	2.5E-02	2.3E-02	2.2E-02	2.0E-02	1.9E-02	1.9E-02	1.9E-02	8.2E+03	2.8E-02	2.6E-02	2.1E-01	2.1E-01	1.4E-02	5.7E-03	1.4E-02	1.7E-02	2.2E-02	1.4E-02	3.1E-01	3.5E-04	3.5E-04	3.2E-04	3.1E-04	3.2E-05	3.0E-05	3.4E-05	3.4E-05	1.2E-04	4.9E-06	4.6E-06	1.6E-03	6.1E-08	4.1E-08	2.6E-07	6.7E-07	2.0E-06	1.2E-06	1.3E-04	1E-03	1E-03	7E-05	8E-05	2E-03	1E-03	2E-04	2E-04	1E-04	7E-05
recreational	481131	3620925	2.5E-02	2.5E-02	2.3E-02	2.2E-02	2.1E-02	1.9E-02	1.9E-02	1.9E-02	8.3E+03	2.8E-02	2.6E-02	2.1E-01	2.1E-01	1.4E-02	5.8E-03	1.4E-02	1.7E-02	2.2E-02	1.4E-02	3.1E-01	3.5E-04	3.5E-04	3.3E-04	3.1E-04	3.2E-05	3.0E-05	3.4E-05	3.4E-05	1.3E-04	5.0E-06	4.7E-06	1.6E-03	6.2E-08	4.1E-08	2.6E-07	6.7E-07	2.0E-06	1.3E-06	1.3E-04	1E-03	1E-03	7E-05	8E-05	2E-03	1E-03	2E-04	2E-04	1E-04	7E-05
recreational	481231	3620925	2.5E-02	2.5E-02	2.4E-02	2.2E-02	2.1E-02	2.0E-02	2.0E-02	2.0E-02	8.4E+03	2.8E-02	2.7E-02	2.1E-01	2.1E-01	1.4E-02	5.8E-03	1.4E-02	1.7E-02	2.3E-02	1.4E-02	3.1E-01	3.6E-04	3.6E-04	3.3E-04	3.2E-04	3.3E-05	3.1E-05	3.5E-05	3.5E-05	1.3E-04	5.1E-06	4.7E-06	1.6E-03	6.3E-08	4.2E-08	2.6E-07	6.8E-07	2.0E-06	1.3E-06	1.3E-04	1E-03	1E-03	7E-05	8E-05	2E-03	1E-03	2E-04	2E-04	1E-04	7E-05
recreational	481331	3620925	2.6E-02	2.6E-02	2.4E-02	2.3E-02	2.1E-02	2.0E-02	2.0E-02	2.0E-02	8.6E+03	2.9E-02	2.7E-02	2.1E-01	2.1E-01	1.4E-02	5.9E-03	1.4E-02	1.7E-02	2.3E-02	1.4E-02	3.1E-01	3.7E-04	3.7E-04	3.4E-04	3.2E-04	3.3E-05	3.1E-05	3.5E-05	3.5E-05	1.3E-04	5.2E-06	4.8E-06	1.6E-03	6.3E-08	4.2E-08	2.7E-07	6.8E-07	2.0E-06	1.3E-06	1.3E-04	2E-03	1E-03	8E-05	9E-05	2E-03	1E-03	2E-04	2E-04	1E-04	7E-05
recreational	481431	3620925	2.6E-02	2.6E-02	2.4E-02	2.3E-02	2.1E-02	2.0E-02	2.0E-02	2.0E-02	8.7E+03	2.9E-02	2.8E-02	2.1E-01	2.1E-01	1.4E-02	5.9E-03	1.4E-02	1.7E-02	2.3E-02	1.4E-02	3.2E-01	3.7E-04	3.7E-04	3.4E-04	3.2E-04	3.3E-05	3.1E-05	3.5E-05	3.5E-05	1.3E-04	5.2E-06	4.9E-06	1.6E-03	6.4E-08	4.2E-08	2.7E-07	6.9E-07	2.1E-06	1.3E-06	1.3E-04	2E-03	1E-03	8E-05	9E-05	2E-03	1E-03	2E-04	2E-04	1E-04	7E-05
recreational	481531	3620925	2.6E-02	2.6E-02	2.4E-02	2.3E-02	2.2E-02	2.0E-02	2.0E-02	2.0E-02	8.8E+03	3.0E-02	2.8E-02	2.1E-01	2.1E-01	1.5E-02	6.0E-03	1.5E-02	1.8E-02	2.3E-02	1.5E-02	3.2E-01	3.6E-04	3.7E-04	3.4E-04	3.2E-04	3.4E-05	3.1E-05	3.6E-05	3.5E-05	1.3E-04	5.3E-06	5.0E-06	1.6E-03	6.4E-08	4.3E-08	2.7E-07	7.0E-07	2.1E-06	1.3E-06	1.3E-04	2E-03	1E-03	8E-05	9E-05	2E-03	1E-03	2E-04	2E-04	1E-04	7E-05
recreational	481631	3620925	2.6E-02	2.7E-02	2.5E-02	2.4E-02	2.2E-02	2.1E-02	2.1E-02	2.0E-02	8.9E+03	3.1E-02	2.9E-02	2.1E-01	2.1E-01	1.5E-02	6.1E-03	1.5E-02	1.8E-02	2.4E-02	1.5E-02	3.1E-01	3.7E-04	3.8E-04	3.5E-04	3.3E-04	3.4E-05	3.2E-05	3.6E-05	3.6E-05	1.4E-04	5.4E-06	5.1E-06	1.6E-03	6.5E-08	4.3E-08	2.7E-07	7.1E-07	2.1E-06	1.3E-06	1.3E-04	2E-03	1E-03	8E-05	9E-05	2E-03	1E-03	2E-04	2E-04	1E-04	7E-05
recreational	481731	3620925	2.8E-02	2.8E-02	2.6E-02	2.5E-02	2.3E-02	2.1E-02	2.1E-02	2.1E-02	9.1E+03	3.1E-02	2.9E-02	2.1E-01	2.1E-01	1.5E-02	6.1E-03	1.5E-02	1.8E-02	2.4E-02	1.5E-02	3.1E-01	3.9E-04	3.9E-04	3.7E-04	3.5E-04	3.5E-05	3.3E-05	3.7E-05	3.7E-05	1.4E-04	5.5E-06	5.2E-06	1.6E-03	6.5E-08	4.3E-08	2.8E-07	7.2E-07	2.1E-06	1.3E-06	1.3E-04	2E-03	1E-03	8E-05	9E-05	2E-03	1E-03	2E-04	2E-04	1E-04	7E-05
residential	483831	3620925	4.7E-02	5.2E-02	4.5E-02	4.2E-02	3.8E-02	3.4E-02	3.3E-02	3.2E-02	2.4E+04	5.1E-02	4.6E-02	1.4E-01	1.4E-01	2.0E-02	8.5E-03	2.0E-02	3.9E-02	5.1E-02	2.6E-02	1.9E-01	6.6E-04	7.3E-04	6.4E-04	5.9E-04	5.8E-05	5.3E-05	5.9E-05	5.7E-05	3.6E-04	9.1E-06	8.3E-06	1.1E-03	8.9E-08	6.1E-08	3.7E-07	1.5E-06	4.5E-06	2.3E-06	7.6E-05	3E-03	3E-03	1E-04	2E-04	1E-03	8E-04	1E-04	2E-04	8E-05	4E-05
residential	483931	3620925	4.9E-02	5.4E-02	4.7E-02	4.3E-02	3.9E-02	3.5E-02	3.4E-02	3.3E-02	2.4E+04	5.1E-02	4.6E-02	1.4E-01	1.4E-01	2.1E-02	8.7E-03	2.0E-02	4.2E-02	5.5E-02	2.7E-02	1.8E-01	6.9E-04	7.6E-04	6.6E-04	6.1E-04	6.0E-05	5.5E-05	6.0E-05	5.8E-05	3.7E-04	9.1E-06	8.3E-06	1.0E-03	9.1E-08	6.2E-08	3.8E-07	1.7E-06	4.9E-06	2.4E-06	7.5E-05	3E-03	3E-03	1E-04	2E-04	1E-03	8E-04	1E-04	2E-04	7E-05	4E-05
residential	484031	3620925	5.0E-02	5.5E-02	4.8E-02	4.4E-02	3.9E-02	3.6E-02	3.4E-02	3.3E-02	2.6E+04	5.2E-02	4.7E-02	1.3E-01	1.3E-01	2.1E-02	8.9E-03	2.1E-02	4.4E-02	5.7E-02	2.8E-02	1.8E-01	7.0E-04	7.8E-04	6.7E-04	6.2E-04	6.1E-05	5.5E-05	6.1E-05	5.9E-05	3.9E-04	9.2E-06	8.4E-06	1.0E-03	9.4E-08	6.4E-08	3.9E-07	1.7E-06	5.0E-06	2.5E-06	7.4E-05	3E-03	3E-03	1E-04	2E-04	1E-03	7E-04	1E-04	1E-04	7E-05	4E-05
residential	484131	3620925	5.1E-02	5.8E-02	4.9E-02	4.5E-02	4.0E-02	3.6E-02	3.5E-02	3.4E-02	2.7E+04	5.3E-02	4.8E-02	1.3E-01	1.3E-01	2.2E-02	9.2E-03	2.1E-02	4.6E-02	6.0E-02	3.0E-02	1.8E-01	7.2E-04	8.2E-04	7.0E-04	6.4E-04	6.2E-05	5.7E-05	6.1E-05	5.9E-05	4.1E-04	9.4E-06	8.6E-06	9.6E-04	9.7E-08	6.5E-08	4.0E-07	1.8E-06	5.4E-06	2.7E-06	7.2E-05	3E-03	3E-03	2E-04	2E-04	1E-03	7E-04	1E-04	1E-04	7E-05	4E-05
residential	484231	3620925	5.3E-02	6.1E-02	5.2E-02	4.7E-02	4.1E-02	3.7E-02	3.6E-02	3.4E-02	2.8E+04	5.5E-02	5.0E-02	1.2E-01	1.2E-01	2.3E-02	9.5E-03	2.2E-02	4.8E-02	6.4E-02	3.2E-02	1.7E-01	7.5E-04	8.6E-04	7.3E-04	6.6E-04	6.4E-05	5.8E-05	6.3E-05	6.0E-05	4.3E-04	9.8E-06	8.9E-06	9.2E-04	1.0E-07	6.7E-08	4.1E-07	1.9E-06	5.7E-06	2.8E-06	7.0E-05	3E-03	3E-03	2E-04	2E-04	9E-04	7E-04	1E-04	1E-04	7E-05	4E-05
residential	484331	3620925	5.6E-02	6.5E-02	5.4E-02	4.9E-02	4.3E-02	3.9E-02	3.6E-02	3.5E-02	3.0E+04	5.7E-02	5.1E-02	1.2E-01	1.2E-01	2.4E-02	9.7E-03	2.3E-02	5.0E-02	6.6E-02	3.3E-02	1.6E-01	7.9E-04	9.2E-04	7.6E-04	6.9E-04	6.7E-05	6.0E-05	6.4E-05	6.2E-05	4.5E-04	1.0E-05	9.2E-06	8.8E-04	1.0E-07	6.9E-08	4.3E-07	2.0E-06	5.9E-06	2.9E-06	6.6E-05	3E-03	3E-03	2E-04	2E-04	9E-04	6E-04	1E-04	1E-04	7E-05	4E-05
residential	477731	3621025	1.4E-02	1.4E-02	1.3E-02	1.2E-02	1.2E-02	1.1E-02	1.1E-02	1.1E-02	5.1E+03	1.1E-02	1.1E-02	4.4E-02	4.4E-02	1.0E-02	4.4E-03	1.0E-02	1.3E-02	1.4E-02	1.1E-02	4.3E-02	1.9E-04	1.9E-04	1.8E-04	1.8E-04	1.8E-05	1.8E-05	2.0E-05	2.0E-05	7.6E-05	2.0E-06	1.9E-06	3.4E-04	4.4E-08	3.1E-08	1.9E-07	5.0E-07	1.2E-06	9.7E-07	1.8E-05	8E-04	7E-04	4E-05	5E-05	3E-04	2E-04	4E-05	5E-05	2E-05	1E-05
residential	477831	3621025	1.3E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.1E-02	1.1E-02	1.1E-02	4.9E+03	1.1E-02	1.1E-02	4.4E-02	4.4E-02	1.0E-02	4.4E-03	9.9E-03	1.3E-02	1.4E-02	1.1E-02	4.2E-02	1.9E-04	1.9E-04	1.8E-04	1.7E-04	1.8E-05	1.7E-05	2.0E-05	2.0E-05	7.5E-05	2.0E-06	1.9E-06	3.4E-04	4.4E-08	3.1E-08	1.9E-07	5.1E-07	1.2E-06	9.8E-07	1.7E-05	8E-04	7E-04	4E-05	5E-05	3E-04	2E-04	4E-05	5E-05	2E-05	1E-05
residential	477931	3621025	1.4E-02	1.4E-02	1.3E-02	1.2E-02	1.2E-02	1.1E-02	1.1E-02	1.1E-02	5.0E+03	1.1E-02	1.1E-02	4.7E-02	4.7E-02	1.0E-02	4.4E-03	1.0E-02	1.3E-02	1.4E-02	1.1E-02	4.5E-02	1.9E-04	1.9E-04	1.8E-04	1.8E-04	1.8E-05	1.8E-05	2.0E-05	2.0E-05	7.6E-05	2.0E-06	1.9E-06	3.5E-04	4.5E-08	3.1E-08	1.9E-07	5.2E-07	1.2E-06	1.0E-06	1.8E-05	8E-04	7E-04	4E-05	5E-05	4E-04	3E-04	4E-05	5E-05	2E-05	1E-05
residential	478031	3621025	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.1E-02	1.1E-02	5.1E+03	1.2E-02	1.1E-02	5.0E-02	5.0E-02	1.0E-02	4.5E-03	1.0E-02	1.3E-02	1.4E-02	1.1E-02	4.9E-02	2.0E-04	2.0E-04	1.9E-04	1.8E-04	1.9E-05	1.8E-05	2.0E-05	2.0E-05	7.7E-05	2.1E-06	1.9E-06	3.8E-04	4.5E-08	3.2E-08	1.9E-07	5.3E-07	1.3E-06	1.0E-06	2.0E-05	8E-04	7E-04	4E-05	5E-05	4E-04	3E-04	5E-05	5E-05	2E-05	1E-05
residential	478131	3621025	1.4E-02	1.4E-02	1.4E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	1.2E-02	5.3E+03	1.2E-02	1.1E-02	5.4E-02	5.4E-02	1.0E-02	4.5E-03	1.0E-02	1.3E-02	1.5E-02	1.1E-02	5.7E-02	2.0E-04	2.0E-04	1.9E-04	1.8E-04	1.9E-05	1.8E-05	2.1E-05	2.1E-05	8.0E-05	2.1E-06	2.0E-06	4.1E-04	4.6E-08	3.2E-08	1.9E-07	5.3E-07	1.3E-06	1.0E-06	2.3E-05	9E-04	8E-04	4E-05	5E-05	4E-04	3E-04	5E-05	6E-05	2E-05	1E-05
residential	478231	3621025	1.5E-02	1.5E-02	1.4E-02	1.4E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	5.4E+03	1.2E-02	1.2E-02	6.0E-02	6.0E-02	1.1E-02	4.5E-03	1.1E-02	1.3E-02	1.5E-02	1.1E-02	6.5E-02	2.1E-04	2.1E-04	2.0E-04	1.9E-04	2.0E-05	1.9E-05	2.2E-05	2.2E-05	8.2E-05	2.2E-06	2.1E-06	4.5E-04	4.8E-08	3.2E-08	2.0E-07	5.3E-07	1.3E-06	1.0E-06	2.7E-05	9E-04	8E-04	4E-05	5E-05	5E-04	3E-04	5E-05	7E-05	3E-05	2E-05
residential	478331	3621025	1.5E-02	1.5E-02	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	1.3E-02	5.5E+03	1.3E-02	1.2E-02	6.5E-02	6.5E-02	1.1E-02	4.5E-03	1.1E-02	1.3E-02	1.5E-02	1.1E-02	7.1E-02	2.2E-04	2.2E-04	2.0E-04	2.0E-04	2.1E-05	2.0E-05	2.2E-05	2.2E-05	8.3E-05	2.2E-06	2.1E-06	4.9E-04	4.8E-08	3.2E-08	2.0E-07	5.2E-07	1.4E-06	9.9E-07	2.9E-05	9E-04	8E-04	5E-05	5E-05	5E-04	4E-04	6E-05	7E-05	3E-05	2E-05
residential	478431	3621025	1.6E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	5.6E+03	1.3E-02	1.2E-02	7.0E-02	7.0E-02	1.1E-02	4.7E-03	1.1E-02	1.3E-02	1.6E-02	1.1E-02	8.1E-02	2.2E-04	2.2E-04	2.1E-04	2.0E-04	2.1E-05	2.0E-05	2.3E-05	2.3E-05	8.4E-05	2.3E-06	2.2E-06	5.3E-04	4.8E-08	3.4E-08	2.0E-07	5.2E-07	1.4E-06	1.0E-06	3.3E-05	9E-04	8E-04	5E-05	5E-05	5E-04	4E-04	6E-05	8E-05	3E-05	2E-05
residential	478531	3621025	1.6E-02	1.6E-02	1.5E-02	1.5E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	5.7E+03	1.4E-02	1.3E-02	7.6E-02	7.6E-02	1.1E-02	4.8E-03	1.1E-02	1.3E-02	1.6E-02	1.1E-02	9.2E-02	2.3E-04	2.3E-04	2.1E-04	2.1E-04	2.2E-05	2.1E-05	2.3E-05	2.3E-05	8.6E-05	2.5E-06	2.4E-06	5.7E-04	4.9E-08	3.4E-08	2.1E-07	5.3E-07	1.4E-06	1.0E-06	3.8E-05	1E-03	9E-04	5E-05	5E-05	6E-04	4E-04	7E-05	8E-05	4E-05	2E-05
residential	478631	3621025	1.7E-02	1.7E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	1.3E-02	6.1E+03	1.5E-02	1.4E-02	8.1E-02	8.1E-02	1.1E-02	4.8E-03	1.1E-02	1.3E-02	1.6E-02	1.1E-02	1.0E-01	2.3E-04	2.3E-04	2.2E-04	2.1E-04	2.2E-05	2.1E-05	2.4E-05	2.4E-05	9.2E-05	2.7E-06	2.5E-06	6.2E-04	4.9E-08	3.4E-08	2.1E-07	5.3E-07	1.5E-06	1.0E-06	4.3E-05	1E-03	9E-04	5E-05	6E-05	6E-04	5E-04	7E-05	9E-05	4E-05	2E-05
residential	478731	3621025	1.7E-02	1.7E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	1.4E-02	6.2E+03	1.5E-02	1.4E-02	8.6E-02	8.6E-02	1.1E-02	4.8E-03	1.1E-02	1.4E-02	1.6E-02	1.2E-02	1.1E-01	2.4E-04	2.4E-04	2.3E-04	2.1E-04	2.2E-05	2.1E-05	2.4E-05	2.4E-05	9.3E-05	2.7E-06	2.6E-06	6.5E-04	4.9E-08	3.4E-08	2.1E-07	5.4E-07	1.5E-06	1.0E-06	4.6E-05	1E-03	9E-04	5E-05	6E-05	7E-04	5E-04	8E-05	9E-05	5E-05	3E-05
residential	478831	3621025	1.7E-02	1.7E-02	1.6E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	6.2E+03	1.6E-02	1.5E-02	9.1E-02	9.1E-02	1.1E-02	4.9E-03	1.1E-02	1.4E-02	1.7E-02	1.2E-02	1.2E-01	2.4E-04	2.4E-04	2.3E-04	2.2E-04	2.3E-05	2.2E-05	2.5E-05	2.5E-05	9.4E-05	2.8E-06	2.6E-06	6.9E-04	5.0E-08	3.5E-08	2.1E-07	5.4E-07	1.5E-06	1.0E-06	5.0E-05	1E-03	9E-04	5E-05	6E-05	7E-04	5E-04	8E-05	1E-04	5E-05	3E-05
residential	478931	3621025	1.7E-02	1.7E-02	1.6E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	6.3E+03	1.6E-02	1.5E-02	9.5E-02	9.5E-02	1.1E-02	4.9E-03	1.1E-02	1.4E-02	1.7E-02	1.2E-02	1.3E-01	2.4E-04	2.5E-04	2.3E-04	2.2E-04	2.3E-05	2.2E-05	2.5E-05	2.5E-05	9.5E-05	2.8E-06	2.7E-06	7.2E-04	5.0E-08	3.5E-08	2.1E-07	5.5E-07	1.5E-06	1.0E-06	5.2E-05	1E-03	9E-04	5E-05	6E-05	7E-04	5E-04	9E-05	1E-04	5E-05	3E-05
residential	479031	3621025	1.8E-02	1.8E-02	1.7E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	6.4E+03	1.6E-02	1.5E-02	1.0E-01	1.0E-01	1.1E-02	4.9E-03	1.1E-02	1.4E-02	1.7E-02	1.2E-02	1.3E-01	2.5E-04	2.5E-04	2.3E-04	2.2E-04	2.3E-05	2.2E-05	2.5E-05	2.5E-05	9.6E-05	2.9E-06	2.7E-06	7.5E-04	5.1E-08	3.5E-08	2.1E-07	5.5E-07	1.5E-06	1.1E-06	5.5E-05	1E-03	9E-04	5E-05	6E-05	8E-04	6E-04	9E-05	1E-04	5E-05	3E-05
residential	479131	3621025	1.8E-02	1.8E-02	1.7E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	6.4E+03	1.6E-02	1.6E-02	1.0E-01	1.0E-01	1.2E-02	5.0E-03	1.2E-02	1.4E-02	1.7E-02	1.2E-02	1.4E-01	2.5E-04	2.5E-04	2.4E-04	2.3E-04	2.4E-05	2.2E-05	2.5E-05	2.5E-05	9.7E-05	2.9E-06	2.8E-06	7.8E-04	5.1E-08	3.5E-08	2.2E-07	5.6E-07	1.5E-06	1.1E-06	5.7E-05	1E-03	9E-04	5E-05	6E-05	8E-04	6E-04	9E-05	1E-04	6E-05	3E-05
residential	479231	3621025	1.8E-02	1.8E-02	1.7E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	6.5E+03	1.7E-02	1.6E-02	1.1E-01	1.1E-01	1.2E-02	5.0E-03	1.2E-02	1.4E-02	1.7E-02	1.2E-02	1.5E-01	2.5E-04	2.5E-04	2.4E-04	2.3E-04	2.4E-05	2.2E-05	2.5E-05	2.5E-05	9.8E-05	3.0E-06	2.8E-06	8.2E-04	5.1E-08	3.5E-08	2.2E-07	5.6E-07	1.5E-06	1.1E-06	6.0E-05	1E-03	1E-03	5E-05	6E-05	8E-04	6E-04	1E-04	1E-04	6E-05	3E-05
residential	479331	3621025	1.8E-02	1.8E-02	1.7E-02	1.6E-02	1.5E-02	1.5E-02	1.5E-02	1.5E-02	6.6E+03	1.7E-02	1.6E-02	1.1E-01	1.1E-01	1.2E-02	5.0E-03	1.2E-02	1.4E-02	1.8E-02	1.2E-02	1.5E-01	2.5E-04	2.6E-04	2.4E-04	2.3E-04	2.4E-05	2.3E-05	2.6E-05	2.6E-05	9.9E-05	3.0E-06	2.9E-06	8.5E-04	5.2E-08	3.6E-08	2.2E-07	5.7E-07	1.6E-06	1.1E-06	6.3E-05	1E-03	1E-03	5E-05	6E-05	8E-04	6E-04	1E-04	1E-04	6E-05	4E-05
residential	479431	3621025	1.8E-02	1.8E-02	1.7E-02	1.7E-02	1.6E-02	1.5E-02	1.5E-02	1.5E-02	6.6E+03	1.7E-02	1.6E-02	1.2E-01	1.2E-01	1.2E-02	5.0E-03	1.2E-02	1.4E-02	1.8E-02	1.2E-02	1.6E-01	2.6E-04	2.6E-04	2.4E-04	2.3E-04	2.4E-05	2.3E-05	2.6E-05	2.6E-05	1.0E-04	3.1E-06	2.9E-06	8.9E-04	5.2E-08	3.6E-08	2.2E-07	5.7E-07	1.6E-06	1.1E-06	6.7E-05	1E-03	1E-03	5E-05	6E-05	9E-04	7E-04	1E-04	1E-04	7E-05	4E-05
recreational	481431	3621025	2.5E-02	2.5E-02	2.3E-02	2.2E-02	2.0E-02	1.9E-02	1.9E-02	1.9E-02	8.4E+03	2.8E-02	2.6E-02	2.0E-01	2.0E-01	1.4E-02	5.9E-03	1.4E-02	1.7E-02	2.2E-02	1.4E-02	2.9E-01	3.5E-04	3.5E-04	3.2E-04	3.1E-04	3.2E-05	3.0E-05	3.4E-05	3.4E-05	1.3E-04	5.0E-06	4.7E-06	1.5E-03	6.2E-08	4.2E-08	2.6E-07	6.7E-07	2.0E-06	1.2E-06	1.2E-04	1E-03	1E-03	7E-05	8E-05	1E-03	1E-03	2E-04	2E-04	1E-04	7E-05
recreational	481531	3621025	2.5E-02	2.5E-02	2.3E-02	2.2E-02	2.1E-02	2.0E-02	2.0E-02	2.0E-02	8.5E+03	2.9E-02	2.7E-02	2.0E-01	2.0E-01	1.4E-02	5.9E-03	1.4E-02	1.7E-02	2.3E-02	1.4E-02	2.9E-01	3.5E-04	3.6E-04	3.3E-04	3.2E-04	3.3E-05	3.1E-05	3.5E-05	3.4E-05	1.3E-04	5.2E-06	4.8E-06	1.5E-03	6.2E-08	4.2E-08	2.6E-07	6.8E-07	2.0E-06	1.3E-06	1.2E-04	1E-03	1E-03	7E-05	8E-05	1E-03	1E-03	2E-04	2E-04	1E-04	7E-05
recreational	481631	3621025	2.6E-02	2.6E-02	2.4E-02	2.3E-02	2.2E-02	2.0E-02	2.0E-02	2.0E-02	8.6E+03	2.9E-02	2.8E-02	2.0E-01	2.0E-01	1.4E-02	6.0E-03	1.4E-02	1.7E-02	2.3E-02	1.4E-02	2.9E-01	3.6E-04	3.7E-04	3.4E-04	3.2E-04	3.3E-05	3.1E-05	3.5E-05	3.5E-05	1.3E-04	5.2E-06	4.9E-06	1.5E-03	6.3E-08	4.3E-08	2.7E-07	6.9E-07	2.0E-06	1.3E-06	1.2E-04	2E-03	1E-03	8E-05	9E-05	1E-03	1E-03	2E-04	2E-04	1E-04	7E-05
residential	483831	3621025	4.6E-02	5.0E-02	4.4E-02	4.0E-02	3.7E-02	3.3E-02	3.2E-02	3.2E-02	2.3E+04	4.8E-02	4.4E-02	1.4E-01	1.4E-01	2.0E-02	8.5E-03	1.9E-02	3.9E-02	5.1E-02	2.5E-02	1.8E-01	6.5E-04	7.1E-04	6.2E-04	5.7E-04	5.7E-05	5.2E-05	5.7E-05	5.6E-05	3.5E-04	8.6E-06	7.8E-06	1.0E-03	8.7E-08	6.0E-08	3.6E-07	1.5E-06	4.5E-06	2.3E-06	7.3E-05	3E-03	2E-03	1E-04	2E-04	1E-03	8E-04	1E-04	1E-04	7E-05	4E-05
residential	483931	3621025	4.8E-02	5.3E-02	4.6E-02	4.2E-02	3.8E-02	3.4E-02	3.3E-02	3.2E-02	2.4E+04	4.9E-02	4.5E-02	1.3E-01	1.3E-01	2.0E-02	8.7E-03	2.0E-02	4.1E-02	5.5E-02	2.7E-02	1.7E-01	6.7E-04	7.4E-04	6.5E-04	6.0E-04	5.9E-05	5.3E-05	5.9E-05	5.7E-05	3.6E-04	8.7E-06	8.0E-06	1.0E-03	9.0E-08	6.2E-08	3.7E-07	1.6E-06	4.9E-06	2.4E-06	7.2E-05	3E-03	3E-03	1E-04	2E-04	1E-03	7E-04	1E-04	1E-04	7E-05	4E-05
residential	484031	3621025	4.8E-02	5.4E-02	4.6E-02	4.3E-02	3.8E-02	3.5E-02	3.3E-02	3.2E-02	2.5E+04	4.9E-02	4.5E-02	1.3E-01	1.3E-01	2.1E-02	8.9E-03	2.0E-02	4.3E-02	5.6E-02	2.8E-02	1.7E-01	6.8E-04	7.6E-04	6.6E-04	6.0E-04	5.9E-05	5.4E-05	5.9E-05	5.7E-05	3.8E-04	8.8E-06	8.1E-06	9.6E-04	9.3E-08	6.3E-08	3.8E-07	1.7E-06	5.0E-06	2.5E-06	7.1E-05	3E-03	3E-03	1E-04	2E-04	1E-03	7E-04	1E-04	1E-04	7E-05	4E-05
residential	484131	3621025	4.9E-02	5.6E-02	4.8E-02	4.4E-02	3.9E-02	3.5E-02	3.4E-02	3.3E-02	2.6E+04	5.1E-02	4.7E-02	1.2E-01	1.2E-01	2.2E-02	9.2E-03	2.1E-02	4.5E-02	5.9E-02	3.0E-02	1.7E-01	6.9E-04	7.9E-04	6.8E-04	6.2E-04	6.0E-05	5.5E-05	6.0E-05	5.8E-05	4.0E-04	9.0E-06	8.3E-06	9.2E-04	9.6E-08	6.5E-08	3.9E-07	1.8E-06	5.2E-06	2.6E-06	6.9E-05	3E-03	3E-03	1E-04	2E-04	9E-04	7E-04	1E-04	1E-04	7E-05	4E-05
residential	484231	3621025	5.1E-02	5.9E-02	5.0E-02	4.5E-02	4.0E-02	3.6E-02	3.4E-02	3.3E-02	2.7E+04	5.3E-02	4.8E-02	1.2E-01	1.2E-01	2.3E-02	9.4E-03	2.2E-02	4.6E-02	6.1E-02	3.1E-02	1.6E-01	7.2E-04	8.3E-04	7.1E-04	6.4E-04	6.2E-05	5.6E-05	6.1E-05	5.8E-05	4.1E-04	9.4E-06	8.6E-06	8.8E-04	1.0E-07	6.7E-08	4.1E-07	1.8E-06	5.5E-06	2.8E-06	6.6E-05	3E-03	3E-03	2E-04	2E-04	9E-04	6E-04	1E-04	1E-04	7E-05	4E-05
residential	477831	3621125	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.1E-02	1.1E-02	1.1E-02	1.1E-02	4.7E+03	1.1E-02	1.0E-02	4.1E-02	4.1E-02	9.8E-03	4.3E-03	9.7E-03	1.2E-02	1.3E-02	1.1E-02	3.8E-02	1.8E-04	1.8E-04	1.7E-04	1.7E-04	1.8E-05	1.7E-05	1.9E-05	1.9E-05	7.1E-05	1.9E-06	1.8E-06	3.1E-04	4.3E-08	3.1E-08	1.8E-07	5.0E-07	1.2E-06	9.6E-07	1.6E-05	8E-04	7E-04	4E-05	4E-05	3E-04	2E-04	4E-05	5E-05	2E-05	9E-06
residential	477931	3621125	1.3E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.1E-02	1.1E-02	1.1E-02	4.8E+03	1.1E-02	1.0E-02	4.4E-02	4.4E-02	9.9E-03	4.3E-03	9.8E-03	1.3E-02	1.3E-02	1.1E-02	4.1E-02	1.9E-04	1.9E-04	1.8E-04	1.7E-04	1.8E-05	1.7E-05	1.9E-05	1.9E-05	7.3E-05	1.9E-06	1.8E-06	3.3E-04	4.4E-08	3.1E-08	1.8E-07	5.0E-07	1.2E-06	9.8E-07	1.7E-05	8E-04	7E-04	4E-05	4E-05	3E-04	2E-04	4E-05	5E-05	2E-05	1E-05
residential	478031	3621125	1.4E-02	1.4E-02	1.3E-02	1.2E-02	1.2E-02	1.1E-02	1.1E-02	1.1E-02	5.0E+03	1.1E-02	1.1E-02	4.7E-02	4.7E-02	1.0E-02	4.4E-03	1.0E-02	1.3E-02	1.4E-02	1.1E-02	4.7E-02	1.9E-04	1.9E-04	1.8E-04	1.7E-04	1.8E-05	1.7E-05	2.0E-05	2.0E-05	7.5E-05	2.0E-06	1.9E-06	3.6E-04	4.4E-08	3.1E-08	1.9E-07	5.1E-07	1.2E-06	9.9E-07	1.9E-05	8E-04	7E-04	4E-05	5E-05	4E-04	3E-04	4E-05	5E-05	2E-05	1E-05
residential	478131	3621125	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.1E-02	1.1E-02	5.1E+03	1.1E-02	1.1E-02	5.1E-02	5.1E-02	1.0E-02	4.4E-03	1.0E-02	1.3E-02	1.4E-02	1.1E-02	5.2E-02	2.0E-04	1.9E-04	1.8E-04	1.8E-04	1.9E-05	1.8E-05	2.0E-05	2.0E-05	7.7E-05	2.0E-06	1.9E-06	3.9E-04	4.5E-08	3.1E-08	1.9E-07	5.2E-07	1.3E-06	9.9E-07	2.2E-05	8E-04	7E-04	4E-05	5E-05	4E-04	3E-04	5E-05	6E-05	2E-05	1E-05
residential	478231	3621125	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	1.2E-02	5.2E+03	1.2E-02	1.1E-02	5.5E-02	5.5E-02	1.0E-02	4.4E-03	1.0E-02	1.3E-02	1.5E-02	1.1E-02	5.9E-02	2.0E-04	2.0E-04	1.9E-04	1.8E-04	1.9E-05	1.8E-05	2.1E-05	2.1E-05	7.9E-05	2.1E-06	2.0E-06	4.2E-04	4.5E-08	3.2E-08	1.9E-07	5.1E-07	1.3E-06	9.9E-07	2.4E-05	9E-04	8E-04	4E-05	5E-05	4E-04	3E-04	5E-05	6E-05	2E-05	1E-05
residential	478331	3621125	1.5E-02	1.5E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	5.3E+03	1.2E-02	1.1E-02	6.0E-02	6.0E-02	1.1E-02	4.5E-03	1.1E-02	1.3E-02	1.5E-02	1.1E-02	6.6E-02	2.1E-04	2.1E-04	2.0E-04	1.9E-04	2.0E-05	1.9E-05	2.2E-05	2.1E-05	8.0E-05	2.1E-06	2.0E-06	4.6E-04	4.7E-08	3.2E-08	2.0E-07	5.1E-07	1.3E-06	9.7E-07	2.7E-05	9E-04	8E-04	4E-05	5E-05	5E-04	3E-04	6E-05	7E-05	3E-05	2E-05
residential	478431	3621125	1.5E-02	1.5E-02	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	1.2E-02	5.4E+03	1.3E-02	1.2E-02	6.5E-02	6.5E-02	1.1E-02	4.6E-03	1.1E-02	1.3E-02	1.5E-02	1.1E-02	7.2E-02	2.1E-04	2.1E-04	2.0E-04	2.0E-04	2.0E-05	2.0E-05	2.2E-05	2.2E-05	8.2E-05	2.2E-06	2.1E-06	4.9E-04	4.7E-08	3.3E-08	2.0E-07	5.0E-07	1.3E-06	9.7E-07	3.0E-05	9E-04	8E-04	4E-05	5E-05	5E-04	4E-04	6E-05	7E-05	3E-05	2E-05
residential	478531	3621125	1.6E-02	1.6E-02	1.5E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	1.3E-02	5.5E+03	1.3E-02	1.2E-02	7.0E-02	7.0E-02	1.1E-02	4.7E-03	1.1E-02	1.3E-02	1.5E-02	1.1E-02	8.2E-02	2.2E-04	2.2E-04	2.1E-04	2.0E-04	2.1E-05	2.0E-05	2.3E-05	2.3E-05	8.3E-05	2.3E-06	2.2E-06	5.3E-04	4.7E-08	3.4E-08	2.0E-07	5.1E-07	1.4E-06	9.8E-07	3.3E-05	9E-04	8E-04	5E-05	5E-05	5E-04	4E-04	6E-05	8E-05	3E-05	2E-05
residential	478631	3621125	1.6E-02	1.6E-02	1.5E-02	1.5E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	5.9E+03	1.4E-02	1.3E-02	7.6E-02	7.6E-02	1.1E-02	4.8E-03	1.1E-02	1.3E-02	1.6E-02	1.1E-02	9.4E-02	2.3E-04	2.3E-04	2.1E-04	2.1E-04	2.1E-05	2.0E-05	2.3E-05	2.3E-05	9.0E-05	2.5E-06	2.4E-06	5.7E-04	4.8E-08	3.4E-08	2.0E-07	5.2E-07	1.4E-06	9.9E-07	3.8E-05	1E-03	9E-04	5E-05	5E-05	6E-04	4E-04	7E-05	8E-05	4E-05	2E-05
residential	478731	3621125	1.6E-02	1.6E-02	1.5E-02	1.5E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	6.0E+03	1.5E-02	1.4E-02	8.0E-02	8.0E-02	1.1E-02	4.8E-03	1.1E-02	1.3E-02	1.6E-02	1.1E-02	1.0E-01	2.3E-04	2.3E-04	2.2E-04	2.1E-04	2.2E-05	2.1E-05	2.4E-05	2.3E-05	9.0E-05	2.6E-06	2.5E-06	6.1E-04	4.8E-08	3.4E-08	2.0E-07	5.2E-07	1.4E-06	1.0E-06	4.2E-05	1E-03	9E-04	5E-05	5E-05	6E-04	4E-04	7E-05	9E-05	4E-05	2E-05
residential	478831	3621125	1.7E-02	1.7E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	1.3E-02	6.0E+03	1.5E-02	1.4E-02	8.5E-02	8.5E-02	1.1E-02	4.8E-03	1.1E-02	1.3E-02	1.6E-02	1.1E-02	1.1E-01	2.3E-04	2.4E-04	2.2E-04	2.1E-04	2.2E-05	2.1E-05	2.4E-05	2.4E-05	9.1E-05	2.7E-06	2.5E-06	6.4E-04	4.9E-08	3.4E-08	2.1E-07	5.3E-07	1.4E-06	1.0E-06	4.5E-05	1E-03	9E-04	5E-05	6E-05	6E-04	5E-04	8E-05	9E-05	4E-05	3E-05
residential	478931	3621125	1.7E-02	1.7E-02	1.6E-02	1.5E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	6.1E+03	1.5E-02	1.4E-02	9.0E-02	9.0E-02	1.1E-02	4.8E-03	1.1E-02	1.3E-02	1.6E-02	1.1E-02	1.2E-01	2.4E-04	2.4E-04	2.3E-04	2.2E-04	2.3E-05	2.1E-05	2.4E-05	2.4E-05	9.2E-05	2.7E-06	2.6E-06	6.8E-04	4.9E-08	3.4E-08	2.1E-07	5.3E-07	1.5E-06	1.0E-06	4.8E-05	1E-03	9E-04	5E-05	6E-05	7E-04	5E-04	8E-05	1E-04	5E-05	3E-05
residential	479031	3621125	1.7E-02	1.7E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	1.4E-02	6.2E+03	1.6E-02	1.5E-02	9.2E-02	9.2E-02	1.1E-02	4.9E-03	1.1E-02	1.3E-02	1.6E-02	1.1E-02	1.2E-01	2.4E-04	2.4E-04	2.3E-04	2.2E-04	2.2E-05	2.1E-05	2.4E-05	2.4E-05	9.3E-05	2.8E-06	2.6E-06	7.0E-04	4.9E-08	3.5E-08	2.1E-07	5.4E-07	1.5E-06	1.0E-06	5.0E-05	1E-03	9E-04	5E-05	6E-05	7E-04	5E-04	8E-05	1E-04	5E-05	3E-05
residential	479131	3621125	1.7E-02	1.7E-02	1.6E-02	1.5E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	6.2E+03	1.6E-02	1.5E-02	9.6E-02	9.6E-02	1.1E-02	4.9E-03	1.1E-02	1.4E-02	1.7E-02	1.2E-02	1.3E-01	2.4E-04	2.4E-04	2.3E-04	2.2E-04	2.3E-05	2.2E-05	2.4E-05	2.4E-05	9.4E-05	2.8E-06	2.6E-06	7.3E-04	5.0E-08	3.5E-08	2.1E-07	5.4E-07	1.5E-06	1.0E-06	5.2E-05	1E-03	9E-04	5E-05	6E-05	7E-04	5E-04	9E-05	1E-04	5E-05	3E-05
residential	479231	3621125	1.7E-02	1.7E-02	1.6E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	6.3E+03	1.6E-02	1.5E-02	1.0E-01	1.0E-01	1.1E-02	4.9E-03	1.1E-02	1.4E-02	1.7E-02	1.2E-02	1.3E-01	2.4E-04	2.4E-04	2.3E-04	2.2E-04	2.3E-05	2.2E-05	2.5E-05	2.5E-05	9.5E-05	2.8E-06	2.7E-06	7.6E-04	5.0E-08	3.5E-08	2.1E-07	5.4E-07	1.5E-06	1.0E-06	5.5E-05	1E-03	9E-04	5E-05	6E-05	8E-04	6E-04	9E-05	1E-04	5E-05	3E-05
residential	479331	3621125	1.8E-02	1.8E-02	1.7E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	6.3E+03	1.6E-02	1.5E-02	1.0E-01	1.0E-01	1.1E-02	5.0E-03	1.1E-02	1.4E-02	1.7E-02	1.2E-02	1.4E-01	2.5E-04	2.5E-04	2.3E-04	2.2E-04	2.3E-05	2.2E-05	2.5E-05	2.5E-05	9.6E-05	2.9E-06	2.7E-06	7.9E-04	5.1E-08	3.5E-08	2.1E-07	5.5E-07	1.5E-06	1.0E-06	5.8E-05	1E-03	9E-04	5E-05	6E-05	8E-04	6E-04	1E-04	1E-04	6E-05	3E-05
residential	479431	3621125	1.8E-02	1.8E-02	1.7E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	6.4E+03	1.7E-02	1.6E-02	1.1E-01	1.1E-01	1.2E-02	5.0E-03	1.2E-02	1.4E-02	1.7E-02	1.2E-02	1.5E-01	2.5E-04	2.5E-04	2.4E-04	2.3E-04	2.4E-05	2.2E-05	2.6E-05	2.5E-05	9.7E-05	3.0E-06	2.8E-06	8.3E-04	5.1E-08	3.5E-08	2.2E-07	5.5E-07	1.5E-06	1.0E-06	6.1E-05	1E-03	1E-03	5E-05	6E-05	8E-04	6E-04	1E-04	1E-04	6E-05	3E-05
residential	479531	3621125	1.8E-02	1.8E-02	1.7E-02	1.6E-02	1.5E-02	1.5E-02	1.5E-02	1.5E-02	6.5E+03	1.7E-02	1.6E-02	1.2E-01	1.2E-01	1.2E-02	5.0E-03	1.2E-02	1.4E-02	1.7E-02	1.2E-02	1.6E-01	2.6E-04	2.6E-04	2.4E-04	2.3E-04	2.4E-05	2.3E-05	2.6E-05	2.6E-05	9.8E-05	3.1E-06	2.9E-06	8.7E-04	5.1E-08	3.6E-08	2.2E-07	5.6E-07	1.5E-06	1.1E-06	6.5E-05	1E-03	1E-03	5E-05	6E-05	9E-04	6E-04	1E-04	1E-04	6E-05	4E-05
residential	479631	3621125	1.8E-02	1.9E-02	1.7E-02	1.7E-02	1.6E-02	1.5E-02	1.5E-02	1.5E-02	6.5E+03	1.8E-02	1.7E-02	1.2E-01	1.2E-01	1.2E-02	5.1E-03	1.2E-02	1.4E-02	1.8E-02	1.2E-02	1.7E-01	2.6E-04	2.6E-04	2.5E-04	2.3E-04	2.4E-05	2.3E-05	2.6E-05	2.6E-05	9.9E-05	3.1E-06	3.0E-06	9.1E-04	5.2E-08	3.6E-08	2.2E-07	5.6E-07	1.6E-06	1.1E-06	6.8E-05	1E-03	1E-03	5E-05	6E-05	9E-04	7E-04	1E-04	1E-04	7E-05	4E-05
recreational	481431	3621125	2.4E-02	2.4E-02	2.3E-02	2.1E-02	2.0E-02	1.9E-02	1.9E-02	1.9E-02	8.1E+03	2.7E-02	2.6E-02	1.8E-01	1.8E-01	1.4E-02	5.8E-03	1.4E-02	1.6E-02	2.1E-02	1.4E-02	2.6E-01	3.4E-04	3.4E-04	3.2E-04	3.0E-04	3.1E-05	3.0E-05	3.4E-05	3.3E-05	1.2E-04	4.9E-06	4.6E-06	1.4E-03	6.0E-08	4.1E-08	2.5E-07	6.5E-07	1.9E-06	1.2E-06	1.1E-04	1E-03	1E-03	7E-05	8E-05	1E-03	1E-03	2E-04	2E-04	1E-04	6E-05
recreational	481531	3621125	2.4E-02	2.5E-02	2.3E-02	2.2E-02	2.1E-02	1.9E-02	1.9E-02	1.9E-02	8.2E+03	2.8E-02	2.6E-02	1.8E-01	1.8E-01	1.4E-02	5.9E-03	1.4E-02	1.7E-02	2.2E-02	1.4E-02	2.6E-01	3.4E-04	3.5E-04	3.3E-04	3.1E-04	3.2E-05	3.0E-05	3.4E-05	3.4E-05	1.2E-04	4.9E-06	4.6E-06	1.4E-03	6.1E-08	4.2E-08	2.6E-07	6.6E-07	1.9E-06	1.2E-06	1.1E-04	1E-03	1E-03	7E-05	8E-05	1E-03	1E-03	2E-04	2E-04	1E-04	6E-05
recreational	481631	3621125	2.5E-02	2.5E-02	2.4E-02	2.2E-02	2.1E-02	2.0E-02	2.0E-02	1.9E-02	8.4E+03	2.8E-02	2.7E-02	1.8E-01	1.8E-01	1.4E-02	5.9E-03	1.4E-02	1.7E-02	2.2E-02	1.4E-02	2.6E-01	3.5E-04	3.6E-04	3.3E-04	3.2E-04	3.3E-05	3.1E-05	3.4E-05	3.4E-05	1.3E-04	5.0E-06	4.7E-06	1.4E-03	6.1E-08	4.2E-08	2.6E-07	6.7E-07	2.0E-06	1.2E-06	1.1E-04	1E-03	1E-03	7E-05	8E-05	1E-03	1E-03	2E-04	2E-04	1E-04	6E-05
recreational	481731	3621125	2.5E-02	2.6E-02	2.4E-02	2.3E-02	2.1E-02	2.0E-02	2.0E-02	2.0E-02	8.5E+03	2.9E-02	2.7E-02	1.8E-01	1.8E-01	1.4E-02	6.0E-03	1.4E-02	1.7E-02	2.2E-02	1.4E-02	2.6E-01	3.6E-04	3.6E-04	3.4E-04	3.2E-04	3.3E-05	3.1E-05	3.5E-05	3.5E-05	1.3E-04	5.1E-06	4.8E-06	1.4E-03	6.2E-08	4.3E-08	2.6E-07	6.8E-07	2.0E-06	1.2E-06	1.1E-04	2E-03	1E-03	7E-05	8E-05	1E-03	1E-03	2E-04	2E-04	1E-04	6E-05
recreational	481831	3621125	2.6E-02	2.6E-02	2.4E-02	2.3E-02	2.2E-02	2.1E-02	2.0E-02	2.0E-02	8.7E+03	2.9E-02	2.7E-02	1.8E-01	1.8E-01	1.4E-02	6.1E-03	1.4E-02	1.7E-02	2.3E-02	1.4E-02	2.6E-01	3.7E-04	3.7E-04	3.5E-04	3.3E-04	3.4E-05	3.2E-05	3.6E-05	3.5E-05	1.3E-04	5.2E-06	4.8E-06	1.4E-03	6.2E-08	4.3E-08	2.6E-07	6.9E-07	2.0E-06	1.3E-06	1.1E-04	2E-03	1E-03	8E-05	9E-05	1E-03	1E-03	2E-04	2E-04	1E-04	6E-05
recreational	481931	3621125	2.7E-02	2.7E-02	2.5E-02	2.4E-02	2.2E-02	2.1E-02	2.1E-02	2.0E-02	8.9E+03	3.0E-02	2.8E-02	1.8E-01	1.8E-01	1.4E-02	6.1E-03	1.4E-02	1.8E-02	2.3E-02	1.4E-02	2.6E-01	3.8E-04	3.8E-04	3.5E-04	3.3E-04	3.5E-05	3.2E-05	3.7E-05	3.6E-05	1.3E-04	5.3E-06	4.9E-06	1.4E-03	6.3E-08	4.4E-08	2.7E-07	7.1E-07	2.0E-06	1.3E-06	1.0E-04	2E-03	1E-03	8E-05	9E-05	1E-03	1E-03	2E-04	2E-04	1E-04	6E-05
recreational	482031	3621125	2.7E-02	2.8E-02	2.6E-02	2.4E-02	2.3E-02	2.1E-02	2.1E-02	2.1E-02	9.1E+03	3.0E-02	2.8E-02	1.8E-01	1.8E-01	1.4E-02	6.2E-03	1.4E-02	1.8E-02	2.3E-02	1.5E-02	2.5E-01	3.8E-04	3.9E-04	3.6E-04	3.4E-04	3.5E-05	3.3E-05	3.7E-05	3.7E-05	1.4E-04	5.3E-06	5.0E-06	1.4E-03	6.4E-08	4.4E-08	2.7E-07	7.2E-07	2.1E-06	1.3E-06	1.0E-04	2E-03	1E-03	8E-05	9E-05	1E-03	1E-03	2E-04	2E-04	1E-04	6E-05
recreational	482131	3621125	2.8E-02	2.8E-02	2.6E-02	2.5E-02	2.3E-02	2.2E-02	2.1E-02	2.1E-02	9.4E+03	3.1E-02	2.9E-02	1.8E-01	1.8E-01	1.5E-02	6.3E-03	1.5E-02	1.9E-02	2.4E-02	1.5E-02	2.5E-01	3.9E-04	4.0E-04	3.7E-04	3.5E-04	3.6E-05	3.4E-05	3.8E-05	3.8E-05	1.4E-04	5.4E-06	5.1E-06	1.4E-03	6.4E-08	4.5E-08	2.7E-07	7.4E-07	2.1E-06	1.3E-06	1.0E-04	2E-03	1E-03	8E-05	9E-05	1E-03	1E-03	2E-04	2E-04	1E-04	6E-05
recreational	482231	3621125	2.8E-02	2.9E-02	2.6E-02	2.5E-02	2.3E-02	2.2E-02	2.2E-02	2.2E-02	9.6E+03	3.1E-02	2.9E-02	1.8E-01	1.8E-01	1.5E-02	6.3E-03	1.5E-02	1.9E-02	2.4E-02	1.5E-02	2.5E-01	4.0E-04	4.0E-04	3.7E-04	3.6E-04	3.6E-05	3.4E-05	3.8E-05	3.8E-05	1.5E-04	5.6E-06	5.2E-06	1.3E-03	6.5E-08	4.5E-08	2.7E-07	7.5E-07	2.2E-06	1.3E-06	1.0E-04	2E-03	2E-03	8E-05	9E-05	1E-03	1E-03	2E-04	2E-04	1E-04	6E-05
recreational	482331	3621125	2.9E-02	2.9E-02	2.7E-02	2.6E-02	2.4E-02	2.2E-02	2.2E-02	2.2E-02	1.0E+04	3.2E-02	3.0E-02	1.7E-01	1.7E-01	1.5E-02	6.4E-03	1.5E-02	1.9E-02	2.5E-02	1.5E-02	2.4E-01	4.1E-04	4.1E-04	3.8E-04	3.6E-04	3.7E-05	3.5E-05	3.9E-05	3.9E-05	1.5E-04	5.7E-06	5.3E-06	1.3E-03	6.6E-08	4.6E-08	2.8E-07	7.7E-07	2.2E-06	1.4E-06	1.0E-04	2E-03	2E-03	8E-05	1E-04	1E-03	1E-03	2E-04	2E-04	1E-04	6E-05
recreational	482431	3621125	3.0E-02	3.0E-02	2.8E-02	2.6E-02	2.4E-02	2.3E-02	2.3E-02	2.2E-02	1.0E+04	3.3E-02	3.1E-02	1.7E-01	1.7E-01	1.5E-02	6.5E-03	1.5E-02	2.0E-02	2.5E-02	1.6E-02	2.4E-01	4.2E-04	4.3E-04	3.9E-04	3.7E-04	3.8E-05	3.5E-05	4.0E-05	4.0E-05	1.6E-04	5.8E-06	5.4E-06	1.3E-03	6.7E-08	4.6E-08	2.8E-07	8.0E-07	2.2E-06	1.4E-06	9.8E-05	2E-03	2E-03	9E-05	1E-04	1E-03	1E-03	2E-04	2E-04	1E-04	6E-05
recreational	482531	3621125	3.1E-02	3.2E-02	2.9E-02	2.8E-02	2.6E-02	2.4E-02	2.4E-02	2.3E-02	1.1E+04	3.3E-02	3.1E-02	1.7E-01	1.7E-01	1.5E-02	6.6E-03	1.5E-02	2.1E-02	2.6E-02	1.6E-02	2.2E-01	4.4E-04	4.6E-04	4.1E-04	3.9E-04	4.0E-05	3.7E-05	4.2E-05	4.1E-05	1.6E-04	5.9E-06	5.5E-06	1.3E-03	6.7E-08	4.7E-08	2.8E-07	8.2E-07	2.3E-06	1.4E-06	9.2E-05	2E-03	2E-03	9E-05	1E-04	1E-03	1E-03	2E-04	2E-04	9E-05	5E-05
residential	483831	3621125	4.4E-02	4.9E-02	4.2E-02	3.9E-02	3.6E-02	3.3E-02	3.1E-02	3.1E-02	2.2E+04	4.6E-02	4.2E-02	1.3E-01	1.3E-01	1.9E-02	8.5E-03	1.9E-02	3.8E-02	5.0E-02	2.5E-02	1.7E-01	6.3E-04	6.9E-04	6.0E-04	5.6E-04	5.5E-05	5.1E-05	5.6E-05	5.4E-05	3.3E-04	8.1E-06	7.4E-06	9.9E-04	8.6E-08	6.0E-08	3.5E-07	1.5E-06	4.5E-06	2.2E-06	7.0E-05	3E-03	2E-03	1E-04	2E-04	1E-03	7E-04	1E-04	1E-04	7E-05	4E-05
residential	483931	3621125	4.5E-02	5.0E-02	4.4E-02	4.0E-02	3.6E-02	3.3E-02	3.2E-02	3.1E-02	2.3E+04	4.6E-02	4.2E-02	1.3E-01	1.3E-01	2.0E-02	8.7E-03	2.0E-02	4.1E-02	5.2E-02	2.6E-02	1.7E-01	6.4E-04	7.1E-04	6.2E-04	5.7E-04	5.6E-05	5.1E-05	5.6E-05	5.5E-05	3.5E-04	8.2E-06	7.5E-06	9.6E-04	8.9E-08	6.2E-08	3.6E-07	1.6E-06	4.6E-06	2.3E-06	7.0E-05	3E-03	2E-03	1E-04	2E-04	1E-03	7E-04	1E-04	1E-04	7E-05	4E-05
residential	484031	3621125	4.6E-02	5.2E-02	4.5E-02	4.1E-02	3.7E-02	3.3E-02	3.2E-02	3.1E-02	2.4E+04	4.7E-02	4.3E-02	1.2E-01	1.2E-01	2.1E-02	8.9E-03	2.0E-02	4.2E-02	5.4E-02	2.8E-02	1.7E-01	6.5E-04	7.3E-04	6.3E-04	5.8E-04	5.7E-05	5.2E-05	5.7E-05	5.5E-05	3.6E-04	8.4E-06	7.7E-06	9.2E-04	9.2E-08	6.3E-08	3.8E-07	1.7E-06	4.8E-06	2.5E-06	6.9E-05	3E-03	3E-03	1E-04	2E-04	9E-04	7E-04	1E-04	1E-04	7E-05	4E-05
residential	484131	3621125	4.8E-02	5.4E-02	4.7E-02	4.2E-02	3.8E-02	3.4E-02	3.3E-02	3.1E-02	2.5E+04	4.9E-02	4.5E-02	1.2E-01	1.2E-01	2.2E-02	9.2E-03	2.1E-02	4.3E-02	5.7E-02	2.9E-02	1.6E-01	6.7E-04	7.7E-04	6.6E-04	6.0E-04	5.9E-05	5.3E-05	5.8E-05	5.6E-05	3.8E-04	8.7E-06	8.0E-06	8.8E-04	9.5E-08	6.5E-08	3.9E-07	1.7E-06	5.1E-06	2.6E-06	6.6E-05	3E-03	3E-03	1E-04	2E-04	9E-04	6E-04	1E-04	1E-04	7E-05	4E-05
residential	484231	3621125	4.9E-02	5.6E-02	4.8E-02	4.3E-02	3.8E-02	3.4E-02	3.3E-02	3.1E-02	2.5E+04	4.9E-02	4.5E-02	1.1E-01	1.1E-01	2.3E-02	9.4E-03	2.2E-02	4.4E-02	5.7E-02	3.0E-02	1.5E-01	6.9E-04	8.0E-04	6.7E-04	6.1E-04	5.9E-05	5.3E-05	5.8E-05	5.5E-05	3.8E-04	8.7E-06	7.9E-06	8.2E-04	1.0E-07	6.7E-08	4.1E-07	1.8E-06	5.1E-06	2.7E-06	6.0E-05	3E-03	3E-03	1E-04	2E-04	8E-04	6E-04	1E-04	1E-04	6E-05	3E-05
residential	477931	3621225	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.1E-02	1.1E-02	1.1E-02	1.1E-02	4.6E+03	1.0E-02	9.8E-03	4.2E-02	4.2E-02	9.7E-03	4.3E-03	9.6E-03	1.2E-02	1.3E-02	1.1E-02	3.9E-02	1.8E-04	1.8E-04	1.7E-04	1.7E-04	1.7E-05	1.7E-05	1.9E-05	1.9E-05	7.0E-05	1.8E-06	1.8E-06	3.2E-04	4.3E-08	3.0E-08	1.8E-07	4.8E-07	1.2E-06	9.4E-07	1.6E-05	8E-04	7E-04	4E-05	4E-05	3E-04	2E-04	4E-05	5E-05	2E-05	9E-06
residential	478031	3621225	1.3E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.1E-02	1.1E-02	1.1E-02	4.8E+03	1.1E-02	1.0E-02	4.5E-02	4.5E-02	9.8E-03	4.3E-03	9.8E-03	1.2E-02	1.4E-02	1.1E-02	4.5E-02	1.9E-04	1.9E-04	1.8E-04	1.7E-04	1.8E-05	1.7E-05	1.9E-05	1.9E-05	7.3E-05	1.9E-06	1.8E-06	3.4E-04	4.3E-08	3.1E-08	1.8E-07	4.9E-07	1.2E-06	9.5E-07	1.8E-05	8E-04	7E-04	4E-05	4E-05	3E-04	3E-04	4E-05	5E-05	2E-05	1E-05
residential	478131	3621225	1.3E-02	1.4E-02	1.3E-02	1.2E-02	1.2E-02	1.1E-02	1.1E-02	1.1E-02	4.9E+03	1.1E-02	1.0E-02	4.8E-02	4.8E-02	9.9E-03	4.4E-03	9.9E-03	1.2E-02	1.4E-02	1.1E-02	4.9E-02	1.9E-04	1.9E-04	1.8E-04	1.7E-04	1.8E-05	1.7E-05	2.0E-05	2.0E-05	7.4E-05	2.0E-06	1.9E-06	3.7E-04	4.4E-08	3.1E-08	1.8E-07	4.9E-07	1.2E-06	9.5E-07	2.0E-05	8E-04	7E-04	4E-05	5E-05	4E-04	3E-04	4E-05	5E-05	2E-05	1E-05
residential	478231	3621225	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.1E-02	1.1E-02	1.1E-02	5.0E+03	1.1E-02	1.1E-02	5.2E-02	5.2E-02	1.0E-02	4.4E-03	1.0E-02	1.2E-02	1.4E-02	1.1E-02	5.4E-02	1.9E-04	1.9E-04	1.8E-04	1.8E-04	1.8E-05	1.8E-05	2.0E-05	2.0E-05	7.5E-05	2.0E-06	1.9E-06	3.9E-04	4.4E-08	3.1E-08	1.9E-07	4.9E-07	1.3E-06	9.5E-07	2.2E-05	8E-04	7E-04	4E-05	5E-05	4E-04	3E-04	5E-05	6E-05	2E-05	1E-05
residential	478331	3621225	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	1.2E-02	5.0E+03	1.1E-02	1.1E-02	5.5E-02	5.5E-02	1.0E-02	4.4E-03	1.0E-02	1.2E-02	1.4E-02	1.1E-02	5.9E-02	2.0E-04	2.0E-04	1.9E-04	1.8E-04	1.9E-05	1.8E-05	2.0E-05	2.0E-05	7.6E-05	2.0E-06	1.9E-06	4.2E-04	4.4E-08	3.1E-08	1.9E-07	4.9E-07	1.3E-06	9.5E-07	2.4E-05	8E-04	8E-04	4E-05	5E-05	4E-04	3E-04	5E-05	6E-05	2E-05	1E-05
residential	478431	3621225	1.5E-02	1.5E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	5.2E+03	1.2E-02	1.1E-02	6.1E-02	6.1E-02	1.0E-02	4.4E-03	1.0E-02	1.2E-02	1.5E-02	1.1E-02	6.7E-02	2.1E-04	2.1E-04	2.0E-04	1.9E-04	2.0E-05	1.9E-05	2.2E-05	2.2E-05	7.9E-05	2.1E-06	2.0E-06	4.6E-04	4.6E-08	3.2E-08	1.9E-07	4.9E-07	1.3E-06	9.4E-07	2.7E-05	9E-04	8E-04	4E-05	5E-05	5E-04	3E-04	6E-05	7E-05	3E-05	2E-05
residential	478531	3621225	1.5E-02	1.5E-02	1.4E-02	1.4E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	5.3E+03	1.2E-02	1.2E-02	6.6E-02	6.6E-02	1.1E-02	4.6E-03	1.0E-02	1.2E-02	1.5E-02	1.1E-02	7.4E-02	2.1E-04	2.1E-04	2.0E-04	1.9E-04	2.0E-05	1.9E-05	2.2E-05	2.2E-05	8.0E-05	2.2E-06	2.1E-06	5.0E-04	4.6E-08	3.3E-08	2.0E-07	4.9E-07	1.3E-06	9.6E-07	3.0E-05	9E-04	8E-04	4E-05	5E-05	5E-04	4E-04	6E-05	7E-05	3E-05	2E-05
residential	478631	3621225	1.5E-02	1.5E-02	1.5E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	1.3E-02	5.4E+03	1.3E-02	1.3E-02	7.1E-02	7.1E-02	1.1E-02	4.7E-03	1.1E-02	1.3E-02	1.5E-02	1.1E-02	8.4E-02	2.2E-04	2.2E-04	2.1E-04	2.0E-04	2.1E-05	2.0E-05	2.2E-05	2.2E-05	8.1E-05	2.4E-06	2.2E-06	5.3E-04	4.7E-08	3.3E-08	2.0E-07	5.0E-07	1.4E-06	9.7E-07	3.4E-05	9E-04	8E-04	5E-05	5E-05	5E-04	4E-04	6E-05	8E-05	3E-05	2E-05
residential	478731	3621225	1.6E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	5.4E+03	1.4E-02	1.3E-02	7.5E-02	7.5E-02	1.1E-02	4.7E-03	1.1E-02	1.3E-02	1.5E-02	1.1E-02	9.1E-02	2.2E-04	2.2E-04	2.1E-04	2.0E-04	2.1E-05	2.0E-05	2.3E-05	2.3E-05	8.2E-05	2.5E-06	2.3E-06	5.7E-04	4.7E-08	3.4E-08	2.0E-07	5.1E-07	1.4E-06	9.7E-07	3.8E-05	9E-04	8E-04	5E-05	5E-05	6E-04	4E-04	7E-05	8E-05	4E-05	2E-05
residential	478831	3621225	1.6E-02	1.6E-02	1.5E-02	1.5E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	5.9E+03	1.4E-02	1.4E-02	7.9E-02	7.9E-02	1.1E-02	4.8E-03	1.1E-02	1.3E-02	1.6E-02	1.1E-02	9.8E-02	2.3E-04	2.3E-04	2.1E-04	2.1E-04	2.1E-05	2.0E-05	2.3E-05	2.3E-05	8.9E-05	2.6E-06	2.4E-06	6.0E-04	4.7E-08	3.4E-08	2.0E-07	5.1E-07	1.4E-06	9.8E-07	4.0E-05	1E-03	9E-04	5E-05	5E-05	6E-04	4E-04	7E-05	9E-05	4E-05	2E-05
residential	478931	3621225	1.6E-02	1.6E-02	1.5E-02	1.5E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	5.9E+03	1.5E-02	1.4E-02	8.3E-02	8.3E-02	1.1E-02	4.8E-03	1.1E-02	1.3E-02	1.6E-02	1.1E-02	1.1E-01	2.3E-04	2.3E-04	2.2E-04	2.1E-04	2.2E-05	2.1E-05	2.3E-05	2.3E-05	8.9E-05	2.6E-06	2.5E-06	6.3E-04	4.8E-08	3.4E-08	2.0E-07	5.2E-07	1.4E-06	9.9E-07	4.3E-05	1E-03	9E-04	5E-05	5E-05	6E-04	5E-04	8E-05	9E-05	4E-05	2E-05
residential	479031	3621225	1.6E-02	1.6E-02	1.5E-02	1.5E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	6.0E+03	1.5E-02	1.4E-02	8.6E-02	8.6E-02	1.1E-02	4.8E-03	1.1E-02	1.3E-02	1.6E-02	1.1E-02	1.1E-01	2.3E-04	2.3E-04	2.2E-04	2.1E-04	2.2E-05	2.1E-05	2.4E-05	2.4E-05	9.0E-05	2.6E-06	2.5E-06	6.5E-04	4.8E-08	3.4E-08	2.0E-07	5.2E-07	1.4E-06	9.9E-07	4.5E-05	1E-03	9E-04	5E-05	5E-05	7E-04	5E-04	8E-05	9E-05	5E-05	3E-05
residential	479131	3621225	1.7E-02	1.7E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	1.3E-02	6.0E+03	1.5E-02	1.4E-02	9.0E-02	9.0E-02	1.1E-02	4.8E-03	1.1E-02	1.3E-02	1.6E-02	1.1E-02	1.2E-01	2.4E-04	2.3E-04	2.2E-04	2.1E-04	2.2E-05	2.1E-05	2.4E-05	2.4E-05	9.1E-05	2.7E-06	2.5E-06	6.8E-04	4.8E-08	3.4E-08	2.1E-07	5.2E-07	1.4E-06	1.0E-06	4.8E-05	1E-03	9E-04	5E-05	6E-05	7E-04	5E-04	8E-05	1E-04	5E-05	3E-05
residential	479231	3621225	1.7E-02	1.7E-02	1.6E-02	1.5E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	6.1E+03	1.6E-02	1.5E-02	9.4E-02	9.4E-02	1.1E-02	4.9E-03	1.1E-02	1.3E-02	1.6E-02	1.1E-02	1.2E-01	2.4E-04	2.4E-04	2.2E-04	2.1E-04	2.3E-05	2.1E-05	2.4E-05	2.4E-05	9.2E-05	2.8E-06	2.6E-06	7.1E-04	4.9E-08	3.5E-08	2.1E-07	5.3E-07	1.5E-06	1.0E-06	5.1E-05	1E-03	9E-04	5E-05	6E-05	7E-04	5E-04	9E-05	1E-04	5E-05	3E-05
residential	479331	3621225	1.7E-02	1.7E-02	1.6E-02	1.5E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	6.1E+03	1.6E-02	1.5E-02	9.8E-02	9.8E-02	1.1E-02	4.9E-03	1.1E-02	1.3E-02	1.6E-02	1.1E-02	1.3E-01	2.4E-04	2.4E-04	2.3E-04	2.2E-04	2.3E-05	2.2E-05	2.5E-05	2.4E-05	9.3E-05	2.8E-06	2.6E-06	7.4E-04	4.9E-08	3.5E-08	2.1E-07	5.3E-07	1.5E-06	1.0E-06	5.3E-05	1E-03	9E-04	5E-05	6E-05	7E-04	5E-04	9E-05	1E-04	5E-05	3E-05
residential	479431	3621225	1.7E-02	1.7E-02	1.6E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	6.2E+03	1.6E-02	1.5E-02	1.0E-01	1.0E-01	1.1E-02	4.9E-03	1.1E-02	1.3E-02	1.7E-02	1.1E-02	1.4E-01	2.4E-04	2.5E-04	2.3E-04	2.2E-04	2.3E-05	2.2E-05	2.5E-05	2.5E-05	9.4E-05	2.9E-06	2.7E-06	7.8E-04	5.0E-08	3.5E-08	2.1E-07	5.3E-07	1.5E-06	1.0E-06	5.7E-05	1E-03	9E-04	5E-05	6E-05	8E-04	6E-04	9E-05	1E-04	6E-05	3E-05
residential	479531	3621225	1.8E-02	1.8E-02	1.7E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	6.3E+03	1.7E-02	1.6E-02	1.1E-01	1.1E-01	1.1E-02	5.0E-03	1.1E-02	1.3E-02	1.7E-02	1.2E-02	1.5E-01	2.5E-04	2.5E-04	2.4E-04	2.3E-04	2.3E-05	2.2E-05	2.5E-05	2.5E-05	9.5E-05	3.0E-06	2.8E-06	8.2E-04	5.0E-08	3.5E-08	2.1E-07	5.4E-07	1.5E-06	1.0E-06	6.0E-05	1E-03	9E-04	5E-05	6E-05	8E-04	6E-04	1E-04	1E-04	6E-05	3E-05
residential	479631	3621225	1.8E-02	1.8E-02	1.7E-02	1.6E-02	1.5E-02	1.5E-02	1.4E-02	1.4E-02	6.3E+03	1.7E-02	1.6E-02	1.1E-01	1.1E-01	1.1E-02	5.0E-03	1.1E-02	1.4E-02	1.7E-02	1.2E-02	1.5E-01	2.5E-04	2.5E-04	2.4E-04	2.3E-04	2.4E-05	2.3E-05	2.5E-05	2.5E-05	9.6E-05	3.0E-06	2.9E-06	8.5E-04	5.0E-08	3.6E-08	2.1E-07	5.4E-07	1.5E-06	1.0E-06	6.3E-05	1E-03	1E-03	5E-05	6E-05	9E-04	6E-04	1E-04	1E-04	6E-05	4E-05
residential	479731	3621225	1.8E-02	1.8E-02	1.7E-02	1.6E-02	1.6E-02	1.5E-02	1.5E-02	1.5E-02	6.4E+03	1.7E-02	1.6E-02	1.2E-01	1.2E-01	1.2E-02	5.0E-03	1.1E-02	1.4E-02	1.7E-02	1.2E-02	1.6E-01	2.6E-04	2.6E-04	2.4E-04	2.3E-04	2.4E-05	2.3E-05	2.6E-05	2.6E-05	9.7E-05	3.1E-06	2.9E-06	8.9E-04	5.1E-08	3.6E-08	2.1E-07	5.4E-07	1.5E-06	1.0E-06	6.6E-05	1E-03	1E-03	5E-05	6E-05	9E-04	7E-04	1E-04	1E-04	7E-05	4E-05
residential	479831	3621225	1.9E-02	1.9E-02	1.8E-02	1.7E-02	1.6E-02	1.5E-02	1.5E-02	1.5E-02	6.5E+03	1.8E-02	1.7E-02	1.2E-01	1.2E-01	1.2E-02	5.1E-03	1.2E-02	1.4E-02	1.7E-02	1.2E-02	1.7E-01	2.6E-04	2.7E-04	2.5E-04	2.4E-04	2.5E-05	2.3E-05	2.7E-05	2.6E-05	9.8E-05	3.2E-06	3.0E-06	9.4E-04	5.1E-08	3.6E-08	2.2E-07	5.5E-07	1.5E-06	1.0E-06	6.9E-05	1E-03	1E-03	5E-05	6E-05	9E-04	7E-04	1E-04	1E-04	7E-05	4E-05
residential	479931	3621225	1.9E-02	1.9E-02	1.8E-02	1.7E-02	1.6E-02	1.5E-02	1.5E-02	1.5E-02	6.5E+03	1.8E-02	1.7E-02	1.3E-01	1.3E-01	1.2E-02	5.1E-03	1.2E-02	1.4E-02	1.7E-02	1.2E-02	1.8E-01	2.7E-04	2.7E-04	2.5E-04	2.4E-04	2.5E-05	2.4E-05	2.7E-05	2.7E-05	9.9E-05	3.2E-06	3.0E-06	9.9E-04	5.2E-08	3.6E-08	2.2E-07	5.5E-07	1.6E-06	1.1E-06	7.2E-05	1E-03	1E-03	6E-05	6E-05	1E-03	7E-04	1E-04	1E-04	7E-05	4E-05
residential	480031	3621225	1.9E-02	1.9E-02	1.8E-02	1.7E-02	1.6E-02	1.5E-02	1.5E-02	1.5E-02	6.6E+03	1.8E-02	1.7E-02	1.3E-01	1.3E-01	1.2E-02	5.1E-03	1.2E-02	1.4E-02	1.8E-02	1.2E-02	1.8E-01	2.6E-04	2.7E-04	2.5E-04	2.4E-04	2.5E-05	2.4E-05	2.7E-05	2.6E-05	1.0E-04	3.2E-06	3.0E-06	9.8E-04	5.2E-08	3.7E-08	2.2E-07	5.6E-07	1.6E-06	1.1E-06	7.4E-05	1E-03	1E-03	5E-05	6E-05	1E-03	7E-04	1E-04	1E-04	7E-05	4E-05
recreational	480131	3621225	1.9E-02	1.9E-02	1.8E-02	1.7E-02	1.6E-02	1.5E-02	1.5E-02	1.5E-02	6.7E+03	1.9E-02	1.8E-02	1.4E-01	1.4E-01	1.2E-02	5.2E-03	1.2E-02	1.4E-02	1.8E-02	1.2E-02	1.9E-01	2.7E-04	2.7E-04	2.6E-04	2.4E-04	2.5E-05	2.4E-05	2.7E-05	2.7E-05	1.0E-04	3.4E-06	3.2E-06	1.0E-03	5.2E-08	3.7E-08	2.2E-07	5.6E-07	1.6E-06	1.1E-06	7.7E-05	1E-03	1E-03	6E-05	6E-05	1E-03	8E-04	1E-04	1E-04	8E-05	4E-05
recreational	480231	3621225	2.0E-02	2.0E-02	1.9E-02	1.8E-02	1.7E-02	1.6E-02	1.6E-02	1.6E-02	6.7E+03	2.0E-02	1.8E-02	1.4E-01	1.4E-01	1.2E-02	5.2E-03	1.2E-02	1.4E-02	1.8E-02	1.2E-02	1.9E-01	2.8E-04	2.8E-04	2.6E-04	2.5E-04	2.6E-05	2.5E-05	2.8E-05	2.8E-05	1.0E-04	3.5E-06	3.3E-06	1.1E-03	5.3E-08	3.7E-08	2.2E-07	5.6E-07	1.6E-06	1.1E-06	8.0E-05	1E-03	1E-03	6E-05	7E-05	1E-03	8E-04	1E-04	2E-04	8E-05	5E-05
recreational	480331	3621225	2.0E-02	2.0E-02	1.9E-02	1.8E-02	1.7E-02	1.6E-02	1.6E-02	1.6E-02	6.8E+03	2.1E-02	1.9E-02	1.4E-01	1.4E-01	1.2E-02	5.2E-03	1.2E-02	1.4E-02	1.8E-02	1.2E-02	2.0E-01	2.8E-04	2.8E-04	2.7E-04	2.5E-04	2.6E-05	2.5E-05	2.8E-05	2.8E-05	1.0E-04	3.7E-06	3.3E-06	1.1E-03	5.3E-08	3.7E-08	2.3E-07	5.7E-07	1.6E-06	1.1E-06	8.3E-05	1E-03	1E-03	6E-05	7E-05	1E-03	8E-04	1E-04	2E-04	8E-05	5E-05
recreational	480431	3621225	2.0E-02	2.0E-02	1.9E-02	1.8E-02	1.7E-02	1.6E-02	1.6E-02	1.6E-02	6.9E+03	2.1E-02	1.9E-02	1.5E-01	1.5E-01	1.2E-02	5.3E-03	1.2E-02	1.4E-02	1.8E-02	1.2E-02	2.1E-01	2.9E-04	2.9E-04	2.7E-04	2.6E-04	2.7E-05	2.5E-05	2.9E-05	2.9E-05	1.0E-04	3.8E-06	3.5E-06	1.1E-03	5.4E-08	3.8E-08	2.3E-07	5.7E-07	1.6E-06	1.1E-06	8.5E-05	1E-03	1E-03	6E-05	7E-05	1E-03	8E-04	1E-04	2E-04	8E-05	5E-05
recreational	480531	3621225	2.1E-02	2.1E-02	2.0E-02	1.9E-02	1.8E-02	1.7E-02	1.6E-02	1.6E-02	7.0E+03	2.2E-02	2.0E-02	1.5E-01	1.5E-01	1.2E-02	5.3E-03	1.2E-02	1.4E-02	1.9E-02	1.2E-02	2.1E-01	2.9E-04	2.9E-04	2.8E-04	2.6E-04	2.7E-05	2.6E-05	2.9E-05	2.9E-05	1.1E-04	3.9E-06	3.6E-06	1.2E-03	5.4E-08	3.8E-08	2.3E-07	5.8E-07	1.7E-06	1.1E-06	8.7E-05	1E-03	1E-03	6E-05	7E-05	1E-03	9E-04	1E-04	2E-04	9E-05	5E-05
recreational	480631	3621225	2.1E-02	2.1E-02	2.0E-02	1.9E-02	1.8E-02	1.7E-02	1.7E-02	1.7E-02	7.1E+03	2.2E-02	2.1E-02	1.6E-01	1.6E-01	1.2E-02	5.4E-03	1.2E-02	1.5E-02	1.9E-02	1.2E-02	2.2E-01	3.0E-04	3.0E-04	2.8E-04	2.7E-04	2.8E-05	2.6E-05	2.9E-05	2.9E-05	1.1E-04	4.0E-06	3.7E-06	1.2E-03	5.5E-08	3.8E-08	2.3E-07	5.8E-07	1.7E-06	1.1E-06	8.9E-05	1E-03	1E-03	6E-05	7E-05	1E-03	9E-04	1E-04	2E-04	9E-05	5E-05
recreational	480731	3621225	2.1E-02	2.1E-02	2.0E-02	1.9E-02	1.8E-02	1.7E-02	1.7E-02	1.7E-02	7.1E+03	2.3E-02	2.1E-02	1.6E-01	1.6E-01	1.2E-02	5.4E-03	1.2E-02	1.5E-02	1.9E-02	1.2E-02	2.2E-01	3.0E-04	3.0E-04	2.8E-04	2.7E-04	2.8E-05	2.6E-05	3.0E-05	3.0E-05	1.1E-04	4.1E-06	3.8E-06	1.2E-03	5.5E-08	3.9E-08	2.3E-07	5.8E-07	1.7E-06	1.1E-06	9.1E-05	1E-03	1E-03	6E-05	7E-05	1E-03	9E-04	1E-04	2E-04	9E-05	5E-05
recreational	480831	3621225	2.2E-02	2.2E-02	2.0E-02	1.9E-02	1.8E-02	1.7E-02	1.7E-02	1.7E-02	7.2E+03	2.4E-02	2.2E-02	1.6E-01	1.6E-01	1.3E-02	5.5E-03	1.3E-02	1.5E-02	1.9E-02	1.3E-02	2.3E-01	3.1E-04	3.1E-04	2.9E-04	2.7E-04	2.8E-05	2.7E-05	3.0E-05	3.0E-05	1.1E-04	4.2E-06	3.9E-06	1.2E-03	5.5E-08	3.9E-08	2.3E-07	5.9E-07	1.7E-06	1.1E-06	9.2E-05	1E-03	1E-03	6E-05	7E-05	1E-03	9E-04	1E-04	2E-04	9E-05	5E-05
recreational	480931	3621225	2.2E-02	2.2E-02	2.1E-02	2.0E-02	1.9E-02	1.8E-02	1.7E-02	1.7E-02	7.3E+03	2.4E-02	2.3E-02	1.7E-01	1.7E-01	1.3E-02	5.5E-03	1.3E-02	1.5E-02	1.9E-02	1.3E-02	2.3E-01	3.1E-04	3.1E-04	2.9E-04	2.8E-04	2.9E-05	2.7E-05	3.1E-05	3.1E-05	1.1E-04	4.3E-06	4.0E-06	1.3E-03	5.6E-08	3.9E-08	2.4E-07	5.9E-07	1.7E-06	1.1E-06	9.4E-05	1E-03	1E-03	6E-05	7E-05	1E-03	9E-04	2E-04	2E-04	9E-05	5E-05
recreational	481031	3621225	2.2E-02	2.2E-02	2.1E-02	2.0E-02	1.9E-02	1.8E-02	1.8E-02	1.7E-02	7.4E+03	2.5E-02	2.3E-02	1.7E-01	1.7E-01	1.3E-02	5.6E-03	1.3E-02	1.5E-02	2.0E-02	1.3E-02	2.3E-01	3.2E-04	3.2E-04	3.0E-04	2.8E-04	2.9E-05	2.7E-05	3.1E-05	3.1E-05	1.1E-04	4.4E-06	4.1E-06	1.3E-03	5.6E-08	4.0E-08	2.4E-07	6.0E-07	1.8E-06	1.1E-06	9.5E-05	1E-03	1E-03	7E-05	7E-05	1E-03	9E-04	2E-04	2E-04	1E-04	5E-05
recreational	481331	3621225	2.3E-02	2.3E-02	2.2E-02	2.1E-02	2.0E-02	1.8E-02	1.8E-02	1.8E-02	7.7E+03	2.6E-02	2.4E-02	1.7E-01	1.7E-01	1.3E-02	5.7E-03	1.3E-02	1.6E-02	2.0E-02	1.3E-02	2.4E-01	3.3E-04	3.3E-04	3.1E-04	2.9E-04	3.0E-05	2.9E-05	3.2E-05	3.2E-05	1.2E-04	4.6E-06	4.3E-06	1.3E-03	5.8E-08	4.1E-08	2.4E-07	6.2E-07	1.8E-06	1.2E-06	9.8E-05	1E-03	1E-03	7E-05	8E-05	1E-03	1E-03	2E-04	2E-04	1E-04	6E-05
recreational	481431	3621225	2.3E-02	2.4E-02	2.2E-02	2.1E-02	2.0E-02	1.9E-02	1.9E-02	1.8E-02	7.8E+03	2.6E-02	2.5E-02	1.7E-01	1.7E-01	1.3E-02	5.8E-03	1.3E-02	1.6E-02	2.1E-02	1.3E-02	2.4E-01	3.3E-04	3.4E-04	3.1E-04	3.0E-04	3.1E-05	2.9E-05	3.3E-05	3.2E-05	1.2E-04	4.7E-06	4.4E-06	1.3E-03	5.8E-08	4.1E-08	2.5E-07	6.3E-07	1.8E-06	1.2E-06	9.9E-05	1E-03	1E-03	7E-05	8E-05	1E-03	1E-03	2E-04	2E-04	1E-04	6E-05
recreational	481531	3621225	2.4E-02	2.4E-02	2.3E-02	2.2E-02	2.0E-02	1.9E-02	1.9E-02	1.9E-02	8.0E+03	2.7E-02	2.5E-02	1.7E-01	1.7E-01	1.3E-02	5.8E-03	1.3E-02	1.6E-02	2.1E-02	1.3E-02	2.4E-01	3.3E-04	3.4E-04	3.2E-04	3.0E-04	3.1E-05	3.0E-05	3.3E-05	3.3E-05	1.2E-04	4.8E-06	4.5E-06	1.3E-03	5.9E-08	4.1E-08	2.5E-07	6.4E-07	1.9E-06	1.2E-06	9.9E-05	1E-03	1E-03	7E-05	8E-05	1E-03	1E-03	2E-04	2E-04	1E-04	6E-05
recreational	481631	3621225	2.4E-02	2.4E-02	2.3E-02	2.2E-02	2.0E-02	1.9E-02	1.9E-02	1.9E-02	8.1E+03	2.7E-02	2.5E-02	1.7E-01	1.7E-01	1.4E-02	5.9E-03	1.3E-02	1.6E-02	2.1E-02	1.4E-02	2.4E-01	3.4E-04	3.5E-04	3.2E-04	3.1E-04	3.2E-05	3.0E-05	3.4E-05	3.3E-05	1.2E-04	4.8E-06	4.5E-06	1.3E-03	6.0E-08	4.2E-08	2.5E-07	6.5E-07	1.9E-06	1.2E-06	9.9E-05	1E-03	1E-03	7E-05	8E-05	1E-03	1E-03	2E-04	2E-04	1E-04	6E-05
recreational	481731	3621225	2.5E-02	2.5E-02	2.3E-02	2.2E-02	2.1E-02	2.0E-02	2.0E-02	1.9E-02	8.3E+03	2.8E-02	2.6E-02	1.7E-01	1.7E-01	1.4E-02	5.9E-03	1.4E-02	1.7E-02	2.2E-02	1.4E-02	2.4E-01	3.5E-04	3.5E-04	3.3E-04	3.1E-04	3.2E-05	3.1E-05	3.4E-05	3.4E-05	1.3E-04	4.9E-06	4.6E-06	1.3E-03	6.0E-08	4.2E-08	2.5E-07	6.7E-07	1.9E-06	1.2E-06	9.9E-05	1E-03	1E-03	7E-05	8E-05	1E-03	1E-03	2E-04	2E-04	1E-04	6E-05

TAMT_HRA_Existing
DPM_annl

AERMOD Output	Multi-Purpose General CargoExisting	Dry BulkExisting	All	Refrigerated ContainersExisting	Multi-Purpose General CargoExisting	Dry BulkExisting	All	Refrigerated ContainersExisting	Multi-Purpose General CargoExisting	Dry BulkExisting	All	Refrigerated Containers	Multi-Purpose General Cargo	Dry Bulk	All
	28%	15%	100%	63%	8%	29%	100%	0%	61%	39%	100%	67%	3%	30%	
recreational	4E-05	2E-05	1E-04	8E-05	1E-05	4E-05	9E-06	0E+00	6E-06	4E-06	4.3E-06	2.9E-06	1.4E-07	1.3E-06	0.00
recreational	4E-05	2E-05	1E-04	8E-05	1E-05	4E-05	1E-05	0E+00	6E-06	4E-06	4.4E-06	2.9E-06	1.4E-07	1.3E-06	0.00
recreational	4E-05	2E-05	1E-04	8E-05	1E-05	4E-05	1E-05	0E+00	6E-06	4E-06	4.4E-06	2.9E-06	1.4E-07	1.3E-06	0.00
recreational	4E-05	2E-05	1E-04	8E-05	1E-05	4E-05	1E-05	0E+00	6E-06	4E-06	4.4E-06	3E-06	1.4E-07	1.3E-06	0.00
recreational	4E-05	2E-05	1E-04	8E-05	1E-05	4E-05	1E-05	0E+00	6E-06	4E-06	4.5E-06	3E-06	1.4E-07	1.4E-06	0.00
recreational	4E-05	2E-05	1E-04	8E-05	1E-05	4E-05	1E-05	0E+00	6E-06	4E-06	4.5E-06	3E-06	1.5E-07	1.4E-06	0.00
recreational	4E-05	2E-05	1E-04	9E-05	1E-05	4E-05	1E-05	0E+00	6E-06	4E-06	4.6E-06	3.1E-06	1.5E-07	1.4E-06	0.00
recreational	4E-05	2E-05	1E-04	9E-05	1E-05	4E-05	1E-05	0E+00	7E-06	4E-06	4.6E-06	3.1E-06	1.5E-07	1.4E-06	0.00
recreational	4E-05	2E-05	1E-04	9E-05	1E-05	4E-05	1E-05	0E+00	7E-06	4E-06	4.7E-06	3.1E-06	1.5E-07	1.4E-06	0.00
recreational	4E-05	2E-05	1E-04	9E-05	1E-05	4E-05	1E-05	0E+00	7E-06	4E-06	4.7E-06	3.2E-06	1.5E-07	1.4E-06	0.00
recreational	4E-05	2E-05	1E-04	9E-05	1E-05	4E-05	1E-05	0E+00	7E-06	4E-06	4.8E-06	3.2E-06	1.5E-07	1.4E-06	0.00
recreational	4E-05	2E-05	1E-04	9E-05	1E-05	4E-05	1E-05	0E+00	7E-06	4E-06	4.9E-06	3.2E-06	1.6E-07	1.5E-06	0.00
recreational	4E-05	2E-05	2E-04	1E-04	1E-05	4E-05	1E-05	0E+00	7E-06	5E-06	4.9E-06	3.3E-06	1.6E-07	1.5E-06	0.00
recreational	4E-05	2E-05	2E-04	1E-04	1E-05	4E-05	1E-05	0E+00	7E-06	5E-06	5E-06	3.3E-06	1.6E-07	1.5E-06	0.00
recreational	4E-05	2E-05	2E-04	1E-04	1E-05	5E-05	1E-05	0E+00	7E-06	5E-06	5.1E-06	3.4E-06	1.6E-07	1.5E-06	0.00

AERMOD Output	ug/m3	Dose Inhallation 3rd tri	0<2	2<9	2<16	16<30	Risk (Residential 30-yr; school 9-yr; park 15-year) 3rd tri	0<2	2<9	2<16	16<30	Summed Risk	Cases Per Million	Chronic HI
recreational	0.00269	0	2.58E-07	1.38E-07	1.12E-07	5.16E-08	0	8.1E-08	4.5E-08	0	4.9E-09	1.313E-07	0.13128	0.00054
recreational	0.00277	0	2.65E-07	1.41E-07	1.15E-07	5.3E-08	0	8.3E-08	4.7E-08	0	5E-09	1.35E-07	0.13499	0.00055
recreational	0.00281	0	2.69E-07	1.44E-07	1.17E-07	5.39E-08	0	8.5E-08	4.7E-08	0	5.1E-09	1.372E-07	0.13718	0.00056
recreational	0.00284	0	2.72E-07	1.45E-07	1.18E-07	5.45E-08	0	8.6E-08	4.8E-08	0	5.1E-09	1.387E-07	0.13866	0.00057
recreational	0.00287	0	2.75E-07	1.47E-07	1.19E-07	5.51E-08	0	8.7E-08	4.8E-08	0	5.2E-09	1.402E-07	0.14016	0.00057
recreational	0.0029	0	2.78E-07	1.48E-07	1.2E-07	5.56E-08	0	8.7E-08	4.9E-08	0	5.2E-09	1.415E-07	0.14147	0.00058
recreational	0.00291	0	2.79E-07	1.49E-07	1.21E-07	5.58E-08	0	8.8E-08	4.9E-08	0	5.3E-09	1.419E-07	0.14195	0.00058
recreational	0.00288	0	2.76E-07	1.47E-07	1.2E-07	5.52E-08	0	8.7E-08	4.9E-08	0	5.2E-09	1.405E-07	0.14046	0.00058
recreational	0.0029	0	2.78E-07	1.48E-07	1.2E-07	5.55E-08	0	8.7E-08	4.9E-08	0	5.2E-09	1.414E-07	0.14136	0.00058
recreational	0.00291	0	2.79E-07	1.49E-07	1.21E-07	5.58E-08	0	8.8E-08	4.9E-08	0	5.3E-09	1.421E-07	0.14214	0.00058
recreational	0.00295	0	2.83E-07	1.51E-07	1.23E-07	5.66E-08	0	8.9E-08	5E-08	0	5.3E-09	1.442E-07	0.14417	0.00059
recreational	0.003	0	2.88E-07	1.53E-07	1.25E-07	5.75E-08	0	9E-08	5.1E-08	0	5.4E-09	1.465E-07	0.14649	0.0006
recreational	0.00299	0	2.87E-07	1.53E-07	1.24E-07	5.74E-08	0	9E-08	5.1E-08	0	5.4E-09	1.462E-07	0.14622	0.0006
recreational	0.003	0	2.88E-07	1.54E-07	1.25E-07	5.76E-08	0	9.1E-08	5.1E-08	0	5.4E-09	1.466E-07	0.14663	0.0006
recreational	0.00296	0	2.84E-07	1.51E-07	1.23E-07	5.68E-08	0	8.9E-08	5E-08	0	5.4E-09	1.446E-07	0.14462	0.00059

AERMOD Output	ug/m3	Dose Inhallation 3rd tri	0<2	2<9	2<16	16<30	Risk (Residential 30-yr; school 9-yr; park 15-year) 3rd tri	0<2	2<9	2<16	16<30	Summed Risk	Cases Per Million	Chronic HI
recreational	3E-04	0E+00	3E-08	2E-08	1E-08	6E-09	0E+00	1E-08	6E-09	0E+00	6E-10	1.6E-08	0.016	6.6E-05
recreational	3E-04	0E+00	3E-08	2E-08	1E-08	6E-09	0E+00	1E-08	6E-09	0E+00	6E-10	1.6E-08	0.016	6.7E-05
recreational	3E-04	0E+00	3E-08	2E-08	1E-08	7E-09	0E+00	1E-08	6E-09	0E+00	6E-10	1.7E-08	0.017	6.9E-05
recreational	3E-04	0E+00	3E-08	2E-08	1E-08	7E-09	0E+00	1E-08	6E-09	0E+00	6E-10	1.7E-08	0.017	6.9E-05
recreational	3E-04	0E+00	3E-08	2E-08	1E-08	7E-09	0E+00	1E-08	6E-09	0E+00	6E-10	1.7E-08	0.017	7E-05
recreational	4E-04	0E+00	3E-08	2E-08	1E-08	7E-09	0E+00	1E-08	6E-09	0E+00	6E-10	1.7E-08	0.017	7E-05
recreational	4E-04	0E+00	3E-08	2E-08	1E-08	7E-09	0E+00	1E-08	6E-09	0E+00	6E-10	1.7E-08	0.017	7E-05
recreational	3E-04	0E+00	3E-08	2E-08	1E-08	7E-09	0E+00	1E-08	6E-09	0E+00	6E-10	1.7E-08	0.017	6.9E-05
recreational	3E-04	0E+00	3E-08	2E-08	1E-08	7E-09	0E+00	1E-08	6E-09	0E+00	6E-10	1.7E-08	0.017	6.9E-05
recreational	3E-04	0E+00	3E-08	2E-08	1E-08	7E-09	0E+00	1E-08	6E-09	0E+00	6E-10	1.7E-08	0.017	6.9E-05
recreational	3E-04	0E+00	3E-08	2E-08	1E-08	7E-09	0E+00	1E-08	6E-09	0E+00	6E-10	1.7E-08	0.017	6.9E-05
recreational	3E-04	0E+00	3E-08	2E-08	1E-08	7E-09	0E+00	1E-08	6E-09	0E+00	6E-10	1.7E-08	0.017	7E-05
recreational	3E-04	0E+00	3E-08	2E-08	1E-08	7E-09	0E+00	1E-08	6E-09	0E+00	6E-10	1.7E-08	0.017	6.9E-05
recreational	3E-04	0E+00	3E-08	2E-08	1E-08	7E-09	0E+00	1E-08	6E-09	0E+00	6E-10	1.7E-08	0.017	6.9E-05
recreational	3E-04	0E+00	3E-08	2E-08	1E-08	6E-09	0E+00	1E-08	6E-09	0E+00	6E-10	1.6E-08	0.016	6.8E-05

AERMOD Output	ug/m3	Dose Inhallation 3rd tri	0<2	2<9	2<16	16<30	Risk (Residential 30-yr; school 9-yr; park 15-year) 3rd tri	0<2	2<9	2<16	16<30	Summed Risk	Cases Per Million	Chronic HI
recreational	4E-04	0E+00	4E-08	2E-08	2E-08	7E-09	0E+00	1E-08	7E-09	0E+00	7E-10	1.9E-08	0.019	7.7E-05
recreational	4E-04	0E+00	4E-08	2E-08	2E-08	8E-09	0E+00	1E-08	7E-09	0E+00	7E-10	1.9E-08	0.019	7.9E-05
recreational	4E-04	0E+00	4E-08	2E-08	2E-08	8E-09	0E+00	1E-08	7E-09	0E+00	7E-10	2.0E-08	0.020	8.1E-05
recreational	4E-04	0E+00	4E-08	2E-08	2E-08	8E-09	0E+00	1E-08	7E-09	0E+00	7E-10	2.0E-08	0.020	8.1E-05
recreational	4E-04	0E+00	4E-08	2E-08	2E-08	8E-09	0E+00	1E-08	7E-09	0E+00	7E-10	2.0E-08	0.020	8.2E-05
recreational	4E-04	0E+00	4E-08	2E-08	2E-08	8E-09	0E+00	1E-08	7E-09	0E+00	7E-10	2.0E-08	0.020	8.2E-05
recreational	4E-04	0E+00	4E-08	2E-08	2E-08	8E-09	0E+00	1E-08	7E-09	0E+00	7E-10	2.0E-08	0.020	8.3E-05
recreational	4E-04	0E+00	4E-08	2E-08	2E-08	8E-09	0E+00	1E-08	7E-09	0E+00	7E-10	2.0E-08	0.020	8.2E-05
recreational	4E-04	0E+00	4E-08	2E-08	2E-08	8E-09	0E+00	1E-08	7E-09	0E+00	7E-10	2.0E-08	0.020	8.2E-05
recreational	4E-04	0E+00	4E-08	2E-08	2E-08	8E-09	0E+00	1E-08	7E-09	0E+00	7E-10	2.0E-08	0.020	8.2E-05
recreational	4E-04	0E+00	4E-08	2E-08	2E-08	8E-09	0E+00	1E-08	7E-09	0E+00	7E-10	2.0E-08	0.020	8.2E-05
recreational	4E-04	0E+00	4E-08	2E-08	2E-08	8E-09	0E+00	1E-08	7E-09	0E+00	7E-10	2.0E-08	0.020	8.3E-05
recreational	4E-04	0E+00	4E-08	2E-08	2E-08	8E-09	0E+00	1E-08	7E-09	0E+00	7E-10	2.0E-08	0.020	8.2E-05
recreational	4E-04	0E+00	4E-08	2E-08	2E-08	8E-09	0E+00	1E-08	7E-09	0E+00	7E-10	2.0E-08	0.020	8.2E-05
recreational	4E-04	0E+00	4E-08	2E-08	2E-08	8E-09	0E+00	1E-08	7E-09	0E+00	7E-10	2.0E-08	0.020	8E-05

TAMT_HRA_Existing
DPM_annl

AERMOD Output — Source Group in AERMOD

Receptor	X	Y	1 B10_1_AUX	3 B10_2_AUX	5 B10_3_AUX	7 B10_4_AUX	9 B10_5_AUX	11 B10_6_AUX	13 B10_7_AUX	15 B10_8_AUX	17 CHE_1	18 LOC_SWTCH EMP	19 LOC_SWTCH LOA	20 OGV_PATH _BLR	21 OGV_PATH _DPM	22 TR_28TH	23 TR_BAYMA R	24 TR_BOSTON	25 TR_CROSBY	26 TR_HARBOR CHA	27 TR_HARBOR SAM	28 TUG_PATH_ DPM
recreational	481831	3621225	2.5E-02	2.6E-02	2.4E-02	2.2E-02	2.1E-02	2.0E-02	2.0E-02	2.0E-02	8.5E+03	2.8E-02	2.6E-02	1.7E-01	1.7E-01	1.4E-02	6.0E-03	1.4E-02	1.7E-02	2.2E-02	1.4E-02	2.4E-01
recreational	481931	3621225	2.6E-02	2.6E-02	2.4E-02	2.3E-02	2.2E-02	2.0E-02	2.0E-02	2.0E-02	8.7E+03	2.8E-02	2.7E-02	1.7E-01	1.7E-01	1.4E-02	6.1E-03	1.4E-02	1.7E-02	2.2E-02	1.4E-02	2.4E-01
recreational	482031	3621225	2.6E-02	2.7E-02	2.5E-02	2.4E-02	2.2E-02	2.1E-02	2.0E-02	2.0E-02	8.9E+03	2.9E-02	2.7E-02	1.7E-01	1.7E-01	1.4E-02	6.1E-03	1.4E-02	1.8E-02	2.3E-02	1.4E-02	2.4E-01
recreational	482131	3621225	2.7E-02	2.7E-02	2.5E-02	2.4E-02	2.2E-02	2.1E-02	2.1E-02	2.1E-02	9.1E+03	3.0E-02	2.8E-02	1.7E-01	1.7E-01	1.4E-02	6.2E-03	1.4E-02	1.8E-02	2.3E-02	1.5E-02	2.3E-01
recreational	482231	3621225	2.7E-02	2.8E-02	2.6E-02	2.5E-02	2.3E-02	2.1E-02	2.1E-02	2.1E-02	9.4E+03	3.0E-02	2.8E-02	1.7E-01	1.7E-01	1.4E-02	6.3E-03	1.4E-02	1.9E-02	2.3E-02	1.5E-02	2.3E-01
recreational	482331	3621225	2.8E-02	2.9E-02	2.6E-02	2.5E-02	2.3E-02	2.2E-02	2.2E-02	2.1E-02	9.8E+03	3.1E-02	2.8E-02	1.7E-01	1.7E-01	1.5E-02	6.4E-03	1.4E-02	1.9E-02	2.4E-02	1.5E-02	2.3E-01
recreational	482431	3621225	2.9E-02	2.9E-02	2.7E-02	2.6E-02	2.4E-02	2.2E-02	2.2E-02	2.2E-02	1.0E+04	3.1E-02	2.9E-02	1.6E-01	1.6E-01	1.5E-02	6.5E-03	1.5E-02	2.0E-02	2.5E-02	1.5E-02	2.2E-01
recreational	482531	3621225	2.9E-02	3.0E-02	2.8E-02	2.6E-02	2.4E-02	2.3E-02	2.2E-02	2.2E-02	1.1E+04	3.2E-02	3.0E-02	1.6E-01	1.6E-01	1.5E-02	6.6E-03	1.5E-02	2.0E-02	2.5E-02	1.6E-02	2.2E-01
residential	482631	3621225	3.0E-02	3.1E-02	2.9E-02	2.7E-02	2.5E-02	2.4E-02	2.3E-02	2.3E-02	1.1E+04	3.3E-02	3.1E-02	1.6E-01	1.6E-01	1.5E-02	6.7E-03	1.5E-02	2.1E-02	2.6E-02	1.6E-02	2.1E-01
residential	483831	3621225	4.3E-02	4.7E-02	4.2E-02	3.8E-02	3.5E-02	3.2E-02	3.1E-02	3.0E-02	2.1E+04	4.4E-02	4.0E-02	1.3E-01	1.3E-01	1.9E-02	8.4E-03	1.9E-02	3.8E-02	5.0E-02	2.5E-02	1.6E-01
residential	483931	3621225	4.3E-02	4.9E-02	4.2E-02	3.9E-02	3.5E-02	3.2E-02	3.1E-02	3.0E-02	2.2E+04	4.4E-02	4.1E-02	1.2E-01	1.2E-01	2.0E-02	8.6E-03	1.9E-02	4.0E-02	5.1E-02	2.6E-02	1.6E-01
residential	484031	3621225	4.5E-02	5.1E-02	4.4E-02	4.0E-02	3.6E-02	3.3E-02	3.1E-02	3.0E-02	2.3E+04	4.5E-02	4.2E-02	1.2E-01	1.2E-01	2.1E-02	8.9E-03	2.0E-02	4.1E-02	5.3E-02	2.8E-02	1.6E-01
residential	484131	3621225	4.5E-02	5.2E-02	4.4E-02	4.1E-02	3.6E-02	3.3E-02	3.1E-02	3.0E-02	2.4E+04	4.6E-02	4.2E-02	1.1E-01	1.1E-01	2.1E-02	9.1E-03	2.1E-02	4.2E-02	5.4E-02	2.9E-02	1.5E-01
school	485902	3618345	4.6E-01	3.7E-01	3.3E-01	3.3E-01	3.8E-01	4.0E-01	4.1E-01	4.0E-01	1.9E+06	4.7E+00	4.2E+00	1.7E-01	1.7E-01	1.3E-01	1.7E-02	1.2E-01	2.3E+00	1.4E+01	2.8E-01	2.3E-01

Receptor	X	Y	Refrigerated ContainersExisting	Refrigerated ContainersExisting	Refrigerated ContainersExisting	Refrigerated ContainersExisting	Multi-Purpose General CargoExisting	Multi-Purpose General CargoExisting	Dry BulkExisting	Dry BulkExisting	AllExisting	AllExisting	AllExisting	AllExisting	TR_28THExisting	TR_BAYMAR Existing	TR_BOSTON Existing	TR_CROSBY Existing	TR_HARBOR CHAExisting	TR_HARBOR SAMExisting	AllExisting
		g/s -->	1.4E-02	1.4E-02	1.4E-02	1.4E-02	1.6E-03	1.6E-03	1.8E-03	1.8E-03	1.5E-08	1.8E-04	1.8E-04	7.6E-03	4.4E-06	7.1E-06	1.9E-05	4.0E-05	8.9E-05	8.9E-05	4.1E-04
			1	3	5	7	9	11	13	15	17	18	19	21	22	23	24	25	26	27	28
			B10_1_AUX	B10_2_AUX	B10_3_AUX	B10_4_AUX	B10_5_AUX	B10_6_AUX	B10_7_AUX	B10_8_AUX	CHE_1	LOC_SWTCHE MP	LOC_SWTCHL OA	OGV_PATH_ DPM	TR_28TH	TR_BAYMAR	TR_BOSTON	TR_CROSBY	TR_HARBOR CHA	TR_HARBOR SAM	TUG_PATH_D PM
recreational	481831	3621225	3.6E-04	3.6E-04	3.3E-04	3.2E-04	3.3E-05	3.1E-05	3.5E-05	3.5E-05	1.3E-04	5.0E-06	4.6E-06	1.3E-03	6.1E-08	4.3E-08	2.6E-07	6.8E-07	1.9E-06	1.2E-06	9.8E-05
recreational	481931	3621225	3.6E-04	3.7E-04	3.4E-04	3.2E-04	3.4E-05	3.1E-05	3.5E-05	3.5E-05	1.3E-04	5.0E-06	4.8E-06	1.3E-03	6.1E-08	4.3E-08	2.6E-07	6.9E-07	2.0E-06	1.3E-06	9.8E-05
recreational	482031	3621225	3.7E-04	3.8E-04	3.5E-04	3.3E-04	3.4E-05	3.2E-05	3.6E-05	3.6E-05	1.3E-04	5.1E-06	4.8E-06	1.3E-03	6.2E-08	4.4E-08	2.6E-07	7.1E-07	2.0E-06	1.3E-06	9.7E-05
recreational	482131	3621225	3.8E-04	3.9E-04	3.6E-04	3.4E-04	3.5E-05	3.3E-05	3.7E-05	3.6E-05	1.4E-04	5.3E-06	4.9E-06	1.3E-03	6.3E-08	4.4E-08	2.6E-07	7.2E-07	2.0E-06	1.3E-06	9.6E-05
recreational	482231	3621225	3.9E-04	3.9E-04	3.6E-04	3.5E-04	3.5E-05	3.3E-05	3.8E-05	3.7E-05	1.4E-04	5.4E-06	5.0E-06	1.3E-03	6.3E-08	4.5E-08	2.7E-07	7.4E-07	2.1E-06	1.3E-06	9.5E-05
recreational	482331	3621225	3.9E-04	4.0E-04	3.7E-04	3.5E-04	3.6E-05	3.4E-05	3.8E-05	3.8E-05	1.5E-04	5.5E-06	5.1E-06	1.3E-03	6.4E-08	4.5E-08	2.7E-07	7.6E-07	2.1E-06	1.3E-06	9.3E-05
recreational	482431	3621225	4.0E-04	4.1E-04	3.8E-04	3.6E-04	3.7E-05	3.5E-05	3.9E-05	3.8E-05	1.5E-04	5.6E-06	5.2E-06	1.2E-03	6.5E-08	4.6E-08	2.7E-07	7.9E-07	2.2E-06	1.4E-06	9.2E-05
recreational	482531	3621225	4.1E-04	4.3E-04	3.9E-04	3.7E-04	3.8E-05	3.5E-05	4.0E-05	3.9E-05	1.6E-04	5.7E-06	5.3E-06	1.2E-03	6.6E-08	4.7E-08	2.8E-07	8.1E-07	2.2E-06	1.4E-06	9.0E-05
residential	482631	3621225	4.3E-04	4.4E-04	4.1E-04	3.8E-04	3.9E-05	3.6E-05	4.1E-05	4.0E-05	1.7E-04	5.8E-06	5.4E-06	1.2E-03	6.6E-08	4.7E-08	2.8E-07	8.4E-07	2.3E-06	1.4E-06	8.7E-05
residential	483831	3621225	6.1E-04	6.7E-04	5.9E-04	5.4E-04	5.4E-05	4.9E-05	5.5E-05	5.3E-05	3.2E-04	7.7E-06	7.1E-06	9.7E-04	8.5E-08	6.0E-08	3.5E-07	1.5E-06	4.4E-06	2.2E-06	6.7E-05
residential	483931	3621225	6.1E-04	6.9E-04	6.0E-04	5.5E-04	5.4E-05	5.0E-05	5.4E-05	5.3E-05	3.4E-04	7.9E-06	7.2E-06	9.3E-04	8.8E-08	6.2E-08	3.6E-07	1.6E-06	4.5E-06	2.3E-06	6.7E-05
residential	484031	3621225	6.3E-04	7.1E-04	6.2E-04	5.6E-04	5.6E-05	5.0E-05	5.5E-05	5.3E-05	3.5E-04	8.1E-06	7.5E-06	8.9E-04	9.1E-08	6.3E-08	3.7E-07	1.6E-06	4.7E-06	2.5E-06	6.6E-05
residential	484131	3621225	6.4E-04	7.3E-04	6.3E-04	5.7E-04	5.6E-05	5.1E-05	5.5E-05	5.3E-05	3.6E-04	8.2E-06	7.5E-06	8.3E-04	9.4E-08	6.5E-08	3.9E-07	1.7E-06	4.8E-06	2.6E-06	6.2E-05
school	485902	3618345	6.5E-03	5.2E-03	4.7E-03	4.7E-03	6.0E-04	6.2E-04	7.2E-04	7.0E-04	2.8E-02	8.4E-04	7.5E-04	1.3E-03	5.6E-07	1.2E-07	2.3E-06	9.2E-05	1.3E-03	2.5E-05	9.3E-05

Receptor	X	Y	All	Refrigerated ContainersExisting	Multi-Purpose General CargoExisting	Dry BulkExisting	All	Refrigerated ContainersExisting	Multi-Purpose General CargoExisting	Dry BulkExisting	All	Refrigerated ContainersExisting
			100%	89%	5%	6%	100%	73%	12%	15%	100%	57%
recreational	481831	3621225	2E-03	1E-03	7E-05	8E-05	1E-03	1E-03	2E-04	2E-04	1E-04	6E-05
recreational	481931	3621225	2E-03	1E-03	8E-05	9E-05	1E-03	1E-03	2E-04	2E-04	1E-04	6E-05
recreational	482031	3621225	2E-03	1E-03	8E-05	9E-05	1E-03	1E-03	2E-04	2E-04	1E-04	6E-05
recreational	482131	3621225	2E-03	1E-03	8E-05	9E-05	1E-03	9E-04	2E-04	2E-04	1E-04	5E-05
recreational	482231	3621225	2E-03	1E-03	8E-05	9E-05	1E-03	9E-04	2E-04	2E-04	9E-05	5E-05
recreational	482331	3621225	2E-03	1E-03	8E-05	9E-05	1E-03	9E-04	2E-04	2E-04	9E-05	5E-05
recreational	482431	3621225	2E-03	2E-03	8E-05	1E-04	1E-03	9E-04	2E-04	2E-04	9E-05	5E-05
recreational	482531	3621225	2E-03	2E-03	9E-05	1E-04	1E-03	9E-04	1E-04	2E-04	9E-05	5E-05
residential	482631	3621225	2E-03	2E-03	9E-05	1E-04	1E-03	9E-04	1E-04	2E-04	9E-05	5E-05
residential	483831	3621225	3E-03	2E-03	1E-04	1E-04	1E-03	7E-04	1E-04	1E-04	7E-05	4E-05
residential	483931	3621225	3E-03	2E-03	1E-04	1E-04	9E-04	7E-04	1E-04	1E-04	7E-05	4E-05
residential	484031	3621225	3E-03	2E-03	1E-04	2E-04	9E-04	7E-04	1E-04	1E-04	7E-05	4E-05
residential	484131	3621225	3E-03	2E-03	1E-04	2E-04	8E-04	6E-04	1E-04	1E-04	6E-05	4E-05
school	485902	3618345	2E-02	2E-02	1E-03	1E-03	1E-03	1E-03	2E-04	2E-04	9E-05	5E-05
			0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

TAMT_HRA_Existing
DPM_annl

AERMOD Output	Multi-Purpose General CargoExisting 28%	Dry BulkExisting 15%	All 100%	Refrigerated ContainersExisting 63%	Multi-Purpose General CargoExisting 8%	Dry BulkExisting 29%	All 100%	Refrigerated ContainersExisting 0%	Multi-Purpose General CargoExisting 61%	Dry BulkExisting 39%	All 100%	Refrigerated Containers 67%	Multi-Purpose General Cargo 3%	Dry Bulk 30%	All
recreational	3E-05	1E-05	1E-04	8E-05	1E-05	4E-05	1E-05	0E+00	6E-06	4E-06	4.2E-06	2.8E-06	1.4E-07	1.3E-06	0.00
recreational	3E-05	1E-05	1E-04	8E-05	1E-05	4E-05	1E-05	0E+00	6E-06	4E-06	4.3E-06	2.9E-06	1.4E-07	1.3E-06	0.00
recreational	3E-05	1E-05	1E-04	8E-05	1E-05	4E-05	1E-05	0E+00	6E-06	4E-06	4.4E-06	2.9E-06	1.4E-07	1.3E-06	0.00
recreational	3E-05	1E-05	1E-04	9E-05	1E-05	4E-05	1E-05	0E+00	6E-06	4E-06	4.4E-06	3E-06	1.4E-07	1.3E-06	0.00
recreational	3E-05	1E-05	1E-04	9E-05	1E-05	4E-05	1E-05	0E+00	6E-06	4E-06	4.5E-06	3E-06	1.5E-07	1.4E-06	0.00
recreational	3E-05	1E-05	1E-04	9E-05	1E-05	4E-05	1E-05	0E+00	6E-06	4E-06	4.6E-06	3.1E-06	1.5E-07	1.4E-06	0.00
recreational	3E-05	1E-05	2E-04	1E-04	1E-05	4E-05	1E-05	0E+00	7E-06	4E-06	4.7E-06	3.1E-06	1.5E-07	1.4E-06	0.00
recreational	3E-05	1E-05	2E-04	1E-04	1E-05	5E-05	1E-05	0E+00	7E-06	4E-06	4.8E-06	3.2E-06	1.6E-07	1.5E-06	0.00
residential	2E-05	1E-05	2E-04	1E-04	1E-05	5E-05	1E-05	0E+00	7E-06	4E-06	5E-06	3.3E-06	1.6E-07	1.5E-06	0.00
residential	2E-05	1E-05	3E-04	2E-04	3E-05	9E-05	1E-05	0E+00	9E-06	6E-06	8.6E-06	5.8E-06	2.8E-07	2.6E-06	0.00
residential	2E-05	1E-05	3E-04	2E-04	3E-05	1E-04	2E-05	0E+00	9E-06	6E-06	8.9E-06	5.9E-06	2.9E-07	2.7E-06	0.00
residential	2E-05	1E-05	4E-04	2E-04	3E-05	1E-04	2E-05	0E+00	1E-05	6E-06	9.3E-06	6.2E-06	3E-07	2.8E-06	0.00
residential	2E-05	9E-06	4E-04	2E-04	3E-05	1E-04	2E-05	0E+00	1E-05	6E-06	9.6E-06	6.4E-06	3.1E-07	2.9E-06	0.00
school	3E-05	1E-05	3E-02	2E-02	2E-03	8E-03	2E-03	0E+00	1E-03	6E-04	0.00139	0.00093	4.5E-05	0.00042	0.06
	0.00	0.00	0.04	0.02	0.00	0.01	0.00	0.00	0.00	0.00					

AERMOD Output	ug/m3	Dose Inhalation 3rd tri	0<2	2<9	2<16	16<30	Risk (Residential 30-yr; school 9-yr; park 15-year) 3rd tri	0<2	2<9	2<16	16<30	Summed Risk	Cases Per Million	Chronic HI
recreational	0.00245	0	2.35E-07	1.25E-07	1.02E-07	4.69E-08	0	7.4E-08	4.1E-08	0	4.4E-09	1.195E-07	0.11947	0.00049
recreational	0.00247	0	2.37E-07	1.26E-07	1.03E-07	4.74E-08	0	7.5E-08	4.2E-08	0	4.5E-09	1.207E-07	0.12072	0.00049
recreational	0.0025	0	2.4E-07	1.28E-07	1.04E-07	4.79E-08	0	7.5E-08	4.2E-08	0	4.5E-09	1.22E-07	0.12205	0.0005
recreational	0.00252	0	2.42E-07	1.29E-07	1.05E-07	4.84E-08	0	7.6E-08	4.3E-08	0	4.6E-09	1.231E-07	0.12314	0.0005
recreational	0.00254	0	2.44E-07	1.3E-07	1.06E-07	4.87E-08	0	7.7E-08	4.3E-08	0	4.6E-09	1.241E-07	0.1241	0.00051
recreational	0.00257	0	2.46E-07	1.31E-07	1.07E-07	4.92E-08	0	7.7E-08	4.3E-08	0	4.6E-09	1.253E-07	0.12531	0.00051
recreational	0.0026	0	2.49E-07	1.33E-07	1.08E-07	4.98E-08	0	7.8E-08	4.4E-08	0	4.7E-09	1.268E-07	0.12685	0.00052
recreational	0.00263	0	2.52E-07	1.35E-07	1.09E-07	5.05E-08	0	7.9E-08	4.4E-08	0	4.8E-09	1.284E-07	0.12845	0.00053
residential	0.00268	9.26E-07	2.8E-06	1.62E-06	1.47E-06	6.7E-07	3.6E-08	8.8E-07	0	9.7E-07	1.5E-07	2.031E-06	2.03095	0.00054
residential	0.0033	1.14E-06	3.45E-06	2E-06	1.81E-06	8.27E-07	4.5E-08	1.1E-06	0	1.2E-06	1.8E-07	2.508E-06	2.50769	0.00066
residential	0.00332	1.15E-06	3.47E-06	2.01E-06	1.82E-06	8.3E-07	4.5E-08	1.1E-06	0	1.2E-06	1.8E-07	2.518E-06	2.51825	0.00066
residential	0.00338	1.17E-06	3.53E-06	2.04E-06	1.85E-06	8.45E-07	4.6E-08	1.1E-06	0	1.2E-06	1.9E-07	2.562E-06	2.56238	0.00068
residential	0.00337	1.17E-06	3.52E-06	2.04E-06	1.85E-06	8.43E-07	4.6E-08	1.1E-06	0	1.2E-06	1.9E-07	2.557E-06	2.55743	0.00067
school	0.04095	0	6.06E-06	3.23E-06	2.63E-06	1.21E-06	0	0	3.6E-06	8.3E-07	0	4.414E-06	4.41412	0.00819
												2.77E-05	27.69	0.01
											residential	2.769E-05	27.69	0.01
											recreational	3.34E-06	3.34	0.01
											school	4.874E-06	4.87	0.01

AERMOD Output	ug/m3	Dose Inhalation 3rd tri	0<2	2<9	2<16	16<30	Risk (Residential 30-yr; school 9-yr; park 15-year) 3rd tri	0<2	2<9	2<16	16<30	Summed Risk	Cases Per Million	Chronic HI
recreational	3E-04	0E+00	3E-08	1E-08	1E-08	5E-09	0E+00	8E-09	5E-09	0E+00	5E-10	1.3E-08	0.013	5.5E-05
recreational	3E-04	0E+00	3E-08	1E-08	1E-08	5E-09	0E+00	8E-09	5E-09	0E+00	5E-10	1.4E-08	0.014	5.5E-05
recreational	3E-04	0E+00	3E-08	1E-08	1E-08	5E-09	0E+00	8E-09	5E-09	0E+00	5E-10	1.4E-08	0.014	5.6E-05
recreational	3E-04	0E+00	3E-08	1E-08	1E-08	5E-09	0E+00	8E-09	5E-09	0E+00	5E-10	1.4E-08	0.014	5.6E-05
recreational	3E-04	0E+00	3E-08	1E-08	1E-08	5E-09	0E+00	8E-09	5E-09	0E+00	5E-10	1.4E-08	0.014	5.6E-05
recreational	3E-04	0E+00	3E-08	1E-08	1E-08	5E-09	0E+00	8E-09	5E-09	0E+00	5E-10	1.4E-08	0.014	5.6E-05
recreational	3E-04	0E+00	3E-08	1E-08	1E-08	5E-09	0E+00	8E-09	5E-09	0E+00	5E-10	1.4E-08	0.014	5.6E-05
recreational	3E-04	0E+00	3E-08	1E-08	1E-08	5E-09	0E+00	8E-09	5E-09	0E+00	5E-10	1.4E-08	0.014	5.6E-05
residential	3E-04	1E-07	3E-07	2E-07	2E-07	7E-08	4E-09	9E-08	0E+00	1E-07	2E-08	2.1E-07	0.214	5.6E-05
residential	3E-04	1E-07	3E-07	2E-07	2E-07	8E-08	4E-09	1E-07	0E+00	1E-07	2E-08	2.3E-07	0.228	6E-05
residential	3E-04	1E-07	3E-07	2E-07	2E-07	7E-08	4E-09	1E-07	0E+00	1E-07	2E-08	2.3E-07	0.227	6E-05
residential	3E-04	1E-07	3E-07	2E-07	2E-07	8E-08	4E-09	1E-07	0E+00	1E-07	2E-08	2.3E-07	0.228	6E-05
residential	3E-04	1E-07	3E-07	2E-07	2E-07	7E-08	4E-09	1E-07	0E+00	1E-07	2E-08	2.2E-07	0.223	5.9E-05
school	5E-03	0E+00	7E-07	4E-07	3E-07	1E-07	0E+00	0E+00	4E-07	1E-07	0E+00	5.1E-07	0.511	0.00095
												3.09E-06	3.09	0.00
											residential	3.088E-06	3.09	0.00
											recreational	3.1627E-07	0.32	0.00
											school	5.6739E-07	0.57	0.00

AERMOD Output	ug/m3	Dose Inhalation 3rd tri	0<2	2<9	2<16	16<30	Risk (Residential 30-yr; school 9-yr; park 15-year) 3rd tri	0<2	2<9	2<16	16<30	Summed Risk	Cases Per Million	Chronic HI
recreational	3E-04	0E+00	3E-08	2E-08	1E-08	6E-09	0E+00	1E-08	6E-09	0E+00	6E-10	1.6E-08	0.016	6.6E-05
recreational	3E-04	0E+00	3E-08	2E-08	1E-08	6E-09	0E+00	1E-08	6E-09	0E+00	6E-10	1.6E-08	0.016	6.7E-05
recreational	3E-04	0E+00	3E-08	2E-08	1E-08	6E-09	0E+00	1E-08	6E-09	0E+00	6E-10	1.6E-08	0.016	6.7E-05
recreational	3E-04	0E+00	3E-08	2E-08	1E-08	6E-09	0E+00	1E-08	6E-09	0E+00	6E-10	1.6E-08	0.016	6.7E-05
recreational	3E-04	0E+00	3E-08	2E-08	1E-08	6E-09	0E+00	1E-08	6E-09	0E+00	6E-10	1.6E-08	0.016	6.7E-05
recreational	3E-04	0E+00	3E-08	2E-08	1E-08	6E-09	0E+00	1E-08	6E-09	0E+00	6E-10	1.7E-08	0.017	6.8E-05
recreational	3E-04	0E+00	3E-08	2E-08	1E-08	7E-09	0E+00	1E-08	6E-09	0E+00	6E-10	1.7E-08	0.017	6.8E-05
recreational	3E-04	0E+00	3E-08	2E-08	1E-08	7E-09	0E+00	1E-08	6E-09	0E+00	6E-10	1.7E-08	0.017	6.8E-05
residential	3E-04	1E-07	4E-07	2E-07	2E-07	9E-08	5E-09	1E-07	0E+00	1E-07	2E-08	2.6E-07	0.262	6.9E-05
residential	4E-04	1E-07	4E-07	2E-07	2E-07	1E-07	5E-09	1E-07	0E+00	1E-07	2E-08	3.0E-07	0.302	8E-05
residential	4E-04	1E-07	4E-07	2E-07	2E-07	1E-07	5E-09	1E-07	0E+00	1E-07	2E-08	3.0E-07	0.303	8E-05
residential	4E-04	1E-07	4E-07	2E-07	2E-07	1E-07	5E-09	1E-07	0E+00	1E-07	2E-08	3.1E-07	0.306	8.1E-05
residential	4E-04	1E-07	4E-07	2E-07	2E-07	1E-07	5E-09	1E-07	0E+00	1E-07	2E-08	3.0E-07	0.301	7.9E-05
school	1E-02	0E+00	2E-06	8E-07	7E-07	3E-07	0E+00	0E+00	9E-07	2E-07	0E+00	1.1E-06	1.149	0.00213
												6.96E-06	6.96	0.00
											residential	6.9592E-06	6.96	0.00
											recreational	9.5391E-07	0.95	0.00
											school	1.2695E-06	1.27	0.00

TAMT Risk Assessment - DPM Cancer and Chronic HI

					AERMOD UNITIZED CONCENTRATIONS																				DPM SCALED CONCENTRATIONS																			Vessel Hoteling				Vessel Transit				Tug/Barge Transit				Terminal E	
																								divide by -->	4	4	4	4	2	2	2	2	1	2	2	1	1	1	1	1	1	1	1														
																									Refrigerated Containersfull TAMT plan unmit	Refrigerated Containersfull TAMT plan unmit	Refrigerated Containersfull TAMT plan unmit	Refrigerated Containersfull TAMT plan unmit	Multi-Purpose General Cargofull TAMT plan unmit	Multi-Purpose General Cargofull TAMT plan unmit	Dry Bulkfull TAMT plan unmit	Dry Bulkfull TAMT plan unmit	Allfull TAMT plan unmit	Allfull TAMT plan unmit	Allfull TAMT plan unmit	Allfull TAMT plan unmit	TR_28THfull TAMT plan unmit	TR_BAYMARfull TAMT plan unmit	TR_BOSTONfull TAMT plan unmit	TR_CROSBYfull TAMT plan unmit	TR_HARBORCHAfull TAMT plan unmit	TR_HARBORSAMfull TAMT plan unmit	Allfull TAMT plan unmit	All	Refrigerated Containersfull TAMT plan unmit	Multi-Purpose General Cargofull TAMT plan unmit	Dry Bulkfull TAMT plan unmit	All	Refrigerated Containersfull TAMT plan unmit	Multi-Purpose General Cargofull TAMT plan unmit	Dry Bulkfull TAMT plan unmit	All	Refrigerated Containersfull TAMT plan unmit	Multi-Purpose General Cargofull TAMT plan unmit	Dry Bulkfull TAMT plan unmit	All	Refrigerated Containersfull TAMT plan unmit
AERMOD Output					Source Group in AERMOD																			g/s -->	7.6E-02	7.6E-02	7.6E-02	7.6E-02	1.7E-02	1.7E-02	1.9E-02	1.9E-02	8.9E-08	2.3E-03	2.3E-03	4.0E-02	7.8E-06	9.2E-06	2.4E-05	5.2E-05	1.1E-04	1.1E-04	2.4E-03	100%	81%	9%	10%	100%	46%	25%	28%	100%	21%	54%	25%	100%	39%
					1	3	5	7	9	11	13	15	17	18	19	20	21	22	23	24	25	26	27	28	1	3	5	7	9	11	13	15	17	18	19	21	22	23	24	25	26	27	28														
	Discrete Receptor ID (Group Name)		X	Y	B10_1_AUX	B10_2_AUX	B10_3_AUX	B10_4_AUX	B10_5_AUX	B10_6_AUX	B10_7_AUX	B10_8_AUX	CHE_1	LOC_SWTCH EMP	LOC_SWTCH LOA	OGV_PATH _BLR	OGV_PATH _DPM	TR_28TH	TR_BAYMA R	TR_BOSTON	TR_CROSBY	TR_HARBOR CHA	TR_HARBOR SAM	TUG_PATH _DPM	B10_1_AUX	B10_2_AUX	B10_3_AUX	B10_4_AUX	B10_5_AUX	B10_6_AUX	B10_7_AUX	B10_8_AUX	CHE_1	LOC_SWTCHE MP	LOC_SWTCHL OA	OGV_PATH_ DPM	TR_28TH	TR_BAYMA R	TR_BOSTON	TR_CROSBY	TR_HARBOR CHA	TR_HARBOR SAM	TUG_PATH_D PM														
residential	res		487479.47	3617250.73	1.9E-01	1.9E-01	2.1E-01	2.3E-01	2.5E-01	2.8E-01	2.9E-01	3.0E-01	2.1E+05	3.9E-01	4.6E-01	7.9E-02	7.9E-02	2.3E+02	3.9E-02	8.6E+01	1.1E+00	5.9E-01	9.1E+00	9.2E-02	1.4E-02	1.4E-02	1.6E-02	1.7E-02	4.4E-03	4.8E-03	5.4E-03	5.7E-03	1.8E-02	9.2E-04	1.1E-03	3.2E-03	1.8E-03	3.6E-07	2.1E-03	5.7E-05	6.7E-05	1.0E-03	2.2E-04	8.2E-02	6E-02	9E-03	1E-02	3E-03	1E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	2E-02	7E-03
residential	res		487504.47	3617250.73	1.9E-01	1.8E-01	2.1E-01	2.3E-01	2.5E-01	2.8E-01	2.9E-01	3.0E-01	2.0E+05	3.9E-01	4.5E-01	7.9E-02	7.9E-02	1.2E+02	3.9E-02	9.1E+01	1.1E+00	5.9E-01	8.4E+00	9.2E-02	1.4E-02	1.4E-02	1.6E-02	1.7E-02	4.3E-03	4.7E-03	5.4E-03	5.6E-03	1.8E-02	9.1E-04	1.1E-03	3.2E-03	9.3E-04	3.6E-07	2.2E-03	5.6E-05	6.7E-05	9.6E-04	2.2E-04	8.1E-02	6E-02	9E-03	1E-02	3E-03	1E-03	8E-04	9E-04	2E-04	5E-05	1E-04	5E-05	2E-02	7E-03
residential	res		487529.47	3617250.73	1.8E-01	1.8E-01	2.1E-01	2.2E-01	2.5E-01	2.7E-01	2.8E-01	3.0E-01	2.0E+05	3.8E-01	4.5E-01	7.8E-02	7.8E-02	7.7E+01	4.0E-02	9.2E+01	1.1E+00	5.8E-01	7.6E+00	9.2E-02	1.4E-02	1.4E-02	1.6E-02	1.7E-02	4.3E-03	4.7E-03	5.3E-03	5.5E-03	1.8E-02	9.0E-04	1.1E-03	3.1E-03	6.1E-04	3.6E-07	2.2E-03	5.5E-05	6.7E-05	8.7E-04	2.2E-04	8.0E-02	6E-02	9E-03	1E-02	3E-03	1E-03	8E-04	9E-04	2E-04	5E-05	1E-04	5E-05	2E-02	7E-03
residential	res		487554.47	3617250.73	1.8E-01	1.8E-01	2.0E-01	2.2E-01	2.4E-01	2.7E-01	2.8E-01	2.9E-01	2.0E+05	3.8E-01	4.5E-01	7.7E-02	7.7E-02	5.6E+01	4.0E-02	9.0E+01	1.0E+00	5.8E-01	6.8E+00	9.2E-02	1.4E-02	1.4E-02	1.5E-02	1.7E-02	4.2E-03	4.6E-03	5.2E-03	5.4E-03	1.8E-02	9.0E-04	1.0E-03	3.1E-03	4.4E-04	3.7E-07	2.2E-03	5.4E-05	6.6E-05	7.8E-04	2.2E-04	7.9E-02	6E-02	9E-03	1E-02	3E-03	1E-03	8E-04	9E-04	2E-04	5E-05	1E-04	5E-05	2E-02	7E-03
residential	res		487579.47	3617250.73	1.8E-01	1.8E-01	2.0E-01	2.2E-01	2.4E-01	2.6E-01	2.8E-01	2.9E-01	2.0E+05	3.8E-01	4.4E-01	7.7E-02	7.7E-02	4.3E+01	4.0E-02	8.4E+01	1.0E+00	5.7E-01	6.1E+00	9.1E-02	1.4E-02	1.3E-02	1.5E-02	1.7E-02	4.2E-03	4.5E-03	5.1E-03	5.4E-03	1.8E-02	8.9E-04	1.0E-03	3.1E-03	3.4E-04	3.7E-07	2.0E-03	5.3E-05	6.6E-05	7.0E-04	2.2E-04	7.8E-02	6E-02	9E-03	1E-02	3E-03	1E-03	8E-04	9E-04	2E-04	4E-05	1E-04	5E-05	2E-02	7E-03
residential	res		487604.47	3617250.73	1.8E-01	1.8E-01	2.0E-01	2.2E-01	2.4E-01	2.6E-01	2.7E-01	2.8E-01	1.9E+05	3.8E-01	4.4E-01	7.6E-02	7.6E-02	3.4E+01	4.1E-02	7.5E+01	1.0E+00	5.7E-01	5.4E+00	9.1E-02	1.4E-02	1.3E-02	1.5E-02	1.6E-02	4.1E-03	4.5E-03	5.1E-03	5.3E-03	1.7E-02	8.8E-04	1.0E-03	3.1E-03	2.7E-04	3.7E-07	1.8E-03	5.2E-05	6.5E-05	6.2E-04	2.2E-04	7.7E-02	6E-02	9E-03	1E-02	3E-03	1E-03	8E-04	9E-04	2E-04	4E-05	1E-04	5E-05	2E-02	7E-03
residential	res		487629.47	3617250.73	1.8E-01	1.8E-01	2.0E-01	2.1E-01	2.4E-01	2.6E-01	2.7E-01	2.8E-01	1.9E+05	3.7E-01	4.3E-01	7.6E-02	7.6E-02	2.8E+01	4.1E-02	6.4E+01	9.9E-01	5.6E-01	4.8E+00	9.1E-02	1.3E-02	1.3E-02	1.5E-02	1.6E-02	4.1E-03	4.4E-03	5.0E-03	5.2E-03	1.7E-02	8.7E-04	1.0E-03	3.0E-03	2.2E-04	3.7E-07	1.6E-03	5.1E-05	6.5E-05	5.5E-04	2.2E-04	7.7E-02	6E-02	8E-03	1E-02	3E-03	1E-03	8E-04	9E-04	2E-04	4E-05	1E-04	5E-05	2E-02	7E-03
residential	res		487654.47	3617250.73	1.8E-01	1.7E-01	2.0E-01	2.1E-01	2.3E-01	2.5E-01	2.7E-01	2.8E-01	1.9E+05	3.7E-01	4.3E-01	7.5E-02	7.5E-02	2.3E+01	4.1E-02	5.2E+01	9.7E-01	5.6E-01	4.3E+00	9.0E-02	1.3E-02	1.3E-02	1.5E-02	1.6E-02	4.0E-03	4.4E-03	4.9E-03	5.2E-03	1.7E-02	8.7E-04	1.0E-03	3.0E-03	1.8E-04	3.8E-07	1.3E-03	5.0E-05	6.4E-05	5.0E-04	2.1E-04	7.6E-02	6E-02	8E-03	1E-02	3E-03	1E-03	8E-04	9E-04	2E-04	4E-05	1E-04	5E-05	2E-02	7E-03
residential	res		487679.47	3617250.73	1.8E-01	1.7E-01	2.0E-01	2.1E-01	2.3E-01	2.5E-01	2.6E-01	2.7E-01	1.9E+05	3.7E-01	4.2E-01	7.5E-02	7.5E-02	2.0E+01	4.2E-02	4.3E+01	9.5E-01	5.6E-01	3.9E+00	9.0E-02	1.3E-02	1.3E-02	1.5E-02	1.6E-02	4.0E-03	4.3E-03	4.9E-03	5.1E-03	1.7E-02	8.6E-04	9.9E-04	3.0E-03	1.5E-04	3.8E-07	1.0E-03	4.9E-05	6.4E-05	4.5E-04	2.1E-04	7.5E-02	6E-02	8E-03	1E-02	3E-03	1E-03	8E-04	9E-04	2E-04	4E-05	1E-04	5E-05	2E-02	6E-03
residential	res		487704.47	3617250.73	1.7E-01	1.7E-01	1.9E-01	2.1E-01	2.3E-01	2.5E-01	2.6E-01	2.7E-01	1.9E+05	3.6E-01	4.2E-01	7.5E-02	7.5E-02	1.7E+01	4.2E-02	3.5E+01	9.4E-01	5.5E-01	3.6E+00	8.9E-02	1.3E-02	1.3E-02	1.5E-02	1.6E-02	3.9E-03	4.3E-03	4.8E-03	5.0E-03	1.7E-02	8.5E-04	9.8E-04	3.0E-03	1.3E-04	3.9E-07	8.6E-04	4.8E-05	6.3E-05	4.1E-04	2.1E-04	7.5E-02	6E-02	8E-03	1E-02	3E-03	1E-03	8E-04	9E-04	2E-04	4E-05	1E-04	5E-05	2E-02	6E-03
residential	res		487729.47	3617250.73	1.7E-01	1.7E-01	1.9E-01	2.1E-01	2.3E-01	2.4E-01	2.6E-01	2.7E-01	1.8E+05	3.6E-01	4.1E-01	7.4E-02	7.4E-02	1.5E+01	4.3E-02	3.0E+01	9.2E-01	5.5E-01	3.3E+00	8.9E-02	1.3E-02	1.3E-02	1.5E-02	1.6E-02	3.9E-03	4.2E-03	4.8E-03	5.0E-03	1.6E-02	8.4E-04	9.7E-04	3.0E-03	1.2E-04	3.9E-07	7.3E-04	4.8E-05	6.3E-05	3.8E-04	2.1E-04	7.4E-02	6E-02	8E-03	1E-02	3E-03	1E-03	8E-04	8E-04	2E-04	4E-05	1E-04	5E-05	2E-02	6E-03
residential	res		487754.47	3617250.73	1.7E-01	1.7E-01	1.9E-01	2.0E-01	2.2E-01	2.4E-01	2.5E-01	2.7E-01	1.8E+05	3.5E-01	4.1E-01	7.4E-02	7.4E-02	1.3E+01	4.3E-02	2.6E+01	9.0E-01	5.4E-01	3.1E+00	8.8E-02	1.3E-02	1.3E-02	1.4E-02	1.5E-02	3.8E-03	4.2E-03	4.7E-03	4.9E-03	1.6E-02	8.3E-04	9.5E-04	3.0E-03	1.0E-04	4.0E-07	6.3E-04	4.7E-05	6.2E-05	3.5E-04	2.1E-04	7.3E-02	6E-02	8E-03	1E-02	3E-03	1E-03	7E-04	8E-04	2E-04	4E-05	1E-04	5E-05	2E-02	6E-03
residential	res		487779.47	3617250.73	1.7E-01	1.7E-01	1.9E-01	2.0E-01	2.2E-01	2.4E-01	2.5E-01	2.6E-01	1.8E+05	3.5E-01	4.0E-01	7.3E-02	7.3E-02	1.2E+01	4.4E-02	2.3E+01	8.9E-01	5.4E-01	2.9E+00	8.8E-02	1.3E-02	1.3E-02	1.4E-02	1.5E-02	3.8E-03	4.1E-03	4.7E-03	4.9E-03	1.6E-02	8.2E-04	9.4E-04	2.9E-03	9.1E-05	4.0E-07	5.5E-04	4.6E-05	6.2E-05	3.3E-04	2.1E-04	7.3E-02	6E-02	8E-03	1E-02	3E-03	1E-03	7E-04	8E-04	2E-04	4E-05	1E-04	5E-05	2E-02	6E-03
residential	res		487804.47	3617250.73	1.7E-01	1.7E-01	1.9E-01	2.0E-01	2.2E-01	2.4E-01	2.5E-01	2.6E-01	1.8E+05	3.5E-01	4.0E-01	7.3E-02	7.3E-02	1.0E+01	4.5E-02	2.0E+01	8.7E-01	5.3E-01	2.7E+00	8.7E-02	1.3E-02	1.3E-02	1.4E-02	1.5E-02	3.8E-03	4.1E-03	4.6E-03	4.8E-03	1.6E-02	8.1E-04	9.3E-04	2.9E-03	8.2E-05	4.1E-07	4.8E-04	4.5E-05	6.1E-05	3.1E-04	2.1E-04	7.2E-02	5E-02	8E-03	9E-03	3E-03	1E-03	7E-04	8E-04	2E-04	4E-05	1E-04	5E-05	2E-02	6E-03
residential	res		487829.47	3617250.73	1.7E-01	1.7E-01	1.9E-01	2.0E-01	2.2E-01	2.3E-01	2.5E-01	2.6E-01	1.7E+05	3.4E-01	3.9E-01	7.3E-02	7.3E-02	9.5E+00	4.5E-02	1.8E+01	8.5E-01	5.3E-01	2.5E+00	8.7E-02	1.3E-02	1.3E-02	1.4E-02	1.5E-02	3.7E-03	4.0E-03	4.6E-03	4.8E-03	1.6E-02	8.0E-04	9.2E-04	2.9E-03	7.5E-05	4.1E-07	4.3E-04	4.4E-05	6.1E-05	2.9E-04	2.1E-04	7.1E-02	5E-02	8E-03	9E-03	3E-03	1E-03	7E-04	8E-04	2E-04	4E-05	1E-04	5E-05	2E-02	6E-03
residential	res		487854.47	3617250.73	1.7E-01	1.6E-01	1.8E-01	2.0E-01	2.1E-01	2.3E-01	2.4E-01	2.5E-01	1.7E+05	3.4E-01	3.9E-01	7.2E-02	7.2E-02	8.7E+00	4.6E-02	1.6E+01	8.4E-01	5.3E-01	2.4E+00	8.6E-02	1.3E-02	1.2E-02	1.4E-02	1.5E-02	3.7E-03	4.0E-03	4.5E-03	4.7E-03	1.5E-02	8.0E-04	9.1E-04	2.9E-03	6.8E-05	4.2E-07	3.8E-04	4.3E-05	6.0E-05	2.8E-04	2.0E-04	7.1E-02	5E-02	8E-03	9E-03	3E-03	1E-03	7E-04	8E-04	2E-04	4E-05	1E-04	5E-05	2E-02	6E-03
residential	res		487479.47	3617270.03	1.9E-01	1.9E-01	2.1E-01	2.3E-01	2.5E-01	2.8E-01	2.9E-01	3.0E-01	2.1E+05	4.0E-01	4.7E-01	7.9E-02	7.9E-02	2.3E+02	3.9E-02	1.1E+02	1.1E+00	6.1E-01	8.3E+00	9.4E-02	1.4E-02	1.4E-02	1.6E-02	1.7E-02	4.4E-03	4.8E-03	5.4E-03	5.7E-03	1.9E-02	9.4E-04	1.1E-03	3.2E-03	1.8E-03	3.5E-07	2.6E-03	5.8E-05	6.9E-05	9.5E-04	2.2E-04	8.2E-02	6E-02	9E-03	1E-02	3E-03	1E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	2E-02	7E-03
residential	res		487504.47	3617270.03	1.9E-01	1.8E-01	2.1E-01	2.3E-01	2.5E-01	2.7E-01	2.9E-01	3.0E-01	2.1E+05	4.0E-01	4.6E-01	7.9E-02	7.9E-02	1.2E+02	3.9E-02	1.2E+02	1.1E+00	6.0E-01	7.8E+00	9.3E-02	1.4E-02	1.4E-02	1.6E-02	1.7E-02	4.3E-03	4.7E-03	5.4E-03	5.6E-03	1.9E-02	9.3E-04	1.1E-03	3.2E-03	9.4E-04	3.6E-07	2.8E-03	5.7E-05	6.9E-05	8.9E-04	2.2E-04	8.1E-02	6E-02	9E-03	1E-02	3E-03	1E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	2E-02	7E-03
residential	res		487529.47	3617270.03	1.9E-01	1.8E-01	2.1E-01	2.2E-01	2.5E-01	2.7E-01	2.8E-01	3.0E-01	2.1E+05	3.9E-01	4.6E-01	7.8E-02	7.8E-02	7.9E+01	3.9E-02	1.2E+02	1.1E+00	6.0E-01	7.1E+00	9.3E-02	1.4E-02	1.4E-02	1.6E-02	1.7E-02	4.3E-03	4.7E-03	5.3E-03	5.5E-03	1.8E-02	9.2E-04	1.1E-03	3.1E-03	6.2E-04	3.6E-07	2.9E-03	5.6E-05	6.8E-05	8.1E-04	2.2E-04	8.0E-02	6E-02	9E-03	1E-02	3E-03	1E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	2E-02	7E-03
residential	res		487554.47	3617270.03	1.8E-01	1.8E-01	2.1E-01	2.2E-01	2.4E-01	2.7E-01	2.8E-01	2.9E-01	2.0E+05	3.9E-01	4.6E-01	7.8E-02	7.8E-02	5.8E+01	4.0E-02	1.2E+02	1.1E+00	5.9E-01	6.4E+00	9.3E-02	1.4E-02	1.4E-02	1.6E-02	1.7E-02	4.2E-03	4.6E-03	5.2E-03	5.4E-03	1.8E-02	9.2E-04	1.1E-03	3.1E-03	4.6E-04	3.6E-07	2.9E-03	5.5E-05	6.8E-05	7.4E-04	2.2E-04	7.9E-02	6E-02	9E-03	1E-02	3E-03	1E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	2E-02	7E-03
residential	res		487579.47	3617270.03	1.8E-01	1.8E-01	2.0E-01	2.2E-01	2.4E-01	2.6E-01	2.8E-01	2.9E-01	2.0E+05	3.9E-01	4.5E-01	7.7E-02	7.7E-02	4.5E+01	4.0E-02	1.1E+02	1.0E+00	5.9E-01	5.8E+00	9.3E-02	1.4E-02	1.4E-02	1.5E-02	1.7E-02	4.2E-03	4.5E-03	5.1E-03	5.4E-03	1.8E-02	9.1E-04	1.1E-03	3.1E-03	3.5E-04	3.6E-07	2.8E-03	5.4E-05	6.7E-05	6.7E-04	2.2E-04	7.8E-02	6E-02	9E-03	1E-02	3E-03	1E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	2E-02	7E-03
residential	res		487604.47	3617270.03	1.8E-01	1.8E-01	2.0E-01	2.2E-01	2.4E-01	2.6E-01	2.7E-01	2.9E-01	2.0E+05	3.8E-01	4.5E-01	7.7E-02	7.7E-02	3.5E+01	4.0E-02	1.0E+02	1.0E+00	5.8E-01	5.2E+00	9.2E-02	1.4E-02	1.3E-02	1.5E-02	1.6E-02	4.1E-03	4.5E-03	5.1E-03	5.3E-03	1.8E-02	9.0E-04	1.0E-03	3.1E-03	2.8E-04	3.7E-07	2.5E-03	5.3E-05	6.7E-05	6.0E-04	2.2E-04	7.8E-02	6E-02	9E-03	1E-02	3E-03	1E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	2E-02	7E-03
residential	res		487629.47	3617270.03	1.8E-01	1.8E-01	2.0E-01	2.1E-01	2.4E-01	2.6E-01	2.7E-01	2.8E-01	1.9E+05	3.8E-01	4.4E-01	7.6E-02	7.6E-02	2.9E+01	4.1E-02	8.6E+01	1.0E+00	5.8E-01	4.7E+00	9.2E-02	1.4E-02	1.3E-02	1.5E-02	1.6E-02	4.1E-03	4.4E-03	5.0E-03	5.2E-03	1.7E-02	8.9E-04	1.0E-03	3.1E-03	2.3E-04	3.7E-07	2.1E-03	5.2E-05	6.6E-05	5.4E-04	2.2E-04	7.7E-02	6E-02	8E-03	1E-02	3E-03	1E-03	8E-04	9E-04	2E-04	5E-05	1E-04	5E-05	2E-02	7E-03
residential	res		487654.47	3617270.03	1.8E-01	1.7E-01	2.0E-01	2.1E-01	2.3E-01	2.5E-01	2.7E-01	2.8E-01	1.9E+05	3.8E-01	4.4E-01	7.6E-02	7.6E-02	2.4E+01	4.1E-02	6.9E+01	9.9E-01	5.7E-01	4.3E+00	9.1E-02	1.3E-02	1.3E-02	1.5E-02	1.6E-02	4.0E-03	4.4E-03	4.9E-03	5.2E-03	1.7E-02	8.8E-04	1.0E-03	3.0E-03	1.9E-04	3.8E-07	1.7E-03	5.1E-05	6.6E-05	4.9E-04	2.2E-04	7.6E-02	6E-02	8E-03	1E-02	3E-03	1E-03	8E-04	9E-04	2E-04	4E-05	1E-04	5E-05	2E-02	7E-03
residential	res		487679.47	3617270.03	1.8E-01	1.7E-01	2.0E-01	2.1E-01	2.3E-01	2.5E-01	2.6E-01	2.8E-01	1.9E+05	3.7E-01	4.3E-01	7.5E-02	7.5E-02	2.0E+01	4.2E-02	5.4E+01	9.7E-01	5.7E-01	3.9E+00	9.1E-02	1.3E-02	1.3E-02	1.5E-02	1.6E-02	4.0E-03	4.3E-03	4.9E-03	5.1E-03	1.7E-02	8.7E-04	1.0E-03	3.0E-03	1.6E-04	3.8E-07	1.3E-03	5.0E-05	6.5E-05	4.5E-04	2.2E-04	7.6E-02	6E-02	8E-03	1E-02	3E-03	1E-03	8E-04	9E-04	2E-04	4E-05	1E-04	5E-05	2E-02	7E-03
residential	res		487704.47	3617270.03	1.8E-01	1.7E-01	1.9E-01	2.1E-01	2.3E-01	2.5E-01	2.6E-01	2.7E-01	1.9E+05	3.7E-01	4.3E-01	7.5E-02	7.5E-02	1.7E+01	4.2E-02	4.4E+01	9.5E-01	5.7E-01	3.6E+00	9.0E-02	1.3E-02	1.3E-02	1.5E-02	1.6E-02	3.9E-03	4.3E-03	4.8E-03	5.1E-03	1.7E-02	8.6E-04	1.0E-03	3.0E-03	1.4E-04	3.9E-07	1.1E-03	4.9E-05	6.5E-05	4.1E-04	2.1E-04	7.5E-02	6E-02	8E-03	1E-02	3E-03	1E-03	8E-04	9E-04	2E-04	4E-05	1E-04	5E-05	2E-02	6E-03
residential	res		487729.47	3617270.03	1.8E-01	1.7E-01	1.9E-01	2.1E-01	2.3E-01	2.4E-01	2.6E-01	2.7E-01	1.9E+05	3.6E-01	4.2E-01	7.4E-02	7.4E-02	1.5E+01	4.3E-02	3.6E+01	9.3E-01	5.6E-01	3.3E+00	9.0E-02	1.3E-02	1.3E-02	1.5E-02	1.6E-02	3.9E-03	4.2E-03	4.8E-03	5.0E-03	1.7E-02	8.6E-04	9.9E-04	3.0E-03	1.2E-04	3.9E-07	8.8E-04	4.8E-05	6.4E-05	3.7E-04	2.1E-04	7.4E-02	6E-02	8E-03	1E-02	3E-03	1E-03	8E-04	8E-04	2E-04	4E-05	1E-04	5E-05	2E-02	6E-03
residential	res		487754.47	3617270.03	1.7E-01	1.7E-01	1.9E-01	2.0E-01	2.2E-01	2.4E-01	2.5E-01	2.7E-01	1.8E+05	3.6E-01	4.1E-01	7.4E-02	7.4E-02	1.3E+01	4.3E-02	3.1E+01	9.1E-01	5.6E-01	3.0E+00	8.9E-02	1.3E-02	1.3E-02	1.4E-02	1.5E-02	3.8E-03	4.2E-03	4.7E-03	4.9E-03	1.6E-02	8.5E-04	9.7E-04	3.0E-03	1.1E-04	4.0E-07	7.5E-04	4.7E-05	6.4E-05	3.5E-04	2.1E-04	7.4E-02	6E-02	8E-03	1E-02	3E-03	1E-03	7E-04	8E-04	2E-04	4E-05	1E-04	5E-05	2E-02	6E-03
residential	res		487779.47	3617270.03	1.7E-01	1.7E-01	1.9E-01	2.0E-01	2.2E-01	2.4E-01	2.5E-01	2.6E-01	1.8E+05	3.6E-01	4.1E-01	7.4E-02	7.4E-02	1.2E+01	4.4E-02	2.6E+01	9.0E-01	5.5E-01	2.8E+00	8.8E-02	1.3E-02	1.3E-02	1.4E-02	1.5E-02	3.8E-03	4.1E-03	4.7E-03	4.9E-03	1.6E-02	8.3E-04	9.6E-04	3.0E-03	9.4E-05	4.0E-07	6.4E-04	4.6E-05	6.3E-05	3.2E-04	2.1E-04	7.3E-02	6E-02	8E-03	1E-02	3E-03	1E-03	7E-04	8E-04	2E-04	4E-05	1E-04	5E-05	2E-02	6E-03
residential	res		487804.47	3617270.03	1.7E-01	1.7E-01	1.9E-01	2.0E-01	2.2E-01	2.4E-01	2.5E-01	2.6E-01	1.8E+05	3.5E-01	4.0E-01	7.3E-02	7.3E-02	1.1E+01	4.4E-02	2.3E+01	8.8E-01	5.5E-01	2.7E+00	8.8E-02	1.3E-02	1.3E-02	1.4E-02	1.5E-02	3.8E-03	4.1E-03	4.6E-03	4.8E-03	1.6E-02	8.2E-04	9.4E-04	2.9E-03	8.4E-05	4.1E-07	5.5E-04	4.6E-05	6.3E-05	3.0E-04	2.1E-04	7.2E-02	6E-02	8E-03	9E-03	3E-03	1E-03	7E-04	8E-04	2E-04	4E-05	1E-04	5E-05	2E-02	6E-03
residential	res		487829.47	3617270.03	1.7E-01	1.7E-01	1.9E-01	2.0E-01	2.2E-01	2.3E-01	2.5E-01	2.6E-01	1.8E+05	3.5E-01	4.0E-01	7.3E-02	7.3E-02	9.7E+00	4.5E-02	2.0E+01	8.6E-01	5.4E-01	2.5E+00	8.7E-02	1.3E-02	1.3E-02	1.4E-02	1.5E-02	3.7E-03	4.0E-03	4.6E-03	4.8E-03	1.6E-02	8.2E-04	9.3E-04	2.9E-03	7.6E-05	4.1E-07	4.8E-04	4.5E-05	6.2E-05	2.9E-04	2.1E-04	7.2E-02	5E-02	8E-03	9E-03	3E-03	1E-03	7E-04	8E-04	2E-04	4E-05	1E-04	5E-05	2E-02	6E-03
residential	res		487854.47	3617270.03	1.7E-01	1.6E-01	1.8E-01	2.0E-01	2.1E-01	2.3E-01	2.4E-01	2.5E-01	1.7E+05	3.5E-01	3.9E-01	7.2E-02	7.2E-02	8.8E+00	4.5E-02	1.7E+01	8.5E-01	5.4E-01	2.4E+00	8.7E-02	1.3E-02	1.2E-02	1.4E-02	1.5E-02	3.7E-03	4.0E-03	4.5E-03	4.7E-03	1.6E-02	8.1E-04	9.2E-04	2.9E-03	6.9E-05	4.2E-07	4.2E-04	4.4E-05	6.1E-05	2.7E-04	2.1E-04	7.1E-02	5E-02	8E-03	9E-03	3E-03	1E-03	7E-04	8E-04	2E-04	4E-05	1E-04	5E-05	2E-02	6E-03
residential	res		487479.47	3617289.33	1.9E-01	1.9E-01	2.1E-01	2.3E-01	2.5E-01	2.8E-01	2.9E-01	3.1E-01	2.1E+05	4.1E-01	4.8E-01	8.0E-02	8.0E-02	2.3E+02	3.8E-02	1.4E+02	1.2E+00	6.2E-01	7.7E+00	9.5E-02	1.4E-02	1.4E-02	1.6E-02	1.7E-02	4.4E-03	4.8E-03	5.4E-03	5.7E-03	1.9E-02	9.6E-04	1.1E-03	3.2E-03	1.8E-03	3.5E-07	3.4E-03	6.0E-05	7.2E-05	8.8E-04	2.2E-04	8.2E-02	6E-02	9E-03	1E-02	3E-03	1E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	2E-02	7E-03
residential	res		487504.47	3617289.33	1.9E-01	1.9E-01	2.1E-01	2.3E-01	2.5E-01	2.7E-01	2.9E-01	3.0E-01	2.1E+05	4.1E-01	4.7E-01	7.9E-02	7.9E-02	1.2E+02	3.9E-02	1.6E+02	1.1E+00	6.2E-01	7.2E+00	9.4E-02	1.4E-02	1.4E-02	1.6E-02	1.7E-02	4.3E-03	4.7E-03	5.4E-03	5.6E-03	1.9E-02	9.5E-04	1.1E-03	3.2E-03	9.4E-04	3.5E-07	3.8E-03	5.8E-05	7.1E-05	8.3E-04	2.2E-04	8.1E-02	6E-02	9E-03	1E-02	3E-03	1E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	2E-02	7E-03
residential	res		487529.47	3617289.33	1.9E-01	1.8E-01	2.1E-01	2.2E-01	2.5E-01	2.7E-01	2.8E-01	3.0E-01	2.1E+05	4.0E-01	4.7E-01	7.9E-02	7.9E-02	8.1E+01	3.8E-02	1.6E+02	1.1E+00	6.1E-01	6.7E+00	9.4E-02	1.4E-02	1.4E-02	1.6E-02	1.7E-02	4.3E-03	4.6E-03	5.3E-03	5.5E-03	1.9E-02	9.4E-04	1.1E-03	3.2E-03	6.4E-04	3.5E-07	4.0E-03	5.7E-05	7.0E-05	7.6E-04	2.2E-04	8.0E-02	6E-02	9E-03	1E-02	3E-03	1E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	2E-02	7E-03
residential	res		487554.47	3617289.33	1.8E-01	1.8E-01	2.1E-01	2.2E-01	2.4E-01	2.7E-01	2.8E-01	2.9E-01	2.1E+05	4.0E-01	4.7E-01	7.8E-02	7.8E-02	6.0E+01	3.9E-02	1.7E+02	1.1E+00	6.1E-01	6.1E+00	9.4E-02	1.4E-02	1.4E-02	1.6E-02	1.7E-02	4.2E-03	4.6E-03	5.2E-03	5.5E-03	1.8E-02	9.4E-04	1.1E-03	3.1E-03	4.7E-04	3.6E-07	4.0E-03	5.6E-05	7.0E-05	7.0E-04	2.2E-04	8.0E-02	6E-02	9E-03	1E-02	3E-03	1E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	2E-02	7E-03
residential	res		487579.47	3617289.33	1.8E-01	1.8E-01	2.0E-01	2.2E-01	2.4E-01	2.6E-01	2.8E-01	2.9E-01	2.0E+05	4.0E-01	4.6E-01	7.7E-02	7.7E-02	4.6E+01	3.9E-02	1.6E+02	1.1E+00	6.0E-01	5.6E+00	9.4E-02	1.4E-02	1.4E-02	1.5E-02	1.7E-02	4.2E-03	4.5E-03	5.1E-03	5.4E-03	1.8E-02	9.3E-04	1.1E-03	3.1E-03	3.6E-04	3.6E-07	3.9E-03	5.5E-05	6.9E-05	6.4E-04	2.2E-04	7.9E-02	6E-02	9E-03	1E-02	3E-03	1E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	2E-02	7E-03
residential	res		487604.47	3617289.33	1.8E-01	1.8E-01	2.0E-01	2.2E-01	2.4E-01	2.6E-01	2.7E-01	2.9E-01	2.0E+05	3.9E-01	4.6E-01	7.7E-02	7.7E-02	3.7E+01	4.0E-02	1.5E+02	1.0E+00	6.0E-01	5.1E+00	9.3E-02	1.4E-02	1.4E-02	1.5E-02	1.6E-02	4.1E-03	4.5E-03	5.1E-03	5.3E-03	1.8E-02	9.2E-04	1.1E-03	3.1E-03	2.9E-04	3.6E-07	3.6E-03	5.4E-05	6.9E-05	5.8E-04	2.2E-04	7.8E-02	6E-02	9E-03	1E-02	3E-03	1E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	2E-02	7E-03
residential	res		487629.47	3617289.33	1.8E-01	1.8E-01	2.0E-01	2.2E-01	2.4E-01	2.6E-01	2.7E-01	2.8E-01	2.0E+05	3.9E-01	4.5E-01	7.6E-02	7.6E-02	3.0E+01	4.0E-02	1.2E+02	1.0E+00	5.9E-01	4.6E+00	9.3E-02	1.4E-02	1.3E-02	1.5E-02	1.6E-02	4.1E-03	4.4E-03	5.0E-03	5.3E-03	1.8E-02	9.1E-04	1.1E-03	3.1E-03	2.3E-04	3.7E-07	3.0E-03	5.3E-05	6.8E-05	5.3E-04	2.2E-04	7.7E-02	6E-02	8E-03	1E-02	3E-03	1E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	2E-02	7E-03
residential	res		487654.47	3617289.33	1.8E-01	1.8E-01	2.0E-01	2.1E-01	2.3E-01	2.5E-01	2.7E-01	2.8E-01	1.9E+05	3.8E-01	4.4E-01	7.6E-02	7.6E-02	2.5E+01	4.1E-02	9.6E+01	1.0E+00	5.9E-01	4.2E+00	9.2E-02	1.4E-02	1.3E-02	1.5E-02	1.6E-02	4.0E-03	4.3E-03	4.9E-03	5.2E-03	1.7E-02	9.0E-04	1.0E-03	3.1E-03	1.9E-04	3.7E-07	2.3E-03	5.2E-05	6.8E-05	4.8E-04	2.2E-04	7.7E-02	6E-02	8E-03	1E-02	3E-03	1E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	2E-02	7E-03
residential	res		487679.47	3617289.33	1.8E-01	1.7E-01	2.0E-01	2.1E-01	2.3E-01	2.5E-01	2.6E-01	2.8E-01	1.9E+05	3.8E-01	4.4E-01	7.6E-02	7.6E-02	2.1E+01	4.1E-02	7.2E+01	9.8E-01	5.8E-01	3.8E+00	9.2E-02	1.4E-02	1.3E-02	1.5E-02	1.6E-02	4.0E-03	4.3E-03	4.9E-03	5.1E-03	1.7E-02	8.9E-04	1.0E-03	3.0E-03	1.6E-04	3.8E-07	1.7E-03	5.1E-05	6.7E-05	4.4E-04	2.2E-04	7.6E-02	6E-02	8E-03	1E-02	3E-03	1E-03	8E-04	9E-04	2E-04	4E-05	1E-04	5E-05	2E-02	7E-03
residential	res		487704.47	3617289.33	1.8E-01	1.7E-01	1.9E-01	2.1E-01	2.3E-01	2.5E-01	2.6E-01	2.7E-01	1.9E+05	3.8E-01	4.3E-01	7.5E-02	7.5E-02	1.8E+01	4.2E-02	5.6E+01	9.6E-01	5.8E-01	3.5E+00	9.1E-02	1.3E-02	1.3E-02	1.5E-02	1.6E-02	3.9E-03	4.2E-03	4.8E-03	5.1E-03	1.7E-02	8.8E-04	1.0E-03	3.0E-03	1.4E-04	3.8E-07	1.3E-03	5.0E-05	6.6E-05	4.0E-04	2.2E-04	7.5E-02	6E-02	8E-03	1E-02	3E-03	1E-03	8E-04	9E-04	2E-04	4E-05	1E-04	5E-05	2E-02	7E-03
residential	res		487729.47	3617289.33	1.8E-01	1.7E-01	1.9E-01	2.1E-01	2.3E-01	2.4E-01	2.6E-01	2.7E-01	1.9E+05	3.7E-01	4.3E-01	7.5E-02	7.5E-02	1.6E+01	4.2E-02	4.4E+01	9.4E-01	5.7E-01	3.2E+00	9.0E-02	1.3E-02	1.3E-02	1.5E-02	1.6E-02	3.9E-03	4.2E-03	4.8E-03	5.0E-03	1.7E-02	8.7E-04	1.0E-03	3.0E-03	1.2E-04	3.9E-07	1.1E-03	4.9E-05	6.6E-05	3.7E-04	2.1E-04	7.4E-02	6E-02	8E-03	1E-02	3E-03	1E-03	8E-04	9E-04	2E-04	4E-05	1E-04	5E-05	2E-02	6E-03
residential	res		487754.47	3617289.33	1.8E-01	1.7E-01	1.9E-01	2.0E-01	2.2E-01	2.4E-01	2.5E-01	2.7E-01	1.8E+05	3.7E-01	4.2E-01	7.4E-02	7.4E-02	1.4E+01	4.3E-02	3.6E+01	9.2E-01	5.7E-01	3.0E+00	9.0E-02	1.3E-02	1.3E-02	1.4E-02	1.5E-02	3.8E-03	4.1E-03	4.7E-03	4.9E-03	1.6E-02	8.6E-04	9.9E-04	3.0E-03	1.1E-04	3.9E-07	8.8E-04	4.8E-05	6.5E-05	3.4E-04	2.1E-04	7.4E-02	6E-02	8E-03	1E-02	3E-03	1E-03	8E-04	8E-04	2E-04	4E-05	1E-04	5E-05	2E-02	6E-03
residential	res		487779.47	3617289.33	1.7E-01	1.7E-01	1.9E-01	2.0E-01	2.2E-01	2.4E-01	2.5E-01	2.6E-01	1.8E+05	3.6E-01	4.1E-01	7.4E-02	7.4E-02	1.2E+01	4.4E-02	3.0E+01	9.1E-01	5.6E-01	2.8E+00	8.9E-02	1.3E-02	1.3E-02	1.4E-02	1.5E-02	3.8E-03	4.1E-03	4.7E-03	4.9E-03	1.6E-02	8.5E-04	9.7E-04	3.0E-03	9.6E-05	4.0E-07	7.3E-04	4.7E-05	6.5E-05	3.2E-04	2.1E-04	7.3E-02	6E-02	8E-03	1E-02	3E-03	1E-03	7E-04	8E-04	2E-04	4E-05	1E-04	5E-05	2E-02	6E-03
residential	res		487804.47	3617289.33	1.7E-01	1.7E-01	1.9E-01	2.0E-01	2.2E-01	2.4E-01	2.5E-01	2.6E-01	1.8E+05	3.6E-01	4.1E-01	7.4E-02	7.4E-02	1.1E+01	4.4E-02	2.5E+01	8.9E-01	5.6E-01	2.6E+00	8.8E-02	1.3E-02	1.3E-02	1.4E-02	1.5E-02	3.8E-03	4.0E-03	4.6E-03	4.8E-03	1.6E-02	8.4E-04	9.6E-04	3.0E-03	8.6E-05	4.0E-07	6.1E-04	4.6E-05	6.4E-05	3.0E-04	2.1E-04	7.3E-02	6E-02	8E-03	9E-03	3E-03	1E-03	7E-04	8E-04	2E-04	4E-05	1E-04	5E-05	2E-02	6E-03
residential	res		487829.47	3617289.33	1.7E-01	1.7E-01	1.9E-01	2.0E-01	2.2E-01	2.3E-01	2.4E-01	2.6E-01	1.8E+05	3.5E-01	4.0E-01	7.3E-02	7.3E-02	9.9E+00	4.5E-02	2.1E+01	8.7E-01	5.5E-01	2.5E+00	8.8E-02	1.3E-02	1.3E-02	1.4E-02	1.5E-02	3.7E-03	4.0E-03	4.6E-03	4.8E-03	1.6E-02	8.3E-04	9.5E-04	2.9E-03	7.7E-05	4.1E-07	5.2E-04	4.5E-05	6.3E-05	2.8E-04	2.1E-04	7.2E-02	5E-02	8E-03	9E-03	3E-03	1E-03	7E-04	8E-04	2E-04	4E-05	1E-04	5E-05	2E-02	6E-03
residential	res		487854.47	3617289.33	1.7E-01	1.7E-01	1.9E-01	2.0E-01	2.1E-01	2.3E-01	2.4E-01	2.5E-01	1.8E+05	3.5E-01	4.0E-01	7.3E-02	7.3E-02	9.0E+00	4.5E-02	1.8E+01	8.6E-01	5.5E-01	2.3E+00	8.8E-02	1.3E-02	1.3E-02	1.4E-02	1.5E-02	3.7E-03	4.0E-03	4.5E-03	4.7E-03	1.6E-02	8.2E-04	9.4E-04	2.9E-03	7.0E-05	4.1E-07	4.5E-04	4.4E-05	6.3E-05	2.7E-04	2.1E-04	7.1E-02	5E-02	8E-03	9E-03	3E-03	1E-03	7E-04	8E-04	2E-04	4E-05	1E-04	5E-05	2E-02	6E-03
residential	res		487479.47	3617308.63	1.9E-01	1.9E-01	2.1E-01	2.3E-01	2.5E-01	2.8E-01	2.9E-01	3.1E-01	2.2E+05	4.2E-01	4.9E-01	8.0E-02	8.0E-02	2.3E+02	3.8E-02	1.9E+02	1.2E+00	6.4E-01	7.2E+00	9.6E-02	1.4E-02	1.4E-02	1.6E-02	1.7E-02	4.4E-03	4.8E-03	5.4E-03	5.7E-03	1.9E-02	9.8E-04	1.1E-03	3.2E-03	1.8E-03	3.5E-07	4.7E-03	6.1E-05	7.4E-05	8.3E-04	2.2E-04	8.3E-02	6E-02	9E-03	1E-02	3E-03	1E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	2E-02	7E-03
residential	res		487504.47	3617308.63	1.9E-01	1.9E-01	2.1E-01	2.3E-01	2.5E-01	2.7E-01	2.9E-01	3.0E-01	2.1E+05	4.1E-01	4.8E-01	7.9E-02	7.9E-02	1.2E+02	3.8E-02	2.2E+02	1.2E+00	6.4E-01	6.8E+00	9.6E-02	1.4E-02	1.4E-02	1.6E-02	1.7E-02	4.3E-03	4.7E-03	5.4E-03	5.6E-03	1.9E-02	9.7E-04	1.1E-03	3.2E-03	9.6E-04	3.5E-07	5.4E-03	6.0E-05	7.3E-05	7.7E-04	2.3E-04	8.2E-02	6E-02	9E-03	1E-02	3E-03	1E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	2E-02	7E-03
residential	res		487529.47	3617308.63	1.9E-01	1.8E-01	2.1E-01	2.3E-01	2.5E-01	2.7E-01	2.8E-01	3.0E-01	2.1E+05	4.1E-01	4.8E-01	7.9E-02	7.9E-02	8.3E+01	3.8E-02	2.4E+02	1.1E+00	6.3E-01	6.3E+00	9.6E-02	1.4E-02	1.4E-02	1.6E-02	1.7E-02	4.3E-03	4.6E-03	5.3E-03	5.5E-03	1.9E-02	9.7E-04	1.1E-03	3.2E-03	6.5E-04	3.5E-07	5.9E-03	5.8E-05	7.2E-05	7.2E-04	2.3E-04	8.1E-02	6E-02	9E-03	1E-02	3E-03	1E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	2E-02	7E-03
residential	res		487554.47	3617308.63	1.9E-01	1.8E-01	2.1E-01	2.2E-01	2.4E-01	2.7E-01	2.8E-01	2.9E-01	2.1E+05	4.1E-01	4.7E-01	7.8E-02	7.8E-02	6.1E+01	3.9E-02	2.5E+02	1.1E+00	6.3E-01	5.8E+00	9.5E-02	1.4E-02	1.4E-02	1.6E-02	1.7E-02	4.2E-03	4.6E-03	5.2E-03	5.5E-03	1.9E-02	9.6E-04	1.1E-03	3.1E-03	4.8E-04	3.5E-07	6.0E-03	5.7E-05	7.2E-05	6.6E-04	2.3E-04	8.0E-02	6E-02	9E-03	1E-02	3E-03	1E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	2E-02	7E-03
residential	res		487579.47	3617308.63	1.8E-01	1.8E-01	2.1E-01	2.2E-01	2.4E-01	2.6E-01	2.8E-01	2.9E-01	2.1E+05	4.0E-01	4.7E-01	7.8E-02	7.8E-02	4.7E+01	3.9E-02	2.4E+02	1.1E+00	6.2E-01	5.4E+00	9.4E-02	1.4E-02	1.4E-02	1.6E-02	1.7E-02	4.2E-03	4.5E-03	5.1E-03	5.4E-03	1.8E-02	9.4E-04	1.1E-03	3.1E-03	3.7E-04	3.6E-07	5.9E-03	5.6E-05	7.1E-05	6.1E-04	2.2E-04	7.9E-02	6E-02	9E-03	1E-02	3E-03	1E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	2E-02	7E-03
residential	res		487604.47	3617308.63	1.8E-01	1.8E-01	2.0E-01	2.2E-01	2.4E-01	2.6E-01	2.7E-01	2.9E-01	2.0E+05	4.0E-01	4.6E-01	7.7E-02	7.7E-02	3.8E+01	4.0E-02	2.3E+02	1.1E+00	6.2E-01	4.9E+00	9.4E-02	1.4E-02	1.4E-02	1.5E-02	1.6E-02	4.1E-03	4.5E-03	5.1E-03	5.3E-03	1.8E-02	9.4E-04	1.1E-03	3.1E-03	2.9E-04	3.6E-07	5.6E-03	5.5E-05	7.0E-05	5.6E-04	2.2E-04	7.8E-02	6E-02	9E-03	1E-02	3E-03	1E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	2E-02	7E-03
residential	res		487629.47	3617308.63	1.8E-01	1.8E-01	2.0E-01	2.2E-01	2.4E-01	2.5E-01	2.7E-01	2.8E-01	2.0E+05	3.9E-01	4.6E-01	7.7E-02	7.7E-02	3.1E+01	4.0E-02	2.0E+02	1.0E+00	6.1E-01	4.5E+00	9.3E-02	1.4E-02	1.3E-02	1.5E-02	1.6E-02	4.1E-03	4.4E-03	5.0E-03	5.3E-03	1.8E-02	9.3E-04	1.1E-03	3.1E-03	2.4E-04	3.7E-07	4.8E-03	5.4E-05	7.0E-05	5.2E-04	2.2E-04	7.8E-02	6E-02	8E-03	1E-02	3E-03	1E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	2E-02	7E-03
residential	res		487654.47	3617308.63	1.8E-01	1.8E-01	2.0E-01	2.1E-01	2.3E-01	2.5E-01	2.7E-01	2.8E-01	2.0E+05	3.9E-01	4.5E-01	7.6E-02	7.6E-02	2.5E+01	4.1E-02	1.5E+02	1.0E+00	6.0E-01	4.1E+00	9.3E-02	1.4E-02	1.3E-02	1.5E-02	1.6E-02	4.0E-03	4.3E-03	4.9E-03	5.2E-03	1.8E-02	9.2E-04	1.1E-03	3.1E-03	2.0E-04	3.7E-07	3.5E-03	5.3E-05	6.9E-05	4.7E-04	2.2E-04	7.7E-02	6E-02	8E-03	1E-02	3E-03	1E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	2E-02	7E-03
residential	res		487679.47	3617308.63	1.8E-01	1.8E-01	2.0E-01	2.1E-01	2.3E-01	2.5E-01	2.6E-01	2.8E-01	1.9E+05	3.9E-01	4.5E-01	7.6E-02	7.6E-02	2.1E+01	4.1E-02	1.0E+02	9.9E-01	6.0E-01	3.8E+00	9.2E-02	1.4E-02	1.3E-02	1.5E-02	1.6E-02	4.0E-03	4.3E-03	4.9E-03	5.1E-03	1.8E-02	9.1E-04	1.0E-03	3.0E-03	1.7E-04	3.8E-07	2.4E-03	5.1E-05	6.9E-05	4.3E-04	2.2E-04	7.6E-02	6E-02	8E-03	1E-02	3E-03	1E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	2E-02	7E-03
residential	res		487704.47	3617308.63	1.8E-01	1.7E-01	2.0E-01	2.1E-01	2.3E-01	2.5E-01	2.6E-01	2.7E-01	1.9E+05	3.8E-01	4.4E-01	7.5E-02	7.5E-02	1.8E+01	4.2E-02	7.2E+01	9.7E-01	5.9E-01	3.5E+00	9.2E-02	1.4E-02	1.3E-02	1.5E-02	1.6E-02	3.9E-03	4.2E-03	4.8E-03	5.1E-03	1.7E-02	9.0E-04	1.0E-03	3.0E-03	1.4E-04	3.8E-07	1.7E-03	5.0E-05	6.8E-05	4.0E-04	2.2E-04	7.5E-02	6E-02	8E-03	1E-02	3E-03	1E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	2E-02	7E-03
residential	res		487729.47	3617308.63	1.8E-01	1.7E-01	1.9E-01	2.1E-01	2.3E-01	2.4E-01	2.6E-01	2.7E-01	1.9E+05	3.8E-01	4.3E-01	7.5E-02	7.5E-02	1.6E+01	4.2E-02	5.4E+01	9.5E-01	5.9E-01	3.2E+00	9.1E-02	1.3E-02	1.3E-02	1.5E-02	1.6E-02	3.9E-03	4.2E-03	4.8E-03	5.0E-03	1.7E-02	8.9E-04	1.0E-03	3.0E-03	1.3E-04	3.9E-07	1.3E-03	4.9E-05	6.7E-05	3.7E-04	2.2E-04	7.5E-02	6E-02	8E-03	1E-02	3E-03	1E-03	8E-04	9E-04	2E-04	4E-05	1E-04	5E-05	2E-02	7E-03
residential	res		487754.47	3617308.63	1.8E-01	1.7E-01	1.9E-01	2.1E-01	2.2E-01	2.4E-01	2.5E-01	2.7E-01	1.9E+05	3.7E-01	4.3E-01	7.5E-02	7.5E-02	1.4E+01	4.3E-02	4.2E+01	9.3E-01	5.8E-01	3.0E+00	9.1E-02	1.3E-02	1.3E-02	1.5E-02	1.6E-02	3.8E-03	4.1E-03	4.7E-03	5.0E-03	1.7E-02	8.8E-04	1.0E-03	3.0E-03	1.1E-04	3.9E-07	1.0E-03	4.8E-05	6.7E-05	3.4E-04	2.2E-04	7.4E-02	6E-02	8E-03	1E-02	3E-03	1E-03	8E-04	9E-04	2E-04	4E-05	1E-04	5E-05	2E-02	6E-03
residential	res		487779.47	3617308.63	1.8E-01	1.7E-01	1.9E-01	2.0E-01	2.2E-01	2.4E-01	2.5E-01	2.6E-01	1.8E+05	3.7E-01	4.2E-01	7.4E-02	7.4E-02	1.2E+01	4.3E-02	3.3E+01	9.2E-01	5.8E-01	2.8E+00	9.0E-02	1.3E-02	1.3E-02	1.4E-02	1.5E-02	3.8E-03	4.1E-03	4.7E-03	4.9E-03	1.6E-02	8.6E-04	9.9E-04	3.0E-03	9.8E-05	4.0E-07	8.1E-04	4.7E-05	6.6E-05	3.2E-04	2.1E-04	7.4E-02	6E-02	8E-03	1E-02	3E-03	1E-03	8E-04	8E-04	2E-04	4E-05	1E-04	5E-05	2E-02	6E-03
residential	res		487804.47	3617308.63	1.8E-01	1.7E-01	1.9E-01	2.0E-01	2.2E-01	2.3E-01	2.5E-01	2.6E-01	1.8E+05	3.6E-01	4.1E-01	7.4E-02	7.4E-02	1.1E+01	4.4E-02	2.7E+01	9.0E-01	5.7E-01	2.6E+00	8.9E-02	1.3E-02	1.3E-02	1.4E-02	1.5E-02	3.8E-03	4.0E-03	4.6E-03	4.8E-03	1.6E-02	8.5E-04	9.7E-04	3.0E-03	8.7E-05	4.0E-07	6.7E-04	4.6E-05	6.5E-05	3.0E-04	2.1E-04	7.3E-02	6E-02	8E-03	9E-03	3E-03	1E-03	7E-04	8E-04	2E-04	4E-05	1E-04	5E-05	2E-02	6E-03
residential	res		487829.47	3617308.63	1.7E-01	1.7E-01	1.9E-01	2.0E-01	2.2E-01	2.3E-01	2.4E-01	2.6E-01	1.8E+05	3.6E-01	4.1E-01	7.3E-02	7.3E-02	1.0E+01	4.4E-02	2.3E+01	8.8E-01	5.6E-01	2.4E+00	8.9E-02	1.3E-02	1.3E-02	1.4E-02	1.5E-02	3.7E-03	4.0E-03	4.5E-03	4.8E-03	1.6E-02	8.4E-04	9.6E-04	2.9E-03	7.9E-05	4.1E-07	5.6E-04	4.6E-05	6.5E-05	2.8E-04	2.1E-04	7.2E-02	6E-02	8E-03	9E-03	3E-03	1E-03	7E-04	8E-04	2E-04	4E-05	1E-04	5E-05	2E-02	6E-03
residential	res		487854.47	3617308.63	1.7E-01	1.7E-01	1.9E-01	2.0E-01	2.1E-01	2.3E-01	2.4E-01	2.5E-01	1.8E+05	3.6E-01	4.1E-01	7.3E-02	7.3E-02	9.1E+00	4.5E-02	2.0E+01	8.6E-01	5.6E-01	2.3E+00	8.8E-02	1.3E-02	1.3E-02	1.4E-02	1.5E-02	3.7E-03	3.9E-03	4.5E-03	4.7E-03	1.6E-02	8.4E-04	9.5E-04	2.9E-03	7.1E-05	4.1E-07	4.8E-04	4.5E-05	6.4E-05	2.6E-04	2.1E-04	7.1E-02	5E-02	8E-03	9E-03	3E-03	1E-03	7E-04	8E-04	2E-04	4E-05	1E-04	5E-05	2E-02	6E-03
residential	res		487479.47	3617327.93	1.9E-01	1.9E-01	2.1E-01	2.3E-01	2.5E-01	2.8E-01	2.9E-01	3.1E-01	2.2E+05	4.3E-01	5.0E-01	8.0E-02	8.0E-02	2.2E+02	3.7E-02	3.0E+02	1.2E+00	6.6E-01	6.8E+00	9.7E-02	1.5E-02	1.4E-02	1.6E-02	1.8E-02	4.4E-03	4.8E-03	5.4E-03	5.7E-03	2.0E-02	1.0E-03	1.2E-03	3.2E-03	1.8E-03	3.4E-07	7.3E-03	6.2E-05	7.6E-05	7.7E-04	2.3E-04	8.3E-02	6E-02	9E-03	1E-02	3E-03	1E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	2E-02	8E-03
residential	res		487504.47	3617327.93	1.9E-01	1.9E-01	2.1E-01	2.3E-01	2.5E-01	2.7E-01	2.9E-01	3.0E-01	2.2E+05	4.2E-01	4.9E-01	8.0E-02	8.0E-02	1.2E+02	3.8E-02	3.7E+02	1.2E+00	6.6E-01	6.4E+00	9.7E-02	1.4E-02	1.4E-02	1.6E-02	1.7E-02	4.3E-03	4.7E-03	5.4E-03	5.6E-03	1.9E-02	9.9E-04	1.2E-03	3.2E-03	9.6E-04	3.4E-07	9.0E-03	6.1E-05	7.5E-05	7.3E-04	2.3E-04	8.2E-02	6E-02	9E-03	1E-02	3E-03	1E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	2E-02	7E-03
residential	res		487529.47	3617327.93	1.9E-01	1.9E-01	2.1E-01	2.3E-01	2.5E-01	2.7E-01	2.8E-01	3.0E-01	2.1E+05	4.2E-01	4.9E-01	7.9E-02	7.9E-02	8.4E+01	3.8E-02	4.0E+02	1.1E+00	6.5E-01	5.9E+00	9.6E-02	1.4E-02	1.4E-02	1.6E-02	1.7E-02	4.3E-03	4.6E-03	5.3E-03	5.5E-03	1.9E-02	9.8E-04	1.1E-03	3.2E-03	6.6E-04	3.5E-07	9.7E-03	5.9E-05	7.4E-05	6.8E-04	2.3E-04	8.1E-02	6E-02	9E-03	1E-02	3E-03	1E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	2E-02	7E-03
residential	res		487554.47	3617327.93	1.9E-01	1.8E-01	2.1E-01	2.2E-01	2.4E-01	2.6E-01	2.8E-01	2.9E-01	2.1E+05	4.1E-01	4.8E-01	7.9E-02	7.9E-02	6.2E+01	3.9E-02	4.1E+02	1.1E+00	6.4E-01	5.5E+00	9.6E-02	1.4E-02	1.4E-02	1.6E-02	1.7E-02	4.2E-03	4.6E-03	5.2E-03	5.5E-03	1.9E-02	9.7E-04	1.1E-03	3.2E-03	4.9E-04	3.5E-07	1.0E-02	5.8E-05	7.4E-05	6.4E-04	2.3E-04	8.0E-02	6E-02	9E-03	1E-02	3E-03	1E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	2E-02	7E-03
residential	res		487579.47	3617327.93	1.9E-01	1.8E-01	2.1E-01	2.2E-01	2.4E-01	2.6E-01	2.8E-01	2.9E-01	2.1E+05	4.1E-01	4.8E-01	7.8E-02	7.8E-02	4.8E+01	3.9E-02	4.1E+02	1.1E+00	6.4E-01	5.2E+00	9.5E-02	1.4E-02	1.4E-02	1.6E-02	1.7E-02	4.2E-03	4.5E-03	5.1E-03	5.4E-03	1.9E-02	9.6E-04	1.1E-03	3.1E-03	3.7E-04	3.6E-07	1.0E-02	5.7E-05	7.3E-05	5.9E-04	2.3E-04	7.9E-02	6E-02	9E-03	1E-02	3E-03	1E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	2E-02	7E-03
residential	res		487604.47	3617327.93	1.9E-01	1.8E-01	2.0E-01	2.2E-01	2.4E-01	2.6E-01	2.7E-01	2.9E-01	2.0E+05	4.1E-01	4.7E-01	7.8E-02	7.8E-02	3.8E+01	3.9E-02	4.0E+02	1.1E+00	6.3E-01	4.8E+00	9.5E-02	1.4E-02	1.4E-02	1.5E-02	1.6E-02	4.1E-03	4.4E-03	5.1E-03	5.3E-03	1.8E-02	9.5E-04	1.1E-03	3.1E-03	3.0E-04	3.6E-07	9.8E-03	5.6E-05	7.2E-05	5.5E-04	2.2E-04	7.9E-02	6E-02	8E-03	1E-02	3E-03	1E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	2E-02	7E-03
residential	res		487629.47	3617327.93	1.8E-01	1.8E-01	2.0E-01	2.2E-01	2.4E-01	2.5E-01	2.7E-01	2.8E-01	2.0E+05	4.0E-01	4.6E-01	7.7E-02	7.7E-02	3.1E+01	4.0E-02	3.6E+02	1.1E+00	6.3E-01	4.4E+00	9.4E-02	1.4E-02	1.4E-02	1.5E-02	1.6E-02	4.1E-03	4.4E-03	5.0E-03	5.3E-03	1.8E-02	9.4E-04	1.1E-03	3.1E-03	2.4E-04	3.7E-07	8.8E-03	5.4E-05	7.2E-05	5.0E-04	2.2E-04	7.8E-02	6E-02	8E-03	1E-02	3E-03	1E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	2E-02	7E-03
residential	res		487654.47	3617327.93	1.8E-01	1.8E-01	2.0E-01	2.1E-01	2.3E-01	2.5E-01	2.7E-01	2.8E-01	2.0E+05	4.0E-01	4.6E-01	7.7E-02	7.7E-02	2.6E+01	4.0E-02	2.6E+02	1.0E+00	6.2E-01	4.1E+00	9.3E-02	1.4E-02	1.3E-02	1.5E-02	1.6E-02	4.0E-03	4.3E-03	4.9E-03	5.2E-03	1.8E-02	9.3E-04	1.1E-03	3.1E-03	2.0E-04	3.7E-07	6.4E-03	5.3E-05	7.1E-05	4.6E-04	2.2E-04	7.7E-02	6E-02	8E-03	1E-02	3E-03	1E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	2E-02	7E-03
residential	res		487679.47	3617327.93	1.8E-01	1.8E-01	2.0E-01	2.1E-01	2.3E-01	2.5E-01	2.6E-01	2.8E-01	2.0E+05	3.9E-01	4.5E-01	7.6E-02	7.6E-02	2.2E+01	4.1E-02	1.5E+02	1.0E+00	6.1E-01	3.7E+00	9.3E-02	1.4E-02	1.3E-02	1.5E-02	1.6E-02	4.0E-03	4.3E-03	4.9E-03	5.1E-03	1.8E-02	9.2E-04	1.1E-03	3.1E-03	1.7E-04	3.8E-07	3.6E-03	5.2E-05	7.0E-05	4.3E-04	2.2E-04	7.6E-02	6E-02	8E-03	1E-02	3E-03	1E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	2E-02	7E-03
residential	res		487704.47	3617327.93	1.8E-01	1.8E-01	2.0E-01	2.1E-01	2.3E-01	2.4E-01	2.6E-01	2.7E-01	1.9E+05	3.9E-01	4.5E-01	7.6E-02	7.6E-02	1.9E+01	4.1E-02	9.2E+01	9.8E-01	6.1E-01	3.5E+00	9.2E-02	1.4E-02	1.3E-02	1.5E-02	1.6E-02	3.9E-03	4.2E-03	4.8E-03	5.1E-03	1.7E-02	9.1E-04	1.0E-03	3.0E-03	1.5E-04	3.8E-07	2.2E-03	5.1E-05	7.0E-05	3.9E-04	2.2E-04	7.6E-02	6E-02	8E-03	1E-02	3E-03	1E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	2E-02	7E-03
residential	res		487729.47	3617327.93	1.8E-01	1.7E-01	1.9E-01	2.1E-01	2.3E-01	2.4E-01	2.6E-01	2.7E-01	1.9E+05	3.8E-01	4.4E-01	7.5E-02	7.5E-02	1.6E+01	4.2E-02	6.3E+01	9.6E-01	6.0E-01	3.2E+00	9.2E-02	1.4E-02	1.3E-02	1.5E-02	1.6E-02	3.9E-03	4.2E-03	4.8E-03	5.0E-03	1.7E-02	9.0E-04	1.0E-03	3.0E-03	1.3E-04	3.8E-07	1.5E-03	5.0E-05	6.9E-05	3.7E-04	2.2E-04	7.5E-02	6E-02	8E-03	1E-02	3E-03	1E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	2E-02	7E-03
residential	res		487754.47	3617327.93	1.8E-01	1.7E-01	1.9E-01	2.1E-01	2.2E-01	2.4E-01	2.5E-01	2.7E-01	1.9E+05	3.8E-01	4.3E-01	7.5E-02	7.5E-02	1.4E+01	4.3E-02	4.7E+01	9.4E-01	6.0E-01	3.0E+00	9.1E-02	1.3E-02	1.3E-02	1.5E-02	1.6E-02	3.8E-03	4.1E-03	4.7E-03	5.0E-03	1.7E-02	8.9E-04	1.0E-03	3.0E-03	1.1E-04	3.9E-07	1.1E-03	4.9E-05	6.8E-05	3.4E-04	2.2E-04	7.4E-02	6E-02	8E-03	1E-02	3E-03	1E-03	8E-04	9E-04	2E-04	4E-05	1E-04	5E-05	2E-02	7E-03
residential	res		487779.47	3617327.93	1.8E-01	1.7E-01	1.9E-01	2.0E-01	2.2E-01	2.4E-01	2.5E-01	2.6E-01	1.9E+05	3.7E-01	4.3E-01	7.4E-02	7.4E-02	1.3E+01	4.3E-02	3.6E+01	9.3E-01	5.9E-01	2.8E+00	9.0E-02	1.3E-02	1.3E-02	1.4E-02	1.5E-02	3.8E-03	4.1E-03	4.6E-03	4.9E-03	1.7E-02	8.8E-04	1.0E-03	3.0E-03	9.9E-05	3.9E-07	8.8E-04	4.8E-05	6.7E-05	3.2E-04	2.1E-04	7.4E-02	6E-02	8E-03	1E-02	3E-03	1E-03	8E-04	8E-04	2E-04	4E-05	1E-04	5E-05	2E-02	6E-03
residential	res		487804.47	3617327.93	1.8E-01	1.7E-01	1.9E-01	2.0E-01	2.2E-01	2.3E-01	2.5E-01	2.6E-01	1.8E+05	3.7E-01	4.2E-01	7.4E-02	7.4E-02	1.1E+01	4.4E-02	2.9E+01	9.1E-01	5.8E-01	2.6E+00	9.0E-02	1.3E-02	1.3E-02	1.4E-02	1.5E-02	3.8E-03	4.0E-03	4.6E-03	4.8E-03	1.6E-02	8.7E-04	9.9E-04	3.0E-03	8.9E-05	4.0E-07	7.1E-04	4.7E-05	6.7E-05	3.0E-04	2.1E-04	7.3E-02	6E-02	8E-03	9E-03	3E-03	1E-03	8E-04	8E-04	2E-04	4E-05	1E-04	5E-05	2E-02	6E-03
residential	res		487829.47	3617327.93	1.8E-01	1.7E-01	1.9E-01	2.0E-01	2.2E-01	2.3E-01	2.4E-01	2.6E-01	1.8E+05	3.7E-01	4.1E-01	7.4E-02	7.4E-02	1.0E+01	4.4E-02	2.4E+01	8.9E-01	5.8E-01	2.4E+00	8.9E-02	1.3E-02	1.3E-02	1.4E-02	1.5E-02	3.7E-03	4.0E-03	4.5E-03	4.8E-03	1.6E-02	8.6E-04	9.7E-04	3.0E-03	8.0E-05	4.1E-07	5.8E-04	4.6E-05	6.6E-05	2.8E-04	2.1E-04	7.2E-02	6E-02	8E-03	9E-03	3E-03	1E-03	7E-04	8E-04	2E-04	4E-05	1E-04	5E-05	2E-02	6E-03
residential	res		487854.47	3617327.93	1.7E-01	1.7E-01	1.9E-01	2.0E-01	2.1E-01	2.3E-01	2.4E-01	2.5E-01	1.8E+05	3.6E-01	4.1E-01	7.3E-02	7.3E-02	9.2E+00	4.5E-02	2.0E+01	8.7E-01	5.7E-01	2.3E+00	8.9E-02	1.3E-02	1.3E-02	1.4E-02	1.5E-02	3.7E-03	3.9E-03	4.5E-03	4.7E-03	1.6E-02	8.5E-04	9.6E-04	2.9E-03	7.2E-05	4.1E-07	4.9E-04	4.5E-05	6.5E-05	2.6E-04	2.1E-04	7.2E-02	5E-02	8E-03	9E-03	3E-03	1E-03	7E-04	8E-04	2E-04	4E-05	1E-04	5E-05	2E-02	6E-03
residential	res		487479.47	3617347.23	1.9E-01	1.9E-01	2.2E-01	2.3E-01	2.5E-01	2.8E-01	2.9E-01	3.1E-01	2.2E+05	4.3E-01	5.1E-01	8.1E-02	8.1E-02	2.2E+02	3.7E-02	6.6E+02	1.2E+00	6.8E-01	6.3E+00	9.8E-02	1.5E-02	1.4E-02	1.6E-02	1.8E-02	4.4E-03	4.7E-03	5.4E-03	5.7E-03	2.0E-02	1.0E-03	1.2E-03	3.2E-03	1.7E-03	3.4E-07	1.6E-02	6.3E-05	7.8E-05	7.3E-04	2.3E-04	8.3E-02	6E-02	9E-03	1E-02	3E-03	2E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	2E-02	8E-03
residential	res		487504.47	3617347.23	1.9E-01	1.9E-01	2.1E-01	2.3E-01	2.5E-01	2.7E-01	2.9E-01	3.0E-01	2.2E+05	4.3E-01	5.0E-01	8.0E-02	8.0E-02	1.2E+02	3.7E-02	8.4E+02	1.2E+00	6.7E-01	6.0E+00	9.7E-02	1.5E-02	1.4E-02	1.6E-02	1.7E-02	4.3E-03	4.7E-03	5.3E-03	5.6E-03	2.0E-02	1.0E-03	1.2E-03	3.2E-03	9.6E-04	3.4E-07	2.0E-02	6.2E-05	7.7E-05	6.9E-04	2.3E-04	8.2E-02	6E-02	9E-03	1E-02	3E-03	1E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	2E-02	8E-03
residential	res		487529.47	3617347.23	1.9E-01	1.9E-01	2.1E-01	2.3E-01	2.5E-01	2.7E-01	2.8E-01	3.0E-01	2.2E+05	4.3E-01	5.0E-01	7.9E-02	7.9E-02	8.4E+01	3.8E-02	8.9E+02	1.2E+00	6.7E-01	5.7E+00	9.7E-02	1.5E-02	1.4E-02	1.6E-02	1.7E-02	4.3E-03	4.6E-03	5.3E-03	5.6E-03	1.9E-02	1.0E-03	1.2E-03	3.2E-03	6.6E-04	3.5E-07	2.2E-02	6.0E-05	7.6E-05	6.5E-04	2.3E-04	8.2E-02	6E-02	9E-03	1E-02	3E-03	1E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	2E-02	7E-03
residential	res		487554.47	3617347.23	1.9E-01	1.9E-01	2.1E-01	2.2E-01	2.5E-01	2.6E-01	2.8E-01	3.0E-01	2.1E+05	4.2E-01	4.9E-01	7.9E-02	7.9E-02	6.2E+01	3.8E-02	9.1E+02	1.1E+00	6.6E-01	5.3E+00	9.6E-02	1.4E-02	1.4E-02	1.6E-02	1.7E-02	4.2E-03	4.6E-03	5.2E-03	5.5E-03	1.9E-02	9.9E-04	1.2E-03	3.2E-03	4.9E-04	3.5E-07	2.2E-02	5.9E-05	7.6E-05	6.1E-04	2.3E-04	8.1E-02	6E-02	9E-03	1E-02	3E-03	1E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	2E-02	7E-03
residential	res		487579.47	3617347.23	1.9E-01	1.8E-01	2.1E-01	2.2E-01	2.4E-01	2.6E-01	2.8E-01	2.9E-01	2.1E+05	4.2E-01	4.8E-01	7.8E-02	7.8E-02	4.8E+01	3.9E-02	9.2E+02	1.1E+00	6.5E-01	5.0E+00	9.6E-02	1.4E-02	1.4E-02	1.6E-02	1.7E-02	4.2E-03	4.5E-03	5.1E-03	5.4E-03	1.9E-02	9.8E-04	1.1E-03	3.1E-03	3.8E-04	3.6E-07	2.2E-02	5.8E-05	7.5E-05	5.7E-04	2.3E-04	8.0E-02	6E-02	9E-03	1E-02	3E-03	1E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	2E-02	7E-03
residential	res		487604.47	3617347.23	1.9E-01	1.8E-01	2.1E-01	2.2E-01	2.4E-01	2.6E-01	2.7E-01	2.9E-01	2.1E+05	4.1E-01	4.8E-01	7.8E-02	7.8E-02	3.8E+01	3.9E-02	9.1E+02	1.1E+00	6.5E-01	4.6E+00	9.5E-02	1.4E-02	1.4E-02	1.6E-02	1.7E-02	4.1E-03	4.4E-03	5.1E-03	5.3E-03	1.8E-02	9.7E-04	1.1E-03	3.1E-03	3.0E-04	3.6E-07	2.2E-02	5.6E-05	7.4E-05	5.3E-04	2.3E-04	7.9E-02	6E-02	9E-03	1E-02	3E-03	1E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	2E-02	7E-03
residential	res		487629.47	3617347.23	1.9E-01	1.8E-01	2.0E-01	2.2E-01	2.4E-01	2.5E-01	2.7E-01	2.8E-01	2.0E+05	4.1E-01	4.7E-01	7.7E-02	7.7E-02	3.2E+01	4.0E-02	8.8E+02	1.1E+00	6.4E-01	4.3E+00	9.5E-02	1.4E-02	1.4E-02	1.5E-02	1.6E-02	4.1E-03	4.4E-03	5.0E-03	5.3E-03	1.8E-02	9.6E-04	1.1E-03	3.1E-03	2.5E-04	3.6E-07	2.1E-02	5.5E-05	7.3E-05	4.9E-04	2.2E-04	7.8E-02	6E-02	8E-03	1E-02	3E-03	1E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	2E-02	7E-03
residential	res		487654.47	3617347.23	1.8E-01	1.8E-01	2.0E-01	2.1E-01	2.3E-01	2.5E-01	2.7E-01	2.8E-01	2.0E+05	4.0E-01	4.6E-01	7.7E-02	7.7E-02	2.6E+01	4.0E-02	7.1E+02	1.0E+00	6.3E-01	4.0E+00	9.4E-02	1.4E-02	1.4E-02	1.5E-02	1.6E-02	4.0E-03	4.3E-03	4.9E-03	5.2E-03	1.8E-02	9.5E-04	1.1E-03	3.1E-03	2.1E-04	3.7E-07	1.7E-02	5.4E-05	7.3E-05	4.6E-04	2.2E-04	7.7E-02	6E-02	8E-03	1E-02	3E-03	1E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	2E-02	7E-03
residential	res		487679.47	3617347.23	1.8E-01	1.8E-01	2.0E-01	2.1E-01	2.3E-01	2.5E-01	2.6E-01	2.8E-01	2.0E+05	4.0E-01	4.6E-01	7.6E-02	7.6E-02	2.2E+01	4.1E-02	2.3E+02	1.0E+00	6.3E-01	3.7E+00	9.3E-02	1.4E-02	1.3E-02	1.5E-02	1.6E-02	4.0E-03	4.3E-03	4.9E-03	5.1E-03	1.8E-02	9.3E-04	1.1E-03	3.1E-03	1.7E-04	3.7E-07	5.5E-03	5.3E-05	7.2E-05	4.2E-04	2.2E-04	7.7E-02	6E-02	8E-03	1E-02	3E-03	1E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	2E-02	7E-03
residential	res		487704.47	3617347.23	1.8E-01	1.8E-01	2.0E-01	2.1E-01	2.3E-01	2.4E-01	2.6E-01	2.7E-01	2.0E+05	3.9E-01	4.5E-01	7.6E-02	7.6E-02	1.9E+01	4.1E-02	1.1E+02	1.0E+00	6.2E-01	3.4E+00	9.3E-02	1.4E-02	1.3E-02	1.5E-02	1.6E-02	3.9E-03	4.2E-03	4.8E-03	5.1E-03	1.7E-02	9.2E-04	1.1E-03	3.1E-03	1.5E-04	3.8E-07	2.7E-03	5.2E-05	7.1E-05	3.9E-04	2.2E-04	7.6E-02	6E-02	8E-03	1E-02	3E-03	1E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	2E-02	7E-03
residential	res		487729.47	3617347.23	1.8E-01	1.7E-01	2.0E-01	2.1E-01	2.3E-01	2.4E-01	2.6E-01	2.7E-01	1.9E+05	3.9E-01	4.5E-01	7.6E-02	7.6E-02	1.7E+01	4.2E-02	7.0E+01	9.7E-01	6.1E-01	3.2E+00	9.2E-02	1.4E-02	1.3E-02	1.5E-02	1.6E-02	3.9E-03	4.2E-03	4.7E-03	5.0E-03	1.7E-02	9.1E-04	1.0E-03	3.0E-03	1.3E-04	3.8E-07	1.7E-03	5.0E-05	7.0E-05	3.6E-04	2.2E-04	7.5E-02	6E-02	8E-03	1E-02	3E-03	1E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	2E-02	7E-03
residential	res		487754.47	3617347.23	1.8E-01	1.7E-01	1.9E-01	2.1E-01	2.2E-01	2.4E-01	2.5E-01	2.7E-01	1.9E+05	3.8E-01	4.4E-01	7.5E-02	7.5E-02	1.5E+01	4.2E-02	4.9E+01	9.5E-01	6.1E-01	2.9E+00	9.2E-02	1.4E-02	1.3E-02	1.5E-02	1.6E-02	3.8E-03	4.1E-03	4.7E-03	5.0E-03	1.7E-02	9.0E-04	1.0E-03	3.0E-03	1.1E-04	3.9E-07	1.2E-03	4.9E-05	7.0E-05	3.4E-04	2.2E-04	7.5E-02	6E-02	8E-03	1E-02	3E-03	1E-03	8E-04	9E-04	2E-04	5E-05	1E-04	5E-05	2E-02	7E-03
residential	res		487779.47	3617347.23	1.8E-01	1.7E-01	1.9E-01	2.0E-01	2.2E-01	2.4E-01	2.5E-01	2.6E-01	1.9E+05	3.8E-01	4.3E-01	7.5E-02	7.5E-02	1.3E+01	4.3E-02	3.8E+01	9.3E-01	6.0E-01	2.7E+00	9.1E-02	1.4E-02	1.3E-02	1.5E-02	1.5E-02	3.8E-03	4.1E-03	4.6E-03	4.9E-03	1.7E-02	8.9E-04	1.0E-03	3.0E-03	1.0E-04	3.9E-07	9.1E-04	4.8E-05	6.9E-05	3.1E-04	2.2E-04	7.4E-02	6E-02	8E-03	1E-02	3E-03	1E-03	8E-04	9E-04	2E-04	4E-05	1E-04	5E-05	2E-02	6E-03
residential	res		487804.47	3617347.23	1.8E-01	1.7E-01	1.9E-01	2.0E-01	2.2E-01	2.3E-01	2.5E-01	2.6E-01	1.9E+05	3.8E-01	4.3E-01	7.4E-02	7.4E-02	1.1E+01	4.3E-02	3.0E+01	9.2E-01	5.9E-01	2.6E+00	9.0E-02	1.3E-02	1.3E-02	1.4E-02	1.5E-02	3.8E-03	4.0E-03	4.6E-03	4.8E-03	1.7E-02	8.8E-04	1.0E-03	3.0E-03	9.0E-05	4.0E-07	7.3E-04	4.7E-05	6.8E-05	2.9E-04	2.1E-04	7.3E-02	6E-02	8E-03	9E-03	3E-03	1E-03	8E-04	8E-04	2E-04	4E-05	1E-04	5E-05	2E-02	6E-03
residential	res		487829.47	3617347.23	1.8E-01	1.7E-01	1.9E-01	2.0E-01	2.2E-01	2.3E-01	2.4E-01	2.6E-01	1.8E+05	3.7E-01	4.2E-01	7.4E-02	7.4E-02	1.0E+01	4.4E-02	2.5E+01	9.0E-01	5.9E-01	2.4E+00	9.0E-02	1.3E-02	1.3E-02	1.4E-02	1.5E-02	3.7E-03	4.0E-03	4.5E-03	4.8E-03	1.6E-02	8.7E-04	9.9E-04	3.0E-03	8.0E-05	4.0E-07	6.0E-04	4.6E-05	6.7E-05	2.8E-04	2.1E-04	7.3E-02	6E-02	8E-03	9E-03	3E-03	1E-03	7E-04	8E-04	2E-04	4E-05	1E-04	5E-05	2E-02	6E-03
residential	res		487854.47	3617347.23	1.8E-01	1.7E-01	1.9E-01	2.0E-01	2.1E-01	2.3E-01	2.4E-01	2.5E-01	1.8E+05	3.7E-01	4.2E-01	7.3E-02	7.3E-02	9.3E+00	4.5E-02	2.1E+01	8.8E-01	5.8E-01	2.3E+00	8.9E-02	1.3E-02	1.3E-02	1.4E-02	1.5E-02	3.7E-03	3.9E-03	4.5E-03	4.7E-03	1.6E-02	8.6E-04	9.8E-04	2.9E-03	7.3E-05	4.1E-07	5.0E-04	4.5E-05	6.7E-05	2.6E-04	2.1E-04	7.2E-02	6E-02	8E-03	9E-03	3E-03	1E-03	7E-04	8E-04	2E-04	4E-05	1E-04	5E-05	2E-02	6E-03
residential	res		487474.27	3617363.29	2.0E-01	1.9E-01	2.2E-01	2.3E-01	2.6E-01	2.8E-01	2.9E-01	3.1E-01	2.3E+05	4.4E-01	5.2E-01	8.1E-02	8.1E-02	2.6E+02	3.7E-02	3.1E+02	1.2E+00	7.0E-01	6.1E+00	9.9E-02	1.5E-02	1.5E-02	1.6E-02	1.8E-02	4.4E-03	4.7E-03	5.4E-03	5.7E-03	2.0E-02	1.0E-03	1.2E-03	3.2E-03	2.1E-03	3.4E-07	7.6E-03	6.4E-05	8.0E-05	7.0E-04	2.3E-04	8.4E-02	6E-02	9E-03	1E-02	3E-03	2E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	2E-02	8E-03
residential	res		487492.77	3617363.29	2.0E-01	1.9E-01	2.2E-01	2.3E-01	2.5E-01	2.7E-01	2.9E-01	3.1E-01	2.2E+05	4.4E-01	5.1E-01	8.1E-02	8.1E-02	1.5E+02	3.7E-02	5.7E+02	1.2E+00	6.9E-01	5.9E+00	9.8E-02	1.5E-02	1.4E-02	1.6E-02	1.8E-02	4.4E-03	4.7E-03	5.4E-03	5.7E-03	2.0E-02	1.0E-03	1.2E-03	3.2E-03	1.2E-03	3.4E-07	1.4E-02	6.3E-05	7.9E-05	6.8E-04	2.3E-04	8.3E-02	6E-02	9E-03	1E-02	3E-03	2E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	2E-02	8E-03
residential	res		487511.27	3617363.29	2.0E-01	1.9E-01	2.1E-01	2.3E-01	2.5E-01	2.7E-01	2.9E-01	3.0E-01	2.2E+05	4.3E-01	5.1E-01	8.0E-02	8.0E-02	1.1E+02	3.8E-02	6.5E+02	1.2E+00	6.9E-01	5.7E+00	9.7E-02	1.5E-02	1.4E-02	1.6E-02	1.7E-02	4.3E-03	4.7E-03	5.3E-03	5.6E-03	2.0E-02	1.0E-03	1.2E-03	3.2E-03	8.4E-04	3.4E-07	1.6E-02	6.2E-05	7.9E-05	6.5E-04	2.3E-04	8.3E-02	6E-02	9E-03	1E-02	3E-03	1E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	2E-02	8E-03
residential	res		487529.77	3617363.29	1.9E-01	1.9E-01	2.1E-01	2.3E-01	2.5E-01	2.7E-01	2.8E-01	3.0E-01	2.2E+05	4.3E-01	5.0E-01	8.0E-02	8.0E-02	8.3E+01	3.8E-02	6.8E+02	1.2E+00	6.8E-01	5.5E+00	9.7E-02	1.5E-02	1.4E-02	1.6E-02	1.7E-02	4.3E-03	4.6E-03	5.3E-03	5.6E-03	1.9E-02	1.0E-03	1.2E-03	3.2E-03	6.5E-04	3.5E-07	1.7E-02	6.1E-05	7.8E-05	6.2E-04	2.3E-04	8.2E-02	6E-02	9E-03	1E-02	3E-03	1E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	2E-02	8E-03
residential	res		487548.27	3617363.29	1.9E-01	1.9E-01	2.1E-01	2.3E-01	2.5E-01	2.6E-01	2.8E-01	3.0E-01	2.2E+05	4.3E-01	5.0E-01	7.9E-02	7.9E-02	6.7E+01	3.8E-02	7.0E+02	1.2E+00	6.8E-01	5.2E+00	9.7E-02	1.5E-02	1.4E-02	1.6E-02	1.7E-02	4.2E-03	4.6E-03	5.2E-03	5.5E-03	1.9E-02	1.0E-03	1.2E-03	3.2E-03	5.3E-04	3.5E-07	1.7E-02	6.0E-05	7.8E-05	5.9E-04	2.3E-04	8.1E-02	6E-02	9E-03	1E-02	3E-03	1E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	2E-02	7E-03
residential	res		487566.77	3617363.29	1.9E-01	1.9E-01	2.1E-01	2.2E-01	2.4E-01	2.6E-01	2.8E-01	2.9E-01	2.1E+05	4.3E-01	4.9E-01	7.9E-02	7.9E-02	5.5E+01	3.8E-02	7.0E+02	1.1E+00	6.7E-01	5.0E+00	9.7E-02	1.4E-02	1.4E-02	1.6E-02	1.7E-02	4.2E-03	4.5E-03	5.1E-03	5.5E-03	1.9E-02	1.0E-03	1.2E-03	3.2E-03	4.3E-04	3.5E-07	1.7E-02	5.9E-05	7.7E-05	5.7E-04	2.3E-04	8.0E-02	6E-02	9E-03	1E-02	3E-03	1E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	2E-02	7E-03
residential	res		487585.27	3617363.29	1.9E-01	1.8E-01	2.1E-01	2.2E-01	2.4E-01	2.6E-01	2.7E-01	2.9E-01	2.1E+05	4.2E-01	4.9E-01	7.9E-02	7.9E-02	4.6E+01	3.9E-02	7.1E+02	1.1E+00	6.7E-01	4.7E+00	9.6E-02	1.4E-02	1.4E-02	1.6E-02	1.7E-02	4.2E-03	4.5E-03	5.1E-03	5.4E-03	1.9E-02	9.9E-04	1.1E-03	3.2E-03	3.6E-04	3.6E-07	1.7E-02	5.8E-05	7.6E-05	5.4E-04	2.3E-04	8.0E-02	6E-02	9E-03	1E-02	3E-03	1E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	2E-02	7E-03
residential	res		487603.77	3617363.29	1.9E-01	1.8E-01	2.1E-01	2.2E-01	2.4E-01	2.6E-01	2.7E-01	2.9E-01	2.1E+05	4.2E-01	4.8E-01	7.8E-02	7.8E-02	3.9E+01	3.9E-02	7.0E+02	1.1E+00	6.6E-01	4.5E+00	9.6E-02	1.4E-02	1.4E-02	1.6E-02	1.7E-02	4.1E-03	4.4E-03	5.1E-03	5.4E-03	1.9E-02	9.8E-04	1.1E-03	3.1E-03	3.1E-04	3.6E-07	1.7E-02	5.7E-05	7.6E-05	5.2E-04	2.3E-04	7.9E-02	6E-02	9E-03	1E-02	3E-03	1E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	2E-02	7E-03
residential	res		487622.27	3617363.29	1.9E-01	1.8E-01	2.0E-01	2.2E-01	2.4E-01	2.5E-01	2.7E-01	2.9E-01	2.1E+05	4.1E-01	4.8E-01	7.8E-02	7.8E-02	3.4E+01	4.0E-02	6.9E+02	1.1E+00	6.6E-01	4.3E+00	9.5E-02	1.4E-02	1.4E-02	1.5E-02	1.7E-02	4.1E-03	4.4E-03	5.0E-03	5.3E-03	1.8E-02	9.7E-04	1.1E-03	3.1E-03	2.6E-04	3.6E-07	1.7E-02	5.6E-05	7.5E-05	4.9E-04	2.3E-04	7.9E-02	6E-02	8E-03	1E-02	3E-03	1E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	2E-02	7E-03
residential	res		487640.77	3617363.29	1.9E-01	1.8E-01	2.0E-01	2.2E-01	2.4E-01	2.5E-01	2.7E-01	2.8E-01	2.0E+05	4.1E-01	4.7E-01	7.7E-02	7.7E-02	2.9E+01	4.0E-02	6.6E+02	1.1E+00	6.5E-01	4.1E+00	9.5E-02	1.4E-02	1.4E-02	1.5E-02	1.6E-02	4.1E-03	4.3E-03	5.0E-03	5.2E-03	1.8E-02	9.6E-04	1.1E-03	3.1E-03	2.3E-04	3.7E-07	1.6E-02	5.5E-05	7.4E-05	4.7E-04	2.2E-04	7.8E-02	6E-02	8E-03	1E-02	3E-03	1E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	2E-02	7E-03
residential	res		487474.27	3617381.79	2.0E-01	1.9E-01	2.2E-01	2.3E-01	2.5E-01	2.7E-01	2.9E-01	3.1E-01	2.3E+05	4.5E-01	5.3E-01	8.1E-02	8.1E-02	2.6E+02	3.7E-02	1.0E+02	1.3E+00	7.2E-01	5.8E+00	9.9E-02	1.5E-02	1.5E-02	1.6E-02	1.8E-02	4.4E-03	4.7E-03	5.4E-03	5.7E-03	2.0E-02	1.1E-03	1.2E-03	3.3E-03	2.0E-03	3.4E-07	2.5E-03	6.5E-05	8.2E-05	6.6E-04	2.4E-04	8.4E-02	6E-02	9E-03	1E-02	3E-03	2E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	2E-02	8E-03
residential	res		487492.77	3617381.79	2.0E-01	1.9E-01	2.2E-01	2.3E-01	2.5E-01	2.7E-01	2.9E-01	3.1E-01	2.3E+05	4.5E-01	5.2E-01	8.1E-02	8.1E-02	1.5E+02	3.7E-02	1.9E+02	1.2E+00	7.1E-01	5.6E+00	9.9E-02	1.5E-02	1.4E-02	1.6E-02	1.8E-02	4.4E-03	4.7E-03	5.4E-03	5.7E-03	2.0E-02	1.0E-03	1.2E-03	3.2E-03	1.2E-03	3.4E-07	4.5E-03	6.4E-05	8.1E-05	6.4E-04	2.3E-04	8.3E-02	6E-02	9E-03	1E-02	3E-03	2E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	2E-02	8E-03
residential	res		487511.27	3617381.79	2.0E-01	1.9E-01	2.2E-01	2.3E-01	2.5E-01	2.7E-01	2.9E-01	3.0E-01	2.2E+05	4.4E-01	5.1E-01	8.1E-02	8.1E-02	1.1E+02	3.8E-02	2.4E+02	1.2E+00	7.1E-01	5.5E+00	9.8E-02	1.5E-02	1.4E-02	1.6E-02	1.7E-02	4.3E-03	4.7E-03	5.3E-03	5.7E-03	2.0E-02	1.0E-03	1.2E-03	3.2E-03	8.3E-04	3.4E-07	5.9E-03	6.3E-05	8.1E-05	6.3E-04	2.3E-04	8.3E-02	6E-02	9E-03	1E-02	3E-03	2E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	2E-02	8E-03
residential	res		487529.77	3617381.79	2.0E-01	1.9E-01	2.1E-01	2.3E-01	2.5E-01	2.7E-01	2.9E-01	3.0E-01	2.2E+05	4.4E-01	5.1E-01	8.0E-02	8.0E-02	8.2E+01	3.8E-02	2.8E+02	1.2E+00	7.0E-01	5.2E+00	9.8E-02	1.5E-02	1.4E-02	1.6E-02	1.7E-02	4.3E-03	4.6E-03	5.3E-03	5.6E-03	2.0E-02	1.0E-03	1.2E-03	3.2E-03	6.5E-04	3.5E-07	6.7E-03	6.2E-05	8.0E-05	6.0E-04	2.3E-04	8.2E-02	6E-02	9E-03	1E-02	3E-03	1E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	2E-02	8E-03
residential	res		487548.27	3617381.79	1.9E-01	1.9E-01	2.1E-01	2.3E-01	2.5E-01	2.6E-01	2.8E-01	3.0E-01	2.2E+05	4.4E-01	5.1E-01	8.0E-02	8.0E-02	6.7E+01	3.8E-02	2.9E+02	1.2E+00	6.9E-01	5.0E+00	9.8E-02	1.5E-02	1.4E-02	1.6E-02	1.7E-02	4.2E-03	4.5E-03	5.2E-03	5.5E-03	1.9E-02	1.0E-03	1.2E-03	3.2E-03	5.2E-04	3.5E-07	7.0E-03	6.0E-05	7.9E-05	5.7E-04	2.3E-04	8.1E-02	6E-02	9E-03	1E-02	3E-03	1E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	2E-02	8E-03
residential	res		487566.77	3617381.79	1.9E-01	1.9E-01	2.1E-01	2.3E-01	2.4E-01	2.6E-01	2.8E-01	2.9E-01	2.2E+05	4.3E-01	5.0E-01	7.9E-02	7.9E-02	5.5E+01	3.8E-02	2.9E+02	1.1E+00	6.9E-01	4.7E+00	9.7E-02	1.5E-02	1.4E-02	1.6E-02	1.7E-02	4.2E-03	4.5E-03	5.1E-03	5.5E-03	1.9E-02	1.0E-03	1.2E-03	3.2E-03	4.3E-04	3.5E-07	7.1E-03	5.9E-05	7.9E-05	5.4E-04	2.3E-04	8.1E-02	6E-02	9E-03	1E-02	3E-03	1E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	2E-02	7E-03
residential	res		487585.27	3617381.79	1.9E-01	1.9E-01	2.1E-01	2.2E-01	2.4E-01	2.6E-01	2.7E-01	2.9E-01	2.1E+05	4.3E-01	5.0E-01	7.9E-02	7.9E-02	4.6E+01	3.9E-02	3.0E+02	1.1E+00	6.8E-01	4.6E+00	9.7E-02	1.5E-02	1.4E-02	1.6E-02	1.7E-02	4.2E-03	4.5E-03	5.1E-03	5.4E-03	1.9E-02	1.0E-03	1.2E-03	3.2E-03	3.6E-04	3.5E-07	7.4E-03	5.8E-05	7.8E-05	5.2E-04	2.3E-04	8.0E-02	6E-02	9E-03	1E-02	3E-03	1E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	2E-02	7E-03
residential	res		487603.77	3617381.79	1.9E-01	1.8E-01	2.1E-01	2.2E-01	2.4E-01	2.6E-01	2.7E-01	2.9E-01	2.1E+05	4.2E-01	4.9E-01	7.9E-02	7.9E-02	3.9E+01	3.9E-02	3.1E+02	1.1E+00	6.8E-01	4.4E+00	9.6E-02	1.4E-02	1.4E-02	1.6E-02	1.7E-02	4.1E-03	4.4E-03	5.1E-03	5.4E-03	1.9E-02	9.9E-04	1.1E-03	3.2E-03	3.1E-04	3.6E-07	7.5E-03	5.7E-05	7.7E-05	5.0E-04	2.3E-04	8.0E-02	6E-02	9E-03	1E-02	3E-03	1E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	2E-02	7E-03
residential	res		487622.27	3617381.79	1.9E-01	1.8E-01	2.1E-01	2.2E-01	2.4E-01	2.5E-01	2.7E-01	2.9E-01	2.1E+05	4.2E-01	4.8E-01	7.8E-02	7.8E-02	3.4E+01	3.9E-02	3.0E+02	1.1E+00	6.7E-01	4.2E+00	9.5E-02	1.4E-02	1.4E-02	1.6E-02	1.7E-02	4.1E-03	4.4E-03	5.0E-03	5.3E-03	1.9E-02	9.8E-04	1.1E-03	3.1E-03	2.6E-04	3.6E-07	7.4E-03	5.6E-05	7.7E-05	4.8E-04	2.3E-04	7.9E-02	6E-02	8E-03	1E-02	3E-03	1E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	2E-02	7E-03
residential	res		487640.77	3617381.79	1.9E-01	1.8E-01	2.0E-01	2.2E-01	2.4E-01	2.5E-01	2.7E-01	2.8E-01	2.1E+05	4.2E-01	4.8E-01	7.8E-02	7.8E-02	2.9E+01	4.0E-02	3.0E+02	1.1E+00	6.7E-01	4.0E+00	9.5E-02	1.4E-02	1.4E-02	1.5E-02	1.6E-02	4.1E-03	4.3E-03	5.0E-03	5.3E-03	1.8E-02	9.7E-04	1.1E-03	3.1E-03	2.3E-04	3.6E-07	7.2E-03	5.6E-05	7.6E-05	4.6E-04	2.3E-04	7.9E-02	6E-02	8E-03	1E-02	3E-03	1E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	2E-02	7E-03
residential	res		487474.27	3617400.29	2.0E-01	1.9E-01	2.2E-01	2.3E-01	2.5E-01	2.7E-01	2.9E-01	3.1E-01	2.3E+05	4.6E-01	5.4E-01	8.1E-02	8.1E-02	2.6E+02	3.6E-02	5.7E+01	1.3E+00	7.4E-01	5.5E+00	1.0E-01	1.5E-02	1.5E-02	1.7E-02	1.8E-02	4.4E-03	4.7E-03	5.4E-03	5.7E-03	2.1E-02	1.1E-03	1.3E-03	3.3E-03	2.0E-03	3.3E-07	1.4E-03	6.6E-05	8.4E-05	6.3E-04	2.4E-04	8.4E-02	6E-02	9E-03	1E-02	3E-03	2E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	2E-02	8E-03
residential	res		487492.77	3617400.29	2.0E-01	1.9E-01	2.2E-01	2.3E-01	2.5E-01	2.7E-01	2.9E-01	3.1E-01	2.3E+05	4.5E-01	5.3E-01	8.1E-02	8.1E-02	1.5E+02	3.7E-02	9.4E+01	1.2E+00	7.3E-01	5.4E+00	1.0E-01	1.5E-02	1.5E-02	1.6E-02	1.8E-02	4.4E-03	4.7E-03	5.3E-03	5.7E-03	2.0E-02	1.1E-03	1.2E-03	3.3E-03	1.2E-03	3.4E-07	2.3E-03	6.5E-05	8.3E-05	6.1E-04	2.4E-04	8.4E-02	6E-02	9E-03	1E-02	3E-03	2E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	2E-02	8E-03
residential	res		487511.27	3617400.29	2.0E-01	1.9E-01	2.2E-01	2.3E-01	2.5E-01	2.7E-01	2.9E-01	3.0E-01	2.3E+05	4.5E-01	5.2E-01	8.1E-02	8.1E-02	1.0E+02	3.7E-02	1.3E+02	1.2E+00	7.2E-01	5.3E+00	9.8E-02	1.5E-02	1.5E-02	1.6E-02	1.8E-02	4.3E-03	4.6E-03	5.3E-03	5.7E-03	2.0E-02	1.0E-03	1.2E-03	3.3E-03	8.1E-04	3.4E-07	3.1E-03	6.3E-05	8.3E-05	6.0E-04	2.3E-04	8.4E-02	6E-02	9E-03	1E-02	3E-03	2E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	2E-02	8E-03
residential	res		487529.77	3617400.29	2.0E-01	1.9E-01	2.1E-01	2.3E-01	2.5E-01	2.7E-01	2.8E-01	3.0E-01	2.2E+05	4.4E-01	5.1E-01	8.0E-02	8.0E-02	8.1E+01	3.8E-02	1.6E+02	1.2E+00	7.2E-01	5.0E+00	9.8E-02	1.5E-02	1.4E-02	1.6E-02	1.7E-02	4.3E-03	4.6E-03	5.3E-03	5.6E-03	2.0E-02	1.0E-03	1.2E-03	3.2E-03	6.4E-04	3.5E-07	3.8E-03	6.2E-05	8.2E-05	5.8E-04	2.3E-04	8.3E-02	6E-02	9E-03	1E-02	3E-03	1E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	2E-02	8E-03
residential	res		487548.27	3617400.29	2.0E-01	1.9E-01	2.1E-01	2.3E-01	2.5E-01	2.6E-01	2.8E-01	3.0E-01	2.2E+05	4.4E-01	5.1E-01	8.0E-02	8.0E-02	6.6E+01	3.8E-02	1.7E+02	1.2E+00	7.1E-01	4.8E+00	9.8E-02	1.5E-02	1.4E-02	1.6E-02	1.7E-02	4.2E-03	4.5E-03	5.2E-03	5.5E-03	2.0E-02	1.0E-03	1.2E-03	3.2E-03	5.2E-04	3.5E-07	4.1E-03	6.1E-05	8.1E-05	5.5E-04	2.3E-04	8.2E-02	6E-02	9E-03	1E-02	3E-03	1E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	2E-02	8E-03
residential	res		487566.77	3617400.29	1.9E-01	1.9E-01	2.1E-01	2.2E-01	2.4E-01	2.6E-01	2.8E-01	2.9E-01	2.2E+05	4.4E-01	5.1E-01	7.9E-02	7.9E-02	5.5E+01	3.8E-02	1.8E+02	1.2E+00	7.0E-01	4.6E+00	9.8E-02	1.5E-02	1.4E-02	1.6E-02	1.7E-02	4.2E-03	4.5E-03	5.1E-03	5.5E-03	1.9E-02	1.0E-03	1.2E-03	3.2E-03	4.3E-04	3.5E-07	4.3E-03	6.0E-05	8.1E-05	5.3E-04	2.3E-04	8.1E-02	6E-02	9E-03	1E-02	3E-03	1E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	2E-02	8E-03
residential	res		487585.27	3617400.29	1.9E-01	1.9E-01	2.1E-01	2.2E-01	2.4E-01	2.6E-01	2.7E-01	2.9E-01	2.2E+05	4.3E-01	5.0E-01	7.9E-02	7.9E-02	4.5E+01	3.9E-02	1.9E+02	1.1E+00	7.0E-01	4.5E+00	9.7E-02	1.5E-02	1.4E-02	1.6E-02	1.7E-02	4.2E-03	4.5E-03	5.1E-03	5.4E-03	1.9E-02	1.0E-03	1.2E-03	3.2E-03	3.5E-04	3.5E-07	4.5E-03	5.9E-05	8.0E-05	5.1E-04	2.3E-04	8.1E-02	6E-02	9E-03	1E-02	3E-03	1E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	2E-02	7E-03
residential	res		487474.27	3617418.79	2.0E-01	1.9E-01	2.2E-01	2.3E-01	2.5E-01	2.7E-01	2.9E-01	3.1E-01	2.3E+05	4.7E-01	5.5E-01	8.2E-02	8.2E-02	2.6E+02	3.6E-02	3.8E+01	1.3E+00	7.5E-01	5.3E+00	1.0E-01	1.5E-02	1.5E-02	1.7E-02	1.8E-02	4.4E-03	4.7E-03	5.4E-03	5.7E-03	2.1E-02	1.1E-03	1.3E-03	3.3E-03	2.0E-03	3.3E-07	9.2E-04	6.6E-05	8.6E-05	6.0E-04	2.4E-04	8.4E-02	6E-02	9E-03	1E-02	3E-03	2E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	2E-02	8E-03
residential	res		487492.77	3617418.79	2.0E-01	1.9E-01	2.2E-01	2.3E-01	2.5E-01	2.7E-01	2.9E-01	3.1E-01	2.3E+05	4.6E-01	5.4E-01	8.1E-02	8.1E-02	1.5E+02	3.7E-02	5.8E+01	1.3E+00	7.5E-01	5.2E+00	1.0E-01	1.5E-02	1.5E-02	1.6E-02	1.8E-02	4.4E-03	4.6E-03	5.3E-03	5.7E-03	2.1E-02	1.1E-03	1.3E-03	3.3E-03	1.2E-03	3.4E-07	1.4E-03	6.5E-05	8.6E-05	5.9E-04	2.4E-04	8.4E-02	6E-02	9E-03	1E-02	3E-03	2E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	2E-02	8E-03
residential	res		487511.27	3617418.79	2.0E-01	1.9E-01	2.2E-01	2.3E-01	2.5E-01	2.7E-01	2.9E-01	3.0E-01	2.3E+05	4.5E-01	5.2E-01	8.1E-02	8.1E-02	1.0E+02	3.8E-02	7.9E+01	1.2E+00	7.4E-01	5.1E+00	9.8E-02	1.5E-02	1.5E-02	1.7E-02	1.8E-02	4.4E-03	4.6E-03	5.3E-03	5.7E-03	2.0E-02	1.1E-03	1.2E-03	3.3E-03	7.9E-04	3.5E-07	1.9E-03	6.4E-05	8.5E-05	5.8E-04	2.3E-04	8.4E-02	6E-02	9E-03	1E-02	3E-03	2E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	2E-02	8E-03
residential	107 (res)		487473.55	3617435.36	2.0E-01	2.0E-01	2.2E-01	2.3E-01	2.5E-01	2.7E-01	2.9E-01	3.1E-01	2.3E+05	4.7E-01	5.5E-01	8.2E-02	8.2E-02	2.6E+02	3.6E-02	2.8E+01	1.3E+00	7.7E-01	5.1E+00	1.0E-01	1.5E-02	1.5E-02	1.7E-02	1.8E-02	4.4E-03	4.7E-03	5.4E-03	5.7E-03	2.1E-02	1.1E-03	1.3E-03	3.3E-03	2.0E-03	3.3E-07	6.8E-04	6.7E-05	8.8E-05	5.8E-04	2.4E-04	8.5E-02	6E-02	9E-03	1E-02	3E-03	2E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	2E-02	8E-03
residential	127 (res)		487656.38	3617366.38	1.9E-01	1.8E-01	2.0E-01	2.2E-01	2.3E-01	2.5E-01	2.6E-01	2.8E-01	2.0E+05	4.1E-01	4.7E-01	7.7E-02	7.7E-02	2.6E+01	4.0E-02	4.9E+02	1.0E+00	6.5E-01	3.9E+00	9.5E-02	1.4E-02	1.4E-02	1.5E-02	1.6E-02	4.0E-03	4.3E-03	4.9E-03	5.2E-03	1.8E-02	9.6E-04	1.1E-03	3.1E-03	2.1E-04	3.7E-07	1.2E-02	5.4E-05	7.4E-05	4.4E-04	2.2E-04	7.8E-02	6E-02	8E-03	1E-02	3E-03	1E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	2E-02	7E-03
recreational	127 (park)		485919.63	3617745.79	0	0	1	1	1	1	1	1	2547420	3	4	0	0	0	0	0	463	13	2	0	2.7E-02	3.2E-02	4.0E-02	4.6E-02	1.3E-02	1.2E-02	1.8E-02	2.6E-02	2.3E-01	6.4E-03	1.0E-02	7.0E-03	2.4E-06	1.6E-07	7.0E-06	2.4E-02	1.5E-03	2.4E-04	5.5E-04	2.1E-01	1E-01	2E-02	4E-02	7E-03	3E-03	2E-03	2E-03	5E-04	1E-04	3E-04	1E-04	2E-01	9E-02
recreational	127 (park)		485877.38	3617693.74	3.3E-01	4.1E-01	5.0E-01	6.0E-01	8.2E-01	9.3E-01	1.4E+00	1.9E+00	2542164	2.6E+00	3.9E+00	1.8E-01	1.8E-01	3.3E-01	1.8E-02	3.1E-01	1.0E+02	1.0E+01	2.1E+00	2.4E-01	2.5E-02	3.1E-02	3.8E-02	4.5E-02	1.4E-02	1.6E-02	2.6E-02	3.5E-02	2.3E-01	6.0E-03	9.3E-03	7.1E-03	2.6E-06	1.6E-07	7.4E-06	5.2E-03	1.1E-03	2.4E-04	5.7E-04	2.3E-01	1E-01	3E-02	6E-02	7E-03	3E-03	2E-03	2E-03	6E-04	1E-04	3E-04	1E-04	2E-01	9E-02
recreational	127 (park)		485958.37	3617628.11	3.1E-01	3.7E-01	4.5E-01	5.3E-01	7.0E-01	9.3E-01	1.4E+00	1.9E+00	1.5E+06	2.0E+00	3.0E+00	1.6E-01	1.6E-01	3.9E-01	1.8E-02	3.6E-01	7.6E+01	8.0E+00	3.5E+00	2.2E-01	2.4E-02	2.8E-02	3.4E-02	4.0E-02	1.2E-02	1.6E-02	2.5E-02	3.4E-02	1.3E-01	4.8E-03	7.0E-03	6.6E-03	3.1E-06	1.7E-07	8.8E-06	3.9E-03	9.1E-04	4.0E-04	5.1E-04	2.1E-01	1E-01	3E-02	6E-02	7E-03	3E-03	2E-03	2E-03	5E-04	1E-04	3E-04	1E-04	1E-01	5E-02
recreational	127 (park)		485934.21	3617686.67	3.3E-01	4.0E-01	4.9E-01	5.7E-01	7.4E-01	8.4E-01	1.2E+00	1.9E+00	1966500	2.4E+00	3.7E+00	1.7E-01	1.7E-01	3.4E-01	1.8E-02	3.2E-01	1.4E+02	1.0E+01	2.8E+00	2.3E-01	2.5E-02	3.0E-02	3.7E-02	4.3E-02	1.3E-02	1.4E-02	2.3E-02	3.6E-02	1.8E-01	5.5E-03	8.6E-03	6.8E-03	2.7E-06	1.7E-07	7.8E-06	7.3E-03	1.2E-03	3.2E-04	5.4E-04	2.2E-01	1E-01	3E-02	6E-02	7E-03	3E-03	2E-03	2E-03	5E-04	1E-04	3E-04	1E-04	2E-01	7E-02
recreational	127 (park)		485836.61	3617642.05	3.0E-01	3.8E-01	4.6E-01	5.6E-01	8.6E-01	1.3E+00	1.9E+00	1.4E+00	2362223	2.4E+00	3.6E+00	1.8E-01	1.8E-01	3.5E-01	1.8E-02	3.2E-01	5.6E+01	8.2E+00	2.1E+00	2.5E-01	2.3E-02	2.9E-02	3.5E-02	4.2E-02	1.5E-02	2.2E-02	3.6E-02	2.6E-02	2.1E-01	5.7E-03	8.6E-03	7.2E-03	2.7E-06	1.6E-07	7.9E-06	2.9E-03	9.4E-04	2.4E-04	5.8E-04	2.3E-01	1E-01	4E-02	6E-02	7E-03	3E-03	2E-03	2E-03	6E-04	1E-04	3E-04	1E-04	2E-01	8E-02
recreational	127 (park)		485905.3	3617589.01	3.0E-01	3.6E-01	4.2E-01	4.9E-01	7.0E-01	1.1E+00	1.6E+00	1.4E+00	1.5E+06	2.0E+00	2.9E+00	1.7E-01	1.7E-01	4.0E-01	1.8E-02	3.7E-01	4.6E+01	7.0E+00	3.0E+00	2.2E-01	2.2E-02	2.7E-02	3.2E-02	3.7E-02	1.2E-02	2.0E-02	3.0E-02	2.6E-02	1.4E-01	4.7E-03	6.9E-03	6.7E-03	3.1E-06	1.7E-07	9.0E-06	2.4E-03	8.0E-04	3.4E-04	5.3E-04	2.1E-01	1E-01	3E-02	6E-02	7E-03	3E-03	2E-03	2E-03	5E-04	1E-04	3E-04	1E-04	1E-01	5E-02
recreational	127 (park)		485955.58	3617717.48	3.5E-01	4.1E-01	5.0E-01	5.8E-01	7.1E-01	7.2E-01	1.0E+00	1.6E+00	2007081	2.4E+00	3.8E+00	1.7E-01	1.7E-01	3.3E-01	1.8E-02	3.1E-01	4.6E+02	1.2E+01	2.8E+00	2.2E-01	2.7E-02	3.1E-02	3.8E-02	4.4E-02	1.2E-02	1.2E-02	1.9E-02	3.0E-02	1.8E-01	5.7E-03	9.0E-03	6.7E-03	2.6E-06	1.7E-07	7.5E-06	2.4E-02	1.3E-03	3.2E-04	5.3E-04	2.1E-01	1E-01	2E-02	5E-02	7E-03	3E-03	2E-03	2E-03	5E-04	1E-04	3E-04	1E-04	2E-01	7E-02
recreational	127 (park)		486000.45	3617682.93	3.4E-01	3.9E-01	4.8E-01	5.5E-01	6.7E-01	7.4E-01	1.0E+00	1.7E+00	1580342	2.1E+00	3.3E+00	1.6E-01	1.6E-01	3.7E-01	1.9E-02	3.4E-01	2.9E+02	1.0E+01	4.0E+00	2.1E-01	2.6E-02	3.0E-02	3.6E-02	4.1E-02	1.2E-02	1.3E-02	1.9E-02	3.1E-02	1.4E-01	5.0E-03	7.7E-03	6.5E-03	2.9E-06	1.7E-07	8.3E-06	1.5E-02	1.2E-03	4.6E-04	5.0E-04	2.1E-01	1E-01	2E-02	5E-02	6E-03	3E-03	2E-03	2E-03	5E-04	1E-04	3E-04	1E-04	1E-01	5E-02
residential	Res2		486422.15	3618812.39	3.7E-01	3.5E-01	3.9E-01	4.1E-01	4.2E-01	3.9E-01	4.3E-01	5.0E-01	7.8E+05	1.6E+00	2.2E+00	1.3E-01	1.3E-01	3.9E-01	2.2E-02	3.6E-01	1.0E+01	5.2E+00	1.4E+01	1.7E-01	2.8E-02	2.6E-02	3.0E-02	3.1E-02	7.2E-03	6.6E-03	7.9E-03	9.2E-03	7.0E-02	3.9E-03	5.2E-03	5.1E-03	3.1E-06	2.0E-07	8.7E-06	5.4E-04	5.9E-04	1.7E-03	3.9E-04	1.5E-01	1E-01	1E-02	2E-02	5E-03	2E-03	1E-03	1E-03	4E-04	8E-05	2E-04	1E-04	7E-02	3E-02
residential	Res2		486474.15	3617771.54	3.5E-01	3.3E-01	3.8E-01	4.0E-01	4.2E-01	4.0E-01	4.4E-01	5.2E-01	7.1E+05	1.5E+00	2.0E+00	1.2E-01	1.2E-01	4.5E-01	2.2E-02	4.1E-01	9.2E+00	3.9E+00	1.5E+01	1.6E-01	2.7E-02	2.5E-02	2.9E-02	3.0E-02	7.2E-03	6.8E-03	8.3E-03	9.6E-03	6.4E-02	3.4E-03	4.6E-03	5.0E-03	3.5E-06	2.0E-07	9.9E-06	4.8E-04	4.5E-04	1.7E-03	3.8E-04	1.4E-01	1E-01	1E-02	2E-02	5E-03	2E-03	1E-03	1E-03	4E-04	8E-05	2E-04	1E-04	6E-02	2E-02
residential	Res2		486517.79	3617736.26	3.4E-01	3.2E-01	3.7E-01	4.0E-01	4.2E-01	4.1E-01	4.5E-01	5.2E-01	6.6E+05	1.3E+00	1.8E+00	1.2E-01	1.2E-01	5.1E-01	2.3E-02	4.6E-01	8.1E+00	3.2E+00	1.6E+01	1.6E-01	2.5E-02	2.4E-02	2.8E-02	3.0E-02	7.2E-03	7.0E-03	8.4E-03	9.8E-03	5.9E-02	3.1E-03	4.1E-03	4.9E-03	4.0E-06	2.1E-07	1.1E-05	4.2E-04	3.6E-04	1.8E-03	3.7E-04	1.4E-01	1E-01	1E-02	2E-02	5E-03	2E-03	1E-03	1E-03	4E-04	8E-05	2E-04	9E-05	6E-02	2E-02
residential	Res2		486544.71	3617711.19	3.3E-01	3.1E-01	3.6E-01	3.9E-01	4.1E-01	4.1E-01	4.6E-01	5.3E-01	6.3E+05	1.2E+00	1.7E+00	1.2E-01	1.2E-01	5.6E-01	2.3E-02	5.0E-01	7.5E+00	2.8E+00	1.6E+01	1.5E-01	2.5E-02	2.4E-02	2.8E-02	3.0E-02	7.1E-03	7.1E-03	8.5E-03	9.8E-03	5.6E-02	2.9E-03	3.9E-03	4.8E-03	4.4E-06	2.1E-07	1.2E-05	3.9E-04	3.2E-04	1.9E-03	3.6E-04	1.4E-01	1E-01	1E-02	2E-02	5E-03	2E-03	1E-03	1E-03	4E-04	8E-05	2E-04	9E-05	6E-02	2E-02
residential	Res2		486607.85	3617744.61	3.2E-01	3.1E-01	3.5E-01	3.7E-01	3.9E-01	3.8E-01	4.2E-01	4.8E-01	5.9E+05	1.2E+00	1.6E+00	1.2E-01	1.2E-01	5.5E-01	2.4E-02	4.8E-01	6.0E+00	2.8E+00	1.1E+01	1.5E-01	2.5E-02	2.3E-02	2.6E-02	2.8E-02	6.6E-03	6.5E-03	7.8E-03	9.0E-03	5.2E-02	2.9E-03	3.7E-03	4.6E-03	4.3E-06	2.2E-07	1.2E-05	3.1E-04	3.3E-04	1.2E-03	3.6E-04	1.3E-01	1E-01	1E-02	2E-02	5E-03	2E-03	1E-03	1E-03	4E-04	7E-05	2E-04	9E-05	5E-02	2E-02
residential	Res2		486555.86	3617783.61	3.4E-01	3.2E-01	3.6E-01	3.8E-01	3.9E-01	3.7E-01	4.1E-01	4.8E-01	6.4E+05	1.4E+00	1.8E+00	1.2E-01	1.2E-01	4.7E-01	2.3E-02	4.2E-01	6.6E+00	3.5E+00	1.0E+01	1.6E-01	2.6E-02	2.4E-02	2.7E-02	2.9E-02	6.7E-03	6.4E-03	7.7E-03	8.8E-03	5.7E-02	3.2E-03	4.1E-03	4.8E-03	3.7E-06	2.1E-07	1.0E-05	3.4E-04	4.0E-04	1.2E-03	3.7E-04	1.4E-01	1E-01	1E-02	2E-02	5E-03	2E-03	1E-03	1E-03	4E-04	8E-05	2E-04	9E-05	6E-02	2E-02
residential	Res2		486498.29	3617830.97	3.6E-01	3.3E-01	3.7E-01	3.8E-01	3.9E-01	3.6E-01	4.0E-01	4.6E-01	6.9E+05	1.5E+00	2.0E+00	1.2E-01	1.2E-01	4.0E-01	2.2E-02	3.6E-01	7.0E+00	4.5E+00	9.6E+00	1.6E-01	2.7E-02	2.5E-02	2.8E-02	2.9E-02	6.7E-03	6.2E-03	7.4E-03	8.5E-03	6.2E-02	3.6E-03	4.7E-03	4.9E-03	3.2E-06	2.1E-07	8.9E-06	3.6E-04	5.1E-04	1.1E-03	3.8E-04	1.4E-01	1E-01	1E-02	2E-02	5E-03	2E-03	1E-03	1E-03	4E-04	8E-05	2E-04	1E-04	6E-02	2E-02
residential	Res2		486456.5	3617863.46	3.8E-01	3.4E-01	3.8E-01	3.9E-01	3.8E-01	3.5E-01	3.9E-01	4.4E-01	7.4E+05	1.7E+00	2.2E+00	1.3E-01	1.3E-01	3.6E-01	2.2E-02	3.3E-01	7.3E+00	5.4E+00	9.0E+00	1.6E-01	2.8E-02	2.6E-02	2.9E-02	2.9E-02	6.6E-03	6.1E-03	7.2E-03	8.1E-03	6.6E-02	4.0E-03	5.1E-03	5.0E-03	2.8E-06	2.0E-07	8.0E-06	3.8E-04	6.2E-04	1.0E-03	3.9E-04	1.4E-01	1E-01	1E-02	2E-02	5E-03	2E-03	1E-03	1E-03	4E-04	8E-05	2E-04	1E-04	7E-02	3E-02
school	BurLogan		487472.38	3617865.04	2.2E-01	2.0E-01	2.1E-01	2.1E-01	2.1E-01	2.1E-01	2.3E-01	2.5E-01	2.3E+05	5.7E-01	6.0E-01	8.4E-02	8.4E-02	4.9E+00	3.3E-02	2.5E+00	9.9E-01	9.9E-01	2.3E+00	1.1E-01	1.7E-02	1.5E-02	1.6E-02	1.6E-02	3.7E-03	3.6E-03	4.2E-03	4.6E-03	2.1E-02	1.3E-03	1.4E-03	3.4E-03	3.8E-05	3.0E-07	6.0E-05	5.1E-05	1.1E-04	2.6E-04	2.6E-04	8.0E-02	6E-02	7E-03	9E-03	3E-03	2E-03	9E-04	1E-03	3E-04	5E-05	1E-04	7E-05	2E-02	8E-03
school	BurLogan		487557.23	3617865.04	2.1E-01	1.9E-01	2.0E-01	2.0E-01	2.0E-01	2.0E-01	2.2E-01	2.4E-01	2.2E+05	5.3E-01	5.6E-01	8.2E-02	8.2E-02	6.5E+00	3.4E-02	3.8E+00	9.1E-01	9.2E-01	2.1E+00	1.1E-01	1.6E-02	1.4E-02	1.5E-02	1.5E-02	3.5E-03	3.5E-03	4.0E-03	4.4E-03	2.0E-02	1.2E-03	1.3E-03	3.3E-03	5.1E-05	3.2E-07	9.2E-05	4.7E-05	1.0E-04	2.4E-04	2.5E-04	7.6E-02	6E-02	7E-03	8E-03	3E-03	2E-03	8E-04	9E-04	3E-04	5E-05	1E-04	6E-05	2E-02	8E-03
school	BurLogan		487680.65	3617783.09	2.0E-01	1.8E-01	1.9E-01	2.0E-01	2.0E-01	2.0E-01	2.2E-01	2.4E-01	2.1E+05	4.9E-01	5.2E-01	8.0E-02	8.0E-02	9.3E+00	3.7E-02	7.7E+00	9.2E-01	8.3E-01	2.1E+00	1.0E-01	1.5E-02	1.4E-02	1.5E-02	1.5E-02	3.5E-03	3.5E-03	4.0E-03	4.4E-03	1.9E-02	1.1E-03	1.2E-03	3.2E-03	7.3E-05	3.4E-07	1.9E-04	4.7E-05	9.5E-05	2.4E-04	2.4E-04	7.4E-02	6E-02	7E-03	8E-03	3E-03	1E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	2E-02	7E-03
school	BurLogan		487845.53	3617783.09	1.9E-01	1.7E-01	1.8E-01	1.8E-01	1.9E-01	1.9E-01	2.0E-01	2.2E-01	1.9E+05	4.3E-01	4.6E-01	7.6E-02	7.6E-02	6.3E+00	4.0E-02	7.8E+00	7.8E-01	7.2E-01	1.7E+00	9.7E-02	1.4E-02	1.3E-02	1.4E-02	1.4E-02	3.2E-03	3.2E-03	3.7E-03	4.0E-03	1.7E-02	1.0E-03	1.1E-03	3.1E-03	5.0E-05	3.7E-07	1.9E-04	4.0E-05	8.3E-05	1.9E-04	2.3E-04	6.9E-02	5E-02	6E-03	8E-03	3E-03	1E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	2E-02	6E-03
residential	Res3		489651.02	3613671.79	3.4E-02	3.3E-02	3.5E-02	3.6E-02	3.8E-02	4.0E-02	4.0E-02	4.1E-02	1.7E+04	4.2E-02	4.4E-02	2.2E-02	2.2E-02	1.1E-01	3.0E+01	1.1E-01	5.6E-02	5.5E-02	8.0E-02	2.1E-02	2.5E-03	2.5E-03	2.6E-03	2.7E-03	6.5E-04	6.9E-04	7.5E-04	7.6E-04	1.6E-03	9.8E-05	1.0E-04	8.7E-04	8.6E-07	2.7E-04	2.8E-06	2.9E-06	6.2E-06	9.1E-06	5.0E-05	1.3E-02	1E-02	1E-03	2E-03	9E-04	4E-04	2E-04	2E-04	5E-05	1E-05	3E-05	1E-05	2E-03	6E-04
school		127	489656.46	3613785.76	3.4E-02	3.4E-02	3.6E-02	3.7E-02	3.9E-02	4.1E-02	4.1E-02	4.2E-02	1.8E+04	4.3E-02	4.6E-02	2.2E-02	2.2E-02	1.1E-01	1.2E+01	1.2E-01	5.7E-02	5.6E-02	8.1E-02	2.2E-02	2.6E-03	2.5E-03	2.7E-03	2.8E-03	6.7E-04	7.1E-04	7.7E-04	7.8E-04	1.6E-03	1.0E-04	1.1E-04	9.0E-04	8.8E-07	1.1E-04	2.8E-06	2.9E-06	6.4E-06	9.2E-06	5.1E-05	1.4E-02	1E-02	1E-03	2E-03	9E-04	4E-04	2E-04	3E-04	5E-05	1E-05	3E-05	1E-05	2E-03	6E-04

TAMT Risk Assessment - DPM Cancer and Chronic HI

AERMOD Output

AERMOD UNITIZED CONCENTRATIONS

	Discrete Receptor ID (Group Name)	X	Y	B10_1_AUX	B10_2_AUX	B10_3_AUX	B10_4_AUX	B10_5_AUX	B10_6_AUX	B10_7_AUX	B10_8_AUX	CHE_1	LOC_SWTCH EMP	LOC_SWTCH LOA	OGV_PATH _BLR	OGV_PATH _DPM	TR_28TH	TR_BAYMA R	TR_BOSTON	TR_CROSBY	TR_HARBOR CHA	TR_HARBOR SAM	TUG_PATH _DPM
Source Group in AERMOD				1	3	5	7	9	11	13	15	17	18	19	20	21	22	23	24	25	26	27	28
school	127	489687.62	3613796.14	3.4E-02	3.4E-02	3.6E-02	3.7E-02	3.9E-02	4.1E-02	4.1E-02	4.2E-02	1.8E+04	4.2E-02	4.5E-02	2.2E-02	2.2E-02	1.1E-01	1.3E+01	1.2E-01	5.6E-02	5.5E-02	8.0E-02	2.2E-02
residential	REC_100M	485330.59	3615425.04	1.7E-01	1.6E-01	1.8E-01	2.0E-01	2.2E-01	2.4E-01	2.5E-01	2.5E-01	1.7E+05	2.6E-01	2.8E-01	7.5E-02	7.5E-02	6.0E-01	3.4E-02	5.7E-01	7.6E-01	5.2E-01	7.8E-01	7.6E-02
residential	REC_100M	485430.59	3615425.04	1.6E-01	1.6E-01	1.8E-01	1.9E-01	2.2E-01	2.4E-01	2.5E-01	2.5E-01	1.6E+05	2.5E-01	2.8E-01	7.3E-02	7.3E-02	6.3E-01	3.5E-02	5.9E-01	7.4E-01	5.0E-01	8.1E-01	7.4E-02
residential	REC_100M	485530.59	3615425.04	1.6E-01	1.6E-01	1.8E-01	1.9E-01	2.1E-01	2.4E-01	2.4E-01	2.4E-01	1.5E+05	2.5E-01	2.8E-01	7.2E-02	7.2E-02	6.6E-01	3.6E-02	6.3E-01	7.1E-01	4.8E-01	8.4E-01	7.1E-02
residential	REC_100M	485230.59	3615525.04	1.8E-01	1.7E-01	2.0E-01	2.1E-01	2.4E-01	2.6E-01	2.6E-01	2.6E-01	1.9E+05	2.7E-01	3.0E-01	7.9E-02	7.9E-02	5.8E-01	3.2E-02	5.5E-01	8.3E-01	5.7E-01	7.8E-01	8.2E-02
residential	REC_100M	485330.59	3615525.04	1.7E-01	1.7E-01	1.9E-01	2.1E-01	2.3E-01	2.6E-01	2.6E-01	2.6E-01	1.8E+05	2.7E-01	3.0E-01	7.7E-02	7.7E-02	6.2E-01	3.3E-02	5.8E-01	8.2E-01	5.6E-01	8.2E-01	8.0E-02
residential	REC_100M	485430.59	3615525.04	1.7E-01	1.6E-01	1.9E-01	2.0E-01	2.2E-01	2.5E-01	2.5E-01	2.6E-01	1.7E+05	2.7E-01	3.0E-01	7.5E-02	7.5E-02	6.5E-01	3.3E-02	6.1E-01	8.0E-01	5.4E-01	8.6E-01	7.8E-02
residential	REC_100M	485530.59	3615525.04	1.7E-01	1.6E-01	1.8E-01	1.9E-01	2.2E-01	2.4E-01	2.5E-01	2.5E-01	1.6E+05	2.7E-01	3.0E-01	7.3E-02	7.3E-02	6.9E-01	3.4E-02	6.5E-01	7.7E-01	5.2E-01	8.9E-01	7.6E-02
residential	REC_100M	485030.59	3615625.04	2.0E-01	1.9E-01	2.2E-01	2.3E-01	2.6E-01	2.8E-01	2.8E-01	2.7E-01	2.3E+05	2.9E-01	3.1E-01	8.7E-02	8.7E-02	5.3E-01	3.0E-02	5.0E-01	8.8E-01	6.4E-01	7.4E-01	9.0E-02
residential	REC_100M	485130.59	3615625.04	1.9E-01	1.8E-01	2.1E-01	2.3E-01	2.5E-01	2.8E-01	2.8E-01	2.7E-01	2.2E+05	2.9E-01	3.2E-01	8.5E-02	8.5E-02	5.6E-01	3.0E-02	5.3E-01	8.9E-01	6.3E-01	7.8E-01	8.8E-02
residential	REC_100M	485230.59	3615625.04	1.9E-01	1.8E-01	2.1E-01	2.2E-01	2.5E-01	2.8E-01	2.8E-01	2.7E-01	2.1E+05	2.9E-01	3.2E-01	8.2E-02	8.2E-02	6.0E-01	3.1E-02	5.6E-01	8.9E-01	6.1E-01	8.2E-01	8.6E-02
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

DPM SCALED CONCENTRATIONS

	divide by -->	4	4	4	4	2	2	2	2	1	2	2	1	1	1	1	1	1	1	1
		Refrigerated Containersfull TAMT plan unmit	Refrigerated Containersfull TAMT plan unmit	Refrigerated Containersfull TAMT plan unmit	Refrigerated Containersfull TAMT plan unmit	Multi-Purpose General Cargofull TAMT plan unmit	Multi-Purpose General Cargofull TAMT plan unmit	Dry Bulkfull TAMT plan unmit	Dry Bulkfull TAMT plan unmit	Allfull TAMT plan unmit	Allfull TAMT plan unmit	Allfull TAMT plan unmit	Allfull TAMT plan unmit	TR_28THfull TAMT plan unmit	TR_BAYMARfull TAMT plan unmit	TR_BOSTONfull TAMT plan unmit	TR_CROSBYfull TAMT plan unmit	TR_HARBORCHAfull TAMT plan unmit	TR_HARBORSAMfull TAMT plan unmit	Allfull TAMT plan unmit
	g/s -->	7.6E-02	7.6E-02	7.6E-02	7.6E-02	1.7E-02	1.7E-02	1.9E-02	1.9E-02	8.9E-08	2.3E-03	2.3E-03	4.0E-02	7.8E-06	9.2E-06	2.4E-05	5.2E-05	1.1E-04	1.1E-04	2.4E-03
		1	3	5	7	9	11	13	15	17	18	19	21	22	23	24	25	26	27	28
Receptor		B10_1_AUX	B10_2_AUX	B10_3_AUX	B10_4_AUX	B10_5_AUX	B10_6_AUX	B10_7_AUX	B10_8_AUX	CHE_1	LOC_SWTCHEMP	LOC_SWTCHLOA	OGV_PATH_DPM	TR_28TH	TR_BAYMAR	TR_BOSTON	TR_CROSBY	TR_HARBORCHA	TR_HARBORSAM	TUG_PATH_DPM
school	127	2.6E-03	2.5E-03	2.7E-03	2.8E-03	6.7E-04	7.1E-04	7.7E-04	7.8E-04	1.6E-03	9.9E-05	1.1E-04	8.9E-04	8.8E-07	1.2E-04	2.8E-06	2.9E-06	6.3E-06	9.1E-05	5.2E-05
residential	REC_100M 485330.59 3615425.04	1.3E-02	1.2E-02	1.4E-02	1.5E-02	3.8E-03	4.2E-03	4.6E-03	4.6E-03	1.5E-02	6.0E-04	6.6E-04	3.0E-03	4.7E-06	3.2E-07	1.4E-05	3.9E-05	6.0E-05	8.9E-05	1.8E-04
residential	REC_100M 485430.59 3615425.04	1.2E-02	1.2E-02	1.4E-02	1.5E-02	3.7E-03	4.2E-03	4.6E-03	4.6E-03	1.5E-02	6.0E-04	6.5E-04	2.9E-03	5.0E-06	3.2E-07	1.4E-05	3.8E-05	5.7E-05	9.3E-05	1.7E-04
residential	REC_100M 485530.59 3615425.04	1.2E-02	1.2E-02	1.3E-02	1.4E-02	3.7E-03	4.1E-03	4.5E-03	4.5E-03	1.4E-02	5.9E-04	6.5E-04	2.9E-03	5.2E-06	3.3E-07	1.5E-05	3.7E-05	5.5E-05	9.6E-05	1.7E-04
residential	REC_100M 485230.59 3615525.04	1.4E-02	1.3E-02	1.5E-02	1.6E-02	4.1E-03	4.5E-03	4.9E-03	4.8E-03	1.7E-02	6.4E-04	7.0E-04	3.2E-03	4.6E-06	3.0E-07	1.3E-05	4.3E-05	6.6E-05	9.0E-05	1.9E-04
residential	REC_100M 485330.59 3615525.04	1.3E-02	1.3E-02	1.4E-02	1.6E-02	4.0E-03	4.4E-03	4.8E-03	4.8E-03	1.6E-02	6.4E-04	7.0E-04	3.1E-03	4.8E-06	3.0E-07	1.4E-05	4.2E-05	6.4E-05	9.4E-05	1.9E-04
residential	REC_100M 485430.59 3615525.04	1.3E-02	1.2E-02	1.4E-02	1.5E-02	3.8E-03	4.3E-03	4.7E-03	4.7E-03	1.6E-02	6.4E-04	7.0E-04	3.0E-03	5.1E-06	3.1E-07	1.5E-05	4.1E-05	6.1E-05	9.8E-05	1.8E-04
residential	REC_100M 485530.59 3615525.04	1.2E-02	1.2E-02	1.4E-02	1.5E-02	3.7E-03	4.2E-03	4.6E-03	4.6E-03	1.5E-02	6.3E-04	7.0E-04	2.9E-03	5.4E-06	3.1E-07	1.6E-05	4.0E-05	5.9E-05	1.0E-04	1.8E-04
residential	REC_100M 485030.59 3615625.04	1.5E-02	1.4E-02	1.6E-02	1.8E-02	4.5E-03	4.9E-03	5.2E-03	5.0E-03	2.0E-02	6.8E-04	7.4E-04	3.5E-03	4.2E-06	2.7E-07	1.2E-05	4.5E-05	7.3E-05	8.5E-05	2.1E-04
residential	REC_100M 485130.59 3615625.04	1.4E-02	1.4E-02	1.6E-02	1.7E-02	4.4E-03	4.8E-03	5.2E-03	5.1E-03	2.0E-02	6.9E-04	7.4E-04	3.4E-03	4.4E-06	2.8E-07	1.3E-05	4.6E-05	7.2E-05	8.9E-05	2.1E-04
residential	REC_100M 485230.59 3615625.04	1.4E-02	1.4E-02	1.6E-02	1.7E-02	4.3E-03	4.8E-03	5.2E-03	5.1E-03	1.9E-02	6.9E-04	7.5E-04	3.3E-03	4.7E-06	2.8E-07	1.4E-05	4.6E-05	7.0E-05	9.4E-05	2.0E-04
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

	Vessel Hoteling				Vessel Transit				Tug/Barge Transit				Terminal E	
	All	Refrigerated Containersfull TAMT plan unmit	Multi-Purpose General Cargofull TAMT plan unmit	Dry Bulkfull TAMT plan unmit	All	Refrigerated Containersfull TAMT plan unmit	Multi-Purpose General Cargofull TAMT plan unmit	Dry Bulkfull TAMT plan unmit	All	Refrigerated Containersfull TAMT plan unmit	Multi-Purpose General Cargofull TAMT plan unmit	Dry Bulkfull TAMT plan unmit	All	Refrigerated Containersfull TAMT plan unmit
	100%	81%	9%	10%	100%	46%	25%	28%	100%	21%	54%	25%	100%	39%
school	1.4E-02	1E-02	1E-03	2E-03	9E-04	4E-04	2E-04	3E-04	5E-05	1E-05	3E-05	1E-05	2E-03	6E-04
residential	7.1E-02	5E-02	8E-03	9E-03	3E-03	1E-03	8E-04	9E-04	2E-04	4E-05	1E-04	5E-05	2E-02	6E-03
residential	7.0E-02	5E-02	8E-03	9E-03	3E-03	1E-03	7E-04	8E-04	2E-04	4E-05	9E-05	4E-05	1E-02	6E-03
residential	6.9E-02	5E-02	8E-03	9E-03	3E-03	1E-03	7E-04	8E-04	2E-04	4E-05	9E-05	4E-05	1E-02	5E-03
residential	7.6E-02	6E-02	9E-03	1E-02	3E-03	1E-03	8E-04	9E-04	2E-04	4E-05	1E-04	5E-05	2E-02	7E-03
residential	7.4E-02	6E-02	8E-03	1E-02	3E-03	1E-03	8E-04	9E-04	2E-04	4E-05	1E-04	5E-05	2E-02	6E-03
residential	7.2E-02	5E-02	8E-03	9E-03	3E-03	1E-03	8E-04	9E-04	2E-04	4E-05	1E-04	5E-05	2E-02	6E-03
residential	7.0E-02	5E-02	8E-03	9E-03	3E-03	1E-03	7E-04	8E-04	2E-04	4E-05	1E-04	5E-05	1E-02	6E-03
residential	8.3E-02	6E-02	9E-03	1E-02	3E-03	2E-03	9E-04	1E-03	2E-04	4E-05	1E-04	5E-05	2E-02	8E-03
residential	8.1E-02	6E-02	9E-03	1E-02	3E-03	2E-03	9E-04	1E-03	2E-04	4E-05	1E-04	5E-05	2E-02	8E-03
residential	7.9E-02	6E-02	9E-03	1E-02	3E-03	2E-03	8E-04	9E-04	2E-04	4E-05	1E-04	5E-05	2E-02	7E-03
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

TAMT Risk Assessment - DPM Cancer and Chronic HI

AERMOD Output

AERMOD UNITIZED CONCENTRATIONS

Discrete Receptor ID	(Group Name)	X	Y	B10_1_AUX	B10_2_AUX	B10_3_AUX	B10_4_AUX	B10_5_AUX	B10_6_AUX	B10_7_AUX	B10_8_AUX	CHE_1	LOC_SWTCH EMP	LOC_SWTCH LOA	OGV_PATH BLR	OGV_PATH DPM	TR_28TH	TR_BAYMA R	TR_BOSTON	TR_CROSBY	TR_HARBOR CHA	TR_HARBOR SAM	TUG_PATH DPM
residential	REC_100M	487430.59	3617725.04	2.3E-01	2.0E-01	2.2E-01	2.3E-01	2.4E-01	2.4E-01	2.6E-01	2.8E-01	2.5E+05	5.8E-01	6.4E-01	8.5E-02	8.5E-02	7.2E+00	3.3E-02	2.9E+00	1.3E+00	1.0E+00	3.0E+00	1.1E-01
residential	REC_100M	487530.59	3617725.04	2.2E-01	2.0E-01	2.1E-01	2.2E-01	2.2E-01	2.3E-01	2.4E-01	2.7E-01	2.3E+05	5.4E-01	5.9E-01	8.3E-02	8.3E-02	1.4E+01	3.5E-02	5.6E+00	1.1E+00	9.3E-01	2.6E+00	1.1E-01
residential	REC_100M	487630.59	3617725.04	2.1E-01	1.9E-01	2.0E-01	2.1E-01	2.1E-01	2.2E-01	2.3E-01	2.5E-01	2.2E+05	5.0E-01	5.4E-01	8.0E-02	8.0E-02	1.3E+01	3.7E-02	8.9E+00	1.0E+00	8.6E-01	2.4E+00	1.0E-01
residential	REC_100M	487730.59	3617725.04	2.0E-01	1.8E-01	1.9E-01	2.0E-01	2.0E-01	2.1E-01	2.2E-01	2.4E-01	2.0E+05	4.7E-01	5.0E-01	7.8E-02	7.8E-02	9.8E+00	3.8E-02	1.0E+01	9.3E-01	7.9E-01	2.1E+00	1.0E-01
residential	REC_100M	487830.59	3617725.04	1.9E-01	1.7E-01	1.8E-01	1.9E-01	1.9E-01	2.0E-01	2.1E-01	2.3E-01	1.9E+05	4.4E-01	4.7E-01	7.6E-02	7.6E-02	7.3E+00	4.0E-02	9.6E+00	8.4E-01	7.3E-01	1.8E+00	9.7E-02
residential	REC_100M	487930.59	3617725.04	1.8E-01	1.7E-01	1.8E-01	1.8E-01	1.9E-01	1.9E-01	2.0E-01	2.1E-01	1.8E+05	4.1E-01	4.3E-01	7.4E-02	7.4E-02	5.3E+00	4.2E-02	7.7E+00	7.7E-01	6.7E-01	1.5E+00	9.4E-02
residential	REC_100M	488030.59	3617725.04	1.8E-01	1.6E-01	1.7E-01	1.7E-01	1.8E-01	1.8E-01	1.9E-01	2.0E-01	1.7E+05	3.8E-01	4.1E-01	7.2E-02	7.2E-02	4.0E+00	4.4E-02	5.7E+00	7.1E-01	6.3E-01	1.3E+00	9.2E-02
residential	REC_100M	488130.59	3617725.04	1.7E-01	1.6E-01	1.7E-01	1.7E-01	1.7E-01	1.7E-01	1.9E-01	2.0E-01	1.6E+05	3.6E-01	3.8E-01	7.1E-02	7.1E-02	3.2E+00	4.6E-02	4.2E+00	6.6E-01	5.9E-01	1.2E+00	8.9E-02
residential	REC_100M	488230.59	3617725.04	1.7E-01	1.5E-01	1.6E-01	1.7E-01	1.7E-01	1.7E-01	1.8E-01	1.9E-01	1.5E+05	3.3E-01	3.5E-01	7.0E-02	7.0E-02	2.5E+00	4.9E-02	3.3E+00	6.2E-01	5.6E-01	1.0E+00	8.5E-02
residential	REC_100M	488330.59	3617725.04	1.6E-01	1.5E-01	1.6E-01	1.6E-01	1.6E-01	1.6E-01	1.7E-01	1.9E-01	1.4E+05	3.1E-01	3.3E-01	6.9E-02	6.9E-02	2.1E+00	5.2E-02	2.5E+00	5.7E-01	5.2E-01	9.1E-01	8.2E-02
residential	REC_100M	488430.59	3617725.04	1.6E-01	1.5E-01	1.6E-01	1.6E-01	1.7E-01	1.7E-01	1.8E-01	1.9E-01	1.3E+05	2.3E-01	2.4E-01	6.8E-02	6.8E-02	1.7E+00	5.4E-02	2.0E+00	5.4E-01	4.6E-01	8.1E-01	6.8E-02
residential	REC_100M	488530.59	3617725.04	1.6E-01	1.4E-01	1.5E-01	1.6E-01	1.6E-01	1.6E-01	1.7E-01	1.8E-01	1.2E+05	2.1E-01	2.3E-01	6.6E-02	6.6E-02	1.4E+00	5.7E-02	1.7E+00	5.0E-01	4.3E-01	7.2E-01	6.5E-02
residential	REC_100M	488630.59	3617725.04	1.5E-01	1.4E-01	1.5E-01	1.5E-01	1.5E-01	1.5E-01	1.6E-01	1.7E-01	1.2E+05	2.3E-01	2.4E-01	6.5E-02	6.5E-02	1.3E+00	5.9E-02	1.4E+00	4.7E-01	4.1E-01	6.5E-01	6.8E-02
residential	REC_100M	488730.59	3617725.04	1.4E-01	1.3E-01	1.4E-01	1.4E-01	1.4E-01	1.4E-01	1.5E-01	1.6E-01	1.2E+05	2.4E-01	2.5E-01	6.3E-02	6.3E-02	1.1E+00	6.3E-02	1.3E+00	4.4E-01	4.1E-01	6.0E-01	7.2E-02
residential	REC_100M	488830.59	3617725.04	1.4E-01	1.2E-01	1.3E-01	1.3E-01	1.3E-01	1.4E-01	1.4E-01	1.5E-01	1.1E+05	2.4E-01	2.5E-01	6.2E-02	6.2E-02	9.9E-01	6.8E-02	1.1E+00	4.2E-01	3.9E-01	5.4E-01	7.3E-02
residential	REC_100M	488930.59	3617725.04	1.3E-01	1.2E-01	1.3E-01	1.3E-01	1.3E-01	1.3E-01	1.4E-01	1.5E-01	1.1E+05	2.3E-01	2.4E-01	6.0E-02	6.0E-02	8.9E-01	7.3E-02	9.9E-01	3.9E-01	3.7E-01	5.0E-01	7.2E-02
residential	REC_100M	489030.59	3617725.04	1.3E-01	1.2E-01	1.2E-01	1.2E-01	1.3E-01	1.3E-01	1.3E-01	1.4E-01	1.0E+05	2.2E-01	2.3E-01	5.9E-02	5.9E-02	8.1E-01	7.8E-02	9.0E-01	3.7E-01	3.5E-01	4.7E-01	7.0E-02
residential	REC_100M	489130.59	3617725.04	1.2E-01	1.1E-01	1.2E-01	1.2E-01	1.2E-01	1.2E-01	1.3E-01	1.4E-01	9.8E+04	2.1E-01	2.2E-01	5.8E-02	5.8E-02	7.4E-01	8.4E-02	8.2E-01	3.5E-01	3.3E-01	4.4E-01	6.8E-02
residential	REC_100M	482830.59	3617825.04	1.7E-01	1.9E-01	1.6E-01	1.4E-01	1.2E-01	1.0E-01	1.0E-01	9.8E-02	1.2E+05	1.8E-01	1.7E-01	2.4E-01	2.4E-01	7.3E-02	1.1E-02	7.2E-02	1.6E-01	2.8E-01	9.4E-02	2.9E-01
residential	REC_100M	482930.59	3617825.04	1.8E-01	2.0E-01	1.7E-01	1.5E-01	1.3E-01	1.1E-01	1.0E-01	1.0E-01	1.3E+05	1.9E-01	1.8E-01	2.4E-01	2.4E-01	7.6E-02	1.1E-02	7.4E-02	1.7E-01	3.0E-01	9.7E-02	3.0E-01
residential	REC_100M	483030.59	3617825.04	1.9E-01	2.1E-01	1.8E-01	1.5E-01	1.3E-01	1.1E-01	1.1E-01	1.1E-01	1.4E+05	2.1E-01	1.9E-01	2.5E-01	2.5E-01	7.8E-02	1.1E-02	7.6E-02	1.8E-01	3.2E-01	1.0E-01	3.1E-01
residential	REC_100M	483130.59	3617825.04	2.0E-01	2.3E-01	1.8E-01	1.6E-01	1.4E-01	1.2E-01	1.1E-01	1.1E-01	1.5E+05	2.2E-01	2.0E-01	2.5E-01	2.5E-01	8.0E-02	1.2E-02	7.9E-02	1.9E-01	3.5E-01	1.1E-01	3.3E-01
residential	REC_100M	483230.59	3617825.04	2.1E-01	2.4E-01	1.9E-01	1.7E-01	1.4E-01	1.2E-01	1.2E-01	1.1E-01	1.6E+05	2.4E-01	2.1E-01	2.5E-01	2.5E-01	8.3E-02	1.2E-02	8.1E-02	2.0E-01	3.8E-01	1.1E-01	3.4E-01
residential	REC_100M	483330.59	3617825.04	2.3E-01	2.5E-01	2.1E-01	1.8E-01	1.5E-01	1.3E-01	1.2E-01	1.2E-01	1.8E+05	2.6E-01	2.3E-01	2.6E-01	2.6E-01	8.5E-02	1.2E-02	8.4E-02	2.2E-01	4.1E-01	1.1E-01	3.5E-01
residential	REC_100M	483430.59	3617825.04	2.4E-01	2.7E-01	2.2E-01	1.9E-01	1.6E-01	1.3E-01	1.3E-01	1.3E-01	2.0E+05	2.8E-01	2.5E-01	2.7E-01	2.7E-01	8.8E-02	1.2E-02	8.6E-02	2.3E-01	4.4E-01	1.2E-01	3.6E-01
residential	REC_100M	483530.59	3617825.04	2.6E-01	2.9E-01	2.4E-01	2.0E-01	1.7E-01	1.4E-01	1.4E-01	1.3E-01	2.2E+05	3.0E-01	2.7E-01	2.7E-01	2.7E-01	9.1E-02	1.2E-02	8.9E-02	2.4E-01	4.8E-01	1.2E-01	3.8E-01
residential	REC_100M	483630.59	3617825.04	2.8E-01	3.1E-01	2.5E-01	2.2E-01	1.8E-01	1.5E-01	1.4E-01	1.4E-01	2.4E+05	3.3E-01	2.9E-01	2.8E-01	2.8E-01	9.4E-02	1.2E-02	9.2E-02	2.6E-01	5.3E-01	1.3E-01	3.9E-01
residential	REC_100M	483730.59	3617825.04	3.0E-01	3.3E-01	2.7E-01	2.3E-01	1.9E-01	1.6E-01	1.5E-01	1.5E-01	2.7E+05	3.5E-01	3.2E-01	2.9E-01	2.9E-01	9.8E-02	1.2E-02	9.6E-02	2.8E-01	5.8E-01	1.4E-01	4.1E-01

DPM SCALED CONCENTRATIONS

Vessel Hoteling

Vessel Transit

Tug/Barge Transit

Terminal E

TAMT Risk Assessment - DPM Cancer and Chronic HI

AERMOD Output

AERMOD UNITIZED CONCENTRATIONS

DPM SCALED CONCENTRATIONS

Discrete Receptor ID (Group Name)		X	Y	B10_1_AUX	B10_2_AUX	B10_3_AUX	B10_4_AUX	B10_5_AUX	B10_6_AUX	B10_7_AUX	B10_8_AUX	CHE_1	LOC_SWTCH EMP	LOC_SWTCH LOA	OGV_PATH BLR	OGV_PATH DPM	TR_28TH	TR_BAYMA R	TR_BOSTON	TR_CROSBY	TR_HARBOR CHA	TR_HARBOR SAM	TUG_PATH DPM	B10_1_AUX	B10_2_AUX	B10_3_AUX	B10_4_AUX	B10_5_AUX	B10_6_AUX	B10_7_AUX	B10_8_AUX	CHE_1	LOC_SWTCHE MP	LOC_SWTCHL OA	OGV_PATH DPM	TR_28TH	TR_BAYMA R	TR_BOSTON	TR_CROSBY	TR_HARBOR CHA	TR_HARBOR SAM	TUG_PATH_D PM	Vessel Hoteling All	Vessel Hoteling Refrigerated Containersful l TAMT plan unmit	Vessel Hoteling Multi-Purpose General Cargofull TAMT plan unmit	Vessel Hoteling Dry Bulkfull TAMT plan	Vessel Transit All	Vessel Transit Refrigerated Containersful TAMT plan	Vessel Transit Multi-Purpose General Cargofull TAMT plan unmit	Vessel Transit Dry Bulkfull TAMT plan unmit	Tug/Barge Transit All	Tug/Barge Transit Refrigerated Containersful TAMT plan unmit	Tug/Barge Transit Multi-Purpose General Cargoful TAMT plan unmit	Tug/Barge Transit Dry Bulkfull TAMT plan unmit	Terminal E All	Terminal E Refrigerated Containersful TAMT plan unmit
Source Group in AERMOD				1	3	5	7	9	11	13	15	17	18	19	20	21	22	23	24	25	26	27	28	1	3	5	7	9	11	13	15	17	18	19	21	22	23	24	25	26	27	28	100%	81%	9%	10%	100%	46%	25%	28%	100%	21%	54%	25%	100%	39%
divide by --> / g/s -->																								7.6E-02	7.6E-02	7.6E-02	7.6E-02	1.7E-02	1.7E-02	1.9E-02	1.9E-02	8.9E-08	2.3E-03	2.3E-03	4.0E-02	7.8E-06	9.2E-06	2.4E-05	5.2E-05	1.1E-04	1.1E-04	2.4E-03														
residential	REC_100M	483830.59	3617825.04	3.2E-01	3.5E-01	2.8E-01	2.5E-01	2.0E-01	1.7E-01	1.6E-01	1.6E-01	3.1E+05	3.8E-01	3.4E-01	3.0E-01	3.0E-01	1.0E-01	1.2E-02	9.9E-02	3.0E-01	6.4E-01	1.4E-01	4.3E-01	2.4E-02	2.6E-02	2.2E-02	1.9E-02	3.5E-03	2.9E-03	3.0E-03	2.9E-03	2.8E-02	9.0E-04	8.0E-04	1.2E-02	7.9E-07	1.1E-07	2.4E-06	1.5E-05	7.3E-05	1.6E-05	1.0E-03	1.0E-01	9E-02	6E-03	6E-03	1E-02	6E-03	3E-03	3E-03	1E-03	2E-04	5E-04	3E-04	3E-02	1E-02
[illegible]																																																								

TAMT Risk Assessment - DPM Cancer and Chronic HI

AERMOD Output

AERMOD UNITIZED CONCENTRATIONS

Land use	Discrete Receptor ID (Group Name)	X	Y	B10_1_AUX	B10_2_AUX	B10_3_AUX	B10_4_AUX	B10_5_AUX	B10_6_AUX	B10_7_AUX	B10_8_AUX	CHE_1	LOC_SWTCH EMP	LOC_SWTCH LOA	OGV_PATH _BLR	OGV_PATH _DPM	TR_28TH	TR_BAYMA R	TR_BOSTON	TR_CROSBY	TR_HARBOR CHA	TR_HARBOR SAM	TUG_PATH _DPM
			Source Group in AERMOD	1	3	5	7	9	11	13	15	17	18	19	20	21	22	23	24	25	26	27	28
residential	REC_100M	489030.59	3618125.04	1.2E-01	1.1E-01	1.1E-01	1.1E-01	1.1E-01	1.1E-01	1.1E-01	1.2E-01	9.1E+04	2.1E-01	2.0E-01	5.9E-02	5.9E-02	7.1E-01	7.0E-02	7.8E-01	2.8E-01	3.2E-01	4.1E-01	7.0E-02
residential	REC_100M	489130.59	3618125.04	1.2E-01	1.0E-01	1.1E-01	1.1E-01	1.1E-01	1.1E-01	1.1E-01	1.2E-01	8.7E+04	2.0E-01	2.0E-01	5.8E-02	5.8E-02	6.3E-01	7.5E-02	7.0E-01	2.7E-01	3.1E-01	3.8E-01	6.8E-02
residential	REC_100M	483030.59	3618225.04	1.6E-01	1.7E-01	1.4E-01	1.2E-01	1.0E-01	9.0E-02	8.9E-02	8.7E-02	9.2E+04	1.8E-01	1.6E-01	2.9E-01	2.9E-01	6.0E-02	1.0E-02	5.9E-02	1.2E-01	2.3E-01	7.2E-02	3.8E-01
residential	REC_100M	483130.59	3618225.04	1.7E-01	1.8E-01	1.5E-01	1.3E-01	1.1E-01	9.4E-02	9.2E-02	9.0E-02	9.8E+04	2.0E-01	1.7E-01	3.0E-01	3.0E-01	6.1E-02	1.0E-02	6.0E-02	1.3E-01	2.5E-01	7.4E-02	4.0E-01
residential	REC_100M	483230.59	3618225.04	1.8E-01	1.9E-01	1.5E-01	1.3E-01	1.1E-01	9.7E-02	9.5E-02	9.3E-02	1.1E+05	2.1E-01	1.9E-01	3.1E-01	3.1E-01	6.3E-02	1.1E-02	6.2E-02	1.3E-01	2.6E-01	7.6E-02	4.2E-01
residential	REC_100M	483330.59	3618225.04	1.9E-01	2.0E-01	1.7E-01	1.4E-01	1.2E-01	1.0E-01	1.0E-01	9.9E-02	1.1E+05	2.2E-01	2.0E-01	3.2E-01	3.2E-01	6.4E-02	1.1E-02	6.3E-02	1.4E-01	2.8E-01	7.9E-02	4.3E-01
school	school	485930.59	3618225.04	5.3E-01	4.1E-01	3.7E-01	3.4E-01	3.7E-01	4.3E-01	4.7E-01	5.1E-01	2016741	5.1E+00	5.5E+00	1.7E-01	1.7E-01	1.5E-01	1.7E-02	1.4E-01	3.7E+00	2.2E+01	3.2E-01	2.3E-01
school	school	486030.59	3618225.04	5.0E-01	3.8E-01	3.6E-01	3.3E-01	3.4E-01	4.0E-01	4.4E-01	5.0E-01	1.5E+06	3.8E+00	4.0E+00	1.6E-01	1.6E-01	1.6E-01	1.8E-02	1.5E-01	5.0E+00	1.6E+01	4.5E-01	2.1E-01
residential	REC_100M	486130.59	3618225.04	4.6E-01	3.5E-01	3.4E-01	3.2E-01	3.2E-01	3.7E-01	4.1E-01	4.7E-01	1.2E+06	2.9E+00	3.0E+00	1.5E-01	1.5E-01	1.6E-01	1.9E-02	1.6E-01	6.3E+00	1.2E+01	6.5E-01	2.0E-01
residential	REC_100M	486230.59	3618225.04	4.2E-01	3.3E-01	3.2E-01	3.0E-01	3.0E-01	3.4E-01	3.8E-01	4.2E-01	9.2E+05	2.3E+00	2.3E+00	1.4E-01	1.4E-01	1.7E-01	2.0E-02	1.6E-01	6.8E+00	8.9E+00	1.1E+00	1.9E-01

DPM SCALED CONCENTRATIONS

	B10_1_AUX	B10_2_AUX	B10_3_AUX	B10_4_AUX	B10_5_AUX	B10_6_AUX	B10_7_AUX	B10_8_AUX	CHE_1	LOC_SWTCHE MP	LOC_SWTCHL OA	OGV_PATH_ DPM	TR_28TH	TR_BAYMA R	TR_BOSTON	TR_CROSBY	TR_HARBOR CHA	TR_HARBOR SAM	TUG_PATH_D PM
divide by -->	4	4	4	4	2	2	2	2	1	2	2	1	1	1	1	1	1	1	1
	Refrigerated Containersfull TAMT plan unmit	Refrigerated Containersful l TAMT plan unmit	Refrigerated Containersful l TAMT plan unmit	Refrigerated Containersful l TAMT plan unmit	Multi-Purpose General Cargofull TAMT plan unmit	Multi-Purpose General Cargofull TAMT plan unmit	Dry Bulkfull TAMT plan unmit	Dry Bulkfull TAMT plan unmit	Allfull TAMT plan unmit	Allfull TAMT plan unmit	Allfull TAMT plan unmit	Allfull TAMT plan unmit	TR_28THfull TAMT plan unmit	TR_BAYMA Rfull TAMT plan unmit	TR_BOSTON full TAMT plan unmit	TR_CROSBYf ull TAMT plan unmit	TR_HARBOR CHAfull TAMT plan unmit	TR_HARBOR SAMfull TAMT plan unmit	Allfull TAMT plan unmit
g/s -->	7.6E-02	7.6E-02	7.6E-02	7.6E-02	1.7E-02	1.7E-02	1.9E-02	1.9E-02	8.9E-08	2.3E-03	2.3E-03	4.0E-02	7.8E-06	9.2E-06	2.4E-05	5.2E-05	1.1E-04	1.1E-04	2.4E-03
	1	3	5	7	9	11	13	15	17	18	19	21	22	23	24	25	26	27	28
489030.59	9.0E-03	8.1E-03	8.2E-03	8.2E-03	1.9E-03	1.9E-03	2.1E-03	2.2E-03	8.1E-03	4.8E-04	4.8E-04	2.4E-03	5.6E-06	6.4E-07	1.9E-05	1.4E-05	3.7E-05	4.6E-05	1.6E-04
489130.59	8.7E-03	7.9E-03	8.0E-03	8.0E-03	1.8E-03	1.8E-03	2.0E-03	2.1E-03	7.8E-03	4.6E-04	4.6E-04	2.3E-03	5.0E-06	6.9E-07	1.7E-05	1.4E-05	3.5E-05	4.3E-05	1.6E-04
483030.59	1.2E-02	1.3E-02	1.1E-02	9.3E-03	1.8E-03	1.6E-03	1.6E-03	1.6E-03	8.2E-03	4.3E-04	3.8E-04	1.2E-02	4.7E-07	9.5E-08	1.4E-06	6.2E-06	2.7E-05	8.3E-06	9.1E-04
483130.59	1.3E-02	1.4E-02	1.1E-02	9.7E-03	1.9E-03	1.6E-03	1.7E-03	1.7E-03	8.7E-03	4.6E-04	4.1E-04	1.2E-02	4.8E-07	9.6E-08	1.5E-06	6.5E-06	2.8E-05	8.5E-06	9.5E-04
483230.59	1.3E-02	1.4E-02	1.2E-02	1.0E-02	2.0E-03	1.7E-03	1.8E-03	1.7E-03	9.4E-03	4.9E-04	4.3E-04	1.2E-02	4.9E-07	9.7E-08	1.5E-06	6.7E-06	3.0E-05	8.8E-06	1.0E-03
483330.59	1.5E-02	1.5E-02	1.2E-02	1.1E-02	2.1E-03	1.8E-03	1.9E-03	1.8E-03	1.0E-02	5.3E-04	4.6E-04	1.3E-02	5.0E-07	9.8E-08	1.5E-06	7.0E-06	3.2E-05	9.0E-06	1.0E-03
485930.59	4.0E-02	3.1E-02	2.8E-02	2.6E-02	6.3E-03	7.4E-03	8.8E-03	9.5E-03	1.8E-01	1.2E-02	1.3E-02	6.8E-03	1.2E-06	1.6E-07	3.5E-06	1.9E-04	2.5E-03	3.7E-05	5.4E-04
486030.59	3.7E-02	2.9E-02	2.7E-02	2.5E-02	5.8E-03	6.9E-03	8.2E-03	9.3E-03	1.4E-01	8.8E-03	9.5E-03	6.3E-03	1.2E-06	1.7E-07	3.6E-06	2.6E-04	1.8E-03	5.2E-05	5.1E-04
486130.59	3.5E-02	2.7E-02	2.5E-02	2.4E-02	5.5E-03	6.4E-03	7.6E-03	8.7E-03	1.0E-01	6.7E-03	7.0E-03	5.9E-03	1.3E-06	1.7E-07	3.8E-06	3.2E-04	1.3E-03	7.4E-05	4.8E-04
486230.59	3.2E-02	2.5E-02	2.4E-02	2.3E-02	5.2E-03	5.9E-03	7.0E-03	7.9E-03	8.2E-02	5.4E-03	5.5E-03	5.6E-03	1.4E-06	1.8E-07	4.0E-06	3.5E-04	1.0E-03	1.2E-04	4.5E-04

	Vessel Hoteling				Vessel Transit				Tug/Barge Transit				Terminal E	
	All	Refrigerated Containersfull TAMT plan unmit	Multi-Purpose General Cargofull TAMT plan unmit	Dry Bulkfull TAMT plan unmit	All	Refrigerated Containersfull TAMT plan unmit	Multi-Purpose General Cargoful l TAMT plan unmit	Dry Bulkfull TAMT plan unmit	All	Refrigerated Containersfull TAMT plan unmit	Multi-Purpose General Cargoful l TAMT plan unmit	Dry Bulkfull TAMT plan unmit	All	Refrigerated Containersfull TAMT plan unmit
	100%	81%	9%	10%	100%	46%	25%	28%	100%	21%	54%	25%	100%	39%
489030.59	4.2E-02	3E-02	4E-03	4E-03	2E-03	1E-03	6E-04	7E-04	2E-04	3E-05	9E-05	4E-05	8E-03	3E-03
489130.59	4.1E-02	3E-02	4E-03	4E-03	2E-03	1E-03	6E-04	7E-04	2E-04	3E-05	9E-05	4E-05	8E-03	3E-03
483030.59	5.1E-02	4E-02	3E-03	3E-03	1E-02	5E-03	3E-03	3E-03	9E-04	2E-04	5E-04	2E-04	8E-03	3E-03
483130.59	5.4E-02	5E-02	3E-03	3E-03	1E-02	6E-03	3E-03	3E-03	1E-03	2E-04	5E-04	2E-04	9E-03	3E-03
483230.59	5.7E-02	5E-02	4E-03	4E-03	1E-02	6E-03	3E-03	4E-03	1E-03	2E-04	5E-04	3E-04	9E-03	4E-03
483330.59	6.1E-02	5E-02	4E-03	4E-03	1E-02	6E-03	3E-03	4E-03	1E-03	2E-04	6E-04	3E-04	1E-02	4E-03
485930.59	1.6E-01	1E-01	1E-02	2E-02	7E-03	3E-03	2E-03	2E-03	5E-04	1E-04	3E-04	1E-04	2E-01	7E-02
486030.59	1.5E-01	1E-01	1E-02	2E-02	6E-03	3E-03	2E-03	2E-03	5E-04	1E-04	3E-04	1E-04	1E-01	5E-02
486130.59	1.4E-01	1E-01	1E-02	2E-02	6E-03	3E-03	1E-03	2E-03	5E-04	1E-04	3E-04	1E-04	1E-01	4E-02
486230.59	1.3E-01	1E-01	1E-02	1E-02	6E-03	3E-03	1E-03	2E-03	4E-04	9E-05	2E-04	1E-04	8E-02	3E-02

TAMT Risk Assessment - DPM Cancer and Chronic HI

AERMOD Output

AERMOD UNITIZED CONCENTRATIONS (Source Group in AERMOD; divide by --> ; g/s -->)

	Discrete Receptor ID (Group Name)	X	Y	B10_1_AUX (1)	B10_2_AUX (3)	B10_3_AUX (5)	B10_4_AUX (7)	B10_5_AUX (9)	B10_6_AUX (11)	B10_7_AUX (13)	B10_8_AUX (15)	CHE_1 (17)	LOC_SWTCH EMP (18)	LOC_SWTCH LOA (19)	OGV_PATH _BLR (20)	OGV_PATH _DPM (21)	TR_28TH (22)	TR_BAYMA R (23)	TR_BOSTON (24)	TR_CROSBY (25)	TR_HARBOR CHA (26)	TR_HARBOR SAM (27)	TUG_PATH _DPM (28)
residential	REC_100M	486530.59	3618625.04	2.4E-01	2.1E-01	2.2E-01	2.3E-01	2.6E-01	2.9E-01	3.1E-01	3.3E-01	4.4E+05	1.0E+00	1.2E+00	1.2E-01	1.2E-01	1.8E-01	2.1E-02	1.5E-01	2.4E+00	2.5E+00	9.1E-01	1.5E-01
residential	REC_100M	486630.59	3618625.04	2.3E-01	2.0E-01	2.0E-01	2.2E-01	2.4E-01	2.7E-01	2.9E-01	3.1E-01	3.8E+05	8.7E-01	1.0E+00	1.1E-01	1.1E-01	2.0E-01	2.2E-02	1.8E-01	2.3E+00	2.1E+00	1.0E+00	1.5E-01
residential	REC_100M	486730.59	3618625.04	2.2E-01	1.9E-01	2.0E-01	2.0E-01	2.3E-01	2.5E-01	2.7E-01	2.9E-01	3.3E+05	7.6E-01	8.8E-01	1.1E-01	1.1E-01	2.4E-01	2.3E-02	2.0E-01	2.2E+00	1.8E+00	1.1E+00	1.4E-01
residential	REC_100M	486830.59	3618625.04	2.1E-01	1.8E-01	1.9E-01	1.9E-01	2.1E-01	2.4E-01	2.6E-01	2.8E-01	2.9E+05	6.7E-01	7.6E-01	1.0E-01	1.0E-01	2.7E-01	2.4E-02	2.4E-01	1.9E+00	1.5E+00	1.2E+00	1.3E-01
residential	REC_100M	486930.59	3618625.04	2.0E-01	1.7E-01	1.8E-01	1.8E-01	2.0E-01	2.2E-01	2.4E-01	2.6E-01	2.6E+05	6.0E-01	6.6E-01	9.8E-02	9.8E-02	3.1E-01	2.4E-02	2.7E-01	1.7E+00	1.3E+00	1.2E+00	1.3E-01
residential	REC_100M	487030.59	3618625.04	2.0E-01	1.7E-01	1.7E-01	1.7E-01	1.9E-01	2.1E-01	2.2E-01	2.4E-01	2.3E+05	5.3E-01	5.8E-01	9.4E-02	9.4E-02	3.5E-01	2.5E-02	3.1E-01	1.5E+00	1.1E+00	1.3E+00	1.2E-01
residential	REC_100M	487130.59	3618625.04	1.9E-01	1.6E-01	1.6E-01	1.7E-01	1.8E-01	2.0E-01	2.1E-01	2.2E-01	2.1E+05	4.8E-01	5.2E-01	9.1E-02	9.1E-02	4.2E-01	2.6E-02	3.6E-01	1.3E+00	9.7E-01	1.3E+00	1.2E-01
residential	REC_100M	487230.59	3618625.04	1.8E-01	1.5E-01	1.6E-01	1.6E-01	1.7E-01	1.8E-01	2.0E-01	2.1E-01	1.9E+05	4.4E-01	4.6E-01	8.8E-02	8.8E-02	5.1E-01	2.7E-02	4.2E-01	1.1E+00	8.5E-01	1.2E+00	1.1E-01
residential	REC_100M	487330.59	3618625.04	1.7E-01	1.5E-01	1.5E-01	1.5E-01	1.6E-01	1.7E-01	1.8E-01	2.0E-01	1.7E+05	4.1E-01	4.2E-01	8.5E-02	8.5E-02	6.5E-01	2.8E-02	5.1E-01	9.2E-01	7.5E-01	1.2E+00	1.1E-01
residential	REC_100M	487430.59	3618625.04	1.7E-01	1.4E-01	1.4E-01	1.5E-01	1.5E-01	1.6E-01	1.7E-01	1.9E-01	1.6E+05	3.8E-01	3.8E-01	8.2E-02	8.2E-02	8.4E-01	2.9E-02	6.5E-01	7.9E-01	6.7E-01	1.2E+00	1.0E-01

DPM SCALED CONCENTRATIONS

	B10_1_AUX	B10_2_AUX	B10_3_AUX	B10_4_AUX	B10_5_AUX	B10_6_AUX	B10_7_AUX	B10_8_AUX	CHE_1	LOC_SWTCHE MP	LOC_SWTCHL OA	OGV_PATH_ DPM	TR_28TH	TR_BAYMA R	TR_BOSTON	TR_CROSBY	TR_HARBOR CHA	TR_HARBOR SAM	TUG_PATH_D PM
divide by -->	4	4	4	4	2	2	2	2	1	2	2	1	1	1	1	1	1	1	1
	Refrigerated Containersfull TAMT plan unmit	Refrigerated Containersful l TAMT plan unmit	Refrigerated Containersful l TAMT plan unmit	Refrigerated Containersful l TAMT plan unmit	Multi-Purpose General Cargofull TAMT plan unmit	Multi-Purpose General Cargofull TAMT plan unmit	Dry Bulkfull TAMT plan unmit	Dry Bulkfull TAMT plan unmit	Allfull TAMT plan unmit	Allfull TAMT plan unmit	Allfull TAMT plan unmit	Allfull TAMT plan unmit	TR_28THfull TAMT plan unmit	TR_BAYMA Rfull TAMT plan unmit	TR_BOSTON full TAMT plan unmit	TR_CROSBYf ull TAMT plan unmit	TR_HARBOR CHAfull TAMT plan unmit	TR_HARBOR SAMfull TAMT plan unmit	Allfull TAMT plan unmit
g/s -->	7.6E-02	7.6E-02	7.6E-02	7.6E-02	1.7E-02	1.7E-02	1.9E-02	1.9E-02	8.9E-08	2.3E-03	2.3E-03	4.0E-02	7.8E-06	9.2E-06	2.4E-05	5.2E-05	1.1E-04	1.1E-04	2.4E-03
	1	3	5	7	9	11	13	15	17	18	19	21	22	23	24	25	26	27	28
486530.59	1.8E-02	1.6E-02	1.6E-02	1.7E-02	4.4E-03	5.0E-03	5.7E-03	6.1E-03	3.9E-02	2.4E-03	2.8E-03	4.6E-03	1.4E-06	1.9E-07	3.7E-06	1.3E-04	2.8E-04	1.0E-04	3.7E-04
486630.59	1.8E-02	1.5E-02	1.5E-02	1.6E-02	4.2E-03	4.7E-03	5.4E-03	5.8E-03	3.4E-02	2.1E-03	2.4E-03	4.4E-03	1.6E-06	2.0E-07	4.3E-06	1.2E-04	2.4E-04	1.2E-04	3.5E-04
486730.59	1.7E-02	1.4E-02	1.5E-02	1.5E-02	3.9E-03	4.4E-03	5.1E-03	5.5E-03	3.0E-02	1.8E-03	2.1E-03	4.3E-03	1.8E-06	2.1E-07	5.0E-06	1.1E-04	2.1E-04	1.3E-04	3.3E-04
486830.59	1.6E-02	1.4E-02	1.4E-02	1.5E-02	3.6E-03	4.1E-03	4.8E-03	5.1E-03	2.6E-02	1.6E-03	1.8E-03	4.1E-03	2.1E-06	2.2E-07	5.7E-06	1.0E-04	1.8E-04	1.4E-04	3.1E-04
486930.59	1.5E-02	1.3E-02	1.3E-02	1.4E-02	3.4E-03	3.8E-03	4.4E-03	4.8E-03	2.3E-02	1.4E-03	1.5E-03	3.9E-03	2.4E-06	2.2E-07	6.6E-06	8.9E-05	1.5E-04	1.4E-04	3.0E-04
487030.59	1.5E-02	1.3E-02	1.3E-02	1.3E-02	3.2E-03	3.6E-03	4.2E-03	4.5E-03	2.1E-02	1.3E-03	1.4E-03	3.8E-03	2.8E-06	2.3E-07	7.5E-06	7.7E-05	1.3E-04	1.4E-04	2.9E-04
487130.59	1.4E-02	1.2E-02	1.2E-02	1.3E-02	3.1E-03	3.4E-03	3.9E-03	4.2E-03	1.9E-02	1.1E-03	1.2E-03	3.7E-03	3.3E-06	2.4E-07	8.7E-06	6.5E-05	1.1E-04	1.4E-04	2.8E-04
487230.59	1.4E-02	1.2E-02	1.2E-02	1.2E-02	2.9E-03	3.2E-03	3.7E-03	3.9E-03	1.7E-02	1.0E-03	1.1E-03	3.5E-03	4.0E-06	2.5E-07	1.0E-05	5.5E-05	9.8E-05	1.4E-04	2.7E-04
487330.59	1.3E-02	1.1E-02	1.1E-02	1.2E-02	2.8E-03	3.0E-03	3.4E-03	3.7E-03	1.5E-02	9.6E-04	9.9E-04	3.4E-03	5.1E-06	2.6E-07	1.2E-05	4.7E-05	8.6E-05	1.4E-04	2.6E-04
487430.59	1.3E-02	1.1E-02	1.1E-02	1.1E-02	2.6E-03	2.8E-03	3.2E-03	3.4E-03	1.4E-02	8.8E-04	9.0E-04	3.3E-03	6.6E-06	2.7E-07	1.6E-05	4.1E-05	7.7E-05	1.4E-04	2.5E-04

	Vessel Hoteling: All	Refrigerated Containersfull TAMT plan unmit	Multi-Purpose General Cargofull TAMT plan unmit	Dry Bulkfull TAMT plan unmit	Vessel Transit: All	Refrigerated Containersfull TAMT plan unmit	Multi-Purpose General Cargoful l TAMT plan unmit	Dry Bulkfull TAMT plan unmit	Tug/Barge Transit: All	Refrigerated Containersfull TAMT plan unmit	Multi-Purpose General Cargoful l TAMT plan unmit	Dry Bulkfull TAMT plan unmit	Terminal E: All	Refrigerated Containersfull TAMT plan unmit
	100%	81%	9%	10%	100%	46%	25%	28%	100%	21%	54%	25%	100%	39%
486530.59	8.9E-02	7E-02	9E-03	1E-02	5E-03	2E-03	1E-03	1E-03	4E-04	8E-05	2E-04	9E-05	4E-02	2E-02
486630.59	8.4E-02	6E-02	9E-03	1E-02	4E-03	2E-03	1E-03	1E-03	3E-04	7E-05	2E-04	9E-05	3E-02	1E-02
486730.59	8.0E-02	6E-02	8E-03	1E-02	4E-03	2E-03	1E-03	1E-03	3E-04	7E-05	2E-04	8E-05	3E-02	1E-02
486830.59	7.6E-02	6E-02	8E-03	1E-02	4E-03	2E-03	1E-03	1E-03	3E-04	7E-05	2E-04	8E-05	3E-02	1E-02
486930.59	7.3E-02	6E-02	7E-03	9E-03	4E-03	2E-03	1E-03	1E-03	3E-04	6E-05	2E-04	8E-05	2E-02	9E-03
487030.59	6.9E-02	5E-02	7E-03	9E-03	4E-03	2E-03	1E-03	1E-03	3E-04	6E-05	2E-04	7E-05	2E-02	8E-03
487130.59	6.6E-02	5E-02	6E-03	8E-03	4E-03	2E-03	9E-04	1E-03	3E-04	6E-05	1E-04	7E-05	2E-02	7E-03
487230.59	6.3E-02	5E-02	6E-03	8E-03	4E-03	2E-03	9E-04	1E-03	3E-04	6E-05	1E-04	7E-05	2E-02	7E-03
487330.59	6.0E-02	5E-02	6E-03	7E-03	3E-03	2E-03	9E-04	1E-03	3E-04	5E-05	1E-04	6E-05	2E-02	6E-03
487430.59	5.8E-02	5E-02	5E-03	7E-03	3E-03	2E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	1E-02	6E-03

TAMT Risk Assessment - DPM Cancer and Chronic HI

AERMOD UNITIZED CONCENTRATIONS

AERMOD Output

Source Group in AERMOD

	Discrete Receptor ID (Group Name)	X	Y	B10_1_AUX (1)	B10_2_AUX (3)	B10_3_AUX (5)	B10_4_AUX (7)	B10_5_AUX (9)	B10_6_AUX (11)	B10_7_AUX (13)	B10_8_AUX (15)	CHE_1 (17)
recreational	park	484030.59	3619025.04	1.3E-01	1.2E-01	1.1E-01	9.9E-02	8.6E-02	7.5E-02	7.5E-02	7.4E-02	5.5E+04
recreational	park	484130.59	3619025.04	1.3E-01	1.3E-01	1.1E-01	1.0E-01	8.7E-02	7.7E-02	7.6E-02	7.4E-02	5.9E+04
recreational	park	484230.59	3619025.04	1.3E-01	1.3E-01	1.1E-01	1.0E-01	8.9E-02	7.9E-02	7.8E-02	7.7E-02	6.4E+04
recreational	park	484330.59	3619025.04	1.3E-01	1.4E-01	1.2E-01	1.1E-01	9.4E-02	8.3E-02	8.2E-02	8.0E-02	7.0E+04
recreational	park	484430.59	3619025.04	1.3E-01	1.4E-01	1.2E-01	1.1E-01	9.1E-02	8.1E-02	7.8E-02	7.8E-02	7.1E+04
residential	REC_100M	484530.59	3619025.04	1.4E-01	1.5E-01	1.3E-01	1.2E-01	1.0E-01	8.9E-02	8.7E-02	8.5E-02	9.0E+04
residential	REC_100M	484630.59	3619025.04	1.4E-01	1.7E-01	1.4E-01	1.2E-01	1.1E-01	9.3E-02	9.0E-02	8.8E-02	1.0E+05
residential	REC_100M	484730.59	3619025.04	1.5E-01	2.0E-01	1.5E-01	1.3E-01	1.1E-01	9.8E-02	9.5E-02	9.2E-02	1.2E+05
residential	REC_100M	484830.59	3619025.04	1.6E-01	2.3E-01	1.7E-01	1.4E-01	1.2E-01	1.0E-01	9.9E-02	9.6E-02	1.5E+05
residential	REC_100M	484930.59	3619025.04	1.9E-01	2.6E-01	1.9E-01	1.6E-01	1.3E-01	1.1E-01	1.0E-01	9.9E-02	1.8E+05
residential	REC_100M	485030.59	3619025.04	2.2E-01	3.0E-01	2.1E-01	1.7E-01	1.4E-01	1.2E-01	1.1E-01	1.0E-01	2.3E+05
residential	REC_100M	485130.59	3619025.04	2.6E-01	3.2E-01	2.3E-01	1.9E-01	1.5E-01	1.2E-01	1.1E-01	1.1E-01	2.9E+05
residential	REC_100M	485230.59	3619025.04	3.0E-01	3.5E-01	2.6E-01	2.2E-01	1.7E-01	1.4E-01	1.2E-01	1.1E-01	3.8E+05
residential	REC_100M	485330.59	3619025.04	3.5E-01	3.6E-01	2.8E-01	2.4E-01	1.9E-01	1.5E-01	1.3E-01	1.2E-01	4.7E+05
residential	REC_100M	485430.59	3619025.04	3.7E-01	3.6E-01	3.1E-01	2.6E-01	2.1E-01	1.7E-01	1.5E-01	1.4E-01	5.9E+05
residential	REC_100M	485530.59	3619025.04	3.8E-01	3.5E-01	3.2E-01	2.8E-01	2.2E-01	1.8E-01	1.7E-01	1.5E-01	6.5E+05
residential	REC_100M	485630.59	3619025.04	3.8E-01	3.3E-01	3.3E-01	2.9E-01	2.4E-01	2.0E-01	1.8E-01	1.7E-01	7.0E+05
residential	REC_100M	485730.59	3619025.04	3.6E-01	3.2E-01	3.3E-01	3.1E-01	2.6E-01	2.2E-01	2.0E-01	1.9E-01	7.3E+05
residential	REC_100M	485830.59	3619025.04	3.5E-01	3.0E-01	3.3E-01	3.1E-01	2.7E-01	2.3E-01	2.2E-01	2.0E-01	7.3E+05
residential	REC_100M	485930.59	3619025.04	3.3E-01	2.8E-01	3.1E-01	3.1E-01	2.8E-01	2.4E-01	2.3E-01	2.2E-01	7.1E+05
residential	REC_100M	486030.59	3619025.04	3.1E-01	2.6E-01	3.0E-01	3.0E-01	2.8E-01	2.5E-01	2.4E-01	2.3E-01	6.6E+05
residential	REC_100M	486230.59	3619025.04	2.7E-01	2.3E-01	2.7E-01	2.8E-01	2.9E-01	2.7E-01	2.7E-01	2.6E-01	5.2E+05
residential	REC_100M	486330.59	3619025.04	2.6E-01	2.2E-01	2.5E-01	2.8E-01	2.9E-01	2.7E-01	2.8E-01	2.8E-01	4.4E+05
residential	REC_100M	486430.59	3619025.04	2.4E-01	2.0E-01	2.4E-01	2.6E-01	2.8E-01	2.8E-01	2.9E-01	2.9E-01	3.8E+05
residential	REC_100M	486530.59	3619025.04	2.2E-01	1.9E-01	2.2E-01	2.4E-01	2.7E-01	2.7E-01	2.8E-01	3.0E-01	3.4E+05
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
residential	REC_100M	485330.59	3619225.04	2.8E-01	3.1E-01	2.4E-01	2.1E-01	1.7E-01	1.4E-01	1.2E-01	1.1E-01	3.4E+05
residential	REC_100M	485430.59	3619225.04	3.1E-01	3.1E-01	2.6E-01	2.2E-01	1.8E-01	1.5E-01	1.4E-01	1.2E-01	4.0E+05
residential	REC_100M	485530.59	3619225.04	3.3E-01	3.2E-01	2.7E-01	2.4E-01	2.0E-01	1.6E-01	1.5E-01	1.4E-01	4.4E+05
residential	REC_100M	485630.59	3619225.04	3.4E-01	3.1E-01	2.8E-01	2.5E-01	2.1E-01	1.7E-01	1.6E-01	1.5E-01	4.7E+05
residential	REC_100M	485730.59	3619225.04	3.4E-01	3.0E-01	2.9E-01	2.6E-01	2.2E-01	1.9E-01	1.8E-01	1.6E-01	5.0E+05
residential	REC_100M	485830.59	3619225.04	3.3E-01	2.9E-01	2.9E-01	2.7E-01	2.4E-01	2.0E-01	1.9E-01	1.8E-01	5.3E+05
residential	REC_100M	485930.59	3619225.04	3.2E-01	2.8E-01	2.9E-01	2.8E-01	2.5E-01	2.1E-01	2.0E-01	1.9E-01	5.3E+05
residential	REC_100M	486030.59	3619225.04	3.1E-01	2.7E-01	2.8E-01	2.8E-01	2.5E-01	2.2E-01	2.1E-01	2.0E-01	5.1E+05
residential	REC_100M	486230.59	3619225.04	2.8E-01	2.3E-01	2.6E-01	2.7E-01	2.6E-01	2.3E-01	2.3E-01	2.3E-01	4.4E+05
residential	REC_100M	486330.59	3619225.04	2.6E-01	2.2E-01	2.5E-01	2.6E-01	2.6E-01	2.4E-01	2.4E-01	2.4E-01	3.9E+05
residential	REC_100M	486430.59	3619225.04	2.5E-01	2.1E-01	2.4E-01	2.5E-01	2.6E-01	2.4E-01	2.5E-01	2.5E-01	3.5E+05
residential	REC_100M	486530.59	3619225.04	2.3E-01	1.9E-01	2.3E-01	2.4E-01	2.5E-01	2.4E-01	2.5E-01	2.6E-01	3.1E+05
residential	REC_100M	486630.59	3619225.04	2.1E-01	1.8E-01	2.1E-01	2.3E-01	2.4E-01	2.4E-01	2.5E-01	2.6E-01	2.8E+05
residential	REC_100M	486730.59	3619225.04	2.0E-01	1.7E-01	2.0E-01	2.1E-01	2.3E-01	2.4E-01	2.5E-01	2.6E-01	2.5E+05
residential	REC_100M	486830.59	3619225.04	1.8E-01	1.6E-01	1.8E-01	2.0E-01	2.2E-01	2.3E-01	2.4E-01	2.5E-01	2.2E+05
residential	REC_100M	486930.59	3619225.04	1.7E-01	1.5E-01	1.7E-01	1.9E-01	2.1E-01	2.2E-01	2.3E-01	2.4E-01	2.2E+05
residential	REC_100M	487030.59	3619225.04	1.6E-01	1.4E-01	1.6E-01	1.7E-01	1.9E-01	2.1E-01	2.2E-01	2.4E-01	1.8E+05
residential	REC_100M	487130.59	3619225.04	1.5E-01	1.3E-01	1.5E-01	1.6E-01	1.8E-01	1.9E-01	2.1E-01	2.2E-01	1.5E+05
residential	REC_100M	487230.59	3619225.04	1.4E-01	1.3E-01	1.4E-01	1.5E-01	1.7E-01	1.9E-01	2.0E-01	2.1E-01	1.5E+05
residential	REC_100M	487330.59	3619225.04	1.4E-01	1.2E-01	1.4E-01	1.5E-01	1.6E-01	1.8E-01	1.9E-01	2.0E-01	1.5E+05
residential	REC_100M	487430.59	3619225.04	1.3E-01	1.2E-01	1.3E-01	1.4E-01	1.5E-01	1.7E-01	1.8E-01	1.9E-01	1.4E+05
residential	REC_100M	487530.59	3619225.04	1.3E-01	1.1E-01	1.2E-01	1.3E-01	1.4E-01	1.6E-01	1.7E-01	1.8E-01	1.3E+05
residential	REC_100M	487630.59	3619225.04	1.2E-01	1.1E-01	1.2E-01	1.2E-01	1.4E-01	1.5E-01	1.6E-01	1.7E-01	1.2E+05
residential	REC_100M	487730.59	3619225.04	1.1E-01	1.0E-01	1.1E-01	1.2E-01	1.3E-01	1.4E-01	1.5E-01	1.6E-01	1.0E+05
residential	REC_100M	487830.59	3619225.04	1.1E-01	9.9E-02	1.1E-01	1.1E-01	1.2E-01	1.3E-01	1.4E-01	1.5E-01	1.0E+05
residential	REC_100M	487930.59	3619225.04	1.1E-01	9.8E-02	1.0E-01	1.1E-01	1.2E-01	1.3E-01	1.4E-01	1.5E-01	1.0E+05

DPM SCALED CONCENTRATIONS

Vessel Hoteling | Vessel Transit | Tug/Barge Transit | Terminal E

TAMT Risk Assessment - DPM Cancer and Chronic HI

AERMOD UNITIZED CONCENTRATIONS

DPM SCALED CONCENTRATIONS

Vessel Hoteling | Vessel Transit | Tug/Barge Transit | Terminal E

AERMOD Output

Source Group in AERMOD: 1, 3, 5, 7, 9, 11, 13, 15, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28

Source groups: B10_1_AUX, B10_2_AUX, B10_3_AUX, B10_4_AUX, B10_5_AUX, B10_6_AUX, B10_7_AUX, B10_8_AUX, CHE_1, LOC_SWTCH EMP, LOC_SWTCH LOA, OGV_PATH BLR, OGV_PATH _DPM, TR_28TH, TR_BAYMA R, TR_BOSTON, TR_CROSBY, TR_HARBOR CHA, TR_HARBOR SAM, TUG_PATH _DPM

DPM scaled concentrations: divide by --> 4, 4, 4, 4, 2, 2, 2, 2, 1, 2, 2, 1, 1, 1, 1, 1, 1, 1, 1 (sources: Refrigerated Containersfull TAMT plan unmit ×4; Multi-Purpose General Cargofull TAMT plan unmit ×2; Dry Bulkfull TAMT plan unmit ×2; Allfull TAMT plan unmit; Allfull TAMT plan unmit; Allfull TAMT plan unmit; Allfull TAMT plan unmit; TR_28THfull TAMT plan unmit; TR_BAYMARfull TAMT plan unmit; TR_BOSTON full TAMT plan unmit; TR_CROSBYfull TAMT plan unmit; TR_HARBOR CHAfull TAMT plan unmit; TR_HARBOR SAMfull TAMT plan unmit; Allfull TAMT plan unmit)

g/s --> 7.6E-02, 7.6E-02, 7.6E-02, 7.6E-02, 1.7E-02, 1.7E-02, 1.9E-02, 1.9E-02, 8.9E-08, 2.3E-03, 2.3E-03, 4.0E-02, 7.8E-06, 9.2E-06, 2.4E-05, 5.2E-05, 1.1E-04, 1.1E-04, 2.4E-03

Vessel Hoteling: All 100%, Refrigerated Containersfull TAMT plan unmit 81%, Multi-Purpose General Cargofull TAMT plan unmit 9%, Dry Bulkfull TAMT plan unmit 10%

Vessel Transit: All 100%, Refrigerated Containersfull TAMT plan unmit 46%, Multi-Purpose General Cargofull TAMT plan unmit 25%, Dry Bulkfull TAMT plan unmit 28%

Tug/Barge Transit: All 100%, Refrigerated Containersfull TAMT plan unmit 21%, Multi-Purpose General Cargofull TAMT plan unmit 54%, Dry Bulkfull TAMT plan unmit 25%

Terminal E: All 100%, Refrigerated Containersfull TAMT plan unmit 39%

	Discrete Receptor ID (Group Name)	X	Y	B10_1_AUX	B10_2_AUX	B10_3_AUX	B10_4_AUX	B10_5_AUX	B10_6_AUX	B10_7_AUX	B10_8_AUX	CHE_1
residential	REC_100M	488030.59	3619225.04	1.1E-01	9.6E-02	1.0E-01	1.1E-01	1.1E-01	1.2E-01	1.3E-01	1.4E-01	9.6E+04
residential	REC_100M	476730.59	3619325.04	1.5E-02	1.5E-02	1.4E-02	1.4E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	6.4E+03
residential	REC_100M	476830.59	3619325.04	1.5E-02	1.5E-02	1.5E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	1.2E-02	6.5E+03
residential	REC_100M	476930.59	3619325.04	1.5E-02	1.6E-02	1.5E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	1.3E-02	6.5E+03
residential	REC_100M	477030.59	3619325.04	1.6E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	6.5E+03
residential	REC_100M	477130.59	3619325.04	1.6E-02	1.6E-02	1.5E-02	1.5E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	6.7E+03
residential	REC_100M	477230.59	3619325.04	1.7E-02	1.7E-02	1.6E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	7.5E+03
residential	REC_100M	477330.59	3619325.04	1.8E-02	1.8E-02	1.7E-02	1.6E-02	1.6E-02	1.5E-02	1.5E-02	1.5E-02	8.0E+03
residential	REC_100M	477430.59	3619325.04	1.9E-02	1.9E-02	1.8E-02	1.7E-02	1.6E-02	1.5E-02	1.5E-02	1.5E-02	8.4E+03
residential	REC_100M	477530.59	3619325.04	1.9E-02	2.0E-02	1.9E-02	1.8E-02	1.7E-02	1.6E-02	1.6E-02	1.6E-02	8.7E+03
residential	REC_100M	477630.59	3619325.04	2.0E-02	2.1E-02	1.9E-02	1.8E-02	1.7E-02	1.7E-02	1.6E-02	1.6E-02	9.0E+03
residential	REC_100M	477730.59	3619325.04	2.1E-02	2.1E-02	2.0E-02	1.9E-02	1.8E-02	1.7E-02	1.7E-02	1.7E-02	9.2E+03
recreational	park	477830.59	3619325.04	2.2E-02	2.3E-02	2.1E-02	2.0E-02	1.9E-02	1.8E-02	1.8E-02	1.8E-02	1.0E+04
recreational	park	478430.59	3619325.04	2.5E-02	2.5E-02	2.3E-02	2.2E-02	2.1E-02	2.0E-02	2.0E-02	1.9E-02	1.1E+04
recreational	park	478530.59	3619325.04	2.5E-02	2.6E-02	2.4E-02	2.3E-02	2.1E-02	2.0E-02	2.0E-02	2.0E-02	1.1E+04
recreational	park	478630.59	3619325.04	2.6E-02	2.7E-02	2.5E-02	2.3E-02	2.2E-02	2.1E-02	2.1E-02	2.0E-02	1.2E+04
recreational	park	483530.59	3619325.04	9.1E-02	9.1E-02	7.9E-02	7.2E-02	6.3E-02	5.6E-02	5.6E-02	5.5E-02	3.3E+04
recreational	park	483830.59	3619325.04	9.5E-02	9.6E-02	8.3E-02	7.6E-02	6.7E-02	6.0E-02	5.9E-02	5.8E-02	3.8E+04
recreational	park	483930.59	3619325.04	1.0E-01	1.0E-01	8.7E-02	7.9E-02	6.9E-02	6.2E-02	6.1E-02	6.0E-02	4.0E+04
residential	REC_100M	484030.59	3619325.04	1.0E-01	1.0E-01	9.1E-02	8.2E-02	7.2E-02	6.4E-02	6.3E-02	6.2E-02	4.3E+04
residential	REC_100M	484130.59	3619325.04	1.1E-01	1.1E-01	9.5E-02	8.6E-02	7.5E-02	6.7E-02	6.5E-02	6.4E-02	4.7E+04
residential	REC_100M	484230.59	3619325.04	1.1E-01	1.1E-01	9.8E-02	8.8E-02	7.7E-02	6.9E-02	6.7E-02	6.5E-02	5.2E+04
residential	REC_100M	484330.59	3619325.04	1.1E-01	1.2E-01	1.0E-01	9.0E-02	8.0E-02	7.0E-02	6.8E-02	6.6E-02	5.8E+04
residential	REC_100M	484430.59	3619325.04	1.1E-01	1.3E-01	1.0E-01	9.3E-02	8.1E-02	7.2E-02	7.0E-02	6.8E-02	6.2E+04
residential	REC_100M	484530.59	3619325.04	1.2E-01	1.4E-01	1.1E-01	9.9E-02	8.5E-02	7.4E-02	7.2E-02	7.0E-02	7.1E+04
residential	REC_100M	484630.59	3619325.04	1.3E-01	1.5E-01	1.2E-01	1.1E-01	9.0E-02	7.9E-02	7.5E-02	7.3E-02	8.3E+04
residential	REC_100M	484730.59	3619325.04	1.4E-01	1.7E-01	1.3E-01	1.1E-01	9.7E-02	8.4E-02	7.9E-02	7.7E-02	9.7E+04
residential	REC_100M	484830.59	3619325.04	1.5E-01	1.9E-01	1.5E-01	1.3E-01	1.0E-01	8.8E-02	8.4E-02	7.9E-02	1.1E+05
residential	REC_100M	484930.59	3619325.04	1.7E-01	2.1E-01	1.6E-01	1.4E-01	1.1E-01	9.4E-02	8.8E-02	8.3E-02	1.4E+05
residential	REC_100M	485030.59	3619325.04	1.9E-01	2.3E-01	1.8E-01	1.5E-01	1.2E-01	1.0E-01	9.3E-02	8.7E-02	1.6E+05
residential	REC_100M	485130.59	3619325.04	2.1E-01	2.5E-01	1.9E-01	1.6E-01	1.3E-01	1.1E-01	1.0E-01	9.2E-02	2.0E+05
residential	REC_100M	485230.59	3619325.04	2.4E-01	2.7E-01	2.1E-01	1.8E-01	1.5E-01	1.2E-01	1.1E-01	9.9E-02	2.5E+05
residential	REC_100M	485330.59	3619325.04	2.6E-01	2.8E-01	2.3E-01	2.0E-01	1.6E-01	1.3E-01	1.2E-01	1.1E-01	3.0E+05
residential	REC_100M	485430.59	3619325.04	2.8E-01	2.9E-01	2.4E-01	2.1E-01	1.7E-01	1.4E-01	1.3E-01	1.2E-01	3.4E+05
residential	REC_100M	485530.59	3619325.04	3.0E-01	3.0E-01	2.5E-01	2.2E-01	1.9E-01	1.5E-01	1.4E-01	1.3E-01	3.8E+05
residential	REC_100M	485630.59	3619325.04	3.1E-01	3.0E-01	2.6E-01	2.3E-01	2.0E-01	1.7E-01	1.5E-01	1.4E-01	4.1E+05
residential	REC_100M	485730.59	3619325.04	3.2E-01	2.9E-01	2.7E-01	2.4E-01	2.1E-01	1.8E-01	1.7E-01	1.6E-01	4.3E+05
residential	REC_100M	485830.59	3619325.04	3.1E-01	2.9E-01	2.8E-01	2.5E-01	2.2E-01	1.9E-01	1.8E-01	1.7E-01	4.6E+05
residential	REC_100M	485930.59	3619325.04	3.1E-01	2.8E-01	2.8E-01	2.6E-01	2.3E-01	2.0E-01	1.9E-01	1.8E-01	4.6E+05
residential	REC_100M	486030.59	3619325.04	3.0E-01	2.6E-01	2.7E-01	2.6E-01	2.4E-01	2.1E-01	2.0E-01	1.9E-01	4.5E+05
residential	REC_100M	486230.59	3619325.04	2.7E-01	2.3E-01	2.6E-01	2.6E-01	2.4E-01	2.2E-01	2.1E-01	2.1E-01	4.0E+05
residential	REC_100M	486330.59	3619325.04	2.6E-01	2.2E-01	2.5E-01	2.5E-01	2.5E-01	2.2E-01	2.2E-01	2.2E-01	3.6E+05
residential	REC_100M	486430.59	3619325.04	2.5E-01	2.1E-01	2.4E-01	2.5E-01	2.5E-01	2.3E-01	2.3E-01	2.3E-01	3.2E+05
residential	REC_100M	486530.59	3619325.04	2.3E-01	1.9E-01	2.3E-01	2.4E-01	2.4E-01	2.3E-01	2.4E-01	2.4E-01	2.9E+05
residential	REC_100M	486630.59	3619325.04	2.2E-01	1.8E-01	2.1E-01	2.3E-01	2.4E-01	2.3E-01	2.4E-01	2.4E-01	2.6E+05
residential	REC_100M	486730.59	3619325.04	2.0E-01	1.7E-01	2.0E-01	2.1E-01	2.3E-01	2.3E-01	2.3E-01	2.4E-01	2.3E+05
residential	REC_100M	486830.59	3619325.04	1.8E-01	1.6E-01	1.8E-01	2.0E-01	2.1E-01	2.2E-01	2.3E-01	2.4E-01	2.0E+05
residential	REC_100M	486930.59	3619325.04	1.7E-01	1.5E-01	1.7E-01	1.9E-01	2.0E-01	2.1E-01	2.2E-01	2.3E-01	1.9E+05
residential	REC_100M	487030.59	3619325.04	1.6E-01	1.4E-01	1.6E-01	1.7E-01	1.9E-01	2.0E-01	2.1E-01	2.3E-01	1.7E+05
residential	REC_100M	487130.59	3619325.04	1.5E-01	1.3E-01	1.5E-01	1.6E-01	1.8E-01	1.9E-01	2.0E-01	2.2E-01	1.6E+05
residential	REC_100M	487230.59	3619325.04	1.4E-01	1.3E-01	1.4E-01	1.5E-01	1.7E-01	1.9E-01	2.0E-01	2.1E-01	1.6E+05
residential	REC_100M	487330.59	3619325.04	1.4E-01	1.2E-01	1.3E-01	1.4E-01	1.6E-01	1.8E-01	1.9E-01	2.0E-01	1.4E+05
residential	REC_100M	487430.59	3619325.04	1.3E-01	1.2E-01	1.3E-01	1.4E-01	1.5E-01	1.7E-01	1.8E-01	1.9E-01	1.4E+05
residential	REC_100M	487530.59	3619325.04	1.2E-01	1.1E-01	1.2E-01	1.3E-01	1.4E-01	1.6E-01	1.7E-01	1.8E-01	1.2E+05
residential	REC_100M	487630.59	3619325.04	1.2E-01	1.1E-01	1.2E-01	1.2E-01	1.4E-01	1.5E-01	1.6E-01	1.7E-01	1.2E+05
residential	REC_100M	487730.59	3619325.04	1.1E-01	1.0E-01	1.1E-01	1.2E-01	1.3E-01	1.4E-01	1.5E-01	1.6E-01	1.0E+05
residential	REC_100M	487830.59	3619325.04	1.1E-01	9.6E-02	1.0E-01	1.1E-01	1.2E-01	1.3E-01	1.4E-01	1.5E-01	9.6E+04
residential	REC_100M	487930.59	3619325.04	1.0E-01	9.4E-02	1.0E-01	1.1E-01	1.2E-01	1.3E-01	1.4E-01	1.4E-01	9.4E+04
residential	REC_100M	476730.59	3619425.04	1.5E-02	1.5E-02	1.4E-02	1.4E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	6.2E+03
residential	REC_100M	476830.59	3619425.04	1.5E-02	1.5E-02	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	6.3E+03

TAMT Risk Assessment - DPM Cancer and Chronic HI

AERMOD Output

				AERMOD UNITIZED CONCENTRATIONS																				DPM SCALED CONCENTRATIONS																			Vessel Hoteling				Vessel Transit				Tug/Barge Transit				Terminal E	
																							divide by -->	4	4	4	4	2	2	2	2	1	2	2	1	1	1	1	1	1	1	1														
																								Refrigerated Containersfull TAMT plan unmit	Refrigerated Containersful l TAMT plan unmit	Refrigerated Containersful l TAMT plan unmit	Refrigerated Containersful l TAMT plan unmit	Multi-Purpose General Cargofull TAMT plan unmit	Multi-Purpose General Cargofull TAMT plan unmit	Dry Bulkfull TAMT plan unmit	Dry Bulkfull TAMT plan unmit	Allfull TAMT plan unmit	Allfull TAMT plan unmit	Allfull TAMT plan unmit	Allfull TAMT plan unmit	TR_28THfull TAMT plan unmit	TR_BAYMA Rfull TAMT plan unmit	TR_BOSTON full TAMT plan unmit	TR_CROSBYf ull TAMT plan unmit	TR_HARBOR CHAfull TAMT plan unmit	TR_HARBOR SAMfull TAMT plan unmit	Allfull TAMT plan unmit	All	Refrigerated Containersfu ll TAMT plan unmit	Multi-Purpose General Cargofull TAMT plan unmit	Dry Bulkfull TAMT plan unmit	All	Refrigerated Containersfull TAMT plan unmit	Multi-Purpose General Cargoful l TAMT plan unmit	Dry Bulkfull TAMT plan unmit	All	Refrigerated Containersfull TAMT plan unmit	Multi-Purpose General Cargoful l TAMT plan unmit	Dry Bulkfull TAMT plan unmit	All	Refrigerated Containersfull TAMT plan unmit
				Source Group in AERMOD																			g/s -->	7.6E-02	7.6E-02	7.6E-02	7.6E-02	1.7E-02	1.7E-02	1.9E-02	1.9E-02	8.9E-08	2.3E-03	2.3E-03	4.0E-02	7.8E-06	9.2E-06	2.4E-05	5.2E-05	1.1E-04	1.1E-04	2.4E-03	100%	81%	9%	10%	100%	46%	25%	28%	100%	21%	54%	25%	100%	39%
				1	3	5	7	9	11	13	15	17	18	19	20	21	22	23	24	25	26	27	28	1	3	5	7	9	11	13	15	17	18	19	21	22	23	24	25	26	27	28														
	Discrete Receptor ID (Group Name)	X	Y	B10_1_AUX	B10_2_AUX	B10_3_AUX	B10_4_AUX	B10_5_AUX	B10_6_AUX	B10_7_AUX	B10_8_AUX	CHE_1	LOC_SWTCH EMP	LOC_SWTCH LOA	OGV_PATH _BLR	OGV_PATH _DPM	TR_28TH	TR_BAYMA R	TR_BOSTON	TR_CROSBY	TR_HARBOR CHA	TR_HARBOR SAM	TUG_PATH _DPM	B10_1_AUX	B10_2_AUX	B10_3_AUX	B10_4_AUX	B10_5_AUX	B10_6_AUX	B10_7_AUX	B10_8_AUX	CHE_1	LOC_SWTCHE MP	LOC_SWTCHL OA	OGV_PATH_ DPM	TR_28TH	TR_BAYMA R	TR_BOSTON	TR_CROSBY	TR_HARBOR CHA	TR_HARBOR SAM	TUG_PATH_D PM														
residential	REC_100M	485730.59	3619525.04	2.8E-01	2.7E-01	2.4E-01	2.1E-01	1.8E-01	1.6E-01	1.5E-01	1.4E-01	3.3E+05	5.0E-01	3.9E-01	1.4E-01	1.4E-01	6.3E-02	1.5E-02	5.8E-02	3.2E-01	8.0E-01	1.2E-01	1.9E-01	2.1E-02	2.0E-02	1.8E-02	1.6E-02	3.2E-03	2.7E-03	2.8E-03	2.6E-03	2.9E-02	1.2E-03	9.2E-04	5.5E-03	4.9E-07	1.4E-07	1.4E-06	1.7E-05	9.2E-05	1.4E-05	4.6E-04	8.7E-02	8E-02	6E-03	5E-03	5E-03	3E-03	1E-03	2E-03	5E-04	9E-05	2E-04	1E-04	3E-02	1E-02
residential	REC_100M	485830.59	3619525.04	2.8E-01	2.6E-01	2.4E-01	2.2E-01	1.9E-01	1.7E-01	1.6E-01	1.5E-01	3.5E+05	5.5E-01	4.4E-01	1.3E-01	1.3E-01	6.8E-02	1.6E-02	6.3E-02	3.9E-01	9.1E-01	1.3E-01	1.8E-01	2.1E-02	2.0E-02	1.8E-02	1.7E-02	3.3E-03	2.9E-03	3.0E-03	2.8E-03	3.1E-02	1.3E-03	1.0E-03	5.3E-03	5.4E-07	1.4E-07	1.5E-06	2.0E-05	1.0E-04	1.5E-05	4.4E-04	8.8E-02	8E-02	6E-03	6E-03	5E-03	2E-03	1E-03	2E-03	4E-04	9E-05	2E-04	1E-04	3E-02	1E-02
residential	REC_100M	485930.59	3619525.04	2.8E-01	2.6E-01	2.5E-01	2.3E-01	2.0E-01	1.7E-01	1.7E-01	1.6E-01	3.5E+05	6.0E-01	4.8E-01	1.3E-01	1.3E-01	7.5E-02	1.6E-02	6.8E-02	4.8E-01	1.0E+00	1.5E-01	1.8E-01	2.1E-02	2.0E-02	1.9E-02	1.7E-02	3.5E-03	3.0E-03	3.1E-03	3.0E-03	3.2E-02	1.4E-03	1.1E-03	5.2E-03	5.9E-07	1.5E-07	1.7E-06	2.5E-05	1.1E-04	1.7E-05	4.2E-04	8.9E-02	8E-02	6E-03	6E-03	5E-03	2E-03	1E-03	1E-03	4E-04	9E-05	2E-04	1E-04	3E-02	1E-02
residential	REC_100M	486030.59	3619525.04	2.8E-01	2.5E-01	2.5E-01	2.3E-01	2.1E-01	1.8E-01	1.8E-01	1.7E-01	3.4E+05	6.1E-01	5.0E-01	1.2E-01	1.2E-01	8.2E-02	1.6E-02	7.2E-02	5.7E-01	1.0E+00	1.7E-01	1.7E-01	2.1E-02	1.9E-02	1.9E-02	1.7E-02	3.6E-03	3.1E-03	3.3E-03	3.2E-03	3.0E-02	1.4E-03	1.2E-03	4.9E-03	6.5E-07	1.5E-07	1.7E-06	2.9E-05	1.2E-04	1.9E-05	4.0E-04	8.9E-02	8E-02	7E-03	6E-03	5E-03	2E-03	1E-03	1E-03	4E-04	8E-05	2E-04	1E-04	3E-02	1E-02
residential	REC_100M	486130.59	3619525.04	2.7E-01	2.4E-01	2.4E-01	2.3E-01	2.1E-01	1.9E-01	1.8E-01	1.8E-01	3.5E+05	6.5E-01	5.4E-01	1.2E-01	1.2E-01	9.0E-02	1.7E-02	8.2E-02	6.5E-01	1.1E+00	1.9E-01	1.6E-01	2.1E-02	1.8E-02	1.8E-02	1.8E-02	3.7E-03	3.2E-03	3.4E-03	3.3E-03	3.1E-02	1.5E-03	1.3E-03	4.8E-03	7.1E-07	1.6E-07	2.0E-06	3.3E-05	1.3E-04	2.2E-05	3.8E-04	8.9E-02	7E-02	7E-03	7E-03	5E-03	2E-03	1E-03	1E-03	4E-04	8E-05	2E-04	1E-04	3E-02	1E-02
residential	REC_100M	487730.59	3619525.04	1.1E-01	9.9E-02	1.1E-01	1.2E-01	1.3E-01	1.4E-01	1.5E-01	1.6E-01	1.0E+05	2.4E-01	2.6E-01	6.2E-02	6.2E-02	4.5E-01	2.6E-02	4.1E-01	4.9E-01	4.0E-01	4.5E-01	7.7E-02	8.4E-03	7.5E-03	8.3E-03	8.9E-03	2.2E-03	2.4E-03	2.8E-03	2.9E-03	9.2E-03	5.6E-04	6.0E-04	2.5E-03	3.5E-06	2.4E-07	1.0E-05	2.5E-05	4.6E-05	5.2E-05	1.8E-04	4.3E-02	3E-02	5E-03	6E-03	2E-03	1E-03	6E-04	7E-04	2E-04	4E-05	1E-04	5E-05	9E-03	4E-03
residential	REC_100M	476730.59	3619625.04	1.4E-02	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	5.7E+03	1.2E-02	1.2E-02	4.9E-02	4.9E-02	1.1E-02	4.7E-03	1.1E-02	1.3E-02	1.6E-02	1.2E-02	4.6E-02	1.1E-03	1.1E-03	1.0E-03	1.0E-03	2.2E-04	2.1E-04	2.2E-04	2.2E-04	5.1E-04	2.9E-05	2.7E-05	2.0E-03	8.9E-08	4.3E-08	2.7E-07	7.0E-07	1.9E-06	1.3E-06	1.1E-04	5.1E-03	4E-03	4E-04	4E-04	2E-03	9E-04	5E-04	6E-04	1E-04	2E-05	6E-05	3E-05	5E-04	2E-04
residential	REC_100M	476830.59	3619625.04	1.4E-02	1.5E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	5.8E+03	1.2E-02	1.2E-02	5.1E-02	5.1E-02	1.1E-02	4.7E-03	1.1E-02	1.4E-02	1.7E-02	1.2E-02	4.8E-02	1.1E-03	1.1E-03	1.0E-03	1.0E-03	2.2E-04	2.1E-04	2.2E-04	2.2E-04	5.2E-04	2.9E-05	2.8E-05	2.0E-03	9.0E-08	4.3E-08	2.7E-07	7.1E-07	1.9E-06	1.4E-06	1.1E-04	5.1E-03	4E-03	4E-04	4E-04	2E-03	9E-04	5E-04	6E-04	1E-04	2E-05	6E-05	3E-05	5E-04	2E-04
residential	REC_100M	476930.59	3619625.04	1.5E-02	1.5E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	5.8E+03	1.2E-02	1.2E-02	5.2E-02	5.2E-02	1.1E-02	4.6E-03	1.1E-02	1.4E-02	1.7E-02	1.2E-02	5.0E-02	1.1E-03	1.1E-03	1.1E-03	1.0E-03	2.2E-04	2.1E-04	2.3E-04	2.2E-04	5.1E-04	2.9E-05	2.8E-05	2.1E-03	8.9E-08	4.2E-08	2.7E-07	7.0E-07	1.9E-06	1.4E-06	1.2E-04	5.2E-03	4E-03	4E-04	5E-04	2E-03	1E-03	5E-04	6E-04	1E-04	2E-05	6E-05	3E-05	5E-04	2E-04
residential	REC_100M	477030.59	3619625.04	1.5E-02	1.5E-02	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	5.9E+03	1.3E-02	1.2E-02	5.4E-02	5.4E-02	1.2E-02	4.6E-03	1.1E-02	1.4E-02	1.7E-02	1.2E-02	5.3E-02	1.1E-03	1.1E-03	1.1E-03	1.0E-03	2.3E-04	2.2E-04	2.3E-04	2.3E-04	5.2E-04	3.0E-05	2.8E-05	2.2E-03	9.1E-08	4.2E-08	2.7E-07	7.2E-07	1.9E-06	1.4E-06	1.3E-04	5.3E-03	4E-03	4E-04	5E-04	2E-03	1E-03	6E-04	6E-04	1E-04	3E-05	7E-05	3E-05	5E-04	2E-04

TAMT Risk Assessment - DPM Cancer and Chronic HI

AERMOD UNITIZED CONCENTRATIONS

DPM SCALED CONCENTRATIONS

AERMOD Output

Receptor Type	Discrete Receptor ID (Group Name)	X	Y	B10_1_AUX (1)	B10_2_AUX (3)	B10_3_AUX (5)	B10_4_AUX (7)	B10_5_AUX (9)	B10_6_AUX (11)	B10_7_AUX (13)	B10_8_AUX (15)
residential	REC_100M	484330.59	3619925.04	8.0E-02	9.3E-02	7.7E-02	6.9E-02	6.0E-02	5.4E-02	5.1E-02	5.0E-02
residential	REC_100M	484430.59	3619925.04	8.5E-02	1.0E-01	8.2E-02	7.3E-02	6.3E-02	5.6E-02	5.3E-02	5.1E-02
residential	REC_100M	484530.59	3619925.04	9.0E-02	1.1E-01	8.7E-02	7.7E-02	6.6E-02	5.8E-02	5.5E-02	5.3E-02
residential	REC_100M	484630.59	3619925.04	9.8E-02	1.2E-01	9.4E-02	8.3E-02	7.0E-02	6.1E-02	5.8E-02	5.5E-02
residential	REC_100M	484730.59	3619925.04	1.1E-01	1.3E-01	1.0E-01	8.9E-02	7.5E-02	6.5E-02	6.1E-02	5.8E-02
residential	REC_100M	484830.59	3619925.04	1.2E-01	1.4E-01	1.1E-01	9.7E-02	8.1E-02	6.9E-02	6.5E-02	6.1E-02
residential	REC_100M	484930.59	3619925.04	1.3E-01	1.5E-01	1.2E-01	1.1E-01	8.8E-02	7.4E-02	6.9E-02	6.4E-02
residential	REC_100M	485030.59	3619925.04	1.4E-01	1.6E-01	1.3E-01	1.1E-01	9.5E-02	8.0E-02	7.4E-02	6.8E-02
residential	REC_100M	485130.59	3619925.04	1.5E-01	1.7E-01	1.4E-01	1.2E-01	1.0E-01	8.6E-02	7.9E-02	7.4E-02
residential	REC_100M	485230.59	3619925.04	1.7E-01	1.8E-01	1.5E-01	1.3E-01	1.1E-01	9.3E-02	8.6E-02	7.9E-02
residential	REC_100M	485330.59	3619925.04	1.8E-01	1.9E-01	1.6E-01	1.4E-01	1.2E-01	1.0E-01	9.3E-02	8.6E-02
residential	REC_100M	485430.59	3619925.04	1.9E-01	2.0E-01	1.7E-01	1.5E-01	1.3E-01	1.1E-01	1.0E-01	9.3E-02
residential	REC_100M	485530.59	3619925.04	2.0E-01	2.0E-01	1.7E-01	1.6E-01	1.3E-01	1.2E-01	1.1E-01	1.0E-01
residential	REC_100M	485630.59	3619925.04	2.1E-01	2.1E-01	1.8E-01	1.6E-01	1.4E-01	1.2E-01	1.2E-01	1.1E-01
residential	REC_100M	485730.59	3619925.04	2.1E-01	2.1E-01	1.8E-01	1.7E-01	1.5E-01	1.3E-01	1.2E-01	1.2E-01
residential	REC_100M	485830.59	3619925.04	2.2E-01	2.2E-01	1.9E-01	1.7E-01	1.5E-01	1.3E-01	1.3E-01	1.2E-01
residential	REC_100M	485930.59	3619925.04	2.2E-01	2.2E-01	1.9E-01	1.8E-01	1.6E-01	1.4E-01	1.4E-01	1.3E-01
residential	REC_100M	486030.59	3619925.04	2.2E-01	2.1E-01	2.0E-01	1.8E-01	1.6E-01	1.4E-01	1.4E-01	1.4E-01
residential	REC_100M	476730.59	3620025.04	1.3E-02	1.4E-02	1.3E-02	1.2E-02	1.2E-02	1.1E-02	1.1E-02	1.1E-02
residential	REC_100M	476830.59	3620025.04	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.1E-02	1.1E-02
residential	REC_100M	476930.59	3620025.04	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	1.1E-02
residential	REC_100M	477030.59	3620025.04	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	1.2E-02
residential	REC_100M	477130.59	3620025.04	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	1.2E-02
residential	REC_100M	477230.59	3620025.04	1.4E-02	1.5E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02
residential	REC_100M	477330.59	3620025.04	1.5E-02	1.5E-02	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02
residential	REC_100M	477430.59	3620025.04	1.5E-02	1.5E-02	1.5E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	1.3E-02
residential	REC_100M	477530.59	3620025.04	1.5E-02	1.5E-02	1.5E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	1.3E-02
residential	REC_100M	477630.59	3620025.04	1.6E-02	1.6E-02	1.5E-02	1.5E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02
residential	REC_100M	477730.59	3620025.04	1.6E-02	1.7E-02	1.6E-02	1.5E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02
residential	REC_100M	477830.59	3620025.04	1.7E-02	1.8E-02	1.7E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02
recreational	park	477930.59	3620025.04	1.8E-02	1.9E-02	1.7E-02	1.7E-02	1.6E-02	1.5E-02	1.5E-02	1.5E-02
recreational	park	478030.59	3620025.04	1.9E-02	2.0E-02	1.8E-02	1.8E-02	1.7E-02	1.6E-02	1.6E-02	1.6E-02
recreational	park	478530.59	3620025.04	2.1E-02	2.2E-02	2.0E-02	2.0E-02	1.8E-02	1.7E-02	1.7E-02	1.7E-02
recreational	park	479030.59	3620025.04	2.3E-02	2.3E-02	2.2E-02	2.1E-02	1.9E-02	1.8E-02	1.8E-02	1.8E-02
recreational	park	479130.59	3620025.04	2.3E-02	2.4E-02	2.2E-02	2.1E-02	2.0E-02	1.9E-02	1.8E-02	1.8E-02
recreational	park	479230.59	3620025.04	2.4E-02	2.4E-02	2.2E-02	2.1E-02	2.0E-02	1.9E-02	1.9E-02	1.9E-02
recreational	park	483530.59	3620025.04	5.9E-02	6.1E-02	5.5E-02	5.0E-02	4.5E-02	4.1E-02	4.0E-02	4.0E-02
recreational	park	483630.59	3620025.04	6.1E-02	6.4E-02	5.6E-02	5.2E-02	4.7E-02	4.3E-02	4.1E-02	4.1E-02
recreational	park	483730.59	3620025.04	6.3E-02	6.7E-02	5.9E-02	5.4E-02	4.8E-02	4.4E-02	4.3E-02	4.2E-02
recreational	park	483830.59	3620025.04	6.4E-02	6.8E-02	6.0E-02	5.5E-02	5.0E-02	4.5E-02	4.4E-02	4.3E-02
recreational	park	483930.59	3620025.04	6.8E-02	7.3E-02	6.3E-02	5.7E-02	5.2E-02	4.7E-02	4.5E-02	4.5E-02
residential	REC_100M	484030.59	3620025.04	7.0E-02	7.6E-02	6.6E-02	6.0E-02	5.3E-02	4.8E-02	4.7E-02	4.6E-02
residential	REC_100M	484130.59	3620025.04	7.2E-02	8.0E-02	6.8E-02	6.2E-02	5.5E-02	4.9E-02	4.8E-02	4.6E-02
residential	REC_100M	484230.59	3620025.04	7.5E-02	8.4E-02	7.1E-02	6.4E-02	5.6E-02	5.0E-02	4.9E-02	4.8E-02
residential	REC_100M	484330.59	3620025.04	7.8E-02	9.0E-02	7.5E-02	6.7E-02	5.9E-02	5.2E-02	5.0E-02	4.8E-02
residential	REC_100M	484430.59	3620025.04	8.1E-02	9.6E-02	7.8E-02	6.9E-02	6.1E-02	5.3E-02	5.1E-02	4.9E-02
residential	REC_100M	484530.59	3620025.04	8.7E-02	1.0E-01	8.4E-02	7.4E-02	6.4E-02	5.6E-02	5.3E-02	5.1E-02
residential	REC_100M	484630.59	3620025.04	9.4E-02	1.1E-01	9.1E-02	8.0E-02	6.8E-02	5.9E-02	5.6E-02	5.3E-02
residential	REC_100M	484730.59	3620025.04	1.0E-01	1.2E-01	9.8E-02	8.6E-02	7.3E-02	6.3E-02	5.9E-02	5.6E-02
residential	REC_100M	484830.59	3620025.04	1.1E-01	1.3E-01	1.1E-01	9.3E-02	7.8E-02	6.7E-02	6.3E-02	5.9E-02
residential	REC_100M	484930.59	3620025.04	1.2E-01	1.4E-01	1.2E-01	1.0E-01	8.4E-02	7.1E-02	6.6E-02	6.2E-02
residential	REC_100M	485030.59	3620025.04	1.3E-01	1.5E-01	1.3E-01	1.1E-01	9.1E-02	7.7E-02	7.1E-02	6.6E-02
residential	REC_100M	485130.59	3620025.04	1.5E-01	1.6E-01	1.3E-01	1.2E-01	9.9E-02	8.3E-02	7.7E-02	7.1E-02
residential	REC_100M	485230.59	3620025.04	1.6E-01	1.7E-01	1.4E-01	1.3E-01	1.1E-01	9.0E-02	8.3E-02	7.7E-02
residential	REC_100M	485330.59	3620025.04	1.7E-01	1.8E-01	1.5E-01	1.3E-01	1.1E-01	9.7E-02	9.0E-02	8.3E-02
residential	REC_100M	485430.59	3620025.04	1.8E-01	1.8E-01	1.6E-01	1.4E-01	1.2E-01	1.0E-01	9.7E-02	9.0E-02
residential	REC_100M	485530.59	3620025.04	1.9E-01	1.9E-01	1.6E-01	1.5E-01	1.3E-01	1.1E-01	1.0E-01	9.7E-02
residential	REC_100M	485630.59	3620025.04	1.9E-01	2.0E-01	1.7E-01	1.5E-01	1.3E-01	1.2E-01	1.1E-01	1.0E-01
residential	REC_100M	485730.59	3620025.04	2.0E-01	2.0E-01	1.7E-01	1.6E-01	1.4E-01	1.2E-01	1.2E-01	1.1E-01
residential	REC_100M	485830.59	3620025.04	2.1E-01	2.0E-01	1.8E-01	1.6E-01	1.4E-01	1.3E-01	1.2E-01	1.2E-01
residential	REC_100M	485930.59	3620025.04	2.1E-01	2.0E-01	1.8E-01	1.7E-01	1.5E-01	1.3E-01	1.3E-01	1.2E-01
residential	REC_100M	486030.59	3620025.04	2.1E-01	2.0E-01	1.9E-01	1.7E-01	1.5E-01	1.4E-01	1.3E-01	1.3E-01
residential	REC_100M	476730.59	3620125.04	1.3E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.1E-02	1.1E-02	1.1E-02
residential	REC_100M	476830.59	3620125.04	1.3E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.1E-02	1.1E-02	1.1E-02
residential	REC_100M	476930.59	3620125.04	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.1E-02	1.1E-02
residential	REC_100M	477030.59	3620125.04	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	1.1E-02
residential	REC_100M	477130.59	3620125.04	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	1.2E-02
residential	REC_100M	477230.59	3620125.04	1.4E-02	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02
residential	REC_100M	477330.59	3620125.04	1.5E-02	1.5E-02	1.4E-02	1.4E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02
residential	REC_100M	477430.59	3620125.04	1.5E-02	1.5E-02	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	1.2E-02
residential	REC_100M	477530.59	3620125.04	1.5E-02	1.5E-02	1.4E-02	1.4E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02
residential	REC_100M	477630.59	3620125.04	1.5E-02	1.5E-02	1.5E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	1.3E-02
residential	REC_100M	477730.59	3620125.04	1.6E-02	1.6E-02	1.5E-02	1.5E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02
residential	REC_100M	477830.59	3620125.04	1.7E-02	1.7E-02	1.6E-02	1.5E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02
residential	REC_100M	477930.59	3620125.04	1.8E-02	1.8E-02	1.7E-02	1.6E-02	1.5E-02	1.5E-02	1.5E-02	1.4E-02
recreational	park	478030.59	3620125.04	1.8E-02	1.9E-02	1.8E-02	1.7E-02	1.6E-02	1.5E-02	1.5E-02	1.5E-02
recreational	park	478130.59	3620125.04	1.9E-02	1.9E-02	1.8E-02	1.7E-02	1.7E-02	1.6E-02	1.6E-02	1.5E-02
recreational	park	478230.59	3620125.04	2.0E-02	2.0E-02	1.9E-02	1.8E-02	1.7E-02	1.6E-02	1.6E-02	1.6E-02
recreational	park	478330.59	3620125.04	2.0E-02	2.1E-02	1.9E-02	1.8E-02	1.8E-02	1.7E-02	1.6E-02	1.6E-02
recreational	park	478430.59	3620125.04	2.0E-02	2.1E-02	1.9E-02	1.8E-02	1.7E-02	1.7E-02	1.6E-02	1.6E-02
recreational	park	478530.59	3620125.04	2.1E-02	2.1E-02	2.0E-02	1.9E-02	1.8E-02	1.7E-02	1.7E-02	1.7E-02
recreational	park	478930.59	3620125.04	2.2E-02	2.2E-02	2.1E-02	2.0E-02	1.9E-02	1.8E-02	1.8E-02	1.8E-02
recreational	park	479030.59	3620125.04	2.2E-02	2.3E-02	2.1E-02	2.0E-02	1.9E-02	1.8E-02	1.8E-02	1.8E-02
recreational	park	479230.59	3620125.04	2.3E-02	2.3E-02	2.2E-02	2.1E-02	1.9E-02	1.8E-02	1.8E-02	1.8E-02
recreational	park	479330.59	3620125.04	2.3E-02	2.4E-02	2.2E-02	2.1E-02	2.0E-02	1.9E-02	1.9E-02	1.8E-02
recreational	park	483830.59	3620125.04	6.2E-02	6.6E-02	5.8E-02	5.3E-02	4.8E-02	4.3E-02	4.2E-02	4.1E-02
recreational	park	483930.59	3620125.04	6.6E-02	7.0E-02	6.1E-02	5.6E-02	5.0E-02	4.5E-02	4.4E-02	4.3E-02
residential	REC_100M	484030.59	3620125.04	6.7E-02	7.4E-02	6.3E-02	5.8E-02	5.1E-02	4.6E-02	4.5E-02	4.4E-02
residential	REC_100M	484130.59	3620125.04	6.9E-02	7.7E-02	6.6E-02	5.9E-02	5.3E-02	4.7E-02	4.6E-02	4.5E-02
residential	REC_100M	484230.59	3620125.04	7.1E-02	8.1E-02	6.8E-02	6.2E-02	5.4E-02	4.8E-02	4.7E-02	4.6E-02
residential	REC_100M	484330.59	3620125.04	7.5E-02	8.7E-02	7.1E-02	6.4E-02	5.6E-02	5.0E-02	4.8E-02	4.6E-02
residential	REC_100M	484430.59	3620125.04	7.8E-02	9.2E-02	7.5E-02	6.7E-02	5.8E-02	5.1E-02	4.9E-02	4.7E-02
residential	REC_100M	484530.59	3620125.04	8.3E-02	1.0E-01	8.1E-02	7.1E-02	6.1E-02	5.4E-02	5.1E-02	4.9E-02
residential	REC_100M	484630.59	3620125.04	9.0E-02	1.1E-01	8.7E-02	7.7E-02	6.5E-02	5.7E-02	5.4E-02	5.1E-02
residential	REC_100M	484730.59	3620125.04	9.8E-02	1.2E-01	9.4E-02	8.2E-02	7.0E-02	6.0E-02	5.7E-02	5.3E-02
residential	REC_100M	484830.59	3620125.04	1.1E-01	1.3E-01	1.0E-01	8.9E-02	7.5E-02	6.4E-02	6.0E-02	5.6E-02
residential	REC_100M	484930.59	3620125.04	1.2E-01	1.4E-01	1.1E-01	9.7E-02	8.1E-02	6.9E-02	6.4E-02	6.0E-02
residential	REC_100M	485030.59	3620125.04	1.3E-01	1.5E-01	1.2E-01	1.0E-01	8.8E-02	7.4E-02	6.9E-02	6.4E-02
residential	REC_100M	485130.59	3620125.04	1.4E-01	1.6E-01	1.3E-01	1.1E-01	9.4E-02	8.0E-02	7.4E-02	6.8E-02
residential	REC_100M	485230.59	3620125.04	1.5E-01	1.6E-01	1.4E-01	1.2E-01	1.0E-01	8.6E-02	7.9E-02	7.3E-02
residential	REC_100M	485330.59	3620125.04	1.6E-01	1.7E-01	1.4E-01	1.3E-01	1.1E-01	9.3E-02	8.6E-02	8.0E-02
residential	REC_100M	485430.59	3620125.04	1.7E-01	1.7E-01	1.5E-01	1.3E-01	1.2E-01	1.0E-01	9.3E-02	8.7E-02
residential	REC_100M	485530.59	3620125.04	1.8E-01	1.8E-01	1.5E-01	1.4E-01	1.2E-01	1.1E-01	1.0E-01	9.3E-02
residential	REC_100M	485630.59	3620125.04	1.8E-01	1.9E-01	1.6E-01	1.5E-01	1.3E-01	1.1E-01	1.1E-01	1.0E-01
residential	REC_100M	485730.59	3620125.04	1.9E-01	1.9E-01	1.6E-01	1.5E-01	1.3E-01	1.2E-01	1.1E-01	1.1E-01
residential	REC_100M	485830.59	3620125.04	2.0E-01	1.9E-01	1.7E-01	1.5E-01	1.4E-01	1.2E-01	1.2E-01	1.1E-01
residential	REC_100M	485930.59	3620125.04	2.0E-01	1.9E-01	1.7E-01	1.6E-01	1.4E-01	1.3E-01	1.2E-01	1.2E-01
residential	REC_100M	476730.59	3620225.04	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.1E-02	1.1E-02	1.1E-02	1.1E-02
residential	REC_100M	476830.59	3620225.04	1.3E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.1E-02	1.1E-02	1.1E-02
residential	REC_100M	476930.59	3620225.04	1.3E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.1E-02	1.1E-02	1.1E-02
residential	REC_100M	477030.59	3620225.04	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	1.1E-02
residential	REC_100M	477130.59	3620225.04	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	1.2E-02
residential	REC_100M	477230.59	3620225.04	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	1.2E-02
residential	REC_100M	477330.59	3620225.04	1.4E-02	1.5E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02
residential	REC_100M	477430.59	3620225.04	1.5E-02	1.5E-02	1.4E-02	1.4E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02
residential	REC_100M	477530.59	3620225.04	1.5E-02	1.5E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02
residential	REC_100M	477630.59	3620225.04	1.5E-02	1.5E-02	1.4E-02	1.4E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02
residential	REC_100M	477730.59	3620225.04	1.5E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02
residential	REC_100M	477830.59	3620225.04	1.6E-02	1.6E-02	1.5E-02	1.5E-02	1.4E-02	1.4E-02	1.3E-02	1.3E-02
residential	REC_100M	477930.59	3620225.04	1.7E-02	1.7E-02	1.6E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02
residential	REC_100M	478030.59	3620225.04	1.8E-02	1.8E-02	1.7E-02	1.6E-02	1.6E-02	1.5E-02	1.5E-02	1.5E-02
recreational	park	478130.59	3620225.04	1.8E-02	1.9E-02	1.7E-02	1.7E-02	1.6E-02	1.5E-02	1.5E-02	1.5E-02
recreational	park	478230.59	3620225.04	1.9E-02	1.9E-02	1.8E-02	1.7E-02	1.6E-02	1.6E-02	1.5E-02	1.5E-02
recreational	park	478330.59	3620225.04	1.9E-02	2.0E-02	1.8E-02	1.8E-02	1.7E-02	1.6E-02	1.6E-02	1.6E-02
recreational	park	478430.59	3620225.04	2.0E-02	2.0E-02	1.9E-02	1.8E-02	1.7E-02	1.6E-02	1.6E-02	1.6E-02
recreational	park	478530.59	3620225.04	2.0E-02	2.0E-02	1.9E-02	1.8E-02	1.7E-02	1.6E-02	1.6E-02	1.6E-02
recreational	park	478630.59	3620225.04	2.0E-02	2.1E-02	1.9E-02	1.9E-02	1.8E-02	1.7E-02	1.7E-02	1.6E-02
recreational	park	478830.59	3620225.04	2.1E-02	2.1E-02	2.0E-02	1.9E-02	1.8E-02	1.7E-02	1.7E-02	1.7E-02
recreational	park	478930.59	3620225.04	2.2E-02	2.2E-02	2.1E-02	2.0E-02	1.9E-02	1.8E-02	1.7E-02	1.7E-02
recreational	park	479330.59	3620225.04	2.3E-02	2.3E-02	2.1E-02	2.1E-02	1.9E-02	1.8E-02	1.8E-02	1.8E-02
recreational	park	483830.59	3620225.04	6.0E-02	6.4E-02	5.6E-02	5.1E-02	4.6E-02	4.2E-02	4.1E-02	4.0E-02
recreational	park	483930.59	3620225.04	6.2E-02	6.7E-02	5.8E-02	5.3E-02	4.8E-02	4.3E-02	4.2E-02	4.1E-02
residential	REC_100M	484030.59	3620225.04	6.5E-02	7.1E-02	6.1E-02	5.6E-02	5.0E-02	4.5E-02	4.4E-02	4.3E-02
residential	REC_100M	484130.59	3620225.04	6.6E-02	7.4E-02	6.3E-02	5.7E-02	5.1E-02	4.6E-02	4.4E-02	4.3E-02
residential	REC_100M	484230.59	3620225.04	6.9E-02	7.8E-02	6.6E-02	5.9E-02	5.2E-02	4.7E-02	4.5E-02	4.4E-02
residential	REC_100M	484330.59	3620225.04	7.1E-02	8.3E-02	6.9E-02	6.2E-02	5.4E-02	4.8E-02	4.6E-02	4.4E-02
residential	REC_100M	484430.59	3620225.04	7.6E-02	8.9E-02	7.3E-02	6.5E-02	5.7E-02	5.0E-02	4.8E-02	4.6E-02
residential	REC_100M	484530.59	3620225.04	8.1E-02	9.7E-02	7.8E-02	6.9E-02	5.9E-02	5.2E-02	5.0E-02	4.7E-02
residential	REC_100M	484630.59	3620225.04	8.7E-02	1.0E-01	8.4E-02	7.4E-02	6.3E-02	5.5E-02	5.2E-02	4.9E-02
residential	REC_100M	484730.59	3620225.04	9.5E-02	1.1E-01	9.1E-02	7.9E-02	6.7E-02	5.8E-02	5.5E-02	5.1E-02
residential	REC_100M	484830.59	3620225.04	1.0E-01	1.2E-01	9.8E-02	8.6E-02	7.2E-02	6.2E-02	5.8E-02	5.4E-02
residential	REC_100M	484930.59	3620225.04	1.1E-01	1.3E-01	1.1E-01	9.3E-02	7.8E-02	6.7E-02	6.2E-02	5.8E-02
residential	REC_100M	485030.59	3620225.04	1.2E-01	1.4E-01	1.1E-01	1.0E-01	8.4E-02	7.1E-02	6.6E-02	6.2E-02
residential	REC_100M	485130.59	3620225.04	1.4E-01	1.5E-01	1.2E-01	1.1E-01	9.0E-02	7.6E-02	7.1E-02	6.5E-02
residential	REC_100M	485230.59	3620225.04	1.4E-01	1.5E-01	1.3E-01	1.1E-01	9.7E-02	8.2E-02	7.6E-02	7.0E-02
residential	REC_100M	485330.59	3620225.04	1.5E-01	1.6E-01	1.4E-01	1.2E-01	1.0E-01	8.9E-02	8.3E-02	7.7E-02
residential	REC_100M	485430.59	3620225.04	1.6E-01	1.6E-01	1.4E-01	1.3E-01	1.1E-01	9.6E-02	9.0E-02	8.4E-02
recreational	park	485530.59	3620225.04	1.7E-01	1.7E-01	1.5E-01	1.3E-01	1.2E-01	1.0E-01	9.6E-02	9.0E-02
recreational	park	485630.59	3620225.04	1.7E-01	1.7E-01	1.5E-01	1.4E-01	1.2E-01	1.1E-01	1.0E-01	9.6E-02

TAMT Risk Assessment - DPM Cancer and Chronic HI

AERMOD UNITIZED CONCENTRATIONS

AERMOD Output — Source Group in AERMOD

	Discrete Receptor ID (Group Name)	X	Y	B10_1_AUX (1)	B10_2_AUX (3)	B10_3_AUX (5)	B10_4_AUX (7)	B10_5_AUX (9)	B10_6_AUX (11)	B10_7_AUX (13)	B10_8_AUX (15)	CHE_1 (17)
recreational	park	485730.59	3620225.04	1.8E-01	1.8E-01	1.5E-01	1.4E-01	1.2E-01	1.1E-01	1.1E-01	1.0E-01	1.3E+05
recreational	park	485830.59	3620225.04	1.8E-01	1.8E-01	1.6E-01	1.5E-01	1.3E-01	1.1E-01	1.1E-01	1.1E-01	1.4E+05
recreational	park	485930.59	3620225.04	1.9E-01	1.8E-01	1.6E-01	1.5E-01	1.3E-01	1.2E-01	1.2E-01	1.1E-01	1.5E+05
residential	REC_100M	476830.59	3620325.04	1.3E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.1E-02	1.1E-02	1.1E-02	4.9E+03
residential	REC_100M	476930.59	3620325.04	1.3E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.1E-02	1.1E-02	1.1E-02	5.0E+03
residential	REC_100M	477030.59	3620325.04	1.3E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.1E-02	1.1E-02	1.1E-02	5.1E+03
residential	REC_100M	477130.59	3620325.04	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	1.1E-02	5.1E+03
residential	REC_100M	477230.59	3620325.04	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	1.2E-02	5.2E+03
residential	REC_100M	477330.59	3620325.04	1.4E-02	1.4E-02	1.4E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	1.2E-02	5.2E+03
residential	REC_100M	477430.59	3620325.04	1.5E-02	1.5E-02	1.4E-02	1.4E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	5.6E+03
residential	REC_100M	477530.59	3620325.04	1.4E-02	1.5E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	5.3E+03
residential	REC_100M	477630.59	3620325.04	1.5E-02	1.5E-02	1.4E-02	1.4E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	5.4E+03
residential	REC_100M	477730.59	3620325.04	1.5E-02	1.5E-02	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	1.3E-02	5.6E+03
residential	REC_100M	477830.59	3620325.04	1.6E-02	1.6E-02	1.5E-02	1.5E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	6.1E+03
residential	REC_100M	477930.59	3620325.04	1.6E-02	1.7E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	1.4E-02	6.4E+03
residential	REC_100M	478030.59	3620325.04	1.7E-02	1.7E-02	1.6E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	6.6E+03
residential	REC_100M	478130.59	3620325.04	1.8E-02	1.8E-02	1.7E-02	1.6E-02	1.5E-02	1.5E-02	1.5E-02	1.4E-02	6.7E+03
residential	REC_100M	478230.59	3620325.04	1.8E-02	1.8E-02	1.7E-02	1.7E-02	1.6E-02	1.5E-02	1.5E-02	1.5E-02	6.9E+03
recreational	park	478330.59	3620325.04	1.9E-02	1.9E-02	1.8E-02	1.7E-02	1.6E-02	1.5E-02	1.5E-02	1.5E-02	7.0E+03
recreational	park	478430.59	3620325.04	1.9E-02	2.0E-02	1.8E-02	1.7E-02	1.7E-02	1.6E-02	1.6E-02	1.6E-02	7.5E+03
recreational	park	478530.59	3620325.04	1.9E-02	2.0E-02	1.8E-02	1.8E-02	1.7E-02	1.6E-02	1.6E-02	1.6E-02	7.6E+03
recreational	park	478630.59	3620325.04	2.0E-02	2.0E-02	1.9E-02	1.8E-02	1.7E-02	1.6E-02	1.6E-02	1.6E-02	7.7E+03
recreational	park	478730.59	3620325.04	2.0E-02	2.1E-02	1.9E-02	1.8E-02	1.7E-02	1.6E-02	1.6E-02	1.6E-02	7.8E+03
recreational	park	483830.59	3620325.04	5.7E-02	6.2E-02	5.4E-02	5.0E-02	4.5E-02	4.1E-02	4.0E-02	3.9E-02	2.7E+04
recreational	park	483930.59	3620325.04	6.0E-02	6.5E-02	5.7E-02	5.2E-02	4.6E-02	4.2E-02	4.1E-02	4.0E-02	2.9E+04
residential	REC_100M	484030.59	3620325.04	6.2E-02	6.9E-02	5.9E-02	5.4E-02	4.8E-02	4.3E-02	4.2E-02	4.1E-02	3.2E+04
residential	REC_100M	484130.59	3620325.04	6.3E-02	7.1E-02	6.1E-02	5.5E-02	4.9E-02	4.4E-02	4.2E-02	4.1E-02	3.3E+04
residential	REC_100M	484230.59	3620325.04	6.6E-02	7.5E-02	6.3E-02	5.7E-02	5.0E-02	4.5E-02	4.3E-02	4.2E-02	3.6E+04
residential	REC_100M	484330.59	3620325.04	6.8E-02	8.0E-02	6.6E-02	5.9E-02	5.2E-02	4.6E-02	4.4E-02	4.3E-02	3.8E+04
residential	REC_100M	484430.59	3620325.04	7.3E-02	8.6E-02	7.0E-02	6.3E-02	5.5E-02	4.8E-02	4.6E-02	4.4E-02	4.1E+04
residential	REC_100M	484530.59	3620325.04	7.8E-02	9.3E-02	7.5E-02	6.7E-02	5.8E-02	5.1E-02	4.8E-02	4.6E-02	4.5E+04
residential	REC_100M	484630.59	3620325.04	8.4E-02	1.0E-01	8.1E-02	7.1E-02	6.1E-02	5.3E-02	5.0E-02	4.8E-02	4.9E+04
residential	REC_100M	484730.59	3620325.04	9.1E-02	1.1E-01	8.7E-02	7.7E-02	6.5E-02	5.6E-02	5.3E-02	5.0E-02	5.3E+04
residential	REC_100M	484830.59	3620325.04	9.9E-02	1.2E-01	9.4E-02	8.3E-02	7.0E-02	6.0E-02	5.6E-02	5.2E-02	5.8E+04
residential	REC_100M	484930.59	3620325.04	1.1E-01	1.2E-01	1.0E-01	8.9E-02	7.5E-02	6.4E-02	6.0E-02	5.6E-02	6.5E+04
residential	REC_100M	485030.59	3620325.04	1.2E-01	1.3E-01	1.1E-01	9.6E-02	8.1E-02	6.9E-02	6.4E-02	6.0E-02	7.1E+04
residential	REC_100M	485130.59	3620325.04	1.3E-01	1.4E-01	1.2E-01	1.0E-01	8.7E-02	7.3E-02	6.8E-02	6.3E-02	7.6E+04
residential	REC_100M	485230.59	3620325.04	1.4E-01	1.4E-01	1.2E-01	1.1E-01	9.3E-02	7.9E-02	7.3E-02	6.8E-02	8.2E+04
residential	REC_100M	485330.59	3620325.04	1.4E-01	1.5E-01	1.3E-01	1.2E-01	1.0E-01	8.5E-02	8.0E-02	7.4E-02	1.0E+05
residential	REC_100M	485430.59	3620325.04	1.5E-01	1.5E-01	1.3E-01	1.2E-01	1.1E-01	9.2E-02	8.6E-02	8.0E-02	1.2E+05
recreational	park	485530.59	3620325.04	1.6E-01	1.6E-01	1.4E-01	1.3E-01	1.1E-01	9.7E-02	9.2E-02	8.6E-02	1.3E+05
recreational	park	485630.59	3620325.04	1.6E-01	1.6E-01	1.4E-01	1.3E-01	1.1E-01	1.0E-01	9.7E-02	9.2E-02	1.2E+05
recreational	park	485730.59	3620325.04	1.6E-01	1.6E-01	1.4E-01	1.3E-01	1.2E-01	1.0E-01	1.0E-01	9.7E-02	1.2E+05
recreational	park	485830.59	3620325.04	1.7E-01	1.7E-01	1.5E-01	1.4E-01	1.2E-01	1.1E-01	1.1E-01	1.0E-01	1.2E+05
recreational	park	485930.59	3620325.04	1.8E-01	1.7E-01	1.5E-01	1.4E-01	1.3E-01	1.1E-01	1.1E-01	1.1E-01	1.3E+05
residential	REC_100M	476930.59	3620425.04	1.3E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.1E-02	1.1E-02	1.1E-02	4.9E+03
residential	REC_100M	477030.59	3620425.04	1.3E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.1E-02	1.1E-02	1.1E-02	4.9E+03
residential	REC_100M	477130.59	3620425.04	1.3E-02	1.4E-02	1.3E-02	1.2E-02	1.2E-02	1.1E-02	1.1E-02	1.1E-02	5.0E+03
residential	REC_100M	477230.59	3620425.04	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	1.2E-02	5.1E+03
residential	REC_100M	477330.59	3620425.04	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	1.2E-02	5.2E+03
residential	REC_100M	477430.59	3620425.04	1.4E-02	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	5.4E+03
residential	REC_100M	477530.59	3620425.04	1.5E-02	1.5E-02	1.4E-02	1.4E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	5.6E+03
residential	REC_100M	477630.59	3620425.04	1.5E-02	1.5E-02	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	1.3E-02	5.8E+03
residential	REC_100M	477730.59	3620425.04	1.6E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	6.0E+03
residential	REC_100M	477830.59	3620425.04	1.6E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	6.0E+03
residential	REC_100M	477930.59	3620425.04	1.6E-02	1.6E-02	1.5E-02	1.5E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	6.1E+03
residential	REC_100M	478030.59	3620425.04	1.7E-02	1.7E-02	1.6E-02	1.5E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	6.4E+03
residential	REC_100M	478130.59	3620425.04	1.7E-02	1.8E-02	1.7E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	6.5E+03
residential	REC_100M	478230.59	3620425.04	1.8E-02	1.8E-02	1.7E-02	1.6E-02	1.5E-02	1.5E-02	1.5E-02	1.4E-02	6.7E+03
residential	REC_100M	478330.59	3620425.04	1.8E-02	1.8E-02	1.7E-02	1.7E-02	1.6E-02	1.5E-02	1.5E-02	1.5E-02	6.8E+03
recreational	park	478430.59	3620425.04	1.9E-02	1.9E-02	1.8E-02	1.7E-02	1.6E-02	1.5E-02	1.5E-02	1.5E-02	7.3E+03
recreational	park	478530.59	3620425.04	1.9E-02	1.9E-02	1.8E-02	1.7E-02	1.7E-02	1.6E-02	1.6E-02	1.6E-02	7.4E+03
recreational	park	478630.59	3620425.04	1.9E-02	2.0E-02	1.8E-02	1.8E-02	1.7E-02	1.6E-02	1.6E-02	1.6E-02	7.5E+03
recreational	park	483830.59	3620425.04	5.5E-02	6.0E-02	5.2E-02	4.8E-02	4.3E-02	3.9E-02	3.9E-02	3.8E-02	2.6E+04
recreational	park	483930.59	3620425.04	5.8E-02	6.4E-02	5.5E-02	5.0E-02	4.5E-02	4.1E-02	4.0E-02	3.9E-02	2.9E+04
residential	REC_100M	484030.59	3620425.04	6.0E-02	6.6E-02	5.7E-02	5.2E-02	4.6E-02	4.2E-02	4.1E-02	4.0E-02	3.0E+04
residential	REC_100M	484130.59	3620425.04	6.1E-02	6.8E-02	5.8E-02	5.3E-02	4.7E-02	4.2E-02	4.1E-02	4.0E-02	3.2E+04
residential	REC_100M	484230.59	3620425.04	6.3E-02	7.2E-02	6.1E-02	5.5E-02	4.9E-02	4.3E-02	4.2E-02	4.0E-02	3.4E+04
residential	REC_100M	484330.59	3620425.04	6.6E-02	7.7E-02	6.4E-02	5.7E-02	5.0E-02	4.5E-02	4.3E-02	4.1E-02	3.7E+04
residential	REC_100M	484430.59	3620425.04	7.0E-02	8.3E-02	6.8E-02	6.1E-02	5.3E-02	4.7E-02	4.4E-02	4.2E-02	3.9E+04
residential	REC_100M	484530.59	3620425.04	7.5E-02	9.0E-02	7.3E-02	6.5E-02	5.6E-02	4.9E-02	4.6E-02	4.4E-02	4.3E+04
residential	REC_100M	484630.59	3620425.04	8.1E-02	9.7E-02	7.8E-02	6.9E-02	5.9E-02	5.2E-02	4.9E-02	4.6E-02	4.6E+04
residential	REC_100M	484730.59	3620425.04	8.8E-02	1.0E-01	8.4E-02	7.4E-02	6.3E-02	5.5E-02	5.1E-02	4.8E-02	5.0E+04
residential	REC_100M	484830.59	3620425.04	9.6E-02	1.1E-01	9.0E-02	7.9E-02	6.7E-02	5.8E-02	5.4E-02	5.1E-02	5.3E+04
residential	REC_100M	484930.59	3620425.04	1.0E-01	1.2E-01	9.8E-02	8.6E-02	7.2E-02	6.2E-02	5.8E-02	5.4E-02	5.9E+04
residential	REC_100M	485030.59	3620425.04	1.1E-01	1.3E-01	1.0E-01	9.2E-02	7.8E-02	6.6E-02	6.2E-02	5.7E-02	6.5E+04
residential	REC_100M	485130.59	3620425.04	1.2E-01	1.3E-01	1.1E-01	9.8E-02	8.3E-02	7.0E-02	6.5E-02	6.1E-02	6.8E+04
residential	REC_100M	485230.59	3620425.04	1.3E-01	1.4E-01	1.2E-01	1.0E-01	8.8E-02	7.5E-02	7.0E-02	6.5E-02	7.6E+04
residential	REC_100M	485330.59	3620425.04	1.4E-01	1.4E-01	1.2E-01	1.1E-01	9.5E-02	8.1E-02	7.6E-02	7.1E-02	9.0E+04
residential	REC_100M	485430.59	3620425.04	1.4E-01	1.5E-01	1.3E-01	1.2E-01	1.0E-01	8.8E-02	8.3E-02	7.8E-02	1.1E+05
recreational	park	485530.59	3620425.04	1.5E-01	1.5E-01	1.3E-01	1.2E-01	1.1E-01	9.2E-02	8.8E-02	8.3E-02	1.1E+05
recreational	park	485630.59	3620425.04	1.5E-01	1.5E-01	1.3E-01	1.2E-01	1.1E-01	9.6E-02	9.2E-02	8.7E-02	1.1E+05
recreational	park	485730.59	3620425.04	1.5E-01	1.5E-01	1.4E-01	1.2E-01	1.1E-01	9.9E-02	9.5E-02	9.2E-02	1.1E+05
recreational	park	485830.59	3620425.04	1.6E-01	1.6E-01	1.4E-01	1.3E-01	1.1E-01	1.0E-01	9.9E-02	9.6E-02	1.1E+05
recreational	park	485930.59	3620425.04	1.6E-01	1.6E-01	1.4E-01	1.3E-01	1.2E-01	1.1E-01	1.1E-01	1.0E-01	1.2E+05
residential	REC_100M	477130.59	3620525.04	1.3E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.1E-02	1.1E-02	1.1E-02	4.9E+03
residential	REC_100M	477230.59	3620525.04	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.1E-02	1.1E-02	1.1E-02	5.0E+03
residential	REC_100M	477330.59	3620525.04	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	1.1E-02	5.1E+03
residential	REC_100M	477430.59	3620525.04	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	1.2E-02	5.0E+03
residential	REC_100M	477530.59	3620525.04	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	1.2E-02	5.1E+03
residential	REC_100M	477630.59	3620525.04	1.4E-02	1.5E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	5.3E+03
residential	REC_100M	477730.59	3620525.04	1.5E-02	1.5E-02	1.4E-02	1.4E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	5.5E+03
residential	REC_100M	477830.59	3620525.04	1.5E-02	1.5E-02	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	1.3E-02	5.7E+03
residential	REC_100M	477930.59	3620525.04	1.6E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	5.9E+03
residential	REC_100M	478030.59	3620525.04	1.6E-02	1.6E-02	1.5E-02	1.5E-02	1.4E-02	1.4E-02	1.3E-02	1.3E-02	6.1E+03
residential	REC_100M	478130.59	3620525.04	1.7E-02	1.7E-02	1.6E-02	1.5E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	6.3E+03
residential	REC_100M	478230.59	3620525.04	1.7E-02	1.7E-02	1.6E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	6.4E+03
residential	REC_100M	478330.59	3620525.04	1.8E-02	1.8E-02	1.7E-02	1.6E-02	1.5E-02	1.5E-02	1.4E-02	1.4E-02	6.5E+03
residential	REC_100M	478430.59	3620525.04	1.8E-02	1.8E-02	1.7E-02	1.7E-02	1.6E-02	1.5E-02	1.5E-02	1.5E-02	6.7E+03
recreational	park	478530.59	3620525.04	1.9E-02	1.9E-02	1.8E-02	1.7E-02	1.6E-02	1.5E-02	1.5E-02	1.5E-02	7.1E+03
recreational	park	478630.59	3620525.04	1.9E-02	1.9E-02	1.8E-02	1.7E-02	1.6E-02	1.6E-02	1.5E-02	1.5E-02	7.2E+03
recreational	park	483830.59	3620525.04	5.3E-02	5.8E-02	5.1E-02	4.7E-02	4.2E-02	3.8E-02	3.7E-02	3.7E-02	2.6E+04
recreational	park	483930.59	3620525.04	5.6E-02	6.2E-02	5.3E-02	4.9E-02	4.4E-02	4.0E-02	3.9E-02	3.8E-02	2.8E+04
residential	REC_100M	484030.59	3620525.04	5.8E-02	6.5E-02	5.6E-02	5.1E-02	4.5E-02	4.1E-02	4.0E-02	3.9E-02	3.0E+04
residential	REC_100M	484130.59	3620525.04	5.9E-02	6.6E-02	5.6E-02	5.1E-02	4.6E-02	4.1E-02	3.9E-02	3.8E-02	3.1E+04
residential	REC_100M	484230.59	3620525.04	6.1E-02	7.0E-02	5.9E-02	5.3E-02	4.7E-02	4.2E-02	4.0E-02	3.9E-02	3.3E+04
residential	REC_100M	484330.59	3620525.04	6.4E-02	7.4E-02	6.2E-02	5.6E-02	4.9E-02	4.3E-02	4.1E-02	4.0E-02	3.5E+04
residential	REC_100M	484430.59	3620525.04	6.7E-02	8.0E-02	6.5E-02	5.9E-02	5.1E-02	4.5E-02	4.3E-02	4.1E-02	3.8E+04
residential	REC_100M	484530.59	3620525.04	7.2E-02	8.6E-02	7.0E-02	6.2E-02	5.4E-02	4.7E-02	4.5E-02	4.3E-02	4.0E+04
residential	REC_100M	484630.59	3620525.04	7.8E-02	9.3E-02	7.5E-02	6.7E-02	5.7E-02	5.0E-02	4.7E-02	4.4E-02	4.4E+04
residential	REC_100M	484730.59	3620525.04	8.5E-02	1.0E-01	8.1E-02	7.1E-02	6.1E-02	5.3E-02	5.0E-02	4.7E-02	4.7E+04
residential	REC_100M	484830.59	3620525.04	9.2E-02	1.1E-01	8.7E-02	7.7E-02	6.5E-02	5.6E-02	5.2E-02	4.9E-02	5.0E+04
residential	REC_100M	484930.59	3620525.04	1.0E-01	1.1E-01	9.3E-02	8.2E-02	7.0E-02	6.0E-02	5.6E-02	5.2E-02	5.5E+04
residential	REC_100M	485030.59	3620525.04	1.1E-01	1.2E-01	1.0E-01	8.8E-02	7.5E-02	6.4E-02	6.0E-02	5.6E-02	6.1E+04
residential	REC_100M	485130.59	3620525.04	1.1E-01	1.2E-01	1.0E-01	9.3E-02	7.9E-02	6.8E-02	6.3E-02	5.9E-02	6.4E+04
residential	REC_100M	485230.59	3620525.04	1.2E-01	1.3E-01	1.1E-01	9.8E-02	8.4E-02	7.2E-02	6.7E-02	6.3E-02	7.0E+04
residential	REC_100M	485330.59	3620525.04	1.3E-01	1.3E-01	1.1E-01	1.0E-01	9.0E-02	7.8E-02	7.3E-02	6.8E-02	8.1E+04
residential	REC_100M	485430.59	3620525.04	1.3E-01	1.4E-01	1.2E-01	1.1E-01	9.7E-02	8.5E-02	8.0E-02	7.5E-02	1.0E+05
recreational	park	485530.59	3620525.04	1.4E-01	1.4E-01	1.2E-01	1.1E-01	1.0E-01	8.9E-02	8.4E-02	7.9E-02	1.0E+05
recreational	park	485630.59	3620525.04	1.4E-01	1.4E-01	1.3E-01	1.2E-01	1.0E-01	9.2E-02	8.8E-02	8.4E-02	1.0E+05
recreational	park	485730.59	3620525.04	1.4E-01	1.4E-01	1.3E-01	1.2E-01	1.1E-01	9.4E-02	9.1E-02	8.8E-02	1.0E+05
recreational	park	485830.59	3620525.04	1.5E-01	1.5E-01	1.3E-01	1.2E-01	1.1E-01	9.7E-02	9.4E-02	9.2E-02	1.0E+05
residential	REC_100M	477230.59	3620625.04	1.3E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.1E-02	1.1E-02	1.1E-02	4.9E+03
residential	REC_100M	477330.59	3620625.04	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.1E-02	1.1E-02	1.1E-02	5.0E+03
residential	REC_100M	477430.59	3620625.04	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.1E-02	1.1E-02	1.1E-02	4.9E+03
residential	REC_100M	477530.59	3620625.04	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.1E-02	1.1E-02	4.9E+03
residential	REC_100M	477630.59	3620625.04	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	1.2E-02	5.1E+03
residential	REC_100M	477730.59	3620625.04	1.4E-02	1.5E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	5.3E+03
residential	REC_100M	477830.59	3620625.04	1.5E-02	1.5E-02	1.4E-02	1.4E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	5.6E+03
residential	REC_100M	477930.59	3620625.04	1.5E-02	1.5E-02	1.5E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	1.3E-02	5.8E+03
residential	REC_100M	478030.59	3620625.04	1.6E-02	1.6E-02	1.5E-02	1.5E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	6.0E+03
residential	REC_100M	478130.59	3620625.04	1.6E-02	1.7E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	1.3E-02	6.1E+03
residential	REC_100M	478230.59	3620625.04	1.7E-02	1.7E-02	1.6E-02	1.5E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	6.2E+03
residential	REC_100M	478330.59	3620625.04	1.7E-02	1.7E-02	1.6E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	6.3E+03
residential	REC_100M	478430.59	3620625.04	1.8E-02	1.8E-02	1.7E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	6.4E+03
residential	REC_100M	478530.59	3620625.04	1.8E-02	1.8E-02	1.7E-02	1.7E-02	1.6E-02	1.5E-02	1.5E-02	1.5E-02	6.9E+03
recreational	park	478630.59	3620625.04	1.8E-02	1.9E-02	1.7E-02	1.7E-02	1.6E-02	1.5E-02	1.5E-02	1.5E-02	7.0E+03
residential	REC_100M	484030.59	3620625.04	5.7E-02	6.3E-02	5.4E-02	5.0E-02	4.4E-02	4.0E-02	3.9E-02	3.8E-02	2.9E+04
residential	REC_100M	484130.59	3620625.04	5.7E-02	6.4E-02	5.4E-02	5.0E-02	4.4E-02	4.0E-02	3.8E-02	3.7E-02	3.0E+04
residential	REC_100M	484230.59	3620625.04	5.9E-02	6.7E-02	5.7E-02	5.1E-02	4.5E-02	4.1E-02	3.9E-02	3.7E-02	3.2E+04
residential	REC_100M	484330.59	3620625.04	6.2E-02	7.2E-02	6.0E-02	5.4E-02	4.7E-02	4.2E-02	4.0E-02	3.8E-02	3.4E+04
residential	REC_100M	484430.59	3620625.04	6.5E-02	7.7E-02	6.3E-02	5.7E-02	5.0E-02	4.4E-02	4.2E-02	4.0E-02	3.6E+04
residential	REC_100M	484530.59	3620625.04	7.0E-02	8.3E-02	6.8E-02	6.0E-02	5.2E-02	4.6E-02	4.4E-02	4.1E-02	3.9E+04
residential	REC_100M	485030.59	3620625.04	1.0E-01	1.1E-01	9.6E-02	8.5E-02	7.2E-02	6.2E-02	5.8E-02	5.4E-02	5.9E+04
residential	REC_100M	485130.59	3620625.04	1.1E-01	1.2E-01	1.0E-01	9.1E-02	7.8E-02	6.7E-02	6.2E-02	5.8E-02	6.6E+04
residential	REC_100M	485230.59	3620625.04	1.2E-01	1.2E-01	1.1E-01	9.5E-02	8.2E-02	7.1E-02	6.6E-02	6.2E-02	7.1E+04
residential	REC_100M	485330.59	3620625.04	1.2E-01	1.3E-01	1.1E-01	1.0E-01	8.7E-02	7.6E-02	7.1E-02	6.6E-02	8.0E+04
residential	REC_100M	485430.59	3620625.04	1.3E-01	1.3E-01	1.2E-01	1.1E-01	9.3E-02	8.2E-02	7.7E-02	7.3E-02	9.9E+04
recreational	park	485530.59	3620625.04	1.3E-01	1.3E-01	1.2E-01	1.1E-01	9.6E-02	8.5E-02	8.1E-02	7.6E-02	9.5E+04

TAMT Risk Assessment - DPM Cancer and Chronic HI

AERMOD UNITIZED CONCENTRATIONS

AERMOD Output — Source Group in AERMOD

	Discrete Receptor ID (Group Name)	X	Y	B10_1_AUX (1)	B10_2_AUX (3)	B10_3_AUX (5)	B10_4_AUX (7)	B10_5_AUX (9)	B10_6_AUX (11)	B10_7_AUX (13)	B10_8_AUX (15)	CHE_1 (17)
recreational	park	485630.59	3620625.04	1.3E-01	1.4E-01	1.2E-01	1.1E-01	9.9E-02	8.8E-02	8.4E-02	8.0E-02	9.6E+04
recreational	park	485730.59	3620625.04	1.4E-01	1.4E-01	1.2E-01	1.1E-01	1.0E-01	9.1E-02	8.8E-02	8.5E-02	9.9E+04
recreational	park	485830.59	3620625.04	1.4E-01	1.4E-01	1.2E-01	1.1E-01	1.0E-01	9.3E-02	9.1E-02	8.8E-02	9.7E+04
residential	REC_100M	477330.59	3620725.04	1.3E-02	1.4E-02	1.3E-02	1.2E-02	1.2E-02	1.1E-02	1.1E-02	1.1E-02	5.0E+03
residential	REC_100M	477430.59	3620725.04	1.3E-02	1.4E-02	1.3E-02	1.2E-02	1.2E-02	1.1E-02	1.1E-02	1.1E-02	4.9E+03
residential	REC_100M	477530.59	3620725.04	1.3E-02	1.4E-02	1.3E-02	1.2E-02	1.2E-02	1.1E-02	1.1E-02	1.1E-02	4.8E+03
residential	REC_100M	477630.59	3620725.04	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.1E-02	1.1E-02	5.0E+03
residential	REC_100M	477730.59	3620725.04	1.4E-02	1.4E-02	1.4E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	1.2E-02	5.3E+03
residential	REC_100M	477830.59	3620725.04	1.5E-02	1.5E-02	1.4E-02	1.4E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	5.6E+03
residential	REC_100M	477930.59	3620725.04	1.5E-02	1.5E-02	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	1.3E-02	5.7E+03

DPM SCALED CONCENTRATIONS

X	TR_HARBOR SAM (27)	TUG_PATH_DPM (28)	Vessel Hoteling All 100%	Refrigerated Containersfull TAMT plan unmit 81%	Multi-Purpose General Cargofull TAMT plan unmit 9%	Dry Bulkfull TAMT plan unmit 10%	Vessel Transit All 100%	Refrigerated Containersfull TAMT plan unmit 46%	Multi-Purpose General Cargoful l TAMT plan unmit 25%	Dry Bulkfull TAMT plan unmit 28%	Tug/Barge Transit All 100%	Refrigerated Containersfull TAMT plan unmit 21%	Multi-Purpose General Cargoful l TAMT plan unmit 54%	Dry Bulkfull TAMT plan unmit 25%	Terminal E All 100%	Refrigerated Containersfull TAMT plan unmit 39%
485630.59	7.5E-06	2.7E-04	4.4E-02	4E-02	3E-03	3E-03	4E-03	2E-03	9E-04	1E-03	3E-04	6E-05	1E-04	7E-05	9E-03	3E-03
485730.59	8.1E-06	2.6E-04	4.5E-02	4E-02	3E-03	3E-03	3E-03	2E-03	9E-04	1E-03	3E-04	5E-05	1E-04	7E-05	9E-03	3E-03
485830.59	8.4E-06	2.4E-04	4.6E-02	4E-02	3E-03	3E-03	3E-03	2E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	9E-03	3E-03
477330.59	1.1E-06	8.8E-05	4.8E-03	4E-03	4E-04	4E-04	2E-03	8E-04	4E-04	5E-04	9E-05	2E-05	5E-05	2E-05	4E-04	2E-04
477430.59	1.1E-06	8.8E-05	4.8E-03	4E-03	4E-04	4E-04	2E-03	8E-04	4E-04	5E-04	9E-05	2E-05	5E-05	2E-05	4E-04	2E-04
477530.59	1.1E-06	8.8E-05	4.7E-03	4E-03	4E-04	4E-04	2E-03	8E-04	4E-04	5E-04	9E-05	2E-05	5E-05	2E-05	4E-04	2E-04
477630.59	1.1E-06	9.7E-05	4.9E-03	4E-03	4E-04	4E-04	2E-03	8E-04	5E-04	5E-04	1E-04	2E-05	5E-05	2E-05	4E-04	2E-04
477730.59	1.2E-06	1.1E-04	5.0E-03	4E-03	4E-04	4E-04	2E-03	9E-04	5E-04	6E-04	1E-04	2E-05	6E-05	3E-05	5E-04	2E-04
477830.59	1.3E-06	1.4E-04	5.3E-03	4E-03	4E-04	5E-04	2E-03	1E-03	6E-04	6E-04	1E-04	3E-05	7E-05	3E-05	5E-04	2E-04
477930.59	1.3E-06	1.5E-04	5.4E-03	4E-03	4E-04	5E-04	2E-03	1E-03	6E-04	7E-04	1E-04	3E-05	8E-05	4E-05	5E-04	2E-04

TAMT Risk Assessment - DPM Cancer and Chronic HI

AERMOD Output

AERMOD UNITIZED CONCENTRATIONS — Source Group in AERMOD

Land use	Discrete Receptor ID (Group Name)	X	Y	B10_1_AUX (1)	B10_2_AUX (3)	B10_3_AUX (5)	B10_4_AUX (7)	B10_5_AUX (9)	B10_6_AUX (11)	B10_7_AUX (13)	B10_8_AUX (15)	CHE_1 (17)
residential	REC_100M	479530.59	3621125.04	1.8E-02	1.8E-02	1.7E-02	1.6E-02	1.5E-02	1.5E-02	1.5E-02	1.5E-02	6.5E+03
residential	REC_100M	479630.59	3621125.04	1.8E-02	1.9E-02	1.7E-02	1.7E-02	1.6E-02	1.5E-02	1.5E-02	1.5E-02	6.5E+03
recreational	park	481430.59	3621125.04	2.4E-02	2.4E-02	2.3E-02	2.1E-02	2.0E-02	1.9E-02	1.9E-02	1.9E-02	8.1E+03
recreational	park	481530.59	3621125.04	2.4E-02	2.5E-02	2.3E-02	2.2E-02	2.1E-02	1.9E-02	1.9E-02	1.9E-02	8.2E+03
recreational	park	481630.59	3621125.04	2.5E-02	2.5E-02	2.4E-02	2.2E-02	2.1E-02	2.0E-02	2.0E-02	1.9E-02	8.4E+03
recreational	park	481730.59	3621125.04	2.5E-02	2.6E-02	2.4E-02	2.3E-02	2.1E-02	2.0E-02	2.0E-02	2.0E-02	8.5E+03
recreational	park	481830.59	3621125.04	2.6E-02	2.6E-02	2.4E-02	2.3E-02	2.2E-02	2.1E-02	2.0E-02	2.0E-02	8.7E+03
recreational	park	481930.59	3621125.04	2.7E-02	2.7E-02	2.5E-02	2.4E-02	2.2E-02	2.1E-02	2.1E-02	2.0E-02	8.9E+03
recreational	park	482030.59	3621125.04	2.7E-02	2.8E-02	2.6E-02	2.4E-02	2.3E-02	2.1E-02	2.1E-02	2.1E-02	9.1E+03
recreational	park	482130.59	3621125.04	2.8E-02	2.8E-02	2.6E-02	2.5E-02	2.3E-02	2.2E-02	2.1E-02	2.1E-02	9.4E+03
recreational	park	482230.59	3621125.04	2.8E-02	2.9E-02	2.6E-02	2.5E-02	2.3E-02	2.2E-02	2.2E-02	2.2E-02	9.6E+03
recreational	park	482330.59	3621125.04	2.9E-02	2.9E-02	2.7E-02	2.6E-02	2.4E-02	2.2E-02	2.2E-02	2.2E-02	1.0E+04
recreational	park	482430.59	3621125.04	3.0E-02	3.0E-02	2.8E-02	2.6E-02	2.4E-02	2.3E-02	2.3E-02	2.2E-02	1.0E+04
recreational	park	482530.59	3621125.04	3.1E-02	3.2E-02	2.9E-02	2.8E-02	2.6E-02	2.4E-02	2.4E-02	2.3E-02	1.1E+04
residential	REC_100M	483830.59	3621125.04	4.4E-02	4.9E-02	4.2E-02	3.9E-02	3.6E-02	3.3E-02	3.1E-02	3.1E-02	2.2E+04
residential	REC_100M	483930.59	3621125.04	4.5E-02	5.0E-02	4.4E-02	4.0E-02	3.6E-02	3.3E-02	3.2E-02	3.1E-02	2.3E+04
residential	REC_100M	484030.59	3621125.04	4.6E-02	5.2E-02	4.5E-02	4.1E-02	3.7E-02	3.3E-02	3.2E-02	3.1E-02	2.4E+04
residential	REC_100M	484130.59	3621125.04	4.8E-02	5.4E-02	4.7E-02	4.2E-02	3.8E-02	3.4E-02	3.3E-02	3.1E-02	2.5E+04
residential	REC_100M	484230.59	3621125.04	4.9E-02	5.6E-02	4.8E-02	4.3E-02	3.8E-02	3.4E-02	3.3E-02	3.1E-02	2.5E+04
residential	REC_100M	477930.59	3621225.04	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.1E-02	1.1E-02	1.1E-02	1.1E-02	4.6E+03
residential	REC_100M	478030.59	3621225.04	1.3E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.1E-02	1.1E-02	1.1E-02	4.8E+03
residential	REC_100M	478130.59	3621225.04	1.3E-02	1.4E-02	1.3E-02	1.2E-02	1.2E-02	1.1E-02	1.1E-02	1.1E-02	4.9E+03
residential	REC_100M	478230.59	3621225.04	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.1E-02	1.1E-02	1.1E-02	5.0E+03
residential	REC_100M	478330.59	3621225.04	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	1.2E-02	5.0E+03
residential	REC_100M	478430.59	3621225.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1.2E-02	5.2E+03
residential	REC_100M	478530.59	3621225.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1.2E-02	5.3E+03
residential	REC_100M	478630.59	3621225.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1.3E-02	5.4E+03
residential	REC_100M	478730.59	3621225.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1.3E-02	5.4E+03
residential	REC_100M	478830.59	3621225.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1.3E-02	5.9E+03
residential	REC_100M	478930.59	3621225.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1.3E-02	5.9E+03
residential	REC_100M	479030.59	3621225.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1.3E-02	6.0E+03
residential	REC_100M	479130.59	3621225.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1.3E-02	6.0E+03
residential	REC_100M	479230.59	3621225.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1.4E-02	6.1E+03
residential	REC_100M	479330.59	3621225.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1.4E-02	6.1E+03
residential	REC_100M	479430.59	3621225.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1.4E-02	6.2E+03
residential	REC_100M	479530.59	3621225.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1.4E-02	6.3E+03
residential	REC_100M	479630.59	3621225.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1.4E-02	6.3E+03
residential	REC_100M	479730.59	3621225.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1.5E-02	6.4E+03
residential	REC_100M	479830.59	3621225.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1.5E-02	6.5E+03
residential	REC_100M	479930.59	3621225.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1.5E-02	6.5E+03
residential	REC_100M	480030.59	3621225.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1.5E-02	6.6E+03
recreational	park	480130.59	3621225.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1.5E-02	6.7E+03
recreational	park	480230.59	3621225.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1.6E-02	6.7E+03
recreational	park	480330.59	3621225.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1.6E-02	6.8E+03
recreational	park	480430.59	3621225.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1.6E-02	6.9E+03
recreational	park	480530.59	3621225.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1.6E-02	7.0E+03
recreational	park	480630.59	3621225.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1.7E-02	7.1E+03
recreational	park	480730.59	3621225.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1.7E-02	7.1E+03
recreational	park	480830.59	3621225.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1.7E-02	7.2E+03
recreational	park	480930.59	3621225.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1.7E-02	7.3E+03
recreational	park	481030.59	3621225.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1.7E-02	7.4E+03
recreational	park	481330.59	3621225.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1.8E-02	7.7E+03
recreational	park	481430.59	3621225.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1.8E-02	7.8E+03
recreational	park	481530.59	3621225.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1.9E-02	8.0E+03
recreational	park	481630.59	3621225.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1.9E-02	8.1E+03
recreational	park	481730.59	3621225.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1.9E-02	8.3E+03
recreational	park	481830.59	3621225.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	2.0E-02	8.5E+03
recreational	park	481930.59	3621225.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	2.0E-02	8.7E+03
recreational	park	482030.59	3621225.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	2.0E-02	8.9E+03
recreational	park	482130.59	3621225.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	2.1E-02	9.1E+03
recreational	park	482230.59	3621225.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	2.1E-02	9.4E+03
recreational	park	482330.59	3621225.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	2.1E-02	9.8E+03
recreational	park	482430.59	3621225.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	2.2E-02	1.0E+04
recreational	park	482530.59	3621225.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	2.2E-02	1.1E+04
residential	REC_100M	482630.59	3621225.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	2.3E-02	1.1E+04
residential	REC_100M	483830.59	3621225.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	3.0E-02	2.1E+04
residential	REC_100M	483930.59	3621225.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	3.0E-02	2.2E+04
residential	REC_100M	484030.59	3621225.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	3.0E-02	2.3E+04
residential	REC_100M	484130.59	3621225.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	3.0E-02	2.4E+04
school	127 (school)	485901.79	3618344.73	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	4.0E-01	1.9E+06

AERMOD UNITIZED CONCENTRATIONS (continued)

X	Y	LOC_SWTCH EMP (18)	LOC_SWTCH LOA (19)	OGV_PATH _BLR (20)	OGV_PATH _DPM (21)	TR_28TH (22)	TR_BAYMA R (23)	TR_BOSTON (24)	TR_CROSBY (25)	TR_HARBOR CHA (26)	TR_HARBOR SAM (27)	TUG_PATH _DPM (28)
479530.59	3621125.04	1.7E-02	1.6E-02	1.2E-01	1.2E-01	1.2E-02	5.0E-03	1.2E-02	1.4E-02	1.7E-02	1.2E-02	1.6E-01
479630.59	3621125.04	1.8E-02	1.7E-02	1.2E-01	1.2E-01	1.2E-02	5.1E-03	1.2E-02	1.4E-02	1.8E-02	1.2E-02	1.7E-01
481430.59	3621125.04	2.7E-02	2.6E-02	1.8E-01	1.8E-01	1.4E-02	5.8E-03	1.4E-02	1.6E-02	2.1E-02	1.4E-02	2.6E-01
481530.59	3621125.04	2.8E-02	2.6E-02	1.8E-01	1.8E-01	1.4E-02	5.9E-03	1.4E-02	1.7E-02	2.2E-02	1.4E-02	2.6E-01
481630.59	3621125.04	2.8E-02	2.7E-02	1.8E-01	1.8E-01	1.4E-02	5.9E-03	1.4E-02	1.7E-02	2.2E-02	1.4E-02	2.6E-01
481730.59	3621125.04	2.9E-02	2.7E-02	1.8E-01	1.8E-01	1.4E-02	6.0E-03	1.4E-02	1.7E-02	2.2E-02	1.4E-02	2.6E-01
481830.59	3621125.04	2.9E-02	2.7E-02	1.8E-01	1.8E-01	1.4E-02	6.1E-03	1.4E-02	1.7E-02	2.3E-02	1.4E-02	2.6E-01
481930.59	3621125.04	3.0E-02	2.8E-02	1.8E-01	1.8E-01	1.4E-02	6.1E-03	1.4E-02	1.8E-02	2.3E-02	1.4E-02	2.6E-01
482030.59	3621125.04	3.0E-02	2.8E-02	1.8E-01	1.8E-01	1.4E-02	6.2E-03	1.4E-02	1.8E-02	2.3E-02	1.5E-02	2.5E-01
482130.59	3621125.04	3.1E-02	2.9E-02	1.8E-01	1.8E-01	1.5E-02	6.3E-03	1.5E-02	1.9E-02	2.4E-02	1.5E-02	2.5E-01
482230.59	3621125.04	3.1E-02	2.9E-02	1.8E-01	1.8E-01	1.5E-02	6.3E-03	1.5E-02	1.9E-02	2.4E-02	1.5E-02	2.5E-01
482330.59	3621125.04	3.2E-02	3.0E-02	1.7E-01	1.7E-01	1.5E-02	6.4E-03	1.5E-02	1.9E-02	2.5E-02	1.5E-02	2.4E-01
482430.59	3621125.04	3.3E-02	3.1E-02	1.7E-01	1.7E-01	1.5E-02	6.5E-03	1.5E-02	2.0E-02	2.5E-02	1.6E-02	2.4E-01
482530.59	3621125.04	3.3E-02	3.1E-02	1.7E-01	1.7E-01	1.5E-02	6.6E-03	1.5E-02	2.1E-02	2.6E-02	1.6E-02	2.2E-01
483830.59	3621125.04	4.6E-02	4.2E-02	1.3E-01	1.3E-01	1.9E-02	8.5E-03	1.9E-02	3.8E-02	5.0E-02	2.5E-02	1.7E-01
483930.59	3621125.04	4.6E-02	4.2E-02	1.3E-01	1.3E-01	2.0E-02	8.7E-03	2.0E-02	4.1E-02	5.2E-02	2.6E-02	1.7E-01
484030.59	3621125.04	4.7E-02	4.3E-02	1.2E-01	1.2E-01	2.1E-02	8.9E-03	2.0E-02	4.2E-02	5.4E-02	2.8E-02	1.7E-01
484130.59	3621125.04	4.9E-02	4.5E-02	1.2E-01	1.2E-01	2.2E-02	9.2E-03	2.1E-02	4.3E-02	5.7E-02	2.9E-02	1.6E-01
484230.59	3621125.04	4.9E-02	4.5E-02	1.1E-01	1.1E-01	2.3E-02	9.4E-03	2.2E-02	4.4E-02	5.7E-02	3.0E-02	1.5E-01
477930.59	3621225.04	1.0E-02	9.8E-03	4.2E-02	4.2E-02	9.7E-03	4.3E-03	9.6E-03	1.2E-02	1.3E-02	1.1E-02	3.9E-02
478030.59	3621225.04	1.1E-02	1.0E-02	4.5E-02	4.5E-02	9.8E-03	4.3E-03	9.8E-03	1.2E-02	1.4E-02	1.1E-02	4.5E-02
478130.59	3621225.04	1.1E-02	1.0E-02	4.8E-02	4.8E-02	9.9E-03	4.4E-03	9.9E-03	1.2E-02	1.4E-02	1.1E-02	4.9E-02
478230.59	3621225.04	1.1E-02	1.1E-02	5.2E-02	5.2E-02	1.0E-02	4.4E-03	1.0E-02	1.2E-02	1.4E-02	1.1E-02	5.4E-02
478330.59	3621225.04	1.1E-02	1.1E-02	5.5E-02	5.5E-02	1.0E-02	4.4E-03	1.0E-02	1.2E-02	1.4E-02	1.1E-02	5.9E-02
478430.59	3621225.04	1.2E-02	1.1E-02	6.1E-02	6.1E-02	1.0E-02	4.4E-03	1.0E-02	1.2E-02	1.5E-02	1.1E-02	6.7E-02
478530.59	3621225.04	1.2E-02	1.2E-02	6.6E-02	6.6E-02	1.1E-02	4.6E-03	1.0E-02	1.2E-02	1.5E-02	1.1E-02	7.4E-02
478630.59	3621225.04	1.3E-02	1.3E-02	7.1E-02	7.1E-02	1.1E-02	4.7E-03	1.1E-02	1.3E-02	1.5E-02	1.1E-02	8.4E-02
478730.59	3621225.04	1.4E-02	1.3E-02	7.5E-02	7.5E-02	1.1E-02	4.7E-03	1.1E-02	1.3E-02	1.5E-02	1.1E-02	9.1E-02
478830.59	3621225.04	1.4E-02	1.4E-02	7.9E-02	7.9E-02	1.1E-02	4.8E-03	1.1E-02	1.3E-02	1.6E-02	1.1E-02	9.8E-02
478930.59	3621225.04	1.5E-02	1.4E-02	8.3E-02	8.3E-02	1.1E-02	4.8E-03	1.1E-02	1.3E-02	1.6E-02	1.1E-02	1.1E-01
479030.59	3621225.04	1.5E-02	1.4E-02	8.6E-02	8.6E-02	1.1E-02	4.8E-03	1.1E-02	1.3E-02	1.6E-02	1.1E-02	1.1E-01
479130.59	3621225.04	1.5E-02	1.4E-02	9.0E-02	9.0E-02	1.1E-02	4.8E-03	1.1E-02	1.3E-02	1.6E-02	1.1E-02	1.2E-01
479230.59	3621225.04	1.6E-02	1.5E-02	9.4E-02	9.4E-02	1.1E-02	4.9E-03	1.1E-02	1.3E-02	1.6E-02	1.1E-02	1.2E-01
479330.59	3621225.04	1.6E-02	1.5E-02	9.8E-02	9.8E-02	1.1E-02	4.9E-03	1.1E-02	1.3E-02	1.6E-02	1.1E-02	1.3E-01
479430.59	3621225.04	1.6E-02	1.5E-02	1.0E-01	1.0E-01	1.1E-02	4.9E-03	1.1E-02	1.3E-02	1.7E-02	1.1E-02	1.4E-01
479530.59	3621225.04	1.7E-02	1.6E-02	1.1E-01	1.1E-01	1.1E-02	5.0E-03	1.1E-02	1.3E-02	1.7E-02	1.2E-02	1.5E-01
479630.59	3621225.04	1.7E-02	1.6E-02	1.1E-01	1.1E-01	1.1E-02	5.0E-03	1.1E-02	1.4E-02	1.7E-02	1.2E-02	1.5E-01
479730.59	3621225.04	1.7E-02	1.6E-02	1.2E-01	1.2E-01	1.2E-02	5.0E-03	1.1E-02	1.4E-02	1.7E-02	1.2E-02	1.6E-01
479830.59	3621225.04	1.8E-02	1.7E-02	1.2E-01	1.2E-01	1.2E-02	5.1E-03	1.2E-02	1.4E-02	1.7E-02	1.2E-02	1.7E-01
479930.59	3621225.04	1.8E-02	1.7E-02	1.3E-01	1.3E-01	1.2E-02	5.1E-03	1.2E-02	1.4E-02	1.7E-02	1.2E-02	1.8E-01
480030.59	3621225.04	1.8E-02	1.7E-02	1.3E-01	1.3E-01	1.2E-02	5.1E-03	1.2E-02	1.4E-02	1.8E-02	1.2E-02	1.8E-01
480130.59	3621225.04	1.9E-02	1.8E-02	1.4E-01	1.4E-01	1.2E-02	5.2E-03	1.2E-02	1.4E-02	1.8E-02	1.2E-02	1.9E-01
480230.59	3621225.04	2.0E-02	1.8E-02	1.4E-01	1.4E-01	1.2E-02	5.2E-03	1.2E-02	1.4E-02	1.8E-02	1.2E-02	1.9E-01
480330.59	3621225.04	2.1E-02	1.9E-02	1.4E-01	1.4E-01	1.2E-02	5.2E-03	1.2E-02	1.4E-02	1.8E-02	1.2E-02	2.0E-01
480430.59	3621225.04	2.1E-02	1.9E-02	1.5E-01	1.5E-01	1.2E-02	5.3E-03	1.2E-02	1.4E-02	1.8E-02	1.2E-02	2.1E-01
480530.59	3621225.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
480630.59	3621225.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
480730.59	3621225.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
480830.59	3621225.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
480930.59	3621225.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
481030.59	3621225.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
481330.59	3621225.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
481430.59	3621225.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
481530.59	3621225.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
481630.59	3621225.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
481730.59	3621225.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
481830.59	3621225.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
481930.59	3621225.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
482030.59	3621225.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
482130.59	3621225.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
482230.59	3621225.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
482330.59	3621225.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
482430.59	3621225.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
482530.59	3621225.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
482630.59	3621225.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
483830.59	3621225.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
483930.59	3621225.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
484030.59	3621225.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
484130.59	3621225.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
485901.79	3618344.73	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

DPM SCALED CONCENTRATIONS

X	Y	B10_1_AUX	B10_2_AUX	B10_3_AUX	B10_4_AUX	B10_5_AUX	B10_6_AUX	B10_7_AUX	B10_8_AUX	CHE_1	LOC_SWTCHE MP	LOC_SWTCHL OA	OGV_PATH_DPM	TR_28TH	TR_BAYMAR	TR_BOSTON	TR_CROSBY	TR_HARBOR CHA	TR_HARBOR SAM	TUG_PATH_DPM
divide by -->		4	4	4	4	2	2	2	2	1	2	2	1	1	1	1	1	1	1	1
		Refrigerated Containersfull TAMT plan unmit	Refrigerated Containersfull TAMT plan unmit	Refrigerated Containersfull TAMT plan unmit	Refrigerated Containersfull TAMT plan unmit	Multi-Purpose General Cargofull TAMT plan unmit	Multi-Purpose General Cargofull TAMT plan unmit	Dry Bulkfull TAMT plan unmit	Dry Bulkfull TAMT plan unmit	Allfull TAMT plan unmit	Allfull TAMT plan unmit	Allfull TAMT plan unmit	Allfull TAMT plan unmit	TR_28THfull TAMT plan unmit	TR_BAYMA Rfull TAMT plan unmit	TR_BOSTON full TAMT plan unmit	TR_CROSBYf ull TAMT plan unmit	TR_HARBOR CHAfull TAMT plan unmit	TR_HARBOR SAMfull TAMT plan unmit	Allfull TAMT plan unmit
g/s -->		7.6E-02	7.6E-02	7.6E-02	7.6E-02	1.7E-02	1.7E-02	1.9E-02	1.9E-02	8.9E-08	2.3E-03	2.3E-03	4.0E-02	7.8E-06	9.2E-06	2.4E-05	5.2E-05	1.1E-04	1.1E-04	2.4E-03
		1	3	5	7	9	11	13	15	17	18	19	21	22	23	24	25	26	27	28
479530.59	3621125.04	1.4E-03	1.4E-03	1.3E-03	1.2E-03	2.7E-04	2.5E-04	2.7E-04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	3.7E-04
479630.59	3621125.04	1.4E-03	1.4E-03	1.3E-03	1.3E-03	2.7E-04	2.6E-04	2.8E-04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	3.9E-04
481430.59	3621125.04	1.8E-03	1.8E-03	1.7E-03	1.6E-03	3.5E-04	3.3E-04	3.5E-04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	6.2E-04
481530.59	3621125.04	1.8E-03	1.9E-03	1.7E-03	1.7E-03	3.6E-04	3.4E-04	3.6E-04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	6.2E-04
481630.59	3621125.04	1.9E-03	1.9E-03	1.8E-03	1.7E-03	3.6E-04	3.4E-04	3.6E-04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	6.2E-04
481730.59	3621125.04	1.9E-03	1.9E-03	1.8E-03	1.7E-03	3.7E-04	3.5E-04	3.7E-04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	6.2E-04
481830.59	3621125.04	2.0E-03	2.0E-03	1.8E-03	1.8E-03	3.7E-04	3.5E-04	3.8E-04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	6.1E-04
481930.59	3621125.04	2.0E-03	2.1E-03	1.9E-03	1.8E-03	3.8E-04	3.6E-04	3.9E-04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	6.1E-04
482030.59	3621125.04	2.1E-03	2.1E-03	1.9E-03	1.8E-03	3.9E-04	3.7E-04	3.9E-04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	6.0E-04
482130.59	3621125.04	2.1E-03	2.1E-03	2.0E-03	1.9E-03	4.0E-04	3.7E-04	4.0E-04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	5.9E-04
482230.59	3621125.04	2.1E-03	2.2E-03	2.0E-03	1.9E-03	4.0E-04	3.8E-04	4.0E-04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	5.9E-04
482330.59	3621125.04	2.2E-03	2.2E-03	2.0E-03	1.9E-03	4.1E-04	3.8E-04	4.1E-04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	5.8E-04
482430.59	3621125.04	2.2E-03	2.3E-03	2.1E-03	2.0E-03	4.2E-04	3.9E-04	4.2E-04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	5.6E-04
482530.59	3621125.04	2.3E-03	2.4E-03	2.2E-03	2.1E-03	4.4E-04	4.1E-04	4.4E-04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	5.3E-04
483830.59	3621125.04	3.4E-03	3.7E-03	3.2E-03	3.0E-03	6.1E-04	5.6E-04	5.8E-04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	4.1E-04
483930.59	3621125.04	3.4E-03	3.8E-03	3.3E-03	3.0E-03	6.3E-04	5.7E-04	5.9E-04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	4.0E-04
484030.59	3621125.04	3.5E-03	3.9E-03	3.4E-03	3.1E-03	6.3E-04	5.8E-04	6.0E-04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	4.0E-04
484130.59	3621125.04	3.6E-03	4.1E-03	3.5E-03	3.2E-03	6.5E-04	5.9E-04	6.1E-04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	3.8E-04
484230.59	3621125.04	3.7E-03	4.3E-03	3.6E-03	3.3E-03	6.6E-04	5.9E-04	6.1E-04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	3.5E-04
477930.59	3621225.04	9.7E-04	9.7E-04	9.2E-04	8.9E-04	1.9E-04	1.9E-04	2.0E-04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	9.3E-05
478030.59	3621225.04	1.0E-03	1.0E-03	9.5E-04	9.1E-04	2.0E-04	1.9E-04	2.0E-04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1.1E-04
478130.59	3621225.04	1.0E-03	1.0E-03	9.6E-04	9.3E-04	2.0E-04	1.9E-04	2.1E-04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1.2E-04
478230.59	3621225.04	1.0E-03	1.0E-03	9.8E-04	9.5E-04	2.1E-04	2.0E-04	2.1E-04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1.3E-04
478330.59	3621225.04	1.1E-03	1.1E-03	1.0E-03	9.6E-04	2.1E-04	2.0E-04	2.2E-04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1.4E-04
478430.59	3621225.04	1.1E-03	1.1E-03	1.1E-03	1.0E-03	2.2E-04	2.1E-04	2.3E-04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1.6E-04
478530.59	3621225.04	1.1E-03	1.1E-03	1.1E-03	1.0E-03	2.2E-04	2.2E-04	2.3E-04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1.8E-04
478630.59	3621225.04	1.2E-03	1.2E-03	1.1E-03	1.1E-03	2.3E-04	2.2E-04	2.4E-04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	2.0E-04
478730.59	3621225.04	1.2E-03	1.2E-03	1.1E-03	1.1E-03	2.4E-04	2.2E-04	2.4E-04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	2.2E-04
478830.59	3621225.04	1.2E-03	1.2E-03	1.1E-03	1.1E-03	2.4E-04	2.3E-04	2.4E-04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	2.3E-04
478930.59	3621225.04	1.2E-03	1.2E-03	1.2E-03	1.1E-03	2.4E-04	2.3E-04	2.5E-04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	2.5E-04
479030.59	3621225.04	1.2E-03	1.2E-03	1.2E-03	1.1E-03	2.4E-04	2.3E-04	2.5E-04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	2.6E-04
479130.59	3621225.04	1.3E-03	1.3E-03	1.2E-03	1.1E-03	2.5E-04	2.4E-04	2.5E-04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	2.8E-04
479230.59	3621225.04	1.3E-03	1.3E-03	1.2E-03	1.2E-03	2.5E-04	2.4E-04	2.6E-04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	2.9E-04
479330.59	3621225.04	1.3E-03	1.3E-03	1.2E-03	1.2E-03	2.5E-04	2.4E-04	2.6E-04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	3.1E-04
479430.59	3621225.04	1.3E-03	1.3E-03	1.2E-03	1.2E-03	2.6E-04	2.4E-04	2.6E-04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	3.3E-04
479530.59	3621225.04	1.3E-03	1.3E-03	1.3E-03	1.2E-03	2.6E-04	2.5E-04	2.7E-04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	3.5E-04
479630.59	3621225.04	1.4E-03	1.4E-03	1.3E-03	1.2E-03	2.6E-04	2.5E-04	2.7E-04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	3.6E-04
479730.59	3621225.04	1.4E-03	1.4E-03	1.3E-03	1.2E-03	2.7E-04	2.5E-04	2.7E-04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	3.8E-04
479830.59	3621225.04	1.4E-03	1.4E-03	1.3E-03	1.3E-03	2.7E-04	2.6E-04	2.8E-04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	4.0E-04
479930.59	3621225.04	1.4E-03	1.5E-03	1.4E-03	1.3E-03	2.8E-04	2.7E-04	2.8E-04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	4.2E-04
480030.59	3621225.04	1.4E-03	1.4E-03	1.3E-03	1.3E-03	2.7E-04	2.6E-04	2.8E-04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	4.3E-04
480130.59	3621225.04	1.4E-03	1.5E-03	1.4E-03	1.3E-03	2.8E-04	2.7E-04	2.9E-04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	4.5E-04
480230.59	3621225.04	1.5E-03	1.5E-03	1.4E-03	1.3E-03	2.9E-04	2.7E-04	2.9E-04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	4.6E-04
480330.59	3621225.04	1.5E-03	1.5E-03	1.4E-03	1.4E-03	2.9E-04	2.7E-04	3.0E-04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	4.8E-04
480430.59	3621225.04	1.5E-03	1.5E-03	1.4E-03	1.4E-03	3.0E-04	2.8E-04	3.0E-04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	4.9E-04
480530.59	3621225.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	5.0E-04
480630.59	3621225.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	5.1E-04
480730.59	3621225.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	5.2E-04
480830.59	3621225.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	5.3E-04
480930.59	3621225.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	5.4E-04
481030.59	3621225.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	5.5E-04
481330.59	3621225.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	5.7E-04
481430.59	3621225.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	5.7E-04
481530.59	3621225.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	5.7E-04
481630.59	3621225.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	5.7E-04
481730.59	3621225.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	5.7E-04
481830.59	3621225.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	5.7E-04
481930.59	3621225.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	5.6E-04
482030.59	3621225.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	5.6E-04
482130.59	3621225.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	5.5E-04
482230.59	3621225.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	5.5E-04
482330.59	3621225.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	5.4E-04
482430.59	3621225.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	5.3E-04
482530.59	3621225.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	5.2E-04
482630.59	3621225.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	5.0E-04
483830.59	3621225.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	3.9E-04
483930.59	3621225.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	3.9E-04
484030.59	3621225.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	3.8E-04
484130.59	3621225.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	3.6E-04
485901.79	3618344.73	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	5.4E-04

X	Y	Vessel Hoteling: All (100%)	Vessel Hoteling: Refrigerated Containersfull TAMT plan unmit (81%)	Vessel Hoteling: Multi-Purpose General Cargofull TAMT plan unmit (9%)	Vessel Hoteling: Dry Bulkfull TAMT plan unmit (10%)	Vessel Transit: All (100%)	Vessel Transit: Refrigerated Containersfull TAMT plan unmit (46%)	Vessel Transit: Multi-Purpose General Cargofull TAMT plan unmit (25%)	Vessel Transit: Dry Bulkfull TAMT plan unmit (28%)	Tug/Barge Transit: All (100%)	Tug/Barge Transit: Refrigerated Containersfull TAMT plan unmit (21%)	Tug/Barge Transit: Multi-Purpose General Cargofull TAMT plan unmit (54%)	Tug/Barge Transit: Dry Bulkfull TAMT plan unmit (25%)	Terminal E: All (100%)	Terminal E: Refrigerated Containersfull TAMT plan unmit (39%)
479530.59	3621125.04	6.3E-03	5E-03	5E-04	5E-04	5E-03	2E-03	1E-03	1E-03	4E-04	8E-05	2E-04	9E-05	6E-04	2E-04
479630.59	3621125.04	6.4E-03	5E-03	5E-04	6E-04	5E-03	2E-03	1E-03	1E-03	4E-04	8E-05	2E-04	1E-04	6E-04	2E-04
481430.59	3621125.04	8.4E-03	7E-03	7E-04	7E-04	7E-03	3E-03	2E-03	2E-03	6E-04	1E-04	3E-04	2E-04	7E-04	3E-04
481530.59	3621125.04	8.5E-03	7E-03	7E-04	7E-04	7E-03	3E-03	2E-03	2E-03	6E-04	1E-04	3E-04	2E-04	7E-04	3E-04
481630.59	3621125.04	8.7E-03	7E-03	7E-04	7E-04	7E-03	3E-03	2E-03	2E-03	6E-04	1E-04	3E-04	2E-04	7E-04	3E-04
481730.59	3621125.04	8.8E-03	7E-03	7E-04	7E-04	7E-03	3E-03	2E-03	2E-03	6E-04	1E-04	3E-04	2E-04	8E-04	3E-04
481830.59	3621125.04	9.0E-03	8E-03	7E-04	8E-04	7E-03	3E-03	2E-03	2E-03	6E-04	1E-04	3E-04	2E-04	8E-04	3E-04
481930.59	3621125.04	9.2E-03	8E-03	7E-04	8E-04	7E-03	3E-03	2E-03	2E-03	6E-04	1E-04	3E-04	2E-04	8E-04	3E-04
482030.59	3621125.04	9.5E-03	8E-03	8E-04	8E-04	7E-03	3E-03	2E-03	2E-03	6E-04	1E-04	3E-04	2E-04	8E-04	3E-04
482130.59	3621125.04	9.6E-03	8E-03	8E-04	8E-04	7E-03	3E-03	2E-03	2E-03	6E-04	1E-04	3E-04	1E-04	8E-04	3E-04
482230.59	3621125.04	9.8E-03	8E-03	8E-04	8E-04	7E-03	3E-03	2E-03	2E-03	6E-04	1E-04	3E-04	1E-04	9E-04	3E-04
482330.59	3621125.04	1.0E-02	8E-03	8E-04	8E-04	7E-03	3E-03	2E-03	2E-03	6E-04	1E-04	3E-04	1E-04	9E-04	3E-04
482430.59	3621125.04	1.0E-02	9E-03	8E-04	8E-04	7E-03	3E-03	2E-03	2E-03	6E-04	1E-04	3E-04	1E-04	9E-04	4E-04
482530.59	3621125.04	1.1E-02	9E-03	9E-04	9E-04	7E-03	3E-03	2E-03	2E-03	5E-04	1E-04	3E-04	1E-04	1E-03	4E-04
483830.59	3621125.04	1.6E-02	1E-02	1E-03	1E-03	5E-03	2E-03	1E-03	1E-03	4E-04	8E-05	2E-04	1E-04	2E-03	8E-04
483930.59	3621125.04	1.6E-02	1E-02	1E-03	1E-03	5E-03	2E-03	1E-03	1E-03	4E-04	8E-05	2E-04	1E-04	2E-03	8E-04
484030.59	3621125.04	1.6E-02	1E-02	1E-03	1E-03	5E-03	2E-03	1E-03	1E-03	4E-04	8E-05	2E-04	1E-04	2E-03	8E-04
484130.59	3621125.04	1.7E-02	1E-02	1E-03	1E-03	5E-03	2E-03	1E-03	1E-03	4E-04	8E-05	2E-04	1E-04	2E-03	9E-04
484230.59	3621125.04	1.7E-02	1E-02	1E-03	1E-03	4E-03	2E-03	1E-03	1E-03	3E-04	7E-05	2E-04	9E-05	2E-03	9E-04
477930.59	3621225.04	4.5E-03	4E-03	4E-04	4E-04	2E-03	8E-04	4E-04	5E-04	9E-05	2E-05	5E-05	2E-05	4E-04	2E-04
478030.59	3621225.04	4.7E-03	4E-03	4E-04	4E-04	2E-03	8E-04	5E-04	5E-04	1E-04	2E-05	6E-05	3E-05	4E-04	2E-04
478130.59	3621225.04	4.7E-03	4E-03	4E-04	4E-04	2E-03	9E-04	5E-04	6E-04	1E-04	2E-05	6E-05	3E-05	4E-04	2E-04
478230.59	3621225.04	4.8E-03	4E-03	4E-04	4E-04	2E-03	1E-03	5E-04	6E-04	1E-04	3E-05	7E-05	3E-05	4E-04	2E-04
478330.59	3621225.04	4.9E-03	4E-03	4E-04	4E-04	2E-03	1E-03	6E-04	6E-04	1E-04	3E-05	8E-05	4E-05	4E-04	2E-04
478430.59	3621225.04	5.2E-03	4E-03	4E-04	5E-04	2E-03	1E-03	6E-04	7E-04	2E-04	3E-05	9E-05	4E-05	5E-04	2E-04
478530.59	3621225.04	5.3E-03	4E-03	4E-04	5E-04	3E-03	1E-03	7E-04	7E-04	2E-04	4E-05	1E-04	4E-05	5E-04	2E-04
478630.59	3621225.04	5.4E-03	5E-03	5E-04	5E-04	3E-03	1E-03	7E-04	8E-04	2E-04	4E-05	1E-04	5E-05	5E-04	2E-04
478730.59	3621225.04	5.5E-03	5E-03	5E-04	5E-04	3E-03	1E-03	8E-04	9E-04	2E-04	4E-05	1E-04	5E-05	5E-04	2E-04
478830.59	3621225.04	5.6E-03	5E-03	5E-04	5E-04	3E-03	1E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	5E-04	2E-04
478930.59	3621225.04	5.7E-03	5E-03	5E-04	5E-04	3E-03	2E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	5E-04	2E-04
479030.59	3621225.04	5.7E-03	5E-03	5E-04	5E-04	3E-03	2E-03	9E-04	1E-03	3E-04	5E-05	1E-04	7E-05	5E-04	2E-04
479130.59	3621225.04	5.8E-03	5E-03	5E-04	5E-04	4E-03	2E-03	9E-04	1E-03	3E-04	6E-05	1E-04	7E-05	5E-04	2E-04
479230.59	3621225.04	5.9E-03	5E-03	5E-04	5E-04	4E-03	2E-03	1E-03	1E-03	3E-04	6E-05	2E-04	7E-05	5E-04	2E-04
479330.59	3621225.04	6.0E-03	5E-03	5E-04	5E-04	4E-03	2E-03	1E-03	1E-03	3E-04	6E-05	2E-04	8E-05	5E-04	2E-04
479430.59	3621225.04	6.1E-03	5E-03	5E-04	5E-04	4E-03	2E-03	1E-03	1E-03	3E-04	7E-05	2E-04	8E-05	6E-04	2E-04
479530.59	3621225.04	6.2E-03	5E-03	5E-04	5E-04	4E-03	2E-03	1E-03	1E-03	3E-04	7E-05	2E-04	9E-05	6E-04	2E-04
479630.59	3621225.04	6.2E-03	5E-03	5E-04	5E-04	5E-03	2E-03	1E-03	1E-03	4E-04	7E-05	2E-04	9E-05	6E-04	2E-04
479730.59	3621225.04	6.4E-03	5E-03	5E-04	5E-04	5E-03	2E-03	1E-03	1E-03	4E-04	8E-05	2E-04	1E-04	6E-04	2E-04
479830.59	3621225.04	6.5E-03	5E-03	5E-04	6E-04	5E-03	2E-03	1E-03	1E-03	4E-04	8E-05	2E-04	1E-04	6E-04	2E-04
479930.59	3621225.04	6.7E-03	6E-03	5E-04	6E-04	5E-03	2E-03	1E-03	1E-03	4E-04	9E-05	2E-04	1E-04	6E-04	2E-04
480030.59	3621225.04	6.5E-03	5E-03	5E-04	6E-04	5E-03	2E-03	1E-03	1E-03	4E-04	9E-05	2E-04	1E-04	6E-04	2E-04
480130.59	3621225.04	6.7E-03	6E-03	5E-04	6E-04	5E-03	3E-03	1E-03	2E-03	4E-04	9E-05	2E-04	1E-04	6E-04	2E-04
480230.59	3621225.04	6.9E-03	6E-03	6E-04	6E-04	6E-03	3E-03	1E-03	2E-03	5E-04	1E-04	2E-04	1E-04	6E-04	2E-04
480330.59	3621225.04	7.0E-03	6E-03	6E-04	6E-04	6E-03	3E-03	1E-03	2E-03	5E-04	1E-04	3E-04	1E-04	6E-04	2E-04
480430.59	3621225.04	7.1E-03	6E-03	6E-04	6E-04	6E-03	3E-03	2E-03	2E-03	5E-04	1E-04	3E-04	1E-04	6E-04	2E-04
480530.59	3621225.04	7.2E-03	6E-03	6E-04	6E-04	6E-03	3E-03	2E-03	2E-03	5E-04	1E-04	3E-04	1E-04	6E-04	2E-04
480630.59	3621225.04	7.3E-03	6E-03	6E-04	6E-04	6E-03	3E-03	2E-03	2E-03	5E-04	1E-04	3E-04	1E-04	6E-04	2E-04
480730.59	3621225.04	7.4E-03	6E-03	6E-04	6E-04	6E-03	3E-03	2E-03	2E-03	5E-04	1E-04	3E-04	1E-04	6E-04	2E-04
480830.59	3621225.04	7.5E-03	6E-03	6E-04	6E-04	7E-03	3E-03	2E-03	2E-03	5E-04	1E-04	3E-04	1E-04	6E-04	2E-04
480930.59	3621225.04	7.7E-03	6E-03	6E-04	6E-04	7E-03	3E-03	2E-03	2E-03	5E-04	1E-04	3E-04	1E-04	7E-04	3E-04
481030.59	3621225.04	7.7E-03	6E-03	6E-04	7E-04	7E-03	3E-03	2E-03	2E-03	5E-04	1E-04	3E-04	1E-04	7E-04	3E-04
481330.59	3621225.04	8.1E-03	7E-03	7E-04	7E-04	7E-03	3E-03	2E-03	2E-03	6E-04	1E-04	3E-04	1E-04	7E-04	3E-04
481430.59	3621225.04	8.2E-03	7E-03	7E-04	7E-04	7E-03	3E-03	2E-03	2E-03	6E-04	1E-04	3E-04	1E-04	7E-04	3E-04
481530.59	3621225.04	8.3E-03	7E-03	7E-04	7E-04	7E-03	3E-03	2E-03	2E-03	6E-04	1E-04	3E-04	1E-04	7E-04	3E-04
481630.59	3621225.04	8.4E-03	7E-03	7E-04	7E-04	7E-03	3E-03	2E-03	2E-03	6E-04	1E-04	3E-04	1E-04	7E-04	3E-04
481730.59	3621225.04	8.6E-03	7E-03	7E-04	7E-04	7E-03	3E-03	2E-03	2E-03	6E-04	1E-04	3E-04	1E-04	7E-04	3E-04
481830.59	3621225.04	8.8E-03	7E-03	7E-04	7E-04	7E-03	3E-03	2E-03	2E-03	6E-04	1E-04	3E-04	1E-04	8E-04	3E-04
481930.59	3621225.04	9.0E-03	7E-03	7E-04	7E-04	7E-03	3E-03	2E-03	2E-03	6E-04	1E-04	3E-04	1E-04	8E-04	3E-04
482030.59	3621225.04	9.2E-03	8E-03	7E-04	8E-04	7E-03	3E-03	2E-03	2E-03	6E-04	1E-04	3E-04	1E-04	8E-04	3E-04
482130.59	3621225.04	9.3E-03	8E-03	7E-04	8E-04	7E-03	3E-03	2E-03	2E-03	6E-04	1E-04	3E-04	1E-04	8E-04	3E-04
482230.59	3621225.04	9.5E-03	8E-03	8E-04	8E-04	7E-03	3E-03	2E-03	2E-03	5E-04	1E-04	3E-04	1E-04	8E-04	3E-04
482330.59	3621225.04	9.7E-03	8E-03	8E-04	8E-04	7E-03	3E-03	2E-03	2E-03	5E-04	1E-04	3E-04	1E-04	9E-04	3E-04
482430.59	3621225.04	1.0E-02	8E-03	8E-04	8E-04	7E-03	3E-03	2E-03	2E-03	5E-04	1E-04	3E-04	1E-04	9E-04	4E-04
482530.59	3621225.04	1.0E-02	9E-03	8E-04	8E-04	7E-03	3E-03	2E-03	2E-03	5E-04	1E-04	3E-04	1E-04	9E-04	4E-04
482630.59	3621225.04	1.1E-02	9E-03	8E-04	8E-04	6E-03	3E-03	2E-03	2E-03	5E-04	1E-04	3E-04	1E-04	1E-03	4E-04
483830.59	3621225.04	1.5E-02	1E-02	1E-03	1E-03	5E-03	2E-03	1E-03	1E-03	4E-04	8E-05	2E-04	1E-04	2E-03	7E-04
483930.59	3621225.04	1.5E-02	1E-02	1E-03	1E-03	5E-03	2E-03	1E-03	1E-03	4E-04	8E-05	2E-04	1E-04	2E-03	8E-04
484030.59	3621225.04	1.6E-02	1E-02	1E-03	1E-03	5E-03	2E-03	1E-03	1E-03	4E-04	8E-05	2E-04	1E-04	2E-03	8E-04
484130.59	3621225.04	1.6E-02	1E-02	1E-03	1E-03	4E-03	2E-03	1E-03	1E-03	4E-04	7E-05	2E-04	9E-05	2E-03	8E-04
485901.79	3618344.73	1.4E-01	1E-01	1E-02	1E-02	7E-03	3E-03	2E-03	2E-03	5E-04	1E-04	3E-04	1E-04	2E-01	6E-02

TAMT Risk Assessment - DPM Cancer and Chronic HI

AERMOD Output

Receptor type	Discrete Receptor ID (Group Name)	X	Y	quipment: Multi-Purpose General Cargofull TAMT plan unmit 17%	quipment: Dry Bulkfull TAMT plan unmit 45%	Locomotives: All 100%	Locomotives: Refrigerated Containersfull TAMT plan unmit 0%	Locomotives: Multi-Purpose General Cargofull TAMT plan unmit 54%	Locomotives: Dry Bulkfull TAMT plan unmit 46%	Trucks: All 100%	Trucks: Refrigerated Containersfull TAMT plan unmit 61%	Trucks: Multi-Purpose General Cargofull TAMT plan unmit 4%	Trucks: Dry Bulkfull TAMT plan unmit 35%	All
residential	res	487479.47	3617250.73	3E-03	8E-03	2E-03	0E+00	1E-03	9E-04	5E-03	3E-03	2E-04	2E-03	0.11
residential	res	487504.47	3617250.73	3E-03	8E-03	2E-03	0E+00	1E-03	9E-04	0.00422	0.00256	0.00019	0.00147	0.11
residential	res	487529.47	3617250.73	3E-03	8E-03	2E-03	0E+00	1E-03	9E-04	0.00384	0.00233	0.00017	0.00134	0.11
residential	res	487554.47	3617250.73	3E-03	8E-03	2E-03	0E+00	1E-03	9E-04	0.00353	0.00214	0.00016	0.00123	0.11
residential	res	487579.47	3617250.73	3E-03	8E-03	2E-03	0E+00	1E-03	9E-04	0.0032	0.00194	0.00014	0.00112	0.10
residential	res	487604.47	3617250.73	3E-03	8E-03	2E-03	0E+00	1E-03	9E-04	0.00283	0.00172	0.00013	0.00099	0.10
residential	res	487629.47	3617250.73	3E-03	8E-03	2E-03	0E+00	1E-03	9E-04	0.00244	0.00148	0.00011	0.00085	0.10
residential	res	487654.47	3617250.73	3E-03	8E-03	2E-03	0E+00	1E-03	9E-04	0.00207	0.00125	9.2E-05	0.00072	0.10
residential	res	487679.47	3617250.73	3E-03	7E-03	2E-03	0E+00	1E-03	8E-04	0.00175	0.00106	7.8E-05	0.00061	0.10
residential	res	487704.47	3617250.73	3E-03	7E-03	2E-03	0E+00	1E-03	8E-04	0.00151	0.00092	6.7E-05	0.00053	0.10

Refrigerated Containers

X	ug/m3	Dose Inhalation: 3rd tri	0<2	2<9	2<16	16<30	Risk (Residential 30-yr; school 9-yr; park 15-year): 3rd tri	0<2	2<9	2<16	16<30	Summed Risk	Cases Per Million	Chronic HI
487479.47	0.07307	3E-05	8E-05	4E-05	4E-05	2E-05	1E-06	2E-05	0E+00	3E-05	4E-06	5.5E-05	55	0.01461
487504.47	0.07189	2.49E-05	7.51E-05	4.35E-05	3.94E-05	1.8E-05	9.8E-07	2.4E-05	0	2.6E-05	4E-06	5.458E-05	55	0.01438
487529.47	0.07096	2.46E-05	7.42E-05	4.29E-05	3.89E-05	1.78E-05	9.7E-07	2.3E-05	0	2.6E-05	3.9E-06	5.387E-05	54	0.01419
487554.47	0.0701	2.43E-05	7.33E-05	4.24E-05	3.85E-05	1.75E-05	9.5E-07	2.3E-05	0	2.5E-05	3.9E-06	5.322E-05	53	0.01402
487579.47	0.06925	2.4E-05	7.24E-05	4.19E-05	3.8E-05	1.73E-05	9.4E-07	2.3E-05	0	2.5E-05	3.8E-06	5.257E-05	53	0.01385
487604.47	0.06836	2.37E-05	7.14E-05	4.14E-05	3.75E-05	1.71E-05	9.3E-07	2.2E-05	0	2.5E-05	3.8E-06	5.189E-05	52	0.01367
487629.47	0.06752	2.34E-05	7.06E-05	4.09E-05	3.7E-05	1.69E-05	9.2E-07	2.2E-05	0	2.4E-05	3.7E-06	5.126E-05	51	0.0135
487654.47	0.0667	2.31E-05	6.97E-05	4.04E-05	3.66E-05	1.67E-05	9.1E-07	2.2E-05	0	2.4E-05	3.7E-06	5.064E-05	51	0.01334
487679.47	0.06596	2.28E-05	6.89E-05	3.99E-05	3.62E-05	1.65E-05	9E-07	2.2E-05	0	2.4E-05	3.6E-06	5.008E-05	50	0.01319
487704.47	0.06527	2.26E-05	6.82E-05	3.95E-05	3.58E-05	1.63E-05	8.9E-07	2.1E-05	0	2.4E-05	3.6E-06	4.955E-05	50	0.01305

Multi-Purpose General Cargo

X	ug/m3	Dose Inhalation: 3rd tri	0<2	2<9	2<16	16<30	Risk (Residential 30-yr; school 9-yr; park 15-year): 3rd tri	0<2	2<9	2<16	16<30	Summed Risk	Cases Per Million	Chronic HI
487479.47	1E-02	5E-06	2E-05	9E-06	8E-06	4E-06	2E-07	5E-06	0E+00	5E-06	8E-07	1.1E-05	10.974	0.00289
487504.47	1E-02	5E-06	1E-05	9E-06	8E-06	4E-06	2E-07	5E-06	0E+00	5E-06	8E-07	1.1E-05	10.816	0.00285
487529.47	1E-02	5E-06	1E-05	8E-06	8E-06	4E-06	2E-07	5E-06	0E+00	5E-06	8E-07	1.1E-05	10.665	0.00281
487554.47	1E-02	5E-06	1E-05	8E-06	8E-06	3E-06	2E-07	5E-06	0E+00	5E-06	8E-07	1.1E-05	10.527	0.00277
487579.47	1E-02	5E-06	1E-05	8E-06	8E-06	3E-06	2E-07	4E-06	0E+00	5E-06	8E-07	1.0E-05	10.390	0.00274
487604.47	1E-02	5E-06	1E-05	8E-06	7E-06	3E-06	2E-07	4E-06	0E+00	5E-06	7E-07	1.0E-05	10.256	0.0027
487629.47	1E-02	5E-06	1E-05	8E-06	7E-06	3E-06	2E-07	4E-06	0E+00	5E-06	7E-07	1.0E-05	10.123	0.00267
487654.47	1E-02	5E-06	1E-05	8E-06	7E-06	3E-06	2E-07	4E-06	0E+00	5E-06	7E-07	1.0E-05	9.989	0.00263
487679.47	1E-02	5E-06	1E-05	8E-06	7E-06	3E-06	2E-07	4E-06	0E+00	5E-06	7E-07	9.9E-06	9.869	0.0026
487704.47	1E-02	4E-06	1E-05	8E-06	7E-06	3E-06	2E-07	4E-06	0E+00	5E-06	7E-07	9.8E-06	9.753	0.00257

Dry Bulk

X	ug/m3	Dose Inhalation: 3rd tri	0<2	2<9	2<16	16<30	Risk (Residential 30-yr; school 9-yr; park 15-year): 3rd tri	0<2	2<9	2<16	16<30	Summed Risk	Cases Per Million	Chronic HI
487479.47	2E-02	8E-06	2E-05	1E-05	1E-05	6E-06	3E-07	8E-06	0E+00	8E-06	1E-06	1.7E-05	17.468	0.0046
487504.47	2E-02	8E-06	2E-05	1E-05	1E-05	6E-06	3E-07	7E-06	0E+00	8E-06	1E-06	1.7E-05	17.047	0.00449
487529.47	2E-02	8E-06	2E-05	1E-05	1E-05	6E-06	3E-07	7E-06	0E+00	8E-06	1E-06	1.7E-05	16.747	0.00441
487554.47	2E-02	8E-06	2E-05	1E-05	1E-05	5E-06	3E-07	7E-06	0E+00	8E-06	1E-06	1.6E-05	16.469	0.00434
487579.47	2E-02	7E-06	2E-05	1E-05	1E-05	5E-06	3E-07	7E-06	0E+00	8E-06	1E-06	1.6E-05	16.185	0.00426
487604.47	2E-02	7E-06	2E-05	1E-05	1E-05	5E-06	3E-07	7E-06	0E+00	8E-06	1E-06	1.6E-05	15.894	0.00419
487629.47	2E-02	7E-06	2E-05	1E-05	1E-05	5E-06	3E-07	7E-06	0E+00	7E-06	1E-06	1.6E-05	15.609	0.00411
487654.47	2E-02	7E-06	2E-05	1E-05	1E-05	5E-06	3E-07	7E-06	0E+00	7E-06	1E-06	1.5E-05	15.331	0.00404
487679.47	2E-02	7E-06	2E-05	1E-05	1E-05	5E-06	3E-07	7E-06	0E+00	7E-06	1E-06	1.5E-05	15.078	0.00397
487704.47	2E-02	7E-06	2E-05	1E-05	1E-05	5E-06	3E-07	6E-06	0E+00	7E-06	1E-06	1.5E-05	14.848	0.00391

TAMT Risk Assessment - DPM Cancer and Chronic HI

AERMOD Output

Receptor type	Discrete Receptor ID (Group Name)	X	Y		Equipment: Multi-Purpose General Cargofull TAMT plan unmit (17%)	Equipment: Dry Bulkfull TAMT plan unmit (45%)	Locomotives: All (100%)	Locomotives: Refrigerated Containersfull TAMT plan unmit (0%)	Locomotives: Multi-Purpose General Cargofull TAMT plan unmit (54%)	Locomotives: Dry Bulkfull TAMT plan unmit (46%)	Trucks: All (100%)	Trucks: Refrigerated Containersfull TAMT plan unmit (61%)	Trucks: Multi-Purpose General Cargofull TAMT plan unmit (4%)	Trucks: Dry Bulkfull TAMT plan unmit (35%)	All
school		127	489687.62	3613796.14	3E-04	7E-04	2E-04	0E+00	1E-04	9E-05	0.00014	8.5E-05	6.2E-06	4.9E-05	0.02
residential	REC_100M		485330.59	3615425.04	3E-03	7E-03	1E-03	0E+00	7E-04	6E-04	0.00021	0.00013	9.2E-06	7.2E-05	0.09
residential	REC_100M		485430.59	3615425.04	2E-03	7E-03	1E-03	0E+00	7E-04	6E-04	0.00021	0.00013	9.3E-06	7.3E-05	0.09
residential	REC_100M		485530.59	3615425.04	2E-03	6E-03	1E-03	0E+00	7E-04	6E-04	0.00021	0.00013	9.3E-06	7.3E-05	0.09
residential	REC_100M		485230.59	3615525.04	3E-03	8E-03	1E-03	0E+00	7E-04	6E-04	0.00022	0.00013	9.6E-06	7.5E-05	0.10
residential	REC_100M		485330.59	3615525.04	3E-03	7E-03	1E-03	0E+00	7E-04	6E-04	0.00022	0.00013	9.7E-06	7.6E-05	0.10
residential	REC_100M		485430.59	3615525.04	3E-03	7E-03	1E-03	0E+00	7E-04	6E-04	0.00022	0.00013	9.8E-06	7.7E-05	0.09
residential	REC_100M		485530.59	3615525.04	2E-03	7E-03	1E-03	0E+00	7E-04	6E-04	0.00022	0.00013	9.9E-06	7.7E-05	0.09
residential	REC_100M		485030.59	3615625.04	3E-03	9E-03	1E-03	0E+00	8E-04	7E-04	0.00022	0.00013	9.8E-06	7.7E-05	0.11
residential	REC_100M		485130.59	3615625.04	3E-03	9E-03	1E-03	0E+00	8E-04	7E-04	0.00022	0.00014	1E-05	7.8E-05	0.11
residential	REC_100M		485230.59	3615625.04	3E-03	8E-03	1E-03	0E+00	8E-04	7E-04	0.00023	0.00014	1E-05	8E-05	0.10

Refrigerated Containers

Receptor (X, Y)	ug/m3	Dose Inhalation: 3rd tri	0<2	2<9	2<16	16<30	Risk (Residential 30-yr; school 9-yr; park 15-year): 3rd tri	0<2	2<9	2<16	16<30	Summed Risk	Cases Per Million	Chronic HI
school 489687.62, 3613796.14	0.01172	0	1.73E-06	9.25E-07	7.51E-07	3.47E-07	0	0	1E-06	2.4E-07	0	1.264E-06	1	0.00234
485330.59, 3615425.04	0.061	2.11E-05	6.38E-05	3.69E-05	3.35E-05	1.53E-05	8.3E-07	2E-05	0	2.2E-05	3.4E-06	4.631E-05	46	0.0122
485430.59, 3615425.04	0.05999	2.08E-05	6.27E-05	3.63E-05	3.29E-05	1.5E-05	8.2E-07	2E-05	0	2.2E-05	3.3E-06	4.555E-05	46	0.012
485530.59, 3615425.04	0.05878	2.03E-05	6.14E-05	3.56E-05	3.22E-05	1.47E-05	8E-07	1.9E-05	0	2.1E-05	3.2E-06	4.462E-05	45	0.01176
485230.59, 3615525.04	0.06586	2.28E-05	6.88E-05	3.98E-05	3.61E-05	1.65E-05	9E-07	2.2E-05	0	2.4E-05	3.6E-06	5E-05	50	0.01317
485330.59, 3615525.04	0.06384	2.21E-05	6.67E-05	3.86E-05	3.5E-05	1.6E-05	8.7E-07	2.1E-05	0	2.3E-05	3.5E-06	4.847E-05	48	0.01277
485430.59, 3615525.04	0.06186	2.14E-05	6.47E-05	3.74E-05	3.39E-05	1.55E-05	8.4E-07	2E-05	0	2.2E-05	3.4E-06	4.697E-05	47	0.01237
485530.59, 3615525.04	0.05991	2.07E-05	6.26E-05	3.62E-05	3.29E-05	1.5E-05	8.1E-07	2E-05	0	2.2E-05	3.3E-06	4.548E-05	45	0.01198
485030.59, 3615625.04	0.07298	2.53E-05	7.63E-05	4.42E-05	4E-05	1.83E-05	9.9E-07	2.4E-05	0	2.6E-05	4E-06	5.54E-05	55	0.0146
485130.59, 3615625.04	0.07114	2.46E-05	7.44E-05	4.3E-05	3.9E-05	1.78E-05	9.7E-07	2.3E-05	0	2.6E-05	3.9E-06	5.401E-05	54	0.01423
485230.59, 3615625.04	0.06898	2.39E-05	7.21E-05	4.17E-05	3.78E-05	1.73E-05	9.4E-07	2.3E-05	0	2.5E-05	3.8E-06	5.237E-05	52	0.0138

Multi-Purpose General Cargo

Receptor (X, Y)	ug/m3	Dose Inhalation: 3rd tri	0<2	2<9	2<16	16<30	Risk (Residential 30-yr; school 9-yr; park 15-year): 3rd tri	0<2	2<9	2<16	16<30	Summed Risk	Cases Per Million	Chronic HI
school 489687.62, 3613796.14	2E-03	0E+00	3E-07	2E-07	1E-07	6E-08	0E+00	0E+00	2E-07	4E-08	0E+00	2.2E-07	0.216	0.0004
485330.59, 3615425.04	1E-02	4E-06	1E-05	7E-06	7E-06	3E-06	2E-07	4E-06	0E+00	4E-06	7E-07	9.2E-06	9.155	0.00241
485430.59, 3615425.04	1E-02	4E-06	1E-05	7E-06	6E-06	3E-06	2E-07	4E-06	0E+00	4E-06	6E-07	9.0E-06	8.961	0.00236
485530.59, 3615425.04	1E-02	4E-06	1E-05	7E-06	6E-06	3E-06	2E-07	4E-06	0E+00	4E-06	6E-07	8.8E-06	8.760	0.00231
485230.59, 3615525.04	1E-02	5E-06	1E-05	8E-06	7E-06	3E-06	2E-07	4E-06	0E+00	5E-06	7E-07	1.0E-05	9.958	0.00262
485330.59, 3615525.04	1E-02	4E-06	1E-05	8E-06	7E-06	3E-06	2E-07	4E-06	0E+00	5E-06	7E-07	9.7E-06	9.657	0.00254
485430.59, 3615525.04	1E-02	4E-06	1E-05	7E-06	7E-06	3E-06	2E-07	4E-06	0E+00	4E-06	7E-07	9.3E-06	9.335	0.00246
485530.59, 3615525.04	1E-02	4E-06	1E-05	7E-06	7E-06	3E-06	2E-07	4E-06	0E+00	4E-06	7E-07	9.0E-06	9.000	0.00237
485030.59, 3615625.04	1E-02	5E-06	2E-05	9E-06	8E-06	4E-06	2E-07	5E-06	0E+00	5E-06	8E-07	1.1E-05	10.985	0.00289
485130.59, 3615625.04	1E-02	5E-06	1E-05	9E-06	8E-06	4E-06	2E-07	5E-06	0E+00	5E-06	8E-07	1.1E-05	10.798	0.00284
485230.59, 3615625.04	1E-02	5E-06	1E-05	8E-06	8E-06	3E-06	2E-07	5E-06	0E+00	5E-06	8E-07	1.1E-05	10.519	0.00277

Dry Bulk

Receptor (X, Y)	ug/m3	Dose Inhalation: 3rd tri	0<2	2<9	2<16	16<30	Risk (Residential 30-yr; school 9-yr; park 15-year): 3rd tri	0<2	2<9	2<16	16<30	Summed Risk	Cases Per Million	Chronic HI
school 489687.62, 3613796.14	3E-03	0E+00	4E-07	2E-07	2E-07	8E-08	0E+00	0E+00	2E-07	5E-08	0E+00	2.9E-07	0.287	0.00053
485330.59, 3615425.04	2E-02	6E-06	2E-05	1E-05	1E-05	4E-06	2E-07	6E-06	0E+00	6E-06	1E-06	1.3E-05	13.366	0.00352
485430.59, 3615425.04	2E-02	6E-06	2E-05	1E-05	1E-05	4E-06	2E-07	6E-06	0E+00	6E-06	9E-07	1.3E-05	13.037	0.00343
485530.59, 3615425.04	2E-02	6E-06	2E-05	1E-05	9E-06	4E-06	2E-07	5E-06	0E+00	6E-06	9E-07	1.3E-05	12.658	0.00333
485230.59, 3615525.04	2E-02	7E-06	2E-05	1E-05	1E-05	5E-06	3E-07	6E-06	0E+00	7E-06	1E-06	1.5E-05	14.560	0.00384
485330.59, 3615525.04	2E-02	6E-06	2E-05	1E-05	1E-05	5E-06	3E-07	6E-06	0E+00	7E-06	1E-06	1.4E-05	14.150	0.00373
485430.59, 3615525.04	2E-02	6E-06	2E-05	1E-05	1E-05	5E-06	2E-07	6E-06	0E+00	7E-06	1E-06	1.4E-05	13.683	0.0036
485530.59, 3615525.04	2E-02	6E-06	2E-05	1E-05	1E-05	4E-06	2E-07	6E-06	0E+00	6E-06	1E-06	1.3E-05	13.176	0.00347
485030.59, 3615625.04	2E-02	7E-06	2E-05	1E-05	1E-05	5E-06	3E-07	7E-06	0E+00	8E-06	1E-06	1.6E-05	16.022	0.00422
485130.59, 3615625.04	2E-02	7E-06	2E-05	1E-05	1E-05	5E-06	3E-07	7E-06	0E+00	8E-06	1E-06	1.6E-05	15.793	0.00416
485230.59, 3615625.04	2E-02	7E-06	2E-05	1E-05	1E-05	5E-06	3E-07	7E-06	0E+00	7E-06	1E-06	1.5E-05	15.441	0.00407

TAMT Risk Assessment - DPM Cancer and Chronic HI

AERMOD Output

Land Use	Discrete Receptor ID (Group Name)	X	Y	quipment: Multi-Purpose General Cargofull TAMT plan unmit (17%)	quipment: Dry Bulkfull TAMT plan unmit (45%)	Locomotives: All (100%)	Locomotives: Refrigerated Containersfull TAMT plan unmit (0%)	Locomotives: Multi-Purpose General Cargofull TAMT plan unmit (54%)	Locomotives: Dry Bulkfull TAMT plan unmit (46%)	Trucks: All (100%)	Trucks: Refrigerated Containersfull TAMT plan unmit (61%)	Trucks: Multi-Purpose General Cargofull TAMT plan unmit (4%)	Trucks: Dry Bulkfull TAMT plan unmit (35%)	All
residential	REC_100M	488230.59	3617325.04	2E-03	6E-03	1E-03	0E+00	8E-04	7E-04	0.00037	0.00023	1.7E-05	0.00013	0.08
residential	REC_100M	488330.59	3617325.04	2E-03	6E-03	1E-03	0E+00	8E-04	6E-04	0.00032	0.0002	1.4E-05	0.00011	0.08
residential	REC_100M	488830.59	3617325.04	2E-03	4E-03	1E-03	0E+00	6E-04	5E-04	0.00019	0.00012	8.6E-06	6.7E-05	0.07
residential	REC_100M	488930.59	3617325.04	2E-03	4E-03	1E-03	0E+00	6E-04	5E-04	0.00018	0.00011	7.9E-06	6.2E-05	0.06
residential	REC_100M	489030.59	3617325.04	2E-03	4E-03	1E-03	0E+00	5E-04	5E-04	0.00017	0.0001	7.4E-06	5.8E-05	0.06
residential	REC_100M	489130.59	3617325.04	1E-03	4E-03	8E-04	0E+00	4E-04	4E-04	0.00015	9.2E-05	6.8E-06	5.3E-05	0.06
residential	REC_100M	483630.59	3617425.04	5E-03	1E-02	2E-03	0E+00	9E-04	7E-04	0.00012	7.4E-05	5.4E-06	4.2E-05	0.14
residential	REC_100M	483730.59	3617425.04	5E-03	1E-02	2E-03	0E+00	1E-03	8E-04	0.00013	8E-05	5.9E-06	4.6E-05	0.15
residential	REC_100M	483830.59	3617425.04	6E-03	2E-02	2E-03	0E+00	1E-03	9E-04	0.00014	8.7E-05	6.4E-06	5E-05	0.16
residential	REC_100M	483930.59	3617425.04	7E-03	2E-02	2E-03	0E+00	1E-03	9E-04	0.00016	9.4E-05	6.9E-06	5.4E-05	0.17
residential	REC_100M	484030.59	3617425.04	8E-03	2E-02	2E-03	0E+00	1E-03	1E-03	0.00017	0.0001	7.6E-06	5.9E-05	0.19
residential	REC_100M	484130.59	3617425.04	9E-03	2E-02	2E-03	0E+00	1E-03	1E-03	0.00019	0.00011	8.3E-06	6.5E-05	0.20
residential	REC_100M	484230.59	3617425.04	1E-02	3E-02	3E-03	0E+00	1E-03	1E-03	0.00021	0.00013	9.2E-06	7.2E-05	0.22
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Refrigerated Containers

X	ug/m3	Dose Inhalation: 3rd tri	Dose Inhalation: 0<2	Dose Inhalation: 2<9	Dose Inhalation: 2<16	Dose Inhalation: 16<30	Risk (Residential 30-yr; school 9-yr; park 15-year): 3rd tri	Risk: 0<2	Risk: 2<9	Risk: 2<16	Risk: 16<30	Summed Risk	Cases Per Million	Chronic HI
488230.59	0.05542	1.92E-05	5.79E-05	3.35E-05	3.04E-05	1.39E-05	7.5E-07	1.8E-05	0	2E-05	3.1E-06	4.207E-05	42	0.01108
488330.59	0.05357	1.85E-05	5.6E-05	3.24E-05	2.94E-05	1.34E-05	7.3E-07	1.8E-05	0	1.9E-05	2.9E-06	4.066E-05	41	0.01071
488830.59	0.04615	1.6E-05	4.82E-05	2.79E-05	2.53E-05	1.16E-05	6.3E-07	1.5E-05	0	1.7E-05	2.5E-06	3.504E-05	35	0.00923
488930.59	0.04452	1.54E-05	4.65E-05	2.69E-05	2.44E-05	1.11E-05	6.1E-07	1.5E-05	0	1.6E-05	2.5E-06	3.38E-05	34	0.0089
489030.59	0.04301	1.49E-05	4.5E-05	2.6E-05	2.36E-05	1.08E-05	5.8E-07	1.4E-05	0	1.6E-05	2.4E-06	3.265E-05	33	0.0086
489130.59	0.04243	1.47E-05	4.44E-05	2.57E-05	2.33E-05	1.06E-05	5.8E-07	1.4E-05	0	1.5E-05	2.3E-06	3.221E-05	32	0.00849
483630.59	0.10209	3.53E-05	0.000107	6.18E-05	5.6E-05	2.55E-05	1.4E-06	3.4E-05	0	3.7E-05	5.6E-06	7.75E-05	77	0.02042
483730.59	0.10755	3.72E-05	0.000112	6.51E-05	5.9E-05	2.69E-05	1.5E-06	3.5E-05	0	3.9E-05	5.9E-06	8.165E-05	82	0.02151
483830.59	0.11469	3.97E-05	0.00012	6.94E-05	6.29E-05	2.87E-05	1.6E-06	3.8E-05	0	4.2E-05	6.3E-06	8.706E-05	87	0.02294
483930.59	0.12297	4.26E-05	0.000129	7.44E-05	6.75E-05	3.08E-05	1.7E-06	4E-05	0	4.5E-05	6.8E-06	9.336E-05	93	0.02459
484030.59	0.13318	4.61E-05	0.000139	8.06E-05	7.3E-05	3.33E-05	1.8E-06	4.4E-05	0	4.8E-05	7.3E-06	0.0001011	101	0.02664
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Multi-Purpose General Cargo

X	ug/m3	Dose Inhalation: 3rd tri	Dose Inhalation: 0<2	Dose Inhalation: 2<9	Dose Inhalation: 2<16	Dose Inhalation: 16<30	Risk (Residential 30-yr; school 9-yr; park 15-year): 3rd tri	Risk: 0<2	Risk: 2<9	Risk: 2<16	Risk: 16<30	Summed Risk	Cases Per Million	Chronic HI
488230.59	1E-02	4E-06	1E-05	6E-06	6E-06	3E-06	1E-07	3E-06	0E+00	4E-06	6E-07	7.8E-06	7.830	0.00206
488330.59	1E-02	3E-06	1E-05	6E-06	5E-06	2E-06	1E-07	3E-06	0E+00	4E-06	5E-07	7.5E-06	7.510	0.00198
488830.59	8E-03	3E-06	9E-06	5E-06	4E-06	2E-06	1E-07	3E-06	0E+00	3E-06	5E-07	6.2E-06	6.225	0.00164
488930.59	8E-03	3E-06	8E-06	5E-06	4E-06	2E-06	1E-07	3E-06	0E+00	3E-06	4E-07	6.0E-06	5.993	0.00158
489030.59	8E-03	3E-06	8E-06	5E-06	4E-06	2E-06	1E-07	2E-06	0E+00	3E-06	4E-07	5.8E-06	5.774	0.00152
489130.59	7E-03	3E-06	8E-06	4E-06	4E-06	2E-06	1E-07	2E-06	0E+00	3E-06	4E-07	5.6E-06	5.591	0.00147
483630.59	2E-02	5E-06	2E-05	9E-06	8E-06	4E-06	2E-07	5E-06	0E+00	6E-06	9E-07	1.2E-05	11.732	0.00309
483730.59	2E-02	6E-06	2E-05	1E-05	9E-06	4E-06	2E-07	5E-06	0E+00	6E-06	9E-07	1.3E-05	12.517	0.0033
483830.59	2E-02	6E-06	2E-05	1E-05	1E-05	4E-06	2E-07	6E-06	0E+00	6E-06	1E-06	1.4E-05	13.517	0.00356
483930.59	2E-02	7E-06	2E-05	1E-05	1E-05	5E-06	3E-07	6E-06	0E+00	7E-06	1E-06	1.5E-05	14.687	0.00387
484030.59	2E-02	7E-06	2E-05	1E-05	1E-05	5E-06	3E-07	7E-06	0E+00	8E-06	1E-06	1.6E-05	16.088	0.00424
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Dry Bulk

X	ug/m3	Dose Inhalation: 3rd tri	Dose Inhalation: 0<2	Dose Inhalation: 2<9	Dose Inhalation: 2<16	Dose Inhalation: 16<30	Risk (Residential 30-yr; school 9-yr; park 15-year): 3rd tri	Risk: 0<2	Risk: 2<9	Risk: 2<16	Risk: 16<30	Summed Risk	Cases Per Million	Chronic HI
488230.59	2E-02	5E-06	2E-05	9E-06	8E-06	4E-06	2E-07	5E-06	0E+00	6E-06	8E-07	1.2E-05	11.643	0.00307
488330.59	1E-02	5E-06	2E-05	9E-06	8E-06	4E-06	2E-07	5E-06	0E+00	5E-06	8E-07	1.1E-05	11.135	0.00293
488830.59	1E-02	4E-06	1E-05	7E-06	7E-06	3E-06	2E-07	4E-06	0E+00	4E-06	7E-07	9.1E-06	9.095	0.0024
488930.59	1E-02	4E-06	1E-05	7E-06	6E-06	3E-06	2E-07	4E-06	0E+00	4E-06	6E-07	8.7E-06	8.733	0.0023
489030.59	1E-02	4E-06	1E-05	7E-06	6E-06	3E-06	2E-07	4E-06	0E+00	4E-06	6E-07	8.4E-06	8.392	0.00221
489130.59	1E-02	4E-06	1E-05	6E-06	6E-06	3E-06	1E-07	4E-06	0E+00	4E-06	6E-07	8.1E-06	8.110	0.00214
483630.59	2E-02	8E-06	2E-05	1E-05	1E-05	6E-06	3E-07	8E-06	0E+00	8E-06	1E-06	1.8E-05	17.555	0.00462
483730.59	3E-02	9E-06	3E-05	2E-05	1E-05	6E-06	3E-07	8E-06	0E+00	9E-06	1E-06	1.9E-05	19.003	0.00501
483830.59	3E-02	9E-06	3E-05	2E-05	2E-05	7E-06	4E-07	9E-06	0E+00	1E-05	2E-06	2.1E-05	20.792	0.00548
483930.59	3E-02	1E-05	3E-05	2E-05	2E-05	8E-06	4E-07	1E-05	0E+00	1E-05	2E-06	2.3E-05	22.904	0.00603
484030.59	3E-02	1E-05	3E-05	2E-05	2E-05	8E-06	5E-07	1E-05	0E+00	1E-05	2E-06	2.5E-05	25.405	0.00669
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

TAMT Risk Assessment - DPM Cancer and Chronic HI

AERMOD Output

Discrete Receptor ID	(Group Name)	X	Y	Equipment: Multi-Purpose General Cargofull TAMT plan unmit 17%	Equipment: Dry Bulkfull TAMT plan unmit 45%	Locomotives: All 100%	Locomotives: Refrigerated Containersfull TAMT plan unmit 0%	Locomotives: Multi-Purpose General Cargofull TAMT plan unmit 54%	Locomotives: Dry Bulkfull TAMT plan unmit 46%	Trucks: All 100%	Trucks: Refrigerated Containersfull TAMT plan unmit 61%	Trucks: Multi-Purpose General Cargofull TAMT plan unmit 4%	Trucks: Dry Bulkfull TAMT plan unmit 35%	All	Refrigerated Containers ug/m3	Dose Inhalation 3rd tri	Dose 0<2	Dose 2<9	Dose 2<16	Dose 16<30	Risk (Residential 30-yr; school 9-yr; park 15-year) 3rd tri	Risk 0<2	Risk 2<9	Risk 2<16	Risk 16<30	Summed Risk	Cases Per Million	Chronic HI
residential	REC_100M	488530.59	3617825.04	2E-03	5E-03	1E-03	0E+00	6E-04	5E-04	0.00021	0.00013	9.2E-06	7.2E-05	0.07	0.05104	1.77E-05	5.33E-05	3.09E-05	2.8E-05	1.28E-05	6.9E-07	1.7E-05	0	1.8E-05	2.8E-06	3.875E-05	39	0.01021
residential	REC_100M	488630.59	3617825.04	2E-03	5E-03	1E-03	0E+00	6E-04	5E-04	0.00019	0.00011	8.3E-06	6.5E-05	0.07	0.04963	1.72E-05	5.19E-05	3E-05	2.72E-05	1.24E-05	6.7E-07	1.6E-05	0	1.8E-05	2.7E-06	3.768E-05	38	0.00993
residential	REC_100M	488730.59	3617825.04	2E-03	5E-03	1E-03	0E+00	6E-04	5E-04	0.00017	0.0001	7.6E-06	6E-05	0.07	0.04641	1.61E-05	4.85E-05	2.81E-05	2.55E-05	1.16E-05	6.3E-07	1.5E-05	0	1.7E-05	2.6E-06	3.523E-05	35	0.00928
residential	REC_100M	488830.59	3617825.04	2E-03	4E-03	1E-03	0E+00	6E-04	5E-04	0.00016	9.5E-05	7E-06	5.5E-05	0.06	0.04403	1.52E-05	4.6E-05	2.66E-05	2.41E-05	1.1E-05	6E-07	1.4E-05	0	1.6E-05	2.4E-06	3.342E-05	33	0.00881
residential	REC_100M	488930.59	3617825.04	2E-03	4E-03	1E-03	0E+00	6E-04	5E-04	0.00014	8.8E-05	6.4E-06	5E-05	0.06	0.04217	1.46E-05	4.41E-05	2.55E-05	2.31E-05	1.06E-05	5.7E-07	1.4E-05	0	1.5E-05	2.3E-06	3.201E-05	32	0.00843
residential	REC_100M	489030.59	3617825.04	1E-03	4E-03	1E-03	0E+00	6E-04	5E-04	0.00013	8.1E-05	6E-06	4.7E-05	0.06	0.04077	1.41E-05	4.26E-05	2.47E-05	2.24E-05	1.02E-05	5.5E-07	1.3E-05	0	1.5E-05	2.2E-06	3.095E-05	31	0.00815
residential	REC_100M	489130.59	3617825.04	1E-03	4E-03	1E-03	0E+00	5E-04	5E-04	0.00013	7.7E-05	5.6E-06	4.4E-05	0.06	0.0396	1.37E-05	4.14E-05	2.4E-05	2.17E-05	9.91E-06	5.4E-07	1.3E-05	0	1.4E-05	2.2E-06	3.006E-05	30	0.00792
residential	REC_100M	482830.59	3617925.04	2E-03	4E-03	8E-04	0E+00	4E-04	4E-04	5E-05	3E-05	2.2E-06	1.7E-05	0.08	0.05559	1.92E-05	5.81E-05	3.36E-05	3.05E-05	1.39E-05	7.6E-07	1.8E-05	0	2E-05	3.1E-06	4.22E-05	42	0.01112
residential	REC_100M	482930.59	3617925.04	2E-03	5E-03	8E-04	0E+00	5E-04	4E-04	5.3E-05	3.2E-05	2.4E-06	1.8E-05	0.08	0.05854	2.03E-05	6.12E-05	3.54E-05	3.21E-05	1.47E-05	8E-07	1.9E-05	0	2.1E-05	3.2E-06	4.444E-05	44	0.01171
residential	REC_100M	483030.59	3617925.04	2E-03	5E-03	9E-04	0E+00	5E-04	4E-04	5.6E-05	3.4E-05	2.5E-06	2E-05	0.08	0.06192	2.14E-05	6.47E-05	3.75E-05	3.4E-05	1.55E-05	8.4E-07	2E-05	0	2.2E-05	3.4E-06	4.7E-05	47	0.01238
residential	REC_100M	483130.59	3617925.04	2E-03	5E-03	1E-03	0E+00	5E-04	4E-04	5.9E-05	3.6E-05	2.6E-06	2.1E-05	0.09	0.06546	2.27E-05	6.84E-05	3.96E-05	3.59E-05	1.64E-05	8.9E-07	2.2E-05	0	2.4E-05	3.6E-06	4.969E-05	50	0.01309
residential	REC_100M	483230.59	3617925.04	2E-03	6E-03	1E-03	0E+00	6E-04	5E-04	6.3E-05	3.8E-05	2.8E-06	2.2E-05	0.09	0.06937	2.4E-05	7.25E-05	4.2E-05	3.8E-05	1.74E-05	9.4E-07	2.3E-05	0	2.5E-05	3.8E-06	5.266E-05	53	0.01387
residential	REC_100M	483330.59	3617925.04	2E-03	6E-03	1E-03	0E+00	6E-04	5E-04	6.7E-05	4.1E-05	3E-06	2.4E-05	0.10	0.07374	2.55E-05	7.71E-05	4.46E-05	4.04E-05	1.85E-05	1E-06	2.4E-05	0	2.7E-05	4.1E-06	5.598E-05	56	0.01475
residential	REC_100M	483430.59	3617925.04	3E-03	7E-03	1E-03	0E+00	6E-04	5E-04	7.2E-05	4.4E-05	3.2E-06	2.5E-05	0.11	0.07842	2.71E-05	8.2E-05	4.74E-05	4.3E-05	1.96E-05	1.1E-06	2.6E-05	0	2.8E-05	4.3E-06	5.953E-05	60	0.01568
residential	REC_100M	483530.59	3617925.04	3E-03	8E-03	1E-03	0E+00	7E-04	6E-04	7.8E-05	4.7E-05	3.5E-06	2.7E-05	0.11	0.08334	2.88E-05	8.71E-05	5.04E-05	4.57E-05	2.09E-05	1.1E-06	2.7E-05	0	3E-05	4.6E-06	6.326E-05	63	0.01667
residential	REC_100M	483630.59	3617925.04	3E-03	9E-03	1E-03	0E+00	8E-04	6E-04	8.4E-05	5.1E-05	3.7E-06	2.9E-05	0.12	0.08877	3.07E-05	9.28E-05	5.37E-05	4.87E-05	2.22E-05	1.2E-06	2.9E-05	0	3.2E-05	4.9E-06	6.739E-05	67	0.01775
residential	REC_100M	483730.59	3617925.04	4E-03	1E-02	2E-03	0E+00	8E-04	7E-04	9.1E-05	5.5E-05	4E-06	3.2E-05	0.13	0.09466	3.28E-05	9.89E-05	5.73E-05	5.19E-05	2.37E-05	1.3E-06	3.1E-05	0	3.4E-05	5.2E-06	7.186E-05	72	0.01893
residential	REC_100M	483830.59	3617925.04	4E-03	1E-02	2E-03	0E+00	9E-04	8E-04	9.9E-05	6E-05	4.4E-06	3.4E-05	0.14	0.10073	3.49E-05	0.000105	6.1E-05	5.53E-05	2.52E-05	1.4E-06	3.3E-05	0	3.6E-05	5.5E-06	7.647E-05	76	0.02015
residential	REC_100M	483930.59	3617925.04	5E-03	1E-02	2E-03	0E+00	1E-03	8E-04	0.00011	6.5E-05	4.8E-06	3.8E-05	0.15	0.10734	3.72E-05	0.000112	6.5E-05	5.89E-05	2.69E-05	1.5E-06	3.5E-05	0	3.9E-05	5.9E-06	8.149E-05	81	0.02147
residential	REC_100M	484030.59	3617925.04	5E-03	1E-02	2E-03	0E+00	1E-03	9E-04	0.00012	7.2E-05	5.3E-06	4.1E-05	0.16	0.11336	3.92E-05	0.000118	6.86E-05	6.22E-05	2.84E-05	1.5E-06	3.7E-05	0	4.1E-05	6.2E-06	8.606E-05	86	0.02267
residential	REC_100M	484130.59	3617925.04	6E-03	2E-02	2E-03	0E+00	1E-03	1E-03	0.00013	8E-05	5.8E-06	4.6E-05	0.17	0.12187	4.22E-05	0.000127	7.37E-05	6.68E-05	3.05E-05	1.7E-06	4E-05	0	4.4E-05	6.7E-06	9.251E-05	93	0.02437
residential	REC_100M	486330.59	3617925.04	1E-02	4E-02	1E-02	0E+00	6E-03	5E-03	0.00276	0.00168	0.00012	0.00096	0.25	0.15504	5.37E-05	0.000162	9.38E-05	8.5E-05	3.88E-05	2.1E-06	5.1E-05	0	5.6E-05	8.5E-06	0.0001177	118	0.03101
residential	REC_100M	486430.59	3617925.04	1E-02	3E-02	1E-02	0E+00	5E-03	4E-03	0.00186	0.00113	8.3E-05	0.00065	0.22	0.14196	4.91E-05	0.000148	8.59E-05	7.79E-05	3.55E-05	1.9E-06	4.7E-05	0	5.1E-05	7.8E-06	0.0001078	108	0.02839
residential	REC_100M	486530.59	3617925.04	1E-02	3E-02	8E-03	0E+00	4E-03	4E-03	0.00142	0.00086	6.3E-05	0.00049	0.20	0.1307	4.52E-05	0.000137	7.91E-05	7.17E-05	3.27E-05	1.8E-06	4.3E-05	0	4.7E-05	7.2E-06	9.922E-05	99	0.02614
residential	REC_100M	486630.59	3617925.04	8E-03	2E-02	7E-03	0E+00	4E-03	3E-03	0.00114	0.00069	5.1E-05	0.0004	0.18	0.12063	4.18E-05	0.000126	7.3E-05	6.62E-05	3.02E-05	1.6E-06	4E-05	0	4.4E-05	6.6E-06	9.158E-05	92	0.02413
residential	REC_100M	486730.59	3617925.04	7E-03	2E-02	6E-03	0E+00	3E-03	3E-03	0.00092	0.00056	4.1E-05	0.00032	0.17	0.11132	3.85E-05	0.000116	6.74E-05	6.11E-05	2.79E-05	1.5E-06	3.7E-05	0	4E-05	6.1E-06	8.451E-05	85	0.02226
residential	REC_100M	486830.59	3617925.04	6E-03	2E-02	5E-03	0E+00	3E-03	2E-03	0.00081	0.00049	3.6E-05	0.00028	0.16	0.10429	3.61E-05	0.000109	6.31E-05	5.72E-05	2.61E-05	1.4E-06	3.4E-05	0	3.8E-05	5.7E-06	7.917E-05	79	0.02086
residential	REC_100M	487030.59	3617925.04	5E-03	1E-02	4E-03	0E+00	2E-03	2E-03	0.00063	0.00038	2.8E-05	0.00022	0.14	0.09171	3.17E-05	9.59E-05	5.55E-05	5.03E-05	2.3E-05	1.2E-06	3E-05	0	3.3E-05	5E-06	6.962E-05	70	0.01834
residential	REC_100M	487130.59	3617925.04	4E-03	1E-02	4E-03	0E+00	2E-03	2E-03	0.00057	0.00034	2.5E-05	0.0002	0.13	0.0864	2.99E-05	9.03E-05	5.23E-05	4.74E-05	2.16E-05	1.2E-06	2.8E-05	0	3.1E-05	4.8E-06	6.559E-05	66	0.01728
residential	REC_100M	487230.59	3617925.04	4E-03	1E-02	3E-03	0E+00	2E-03	2E-03	0.00053	0.00032	2.3E-05	0.00018	0.12	0.08169	2.83E-05	8.54E-05	4.94E-05	4.48E-05	2.04E-05	1.1E-06	2.7E-05	0	3E-05	4.5E-06	6.201E-05	62	0.01634
residential	REC_100M	487330.59	3617925.04	4E-03	1E-02	3E-03	0E+00	2E-03	1E-03	0.0005	0.0003	2.2E-05	0.00017	0.11	0.07757	2.69E-05	8.11E-05	4.69E-05	4.25E-05	1.94E-05	1.1E-06	2.5E-05	0	2.8E-05	4.3E-06	5.889E-05	59	0.01551
residential	REC_100M	487430.59	3617925.04	3E-03	9E-03	3E-03	0E+00	2E-03	1E-03	0.00048	0.00029	2.1E-05	0.00017	0.11	0.0736	2.55E-05	7.69E-05	4.45E-05	4.04E-05	1.84E-05	1E-06	2.4E-05	0	2.7E-05	4.1E-06	5.588E-05	56	0.01472
school	BurLogan	487530.59	3617925.04	3E-03	9E-03	3E-03	0E+00	1E-03	1E-03	0.00048	0.00029	2.1E-05	0.00017	0.10	0.06998	0	1.04E-05	5.52E-06	4.49E-06	2.07E-06	0	0	6.1E-06	1.4E-06	0	7.543E-06	8	0.014
school	BurLogan	487630.59	3617925.04	3E-03	8E-03	2E-03	0E+00	1E-03	1E-03	0.00049	0.00029	2.2E-05	0.00017	0.10	0.06686	0	9.89E-06	5.28E-06	4.29E-06	1.98E-06	0	0	5.8E-06	1.4E-06	0	7.208E-06	7	0.01337
school	BurLogan	487730.59	3617925.04	3E-03	8E-03	2E-03	0E+00	1E-03	1E-03	0.00047	0.00029	2.1E-05	0.00016	0.09	0.06387	0	9.45E-06	5.04E-06	4.09E-06	1.89E-06	0	0	5.6E-06	1.3E-06	0	6.885E-06	7	0.01277
school	BurLogan	487830.59	3617925.04	3E-03	7E-03	2E-03	0E+00	1E-03	9E-04	0.00045	0.00027	2E-05	0.00016	0.09	0.06124	0	9.06E-06	4.83E-06	3.93E-06	1.81E-06	0	0	5.4E-06	1.3E-06	0	6.601E-06	7	0.01225
residential	REC_100M	487930.59	3617925.04	3E-03	7E-03	2E-03	0E+00	1E-03	9E-04	0.00043	0.00026	1.9E-05	0.00015	0.09	0.05963	2.06E-05	6.23E-05	3.61E-05	3.27E-05	1.49E-05	8.1E-07	2E-05	0	2.2E-05	3.3E-06	4.527E-05	45	0.01193
residential	REC_100M	488030.59	3617925.04	2E-03	7E-03	2E-03	0E+00	1E-03	8E-04	0.00039	0.00023	1.7E-05	0.00013	0.08	0.05803	2.01E-05	6.07E-05	3.51E-05	3.18E-05	1.45E-05	7.9E-07	1.9E-05	0	2.1E-05	3.2E-06	4.405E-05	44	0.01161
school	school	488130.59	3617925.04	2E-03	6E-03	2E-03	0E+00	9E-04	7E-04	0.00034	0.00021	1.5E-05	0.00012	0.08	0.05695	0	8.43E-06	4.49E-06	3.65E-06	1.69E-06	0	0	5E-06	1.2E-06	0	6.139E-06	6	0.01139
school	school	488230.59	3617925.04	2E-03	6E-03	2E-03	0E+00	8E-04	7E-04	0.0003	0.00018	1.3E-05	0.0001	0.08	0.05415	0	8.01E-06	4.27E-06	3.47E-06	1.6E-06	0	0	4.7E-06	1.1E-06	0	5.838E-06	6	0.01083
residential	REC_100M	488330.59	3617925.04	2E-03	6E-03	1E-03	0E+00	8E-04	7E-04	0.00026	0.00016	1.2E-05	9.2E-05	0.07	0.05255	1.82E-05	5.49E-05	3.18E-05	2.88E-05	1.32E-05	7.1E-07	1.7E-05	0	1.9E-05	2.9E-06	3.989E-05	40	0.01051
residential	REC_100M	488430.59	3617925.04	2E-03	5E-03	1E-03	0E+00	6E-04	5E-04	0.00023	0.00014	1E-05	8E-05	0.07	0.05191	1.8E-05	5.43E-05	3.14E-05	2.85E-05	1.3E-05	7.1E-07	1.7E-05	0	1.9E-05	2.9E-06	3.941E-05	39	0.01038
residential	REC_100M	488530.59	3617925.04	2E-03	5E-03	1E-03	0E+00	6E-04	5E-04	0.0002	0.00012	9.1E-06	7.1E-05	0.07	0.05002	1.73E-05	5.23E-05	3.03E-05	2.74E-05	1.25E-05	6.8E-07	1.6E-05	0	1.8E-05	2.8E-06	3.797E-05	38	0.01
residential	REC_100M	488630.59	3617925.04	2E-03	5E-03	1E-03	0E+00	5E-04	5E-04	0.00018	0.00011	8.1E-06	6.4E-05	0.07	0.04861	1.68E-05	5.08E-05	2.94E-05	2.67E-05	1.22E-05	6.6E-07	1.6E-05	0	1.8E-05	2.7E-06	3.69E-05	37	0.00972
residential	REC_100M	488730.59	3617925.04	2E-03	4E-03	1E-03	0E+00	6E-04	5E-04	0.00017	0.0001	7.4E-06	5.8E-05	0.07	0.04621	1.6E-05	4.83E-05	2.8E-05	2.53E-05	1.16E-05	6.3E-07	1.5E-05	0	1.7E-05	2.5E-06	3.508E-05	35	0.00924
residential	REC_100M	488830.59	3617925.04	2E-03	4E-03	1E-03	0E+00	6E-04	5E-04	0.00015	9.3E-05	6.8E-06	5.3E-05	0.06	0.04431	1.53E-05	4.63E-05	2.68E-05	2.43E-05	1.11E-05	6E-07	1.5E-05	0	1.6E-05	2.4E-06	3.364E-05	34	0.00886
residential	REC_100M	488930.59	3617925.04	2E-03	4E-03	1E-03	0E+00	6E-04	5E-04	0.00014	8.6E-05	6.3E-06	4.9E-05	0.06	0.04248	1.47E-05	4.44E-05	2.57E-05	2.33E-05	1.06E-05	5.8E-07	1.4E-05	0	1.5E-05	2.3E-06	3.225E-05	32	0.0085
residential	REC_100M	489030.59	3617925.04	1E-03	4E-03	1E-03	0E+00	5E-04	5E-04	0.00013	7.9E-05	5.8E-06	4.6E-05	0.06	0.04057	1.4E-05	4.24E-05	2.45E-05	2.23E-05	1.02E-05	5.5E-07	1.3E-05	0	1.5E-05	2.2E-06	3.08E-05	31	0.00811
residential	REC_100M	489130.59	3617925.04	1E-03	4E-03	1E-03	0E+00	5E-04	4E-04	0.00012	7.4E-05	5.4E-06	4.2E-05	0.05	0.03882	1.34E-05	4.06E-05	2.35E-05	2.13E-05	9.71E-06	5.3E-07	1.3E-05	0	1.4E-05	2.1E-06	2.947E-05	29	0.00776
residential	REC_100M	482930.59	3618025.04	2E-03	4E-03	8E-04	0E+00	4E-04	4E-04	4.9E-05	3E-05	2.2E-06	1.7E-05	0.08	0.05634	1.95E-05	5.89E-05	3.41E-05	3.09E-05	1.41E-05	7.7E-07	1.9E-05	0	2E-05	3.1E-06	4.277E-05	43	0.01127
residential	REC_100M	483030.59	3618025.04	2E-03	5E-03	9E-04	0E+00	5E-04	4E-04	5.1E-05	3.1E-05	2.3E-06	1.8E-05	0.08	0.05922	2.05E-05	6.19E-05	3.58E-05	3.25E-05	1.48E-05	8.1E-07	1.9E-05	0	2.1E-05	3.3E-06	4.496E-05	45	0.01184
residential	REC_100M	483130.59	3618025.04	2E-03	5E-03	9E-04	0E+00	5E-04	4E-04	5.5E-05	3.3E-05	2.4E-06	1.9E-05	0.08	0.06246	2.16E-05	6.53E-05	3.78E-05	3.43E-05	1.56E-05	8.5E-07	2.1E-05	0	2.3E-05	3.4E-06	4.741E-05	47	0.01249
residential	REC_100M	483230.59	3618025.04	2E-03	5E-03	1E-03	0E+00	5E-04	5E-04	5.8E-05	3.5E-05	2.6E-06	2E-05	0.09	0.06598	2.28E-05	6.9E-05	3.99E-05	3.62E-05	1.65E-05	9E-07	2.2E-05	0	2.4E-05	3.6E-06	5.009E-05	50	0.0132
residential	REC_100M	483330.59	3618025.04	2E-03	6E-03	1E-03	0E+00	6E-04	5E-04	6.2E-05	3.7E-05	2.7E-06	2.1E-05	0.09	0.07001	2.42E-05	7.32E-05	4.24E-05	3.84E-05	1.75E-05	9.5E-07	2.3E-05	0	2.5E-05	3.9E-06	5.315E-05	53	0.014
residential	REC_100M	483430.59	3618025.04	2E-03	6E-03	1E-03	0E+00	6E-04	5E-04	6.6E-05	4E-05	2.9E-06	2.3E-05	0.10	0.07424	2.57E-05	7.76E-05	4.49E-05	4.07E-05	1.86E-05	1E-06	2.4E-05	0	2.7E-05	4.1E-06	5.636E-05	56	0.01485
residential	REC_100M	483530.59	3618025.04	3E-03	7E-03	1E-03	0E+00	7E-04	6E-04	7.1E-05	4.3E-05	3.1E-06	2.5E-05	0.11	0.079	2.73E-05	8.26E-05	4.78E-05	4.33E-05	1.98E-05	1.1E-06	2.6E-05	0	2.9E-05	4.3E-06	5.997E-05	60	0.0158
residential	REC_100M	483630.59	3618025.04	3E-03	8E-03	1E-03	0E+00	7E-04	6E-04	7.6E-05	4.6E-05	3.4E-06	2.6E-05	0.11	0.08382	2.9E-05	8.76E-05	5.07E-05	4.6E-05	2.1E-05	1.1E-06	2.8E-05	0	3E-05	4.6E-06	6.363E-05	64	0.01676
residential	REC_100M	483730.59	3618025.04	3E-03	9E-03	1E-03	0E+00	8E-04	7E-04	8.2E-05	5E-05	3.6E-06	2.9E-05	0.12	0.08907	3.08E-05	9.31E-05	5.39E-05	4.89E-05	2.23E-05	1.2E-06	2.9E-05	0	3.2E-05	4.9E-06	6.762E-05	68	0.01781
residential	REC_100M	483830.59	3618025.04	4E-03	1E-02	2E-03	0E+00	9E-04	7E-04	8.9E-05	5.4E-05	4E-06	3.1E-05	0.13	0.09463	3.28E-05	9.89E-05	5.73E-05	5.19E-05	2.37E-05	1.3E-06	3.1E-05	0	3.4E-05	5.2E-06	7.184E-05	72	0.01893
residential	REC_100M	483930.59	3618025.04	4E-03	1E-02	2E-03	0E+00	9E-04	8E-04	9.7E-05	5.9E-05	4.3E-06	3.4E-05	0.14	0.10094	3.49E-05	0.000106	6.11E-05	5.54E-05	2.53E-05	1.4E-06	3.3E-05	0	3.7E-05	5.6E-06	7.663E-05	77	0.02019
residential	REC_100M	486230.59	3618025.04	2E-02	4E-02	1E-02	0E+00	8E-03	7E-03	0.00298	0.00181	0.00013	0.00104	0.26	0.1632	5.65E-05	0.000171	9.87E-05	8.95E-05	4.08E-05	2.2E-06	5.4E-05	0	5.9E-05	9E-06	0.0001239	124	0.03264
residential	REC_100M	486330.59	3618025.04	1E-02	3E-02	1E-02	0E+00	6E-03	5E-03	0.00216	0.00131	9.6E-05	0.00075	0.23	0.14798	5.12E-05	0.000155	8.95E-05	8.12E-05	3.7E-05	2E-06	4.9E-05	0	5.4E-05	8.1E-06	0.0001123	112	0.0296
residential	REC_100M	486430.59	3618025.04	1E-02	3E-02	9E-03	0E+00	5E-03	4E-03	0.00156	0.00095	7E-05	0.00054	0.21	0.13518	4.68E-05	0.000141	8.18E-05	7.41E-05	3.38E-05	1.8E-06	4.4E-05	0	4.9E-05	7.4E-06	0.0001026	103	0.02704
residential	REC_100M	486530.59	3618025.04	9E-03	2E-02	8E-03	0E+00	4E-03	4E-03	0.0012	0.00073	5.3E-05	0.00042	0.19	0.12476	4.32E-05	0.00013	7.55E-05	6.84E-05	3.12E-05	1.7E-06	4.1E-05	0	4.5E-05	6.9E-06	9.471E-05	95	0.02495
residential	REC_100M	486630.59	3618025.04	8E-03	2E-02	7E-03	0E+00	4E-03	3E-03	0.00096	0.00059	4.3E-05	0.00034	0.17	0.11521	3.99E-05	0.00012	6.97E-05	6.32E-05	2.88E-05	1.6E-06	3.8E-05	0	4.2E-05	6.3E-06	8.746E-05	87	0.02304
residential	REC_100M	486930.59	3618025.04	5E-03	1E-02	4E-03	0E+00	2E-03	2E-03	0.0006	0.00037	2.7E-05	0.00021	0.14	0.09322	3.23E-05	9.74E-05	5.64E-05	5.11E-05	2.33E-05	1.3E-06	3.1E-05	0	3.4E-05	5.1E-06	7.077E-05	71	0.01864
residential	REC_100M	487030.59	3618025.04	5E-03	1E-02	4E-03	0E+00	2E-03	2E-03	0.00054	0.00033	2.4E-05	0.00019	0.13	0.08761	3.03E-05	9.16E-05	5.3E-05	4.81E-05	2.19E-05	1.2E-06	2.9E-05	0	3.2E-05	4.8E-06	6.651E-05	67	0.01752
residential	REC_100M	487130.59	3618025.04	4E-03	1E-02	3E-03	0E+00	2E-03	2E-03	0.0005	0.0003	2.2E-05	0.00017	0.12	0.08263	2.86E-05	8.64E-05	5E-05	4.53E-05	2.07E-05	1.1E-06	2.7E-05	0	3E-05	4.5E-06	6.273E-05	63	0.01653
residential	REC_100M	487230.59	3618025.04	4E-03	1E-02	3E-03	0E+00	2E-03	1E-03	0.00047	0.00028	2.1E-05	0.00016	0.11	0.07825	2.71E-05	8.18E-05	4.73E-05	4.29E-05	1.96E-05	1.1E-06	2.6E-05	0	2.8E-05	4.3E-06	5.94E-05	59	0.01565
residential	REC_100M	487330.59	3618025.04	4E-03	1E-02	3E-03	0E+00	2E-03	1E-03	0.00044	0.00027	2E-05	0.00015	0.11	0.07415	2.57E-05	7.75E-05	4.49E-05	4.07E-05	1.86E-05	1E-06	2.4E-05	0	2.7E-05	4.1E-06	5.629E-05	56	0.01483
residential	REC_100M	487430.59	3618025.04	3E-03	9E-03	3E-03	0E+00	1E-03	1E-03	0.00042	0.00026	1.9E-05	0.00015	0.10	0.07046	2.44E-05	7.36E-05	4.26E-05	3.86E-05	1.76E-05	9.6E-07	2.3E-05	0	2.6E-05	3.9E-06	5.349E-05	53	0.01409
school	BurLogan	487530.59	3618025.04	3E-03	8E-03	2E-03	0E+00	1E-03	1E-03	0.00042	0.00025	1.9E-05	0.00015	0.10	0.06706	0	9.92E-06	5.29E-06	4.3E-06	1.98E-06	0	0	5.9E-06	1.4E-06	0	7.229E-06	7	0.01341
school	BurLogan	487630.59	3618025.04	3E-03	8E-03	2E-03	0E+00	1E-03	1E-03	0.00042	0.00025	1.8E-05	0.00014	0.09	0.06407	0	9.48E-06	5.06E-06	4.11E-06	1.9E-06	0	0	5.6E-06	1.3E-06	0	6.907E-06	7	0.01281
school	BurLogan	487730.59	3618025.04	3E-03	7E-03	2E-03	0E+00	1E-03	1E-03	0.0004	0.00025	1.8E-05	0.00014	0.09	0.06132	0	9.07E-06	4.84E-06	3.93E-06	1.81E-06	0	0	5.4E-06	1.2E-06	0	6.611E-06	7	0.01226
school	BurLogan	487830.59	3618025.04	3E-03	7E-03	2E-03	0E+00	1E-03	9E-04	0.00039	0.00024	1.7E-05	0.00014	0.08	0.05897	0	8.72E-06	4.65E-06	3.78E-06	1.74E-06	0	0	5.2E-06	1.2E-06	0	6.357E-06	6	0.01179
residential	REC_100M	487930.59	3618025.04	2E-03	7E-03	2E-03	0E+00	1E-03	8E-04	0.00038	0.00023	1.7E-05	0.00013	0.08	0.0581	2.01E-05	6.07E-05	3.52E-05	3.19E-05	1.45E-05	7.9E-07	1.9E-05	0	2.1E-05	3.2E-06	4.411E-05	44	0.01162
residential	REC_100M	488030.59	3618025.04	2E-03	6E-03	2E-03	0E+00	9E-04	8E-04	0.00035	0.00021	1.6E-05	0.00012	0.08	0.05632	1.95E-05	5.89E-05	3.41E-05	3.09E-05	1.41E-05	7.7E-07	1.9E-05	0	2E-05	3.1E-06	4.276E-05	43	0.01126
residential	REC_100M	488130.59	3618025.04	2E-03	6E-03	2E-03	0E+00	9E-04	7E-04	0.00032	0.00019	1.4E-05	0.00011	0.08	0.05412	1.87E-05	5.66E-05	3.27E-05	2.97E-05	1.35E-05	7.4E-07	1.8E-05	0	2E-05	3E-06	4.109E-05	41	0.01082
residential	REC_100M	488230.59	3618025.04	2E-03	6E-03	2E-03	0E+00	8E-04	7E-04	0.00028	0.00017	1.3E-05	9.9E-05	0.07	0.05149	1.78E-05	5.38E-05	3.12E-05	2.82E-05	1.29E-05	7E-07	1.7E-05	0	1.9E-05	2.8E-06	3.909E-05	39	0.0103
residential	REC_100M	488330.59	3618025.04	2E-03	5E-03	1E-03	0E+00	8E-04	6E-04	0.00026	0.00015	1.1E-05	8.9E-05	0.07	0.05085	1.76E-05	5.31E-05	3.08E-05	2.79E-05	1.27E-05	6.9E-07	1.7E-05	0	1.8E-05	2.8E-06	3.86E-05	39	0.01017
residential	REC_100M	488430.59	3618025.04	2E-03	5E-03	1E-03	0E+00	6E-04	5E-04	0.00023	0.00014	1E-05	7.9E-05	0.07	0.05059	1.75E-05	5.29E-05	3.06E-05	2.78E-05	1.27E-05	6.9E-07	1.7E-05	0	1.8E-05	2.8E-06	3.841E-05	38	0.01012
residential	REC_100M	488530.59	3618025.04	2E-03	5E-03	1E-03	0E+00	6E-04	5E-04	0.0002	0.00012	9E-06	7E-05	0.07	0.04875	1.69E-05	5.1E-05	2.95E-05	2.67E-05	1.22E-05	6.6E-07	1.6E-05	0	1.8E-05	2.7E-06	3.701E-05	37	0.00975
residential	REC_100M	488630.59	3618025.04	2E-03	5E-03	1E-03	0E+00	5E-04	5E-04	0.00018	0.00011	8.1E-06	6.3E-05	0.07	0.04754	1.65E-05	4.97E-05	2.88E-05	2.61E-05	1.19E-05	6.5E-07	1.6E-05	0	1.7E-05	2.6E-06	3.609E-05	36	0.00951
residential	REC_100M	488730.59	3618025.04	2E-03	4E-03	1E-03	0E+00	6E-04	5E-04	0.00016	0.0001	7.3E-06	5.7E-05	0.06	0.04477	1.55E-05	4.68E-05	2.71E-05	2.46E-05	1.12E-05	6.1E-07	1.5E-05	0	1.6E-05	2.5E-06	3.399E-05	34	0.00895
residential	REC_100M	488830.59	3618025.04	2E-03	4E-03	1E-03	0E+00	6E-04	5E-04	0.00015	8.9E-05	6.5E-06	5.1E-05	0.06	0.04132	1.43E-05	4.32E-05	2.5E-05	2.27E-05	1.03E-05	5.6E-07	1.4E-05	0	1.5E-05	2.3E-06	3.137E-05	31	0.00826
residential	REC_100M	488930.59	3618025.04	1E-03	4E-03	1E-03	0E+00	6E-04	5E-04	0.00013	8.1E-05	5.9E-06	4.6E-05	0.06	0.03959	1.37E-05	4.14E-05	2.4E-05	2.17E-05	9.91E-06	5.4E-07	1.3E-05	0	1.4E-05	2.2E-06	3.006E-05	30	0.00792
residential	REC_100M	489030.59	3618025.04	1E-03	4E-03	1E-03	0E+00	5E-04	4E-04	0.00013	7.7E-05	5.7E-06	4.4E-05	0.06	0.03976	1.38E-05	4.16E-05	2.41E-05	2.18E-05	9.95E-06	5.4E-07	1.3E-05	0	1.4E-05	2.2E-06	3.019E-05	30	0.00795
residential	REC_100M	489130.59	3618025.04	1E-03	4E-03	1E-03	0E+00	5E-04	4E-04	0.00012	7E-05	5.2E-06	4E-05	0.05	0.03752	1.3E-05	3.92E-05	2.27E-05	2.06E-05	9.39E-06	5.1E-07	1.2E-05	0	1.4E-05	2.1E-06	2.848E-05	28	0.0075
residential	REC_100M	482930.59	3618125.04	1E-03	4E-03	8E-04	0E+00	4E-04	4E-04	4.5E-05	2.7E-05	2E-06	1.6E-05	0.07	0.0541	1.87E-05	5.65E-05	3.27E-05	2.97E-05	1.35E-05	7.4E-07	1.8E-05	0	2E-05	3E-06	4.107E-05	41	0.01082
residential	REC_100M	483030.59	3618125.04	2E-03	4E-03	8E-04	0E+00	5E-04	4E-04	4.7E-05	2.9E-05	2.1E-06	1.6E-05	0.08	0.05648	1.96E-05	5.9E-05	3.42E-05	3.1E-05	1.41E-05	7.7E-07	1.9E-05	0	2E-05	3.1E-06	4.288E-05	43	0.0113
residential	REC_100M	483130.59	3618125.04	2E-03	4E-03	9E-04	0E+00	5E-04	4E-04	5E-05	3E-05	2.2E-06	1.7E-05	0.08	0.0593	2.05E-05	6.2E-05	3.59E-05	3.25E-05	1.48E-05	8.1E-07	1.9E-05	0	2.1E-05	3.3E-06	4.502E-05	45	0.01186
residential	REC_100M	483230.59	3618125.04	2E-03	5E-03	1E-03	0E+00	5E-04	4E-04	5.3E-05	3.2E-05	2.3E-06	1.8E-05	0.08	0.06253	2.16E-05	6.54E-05	3.78E-05	3.43E-05	1.57E-05	8.5E-07	2.1E-05	0	2.3E-05	3.4E-06	4.747E-05	47	0.01251
residential	REC_100M	483330.59	3618125.04	2E-03	5E-03	1E-03	0E+00	6E-04	5E-04	5.6E-05	3.4E-05	2.5E-06	1.9E-05	0.09	0.06614	2.29E-05	6.91E-05	4E-05	3.63E-05	1.66E-05	9E-07	2.2E-05	0	2.4E-05	3.6E-06	5.021E-05	50	0.01323
residential	REC_100M	483430.59	3618125.04	2E-03	6E-03	1E-03	0E+00	6E-04	5E-04	6E-05	3.6E-05	2.7E-06	2.1E-05	0.09	0.06998	2.42E-05	7.31E-05	4.23E-05	3.84E-05	1.75E-05	9.5E-07	2.3E-05	0	2.5E-05	3.9E-06	5.312E-05	53	0.014
residential	REC_100M	483530.59	3618125.04	2E-03	6E-03	1E-03	0E+00	7E-04	6E-04	6.4E-05	3.9E-05	2.8E-06	2.2E-05	0.10	0.07425	2.57E-05	7.76E-05	4.49E-05	4.07E-05	1.86E-05	1E-06	2.4E-05	0	2.7E-05	4.1E-06	5.637E-05	56	0.01485
residential	REC_100M	483630.59	3618125.04	2E-03	7E-03	1E-03	0E+00	7E-04	6E-04	6.8E-05	4.1E-05	3E-06	2.4E-05	0.11	0.08027	2.78E-05	8.39E-05	4.86E-05	4.4E-05	2.01E-05	1.1E-06	2.6E-05	0	2.9E-05	4.4E-06	6.094E-05	61	0.01605
school	school	486030.59	3618125.04	2E-02	7E-02	2E-02	0E+00	1E-02	1E-02	0.0033	0.002	0.00015	0.00115	0.34	0.19282	0	2.85E-05	1.52E-05	1.24E-05	5.71E-06	0	0	1.7E-05	3.9E-06	0	2.079E-05	21	0.03856
school	school	486130.59	3618125.04	2E-02	5E-02	2E-02	0E+00	9E-03	7E-03	0.00252	0.00153	0.00011	0.00088	0.29	0.16965	0	2.51E-05	1.34E-05	1.09E-05	5.02E-06	0	0	1.5E-05	3.4E-06	0	1.829E-05	18	0.03393
residential	REC_100M	486230.59	3618125.04	1E-02	4E-02	1E-02	0E+00	7E-03	6E-03	0.00203	0.00123	9E-05	0.00071	0.25	0.15185	5.26E-05	0.000159	9.19E-05	8.33E-05	3.8E-05	2.1E-06	5E-05	0	5.5E-05	8.4E-06	0.0001153	115	0.03037
residential	REC_100M	486330.59	3618125.04	1E-02	3E-02	1E-02	0E+00	6E-03	5E-03	0.00163	0.00099	7.3E-05	0.00057	0.22	0.13743	4.76E-05	0.000144	8.32E-05	7.54E-05	3.44E-05	1.9E-06	4.5E-05	0	5E-05	7.6E-06	0.0001043	104	0.02749
residential	REC_100M	486430.59	3618125.04	1E-02	3E-02	9E-03	0E+00	5E-03	4E-03	0.00131	0.0008	5.8E-05	0.00046	0.20	0.12639	4.38E-05	0.000132	7.65E-05	6.93E-05	3.16E-05	1.7E-06	4.2E-05	0	4.6E-05	7E-06	9.595E-05	96	0.02528
residential	REC_100M	486530.59	3618125.04	8E-03	2E-02	7E-03	0E+00	4E-03	3E-03	0.00104	0.00063	4.6E-05	0.00036	0.18	0.11622	4.02E-05	0.000121	7.03E-05	6.37E-05	2.91E-05	1.6E-06	3.8E-05	0	4.2E-05	6.4E-06	8.823E-05	88	0.02324
residential	REC_100M	486830.59	3618125.04	5E-03	1E-02	4E-03	0E+00	2E-03	2E-03	0.0006	0.00037	2.7E-05	0.00021	0.14	0.09378	3.25E-05	9.8E-05	5.67E-05	5.14E-05	2.35E-05	1.3E-06	3.1E-05	0	3.4E-05	5.2E-06	7.119E-05	71	0.01876
residential	REC_100M	486930.59	3618125.04	5E-03	1E-02	4E-03	0E+00	2E-03	2E-03	0.00053	0.00032	2.4E-05	0.00018	0.13	0.08782	3.04E-05	9.18E-05	5.31E-05	4.82E-05	2.2E-05	1.2E-06	2.9E-05	0	3.2E-05	4.8E-06	6.667E-05	67	0.01756
residential	REC_100M	487030.59	3618125.04	4E-03	1E-02	3E-03	0E+00	2E-03	2E-03	0.00048	0.00029	2.1E-05	0.00017	0.12	0.08265	2.86E-05	8.64E-05	5E-05	4.53E-05	2.07E-05	1.1E-06	2.7E-05	0	3E-05	4.6E-06	6.274E-05	63	0.01653
residential	REC_100M	487130.59	3618125.04	4E-03	1E-02	3E-03	0E+00	2E-03	1E-03	0.00044	0.00027	2E-05	0.00015	0.11	0.07809	2.7E-05	8.16E-05	4.73E-05	4.28E-05	1.95E-05	1.1E-06	2.6E-05	0	2.8E-05	4.3E-06	5.929E-05	59	0.01562
residential	REC_100M	487230.59	3618125.04	3E-03	9E-03	3E-03	0E+00	2E-03	1E-03	0.00041	0.00025	1.8E-05	0.00014	0.11	0.07394	2.56E-05	7.73E-05	4.47E-05	4.06E-05	1.85E-05	1E-06	2.4E-05	0	2.7E-05	4.1E-06	5.613E-05	56	0.01479
residential	REC_100M	487330.59	3618125.04	3E-03	9E-03	3E-03	0E+00	1E-03	1E-03	0.00039	0.00024	1.7E-05	0.00014	0.10	0.07028	2.43E-05	7.35E-05	4.25E-05	3.85E-05	1.76E-05	9.6E-07	2.3E-05	0	2.5E-05	3.9E-06	5.335E-05	53	0.01406
residential	REC_100M	487430.59	3618125.04	3E-03	8E-03	2E-03	0E+00	1E-03	1E-03	0.00038	0.00023	1.7E-05	0.00013	0.10	0.06694	2.32E-05	7E-05	4.05E-05	3.67E-05	1.68E-05	9.1E-07	2.2E-05	0	2.4E-05	3.7E-06	5.082E-05	51	0.01339
school	BurLogan	487530.59	3618125.04	3E-03	8E-03	2E-03	0E+00	1E-03	1E-03	0.00037	0.00023	1.7E-05	0.00013	0.09	0.06382	0	9.44E-06	5.04E-06	4.09E-06	1.89E-06	0	0	5.6E-06	1.3E-06	0	6.88E-06	7	0.01276
school	BurLogan	487630.59	3618125.04	3E-03	7E-03	2E-03	0E+00	1E-03	9E-04	0.00036	0.00022	1.6E-05	0.00012	0.09	0.0606	0	8.97E-06	4.78E-06	3.89E-06	1.79E-06	0	0	5.3E-06	1.2E-06	0	6.533E-06	7	0.01212
school	BurLogan	487730.59	3618125.04	2E-03	7E-03	2E-03	0E+00	1E-03	9E-04	0.00035	0.00021	1.6E-05	0.00012	0.08	0.05822	0	8.61E-06	4.59E-06	3.73E-06	1.72E-06	0	0	5.1E-06	1.2E-06	0	6.276E-06	6	0.01164
school	BurLogan	487830.59	3618125.04	2E-03	6E-03	2E-03	0E+00	1E-03	8E-04	0.00034	0.00021	1.5E-05	0.00012	0.08	0.05616	0	8.31E-06	4.43E-06	3.6E-06	1.66E-06	0	0	4.9E-06	1.1E-06	0	6.054E-06	6	0.01123
residential	REC_100M	487930.59	3618125.04	2E-03	6E-03	2E-03	0E+00	9E-04	8E-04	0.00034	0.0002	1.5E-05	0.00012	0.08	0.05493	1.9E-05	5.74E-05	3.32E-05	3.01E-05	1.37E-05	7.5E-07	1.8E-05	0	2E-05	3E-06	4.17E-05	42	0.01099
residential	REC_100M	488030.59	3618125.04	2E-03	6E-03	2E-03	0E+00	9E-04	8E-04	0.00032	0.0002	1.4E-05	0.00011	0.08	0.05422	1.88E-05	5.67E-05	3.28E-05	2.97E-05	1.36E-05	7.4E-07	1.8E-05	0	2E-05	3E-06	4.116E-05	41	0.01084
residential	REC_100M	488130.59	3618125.04	2E-03	6E-03	2E-03	0E+00	8E-04	7E-04	0.00029	0.00018	1.3E-05	0.0001	0.07	0.052	1.8E-05	5.44E-05	3.15E-05	2.85E-05	1.3E-05	7.1E-07	1.7E-05	0	1.9E-05	2.9E-06	3.948E-05	39	0.0104
residential	REC_100M	488230.59	3618125.04	2E-03	5E-03	1E-03	0E+00	8E-04	7E-04	0.00027	0.00016	1.2E-05	9.3E-05	0.07	0.04943	1.71E-05	5.17E-05	2.99E-05	2.71E-05	1.24E-05	6.7E-07	1.6E-05	0	1.8E-05	2.7E-06	3.752E-05	38	0.00989
residential	REC_100M	488330.59	3618125.04	2E-03	5E-03	1E-03	0E+00	7E-04	6E-04	0.00024	0.00015	1.1E-05	8.5E-05	0.07	0.04876	1.69E-05	5.1E-05	2.95E-05	2.67E-05	1.22E-05	6.6E-07	1.6E-05	0	1.8E-05	2.7E-06	3.702E-05	37	0.00975
residential	REC_100M	488430.59	3618125.04	2E-03	5E-03	1E-03	0E+00	7E-04	6E-04	0.00022	0.00013	9.8E-06	7.7E-05	0.07	0.0487	1.69E-05	5.09E-05	2.95E-05	2.67E-05	1.22E-05	6.6E-07	1.6E-05	0	1.8E-05	2.7E-06	3.697E-05	37	0.00974
residential	REC_100M	488530.59	3618125.04	2E-03	5E-03	1E-03	0E+00	6E-04	5E-04	0.0002	0.00012	8.8E-06	6.9E-05	0.07	0.04719	1.63E-05	4.93E-05	2.86E-05	2.59E-05	1.18E-05	6.4E-07	1.6E-05	0	1.7E-05	2.6E-06	3.582E-05	36	0.00944
residential	REC_100M	488630.59	3618125.04	2E-03	4E-03	1E-03	0E+00	5E-04	4E-04	0.00018	0.00011	8E-06	6.2E-05	0.06	0.04591	1.59E-05	4.8E-05	2.78E-05	2.52E-05	1.15E-05	6.2E-07	1.5E-05	0	1.7E-05	2.5E-06	3.486E-05	35	0.00918
residential	REC_100M	488730.59	3618125.04	2E-03	4E-03	1E-03	0E+00	6E-04	5E-04	0.00016	9.9E-05	7.2E-06	5.7E-05	0.06	0.0429	1.48E-05	4.48E-05	2.6E-05	2.35E-05	1.07E-05	5.8E-07	1.4E-05	0	1.6E-05	2.4E-06	3.257E-05	33	0.00858
residential	REC_100M	488830.59	3618125.04	1E-03	4E-03	1E-03	0E+00	6E-04	5E-04	0.00014	8.7E-05	6.4E-06	5E-05	0.06	0.03975	1.38E-05	4.15E-05	2.41E-05	2.18E-05	9.95E-06	5.4E-07	1.3E-05	0	1.4E-05	2.2E-06	3.018E-05	30	0.00795
residential	REC_100M	488930.59	3618125.04	1E-03	4E-03	1E-03	0E+00	5E-04	5E-04	0.00013	8E-05	5.9E-06	4.6E-05	0.05	0.03852	1.33E-05	4.03E-05	2.33E-05	2.11E-05	9.64E-06	5.2E-07	1.3E-05	0	1.4E-05	2.1E-06	2.924E-05	29	0.0077

TAMT Risk Assessment - DPM Cancer and Chronic HI

	Discrete Receptor ID (Group Name)	X	Y	quipment: Multi-Purpose General Cargofull TAMT plan unmit	Dry Bulkfull TAMT plan unmit	Locomotives: All	Refrigerated Containersfull TAMT plan unmit	Multi-Purpose General Cargofull TAMT plan unmit	Dry Bulkfull TAMT plan unmit	Trucks: All	Refrigerated Containersfull TAMT plan unmit	Multi-Purpose General Cargofull TAMT plan unmit	Dry Bulkfull TAMT plan unmit	All	ug/m3	3rd tri
AERMOD Output				17%	45%	100%	0%	54%	46%	100%	61%	4%	35%			
residential	REC_100M	489030.59	3618125.04	1E-03	4E-03	1E-03	0E+00	5E-04	4E-04	0.00012	7.5E-05	5.5E-06	4.3E-05	0.05	0.03785	1.31E-05
residential	REC_100M	489130.59	3618125.04	1E-03	3E-03	9E-04	0E+00	5E-04	4E-04	0.00011	7E-05	5.1E-06	4E-05	0.05	0.03687	1.28E-05
residential	REC_100M	483030.59	3618225.04	1E-03	4E-03	8E-04	0E+00	4E-04	4E-04	4.3E-05	2.6E-05	1.9E-06	1.5E-05	0.07	0.05359	1.86E-05
residential	REC_100M	483130.59	3618225.04	1E-03	4E-03	9E-04	0E+00	5E-04	4E-04	4.5E-05	2.7E-05	2E-06	1.6E-05	0.08	0.05628	1.95E-05
residential	REC_100M	483230.59	3618225.04	2E-03	4E-03	9E-04	0E+00	5E-04	4E-04	4.8E-05	2.9E-05	2.1E-06	1.7E-05	0.08	0.05904	2.04E-05
residential	REC_100M	483330.59	3618225.04	2E-03	5E-03	1E-03	0E+00	5E-04	5E-04	5.1E-05	3.1E-05	2.3E-06	1.8E-05	0.09	0.06349	2.2E-05
school	school	485930.59	3618225.04	3E-02	8E-02	2E-02	0E+00	1E-02	1E-02	0.00276	0.00167	0.00012	0.00096	0.37	0.19953	0
school	school	486030.59	3618225.04	2E-02	6E-02	2E-02	0E+00	1E-02	8E-03	0.00212	0.00129	9.5E-05	0.00074	0.31	0.17514	0
residential	REC_100M	486130.59	3618225.04	2E-02	5E-02	1E-02	0E+00	7E-03	6E-03	0.00174	0.00105	7.7E-05	0.00061	0.26	0.15464	5.35E-05
residential	REC_100M	486230.59	3618225.04	1E-02	4E-02	1E-02	0E+00	6E-03	5E-03	0.00149	0.00091	6.6E-05	0.00052	0.23	0.13925	4.82E-05
residential	REC_100M	486330.59	3618225.04	1E-02	3E-02	9E-03	0E+00	5E-03	4E-03	0.00128	0.00078	5.7E-05	0.00045	0.20	0.12687	4.39E-05
residential	REC_100M	486430.59	3618225.04	9E-03	2E-02	7E-03	0E+00	4E-03	3E-03	0.00109	0.00066	4.8E-05	0.00038	0.18	0.11686	4.05E-05
residential	REC_100M	486730.59	3618225.04	6E-03	2E-02	5E-03	0E+00	3E-03	2E-03	0.00066	0.0004	2.9E-05	0.00023	0.14	0.09431	3.26E-05
residential	REC_100M	486830.59	3618225.04	5E-03	1E-02	4E-03	0E+00	2E-03	2E-03	0.00057	0.00035	2.6E-05	0.0002	0.13	0.08838	3.06E-05
residential	REC_100M	486930.59	3618225.04	4E-03	1E-02	4E-03	0E+00	2E-03	2E-03	0.0005	0.0003	2.2E-05	0.00017	0.12	0.08279	2.87E-05
residential	REC_100M	487030.59	3618225.04	4E-03	1E-02	3E-03	0E+00	2E-03	1E-03	0.00044	0.00027	2E-05	0.00015	0.11	0.07774	2.69E-05
residential	REC_100M	487130.59	3618225.04	3E-03	9E-03	3E-03	0E+00	2E-03	1E-03	0.00039	0.00024	1.8E-05	0.00014	0.11	0.07323	2.53E-05
residential	REC_100M	487230.59	3618225.04	3E-03	9E-03	3E-03	0E+00	1E-03	1E-03	0.00036	0.00022	1.6E-05	0.00013	0.10	0.06935	2.4E-05
residential	REC_100M	487330.59	3618225.04	3E-03	8E-03	2E-03	0E+00	1E-03	1E-03	0.00035	0.00022	1.6E-05	0.00012	0.10	0.06633	2.3E-05
residential	REC_100M	487430.59	3618225.04	3E-03	8E-03	2E-03	0E+00	1E-03	1E-03	0.00035	0.00021	1.5E-05	0.00012	0.09	0.06343	2.2E-05
residential	REC_100M	487530.59	3618225.04	3E-03	7E-03	2E-03	0E+00	1E-03	9E-04	0.00033	0.0002	1.4E-05	0.00011	0.09	0.06001	2.08E-05
residential	REC_100M	487630.59	3618225.04	2E-03	6E-03	2E-03	0E+00	1E-03	9E-04	0.00032	0.00019	1.4E-05	0.00011	0.08	0.0574	1.99E-05
residential	REC_100M	487730.59	3618225.04	2E-03	6E-03	2E-03	0E+00	1E-03	8E-04	0.00031	0.00019	1.4E-05	0.00011	0.08	0.05521	1.91E-05
residential	REC_100M	487830.59	3618225.04	2E-03	6E-03	2E-03	0E+00	9E-04	8E-04	0.0003	0.00018	1.3E-05	0.0001	0.08	0.05323	1.84E-05
residential	REC_100M	487930.59	3618225.04	2E-03	6E-03	2E-03	0E+00	9E-04	8E-04	0.0003	0.00018	1.3E-05	0.00011	0.07	0.05238	1.81E-05
residential	REC_100M	488030.59	3618225.04	2E-03	6E-03	2E-03	0E+00	8E-04	7E-04	0.00029	0.00018	1.3E-05	0.0001	0.07	0.05162	1.79E-05
residential	REC_100M	488130.59	3618225.04	2E-03	5E-03	1E-03	0E+00	8E-04	7E-04	0.00027	0.00016	1.2E-05	9.4E-05	0.07	0.04945	1.71E-05
residential	REC_100M	488230.59	3618225.04	2E-03	5E-03	1E-03	0E+00	7E-04	6E-04	0.00025	0.00015	1.1E-05	8.6E-05	0.07	0.04694	1.63E-05
residential	REC_100M	488330.59	3618225.04	2E-03	5E-03	1E-03	0E+00	7E-04	6E-04	0.00023	0.00014	1E-05	7.9E-05	0.06	0.04564	1.58E-05
residential	REC_100M	488430.59	3618225.04	2E-03	5E-03	1E-03	0E+00	7E-04	6E-04	0.00021	0.00013	9.4E-06	7.4E-05	0.06	0.04584	1.59E-05
residential	REC_100M	488530.59	3618225.04	2E-03	4E-03	1E-03	0E+00	6E-04	5E-04	0.00019	0.00012	8.6E-06	6.7E-05	0.06	0.04553	1.58E-05
residential	REC_100M	488630.59	3618225.04	2E-03	4E-03	1E-03	0E+00	5E-04	4E-04	0.00018	0.00011	7.8E-06	6.1E-05	0.06	0.04461	1.54E-05
residential	REC_100M	488730.59	3618225.04	1E-03	4E-03	1E-03	0E+00	6E-04	5E-04	0.00016	9.7E-05	7.1E-06	5.6E-05	0.06	0.04118	1.43E-05
residential	REC_100M	488830.59	3618225.04	1E-03	4E-03	1E-03	0E+00	5E-04	5E-04	0.00014	8.7E-05	6.4E-06	5E-05	0.05	0.03874	1.34E-05
residential	REC_100M	488930.59	3618225.04	1E-03	4E-03	1E-03	0E+00	5E-04	4E-04	0.00013	7.9E-05	5.8E-06	4.5E-05	0.05	0.03713	1.29E-05
residential	REC_100M	489030.59	3618225.04	1E-03	3E-03	9E-04	0E+00	5E-04	4E-04	0.00012	7.2E-05	5.3E-06	4.1E-05	0.05	0.03587	1.24E-05
residential	REC_100M	483030.59	3618325.04	1E-03	3E-03	8E-04	0E+00	4E-04	4E-04	3.9E-05	2.4E-05	1.7E-06	1.4E-05	0.07	0.05052	1.75E-05
residential	REC_100M	483130.59	3618325.04	1E-03	3E-03	8E-04	0E+00	4E-04	4E-04	4.1E-05	2.5E-05	1.8E-06	1.4E-05	0.08	0.05501	1.9E-05
residential	REC_100M	486030.59	3618325.04	2E-02	6E-02	2E-02	0E+00	9E-03	7E-03	0.00151	0.00092	6.7E-05	0.00053	0.28	0.15884	5.5E-05
residential	REC_100M	486130.59	3618325.04	2E-02	4E-02	1E-02	0E+00	7E-03	6E-03	0.00131	0.00079	5.8E-05	0.00046	0.24	0.14148	4.9E-05
residential	REC_100M	486230.59	3618325.04	1E-02	3E-02	1E-02	0E+00	5E-03	5E-03	0.00115	0.0007	5.1E-05	0.0004	0.21	0.12766	4.42E-05
residential	REC_100M	486330.59	3618325.04	1E-02	3E-02	8E-03	0E+00	4E-03	4E-03	0.00102	0.00062	4.5E-05	0.00036	0.19	0.11694	4.05E-05
residential	REC_100M	486530.59	3618325.04	7E-03	2E-02	6E-03	0E+00	3E-03	3E-03	0.00079	0.00048	3.5E-05	0.00028	0.16	0.10023	3.47E-05
residential	REC_100M	486630.59	3618325.04	6E-03	2E-02	5E-03	0E+00	3E-03	2E-03	0.00069	0.00042	3.1E-05	0.00024	0.14	0.09362	3.24E-05
residential	REC_100M	486730.59	3618325.04	5E-03	1E-02	4E-03	0E+00	2E-03	2E-03	0.0006	0.00036	2.7E-05	0.00021	0.13	0.08763	3.03E-05
residential	REC_100M	486830.59	3618325.04	5E-03	1E-02	4E-03	0E+00	2E-03	2E-03	0.00052	0.00031	2.3E-05	0.00018	0.12	0.08212	2.84E-05
residential	REC_100M	486930.59	3618325.04	4E-03	1E-02	3E-03	0E+00	2E-03	2E-03	0.00047	0.00028	2.1E-05	0.00016	0.12	0.07772	2.69E-05
residential	REC_100M	487030.59	3618325.04	4E-03	1E-02	3E-03	0E+00	2E-03	1E-03	0.00041	0.00025	1.8E-05	0.00014	0.11	0.0731	2.53E-05
residential	REC_100M	487130.59	3618325.04	3E-03	9E-03	3E-03	0E+00	1E-03	1E-03	0.00036	0.00022	1.6E-05	0.00013	0.10	0.06876	2.38E-05
residential	REC_100M	487230.59	3618325.04	3E-03	8E-03	2E-03	0E+00	1E-03	1E-03	0.00034	0.00021	1.5E-05	0.00012	0.09	0.06538	2.26E-05
residential	REC_100M	487330.59	3618325.04	3E-03	8E-03	2E-03	0E+00	1E-03	1E-03	0.00033	0.0002	1.5E-05	0.00011	0.09	0.06264	2.17E-05
residential	REC_100M	487430.59	3618325.04	3E-03	7E-03	2E-03	0E+00	1E-03	1E-03	0.00032	0.0002	1.4E-05	0.00011	0.09	0.0603	2.09E-05
residential	REC_100M	487530.59	3618325.04	2E-03	7E-03	2E-03	0E+00	1E-03	9E-04	0.00031	0.00019	1.4E-05	0.00011	0.08	0.05749	1.99E-05
residential	REC_100M	487630.59	3618325.04	2E-03	6E-03	2E-03	0E+00	1E-03	8E-04	0.0003	0.00019	1.4E-05	0.00011	0.08	0.0553	1.91E-05
residential	REC_100M	487730.59	3618325.04	2E-03	6E-03	2E-03	0E+00	9E-04	8E-04	0.00029	0.00018	1.3E-05	0.0001	0.08	0.05312	1.84E-05
residential	REC_100M	487830.59	3618325.04	2E-03	6E-03	2E-03	0E+00	8E-04	7E-04	0.00028	0.00017	1.2E-05	9.6E-05	0.07	0.05072	1.76E-05
residential	REC_100M	487930.59	3618325.04	2E-03	5E-03	2E-03	0E+00	8E-04	7E-04	0.00028	0.00017	1.2E-05	9.6E-05	0.07	0.04997	1.73E-05
residential	REC_100M	488030.59	3618325.04	2E-03	5E-03	1E-03	0E+00	8E-04	7E-04	0.00027	0.00016	1.2E-05	9.3E-05	0.07	0.04902	1.7E-05
residential	REC_100M	488130.59	3618325.04	2E-03	5E-03	1E-03	0E+00	7E-04	6E-04	0.00025	0.00015	1.1E-05	8.6E-05	0.07	0.04642	1.61E-05
residential	REC_100M	488230.59	3618325.04	2E-03	5E-03	1E-03	0E+00	7E-04	6E-04	0.00023	0.00014	1E-05	8E-05	0.06	0.04481	1.55E-05
residential	REC_100M	488330.59	3618325.04	2E-03	4E-03	1E-03	0E+00	7E-04	6E-04	0.00021	0.00013	9.4E-06	7.4E-05	0.06	0.04289	1.48E-05
residential	REC_100M	488430.59	3618325.04	2E-03	4E-03	1E-03	0E+00	6E-04	5E-04	0.0002	0.00012	8.9E-06	7E-05	0.06	0.04332	1.5E-05
residential	REC_100M	488530.59	3618325.04	2E-03	4E-03	1E-03	0E+00	6E-04	5E-04	0.00019	0.00011	8.3E-06	6.5E-05	0.06	0.04382	1.52E-05
residential	REC_100M	488630.59	3618325.04	2E-03	4E-03	1E-03	0E+00	6E-04	5E-04	0.00017	0.0001	7.7E-06	6E-05	0.06	0.04208	1.46E-05
residential	REC_100M	488730.59	3618325.04	1E-03	4E-03	1E-03	0E+00	5E-04	5E-04	0.00016	9.5E-05	7E-06	5.5E-05	0.06	0.04028	1.39E-05
residential	REC_100M	488830.59	3618325.04	1E-03	4E-03	1E-03	0E+00	5E-04	4E-04	0.00014	8.5E-05	6.2E-06	4.9E-05	0.05	0.03703	1.28E-05
residential	REC_100M	488930.59	3618325.04	1E-03	3E-03	9E-04	0E+00	5E-04	4E-04	0.00013	7.8E-05	5.7E-06	4.5E-05	0.05	0.0356	1.23E-05
recreational	park	484630.59	3618425.04	4E-03	1E-02	3E-03	0E+00	1E-03	1E-03	0.00011	6.7E-05	4.9E-06	3.9E-05	0.12	0.07707	0
recreational	park	484730.59	3618425.04	5E-03	1E-02	3E-03	0E+00	2E-03	1E-03	0.00013	7.7E-05	5.6E-06	4.4E-05	0.13	0.08553	0
recreational	park	485030.59	3618425.04	1E-02	4E-02	4E-03	0E+00	2E-03	2E-03	0.00023	0.00014	1E-05	7.9E-05	0.26	0.18709	0
recreational	park	484950.32	3618481.14	8E-03	2E-02	3E-03	0E+00	2E-03	2E-03	0.00015	9.3E-05	6.8E-06	5.3E-05	0.19	0.13768	0
residential	REC_100M	485930.59	3618425.04	2E-02	6E-02	2E-02	0E+00	9E-03	8E-03	0.00129	0.00078	5.7E-05	0.00045	0.30	0.16273	5.63E-05
residential	REC_100M	486030.59	3618425.04	2E-02	5E-02	1E-02	0E+00	8E-03	7E-03	0.00114	0.00069	5.1E-05	0.0004	0.26	0.14537	5.03E-05
residential	REC_100M	486130.59	3618425.04	1E-02	4E-02	1E-02	0E+00	6E-03	5E-03	0.00102	0.00062	4.5E-05	0.00036	0.23	0.13064	4.52E-05
residential	REC_100M	486230.59	3618425.04	1E-02	3E-02	9E-03	0E+00	5E-03	4E-03	0.00093	0.00056	4.1E-05	0.00032	0.20	0.11873	4.11E-05
residential	REC_100M	486430.59	3618425.04	8E-03	2E-02	6E-03	0E+00	3E-03	3E-03	0.00075	0.00045	3.3E-05	0.00026	0.16	0.10031	3.47E-05
residential	REC_100M	486530.59	3618425.04	7E-03	2E-02	5E-03	0E+00	3E-03	2E-03	0.00068	0.00042	3E-05	0.00024	0.15	0.09373	3.24E-05
residential	REC_100M	486630.59	3618425.04	6E-03	2E-02	5E-03	0E+00	2E-03	2E-03	0.00061	0.00037	2.7E-05	0.00021	0.14	0.08769	3.04E-05
residential	REC_100M	486730.59	3618425.04	5E-03	1E-02	4E-03	0E+00	2E-03	2E-03	0.00055	0.00033	2.4E-05	0.00019	0.13	0.08229	2.85E-05
residential	REC_100M	486830.59	3618425.04	4E-03	1E-02	3E-03	0E+00	2E-03	2E-03	0.00049	0.0003	2.2E-05	0.00017	0.12	0.07733	2.68E-05
residential	REC_100M	486930.59	3618425.04	4E-03	1E-02	3E-03	0E+00	2E-03	1E-03	0.00043	0.00026	1.9E-05	0.00015	0.11	0.07289	2.52E-05
residential	REC_100M	487030.59	3618425.04	3E-03	9E-03	3E-03	0E+00	1E-03	1E-03	0.00039	0.00024	1.7E-05	0.00014	0.10	0.06876	2.38E-05
residential	REC_100M	487130.59	3618425.04	3E-03	8E-03	2E-03	0E+00	1E-03	1E-03	0.00034	0.00021	1.5E-05	0.00012	0.10	0.06468	2.24E-05
residential	REC_100M	487230.59	3618425.04	3E-03	8E-03	2E-03	0E+00	1E-03	1E-03	0.00033	0.0002	1.5E-05	0.00012	0.09	0.06236	2.16E-05
residential	REC_100M	487330.59	3618425.04	3E-03	7E-03	2E-03	0E+00	1E-03	1E-03	0.00032	0.00019	1.4E-05	0.00011	0.09	0.05984	2.07E-05
residential	REC_100M	487430.59	3618425.04	3E-03	7E-03	2E-03	0E+00	1E-03	9E-04	0.00031	0.00019	1.4E-05	0.00011	0.08	0.05757	1.99E-05
residential	REC_100M	487530.59	3618425.04	2E-03	7E-03	2E-03	0E+00	1E-03	8E-04	0.0003	0.00018	1.3E-05	0.0001	0.08	0.0552	1.91E-05
residential	REC_100M	487630.59	3618425.04	2E-03	6E-03	2E-03	0E+00	9E-04	8E-04	0.00029	0.00017	1.3E-05	1E-04	0.08	0.05298	1.83E-05
residential	REC_100M	487730.59	3618425.04	2E-03	6E-03	2E-03	0E+00	9E-04	7E-04	0.00028	0.00017	1.2E-05	9.6E-05	0.07	0.05098	1.76E-05
residential	REC_100M	487830.59	3618425.04	2E-03	5E-03	2E-03	0E+00	8E-04	7E-04	0.00026	0.00016	1.2E-05	9.2E-05	0.07	0.04915	1.7E-05
residential	REC_100M	487930.59	3618425.04	2E-03	5E-03	1E-03	0E+00	8E-04	7E-04	0.00025	0.00015	1.1E-05	8.9E-05	0.07	0.04775	1.65E-05
residential	REC_100M	488030.59	3618425.04	2E-03	5E-03	1E-03	0E+00	7E-04	6E-04	0.00024	0.00015	1.1E-05	8.4E-05	0.07	0.04606	1.59E-05
residential	REC_100M	488130.59	3618425.04	2E-03	5E-03	1E-03	0E+00	7E-04	6E-04	0.00023	0.00014	1E-05	7.9E-05	0.06	0.04403	1.52E-05
residential	REC_100M	488230.59	3618425.04	2E-03	4E-03	1E-03	0E+00	7E-04	6E-04	0.00021	0.00013	9.5E-06	7.4E-05	0.06	0.04246	1.47E-05
residential	REC_100M	488330.59	3618425.04	2E-03	4E-03	1E-03	0E+00	6E-04	5E-04	0.0002	0.00012	8.8E-06	6.9E-05	0.06	0.041	1.42E-05
residential	REC_100M	488430.59	3618425.04	2E-03	4E-03	1E-03	0E+00	6E-04	5E-04	0.00019	0.00012	8.5E-06	6.7E-05	0.06	0.04168	1.44E-05
residential	REC_100M	488530.59	3618425.04	2E-03	4E-03	1E-03	0E+00	6E-04	5E-04	0.00018	0.00011	8E-06	6.3E-05	0.06	0.04209	1.46E-05
residential	REC_100M	488630.59	3618425.04	1E-03	4E-03	1E-03	0E+00	5E-04	4E-04	0.00017	0.0001	7.4E-06	5.8E-05	0.06	0.04128	1.43E-05
residential	REC_100M	488730.59	3618425.04	1E-03	4E-03	1E-03	0E+00	5E-04	4E-04	0.00015	9.2E-05	6.8E-06	5.3E-05	0.05	0.03832	1.33E-05
residential	REC_100M	488830.59	3618425.04	1E-03	3E-03	9E-04	0E+00	5E-04	4E-04	0.00014	8.4E-05	6.1E-06	4.8E-05	0.05	0.0357	1.24E-05
recreational	park	484530.59	3618525.04	3E-03	8E-03	2E-03	0E+00	1E-03	1E-03	8E-05	4.8E-05	3.5E-06	2.8E-05	0.10	0.06689	0
recreational	park	484630.59	3618525.04	3E-03	9E-03	2E-03	0E+00	1E-03	1E-03	8.8E-05	5.3E-05	3.9E-06	3.1E-05	0.10	0.06934	0
recreational	park	484930.59	3618525.04	6E-03	2E-02	3E-03	0E+00	2E-03	1E-03	0.00013	7.7E-05	5.6E-06	4.4E-05	0.16	0.11888	0
recreational	park	485030.59	3618525.04	9E-03	2E-02	3E-03	0E+00	2E-03	2E-03	0.00015	9.1E-05	6.7E-06	5.2E-05	0.20	0.15078	0
recreational	park	485130.59	3618525.04	1E-02	4E-02	4E-03	0E+00	2E-03	2E-03	0.00018	0.00011	8.2E-06	6.4E-05	0.26	0.19209	0
recreational	REC_100M	485830.59	3618525.04	2E-02	7E-02	1E-02	0E+00	7E-03	6E-03	0.00106	0.00064	4.7E-05	0.00037	0.30	0.164	0
residential	REC_100M	485930.59	3618525.04	2E-02	5E-02	1E-02	0E+00	7E-03	6E-03	0.00096	0.00059	4.3E-05	0.00034	0.27	0.15055	5.21E-05
residential	REC_100M	486030.59	3618525.04	2E-02	4E-02	1E-02	0E+00	7E-03	6E-03	0.00089	0.00054	4E-05	0.00031	0.24	0.13676	4.73E-05
residential	REC_100M	486130.59	3618525.04	1E-02	4E-02	1E-02	0E+00	6E-03	5E-03	0.00083	0.0005	3.7E-05	0.00029	0.22	0.12434	4.3E-05
residential	REC_100M	486330.59	3618525.04	9E-03	3E-02	7E-03	0E+00	4E-03	3E-03	0.00069	0.00042	3.1E-05	0.00024	0.17	0.10274	3.56E-05
residential	REC_100M	486430.59	3618525.04	8E-03	2E-02	6E-03	0E+00	3E-03	3E-03	0.00065	0.00039	2.9E-05	0.00023	0.16	0.09566	3.31E-05
residential	REC_100M	486530.59	3618525.04	7E-03	2E-02	5E-03	0E+00	3E-03	2E-03	0.0006	0.00036	2.7E-05	0.00021	0.14	0.08892	3.08E-05
residential	REC_100M	486630.59	3618525.04	6E-03	2E-02	4E-03	0E+00	2E-03	2E-03	0.00055	0.00033	2.4E-05	0.00019	0.13	0.08331	2.88E-05
residential	REC_100M	486730.59	3618525.04	5E-03	1E-02	4E-03	0E+00	2E-03	2E-03	0.0005	0.0003	2.2E-05	0.00017	0.12	0.07821	2.71E-05
residential	REC_100M	486830.59	3618525.04	4E-03	1E-02	3E-03	0E+00	2E-03	2E-03	0.00046	0.00028	2E-05	0.00016	0.11	0.07381	2.56E-05
residential	REC_100M	486930.59	3618525.04	4E-03	1E-02	3E-03	0E+00	2E-03	1E-03	0.0004	0.00024	1.8E-05	0.00014	0.10	0.06861	2.37E-05
residential	REC_100M	487030.59	3618525.04	3E-03	9E-03	2E-03	0E+00	1E-03	1E-03	0.00036	0.00022	1.6E-05	0.00013	0.10	0.06484	2.24E-05
residential	REC_100M	487130.59	3618525.04	3E-03	8E-03	2E-03	0E+00	1E-03	1E-03	0.00034	0.0002	1.5E-05	0.00012	0.09	0.06192	2.14E-05
residential	REC_100M	487230.59	3618525.04	3E-03	8E-03	2E-03	0E+00	1E-03	1E-03	0.00032	0.0002	1.4E-05	0.00011	0.09	0.05989	2.07E-05
residential	REC_100M	487330.59	3618525.04	3E-03	7E-03	2E-03	0E+00	1E-03	9E-04	0.0003	0.00019	1.4E-05	0.00011	0.08	0.05731	1.98E-05
residential	REC_100M	487430.59	3618525.04	2E-03	7E-03	2E-03	0E+00	1E-03	9E-04	0.00029	0.00018	1.3E-05	0.0001	0.08	0.05492	1.9E-05
residential	REC_100M	487530.59	3618525.04	2E-03	6E-03	2E-03	0E+00	9E-04	8E-04	0.00028	0.00017	1.2E-05	9.7E-05	0.08	0.05286	1.83E-05
residential	REC_100M	487630.59	3618525.04	2E-03	6E-03	2E-03	0E+00	9E-04	7E-04	0.00027	0.00016	1.2E-05	9.4E-05	0.07	0.05083	1.76E-05
residential	REC_100M	487730.59	3618525.04	2E-03	5E-03	2E-03	0E+00	8E-04	7E-04	0.00026	0.00016	1.1E-05	9E-05	0.07	0.04886	1.69E-05
residential	REC_100M	487830.59	3618525.04	2E-03	5E-03	1E-03	0E+00	8E-04	7E-04	0.00025	0.00015	1.1E-05	8.6E-05	0.07	0.04706	1.63E-05
residential	REC_100M	487930.59	3618525.04	2E-03	5E-03	1E-03	0E+00	7E-04	6E-04	0.00023	0.00014	1E-05	8.2E-05	0.06	0.0454	1.57E-05
residential	REC_100M	488030.59	3618525.04	2E-03	5E-03	1E-03	0E+00	7E-04	6E-04	0.00022	0.00014	1E-05	7.8E-05	0.06	0.04387	1.52E-05
residential	REC_100M	488130.59	3618525.04	2E-03	4E-03	1E-03	0E+00	6E-04	5E-04	0.00021	0.00013	9.4E-06	7.4E-05	0.06	0.04204	1.46E-05
residential	REC_100M	488230.59	3618525.04	2E-03	4E-03	1E-03	0E+00	6E-04	5E-04	0.0002	0.00012	8.8E-06	6.9E-05	0.06	0.04026	1.39E-05
residential	REC_100M	488330.59	3618525.04	1E-03	4E-03	1E-03	0E+00	6E-04	5E-04	0.00019	0.00011	8.3E-06	6.5E-05	0.06	0.03922	1.36E-05
residential	REC_100M	488430.59	3618525.04	1E-03	4E-03	1E-03	0E+00	6E-04	5E-04	0.00018	0.00011	8.1E-06	6.3E-05	0.06	0.03985	1.38E-05
residential	REC_100M	488530.59	3618525.04	1E-03	4E-03	1E-03	0E+00	5E-04	5E-04	0.00017	0.0001	7.7E-06	6E-05	0.06	0.04042	1.4E-05
residential	REC_100M	488630.59	3618525.04	1E-03	4E-03	9E-04	0E+00	5E-04	4E-04	0.00016	9.7E-05	7.1E-06	5.6E-05	0.06	0.03966	1.37E-05
residential	REC_100M	488730.59	3618525.04	1E-03	3E-03	9E-04	0E+00	5E-04	4E-04	0.00015	8.9E-05	6.6E-06	5.1E-05	0.05	0.03656	1.27E-05
recreational	park	484329.51	3618644.52	2E-03	5E-03	2E-03	0E+00	8E-04	7E-04	5.5E-05	3.3E-05	2.4E-06	1.9E-05	0.09	0.06069	0
recreational	park	484433.84	3618608.81	2E-03	6E-03	2E-03	0E+00	9E-04	8E-04	6.2E-05	3.8E-05	2.8E-06	2.2E-05	0.09	0.06335	0
recreational	park	484630.59	3618625.04	3E-03	7E-03	2E-03	0E+00	1E-03	9E-04	7E-05	4.2E-05	3.1E-06	2.4E-05	0.09	0.06402	0
recreational	park	484730.59	3618625.04	3E-03	8E-03	2E-03	0E+00	1E-03	1E-03	7.6E-05	4.6E-05	3.4E-06	2.7E-05	0.10	0.06952	0
recreational	park	484830.59	3618625.04	4E-03	1E-02	2E-03	0E+00	1E-03	1E-03	8.3E-05	5.1E-05	3.7E-06	2.9E-05	0.11	0.08038	0
recreational	park	484930.59	3618625.04	5E-03	1E-02	3E-03	0E+00	1E-03	1E-03	9.2E-05	5.6E-05	4.1E-06	3.2E-05	0.14	0.09894	0
recreational	park	485030.59	3618625.04	7E-03	2E-02	3E-03	0E+00	2E-03	1E-03	0.0001	6.3E-05	4.6E-06	3.6E-05	0.17	0.12368	0
residential	REC_100M	485130.59	3618625.04	9E-03	3E-02	3E-03	0E+00	2E-03	1E-03	0.00012	7.2E-05	5.3E-06	4.1E-05	0.21	0.15255	5.28E-05
residential	REC_100M	485230.59	3618625.04	1E-02	4E-02	4E-03	0E+00	2E-03	2E-03	0.00015	9E-05	6.6E-06	5.1E-05	0.25	0.17939	6.21E-05
residential	REC_100M	485830.59	3618625.04	2E-02	6E-02	1E-02	0E+00	6E-03	5E-03	0.00079	0.00048	3.5E-05	0.00028	0.27	0.15383	5.33E-05
residential	REC_100M	485930.59	3618625.04	2E-02	5E-02	1E-02	0E+00	6E-03	5E-03	0.00075	0.00046	3.3E-05	0.00026	0.25	0.14209	4.92E-05
residential	REC_100M	486030.59	3618625.04	1E-02	4E-02	1E-02	0E+00	6E-03	5E-03	0.00072	0.00043	3.2E-05	0.00025	0.22	0.1296	4.49E-05
residential	REC_100M	486230.59	3618625.04	1E-02	3E-02	8E-03	0E+00	5E-03	4E-03	0.00064	0.00039	2.8E-05	0.00022	0.18	0.10807	3.74E-05
residential	REC_100M	486330.59	3618625.04	9E-03	2E-02	7E-03	0E+00	4E-03	3E-03	0.0006	0.00036	2.7E-05	0.00021	0.17	0.09976	3.45E-05
residential	REC_100M	486430.59	3618625.04	8E-03	2E-02	6E-03	0E+00	3E-03	3E-03	0.00056	0.00034	2.5E-05	0.00019	0.15	0.0919	3.18E-05

Refrigerated Containers — Dose Inhallation; Risk (Residential 30-yr; school 9-yr; park 15-year)

Multi-Purpose General Cargo — Dose Inhallation; Risk (Residential 30-yr; school 9-yr; park 15-year)

Dry Bulk — Dose Inhallation; Risk (Residential 30-yr; school 9-yr; park 15-year)

TAMT Risk Assessment - DPM Cancer and Chronic HI

AERMOD Output

Receptor type	Discrete Receptor ID (Group Name)	X	Y	quipment: Multi-Purpose General Cargofull TAMT plan unmit 17%	quipment: Dry Bulkfull TAMT plan unmit 45%	Locomotives: All 100%	Locomotives: Refrigerated Containersfull TAMT plan unmit 0%	Locomotives: Multi-Purpose General Cargofull TAMT plan unmit 54%	Locomotives: Dry Bulkfull TAMT plan unmit 46%	Trucks: All 100%	Trucks: Refrigerated Containersfull TAMT plan unmit 61%	Trucks: Multi-Purpose General Cargofull TAMT plan unmit 4%	Trucks: Dry Bulkfull TAMT plan unmit 35%	All
residential	REC_100M	486530.59	3618625.04	6E-03	2E-02	5E-03	0E+00	3E-03	2E-03	0.00052	0.00032	2.3E-05	0.00018	0.14
residential	REC_100M	486630.59	3618625.04	6E-03	2E-02	4E-03	0E+00	2E-03	2E-03	0.00049	0.0003	2.2E-05	0.00017	0.13
residential	REC_100M	486730.59	3618625.04	5E-03	1E-02	4E-03	0E+00	2E-03	2E-03	0.00046	0.00028	2E-05	0.00016	0.12
residential	REC_100M	486830.59	3618625.04	4E-03	1E-02	3E-03	0E+00	2E-03	2E-03	0.00042	0.00026	1.9E-05	0.00015	0.11
residential	REC_100M	486930.59	3618625.04	4E-03	1E-02	3E-03	0E+00	2E-03	1E-03	0.00039	0.00024	1.7E-05	0.00014	0.10
residential	REC_100M	487030.59	3618625.04	3E-03	9E-03	3E-03	0E+00	1E-03	1E-03	0.00036	0.00022	1.6E-05	0.00013	0.10
residential	REC_100M	487130.59	3618625.04	3E-03	8E-03	2E-03	0E+00	1E-03	1E-03	0.00033	0.0002	1.5E-05	0.00012	0.09
residential	REC_100M	487230.59	3618625.04	3E-03	8E-03	2E-03	0E+00	1E-03	1E-03	0.00031	0.00019	1.4E-05	0.00011	0.09
residential	REC_100M	487330.59	3618625.04	3E-03	7E-03	2E-03	0E+00	1E-03	9E-04	0.00029	0.00018	1.3E-05	0.0001	0.08
residential	REC_100M	487430.59	3618625.04	2E-03	6E-03	2E-03	0E+00	1E-03	8E-04	0.00028	0.00017	1.2E-05	9.6E-05	0.08

Refrigerated Containers

X	ug/m3	Dose Inhalation 3rd tri	0<2	2<9	2<16	16<30	Risk (Residential 30-yr; school 9-yr; park 15-year) 3rd tri	0<2	2<9	2<16	16<30	Summed Risk	Cases Per Million	Chronic HI
486530.59	0.08536	2.96E-05	8.92E-05	5.17E-05	4.68E-05	2.14E-05	1.2E-06	2.8E-05	0	3.1E-05	4.7E-06	6.481E-05	65	0.01707
486630.59	0.07996	2.77E-05	8.36E-05	4.84E-05	4.39E-05	2E-05	1.1E-06	2.6E-05	0	2.9E-05	4.4E-06	6.071E-05	61	0.01599
486730.59	0.07531	2.61E-05	7.87E-05	4.56E-05	4.13E-05	1.88E-05	1E-06	2.5E-05	0	2.7E-05	4.1E-06	5.717E-05	57	0.01506
486830.59	0.07095	2.46E-05	7.42E-05	4.29E-05	3.89E-05	1.78E-05	9.6E-07	2.3E-05	0	2.6E-05	3.9E-06	5.386E-05	54	0.01419
486930.59	0.0671	2.32E-05	7.01E-05	4.06E-05	3.68E-05	1.68E-05	9.1E-07	2.2E-05	0	2.4E-05	3.7E-06	5.094E-05	51	0.01342
487030.59	0.06357	2.2E-05	6.64E-05	3.85E-05	3.49E-05	1.59E-05	8.6E-07	2.1E-05	0	2.3E-05	3.5E-06	4.826E-05	48	0.01271
487130.59	0.06044	2.09E-05	6.32E-05	3.66E-05	3.32E-05	1.51E-05	8.2E-07	2E-05	0	2.2E-05	3.3E-06	4.588E-05	46	0.01209
487230.59	0.05762	1.99E-05	6.02E-05	3.49E-05	3.16E-05	1.44E-05	7.8E-07	1.9E-05	0	2.1E-05	3.2E-06	4.374E-05	44	0.01152
487330.59	0.05502	1.9E-05	5.75E-05	3.33E-05	3.02E-05	1.38E-05	7.5E-07	1.8E-05	0	2E-05	3E-06	4.177E-05	42	0.011
487430.59	0.05266	1.82E-05	5.5E-05	3.19E-05	2.89E-05	1.32E-05	7.2E-07	1.7E-05	0	1.9E-05	2.9E-06	3.998E-05	40	0.01053

Multi-Purpose General Cargo

X	ug/m3	Dose Inhalation 3rd tri	0<2	2<9	2<16	16<30	Risk (Residential 30-yr; school 9-yr; park 15-year) 3rd tri	0<2	2<9	2<16	16<30	Summed Risk	Cases Per Million	Chronic HI
486530.59	2E-02	7E-06	2E-05	1E-05	1E-05	5E-06	3E-07	7E-06	0E+00	7E-06	1E-06	1.5E-05	15.251	0.00402
486630.59	2E-02	6E-06	2E-05	1E-05	1E-05	5E-06	2E-07	6E-06	0E+00	7E-06	1E-06	1.4E-05	13.797	0.00363
486730.59	2E-02	6E-06	2E-05	1E-05	9E-06	4E-06	2E-07	5E-06	0E+00	6E-06	9E-07	1.3E-05	12.558	0.00331
486830.59	2E-02	5E-06	2E-05	9E-06	8E-06	4E-06	2E-07	5E-06	0E+00	5E-06	8E-07	1.1E-05	11.450	0.00302
486930.59	1E-02	5E-06	1E-05	8E-06	8E-06	3E-06	2E-07	5E-06	0E+00	5E-06	8E-07	1.1E-05	10.511	0.00277
487030.59	1E-02	4E-06	1E-05	8E-06	7E-06	3E-06	2E-07	4E-06	0E+00	5E-06	7E-07	9.7E-06	9.692	0.00255
487130.59	1E-02	4E-06	1E-05	7E-06	7E-06	3E-06	2E-07	4E-06	0E+00	4E-06	7E-07	9.0E-06	8.999	0.00237
487230.59	1E-02	4E-06	1E-05	7E-06	6E-06	3E-06	2E-07	4E-06	0E+00	4E-06	6E-07	8.4E-06	8.397	0.00221
487330.59	1E-02	4E-06	1E-05	6E-06	6E-06	3E-06	1E-07	3E-06	0E+00	4E-06	6E-07	7.9E-06	7.872	0.00207
487430.59	1E-02	3E-06	1E-05	6E-06	5E-06	2E-06	1E-07	3E-06	0E+00	4E-06	5E-07	7.4E-06	7.412	0.00195

Dry Bulk

X	ug/m3	Dose Inhalation 3rd tri	0<2	2<9	2<16	16<30	Risk (Residential 30-yr; school 9-yr; park 15-year) 3rd tri	0<2	2<9	2<16	16<30	Summed Risk	Cases Per Million	Chronic HI
486530.59	3E-02	1E-05	3E-05	2E-05	2E-05	8E-06	5E-07	1E-05	0E+00	1E-05	2E-06	2.5E-05	25.357	0.00668
486630.59	3E-02	1E-05	3E-05	2E-05	2E-05	8E-06	4E-07	1E-05	0E+00	1E-05	2E-06	2.3E-05	22.769	0.006
486730.59	3E-02	9E-06	3E-05	2E-05	1E-05	7E-06	4E-07	9E-06	0E+00	1E-05	1E-06	2.1E-05	20.547	0.00541
486830.59	2E-02	8E-06	3E-05	1E-05	1E-05	6E-06	3E-07	8E-06	0E+00	9E-06	1E-06	1.9E-05	18.562	0.00489
486930.59	2E-02	8E-06	2E-05	1E-05	1E-05	6E-06	3E-07	7E-06	0E+00	8E-06	1E-06	1.7E-05	16.871	0.00444
487030.59	2E-02	7E-06	2E-05	1E-05	1E-05	5E-06	3E-07	7E-06	0E+00	7E-06	1E-06	1.5E-05	15.409	0.00406
487130.59	2E-02	6E-06	2E-05	1E-05	1E-05	5E-06	3E-07	6E-06	0E+00	7E-06	1E-06	1.4E-05	14.170	0.00373
487230.59	2E-02	6E-06	2E-05	1E-05	9E-06	4E-06	2E-07	6E-06	0E+00	6E-06	1E-06	1.3E-05	13.107	0.00345
487330.59	2E-02	6E-06	2E-05	1E-05	9E-06	4E-06	2E-07	5E-06	0E+00	6E-06	9E-07	1.2E-05	12.186	0.00321
487430.59	1E-02	5E-06	2E-05	9E-06	8E-06	4E-06	2E-07	5E-06	0E+00	5E-06	8E-07	1.1E-05	11.387	0.003

TAMT Risk Assessment - DPM Cancer and Chronic HI

	Discrete Receptor ID (Group Name)	X	Y	quipment: Multi-Purpose General Cargofull TAMT plan unmit	quipment: Dry Bulkfull TAMT plan unmit	Locomotives: All	Locomotives: Refrigerated Containersfull TAMT plan unmit	Locomotives: Multi-Purpose General Cargofull TAMT plan unmit	Locomotives: Dry Bulkfull TAMT plan unmit	Trucks: All	Trucks: Refrigerated Containersfull TAMT plan unmit	Trucks: Multi-Purpose General Cargofull TAMT plan unmit	Trucks: Dry Bulkfull TAMT plan unmit	All
AERMOD Output				17%	45%	100%	0%	54%	46%	100%	61%	4%	35%	
recreational	park	484030.59	3619025.04	8E-04	2E-03	9E-04	0E+00	5E-04	4E-04	2.8E-05	1.7E-05	1.3E-06	9.8E-06	0.06
recreational	park	484130.59	3619025.04	9E-04	2E-03	1E-03	0E+00	5E-04	4E-04	2.9E-05	1.8E-05	1.3E-06	1E-05	0.06
recreational	park	484230.59	3619025.04	9E-04	3E-03	1E-03	0E+00	6E-04	5E-04	3E-05	1.8E-05	1.3E-06	1.1E-05	0.06
recreational	park	484330.59	3619025.04	1E-03	3E-03	1E-03	0E+00	6E-04	5E-04	3.1E-05	1.9E-05	1.4E-06	1.1E-05	0.06
recreational	park	484430.59	3619025.04	1E-03	3E-03	1E-03	0E+00	6E-04	5E-04	3.3E-05	2E-05	1.5E-06	1.1E-05	0.06
residential	REC_100M	484530.59	3619025.04	1E-03	4E-03	1E-03	0E+00	7E-04	6E-04	3.4E-05	2.1E-05	1.5E-06	1.2E-05	0.07
residential	REC_100M	484630.59	3619025.04	2E-03	4E-03	1E-03	0E+00	7E-04	6E-04	3.6E-05	2.2E-05	1.6E-06	1.3E-05	0.07
residential	REC_100M	484730.59	3619025.04	2E-03	5E-03	1E-03	0E+00	8E-04	6E-04	3.9E-05	2.4E-05	1.7E-06	1.4E-05	0.08
residential	REC_100M	484830.59	3619025.04	2E-03	6E-03	1E-03	0E+00	8E-04	7E-04	4.3E-05	2.6E-05	1.9E-06	1.5E-05	0.09
residential	REC_100M	484930.59	3619025.04	3E-03	7E-03	2E-03	0E+00	9E-04	8E-04	4.8E-05	2.9E-05	2.1E-06	1.7E-05	0.10

Refrigerated Containers

X	ug/m3	Dose Inhalation: 3rd tri	0<2	2<9	2<16	16<30	Risk (Residential 30-yr; school 9-yr; park 15-year): 3rd tri	0<2	2<9	2<16	16<30	Summed Risk	Cases Per Million	Chronic HI
484030.59	0.04428	0	4.25E-06	2.26E-06	1.84E-06	8.49E-07	0	1.3E-06	7.5E-07	0	8E-08	2.162E-06	2	0.00886
484130.59	0.04398	0	4.22E-06	2.25E-06	1.83E-06	8.43E-07	0	1.3E-06	7.4E-07	0	8E-08	2.147E-06	2	0.0088
484230.59	0.04469	0	4.29E-06	2.29E-06	1.86E-06	8.57E-07	0	1.3E-06	7.5E-07	0	8.1E-08	2.182E-06	2	0.00894
484330.59	0.04604	0	4.41E-06	2.35E-06	1.91E-06	8.83E-07	0	1.4E-06	7.8E-07	0	8.3E-08	2.248E-06	2	0.00921
484430.59	0.04502	0	4.32E-06	2.3E-06	1.87E-06	8.63E-07	0	1.4E-06	7.6E-07	0	8.1E-08	2.198E-06	2	0.009
484530.59	0.0491	1.7E-05	5.13E-05	2.97E-05	2.69E-05	1.23E-05	6.7E-07	1.6E-05	0	1.8E-05	2.7E-06	3.728E-05	37	0.00982
484630.59	0.05226	1.81E-05	5.46E-05	3.16E-05	2.87E-05	1.31E-05	7.1E-07	1.7E-05	0	1.9E-05	2.9E-06	3.967E-05	40	0.01045
484730.59	0.0566	1.96E-05	5.92E-05	3.42E-05	3.1E-05	1.42E-05	7.7E-07	1.9E-05	0	2E-05	3.1E-06	4.297E-05	43	0.01132
484830.59	0.06271	2.17E-05	6.55E-05	3.79E-05	3.44E-05	1.57E-05	8.5E-07	2.1E-05	0	2.3E-05	3.5E-06	4.761E-05	48	0.01254
484930.59	0.07055	2.44E-05	7.37E-05	4.27E-05	3.87E-05	1.77E-05	9.6E-07	2.3E-05	0	2.6E-05	3.9E-06	5.356E-05	54	0.01411

Multi-Purpose General Cargo

X	ug/m3	Dose Inhalation: 3rd tri	0<2	2<9	2<16	16<30	Risk (Residential 30-yr; school 9-yr; park 15-year): 3rd tri	0<2	2<9	2<16	16<30	Summed Risk	Cases Per Million	Chronic HI
484030.59	9E-03	0E+00	8E-07	5E-07	4E-07	2E-07	0E+00	3E-07	1E-07	0E+00	2E-08	4.3E-07	0.433	0.00177
484130.59	9E-03	0E+00	8E-07	4E-07	4E-07	2E-07	0E+00	3E-07	1E-07	0E+00	2E-08	4.2E-07	0.420	0.00172
484230.59	8E-03	0E+00	8E-07	4E-07	4E-07	2E-07	0E+00	3E-07	1E-07	0E+00	2E-08	4.1E-07	0.415	0.0017
484330.59	9E-03	0E+00	8E-07	4E-07	4E-07	2E-07	0E+00	3E-07	1E-07	0E+00	2E-08	4.2E-07	0.417	0.00171
484430.59	8E-03	0E+00	8E-07	4E-07	3E-07	2E-07	0E+00	2E-07	1E-07	0E+00	1E-08	4.0E-07	0.397	0.00163
484530.59	9E-03	3E-06	9E-06	5E-06	5E-06	2E-06	1E-07	3E-06	0E+00	3E-06	5E-07	6.6E-06	6.615	0.00174
484630.59	9E-03	3E-06	9E-06	5E-06	5E-06	2E-06	1E-07	3E-06	0E+00	3E-06	5E-07	6.8E-06	6.805	0.00179
484730.59	9E-03	3E-06	1E-05	6E-06	5E-06	2E-06	1E-07	3E-06	0E+00	3E-06	5E-07	7.1E-06	7.067	0.00186
484830.59	1E-02	3E-06	1E-05	6E-06	5E-06	2E-06	1E-07	3E-06	0E+00	4E-06	5E-07	7.5E-06	7.457	0.00196
484930.59	1E-02	4E-06	1E-05	6E-06	6E-06	3E-06	1E-07	3E-06	0E+00	4E-06	6E-07	8.0E-06	7.988	0.0021

Dry Bulk

X	ug/m3	Dose Inhalation: 3rd tri	0<2	2<9	2<16	16<30	Risk (Residential 30-yr; school 9-yr; park 15-year): 3rd tri	0<2	2<9	2<16	16<30	Summed Risk	Cases Per Million	Chronic HI
484030.59	1E-02	0E+00	1E-06	5E-07	4E-07	2E-07	0E+00	3E-07	2E-07	0E+00	2E-08	5.0E-07	0.499	0.00204
484130.59	1E-02	0E+00	1E-06	5E-07	4E-07	2E-07	0E+00	3E-07	2E-07	0E+00	2E-08	4.9E-07	0.491	0.00201
484230.59	1E-02	0E+00	1E-06	5E-07	4E-07	2E-07	0E+00	3E-07	2E-07	0E+00	2E-08	4.9E-07	0.491	0.00201
484330.59	1E-02	0E+00	1E-06	5E-07	4E-07	2E-07	0E+00	3E-07	2E-07	0E+00	2E-08	5.0E-07	0.501	0.00205
484430.59	1E-02	0E+00	9E-07	5E-07	4E-07	2E-07	0E+00	3E-07	2E-07	0E+00	2E-08	4.8E-07	0.481	0.00197
484530.59	1E-02	4E-06	1E-05	7E-06	6E-06	3E-06	1E-07	4E-06	0E+00	4E-06	6E-07	8.3E-06	8.252	0.00217
484630.59	1E-02	4E-06	1E-05	7E-06	6E-06	3E-06	2E-07	4E-06	0E+00	4E-06	6E-07	8.7E-06	8.691	0.00229
484730.59	1E-02	4E-06	1E-05	7E-06	7E-06	3E-06	2E-07	4E-06	0E+00	4E-06	7E-07	9.3E-06	9.288	0.00245
484830.59	1E-02	5E-06	1E-05	8E-06	7E-06	3E-06	2E-07	4E-06	0E+00	5E-06	7E-07	1.0E-05	10.108	0.00266
484930.59	1E-02	5E-06	2E-05	9E-06	8E-06	4E-06	2E-07	5E-06	0E+00	5E-06	8E-07	1.1E-05	11.208	0.00295

TAMT Risk Assessment - DPM Cancer and Chronic HI

				quipment		Locomotives				Trucks					
				Multi-Purpose General Cargoful l TAMT plan unmit	Dry Bulkfull TAMT plan unmit	All	Refrigerated Containersfull TAMT plan unmit	Multi-Purpose General Cargoful l TAMT plan unmit	Dry Bulkfull TAMT plan unmit	All	Refrigerated Containersfull TAMT plan unmit	Multi-Purpose General Cargoful l TAMT plan unmit	Dry Bulkfull TAMT plan unmit	All	
AERMOD Output				17%	45%	100%	0%	54%	46%	100%	61%	4%	35%		
	Discrete Receptor ID (Group Name)	X	Y												ug/m3
residential	REC_100M	488030.59	3619225.04	1E-03	4E-03	1E-03	0E+00	6E-04	5E-04	0.00016	9.6E-05	7E-06	5.5E-05	0.05	0.03561
residential	REC_100M	476730.59	3619325.04	9E-05	3E-04	6E-05	0E+00	3E-05	3E-05	4.6E-06	2.8E-06	2.1E-07	1.6E-06	0.01	0.00566
residential	REC_100M	476830.59	3619325.04	1E-04	3E-04	6E-05	0E+00	3E-05	3E-05	4.7E-06	2.9E-06	2.1E-07	1.6E-06	0.01	0.0058
residential	REC_100M	476930.59	3619325.04	1E-04	3E-04	6E-05	0E+00	3E-05	3E-05	4.7E-06	2.9E-06	2.1E-07	1.6E-06	0.01	0.00588
residential	REC_100M	477030.59	3619325.04	1E-04	3E-04	6E-05	0E+00	3E-05	3E-05	4.7E-06	2.9E-06	2.1E-07	1.7E-06	0.01	0.00596
residential	REC_100M	477130.59	3619325.04	1E-04	3E-04	6E-05	0E+00	3E-05	3E-05	4.9E-06	3E-06	2.2E-07	1.7E-06	0.01	0.00616
residential	REC_100M	477230.59	3619325.04	1E-04	3E-04	7E-05	0E+00	4E-05	3E-05	5.4E-06	3.3E-06	2.4E-07	1.9E-06	0.01	0.00679
residential	REC_100M	477330.59	3619325.04	1E-04	3E-04	8E-05	0E+00	4E-05	3E-05	5.7E-06	3.4E-06	2.5E-07	2E-06	0.01	0.00718
residential	REC_100M	477430.59	3619325.04	1E-04	3E-04	8E-05	0E+00	4E-05	4E-05	6E-06	3.6E-06	2.7E-07	2.1E-06	0.01	0.00764
residential	REC_100M	477530.59	3619325.04	1E-04	3E-04	8E-05	0E+00	4E-05	4E-05	6.1E-06	3.7E-06	2.7E-07	2.1E-06	0.01	0.00808
residential	REC_100M	477630.59	3619325.04	1E-04	4E-04	8E-05	0E+00	5E-05	4E-05	6.3E-06	3.8E-06	2.8E-07	2.2E-06	0.01	0.0085
residential	REC_100M	477730.59	3619325.04	1E-04	4E-04	9E-05	0E+00	5E-05	4E-05	6.5E-06	3.9E-06	2.9E-07	2.3E-06	0.01	0.00899
recreational	park	477830.59	3619325.04	1E-04	4E-04	9E-05	0E+00	5E-05	4E-05	6.7E-06	4.1E-06	3E-07	2.3E-06	0.02	0.00989
recreational	park	478430.59	3619325.04	2E-04	4E-04	1E-04	0E+00	6E-05	5E-05	7.3E-06	4.4E-06	3.2E-07	2.5E-06	0.02	0.01237
recreational	park	478530.59	3619325.04	2E-04	5E-04	1E-04	0E+00	6E-05	5E-05	7.4E-06	4.5E-06	3.3E-07	2.6E-06	0.02	0.01312

Refrigerated Containers

Dose Inhalation — Risk (Residential 30-yr; school 9-yr; park 15-year)

Multi-Purpose General Cargo

Dose Inhalation — Risk (Residential 30-yr; school 9-yr; park 15-year)

Dry Bulk

Dose Inhalation — Risk (Residential 30-yr; school 9-yr; park 15-year)

ug/m3	3rd tri	0<2	2<9	2<16	16<30	3rd tri	0<2	2<9	2<16	16<30	Summed Risk	Cases Per Million	Chronic HI

TAMT Risk Assessment - DPM Cancer and Chronic HI

				quipment		Locomotives				Trucks					Refrigerated Containers	
				Multi-Purpose General Cargoful l TAMT plan unmit	Dry Bulkfull TAMT plan unmit	All	Refrigerated Containersfull TAMT plan unmit	Multi-Purpose General Cargoful l TAMT plan unmit	Dry Bulkfull TAMT plan unmit	All	Refrigerated Containersfull TAMT plan unmit	Multi-Purpose General Cargoful l TAMT plan unmit	Dry Bulkfull TAMT plan unmit	All	Dose Inhalation	
AERMOD Output				17%	45%	100%	0%	54%	46%	100%	61%	4%	35%			
	Discrete Receptor ID (Group Name)	X	Y												ug/m3	3rd tri
residential	REC_100M	485730.59	3619525.04	5E-03	1E-02	2E-03	0E+00	1E-03	1E-03	0.00012	7.5E-05	5.5E-06	4.3E-05	0.12	0.0892	3.09E-05
residential	REC_100M	485830.59	3619525.04	5E-03	1E-02	2E-03	0E+00	1E-03	1E-03	0.00014	8.6E-05	6.3E-06	5E-05	0.13	0.09084	3.14E-05
residential	REC_100M	485930.59	3619525.04	5E-03	1E-02	3E-03	0E+00	1E-03	1E-03	0.00016	9.6E-05	7.1E-06	5.5E-05	0.13	0.09141	3.16E-05
residential	REC_100M	486030.59	3619525.04	5E-03	1E-02	3E-03	0E+00	1E-03	1E-03	0.00017	0.0001	7.5E-06	5.9E-05	0.13	0.09041	3.13E-05
residential	REC_100M	486130.59	3619525.04	5E-03	1E-02	3E-03	0E+00	2E-03	1E-03	0.00019	0.00011	8.2E-06	6.5E-05	0.13	0.08943	3.1E-05
residential	REC_100M	487730.59	3619525.04	2E-03	4E-03	1E-03	0E+00	6E-04	5E-04	0.00014	8.3E-05	6.1E-06	4.8E-05	0.06	0.03792	1.31E-05
residential	REC_100M	476730.59	3619625.04	8E-05	2E-04	6E-05	0E+00	3E-05	3E-05	4.3E-06	2.6E-06	1.9E-07	1.5E-06	0.01	0.00534	1.85E-06
residential	REC_100M	476830.59	3619625.04	9E-05	2E-04	6E-05	0E+00	3E-05	3E-05	4.4E-06	2.7E-06	1.9E-07	1.5E-06	0.01	0.00544	1.88E-06
residential	REC_100M	476930.59	3619625.04	8E-05	2E-04	6E-05	0E+00	3E-05	3E-05	4.3E-06	2.6E-06	1.9E-07	1.5E-06	0.01	0.00548	1.9E-06
residential	REC_100M	477030.59	3619625.04	9E-05	2E-04	6E-05	0E+00	3E-05	3E-05	4.4E-06	2.7E-06	2E-07	1.5E-06	0.01	0.00561	1.94E-06
residential	REC_100M	477130.59	3619625.04	9E-05	2E-04	6E-05	0E+00	3E-05	3E-05	4.6E-06	2.8E-06	2E-07	1.6E-06	0.01	0.0058	2.01E-06
residential	REC_100M	477230.59	3619625.04	9E-05	2E-04	6E-05	0E+00	3E-05	3E-05	4.7E-06	2.8E-06	2.1E-07	1.6E-06	0.01	0.00598	2.07E-06
residential	REC_100M	477330.59	3619625.04	9E-05	3E-04	6E-05	0E+00	3E-05	3E-05	4.8E-06	2.9E-06	2.1E-07	1.7E-06	0.01	0.00615	2.13E-06
residential	REC_100M	477430.59	3619625.04	1E-04	3E-04	7E-05	0E+00	4E-05	3E-05	5.1E-06	3.1E-06	2.3E-07	1.8E-06	0.01	0.00653	2.26E-06
residential	REC_100M	477530.59	3619625.04	1E-04	3E-04	7E-05	0E+00	4E-05	3E-05	5.3E-06	3.2E-06	2.4E-07	1.9E-06	0.01	0.0069	2.39E-06
residential	REC_100M	477630.59	3619625.04	1E-04	3E-04	7E-05	0E+00	4E-05	3E-05	5.4E-06	3.3E-06	2.4E-07	1.9E-06	0.01	0.00713	2.47E-06
residential	REC_100M	477730.59	3619625.04	1E-04	3E-04	8E-05	0E+00	4E-05	4E-05	5.7E-06	3.5E-06	2.5E-07	2E-06	0.01	0.00764	2.64E-06

Multi-Purpose General Cargo

Dry Bulk

Dose Inhalation

Risk (Residential 30-yr; school 9-yr; park 15-yr)

TAMT Risk Assessment - DPM Cancer and Chronic HI

AERMOD Output

Discrete Receptor ID (Group Name)		X	Y	quipment: Multi-Purpose General Cargofull TAMT plan unmit (17%)	quipment: Dry Bulkfull TAMT plan unmit (45%)	Locomotives: All (100%)	Locomotives: Refrigerated Containersfull TAMT plan unmit (0%)	Locomotives: Multi-Purpose General Cargofull TAMT plan unmit (54%)	Locomotives: Dry Bulkfull TAMT plan unmit (46%)	Trucks: All (100%)	Trucks: Refrigerated Containersfull TAMT plan unmit (61%)	Trucks: Multi-Purpose General Cargofull TAMT plan unmit (4%)	Trucks: Dry Bulkfull TAMT plan unmit (35%)	All
residential	REC_100M	484330.59	3619925.04	7E-04	2E-03	4E-04	0E+00	2E-04	2E-04	1.8E-05	1.1E-05	8.1E-07	6.4E-06	0.04
residential	REC_100M	484430.59	3619925.04	7E-04	2E-03	5E-04	0E+00	2E-04	2E-04	2E-05	1.2E-05	8.8E-07	6.9E-06	0.04
residential	REC_100M	484530.59	3619925.04	8E-04	2E-03	5E-04	0E+00	3E-04	2E-04	2.2E-05	1.3E-05	9.6E-07	7.5E-06	0.04
residential	REC_100M	484630.59	3619925.04	9E-04	2E-03	5E-04	0E+00	3E-04	2E-04	2.4E-05	1.4E-05	1.1E-06	8.3E-06	0.05
residential	REC_100M	484730.59	3619925.04	1E-03	3E-03	5E-04	0E+00	3E-04	2E-04	2.6E-05	1.6E-05	1.2E-06	9.1E-06	0.05
residential	REC_100M	484830.59	3619925.04	1E-03	3E-03	6E-04	0E+00	3E-04	3E-04	2.9E-05	1.7E-05	1.3E-06	1E-05	0.05
residential	REC_100M	484930.59	3619925.04	1E-03	3E-03	6E-04	0E+00	3E-04	3E-04	3.2E-05	1.9E-05	1.4E-06	1.1E-05	0.06
residential	REC_100M	485030.59	3619925.04	1E-03	4E-03	7E-04	0E+00	4E-04	3E-04	3.5E-05	2.1E-05	1.5E-06	1.2E-05	0.06
residential	REC_100M	485130.59	3619925.04	2E-03	5E-03	7E-04	0E+00	4E-04	3E-04	3.8E-05	2.3E-05	1.7E-06	1.3E-05	0.07
residential	REC_100M	485230.59	3619925.04	2E-03	5E-03	8E-04	0E+00	4E-04	4E-04	4.3E-05	2.6E-05	1.9E-06	1.5E-05	0.07

Refrigerated Containers

ug/m3	Dose Inhalation: 3rd tri	0<2	2<9	2<16	16<30	Risk (Residential 30-yr; school 9-yr; park 15-year): 3rd tri	0<2	2<9	2<16	16<30	Summed Risk	Cases Per Million	Chronic HI
0.02937	1.02E-05	3.07E-05	1.78E-05	1.61E-05	7.35E-06	4E-07	9.6E-06	0	1.1E-05	1.6E-06	2.229E-05	22	0.00587
0.03089	1.07E-05	3.23E-05	1.87E-05	1.69E-05	7.73E-06	4.2E-07	1E-05	0	1.1E-05	1.7E-06	2.345E-05	23	0.00618
0.03279	1.14E-05	3.43E-05	1.98E-05	1.8E-05	8.21E-06	4.5E-07	1.1E-05	0	1.2E-05	1.8E-06	2.49E-05	25	0.00656
0.03517	1.22E-05	3.68E-05	2.13E-05	1.93E-05	8.8E-06	4.8E-07	1.2E-05	0	1.3E-05	1.9E-06	2.67E-05	27	0.00703
0.03777	1.31E-05	3.95E-05	2.29E-05	2.07E-05	9.45E-06	5.1E-07	1.2E-05	0	1.4E-05	2.1E-06	2.867E-05	29	0.00755
0.04093	1.42E-05	4.28E-05	2.48E-05	2.24E-05	1.02E-05	5.6E-07	1.3E-05	0	1.5E-05	2.3E-06	3.107E-05	31	0.00819
0.04422	1.53E-05	4.62E-05	2.68E-05	2.43E-05	1.11E-05	6E-07	1.5E-05	0	1.6E-05	2.4E-06	3.357E-05	34	0.00884
0.04767	1.65E-05	4.98E-05	2.88E-05	2.61E-05	1.19E-05	6.5E-07	1.6E-05	0	1.7E-05	2.6E-06	3.619E-05	36	0.00953
0.05125	1.77E-05	5.36E-05	3.1E-05	2.81E-05	1.28E-05	7E-07	1.7E-05	0	1.9E-05	2.8E-06	3.891E-05	39	0.01025
0.05474	1.89E-05	5.72E-05	3.31E-05	3E-05	1.37E-05	7.4E-07	1.8E-05	0	2E-05	3E-06	4.155E-05	42	0.01095

Multi-Purpose General Cargo

ug/m3	Dose Inhalation: 3rd tri	0<2	2<9	2<16	16<30	Risk (Residential 30-yr; school 9-yr; park 15-year): 3rd tri	0<2	2<9	2<16	16<30	Summed Risk	Cases Per Million	Chronic HI
5E-03	2E-06	5E-06	3E-06	3E-06	1E-06	7E-08	2E-06	0E+00	2E-06	3E-07	3.9E-06	3.906	0.00103
5E-03	2E-06	5E-06	3E-06	3E-06	1E-06	7E-08	2E-06	0E+00	2E-06	3E-07	4.0E-06	3.968	0.00105
5E-03	2E-06	6E-06	3E-06	3E-06	1E-06	7E-08	2E-06	0E+00	2E-06	3E-07	4.0E-06	4.048	0.00107
5E-03	2E-06	6E-06	3E-06	3E-06	1E-06	7E-08	2E-06	0E+00	2E-06	3E-07	4.2E-06	4.164	0.0011
6E-03	2E-06	6E-06	3E-06	3E-06	1E-06	8E-08	2E-06	0E+00	2E-06	3E-07	4.3E-06	4.295	0.00113
6E-03	2E-06	6E-06	4E-06	3E-06	1E-06	8E-08	2E-06	0E+00	2E-06	3E-07	4.5E-06	4.488	0.00118
6E-03	2E-06	7E-06	4E-06	3E-06	2E-06	8E-08	2E-06	0E+00	2E-06	3E-07	4.7E-06	4.724	0.00124
7E-03	2E-06	7E-06	4E-06	4E-06	2E-06	9E-08	2E-06	0E+00	2E-06	4E-07	5.0E-06	4.998	0.00132
7E-03	2E-06	7E-06	4E-06	4E-06	2E-06	1E-07	2E-06	0E+00	3E-06	4E-07	5.4E-06	5.351	0.00141
8E-03	3E-06	8E-06	5E-06	4E-06	2E-06	1E-07	2E-06	0E+00	3E-06	4E-07	5.8E-06	5.757	0.00152

Dry Bulk

ug/m3	Dose Inhalation: 3rd tri	0<2	2<9	2<16	16<30	Risk (Residential 30-yr; school 9-yr; park 15-year): 3rd tri	0<2	2<9	2<16	16<30	Summed Risk	Cases Per Million	Chronic HI
6E-03	2E-06	7E-06	4E-06	3E-06	2E-06	8E-08	2E-06	0E+00	2E-06	3E-07	4.7E-06	4.721	0.00124
6E-03	2E-06	7E-06	4E-06	3E-06	2E-06	9E-08	2E-06	0E+00	2E-06	4E-07	4.8E-06	4.844	0.00128
7E-03	2E-06	7E-06	4E-06	4E-06	2E-06	9E-08	2E-06	0E+00	2E-06	4E-07	5.0E-06	4.997	0.00132
7E-03	2E-06	7E-06	4E-06	4E-06	2E-06	9E-08	2E-06	0E+00	2E-06	4E-07	5.2E-06	5.200	0.00137
7E-03	2E-06	7E-06	4E-06	4E-06	2E-06	1E-07	2E-06	0E+00	3E-06	4E-07	5.4E-06	5.423	0.00143
8E-03	3E-06	8E-06	5E-06	4E-06	2E-06	1E-07	2E-06	0E+00	3E-06	4E-07	5.7E-06	5.737	0.00151
8E-03	3E-06	8E-06	5E-06	4E-06	2E-06	1E-07	3E-06	0E+00	3E-06	4E-07	6.1E-06	6.125	0.00161
9E-03	3E-06	9E-06	5E-06	5E-06	2E-06	1E-07	3E-06	0E+00	3E-06	5E-07	6.6E-06	6.597	0.00174
1E-02	3E-06	1E-05	6E-06	5E-06	2E-06	1E-07	3E-06	0E+00	3E-06	5E-07	7.2E-06	7.229	0.0019
1E-02	4E-06	1E-05	6E-06	6E-06	3E-06	1E-07	3E-06	0E+00	4E-06	6E-07	8.0E-06	7.966	0.0021

TAMT Risk Assessment - DPM Cancer and Chronic HI

	Discrete Receptor ID (Group Name)	X	Y	quipment: Multi-Purpose General Cargofull TAMT plan unmit	quipment: Dry Bulkfull TAMT plan unmit	Locomotives: All	Locomotives: Refrigerated Containersfull TAMT plan unmit	Locomotives: Multi-Purpose General Cargofull TAMT plan unmit	Locomotives: Dry Bulkfull TAMT plan unmit	Trucks: All	Trucks: Refrigerated Containersfull TAMT plan unmit	Trucks: Multi-Purpose General Cargofull TAMT plan unmit	Trucks: Dry Bulkfull TAMT plan unmit	All
AERMOD Output				17%	45%	100%	0%	54%	46%	100%	61%	4%	35%	
recreational	park	485730.59	3620225.04	2E-03	5E-03	9E-04	0E+00	5E-04	4E-04	5.6E-05	3.4E-05	2.5E-06	2E-05	0.07
recreational	park	485830.59	3620225.04	2E-03	5E-03	1E-03	0E+00	6E-04	5E-04	6.5E-05	3.9E-05	2.9E-06	2.3E-05	0.08
recreational	park	485930.59	3620225.04	2E-03	6E-03	1E-03	0E+00	6E-04	5E-04	7.4E-05	4.5E-05	3.3E-06	2.6E-05	0.08
residential	REC_100M	476830.59	3620325.04	7E-05	2E-04	5E-05	0E+00	3E-05	2E-05	3.8E-06	2.3E-06	1.7E-07	1.3E-06	0.01
residential	REC_100M	476930.59	3620325.04	7E-05	2E-04	5E-05	0E+00	3E-05	2E-05	3.9E-06	2.4E-06	1.7E-07	1.4E-06	0.01
residential	REC_100M	477030.59	3620325.04	7E-05	2E-04	5E-05	0E+00	3E-05	2E-05	3.9E-06	2.4E-06	1.8E-07	1.4E-06	0.01
residential	REC_100M	477130.59	3620325.04	8E-05	2E-04	5E-05	0E+00	3E-05	2E-05	4E-06	2.4E-06	1.8E-07	1.4E-06	0.01
residential	REC_100M	477230.59	3620325.04	8E-05	2E-04	5E-05	0E+00	3E-05	2E-05	4E-06	2.4E-06	1.8E-07	1.4E-06	0.01
residential	REC_100M	477330.59	3620325.04	8E-05	2E-04	5E-05	0E+00	3E-05	2E-05	4E-06	2.4E-06	1.8E-07	1.4E-06	0.01
residential	REC_100M	477430.59	3620325.04	8E-05	2E-04	6E-05	0E+00	3E-05	3E-05	4.2E-06	2.6E-06	1.9E-07	1.5E-06	0.01
residential	REC_100M	477530.59	3620325.04	8E-05	2E-04	6E-05	0E+00	3E-05	3E-05	4E-06	2.5E-06	1.8E-07	1.4E-06	0.01

Refrigerated Containers

X	ug/m3	Dose Inhalation: 3rd tri	0<2	2<9	2<16	16<30	Risk (Residential 30-yr; school 9-yr; park 15-year): 3rd tri	0<2	2<9	2<16	16<30	Summed Risk	Cases Per Million	Chronic HI
485730.59	0.05529	0	5.3E-06	2.83E-06	2.3E-06	1.06E-06	0	1.7E-06	9.3E-07	0	1E-07	2.699E-06	3	0.01106
485830.59	0.05703	0	5.47E-06	2.92E-06	2.37E-06	1.09E-06	0	1.7E-06	9.6E-07	0	1E-07	2.784E-06	3	0.01141
485930.59	0.0585	0	5.61E-06	2.99E-06	2.43E-06	1.12E-06	0	1.8E-06	9.9E-07	0	1.1E-07	2.856E-06	3	0.0117
476830.59	0.00476	1.65E-06	4.97E-06	2.88E-06	2.61E-06	1.19E-06	6.5E-08	1.6E-06	0	1.7E-06	2.6E-07	3.61E-06	4	0.00095
476930.59	0.00486	1.68E-06	5.08E-06	2.94E-06	2.67E-06	1.22E-06	6.6E-08	1.6E-06	0	1.8E-06	2.7E-07	3.693E-06	4	0.00097
477030.59	0.00495	1.71E-06	5.17E-06	3E-06	2.72E-06	1.24E-06	6.7E-08	1.6E-06	0	1.8E-06	2.7E-07	3.759E-06	4	0.00099
477130.59	0.00505	1.75E-06	5.28E-06	3.06E-06	2.77E-06	1.26E-06	6.9E-08	1.7E-06	0	1.8E-06	2.8E-07	3.835E-06	4	0.00101
477230.59	0.00514	1.78E-06	5.37E-06	3.11E-06	2.82E-06	1.29E-06	7E-08	1.7E-06	0	1.9E-06	2.8E-07	3.901E-06	4	0.00103
477330.59	0.0052	1.8E-06	5.44E-06	3.15E-06	2.85E-06	1.3E-06	7.1E-08	1.7E-06	0	1.9E-06	2.9E-07	3.949E-06	4	0.00104
477430.59	0.00551	1.91E-06	5.76E-06	3.33E-06	3.02E-06	1.38E-06	7.5E-08	1.8E-06	0	2E-06	3E-07	4.183E-06	4	0.0011
477530.59	0.00542	1.88E-06	5.66E-06	3.28E-06	2.97E-06	1.36E-06	7.4E-08	1.8E-06	0	2E-06	3E-07	4.112E-06	4	0.00108

Multi-Purpose General Cargo

X	ug/m3	Dose Inhalation: 3rd tri	0<2	2<9	2<16	16<30	Risk (Residential 30-yr; school 9-yr; park 15-year): 3rd tri	0<2	2<9	2<16	16<30	Summed Risk	Cases Per Million	Chronic HI
485730.59	8E-03	0E+00	7E-07	4E-07	3E-07	1E-07	0E+00	2E-07	1E-07	0E+00	1E-08	3.7E-07	0.371	0.00152
485830.59	8E-03	0E+00	8E-07	4E-07	3E-07	2E-07	0E+00	2E-07	1E-07	0E+00	1E-08	3.9E-07	0.388	0.00159
485930.59	8E-03	0E+00	8E-07	4E-07	3E-07	2E-07	0E+00	2E-07	1E-07	0E+00	1E-08	4.0E-07	0.405	0.00166
476830.59	9E-04	3E-07	1E-06	6E-07	5E-07	2E-07	1E-08	3E-07	0E+00	3E-07	5E-08	7.0E-07	0.698	0.00018
476930.59	9E-04	3E-07	1E-06	6E-07	5E-07	2E-07	1E-08	3E-07	0E+00	3E-07	5E-08	7.2E-07	0.721	0.00019
477030.59	1E-03	3E-07	1E-06	6E-07	5E-07	2E-07	1E-08	3E-07	0E+00	4E-07	5E-08	7.4E-07	0.739	0.00019
477130.59	1E-03	3E-07	1E-06	6E-07	5E-07	3E-07	1E-08	3E-07	0E+00	4E-07	6E-08	7.6E-07	0.760	0.0002
477230.59	1E-03	4E-07	1E-06	6E-07	6E-07	3E-07	1E-08	3E-07	0E+00	4E-07	6E-08	7.8E-07	0.781	0.00021
477330.59	1E-03	4E-07	1E-06	6E-07	6E-07	3E-07	1E-08	3E-07	0E+00	4E-07	6E-08	8.0E-07	0.795	0.00021
477430.59	1E-03	4E-07	1E-06	7E-07	6E-07	3E-07	2E-08	4E-07	0E+00	4E-07	6E-08	8.6E-07	0.864	0.00023
477530.59	1E-03	4E-07	1E-06	7E-07	6E-07	3E-07	2E-08	4E-07	0E+00	4E-07	6E-08	8.4E-07	0.845	0.00022

Dry Bulk

X	ug/m3	Dose Inhalation: 3rd tri	0<2	2<9	2<16	16<30	Risk (Residential 30-yr; school 9-yr; park 15-year): 3rd tri	0<2	2<9	2<16	16<30	Summed Risk	Cases Per Million	Chronic HI
485730.59	1E-02	0E+00	1E-06	5E-07	4E-07	2E-07	0E+00	3E-07	2E-07	0E+00	2E-08	5.2E-07	0.520	0.00213
485830.59	1E-02	0E+00	1E-06	6E-07	5E-07	2E-07	0E+00	3E-07	2E-07	0E+00	2E-08	5.5E-07	0.550	0.00225
485930.59	1E-02	0E+00	1E-06	6E-07	5E-07	2E-07	0E+00	4E-07	2E-07	0E+00	2E-08	5.8E-07	0.580	0.00238
476830.59	1E-03	4E-07	1E-06	7E-07	6E-07	3E-07	1E-08	4E-07	0E+00	4E-07	6E-08	8.2E-07	0.818	0.00022
476930.59	1E-03	4E-07	1E-06	7E-07	6E-07	3E-07	2E-08	4E-07	0E+00	4E-07	6E-08	8.5E-07	0.845	0.00022
477030.59	1E-03	4E-07	1E-06	7E-07	6E-07	3E-07	2E-08	4E-07	0E+00	4E-07	6E-08	8.7E-07	0.866	0.00023
477130.59	1E-03	4E-07	1E-06	7E-07	6E-07	3E-07	2E-08	4E-07	0E+00	4E-07	6E-08	8.9E-07	0.891	0.00023
477230.59	1E-03	4E-07	1E-06	7E-07	7E-07	3E-07	2E-08	4E-07	0E+00	4E-07	7E-08	9.1E-07	0.914	0.00024
477330.59	1E-03	4E-07	1E-06	7E-07	7E-07	3E-07	2E-08	4E-07	0E+00	4E-07	7E-08	9.3E-07	0.929	0.00024
477430.59	1E-03	5E-07	1E-06	8E-07	7E-07	3E-07	2E-08	4E-07	0E+00	5E-07	7E-08	1.0E-06	1.008	0.00027
477530.59	1E-03	4E-07	1E-06	8E-07	7E-07	3E-07	2E-08	4E-07	0E+00	5E-07	7E-08	9.8E-07	0.983	0.00026

TAMT Risk Assessment - DPM Cancer and Chronic HI

AERMOD Output

	Discrete Receptor ID (Group Name)	X	Y	quipment: Multi-Purpose General Cargofull TAMT plan unmit 17%	quipment: Dry Bulkfull TAMT plan unmit 45%	Locomotives: All 100%	Locomotives: Refrigerated Containersfull TAMT plan unmit 0%	Locomotives: Multi-Purpose General Cargofull TAMT plan unmit 54%	Locomotives: Dry Bulkfull TAMT plan unmit 46%	Trucks: All 100%	Trucks: Refrigerated Containersfull TAMT plan unmit 61%	Trucks: Multi-Purpose General Cargofull TAMT plan unmit 4%	Trucks: Dry Bulkfull TAMT plan unmit 35%	All	Refrigerated Containers ug/m3
recreational	park	485630.59	3620625.04	1E-03	4E-03	7E-04	0E+00	4E-04	3E-04	4.1E-05	2.5E-05	1.8E-06	1.4E-05	0.06	0.04274
recreational	park	485730.59	3620625.04	1E-03	4E-03	7E-04	0E+00	4E-04	3E-04	4.5E-05	2.7E-05	2E-06	1.6E-05	0.06	0.04386
recreational	park	485830.59	3620625.04	1E-03	4E-03	7E-04	0E+00	4E-04	3E-04	4.7E-05	2.9E-05	2.1E-06	1.6E-05	0.06	0.044
residential	REC_100M	477330.59	3620725.04	7E-05	2E-04	5E-05	0E+00	3E-05	2E-05	3.6E-06	2.2E-06	1.6E-07	1.3E-06	0.01	0.0049
residential	REC_100M	477430.59	3620725.04	7E-05	2E-04	5E-05	0E+00	3E-05	2E-05	3.6E-06	2.2E-06	1.6E-07	1.2E-06	0.01	0.00491
residential	REC_100M	477530.59	3620725.04	7E-05	2E-04	5E-05	0E+00	3E-05	2E-05	3.5E-06	2.1E-06	1.6E-07	1.2E-06	0.01	0.0049
residential	REC_100M	477630.59	3620725.04	7E-05	2E-04	5E-05	0E+00	3E-05	2E-05	3.7E-06	2.2E-06	1.6E-07	1.3E-06	0.01	0.00507
residential	REC_100M	477730.59	3620725.04	8E-05	2E-04	6E-05	0E+00	3E-05	3E-05	3.9E-06	2.3E-06	1.7E-07	1.3E-06	0.01	0.0053
residential	REC_100M	477830.59	3620725.04	8E-05	2E-04	6E-05	0E+00	3E-05	3E-05	4.1E-06	2.5E-06	1.8E-07	1.4E-06	0.01	0.00562
residential	REC_100M	477930.59	3620725.04	8E-05	2E-04	6E-05	0E+00	3E-05	3E-05	4.2E-06	2.5E-06	1.9E-07	1.5E-06	0.01	0.0058
residential	REC_100M	478030.59	3620725.04	8E-05	2E-04	6E-05	0E+00	3E-05	3E-05	4.2E-06	2.6E-06	1.9E-07	1.5E-06	0.01	0.00588
residential	REC_100M	478130.59	3620725.04	9E-05	2E-04	6E-05	0E+00	3E-05	3E-05	4.3E-06	2.6E-06	1.9E-07	1.5E-06	0.01	0.0061
residential	REC_100M	478230.59	3620725.04	9E-05	2E-04	6E-05	0E+00	3E-05	3E-05	4.4E-06	2.7E-06	2E-07	1.5E-06	0.01	0.00646
residential	REC_100M	478330.59	3620725.04	9E-05	2E-04	7E-05	0E+00	4E-05	3E-05	4.5E-06	2.7E-06	2E-07	1.6E-06	0.01	0.00669
residential	REC_100M	478430.59	3620725.04	9E-05	2E-04	7E-05	0E+00	4E-05	3E-05	4.5E-06	2.8E-06	2E-07	1.6E-06	0.01	0.00694
residential	REC_100M	478530.59	3620725.04	1E-04	3E-04	7E-05	0E+00	4E-05	3E-05	4.6E-06	2.8E-06	2E-07	1.6E-06	0.01	0.0072
residential	REC_100M	478630.59	3620725.04	1E-04	3E-04	7E-05	0E+00	4E-05	3E-05	4.6E-06	2.8E-06	2.1E-07	1.6E-06	0.01	0.00744
recreational	park	480030.59	3620725.04	1E-04	3E-04	1E-04	0E+00	6E-05	5E-05	5.4E-06	3.3E-06	2.4E-07	1.9E-06	0.02	0.01042
recreational	park	482330.59	3620725.04	2E-04	4E-04	2E-04	0E+00	9E-05	8E-05	6.9E-06	4.2E-06	3.1E-07	2.4E-06	0.02	0.01426
residential	REC_100M	483930.59	3620725.04	4E-04	1E-03	3E-04	0E+00	1E-04	1E-04	1.2E-05	7.6E-06	5.6E-07	4.4E-06	0.03	0.01952
residential	REC_100M	484030.59	3620725.04	4E-04	1E-03	3E-04	0E+00	1E-04	1E-04	1.3E-05	8.1E-06	6E-07	4.7E-06	0.03	0.01992
residential	REC_100M	484130.59	3620725.04	4E-04	1E-03	3E-04	0E+00	1E-04	1E-04	1.4E-05	8.4E-06	6.2E-07	4.9E-06	0.03	0.0201
residential	REC_100M	484230.59	3620725.04	5E-04	1E-03	3E-04	0E+00	1E-04	1E-04	1.5E-05	9E-06	6.6E-07	5.2E-06	0.03	0.0207
residential	REC_100M	484330.59	3620725.04	5E-04	1E-03	3E-04	0E+00	1E-04	1E-04	1.6E-05	9.5E-06	6.9E-07	5.4E-06	0.03	0.02156
residential	REC_100M	484430.59	3620725.04	5E-04	1E-03	3E-04	0E+00	2E-04	1E-04	1.7E-05	1E-05	7.4E-07	5.8E-06	0.03	0.02278
residential	REC_100M	484530.59	3620725.04	5E-04	1E-03	3E-04	0E+00	2E-04	1E-04	1.7E-05	1.1E-05	7.8E-07	6.1E-06	0.03	0.02413
residential	REC_100M	477430.59	3620825.04	7E-05	2E-04	5E-05	0E+00	3E-05	2E-05	3.6E-06	2.2E-06	1.6E-07	1.2E-06	0.01	0.00484
residential	REC_100M	477530.59	3620825.04	7E-05	2E-04	5E-05	0E+00	3E-05	2E-05	3.5E-06	2.1E-06	1.5E-07	1.2E-06	0.01	0.00477
residential	REC_100M	477630.59	3620825.04	7E-05	2E-04	5E-05	0E+00	3E-05	2E-05	3.6E-06	2.2E-06	1.6E-07	1.3E-06	0.01	0.00496
residential	REC_100M	477730.59	3620825.04	8E-05	2E-04	5E-05	0E+00	3E-05	2E-05	3.9E-06	2.4E-06	1.7E-07	1.4E-06	0.01	0.00521
residential	REC_100M	477830.59	3620825.04	8E-05	2E-04	6E-05	0E+00	3E-05	3E-05	4E-06	2.5E-06	1.8E-07	1.4E-06	0.01	0.00546
residential	REC_100M	477930.59	3620825.04	8E-05	2E-04	6E-05	0E+00	3E-05	3E-05	4.1E-06	2.5E-06	1.8E-07	1.4E-06	0.01	0.00547
residential	REC_100M	478030.59	3620825.04	8E-05	2E-04	6E-05	0E+00	3E-05	3E-05	4.1E-06	2.5E-06	1.8E-07	1.4E-06	0.01	0.00555
residential	REC_100M	478130.59	3620825.04	8E-05	2E-04	6E-05	0E+00	3E-05	3E-05	4.2E-06	2.6E-06	1.9E-07	1.5E-06	0.01	0.00583
residential	REC_100M	478230.59	3620825.04	9E-05	2E-04	6E-05	0E+00	3E-05	3E-05	4.3E-06	2.6E-06	1.9E-07	1.5E-06	0.01	0.00624
residential	REC_100M	478330.59	3620825.04	9E-05	2E-04	6E-05	0E+00	3E-05	3E-05	4.4E-06	2.7E-06	1.9E-07	1.5E-06	0.01	0.00648
residential	REC_100M	478430.59	3620825.04	9E-05	3E-04	7E-05	0E+00	4E-05	3E-05	4.4E-06	2.7E-06	2E-07	1.5E-06	0.01	0.00672
residential	REC_100M	478530.59	3620825.04	9E-05	3E-04	7E-05	0E+00	4E-05	3E-05	4.5E-06	2.7E-06	2E-07	1.6E-06	0.01	0.00697
residential	REC_100M	478630.59	3620825.04	1E-04	3E-04	7E-05	0E+00	4E-05	3E-05	4.5E-06	2.7E-06	2E-07	1.6E-06	0.01	0.00715
residential	REC_100M	478730.59	3620825.04	1E-04	3E-04	7E-05	0E+00	4E-05	3E-05	4.6E-06	2.8E-06	2E-07	1.6E-06	0.01	0.0073
residential	REC_100M	478830.59	3620825.04	1E-04	3E-04	8E-05	0E+00	4E-05	3E-05	4.6E-06	2.8E-06	2.1E-07	1.6E-06	0.01	0.00754
residential	REC_100M	478930.59	3620825.04	1E-04	3E-04	8E-05	0E+00	4E-05	4E-05	4.7E-06	2.8E-06	2.1E-07	1.6E-06	0.01	0.00769
residential	REC_100M	479030.59	3620825.04	1E-04	3E-04	8E-05	0E+00	4E-05	4E-05	4.7E-06	2.9E-06	2.1E-07	1.6E-06	0.01	0.00783
recreational	park	480030.59	3620825.04	1E-04	3E-04	1E-04	0E+00	5E-05	5E-05	5.2E-06	3.1E-06	2.3E-07	1.8E-06	0.02	0.01008
recreational	park	480130.59	3620825.04	1E-04	3E-04	1E-04	0E+00	6E-05	5E-05	5.2E-06	3.2E-06	2.3E-07	1.8E-06	0.02	0.01017
recreational	park	480230.59	3620825.04	1E-04	3E-04	1E-04	0E+00	6E-05	5E-05	5.3E-06	3.2E-06	2.4E-07	1.8E-06	0.02	0.01044
recreational	park	480330.59	3620825.04	1E-04	3E-04	1E-04	0E+00	6E-05	5E-05	5.3E-06	3.2E-06	2.4E-07	1.9E-06	0.02	0.01076
recreational	park	480430.59	3620825.04	1E-04	3E-04	1E-04	0E+00	6E-05	5E-05	5.4E-06	3.3E-06	2.4E-07	1.9E-06	0.02	0.01098
recreational	park	480530.59	3620825.04	1E-04	3E-04	1E-04	0E+00	6E-05	5E-05	5.4E-06	3.3E-06	2.4E-07	1.9E-06	0.02	0.01114
recreational	park	480630.59	3620825.04	1E-04	3E-04	1E-04	0E+00	6E-05	5E-05	5.5E-06	3.3E-06	2.4E-07	1.9E-06	0.02	0.01115
recreational	park	480730.59	3620825.04	1E-04	3E-04	1E-04	0E+00	7E-05	6E-05	5.5E-06	3.4E-06	2.5E-07	1.9E-06	0.02	0.01144
recreational	park	480830.59	3620825.04	1E-04	3E-04	1E-04	0E+00	7E-05	6E-05	5.6E-06	3.4E-06	2.5E-07	1.9E-06	0.02	0.01164
recreational	park	480930.59	3620825.04	1E-04	3E-04	1E-04	0E+00	7E-05	6E-05	5.6E-06	3.4E-06	2.5E-07	2E-06	0.02	0.01198
recreational	park	481030.59	3620825.04	1E-04	3E-04	1E-04	0E+00	7E-05	6E-05	5.7E-06	3.5E-06	2.5E-07	2E-06	0.02	0.01217
recreational	park	481130.59	3620825.04	1E-04	3E-04	1E-04	0E+00	7E-05	6E-05	5.8E-06	3.5E-06	2.6E-07	2E-06	0.02	0.01232
recreational	park	481230.59	3620825.04	1E-04	4E-04	1E-04	0E+00	7E-05	6E-05	5.8E-06	3.5E-06	2.6E-07	2E-06	0.02	0.01248
recreational	park	481330.59	3620825.04	1E-04	4E-04	1E-04	0E+00	7E-05	6E-05	5.9E-06	3.6E-06	2.6E-07	2E-06	0.02	0.01262
recreational	park	481430.59	3620825.04	1E-04	4E-04	1E-04	0E+00	8E-05	6E-05	5.9E-06	3.6E-06	2.6E-07	2.1E-06	0.02	0.01268

Refrigerated Containers — Dose Inhalation: ug/m3, 3rd tri, 0<2, 2<9, 2<16, 16<30; Risk (Residential 30-yr; school 9-yr; park 15-year): 3rd tri, 0<2, 2<9, 2<16, 16<30, Summed Risk, Cases Per Million, Chronic HI

Multi-Purpose General Cargo — Dose Inhalation: ug/m3, 3rd tri, 0<2, 2<9, 2<16, 16<30; Risk (Residential 30-yr; school 9-yr; park 15-year): 3rd tri, 0<2, 2<9, 2<16, 16<30, Summed Risk, Cases Per Million, Chronic HI

Dry Bulk

TAMT Risk Assessment - DPM Cancer and Chronic HI

AERMOD Output

Type	Discrete Receptor ID (Group Name)	X	Y	quipment: Multi-Purpose General Cargoful l TAMT plan unmit 17%	quipment: Dry Bulkfull TAMT plan unmit 45%	Locomotives: All 100%	Locomotives: Refrigerated Containersfull TAMT plan unmit 0%	Locomotives: Multi-Purpose General Cargoful l TAMT plan unmit 54%	Locomotives: Dry Bulkfull TAMT plan unmit 46%	Trucks: All 100%	Trucks: Refrigerated Containersfull TAMT plan unmit 61%	Trucks: Multi-Purpose General Cargoful l TAMT plan unmit 4%	Trucks: Dry Bulkfull TAMT plan unmit 35%	All
residential	REC_100M	479530.59	3621125.04	1E-04	3E-04	8E-05	0E+00	4E-05	4E-05	4.5E-06	2.7E-06	2E-07	1.6E-06	0.01
residential	REC_100M	479630.59	3621125.04	1E-04	3E-04	8E-05	0E+00	4E-05	4E-05	4.5E-06	2.7E-06	2E-07	1.6E-06	0.01
recreational	park	481430.59	3621125.04	1E-04	3E-04	1E-04	0E+00	7E-05	6E-05	5.3E-06	3.2E-06	2.4E-07	1.9E-06	0.02
recreational	park	481530.59	3621125.04	1E-04	3E-04	1E-04	0E+00	7E-05	6E-05	5.4E-06	3.3E-06	2.4E-07	1.9E-06	0.02
recreational	park	481630.59	3621125.04	1E-04	3E-04	1E-04	0E+00	7E-05	6E-05	5.5E-06	3.3E-06	2.4E-07	1.9E-06	0.02
recreational	park	481730.59	3621125.04	1E-04	3E-04	1E-04	0E+00	7E-05	6E-05	5.6E-06	3.4E-06	2.5E-07	1.9E-06	0.02
recreational	park	481830.59	3621125.04	1E-04	3E-04	1E-04	0E+00	7E-05	6E-05	5.6E-06	3.4E-06	2.5E-07	2E-06	0.02
recreational	park	481930.59	3621125.04	1E-04	4E-04	1E-04	0E+00	7E-05	6E-05	5.7E-06	3.5E-06	2.5E-07	2E-06	0.02
recreational	park	482030.59	3621125.04	1E-04	4E-04	1E-04	0E+00	7E-05	6E-05	5.8E-06	3.5E-06	2.6E-07	2E-06	0.02
recreational	park	482130.59	3621125.04	1E-04	4E-04	1E-04	0E+00	8E-05	6E-05	5.9E-06	3.6E-06	2.6E-07	2.1E-06	0.02
recreational	park	482230.59	3621125.04	1E-04	4E-04	1E-04	0E+00	8E-05	7E-05	6E-06	3.6E-06	2.7E-07	2.1E-06	0.02
recreational	park	482330.59	3621125.04	1E-04	4E-04	1E-04	0E+00	8E-05	7E-05	6.1E-06	3.7E-06	2.7E-07	2.1E-06	0.02
recreational	park	482430.59	3621125.04	2E-04	4E-04	1E-04	0E+00	8E-05	7E-05	6.3E-06	3.8E-06	2.8E-07	2.2E-06	0.02
recreational	park	482530.59	3621125.04	2E-04	4E-04	2E-04	0E+00	8E-05	7E-05	6.4E-06	3.9E-06	2.8E-07	2.2E-06	0.02
residential	REC_100M	483830.59	3621125.04	3E-04	9E-04	2E-04	0E+00	1E-04	9E-05	1.1E-05	6.9E-06	5E-07	3.9E-06	0.02
residential	REC_100M	483930.59	3621125.04	3E-04	9E-04	2E-04	0E+00	1E-04	1E-04	1.2E-05	7.2E-06	5.2E-07	4.1E-06	0.02
residential	REC_100M	484030.59	3621125.04	4E-04	1E-03	2E-04	0E+00	1E-04	1E-04	1.2E-05	7.5E-06	5.5E-07	4.3E-06	0.02
residential	REC_100M	484130.59	3621125.04	4E-04	1E-03	2E-04	0E+00	1E-04	1E-04	1.3E-05	7.8E-06	5.7E-07	4.5E-06	0.02
residential	REC_100M	484230.59	3621125.04	4E-04	1E-03	2E-04	0E+00	1E-04	1E-04	1.3E-05	7.9E-06	5.8E-07	4.6E-06	0.02
residential	REC_100M	477930.59	3621225.04	7E-05	2E-04	5E-05	0E+00	3E-05	2E-05	3.7E-06	2.2E-06	1.6E-07	1.3E-06	0.01
residential	REC_100M	478030.59	3621225.04	7E-05	2E-04	5E-05	0E+00	3E-05	2E-05	3.8E-06	2.3E-06	1.7E-07	1.3E-06	0.01
residential	REC_100M	478130.59	3621225.04	7E-05	2E-04	5E-05	0E+00	3E-05	2E-05	3.8E-06	2.3E-06	1.7E-07	1.3E-06	0.01
residential	REC_100M	478230.59	3621225.04	7E-05	2E-04	5E-05	0E+00	3E-05	2E-05	3.8E-06	2.3E-06	1.7E-07	1.3E-06	0.01
residential	REC_100M	478330.59	3621225.04	7E-05	2E-04	5E-05	0E+00	3E-05	2E-05	3.9E-06	2.3E-06	1.7E-07	1.3E-06	0.01
residential	REC_100M	478430.59	3621225.04	8E-05	2E-04	5E-05	0E+00	3E-05	3E-05	3.9E-06	2.4E-06	1.7E-07	1.4E-06	0.01
residential	REC_100M	478530.59	3621225.04	8E-05	2E-04	6E-05	0E+00	3E-05	3E-05	4E-06	2.4E-06	1.8E-07	1.4E-06	0.01
residential	REC_100M	478630.59	3621225.04	8E-05	2E-04	6E-05	0E+00	3E-05	3E-05	4E-06	2.4E-06	1.8E-07	1.4E-06	0.01
residential	REC_100M	478730.59	3621225.04	8E-05	2E-04	6E-05	0E+00	3E-05	3E-05	4.1E-06	2.5E-06	1.8E-07	1.4E-06	0.01
residential	REC_100M	478830.59	3621225.04	9E-05	2E-04	7E-05	0E+00	4E-05	3E-05	4.1E-06	2.5E-06	1.8E-07	1.4E-06	0.01
residential	REC_100M	478930.59	3621225.04	9E-05	2E-04	7E-05	0E+00	4E-05	3E-05	4.1E-06	2.5E-06	1.8E-07	1.4E-06	0.01
residential	REC_100M	479030.59	3621225.04	9E-05	2E-04	7E-05	0E+00	4E-05	3E-05	4.2E-06	2.5E-06	1.9E-07	1.5E-06	0.01
residential	REC_100M	479130.59	3621225.04	9E-05	2E-04	7E-05	0E+00	4E-05	3E-05	4.2E-06	2.6E-06	1.9E-07	1.5E-06	0.01
residential	REC_100M	479230.59	3621225.04	9E-05	2E-04	7E-05	0E+00	4E-05	3E-05	4.2E-06	2.6E-06	1.9E-07	1.5E-06	0.01
residential	REC_100M	479330.59	3621225.04	9E-05	2E-04	7E-05	0E+00	4E-05	3E-05	4.3E-06	2.6E-06	1.9E-07	1.5E-06	0.01
residential	REC_100M	479430.59	3621225.04	9E-05	2E-04	7E-05	0E+00	4E-05	3E-05	4.3E-06	2.6E-06	1.9E-07	1.5E-06	0.01
residential	REC_100M	479530.59	3621225.04	9E-05	3E-04	8E-05	0E+00	4E-05	4E-05	4.3E-06	2.6E-06	1.9E-07	1.5E-06	0.01
residential	REC_100M	479630.59	3621225.04	9E-05	3E-04	8E-05	0E+00	4E-05	4E-05	4.4E-06	2.7E-06	2E-07	1.5E-06	0.01
residential	REC_100M	479730.59	3621225.04	9E-05	3E-04	8E-05	0E+00	4E-05	4E-05	4.4E-06	2.7E-06	2E-07	1.5E-06	0.01
residential	REC_100M	479830.59	3621225.04	1E-04	3E-04	8E-05	0E+00	4E-05	4E-05	4.5E-06	2.7E-06	2E-07	1.6E-06	0.01
residential	REC_100M	479930.59	3621225.04	1E-04	3E-04	8E-05	0E+00	4E-05	4E-05	4.5E-06	2.7E-06	2E-07	1.6E-06	0.01
residential	REC_100M	480030.59	3621225.04	1E-04	3E-04	8E-05	0E+00	4E-05	4E-05	4.5E-06	2.8E-06	2E-07	1.6E-06	0.01
recreational	park	480130.59	3621225.04	1E-04	3E-04	9E-05	0E+00	5E-05	4E-05	4.6E-06	2.8E-06	2E-07	1.6E-06	0.01
recreational	park	480230.59	3621225.04	1E-04	3E-04	9E-05	0E+00	5E-05	4E-05	4.6E-06	2.8E-06	2.1E-07	1.6E-06	0.01
recreational	park	480330.59	3621225.04	1E-04	3E-04	9E-05	0E+00	5E-05	4E-05	4.6E-06	2.8E-06	2.1E-07	1.6E-06	0.01
recreational	park	480430.59	3621225.04	1E-04	3E-04	1E-04	0E+00	5E-05	4E-05	4.7E-06	2.8E-06	2.1E-07	1.6E-06	0.01
recreational	park	480530.59	3621225.04	1E-04	3E-04	1E-04	0E+00	5E-05	5E-05	4.7E-06	2.9E-06	2.1E-07	1.6E-06	0.01
recreational	park	480630.59	3621225.04	1E-04	3E-04	1E-04	0E+00	5E-05	5E-05	4.8E-06	2.9E-06	2.1E-07	1.7E-06	0.01
recreational	park	480730.59	3621225.04	1E-04	3E-04	1E-04	0E+00	6E-05	5E-05	4.8E-06	2.9E-06	2.1E-07	1.7E-06	0.02
recreational	park	480830.59	3621225.04	1E-04	3E-04	1E-04	0E+00	6E-05	5E-05	4.9E-06	2.9E-06	2.2E-07	1.7E-06	0.02
recreational	park	480930.59	3621225.04	1E-04	3E-04	1E-04	0E+00	6E-05	5E-05	4.9E-06	3E-06	2.2E-07	1.7E-06	0.02
recreational	park	481030.59	3621225.04	1E-04	3E-04	1E-04	0E+00	6E-05	5E-05	4.9E-06	3E-06	2.2E-07	1.7E-06	0.02
recreational	park	481330.59	3621225.04	1E-04	3E-04	1E-04	0E+00	6E-05	5E-05	5.1E-06	3.1E-06	2.3E-07	1.8E-06	0.02
recreational	park	481430.59	3621225.04	1E-04	3E-04	1E-04	0E+00	6E-05	5E-05	5.2E-06	3.1E-06	2.3E-07	1.8E-06	0.02
recreational	park	481530.59	3621225.04	1E-04	3E-04	1E-04	0E+00	7E-05	6E-05	5.2E-06	3.2E-06	2.3E-07	1.8E-06	0.02
recreational	park	481630.59	3621225.04	1E-04	3E-04	1E-04	0E+00	7E-05	6E-05	5.3E-06	3.2E-06	2.4E-07	1.9E-06	0.02
recreational	park	481730.59	3621225.04	1E-04	3E-04	1E-04	0E+00	7E-05	6E-05	5.4E-06	3.3E-06	2.4E-07	1.9E-06	0.02
recreational	park	481830.59	3621225.04	1E-04	3E-04	1E-04	0E+00	7E-05	6E-05	5.5E-06	3.3E-06	2.4E-07	1.9E-06	0.02
recreational	park	481930.59	3621225.04	1E-04	3E-04	1E-04	0E+00	7E-05	6E-05	5.6E-06	3.4E-06	2.5E-07	1.9E-06	0.02
recreational	park	482030.59	3621225.04	1E-04	4E-04	1E-04	0E+00	7E-05	6E-05	5.6E-06	3.4E-06	2.5E-07	2E-06	0.02
recreational	park	482130.59	3621225.04	1E-04	4E-04	1E-04	0E+00	7E-05	6E-05	5.7E-06	3.5E-06	2.6E-07	2E-06	0.02
recreational	park	482230.59	3621225.04	1E-04	4E-04	1E-04	0E+00	7E-05	6E-05	5.9E-06	3.6E-06	2.6E-07	2E-06	0.02
recreational	park	482330.59	3621225.04	1E-04	4E-04	1E-04	0E+00	8E-05	6E-05	6E-06	3.6E-06	2.7E-07	2.1E-06	0.02
recreational	park	482430.59	3621225.04	1E-04	4E-04	1E-04	0E+00	8E-05	7E-05	6.1E-06	3.7E-06	2.7E-07	2.1E-06	0.02
recreational	park	482530.59	3621225.04	2E-04	4E-04	1E-04	0E+00	8E-05	7E-05	6.3E-06	3.8E-06	2.8E-07	2.2E-06	0.02
residential	REC_100M	482630.59	3621225.04	2E-04	4E-04	1E-04	0E+00	8E-05	7E-05	6.4E-06	3.9E-06	2.9E-07	2.2E-06	0.02
residential	REC_100M	483830.59	3621225.04	3E-04	9E-04	2E-04	0E+00	1E-04	9E-05	1.1E-05	6.8E-06	5E-07	3.9E-06	0.02
residential	REC_100M	483930.59	3621225.04	3E-04	9E-04	2E-04	0E+00	1E-04	9E-05	1.2E-05	7E-06	5.1E-07	4E-06	0.02
residential	REC_100M	484030.59	3621225.04	3E-04	9E-04	2E-04	0E+00	1E-04	9E-05	1.2E-05	7.3E-06	5.4E-07	4.2E-06	0.02
residential	REC_100M	484130.59	3621225.04	3E-04	9E-04	2E-04	0E+00	1E-04	1E-04	1.2E-05	7.5E-06	5.5E-07	4.3E-06	0.02
school	127 (school)	485901.79	3618344.73	3E-02	7E-02	2E-02	0E+00	1E-02	1E-02	0.00179	0.00108	7.9E-05	0.00062	0.34

Refrigerated Containers

X	ug/m3	Dose Inhalation: 3rd tri	Dose Inhalation: 0<2	Dose Inhalation: 2<9	Dose Inhalation: 2<16	Dose Inhalation: 16<30	Risk (Residential 30-yr; school 9-yr; park 15-year): 3rd tri	Risk: 0<2	Risk: 2<9	Risk: 2<16	Risk: 16<30	Summed Risk	Cases Per Million	Chronic HI
479530.59	0.00772	2.67E-06	8.07E-06	4.67E-06	4.23E-06	1.93E-06	1E-07	2.5E-06	0	2.8E-06	4.3E-07	5.86E-06	6	0.00154
479630.59	0.00791	2.74E-06	8.27E-06	4.78E-06	4.34E-06	1.98E-06	1.1E-07	2.6E-06	0	2.9E-06	4.4E-07	6.003E-06	6	0.00158
481430.59	0.01082	0	1.04E-06	5.54E-07	4.5E-07	2.08E-07	0	3.3E-07	1.8E-07	0	2E-08	5.284E-07	1	0.00216
481530.59	0.01097	0	1.05E-06	5.61E-07	4.56E-07	2.1E-07	0	3.3E-07	1.9E-07	0	2E-08	5.357E-07	1	0.00219
481630.59	0.01109	0	1.06E-06	5.67E-07	4.61E-07	2.13E-07	0	3.3E-07	1.9E-07	0	2E-08	5.416E-07	1	0.00222
481730.59	0.01123	0	1.08E-06	5.74E-07	4.67E-07	2.15E-07	0	3.4E-07	1.9E-07	0	2E-08	5.484E-07	1	0.00225
481830.59	0.01137	0	1.09E-06	5.82E-07	4.73E-07	2.18E-07	0	3.4E-07	1.9E-07	0	2.1E-08	5.553E-07	1	0.00227
481930.59	0.01157	0	1.11E-06	5.91E-07	4.81E-07	2.22E-07	0	3.5E-07	2E-07	0	2.1E-08	5.647E-07	1	0.00231
482030.59	0.01173	0	1.13E-06	6E-07	4.88E-07	2.25E-07	0	3.5E-07	2E-07	0	2.1E-08	5.729E-07	1	0.00235
482130.59	0.01185	0	1.14E-06	6.06E-07	4.92E-07	2.27E-07	0	3.6E-07	2E-07	0	2.1E-08	5.783E-07	1	0.00237
482230.59	0.01194	0	1.15E-06	6.11E-07	4.96E-07	2.29E-07	0	3.6E-07	2E-07	0	2.2E-08	5.83E-07	1	0.00239
482330.59	0.01211	0	1.16E-06	6.19E-07	5.03E-07	2.32E-07	0	3.6E-07	2E-07	0	2.2E-08	5.912E-07	1	0.00242
482430.59	0.01231	0	1.18E-06	6.3E-07	5.12E-07	2.36E-07	0	3.7E-07	2.1E-07	0	2.2E-08	6.011E-07	1	0.00246
482530.59	0.01279	0	1.23E-06	6.54E-07	5.31E-07	2.45E-07	0	3.9E-07	2.2E-07	0	2.3E-08	6.244E-07	1	0.00256
483830.59	0.01651	5.72E-06	1.73E-05	9.99E-06	9.06E-06	4.13E-06	2.2E-07	5.4E-06	0	6E-06	9.1E-07	1.254E-05	13	0.0033
483930.59	0.01681	5.82E-06	1.76E-05	1.02E-05	9.22E-06	4.21E-06	2.3E-07	5.5E-06	0	6.1E-06	9.3E-07	1.276E-05	13	0.00336
484030.59	0.01705	5.9E-06	1.78E-05	1.03E-05	9.35E-06	4.27E-06	2.3E-07	5.6E-06	0	6.2E-06	9.4E-07	1.294E-05	13	0.00341
484130.59	0.01757	6.08E-06	1.84E-05	1.06E-05	9.64E-06	4.4E-06	2.4E-07	5.8E-06	0	6.4E-06	9.7E-07	1.334E-05	13	0.00351
484230.59	0.01778	6.15E-06	1.86E-05	1.08E-05	9.75E-06	4.45E-06	2.4E-07	5.8E-06	0	6.4E-06	9.8E-07	1.35E-05	13	0.00356
477930.59	0.00471	1.63E-06	4.92E-06	2.85E-06	2.58E-06	1.18E-06	6.4E-08	1.5E-06	0	1.7E-06	2.6E-07	3.574E-06	4	0.00094
478030.59	0.00489	1.69E-06	5.11E-06	2.96E-06	2.68E-06	1.22E-06	6.7E-08	1.6E-06	0	1.8E-06	2.7E-07	3.713E-06	4	0.00098
478130.59	0.00503	1.74E-06	5.25E-06	3.04E-06	2.76E-06	1.26E-06	6.8E-08	1.7E-06	0	1.8E-06	2.8E-07	3.816E-06	4	0.00101
478230.59	0.00516	1.79E-06	5.4E-06	3.12E-06	2.83E-06	1.29E-06	7E-08	1.7E-06	0	1.9E-06	2.8E-07	3.92E-06	4	0.00103
478330.59	0.0053	1.83E-06	5.54E-06	3.21E-06	2.91E-06	1.33E-06	7.2E-08	1.7E-06	0	1.9E-06	2.9E-07	4.023E-06	4	0.00106
478430.59	0.00565	1.96E-06	5.9E-06	3.42E-06	3.1E-06	1.41E-06	7.7E-08	1.9E-06	0	2E-06	3.1E-07	4.289E-06	4	0.00113
478530.59	0.00584	2.02E-06	6.11E-06	3.54E-06	3.21E-06	1.46E-06	7.9E-08	1.9E-06	0	2.1E-06	3.2E-07	4.436E-06	4	0.00117
478630.59	0.00605	2.1E-06	6.33E-06	3.66E-06	3.32E-06	1.52E-06	8.2E-08	2E-06	0	2.2E-06	3.3E-07	4.596E-06	5	0.00121
478730.59	0.00622	2.15E-06	6.5E-06	3.76E-06	3.41E-06	1.56E-06	8.5E-08	2E-06	0	2.3E-06	3.4E-07	4.723E-06	5	0.00124
478830.59	0.00639	2.21E-06	6.68E-06	3.87E-06	3.5E-06	1.6E-06	8.7E-08	2.1E-06	0	2.3E-06	3.5E-07	4.85E-06	5	0.00128
478930.59	0.00652	2.26E-06	6.82E-06	3.95E-06	3.58E-06	1.63E-06	8.9E-08	2.1E-06	0	2.4E-06	3.6E-07	4.952E-06	5	0.0013
479030.59	0.00663	2.3E-06	6.93E-06	4.01E-06	3.64E-06	1.66E-06	9E-08	2.2E-06	0	2.4E-06	3.7E-07	5.035E-06	5	0.00133
479130.59	0.00679	2.35E-06	7.09E-06	4.11E-06	3.72E-06	1.7E-06	9.2E-08	2.2E-06	0	2.5E-06	3.7E-07	5.152E-06	5	0.00136
479230.59	0.00694	2.4E-06	7.25E-06	4.2E-06	3.8E-06	1.74E-06	9.4E-08	2.3E-06	0	2.5E-06	3.8E-07	5.265E-06	5	0.00139
479330.59	0.00706	2.44E-06	7.38E-06	4.27E-06	3.87E-06	1.77E-06	9.6E-08	2.3E-06	0	2.6E-06	3.9E-07	5.361E-06	5	0.00141
479430.59	0.00725	2.51E-06	7.58E-06	4.39E-06	3.98E-06	1.81E-06	9.9E-08	2.4E-06	0	2.6E-06	4E-07	5.502E-06	6	0.00145
479530.59	0.00743	2.57E-06	7.77E-06	4.5E-06	4.08E-06	1.86E-06	1E-07	2.4E-06	0	2.7E-06	4.1E-07	5.64E-06	6	0.00149
479630.59	0.00758	2.62E-06	7.92E-06	4.59E-06	4.16E-06	1.9E-06	1E-07	2.5E-06	0	2.7E-06	4.2E-07	5.756E-06	6	0.00152
479730.59	0.00778	2.69E-06	8.13E-06	4.71E-06	4.27E-06	1.95E-06	1.1E-07	2.6E-06	0	2.8E-06	4.3E-07	5.907E-06	6	0.00156
479830.59	0.00806	2.79E-06	8.43E-06	4.88E-06	4.42E-06	2.02E-06	1.1E-07	2.6E-06	0	2.9E-06	4.4E-07	6.121E-06	6	0.00161
479930.59	0.0083	2.87E-06	8.68E-06	5.02E-06	4.55E-06	2.08E-06	1.1E-07	2.7E-06	0	3E-06	4.6E-07	6.303E-06	6	0.00166
480030.59	0.00816	2.82E-06	8.52E-06	4.93E-06	4.47E-06	2.04E-06	1.1E-07	2.7E-06	0	3E-06	4.5E-07	6.191E-06	6	0.00163
480130.59	0.00843	0	8.09E-07	4.31E-07	3.5E-07	1.62E-07	0	2.5E-07	1.4E-07	0	1.5E-08	4.118E-07	0	0.00169
480230.59	0.00868	0	8.33E-07	4.44E-07	3.61E-07	1.67E-07	0	2.6E-07	1.5E-07	0	1.6E-08	4.24E-07	0	0.00174
480330.59	0.00883	0	8.47E-07	4.51E-07	3.67E-07	1.69E-07	0	2.7E-07	1.5E-07	0	1.6E-08	4.31E-07	0	0.00177
480430.59	0.00903	0	8.66E-07	4.62E-07	3.75E-07	1.73E-07	0	2.7E-07	1.5E-07	0	1.6E-08	4.408E-07	0	0.00181
480530.59	0.00924	0	8.86E-07	4.72E-07	3.84E-07	1.77E-07	0	2.8E-07	1.6E-07	0	1.7E-08	4.509E-07	0	0.00185
480630.59	0.00936	0	8.97E-07	4.79E-07	3.89E-07	1.79E-07	0	2.8E-07	1.6E-07	0	1.7E-08	4.569E-07	0	0.00187
480730.59	0.00951	0	9.12E-07	4.86E-07	3.95E-07	1.82E-07	0	2.9E-07	1.6E-07	0	1.7E-08	4.641E-07	0	0.0019
480830.59	0.0097	0	9.3E-07	4.96E-07	4.03E-07	1.86E-07	0	2.9E-07	1.6E-07	0	1.8E-08	4.736E-07	0	0.00194
480930.59	0.00986	0	9.45E-07	5.04E-07	4.1E-07	1.89E-07	0	3E-07	1.7E-07	0	1.8E-08	4.813E-07	0	0.00197
481030.59	0.00999	0	9.58E-07	5.11E-07	4.15E-07	1.92E-07	0	3E-07	1.7E-07	0	1.8E-08	4.877E-07	0	0.002
481330.59	0.01035	0	9.93E-07	5.29E-07	4.3E-07	1.99E-07	0	3.1E-07	1.7E-07	0	1.9E-08	5.054E-07	1	0.00207
481430.59	0.01045	0	1E-06	5.34E-07	4.34E-07	2E-07	0	3.1E-07	1.8E-07	0	1.9E-08	5.1E-07	1	0.00209
481530.59	0.01058	0	1.01E-06	5.41E-07	4.4E-07	2.03E-07	0	3.2E-07	1.8E-07	0	1.9E-08	5.168E-07	1	0.00212
481630.59	0.01068	0	1.02E-06	5.46E-07	4.44E-07	2.05E-07	0	3.2E-07	1.8E-07	0	1.9E-08	5.212E-07	1	0.00214
481730.59	0.01084	0	1.04E-06	5.54E-07	4.5E-07	2.08E-07	0	3.3E-07	1.8E-07	0	2E-08	5.29E-07	1	0.00217
481830.59	0.01097	0	1.05E-06	5.61E-07	4.56E-07	2.1E-07	0	3.3E-07	1.9E-07	0	2E-08	5.355E-07	1	0.00219
481930.59	0.01112	0	1.07E-06	5.69E-07	4.62E-07	2.13E-07	0	3.4E-07	1.9E-07	0	2E-08	5.429E-07	1	0.00222
482030.59	0.01128	0	1.08E-06	5.77E-07	4.69E-07	2.16E-07	0	3.4E-07	1.9E-07	0	2E-08	5.506E-07	1	0.00226
482130.59	0.01141	0	1.09E-06	5.84E-07	4.74E-07	2.19E-07	0	3.4E-07	1.9E-07	0	2.1E-08	5.572E-07	1	0.00228
482230.59	0.01153	0	1.11E-06	5.9E-07	4.79E-07	2.21E-07	0	3.5E-07	1.9E-07	0	2.1E-08	5.631E-07	1	0.00231
482330.59	0.01169	0	1.12E-06	5.98E-07	4.86E-07	2.24E-07	0	3.5E-07	2E-07	0	2.1E-08	5.707E-07	1	0.00234
482430.59	0.01188	0	1.14E-06	6.08E-07	4.94E-07	2.28E-07	0	3.6E-07	2E-07	0	2.1E-08	5.802E-07	1	0.00238
482530.59	0.01209	0	1.16E-06	6.18E-07	5.02E-07	2.32E-07	0	3.6E-07	2E-07	0	2.2E-08	5.902E-07	1	0.00242
482630.59	0.01235	4.28E-06	1.29E-05	7.47E-06	6.78E-06	3.09E-06	1.7E-07	4.1E-06	0	4.5E-06	6.8E-07	9.378E-06	9	0.00247
483830.59	0.0161	5.57E-06	1.68E-05	9.74E-06	8.83E-06	4.03E-06	2.2E-07	5.3E-06	0	5.8E-06	8.9E-07	1.222E-05	12	0.00322
483930.59	0.01623	5.62E-06	1.7E-05	9.82E-06	8.9E-06	4.06E-06	2.2E-07	5.3E-06	0	5.9E-06	8.9E-07	1.232E-05	12	0.00325
484030.59	0.01661	5.75E-06	1.74E-05	1E-05	9.11E-06	4.16E-06	2.3E-07	5.5E-06	0	6E-06	9.1E-07	1.261E-05	13	0.00332
484130.59	0.0167	5.78E-06	1.75E-05	1.01E-05	9.16E-06	4.18E-06	2.3E-07	5.5E-06	0	6E-06	9.2E-07	1.268E-05	13	0.00334
485901.79	0.1815	0	2.69E-05	1.43E-05	1.16E-05	5.37E-06	0	0	1.6E-05	3.7E-06	0	1.957E-05	20	0.0363

Multi-Purpose General Cargo

X	ug/m3	Dose Inhalation: 3rd tri	Dose Inhalation: 0<2	Dose Inhalation: 2<9	Dose Inhalation: 2<16	Dose Inhalation: 16<30	Risk (Residential 30-yr; school 9-yr; park 15-year): 3rd tri	Risk: 0<2	Risk: 2<9	Risk: 2<16	Risk: 16<30	Summed Risk	Cases Per Million	Chronic HI
479530.59	2E-03	7E-07	2E-06	1E-06	1E-06	5E-07	3E-08	7E-07	0E+00	7E-07	1E-07	1.5E-06	1.539	0.00041
479630.59	2E-03	7E-07	2E-06	1E-06	1E-06	5E-07	3E-08	7E-07	0E+00	8E-07	1E-07	1.6E-06	1.596	0.00042
481430.59	3E-03	0E+00	3E-07	2E-07	1E-07	6E-08	0E+00	9E-08	5E-08	0E+00	6E-09	1.5E-07	0.150	0.00061
481530.59	3E-03	0E+00	3E-07	2E-07	1E-07	6E-08	0E+00	9E-08	5E-08	0E+00	6E-09	1.5E-07	0.151	0.00062
481630.59	3E-03	0E+00	3E-07	2E-07	1E-07	6E-08	0E+00	9E-08	5E-08	0E+00	6E-09	1.5E-07	0.151	0.00062
481730.59	3E-03	0E+00	3E-07	2E-07	1E-07	6E-08	0E+00	9E-08	5E-08	0E+00	6E-09	1.5E-07	0.151	0.00062
481830.59	3E-03	0E+00	3E-07	2E-07	1E-07	6E-08	0E+00	9E-08	5E-08	0E+00	6E-09	1.5E-07	0.152	0.00062
481930.59	3E-03	0E+00	3E-07	2E-07	1E-07	6E-08	0E+00	9E-08	5E-08	0E+00	6E-09	1.5E-07	0.152	0.00062
482030.59	3E-03	0E+00	3E-07	2E-07	1E-07	6E-08	0E+00	9E-08	5E-08	0E+00	6E-09	1.5E-07	0.152	0.00062
482130.59	3E-03	0E+00	3E-07	2E-07	1E-07	6E-08	0E+00	9E-08	5E-08	0E+00	6E-09	1.5E-07	0.153	0.00063
482230.59	3E-03	0E+00	3E-07	2E-07	1E-07	6E-08	0E+00	9E-08	5E-08	0E+00	6E-09	1.5E-07	0.152	0.00062
482330.59	3E-03	0E+00	3E-07	2E-07	1E-07	6E-08	0E+00	9E-08	5E-08	0E+00	6E-09	1.5E-07	0.152	0.00062
482430.59	3E-03	0E+00	3E-07	2E-07	1E-07	6E-08	0E+00	9E-08	5E-08	0E+00	6E-09	1.5E-07	0.151	0.00062
482530.59	3E-03	0E+00	3E-07	2E-07	1E-07	6E-08	0E+00	9E-08	5E-08	0E+00	6E-09	1.5E-07	0.153	0.00063
483830.59	3E-03	1E-06	3E-06	2E-06	2E-06	8E-07	4E-08	1E-06	0E+00	1E-06	2E-07	2.4E-06	2.398	0.00063
483930.59	3E-03	1E-06	3E-06	2E-06	2E-06	8E-07	4E-08	1E-06	0E+00	1E-06	2E-07	2.4E-06	2.392	0.00063
484030.59	3E-03	1E-06	3E-06	2E-06	2E-06	8E-07	4E-08	1E-06	0E+00	1E-06	2E-07	2.4E-06	2.371	0.00062
484130.59	3E-03	1E-06	3E-06	2E-06	2E-06	8E-07	4E-08	1E-06	0E+00	1E-06	2E-07	2.4E-06	2.369	0.00062
484230.59	3E-03	1E-06	3E-06	2E-06	2E-06	8E-07	4E-08	1E-06	0E+00	1E-06	2E-07	2.3E-06	2.293	0.0006
477930.59	9E-04	3E-07	1E-06	6E-07	5E-07	2E-07	1E-08	3E-07	0E+00	3E-07	5E-08	7.2E-07	0.718	0.00019
478030.59	1E-03	3E-07	1E-06	6E-07	6E-07	3E-07	1E-08	3E-07	0E+00	4E-07	6E-08	7.6E-07	0.763	0.0002
478130.59	1E-03	4E-07	1E-06	6E-07	6E-07	3E-07	1E-08	3E-07	0E+00	4E-07	6E-08	8.0E-07	0.797	0.00021
478230.59	1E-03	4E-07	1E-06	7E-07	6E-07	3E-07	1E-08	4E-07	0E+00	4E-07	6E-08	8.3E-07	0.831	0.00022
478330.59	1E-03	4E-07	1E-06	7E-07	6E-07	3E-07	2E-08	4E-07	0E+00	4E-07	6E-08	8.7E-07	0.868	0.00023
478430.59	1E-03	4E-07	1E-06	8E-07	7E-07	3E-07	2E-08	4E-07	0E+00	5E-07	7E-08	9.4E-07	0.944	0.00025
478530.59	1E-03	5E-07	1E-06	8E-07	7E-07	3E-07	2E-08	4E-07	0E+00	5E-07	7E-08	9.9E-07	0.994	0.00026
478630.59	1E-03	5E-07	1E-06	8E-07	8E-07	3E-07	2E-08	5E-07	0E+00	5E-07	8E-08	1.1E-06	1.052	0.00028
478730.59	1E-03	5E-07	2E-06	9E-07	8E-07	4E-07	2E-08	5E-07	0E+00	5E-07	8E-08	1.1E-06	1.100	0.00029
478830.59	2E-03	5E-07	2E-06	9E-07	8E-07	4E-07	2E-08	5E-07	0E+00	5E-07	8E-08	1.1E-06	1.147	0.0003
478930.59	2E-03	5E-07	2E-06	9E-07	9E-07	4E-07	2E-08	5E-07	0E+00	6E-07	9E-08	1.2E-06	1.191	0.00031
479030.59	2E-03	6E-07	2E-06	1E-06	9E-07	4E-07	2E-08	5E-07	0E+00	6E-07	9E-08	1.2E-06	1.225	0.00032
479130.59	2E-03	6E-07	2E-06	1E-06	9E-07	4E-07	2E-08	5E-07	0E+00	6E-07	9E-08	1.3E-06	1.268	0.00033
479230.59	2E-03	6E-07	2E-06	1E-06	9E-07	4E-07	2E-08	6E-07	0E+00	6E-07	1E-07	1.3E-06	1.313	0.00035
479330.59	2E-03	6E-07	2E-06	1E-06	1E-06	4E-07	2E-08	6E-07	0E+00	6E-07	1E-07	1.3E-06	1.348	0.00036
479430.59	2E-03	6E-07	2E-06	1E-06	1E-06	5E-07	3E-08	6E-07	0E+00	7E-07	1E-07	1.4E-06	1.408	0.00037
479530.59	2E-03	7E-07	2E-06	1E-06	1E-06	5E-07	3E-08	6E-07	0E+00	7E-07	1E-07	1.5E-06	1.457	0.00038
479630.59	2E-03	7E-07	2E-06	1E-06	1E-06	5E-07	3E-08	7E-07	0E+00	7E-07	1E-07	1.5E-06	1.505	0.0004
479730.59	2E-03	7E-07	2E-06	1E-06	1E-06	5E-07	3E-08	7E-07	0E+00	7E-07	1E-07	1.6E-06	1.560	0.00041
479830.59	2E-03	7E-07	2E-06	1E-06	1E-06	5E-07	3E-08	7E-07	0E+00	8E-07	1E-07	1.6E-06	1.630	0.00043
479930.59	2E-03	8E-07	2E-06	1E-06	1E-06	6E-07	3E-08	7E-07	0E+00	8E-07	1E-07	1.7E-06	1.697	0.00045
480030.59	2E-03	8E-07	2E-06	1E-06	1E-06	6E-07	3E-08	7E-07	0E+00	8E-07	1E-07	1.7E-06	1.681	0.00044
480130.59	2E-03	0E+00	2E-07	1E-07	1E-07	4E-08	0E+00	7E-08	4E-08	0E+00	4E-09	1.1E-07	0.113	0.00046
480230.59	2E-03	0E+00	2E-07	1E-07	1E-07	5E-08	0E+00	7E-08	4E-08	0E+00	4E-09	1.2E-07	0.117	0.00048
480330.59	2E-03	0E+00	2E-07	1E-07	1E-07	5E-08	0E+00	7E-08	4E-08	0E+00	4E-09	1.2E-07	0.119	0.00049
480430.59	3E-03	0E+00	2E-07	1E-07	1E-07	5E-08	0E+00	8E-08	4E-08	0E+00	5E-09	1.2E-07	0.123	0.0005
480530.59	3E-03	0E+00	2E-07	1E-07	1E-07	5E-08	0E+00	8E-08	4E-08	0E+00	5E-09	1.3E-07	0.126	0.00051
480630.59	3E-03	0E+00	3E-07	1E-07	1E-07	5E-08	0E+00	8E-08	4E-08	0E+00	5E-09	1.3E-07	0.128	0.00052
480730.59	3E-03	0E+00	3E-07	1E-07	1E-07	5E-08	0E+00	8E-08	5E-08	0E+00	5E-09	1.3E-07	0.130	0.00053
480830.59	3E-03	0E+00	3E-07	1E-07	1E-07	5E-08	0E+00	8E-08	5E-08	0E+00	5E-09	1.3E-07	0.133	0.00055
480930.59	3E-03	0E+00	3E-07	1E-07	1E-07	5E-08	0E+00	8E-08	5E-08	0E+00	5E-09	1.4E-07	0.135	0.00055
481030.59	3E-03	0E+00	3E-07	1E-07	1E-07	5E-08	0E+00	8E-08	5E-08	0E+00	5E-09	1.4E-07	0.137	0.00056
481330.59	3E-03	0E+00	3E-07	1E-07	1E-07	6E-08	0E+00	9E-08	5E-08	0E+00	5E-09	1.4E-07	0.141	0.00058
481430.59	3E-03	0E+00	3E-07	1E-07	1E-07	6E-08	0E+00	9E-08	5E-08	0E+00	5E-09	1.4E-07	0.142	0.00058
481530.59	3E-03	0E+00	3E-07	1E-07	1E-07	6E-08	0E+00	9E-08	5E-08	0E+00	5E-09	1.4E-07	0.143	0.00059
481630.59	3E-03	0E+00	3E-07	2E-07	1E-07	6E-08	0E+00	9E-08	5E-08	0E+00	5E-09	1.4E-07	0.143	0.00059
481730.59	3E-03	0E+00	3E-07	2E-07	1E-07	6E-08	0E+00	9E-08	5E-08	0E+00	5E-09	1.4E-07	0.144	0.00059
481830.59	3E-03	0E+00	3E-07	2E-07	1E-07	6E-08	0E+00	9E-08	5E-08	0E+00	5E-09	1.4E-07	0.145	0.00059
481930.59	3E-03	0E+00	3E-07	2E-07	1E-07	6E-08	0E+00	9E-08	5E-08	0E+00	5E-09	1.4E-07	0.145	0.00059
482030.59	3E-03	0E+00	3E-07	2E-07	1E-07	6E-08	0E+00	9E-08	5E-08	0E+00	5E-09	1.5E-07	0.145	0.0006
482130.59	3E-03	0E+00	3E-07	2E-07	1E-07	6E-08	0E+00	9E-08	5E-08	0E+00	5E-09	1.5E-07	0.145	0.0006
482230.59	3E-03	0E+00	3E-07	2E-07	1E-07	6E-08	0E+00	9E-08	5E-08	0E+00	5E-09	1.5E-07	0.145	0.0006
482330.59	3E-03	0E+00	3E-07	2E-07	1E-07	6E-08	0E+00	9E-08	5E-08	0E+00	5E-09	1.5E-07	0.145	0.0006
482430.59	3E-03	0E+00	3E-07	2E-07	1E-07	6E-08	0E+00	9E-08	5E-08	0E+00	5E-09	1.5E-07	0.145	0.0006
482530.59	3E-03	0E+00	3E-07	2E-07	1E-07	6E-08	0E+00	9E-08	5E-08	0E+00	5E-09	1.5E-07	0.145	0.0006
482630.59	3E-03	1E-06	3E-06	2E-06	2E-06	7E-07	4E-08	1E-06	0E+00	1E-06	2E-07	2.3E-06	2.264	0.0006
483830.59	3E-03	1E-06	3E-06	2E-06	2E-06	8E-07	4E-08	1E-06	0E+00	1E-06	2E-07	2.3E-06	2.332	0.00061
483930.59	3E-03	1E-06	3E-06	2E-06	2E-06	8E-07	4E-08	1E-06	0E+00	1E-06	2E-07	2.3E-06	2.312	0.00061
484030.59	3E-03	1E-06	3E-06	2E-06	2E-06	8E-07	4E-08	1E-06	0E+00	1E-06	2E-07	2.3E-06	2.304	0.00061
484130.59	3E-03	1E-06	3E-06	2E-06	2E-06	7E-07	4E-08	1E-06	0E+00	1E-06	2E-07	2.2E-06	2.234	0.00059
485901.79	5E-02	0E+00	8E-06	4E-06	3E-06	2E-06	0E+00	0E+00	5E-06	1E-06	0E+00	5.9E-06	5.874	0.0109

Dry Bulk

X	ug/m3	Dose Inhalation: 3rd tri	Dose Inhalation: 0<2	Dose Inhalation: 2<9	Dose Inhalation: 2<16	Dose Inhalation: 16<30	Risk (Residential 30-yr; school 9-yr; park 15-year): 3rd tri	Risk: 0<2	Risk: 2<9	Risk: 2<16	Risk: 16<30	Summed Risk	Cases Per Million	Chronic HI
479530.59	2E-03	8E-07	2E-06	1E-06	1E-06	6E-07	3E-08	7E-07	0E+00	8E-07	1E-07	1.7E-06	1.706	0.00045
479630.59	2E-03	8E-07	2E-06	1E-06	1E-06	6E-07	3E-08	8E-07	0E+00	8E-07	1E-07	1.8E-06	1.764	0.00046
481430.59	3E-03	0E+00	3E-07	2E-07	1E-07	6E-08	0E+00	1E-07	6E-08	0E+00	6E-09	1.6E-07	0.163	0.00067
481530.59	3E-03	0E+00	3E-07	2E-07	1E-07	6E-08	0E+00	1E-07	6E-08	0E+00	6E-09	1.6E-07	0.164	0.00067
481630.59	3E-03	0E+00	3E-07	2E-07	1E-07	6E-08	0E+00	1E-07	6E-08	0E+00	6E-09	1.6E-07	0.165	0.00067
481730.59	3E-03	0E+00	3E-07	2E-07	1E-07	6E-08	0E+00	1E-07	6E-08	0E+00	6E-09	1.7E-07	0.165	0.00068
481830.59	3E-03	0E+00	3E-07	2E-07	1E-07	7E-08	0E+00	1E-07	6E-08	0E+00	6E-09	1.7E-07	0.166	0.00068
481930.59	3E-03	0E+00	3E-07	2E-07	1E-07	7E-08	0E+00	1E-07	6E-08	0E+00	6E-09	1.7E-07	0.167	0.00068
482030.59	3E-03	0E+00	3E-07	2E-07	1E-07	7E-08	0E+00	1E-07	6E-08	0E+00	6E-09	1.7E-07	0.167	0.00068
482130.59	3E-03	0E+00	3E-07	2E-07	1E-07	7E-08	0E+00	1E-07	6E-08	0E+00	6E-09	1.7E-07	0.167	0.00069
482230.59	3E-03	0E+00	3E-07	2E-07	1E-07	7E-08	0E+00	1E-07	6E-08	0E+00	6E-09	1.7E-07	0.167	0.00068
482330.59	3E-03	0E+00	3E-07	2E-07	1E-07	7E-08	0E+00	1E-07	6E-08	0E+00	6E-09	1.7E-07	0.167	0.00069
482430.59	3E-03	0E+00	3E-07	2E-07	1E-07	7E-08	0E+00	1E-07	6E-08	0E+00	6E-09	1.7E-07	0.168	0.00069
482530.59	3E-03	0E+00	3E-07	2E-07	1E-07	7E-08	0E+00	1E-07	6E-08	0E+00	6E-09	1.7E-07	0.170	0.0007
483830.59	4E-03	1E-06	4E-06	2E-06	2E-06	9E-07	5E-08	1E-06	0E+00	1E-06	2E-07	2.8E-06	2.831	0.00075
483930.59	4E-03	1E-06	4E-06	2E-06	2E-06	9E-07	5E-08	1E-06	0E+00	1E-06	2E-07	2.8E-06	2.839	0.00075
484030.59	4E-03	1E-06	4E-06	2E-06	2E-06	9E-07	5E-08	1E-06	0E+00	1E-06	2E-07	2.8E-06	2.824	0.00074
484130.59	4E-03	1E-06	4E-06	2E-06	2E-06	9E-07	5E-08	1E-06	0E+00	1E-06	2E-07	2.8E-06	2.833	0.00075
484230.59	4E-03	1E-06	4E-06	2E-06	2E-06	9E-07	5E-08	1E-06	0E+00	1E-06	2E-07	2.7E-06	2.747	0.00072
477930.59	1E-03	4E-07	1E-06	7E-07	6E-07	3E-07	2E-08	4E-07	0E+00	4E-07	6E-08	8.4E-07	0.839	0.00022
478030.59	1E-03	4E-07	1E-06	7E-07	6E-07	3E-07	2E-08	4E-07	0E+00	4E-07	6E-08	8.9E-07	0.888	0.00023
478130.59	1E-03	4E-07	1E-06	7E-07	7E-07	3E-07	2E-08	4E-07	0E+00	4E-07	7E-08	9.2E-07	0.924	0.00024
478230.59	1E-03	4E-07	1E-06	8E-07	7E-07	3E-07	2E-08	4E-07	0E+00	5E-07	7E-08	9.6E-07	0.961	0.00025
478330.59	1E-03	5E-07	1E-06	8E-07	7E-07	3E-07	2E-08	4E-07	0E+00	5E-07	7E-08	1.0E-06	1.000	0.00026
478430.59	1E-03	5E-07	1E-06	9E-07	8E-07	4E-07	2E-08	5E-07	0E+00	5E-07	8E-08	1.1E-06	1.083	0.00029
478530.59	1E-03	5E-07	2E-06	9E-07	8E-07	4E-07	2E-08	5E-07	0E+00	5E-07	8E-08	1.1E-06	1.134	0.0003
478630.59	2E-03	5E-07	2E-06	1E-06	9E-07	4E-07	2E-08	5E-07	0E+00	6E-07	9E-08	1.2E-06	1.192	0.00031
478730.59	2E-03	6E-07	2E-06	1E-06	9E-07	4E-07	2E-08	5E-07	0E+00	6E-07	9E-08	1.2E-06	1.243	0.00033
478830.59	2E-03	6E-07	2E-06	1E-06	9E-07	4E-07	2E-08	6E-07	0E+00	6E-07	9E-08	1.3E-06	1.298	0.00034
478930.59	2E-03	6E-07	2E-06	1E-06	1E-06	4E-07	2E-08	6E-07	0E+00	6E-07	1E-07	1.3E-06	1.342	0.00035
479030.59	2E-03	6E-07	2E-06	1E-06	1E-06	5E-07	2E-08	6E-07	0E+00	7E-07	1E-07	1.4E-06	1.378	0.00036
479130.59	2E-03	6E-07	2E-06	1E-06	1E-06	5E-07	3E-08	6E-07	0E+00	7E-07	1E-07	1.4E-06	1.421	0.00037
479230.59	2E-03	7E-07	2E-06	1E-06	1E-06	5E-07	3E-08	6E-07	0E+00	7E-07	1E-07	1.5E-06	1.469	0.00039
479330.59	2E-03	7E-07	2E-06	1E-06	1E-06	5E-07	3E-08	7E-07	0E+00	7E-07	1E-07	1.5E-06	1.507	0.0004
479430.59	2E-03	7E-07	2E-06	1E-06	1E-06	5E-07	3E-08	7E-07	0E+00	7E-07	1E-07	1.6E-06	1.567	0.00041
479530.59	2E-03	7E-07	2E-06	1E-06	1E-06	5E-07	3E-08	7E-07	0E+00	8E-07	1E-07	1.6E-06	1.621	0.00043
479630.59	2E-03	8E-07	2E-06	1E-06	1E-06	5E-07	3E-08	7E-07	0E+00	8E-07	1E-07	1.7E-06	1.667	0.00044
479730.59	2E-03	8E-07	2E-06	1E-06	1E-06	6E-07	3E-08	7E-07	0E+00	8E-07	1E-07	1.7E-06	1.726	0.00045
479830.59	2E-03	8E-07	2E-06	1E-06	1E-06	6E-07	3E-08	8E-07	0E+00	9E-07	1E-07	1.8E-06	1.800	0.00047
479930.59	2E-03	9E-07	3E-06	1E-06	1E-06	6E-07	3E-08	8E-07	0E+00	9E-07	1E-07	1.9E-06	1.869	0.00049
480030.59	2E-03	8E-07	3E-06	1E-06	1E-06	6E-07	3E-08	8E-07	0E+00	9E-07	1E-07	1.8E-06	1.850	0.00049
480130.59	3E-03	0E+00	2E-07	1E-07	1E-07	5E-08	0E+00	8E-08	4E-08	0E+00	5E-09	1.2E-07	0.124	0.00051
480230.59	3E-03	0E+00	3E-07	1E-07	1E-07	5E-08	0E+00	8E-08	4E-08	0E+00	5E-09	1.3E-07	0.128	0.00052
480330.59	3E-03	0E+00	3E-07	1E-07	1E-07	5E-08	0E+00	8E-08	5E-08	0E+00	5E-09	1.3E-07	0.131	0.00054
480430.59	3E-03	0E+00	3E-07	1E-07	1E-07	5E-08	0E+00	8E-08	5E-08	0E+00	5E-09	1.3E-07	0.134	0.00055
480530.59	3E-03	0E+00	3E-07	1E-07	1E-07	5E-08	0E+00	8E-08	5E-08	0E+00	5E-09	1.4E-07	0.137	0.00056
480630.59	3E-03	0E+00	3E-07	1E-07	1E-07	5E-08	0E+00	9E-08	5E-08	0E+00	5E-09	1.4E-07	0.140	0.00057
480730.59	3E-03	0E+00	3E-07	1E-07	1E-07	6E-08	0E+00	9E-08	5E-08	0E+00	5E-09	1.4E-07	0.143	0.00058
480830.59	3E-03	0E+00	3E-07	2E-07	1E-07	6E-08	0E+00	9E-08	5E-08	0E+00	5E-09	1.5E-07	0.145	0.0006
480930.59	3E-03	0E+00	3E-07	2E-07	1E-07	6E-08	0E+00	9E-08	5E-08	0E+00	5E-09	1.5E-07	0.148	0.00061
481030.59	3E-03	0E+00	3E-07	2E-07	1E-07	6E-08	0E+00	9E-08	5E-08	0E+00	6E-09	1.5E-07	0.150	0.00061
481330.59	3E-03	0E+00	3E-07	2E-07	1E-07	6E-08	0E+00	1E-07	5E-08	0E+00	6E-09	1.5E-07	0.154	0.00063
481430.59	3E-03	0E+00	3E-07	2E-07	1E-07	6E-08	0E+00	1E-07	5E-08	0E+00	6E-09	1.6E-07	0.155	0.00064
481530.59	3E-03	0E+00	3E-07	2E-07	1E-07	6E-08	0E+00	1E-07	5E-08	0E+00	6E-09	1.6E-07	0.156	0.00064
481630.59	3E-03	0E+00	3E-07	2E-07	1E-07	6E-08	0E+00	1E-07	5E-08	0E+00	6E-09	1.6E-07	0.157	0.00064
481730.59	3E-03	0E+00	3E-07	2E-07	1E-07	6E-08	0E+00	1E-07	5E-08	0E+00	6E-09	1.6E-07	0.158	0.00065
481830.59	3E-03	0E+00	3E-07	2E-07	1E-07	6E-08	0E+00	1E-07	5E-08	0E+00	6E-09	1.6E-07	0.158	0.00065
481930.59	3E-03	0E+00	3E-07	2E-07	1E-07	6E-08	0E+00	1E-07	5E-08	0E+00	6E-09	1.6E-07	0.159	0.00065
482030.59	3E-03	0E+00	3E-07	2E-07	1E-07	6E-08	0E+00	1E-07	6E-08	0E+00	6E-09	1.6E-07	0.159	0.00065
482130.59	3E-03	0E+00	3E-07	2E-07	1E-07	6E-08	0E+00	1E-07	6E-08	0E+00	6E-09	1.6E-07	0.160	0.00066
482230.59	3E-03	0E+00	3E-07	2E-07	1E-07	6E-08	0E+00	1E-07	6E-08	0E+00	6E-09	1.6E-07	0.160	0.00066
482330.59	3E-03	0E+00	3E-07	2E-07	1E-07	6E-08	0E+00	1E-07	6E-08	0E+00	6E-09	1.6E-07	0.161	0.00066
482430.59	3E-03	0E+00	3E-07	2E-07	1E-07	6E-08	0E+00	1E-07	6E-08	0E+00	6E-09	1.6E-07	0.161	0.00066
482530.59	3E-03	0E+00	3E-07	2E-07	1E-07	6E-08	0E+00	1E-07	6E-08	0E+00	6E-09	1.6E-07	0.161	0.00066
482630.59	3E-03	1E-06	3E-06	2E-06	2E-06	8E-07	5E-08	1E-06	0E+00	1E-06	2E-07	2.5E-06	2.521	0.00066
483830.59	4E-03	1E-06	4E-06	2E-06	2E-06	9E-07	5E-08	1E-06	0E+00	1E-06	2E-07	2.8E-06	2.757	0.00073
483930.59	4E-03	1E-06	4E-06	2E-06	2E-06	9E-07	5E-08	1E-06	0E+00	1E-06	2E-07	2.7E-06	2.741	0.00072
484030.59	4E-03	1E-06	4E-06	2E-06	2E-06	9E-07	5E-08	1E-06	0E+00	1E-06	2E-07	2.7E-06	2.745	0.00072
484130.59	4E-03	1E-06	4E-06	2E-06	2E-06	9E-07	5E-08	1E-06	0E+00	1E-06	2E-07	2.7E-06	2.668	0.0007
485901.79	1E-01	0E+00	2E-05	8E-06	7E-06	3E-06	0E+00	0E+00	9E-06	2E-06	0E+00	1.1E-05	10.988	0.02039

TAMT Risk Assessment - DPM Cancer and Chronic HI

AERMOD UNITIZED CONCENTRATIONS

DPM SCALED CONCENTRATIONS

AERMOD Output

Source Group in AERMOD

divide by -->

g/s -->

Discrete Receptor ID (Group Name)	X	Y	B10_1_AUX	B10_2_AUX	B10_3_AUX	B10_4_AUX	B10_5_AUX	B10_6_AUX	B10_7_AUX	B10_8_AUX	CHE_1	LOC_SWTCH EMP	LOC_SWTCH LOA	OGV_PATH BLR	OGV_PATH _DPM	TR_28TH	TR_BAYMA R	TR_BOSTON	TR_CROSBY	TR_HARBOR CHA	TR_HARBOR SAM	TUG_PATH _DPM	B10_1_AUX	B10_2_AUX	B10_3_AUX	B10_4_AUX	B10_5_AUX	B10_6_AUX	B10_7_AUX	B10_8_AUX	CHE_1	LOC_SWTCHE MP	LOC_SWTCHL OA	OGV_PATH_ DPM	TR_28TH	TR_BAYMA R	TR_BOSTON	TR_CROSBY	TR_HARBOR CHA	TR_HARBOR SAM	TUG_PATH_D PM	SUM
[illegible]																																										

Vessel Hoteling | Vessel Transit | Tug/Barge Transit | Terminal E

Refrigerated Containersfully_mitigated | Multi-Purpose General Cargofully_mitigated | Dry Bulkfully_mitigated

TAMT Risk Assessment - DPM Cancer and Chronic HI

AERMOD UNITIZED CONCENTRATIONS

DPM SCALED CONCENTRATIONS

AERMOD Output — Source Group in AERMOD — divide by --> (Refrigerated Containersfully_mitigated: 4; g/s --> 1.1E-02)

	Discrete Receptor ID (Group Name)	X	Y	B10_1_AUX (1)	B10_2_AUX (3)	B10_3_AUX (5)	B10_4_AUX (7)	B10_5_AUX (9)	B10_6_AUX (11)	B10_7_AUX (13)	B10_8_AUX (15)	CHE_1 (17)	LOC_SWTCH EMP (18)	LOC_SWTCH LOA (19)	OGV_PATH_BLR (20)	OGV_PATH_DPM (21)	TR_28TH (22)	TR_BAYMAR (23)	TR_BOSTON (24)	TR_CROSBY (25)	TR_HARBOR CHA (26)	TR_HARBOR SAM (27)	TUG_PATH_DPM (28)	B10_1_AUX (scaled, 1)
residential	REC_100M	485230.59	3615725.04	2.0E-01	1.9E-01	2.1E-01	2.3E-01	2.6E-01	2.9E-01	2.9E-01	2.9E-01	2.3E+05	3.1E-01	3.4E-01	8.5E-02	8.5E-02	6.1E-01	2.9E-02	5.7E-01	9.7E-01	6.6E-01	8.6E-01	9.0E-02	2.2E-03
residential	REC_100M	485330.59	3615725.04	1.9E-01	1.8E-01	2.1E-01	2.3E-01	2.5E-01	2.8E-01	2.9E-01	2.9E-01	2.1E+05	3.1E-01	3.4E-01	8.3E-02	8.3E-02	6.5E-01	3.0E-02	6.1E-01	9.6E-01	6.4E-01	9.0E-01	8.8E-02	2.1E-03
residential	REC_100M	485230.59	3615825.04	2.0E-01	1.9E-01	2.2E-01	2.4E-01	2.7E-01	3.1E-01	3.1E-01	3.0E-01	2.4E+05	3.4E-01	3.7E-01	8.8E-02	8.8E-02	6.2E-01	2.8E-02	5.8E-01	1.0E+00	7.1E-01	9.0E-01	9.5E-02	2.3E-03
residential	REC_100M	489130.59	3615925.04	7.4E-02	7.6E-02	8.3E-02	8.8E-02	9.6E-02	1.0E-01	1.0E-01	1.0E-01	5.2E+04	9.2E-02	9.9E-02	4.1E-02	4.1E-02	3.3E-01	1.6E-01	3.3E-01	1.7E-01	1.3E-01	2.5E-01	3.9E-02	8.4E-04
residential	REC_100M	489030.59	3616025.04	7.9E-02	8.0E-02	8.8E-02	9.4E-02	1.0E-01	1.1E-01	1.1E-01	1.1E-01	5.6E+04	9.8E-02	1.1E-01	4.3E-02	4.3E-02	3.7E-01	1.4E-01	3.8E-01	1.8E-01	1.4E-01	2.9E-01	4.1E-02	8.8E-04
residential	REC_100M	489130.59	3616025.04	7.8E-02	8.0E-02	8.7E-02	9.3E-02	1.0E-01	1.1E-01	1.1E-01	1.1E-01	5.5E+04	9.5E-02	1.0E-01	4.3E-02	4.3E-02	3.6E-01	1.5E-01	3.6E-01	1.8E-01	1.4E-01	2.9E-01	4.0E-02	8.8E-04
residential	REC_100M	488930.59	3616125.04	8.3E-02	8.5E-02	9.3E-02	9.9E-02	1.1E-01	1.2E-01	1.2E-01	1.2E-01	6.0E+04	1.0E-01	1.1E-01	4.5E-02	4.5E-02	4.3E-01	1.2E-01	4.3E-01	2.0E-01	1.6E-01	3.4E-01	4.3E-02	9.4E-04
residential	REC_100M	489030.59	3616125.04	8.2E-02	8.4E-02	9.2E-02	9.8E-02	1.1E-01	1.2E-01	1.2E-01	1.2E-01	5.9E+04	1.0E-01	1.1E-01	4.4E-02	4.4E-02	4.1E-01	1.3E-01	4.1E-01	2.0E-01	1.5E-01	3.4E-01	4.2E-02	9.3E-04
residential	REC_100M	489130.59	3616125.04	8.2E-02	8.3E-02	9.1E-02	9.7E-02	1.1E-01	1.1E-01	1.2E-01	1.2E-01	5.8E+04	9.9E-02	1.1E-01	4.4E-02	4.4E-02	4.0E-01	1.5E-01	4.0E-01	2.0E-01	1.5E-01	3.3E-01	4.2E-02	9.2E-04
residential	REC_100M	488730.59	3616225.04	8.9E-02	9.1E-02	1.0E-01	1.1E-01	1.2E-01	1.3E-01	1.3E-01	1.3E-01	6.6E+04	1.2E-01	1.3E-01	4.7E-02	4.7E-02	5.1E-01	1.0E-01	5.2E-01	2.3E-01	1.7E-01	3.9E-01	4.5E-02	1.0E-03
residential	REC_100M	488830.59	3616225.04	8.8E-02	9.0E-02	9.9E-02	1.1E-01	1.2E-01	1.3E-01	1.3E-01	1.3E-01	6.5E+04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
residential	REC_100M	488930.59	3616225.04	8.7E-02	8.9E-02	9.8E-02	1.0E-01	1.1E-01	1.2E-01	1.3E-01	1.3E-01	6.3E+04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
residential	REC_100M	489030.59	3616225.04	8.6E-02	8.8E-02	9.6E-02	1.0E-01	1.1E-01	1.2E-01	1.2E-01	1.2E-01	6.2E+04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
residential	REC_100M	489130.59	3616225.04	8.6E-02	8.7E-02	9.5E-02	1.0E-01	1.1E-01	1.2E-01	1.2E-01	1.2E-01	6.1E+04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
residential	REC_100M	488630.59	3616325.04	9.5E-02	9.7E-02	1.1E-01	1.1E-01	1.3E-01	1.4E-01	1.4E-01	1.4E-01	7.1E+04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
residential	REC_100M	488730.59	3616325.04	9.4E-02	9.5E-02	1.1E-01	1.1E-01	1.2E-01	1.4E-01	1.4E-01	1.4E-01	7.0E+04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
residential	REC_100M	488830.59	3616325.04	9.3E-02	9.4E-02	1.0E-01	1.1E-01	1.2E-01	1.3E-01	1.3E-01	1.3E-01	6.9E+04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
residential	REC_100M	488930.59	3616325.04	9.2E-02	9.3E-02	1.0E-01	1.1E-01	1.2E-01	1.3E-01	1.3E-01	1.3E-01	6.7E+04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
residential	REC_100M	489030.59	3616325.04	9.1E-02	9.2E-02	1.0E-01	1.1E-01	1.2E-01	1.3E-01	1.3E-01	1.3E-01	6.7E+04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
residential	REC_100M	489130.59	3616325.04	8.9E-02	9.0E-02	9.9E-02	1.1E-01	1.1E-01	1.2E-01	1.3E-01	1.3E-01	6.6E+04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
residential	REC_100M	488530.59	3616425.04	1.0E-01	1.0E-01	1.1E-01	1.2E-01	1.3E-01	1.5E-01	1.5E-01	1.5E-01	7.7E+04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

TAMT Risk Assessment - DPM Cancer and Chronic HI

AERMOD Output

AERMOD UNITIZED CONCENTRATIONS

Source Group in AERMOD

	Discrete Receptor ID (Group Name)	X	Y	B10_1_AUX	B10_2_AUX	B10_3_AUX	B10_4_AUX	B10_5_AUX	B10_6_AUX	B10_7_AUX	B10_8_AUX	CHE_1	LOC_SWTCH EMP
				1	3	5	7	9	11	13	15	17	18
residential	REC_100M	483430.59	3617525.04	2.5E-01	2.9E-01	2.5E-01	2.2E-01	1.9E-01	1.6E-01	1.5E-01	1.5E-01	2.5E+05	3.0E-01
residential	REC_100M	483530.59	3617525.04	2.7E-01	3.0E-01	2.6E-01	2.4E-01	2.0E-01	1.7E-01	1.6E-01	1.5E-01	2.8E+05	3.3E-01
residential	REC_100M	483630.59	3617525.04	2.8E-01	3.2E-01	2.8E-01	2.5E-01	2.1E-01	1.8E-01	1.7E-01	1.7E-01	3.1E+05	3.5E-01
residential	REC_100M	483730.59	3617525.04	3.0E-01	3.4E-01	3.0E-01	2.7E-01	2.3E-01	1.9E-01	1.8E-01	1.7E-01	3.5E+05	3.9E-01
residential	REC_100M	483830.59	3617525.04	3.2E-01	3.6E-01	3.2E-01	2.9E-01	2.4E-01	2.0E-01	1.9E-01	1.9E-01	3.9E+05	4.2E-01
residential	REC_100M	483930.59	3617525.04	3.3E-01	3.7E-01	3.4E-01	3.1E-01	2.6E-01	2.1E-01	2.1E-01	2.0E-01	4.5E+05	4.6E-01
residential	REC_100M	484030.59	3617525.04	3.6E-01	4.0E-01	3.6E-01	3.3E-01	2.8E-01	2.3E-01	2.2E-01	2.1E-01	5.1E+05	4.9E-01
residential	REC_100M	484130.59	3617525.04	3.8E-01	4.1E-01	3.8E-01	3.5E-01	3.0E-01	2.5E-01	2.4E-01	2.3E-01	5.8E+05	5.3E-01
residential	REC_100M	484230.59	3617525.04	4.0E-01	4.2E-01	4.0E-01	3.7E-01	3.2E-01	2.7E-01	2.6E-01	2.5E-01	6.7E+05	5.7E-01
residential	REC_100M	484330.59	3617525.04	4.1E-01	4.3E-01	4.1E-01	3.8E-01	3.4E-01	2.8E-01	2.7E-01	2.6E-01	7.8E+05	6.3E-01
residential	REC_100M	484430.59	3617525.04	4.2E-01	4.2E-01	4.1E-01	3.9E-01	3.5E-01	3.0E-01	2.9E-01	2.8E-01	9.3E+05	7.1E-01
residential	REC_100M	486730.59	3617525.04	2.6E-01	2.7E-01	3.1E-01	3.4E-01	3.8E-01	4.2E-01	4.5E-01	4.9E-01	4.4E+05	8.3E-01
residential	REC_100M	486830.59	3617525.04	2.6E-01	2.6E-01	3.0E-01	3.3E-01	3.6E-01	3.9E-01	4.2E-01	4.6E-01	4.0E+05	7.7E-01
residential	REC_100M	486930.59	3617525.04	2.5E-01	2.5E-01	2.8E-01	3.1E-01	3.4E-01	3.6E-01	3.9E-01	4.3E-01	3.7E+05	7.1E-01
residential	REC_100M	487030.59	3617525.04	2.4E-01	2.4E-01	2.7E-01	2.9E-01	3.2E-01	3.4E-01	3.7E-01	4.0E-01	3.4E+05	6.7E-01
residential	REC_100M	487130.59	3617525.04	2.4E-01	2.3E-01	2.6E-01	2.8E-01	3.0E-01	3.2E-01	3.4E-01	3.7E-01	3.1E+05	6.3E-01
residential	REC_100M	487230.59	3617525.04	2.3E-01	2.2E-01	2.5E-01	2.6E-01	2.8E-01	3.0E-01	3.2E-01	3.5E-01	2.9E+05	5.9E-01
residential	REC_100M	487630.59	3617525.04	2.0E-01	1.9E-01	2.1E-01	2.2E-01	2.3E-01	2.4E-01	2.6E-01	2.8E-01	2.2E+05	4.7E-01
residential	REC_100M	487730.59	3617525.04	1.9E-01	1.8E-01	2.0E-01	2.1E-01	2.2E-01	2.3E-01	2.4E-01	2.6E-01	2.0E+05	4.4E-01
residential	REC_100M	487830.59	3617525.04	1.9E-01	1.7E-01	1.9E-01	2.0E-01	2.1E-01	2.2E-01	2.3E-01	2.5E-01	1.9E+05	4.1E-01
residential	REC_100M	487930.59	3617525.04	1.8E-01	1.7E-01	1.8E-01	1.9E-01	2.0E-01	2.1E-01	2.2E-01	2.4E-01	1.8E+05	3.9E-01
residential	REC_100M	488030.59	3617525.04	1.7E-01	1.6E-01	1.8E-01	1.8E-01	1.9E-01	2.0E-01	2.1E-01	2.2E-01	1.7E+05	3.7E-01
residential	REC_100M	488130.59	3617525.04	1.7E-01	1.6E-01	1.7E-01	1.7E-01	1.8E-01	1.9E-01	2.0E-01	2.1E-01	1.6E+05	3.5E-01
residential	REC_100M	488230.59	3617525.04	1.6E-01	1.5E-01	1.6E-01	1.7E-01	1.8E-01	1.8E-01	1.9E-01	2.0E-01	1.5E+05	3.3E-01
residential	REC_100M	488330.59	3617525.04	1.6E-01	1.5E-01	1.6E-01	1.6E-01	1.7E-01	1.8E-01	1.9E-01	2.0E-01	1.4E+05	3.1E-01
residential	REC_100M	488430.59	3617525.04	1.6E-01	1.5E-01	1.6E-01	1.7E-01	1.8E-01	1.8E-01	1.9E-01	2.0E-01	1.3E+05	2.2E-01
residential	REC_100M	488530.59	3617525.04	1.6E-01	1.4E-01	1.6E-01	1.6E-01	1.7E-01	1.7E-01	1.8E-01	1.9E-01	1.2E+05	2.0E-01
residential	REC_100M	488730.59	3617525.04	1.4E-01	1.3E-01	1.4E-01	1.5E-01	1.5E-01	1.6E-01	1.6E-01	1.7E-01	1.2E+05	2.4E-01
residential	REC_100M	488830.59	3617525.04	1.4E-01	1.3E-01	1.4E-01	1.4E-01	1.4E-01	1.5E-01	1.6E-01	1.6E-01	1.1E+05	2.3E-01
residential	REC_100M	488930.59	3617525.04	1.3E-01	1.2E-01	1.3E-01	1.3E-01	1.4E-01	1.4E-01	1.5E-01	1.6E-01	1.1E+05	2.3E-01
residential	REC_100M	489030.59	3617525.04	1.3E-01	1.2E-01	1.3E-01	1.3E-01	1.3E-01	1.4E-01	1.4E-01	1.5E-01	1.0E+05	2.2E-01
residential	REC_100M	489130.59	3617525.04	1.3E-01	1.2E-01	1.2E-01	1.3E-01	1.3E-01	1.4E-01	1.4E-01	1.5E-01	9.9E+04	1.9E-01
residential	REC_100M	483230.59	3617625.04	2.3E-01	2.6E-01	2.2E-01	1.9E-01	1.6E-01	1.4E-01	1.3E-01	1.3E-01	1.9E+05	2.5E-01
residential	REC_100M	483330.59	3617625.04	2.4E-01	2.7E-01	2.3E-01	2.1E-01	1.7E-01	1.5E-01	1.4E-01	1.4E-01	2.1E+05	2.7E-01
residential	REC_100M	483430.59	3617625.04	2.5E-01	2.8E-01	2.4E-01	2.1E-01	1.8E-01	1.5E-01	1.4E-01	1.4E-01	2.4E+05	3.0E-01
residential	REC_100M	483530.59	3617625.04	2.7E-01	3.0E-01	2.6E-01	2.3E-01	1.9E-01	1.6E-01	1.5E-01	1.5E-01	2.6E+05	3.2E-01
residential	REC_100M	483630.59	3617625.04	2.8E-01	3.2E-01	2.7E-01	2.4E-01	2.0E-01	1.7E-01	1.6E-01	1.6E-01	2.9E+05	3.5E-01
residential	REC_100M	483730.59	3617625.04	3.0E-01	3.4E-01	2.9E-01	2.6E-01	2.2E-01	1.8E-01	1.7E-01	1.7E-01	3.3E+05	3.8E-01
residential	REC_100M	483830.59	3617625.04	3.2E-01	3.6E-01	3.1E-01	2.8E-01	2.3E-01	1.9E-01	1.8E-01	1.8E-01	3.7E+05	4.1E-01
residential	REC_100M	483930.59	3617625.04	3.4E-01	3.8E-01	3.3E-01	3.0E-01	2.5E-01	2.0E-01	2.0E-01	1.9E-01	4.2E+05	4.4E-01
residential	REC_100M	484030.59	3617625.04	3.6E-01	3.9E-01	3.5E-01	3.2E-01	2.6E-01	2.2E-01	2.1E-01	2.0E-01	4.8E+05	4.8E-01
residential	REC_100M	484130.59	3617625.04	3.8E-01	4.1E-01	3.7E-01	3.4E-01	2.8E-01	2.3E-01	2.2E-01	2.1E-01	5.5E+05	5.2E-01
residential	REC_100M	484230.59	3617625.04	4.0E-01	4.1E-01	3.9E-01	3.5E-01	3.0E-01	2.5E-01	2.4E-01	2.3E-01	6.5E+05	5.7E-01
residential	REC_100M	484330.59	3617625.04	4.1E-01	4.1E-01	3.9E-01	3.7E-01	3.1E-01	2.6E-01	2.5E-01	2.5E-01	7.7E+05	6.4E-01
residential	REC_100M	484430.59	3617625.04	4.3E-01	3.9E-01	3.9E-01	3.7E-01	3.3E-01	2.7E-01	2.7E-01	2.6E-01	9.2E+05	7.1E-01
residential	REC_100M	486630.59	3617625.04	3.0E-01	2.9E-01	3.4E-01	3.7E-01	4.1E-01	4.2E-01	4.7E-01	5.3E-01	5.3E+05	1.0E+00
residential	REC_100M	486730.59	3617625.04	2.9E-01	2.8E-01	3.2E-01	3.5E-01	3.8E-01	3.9E-01	4.3E-01	4.8E-01	4.8E+05	9.4E-01
residential	REC_100M	486830.59	3617625.04	2.8E-01	2.7E-01	3.0E-01	3.3E-01	3.5E-01	3.6E-01	4.0E-01	4.5E-01	4.3E+05	8.6E-01
residential	REC_100M	486930.59	3617625.04	2.7E-01	2.5E-01	2.9E-01	3.1E-01	3.3E-01	3.4E-01	3.7E-01	4.2E-01	3.9E+05	8.0E-01
residential	REC_100M	487030.59	3617625.04	2.6E-01	2.4E-01	2.7E-01	2.9E-01	3.1E-01	3.2E-01	3.5E-01	3.9E-01	3.5E+05	7.4E-01
residential	REC_100M	487130.59	3617625.04	2.5E-01	2.3E-01	2.6E-01	2.8E-01	2.9E-01	3.0E-01	3.3E-01	3.6E-01	3.2E+05	6.9E-01
residential	REC_100M	487430.59	3617625.04	2.2E-01	2.0E-01	2.2E-01	2.4E-01	2.5E-01	2.5E-01	2.7E-01	3.0E-01	2.5E+05	5.6E-01
residential	REC_100M	487530.59	3617625.04	2.1E-01	2.0E-01	2.1E-01	2.2E-01	2.4E-01	2.4E-01	2.6E-01	2.8E-01	2.4E+05	5.2E-01
residential	REC_100M	487630.59	3617625.04	2.0E-01	1.9E-01	2.0E-01	2.1E-01	2.2E-01	2.3E-01	2.4E-01	2.7E-01	2.2E+05	4.9E-01
residential	REC_100M	487730.59	3617625.04	2.0E-01	1.8E-01	2.0E-01	2.0E-01	2.1E-01	2.2E-01	2.3E-01	2.5E-01	2.1E+05	4.6E-01
residential	REC_100M	487830.59	3617625.04	1.9E-01	1.7E-01	1.9E-01	2.0E-01	2.0E-01	2.1E-01	2.2E-01	2.4E-01	1.9E+05	4.3E-01
residential	REC_100M	487930.59	3617625.04	1.8E-01	1.7E-01	1.8E-01	1.9E-01	1.9E-01	2.0E-01	2.1E-01	2.3E-01	1.8E+05	4.0E-01
residential	REC_100M	488030.59	3617625.04	1.8E-01	1.6E-01	1.7E-01	1.8E-01	1.8E-01	1.9E-01	2.0E-01	2.1E-01	1.7E+05	3.8E-01
residential	REC_100M	488130.59	3617625.04	1.7E-01	1.5E-01	1.7E-01	1.7E-01	1.8E-01	1.8E-01	1.9E-01	2.1E-01	1.6E+05	3.6E-01
residential	REC_100M	488230.59	3617625.04	1.6E-01	1.5E-01	1.6E-01	1.7E-01	1.7E-01	1.7E-01	1.9E-01	2.0E-01	1.5E+05	3.4E-01
residential	REC_100M	488330.59	3617625.04	1.6E-01	1.5E-01	1.6E-01	1.6E-01	1.7E-01	1.7E-01	1.8E-01	1.9E-01	1.5E+05	3.1E-01
residential	REC_100M	488430.59	3617625.04	1.6E-01	1.5E-01	1.6E-01	1.7E-01	1.7E-01	1.8E-01	1.9E-01	2.0E-01	1.3E+05	2.2E-01
residential	REC_100M	488530.59	3617625.04	1.6E-01	1.5E-01	1.6E-01	1.6E-01	1.7E-01	1.7E-01	1.8E-01	1.9E-01	1.2E+05	2.1E-01
residential	REC_100M	488630.59	3617625.04	1.5E-01	1.4E-01	1.5E-01	1.5E-01	1.5E-01	1.6E-01	1.7E-01	1.8E-01	1.2E+05	2.4E-01
residential	REC_100M	488730.59	3617625.04	1.4E-01	1.3E-01	1.4E-01	1.4E-01	1.5E-01	1.5E-01	1.6E-01	1.7E-01	1.2E+05	2.4E-01
residential	REC_100M	488830.59	3617625.04	1.4E-01	1.3E-01	1.3E-01	1.4E-01	1.4E-01	1.4E-01	1.5E-01	1.6E-01	1.1E+05	2.4E-01
residential	REC_100M	488930.59	3617625.04	1.3E-01	1.2E-01	1.3E-01	1.3E-01	1.3E-01	1.4E-01	1.4E-01	1.5E-01	1.1E+05	2.3E-01
residential	REC_100M	489030.59	3617625.04	1.3E-01	1.2E-01	1.2E-01	1.3E-01	1.3E-01	1.3E-01	1.4E-01	1.5E-01	1.0E+05	2.2E-01
residential	REC_100M	489130.59	3617625.04	1.3E-01	1.2E-01	1.2E-01	1.2E-01	1.3E-01	1.3E-01	1.4E-01	1.4E-01	9.9E+04	2.1E-01
residential	REC_100M	483030.59	3617725.04	2.0E-01	2.2E-01	1.9E-01	1.6E-01	1.4E-01	1.2E-01	1.2E-01	1.1E-01	1.5E+05	2.1E-01
residential	REC_100M	483130.59	3617725.04	2.1E-01	2.4E-01	2.0E-01	1.7E-01	1.5E-01	1.3E-01	1.2E-01	1.2E-01	1.6E+05	2.3E-01
residential	REC_100M	483230.59	3617725.04	2.2E-01	2.5E-01	2.1E-01	1.8E-01	1.5E-01	1.3E-01	1.3E-01	1.2E-01	1.8E+05	2.5E-01
residential	REC_100M	483330.59	3617725.04	2.3E-01	2.6E-01	2.2E-01	1.9E-01	1.6E-01	1.3E-01	1.3E-01	1.3E-01	2.0E+05	2.7E-01
residential	REC_100M	483430.59	3617725.04	2.5E-01	2.8E-01	2.3E-01	2.0E-01	1.7E-01	1.4E-01	1.4E-01	1.3E-01	2.2E+05	2.9E-01
residential	REC_100M	483530.59	3617725.04	2.6E-01	3.0E-01	2.5E-01	2.1E-01	1.8E-01	1.5E-01	1.4E-01	1.4E-01	2.4E+05	3.1E-01
residential	REC_100M	483630.59	3617725.04	2.8E-01	3.2E-01	2.6E-01	2.3E-01	1.9E-01	1.6E-01	1.5E-01	1.5E-01	2.7E+05	3.4E-01
residential	REC_100M	483730.59	3617725.04	3.0E-01	3.4E-01	2.8E-01	2.5E-01	2.0E-01	1.7E-01	1.6E-01	1.6E-01	3.0E+05	3.7E-01
residential	REC_100M	483830.59	3617725.04	3.2E-01	3.6E-01	3.0E-01	2.6E-01	2.2E-01	1.8E-01	1.7E-01	1.7E-01	3.4E+05	4.0E-01
residential	REC_100M	483930.59	3617725.04	3.4E-01	3.7E-01	3.2E-01	2.8E-01	2.3E-01	1.9E-01	1.8E-01	1.8E-01	3.9E+05	4.3E-01
residential	REC_100M	484030.59	3617725.04	3.6E-01	3.9E-01	3.4E-01	3.0E-01	2.4E-01	2.0E-01	1.9E-01	1.9E-01	4.5E+05	4.7E-01
residential	REC_100M	484130.59	3617725.04	3.8E-01	4.0E-01	3.6E-01	3.1E-01	2.6E-01	2.1E-01	2.1E-01	2.0E-01	5.2E+05	5.1E-01
residential	REC_100M	484230.59	3617725.04	4.0E-01	4.0E-01	3.7E-01	3.3E-01	2.7E-01	2.3E-01	2.2E-01	2.1E-01	6.1E+05	5.7E-01
residential	REC_100M	484330.59	3617725.04	4.1E-01	3.8E-01	3.8E-01	3.4E-01	2.9E-01	2.4E-01	2.3E-01	2.3E-01	7.3E+05	6.4E-01
residential	REC_100M	486530.59	3617725.04	3.3E-01	3.2E-01	3.7E-01	3.9E-01	4.1E-01	4.1E-01	4.6E-01	5.3E-01	6.5E+05	1.3E+00
residential	REC_100M	486630.59	3617725.04	3.2E-01	3.0E-01	3.4E-01	3.7E-01	3.8E-01	3.8E-01	4.2E-01	4.9E-01	5.7E+05	1.2E+00
residential	REC_100M	486730.59	3617725.04	3.1E-01	2.9E-01	3.2E-01	3.4E-01	3.6E-01	3.6E-01	3.9E-01	4.5E-01	5.0E+05	1.1E+00
residential	REC_100M	486830.59	3617725.04	2.9E-01	2.7E-01	3.0E-01	3.2E-01	3.4E-01	3.3E-01	3.7E-01	4.2E-01	4.4E+05	9.7E-01
residential	REC_100M	486930.59	3617725.04	2.8E-01	2.6E-01	2.9E-01	3.0E-01	3.1E-01	3.1E-01	3.5E-01	3.9E-01	3.9E+05	8.8E-01
residential	REC_100M	487030.59	3617725.04	2.7E-01	2.4E-01	2.7E-01	2.8E-01	3.0E-01	3.0E-01	3.3E-01	3.6E-01	3.6E+05	8.1E-01
residential	REC_100M	487230.59	3617725.04	2.5E-01	2.3E-01	2.5E-01	2.6E-01	2.7E-01	2.7E-01	2.9E-01	3.2E-01	3.0E+05	6.8E-01
residential	REC_100M	487330.59	3617725.04	2.4E-01	2.1E-01	2.3E-01	2.4E-01	2.5E-01	2.5E-01	2.7E-01	3.0E-01	2.7E+05	6.3E-01
residential	REC_100M	487430.59	3617725.04	2.3E-01	2.0E-01	2.2E-01	2.3E-01	2.4E-01	2.4E-01	2.6E-01	2.8E-01	2.5E+05	5.8E-01
residential	REC_100M	487530.59	3617725.04	2.2E-01	2.0E-01	2.1E-01	2.2E-01	2.2E-01	2.3E-01	2.4E-01	2.7E-01	2.3E+05	5.4E-01
residential	REC_100M	487630.59	3617725.04	2.1E-01	1.9E-01	2.0E-01	2.1E-01	2.1E-01	2.2E-01	2.3E-01	2.5E-01	2.2E+05	5.0E-01
residential	REC_100M	487730.59	3617725.04	2.0E-01	1.8E-01	1.9E-01	2.0E-01	2.0E-01	2.1E-01	2.2E-01	2.4E-01	2.0E+05	4.7E-01
residential	REC_100M	487830.59	3617725.04	1.9E-01	1.7E-01	1.8E-01	1.9E-01	1.9E-01	2.0E-01	2.1E-01	2.3E-01	1.9E+05	4.4E-01
residential	REC_100M	487930.59	3617725.04	1.8E-01	1.7E-01	1.8E-01	1.8E-01	1.9E-01	1.9E-01	2.0E-01	2.1E-01	1.8E+05	4.1E-01
residential	REC_100M	488030.59	3617725.04	1.8E-01	1.6E-01	1.7E-01	1.7E-01	1.8E-01	1.8E-01	1.9E-01	2.0E-01	1.7E+05	3.8E-01
residential	REC_100M	488130.59	3617725.04	1.7E-01	1.6E-01	1.7E-01	1.7E-01	1.7E-01	1.7E-01	1.9E-01	2.0E-01	1.6E+05	3.6E-01
residential	REC_100M	488230.59	3617725.04	1.7E-01	1.5E-01	1.6E-01	1.7E-01	1.7E-01	1.7E-01	1.8E-01	1.9E-01	1.5E+05	3.3E-01
residential	REC_100M	488330.59	3617725.04	1.6E-01	1.5E-01	1.6E-01	1.6E-01	1.6E-01	1.6E-01	1.7E-01	1.9E-01	1.4E+05	3.1E-01
residential	REC_100M	488430.59	3617725.04	1.6E-01	1.5E-01	1.6E-01	1.6E-01	1.7E-01	1.7E-01	1.8E-01	1.9E-01	1.3E+05	2.3E-01
residential	REC_100M	488530.59	3617725.04	1.6E-01	1.4E-01	1.5E-01	1.6E-01	1.6E-01	1.6E-01	1.7E-01	1.8E-01	1.2E+05	2.1E-01
residential	REC_100M	488630.59	3617725.04	1.5E-01	1.4E-01	1.5E-01	1.5E-01	1.5E-01	1.5E-01	1.6E-01	1.7E-01	1.2E+05	2.3E-01
residential	REC_100M	488730.59	3617725.04	1.4E-01	1.3E-01	1.4E-01	1.4E-01	1.4E-01	1.4E-01	1.5E-01	1.6E-01	1.2E+05	2.4E-01
residential	REC_100M	488830.59	3617725.04	1.4E-01	1.2E-01	1.3E-01	1.3E-01	1.3E-01	1.4E-01	1.4E-01	1.5E-01	1.1E+05	2.4E-01
residential	REC_100M	488930.59	3617725.04	1.3E-01	1.2E-01	1.3E-01	1.3E-01	1.3E-01	1.3E-01	1.4E-01	1.5E-01	1.1E+05	2.3E-01
residential	REC_100M	489030.59	3617725.04	1.3E-01	1.2E-01	1.2E-01	1.2E-01	1.3E-01	1.3E-01	1.3E-01	1.4E-01	1.0E+05	2.2E-01
residential	REC_100M	489130.59	3617725.04	1.2E-01	1.1E-01	1.2E-01	1.2E-01	1.2E-01	1.2E-01	1.3E-01	1.4E-01	9.8E+04	2.1E-01
residential	REC_100M	482830.59	3617825.04	1.7E-01	1.9E-01	1.6E-01	1.4E-01	1.2E-01	1.0E-01	1.0E-01	9.8E-02	1.2E+05	1.8E-01
residential	REC_100M	482930.59	3617825.04	1.8E-01	2.0E-01	1.7E-01	1.5E-01	1.3E-01	1.1E-01	1.0E-01	1.0E-01	1.3E+05	1.9E-01
residential	REC_100M	483030.59	3617825.04	1.9E-01	2.1E-01	1.8E-01	1.5E-01	1.3E-01	1.1E-01	1.1E-01	1.1E-01	1.4E+05	2.1E-01
residential	REC_100M	483130.59	3617825.04	2.0E-01	2.3E-01	1.8E-01	1.6E-01	1.4E-01	1.2E-01	1.1E-01	1.1E-01	1.5E+05	2.2E-01
residential	REC_100M	483230.59	3617825.04	2.1E-01	2.4E-01	1.9E-01	1.7E-01	1.4E-01	1.2E-01	1.2E-01	1.1E-01	1.6E+05	2.4E-01
residential	REC_100M	483330.59	3617825.04	2.3E-01	2.5E-01	2.1E-01	1.8E-01	1.5E-01	1.3E-01	1.2E-01	1.2E-01	1.8E+05	2.6E-01
residential	REC_100M	483430.59	3617825.04	2.4E-01	2.7E-01	2.2E-01	1.9E-01	1.6E-01	1.3E-01	1.3E-01	1.3E-01	2.0E+05	2.8E-01
residential	REC_100M	483530.59	3617825.04	2.6E-01	2.9E-01	2.4E-01	2.0E-01	1.7E-01	1.4E-01	1.4E-01	1.3E-01	2.2E+05	3.0E-01
residential	REC_100M	483630.59	3617825.04	2.8E-01	3.1E-01	2.5E-01	2.2E-01	1.8E-01	1.5E-01	1.4E-01	1.4E-01	2.4E+05	3.3E-01
residential	REC_100M	483730.59	3617825.04	3.0E-01	3.3E-01	2.7E-01	2.3E-01	1.9E-01	1.6E-01	1.5E-01	1.5E-01	2.7E+05	3.5E-01
residential	REC_100M	483830.59	3617825.04	3.2E-01	3.5E-01	2.8E-01	2.5E-01	2.0E-01	1.7E-01	1.6E-01	1.6E-01	3.1E+05	3.8E-01
residential	REC_100M	483930.59	3617825.04	3.4E-01	3.6E-01	3.0E-01	2.6E-01	2.1E-01	1.8E-01	1.7E-01	1.7E-01	3.5E+05	4.2E-01
residential	REC_100M	484030.59	3617825.04	3.6E-01	3.7E-01	3.2E-01	2.8E-01	2.3E-01	1.9E-01	1.8E-01	1.8E-01	4.0E+05	4.6E-01
residential	REC_100M	484130.59	3617825.04	3.8E-01	3.8E-01	3.3E-01	2.9E-01	2.4E-01	2.0E-01	1.9E-01	1.9E-01	4.7E+05	5.0E-01
residential	REC_100M	484230.59	3617825.04	3.9E-01	3.7E-01	3.4E-01	3.0E-01	2.5E-01	2.1E-01	2.0E-01	2.0E-01	5.6E+05	5.6E-01
residential	REC_100M	486430.59	3617825.04	3.7E-01	3.4E-01	3.9E-01	4.1E-01	4.1E-01	3.8E-01	4.2E-01	4.8E-01	7.7E+05	1.7E+00
residential	REC_100M	486530.59	3617825.04	3.5E-01	3.2E-01	3.6E-01	3.8E-01	3.8E-01	3.6E-01	3.9E-01	4.5E-01	6.6E+05	1.5E+00
residential	REC_100M	486630.59	3617825.04	3.4E-01	3.0E-01	3.4E-01	3.5E-01	3.5E-01	3.4E-01	3.7E-01	4.2E-01	5.7E+05	1.3E+00
residential	REC_100M	486730.59	3617825.04	3.2E-01	2.9E-01	3.2E-01	3.3E-01	3.3E-01	3.2E-01	3.5E-01	4.0E-01	5.0E+05	1.2E+00
residential	REC_100M	486830.59	3617825.04	3.0E-01	2.7E-01	3.0E-01	3.1E-01	3.1E-01	3.0E-01	3.3E-01	3.8E-01	4.4E+05	1.0E+00
residential	REC_100M	486930.59	3617825.04	2.9E-01	2.6E-01	2.8E-01	2.9E-01	2.9E-01	2.9E-01	3.1E-01	3.5E-01	3.9E+05	9.3E-01
residential	REC_100M	487130.59	3617825.04	2.6E-01	2.3E-01	2.5E-01	2.6E-01	2.6E-01	2.6E-01	2.8E-01	3.1E-01	3.2E+05	7.7E-01
residential	REC_100M	487230.59	3617825.04	2.5E-01	2.2E-01	2.4E-01	2.4E-01	2.5E-01	2.4E-01	2.7E-01	2.9E-01	2.9E+05	7.0E-01
residential	REC_100M	487330.59	3617825.04	2.4E-01	2.1E-01	2.3E-01	2.3E-01	2.4E-01	2.3E-01	2.5E-01	2.8E-01	2.7E+05	6.4E-01
residential	REC_100M	487430.59	3617825.04	2.3E-01	2.0E-01	2.2E-01	2.2E-01	2.2E-01	2.2E-01	2.4E-01	2.6E-01	2.5E+05	5.9E-01
school	BurLogan	487530.59	3617825.04	2.2E-01	1.9E-01	2.1E-01	2.1E-01	2.1E-01	2.1E-01	2.3E-01	2.5E-01	2.3E+05	5.4E-01
school	BurLogan	487630.59	3617825.04	2.1E-01	1.8E-01	2.0E-01	2.0E-01	2.0E-01	2.0E-01	2.2E-01	2.3E-01	2.1E+05	5.0E-01
school	BurLogan	487730.59	3617825.04	2.0E-01	1.8E-01	1.9E-01	1.9E-01	1.9E-01	1.9E-01	2.1E-01	2.2E-01	2.0E+05	4.7E-01
school	BurLogan	487830.59	3617825.04	1.9E-01	1.7E-01	1.8E-01	1.8E-01	1.9E-01	1.8E-01	2.0E-01	2.1E-01	1.9E+05	4.4E-01
residential	REC_100M	487930.59	3617825.04	1.8E-01	1.6E-01	1.7E-01	1.8E-01	1.8E-01	1.8E-01	1.9E-01	2.0E-01	1.8E+05	4.1E-01
residential	REC_100M	488030.59	3617825.04	1.8E-01	1.6E-01	1.7E-01	1.7E-01	1.7E-01	1.7E-01	1.8E-01	2.0E-01	1.7E+05	3.8E-01
school	school	488130.59	3617825.04	1.8E-01	1.6E-01	1.7E-01	1.7E-01	1.7E-01	1.7E-01	1.8E-01	2.0E-01	1.6E+05	3.4E-01
school	school	488230.59	3617825.04	1.7E-01	1.5E-01	1.6E-01	1.7E-01	1.7E-01	1.7E-01	1.8E-01	1.9E-01	1.5E+05	3.2E-01
residential	REC_100M	488330.59	3617825.04	1.7E-01	1.5E-01	1.6E-01	1.6E-01	1.6E-01	1.6E-01	1.7E-01	1.8E-01	1.4E+05	2.9E-01
residential	REC_100M	488430.59	3617825.04	1.6E-01	1.5E-01	1.6E-01	1.6E-01	1.6E-01	1.6E-01	1.7E-01	1.8E-01	1.3E+05	2.3E-01
residential	REC_100M	488530.59	3617825.04	1.6E-01	1.4E-01	1.5E-01	1.5E-01	1.6E-01	1.6E-01	1.7E-01	1.8E-01	1.2E+05	2.2E-01
residential	REC_100M	488630.59	3617825.04	1.5E-01	1.4E-01	1.5E-01	1.5E-01	1.5E-01	1.5E-01	1.6E-01	1.7E-01	1.2E+05	2.0E-01
residential	REC_100M	488730.59	3617825.04	1.4E-01	1.3E-01	1.3E-01	1.4E-01	1.4E-01	1.4E-01	1.5E-01	1.6E-01	1.2E+05	2.4E-01
residential	REC_100M	488830.59	3617825.04	1.4E-01	1.2E-01	1.3E-01	1.3E-01	1.3E-01	1.3E-01	1.4E-01	1.5E-01	1.1E+05	2.4E-01
residential	REC_100M	488930.59	3617825.04	1.3E-01	1.2E-01	1.2E-01	1.2E-01	1.3E-01	1.3E-01	1.3E-01	1.4E-01	1.0E+05	2.3E-01
residential	REC_100M	489030.59	3617825.04	1.3E-01	1.1E-01	1.2E-01	1.2E-01	1.2E-01	1.2E-01	1.2E-01	1.3E-01	1.0E+05	2.2E-01
residential	REC_100M	489130.59	3617825.04	1.2E-01	1.1E-01	1.2E-01	1.2E-01	1.2E-01	1.2E-01	1.2E-01	1.3E-01	9.6E+04	2.1E-01
residential	REC_100M	482830.59	3617925.04	1.6E-01	1.8E-01	1.5E-01	1.3E-01	1.1E-01	9.7E-02	9.5E-02	9.2E-02	1.1E+05	1.8E-01
residential	REC_100M	482930.59	3617925.04	1.7E-01	1.9E-01	1.6E-01	1.4E-01	1.2E-01	1.0E-01	9.8E-02	9.6E-02	1.1E+05	1.9E-01
residential	REC_100M	483030.59	3617925.04	1.8E-01	2.0E-01	1.7E-01	1.5E-01	1.2E-01	1.1E-01	1.0E-01	1.0E-01	1.2E+05	2.0E-01
residential	REC_100M	483130.59	3617925.04	2.0E-01	2.1E-01	1.7E-01	1.5E-01	1.3E-01	1.1E-01	1.1E-01	1.0E-01	1.3E+05	2.2E-01
residential	REC_100M	483230.59	3617925.04	2.1E-01	2.3E-01	1.9E-01	1.6E-01	1.4E-01	1.2E-01	1.1E-01	1.1E-01	1.5E+05	2.3E-01
residential	REC_100M	483330.59	3617925.04	2.2E-01	2.4E-01	2.0E-01	1.7E-01	1.4E-01	1.2E-01	1.2E-01	1.1E-01	1.6E+05	2.5E-01
residential	REC_100M	483430.59	3617925.04	2.4E-01	2.6E-01	2.1E-01	1.8E-01	1.5E-01	1.3E-01	1.2E-01	1.2E-01	1.8E+05	2.7E-01
residential	REC_100M	483530.59	3617925.04	2.5E-01	2.8E-01	2.2E-01	1.9E-01	1.6E-01	1.3E-01	1.3E-01	1.3E-01	1.9E+05	2.9E-01
residential	REC_100M	483630.59	3617925.04	2.7E-01	2.9E-01	2.4E-01	2.0E-01	1.7E-01	1.4E-01	1.4E-01	1.3E-01	2.2E+05	3.2E-01
residential	REC_100M	483730.59	3617925.04	2.9E-01	3.1E-01	2.5E-01	2.2E-01	1.8E-01	1.5E-01	1.4E-01	1.4E-01	2.4E+05	3.4E-01
residential	REC_100M	483830.59	3617925.04	3.0E-01	3.3E-01	2.7E-01	2.3E-01	1.9E-01	1.5E-01	1.5E-01	1.5E-01	2.7E+05	3.7E-01
residential	REC_100M	483930.59	3617925.04	3.3E-01	3.4E-01	2.8E-01	2.4E-01	2.0E-01	1.6E-01	1.6E-01	1.6E-01	3.1E+05	4.1E-01

TAMT Risk Assessment - DPM Cancer and Chronic HI

AERMOD Output

AERMOD UNITIZED CONCENTRATIONS

Source Group in AERMOD

	Discrete Receptor ID (Group Name)	X	Y	B10_1_AUX	B10_2_AUX	B10_3_AUX	B10_4_AUX	B10_5_AUX	B10_6_AUX	B10_7_AUX	B10_8_AUX	CHE_1	LOC_SWTCHEMP	LOC_SWTCHLOA	OGV_PATH_BLR	OGV_PATH_DPM	TR_28TH	TR_BAYMAR	TR_BOSTON	TR_CROSBY	TR_HARBORCHA	TR_HARBORSAM	TUG_PATH_DPM
				1	3	5	7	9	11	13	15	17	18	19	20	21	22	23	24	25	26	27	28
residential	REC_100N	484030.59	3617925.04	3.5E-01	3.5E-01	2.9E-01	2.6E-01	2.1E-01	1.7E-01	1.7E-01	1.6E-01	3.6E+05	4.5E-01	3.9E-01	3.4E-01	3.4E-01	1.0E-01	1.2E-02	9.8E-02	3.0E-01	7.3E-01	1.4E-01	5.2E-01
residential	REC_100N	484130.59	3617925.04	3.7E-01	3.6E-01	3.2E-01	2.8E-01	2.3E-01	1.9E-01	1.8E-01	1.8E-01	4.2E+05	4.9E-01	4.2E-01	3.6E-01	3.6E-01	1.0E-01	1.2E-02	1.0E-01	3.2E-01	8.3E-01	1.5E-01	5.4E-01
residential	REC_100N	486330.59	3617925.04	4.1E-01	3.7E-01	4.0E-01	4.0E-01	3.8E-01	3.4E-01	3.7E-01	4.1E-01	9.0E+05	2.2E+00	2.8E+00	1.3E-01	1.3E-01	2.9E-01	2.1E-02	2.7E-01	1.3E+01	9.9E+00	8.2E+00	1.8E-01
residential	REC_100N	486430.59	3617925.04	3.9E-01	3.4E-01	3.7E-01	3.8E-01	3.6E-01	3.3E-01	3.6E-01	4.0E-01	7.6E+05	1.9E+00	2.3E+00	1.3E-01	1.3E-01	3.1E-01	2.2E-02	2.9E-01	7.0E+00	6.2E+00	6.8E+00	1.7E-01
residential	REC_100N	486530.59	3617925.04	3.7E-01	3.2E-01	3.5E-01	3.5E-01	3.4E-01	3.2E-01	3.4E-01	3.8E-01	6.5E+05	1.6E+00	1.9E+00	1.2E-01	1.2E-01	3.4E-01	2.2E-02	3.1E-01	4.6E+00	4.5E+00	5.7E+00	1.6E-01
residential	REC_100N	486630.59	3617925.04	3.5E-01	3.0E-01	3.3E-01	3.3E-01	3.2E-01	3.0E-01	3.3E-01	3.6E-01	5.5E+05	1.4E+00	1.6E+00	1.2E-01	1.2E-01	3.7E-01	2.3E-02	3.3E-01	3.4E+00	3.4E+00	4.9E+00	1.5E-01
residential	REC_100N	486730.59	3617925.04	3.3E-01	2.8E-01	3.0E-01	3.1E-01	3.0E-01	2.9E-01	3.2E-01	3.5E-01	4.7E+05	1.2E+00	1.3E+00	1.1E-01	1.1E-01	4.1E-01	2.4E-02	3.2E-01	2.6E+00	2.7E+00	4.1E+00	1.5E-01
residential	REC_100N	486830.59	3617925.04	3.1E-01	2.7E-01	2.9E-01	2.9E-01	2.9E-01	2.7E-01	3.0E-01	3.3E-01	4.2E+05	1.1E+00	1.2E+00	1.0E-01	1.0E-01	4.7E-01	2.5E-02	3.5E-01	2.2E+00	2.3E+00	3.7E+00	1.4E-01
residential	REC_100N	487030.59	3617925.04	2.8E-01	2.4E-01	2.5E-01	2.6E-01	2.6E-01	2.5E-01	2.7E-01	3.0E-01	3.3E+05	8.5E-01	9.0E-01	9.7E-02	9.7E-02	6.5E-01	2.7E-02	4.7E-01	1.5E+00	1.6E+00	3.0E+00	1.3E-01
residential	REC_100N	487130.59	3617925.04	2.6E-01	2.3E-01	2.4E-01	2.4E-01	2.4E-01	2.4E-01	2.6E-01	2.8E-01	3.0E+05	7.6E-01	8.0E-01	9.3E-02	9.3E-02	8.6E-01	2.8E-02	6.1E-01	1.3E+00	1.4E+00	2.7E+00	1.2E-01

DPM SCALED CONCENTRATIONS

	B10_1_AUX	B10_2_AUX	B10_3_AUX	B10_4_AUX	B10_5_AUX	B10_6_AUX	B10_7_AUX	B10_8_AUX	CHE_1	LOC_SWTCHEMP	LOC_SWTCHLOA	OGV_PATH_DPM	TR_28TH	TR_BAYMAR	TR_BOSTON	TR_CROSBY	TR_HARBORCHA	TR_HARBORSAM	TUG_PATH_DPM	SUM
divide by -->	4	4	4	4	2	2	2	2	1	2	2	1	1	1	1	1	1	1	1	
	Refrigerated Containersfully_mitigated	Refrigerated Containersfully_mitigated	Refrigerated Containersfully_mitigated	Refrigerated Containersfully_mitigated	Multi-Purpose General Cargofully_mitigated	Multi-Purpose General Cargofully_mitigated	Dry Bulkfully_mitigated	Dry Bulkfully_mitigated	Allfully_mitigated	Allfully_mitigated	Allfully_mitigated	Allfully_mitigated	TR_28THfully_mitigated	TR_BAYMARfully_mitigated	TR_BOSTONfully_mitigated	TR_CROSBYfully_mitigated	TR_HARBORCHAfully_mitigated	TR_HARBORSAMfully_mitigated	Allfully_mitigated	
g/s -->	1.1E-02	1.1E-02	1.1E-02	1.1E-02	1.3E-02	1.3E-02	1.4E-02	1.4E-02	2.8E-08	2.3E-03	2.3E-03	4.02E-02	7.8E-06	9.2E-06	2.4E-05	5.2E-05	1.1E-04	1.1E-04	2.4E-03	
	1	3	5	7	9	11	13	15	17	18	19	21	22	23	24	25	26	27	28	
484030.59	3.9E-03	4.0E-03	3.3E-03	2.9E-03	2.7E-03	2.2E-03	2.3E-03	2.3E-03	1.0E-02	1.0E-03	9.2E-04	1.4E-02	7.8E-07	1.1E-07	2.4E-06	1.5E-05	8.4E-05	1.6E-05	1.2E-03	5.1E-02
484130.59	4.2E-03	4.1E-03	3.6E-03	3.1E-03	3.0E-03	2.4E-03	2.6E-03	2.5E-03	1.2E-02	1.1E-03	1.0E-03	1.5E-02	8.1E-07	1.1E-07	2.4E-06	1.7E-05	9.5E-05	1.7E-05	1.3E-03	5.5E-02
486330.59	4.7E-03	4.1E-03	4.5E-03	4.5E-03	5.0E-03	4.4E-03	5.2E-03	5.8E-03	2.5E-02	5.1E-03	6.5E-03	5.4E-03	2.3E-06	1.9E-07	6.6E-06	6.9E-04	1.1E-03	9.3E-04	4.2E-04	8.4E-02
486430.59	4.4E-03	3.9E-03	4.2E-03	4.2E-03	4.7E-03	4.3E-03	5.0E-03	5.5E-03	2.1E-02	4.4E-03	5.3E-03	5.1E-03	2.5E-06	2.0E-07	7.0E-06	3.6E-04	7.1E-04	7.8E-04	4.0E-04	7.5E-02
486530.59	4.2E-03	3.6E-03	3.9E-03	4.0E-03	4.4E-03	4.1E-03	4.8E-03	5.3E-03	1.8E-02	3.8E-03	4.4E-03	4.9E-03	2.6E-06	2.1E-07	7.5E-06	2.4E-04	5.1E-04	6.6E-04	3.8E-04	6.7E-02
486630.59	3.9E-03	3.4E-03	3.7E-03	3.7E-03	4.2E-03	3.9E-03	4.6E-03	5.1E-03	1.6E-02	3.3E-03	3.8E-03	4.6E-03	2.9E-06	2.1E-07	8.0E-06	1.8E-04	3.9E-04	5.6E-04	3.6E-04	6.1E-02
486730.59	3.7E-03	3.2E-03	3.4E-03	3.5E-03	3.9E-03	3.7E-03	4.4E-03	4.9E-03	1.3E-02	2.8E-03	3.1E-03	4.4E-03	3.2E-06	2.2E-07	7.8E-06	1.3E-04	3.1E-04	4.7E-04	3.5E-04	5.6E-02
486830.59	3.5E-03	3.0E-03	3.2E-03	3.3E-03	3.7E-03	3.6E-03	4.2E-03	4.7E-03	1.2E-02	2.5E-03	2.7E-03	4.2E-03	3.7E-06	2.3E-07	8.5E-06	1.1E-04	2.6E-04	4.2E-04	3.3E-04	5.2E-02
487030.59	3.1E-03	2.7E-03	2.9E-03	2.9E-03	3.3E-03	3.2E-03	3.8E-03	4.2E-03	9.4E-03	2.0E-03	2.1E-03	3.9E-03	5.1E-06	2.5E-07	1.1E-05	7.9E-05	1.9E-04	3.4E-04	3.0E-04	4.4E-02
487130.59	3.0E-03	2.6E-03	2.7E-03	2.7E-03	3.2E-03	3.1E-03	3.6E-03	4.0E-03	8.5E-03	1.8E-03	1.9E-03	3.7E-03	6.8E-06	2.6E-07	1.5E-05	6.9E-05	1.6E-04	3.1E-04	2.9E-04	4.2E-02

	Vessel Hoteling All	Vessel Hoteling Refrigerated Containersfully_mitigated	Vessel Hoteling Multi-Purpose General Cargofully_mitigated	Vessel Hoteling Dry Bulkfully_mitigated	Vessel Transit All	Vessel Transit Refrigerated Containersfully_mitigated	Vessel Transit Multi-Purpose General Cargofully_mitigated	Vessel Transit Dry Bulkfully_mitigated	Tug/Barge Transit All	Tug/Barge Transit Refrigerated Containersfully_mitigated	Tug/Barge Transit Multi-Purpose General Cargofully_mitigated	Tug/Barge Transit Dry Bulkfully_mitigated	Terminal E All	Terminal E Refrigerated Containersfully_mitigated
	100%	46%	26%	28%	100%	46%	25%	28%	100%	21%	54%	25%	100%	40%
484030.59	2.4E-02	1E-02	5E-03	5E-03	1E-02	6E-03	3E-03	4E-03	1E-03	3E-04	7E-04	3E-04	1E-02	4E-03
484130.59	2.5E-02	1E-02	5E-03	5E-03	1E-02	7E-03	4E-03	4E-03	1E-03	3E-04	7E-04	3E-04	1E-02	5E-03
486330.59	3.8E-02	2E-02	9E-03	1E-02	5E-03	2E-03	1E-03	2E-03	4E-04	9E-05	2E-04	1E-04	3E-02	1E-02
486430.59	3.6E-02	2E-02	9E-03	1E-02	5E-03	2E-03	1E-03	1E-03	4E-04	8E-05	2E-04	1E-04	2E-02	9E-03
486530.59	3.4E-02	2E-02	9E-03	1E-02	5E-03	2E-03	1E-03	1E-03	4E-04	8E-05	2E-04	1E-04	2E-02	7E-03
486630.59	3.2E-02	1E-02	8E-03	1E-02	5E-03	2E-03	1E-03	1E-03	4E-04	8E-05	2E-04	9E-05	2E-02	6E-03
486730.59	3.1E-02	1E-02	8E-03	9E-03	4E-03	2E-03	1E-03	1E-03	3E-04	7E-05	2E-04	9E-05	1E-02	5E-03
486830.59	2.9E-02	1E-02	7E-03	9E-03	4E-03	2E-03	1E-03	1E-03	3E-04	7E-05	2E-04	8E-05	1E-02	5E-03
487030.59	2.6E-02	1E-02	7E-03	8E-03	4E-03	2E-03	1E-03	1E-03	3E-04	6E-05	2E-04	8E-05	9E-03	4E-03
487130.59	2.5E-02	1E-02	6E-03	8E-03	4E-03	2E-03	9E-04	1E-03	3E-04	6E-05	2E-04	7E-05	9E-03	3E-03

TAMT Risk Assessment - DPM Cancer and Chronic HI

AERMOD UNITIZED CONCENTRATIONS

AERMOD Output — Source Group in AERMOD

DPM SCALED CONCENTRATIONS

B10_4_AUX (7; divide by 4; Refrigerated Containersfully_mitigated; 1.1E-02)	B10_5_AUX (9; 2; Multi-Purpose General Cargofully_mitigated; 1.3E-02)	B10_6_AUX (11; 2; Multi-Purpose General Cargofully_mitigated; 1.3E-02)	B10_7_AUX (13; 2; Dry Bulkfully_mitigated; 1.4E-02)	B10_8_AUX (15; 2; Dry Bulkfully_mitigated; 1.4E-02)	CHE_1 (17; 1; Allfully_mitigated; 2.8E-08)	LOC_SWTCHEMP (18; 2; Allfully_mitigated; 2.3E-03)	LOC_SWTCHLOA (19; 2; Allfully_mitigated; 2.3E-03)	OGV_PATH_DPM (21; 1; Allfully_mitigated; 4.02E-02)	TR_28TH (22; 1; TR_28THfully_mitigated; 7.8E-06)	TR_BAYMAR (23; 1; TR_BAYMARfully_mitigated; 9.2E-06)	TR_BOSTON (24; 1; TR_BOSTONfully_mitigated; 2.4E-05)	TR_CROSBY (25; 1; TR_CROSBYfully_mitigated; 5.2E-05)	TR_HARBORCHA (26; 1; TR_HARBORCHAfully_mitigated; 1.1E-04)	TR_HARBORSAM (27; 1; TR_HARBORSAMfully_mitigated; 1.1E-04)	TUG_PATH_DPM (28; 1; Allfully_mitigated; 2.4E-03)	SUM	Vessel Hoteling: All 100%	Vessel Hoteling: Refrigerated Containersfully_mitigated 46%	Vessel Hoteling: Multi-Purpose General Cargofully_mitigated 26%	Vessel Hoteling: Dry Bulkfully_mitigated 28%	Vessel Transit: All 100%	Vessel Transit: Refrigerated Containersfully_mitigated 46%	Vessel Transit: Multi-Purpose General Cargofully_mitigated 25%	Vessel Transit: Dry Bulkfully_mitigated 28%	Tug/Barge Transit: All 100%	Tug/Barge Transit: Refrigerated Containersfully_mitigated 21%	Tug/Barge Transit: Multi-Purpose General Cargofully_mitigated 54%	Tug/Barge Transit: Dry Bulkfully_mitigated 25%	Terminal E: All 100%	Terminal E: Refrigerated Containersfully_mitigated 40%
1.4E-03	1.6E-03	1.6E-03	1.8E-03	1.9E-03	3.3E-03	6.5E-04	6.4E-04	2.8E-03	1.4E-05	3.9E-07	4.9E-05	2.0E-05	5.1E-05	9.6E-05	2.0E-04	2.1E-02	1.3E-02	6E-03	3E-03	4E-03	3E-03	1E-03	7E-04	8E-04	2E-04	4E-05	1E-04	5E-05	3E-03	1E-03
1.4E-03	1.5E-03	1.5E-03	1.7E-03	1.8E-03	3.1E-03	6.2E-04	6.0E-04	2.7E-03	1.3E-05	4.0E-07	4.5E-05	1.9E-05	4.7E-05	8.6E-05	2.0E-04	2.0E-02	1.2E-02	6E-03	3E-03	4E-03	3E-03	1E-03	7E-04	8E-04	2E-04	4E-05	1E-04	5E-05	3E-03	1E-03
1.4E-03	1.6E-03	1.6E-03	1.8E-03	1.9E-03	3.1E-03	5.9E-04	5.9E-04	2.7E-03	1.2E-05	4.3E-07	4.2E-05	1.8E-05	4.7E-05	8.2E-05	1.9E-04	2.0E-02	1.2E-02	6E-03	3E-03	4E-03	3E-03	1E-03	7E-04	8E-04	2E-04	4E-05	1E-04	5E-05	3E-03	1E-03
1.4E-03	1.6E-03	1.6E-03	1.8E-03	1.9E-03	3.0E-03	5.4E-04	5.4E-04	2.6E-03	1.1E-05	4.5E-07	3.8E-05	1.8E-05	4.5E-05	7.5E-05	1.7E-04	2.0E-02	1.3E-02	6E-03	3E-03	4E-03	3E-03	1E-03	7E-04	8E-04	2E-04	3E-05	9E-05	4E-05	3E-03	1E-03
1.4E-03	1.6E-03	1.5E-03	1.7E-03	1.8E-03	2.9E-03	5.2E-04	5.2E-04	2.6E-03	9.4E-06	4.7E-07	3.4E-05	1.7E-05	4.3E-05	6.9E-05	1.6E-04	1.9E-02	1.2E-02	6E-03	3E-03	4E-03	3E-03	1E-03	7E-04	7E-04	2E-04	3E-05	9E-05	4E-05	3E-03	1E-03
1.3E-03	1.5E-03	1.5E-03	1.7E-03	1.8E-03	2.7E-03	5.0E-04	5.0E-04	2.5E-03	8.3E-06	5.0E-07	3.0E-05	1.6E-05	4.0E-05	6.2E-05	1.7E-04	1.8E-02	1.2E-02	5E-03	3E-03	3E-03	3E-03	1E-03	6E-04	7E-04	2E-04	3E-05	9E-05	4E-05	3E-03	1E-03
1.2E-03	1.3E-03	1.3E-03	1.5E-03	1.6E-03	2.5E-03	4.9E-04	4.8E-04	2.4E-03	7.4E-06	5.4E-07	2.7E-05	1.4E-05	3.7E-05	5.5E-05	1.7E-04	1.7E-02	1.1E-02	5E-03	3E-03	3E-03	2E-03	1E-03	6E-04	7E-04	2E-04	4E-05	9E-05	4E-05	3E-03	1E-03
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3.2E-03	4.1E-03	4.1E-03	4.5E-03	4.6E-03	1.8E-02	3.8E-03	3.7E-03	5.2E-03	9.3E-07	1.7E-07	2.6E-06	9.6E-05	3.7E-04	5.1E-05	4.3E-04	6.1E-02	2.9E-02	1E-02	8E-03	9E-03	5E-03	2E-03	1E-03	1E-03	4E-04	9E-05	2E-04	1E-04	2E-02	7E-03
3.0E-03	3.9E-03	4.0E-03	4.5E-03	4.7E-03	1.6E-02	3.2E-03	3.4E-03	5.0E-03	1.0E-06	1.8E-07	2.9E-06	9.8E-05	3.2E-04	6.5E-05	4.0E-04	5.6E-02	2.8E-02	1E-02	8E-03	9E-03	5E-03	2E-03	1E-03	1E-03	4E-04	8E-05	2E-04	1E-04	2E-02	6E-03
2.8E-03	3.6E-03	3.9E-03	4.4E-03	4.6E-03	1.4E-02	2.8E-03	3.0E-03	4.8E-03	1.2E-06	1.8E-07	3.2E-06	1.0E-04	2.9E-04	7.7E-05	3.8E-04	5.2E-02	2.7E-02	1E-02	8E-03	9E-03	5E-03	2E-03	1E-03	1E-03	4E-04	8E-05	2E-04	1E-04	1E-02	6E-03
2.6E-03	3.4E-03	3.7E-03	4.3E-03	4.5E-03	1.2E-02	2.4E-03	2.7E-03	4.5E-03	1.3E-06	1.9E-07	3.5E-06	1.0E-04	2.5E-04	8.8E-05	3.6E-04	4.8E-02	2.6E-02	1E-02	7E-03	9E-03	5E-03	2E-03	1E-03	1E-03	4E-04	7E-05	2E-04	9E-05	1E-02	5E-03
2.4E-03	3.2E-03	3.5E-03	4.0E-03	4.3E-03	1.1E-02	2.0E-03	2.3E-03	4.4E-03	1.5E-06	2.0E-07	4.2E-06	1.0E-04	2.2E-04	9.9E-05	3.4E-04	4.4E-02	2.4E-02	9E-03	7E-03	8E-03	4E-03	2E-03	1E-03	1E-03	3E-04	7E-05	2E-04	9E-05	1E-02	4E-03
2.3E-03	3.0E-03	3.3E-03	3.8E-03	4.1E-03	9.2E-03	1.8E-03	2.0E-03	4.2E-03	1.8E-06	2.0E-07	4.8E-06	9.9E-05	1.9E-04	1.1E-04	3.3E-04	4.1E-02	2.3E-02	9E-03	6E-03	8E-03	4E-03	2E-03	1E-03	1E-03	3E-04	7E-05	2E-04	8E-05	9E-03	4E-03
2.2E-03	2.8E-03	3.1E-03	3.6E-03	3.9E-03	8.1E-03	1.5E-03	1.8E-03	4.0E-03	2.0E-06	2.1E-07	5.4E-06	9.1E-05	1.7E-04	1.2E-04	3.1E-04	3.8E-02	2.2E-02	8E-03	6E-03	7E-03	4E-03	2E-03	1E-03	1E-03	3E-04	6E-05	2E-04	8E-05	8E-03	3E-03
2.0E-03	2.6E-03	2.9E-03	3.4E-03	3.6E-03	7.2E-03	1.4E-03	1.6E-03	3.9E-03	2.2E-06	2.2E-07	6.1E-06	8.3E-05	1.5E-04	1.2E-04	3.0E-04	3.5E-02	2.1E-02	8E-03	6E-03	7E-03	4E-03	2E-03	1E-03	1E-03	3E-04	6E-05	2E-04	8E-05	7E-03	3E-03
1.9E-03	2.4E-03	2.7E-03	3.2E-03	3.4E-03	6.4E-03	1.2E-03	1.4E-03	3.7E-03	2.6E-06	2.3E-07	7.0E-06	7.4E-05	1.3E-04	1.3E-04	2.9E-04	3.3E-02	1.9E-02	8E-03	5E-03	7E-03	4E-03	2E-03	9E-04	1E-03	3E-04	6E-05	2E-04	7E-05	6E-03	3E-03
1.8E-03	2.3E-03	2.6E-03	3.0E-03	3.2E-03	5.8E-03	1.1E-03	1.2E-03	3.6E-03	3.0E-06	2.4E-07	8.0E-06	6.5E-05	1.1E-04	1.3E-04	2.7E-04	3.1E-02	1.8E-02	7E-03	5E-03	6E-03	4E-03	2E-03	9E-04	1E-03	3E-04	6E-05	1E-04	7E-05	6E-03	2E-03
1.8E-03	2.2E-03	2.4E-03	2.8E-03	3.0E-03	5.2E-03	1.0E-03	1.1E-03	3.5E-03	3.7E-06	2.5E-07	9.4E-06	5.6E-05	9.6E-05	1.3E-04	2.6E-04	2.9E-02	1.7E-02	7E-03	5E-03	6E-03	3E-03	2E-03	9E-04	1E-03	3E-04	5E-05	1E-04	7E-05	5E-03	2E-03
1.7E-03	2.1E-03	2.3E-03	2.6E-03	2.8E-03	4.7E-03	9.1E-04	9.7E-04	3.4E-03	4.6E-06	2.5E-07	1.1E-05	4.8E-05	8.4E-05	1.3E-04	2.5E-04	2.7E-02	1.6E-02	7E-03	4E-03	5E-03	3E-03	2E-03	9E-04	1E-03	3E-04	5E-05	1E-04	6E-05	5E-03	2E-03
1.6E-03	2.0E-03	2.1E-03	2.4E-03	2.6E-03	4.4E-03	8.4E-04	8.8E-04	3.3E-03	5.8E-06	2.6E-07	1.4E-05	4.2E-05	7.5E-05	1.2E-04	2.5E-04	2.5E-02	1.6E-02	6E-03	4E-03	5E-03	3E-03	2E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	4E-03	2E-03
1.5E-03	1.9E-03	2.0E-03	2.3E-03	2.5E-03	4.0E-03	7.8E-04	8.1E-04	3.2E-03	7.2E-06	2.7E-07	1.8E-05	3.7E-05	6.7E-05	1.2E-04	2.4E-04	2.4E-02	1.5E-02	6E-03	4E-03	5E-03	3E-03	1E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	4E-03	2E-03
1.5E-03	1.8E-03	1.9E-03	2.2E-03	2.3E-03	3.8E-03	7.3E-04	7.5E-04	3.1E-03	8.1E-06	2.8E-07	2.2E-05	3.2E-05	6.1E-05	1.1E-04	2.3E-04	2.3E-02	1.4E-02	6E-03	4E-03	5E-03	3E-03	1E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	4E-03	2E-03
1.4E-03	1.7E-03	1.8E-03	2.1E-03	2.2E-03	3.5E-03	6.9E-04	7.0E-04	3.0E-03	8.7E-06	2.9E-07	2.5E-05	2.8E-05	5.6E-05	1.1E-04	2.2E-04	2.2E-02	1.4E-02	6E-03	4E-03	4E-03	3E-03	1E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	4E-03	1E-03
1.4E-03	1.6E-03	1.7E-03	2.0E-03	2.1E-03	3.3E-03	6.4E-04	6.5E-04	2.9E-03	8.8E-06	3.0E-07	2.6E-05	2.5E-05	5.2E-05	1.0E-04	2.2E-04	2.1E-02	1.3E-02	6E-03	3E-03	4E-03	3E-03	1E-03	7E-04	8E-04	2E-04	4E-05	1E-04	5E-05	3E-03	1E-03
1.3E-03	1.6E-03	1.7E-03	1.9E-03	2.0E-03	3.1E-03	6.1E-04	6.1E-04	2.8E-03	9.0E-06	3.2E-07	2.7E-05	2.2E-05	4.8E-05	9.8E-05	2.1E-04	2.0E-02	1.2E-02	5E-03	3E-03	4E-03	3E-03	1E-03	7E-04	8E-04	2E-04	4E-05	1E-04	5E-05	3E-03	1E-03
1.3E-03	1.5E-03	1.6E-03	1.8E-03	1.9E-03	3.0E-03	5.7E-04	5.7E-04	2.8E-03	9.2E-06	3.3E-07	2.7E-05	2.1E-05	4.5E-05	9.3E-05	2.0E-04	1.9E-02	1.2E-02	5E-03	3E-03	4E-03	3E-03	1E-03	7E-04	8E-04	2E-04	4E-05	1E-04	5E-05	3E-03	1E-03
1.2E-03	1.5E-03	1.5E-03	1.7E-03	1.8E-03	2.8E-03	5.4E-04	5.4E-04	2.7E-03	9.3E-06	3.4E-07	2.8E-05	1.9E-05	4.2E-05	8.8E-05	2.0E-04	1.9E-02	1.2E-02	5E-03	3E-03	4E-03	3E-03	1E-03	7E-04	8E-04	2E-04	4E-05	1E-04	5E-05	3E-03	1E-03
1.2E-03	1.4E-03	1.5E-03	1.7E-03	1.7E-03	2.7E-03	5.2E-04	5.2E-04	2.6E-03	9.3E-06	3.6E-07	2.9E-05	1.8E-05	4.0E-05	8.3E-05	1.9E-04	1.8E-02	1.1E-02	5E-03	3E-03	3E-03	3E-03	1E-03	7E-04	7E-04	2E-04	4E-05	1E-04	5E-05	3E-03	1E-03
1.2E-03	1.4E-03	1.4E-03	1.6E-03	1.7E-03	2.6E-03	5.0E-04	4.9E-04	2.6E-03	9.1E-06	3.8E-07	2.9E-05	1.7E-05	3.8E-05	7.9E-05	1.9E-04	1.7E-02	1.1E-02	5E-03	3E-03	3E-03	3E-03	1E-03	7E-04	7E-04	2E-04	4E-05	1E-04	5E-05	3E-03	1E-03
1.2E-03	1.4E-03	1.5E-03	1.7E-03	1.7E-03	2.6E-03	4.9E-04	4.9E-04	2.6E-03	8.6E-06	3.9E-07	2.8E-05	1.6E-05	3.9E-05	7.5E-05	1.7E-04	1.8E-02	1.1E-02	5E-03	3E-03	3E-03	3E-03	1E-03	7E-04	7E-04	2E-04	3E-05	9E-05	4E-05	3E-03	1E-03
1.2E-03	1.4E-03	1.4E-03	1.6E-03	1.7E-03	2.5E-03	4.7E-04	4.7E-04	2.5E-03	8.2E-06	4.1E-07	2.7E-05	1.5E-05	3.7E-05	6.9E-05	1.6E-04	1.7E-02	1.1E-02	5E-03	3E-03	3E-03	3E-03	1E-03	6E-04	7E-04	2E-04	3E-05	9E-05	4E-05	3E-03	1E-03
1.3E-03	1.3E-03	1.1E-03	1.2E-03	1.2E-03	2.1E-03	6.2E-04	5.2E-04	1.8E-02	4.1E-07	9.6E-08	1.2E-06	4.9E-06	2.4E-05	6.9E-06	1.8E-03	3.4E-02	1.1E-02	6E-03	2E-03	2E-03	2E-02	8E-03	4E-03	5E-03	2E-03	4E-04	1E-03	5E-04	2E-03	9E-04
1.4E-03	1.5E-03	1.3E-03	1.4E-03	1.4E-03	3.1E-03	8.2E-04	6.8E-04	1.3E-02	4.4E-07	1.0E-07	1.4E-06	5.5E-06	3.0E-05	7.5E-06	1.2E-03	3.1E-02	1.2E-02	7E-03	3E-03	3E-03	1E-02	6E-03	3E-03	4E-03	1E-03	2E-04	7E-04	3E-04	3E-03	1E-03
1.5E-03	1.5E-03	1.3E-03	1.4E-03	1.4E-03	3.6E-03	9.0E-04	7.3E-04	1.2E-02	4.5E-07	1.1E-07	1.4E-06	5.8E-06	3.2E-05	7.6E-06	1.1E-03	3.1E-02	1.3E-02	7E-03	3E-03	3E-03	1E-02	6E-03	3E-03	3E-03	1E-03	2E-04	6E-04	3E-04	4E-03	1E-03
1.6E-03	1.6E-03	1.4E-03	1.4E-03	1.4E-03	4.2E-03	9.7E-04	7.8E-04	1.2E-02	4.6E-07	1.1E-07	1.4E-06	6.1E-06	3.5E-05	7.8E-06	1.0E-03	3.2E-02	1.3E-02	7E-03	3E-03	3E-03	1E-02	5E-03	3E-03	3E-03	1E-03	2E-04	6E-04	3E-04	4E-03	2E-03
1.7E-03	1.6E-03	1.4E-03	1.5E-03	1.5E-03	5.1E-03	1.1E-03	8.4E-04	1.1E-02	4.7E-07	1.1E-07	1.4E-06	6.6E-06	3.8E-05	8.1E-06	9.7E-04	3.4E-02	1.4E-02	8E-03	3E-03	3E-03	1E-02	5E-03	3E-03	3E-03	1E-03	2E-04	5E-04	2E-04	5E-03	2E-03
1.8E-03	1.8E-03	1.5E-03	1.6E-03	1.5E-03	6.6E-03	1.1E-03	8.9E-04	1.0E-02	4.8E-07	1.1E-07	1.5E-06	7.3E-06	4.2E-05	8.4E-06	8.9E-04	3.6E-02	1.6E-02	1E-02	3E-03	3E-03	1E-02	5E-03	3E-03	3E-03	9E-04	2E-04	5E-04	2E-04	7E-03	3E-03
2.1E-03	1.9E-03	1.6E-03	1.7E-03	1.6E-03	8.7E-03	1.2E-03	9.8E-04	1.0E-02	5.0E-07	1.2E-07	1.5E-06	8.3E-06	4.8E-05	8.7E-06	8.4E-04	4.0E-02	1.9E-02	1E-02	4E-03	3E-03	1E-02	5E-03	3E-03	3E-03	8E-04	2E-04	5E-04	2E-04	9E-03	3E-03
2.4E-03	2.1E-03	1.8E-03	1.8E-03	1.7E-03	1.2E-02	1.4E-03	1.1E-03	9.5E-03	5.1E-07	1.2E-07	1.6E-06	9.7E-06	5.9E-05	9.2E-06	7.9E-04	4.6E-02	2.1E-02	1E-02	4E-03	3E-03	9E-03	4E-03	2E-03	3E-03	8E-04	2E-04	4E-04	2E-04	1E-02	5E-03
2.7E-03	2.4E-03	1.9E-03	1.8E-03	1.7E-03	1.5E-02	1.4E-03	1.1E-03	8.9E-03	5.2E-07	1.2E-07	1.6E-06	1.2E-05	7.6E-05	9.8E-06	7.8E-04	5.1E-02	2.3E-02	2E-02	4E-03	4E-03	9E-03	4E-03	2E-03	3E-03	8E-04	2E-04	4E-04	2E-04	2E-02	6E-03
3.1E-03	2.7E-03	2.1E-03	2.0E-03	1.8E-03	2.1E-02	1.6E-03	1.2E-03	8.5E-03	5.4E-07	1.3E-07	1.6E-06	1.4E-05	1.1E-04	1.1E-05	7.3E-04	5.8E-02	2.5E-02	2E-02	5E-03	4E-03	8E-03	4E-03	2E-03	2E-03	7E-04	2E-04	4E-04	2E-04	2E-02	8E-03
3.4E-03	3.1E-03	2.4E-03	2.3E-03	2.1E-03	2.7E-02	1.9E-03	1.4E-03	8.1E-03	5.5E-07	1.3E-07	1.7E-06	1.7E-05	1.8E-04	1.2E-05	6.7E-04	6.6E-02	2.7E-02	2E-02	5E-03	4E-03	8E-03	4E-03	2E-03	2E-03	7E-04	1E-04	4E-04	2E-04	3E-02	1E-02
3.9E-03	4.1E-03	3.5E-03	3.5E-03	3.2E-03	2.9E-02	3.9E-03	2.7E-03	6.6E-03	6.5E-07	1.5E-07	1.9E-06	4.0E-05	4.2E-04	2.2E-05	5.2E-04	7.2E-02	2.9E-02	2E-02	8E-03	7E-03	7E-03	3E-03	2E-03	2E-03	5E-04	1E-04	3E-04	1E-04	3E-02	1E-02
3.8E-03	4.2E-03	3.7E-03	3.8E-03	3.6E-03	2.6E-02	4.2E-03	3.0E-03	6.3E-03	6.9E-07	1.6E-07	2.0E-06	5.3E-05	4.1E-04	2.6E-05	4.9E-04	7.0E-02	3.0E-02	1E-02	8E-03	7E-03	6E-03	3E-03	2E-03	2E-03	5E-04	1E-04	3E-04	1E-04	3E-02	1E-02
3.6E-03	4.2E-03	3.7E-03	3.9E-03	3.8E-03	2.3E-02	4.2E-03	3.3E-03	5.9E-03	7.4E-07	1.6E-07	2.1E-06	6.7E-05	3.9E-04	3.0E-05	4.7E-04	6.7E-02	2.9E-02	1E-02	8E-03	8E-03	6E-03	3E-03	1E-03	2E-03	5E-04	1E-04	3E-04	1E-04	2E-02	9E-03
3.2E-03	4.0E-03	3.9E-03	4.3E-03	4.3E-03	1.7E-02	3.4E-03	3.1E-03	5.1E-03	9.0E-07	1.7E-07	2.4E-06	8.0E-05	3.1E-04	4.5E-05	4.2E-04	5.8E-02	2.8E-02	1E-02	8E-03	9E-03	5E-03	2E-03	1E-03	1E-03	4E-04	9E-05	2E-04	1E-04	2E-02	7E-03

TAMT Risk Assessment - DPM Cancer and Chronic HI

AERMOD UNITIZED CONCENTRATIONS

AERMOD Output

Source Group in AERMOD

	Discrete Receptor ID (Group Name)	X	Y	B10_1_AUX	B10_2_AUX	B10_3_AUX	B10_4_AUX	B10_5_AUX	B10_6_AUX	B10_7_AUX	B10_8_AUX	CHE_1	LOC_SWTCH EMP
				1	3	5	7	9	11	13	15	17	18
residential	REC_100M	486330.59	3618825.04	2.5E-01	2.1E-01	2.5E-01	2.7E-01	3.0E-01	3.0E-01	3.1E-01	3.2E-01	5.1E+05	1.3E+00
residential	REC_100M	486430.59	3618825.04	2.4E-01	2.0E-01	2.3E-01	2.5E-01	2.8E-01	3.0E-01	3.1E-01	3.2E-01	4.5E+05	1.1E+00
residential	REC_100M	486530.59	3618825.04	2.2E-01	1.9E-01	2.1E-01	2.4E-01	2.7E-01	2.9E-01	3.0E-01	3.2E-01	3.9E+05	9.6E-01
residential	REC_100M	486630.59	3618825.04	2.1E-01	1.8E-01	2.0E-01	2.2E-01	2.5E-01	2.7E-01	2.9E-01	3.0E-01	3.6E+05	8.6E-01
residential	REC_100M	486730.59	3618825.04	2.0E-01	1.7E-01	1.9E-01	2.0E-01	2.3E-01	2.5E-01	2.7E-01	2.9E-01	3.2E+05	7.5E-01
residential	REC_100M	486830.59	3618825.04	1.9E-01	1.7E-01	1.8E-01	1.9E-01	2.2E-01	2.4E-01	2.6E-01	2.8E-01	2.8E+05	6.5E-01
residential	REC_100M	486930.59	3618825.04	1.8E-01	1.6E-01	1.7E-01	1.8E-01	2.0E-01	2.3E-01	2.4E-01	2.6E-01	2.5E+05	5.7E-01
residential	REC_100M	487030.59	3618825.04	1.7E-01	1.5E-01	1.6E-01	1.7E-01	1.9E-01	2.1E-01	2.3E-01	2.5E-01	2.2E+05	5.0E-01
residential	REC_100M	487130.59	3618825.04	1.7E-01	1.5E-01	1.5E-01	1.6E-01	1.8E-01	2.0E-01	2.1E-01	2.3E-01	2.0E+05	4.6E-01
residential	REC_100M	487230.59	3618825.04	1.6E-01	1.4E-01	1.5E-01	1.5E-01	1.7E-01	1.9E-01	2.0E-01	2.1E-01	1.8E+05	4.1E-01
residential	REC_100M	487330.59	3618825.04	1.5E-01	1.4E-01	1.4E-01	1.5E-01	1.6E-01	1.8E-01	1.9E-01	2.0E-01	1.6E+05	3.8E-01
residential	REC_100M	487430.59	3618825.04	1.5E-01	1.3E-01	1.4E-01	1.4E-01	1.5E-01	1.7E-01	1.8E-01	1.9E-01	1.5E+05	3.4E-01
residential	REC_100M	487530.59	3618825.04	1.4E-01	1.3E-01	1.3E-01	1.3E-01	1.4E-01	1.6E-01	1.7E-01	1.8E-01	1.4E+05	3.2E-01

DPM SCALED CONCENTRATIONS

Vessel Hoteling | Vessel Transit | Tug/Barge Transit | Terminal E

TAMT Risk Assessment - DPM Cancer and Chronic HI

AERMOD Output

AERMOD UNITIZED CONCENTRATIONS

	Discrete Receptor ID (Group Name)	X	Y	B10_1_AUX	B10_2_AUX	B10_3_AUX	B10_4_AUX	B10_5_AUX	B10_6_AUX	B10_7_AUX	B10_8_AUX	CHE_1	LOC_SWTCH EMP	LOC_SWTCH LOA	OGV_PATH _BLR	OGV_PATH _DPM	TR_28TH	TR_BAYMA R	TR_BOSTON	TR_CROSBY	TR_HARBOR CHA	TR_HARBOR SAM	TUG_PATH _DPM
Source Group in AERMOD				1	3	5	7	9	11	13	15	17	18	19	20	21	22	23	24	25	26	27	28
residential	REC_100I	487630.59	3619125.04	1.2E-01	1.1E-01	1.2E-01	1.2E-01	1.4E-01	1.5E-01	1.6E-01	1.7E-01	1.2E+05	2.7E-01	3.0E-01	7.1E-02	7.1E-02	6.6E-01	2.8E-02	5.8E-01	6.3E-01	4.9E-01	7.0E-01	9.0E-02
residential	REC_100I	487730.59	3619125.04	1.2E-01	1.1E-01	1.1E-01	1.2E-01	1.3E-01	1.4E-01	1.5E-01	1.6E-01	1.1E+05	2.6E-01	2.9E-01	6.9E-02	6.9E-02	6.9E-01	3.0E-02	6.5E-01	5.9E-01	4.6E-01	7.0E-01	8.8E-02
residential	REC_100I	487830.59	3619125.04	1.2E-01	1.0E-01	1.1E-01	1.1E-01	1.2E-01	1.4E-01	1.4E-01	1.5E-01	1.1E+05	2.5E-01	2.7E-01	6.8E-02	6.8E-02	7.1E-01	3.1E-02	6.9E-01	5.4E-01	4.3E-01	6.9E-01	8.5E-02
residential	REC_100I	487930.59	3619125.04	1.1E-01	1.0E-01	1.1E-01	1.1E-01	1.2E-01	1.3E-01	1.4E-01	1.5E-01	1.0E+05	2.4E-01	2.5E-01	6.7E-02	6.7E-02	7.3E-01	3.2E-02	7.1E-01	5.0E-01	4.0E-01	6.8E-01	8.3E-02
residential	REC_100I	488030.59	3619125.04	1.1E-01	9.8E-02	1.0E-01	1.1E-01	1.1E-01	1.2E-01	1.3E-01	1.4E-01	9.7E+04	2.2E-01	2.4E-01	6.5E-02	6.5E-02	7.4E-01	3.3E-02	7.1E-01	4.5E-01	3.7E-01	6.6E-01	8.1E-02
residential	REC_100I	488130.59	3619125.04	1.1E-01	9.5E-02	9.9E-02	1.0E-01	1.1E-01	1.2E-01	1.2E-01	1.3E-01	9.1E+04	2.1E-01	2.2E-01	6.4E-02	6.4E-02	7.5E-01	3.5E-02	7.2E-01	4.1E-01	3.4E-01	6.4E-01	7.8E-02
residential	REC_100I	476730.59	3619225.04	1.5E-02	1.5E-02	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	6.5E+03	1.3E-02	1.2E-02	5.6E-02	5.6E-02	1.2E-02	5.1E-03	1.2E-02	1.5E-02	1.9E-02	1.2E-02	5.6E-02
residential	REC_100I	476830.59	3619225.04	1.5E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	6.7E+03	1.3E-02	1.3E-02	5.9E-02	5.9E-02	1.2E-02	5.1E-03	1.2E-02	1.5E-02	1.9E-02	1.3E-02	6.0E-02
residential	REC_100I	476930.59	3619225.04	1.6E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	6.7E+03	1.4E-02	1.3E-02	6.1E-02	6.1E-02	1.2E-02	5.1E-03	1.2E-02	1.5E-02	1.9E-02	1.3E-02	6.4E-02
residential	REC_100I	477030.59	3619225.04	1.6E-02	1.6E-02	1.5E-02	1.5E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	6.7E+03	1.4E-02	1.3E-02	6.3E-02	6.3E-02	1.2E-02	5.1E-03	1.2E-02	1.5E-02	1.9E-02	1.3E-02	6.7E-02
residential	REC_100I	477130.59	3619225.04	1.6E-02	1.6E-02	1.5E-02	1.5E-02	1.4E-02	1.4E-02	1.3E-02	1.3E-02	6.9E+03	1.4E-02	1.3E-02	6.8E-02	6.8E-02	1.3E-02	5.1E-03	1.3E-02	1.5E-02	2.0E-02	1.3E-02	7.3E-02

DPM SCALED CONCENTRATIONS

Receptor X	B10_1_AUX	B10_2_AUX	B10_3_AUX	B10_4_AUX	B10_5_AUX	B10_6_AUX	B10_7_AUX	B10_8_AUX	CHE_1	LOC_SWTCHEMP	LOC_SWTCHLOA	OGV_PATH_DPM	TR_28TH	TR_BAYMAR	TR_BOSTON	TR_CROSBY	TR_HARBORCHA	TR_HARBORSAM	TUG_PATH_DPM	SUM
divide by -->	4	4	4	4	2	2	2	2	1	2	2	1	1	1	1	1	1	1	1	
	Refrigerated Containersfully_mitigated	Refrigerated Containersfully_mitigated	Refrigerated Containersfully_mitigated	Refrigerated Containersfully_mitigated	Multi-Purpose General Cargofully_mitigated	Multi-Purpose General Cargofully_mitigated	Dry Bulkfully_mitigated	Dry Bulkfully_mitigated	Allfully_mitigated	Allfully_mitigated	Allfully_mitigated	Allfully_mitigated	TR_28THfully_mitigated	TR_BAYMARfully_mitigated	TR_BOSTONfully_mitigated	TR_CROSBYfully_mitigated	TR_HARBORCHAfully_mitigated	TR_HARBORSAMfully_mitigated	Allfully_mitigated	
g/s -->	1.1E-02	1.1E-02	1.1E-02	1.1E-02	1.3E-02	1.3E-02	1.4E-02	1.4E-02	2.8E-08	2.3E-03	2.3E-03	4.02E-02	7.8E-06	9.2E-06	2.4E-05	5.2E-05	1.1E-04	1.1E-04	2.4E-03	
	1	3	5	7	9	11	13	15	17	18	19	21	22	23	24	25	26	27	28	
487630.59	1.4E-03	1.2E-03	1.3E-03	1.4E-03	1.8E-03	1.9E-03	2.2E-03	2.4E-03	3.4E-03	6.5E-04	7.1E-04	2.8E-03	5.2E-06	2.6E-07	1.4E-05	3.3E-05	5.6E-05	8.0E-05	2.1E-04	2.2E-02
487730.59	1.3E-03	1.2E-03	1.3E-03	1.3E-03	1.7E-03	1.8E-03	2.1E-03	2.2E-03	3.2E-03	6.1E-04	6.7E-04	2.8E-03	5.4E-06	2.7E-07	1.6E-05	3.0E-05	5.2E-05	8.0E-05	2.1E-04	2.1E-02
487830.59	1.3E-03	1.2E-03	1.2E-03	1.3E-03	1.6E-03	1.8E-03	2.0E-03	2.1E-03	3.1E-03	5.8E-04	6.3E-04	2.7E-03	5.6E-06	2.8E-07	1.7E-05	2.8E-05	4.9E-05	7.9E-05	2.0E-04	2.0E-02
487930.59	1.3E-03	1.1E-03	1.2E-03	1.3E-03	1.5E-03	1.7E-03	1.9E-03	2.0E-03	2.9E-03	5.5E-04	6.0E-04	2.7E-03	5.7E-06	2.9E-07	1.7E-05	2.6E-05	4.6E-05	7.8E-05	2.0E-04	1.9E-02
488030.59	1.2E-03	1.1E-03	1.2E-03	1.2E-03	1.5E-03	1.6E-03	1.8E-03	1.9E-03	2.7E-03	5.2E-04	5.5E-04	2.6E-03	5.8E-06	3.1E-07	1.7E-05	2.3E-05	4.2E-05	7.6E-05	1.9E-04	1.8E-02
488130.59	1.2E-03	1.1E-03	1.1E-03	1.2E-03	1.4E-03	1.5E-03	1.7E-03	1.8E-03	2.6E-03	4.8E-04	5.1E-04	2.6E-03	5.9E-06	3.2E-07	1.8E-05	2.1E-05	3.9E-05	7.3E-05	1.9E-04	1.7E-02
476730.59	1.7E-04	1.7E-04	1.6E-04	1.6E-04	1.7E-04	1.6E-04	1.7E-04	1.7E-04	1.8E-04	3.0E-05	2.9E-05	2.2E-03	9.5E-08	4.7E-08	2.9E-07	7.6E-07	2.1E-06	1.4E-06	1.3E-04	4.0E-03
476830.59	1.7E-04	1.8E-04	1.7E-04	1.6E-04	1.8E-04	1.7E-04	1.8E-04	1.8E-04	1.9E-04	3.1E-05	3.0E-05	2.4E-03	9.7E-08	4.7E-08	3.0E-07	7.8E-07	2.2E-06	1.4E-06	1.4E-04	4.1E-03
476930.59	1.8E-04	1.8E-04	1.7E-04	1.6E-04	1.8E-04	1.7E-04	1.8E-04	1.8E-04	1.9E-04	3.2E-05	3.0E-05	2.5E-03	9.8E-08	4.7E-08	3.0E-07	7.8E-07	2.2E-06	1.5E-06	1.5E-04	4.3E-03
477030.59	1.8E-04	1.8E-04	1.7E-04	1.6E-04	1.8E-04	1.7E-04	1.8E-04	1.8E-04	1.9E-04	3.2E-05	3.0E-05	2.5E-03	9.8E-08	4.7E-08	3.0E-07	7.8E-07	2.2E-06	1.5E-06	1.6E-04	4.4E-03
477130.59	1.8E-04	1.8E-04	1.7E-04	1.7E-04	1.8E-04	1.8E-04	1.9E-04	1.9E-04	2.0E-04	3.3E-05	3.1E-05	2.7E-03	1.0E-07	4.7E-08	3.0E-07	7.9E-07	2.3E-06	1.5E-06	1.7E-04	4.6E-03

Receptor X	Vessel Hoteling All	Vessel Hoteling Refrigerated Containersfully_mitigated	Vessel Hoteling Multi-Purpose General Cargofully_mitigated	Vessel Hoteling Dry Bulkfully_mitigated	Vessel Transit All	Vessel Transit Refrigerated Containersfully_mitigated	Vessel Transit Multi-Purpose General Cargofully_mitigated	Vessel Transit Dry Bulkfully_mitigated	Tug/Barge Transit All	Tug/Barge Transit Refrigerated Containersfully_mitigated	Tug/Barge Transit Multi-Purpose General Cargofully_mitigated	Tug/Barge Transit Dry Bulkfully_mitigated	Terminal E All	Terminal E Refrigerated Containersfully_mitigated
	100%	46%	26%	28%	100%	46%	25%	28%	100%	21%	54%	25%	100%	40%
487630.59	1.4E-02	5E-03	4E-03	5E-03	3E-03	1E-03	7E-04	8E-04	2E-04	4E-05	1E-04	5E-05	3E-03	1E-03
487730.59	1.3E-02	5E-03	4E-03	4E-03	3E-03	1E-03	7E-04	8E-04	2E-04	4E-05	1E-04	5E-05	3E-03	1E-03
487830.59	1.3E-02	5E-03	3E-03	4E-03	3E-03	1E-03	7E-04	8E-04	2E-04	4E-05	1E-04	5E-05	3E-03	1E-03
487930.59	1.2E-02	5E-03	3E-03	4E-03	3E-03	1E-03	7E-04	8E-04	2E-04	4E-05	1E-04	5E-05	3E-03	1E-03
488030.59	1.2E-02	5E-03	3E-03	4E-03	3E-03	1E-03	7E-04	7E-04	2E-04	4E-05	1E-04	5E-05	3E-03	1E-03
488130.59	1.1E-02	5E-03	3E-03	4E-03	3E-03	1E-03	6E-04	7E-04	2E-04	4E-05	1E-04	5E-05	3E-03	1E-03
476730.59	1.3E-03	7E-04	3E-04	3E-04	2E-03	1E-03	6E-04	6E-04	1E-04	3E-05	7E-05	3E-05	2E-04	7E-05
476830.59	1.4E-03	7E-04	3E-04	4E-04	2E-03	1E-03	6E-04	7E-04	1E-04	3E-05	8E-05	4E-05	2E-04	8E-05
476930.59	1.4E-03	7E-04	3E-04	4E-04	2E-03	1E-03	6E-04	7E-04	2E-04	3E-05	8E-05	4E-05	2E-04	8E-05
477030.59	1.4E-03	7E-04	3E-04	4E-04	3E-03	1E-03	6E-04	7E-04	2E-04	3E-05	9E-05	4E-05	2E-04	8E-05
477130.59	1.4E-03	7E-04	4E-04	4E-04	3E-03	1E-03	7E-04	8E-04	2E-04	4E-05	9E-05	4E-05	2E-04	8E-05

[illegible]

TAMT Risk Assessment - DPM Cancer and Chronic HI

AERMOD Output

AERMOD UNITIZED CONCENTRATIONS (Source Group in AERMOD; g/s --> ; divide by -->)

	Discrete Receptor ID (Group Name)	X	Y	B10_1_AUX	B10_2_AUX	B10_3_AUX	B10_4_AUX	B10_5_AUX	B10_6_AUX	B10_7_AUX	B10_8_AUX	CHE_1	LOC_SWTCH EMP	LOC_SWTCH LOA	OGV_PATH _BLR	OGV_PATH _DPM	TR_28TH	TR_BAYMA R	TR_BOSTON	TR_CROSBY	TR_HARBOR CHA	TR_HARBOR SAM	TUG_PATH _DPM
			Source Group	1	3	5	7	9	11	13	15	17	18	19	20	21	22	23	24	25	26	27	28
residential	REC_100M	486830.59	3619425.04	1.8E-01	1.6E-01	1.8E-01	1.9E-01	2.1E-01	2.1E-01	2.1E-01	2.2E-01	1.9E+05	4.3E-01	4.3E-01	8.0E-02	8.0E-02	1.5E-01	2.0E-02	1.3E-01	6.0E-01	7.2E-01	3.5E-01	1.0E-01
residential	REC_100M	486930.59	3619425.04	1.7E-01	1.5E-01	1.7E-01	1.9E-01	2.0E-01	2.0E-01	2.1E-01	2.2E-01	1.9E+05	4.4E-01	4.4E-01	8.0E-02	8.0E-02	1.7E-01	2.1E-02	1.5E-01	6.7E-01	7.3E-01	4.0E-01	1.0E-01
residential	REC_100M	487030.59	3619425.04	1.6E-01	1.4E-01	1.6E-01	1.7E-01	1.9E-01	2.0E-01	2.1E-01	2.2E-01	1.7E+05	3.8E-01	4.0E-01	7.6E-02	7.6E-02	1.9E-01	2.1E-02	1.6E-01	6.4E-01	6.5E-01	4.0E-01	9.6E-02
residential	REC_100M	487130.59	3619425.04	1.5E-01	1.3E-01	1.5E-01	1.6E-01	1.8E-01	1.9E-01	2.0E-01	2.1E-01	1.5E+05	3.5E-01	3.7E-01	7.3E-02	7.3E-02	2.1E-01	2.2E-02	1.8E-01	6.1E-01	6.0E-01	4.2E-01	9.2E-02
residential	REC_100M	487230.59	3619425.04	1.4E-01	1.3E-01	1.4E-01	1.5E-01	1.7E-01	1.8E-01	1.9E-01	2.0E-01	1.5E+05	3.5E-01	3.7E-01	7.2E-02	7.2E-02	2.6E-01	2.3E-02	2.1E-01	6.1E-01	5.9E-01	4.6E-01	9.2E-02
residential	REC_100M	487330.59	3619425.04	1.3E-01	1.2E-01	1.3E-01	1.4E-01	1.6E-01	1.7E-01	1.8E-01	1.9E-01	1.3E+05	2.9E-01	3.1E-01	6.8E-02	6.8E-02	2.8E-01	2.3E-02	2.3E-01	5.4E-01	5.0E-01	4.3E-01	8.4E-02
residential	REC_100M	487430.59	3619425.04	1.3E-01	1.2E-01	1.3E-01	1.4E-01	1.5E-01	1.7E-01	1.8E-01	1.9E-01	1.4E+05	3.2E-01	3.4E-01	7.0E-02	7.0E-02	3.8E-01	2.5E-02	3.1E-01	6.1E-01	5.5E-01	5.2E-01	8.9E-02
residential	REC_100M	487530.59	3619425.04	1.2E-01	1.1E-01	1.2E-01	1.3E-01	1.5E-01	1.6E-01	1.7E-01	1.8E-01	1.3E+05	2.9E-01	3.2E-01	6.8E-02	6.8E-02	4.4E-01	2.6E-02	3.7E-01	5.9E-01	5.1E-01	5.2E-01	8.6E-02
residential	REC_100M	487630.59	3619425.04	1.2E-01	1.0E-01	1.1E-01	1.2E-01	1.4E-01	1.5E-01	1.6E-01	1.7E-01	1.1E+05	2.5E-01	2.8E-01	6.5E-02	6.5E-02	4.7E-01	2.6E-02	4.1E-01	5.4E-01	4.4E-01	4.9E-01	8.1E-02
residential	REC_100M	487730.59	3619425.04	1.1E-01	9.9E-02	1.1E-01	1.2E-01	1.3E-01	1.4E-01	1.5E-01	1.6E-01	1.0E+05	2.4E-01	2.6E-01	6.3E-02	6.3E-02	4.8E-01	2.7E-02	4.5E-01	5.1E-01	4.0E-01	4.9E-01	7.9E-02
residential	REC_100M	487830.59	3619425.04	1.1E-01	9.4E-02	1.0E-01	1.1E-01	1.2E-01	1.3E-01	1.4E-01	1.5E-01	9.3E+04	2.1E-01	2.3E-01	6.1E-02	6.1E-02	4.8E-01	2.8E-02	4.5E-01	4.6E-01	3.6E-01	4.7E-01	7.5E-02

DPM SCALED CONCENTRATIONS

X	B10_1_AUX	B10_2_AUX	B10_3_AUX	B10_4_AUX	B10_5_AUX	B10_6_AUX	B10_7_AUX	B10_8_AUX	CHE_1	LOC_SWTCHEMP	LOC_SWTCHLOA	OGV_PATH_DPM	TR_28TH	TR_BAYMAR	TR_BOSTON	TR_CROSBY	TR_HARBORCHA	TR_HARBORSAM	TUG_PATH_DPM	SUM
divide by -->	4	4	4	4	2	2	2	2	1	2	2	1	1	1	1	1	1	1	1	
	Refrigerated Containersfully_mitigated	Refrigerated Containersfully_mitigated	Refrigerated Containersfully_mitigated	Refrigerated Containersfully_mitigated	Multi-Purpose General Cargofully_mitigated	Multi-Purpose General Cargofully_mitigated	Dry Bulkfully_mitigated	Dry Bulkfully_mitigated	Allfully_mitigated	Allfully_mitigated	Allfully_mitigated	Allfully_mitigated	TR_28THfully_mitigated	TR_BAYMARfully_mitigated	TR_BOSTONfully_mitigated	TR_CROSBYfully_mitigated	TR_HARBORCHAfully_mitigated	TR_HARBORSAMfully_mitigated	Allfully_mitigated	
g/s -->	1.1E-02	1.1E-02	1.1E-02	1.1E-02	1.3E-02	1.3E-02	1.4E-02	1.4E-02	2.8E-08	2.3E-03	2.3E-03	4.02E-02	7.8E-06	9.2E-06	2.4E-05	5.2E-05	1.1E-04	1.1E-04	2.4E-03	
	1	3	5	7	9	11	13	15	17	18	19	21	22	23	24	25	26	27	28	
486830.59	2.1E-03	1.7E-03	2.0E-03	2.2E-03	2.7E-03	2.7E-03	3.0E-03	3.1E-03	5.4E-03	1.0E-03	1.0E-03	3.2E-03	1.1E-06	1.8E-07	3.1E-06	3.1E-05	8.2E-05	4.0E-05	2.4E-04	3.1E-02
486930.59	2.0E-03	1.7E-03	1.9E-03	2.1E-03	2.6E-03	2.7E-03	3.0E-03	3.1E-03	5.4E-03	1.0E-03	1.0E-03	3.2E-03	1.3E-06	1.9E-07	3.6E-06	3.5E-05	8.4E-05	4.6E-05	2.4E-04	3.0E-02
487030.59	1.8E-03	1.6E-03	1.8E-03	1.9E-03	2.4E-03	2.5E-03	2.9E-03	3.0E-03	4.7E-03	9.0E-04	9.3E-04	3.0E-03	1.5E-06	1.9E-07	3.8E-06	3.3E-05	7.4E-05	4.6E-05	2.3E-04	2.8E-02
487130.59	1.7E-03	1.5E-03	1.7E-03	1.8E-03	2.3E-03	2.4E-03	2.8E-03	2.9E-03	4.3E-03	8.2E-04	8.7E-04	2.9E-03	1.7E-06	2.0E-07	4.3E-06	3.1E-05	6.9E-05	4.8E-05	2.2E-04	2.6E-02
487230.59	1.6E-03	1.4E-03	1.6E-03	1.7E-03	2.2E-03	2.4E-03	2.7E-03	2.8E-03	4.2E-03	8.1E-04	8.6E-04	2.9E-03	2.0E-06	2.1E-07	5.2E-06	3.2E-05	6.8E-05	5.2E-05	2.2E-04	2.6E-02
487330.59	1.5E-03	1.3E-03	1.5E-03	1.6E-03	2.0E-03	2.2E-03	2.5E-03	2.7E-03	3.6E-03	6.8E-04	7.4E-04	2.7E-03	2.2E-06	2.1E-07	5.6E-06	2.8E-05	5.7E-05	5.0E-05	2.0E-04	2.3E-02
487430.59	1.5E-03	1.3E-03	1.5E-03	1.6E-03	2.0E-03	2.2E-03	2.5E-03	2.6E-03	3.9E-03	7.4E-04	8.0E-04	2.8E-03	3.0E-06	2.3E-07	7.5E-06	3.2E-05	6.3E-05	5.9E-05	2.1E-04	2.4E-02
487530.59	1.4E-03	1.2E-03	1.4E-03	1.5E-03	1.9E-03	2.1E-03	2.4E-03	2.5E-03	3.6E-03	6.8E-04	7.4E-04	2.7E-03	3.5E-06	2.4E-07	9.0E-06	3.1E-05	5.8E-05	5.9E-05	2.0E-04	2.2E-02
487630.59	1.3E-03	1.2E-03	1.3E-03	1.4E-03	1.8E-03	1.9E-03	2.2E-03	2.4E-03	3.1E-03	5.9E-04	6.5E-04	2.6E-03	3.7E-06	2.4E-07	9.9E-06	2.8E-05	5.0E-05	5.6E-05	1.9E-04	2.1E-02
487730.59	1.3E-03	1.1E-03	1.2E-03	1.3E-03	1.7E-03	1.8E-03	2.1E-03	2.2E-03	2.9E-03	5.5E-04	6.0E-04	2.5E-03	3.8E-06	2.5E-07	1.1E-05	2.6E-05	4.6E-05	5.6E-05	1.9E-04	2.0E-02
487830.59	1.2E-03	1.1E-03	1.2E-03	1.2E-03	1.6E-03	1.7E-03	2.0E-03	2.1E-03	2.6E-03	5.0E-04	5.5E-04	2.4E-03	3.7E-06	2.5E-07	1.1E-05	2.4E-05	4.1E-05	5.4E-05	1.8E-04	1.8E-02

X	Vessel Hoteling: All 100%	Vessel Hoteling: Refrigerated Containersfully_mitigated 46%	Vessel Hoteling: Multi-Purpose General Cargofully_mitigated 26%	Vessel Hoteling: Dry Bulkfully_mitigated 28%	Vessel Transit: All 100%	Vessel Transit: Refrigerated Containersfully_mitigated 46%	Vessel Transit: Multi-Purpose General Cargofully_mitigated 25%	Vessel Transit: Dry Bulkfully_mitigated 28%	Tug/Barge Transit: All 100%	Tug/Barge Transit: Refrigerated Containersfully_mitigated 21%	Tug/Barge Transit: Multi-Purpose General Cargofully_mitigated 54%	Tug/Barge Transit: Dry Bulkfully_mitigated 25%	Terminal E: All 100%	Terminal E: Refrigerated Containersfully_mitigated 40%
486830.59	1.9E-02	8E-03	5E-03	6E-03	3E-03	1E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	5E-03	2E-03
486930.59	1.9E-02	8E-03	5E-03	6E-03	3E-03	1E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	5E-03	2E-03
487030.59	1.8E-02	7E-03	5E-03	6E-03	3E-03	1E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	5E-03	2E-03
487130.59	1.7E-02	7E-03	5E-03	6E-03	3E-03	1E-03	7E-04	8E-04	2E-04	5E-05	1E-04	5E-05	4E-03	2E-03
487230.59	1.6E-02	6E-03	5E-03	6E-03	3E-03	1E-03	7E-04	8E-04	2E-04	5E-05	1E-04	5E-05	4E-03	2E-03
487330.59	1.5E-02	6E-03	4E-03	5E-03	3E-03	1E-03	7E-04	8E-04	2E-04	4E-05	1E-04	5E-05	4E-03	1E-03
487430.59	1.5E-02	6E-03	4E-03	5E-03	3E-03	1E-03	7E-04	8E-04	2E-04	4E-05	1E-04	5E-05	4E-03	2E-03
487530.59	1.4E-02	5E-03	4E-03	5E-03	3E-03	1E-03	7E-04	8E-04	2E-04	4E-05	1E-04	5E-05	4E-03	1E-03
487630.59	1.3E-02	5E-03	4E-03	5E-03	3E-03	1E-03	7E-04	7E-04	2E-04	4E-05	1E-04	5E-05	3E-03	1E-03
487730.59	1.3E-02	5E-03	4E-03	4E-03	3E-03	1E-03	6E-04	7E-04	2E-04	4E-05	1E-04	5E-05	3E-03	1E-03
487830.59	1.2E-02	5E-03	3E-03	4E-03	2E-03	1E-03	6E-04	7E-04	2E-04	4E-05	1E-04	5E-05	3E-03	1E-03

TAMT Risk Assessment - DPM Cancer and Chronic HI

AERMOD Output

AERMOD UNITIZED CONCENTRATIONS

	Discrete Receptor ID (Group Name)	X	Y	B10_1_AUX	B10_2_AUX	B10_3_AUX	B10_4_AUX	B10_5_AUX	B10_6_AUX	B10_7_AUX	B10_8_AUX	CHE_1	LOC_SWTCH EMP	LOC_SWTCH LOA	OGV_PATH _BLR	OGV_PATH _DPM	TR_28TH	TR_BAYMA R	TR_BOSTON	TR_CROSBY	TR_HARBOR CHA	TR_HARBOR SAM	TUG_PATH _DPM
			Source Group in AERMOD	1	3	5	7	9	11	13	15	17	18	19	20	21	22	23	24	25	26	27	28
residential	REC_100M	485530.59	3619825.04	2.1E-01	2.2E-01	1.8E-01	1.6E-01	1.4E-01	1.2E-01	1.1E-01	1.1E-01	2.1E+05	2.9E-01	2.4E-01	1.3E-01	1.3E-01	5.2E-02	1.4E-02	4.8E-02	2.0E-01	4.3E-01	9.0E-02	1.9E-01
residential	REC_100M	485630.59	3619825.04	2.2E-01	2.2E-01	1.9E-01	1.7E-01	1.5E-01	1.3E-01	1.2E-01	1.1E-01	2.2E+05	3.2E-01	2.6E-01	1.3E-01	1.3E-01	5.6E-02	1.4E-02	5.0E-02	2.2E-01	4.9E-01	9.6E-02	1.8E-01
residential	REC_100M	485730.59	3619825.04	2.3E-01	2.2E-01	2.0E-01	1.8E-01	1.6E-01	1.4E-01	1.3E-01	1.2E-01	2.3E+05	3.6E-01	3.0E-01	1.2E-01	1.2E-01	6.1E-02	1.5E-02	5.4E-02	2.6E-01	5.7E-01	1.0E-01	1.7E-01
residential	REC_100M	485830.59	3619825.04	2.3E-01	2.3E-01	2.0E-01	1.8E-01	1.6E-01	1.4E-01	1.4E-01	1.3E-01	2.4E+05	3.9E-01	3.2E-01	1.2E-01	1.2E-01	6.6E-02	1.5E-02	5.8E-02	3.2E-01	6.2E-01	1.1E-01	1.6E-01
residential	REC_100M	485930.59	3619825.04	2.4E-01	2.3E-01	2.1E-01	1.9E-01	1.7E-01	1.5E-01	1.4E-01	1.4E-01	2.5E+05	4.2E-01	3.5E-01	1.2E-01	1.2E-01	7.2E-02	1.5E-02	6.3E-02	3.8E-01	6.8E-01	1.3E-01	1.6E-01
residential	REC_100M	486030.59	3619825.04	2.4E-01	2.2E-01	2.1E-01	1.9E-01	1.7E-01	1.5E-01	1.5E-01	1.4E-01	2.5E+05	4.5E-01	3.8E-01	1.1E-01	1.1E-01	7.8E-02	1.6E-02	7.0E-02	4.4E-01	7.3E-01	1.4E-01	1.5E-01
residential	REC_100M	476730.59	3619925.04	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.1E-02	1.1E-02	5.3E+03	1.1E-02	1.1E-02	4.3E-02	4.3E-02	1.1E-02	4.4E-03	1.1E-02	1.3E-02	1.5E-02	1.1E-02	3.8E-02
residential	REC_100M	476830.59	3619925.04	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	1.1E-02	5.4E+03	1.2E-02	1.1E-02	4.5E-02	4.5E-02	1.1E-02	4.4E-03	1.1E-02	1.3E-02	1.5E-02	1.2E-02	4.1E-02
residential	REC_100M	476930.59	3619925.04	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	1.2E-02	5.3E+03	1.2E-02	1.1E-02	4.6E-02	4.6E-02	1.1E-02	4.3E-03	1.1E-02	1.3E-02	1.5E-02	1.2E-02	4.2E-02
residential	REC_100M	477030.59	3619925.04	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	1.2E-02	5.3E+03	1.2E-02	1.1E-02	4.7E-02	4.7E-02	1.1E-02	4.3E-03	1.1E-02	1.3E-02	1.5E-02	1.2E-02	4.3E-02
residential	REC_100M	477130.59	3619925.04	1.4E-02	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	5.4E+03	1.2E-02	1.1E-02	4.9E-02	4.9E-02	1.1E-02	4.3E-03	1.1E-02	1.3E-02	1.5E-02	1.2E-02	4.6E-02

DPM SCALED CONCENTRATIONS

	B10_1_AUX	B10_2_AUX	B10_3_AUX	B10_4_AUX	B10_5_AUX	B10_6_AUX	B10_7_AUX	B10_8_AUX	CHE_1	LOC_SWTCHEMP	LOC_SWTCHLOA	OGV_PATH_DPM	TR_28TH	TR_BAYMAR	TR_BOSTON	TR_CROSBY	TR_HARBORCHA	TR_HARBORSAM	TUG_PATH_DPM	SUM
divide by -->	4	4	4	4	2	2	2	2	1	2	2	1	1	1	1	1	1	1	1	
	Refrigerated Containersfully_mitigated	Refrigerated Containersfully_mitigated	Refrigerated Containersfully_mitigated	Refrigerated Containersfully_mitigated	Multi-Purpose General Cargofully_mitigated	Multi-Purpose General Cargofully_mitigated	Dry Bulkfully_mitigated	Dry Bulkfully_mitigated	Allfully_mitigated	Allfully_mitigated	Allfully_mitigated	Allfully_mitigated	TR_28THfully_mitigated	TR_BAYMARfully_mitigated	TR_BOSTONfully_mitigated	TR_CROSBYfully_mitigated	TR_HARBORCHAfully_mitigated	TR_HARBORSAMfully_mitigated	Allfully_mitigated	
g/s -->	1.1E-02	1.1E-02	1.1E-02	1.1E-02	1.3E-02	1.3E-02	1.4E-02	1.4E-02	2.8E-08	2.3E-03	2.3E-03	4.02E-02	7.8E-06	9.2E-06	2.4E-05	5.2E-05	1.1E-04	1.1E-04	2.4E-03	
	1	3	5	7	9	11	13	15	17	18	19	21	22	23	24	25	26	27	28	
	2.3E-03	2.4E-03	2.1E-03	1.8E-03	1.8E-03	1.6E-03	1.6E-03	1.5E-03	6.0E-03	6.9E-04	5.6E-04	5.3E-03	4.1E-07	1.3E-07	1.2E-06	1.0E-05	4.9E-05	1.0E-05	4.4E-04	2.8E-02
	2.5E-03	2.5E-03	2.1E-03	1.9E-03	1.9E-03	1.7E-03	1.7E-03	1.6E-03	6.2E-03	7.6E-04	6.2E-04	5.1E-03	4.4E-07	1.3E-07	1.2E-06	1.2E-05	5.6E-05	1.1E-05	4.2E-04	2.9E-02
	2.5E-03	2.5E-03	2.2E-03	2.0E-03	2.0E-03	1.8E-03	1.8E-03	1.7E-03	6.6E-03	8.5E-04	6.9E-04	5.0E-03	4.8E-07	1.3E-07	1.3E-06	1.4E-05	6.5E-05	1.2E-05	4.1E-04	3.0E-02
	2.6E-03	2.6E-03	2.3E-03	2.1E-03	2.1E-03	1.8E-03	1.9E-03	1.8E-03	6.7E-03	9.2E-04	7.6E-04	4.8E-03	5.2E-07	1.4E-07	1.4E-06	1.6E-05	7.0E-05	1.3E-05	3.9E-04	3.1E-02
	2.7E-03	2.5E-03	2.3E-03	2.1E-03	2.2E-03	1.9E-03	2.0E-03	1.9E-03	7.0E-03	9.9E-04	8.3E-04	4.7E-03	5.6E-07	1.4E-07	1.5E-06	2.0E-05	7.8E-05	1.5E-05	3.8E-04	3.2E-02
	2.7E-03	2.5E-03	2.3E-03	2.2E-03	2.2E-03	2.0E-03	2.1E-03	2.0E-03	7.1E-03	1.0E-03	8.8E-04	4.5E-03	6.1E-07	1.5E-07	1.7E-06	2.3E-05	8.3E-05	1.6E-05	3.6E-04	3.2E-02
	1.5E-04	1.6E-04	1.5E-04	1.4E-04	1.6E-04	1.5E-04	1.6E-04	1.6E-04	1.5E-04	2.7E-05	2.6E-05	1.7E-03	8.5E-08	4.0E-08	2.6E-07	6.7E-07	1.7E-06	1.3E-06	9.1E-05	3.3E-03
	1.6E-04	1.6E-04	1.5E-04	1.5E-04	1.6E-04	1.5E-04	1.6E-04	1.6E-04	1.5E-04	2.8E-05	2.6E-05	1.8E-03	8.7E-08	4.0E-08	2.6E-07	6.8E-07	1.7E-06	1.3E-06	9.6E-05	3.4E-03
	1.6E-04	1.6E-04	1.5E-04	1.5E-04	1.6E-04	1.5E-04	1.6E-04	1.6E-04	1.5E-04	2.7E-05	2.6E-05	1.8E-03	8.6E-08	4.0E-08	2.6E-07	6.8E-07	1.7E-06	1.3E-06	9.9E-05	3.4E-03
	1.6E-04	1.6E-04	1.5E-04	1.5E-04	1.6E-04	1.5E-04	1.7E-04	1.6E-04	1.5E-04	2.7E-05	2.6E-05	1.9E-03	8.6E-08	3.9E-08	2.6E-07	6.7E-07	1.7E-06	1.3E-06	1.0E-04	3.5E-03
	1.6E-04	1.6E-04	1.5E-04	1.5E-04	1.6E-04	1.6E-04	1.7E-04	1.7E-04	1.5E-04	2.8E-05	2.7E-05	2.0E-03	8.7E-08	4.0E-08	2.7E-07	6.9E-07	1.7E-06	1.3E-06	1.1E-04	3.6E-03

Vessel Hoteling All	Refrigerated Containersfully_mitigated	Multi-Purpose General Cargofully_mitigated	Dry Bulkfully_mitigated	Vessel Transit All	Refrigerated Containersfully_mitigated	Multi-Purpose General Cargofully_mitigated	Dry Bulkfully_mitigated	Tug/Barge Transit All	Refrigerated Containersfully_mitigated	Multi-Purpose General Cargofully_mitigated	Dry Bulkfully_mitigated	Terminal E All	Refrigerated Containersfully_mitigated
100%	46%	26%	28%	100%	46%	25%	28%	100%	21%	54%	25%	100%	40%
1.5E-02	9E-03	3E-03	3E-03	5E-03	2E-03	1E-03	2E-03	4E-04	9E-05	2E-04	1E-04	6E-03	2E-03
1.6E-02	9E-03	4E-03	3E-03	5E-03	2E-03	1E-03	1E-03	4E-04	9E-05	2E-04	1E-04	6E-03	2E-03
1.7E-02	9E-03	4E-03	4E-03	5E-03	2E-03	1E-03	1E-03	4E-04	8E-05	2E-04	1E-04	7E-03	3E-03
1.7E-02	9E-03	4E-03	4E-03	5E-03	2E-03	1E-03	1E-03	4E-04	8E-05	2E-04	1E-04	7E-03	3E-03
1.8E-02	1E-02	4E-03	4E-03	5E-03	2E-03	1E-03	1E-03	4E-04	8E-05	2E-04	1E-04	7E-03	3E-03
1.8E-02	1E-02	4E-03	4E-03	5E-03	2E-03	1E-03	1E-03	4E-04	8E-05	2E-04	9E-05	7E-03	3E-03
1.2E-03	6E-04	3E-04	3E-04	2E-03	8E-04	4E-04	5E-04	9E-05	2E-05	5E-05	2E-05	1E-04	6E-05
1.2E-03	6E-04	3E-04	3E-04	2E-03	8E-04	5E-04	5E-04	1E-04	2E-05	5E-05	2E-05	2E-04	6E-05
1.3E-03	6E-04	3E-04	3E-04	2E-03	9E-04	5E-04	5E-04	1E-04	2E-05	5E-05	2E-05	2E-04	6E-05
1.3E-03	6E-04	3E-04	3E-04	2E-03	9E-04	5E-04	5E-04	1E-04	2E-05	6E-05	3E-05	2E-04	6E-05
1.3E-03	6E-04	3E-04	3E-04	2E-03	9E-04	5E-04	6E-04	1E-04	2E-05	6E-05	3E-05	2E-04	6E-05

TAMT Risk Assessment - DPM Cancer and Chronic HI

AERMOD UNITIZED CONCENTRATIONS

AERMOD Output — Source Group in AERMOD — divide by --> / g/s -->

	Discrete Receptor ID (Group Name)	X	Y	B10_1_AUX (1)	B10_2_AUX (3)	B10_3_AUX (5)	B10_4_AUX (7)	B10_5_AUX (9)	B10_6_AUX (11)	B10_7_AUX (13)	B10_8_AUX (15)	CHE_1 (17)	LOC_SWTCH EMP (18)	LOC_SWTCH LOA (19)	OGV_PATH _BLR (20)	OGV_PATH _DPM (21)	TR_28TH (22)	TR_BAYMAR (23)	TR_BOSTON (24)	TR_CROSBY (25)	TR_HARBOR CHA (26)	TR_HARBOR SAM (27)	TUG_PATH _DPM (28)	B10_1_AUX (4; Refrigerated Containersfully_mitigated; 1.1E-02; 1)
residential	REC_100M	484230.59	3620225.04	6.9E-02	7.8E-02	6.6E-02	5.9E-02	5.2E-02	4.7E-02	4.5E-02	4.4E-02	3.7E+04	8.0E-02	7.2E-02	1.7E-01	1.7E-01	2.6E-02	9.6E-03	2.6E-02	5.5E-02	7.5E-02	3.3E-02	2.4E-01	7.7E-04
residential	REC_100M	484330.59	3620225.04	7.1E-02	8.3E-02	6.9E-02	6.2E-02	5.4E-02	4.8E-02	4.6E-02	4.4E-02	4.0E+04	8.2E-02	7.3E-02	1.6E-01	1.6E-01	2.7E-02	9.8E-03	2.7E-02	5.9E-02	8.1E-02	3.5E-02	2.4E-01	8.0E-04
residential	REC_100M	484430.59	3620225.04	7.6E-02	8.9E-02	7.3E-02	6.5E-02	5.7E-02	5.0E-02	4.8E-02	4.6E-02	4.3E+04	8.4E-02	7.5E-02	1.6E-01	1.6E-01	2.8E-02	1.0E-02	2.7E-02	6.4E-02	8.9E-02	3.8E-02	2.3E-01	8.5E-04
residential	REC_100M	484530.59	3620225.04	8.1E-02	9.7E-02	7.8E-02	6.9E-02	5.9E-02	5.2E-02	5.0E-02	4.7E-02	4.7E+04	8.8E-02	7.8E-02	1.5E-01	1.5E-01	2.9E-02	1.0E-02	2.8E-02	6.8E-02	9.7E-02	4.1E-02	2.2E-01	9.1E-04
residential	REC_100M	484630.59	3620225.04	8.7E-02	1.0E-01	8.4E-02	7.4E-02	6.3E-02	5.5E-02	5.2E-02	4.9E-02	5.1E+04	9.3E-02	8.2E-02	1.5E-01	1.5E-01	3.0E-02	1.1E-02	2.8E-02	7.3E-02	1.1E-01	4.3E-02	2.1E-01	9.8E-04
residential	REC_100M	484730.59	3620225.04	9.5E-02	1.1E-01	9.1E-02	7.9E-02	6.7E-02	5.8E-02	5.5E-02	5.1E-02	5.6E+04	9.9E-02	8.7E-02	1.4E-01	1.4E-01	3.1E-02	1.1E-02	2.9E-02	7.9E-02	1.2E-01	4.6E-02	2.0E-01	1.1E-03
residential	REC_100M	484830.59	3620225.04	1.0E-01	1.2E-01	9.8E-02	8.6E-02	7.2E-02	6.2E-02	5.8E-02	5.4E-02	6.2E+04	1.0E-01	9.3E-02	1.4E-01	1.4E-01	3.2E-02	1.1E-02	3.0E-02	8.5E-02	1.3E-01	4.8E-02	1.9E-01	1.2E-03
residential	REC_100M	484930.59	3620225.04	1.1E-01	1.3E-01	1.1E-01	9.3E-02	7.8E-02	6.7E-02	6.2E-02	5.8E-02	7.0E+04	1.1E-01	9.9E-02	1.3E-01	1.3E-01	3.3E-02	1.2E-02	3.2E-02	9.3E-02	1.4E-01	5.1E-02	1.9E-01	1.3E-03
residential	REC_100M	485030.59	3620225.04	1.2E-01	1.4E-01	1.1E-01	1.0E-01	8.4E-02	7.1E-02	6.6E-02	6.2E-02	7.8E+04	1.2E-01	1.1E-01	1.3E-01	1.3E-01	3.5E-02	1.2E-02	3.3E-02	9.9E-02	1.5E-01	5.4E-02	1.8E-01	1.4E-03
residential	REC_100M	485130.59	3620225.04	1.4E-01	1.5E-01	1.2E-01	1.1E-01	9.0E-02	7.6E-02	7.1E-02	6.5E-02	8.1E+04	1.3E-01	1.1E-01	1.2E-01	1.2E-01	3.7E-02	1.2E-02	3.5E-02	1.0E-01	1.5E-01	5.5E-02	1.6E-01	1.5E-03
residential	REC_100M	485230.59	3620225.04	1.4E-01	1.5E-01	1.3E-01	1.1E-01	9.7E-02	8.2E-02	7.6E-02	7.0E-02	8.9E+04	1.4E-01	1.2E-01	1.1E-01	1.1E-01	3.9E-02	1.2E-02	3.7E-02	1.0E-01	1.7E-01	5.8E-02	1.5E-01	1.6E-03
residential	REC_100M	485330.59	3620225.04	1.5E-01	1.6E-01	1.4E-01	1.2E-01	1.0E-01	8.9E-02	8.3E-02	7.7E-02	1.1E+05	1.6E-01	1.4E-01	1.1E-01	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
residential	REC_100M	485430.59	3620225.04	1.6E-01	1.6E-01	1.4E-01	1.3E-01	1.1E-01	9.6E-02	9.0E-02	8.4E-02	1.3E+05	1.9E-01	1.6E-01	1.2E-01	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
recreational	park	485530.59	3620225.04	1.7E-01	1.7E-01	1.5E-01	1.3E-01	1.2E-01	1.0E-01	9.6E-02	9.0E-02	1.4E+05	2.1E-01	1.7E-01	1.1E-01	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
recreational	park	485630.59	3620225.04	1.7E-01	1.7E-01	1.5E-01	1.4E-01	1.2E-01	1.1E-01	1.0E-01	9.6E-02	1.3E+05	2.1E-01	1.8E-01	1.0E-01	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
recreational	park	485730.59	3620225.04	1.8E-01	1.8E-01	1.5E-01	1.4E-01	1.2E-01	1.1E-01	1.1E-01	1.0E-01	1.3E+05	2.2E-01	1.9E-01	9.8E-02	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
recreational	park	485830.59	3620225.04	1.8E-01	1.8E-01	1.6E-01	1.5E-01	1.3E-01	1.1E-01	1.1E-01	1.1E-01	1.4E+05	2.4E-01	2.1E-01	9.7E-02	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
recreational	park	485930.59	3620225.04	1.9E-01	1.8E-01	1.6E-01	1.5E-01	1.3E-01	1.2E-01	1.2E-01	1.1E-01	1.5E+05	2.6E-01	2.3E-01	9.6E-02	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
residential	REC_100M	476830.59	3620325.04	1.3E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.1E-02	1.1E-02	1.1E-02	4.9E+03	1.1E-02	1.0E-02	3.8E-02	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
residential	REC_100M	476930.59	3620325.04	1.3E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.1E-02	1.1E-02	1.1E-02	5.0E+03	1.1E-02	1.1E-02	4.0E-02	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
residential	REC_100M	477030.59	3620325.04	1.3E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.1E-02	1.1E-02	1.1E-02	5.1E+03	1.1E-02	1.1E-02	4.1E-02	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

TAMT Risk Assessment - DPM Cancer and Chronic HI

AERMOD Output

AERMOD UNITIZED CONCENTRATIONS — Source Group in AERMOD

	Discrete Receptor ID (Group Name)	X	Y	B10_1_AUX (1)	B10_2_AUX (3)	B10_3_AUX (5)	B10_4_AUX (7)	B10_5_AUX (9)	B10_6_AUX (11)	B10_7_AUX (13)	B10_8_AUX (15)	CHE_1 (17)	LOC_SWTCH EMP (18)	LOC_SWTCH LOA (19)
recreational	park	485630.59	3620625.04	1.3E-01	1.4E-01	1.2E-01	1.1E-01	9.9E-02	8.8E-02	8.4E-02	8.0E-02	9.6E+04	1.6E-01	1.4E-01
recreational	park	485730.59	3620625.04	1.4E-01	1.4E-01	1.2E-01	1.1E-01	1.0E-01	9.1E-02	8.8E-02	8.5E-02	9.9E+04	1.7E-01	1.5E-01
recreational	park	485830.59	3620625.04	1.4E-01	1.4E-01	1.2E-01	1.1E-01	1.0E-01	9.3E-02	9.1E-02	8.8E-02	9.7E+04	1.7E-01	1.5E-01
residential	REC_100M	477330.59	3620725.04	1.3E-02	1.4E-02	1.3E-02	1.2E-02	1.2E-02	1.1E-02	1.1E-02	1.1E-02	5.0E+03	1.1E-02	1.1E-02
residential	REC_100M	477430.59	3620725.04	1.3E-02	1.4E-02	1.3E-02	1.2E-02	1.2E-02	1.1E-02	1.1E-02	1.1E-02	4.9E+03	1.1E-02	1.1E-02
residential	REC_100M	477530.59	3620725.04	1.3E-02	1.4E-02	1.3E-02	1.2E-02	1.2E-02	1.1E-02	1.1E-02	1.1E-02	4.8E+03	1.1E-02	1.1E-02
residential	REC_100M	477630.59	3620725.04	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.1E-02	1.1E-02	5.0E+03	1.2E-02	1.1E-02
residential	REC_100M	477730.59	3620725.04	1.4E-02	1.4E-02	1.4E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	1.2E-02	5.3E+03	1.2E-02	1.2E-02
residential	REC_100M	477830.59	3620725.04	1.5E-02	1.5E-02	1.4E-02	1.4E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	5.6E+03	1.3E-02	1.2E-02
residential	REC_100M	477930.59	3620725.04	1.5E-02	1.5E-02	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	1.3E-02	5.7E+03	1.3E-02	1.2E-02
residential	REC_100M	478030.59	3620725.04	1.5E-02	1.5E-02	1.5E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	1.3E-02	5.8E+03	1.3E-02	1.2E-02
residential	REC_100M	478130.59	3620725.04	1.6E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	5.9E+03	1.3E-02	1.3E-02
residential	REC_100M	478230.59	3620725.04	1.6E-02	1.7E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	1.3E-02	6.0E+03	1.4E-02	1.3E-02
residential	REC_100M	478330.59	3620725.04	1.7E-02	1.7E-02	1.6E-02	1.5E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	6.1E+03	1.4E-02	1.4E-02
residential	REC_100M	478430.59	3620725.04	1.7E-02	1.7E-02	1.6E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	6.2E+03	1.5E-02	1.4E-02
residential	REC_100M	478530.59	3620725.04	1.8E-02	1.8E-02	1.7E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	6.7E+03	1.6E-02	1.5E-02
residential	REC_100M	478630.59	3620725.04	1.8E-02	1.8E-02	1.7E-02	1.6E-02	1.5E-02	1.5E-02	1.5E-02	1.5E-02	6.7E+03	1.6E-02	1.5E-02
recreational	park	480030.59	3620725.04	2.2E-02	2.2E-02	2.1E-02	2.0E-02	1.8E-02	1.7E-02	1.7E-02	1.7E-02	7.9E+03	2.3E-02	2.1E-02
recreational	park	482330.59	3620725.04	3.3E-02	3.4E-02	3.1E-02	2.9E-02	2.7E-02	2.5E-02	2.5E-02	2.4E-02	1.1E+04	3.8E-02	3.5E-02
residential	REC_100M	483930.59	3620725.04	5.3E-02	5.8E-02	5.0E-02	4.6E-02	4.2E-02	3.8E-02	3.7E-02	3.6E-02	2.7E+04	5.9E-02	5.4E-02
residential	REC_100M	484030.59	3620725.04	5.4E-02	6.0E-02	5.2E-02	4.7E-02	4.2E-02	3.8E-02	3.7E-02	3.6E-02	2.8E+04	5.8E-02	5.3E-02
residential	REC_100M	484130.59	3620725.04	5.4E-02	6.2E-02	5.3E-02	4.8E-02	4.3E-02	3.9E-02	3.7E-02	3.6E-02	2.9E+04	5.8E-02	5.3E-02
residential	REC_100M	484230.59	3620725.04	5.6E-02	6.5E-02	5.5E-02	5.0E-02	4.4E-02	3.9E-02	3.8E-02	3.6E-02	3.1E+04	6.0E-02	5.5E-02
residential	REC_100M	484330.59	3620725.04	5.9E-02	6.9E-02	5.8E-02	5.2E-02	4.6E-02	4.1E-02	3.9E-02	3.7E-02	3.2E+04	6.2E-02	5.6E-02
residential	REC_100M	484430.59	3620725.04	6.3E-02	7.4E-02	6.1E-02	5.5E-02	4.8E-02	4.3E-02	4.0E-02	3.9E-02	3.5E+04	6.5E-02	5.8E-02
residential	REC_100M	484530.59	3620725.04	6.8E-02	8.0E-02	6.6E-02	5.9E-02	5.1E-02	4.5E-02	4.2E-02	4.0E-02	3.7E+04	6.9E-02	6.1E-02
residential	REC_100M	477430.59	3620825.04	1.3E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.1E-02	1.1E-02	1.1E-02	4.9E+03	1.1E-02	1.1E-02
residential	REC_100M	477530.59	3620825.04	1.3E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.1E-02	1.1E-02	1.1E-02	4.7E+03	1.1E-02	1.0E-02
residential	REC_100M	477630.59	3620825.04	1.3E-02	1.4E-02	1.3E-02	1.2E-02	1.2E-02	1.1E-02	1.1E-02	1.1E-02	4.9E+03	1.1E-02	1.1E-02
residential	REC_100M	477730.59	3620825.04	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	1.2E-02	5.2E+03	1.2E-02	1.1E-02
residential	REC_100M	477830.59	3620825.04	1.5E-02	1.5E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	5.5E+03	1.2E-02	1.2E-02
residential	REC_100M	477930.59	3620825.04	1.4E-02	1.5E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	5.5E+03	1.2E-02	1.2E-02
residential	REC_100M	478030.59	3620825.04	1.5E-02	1.5E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	5.5E+03	1.2E-02	1.2E-02
residential	REC_100M	478130.59	3620825.04	1.5E-02	1.5E-02	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	1.3E-02	5.7E+03	1.3E-02	1.2E-02
residential	REC_100M	478230.59	3620825.04	1.6E-02	1.6E-02	1.5E-02	1.5E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	5.8E+03	1.3E-02	1.3E-02
residential	REC_100M	478330.59	3620825.04	1.6E-02	1.7E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	1.3E-02	5.9E+03	1.4E-02	1.3E-02
residential	REC_100M	478430.59	3620825.04	1.7E-02	1.7E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	1.4E-02	6.4E+03	1.5E-02	1.4E-02
residential	REC_100M	478530.59	3620825.04	1.7E-02	1.7E-02	1.6E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	6.4E+03	1.6E-02	1.5E-02
residential	REC_100M	478630.59	3620825.04	1.8E-02	1.8E-02	1.7E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	6.5E+03	1.6E-02	1.5E-02
residential	REC_100M	478730.59	3620825.04	1.8E-02	1.8E-02	1.7E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	6.6E+03	1.6E-02	1.5E-02
residential	REC_100M	478830.59	3620825.04	1.8E-02	1.8E-02	1.7E-02	1.7E-02	1.6E-02	1.5E-02	1.5E-02	1.5E-02	6.7E+03	1.6E-02	1.6E-02
residential	REC_100M	478930.59	3620825.04	1.8E-02	1.8E-02	1.7E-02	1.7E-02	1.6E-02	1.5E-02	1.5E-02	1.5E-02	6.7E+03	1.7E-02	1.6E-02
residential	REC_100M	479030.59	3620825.04	1.9E-02	1.9E-02	1.8E-02	1.7E-02	1.6E-02	1.5E-02	1.5E-02	1.5E-02	6.8E+03	1.7E-02	1.6E-02
recreational	park	480030.59	3620825.04	2.2E-02	2.2E-02	2.0E-02	2.0E-02	1.8E-02	1.7E-02	1.7E-02	1.7E-02	7.6E+03	2.2E-02	2.0E-02
recreational	park	480130.59	3620825.04	2.2E-02	2.2E-02	2.0E-02	1.9E-02	1.8E-02	1.7E-02	1.7E-02	1.7E-02	7.7E+03	2.3E-02	2.1E-02
recreational	park	480230.59	3620825.04	2.2E-02	2.2E-02	2.1E-02	2.0E-02	1.9E-02	1.8E-02	1.8E-02	1.7E-02	7.8E+03	2.3E-02	2.2E-02
recreational	park	480330.59	3620825.04	2.3E-02	2.3E-02	2.1E-02	2.0E-02	1.9E-02	1.8E-02	1.8E-02	1.8E-02	7.9E+03	2.4E-02	2.2E-02
recreational	park	480430.59	3620825.04	2.3E-02	2.3E-02	2.2E-02	2.1E-02	1.9E-02	1.8E-02	1.8E-02	1.8E-02	8.0E+03	2.5E-02	2.3E-02
recreational	park	480530.59	3620825.04	2.4E-02	2.3E-02	2.2E-02	2.1E-02	2.0E-02	1.9E-02	1.8E-02	1.8E-02	8.1E+03	2.6E-02	2.4E-02
recreational	park	480630.59	3620825.04	2.3E-02	2.3E-02	2.2E-02	2.1E-02	2.0E-02	1.8E-02	1.8E-02	1.8E-02	8.1E+03	2.6E-02	2.4E-02
recreational	park	480730.59	3620825.04	2.4E-02	2.4E-02	2.2E-02	2.1E-02	2.0E-02	1.9E-02	1.9E-02	1.8E-02	8.2E+03	2.7E-02	2.5E-02
recreational	park	480830.59	3620825.04	2.4E-02	2.4E-02	2.3E-02	2.2E-02	2.0E-02	1.9E-02	1.9E-02	1.9E-02	8.3E+03	2.7E-02	2.6E-02
recreational	park	480930.59	3620825.04	2.5E-02	2.5E-02	2.4E-02	2.2E-02	2.1E-02	2.0E-02	2.0E-02	1.9E-02	8.5E+03	2.8E-02	2.6E-02
recreational	park	481030.59	3620825.04	2.6E-02	2.6E-02	2.4E-02	2.3E-02	2.1E-02	2.0E-02	2.0E-02	2.0E-02	8.6E+03	2.9E-02	2.7E-02
recreational	park	481130.59	3620825.04	2.6E-02	2.6E-02	2.4E-02	2.3E-02	2.2E-02	2.0E-02	2.0E-02	2.0E-02	8.7E+03	2.9E-02	2.7E-02
recreational	park	481230.59	3620825.04	2.6E-02	2.7E-02	2.5E-02	2.4E-02	2.2E-02	2.0E-02	2.0E-02	2.0E-02	8.8E+03	3.0E-02	2.8E-02
recreational	park	481330.59	3620825.04	2.7E-02	2.7E-02	2.5E-02	2.4E-02	2.2E-02	2.1E-02	2.1E-02	2.1E-02	8.9E+03	3.0E-02	2.8E-02
recreational	park	481430.59	3620825.04	2.7E-02	2.7E-02	2.5E-02	2.4E-02	2.2E-02	2.1E-02	2.1E-02	2.1E-02	9.0E+03	3.1E-02	2.9E-02
recreational	park	481530.59	3620825.04	2.7E-02	2.7E-02	2.5E-02	2.4E-02	2.2E-02	2.1E-02	2.1E-02	2.1E-02	9.1E+03	3.1E-02	2.9E-02
recreational	park	481630.59	3620825.04	2.7E-02	2.8E-02	2.6E-02	2.4E-02	2.3E-02	2.1E-02	2.1E-02	2.1E-02	9.3E+03	3.2E-02	3.0E-02
recreational	park	481730.59	3620825.04	2.8E-02	2.8E-02	2.6E-02	2.5E-02	2.3E-02	2.2E-02	2.2E-02	2.1E-02	9.4E+03	3.2E-02	3.0E-02
recreational	park	481830.59	3620825.04	2.9E-02	2.9E-02	2.7E-02	2.6E-02	2.4E-02	2.2E-02	2.2E-02	2.2E-02	9.6E+03	3.3E-02	3.1E-02
recreational	park	481930.59	3620825.04	3.0E-02	3.0E-02	2.8E-02	2.6E-02	2.5E-02	2.3E-02	2.3E-02	2.3E-02	9.8E+03	3.4E-02	3.1E-02
recreational	park	482030.59	3620825.04	3.0E-02	3.1E-02	2.8E-02	2.7E-02	2.5E-02	2.3E-02	2.3E-02	2.3E-02	1.0E+04	3.4E-02	3.2E-02
recreational	park	482130.59	3620825.04	3.1E-02	3.1E-02	2.9E-02	2.7E-02	2.5E-02	2.4E-02	2.3E-02	2.3E-02	1.0E+04	3.5E-02	3.2E-02
recreational	park	482230.59	3620825.04	3.0E-02	3.1E-02	2.9E-02	2.7E-02	2.5E-02	2.4E-02	2.3E-02	2.3E-02	1.0E+04	3.5E-02	3.3E-02
recreational	park	482330.59	3620825.04	3.3E-02	3.3E-02	3.1E-02	2.9E-02	2.7E-02	2.5E-02	2.5E-02	2.4E-02	1.1E+04	3.6E-02	3.3E-02
residential	REC_100M	483930.59	3620825.04	5.1E-02	5.6E-02	4.9E-02	4.5E-02	4.0E-02	3.6E-02	3.5E-02	3.4E-02	2.6E+04	5.5E-02	5.0E-02
residential	REC_100M	484030.59	3620825.04	5.2E-02	5.8E-02	5.0E-02	4.5E-02	4.1E-02	3.7E-02	3.6E-02	3.4E-02	2.7E+04	5.4E-02	5.0E-02
residential	REC_100M	484130.59	3620825.04	5.3E-02	6.0E-02	5.1E-02	4.7E-02	4.2E-02	3.7E-02	3.6E-02	3.5E-02	2.8E+04	5.6E-02	5.0E-02
residential	REC_100M	484230.59	3620825.04	5.5E-02	6.3E-02	5.3E-02	4.8E-02	4.3E-02	3.9E-02	3.7E-02	3.6E-02	3.0E+04	5.7E-02	5.2E-02
residential	REC_100M	484330.59	3620825.04	5.8E-02	6.7E-02	5.6E-02	5.0E-02	4.4E-02	4.0E-02	3.8E-02	3.6E-02	3.1E+04	5.9E-02	5.4E-02
residential	REC_100M	484430.59	3620825.04	6.1E-02	7.1E-02	5.9E-02	5.3E-02	4.6E-02	4.1E-02	3.9E-02	3.7E-02	3.2E+04	6.1E-02	5.5E-02
residential	REC_100M	477530.59	3620925.04	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.1E-02	1.1E-02	1.1E-02	1.1E-02	4.6E+03	1.1E-02	1.0E-02
residential	REC_100M	477630.59	3620925.04	1.3E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.1E-02	1.1E-02	1.1E-02	4.9E+03	1.1E-02	1.1E-02
residential	REC_100M	477730.59	3620925.04	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	1.2E-02	5.3E+03	1.2E-02	1.1E-02
residential	REC_100M	477830.59	3620925.04	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	1.1E-02	5.1E+03	1.2E-02	1.1E-02
residential	REC_100M	477930.59	3620925.04	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	1.2E-02	5.2E+03	1.2E-02	1.1E-02
residential	REC_100M	478030.59	3620925.04	1.4E-02	1.4E-02	1.4E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	1.2E-02	5.3E+03	1.2E-02	1.1E-02
residential	REC_100M	478130.59	3620925.04	1.5E-02	1.5E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	5.5E+03	1.2E-02	1.2E-02
residential	REC_100M	478230.59	3620925.04	1.5E-02	1.5E-02	1.5E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	1.3E-02	5.6E+03	1.3E-02	1.2E-02
residential	REC_100M	478330.59	3620925.04	1.6E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	5.7E+03	1.3E-02	1.3E-02
residential	REC_100M	478430.59	3620925.04	1.6E-02	1.6E-02	1.5E-02	1.5E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	5.8E+03	1.4E-02	1.3E-02
residential	REC_100M	478530.59	3620925.04	1.7E-02	1.7E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	1.4E-02	6.2E+03	1.5E-02	1.4E-02
residential	REC_100M	478630.59	3620925.04	1.7E-02	1.7E-02	1.6E-02	1.5E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	6.3E+03	1.5E-02	1.5E-02
residential	REC_100M	478730.59	3620925.04	1.7E-02	1.7E-02	1.6E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	6.4E+03	1.6E-02	1.5E-02
residential	REC_100M	478830.59	3620925.04	1.8E-02	1.8E-02	1.7E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	6.4E+03	1.6E-02	1.5E-02
residential	REC_100M	478930.59	3620925.04	1.8E-02	1.8E-02	1.7E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	6.5E+03	1.6E-02	1.5E-02
residential	REC_100M	479030.59	3620925.04	1.8E-02	1.8E-02	1.7E-02	1.6E-02	1.5E-02	1.5E-02	1.5E-02	1.5E-02	6.6E+03	1.7E-02	1.6E-02
residential	REC_100M	479130.59	3620925.04	1.8E-02	1.8E-02	1.7E-02	1.6E-02	1.6E-02	1.5E-02	1.5E-02	1.5E-02	6.6E+03	1.7E-02	1.6E-02
residential	REC_100M	479230.59	3620925.04	1.8E-02	1.9E-02	1.7E-02	1.7E-02	1.6E-02	1.5E-02	1.5E-02	1.5E-02	6.7E+03	1.7E-02	1.6E-02
recreational	park	480930.59	3620925.04	2.4E-02	2.4E-02	2.3E-02	2.2E-02	2.0E-02	1.9E-02	1.9E-02	1.9E-02	8.1E+03	2.7E-02	2.5E-02
recreational	park	481030.59	3620925.04	2.4E-02	2.5E-02	2.3E-02	2.2E-02	2.0E-02	1.9E-02	1.9E-02	1.9E-02	8.2E+03	2.8E-02	2.6E-02
recreational	park	481130.59	3620925.04	2.5E-02	2.5E-02	2.3E-02	2.2E-02	2.1E-02	1.9E-02	1.9E-02	1.9E-02	8.3E+03	2.8E-02	2.6E-02
recreational	park	481230.59	3620925.04	2.5E-02	2.5E-02	2.4E-02	2.2E-02	2.1E-02	2.0E-02	2.0E-02	2.0E-02	8.4E+03	2.8E-02	2.7E-02
recreational	park	481330.59	3620925.04	2.6E-02	2.6E-02	2.4E-02	2.3E-02	2.1E-02	2.0E-02	2.0E-02	2.0E-02	8.6E+03	2.9E-02	2.7E-02
recreational	park	481430.59	3620925.04	2.6E-02	2.6E-02	2.4E-02	2.3E-02	2.1E-02	2.0E-02	2.0E-02	2.0E-02	8.7E+03	2.9E-02	2.8E-02
recreational	park	481530.59	3620925.04	2.6E-02	2.6E-02	2.4E-02	2.3E-02	2.2E-02	2.0E-02	2.0E-02	2.0E-02	8.8E+03	3.0E-02	2.8E-02
recreational	park	481630.59	3620925.04	2.6E-02	2.7E-02	2.5E-02	2.4E-02	2.2E-02	2.1E-02	2.1E-02	2.0E-02	8.9E+03	3.1E-02	2.9E-02
recreational	park	481730.59	3620925.04	2.8E-02	2.8E-02	2.6E-02	2.5E-02	2.3E-02	2.1E-02	2.1E-02	2.1E-02	9.1E+03	3.1E-02	2.9E-02
residential	REC_100M	483830.59	3620925.04	4.7E-02	5.2E-02	4.5E-02	4.2E-02	3.8E-02	3.4E-02	3.3E-02	3.2E-02	2.4E+04	5.1E-02	4.6E-02
residential	REC_100M	483930.59	3620925.04	4.9E-02	5.4E-02	4.7E-02	4.3E-02	3.9E-02	3.5E-02	3.4E-02	3.3E-02	2.4E+04	5.1E-02	4.6E-02
residential	REC_100M	484030.59	3620925.04	5.0E-02	5.5E-02	4.8E-02	4.4E-02	3.9E-02	3.6E-02	3.4E-02	3.3E-02	2.6E+04	5.2E-02	4.7E-02
residential	REC_100M	484130.59	3620925.04	5.1E-02	5.8E-02	4.9E-02	4.5E-02	4.0E-02	3.6E-02	3.5E-02	3.4E-02	2.7E+04	5.3E-02	4.8E-02
residential	REC_100M	484230.59	3620925.04	5.3E-02	6.1E-02	5.2E-02	4.7E-02	4.1E-02	3.7E-02	3.6E-02	3.4E-02	2.8E+04	5.5E-02	5.0E-02
residential	REC_100M	484330.59	3620925.04	5.6E-02	6.5E-02	5.4E-02	4.9E-02	4.3E-02	3.9E-02	3.6E-02	3.5E-02	3.0E+04	5.7E-02	5.1E-02
residential	REC_100M	477730.59	3621025.04	1.4E-02	1.4E-02	1.3E-02	1.2E-02	1.2E-02	1.1E-02	1.1E-02	1.1E-02	5.1E+03	1.1E-02	1.1E-02
residential	REC_100M	477830.59	3621025.04	1.3E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.1E-02	1.1E-02	1.1E-02	4.9E+03	1.1E-02	1.1E-02
residential	REC_100M	477930.59	3621025.04	1.4E-02	1.4E-02	1.3E-02	1.2E-02	1.2E-02	1.1E-02	1.1E-02	1.1E-02	5.0E+03	1.1E-02	1.1E-02
residential	REC_100M	478030.59	3621025.04	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.1E-02	1.1E-02	5.1E+03	1.2E-02	1.1E-02
residential	REC_100M	478130.59	3621025.04	1.4E-02	1.4E-02	1.4E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	1.2E-02	5.3E+03	1.2E-02	1.1E-02
residential	REC_100M	478230.59	3621025.04	1.5E-02	1.5E-02	1.4E-02	1.4E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	5.4E+03	1.2E-02	1.2E-02
residential	REC_100M	478330.59	3621025.04	1.5E-02	1.5E-02	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	1.3E-02	5.5E+03	1.3E-02	1.2E-02
residential	REC_100M	478430.59	3621025.04	1.6E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	5.6E+03	1.3E-02	1.2E-02
residential	REC_100M	478530.59	3621025.04	1.6E-02	1.6E-02	1.5E-02	1.5E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	5.7E+03	1.4E-02	1.3E-02
residential	REC_100M	478630.59	3621025.04	1.7E-02	1.7E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	1.3E-02	6.1E+03	1.5E-02	1.4E-02
residential	REC_100M	478730.59	3621025.04	1.7E-02	1.7E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	1.4E-02	6.2E+03	1.5E-02	1.4E-02
residential	REC_100M	478830.59	3621025.04	1.7E-02	1.7E-02	1.6E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	6.2E+03	1.6E-02	1.5E-02
residential	REC_100M	478930.59	3621025.04	1.7E-02	1.7E-02	1.6E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	6.3E+03	1.6E-02	1.5E-02
residential	REC_100M	479030.59	3621025.04	1.8E-02	1.8E-02	1.7E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	6.4E+03	1.6E-02	1.5E-02
residential	REC_100M	479130.59	3621025.04	1.8E-02	1.8E-02	1.7E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	6.4E+03	1.6E-02	1.6E-02
residential	REC_100M	479230.59	3621025.04	1.8E-02	1.8E-02	1.7E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	6.5E+03	1.7E-02	1.6E-02
residential	REC_100M	479330.59	3621025.04	1.8E-02	1.8E-02	1.7E-02	1.6E-02	1.5E-02	1.5E-02	1.5E-02	1.5E-02	6.6E+03	1.7E-02	1.6E-02
residential	REC_100M	479430.59	3621025.04	1.8E-02	1.8E-02	1.7E-02	1.7E-02	1.6E-02	1.5E-02	1.5E-02	1.5E-02	6.6E+03	1.7E-02	1.6E-02
recreational	park	481430.59	3621025.04	2.5E-02	2.5E-02	2.3E-02	2.2E-02	2.0E-02	1.9E-02	1.9E-02	1.9E-02	8.4E+03	2.8E-02	2.6E-02
recreational	park	481530.59	3621025.04	2.5E-02	2.5E-02	2.3E-02	2.2E-02	2.1E-02	2.0E-02	2.0E-02	2.0E-02	8.5E+03	2.9E-02	2.7E-02
recreational	park	481630.59	3621025.04	2.6E-02	2.6E-02	2.4E-02	2.3E-02	2.2E-02	2.0E-02	2.0E-02	2.0E-02	8.6E+03	2.9E-02	2.8E-02
residential	REC_100M	483830.59	3621025.04	4.6E-02	5.0E-02	4.4E-02	4.0E-02	3.7E-02	3.3E-02	3.2E-02	3.2E-02	2.3E+04	4.8E-02	4.4E-02
residential	REC_100M	483930.59	3621025.04	4.8E-02	5.3E-02	4.6E-02	4.2E-02	3.8E-02	3.4E-02	3.3E-02	3.2E-02	2.4E+04	4.9E-02	4.5E-02
residential	REC_100M	484030.59	3621025.04	4.8E-02	5.4E-02	4.6E-02	4.3E-02	3.8E-02	3.5E-02	3.3E-02	3.2E-02	2.5E+04	4.9E-02	4.5E-02
residential	REC_100M	484130.59	3621025.04	4.9E-02	5.6E-02	4.8E-02	4.4E-02	3.9E-02	3.5E-02	3.4E-02	3.3E-02	2.6E+04	5.1E-02	4.7E-02
residential	REC_100M	484230.59	3621025.04	5.1E-02	5.9E-02	5.0E-02	4.5E-02	4.0E-02	3.6E-02	3.4E-02	3.3E-02	2.7E+04	5.3E-02	4.8E-02
residential	REC_100M	477830.59	3621125.04	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.1E-02	1.1E-02	1.1E-02	1.1E-02	4.7E+03	1.1E-02	1.0E-02
residential	REC_100M	477930.59	3621125.04	1.3E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.1E-02	1.1E-02	1.1E-02	4.8E+03	1.1E-02	1.0E-02
residential	REC_100M	478030.59	3621125.04	1.4E-02	1.4E-02	1.3E-02	1.2E-02	1.2E-02	1.1E-02	1.1E-02	1.1E-02	5.0E+03	1.1E-02	1.1E-02
residential	REC_100M	478130.59	3621125.04	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.1E-02	1.1E-02	5.1E+03	1.1E-02	1.1E-02
residential	REC_100M	478230.59	3621125.04	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	1.2E-02	5.2E+03	1.2E-02	1.1E-02
residential	REC_100M	478330.59	3621125.04	1.5E-02	1.5E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	5.3E+03	1.2E-02	1.1E-02
residential	REC_100M	478430.59	3621125.04	1.5E-02	1.5E-02	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	1.2E-02	5.4E+03	1.3E-02	1.2E-02
residential	REC_100M	478530.59	3621125.04	1.6E-02	1.6E-02	1.5E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	1.3E-02	5.5E+03	1.3E-02	1.2E-02
residential	REC_100M	478630.59	3621125.04	1.6E-02	1.6E-02	1.5E-02	1.5E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	5.9E+03	1.4E-02	1.3E-02
residential	REC_100M	478730.59	3621125.04	1.6E-02	1.6E-02	1.5E-02	1.5E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	6.0E+03	1.5E-02	1.4E-02
residential	REC_100M	478830.59	3621125.04	1.7E-02	1.7E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	1.3E-02	6.0E+03	1.5E-02	1.4E-02
residential	REC_100M	478930.59	3621125.04	1.7E-02	1.7E-02	1.6E-02	1.5E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	6.1E+03	1.5E-02	1.4E-02
residential	REC_100M	479030.59	3621125.04	1.7E-02	1.7E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	1.4E-02	6.2E+03	1.6E-02	1.5E-02
residential	REC_100M	479130.59	3621125.04	1.7E-02	1.7E-02	1.6E-02	1.5E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	6.2E+03	1.6E-02	1.5E-02
residential	REC_100M	479230.59	3621125.04	1.7E-02	1.7E-02	1.6E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	6.3E+03	1.6E-02	1.5E-02
residential	REC_100M	479330.59	3621125.04	1.8E-02	1.8E-02	1.7E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	6.3E+03	1.6E-02	1.5E-02
residential	REC_100M	479430.59	3621125.04	1.8E-02	1.8E-02	1.7E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	6.4E+03	1.7E-02	1.6E-02
residential	REC_100M	479530.59	3621125.04	1.8E-02	1.8E-02	1.7E-02	1.6E-02	1.5E-02	1.5E-02	1.5E-02	1.5E-02	6.5E+03	1.7E-02	1.6E-02
residential	REC_100M	479630.59	3621125.04	1.8E-02	1.9E-02	1.7E-02	1.7E-02	1.6E-02	1.5E-02	1.5E-02	1.5E-02	6.5E+03	1.8E-02	1.7E-02
recreational	park	481430.59	3621125.04	2.4E-02	2.4E-02	2.3E-02	2.1E-02	2.0E-02	1.9E-02	1.9E-02	1.9E-02	8.1E+03	2.7E-02	2.6E-02
recreational	park	481530.59	3621125.04	2.4E-02	2.5E-02	2.3E-02	2.2E-02	2.1E-02	1.9E-02	1.9E-02	1.9E-02	8.2E+03	2.8E-02	2.6E-02
recreational	park	481630.59	3621125.04	2.5E-02	2.5E-02	2.4E-02	2.2E-02	2.1E-02	2.0E-02	2.0E-02	1.9E-02	8.4E+03	2.8E-02	2.7E-02
recreational	park	481730.59	3621125.04	2.5E-02	2.6E-02	2.4E-02	2.3E-02	2.1E-02	2.0E-02	2.0E-02	2.0E-02	8.5E+03	2.9E-02	2.7E-02
recreational	park	481830.59	3621125.04	2.6E-02	2.6E-02	2.4E-02	2.3E-02	2.2E-02	2.1E-02	2.0E-02	2.0E-02	8.7E+03	2.9E-02	2.7E-02
recreational	park	481930.59	3621125.04	2.7E-02	2.7E-02	2.5E-02	2.4E-02	2.2E-02	2.1E-02	2.1E-02	2.0E-02	8.9E+03	3.0E-02	2.8E-02
recreational	park	482030.59	3621125.04	2.7E-02	2.8E-02	2.6E-02	2.4E-02	2.3E-02	2.1E-02	2.1E-02	2.1E-02	9.1E+03	3.0E-02	2.8E-02
recreational	park	482130.59	3621125.04	2.8E-02	2.8E-02	2.6E-02	2.5E-02	2.3E-02	2.2E-02	2.1E-02	2.1E-02	9.4E+03	3.1E-02	2.9E-02
recreational	park	482230.59	3621125.04	2.8E-02	2.9E-02	2.6E-02	2.5E-02	2.3E-02	2.2E-02	2.2E-02	2.2E-02	9.6E+03	3.1E-02	2.9E-02
recreational	park	482330.59	3621125.04	2.9E-02	2.9E-02	2.7E-02	2.6E-02	2.4E-02	2.2E-02	2.2E-02	2.2E-02	1.0E+04	3.2E-02	3.0E-02
recreational	park	482430.59	3621125.04	3.0E-02	3.0E-02	2.8E-02	2.6E-02	2.4E-02	2.3E-02	2.3E-02	2.2E-02	1.0E+04	3.3E-02	3.1E-02
recreational	park	482530.59	3621125.04	3.1E-02	3.2E-02	2.9E-02	2.8E-02	2.6E-02	2.4E-02	2.4E-02	2.3E-02	1.1E+04	3.3E-02	3.1E-02
residential	REC_100M	483830.59	3621125.04	4.4E-02	4.9E-02	4.2E-02	3.9E-02	3.6E-02	3.3E-02	3.1E-02	3.1E-02	2.2E+04	4.6E-02	4.2E-02

[illegible] — remaining columns of this sheet (AERMOD unitized concentrations for source groups 20–28: OGV_PATH BLR, OGV_PATH_DPM, TR_28TH, TR_BAYMAR, TR_BOSTON, TR_CROSBY, TR_HARBORCHA, TR_HARBORSAM, TUG_PATH_DPM; DPM SCALED CONCENTRATIONS with SUM; Vessel Hoteling, Vessel Transit, Tug/Barge Transit and Terminal E percentage breakdowns) are printed too small to read at this scan resolution.

TAMT Risk Assessment - DPM Cancer and Chronic HI

AERMOD Output

AERMOD UNITIZED CONCENTRATIONS (Source Group in AERMOD)

Type	Discrete Receptor ID (Group Name)	X	Y	1 B10_1_AUX	3 B10_2_AUX	5 B10_3_AUX	7 B10_4_AUX	9 B10_5_AUX	11 B10_6_AUX	13 B10_7_AUX	15 B10_8_AUX	17 CHE_1	18 LOC_SWTCH EMP	19 LOC_SWTCH LOA	20 OGV_PATH _BLR	21 OGV_PATH _DPM	22 TR_28TH	23 TR_BAYMAR	24 TR_BOSTON	25 TR_CROSBY	26 TR_HARBOR CHA	27 TR_HARBOR SAM	28 TUG_PATH _DPM
residential	REC_100	483930.59	3621125.04	4.5E-02	5.0E-02	4.4E-02	4.0E-02	3.6E-02	3.3E-02	3.2E-02	3.1E-02	2.3E+04	4.6E-02	4.2E-02	1.3E-01	1.3E-01	2.0E-02	8.7E-03	2.0E-02	4.1E-02	5.2E-02	2.6E-02	1.7E-01
residential	REC_100	484030.59	3621125.04	4.6E-02	5.2E-02	4.5E-02	4.1E-02	3.7E-02	3.3E-02	3.2E-02	3.1E-02	2.4E+04	4.7E-02	4.3E-02	1.2E-01	1.2E-01	2.1E-02	8.9E-03	2.0E-02	4.2E-02	5.4E-02	2.8E-02	1.7E-01
residential	REC_100	484130.59	3621125.04	4.8E-02	5.4E-02	4.7E-02	4.2E-02	3.8E-02	3.4E-02	3.3E-02	3.1E-02	2.5E+04	4.9E-02	4.5E-02	1.2E-01	1.2E-01	2.2E-02	9.2E-03	2.1E-02	4.3E-02	5.7E-02	2.9E-02	1.6E-01
residential	REC_100	484230.59	3621125.04	4.9E-02	5.6E-02	4.8E-02	4.3E-02	3.8E-02	3.4E-02	3.3E-02	3.1E-02	2.5E+04	4.9E-02	4.5E-02	1.1E-01	1.1E-01	2.3E-02	9.4E-03	2.2E-02	4.4E-02	5.7E-02	3.0E-02	1.5E-01
residential	REC_100	477930.59	3621225.04	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.1E-02	1.1E-02	1.1E-02	1.1E-02	4.6E+03	1.0E-02	9.8E-03	4.2E-02	4.2E-02	9.7E-03	4.3E-03	9.6E-03	1.2E-02	1.3E-02	1.1E-02	3.9E-02
residential	REC_100	478030.59	3621225.04	1.3E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.1E-02	1.1E-02	1.1E-02	4.8E+03	1.1E-02	1.0E-02	4.5E-02	4.5E-02	9.8E-03	4.3E-03	9.8E-03	1.2E-02	1.4E-02	1.1E-02	4.5E-02
residential	REC_100	478130.59	3621225.04	1.3E-02	1.4E-02	1.3E-02	1.2E-02	1.2E-02	1.1E-02	1.1E-02	1.1E-02	4.9E+03	1.1E-02	1.0E-02	4.8E-02	4.8E-02	9.9E-03	4.4E-03	9.9E-03	1.2E-02	1.4E-02	1.1E-02	4.9E-02
residential	REC_100	478230.59	3621225.04	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.1E-02	1.1E-02	1.1E-02	5.0E+03	1.1E-02	1.1E-02	5.2E-02	5.2E-02	1.0E-02	4.4E-03	1.0E-02	1.2E-02	1.4E-02	1.1E-02	5.4E-02
residential	REC_100	478330.59	3621225.04	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	1.2E-02	5.0E+03	1.1E-02	1.1E-02	5.5E-02	5.5E-02	1.0E-02	4.4E-03	1.0E-02	1.2E-02	1.4E-02	1.1E-02	5.9E-02
residential	REC_100	478430.59	3621225.04	1.5E-02	1.5E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	5.2E+03	1.2E-02	1.1E-02	6.1E-02	6.1E-02	1.0E-02	4.4E-03	1.0E-02	1.2E-02	1.5E-02	1.1E-02	6.7E-02
residential	REC_100	478530.59	3621225.04	1.5E-02	1.5E-02	1.4E-02	1.4E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	5.3E+03	1.2E-02	1.2E-02	6.6E-02	6.6E-02	1.1E-02	4.6E-03	1.0E-02	1.2E-02	1.5E-02	1.1E-02	7.4E-02
residential	REC_100	478630.59	3621225.04	1.5E-02	1.5E-02	1.5E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	1.3E-02	5.4E+03	1.3E-02	1.3E-02	7.1E-02	7.1E-02	1.1E-02	4.7E-03	1.1E-02	1.3E-02	1.5E-02	1.1E-02	8.4E-02
residential	REC_100	478730.59	3621225.04	1.6E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	5.4E+03	1.4E-02	1.3E-02	7.5E-02	7.5E-02	1.1E-02	4.7E-03	1.1E-02	1.3E-02	1.5E-02	1.1E-02	9.1E-02
residential	REC_100	478830.59	3621225.04	1.6E-02	1.6E-02	1.5E-02	1.5E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	5.9E+03	1.4E-02	1.4E-02	7.9E-02	7.9E-02	1.1E-02	4.8E-03	1.1E-02	1.3E-02	1.6E-02	1.1E-02	9.8E-02
residential	REC_100	478930.59	3621225.04	1.6E-02	1.6E-02	1.5E-02	1.5E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	5.9E+03	1.5E-02	1.4E-02	8.3E-02	8.3E-02	1.1E-02	4.8E-03	1.1E-02	1.3E-02	1.6E-02	1.1E-02	1.1E-01
residential	REC_100	479030.59	3621225.04	1.6E-02	1.6E-02	1.5E-02	1.5E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	6.0E+03	1.5E-02	1.4E-02	8.6E-02	8.6E-02	1.1E-02	4.8E-03	1.1E-02	1.3E-02	1.6E-02	1.1E-02	1.1E-01
residential	REC_100	479130.59	3621225.04	1.7E-02	1.7E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	1.3E-02	6.0E+03	1.5E-02	1.4E-02	9.0E-02	9.0E-02	1.1E-02	4.8E-03	1.1E-02	1.3E-02	1.6E-02	1.1E-02	1.2E-01
residential	REC_100	479230.59	3621225.04	1.7E-02	1.7E-02	1.6E-02	1.5E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	6.1E+03	1.6E-02	1.5E-02	9.4E-02	9.4E-02	1.1E-02	4.9E-03	1.1E-02	1.3E-02	1.6E-02	1.1E-02	1.2E-01
residential	REC_100	479330.59	3621225.04	1.7E-02	1.7E-02	1.6E-02	1.5E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	6.1E+03	1.6E-02	1.5E-02	9.8E-02	9.8E-02	1.1E-02	4.9E-03	1.1E-02	1.3E-02	1.6E-02	1.1E-02	1.3E-01
residential	REC_100	479430.59	3621225.04	1.7E-02	1.7E-02	1.6E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	6.2E+03	1.6E-02	1.5E-02	1.0E-01	1.0E-01	1.1E-02	4.9E-03	1.1E-02	1.3E-02	1.7E-02	1.1E-02	1.4E-01
residential	REC_100	479530.59	3621225.04	1.8E-02	1.8E-02	1.7E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	6.3E+03	1.7E-02	1.6E-02	1.1E-01	1.1E-01	1.1E-02	5.0E-03	1.1E-02	1.3E-02	1.7E-02	1.2E-02	1.5E-01
residential	REC_100	479630.59	3621225.04	1.8E-02	1.8E-02	1.7E-02	1.6E-02	1.5E-02	1.5E-02	1.4E-02	1.4E-02	6.3E+03	1.7E-02	1.6E-02	1.1E-01	1.1E-01	1.1E-02	5.0E-03	1.1E-02	1.4E-02	1.7E-02	1.2E-02	1.5E-01
residential	REC_100	479730.59	3621225.04	1.8E-02	1.8E-02	1.7E-02	1.6E-02	1.6E-02	1.5E-02	1.5E-02	1.5E-02	6.4E+03	1.7E-02	1.6E-02	1.2E-01	1.2E-01	1.2E-02	5.0E-03	1.1E-02	1.4E-02	1.7E-02	1.2E-02	1.6E-01
residential	REC_100	479830.59	3621225.04	1.9E-02	1.9E-02	1.8E-02	1.7E-02	1.6E-02	1.5E-02	1.5E-02	1.5E-02	6.5E+03	1.8E-02	1.7E-02	1.2E-01	1.2E-01	1.2E-02	5.1E-03	1.2E-02	1.4E-02	1.7E-02	1.2E-02	1.7E-01
residential	REC_100	479930.59	3621225.04	1.9E-02	1.9E-02	1.8E-02	1.7E-02	1.6E-02	1.5E-02	1.5E-02	1.5E-02	6.5E+03	1.8E-02	1.7E-02	1.3E-01	1.3E-01	1.2E-02	5.1E-03	1.2E-02	1.4E-02	1.7E-02	1.2E-02	1.8E-01
residential	REC_100	480030.59	3621225.04	1.9E-02	1.9E-02	1.8E-02	1.7E-02	1.6E-02	1.5E-02	1.5E-02	1.5E-02	6.6E+03	1.8E-02	1.7E-02	1.3E-01	1.3E-01	1.2E-02	5.1E-03	1.2E-02	1.4E-02	1.8E-02	1.2E-02	1.8E-01
recreational	park	480130.59	3621225.04	1.9E-02	1.9E-02	1.8E-02	1.7E-02	1.6E-02	1.5E-02	1.5E-02	1.5E-02	6.7E+03	1.9E-02	1.8E-02	1.4E-01	1.4E-01	1.2E-02	5.2E-03	1.2E-02	1.4E-02	1.8E-02	1.2E-02	1.9E-01
recreational	park	480230.59	3621225.04	2.0E-02	2.0E-02	1.9E-02	1.8E-02	1.7E-02	1.6E-02	1.6E-02	1.6E-02	6.7E+03	2.0E-02	1.8E-02	1.4E-01	1.4E-01	1.2E-02	5.2E-03	1.2E-02	1.4E-02	1.8E-02	1.2E-02	1.9E-01
recreational	park	480330.59	3621225.04	2.0E-02	2.0E-02	1.9E-02	1.8E-02	1.7E-02	1.6E-02	1.6E-02	1.6E-02	6.8E+03	2.1E-02	1.9E-02	1.4E-01	1.4E-01	1.2E-02	5.2E-03	1.2E-02	1.4E-02	1.8E-02	1.2E-02	2.0E-01
recreational	park	480430.59	3621225.04	2.0E-02	2.0E-02	1.9E-02	1.8E-02	1.7E-02	1.6E-02	1.6E-02	1.6E-02	6.9E+03	2.1E-02	1.9E-02	1.5E-01	1.5E-01	1.2E-02	5.3E-03	1.2E-02	1.4E-02	1.8E-02	1.2E-02	2.1E-01
recreational	park	480530.59	3621225.04	2.1E-02	2.1E-02	2.0E-02	1.9E-02	1.8E-02	1.7E-02	1.6E-02	1.6E-02	7.0E+03	2.2E-02	2.0E-02	1.5E-01	1.5E-01	1.2E-02	5.3E-03	1.2E-02	1.4E-02	1.9E-02	1.2E-02	2.1E-01
recreational	park	480630.59	3621225.04	2.1E-02	2.1E-02	2.0E-02	1.9E-02	1.8E-02	1.7E-02	1.7E-02	1.7E-02	7.1E+03	2.2E-02	2.1E-02	1.6E-01	1.6E-01	1.2E-02	5.4E-03	1.2E-02	1.5E-02	1.9E-02	1.2E-02	2.2E-01
recreational	park	480730.59	3621225.04	2.1E-02	2.1E-02	2.0E-02	1.9E-02	1.8E-02	1.7E-02	1.7E-02	1.7E-02	7.1E+03	2.3E-02	2.1E-02	1.6E-01	1.6E-01	1.2E-02	5.4E-03	1.2E-02	1.5E-02	1.9E-02	1.2E-02	2.2E-01
recreational	park	480830.59	3621225.04	2.2E-02	2.2E-02	2.0E-02	1.9E-02	1.8E-02	1.7E-02	1.7E-02	1.7E-02	7.2E+03	2.4E-02	2.2E-02	1.6E-01	1.6E-01	1.3E-02	5.5E-03	1.3E-02	1.5E-02	1.9E-02	1.3E-02	2.3E-01
recreational	park	480930.59	3621225.04	2.2E-02	2.2E-02	2.1E-02	2.0E-02	1.9E-02	1.8E-02	1.7E-02	1.7E-02	7.3E+03	2.4E-02	2.3E-02	1.7E-01	1.7E-01	1.3E-02	5.5E-03	1.3E-02	1.5E-02	1.9E-02	1.3E-02	2.3E-01
recreational	park	481030.59	3621225.04	2.2E-02	2.2E-02	2.1E-02	2.0E-02	1.9E-02	1.8E-02	1.8E-02	1.7E-02	7.4E+03	2.5E-02	2.3E-02	1.7E-01	1.7E-01	1.3E-02	5.6E-03	1.3E-02	1.5E-02	2.0E-02	1.3E-02	2.3E-01
recreational	park	481330.59	3621225.04	2.3E-02	2.3E-02	2.2E-02	2.1E-02	2.0E-02	1.8E-02	1.8E-02	1.8E-02	7.7E+03	2.6E-02	2.4E-02	1.7E-01	1.7E-01	1.3E-02	5.7E-03	1.3E-02	1.6E-02	2.0E-02	1.3E-02	2.4E-01
recreational	park	481430.59	3621225.04	2.3E-02	2.4E-02	2.2E-02	2.1E-02	2.0E-02	1.9E-02	1.9E-02	1.8E-02	7.8E+03	2.6E-02	2.5E-02	1.7E-01	1.7E-01	1.3E-02	5.8E-03	1.3E-02	1.6E-02	2.1E-02	1.3E-02	2.4E-01
recreational	park	481530.59	3621225.04	2.4E-02	2.4E-02	2.3E-02	2.2E-02	2.0E-02	1.9E-02	1.9E-02	1.9E-02	8.0E+03	2.7E-02	2.5E-02	1.7E-01	1.7E-01	1.3E-02	5.8E-03	1.3E-02	1.6E-02	2.1E-02	1.3E-02	2.4E-01
recreational	park	481630.59	3621225.04	2.4E-02	2.4E-02	2.3E-02	2.2E-02	2.0E-02	1.9E-02	1.9E-02	1.9E-02	8.1E+03	2.7E-02	2.5E-02	1.7E-01	1.7E-01	1.4E-02	5.9E-03	1.3E-02	1.6E-02	2.1E-02	1.4E-02	2.4E-01
recreational	park	481730.59	3621225.04	2.5E-02	2.5E-02	2.3E-02	2.2E-02	2.1E-02	2.0E-02	2.0E-02	1.9E-02	8.3E+03	2.8E-02	2.6E-02	1.7E-01	1.7E-01	1.4E-02	5.9E-03	1.4E-02	1.7E-02	2.2E-02	1.4E-02	2.4E-01
recreational	park	481830.59	3621225.04	2.5E-02	2.6E-02	2.4E-02	2.2E-02	2.1E-02	2.0E-02	2.0E-02	2.0E-02	8.5E+03	2.8E-02	2.6E-02	1.7E-01	1.7E-01	1.4E-02	6.0E-03	1.4E-02	1.7E-02	2.2E-02	1.4E-02	2.4E-01
recreational	park	481930.59	3621225.04	2.6E-02	2.6E-02	2.4E-02	2.3E-02	2.2E-02	2.0E-02	2.0E-02	2.0E-02	8.7E+03	2.8E-02	2.7E-02	1.7E-01	1.7E-01	1.4E-02	6.1E-03	1.4E-02	1.7E-02	2.2E-02	1.4E-02	2.4E-01
recreational	park	482030.59	3621225.04	2.6E-02	2.7E-02	2.5E-02	2.4E-02	2.2E-02	2.1E-02	2.0E-02	2.0E-02	8.9E+03	2.9E-02	2.7E-02	1.7E-01	1.7E-01	1.4E-02	6.1E-03	1.4E-02	1.8E-02	2.3E-02	1.4E-02	2.4E-01
recreational	park	482130.59	3621225.04	2.7E-02	2.7E-02	2.5E-02	2.4E-02	2.2E-02	2.1E-02	2.1E-02	2.1E-02	9.1E+03	3.0E-02	2.8E-02	1.7E-01	1.7E-01	1.4E-02	6.2E-03	1.4E-02	1.8E-02	2.3E-02	1.5E-02	2.3E-01
recreational	park	482230.59	3621225.04	2.7E-02	2.8E-02	2.6E-02	2.5E-02	2.3E-02	2.1E-02	2.1E-02	2.1E-02	9.4E+03	3.0E-02	2.8E-02	1.7E-01	1.7E-01	1.4E-02	6.3E-03	1.4E-02	1.9E-02	2.3E-02	1.5E-02	2.3E-01
recreational	park	482330.59	3621225.04	2.8E-02	2.9E-02	2.6E-02	2.5E-02	2.3E-02	2.2E-02	2.2E-02	2.1E-02	9.8E+03	3.1E-02	2.8E-02	1.7E-01	1.7E-01	1.5E-02	6.4E-03	1.4E-02	1.9E-02	2.4E-02	1.5E-02	2.3E-01
recreational	park	482430.59	3621225.04	2.9E-02	2.9E-02	2.7E-02	2.6E-02	2.4E-02	2.2E-02	2.2E-02	2.2E-02	1.0E+04	3.1E-02	2.9E-02	1.6E-01	1.6E-01	1.5E-02	6.5E-03	1.5E-02	2.0E-02	2.5E-02	1.5E-02	2.2E-01
recreational	park	482530.59	3621225.04	2.9E-02	3.0E-02	2.8E-02	2.6E-02	2.4E-02	2.3E-02	2.2E-02	2.2E-02	1.1E+04	3.2E-02	3.0E-02	1.6E-01	1.6E-01	1.5E-02	6.6E-03	1.5E-02	2.0E-02	2.5E-02	1.6E-02	2.2E-01
residential	REC_100	482630.59	3621225.04	3.0E-02	3.1E-02	2.9E-02	2.7E-02	2.5E-02	2.4E-02	2.3E-02	2.3E-02	1.1E+04	3.3E-02	3.1E-02	1.6E-01	1.6E-01	1.5E-02	6.7E-03	1.5E-02	2.1E-02	2.6E-02	1.6E-02	2.1E-01
residential	REC_100	483830.59	3621225.04	4.3E-02	4.7E-02	4.2E-02	3.8E-02	3.5E-02	3.2E-02	3.1E-02	3.0E-02	2.1E+04	4.4E-02	4.0E-02	1.3E-01	1.3E-01	1.9E-02	8.4E-03	1.9E-02	3.8E-02	5.0E-02	2.5E-02	1.6E-01
residential	REC_100	483930.59	3621225.04	4.3E-02	4.9E-02	4.2E-02	3.9E-02	3.5E-02	3.2E-02	3.1E-02	3.0E-02	2.2E+04	4.4E-02	4.1E-02	1.2E-01	1.2E-01	2.0E-02	8.6E-03	1.9E-02	4.0E-02	5.1E-02	2.6E-02	1.6E-01
residential	REC_100	484030.59	3621225.04	4.5E-02	5.1E-02	4.4E-02	4.0E-02	3.6E-02	3.3E-02	3.1E-02	3.0E-02	2.3E+04	4.5E-02	4.2E-02	1.2E-01	1.2E-01	2.1E-02	8.9E-03	2.0E-02	4.1E-02	5.3E-02	2.8E-02	1.6E-01
residential	REC_100	484130.59	3621225.04	4.5E-02	5.2E-02	4.4E-02	4.1E-02	3.6E-02	3.3E-02	3.1E-02	3.0E-02	2.4E+04	4.6E-02	4.2E-02	1.1E-01	1.1E-01	2.1E-02	9.1E-03	2.1E-02	4.2E-02	5.4E-02	2.9E-02	1.5E-01
school	127 (scho	485901.79	3618344.73	4.6E-01	3.7E-01	3.3E-01	3.3E-01	3.8E-01	4.0E-01	4.1E-01	4.0E-01	1.9E+06	4.7E+00	4.2E+00	1.7E-01	1.7E-01	1.3E-01	1.7E-02	1.2E-01	2.3E+00	1.4E+01	2.8E-01	2.3E-01

DPM SCALED CONCENTRATIONS

	1	3	5	7	9	11	13	15	17	18	19	21	22	23	24	25	26	27	28	
divide by -->	4	4	4	4	2	2	2	2	1	2	2	1	1	1	1	1	1	1	1	
	Refrigerated Containersfully_mitigated	Refrigerated Containersfully_mitigated	Refrigerated Containersfully_mitigated	Refrigerated Containersfully_mitigated	Multi-Purpose General Cargofully_mitigated	Multi-Purpose General Cargofully_mitigated	Dry Bulkfully_mitigated	Dry Bulkfully_mitigated	Allfully_mitigated	Allfully_mitigated	Allfully_mitigated	Allfully_mitigated	TR_28THfully_mitigated	TR_BAYMARfully_mitigated	TR_BOSTONfully_mitigated	TR_CROSBYfully_mitigated	TR_HARBORCHAfully_mitigated	TR_HARBORSAMfully_mitigated	Allfully_mitigated	
g/s -->	1.1E-02	1.1E-02	1.1E-02	1.1E-02	1.3E-02	1.3E-02	1.4E-02	1.4E-02	2.8E-08	2.3E-03	2.3E-03	4.02E-02	7.8E-06	9.2E-06	2.4E-05	5.2E-05	1.1E-04	1.1E-04	2.4E-03	
X	B10_1_AUX	B10_2_AUX	B10_3_AUX	B10_4_AUX	B10_5_AUX	B10_6_AUX	B10_7_AUX	B10_8_AUX	CHE_1	LOC_SWTCHEMP	LOC_SWTCHLOA	OGV_PATH_DPM	TR_28TH	TR_BAYMAR	TR_BOSTON	TR_CROSBY	TR_HARBORCHA	TR_HARBORSAM	TUG_PATH_DPM	SUM
483930.59	5.1E-04	5.7E-04	4.9E-04	4.5E-04	4.7E-04	4.3E-04	4.5E-04	4.3E-04	6.5E-04	1.1E-04	9.9E-05	5.1E-03	1.6E-07	7.9E-08	4.7E-07	2.1E-06	6.0E-06	3.0E-06	4.0E-04	1.0E-02
484030.59	5.2E-04	5.8E-04	5.0E-04	4.6E-04	4.8E-04	4.3E-04	4.5E-04	4.3E-04	6.8E-04	1.1E-04	1.0E-04	4.9E-03	1.6E-07	8.2E-08	4.9E-07	2.2E-06	6.2E-06	3.2E-06	4.0E-04	1.0E-02
484130.59	5.4E-04	6.1E-04	5.2E-04	4.8E-04	4.9E-04	4.4E-04	4.6E-04	4.4E-04	7.1E-04	1.1E-04	1.1E-04	4.7E-03	1.7E-07	8.4E-08	5.0E-07	2.2E-06	6.5E-06	3.4E-06	3.8E-04	1.0E-02
484230.59	5.5E-04	6.3E-04	5.4E-04	4.9E-04	5.0E-04	4.5E-04	4.6E-04	4.4E-04	7.1E-04	1.1E-04	1.0E-04	4.3E-03	1.8E-07	8.6E-08	5.3E-07	2.3E-06	6.5E-06	3.5E-06	3.5E-04	9.7E-03
477930.59	1.4E-04	1.4E-04	1.4E-04	1.3E-04	1.5E-04	1.4E-04	1.5E-04	1.5E-04	1.3E-04	2.4E-05	2.3E-05	1.7E-03	7.6E-08	3.9E-08	2.3E-07	6.3E-07	1.5E-06	1.2E-06	9.3E-05	3.1E-03
478030.59	1.5E-04	1.5E-04	1.4E-04	1.4E-04	1.5E-04	1.4E-04	1.5E-04	1.5E-04	1.4E-04	2.5E-05	2.4E-05	1.8E-03	7.7E-08	4.0E-08	2.4E-07	6.4E-07	1.6E-06	1.2E-06	1.1E-04	3.3E-03
478130.59	1.5E-04	1.5E-04	1.4E-04	1.4E-04	1.5E-04	1.5E-04	1.6E-04	1.6E-04	1.4E-04	2.6E-05	2.5E-05	1.9E-03	7.8E-08	4.0E-08	2.4E-07	6.4E-07	1.6E-06	1.2E-06	1.2E-04	3.4E-03
478230.59	1.5E-04	1.5E-04	1.5E-04	1.4E-04	1.5E-04	1.5E-04	1.6E-04	1.6E-04	1.4E-04	2.6E-05	2.5E-05	2.1E-03	7.8E-08	4.0E-08	2.4E-07	6.4E-07	1.6E-06	1.2E-06	1.3E-04	3.6E-03
478330.59	1.6E-04	1.6E-04	1.5E-04	1.4E-04	1.6E-04	1.5E-04	1.6E-04	1.6E-04	1.4E-04	2.7E-05	2.6E-05	2.2E-03	7.9E-08	4.0E-08	2.4E-07	6.4E-07	1.6E-06	1.2E-06	1.4E-04	3.8E-03
478430.59	1.7E-04	1.7E-04	1.6E-04	1.5E-04	1.7E-04	1.6E-04	1.7E-04	1.7E-04	1.5E-04	2.8E-05	2.7E-05	2.5E-03	8.2E-08	4.1E-08	2.5E-07	6.3E-07	1.7E-06	1.2E-06	1.6E-04	4.1E-03
478530.59	1.7E-04	1.7E-04	1.6E-04	1.6E-04	1.7E-04	1.6E-04	1.7E-04	1.7E-04	1.5E-04	2.9E-05	2.8E-05	2.6E-03	8.3E-08	4.2E-08	2.5E-07	6.4E-07	1.7E-06	1.2E-06	1.8E-04	4.4E-03
478630.59	1.7E-04	1.7E-04	1.6E-04	1.6E-04	1.7E-04	1.7E-04	1.8E-04	1.8E-04	1.5E-04	3.1E-05	2.9E-05	2.8E-03	8.3E-08	4.3E-08	2.6E-07	6.5E-07	1.8E-06	1.2E-06	2.0E-04	4.6E-03
478730.59	1.8E-04	1.8E-04	1.7E-04	1.6E-04	1.8E-04	1.7E-04	1.8E-04	1.8E-04	1.5E-04	3.3E-05	3.1E-05	3.0E-03	8.4E-08	4.3E-08	2.6E-07	6.6E-07	1.8E-06	1.3E-06	2.2E-04	4.8E-03
478830.59	1.8E-04	1.8E-04	1.7E-04	1.6E-04	1.8E-04	1.7E-04	1.8E-04	1.8E-04	1.7E-04	3.4E-05	3.2E-05	3.2E-03	8.4E-08	4.3E-08	2.6E-07	6.6E-07	1.8E-06	1.3E-06	2.3E-04	5.0E-03
478930.59	1.8E-04	1.8E-04	1.7E-04	1.7E-04	1.8E-04	1.7E-04	1.8E-04	1.9E-04	1.7E-04	3.5E-05	3.3E-05	3.3E-03	8.5E-08	4.4E-08	2.6E-07	6.7E-07	1.8E-06	1.3E-06	2.5E-04	5.2E-03
479030.59	1.8E-04	1.8E-04	1.7E-04	1.7E-04	1.8E-04	1.7E-04	1.9E-04	1.9E-04	1.7E-04	3.5E-05	3.3E-05	3.5E-03	8.6E-08	4.4E-08	2.6E-07	6.7E-07	1.8E-06	1.3E-06	2.6E-04	5.4E-03
479130.59	1.9E-04	1.9E-04	1.8E-04	1.7E-04	1.9E-04	1.8E-04	1.9E-04	1.9E-04	1.7E-04	3.6E-05	3.4E-05	3.6E-03	8.6E-08	4.4E-08	2.7E-07	6.8E-07	1.8E-06	1.3E-06	2.8E-04	5.6E-03
479230.59	1.9E-04	1.9E-04	1.8E-04	1.7E-04	1.9E-04	1.8E-04	1.9E-04	1.9E-04	1.7E-04	3.7E-05	3.4E-05	3.8E-03	8.7E-08	4.5E-08	2.7E-07	6.8E-07	1.9E-06	1.3E-06	2.9E-04	5.8E-03
479330.59	1.9E-04	1.9E-04	1.8E-04	1.7E-04	1.9E-04	1.8E-04	1.9E-04	1.9E-04	1.7E-04	3.7E-05	3.4E-05	3.9E-03	8.8E-08	4.5E-08	2.7E-07	6.9E-07	1.9E-06	1.3E-06	3.1E-04	6.0E-03
479430.59	1.9E-04	2.0E-04	1.8E-04	1.8E-04	1.9E-04	1.8E-04	2.0E-04	2.0E-04	1.8E-04	3.9E-05	3.6E-05	4.1E-03	8.8E-08	4.5E-08	2.7E-07	6.9E-07	1.9E-06	1.3E-06	3.3E-04	6.2E-03
479530.59	2.0E-04	2.0E-04	1.9E-04	1.8E-04	1.9E-04	1.9E-04	2.0E-04	2.0E-04	1.8E-04	3.9E-05	3.7E-05	4.3E-03	8.9E-08	4.5E-08	2.8E-07	7.0E-07	1.9E-06	1.3E-06	3.5E-04	6.5E-03
479630.59	2.0E-04	2.0E-04	1.9E-04	1.8E-04	2.0E-04	1.9E-04	2.0E-04	2.0E-04	1.8E-04	4.0E-05	3.8E-05	4.5E-03	9.0E-08	4.6E-08	2.8E-07	7.0E-07	1.9E-06	1.3E-06	3.6E-04	6.7E-03
479730.59	2.0E-04	2.0E-04	1.9E-04	1.9E-04	2.0E-04	1.9E-04	2.0E-04	2.0E-04	1.8E-04	4.1E-05	3.8E-05	4.7E-03	9.0E-08	4.6E-08	2.8E-07	7.1E-07	2.0E-06	1.3E-06	3.8E-04	7.0E-03
479830.59	2.1E-04	2.1E-04	2.0E-04	1.9E-04	2.1E-04	2.0E-04	2.1E-04	2.1E-04	1.8E-04	4.2E-05	3.9E-05	5.0E-03	9.1E-08	4.6E-08	2.8E-07	7.1E-07	2.0E-06	1.3E-06	4.0E-04	7.3E-03
479930.59	2.2E-04	2.2E-04	2.0E-04	1.9E-04	2.1E-04	2.0E-04	2.1E-04	2.1E-04	1.9E-04	4.3E-05	4.0E-05	5.2E-03	9.2E-08	4.7E-08	2.8E-07	7.2E-07	2.0E-06	1.4E-06	4.2E-04	7.6E-03
480030.59	2.1E-04	2.1E-04	2.0E-04	1.9E-04	2.1E-04	2.0E-04	2.1E-04	2.1E-04	1.9E-04	4.3E-05	4.0E-05	5.2E-03	9.3E-08	4.7E-08	2.9E-07	7.2E-07	2.0E-06	1.4E-06	4.3E-04	7.5E-03
480130.59	2.2E-04	2.2E-04	2.0E-04	1.9E-04	2.1E-04	2.0E-04	2.2E-04	2.1E-04	1.9E-04	4.5E-05	4.2E-05	5.4E-03	9.3E-08	4.7E-08	2.9E-07	7.3E-07	2.0E-06	1.4E-06	4.5E-04	7.8E-03
480230.59	2.2E-04	2.2E-04	2.1E-04	2.0E-04	2.2E-04	2.1E-04	2.2E-04	2.2E-04	1.9E-04	4.7E-05	4.3E-05	5.7E-03	9.4E-08	4.8E-08	2.9E-07	7.3E-07	2.1E-06	1.4E-06	4.6E-04	8.1E-03
480330.59	2.2E-04	2.3E-04	2.1E-04	2.0E-04	2.2E-04	2.1E-04	2.2E-04	2.2E-04	1.9E-04	4.8E-05	4.4E-05	5.8E-03	9.5E-08	4.8E-08	2.9E-07	7.4E-07	2.1E-06	1.4E-06	4.8E-04	8.3E-03
480430.59	2.3E-04	2.3E-04	2.2E-04	2.1E-04	2.2E-04	2.1E-04	2.3E-04	2.3E-04	2.0E-04	5.0E-05	4.6E-05	6.0E-03	9.6E-08	4.8E-08	2.9E-07	7.4E-07	2.1E-06	1.4E-06	4.9E-04	8.6E-03
480530.59	2.3E-04	2.3E-04	2.2E-04	2.1E-04	2.3E-04	2.1E-04	2.3E-04	2.3E-04	2.0E-04	5.1E-05	4.7E-05	6.2E-03	9.6E-08	4.9E-08	3.0E-07	7.5E-07	2.1E-06	1.4E-06	5.0E-04	8.8E-03
480630.59	2.4E-04	2.4E-04	2.2E-04	2.1E-04	2.3E-04	2.2E-04	2.3E-04	2.3E-04	2.0E-04	5.3E-05	4.9E-05	6.3E-03	9.7E-08	4.9E-08	3.0E-07	7.5E-07	2.2E-06	1.4E-06	5.1E-04	8.9E-03
480730.59	2.4E-04	2.4E-04	2.2E-04	2.1E-04	2.3E-04	2.2E-04	2.4E-04	2.3E-04	2.0E-04	5.4E-05	5.0E-05	6.4E-03	9.8E-08	5.0E-08	3.0E-07	7.6E-07	2.2E-06	1.4E-06	5.2E-04	9.1E-03
480830.59	2.4E-04	2.4E-04	2.3E-04	2.2E-04	2.4E-04	2.2E-04	2.4E-04	2.4E-04	2.0E-04	5.6E-05	5.2E-05	6.6E-03	9.9E-08	5.0E-08	3.0E-07	7.7E-07	2.2E-06	1.4E-06	5.3E-04	9.3E-03
480930.59	2.5E-04	2.5E-04	2.3E-04	2.2E-04	2.4E-04	2.3E-04	2.4E-04	2.4E-04	2.1E-04	5.7E-05	5.3E-05	6.7E-03	9.9E-08	5.0E-08	3.1E-07	7.7E-07	2.2E-06	1.4E-06	5.4E-04	9.5E-03
481030.59	2.5E-04	2.5E-04	2.4E-04	2.2E-04	2.4E-04	2.3E-04	2.5E-04	2.4E-04	2.1E-04	5.8E-05	5.4E-05	6.8E-03	1.0E-07	5.1E-08	3.1E-07	7.8E-07	2.3E-06	1.5E-06	5.5E-04	9.6E-03
481330.59	2.6E-04	2.6E-04	2.5E-04	2.3E-04	2.5E-04	2.4E-04	2.5E-04	2.5E-04	2.2E-04	6.1E-05	5.7E-05	6.9E-03	1.0E-07	5.2E-08	3.2E-07	8.1E-07	2.3E-06	1.5E-06	5.7E-04	9.9E-03
481430.59	2.6E-04	2.7E-04	2.5E-04	2.4E-04	2.6E-04	2.4E-04	2.6E-04	2.6E-04	2.2E-04	6.2E-05	5.8E-05	7.0E-03	1.0E-07	5.3E-08	3.2E-07	8.2E-07	2.4E-06	1.5E-06	5.7E-04	9.9E-03
481530.59	2.7E-04	2.7E-04	2.5E-04	2.4E-04	2.6E-04	2.5E-04	2.6E-04	2.6E-04	2.3E-04	6.3E-05	5.9E-05	7.0E-03	1.0E-07	5.3E-08	3.2E-07	8.4E-07	2.4E-06	1.5E-06	5.7E-04	1.0E-02
481630.59	2.7E-04	2.8E-04	2.6E-04	2.5E-04	2.6E-04	2.5E-04	2.7E-04	2.6E-04	2.3E-04	6.3E-05	6.0E-05	7.0E-03	1.1E-07	5.4E-08	3.3E-07	8.5E-07	2.4E-06	1.5E-06	5.7E-04	1.0E-02
481730.59	2.8E-04	2.8E-04	2.6E-04	2.5E-04	2.7E-04	2.6E-04	2.7E-04	2.7E-04	2.3E-04	6.5E-05	6.0E-05	7.0E-03	1.1E-07	5.4E-08	3.3E-07	8.7E-07	2.5E-06	1.6E-06	5.7E-04	1.0E-02
481830.59	2.8E-04	2.9E-04	2.7E-04	2.5E-04	2.8E-04	2.6E-04	2.8E-04	2.7E-04	2.4E-04	6.6E-05	6.1E-05	6.9E-03	1.1E-07	5.5E-08	3.3E-07	8.8E-07	2.5E-06	1.6E-06	5.7E-04	1.0E-02
481930.59	2.9E-04	3.0E-04	2.7E-04	2.6E-04	2.8E-04	2.6E-04	2.8E-04	2.8E-04	2.4E-04	6.7E-05	6.3E-05	6.9E-03	1.1E-07	5.6E-08	3.4E-07	9.0E-07	2.5E-06	1.6E-06	5.6E-04	1.0E-02
482030.59	2.9E-04	3.0E-04	2.8E-04	2.7E-04	2.9E-04	2.7E-04	2.8E-04	2.8E-04	2.5E-04	6.8E-05	6.4E-05	6.9E-03	1.1E-07	5.6E-08	3.4E-07	9.2E-07	2.6E-06	1.6E-06	5.6E-04	1.0E-02
482130.59	3.0E-04	3.1E-04	2.8E-04	2.7E-04	2.9E-04	2.7E-04	2.9E-04	2.9E-04	2.6E-04	7.0E-05	6.5E-05	6.8E-03	1.1E-07	5.7E-08	3.4E-07	9.4E-07	2.6E-06	1.7E-06	5.5E-04	1.0E-02
482230.59	3.1E-04	3.1E-04	2.9E-04	2.8E-04	3.0E-04	2.8E-04	3.0E-04	2.9E-04	2.7E-04	7.1E-05	6.6E-05	6.8E-03	1.1E-07	5.8E-08	3.5E-07	9.6E-07	2.7E-06	1.7E-06	5.5E-04	1.0E-02
482330.59	3.1E-04	3.2E-04	3.0E-04	2.8E-04	3.0E-04	2.8E-04	3.0E-04	3.0E-04	2.8E-04	7.2E-05	6.7E-05	6.7E-03	1.1E-07	5.8E-08	3.5E-07	9.9E-07	2.7E-06	1.7E-06	5.4E-04	1.0E-02
482430.59	3.2E-04	3.3E-04	3.0E-04	2.9E-04	3.1E-04	2.9E-04	3.1E-04	3.0E-04	2.9E-04	7.4E-05	6.9E-05	6.6E-03	1.2E-07	5.9E-08	3.5E-07	1.0E-06	2.8E-06	1.8E-06	5.3E-04	1.0E-02
482530.59	3.3E-04	3.4E-04	3.1E-04	3.0E-04	3.2E-04	3.0E-04	3.1E-04	3.1E-04	3.0E-04	7.5E-05	7.0E-05	6.5E-03	1.2E-07	6.0E-08	3.6E-07	1.1E-06	2.9E-06	1.8E-06	5.2E-04	1.0E-02
482630.59	3.4E-04	3.5E-04	3.2E-04	3.1E-04	3.3E-04	3.0E-04	3.2E-04	3.2E-04	3.1E-04	7.7E-05	7.2E-05	6.5E-03	1.2E-07	6.1E-08	3.6E-07	1.1E-06	3.0E-06	1.8E-06	5.0E-04	1.0E-02
483830.59	4.9E-04	5.3E-04	4.7E-04	4.3E-04	4.5E-04	4.1E-04	4.3E-04	4.2E-04	6.1E-04	1.0E-04	9.4E-05	5.1E-03	1.5E-07	7.7E-08	4.5E-07	2.0E-06	5.7E-06	2.9E-06	3.9E-04	1.0E-02
483930.59	4.9E-04	5.5E-04	4.7E-04	4.4E-04	4.5E-04	4.2E-04	4.3E-04	4.2E-04	6.3E-04	1.0E-04	9.5E-05	4.9E-03	1.6E-07	7.9E-08	4.7E-07	2.1E-06	5.8E-06	3.0E-06	3.9E-04	9.8E-03
484030.59	5.0E-04	5.7E-04	4.9E-04	4.5E-04	4.7E-04	4.2E-04	4.4E-04	4.2E-04	6.6E-04	1.1E-04	9.9E-05	4.7E-03	1.6E-07	8.1E-08	4.8E-07	2.1E-06	6.1E-06	3.2E-06	3.8E-04	9.7E-03
484130.59	5.1E-04	5.8E-04	5.0E-04	4.6E-04	4.7E-04	4.2E-04	4.4E-04	4.2E-04	6.7E-04	1.1E-04	9.9E-05	4.4E-03	1.7E-07	8.4E-08	5.0E-07	2.2E-06	6.2E-06	3.3E-06	3.6E-04	5.0E-02
485901.79	5.2E-03	4.1E-03	3.7E-03	3.7E-03	5.0E-03	5.2E-03	5.7E-03	5.5E-03	5.3E-02	1.1E-02	9.9E-03	6.9E-03	1.0E-06	1.6E-07	3.0E-06	1.2E-04	1.6E-03	3.2E-05	5.4E-04	1.2E-01

	Vessel Hoteling				Vessel Transit				Tug/Barge Transit				Terminal E	
	All	Refrigerated Containersfully_mitigated	Multi-Purpose General Cargofully_mitigated	Dry Bulkfully_mitigated	All	Refrigerated Containersfully_mitigated	Multi-Purpose General Cargofully_mitigated	Dry Bulkfully_mitigated	All	Refrigerated Containersfully_mitigated	Multi-Purpose General Cargofully_mitigated	Dry Bulkfully_mitigated	All	Refrigerated Containersfully_mitigated
X	100%	46%	26%	28%	100%	46%	25%	28%	100%	21%	54%	25%	100%	40%
483930.59	3.8E-03	2E-03	9E-04	9E-04	5E-03	2E-03	1E-03	1E-03	4E-04	8E-05	2E-04	1E-04	7E-04	3E-04
484030.59	3.9E-03	2E-03	9E-04	9E-04	5E-03	2E-03	1E-03	1E-03	4E-04	8E-05	2E-04	1E-04	7E-04	3E-04
484130.59	4.0E-03	2E-03	9E-04	9E-04	5E-03	2E-03	1E-03	1E-03	4E-04	8E-05	2E-04	1E-04	7E-04	3E-04
484230.59	4.0E-03	2E-03	9E-04	9E-04	4E-03	2E-03	1E-03	1E-03	3E-04	7E-05	2E-04	9E-05	7E-04	3E-04
477930.59	1.1E-03	6E-04	3E-04	3E-04	2E-03	8E-04	4E-04	5E-04	9E-05	2E-05	5E-05	2E-05	1E-04	5E-05
478030.59	1.2E-03	6E-04	3E-04	3E-04	2E-03	8E-04	5E-04	5E-04	1E-04	2E-05	6E-05	3E-05	1E-04	5E-05
478130.59	1.2E-03	6E-04	3E-04	3E-04	2E-03	9E-04	5E-04	6E-04	1E-04	2E-05	6E-05	3E-05	1E-04	6E-05
478230.59	1.2E-03	6E-04	3E-04	3E-04	2E-03	1E-03	5E-04	6E-04	1E-04	3E-05	7E-05	3E-05	1E-04	6E-05
478330.59	1.2E-03	6E-04	3E-04	3E-04	2E-03	1E-03	6E-04	6E-04	1E-04	3E-05	8E-05	4E-05	1E-04	6E-05
478430.59	1.3E-03	6E-04	3E-04	3E-04	2E-03	1E-03	6E-04	7E-04	2E-04	3E-05	9E-05	4E-05	1E-04	6E-05
478530.59	1.3E-03	7E-04	3E-04	3E-04	3E-03	1E-03	7E-04	7E-04	2E-04	4E-05	1E-04	4E-05	1E-04	6E-05
478630.59	1.4E-03	7E-04	3E-04	4E-04	3E-03	1E-03	7E-04	8E-04	2E-04	4E-05	1E-04	5E-05	2E-04	6E-05
478730.59	1.4E-03	7E-04	3E-04	4E-04	3E-03	1E-03	8E-04	9E-04	2E-04	4E-05	1E-04	5E-05	2E-04	6E-05
478830.59	1.4E-03	7E-04	3E-04	4E-04	3E-03	1E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	2E-04	7E-05
478930.59	1.4E-03	7E-04	4E-04	4E-04	3E-03	2E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	2E-04	7E-05
479030.59	1.4E-03	7E-04	4E-04	4E-04	3E-03	2E-03	9E-04	1E-03	3E-04	5E-05	1E-04	7E-05	2E-04	7E-05
479130.59	1.5E-03	7E-04	4E-04	4E-04	4E-03	2E-03	9E-04	1E-03	3E-04	6E-05	1E-04	7E-05	2E-04	7E-05
479230.59	1.5E-03	7E-04	4E-04	4E-04	4E-03	2E-03	1E-03	1E-03	3E-04	6E-05	2E-04	7E-05	2E-04	7E-05
479330.59	1.5E-03	7E-04	4E-04	4E-04	4E-03	2E-03	1E-03	1E-03	3E-04	6E-05	2E-04	8E-05	2E-04	7E-05
479430.59	1.5E-03	8E-04	4E-04	4E-04	4E-03	2E-03	1E-03	1E-03	3E-04	7E-05	2E-04	8E-05	2E-04	7E-05
479530.59	1.5E-03	8E-04	4E-04	4E-04	4E-03	2E-03	1E-03	1E-03	3E-04	7E-05	2E-04	9E-05	2E-04	7E-05
479630.59	1.6E-03	8E-04	4E-04	4E-04	5E-03	2E-03	1E-03	1E-03	4E-04	7E-05	2E-04	9E-05	2E-04	7E-05
479730.59	1.6E-03	8E-04	4E-04	4E-04	5E-03	2E-03	1E-03	1E-03	4E-04	8E-05	2E-04	1E-04	2E-04	7E-05
479830.59	1.6E-03	8E-04	4E-04	4E-04	5E-03	2E-03	1E-03	1E-03	4E-04	8E-05	2E-04	1E-04	2E-04	7E-05
479930.59	1.7E-03	8E-04	4E-04	4E-04	5E-03	2E-03	1E-03	1E-03	4E-04	9E-05	2E-04	1E-04	2E-04	7E-05
480030.59	1.6E-03	8E-04	4E-04	4E-04	5E-03	2E-03	1E-03	1E-03	4E-04	9E-05	2E-04	1E-04	2E-04	8E-05
480130.59	1.7E-03	8E-04	4E-04	4E-04	5E-03	3E-03	1E-03	2E-03	4E-04	9E-05	2E-04	1E-04	2E-04	8E-05
480230.59	1.7E-03	9E-04	4E-04	4E-04	6E-03	3E-03	1E-03	2E-03	5E-04	1E-04	2E-04	1E-04	2E-04	8E-05
480330.59	1.7E-03	9E-04	4E-04	4E-04	6E-03	3E-03	1E-03	2E-03	5E-04	1E-04	3E-04	1E-04	2E-04	8E-05
480430.59	1.8E-03	9E-04	4E-04	5E-04	6E-03	3E-03	2E-03	2E-03	5E-04	1E-04	3E-04	1E-04	2E-04	8E-05
480530.59	1.8E-03	9E-04	4E-04	5E-04	6E-03	3E-03	2E-03	2E-03	5E-04	1E-04	3E-04	1E-04	2E-04	8E-05
480630.59	1.8E-03	9E-04	4E-04	5E-04	6E-03	3E-03	2E-03	2E-03	5E-04	1E-04	3E-04	1E-04	2E-04	8E-05
480730.59	1.8E-03	9E-04	5E-04	5E-04	6E-03	3E-03	2E-03	2E-03	5E-04	1E-04	3E-04	1E-04	2E-04	8E-05
480830.59	1.9E-03	9E-04	5E-04	5E-04	7E-03	3E-03	2E-03	2E-03	5E-04	1E-04	3E-04	1E-04	2E-04	8E-05
480930.59	1.9E-03	1E-03	5E-04	5E-04	7E-03	3E-03	2E-03	2E-03	5E-04	1E-04	3E-04	1E-04	2E-04	8E-05
481030.59	1.9E-03	1E-03	5E-04	5E-04	7E-03	3E-03	2E-03	2E-03	5E-04	1E-04	3E-04	1E-04	2E-04	8E-05
481330.59	2.0E-03	1E-03	5E-04	5E-04	7E-03	3E-03	2E-03	2E-03	6E-04	1E-04	3E-04	1E-04	2E-04	9E-05
481430.59	2.0E-03	1E-03	5E-04	5E-04	7E-03	3E-03	2E-03	2E-03	6E-04	1E-04	3E-04	1E-04	2E-04	9E-05
481530.59	2.1E-03	1E-03	5E-04	5E-04	7E-03	3E-03	2E-03	2E-03	6E-04	1E-04	3E-04	1E-04	2E-04	9E-05
481630.59	2.1E-03	1E-03	5E-04	5E-04	7E-03	3E-03	2E-03	2E-03	6E-04	1E-04	3E-04	1E-04	2E-04	9E-05
481730.59	2.1E-03	1E-03	5E-04	5E-04	7E-03	3E-03	2E-03	2E-03	6E-04	1E-04	3E-04	1E-04	2E-04	9E-05
481830.59	2.2E-03	1E-03	5E-04	5E-04	7E-03	3E-03	2E-03	2E-03	6E-04	1E-04	3E-04	1E-04	2E-04	1E-04
481930.59	2.2E-03	1E-03	5E-04	6E-04	7E-03	3E-03	2E-03	2E-03	6E-04	1E-04	3E-04	1E-04	2E-04	1E-04
482030.59	2.3E-03	1E-03	6E-04	6E-04	7E-03	3E-03	2E-03	2E-03	6E-04	1E-04	3E-04	1E-04	3E-04	1E-04
482130.59	2.3E-03	1E-03	6E-04	6E-04	7E-03	3E-03	2E-03	2E-03	6E-04	1E-04	3E-04	1E-04	3E-04	1E-04
482230.59	2.3E-03	1E-03	6E-04	6E-04	7E-03	3E-03	2E-03	2E-03	5E-04	1E-04	3E-04	1E-04	3E-04	1E-04
482330.59	2.4E-03	1E-03	6E-04	6E-04	7E-03	3E-03	2E-03	2E-03	5E-04	1E-04	3E-04	1E-04	3E-04	1E-04
482430.59	2.5E-03	1E-03	6E-04	6E-04	7E-03	3E-03	2E-03	2E-03	5E-04	1E-04	3E-04	1E-04	3E-04	1E-04
482530.59	2.5E-03	1E-03	6E-04	6E-04	7E-03	3E-03	2E-03	2E-03	5E-04	1E-04	3E-04	1E-04	3E-04	1E-04
482630.59	2.6E-03	1E-03	6E-04	6E-04	6E-03	3E-03	2E-03	2E-03	5E-04	1E-04	3E-04	1E-04	3E-04	1E-04
483830.59	3.6E-03	2E-03	9E-04	8E-04	5E-03	2E-03	1E-03	1E-03	4E-04	8E-05	2E-04	1E-04	6E-04	2E-04
483930.59	3.7E-03	2E-03	9E-04	8E-04	5E-03	2E-03	1E-03	1E-03	4E-04	8E-05	2E-04	1E-04	6E-04	3E-04
484030.59	3.8E-03	2E-03	9E-04	9E-04	5E-03	2E-03	1E-03	1E-03	4E-04	8E-05	2E-04	1E-04	7E-04	3E-04
484130.59	3.8E-03	2E-03	9E-04	9E-04	4E-03	2E-03	1E-03	1E-03	4E-04	7E-05	2E-04	9E-05	7E-04	3E-04
485901.79	3.8E-02	2E-02	1E-02	1E-02	7E-03	3E-03	2E-03	2E-03	5E-04	1E-04	3E-04	1E-04	5E-02	2E-02

TAMT Risk Assessment - DPM Cancer and Chronic HI

	Discrete Receptor ID (Group Name)	X	Y	quipment: Multi-Purpose General Cargofully_mitigated 0.0%	quipment: Dry Bulkfully_mitigated 60%	Locomotives: All 100%	Locomotives: Refrigerated Containersfully_mitigated 0%	Locomotives: Multi-Purpose General Cargofully_mitigated 54%	Locomotives: Dry Bulkfully_mitigated 46%	Trucks: All 100%	Trucks: Refrigerated Containersfully_mitigated 61%	Trucks: Multi-Purpose General Cargofully_mitigated 4%	Trucks: Dry Bulkfully_mitigated 35%	All
AERMOD Output														
residential	res	487479.47	3617250.73	0E+00	3E-03	2E-03	0E+00	1E-03	9E-04	5E-03	3E-03	2E-04	2E-03	0.04
residential	res	487504.47	3617250.73	0E+00	3E-03	2E-03	0E+00	1E-03	9E-04	0.00422	0.00256	0.00019	0.00147	0.04
residential	res	487529.47	3617250.73	0E+00	3E-03	2E-03	0E+00	1E-03	9E-04	0.00384	0.00233	0.00017	0.00134	0.04
residential	res	487554.47	3617250.73	0E+00	3E-03	2E-03	0E+00	1E-03	9E-04	0.00353	0.00214	0.00016	0.00123	0.04
residential	res	487579.47	3617250.73	0E+00	3E-03	2E-03	0E+00	1E-03	9E-04	0.0032	0.00194	0.00014	0.00112	0.04
residential	res	487604.47	3617250.73	0E+00	3E-03	2E-03	0E+00	1E-03	9E-04	0.00283	0.00172	0.00013	0.00099	0.04
residential	res	487629.47	3617250.73	0E+00	3E-03	2E-03	0E+00	1E-03	9E-04	0.00244	0.00148	0.00011	0.00085	0.04
residential	res	487654.47	3617250.73	0E+00	3E-03	2E-03	0E+00	1E-03	9E-04	0.00207	0.00125	9.2E-05	0.00072	0.04
residential	res	487679.47	3617250.73	0E+00	3E-03	2E-03	0E+00	1E-03	8E-04	0.00175	0.00106	7.8E-05	0.00061	0.03
residential	res	487704.47	3617250.73	0E+00	3E-03	2E-03	0E+00	1E-03	8E-04	0.00151	0.00092	6.7E-05	0.00053	0.03
residential	res	487729.47	3617250.73	0E+00	3E-03	2E-03	0E+00	1E-03	8E-04	0.00133	0.00081	5.9E-05	0.00047	0.03
residential	res	487754.47	3617250.73	0E+00	3E-03	2E-03	0E+00	1E-03	8E-04	0.00119	0.00072	5.3E-05	0.00042	0.03
residential	res	487779.47	3617250.73	0E+00	3E-03	2E-03	0E+00	1E-03	8E-04	0.00108	0.00065	4.8E-05	0.00038	0.03

Refrigerated Containers

X	ug/m3	Dose Inhalation: 3rd tri	0<2	2<9	2<16	16<30	Risk (Residential 30-yr; school 9-yr; park 15-year): 3rd tri	0<2	2<9	2<16	16<30	Summed Risk	Cases Per Million	Chronic HI
487479.47	0.01609	6E-06	2E-05	1E-05	9E-06	4E-06	2E-07	5E-06	0E+00	6E-06	9E-07	1.2E-05	12.215	0.00322
487504.47	0.01545	5.35E-06	1.61E-05	9.35E-06	8.47E-06	3.87E-06	2.1E-07	5.1E-06	0	5.6E-06	8.5E-07	1.173E-05	11.7285	0.00309
487529.47	0.01509	5.22E-06	1.58E-05	9.13E-06	8.28E-06	3.78E-06	2.1E-07	5E-06	0	5.5E-06	8.3E-07	1.146E-05	11.456	0.00302
487554.47	0.01478	5.12E-06	1.54E-05	8.94E-06	8.11E-06	3.7E-06	2E-07	4.9E-06	0	5.3E-06	8.1E-07	1.122E-05	11.2185	0.00296
487579.47	0.01446	5E-06	1.51E-05	8.75E-06	7.93E-06	3.62E-06	2E-07	4.7E-06	0	5.2E-06	8E-07	1.097E-05	10.9741	0.00289
487604.47	0.01411	4.88E-06	1.47E-05	8.54E-06	7.74E-06	3.53E-06	1.9E-07	4.6E-06	0	5.1E-06	7.8E-07	1.071E-05	10.7122	0.00282
487629.47	0.01376	4.76E-06	1.44E-05	8.33E-06	7.55E-06	3.44E-06	1.9E-07	4.5E-06	0	5E-06	7.6E-07	1.045E-05	10.4461	0.00275
487654.47	0.01342	4.65E-06	1.4E-05	8.12E-06	7.36E-06	3.36E-06	1.8E-07	4.4E-06	0	4.9E-06	7.4E-07	1.019E-05	10.1894	0.00268
487679.47	0.01313	4.54E-06	1.37E-05	7.94E-06	7.2E-06	3.29E-06	1.8E-07	4.3E-06	0	4.8E-06	7.2E-07	9.966E-06	9.9661	0.00263
487704.47	0.01288	4.46E-06	1.35E-05	7.79E-06	7.07E-06	3.22E-06	1.8E-07	4.2E-06	0	4.7E-06	7.1E-07	9.779E-06	9.77867	0.00258
487729.47	0.01268	4.39E-06	1.33E-05	7.67E-06	6.95E-06	3.17E-06	1.7E-07	4.2E-06	0	4.6E-06	7E-07	9.626E-06	9.62555	0.00254
487754.47	0.01249	4.32E-06	1.31E-05	7.56E-06	6.85E-06	3.13E-06	1.7E-07	4.1E-06	0	4.5E-06	6.9E-07	9.483E-06	9.48274	0.0025
487779.47	0.01233	4.27E-06	1.29E-05	7.46E-06	6.76E-06	3.09E-06	1.7E-07	4E-06	0	4.5E-06	6.8E-07	9.359E-06	9.35945	0.00247

Multi-Purpose General Cargo

X	ug/m3	Dose Inhalation: 3rd tri	0<2	2<9	2<16	16<30	Risk (Residential 30-yr; school 9-yr; park 15-year): 3rd tri	0<2	2<9	2<16	16<30	Summed Risk	Cases Per Million	Chronic HI
487479.47	9E-03	3E-06	1E-05	6E-06	5E-06	2E-06	1E-07	3E-06	0E+00	3E-06	5E-07	6.9E-06	6.929	0.00183
487504.47	9E-03	3E-06	9E-06	5E-06	5E-06	2E-06	1E-07	3E-06	0E+00	3E-06	5E-07	6.8E-06	6.821	0.0018
487529.47	9E-03	3E-06	9E-06	5E-06	5E-06	2E-06	1E-07	3E-06	0E+00	3E-06	5E-07	6.7E-06	6.722	0.00177
487554.47	9E-03	3E-06	9E-06	5E-06	5E-06	2E-06	1E-07	3E-06	0E+00	3E-06	5E-07	6.6E-06	6.634	0.00175
487579.47	9E-03	3E-06	9E-06	5E-06	5E-06	2E-06	1E-07	3E-06	0E+00	3E-06	5E-07	6.5E-06	6.546	0.00172
487604.47	9E-03	3E-06	9E-06	5E-06	5E-06	2E-06	1E-07	3E-06	0E+00	3E-06	5E-07	6.5E-06	6.459	0.0017
487629.47	8E-03	3E-06	9E-06	5E-06	5E-06	2E-06	1E-07	3E-06	0E+00	3E-06	5E-07	6.4E-06	6.374	0.00168
487654.47	8E-03	3E-06	9E-06	5E-06	5E-06	2E-06	1E-07	3E-06	0E+00	3E-06	5E-07	6.3E-06	6.287	0.00166
487679.47	8E-03	3E-06	9E-06	5E-06	4E-06	2E-06	1E-07	3E-06	0E+00	3E-06	5E-07	6.2E-06	6.210	0.00164
487704.47	8E-03	3E-06	8E-06	5E-06	4E-06	2E-06	1E-07	3E-06	0E+00	3E-06	4E-07	6.1E-06	6.137	0.00162
487729.47	8E-03	3E-06	8E-06	5E-06	4E-06	2E-06	1E-07	3E-06	0E+00	3E-06	4E-07	6.1E-06	6.068	0.0016
487754.47	8E-03	3E-06	8E-06	5E-06	4E-06	2E-06	1E-07	3E-06	0E+00	3E-06	4E-07	6.0E-06	6.000	0.00158
487779.47	8E-03	3E-06	8E-06	5E-06	4E-06	2E-06	1E-07	3E-06	0E+00	3E-06	4E-07	5.9E-06	5.934	0.00156

Dry Bulk

X	ug/m3	Dose Inhalation: 3rd tri	0<2	2<9	2<16	16<30	Risk (Residential 30-yr; school 9-yr; park 15-year): 3rd tri	0<2	2<9	2<16	16<30	Summed Risk	Cases Per Million	Chronic HI
487479.47	2E-02	5E-06	2E-05	9E-06	8E-06	4E-06	2E-07	5E-06	0E+00	6E-06	9E-07	1.2E-05	11.747	0.00309
487504.47	2E-02	5E-06	2E-05	9E-06	8E-06	4E-06	2E-07	5E-06	0E+00	5E-06	8E-07	1.1E-05	11.397	0.003
487529.47	1E-02	5E-06	2E-05	9E-06	8E-06	4E-06	2E-07	5E-06	0E+00	5E-06	8E-07	1.1E-05	11.168	0.00294
487554.47	1E-02	5E-06	2E-05	9E-06	8E-06	4E-06	2E-07	5E-06	0E+00	5E-06	8E-07	1.1E-05	10.961	0.00289
487579.47	1E-02	5E-06	1E-05	9E-06	8E-06	4E-06	2E-07	5E-06	0E+00	5E-06	8E-07	1.1E-05	10.747	0.00283
487604.47	1E-02	5E-06	1E-05	8E-06	8E-06	3E-06	2E-07	5E-06	0E+00	5E-06	8E-07	1.1E-05	10.526	0.00277
487629.47	1E-02	5E-06	1E-05	8E-06	7E-06	3E-06	2E-07	4E-06	0E+00	5E-06	7E-07	1.0E-05	10.307	0.00272
487654.47	1E-02	5E-06	1E-05	8E-06	7E-06	3E-06	2E-07	4E-06	0E+00	5E-06	7E-07	1.0E-05	10.095	0.00266
487679.47	1E-02	5E-06	1E-05	8E-06	7E-06	3E-06	2E-07	4E-06	0E+00	5E-06	7E-07	9.9E-06	9.904	0.00261
487704.47	1E-02	4E-06	1E-05	8E-06	7E-06	3E-06	2E-07	4E-06	0E+00	5E-06	7E-07	9.7E-06	9.736	0.00256
487729.47	1E-02	4E-06	1E-05	8E-06	7E-06	3E-06	2E-07	4E-06	0E+00	5E-06	7E-07	9.6E-06	9.583	0.00252
487754.47	1E-02	4E-06	1E-05	8E-06	7E-06	3E-06	2E-07	4E-06	0E+00	5E-06	7E-07	9.4E-06	9.443	0.00249
487779.47	1E-02	4E-06	1E-05	7E-06	7E-06	3E-06	2E-07	4E-06	0E+00	4E-06	7E-07	9.3E-06	9.313	0.00245

TAMT Risk Assessment - DPM Cancer and Chronic HI

AERMOD Output

Land use	Discrete Receptor ID (Group Name)	X	Y	Equipment: Multi-Purpose General Cargofully_mitigated (0.0%)	Equipment: Dry Bulkfully_mitigated (60%)	Locomotives: All (100%)	Locomotives: Refrigerated Containersfully_mitigated (0%)	Locomotives: Multi-Purpose General Cargofully_mitigated (54%)	Locomotives: Dry Bulkfully_mitigated (46%)	Trucks: All (100%)	Trucks: Refrigerated Containersfully_mitigated (61%)	Trucks: Multi-Purpose General Cargofully_mitigated (4%)	Trucks: Dry Bulkfully_mitigated (35%)	All
residential	REC_100	485230.59	3615725.04	0E+00	4E-03	2E-03	0E+00	8E-04	7E-04	0.00024	0.00015	1.1E-05	8.4E-05	0.04
residential	REC_100	485330.59	3615725.04	0E+00	4E-03	2E-03	0E+00	8E-04	7E-04	0.00025	0.00015	1.1E-05	8.6E-05	0.04
residential	REC_100	485230.59	3615825.04	0E+00	4E-03	2E-03	0E+00	9E-04	8E-04	0.00026	0.00016	1.1E-05	9E-05	0.04
residential	REC_100	489130.59	3615925.04	0E+00	9E-04	4E-04	0E+00	2E-04	2E-04	6.5E-05	4E-05	2.9E-06	2.3E-05	0.01
residential	REC_100	489030.59	3616025.04	0E+00	9E-04	5E-04	0E+00	3E-04	2E-04	7.3E-05	4.4E-05	3.2E-06	2.5E-05	0.01
residential	REC_100	489130.59	3616025.04	0E+00	9E-04	5E-04	0E+00	3E-04	2E-04	7.2E-05	4.4E-05	3.2E-06	2.5E-05	0.01
residential	REC_100	488930.59	3616125.04	0E+00	1E-03	5E-04	0E+00	3E-04	2E-04	8.2E-05	5E-05	3.6E-06	2.8E-05	0.01
residential	REC_100	489030.59	3616125.04	0E+00	1E-03	5E-04	0E+00	3E-04	2E-04	8.1E-05	4.9E-05	3.6E-06	2.8E-05	0.01
residential	REC_100	489130.59	3616125.04	0E+00	1E-03	5E-04	0E+00	3E-04	2E-04	8E-05	4.9E-05	3.6E-06	2.8E-05	0.01
residential	REC_100	488730.59	3616225.04	0E+00	1E-03	6E-04	0E+00	3E-04	3E-04	9.4E-05	5.7E-05	4.2E-06	3.3E-05	0.02
residential	REC_100	488830.59	3616225.04	0E+00	1E-03	5E-04	0E+00	3E-04	3E-04	9.3E-05	5.6E-05	4.1E-06	3.2E-05	0.02
residential	REC_100	488930.59	3616225.04	0E+00	1E-03	5E-04	0E+00	3E-04	2E-04	9.2E-05	5.6E-05	4.1E-06	3.2E-05	0.02
residential	REC_100	489030.59	3616225.04	0E+00	1E-03	5E-04	0E+00	3E-04	2E-04	9.1E-05	5.5E-05	4E-06	3.2E-05	0.01
residential	REC_100	489130.59	3616225.04	0E+00	1E-03	5E-04	0E+00	3E-04	2E-04	9E-05	5.4E-05	4E-06	3.1E-05	0.01
residential	REC_100	488630.59	3616325.04	0E+00	1E-03	6E-04	0E+00	3E-04	3E-04	0.00011	6.6E-05	4.8E-06	3.8E-05	0.02
residential	REC_100	488730.59	3616325.04	0E+00	1E-03	6E-04	0E+00	3E-04	3E-04	0.00011	6.5E-05	4.8E-06	3.7E-05	0.02
residential	REC_100	488830.59	3616325.04	0E+00	1E-03	6E-04	0E+00	3E-04	3E-04	0.00011	6.4E-05	4.7E-06	3.7E-05	0.02
residential	REC_100	488930.59	3616325.04	0E+00	1E-03	5E-04	0E+00	3E-04	3E-04	0.0001	6.3E-05	4.6E-06	3.6E-05	0.02

Refrigerated Containers

X	Y	ug/m3	Dose Inhalation 3rd tri	Dose 0<2	Dose 2<9	Dose 2<16	Dose 16<30	Risk (Residential 30-yr; school 9-yr; park 15-year) 3rd tri	Risk 0<2	Risk 2<9	Risk 2<16	Risk 16<30	Summed Risk	Cases Per Million	Chronic HI
485230.59	3615725.04	0.0137	4.74E-06	1.43E-05	8.29E-06	7.52E-06	3.43E-06	1.9E-07	4.5E-06	0	5E-06	7.5E-07	1.04E-05	10.4028	0.00274
485330.59	3615725.04	0.01324	4.58E-06	1.38E-05	8.01E-06	7.26E-06	3.31E-06	1.8E-07	4.3E-06	0	4.8E-06	7.3E-07	1.005E-05	10.0481	0.00265
485230.59	3615825.04	0.01439	4.98E-06	1.5E-05	8.71E-06	7.89E-06	3.6E-06	2E-07	4.7E-06	0	5.2E-06	7.9E-07	1.092E-05	10.9235	0.00288
489130.59	3615925.04	0.00504	1.75E-06	5.27E-06	3.05E-06	2.77E-06	1.26E-06	6.9E-08	1.7E-06	0	1.8E-06	2.8E-07	3.829E-06	3.82895	0.00101
489030.59	3616025.04	0.00533	1.84E-06	5.57E-06	3.22E-06	2.92E-06	1.33E-06	7.2E-08	1.8E-06	0	1.9E-06	2.9E-07	4.046E-06	4.04551	0.00107
489130.59	3616025.04	0.00528	1.83E-06	5.52E-06	3.19E-06	2.9E-06	1.32E-06	7.2E-08	1.7E-06	0	1.9E-06	2.9E-07	4.007E-06	4.00694	0.00106
488930.59	3616125.04	0.00565	1.95E-06	5.9E-06	3.42E-06	3.1E-06	1.41E-06	7.7E-08	1.9E-06	0	2E-06	3.1E-07	4.286E-06	4.2864	0.00113
489030.59	3616125.04	0.00558	1.93E-06	5.83E-06	3.38E-06	3.06E-06	1.4E-06	7.6E-08	1.8E-06	0	2E-06	3.1E-07	4.238E-06	4.23765	0.00112
489130.59	3616125.04	0.00551	1.91E-06	5.76E-06	3.34E-06	3.02E-06	1.38E-06	7.5E-08	1.8E-06	0	2E-06	3E-07	4.186E-06	4.18615	0.0011
488730.59	3616225.04	0.00608	2.1E-06	6.35E-06	3.68E-06	3.33E-06	1.52E-06	8.3E-08	2E-06	0	2.2E-06	3.3E-07	4.614E-06	4.61391	0.00122
488830.59	3616225.04	0.006	2.08E-06	6.27E-06	3.63E-06	3.29E-06	1.5E-06	8.2E-08	2E-06	0	2.2E-06	3.3E-07	4.554E-06	4.55363	0.0012
488930.59	3616225.04	0.00592	2.05E-06	6.19E-06	3.58E-06	3.25E-06	1.48E-06	8.1E-08	1.9E-06	0	2.1E-06	3.3E-07	4.497E-06	4.49661	0.00118
489030.59	3616225.04	0.00584	2.02E-06	6.1E-06	3.53E-06	3.2E-06	1.46E-06	7.9E-08	1.9E-06	0	2.1E-06	3.2E-07	4.431E-06	4.43128	0.00117
489130.59	3616225.04	0.00577	2E-06	6.03E-06	3.49E-06	3.16E-06	1.44E-06	7.8E-08	1.9E-06	0	2.1E-06	3.2E-07	4.377E-06	4.37673	0.00115
488630.59	3616325.04	0.00647	2.24E-06	6.76E-06	3.91E-06	3.55E-06	1.62E-06	8.8E-08	2.1E-06	0	2.3E-06	3.6E-07	4.908E-06	4.90828	0.00129
488730.59	3616325.04	0.00637	2.21E-06	6.66E-06	3.86E-06	3.5E-06	1.59E-06	8.7E-08	2.1E-06	0	2.3E-06	3.5E-07	4.838E-06	4.83766	0.00127
488830.59	3616325.04	0.00629	2.18E-06	6.57E-06	3.8E-06	3.45E-06	1.57E-06	8.5E-08	2.1E-06	0	2.3E-06	3.5E-07	4.771E-06	4.77133	0.00126
488930.59	3616325.04	0.00621	2.15E-06	6.49E-06	3.75E-06	3.4E-06	1.55E-06	8.4E-08	2E-06	0	2.2E-06	3.4E-07	4.711E-06	4.71095	0.00124

Multi-Purpose General Cargo

X	Y	ug/m3	Dose Inhalation 3rd tri	Dose 0<2	Dose 2<9	Dose 2<16	Dose 16<30	Risk (Residential 30-yr; school 9-yr; park 15-year) 3rd tri	Risk 0<2	Risk 2<9	Risk 2<16	Risk 16<30	Summed Risk	Cases Per Million	Chronic HI
485230.59	3615725.04	9E-03	3E-06	9E-06	5E-06	5E-06	2E-06	1E-07	3E-06	0E+00	3E-06	5E-07	6.8E-06	6.816	0.0018
485330.59	3615725.04	9E-03	3E-06	9E-06	5E-06	5E-06	2E-06	1E-07	3E-06	0E+00	3E-06	5E-07	6.7E-06	6.652	0.00175
485230.59	3615825.04	9E-03	3E-06	1E-05	6E-06	5E-06	2E-06	1E-07	3E-06	0E+00	3E-06	5E-07	7.2E-06	7.163	0.00189
489130.59	3615925.04	3E-03	1E-06	3E-06	2E-06	2E-06	8E-07	4E-08	1E-06	0E+00	1E-06	2E-07	2.5E-06	2.511	0.00066
489030.59	3616025.04	4E-03	1E-06	4E-06	2E-06	2E-06	9E-07	5E-08	1E-06	0E+00	1E-06	2E-07	2.7E-06	2.664	0.0007
489130.59	3616025.04	3E-03	1E-06	4E-06	2E-06	2E-06	9E-07	5E-08	1E-06	0E+00	1E-06	2E-07	2.6E-06	2.627	0.00069
488930.59	3616125.04	4E-03	1E-06	4E-06	2E-06	2E-06	9E-07	5E-08	1E-06	0E+00	1E-06	2E-07	2.8E-06	2.833	0.00075
489030.59	3616125.04	4E-03	1E-06	4E-06	2E-06	2E-06	9E-07	5E-08	1E-06	0E+00	1E-06	2E-07	2.8E-06	2.784	0.00073
489130.59	3616125.04	4E-03	1E-06	4E-06	2E-06	2E-06	9E-07	5E-08	1E-06	0E+00	1E-06	2E-07	2.7E-06	2.743	0.00072
488730.59	3616225.04	4E-03	1E-06	4E-06	2E-06	2E-06	1E-06	6E-08	1E-06	0E+00	1E-06	2E-07	3.1E-06	3.072	0.00081
488830.59	3616225.04	4E-03	1E-06	4E-06	2E-06	2E-06	1E-06	5E-08	1E-06	0E+00	1E-06	2E-07	3.0E-06	3.016	0.00079
488930.59	3616225.04	4E-03	1E-06	4E-06	2E-06	2E-06	1E-06	5E-08	1E-06	0E+00	1E-06	2E-07	3.0E-06	2.961	0.00078
489030.59	3616225.04	4E-03	1E-06	4E-06	2E-06	2E-06	1E-06	5E-08	1E-06	0E+00	1E-06	2E-07	2.9E-06	2.913	0.00077
489130.59	3616225.04	4E-03	1E-06	4E-06	2E-06	2E-06	9E-07	5E-08	1E-06	0E+00	1E-06	2E-07	2.9E-06	2.859	0.00075
488630.59	3616325.04	4E-03	1E-06	5E-06	3E-06	2E-06	1E-06	6E-08	1E-06	0E+00	2E-06	2E-07	3.3E-06	3.276	0.00086
488730.59	3616325.04	4E-03	1E-06	4E-06	3E-06	2E-06	1E-06	6E-08	1E-06	0E+00	2E-06	2E-07	3.2E-06	3.215	0.00085
488830.59	3616325.04	4E-03	1E-06	4E-06	3E-06	2E-06	1E-06	6E-08	1E-06	0E+00	2E-06	2E-07	3.2E-06	3.157	0.00083
488930.59	3616325.04	4E-03	1E-06	4E-06	2E-06	2E-06	1E-06	6E-08	1E-06	0E+00	1E-06	2E-07	3.1E-06	3.096	0.00082

Dry Bulk

X	Y	ug/m3	Dose Inhalation 3rd tri	Dose 0<2	Dose 2<9	Dose 2<16	Dose 16<30	Risk (Residential 30-yr; school 9-yr; park 15-year) 3rd tri	Risk 0<2	Risk 2<9	Risk 2<16	Risk 16<30	Summed Risk	Cases Per Million	Chronic HI
485230.59	3615725.04	1E-02	5E-06	1E-05	8E-06	8E-06	3E-06	2E-07	5E-06	0E+00	5E-06	8E-07	1.0E-05	10.420	0.00275
485330.59	3615725.04	1E-02	5E-06	1E-05	8E-06	7E-06	3E-06	2E-07	4E-06	0E+00	5E-06	7E-07	1.0E-05	10.187	0.00268
485230.59	3615825.04	1E-02	5E-06	2E-05	9E-06	8E-06	4E-06	2E-07	5E-06	0E+00	5E-06	8E-07	1.1E-05	11.035	0.00291
489130.59	3615925.04	5E-03	2E-06	5E-06	3E-06	2E-06	1E-06	6E-08	1E-06	0E+00	2E-06	2E-07	3.4E-06	3.418	0.0009
489030.59	3616025.04	5E-03	2E-06	5E-06	3E-06	3E-06	1E-06	7E-08	2E-06	0E+00	2E-06	3E-07	3.6E-06	3.640	0.00096
489130.59	3616025.04	5E-03	2E-06	5E-06	3E-06	3E-06	1E-06	6E-08	2E-06	0E+00	2E-06	3E-07	3.6E-06	3.594	0.00095
488930.59	3616125.04	5E-03	2E-06	5E-06	3E-06	3E-06	1E-06	7E-08	2E-06	0E+00	2E-06	3E-07	3.9E-06	3.887	0.00102
489030.59	3616125.04	5E-03	2E-06	5E-06	3E-06	3E-06	1E-06	7E-08	2E-06	0E+00	2E-06	3E-07	3.8E-06	3.829	0.00101
489130.59	3616125.04	5E-03	2E-06	5E-06	3E-06	3E-06	1E-06	7E-08	2E-06	0E+00	2E-06	3E-07	3.8E-06	3.774	0.00099
488730.59	3616225.04	6E-03	2E-06	6E-06	3E-06	3E-06	1E-06	8E-08	2E-06	0E+00	2E-06	3E-07	4.2E-06	4.233	0.00112
488830.59	3616225.04	5E-03	2E-06	6E-06	3E-06	3E-06	1E-06	7E-08	2E-06	0E+00	2E-06	3E-07	4.2E-06	4.161	0.0011
488930.59	3616225.04	5E-03	2E-06	6E-06	3E-06	3E-06	1E-06	7E-08	2E-06	0E+00	2E-06	3E-07	4.1E-06	4.094	0.00108
489030.59	3616225.04	5E-03	2E-06	6E-06	3E-06	3E-06	1E-06	7E-08	2E-06	0E+00	2E-06	3E-07	4.0E-06	4.024	0.00106
489130.59	3616225.04	5E-03	2E-06	5E-06	3E-06	3E-06	1E-06	7E-08	2E-06	0E+00	2E-06	3E-07	4.0E-06	3.955	0.00104
488630.59	3616325.04	6E-03	2E-06	6E-06	4E-06	3E-06	1E-06	8E-08	2E-06	0E+00	2E-06	3E-07	4.5E-06	4.540	0.0012
488730.59	3616325.04	6E-03	2E-06	6E-06	4E-06	3E-06	1E-06	8E-08	2E-06	0E+00	2E-06	3E-07	4.5E-06	4.462	0.00118
488830.59	3616325.04	6E-03	2E-06	6E-06	3E-06	3E-06	1E-06	8E-08	2E-06	0E+00	2E-06	3E-07	4.4E-06	4.384	0.00116
488930.59	3616325.04	6E-03	2E-06	6E-06	3E-06	3E-06	1E-06	8E-08	2E-06	0E+00	2E-06	3E-07	4.3E-06	4.306	0.00113

TAMT Risk Assessment - DPM Cancer and Chronic HI

				Equipment		Locomotives				Trucks				
				Multi-Purpose General Cargofully_mitigated	Dry Bulkfully_mitigated	All	Refrigerated Containersfully_mitigated	Multi-Purpose General Cargofully_mitigated	Dry Bulkfully_mitigated	All	Refrigerated Containersfully_mitigated	Multi-Purpose General Cargofully_mitigated	Dry Bulkfully_mitigated	All
AERMOD Output				0.0%	60%	100%	0%	54%	46%	100%	61%	4%	35%	
	Discrete Receptor ID (Group Name)	X	Y											
residential	REC_100I	483430.59	3617525.04	0E+00	4E-03	1E-03	0E+00	7E-04	6E-04	9.8E-05	6E-05	4.4E-06	3.4E-05	0.04
residential	REC_100I	483530.59	3617525.04	0E+00	5E-03	1E-03	0E+00	8E-04	7E-04	0.00011	6.4E-05	4.7E-06	3.7E-05	0.04
residential	REC_100I	483630.59	3617525.04	0E+00	5E-03	2E-03	0E+00	9E-04	7E-04	0.00011	6.9E-05	5.1E-06	4E-05	0.04
residential	REC_100I	483730.59	3617525.04	0E+00	6E-03	2E-03	0E+00	9E-04	8E-04	0.00012	7.5E-05	5.5E-06	4.3E-05	0.05
residential	REC_100I	483830.59	3617525.04	0E+00	7E-03	2E-03	0E+00	1E-03	9E-04	0.00014	8.2E-05	6E-06	4.7E-05	0.05
residential	REC_100I	483930.59	3617525.04	0E+00	8E-03	2E-03	0E+00	1E-03	9E-04	0.00015	9E-05	6.6E-06	5.1E-05	0.05
residential	REC_100I	484030.59	3617525.04	0E+00	9E-03	2E-03	0E+00	1E-03	1E-03	0.00016	9.8E-05	7.2E-06	5.6E-05	0.06
residential	REC_100I	484130.59	3617525.04	0E+00	1E-02	2E-03	0E+00	1E-03	1E-03	0.00018	0.00011	7.9E-06	6.2E-05	0.06
residential	REC_100I	484230.59	3617525.04	0E+00	1E-02	3E-03	0E+00	1E-03	1E-03	0.0002	0.00012	8.8E-06	6.9E-05	0.07
residential	REC_100I	484330.59	3617525.04	0E+00	1E-02	3E-03	0E+00	2E-03	1E-03	0.00022	0.00013	9.8E-06	7.7E-05	0.07
residential	REC_100I	484430.59	3617525.04	0E+00	2E-02	3E-03	0E+00	2E-03	1E-03	0.00025	0.00015	1.1E-05	8.6E-05	0.08
residential	REC_100I	486730.59	3617525.04	0E+00	7E-03	4E-03	0E+00	2E-03	2E-03	0.00287	0.00174	0.00013	0.001	0.06
residential	REC_100I	486830.59	3617525.04	0E+00	7E-03	4E-03	0E+00	2E-03	2E-03	0.00193	0.00117	8.6E-05	0.00067	0.06
residential	REC_100I	486930.59	3617525.04	0E+00	6E-03	4E-03	0E+00	2E-03	2E-03	0.00149	0.00091	6.6E-05	0.00052	0.05
residential	REC_100I	487030.59	3617525.04	0E+00	6E-03	3E-03	0E+00	2E-03	2E-03	0.00123	0.00075	5.5E-05	0.00043	0.05
residential	REC_100I	487130.59	3617525.04	0E+00	5E-03	3E-03	0E+00	2E-03	1E-03	0.00107	0.00065	4.7E-05	0.00037	0.05
residential	REC_100I	487230.59	3617525.04	0E+00	5E-03	3E-03	0E+00	2E-03	1E-03	0.00097	0.00059	4.3E-05	0.00034	0.04
residential	REC_100I	487630.59	3617525.04	0E+00	4E-03	2E-03	0E+00	1E-03	1E-03	0.0016	0.00097	7.1E-05	0.00056	0.04

Refrigerated Containers															
	Dose Inhallation						Risk (Residential 30-yr; school 9-yr; park 15-year)								
ug/m3	3rd tri	0<2	2<9	2<16	16<30	3rd tri	0<2	2<9	2<16	16<30	Summed Risk	Cases Per Million	Chronic HI		
0.01884	6.52E-06	1.97E-05	1.14E-05	1.03E-05	4.72E-06	2.6E-07	6.2E-06	0	6.8E-06	1E-06	1.431E-05	14.3061	0.00377		

Multi-Purpose General Cargo														
	Dose Inhallation						Risk (Residential 30-yr; school 9-yr; park 15-year)							
ug/m3	3rd tri	0<2	2<9	2<16	16<30	3rd tri	0<2	2<9	2<16	16<30	Summed Risk	Cases Per Million	Chronic HI	
8E-03	3E-06	8E-06	5E-06	4E-06	2E-06	1E-07	3E-06	0E+00	3E-06	4E-07	6.1E-06	6.076	0.0016	

Dry Bulk														
	Dose Inhallation						Risk (Residential 30-yr; school 9-yr; park 15-year)							
ug/m3	3rd tri	0<2	2<9	2<16	16<30	3rd tri	0<2	2<9	2<16	16<30	Summed Risk	Cases Per Million	Chronic HI	
1E-02	4E-06	1E-05	7E-06	7E-06	3E-06	2E-07	4E-06	0E+00	4E-06	7E-07	9.1E-06	9.077	0.00239	

TAMT Risk Assessment - DPM Cancer and Chronic HI

AERMOD Output

Discrete Receptor ID (Group Name)		X	Y	Equipment: Multi-Purpose General Cargofully_mitigated 0.0%	Equipment: Dry Bulkfully_mitigated 60%	Locomotives: All 100%	Locomotives: Refrigerated Containersfully_mitigated 0%	Locomotives: Multi-Purpose General Cargofully_mitigated 54%	Locomotives: Dry Bulkfully_mitigated 46%	Trucks: All 100%	Trucks: Refrigerated Containersfully_mitigated 61%	Trucks: Multi-Purpose General Cargofully_mitigated 4%	Trucks: Dry Bulkfully_mitigated 35%	All
residential	REC_100M	484030.59	3617925.04	0E+00	6E-03	2E-03	0E+00	1E-03	9E-04	0.00012	7.2E-05	5.3E-06	4.1E-05	0.05
residential	REC_100M	484130.59	3617925.04	0E+00	7E-03	2E-03	0E+00	1E-03	1E-03	0.00013	8E-05	5.8E-06	4.6E-05	0.06
residential	REC_100M	486330.59	3617925.04	0E+00	2E-02	1E-02	0E+00	6E-03	5E-03	0.00276	0.00168	0.00012	0.00096	0.08
residential	REC_100M	486430.59	3617925.04	0E+00	1E-02	1E-02	0E+00	5E-03	4E-03	0.00186	0.00113	8.3E-05	0.00065	0.07
residential	REC_100M	486530.59	3617925.04	0E+00	1E-02	8E-03	0E+00	4E-03	4E-03	0.00142	0.00086	6.3E-05	0.00049	0.07
residential	REC_100M	486630.59	3617925.04	0E+00	9E-03	7E-03	0E+00	4E-03	3E-03	0.00114	0.00069	5.1E-05	0.0004	0.06
residential	REC_100M	486730.59	3617925.04	0E+00	8E-03	6E-03	0E+00	3E-03	3E-03	0.00092	0.00056	4.1E-05	0.00032	0.06
residential	REC_100M	486830.59	3617925.04	0E+00	7E-03	5E-03	0E+00	3E-03	2E-03	0.00081	0.00049	3.6E-05	0.00028	0.05
residential	REC_100M	487030.59	3617925.04	0E+00	6E-03	4E-03	0E+00	2E-03	2E-03	0.00063	0.00038	2.8E-05	0.00022	0.04
residential	REC_100M	487130.59	3617925.04	0E+00	5E-03	4E-03	0E+00	2E-03	2E-03	0.00057	0.00034	2.5E-05	0.0002	0.04
residential	REC_100M	487230.59	3617925.04	0E+00	5E-03	3E-03	0E+00	2E-03	2E-03	0.00053	0.00032	2.3E-05	0.00018	0.04

Refrigerated Containers

X	ug/m3	Dose Inhalation: 3rd tri	0<2	2<9	2<16	16<30	Risk (Residential 30-yr; school 9-yr; park 15-year): 3rd tri	0<2	2<9	2<16	16<30	Summed Risk	Cases Per Million	Chronic HI
484030.59	0.02479	8.58E-06	2.59E-05	1.5E-05	1.36E-05	6.21E-06	3.4E-07	8.1E-06	0	9E-06	1.4E-06	1.882E-05	18.8221	0.00496
484130.59	0.02683	9.29E-06	2.8E-05	1.62E-05	1.47E-05	6.71E-06	3.6E-07	8.8E-06	0	9.7E-06	1.5E-06	2.037E-05	20.3676	0.00537
486330.59	0.03233	1.12E-05	3.38E-05	1.96E-05	1.77E-05	8.09E-06	4.4E-07	1.1E-05	0	1.2E-05	1.8E-06	2.454E-05	24.5443	0.00647
486430.59	0.02892	1E-05	3.02E-05	1.75E-05	1.59E-05	7.24E-06	3.9E-07	9.5E-06	0	1E-05	1.6E-06	2.195E-05	21.9536	0.00578
486530.59	0.02622	9.08E-06	2.74E-05	1.59E-05	1.44E-05	6.56E-06	3.6E-07	8.6E-06	0	9.5E-06	1.4E-06	1.991E-05	19.9086	0.00524
486630.59	0.02391	8.28E-06	2.5E-05	1.45E-05	1.31E-05	5.98E-06	3.3E-07	7.9E-06	0	8.7E-06	1.3E-06	1.815E-05	18.1542	0.00478
486730.59	0.02177	7.54E-06	2.28E-05	1.32E-05	1.19E-05	5.45E-06	3E-07	7.2E-06	0	7.9E-06	1.2E-06	1.653E-05	16.5264	0.00435
486830.59	0.02029	7.02E-06	2.12E-05	1.23E-05	1.11E-05	5.08E-06	2.8E-07	6.7E-06	0	7.3E-06	1.1E-06	1.54E-05	15.4017	0.00406
487030.59	0.01765	6.11E-06	1.85E-05	1.07E-05	9.68E-06	4.42E-06	2.4E-07	5.8E-06	0	6.4E-06	9.7E-07	1.34E-05	13.401	0.00353
487130.59	0.01658	5.74E-06	1.73E-05	1E-05	9.09E-06	4.15E-06	2.3E-07	5.4E-06	0	6E-06	9.1E-07	1.259E-05	12.5851	0.00332
487230.59	0.01565	5.42E-06	1.64E-05	9.47E-06	8.58E-06	3.92E-06	2.1E-07	5.1E-06	0	5.7E-06	8.6E-07	1.188E-05	11.8785	0.00313

Multi-Purpose General Cargo

X	ug/m3	Dose Inhalation: 3rd tri	0<2	2<9	2<16	16<30	Risk (Residential 30-yr; school 9-yr; park 15-year): 3rd tri	0<2	2<9	2<16	16<30	Summed Risk	Cases Per Million	Chronic HI
484030.59	1E-02	4E-06	1E-05	6E-06	6E-06	3E-06	1E-07	3E-06	0E+00	4E-06	6E-07	7.7E-06	7.691	0.00203
484130.59	1E-02	4E-06	1E-05	7E-06	6E-06	3E-06	1E-07	4E-06	0E+00	4E-06	6E-07	8.3E-06	8.310	0.00219
486330.59	2E-02	6E-06	2E-05	1E-05	1E-05	4E-06	2E-07	6E-06	0E+00	6E-06	1E-06	1.3E-05	13.220	0.00348
486430.59	2E-02	5E-06	2E-05	1E-05	9E-06	4E-06	2E-07	5E-06	0E+00	6E-06	9E-07	1.2E-05	11.994	0.00316
486530.59	1E-02	5E-06	2E-05	9E-06	8E-06	4E-06	2E-07	5E-06	0E+00	5E-06	8E-07	1.1E-05	10.968	0.00289
486630.59	1E-02	5E-06	1E-05	8E-06	7E-06	3E-06	2E-07	4E-06	0E+00	5E-06	7E-07	1.0E-05	10.085	0.00266
486730.59	1E-02	4E-06	1E-05	7E-06	7E-06	3E-06	2E-07	4E-06	0E+00	4E-06	7E-07	9.3E-06	9.299	0.00245
486830.59	1E-02	4E-06	1E-05	7E-06	6E-06	3E-06	2E-07	4E-06	0E+00	4E-06	6E-07	8.7E-06	8.650	0.00228
487030.59	1E-02	3E-06	1E-05	6E-06	5E-06	2E-06	1E-07	3E-06	0E+00	4E-06	5E-07	7.5E-06	7.547	0.00199
487130.59	9E-03	3E-06	1E-05	6E-06	5E-06	2E-06	1E-07	3E-06	0E+00	3E-06	5E-07	7.1E-06	7.088	0.00187
487230.59	9E-03	3E-06	9E-06	5E-06	5E-06	2E-06	1E-07	3E-06	0E+00	3E-06	5E-07	6.7E-06	6.685	0.00176

Dry Bulk

X	ug/m3	Dose Inhalation: 3rd tri	0<2	2<9	2<16	16<30	Risk (Residential 30-yr; school 9-yr; park 15-year): 3rd tri	0<2	2<9	2<16	16<30	Summed Risk	Cases Per Million	Chronic HI
484030.59	2E-02	5E-06	2E-05	1E-05	9E-06	4E-06	2E-07	5E-06	0E+00	6E-06	9E-07	1.2E-05	12.005	0.00316
484130.59	2E-02	6E-06	2E-05	1E-05	1E-05	4E-06	2E-07	6E-06	0E+00	6E-06	1E-06	1.3E-05	13.404	0.00353
486330.59	3E-02	1E-05	4E-05	2E-05	2E-05	9E-06	5E-07	1E-05	0E+00	1E-05	2E-06	2.6E-05	25.795	0.0068
486430.59	3E-02	1E-05	3E-05	2E-05	2E-05	7E-06	4E-07	1E-05	0E+00	1E-05	2E-06	2.3E-05	22.698	0.00598
486530.59	3E-02	9E-06	3E-05	2E-05	1E-05	7E-06	4E-07	9E-06	0E+00	1E-05	1E-06	2.0E-05	20.290	0.00535
486630.59	2E-02	8E-06	3E-05	1E-05	1E-05	6E-06	3E-07	8E-06	0E+00	9E-06	1E-06	1.8E-05	18.264	0.00481
486730.59	2E-02	8E-06	2E-05	1E-05	1E-05	5E-06	3E-07	7E-06	0E+00	8E-06	1E-06	1.6E-05	16.452	0.00433
486830.59	2E-02	7E-06	2E-05	1E-05	1E-05	5E-06	3E-07	7E-06	0E+00	7E-06	1E-06	1.5E-05	15.097	0.00398
487030.59	2E-02	6E-06	2E-05	1E-05	9E-06	4E-06	2E-07	6E-06	0E+00	7E-06	1E-06	1.3E-05	12.805	0.00337
487130.59	2E-02	5E-06	2E-05	9E-06	9E-06	4E-06	2E-07	5E-06	0E+00	6E-06	9E-07	1.2E-05	11.886	0.00313
487230.59	1E-02	5E-06	2E-05	9E-06	8E-06	4E-06	2E-07	5E-06	0E+00	5E-06	8E-07	1.1E-05	11.101	0.00292

TAMT Risk Assessment - DPM Cancer and Chronic HI

Refrigerated Containers

Dose Inhallation

Risk (Residential 30-yr; school 9-yr; park 15-yr)

Multi-Purpose General Cargo

Dose Inhallation

Risk (Residential 30-yr; school 9-yr; park 15-yr)

Dry Bulk

Dose Inhallation

Risk (Residential 30-yr; school 9-yr; park 15-yr)

				quipment		Locomotives				Trucks					Refrigerated Containers
				Multi-Purpose General Cargofully_mitigated	Dry Bulkfully_mitigated	All	Refrigerated Containersfully_mitigated	Multi-Purpose General Cargofully_mitigated	Dry Bulkfully_mitigated	All	Refrigerated Containersfully_mitigated	Multi-Purpose General Cargofully_mitigated	Dry Bulkfully_mitigated	All	
AERMOD Output				0.0%	60%	100%	0%	54%	46%	100%	61%	4%	35%		
	Discrete Receptor ID (Group Name)	X	Y												ug/m3
residential	REC_100M	488230.59	3618325.04	0E+00	2E-03	1E-03	0E+00	7E-04	6E-04	0.00023	0.00014	1E-05	8E-05	0.02	0.00864
residential	REC_100M	488330.59	3618325.04	0E+00	2E-03	1E-03	0E+00	7E-04	6E-04	0.00021	0.00013	9.4E-06	7.4E-05	0.02	0.00827
residential	REC_100M	488430.59	3618325.04	0E+00	2E-03	1E-03	0E+00	6E-04	5E-04	0.0002	0.00012	8.9E-06	7E-05	0.02	0.00833
residential	REC_100M	488530.59	3618325.04	0E+00	2E-03	1E-03	0E+00	6E-04	5E-04	0.00019	0.00011	8.3E-06	6.5E-05	0.02	0.00836
residential	REC_100M	488630.59	3618325.04	0E+00	2E-03	1E-03	0E+00	6E-04	5E-04	0.00017	0.0001	7.7E-06	6E-05	0.02	0.00804
residential	REC_100M	488730.59	3618325.04	0E+00	2E-03	1E-03	0E+00	5E-04	5E-04	0.00016	9.5E-05	7E-06	5.5E-05	0.02	0.00771
residential	REC_100M	488830.59	3618325.04	0E+00	2E-03	1E-03	0E+00	5E-04	4E-04	0.00014	8.5E-05	6.2E-06	4.9E-05	0.02	0.00712
residential	REC_100M	488930.59	3618325.04	0E+00	1E-03	9E-04	0E+00	5E-04	4E-04	0.00013	7.8E-05	5.7E-06	4.5E-05	0.02	0.00685
recreational	park	484630.59	3618425.04	0E+00	5E-03	3E-03	0E+00	1E-03	1E-03	0.00011	6.7E-05	4.9E-06	3.9E-05	0.05	0.02041
recreational	park	484730.59	3618425.04	0E+00	6E-03	3E-03	0E+00	2E-03	1E-03	0.00013	7.7E-05	5.6E-06	4.4E-05	0.05	0.02145
recreational	park	485030.59	3618425.04	0E+00	2E-02	4E-03	0E+00	2E-03	2E-03	0.00023	0.00014	1E-05	7.9E-05	0.07	0.03888
recreational	park	484950.32	3618481.14	0E+00	9E-03	3E-03	0E+00	2E-03	2E-03	0.00015	9.3E-05	6.8E-06	5.3E-05	0.06	0.02905
residential	REC_100M	485930.59	3618425.04	0E+00	3E-02	2E-02	0E+00	9E-03	8E-03	0.00129	0.00078	5.7E-05	0.00045	0.11	0.03751
residential	REC_100M	486030.59	3618425.04	0E+00	2E-02	1E-02	0E+00	8E-03	7E-03	0.00114	0.00069	5.1E-05	0.0004	0.09	0.03257
residential	REC_100M	486130.59	3618425.04	0E+00	2E-02	1E-02	0E+00	6E-03	5E-03	0.00102	0.00062	4.5E-05	0.00036	0.08	0.02861
residential	REC_100M	486230.59	3618425.04	0E+00	1E-02	9E-03	0E+00	5E-03	4E-03	0.00093	0.00056	4.1E-05	0.00032	0.07	0.02547
residential	REC_100M	486430.59	3618425.04	0E+00	9E-03	6E-03	0E+00	3E-03	3E-03	0.00075	0.00045	3.3E-05	0.00026	0.06	0.02074
residential	REC_100M	486530.59	3618425.04	0E+00	8E-03	5E-03	0E+00	3E-03	2E-03	0.00068	0.00042	3E-05	0.00024	0.05	0.01914
residential	REC_100M	486630.59	3618425.04	0E+00	7E-03	5E-03	0E+00	2E-03	2E-03	0.00061	0.00037	2.7E-05	0.00021	0.05	0.0177
residential	REC_100M	486730.59	3618425.04	0E+00	6E-03	4E-03	0E+00	2E-03	2E-03	0.00055	0.00033	2.4E-05	0.00019	0.04	0.01645
residential	REC_100M	486830.59	3618425.04	0E+00	5E-03	3E-03	0E+00	2E-03	2E-03	0.00049	0.0003	2.2E-05	0.00017	0.04	0.01533
residential	REC_100M	486930.59	3618425.04	0E+00	4E-03	3E-03	0E+00	2E-03	1E-03	0.00043	0.00026	1.9E-05	0.00015	0.04	0.01435
residential	REC_100M	487030.59	3618425.04	0E+00	4E-03	3E-03	0E+00	1E-03	1E-03	0.00039	0.00024	1.7E-05	0.00014	0.03	0.01345
residential	REC_100M	487130.59	3618425.04	0E+00	3E-03	2E-03	0E+00	1E-03	1E-03	0.00034	0.00021	1.5E-05	0.00012	0.03	0.01257
residential	REC_100M	487230.59	3618425.04	0E+00	3E-03	2E-03	0E+00	1E-03	1E-03	0.00033	0.0002	1.5E-05	0.00012	0.03	0.01214
residential	REC_100M	487330.59	3618425.04	0E+00	3E-03	2E-03	0E+00	1E-03	1E-03	0.00032	0.00019	1.4E-05	0.00011	0.03	0.01164
residential	REC_100M	487430.59	3618425.04	0E+00	3E-03	2E-03	0E+00	1E-03	9E-04	0.00031	0.00019	1.4E-05	0.00011	0.03	0.01119
residential	REC_100M	487530.59	3618425.04	0E+00	3E-03	2E-03	0E+00	1E-03	8E-04	0.0003	0.00018	1.3E-05	0.0001	0.03	0.01072
residential	REC_100M	487630.59	3618425.04	0E+00	3E-03	2E-03	0E+00	9E-04	8E-04	0.00029	0.00017	1.3E-05	1E-04	0.02	0.01028
residential	REC_100M	487730.59	3618425.04	0E+00	2E-03	2E-03	0E+00	9E-04	7E-04	0.00028	0.00017	1.2E-05	9.6E-05	0.02	0.00989
residential	REC_100M	487830.59	3618425.04	0E+00	2E-03	2E-03	0E+00	8E-04	7E-04	0.00026	0.00016	1.2E-05	9.2E-05	0.02	0.00953
residential	REC_100M	487930.59	3618425.04	0E+00	2E-03	1E-03	0E+00	8E-04	7E-04	0.00025	0.00015	1.1E-05	8.9E-05	0.02	0.00925
residential	REC_100M	488030.59	3618425.04	0E+00	2E-03	1E-03	0E+00	7E-04	6E-04	0.00024	0.00015	1.1E-05	8.4E-05	0.02	0.00892
residential	REC_100M	488130.59	3618425.04	0E+00	2E-03	1E-03	0E+00	7E-04	6E-04	0.00023	0.00014	1E-05	7.9E-05	0.02	0.00853
residential	REC_100M	488230.59	3618425.04	0E+00	2E-03	1E-03	0E+00	7E-04	6E-04	0.00021	0.00013	9.5E-06	7.4E-05	0.02	0.00822
residential	REC_100M	488330.59	3618425.04	0E+00	2E-03	1E-03	0E+00	6E-04	5E-04	0.0002	0.00012	8.8E-06	6.9E-05	0.02	0.00793
residential	REC_100M	488430.59	3618425.04	0E+00	2E-03	1E-03	0E+00	6E-04	5E-04	0.00019	0.00012	8.5E-06	6.7E-05	0.02	0.00804
residential	REC_100M	488530.59	3618425.04	0E+00	2E-03	1E-03	0E+00	6E-04	5E-04	0.00018	0.00011	8E-06	6.3E-05	0.02	0.00806
residential	REC_100M	488630.59	3618425.04	0E+00	2E-03	1E-03	0E+00	5E-04	4E-04	0.00017	0.0001	7.4E-06	5.8E-05	0.02	0.00789
residential	REC_100M	488730.59	3618425.04	0E+00	2E-03	1E-03	0E+00	5E-04	4E-04	0.00015	9.2E-05	6.8E-06	5.3E-05	0.02	0.00737
residential	REC_100M	488830.59	3618425.04	0E+00	1E-03	9E-04	0E+00	5E-04	4E-04	0.00014	8.4E-05	6.1E-06	4.8E-05	0.02	0.00689
recreational	park	484530.59	3618525.04	0E+00	3E-03	2E-03	0E+00	1E-03	1E-03	8E-05	4.8E-05	3.5E-06	2.8E-05	0.04	0.01809
recreational	park	484630.59	3618525.04	0E+00	4E-03	2E-03	0E+00	1E-03	1E-03	8.8E-05	5.3E-05	3.9E-06	3.1E-05	0.04	0.01812
recreational	park	484930.59	3618525.04	0E+00	7E-03	3E-03	0E+00	2E-03	1E-03	0.00013	7.7E-05	5.6E-06	4.4E-05	0.05	0.0255
recreational	park	485030.59	3618525.04	0E+00	1E-02	3E-03	0E+00	2E-03	2E-03	0.00015	9.1E-05	6.7E-06	5.2E-05	0.06	0.03108
recreational	park	485130.59	3618525.04	0E+00	2E-02	4E-03	0E+00	2E-03	2E-03	0.00018	0.00011	8.2E-06	6.4E-05	0.07	0.03882
recreational	REC_100M	485830.59	3618525.04	0E+00	3E-02	1E-02	0E+00	7E-03	6E-03	0.00106	0.00064	4.7E-05	0.00037	0.10	0.03817
residential	REC_100M	485930.59	3618525.04	0E+00	2E-02	1E-02	0E+00	7E-03	6E-03	0.00096	0.00059	4.3E-05	0.00034	0.09	0.03426
residential	REC_100M	486030.59	3618525.04	0E+00	2E-02	1E-02	0E+00	7E-03	6E-03	0.00089	0.00054	4E-05	0.00031	0.08	0.03041
residential	REC_100M	486130.59	3618525.04	0E+00	2E-02	1E-02	0E+00	6E-03	5E-03	0.00083	0.0005	3.7E-05	0.00029	0.08	0.02716
residential	REC_100M	486330.59	3618525.04	0E+00	1E-02	7E-03	0E+00	4E-03	3E-03	0.00069	0.00042	3.1E-05	0.00024	0.06	0.02171
residential	REC_100M	486430.59	3618525.04	0E+00	9E-03	6E-03	0E+00	3E-03	3E-03	0.00065	0.00039	2.9E-05	0.00023	0.06	0.01994
residential	REC_100M	486530.59	3618525.04	0E+00	8E-03	5E-03	0E+00	3E-03	2E-03	0.0006	0.00036	2.7E-05	0.00021	0.05	0.01829
residential	REC_100M	486630.59	3618525.04	0E+00	7E-03	4E-03	0E+00	2E-03	2E-03	0.00055	0.00033	2.4E-05	0.00019	0.05	0.01695
residential	REC_100M	486730.59	3618525.04	0E+00	6E-03	4E-03	0E+00	2E-03	2E-03	0.0005	0.0003	2.2E-05	0.00017	0.04	0.01576
residential	REC_100M	486830.59	3618525.04	0E+00	5E-03	3E-03	0E+00	2E-03	2E-03	0.00046	0.00028	2E-05	0.00016	0.04	0.01476
residential	REC_100M	486930.59	3618525.04	0E+00	4E-03	3E-03	0E+00	2E-03	1E-03	0.0004	0.00024	1.8E-05	0.00014	0.04	0.01357
residential	REC_100M	487030.59	3618525.04	0E+00	4E-03	2E-03	0E+00	1E-03	1E-03	0.00036	0.00022	1.6E-05	0.00013	0.03	0.01275
residential	REC_100M	487130.59	3618525.04	0E+00	3E-03	2E-03	0E+00	1E-03	1E-03	0.00034	0.0002	1.5E-05	0.00012	0.03	0.01215
residential	REC_100M	487230.59	3618525.04	0E+00	3E-03	2E-03	0E+00	1E-03	1E-03	0.00032	0.0002	1.4E-05	0.00011	0.03	0.01174
residential	REC_100M	487330.59	3618525.04	0E+00	3E-03	2E-03	0E+00	1E-03	9E-04	0.0003	0.00019	1.4E-05	0.00011	0.03	0.01121
residential	REC_100M	487430.59	3618525.04	0E+00	3E-03	2E-03	0E+00	1E-03	9E-04	0.00029	0.00018	1.3E-05	0.0001	0.03	0.01073
residential	REC_100M	487530.59	3618525.04	0E+00	3E-03	2E-03	0E+00	9E-04	8E-04	0.00028	0.00017	1.2E-05	9.7E-05	0.03	0.01031
residential	REC_100M	487630.59	3618525.04	0E+00	2E-03	2E-03	0E+00	9E-04	7E-04	0.00027	0.00016	1.2E-05	9.4E-05	0.02	0.00991
residential	REC_100M	487730.59	3618525.04	0E+00	2E-03	2E-03	0E+00	8E-04	7E-04	0.00026	0.00016	1.1E-05	9E-05	0.02	0.00952
residential	REC_100M	487830.59	3618525.04	0E+00	2E-03	1E-03	0E+00	8E-04	7E-04	0.00025	0.00015	1.1E-05	8.6E-05	0.02	0.00916
residential	REC_100M	487930.59	3618525.04	0E+00	2E-03	1E-03	0E+00	7E-04	6E-04	0.00023	0.00014	1E-05	8.2E-05	0.02	0.00883
residential	REC_100M	488030.59	3618525.04	0E+00	2E-03	1E-03	0E+00	7E-04	6E-04	0.00022	0.00014	1E-05	7.8E-05	0.02	0.00853
residential	REC_100M	488130.59	3618525.04	0E+00	2E-03	1E-03	0E+00	6E-04	5E-04	0.00021	0.00013	9.4E-06	7.4E-05	0.02	0.00817
residential	REC_100M	488230.59	3618525.04	0E+00	2E-03	1E-03	0E+00	6E-04	5E-04	0.0002	0.00012	8.8E-06	6.9E-05	0.02	0.00782
residential	REC_100M	488330.59	3618525.04	0E+00	2E-03	1E-03	0E+00	6E-04	5E-04	0.00019	0.00011	8.3E-06	6.5E-05	0.02	0.00762
residential	REC_100M	488430.59	3618525.04	0E+00	2E-03	1E-03	0E+00	6E-04	5E-04	0.00018	0.00011	8.1E-06	6.3E-05	0.02	0.00772
residential	REC_100M	488530.59	3618525.04	0E+00	2E-03	1E-03	0E+00	5E-04	5E-04	0.00017	0.0001	7.7E-06	6E-05	0.02	0.00777
residential	REC_100M	488630.59	3618525.04	0E+00	2E-03	9E-04	0E+00	5E-04	4E-04	0.00016	9.7E-05	7.1E-06	5.6E-05	0.02	0.00761
residential	REC_100M	488730.59	3618525.04	0E+00	1E-03	9E-04	0E+00	5E-04	4E-04	0.00015	8.9E-05	6.6E-06	5.1E-05	0.02	0.00706
recreational	park	484329.51	3618644.52	0E+00	2E-03	2E-03	0E+00	8E-04	7E-04	5.5E-05	3.3E-05	2.4E-06	1.9E-05	0.04	0.01718
recreational	park	484433.84	3618608.81	0E+00	2E-03	2E-03	0E+00	9E-04	8E-04	6.2E-05	3.8E-05	2.8E-06	2.2E-05	0.04	0.01738
recreational	park	484630.59	3618625.04	0E+00	3E-03	2E-03	0E+00	1E-03	9E-04	7E-05	4.2E-05	3.1E-06	2.4E-05	0.04	0.01652
recreational	park	484730.59	3618625.04	0E+00	3E-03	2E-03	0E+00	1E-03	1E-03	7.6E-05	4.6E-05	3.4E-06	2.7E-05	0.04	0.01715
recreational	park	484830.59	3618625.04	0E+00	4E-03	2E-03	0E+00	1E-03	1E-03	8.3E-05	5.1E-05	3.7E-06	2.9E-05	0.04	0.01865
recreational	park	484930.59	3618625.04	0E+00	5E-03	3E-03	0E+00	1E-03	1E-03	9.2E-05	5.6E-05	4.1E-06	3.2E-05	0.04	0.02159
recreational	park	485030.59	3618625.04	0E+00	8E-03	3E-03	0E+00	2E-03	1E-03	0.0001	6.3E-05	4.6E-06	3.6E-05	0.05	0.02577
residential	REC_100M	485130.59	3618625.04	0E+00	1E-02	3E-03	0E+00	2E-03	1E-03	0.00012	7.2E-05	5.3E-06	4.1E-05	0.06	0.03105
residential	REC_100M	485230.59	3618625.04	0E+00	2E-02	4E-03	0E+00	2E-03	2E-03	0.00015	9E-05	6.6E-06	5.1E-05	0.07	0.03685
residential	REC_100M	485830.59	3618625.04	0E+00	2E-02	1E-02	0E+00	6E-03	5E-03	0.00079	0.00048	3.5E-05	0.00028	0.09	0.03498
residential	REC_100M	485930.59	3618625.04	0E+00	2E-02	1E-02	0E+00	6E-03	5E-03	0.00075	0.00046	3.3E-05	0.00026	0.08	0.03182
residential	REC_100M	486030.59	3618625.04	0E+00	2E-02	1E-02	0E+00	6E-03	5E-03	0.00072	0.00043	3.2E-05	0.00025	0.08	0.02853
residential	REC_100M	486230.59	3618625.04	0E+00	1E-02	8E-03	0E+00	5E-03	4E-03	0.00064	0.00039	2.8E-05	0.00022	0.07	0.02317
residential	REC_100M	486330.59	3618625.04	0E+00	1E-02	7E-03	0E+00	4E-03	3E-03	0.0006	0.00036	2.7E-05	0.00021	0.06	0.02112
residential	REC_100M	486430.59	3618625.04	0E+00	9E-03	6E-03	0E+00	3E-03	3E-03	0.00056	0.00034	2.5E-05	0.00019	0.05	0.0192
residential	REC_100M	486530.59	3618625.04	0E+00	7E-03	5E-03	0E+00	3E-03	2E-03	0.00052	0.00032	2.3E-05	0.00018	0.05	0.01763
residential	REC_100M	486630.59	3618625.04	0E+00	6E-03	4E-03	0E+00	2E-03	2E-03	0.00049	0.0003	2.2E-05	0.00017	0.05	0.01635
residential	REC_100M	486730.59	3618625.04	0E+00	6E-03	4E-03	0E+00	2E-03	2E-03	0.00046	0.00028	2E-05	0.00016	0.04	0.01527
residential	REC_100M	486830.59	3618625.04	0E+00	5E-03	3E-03	0E+00	2E-03	2E-03	0.00042	0.00026	1.9E-05	0.00015	0.04	0.01428
residential	REC_100M	486930.59	3618625.04	0E+00	4E-03	3E-03	0E+00	2E-03	1E-03	0.00039	0.00024	1.7E-05	0.00014	0.04	0.01341
residential	REC_100M	487030.59	3618625.04	0E+00	4E-03	3E-03	0E+00	1E-03	1E-03	0.00036	0.00022	1.6E-05	0.00013	0.03	0.01264
residential	REC_100M	487130.59	3618625.04	0E+00	4E-03	2E-03	0E+00	1E-03	1E-03	0.00033	0.0002	1.5E-05	0.00012	0.03	0.01196
residential	REC_100M	487230.59	3618625.04	0E+00	3E-03	2E-03	0E+00	1E-03	1E-03	0.00031	0.00019	1.4E-05	0.00011	0.03	0.01136
residential	REC_100M	487330.59	3618625.04	0E+00	3E-03	2E-03	0E+00	1E-03	9E-04	0.00029	0.00018	1.3E-05	0.0001	0.03	0.01082
residential	REC_100M	487430.59	3618625.04	0E+00	3E-03	2E-03	0E+00	1E-03	8E-04	0.00028	0.00017	1.2E-05	9.6E-05	0.03	0.01033
residential	REC_100M	487530.59	3618625.04	0E+00	3E-03	2E-03	0E+00	9E-04	8E-04	0.00026	0.00016	1.2E-05	9.2E-05	0.02	0.0099
residential	REC_100M	487630.59	3618625.04	0E+00	2E-03	2E-03	0E+00	8E-04	7E-04	0.00025	0.00015	1.1E-05	8.8E-05	0.02	0.00951
residential	REC_100M	487730.59	3618625.04	0E+00	2E-03	1E-03	0E+00	8E-04	7E-04	0.00024	0.00015	1.1E-05	8.4E-05	0.02	0.00913
residential	REC_100M	487830.59	3618625.04	0E+00	2E-03	1E-03	0E+00	7E-04	6E-04	0.00023	0.00014	1E-05	8E-05	0.02	0.00879
residential	REC_100M	487930.59	3618625.04	0E+00	2E-03	1E-03	0E+00	7E-04	6E-04	0.00022	0.00013	9.7E-06	7.6E-05	0.02	0.00845
residential	REC_100M	488030.59	3618625.04	0E+00	2E-03	1E-03	0E+00	7E-04	6E-04	0.00021	0.00013	9.3E-06	7.3E-05	0.02	0.00817
residential	REC_100M	488130.59	3618625.04	0E+00	2E-03	1E-03	0E+00	6E-04	5E-04	0.0002	0.00012	8.8E-06	6.9E-05	0.02	0.00788
residential	REC_100M	488230.59	3618625.04	0E+00	2E-03	1E-03	0E+00	6E-04	5E-04	0.00019	0.00011	8.4E-06	6.6E-05	0.02	0.00763
residential	REC_100M	488330.59	3618625.04	0E+00	2E-03	1E-03	0E+00	6E-04	5E-04	0.00018	0.00011	8E-06	6.3E-05	0.02	0.00741
residential	REC_100M	488430.59	3618625.04	0E+00	2E-03	1E-03	0E+00	6E-04	5E-04	0.00017	0.00011	7.8E-06	6.1E-05	0.02	0.00762
residential	REC_100M	488530.59	3618625.04	0E+00	2E-03	1E-03	0E+00	5E-04	4E-04	0.00016	1E-04	7.3E-06	5.7E-05	0.02	0.00749
residential	REC_100M	488630.59	3618625.04	0E+00	2E-03	9E-04	0E+00	5E-04	4E-04	0.00015	9.4E-05	6.9E-06	5.4E-05	0.02	0.00727
recreational	park	484230.59	3618725.04	0E+00	2E-03	1E-03	0E+00	7E-04	6E-04	4.5E-05	2.8E-05	2E-06	1.6E-05	0.04	0.01639
recreational	park	484330.59	3618725.04	0E+00	2E-03	1E-03	0E+00	8E-04	7E-04	4.8E-05	2.9E-05	2.1E-06	1.7E-05	0.03	0.01602
recreational	park	484630.59	3618725.04	0E+00	2E-03	2E-03	0E+00	1E-03	8E-04	5.7E-05	3.5E-05	2.5E-06	2E-05	0.03	0.01525
recreational	park	484730.59	3618725.04	0E+00	3E-03	2E-03	0E+00	1E-03	9E-04	6.1E-05	3.7E-05	2.7E-06	2.1E-05	0.03	0.0157
recreational	park	484830.59	3618725.04	0E+00	4E-03	2E-03	0E+00	1E-03	1E-03	6.6E-05	4E-05	2.9E-06	2.3E-05	0.04	0.01698
recreational	park	484930.59	3618725.04	0E+00	5E-03	2E-03	0E+00	1E-03	1E-03	7.1E-05	4.3E-05	3.2E-06	2.5E-05	0.04	0.01914
residential	REC_100M	485030.59	3618725.04	0E+00	6E-03	3E-03	0E+00	1E-03	1E-03	7.9E-05	4.8E-05	3.5E-06	2.8E-05	0.04	0.02232
residential	REC_100M	485130.59	3618725.04	0E+00	9E-03	3E-03	0E+00	1E-03	1E-03	9.3E-05	5.6E-05	4.1E-06	3.2E-05	0.05	0.02629
residential	REC_100M	485230.59	3618725.04	0E+00	1E-02	3E-03	0E+00	2E-03	1E-03	0.00012	7.1E-05	5.2E-06	4.1E-05	0.06	0.03042
residential	REC_100M	485330.59	3618725.04	0E+00	2E-02	3E-03	0E+00	2E-03	2E-03	0.00017	0.0001	7.6E-06	5.9E-05	0.07	0.03434
residential	REC_100M	485830.59	3618725.04	0E+00	2E-02	8E-03	0E+00	4E-03	4E-03	0.00061	0.00037	2.7E-05	0.00021	0.08	0.03245
residential	REC_100M	485930.59	3618725.04	0E+00	2E-02	9E-03	0E+00	5E-03	4E-03	0.0006	0.00037	2.7E-05	0.00021	0.08	0.03004
residential	REC_100M	486030.59	3618725.04	0E+00	2E-02	9E-03	0E+00	5E-03	4E-03	0.00058	0.00035	2.6E-05	0.0002	0.07	0.02697
residential	REC_100M	486230.59	3618725.04	0E+00	1E-02	7E-03	0E+00	4E-03	3E-03	0.00052	0.00031	2.3E-05	0.00018	0.06	0.02187
residential	REC_100M	486330.59	3618725.04	0E+00	9E-03	7E-03	0E+00	4E-03	3E-03	0.00049	0.0003	2.2E-05	0.00017	0.06	0.02002
residential	REC_100M	486430.59	3618725.04	0E+00	8E-03	6E-03	0E+00	3E-03	3E-03	0.00047	0.00029	2.1E-05	0.00017	0.05	0.0185
residential	REC_100M	486530.59	3618725.04	0E+00	7E-03	5E-03	0E+00	3E-03	2E-03	0.00045	0.00027	2E-05	0.00016	0.05	0.01706
residential	REC_100M	486630.59	3618725.04	0E+00	6E-03	4E-03	0E+00	2E-03	2E-03	0.00043	0.00026	1.9E-05	0.00015	0.04	0.01589
residential	REC_100M	486730.59	3618725.04	0E+00	6E-03	4E-03	0E+00	2E-03	2E-03	0.00041	0.00025	1.8E-05	0.00014	0.04	0.01483
residential	REC_100M	486830.59	3618725.04	0E+00	5E-03	3E-03	0E+00	2E-03	2E-03	0.00038	0.00023	1.7E-05	0.00013	0.04	0.01385
residential	REC_100M	486930.59	3618725.04	0E+00	4E-03	3E-03	0E+00	2E-03	1E-03	0.00036	0.00022	1.6E-05	0.00013	0.04	0.01299
residential	REC_100M	487030.59	3618725.04	0E+00	4E-03	3E-03	0E+00	1E-03	1E-03	0.00034	0.0002	1.5E-05	0.00012	0.03	0.01223
residential	REC_100M	487130.59	3618725.04	0E+00	3E-03	2E-03	0E+00	1E-03	1E-03	0.00031	0.00019	1.4E-05	0.00011	0.03	0.01157
residential	REC_100M	487230.59	3618725.04	0E+00	3E-03	2E-03	0E+00	1E-03	1E-03	0.00029	0.00018	1.3E-05	0.0001	0.03	0.01099
residential	REC_100M	487330.59	3618725.04	0E+00	3E-03	2E-03	0E+00	1E-03	9E-04	0.00028	0.00017	1.2E-05	9.6E-05	0.03	0.01043
residential	REC_100M	487430.59	3618725.04	0E+00	3E-03	2E-03	0E+00	9E-04	8E-04	0.00026	0.00016	1.2E-05	9.1E-05	0.03	0.00994
residential	REC_100M	487530.59	3618725.04	0E+00	2E-03	2E-03	0E+00	9E-04	7E-04	0.00025	0.00015	1.1E-05	8.7E-05	0.02	0.0095
residential	REC_100M	487630.59	3618725.04	0E+00	2E-03	1E-03	0E+00	8E-04	7E-04	0.00024	0.00014	1.1E-05	8.3E-05	0.02	0.00915
residential	REC_100M	487730.59	3618725.04	0E+00	2E-03	1E-03	0E+00	7E-04	6E-04	0.00023	0.00014	1E-05	7.9E-05	0.02	0.00879
residential	REC_100M	487830.59	3618725.04	0E+00	2E-03	1E-03	0E+00	7E-04	6E-04	0.00022	0.00013	9.6E-06	7.5E-05	0.02	0.00844
residential	REC_100M	487930.59	3618725.04	0E+00	2E-03	1E-03	0E+00	7E-04	6E-04	0.0002	0.00012	9.1E-06	7.1E-05	0.02	0.00814
residential	REC_100M	488030.59	3618725.04	0E+00	2E-03	1E-03	0E+00	6E-04	5E-04	0.0002	0.00012	8.7E-06	6.8E-05	0.02	0.00786
residential	REC_100M	488130.59	3618725.04	0E+00	2E-03	1E-03	0E+00	6E-04	5E-04	0.00019	0.00011	8.3E-06	6.5E-05	0.02	0.0076
residential	REC_100M	488230.59	3618725.04	0E+00	2E-03	1E-03	0E+00	6E-04	5E-04	0.00018	0.00011	8E-06	6.3E-05	0.02	0.00738
residential	REC_100M	488330.59	3618725.04	0E+00	2E-03	1E-03	0E+00	5E-04	5E-04	0.00017	0.0001	7.6E-06	6E-05	0.02	0.0072
residential	REC_100M	488430.59	3618725.04	0E+00	2E-03	1E-03	0E+00	5E-04	5E-04	0.00017	0.0001	7.4E-06	5.8E-05	0.02	0.00745
residential	REC_100M	488530.59	3618725.04	0E+00	2E-03	9E-04	0E+00	5E-04	4E-04	0.00016	9.5E-05	7E-06	5.5E-05	0.02	0.00722
recreational	park	484130.59	3618825.04	0E+00	1E-03	1E-03	0E+00	6E-04	5E-04	3.7E-05	2.3E-05	1.7E-06	1.3E-05	0.03	0.01553
recreational	park	484530.59	3618825.04	0E+00	2E-03	2E-03	0E+00	8E-04	7E-04	4.5E-05	2.7E-05	2E-06	1.6E-05	0.03	0.01414
recreational	park	484630.59	3618825.04	0E+00	2E-03	2E-03	0E+00	9E-04	7E-04	4.8E-05	2.9E-05	2.1E-06	1.7E-05	0.03	0.01424
recreational	park	484730.59	3618825.04	0E+00	3E-03	2E-03	0E+00	9E-04	8E-04	5.1E-05	3.1E-05	2.3E-06	1.8E-05	0.03	0.01476
residential	REC_100M	484830.59	3618825.04	0E+00	3E-03	2E-03	0E+00	1E-03	9E-04	5.4E-05	3.3E-05	2.4E-06	1.9E-05	0.03	0.01582
residential	REC_100M	484930.59	3618825.04	0E+00	4E-03	2E-03	0E+00	1E-03	9E-04	5.9E-05	3.6E-05	2.6E-06	2.1E-05	0.04	0.01766
residential	REC_100M	485030.59	3618825.04	0E+00	5E-03	2E-03	0E+00	1E-03	1E-03	6.7E-05	4.1E-05	3E-06	2.3E-05	0.04	0.02009
residential	REC_100M	485130.59	3618825.04	0E+00	7E-03	2E-03	0E+00	1E-03	1E-03	8E-05	4.9E-05	3.6E-06	2.8E-05	0.05	0.02303
residential	REC_100M	485230.59	3618825.04	0E+00	9E-03	2E-03	0E+00	1E-03	1E-03	0.0001	6.1E-05	4.5E-06	3.5E-05	0.05	0.02601
residential	REC_100M	485330.59	3618825.04	0E+00	1E-02	3E-03	0E+00	2E-03	1E-03	0.00014	8.5E-05	6.3E-06	4.9E-05	0.06	0.02912
residential	REC_100M	485430.59	3618825.04	0E+00	2E-02	3E-03	0E+00	2E-03	2E-03	0.00022	0.00013	9.6E-06	7.5E-05	0.07	0.03167
residential	REC_100M	485830.59	3618825.04	0E+00	2E-02	7E-03	0E+00	4E-03	3E-03	0.00048	0.00029	2.1E-05	0.00017	0.07	0.03016
residential	REC_100M	485930.59	3618825.04	0E+00	2E-02	7E-03	0E+00	4E-03	3E-03	0.00049	0.0003	2.2E-05	0.00017	0.07	0.02828
residential	REC_100M	486030.59	3618825.04	0E+00	1E-02	7E-03	0E+00	4E-03	3E-03	0.00049	0.0003	2.2E-05	0.00017	0.07	0.02587
residential	REC_100M	486230.59	3618825.04	0E+00	1E-02	7E-03	0E+00	4E-03	3E-03	0.00044	0.00027	2E-05	0.00015	0.06	0.02129

TAMT Risk Assessment - DPM Cancer and Chronic HI

AERMOD Output

Land use	Discrete Receptor ID (Group Name)	X	Y	quipment: Multi-Purpose General Cargofully_mitigated (0.0%)	quipment: Dry Bulkfully_mitigated (60%)	Locomotives: All (100%)	Locomotives: Refrigerated Containersfully_mitigated (0%)	Locomotives: Multi-Purpose General Cargofully_mitigated (54%)	Locomotives: Dry Bulkfully_mitigated (46%)	Trucks: All (100%)	Trucks: Refrigerated Containersfully_mitigated (61%)	Trucks: Multi-Purpose General Cargofully_mitigated (4%)	Trucks: Dry Bulkfully_mitigated (35%)	All
residential	REC_100M	486330.59	3618825.04	0E+00	9E-03	6E-03	0E+00	3E-03	3E-03	0.00041	0.00025	1.8E-05	0.00014	0.05
residential	REC_100M	486430.59	3618825.04	0E+00	8E-03	5E-03	0E+00	3E-03	2E-03	0.00039	0.00024	1.8E-05	0.00014	0.05
residential	REC_100M	486530.59	3618825.04	0E+00	7E-03	5E-03	0E+00	3E-03	2E-03	0.00038	0.00023	1.7E-05	0.00013	0.05
residential	REC_100M	486630.59	3618825.04	0E+00	6E-03	4E-03	0E+00	2E-03	2E-03	0.00038	0.00023	1.7E-05	0.00013	0.04
residential	REC_100M	486730.59	3618825.04	0E+00	5E-03	4E-03	0E+00	2E-03	2E-03	0.00037	0.00022	1.6E-05	0.00013	0.04
residential	REC_100M	486830.59	3618825.04	0E+00	5E-03	3E-03	0E+00	2E-03	2E-03	0.00035	0.00021	1.6E-05	0.00012	0.04
residential	REC_100M	486930.59	3618825.04	0E+00	4E-03	3E-03	0E+00	2E-03	1E-03	0.00033	0.0002	1.5E-05	0.00011	0.03
residential	REC_100M	487030.59	3618825.04	0E+00	4E-03	3E-03	0E+00	1E-03	1E-03	0.00031	0.00019	1.4E-05	0.00011	0.03
residential	REC_100M	487130.59	3618825.04	0E+00	3E-03	2E-03	0E+00	1E-03	1E-03	0.00029	0.00018	1.3E-05	0.0001	0.03
residential	REC_100M	487230.59	3618825.04	0E+00	3E-03	2E-03	0E+00	1E-03	9E-04	0.00028	0.00017	1.2E-05	9.6E-05	0.03

Refrigerated Containers

X	ug/m3	Dose Inhalation: 3rd tri	0<2	2<9	2<16	16<30	Risk (Residential 30-yr; school 9-yr; park 15-year): 3rd tri	0<2	2<9	2<16	16<30	Summed Risk	Cases Per Million	Chronic HI
486330.59	0.01939	6.71E-06	2.03E-05	1.17E-05	1.06E-05	4.85E-06	2.6E-07	6.4E-06	0	7E-06	1.1E-06	1.472E-05	14.7209	0.00388
486430.59	0.01787	6.19E-06	1.87E-05	1.08E-05	9.8E-06	4.47E-06	2.4E-07	5.9E-06	0	6.5E-06	9.8E-07	1.357E-05	13.5667	0.00357
486530.59	0.01654	5.73E-06	1.73E-05	1E-05	9.07E-06	4.14E-06	2.2E-07	5.4E-06	0	6E-06	9.1E-07	1.256E-05	12.5572	0.00331
486630.59	0.01551	5.37E-06	1.62E-05	9.39E-06	8.51E-06	3.88E-06	2.1E-07	5.1E-06	0	5.6E-06	8.5E-07	1.178E-05	11.7781	0.0031
486730.59	0.01449	5.02E-06	1.51E-05	8.77E-06	7.95E-06	3.63E-06	2E-07	4.8E-06	0	5.2E-06	8E-07	1.1E-05	11.0028	0.0029
486830.59	0.01353	4.68E-06	1.41E-05	8.19E-06	7.42E-06	3.39E-06	1.8E-07	4.4E-06	0	4.9E-06	7.4E-07	1.027E-05	10.2713	0.00271
486930.59	0.01262	4.37E-06	1.32E-05	7.63E-06	6.92E-06	3.16E-06	1.7E-07	4.1E-06	0	4.6E-06	6.9E-07	9.577E-06	9.57702	0.00252
487030.59	0.01186	4.11E-06	1.24E-05	7.18E-06	6.51E-06	2.97E-06	1.6E-07	3.9E-06	0	4.3E-06	6.5E-07	9.007E-06	9.0068	0.00237
487130.59	0.01127	3.9E-06	1.18E-05	6.82E-06	6.18E-06	2.82E-06	1.5E-07	3.7E-06	0	4.1E-06	6.2E-07	8.556E-06	8.55583	0.00225
487230.59	0.01067	3.69E-06	1.12E-05	6.46E-06	5.85E-06	2.67E-06	1.5E-07	3.5E-06	0	3.9E-06	5.9E-07	8.099E-06	8.09928	0.00213

Multi-Purpose General Cargo

X	ug/m3	Dose Inhalation: 3rd tri	0<2	2<9	2<16	16<30	Risk (Residential 30-yr; school 9-yr; park 15-year): 3rd tri	0<2	2<9	2<16	16<30	Summed Risk	Cases Per Million	Chronic HI
486330.59	1E-02	4E-06	1E-05	8E-06	7E-06	3E-06	2E-07	4E-06	0E+00	5E-06	7E-07	9.5E-06	9.471	0.0025
486430.59	1E-02	4E-06	1E-05	7E-06	6E-06	3E-06	2E-07	4E-06	0E+00	4E-06	6E-07	8.9E-06	8.934	0.00235
486530.59	1E-02	4E-06	1E-05	7E-06	6E-06	3E-06	1E-07	4E-06	0E+00	4E-06	6E-07	8.4E-06	8.358	0.0022
486630.59	1E-02	4E-06	1E-05	6E-06	6E-06	3E-06	1E-07	3E-06	0E+00	4E-06	6E-07	7.8E-06	7.800	0.00205
486730.59	1E-02	3E-06	1E-05	6E-06	5E-06	2E-06	1E-07	3E-06	0E+00	3E-06	5E-07	7.3E-06	7.261	0.00191
486830.59	9E-03	3E-06	9E-06	5E-06	5E-06	2E-06	1E-07	3E-06	0E+00	3E-06	5E-07	6.7E-06	6.748	0.00178
486930.59	8E-03	3E-06	9E-06	5E-06	5E-06	2E-06	1E-07	3E-06	0E+00	3E-06	5E-07	6.3E-06	6.259	0.00165
487030.59	8E-03	3E-06	8E-06	5E-06	4E-06	2E-06	1E-07	3E-06	0E+00	3E-06	4E-07	5.8E-06	5.828	0.00154
487130.59	7E-03	2E-06	8E-06	4E-06	4E-06	2E-06	1E-07	2E-06	0E+00	3E-06	4E-07	5.5E-06	5.465	0.00144
487230.59	7E-03	2E-06	7E-06	4E-06	4E-06	2E-06	9E-08	2E-06	0E+00	2E-06	4E-07	5.1E-06	5.119	0.00135

Dry Bulk

X	ug/m3	Dose Inhalation: 3rd tri	0<2	2<9	2<16	16<30	Risk (Residential 30-yr; school 9-yr; park 15-year): 3rd tri	0<2	2<9	2<16	16<30	Summed Risk	Cases Per Million	Chronic HI
486330.59	2E-02	8E-06	2E-05	1E-05	1E-05	5E-06	3E-07	7E-06	0E+00	8E-06	1E-06	1.7E-05	16.522	0.00435
486430.59	2E-02	7E-06	2E-05	1E-05	1E-05	5E-06	3E-07	7E-06	0E+00	7E-06	1E-06	1.5E-05	15.450	0.00407
486530.59	2E-02	7E-06	2E-05	1E-05	1E-05	5E-06	3E-07	6E-06	0E+00	7E-06	1E-06	1.4E-05	14.381	0.00379
486630.59	2E-02	6E-06	2E-05	1E-05	1E-05	4E-06	2E-07	6E-06	0E+00	6E-06	1E-06	1.3E-05	13.420	0.00354
486730.59	2E-02	6E-06	2E-05	1E-05	9E-06	4E-06	2E-07	5E-06	0E+00	6E-06	9E-07	1.2E-05	12.405	0.00327
486830.59	2E-02	5E-06	2E-05	9E-06	8E-06	4E-06	2E-07	5E-06	0E+00	5E-06	8E-07	1.1E-05	11.418	0.00301
486930.59	1E-02	5E-06	1E-05	8E-06	8E-06	3E-06	2E-07	5E-06	0E+00	5E-06	8E-07	1.0E-05	10.473	0.00276
487030.59	1E-02	4E-06	1E-05	8E-06	7E-06	3E-06	2E-07	4E-06	0E+00	5E-06	7E-07	9.7E-06	9.655	0.00254
487130.59	1E-02	4E-06	1E-05	7E-06	6E-06	3E-06	2E-07	4E-06	0E+00	4E-06	7E-07	9.0E-06	8.962	0.00236
487230.59	1E-02	4E-06	1E-05	7E-06	6E-06	3E-06	1E-07	4E-06	0E+00	4E-06	6E-07	8.3E-06	8.302	0.00219

TAMT Risk Assessment - DPM Cancer and Chronic HI

	Discrete Receptor ID (Group Name)	X	Y	quipment: Multi-Purpose General Cargofully_mitigated	quipment: Dry Bulkfully_mitigated	Locomotives: All	Locomotives: Refrigerated Containersfully_mitigated	Locomotives: Multi-Purpose General Cargofully_mitigated	Locomotives: Dry Bulkfully_mitigated	Trucks: All	Trucks: Refrigerated Containersfully_mitigated	Trucks: Multi-Purpose General Cargofully_mitigated	Trucks: Dry Bulkfully_mitigated	All
AERMOD Output				0.0%	60%	100%	0%	54%	46%	100%	61%	4%	35%	
residential	REC_100M	487630.59	3619125.04	0E+00	2E-03	1E-03	0E+00	7E-04	6E-04	0.00019	0.00011	8.4E-06	6.6E-05	0.02
residential	REC_100M	487730.59	3619125.04	0E+00	2E-03	1E-03	0E+00	7E-04	6E-04	0.00018	0.00011	8.2E-06	6.4E-05	0.02
residential	REC_100M	487830.59	3619125.04	0E+00	2E-03	1E-03	0E+00	7E-04	6E-04	0.00018	0.00011	8E-06	6.2E-05	0.02
residential	REC_100M	487930.59	3619125.04	0E+00	2E-03	1E-03	0E+00	6E-04	5E-04	0.00017	0.0001	7.7E-06	6E-05	0.02
residential	REC_100M	488030.59	3619125.04	0E+00	2E-03	1E-03	0E+00	6E-04	5E-04	0.00016	1E-04	7.3E-06	5.7E-05	0.02
residential	REC_100M	488130.59	3619125.04	0E+00	2E-03	1E-03	0E+00	5E-04	5E-04	0.00016	9.5E-05	7E-06	5.5E-05	0.02
residential	REC_100M	476730.59	3619225.04	0E+00	1E-04	6E-05	0E+00	3E-05	3E-05	4.7E-06	2.9E-06	2.1E-07	1.7E-06	0.00
residential	REC_100M	476830.59	3619225.04	0E+00	1E-04	6E-05	0E+00	3E-05	3E-05	4.8E-06	2.9E-06	2.2E-07	1.7E-06	0.00
residential	REC_100M	476930.59	3619225.04	0E+00	1E-04	6E-05	0E+00	3E-05	3E-05	4.9E-06	3E-06	2.2E-07	1.7E-06	0.00
residential	REC_100M	477030.59	3619225.04	0E+00	1E-04	6E-05	0E+00	3E-05	3E-05	4.9E-06	3E-06	2.2E-07	1.7E-06	0.00
residential	REC_100M	477130.59	3619225.04	0E+00	1E-04	6E-05	0E+00	3E-05	3E-05	5E-06	3E-06	2.2E-07	1.7E-06	0.00
residential	REC_100M	477230.59	3619225.04	0E+00	1E-04	7E-05	0E+00	4E-05	3E-05	5.7E-06	3.4E-06	2.5E-07	2E-06	0.01
[illegible]														

Refrigerated Containers

ug/m3	Dose Inhalation: 3rd tri	0<2	2<9	2<16	16<30	Risk (Residential 30-yr; school 9-yr; park 15-year): 3rd tri	0<2	2<9	2<16	16<30	Summed Risk	Cases Per Million	Chronic HI
0.00817	2.83E-06	8.54E-06	4.95E-06	4.48E-06	2.05E-06	1.1E-07	2.7E-06	0	3E-06	4.5E-07	6.206E-06	6.20576	0.00163
0.0079	2.73E-06	8.25E-06	4.78E-06	4.33E-06	1.98E-06	1.1E-07	2.6E-06	0	2.9E-06	4.3E-07	5.994E-06	5.99446	0.00158
0.00766	2.65E-06	8E-06	4.63E-06	4.2E-06	1.92E-06	1E-07	2.5E-06	0	2.8E-06	4.2E-07	5.813E-06	5.81328	0.00153
0.00743	2.57E-06	7.77E-06	4.5E-06	4.08E-06	1.86E-06	1E-07	2.4E-06	0	2.7E-06	4.1E-07	5.644E-06	5.64401	0.00149
0.00715	2.47E-06	7.47E-06	4.33E-06	3.92E-06	1.79E-06	9.7E-08	2.3E-06	0	2.6E-06	3.9E-07	5.426E-06	5.42645	0.00143
0.00687	2.38E-06	7.18E-06	4.16E-06	3.77E-06	1.72E-06	9.3E-08	2.3E-06	0	2.5E-06	3.8E-07	5.216E-06	5.21568	0.00137
0.00181	6.26E-07	1.89E-06	1.09E-06	9.92E-07	4.52E-07	2.5E-08	5.9E-07	0	6.5E-07	1E-07	1.372E-06	1.37236	0.00036
0.00189	6.53E-07	1.97E-06	1.14E-06	1.03E-06	4.72E-07	2.6E-08	6.2E-07	0	6.8E-07	1E-07	1.431E-06	1.43119	0.00038
0.00194	6.71E-07	2.03E-06	1.17E-06	1.06E-06	4.85E-07	2.6E-08	6.4E-07	0	7E-07	1.1E-07	1.472E-06	1.47174	0.00039
0.00199	6.87E-07	2.08E-06	1.2E-06	1.09E-06	4.97E-07	2.7E-08	6.5E-07	0	7.2E-07	1.1E-07	1.507E-06	1.50725	0.0004
0.00209	7.23E-07	2.18E-06	1.26E-06	1.15E-06	5.23E-07	2.8E-08	6.9E-07	0	7.6E-07	1.2E-07	1.587E-06	1.58651	0.00042
[illegible]													

Multi-Purpose General Cargo

ug/m3	Dose Inhalation: 3rd tri	0<2	2<9	2<16	16<30	Risk (Residential 30-yr; school 9-yr; park 15-year): 3rd tri	0<2	2<9	2<16	16<30	Summed Risk	Cases Per Million	Chronic HI
[illegible]													

Dry Bulk

ug/m3	Dose Inhalation: 3rd tri	0<2	2<9	2<16	16<30	Risk (Residential 30-yr; school 9-yr; park 15-year): 3rd tri	0<2	2<9	2<16	16<30	Summed Risk	Cases Per Million	Chronic HI
[illegible]													

TAMT Risk Assessment - DPM Cancer and Chronic HI

AERMOD Output

	Discrete Receptor ID (Group Name)	X	Y	quipment: Multi-Purpose General Cargofully_mitigated (0.0%)	quipment: Dry Bulkfully_mitigated (60%)	Locomotives: All (100%)	Locomotives: Refrigerated Containersfully_mitigated (0%)	Locomotives: Multi-Purpose General Cargofully_mitigated (54%)	Locomotives: Dry Bulkfully_mitigated (46%)	Trucks: All (100%)	Trucks: Refrigerated Containersfully_mitigated (61%)	Trucks: Multi-Purpose General Cargofully_mitigated (4%)	Trucks: Dry Bulkfully_mitigated (35%)	All
residential	REC_100M	486830.59	3619425.04	0E+00	3E-03	2E-03	0E+00	1E-03	9E-04	0.00016	9.5E-05	7E-06	5.5E-05	0.03
residential	REC_100M	486930.59	3619425.04	0E+00	3E-03	2E-03	0E+00	1E-03	1E-03	0.00017	0.0001	7.6E-06	5.9E-05	0.03
residential	REC_100M	487030.59	3619425.04	0E+00	3E-03	2E-03	0E+00	1E-03	8E-04	0.00016	9.6E-05	7.1E-06	5.5E-05	0.03
residential	REC_100M	487130.59	3619425.04	0E+00	3E-03	2E-03	0E+00	9E-04	8E-04	0.00015	9.3E-05	6.8E-06	5.4E-05	0.03
residential	REC_100M	487230.59	3619425.04	0E+00	3E-03	2E-03	0E+00	9E-04	8E-04	0.00016	9.7E-05	7.1E-06	5.6E-05	0.03
residential	REC_100M	487330.59	3619425.04	0E+00	2E-03	1E-03	0E+00	8E-04	7E-04	0.00014	8.7E-05	6.4E-06	5E-05	0.02
residential	REC_100M	487430.59	3619425.04	0E+00	2E-03	2E-03	0E+00	8E-04	7E-04	0.00016	1E-04	7.3E-06	5.7E-05	0.02
residential	REC_100M	487530.59	3619425.04	0E+00	2E-03	1E-03	0E+00	8E-04	7E-04	0.00016	9.8E-05	7.2E-06	5.6E-05	0.02
residential	REC_100M	487630.59	3619425.04	0E+00	2E-03	1E-03	0E+00	7E-04	6E-04	0.00015	9E-05	6.6E-06	5.1E-05	0.02
residential	REC_100M	487730.59	3619425.04	0E+00	2E-03	1E-03	0E+00	6E-04	5E-04	0.00014	8.7E-05	6.4E-06	5E-05	0.02
residential	REC_100M	487830.59	3619425.04	0E+00	2E-03	1E-03	0E+00	6E-04	5E-04	0.00013	8.1E-05	6E-06	4.7E-05	0.02
residential	REC_100M	476730.59	3619525.04	0E+00	1E-04	6E-05	0E+00	3E-05	3E-05	4.4E-06	2.7E-06	2E-07	1.6E-06	0.00
residential	REC_100M	476830.59	3619525.04	0E+00	1E-04	6E-05	0E+00	3E-05	3E-05	4.5E-06	2.7E-06	2E-07	1.6E-06	0.00

Refrigerated Containers

X	ug/m3	Dose Inhalation 3rd tri	Dose 0<2	Dose 2<9	Dose 2<16	Dose 16<30	Risk (Residential 30-yr; school 9-yr; park 15-year) 3rd tri	Risk 0<2	Risk 2<9	Risk 2<16	Risk 16<30	Summed Risk	Cases Per Million	Chronic HI
486830.59	0.01185	4.1E-06	1.24E-05	7.17E-06	6.5E-06	2.96E-06	1.6E-07	3.9E-06	0	4.3E-06	6.5E-07	8.994E-06	8.99357	0.00237
486930.59	0.0115	3.98E-06	1.2E-05	6.96E-06	6.31E-06	2.88E-06	1.6E-07	3.8E-06	0	4.2E-06	6.3E-07	8.734E-06	8.73374	0.0023
487030.59	0.01057	3.66E-06	1.1E-05	6.39E-06	5.8E-06	2.64E-06	1.4E-07	3.5E-06	0	3.8E-06	5.8E-07	8.021E-06	8.02109	0.00211
487130.59	0.0099	3.43E-06	1.03E-05	5.99E-06	5.43E-06	2.48E-06	1.3E-07	3.3E-06	0	3.6E-06	5.5E-07	7.516E-06	7.5163	0.00198
487230.59	0.00957	3.31E-06	1E-05	5.79E-06	5.25E-06	2.4E-06	1.3E-07	3.1E-06	0	3.5E-06	5.3E-07	7.268E-06	7.26765	0.00191
487330.59	0.00871	3.02E-06	9.1E-06	5.27E-06	4.78E-06	2.18E-06	1.2E-07	2.9E-06	0	3.2E-06	4.8E-07	6.613E-06	6.6131	0.00174
487430.59	0.0088	3.05E-06	9.2E-06	5.32E-06	4.83E-06	2.2E-06	1.2E-07	2.9E-06	0	3.2E-06	4.8E-07	6.68E-06	6.68036	0.00176
487530.59	0.00834	2.89E-06	8.72E-06	5.05E-06	4.58E-06	2.09E-06	1.1E-07	2.7E-06	0	3E-06	4.6E-07	6.333E-06	6.33266	0.00167
487630.59	0.00775	2.68E-06	8.1E-06	4.69E-06	4.25E-06	1.94E-06	1.1E-07	2.5E-06	0	2.8E-06	4.3E-07	5.88E-06	5.88007	0.00155
487730.59	0.00739	2.56E-06	7.72E-06	4.47E-06	4.05E-06	1.85E-06	1E-07	2.4E-06	0	2.7E-06	4.1E-07	5.609E-06	5.60877	0.00148
487830.59	0.00697	2.41E-06	7.28E-06	4.22E-06	3.82E-06	1.74E-06	9.5E-08	2.3E-06	0	2.5E-06	3.8E-07	5.291E-06	5.29089	0.00139
476730.59	0.00169	5.85E-07	1.77E-06	1.02E-06	9.27E-07	4.23E-07	2.3E-08	5.6E-07	0	6.1E-07	9.3E-08	1.283E-06	1.28322	0.00034
476830.59	0.00174	6.01E-07	1.82E-06	1.05E-06	9.53E-07	4.35E-07	2.4E-08	5.7E-07	0	6.3E-07	9.6E-08	1.319E-06	1.31877	0.00035

Multi-Purpose General Cargo

X	ug/m3	Dose Inhalation 3rd tri	Dose 0<2	Dose 2<9	Dose 2<16	Dose 16<30	Risk (Residential 30-yr; school 9-yr; park 15-year) 3rd tri	Risk 0<2	Risk 2<9	Risk 2<16	Risk 16<30	Summed Risk	Cases Per Million	Chronic HI
486830.59	7E-03	3E-06	8E-06	4E-06	4E-06	2E-06	1E-07	2E-06	0E+00	3E-06	4E-07	5.6E-06	5.606	0.00148
486930.59	7E-03	3E-06	8E-06	4E-06	4E-06	2E-06	1E-07	2E-06	0E+00	3E-06	4E-07	5.6E-06	5.555	0.00146
487030.59	7E-03	2E-06	7E-06	4E-06	4E-06	2E-06	9E-08	2E-06	0E+00	2E-06	4E-07	5.2E-06	5.204	0.00137
487130.59	7E-03	2E-06	7E-06	4E-06	4E-06	2E-06	9E-08	2E-06	0E+00	2E-06	4E-07	4.9E-06	4.940	0.0013
487230.59	6E-03	2E-06	7E-06	4E-06	3E-06	2E-06	9E-08	2E-06	0E+00	2E-06	3E-07	4.8E-06	4.806	0.00127
487330.59	6E-03	2E-06	6E-06	4E-06	3E-06	1E-06	8E-08	2E-06	0E+00	2E-06	3E-07	4.4E-06	4.404	0.00116
487430.59	6E-03	2E-06	6E-06	4E-06	3E-06	1E-06	8E-08	2E-06	0E+00	2E-06	3E-07	4.4E-06	4.424	0.00117
487530.59	6E-03	2E-06	6E-06	3E-06	3E-06	1E-06	8E-08	2E-06	0E+00	2E-06	3E-07	4.2E-06	4.191	0.0011
487630.59	5E-03	2E-06	5E-06	3E-06	3E-06	1E-06	7E-08	2E-06	0E+00	2E-06	3E-07	3.9E-06	3.895	0.00103
487730.59	5E-03	2E-06	5E-06	3E-06	3E-06	1E-06	7E-08	2E-06	0E+00	2E-06	3E-07	3.7E-06	3.698	0.00097
487830.59	5E-03	2E-06	5E-06	3E-06	3E-06	1E-06	6E-08	2E-06	0E+00	2E-06	3E-07	3.5E-06	3.472	0.00091
476730.59	9E-04	3E-07	1E-06	6E-07	5E-07	2E-07	1E-08	3E-07	0E+00	3E-07	5E-08	7.1E-07	0.713	0.00019
476830.59	1E-03	3E-07	1E-06	6E-07	5E-07	2E-07	1E-08	3E-07	0E+00	4E-07	5E-08	7.3E-07	0.735	0.00019

Dry Bulk

X	ug/m3	Dose Inhalation 3rd tri	Dose 0<2	Dose 2<9	Dose 2<16	Dose 16<30	Risk (Residential 30-yr; school 9-yr; park 15-year) 3rd tri	Risk 0<2	Risk 2<9	Risk 2<16	Risk 16<30	Summed Risk	Cases Per Million	Chronic HI
486830.59	1E-02	4E-06	1E-05	7E-06	6E-06	3E-06	2E-07	4E-06	0E+00	4E-06	6E-07	8.6E-06	8.561	0.00226
486930.59	1E-02	4E-06	1E-05	7E-06	6E-06	3E-06	2E-07	4E-06	0E+00	4E-06	6E-07	8.6E-06	8.579	0.00226
487030.59	1E-02	4E-06	1E-05	6E-06	6E-06	3E-06	1E-07	3E-06	0E+00	4E-06	6E-07	8.0E-06	7.980	0.0021
487130.59	1E-02	3E-06	1E-05	6E-06	5E-06	2E-06	1E-07	3E-06	0E+00	4E-06	5E-07	7.6E-06	7.567	0.00199
487230.59	1E-02	3E-06	1E-05	6E-06	5E-06	2E-06	1E-07	3E-06	0E+00	4E-06	5E-07	7.4E-06	7.410	0.00195
487330.59	9E-03	3E-06	9E-06	5E-06	5E-06	2E-06	1E-07	3E-06	0E+00	3E-06	5E-07	6.7E-06	6.719	0.00177
487430.59	9E-03	3E-06	9E-06	5E-06	5E-06	2E-06	1E-07	3E-06	0E+00	3E-06	5E-07	6.9E-06	6.861	0.00181
487530.59	9E-03	3E-06	9E-06	5E-06	5E-06	2E-06	1E-07	3E-06	0E+00	3E-06	5E-07	6.5E-06	6.475	0.00171
487630.59	8E-03	3E-06	8E-06	5E-06	4E-06	2E-06	1E-07	3E-06	0E+00	3E-06	4E-07	5.9E-06	5.948	0.00157
487730.59	7E-03	3E-06	8E-06	4E-06	4E-06	2E-06	1E-07	2E-06	0E+00	3E-06	4E-07	5.6E-06	5.625	0.00148
487830.59	7E-03	2E-06	7E-06	4E-06	4E-06	2E-06	9E-08	2E-06	0E+00	2E-06	4E-07	5.2E-06	5.240	0.00138
476730.59	1E-03	4E-07	1E-06	7E-07	6E-07	3E-07	1E-08	4E-07	0E+00	4E-07	6E-08	8.2E-07	0.819	0.00022
476830.59	1E-03	4E-07	1E-06	7E-07	6E-07	3E-07	2E-08	4E-07	0E+00	4E-07	6E-08	8.4E-07	0.843	0.00022

TAMT Risk Assessment - DPM Cancer and Chronic HI

AERMOD Output

Receptor type	Discrete Receptor ID (Group Name)	X	Y	quipment: Multi-Purpose General Cargofully_mitigated 0.0%	quipment: Dry Bulkfully_mitigated 60%	Locomotives: All 100%	Locomotives: Refrigerated Containersfully_mitigated 0%	Locomotives: Multi-Purpose General Cargofully_mitigated 54%	Locomotives: Dry Bulkfully_mitigated 46%	Trucks: All 100%	Trucks: Refrigerated Containersfully_mitigated 61%	Trucks: Multi-Purpose General Cargofully_mitigated 4%	Trucks: Dry Bulkfully_mitigated 35%	All
residential	REC_100M	485530.59	3619825.04	0E+00	4E-03	1E-03	0E+00	7E-04	6E-04	7.2E-05	4.3E-05	3.2E-06	2.5E-05	0.03
residential	REC_100M	485630.59	3619825.04	0E+00	4E-03	1E-03	0E+00	7E-04	6E-04	8E-05	4.9E-05	3.6E-06	2.8E-05	0.03
residential	REC_100M	485730.59	3619825.04	0E+00	4E-03	2E-03	0E+00	8E-04	7E-04	9.2E-05	5.6E-05	4.1E-06	3.2E-05	0.03
residential	REC_100M	485830.59	3619825.04	0E+00	4E-03	2E-03	0E+00	9E-04	8E-04	0.0001	6.2E-05	4.5E-06	3.6E-05	0.03
residential	REC_100M	485930.59	3619825.04	0E+00	4E-03	2E-03	0E+00	1E-03	8E-04	0.00011	6.9E-05	5.1E-06	4E-05	0.03
residential	REC_100M	486030.59	3619825.04	0E+00	4E-03	2E-03	0E+00	1E-03	9E-04	0.00013	7.6E-05	5.6E-06	4.4E-05	0.03
residential	REC_100M	476730.59	3619925.04	0E+00	9E-05	5E-05	0E+00	3E-05	2E-05	4.1E-06	2.5E-06	1.8E-07	1.4E-06	0.00
residential	REC_100M	476830.59	3619925.04	0E+00	9E-05	5E-05	0E+00	3E-05	2E-05	4.1E-06	2.5E-06	1.8E-07	1.4E-06	0.00
residential	REC_100M	476930.59	3619925.04	0E+00	9E-05	5E-05	0E+00	3E-05	2E-05	4.1E-06	2.5E-06	1.8E-07	1.4E-06	0.00
residential	REC_100M	477030.59	3619925.04	0E+00	9E-05	5E-05	0E+00	3E-05	2E-05	4.1E-06	2.5E-06	1.8E-07	1.4E-06	0.00
residential	REC_100M	477130.59	3619925.04	0E+00	9E-05	6E-05	0E+00	3E-05	3E-05	4.2E-06	2.5E-06	1.9E-07	1.5E-06	0.00
residential	REC_100M	477230.59	3619925.04	0E+00	9E-05	6E-05	0E+00	3E-05	3E-05	4.3E-06	2.6E-06	1.9E-07	1.5E-06	0.00

Refrigerated Containers

X	ug/m3	Dose Inhallation: 3rd tri	0<2	2<9	2<16	16<30	Risk (Residential 30-yr; school 9-yr; park 15-year): 3rd tri	0<2	2<9	2<16	16<30	Summed Risk	Cases Per Million	Chronic HI
485530.59	0.01371	4.75E-06	1.43E-05	8.3E-06	7.52E-06	3.43E-06	1.9E-07	4.5E-06	0	5E-06	7.6E-07	1.041E-05	10.4112	0.00274
485630.59	0.014	4.85E-06	1.46E-05	8.47E-06	7.68E-06	3.5E-06	1.9E-07	4.6E-06	0	5.1E-06	7.7E-07	1.063E-05	10.6265	0.0028
485730.59	0.01437	4.97E-06	1.5E-05	8.7E-06	7.88E-06	3.6E-06	2E-07	4.7E-06	0	5.2E-06	7.9E-07	1.091E-05	10.9104	0.00287
485830.59	0.01454	5.03E-06	1.52E-05	8.8E-06	7.97E-06	3.64E-06	2E-07	4.8E-06	0	5.3E-06	8E-07	1.104E-05	11.0352	0.00291
485930.59	0.01475	5.11E-06	1.54E-05	8.93E-06	8.09E-06	3.69E-06	2E-07	4.8E-06	0	5.3E-06	8.1E-07	1.12E-05	11.198	0.00295
486030.59	0.01484	5.14E-06	1.55E-05	8.98E-06	8.14E-06	3.71E-06	2E-07	4.9E-06	0	5.4E-06	8.2E-07	1.127E-05	11.2669	0.00297
476730.59	0.00149	5.14E-07	1.55E-06	8.99E-07	8.15E-07	3.72E-07	2E-08	4.9E-07	0	5.4E-07	8.2E-08	1.128E-06	1.12797	0.0003
476830.59	0.00154	5.32E-07	1.61E-06	9.3E-07	8.43E-07	3.85E-07	2.1E-08	5E-07	0	5.6E-07	8.5E-08	1.167E-06	1.16654	0.00031
476930.59	0.00155	5.37E-07	1.62E-06	9.39E-07	8.51E-07	3.88E-07	2.1E-08	5.1E-07	0	5.6E-07	8.5E-08	1.178E-06	1.17803	0.00031
477030.59	0.00158	5.46E-07	1.65E-06	9.54E-07	8.65E-07	3.94E-07	2.1E-08	5.2E-07	0	5.7E-07	8.7E-08	1.197E-06	1.19656	0.00032

Multi-Purpose General Cargo

X	ug/m3	Dose Inhallation: 3rd tri	0<2	2<9	2<16	16<30	Risk (Residential 30-yr; school 9-yr; park 15-year): 3rd tri	0<2	2<9	2<16	16<30	Summed Risk	Cases Per Million	Chronic HI
485530.59	6E-03	2E-06	6E-06	3E-06	3E-06	1E-06	8E-08	2E-06	0E+00	2E-06	3E-07	4.3E-06	4.302	0.00113
485630.59	6E-03	2E-06	6E-06	4E-06	3E-06	1E-06	8E-08	2E-06	0E+00	2E-06	3E-07	4.4E-06	4.434	0.00117
485730.59	6E-03	2E-06	6E-06	4E-06	3E-06	2E-06	8E-08	2E-06	0E+00	2E-06	3E-07	4.6E-06	4.612	0.00122
485830.59	6E-03	2E-06	7E-06	4E-06	3E-06	2E-06	8E-08	2E-06	0E+00	2E-06	3E-07	4.7E-06	4.737	0.00125
485930.59	6E-03	2E-06	7E-06	4E-06	4E-06	2E-06	9E-08	2E-06	0E+00	2E-06	4E-07	4.9E-06	4.888	0.00129
486030.59	7E-03	2E-06	7E-06	4E-06	4E-06	2E-06	9E-08	2E-06	0E+00	2E-06	4E-07	5.0E-06	5.007	0.00132
476730.59	8E-04	3E-07	9E-07	5E-07	5E-07	2E-07	1E-08	3E-07	0E+00	3E-07	5E-08	6.2E-07	0.625	0.00016
476830.59	9E-04	3E-07	9E-07	5E-07	5E-07	2E-07	1E-08	3E-07	0E+00	3E-07	5E-08	6.5E-07	0.647	0.00017
476930.59	9E-04	3E-07	9E-07	5E-07	5E-07	2E-07	1E-08	3E-07	0E+00	3E-07	5E-08	6.5E-07	0.654	0.00017
477030.59	9E-04	3E-07	9E-07	5E-07	5E-07	2E-07	1E-08	3E-07	0E+00	3E-07	5E-08	6.7E-07	0.666	0.00018

Dry Bulk

X	ug/m3	Dose Inhallation: 3rd tri	0<2	2<9	2<16	16<30	Risk (Residential 30-yr; school 9-yr; park 15-year): 3rd tri	0<2	2<9	2<16	16<30	Summed Risk	Cases Per Million	Chronic HI
485530.59	9E-03	3E-06	9E-06	5E-06	5E-06	2E-06	1E-07	3E-06	0E+00	3E-06	5E-07	6.8E-06	6.756	0.00178
485630.59	9E-03	3E-06	1E-05	6E-06	5E-06	2E-06	1E-07	3E-06	0E+00	3E-06	5E-07	7.0E-06	6.977	0.00184
485730.59	1E-02	3E-06	1E-05	6E-06	5E-06	2E-06	1E-07	3E-06	0E+00	4E-06	5E-07	7.4E-06	7.372	0.00194
485830.59	1E-02	3E-06	1E-05	6E-06	5E-06	2E-06	1E-07	3E-06	0E+00	4E-06	5E-07	7.6E-06	7.557	0.00199
485930.59	1E-02	4E-06	1E-05	6E-06	6E-06	3E-06	1E-07	3E-06	0E+00	4E-06	6E-07	7.9E-06	7.864	0.00207
486030.59	1E-02	4E-06	1E-05	6E-06	6E-06	3E-06	1E-07	3E-06	0E+00	4E-06	6E-07	8.1E-06	8.084	0.00213
476730.59	9E-04	3E-07	1E-06	6E-07	5E-07	2E-07	1E-08	3E-07	0E+00	3E-07	5E-08	7.2E-07	0.718	0.00019
476830.59	1E-03	3E-07	1E-06	6E-07	5E-07	2E-07	1E-08	3E-07	0E+00	4E-07	5E-08	7.4E-07	0.744	0.0002
476930.59	1E-03	3E-07	1E-06	6E-07	5E-07	2E-07	1E-08	3E-07	0E+00	4E-07	5E-08	7.5E-07	0.751	0.0002
477030.59	1E-03	3E-07	1E-06	6E-07	6E-07	3E-07	1E-08	3E-07	0E+00	4E-07	6E-08	7.6E-07	0.764	0.0002

TAMT Risk Assessment - DPM Cancer and Chronic HI

AERMOD Output

	Discrete Receptor ID (Group Name)	X	Y	quipment: Multi-Purpose General Cargofully_mitigated (0.0%)	quipment: Dry Bulkfully_mitigated (60%)	Locomotives: All (100%)	Locomotives: Refrigerated Containersfully_mitigated (0%)	Locomotives: Multi-Purpose General Cargofully_mitigated (54%)	Locomotives: Dry Bulkfully_mitigated (46%)	Trucks: All (100%)	Trucks: Refrigerated Containersfully_mitigated (61%)	Trucks: Multi-Purpose General Cargofully_mitigated (4%)	Trucks: Dry Bulkfully_mitigated (35%)	All
residential	REC_100M	484230.59	3620225.04	0E+00	6E-04	4E-04	0E+00	2E-04	2E-04	1.6E-05	9.8E-06	7.2E-07	5.6E-06	0.01
residential	REC_100M	484330.59	3620225.04	0E+00	7E-04	4E-04	0E+00	2E-04	2E-04	1.7E-05	1.1E-05	7.7E-07	6E-06	0.01
residential	REC_100M	484430.59	3620225.04	0E+00	7E-04	4E-04	0E+00	2E-04	2E-04	1.9E-05	1.1E-05	8.3E-07	6.5E-06	0.01
residential	REC_100M	484530.59	3620225.04	0E+00	8E-04	4E-04	0E+00	2E-04	2E-04	2E-05	1.2E-05	9E-07	7.1E-06	0.01
residential	REC_100M	484630.59	3620225.04	0E+00	9E-04	4E-04	0E+00	2E-04	2E-04	2.2E-05	1.3E-05	9.7E-07	7.6E-06	0.02
residential	REC_100M	484730.59	3620225.04	0E+00	9E-04	4E-04	0E+00	2E-04	2E-04	2.4E-05	1.4E-05	1E-06	8.2E-06	0.02
residential	REC_100M	484830.59	3620225.04	0E+00	1E-03	5E-04	0E+00	3E-04	2E-04	2.5E-05	1.5E-05	1.1E-06	8.9E-06	0.02
residential	REC_100M	484930.59	3620225.04	0E+00	1E-03	5E-04	0E+00	3E-04	2E-04	2.8E-05	1.7E-05	1.2E-06	9.6E-06	0.02
residential	REC_100M	485030.59	3620225.04	0E+00	1E-03	5E-04	0E+00	3E-04	2E-04	3E-05	1.8E-05	1.3E-06	1E-05	0.02
residential	REC_100M	485130.59	3620225.04	0E+00	1E-03	6E-04	0E+00	3E-04	3E-04	3E-05	1.8E-05	1.4E-06	1.1E-05	0.02
residential	REC_100M	485230.59	3620225.04	0E+00	2E-03	6E-04	0E+00	3E-04	3E-04	3.2E-05	2E-05	1.4E-06	1.1E-05	0.02
residential	REC_100M	485330.59	3620225.04	0E+00	2E-03	7E-04	0E+00	4E-04	3E-04	3.9E-05	2.4E-05	1.7E-06	1.4E-05	0.02
residential	REC_100M	485430.59	3620225.04	0E+00	2E-03	8E-04	0E+00	4E-04	4E-04	4.7E-05	2.8E-05	2.1E-06	1.6E-05	0.02

Refrigerated Containers

X	ug/m3	Dose Inhalation: 3rd tri	0<2	2<9	2<16	16<30	Risk (Residential 30-yr; school 9-yr; park 15-year): 3rd tri	0<2	2<9	2<16	16<30	Summed Risk	Cases Per Million	Chronic HI
484230.59	0.00676	2.34E-06	7.06E-06	4.09E-06	3.71E-06	1.69E-06	9.2E-08	2.2E-06	0	2.4E-06	3.7E-07	5.13E-06	5.12993	0.00135
484330.59	0.00682	2.36E-06	7.13E-06	4.13E-06	3.74E-06	1.71E-06	9.3E-08	2.2E-06	0	2.5E-06	3.8E-07	5.176E-06	5.17561	0.00136
484430.59	0.00695	2.41E-06	7.27E-06	4.21E-06	3.81E-06	1.74E-06	9.5E-08	2.3E-06	0	2.5E-06	3.8E-07	5.278E-06	5.27795	0.00139
484530.59	0.00712	2.47E-06	7.45E-06	4.31E-06	3.91E-06	1.78E-06	9.7E-08	2.3E-06	0	2.6E-06	3.9E-07	5.409E-06	5.4086	0.00142
484630.59	0.00735	2.54E-06	7.68E-06	4.45E-06	4.03E-06	1.84E-06	1E-07	2.4E-06	0	2.7E-06	4E-07	5.579E-06	5.57946	0.00147
484730.59	0.00764	2.64E-06	7.98E-06	4.62E-06	4.19E-06	1.91E-06	1E-07	2.5E-06	0	2.8E-06	4.2E-07	5.796E-06	5.79626	0.00153
484830.59	0.00797	2.76E-06	8.33E-06	4.82E-06	4.37E-06	1.99E-06	1.1E-07	2.6E-06	0	2.9E-06	4.4E-07	6.048E-06	6.04841	0.00159
484930.59	0.00835	2.89E-06	8.73E-06	5.05E-06	4.58E-06	2.09E-06	1.1E-07	2.7E-06	0	3E-06	4.6E-07	6.34E-06	6.34044	0.00167
485030.59	0.00873	3.02E-06	9.13E-06	5.28E-06	4.79E-06	2.19E-06	1.2E-07	2.9E-06	0	3.2E-06	4.8E-07	6.628E-06	6.62792	0.00175
485130.59	0.00901	3.12E-06	9.41E-06	5.45E-06	4.94E-06	2.25E-06	1.2E-07	3E-06	0	3.3E-06	5E-07	6.837E-06	6.83673	0.0018
485230.59	0.00933	3.23E-06	9.75E-06	5.64E-06	5.11E-06	2.33E-06	1.3E-07	3.1E-06	0	3.4E-06	5.1E-07	7.079E-06	7.0794	0.00187
485330.59	0.0099	3.43E-06	1.04E-05	5.99E-06	5.43E-06	2.48E-06	1.3E-07	3.3E-06	0	3.6E-06	5.5E-07	7.519E-06	7.51855	0.00198
485430.59	0.01042	3.61E-06	1.09E-05	6.3E-06	5.71E-06	2.61E-06	1.4E-07	3.4E-06	0	3.8E-06	5.7E-07	7.908E-06	7.90815	0.00208

Multi-Purpose General Cargo

X	ug/m3	Dose Inhalation: 3rd tri	0<2	2<9	2<16	16<30	Risk (Residential 30-yr; school 9-yr; park 15-year): 3rd tri	0<2	2<9	2<16	16<30	Summed Risk	Cases Per Million	Chronic HI
484230.59	4E-03	1E-06	4E-06	2E-06	2E-06	9E-07	5E-08	1E-06	0E+00	1E-06	2E-07	2.7E-06	2.659	0.0007
484330.59	3E-03	1E-06	4E-06	2E-06	2E-06	9E-07	5E-08	1E-06	0E+00	1E-06	2E-07	2.6E-06	2.635	0.00069
484430.59	3E-03	1E-06	4E-06	2E-06	2E-06	9E-07	5E-08	1E-06	0E+00	1E-06	2E-07	2.6E-06	2.631	0.00069
484530.59	3E-03	1E-06	4E-06	2E-06	2E-06	9E-07	5E-08	1E-06	0E+00	1E-06	2E-07	2.6E-06	2.638	0.0007
484630.59	4E-03	1E-06	4E-06	2E-06	2E-06	9E-07	5E-08	1E-06	0E+00	1E-06	2E-07	2.7E-06	2.658	0.0007
484730.59	4E-03	1E-06	4E-06	2E-06	2E-06	9E-07	5E-08	1E-06	0E+00	1E-06	2E-07	2.7E-06	2.699	0.00071
484830.59	4E-03	1E-06	4E-06	2E-06	2E-06	9E-07	5E-08	1E-06	0E+00	1E-06	2E-07	2.8E-06	2.752	0.00073
484930.59	4E-03	1E-06	4E-06	2E-06	2E-06	9E-07	5E-08	1E-06	0E+00	1E-06	2E-07	2.8E-06	2.832	0.00075
485030.59	4E-03	1E-06	4E-06	2E-06	2E-06	1E-06	5E-08	1E-06	0E+00	1E-06	2E-07	2.9E-06	2.907	0.00077
485130.59	4E-03	1E-06	4E-06	2E-06	2E-06	1E-06	5E-08	1E-06	0E+00	1E-06	2E-07	2.9E-06	2.936	0.00077
485230.59	4E-03	1E-06	4E-06	2E-06	2E-06	1E-06	5E-08	1E-06	0E+00	1E-06	2E-07	3.0E-06	3.023	0.0008
485330.59	4E-03	1E-06	4E-06	3E-06	2E-06	1E-06	6E-08	1E-06	0E+00	2E-06	2E-07	3.2E-06	3.231	0.00085
485430.59	5E-03	2E-06	5E-06	3E-06	2E-06	1E-06	6E-08	1E-06	0E+00	2E-06	2E-07	3.4E-06	3.420	0.0009

Dry Bulk

X	ug/m3	Dose Inhalation: 3rd tri	0<2	2<9	2<16	16<30	Risk (Residential 30-yr; school 9-yr; park 15-year): 3rd tri	0<2	2<9	2<16	16<30	Summed Risk	Cases Per Million	Chronic HI
484230.59	4E-03	1E-06	4E-06	2E-06	2E-06	1E-06	6E-08	1E-06	0E+00	1E-06	2E-07	3.1E-06	3.118	0.00082
484330.59	4E-03	1E-06	4E-06	2E-06	2E-06	1E-06	6E-08	1E-06	0E+00	1E-06	2E-07	3.1E-06	3.116	0.00082
484430.59	4E-03	1E-06	4E-06	3E-06	2E-06	1E-06	6E-08	1E-06	0E+00	1E-06	2E-07	3.1E-06	3.142	0.00083
484530.59	4E-03	1E-06	4E-06	3E-06	2E-06	1E-06	6E-08	1E-06	0E+00	2E-06	2E-07	3.2E-06	3.179	0.00084
484630.59	4E-03	1E-06	4E-06	3E-06	2E-06	1E-06	6E-08	1E-06	0E+00	2E-06	2E-07	3.2E-06	3.233	0.00085
484730.59	4E-03	2E-06	5E-06	3E-06	2E-06	1E-06	6E-08	1E-06	0E+00	2E-06	2E-07	3.3E-06	3.310	0.00087
484830.59	5E-03	2E-06	5E-06	3E-06	2E-06	1E-06	6E-08	1E-06	0E+00	2E-06	2E-07	3.4E-06	3.417	0.0009
484930.59	5E-03	2E-06	5E-06	3E-06	3E-06	1E-06	6E-08	2E-06	0E+00	2E-06	3E-07	3.6E-06	3.573	0.00094
485030.59	5E-03	2E-06	5E-06	3E-06	3E-06	1E-06	7E-08	2E-06	0E+00	2E-06	3E-07	3.7E-06	3.732	0.00098
485130.59	5E-03	2E-06	5E-06	3E-06	3E-06	1E-06	7E-08	2E-06	0E+00	2E-06	3E-07	3.8E-06	3.783	0.001
485230.59	5E-03	2E-06	5E-06	3E-06	3E-06	1E-06	7E-08	2E-06	0E+00	2E-06	3E-07	4.0E-06	3.957	0.00104
485330.59	6E-03	2E-06	6E-06	4E-06	3E-06	1E-06	8E-08	2E-06	0E+00	2E-06	3E-07	4.4E-06	4.449	0.00117
485430.59	6E-03	2E-06	7E-06	4E-06	4E-06	2E-06	9E-08	2E-06	0E+00	2E-06	4E-07	4.9E-06	4.934	0.0013

TAMT Risk Assessment - DPM Cancer and Chronic HI

AERMOD Output

Discrete Receptor ID (Group Name)		X	Y	Equipment: Multi-Purpose General Cargofully_mitigated 0.0%	Equipment: Dry Bulkfully_mitigated 60%	Locomotives: All 100%	Locomotives: Refrigerated Containersfully_mitigated 0%	Locomotives: Multi-Purpose General Cargofully_mitigated 54%	Locomotives: Dry Bulkfully_mitigated 46%	Trucks: All 100%	Trucks: Refrigerated Containersfully_mitigated 61%	Trucks: Multi-Purpose General Cargofully_mitigated 4%	Trucks: Dry Bulkfully_mitigated 35%	All
recreational	park	485630.59	3620625.04	0E+00	2E-03	7E-04	0E+00	4E-04	3E-04	4.1E-05	2.5E-05	1.8E-06	1.4E-05	0.02
recreational	park	485730.59	3620625.04	0E+00	2E-03	7E-04	0E+00	4E-04	3E-04	4.5E-05	2.7E-05	2E-06	1.6E-05	0.02
recreational	park	485830.59	3620625.04	0E+00	2E-03	7E-04	0E+00	4E-04	3E-04	4.7E-05	2.9E-05	2.1E-06	1.6E-05	0.02
residential	REC_100M	477330.59	3620725.04	0E+00	8E-05	5E-05	0E+00	3E-05	2E-05	3.6E-06	2.2E-06	1.6E-07	1.3E-06	0.00
residential	REC_100M	477430.59	3620725.04	0E+00	8E-05	5E-05	0E+00	3E-05	2E-05	3.6E-06	2.2E-06	1.6E-07	1.2E-06	0.00
residential	REC_100M	477530.59	3620725.04	0E+00	8E-05	5E-05	0E+00	3E-05	2E-05	3.5E-06	2.1E-06	1.6E-07	1.2E-06	0.00
residential	REC_100M	477630.59	3620725.04	0E+00	8E-05	5E-05	0E+00	3E-05	2E-05	3.7E-06	2.2E-06	1.6E-07	1.3E-06	0.00
residential	REC_100M	477730.59	3620725.04	0E+00	9E-05	6E-05	0E+00	3E-05	3E-05	3.9E-06	2.3E-06	1.7E-07	1.3E-06	0.00
residential	REC_100M	477830.59	3620725.04	0E+00	9E-05	6E-05	0E+00	3E-05	3E-05	4.1E-06	2.5E-06	1.8E-07	1.4E-06	0.00
residential	REC_100M	477930.59	3620725.04	0E+00	1E-04	6E-05	0E+00	3E-05	3E-05	4.2E-06	2.5E-06	1.9E-07	1.5E-06	0.00

Refrigerated Containers

Receptor X	ug/m3	Dose Inhallation 3rd tri	0<2	2<9	2<16	16<30	Risk (Residential 30-yr; school 9-yr; park 15-year) 3rd tri	0<2	2<9	2<16	16<30	Summed Risk	Cases Per Million	Chronic HI
485630.59	0.00843	0	8.08E-07	4.31E-07	3.5E-07	1.62E-07	0	2.5E-07	1.4E-07	0	1.5E-08	4.114E-07	0.41143	0.00169
485730.59	0.00859	0	8.24E-07	4.39E-07	3.57E-07	1.65E-07	0	2.6E-07	1.4E-07	0	1.6E-08	4.193E-07	0.41931	0.00172
485830.59	0.00853	0	8.18E-07	4.36E-07	3.55E-07	1.64E-07	0	2.6E-07	1.4E-07	0	1.5E-08	4.165E-07	0.41654	0.00171
477330.59	0.00143	4.94E-07	1.49E-06	8.63E-07	7.83E-07	3.57E-07	1.9E-08	4.7E-07	0	5.2E-07	7.9E-08	1.083E-06	1.0832	0.00029
477430.59	0.00144	4.98E-07	1.5E-06	8.71E-07	7.89E-07	3.6E-07	2E-08	4.7E-07	0	5.2E-07	7.9E-08	1.092E-06	1.0925	0.00029
477530.59	0.00144	4.99E-07	1.51E-06	8.73E-07	7.91E-07	3.61E-07	2E-08	4.7E-07	0	5.2E-07	7.9E-08	1.095E-06	1.09499	0.00029
477630.59	0.00152	5.25E-07	1.59E-06	9.18E-07	8.32E-07	3.8E-07	2.1E-08	5E-07	0	5.5E-07	8.4E-08	1.152E-06	1.15173	0.0003
477730.59	0.00162	5.62E-07	1.7E-06	9.83E-07	8.91E-07	4.07E-07	2.2E-08	5.3E-07	0	5.9E-07	8.9E-08	1.233E-06	1.23348	0.00032
477830.59	0.00177	6.14E-07	1.86E-06	1.07E-06	9.73E-07	4.44E-07	2.4E-08	5.8E-07	0	6.4E-07	9.8E-08	1.347E-06	1.34739	0.00035
477930.59	0.00187	6.47E-07	1.95E-06	1.13E-06	1.02E-06	4.68E-07	2.5E-08	6.1E-07	0	6.8E-07	1E-07	1.418E-06	1.41816	0.00037

Multi-Purpose General Cargo

Receptor X	ug/m3	Dose Inhallation 3rd tri	0<2	2<9	2<16	16<30	Risk (Residential 30-yr; school 9-yr; park 15-year) 3rd tri	0<2	2<9	2<16	16<30	Summed Risk	Cases Per Million	Chronic HI
485630.59	4E-03	0E+00	4E-07	2E-07	2E-07	7E-08	0E+00	1E-07	6E-08	0E+00	7E-09	1.9E-07	0.187	0.00077
485730.59	4E-03	0E+00	4E-07	2E-07	2E-07	8E-08	0E+00	1E-07	7E-08	0E+00	7E-09	1.9E-07	0.192	0.00078
485830.59	4E-03	0E+00	4E-07	2E-07	2E-07	8E-08	0E+00	1E-07	7E-08	0E+00	7E-09	1.9E-07	0.191	0.00078
477330.59	8E-04	3E-07	8E-07	5E-07	4E-07	2E-07	1E-08	3E-07	0E+00	3E-07	4E-08	6.0E-07	0.601	0.00016
477430.59	8E-04	3E-07	8E-07	5E-07	4E-07	2E-07	1E-08	3E-07	0E+00	3E-07	4E-08	6.1E-07	0.606	0.00016
477530.59	8E-04	3E-07	8E-07	5E-07	4E-07	2E-07	1E-08	3E-07	0E+00	3E-07	4E-08	6.1E-07	0.608	0.00016
477630.59	8E-04	3E-07	9E-07	5E-07	5E-07	2E-07	1E-08	3E-07	0E+00	3E-07	5E-08	6.4E-07	0.640	0.00017
477730.59	9E-04	3E-07	9E-07	5E-07	5E-07	2E-07	1E-08	3E-07	0E+00	3E-07	5E-08	6.9E-07	0.688	0.00018
477830.59	1E-03	3E-07	1E-06	6E-07	5E-07	2E-07	1E-08	3E-07	0E+00	4E-07	5E-08	7.6E-07	0.756	0.0002
477930.59	1E-03	4E-07	1E-06	6E-07	6E-07	3E-07	1E-08	3E-07	0E+00	4E-07	6E-08	8.0E-07	0.798	0.00021

Dry Bulk

Receptor X	ug/m3	Dose Inhallation 3rd tri	0<2	2<9	2<16	16<30	Risk (Residential 30-yr; school 9-yr; park 15-year) 3rd tri	0<2	2<9	2<16	16<30	Summed Risk	Cases Per Million	Chronic HI
485630.59	5E-03	0E+00	5E-07	3E-07	2E-07	1E-07	0E+00	2E-07	9E-08	0E+00	1E-08	2.6E-07	0.260	0.00106
485730.59	6E-03	0E+00	5E-07	3E-07	2E-07	1E-07	0E+00	2E-07	9E-08	0E+00	1E-08	2.7E-07	0.269	0.0011
485830.59	5E-03	0E+00	5E-07	3E-07	2E-07	1E-07	0E+00	2E-07	9E-08	0E+00	1E-08	2.7E-07	0.268	0.0011
477330.59	9E-04	3E-07	1E-06	6E-07	5E-07	2E-07	1E-08	3E-07	0E+00	3E-07	5E-08	6.9E-07	0.692	0.00018
477430.59	9E-04	3E-07	1E-06	6E-07	5E-07	2E-07	1E-08	3E-07	0E+00	3E-07	5E-08	7.0E-07	0.697	0.00018
477530.59	9E-04	3E-07	1E-06	6E-07	5E-07	2E-07	1E-08	3E-07	0E+00	3E-07	5E-08	7.0E-07	0.698	0.00018
477630.59	1E-03	3E-07	1E-06	6E-07	5E-07	2E-07	1E-08	3E-07	0E+00	4E-07	5E-08	7.3E-07	0.734	0.00019
477730.59	1E-03	3E-07	1E-06	6E-07	6E-07	3E-07	1E-08	3E-07	0E+00	4E-07	6E-08	7.9E-07	0.787	0.00021
477830.59	1E-03	4E-07	1E-06	7E-07	6E-07	3E-07	2E-08	4E-07	0E+00	4E-07	6E-08	8.6E-07	0.860	0.00023
477930.59	1E-03	4E-07	1E-06	7E-07	7E-07	3E-07	2E-08	4E-07	0E+00	4E-07	7E-08	9.0E-07	0.905	0.00024

TAMT Risk Assessment - DPM Cancer and Chronic HI

AERMOD Output

	Discrete Receptor ID (Group Name)	X	Y	Equipment: Multi-Purpose General Cargofully_mitigated 0.0%	Equipment: Dry Bulkfully_mitigated 60%	Locomotives: All 100%	Locomotives: Refrigerated Containersfully_mitigated 0%	Locomotives: Multi-Purpose General Cargofully_mitigated 54%	Locomotives: Dry Bulkfully_mitigated 46%	Trucks: All 100%	Trucks: Refrigerated Containersfully_mitigated 61%	Trucks: Multi-Purpose General Cargofully_mitigated 4%	Trucks: Dry Bulkfully_mitigated 35%	All
residential	REC_100M	483930.59	3621125.04	0E+00	4E-04	2E-04	0E+00	1E-04	1E-04	1.2E-05	7.2E-06	5.2E-07	4.1E-06	0.01
residential	REC_100M	484030.59	3621125.04	0E+00	4E-04	2E-04	0E+00	1E-04	1E-04	1.2E-05	7.5E-06	5.5E-07	4.3E-06	0.01
residential	REC_100M	484130.59	3621125.04	0E+00	4E-04	2E-04	0E+00	1E-04	1E-04	1.3E-05	7.8E-06	5.7E-07	4.5E-06	0.01
residential	REC_100M	484230.59	3621125.04	0E+00	4E-04	2E-04	0E+00	1E-04	1E-04	1.3E-05	7.9E-06	5.8E-07	4.6E-06	0.01
residential	REC_100M	477930.59	3621225.04	0E+00	8E-05	5E-05	0E+00	3E-05	2E-05	3.7E-06	2.2E-06	1.6E-07	1.3E-06	0.00
residential	REC_100M	478030.59	3621225.04	0E+00	8E-05	5E-05	0E+00	3E-05	2E-05	3.8E-06	2.3E-06	1.7E-07	1.3E-06	0.00
residential	REC_100M	478130.59	3621225.04	0E+00	8E-05	5E-05	0E+00	3E-05	2E-05	3.8E-06	2.3E-06	1.7E-07	1.3E-06	0.00
residential	REC_100M	478230.59	3621225.04	0E+00	8E-05	5E-05	0E+00	3E-05	2E-05	3.8E-06	2.3E-06	1.7E-07	1.3E-06	0.00
residential	REC_100M	478330.59	3621225.04	0E+00	8E-05	5E-05	0E+00	3E-05	2E-05	3.9E-06	2.3E-06	1.7E-07	1.3E-06	0.00
residential	REC_100M	478430.59	3621225.04	0E+00	9E-05	5E-05	0E+00	3E-05	3E-05	3.9E-06	2.4E-06	1.7E-07	1.4E-06	0.00
residential	REC_100M	478530.59	3621225.04	0E+00	9E-05	6E-05	0E+00	3E-05	3E-05	4E-06	2.4E-06	1.8E-07	1.4E-06	0.00
residential	REC_100M	478630.59	3621225.04	0E+00	9E-05	6E-05	0E+00	3E-05	3E-05	4E-06	2.4E-06	1.8E-07	1.4E-06	0.00
residential	REC_100M	478730.59	3621225.04	0E+00	9E-05	6E-05	0E+00	3E-05	3E-05	4.1E-06	2.5E-06	1.8E-07	1.4E-06	0.00
residential	REC_100M	478830.59	3621225.04	0E+00	1E-04	7E-05	0E+00	4E-05	3E-05	4.1E-06	2.5E-06	1.8E-07	1.4E-06	0.01
residential	REC_100M	478930.59	3621225.04	0E+00	1E-04	7E-05	0E+00	4E-05	3E-05	4.1E-06	2.5E-06	1.8E-07	1.4E-06	0.01
residential	REC_100M	479030.59	3621225.04	0E+00	1E-04	7E-05	0E+00	4E-05	3E-05	4.2E-06	2.5E-06	1.9E-07	1.5E-06	0.01
residential	REC_100M	479130.59	3621225.04	0E+00	1E-04	7E-05	0E+00	4E-05	3E-05	4.2E-06	2.6E-06	1.9E-07	1.5E-06	0.01
residential	REC_100M	479230.59	3621225.04	0E+00	1E-04	7E-05	0E+00	4E-05	3E-05	4.2E-06	2.6E-06	1.9E-07	1.5E-06	0.01
residential	REC_100M	479330.59	3621225.04	0E+00	1E-04	7E-05	0E+00	4E-05	3E-05	4.3E-06	2.6E-06	1.9E-07	1.5E-06	0.01
residential	REC_100M	479430.59	3621225.04	0E+00	1E-04	7E-05	0E+00	4E-05	3E-05	4.3E-06	2.6E-06	1.9E-07	1.5E-06	0.01
residential	REC_100M	479530.59	3621225.04	0E+00	1E-04	8E-05	0E+00	4E-05	4E-05	4.3E-06	2.6E-06	1.9E-07	1.5E-06	0.01
residential	REC_100M	479630.59	3621225.04	0E+00	1E-04	8E-05	0E+00	4E-05	4E-05	4.4E-06	2.7E-06	2E-07	1.5E-06	0.01
residential	REC_100M	479730.59	3621225.04	0E+00	1E-04	8E-05	0E+00	4E-05	4E-05	4.4E-06	2.7E-06	2E-07	1.5E-06	0.01
residential	REC_100M	479830.59	3621225.04	0E+00	1E-04	8E-05	0E+00	4E-05	4E-05	4.5E-06	2.7E-06	2E-07	1.6E-06	0.01
residential	REC_100M	479930.59	3621225.04	0E+00	1E-04	8E-05	0E+00	4E-05	4E-05	4.5E-06	2.7E-06	2E-07	1.6E-06	0.01
residential	REC_100M	480030.59	3621225.04	0E+00	1E-04	8E-05	0E+00	4E-05	4E-05	4.5E-06	2.8E-06	2E-07	1.6E-06	0.01
recreational	park	480130.59	3621225.04	0E+00	1E-04	9E-05	0E+00	5E-05	4E-05	4.6E-06	2.8E-06	2E-07	1.6E-06	0.01
recreational	park	480230.59	3621225.04	0E+00	1E-04	9E-05	0E+00	5E-05	4E-05	4.6E-06	2.8E-06	2.1E-07	1.6E-06	0.01
recreational	park	480330.59	3621225.04	0E+00	1E-04	9E-05	0E+00	5E-05	4E-05	4.6E-06	2.8E-06	2.1E-07	1.6E-06	0.01
recreational	park	480430.59	3621225.04	0E+00	1E-04	1E-04	0E+00	5E-05	4E-05	4.7E-06	2.8E-06	2.1E-07	1.6E-06	0.01
recreational	park	480530.59	3621225.04	0E+00	1E-04	1E-04	0E+00	5E-05	5E-05	4.7E-06	2.9E-06	2.1E-07	1.6E-06	0.01
recreational	park	480630.59	3621225.04	0E+00	1E-04	1E-04	0E+00	5E-05	5E-05	4.8E-06	2.9E-06	2.1E-07	1.7E-06	0.01
recreational	park	480730.59	3621225.04	0E+00	1E-04	1E-04	0E+00	6E-05	5E-05	4.8E-06	2.9E-06	2.1E-07	1.7E-06	0.01
recreational	park	480830.59	3621225.04	0E+00	1E-04	1E-04	0E+00	6E-05	5E-05	4.9E-06	2.9E-06	2.2E-07	1.7E-06	0.01
recreational	park	480930.59	3621225.04	0E+00	1E-04	1E-04	0E+00	6E-05	5E-05	4.9E-06	3E-06	2.2E-07	1.7E-06	0.01
recreational	park	481030.59	3621225.04	0E+00	1E-04	1E-04	0E+00	6E-05	5E-05	4.9E-06	3E-06	2.2E-07	1.7E-06	0.01
recreational	park	481330.59	3621225.04	0E+00	1E-04	1E-04	0E+00	6E-05	5E-05	5.1E-06	3.1E-06	2.3E-07	1.8E-06	0.01
recreational	park	481430.59	3621225.04	0E+00	1E-04	1E-04	0E+00	6E-05	5E-05	5.2E-06	3.1E-06	2.3E-07	1.8E-06	0.01
recreational	park	481530.59	3621225.04	0E+00	1E-04	1E-04	0E+00	7E-05	6E-05	5.2E-06	3.2E-06	2.3E-07	1.8E-06	0.01
recreational	park	481630.59	3621225.04	0E+00	1E-04	1E-04	0E+00	7E-05	6E-05	5.3E-06	3.2E-06	2.4E-07	1.9E-06	0.01
recreational	park	481730.59	3621225.04	0E+00	1E-04	1E-04	0E+00	7E-05	6E-05	5.4E-06	3.3E-06	2.4E-07	1.9E-06	0.01
recreational	park	481830.59	3621225.04	0E+00	1E-04	1E-04	0E+00	7E-05	6E-05	5.5E-06	3.3E-06	2.4E-07	1.9E-06	0.01
recreational	park	481930.59	3621225.04	0E+00	1E-04	1E-04	0E+00	7E-05	6E-05	5.6E-06	3.4E-06	2.5E-07	1.9E-06	0.01
recreational	park	482030.59	3621225.04	0E+00	1E-04	1E-04	0E+00	7E-05	6E-05	5.6E-06	3.4E-06	2.5E-07	2E-06	0.01
recreational	park	482130.59	3621225.04	0E+00	2E-04	1E-04	0E+00	7E-05	6E-05	5.7E-06	3.5E-06	2.6E-07	2E-06	0.01
recreational	park	482230.59	3621225.04	0E+00	2E-04	1E-04	0E+00	7E-05	6E-05	5.9E-06	3.6E-06	2.6E-07	2E-06	0.01
recreational	park	482330.59	3621225.04	0E+00	2E-04	1E-04	0E+00	8E-05	6E-05	6E-06	3.6E-06	2.7E-07	2.1E-06	0.01
recreational	park	482430.59	3621225.04	0E+00	2E-04	1E-04	0E+00	8E-05	7E-05	6.1E-06	3.7E-06	2.7E-07	2.1E-06	0.01
recreational	park	482530.59	3621225.04	0E+00	2E-04	1E-04	0E+00	8E-05	7E-05	6.3E-06	3.8E-06	2.8E-07	2.2E-06	0.01
residential	REC_100M	482630.59	3621225.04	0E+00	2E-04	1E-04	0E+00	8E-05	7E-05	6.4E-06	3.9E-06	2.9E-07	2.2E-06	0.01
residential	REC_100M	483830.59	3621225.04	0E+00	4E-04	2E-04	0E+00	1E-04	9E-05	1.1E-05	6.8E-06	5E-07	3.9E-06	0.01
residential	REC_100M	483930.59	3621225.04	0E+00	4E-04	2E-04	0E+00	1E-04	9E-05	1.2E-05	7E-06	5.1E-07	4E-06	0.01
residential	REC_100M	484030.59	3621225.04	0E+00	4E-04	2E-04	0E+00	1E-04	9E-05	1.2E-05	7.3E-06	5.4E-07	4.2E-06	0.01
residential	REC_100M	484130.59	3621225.04	0E+00	4E-04	2E-04	0E+00	1E-04	1E-04	1.2E-05	7.5E-06	5.5E-07	4.3E-06	0.01
school	127 (scho	485901.79	3618344.73	0E+00	3E-02	2E-02	0E+00	1E-02	1E-02	0.00179	0.00108	7.9E-05	0.00062	0.12

Refrigerated Containers

X	Y	Dose Inhalation ug/m3	Dose 3rd tri	Dose 0<2	Dose 2<9	Dose 2<16	Dose 16<30	Risk (Residential 30-yr; school 9-yr; park 15-year) 3rd tri	Risk 0<2	Risk 2<9	Risk 2<16	Risk 16<30	Summed Risk	Cases Per Million	Chronic HI
483930.59	3621125.04	0.00474	1.64E-06	4.95E-06	2.87E-06	2.6E-06	1.19E-06	6.4E-08	1.6E-06	0	1.7E-06	2.6E-07	3.595E-06	3.59485	0.00095
484030.59	3621125.04	0.00469	1.62E-06	4.9E-06	2.84E-06	2.57E-06	1.17E-06	6.4E-08	1.5E-06	0	1.7E-06	2.6E-07	3.558E-06	3.55828	0.00094
484130.59	3621125.04	0.0047	1.63E-06	4.91E-06	2.84E-06	2.58E-06	1.18E-06	6.4E-08	1.5E-06	0	1.7E-06	2.6E-07	3.565E-06	3.56487	0.00094
484230.59	3621125.04	0.00458	1.59E-06	4.79E-06	2.77E-06	2.51E-06	1.15E-06	6.2E-08	1.5E-06	0	1.7E-06	2.5E-07	3.477E-06	3.47734	0.00092
477930.59	3621225.04	0.00141	4.88E-07	1.47E-06	8.53E-07	7.74E-07	3.53E-07	1.9E-08	4.6E-07	0	5.1E-07	7.8E-08	1.071E-06	1.07059	0.00028
478030.59	3621225.04	0.0015	5.19E-07	1.57E-06	9.07E-07	8.22E-07	3.75E-07	2E-08	4.9E-07	0	5.4E-07	8.3E-08	1.138E-06	1.13797	0.0003
478130.59	3621225.04	0.00157	5.43E-07	1.64E-06	9.49E-07	8.6E-07	3.93E-07	2.1E-08	5.2E-07	0	5.7E-07	8.6E-08	1.191E-06	1.19062	0.00031
478230.59	3621225.04	0.00164	5.68E-07	1.71E-06	9.93E-07	9E-07	4.11E-07	2.2E-08	5.4E-07	0	5.9E-07	9E-08	1.246E-06	1.24564	0.00033
478330.59	3621225.04	0.00172	5.94E-07	1.79E-06	1.04E-06	9.41E-07	4.29E-07	2.3E-08	5.6E-07	0	6.2E-07	9.4E-08	1.303E-06	1.3025	0.00034
478430.59	3621225.04	0.00188	6.49E-07	1.96E-06	1.13E-06	1.03E-06	4.69E-07	2.5E-08	6.2E-07	0	6.8E-07	1E-07	1.423E-06	1.42348	0.00038
478530.59	3621225.04	0.00198	6.85E-07	2.07E-06	1.2E-06	1.08E-06	4.95E-07	2.7E-08	6.5E-07	0	7.2E-07	1.1E-07	1.502E-06	1.5015	0.0004
478630.59	3621225.04	0.00209	7.24E-07	2.19E-06	1.27E-06	1.15E-06	5.23E-07	2.8E-08	6.9E-07	0	7.6E-07	1.2E-07	1.587E-06	1.58724	0.00042
478730.59	3621225.04	0.00219	7.57E-07	2.29E-06	1.32E-06	1.2E-06	5.47E-07	3E-08	7.2E-07	0	7.9E-07	1.2E-07	1.66E-06	1.6604	0.00044
478830.59	3621225.04	0.00228	7.89E-07	2.38E-06	1.38E-06	1.25E-06	5.71E-07	3.1E-08	7.5E-07	0	8.3E-07	1.3E-07	1.731E-06	1.73121	0.00046
478930.59	3621225.04	0.00237	8.19E-07	2.47E-06	1.43E-06	1.3E-06	5.92E-07	3.2E-08	7.8E-07	0	8.6E-07	1.3E-07	1.797E-06	1.79673	0.00047
479030.59	3621225.04	0.00244	8.44E-07	2.55E-06	1.47E-06	1.34E-06	6.1E-07	3.3E-08	8E-07	0	8.8E-07	1.3E-07	1.85E-06	1.85012	0.00049
479130.59	3621225.04	0.00253	8.75E-07	2.64E-06	1.53E-06	1.39E-06	6.32E-07	3.4E-08	8.3E-07	0	9.1E-07	1.4E-07	1.918E-06	1.91807	0.00051
479230.59	3621225.04	0.00262	9.07E-07	2.74E-06	1.58E-06	1.44E-06	6.56E-07	3.6E-08	8.6E-07	0	9.5E-07	1.4E-07	1.988E-06	1.98836	0.00052
479330.59	3621225.04	0.0027	9.33E-07	2.82E-06	1.63E-06	1.48E-06	6.75E-07	3.7E-08	8.9E-07	0	9.8E-07	1.5E-07	2.046E-06	2.04631	0.00054
479430.59	3621225.04	0.00281	9.73E-07	2.94E-06	1.7E-06	1.54E-06	7.04E-07	3.8E-08	9.2E-07	0	1E-06	1.5E-07	2.135E-06	2.13466	0.00056
479530.59	3621225.04	0.00292	1.01E-06	3.05E-06	1.77E-06	1.6E-06	7.3E-07	4E-08	9.6E-07	0	1.1E-06	1.6E-07	2.216E-06	2.21562	0.00058
479630.59	3621225.04	0.00301	1.04E-06	3.15E-06	1.82E-06	1.65E-06	7.54E-07	4.1E-08	9.9E-07	0	1.1E-06	1.7E-07	2.288E-06	2.28775	0.0006
479730.59	3621225.04	0.00313	1.08E-06	3.27E-06	1.89E-06	1.72E-06	7.83E-07	4.3E-08	1E-06	0	1.1E-06	1.7E-07	2.376E-06	2.37603	0.00063
479830.59	3621225.04	0.00328	1.14E-06	3.43E-06	1.98E-06	1.8E-06	8.21E-07	4.5E-08	1.1E-06	0	1.2E-06	1.8E-07	2.49E-06	2.4898	0.00066
479930.59	3621225.04	0.00342	1.18E-06	3.57E-06	2.07E-06	1.88E-06	8.56E-07	4.7E-08	1.1E-06	0	1.2E-06	1.9E-07	2.597E-06	2.59655	0.00068
480030.59	3621225.04	0.00338	1.17E-06	3.53E-06	2.04E-06	1.85E-06	8.45E-07	4.6E-08	1.1E-06	0	1.2E-06	1.9E-07	2.563E-06	2.56295	0.00068
480130.59	3621225.04	0.00352	0	3.38E-07	1.8E-07	1.46E-07	6.76E-08	0	1.1E-07	5.9E-08	0	6.4E-09	1.721E-07	0.17208	0.0007
480230.59	3621225.04	0.00365	0	3.5E-07	1.87E-07	1.52E-07	7.01E-08	0	1.1E-07	6.2E-08	0	6.6E-09	1.783E-07	0.17834	0.00073
480330.59	3621225.04	0.00374	0	3.58E-07	1.91E-07	1.55E-07	7.17E-08	0	1.1E-07	6.3E-08	0	6.8E-09	1.825E-07	0.1825	0.00075
480430.59	3621225.04	0.00385	0	3.69E-07	1.97E-07	1.6E-07	7.37E-08	0	1.2E-07	6.5E-08	0	7E-09	1.877E-07	0.18774	0.00077
480530.59	3621225.04	0.00394	0	3.78E-07	2.02E-07	1.64E-07	7.56E-08	0	1.2E-07	6.7E-08	0	7.1E-09	1.925E-07	0.19253	0.00079
480630.59	3621225.04	0.00402	0	3.85E-07	2.05E-07	1.67E-07	7.7E-08	0	1.2E-07	6.8E-08	0	7.3E-09	1.961E-07	0.19607	0.0008
480730.59	3621225.04	0.0041	0	3.93E-07	2.1E-07	1.7E-07	7.86E-08	0	1.2E-07	6.9E-08	0	7.4E-09	2E-07	0.20003	0.00082
480830.59	3621225.04	0.00418	0	4.01E-07	2.14E-07	1.74E-07	8.02E-08	0	1.3E-07	7.1E-08	0	7.6E-09	2.042E-07	0.20416	0.00084
480930.59	3621225.04	0.00425	0	4.08E-07	2.18E-07	1.77E-07	8.16E-08	0	1.3E-07	7.2E-08	0	7.7E-09	2.077E-07	0.2077	0.00085
481030.59	3621225.04	0.00431	0	4.14E-07	2.21E-07	1.79E-07	8.27E-08	0	1.3E-07	7.3E-08	0	7.8E-09	2.106E-07	0.21058	0.00086
481330.59	3621225.04	0.00443	0	4.25E-07	2.27E-07	1.84E-07	8.5E-08	0	1.3E-07	7.5E-08	0	8E-09	2.165E-07	0.2165	0.00089
481430.59	3621225.04	0.00445	0	4.27E-07	2.28E-07	1.85E-07	8.54E-08	0	1.3E-07	7.5E-08	0	8.1E-09	2.175E-07	0.21747	0.00089
481530.59	3621225.04	0.00448	0	4.3E-07	2.29E-07	1.86E-07	8.6E-08	0	1.4E-07	7.6E-08	0	8.1E-09	2.188E-07	0.21885	0.0009
481630.59	3621225.04	0.00449	0	4.31E-07	2.3E-07	1.87E-07	8.61E-08	0	1.4E-07	7.6E-08	0	8.1E-09	2.193E-07	0.21929	0.0009
481730.59	3621225.04	0.00452	0	4.33E-07	2.31E-07	1.88E-07	8.66E-08	0	1.4E-07	7.6E-08	0	8.2E-09	2.205E-07	0.22054	0.0009
481830.59	3621225.04	0.00453	0	4.34E-07	2.32E-07	1.88E-07	8.68E-08	0	1.4E-07	7.6E-08	0	8.2E-09	2.211E-07	0.22106	0.00091
481930.59	3621225.04	0.00454	0	4.35E-07	2.32E-07	1.89E-07	8.7E-08	0	1.4E-07	7.7E-08	0	8.2E-09	2.216E-07	0.22158	0.00091
482030.59	3621225.04	0.00455	0	4.36E-07	2.33E-07	1.89E-07	8.72E-08	0	1.4E-07	7.7E-08	0	8.2E-09	2.221E-07	0.22208	0.00091
482130.59	3621225.04	0.00455	0	4.36E-07	2.33E-07	1.89E-07	8.73E-08	0	1.4E-07	7.7E-08	0	8.2E-09	2.221E-07	0.22213	0.00091
482230.59	3621225.04	0.00454	0	4.36E-07	2.32E-07	1.89E-07	8.71E-08	0	1.4E-07	7.7E-08	0	8.2E-09	2.219E-07	0.22185	0.00091
482330.59	3621225.04	0.00454	0	4.35E-07	2.32E-07	1.89E-07	8.7E-08	0	1.4E-07	7.7E-08	0	8.2E-09	2.216E-07	0.22158	0.00091
482430.59	3621225.04	0.00454	0	4.35E-07	2.32E-07	1.89E-07	8.71E-08	0	1.4E-07	7.7E-08	0	8.2E-09	2.216E-07	0.22164	0.00091
482530.59	3621225.04	0.00454	0	4.35E-07	2.32E-07	1.89E-07	8.7E-08	0	1.4E-07	7.7E-08	0	8.2E-09	2.215E-07	0.22152	0.00091
482630.59	3621225.04	0.00455	1.57E-06	4.75E-06	2.75E-06	2.49E-06	1.14E-06	6.2E-08	1.5E-06	0	1.6E-06	2.5E-07	3.452E-06	3.45161	0.00091
483830.59	3621225.04	0.00463	1.6E-06	4.84E-06	2.8E-06	2.54E-06	1.16E-06	6.3E-08	1.5E-06	0	1.7E-06	2.5E-07	3.512E-06	3.51196	0.00093
483930.59	3621225.04	0.00457	1.58E-06	4.78E-06	2.77E-06	2.51E-06	1.14E-06	6.2E-08	1.5E-06	0	1.7E-06	2.5E-07	3.469E-06	3.4692	0.00091
484030.59	3621225.04	0.00456	1.58E-06	4.76E-06	2.76E-06	2.5E-06	1.14E-06	6.2E-08	1.5E-06	0	1.6E-06	2.5E-07	3.459E-06	3.45862	0.00091
484130.59	3621225.04	0.00443	1.53E-06	4.63E-06	2.68E-06	2.43E-06	1.11E-06	6E-08	1.5E-06	0	1.6E-06	2.4E-07	3.366E-06	3.36597	0.00089
485901.79	3618344.73	0.04252	0	6.29E-06	3.35E-06	2.73E-06	1.26E-06	0	0	3.7E-06	8.6E-07	0	4.583E-06	4.58332	0.0085

Multi-Purpose General Cargo

X	Y	Dose Inhalation ug/m3	Dose 3rd tri	Dose 0<2	Dose 2<9	Dose 2<16	Dose 16<30	Risk (Residential 30-yr; school 9-yr; park 15-year) 3rd tri	Risk 0<2	Risk 2<9	Risk 2<16	Risk 16<30	Summed Risk	Cases Per Million	Chronic HI
483930.59	3621125.04	3E-03	9E-07	3E-06	2E-06	1E-06	6E-07	3E-08	8E-07	0E+00	9E-07	1E-07	1.9E-06	1.908	0.0005
484030.59	3621125.04	2E-03	9E-07	3E-06	1E-06	1E-06	6E-07	3E-08	8E-07	0E+00	9E-07	1E-07	1.9E-06	1.873	0.00049
484130.59	3621125.04	2E-03	8E-07	3E-06	1E-06	1E-06	6E-07	3E-08	8E-07	0E+00	9E-07	1E-07	1.9E-06	1.853	0.00049
484230.59	3621125.04	2E-03	8E-07	2E-06	1E-06	1E-06	6E-07	3E-08	8E-07	0E+00	8E-07	1E-07	1.8E-06	1.776	0.00047
477930.59	3621225.04	8E-04	3E-07	8E-07	5E-07	4E-07	2E-07	1E-08	3E-07	0E+00	3E-07	4E-08	6.0E-07	0.595	0.00016
478030.59	3621225.04	8E-04	3E-07	9E-07	5E-07	5E-07	2E-07	1E-08	3E-07	0E+00	3E-07	5E-08	6.4E-07	0.636	0.00017
478130.59	3621225.04	9E-04	3E-07	9E-07	5E-07	5E-07	2E-07	1E-08	3E-07	0E+00	3E-07	5E-08	6.7E-07	0.667	0.00018
478230.59	3621225.04	9E-04	3E-07	1E-06	6E-07	5E-07	2E-07	1E-08	3E-07	0E+00	3E-07	5E-08	7.0E-07	0.700	0.00018
478330.59	3621225.04	1E-03	3E-07	1E-06	6E-07	5E-07	2E-07	1E-08	3E-07	0E+00	4E-07	5E-08	7.3E-07	0.735	0.00019
478430.59	3621225.04	1E-03	4E-07	1E-06	6E-07	6E-07	3E-07	1E-08	3E-07	0E+00	4E-07	6E-08	8.1E-07	0.805	0.00021
478530.59	3621225.04	1E-03	4E-07	1E-06	7E-07	6E-07	3E-07	2E-08	4E-07	0E+00	4E-07	6E-08	8.5E-07	0.853	0.00022
478630.59	3621225.04	1E-03	4E-07	1E-06	7E-07	7E-07	3E-07	2E-08	4E-07	0E+00	4E-07	7E-08	9.1E-07	0.907	0.00024
478730.59	3621225.04	1E-03	4E-07	1E-06	8E-07	7E-07	3E-07	2E-08	4E-07	0E+00	5E-07	7E-08	9.5E-07	0.953	0.00025
478830.59	3621225.04	1E-03	5E-07	1E-06	8E-07	7E-07	3E-07	2E-08	4E-07	0E+00	5E-07	7E-08	9.9E-07	0.994	0.00026
478930.59	3621225.04	1E-03	5E-07	1E-06	8E-07	7E-07	3E-07	2E-08	4E-07	0E+00	5E-07	8E-08	1.0E-06	1.036	0.00027
479030.59	3621225.04	1E-03	5E-07	1E-06	9E-07	8E-07	4E-07	2E-08	5E-07	0E+00	5E-07	8E-08	1.1E-06	1.069	0.00028
479130.59	3621225.04	1E-03	5E-07	2E-06	9E-07	8E-07	4E-07	2E-08	5E-07	0E+00	5E-07	8E-08	1.1E-06	1.110	0.00029
479230.59	3621225.04	2E-03	5E-07	2E-06	9E-07	8E-07	4E-07	2E-08	5E-07	0E+00	5E-07	8E-08	1.2E-06	1.153	0.0003
479330.59	3621225.04	2E-03	5E-07	2E-06	9E-07	9E-07	4E-07	2E-08	5E-07	0E+00	6E-07	9E-08	1.2E-06	1.187	0.00031
479430.59	3621225.04	2E-03	6E-07	2E-06	1E-06	9E-07	4E-07	2E-08	5E-07	0E+00	6E-07	9E-08	1.2E-06	1.244	0.00033
479530.59	3621225.04	2E-03	6E-07	2E-06	1E-06	9E-07	4E-07	2E-08	6E-07	0E+00	6E-07	9E-08	1.3E-06	1.292	0.00034
479630.59	3621225.04	2E-03	6E-07	2E-06	1E-06	1E-06	4E-07	2E-08	6E-07	0E+00	6E-07	1E-07	1.3E-06	1.337	0.00035
479730.59	3621225.04	2E-03	6E-07	2E-06	1E-06	1E-06	5E-07	2E-08	6E-07	0E+00	7E-07	1E-07	1.4E-06	1.391	0.00037
479830.59	3621225.04	2E-03	7E-07	2E-06	1E-06	1E-06	5E-07	3E-08	6E-07	0E+00	7E-07	1E-07	1.5E-06	1.457	0.00038
479930.59	3621225.04	2E-03	7E-07	2E-06	1E-06	1E-06	5E-07	3E-08	7E-07	0E+00	7E-07	1E-07	1.5E-06	1.521	0.0004
480030.59	3621225.04	2E-03	7E-07	2E-06	1E-06	1E-06	5E-07	3E-08	7E-07	0E+00	7E-07	1E-07	1.5E-06	1.506	0.0004
480130.59	3621225.04	2E-03	0E+00	2E-07	1E-07	9E-08	4E-08	0E+00	6E-08	3E-08	0E+00	4E-09	1.0E-07	0.101	0.00041
480230.59	3621225.04	2E-03	0E+00	2E-07	1E-07	9E-08	4E-08	0E+00	6E-08	4E-08	0E+00	4E-09	1.0E-07	0.105	0.00043
480330.59	3621225.04	2E-03	0E+00	2E-07	1E-07	9E-08	4E-08	0E+00	7E-08	4E-08	0E+00	4E-09	1.1E-07	0.107	0.00044
480430.59	3621225.04	2E-03	0E+00	2E-07	1E-07	9E-08	4E-08	0E+00	7E-08	4E-08	0E+00	4E-09	1.1E-07	0.111	0.00045
480530.59	3621225.04	2E-03	0E+00	2E-07	1E-07	1E-07	4E-08	0E+00	7E-08	4E-08	0E+00	4E-09	1.1E-07	0.113	0.00046
480630.59	3621225.04	2E-03	0E+00	2E-07	1E-07	1E-07	5E-08	0E+00	7E-08	4E-08	0E+00	4E-09	1.2E-07	0.116	0.00047
480730.59	3621225.04	2E-03	0E+00	2E-07	1E-07	1E-07	5E-08	0E+00	7E-08	4E-08	0E+00	4E-09	1.2E-07	0.118	0.00048
480830.59	3621225.04	2E-03	0E+00	2E-07	1E-07	1E-07	5E-08	0E+00	7E-08	4E-08	0E+00	4E-09	1.2E-07	0.120	0.00049
480930.59	3621225.04	3E-03	0E+00	2E-07	1E-07	1E-07	5E-08	0E+00	8E-08	4E-08	0E+00	5E-09	1.2E-07	0.123	0.0005
481030.59	3621225.04	3E-03	0E+00	2E-07	1E-07	1E-07	5E-08	0E+00	8E-08	4E-08	0E+00	5E-09	1.2E-07	0.124	0.00051
481330.59	3621225.04	3E-03	0E+00	3E-07	1E-07	1E-07	5E-08	0E+00	8E-08	4E-08	0E+00	5E-09	1.3E-07	0.128	0.00052
481430.59	3621225.04	3E-03	0E+00	3E-07	1E-07	1E-07	5E-08	0E+00	8E-08	4E-08	0E+00	5E-09	1.3E-07	0.128	0.00053
481530.59	3621225.04	3E-03	0E+00	3E-07	1E-07	1E-07	5E-08	0E+00	8E-08	4E-08	0E+00	5E-09	1.3E-07	0.129	0.00053
481630.59	3621225.04	3E-03	0E+00	3E-07	1E-07	1E-07	5E-08	0E+00	8E-08	4E-08	0E+00	5E-09	1.3E-07	0.129	0.00053
481730.59	3621225.04	3E-03	0E+00	3E-07	1E-07	1E-07	5E-08	0E+00	8E-08	4E-08	0E+00	5E-09	1.3E-07	0.130	0.00053
481830.59	3621225.04	3E-03	0E+00	3E-07	1E-07	1E-07	5E-08	0E+00	8E-08	4E-08	0E+00	5E-09	1.3E-07	0.130	0.00053
481930.59	3621225.04	3E-03	0E+00	3E-07	1E-07	1E-07	5E-08	0E+00	8E-08	4E-08	0E+00	5E-09	1.3E-07	0.130	0.00053
482030.59	3621225.04	3E-03	0E+00	3E-07	1E-07	1E-07	5E-08	0E+00	8E-08	4E-08	0E+00	5E-09	1.3E-07	0.130	0.00053
482130.59	3621225.04	3E-03	0E+00	3E-07	1E-07	1E-07	5E-08	0E+00	8E-08	4E-08	0E+00	5E-09	1.3E-07	0.130	0.00053
482230.59	3621225.04	3E-03	0E+00	3E-07	1E-07	1E-07	5E-08	0E+00	8E-08	4E-08	0E+00	5E-09	1.3E-07	0.129	0.00053
482330.59	3621225.04	3E-03	0E+00	3E-07	1E-07	1E-07	5E-08	0E+00	8E-08	4E-08	0E+00	5E-09	1.3E-07	0.129	0.00053
482430.59	3621225.04	3E-03	0E+00	3E-07	1E-07	1E-07	5E-08	0E+00	8E-08	4E-08	0E+00	5E-09	1.3E-07	0.128	0.00053
482530.59	3621225.04	3E-03	0E+00	3E-07	1E-07	1E-07	5E-08	0E+00	8E-08	4E-08	0E+00	5E-09	1.3E-07	0.128	0.00052
482630.59	3621225.04	3E-03	9E-07	3E-06	2E-06	1E-06	7E-07	4E-08	9E-07	0E+00	9E-07	1E-07	2.0E-06	1.982	0.00052
483830.59	3621225.04	2E-03	9E-07	3E-06	1E-06	1E-06	6E-07	3E-08	8E-07	0E+00	9E-07	1E-07	1.9E-06	1.876	0.00049
483930.59	3621225.04	2E-03	8E-07	3E-06	1E-06	1E-06	6E-07	3E-08	8E-07	0E+00	9E-07	1E-07	1.8E-06	1.843	0.00049
484030.59	3621225.04	2E-03	8E-07	3E-06	1E-06	1E-06	6E-07	3E-08	8E-07	0E+00	9E-07	1E-07	1.8E-06	1.820	0.00048
484130.59	3621225.04	2E-03	8E-07	2E-06	1E-06	1E-06	6E-07	3E-08	8E-07	0E+00	8E-07	1E-07	1.7E-06	1.747	0.00046
485901.79	3618344.73	2E-02	0E+00	3E-06	2E-06	2E-06	7E-07	0E+00	0E+00	2E-06	5E-07	0E+00	2.5E-06	2.542	0.00472

Dry Bulk

X	Y	Dose Inhalation ug/m3	Dose 3rd tri	Dose 0<2	Dose 2<9	Dose 2<16	Dose 16<30	Risk (Residential 30-yr; school 9-yr; park 15-year) 3rd tri	Risk 0<2	Risk 2<9	Risk 2<16	Risk 16<30	Summed Risk	Cases Per Million	Chronic HI
483930.59	3621125.04	3E-03	1E-06	3E-06	2E-06	2E-06	7E-07	4E-08	1E-06	0E+00	1E-06	2E-07	2.2E-06	2.214	0.00058
484030.59	3621125.04	3E-03	1E-06	3E-06	2E-06	2E-06	7E-07	4E-08	9E-07	0E+00	1E-06	2E-07	2.2E-06	2.180	0.00057
484130.59	3621125.04	3E-03	1E-06	3E-06	2E-06	2E-06	7E-07	4E-08	9E-07	0E+00	1E-06	2E-07	2.2E-06	2.166	0.00057
484230.59	3621125.04	3E-03	9E-07	3E-06	2E-06	2E-06	7E-07	4E-08	9E-07	0E+00	1E-06	2E-07	2.1E-06	2.082	0.00055
477930.59	3621225.04	9E-04	3E-07	9E-07	5E-07	5E-07	2E-07	1E-08	3E-07	0E+00	3E-07	5E-08	6.8E-07	0.683	0.00018
478030.59	3621225.04	1E-03	3E-07	1E-06	6E-07	5E-07	2E-07	1E-08	3E-07	0E+00	3E-07	5E-08	7.3E-07	0.727	0.00019
478130.59	3621225.04	1E-03	3E-07	1E-06	6E-07	5E-07	3E-07	1E-08	3E-07	0E+00	4E-07	6E-08	7.6E-07	0.760	0.0002
478230.59	3621225.04	1E-03	4E-07	1E-06	6E-07	6E-07	3E-07	1E-08	3E-07	0E+00	4E-07	6E-08	7.9E-07	0.794	0.00021
478330.59	3621225.04	1E-03	4E-07	1E-06	7E-07	6E-07	3E-07	1E-08	4E-07	0E+00	4E-07	6E-08	8.3E-07	0.830	0.00022
478430.59	3621225.04	1E-03	4E-07	1E-06	7E-07	7E-07	3E-07	2E-08	4E-07	0E+00	4E-07	7E-08	9.1E-07	0.906	0.00024
478530.59	3621225.04	1E-03	4E-07	1E-06	8E-07	7E-07	3E-07	2E-08	4E-07	0E+00	5E-07	7E-08	9.5E-07	0.955	0.00025
478630.59	3621225.04	1E-03	5E-07	1E-06	8E-07	7E-07	3E-07	2E-08	4E-07	0E+00	5E-07	7E-08	1.0E-06	1.009	0.00027
478730.59	3621225.04	1E-03	5E-07	1E-06	8E-07	8E-07	3E-07	2E-08	5E-07	0E+00	5E-07	8E-08	1.1E-06	1.057	0.00028
478830.59	3621225.04	1E-03	5E-07	2E-06	9E-07	8E-07	4E-07	2E-08	5E-07	0E+00	5E-07	8E-08	1.1E-06	1.104	0.00029
478930.59	3621225.04	2E-03	5E-07	2E-06	9E-07	8E-07	4E-07	2E-08	5E-07	0E+00	5E-07	8E-08	1.1E-06	1.146	0.0003
479030.59	3621225.04	2E-03	5E-07	2E-06	9E-07	9E-07	4E-07	2E-08	5E-07	0E+00	6E-07	9E-08	1.2E-06	1.180	0.00031
479130.59	3621225.04	2E-03	6E-07	2E-06	1E-06	9E-07	4E-07	2E-08	5E-07	0E+00	6E-07	9E-08	1.2E-06	1.221	0.00032
479230.59	3621225.04	2E-03	6E-07	2E-06	1E-06	9E-07	4E-07	2E-08	5E-07	0E+00	6E-07	9E-08	1.3E-06	1.267	0.00033
479330.59	3621225.04	2E-03	6E-07	2E-06	1E-06	9E-07	4E-07	2E-08	6E-07	0E+00	6E-07	9E-08	1.3E-06	1.302	0.00034
479430.59	3621225.04	2E-03	6E-07	2E-06	1E-06	1E-06	4E-07	2E-08	6E-07	0E+00	6E-07	1E-07	1.4E-06	1.360	0.00036
479530.59	3621225.04	2E-03	6E-07	2E-06	1E-06	1E-06	5E-07	3E-08	6E-07	0E+00	7E-07	1E-07	1.4E-06	1.411	0.00037
479630.59	3621225.04	2E-03	7E-07	2E-06	1E-06	1E-06	5E-07	3E-08	6E-07	0E+00	7E-07	1E-07	1.5E-06	1.455	0.00038
479730.59	3621225.04	2E-03	7E-07	2E-06	1E-06	1E-06	5E-07	3E-08	7E-07	0E+00	7E-07	1E-07	1.5E-06	1.511	0.0004
479830.59	3621225.04	2E-03	7E-07	2E-06	1E-06	1E-06	5E-07	3E-08	7E-07	0E+00	8E-07	1E-07	1.6E-06	1.581	0.00042
479930.59	3621225.04	2E-03	8E-07	2E-06	1E-06	1E-06	5E-07	3E-08	7E-07	0E+00	8E-07	1E-07	1.6E-06	1.647	0.00043
480030.59	3621225.04	2E-03	7E-07	2E-06	1E-06	1E-06	5E-07	3E-08	7E-07	0E+00	8E-07	1E-07	1.6E-06	1.629	0.00043
480130.59	3621225.04	2E-03	0E+00	2E-07	1E-07	9E-08	4E-08	0E+00	7E-08	4E-08	0E+00	4E-09	1.1E-07	0.109	0.00045
480230.59	3621225.04	2E-03	0E+00	2E-07	1E-07	1E-07	4E-08	0E+00	7E-08	4E-08	0E+00	4E-09	1.1E-07	0.113	0.00046
480330.59	3621225.04	2E-03	0E+00	2E-07	1E-07	1E-07	5E-08	0E+00	7E-08	4E-08	0E+00	4E-09	1.2E-07	0.116	0.00047
480430.59	3621225.04	2E-03	0E+00	2E-07	1E-07	1E-07	5E-08	0E+00	7E-08	4E-08	0E+00	4E-09	1.2E-07	0.119	0.00049
480530.59	3621225.04	2E-03	0E+00	2E-07	1E-07	1E-07	5E-08	0E+00	8E-08	4E-08	0E+00	5E-09	1.2E-07	0.122	0.0005
480630.59	3621225.04	3E-03	0E+00	2E-07	1E-07	1E-07	5E-08	0E+00	8E-08	4E-08	0E+00	5E-09	1.2E-07	0.124	0.00051
480730.59	3621225.04	3E-03	0E+00	2E-07	1E-07	1E-07	5E-08	0E+00	8E-08	4E-08	0E+00	5E-09	1.3E-07	0.127	0.00052
480830.59	3621225.04	3E-03	0E+00	3E-07	1E-07	1E-07	5E-08	0E+00	8E-08	4E-08	0E+00	5E-09	1.3E-07	0.130	0.00053
480930.59	3621225.04	3E-03	0E+00	3E-07	1E-07	1E-07	5E-08	0E+00	8E-08	5E-08	0E+00	5E-09	1.3E-07	0.132	0.00054
481030.59	3621225.04	3E-03	0E+00	3E-07	1E-07	1E-07	5E-08	0E+00	8E-08	5E-08	0E+00	5E-09	1.3E-07	0.134	0.00055
481330.59	3621225.04	3E-03	0E+00	3E-07	1E-07	1E-07	5E-08	0E+00	8E-08	5E-08	0E+00	5E-09	1.4E-07	0.137	0.00056
481430.59	3621225.04	3E-03	0E+00	3E-07	1E-07	1E-07	5E-08	0E+00	9E-08	5E-08	0E+00	5E-09	1.4E-07	0.138	0.00056
481530.59	3621225.04	3E-03	0E+00	3E-07	1E-07	1E-07	5E-08	0E+00	9E-08	5E-08	0E+00	5E-09	1.4E-07	0.139	0.00057
481630.59	3621225.04	3E-03	0E+00	3E-07	1E-07	1E-07	5E-08	0E+00	9E-08	5E-08	0E+00	5E-09	1.4E-07	0.139	0.00057
481730.59	3621225.04	3E-03	0E+00	3E-07	1E-07	1E-07	5E-08	0E+00	9E-08	5E-08	0E+00	5E-09	1.4E-07	0.140	0.00057
481830.59	3621225.04	3E-03	0E+00	3E-07	1E-07	1E-07	5E-08	0E+00	9E-08	5E-08	0E+00	5E-09	1.4E-07	0.140	0.00057
481930.59	3621225.04	3E-03	0E+00	3E-07	1E-07	1E-07	6E-08	0E+00	9E-08	5E-08	0E+00	5E-09	1.4E-07	0.140	0.00057
482030.59	3621225.04	3E-03	0E+00	3E-07	1E-07	1E-07	6E-08	0E+00	9E-08	5E-08	0E+00	5E-09	1.4E-07	0.140	0.00057
482130.59	3621225.04	3E-03	0E+00	3E-07	1E-07	1E-07	6E-08	0E+00	9E-08	5E-08	0E+00	5E-09	1.4E-07	0.140	0.00057
482230.59	3621225.04	3E-03	0E+00	3E-07	1E-07	1E-07	6E-08	0E+00	9E-08	5E-08	0E+00	5E-09	1.4E-07	0.140	0.00057
482330.59	3621225.04	3E-03	0E+00	3E-07	1E-07	1E-07	5E-08	0E+00	9E-08	5E-08	0E+00	5E-09	1.4E-07	0.140	0.00057
482430.59	3621225.04	3E-03	0E+00	3E-07	1E-07	1E-07	5E-08	0E+00	9E-08	5E-08	0E+00	5E-09	1.4E-07	0.140	0.00057
482530.59	3621225.04	3E-03	0E+00	3E-07	1E-07	1E-07	5E-08	0E+00	9E-08	5E-08	0E+00	5E-09	1.4E-07	0.139	0.00057
482630.59	3621225.04	3E-03	1E-06	3E-06	2E-06	2E-06	7E-07	4E-08	9E-07	0E+00	1E-06	2E-07	2.2E-06	2.167	0.00057
483830.59	3621225.04	3E-03	1E-06	3E-06	2E-06	2E-06	7E-07	4E-08	9E-07	0E+00	1E-06	2E-07	2.2E-06	2.168	0.00057
483930.59	3621225.04	3E-03	1E-06	3E-06	2E-06	2E-06	7E-07	4E-08	9E-07	0E+00	1E-06	2E-07	2.1E-06	2.136	0.00056
484030.59	3621225.04	3E-03	1E-06	3E-06	2E-06	2E-06	7E-07	4E-08	9E-07	0E+00	1E-06	2E-07	2.1E-06	2.119	0.00056
484130.59	3621225.04	3E-03	9E-07	3E-06	2E-06	1E-06	7E-07	4E-08	9E-07	0E+00	1E-06	1E-07	2.0E-06	2.040	0.00054
485901.79	3618344.73	6E-02	0E+00	8E-06	4E-06	4E-06	2E-06	0E+00	0E+00	5E-06	1E-06	0E+00	5.9E-06	5.937	0.01102

TAMT Risk Assessment - DPM Cancer and Chronic HI

AERMOD Output

AERMOD UNITIZED CONCENTRATIONS

Source Group in AERMOD

	Discrete Receptor ID (Group Name)	X	Y	B10_1_AUX	B10_2_AUX	B10_3_AUX	B10_4_AUX	B10_5_AUX	B10_6_AUX	B10_7_AUX	B10_8_AUX	CHE_1	LOC_SWTCH EMP	LOC_SWTCH LOA	OGV_PATH _BLR	OGV_PATH _DPM	TR_28TH	TR_BAYMA R	TR_BOSTON	TR_CROSBY	TR_HARBOR CHA	TR_HARBOR SAM	TUG_PATH_ DPM
				1	3	5	7	9	11	13	15	17	18	19	20	21	22	23	24	25	26	27	28
residential	res	487479.47	3617250.73	1.9E-01	1.9E-01	2.1E-01	2.3E-01	2.5E-01	2.8E-01	2.9E-01	3.0E-01	2.1E+05	3.9E-01	4.6E-01	7.9E-02	7.9E-02	2.3E+02	3.9E-02	8.6E+01	1.1E+00	5.9E-01	9.1E+00	9.2E-02
residential	res	487504.47	3617250.73	1.8E-01	1.8E-01	2.1E-01	2.3E-01	2.5E-01	2.8E-01	2.9E-01	3.0E-01	2.0E+05	3.9E-01	4.5E-01	7.9E-02	7.9E-02	1.2E+02	3.9E-02	9.1E+01	1.1E+00	5.9E-01	8.4E+00	9.2E-02
residential	res	487529.47	3617250.73	1.8E-01	1.8E-01	2.1E-01	2.2E-01	2.5E-01	2.7E-01	2.8E-01	3.0E-01	2.0E+05	3.8E-01	4.5E-01	7.8E-02	7.8E-02	7.7E+01	4.0E-02	9.2E+01	1.1E+00	5.8E-01	7.6E+00	9.2E-02
residential	res	487554.47	3617250.73	1.8E-01	1.8E-01	2.0E-01	2.2E-01	2.4E-01	2.7E-01	2.8E-01	2.9E-01	2.0E+05	3.8E-01	4.5E-01	7.7E-02	7.7E-02	5.6E+01	4.0E-02	9.0E+01	1.0E+00	5.8E-01	6.8E+00	9.2E-02
residential	res	487579.47	3617250.73	1.8E-01	1.8E-01	2.0E-01	2.2E-01	2.4E-01	2.6E-01	2.8E-01	2.9E-01	2.0E+05	3.8E-01	4.4E-01	7.7E-02	7.7E-02	4.3E+01	4.0E-02	8.4E+01	1.0E+00	5.7E-01	6.1E+00	9.1E-02
residential	res	487604.47	3617250.73	1.8E-01	1.8E-01	2.0E-01	2.2E-01	2.4E-01	2.6E-01	2.7E-01	2.8E-01	1.9E+05	3.8E-01	4.4E-01	7.6E-02	7.6E-02	3.4E+01	4.1E-02	7.5E+01	1.0E+00	5.7E-01	5.4E+00	9.1E-02
residential	res	487629.47	3617250.73	1.8E-01	1.8E-01	2.0E-01	2.1E-01	2.4E-01	2.6E-01	2.7E-01	2.8E-01	1.9E+05	3.7E-01	4.3E-01	7.6E-02	7.6E-02	2.8E+01	4.1E-02	6.4E+01	9.9E-01	5.6E-01	4.8E+00	9.1E-02
residential	res	487654.47	3617250.73	1.8E-01	1.7E-01	2.0E-01	2.1E-01	2.3E-01	2.5E-01	2.7E-01	2.8E-01	1.9E+05	3.7E-01	4.3E-01	7.5E-02	7.5E-02	2.3E+01	4.1E-02	5.2E+01	9.7E-01	5.6E-01	4.3E+00	9.0E-02
residential	res	487679.47	3617250.73	1.8E-01	1.7E-01	2.0E-01	2.1E-01	2.3E-01	2.5E-01	2.6E-01	2.7E-01	1.9E+05	3.7E-01	4.2E-01	7.5E-02	7.5E-02	2.0E+01	4.2E-02	4.3E+01	9.5E-01	5.6E-01	3.9E+00	9.0E-02
residential	res	487704.47	3617250.73	1.7E-01	1.7E-01	1.9E-01	2.1E-01	2.3E-01	2.5E-01	2.6E-01	2.7E-01	1.9E+05	3.6E-01	4.2E-01	7.5E-02	7.5E-02	1.7E+01	4.2E-02	3.5E+01	9.4E-01	5.5E-01	3.6E+00	8.9E-02
residential	res	487729.47	3617250.73	1.7E-01	1.7E-01	1.9E-01	2.1E-01	2.3E-01	2.4E-01	2.6E-01	2.7E-01	1.8E+05	3.6E-01	4.1E-01	7.4E-02	7.4E-02	1.5E+01	4.3E-02	3.0E+01	9.2E-01	5.5E-01	3.3E+00	8.9E-02
residential	res	487754.47	3617250.73	1.7E-01	1.7E-01	1.9E-01	2.0E-01	2.2E-01	2.4E-01	2.5E-01	2.7E-01	1.8E+05	3.5E-01	4.1E-01	7.4E-02	7.4E-02	1.3E+01	4.3E-02	2.6E+01	9.0E-01	5.4E-01	3.1E+00	8.8E-02
residential	res	487779.47	3617250.73	1.7E-01	1.7E-01	1.9E-01	2.0E-01	2.2E-01	2.4E-01	2.5E-01	2.6E-01	1.8E+05	3.5E-01	4.0E-01	7.3E-02	7.3E-02	1.2E+01	4.4E-02	2.3E+01	8.9E-01	5.4E-01	2.9E+00	8.8E-02

DPM SCALED CONCENTRATIONS

X	B10_1_AUX	B10_2_AUX	B10_3_AUX	B10_4_AUX	B10_5_AUX	B10_6_AUX	B10_7_AUX	B10_8_AUX	CHE_1	LOC_SWTCHE MP	LOC_SWTCHL OA	OGV_PATH_D PM	TR_28TH	TR_BAYMA R	TR_BOSTON	TR_CROSBY	TR_HARBOR CHA	TR_HARBOR SAM	TUG_PATH_D PM
divide by -->	4	4	4	4	2	2	2	2	1	2	2	1	1	1	1	1	1	1	1
	Refrigerated ContainersSTC UNMIT	Refrigerated ContainersSTC UNMIT	Refrigerated ContainersSTC UNMIT	Refrigerated ContainersSTC UNMIT	Multi-Purpose General CargoSTC UNMIT	Multi-Purpose General CargoSTC UNMIT	Dry BulkSTC UNMIT	Dry BulkSTC UNMIT	AllSTC UNMIT	AllSTC UNMIT	AllSTC UNMIT	AllSTC UNMIT	TR_28THSTC UNMIT	TR_BAYMARSTC UNMIT	TR_BOSTON STC UNMIT	TR_CROSBY STC UNMIT	TR_HARBORCHASTC UNMIT	TR_HARBORSAMSTC UNMIT	AllSTC UNMIT
g/s -->	5.7E-02	5.7E-02	5.7E-02	5.7E-02	1.3E-02	1.3E-02	1.4E-02	1.4E-02	6.8E-08	1.8E-03	1.8E-03	3.0E-02	7.1E-06	8.6E-06	2.3E-05	4.8E-05	1.1E-04	1.1E-04	1.8E-03
	1	3	5	7	9	11	13	15	17	18	19	21	22	23	24	25	26	27	28
487479.47	1.1E-02	1.0E-02	1.2E-02	1.3E-02	3.3E-03	3.6E-03	4.1E-03	4.2E-03	1.4E-02	6.9E-04	8.1E-04	2.4E-03	1.7E-03	3.4E-07	2.0E-03	5.3E-05	6.3E-05	9.7E-04	1.6E-04
487504.47	1.0E-02	1.0E-02	1.2E-02	1.3E-02	3.2E-03	3.6E-03	4.0E-03	4.2E-03	1.4E-02	6.8E-04	8.0E-04	2.4E-03	8.4E-04	3.4E-07	2.1E-03	5.2E-05	6.3E-05	9.0E-04	1.6E-04
487529.47	1.0E-02	1.0E-02	1.2E-02	1.3E-02	3.2E-03	3.5E-03	4.0E-03	4.1E-03	1.4E-02	6.8E-04	7.9E-04	2.3E-03	5.5E-04	3.4E-07	2.1E-03	5.1E-05	6.2E-05	8.1E-04	1.6E-04
487554.47	1.0E-02	1.0E-02	1.2E-02	1.3E-02	3.2E-03	3.5E-03	3.9E-03	4.1E-03	1.4E-02	6.7E-04	7.9E-04	2.3E-03	4.0E-04	3.4E-07	2.0E-03	5.0E-05	6.2E-05	7.3E-04	1.6E-04
487579.47	1.0E-02	1.0E-02	1.1E-02	1.2E-02	3.1E-03	3.4E-03	3.8E-03	4.0E-03	1.3E-02	6.7E-04	7.8E-04	2.3E-03	3.1E-04	3.5E-07	1.9E-03	5.0E-05	6.1E-05	6.5E-04	1.6E-04
487604.47	1.0E-02	1.0E-02	1.1E-02	1.2E-02	3.1E-03	3.4E-03	3.8E-03	4.0E-03	1.3E-02	6.6E-04	7.7E-04	2.3E-03	2.4E-04	3.5E-07	1.7E-03	4.9E-05	6.1E-05	5.8E-04	1.6E-04
487629.47	1.0E-02	1.0E-02	1.1E-02	1.2E-02	3.0E-03	3.3E-03	3.7E-03	3.9E-03	1.3E-02	6.6E-04	7.6E-04	2.3E-03	2.0E-04	3.5E-07	1.5E-03	4.8E-05	6.0E-05	5.2E-04	1.6E-04
487654.47	1.0E-02	9.9E-03	1.1E-02	1.2E-02	3.0E-03	3.3E-03	3.7E-03	3.9E-03	1.3E-02	6.5E-04	7.5E-04	2.3E-03	1.6E-04	3.5E-07	1.2E-03	4.7E-05	6.0E-05	4.6E-04	1.6E-04
487679.47	1.0E-02	9.8E-03	1.1E-02	1.2E-02	3.0E-03	3.2E-03	3.7E-03	3.8E-03	1.3E-02	6.4E-04	7.4E-04	2.3E-03	1.4E-04	3.6E-07	9.7E-04	4.6E-05	6.0E-05	4.2E-04	1.6E-04
487704.47	9.9E-03	9.7E-03	1.1E-02	1.2E-02	2.9E-03	3.2E-03	3.6E-03	3.8E-03	1.3E-02	6.4E-04	7.3E-04	2.2E-03	1.2E-04	3.6E-07	8.0E-04	4.5E-05	5.9E-05	3.8E-04	1.6E-04
487729.47	9.9E-03	9.7E-03	1.1E-02	1.2E-02	2.9E-03	3.2E-03	3.6E-03	3.7E-03	1.2E-02	6.3E-04	7.2E-04	2.2E-03	1.1E-04	3.7E-07	6.8E-04	4.4E-05	5.9E-05	3.5E-04	1.6E-04
487754.47	9.8E-03	9.6E-03	1.1E-02	1.2E-02	2.9E-03	3.1E-03	3.5E-03	3.7E-03	1.2E-02	6.2E-04	7.2E-04	2.2E-03	9.3E-05	3.7E-07	5.9E-04	4.4E-05	5.8E-05	3.3E-04	1.6E-04
487779.47	9.7E-03	9.5E-03	1.1E-02	1.1E-02	2.9E-03	3.1E-03	3.5E-03	3.6E-03	1.2E-02	6.2E-04	7.1E-04	2.2E-03	8.3E-05	3.8E-07	5.1E-04	4.3E-05	5.8E-05	3.1E-04	1.5E-04

X	Vessel Hoteling: All	Refrigerated ContainersSTC UNMIT	Multi-Purpose General CargoSTC UNMIT	Dry BulkSTC UNMIT	Vessel Transit: All	Refrigerated ContainersSTC UNMIT	Multi-Purpose General CargoSTC UNMIT	Dry BulkSTC UNMIT	Tug/Barge Transit: All	Refrigerated ContainersSTC UNMIT	Multi-Purpose General CargoSTC UNMIT	Dry BulkSTC UNMIT	Terminal I: All	Refrigerated ContainersSTC UNMIT
	100%	81%	9%	10%	100%	46%	25%	28%	100%	21%	54%	25%	100%	39%
487479.47	6.1E-02	5E-02	7E-03	8E-03	2E-03	1E-03	6E-04	7E-04	2E-04	3E-05	9E-05	4E-05	1E-02	5E-03
487504.47	6.1E-02	5E-02	7E-03	8E-03	2E-03	1E-03	6E-04	7E-04	2E-04	3E-05	9E-05	4E-05	1E-02	5E-03
487529.47	6.0E-02	5E-02	7E-03	8E-03	2E-03	1E-03	6E-04	7E-04	2E-04	3E-05	9E-05	4E-05	1E-02	5E-03
487554.47	5.9E-02	4E-02	7E-03	8E-03	2E-03	1E-03	6E-04	7E-04	2E-04	3E-05	9E-05	4E-05	1E-02	5E-03
487579.47	5.9E-02	4E-02	7E-03	8E-03	2E-03	1E-03	6E-04	7E-04	2E-04	3E-05	9E-05	4E-05	1E-02	5E-03
487604.47	5.8E-02	4E-02	6E-03	8E-03	2E-03	1E-03	6E-04	7E-04	2E-04	3E-05	9E-05	4E-05	1E-02	5E-03
487629.47	5.7E-02	4E-02	6E-03	8E-03	2E-03	1E-03	6E-04	6E-04	2E-04	3E-05	9E-05	4E-05	1E-02	5E-03
487654.47	5.7E-02	4E-02	6E-03	8E-03	2E-03	1E-03	6E-04	6E-04	2E-04	3E-05	9E-05	4E-05	1E-02	5E-03
487679.47	5.6E-02	4E-02	6E-03	7E-03	2E-03	1E-03	6E-04	6E-04	2E-04	3E-05	9E-05	4E-05	1E-02	5E-03
487704.47	5.6E-02	4E-02	6E-03	7E-03	2E-03	1E-03	6E-04	6E-04	2E-04	3E-05	9E-05	4E-05	1E-02	5E-03
487729.47	5.5E-02	4E-02	6E-03	7E-03	2E-03	1E-03	6E-04	6E-04	2E-04	3E-05	8E-05	4E-05	1E-02	5E-03
487754.47	5.5E-02	4E-02	6E-03	7E-03	2E-03	1E-03	6E-04	6E-04	2E-04	3E-05	8E-05	4E-05	1E-02	5E-03
487779.47	5.5E-02	4E-02	6E-03	7E-03	2E-03	1E-03	6E-04	6E-04	2E-04	3E-05	8E-05	4E-05	1E-02	5E-03

TAMT Risk Assessment - DPM Cancer and Chronic HI

AERMOD Output

AERMOD UNITIZED CONCENTRATIONS

	Discrete Receptor ID (Group Name)	X	Y	B10_1_AUX	B10_2_AUX	B10_3_AUX	B10_4_AUX	B10_5_AUX	B10_6_AUX	B10_7_AUX	B10_8_AUX	CHE_1	LOC_SWTCH EMP	LOC_SWTCH LOA	OGV_PATH _BLR	OGV_PATH _DPM	TR_28TH	TR_BAYMA R	TR_BOSTON	TR_CROSBY	TR_HARBOR CHA	TR_HARBOR SAM	TUG_PATH_ DPM
			Source Group in AERMOD	1	3	5	7	9	11	13	15	17	18	19	20	21	22	23	24	25	26	27	28
residential	REC_100M	485430.59	3615625.04	1.8E-01	1.7E-01	1.9E-01	2.1E-01	2.3E-01	2.6E-01	2.7E-01	2.7E-01	1.9E+05	2.9E-01	3.2E-01	7.8E-02	7.8E-02	6.7E-01	3.2E-02	6.3E-01	8.7E-01	5.8E-01	9.0E-01	8.1E-02
residential	REC_100M	485130.59	3615725.04	2.0E-01	1.9E-01	2.2E-01	2.4E-01	2.7E-01	2.9E-01	2.9E-01	2.9E-01	2.4E+05	3.1E-01	3.4E-01	8.8E-02	8.8E-02	5.7E-01	2.9E-02	5.4E-01	9.6E-01	6.7E-01	8.1E-01	9.3E-02
residential	REC_100M	485230.59	3615725.04	2.0E-01	1.9E-01	2.1E-01	2.3E-01	2.6E-01	2.9E-01	2.9E-01	2.9E-01	2.3E+05	3.1E-01	3.4E-01	8.5E-02	8.5E-02	6.1E-01	2.9E-02	5.7E-01	9.7E-01	6.6E-01	8.6E-01	9.0E-02
residential	REC_100M	485330.59	3615725.04	1.9E-01	1.8E-01	2.1E-01	2.3E-01	2.5E-01	2.8E-01	2.9E-01	2.9E-01	2.1E+05	3.1E-01	3.4E-01	8.3E-02	8.3E-02	6.5E-01	3.0E-02	6.1E-01	9.6E-01	6.4E-01	9.0E-01	8.8E-02
residential	REC_100M	485230.59	3615825.04	2.0E-01	1.9E-01	2.2E-01	2.4E-01	2.7E-01	3.1E-01	3.1E-01	3.0E-01	2.4E+05	3.4E-01	3.7E-01	8.8E-02	8.8E-02	6.2E-01	2.8E-02	5.8E-01	1.0E+00	7.1E-01	9.0E-01	9.5E-02
residential	REC_100M	489130.59	3615925.04	7.4E-02	7.6E-02	8.3E-02	8.8E-02	9.6E-02	1.0E-01	1.0E-01	1.0E-01	5.2E+04	9.2E-02	9.9E-02	4.1E-02	4.1E-02	3.3E-01	1.6E-01	3.3E-01	1.7E-01	1.3E-01	2.5E-01	3.9E-02
residential	REC_100M	489030.59	3616025.04	7.9E-02	8.0E-02	8.8E-02	9.4E-02	1.0E-01	1.1E-01	1.1E-01	1.1E-01	5.6E+04	9.8E-02	1.1E-01	4.3E-02	4.3E-02	3.7E-01	1.4E-01	3.8E-01	1.8E-01	1.4E-01	2.9E-01	4.1E-02
residential	REC_100M	489130.59	3616025.04	7.8E-02	8.0E-02	8.7E-02	9.3E-02	1.0E-01	1.1E-01	1.1E-01	1.1E-01	5.5E+04	9.5E-02	1.0E-01	4.3E-02	4.3E-02	3.6E-01	1.5E-01	3.6E-01	1.8E-01	1.4E-01	2.9E-01	4.0E-02
residential	REC_100M	488930.59	3616125.04	8.3E-02	8.5E-02	9.3E-02	9.9E-02	1.1E-01	1.2E-01	1.2E-01	1.2E-01	6.0E+04	1.0E-01	1.1E-01	4.5E-02	4.5E-02	4.3E-01	1.2E-01	4.3E-01	2.0E-01	1.6E-01	3.4E-01	4.3E-02
residential	REC_100M	489030.59	3616125.04	8.2E-02	8.4E-02	9.2E-02	9.8E-02	1.1E-01	1.2E-01	1.2E-01	1.2E-01	5.9E+04	1.0E-01	1.1E-01	4.4E-02	4.4E-02	4.1E-01	1.3E-01	4.1E-01	2.0E-01	1.5E-01	3.4E-01	4.2E-02
residential	REC_100M	489130.59	3616125.04	8.2E-02	8.3E-02	9.1E-02	9.7E-02	1.1E-01	1.1E-01	1.2E-01	1.2E-01	5.8E+04	9.9E-02	1.1E-01	4.4E-02	4.4E-02	4.0E-01	1.5E-01	4.0E-01	2.0E-01	1.5E-01	3.3E-01	4.2E-02

DPM SCALED CONCENTRATIONS

Receptor (X, Y)	B10_1_AUX	B10_2_AUX	B10_3_AUX	B10_4_AUX	B10_5_AUX	B10_6_AUX	B10_7_AUX	B10_8_AUX	CHE_1	LOC_SWTCHE MP	LOC_SWTCHL OA	OGV_PATH_D PM	TR_28TH	TR_BAYMA R	TR_BOSTON	TR_CROSBY	TR_HARBOR CHA	TR_HARBOR SAM	TUG_PATH_D PM
divide by -->	4	4	4	4	2	2	2	2	1	2	2	1	1	1	1	1	1	1	1
	Refrigerated ContainersSTC UNMIT	Refrigerated ContainersSTC UNMIT	Refrigerated ContainersSTC UNMIT	Refrigerated ContainersSTC UNMIT	Multi-Purpose General CargoSTC UNMIT	Multi-Purpose General CargoSTC UNMIT	Dry BulkSTC UNMIT	Dry BulkSTC UNMIT	AllSTC UNMIT	AllSTC UNMIT	AllSTC UNMIT	AllSTC UNMIT	TR_28THSTC UNMIT	TR_BAYMARSTC UNMIT	TR_BOSTON STC UNMIT	TR_CROSBY STC UNMIT	TR_HARBOR CHASTC UNMIT	TR_HARBOR SAMSTC UNMIT	AllSTC UNMIT
g/s -->	5.7E-02	5.7E-02	5.7E-02	5.7E-02	1.3E-02	1.3E-02	1.4E-02	1.4E-02	6.8E-08	1.8E-03	1.8E-03	3.0E-02	7.1E-06	8.6E-06	2.3E-05	4.8E-05	1.1E-04	1.1E-04	1.8E-03
	1	3	5	7	9	11	13	15	17	18	19	21	22	23	24	25	26	27	28
485430.59, 3615625.04	1.0E-02	9.6E-03	1.1E-02	1.2E-02	3.0E-03	3.4E-03	3.7E-03	3.7E-03	1.3E-02	5.1E-04	5.6E-04	2.3E-03	4.8E-06	2.7E-07	1.4E-05	4.2E-05	6.2E-05	9.7E-05	1.4E-04
485130.59, 3615725.04	1.1E-02	1.1E-02	1.3E-02	1.4E-02	3.5E-03	3.8E-03	4.1E-03	4.0E-03	1.6E-02	5.5E-04	6.0E-04	2.6E-03	4.1E-06	2.5E-07	1.2E-05	4.6E-05	7.2E-05	8.7E-05	1.6E-04
485230.59, 3615725.04	1.1E-02	1.1E-02	1.2E-02	1.3E-02	3.4E-03	3.8E-03	4.1E-03	4.0E-03	1.5E-02	5.5E-04	6.0E-04	2.6E-03	4.3E-06	2.5E-07	1.3E-05	4.7E-05	7.1E-05	9.2E-05	1.6E-04
485330.59, 3615725.04	1.1E-02	1.0E-02	1.2E-02	1.3E-02	3.3E-03	3.7E-03	4.0E-03	4.0E-03	1.4E-02	5.5E-04	6.0E-04	2.5E-03	4.6E-06	2.6E-07	1.4E-05	4.7E-05	6.9E-05	9.7E-05	1.6E-04
485230.59, 3615825.04	1.2E-02	1.1E-02	1.3E-02	1.4E-02	3.5E-03	4.0E-03	4.3E-03	4.2E-03	1.7E-02	5.9E-04	6.5E-04	2.7E-03	4.4E-06	2.4E-07	1.3E-05	5.1E-05	7.6E-05	9.6E-05	1.7E-04
489130.59, 3615925.04	4.2E-03	4.3E-03	4.7E-03	5.0E-03	1.2E-03	1.4E-03	1.5E-03	1.4E-03	3.5E-03	1.6E-04	1.7E-04	1.2E-03	2.3E-06	1.4E-06	7.5E-06	8.0E-06	1.4E-05	2.7E-05	6.9E-05
489030.59, 3616025.04	4.5E-03	4.5E-03	5.0E-03	5.3E-03	1.3E-03	1.4E-03	1.5E-03	1.5E-03	3.8E-03	1.7E-04	1.9E-04	1.3E-03	2.7E-06	1.2E-06	8.5E-06	8.9E-06	1.6E-05	3.1E-05	7.2E-05
489130.59, 3616025.04	4.4E-03	4.5E-03	4.9E-03	5.2E-03	1.3E-03	1.4E-03	1.5E-03	1.5E-03	3.7E-03	1.7E-04	1.8E-04	1.3E-03	2.6E-06	1.3E-06	8.2E-06	8.9E-06	1.5E-05	3.1E-05	7.1E-05
488930.59, 3616125.04	4.7E-03	4.8E-03	5.3E-03	5.6E-03	1.4E-03	1.5E-03	1.7E-03	1.6E-03	4.1E-03	1.8E-04	2.0E-04	1.3E-03	3.0E-06	1.1E-06	9.7E-06	9.8E-06	1.7E-05	3.6E-05	7.6E-05
489030.59, 3616125.04	4.7E-03	4.8E-03	5.2E-03	5.6E-03	1.4E-03	1.5E-03	1.6E-03	1.6E-03	4.0E-03	1.8E-04	1.9E-04	1.3E-03	2.9E-06	1.1E-06	9.3E-06	9.8E-06	1.7E-05	3.6E-05	7.5E-05
489130.59, 3616125.04	4.6E-03	4.7E-03	5.2E-03	5.5E-03	1.4E-03	1.5E-03	1.6E-03	1.6E-03	3.9E-03	1.8E-04	1.9E-04	1.3E-03	2.8E-06	1.3E-06	9.0E-06	9.8E-06	1.6E-05	3.6E-05	7.4E-05

Receptor (X, Y)	Vessel Hoteling All	Refrigerated ContainersSTC UNMIT	Multi-Purpose General CargoSTC UNMIT	Dry BulkSTC UNMIT	Vessel Transit All	Refrigerated ContainersSTC UNMIT	Multi-Purpose General CargoSTC UNMIT	Dry BulkSTC UNMIT	Tug/Barge Transit All	Refrigerated ContainersSTC UNMIT	Multi-Purpose General CargoSTC UNMIT	Dry BulkSTC UNMIT	Terminal I All	Refrigerated ContainersSTC UNMIT
	100%	81%	9%	10%	100%	46%	25%	28%	100%	21%	54%	25%	100%	39%
485430.59, 3615625.04	5.6E-02	4E-02	6E-03	7E-03	2E-03	1E-03	6E-04	7E-04	1E-04	3E-05	8E-05	4E-05	1E-02	5E-03
485130.59, 3615725.04	6.4E-02	5E-02	7E-03	8E-03	3E-03	1E-03	7E-04	7E-04	2E-04	3E-05	9E-05	4E-05	2E-02	6E-03
485230.59, 3615725.04	6.2E-02	5E-02	7E-03	8E-03	3E-03	1E-03	6E-04	7E-04	2E-04	3E-05	9E-05	4E-05	2E-02	6E-03
485330.59, 3615725.04	6.1E-02	5E-02	7E-03	8E-03	2E-03	1E-03	6E-04	7E-04	2E-04	3E-05	8E-05	4E-05	1E-02	6E-03
485230.59, 3615825.04	6.5E-02	5E-02	7E-03	8E-03	3E-03	1E-03	7E-04	8E-04	2E-04	3E-05	9E-05	4E-05	2E-02	6E-03
489130.59, 3615925.04	2.4E-02	2E-02	3E-03	3E-03	1E-03	6E-04	3E-04	4E-04	7E-05	1E-05	4E-05	2E-05	4E-03	1E-03
489030.59, 3616025.04	2.5E-02	2E-02	3E-03	3E-03	1E-03	6E-04	3E-04	4E-04	7E-05	2E-05	4E-05	2E-05	4E-03	1E-03
489130.59, 3616025.04	2.5E-02	2E-02	3E-03	3E-03	1E-03	6E-04	3E-04	4E-04	7E-05	1E-05	4E-05	2E-05	4E-03	1E-03
488930.59, 3616125.04	2.7E-02	2E-02	3E-03	3E-03	1E-03	6E-04	3E-04	4E-04	8E-05	2E-05	4E-05	2E-05	4E-03	2E-03
489030.59, 3616125.04	2.6E-02	2E-02	3E-03	3E-03	1E-03	6E-04	3E-04	4E-04	7E-05	2E-05	4E-05	2E-05	4E-03	2E-03
489130.59, 3616125.04	2.6E-02	2E-02	3E-03	3E-03	1E-03	6E-04	3E-04	4E-04	7E-05	2E-05	4E-05	2E-05	4E-03	2E-03

TAMT Risk Assessment - DPM Cancer and Chronic HI

AERMOD Output

	Discrete Receptor ID (Group Name)	X	Y	AERMOD UNITIZED CONCENTRATIONS — Source Group in AERMOD: 1	3	5	7	9	11	13	15	17	18	19	20	21	22	23	24	25	26	27	28 (g/s --> ; divide by -->)	DPM SCALED CONCENTRATIONS: 4 Refrigerated ContainersSTC UNMIT, 5.7E-02, 1	4 Refrigerated ContainersSTC UNMIT, 5.7E-02, 3	4 Refrigerated ContainersSTC UNMIT, 5.7E-02, 5	4 Refrigerated ContainersSTC UNMIT, 5.7E-02, 7
				B10_1_AUX	B10_2_AUX	B10_3_AUX	B10_4_AUX	B10_5_AUX	B10_6_AUX	B10_7_AUX	B10_8_AUX	CHE_1	LOC_SWTCH EMP	LOC_SWTCH LOA	OGV_PATH _BLR	OGV_PATH _DPM	TR_28TH	TR_BAYMA R	TR_BOSTON	TR_CROSBY	TR_HARBOR CHA	TR_HARBOR SAM	TUG_PATH_ DPM	B10_1_AUX	B10_2_AUX	B10_3_AUX	B10_4_AUX
residential	REC_100M	488730.59	3617425.04	1.4E-01	1.3E-01	1.4E-01	1.5E-01	1.6E-01	1.6E-01	1.7E-01	1.8E-01	1.2E+05	2.2E-01	2.4E-01	6.2E-02	6.2E-02	1.4E+00	6.8E-02	1.7E+00	4.7E-01	3.8E-01	7.2E-01	6.7E-02	8.1E-03	7.5E-03	8.1E-03	8.4E-03
residential	REC_100M	488830.59	3617425.04	1.4E-01	1.3E-01	1.4E-01	1.4E-01	1.5E-01	1.5E-01	1.6E-01	1.7E-01	1.1E+05	2.2E-01	2.4E-01	6.1E-02	6.1E-02	1.2E+00	7.3E-02	1.5E+00	4.5E-01	3.7E-01	6.6E-01	6.8E-02	7.8E-03	7.2E-03	7.8E-03	8.0E-03
residential	REC_100M	488930.59	3617425.04	1.3E-01	1.2E-01	1.3E-01	1.4E-01	1.4E-01	1.5E-01	1.5E-01	1.6E-01	1.1E+05	2.2E-01	2.3E-01	5.9E-02	5.9E-02	1.1E+00	7.9E-02	1.3E+00	4.3E-01	3.6E-01	6.1E-01	6.8E-02	7.5E-03	7.0E-03	7.5E-03	7.7E-03
residential	REC_100M	489030.59	3617425.04	1.3E-01	1.2E-01	1.3E-01	1.3E-01	1.4E-01	1.4E-01	1.5E-01	1.5E-01	1.0E+05	2.1E-01	2.3E-01	5.8E-02	5.8E-02	9.9E-01	8.5E-02	1.1E+00	4.1E-01	3.4E-01	5.7E-01	6.7E-02	7.2E-03	6.8E-03	7.2E-03	7.4E-03
residential	REC_100M	489130.59	3617425.04	1.3E-01	1.2E-01	1.3E-01	1.3E-01	1.4E-01	1.4E-01	1.5E-01	1.5E-01	9.9E+04	1.8E-01	1.9E-01	5.7E-02	5.7E-02	8.9E-01	9.1E-02	1.0E+00	3.8E-01	3.1E-01	5.4E-01	6.0E-02	7.2E-03	6.7E-03	7.1E-03	7.4E-03
residential	REC_100M	483430.59	3617525.04	2.5E-01	2.9E-01	2.5E-01	2.2E-01	1.9E-01	1.6E-01	1.5E-01	1.5E-01	2.5E+05	3.0E-01	2.7E-01	2.3E-01	2.3E-01	1.1E-01	1.3E-02	1.1E-01	3.1E-01	5.3E-01	1.6E-01	3.1E-01	1.4E-02	1.6E-02	1.4E-02	1.3E-02
residential	REC_100M	483530.59	3617525.04	2.7E-01	3.0E-01	2.6E-01	2.4E-01	2.0E-01	1.7E-01	1.6E-01	1.5E-01	2.8E+05	3.3E-01	3.0E-01	2.3E-01	2.3E-01	1.1E-01	1.3E-02	1.1E-01	3.3E-01	5.8E-01	1.6E-01	3.2E-01	1.5E-02	1.7E-02	1.5E-02	1.3E-02
residential	REC_100M	483630.59	3617525.04	2.8E-01	3.2E-01	2.8E-01	2.5E-01	2.1E-01	1.8E-01	1.7E-01	1.7E-01	3.1E+05	3.5E-01	3.2E-01	2.4E-01	2.4E-01	1.2E-01	1.3E-02	1.1E-01	3.6E-01	6.3E-01	1.7E-01	3.3E-01	1.6E-02	1.8E-02	1.6E-02	1.4E-02
residential	REC_100M	483730.59	3617525.04	3.0E-01	3.4E-01	3.0E-01	2.7E-01	2.3E-01	1.9E-01	1.8E-01	1.7E-01	3.5E+05	3.9E-01	3.5E-01	2.4E-01	2.4E-01	1.2E-01	1.3E-02	1.2E-01	3.9E-01	6.9E-01	1.8E-01	3.4E-01	1.7E-02	1.9E-02	1.7E-02	1.5E-02
residential	REC_100M	483830.59	3617525.04	3.2E-01	3.6E-01	3.2E-01	2.9E-01	2.4E-01	2.0E-01	1.9E-01	1.9E-01	3.9E+05	4.2E-01	3.8E-01	2.5E-01	2.5E-01	1.3E-01	1.3E-02	1.2E-01	4.3E-01	7.6E-01	1.9E-01	3.5E-01	1.8E-02	2.0E-02	1.8E-02	1.6E-02
residential	REC_100M	483930.59	3617525.04	3.3E-01	3.7E-01	3.4E-01	3.1E-01	2.6E-01	2.1E-01	2.1E-01	2.0E-01	4.5E+05	4.6E-01	4.1E-01	2.5E-01	2.5E-01	1.3E-01	1.3E-02	1.3E-01	4.7E-01	8.3E-01	2.1E-01	3.6E-01	1.9E-02	2.1E-02	1.9E-02	1.7E-02
residential	REC_100M	484030.59	3617525.04	3.6E-01	4.0E-01	3.6E-01	3.3E-01	2.8E-01	2.3E-01	2.2E-01	2.1E-01	5.1E+05	4.9E-01	4.4E-01	2.6E-01	2.6E-01	1.4E-01	1.3E-02	1.4E-01	5.2E-01	9.2E-01	2.2E-01	3.7E-01	2.0E-02	2.2E-02	2.1E-02	1.9E-02
residential	REC_100M	484130.59	3617525.04	3.8E-01	4.1E-01	3.8E-01	3.5E-01	3.0E-01	2.5E-01	2.4E-01	2.3E-01	5.8E+05	5.3E-01	4.8E-01	2.7E-01	2.7E-01	1.5E-01	1.4E-02	1.4E-01	5.8E-01	1.0E+00	2.3E-01	3.8E-01	2.1E-02	2.3E-02	2.2E-02	2.0E-02
residential	REC_100M	484230.59	3617525.04	4.0E-01	4.2E-01	4.0E-01	3.7E-01	3.2E-01	2.7E-01	2.6E-01	2.5E-01	6.7E+05	5.7E-01	5.2E-01	2.8E-01	2.8E-01	1.5E-01	1.4E-02	1.5E-01	6.4E-01	1.1E+00	2.5E-01	3.9E-01	2.3E-02	2.4E-02	2.3E-02	2.1E-02
residential	REC_100M	484330.59	3617525.04	4.1E-01	4.3E-01	4.1E-01	3.8E-01	3.4E-01	2.8E-01	2.7E-01	2.6E-01	7.8E+05	6.3E-01	5.7E-01	2.8E-01	2.8E-01	1.6E-01	1.4E-02	1.5E-01	7.2E-01	1.3E+00	2.7E-01	4.1E-01	2.3E-02	2.4E-02	2.3E-02	2.2E-02
residential	REC_100M	484430.59	3617525.04	4.2E-01	4.2E-01	4.1E-01	3.9E-01	3.5E-01	3.0E-01	2.9E-01	2.8E-01	9.3E+05	7.1E-01	6.4E-01	2.9E-01	2.9E-01	1.7E-01	1.4E-02	1.6E-01	8.2E-01	1.4E+00	2.9E-01	4.3E-01	2.4E-02	2.4E-02	2.3E-02	2.2E-02
residential	REC_100M	486730.59	3617525.04	2.6E-01	2.7E-01	3.1E-01	3.4E-01	3.8E-01	4.2E-01	4.5E-01	4.9E-01	4.4E+05	8.3E-01	1.1E+00	1.1E-01	1.1E-01	1.3E+00	2.6E-02	1.0E+00	3.7E+00	1.4E+00	2.2E+01	1.3E-01	1.5E-02	1.5E-02	1.8E-02	1.9E-02
residential	REC_100M	486830.59	3617525.04	2.6E-01	2.6E-01	3.0E-01	3.3E-01	3.6E-01	3.9E-01	4.2E-01	4.6E-01	4.0E+05	7.7E-01	9.7E-01	1.0E-01	1.0E-01	1.5E+00	2.7E-02	1.2E+00	3.2E+00	1.3E+00	1.4E+01	1.3E-01	1.5E-02	1.5E-02	1.7E-02	1.8E-02
residential	REC_100M	486930.59	3617525.04	2.5E-01	2.5E-01	2.8E-01	3.1E-01	3.4E-01	3.6E-01	3.9E-01	4.3E-01	3.7E+05	7.1E-01	8.9E-01	9.9E-02	9.9E-02	1.9E+00	2.8E-02	1.4E+00	2.7E+00	1.2E+00	1.0E+01	1.2E-01	1.4E-02	1.4E-02	1.6E-02	1.8E-02
residential	REC_100M	487030.59	3617525.04	2.4E-01	2.4E-01	2.7E-01	2.9E-01	3.2E-01	3.4E-01	3.7E-01	4.0E-01	3.4E+05	6.7E-01	8.2E-01	9.5E-02	9.5E-02	2.6E+00	2.9E-02	1.7E+00	2.4E+00	1.1E+00	8.0E+00	1.2E-01	1.4E-02	1.3E-02	1.5E-02	1.7E-02
residential	REC_100M	487130.59	3617525.04	2.4E-01	2.3E-01	2.6E-01	2.8E-01	3.0E-01	3.2E-01	3.4E-01	3.7E-01	3.1E+05	6.3E-01	7.6E-01	9.2E-02	9.2E-02	3.7E+00	3.0E-02	2.1E+00	2.1E+00	1.1E+00	6.6E+00	1.2E-01	1.3E-02	1.3E-02	1.5E-02	1.6E-02
residential	REC_100M	487230.59	3617525.04	2.3E-01	2.2E-01	2.5E-01	2.6E-01	2.8E-01	3.0E-01	3.2E-01	3.5E-01	2.9E+05	5.9E-01	7.0E-01	8.9E-02	8.9E-02	6.1E+00	3.2E-02	2.7E+00	1.8E+00	1.0E+00	5.6E+00	1.1E-01	1.3E-02	1.2E-02	1.4E-02	1.5E-02
residential	REC_100M	487630.59	3617525.04	2.0E-01	1.9E-01	2.1E-01	2.2E-01	2.3E-01	2.4E-01	2.6E-01	2.8E-01	2.2E+05	4.7E-01	5.3E-01	7.9E-02	7.9E-02	2.8E+01	3.8E-02	3.6E+01	1.1E+00	7.7E-01	3.2E+00	1.0E-01	1.1E-02	1.1E-02	1.2E-02	1.2E-02
residential	REC_100M	487730.59	3617525.04	1.9E-01	1.8E-01	2.0E-01	2.1E-01	2.2E-01	2.3E-01	2.4E-01	2.6E-01	2.0E+05	4.4E-01	4.9E-01	7.7E-02	7.7E-02	1.5E+01	4.0E-02	3.1E+01	1.0E+00	7.2E-01	2.7E+00	9.7E-02	1.1E-02	1.0E-02	1.1E-02	1.2E-02
residential	REC_100M	487830.59	3617525.04	1.9E-01	1.7E-01	1.9E-01	2.0E-01	2.1E-01	2.2E-01	2.3E-01	2.5E-01	1.9E+05	4.1E-01	4.6E-01	7.5E-02	7.5E-02	9.6E+00	4.2E-02	1.7E+01	9.4E-01	6.8E-01	2.2E+00	9.4E-02	1.1E-02	9.8E-03	1.1E-02	1.1E-02
residential	REC_100M	487930.59	3617525.04	1.8E-01	1.7E-01	1.8E-01	1.9E-01	2.0E-01	2.1E-01	2.2E-01	2.4E-01	1.8E+05	3.9E-01	4.3E-01	7.4E-02	7.4E-02	6.6E+00	4.4E-02	9.3E+00	8.6E-01	6.4E-01	1.8E+00	9.2E-02	1.0E-02	9.5E-03	1.0E-02	1.1E-02
residential	REC_100M	488030.59	3617525.04	1.7E-01	1.6E-01	1.8E-01	1.8E-01	1.9E-01	2.0E-01	2.1E-01	2.2E-01	1.7E+05	3.7E-01	4.0E-01	7.2E-02	7.2E-02	4.8E+00	4.6E-02	6.0E+00	7.9E-01	6.0E-01	1.5E+00	9.0E-02	9.8E-03	9.1E-03	9.9E-03	1.0E-02
residential	REC_100M	488130.59	3617525.04	1.7E-01	1.6E-01	1.7E-01	1.7E-01	1.8E-01	1.9E-01	2.0E-01	2.1E-01	1.6E+05	3.5E-01	3.8E-01	7.0E-02	7.0E-02	3.6E+00	4.8E-02	4.3E+00	7.3E-01	5.6E-01	1.2E+00	8.7E-02	9.5E-03	8.8E-03	9.5E-03	9.9E-03
residential	REC_100M	488230.59	3617525.04	1.6E-01	1.5E-01	1.6E-01	1.7E-01	1.8E-01	1.8E-01	1.9E-01	2.0E-01	1.5E+05	3.3E-01	3.6E-01	6.9E-02	6.9E-02	2.9E+00	5.1E-02	3.4E+00	6.8E-01	5.3E-01	1.1E+00	8.5E-02	9.2E-03	8.6E-03	9.2E-03	9.6E-03
residential	REC_100M	488330.59	3617525.04	1.6E-01	1.5E-01	1.6E-01	1.6E-01	1.7E-01	1.8E-01	1.9E-01	2.0E-01	1.4E+05	3.1E-01	3.4E-01	6.8E-02	6.8E-02	2.4E+00	5.4E-02	2.9E+00	6.3E-01	5.0E-01	9.7E-01	8.2E-02	9.0E-03	8.3E-03	9.0E-03	9.3E-03
residential	REC_100M	488430.59	3617525.04	1.6E-01	1.5E-01	1.6E-01	1.7E-01	1.8E-01	1.8E-01	1.9E-01	2.0E-01	1.3E+05	2.2E-01	2.4E-01	6.7E-02	6.7E-02	1.9E+00	5.7E-02	2.4E+00	5.7E-01	4.4E-01	8.9E-01	6.5E-02	9.2E-03	8.5E-03	9.2E-03	9.5E-03
residential	REC_100M	488530.59	3617525.04	1.6E-01	1.4E-01	1.6E-01	1.6E-01	1.7E-01	1.7E-01	1.8E-01	1.9E-01	1.2E+05	2.0E-01	2.2E-01	6.6E-02	6.6E-02	1.7E+00	6.0E-02	2.0E+00	5.3E-01	4.2E-01	8.1E-01	6.5E-02	8.9E-03	8.2E-03	8.8E-03	9.1E-03
residential	REC_100M	488730.59	3617525.04	1.4E-01	1.3E-01	1.4E-01	1.5E-01	1.5E-01	1.6E-01	1.6E-01	1.7E-01	1.2E+05	2.4E-01	2.5E-01	6.3E-02	6.3E-02	1.3E+00	6.6E-02	1.5E+00	4.7E-01	4.0E-01	6.7E-01	7.0E-02	8.1E-03	7.5E-03	8.0E-03	8.3E-03
residential	REC_100M	488830.59	3617525.04	1.4E-01	1.3E-01	1.4E-01	1.4E-01	1.4E-01	1.5E-01	1.6E-01	1.6E-01	1.1E+05	2.3E-01	2.5E-01	6.1E-02	6.1E-02	1.1E+00	7.2E-02	1.3E+00	4.5E-01	3.8E-01	6.2E-01	7.0E-02	7.8E-03	7.2E-03	7.7E-03	7.9E-03
residential	REC_100M	488930.59	3617525.04	1.3E-01	1.2E-01	1.3E-01	1.3E-01	1.4E-01	1.4E-01	1.5E-01	1.6E-01	1.1E+05	2.3E-01	2.4E-01	6.0E-02	6.0E-02	1.0E+00	7.7E-02	1.2E+00	4.3E-01	3.7E-01	5.7E-01	7.0E-02	7.5E-03	7.0E-03	7.4E-03	7.6E-03
residential	REC_100M	489030.59	3617525.04	1.3E-01	1.2E-01	1.3E-01	1.3E-01	1.3E-01	1.4E-01	1.4E-01	1.5E-01	1.0E+05	2.2E-01	2.3E-01	5.9E-02	5.9E-02	9.3E-01	8.3E-02	1.1E+00	4.0E-01	3.5E-01	5.3E-01	6.9E-02	7.2E-03	6.7E-03	7.1E-03	7.3E-03
residential	REC_100M	489130.59	3617525.04	1.3E-01	1.2E-01	1.2E-01	1.3E-01	1.3E-01	1.4E-01	1.4E-01	1.5E-01	9.9E+04	1.9E-01	2.0E-01	5.8E-02	5.8E-02	8.4E-01	8.8E-02	9.6E-01	3.7E-01	3.2E-01	5.0E-01	6.3E-02	7.2E-03	6.7E-03	7.1E-03	7.3E-03
residential	REC_100M	483230.59	3617625.04	2.3E-01	2.6E-01	2.2E-01	1.9E-01	1.6E-01	1.4E-01	1.3E-01	1.3E-01	1.9E+05	2.5E-01	2.3E-01	2.4E-01	2.4E-01	9.5E-02	1.2E-02	9.3E-02	2.5E-01	4.3E-01	1.3E-01	3.0E-01	1.3E-02	1.5E-02	1.2E-02	1.1E-02
residential	REC_100M	483330.59	3617625.04	2.4E-01	2.7E-01	2.3E-01	2.1E-01	1.7E-01	1.5E-01	1.4E-01	1.4E-01	2.1E+05	2.7E-01	2.4E-01	2.4E-01	2.4E-01	9.8E-02	1.2E-02	9.6E-02	2.6E-01	4.6E-01	1.4E-01	3.1E-01	1.4E-02	1.6E-02	1.3E-02	1.2E-02
residential	REC_100M	483430.59	3617625.04	2.5E-01	2.8E-01	2.4E-01	2.1E-01	1.8E-01	1.5E-01	1.4E-01	1.4E-01	2.4E+05	3.0E-01	2.7E-01	2.4E-01	2.4E-01	1.0E-01	1.2E-02	9.9E-02	2.8E-01	5.1E-01	1.4E-01	3.3E-01	1.4E-02	1.6E-02	1.4E-02	1.2E-02
residential	REC_100M	483530.59	3617625.04	2.7E-01	3.0E-01	2.6E-01	2.3E-01	1.9E-01	1.6E-01	1.5E-01	1.5E-01	2.6E+05	3.2E-01	2.9E-01	2.4E-01	2.4E-01	1.1E-01	1.3E-02	1.0E-01	3.0E-01	5.5E-01	1.5E-01	3.4E-01	1.5E-02	1.7E-02	1.5E-02	1.3E-02
residential	REC_100M	483630.59	3617625.04	2.8E-01	3.2E-01	2.7E-01	2.4E-01	2.0E-01	1.7E-01	1.6E-01	1.6E-01	2.9E+05	3.5E-01	3.1E-01	2.5E-01	2.5E-01	1.1E-01	1.3E-02	1.1E-01	3.3E-01	6.0E-01	1.6E-01	3.5E-01	1.6E-02	1.8E-02	1.6E-02	1.4E-02
residential	REC_100M	483730.59	3617625.04	3.0E-01	3.4E-01	2.9E-01	2.6E-01	2.2E-01	1.8E-01	1.7E-01	1.7E-01	3.3E+05	3.8E-01	3.4E-01	2.6E-01	2.6E-01	1.1E-01	1.3E-02	1.1E-01	3.5E-01	6.6E-01	1.7E-01	3.6E-01	1.7E-02	1.9E-02	1.7E-02	1.5E-02
residential	REC_100M	483830.59	3617625.04	3.2E-01	3.6E-01	3.1E-01	2.8E-01	2.3E-01	1.9E-01	1.8E-01	1.8E-01	3.7E+05	4.1E-01	3.7E-01	2.6E-01	2.6E-01	1.2E-01	1.3E-02	1.2E-01	3.8E-01	7.2E-01	1.8E-01	3.7E-01	1.8E-02	2.0E-02	1.8E-02	1.6E-02
residential	REC_100M	483930.59	3617625.04	3.4E-01	3.8E-01	3.3E-01	3.0E-01	2.5E-01	2.0E-01	2.0E-01	1.9E-01	4.2E+05	4.4E-01	4.0E-01	2.7E-01	2.7E-01	1.2E-01	1.3E-02	1.2E-01	4.2E-01	8.0E-01	1.9E-01	3.8E-01	1.9E-02	2.1E-02	1.9E-02	1.7E-02
residential	REC_100M	484030.59	3617625.04	3.6E-01	3.9E-01	3.5E-01	3.2E-01	2.6E-01	2.2E-01	2.1E-01	2.0E-01	4.8E+05	4.8E-01	4.3E-01	2.8E-01	2.8E-01	1.3E-01	1.3E-02	1.2E-01	4.6E-01	8.9E-01	2.0E-01	4.0E-01	2.0E-02	2.2E-02	2.0E-02	1.8E-02
residential	REC_100M	484130.59	3617625.04	3.8E-01	4.1E-01	3.7E-01	3.4E-01	2.8E-01	2.3E-01	2.2E-01	2.1E-01	5.5E+05	5.2E-01	4.7E-01	2.9E-01	2.9E-01	1.3E-01	1.3E-02	1.3E-01	5.0E-01	9.9E-01	2.1E-01	4.2E-01	2.2E-02	2.3E-02	2.1E-02	1.9E-02
residential	REC_100M	484230.59	3617625.04	4.0E-01	4.1E-01	3.9E-01	3.5E-01	3.0E-01	2.5E-01	2.4E-01	2.3E-01	6.5E+05	5.7E-01	5.1E-01	3.0E-01	3.0E-01	1.4E-01	1.3E-02	1.4E-01	5.6E-01	1.1E+00	2.2E-01	4.3E-01	2.3E-02	2.3E-02	2.2E-02	2.0E-02
residential	REC_100M	484330.59	3617625.04	4.1E-01	4.1E-01	3.9E-01	3.7E-01	3.1E-01	2.6E-01	2.5E-01	2.5E-01	7.7E+05	6.4E-01	5.7E-01	3.1E-01	3.1E-01	1.5E-01	1.4E-02	1.4E-01	6.2E-01	1.3E+00	2.4E-01	4.6E-01	2.3E-02	2.3E-02	2.2E-02	2.1E-02
residential	REC_100M	484430.59	3617625.04	4.3E-01	3.9E-01	3.9E-01	3.7E-01	3.3E-01	2.7E-01	2.7E-01	2.6E-01	9.2E+05	7.1E-01	6.4E-01	3.2E-01	3.2E-01	1.5E-01	1.4E-02	1.5E-01	7.0E-01	1.4E+00	2.6E-01	4.8E-01	2.4E-02	2.2E-02	2.2E-02	2.1E-02
residential	REC_100M	486630.59	3617625.04	3.0E-01	2.9E-01	3.4E-01	3.7E-01	4.1E-01	4.2E-01	4.7E-01	5.3E-01	5.3E+05	1.0E+00	1.3E+00	1.1E-01	1.1E-01	7.9E-01	2.4E-02	6.8E-01	5.5E+00	1.9E+00	1.9E+01	1.4E-01	1.7E-02	1.7E-02	1.9E-02	2.1E-02
residential	REC_100M	486730.59	3617625.04	2.9E-01	2.8E-01	3.2E-01	3.5E-01	3.8E-01	3.9E-01	4.3E-01	4.8E-01	4.8E+05	9.4E-01	1.2E+00	1.1E-01	1.1E-01	9.1E-01	2.5E-02	7.6E-01	4.4E+00	1.8E+00	1.2E+01	1.4E-01	1.6E-02	1.6E-02	1.8E-02	2.0E-02
residential	REC_100M	486830.59	3617625.04	2.8E-01	2.7E-01	3.0E-01	3.3E-01	3.5E-01	3.6E-01	4.0E-01	4.5E-01	4.3E+05	8.6E-01	1.1E+00	1.0E-01	1.0E-01	1.1E+00	2.6E-02	8.6E-01	3.6E+00	1.6E+00	9.3E+00	1.3E-01	1.6E-02	1.5E-02	1.7E-02	1.9E-02
residential	REC_100M	486930.59	3617625.04	2.7E-01	2.5E-01	2.9E-01	3.1E-01	3.3E-01	3.4E-01	3.7E-01	4.2E-01	3.9E+05	8.0E-01	9.9E-01	1.0E-01	1.0E-01	1.3E+00	2.7E-02	9.7E-01	2.9E+00	1.5E+00	7.3E+00	1.3E-01	1.5E-02	1.4E-02	1.6E-02	1.7E-02
residential	REC_100M	487030.59	3617625.04	2.6E-01	2.4E-01	2.7E-01	2.9E-01	3.1E-01	3.2E-01	3.5E-01	3.9E-01	3.5E+05	7.4E-01	9.0E-01	9.6E-02	9.6E-02	1.6E+00	2.8E-02	1.1E+00	2.5E+00	1.4E+00	6.0E+00	1.2E-01	1.5E-02	1.4E-02	1.5E-02	1.6E-02
residential	REC_100M	487130.59	3617625.04	2.5E-01	2.3E-01	2.6E-01	2.8E-01	2.9E-01	3.0E-01	3.3E-01	3.6E-01	3.2E+05	6.9E-01	8.2E-01	9.3E-02	9.3E-02	2.1E+00	3.0E-02	1.2E+00	2.1E+00	1.2E+00	5.1E+00	1.2E-01	1.4E-02	1.3E-02	1.5E-02	1.6E-02
residential	REC_100M	487430.59	3617625.04	2.2E-01	2.0E-01	2.2E-01	2.4E-01	2.5E-01	2.5E-01	2.7E-01	3.0E-01	2.5E+05	5.6E-01	6.3E-01	8.5E-02	8.5E-02	1.5E+01	3.4E-02	4.1E+00	1.4E+00	9.7E-01	3.6E+00	1.1E-01	1.3E-02	1.2E-02	1.3E-02	1.3E-02
residential	REC_100M	487530.59	3617625.04	2.1E-01	2.0E-01	2.1E-01	2.2E-01	2.4E-01	2.4E-01	2.6E-01	2.8E-01	2.4E+05	5.2E-01	5.8E-01	8.2E-02	8.2E-02	3.3E+01	3.6E-02	9.4E+00	1.2E+00	8.9E-01	3.2E+00	1.0E-01	1.2E-02	1.1E-02	1.2E-02	1.3E-02
residential	REC_100M	487630.59	3617625.04	2.0E-01	1.9E-01	2.0E-01	2.1E-01	2.2E-01	2.3E-01	2.4E-01	2.7E-01	2.2E+05	4.9E-01	5.4E-01	8.0E-02	8.0E-02	1.9E+01	3.7E-02	1.6E+01	1.1E+00	8.2E-01	2.7E+00	1.0E-01	1.2E-02	1.1E-02	1.2E-02	1.2E-02
residential	REC_100M	487730.59	3617625.04	2.0E-01	1.8E-01	2.0E-01	2.0E-01	2.1E-01	2.2E-01	2.3E-01	2.5E-01	2.1E+05	4.6E-01	5.0E-01	7.8E-02	7.8E-02	1.2E+01	3.9E-02	1.7E+01	1.0E+00	7.6E-01	2.4E+00	9.9E-02	1.1E-02	1.0E-02	1.1E-02	1.2E-02
residential	REC_100M	487830.59	3617625.04	1.9E-01	1.7E-01	1.9E-01	2.0E-01	2.0E-01	2.1E-01	2.2E-01	2.4E-01	1.9E+05	4.3E-01	4.7E-01	7.6E-02	7.6E-02	8.4E+00	4.1E-02	1.3E+01	9.1E-01	7.1E-01	2.0E+00	9.6E-02	1.1E-02	9.9E-03	1.1E-02	1.1E-02
residential	REC_100M	487930.59	3617625.04	1.8E-01	1.7E-01	1.8E-01	1.9E-01	1.9E-01	2.0E-01	2.1E-01	2.3E-01	1.8E+05	4.0E-01	4.4E-01	7.4E-02	7.4E-02	5.9E+00	4.3E-02	9.0E+00	8.3E-01	6.6E-01	1.7E+00	9.3E-02	1.0E-02	9.5E-03	1.0E-02	1.1E-02
residential	REC_100M	488030.59	3617625.04	1.8E-01	1.6E-01	1.7E-01	1.8E-01	1.8E-01	1.9E-01	2.0E-01	2.1E-01	1.7E+05	3.8E-01	4.1E-01	7.2E-02	7.2E-02	4.2E+00	4.5E-02	5.7E+00	7.6E-01	6.1E-01	1.4E+00	9.1E-02	9.9E-03	9.1E-03	9.8E-03	1.0E-02
residential	REC_100M	488130.59	3617625.04	1.7E-01	1.5E-01	1.7E-01	1.7E-01	1.8E-01	1.8E-01	1.9E-01	2.1E-01	1.6E+05	3.6E-01	3.8E-01	7.0E-02	7.0E-02	3.4E+00	4.7E-02	3.9E+00	7.0E-01	5.8E-01	1.2E+00	8.8E-02	9.6E-03	8.8E-03	9.4E-03	9.7E-03
residential	REC_100M	488230.59	3617625.04	1.6E-01	1.5E-01	1.6E-01	1.7E-01	1.7E-01	1.7E-01	1.9E-01	2.0E-01	1.5E+05	3.4E-01	3.6E-01	6.9E-02	6.9E-02	2.7E+00	5.0E-02	3.0E+00	6.5E-01	5.5E-01	1.0E+00	8.6E-02	9.3E-03	8.5E-03	9.1E-03	9.4E-03
residential	REC_100M	488330.59	3617625.04	1.6E-01	1.5E-01	1.6E-01	1.6E-01	1.7E-01	1.7E-01	1.8E-01	1.9E-01	1.5E+05	3.1E-01	3.3E-01	6.8E-02	6.8E-02	2.2E+00	5.3E-02	2.6E+00	6.1E-01	5.1E-01	9.3E-01	8.2E-02	9.2E-03	8.4E-03	9.0E-03	9.2E-03
residential	REC_100M	488430.59	3617625.04	1.6E-01	1.5E-01	1.6E-01	1.7E-01	1.7E-01	1.8E-01	1.9E-01	2.0E-01	1.3E+05	2.2E-01	2.4E-01	6.8E-02	6.8E-02	1.8E+00	5.6E-02	2.1E+00	5.6E-01	4.5E-01	8.4E-01	6.7E-02	9.3E-03	8.5E-03	9.1E-03	9.4E-03
residential	REC_100M	488530.59	3617625.04	1.6E-01	1.5E-01	1.6E-01	1.6E-01	1.7E-01	1.7E-01	1.8E-01	1.9E-01	1.2E+05	2.1E-01	2.3E-01	6.6E-02	6.6E-02	1.5E+00	5.8E-02	1.8E+00	5.2E-01	4.3E-01	7.6E-01	6.0E-02	9.0E-03	8.2E-03	8.8E-03	9.1E-03
residential	REC_100M	488630.59	3617625.04	1.5E-01	1.4E-01	1.5E-01	1.5E-01	1.5E-01	1.6E-01	1.7E-01	1.8E-01	1.2E+05	2.4E-01	2.6E-01	6.5E-02	6.5E-02	1.3E+00	6.1E-02	1.6E+00	4.9E-01	4.2E-01	6.9E-01	7.1E-02	8.5E-03	7.8E-03	8.3E-03	8.5E-03
residential	REC_100M	488730.59	3617625.04	1.4E-01	1.3E-01	1.4E-01	1.4E-01	1.5E-01	1.5E-01	1.6E-01	1.7E-01	1.2E+05	2.4E-01	2.6E-01	6.3E-02	6.3E-02	1.2E+00	6.5E-02	1.4E+00	4.6E-01	4.1E-01	6.3E-01	7.1E-02	8.1E-03	7.5E-03	7.9E-03	8.1E-03
residential	REC_100M	488830.59	3617625.04	1.4E-01	1.3E-01	1.3E-01	1.4E-01	1.4E-01	1.4E-01	1.5E-01	1.6E-01	1.1E+05	2.4E-01	2.5E-01	6.2E-02	6.2E-02	1.1E+00	7.0E-02	1.2E+00	4.4E-01	3.9E-01	5.8E-01	7.2E-02	7.8E-03	7.1E-03	7.5E-03	7.7E-03
residential	REC_100M	488930.59	3617625.04	1.3E-01	1.2E-01	1.3E-01	1.3E-01	1.3E-01	1.4E-01	1.4E-01	1.5E-01	1.1E+05	2.3E-01	2.4E-01	6.0E-02	6.0E-02	9.6E-01	7.5E-02	1.1E+00	4.1E-01	3.7E-01	5.3E-01	7.1E-02	7.5E-03	6.9E-03	7.3E-03	7.4E-03
residential	REC_100M	489030.59	3617625.04	1.3E-01	1.2E-01	1.2E-01	1.3E-01	1.3E-01	1.3E-01	1.4E-01	1.5E-01	1.0E+05	2.2E-01	2.3E-01	5.9E-02	5.9E-02	8.7E-01	8.0E-02	9.8E-01	3.9E-01	3.5E-01	5.0E-01	6.8E-02	7.3E-03	6.7E-03	7.1E-03	7.3E-03
residential	REC_100M	489130.59	3617625.04	1.3E-01	1.2E-01	1.2E-01	1.2E-01	1.3E-01	1.3E-01	1.4E-01	1.4E-01	9.9E+04	2.1E-01	2.2E-01	5.8E-02	5.8E-02	7.9E-01	8.6E-02	8.9E-01	3.7E-01	3.3E-01	4.7E-01	6.6E-02	7.1E-03	6.5E-03	6.9E-03	7.0E-03
residential	REC_100M	483030.59	3617725.04	2.0E-01	2.2E-01	1.9E-01	1.6E-01	1.4E-01	1.2E-01	1.2E-01	1.1E-01	1.5E+05	2.1E-01	1.9E-01	2.4E-01	2.4E-01	8.3E-02	1.2E-02	8.1E-02	2.0E-01	3.5E-01	1.1E-01	2.9E-01	1.1E-02	1.3E-02	1.1E-02	9.3E-03
residential	REC_100M	483130.59	3617725.04	2.1E-01	2.4E-01	2.0E-01	1.7E-01	1.5E-01	1.3E-01	1.2E-01	1.2E-01	1.6E+05	2.3E-01	2.1E-01	2.4E-01	2.4E-01	8.6E-02	1.2E-02	8.4E-02	2.1E-01	3.7E-01	1.1E-01	3.0E-01	1.2E-02	1.3E-02	1.1E-02	9.8E-03
residential	REC_100M	483230.59	3617725.04	2.2E-01	2.5E-01	2.1E-01	1.8E-01	1.5E-01	1.3E-01	1.3E-01	1.2E-01	1.8E+05	2.5E-01	2.2E-01	2.4E-01	2.4E-01	8.9E-02	1.2E-02	8.7E-02	2.2E-01	4.0E-01	1.2E-01	3.2E-01	1.3E-02	1.4E-02	1.2E-02	1.0E-02
residential	REC_100M	483330.59	3617725.04	2.3E-01	2.6E-01	2.2E-01	1.9E-01	1.6E-01	1.3E-01	1.3E-01	1.3E-01	2.0E+05	2.7E-01	2.4E-01	2.4E-01	2.4E-01	9.2E-02	1.2E-02	9.0E-02	2.4E-01	4.4E-01	1.2E-01	3.4E-01	1.3E-02	1.5E-02	1.2E-02	1.1E-02
residential	REC_100M	483430.59	3617725.04	2.5E-01	2.8E-01	2.3E-01	2.0E-01	1.7E-01	1.4E-01	1.4E-01	1.3E-01	2.2E+05	2.9E-01	2.6E-01	2.5E-01	2.5E-01	9.5E-02	1.2E-02	9.3E-02	2.5E-01	4.8E-01	1.3E-01	3.5E-01	1.4E-02	1.6E-02	1.3E-02	1.1E-02
residential	REC_100M	483530.59	3617725.04	2.6E-01	3.0E-01	2.5E-01	2.1E-01	1.8E-01	1.5E-01	1.4E-01	1.4E-01	2.4E+05	3.1E-01	2.8E-01	2.6E-01	2.6E-01	9.8E-02	1.2E-02	9.6E-02	2.7E-01	5.2E-01	1.4E-01	3.6E-01	1.5E-02	1.7E-02	1.4E-02	1.2E-02
residential	REC_100M	483630.59	3617725.04	2.8E-01	3.2E-01	2.6E-01	2.3E-01	1.9E-01	1.6E-01	1.5E-01	1.5E-01	2.7E+05	3.4E-01	3.0E-01	2.6E-01	2.6E-01	1.0E-01	1.2E-02	9.9E-02	2.9E-01	5.6E-01	1.4E-01	3.7E-01	1.6E-02	1.8E-02	1.5E-02	1.3E-02
residential	REC_100M	483730.59	3617725.04	3.0E-01	3.4E-01	2.8E-01	2.5E-01	2.0E-01	1.7E-01	1.6E-01	1.6E-01	3.0E+05	3.7E-01	3.3E-01	2.7E-01	2.7E-01	1.1E-01	1.2E-02	1.0E-01	3.1E-01	6.2E-01	1.5E-01	3.8E-01	1.7E-02	1.9E-02	1.6E-02	1.4E-02
residential	REC_100M	483830.59	3617725.04	3.2E-01	3.6E-01	3.0E-01	2.6E-01	2.2E-01	1.8E-01	1.7E-01	1.7E-01	3.4E+05	4.0E-01	3.5E-01	2.8E-01	2.8E-01	1.1E-01	1.3E-02	1.1E-01	3.4E-01	6.8E-01	1.6E-01	4.0E-01	1.8E-02	2.0E-02	1.7E-02	1.5E-02
residential	REC_100M	483930.59	3617725.04	3.4E-01	3.7E-01	3.2E-01	2.8E-01	2.3E-01	1.9E-01	1.8E-01	1.8E-01	3.9E+05	4.3E-01	3.8E-01	2.9E-01	2.9E-01	1.1E-01	1.3E-02	1.1E-01	3.7E-01	7.6E-01	1.7E-01	4.1E-01	1.9E-02	2.1E-02	1.8E-02	1.6E-02
residential	REC_100M	484030.59	3617725.04	3.6E-01	3.9E-01	3.4E-01	3.0E-01	2.4E-01	2.0E-01	1.9E-01	1.9E-01	4.5E+05	4.7E-01	4.2E-01	3.0E-01	3.0E-01	1.2E-01	1.3E-02	1.2E-01	4.0E-01	8.5E-01	1.8E-01	4.3E-01	2.0E-02	2.2E-02	1.9E-02	1.7E-02
residential	REC_100M	484130.59	3617725.04	3.8E-01	4.0E-01	3.6E-01	3.1E-01	2.6E-01	2.1E-01	2.1E-01	2.0E-01	5.2E+05	5.1E-01	4.6E-01	3.1E-01	3.1E-01	1.2E-01	1.3E-02	1.2E-01	4.4E-01	9.5E-01	1.9E-01	4.6E-01	2.2E-02	2.2E-02	2.0E-02	1.8E-02
residential	REC_100M	484230.59	3617725.04	4.0E-01	4.0E-01	3.7E-01	3.3E-01	2.7E-01	2.3E-01	2.2E-01	2.1E-01	6.1E+05	5.7E-01	5.0E-01	3.2E-01	3.2E-01	1.3E-01	1.3E-02	1.2E-01	4.8E-01	1.1E+00	2.0E-01	4.8E-01	2.3E-02	2.3E-02	2.1E-02	1.9E-02
residential	REC_100M	484330.59	3617725.04	4.1E-01	3.8E-01	3.8E-01	3.4E-01	2.9E-01	2.4E-01	2.3E-01	2.3E-01	7.3E+05	6.4E-01	5.6E-01	3.3E-01	3.3E-01	1.3E-01	1.3E-02	1.3E-01	5.3E-01	1.2E+00	2.1E-01	5.1E-01	2.3E-02	2.2E-02	2.1E-02	1.9E-02
residential	REC_100M	486530.59	3617725.04	3.3E-01	3.2E-01	3.7E-01	3.9E-01	4.1E-01	4.1E-01	4.6E-01	5.3E-01	6.5E+05	1.3E+00	1.7E+00	1.2E-01	1.2E-01	5.3E-01	2.3E-02	4.8E-01	7.8E+00	3.0E+00	1.6E+01	1.5E-01	1.9E-02	1.8E-02	2.1E-02	2.2E-02
residential	REC_100M	486630.59	3617725.04	3.2E-01	3.0E-01	3.4E-01	3.7E-01	3.8E-01	3.8E-01	4.2E-01	4.9E-01	5.7E+05	1.2E+00	1.5E+00	1.1E-01	1.1E-01	5.9E-01	2.4E-02	5.2E-01	5.7E+00	2.6E+00	1.1E+01	1.5E-01	1.8E-02	1.7E-02	1.9E-02	2.1E-02
residential	REC_100M	486730.59	3617725.04	3.1E-01	2.9E-01	3.2E-01	3.4E-01	3.6E-01	3.6E-01	3.9E-01	4.5E-01	5.0E+05	1.1E+00	1.3E+00	1.1E-01	1.1E-01	6.6E-01	2.5E-02	5.7E-01	4.3E+00	2.3E+00	8.3E+00	1.4E-01	1.7E-02	1.6E-02	1.8E-02	1.9E-02
residential	REC_100M	486830.59	3617725.04	2.9E-01	2.7E-01	3.0E-01	3.2E-01	3.4E-01	3.3E-01	3.7E-01	4.2E-01	4.4E+05	9.7E-01	1.2E+00	1.0E-01	1.0E-01	7.6E-01	2.6E-02	6.2E-01	3.4E+00	2.0E+00	6.6E+00	1.4E-01	1.7E-02	1.5E-02	1.7E-02	1.8E-02
residential	REC_100M	486930.59	3617725.04	2.8E-01	2.6E-01	2.9E-01	3.0E-01	3.1E-01	3.1E-01	3.5E-01	3.9E-01	3.9E+05	8.8E-01	1.1E+00	1.0E-01	1.0E-01	8.8E-01	2.7E-02	6.6E-01	2.8E+00	1.7E+00	5.4E+00	1.3E-01	1.6E-02	1.5E-02	1.6E-02	1.7E-02
residential	REC_100M	487030.59	3617725.04	2.7E-01	2.4E-01	2.7E-01	2.8E-01	3.0E-01	3.0E-01	3.3E-01	3.6E-01	3.6E+05	8.1E-01	9.4E-01	9.7E-02	9.7E-02	1.1E+00	2.8E-02	7.0E-01	2.3E+00	1.5E+00	4.7E+00	1.3E-01	1.5E-02	1.4E-02	1.5E-02	1.6E-02
residential	REC_100M	487230.59	3617725.04	2.5E-01	2.3E-01	2.5E-01	2.6E-01	2.7E-01	2.7E-01	2.9E-01	3.2E-01	3.0E+05	6.8E-01	7.7E-01	9.1E-02	9.1E-02	1.9E+00	3.1E-02	1.2E+00	1.7E+00	1.3E+00	3.8E+00	1.2E-01	1.4E-02	1.3E-02	1.4E-02	1.5E-02
residential	REC_100M	487330.59	3617725.04	2.4E-01	2.1E-01	2.3E-01	2.4E-01	2.5E-01	2.5E-01	2.7E-01	3.0E-01	2.7E+05	6.3E-01	7.0E-01	8.8E-02	8.8E-02	3.1E+00	3.2E-02	1.7E+00	1.5E+00	1.1E+00	3.3E+00	1.1E-01	1.3E-02	1.2E-02	1.3E-02	1.4E-02
residential	REC_100M	487430.59	3617725.04	2.3E-01	2.0E-01	2.2E-01	2.3E-01	2.4E-01	2.4E-01	2.6E-01	2.8E-01	2.5E+05	5.8E-01	6.4E-01	8.5E-02	8.5E-02	7.2E+00	3.3E-02	2.9E+00	1.3E+00	1.0E+00	3.0E+00	1.1E-01	1.3E-02	1.2E-02	1.3E-02	1.3E-02

TAMT Risk Assessment - DPM Cancer and Chronic HI

AERMOD Output

AERMOD UNITIZED CONCENTRATIONS

	Discrete Receptor ID (Group Name)	X	Y	B10_1_AUX	B10_2_AUX	B10_3_AUX	B10_4_AUX	B10_5_AUX	B10_6_AUX	B10_7_AUX	B10_8_AUX	CHE_1	LOC_SWTCH EMP	LOC_SWTCH LOA	OGV_PATH _BLR	OGV_PATH _DPM	TR_28TH	TR_BAYMA R	TR_BOSTON	TR_CROSBY	TR_HARBOR CHA	TR_HARBOR SAM	TUG_PATH_ DPM
Source Group in AERMOD				1	3	5	7	9	11	13	15	17	18	19	20	21	22	23	24	25	26	27	28
residential	REC_100M	483230.59	3617925.04	2.1E-01	2.3E-01	1.9E-01	1.6E-01	1.4E-01	1.2E-01	1.1E-01	1.1E-01	1.5E+05	2.3E-01	2.1E-01	2.7E-01	2.7E-01	7.7E-02	1.1E-02	7.6E-02	1.8E-01	3.5E-01	1.0E-01	3.5E-01
residential	REC_100M	483330.59	3617925.04	2.2E-01	2.4E-01	2.0E-01	1.7E-01	1.4E-01	1.2E-01	1.2E-01	1.1E-01	1.6E+05	2.5E-01	2.2E-01	2.7E-01	2.7E-01	8.0E-02	1.1E-02	7.8E-02	1.9E-01	3.8E-01	1.0E-01	3.7E-01
residential	REC_100M	483430.59	3617925.04	2.4E-01	2.6E-01	2.1E-01	1.8E-01	1.5E-01	1.3E-01	1.2E-01	1.2E-01	1.8E+05	2.7E-01	2.4E-01	2.8E-01	2.8E-01	8.2E-02	1.2E-02	8.0E-02	2.0E-01	4.1E-01	1.1E-01	3.8E-01
residential	REC_100M	483530.59	3617925.04	2.5E-01	2.8E-01	2.2E-01	1.9E-01	1.6E-01	1.3E-01	1.3E-01	1.3E-01	1.9E+05	2.9E-01	2.6E-01	2.9E-01	2.9E-01	8.5E-02	1.2E-02	8.3E-02	2.2E-01	4.4E-01	1.1E-01	4.0E-01
residential	REC_100M	483630.59	3617925.04	2.7E-01	2.9E-01	2.4E-01	2.0E-01	1.7E-01	1.4E-01	1.4E-01	1.3E-01	2.2E+05	3.2E-01	2.8E-01	2.9E-01	2.9E-01	8.7E-02	1.2E-02	8.5E-02	2.3E-01	4.9E-01	1.2E-01	4.2E-01
residential	REC_100M	483730.59	3617925.04	2.9E-01	3.1E-01	2.5E-01	2.2E-01	1.8E-01	1.5E-01	1.4E-01	1.4E-01	2.4E+05	3.4E-01	3.0E-01	3.0E-01	3.0E-01	9.0E-02	1.2E-02	8.8E-02	2.4E-01	5.3E-01	1.2E-01	4.4E-01
residential	REC_100M	483830.59	3617925.04	3.0E-01	3.3E-01	2.7E-01	2.3E-01	1.9E-01	1.5E-01	1.5E-01	1.5E-01	2.7E+05	3.7E-01	3.3E-01	3.1E-01	3.1E-01	9.3E-02	1.2E-02	9.1E-02	2.6E-01	5.9E-01	1.3E-01	4.6E-01
residential	REC_100M	483930.59	3617925.04	3.3E-01	3.4E-01	2.8E-01	2.4E-01	2.0E-01	1.6E-01	1.6E-01	1.6E-01	3.1E+05	4.1E-01	3.6E-01	3.3E-01	3.3E-01	9.6E-02	1.2E-02	9.4E-02	2.8E-01	6.6E-01	1.3E-01	4.9E-01
residential	REC_100M	484030.59	3617925.04	3.5E-01	3.5E-01	2.9E-01	2.6E-01	2.1E-01	1.7E-01	1.7E-01	1.6E-01	3.6E+05	4.5E-01	3.9E-01	3.4E-01	3.4E-01	1.0E-01	1.2E-02	9.8E-02	3.0E-01	7.3E-01	1.4E-01	5.2E-01
residential	REC_100M	484130.59	3617925.04	3.7E-01	3.6E-01	3.2E-01	2.8E-01	2.3E-01	1.9E-01	1.8E-01	1.8E-01	4.2E+05	4.9E-01	4.2E-01	3.6E-01	3.6E-01	1.0E-01	1.2E-02	1.0E-01	3.2E-01	8.3E-01	1.5E-01	5.4E-01

DPM SCALED CONCENTRATIONS

	X	divide by -->	4	4	4	4	2	2	2	2	1	2	2	1	1	1	1	1	1	1	1
			Refrigerated ContainersSTC UNMIT	Refrigerated ContainersSTC UNMIT	Refrigerated ContainersSTC UNMIT	Refrigerated ContainersSTC UNMIT	Multi-Purpose General CargoSTC UNMIT	Multi-Purpose General CargoSTC UNMIT	Dry BulkSTC UNMIT	Dry BulkSTC UNMIT	AllSTC UNMIT	AllSTC UNMIT	AllSTC UNMIT	AllSTC UNMIT	TR_28THSTC UNMIT	TR_BAYMARSTC UNMIT	TR_BOSTON STC UNMIT	TR_CROSBY STC UNMIT	TR_HARBOR CHASTC UNMIT	TR_HARBOR SAMSTC UNMIT	AllSTC UNMIT
		g/s -->	5.7E-02	5.7E-02	5.7E-02	5.7E-02	1.3E-02	1.3E-02	1.4E-02	1.4E-02	6.8E-08	1.8E-03	1.8E-03	3.0E-02	7.1E-06	8.6E-06	2.3E-05	4.8E-05	1.1E-04	1.1E-04	1.8E-03
			1	3	5	7	9	11	13	15	17	18	19	21	22	23	24	25	26	27	28
			B10_1_AUX	B10_2_AUX	B10_3_AUX	B10_4_AUX	B10_5_AUX	B10_6_AUX	B10_7_AUX	B10_8_AUX	CHE_1	LOC_SWTCHE MP	LOC_SWTCHL OA	OGV_PATH_D PM	TR_28TH	TR_BAYMA R	TR_BOSTON	TR_CROSBY	TR_HARBOR CHA	TR_HARBOR SAM	TUG_PATH_D PM
residential	483230.59		1.2E-02	1.3E-02	1.0E-02	9.2E-03	1.8E-03	1.5E-03	1.6E-03	1.5E-03	9.9E-03	4.1E-04	3.6E-04	8.0E-03	5.5E-07	9.7E-08	1.7E-06	8.8E-06	3.7E-05	1.1E-05	6.3E-04
residential	483330.59		1.3E-02	1.4E-02	1.1E-02	9.7E-03	1.8E-03	1.6E-03	1.6E-03	1.6E-03	1.1E-02	4.4E-04	3.9E-04	8.2E-03	5.7E-07	9.8E-08	1.8E-06	9.3E-06	4.0E-05	1.1E-05	6.5E-04
residential	483430.59		1.3E-02	1.5E-02	1.2E-02	1.0E-02	1.9E-03	1.6E-03	1.7E-03	1.7E-03	1.2E-02	4.8E-04	4.2E-04	8.4E-03	5.9E-07	9.9E-08	1.8E-06	9.9E-06	4.4E-05	1.2E-05	6.7E-04
residential	483530.59		1.4E-02	1.6E-02	1.3E-02	1.1E-02	2.0E-03	1.7E-03	1.8E-03	1.8E-03	1.3E-02	5.1E-04	4.6E-04	8.6E-03	6.0E-07	1.0E-07	1.9E-06	1.0E-05	4.8E-05	1.2E-05	7.1E-04
residential	483630.59		1.5E-02	1.7E-02	1.3E-02	1.2E-02	2.2E-03	1.8E-03	1.9E-03	1.8E-03	1.5E-02	5.6E-04	4.9E-04	8.9E-03	6.2E-07	1.0E-07	1.9E-06	1.1E-05	5.2E-05	1.3E-05	7.4E-04
residential	483730.59		1.6E-02	1.8E-02	1.4E-02	1.2E-02	2.3E-03	1.9E-03	2.0E-03	1.9E-03	1.6E-02	6.0E-04	5.3E-04	9.1E-03	6.4E-07	1.0E-07	2.0E-06	1.2E-05	5.7E-05	1.3E-05	7.7E-04
residential	483830.59		1.7E-02	1.9E-02	1.5E-02	1.3E-02	2.4E-03	2.0E-03	2.1E-03	2.0E-03	1.9E-02	6.5E-04	5.8E-04	9.5E-03	6.7E-07	1.0E-07	2.1E-06	1.3E-05	6.3E-05	1.4E-05	8.2E-04
residential	483930.59		1.9E-02	1.9E-02	1.6E-02	1.4E-02	2.6E-03	2.1E-03	2.2E-03	2.2E-03	2.1E-02	7.1E-04	6.3E-04	9.8E-03	6.9E-07	1.0E-07	2.1E-06	1.3E-05	7.0E-05	1.4E-05	8.6E-04
residential	484030.59		2.0E-02	2.0E-02	1.7E-02	1.4E-02	2.7E-03	2.2E-03	2.3E-03	2.3E-03	2.4E-02	7.8E-04	6.9E-04	1.0E-02	7.1E-07	1.0E-07	2.2E-06	1.4E-05	7.9E-05	1.5E-05	9.2E-04
residential	484130.59		2.1E-02	2.0E-02	1.8E-02	1.6E-02	3.0E-03	2.4E-03	2.6E-03	2.5E-03	2.8E-02	8.6E-04	7.5E-04	1.1E-02	7.4E-07	1.1E-07	2.3E-06	1.5E-05	8.9E-05	1.6E-05	9.6E-04

	X	Vessel Hoteling All	Vessel Hoteling Refrigerated ContainersSTC UNMIT	Vessel Hoteling Multi-Purpose General CargoSTC UNMIT	Vessel Hoteling Dry BulkSTC UNMIT	Vessel Transit All	Vessel Transit Refrigerated ContainersSTC UNMIT	Vessel Transit Multi-Purpose General CargoSTC UNMIT	Vessel Transit Dry BulkSTC UNMIT	Tug/Barge Transit All	Tug/Barge Transit Refrigerated ContainersSTC UNMIT	Tug/Barge Transit Multi-Purpose General CargoSTC UNMIT	Tug/Barge Transit Dry BulkSTC UNMIT	Terminal I All	Terminal I Refrigerated ContainersSTC UNMIT
		100%	81%	9%	10%	100%	46%	25%	28%	100%	21%	54%	25%	100%	39%
residential	483230.59	5.1E-02	4E-02	3E-03	3E-03	8E-03	4E-03	2E-03	2E-03	6E-04	1E-04	3E-04	2E-04	1E-02	4E-03
residential	483330.59	5.4E-02	5E-02	3E-03	3E-03	8E-03	4E-03	2E-03	2E-03	6E-04	1E-04	4E-04	2E-04	1E-02	4E-03
residential	483430.59	5.7E-02	5E-02	4E-03	3E-03	8E-03	4E-03	2E-03	2E-03	7E-04	1E-04	4E-04	2E-04	1E-02	5E-03
residential	483530.59	6.1E-02	5E-02	4E-03	4E-03	9E-03	4E-03	2E-03	2E-03	7E-04	1E-04	4E-04	2E-04	1E-02	5E-03
residential	483630.59	6.4E-02	6E-02	4E-03	4E-03	9E-03	4E-03	2E-03	3E-03	7E-04	2E-04	4E-04	2E-04	1E-02	6E-03
residential	483730.59	6.8E-02	6E-02	4E-03	4E-03	9E-03	4E-03	2E-03	3E-03	8E-04	2E-04	4E-04	2E-04	2E-02	6E-03
residential	483830.59	7.2E-02	6E-02	4E-03	4E-03	9E-03	4E-03	2E-03	3E-03	8E-04	2E-04	4E-04	2E-04	2E-02	7E-03
residential	483930.59	7.7E-02	7E-02	5E-03	4E-03	1E-02	5E-03	2E-03	3E-03	9E-04	2E-04	5E-04	2E-04	2E-02	8E-03
residential	484030.59	8.0E-02	7E-02	5E-03	5E-03	1E-02	5E-03	3E-03	3E-03	9E-04	2E-04	5E-04	2E-04	2E-02	9E-03
residential	484130.59	8.6E-02	8E-02	5E-03	5E-03	1E-02	5E-03	3E-03	3E-03	1E-03	2E-04	5E-04	2E-04	3E-02	1E-02

TAMT Risk Assessment - DPM Cancer and Chronic HI

AERMOD Output

AERMOD UNITIZED CONCENTRATIONS

	Discrete Receptor ID (Group Name)	X	Y	1 B10_1_AUX	3 B10_2_AUX	5 B10_3_AUX	7 B10_4_AUX	9 B10_5_AUX	11 B10_6_AUX	13 B10_7_AUX	15 B10_8_AUX	17 CHE_1	18 LOC_SWTCH EMP	19 LOC_SWTCH LOA	20 OGV_PATH _BLR	21 OGV_PATH _DPM	22 TR_28TH	23 TR_BAYMA R	24 TR_BOSTON	25 TR_CROSBY	26 TR_HARBOR CHA	27 TR_HARBOR SAM	28 TUG_PATH_ DPM
residential	REC_100M	487130.59	3618325.04	2.3E-01	1.9E-01	1.9E-01	1.8E-01	1.9E-01	1.9E-01	2.1E-01	2.3E-01	2.2E+05	5.5E-01	5.3E-01	9.0E-02	9.0E-02	5.5E-01	2.6E-02	4.3E-01	9.9E-01	1.0E+00	1.6E+00	1.2E-01
residential	REC_100M	487230.59	3618325.04	2.1E-01	1.8E-01	1.8E-01	1.8E-01	1.8E-01	1.8E-01	2.0E-01	2.1E-01	2.0E+05	5.1E-01	4.9E-01	8.7E-02	8.7E-02	6.8E-01	2.7E-02	5.3E-01	8.5E-01	9.1E-01	1.5E+00	1.1E-01
residential	REC_100M	487330.59	3618325.04	2.0E-01	1.7E-01	1.7E-01	1.7E-01	1.7E-01	1.7E-01	1.9E-01	2.0E-01	1.9E+05	4.8E-01	4.6E-01	8.5E-02	8.5E-02	9.1E-01	2.9E-02	6.7E-01	7.6E-01	8.4E-01	1.5E+00	1.1E-01
residential	REC_100M	487430.59	3618325.04	2.0E-01	1.7E-01	1.7E-01	1.6E-01	1.6E-01	1.7E-01	1.8E-01	1.9E-01	1.8E+05	4.5E-01	4.3E-01	8.3E-02	8.3E-02	1.3E+00	3.0E-02	9.0E-01	6.9E-01	7.8E-01	1.5E+00	1.1E-01
residential	REC_100M	487530.59	3618325.04	1.9E-01	1.6E-01	1.6E-01	1.6E-01	1.6E-01	1.6E-01	1.7E-01	1.8E-01	1.7E+05	4.2E-01	4.0E-01	8.1E-02	8.1E-02	1.7E+00	3.1E-02	1.2E+00	6.2E-01	7.1E-01	1.4E+00	1.0E-01
residential	REC_100M	487630.59	3618325.04	1.8E-01	1.5E-01	1.5E-01	1.5E-01	1.5E-01	1.5E-01	1.6E-01	1.7E-01	1.6E+05	3.9E-01	3.8E-01	7.9E-02	7.9E-02	1.9E+00	3.3E-02	1.6E+00	5.7E-01	6.6E-01	1.3E+00	1.0E-01
residential	REC_100M	487730.59	3618325.04	1.7E-01	1.5E-01	1.5E-01	1.5E-01	1.5E-01	1.5E-01	1.5E-01	1.6E-01	1.5E+05	3.7E-01	3.5E-01	7.7E-02	7.7E-02	2.0E+00	3.4E-02	1.8E+00	5.2E-01	6.1E-01	1.2E+00	9.8E-02
residential	REC_100M	487830.59	3618325.04	1.6E-01	1.4E-01	1.4E-01	1.4E-01	1.4E-01	1.4E-01	1.5E-01	1.6E-01	1.4E+05	3.4E-01	3.3E-01	7.4E-02	7.4E-02	2.0E+00	3.5E-02	1.9E+00	4.8E-01	5.6E-01	1.1E+00	9.5E-02
residential	REC_100M	487930.59	3618325.04	1.6E-01	1.4E-01	1.4E-01	1.4E-01	1.4E-01	1.4E-01	1.4E-01	1.5E-01	1.4E+05	3.3E-01	3.2E-01	7.4E-02	7.4E-02	2.2E+00	3.7E-02	2.0E+00	4.6E-01	5.4E-01	1.1E+00	9.3E-02
residential	REC_100M	488030.59	3618325.04	1.6E-01	1.4E-01	1.4E-01	1.4E-01	1.4E-01	1.4E-01	1.4E-01	1.5E-01	1.3E+05	3.2E-01	3.1E-01	7.3E-02	7.3E-02	2.1E+00	3.9E-02	2.2E+00	4.4E-01	5.2E-01	1.0E+00	8.9E-02

DPM SCALED CONCENTRATIONS

Source Group	1	3	5	7	9	11	13	15	17	18	19	21	22	23	24	25	26	27	28
divide by -->	4	4	4	4	2	2	2	2	1	2	2	1	1	1	1	1	1	1	1
	Refrigerated ContainersSTC UNMIT	Refrigerated ContainersSTC UNMIT	Refrigerated ContainersSTC UNMIT	Refrigerated ContainersSTC UNMIT	Multi-Purpose General CargoSTC UNMIT	Multi-Purpose General CargoSTC UNMIT	Dry BulkSTC UNMIT	Dry BulkSTC UNMIT	AllSTC UNMIT	AllSTC UNMIT	AllSTC UNMIT	AllSTC UNMIT	TR_28THSTC UNMIT	TR_BAYMARSTC UNMIT	TR_BOSTON STC UNMIT	TR_CROSBY STC UNMIT	TR_HARBOR CHASTC UNMIT	TR_HARBOR SAMSTC UNMIT	AllSTC UNMIT
g/s -->	5.7E-02	5.7E-02	5.7E-02	5.7E-02	1.3E-02	1.3E-02	1.4E-02	1.4E-02	6.8E-08	1.8E-03	1.8E-03	3.0E-02	7.1E-06	8.6E-06	2.3E-05	4.8E-05	1.1E-04	1.1E-04	1.8E-03
X	B10_1_AUX	B10_2_AUX	B10_3_AUX	B10_4_AUX	B10_5_AUX	B10_6_AUX	B10_7_AUX	B10_8_AUX	CHE_1	LOC_SWTCHEMP	LOC_SWTCHLOA	OGV_PATH_DPM	TR_28TH	TR_BAYMAR	TR_BOSTON	TR_CROSBY	TR_HARBOR CHA	TR_HARBOR SAM	TUG_PATH_DPM
487130.59	1.3E-02	1.1E-02	1.1E-02	1.0E-02	2.4E-03	2.5E-03	2.9E-03	3.1E-03	1.5E-02	9.8E-04	9.3E-04	2.7E-03	3.9E-06	2.3E-07	9.8E-06	4.8E-05	1.1E-04	1.7E-04	2.1E-04
487230.59	1.2E-02	1.0E-02	1.0E-02	1.0E-02	2.3E-03	2.4E-03	2.7E-03	2.9E-03	1.4E-02	9.0E-04	8.5E-04	2.6E-03	4.8E-06	2.4E-07	1.2E-05	4.1E-05	9.8E-05	1.6E-04	2.0E-04
487330.59	1.2E-02	9.7E-03	9.7E-03	9.6E-03	2.2E-03	2.3E-03	2.6E-03	2.8E-03	1.3E-02	8.4E-04	8.0E-04	2.6E-03	6.5E-06	2.5E-07	1.5E-05	3.7E-05	9.0E-05	1.6E-04	2.0E-04
487430.59	1.1E-02	9.4E-03	9.4E-03	9.3E-03	2.1E-03	2.2E-03	2.5E-03	2.6E-03	1.2E-02	8.0E-04	7.6E-04	2.5E-03	9.2E-06	2.6E-07	2.0E-05	3.3E-05	8.4E-05	1.6E-04	1.9E-04
487530.59	1.1E-02	9.0E-03	9.0E-03	8.9E-03	2.0E-03	2.1E-03	2.3E-03	2.5E-03	1.1E-02	7.3E-04	7.0E-04	2.4E-03	1.2E-05	2.7E-07	2.8E-05	3.0E-05	7.6E-05	1.4E-04	1.8E-04
487630.59	1.0E-02	8.7E-03	8.7E-03	8.6E-03	1.9E-03	2.0E-03	2.2E-03	2.4E-03	1.1E-02	6.9E-04	6.6E-04	2.4E-03	1.4E-05	2.8E-07	3.6E-05	2.7E-05	7.1E-05	1.4E-04	1.8E-04
487730.59	9.7E-03	8.4E-03	8.4E-03	8.3E-03	1.9E-03	1.9E-03	2.2E-03	2.3E-03	1.0E-02	6.5E-04	6.2E-04	2.3E-03	1.4E-05	2.9E-07	4.1E-05	2.5E-05	6.5E-05	1.3E-04	1.7E-04
487830.59	9.3E-03	8.0E-03	8.0E-03	7.9E-03	1.8E-03	1.8E-03	2.1E-03	2.2E-03	9.4E-03	6.0E-04	5.8E-04	2.2E-03	1.5E-05	3.0E-07	4.2E-05	2.3E-05	6.0E-05	1.2E-04	1.7E-04
487930.59	9.1E-03	7.9E-03	7.9E-03	7.9E-03	1.8E-03	1.8E-03	2.0E-03	2.1E-03	9.3E-03	5.8E-04	5.7E-04	2.2E-03	1.6E-05	3.2E-07	4.6E-05	2.2E-05	5.8E-05	1.1E-04	1.6E-04
488030.59	8.9E-03	7.8E-03	7.8E-03	7.7E-03	1.7E-03	1.7E-03	2.0E-03	2.1E-03	9.0E-03	5.6E-04	5.5E-04	2.2E-03	1.5E-05	3.4E-07	4.9E-05	2.1E-05	5.5E-05	1.1E-04	1.6E-04

	Vessel Hoteling				Vessel Transit				Tug/Barge Transit				Terminal I	
	All	Refrigerated ContainersSTC UNMIT	Multi-Purpose General CargoSTC UNMIT	Dry BulkSTC UNMIT	All	Refrigerated ContainersSTC UNMIT	Multi-Purpose General CargoSTC UNMIT	Dry BulkSTC UNMIT	All	Refrigerated ContainersSTC UNMIT	Multi-Purpose General CargoSTC UNMIT	Dry BulkSTC UNMIT	All	Refrigerated ContainersSTC UNMIT
X	100%	81%	9%	10%	100%	46%	25%	28%	100%	21%	54%	25%	100%	39%
487130.59	5.5E-02	4E-02	5E-03	6E-03	3E-03	1E-03	7E-04	8E-04	2E-04	4E-05	1E-04	5E-05	1E-02	6E-03
487230.59	5.3E-02	4E-02	5E-03	6E-03	3E-03	1E-03	7E-04	7E-04	2E-04	4E-05	1E-04	5E-05	1E-02	5E-03
487330.59	5.0E-02	4E-02	4E-03	5E-03	3E-03	1E-03	6E-04	7E-04	2E-04	4E-05	1E-04	5E-05	1E-02	5E-03
487430.59	4.9E-02	4E-02	4E-03	5E-03	3E-03	1E-03	6E-04	7E-04	2E-04	4E-05	1E-04	5E-05	1E-02	5E-03
487530.59	4.6E-02	4E-02	4E-03	5E-03	2E-03	1E-03	6E-04	7E-04	2E-04	4E-05	1E-04	5E-05	1E-02	4E-03
487630.59	4.5E-02	4E-02	4E-03	5E-03	2E-03	1E-03	6E-04	7E-04	2E-04	4E-05	1E-04	4E-05	1E-02	4E-03
487730.59	4.3E-02	3E-02	4E-03	4E-03	2E-03	1E-03	6E-04	7E-04	2E-04	4E-05	9E-05	4E-05	1E-02	4E-03
487830.59	4.1E-02	3E-02	4E-03	4E-03	2E-03	1E-03	6E-04	6E-04	2E-04	3E-05	9E-05	4E-05	9E-03	4E-03
487930.59	4.0E-02	3E-02	4E-03	4E-03	2E-03	1E-03	6E-04	6E-04	2E-04	3E-05	9E-05	4E-05	9E-03	4E-03
488030.59	4.0E-02	3E-02	3E-03	4E-03	2E-03	1E-03	6E-04	6E-04	2E-04	3E-05	9E-05	4E-05	9E-03	3E-03

TAMT Risk Assessment - DPM Cancer and Chronic HI

AERMOD UNITIZED CONCENTRATIONS

AERMOD Output

	Discrete Receptor ID (Group Name)	X	Y	B10_1_AUX (1)	B10_2_AUX (3)	B10_3_AUX (5)	B10_4_AUX (7)	B10_5_AUX (9)	B10_6_AUX (11)	B10_7_AUX (13)	B10_8_AUX (15)	CHE_1 (17)
recreational	park	484530.59	3618825.04	1.6E-01	1.6E-01	1.4E-01	1.3E-01	1.1E-01	1.0E-01	9.8E-02	9.7E-02	1.1E+05
recreational	park	484630.59	3618825.04	1.6E-01	1.8E-01	1.4E-01	1.3E-01	1.2E-01	1.0E-01	1.0E-01	1.0E-01	1.3E+05
recreational	park	484730.59	3618825.04	1.6E-01	2.1E-01	1.5E-01	1.4E-01	1.2E-01	1.1E-01	1.0E-01	1.0E-01	1.5E+05
residential	REC_100M	484830.59	3618825.04	1.7E-01	2.6E-01	1.7E-01	1.5E-01	1.3E-01	1.1E-01	1.1E-01	1.1E-01	1.8E+05
residential	REC_100M	484930.59	3618825.04	2.0E-01	3.2E-01	2.0E-01	1.6E-01	1.4E-01	1.2E-01	1.1E-01	1.1E-01	2.3E+05
residential	REC_100M	485030.59	3618825.04	2.5E-01	3.7E-01	2.3E-01	1.9E-01	1.5E-01	1.3E-01	1.2E-01	1.2E-01	3.1E+05
residential	REC_100M	485130.59	3618825.04	3.3E-01	4.0E-01	2.7E-01	2.1E-01	1.7E-01	1.4E-01	1.3E-01	1.2E-01	4.1E+05
residential	REC_100M	485230.59	3618825.04	4.1E-01	4.1E-01	3.1E-01	2.4E-01	1.8E-01	1.5E-01	1.3E-01	1.2E-01	5.5E+05
residential	REC_100M	485330.59	3618825.04	4.5E-01	4.0E-01	3.4E-01	2.8E-01	2.1E-01	1.6E-01	1.5E-01	1.3E-01	7.4E+05
residential	REC_100M	485430.59	3618825.04	4.6E-01	3.8E-01	3.6E-01	3.1E-01	2.4E-01	1.9E-01	1.7E-01	1.5E-01	9.4E+05
residential	REC_100M	485830.59	3618825.04	3.4E-01	3.0E-01	3.4E-01	3.5E-01	3.2E-01	2.7E-01	2.5E-01	2.3E-01	1.0E+06
residential	REC_100M	485930.59	3618825.04	3.2E-01	2.8E-01	3.3E-01	3.4E-01	3.3E-01	2.8E-01	2.7E-01	2.5E-01	9.4E+05
residential	REC_100M	486030.59	3618825.04	3.0E-01	2.6E-01	3.0E-01	3.2E-01	3.2E-01	2.9E-01	2.8E-01	2.7E-01	8.3E+05
residential	REC_100M	486230.59	3618825.04	2.6E-01	2.2E-01	2.6E-01	2.9E-01	3.1E-01	3.0E-01	3.1E-01	3.1E-01	6.0E+05
residential	REC_100M	486330.59	3618825.04	2.5E-01	2.1E-01	2.5E-01	2.7E-01	3.0E-01	3.0E-01	3.1E-01	3.2E-01	5.1E+05
residential	REC_100M	486430.59	3618825.04	2.4E-01	2.0E-01	2.3E-01	2.5E-01	2.8E-01	3.0E-01	3.1E-01	3.2E-01	4.5E+05
residential	REC_100M	486530.59	3618825.04	2.2E-01	1.9E-01	2.1E-01	2.4E-01	2.7E-01	2.9E-01	3.0E-01	3.2E-01	3.9E+05
residential	REC_100M	486630.59	3618825.04	2.1E-01	1.8E-01	2.0E-01	2.2E-01	2.5E-01	2.7E-01	2.9E-01	3.0E-01	3.6E+05
residential	REC_100M	486730.59	3618825.04	2.0E-01	1.7E-01	1.9E-01	2.0E-01	2.3E-01	2.5E-01	2.7E-01	2.9E-01	3.2E+05
residential	REC_100M	486830.59	3618825.04	1.9E-01	1.7E-01	1.8E-01	1.9E-01	2.2E-01	2.4E-01	2.6E-01	2.8E-01	2.8E+05
residential	REC_100M	486930.59	3618825.04	1.8E-01	1.6E-01	1.7E-01	1.8E-01	2.0E-01	2.3E-01	2.4E-01	2.6E-01	2.5E+05
residential	REC_100M	487030.59	3618825.04	1.7E-01	1.5E-01	1.6E-01	1.7E-01	1.9E-01	2.1E-01	2.3E-01	2.5E-01	2.2E+05
residential	REC_100M	487130.59	3618825.04	1.7E-01	1.5E-01	1.5E-01	1.6E-01	1.8E-01	2.0E-01	2.1E-01	2.3E-01	2.0E+05
residential	REC_100M	487230.59	3618825.04	1.6E-01	1.4E-01	1.5E-01	1.5E-01	1.7E-01	1.9E-01	2.0E-01	2.1E-01	1.8E+05
residential	REC_100M	487330.59	3618825.04	1.5E-01	1.4E-01	1.4E-01	1.5E-01	1.6E-01	1.8E-01	1.9E-01	2.0E-01	1.6E+05
residential	REC_100M	487430.59	3618825.04	1.5E-01	1.3E-01	1.4E-01	1.4E-01	1.5E-01	1.7E-01	1.8E-01	1.9E-01	1.5E+05
residential	REC_100M	487530.59	3618825.04	1.4E-01	1.3E-01	1.3E-01	1.3E-01	1.4E-01	1.6E-01	1.7E-01	1.8E-01	1.4E+05
residential	REC_100M	487630.59	3618825.04	1.4E-01	1.2E-01	1.3E-01	1.3E-01	1.4E-01	1.5E-01	1.6E-01	1.7E-01	1.3E+05
residential	REC_100M	487730.59	3618825.04	1.3E-01	1.2E-01	1.2E-01	1.2E-01	1.3E-01	1.4E-01	1.5E-01	1.6E-01	1.2E+05
residential	REC_100M	487830.59	3618825.04	1.3E-01	1.1E-01	1.2E-01	1.2E-01	1.3E-01	1.3E-01	1.4E-01	1.5E-01	1.1E+05
residential	REC_100M	487930.59	3618825.04	1.2E-01	1.1E-01	1.1E-01	1.1E-01	1.2E-01	1.3E-01	1.3E-01	1.4E-01	1.1E+05
residential	REC_100M	488030.59	3618825.04	1.2E-01	1.1E-01	1.1E-01	1.1E-01	1.1E-01	1.2E-01	1.3E-01	1.4E-01	1.0E+05
residential	REC_100M	488130.59	3618825.04	1.2E-01	1.0E-01	1.1E-01	1.1E-01	1.1E-01	1.2E-01	1.2E-01	1.3E-01	9.6E+04
residential	REC_100M	488230.59	3618825.04	1.1E-01	1.0E-01	1.0E-01	1.0E-01	1.1E-01	1.1E-01	1.2E-01	1.2E-01	9.2E+04
residential	REC_100M	488330.59	3618825.04	1.1E-01	9.8E-02	1.0E-01	1.0E-01	1.0E-01	1.1E-01	1.1E-01	1.2E-01	8.8E+04
residential	REC_100M	488430.59	3618825.04	1.2E-01	1.0E-01	1.1E-01	1.1E-01	1.1E-01	1.1E-01	1.2E-01	1.2E-01	8.9E+04
residential	REC_100M	477630.59	3618925.04	2.3E-02	2.3E-02	2.2E-02	2.1E-02	2.0E-02	1.8E-02	1.8E-02	1.8E-02	1.1E+04
residential	REC_100M	477730.59	3618925.04	2.4E-02	2.4E-02	2.3E-02	2.2E-02	2.0E-02	1.9E-02	1.9E-02	1.9E-02	1.2E+04
recreational	park	484030.59	3618925.04	1.4E-01	1.4E-01	1.2E-01	1.1E-01	9.6E-02	8.3E-02	8.2E-02	8.2E-02	6.2E+04
recreational	park	484130.59	3618925.04	1.4E-01	1.4E-01	1.2E-01	1.1E-01	9.4E-02	8.2E-02	8.1E-02	8.0E-02	6.6E+04
recreational	park	484430.59	3618925.04	1.4E-01	1.5E-01	1.3E-01	1.2E-01	1.0E-01	9.0E-02	8.9E-02	8.8E-02	8.6E+04
recreational	park	484530.59	3618925.04	1.5E-01	1.6E-01	1.3E-01	1.2E-01	1.1E-01	9.4E-02	9.1E-02	9.0E-02	9.8E+04
recreational	park	484630.59	3618925.04	1.5E-01	1.7E-01	1.4E-01	1.3E-01	1.1E-01	9.7E-02	9.5E-02	9.2E-02	1.1E+05
residential	REC_100M	484730.59	3618925.04	1.5E-01	2.0E-01	1.5E-01	1.3E-01	1.2E-01	1.0E-01	9.8E-02	9.5E-02	1.3E+05
residential	REC_100M	484830.59	3618925.04	1.7E-01	2.4E-01	1.7E-01	1.5E-01	1.3E-01	1.1E-01	1.0E-01	1.0E-01	1.6E+05
residential	REC_100M	484930.59	3618925.04	1.9E-01	2.8E-01	1.9E-01	1.6E-01	1.3E-01	1.1E-01	1.1E-01	1.0E-01	2.0E+05
residential	REC_100M	485030.59	3618925.04	2.3E-01	3.3E-01	2.2E-01	1.8E-01	1.4E-01	1.2E-01	1.1E-01	1.1E-01	2.6E+05
residential	REC_100M	485130.59	3618925.04	2.9E-01	3.6E-01	2.5E-01	2.0E-01	1.6E-01	1.3E-01	1.2E-01	1.1E-01	3.5E+05
residential	REC_100M	485230.59	3618925.04	3.4E-01	3.8E-01	2.8E-01	2.3E-01	1.8E-01	1.4E-01	1.3E-01	1.2E-01	4.5E+05
residential	REC_100M	485330.59	3618925.04	3.9E-01	3.8E-01	3.1E-01	2.6E-01	2.0E-01	1.6E-01	1.4E-01	1.3E-01	5.9E+05
residential	REC_100M	485430.59	3618925.04	4.1E-01	3.7E-01	3.3E-01	2.8E-01	2.2E-01	1.7E-01	1.6E-01	1.4E-01	7.2E+05
residential	REC_100M	485530.59	3618925.04	4.1E-01	3.6E-01	3.4E-01	3.0E-01	2.4E-01	2.0E-01	1.8E-01	1.6E-01	8.2E+05
residential	REC_100M	485830.59	3618925.04	3.5E-01	3.0E-01	3.4E-01	3.3E-01	3.0E-01	2.5E-01	2.4E-01	2.2E-01	8.7E+05
residential	REC_100M	485930.59	3618925.04	3.3E-01	2.8E-01	3.2E-01	3.3E-01	3.0E-01	2.6E-01	2.5E-01	2.4E-01	8.2E+05
residential	REC_100M	486030.59	3618925.04	3.0E-01	2.6E-01	3.0E-01	3.1E-01	3.0E-01	2.7E-01	2.6E-01	2.5E-01	7.4E+05
residential	REC_100M	486230.59	3618925.04	2.7E-01	2.3E-01	2.6E-01	2.9E-01	3.0E-01	2.8E-01	2.8E-01	2.8E-01	5.7E+05
residential	REC_100M	486330.59	3618925.04	2.5E-01	2.1E-01	2.5E-01	2.8E-01	3.0E-01	2.9E-01	3.0E-01	3.0E-01	4.7E+05
residential	REC_100M	486430.59	3618925.04	2.4E-01	2.0E-01	2.3E-01	2.6E-01	2.9E-01	2.9E-01	3.0E-01	3.1E-01	4.1E+05
residential	REC_100M	486530.59	3618925.04	2.2E-01	1.9E-01	2.2E-01	2.4E-01	2.7E-01	2.8E-01	3.0E-01	3.1E-01	3.5E+05
residential	REC_100M	486630.59	3618925.04	2.1E-01	1.8E-01	2.0E-01	2.2E-01	2.5E-01	2.7E-01	2.8E-01	3.0E-01	3.4E+05
residential	REC_100M	486730.59	3618925.04	2.0E-01	1.7E-01	1.9E-01	2.1E-01	2.3E-01	2.5E-01	2.7E-01	2.8E-01	3.1E+05
residential	REC_100M	486830.59	3618925.04	1.9E-01	1.6E-01	1.8E-01	1.9E-01	2.2E-01	2.4E-01	2.6E-01	2.7E-01	2.8E+05
residential	REC_100M	486930.59	3618925.04	1.8E-01	1.5E-01	1.7E-01	1.8E-01	2.0E-01	2.3E-01	2.4E-01	2.6E-01	2.4E+05
residential	REC_100M	487030.59	3618925.04	1.7E-01	1.5E-01	1.6E-01	1.7E-01	1.9E-01	2.1E-01	2.3E-01	2.5E-01	2.2E+05
residential	REC_100M	487130.59	3618925.04	1.6E-01	1.4E-01	1.5E-01	1.6E-01	1.8E-01	2.0E-01	2.2E-01	2.3E-01	1.9E+05
residential	REC_100M	487230.59	3618925.04	1.5E-01	1.3E-01	1.4E-01	1.5E-01	1.7E-01	1.9E-01	2.0E-01	2.2E-01	1.7E+05
residential	REC_100M	487330.59	3618925.04	1.5E-01	1.3E-01	1.4E-01	1.4E-01	1.6E-01	1.8E-01	1.9E-01	2.0E-01	1.6E+05
residential	REC_100M	487430.59	3618925.04	1.4E-01	1.3E-01	1.3E-01	1.4E-01	1.5E-01	1.7E-01	1.8E-01	1.9E-01	1.5E+05
residential	REC_100M	487530.59	3618925.04	1.4E-01	1.2E-01	1.3E-01	1.3E-01	1.4E-01	1.6E-01	1.7E-01	1.8E-01	1.4E+05
residential	REC_100M	487630.59	3618925.04	1.3E-01	1.2E-01	1.2E-01	1.3E-01	1.4E-01	1.5E-01	1.6E-01	1.7E-01	1.3E+05
residential	REC_100M	487730.59	3618925.04	1.3E-01	1.1E-01	1.2E-01	1.2E-01	1.3E-01	1.4E-01	1.5E-01	1.6E-01	1.2E+05
residential	REC_100M	487830.59	3618925.04	1.2E-01	1.1E-01	1.1E-01	1.2E-01	1.2E-01	1.4E-01	1.4E-01	1.5E-01	1.1E+05
residential	REC_100M	487930.59	3618925.04	1.2E-01	1.1E-01	1.1E-01	1.1E-01	1.2E-01	1.3E-01	1.4E-01	1.4E-01	1.1E+05
residential	REC_100M	488030.59	3618925.04	1.2E-01	1.0E-01	1.1E-01	1.1E-01	1.1E-01	1.2E-01	1.3E-01	1.4E-01	9.9E+04
residential	REC_100M	488130.59	3618925.04	1.1E-01	1.0E-01	1.0E-01	1.0E-01	1.1E-01	1.2E-01	1.2E-01	1.3E-01	9.3E+04
residential	REC_100M	488230.59	3618925.04	1.1E-01	9.7E-02	9.9E-02	1.0E-01	1.1E-01	1.1E-01	1.2E-01	1.2E-01	8.9E+04
residential	REC_100M	488330.59	3618925.04	1.1E-01	9.5E-02	9.7E-02	9.8E-02	1.0E-01	1.1E-01	1.1E-01	1.2E-01	8.5E+04
residential	REC_100M	477030.59	3619025.04	1.6E-02	1.7E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	1.3E-02	7.3E+03
residential	REC_100M	477130.59	3619025.04	1.8E-02	1.8E-02	1.7E-02	1.6E-02	1.5E-02	1.5E-02	1.4E-02	1.4E-02	8.0E+03
residential	REC_100M	477230.59	3619025.04	1.9E-02	2.0E-02	1.8E-02	1.8E-02	1.7E-02	1.6E-02	1.6E-02	1.5E-02	9.1E+03
residential	REC_100M	477330.59	3619025.04	2.0E-02	2.0E-02	1.9E-02	1.8E-02	1.7E-02	1.6E-02	1.6E-02	1.6E-02	9.5E+03
residential	REC_100M	477430.59	3619025.04	2.1E-02	2.1E-02	2.0E-02	1.9E-02	1.8E-02	1.7E-02	1.7E-02	1.7E-02	9.8E+03
residential	REC_100M	477530.59	3619025.04	2.1E-02	2.2E-02	2.0E-02	1.9E-02	1.8E-02	1.7E-02	1.7E-02	1.7E-02	1.0E+04
residential	REC_100M	477630.59	3619025.04	2.2E-02	2.3E-02	2.1E-02	2.0E-02	1.9E-02	1.8E-02	1.8E-02	1.8E-02	1.0E+04
residential	REC_100M	477730.59	3619025.04	2.3E-02	2.4E-02	2.2E-02	2.1E-02	2.0E-02	1.9E-02	1.9E-02	1.8E-02	1.1E+04
recreational	park	478030.59	3619025.04	2.4E-02	2.5E-02	2.3E-02	2.2E-02	2.1E-02	2.0E-02	2.0E-02	1.9E-02	1.2E+04
recreational	park	478130.59	3619025.04	2.5E-02	2.6E-02	2.4E-02	2.3E-02	2.1E-02	2.0E-02	2.0E-02	2.0E-02	1.2E+04
recreational	park	478230.59	3619025.04	2.5E-02	2.6E-02	2.4E-02	2.3E-02	2.2E-02	2.0E-02	2.0E-02	2.0E-02	1.2E+04
recreational	park	483930.59	3619025.04	1.2E-01	1.2E-01	1.1E-01	9.4E-02	8.2E-02	7.3E-02	7.2E-02	7.1E-02	5.2E+04
recreational	park	484030.59	3619025.04	1.3E-01	1.2E-01	1.1E-01	9.9E-02	8.6E-02	7.5E-02	7.5E-02	7.4E-02	5.5E+04
recreational	park	484130.59	3619025.04	1.3E-01	1.3E-01	1.1E-01	1.0E-01	8.7E-02	7.7E-02	7.6E-02	7.4E-02	5.9E+04
recreational	park	484230.59	3619025.04	1.3E-01	1.3E-01	1.1E-01	1.0E-01	8.9E-02	7.9E-02	7.8E-02	7.7E-02	6.4E+04
recreational	park	484330.59	3619025.04	1.3E-01	1.4E-01	1.2E-01	1.1E-01	9.4E-02	8.3E-02	8.2E-02	8.0E-02	7.0E+04
recreational	park	484430.59	3619025.04	1.3E-01	1.4E-01	1.2E-01	1.1E-01	9.1E-02	8.1E-02	7.8E-02	7.8E-02	7.1E+04
residential	REC_100M	484530.59	3619025.04	1.4E-01	1.5E-01	1.3E-01	1.2E-01	1.0E-01	8.9E-02	8.7E-02	8.5E-02	9.0E+04
residential	REC_100M	484630.59	3619025.04	1.4E-01	1.7E-01	1.4E-01	1.2E-01	1.1E-01	9.3E-02	9.0E-02	8.8E-02	1.0E+05
residential	REC_100M	484730.59	3619025.04	1.5E-01	2.0E-01	1.5E-01	1.3E-01	1.1E-01	9.8E-02	9.5E-02	9.2E-02	1.2E+05
residential	REC_100M	484830.59	3619025.04	1.6E-01	2.3E-01	1.7E-01	1.4E-01	1.2E-01	1.0E-01	9.9E-02	9.6E-02	1.5E+05
residential	REC_100M	484930.59	3619025.04	1.9E-01	2.6E-01	1.9E-01	1.6E-01	1.3E-01	1.1E-01	1.0E-01	9.9E-02	1.8E+05
residential	REC_100M	485030.59	3619025.04	2.2E-01	3.0E-01	2.1E-01	1.7E-01	1.4E-01	1.2E-01	1.1E-01	1.0E-01	2.3E+05
residential	REC_100M	485130.59	3619025.04	2.6E-01	3.2E-01	2.3E-01	1.9E-01	1.5E-01	1.2E-01	1.1E-01	1.1E-01	2.9E+05
residential	REC_100M	485230.59	3619025.04	3.0E-01	3.5E-01	2.6E-01	2.2E-01	1.7E-01	1.4E-01	1.2E-01	1.1E-01	3.8E+05
residential	REC_100M	485330.59	3619025.04	3.5E-01	3.6E-01	2.8E-01	2.4E-01	1.9E-01	1.5E-01	1.3E-01	1.2E-01	4.7E+05
residential	REC_100M	485430.59	3619025.04	3.7E-01	3.6E-01	3.1E-01	2.6E-01	2.1E-01	1.7E-01	1.5E-01	1.4E-01	5.9E+05
residential	REC_100M	485530.59	3619025.04	3.8E-01	3.5E-01	3.2E-01	2.8E-01	2.2E-01	1.8E-01	1.7E-01	1.5E-01	6.5E+05
residential	REC_100M	485630.59	3619025.04	3.8E-01	3.3E-01	3.3E-01	2.9E-01	2.4E-01	2.0E-01	1.8E-01	1.7E-01	7.0E+05
residential	REC_100M	485730.59	3619025.04	3.6E-01	3.2E-01	3.3E-01	3.1E-01	2.6E-01	2.2E-01	2.0E-01	1.9E-01	7.3E+05
residential	REC_100M	485830.59	3619025.04	3.5E-01	3.0E-01	3.3E-01	3.1E-01	2.7E-01	2.3E-01	2.2E-01	2.0E-01	7.3E+05
residential	REC_100M	485930.59	3619025.04	3.3E-01	2.8E-01	3.1E-01	3.1E-01	2.8E-01	2.4E-01	2.3E-01	2.2E-01	7.1E+05
residential	REC_100M	486030.59	3619025.04	3.1E-01	2.6E-01	3.0E-01	3.0E-01	2.8E-01	2.5E-01	2.4E-01	2.3E-01	6.6E+05
residential	REC_100M	486230.59	3619025.04	2.7E-01	2.3E-01	2.7E-01	2.8E-01	2.9E-01	2.7E-01	2.7E-01	2.6E-01	5.2E+05
residential	REC_100M	486330.59	3619025.04	2.6E-01	2.2E-01	2.5E-01	2.8E-01	2.9E-01	2.7E-01	2.8E-01	2.8E-01	4.4E+05
residential	REC_100M	486430.59	3619025.04	2.4E-01	2.0E-01	2.4E-01	2.6E-01	2.8E-01	2.8E-01	2.9E-01	2.9E-01	3.8E+05
residential	REC_100M	486530.59	3619025.04	2.2E-01	1.9E-01	2.2E-01	2.4E-01	2.7E-01	2.7E-01	2.8E-01	3.0E-01	3.4E+05
residential	REC_100M	486630.59	3619025.04	2.1E-01	1.8E-01	2.1E-01	2.3E-01	2.5E-01	2.6E-01	2.7E-01	2.9E-01	3.2E+05
residential	REC_100M	486730.59	3619025.04	1.9E-01	1.7E-01	1.9E-01	2.1E-01	2.3E-01	2.5E-01	2.6E-01	2.8E-01	3.0E+05
residential	REC_100M	486830.59	3619025.04	1.8E-01	1.6E-01	1.8E-01	2.0E-01	2.2E-01	2.4E-01	2.5E-01	2.7E-01	2.7E+05
residential	REC_100M	486930.59	3619025.04	1.7E-01	1.5E-01	1.7E-01	1.8E-01	2.1E-01	2.3E-01	2.4E-01	2.6E-01	2.4E+05
residential	REC_100M	487030.59	3619025.04	1.6E-01	1.4E-01	1.6E-01	1.7E-01	1.9E-01	2.2E-01	2.3E-01	2.5E-01	2.0E+05
residential	REC_100M	487130.59	3619025.04	1.5E-01	1.3E-01	1.5E-01	1.6E-01	1.8E-01	2.0E-01	2.2E-01	2.4E-01	1.7E+05
residential	REC_100M	487230.59	3619025.04	1.5E-01	1.3E-01	1.4E-01	1.5E-01	1.7E-01	1.9E-01	2.0E-01	2.2E-01	1.6E+05
residential	REC_100M	487330.59	3619025.04	1.4E-01	1.2E-01	1.3E-01	1.4E-01	1.6E-01	1.8E-01	1.9E-01	2.1E-01	1.4E+05
residential	REC_100M	487430.59	3619025.04	1.4E-01	1.2E-01	1.3E-01	1.4E-01	1.5E-01	1.7E-01	1.8E-01	1.9E-01	1.4E+05
residential	REC_100M	487530.59	3619025.04	1.3E-01	1.2E-01	1.2E-01	1.3E-01	1.4E-01	1.6E-01	1.7E-01	1.8E-01	1.3E+05
residential	REC_100M	487630.59	3619025.04	1.3E-01	1.1E-01	1.2E-01	1.2E-01	1.4E-01	1.5E-01	1.6E-01	1.7E-01	1.2E+05
residential	REC_100M	487730.59	3619025.04	1.2E-01	1.1E-01	1.2E-01	1.2E-01	1.3E-01	1.4E-01	1.5E-01	1.6E-01	1.2E+05
residential	REC_100M	487830.59	3619025.04	1.2E-01	1.1E-01	1.1E-01	1.2E-01	1.2E-01	1.4E-01	1.4E-01	1.5E-01	1.1E+05
residential	REC_100M	487930.59	3619025.04	1.2E-01	1.0E-01	1.1E-01	1.1E-01	1.2E-01	1.3E-01	1.4E-01	1.4E-01	1.0E+05
residential	REC_100M	488030.59	3619025.04	1.1E-01	1.0E-01	1.0E-01	1.1E-01	1.1E-01	1.2E-01	1.3E-01	1.4E-01	9.8E+04
residential	REC_100M	488130.59	3619025.04	1.1E-01	9.7E-02	1.0E-01	1.0E-01	1.1E-01	1.2E-01	1.2E-01	1.3E-01	9.2E+04
residential	REC_100M	488230.59	3619025.04	1.0E-01	9.4E-02	9.7E-02	9.9E-02	1.0E-01	1.1E-01	1.2E-01	1.2E-01	8.7E+04
residential	REC_100M	477030.59	3619125.04	1.6E-02	1.6E-02	1.5E-02	1.5E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	7.0E+03
residential	REC_100M	477130.59	3619125.04	1.7E-02	1.7E-02	1.6E-02	1.5E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	7.4E+03
residential	REC_100M	477230.59	3619125.04	1.9E-02	1.9E-02	1.8E-02	1.7E-02	1.6E-02	1.5E-02	1.5E-02	1.5E-02	8.7E+03
residential	REC_100M	477330.59	3619125.04	1.9E-02	2.0E-02	1.8E-02	1.8E-02	1.7E-02	1.6E-02	1.6E-02	1.6E-02	9.1E+03
residential	REC_100M	477430.59	3619125.04	2.0E-02	2.0E-02	1.9E-02	1.8E-02	1.7E-02	1.6E-02	1.6E-02	1.6E-02	9.4E+03
residential	REC_100M	477530.59	3619125.04	2.1E-02	2.1E-02	2.0E-02	1.9E-02	1.8E-02	1.7E-02	1.7E-02	1.7E-02	9.6E+03
residential	REC_100M	477630.59	3619125.04	2.2E-02	2.2E-02	2.1E-02	2.0E-02	1.9E-02	1.8E-02	1.7E-02	1.7E-02	9.8E+03
residential	REC_100M	477730.59	3619125.04	2.2E-02	2.3E-02	2.1E-02	2.0E-02	1.9E-02	1.8E-02	1.8E-02	1.8E-02	1.0E+04
recreational	park	478230.59	3619125.04	2.5E-02	2.6E-02	2.4E-02	2.3E-02	2.1E-02	2.0E-02	2.0E-02	2.0E-02	1.2E+04
recreational	park	478330.59	3619125.04	2.5E-02	2.6E-02	2.4E-02	2.3E-02	2.2E-02	2.0E-02	2.0E-02	2.0E-02	1.2E+04
recreational	park	483830.59	3619125.04	1.2E-01	1.2E-01	1.0E-01	9.0E-02	7.9E-02	7.0E-02	6.8E-02	6.8E-02	4.5E+04
recreational	park	483930.59	3619125.04	1.1E-01	1.1E-01	9.8E-02	8.9E-02	7.8E-02	6.9E-02	6.8E-02	6.7E-02	4.7E+04
recreational	park	484030.59	3619125.04	1.2E-01	1.2E-01	1.0E-01	9.2E-02	8.1E-02	7.1E-02	7.0E-02	6.9E-02	5.0E+04
recreational	park	484130.59	3619125.04	1.2E-01	1.2E-01	1.0E-01	9.4E-02	8.2E-02	7.2E-02	7.1E-02	7.1E-02	5.4E+04
recreational	park	484230.59	3619125.04	1.2E-01	1.2E-01	1.1E-01	9.6E-02	8.4E-02	7.4E-02	7.3E-02	7.2E-02	5.9E+04
recreational	park	484330.59	3619125.04	1.2E-01	1.3E-01	1.1E-01	1.0E-01	8.8E-02	7.8E-02	7.5E-02	7.5E-02	6.5E+04
residential	REC_100M	484430.59	3619125.04	1.3E-01	1.4E-01	1.2E-01	1.1E-01	9.5E-02	8.3E-02	8.0E-02	7.9E-02	7.3E+04
residential	REC_100M	484530.59	3619125.04	1.3E-01	1.5E-01	1.2E-01	1.1E-01	9.7E-02	8.6E-02	8.3E-02	8.1E-02	8.4E+04
residential	REC_100M	484630.59	3619125.04	1.4E-01	1.7E-01	1.3E-01	1.2E-01	1.0E-01	8.8E-02	8.6E-02	8.4E-02	9.7E+04
residential	REC_100M	484730.59	3619125.04	1.5E-01	1.9E-01	1.4E-01	1.3E-01	1.1E-01	9.2E-02	8.9E-02	8.6E-02	1.1E+05
residential	REC_100M	484830.59	3619125.04	1.6E-01	2.2E-01	1.6E-01	1.4E-01	1.2E-01	9.9E-02	9.4E-02	9.1E-02	1.4E+05
residential	REC_100M	484930.59	3619125.04	1.8E-01	2.4E-01	1.8E-01	1.5E-01	1.2E-01	1.0E-01	9.8E-02	9.3E-02	1.7E+05
residential	REC_100M	485030.59	3619125.04	2.1E-01	2.7E-01	2.0E-01	1.7E-01	1.3E-01	1.1E-01	1.0E-01	9.5E-02	2.0E+05
residential	REC_100M	485130.59	3619125.04	2.4E-01	3.0E-01	2.2E-01	1.8E-01	1.5E-01	1.2E-01	1.1E-01	1.0E-01	2.6E+05
residential	REC_100M	485230.59	3619125.04	2.8E-01	3.2E-01	2.4E-01	2.0E-01	1.6E-01	1.3E-01	1.2E-01	1.1E-01	3.2E+05
residential	REC_100M	485330.59	3619125.04	3.1E-01	3.3E-01	2.6E-01	2.2E-01	1.8E-01	1.4E-01	1.3E-01	1.2E-01	4.0E+05
residential	REC_100M	485430.59	3619125.04	3.4E-01	3.4E-01	2.8E-01	2.4E-01	1.9E-01	1.6E-01	1.4E-01	1.3E-01	4.8E+05
residential	REC_100M	485530.59	3619125.04	3.5E-01	3.3E-01	2.9E-01	2.6E-01	2.1E-01	1.7E-01	1.6E-01	1.4E-01	5.3E+05
residential	REC_100M	485630.59	3619125.04	3.6E-01	3.3E-01	3.0E-01	2.7E-01	2.2E-01	1.9E-01	1.7E-01	1.6E-01	5.7E+05
residential	REC_100M	485730.59	3619125.04	3.5E-01	3.1E-01	3.1E-01	2.8E-01	2.4E-01	2.0E-01	1.9E-01	1.7E-01	6.0E+05

TAMT Risk Assessment - DPM Cancer and Chronic HI

AERMOD UNITIZED CONCENTRATIONS

AERMOD Output

Receptor Type	Discrete Receptor ID (Group Name)	X	Y	B10_1_AUX	B10_2_AUX	B10_3_AUX	B10_4_AUX	B10_5_AUX	B10_6_AUX	B10_7_AUX	B10_8_AUX	CHE_1	LOC_SWTCH EMP
residential	REC_100M	485130.59	3619225.04	2.3E-01	2.7E-01	2.1E-01	1.7E-01	1.4E-01	1.1E-01	1.0E-01	9.6E-02	2.3E+05	3.3E-01
residential	REC_100M	485230.59	3619225.04	2.6E-01	2.9E-01	2.3E-01	1.9E-01	1.5E-01	1.2E-01	1.1E-01	1.0E-01	2.8E+05	3.6E-01
residential	REC_100M	485330.59	3619225.04	2.8E-01	3.1E-01	2.4E-01	2.1E-01	1.7E-01	1.4E-01	1.2E-01	1.1E-01	3.4E+05	4.1E-01
residential	REC_100M	485430.59	3619225.04	3.1E-01	3.1E-01	2.6E-01	2.2E-01	1.8E-01	1.5E-01	1.4E-01	1.2E-01	4.0E+05	4.7E-01
residential	REC_100M	485530.59	3619225.04	3.3E-01	3.2E-01	2.7E-01	2.4E-01	2.0E-01	1.6E-01	1.5E-01	1.4E-01	4.4E+05	5.4E-01
residential	REC_100M	485630.59	3619225.04	3.4E-01	3.1E-01	2.8E-01	2.5E-01	2.1E-01	1.7E-01	1.6E-01	1.5E-01	4.7E+05	6.3E-01
residential	REC_100M	485730.59	3619225.04	3.4E-01	3.0E-01	2.9E-01	2.6E-01	2.2E-01	1.9E-01	1.8E-01	1.6E-01	5.0E+05	7.3E-01
residential	REC_100M	485830.59	3619225.04	3.3E-01	2.9E-01	2.9E-01	2.7E-01	2.4E-01	2.0E-01	1.9E-01	1.8E-01	5.3E+05	8.2E-01
residential	REC_100M	485930.59	3619225.04	3.2E-01	2.8E-01	2.9E-01	2.8E-01	2.5E-01	2.1E-01	2.0E-01	1.9E-01	5.3E+05	8.9E-01
residential	REC_100M	486030.59	3619225.04	3.1E-01	2.7E-01	2.8E-01	2.8E-01	2.5E-01	2.2E-01	2.1E-01	2.0E-01	5.1E+05	9.4E-01
residential	REC_100M	486230.59	3619225.04	2.8E-01	2.3E-01	2.6E-01	2.7E-01	2.6E-01	2.3E-01	2.3E-01	2.3E-01	4.4E+05	9.1E-01
residential	REC_100M	486330.59	3619225.04	2.6E-01	2.2E-01	2.5E-01	2.6E-01	2.6E-01	2.4E-01	2.4E-01	2.4E-01	3.9E+05	8.5E-01
residential	REC_100M	486430.59	3619225.04	2.5E-01	2.1E-01	2.4E-01	2.5E-01	2.6E-01	2.4E-01	2.5E-01	2.5E-01	3.5E+05	7.8E-01
residential	REC_100M	486530.59	3619225.04	2.3E-01	1.9E-01	2.3E-01	2.4E-01	2.5E-01	2.4E-01	2.5E-01	2.6E-01	3.1E+05	7.1E-01
residential	REC_100M	486630.59	3619225.04	2.1E-01	1.8E-01	2.1E-01	2.3E-01	2.4E-01	2.4E-01	2.5E-01	2.6E-01	2.8E+05	6.6E-01
residential	REC_100M	486730.59	3619225.04	2.0E-01	1.7E-01	2.0E-01	2.1E-01	2.3E-01	2.4E-01	2.5E-01	2.6E-01	2.5E+05	5.9E-01
residential	REC_100M	486830.59	3619225.04	1.8E-01	1.6E-01	1.8E-01	2.0E-01	2.2E-01	2.3E-01	2.4E-01	2.5E-01	2.2E+05	5.1E-01
residential	REC_100M	486930.59	3619225.04	1.7E-01	1.5E-01	1.7E-01	1.9E-01	2.1E-01	2.2E-01	2.3E-01	2.4E-01	2.2E+05	5.1E-01
residential	REC_100M	487030.59	3619225.04	1.6E-01	1.4E-01	1.6E-01	1.7E-01	1.9E-01	2.1E-01	2.2E-01	2.4E-01	1.8E+05	4.3E-01
residential	REC_100M	487130.59	3619225.04	1.5E-01	1.3E-01	1.5E-01	1.6E-01	1.8E-01	1.9E-01	2.1E-01	2.2E-01	1.5E+05	3.4E-01
residential	REC_100M	487230.59	3619225.04	1.4E-01	1.3E-01	1.4E-01	1.5E-01	1.7E-01	1.9E-01	2.0E-01	2.1E-01	1.5E+05	3.5E-01
residential	REC_100M	487330.59	3619225.04	1.4E-01	1.2E-01	1.4E-01	1.5E-01	1.6E-01	1.8E-01	1.9E-01	2.0E-01	1.5E+05	3.5E-01
residential	REC_100M	487430.59	3619225.04	1.3E-01	1.2E-01	1.3E-01	1.4E-01	1.5E-01	1.7E-01	1.8E-01	1.9E-01	1.4E+05	3.3E-01
residential	REC_100M	487530.59	3619225.04	1.3E-01	1.1E-01	1.2E-01	1.3E-01	1.4E-01	1.6E-01	1.7E-01	1.8E-01	1.3E+05	2.9E-01
residential	REC_100M	487630.59	3619225.04	1.2E-01	1.1E-01	1.2E-01	1.2E-01	1.4E-01	1.5E-01	1.6E-01	1.7E-01	1.2E+05	2.7E-01
residential	REC_100M	487730.59	3619225.04	1.1E-01	1.0E-01	1.1E-01	1.2E-01	1.3E-01	1.4E-01	1.5E-01	1.6E-01	1.0E+05	2.4E-01
residential	REC_100M	487830.59	3619225.04	1.1E-01	9.9E-02	1.1E-01	1.1E-01	1.2E-01	1.3E-01	1.4E-01	1.5E-01	1.0E+05	2.3E-01
residential	REC_100M	487930.59	3619225.04	1.1E-01	9.8E-02	1.0E-01	1.1E-01	1.2E-01	1.3E-01	1.4E-01	1.5E-01	1.0E+05	2.3E-01
residential	REC_100M	488030.59	3619225.04	1.1E-01	9.6E-02	1.0E-01	1.1E-01	1.1E-01	1.2E-01	1.3E-01	1.4E-01	9.6E+04	2.2E-01
residential	REC_100M	476730.59	3619325.04	1.5E-02	1.5E-02	1.4E-02	1.4E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	6.4E+03	1.3E-02
residential	REC_100M	476830.59	3619325.04	1.5E-02	1.5E-02	1.5E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	1.2E-02	6.5E+03	1.3E-02
residential	REC_100M	476930.59	3619325.04	1.5E-02	1.6E-02	1.5E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	1.3E-02	6.5E+03	1.3E-02
residential	REC_100M	477030.59	3619325.04	1.6E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	6.5E+03	1.3E-02
residential	REC_100M	477130.59	3619325.04	1.6E-02	1.6E-02	1.5E-02	1.5E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	6.7E+03	1.4E-02
residential	REC_100M	477230.59	3619325.04	1.7E-02	1.7E-02	1.6E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	7.5E+03	1.5E-02
residential	REC_100M	477330.59	3619325.04	1.8E-02	1.8E-02	1.7E-02	1.6E-02	1.6E-02	1.5E-02	1.5E-02	1.5E-02	8.0E+03	1.6E-02
residential	REC_100M	477430.59	3619325.04	1.9E-02	1.9E-02	1.8E-02	1.7E-02	1.6E-02	1.5E-02	1.5E-02	1.5E-02	8.4E+03	1.7E-02
residential	REC_100M	477530.59	3619325.04	1.9E-02	2.0E-02	1.9E-02	1.8E-02	1.7E-02	1.6E-02	1.6E-02	1.6E-02	8.7E+03	1.8E-02
residential	REC_100M	477630.59	3619325.04	2.0E-02	2.1E-02	1.9E-02	1.8E-02	1.7E-02	1.7E-02	1.6E-02	1.6E-02	9.0E+03	1.8E-02
residential	REC_100M	477730.59	3619325.04	2.1E-02	2.1E-02	2.0E-02	1.9E-02	1.8E-02	1.7E-02	1.7E-02	1.7E-02	9.2E+03	1.9E-02
recreational	park	477830.59	3619325.04	2.2E-02	2.3E-02	2.1E-02	2.0E-02	1.9E-02	1.8E-02	1.8E-02	1.8E-02	1.0E+04	2.0E-02
recreational	park	478430.59	3619325.04	2.5E-02	2.5E-02	2.3E-02	2.2E-02	2.1E-02	2.0E-02	2.0E-02	1.9E-02	1.1E+04	2.3E-02
recreational	park	478530.59	3619325.04	2.5E-02	2.6E-02	2.4E-02	2.3E-02	2.1E-02	2.0E-02	2.0E-02	2.0E-02	1.1E+04	2.4E-02
recreational	park	478630.59	3619325.04	2.6E-02	2.7E-02	2.5E-02	2.3E-02	2.2E-02	2.1E-02	2.1E-02	2.0E-02	1.2E+04	2.4E-02
recreational	park	483530.59	3619325.04	9.1E-02	9.1E-02	7.9E-02	7.2E-02	6.3E-02	5.6E-02	5.6E-02	5.5E-02	3.3E+04	1.3E-01
recreational	park	483830.59	3619325.04	9.5E-02	9.6E-02	8.3E-02	7.6E-02	6.7E-02	6.0E-02	5.9E-02	5.8E-02	3.8E+04	1.5E-01
recreational	park	483930.59	3619325.04	1.0E-01	1.0E-01	8.7E-02	7.9E-02	6.9E-02	6.2E-02	6.1E-02	6.0E-02	4.0E+04	1.6E-01
residential	REC_100M	484030.59	3619325.04	1.0E-01	1.0E-01	9.1E-02	8.2E-02	7.2E-02	6.4E-02	6.3E-02	6.2E-02	4.3E+04	1.6E-01
residential	REC_100M	484130.59	3619325.04	1.1E-01	1.1E-01	9.5E-02	8.6E-02	7.5E-02	6.7E-02	6.5E-02	6.4E-02	4.7E+04	1.7E-01
residential	REC_100M	484230.59	3619325.04	1.1E-01	1.1E-01	9.8E-02	8.8E-02	7.7E-02	6.9E-02	6.7E-02	6.5E-02	5.2E+04	1.8E-01
residential	REC_100M	484330.59	3619325.04	1.1E-01	1.2E-01	1.0E-01	9.0E-02	8.0E-02	7.0E-02	6.8E-02	6.6E-02	5.8E+04	2.0E-01
residential	REC_100M	484430.59	3619325.04	1.1E-01	1.3E-01	1.0E-01	9.3E-02	8.1E-02	7.2E-02	7.0E-02	6.8E-02	6.2E+04	2.0E-01
residential	REC_100M	484530.59	3619325.04	1.2E-01	1.4E-01	1.1E-01	9.9E-02	8.5E-02	7.4E-02	7.2E-02	7.0E-02	7.1E+04	2.0E-01
residential	REC_100M	484630.59	3619325.04	1.3E-01	1.5E-01	1.2E-01	1.1E-01	9.0E-02	7.9E-02	7.5E-02	7.3E-02	8.3E+04	2.2E-01
residential	REC_100M	484730.59	3619325.04	1.4E-01	1.7E-01	1.3E-01	1.1E-01	9.7E-02	8.4E-02	7.9E-02	7.7E-02	9.7E+04	2.3E-01
residential	REC_100M	484830.59	3619325.04	1.5E-01	1.9E-01	1.5E-01	1.3E-01	1.0E-01	8.8E-02	8.4E-02	7.9E-02	1.1E+05	2.5E-01
residential	REC_100M	484930.59	3619325.04	1.7E-01	2.1E-01	1.6E-01	1.4E-01	1.1E-01	9.4E-02	8.8E-02	8.3E-02	1.4E+05	2.5E-01
residential	REC_100M	485030.59	3619325.04	1.9E-01	2.3E-01	1.8E-01	1.5E-01	1.2E-01	1.0E-01	9.3E-02	8.7E-02	1.6E+05	2.7E-01
residential	REC_100M	485130.59	3619325.04	2.1E-01	2.5E-01	1.9E-01	1.6E-01	1.3E-01	1.1E-01	1.0E-01	9.2E-02	2.0E+05	2.9E-01
residential	REC_100M	485230.59	3619325.04	2.4E-01	2.7E-01	2.1E-01	1.8E-01	1.5E-01	1.2E-01	1.1E-01	9.9E-02	2.5E+05	3.2E-01
residential	REC_100M	485330.59	3619325.04	2.6E-01	2.8E-01	2.3E-01	2.0E-01	1.6E-01	1.3E-01	1.2E-01	1.1E-01	3.0E+05	3.6E-01
residential	REC_100M	485430.59	3619325.04	2.8E-01	2.9E-01	2.4E-01	2.1E-01	1.7E-01	1.4E-01	1.3E-01	1.2E-01	3.4E+05	4.1E-01
residential	REC_100M	485530.59	3619325.04	3.0E-01	3.0E-01	2.5E-01	2.2E-01	1.9E-01	1.5E-01	1.4E-01	1.3E-01	3.8E+05	4.8E-01
residential	REC_100M	485630.59	3619325.04	3.1E-01	3.0E-01	2.6E-01	2.3E-01	2.0E-01	1.7E-01	1.5E-01	1.4E-01	4.1E+05	5.6E-01
residential	REC_100M	485730.59	3619325.04	3.2E-01	2.9E-01	2.7E-01	2.4E-01	2.1E-01	1.8E-01	1.7E-01	1.6E-01	4.3E+05	6.3E-01
residential	REC_100M	485830.59	3619325.04	3.1E-01	2.9E-01	2.8E-01	2.5E-01	2.2E-01	1.9E-01	1.8E-01	1.7E-01	4.6E+05	7.1E-01
residential	REC_100M	485930.59	3619325.04	3.1E-01	2.8E-01	2.8E-01	2.6E-01	2.3E-01	2.0E-01	1.9E-01	1.8E-01	4.6E+05	7.7E-01
residential	REC_100M	486030.59	3619325.04	3.0E-01	2.6E-01	2.7E-01	2.6E-01	2.4E-01	2.1E-01	2.0E-01	1.9E-01	4.5E+05	8.2E-01
residential	REC_100M	486230.59	3619325.04	2.7E-01	2.3E-01	2.6E-01	2.6E-01	2.4E-01	2.2E-01	2.1E-01	2.1E-01	4.0E+05	8.1E-01
residential	REC_100M	486330.59	3619325.04	2.6E-01	2.2E-01	2.5E-01	2.5E-01	2.5E-01	2.2E-01	2.2E-01	2.2E-01	3.6E+05	7.5E-01
residential	REC_100M	486430.59	3619325.04	2.5E-01	2.1E-01	2.4E-01	2.5E-01	2.5E-01	2.3E-01	2.3E-01	2.3E-01	3.2E+05	7.0E-01
residential	REC_100M	486530.59	3619325.04	2.3E-01	1.9E-01	2.3E-01	2.4E-01	2.4E-01	2.3E-01	2.4E-01	2.4E-01	2.9E+05	6.4E-01
residential	REC_100M	486630.59	3619325.04	2.2E-01	1.8E-01	2.1E-01	2.3E-01	2.4E-01	2.3E-01	2.4E-01	2.4E-01	2.6E+05	5.9E-01
residential	REC_100M	486730.59	3619325.04	2.0E-01	1.7E-01	2.0E-01	2.1E-01	2.3E-01	2.3E-01	2.3E-01	2.4E-01	2.3E+05	5.3E-01
residential	REC_100M	486830.59	3619325.04	1.8E-01	1.6E-01	1.8E-01	2.0E-01	2.1E-01	2.2E-01	2.3E-01	2.4E-01	2.0E+05	4.7E-01
residential	REC_100M	486930.59	3619325.04	1.7E-01	1.5E-01	1.7E-01	1.9E-01	2.0E-01	2.1E-01	2.2E-01	2.3E-01	1.9E+05	4.5E-01
residential	REC_100M	487030.59	3619325.04	1.6E-01	1.4E-01	1.6E-01	1.7E-01	1.9E-01	2.0E-01	2.1E-01	2.3E-01	1.7E+05	4.0E-01
residential	REC_100M	487130.59	3619325.04	1.5E-01	1.3E-01	1.5E-01	1.6E-01	1.8E-01	1.9E-01	2.0E-01	2.2E-01	1.6E+05	3.6E-01
residential	REC_100M	487230.59	3619325.04	1.4E-01	1.3E-01	1.4E-01	1.5E-01	1.7E-01	1.9E-01	2.0E-01	2.1E-01	1.6E+05	3.6E-01
residential	REC_100M	487330.59	3619325.04	1.4E-01	1.2E-01	1.3E-01	1.4E-01	1.6E-01	1.8E-01	1.9E-01	2.0E-01	1.4E+05	3.2E-01
residential	REC_100M	487430.59	3619325.04	1.3E-01	1.2E-01	1.3E-01	1.4E-01	1.5E-01	1.7E-01	1.8E-01	1.9E-01	1.4E+05	3.2E-01
residential	REC_100M	487530.59	3619325.04	1.2E-01	1.1E-01	1.2E-01	1.3E-01	1.4E-01	1.6E-01	1.7E-01	1.8E-01	1.2E+05	2.8E-01
residential	REC_100M	487630.59	3619325.04	1.2E-01	1.1E-01	1.2E-01	1.2E-01	1.4E-01	1.5E-01	1.6E-01	1.7E-01	1.2E+05	2.7E-01
residential	REC_100M	487730.59	3619325.04	1.1E-01	1.0E-01	1.1E-01	1.2E-01	1.3E-01	1.4E-01	1.5E-01	1.6E-01	1.0E+05	2.4E-01
residential	REC_100M	487830.59	3619325.04	1.1E-01	9.6E-02	1.0E-01	1.1E-01	1.2E-01	1.3E-01	1.4E-01	1.5E-01	9.6E+04	2.2E-01
residential	REC_100M	487930.59	3619325.04	1.0E-01	9.4E-02	1.0E-01	1.1E-01	1.2E-01	1.3E-01	1.4E-01	1.4E-01	9.4E+04	2.1E-01
residential	REC_100M	476730.59	3619425.04	1.5E-02	1.5E-02	1.4E-02	1.4E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	6.2E+03	1.3E-02
residential	REC_100M	476830.59	3619425.04	1.5E-02	1.5E-02	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	6.3E+03	1.3E-02
residential	REC_100M	476930.59	3619425.04	1.5E-02	1.5E-02	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	1.2E-02	6.2E+03	1.3E-02
residential	REC_100M	477030.59	3619425.04	1.5E-02	1.5E-02	1.5E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	1.3E-02	6.3E+03	1.3E-02
residential	REC_100M	477130.59	3619425.04	1.6E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	6.4E+03	1.3E-02
residential	REC_100M	477230.59	3619425.04	1.6E-02	1.6E-02	1.5E-02	1.5E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	6.6E+03	1.4E-02
residential	REC_100M	477330.59	3619425.04	1.7E-02	1.7E-02	1.6E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	7.1E+03	1.5E-02
residential	REC_100M	477430.59	3619425.04	1.8E-02	1.8E-02	1.7E-02	1.6E-02	1.6E-02	1.5E-02	1.5E-02	1.5E-02	7.9E+03	1.7E-02
residential	REC_100M	477530.59	3619425.04	1.9E-02	1.9E-02	1.8E-02	1.7E-02	1.6E-02	1.6E-02	1.5E-02	1.5E-02	8.3E+03	1.7E-02
residential	REC_100M	477630.59	3619425.04	1.9E-02	2.0E-02	1.8E-02	1.8E-02	1.7E-02	1.6E-02	1.6E-02	1.6E-02	8.5E+03	1.8E-02
residential	REC_100M	477730.59	3619425.04	2.0E-02	2.1E-02	1.9E-02	1.9E-02	1.8E-02	1.7E-02	1.6E-02	1.6E-02	8.8E+03	1.8E-02
recreational	park	477830.59	3619425.04	2.1E-02	2.2E-02	2.0E-02	2.0E-02	1.8E-02	1.7E-02	1.7E-02	1.7E-02	9.1E+03	1.9E-02
recreational	park	478530.59	3619425.04	2.4E-02	2.5E-02	2.3E-02	2.2E-02	2.1E-02	2.0E-02	1.9E-02	1.9E-02	1.1E+04	2.3E-02
recreational	park	478630.59	3619425.04	2.5E-02	2.5E-02	2.4E-02	2.2E-02	2.1E-02	2.0E-02	2.0E-02	2.0E-02	1.1E+04	2.4E-02
recreational	park	483530.59	3619425.04	8.6E-02	8.5E-02	7.6E-02	6.8E-02	6.1E-02	5.5E-02	5.4E-02	5.3E-02	3.0E+04	1.2E-01
recreational	park	483630.59	3619425.04	8.5E-02	8.6E-02	7.6E-02	6.9E-02	6.1E-02	5.5E-02	5.4E-02	5.3E-02	3.2E+04	1.2E-01
recreational	park	483730.59	3619425.04	8.8E-02	8.8E-02	7.8E-02	7.0E-02	6.3E-02	5.6E-02	5.5E-02	5.4E-02	3.3E+04	1.3E-01
recreational	park	483830.59	3619425.04	9.0E-02	9.1E-02	7.9E-02	7.2E-02	6.4E-02	5.7E-02	5.6E-02	5.5E-02	3.5E+04	1.4E-01
recreational	park	483930.59	3619425.04	9.2E-02	9.4E-02	8.2E-02	7.4E-02	6.5E-02	5.9E-02	5.8E-02	5.7E-02	3.8E+04	1.4E-01
residential	REC_100M	484030.59	3619425.04	9.7E-02	1.0E-01	8.6E-02	7.9E-02	6.9E-02	6.1E-02	6.0E-02	5.9E-02	4.1E+04	1.5E-01
residential	REC_100M	484130.59	3619425.04	9.9E-02	1.0E-01	9.0E-02	8.1E-02	7.1E-02	6.3E-02	6.2E-02	6.0E-02	4.5E+04	1.6E-01
residential	REC_100M	484230.59	3619425.04	1.0E-01	1.1E-01	9.2E-02	8.3E-02	7.3E-02	6.5E-02	6.4E-02	6.2E-02	5.0E+04	1.7E-01
residential	REC_100M	484330.59	3619425.04	1.0E-01	1.1E-01	9.5E-02	8.5E-02	7.4E-02	6.6E-02	6.4E-02	6.3E-02	5.3E+04	1.7E-01
residential	REC_100M	484430.59	3619425.04	1.1E-01	1.2E-01	9.9E-02	8.9E-02	7.7E-02	6.8E-02	6.5E-02	6.4E-02	5.9E+04	1.7E-01
residential	REC_100M	484530.59	3619425.04	1.1E-01	1.3E-01	1.1E-01	9.5E-02	8.1E-02	7.1E-02	6.8E-02	6.6E-02	6.8E+04	1.8E-01
residential	REC_100M	484630.59	3619425.04	1.2E-01	1.5E-01	1.2E-01	1.0E-01	8.7E-02	7.5E-02	7.2E-02	7.0E-02	7.9E+04	1.9E-01

TAMT Risk Assessment - DPM Cancer and Chronic HI

AERMOD UNITIZED CONCENTRATIONS

AERMOD Output	Discrete Receptor ID (Group Name)	X	Y	B10_1_AUX	B10_2_AUX	B10_3_AUX	B10_4_AUX	B10_5_AUX	B10_6_AUX	B10_7_AUX	B10_8_AUX	CHE_1	LOC_SWTCH EMP	LOC_SWTCH LOA	OGV_PATH _BLR	OGV_PATH _DPM	TR_28TH	TR_BAYMA R	TR_BOSTON	TR_CROSBY	TR_HARBOR CHA	TR_HARBOR SAM	TUG_PATH_ DPM
Source Group in AERMOD				1	3	5	7	9	11	13	15	17	18	19	20	21	22	23	24	25	26	27	28
residential	REC_100M	484730.59	3619425.04	1.3E-01	1.7E-01	1.3E-01	1.1E-01	9.3E-02	8.0E-02	7.6E-02	7.3E-02	9.1E+04	2.1E-01	1.7E-01	2.1E-01	2.1E-01	4.1E-02	1.1E-02	4.0E-02	9.7E-02	1.6E-01	5.0E-02	3.1E-01
residential	REC_100M	484830.59	3619425.04	1.4E-01	1.8E-01	1.4E-01	1.2E-01	9.9E-02	8.4E-02	7.9E-02	7.5E-02	1.1E+05	2.1E-01	1.7E-01	2.0E-01	2.0E-01	4.2E-02	1.2E-02	4.1E-02	1.1E-01	1.9E-01	5.3E-02	2.9E-01
residential	REC_100M	484930.59	3619425.04	1.6E-01	2.0E-01	1.5E-01	1.3E-01	1.1E-01	8.9E-02	8.4E-02	7.8E-02	1.2E+05	2.2E-01	1.8E-01	1.9E-01	1.9E-01	4.3E-02	1.2E-02	4.2E-02	1.2E-01	2.2E-01	5.7E-02	2.8E-01
residential	REC_100M	485030.59	3619425.04	1.8E-01	2.2E-01	1.7E-01	1.4E-01	1.2E-01	9.6E-02	8.9E-02	8.3E-02	1.5E+05	2.3E-01	1.9E-01	1.9E-01	1.9E-01	4.4E-02	1.2E-02	4.3E-02	1.4E-01	2.5E-01	6.2E-02	2.7E-01
residential	REC_100M	485130.59	3619425.04	2.0E-01	2.3E-01	1.8E-01	1.6E-01	1.3E-01	1.0E-01	9.5E-02	8.8E-02	1.8E+05	2.5E-01	2.0E-01	1.8E-01	1.8E-01	4.6E-02	1.3E-02	4.4E-02	1.6E-01	2.9E-01	6.9E-02	2.6E-01
residential	REC_100M	485230.59	3619425.04	2.2E-01	2.5E-01	2.0E-01	1.7E-01	1.4E-01	1.1E-01	1.0E-01	9.6E-02	2.2E+05	2.9E-01	2.3E-01	1.7E-01	1.7E-01	4.7E-02	1.3E-02	4.6E-02	1.8E-01	3.5E-01	7.6E-02	2.5E-01
residential	REC_100M	485330.59	3619425.04	2.4E-01	2.6E-01	2.1E-01	1.8E-01	1.5E-01	1.2E-01	1.1E-01	1.0E-01	2.6E+05	3.2E-01	2.5E-01	1.6E-01	1.6E-01	4.9E-02	1.3E-02	4.7E-02	1.9E-01	4.2E-01	8.4E-02	2.4E-01
residential	REC_100M	485430.59	3619425.04	2.6E-01	2.7E-01	2.3E-01	2.0E-01	1.6E-01	1.4E-01	1.2E-01	1.1E-01	3.0E+05	3.7E-01	2.9E-01	1.6E-01	1.6E-01	5.2E-02	1.4E-02	4.9E-02	2.2E-01	5.3E-01	9.3E-02	2.3E-01
residential	REC_100M	485530.59	3619425.04	2.8E-01	2.8E-01	2.4E-01	2.1E-01	1.8E-01	1.5E-01	1.4E-01	1.2E-01	3.3E+05	4.3E-01	3.3E-01	1.5E-01	1.5E-01	5.5E-02	1.4E-02	5.2E-02	2.5E-01	6.7E-01	1.0E-01	2.2E-01
residential	REC_100M	485630.59	3619425.04	2.9E-01	2.8E-01	2.5E-01	2.2E-01	1.9E-01	1.6E-01	1.5E-01	1.4E-01	3.5E+05	4.9E-01	3.8E-01	1.5E-01	1.5E-01	5.9E-02	1.5E-02	5.5E-02	2.9E-01	7.9E-01	1.1E-01	2.1E-01

DPM SCALED CONCENTRATIONS

X	B10_1_AUX	B10_2_AUX	B10_3_AUX	B10_4_AUX	B10_5_AUX	B10_6_AUX	B10_7_AUX	B10_8_AUX	CHE_1	LOC_SWTCHE MP	LOC_SWTCHL OA	OGV_PATH_D PM	TR_28TH	TR_BAYMA R	TR_BOSTON	TR_CROSBY	TR_HARBOR CHA	TR_HARBOR SAM	TUG_PATH_D PM
divide by -->	4	4	4	4	2	2	2	2	1	2	2	1	1	1	1	1	1	1	1
	Refrigerated ContainersSTC UNMIT	Refrigerated ContainersSTC UNMIT	Refrigerated ContainersSTC UNMIT	Refrigerated ContainersSTC UNMIT	Multi-Purpose General CargoSTC UNMIT	Multi-Purpose General CargoSTC UNMIT	Dry BulkSTC UNMIT	Dry BulkSTC UNMIT	AllSTC UNMIT	AllSTC UNMIT	AllSTC UNMIT	AllSTC UNMIT	TR_28THSTC UNMIT	TR_BAYMARSTC UNMIT	TR_BOSTONSTC UNMIT	TR_CROSBYSTC UNMIT	TR_HARBORCHASTC UNMIT	TR_HARBORSAMSTC UNMIT	AllSTC UNMIT
g/s -->	5.7E-02	5.7E-02	5.7E-02	5.7E-02	1.3E-02	1.3E-02	1.4E-02	1.4E-02	6.8E-08	1.8E-03	1.8E-03	3.0E-02	7.1E-06	8.6E-06	2.3E-05	4.8E-05	1.1E-04	1.1E-04	1.8E-03
	1	3	5	7	9	11	13	15	17	18	19	21	22	23	24	25	26	27	28
484730.59	7.5E-03	9.4E-03	7.2E-03	6.3E-03	1.2E-03	1.0E-03	1.1E-03	1.0E-03	6.2E-03	3.6E-04	3.0E-04	6.4E-03	2.9E-07	9.7E-08	9.1E-07	4.7E-06	1.8E-05	5.3E-06	5.4E-04
484830.59	8.2E-03	1.0E-02	7.9E-03	6.7E-03	1.3E-03	1.1E-03	1.1E-03	1.0E-03	7.2E-03	3.7E-04	3.1E-04	6.1E-03	3.0E-07	9.9E-08	9.3E-07	5.3E-06	2.0E-05	5.7E-06	5.2E-04
484930.59	9.1E-03	1.1E-02	8.7E-03	7.4E-03	1.4E-03	1.2E-03	1.2E-03	1.1E-03	8.5E-03	3.9E-04	3.2E-04	5.9E-03	3.1E-07	1.0E-07	9.5E-07	6.0E-06	2.3E-05	6.1E-06	5.0E-04
485030.59	1.0E-02	1.2E-02	9.5E-03	8.1E-03	1.5E-03	1.2E-03	1.2E-03	1.2E-03	1.0E-02	4.1E-04	3.3E-04	5.6E-03	3.1E-07	1.1E-07	9.8E-07	6.7E-06	2.7E-05	6.7E-06	4.8E-04
485130.59	1.1E-02	1.3E-02	1.0E-02	8.9E-03	1.6E-03	1.3E-03	1.3E-03	1.2E-03	1.2E-02	4.4E-04	3.6E-04	5.4E-03	3.2E-07	1.1E-07	1.0E-06	7.5E-06	3.1E-05	7.4E-06	4.6E-04
485230.59	1.3E-02	1.4E-02	1.1E-02	9.7E-03	1.8E-03	1.5E-03	1.5E-03	1.3E-03	1.5E-02	5.1E-04	4.0E-04	5.2E-03	3.4E-07	1.1E-07	1.0E-06	8.5E-06	3.8E-05	8.2E-06	4.4E-04
485330.59	1.4E-02	1.5E-02	1.2E-02	1.0E-02	2.0E-03	1.6E-03	1.6E-03	1.4E-03	1.8E-02	5.6E-04	4.4E-04	5.0E-03	3.5E-07	1.1E-07	1.1E-06	9.4E-06	4.5E-05	9.0E-06	4.2E-04
485430.59	1.5E-02	1.6E-02	1.3E-02	1.1E-02	2.1E-03	1.8E-03	1.7E-03	1.6E-03	2.0E-02	6.5E-04	5.0E-04	4.8E-03	3.7E-07	1.2E-07	1.1E-06	1.1E-05	5.7E-05	1.0E-05	4.0E-04
485530.59	1.6E-02	1.6E-02	1.3E-02	1.2E-02	2.3E-03	1.9E-03	1.9E-03	1.7E-03	2.2E-02	7.6E-04	5.8E-04	4.6E-03	3.9E-07	1.2E-07	1.2E-06	1.2E-05	7.1E-05	1.1E-05	3.9E-04
485630.59	1.7E-02	1.6E-02	1.4E-02	1.2E-02	2.4E-03	2.0E-03	2.0E-03	1.9E-03	2.4E-02	8.7E-04	6.6E-04	4.4E-03	4.2E-07	1.3E-07	1.2E-06	1.4E-05	8.5E-05	1.2E-05	3.7E-04

X	Vessel Hoteling: All	Vessel Hoteling: Refrigerated ContainersSTC UNMIT	Vessel Hoteling: Multi-Purpose General CargoSTC UNMIT	Vessel Hoteling: Dry BulkSTC UNMIT	Vessel Transit: All	Vessel Transit: Refrigerated ContainersSTC UNMIT	Vessel Transit: Multi-Purpose General CargoSTC UNMIT	Vessel Transit: Dry BulkSTC UNMIT	Tug/Barge Transit: All	Tug/Barge Transit: Refrigerated ContainersSTC UNMIT	Tug/Barge Transit: Multi-Purpose General CargoSTC UNMIT	Tug/Barge Transit: Dry BulkSTC UNMIT	Terminal I: All	Terminal I: Refrigerated ContainersSTC UNMIT
	100%	81%	9%	10%	100%	46%	25%	28%	100%	21%	54%	25%	100%	39%
484730.59	3.5E-02	3E-02	2E-03	2E-03	6E-03	3E-03	2E-03	2E-03	5E-04	1E-04	3E-04	1E-04	6E-03	2E-03
484830.59	3.8E-02	3E-02	2E-03	2E-03	6E-03	3E-03	2E-03	2E-03	5E-04	1E-04	3E-04	1E-04	7E-03	3E-03
484930.59	4.1E-02	4E-02	3E-03	2E-03	6E-03	3E-03	1E-03	2E-03	5E-04	1E-04	3E-04	1E-04	8E-03	3E-03
485030.59	4.5E-02	4E-02	3E-03	2E-03	6E-03	3E-03	1E-03	2E-03	5E-04	1E-04	3E-04	1E-04	1E-02	4E-03
485130.59	4.9E-02	4E-02	3E-03	3E-03	5E-03	3E-03	1E-03	2E-03	5E-04	1E-04	2E-04	1E-04	1E-02	5E-03
485230.59	5.4E-02	5E-02	3E-03	3E-03	5E-03	2E-03	1E-03	1E-03	4E-04	9E-05	2E-04	1E-04	1E-02	6E-03
485330.59	5.8E-02	5E-02	4E-03	3E-03	5E-03	2E-03	1E-03	1E-03	4E-04	9E-05	2E-04	1E-04	2E-02	7E-03
485430.59	6.1E-02	5E-02	4E-03	3E-03	5E-03	2E-03	1E-03	1E-03	4E-04	8E-05	2E-04	1E-04	2E-02	8E-03
485530.59	6.5E-02	6E-02	4E-03	4E-03	5E-03	2E-03	1E-03	1E-03	4E-04	8E-05	2E-04	1E-04	2E-02	9E-03
485630.59	6.7E-02	6E-02	4E-03	4E-03	4E-03	2E-03	1E-03	1E-03	4E-04	8E-05	2E-04	9E-05	2E-02	9E-03

TAMT Risk Assessment - DPM Cancer and Chronic HI

AERMOD Output	Discrete Receptor ID (Group Name)	X	Y	AERMOD UNITIZED CONCENTRATIONS																				DPM SCALED CONCENTRATIONS																			Vessel Hoteling				Vessel Transit				Tug/Barge Transit				Terminal I	
																								Refrigerated ContainersSTC UNMIT	Refrigerated ContainersST C UNMIT	Refrigerated ContainersST C UNMIT	Refrigerated ContainersST C UNMIT	Multi-Purpose General CargoSTC UNMIT	Multi-Purpose General CargoSTC UNMIT	Dry BulkSTC UNMIT	Dry BulkSTC UNMIT	AllSTC UNMIT	AllSTC UNMIT	AllSTC UNMIT	AllSTC UNMIT	TR_28THSTC UNMIT	TR_BAYMA RSTC UNMIT	TR_BOSTON STC UNMIT	TR_CROSBY STC UNMIT	TR_HARBOR CHASTC UNMIT	TR_HARBOR SAMSTC UNMIT	AllSTC UNMIT	All	Refrigerated ContainersS TC UNMIT	Multi-Purpose General CargoSTC UNMIT	Dry BulkSTC UNMIT	All	Refriger ated Contain ersSTC UNMIT	Multi-Purpose General CargoST C UNMIT	Dry BulkSTC UNMIT	All	Refriger ated Contain ersSTC UNMIT	Multi-Purpose General CargoST C UNMIT	Dry BulkSTC UNMIT	All	Refriger ated Contain ersSTC UNMIT
																							divide by -->	4	4	4	4	2	2	2	2	1	2	2	1	1	1	1	1	1	1	1														
																							g/s -->	5.7E-02	5.7E-02	5.7E-02	5.7E-02	1.3E-02	1.3E-02	1.4E-02	1.4E-02	6.8E-08	1.8E-03	1.8E-03	3.0E-02	7.1E-06	8.6E-06	2.3E-05	4.8E-05	1.1E-04	1.1E-04	1.8E-03	100%	81%	9%	10%	100%	46%	25%	28%	100%	21%	54%	25%	100%	39%
			Source Group in AERMOD	1	3	5	7	9	11	13	15	17	18	19	21	22	23	24	25	26	27	28		1	3	5	7	9	11	13	15	17	18	19	21	22	23	24	25	26	27	28														
		X	Y	B10_1_AUX	B10_2_AUX	B10_3_AUX	B10_4_AUX	B10_5_AUX	B10_6_AUX	B10_7_AUX	B10_8_AUX	CHE_1	LOC_SWTCH EMP	LOC_SWTCH LOA	OGV_PATH _BLR	OGV_PATH _DPM	TR_28TH	TR_BAYMA R	TR_BOSTON	TR_CROSBY	TR_HARBOR CHA	TR_HARBOR SAM	TUG_PATH_ DPM	B10_1_AUX	B10_2_AUX	B10_3_AUX	B10_4_AUX	B10_5_AUX	B10_6_AUX	B10_7_AUX	B10_8_AUX	CHE_1	LOC_SWTCHE MP	LOC_SWTCHL OA	OGV_PATH_D PM	TR_28TH	TR_BAYMA R	TR_BOSTON	TR_CROSBY	TR_HARBOR CHA	TR_HARBOR SAM	TUG_PATH_D PM														
residential	REC_100M	477730.59	3619825.04	1.8E-02	1.8E-02	1.7E-02	1.6E-02	1.5E-02	1.5E-02	1.5E-02	1.4E-02	7.2E+03	1.6E-02	1.5E-02	8.5E-02	8.5E-02	1.3E-02	5.1E-03	1.3E-02	1.7E-02	2.0E-02	1.5E-02	1.0E-01	1.0E-03	1.0E-03	9.5E-04	9.2E-04	2.0E-04	1.9E-04	2.0E-04	2.0E-04	4.9E-04	2.8E-05	2.7E-05	2.6E-03	9.5E-08	4.3E-08	3.0E-07	8.3E-07	2.2E-06	1.6E-06	1.8E-04	4.7E-03	4E-03	4E-04	4E-04	3E-03	1E-03	6E-04	7E-04	2E-04	4E-05	1E-04	4E-05	5E-04	2E-04
residential	REC_100M	477830.59	3619825.04	1.9E-02	1.9E-02	1.8E-02	1.7E-02	1.6E-02	1.6E-02	1.5E-02	1.5E-02	7.6E+03	1.7E-02	1.6E-02	1.0E-01	1.0E-01	1.4E-02	5.3E-03	1.4E-02	1.7E-02	2.1E-02	1.5E-02	1.3E-01	1.1E-03	1.1E-03	1.0E-03	9.8E-04	2.1E-04	2.0E-04	2.2E-04	2.1E-04	5.2E-04	2.9E-05	2.8E-05	3.0E-03	1.0E-07	4.6E-08	3.2E-07	8.4E-07	2.3E-06	1.6E-06	2.2E-04	5.0E-03	4E-03	4E-04	4E-04	3E-03	1E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	5E-04	2E-04
recreational	park	477930.59	3619825.04	2.0E-02	2.1E-02	1.9E-02	1.8E-02	1.8E-02	1.7E-02	1.6E-02	1.6E-02	8.5E+03	1.8E-02	1.7E-02	1.2E-01	1.2E-01	1.4E-02	5.6E-03	1.4E-02	1.8E-02	2.3E-02	1.5E-02	1.6E-01	1.1E-03	1.2E-03	1.1E-03	1.0E-03	2.3E-04	2.1E-04	2.3E-04	2.3E-04	5.8E-04	3.2E-05	3.0E-05	3.6E-03	1.0E-07	4.8E-08	3.2E-07	8.6E-07	2.4E-06	1.6E-06	2.8E-04	5.3E-03	4E-03	4E-04	5E-04	4E-03	2E-03	9E-04	1E-03	3E-04	6E-05	2E-04	7E-05	6E-04	2E-04
recreational	park	478930.59	3619825.04	2.4E-02	2.4E-02	2.3E-02	2.2E-02	2.0E-02	1.9E-02	1.9E-02	1.9E-02	9.7E+03	2.3E-02	2.1E-02	2.5E-01	2.5E-01	1.6E-02	5.8E-03	1.6E-02	2.0E-02	2.6E-02	1.6E-02	3.8E-01	1.4E-03	1.4E-03	1.3E-03	1.2E-03	2.6E-04	2.5E-04	2.7E-04	2.6E-04	6.6E-04	4.0E-05	3.8E-05	7.5E-03	1.1E-07	5.0E-08	3.6E-07	9.6E-07	2.8E-06	1.8E-06	6.7E-04	6.3E-03	5E-03	5E-04	5E-04	8E-03	4E-03	2E-03	2E-03	7E-04	1E-04	4E-04	2E-04	7E-04	3E-04
recreational	park	479030.59	3619825.04	2.4E-02	2.4E-02	2.3E-02	2.2E-02	2.0E-02	1.9E-02	1.9E-02	1.9E-02	9.9E+03	2.3E-02	2.2E-02	2.7E-01	2.7E-01	1.6E-02	5.9E-03	1.6E-02	2.0E-02	2.6E-02	1.7E-02	4.3E-01	1.4E-03	1.4E-03	1.3E-03	1.2E-03	2.6E-04	2.5E-04	2.7E-04	2.6E-04	6.7E-04	4.1E-05	3.9E-05	8.1E-03	1.1E-07	5.0E-08	3.6E-07	9.8E-07	2.8E-06	1.8E-06	7.6E-04	6.3E-03	5E-03	5E-04	5E-04	8E-03	4E-03	2E-03	2E-03	8E-04	2E-04	4E-04	2E-04	7E-04	3E-04
recreational	park	479130.59	3619825.04	2.5E-02	2.5E-02	2.3E-02	2.2E-02	2.1E-02	2.0E-02	2.0E-02	1.9E-02	1.0E+04	2.4E-02	2.3E-02	3.0E-01	3.0E-01	1.6E-02	5.9E-03	1.6E-02	2.0E-02	2.7E-02	1.7E-02	4.8E-01	1.4E-03	1.4E-03	1.3E-03	1.3E-03	2.7E-04	2.6E-04	2.7E-04	2.7E-04	6.8E-04	4.2E-05	4.0E-05	9.0E-03	1.1E-07	5.1E-08	3.6E-07	9.9E-07	2.9E-06	1.8E-06	8.5E-04	6.5E-03	5E-03	5E-04	5E-04	9E-03	4E-03	2E-03	3E-03	8E-04	2E-04	5E-04	2E-04	7E-04	3E-04
recreational	park	483830.59	3619825.04	7.1E-02	7.5E-02	6.5E-02	6.0E-02	5.4E-02	4.8E-02	4.7E-02	4.6E-02	3.0E+04	1.0E-01	8.9E-02	2.4E-01	2.4E-01	2.9E-02	9.0E-03	2.8E-02	4.4E-02	6.6E-02	3.1E-02	3.6E-01	4.0E-03	4.2E-03	3.7E-03	3.4E-03	6.9E-04	6.2E-04	6.5E-04	6.4E-04	2.0E-03	1.8E-04	1.6E-04	7.4E-03	2.0E-07	7.7E-08	6.4E-07	2.1E-06	7.1E-06	3.3E-06	6.4E-04	1.8E-02	2E-02	1E-03	1E-03	7E-03	3E-03	2E-03	2E-03	6E-04	1E-04	3E-04	2E-04	2E-03	8E-04
recreational	park	483930.59	3619825.04	7.4E-02	7.8E-02	6.8E-02	6.2E-02	5.5E-02	5.0E-02	4.9E-02	4.8E-02	3.2E+04	1.1E-01	9.2E-02	2.4E-01	2.4E-01	2.9E-02	9.2E-03	2.9E-02	4.7E-02	6.9E-02	3.1E-02	3.4E-01	4.2E-03	4.4E-03	3.8E-03	3.5E-03	7.2E-04	6.4E-04	6.8E-04	6.6E-04	2.2E-03	1.9E-04	1.6E-04	7.1E-03	2.1E-07	7.8E-08	6.5E-07	2.3E-06	7.4E-06	3.4E-06	6.0E-04	1.9E-02	2E-02	1E-03	1E-03	7E-03	3E-03	2E-03	2E-03	6E-04	1E-04	3E-04	2E-04	2E-03	9E-04
residential	REC_100M	484030.59	3619825.04	7.7E-02	8.3E-02	7.1E-02	6.5E-02	5.8E-02	5.2E-02	5.1E-02	4.9E-02	3.6E+04	1.1E-01	9.5E-02	2.3E-01	2.3E-01	2.9E-02	9.3E-03	2.9E-02	5.0E-02	7.3E-02	3.2E-02	3.3E-01	4.4E-03	4.7E-03	4.0E-03	3.7E-03	7.5E-04	6.7E-04	7.0E-04	6.8E-04	2.4E-03	1.9E-04	1.7E-04	6.8E-03	2.1E-07	8.0E-08	6.6E-07	2.4E-06	7.8E-06	3.5E-06	5.7E-04	2.0E-02	2E-02	1E-03	1E-03	7E-03	3E-03	2E-03	2E-03	6E-04	1E-04	3E-04	1E-04	2E-03	9E-04
residential	REC_100M	484130.59	3619825.04	7.8E-02	8.6E-02	7.3E-02	6.6E-02	5.9E-02	5.3E-02	5.1E-02	5.0E-02	3.7E+04	1.1E-01	9.6E-02	2.2E-01	2.2E-01	3.0E-02	9.5E-03	3.0E-02	5.3E-02	7.7E-02	3.4E-02	3.1E-01	4.4E-03	4.9E-03	4.2E-03	3.7E-03	7.6E-04	6.9E-04	7.1E-04	7.0E-04	2.5E-03	1.9E-04	1.7E-04	6.5E-03	2.1E-07	8.2E-08	6.7E-07	2.6E-06	8.3E-06	3.6E-06	5.5E-04	2.0E-02	2E-02	1E-03	1E-03	7E-03	3E-03	2E-03	2E-03	6E-04	1E-04	3E-04	1E-04	3E-03	1E-03
residential	REC_100M	484230.59	3619825.04	8.1E-02	9.1E-02	7.6E-02	6.9E-02	6.1E-02	5.4E-02	5.3E-02	5.1E-02	4.2E+04	1.1E-01	9.7E-02	2.1E-01	2.1E-01	3.1E-02	9.8E-03	3.0E-02	5.7E-02	8.4E-02	3.5E-02	3.0E-01	4.6E-03	5.2E-03	4.3E-03	3.9E-03	7.8E-04	7.0E-04	7.3E-04	7.1E-04	2.8E-03	1.9E-04	1.7E-04	6.3E-03	2.2E-07	8.4E-08	6.8E-07	2.8E-06	8.9E-06	3.8E-06	5.3E-04	2.1E-02	2E-02	1E-03	1E-03	6E-03	3E-03	2E-03	2E-03	5E-04	1E-04	3E-04	1E-04	3E-03	1E-03
residential	REC_100M	484330.59	3619825.04	8.4E-02	9.6E-02	8.0E-02	7.2E-02	6.3E-02	5.6E-02	5.3E-02	5.2E-02	4.6E+04	1.1E-01	9.8E-02	2.0E-01	2.0E-01	3.1E-02	1.0E-02	3.1E-02	6.2E-02	8.9E-02	3.7E-02	2.9E-01	4.8E-03	5.5E-03	4.5E-03	4.1E-03	8.1E-04	7.2E-04	7.4E-04	7.3E-04	3.1E-03	2.0E-04	1.7E-04	6.0E-03	2.2E-07	8.6E-08	7.0E-07	3.0E-06	9.6E-06	3.9E-06	5.2E-04	2.2E-02	2E-02	2E-03	1E-03	6E-03	3E-03	2E-03	2E-03	5E-04	1E-04	3E-04	1E-04	3E-03	1E-03
residential	REC_100M	484430.59	3619825.04	8.8E-02	1.0E-01	8.4E-02	7.5E-02	6.5E-02	5.7E-02	5.5E-02	5.3E-02	5.1E+04	1.1E-01	9.8E-02	1.9E-01	1.9E-01	3.2E-02	1.0E-02	3.1E-02	6.8E-02	9.7E-02	3.9E-02	2.8E-01	5.0E-03	5.9E-03	4.8E-03	4.2E-03	8.4E-04	7.4E-04	7.6E-04	7.4E-04	3.5E-03	2.0E-04	1.7E-04	5.8E-03	2.3E-07	8.8E-08	7.1E-07	3.3E-06	1.0E-05	4.1E-06	5.0E-04	2.3E-02	2E-02	2E-03	2E-03	6E-03	3E-03	1E-03	2E-03	5E-04	1E-04	3E-04	1E-04	3E-03	1E-03
residential	REC_100M	484530.59	3619825.04	9.4E-02	1.1E-01	9.0E-02	7.9E-02	6.8E-02	6.0E-02	5.7E-02	5.5E-02	5.7E+04	1.2E-01	1.0E-01	1.8E-01	1.8E-01	3.3E-02	1.1E-02	3.2E-02	7.4E-02	1.1E-01	4.1E-02	2.7E-01	5.3E-03	6.4E-03	5.1E-03	4.5E-03	8.8E-04	7.8E-04	7.9E-04	7.6E-04	3.8E-03	2.0E-04	1.8E-04	5.6E-03	2.3E-07	9.0E-08	7.2E-07	3.6E-06	1.2E-05	4.4E-06	4.8E-04	2.5E-02	2E-02	2E-03	2E-03	6E-03	3E-03	1E-03	2E-03	5E-04	1E-04	3E-04	1E-04	4E-03	1E-03
residential	REC_100M	484630.59	3619825.04	1.0E-01	1.2E-01	9.8E-02	8.6E-02	7.3E-02	6.3E-02	6.0E-02	5.7E-02	6.3E+04	1.2E-01	1.1E-01	1.8E-01	1.8E-01	3.3E-02	1.1E-02	3.3E-02	8.2E-02	1.2E-01	4.4E-02	2.6E-01	5.7E-03	7.0E-03	5.5E-03	4.9E-03	9.4E-04	8.2E-04	8.3E-04	7.9E-04	4.3E-03	2.2E-04	1.9E-04	5.4E-03	2.4E-07	9.3E-08	7.4E-07	3.9E-06	1.3E-05	4.7E-06	4.6E-04	2.7E-02	2E-02	2E-03	2E-03	5E-03	3E-03	1E-03	2E-03	5E-04	1E-04	3E-04	1E-04	4E-03	2E-03
residential	REC_100M	484730.59	3619825.04	1.1E-01	1.4E-01	1.1E-01	9.2E-02	7.8E-02	6.7E-02	6.3E-02	6.0E-02	7.1E+04	1.3E-01	1.1E-01	1.7E-01	1.7E-01	3.4E-02	1.1E-02	3.4E-02	8.9E-02	1.4E-01	4.7E-02	2.5E-01	6.3E-03	7.7E-03	6.0E-03	5.2E-03	1.0E-03	8.6E-04	8.8E-04	8.3E-04	4.8E-03	2.3E-04	2.0E-04	5.2E-03	2.5E-07	9.5E-08	7.6E-07	4.3E-06	1.5E-05	5.1E-06	4.5E-04	2.9E-02	3E-02	2E-03	2E-03	5E-03	2E-03	1E-03	1E-03	4E-04	9E-05	2E-04	1E-04	5E-03	2E-03
residential	REC_100M	484830.59	3619825.04	1.2E-01	1.5E-01	1.2E-01	1.0E-01	8.4E-02	7.1E-02	6.7E-02	6.3E-02	8.0E+04	1.4E-01	1.2E-01	1.7E-01	1.7E-01	3.6E-02	1.1E-02	3.4E-02	9.7E-02	1.5E-01	5.1E-02	2.4E-01	6.9E-03	8.4E-03	6.6E-03	5.7E-03	1.1E-03	9.2E-04	9.3E-04	8.7E-04	5.4E-03	2.4E-04	2.1E-04	5.0E-03	2.5E-07	9.8E-08	7.8E-07	4.7E-06	1.6E-05	5.5E-06	4.3E-04	3.1E-02	3E-02	2E-03	2E-03	5E-03	2E-03	1E-03	1E-03	4E-04	9E-05	2E-04	1E-04	5E-03	2E-03
residential	REC_100M	484930.59	3619825.04	1.3E-01	1.6E-01	1.3E-01	1.1E-01	9.1E-02	7.6E-02	7.1E-02	6.6E-02	9.1E+04	1.5E-01	1.3E-01	1.6E-01	1.6E-01	3.7E-02	1.2E-02	3.6E-02	1.1E-01	1.7E-01	5.6E-02	2.3E-01	7.6E-03	9.1E-03	7.2E-03	6.2E-03	1.2E-03	9.9E-04	9.9E-04	9.2E-04	6.2E-03	2.6E-04	2.2E-04	4.8E-03	2.6E-07	1.0E-07	8.1E-07	5.2E-06	1.9E-05	6.0E-06	4.1E-04	3.4E-02	3E-02	2E-03	2E-03	5E-03	2E-03	1E-03	1E-03	4E-04	9E-05	2E-04	1E-04	6E-03	2E-03
residential	REC_100M	485030.59	3619825.04	1.5E-01	1.7E-01	1.4E-01	1.2E-01	9.9E-02	8.3E-02	7.7E-02	7.1E-02	1.1E+05	1.6E-01	1.4E-01	1.6E-01	1.6E-01	3.8E-02	1.2E-02	3.7E-02	1.2E-01	2.0E-01	6.0E-02	2.3E-01	8.4E-03	9.7E-03	7.8E-03	6.8E-03	1.3E-03	1.1E-03	1.1E-03	9.9E-04	7.2E-03	2.9E-04	2.4E-04	4.7E-03	2.7E-07	1.0E-07	8.4E-07	5.7E-06	2.1E-05	6.4E-06	4.0E-04	3.7E-02	3E-02	2E-03	2E-03	5E-03	2E-03	1E-03	1E-03	4E-04	8E-05	2E-04	1E-04	7E-03	3E-03
residential	REC_100M	485130.59	3619825.04	1.6E-01	1.8E-01	1.5E-01	1.3E-01	1.1E-01	8.9E-02	8.2E-02	7.6E-02	1.2E+05	1.8E-01	1.5E-01	1.5E-01	1.5E-01	4.0E-02	1.2E-02	3.8E-02	1.3E-01	2.2E-01	6.4E-02	2.2E-01	9.2E-03	1.0E-02	8.4E-03	7.3E-03	1.4E-03	1.2E-03	1.1E-03	1.1E-03	8.4E-03	3.1E-04	2.6E-04	4.5E-03	2.9E-07	1.1E-07	8.7E-07	6.2E-06	2.4E-05	6.9E-06	3.8E-04	4.0E-02	4E-02	3E-03	2E-03	5E-03	2E-03	1E-03	1E-03	4E-04	8E-05	2E-04	1E-04	8E-03	3E-03
residential	REC_100M	485230.59	3619825.04	1.7E-01	1.9E-01	1.6E-01	1.4E-01	1.2E-01	9.7E-02	8.9E-02	8.2E-02	1.5E+05	2.0E-01	1.6E-01	1.4E-01	1.4E-01	4.3E-02	1.3E-02	4.0E-02	1.4E-01	2.5E-01	6.9E-02	2.1E-01	9.9E-03	1.1E-02	8.9E-03	7.9E-03	1.5E-03	1.3E-03	1.2E-03	1.1E-03	9.8E-03	3.5E-04	2.9E-04	4.3E-03	3.0E-07	1.1E-07	9.0E-07	6.8E-06	2.7E-05	7.4E-06	3.7E-04	4.3E-02	4E-02	3E-03	2E-03	4E-03	2E-03	1E-03	1E-03	4E-04	8E-05	2E-04	9E-05	1E-02	4E-03
residential	REC_100M	485330.59	3619825.04	1.9E-01	2.0E-01	1.7E-01	1.5E-01	1.2E-01	1.0E-01	9.7E-02	8.9E-02	1.7E+05	2.2E-01	1.8E-01	1.4E-01	1.4E-01	4.5E-02	1.3E-02	4.1E-02	1.5E-01	2.9E-01	7.5E-02	2.0E-01	1.1E-02	1.1E-02	9.5E-03	8.4E-03	1.6E-03	1.4E-03	1.3E-03	1.2E-03	1.1E-02	4.0E-04	3.2E-04	4.2E-03	3.2E-07	1.1E-07	9.4E-07	7.4E-06	3.1E-05	8.1E-06	3.5E-04	4.5E-02	4E-02	3E-03	3E-03	4E-03	2E-03	1E-03	1E-03	4E-04	7E-05	2E-04	9E-05	1E-02	4E-03
residential	REC_100M	485430.59	3619825.04	2.0E-01	2.1E-01	1.8E-01	1.6E-01	1.3E-01	1.1E-01	1.0E-01	9.7E-02	1.9E+05	2.5E-01	2.1E-01	1.3E-01	1.3E-01	4.8E-02	1.3E-02	4.4E-02	1.7E-01	3.5E-01	8.1E-02	1.9E-01	1.1E-02	1.2E-02	1.0E-02	8.9E-03	1.7E-03	1.5E-03	1.5E-03	1.3E-03	1.3E-02	4.5E-04	3.6E-04	4.0E-03	3.4E-07	1.2E-07	9.9E-07	8.2E-06	3.7E-05	8.7E-06	3.4E-04	4.8E-02	4E-02	3E-03	3E-03	4E-03	2E-03	1E-03	1E-03	3E-04	7E-05	2E-04	8E-05	1E-02	5E-03
residential	REC_100M	485530.59	3619825.04	2.1E-01	2.2E-01	1.8E-01	1.6E-01	1.4E-01	1.2E-01	1.1E-01	1.1E-01	2.1E+05	2.9E-01	2.4E-01	1.3E-01	1.3E-01	5.2E-02	1.4E-02	4.8E-02	2.0E-01	4.3E-01	9.0E-02	1.9E-01	1.2E-02	1.2E-02	1.0E-02	9.3E-03	1.8E-03	1.6E-03	1.6E-03	1.5E-03	1.4E-02	5.2E-04	4.2E-04	4.0E-03	3.7E-07	1.2E-07	1.1E-06	9.5E-06	4.6E-05	9.6E-06	3.3E-04	5.0E-02	4E-02	3E-03	3E-03	4E-03	2E-03	1E-03	1E-03	3E-04	7E-05	2E-04	8E-05	1E-02	6E-03
residential	REC_100M	485630.59	3619825.04	2.2E-01	2.2E-01	1.9E-01	1.7E-01	1.5E-01	1.3E-01	1.2E-01	1.1E-01	2.2E+05	3.2E-01	2.6E-01	1.3E-01	1.3E-01	5.6E-02	1.4E-02	5.0E-02	2.2E-01	4.9E-01	9.6E-02	1.8E-01	1.2E-02	1.3E-02	1.1E-02	9.7E-03	1.9E-03	1.7E-03	1.7E-03	1.6E-03	1.5E-02	5.7E-04	4.6E-04	3.8E-03	4.0E-07	1.2E-07	1.1E-06	1.1E-05	5.2E-05	1.0E-05	3.1E-04	5.2E-02	5E-02	4E-03	3E-03	4E-03	2E-03	1E-03	1E-03	3E-04	6E-05	2E-04	8E-05	1E-02	6E-03
residential	REC_100M	485730.59	3619825.04	2.3E-01	2.2E-01	2.0E-01	1.8E-01	1.6E-01	1.4E-01	1.3E-01	1.2E-01	2.3E+05	3.6E-01	3.0E-01	1.2E-01	1.2E-01	6.1E-02	1.5E-02	5.4E-02	2.6E-01	5.7E-01	1.0E-01	1.7E-01	1.3E-02	1.3E-02	1.1E-02	1.0E-02	2.0E-03	1.7E-03	1.8E-03	1.7E-03	1.6E-02	6.4E-04	5.2E-04	3.7E-03	4.3E-07	1.3E-07	1.2E-06	1.3E-05	6.1E-05	1.1E-05	3.0E-04	5.4E-02	5E-02	4E-03	4E-03	4E-03	2E-03	9E-04	1E-03	3E-04	6E-05	2E-04	8E-05	2E-02	6E-03
residential	REC_100M	485830.59	3619825.04	2.3E-01	2.3E-01	2.0E-01	1.8E-01	1.6E-01	1.4E-01	1.4E-01	1.3E-01	2.4E+05	3.9E-01	3.2E-01	1.2E-01	1.2E-01	6.6E-02	1.5E-02	5.8E-02	3.2E-01	6.2E-01	1.1E-01	1.6E-01	1.3E-02	1.3E-02	1.1E-02	1.0E-02	2.1E-03	1.8E-03	1.9E-03	1.8E-03	1.6E-02	6.9E-04	5.7E-04	3.6E-03	4.7E-07	1.3E-07	1.3E-06	1.5E-05	6.6E-05	1.2E-05	2.9E-04	5.5E-02	5E-02	4E-03	4E-03	4E-03	2E-03	9E-04	1E-03	3E-04	6E-05	2E-04	7E-05	2E-02	6E-03
residential	REC_100M	485930.59	3619825.04	2.4E-01	2.3E-01	2.1E-01	1.9E-01	1.7E-01	1.5E-01	1.4E-01	1.4E-01	2.5E+05	4.2E-01	3.5E-01	1.2E-01	1.2E-01	7.2E-02	1.5E-02	6.3E-02	3.8E-01	6.8E-01	1.3E-01	1.6E-01	1.3E-02	1.3E-02	1.2E-02	1.1E-02	2.2E-03	1.9E-03	2.0E-03	1.9E-03	1.7E-02	7.4E-04	6.2E-04	3.5E-03	5.1E-07	1.3E-07	1.4E-06	1.8E-05	7.3E-05	1.4E-05	2.8E-04	5.7E-02	5E-02	4E-03	4E-03	3E-03	2E-03	9E-04	1E-03	3E-04	6E-05	2E-04	7E-05	2E-02	6E-03
residential	REC_100M	486030.59	3619825.04	2.4E-01	2.2E-01	2.1E-01	1.9E-01	1.7E-01	1.5E-01	1.5E-01	1.4E-01	2.5E+05	4.5E-01	3.8E-01	1.1E-01	1.1E-01	7.8E-02	1.6E-02	7.0E-02	4.4E-01	7.3E-01	1.4E-01	1.5E-01	1.3E-02	1.3E-02	1.2E-02	1.1E-02	2.2E-03	2.0E-03	2.1E-03	2.0E-03	1.7E-02	7.8E-04	6.6E-04	3.4E-03	5.6E-07	1.4E-07	1.6E-06	2.1E-05	7.8E-05	1.5E-05	2.7E-04	5.7E-02	5E-02	4E-03	4E-03	3E-03	2E-03	9E-04	1E-03	3E-04	6E-05	1E-04	7E-05	2E-02	7E-03
residential	REC_100M	476730.59	3619925.04	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.1E-02	1.1E-02	5.3E+03	1.1E-02	1.1E-02	4.3E-02	4.3E-02	1.1E-02	4.4E-03	1.1E-02	1.3E-02	1.5E-02	1.1E-02	3.8E-02	7.7E-04	7.8E-04	7.4E-04	7.2E-04	1.6E-04	1.5E-04	1.6E-04	1.6E-04	3.6E-04	2.0E-05	1.9E-05	1.3E-03	7.7E-08	3.7E-08	2.4E-07	6.2E-07	1.6E-06	1.2E-06	6.8E-05	3.6E-03	3E-03	3E-04	3E-04	1E-03	6E-04	3E-04	4E-04	7E-05	1E-05	4E-05	2E-05	4E-04	1E-04
residential	REC_100M	476830.59	3619925.04	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	1.1E-02	5.4E+03	1.2E-02	1.1E-02	4.5E-02	4.5E-02	1.1E-02	4.4E-03	1.1E-02	1.3E-02	1.5E-02	1.2E-02	4.1E-02	7.8E-04	8.0E-04	7.6E-04	7.3E-04	1.6E-04	1.5E-04	1.6E-04	1.6E-04	3.6E-04	2.1E-05	2.0E-05	1.4E-03	7.9E-08	3.7E-08	2.5E-07	6.4E-07	1.6E-06	1.2E-06	7.2E-05	3.7E-03	3E-03	3E-04	3E-04	1E-03	6E-04	3E-04	4E-04	7E-05	1E-05	4E-05	2E-05	4E-04	1E-04
residential	REC_100M	476930.59	3619925.04	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	1.2E-02	5.3E+03	1.2E-02	1.1E-02	4.6E-02	4.6E-02	1.1E-02	4.3E-03	1.1E-02	1.3E-02	1.5E-02	1.2E-02	4.2E-02	7.9E-04	8.0E-04	7.6E-04	7.3E-04	1.6E-04	1.5E-04	1.6E-04	1.6E-04	3.6E-04	2.1E-05	2.0E-05	1.4E-03	7.8E-08	3.7E-08	2.4E-07	6.3E-07	1.6E-06	1.2E-06	7.3E-05	3.7E-03	3E-03	3E-04	3E-04	1E-03	6E-04	3E-04	4E-04	7E-05	2E-05	4E-05	2E-05	4E-04	1E-04
residential	REC_100M	477030.59	3619925.04	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	1.2E-02	5.3E+03	1.2E-02	1.1E-02	4.7E-02	4.7E-02	1.1E-02	4.3E-03	1.1E-02	1.3E-02	1.5E-02	1.2E-02	4.3E-02	7.9E-04	8.0E-04	7.6E-04	7.4E-04	1.6E-04	1.5E-04	1.6E-04	1.6E-04	3.6E-04	2.1E-05	2.0E-05	1.4E-03	7.8E-08	3.7E-08	2.4E-07	6.3E-07	1.6E-06	1.2E-06	7.6E-05	3.7E-03	3E-03	3E-04	3E-04	1E-03	7E-04	4E-04	4E-04	8E-05	2E-05	4E-05	2E-05	4E-04	1E-04
residential	REC_100M	477130.59	3619925.04	1.4E-02	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	5.4E+03	1.2E-02	1.1E-02	4.9E-02	4.9E-02	1.1E-02	4.3E-03	1.1E-02	1.3E-02	1.5E-02	1.2E-02	4.6E-02	8.1E-04	8.2E-04	7.8E-04	7.5E-04	1.6E-04	1.6E-04	1.7E-04	1.7E-04	3.7E-04	2.1E-05	2.0E-05	1.5E-03	7.9E-08	3.7E-08	2.5E-07	6.4E-07	1.6E-06	1.3E-06	8.1E-05	3.8E-03	3E-03	3E-04	3E-04	1E-03	7E-04	4E-04	4E-04	8E-05	2E-05	4E-05	2E-05	4E-04	1E-04
residential	REC_100M	477230.59	3619925.04	1.5E-02	1.5E-02	1.4E-02	1.4E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	5.6E+03	1.2E-02	1.2E-02	5.3E-02	5.3E-02	1.1E-02	4.4E-03	1.1E-02	1.4E-02	1.6E-02	1.2E-02	5.0E-02	8.3E-04	8.4E-04	8.0E-04	7.7E-04	1.7E-04	1.6E-04	1.7E-04	1.7E-04	3.8E-04	2.2E-05	2.1E-05	1.6E-03	8.2E-08	3.8E-08	2.6E-07	6.7E-07	1.7E-06	1.3E-06	8.8E-05	3.9E-03	3E-03	3E-04	3E-04	2E-03	7E-04	4E-04	4E-04	9E-05	2E-05	5E-05	2E-05	4E-04	1E-04
residential	REC_100M	477330.59	3619925.04	1.5E-02	1.5E-02	1.5E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	1.3E-02	5.9E+03	1.3E-02	1.3E-02	5.7E-02	5.7E-02	1.2E-02	4.5E-03	1.2E-02	1.5E-02	1.7E-02	1.3E-02	5.6E-02	8.6E-04	8.8E-04	8.3E-04	8.0E-04	1.7E-04	1.7E-04	1.8E-04	1.8E-04	4.0E-04	2.3E-05	2.2E-05	1.7E-03	8.5E-08	3.9E-08	2.7E-07	7.1E-07	1.8E-06	1.4E-06	9.9E-05	4.1E-03	3E-03	3E-04	4E-04	2E-03	8E-04	4E-04	5E-04	1E-04	2E-05	5E-05	2E-05	4E-04	2E-04
residential	REC_100M	477430.59	3619925.04	1.5E-02	1.5E-02	1.5E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	1.3E-02	5.8E+03	1.3E-02	1.2E-02	5.8E-02	5.8E-02	1.2E-02	4.5E-03	1.2E-02	1.4E-02	1.6E-02	1.3E-02	5.8E-02	8.6E-04	8.8E-04	8.3E-04	8.0E-04	1.7E-04	1.7E-04	1.8E-04	1.8E-04	3.9E-04	2.3E-05	2.2E-05	1.8E-03	8.4E-08	3.9E-08	2.6E-07	7.0E-07	1.8E-06	1.4E-06	1.0E-04	4.1E-03	3E-03	3E-04	4E-04	2E-03	8E-04	4E-04	5E-04	1E-04	2E-05	6E-05	3E-05	4E-04	2E-04
residential	REC_100M	477530.59	3619925.04	1.5E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	5.9E+03	1.3E-02	1.3E-02	6.1E-02	6.1E-02	1.2E-02	4.5E-03	1.2E-02	1.5E-02	1.6E-02	1.3E-02	6.2E-02	8.8E-04	8.9E-04	8.4E-04	8.1E-04	1.8E-04	1.7E-04	1.8E-04	1.8E-04	4.0E-04	2.3E-05	2.2E-05	1.8E-03	8.5E-08	3.9E-08	2.7E-07	7.1E-07	1.8E-06	1.4E-06	1.1E-04	4.1E-03	3E-03	3E-04	4E-04	2E-03	9E-04	5E-04	5E-04	1E-04	2E-05	6E-05	3E-05	4E-04	2E-04
residential	REC_100M	477630.59	3619925.04	1.6E-02	1.6E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	1.3E-02	6.4E+03	1.4E-02	1.4E-02	6.9E-02	6.9E-02	1.2E-02	4.7E-03	1.2E-02	1.6E-02	1.8E-02	1.4E-02	7.3E-02	9.2E-04	9.3E-04	8.8E-04	8.5E-04	1.9E-04	1.8E-04	1.9E-04	1.9E-04	4.3E-04	2.5E-05	2.4E-05	2.1E-03	8.9E-08	4.1E-08	2.8E-07	7.7E-07	1.9E-06	1.5E-06	1.3E-04	4.3E-03	4E-03	4E-04	4E-04	2E-03	1E-03	5E-04	6E-04	1E-04	3E-05	7E-05	3E-05	4E-04	2E-04
residential	REC_100M	477730.59	3619925.04	1.7E-02	1.7E-02	1.6E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	6.8E+03	1.5E-02	1.4E-02	7.7E-02	7.7E-02	1.3E-02	4.9E-03	1.3E-02	1.7E-02	1.9E-02	1.4E-02	8.7E-02	9.6E-04	9.8E-04	9.2E-04	8.9E-04	1.9E-04	1.8E-04	2.0E-04	1.9E-04	4.6E-04	2.7E-05	2.5E-05	2.3E-03	9.1E-08	4.2E-08	2.9E-07	8.1E-07	2.0E-06	1.5E-06	1.5E-04	4.5E-03	4E-03	4E-04	4E-04	2E-03	1E-03	6E-04	7E-04	2E-04	3E-05	8E-05	4E-05	5E-04	2E-04
residential	REC_100M	477830.59	3619925.04	1.8E-02	1.8E-02	1.7E-02	1.7E-02	1.6E-02	1.5E-02	1.5E-02	1.5E-02	7.3E+03	1.6E-02	1.5E-02	9.1E-02	9.1E-02	1.4E-02	5.2E-03	1.3E-02	1.7E-02	2.0E-02	1.4E-02	1.1E-01	1.0E-03	1.0E-03	9.8E-04	9.4E-04	2.0E-04	2.0E-04	2.1E-04	2.1E-04	4.9E-04	2.8E-05	2.7E-05	2.7E-03	9.8E-08	4.4E-08	3.0E-07	8.2E-07	2.2E-06	1.5E-06	2.0E-04	4.8E-03	4E-03	4E-04	4E-04	3E-03	1E-03	7E-04	8E-04	2E-04	4E-05	1E-04	5E-05	5E-04	2E-04
recreational	park	477930.59	3619925.04	1.9E-02	2.0E-02	1.8E-02	1.8E-02	1.7E-02	1.6E-02	1.6E-02	1.6E-02	7.7E+03	1.7E-02	1.6E-02	1.1E-01	1.1E-01	1.4E-02	5.5E-03	1.4E-02	1.7E-02	2.2E-02	1.4E-02	1.4E-01	1.1E-03	1.1E-03	1.0E-03	1.0E-03	2.2E-04	2.0E-04	2.2E-04	2.2E-04	5.2E-04	3.0E-05	2.8E-05	3.2E-03	9.9E-08	4.7E-08	3.1E-07	8.3E-07	2.3E-06	1.5E-06	2.4E-04	5.1E-03	4E-03	4E-04	4E-04	3E-03	1E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	5E-04	2E-04
recreational	park	479030.59	3619925.04	2.4E-02	2.4E-02	2.2E-02	2.1E-02	2.0E-02	1.9E-02	1.9E-02	1.9E-02	9.5E+03	2.3E-02	2.1E-02	2.4E-01	2.4E-01	1.5E-02	5.8E-03	1.5E-02	2.0E-02	2.5E-02	1.6E-02	3.8E-01	1.3E-03	1.4E-03	1.3E-03	1.2E-03	2.6E-04	2.4E-04	2.6E-04	2.6E-04	6.4E-04	4.0E-05	3.7E-05	7.3E-03	1.1E-07	4.9E-08	3.5E-07	9.4E-07	2.7E-06	1.7E-06	6.6E-04	6.2E-03	5E-03	5E-04	5E-04	7E-03	3E-03	2E-03	2E-03	7E-04	1E-04	4E-04	2E-04	6E-04	2E-04
recreational	park	479130.59	3619925.04	2.4E-02	2.4E-02	2.3E-02	2.2E-02	2.0E-02	1.9E-02	1.9E-02	1.9E-02	9.6E+03	2.3E-02	2.2E-02	2.6E-01	2.6E-01	1.6E-02	5.8E-03	1.6E-02	2.0E-02	2.6E-02	1.6E-02	4.2E-01	1.4E-03	1.4E-03	1.3E-03	1.2E-03	2.6E-04	2.5E-04	2.6E-04	2.6E-04	6.5E-04	4.1E-05	3.8E-05	7.9E-03	1.1E-07	5.0E-08	3.5E-07	9.5E-07	2.7E-06	1.7E-06	7.4E-04	6.3E-03	5E-03	5E-04	5E-04	8E-03	4E-03	2E-03	2E-03	7E-04	2E-04	4E-04	2E-04	7E-04	3E-04
recreational	park	479230.59	3619925.04	2.5E-02	2.5E-02	2.3E-02	2.2E-02	2.1E-02	2.0E-02	1.9E-02	1.9E-02	9.8E+03	2.4E-02	2.2E-02	2.9E-01	2.9E-01	1.6E-02	5.8E-03	1.6E-02	2.0E-02	2.6E-02	1.6E-02	4.7E-01	1.4E-03	1.4E-03	1.3E-03	1.3E-03	2.7E-04	2.5E-04	2.7E-04	2.7E-04	6.6E-04	4.2E-05	3.9E-05	8.7E-03	1.1E-07	5.0E-08	3.6E-07	9.7E-07	2.8E-06	1.8E-06	8.2E-04	6.4E-03	5E-03	5E-04	5E-04	9E-03	4E-03	2E-03	2E-03	8E-04	2E-04	4E-04	2E-04	7E-04	3E-04
recreational	park	483530.59	3619925.04	6.2E-02	6.4E-02	5.7E-02	5.2E-02	4.7E-02	4.3E-02	4.2E-02	4.2E-02	2.3E+04	8.3E-02	7.4E-02	2.6E-01	2.6E-01	2.6E-02	8.5E-03	2.6E-02	3.8E-02	5.6E-02	2.7E-02	3.9E-01	3.5E-03	3.6E-03	3.2E-03	3.0E-03	6.1E-04	5.5E-04	5.9E-04	5.8E-04	1.6E-03	1.5E-04	1.3E-04	7.9E-03	1.9E-07	7.2E-08	5.9E-07	1.8E-06	6.0E-06	2.9E-06	6.9E-04	1.6E-02	1E-02	1E-03	1E-03	8E-03	4E-03	2E-03	2E-03	7E-04	1E-04	4E-04	2E-04	2E-03	6E-04
recreational	park	483630.59	3619925.04	6.5E-02	6.7E-02	6.0E-02	5.5E-02	4.9E-02	4.4E-02	4.4E-02	4.3E-02	2.5E+04	8.7E-02	7.7E-02	2.5E-01	2.5E-01	2.6E-02	8.6E-03	2.6E-02	3.9E-02	5.8E-02	2.8E-02	3.7E-01	3.7E-03	3.8E-03	3.4E-03	3.1E-03	6.4E-04	5.8E-04	6.1E-04	6.0E-04	1.7E-03	1.5E-04	1.4E-04	7.6E-03	1.9E-07	7.4E-08	6.0E-07	1.9E-06	6.2E-06	3.0E-06	6.5E-04	1.6E-02	1E-02	1E-03	1E-03	8E-03	4E-03	2E-03	2E-03	6E-04	1E-04	3E-04	2E-04	2E-03	7E-04
recreational	park	483730.59	3619925.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
recreational	park	483830.59	3619925.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
recreational	park	483930.59	3619925.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
residential	REC_100M	484030.59	3619925.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
residential	REC_100M	484130.59	3619925.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
residential	REC_100M	484230.59	3619925.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
residential	REC_100M	484330.59	3619925.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
residential	REC_100M	484430.59	3619925.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
residential	REC_100M	484530.59	3619925.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
residential	REC_100M	484630.59	3619925.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
residential	REC_100M	484730.59	3619925.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
residential	REC_100M	484830.59	3619925.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
residential	REC_100M	484930.59	3619925.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
residential	REC_100M	485030.59	3619925.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
residential	REC_100M	485130.59	3619925.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
residential	REC_100M	485230.59	3619925.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
residential	REC_100M	485330.59	3619925.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
residential	REC_100M	485430.59	3619925.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
residential	REC_100M	485530.59	3619925.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
residential	REC_100M	485630.59	3619925.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
residential	REC_100M	485730.59	3619925.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
residential	REC_100M	485830.59	3619925.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
residential	REC_100M	485930.59	3619925.04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
residential	REC_100M	486030.59	3619925.04	2.2E-01	2.1E-01	2.0E-01	1.8E-01	1.6E-01	1.4E-01	1.4E-01	1.4E-01	2.3E+05	4.1E-01	3.4E-01	1.1E-01	1.1E-01	7.6E-02	1.6E-02	6.8E-02	4.1E-01	6.6E-01	1.4E-01	1.5E-01	1.3E-02	1.2E-02	1.1E-02	1.0E-02	2.1E-03	1.9E-03	2.0E-03	1.9E-03	1.5E-02	7.1E-04	6.1E-04	3.3E-03	5.5E-07	1.4E-07	1.5E-06	2.0E-05	7.0E-05	1.5E-05	2.6E-04	5.4E-02	5E-02	4E-03	4E-03	3E-03	2E-03	8E-04	9E-04	3E-04	5E-05	1E-04	7E-05	2E-02	6E-03
residential	REC_100M	476730.59	3620025.04	1.3E-02	1.4E-02	1.3E-02	1.2E-02	1.2E-02	1.1E-02	1.1E-02	1.1E-02	5.1E+03	1.1E-02	1.1E-02	4.1E-02	4.1E-02	1.1E-02	4.3E-03	1.0E-02	1.3E-02	1.4E-02	1.1E-02	3.6E-02	7.6E-04	7.7E-04	7.3E-04	7.1E-04	1.5E-04	1.5E-04	1.6E-04	1.5E-04	3.5E-04	2.0E-05	1.9E-05	1.2E-03	7.6E-08	3.7E-08	2.4E-07	6.1E-07	1.5E-06	1.2E-06	6.4E-05	3.6E-03	3E-03	3E-04	3E-04	1E-03	6E-04	3E-04	4E-04	6E-05	1E-05	3E-05	2E-05	3E-04	1E-04
residential	REC_100M	476830.59	3620025.04	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.1E-02	1.1E-02	5.3E+03	1.2E-02	1.1E-02	4.4E-02	4.4E-02	1.1E-02	4.3E-03	1.1E-02	1.3E-02	1.5E-02	1.2E-02	3.9E-02	7.8E-04	7.9E-04	7.5E-04	7.2E-04	1.6E-04	1.5E-04	1.6E-04	1.6E-04	3.6E-04	2.0E-05	2.0E-05	1.3E-03	7.8E-08	3.7E-08	2.4E-07	6.3E-07	1.6E-06	1.2E-06	6.8E-05	3.7E-03	3E-03	3E-04	3E-04	1E-03	6E-04	3E-04	4E-04	7E-05	1E-05	4E-05	2E-05	4E-04	1E-04
residential	REC_100M	476930.59	3620025.04	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	1.1E-02	5.3E+03	1.2E-02	1.1E-02	4.5E-02	4.5E-02	1.1E-02	4.3E-03	1.1E-02	1.3E-02	1.5E-02	1.2E-02	4.0E-02	7.8E-04	7.9E-04	7.5E-04	7.3E-04	1.6E-04	1.5E-04	1.6E-04	1.6E-04	3.6E-04	2.0E-05	2.0E-05	1.3E-03	7.8E-08	3.7E-08	2.4E-07	6.3E-07	1.6E-06	1.2E-06	7.0E-05	3.7E-03	3E-03	3E-04	3E-04	1E-03	6E-04	3E-04	4E-04	7E-05	1E-05	4E-05	2E-05	4E-04	1E-04
residential	REC_100M	477030.59	3620025.04	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	1.2E-02	5.2E+03	1.2E-02	1.1E-02	4.5E-02	4.5E-02	1.1E-02	4.2E-03	1.1E-02	1.3E-02	1.5E-02	1.1E-02	4.1E-02	7.8E-04	8.0E-04	7.5E-04	7.3E-04	1.6E-04	1.5E-04	1.6E-04	1.6E-04	3.5E-04	2.0E-05	1.9E-05	1.4E-03	7.7E-08	3.6E-08	2.4E-07	6.3E-07	1.6E-06	1.2E-06	7.2E-05	3.7E-03	3E-03	3E-04	3E-04	1E-03	6E-04	3E-04	4E-04	7E-05	1E-05	4E-05	2E-05	4E-04	1E-04
residential	REC_100M	477130.59	3620025.04	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	1.2E-02	5.2E+03	1.2E-02	1.1E-02	4.7E-02	4.7E-02	1.1E-02	4.3E-03	1.1E-02	1.3E-02	1.5E-02	1.2E-02	4.3E-02	7.9E-04	8.1E-04	7.6E-04	7.4E-04	1.6E-04	1.5E-04	1.6E-04	1.6E-04	3.6E-04	2.1E-05	2.0E-05	1.4E-03	7.8E-08	3.6E-08	2.4E-07	6.3E-07	1.6E-06	1.2E-06	7.5E-05	3.7E-03	3E-03	3E-04	3E-04	1E-03	7E-04	4E-04	4E-04	8E-05	2E-05	4E-05	2E-05	4E-04	1E-04
residential	REC_100M	477230.59	3620025.04	1.4E-02	1.5E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	5.4E+03	1.2E-02	1.2E-02	5.0E-02	5.0E-02	1.1E-02	4.3E-03	1.1E-02	1.4E-02	1.5E-02	1.2E-02	4.6E-02	8.2E-04	8.3E-04	7.9E-04	7.6E-04	1.7E-04	1.6E-04	1.7E-04	1.7E-04	3.7E-04	2.1E-05	2.0E-05	1.5E-03	8.0E-08	3.7E-08	2.5E-07	6.6E-07	1.6E-06	1.3E-06	8.2E-05	3.8E-03	3E-03	3E-04	3E-04	2E-03	7E-04	4E-04	4E-04	8E-05	2E-05	4E-05	2E-05	4E-04	1E-04
residential	REC_100M	477330.59	3620025.04	1.5E-02	1.5E-02	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	5.7E+03	1.3E-02	1.2E-02	5.4E-02	5.4E-02	1.2E-02	4.5E-03	1.1E-02	1.4E-02	1.6E-02	1.2E-02	5.1E-02	8.4E-04	8.6E-04	8.1E-04	7.8E-04	1.7E-04	1.6E-04	1.7E-04	1.7E-04	3.9E-04	2.2E-05	2.1E-05	1.6E-03	8.3E-08	3.8E-08	2.6E-07	6.9E-07	1.7E-06	1.3E-06	9.1E-05	4.0E-03	3E-03	3E-04	3E-04	2E-03	8E-04	4E-04	4E-04	9E-05	2E-05	5E-05	2E-05	4E-04	1E-04
residential	REC_100M	477430.59	3620025.04	1.5E-02	1.5E-02	1.5E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	1.3E-02	5.8E+03	1.3E-02	1.2E-02	5.7E-02	5.7E-02	1.2E-02	4.5E-03	1.2E-02	1.5E-02	1.6E-02	1.3E-02	5.6E-02	8.6E-04	8.7E-04	8.2E-04	8.0E-04	1.7E-04	1.7E-04	1.8E-04	1.8E-04	3.9E-04	2.3E-05	2.2E-05	1.7E-03	8.4E-08	3.9E-08	2.6E-07	7.1E-07	1.7E-06	1.3E-06	9.8E-05	4.0E-03	3E-03	3E-04	4E-04	2E-03	8E-04	4E-04	5E-04	1E-04	2E-05	5E-05	2E-05	4E-04	1E-04
residential	REC_100M	477530.59	3620025.04	1.5E-02	1.5E-02	1.5E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	1.3E-02	5.7E+03	1.3E-02	1.2E-02	5.8E-02	5.8E-02	1.2E-02	4.5E-03	1.1E-02	1.4E-02	1.6E-02	1.2E-02	5.7E-02	8.6E-04	8.7E-04	8.2E-04	8.0E-04	1.7E-04	1.7E-04	1.8E-04	1.7E-04	3.9E-04	2.3E-05	2.2E-05	1.7E-03	8.3E-08	3.8E-08	2.6E-07	7.0E-07	1.7E-06	1.3E-06	1.0E-04	4.0E-03	3E-03	3E-04	4E-04	2E-03	8E-04	4E-04	5E-04	1E-04	2E-05	5E-05	3E-05	4E-04	1E-04
residential	REC_100M	477630.59	3620025.04	1.6E-02	1.6E-02	1.5E-02	1.5E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	6.0E+03	1.4E-02	1.3E-02	6.3E-02	6.3E-02	1.2E-02	4.6E-03	1.2E-02	1.5E-02	1.7E-02	1.3E-02	6.5E-02	8.9E-04	9.1E-04	8.5E-04	8.3E-04	1.8E-04	1.7E-04	1.8E-04	1.8E-04	4.1E-04	2.4E-05	2.3E-05	1.9E-03	8.6E-08	4.0E-08	2.7E-07	7.4E-07	1.8E-06	1.4E-06	1.1E-04	4.2E-03	3E-03	4E-04	4E-04	2E-03	9E-04	5E-04	5E-04	1E-04	2E-05	6E-05	3E-05	4E-04	2E-04
residential	REC_100M	477730.59	3620025.04	1.6E-02	1.7E-02	1.6E-02	1.5E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	6.5E+03	1.5E-02	1.4E-02	7.2E-02	7.2E-02	1.2E-02	4.8E-03	1.2E-02	1.6E-02	1.8E-02	1.4E-02	7.8E-02	9.3E-04	9.5E-04	8.9E-04	8.6E-04	1.9E-04	1.8E-04	1.9E-04	1.9E-04	4.4E-04	2.6E-05	2.4E-05	2.2E-03	8.9E-08	4.1E-08	2.8E-07	7.8E-07	1.9E-06	1.4E-06	1.4E-04	4.4E-03	4E-03	4E-04	4E-04	2E-03	1E-03	5E-04	6E-04	1E-04	3E-05	7E-05	3E-05	4E-04	2E-04
residential	REC_100M	477830.59	3620025.04	1.7E-02	1.8E-02	1.7E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	6.9E+03	1.5E-02	1.5E-02	8.2E-02	8.2E-02	1.3E-02	5.0E-03	1.3E-02	1.7E-02	1.9E-02	1.4E-02	9.8E-02	9.8E-04	1.0E-03	9.4E-04	9.1E-04	2.0E-04	1.9E-04	2.0E-04	2.0E-04	4.7E-04	2.7E-05	2.6E-05	2.5E-03	9.3E-08	4.3E-08	2.9E-07	8.0E-07	2.1E-06	1.5E-06	1.7E-04	4.6E-03	4E-03	4E-04	4E-04	2E-03	1E-03	6E-04	7E-04	2E-04	4E-05	9E-05	4E-05	5E-04	2E-04
recreational	park	477930.59	3620025.04	1.8E-02	1.9E-02	1.7E-02	1.7E-02	1.6E-02	1.5E-02	1.5E-02	1.5E-02	7.2E+03	1.6E-02	1.5E-02	9.4E-02	9.4E-02	1.4E-02	5.2E-03	1.3E-02	1.7E-02	2.0E-02	1.4E-02	1.2E-01	1.0E-03	1.1E-03	9.9E-04	9.5E-04	2.1E-04	2.0E-04	2.1E-04	2.1E-04	4.9E-04	2.8E-05	2.7E-05	2.8E-03	9.7E-08	4.5E-08	3.1E-07	8.0E-07	2.2E-06	1.5E-06	2.0E-04	4.9E-03	4E-03	4E-04	4E-04	3E-03	1E-03	7E-04	8E-04	2E-04	4E-05	1E-04	5E-05	5E-04	2E-04
recreational	park	478030.59	3620025.04	1.9E-02	2.0E-02	1.8E-02	1.8E-02	1.7E-02	1.6E-02	1.6E-02	1.6E-02	8.0E+03	1.8E-02	1.7E-02	1.1E-01	1.1E-01	1.4E-02	5.4E-03	1.4E-02	1.7E-02	2.1E-02	1.4E-02	1.4E-01	1.1E-03	1.1E-03	1.0E-03	1.0E-03	2.2E-04	2.1E-04	2.2E-04	2.2E-04	5.4E-04	3.1E-05	2.9E-05	3.3E-03	9.7E-08	4.6E-08	3.1E-07	8.1E-07	2.3E-06	1.5E-06	2.5E-04	5.1E-03	4E-03	4E-04	4E-04	3E-03	2E-03	8E-04	9E-04	3E-04	5E-05	1E-04	6E-05	5E-04	2E-04
recreational	park	478530.59	3620025.04	2.1E-02	2.2E-02	2.0E-02	2.0E-02	1.8E-02	1.7E-02	1.7E-02	1.7E-02	8.5E+03	2.0E-02	1.8E-02	1.6E-01	1.6E-01	1.4E-02	5.5E-03	1.4E-02	1.8E-02	2.3E-02	1.5E-02	2.2E-01	1.2E-03	1.2E-03	1.2E-03	1.1E-03	2.4E-04	2.3E-04	2.4E-04	2.4E-04	5.8E-04	3.4E-05	3.2E-05	4.7E-03	1.0E-07	4.8E-08	3.2E-07	8.6E-07	2.4E-06	1.6E-06	3.8E-04	5.7E-03	5E-03	5E-04	5E-04	5E-03	2E-03	1E-03	1E-03	4E-04	8E-05	2E-04	1E-04	6E-04	2E-04
recreational	park	479030.59	3620025.04	2.3E-02	2.3E-02	2.2E-02	2.1E-02	1.9E-02	1.8E-02	1.8E-02	1.8E-02	9.1E+03	2.2E-02	2.1E-02	2.2E-01	2.2E-01	1.5E-02	5.7E-03	1.5E-02	1.9E-02	2.4E-02	1.6E-02	3.3E-01	1.3E-03	1.3E-03	1.2E-03	1.2E-03	2.5E-04	2.4E-04	2.5E-04	2.5E-04	6.2E-04	3.9E-05	3.6E-05	6.5E-03	1.1E-07	4.9E-08	3.4E-07	9.1E-07	2.6E-06	1.7E-06	5.9E-04	6.0E-03	5E-03	5E-04	5E-04	6E-03	3E-03	2E-03	2E-03	6E-04	1E-04	3E-04	1E-04	6E-04	2E-04
recreational	park	479130.59	3620025.04	2.3E-02	2.4E-02	2.2E-02	2.1E-02	2.0E-02	1.9E-02	1.8E-02	1.8E-02	9.2E+03	2.3E-02	2.1E-02	2.3E-01	2.3E-01	1.5E-02	5.7E-03	1.5E-02	1.9E-02	2.5E-02	1.6E-02	3.7E-01	1.3E-03	1.3E-03	1.2E-03	1.2E-03	2.6E-04	2.4E-04	2.6E-04	2.6E-04	6.3E-04	4.0E-05	3.7E-05	7.0E-03	1.1E-07	4.9E-08	3.4E-07	9.2E-07	2.6E-06	1.7E-06	6.5E-04	6.1E-03	5E-03	5E-04	5E-04	7E-03	3E-03	2E-03	2E-03	6E-04	1E-04	4E-04	2E-04	6E-04	2E-04
recreational	park	479230.59	3620025.04	2.4E-02	2.4E-02	2.2E-02	2.1E-02	2.0E-02	1.9E-02	1.9E-02	1.9E-02	9.4E+03	2.3E-02	2.2E-02	2.5E-01	2.5E-01	1.5E-02	5.7E-03	1.5E-02	1.9E-02	2.5E-02	1.6E-02	4.1E-01	1.3E-03	1.4E-03	1.3E-03	1.2E-03	2.6E-04	2.4E-04	2.6E-04	2.6E-04	6.3E-04	4.1E-05	3.8E-05	7.6E-03	1.1E-07	4.9E-08	3.5E-07	9.3E-07	2.7E-06	1.7E-06	7.2E-04	6.2E-03	5E-03	5E-04	5E-04	8E-03	4E-03	2E-03	2E-03	7E-04	1E-04	4E-04	2E-04	6E-04	2E-04
recreational	park	483530.59	3620025.04	5.9E-02	6.1E-02	5.5E-02	5.0E-02	4.5E-02	4.1E-02	4.0E-02	4.0E-02	2.3E+04	7.8E-02	7.0E-02	2.4E-01	2.4E-01	2.5E-02	8.4E-03	2.5E-02	3.7E-02	5.3E-02	2.6E-02	3.6E-01	3.3E-03	3.5E-03	3.1E-03	2.9E-03	5.9E-04	5.3E-04	5.6E-04	5.5E-04	1.5E-03	1.4E-04	1.2E-04	7.3E-03	1.8E-07	7.2E-08	5.6E-07	1.8E-06	5.7E-06	2.8E-06	6.4E-04	1.5E-02	1E-02	1E-03	1E-03	7E-03	3E-03	2E-03	2E-03	6E-04	1E-04	3E-04	2E-04	2E-03	6E-04
recreational	park	483630.59	3620025.04	6.1E-02	6.4E-02	5.6E-02	5.2E-02	4.7E-02	4.3E-02	4.1E-02	4.1E-02	2.4E+04	8.1E-02	7.2E-02	2.3E-01	2.3E-01	2.5E-02	8.5E-03	2.5E-02	3.8E-02	5.5E-02	2.7E-02	3.4E-01	3.4E-03	3.6E-03	3.2E-03	2.9E-03	6.0E-04	5.5E-04	5.8E-04	5.7E-04	1.6E-03	1.4E-04	1.3E-04	7.1E-03	1.8E-07	7.3E-08	5.7E-07	1.9E-06	5.9E-06	2.9E-06	6.0E-04	1.6E-02	1E-02	1E-03	1E-03	7E-03	3E-03	2E-03	2E-03	6E-04	1E-04	3E-04	2E-04	2E-03	6E-04
recreational	park	483730.59	3620025.04	6.3E-02	6.7E-02	5.9E-02	5.4E-02	4.8E-02	4.4E-02	4.3E-02	4.2E-02	2.6E+04	8.4E-02	7.5E-02	2.3E-01	2.3E-01	2.6E-02	8.7E-03	2.6E-02	4.0E-02	5.7E-02	2.8E-02	3.3E-01	3.6E-03	3.8E-03	3.3E-03	3.0E-03	6.2E-04	5.7E-04	5.9E-04	5.8E-04	1.8E-03	1.5E-04	1.3E-04	6.8E-03	1.8E-07	7.4E-08	5.8E-07	1.9E-06	6.1E-06	3.0E-06	5.8E-04	1.6E-02	1E-02	1E-03	1E-03	7E-03	3E-03	2E-03	2E-03	6E-04	1E-04	3E-04	1E-04	2E-03	7E-04
recreational	park	483830.59	3620025.04	6.4E-02	6.8E-02	6.0E-02	5.5E-02	5.0E-02	4.5E-02	4.4E-02	4.3E-02	2.8E+04	8.7E-02	7.7E-02	2.2E-01	2.2E-01	2.6E-02	8.9E-03	2.6E-02	4.3E-02	6.0E-02	2.9E-02	3.1E-01	3.6E-03	3.9E-03	3.4E-03	3.1E-03	6.4E-04	5.8E-04	6.1E-04	5.9E-04	1.9E-03	1.5E-04	1.4E-04	6.5E-03	1.9E-07	7.6E-08	5.9E-07	2.1E-06	6.4E-06	3.1E-06	5.5E-04	1.6E-02	1E-02	1E-03	1E-03	7E-03	3E-03	2E-03	2E-03	6E-04	1E-04	3E-04	1E-04	2E-03	7E-04
recreational	park	483930.59	3620025.04	6.8E-02	7.3E-02	6.3E-02	5.7E-02	5.2E-02	4.7E-02	4.5E-02	4.5E-02	3.1E+04	9.2E-02	8.0E-02	2.1E-01	2.1E-01	2.7E-02	9.0E-03	2.6E-02	4.5E-02	6.3E-02	3.0E-02	3.0E-01	3.9E-03	4.1E-03	3.6E-03	3.3E-03	6.7E-04	6.0E-04	6.3E-04	6.2E-04	2.1E-03	1.6E-04	1.4E-04	6.3E-03	1.9E-07	7.7E-08	6.0E-07	2.2E-06	6.8E-06	3.2E-06	5.3E-04	1.7E-02	1E-02	1E-03	1E-03	6E-03	3E-03	2E-03	2E-03	5E-04	1E-04	3E-04	1E-04	2E-03	8E-04
residential	REC_100M	484030.59	3620025.04	7.0E-02	7.6E-02	6.6E-02	6.0E-02	5.3E-02	4.8E-02	4.7E-02	4.6E-02	3.4E+04	9.5E-02	8.4E-02	2.0E-01	2.0E-01	2.7E-02	9.2E-03	2.7E-02	4.8E-02	6.7E-02	3.1E-02	2.9E-01	4.0E-03	4.3E-03	3.7E-03	3.4E-03	6.9E-04	6.2E-04	6.5E-04	6.3E-04	2.3E-03	1.7E-04	1.5E-04	6.1E-03	1.9E-07	7.9E-08	6.1E-07	2.3E-06	7.2E-06	3.3E-06	5.1E-04	1.8E-02	2E-02	1E-03	1E-03	6E-03	3E-03	2E-03	2E-03	5E-04	1E-04	3E-04	1E-04	2E-03	9E-04
residential	REC_100M	484130.59	3620025.04	7.2E-02	8.0E-02	6.8E-02	6.2E-02	5.5E-02	4.9E-02	4.8E-02	4.6E-02	3.6E+04	9.4E-02	8.3E-02	2.0E-01	2.0E-01	2.8E-02	9.4E-03	2.7E-02	5.2E-02	7.3E-02	3.2E-02	2.8E-01	4.1E-03	4.5E-03	3.8E-03	3.5E-03	7.1E-04	6.4E-04	6.6E-04	6.4E-04	2.4E-03	1.7E-04	1.5E-04	5.9E-03	2.0E-07	8.1E-08	6.2E-07	2.5E-06	7.8E-06	3.5E-06	4.9E-04	1.9E-02	2E-02	1E-03	1E-03	6E-03	3E-03	1E-03	2E-03	5E-04	1E-04	3E-04	1E-04	2E-03	9E-04
residential	REC_100M	484230.59	3620025.04	7.5E-02	8.4E-02	7.1E-02	6.4E-02	5.6E-02	5.0E-02	4.9E-02	4.8E-02	3.9E+04	9.4E-02	8.3E-02	1.9E-01	1.9E-01	2.8E-02	9.7E-03	2.8E-02	5.6E-02	8.0E-02	3.4E-02	2.7E-01	4.2E-03	4.8E-03	4.0E-03	3.6E-03	7.3E-04	6.5E-04	6.7E-04	6.6E-04	2.7E-03	1.7E-04	1.5E-04	5.7E-03	2.0E-07	8.3E-08	6.3E-07	2.7E-06	8.5E-06	3.6E-06	4.8E-04	1.9E-02	2E-02	1E-03	2E-03	6E-03	3E-03	1E-03	2E-03	5E-04	1E-04	3E-04	1E-04	3E-03	1E-03
residential	REC_100M	484330.59	3620025.04	7.8E-02	9.0E-02	7.5E-02	6.7E-02	5.9E-02	5.2E-02	5.0E-02	4.8E-02	4.3E+04	9.5E-02	8.4E-02	1.8E-01	1.8E-01	2.9E-02	9.9E-03	2.8E-02	6.1E-02	8.5E-02	3.6E-02	2.6E-01	4.4E-03	5.1E-03	4.2E-03	3.8E-03	7.6E-04	6.7E-04	6.9E-04	6.7E-04	2.9E-03	1.7E-04	1.5E-04	5.5E-03	2.1E-07	8.5E-08	6.4E-07	2.9E-06	9.1E-06	3.8E-06	4.6E-04	2.0E-02	2E-02	1E-03	2E-03	5E-03	3E-03	1E-03	2E-03	5E-04	1E-04	2E-04	1E-04	3E-03	1E-03
residential	REC_100M	484430.59	3620025.04	8.1E-02	9.6E-02	7.8E-02	6.9E-02	6.1E-02	5.3E-02	5.1E-02	4.9E-02	4.7E+04	9.7E-02	8.5E-02	1.7E-01	1.7E-01	3.0E-02	1.0E-02	2.9E-02	6.6E-02	9.3E-02	3.8E-02	2.5E-01	4.6E-03	5.4E-03	4.4E-03	3.9E-03	7.8E-04	6.9E-04	7.1E-04	6.8E-04	3.2E-03	1.7E-04	1.5E-04	5.2E-03	2.1E-07	8.7E-08	6.6E-07	3.2E-06	9.9E-06	4.1E-06	4.5E-04	2.1E-02	2E-02	1E-03	1E-03	5E-03	2E-03	1E-03	1E-03	4E-04	9E-05	2E-04	1E-04	3E-03	1E-03
residential	REC_100M	484530.59	3620025.04	8.7E-02	1.0E-01	8.4E-02	7.4E-02	6.4E-02	5.6E-02	5.3E-02	5.1E-02	5.2E+04	1.0E-01	8.9E-02	1.7E-01	1.7E-01	3.0E-02	1.0E-02	3.0E-02	7.2E-02	1.0E-01	4.1E-02	2.4E-01	4.9E-03	5.9E-03	4.8E-03	4.2E-03	8.3E-04	7.3E-04	7.4E-04	7.1E-04	3.5E-03	1.8E-04	1.6E-04	5.0E-03	2.2E-07	9.0E-08	6.7E-07	3.5E-06	1.1E-05	4.3E-06	4.3E-04	2.3E-02	2E-02	2E-03	1E-03	5E-03	2E-03	1E-03	1E-03	4E-04	9E-05	2E-04	1E-04	4E-03	1E-03
residential	REC_100M	484630.59	3620025.04	9.4E-02	1.1E-01	9.1E-02	8.0E-02	6.8E-02	5.9E-02	5.6E-02	5.3E-02	5.7E+04	1.1E-01	9.4E-02	1.6E-01	1.6E-01	3.1E-02	1.1E-02	3.0E-02	7.8E-02	1.1E-01	4.3E-02	2.4E-01	5.3E-03	6.5E-03	5.2E-03	4.5E-03	8.8E-04	7.7E-04	7.8E-04	7.4E-04	3.9E-03	1.9E-04	1.6E-04	4.9E-03	2.2E-07	9.2E-08	6.9E-07	3.8E-06	1.2E-05	4.7E-06	4.2E-04	2.5E-02	2E-02	2E-03	2E-03	5E-03	2E-03	1E-03	1E-03	4E-04	9E-05	2E-04	1E-04	4E-03	1E-03
residential	REC_100M	484730.59	3620025.04	1.0E-01	1.2E-01	9.8E-02	8.6E-02	7.3E-02	6.3E-02	5.9E-02	5.6E-02	6.3E+04	1.1E-01	9.8E-02	1.6E-01	1.6E-01	3.2E-02	1.1E-02	3.1E-02	8.4E-02	1.3E-01	4.7E-02	2.3E-01	5.8E-03	7.0E-03	5.6E-03	4.9E-03	9.4E-04	8.1E-04	8.2E-04	7.7E-04	4.3E-03	2.0E-04	1.7E-04	4.7E-03	2.3E-07	9.5E-08	7.1E-07	4.1E-06	1.4E-05	5.0E-06	4.0E-04	2.7E-02	2E-02	2E-03	2E-03	5E-03	2E-03	1E-03	1E-03	4E-04	8E-05	2E-04	1E-04	4E-03	2E-03
residential	REC_100M	484830.59	3620025.04	1.1E-01	1.3E-01	1.1E-01	9.3E-02	7.8E-02	6.7E-02	6.3E-02	5.9E-02	7.1E+04	1.2E-01	1.0E-01	1.5E-01	1.5E-01	3.4E-02	1.1E-02	3.2E-02	9.2E-02	1.4E-01	5.0E-02	2.2E-01	6.4E-03	7.6E-03	6.1E-03	5.3E-03	1.0E-03	8.7E-04	8.7E-04	8.2E-04	4.8E-03	2.1E-04	1.8E-04	4.6E-03	2.4E-07	9.7E-08	7.4E-07	4.5E-06	1.5E-05	5.4E-06	3.9E-04	2.9E-02	3E-02	2E-03	2E-03	5E-03	2E-03	1E-03	1E-03	4E-04	8E-05	2E-04	1E-04	5E-03	2E-03
residential	REC_100M	484930.59	3620025.04	1.2E-01	1.4E-01	1.2E-01	1.0E-01	8.4E-02	7.1E-02	6.6E-02	6.2E-02	8.0E+04	1.3E-01	1.1E-01	1.5E-01	1.5E-01	3.5E-02	1.2E-02	3.3E-02	1.0E-01	1.6E-01	5.4E-02	2.1E-01	7.0E-03	8.2E-03	6.6E-03	5.7E-03	1.1E-03	9.2E-04	9.2E-04	8.6E-04	5.4E-03	2.3E-04	2.0E-04	4.4E-03	2.5E-07	1.0E-07	7.5E-07	4.8E-06	1.7E-05	5.8E-06	3.7E-04	3.1E-02	3E-02	2E-03	2E-03	4E-03	2E-03	1E-03	1E-03	4E-04	8E-05	2E-04	9E-05	5E-03	2E-03
residential	REC_100M	485030.59	3620025.04	1.3E-01	1.5E-01	1.3E-01	1.1E-01	9.1E-02	7.7E-02	7.1E-02	6.6E-02	9.2E+04	1.4E-01	1.2E-01	1.4E-01	1.4E-01	3.7E-02	1.2E-02	3.5E-02	1.1E-01	1.7E-01	5.7E-02	2.0E-01	7.6E-03	8.7E-03	7.1E-03	6.2E-03	1.2E-03	1.0E-03	9.9E-04	9.2E-04	6.2E-03	2.5E-04	2.1E-04	4.3E-03	2.6E-07	1.0E-07	7.9E-07	5.3E-06	1.9E-05	6.2E-06	3.6E-04	3.4E-02	3E-02	2E-03	2E-03	4E-03	2E-03	1E-03	1E-03	4E-04	7E-05	2E-04	9E-05	6E-03	2E-03
residential	REC_100M	485130.59	3620025.04	1.5E-01	1.6E-01	1.3E-01	1.2E-01	9.9E-02	8.3E-02	7.7E-02	7.1E-02	1.1E+05	1.6E-01	1.3E-01	1.4E-01	1.4E-01	3.9E-02	1.2E-02	3.6E-02	1.2E-01	1.9E-01	6.1E-02	2.0E-01	8.3E-03	9.2E-03	7.6E-03	6.7E-03	1.3E-03	1.1E-03	1.1E-03	9.9E-04	7.2E-03	2.8E-04	2.3E-04	4.1E-03	2.8E-07	1.1E-07	8.2E-07	5.7E-06	2.1E-05	6.6E-06	3.5E-04	3.6E-02	3E-02	2E-03	2E-03	4E-03	2E-03	1E-03	1E-03	3E-04	7E-05	2E-04	9E-05	7E-03	3E-03
residential	REC_100M	485230.59	3620025.04	1.6E-01	1.7E-01	1.4E-01	1.3E-01	1.1E-01	9.0E-02	8.3E-02	7.7E-02	1.2E+05	1.7E-01	1.5E-01	1.3E-01	1.3E-01	4.1E-02	1.3E-02	3.8E-02	1.3E-01	2.2E-01	6.6E-02	1.9E-01	8.9E-03	9.7E-03	8.0E-03	7.1E-03	1.4E-03	1.2E-03	1.2E-03	1.1E-03	8.4E-03	3.1E-04	2.6E-04	4.0E-03	2.9E-07	1.1E-07	8.6E-07	6.2E-06	2.4E-05	7.1E-06	3.3E-04	3.8E-02	3E-02	3E-03	2E-03	4E-03	2E-03	1E-03	1E-03	3E-04	7E-05	2E-04	8E-05	8E-03	3E-03
residential	REC_100M	485330.59	3620025.04	1.7E-01	1.8E-01	1.5E-01	1.3E-01	1.1E-01	9.7E-02	9.0E-02	8.3E-02	1.4E+05	2.0E-01	1.6E-01	1.3E-01	1.3E-01	4.4E-02	1.3E-02	4.0E-02	1.4E-01	2.5E-01	7.1E-02	1.8E-01	9.5E-03	1.0E-02	8.5E-03	7.6E-03	1.5E-03	1.2E-03	1.2E-03	1.2E-03	9.6E-03	3.4E-04	2.9E-04	3.9E-03	3.1E-07	1.1E-07	9.1E-07	6.7E-06	2.7E-05	7.6E-06	3.2E-04	4.1E-02	4E-02	3E-03	2E-03	4E-03	2E-03	1E-03	1E-03	3E-04	7E-05	2E-04	8E-05	1E-02	4E-03
residential	REC_100M	485430.59	3620025.04	1.8E-01	1.8E-01	1.6E-01	1.4E-01	1.2E-01	1.0E-01	9.7E-02	9.0E-02	1.6E+05	2.2E-01	1.8E-01	1.2E-01	1.2E-01	4.6E-02	1.3E-02	4.3E-02	1.5E-01	3.0E-01	7.6E-02	1.8E-01	1.0E-02	1.0E-02	8.9E-03	8.0E-03	1.6E-03	1.3E-03	1.3E-03	1.2E-03	1.1E-02	3.9E-04	3.2E-04	3.7E-03	3.3E-07	1.1E-07	9.7E-07	7.4E-06	3.2E-05	8.2E-06	3.1E-04	4.3E-02	4E-02	3E-03	3E-03	4E-03	2E-03	9E-04	1E-03	3E-04	6E-05	2E-04	8E-05	1E-02	4E-03
residential	REC_100M	485530.59	3620025.04	1.9E-01	1.9E-01	1.6E-01	1.5E-01	1.3E-01	1.1E-01	1.0E-01	9.7E-02	1.6E+05	2.4E-01	2.0E-01	1.2E-01	1.2E-01	4.9E-02	1.4E-02	4.6E-02	1.7E-01	3.4E-01	8.1E-02	1.7E-01	1.1E-02	1.1E-02	9.2E-03	8.3E-03	1.7E-03	1.4E-03	1.4E-03	1.3E-03	1.1E-02	4.2E-04	3.5E-04	3.6E-03	3.5E-07	1.2E-07	1.0E-06	8.3E-06	3.6E-05	8.7E-06	2.9E-04	4.5E-02	4E-02	3E-03	3E-03	4E-03	2E-03	9E-04	1E-03	3E-04	6E-05	2E-04	7E-05	1E-02	4E-03
residential	REC_100M	485630.59	3620025.04	1.9E-01	2.0E-01	1.7E-01	1.5E-01	1.3E-01	1.2E-01	1.1E-01	1.0E-01	1.7E+05	2.7E-01	2.2E-01	1.1E-01	1.1E-01	5.2E-02	1.4E-02	4.9E-02	2.0E-01	3.9E-01	8.7E-02	1.6E-01	1.1E-02	1.1E-02	9.6E-03	8.7E-03	1.7E-03	1.5E-03	1.5E-03	1.5E-03	1.2E-02	4.7E-04	3.9E-04	3.4E-03	3.7E-07	1.2E-07	1.1E-06	9.5E-06	4.1E-05	9.3E-06	2.8E-04	4.7E-02	4E-02	3E-03	3E-03	3E-03	2E-03	9E-04	1E-03	3E-04	6E-05	2E-04	7E-05	1E-02	4E-03
residential	REC_100M	485730.59	3620025.04	2.0E-01	2.0E-01	1.7E-01	1.6E-01	1.4E-01	1.2E-01	1.2E-01	1.1E-01	1.8E+05	2.9E-01	2.4E-01	1.1E-01	1.1E-01	5.6E-02	1.4E-02	5.2E-02	2.3E-01	4.3E-01	9.4E-02	1.5E-01	1.1E-02	1.1E-02	9.9E-03	9.0E-03	1.8E-03	1.6E-03	1.6E-03	1.6E-03	1.2E-02	5.1E-04	4.3E-04	3.3E-03	4.0E-07	1.2E-07	1.2E-06	1.1E-05	4.6E-05	1.0E-05	2.7E-04	4.8E-02	4E-02	3E-03	3E-03	3E-03	2E-03	8E-04	9E-04	3E-04	6E-05	1E-04	7E-05	1E-02	5E-03
residential	REC_100M	485830.59	3620025.04	2.1E-01	2.0E-01	1.8E-01	1.6E-01	1.4E-01	1.3E-01	1.2E-01	1.2E-01	1.7E+05	2.9E-01	2.5E-01	1.0E-01	1.0E-01	5.9E-02	1.4E-02	5.5E-02	2.6E-01	4.4E-01	1.0E-01	1.4E-01	1.2E-02	1.2E-02	1.0E-02	9.3E-03	1.9E-03	1.6E-03	1.7E-03	1.7E-03	1.1E-02	5.1E-04	4.4E-04	3.2E-03	4.2E-07	1.2E-07	1.2E-06	1.2E-05	4.7E-05	1.1E-05	2.5E-04	5.0E-02	4E-02	4E-03	3E-03	3E-03	1E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	1E-02	4E-03
residential	REC_100M	485930.59	3620025.04	2.1E-01	2.0E-01	1.8E-01	1.7E-01	1.5E-01	1.3E-01	1.3E-01	1.2E-01	1.9E+05	3.3E-01	2.9E-01	1.1E-01	1.1E-01	6.6E-02	1.5E-02	6.0E-02	3.2E-01	5.3E-01	1.2E-01	1.4E-01	1.2E-02	1.2E-02	1.0E-02	9.5E-03	1.9E-03	1.7E-03	1.8E-03	1.7E-03	1.3E-02	5.9E-04	5.0E-04	3.2E-03	4.7E-07	1.3E-07	1.4E-06	1.6E-05	5.6E-05	1.2E-05	2.6E-04	5.1E-02	4E-02	4E-03	4E-03	3E-03	1E-03	8E-04	9E-04	3E-04	5E-05	1E-04	6E-05	1E-02	5E-03
residential	REC_100M	486030.59	3620025.04	2.1E-01	2.0E-01	1.9E-01	1.7E-01	1.5E-01	1.4E-01	1.3E-01	1.3E-01	2.0E+05	3.6E-01	3.1E-01	1.0E-01	1.0E-01	7.2E-02	1.5E-02	6.6E-02	3.8E-01	5.8E-01	1.3E-01	1.4E-01	1.2E-02	1.2E-02	1.1E-02	9.8E-03	2.0E-03	1.8E-03	1.9E-03	1.8E-03	1.4E-02	6.4E-04	5.5E-04	3.1E-03	5.1E-07	1.3E-07	1.5E-06	1.8E-05	6.2E-05	1.4E-05	2.5E-04	5.1E-02	4E-02	4E-03	4E-03	3E-03	1E-03	8E-04	9E-04	3E-04	5E-05	1E-04	6E-05	1E-02	5E-03
residential	REC_100M	476730.59	3620125.04	1.3E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.1E-02	1.1E-02	1.1E-02	5.0E+03	1.1E-02	1.0E-02	3.9E-02	3.9E-02	1.0E-02	4.2E-03	1.0E-02	1.3E-02	1.4E-02	1.1E-02	3.4E-02	7.4E-04	7.5E-04	7.2E-04	6.9E-04	1.5E-04	1.4E-04	1.5E-04	1.5E-04	3.4E-04	1.9E-05	1.8E-05	1.2E-03	7.4E-08	3.6E-08	2.3E-07	6.0E-07	1.5E-06	1.2E-06	6.0E-05	3.5E-03	3E-03	3E-04	3E-04	1E-03	5E-04	3E-04	3E-04	6E-05	1E-05	3E-05	2E-05	3E-04	1E-04
residential	REC_100M	476830.59	3620125.04	1.3E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.1E-02	1.1E-02	1.1E-02	5.2E+03	1.1E-02	1.1E-02	4.2E-02	4.2E-02	1.1E-02	4.2E-03	1.1E-02	1.3E-02	1.4E-02	1.1E-02	3.7E-02	7.6E-04	7.7E-04	7.4E-04	7.1E-04	1.6E-04	1.5E-04	1.6E-04	1.5E-04	3.5E-04	2.0E-05	1.9E-05	1.3E-03	7.7E-08	3.6E-08	2.4E-07	6.3E-07	1.5E-06	1.2E-06	6.5E-05	3.6E-03	3E-03	3E-04	3E-04	1E-03	6E-04	3E-04	4E-04	6E-05	1E-05	3E-05	2E-05	3E-04	1E-04
residential	REC_100M	476930.59	3620125.04	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.1E-02	1.1E-02	5.2E+03	1.1E-02	1.1E-02	4.3E-02	4.3E-02	1.1E-02	4.2E-03	1.1E-02	1.3E-02	1.5E-02	1.2E-02	3.8E-02	7.7E-04	7.8E-04	7.5E-04	7.2E-04	1.6E-04	1.5E-04	1.6E-04	1.6E-04	3.5E-04	2.0E-05	1.9E-05	1.3E-03	7.7E-08	3.6E-08	2.4E-07	6.4E-07	1.6E-06	1.2E-06	6.7E-05	3.6E-03	3E-03	3E-04	3E-04	1E-03	6E-04	3E-04	4E-04	7E-05	1E-05	4E-05	2E-05	4E-04	1E-04
residential	REC_100M	477030.59	3620125.04	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	1.1E-02	5.2E+03	1.1E-02	1.1E-02	4.4E-02	4.4E-02	1.1E-02	4.2E-03	1.1E-02	1.3E-02	1.4E-02	1.1E-02	3.9E-02	7.8E-04	7.9E-04	7.5E-04	7.2E-04	1.6E-04	1.5E-04	1.6E-04	1.6E-04	3.5E-04	2.0E-05	1.9E-05	1.3E-03	7.7E-08	3.6E-08	2.4E-07	6.3E-07	1.5E-06	1.2E-06	6.9E-05	3.7E-03	3E-03	3E-04	3E-04	1E-03	6E-04	3E-04	4E-04	7E-05	1E-05	4E-05	2E-05	3E-04	1E-04
residential	REC_100M	477130.59	3620125.04	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	1.2E-02	5.1E+03	1.2E-02	1.1E-02	4.5E-02	4.5E-02	1.1E-02	4.2E-03	1.1E-02	1.3E-02	1.4E-02	1.1E-02	4.0E-02	7.8E-04	7.9E-04	7.5E-04	7.3E-04	1.6E-04	1.5E-04	1.6E-04	1.6E-04	3.5E-04	2.0E-05	1.9E-05	1.4E-03	7.7E-08	3.6E-08	2.4E-07	6.3E-07	1.6E-06	1.2E-06	7.1E-05	3.7E-03	3E-03	3E-04	3E-04	1E-03	6E-04	3E-04	4E-04	7E-05	1E-05	4E-05	2E-05	3E-04	1E-04
residential	REC_100M	477230.59	3620125.04	1.4E-02	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	5.3E+03	1.2E-02	1.1E-02	4.8E-02	4.8E-02	1.1E-02	4.3E-03	1.1E-02	1.4E-02	1.5E-02	1.2E-02	4.3E-02	8.0E-04	8.1E-04	7.7E-04	7.5E-04	1.6E-04	1.6E-04	1.7E-04	1.6E-04	3.6E-04	2.1E-05	2.0E-05	1.4E-03	7.8E-08	3.7E-08	2.5E-07	6.5E-07	1.6E-06	1.2E-06	7.6E-05	3.8E-03	3E-03	3E-04	3E-04	1E-03	7E-04	4E-04	4E-04	8E-05	2E-05	4E-05	2E-05	4E-04	1E-04
residential	REC_100M	477330.59	3620125.04	1.5E-02	1.5E-02	1.4E-02	1.4E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	5.6E+03	1.3E-02	1.2E-02	5.2E-02	5.2E-02	1.1E-02	4.4E-03	1.1E-02	1.4E-02	1.6E-02	1.2E-02	4.9E-02	8.3E-04	8.5E-04	8.0E-04	7.7E-04	1.7E-04	1.6E-04	1.7E-04	1.7E-04	3.8E-04	2.2E-05	2.1E-05	1.6E-03	8.1E-08	3.8E-08	2.6E-07	6.9E-07	1.7E-06	1.3E-06	8.6E-05	3.9E-03	3E-03	3E-04	3E-04	2E-03	7E-04	4E-04	4E-04	9E-05	2E-05	5E-05	2E-05	4E-04	1E-04
residential	REC_100M	477430.59	3620125.04	1.5E-02	1.5E-02	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	1.2E-02	5.7E+03	1.3E-02	1.2E-02	5.4E-02	5.4E-02	1.1E-02	4.5E-03	1.1E-02	1.4E-02	1.6E-02	1.2E-02	5.2E-02	8.4E-04	8.6E-04	8.1E-04	7.8E-04	1.7E-04	1.6E-04	1.7E-04	1.7E-04	3.8E-04	2.2E-05	2.1E-05	1.6E-03	8.2E-08	3.8E-08	2.6E-07	7.0E-07	1.7E-06	1.3E-06	9.1E-05	4.0E-03	3E-03	3E-04	3E-04	2E-03	8E-04	4E-04	5E-04	9E-05	2E-05	5E-05	2E-05	4E-04	1E-04
residential	REC_100M	477530.59	3620125.04	1.5E-02	1.5E-02	1.4E-02	1.4E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	5.5E+03	1.2E-02	1.2E-02	5.4E-02	5.4E-02	1.1E-02	4.4E-03	1.1E-02	1.4E-02	1.5E-02	1.2E-02	5.2E-02	8.4E-04	8.5E-04	8.1E-04	7.8E-04	1.7E-04	1.6E-04	1.7E-04	1.7E-04	3.7E-04	2.2E-05	2.1E-05	1.6E-03	8.0E-08	3.8E-08	2.5E-07	6.8E-07	1.7E-06	1.3E-06	9.2E-05	3.9E-03	3E-03	3E-04	3E-04	2E-03	8E-04	4E-04	5E-04	9E-05	2E-05	5E-05	2E-05	4E-04	1E-04
residential	REC_100M	477630.59	3620125.04	1.5E-02	1.5E-02	1.5E-02	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	5.7E+03	1.3E-02	1.2E-02	5.9E-02	5.9E-02	1.2E-02	4.5E-03	1.1E-02	1.5E-02	1.6E-02	1.2E-02	5.8E-02	8.6E-04	8.8E-04	8.3E-04	8.0E-04	1.7E-04	1.7E-04	1.8E-04	1.8E-04	3.9E-04	2.3E-05	2.2E-05	1.8E-03	8.3E-08	3.9E-08	2.6E-07	7.0E-07	1.7E-06	1.3E-06	1.0E-04	4.1E-03	3E-03	3E-04	4E-04	2E-03	8E-04	4E-04	5E-04	1E-04	2E-05	6E-05	3E-05	4E-04	1E-04
residential	REC_100M	477730.59	3620125.04	1.6E-02	1.6E-02	1.5E-02	1.5E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	6.1E+03	1.4E-02	1.3E-02	6.6E-02	6.6E-02	1.2E-02	4.7E-03	1.2E-02	1.5E-02	1.7E-02	1.3E-02	6.9E-02	9.0E-04	9.2E-04	8.7E-04	8.4E-04	1.8E-04	1.7E-04	1.8E-04	1.8E-04	4.2E-04	2.5E-05	2.3E-05	2.0E-03	8.6E-08	4.0E-08	2.7E-07	7.4E-07	1.8E-06	1.4E-06	1.2E-04	4.2E-03	4E-03	4E-04	4E-04	2E-03	9E-04	5E-04	6E-04	1E-04	3E-05	7E-05	3E-05	4E-04	2E-04
residential	REC_100M	477830.59	3620125.04	1.7E-02	1.7E-02	1.6E-02	1.5E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	6.6E+03	1.5E-02	1.4E-02	7.5E-02	7.5E-02	1.2E-02	4.9E-03	1.2E-02	1.6E-02	1.8E-02	1.3E-02	8.5E-02	9.5E-04	9.6E-04	9.1E-04	8.7E-04	1.9E-04	1.8E-04	1.9E-04	1.9E-04	4.5E-04	2.6E-05	2.5E-05	2.2E-03	8.8E-08	4.2E-08	2.8E-07	7.7E-07	2.0E-06	1.4E-06	1.5E-04	4.4E-03	4E-03	4E-04	4E-04	2E-03	1E-03	6E-04	6E-04	2E-04	3E-05	8E-05	4E-05	4E-04	2E-04
residential	REC_100M	477930.59	3620125.04	1.8E-02	1.8E-02	1.7E-02	1.6E-02	1.5E-02	1.5E-02	1.5E-02	1.4E-02	6.9E+03	1.5E-02	1.5E-02	8.5E-02	8.5E-02	1.3E-02	5.0E-03	1.3E-02	1.6E-02	1.9E-02	1.3E-02	1.0E-01	1.0E-03	1.0E-03	9.6E-04	9.2E-04	2.0E-04	1.9E-04	2.0E-04	2.0E-04	4.7E-04	2.7E-05	2.6E-05	2.6E-03	9.4E-08	4.3E-08	2.9E-07	7.8E-07	2.0E-06	1.4E-06	1.8E-04	4.7E-03	4E-03	4E-04	4E-04	3E-03	1E-03	6E-04	7E-04	2E-04	4E-05	1E-04	5E-05	5E-04	2E-04
recreational	park	478030.59	3620125.04	1.8E-02	1.9E-02	1.8E-02	1.7E-02	1.6E-02	1.5E-02	1.5E-02	1.5E-02	7.2E+03	1.6E-02	1.5E-02	9.7E-02	9.7E-02	1.3E-02	5.3E-03	1.3E-02	1.6E-02	2.0E-02	1.4E-02	1.2E-01	1.0E-03	1.1E-03	9.9E-04	9.6E-04	2.1E-04	2.0E-04	2.1E-04	2.1E-04	4.9E-04	2.8E-05	2.7E-05	2.9E-03	9.5E-08	4.6E-08	3.0E-07	7.9E-07	2.2E-06	1.5E-06	2.2E-04	4.9E-03	4E-03	4E-04	4E-04	3E-03	1E-03	7E-04	8E-04	2E-04	4E-05	1E-04	5E-05	5E-04	2E-04
recreational	park	478130.59	3620125.04	1.9E-02	1.9E-02	1.8E-02	1.7E-02	1.7E-02	1.6E-02	1.6E-02	1.5E-02	7.4E+03	1.7E-02	1.6E-02	1.1E-01	1.1E-01	1.3E-02	5.4E-03	1.3E-02	1.6E-02	2.1E-02	1.4E-02	1.4E-01	1.1E-03	1.1E-03	1.0E-03	9.9E-04	2.1E-04	2.0E-04	2.2E-04	2.2E-04	5.0E-04	3.0E-05	2.9E-05	3.2E-03	9.5E-08	4.6E-08	3.0E-07	8.0E-07	2.2E-06	1.5E-06	2.5E-04	5.0E-03	4E-03	4E-04	4E-04	3E-03	1E-03	8E-04	9E-04	3E-04	5E-05	1E-04	6E-05	5E-04	2E-04
recreational	park	478230.59	3620125.04	2.0E-02	2.0E-02	1.9E-02	1.8E-02	1.7E-02	1.6E-02	1.6E-02	1.6E-02	7.9E+03	1.8E-02	1.7E-02	1.2E-01	1.2E-01	1.4E-02	5.4E-03	1.3E-02	1.7E-02	2.1E-02	1.4E-02	1.6E-01	1.1E-03	1.1E-03	1.1E-03	1.0E-03	2.2E-04	2.1E-04	2.2E-04	2.2E-04	5.4E-04	3.1E-05	3.0E-05	3.5E-03	9.6E-08	4.6E-08	3.0E-07	8.1E-07	2.3E-06	1.5E-06	2.8E-04	5.2E-03	4E-03	4E-04	4E-04	4E-03	2E-03	9E-04	1E-03	3E-04	6E-05	2E-04	7E-05	5E-04	2E-04
recreational	park	478330.59	3620125.04	2.0E-02	2.1E-02	1.9E-02	1.8E-02	1.8E-02	1.7E-02	1.6E-02	1.6E-02	8.0E+03	1.8E-02	1.7E-02	1.3E-01	1.3E-01	1.4E-02	5.4E-03	1.4E-02	1.7E-02	2.1E-02	1.4E-02	1.7E-01	1.1E-03	1.2E-03	1.1E-03	1.0E-03	2.3E-04	2.1E-04	2.3E-04	2.3E-04	5.4E-04	3.2E-05	3.0E-05	3.9E-03	9.7E-08	4.6E-08	3.1E-07	8.1E-07	2.3E-06	1.5E-06	3.1E-04	5.3E-03	4E-03	4E-04	4E-04	4E-03	2E-03	1E-03	1E-03	3E-04	6E-05	2E-04	8E-05	5E-04	2E-04
recreational	park	478430.59	3620125.04	2.0E-02	2.1E-02	1.9E-02	1.8E-02	1.7E-02	1.7E-02	1.6E-02	1.6E-02	8.1E+03	1.9E-02	1.8E-02	1.3E-01	1.3E-01	1.4E-02	5.4E-03	1.4E-02	1.7E-02	2.2E-02	1.4E-02	1.8E-01	1.1E-03	1.2E-03	1.1E-03	1.0E-03	2.3E-04	2.1E-04	2.3E-04	2.3E-04	5.5E-04	3.3E-05	3.1E-05	4.0E-03	9.8E-08	4.7E-08	3.1E-07	8.2E-07	2.3E-06	1.5E-06	3.3E-04	5.4E-03	4E-03	4E-04	5E-04	4E-03	2E-03	1E-03	1E-03	3E-04	7E-05	2E-04	8E-05	5E-04	2E-04
recreational	park	478530.59	3620125.04	2.1E-02	2.1E-02	2.0E-02	1.9E-02	1.8E-02	1.7E-02	1.7E-02	1.7E-02	8.2E+03	1.9E-02	1.8E-02	1.4E-01	1.4E-01	1.4E-02	5.5E-03	1.4E-02	1.7E-02	2.2E-02	1.4E-02	2.0E-01	1.2E-03	1.2E-03	1.1E-03	1.1E-03	2.3E-04	2.2E-04	2.3E-04	2.3E-04	5.6E-04	3.3E-05	3.2E-05	4.2E-03	9.9E-08	4.7E-08	3.1E-07	8.3E-07	2.3E-06	1.5E-06	3.5E-04	5.4E-03	5E-03	4E-04	5E-04	4E-03	2E-03	1E-03	1E-03	4E-04	7E-05	2E-04	9E-05	6E-04	2E-04

TAMT Risk Assessment - DPM Cancer and Chronic HI

AERMOD UNITIZED CONCENTRATIONS

DPM SCALED CONCENTRATIONS

TUG_PATH_DPM (unitized)	B10_1_AUX	B10_2_AUX	B10_3_AUX	B10_4_AUX	B10_5_AUX	B10_6_AUX	B10_7_AUX	B10_8_AUX	CHE_1	LOC_SWTCHEMP	LOC_SWTCHLOA	OGV_PATH_PM	TR_28TH	TR_BAYMAR	TR_BOSTON	TR_CROSBY	TR_HARBORCHA	TR_HARBORSAM	TUG_PATH_DPM	Vessel Hoteling All	Refrigerated	Multi-Purpose	Dry Bulk	Vessel Transit All	Refrigerated	Multi-Purpose	Dry Bulk	Tug/Barge Transit All	Refrigerated	Multi-Purpose	Dry Bulk	Terminal All	Refrigerated
4.9E-02	8.3E-04	8.5E-04	8.0E-04	7.7E-04	1.7E-04	1.6E-04	1.7E-04	1.7E-04	3.8E-04	2.2E-05	2.1E-05	1.6E-03	8.0E-08	3.9E-08	2.5E-07	6.7E-07	1.7E-06	1.2E-06	8.6E-05	3.9E-03	3E-03	3E-04	3E-04	2E-03	7E-04	4E-04	4E-04	9E-05	2E-05	5E-05	2E-05	4E-04	1E-04
4.7E-02	8.2E-04	8.3E-04	7.9E-04	7.6E-04	1.7E-04	1.6E-04	1.7E-04	1.7E-04	3.6E-04	2.2E-05	2.1E-05	1.5E-03	7.8E-08	3.8E-08	2.4E-07	6.3E-07	1.6E-06	1.2E-06	8.3E-05	3.9E-03	3E-03	3E-04	3E-04	2E-03	7E-04	4E-04	4E-04	8E-05	2E-05	4E-05	2E-05	4E-04	1E-04
5.0E-02	8.3E-04	8.4E-04	8.0E-04	7.7E-04	1.7E-04	1.6E-04	1.7E-04	1.7E-04	3.6E-04	2.2E-05	2.1E-05	1.6E-03	7.8E-08	3.8E-08	2.5E-07	6.3E-07	1.6E-06	1.2E-06	8.8E-05	3.9E-03	3E-03	3E-04	3E-04	2E-03	7E-04	4E-04	4E-04	9E-05	2E-05	5E-05	2E-05	4E-04	1E-04
5.6E-02	8.5E-04	8.7E-04	8.2E-04	7.9E-04	1.7E-04	1.6E-04	1.8E-04	1.7E-04	3.8E-04	2.3E-05	2.2E-05	1.7E-03	8.0E-08	3.9E-08	2.5E-07	6.5E-07	1.7E-06	1.2E-06	9.9E-05	4.0E-03	3E-03	3E-04	3E-04	2E-03	8E-04	4E-04	5E-04	1E-04	2E-05	5E-05	2E-05	4E-04	1E-04
6.9E-02	9.0E-04	9.1E-04	8.6E-04	8.3E-04	1.8E-04	1.7E-04	1.8E-04	1.8E-04	4.1E-04	2.4E-05	2.3E-05	1.9E-03	8.4E-08	4.1E-08	2.6E-07	6.9E-07	1.8E-06	1.3E-06	1.2E-04	4.2E-03	3E-03	3E-04	4E-04	2E-03	9E-04	5E-04	6E-04	1E-04	3E-05	7E-05	3E-05	4E-04	2E-04
8.3E-02	9.3E-04	9.5E-04	8.9E-04	8.6E-04	1.9E-04	1.8E-04	1.9E-04	1.9E-04	4.3E-04	2.5E-05	2.4E-05	2.2E-03	8.6E-08	4.2E-08	2.7E-07	7.1E-07	1.9E-06	1.3E-06	1.5E-04	4.4E-03	4E-03	4E-04	4E-04	2E-03	1E-03	5E-04	6E-04	1E-04	3E-05	8E-05	4E-05	4E-04	2E-04
9.6E-02	9.8E-04	9.9E-04	9.3E-04	9.0E-04	1.9E-04	1.8E-04	2.0E-04	2.0E-04	4.5E-04	2.6E-05	2.5E-05	2.4E-03	9.0E-08	4.2E-08	2.8E-07	7.3E-07	2.0E-06	1.4E-06	1.7E-04	4.6E-03	4E-03	4E-04	4E-04	2E-03	1E-03	6E-04	7E-04	2E-04	4E-05	9E-05	4E-05	4E-04	2E-04
1.1E-01	1.0E-03	1.0E-03	9.6E-04	9.2E-04	2.0E-04	1.9E-04	2.0E-04	2.0E-04	4.6E-04	2.7E-05	2.5E-05	2.7E-03	9.1E-08	4.4E-08	2.9E-07	7.5E-07	2.0E-06	1.4E-06	1.9E-04	4.7E-03	4E-03	4E-04	4E-04	3E-03	1E-03	7E-04	8E-04	2E-04	4E-05	1E-04	5E-05	5E-04	2E-04
1.3E-01	1.0E-03	1.0E-03	9.8E-04	9.5E-04	2.1E-04	1.9E-04	2.1E-04	2.1E-04	4.7E-04	2.8E-05	2.7E-05	2.9E-03	9.1E-08	4.5E-08	2.9E-07	7.6E-07	2.1E-06	1.4E-06	2.2E-04	4.8E-03	4E-03	4E-04	4E-04	3E-03	1E-03	7E-04	8E-04	2E-04	5E-05	1E-04	6E-05	5E-04	2E-04
1.4E-01	1.1E-03	1.1E-03	1.0E-03	9.7E-04	2.1E-04	2.0E-04	2.1E-04	2.1E-04	4.8E-04	2.9E-05	2.8E-05	3.2E-03	9.2E-08	4.5E-08	2.9E-07	7.6E-07	2.1E-06	1.4E-06	2.5E-04	4.9E-03	4E-03	4E-04	4E-04	3E-03	1E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	5E-04	2E-04
1.6E-01	1.1E-03	1.1E-03	1.0E-03	9.9E-04	2.1E-04	2.0E-04	2.2E-04	2.2E-04	5.1E-04	3.1E-05	2.9E-05	3.4E-03	9.3E-08	4.5E-08	2.9E-07	7.7E-07	2.2E-06	1.4E-06	2.8E-04	5.1E-03	4E-03	4E-04	4E-04	3E-03	2E-03	9E-04	1E-03	3E-04	6E-05	1E-04	7E-05	5E-04	2E-04
1.7E-01	1.1E-03	1.1E-03	1.0E-03	1.0E-03	2.2E-04	2.1E-04	2.2E-04	2.2E-04	5.2E-04	3.1E-05	3.0E-05	3.6E-03	9.4E-08	4.5E-08	3.0E-07	7.8E-07	2.2E-06	1.5E-06	2.9E-04	5.1E-03	4E-03	4E-04	4E-04	4E-03	2E-03	9E-04	1E-03	3E-04	6E-05	2E-04	7E-05	5E-04	2E-04
1.8E-01	1.1E-03	1.1E-03	1.1E-03	1.0E-03	2.2E-04	2.1E-04	2.2E-04	2.2E-04	5.2E-04	3.2E-05	3.0E-05	3.9E-03	9.5E-08	4.6E-08	3.0E-07	7.9E-07	2.2E-06	1.5E-06	3.2E-04	5.3E-03	4E-03	4E-04	4E-04	4E-03	2E-03	1E-03	1E-03	3E-04	7E-05	2E-04	8E-05	5E-04	2E-04
2.0E-01	1.1E-03	1.2E-03	1.1E-03	1.0E-03	2.2E-04	2.1E-04	2.3E-04	2.3E-04	5.3E-04	3.3E-05	3.1E-05	4.1E-03	9.5E-08	4.6E-08	3.0E-07	8.0E-07	2.2E-06	1.5E-06	3.5E-04	5.3E-03	4E-03	4E-04	5E-04	4E-03	2E-03	1E-03	1E-03	3E-04	7E-05	2E-04	9E-05	5E-04	2E-04
2.6E-01	3.3E-03	3.5E-03	3.1E-03	2.8E-03	5.8E-04	5.3E-04	5.5E-04	5.4E-04	1.8E-03	1.3E-04	1.1E-04	5.5E-03	1.7E-07	7.5E-08	5.3E-07	2.0E-06	5.9E-06	2.9E-06	4.5E-04	1.5E-02	1E-02	1E-03	1E-03	6E-03	3E-03	1E-03	2E-03	5E-04	9E-05	2E-04	1E-04	2E-03	7E-04
2.5E-01	3.4E-03	3.7E-03	3.2E-03	2.9E-03	6.0E-04	5.4E-04	5.7E-04	5.6E-04	2.0E-03	1.3E-04	1.2E-04	5.4E-03	1.7E-07	7.6E-08	5.4E-07	2.1E-06	6.3E-06	3.0E-06	4.4E-04	1.6E-02	1E-02	1E-03	1E-03	5E-03	3E-03	1E-03	2E-03	4E-04	9E-05	2E-04	1E-04	2E-03	8E-04
2.4E-01	3.5E-03	3.9E-03	3.4E-03	3.0E-03	6.2E-04	5.6E-04	5.9E-04	5.7E-04	2.2E-03	1.3E-04	1.2E-04	5.2E-03	1.7E-07	7.8E-08	5.5E-07	2.3E-06	6.8E-06	3.2E-06	4.2E-04	1.6E-02	1E-02	1E-03	1E-03	5E-03	2E-03	1E-03	1E-03	4E-04	9E-05	2E-04	1E-04	2E-03	8E-04
2.4E-01	3.6E-03	4.0E-03	3.4E-03	3.1E-03	6.3E-04	5.7E-04	5.9E-04	5.7E-04	2.2E-03	1.3E-04	1.2E-04	5.0E-03	1.8E-07	8.0E-08	5.6E-07	2.4E-06	7.3E-06	3.3E-06	4.2E-04	1.7E-02	1E-02	1E-03	1E-03	5E-03	2E-03	1E-03	1E-03	4E-04	9E-05	2E-04	1E-04	2E-03	9E-04
2.3E-01	3.7E-03	4.3E-03	3.5E-03	3.2E-03	6.5E-04	5.8E-04	6.0E-04	5.8E-04	2.4E-03	1.3E-04	1.2E-04	4.8E-03	1.8E-07	8.2E-08	5.7E-07	2.6E-06	7.8E-06	3.5E-06	4.1E-04	1.7E-02	1E-02	1E-03	1E-03	5E-03	2E-03	1E-03	1E-03	4E-04	8E-05	2E-04	1E-04	2E-03	9E-04
2.2E-01	3.9E-03	4.5E-03	3.7E-03	3.3E-03	6.7E-04	6.0E-04	6.2E-04	5.9E-04	2.6E-03	1.3E-04	1.2E-04	4.6E-03	1.9E-07	8.5E-08	5.8E-07	2.8E-06	8.5E-06	3.8E-06	3.9E-04	1.8E-02	2E-02	1E-03	1E-03	5E-03	2E-03	1E-03	1E-03	4E-04	8E-05	2E-04	1E-04	3E-03	1E-03
2.2E-01	4.1E-03	4.9E-03	4.0E-03	3.6E-03	7.1E-04	6.3E-04	6.4E-04	6.1E-04	2.8E-03	1.4E-04	1.3E-04	4.5E-03	1.9E-07	8.7E-08	6.0E-07	3.0E-06	9.3E-06	4.0E-06	3.8E-04	1.9E-02	2E-02	1E-03	1E-03	4E-03	2E-03	1E-03	1E-03	4E-04	8E-05	2E-04	1E-04	3E-03	1E-03
2.1E-01	4.4E-03	5.3E-03	4.3E-03	3.8E-03	7.5E-04	6.6E-04	6.7E-04	6.3E-04	3.0E-03	1.5E-04	1.3E-04	4.3E-03	2.0E-07	8.9E-08	6.2E-07	3.2E-06	1.0E-05	4.3E-06	3.7E-04	2.0E-02	2E-02	1E-03	1E-03	4E-03	2E-03	1E-03	1E-03	4E-04	8E-05	2E-04	9E-05	3E-03	1E-03
2.0E-01	4.8E-03	5.7E-03	4.6E-03	4.1E-03	7.9E-04	6.9E-04	7.0E-04	6.6E-04	3.3E-03	1.6E-04	1.4E-04	4.2E-03	2.1E-07	9.2E-08	6.2E-07	3.4E-06	1.1E-05	4.5E-06	3.5E-04	2.2E-02	2E-02	1E-03	1E-03	4E-03	2E-03	1E-03	1E-03	4E-04	7E-05	2E-04	9E-05	3E-03	1E-03
1.9E-01	5.2E-03	6.2E-03	4.9E-03	4.3E-03	8.4E-04	7.3E-04	7.3E-04	6.9E-04	3.6E-03	1.6E-04	1.5E-04	4.0E-03	2.1E-07	9.4E-08	6.5E-07	3.7E-06	1.2E-05	4.8E-06	3.4E-04	2.4E-02	2E-02	2E-03	1E-03	4E-03	2E-03	1E-03	1E-03	3E-04	7E-05	2E-04	8E-05	4E-03	1E-03
1.8E-01	5.6E-03	6.6E-03	5.3E-03	4.7E-03	9.0E-04	7.7E-04	7.8E-04	7.3E-04	3.9E-03	1.7E-04	1.5E-04	3.9E-03	2.2E-07	9.6E-08	6.8E-07	4.0E-06	1.3E-05	5.0E-06	3.2E-04	2.5E-02	2E-02	2E-03	2E-03	4E-03	2E-03	1E-03	1E-03	3E-04	7E-05	2E-04	8E-05	4E-03	2E-03
1.8E-01	6.1E-03	7.1E-03	5.8E-03	5.1E-03	9.8E-04	8.3E-04	8.3E-04	7.8E-04	4.4E-03	1.9E-04	1.7E-04	3.8E-03	2.4E-07	9.9E-08	7.1E-07	4.3E-06	1.4E-05	5.3E-06	3.2E-04	2.7E-02	2E-02	2E-03	2E-03	4E-03	2E-03	1E-03	1E-03	3E-04	7E-05	2E-04	8E-05	4E-03	2E-03
1.7E-01	6.7E-03	7.5E-03	6.2E-03	5.4E-03	1.0E-03	8.9E-04	8.9E-04	8.3E-04	4.8E-03	2.0E-04	1.8E-04	3.6E-03	2.5E-07	1.0E-07	7.6E-07	4.5E-06	1.5E-05	5.6E-06	2.9E-04	3.0E-02	3E-02	2E-03	2E-03	4E-03	2E-03	9E-04	1E-03	3E-04	6E-05	2E-04	7E-05	5E-03	2E-03
1.5E-01	7.3E-03	7.9E-03	6.6E-03	5.8E-03	1.1E-03	9.5E-04	9.5E-04	8.8E-04	5.1E-03	2.1E-04	1.8E-04	3.4E-03	2.6E-07	1.0E-07	7.9E-07	4.6E-06	1.5E-05	5.8E-06	2.7E-04	3.2E-02	3E-02	2E-03	2E-03	3E-03	2E-03	9E-04	1E-03	3E-04	6E-05	1E-04	7E-05	5E-03	2E-03
1.4E-01	7.7E-03	8.2E-03	6.9E-03	6.2E-03	1.2E-03	1.0E-03	1.0E-03	9.4E-04	5.6E-03	2.2E-04	1.9E-04	3.2E-03	2.8E-07	1.0E-07	8.3E-07	4.7E-06	1.7E-05	6.0E-06	2.5E-04	3.3E-02	3E-02	2E-03	2E-03	3E-03	2E-03	8E-04	9E-04	3E-04	5E-05	1E-04	6E-05	6E-03	2E-03
1.5E-01	8.1E-03	8.5E-03	7.3E-03	6.5E-03	1.3E-03	1.1E-03	1.1E-03	1.0E-03	6.9E-03	2.7E-04	2.3E-04	3.3E-03	3.0E-07	1.1E-07	8.9E-07	5.5E-06	2.1E-05	6.7E-06	2.6E-04	3.5E-02	3E-02	2E-03	2E-03	3E-03	2E-03	8E-04	9E-04	3E-04	5E-05	1E-04	7E-05	7E-03	3E-03
1.5E-01	8.4E-03	8.8E-03	7.6E-03	6.9E-03	1.4E-03	1.2E-03	1.2E-03	1.1E-03	8.3E-03	3.1E-04	2.6E-04	3.3E-03	3.2E-07	1.1E-07	9.4E-07	6.5E-06	2.6E-05	7.4E-06	2.7E-04	3.7E-02	3E-02	3E-03	2E-03	3E-03	2E-03	8E-04	9E-04	3E-04	6E-05	1E-04	7E-05	8E-03	3E-03
1.4E-01	8.8E-03	9.0E-03	7.8E-03	7.1E-03	1.4E-03	1.3E-03	1.3E-03	1.2E-03	8.6E-03	3.4E-04	2.9E-04	3.2E-03	3.3E-07	1.1E-07	1.0E-06	7.2E-06	2.9E-05	7.8E-06	2.5E-04	3.8E-02	3E-02	3E-03	2E-03	3E-03	1E-03	8E-04	9E-04	3E-04	5E-05	1E-04	6E-05	9E-03	3E-03
1.3E-01	9.1E-03	9.2E-03	8.0E-03	7.3E-03	1.5E-03	1.3E-03	1.3E-03	1.3E-03	8.1E-03	3.4E-04	2.9E-04	3.0E-03	3.4E-07	1.1E-07	1.0E-06	7.6E-06	2.9E-05	7.9E-06	2.3E-04	3.9E-02	3E-02	3E-03	3E-03	3E-03	1E-03	7E-04	8E-04	2E-04	5E-05	1E-04	6E-05	8E-03	3E-03
1.2E-01	9.3E-03	9.4E-03	8.2E-03	7.5E-03	1.5E-03	1.3E-03	1.4E-03	1.3E-03	8.0E-03	3.5E-04	3.1E-04	2.8E-03	3.6E-07	1.1E-07	1.1E-06	8.4E-06	3.1E-05	8.2E-06	2.1E-04	4.0E-02	3E-02	3E-03	3E-03	3E-03	1E-03	7E-04	8E-04	2E-04	4E-05	1E-04	5E-05	8E-03	3E-03
1.2E-01	9.6E-03	9.6E-03	8.4E-03	7.7E-03	1.6E-03	1.4E-03	1.5E-03	1.4E-03	8.4E-03	3.8E-04	3.3E-04	2.8E-03	3.8E-07	1.2E-07	1.1E-06	9.8E-06	3.4E-05	9.1E-06	2.1E-04	4.1E-02	4E-02	3E-03	3E-03	3E-03	1E-03	7E-04	8E-04	2E-04	4E-05	1E-04	5E-05	8E-03	3E-03
1.2E-01	9.9E-03	9.8E-03	8.7E-03	8.0E-03	1.6E-03	1.5E-03	1.5E-03	1.5E-03	9.1E-03	4.2E-04	3.7E-04	2.8E-03	4.2E-07	1.2E-07	1.2E-06	1.2E-05	4.0E-05	1.1E-05	2.2E-04	4.3E-02	4E-02	3E-03	3E-03	3E-03	1E-03	7E-04	8E-04	2E-04	4E-05	1E-04	5E-05	9E-03	4E-03
3.3E-02	7.4E-04	7.5E-04	7.1E-04	6.9E-04	1.5E-04	1.4E-04	1.5E-04	1.5E-04	3.3E-04	1.9E-05	1.8E-05	1.1E-03	7.2E-08	3.6E-08	2.3E-07	5.9E-07	1.5E-06	1.1E-06	5.7E-05	3.5E-03	3E-03	3E-04	3E-04	1E-03	5E-04	3E-04	3E-04	6E-05	1E-05	3E-05	1E-05	3E-04	1E-04
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3.6E-02	7.6E-04	7.7E-04	7.3E-04	7.1E-04	1.5E-04	1.5E-04	1.6E-04	1.6E-04	3.4E-04	2.0E-05	1.9E-05	1.2E-03	7.3E-08	3.6E-08	2.3E-07	6.0E-07	1.5E-06	1.1E-06	6.3E-05	3.6E-03	3E-03	3E-04	3E-04	1E-03	6E-04	3E-04	3E-04	6E-05	1E-05	3E-05	2E-05	3E-04	1E-04
3.9E-02	7.8E-04	7.9E-04	7.5E-04	7.2E-04	1.6E-04	1.5E-04	1.6E-04	1.6E-04	3.5E-04	2.0E-05	2.0E-05	1.3E-03	7.5E-08	3.7E-08	2.4E-07	6.1E-07	1.6E-06	1.1E-06	6.8E-05	3.7E-03	3E-03	3E-04	3E-04	1E-03	6E-04	3E-04	4E-04	7E-05	1E-05	4E-05	2E-05	3E-04	1E-04
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1.2E-01	8.6E-03	8.6E-03	7.6E-03	6.9E-03	1.4E-03	1.2E-03	1.3E-03	1.2E-03	7.4E-03	3.1E-04	2.7E-04	2.8E-03	3.3E-07	1.1E-07	9.9E-07	7.2E-06	2.7E-05	7.5E-06	2.1E-04	3.7E-02	3E-02	3E-03	2E-03	3E-03	1E-03	7E-04	8E-04	2E-04	4E-05	1E-04	5E-05	7E-03	3E-03
1.1E-01	8.7E-03	8.7E-03	7.7E-03	7.0E-03	1.4E-03	1.3E-03	1.3E-03	1.3E-03	7.3E-03	3.2E-04	2.8E-04	2.7E-03	3.4E-07	1.1E-07	1.0E-06	7.8E-06	2.8E-05	7.8E-06	2.0E-04	3.7E-02	3E-02	3E-03	3E-03	3E-03	1E-03	7E-04	8E-04	2E-04	4E-05	1E-04	5E-05	7E-03	3E-03
1.1E-01	8.9E-03	8.9E-03	7.8E-03	7.2E-03	1.5E-03	1.3E-03	1.4E-03	1.3E-03	7.4E-03	3.4E-04	3.0E-04	2.6E-03	3.6E-07	1.1E-07	1.1E-06	8.9E-06	3.1E-05	8.4E-06	1.9E-04	3.8E-02	3E-02	3E-03	3E-03	3E-03	1E-03	7E-04	7E-04	2E-04	4E-05	1E-04	5E-05	7E-03	3E-03
1.2E-01	9.3E-03	9.2E-03	8.2E-03	7.6E-03	1.5E-03	1.4E-03	1.5E-03	1.4E-03	8.3E-03	3.8E-04	3.4E-04	2.7E-03	4.1E-07	1.2E-07	1.2E-06	1.1E-05	3.6E-05	1.0E-05	2.0E-04	4.0E-02	3E-02	3E-03	3E-03	3E-03	1E-03	7E-04	8E-04	2E-04	4E-05	1E-04	5E-05	8E-03	3E-03
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3.7E-02	7.7E-04	7.8E-04	7.4E-04	7.1E-04	1.6E-04	1.5E-04	1.6E-04	1.6E-04	3.4E-04	2.0E-05	1.9E-05	1.3E-03	7.3E-08	3.7E-08	2.3E-07	5.7E-07	1.5E-06	1.1E-06	6.5E-05	3.6E-03	3E-03	3E-04	3E-04	1E-03	6E-04	3E-04	4E-04	7E-05	1E-05	4E-05	2E-05	3E-04	1E-04
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1.3E-01	7.2E-03	7.5E-03	6.5E-03	5.9E-03	1.2E-03	1.0E-03	1.0E-03	9.5E-04	5.5E-03	2.2E-04	1.9E-04	2.9E-03	2.8E-07	1.0E-07	8.4E-07	4.7E-06	1.7E-05	6.1E-06	2.2E-04	3.1E-02	3E-02	2E-03	2E-03	3E-03	1E-03	7E-04	8E-04	2E-04	5E-05	1E-04	6E-05	6E-03	2E-03
1.4E-01	7.6E-03	7.9E-03	6.8E-03	6.2E-03	1.3E-03	1.1E-03	1.1E-03	1.0E-03	7.0E-03	2.7E-04	2.3E-04	3.1E-03	3.1E-07	1.1E-07	9.1E-07	5.9E-06	2.2E-05	6.9E-06	2.4E-04	3.3E-02	3E-02	2E-03	2E-03	3E-03	1E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	7E-03	3E-03
1.3E-01	7.9E-03	8.1E-03	7.0E-03	6.5E-03	1.3E-03	1.1E-03	1.2E-03	1.1E-03	7.1E-03	2.9E-04	2.5E-04	2.9E-03	3.2E-07	1.1E-07	9.5E-07	6.4E-06	2.4E-05	7.1E-06	2.3E-04	3.4E-02	3E-02	2E-03	2E-03	3E-03	1E-03	7E-04	8E-04	2E-04	5E-05	1E-04	6E-05	7E-03	3E-03
1.2E-01	8.1E-03	8.2E-03	7.2E-03	6.6E-03	1.3E-03	1.2E-03	1.2E-03	1.2E-03	7.0E-03	3.0E-04	2.6E-04	2.8E-03	3.3E-07	1.1E-07	9.7E-07	6.9E-06	2.5E-05	7.3E-06	2.1E-04	3.5E-02	3E-02	3E-03	2E-03	3E-03	1E-03	7E-04	8E-04	2E-04	4E-05	1E-04	5E-05	7E-03	3E-03

TAMT Risk Assessment - DPM Cancer and Chronic HI

AERMOD UNITIZED CONCENTRATIONS

AERMOD Output

Source Group in AERMOD

				1	3	5	7	9	11	13	15	17	18	19	20	21	22
	Discrete Receptor ID (Group Name)	X	Y	B10_1_AUX	B10_2_AUX	B10_3_AUX	B10_4_AUX	B10_5_AUX	B10_6_AUX	B10_7_AUX	B10_8_AUX	CHE_1	LOC_SWTCH EMP	LOC_SWTCH LOA	OGV_PATH _BLR	OGV_PATH _DPM	TR_28TH
recreational	park	485730.59	3620525.04	1.4E-01	1.4E-01	1.3E-01	1.2E-01	1.1E-01	9.4E-02	9.1E-02	8.8E-02	1.0E+05	1.7E-01	1.5E-01	8.7E-02	8.7E-02	4.7E-02
recreational	park	485830.59	3620525.04	1.5E-01	1.5E-01	1.3E-01	1.2E-01	1.1E-01	9.7E-02	9.4E-02	9.2E-02	1.0E+05	1.8E-01	1.6E-01	8.4E-02	8.4E-02	5.0E-02
residential	REC_100M	477230.59	3620625.04	1.3E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.1E-02	1.1E-02	1.1E-02	4.9E+03	1.1E-02	1.1E-02	4.0E-02	4.0E-02	1.0E-02
residential	REC_100M	477330.59	3620625.04	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.1E-02	1.1E-02	1.1E-02	5.0E+03	1.1E-02	1.1E-02	4.2E-02	4.2E-02	1.0E-02
residential	REC_100M	477430.59	3620625.04	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.1E-02	1.1E-02	1.1E-02	4.9E+03	1.1E-02	1.1E-02	4.3E-02	4.3E-02	1.0E-02
residential	REC_100M	477530.59	3620625.04	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.1E-02	1.1E-02	4.9E+03	1.1E-02	1.1E-02	4.4E-02	4.4E-02	1.0E-02
residential	REC_100M	477630.59	3620625.04	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	1.2E-02	5.1E+03	1.2E-02	1.1E-02	4.7E-02	4.7E-02	1.0E-02
residential	REC_100M	477730.59	3620625.04	1.4E-02	1.5E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	5.3E+03	1.2E-02	1.2E-02	5.0E-02	5.0E-02	1.1E-02
residential	REC_100M	477830.59	3620625.04	1.5E-02	1.5E-02	1.4E-02	1.4E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	5.6E+03	1.3E-02	1.2E-02	5.5E-02	5.5E-02	1.1E-02
residential	REC_100M	477930.59	3620625.04	1.5E-02	1.5E-02	1.5E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	1.3E-02	5.8E+03	1.3E-02	1.2E-02	6.0E-02	6.0E-02	1.1E-02
residential	REC_100M	478030.59	3620625.04	1.6E-02	1.6E-02	1.5E-02	1.5E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	6.0E+03	1.3E-02	1.3E-02	6.7E-02	6.7E-02	1.2E-02
residential	REC_100M	478130.59	3620625.04	1.6E-02	1.7E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	1.3E-02	6.1E+03	1.4E-02	1.3E-02	7.3E-02	7.3E-02	1.2E-02
residential	REC_100M	478230.59	3620625.04	1.7E-02	1.7E-02	1.6E-02	1.5E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	6.2E+03	1.4E-02	1.3E-02	7.8E-02	7.8E-02	1.2E-02
residential	REC_100M	478330.59	3620625.04	1.7E-02	1.7E-02	1.6E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	6.3E+03	1.5E-02	1.4E-02	8.4E-02	8.4E-02	1.2E-02
residential	REC_100M	478430.59	3620625.04	1.8E-02	1.8E-02	1.7E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	6.4E+03	1.6E-02	1.5E-02	9.2E-02	9.2E-02	1.2E-02
residential	REC_100M	478530.59	3620625.04	1.8E-02	1.8E-02	1.7E-02	1.7E-02	1.6E-02	1.5E-02	1.5E-02	1.5E-02	6.9E+03	1.6E-02	1.6E-02	9.9E-02	9.9E-02	1.2E-02

TAMT Risk Assessment - DPM Cancer and Chronic HI

AERMOD Output

AERMOD UNITIZED CONCENTRATIONS (Source Group in AERMOD)

Type	Discrete Receptor ID (Group Name)	X	Y	1 B10_1_AUX	3 B10_2_AUX	5 B10_3_AUX	7 B10_4_AUX	9 B10_5_AUX	11 B10_6_AUX	13 B10_7_AUX	15 B10_8_AUX	17 CHE_1	18 LOC_SWTCH EMP	19 LOC_SWTCH LOA	20 OGV_PATH _BLR	21 OGV_PATH _DPM	22 TR_28TH	23 TR_BAYMA R	24 TR_BOSTON	25 TR_CROSBY	26 TR_HARBOR CHA	27 TR_HARBOR SAM	28 TUG_PATH_ DPM
residential	REC_100N	477830.59	3621125.04	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.1E-02	1.1E-02	1.1E-02	1.1E-02	4.7E+03	1.1E-02	1.0E-02	4.1E-02	4.1E-02	9.8E-03	4.3E-03	9.7E-03	1.2E-02	1.3E-02	1.1E-02	3.8E-02
residential	REC_100N	477930.59	3621125.04	1.3E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.1E-02	1.1E-02	1.1E-02	4.8E+03	1.1E-02	1.0E-02	4.4E-02	4.4E-02	9.9E-03	4.3E-03	9.8E-03	1.3E-02	1.3E-02	1.1E-02	4.1E-02
residential	REC_100N	478030.59	3621125.04	1.4E-02	1.4E-02	1.3E-02	1.2E-02	1.2E-02	1.1E-02	1.1E-02	1.1E-02	5.0E+03	1.1E-02	1.1E-02	4.7E-02	4.7E-02	1.0E-02	4.4E-03	1.0E-02	1.3E-02	1.4E-02	1.1E-02	4.7E-02
residential	REC_100N	478130.59	3621125.04	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.1E-02	1.1E-02	5.1E+03	1.1E-02	1.1E-02	5.1E-02	5.1E-02	1.0E-02	4.4E-03	1.0E-02	1.3E-02	1.4E-02	1.1E-02	5.2E-02
residential	REC_100N	478230.59	3621125.04	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	1.2E-02	5.2E+03	1.2E-02	1.1E-02	5.5E-02	5.5E-02	1.0E-02	4.4E-03	1.0E-02	1.3E-02	1.5E-02	1.1E-02	5.9E-02
residential	REC_100N	478330.59	3621125.04	1.5E-02	1.5E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	5.3E+03	1.2E-02	1.1E-02	6.0E-02	6.0E-02	1.1E-02	4.5E-03	1.1E-02	1.3E-02	1.5E-02	1.1E-02	6.6E-02
residential	REC_100N	478430.59	3621125.04	1.5E-02	1.5E-02	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	5.4E+03	1.3E-02	1.2E-02	6.5E-02	6.5E-02	1.1E-02	4.6E-03	1.1E-02	1.3E-02	1.5E-02	1.1E-02	7.2E-02
residential	REC_100N	478530.59	3621125.04	1.6E-02	1.6E-02	1.5E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	1.3E-02	5.5E+03	1.3E-02	1.2E-02	7.0E-02	7.0E-02	1.1E-02	4.7E-03	1.1E-02	1.3E-02	1.5E-02	1.1E-02	8.2E-02
residential	REC_100N	478630.59	3621125.04	1.6E-02	1.6E-02	1.5E-02	1.5E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	5.9E+03	1.4E-02	1.3E-02	7.6E-02	7.6E-02	1.1E-02	4.8E-03	1.1E-02	1.3E-02	1.6E-02	1.1E-02	9.4E-02
residential	REC_100N	478730.59	3621125.04	1.6E-02	1.6E-02	1.5E-02	1.5E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	6.0E+03	1.5E-02	1.4E-02	8.0E-02	8.0E-02	1.1E-02	4.8E-03	1.1E-02	1.3E-02	1.6E-02	1.1E-02	1.0E-01
residential	REC_100N	478830.59	3621125.04	1.7E-02	1.7E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	1.3E-02	6.0E+03	1.5E-02	1.4E-02	8.5E-02	8.5E-02	1.1E-02	4.8E-03	1.1E-02	1.3E-02	1.6E-02	1.1E-02	1.1E-01
residential	REC_100N	478930.59	3621125.04	1.7E-02	1.7E-02	1.6E-02	1.5E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	6.1E+03	1.5E-02	1.4E-02	9.0E-02	9.0E-02	1.1E-02	4.8E-03	1.1E-02	1.3E-02	1.6E-02	1.1E-02	1.2E-01
residential	REC_100N	479030.59	3621125.04	1.7E-02	1.7E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	1.4E-02	6.2E+03	1.6E-02	1.5E-02	9.2E-02	9.2E-02	1.1E-02	4.9E-03	1.1E-02	1.3E-02	1.6E-02	1.1E-02	1.2E-01
residential	REC_100N	479130.59	3621125.04	1.7E-02	1.7E-02	1.6E-02	1.5E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	6.2E+03	1.6E-02	1.5E-02	9.6E-02	9.6E-02	1.1E-02	4.9E-03	1.1E-02	1.4E-02	1.7E-02	1.2E-02	1.3E-01
residential	REC_100N	479230.59	3621125.04	1.7E-02	1.7E-02	1.6E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	6.3E+03	1.6E-02	1.5E-02	1.0E-01	1.0E-01	1.1E-02	4.9E-03	1.1E-02	1.4E-02	1.7E-02	1.2E-02	1.3E-01
residential	REC_100N	479330.59	3621125.04	1.8E-02	1.8E-02	1.7E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	6.3E+03	1.6E-02	1.5E-02	1.0E-01	1.0E-01	1.1E-02	5.0E-03	1.1E-02	1.4E-02	1.7E-02	1.2E-02	1.4E-01
residential	REC_100N	479430.59	3621125.04	1.8E-02	1.8E-02	1.7E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	6.4E+03	1.7E-02	1.6E-02	1.1E-01	1.1E-01	1.2E-02	5.0E-03	1.2E-02	1.4E-02	1.7E-02	1.2E-02	1.5E-01
residential	REC_100N	479530.59	3621125.04	1.8E-02	1.8E-02	1.7E-02	1.6E-02	1.5E-02	1.5E-02	1.5E-02	1.5E-02	6.5E+03	1.7E-02	1.6E-02	1.2E-01	1.2E-01	1.2E-02	5.0E-03	1.2E-02	1.4E-02	1.7E-02	1.2E-02	1.6E-01
residential	REC_100N	479630.59	3621125.04	1.8E-02	1.9E-02	1.7E-02	1.7E-02	1.6E-02	1.5E-02	1.5E-02	1.5E-02	6.5E+03	1.8E-02	1.7E-02	1.2E-01	1.2E-01	1.2E-02	5.1E-03	1.2E-02	1.4E-02	1.8E-02	1.2E-02	1.7E-01
recreational	park	481430.59	3621125.04	2.4E-02	2.4E-02	2.3E-02	2.1E-02	2.0E-02	1.9E-02	1.9E-02	1.9E-02	8.1E+03	2.7E-02	2.6E-02	1.8E-01	1.8E-01	1.4E-02	5.8E-03	1.4E-02	1.6E-02	2.1E-02	1.4E-02	2.6E-01
recreational	park	481530.59	3621125.04	2.4E-02	2.5E-02	2.3E-02	2.2E-02	2.1E-02	1.9E-02	1.9E-02	1.9E-02	8.2E+03	2.8E-02	2.6E-02	1.8E-01	1.8E-01	1.4E-02	5.9E-03	1.4E-02	1.7E-02	2.2E-02	1.4E-02	2.6E-01
recreational	park	481630.59	3621125.04	2.5E-02	2.5E-02	2.4E-02	2.2E-02	2.1E-02	2.0E-02	2.0E-02	1.9E-02	8.4E+03	2.8E-02	2.7E-02	1.8E-01	1.8E-01	1.4E-02	5.9E-03	1.4E-02	1.7E-02	2.2E-02	1.4E-02	2.6E-01
recreational	park	481730.59	3621125.04	2.5E-02	2.6E-02	2.4E-02	2.3E-02	2.1E-02	2.0E-02	2.0E-02	2.0E-02	8.5E+03	2.9E-02	2.7E-02	1.8E-01	1.8E-01	1.4E-02	6.0E-03	1.4E-02	1.7E-02	2.2E-02	1.4E-02	2.6E-01
recreational	park	481830.59	3621125.04	2.6E-02	2.6E-02	2.4E-02	2.3E-02	2.2E-02	2.1E-02	2.0E-02	2.0E-02	8.7E+03	2.9E-02	2.7E-02	1.8E-01	1.8E-01	1.4E-02	6.1E-03	1.4E-02	1.7E-02	2.3E-02	1.4E-02	2.6E-01
recreational	park	481930.59	3621125.04	2.7E-02	2.7E-02	2.5E-02	2.4E-02	2.2E-02	2.1E-02	2.1E-02	2.0E-02	8.9E+03	3.0E-02	2.8E-02	1.8E-01	1.8E-01	1.4E-02	6.1E-03	1.4E-02	1.8E-02	2.3E-02	1.4E-02	2.6E-01
recreational	park	482030.59	3621125.04	2.7E-02	2.8E-02	2.6E-02	2.4E-02	2.3E-02	2.1E-02	2.1E-02	2.1E-02	9.1E+03	3.0E-02	2.8E-02	1.8E-01	1.8E-01	1.4E-02	6.2E-03	1.4E-02	1.8E-02	2.3E-02	1.5E-02	2.5E-01
recreational	park	482130.59	3621125.04	2.8E-02	2.8E-02	2.6E-02	2.5E-02	2.3E-02	2.2E-02	2.1E-02	2.1E-02	9.4E+03	3.1E-02	2.9E-02	1.8E-01	1.8E-01	1.5E-02	6.3E-03	1.5E-02	1.9E-02	2.4E-02	1.5E-02	2.5E-01
recreational	park	482230.59	3621125.04	2.8E-02	2.9E-02	2.6E-02	2.5E-02	2.3E-02	2.2E-02	2.2E-02	2.2E-02	9.6E+03	3.1E-02	2.9E-02	1.8E-01	1.8E-01	1.5E-02	6.3E-03	1.5E-02	1.9E-02	2.4E-02	1.5E-02	2.5E-01
recreational	park	482330.59	3621125.04	2.9E-02	2.9E-02	2.7E-02	2.6E-02	2.4E-02	2.2E-02	2.2E-02	2.2E-02	1.0E+04	3.2E-02	3.0E-02	1.7E-01	1.7E-01	1.5E-02	6.4E-03	1.5E-02	1.9E-02	2.5E-02	1.5E-02	2.4E-01
recreational	park	482430.59	3621125.04	3.0E-02	3.0E-02	2.8E-02	2.6E-02	2.4E-02	2.3E-02	2.3E-02	2.2E-02	1.0E+04	3.3E-02	3.1E-02	1.7E-01	1.7E-01	1.5E-02	6.5E-03	1.5E-02	2.0E-02	2.5E-02	1.6E-02	2.4E-01
recreational	park	482530.59	3621125.04	3.1E-02	3.2E-02	2.9E-02	2.8E-02	2.6E-02	2.4E-02	2.4E-02	2.3E-02	1.1E+04	3.3E-02	3.1E-02	1.7E-01	1.7E-01	1.5E-02	6.6E-03	1.5E-02	2.1E-02	2.6E-02	1.6E-02	2.2E-01
residential	REC_100N	483830.59	3621125.04	4.4E-02	4.9E-02	4.2E-02	3.9E-02	3.6E-02	3.3E-02	3.1E-02	3.1E-02	2.2E+04	4.6E-02	4.2E-02	1.3E-01	1.3E-01	1.9E-02	8.5E-03	1.9E-02	3.8E-02	5.0E-02	2.5E-02	1.7E-01
residential	REC_100N	483930.59	3621125.04	4.5E-02	5.0E-02	4.4E-02	4.0E-02	3.6E-02	3.3E-02	3.2E-02	3.1E-02	2.3E+04	4.6E-02	4.2E-02	1.3E-01	1.3E-01	2.0E-02	8.7E-03	2.0E-02	4.1E-02	5.2E-02	2.6E-02	1.7E-01
residential	REC_100N	484030.59	3621125.04	4.6E-02	5.2E-02	4.5E-02	4.1E-02	3.7E-02	3.3E-02	3.2E-02	3.1E-02	2.4E+04	4.7E-02	4.3E-02	1.2E-01	1.2E-01	2.1E-02	8.9E-03	2.0E-02	4.2E-02	5.4E-02	2.8E-02	1.7E-01
residential	REC_100N	484130.59	3621125.04	4.8E-02	5.4E-02	4.7E-02	4.2E-02	3.8E-02	3.4E-02	3.3E-02	3.1E-02	2.5E+04	4.9E-02	4.5E-02	1.2E-01	1.2E-01	2.2E-02	9.2E-03	2.1E-02	4.3E-02	5.7E-02	2.9E-02	1.6E-01
residential	REC_100N	484230.59	3621125.04	4.9E-02	5.6E-02	4.8E-02	4.3E-02	3.8E-02	3.4E-02	3.3E-02	3.1E-02	2.5E+04	4.9E-02	4.5E-02	1.1E-01	1.1E-01	2.3E-02	9.4E-03	2.2E-02	4.4E-02	5.7E-02	3.0E-02	1.5E-01
residential	REC_100N	477930.59	3621225.04	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.1E-02	1.1E-02	1.1E-02	1.1E-02	4.6E+03	1.0E-02	9.8E-03	4.2E-02	4.2E-02	9.7E-03	4.3E-03	9.6E-03	1.2E-02	1.3E-02	1.1E-02	3.9E-02
residential	REC_100N	478030.59	3621225.04	1.3E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.1E-02	1.1E-02	1.1E-02	4.8E+03	1.1E-02	1.0E-02	4.5E-02	4.5E-02	9.8E-03	4.3E-03	9.8E-03	1.2E-02	1.4E-02	1.1E-02	4.5E-02
residential	REC_100N	478130.59	3621225.04	1.3E-02	1.4E-02	1.3E-02	1.2E-02	1.2E-02	1.1E-02	1.1E-02	1.1E-02	4.9E+03	1.1E-02	1.0E-02	4.8E-02	4.8E-02	9.9E-03	4.4E-03	9.9E-03	1.2E-02	1.4E-02	1.1E-02	4.9E-02
residential	REC_100N	478230.59	3621225.04	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.1E-02	1.1E-02	1.1E-02	5.0E+03	1.1E-02	1.1E-02	5.2E-02	5.2E-02	1.0E-02	4.4E-03	1.0E-02	1.2E-02	1.4E-02	1.1E-02	5.4E-02
residential	REC_100N	478330.59	3621225.04	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	1.2E-02	5.0E+03	1.1E-02	1.1E-02	5.5E-02	5.5E-02	1.0E-02	4.4E-03	1.0E-02	1.2E-02	1.4E-02	1.1E-02	5.9E-02
residential	REC_100N	478430.59	3621225.04	1.5E-02	1.5E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	5.2E+03	1.2E-02	1.1E-02	6.1E-02	6.1E-02	1.0E-02	4.4E-03	1.0E-02	1.2E-02	1.5E-02	1.1E-02	6.7E-02
residential	REC_100N	478530.59	3621225.04	1.5E-02	1.5E-02	1.4E-02	1.4E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	5.3E+03	1.2E-02	1.2E-02	6.6E-02	6.6E-02	1.1E-02	4.6E-03	1.0E-02	1.2E-02	1.5E-02	1.1E-02	7.4E-02
residential	REC_100N	478630.59	3621225.04	1.5E-02	1.5E-02	1.5E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	1.3E-02	5.4E+03	1.3E-02	1.3E-02	7.1E-02	7.1E-02	1.1E-02	4.7E-03	1.1E-02	1.3E-02	1.5E-02	1.1E-02	8.4E-02
residential	REC_100N	478730.59	3621225.04	1.6E-02	1.6E-02	1.5E-02	1.5E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	5.4E+03	1.4E-02	1.3E-02	7.5E-02	7.5E-02	1.1E-02	4.7E-03	1.1E-02	1.3E-02	1.5E-02	1.1E-02	9.1E-02
residential	REC_100N	478830.59	3621225.04	1.6E-02	1.6E-02	1.5E-02	1.5E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	5.9E+03	1.4E-02	1.4E-02	7.9E-02	7.9E-02	1.1E-02	4.8E-03	1.1E-02	1.3E-02	1.6E-02	1.1E-02	9.8E-02
residential	REC_100N	478930.59	3621225.04	1.6E-02	1.6E-02	1.5E-02	1.5E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	5.9E+03	1.5E-02	1.4E-02	8.3E-02	8.3E-02	1.1E-02	4.8E-03	1.1E-02	1.3E-02	1.6E-02	1.1E-02	1.1E-01
residential	REC_100N	479030.59	3621225.04	1.6E-02	1.6E-02	1.5E-02	1.5E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	6.0E+03	1.5E-02	1.4E-02	8.6E-02	8.6E-02	1.1E-02	4.8E-03	1.1E-02	1.3E-02	1.6E-02	1.1E-02	1.1E-01
residential	REC_100N	479130.59	3621225.04	1.7E-02	1.7E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	1.3E-02	6.0E+03	1.5E-02	1.4E-02	9.0E-02	9.0E-02	1.1E-02	4.8E-03	1.1E-02	1.3E-02	1.6E-02	1.1E-02	1.2E-01
residential	REC_100N	479230.59	3621225.04	1.7E-02	1.7E-02	1.6E-02	1.5E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	6.1E+03	1.6E-02	1.5E-02	9.4E-02	9.4E-02	1.1E-02	4.9E-03	1.1E-02	1.3E-02	1.6E-02	1.1E-02	1.2E-01
residential	REC_100N	479330.59	3621225.04	1.7E-02	1.7E-02	1.6E-02	1.5E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	6.1E+03	1.6E-02	1.5E-02	9.8E-02	9.8E-02	1.1E-02	4.9E-03	1.1E-02	1.3E-02	1.6E-02	1.1E-02	1.3E-01
residential	REC_100N	479430.59	3621225.04	1.7E-02	1.7E-02	1.6E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	6.2E+03	1.6E-02	1.5E-02	1.0E-01	1.0E-01	1.1E-02	4.9E-03	1.1E-02	1.3E-02	1.7E-02	1.1E-02	1.4E-01
residential	REC_100N	479530.59	3621225.04	1.8E-02	1.8E-02	1.7E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	6.3E+03	1.7E-02	1.6E-02	1.1E-01	1.1E-01	1.1E-02	5.0E-03	1.1E-02	1.3E-02	1.7E-02	1.2E-02	1.5E-01
residential	REC_100N	479630.59	3621225.04	1.8E-02	1.8E-02	1.7E-02	1.6E-02	1.5E-02	1.5E-02	1.4E-02	1.4E-02	6.3E+03	1.7E-02	1.6E-02	1.1E-01	1.1E-01	1.1E-02	5.0E-03	1.1E-02	1.4E-02	1.7E-02	1.2E-02	1.5E-01
residential	REC_100N	479730.59	3621225.04	1.8E-02	1.8E-02	1.7E-02	1.6E-02	1.6E-02	1.5E-02	1.5E-02	1.5E-02	6.4E+03	1.7E-02	1.6E-02	1.2E-01	1.2E-01	1.2E-02	5.0E-03	1.1E-02	1.4E-02	1.7E-02	1.2E-02	1.6E-01
residential	REC_100N	479830.59	3621225.04	1.9E-02	1.9E-02	1.8E-02	1.7E-02	1.6E-02	1.5E-02	1.5E-02	1.5E-02	6.5E+03	1.8E-02	1.7E-02	1.2E-01	1.2E-01	1.2E-02	5.1E-03	1.2E-02	1.4E-02	1.7E-02	1.2E-02	1.7E-01
residential	REC_100N	479930.59	3621225.04	1.9E-02	1.9E-02	1.8E-02	1.7E-02	1.6E-02	1.5E-02	1.5E-02	1.5E-02	6.5E+03	1.8E-02	1.7E-02	1.3E-01	1.3E-01	1.2E-02	5.1E-03	1.2E-02	1.4E-02	1.7E-02	1.2E-02	1.8E-01
residential	REC_100N	480030.59	3621225.04	1.9E-02	1.9E-02	1.8E-02	1.7E-02	1.6E-02	1.5E-02	1.5E-02	1.5E-02	6.6E+03	1.8E-02	1.7E-02	1.3E-01	1.3E-01	1.2E-02	5.1E-03	1.2E-02	1.4E-02	1.8E-02	1.2E-02	1.8E-01
recreational	park	480130.59	3621225.04	1.9E-02	1.9E-02	1.8E-02	1.7E-02	1.6E-02	1.5E-02	1.5E-02	1.5E-02	6.7E+03	1.9E-02	1.8E-02	1.4E-01	1.4E-01	1.2E-02	5.2E-03	1.2E-02	1.4E-02	1.8E-02	1.2E-02	1.9E-01
recreational	park	480230.59	3621225.04	2.0E-02	2.0E-02	1.9E-02	1.8E-02	1.7E-02	1.6E-02	1.6E-02	1.6E-02	6.7E+03	2.0E-02	1.8E-02	1.4E-01	1.4E-01	1.2E-02	5.2E-03	1.2E-02	1.4E-02	1.8E-02	1.2E-02	1.9E-01
recreational	park	480330.59	3621225.04	2.0E-02	2.0E-02	1.9E-02	1.8E-02	1.7E-02	1.6E-02	1.6E-02	1.6E-02	6.8E+03	2.1E-02	1.9E-02	1.4E-01	1.4E-01	1.2E-02	5.2E-03	1.2E-02	1.4E-02	1.8E-02	1.2E-02	2.0E-01
recreational	park	480430.59	3621225.04	2.0E-02	2.0E-02	1.9E-02	1.8E-02	1.7E-02	1.6E-02	1.6E-02	1.6E-02	6.9E+03	2.1E-02	1.9E-02	1.5E-01	1.5E-01	1.2E-02	5.3E-03	1.2E-02	1.4E-02	1.8E-02	1.2E-02	2.1E-01
recreational	park	480530.59	3621225.04	2.1E-02	2.1E-02	2.0E-02	1.9E-02	1.8E-02	1.7E-02	1.6E-02	1.6E-02	7.0E+03	2.2E-02	2.0E-02	1.5E-01	1.5E-01	1.2E-02	5.3E-03	1.2E-02	1.4E-02	1.9E-02	1.2E-02	2.1E-01
recreational	park	480630.59	3621225.04	2.1E-02	2.1E-02	2.0E-02	1.9E-02	1.8E-02	1.7E-02	1.7E-02	1.7E-02	7.1E+03	2.2E-02	2.1E-02	1.6E-01	1.6E-01	1.2E-02	5.4E-03	1.2E-02	1.5E-02	1.9E-02	1.2E-02	2.2E-01
recreational	park	480730.59	3621225.04	2.1E-02	2.1E-02	2.0E-02	1.9E-02	1.8E-02	1.7E-02	1.7E-02	1.7E-02	7.1E+03	2.3E-02	2.1E-02	1.6E-01	1.6E-01	1.2E-02	5.4E-03	1.2E-02	1.5E-02	1.9E-02	1.2E-02	2.2E-01
recreational	park	480830.59	3621225.04	2.2E-02	2.2E-02	2.0E-02	1.9E-02	1.8E-02	1.7E-02	1.7E-02	1.7E-02	7.2E+03	2.4E-02	2.2E-02	1.6E-01	1.6E-01	1.3E-02	5.5E-03	1.3E-02	1.5E-02	1.9E-02	1.3E-02	2.3E-01
recreational	park	480930.59	3621225.04	2.2E-02	2.2E-02	2.1E-02	2.0E-02	1.9E-02	1.8E-02	1.7E-02	1.7E-02	7.3E+03	2.4E-02	2.3E-02	1.7E-01	1.7E-01	1.3E-02	5.5E-03	1.3E-02	1.5E-02	1.9E-02	1.3E-02	2.3E-01
recreational	park	481030.59	3621225.04	2.2E-02	2.2E-02	2.1E-02	2.0E-02	1.9E-02	1.8E-02	1.8E-02	1.7E-02	7.4E+03	2.5E-02	2.3E-02	1.7E-01	1.7E-01	1.3E-02	5.6E-03	1.3E-02	1.5E-02	2.0E-02	1.3E-02	2.3E-01
recreational	park	481330.59	3621225.04	2.3E-02	2.3E-02	2.2E-02	2.1E-02	2.0E-02	1.8E-02	1.8E-02	1.8E-02	7.7E+03	2.6E-02	2.4E-02	1.7E-01	1.7E-01	1.3E-02	5.7E-03	1.3E-02	1.6E-02	2.0E-02	1.3E-02	2.4E-01
recreational	park	481430.59	3621225.04	2.3E-02	2.4E-02	2.2E-02	2.1E-02	2.0E-02	1.9E-02	1.9E-02	1.8E-02	7.8E+03	2.6E-02	2.5E-02	1.7E-01	1.7E-01	1.3E-02	5.8E-03	1.3E-02	1.6E-02	2.1E-02	1.3E-02	2.4E-01
recreational	park	481530.59	3621225.04	2.4E-02	2.4E-02	2.3E-02	2.2E-02	2.0E-02	1.9E-02	1.9E-02	1.9E-02	8.0E+03	2.7E-02	2.5E-02	1.7E-01	1.7E-01	1.3E-02	5.8E-03	1.3E-02	1.6E-02	2.1E-02	1.3E-02	2.4E-01
recreational	park	481630.59	3621225.04	2.4E-02	2.4E-02	2.3E-02	2.2E-02	2.0E-02	1.9E-02	1.9E-02	1.9E-02	8.1E+03	2.7E-02	2.5E-02	1.7E-01	1.7E-01	1.4E-02	5.9E-03	1.3E-02	1.6E-02	2.1E-02	1.4E-02	2.4E-01
recreational	park	481730.59	3621225.04	2.5E-02	2.5E-02	2.3E-02	2.2E-02	2.1E-02	2.0E-02	2.0E-02	1.9E-02	8.3E+03	2.8E-02	2.6E-02	1.7E-01	1.7E-01	1.4E-02	5.9E-03	1.4E-02	1.7E-02	2.2E-02	1.4E-02	2.4E-01
recreational	park	481830.59	3621225.04	2.5E-02	2.6E-02	2.4E-02	2.2E-02	2.1E-02	2.0E-02	2.0E-02	2.0E-02	8.5E+03	2.8E-02	2.6E-02	1.7E-01	1.7E-01	1.4E-02	6.0E-03	1.4E-02	1.7E-02	2.2E-02	1.4E-02	2.4E-01
recreational	park	481930.59	3621225.04	2.6E-02	2.6E-02	2.4E-02	2.3E-02	2.2E-02	2.0E-02	2.0E-02	2.0E-02	8.7E+03	2.8E-02	2.7E-02	1.7E-01	1.7E-01	1.4E-02	6.1E-03	1.4E-02	1.7E-02	2.2E-02	1.4E-02	2.4E-01
recreational	park	482030.59	3621225.04	2.6E-02	2.7E-02	2.5E-02	2.4E-02	2.2E-02	2.1E-02	2.0E-02	2.0E-02	8.9E+03	2.9E-02	2.7E-02	1.7E-01	1.7E-01	1.4E-02	6.1E-03	1.4E-02	1.8E-02	2.3E-02	1.4E-02	2.4E-01
recreational	park	482130.59	3621225.04	2.7E-02	2.7E-02	2.5E-02	2.4E-02	2.2E-02	2.1E-02	2.1E-02	2.1E-02	9.1E+03	3.0E-02	2.8E-02	1.7E-01	1.7E-01	1.4E-02	6.2E-03	1.4E-02	1.8E-02	2.3E-02	1.5E-02	2.3E-01
recreational	park	482230.59	3621225.04	2.7E-02	2.8E-02	2.6E-02	2.5E-02	2.3E-02	2.1E-02	2.1E-02	2.1E-02	9.4E+03	3.0E-02	2.8E-02	1.7E-01	1.7E-01	1.4E-02	6.3E-03	1.4E-02	1.9E-02	2.3E-02	1.5E-02	2.3E-01
recreational	park	482330.59	3621225.04	2.8E-02	2.9E-02	2.6E-02	2.5E-02	2.3E-02	2.2E-02	2.2E-02	2.1E-02	9.8E+03	3.1E-02	2.8E-02	1.7E-01	1.7E-01	1.5E-02	6.4E-03	1.4E-02	1.9E-02	2.4E-02	1.5E-02	2.3E-01
recreational	park	482430.59	3621225.04	2.9E-02	2.9E-02	2.7E-02	2.6E-02	2.4E-02	2.2E-02	2.2E-02	2.2E-02	1.0E+04	3.1E-02	2.9E-02	1.6E-01	1.6E-01	1.5E-02	6.5E-03	1.5E-02	2.0E-02	2.5E-02	1.5E-02	2.2E-01
recreational	park	482530.59	3621225.04	2.9E-02	3.0E-02	2.8E-02	2.6E-02	2.4E-02	2.3E-02	2.2E-02	2.2E-02	1.1E+04	3.2E-02	3.0E-02	1.6E-01	1.6E-01	1.5E-02	6.6E-03	1.5E-02	2.0E-02	2.5E-02	1.6E-02	2.2E-01
residential	REC_100N	482630.59	3621225.04	3.0E-02	3.1E-02	2.9E-02	2.7E-02	2.5E-02	2.4E-02	2.3E-02	2.3E-02	1.1E+04	3.3E-02	3.1E-02	1.6E-01	1.6E-01	1.5E-02	6.7E-03	1.5E-02	2.1E-02	2.6E-02	1.6E-02	2.1E-01
residential	REC_100N	483830.59	3621225.04	4.3E-02	4.7E-02	4.2E-02	3.8E-02	3.5E-02	3.2E-02	3.1E-02	3.0E-02	2.1E+04	4.4E-02	4.0E-02	1.3E-01	1.3E-01	1.9E-02	8.4E-03	1.9E-02	3.8E-02	5.0E-02	2.5E-02	1.6E-01
residential	REC_100N	483930.59	3621225.04	4.3E-02	4.9E-02	4.2E-02	3.9E-02	3.5E-02	3.2E-02	3.1E-02	3.0E-02	2.2E+04	4.4E-02	4.1E-02	1.2E-01	1.2E-01	2.0E-02	8.6E-03	1.9E-02	4.0E-02	5.1E-02	2.6E-02	1.6E-01
residential	REC_100N	484030.59	3621225.04	4.5E-02	5.1E-02	4.4E-02	4.0E-02	3.6E-02	3.3E-02	3.1E-02	3.0E-02	2.3E+04	4.5E-02	4.2E-02	1.2E-01	1.2E-01	2.1E-02	8.9E-03	2.0E-02	4.1E-02	5.3E-02	2.8E-02	1.6E-01
residential	REC_100N	484130.59	3621225.04	4.5E-02	5.2E-02	4.4E-02	4.1E-02	3.6E-02	3.3E-02	3.1E-02	3.0E-02	2.4E+04	4.6E-02	4.2E-02	1.1E-01	1.1E-01	2.1E-02	9.1E-03	2.1E-02	4.2E-02	5.4E-02	2.9E-02	1.5E-01
school	127 (schoo	485901.79	3618344.73	4.6E-01	3.7E-01	3.3E-01	3.3E-01	3.8E-01	4.0E-01	4.1E-01	4.0E-01	1.9E+06	4.7E+00	4.2E+00	1.7E-01	1.7E-01	1.3E-01	1.7E-02	1.2E-01	2.3E+00	1.4E+01	2.8E-01	2.3E-01

DPM SCALED CONCENTRATIONS

X	Y	B10_1_AUX (1; Refrigerated ContainersSTC UNMIT; divide by 4; g/s 5.7E-02)	B10_2_AUX (3; Refrigerated Containers$T C UNMIT; divide by 4; g/s 5.7E-02)	B10_3_AUX (5; Refrigerated Containers$T C UNMIT; divide by 4; g/s 5.7E-02)	B10_4_AUX (7; Refrigerated Containers$T C UNMIT; divide by 4; g/s 5.7E-02)	B10_5_AUX (9; Multi-Purpose General CargoSTC UNMIT; divide by 2; g/s 1.3E-02)	B10_6_AUX (11; Multi-Purpose General CargoSTC UNMIT; divide by 2; g/s 1.3E-02)	B10_7_AUX (13; Dry BulkSTC UNMIT; divide by 2; g/s 1.4E-02)	B10_8_AUX (15; Dry BulkSTC UNMIT; divide by 2; g/s 1.4E-02)	CHE_1 (17; AllSTC UNMIT; divide by 1; g/s 6.8E-08)	LOC_SWTCHE MP (18; AllSTC UNMIT; divide by 2; g/s 1.8E-03)	LOC_SWTCHL OA (19; AllSTC UNMIT; divide by 2; g/s 1.8E-03)	OGV_PATH_D PM (21; AllSTC UNMIT; divide by 1; g/s 3.0E-02)	TR_28TH (22; TR_28THSTC UNMIT; divide by 1; g/s 7.1E-06)	TR_BAYMA R (23; TR_BAYMA RSTC UNMIT; divide by 1; g/s 8.6E-06)	TR_BOSTON (24; TR_BOSTON STC UNMIT; divide by 1; g/s 2.3E-05)	TR_CROSBY (25; TR_CROSBY STC UNMIT; divide by 1; g/s 4.8E-05)	TR_HARBOR CHA (26; TR_HARBOR CHASTC UNMIT; divide by 1; g/s 1.1E-04)	TR_HARBOR SAM (27; TR_HARBOR SAMSTC UNMIT; divide by 1; g/s 1.1E-04)	TUG_PATH_D PM (28; AllSTC UNMIT; divide by 1; g/s 1.8E-03)
477830.59	3621125.04	7.4E-04	7.3E-04	7.0E-04	6.7E-04	1.5E-04	1.4E-04	1.5E-04	1.5E-04	3.2E-04	1.9E-05	1.8E-05	1.2E-03	7.0E-08	3.7E-08	2.2E-07	6.0E-07	1.4E-06	1.2E-06	6.7E-05
477930.59	3621125.04	7.5E-04	7.5E-04	7.1E-04	6.8E-04	1.5E-04	1.4E-04	1.5E-04	1.5E-04	3.2E-04	1.9E-05	1.8E-05	1.3E-03	7.1E-08	3.7E-08	2.2E-07	6.1E-07	1.4E-06	1.2E-06	7.3E-05
478030.59	3621125.04	7.7E-04	7.7E-04	7.2E-04	7.0E-04	1.5E-04	1.5E-04	1.5E-04	1.6E-04	3.4E-04	2.0E-05	1.9E-05	1.4E-03	7.2E-08	3.8E-08	2.3E-07	6.2E-07	1.5E-06	1.2E-06	8.2E-05
478130.59	3621125.04	7.9E-04	7.8E-04	7.3E-04	7.0E-04	1.6E-04	1.5E-04	1.6E-04	1.6E-04	3.4E-04	2.0E-05	1.9E-05	1.5E-03	7.2E-08	3.8E-08	2.3E-07	6.3E-07	1.5E-06	1.2E-06	9.2E-05
478230.59	3621125.04	8.0E-04	8.1E-04	7.6E-04	7.3E-04	1.6E-04	1.5E-04	1.6E-04	1.6E-04	3.5E-04	2.1E-05	2.0E-05	1.7E-03	7.3E-08	3.8E-08	2.3E-07	6.2E-07	1.6E-06	1.2E-06	1.0E-04
478330.59	3621125.04	8.4E-04	8.4E-04	7.9E-04	7.6E-04	1.7E-04	1.6E-04	1.7E-04	1.7E-04	3.6E-04	2.1E-05	2.0E-05	1.8E-03	7.6E-08	3.8E-08	2.4E-07	6.1E-07	1.6E-06	1.2E-06	1.2E-04
478430.59	3621125.04	8.6E-04	8.6E-04	8.1E-04	7.8E-04	1.7E-04	1.6E-04	1.7E-04	1.7E-04	3.6E-04	2.2E-05	2.1E-05	2.0E-03	7.6E-08	3.9E-08	2.4E-07	6.1E-07	1.6E-06	1.2E-06	1.3E-04
478530.59	3621125.04	8.8E-04	8.8E-04	8.4E-04	8.0E-04	1.7E-04	1.7E-04	1.8E-04	1.8E-04	3.7E-04	2.3E-05	2.1E-05	2.1E-03	7.7E-08	4.0E-08	2.4E-07	6.2E-07	1.6E-06	1.2E-06	1.4E-04
478630.59	3621125.04	9.1E-04	9.1E-04	8.6E-04	8.2E-04	1.8E-04	1.7E-04	1.8E-04	1.8E-04	3.8E-04	2.4E-05	2.2E-05	2.3E-03	7.7E-08	4.0E-08	2.4E-07	6.2E-07	1.7E-06	1.2E-06	1.6E-04
478730.59	3621125.04	9.2E-04	9.2E-04	8.7E-04	8.4E-04	1.8E-04	1.7E-04	1.8E-04	1.8E-04	3.9E-04	2.5E-05	2.4E-05	2.4E-03	7.7E-08	4.1E-08	2.4E-07	6.2E-07	1.7E-06	1.2E-06	1.8E-04
478830.59	3621125.04	9.4E-04	9.4E-04	8.9E-04	8.6E-04	1.8E-04	1.8E-04	1.9E-04	1.9E-04	4.0E-04	2.5E-05	2.4E-05	2.5E-03	7.8E-08	4.1E-08	2.5E-07	6.3E-07	1.7E-06	1.2E-06	1.9E-04
478930.59	3621125.04	9.6E-04	9.6E-04	9.1E-04	8.7E-04	1.9E-04	1.8E-04	1.9E-04	1.9E-04	4.0E-04	2.6E-05	2.5E-05	2.7E-03	7.9E-08	4.1E-08	2.5E-07	6.4E-07	1.7E-06	1.2E-06	2.1E-04
479030.59	3621125.04	9.6E-04	9.6E-04	9.0E-04	8.7E-04	1.9E-04	1.8E-04	1.9E-04	1.9E-04	4.1E-04	2.7E-05	2.5E-05	2.8E-03	7.9E-08	4.2E-08	2.5E-07	6.5E-07	1.7E-06	1.2E-06	2.1E-04
479130.59	3621125.04	9.7E-04	9.7E-04	9.1E-04	8.7E-04	1.9E-04	1.8E-04	1.9E-04	1.9E-04	4.2E-04	2.8E-05	2.6E-05	2.8E-03	8.0E-08	4.2E-08	2.5E-07	6.5E-07	1.7E-06	1.2E-06	2.2E-04
479230.59	3621125.04	9.8E-04	9.8E-04	9.2E-04	8.9E-04	1.9E-04	1.8E-04	1.9E-04	1.9E-04	4.2E-04	2.8E-05	2.6E-05	2.9E-03	8.0E-08	4.2E-08	2.5E-07	6.5E-07	1.7E-06	1.2E-06	2.3E-04
479330.59	3621125.04	1.0E-03	1.0E-03	9.5E-04	9.0E-04	1.9E-04	1.9E-04	2.0E-04	2.0E-04	4.3E-04	2.9E-05	2.7E-05	3.0E-03	8.1E-08	4.2E-08	2.6E-07	6.6E-07	1.8E-06	1.2E-06	2.5E-04
479430.59	3621125.04	1.0E-03	1.0E-03	9.7E-04	9.2E-04	2.0E-04	1.9E-04	2.0E-04	2.0E-04	4.3E-04	3.0E-05	2.8E-05	3.2E-03	8.2E-08	4.3E-08	2.6E-07	6.6E-07	1.8E-06	1.2E-06	2.6E-04
479530.59	3621125.04	1.0E-03	1.0E-03	9.8E-04	9.4E-04	2.0E-04	1.9E-04	2.0E-04	2.0E-04	4.4E-04	3.1E-05	2.9E-05	3.3E-03	8.2E-08	4.3E-08	2.6E-07	6.6E-07	1.8E-06	1.2E-06	2.8E-04
479630.59	3621125.04	1.0E-03	1.1E-03	1.0E-03	9.6E-04	2.0E-04	2.0E-04	2.1E-04	2.1E-04	4.4E-04	3.1E-05	2.9E-05	3.5E-03	8.3E-08	4.3E-08	2.6E-07	6.7E-07	1.8E-06	1.3E-06	2.9E-04
481430.59	3621125.04	1.4E-03	1.4E-03	1.3E-03	1.2E-03	2.7E-04	2.6E-04	2.7E-04	2.7E-04	5.5E-04	4.8E-05	4.5E-05	5.5E-03	9.7E-08	5.0E-08	3.1E-07	7.9E-07	2.3E-06	1.5E-06	4.6E-04
481530.59	3621125.04	1.4E-03	1.4E-03	1.3E-03	1.2E-03	2.7E-04	2.6E-04	2.7E-04	2.7E-04	5.6E-04	4.9E-05	4.5E-05	5.5E-03	9.8E-08	5.1E-08	3.1E-07	8.0E-07	2.3E-06	1.5E-06	4.6E-04
481630.59	3621125.04	1.4E-03	1.4E-03	1.4E-03	1.3E-03	2.8E-04	2.7E-04	2.8E-04	2.8E-04	5.7E-04	5.0E-05	4.7E-05	5.5E-03	9.9E-08	5.1E-08	3.1E-07	8.1E-07	2.4E-06	1.5E-06	4.6E-04
481730.59	3621125.04	1.4E-03	1.5E-03	1.4E-03	1.3E-03	2.8E-04	2.7E-04	2.8E-04	2.8E-04	5.9E-04	5.1E-05	4.7E-05	5.5E-03	1.0E-07	5.2E-08	3.2E-07	8.3E-07	2.4E-06	1.5E-06	4.6E-04
481830.59	3621125.04	1.5E-03	1.5E-03	1.4E-03	1.3E-03	2.9E-04	2.8E-04	2.9E-04	2.9E-04	6.0E-04	5.1E-05	4.8E-05	5.5E-03	1.0E-07	5.2E-08	3.2E-07	8.4E-07	2.4E-06	1.5E-06	4.6E-04
481930.59	3621125.04	1.5E-03	1.5E-03	1.4E-03	1.4E-03	2.9E-04	2.8E-04	3.0E-04	2.9E-04	6.2E-04	5.2E-05	4.9E-05	5.5E-03	1.0E-07	5.3E-08	3.2E-07	8.6E-07	2.5E-06	1.6E-06	4.5E-04
482030.59	3621125.04	1.5E-03	1.6E-03	1.5E-03	1.4E-03	3.0E-04	2.8E-04	3.0E-04	3.0E-04	6.3E-04	5.3E-05	5.0E-05	5.4E-03	1.0E-07	5.4E-08	3.3E-07	8.8E-07	2.5E-06	1.6E-06	4.5E-04
482130.59	3621125.04	1.6E-03	1.6E-03	1.5E-03	1.4E-03	3.0E-04	2.9E-04	3.1E-04	3.0E-04	6.5E-04	5.4E-05	5.1E-05	5.4E-03	1.0E-07	5.4E-08	3.3E-07	9.0E-07	2.6E-06	1.6E-06	4.4E-04
482230.59	3621125.04	1.6E-03	1.6E-03	1.5E-03	1.5E-03	3.1E-04	2.9E-04	3.1E-04	3.1E-04	6.8E-04	5.5E-05	5.2E-05	5.4E-03	1.1E-07	5.5E-08	3.3E-07	9.2E-07	2.6E-06	1.6E-06	4.4E-04
482330.59	3621125.04	1.6E-03	1.7E-03	1.6E-03	1.5E-03	3.2E-04	3.0E-04	3.2E-04	3.1E-04	7.0E-04	5.6E-05	5.3E-05	5.3E-03	1.1E-07	5.6E-08	3.4E-07	9.6E-07	2.7E-06	1.7E-06	4.3E-04
482430.59	3621125.04	1.7E-03	1.7E-03	1.6E-03	1.5E-03	3.2E-04	3.1E-04	3.2E-04	3.2E-04	7.3E-04	5.8E-05	5.4E-05	5.3E-03	1.1E-07	5.7E-08	3.4E-07	1.0E-06	2.8E-06	1.7E-06	4.2E-04
482530.59	3621125.04	1.8E-03	1.8E-03	1.7E-03	1.6E-03	3.3E-04	3.2E-04	3.3E-04	3.3E-04	7.8E-04	5.9E-05	5.5E-05	5.3E-03	1.1E-07	5.8E-08	3.5E-07	1.1E-06	2.9E-06	1.7E-06	3.9E-04
483830.59	3621125.04	2.5E-03	2.8E-03	2.5E-03	2.3E-03	4.7E-04	4.3E-04	4.4E-04	4.3E-04	1.6E-03	8.0E-05	7.3E-05	4.1E-03	1.4E-07	7.3E-08	4.3E-07	1.9E-06	5.2E-06	2.8E-06	3.0E-04
483930.59	3621125.04	2.6E-03	2.9E-03	2.5E-03	2.3E-03	4.8E-04	4.4E-04	4.5E-04	4.3E-04	1.6E-03	8.2E-05	7.5E-05	4.0E-03	1.5E-07	7.5E-08	4.5E-07	2.0E-06	5.5E-06	2.9E-06	3.0E-04
484030.59	3621125.04	2.6E-03	2.9E-03	2.6E-03	2.4E-03	4.8E-04	4.4E-04	4.5E-04	4.3E-04	1.7E-03	8.4E-05	7.7E-05	3.8E-03	1.5E-07	7.7E-08	4.6E-07	2.1E-06	5.8E-06	3.0E-06	2.9E-04
484130.59	3621125.04	2.7E-03	3.1E-03	2.7E-03	2.5E-03	4.9E-04	4.5E-04	4.6E-04	4.3E-04	1.7E-03	8.6E-05	7.9E-05	3.6E-03	1.5E-07	8.0E-08	4.8E-07	2.1E-06	6.1E-06	3.2E-06	2.9E-04
484230.59	3621125.04	2.8E-03	3.2E-03	2.8E-03	2.6E-03	4.9E-04	4.5E-04	4.6E-04	4.3E-04	1.8E-03	8.8E-05	8.1E-05	3.5E-03	1.6E-07	8.2E-08	5.0E-07	2.2E-06	6.4E-06	3.3E-06	2.6E-04
477930.59	3621225.04	7.3E-04	7.3E-04	6.9E-04	6.7E-04	1.5E-04	1.4E-04	1.5E-04	1.5E-04	3.2E-04	1.8E-05	1.7E-05	1.3E-03	6.9E-08	3.6E-08	2.2E-07	5.9E-07	1.4E-06	1.2E-06	6.9E-05
478030.59	3621225.04	7.5E-04	7.5E-04	7.1E-04	6.8E-04	1.5E-04	1.4E-04	1.5E-04	1.5E-04	3.3E-04	1.9E-05	1.8E-05	1.4E-03	7.0E-08	3.7E-08	2.2E-07	6.0E-07	1.5E-06	1.2E-06	7.9E-05
478130.59	3621225.04	7.6E-04	7.7E-04	7.2E-04	7.0E-04	1.5E-04	1.5E-04	1.5E-04	1.5E-04	3.3E-04	1.9E-05	1.8E-05	1.5E-03	7.1E-08	3.7E-08	2.2E-07	6.0E-07	1.5E-06	1.2E-06	8.7E-05
478230.59	3621225.04	7.8E-04	7.8E-04	7.4E-04	7.1E-04	1.6E-04	1.5E-04	1.6E-04	1.6E-04	3.4E-04	2.0E-05	1.9E-05	1.6E-03	7.1E-08	3.7E-08	2.3E-07	6.0E-07	1.5E-06	1.2E-06	9.5E-05
478330.59	3621225.04	7.9E-04	7.9E-04	7.5E-04	7.3E-04	1.6E-04	1.5E-04	1.6E-04	1.6E-04	3.5E-04	2.0E-05	1.9E-05	1.7E-03	7.2E-08	3.8E-08	2.3E-07	6.0E-07	1.6E-06	1.2E-06	1.0E-04
478430.59	3621225.04	8.3E-04	8.4E-04	7.9E-04	7.6E-04	1.7E-04	1.6E-04	1.7E-04	1.7E-04	3.5E-04	2.1E-05	2.0E-05	1.8E-03	7.3E-08	3.8E-08	2.3E-07	6.0E-07	1.6E-06	1.2E-06	1.2E-04
478530.59	3621225.04	8.5E-04	8.5E-04	8.1E-04	7.8E-04	1.7E-04	1.6E-04	1.7E-04	1.7E-04	3.6E-04	2.2E-05	2.1E-05	1.9E-03	7.4E-08	3.9E-08	2.3E-07	6.1E-07	1.6E-06	1.2E-06	1.3E-04
478630.59	3621225.04	8.8E-04	8.8E-04	8.4E-04	8.0E-04	1.7E-04	1.7E-04	1.8E-04	1.7E-04	3.7E-04	2.3E-05	2.2E-05	2.1E-03	7.5E-08	4.0E-08	2.4E-07	6.1E-07	1.7E-06	1.2E-06	1.5E-04
478730.59	3621225.04	8.9E-04	9.0E-04	8.4E-04	8.1E-04	1.8E-04	1.7E-04	1.8E-04	1.8E-04	3.7E-04	2.4E-05	2.3E-05	2.2E-03	7.6E-08	4.0E-08	2.4E-07	6.2E-07	1.7E-06	1.2E-06	1.6E-04
478830.59	3621225.04	9.1E-04	9.1E-04	8.6E-04	8.3E-04	1.8E-04	1.7E-04	1.8E-04	1.8E-04	4.0E-04	2.5E-05	2.4E-05	2.4E-03	7.7E-08	4.1E-08	2.4E-07	6.2E-07	1.7E-06	1.2E-06	1.7E-04
478930.59	3621225.04	9.2E-04	9.2E-04	8.7E-04	8.3E-04	1.8E-04	1.7E-04	1.8E-04	1.8E-04	4.0E-04	2.6E-05	2.5E-05	2.5E-03	7.7E-08	4.1E-08	2.4E-07	6.3E-07	1.7E-06	1.2E-06	1.9E-04
479030.59	3621225.04	9.3E-04	9.3E-04	8.8E-04	8.4E-04	1.8E-04	1.7E-04	1.9E-04	1.9E-04	4.0E-04	2.6E-05	2.5E-05	2.6E-03	7.8E-08	4.1E-08	2.5E-07	6.3E-07	1.7E-06	1.2E-06	1.9E-04
479130.59	3621225.04	9.4E-04	9.4E-04	8.9E-04	8.5E-04	1.9E-04	1.8E-04	1.9E-04	1.9E-04	4.1E-04	2.7E-05	2.5E-05	2.7E-03	7.8E-08	4.1E-08	2.5E-07	6.3E-07	1.7E-06	1.2E-06	2.1E-04
479230.59	3621225.04	9.5E-04	9.6E-04	9.0E-04	8.7E-04	1.9E-04	1.8E-04	1.9E-04	1.9E-04	4.1E-04	2.7E-05	2.6E-05	2.8E-03	7.9E-08	4.2E-08	2.5E-07	6.4E-07	1.7E-06	1.2E-06	2.2E-04
479330.59	3621225.04	9.7E-04	9.7E-04	9.1E-04	8.8E-04	1.9E-04	1.8E-04	1.9E-04	1.9E-04	4.2E-04	2.7E-05	2.6E-05	2.9E-03	8.0E-08	4.2E-08	2.5E-07	6.4E-07	1.8E-06	1.2E-06	2.3E-04
479430.59	3621225.04	9.8E-04	9.9E-04	9.3E-04	8.9E-04	1.9E-04	1.8E-04	2.0E-04	2.0E-04	4.2E-04	2.9E-05	2.7E-05	3.1E-03	8.0E-08	4.2E-08	2.5E-07	6.5E-07	1.8E-06	1.2E-06	2.4E-04
479530.59	3621225.04	1.0E-03	1.0E-03	9.4E-04	9.1E-04	1.9E-04	1.9E-04	2.0E-04	2.0E-04	4.2E-04	3.0E-05	2.8E-05	3.2E-03	8.1E-08	4.3E-08	2.6E-07	6.5E-07	1.8E-06	1.2E-06	2.6E-04
479630.59	3621225.04	1.0E-03	1.0E-03	9.5E-04	9.1E-04	2.0E-04	1.9E-04	2.0E-04	2.0E-04	4.3E-04	3.0E-05	2.8E-05	3.4E-03	8.2E-08	4.3E-08	2.6E-07	6.6E-07	1.8E-06	1.2E-06	2.7E-04
479730.59	3621225.04	1.0E-03	1.0E-03	9.7E-04	9.3E-04	2.0E-04	1.9E-04	2.0E-04	2.0E-04	4.3E-04	3.1E-05	2.9E-05	3.5E-03	8.2E-08	4.3E-08	2.6E-07	6.6E-07	1.8E-06	1.2E-06	2.8E-04
479830.59	3621225.04	1.1E-03	1.1E-03	1.0E-03	9.5E-04	2.1E-04	2.0E-04	2.1E-04	2.1E-04	4.4E-04	3.1E-05	2.9E-05	3.7E-03	8.3E-08	4.3E-08	2.6E-07	6.6E-07	1.9E-06	1.3E-06	3.0E-04
479930.59	3621225.04	1.1E-03	1.1E-03	1.0E-03	9.8E-04	2.1E-04	2.0E-04	2.1E-04	2.1E-04	4.4E-04	3.2E-05	3.0E-05	3.9E-03	8.3E-08	4.4E-08	2.6E-07	6.7E-07	1.9E-06	1.3E-06	3.1E-04
480030.59	3621225.04	1.1E-03	1.1E-03	1.0E-03	9.5E-04	2.1E-04	2.0E-04	2.1E-04	2.1E-04	4.5E-04	3.2E-05	3.0E-05	3.9E-03	8.4E-08	4.4E-08	2.7E-07	6.8E-07	1.9E-06	1.3E-06	3.2E-04
480130.59	3621225.04	1.1E-03	1.1E-03	1.0E-03	9.8E-04	2.1E-04	2.0E-04	2.1E-04	2.1E-04	4.5E-04	3.4E-05	3.2E-05	4.1E-03	8.5E-08	4.4E-08	2.7E-07	6.8E-07	1.9E-06	1.3E-06	3.3E-04
480230.59	3621225.04	1.1E-03	1.1E-03	1.0E-03	1.0E-03	2.2E-04	2.0E-04	2.2E-04	2.2E-04	4.6E-04	3.5E-05	3.2E-05	4.2E-03	8.5E-08	4.5E-08	2.7E-07	6.8E-07	1.9E-06	1.3E-06	3.4E-04
480330.59	3621225.04	1.1E-03	1.1E-03	1.1E-03	1.0E-03	2.2E-04	2.1E-04	2.2E-04	2.2E-04	4.6E-04	3.6E-05	3.3E-05	4.4E-03	8.6E-08	4.5E-08	2.7E-07	6.9E-07	2.0E-06	1.3E-06	3.5E-04
480430.59	3621225.04	1.2E-03	1.2E-03	1.1E-03	1.0E-03	2.2E-04	2.1E-04	2.3E-04	2.2E-04	4.7E-04	3.7E-05	3.4E-05	4.5E-03	8.7E-08	4.5E-08	2.8E-07	6.9E-07	2.0E-06	1.3E-06	3.6E-04
480530.59	3621225.04	1.2E-03	1.2E-03	1.1E-03	1.1E-03	2.3E-04	2.1E-04	2.3E-04	2.3E-04	4.7E-04	3.8E-05	3.5E-05	4.6E-03	8.7E-08	4.6E-08	2.8E-07	7.0E-07	2.0E-06	1.3E-06	3.7E-04
480630.59	3621225.04	1.2E-03	1.2E-03	1.1E-03	1.1E-03	2.3E-04	2.2E-04	2.3E-04	2.3E-04	4.8E-04	3.9E-05	3.6E-05	4.7E-03	8.8E-08	4.6E-08	2.8E-07	7.0E-07	2.0E-06	1.3E-06	3.8E-04
480730.59	3621225.04	1.2E-03	1.2E-03	1.1E-03	1.1E-03	2.3E-04	2.2E-04	2.3E-04	2.3E-04	4.8E-04	4.1E-05	3.7E-05	4.8E-03	8.9E-08	4.6E-08	2.8E-07	7.1E-07	2.0E-06	1.3E-06	3.9E-04
480830.59	3621225.04	1.2E-03	1.2E-03	1.2E-03	1.1E-03	2.4E-04	2.2E-04	2.4E-04	2.4E-04	4.9E-04	4.2E-05	3.9E-05	4.9E-03	9.0E-08	4.7E-08	2.8E-07	7.2E-07	2.1E-06	1.3E-06	4.0E-04
480930.59	3621225.04	1.3E-03	1.3E-03	1.2E-03	1.1E-03	2.4E-04	2.3E-04	2.4E-04	2.4E-04	5.0E-04	4.3E-05	4.0E-05	5.0E-03	9.0E-08	4.7E-08	2.9E-07	7.2E-07	2.1E-06	1.4E-06	4.0E-04
481030.59	3621225.04	1.3E-03	1.3E-03	1.2E-03	1.1E-03	2.4E-04	2.3E-04	2.4E-04	2.4E-04	5.0E-04	4.3E-05	4.1E-05	5.1E-03	9.1E-08	4.8E-08	2.9E-07	7.3E-07	2.1E-06	1.4E-06	4.1E-04
481330.59	3621225.04	1.3E-03	1.3E-03	1.2E-03	1.2E-03	2.5E-04	2.4E-04	2.5E-04	2.5E-04	5.2E-04	4.5E-05	4.3E-05	5.2E-03	9.4E-08	4.9E-08	3.0E-07	7.6E-07	2.2E-06	1.4E-06	4.2E-04
481430.59	3621225.04	1.3E-03	1.3E-03	1.2E-03	1.2E-03	2.6E-04	2.4E-04	2.6E-04	2.6E-04	5.3E-04	4.6E-05	4.3E-05	5.2E-03	9.4E-08	4.9E-08	3.0E-07	7.7E-07	2.2E-06	1.4E-06	4.3E-04
481530.59	3621225.04	1.3E-03	1.4E-03	1.3E-03	1.2E-03	2.6E-04	2.5E-04	2.6E-04	2.6E-04	5.4E-04	4.7E-05	4.4E-05	5.2E-03	9.5E-08	5.0E-08	3.0E-07	7.8E-07	2.2E-06	1.4E-06	4.3E-04
481630.59	3621225.04	1.4E-03	1.4E-03	1.3E-03	1.2E-03	2.6E-04	2.5E-04	2.6E-04	2.6E-04	5.5E-04	4.8E-05	4.5E-05	5.2E-03	9.6E-08	5.0E-08	3.0E-07	7.9E-07	2.3E-06	1.4E-06	4.3E-04
481730.59	3621225.04	1.4E-03	1.4E-03	1.3E-03	1.3E-03	2.7E-04	2.6E-04	2.7E-04	2.7E-04	5.6E-04	4.9E-05	4.5E-05	5.2E-03	9.7E-08	5.1E-08	3.1E-07	8.1E-07	2.3E-06	1.5E-06	4.2E-04
481830.59	3621225.04	1.4E-03	1.5E-03	1.3E-03	1.3E-03	2.8E-04	2.6E-04	2.8E-04	2.7E-04	5.7E-04	4.9E-05	4.6E-05	5.2E-03	9.8E-08	5.1E-08	3.1E-07	8.2E-07	2.3E-06	1.5E-06	4.2E-04
481930.59	3621225.04	1.5E-03	1.5E-03	1.4E-03	1.3E-03	2.8E-04	2.6E-04	2.8E-04	2.8E-04	5.9E-04	5.0E-05	4.7E-05	5.2E-03	9.9E-08	5.2E-08	3.1E-07	8.4E-07	2.4E-06	1.5E-06	4.2E-04
482030.59	3621225.04	1.5E-03	1.5E-03	1.4E-03	1.3E-03	2.9E-04	2.7E-04	2.8E-04	2.8E-04	6.0E-04	5.1E-05	4.8E-05	5.1E-03	1.0E-07	5.3E-08	3.2E-07	8.6E-07	2.4E-06	1.5E-06	4.2E-04
482130.59	3621225.04	1.5E-03	1.6E-03	1.4E-03	1.4E-03	2.9E-04	2.7E-04	2.9E-04	2.9E-04	6.2E-04	5.2E-05	4.9E-05	5.1E-03	1.0E-07	5.3E-08	3.2E-07	8.8E-07	2.5E-06	1.6E-06	4.1E-04
482230.59	3621225.04	1.5E-03	1.6E-03	1.5E-03	1.4E-03	2.9E-04	2.8E-04	3.0E-04	2.9E-04	6.4E-04	5.3E-05	4.9E-05	5.1E-03	1.0E-07	5.4E-08	3.2E-07	9.0E-07	2.5E-06	1.6E-06	4.1E-04
482330.59	3621225.04	1.6E-03	1.6E-03	1.5E-03	1.4E-03	3.0E-04	2.8E-04	3.0E-04	3.0E-04	6.6E-04	5.4E-05	5.0E-05	5.0E-03	1.0E-07	5.5E-08	3.3E-07	9.2E-07	2.6E-06	1.6E-06	4.0E-04
482430.59	3621225.04	1.6E-03	1.7E-03	1.5E-03	1.4E-03	3.1E-04	2.9E-04	3.1E-04	3.0E-04	6.9E-04	5.5E-05	5.2E-05	4.9E-03	1.0E-07	5.5E-08	3.3E-07	9.5E-07	2.6E-06	1.6E-06	3.9E-04
482530.59	3621225.04	1.7E-03	1.7E-03	1.6E-03	1.5E-03	3.1E-04	3.0E-04	3.1E-04	3.1E-04	7.2E-04	5.6E-05	5.3E-05	4.9E-03	1.1E-07	5.6E-08	3.3E-07	9.9E-07	2.7E-06	1.7E-06	3.9E-04
482630.59	3621225.04	1.7E-03	1.8E-03	1.6E-03	1.5E-03	3.2E-04	3.0E-04	3.2E-04	3.1E-04	7.5E-04	5.8E-05	5.4E-05	4.8E-03	1.1E-07	5.7E-08	3.4E-07	1.0E-06	2.8E-06	1.7E-06	3.8E-04
483830.59	3621225.04	2.4E-03	2.7E-03	2.4E-03	2.2E-03	4.5E-04	4.1E-04	4.3E-04	4.2E-04	1.5E-03	7.7E-05	7.0E-05	3.8E-03	1.4E-07	7.2E-08	4.2E-07	1.8E-06	5.3E-06	2.7E-06	2.9E-04
483930.59	3621225.04	2.5E-03	2.8E-03	2.4E-03	2.2E-03	4.5E-04	4.1E-04	4.3E-04	4.2E-04	1.5E-03	7.8E-05	7.2E-05	3.7E-03	1.4E-07	7.4E-08	4.4E-07	1.9E-06	5.4E-06	2.8E-06	2.9E-04
484030.59	3621225.04	2.5E-03	2.9E-03	2.5E-03	2.3E-03	4.6E-04	4.2E-04	4.4E-04	4.2E-04	1.6E-03	8.0E-05	7.4E-05	3.5E-03	1.5E-07	7.6E-08	4.5E-07	2.0E-06	5.7E-06	3.0E-06	2.8E-04
484130.59	3621225.04	2.6E-03	2.9E-03	2.5E-03	2.3E-03	4.7E-04	4.2E-04	4.3E-04	4.1E-04	1.6E-03	8.1E-05	7.5E-05	3.3E-03	1.5E-07	7.8E-08	4.7E-07	2.0E-06	5.8E-06	3.1E-06	2.6E-04
485901.79	3618344.73	2.6E-02	2.1E-02	1.9E-02	1.9E-02	5.0E-03	5.2E-03	5.6E-03	5.5E-03	1.3E-01	8.3E-03	7.4E-03	5.2E-03	9.1E-07	1.5E-07	2.8E-06	1.1E-04	1.5E-03	3.0E-05	4.0E-04

X	Y	Vessel Hoteling: All (100%)	Vessel Hoteling: Refrigerated Container$ TC UNMIT (81%)	Vessel Hoteling: Multi-Purpose General CargoSTC UNMIT (9%)	Vessel Hoteling: Dry BulkSTC UNMIT (10%)	Vessel Transit: All (100%)	Vessel Transit: Refrigerated ContainersSTC UNMIT (46%)	Vessel Transit: Multi-Purpose General CargoST C UNMIT (25%)	Vessel Transit: Dry BulkSTC UNMIT (28%)	Tug/Barge Transit: All (100%)	Tug/Barge Transit: Refrigerated ContainersSTC UNMIT (21%)	Tug/Barge Transit: Multi-Purpose General CargoST C UNMIT (54%)	Tug/Barge Transit: Dry BulkSTC UNMIT (25%)	Terminal I: All (100%)	Terminal I: Refrigerated ContainersSTC UNMIT (39%)
477830.59	3621125.04	3.4E-03	3E-03	3E-04	3E-04	1E-03	6E-04	3E-04	4E-04	7E-05	1E-05	4E-05	2E-05	3E-04	1E-04
477930.59	3621125.04	3.5E-03	3E-03	3E-04	3E-04	1E-03	6E-04	3E-04	4E-04	7E-05	2E-05	4E-05	2E-05	3E-04	1E-04
478030.59	3621125.04	3.6E-03	3E-03	3E-04	3E-04	1E-03	7E-04	4E-04	4E-04	8E-05	2E-05	4E-05	2E-05	3E-04	1E-04
478130.59	3621125.04	3.6E-03	3E-03	3E-04	3E-04	2E-03	7E-04	4E-04	5E-04	8E-05	2E-05	5E-05	2E-05	3E-04	1E-04
478230.59	3621125.04	3.8E-03	3E-03	3E-04	3E-04	2E-03	8E-04	4E-04	5E-04	1E-04	2E-05	5E-05	3E-05	4E-04	1E-04
478330.59	3621125.04	3.9E-03	3E-03	3E-04	3E-04	2E-03	8E-04	5E-04	5E-04	1E-04	2E-05	6E-05	3E-05	4E-04	1E-04
478430.59	3621125.04	4.0E-03	3E-03	3E-04	4E-04	2E-03	9E-04	5E-04	5E-04	1E-04	3E-05	7E-05	3E-05	4E-04	1E-04
478530.59	3621125.04	4.1E-03	3E-03	3E-04	4E-04	2E-03	1E-03	5E-04	6E-04	1E-04	3E-05	8E-05	4E-05	4E-04	1E-04
478630.59	3621125.04	4.2E-03	3E-03	4E-04	4E-04	2E-03	1E-03	6E-04	6E-04	2E-04	3E-05	9E-05	4E-05	4E-04	2E-04
478730.59	3621125.04	4.2E-03	4E-03	4E-04	4E-04	2E-03	1E-03	6E-04	7E-04	2E-04	4E-05	9E-05	4E-05	4E-04	2E-04
478830.59	3621125.04	4.3E-03	4E-03	4E-04	4E-04	3E-03	1E-03	6E-04	7E-04	2E-04	4E-05	1E-04	5E-05	4E-04	2E-04
478930.59	3621125.04	4.4E-03	4E-03	4E-04	4E-04	3E-03	1E-03	7E-04	8E-04	2E-04	4E-05	1E-04	5E-05	4E-04	2E-04
479030.59	3621125.04	4.4E-03	4E-03	4E-04	4E-04	3E-03	1E-03	7E-04	8E-04	2E-04	5E-05	1E-04	5E-05	4E-04	2E-04
479130.59	3621125.04	4.5E-03	4E-03	4E-04	4E-04	3E-03	1E-03	7E-04	8E-04	2E-04	5E-05	1E-04	5E-05	4E-04	2E-04
479230.59	3621125.04	4.5E-03	4E-03	4E-04	4E-04	3E-03	1E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	4E-04	2E-04
479330.59	3621125.04	4.6E-03	4E-03	4E-04	4E-04	3E-03	2E-03	8E-04	9E-04	3E-04	5E-05	1E-04	6E-05	4E-04	2E-04
479430.59	3621125.04	4.7E-03	4E-03	4E-04	4E-04	3E-03	2E-03	8E-04	1E-03	3E-04	6E-05	1E-04	7E-05	4E-04	2E-04
479530.59	3621125.04	4.8E-03	4E-03	4E-04	4E-04	4E-03	2E-03	9E-04	1E-03	3E-04	6E-05	2E-04	7E-05	4E-04	2E-04
479630.59	3621125.04	4.9E-03	4E-03	4E-04	4E-04	4E-03	2E-03	9E-04	1E-03	3E-04	6E-05	2E-04	7E-05	4E-04	2E-04
481430.59	3621125.04	6.3E-03	5E-03	5E-04	5E-04	6E-03	3E-03	1E-03	2E-03	5E-04	1E-04	3E-04	1E-04	5E-04	2E-04
481530.59	3621125.04	6.4E-03	5E-03	5E-04	5E-04	6E-03	3E-03	1E-03	2E-03	5E-04	1E-04	3E-04	1E-04	5E-04	2E-04
481630.59	3621125.04	6.5E-03	5E-03	5E-04	5E-04	6E-03	3E-03	1E-03	2E-03	5E-04	1E-04	3E-04	1E-04	5E-04	2E-04
481730.59	3621125.04	6.6E-03	6E-03	5E-04	5E-04	6E-03	3E-03	1E-03	2E-03	5E-04	1E-04	3E-04	1E-04	6E-04	2E-04
481830.59	3621125.04	6.8E-03	6E-03	5E-04	6E-04	6E-03	3E-03	1E-03	2E-03	5E-04	1E-04	3E-04	1E-04	6E-04	2E-04
481930.59	3621125.04	6.9E-03	6E-03	6E-04	6E-04	6E-03	3E-03	1E-03	2E-03	5E-04	1E-04	3E-04	1E-04	6E-04	2E-04
482030.59	3621125.04	7.1E-03	6E-03	6E-04	6E-04	6E-03	3E-03	1E-03	2E-03	5E-04	1E-04	3E-04	1E-04	6E-04	2E-04
482130.59	3621125.04	7.2E-03	6E-03	6E-04	6E-04	6E-03	3E-03	1E-03	2E-03	5E-04	1E-04	3E-04	1E-04	6E-04	2E-04
482230.59	3621125.04	7.3E-03	6E-03	6E-04	6E-04	6E-03	3E-03	1E-03	2E-03	5E-04	1E-04	3E-04	1E-04	6E-04	2E-04
482330.59	3621125.04	7.5E-03	6E-03	6E-04	6E-04	6E-03	3E-03	1E-03	2E-03	5E-04	1E-04	3E-04	1E-04	7E-04	3E-04
482430.59	3621125.04	7.7E-03	6E-03	6E-04	6E-04	6E-03	3E-03	1E-03	2E-03	5E-04	1E-04	3E-04	1E-04	7E-04	3E-04
482530.59	3621125.04	8.1E-03	7E-03	6E-04	6E-04	5E-03	3E-03	1E-03	1E-03	4E-04	9E-05	2E-04	1E-04	8E-04	3E-04
483830.59	3621125.04	1.2E-02	1E-02	9E-04	9E-04	4E-03	2E-03	1E-03	1E-03	3E-04	6E-05	2E-04	8E-05	2E-03	6E-04
483930.59	3621125.04	1.2E-02	1E-02	9E-04	9E-04	4E-03	2E-03	1E-03	1E-03	3E-04	6E-05	2E-04	7E-05	2E-03	6E-04
484030.59	3621125.04	1.3E-02	1E-02	9E-04	9E-04	4E-03	2E-03	1E-03	1E-03	3E-04	6E-05	2E-04	7E-05	2E-03	7E-04
484130.59	3621125.04	1.3E-02	1E-02	9E-04	9E-04	4E-03	2E-03	1E-03	1E-03	3E-04	6E-05	2E-04	7E-05	2E-03	7E-04
484230.59	3621125.04	1.3E-02	1E-02	1E-03	9E-04	4E-03	2E-03	9E-04	1E-03	3E-04	6E-05	2E-04	7E-05	2E-03	7E-04
477930.59	3621225.04	3.4E-03	3E-03	3E-04	3E-04	1E-03	6E-04	3E-04	4E-04	7E-05	1E-05	4E-05	2E-05	3E-04	1E-04
478030.59	3621225.04	3.5E-03	3E-03	3E-04	3E-04	1E-03	6E-04	3E-04	4E-04	8E-05	2E-05	4E-05	2E-05	3E-04	1E-04
478130.59	3621225.04	3.5E-03	3E-03	3E-04	3E-04	1E-03	7E-04	4E-04	4E-04	8E-05	2E-05	4E-05	2E-05	3E-04	1E-04
478230.59	3621225.04	3.6E-03	3E-03	3E-04	3E-04	2E-03	7E-04	4E-04	5E-04	9E-05	2E-05	5E-05	2E-05	3E-04	1E-04
478330.59	3621225.04	3.7E-03	3E-03	3E-04	3E-04	2E-03	8E-04	4E-04	5E-04	1E-04	2E-05	5E-05	3E-05	4E-04	1E-04
478430.59	3621225.04	3.9E-03	3E-03	3E-04	3E-04	2E-03	8E-04	5E-04	5E-04	1E-04	2E-05	6E-05	3E-05	4E-04	1E-04
478530.59	3621225.04	4.0E-03	3E-03	3E-04	4E-04	2E-03	9E-04	5E-04	5E-04	1E-04	3E-05	7E-05	3E-05	4E-04	1E-04
478630.59	3621225.04	4.1E-03	3E-03	3E-04	4E-04	2E-03	1E-03	5E-04	6E-04	1E-04	3E-05	8E-05	4E-05	4E-04	1E-04
478730.59	3621225.04	4.1E-03	3E-03	3E-04	4E-04	2E-03	1E-03	6E-04	6E-04	2E-04	3E-05	9E-05	4E-05	4E-04	1E-04
478830.59	3621225.04	4.2E-03	4E-03	3E-04	4E-04	2E-03	1E-03	6E-04	7E-04	2E-04	4E-05	9E-05	4E-05	4E-04	2E-04
478930.59	3621225.04	4.3E-03	4E-03	4E-04	4E-04	2E-03	1E-03	6E-04	7E-04	2E-04	4E-05	1E-04	5E-05	4E-04	2E-04
479030.59	3621225.04	4.3E-03	4E-03	4E-04	4E-04	3E-03	1E-03	7E-04	7E-04	2E-04	4E-05	1E-04	5E-05	4E-04	2E-04
479130.59	3621225.04	4.4E-03	4E-03	4E-04	4E-04	3E-03	1E-03	7E-04	8E-04	2E-04	4E-05	1E-04	5E-05	4E-04	2E-04
479230.59	3621225.04	4.4E-03	4E-03	4E-04	4E-04	3E-03	1E-03	7E-04	8E-04	2E-04	5E-05	1E-04	5E-05	4E-04	2E-04
479330.59	3621225.04	4.5E-03	4E-03	4E-04	4E-04	3E-03	1E-03	7E-04	8E-04	2E-04	5E-05	1E-04	6E-05	4E-04	2E-04
479430.59	3621225.04	4.5E-03	4E-03	4E-04	4E-04	3E-03	1E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	4E-04	2E-04
479530.59	3621225.04	4.6E-03	4E-03	4E-04	4E-04	3E-03	2E-03	8E-04	9E-04	3E-04	5E-05	1E-04	6E-05	4E-04	2E-04
479630.59	3621225.04	4.7E-03	4E-03	4E-04	4E-04	3E-03	2E-03	8E-04	1E-03	3E-04	6E-05	1E-04	7E-05	4E-04	2E-04
479730.59	3621225.04	4.8E-03	4E-03	4E-04	4E-04	4E-03	2E-03	9E-04	1E-03	3E-04	6E-05	2E-04	7E-05	4E-04	2E-04
479830.59	3621225.04	4.9E-03	4E-03	4E-04	4E-04	4E-03	2E-03	9E-04	1E-03	3E-04	6E-05	2E-04	7E-05	4E-04	2E-04
479930.59	3621225.04	5.0E-03	4E-03	4E-04	4E-04	4E-03	2E-03	1E-03	1E-03	3E-04	6E-05	2E-04	8E-05	4E-04	2E-04
480030.59	3621225.04	4.9E-03	4E-03	4E-04	4E-04	4E-03	2E-03	1E-03	1E-03	3E-04	7E-05	2E-04	8E-05	4E-04	2E-04
480130.59	3621225.04	5.0E-03	4E-03	4E-04	4E-04	4E-03	2E-03	1E-03	1E-03	3E-04	7E-05	2E-04	8E-05	5E-04	2E-04
480230.59	3621225.04	5.2E-03	4E-03	4E-04	4E-04	4E-03	2E-03	1E-03	1E-03	3E-04	7E-05	2E-04	9E-05	5E-04	2E-04
480330.59	3621225.04	5.2E-03	4E-03	4E-04	4E-04	4E-03	2E-03	1E-03	1E-03	4E-04	7E-05	2E-04	9E-05	5E-04	2E-04
480430.59	3621225.04	5.3E-03	4E-03	4E-04	5E-04	4E-03	2E-03	1E-03	1E-03	4E-04	8E-05	2E-04	9E-05	5E-04	2E-04
480530.59	3621225.04	5.4E-03	5E-03	4E-04	5E-04	5E-03	2E-03	1E-03	1E-03	4E-04	8E-05	2E-04	9E-05	5E-04	2E-04
480630.59	3621225.04	5.5E-03	5E-03	4E-04	5E-04	5E-03	2E-03	1E-03	1E-03	4E-04	8E-05	2E-04	1E-04	5E-04	2E-04
480730.59	3621225.04	5.5E-03	5E-03	5E-04	5E-04	5E-03	2E-03	1E-03	1E-03	4E-04	8E-05	2E-04	1E-04	5E-04	2E-04
480830.59	3621225.04	5.7E-03	5E-03	5E-04	5E-04	5E-03	2E-03	1E-03	1E-03	4E-04	8E-05	2E-04	1E-04	5E-04	2E-04
480930.59	3621225.04	5.7E-03	5E-03	5E-04	5E-04	5E-03	2E-03	1E-03	1E-03	4E-04	8E-05	2E-04	1E-04	5E-04	2E-04
481030.59	3621225.04	5.8E-03	5E-03	5E-04	5E-04	5E-03	2E-03	1E-03	1E-03	4E-04	8E-05	2E-04	1E-04	5E-04	2E-04
481330.59	3621225.04	6.1E-03	5E-03	5E-04	5E-04	5E-03	2E-03	1E-03	1E-03	4E-04	9E-05	2E-04	1E-04	5E-04	2E-04
481430.59	3621225.04	6.1E-03	5E-03	5E-04	5E-04	5E-03	2E-03	1E-03	1E-03	4E-04	9E-05	2E-04	1E-04	5E-04	2E-04
481530.59	3621225.04	6.2E-03	5E-03	5E-04	5E-04	5E-03	2E-03	1E-03	1E-03	4E-04	9E-05	2E-04	1E-04	5E-04	2E-04
481630.59	3621225.04	6.3E-03	5E-03	5E-04	5E-04	5E-03	2E-03	1E-03	1E-03	4E-04	9E-05	2E-04	1E-04	5E-04	2E-04
481730.59	3621225.04	6.5E-03	5E-03	5E-04	5E-04	5E-03	2E-03	1E-03	1E-03	4E-04	9E-05	2E-04	1E-04	6E-04	2E-04
481830.59	3621225.04	6.6E-03	6E-03	5E-04	5E-04	5E-03	2E-03	1E-03	1E-03	4E-04	9E-05	2E-04	1E-04	6E-04	2E-04
481930.59	3621225.04	6.7E-03	6E-03	5E-04	6E-04	5E-03	2E-03	1E-03	1E-03	4E-04	9E-05	2E-04	1E-04	6E-04	2E-04
482030.59	3621225.04	6.9E-03	6E-03	6E-04	6E-04	5E-03	2E-03	1E-03	1E-03	4E-04	9E-05	2E-04	1E-04	6E-04	2E-04
482130.59	3621225.04	7.0E-03	6E-03	6E-04	6E-04	5E-03	2E-03	1E-03	1E-03	4E-04	9E-05	2E-04	1E-04	6E-04	2E-04
482230.59	3621225.04	7.1E-03	6E-03	6E-04	6E-04	5E-03	2E-03	1E-03	1E-03	4E-04	8E-05	2E-04	1E-04	6E-04	2E-04
482330.59	3621225.04	7.3E-03	6E-03	6E-04	6E-04	5E-03	2E-03	1E-03	1E-03	4E-04	8E-05	2E-04	1E-04	7E-04	3E-04
482430.59	3621225.04	7.5E-03	6E-03	6E-04	6E-04	5E-03	2E-03	1E-03	1E-03	4E-04	8E-05	2E-04	1E-04	7E-04	3E-04
482530.59	3621225.04	7.7E-03	6E-03	6E-04	6E-04	5E-03	2E-03	1E-03	1E-03	4E-04	8E-05	2E-04	1E-04	7E-04	3E-04
482630.59	3621225.04	7.9E-03	7E-03	6E-04	6E-04	5E-03	2E-03	1E-03	1E-03	4E-04	8E-05	2E-04	9E-05	8E-04	3E-04
483830.59	3621225.04	1.1E-02	1E-02	9E-04	8E-04	4E-03	2E-03	1E-03	1E-03	3E-04	6E-05	2E-04	7E-05	1E-03	6E-04
483930.59	3621225.04	1.2E-02	1E-02	9E-04	8E-04	4E-03	2E-03	9E-04	1E-03	3E-04	6E-05	2E-04	7E-05	2E-03	6E-04
484030.59	3621225.04	1.2E-02	1E-02	9E-04	9E-04	4E-03	2E-03	9E-04	1E-03	3E-04	6E-05	2E-04	7E-05	2E-03	6E-04
484130.59	3621225.04	1.2E-02	1E-02	9E-04	8E-04	3E-03	2E-03	8E-04	9E-04	3E-04	6E-05	1E-04	7E-05	2E-03	6E-04
485901.79	3618344.73	1.1E-01	8E-02	1E-02	1E-02	5E-03	2E-03	1E-03	1E-03	4E-04	8E-05	2E-04	1E-04	1E-01	5E-02

TAMT Risk Assessment - DPM Cancer and Chronic HI

	Discrete Receptor ID (Group Name)	X	Y	Equipment: Multi-Purpose General CargoSTC UNMIT	Equipment: Dry BulkSTC UNMIT	Locomotives: All	Locomotives: Refrigerated ContainersSTC UNMIT	Locomotives: Multi-Purpose General CargoSTC UNMIT	Locomotives: Dry BulkSTC UNMIT	Trucks: All	Trucks: Refrigerated ContainersSTC UNMIT	Trucks: Multi-Purpose General CargoSTC UNMIT	Trucks: Dry BulkSTC UNMIT	All
AERMOD Output				17%	45%	100%	0%	54%	46%	100%	62%	4%	34%	
residential	res	487479.47	3617250.73	2E-03	6E-03	1E-03	0E+00	8E-04	7E-04	5E-03	3E-03	2E-04	2E-03	0.08
residential	res	487504.47	3617250.73	2E-03	6E-03	1E-03	0E+00	8E-04	7E-04	0.00392	0.002428	0.000169601	0.001325	0.08
residential	res	487529.47	3617250.73	2E-03	6E-03	1E-03	0E+00	8E-04	7E-04	0.00358	0.002213	0.000154603	0.001208	0.08
residential	res	487554.47	3617250.73	2E-03	6E-03	1E-03	0E+00	8E-04	7E-04	0.00329	0.002035	0.000142153	0.001111	0.08
residential	res	487579.47	3617250.73	2E-03	6E-03	1E-03	0E+00	8E-04	7E-04	0.00298	0.001846	0.000128938	0.001008	0.08
residential	res	487604.47	3617250.73	2E-03	6E-03	1E-03	0E+00	8E-04	7E-04	0.00264	0.001635	0.000114216	0.000893	0.08
residential	res	487629.47	3617250.73	2E-03	6E-03	1E-03	0E+00	8E-04	7E-04	0.00228	0.001409	9.84176E-05	0.000769	0.08
residential	res	487654.47	3617250.73	2E-03	6E-03	1E-03	0E+00	8E-04	6E-04	0.00193	0.001192	8.32462E-05	0.000651	0.08
residential	res	487679.47	3617250.73	2E-03	6E-03	1E-03	0E+00	7E-04	6E-04	0.00163	0.00101	7.0573E-05	0.000552	0.07
residential	res	487704.47	3617250.73	2E-03	6E-03	1E-03	0E+00	7E-04	6E-04	0.00141	0.000873	6.1012E-05	0.000477	0.07
residential	res	487729.47	3617250.73	2E-03	6E-03	1E-03	0E+00	7E-04	6E-04	0.00124	0.00077	5.38083E-05	0.000421	0.07

Refrigerated Containers — Dose Inhalation; Risk (Residential 30-yr; school 9-yr; park 15-year)

X	ug/m3	Dose 3rd tri	Dose 0<2	Dose 2<9	Dose 2<16	Dose 16<30	Risk 3rd tri	Risk 0<2	Risk 2<9	Risk 2<16	Risk 16<30	Summed Risk	Cases Per Million	Chronic HI
487479.47	0.05547	2E-05	6E-05	3E-05	3E-05	1E-05	8E-07	2E-05	0E+00	2E-05	3E-06	4.2E-05	42	0.01109
487504.47	0.05449	1.89E-05	5.7E-05	3.3E-05	2.99E-05	1.36E-05	7.4106E-07	1.79004E-05	0	1.97266E-05	3.00037E-06	4.137E-05	41	0.0109
487529.47	0.05375	1.86E-05	5.62E-05	3.25E-05	2.95E-05	1.35E-05	7.30996E-07	1.76573E-05	0	1.94587E-05	2.95962E-06	4.081E-05	41	0.01075
487554.47	0.05307	1.84E-05	5.55E-05	3.21E-05	2.91E-05	1.33E-05	7.21759E-07	1.74342E-05	0	1.92128E-05	2.92222E-06	4.029E-05	40	0.01061
487579.47	0.05239	1.81E-05	5.48E-05	3.17E-05	2.87E-05	1.31E-05	7.12448E-07	1.72093E-05	0	1.89649E-05	2.88453E-06	3.977E-05	40	0.01048
487604.47	0.05168	1.79E-05	5.4E-05	3.13E-05	2.83E-05	1.29E-05	7.02774E-07	1.69756E-05	0	1.87074E-05	2.84536E-06	3.923E-05	39	0.01034
487629.47	0.051	1.77E-05	5.33E-05	3.09E-05	2.8E-05	1.28E-05	6.93553E-07	1.67529E-05	0	1.8462E-05	2.80803E-06	3.872E-05	39	0.0102
487654.47	0.05034	1.74E-05	5.26E-05	3.05E-05	2.76E-05	1.26E-05	6.8462E-07	1.65371E-05	0	1.82242E-05	2.77186E-06	3.822E-05	38	0.01007
487679.47	0.04975	1.72E-05	5.2E-05	3.01E-05	2.73E-05	1.25E-05	6.76559E-07	1.63424E-05	0	1.80096E-05	2.73922E-06	3.777E-05	38	0.00995
487704.47	0.0492	1.7E-05	5.14E-05	2.98E-05	2.7E-05	1.23E-05	6.69115E-07	1.61626E-05	0	1.78114E-05	2.70908E-06	3.735E-05	37	0.00984
487729.47	0.04873	1.69E-05	5.09E-05	2.95E-05	2.67E-05	1.22E-05	6.62745E-07	1.60087E-05	0	1.76419E-05	2.68329E-06	3.7E-05	37	0.00975

Multi-Purpose General Cargo — Dose Inhalation; Risk (Residential 30-yr; school 9-yr; park 15-year)

X	ug/m3	Dose 3rd tri	Dose 0<2	Dose 2<9	Dose 2<16	Dose 16<30	Risk 3rd tri	Risk 0<2	Risk 2<9	Risk 2<16	Risk 16<30	Summed Risk	Cases Per Million	Chronic HI
487479.47	1E-02	4E-06	1E-05	7E-06	6E-06	3E-06	1E-07	4E-06	0E+00	4E-06	6E-07	8.3E-06	8.278	0.00218
487504.47	1E-02	4E-06	1E-05	7E-06	6E-06	3E-06	1E-07	4E-06	0E+00	4E-06	6E-07	8.2E-06	8.155	0.00215
487529.47	1E-02	4E-06	1E-05	6E-06	6E-06	3E-06	1E-07	4E-06	0E+00	4E-06	6E-07	8.0E-06	8.040	0.00212
487554.47	1E-02	4E-06	1E-05	6E-06	6E-06	3E-06	1E-07	3E-06	0E+00	4E-06	6E-07	7.9E-06	7.935	0.00209
487579.47	1E-02	4E-06	1E-05	6E-06	6E-06	3E-06	1E-07	3E-06	0E+00	4E-06	6E-07	7.8E-06	7.830	0.00206
487604.47	1E-02	4E-06	1E-05	6E-06	6E-06	3E-06	1E-07	3E-06	0E+00	4E-06	6E-07	7.7E-06	7.727	0.00204
487629.47	1E-02	3E-06	1E-05	6E-06	6E-06	3E-06	1E-07	3E-06	0E+00	4E-06	6E-07	7.6E-06	7.626	0.00201
487654.47	1E-02	3E-06	1E-05	6E-06	5E-06	2E-06	1E-07	3E-06	0E+00	4E-06	5E-07	7.5E-06	7.523	0.00198
487679.47	1E-02	3E-06	1E-05	6E-06	5E-06	2E-06	1E-07	3E-06	0E+00	4E-06	5E-07	7.4E-06	7.431	0.00196
487704.47	1E-02	3E-06	1E-05	6E-06	5E-06	2E-06	1E-07	3E-06	0E+00	4E-06	5E-07	7.3E-06	7.343	0.00193
487729.47	1E-02	3E-06	1E-05	6E-06	5E-06	2E-06	1E-07	3E-06	0E+00	3E-06	5E-07	7.3E-06	7.259	0.00191

Dry Bulk — Dose Inhalation; Risk (Residential 30-yr; school 9-yr; park 15-year)

X	ug/m3	Dose 3rd tri	Dose 0<2	Dose 2<9	Dose 2<16	Dose 16<30	Risk 3rd tri	Risk 0<2	Risk 2<9	Risk 2<16	Risk 16<30	Summed Risk	Cases Per Million	Chronic HI
487479.47	2E-02	6E-06	2E-05	1E-05	1E-05	4E-06	2E-07	6E-06	0E+00	6E-06	1E-06	1.3E-05	13.337	0.00351
487504.47	2E-02	6E-06	2E-05	1E-05	9E-06	4E-06	2E-07	6E-06	0E+00	6E-06	9E-07	1.3E-05	12.991	0.00342
487529.47	2E-02	6E-06	2E-05	1E-05	9E-06	4E-06	2E-07	6E-06	0E+00	6E-06	9E-07	1.3E-05	12.752	0.00336
487554.47	2E-02	6E-06	2E-05	1E-05	9E-06	4E-06	2E-07	5E-06	0E+00	6E-06	9E-07	1.3E-05	12.532	0.0033
487579.47	2E-02	6E-06	2E-05	1E-05	9E-06	4E-06	2E-07	5E-06	0E+00	6E-06	9E-07	1.2E-05	12.305	0.00324
487604.47	2E-02	6E-06	2E-05	1E-05	9E-06	4E-06	2E-07	5E-06	0E+00	6E-06	9E-07	1.2E-05	12.072	0.00318
487629.47	2E-02	5E-06	2E-05	9E-06	9E-06	4E-06	2E-07	5E-06	0E+00	6E-06	9E-07	1.2E-05	11.842	0.00312
487654.47	2E-02	5E-06	2E-05	9E-06	8E-06	4E-06	2E-07	5E-06	0E+00	6E-06	8E-07	1.2E-05	11.618	0.00306
487679.47	2E-02	5E-06	2E-05	9E-06	8E-06	4E-06	2E-07	5E-06	0E+00	5E-06	8E-07	1.1E-05	11.415	0.00301
487704.47	1E-02	5E-06	2E-05	9E-06	8E-06	4E-06	2E-07	5E-06	0E+00	5E-06	8E-07	1.1E-05	11.232	0.00296
487729.47	1E-02	5E-06	2E-05	9E-06	8E-06	4E-06	2E-07	5E-06	0E+00	5E-06	8E-07	1.1E-05	11.064	0.00291

[illegible]

TAMT Risk Assessment - DPM Cancer and Chronic HI

AERMOD Output

Discrete Receptor ID (Group Name)		X	Y	Equipment: Multi-Purpose General CargoSTC UNMIT (17%)	Equipment: Dry BulkSTC UNMIT (45%)	Locomotives: All (100%)	Locomotives: Refrigerated Container sSTC UNMIT (0%)	Locomotives: Multi-Purpose General CargoSTC UNMIT (54%)	Locomotives: Dry BulkSTC UNMIT (46%)	Trucks: All (100%)	Trucks: Refrigerated Container sSTC UNMIT (62%)	Trucks: Multi-Purpose General CargoSTC UNMIT (4%)	Trucks: Dry BulkSTC UNMIT (34%)	All	Refrigerated Containers – Dose Inhalation ug/m3
residential	REC_100M	485430.59	3615625.04	2E-03	6E-03	1E-03	0E+00	6E-04	5E-04	0.00022	0.000136	9.4942E-06	7.42E-05	0.07	0.0486
residential	REC_100M	485130.59	3615725.04	3E-03	7E-03	1E-03	0E+00	6E-04	5E-04	0.00022	0.000137	9.59369E-06	7.5E-05	0.08	0.05592
residential	REC_100M	485230.59	3615725.04	3E-03	7E-03	1E-03	0E+00	6E-04	5E-04	0.00023	0.00014	9.79973E-06	7.66E-05	0.08	0.05438
residential	REC_100M	485330.59	3615725.04	2E-03	6E-03	1E-03	0E+00	6E-04	5E-04	0.00023	0.000143	9.97074E-06	7.79E-05	0.08	0.05261
residential	REC_100M	485230.59	3615825.04	3E-03	7E-03	1E-03	0E+00	7E-04	6E-04	0.00024	0.000149	1.03963E-05	8.12E-05	0.09	0.05696
residential	REC_100M	489130.59	3615925.04	6E-04	2E-03	3E-04	0E+00	2E-04	2E-04	6.1E-05	3.77E-05	2.63725E-06	2.06E-05	0.03	0.02025
residential	REC_100M	489030.59	3616025.04	6E-04	2E-03	4E-04	0E+00	2E-04	2E-04	6.8E-05	4.2E-05	2.93716E-06	2.3E-05	0.03	0.02142
residential	REC_100M	489130.59	3616025.04	6E-04	2E-03	3E-04	0E+00	2E-04	2E-04	6.8E-05	4.18E-05	2.92179E-06	2.28E-05	0.03	0.02122
residential	REC_100M	488930.59	3616125.04	7E-04	2E-03	4E-04	0E+00	2E-04	2E-04	7.6E-05	4.73E-05	3.30287E-06	2.58E-05	0.03	0.02272
residential	REC_100M	489030.59	3616125.04	7E-04	2E-03	4E-04	0E+00	2E-04	2E-04	7.6E-05	4.69E-05	3.27785E-06	2.56E-05	0.03	0.02246
residential	REC_100M	489130.59	3616125.04	6E-04	2E-03	4E-04	0E+00	2E-04	2E-04	7.5E-05	4.66E-05	3.25268E-06	2.54E-05	0.03	0.02219
residential	REC_100M	488730.59	3616225.04	7E-04	2E-03	4E-04	0E+00	2E-04	2E-04	8.8E-05	5.43E-05	3.79476E-06	2.97E-05	0.04	0.02448
residential	REC_100M	488830.59	3616225.04	7E-04	2E-03	4E-04	0E+00	2E-04	2E-04	8.7E-05	5.37E-05	3.75392E-06	2.93E-05	0.03	0.02416
residential	REC_100M	488930.59	3616225.04	7E-04	2E-03	4E-04	0E+00	2E-04	2E-04	8.6E-05	5.32E-05	3.71368E-06	2.9E-05	0.03	0.02386
residential	REC_100M	489030.59	3616225.04	7E-04	2E-03	4E-04	0E+00	2E-04	2E-04	8.5E-05	5.26E-05	3.67134E-06	2.87E-05	0.03	0.02351
residential	REC_100M	489130.59	3616225.04	7E-04	2E-03	4E-04	0E+00	2E-04	2E-04	8.4E-05	5.19E-05	3.62541E-06	2.83E-05	0.03	0.02322
residential	REC_100M	488630.59	3616325.04	8E-04	2E-03	5E-04	0E+00	2E-04	2E-04	0.0001	6.27E-05	4.38056E-06	3.42E-05	0.04	0.02606
residential	REC_100M	488730.59	3616325.04	8E-04	2E-03	5E-04	0E+00	2E-04	2E-04	1E-04	6.18E-05	4.31749E-06	3.37E-05	0.04	0.02568
residential	REC_100M	488830.59	3616325.04	8E-04	2E-03	4E-04	0E+00	2E-04	2E-04	9.8E-05	6.09E-05	4.25253E-06	3.32E-05	0.04	0.02533
residential	REC_100M	488930.59	3616325.04	8E-04	2E-03	4E-04	0E+00	2E-04	2E-04	9.7E-05	5.99E-05	4.18295E-06	3.27E-05	0.04	0.02502
residential	REC_100M	489030.59	3616325.04	7E-04	2E-03	4E-04	0E+00	2E-04	2E-04	9.5E-05	5.88E-05	4.10901E-06	3.21E-05	0.04	0.0246
residential	REC_100M	489130.59	3616325.04	7E-04	2E-03	4E-04	0E+00	2E-04	2E-04	9.3E-05	5.77E-05	4.02988E-06	3.15E-05	0.03	0.02421
residential	REC_100M	488530.59	3616425.04	9E-04	2E-03	5E-04	0E+00	3E-04	2E-04	0.00012	7.35E-05	5.13272E-06	4.01E-05	0.04	0.02766
residential	REC_100M	488630.59	3616425.04	9E-04	2E-03	5E-04	0E+00	3E-04	2E-04	0.00012	7.2E-05	5.0312E-06	3.93E-05	0.04	0.02727
residential	REC_100M	488730.59	3616425.04	8E-04	2E-03	5E-04	0E+00	3E-04	2E-04	0.00011	7.05E-05	4.9248E-06	3.85E-05	0.04	0.02692
residential	REC_100M	488830.59	3616425.04	8E-04	2E-03	5E-04	0E+00	2E-04	2E-04	0.00011	6.89E-05	4.81273E-06	3.76E-05	0.04	0.02657
residential	REC_100M	488930.59	3616425.04	8E-04	2E-03	4E-04	0E+00	2E-04	2E-04	0.00011	6.72E-05	4.69529E-06	3.67E-05	0.04	0.02612
residential	REC_100M	489030.59	3616425.04	8E-04	2E-03	4E-04	0E+00	2E-04	2E-04	0.00011	6.54E-05	4.57249E-06	3.57E-05	0.04	0.02575
residential	REC_100M	489130.59	3616425.04	8E-04	2E-03	4E-04	0E+00	2E-04	2E-04	0.0001	6.36E-05	4.44606E-06	3.47E-05	0.04	0.0253
residential	REC_100M	488330.59	3616525.04	1E-03	3E-03	6E-04	0E+00	3E-04	3E-04	0.00015	8.99E-05	6.28293E-06	4.91E-05	0.04	0.03031
residential	REC_100M	488430.59	3616525.04	9E-04	3E-03	5E-04	0E+00	3E-04	2E-04	0.00014	8.75E-05	6.11557E-06	4.78E-05	0.04	0.02975
residential	REC_100M	488530.59	3616525.04	9E-04	3E-03	5E-04	0E+00	3E-04	3E-04	0.00014	8.51E-05	5.94725E-06	4.65E-05	0.04	0.02918
residential	REC_100M	488630.59	3616525.04	9E-04	2E-03	5E-04	0E+00	3E-04	2E-04	0.00013	8.26E-05	5.77131E-06	4.51E-05	0.04	0.02876
residential	REC_100M	488730.59	3616525.04	9E-04	2E-03	5E-04	0E+00	3E-04	2E-04	0.00013	8E-05	5.5906E-06	4.37E-05	0.04	0.02832
residential	REC_100M	488830.59	3616525.04	9E-04	2E-03	5E-04	0E+00	3E-04	2E-04	0.00013	7.74E-05	5.40637E-06	4.23E-05	0.04	0.02783
residential	REC_100M	488930.59	3616525.04	9E-04	2E-03	5E-04	0E+00	3E-04	2E-04	0.00012	7.47E-05	5.22017E-06	4.08E-05	0.04	0.02734
residential	REC_100M	489030.59	3616525.04	9E-04	2E-03	5E-04	0E+00	3E-04	2E-04	0.00012	7.21E-05	5.03463E-06	3.93E-05	0.04	0.02681
residential	REC_100M	489130.59	3616525.04	8E-04	2E-03	5E-04	0E+00	3E-04	2E-04	0.00011	6.94E-05	4.8514E-06	3.79E-05	0.04	0.02629
residential	REC_100M	488230.59	3616625.04	1E-03	3E-03	6E-04	0E+00	3E-04	3E-04	0.00018	0.000111	7.72705E-06	6.04E-05	0.05	0.03259
residential	REC_100M	488330.59	3616625.04	1E-03	3E-03	6E-04	0E+00	3E-04	3E-04	0.00017	0.000106	7.43279E-06	5.81E-05	0.05	0.03202
residential	REC_100M	488430.59	3616625.04	1E-03	3E-03	6E-04	0E+00	3E-04	3E-04	0.00017	0.000102	7.13933E-06	5.58E-05	0.05	0.03141
residential	REC_100M	488530.59	3616625.04	1E-03	3E-03	5E-04	0E+00	3E-04	3E-04	0.00016	9.8E-05	6.84772E-06	5.35E-05	0.04	0.03076
residential	REC_100M	488630.59	3616625.04	1E-03	3E-03	5E-04	0E+00	3E-04	2E-04	0.00015	9.38E-05	6.55648E-06	5.12E-05	0.04	0.03018
residential	REC_100M	488730.59	3616625.04	9E-04	3E-03	5E-04	0E+00	3E-04	2E-04	0.00015	8.98E-05	6.27058E-06	4.9E-05	0.04	0.02963
residential	REC_100M	488830.59	3616625.04	9E-04	2E-03	5E-04	0E+00	3E-04	2E-04	0.00014	8.58E-05	5.9933E-06	4.68E-05	0.04	0.02903
residential	REC_100M	488930.59	3616625.04	9E-04	2E-03	5E-04	0E+00	3E-04	2E-04	0.00013	8.2E-05	5.72599E-06	4.47E-05	0.04	0.02845
residential	REC_100M	489030.59	3616625.04	9E-04	2E-03	5E-04	0E+00	3E-04	2E-04	0.00013	7.83E-05	5.47152E-06	4.28E-05	0.04	0.02782
residential	REC_100M	489130.59	3616625.04	9E-04	2E-03	5E-04	0E+00	3E-04	2E-04	0.00012	7.49E-05	5.23164E-06	4.09E-05	0.04	0.02728
residential	REC_100M	488130.59	3616725.04	1E-03	3E-03	7E-04	0E+00	4E-04	3E-04	0.00023	0.00014	9.76576E-06	7.63E-05	0.05	0.03558
residential	REC_100M	488230.59	3616725.04	1E-03	3E-03	6E-04	0E+00	3E-04	3E-04	0.00021	0.000132	9.23967E-06	7.22E-05	0.05	0.03445
residential	REC_100M	488330.59	3616725.04	1E-03	3E-03	6E-04	0E+00	3E-04	3E-04	0.0002	0.000125	8.71914E-06	6.81E-05	0.05	0.03365
residential	REC_100M	488430.59	3616725.04	1E-03	3E-03	6E-04	0E+00	3E-04	3E-04	0.00019	0.000118	8.22581E-06	6.43E-05	0.05	0.03292
residential	REC_100M	488530.59	3616725.04	1E-03	3E-03	6E-04	0E+00	3E-04	3E-04	0.00018	0.000111	7.76033E-06	6.06E-05	0.05	0.0322
residential	REC_100M	488630.59	3616725.04	1E-03	3E-03	5E-04	0E+00	3E-04	3E-04	0.00017	0.000105	7.32483E-06	5.72E-05	0.05	0.03156
residential	REC_100M	488730.59	3616725.04	1E-03	3E-03	5E-04	0E+00	3E-04	2E-04	0.00016	9.9E-05	6.91865E-06	5.41E-05	0.04	0.03092
residential	REC_100M	488830.59	3616725.04	1E-03	3E-03	5E-04	0E+00	3E-04	2E-04	0.00015	9.36E-05	6.54094E-06	5.11E-05	0.04	0.03029
residential	REC_100M	488930.59	3616725.04	9E-04	3E-03	5E-04	0E+00	3E-04	2E-04	0.00014	8.86E-05	6.19252E-06	4.84E-05	0.04	0.02953
residential	REC_100M	489030.59	3616725.04	9E-04	3E-03	5E-04	0E+00	3E-04	2E-04	0.00014	8.41E-05	5.87377E-06	4.59E-05	0.04	0.02884
residential	REC_100M	489130.59	3616725.04	9E-04	3E-03	5E-04	0E+00	3E-04	2E-04	0.00013	7.97E-05	5.56834E-06	4.35E-05	0.04	0.02825
recreational	park	484530.59	3616825.04	7E-03	2E-02	2E-03	0E+00	1E-03	9E-04	0.00027	0.000165	1.15167E-05	9E-05	0.16	0.10679
recreational	park	484630.59	3616825.04	8E-03	2E-02	2E-03	0E+00	1E-03	1E-03	0.00029	0.000179	1.24807E-05	9.75E-05	0.17	0.114
residential	REC_100M	488030.59	3616825.04	1E-03	3E-03	8E-04	0E+00	4E-04	4E-04	0.0003	0.000184	1.28764E-05	0.000101	0.05	0.03745
residential	REC_100M	488130.59	3616825.04	1E-03	3E-03	7E-04	0E+00	4E-04	3E-04	0.00027	0.000169	1.17892E-05	9.21E-05	0.05	0.03681
residential	REC_100M	488230.59	3616825.04	1E-03	3E-03	7E-04	0E+00	4E-04	3E-04	0.00025	0.000155	1.08376E-05	8.47E-05	0.05	0.03608
residential	REC_100M	488330.59	3616825.04	1E-03	3E-03	6E-04	0E+00	3E-04	3E-04	0.00023	0.000143	1.0009E-05	7.82E-05	0.05	0.03521
residential	REC_100M	488430.59	3616825.04	1E-03	3E-03	6E-04	0E+00	3E-04	3E-04	0.00021	0.000133	9.27391E-06	7.25E-05	0.05	0.03441
residential	REC_100M	488530.59	3616825.04	1E-03	3E-03	6E-04	0E+00	3E-04	3E-04	0.0002	0.000123	8.62E-06	6.74E-05	0.05	0.03363
residential	REC_100M	488630.59	3616825.04	1E-03	3E-03	6E-04	0E+00	3E-04	3E-04	0.00019	0.000115	8.03435E-06	6.28E-05	0.05	0.03286
recreational	park	484430.59	3616925.04	8E-03	2E-02	2E-03	0E+00	1E-03	9E-04	0.00025	0.000155	1.081E-05	8.45E-05	0.16	0.10821
recreational	park	484530.59	3616925.04	8E-03	2E-02	2E-03	0E+00	1E-03	1E-03	0.00027	0.000168	1.17603E-05	9.19E-05	0.17	0.11194
residential	REC_100M	487830.59	3616925.04	1E-03	4E-03	9E-04	0E+00	5E-04	4E-04	0.00048	0.000294	2.05557E-05	0.000161	0.06	0.04149
residential	REC_100M	487930.59	3616925.04	1E-03	4E-03	9E-04	0E+00	5E-04	4E-04	0.00041	0.000253	1.76701E-05	0.000138	0.06	0.04049
residential	REC_100M	488030.59	3616925.04	1E-03	4E-03	8E-04	0E+00	4E-04	4E-04	0.00036	0.000221	1.54651E-05	0.000121	0.06	0.03948
residential	REC_100M	488130.59	3616925.04	1E-03	4E-03	8E-04	0E+00	4E-04	3E-04	0.00032	0.000197	1.37414E-05	0.000107	0.06	0.03857
residential	REC_100M	488230.59	3616925.04	1E-03	3E-03	7E-04	0E+00	4E-04	3E-04	0.00029	0.000177	1.23527E-05	9.65E-05	0.05	0.03766
residential	REC_100M	488330.59	3616925.04	1E-03	3E-03	7E-04	0E+00	4E-04	3E-04	0.00026	0.00016	1.11761E-05	8.73E-05	0.05	0.03715
residential	REC_100M	488430.59	3616925.04	1E-03	3E-03	6E-04	0E+00	3E-04	3E-04	0.00024	0.000146	1.02197E-05	7.99E-05	0.05	0.03588
residential	REC_100M	488530.59	3616925.04	1E-03	3E-03	6E-04	0E+00	3E-04	3E-04	0.00022	0.000134	9.37761E-06	7.33E-05	0.05	0.03496
residential	REC_100M	489130.59	3616925.04	9E-04	3E-03	5E-04	0E+00	3E-04	2E-04	0.00014	8.7E-05	6.08083E-06	4.75E-05	0.04	0.03001
recreational	park	484330.59	3617025.04	7E-03	2E-02	2E-03	0E+00	1E-03	9E-04	0.00023	0.000143	9.99832E-06	7.81E-05	0.16	0.10922
recreational	park	484430.59	3617025.04	8E-03	2E-02	2E-03	0E+00	1E-03	1E-03	0.00025	0.000156	1.09184E-05	8.53E-05	0.17	0.11323
recreational	park	484530.59	3617025.04	9E-03	2E-02	2E-03	0E+00	1E-03	1E-03	0.00028	0.000171	1.19425E-05	9.33E-05	0.18	0.11919
residential	REC_100M	487730.59	3617025.04	2E-03	4E-03	1E-03	0E+00	5E-04	5E-04	0.00076	0.000472	3.29822E-05	0.000258	0.07	0.04497
residential	REC_100M	487830.59	3617025.04	2E-03	4E-03	1E-03	0E+00	5E-04	4E-04	0.00059	0.000364	2.54602E-05	0.000199	0.06	0.04377
residential	REC_100M	487930.59	3617025.04	2E-03	4E-03	9E-04	0E+00	5E-04	4E-04	0.00048	0.000299	2.08809E-05	0.000163	0.06	0.04265
residential	REC_100M	488030.59	3617025.04	2E-03	4E-03	9E-04	0E+00	5E-04	4E-04	0.00041	0.000254	1.77638E-05	0.000139	0.06	0.04152
residential	REC_100M	488130.59	3617025.04	1E-03	4E-03	8E-04	0E+00	4E-04	4E-04	0.00036	0.000221	1.54542E-05	0.000121	0.06	0.04044
residential	REC_100M	488230.59	3617025.04	1E-03	4E-03	9E-04	0E+00	5E-04	4E-04	0.00032	0.000196	1.36708E-05	0.000107	0.06	0.03899
residential	REC_100M	488330.59	3617025.04	1E-03	4E-03	7E-04	0E+00	4E-04	3E-04	0.00028	0.000174	1.21903E-05	9.53E-05	0.06	0.03832
residential	REC_100M	489030.59	3617025.04	1E-03	3E-03	5E-04	0E+00	3E-04	2E-04	0.00015	9.54E-05	6.66194E-06	5.21E-05	0.05	0.0316
residential	REC_100M	489130.59	3617025.04	1E-03	3E-03	5E-04	0E+00	3E-04	2E-04	0.00014	8.92E-05	6.22894E-06	4.87E-05	0.04	0.0307
residential	REC_100M	484130.59	3617125.04	6E-03	2E-02	2E-03	0E+00	9E-04	8E-04	0.00019	0.000119	8.3263E-06	6.51E-05	0.15	0.10185
recreational	park	484230.59	3617125.04	7E-03	2E-02	2E-03	0E+00	1E-03	8E-04	0.00021	0.00013	9.1029E-06	7.11E-05	0.16	0.10774
recreational	park	484330.59	3617125.04	8E-03	2E-02	2E-03	0E+00	1E-03	9E-04	0.00023	0.000143	9.9746E-06	7.8E-05	0.17	0.11295
recreational	park	484430.59	3617125.04	9E-03	2E-02	2E-03	0E+00	1E-03	1E-03	0.00025	0.000157	1.09535E-05	8.56E-05	0.18	0.1183
recreational	park	484530.59	3617125.04	1E-02	3E-02	2E-03	0E+00	1E-03	1E-03	0.00028	0.000173	1.20528E-05	9.42E-05	0.19	0.12369
residential	REC_100M	488330.59	3617125.04	1E-03	4E-03	9E-04	0E+00	5E-04	4E-04	0.0003	0.000184	1.28739E-05	0.000101	0.06	0.03926
residential	REC_100M	488430.59	3617125.04	1E-03	4E-03	7E-04	0E+00	4E-04	3E-04	0.00026	0.000164	1.14414E-05	8.94E-05	0.06	0.03845
residential	REC_100M	488630.59	3617125.04	1E-03	4E-03	8E-04	0E+00	4E-04	4E-04	0.00022	0.000135	9.43155E-06	7.37E-05	0.05	0.0357
residential	REC_100M	488830.59	3617125.04	1E-03	3E-03	6E-04	0E+00	3E-04	3E-04	0.00018	0.000113	7.85971E-06	6.14E-05	0.05	0.03406
residential	REC_100M	488930.59	3617125.04	1E-03	3E-03	7E-04	0E+00	4E-04	3E-04	0.00017	0.000104	7.28348E-06	5.69E-05	0.05	0.03297
residential	REC_100M	489030.59	3617125.04	1E-03	3E-03	6E-04	0E+00	3E-04	3E-04	0.00016	9.69E-05	6.76646E-06	5.29E-05	0.05	0.032
residential	REC_100M	489130.59	3617125.04	1E-03	3E-03	5E-04	0E+00	3E-04	2E-04	0.00015	9E-05	6.28641E-06	4.91E-05	0.04	0.03132
residential	REC_100M	484030.59	3617225.04	6E-03	2E-02	2E-03	0E+00	9E-04	7E-04	0.00017	0.000106	7.4371E-06	5.81E-05	0.14	0.09819
residential	REC_100M	484130.59	3617225.04	6E-03	2E-02	2E-03	0E+00	9E-04	8E-04	0.00019	0.000117	8.14223E-06	6.36E-05	0.15	0.10396
recreational	park	484230.59	3617225.04	7E-03	2E-02	2E-03	0E+00	1E-03	8E-04	0.00021	0.000128	8.94203E-06	6.99E-05	0.16	0.11004
recreational	park	484330.59	3617225.04	8E-03	2E-02	2E-03	0E+00	1E-03	9E-04	0.00023	0.000141	9.85058E-06	7.7E-05	0.17	0.11591
recreational	park	484430.59	3617225.04	9E-03	3E-02	2E-03	0E+00	1E-03	1E-03	0.00025	0.000156	1.08826E-05	8.5E-05	0.18	0.12159
recreational	park	484530.59	3617225.04	1E-02	3E-02	2E-03	0E+00	1E-03	1E-03	0.00028	0.000173	1.20546E-05	9.42E-05	0.19	0.12698
recreational	park	484630.59	3617225.04	1E-02	3E-02	3E-03	0E+00	1E-03	1E-03	0.00031	0.000192	1.3379E-05	0.000105	0.21	0.13426
residential	REC_100M	487230.59	3617225.04	3E-03	7E-03	2E-03	0E+00	9E-04	8E-04	0.00233	0.001439	0.000100546	0.000786	0.09	0.05772
residential	REC_100M	487330.59	3617225.04	2E-03	7E-03	2E-03	0E+00	8E-04	7E-04	0.00244	0.001512	0.000105641	0.000826	0.09	0.05593
residential	REC_100M	487430.59	3617225.04	2E-03	6E-03	1E-03	0E+00	8E-04	7E-04	0.00339	0.0021	0.000146729	0.001147	0.08	0.05495
residential	REC_100M	488230.59	3617225.04	2E-03	4E-03	1E-03	0E+00	6E-04	5E-04	0.00035	0.000216	1.50955E-05	0.000118	0.06	0.04082
residential	REC_100M	488330.59	3617225.04	2E-03	4E-03	9E-04	0E+00	5E-04	4E-04	0.0003	0.000188	1.3146E-05	0.000103	0.06	0.04018
residential	REC_100M	488430.59	3617225.04	1E-03	4E-03	9E-04	0E+00	5E-04	4E-04	0.00027	0.000166	1.16103E-05	9.07E-05	0.06	0.03906
residential	REC_100M	488830.59	3617225.04	1E-03	3E-03	7E-04	0E+00	4E-04	3E-04	0.00018	0.000113	7.86929E-06	6.15E-05	0.05	0.0345
residential	REC_100M	488930.59	3617225.04	1E-03	3E-03	7E-04	0E+00	4E-04	3E-04	0.00017	0.000105	7.3117E-06	5.71E-05	0.05	0.03325
residential	REC_100M	489030.59	3617225.04	1E-03	3E-03	7E-04	0E+00	4E-04	3E-04	0.00016	9.74E-05	6.80418E-06	5.32E-05	0.05	0.03223
residential	REC_100M	489130.59	3617225.04	1E-03	3E-03	7E-04	0E+00	4E-04	3E-04	0.00015	9.03E-05	6.30916E-06	4.93E-05	0.05	0.03144
residential	REC_100M	483830.59	3617325.04	5E-03	1E-02	1E-03	0E+00	8E-04	7E-04	0.00014	8.66E-05	6.04915E-06	4.73E-05	0.12	0.08612
residential	REC_100M	483930.59	3617325.04	5E-03	1E-02	2E-03	0E+00	8E-04	7E-04	0.00015	9.41E-05	6.57158E-06	5.14E-05	0.13	0.09208
residential	REC_100M	484030.59	3617325.04	6E-03	2E-02	2E-03	0E+00	9E-04	7E-04	0.00017	0.000103	7.17982E-06	5.61E-05	0.14	0.09959
residential	REC_100M	484130.59	3617325.04	7E-03	2E-02	2E-03	0E+00	9E-04	8E-04	0.00018	0.000113	7.88405E-06	6.16E-05	0.15	0.10557
residential	REC_100M	484230.59	3617325.04	7E-03	2E-02	2E-03	0E+00	1E-03	9E-04	0.0002	0.000124	8.68975E-06	6.79E-05	0.16	0.11152
recreational	park	484330.59	3617325.04	9E-03	2E-02	2E-03	0E+00	1E-03	9E-04	0.00022	0.000138	9.61526E-06	7.51E-05	0.17	0.11757
recreational	park	484430.59	3617325.04	1E-02	3E-02	2E-03	0E+00	1E-03	1E-03	0.00025	0.000153	1.06801E-05	8.35E-05	0.19	0.12357
recreational	park	484530.59	3617325.04	1E-02	3E-02	3E-03	0E+00	1E-03	1E-03	0.00028	0.00017	1.1908E-05	9.31E-05	0.20	0.12904
recreational	park	484630.59	3617325.04	1E-02	3E-02	3E-03	0E+00	1E-03	1E-03	0.00031	0.000191	1.33115E-05	0.000104	0.21	0.13498
residential	REC_100M	487030.59	3617325.04	3E-03	9E-03	2E-03	0E+00	1E-03	1E-03	0.00213	0.001316	9.19504E-05	0.000719	0.10	0.06431
residential	REC_100M	487130.59	3617325.04	3E-03	8E-03	2E-03	0E+00	1E-03	9E-04	0.0017	0.001054	7.36212E-05	0.000575	0.10	0.06185
residential	REC_100M	487230.59	3617325.04	3E-03	8E-03	2E-03	0E+00	1E-03	9E-04	0.00157	0.000974	6.80209E-05	0.000532	0.09	0.05982
residential	REC_100M	487330.59	3617325.04	3E-03	7E-03	2E-03	0E+00	1E-03	8E-04	0.00181	0.001119	7.81726E-05	0.000611	0.09	0.05794
residential	REC_100M	487430.59	3617325.04	3E-03	7E-03	2E-03	0E+00	9E-04	8E-04	0.00403	0.002493	0.000174196	0.001361	0.09	0.0571
residential	REC_100M	487930.59	3617325.04	2E-03	5E-03	1E-03	0E+00	7E-04	6E-04	0.00066	0.000406	2.83956E-05	0.000222	0.07	0.04584
residential	REC_100M	488030.59	3617325.04	2E-03	5E-03	1E-03	0E+00	7E-04	6E-04	0.0005	0.000311	2.17045E-05	0.00017	0.07	0.04425
residential	REC_100M	488130.59	3617325.04	2E-03	5E-03	1E-03	0E+00	6E-04	5E-04	0.00041	0.000253	1.76837E-05	0.000138	0.06	0.04275
residential	REC_100M	488230.59	3617325.04	2E-03	4E-03	1E-03	0E+00	6E-04	5E-04	0.00035	0.000215	1.49966E-05	0.000117	0.06	0.04166
residential	REC_100M	488330.59	3617325.04	2E-03	4E-03	1E-03	0E+00	6E-04	5E-04	0.0003	0.000186	1.30146E-05	0.000102	0.06	0.04026
residential	REC_100M	488830.59	3617325.04	1E-03	3E-03	8E-04	0E+00	4E-04	4E-04	0.00018	0.000111	7.77509E-06	6.08E-05	0.05	0.03467
residential	REC_100M	488930.59	3617325.04	1E-03	3E-03	8E-04	0E+00	4E-04	4E-04	0.00017	0.000103	7.20496E-06	5.63E-05	0.05	0.03345
residential	REC_100M	489030.59	3617325.04	1E-03	3E-03	8E-04	0E+00	4E-04	3E-04	0.00015	9.58E-05	6.69597E-06	5.23E-05	0.05	0.03232
residential	REC_100M	489130.59	3617325.04	1E-03	3E-03	6E-04	0E+00	3E-04	3E-04	0.00014	8.81E-05	6.15409E-06	4.81E-05	0.05	0.03188
residential	REC_100M	483630.59	3617425.04	4E-03	1E-02	1E-03	0E+00	7E-04	6E-04	0.00011	7.02E-05	4.90614E-06	3.83E-05	0.11	0.07669
residential	REC_100M	483730.59	3617425.04	4E-03	1E-02	1E-03	0E+00	7E-04	6E-04	0.00012	7.62E-05	5.32031E-06	4.16E-05	0.11	0.0808
residential	REC_100M	483830.59	3617425.04	5E-03	1E-02	1E-03	0E+00	8E-04	7E-04	0.00013	8.28E-05	5.78172E-06	4.52E-05	0.12	0.08617
residential	REC_100M	483930.59	3617425.04	5E-03	1E-02	2E-03	0E+00	8E-04	7E-04	0.00015	9E-05	6.29062E-06	4.92E-05	0.13	0.0924
residential	REC_100M	484030.59	3617425.04	6E-03	2E-02	2E-03	0E+00	9E-04	7E-04	0.00016	9.84E-05	6.87429E-06	5.37E-05	0.14	0.10008
residential	REC_100M	484130.59	3617425.04	7E-03	2E-02	2E-03	0E+00	1E-03	8E-04	0.00018	0.000108	7.56653E-06	5.91E-05	0.15	0.10612
residential	REC_100M	484230.59	3617425.04	8E-03	2E-02	2E-03	0E+00	1E-03	9E-04	0.00019	0.00012	8.36398E-06	6.54E-05	0.16	0.11202
recreational	park	484330.59	3617425.04	9E-03	2E-02	2E-03	0E+00	1E-03	1E-03	0.00021	0.000133	9.28725E-06	7.26E-05	0.17	0.11809
recreational	park	484430.59	3617425.04	1E-02	3E-02	2E-03	0E+00	1E-03	1E-03	0.00024	0.000148	1.03604E-05	8.1E-05	0.19	0.12397
residential	REC_100M	484530.59	3617425.04	1E-02	3E-02	3E-03	0E+00	1E-03	1E-03	0.00027	0.000166	1.16123E-05	9.07E-05	0.20	0.12916
residential	REC_100M	486930.59	3617425.04	4E-03	1E-02	3E-03	0E+00	1E-03	1E-03	0.00191	0.00118	8.24242E-05	0.000644	0.11	0.07048
residential	REC_100M	487030.59	3617425.04	4E-03	9E-03	2E-03	0E+00	1E-03	1E-03	0.00147	0.000909	6.35105E-05	0.000496	0.10	0.06756
residential	REC_100M	487130.59	3617425.04	3E-03	9E-03	2E-03	0E+00	1E-03	1E-03	0.00125	0.000776	5.4185E-05	0.000423	0.10	0.06464
residential	REC_100M	487230.59	3617425.04	3E-03	8E-03	2E-03	0E+00	1E-03	1E-03	0.00116	0.000717	5.00797E-05	0.000391	0.09	0.06198
residential	REC_100M	487330.59	3617425.04	3E-03	8E-03	2E-03	0E+00	1E-03	9E-04	0.00123	0.00076	5.31162E-05	0.000415	0.09	0.05972
residential	REC_100M	487430.59	3617425.04	3E-03	7E-03	2E-03	0E+00	1E-03	8E-04	0.00206	0.001277	8.9197E-05	0.000697	0.09	0.05762
residential	REC_100M	488430.59	3617425.04	1E-03	4E-03	8E-04	0E+00	4E-04	4E-04	0.00025	0.000156	1.08975E-05	8.52E-05	0.06	0.04052
residential	REC_100M	488530.59	3617425.04	1E-03	4E-03	7E-04	0E+00	4E-04	3E-04	0.00023	0.00014	9.78647E-06	7.65E-05	0.06	0.0391

Refrigerated Containers — Dose Inhalation (ug/m3, 3rd tri, 0<2, 2<9, 2<16, 16<30); Risk (Residential 30-yr; school 9-yr; park 15-year) (3rd tri, 0<2, 2<9, 2<16, 16<30, Summed Risk, Cases Per Million, Chronic HI)

Multi-Purpose General Cargo — Dose Inhalation (ug/m3, 3rd tri, 0<2, 2<9, 2<16, 16<30); Risk (Residential 30-yr; school 9-yr; park 15-year) (3rd tri, 0<2, 2<9, 2<16, 16<30, Summed Risk, Cases Per Million, Chronic HI)

Dry Bulk — Dose Inhalation (ug/m3, 3rd tri, 0<2, 2<9, 2<16, 16<30); Risk (Residential 30-yr; school 9-yr; park 15-year) (3rd tri, 0<2, 2<9, 2<16, 16<30, Summed Risk, Cases Per Million, Chronic HI)

TAMT Risk Assessment - DPM Cancer and Chronic HI

Group	Discrete Receptor ID (Group Name)	X	Y	Equipment: Multi-Purpose General CargoSTC UNMIT	Equipment: Dry BulkSTC UNMIT	Locomotives: All	Locomotives: Refrigerated ContainersSTC UNMIT	Locomotives: Multi-Purpose General CargoSTC UNMIT	Locomotives: Dry BulkSTC UNMIT	Trucks: All	Trucks: Refrigerated ContainersSTC UNMIT	Trucks: Multi-Purpose General CargoSTC UNMIT	Trucks: Dry BulkSTC UNMIT	All	Refrigerated Containers ug/m3	RC Dose Inhalation 3rd tri	RC Dose 0<2	RC Dose 2<9	RC Dose 2<16	RC Dose 16<30	RC Risk (Residential 30-yr; school 9-yr; park 15-year) 3rd tri	RC Risk 0<2	RC Risk 2<9	RC Risk 2<16	RC Risk 16<30	RC Summed Risk	RC Cases Per Million	RC Chronic HI	Multi-Purpose General Cargo ug/m3	MPGC Dose Inhalation 3rd tri	MPGC Dose 0<2	MPGC Dose 2<9	MPGC Dose 2<16	MPGC Dose 16<30	MPGC Risk (Residential 30-yr; school 9-yr; park 15-year) 3rd tri	MPGC Risk 0<2	MPGC Risk 2<9	MPGC Risk 2<16	MPGC Risk 16<30	MPGC Summed Risk	MPGC Cases Per Million	MPGC Chronic HI	Dry Bulk ug/m3	DB Dose Inhalation 3rd tri	DB Dose 0<2	DB Dose 2<9	DB Dose 2<16	DB Dose 16<30	DB Risk (Residential 30-yr; school 9-yr; park 15-year) 3rd tri	DB Risk 0<2	DB Risk 2<9	DB Risk 2<16	DB Risk 16<30	DB Summed Risk	DB Cases Per Million	DB Chronic HI
AERMOD Output				17%	45%	100%	0%	54%	46%	100%	62%	4%	34%																																											
residential	REC_100M	488730.59	3617425.04	1E-03	4E-03	8E-04	0E+00	4E-04	4E-04	0.00019	0.000117	8.17978E-06	6.39E-05	0.05	0.03622	1.25E-05	3.79E-05	2.19E-05	1.99E-05	9.06E-06	4.92567E-07	1.1898E-05	0	1.31118E-05	1.99428E-06	2.75E-05	27	0.00724	6E-03	2E-06	7E-06	4E-06	4E-06	2E-06	9E-08	2E-06	0E+00	2E-06	4E-07	4.8E-06	4.848	0.00128	9E-03	3E-06	1E-05	6E-06	5E-06	2E-06	1E-07	3E-06	0E+00	3E-06	5E-07	7.1E-06	7.130	0.00188
residential	REC_100M	488830.59	3617425.04	1E-03	3E-03	8E-04	0E+00	4E-04	4E-04	0.00017	0.000108	7.56563E-06	5.91E-05	0.05	0.03472	1.2E-05	3.63E-05	2.1E-05	1.9E-05	8.69E-06	4.722E-07	1.1406E-05	0	1.25697E-05	1.91182E-06	2.636E-05	26	0.00694	6E-03	2E-06	6E-06	4E-06	3E-06	2E-06	8E-08	2E-06	0E+00	2E-06	3E-07	4.7E-06	4.654	0.00123	9E-03	3E-06	9E-06	5E-06	5E-06	2E-06	1E-07	3E-06	0E+00	3E-06	5E-07	6.8E-06	6.825	0.0018
residential	REC_100M	488930.59	3617425.04	1E-03	3E-03	8E-04	0E+00	4E-04	4E-04	0.00016	0.0001	7.00817E-06	5.48E-05	0.05	0.03345	1.16E-05	3.5E-05	2.02E-05	1.83E-05	8.37E-06	4.54879E-07	1.09877E-05	0	1.21086E-05	1.84169E-06	2.539E-05	25	0.00669	6E-03	2E-06	6E-06	4E-06	3E-06	1E-06	8E-08	2E-06	0E+00	2E-06	3E-07	4.5E-06	4.474	0.00118	9E-03	3E-06	9E-06	5E-06	5E-06	2E-06	1E-07	3E-06	0E+00	3E-06	5E-07	6.5E-06	6.543	0.00172
residential	REC_100M	489030.59	3617425.04	1E-03	3E-03	8E-04	0E+00	4E-04	4E-04	0.00015	9.33E-05	6.5184E-06	5.09E-05	0.05	0.03227	1.12E-05	3.37E-05	1.95E-05	1.77E-05	8.08E-06	4.38859E-07	1.06007E-05	0	1.16822E-05	1.77683E-06	2.45E-05	24	0.00645	6E-03	2E-06	6E-06	3E-06	3E-06	1E-06	8E-08	2E-06	0E+00	2E-06	3E-07	4.3E-06	4.306	0.00113	8E-03	3E-06	9E-06	5E-06	5E-06	2E-06	1E-07	3E-06	0E+00	3E-06	5E-07	6.3E-06	6.281	0.00165
residential	REC_100M	489130.59	3617425.04	1E-03	3E-03	7E-04	0E+00	4E-04	3E-04	0.00014	8.61E-05	6.01426E-06	4.7E-05	0.05	0.03189	1.1E-05	3.33E-05	1.93E-05	1.75E-05	7.98E-06	4.33626E-07	1.04743E-05	0	1.15429E-05	1.75564E-06	2.421E-05	24	0.00638	6E-03	2E-06	6E-06	3E-06	3E-06	1E-06	7E-08	2E-06	0E+00	2E-06	3E-07	4.2E-06	4.184	0.0011	8E-03	3E-06	8E-06	5E-06	4E-06	2E-06	1E-07	3E-06	0E+00	3E-06	4E-07	6.1E-06	6.088	0.0016
residential	REC_100M	483430.59	3617525.04	3E-03	8E-03	1E-03	0E+00	5E-04	5E-04	9.2E-05	5.69E-05	3.97337E-06	3.11E-05	0.09	0.06782	2.35E-05	7.09E-05	4.1E-05	3.72E-05	1.7E-05	9.2235E-07	2.22795E-05	0	2.45524E-05	3.73437E-06	5.149E-05	51	0.01356	1E-02	3E-06	1E-05	6E-06	5E-06	2E-06	1E-07	3E-06	0E+00	4E-06	5E-07	7.6E-06	7.554	0.00199	1E-02	5E-06	2E-05	9E-06	8E-06	4E-06	2E-07	5E-06	0E+00	5E-06	8E-07	1.1E-05	10.987	0.00289
residential	REC_100M	483530.59	3617525.04	3E-03	8E-03	1E-03	0E+00	6E-04	5E-04	9.9E-05	6.14E-05	4.29131E-06	3.35E-05	0.10	0.0713	2.47E-05	7.45E-05	4.31E-05	3.91E-05	1.78E-05	9.69652E-07	2.34221E-05	0	2.58115E-05	3.92588E-06	5.413E-05	54	0.01426	1E-02	4E-06	1E-05	6E-06	6E-06	3E-06	1E-07	3E-06	0E+00	4E-06	6E-07	8.0E-06	7.995	0.00211	2E-02	5E-06	2E-05	9E-06	9E-06	4E-06	2E-07	5E-06	0E+00	6E-06	9E-07	1.2E-05	11.793	0.00311
residential	REC_100M	483630.59	3617525.04	3E-03	9E-03	1E-03	0E+00	6E-04	5E-04	0.00011	6.63E-05	4.63141E-06	3.62E-05	0.10	0.0765	2.65E-05	8E-05	4.63E-05	4.2E-05	1.91E-05	1.04029E-06	2.51284E-05	0	2.76919E-05	4.21189E-06	5.807E-05	58	0.0153	1E-02	4E-06	1E-05	7E-06	6E-06	3E-06	2E-07	4E-06	0E+00	4E-06	6E-07	8.6E-06	8.599	0.00227	2E-02	6E-06	2E-05	1E-05	9E-06	4E-06	2E-07	6E-06	0E+00	6E-06	9E-07	1.3E-05	12.829	0.00338
residential	REC_100M	483730.59	3617525.04	4E-03	1E-02	1E-03	0E+00	7E-04	6E-04	0.00012	7.19E-05	5.02406E-06	3.93E-05	0.11	0.08124	2.81E-05	8.49E-05	4.92E-05	4.46E-05	2.03E-05	1.10475E-06	2.66854E-05	0	2.94078E-05	4.47286E-06	6.167E-05	62	0.01625	1E-02	4E-06	1E-05	7E-06	7E-06	3E-06	2E-07	4E-06	0E+00	4E-06	7E-07	9.2E-06	9.220	0.00243	2E-02	6E-06	2E-05	1E-05	1E-05	5E-06	3E-07	6E-06	0E+00	7E-06	1E-06	1.4E-05	13.956	0.00368
residential	REC_100M	483830.59	3617525.04	4E-03	1E-02	1E-03	0E+00	8E-04	6E-04	0.00013	7.83E-05	5.46818E-06	4.27E-05	0.12	0.08649	2.99E-05	9.04E-05	5.23E-05	4.74E-05	2.16E-05	1.17622E-06	2.84117E-05	0	3.13102E-05	4.76222E-06	6.566E-05	66	0.0173	1E-02	5E-06	1E-05	8E-06	7E-06	3E-06	2E-07	4E-06	0E+00	5E-06	7E-07	9.9E-06	9.939	0.00262	2E-02	7E-06	2E-05	1E-05	1E-05	5E-06	3E-07	7E-06	0E+00	7E-06	1E-06	1.5E-05	15.276	0.00402
residential	REC_100M	483930.59	3617525.04	5E-03	1E-02	2E-03	0E+00	8E-04	7E-04	0.00014	8.55E-05	5.97388E-06	4.67E-05	0.13	0.09204	3.19E-05	9.62E-05	5.57E-05	5.05E-05	2.3E-05	1.25168E-06	3.02346E-05	0	3.33191E-05	5.06776E-06	6.987E-05	70	0.01841	1E-02	5E-06	1E-05	9E-06	8E-06	4E-06	2E-07	5E-06	0E+00	5E-06	8E-07	1.1E-05	10.761	0.00283	2E-02	8E-06	2E-05	1E-05	1E-05	6E-06	3E-07	7E-06	0E+00	8E-06	1E-06	1.7E-05	16.816	0.00443

TAMT Risk Assessment - DPM Cancer and Chronic HI

AERMOD Output

	Discrete Receptor ID (Group Name)	X	Y	Equipment: Multi-Purpose General CargoSTC UNMIT (17%)	Equipment: Dry BulkSTC UNMIT (45%)	Locomotives: All (100%)	Locomotives: Refrigerated ContainersSTC UNMIT (0%)	Locomotives: Multi-Purpose General CargoSTC UNMIT (54%)	Locomotives: Dry BulkSTC UNMIT (46%)	Trucks: All (100%)	Trucks: Refrigerated ContainersSTC UNMIT (62%)	Trucks: Multi-Purpose General CargoSTC UNMIT (4%)	Trucks: Dry BulkSTC UNMIT (34%)	All	Refrigerated Containers: ug/m3	Dose Inhallation: 3rd tri	0<2	2<9	2<16	16<30	Risk (Residential 30-yr; school 9-yr; park 15-year): 3rd tri	0<2	2<9	2<16	16<30	Summed Risk	Cases Per Million	Chronic HI	Multi-Purpose General Cargo: ug/m3	Dose Inhallation: 3rd tri	0<2	2<9	2<16	16<30	Risk (Residential 30-yr; school 9-yr; park 15-year): 3rd tri	0<2	2<9	2<16	16<30	Summed Risk	Cases Per Million	Chronic HI	Dry Bulk: ug/m3	Dose Inhallation: 3rd tri	0<2	2<9	2<16	16<30	Risk (Residential 30-yr; school 9-yr; park 15-year): 3rd tri	0<2	2<9	2<16	16<30	Summed Risk	Cases Per Million	Chronic HI
residential	REC_100M	483230.59	3617925.04	2E-03	4E-03	8E-04	0E+00	4E-04	4E-04	5.9E-05	3.66E-05	2.55772E-06	2E-05	0.07	0.05208	1.8E-05	5.44E-05	3.15E-05	2.86E-05	1.3E-05	7.08306E-07	1.71092E-05	0	1.88547E-05	2.86776E-06	3.954E-05	40	0.01042	8E-03	3E-06	8E-06	5E-06	4E-06	2E-06	1E-07	3E-06	0E+00	3E-06	4E-07	5.8E-06	5.821	0.00153	1E-02	4E-06	1E-05	6E-06	6E-06	3E-06	1E-07	3E-06	0E+00	4E-06	6E-07	7.8E-06	7.841	0.00207
residential	REC_100M	483330.59	3617925.04	2E-03	5E-03	8E-04	0E+00	5E-04	4E-04	6.3E-05	3.91E-05	2.73006E-06	2.13E-05	0.07	0.05537	1.92E-05	5.79E-05	3.35E-05	3.04E-05	1.39E-05	7.5297E-07	1.81881E-05	0	2.00436E-05	3.04859E-06	4.203E-05	42	0.01107	8E-03	3E-06	8E-06	5E-06	4E-06	2E-06	1E-07	3E-06	0E+00	3E-06	4E-07	6.1E-06	6.127	0.00161	1E-02	4E-06	1E-05	7E-06	6E-06	3E-06	1E-07	4E-06	0E+00	4E-06	6E-07	8.3E-06	8.335	0.0022
residential	REC_100M	483430.59	3617925.04	2E-03	5E-03	9E-04	0E+00	5E-04	4E-04	6.8E-05	4.18E-05	2.92304E-06	2.28E-05	0.08	0.05888	2.04E-05	6.15E-05	3.56E-05	3.23E-05	1.47E-05	8.00708E-07	1.93412E-05	0	2.13144E-05	3.24187E-06	4.47E-05	45	0.01178	9E-03	3E-06	9E-06	5E-06	5E-06	2E-06	1E-07	3E-06	0E+00	3E-06	5E-07	6.5E-06	6.472	0.00171	1E-02	4E-06	1E-05	7E-06	6E-06	3E-06	2E-07	4E-06	0E+00	4E-06	6E-07	8.9E-06	8.892	0.00234
residential	REC_100M	483530.59	3617925.04	2E-03	6E-03	1E-03	0E+00	5E-04	4E-04	7.3E-05	4.5E-05	3.14036E-06	2.45E-05	0.08	0.06258	2.17E-05	6.54E-05	3.79E-05	3.43E-05	1.57E-05	8.50978E-07	2.05555E-05	0	2.26525E-05	3.4454E-06	4.75E-05	48	0.01252	9E-03	3E-06	9E-06	5E-06	5E-06	2E-06	1E-07	3E-06	0E+00	3E-06	5E-07	6.8E-06	6.845	0.0018	1E-02	4E-06	1E-05	8E-06	7E-06	3E-06	2E-07	4E-06	0E+00	5E-06	7E-07	9.5E-06	9.517	0.00251
residential	REC_100M	483630.59	3617925.04	2E-03	7E-03	1E-03	0E+00	6E-04	5E-04	7.8E-05	4.85E-05	3.38666E-06	2.65E-05	0.09	0.06666	2.31E-05	6.97E-05	4.03E-05	3.66E-05	1.67E-05	9.06548E-07	2.18978E-05	0	2.41318E-05	3.67039E-06	5.061E-05	51	0.01333	1E-02	3E-06	1E-05	6E-06	5E-06	2E-06	1E-07	3E-06	0E+00	3E-06	5E-07	7.3E-06	7.285	0.00192	1E-02	5E-06	1E-05	8E-06	7E-06	3E-06	2E-07	4E-06	0E+00	5E-06	7E-07	1.0E-05	10.267	0.0027
residential	REC_100M	483730.59	3617925.04	3E-03	7E-03	1E-03	0E+00	6E-04	5E-04	8.5E-05	5.25E-05	3.6679E-06	2.87E-05	0.10	0.07109	2.46E-05	7.43E-05	4.3E-05	3.9E-05	1.78E-05	9.66767E-07	2.33524E-05	0	2.57348E-05	3.9142E-06	5.397E-05	54	0.01422	1E-02	4E-06	1E-05	6E-06	6E-06	3E-06	1E-07	3E-06	0E+00	4E-06	6E-07	7.8E-06	7.769	0.00205	1E-02	5E-06	2E-05	9E-06	8E-06	4E-06	2E-07	5E-06	0E+00	5E-06	8E-07	1.1E-05	11.104	0.00293
residential	REC_100M	483830.59	3617925.04	3E-03	8E-03	1E-03	0E+00	7E-04	6E-04	9.2E-05	5.71E-05	3.99083E-06	3.12E-05	0.10	0.07565	2.62E-05	7.91E-05	4.58E-05	4.15E-05	1.89E-05	1.02883E-06	2.48515E-05	0	2.73868E-05	4.16548E-06	5.743E-05	57	0.01513	1E-02	4E-06	1E-05	7E-06	6E-06	3E-06	1E-07	4E-06	0E+00	4E-06	6E-07	8.3E-06	8.327	0.00219	2E-02	6E-06	2E-05	1E-05	9E-06	4E-06	2E-07	5E-06	0E+00	6E-06	9E-07	1.2E-05	12.081	0.00318
residential	REC_100M	483930.59	3617925.04	3E-03	9E-03	1E-03	0E+00	7E-04	6E-04	0.0001	6.25E-05	4.36478E-06	3.41E-05	0.11	0.08062	2.79E-05	8.43E-05	4.88E-05	4.42E-05	2.02E-05	1.09644E-06	2.64846E-05	0	2.91866E-05	4.43921E-06	6.121E-05	61	0.01612	1E-02	4E-06	1E-05	7E-06	6E-06	3E-06	2E-07	4E-06	0E+00	4E-06	7E-07	9.0E-06	8.987	0.00237	2E-02	6E-06	2E-05	1E-05	1E-05	4E-06	2E-07	6E-06	0E+00	6E-06	1E-06	1.3E-05	13.269	0.0035
residential	REC_100M	484030.59	3617925.04	4E-03	1E-02	1E-03	0E+00	8E-04	7E-04	0.00011	6.87E-05	4.8009E-06	3.75E-05	0.12	0.08515	2.95E-05	8.9E-05	5.15E-05	4.67E-05	2.13E-05	1.15801E-06	2.7972E-05	0	3.08257E-05	4.68852E-06	6.464E-05	65	0.01703	1E-02	4E-06	1E-05	8E-06	7E-06	3E-06	2E-07	4E-06	0E+00	5E-06	7E-07	9.7E-06	9.728	0.00256	2E-02	7E-06	2E-05	1E-05	1E-05	5E-06	3E-07	6E-06	0E+00	7E-06	1E-06	1.5E-05	14.666	0.00386
residential	REC_100M	484130.59	3617925.04	5E-03	1E-02	2E-03	0E+00	9E-04	7E-04	0.00012	7.6E-05	5.3125E-06	4.15E-05	0.13	0.09155	3.17E-05	9.57E-05	5.54E-05	5.02E-05	2.29E-05	1.24507E-06	3.00747E-05	0	3.31429E-05	5.04096E-06	6.95E-05	70	0.01831	1E-02	5E-06	1E-05	9E-06	8E-06	4E-06	2E-07	5E-06	0E+00	5E-06	8E-07	1.1E-05	10.777	0.00284	2E-02	8E-06	2E-05	1E-05	1E-05	5E-06	3E-07	7E-06	0E+00	8E-06	1E-06	1.7E-05	16.594	0.00437

TAMT Risk Assessment - DPM Cancer and Chronic HI

AERMOD Output

	Discrete Receptor ID (Group Name)	X	Y	Equipment: Multi-Purpose General CargoSTC UNMIT 17%	Equipment: Dry BulkSTC UNMIT 45%	Locomotives: All 100%	Locomotives: Refrigerated ContainersSTC UNMIT 0%	Locomotives: Multi-Purpose General CargoSTC UNMIT 54%	Locomotives: Dry BulkSTC UNMIT 46%	Trucks: All 100%	Trucks: Refrigerated ContainersSTC UNMIT 62%	Trucks: Multi-Purpose General CargoSTC UNMIT 4%	Trucks: Dry BulkSTC UNMIT 34%	All	Refrigerated Containers, Dose Inhalation: ug/m3
residential	REC_100M	487130.59	3618325.04	2E-03	7E-03	2E-03	0E+00	1E-03	9E-04	0.00034	0.000211	1.47507E-05	0.000115	0.08	0.05169
residential	REC_100M	487230.59	3618325.04	2E-03	6E-03	2E-03	0E+00	9E-04	8E-04	0.00032	0.000197	1.37913E-05	0.000108	0.07	0.04915
residential	REC_100M	487330.59	3618325.04	2E-03	6E-03	2E-03	0E+00	9E-04	8E-04	0.00031	0.000191	1.3323E-05	0.000104	0.07	0.04708
residential	REC_100M	487430.59	3618325.04	2E-03	6E-03	2E-03	0E+00	8E-04	7E-04	0.0003	0.000188	1.3104E-05	0.000102	0.07	0.04533
residential	REC_100M	487530.59	3618325.04	2E-03	5E-03	1E-03	0E+00	8E-04	7E-04	0.00029	0.00018	1.25867E-05	9.84E-05	0.06	0.04322
residential	REC_100M	487630.59	3618325.04	2E-03	5E-03	1E-03	0E+00	7E-04	6E-04	0.00028	0.000176	1.23181E-05	9.63E-05	0.06	0.04157
residential	REC_100M	487730.59	3618325.04	2E-03	5E-03	1E-03	0E+00	7E-04	6E-04	0.00027	0.00017	1.18552E-05	9.26E-05	0.06	0.03993
residential	REC_100M	487830.59	3618325.04	2E-03	4E-03	1E-03	0E+00	6E-04	5E-04	0.00026	0.000159	1.11239E-05	8.69E-05	0.05	0.03812
residential	REC_100M	487930.59	3618325.04	2E-03	4E-03	1E-03	0E+00	6E-04	5E-04	0.00026	0.000159	1.11277E-05	8.7E-05	0.05	0.03755
residential	REC_100M	488030.59	3618325.04	1E-03	4E-03	1E-03	0E+00	6E-04	5E-04	0.00025	0.000155	1.07981E-05	8.44E-05	0.05	0.03684
residential	REC_100M	488130.59	3618325.04	1E-03	4E-03	1E-03	0E+00	6E-04	5E-04	0.00023	0.000143	9.95757E-06	7.78E-05	0.05	0.03489
residential	REC_100M	488230.59	3618325.04	1E-03	4E-03	1E-03	0E+00	5E-04	4E-04	0.00021	0.000133	9.28318E-06	7.25E-05	0.05	0.03367
residential	REC_100M	488330.59	3618325.04	1E-03	3E-03	9E-04	0E+00	5E-04	4E-04	0.0002	0.000122	8.51773E-06	6.66E-05	0.05	0.03223
residential	REC_100M	488430.59	3618325.04	1E-03	3E-03	9E-04	0E+00	5E-04	4E-04	0.00019	0.000116	8.11816E-06	6.34E-05	0.05	0.03255
residential	REC_100M	488530.59	3618325.04	1E-03	3E-03	8E-04	0E+00	4E-04	4E-04	0.00017	0.000108	7.55276E-06	5.9E-05	0.05	0.03292
residential	REC_100M	488630.59	3618325.04	1E-03	3E-03	8E-04	0E+00	4E-04	4E-04	0.00016	9.94E-05	6.94444E-06	5.43E-05	0.04	0.03161
residential	REC_100M	488730.59	3618325.04	1E-03	3E-03	7E-04	0E+00	4E-04	3E-04	0.00015	9.09E-05	6.34887E-06	4.96E-05	0.04	0.03026
residential	REC_100M	488830.59	3618325.04	1E-03	3E-03	7E-04	0E+00	4E-04	3E-04	0.00013	8.11E-05	5.66769E-06	4.43E-05	0.04	0.02782
residential	REC_100M	488930.59	3618325.04	9E-04	3E-03	7E-04	0E+00	4E-04	3E-04	0.00012	7.38E-05	5.15877E-06	4.03E-05	0.04	0.02674
recreational	park	484630.59	3618425.04	3E-03	9E-03	2E-03	0E+00	1E-03	9E-04	0.0001	6.4E-05	4.47411E-06	3.5E-05	0.09	0.05791
recreational	park	484730.59	3618425.04	4E-03	1E-02	2E-03	0E+00	1E-03	1E-03	0.00012	7.33E-05	5.11934E-06	4E-05	0.10	0.06428
recreational	park	485030.59	3618425.04	1E-02	3E-02	3E-03	0E+00	2E-03	1E-03	0.00021	0.000132	9.21646E-06	7.2E-05	0.20	0.14065
recreational	park	484950.32	3618481.14	6E-03	2E-02	2E-03	0E+00	1E-03	1E-03	0.00014	8.87E-05	6.19436E-06	4.84E-05	0.14	0.10345
residential	REC_100M	485930.59	3618425.04	2E-02	5E-02	1E-02	0E+00	7E-03	6E-03	0.00121	0.000748	5.22258E-05	0.000408	0.22	0.12273
residential	REC_100M	486030.59	3618425.04	1E-02	4E-02	1E-02	0E+00	6E-03	5E-03	0.00107	0.000662	4.62274E-05	0.000361	0.20	0.10958
residential	REC_100M	486130.59	3618425.04	1E-02	3E-02	9E-03	0E+00	5E-03	4E-03	0.00096	0.000591	4.13207E-05	0.000323	0.17	0.09844
residential	REC_100M	486230.59	3618425.04	9E-03	2E-02	7E-03	0E+00	4E-03	3E-03	0.00087	0.000536	3.746E-05	0.000293	0.15	0.08943
residential	REC_100M	486430.59	3618425.04	6E-03	2E-02	5E-03	0E+00	3E-03	2E-03	0.0007	0.000434	3.0312E-05	0.000237	0.12	0.07551
residential	REC_100M	486530.59	3618425.04	5E-03	1E-02	4E-03	0E+00	2E-03	2E-03	0.00064	0.000396	2.76796E-05	0.000216	0.11	0.07054
residential	REC_100M	486630.59	3618425.04	4E-03	1E-02	3E-03	0E+00	2E-03	2E-03	0.00057	0.000355	2.48135E-05	0.000194	0.10	0.06598
residential	REC_100M	486730.59	3618425.04	4E-03	1E-02	3E-03	0E+00	2E-03	1E-03	0.00051	0.000318	2.22026E-05	0.000174	0.10	0.0619
residential	REC_100M	486830.59	3618425.04	3E-03	9E-03	3E-03	0E+00	1E-03	1E-03	0.00046	0.000282	1.97302E-05	0.000154	0.09	0.05816
residential	REC_100M	486930.59	3618425.04	3E-03	8E-03	2E-03	0E+00	1E-03	1E-03	0.00041	0.000252	1.75753E-05	0.000137	0.08	0.05481
residential	REC_100M	487030.59	3618425.04	3E-03	7E-03	2E-03	0E+00	1E-03	9E-04	0.00036	0.000225	1.56893E-05	0.000123	0.08	0.0517
residential	REC_100M	487130.59	3618425.04	2E-03	6E-03	2E-03	0E+00	9E-04	8E-04	0.00032	0.000198	1.38353E-05	0.000108	0.07	0.04862
residential	REC_100M	487230.59	3618425.04	2E-03	6E-03	2E-03	0E+00	9E-04	8E-04	0.00031	0.000193	1.34821E-05	0.000105	0.07	0.04688
residential	REC_100M	487330.59	3618425.04	2E-03	6E-03	2E-03	0E+00	8E-04	7E-04	0.0003	0.000184	1.28399E-05	0.0001	0.07	0.04498
residential	REC_100M	487430.59	3618425.04	2E-03	5E-03	1E-03	0E+00	8E-04	7E-04	0.00029	0.000178	1.24061E-05	9.7E-05	0.06	0.04328
residential	REC_100M	487530.59	3618425.04	2E-03	5E-03	1E-03	0E+00	7E-04	6E-04	0.00028	0.000172	1.19859E-05	9.37E-05	0.06	0.04149
residential	REC_100M	487630.59	3618425.04	2E-03	5E-03	1E-03	0E+00	7E-04	6E-04	0.00027	0.000166	1.15788E-05	9.05E-05	0.06	0.03982
residential	REC_100M	487730.59	3618425.04	2E-03	4E-03	1E-03	0E+00	7E-04	6E-04	0.00026	0.000159	1.11255E-05	8.69E-05	0.05	0.03832
residential	REC_100M	487830.59	3618425.04	2E-03	4E-03	1E-03	0E+00	6E-04	5E-04	0.00025	0.000152	1.06321E-05	8.31E-05	0.05	0.03694
residential	REC_100M	487930.59	3618425.04	1E-03	4E-03	1E-03	0E+00	6E-04	5E-04	0.00024	0.000147	1.02571E-05	8.02E-05	0.05	0.03588
residential	REC_100M	488030.59	3618425.04	1E-03	4E-03	1E-03	0E+00	6E-04	5E-04	0.00023	0.00014	9.77685E-06	7.64E-05	0.05	0.03462
residential	REC_100M	488130.59	3618425.04	1E-03	3E-03	1E-03	0E+00	5E-04	4E-04	0.00021	0.000131	9.16337E-06	7.16E-05	0.05	0.03309
residential	REC_100M	488230.59	3618425.04	1E-03	3E-03	9E-04	0E+00	5E-04	4E-04	0.0002	0.000123	8.60136E-06	6.72E-05	0.05	0.03191
residential	REC_100M	488330.59	3618425.04	1E-03	3E-03	9E-04	0E+00	5E-04	4E-04	0.00019	0.000115	8.02387E-06	6.27E-05	0.04	0.03081
residential	REC_100M	488430.59	3618425.04	1E-03	3E-03	8E-04	0E+00	5E-04	4E-04	0.00018	0.000111	7.73137E-06	6.04E-05	0.04	0.03132
residential	REC_100M	488530.59	3618425.04	1E-03	3E-03	8E-04	0E+00	4E-04	4E-04	0.00017	0.000104	7.26341E-06	5.68E-05	0.04	0.03162
residential	REC_100M	488630.59	3618425.04	1E-03	3E-03	7E-04	0E+00	4E-04	3E-04	0.00016	9.62E-05	6.71877E-06	5.25E-05	0.04	0.03101
residential	REC_100M	488730.59	3618425.04	1E-03	3E-03	7E-04	0E+00	4E-04	3E-04	0.00014	8.81E-05	6.15397E-06	4.81E-05	0.04	0.02879
residential	REC_100M	488830.59	3618425.04	1E-03	3E-03	7E-04	0E+00	4E-04	3E-04	0.00013	7.98E-05	5.57478E-06	4.36E-05	0.04	0.02682
recreational	park	484530.59	3618525.04	2E-03	6E-03	2E-03	0E+00	9E-04	7E-04	7.5E-05	4.62E-05	3.22419E-06	2.52E-05	0.07	0.05024
recreational	park	484630.59	3618525.04	2E-03	7E-03	2E-03	0E+00	9E-04	8E-04	8.2E-05	5.08E-05	3.55083E-06	2.77E-05	0.08	0.05209
recreational	park	484930.59	3618525.04	5E-03	1E-02	2E-03	0E+00	1E-03	1E-03	0.00012	7.35E-05	5.13358E-06	4.01E-05	0.12	0.08931
recreational	park	485030.59	3618525.04	7E-03	2E-02	3E-03	0E+00	1E-03	1E-03	0.00014	8.68E-05	6.06512E-06	4.74E-05	0.15	0.1133
recreational	park	485130.59	3618525.04	1E-02	3E-02	3E-03	0E+00	2E-03	1E-03	0.00017	0.000107	7.45595E-06	5.83E-05	0.20	0.14439
recreational	REC_100M	485830.59	3618525.04	2E-02	5E-02	1E-02	0E+00	6E-03	5E-03	0.00099	0.000615	4.29672E-05	0.000336	0.22	0.12368
residential	REC_100M	485930.59	3618525.04	2E-02	4E-02	1E-02	0E+00	5E-03	5E-03	0.0009	0.000559	3.90367E-05	0.000305	0.20	0.11349
residential	REC_100M	486030.59	3618525.04	1E-02	3E-02	9E-03	0E+00	5E-03	4E-03	0.00084	0.000517	3.61044E-05	0.000282	0.18	0.10305
residential	REC_100M	486130.59	3618525.04	1E-02	3E-02	8E-03	0E+00	4E-03	4E-03	0.00077	0.000479	3.34521E-05	0.000261	0.16	0.09367
residential	REC_100M	486330.59	3618525.04	7E-03	2E-02	6E-03	0E+00	3E-03	3E-03	0.00065	0.000402	2.80621E-05	0.000219	0.13	0.07735
residential	REC_100M	486430.59	3618525.04	6E-03	2E-02	5E-03	0E+00	3E-03	2E-03	0.00061	0.000375	2.61658E-05	0.000204	0.12	0.072
residential	REC_100M	486530.59	3618525.04	5E-03	1E-02	4E-03	0E+00	2E-03	2E-03	0.00056	0.000346	2.4155E-05	0.000189	0.11	0.06692
residential	REC_100M	486630.59	3618525.04	4E-03	1E-02	3E-03	0E+00	2E-03	2E-03	0.00051	0.000317	2.21731E-05	0.000173	0.10	0.06268
residential	REC_100M	486730.59	3618525.04	4E-03	1E-02	3E-03	0E+00	2E-03	1E-03	0.00047	0.00029	2.02296E-05	0.000158	0.09	0.05883
residential	REC_100M	486830.59	3618525.04	3E-03	9E-03	3E-03	0E+00	1E-03	1E-03	0.00043	0.000265	1.85047E-05	0.000145	0.09	0.05551
residential	REC_100M	486930.59	3618525.04	3E-03	8E-03	2E-03	0E+00	1E-03	1E-03	0.00037	0.000231	1.6105E-05	0.000126	0.08	0.05159
residential	REC_100M	487030.59	3618525.04	2E-03	7E-03	2E-03	0E+00	1E-03	9E-04	0.00034	0.000208	1.45522E-05	0.000114	0.07	0.04875
residential	REC_100M	487130.59	3618525.04	2E-03	6E-03	2E-03	0E+00	9E-04	8E-04	0.00032	0.000195	1.362E-05	0.000106	0.07	0.04655
residential	REC_100M	487230.59	3618525.04	2E-03	6E-03	2E-03	0E+00	9E-04	8E-04	0.0003	0.000188	1.3124E-05	0.000103	0.07	0.04502
residential	REC_100M	487330.59	3618525.04	2E-03	5E-03	2E-03	0E+00	8E-04	7E-04	0.00029	0.000177	1.23338E-05	9.64E-05	0.06	0.04308
residential	REC_100M	487430.59	3618525.04	2E-03	5E-03	1E-03	0E+00	8E-04	6E-04	0.00027	0.000168	1.17122E-05	9.15E-05	0.06	0.04128
residential	REC_100M	487530.59	3618525.04	2E-03	5E-03	1E-03	0E+00	7E-04	6E-04	0.00026	0.000162	1.12837E-05	8.82E-05	0.06	0.03973
residential	REC_100M	487630.59	3618525.04	2E-03	4E-03	1E-03	0E+00	7E-04	6E-04	0.00025	0.000156	1.08783E-05	8.5E-05	0.06	0.03821
residential	REC_100M	487730.59	3618525.04	2E-03	4E-03	1E-03	0E+00	6E-04	5E-04	0.00024	0.000149	1.04207E-05	8.14E-05	0.05	0.03672
residential	REC_100M	487830.59	3618525.04	1E-03	4E-03	1E-03	0E+00	6E-04	5E-04	0.00023	0.000142	9.94182E-06	7.77E-05	0.05	0.03537
residential	REC_100M	487930.59	3618525.04	1E-03	4E-03	1E-03	0E+00	5E-04	5E-04	0.00022	0.000136	9.46854E-06	7.4E-05	0.05	0.03412
residential	REC_100M	488030.59	3618525.04	1E-03	4E-03	1E-03	0E+00	5E-04	4E-04	0.00021	0.000129	9.04252E-06	7.07E-05	0.05	0.03297
residential	REC_100M	488130.59	3618525.04	1E-03	3E-03	9E-04	0E+00	5E-04	4E-04	0.0002	0.000122	8.53124E-06	6.67E-05	0.04	0.03159
residential	REC_100M	488230.59	3618525.04	1E-03	3E-03	8E-04	0E+00	5E-04	4E-04	0.00018	0.000114	7.97917E-06	6.24E-05	0.04	0.03025
residential	REC_100M	488330.59	3618525.04	1E-03	3E-03	8E-04	0E+00	4E-04	4E-04	0.00018	0.000108	7.57534E-06	5.92E-05	0.04	0.02947
residential	REC_100M	488430.59	3618525.04	1E-03	3E-03	8E-04	0E+00	4E-04	4E-04	0.00017	0.000105	7.33875E-06	5.74E-05	0.04	0.02995
residential	REC_100M	488530.59	3618525.04	1E-03	3E-03	8E-04	0E+00	4E-04	3E-04	0.00016	9.96E-05	6.95618E-06	5.44E-05	0.04	0.03037
residential	REC_100M	488630.59	3618525.04	1E-03	3E-03	7E-04	0E+00	4E-04	3E-04	0.00015	9.28E-05	6.48418E-06	5.07E-05	0.04	0.0298
residential	REC_100M	488730.59	3618525.04	1E-03	3E-03	7E-04	0E+00	4E-04	3E-04	0.00014	8.52E-05	5.95126E-06	4.65E-05	0.04	0.02747
recreational	park	484329.51	3618644.52	1E-03	4E-03	1E-03	0E+00	6E-04	5E-04	5.1E-05	3.16E-05	2.21E-06	1.73E-05	0.07	0.04556
recreational	park	484433.84	3618608.81	2E-03	4E-03	1E-03	0E+00	7E-04	6E-04	5.8E-05	3.61E-05	2.52473E-06	1.97E-05	0.07	0.04756
recreational	park	484630.59	3618625.04	2E-03	5E-03	2E-03	0E+00	8E-04	7E-04	6.6E-05	4.06E-05	2.83335E-06	2.21E-05	0.07	0.04808
recreational	park	484730.59	3618625.04	2E-03	6E-03	2E-03	0E+00	9E-04	8E-04	7.1E-05	4.4E-05	3.07674E-06	2.4E-05	0.08	0.05221
recreational	park	484830.59	3618625.04	3E-03	8E-03	2E-03	0E+00	1E-03	8E-04	7.8E-05	4.82E-05	3.36932E-06	2.63E-05	0.08	0.06038
recreational	park	484930.59	3618625.04	4E-03	1E-02	2E-03	0E+00	1E-03	9E-04	8.6E-05	5.33E-05	3.72454E-06	2.91E-05	0.10	0.07433
recreational	park	485030.59	3618625.04	5E-03	1E-02	2E-03	0E+00	1E-03	1E-03	9.7E-05	5.98E-05	4.17588E-06	3.26E-05	0.13	0.09292
residential	REC_100M	485130.59	3618625.04	7E-03	2E-02	2E-03	0E+00	1E-03	1E-03	0.00011	6.89E-05	4.8126E-06	3.76E-05	0.16	0.11464
residential	REC_100M	485230.59	3618625.04	1E-02	3E-02	3E-03	0E+00	1E-03	1E-03	0.00014	8.55E-05	5.97105E-06	4.67E-05	0.19	0.13488
residential	REC_100M	485830.59	3618625.04	2E-02	4E-02	8E-03	0E+00	4E-03	4E-03	0.00074	0.000458	3.19932E-05	0.00025	0.20	0.11594
residential	REC_100M	485930.59	3618625.04	1E-02	4E-02	8E-03	0E+00	4E-03	4E-03	0.0007	0.000435	3.04059E-05	0.000238	0.19	0.10706
residential	REC_100M	486030.59	3618625.04	1E-02	3E-02	8E-03	0E+00	4E-03	4E-03	0.00067	0.000415	2.89755E-05	0.000226	0.17	0.09763
residential	REC_100M	486230.59	3618625.04	8E-03	2E-02	6E-03	0E+00	3E-03	3E-03	0.00059	0.000368	2.57149E-05	0.000201	0.14	0.08137
residential	REC_100M	486330.59	3618625.04	7E-03	2E-02	5E-03	0E+00	3E-03	2E-03	0.00056	0.000346	2.41955E-05	0.000189	0.13	0.0751
residential	REC_100M	486430.59	3618625.04	6E-03	2E-02	5E-03	0E+00	2E-03	2E-03	0.00052	0.000322	2.24608E-05	0.000176	0.11	0.06917
residential	REC_100M	486530.59	3618625.04	5E-03	1E-02	4E-03	0E+00	2E-03	2E-03	0.00049	0.000301	2.10343E-05	0.000164	0.10	0.06423
residential	REC_100M	486630.59	3618625.04	4E-03	1E-02	3E-03	0E+00	2E-03	2E-03	0.00046	0.000283	1.97405E-05	0.000154	0.10	0.06016
residential	REC_100M	486730.59	3618625.04	4E-03	1E-02	3E-03	0E+00	2E-03	1E-03	0.00043	0.000264	1.841E-05	0.000144	0.09	0.05665
residential	REC_100M	486830.59	3618625.04	3E-03	9E-03	3E-03	0E+00	1E-03	1E-03	0.00039	0.000244	1.70464E-05	0.000133	0.08	0.05336
residential	REC_100M	486930.59	3618625.04	3E-03	8E-03	2E-03	0E+00	1E-03	1E-03	0.00037	0.000226	1.57921E-05	0.000123	0.08	0.05046
residential	REC_100M	487030.59	3618625.04	3E-03	7E-03	2E-03	0E+00	1E-03	9E-04	0.00034	0.000209	1.45729E-05	0.000114	0.07	0.0478
residential	REC_100M	487130.59	3618625.04	2E-03	6E-03	2E-03	0E+00	1E-03	8E-04	0.00031	0.000193	1.34865E-05	0.000105	0.07	0.04544
residential	REC_100M	487230.59	3618625.04	2E-03	6E-03	2E-03	0E+00	9E-04	7E-04	0.00029	0.00018	1.25552E-05	9.81E-05	0.06	0.04331
residential	REC_100M	487330.59	3618625.04	2E-03	5E-03	1E-03	0E+00	8E-04	7E-04	0.00027	0.000169	1.17792E-05	9.21E-05	0.06	0.04136
residential	REC_100M	487430.59	3618625.04	2E-03	5E-03	1E-03	0E+00	7E-04	6E-04	0.00026	0.00016	1.11574E-05	8.72E-05	0.06	0.03958
residential	REC_100M	487530.59	3618625.04	2E-03	5E-03	1E-03	0E+00	7E-04	6E-04	0.00025	0.000153	1.06579E-05	8.33E-05	0.06	0.03799
residential	REC_100M	487630.59	3618625.04	2E-03	4E-03	1E-03	0E+00	6E-04	5E-04	0.00024	0.000146	1.02068E-05	7.98E-05	0.05	0.03651
residential	REC_100M	487730.59	3618625.04	1E-03	4E-03	1E-03	0E+00	6E-04	5E-04	0.00023	0.000139	9.7393E-06	7.61E-05	0.05	0.03508
residential	REC_100M	487830.59	3618625.04	1E-03	4E-03	1E-03	0E+00	5E-04	5E-04	0.00021	0.000133	9.28408E-06	7.26E-05	0.05	0.03381
residential	REC_100M	487930.59	3618625.04	1E-03	4E-03	1E-03	0E+00	5E-04	4E-04	0.0002	0.000126	8.80263E-06	6.88E-05	0.05	0.03254
residential	REC_100M	488030.59	3618625.04	1E-03	3E-03	9E-04	0E+00	5E-04	4E-04	0.00019	0.00012	8.41132E-06	6.57E-05	0.05	0.03146
residential	REC_100M	488130.59	3618625.04	1E-03	3E-03	9E-04	0E+00	5E-04	4E-04	0.00019	0.000115	8.02297E-06	6.27E-05	0.04	0.03035
residential	REC_100M	488230.59	3618625.04	1E-03	3E-03	8E-04	0E+00	4E-04	4E-04	0.00018	0.00011	7.65025E-06	5.98E-05	0.04	0.02939
residential	REC_100M	488330.59	3618625.04	1E-03	3E-03	8E-04	0E+00	4E-04	4E-04	0.00017	0.000104	7.26478E-06	5.68E-05	0.04	0.02858
residential	REC_100M	488430.59	3618625.04	1E-03	3E-03	8E-04	0E+00	4E-04	4E-04	0.00016	0.000101	7.0372E-06	5.5E-05	0.04	0.02958
residential	REC_100M	488530.59	3618625.04	1E-03	3E-03	7E-04	0E+00	4E-04	3E-04	0.00015	9.52E-05	6.65361E-06	5.2E-05	0.04	0.02918
residential	REC_100M	488630.59	3618625.04	1E-03	3E-03	7E-04	0E+00	4E-04	3E-04	0.00014	8.93E-05	6.23549E-06	4.87E-05	0.04	0.02831
recreational	park	484230.59	3618725.04	1E-03	3E-03	1E-03	0E+00	5E-04	5E-04	4.2E-05	2.63E-05	1.83505E-06	1.43E-05	0.06	0.04232
recreational	park	484330.59	3618725.04	1E-03	3E-03	1E-03	0E+00	6E-04	5E-04	4.5E-05	2.77E-05	1.93464E-06	1.51E-05	0.06	0.04305
recreational	park	484630.59	3618725.04	2E-03	4E-03	1E-03	0E+00	7E-04	6E-04	5.3E-05	3.3E-05	2.30671E-06	1.8E-05	0.06	0.04485
recreational	park	484730.59	3618725.04	2E-03	5E-03	1E-03	0E+00	8E-04	7E-04	5.7E-05	3.53E-05	2.46569E-06	1.93E-05	0.07	0.04814
recreational	park	484830.59	3618725.04	2E-03	6E-03	2E-03	0E+00	9E-04	7E-04	6.1E-05	3.8E-05	2.6525E-06	2.07E-05	0.08	0.05487
recreational	park	484930.59	3618725.04	3E-03	8E-03	2E-03	0E+00	1E-03	8E-04	6.7E-05	4.13E-05	2.88398E-06	2.25E-05	0.09	0.0652
residential	REC_100M	485030.59	3618725.04	4E-03	1E-02	2E-03	0E+00	1E-03	9E-04	7.4E-05	4.59E-05	3.20669E-06	2.51E-05	0.11	0.07944
residential	REC_100M	485130.59	3618725.04	6E-03	2E-02	2E-03	0E+00	1E-03	1E-03	8.7E-05	5.36E-05	3.74345E-06	2.93E-05	0.13	0.09592
residential	REC_100M	485230.59	3618725.04	8E-03	2E-02	2E-03	0E+00	1E-03	1E-03	0.00011	6.82E-05	4.76153E-06	3.72E-05	0.16	0.11123
residential	REC_100M	485330.59	3618725.04	1E-02	3E-02	3E-03	0E+00	1E-03	1E-03	0.00016	9.87E-05	6.89604E-06	5.39E-05	0.18	0.12285
residential	REC_100M	485830.59	3618725.04	1E-02	4E-02	6E-03	0E+00	3E-03	3E-03	0.00057	0.000354	2.47559E-05	0.000193	0.19	0.11024
residential	REC_100M	485930.59	3618725.04	1E-02	3E-02	7E-03	0E+00	4E-03	3E-03	0.00057	0.00035	2.44731E-05	0.000191	0.17	0.10307
residential	REC_100M	486030.59	3618725.04	1E-02	3E-02	7E-03	0E+00	4E-03	3E-03	0.00054	0.000337	2.35374E-05	0.000184	0.16	0.09342
residential	REC_100M	486230.59	3618725.04	7E-03	2E-02	6E-03	0E+00	3E-03	3E-03	0.00048	0.000299	2.08692E-05	0.000163	0.13	0.0778
residential	REC_100M	486330.59	3618725.04	6E-03	2E-02	5E-03	0E+00	3E-03	2E-03	0.00046	0.000284	1.9838E-05	0.000155	0.12	0.07191
residential	REC_100M	486430.59	3618725.04	5E-03	1E-02	4E-03	0E+00	2E-03	2E-03	0.00044	0.000275	1.91773E-05	0.00015	0.11	0.06691
residential	REC_100M	486530.59	3618725.04	5E-03	1E-02	4E-03	0E+00	2E-03	2E-03	0.00042	0.000261	1.82311E-05	0.000142	0.10	0.06224
residential	REC_100M	486630.59	3618725.04	4E-03	1E-02	3E-03	0E+00	2E-03	2E-03	0.00041	0.000251	1.75221E-05	0.000137	0.09	0.05835
residential	REC_100M	486730.59	3618725.04	4E-03	1E-02	3E-03	0E+00	2E-03	1E-03	0.00038	0.000237	1.65702E-05	0.000129	0.09	0.05483
residential	REC_100M	486830.59	3618725.04	3E-03	9E-03	2E-03	0E+00	1E-03	1E-03	0.00036	0.000222	1.55295E-05	0.000121	0.08	0.05158
residential	REC_100M	486930.59	3618725.04	3E-03	8E-03	2E-03	0E+00	1E-03	1E-03	0.00034	0.000208	1.45278E-05	0.000114	0.08	0.04866
residential	REC_100M	487030.59	3618725.04	3E-03	7E-03	2E-03	0E+00	1E-03	9E-04	0.00031	0.000194	1.35806E-05	0.000106	0.07	0.04605
residential	REC_100M	487130.59	3618725.04	2E-03	6E-03	2E-03	0E+00	9E-04	8E-04	0.00029	0.000182	1.27004E-05	9.93E-05	0.07	0.04376
residential	REC_100M	487230.59	3618725.04	2E-03	6E-03	2E-03	0E+00	8E-04	7E-04	0.00027	0.00017	1.18858E-05	9.29E-05	0.06	0.0417
residential	REC_100M	487330.59	3618725.04	2E-03	5E-03	1E-03	0E+00	8E-04	6E-04	0.00026	0.000159	1.11328E-05	8.7E-05	0.06	0.03969
residential	REC_100M	487430.59	3618725.04	2E-03	5E-03	1E-03	0E+00	7E-04	6E-04	0.00024	0.000151	1.05265E-05	8.23E-05	0.06	0.03789
residential	REC_100M	487530.59	3618725.04	2E-03	4E-03	1E-03	0E+00	6E-04	5E-04	0.00023	0.000144	1.0043E-05	7.85E-05	0.05	0.0363
residential	REC_100M	487630.59	3618725.04	1E-03	4E-03	1E-03	0E+00	6E-04	5E-04	0.00022	0.000138	9.64858E-06	7.54E-05	0.05	0.035
residential	REC_100M	487730.59	3618725.04	1E-03	4E-03	1E-03	0E+00	6E-04	5E-04	0.00021	0.000132	9.19899E-06	7.19E-05	0.05	0.03367
residential	REC_100M	487830.59	3618725.04	1E-03	4E-03	1E-03	0E+00	5E-04	4E-04	0.0002	0.000125	8.70789E-06	6.81E-05	0.05	0.03236
residential	REC_100M	487930.59	3618725.04	1E-03	3E-03	9E-04	0E+00	5E-04	4E-04	0.00019	0.000119	8.27966E-06	6.47E-05	0.05	0.03123
residential	REC_100M	488030.59	3618725.04	1E-03	3E-03	9E-04	0E+00	5E-04	4E-04	0.00018	0.000113	7.897E-06	6.17E-05	0.04	0.03017
residential	REC_100M	488130.59	3618725.04	1E-03	3E-03	8E-04	0E+00	4E-04	4E-04	0.00017	0.000108	7.55373E-06	5.9E-05	0.04	0.02916
residential	REC_100M	488230.59	3618725.04	1E-03	3E-03	8E-04	0E+00	4E-04	4E-04	0.00017	0.000104	7.2593E-06	5.67E-05	0.04	0.02835
residential	REC_100M	488330.59	3618725.04	1E-03	3E-03	7E-04	0E+00	4E-04	3E-04	0.00016	9.93E-05	6.9402E-06	5.42E-05	0.04	0.02764
residential	REC_100M	488430.59	3618725.04	1E-03	3E-03	7E-04	0E+00	4E-04	3E-04	0.00016	9.64E-05	6.73592E-06	5.26E-05	0.04	0.02889
residential	REC_100M	488530.59	3618725.04	1E-03	3E-03	7E-04	0E+00	4E-04	3E-04	0.00015	9.08E-05	6.34691E-06	4.96E-05	0.04	0.02799
recreational	park	484130.59	3618825.04	8E-04	2E-03	9E-04	0E+00	5E-04	4E-04	3.5E-05	2.17E-05	1.51633E-06	1.18E-05	0.06	0.03914

Refrigerated Containers

Dose Inhalation — Risk (Residential 30-yr; school 9-yr; park 15-year)

Multi-Purpose General Cargo

Dose Inhalation — Risk (Residential 30-yr; school 9-yr; park 15-year)

Dry Bulk

Dose Inhalation — Risk (Residential 30-yr; school 9-yr; park 15-year)

TAMT Risk Assessment - DPM Cancer and Chronic HI

AERMOD Output

	Discrete Receptor ID (Group Name)	X	Y	Equipment: Multi-Purpose General CargoSTC UNMIT (17%)	Equipment: Dry BulkSTC UNMIT (45%)	Locomotives: All (100%)	Locomotives: Refrigerated ContainersSTC UNMIT (0%)	Locomotives: Multi-Purpose General CargoSTC UNMIT (54%)	Locomotives: Dry BulkSTC UNMIT (46%)	Trucks: All (100%)	Trucks: Refrigerated ContainersSTC UNMIT (62%)	Trucks: Multi-Purpose General CargoSTC UNMIT (4%)	Trucks: Dry BulkSTC UNMIT (34%)	All
recreational	park	484530.59	3618825.04	1E-03	3E-03	1E-03	0E+00	6E-04	5E-04	4.2E-05	2.62E-05	1.82844E-06	1.43E-05	0.06
recreational	park	484630.59	3618825.04	1E-03	4E-03	1E-03	0E+00	7E-04	6E-04	4.5E-05	2.76E-05	1.92971E-06	1.51E-05	0.06
recreational	park	484730.59	3618825.04	2E-03	5E-03	1E-03	0E+00	7E-04	6E-04	4.7E-05	2.93E-05	2.04821E-06	1.6E-05	0.06
residential	REC_100M	484830.59	3618825.04	2E-03	6E-03	1E-03	0E+00	8E-04	7E-04	5.1E-05	3.14E-05	2.19546E-06	1.72E-05	0.07
residential	REC_100M	484930.59	3618825.04	3E-03	7E-03	2E-03	0E+00	8E-04	7E-04	5.5E-05	3.43E-05	2.39775E-06	1.87E-05	0.08
residential	REC_100M	485030.59	3618825.04	3E-03	9E-03	2E-03	0E+00	9E-04	8E-04	6.3E-05	3.88E-05	2.71319E-06	2.12E-05	0.10
residential	REC_100M	485130.59	3618825.04	5E-03	1E-02	2E-03	0E+00	1E-03	8E-04	7.5E-05	4.64E-05	3.24437E-06	2.54E-05	0.11
residential	REC_100M	485230.59	3618825.04	6E-03	2E-02	2E-03	0E+00	1E-03	8E-04	9.4E-05	5.8E-05	4.05007E-06	3.17E-05	0.13
residential	REC_100M	485330.59	3618825.04	8E-03	2E-02	2E-03	0E+00	1E-03	1E-03	0.00013	8.14E-05	5.68527E-06	4.44E-05	0.15
residential	REC_100M	485430.59	3618825.04	1E-02	3E-02	3E-03	0E+00	1E-03	1E-03	0.0002	0.000125	8.75566E-06	6.84E-05	0.17
residential	REC_100M	485830.59	3618825.04	1E-02	3E-02	5E-03	0E+00	3E-03	2E-03	0.00045	0.000279	1.94831E-05	0.000152	0.17
residential	REC_100M	485930.59	3618825.04	1E-02	3E-02	5E-03	0E+00	3E-03	2E-03	0.00046	0.000286	1.99908E-05	0.000156	0.16
residential	REC_100M	486030.59	3618825.04	9E-03	3E-02	6E-03	0E+00	3E-03	3E-03	0.00046	0.000284	1.98134E-05	0.000155	0.15
residential	REC_100M	486230.59	3618825.04	7E-03	2E-02	5E-03	0E+00	3E-03	2E-03	0.00041	0.000255	1.78149E-05	0.000139	0.13
residential	REC_100M	486330.59	3618825.04	6E-03	2E-02	4E-03	0E+00	2E-03	2E-03	0.00038	0.000235	1.64288E-05	0.000128	0.12
residential	REC_100M	486430.59	3618825.04	5E-03	1E-02	4E-03	0E+00	2E-03	2E-03	0.00037	0.000228	1.59134E-05	0.000124	0.11
residential	REC_100M	486530.59	3618825.04	4E-03	1E-02	4E-03	0E+00	2E-03	2E-03	0.00036	0.000221	1.54718E-05	0.000121	0.10
residential	REC_100M	486630.59	3618825.04	4E-03	1E-02	3E-03	0E+00	2E-03	1E-03	0.00036	0.000221	1.54359E-05	0.000121	0.09
residential	REC_100M	486730.59	3618825.04	4E-03	1E-02	3E-03	0E+00	2E-03	1E-03	0.00034	0.000213	1.48773E-05	0.000116	0.09
residential	REC_100M	486830.59	3618825.04	3E-03	9E-03	2E-03	0E+00	1E-03	1E-03	0.00033	0.000202	1.40895E-05	0.00011	0.08
residential	REC_100M	486930.59	3618825.04	3E-03	7E-03	2E-03	0E+00	1E-03	1E-03	0.00031	0.000189	1.31943E-05	0.000103	0.07
residential	REC_100M	487030.59	3618825.04	2E-03	7E-03	2E-03	0E+00	1E-03	9E-04	0.00029	0.000178	1.24656E-05	9.74E-05	0.07
residential	REC_100M	487130.59	3618825.04	2E-03	6E-03	2E-03	0E+00	9E-04	8E-04	0.00028	0.00017	1.18917E-05	9.29E-05	0.07
residential	REC_100M	487230.59	3618825.04	2E-03	5E-03	2E-03	0E+00	8E-04	7E-04	0.00026	0.00016	1.11843E-05	8.74E-05	0.06
residential	REC_100M	487330.59	3618825.04	2E-03	5E-03	1E-03	0E+00	8E-04	6E-04	0.00024	0.000151	1.05482E-05	8.24E-05	0.06
residential	REC_100M	487430.59	3618825.04	2E-03	5E-03	1E-03	0E+00	7E-04	6E-04	0.00023	0.000143	9.9594E-06	7.78E-05	0.05
residential	REC_100M	487530.59	3618825.04	2E-03	4E-03	1E-03	0E+00	6E-04	5E-04	0.00022	0.000136	9.49242E-06	7.42E-05	0.05
residential	REC_100M	487630.59	3618825.04	1E-03	4E-03	1E-03	0E+00	6E-04	5E-04	0.00021	0.000131	9.12875E-06	7.13E-05	0.05
residential	REC_100M	487730.59	3618825.04	1E-03	4E-03	1E-03	0E+00	5E-04	5E-04	0.0002	0.000126	8.76917E-06	6.85E-05	0.05
residential	REC_100M	487830.59	3618825.04	1E-03	3E-03	9E-04	0E+00	5E-04	4E-04	0.00019	0.000119	8.32069E-06	6.5E-05	0.05
residential	REC_100M	487930.59	3618825.04	1E-03	3E-03	9E-04	0E+00	5E-04	4E-04	0.00018	0.000113	7.88282E-06	6.16E-05	0.04
residential	REC_100M	488030.59	3618825.04	1E-03	3E-03	8E-04	0E+00	4E-04	4E-04	0.00017	0.000107	7.47615E-06	5.84E-05	0.04
residential	REC_100M	488130.59	3618825.04	1E-03	3E-03	8E-04	0E+00	4E-04	4E-04	0.00017	0.000102	7.1483E-06	5.59E-05	0.04
residential	REC_100M	488230.59	3618825.04	1E-03	3E-03	7E-04	0E+00	4E-04	3E-04	0.00016	9.83E-05	6.86627E-06	5.37E-05	0.04
residential	REC_100M	488330.59	3618825.04	1E-03	3E-03	7E-04	0E+00	4E-04	3E-04	0.00015	9.4E-05	6.56885E-06	5.13E-05	0.04
residential	REC_100M	488430.59	3618825.04	1E-03	3E-03	7E-04	0E+00	4E-04	3E-04	0.00015	9.21E-05	6.43363E-06	5.03E-05	0.04
residential	REC_100M	477630.59	3618925.04	1E-04	3E-04	7E-05	0E+00	4E-05	3E-05	6.9E-06	4.27E-06	2.9846E-07	2.33E-06	0.01
residential	REC_100M	477730.59	3618925.04	1E-04	4E-04	7E-05	0E+00	4E-05	3E-05	7.1E-06	4.42E-06	3.09043E-07	2.42E-06	0.01
recreational	park	484030.59	3618925.04	7E-04	2E-03	7E-04	0E+00	4E-04	3E-04	3E-05	1.84E-05	1.28225E-06	1E-05	0.05
recreational	park	484130.59	3618925.04	7E-04	2E-03	8E-04	0E+00	4E-04	4E-04	3.1E-05	1.91E-05	1.33172E-06	1.04E-05	0.05
recreational	park	484430.59	3618925.04	1E-03	3E-03	1E-03	0E+00	5E-04	4E-04	3.5E-05	2.15E-05	1.50524E-06	1.18E-05	0.05
recreational	park	484530.59	3618925.04	1E-03	3E-03	1E-03	0E+00	6E-04	5E-04	3.6E-05	2.26E-05	1.57654E-06	1.23E-05	0.05
recreational	park	484630.59	3618925.04	1E-03	3E-03	1E-03	0E+00	6E-04	5E-04	3.8E-05	2.38E-05	1.66023E-06	1.3E-05	0.06
residential	REC_100M	484730.59	3618925.04	2E-03	4E-03	1E-03	0E+00	6E-04	5E-04	4.1E-05	2.53E-05	1.76432E-06	1.38E-05	0.06
residential	REC_100M	484830.59	3618925.04	2E-03	5E-03	1E-03	0E+00	7E-04	6E-04	4.4E-05	2.73E-05	1.90482E-06	1.49E-05	0.07
residential	REC_100M	484930.59	3618925.04	2E-03	6E-03	1E-03	0E+00	7E-04	6E-04	4.9E-05	3.02E-05	2.11273E-06	1.65E-05	0.08
residential	REC_100M	485030.59	3618925.04	3E-03	8E-03	1E-03	0E+00	8E-04	7E-04	5.6E-05	3.49E-05	2.43986E-06	1.91E-05	0.09
residential	REC_100M	485130.59	3618925.04	4E-03	1E-02	2E-03	0E+00	9E-04	7E-04	6.8E-05	4.22E-05	2.94522E-06	2.3E-05	0.10
residential	REC_100M	485230.59	3618925.04	5E-03	1E-02	2E-03	0E+00	9E-04	8E-04	8.5E-05	5.29E-05	3.69316E-06	2.89E-05	0.12
residential	REC_100M	485330.59	3618925.04	7E-03	2E-02	2E-03	0E+00	1E-03	9E-04	0.00011	7.01E-05	4.89426E-06	3.82E-05	0.13
residential	REC_100M	485430.59	3618925.04	8E-03	2E-02	2E-03	0E+00	1E-03	1E-03	0.00016	9.9E-05	6.9171E-06	5.41E-05	0.15
residential	REC_100M	485530.59	3618925.04	9E-03	3E-02	3E-03	0E+00	1E-03	1E-03	0.00022	0.000138	9.61801E-06	7.52E-05	0.15
residential	REC_100M	485830.59	3618925.04	1E-02	3E-02	4E-03	0E+00	2E-03	2E-03	0.00036	0.000223	1.55539E-05	0.000122	0.16
residential	REC_100M	485930.59	3618925.04	9E-03	2E-02	4E-03	0E+00	2E-03	2E-03	0.00038	0.000236	1.64645E-05	0.000129	0.15
residential	REC_100M	486030.59	3618925.04	8E-03	2E-02	5E-03	0E+00	3E-03	2E-03	0.00039	0.000238	1.66497E-05	0.00013	0.14
residential	REC_100M	486230.59	3618925.04	6E-03	2E-02	4E-03	0E+00	2E-03	2E-03	0.00036	0.000225	1.57365E-05	0.000123	0.12
residential	REC_100M	486330.59	3618925.04	5E-03	1E-02	4E-03	0E+00	2E-03	2E-03	0.00033	0.000201	1.40729E-05	0.00011	0.11
residential	REC_100M	486430.59	3618925.04	5E-03	1E-02	3E-03	0E+00	2E-03	2E-03	0.00031	0.00019	1.33078E-05	0.000104	0.10
residential	REC_100M	486530.59	3618925.04	4E-03	1E-02	3E-03	0E+00	2E-03	1E-03	0.0003	0.000183	1.27592E-05	9.97E-05	0.10
residential	REC_100M	486630.59	3618925.04	4E-03	1E-02	3E-03	0E+00	2E-03	1E-03	0.00031	0.000192	1.34225E-05	0.000105	0.09
residential	REC_100M	486730.59	3618925.04	4E-03	1E-02	3E-03	0E+00	1E-03	1E-03	0.00031	0.000192	1.34413E-05	0.000105	0.08
residential	REC_100M	486830.59	3618925.04	3E-03	8E-03	2E-03	0E+00	1E-03	1E-03	0.0003	0.000183	1.278E-05	9.99E-05	0.08
residential	REC_100M	486930.59	3618925.04	3E-03	7E-03	2E-03	0E+00	1E-03	1E-03	0.00028	0.000173	1.21018E-05	9.46E-05	0.07
residential	REC_100M	487030.59	3618925.04	2E-03	7E-03	2E-03	0E+00	1E-03	9E-04	0.00027	0.000165	1.15117E-05	9E-05	0.07
residential	REC_100M	487130.59	3618925.04	2E-03	6E-03	2E-03	0E+00	9E-04	8E-04	0.00025	0.000154	1.07651E-05	8.41E-05	0.06
residential	REC_100M	487230.59	3618925.04	2E-03	5E-03	1E-03	0E+00	8E-04	7E-04	0.00023	0.000145	1.01224E-05	7.91E-05	0.06
residential	REC_100M	487330.59	3618925.04	2E-03	5E-03	1E-03	0E+00	7E-04	6E-04	0.00023	0.00014	9.78115E-06	7.64E-05	0.06
residential	REC_100M	487430.59	3618925.04	2E-03	4E-03	1E-03	0E+00	7E-04	6E-04	0.00022	0.000135	9.42703E-06	7.37E-05	0.05
residential	REC_100M	487530.59	3618925.04	2E-03	4E-03	1E-03	0E+00	6E-04	5E-04	0.00021	0.000129	8.98974E-06	7.03E-05	0.05
residential	REC_100M	487630.59	3618925.04	1E-03	4E-03	1E-03	0E+00	6E-04	5E-04	0.0002	0.000125	8.70504E-06	6.8E-05	0.05
residential	REC_100M	487730.59	3618925.04	1E-03	4E-03	1E-03	0E+00	5E-04	5E-04	0.00019	0.00012	8.38666E-06	6.55E-05	0.05
residential	REC_100M	487830.59	3618925.04	1E-03	3E-03	9E-04	0E+00	5E-04	4E-04	0.00019	0.000115	8.0044E-06	6.26E-05	0.05
residential	REC_100M	487930.59	3618925.04	1E-03	3E-03	9E-04	0E+00	5E-04	4E-04	0.00017	0.000108	7.56148E-06	5.91E-05	0.04
residential	REC_100M	488030.59	3618925.04	1E-03	3E-03	8E-04	0E+00	4E-04	4E-04	0.00017	0.000102	7.15897E-06	5.59E-05	0.04
residential	REC_100M	488130.59	3618925.04	1E-03	3E-03	8E-04	0E+00	4E-04	4E-04	0.00016	9.74E-05	6.80371E-06	5.32E-05	0.04
residential	REC_100M	488230.59	3618925.04	1E-03	3E-03	7E-04	0E+00	4E-04	3E-04	0.00015	9.33E-05	6.51537E-06	5.09E-05	0.04
residential	REC_100M	488330.59	3618925.04	1E-03	3E-03	7E-04	0E+00	4E-04	3E-04	0.00014	8.96E-05	6.26106E-06	4.89E-05	0.04
residential	REC_100M	477030.59	3619025.04	8E-05	2E-04	5E-05	0E+00	3E-05	2E-05	5E-06	3.07E-06	2.14632E-07	1.68E-06	0.01
residential	REC_100M	477130.59	3619025.04	9E-05	2E-04	5E-05	0E+00	3E-05	2E-05	5.4E-06	3.35E-06	2.34186E-07	1.83E-06	0.01
residential	REC_100M	477230.59	3619025.04	1E-04	3E-04	6E-05	0E+00	3E-05	3E-05	6E-06	3.73E-06	2.6027E-07	2.03E-06	0.01
residential	REC_100M	477330.59	3619025.04	1E-04	3E-04	6E-05	0E+00	3E-05	3E-05	6.2E-06	3.86E-06	2.69718E-07	2.11E-06	0.01
residential	REC_100M	477430.59	3619025.04	1E-04	3E-04	7E-05	0E+00	4E-05	3E-05	6.4E-06	3.94E-06	2.7528E-07	2.15E-06	0.01
residential	REC_100M	477530.59	3619025.04	1E-04	3E-04	7E-05	0E+00	4E-05	3E-05	6.5E-06	4.03E-06	2.81523E-07	2.2E-06	0.01
residential	REC_100M	477630.59	3619025.04	1E-04	3E-04	7E-05	0E+00	4E-05	3E-05	6.7E-06	4.12E-06	2.87797E-07	2.25E-06	0.01
residential	REC_100M	477730.59	3619025.04	1E-04	3E-04	7E-05	0E+00	4E-05	3E-05	6.9E-06	4.27E-06	2.98209E-07	2.33E-06	0.01
recreational	park	478030.59	3619025.04	1E-04	4E-04	8E-05	0E+00	4E-05	4E-05	7.2E-06	4.46E-06	3.11352E-07	2.43E-06	0.01
recreational	park	478130.59	3619025.04	1E-04	4E-04	8E-05	0E+00	4E-05	4E-05	7.3E-06	4.52E-06	3.15847E-07	2.47E-06	0.02
recreational	park	478230.59	3619025.04	1E-04	4E-04	8E-05	0E+00	4E-05	4E-05	7.4E-06	4.59E-06	3.2048E-07	2.5E-06	0.02
recreational	park	483930.59	3619025.04	6E-04	2E-03	6E-04	0E+00	4E-04	3E-04	2.6E-05	1.58E-05	1.10547E-06	8.64E-06	0.05
recreational	park	484030.59	3619025.04	6E-04	2E-03	7E-04	0E+00	4E-04	3E-04	2.6E-05	1.63E-05	1.14224E-06	8.93E-06	0.05
recreational	park	484130.59	3619025.04	7E-04	2E-03	7E-04	0E+00	4E-04	3E-04	2.7E-05	1.69E-05	1.18208E-06	9.24E-06	0.05
recreational	park	484230.59	3619025.04	7E-04	2E-03	8E-04	0E+00	4E-04	4E-04	2.8E-05	1.75E-05	1.22504E-06	9.57E-06	0.05
recreational	park	484330.59	3619025.04	8E-04	2E-03	8E-04	0E+00	4E-04	4E-04	2.9E-05	1.82E-05	1.27248E-06	9.94E-06	0.05
recreational	park	484430.59	3619025.04	8E-04	2E-03	8E-04	0E+00	4E-04	4E-04	3.1E-05	1.9E-05	1.32528E-06	1.04E-05	0.05
residential	REC_100M	484530.59	3619025.04	1E-03	3E-03	9E-04	0E+00	5E-04	4E-04	3.2E-05	1.99E-05	1.38959E-06	1.09E-05	0.05
residential	REC_100M	484630.59	3619025.04	1E-03	3E-03	1E-03	0E+00	5E-04	5E-04	3.4E-05	2.1E-05	1.46767E-06	1.15E-05	0.05
residential	REC_100M	484730.59	3619025.04	1E-03	4E-03	1E-03	0E+00	6E-04	5E-04	3.6E-05	2.25E-05	1.57102E-06	1.23E-05	0.06
residential	REC_100M	484830.59	3619025.04	2E-03	5E-03	1E-03	0E+00	6E-04	5E-04	4E-05	2.46E-05	1.71929E-06	1.34E-05	0.06
residential	REC_100M	484930.59	3619025.04	2E-03	6E-03	1E-03	0E+00	7E-04	6E-04	4.5E-05	2.78E-05	1.93995E-06	1.52E-05	0.07
residential	REC_100M	485030.59	3619025.04	3E-03	7E-03	1E-03	0E+00	7E-04	6E-04	5.2E-05	3.25E-05	2.26715E-06	1.77E-05	0.08
residential	REC_100M	485130.59	3619025.04	3E-03	9E-03	1E-03	0E+00	7E-04	6E-04	6.3E-05	3.9E-05	2.72564E-06	2.13E-05	0.09
residential	REC_100M	485230.59	3619025.04	4E-03	1E-02	1E-03	0E+00	8E-04	7E-04	7.8E-05	4.8E-05	3.35223E-06	2.62E-05	0.10
residential	REC_100M	485330.59	3619025.04	5E-03	1E-02	2E-03	0E+00	9E-04	7E-04	9.7E-05	6E-05	4.19175E-06	3.28E-05	0.12
residential	REC_100M	485430.59	3619025.04	7E-03	2E-02	2E-03	0E+00	1E-03	9E-04	0.00013	8.27E-05	5.77548E-06	4.51E-05	0.13
residential	REC_100M	485530.59	3619025.04	7E-03	2E-02	2E-03	0E+00	1E-03	1E-03	0.00018	0.000109	7.59749E-06	5.94E-05	0.14
residential	REC_100M	485630.59	3619025.04	8E-03	2E-02	3E-03	0E+00	1E-03	1E-03	0.00022	0.000135	9.42487E-06	7.37E-05	0.14
residential	REC_100M	485730.59	3619025.04	8E-03	2E-02	3E-03	0E+00	2E-03	1E-03	0.00026	0.00016	1.11511E-05	8.71E-05	0.14
residential	REC_100M	485830.59	3619025.04	8E-03	2E-02	3E-03	0E+00	2E-03	2E-03	0.00029	0.000181	1.26377E-05	9.88E-05	0.14
residential	REC_100M	485930.59	3619025.04	8E-03	2E-02	4E-03	0E+00	2E-03	2E-03	0.00031	0.000195	1.35974E-05	0.000106	0.14
residential	REC_100M	486030.59	3619025.04	7E-03	2E-02	4E-03	0E+00	2E-03	2E-03	0.00033	0.000203	1.41801E-05	0.000111	0.13
residential	REC_100M	486230.59	3619025.04	6E-03	2E-02	4E-03	0E+00	2E-03	2E-03	0.00032	0.000195	1.36333E-05	0.000107	0.12
residential	REC_100M	486330.59	3619025.04	5E-03	1E-02	3E-03	0E+00	2E-03	2E-03	0.00029	0.000178	1.2405E-05	9.69E-05	0.11
residential	REC_100M	486430.59	3619025.04	4E-03	1E-02	3E-03	0E+00	2E-03	1E-03	0.00027	0.000166	1.15879E-05	9.06E-05	0.10
residential	REC_100M	486530.59	3619025.04	4E-03	1E-02	3E-03	0E+00	2E-03	1E-03	0.00026	0.000163	1.13629E-05	8.88E-05	0.09
residential	REC_100M	486630.59	3619025.04	4E-03	1E-02	3E-03	0E+00	1E-03	1E-03	0.00027	0.000166	1.16211E-05	9.08E-05	0.09
residential	REC_100M	486730.59	3619025.04	3E-03	9E-03	3E-03	0E+00	1E-03	1E-03	0.00027	0.000168	1.17378E-05	9.17E-05	0.08
residential	REC_100M	486830.59	3619025.04	3E-03	8E-03	2E-03	0E+00	1E-03	1E-03	0.00026	0.000163	1.13747E-05	8.89E-05	0.08
residential	REC_100M	486930.59	3619025.04	3E-03	7E-03	2E-03	0E+00	1E-03	1E-03	0.00025	0.000157	1.09679E-05	8.57E-05	0.07
residential	REC_100M	487030.59	3619025.04	2E-03	6E-03	2E-03	0E+00	9E-04	8E-04	0.00023	0.000141	9.86015E-06	7.71E-05	0.07
residential	REC_100M	487130.59	3619025.04	2E-03	5E-03	1E-03	0E+00	8E-04	7E-04	0.0002	0.000124	8.69186E-06	6.79E-05	0.06
residential	REC_100M	487230.59	3619025.04	2E-03	5E-03	1E-03	0E+00	7E-04	6E-04	0.0002	0.000125	8.69937E-06	6.8E-05	0.06
residential	REC_100M	487330.59	3619025.04	2E-03	4E-03	1E-03	0E+00	7E-04	6E-04	0.00019	0.000117	8.18729E-06	6.4E-05	0.05
residential	REC_100M	487430.59	3619025.04	2E-03	4E-03	1E-03	0E+00	7E-04	6E-04	0.0002	0.000126	8.83384E-06	6.9E-05	0.05
residential	REC_100M	487530.59	3619025.04	1E-03	4E-03	1E-03	0E+00	6E-04	5E-04	0.0002	0.000122	8.5037E-06	6.65E-05	0.05
residential	REC_100M	487630.59	3619025.04	1E-03	4E-03	1E-03	0E+00	6E-04	5E-04	0.00018	0.000114	7.99373E-06	6.25E-05	0.05
residential	REC_100M	487730.59	3619025.04	1E-03	4E-03	1E-03	0E+00	5E-04	5E-04	0.00019	0.000115	8.01658E-06	6.26E-05	0.05
residential	REC_100M	487830.59	3619025.04	1E-03	3E-03	9E-04	0E+00	5E-04	4E-04	0.00018	0.00011	7.66028E-06	5.99E-05	0.04
residential	REC_100M	487930.59	3619025.04	1E-03	3E-03	9E-04	0E+00	5E-04	4E-04	0.00017	0.000104	7.28688E-06	5.69E-05	0.04
residential	REC_100M	488030.59	3619025.04	1E-03	3E-03	8E-04	0E+00	4E-04	4E-04	0.00016	9.89E-05	6.90693E-06	5.4E-05	0.04
residential	REC_100M	488130.59	3619025.04	1E-03	3E-03	8E-04	0E+00	4E-04	3E-04	0.00015	9.39E-05	6.56156E-06	5.13E-05	0.04
residential	REC_100M	488230.59	3619025.04	1E-03	3E-03	7E-04	0E+00	4E-04	3E-04	0.00014	8.93E-05	6.24007E-06	4.88E-05	0.04
residential	REC_100M	477030.59	3619125.04	8E-05	2E-04	5E-05	0E+00	3E-05	2E-05	4.8E-06	2.95E-06	2.05839E-07	1.61E-06	0.01
residential	REC_100M	477130.59	3619125.04	8E-05	2E-04	5E-05	0E+00	3E-05	2E-05	5E-06	3.1E-06	2.16672E-07	1.69E-06	0.01
residential	REC_100M	477230.59	3619125.04	1E-04	3E-04	6E-05	0E+00	3E-05	3E-05	5.7E-06	3.55E-06	2.4822E-07	1.94E-06	0.01
residential	REC_100M	477330.59	3619125.04	1E-04	3E-04	6E-05	0E+00	3E-05	3E-05	5.9E-06	3.67E-06	2.567E-07	2.01E-06	0.01
residential	REC_100M	477430.59	3619125.04	1E-04	3E-04	6E-05	0E+00	3E-05	3E-05	6.1E-06	3.78E-06	2.64218E-07	2.06E-06	0.01
residential	REC_100M	477530.59	3619125.04	1E-04	3E-04	6E-05	0E+00	4E-05	3E-05	6.3E-06	3.87E-06	2.70291E-07	2.11E-06	0.01
residential	REC_100M	477630.59	3619125.04	1E-04	3E-04	7E-05	0E+00	4E-05	3E-05	6.4E-06	3.97E-06	2.7729E-07	2.17E-06	0.01
residential	REC_100M	477730.59	3619125.04	1E-04	3E-04	7E-05	0E+00	4E-05	3E-05	6.7E-06	4.12E-06	2.87803E-07	2.25E-06	0.01
recreational	park	478230.59	3619125.04	1E-04	4E-04	8E-05	0E+00	4E-05	4E-05	7.1E-06	4.42E-06	3.08493E-07	2.41E-06	0.02
recreational	park	478330.59	3619125.04	1E-04	4E-04	8E-05	0E+00	4E-05	4E-05	7.2E-06	4.48E-06	3.12993E-07	2.45E-06	0.02
recreational	park	483830.59	3619125.04	5E-04	1E-03	6E-04	0E+00	3E-04	3E-04	2.2E-05	1.38E-05	9.6617E-07	7.55E-06	0.05
recreational	park	483930.59	3619125.04	5E-04	1E-03	6E-04	0E+00	3E-04	3E-04	2.3E-05	1.43E-05	9.9566E-07	7.78E-06	0.04
recreational	park	484030.59	3619125.04	6E-04	2E-03	6E-04	0E+00	3E-04	3E-04	2.4E-05	1.47E-05	1.02667E-06	8.02E-06	0.04
recreational	park	484130.59	3619125.04	6E-04	2E-03	7E-04	0E+00	4E-04	3E-04	2.5E-05	1.52E-05	1.06032E-06	8.29E-06	0.04
recreational	park	484230.59	3619125.04	7E-04	2E-03	7E-04	0E+00	4E-04	3E-04	2.5E-05	1.57E-05	1.09774E-06	8.58E-06	0.04
recreational	park	484330.59	3619125.04	7E-04	2E-03	8E-04	0E+00	4E-04	3E-04	2.6E-05	1.63E-05	1.14008E-06	8.91E-06	0.05
residential	REC_100M	484430.59	3619125.04	8E-04	2E-03	8E-04	0E+00	4E-04	4E-04	2.8E-05	1.7E-05	1.18943E-06	9.3E-06	0.05
residential	REC_100M	484530.59	3619125.04	9E-04	3E-03	8E-04	0E+00	5E-04	4E-04	2.9E-05	1.79E-05	1.25071E-06	9.77E-06	0.05
residential	REC_100M	484630.59	3619125.04	1E-03	3E-03	9E-04	0E+00	5E-04	4E-04	3.1E-05	1.9E-05	1.3307E-06	1.04E-05	0.05
residential	REC_100M	484730.59	3619125.04	1E-03	3E-03	9E-04	0E+00	5E-04	4E-04	3.3E-05	2.06E-05	1.44107E-06	1.13E-05	0.06
residential	REC_100M	484830.59	3619125.04	2E-03	4E-03	1E-03	0E+00	6E-04	5E-04	3.7E-05	2.29E-05	1.60016E-06	1.25E-05	0.06
residential	REC_100M	484930.59	3619125.04	2E-03	5E-03	1E-03	0E+00	6E-04	5E-04	4.2E-05	2.62E-05	1.82781E-06	1.43E-05	0.07
residential	REC_100M	485030.59	3619125.04	2E-03	6E-03	1E-03	0E+00	6E-04	5E-04	4.9E-05	3.06E-05	2.1392E-06	1.67E-05	0.08
residential	REC_100M	485130.59	3619125.04	3E-03	8E-03	1E-03	0E+00	6E-04	5E-04	5.9E-05	3.64E-05	2.54433E-06	1.99E-05	0.09
residential	REC_100M	485230.59	3619125.04	4E-03	1E-02	1E-03	0E+00	7E-04	6E-04	7.1E-05	4.38E-05	3.06324E-06	2.39E-05	0.10
residential	REC_100M	485330.59	3619125.04	4E-03	1E-02	1E-03	0E+00	8E-04	7E-04	8.8E-05	5.42E-05	3.78509E-06	2.96E-05	0.11
residential	REC_100M	485430.59	3619125.04	5E-03	1E-02	2E-03	0E+00	9E-04	8E-04	0.00011	6.99E-05	4.88372E-06	3.82E-05	0.12
residential	REC_100M	485530.59	3619125.04	6E-03	2E-02	2E-03	0E+00	1E-03	9E-04	0.00015	9E-05	6.28747E-06	4.91E-05	0.12
residential	REC_100M	485630.59	3619125.04	6E-03	2E-02	2E-03	0E+00	1E-03	1E-03	0.00018	0.000109	7.59612E-06	5.94E-05	0.13
residential	REC_100M	485730.59	3619125.04	7E-03	2E-02	3E-03	0E+00	1E-03	1E-03	0.00021	0.00013	9.05168E-06	7.07E-05	0.13

Refrigerated Containers

Dose Inhallation

Risk (Residential 30-yr; school 9-yr; park 15-yr)

Multi-Purpose General Cargo

Dose Inhallation

Risk (Residential 30-yr; school 9-yr; park 15-yr)

Dry Bulk

Dose Inhallation

Risk (Residential 30-yr; school 9-yr; park 15-yr)

TAMT Risk Assessment - DPM Cancer and Chronic HI

				Equipment		Locomotives				Trucks					Refrigerated Containers						
				Multi-Purpose General CargoSTC UNMIT	Dry BulkSTC UNMIT	All	Refrigerated ContainersSTC UNMIT	Multi-Purpose General CargoSTC UNMIT	Dry BulkSTC UNMIT	All	Refrigerated ContainersSTC UNMIT	Multi-Purpose General CargoSTC UNMIT	Dry BulkSTC UNMIT	All		Dose Inhallation					Risk (Residential 30-yr; school 9-yr; park 15-year)
AERMOD Output				17%	45%	100%	0%	54%	46%	100%	62%	4%	34%								
	Discrete Receptor ID (Group Name)	X	Y												ug/m3	3rd tri	0<2	2<9	2<16	16<30	3rd tri
residential	REC_100M	485830.59	3619125.04	7E-03	2E-02	3E-03	0E+00	2E-03	1E-03	0.00024	0.000148	1.03715E-05	8.11E-05	0.13	0.08899	3.08E-05	9.3E-05	5.38E-05	4.88E-05	2.23E-05	1.21018E-06
residential	REC_100M	485930.59	3619125.04	7E-03	2E-02	3E-03	0E+00	2E-03	1E-03	0.00026	0.000164	1.14254E-05	8.93E-05	0.13	0.08676	3E-05	9.07E-05	5.25E-05	4.76E-05	2.17E-05	1.17985E-06
residential	REC_100M	486030.59	3619125.04	6E-03	2E-02	3E-03	0E+00	2E-03	2E-03	0.00028	0.000173	1.20897E-05	9.45E-05	0.13	0.08267	2.86E-05	8.64E-05	5E-05	4.53E-05	2.07E-05	1.1243E-06
residential	REC_100M	486230.59	3619125.04	5E-03	1E-02	3E-03	0E+00	2E-03	2E-03	0.00028	0.000171	1.19256E-05	9.32E-05	0.11	0.07407	2.56E-05	7.74E-05	4.48E-05	4.06E-05	1.85E-05	1.00733E-06
residential	REC_100M	486330.59	3619125.04	5E-03	1E-02	3E-03	0E+00	2E-03	1E-03	0.00026	0.000159	1.11176E-05	8.69E-05	0.11	0.06968	2.41E-05	7.28E-05	4.22E-05	3.82E-05	1.74E-05	9.47559E-07
residential	REC_100M	486430.59	3619125.04	4E-03	1E-02	3E-03	0E+00	2E-03	1E-03	0.00024	0.00015	1.05014E-05	8.21E-05	0.10	0.06505	2.25E-05	6.8E-05	3.94E-05	3.57E-05	1.63E-05	8.8457E-07
residential	REC_100M	486530.59	3619125.04	4E-03	1E-02	3E-03	0E+00	1E-03	1E-03	0.00024	0.000147	1.02636E-05	8.02E-05	0.09	0.06043	2.09E-05	6.32E-05	3.66E-05	3.31E-05	1.51E-05	8.21861E-07
residential	REC_100M	486630.59	3619125.04	3E-03	9E-03	3E-03	0E+00	1E-03	1E-03	0.00024	0.000147	1.02848E-05	8.04E-05	0.09	0.05623	1.95E-05	5.88E-05	3.4E-05	3.08E-05	1.41E-05	7.64681E-07
residential	REC_100M	486730.59	3619125.04	3E-03	8E-03	2E-03	0E+00	1E-03	1E-03	0.00023	0.00014	9.79541E-06	7.65E-05	0.08	0.05216	1.81E-05	5.45E-05	3.16E-05	2.86E-05	1.31E-05	7.09318E-07
residential	REC_100M	486830.59	3619125.04	3E-03	7E-03	2E-03	0E+00	1E-03	1E-03	0.00022	0.000138	9.63281E-06	7.53E-05	0.08	0.04861	1.68E-05	5.08E-05	2.94E-05	2.67E-05	1.22E-05	6.61077E-07
residential	REC_100M	486930.59	3619125.04	3E-03	7E-03	2E-03	0E+00	1E-03	9E-04	0.00023	0.000139	9.73243E-06	7.61E-05	0.07	0.04574	1.58E-05	4.78E-05	2.77E-05	2.51E-05	1.14E-05	6.22021E-07
residential	REC_100M	487030.59	3619125.04	2E-03	6E-03	2E-03	0E+00	9E-04	7E-04	0.00019	0.000119	8.3222E-06	6.5E-05	0.06	0.04192	1.45E-05	4.38E-05	2.54E-05	2.3E-05	1.05E-05	5.70134E-07
residential	REC_100M	487130.59	3619125.04	2E-03	4E-03	1E-03	0E+00	7E-04	6E-04	0.00016	9.87E-05	6.89763E-06	5.39E-05	0.06	0.03738	1.29E-05	3.91E-05	2.26E-05	2.05E-05	9.36E-06	5.08333E-07
residential	REC_100M	487230.59	3619125.04	2E-03	4E-03	1E-03	0E+00	7E-04	6E-04	0.00017	0.000104	7.25412E-06	5.67E-05	0.06	0.03638	1.26E-05	3.8E-05	2.2E-05	2E-05	9.1E-06	4.94703E-07
residential	REC_100M	487330.59	3619125.04	1E-03	4E-03	1E-03	0E+00	6E-04	5E-04	0.00017	0.000105	7.31754E-06	5.72E-05	0.05	0.03475	1.2E-05	3.63E-05	2.1E-05	1.91E-05	8.7E-06	4.72555E-07
residential	REC_100M	487430.59	3619125.04	2E-03	4E-03	1E-03	0E+00	7E-04	6E-04	0.00019	0.00012	8.41366E-06	6.58E-05	0.05	0.03454	1.2E-05	3.61E-05	2.09E-05	1.89E-05	8.65E-06	4.69762E-07
residential	REC_100M	487530.59	3619125.04	1E-03	4E-03	1E-03	0E+00	6E-04	5E-04	0.00018	0.000113	7.90643E-06	6.18E-05	0.05	0.03261	1.13E-05	3.41E-05	1.97E-05	1.79E-05	8.16E-06	4.43415E-07
residential	REC_100M	487630.59	3619125.04	1E-03	4E-03	1E-03	0E+00	6E-04	5E-04	0.00018	0.000109	7.60235E-06	5.94E-05	0.05	0.03112	1.08E-05	3.25E-05	1.88E-05	1.71E-05	7.79E-06	4.23268E-07
residential	REC_100M	487730.59	3619125.04	1E-03	3E-03	1E-03	0E+00	5E-04	4E-04	0.00017	0.000106	7.42877E-06	5.81E-05	0.04	0.03004	1.04E-05	3.14E-05	1.82E-05	1.65E-05	7.52E-06	4.08465E-07
residential	REC_100M	487830.59	3619125.04	1E-03	3E-03	9E-04	0E+00	5E-04	4E-04	0.00017	0.000103	7.22979E-06	5.65E-05	0.04	0.02911	1.01E-05	3.04E-05	1.76E-05	1.6E-05	7.29E-06	3.95912E-07
residential	REC_100M	487930.59	3619125.04	1E-03	3E-03	9E-04	0E+00	5E-04	4E-04	0.00016	0.0001	6.98814E-06	5.46E-05	0.04	0.02827	9.79E-06	2.96E-05	1.71E-05	1.55E-05	7.08E-06	3.84511E-07
residential	REC_100M	488030.59	3619125.04	1E-03	3E-03	8E-04	0E+00	4E-04	4E-04	0.00015	9.52E-05	6.65169E-06	5.2E-05	0.04	0.0272	9.42E-06	2.84E-05	1.65E-05	1.49E-05	6.81E-06	3.69885E-07
residential	REC_100M	488130.59	3619125.04	1E-03	3E-03	7E-04	0E+00	4E-04	3E-04	0.00015	9.05E-05	6.32404E-06	4.94E-05	0.04	0.02615	9.05E-06	2.73E-05	1.58E-05	1.43E-05	6.55E-06	3.55656E-07
residential	REC_100M	476730.59	3619225.04	7E-05	2E-04	4E-05	0E+00	2E-05	2E-05	4.4E-06	2.74E-06	1.91683E-07	1.5E-06	0.01	0.0043	1.49E-06	4.5E-06	2.6E-06	2.36E-06	1.08E-06	5.85074E-08
residential	REC_100M	476830.59	3619225.04	7E-05	2E-04	5E-05	0E+00	2E-05	2E-05	4.5E-06	2.8E-06	1.95702E-07	1.53E-06	0.01	0.00443	1.53E-06	4.63E-06	2.68E-06	2.43E-06	1.11E-06	6.0226E-08
residential	REC_100M	476930.59	3619225.04	8E-05	2E-04	5E-05	0E+00	3E-05	2E-05	4.6E-06	2.82E-06	1.97053E-07	1.54E-06	0.01	0.00451	1.56E-06	4.71E-06	2.73E-06	2.47E-06	1.13E-06	6.12888E-08
residential	REC_100M	477030.59	3619225.04	8E-05	2E-04	5E-05	0E+00	3E-05	2E-05	4.6E-06	2.83E-06	1.97395E-07	1.54E-06	0.01	0.00457	1.58E-06	4.78E-06	2.76E-06	2.51E-06	1.14E-06	6.21321E-08
residential	REC_100M	477130.59	3619225.04	8E-05	2E-04	5E-05	0E+00	3E-05	2E-05	4.7E-06	2.9E-06	2.02782E-07	1.58E-06	0.01	0.00473	1.64E-06	4.95E-06	2.86E-06	2.6E-06	1.18E-06	6.43592E-08
residential	REC_100M	477230.59	3619225.04	9E-05	2E-04	6E-05	0E+00	3E-05	3E-05	5.3E-06	3.27E-06	2.28613E-07	1.79E-06	0.01	0.00528	1.83E-06	5.52E-06	3.2E-06	2.9E-06	1.32E-06	7.18532E-08
residential	REC_100M	477330.59	3619225.04	1E-04	3E-04	6E-05	0E+00	3E-05	3E-05	5.6E-06	3.48E-06	2.43208E-07	1.9E-06	0.01	0.00568	1.97E-06	5.93E-06	3.43E-06	3.11E-06	1.42E-06	7.72025E-08
residential	REC_100M	477430.59	3619225.04	1E-04	3E-04	6E-05	0E+00	3E-05	3E-05	5.8E-06	3.61E-06	2.5239E-07	1.97E-06	0.01	0.00601	2.08E-06	6.29E-06	3.64E-06	3.3E-06	1.51E-06	8.17917E-08
residential	REC_100M	477530.59	3619225.04	1E-04	3E-04	6E-05	0E+00	3E-05	3E-05	6E-06	3.71E-06	2.59512E-07	2.03E-06	0.01	0.00634	2.19E-06	6.63E-06	3.84E-06	3.48E-06	1.59E-06	8.62202E-08
residential	REC_100M	477630.59	3619225.04	1E-04	3E-04	6E-05	0E+00	3E-05	3E-05	6.2E-06	3.81E-06	2.66446E-07	2.08E-06	0.01	0.00668	2.31E-06	6.99E-06	4.04E-06	3.67E-06	1.67E-06	9.0905E-08
residential	REC_100M	477730.59	3619225.04	1E-04	3E-04	7E-05	0E+00	4E-05	3E-05	6.3E-06	3.93E-06	2.74524E-07	2.15E-06	0.01	0.00707	2.45E-06	7.39E-06	4.28E-06	3.88E-06	1.77E-06	9.61801E-08
recreational	park	478330.59	3619225.04	1E-04	3E-04	8E-05	0E+00	4E-05	4E-05	7E-06	4.31E-06	3.01237E-07	2.35E-06	0.02	0.00937	0	8.98E-07	4.79E-07	3.89E-07	1.8E-07	0
recreational	park	478430.59	3619225.04	1E-04	4E-04	8E-05	0E+00	4E-05	4E-05	7.1E-06	4.37E-06	3.05525E-07	2.39E-06	0.02	0.00981	0	9.41E-07	5.02E-07	4.08E-07	1.88E-07	0
recreational	park	483830.59	3619225.04	5E-04	1E-03	5E-04	0E+00	3E-04	2E-04	2E-05	1.26E-05	8.78837E-07	6.87E-06	0.04	0.02851	0	2.73E-06	1.46E-06	1.18E-06	5.47E-07	0
recreational	park	483930.59	3619225.04	5E-04	1E-03	6E-04	0E+00	3E-04	3E-04	2.1E-05	1.29E-05	9.04036E-07	7.06E-06	0.04	0.02803	0	2.69E-06	1.43E-06	1.16E-06	5.37E-07	0
recreational	park	484030.59	3619225.04	5E-04	1E-03	6E-04	0E+00	3E-04	3E-04	2.2E-05	1.33E-05	9.3128E-07	7.28E-06	0.04	0.02839	0	2.72E-06	1.45E-06	1.18E-06	5.44E-07	0
recreational	park	484130.59	3619225.04	6E-04	2E-03	6E-04	0E+00	3E-04	3E-04	2.2E-05	1.38E-05	9.61367E-07	7.51E-06	0.04	0.02929	0	2.81E-06	1.5E-06	1.22E-06	5.62E-07	0
residential	REC_100M	484230.59	3619225.04	6E-04	2E-03	6E-04	0E+00	4E-04	3E-04	2.3E-05	1.43E-05	9.95623E-07	7.78E-06	0.04	0.02984	1.03E-05	3.12E-05	1.81E-05	1.64E-05	7.47E-06	4.05845E-07
residential	REC_100M	484330.59	3619225.04	7E-04	2E-03	7E-04	0E+00	4E-04	3E-04	2.4E-05	1.48E-05	1.03606E-06	8.1E-06	0.04	0.03128	1.08E-05	3.27E-05	1.89E-05	1.72E-05	7.83E-06	4.25338E-07
residential	REC_100M	484430.59	3619225.04	7E-04	2E-03	7E-04	0E+00	4E-04	3E-04	2.5E-05	1.55E-05	1.08516E-06	8.48E-06	0.04	0.03144	1.09E-05	3.29E-05	1.9E-05	1.72E-05	7.87E-06	4.27567E-07
residential	REC_100M	484530.59	3619225.04	9E-04	2E-03	8E-04	0E+00	4E-04	4E-04	2.7E-05	1.64E-05	1.14881E-06	8.98E-06	0.05	0.03386	1.17E-05	3.54E-05	2.05E-05	1.86E-05	8.48E-06	4.60539E-07
residential	REC_100M	484630.59	3619225.04	1E-03	3E-03	8E-04	0E+00	4E-04	4E-04	2.9E-05	1.77E-05	1.23466E-06	9.65E-06	0.05	0.03607	1.25E-05	3.77E-05	2.18E-05	1.98E-05	9.03E-06	4.90592E-07
residential	REC_100M	484730.59	3619225.04	1E-03	3E-03	9E-04	0E+00	5E-04	4E-04	3.1E-05	1.94E-05	1.35378E-06	1.06E-05	0.05	0.03921	1.36E-05	4.1E-05	2.37E-05	2.15E-05	9.81E-06	5.33176E-07
residential	REC_100M	484830.59	3619225.04	1E-03	4E-03	9E-04	0E+00	5E-04	4E-04	3.5E-05	2.18E-05	1.52017E-06	1.19E-05	0.06	0.04319	1.5E-05	4.51E-05	2.61E-05	2.37E-05	1.08E-05	5.87355E-07
residential	REC_100M	484930.59	3619225.04	2E-03	5E-03	9E-04	0E+00	5E-04	4E-04	4E-05	2.5E-05	1.74481E-06	1.36E-05	0.06	0.04762	1.65E-05	4.98E-05	2.88E-05	2.61E-05	1.19E-05	6.47605E-07
residential	REC_100M	485030.59	3619225.04	2E-03	6E-03	1E-03	0E+00	5E-04	4E-04	4.7E-05	2.88E-05	2.01367E-06	1.57E-05	0.07	0.05286	1.83E-05	5.52E-05	3.2E-05	2.9E-05	1.32E-05	7.18842E-07
residential	REC_100M	485130.59	3619225.04	3E-03	7E-03	1E-03	0E+00	6E-04	5E-04	5.5E-05	3.37E-05	2.35661E-06	1.84E-05	0.08	0.05871	2.03E-05	6.14E-05	3.55E-05	3.22E-05	1.47E-05	7.9845E-07
residential	REC_100M	485230.59	3619225.04	3E-03	9E-03	1E-03	0E+00	6E-04	5E-04	6.5E-05	4.02E-05	2.80916E-06	2.2E-05	0.09	0.06486	2.25E-05	6.78E-05	3.92E-05	3.56E-05	1.62E-05	8.82047E-07
residential	REC_100M	485330.59	3619225.04	4E-03	1E-02	1E-03	0E+00	7E-04	6E-04	7.9E-05	4.88E-05	3.40744E-06	2.66E-05	0.10	0.0707	2.45E-05	7.39E-05	4.28E-05	3.88E-05	1.77E-05	9.61406E-07
residential	REC_100M	485430.59	3619225.04	4E-03	1E-02	1E-03	0E+00	8E-04	7E-04	9.9E-05	6.12E-05	4.27639E-06	3.34E-05	0.10	0.07571	2.62E-05	7.91E-05	4.58E-05	4.15E-05	1.89E-05	1.02962E-06
residential	REC_100M	485530.59	3619225.04	5E-03	1E-02	2E-03	0E+00	9E-04	8E-04	0.00012	7.63E-05	5.33396E-06	4.17E-05	0.11	0.07963	2.76E-05	8.32E-05	4.82E-05	4.37E-05	1.99E-05	1.08296E-06
residential	REC_100M	485630.59	3619225.04	5E-03	1E-02	2E-03	0E+00	1E-03	9E-04	0.00015	9.15E-05	6.3941E-06	5E-05	0.12	0.08206	2.84E-05	8.58E-05	4.97E-05	4.5E-05	2.05E-05	1.11599E-06
residential	REC_100M	485730.59	3619225.04	6E-03	2E-02	2E-03	0E+00	1E-03	1E-03	0.00017	0.000108	7.52762E-06	5.88E-05	0.12	0.08303	2.87E-05	8.68E-05	5.02E-05	4.55E-05	2.08E-05	1.12911E-06
residential	REC_100M	485830.59	3619225.04	6E-03	2E-02	3E-03	0E+00	1E-03	1E-03	0.0002	0.000125	8.727E-06	6.82E-05	0.12	0.08335	2.89E-05	8.71E-05	5.04E-05	4.57E-05	2.09E-05	1.13346E-06
residential	REC_100M	485930.59	3619225.04	6E-03	2E-02	3E-03	0E+00	2E-03	1E-03	0.00023	0.000139	9.72893E-06	7.6E-05	0.12	0.08232	2.85E-05	8.6E-05	4.98E-05	4.52E-05	2.06E-05	1.11948E-06
residential	REC_100M	486030.59	3619225.04	6E-03	2E-02	3E-03	0E+00	2E-03	1E-03	0.00024	0.000149	1.04274E-05	8.15E-05	0.12	0.07945	2.75E-05	8.3E-05	4.81E-05	4.36E-05	1.99E-05	1.08044E-06
residential	REC_100M	486230.59	3619225.04	5E-03	1E-02	3E-03	0E+00	2E-03	1E-03	0.00025	0.000153	1.07127E-05	8.37E-05	0.11	0.07241	2.51E-05	7.57E-05	4.38E-05	3.97E-05	1.81E-05	9.84668E-07
residential	REC_100M	486330.59	3619225.04	4E-03	1E-02	3E-03	0E+00	2E-03	1E-03	0.00024	0.000145	1.01614E-05	7.94E-05	0.10	0.06858	2.37E-05	7.17E-05	4.15E-05	3.76E-05	1.72E-05	9.32576E-07
residential	REC_100M	486430.59	3619225.04	4E-03	1E-02	3E-03	0E+00	1E-03	1E-03	0.00022	0.000137	9.58253E-06	7.49E-05	0.10	0.06449	2.23E-05	6.74E-05	3.9E-05	3.54E-05	1.61E-05	8.77038E-07
residential	REC_100M	486530.59	3619225.04	3E-03	9E-03	2E-03	0E+00	1E-03	1E-03	0.00021	0.000132	9.19794E-06	7.19E-05	0.09	0.0602	2.08E-05	6.29E-05	3.64E-05	3.3E-05	1.51E-05	8.1862E-07
residential	REC_100M	486630.59	3619225.04	3E-03	9E-03	2E-03	0E+00	1E-03	1E-03	0.00021	0.00013	9.0717E-06	7.09E-05	0.09	0.05608	1.94E-05	5.86E-05	3.39E-05	3.08E-05	1.4E-05	7.62683E-07
residential	REC_100M	486730.59	3619225.04	3E-03	8E-03	2E-03	0E+00	1E-03	9E-04	0.0002	0.000123	8.59525E-06	6.72E-05	0.08	0.052	1.8E-05	5.43E-05	3.15E-05	2.85E-05	1.3E-05	7.07134E-07
residential	REC_100M	486830.59	3619225.04	2E-03	7E-03	2E-03	0E+00	1E-03	8E-04	0.00019	0.000117	8.16393E-06	6.38E-05	0.07	0.04813	1.67E-05	5.03E-05	2.91E-05	2.64E-05	1.2E-05	6.54557E-07
residential	REC_100M	486930.59	3619225.04	2E-03	7E-03	2E-03	0E+00	1E-03	8E-04	0.0002	0.000125	8.74119E-06	6.83E-05	0.07	0.04562	1.58E-05	4.77E-05	2.76E-05	2.5E-05	1.14E-05	6.20374E-07
residential	REC_100M	487030.59	3619225.04	2E-03	6E-03	2E-03	0E+00	9E-04	7E-04	0.00018	0.000113	7.90599E-06	6.18E-05	0.06	0.04216	1.46E-05	4.41E-05	2.55E-05	2.31E-05	1.06E-05	5.73314E-07
residential	REC_100M	487130.59	3619225.04	2E-03	4E-03	1E-03	0E+00	7E-04	6E-04	0.00015	9.54E-05	6.66259E-06	5.21E-05	0.06	0.0378	1.31E-05	3.95E-05	2.29E-05	2.07E-05	9.46E-06	5.14062E-07
residential	REC_100M	487230.59	3619225.04	2E-03	5E-03	1E-03	0E+00	7E-04	6E-04	0.00017	0.000103	7.21225E-06	5.64E-05	0.06	0.03694	1.28E-05	3.86E-05	2.24E-05	2.03E-05	9.25E-06	5.02369E-07
residential	REC_100M	487330.59	3619225.04	2E-03	5E-03	1E-03	0E+00	7E-04	6E-04	0.00018	0.000112	7.83462E-06	6.12E-05	0.05	0.03584	1.24E-05	3.75E-05	2.17E-05	1.97E-05	8.97E-06	4.87397E-07
residential	REC_100M	487430.59	3619225.04	2E-03	4E-03	1E-03	0E+00	7E-04	6E-04	0.00018	0.000113	7.90535E-06	6.18E-05	0.05	0.03432	1.19E-05	3.59E-05	2.08E-05	1.88E-05	8.59E-06	4.66792E-07
residential	REC_100M	487530.59	3619225.04	1E-03	4E-03	1E-03	0E+00	6E-04	5E-04	0.00017	0.000106	7.37471E-06	5.76E-05	0.05	0.03222	1.12E-05	3.37E-05	1.95E-05	1.77E-05	8.06E-06	4.38151E-07
residential	REC_100M	487630.59	3619225.04	1E-03	4E-03	1E-03	0E+00	5E-04	5E-04	0.00016	0.000101	7.04353E-06	5.5E-05	0.05	0.03059	1.06E-05	3.2E-05	1.85E-05	1.68E-05	7.66E-06	4.15956E-07
residential	REC_100M	487730.59	3619225.04	1E-03	3E-03	9E-04	0E+00	5E-04	4E-04	0.00015	9.17E-05	6.40466E-06	5.01E-05	0.04	0.02872	9.94E-06	3E-05	1.74E-05	1.58E-05	7.19E-06	3.90586E-07
residential	REC_100M	487830.59	3619225.04	1E-03	3E-03	9E-04	0E+00	5E-04	4E-04	0.00015	9.41E-05	6.57165E-06	5.14E-05	0.04	0.0281	9.73E-06	2.94E-05	1.7E-05	1.54E-05	7.03E-06	3.82104E-07
residential	REC_100M	487930.59	3619225.04	1E-03	3E-03	8E-04	0E+00	5E-04	4E-04	0.00015	9.47E-05	6.61428E-06	5.17E-05	0.04	0.02761	9.56E-06	2.89E-05	1.67E-05	1.51E-05	6.91E-06	3.75462E-07
residential	REC_100M	488030.59	3619225.04	1E-03	3E-03	8E-04	0E+00	4E-04	4E-04	0.00015	9.14E-05	6.38675E-06	4.99E-05	0.04	0.02676	9.26E-06	2.8E-05	1.62E-05	1.47E-05	6.7E-06	3.63891E-07
residential	REC_100M	476730.59	3619325.04	7E-05	2E-04	4E-05	0E+00	2E-05	2E-05	4.3E-06	2.68E-06	1.87518E-07	1.47E-06	0.01	0.00425	1.47E-06	4.44E-06	2.57E-06	2.33E-06	1.06E-06	5.77925E-08
residential	REC_100M	476830.59	3619325.04	7E-05	2E-04	5E-05	0E+00	2E-05	2E-05	4.4E-06	2.73E-06	1.90396E-07	1.49E-06	0.01	0.00435	1.51E-06	4.55E-06	2.63E-06	2.39E-06	1.09E-06	5.9185E-08
residential	REC_100M	476930.59	3619325.04	7E-05	2E-04	5E-05	0E+00	2E-05	2E-05	4.4E-06	2.73E-06	1.9095E-07	1.49E-06	0.01	0.00441	1.53E-06	4.61E-06	2.67E-06	2.42E-06	1.1E-06	6.00329E-08
residential	REC_100M	477030.59	3619325.04	7E-05	2E-04	5E-05	0E+00	2E-05	2E-05	4.4E-06	2.74E-06	1.91524E-07	1.5E-06	0.01	0.00447	1.55E-06	4.68E-06	2.71E-06	2.45E-06	1.12E-06	6.08454E-08
residential	REC_100M	477130.59	3619325.04	7E-05	2E-04	5E-05	0E+00	3E-05	2E-05	4.5E-06	2.81E-06	1.96566E-07	1.54E-06	0.01	0.00463	1.6E-06	4.83E-06	2.8E-06	2.54E-06	1.16E-06	6.2907E-08
residential	REC_100M	477230.59	3619325.04	8E-05	2E-04	5E-05	0E+00	3E-05	2E-05	5.1E-06	3.13E-06	2.18616E-07	1.71E-06	0.01	0.0051	1.76E-06	5.33E-06	3.08E-06	2.8E-06	1.28E-06	6.9305E-08
residential	REC_100M	477330.59	3619325.04	9E-05	2E-04	6E-05	0E+00	3E-05	3E-05	5.3E-06	3.29E-06	2.29606E-07	1.79E-06	0.01	0.00539	1.87E-06	5.63E-06	3.26E-06	2.96E-06	1.35E-06	7.32972E-08
residential	REC_100M	477430.59	3619325.04	9E-05	3E-04	6E-05	0E+00	3E-05	3E-05	5.6E-06	3.45E-06	2.40802E-07	1.88E-06	0.01	0.00573	1.98E-06	5.99E-06	3.47E-06	3.14E-06	1.43E-06	7.79719E-08
residential	REC_100M	477530.59	3619325.04	1E-04	3E-04	6E-05	0E+00	3E-05	3E-05	5.7E-06	3.56E-06	2.48477E-07	1.94E-06	0.01	0.00606	2.1E-06	6.34E-06	3.67E-06	3.32E-06	1.52E-06	8.24375E-08
residential	REC_100M	477630.59	3619325.04	1E-04	3E-04	6E-05	0E+00	3E-05	3E-05	5.9E-06	3.65E-06	2.55039E-07	1.99E-06	0.01	0.00638	2.21E-06	6.67E-06	3.86E-06	3.5E-06	1.6E-06	8.67256E-08
residential	REC_100M	477730.59	3619325.04	1E-04	3E-04	6E-05	0E+00	3E-05	3E-05	6.1E-06	3.76E-06	2.62465E-07	2.05E-06	0.01	0.00675	2.34E-06	7.05E-06	4.08E-06	3.7E-06	1.69E-06	9.17919E-08
recreational	park	477830.59	3619325.04	1E-04	3E-04	7E-05	0E+00	4E-05	3E-05	6.3E-06	3.89E-06	2.71534E-07	2.12E-06	0.01	0.00742	0	7.12E-07	3.8E-07	3.08E-07	1.42E-07	0
recreational	park	478430.59	3619325.04	1E-04	3E-04	8E-05	0E+00	4E-05	4E-05	6.8E-06	4.21E-06	2.94003E-07	2.3E-06	0.02	0.00928	0	8.9E-07	4.75E-07	3.86E-07	1.78E-07	0
recreational	park	478530.59	3619325.04	1E-04	3E-04	8E-05	0E+00	4E-05	4E-05	6.9E-06	4.27E-06	2.98019E-07	2.33E-06	0.02	0.00985	0	9.44E-07	5.04E-07	4.09E-07	1.89E-07	0
recreational	park	478630.59	3619325.04	1E-04	3E-04	8E-05	0E+00	4E-05	4E-05	7E-06	4.32E-06	3.01959E-07	2.36E-06	0.02	0.01069	0	1.02E-06	5.47E-07	4.44E-07	2.05E-07	0
recreational	park	483530.59	3619325.04	4E-04	1E-03	4E-04	0E+00	2E-04	2E-04	1.7E-05	1.07E-05	7.4677E-07	5.84E-06	0.04	0.02601	0	2.49E-06	1.33E-06	1.08E-06	4.99E-07	0
recreational	park	483830.59	3619325.04	4E-04	1E-03	5E-04	0E+00	3E-04	2E-04	1.9E-05	1.15E-05	8.04801E-07	6.29E-06	0.04	0.02586	0	2.48E-06	1.32E-06	1.07E-06	4.96E-07	0
recreational	park	483930.59	3619325.04	4E-04	1E-03	5E-04	0E+00	3E-04	2E-04	1.9E-05	1.18E-05	8.27417E-07	6.47E-06	0.04	0.02646	0	2.54E-06	1.35E-06	1.1E-06	5.07E-07	0
residential	REC_100M	484030.59	3619325.04	5E-04	1E-03	5E-04	0E+00	3E-04	2E-04	2E-05	1.22E-05	8.52598E-07	6.66E-06	0.04	0.02719	9.41E-06	2.84E-05	1.65E-05	1.49E-05	6.81E-06	3.69828E-07
residential	REC_100M	484130.59	3619325.04	5E-04	1E-03	6E-04	0E+00	3E-04	3E-04	2E-05	1.26E-05	8.81143E-07	6.89E-06	0.04	0.02797	9.68E-06	2.92E-05	1.69E-05	1.53E-05	7E-06	3.80309E-07
residential	REC_100M	484230.59	3619325.04	6E-04	2E-03	6E-04	0E+00	3E-04	3E-04	2.1E-05	1.31E-05	9.1451E-07	7.15E-06	0.04	0.02858	9.89E-06	2.99E-05	1.73E-05	1.57E-05	7.15E-06	3.88732E-07
residential	REC_100M	484330.59	3619325.04	7E-04	2E-03	6E-04	0E+00	3E-04	3E-04	2.2E-05	1.37E-05	9.55404E-07	7.47E-06	0.04	0.02935	1.02E-05	3.07E-05	1.78E-05	1.61E-05	7.34E-06	3.99095E-07
residential	REC_100M	484430.59	3619325.04	7E-04	2E-03	6E-04	0E+00	3E-04	3E-04	2.3E-05	1.44E-05	1.00717E-06	7.87E-06	0.04	0.03013	1.04E-05	3.15E-05	1.82E-05	1.65E-05	7.54E-06	4.09791E-07
residential	REC_100M	484530.59	3619325.04	8E-04	2E-03	7E-04	0E+00	4E-04	3E-04	2.5E-05	1.54E-05	1.07459E-06	8.4E-06	0.04	0.03178	1.1E-05	3.32E-05	1.92E-05	1.74E-05	7.95E-06	4.32241E-07
residential	REC_100M	484630.59	3619325.04	9E-04	3E-03	7E-04	0E+00	4E-04	3E-04	2.7E-05	1.67E-05	1.16763E-06	9.12E-06	0.05	0.03433	1.19E-05	3.59E-05	2.08E-05	1.88E-05	8.59E-06	4.66883E-07
residential	REC_100M	484730.59	3619325.04	1E-03	3E-03	8E-04	0E+00	4E-04	3E-04	3E-05	1.85E-05	1.2937E-06	1.01E-05	0.05	0.03744	1.3E-05	3.91E-05	2.27E-05	2.05E-05	9.37E-06	5.09132E-07
residential	REC_100M	484830.59	3619325.04	1E-03	3E-03	8E-04	0E+00	4E-04	4E-04	3.4E-05	2.09E-05	1.4621E-06	1.14E-05	0.06	0.04106	1.42E-05	4.29E-05	2.48E-05	2.25E-05	1.03E-05	5.58405E-07
residential	REC_100M	484930.59	3619325.04	2E-03	4E-03	8E-04	0E+00	4E-04	4E-04	3.9E-05	2.4E-05	1.67566E-06	1.31E-05	0.06	0.0451	1.56E-05	4.71E-05	2.73E-05	2.47E-05	1.13E-05	6.133E-07
residential	REC_100M	485030.59	3619325.04	2E-03	5E-03	9E-04	0E+00	5E-04	4E-04	4.4E-05	2.72E-05	1.90192E-06	1.49E-05	0.07	0.04972	1.72E-05	5.2E-05	3.01E-05	2.73E-05	1.24E-05	6.7613E-07
residential	REC_100M	485130.59	3619325.04	2E-03	6E-03	9E-04	0E+00	5E-04	4E-04	5.1E-05	3.16E-05	2.20797E-06	1.73E-05	0.07	0.05479	1.9E-05	5.73E-05	3.32E-05	3.01E-05	1.37E-05	7.4512E-07
residential	REC_100M	485230.59	3619325.04	3E-03	7E-03	1E-03	0E+00	5E-04	5E-04	6E-05	3.71E-05	2.59377E-06	2.03E-05	0.08	0.06009	2.08E-05	6.28E-05	3.64E-05	3.3E-05	1.5E-05	8.17166E-07
residential	REC_100M	485330.59	3619325.04	3E-03	9E-03	1E-03	0E+00	6E-04	5E-04	7.2E-05	4.43E-05	3.09357E-06	2.42E-05	0.09	0.06514	2.25E-05	6.81E-05	3.94E-05	3.57E-05	1.63E-05	8.8588E-07
residential	REC_100M	485430.59	3619325.04	4E-03	1E-02	1E-03	0E+00	7E-04	6E-04	8.8E-05	5.45E-05	3.80766E-06	2.98E-05	0.10	0.06969	2.41E-05	7.28E-05	4.22E-05	3.82E-05	1.74E-05	9.47676E-07
residential	REC_100M	485530.59	3619325.04	4E-03	1E-02	1E-03	0E+00	8E-04	7E-04	0.00011	6.68E-05	4.66429E-06	3.65E-05	0.10	0.07337	2.54E-05	7.67E-05	4.44E-05	4.02E-05	1.84E-05	9.97771E-07
residential	REC_100M	485630.59	3619325.04	5E-03	1E-02	2E-03	0E+00	9E-04	8E-04	0.00013	7.93E-05	5.53828E-06	4.33E-05	0.11	0.07592	2.63E-05	7.94E-05	4.59E-05	4.16E-05	1.9E-05	1.03244E-06
residential	REC_100M	485730.59	3619325.04	5E-03	1E-02	2E-03	0E+00	1E-03	9E-04	0.00015	9.19E-05	6.42168E-06	5.02E-05	0.11	0.0773	2.68E-05	8.08E-05	4.68E-05	4.24E-05	1.93E-05	1.05118E-06
residential	REC_100M	485830.59	3619325.04	5E-03	1E-02	2E-03	0E+00	1E-03	1E-03	0.00017	0.000107	7.49462E-06	5.86E-05	0.11	0.0781	2.7E-05	8.16E-05	4.73E-05	4.28E-05	1.95E-05	1.06215E-06
residential	REC_100M	485930.59	3619325.04	5E-03	1E-02	2E-03	0E+00	1E-03	1E-03	0.00019	0.00012	8.37926E-06	6.55E-05	0.11	0.07771	2.69E-05	8.12E-05	4.7E-05	4.26E-05	1.94E-05	1.05678E-06
residential	REC_100M	486030.59	3619325.04	5E-03	1E-02	3E-03	0E+00	1E-03	1E-03	0.00021	0.00013	9.07284E-06	7.09E-05	0.11	0.0759	2.63E-05	7.93E-05	4.59E-05	4.16E-05	1.9E-05	1.03214E-06
residential	REC_100M	486230.59	3619325.04	5E-03	1E-02	3E-03	0E+00	1E-03	1E-03	0.00022	0.000136	9.50675E-06	7.43E-05	0.10	0.07034	2.43E-05	7.35E-05	4.26E-05	3.86E-05	1.76E-05	9.56534E-07
residential	REC_100M	486330.59	3619325.04	4E-03	1E-02	2E-03	0E+00	1E-03	1E-03	0.00021	0.000129	9.03057E-06	7.06E-05	0.10	0.06717	2.33E-05	7.02E-05	4.06E-05	3.68E-05	1.68E-05	9.13471E-07
residential	REC_100M	486430.59	3619325.04	4E-03	1E-02	2E-03	0E+00	1E-03	1E-03	0.0002	0.000122	8.52654E-06	6.66E-05	0.09	0.06358	2.2E-05	6.64E-05	3.85E-05	3.49E-05	1.59E-05	8.64586E-07
residential	REC_100M	486530.59	3619325.04	3E-03	9E-03	2E-03	0E+00	1E-03	1E-03	0.00019	0.000117	8.14826E-06	6.37E-05	0.09	0.0596	2.06E-05	6.23E-05	3.61E-05	3.27E-05	1.49E-05	8.1053E-07
residential	REC_100M	486630.59	3619325.04	3E-03	8E-03	2E-03	0E+00	1E-03	9E-04	0.00018	0.000113	7.88075E-06	6.16E-05	0.08	0.05559	1.92E-05	5.81E-05	3.36E-05	3.05E-05	1.39E-05	7.55998E-07
residential	REC_100M	486730.59	3619325.04	3E-03	7E-03	2E-03	0E+00	1E-03	8E-04	0.00017	0.000108	7.51393E-06	5.87E-05	0.08	0.05152	1.78E-05	5.39E-05	3.12E-05	2.83E-05	1.29E-05	7.00653E-07
residential	REC_100M	486830.59	3619325.04	2E-03	6E-03	2E-03	0E+00	9E-04	8E-04	0.00016	0.000102	7.1024E-06	5.55E-05	0.07	0.04742	1.64E-05	4.96E-05	2.87E-05	2.6E-05	1.19E-05	6.4492E-07
residential	REC_100M	486930.59	3619325.04	2E-03	6E-03	2E-03	0E+00	9E-04	7E-04	0.00017	0.000105	7.36627E-06	5.76E-05	0.07	0.04489	1.55E-05	4.69E-05	2.72E-05	2.46E-05	1.12E-05	6.10507E-07
residential	REC_100M	487030.59	3619325.04	2E-03	5E-03	1E-03	0E+00	8E-04	7E-04	0.00016	0.000101	7.02221E-06	5.49E-05	0.06	0.0417	1.44E-05	4.36E-05	2.52E-05	2.29E-05	1.04E-05	5.67038E-07
residential	REC_100M	487130.59	3619325.04	2E-03	5E-03	1E-03	0E+00	7E-04	6E-04	0.00015	9.59E-05	6.69798E-06	5.23E-05	0.06	0.03884	1.34E-05	4.06E-05	2.35E-05	2.13E-05	9.72E-06	5.2823E-07
residential	REC_100M	487230.59	3619325.04	2E-03	5E-03	1E-03	0E+00	7E-04	6E-04	0.00017	0.000102	7.15028E-06	5.59E-05	0.06	0.0375	1.3E-05	3.92E-05	2.27E-05	2.06E-05	9.39E-06	5.10039E-07
residential	REC_100M	487330.59	3619325.04	2E-03	4E-03	1E-03	0E+00	6E-04	5E-04	0.00015	9.45E-05	6.6012E-06	5.16E-05	0.05	0.03486	1.21E-05	3.64E-05	2.11E-05	1.91E-05	8.72E-06	4.74048E-07
residential	REC_100M	487430.59	3619325.04	2E-03	4E-03	1E-03	0E+00	6E-04	5E-04	0.00016	0.000102	7.1255E-06	5.57E-05	0.05	0.03386	1.17E-05	3.54E-05	2.05E-05	1.86E-05	8.47E-06	4.60509E-07
residential	REC_100M	487530.59	3619325.04	1E-03	4E-03	1E-03	0E+00	6E-04	5E-04	0.00015	9.41E-05	6.57713E-06	5.14E-05	0.05	0.03163	1.09E-05	3.31E-05	1.91E-05	1.73E-05	7.92E-06	4.30127E-07
residential	REC_100M	487630.59	3619325.04	1E-03	4E-03	1E-03	0E+00	5E-04	5E-04	0.00015	9.52E-05	6.65157E-06	5.2E-05	0.05	0.03041	1.05E-05	3.18E-05	1.84E-05	1.67E-05	7.61E-06	4.1361E-07
residential	REC_100M	487730.59	3619325.04	1E-03	3E-03	9E-04	0E+00	5E-04	4E-04	0.00014	8.81E-05	6.15785E-06	4.81E-05	0.04	0.02864	9.91E-06	2.99E-05	1.73E-05	1.57E-05	7.17E-06	3.89464E-07
residential	REC_100M	487830.59	3619325.04	1E-03	3E-03	8E-04	0E+00	4E-04	4E-04	0.00013	8.35E-05	5.83482E-06	4.56E-05	0.04	0.02724	9.43E-06	2.85E-05	1.65E-05	1.49E-05	6.82E-06	3.70398E-07
residential	REC_100M	487930.59	3619325.04	1E-03	3E-03	8E-04	0E+00	4E-04	4E-04	0.00014	8.42E-05	5.88204E-06	4.6E-05	0.04	0.0265	9.17E-06	2.77E-05	1.6E-05	1.45E-05	6.63E-06	3.60339E-07
residential	REC_100M	476730.59	3619425.04	7E-05	2E-04	4E-05	0E+00	2E-05	2E-05	4.3E-06	2.63E-06	1.83875E-07	1.44E-06	0.01	0.00419	1.45E-06	4.38E-06	2.53E-06	2.3E-06	1.05E-06	5.69543E-08
residential	REC_100M	476830.59	3619425.04	7E-05	2E-04	4E-05	0E+00	2E-05	2E-05	4.3E-06	2.67E-06	1.86385E-07	1.46E-06	0.01	0.00428	1.48E-06	4.47E-06	2.59E-06	2.35E-06	1.07E-06	5.8161E-08
residential	REC_100M	476930.59	3619425.04	7E-05	2E-04	4E-05	0E+00	2E-05	2E-05	4.3E-06	2.66E-06	1.86022E-07	1.45E-06	0.01	0.00432	1.5E-06	4.51E-06	2.61E-06	2.37E-06	1.08E-06	5.87323E-08
residential	REC_100M	477030.59	3619425.04	7E-05	2E-04	5E-05	0E+00	2E-05	2E-05	4.3E-06	2.67E-06	1.86477E-07	1.46E-06	0.01	0.00438	1.52E-06	4.58E-06	2.65E-06	2.4E-06	1.1E-06	5.9541E-08
residential	REC_100M	477130.59	3619425.04	7E-05	2E-04	5E-05	0E+00	3E-05	2E-05	4.4E-06	2.74E-06	1.91202E-07	1.49E-06	0.01	0.00452	1.56E-06	4.72E-06	2.73E-06	2.48E-06	1.13E-06	6.14461E-08
residential	REC_100M	477230.59	3619425.04	7E-05	2E-04	5E-05	0E+00	3E-05	2E-05	4.6E-06	2.83E-06	1.97761E-07	1.55E-06	0.01	0.00469	1.62E-06	4.91E-06	2.84E-06	2.57E-06	1.17E-06	6.38368E-08
residential	REC_100M	477330.59	3619425.04	8E-05	2E-04	5E-05	0E+00	3E-05	2E-05	4.9E-06	3.02E-06	2.11215E-07	1.65E-06	0.01	0.005	1.73E-06	5.23E-06	3.03E-06	2.74E-06	1.25E-06	6.80499E-08
residential	REC_100M	477430.59	3619425.04	9E-05	2E-04	6E-05	0E+00	3E-05	3E-05	5.3E-06	3.27E-06	2.28475E-07	1.79E-06	0.01	0.00544	1.88E-06	5.68E-06	3.29E-06	2.98E-06	1.36E-06	7.39616E-08
residential	REC_100M	477530.59	3619425.04	9E-05	3E-04	6E-05	0E+00	3E-05	3E-05	5.5E-06	3.4E-06	2.37466E-07	1.86E-06	0.01	0.00576	1.99E-06	6.02E-06	3.48E-06	3.16E-06	1.44E-06	7.82802E-08
residential	REC_100M	477630.59	3619425.04	1E-04	3E-04	6E-05	0E+00	3E-05	3E-05	5.6E-06	3.48E-06	2.43365E-07	1.9E-06	0.01	0.00603	2.09E-06	6.31E-06	3.65E-06	3.31E-06	1.51E-06	8.20458E-08
residential	REC_100M	477730.59	3619425.04	1E-04	3E-04	6E-05	0E+00	3E-05	3E-05	5.8E-06	3.6E-06	2.51562E-07	1.97E-06	0.01	0.00643	2.23E-06	6.72E-06	3.89E-06	3.53E-06	1.61E-06	8.74568E-08
recreational	park	477830.59	3619425.04	1E-04	3E-04	7E-05	0E+00	4E-05	3E-05	6.1E-06	3.75E-06	2.62079E-07	2.05E-06	0.01	0.00693	0	6.64E-07	3.54E-07	2.88E-07	1.33E-07	0
recreational	park	478530.59	3619425.04	1E-04	3E-04	8E-05	0E+00	4E-05	4E-05	6.6E-06	4.1E-06	2.86769E-07	2.24E-06	0.02	0.00927	0	8.89E-07	4.74E-07	3.85E-07	1.78E-07	0
recreational	park	478630.59	3619425.04	1E-04	3E-04	8E-05	0E+00	4E-05	4E-05	6.7E-06	4.16E-06	2.90581E-07	2.27E-06	0.02	0.00981	0	9.4E-07	5.02E-07	4.08E-07	1.88E-07	0
recreational	park	483530.59	3619425.04	3E-04	9E-04	4E-04	0E+00	2E-04	2E-04	1.6E-05	9.87E-06	6.89427E-07	5.39E-06	0.04	0.02438	0	2.34E-06	1.25E-06	1.01E-06	4.68E-07	0
recreational	park	483630.59	3619425.04	4E-04	1E-03	4E-04	0E+00	2E-04	2E-04	1.6E-05	1.01E-05	7.05601E-07	5.51E-06	0.04	0.02402	0	2.3E-06	1.23E-06	9.98E-07	4.61E-07	0
recreational	park	483730.59	3619425.04	4E-04	1E-03	4E-04	0E+00	2E-04	2E-04	1.7E-05	1.03E-05	7.23067E-07	5.65E-06	0.04	0.02418	0	2.32E-06	1.24E-06	1E-06	4.64E-07	0
recreational	park	483830.59	3619425.04	4E-04	1E-03	4E-04	0E+00	2E-04	2E-04	1.7E-05	1.06E-05	7.42399E-07	5.8E-06	0.04	0.02436	0	2.34E-06	1.25E-06	1.01E-06	4.67E-07	0
recreational	park	483930.59	3619425.04	4E-04	1E-03	5E-04	0E+00	3E-04	2E-04	1.8E-05	1.09E-05	7.63604E-07	5.97E-06	0.04	0.0248	0	2.38E-06	1.27E-06	1.03E-06	4.76E-07	0
residential	REC_100M	484030.59	3619425.04	5E-04	1E-03	5E-04	0E+00	3E-04	2E-04	1.8E-05	1.13E-05	7.87909E-07	6.16E-06	0.04	0.02577	8.92E-06	2.69E-05	1.56E-05	1.41E-05	6.45E-06	3.50412E-07
residential	REC_100M	484130.59	3619425.04	5E-04	1E-03	5E-04	0E+00	3E-04	2E-04	1.9E-05	1.17E-05	8.16302E-07	6.38E-06	0.04	0.02633	9.11E-06	2.75E-05	1.59E-05	1.44E-05	6.59E-06	3.58033E-07
residential	REC_100M	484230.59	3619425.04	6E-04	2E-03	6E-04	0E+00	3E-04	3E-04	2E-05	1.22E-05	8.50493E-07	6.65E-06	0.04	0.02697	9.34E-06	2.82E-05	1.63E-05	1.48E-05	6.75E-06	3.66796E-07
residential	REC_100M	484330.59	3619425.04	6E-04	2E-03	5E-04	0E+00	3E-04	2E-04	2.1E-05	1.28E-05	8.93177E-07	6.98E-06	0.04	0.02739	9.48E-06	2.86E-05	1.66E-05	1.5E-05	6.85E-06	3.72467E-07
residential	REC_100M	484430.59	3619425.04	7E-04	2E-03	5E-04	0E+00	3E-04	3E-04	2.2E-05	1.36E-05	9.49003E-07	7.42E-06	0.04	0.0285	9.86E-06	2.98E-05	1.72E-05	1.56E-05	7.13E-06	3.87525E-07
residential	REC_100M	484530.59	3619425.04	8E-04	2E-03	6E-04	0E+00	3E-04	3E-04	2.4E-05	1.46E-05	1.02237E-06	7.99E-06	0.04	0.03039	1.05E-05	3.18E-05	1.84E-05	1.67E-05	7.61E-06	4.13246E-07
residential	REC_100M	484630.59	3619425.04	9E-04	2E-03	6E-04	0E+00	3E-04	3E-04	2.6E-05	1.6E-05	1.1208E-06	8.76E-06	0.04	0.03287	1.14E-05	3.44E-05	1.99E-05	1.8E-05	8.23E-06	4.47007E-07

Multi-Purpose General Cargo

Dry Bulk

TAMT Risk Assessment - DPM Cancer and Chronic HI

AERMOD Output

Receptor type	Discrete Receptor ID (Group Name)	X	Y	Equipment: Multi-Purpose General CargoSTC UNMIT 17%	Equipment: Dry BulkSTC UNMIT 45%	Locomotives: All 100%	Locomotives: Refrigerated ContainersSTC UNMIT 0%	Locomotives: Multi-Purpose General CargoSTC UNMIT 54%	Locomotives: Dry BulkSTC UNMIT 46%	Trucks: All 100%	Trucks: Refrigerated ContainersSTC UNMIT 62%	Trucks: Multi-Purpose General CargoSTC UNMIT 4%	Trucks: Dry BulkSTC UNMIT 34%	All
residential	REC_100M	484730.59	3619425.04	1E-03	3E-03	7E-04	0E+00	4E-04	3E-04	2.9E-05	1.79E-05	1.25057E-06	9.77E-06	0.05
residential	REC_100M	484830.59	3619425.04	1E-03	3E-03	7E-04	0E+00	4E-04	3E-04	3.2E-05	2E-05	1.39664E-06	1.09E-05	0.05
residential	REC_100M	484930.59	3619425.04	1E-03	4E-03	7E-04	0E+00	4E-04	3E-04	3.7E-05	2.26E-05	1.58002E-06	1.23E-05	0.06
residential	REC_100M	485030.59	3619425.04	2E-03	5E-03	7E-04	0E+00	4E-04	3E-04	4.2E-05	2.58E-05	1.80405E-06	1.41E-05	0.06
residential	REC_100M	485130.59	3619425.04	2E-03	5E-03	8E-04	0E+00	4E-04	4E-04	4.8E-05	2.96E-05	2.06705E-06	1.62E-05	0.07
residential	REC_100M	485230.59	3619425.04	2E-03	7E-03	9E-04	0E+00	5E-04	4E-04	5.6E-05	3.46E-05	2.41401E-06	1.89E-05	0.08
residential	REC_100M	485330.59	3619425.04	3E-03	8E-03	1E-03	0E+00	5E-04	5E-04	6.5E-05	4.04E-05	2.82428E-06	2.21E-05	0.08
residential	REC_100M	485430.59	3619425.04	3E-03	9E-03	1E-03	0E+00	6E-04	5E-04	7.9E-05	4.9E-05	3.42641E-06	2.68E-05	0.09
residential	REC_100M	485530.59	3619425.04	4E-03	1E-02	1E-03	0E+00	7E-04	6E-04	9.6E-05	5.94E-05	4.14918E-06	3.24E-05	0.09
residential	REC_100M	485630.59	3619425.04	4E-03	1E-02	2E-03	0E+00	8E-04	7E-04	0.00011	6.98E-05	4.87353E-06	3.81E-05	0.10

Refrigerated Containers

ug/m3	Dose Inhalation 3rd tri	0<2	2<9	2<16	16<30	Risk (Residential 30-yr; school 9-yr; park 15-year) 3rd tri	0<2	2<9	2<16	16<30	Summed Risk	Cases Per Million	Chronic HI
0.03582	1.24E-05	3.74E-05	2.17E-05	1.96E-05	8.96E-06	4.87096E-07	1.17659E-05	0	1.29662E-05	1.97213E-06	2.719E-05	27	0.00716
0.03896	1.35E-05	4.07E-05	2.36E-05	2.14E-05	9.75E-06	5.29771E-07	1.27967E-05	0	1.41022E-05	2.14491E-06	2.957E-05	30	0.00779
0.04268	1.48E-05	4.46E-05	2.58E-05	2.34E-05	1.07E-05	5.8044E-07	1.40206E-05	0	1.5451E-05	2.35006E-06	3.24E-05	32	0.00854
0.04679	1.62E-05	4.89E-05	2.83E-05	2.57E-05	1.17E-05	6.36306E-07	1.537E-05	0	1.69381E-05	2.57624E-06	3.552E-05	36	0.00936
0.05122	1.77E-05	5.35E-05	3.1E-05	2.81E-05	1.28E-05	6.96615E-07	1.68268E-05	0	1.85435E-05	2.82042E-06	3.889E-05	39	0.01024
0.05602	1.94E-05	5.86E-05	3.39E-05	3.07E-05	1.4E-05	7.61827E-07	1.8402E-05	0	2.02794E-05	3.08445E-06	4.253E-05	43	0.0112
0.06038	2.09E-05	6.31E-05	3.65E-05	3.31E-05	1.51E-05	8.21151E-07	1.9835E-05	0	2.18585E-05	3.32464E-06	4.584E-05	46	0.01208
0.06446	2.23E-05	6.74E-05	3.9E-05	3.54E-05	1.61E-05	8.76557E-07	2.11733E-05	0	2.33334E-05	3.54896E-06	4.893E-05	49	0.01289
0.06784	2.35E-05	7.09E-05	4.1E-05	3.72E-05	1.7E-05	9.22573E-07	2.22849E-05	0	2.45583E-05	3.73527E-06	5.15E-05	52	0.01357
0.07038	2.44E-05	7.36E-05	4.26E-05	3.86E-05	1.76E-05	9.5715E-07	2.31201E-05	0	2.54787E-05	3.87526E-06	5.343E-05	53	0.01408

Multi-Purpose General Cargo

ug/m3	Dose Inhalation 3rd tri	0<2	2<9	2<16	16<30	Risk (Residential 30-yr; school 9-yr; park 15-year) 3rd tri	0<2	2<9	2<16	16<30	Summed Risk	Cases Per Million	Chronic HI
6E-03	2E-06	6E-06	3E-06	3E-06	1E-06	8E-08	2E-06	0E+00	2E-06	3E-07	4.2E-06	4.188	0.0011
6E-03	2E-06	6E-06	3E-06	3E-06	1E-06	8E-08	2E-06	0E+00	2E-06	3E-07	4.4E-06	4.360	0.00115
6E-03	2E-06	6E-06	4E-06	3E-06	2E-06	8E-08	2E-06	0E+00	2E-06	3E-07	4.6E-06	4.600	0.00121
6E-03	2E-06	7E-06	4E-06	4E-06	2E-06	9E-08	2E-06	0E+00	2E-06	4E-07	4.9E-06	4.922	0.0013
7E-03	2E-06	7E-06	4E-06	4E-06	2E-06	1E-07	2E-06	0E+00	3E-06	4E-07	5.3E-06	5.342	0.00141
8E-03	3E-06	8E-06	5E-06	4E-06	2E-06	1E-07	3E-06	0E+00	3E-06	4E-07	5.9E-06	5.914	0.00156
8E-03	3E-06	9E-06	5E-06	5E-06	2E-06	1E-07	3E-06	0E+00	3E-06	5E-07	6.5E-06	6.450	0.0017
9E-03	3E-06	1E-05	6E-06	5E-06	2E-06	1E-07	3E-06	0E+00	3E-06	5E-07	7.0E-06	7.040	0.00185
1E-02	3E-06	1E-05	6E-06	5E-06	2E-06	1E-07	3E-06	0E+00	4E-06	5E-07	7.5E-06	7.547	0.00199
1E-02	4E-06	1E-05	6E-06	6E-06	3E-06	1E-07	3E-06	0E+00	4E-06	6E-07	8.0E-06	7.968	0.0021

Dry Bulk

ug/m3	Dose Inhalation 3rd tri	0<2	2<9	2<16	16<30	Risk (Residential 30-yr; school 9-yr; park 15-year) 3rd tri	0<2	2<9	2<16	16<30	Summed Risk	Cases Per Million	Chronic HI
7E-03	2E-06	7E-06	4E-06	4E-06	2E-06	1E-07	2E-06	0E+00	3E-06	4E-07	5.4E-06	5.384	0.00142
8E-03	3E-06	8E-06	5E-06	4E-06	2E-06	1E-07	2E-06	0E+00	3E-06	4E-07	5.7E-06	5.736	0.00151
8E-03	3E-06	9E-06	5E-06	4E-06	2E-06	1E-07	3E-06	0E+00	3E-06	4E-07	6.2E-06	6.195	0.00163
9E-03	3E-06	9E-06	5E-06	5E-06	2E-06	1E-07	3E-06	0E+00	3E-06	5E-07	6.8E-06	6.809	0.00179
1E-02	3E-06	1E-05	6E-06	5E-06	3E-06	1E-07	3E-06	0E+00	4E-06	6E-07	7.6E-06	7.608	0.002
1E-02	4E-06	1E-05	7E-06	6E-06	3E-06	2E-07	4E-06	0E+00	4E-06	6E-07	8.7E-06	8.711	0.00229
1E-02	4E-06	1E-05	8E-06	7E-06	3E-06	2E-07	4E-06	0E+00	5E-06	7E-07	9.8E-06	9.791	0.00258
2E-02	5E-06	2E-05	9E-06	8E-06	4E-06	2E-07	5E-06	0E+00	5E-06	8E-07	1.1E-05	10.952	0.00289
2E-02	5E-06	2E-05	9E-06	9E-06	4E-06	2E-07	5E-06	0E+00	6E-06	9E-07	1.2E-05	11.911	0.00314
2E-02	6E-06	2E-05	1E-05	9E-06	4E-06	2E-07	5E-06	0E+00	6E-06	9E-07	1.3E-05	12.658	0.00333

TAMT Risk Assessment - DPM Cancer and Chronic HI

				Equipment		Locomotives				Trucks				
				Multi-Purpose General CargoSTC UNMIT	Dry BulkSTC UNMIT	All	Refrigerated ContainersSTC UNMIT	Multi-Purpose General CargoSTC UNMIT	Dry BulkSTC UNMIT	All	Refrigerated ContainersSTC UNMIT	Multi-Purpose General CargoSTC UNMIT	Dry BulkSTC UNMIT	All
AERMOD Output				17%	45%	100%	0%	54%	46%	100%	62%	4%	34%	
	Discrete Receptor ID (Group Name)	X	Y											
residential	REC_100M	477730.59	3619825.04	8E-05	2E-04	5E-05	0E+00	3E-05	3E-05	5E-06	3.09E-06	2.15704E-07	1.69E-06	0.01
residential	REC_100M	477830.59	3619825.04	9E-05	2E-04	6E-05	0E+00	3E-05	3E-05	5.2E-06	3.2E-06	2.23344E-07	1.75E-06	0.01
recreational	park	477930.59	3619825.04	1E-04	3E-04	6E-05	0E+00	3E-05	3E-05	5.3E-06	3.3E-06	2.30871E-07	1.8E-06	0.01
recreational	park	478930.59	3619825.04	1E-04	3E-04	8E-05	0E+00	4E-05	4E-05	6E-06	3.72E-06	2.59988E-07	2.03E-06	0.02
recreational	park	479030.59	3619825.04	1E-04	3E-04	8E-05	0E+00	4E-05	4E-05	6.1E-06	3.77E-06	2.633E-07	2.06E-06	0.02
recreational	park	479130.59	3619825.04	1E-04	3E-04	8E-05	0E+00	4E-05	4E-05	6.2E-06	3.82E-06	2.66604E-07	2.08E-06	0.02
recreational	park	483830.59	3619825.04	3E-04	9E-04	3E-04	0E+00	2E-04	2E-04	1.3E-05	8.29E-06	5.79243E-07	4.53E-06	0.03
recreational	park	483930.59	3619825.04	4E-04	1E-03	3E-04	0E+00	2E-04	2E-04	1.4E-05	8.62E-06	6.02465E-07	4.71E-06	0.03
residential	REC_100M	484030.59	3619825.04	4E-04	1E-03	4E-04	0E+00	2E-04	2E-04	1.5E-05	9.03E-06	6.31135E-07	4.93E-06	0.03
residential	REC_100M	484130.59	3619825.04	4E-04	1E-03	4E-04	0E+00	2E-04	2E-04	1.5E-05	9.54E-06	6.6676E-07	5.21E-06	0.03
residential	REC_100M	484230.59	3619825.04	5E-04	1E-03	4E-04	0E+00	2E-04	2E-04	1.6E-05	1.02E-05	7.1134E-07	5.56E-06	0.03
residential	REC_100M	484330.59	3619825.04	5E-04	1E-03	4E-04	0E+00	2E-04	2E-04	1.8E-05	1.08E-05	7.5741E-07	5.92E-06	0.03
residential	REC_100M	484430.59	3619825.04	6E-04	2E-03	4E-04	0E+00	2E-04	2E-04	1.9E-05	1.17E-05	8.16421E-07	6.38E-06	0.03
residential	REC_100M	484530.59	3619825.04	6E-04	2E-03	4E-04	0E+00	2E-04	2E-04	2.1E-05	1.27E-05	8.89343E-07	6.95E-06	0.03
residential	REC_100M	484630.59	3619825.04	7E-04	2E-03	4E-04	0E+00	2E-04	2E-04	2.3E-05	1.41E-05	9.82552E-07	7.68E-06	0.04
residential	REC_100M	484730.59	3619825.04	8E-04	2E-03	4E-04	0E+00	2E-04	2E-04	2.5E-05	1.56E-05	1.08774E-06	8.5E-06	0.04
residential	REC_100M	484830.59	3619825.04	9E-04	2E-03	4E-04	0E+00	2E-04	2E-04	2.8E-05	1.72E-05	1.204E-06	9.41E-06	0.04
residential	REC_100M	484930.59	3619825.04	1E-03	3E-03	5E-04	0E+00	3E-04	2E-04	3.1E-05	1.91E-05	1.33349E-06	1.04E-05	0.05
residential	REC_100M	485030.59	3619825.04	1E-03	3E-03	5E-04	0E+00	3E-04	2E-04	3.4E-05	2.13E-05	1.48582E-06	1.16E-05	0.05
residential	REC_100M	485130.59	3619825.04	1E-03	4E-03	6E-04	0E+00	3E-04	3E-04	3.8E-05	2.35E-05	1.63978E-06	1.28E-05	0.05
residential	REC_100M	485230.59	3619825.04	2E-03	4E-03	6E-04	0E+00	3E-04	3E-04	4.2E-05	2.63E-05	1.83555E-06	1.43E-05	0.06
residential	REC_100M	485330.59	3619825.04	2E-03	5E-03	7E-04	0E+00	4E-04	3E-04	4.8E-05	2.99E-05	2.0894E-06	1.63E-05	0.06
residential	REC_100M	485430.59	3619825.04	2E-03	6E-03	8E-04	0E+00	4E-04	4E-04	5.6E-05	3.45E-05	2.40706E-06	1.88E-05	0.07
residential	REC_100M	485530.59	3619825.04	2E-03	6E-03	9E-04	0E+00	5E-04	4E-04	6.7E-05	4.14E-05	2.89304E-06	2.26E-05	0.07
residential	REC_100M	485630.59	3619825.04	2E-03	7E-03	1E-03	0E+00	6E-04	5E-04	7.5E-05	4.66E-05	3.25367E-06	2.54E-05	0.07
residential	REC_100M	485730.59	3619825.04	3E-03	7E-03	1E-03	0E+00	6E-04	5E-04	8.6E-05	5.35E-05	3.7368E-06	2.92E-05	0.08
residential	REC_100M	485830.59	3619825.04	3E-03	7E-03	1E-03	0E+00	7E-04	6E-04	9.5E-05	5.9E-05	4.12287E-06	3.22E-05	0.08
residential	REC_100M	485930.59	3619825.04	3E-03	7E-03	1E-03	0E+00	7E-04	6E-04	0.00011	6.61E-05	4.61935E-06	3.61E-05	0.08
residential	REC_100M	486030.59	3619825.04	3E-03	8E-03	1E-03	0E+00	8E-04	7E-04	0.00012	7.24E-05	5.06078E-06	3.95E-05	0.08
residential	REC_100M	476730.59	3619925.04	6E-05	2E-04	4E-05	0E+00	2E-05	2E-05	3.8E-06	2.34E-06	1.63825E-07	1.28E-06	0.01
residential	REC_100M	476830.59	3619925.04	6E-05	2E-04	4E-05	0E+00	2E-05	2E-05	3.9E-06	2.39E-06	1.67038E-07	1.31E-06	0.01
residential	REC_100M	476930.59	3619925.04	6E-05	2E-04	4E-05	0E+00	2E-05	2E-05	3.8E-06	2.37E-06	1.65643E-07	1.29E-06	0.01
residential	REC_100M	477030.59	3619925.04	6E-05	2E-04	4E-05	0E+00	2E-05	2E-05	3.8E-06	2.37E-06	1.65288E-07	1.29E-06	0.01
residential	REC_100M	477130.59	3619925.04	6E-05	2E-04	4E-05	0E+00	2E-05	2E-05	3.9E-06	2.41E-06	1.68569E-07	1.32E-06	0.01
residential	REC_100M	477230.59	3619925.04	6E-05	2E-04	4E-05	0E+00	2E-05	2E-05	4E-06	2.5E-06	1.74608E-07	1.36E-06	0.01
residential	REC_100M	477330.59	3619925.04	7E-05	2E-04	5E-05	0E+00	2E-05	2E-05	4.2E-06	2.63E-06	1.83627E-07	1.44E-06	0.01
residential	REC_100M	477430.59	3619925.04	7E-05	2E-04	4E-05	0E+00	2E-05	2E-05	4.2E-06	2.59E-06	1.81188E-07	1.42E-06	0.01
residential	REC_100M	477530.59	3619925.04	7E-05	2E-04	5E-05	0E+00	2E-05	2E-05	4.2E-06	2.62E-06	1.82906E-07	1.43E-06	0.01
residential	REC_100M	477630.59	3619925.04	7E-05	2E-04	5E-05	0E+00	3E-05	2E-05	4.6E-06	2.82E-06	1.9683E-07	1.54E-06	0.01
residential	REC_100M	477730.59	3619925.04	8E-05	2E-04	5E-05	0E+00	3E-05	2E-05	4.8E-06	2.95E-06	2.06278E-07	1.61E-06	0.01
residential	REC_100M	477830.59	3619925.04	8E-05	2E-04	5E-05	0E+00	3E-05	3E-05	5E-06	3.07E-06	2.14455E-07	1.68E-06	0.01
recreational	park	477930.59	3619925.04	9E-05	2E-04	6E-05	0E+00	3E-05	3E-05	5.2E-06	3.2E-06	2.23297E-07	1.75E-06	0.01
recreational	park	479030.59	3619925.04	1E-04	3E-04	8E-05	0E+00	4E-05	4E-05	5.9E-06	3.63E-06	2.53852E-07	1.98E-06	0.01
recreational	park	479130.59	3619925.04	1E-04	3E-04	8E-05	0E+00	4E-05	4E-05	5.9E-06	3.68E-06	2.57021E-07	2.01E-06	0.02
recreational	park	479230.59	3619925.04	1E-04	3E-04	8E-05	0E+00	4E-05	4E-05	6E-06	3.72E-06	2.60178E-07	2.03E-06	0.02
recreational	park	483530.59	3619925.04	3E-04	7E-04	3E-04	0E+00	1E-04	1E-04	1.2E-05	7.18E-06	5.01933E-07	3.92E-06	0.03
recreational	park	483630.59	3619925.04	3E-04	8E-04	3E-04	0E+00	2E-04	1E-04	1.2E-05	7.39E-06	5.16616E-07	4.04E-06	0.03
recreational	park	483730.59	3619925.04	3E-04	8E-04	3E-04	0E+00	2E-04	1E-04	1.2E-05	7.64E-06	5.33811E-07	4.17E-06	0.03
recreational	park	483830.59	3619925.04	3E-04	9E-04	3E-04	0E+00	2E-04	1E-04	1.3E-05	7.94E-06	5.54633E-07	4.33E-06	0.03
recreational	park	483930.59	3619925.04	4E-04	1E-03	3E-04	0E+00	2E-04	1E-04	1.3E-05	8.3E-06	5.79522E-07	4.53E-06	0.03
residential	REC_100M	484030.59	3619925.04	4E-04	1E-03	3E-04	0E+00	2E-04	2E-04	1.4E-05	8.73E-06	6.10107E-07	4.77E-06	0.03
residential	REC_100M	484130.59	3619925.04	4E-04	1E-03	3E-04	0E+00	2E-04	2E-04	1.5E-05	9.28E-06	6.48122E-07	5.06E-06	0.03
residential	REC_100M	484230.59	3619925.04	5E-04	1E-03	3E-04	0E+00	2E-04	2E-04	1.6E-05	9.95E-06	6.94953E-07	5.43E-06	0.03
residential	REC_100M	484330.59	3619925.04	5E-04	1E-03	3E-04	0E+00	2E-04	2E-04	1.7E-05	1.06E-05	7.37487E-07	5.76E-06	0.03
residential	REC_100M	484430.59	3619925.04	6E-04	1E-03	3E-04	0E+00	2E-04	2E-04	1.9E-05	1.15E-05	8.03014E-07	6.28E-06	0.03
residential	REC_100M	484530.59	3619925.04	6E-04	2E-03	4E-04	0E+00	2E-04	2E-04	2E-05	1.25E-05	8.74384E-07	6.83E-06	0.03
residential	REC_100M	484630.59	3619925.04	7E-04	2E-03	4E-04	0E+00	2E-04	2E-04	2.2E-05	1.38E-05	9.61834E-07	7.52E-06	0.04
residential	REC_100M	484730.59	3619925.04	7E-04	2E-03	4E-04	0E+00	2E-04	2E-04	2.4E-05	1.51E-05	1.05809E-06	8.27E-06	0.04
residential	REC_100M	484830.59	3619925.04	8E-04	2E-03	4E-04	0E+00	2E-04	2E-04	2.7E-05	1.67E-05	1.16575E-06	9.11E-06	0.04
residential	REC_100M	484930.59	3619925.04	1E-03	3E-03	5E-04	0E+00	2E-04	2E-04	3E-05	1.84E-05	1.28271E-06	1E-05	0.04
residential	REC_100M	485030.59	3619925.04	1E-03	3E-03	5E-04	0E+00	3E-04	2E-04	3.3E-05	2.01E-05	1.40708E-06	1.1E-05	0.05
residential	REC_100M	485130.59	3619925.04	1E-03	3E-03	5E-04	0E+00	3E-04	2E-04	3.6E-05	2.23E-05	1.55505E-06	1.22E-05	0.05
residential	REC_100M	485230.59	3619925.04	1E-03	4E-03	6E-04	0E+00	3E-04	3E-04	4E-05	2.48E-05	1.73372E-06	1.35E-05	0.05
residential	REC_100M	485330.59	3619925.04	2E-03	5E-03	7E-04	0E+00	4E-04	3E-04	4.5E-05	2.81E-05	1.96282E-06	1.53E-05	0.06
residential	REC_100M	485430.59	3619925.04	2E-03	5E-03	8E-04	0E+00	4E-04	3E-04	5.2E-05	3.22E-05	2.24809E-06	1.76E-05	0.06
residential	REC_100M	485530.59	3619925.04	2E-03	6E-03	8E-04	0E+00	5E-04	4E-04	6E-05	3.69E-05	2.57499E-06	2.01E-05	0.06
residential	REC_100M	485630.59	3619925.04	2E-03	6E-03	9E-04	0E+00	5E-04	4E-04	6.8E-05	4.22E-05	2.94602E-06	2.3E-05	0.07
residential	REC_100M	485730.59	3619925.04	2E-03	6E-03	1E-03	0E+00	6E-04	5E-04	7.8E-05	4.81E-05	3.35975E-06	2.63E-05	0.07
residential	REC_100M	485830.59	3619925.04	2E-03	6E-03	1E-03	0E+00	6E-04	5E-04	8.3E-05	5.14E-05	3.59384E-06	2.81E-05	0.07
residential	REC_100M	485930.59	3619925.04	2E-03	6E-03	1E-03	0E+00	7E-04	6E-04	9.5E-05	5.87E-05	4.10145E-06	3.21E-05	0.07
residential	REC_100M	486030.59	3619925.04	3E-03	7E-03	1E-03	0E+00	7E-04	6E-04	0.00011	6.63E-05	4.63413E-06	3.62E-05	0.07
residential	REC_100M	476730.59	3620025.04	6E-05	2E-04	4E-05	0E+00	2E-05	2E-05	3.7E-06	2.3E-06	1.60883E-07	1.26E-06	0.01
residential	REC_100M	476830.59	3620025.04	6E-05	2E-04	4E-05	0E+00	2E-05	2E-05	3.8E-06	2.37E-06	1.65335E-07	1.29E-06	0.01
residential	REC_100M	476930.59	3620025.04	6E-05	2E-04	4E-05	0E+00	2E-05	2E-05	3.8E-06	2.36E-06	1.64611E-07	1.29E-06	0.01
residential	REC_100M	477030.59	3620025.04	6E-05	2E-04	4E-05	0E+00	2E-05	2E-05	3.8E-06	2.33E-06	1.63005E-07	1.27E-06	0.01
residential	REC_100M	477130.59	3620025.04	6E-05	2E-04	4E-05	0E+00	2E-05	2E-05	3.8E-06	2.35E-06	1.64449E-07	1.29E-06	0.01
residential	REC_100M	477230.59	3620025.04	6E-05	2E-04	4E-05	0E+00	2E-05	2E-05	3.9E-06	2.44E-06	1.7026E-07	1.33E-06	0.01
residential	REC_100M	477330.59	3620025.04	6E-05	2E-04	4E-05	0E+00	2E-05	2E-05	4.1E-06	2.55E-06	1.77925E-07	1.39E-06	0.01
residential	REC_100M	477430.59	3620025.04	7E-05	2E-04	4E-05	0E+00	2E-05	2E-05	4.2E-06	2.59E-06	1.81022E-07	1.41E-06	0.01
residential	REC_100M	477530.59	3620025.04	6E-05	2E-04	4E-05	0E+00	2E-05	2E-05	4.1E-06	2.54E-06	1.77644E-07	1.39E-06	0.01
residential	REC_100M	477630.59	3620025.04	7E-05	2E-04	5E-05	0E+00	3E-05	2E-05	4.3E-06	2.68E-06	1.87115E-07	1.46E-06	0.01
residential	REC_100M	477730.59	3620025.04	7E-05	2E-04	5E-05	0E+00	3E-05	2E-05	4.6E-06	2.84E-06	1.98273E-07	1.55E-06	0.01
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
residential	REC_100M	476730.59	3620125.04	6E-05	2E-04	4E-05	0E+00	2E-05	2E-05	3.6E-06	2.24E-06	1.56472E-07	1.22E-06	0.01
residential	REC_100M	476830.59	3620125.04	6E-05	2E-04	4E-05	0E+00	2E-05	2E-05	3.8E-06	2.33E-06	1.6256E-07	1.27E-06	0.01
residential	REC_100M	476930.59	3620125.04	6E-05	2E-04	4E-05	0E+00	2E-05	2E-05	3.8E-06	2.34E-06	1.63364E-07	1.28E-06	0.01
residential	REC_100M	477030.59	3620125.04	6E-05	2E-04	4E-05	0E+00	2E-05	2E-05	3.8E-06	2.32E-06	1.62263E-07	1.27E-06	0.01
residential	REC_100M	477130.59	3620125.04	6E-05	2E-04	4E-05	0E+00	2E-05	2E-05	3.7E-06	2.32E-06	1.62049E-07	1.27E-06	0.01
residential	REC_100M	477230.59	3620125.04	6E-05	2E-04	4E-05	0E+00	2E-05	2E-05	3.9E-06	2.38E-06	1.6647E-07	1.3E-06	0.01
residential	REC_100M	477330.59	3620125.04	6E-05	2E-04	4E-05	0E+00	2E-05	2E-05	4.1E-06	2.51E-06	1.75488E-07	1.37E-06	0.01
residential	REC_100M	477430.59	3620125.04	6E-05	2E-04	4E-05	0E+00	2E-05	2E-05	4.1E-06	2.53E-06	1.76656E-07	1.38E-06	0.01
residential	REC_100M	477530.59	3620125.04	6E-05	2E-04	4E-05	0E+00	2E-05	2E-05	4E-06	2.45E-06	1.71099E-07	1.34E-06	0.01
residential	REC_100M	477630.59	3620125.04	6E-05	2E-04	4E-05	0E+00	2E-05	2E-05	4.1E-06	2.54E-06	1.77763E-07	1.39E-06	0.01
residential	REC_100M	477730.59	3620125.04	7E-05	2E-04	5E-05	0E+00	3E-05	2E-05	4.4E-06	2.69E-06	1.88185E-07	1.47E-06	0.01
residential	REC_100M	477830.59	3620125.04	7E-05	2E-04	5E-05	0E+00	3E-05	2E-05	4.6E-06	2.82E-06	1.97201E-07	1.54E-06	0.01
residential	REC_100M	477930.59	3620125.04	8E-05	2E-04	5E-05	0E+00	3E-05	2E-05	4.7E-06	2.91E-06	2.03035E-07	1.59E-06	0.01
recreational	park	478030.59	3620125.04	8E-05	2E-04	6E-05	0E+00	3E-05	3E-05	4.8E-06	3E-06	2.09687E-07	1.64E-06	0.01
recreational	park	478130.59	3620125.04	8E-05	2E-04	6E-05	0E+00	3E-05	3E-05	4.9E-06	3.06E-06	2.1395E-07	1.67E-06	0.01
recreational	park	478230.59	3620125.04	9E-05	2E-04	6E-05	0E+00	3E-05	3E-05	5E-06	3.1E-06	2.16361E-07	1.69E-06	0.01
recreational	park	478330.59	3620125.04	9E-05	2E-04	6E-05	0E+00	3E-05	3E-05	5.1E-06	3.13E-06	2.18525E-07	1.71E-06	0.01
recreational	park	478430.59	3620125.04	9E-05	2E-04	6E-05	0E+00	3E-05	3E-05	5.1E-06	3.16E-06	2.2106E-07	1.73E-06	0.01
recreational	park	478530.59	3620125.04	9E-05	2E-04	7E-05	0E+00	4E-05	3E-05	5.2E-06	3.2E-06	2.23573E-07	1.75E-06	0.01
recreational	park	478930.59	3620125.04	1E-04	3E-04	7E-05	0E+00	4E-05	3E-05	5.4E-06	3.35E-06	2.33857E-07	1.83E-06	0.01
recreational	park	479030.59	3620125.04	1E-04	3E-04	7E-05	0E+00	4E-05	3E-05	5.5E-06	3.39E-06	2.36657E-07	1.85E-06	0.01
recreational	park	479230.59	3620125.04	1E-04	3E-04	8E-05	0E+00	4E-05	4E-05	5.6E-06	3.47E-06	2.42288E-07	1.89E-06	0.01
recreational	park	479330.59	3620125.04	1E-04	3E-04	8E-05	0E+00	4E-05	4E-05	5.7E-06	3.51E-06	2.45241E-07	1.92E-06	0.01
recreational	park	483830.59	3620125.04	3E-04	8E-04	3E-04	0E+00	1E-04	1E-04	1.2E-05	7.43E-06	5.1908E-07	4.06E-06	0.02
recreational	park	483930.59	3620125.04	3E-04	9E-04	3E-04	0E+00	2E-04	1E-04	1.3E-05	7.84E-06	5.4743E-07	4.28E-06	0.03
residential	REC_100M	484030.59	3620125.04	4E-04	1E-03	3E-04	0E+00	2E-04	1E-04	1.3E-05	8.33E-06	5.81732E-07	4.55E-06	0.03
residential	REC_100M	484130.59	3620125.04	4E-04	1E-03	3E-04	0E+00	2E-04	1E-04	1.4E-05	8.92E-06	6.23099E-07	4.87E-06	0.03
residential	REC_100M	484230.59	3620125.04	4E-04	1E-03	3E-04	0E+00	2E-04	1E-04	1.5E-05	9.52E-06	6.65349E-07	5.2E-06	0.03
residential	REC_100M	484330.59	3620125.04	5E-04	1E-03	3E-04	0E+00	2E-04	1E-04	1.6E-05	1.02E-05	7.12873E-07	5.57E-06	0.03
residential	REC_100M	484430.59	3620125.04	5E-04	1E-03	3E-04	0E+00	2E-04	1E-04	1.8E-05	1.1E-05	7.71808E-07	6.03E-06	0.03
residential	REC_100M	484530.59	3620125.04	5E-04	1E-03	3E-04	0E+00	2E-04	1E-04	1.9E-05	1.2E-05	8.39886E-07	6.56E-06	0.03
residential	REC_100M	484630.59	3620125.04	6E-04	2E-03	3E-04	0E+00	2E-04	2E-04	2.1E-05	1.31E-05	9.13666E-07	7.14E-06	0.03
residential	REC_100M	484730.59	3620125.04	7E-04	2E-03	3E-04	0E+00	2E-04	2E-04	2.3E-05	1.42E-05	9.91443E-07	7.75E-06	0.03
residential	REC_100M	484830.59	3620125.04	7E-04	2E-03	4E-04	0E+00	2E-04	2E-04	2.5E-05	1.54E-05	1.07755E-06	8.42E-06	0.04
residential	REC_100M	484930.59	3620125.04	8E-04	2E-03	4E-04	0E+00	2E-04	2E-04	2.7E-05	1.68E-05	1.17548E-06	9.19E-06	0.04
residential	REC_100M	485030.59	3620125.04	9E-04	3E-03	4E-04	0E+00	2E-04	2E-04	2.9E-05	1.82E-05	1.27027E-06	9.93E-06	0.04
residential	REC_100M	485130.59	3620125.04	1E-03	3E-03	5E-04	0E+00	3E-04	2E-04	3.1E-05	1.95E-05	1.35984E-06	1.06E-05	0.05
residential	REC_100M	485230.59	3620125.04	1E-03	3E-03	5E-04	0E+00	3E-04	2E-04	3.4E-05	2.1E-05	1.4687E-06	1.15E-05	0.05
residential	REC_100M	485330.59	3620125.04	1E-03	4E-03	6E-04	0E+00	3E-04	3E-04	4E-05	2.46E-05	1.71528E-06	1.34E-05	0.05
residential	REC_100M	485430.59	3620125.04	2E-03	4E-03	7E-04	0E+00	4E-04	3E-04	4.6E-05	2.86E-05	1.99739E-06	1.56E-05	0.05
residential	REC_100M	485530.59	3620125.04	2E-03	5E-03	7E-04	0E+00	4E-04	3E-04	5.1E-05	3.18E-05	2.22229E-06	1.74E-05	0.06
residential	REC_100M	485630.59	3620125.04	2E-03	5E-03	8E-04	0E+00	4E-04	4E-04	5.6E-05	3.45E-05	2.40898E-06	1.88E-05	0.06
residential	REC_100M	485730.59	3620125.04	2E-03	4E-03	8E-04	0E+00	4E-04	4E-04	5.8E-05	3.6E-05	2.51736E-06	1.97E-05	0.06
residential	REC_100M	485830.59	3620125.04	2E-03	5E-03	9E-04	0E+00	5E-04	4E-04	6.6E-05	4.11E-05	2.86985E-06	2.24E-05	0.06
residential	REC_100M	485930.59	3620125.04	2E-03	5E-03	1E-03	0E+00	5E-04	4E-04	7.7E-05	4.78E-05	3.3376E-06	2.61E-05	0.06
residential	REC_100M	476730.59	3620225.04	5E-05	1E-04	4E-05	0E+00	2E-05	2E-05	3.6E-06	2.2E-06	1.5403E-07	1.2E-06	0.01

Refrigerated Containers

Multi-Purpose General Cargo

Dry Bulk

Dose Inhallation

Risk (Residential 30-yr; school 9-yr; park 15-yr)

TAMT Risk Assessment - DPM Cancer and Chronic HI

	Discrete Receptor ID (Group Name)	X	Y	Equipment: Multi-Purpose General CargoSTC UNMIT	Equipment: Dry BulkSTC UNMIT	Locomotives: All	Locomotives: Refrigerated ContainersSTC UNMIT	Locomotives: Multi-Purpose General CargoSTC UNMIT	Locomotives: Dry BulkSTC UNMIT	Trucks: All	Trucks: Refrigerated ContainersSTC UNMIT	Trucks: Multi-Purpose General CargoSTC UNMIT	Trucks: Dry BulkSTC UNMIT	All
AERMOD Output				17%	45%	100%	0%	54%	46%	100%	62%	4%	34%	
residential	REC_100M	476830.59	3620225.04	6E-05	2E-04	4E-05	0E+00	2E-05	2E-05	3.7E-06	2.28E-06	1.59374E-07	1.25E-06	0.01
residential	REC_100M	476930.59	3620225.04	6E-05	2E-04	4E-05	0E+00	2E-05	2E-05	3.7E-06	2.31E-06	1.61339E-07	1.26E-06	0.01
residential	REC_100M	477030.59	3620225.04	6E-05	2E-04	4E-05	0E+00	2E-05	2E-05	3.7E-06	2.31E-06	1.61533E-07	1.26E-06	0.01
residential	REC_100M	477130.59	3620225.04	6E-05	2E-04	4E-05	0E+00	2E-05	2E-05	3.8E-06	2.32E-06	1.62147E-07	1.27E-06	0.01
residential	REC_100M	477230.59	3620225.04	6E-05	2E-04	4E-05	0E+00	2E-05	2E-05	3.8E-06	2.32E-06	1.62185E-07	1.27E-06	0.01
residential	REC_100M	477330.59	3620225.04	6E-05	2E-04	4E-05	0E+00	2E-05	2E-05	3.9E-06	2.44E-06	1.70389E-07	1.33E-06	0.01
residential	REC_100M	477430.59	3620225.04	6E-05	2E-04	4E-05	0E+00	2E-05	2E-05	4E-06	2.48E-06	1.72964E-07	1.35E-06	0.01
residential	REC_100M	477530.59	3620225.04	6E-05	2E-04	4E-05	0E+00	2E-05	2E-05	3.8E-06	2.38E-06	1.66123E-07	1.3E-06	0.01
residential	REC_100M	477630.59	3620225.04	6E-05	2E-04	4E-05	0E+00	2E-05	2E-05	3.9E-06	2.41E-06	1.68052E-07	1.31E-06	0.01
residential	REC_100M	477730.59	3620225.04	6E-05	2E-04	5E-05	0E+00	2E-05	2E-05	4.1E-06	2.53E-06	1.76787E-07	1.38E-06	0.01
residential	REC_100M	477830.59	3620225.04	7E-05	2E-04	5E-05	0E+00	3E-05	2E-05	4.3E-06	2.68E-06	1.87394E-07	1.46E-06	0.01

Refrigerated Containers

	ug/m3	Dose Inhallation: 3rd tri	0<2	2<9	2<16	16<30	Risk (Residential 30-yr; school 9-yr; park 15-year): 3rd tri	0<2	2<9	2<16	16<30	Summed Risk	Cases Per Million	Chronic HI
residential 476830.59	0.00365	1.26E-06	3.81E-06	2.21E-06	2E-06	9.13E-07	4.96153E-08	1.19846E-06	0	1.32073E-06	2.0088E-07	2.77E-06	3	0.00073
residential 476930.59	0.00372	1.29E-06	3.89E-06	2.25E-06	2.04E-06	9.31E-07	5.05852E-08	1.22189E-06	0	1.34655E-06	2.04807E-07	2.824E-06	3	0.00074
residential 477030.59	0.00376	1.3E-06	3.93E-06	2.27E-06	2.06E-06	9.41E-07	5.11298E-08	1.23505E-06	0	1.36104E-06	2.07012E-07	2.854E-06	3	0.00075
residential 477130.59	0.00382	1.32E-06	3.99E-06	2.31E-06	2.09E-06	9.56E-07	5.19204E-08	1.25414E-06	0	1.38209E-06	2.10213E-07	2.898E-06	3	0.00076
residential 477230.59	0.00387	1.34E-06	4.04E-06	2.34E-06	2.12E-06	9.68E-07	5.26165E-08	1.27096E-06	0	1.40062E-06	2.13031E-07	2.937E-06	3	0.00077
residential 477330.59	0.00405	1.4E-06	4.24E-06	2.45E-06	2.22E-06	1.01E-06	5.51079E-08	1.33114E-06	0	1.46694E-06	2.23118E-07	3.076E-06	3	0.00081
residential 477430.59	0.00415	1.44E-06	4.34E-06	2.51E-06	2.28E-06	1.04E-06	5.64941E-08	1.36462E-06	0	1.50384E-06	2.28731E-07	3.154E-06	3	0.00083
residential 477530.59	0.0041	1.42E-06	4.29E-06	2.48E-06	2.25E-06	1.03E-06	5.57681E-08	1.34708E-06	0	1.48451E-06	2.25791E-07	3.113E-06	3	0.00082
residential 477630.59	0.0042	1.45E-06	4.39E-06	2.54E-06	2.3E-06	1.05E-06	5.7099E-08	1.37923E-06	0	1.51994E-06	2.3118E-07	3.187E-06	3	0.00084
residential 477730.59	0.00442	1.53E-06	4.62E-06	2.67E-06	2.42E-06	1.11E-06	6.00473E-08	1.45045E-06	0	1.59842E-06	2.43117E-07	3.352E-06	3	0.00088
residential 477830.59	0.00472	1.63E-06	4.93E-06	2.86E-06	2.59E-06	1.18E-06	6.4179E-08	1.55025E-06	0	1.70841E-06	2.59845E-07	3.583E-06	4	0.00094

Multi-Purpose General Cargo

Dry Bulk

TAMT Risk Assessment - DPM Cancer and Chronic HI

AERMOD Output

	Discrete Receptor ID (Group Name)	X	Y	Equipment: Multi-Purpose General CargoSTC UNMIT (17%)	Equipment: Dry BulkSTC UNMIT (45%)	Locomotives: All (100%)	Locomotives: Refrigerated ContainersSTC UNMIT (0%)	Locomotives: Multi-Purpose General CargoSTC UNMIT (54%)	Locomotives: Dry BulkSTC UNMIT (46%)	Trucks: All (100%)	Trucks: Refrigerated ContainersSTC UNMIT (62%)	Trucks: Multi-Purpose General CargoSTC UNMIT (4%)	Trucks: Dry BulkSTC UNMIT (34%)	All
recreational	park	485730.59	3620525.04	1E-03	3E-03	6E-04	0E+00	3E-04	3E-04	4.3E-05	2.65E-05	1.84905E-06	1.45E-05	0.05
recreational	park	485830.59	3620525.04	1E-03	3E-03	6E-04	0E+00	3E-04	3E-04	4.6E-05	2.85E-05	1.99327E-06	1.56E-05	0.05
residential	REC_100M	477230.59	3620625.04	5E-05	1E-04	4E-05	0E+00	2E-05	2E-05	3.4E-06	2.1E-06	1.46402E-07	1.14E-06	0.01
residential	REC_100M	477330.59	3620625.04	6E-05	2E-04	4E-05	0E+00	2E-05	2E-05	3.4E-06	2.13E-06	1.48932E-07	1.16E-06	0.01
residential	REC_100M	477430.59	3620625.04	5E-05	1E-04	4E-05	0E+00	2E-05	2E-05	3.4E-06	2.09E-06	1.45881E-07	1.14E-06	0.01
residential	REC_100M	477530.59	3620625.04	5E-05	1E-04	4E-05	0E+00	2E-05	2E-05	3.4E-06	2.08E-06	1.45565E-07	1.14E-06	0.01
residential	REC_100M	477630.59	3620625.04	6E-05	2E-04	4E-05	0E+00	2E-05	2E-05	3.5E-06	2.14E-06	1.4943E-07	1.17E-06	0.01
residential	REC_100M	477730.59	3620625.04	6E-05	2E-04	4E-05	0E+00	2E-05	2E-05	3.6E-06	2.23E-06	1.55602E-07	1.22E-06	0.01
residential	REC_100M	477830.59	3620625.04	6E-05	2E-04	4E-05	0E+00	2E-05	2E-05	3.8E-06	2.32E-06	1.62252E-07	1.27E-06	0.01
residential	REC_100M	477930.59	3620625.04	6E-05	2E-04	4E-05	0E+00	2E-05	2E-05	3.9E-06	2.42E-06	1.68987E-07	1.32E-06	0.01

Refrigerated Containers

X	ug/m3	Dose Inhalation: 3rd tri	0<2	2<9	2<16	16<30	Risk (Residential 30-yr; school 9-yr; park 15-year): 3rd tri	0<2	2<9	2<16	16<30	Summed Risk	Cases Per Million	Chronic HI
485730.59	0.03422	0	3.28E-06	1.75E-06	1.42E-06	6.56E-07	0	1.0313E-06	5.8E-07	0	6.18777E-08	1.671E-06	2	0.00684
485830.59	0.03474	0	3.33E-06	1.78E-06	1.44E-06	6.66E-07	0	1.04687E-06	5.9E-07	0	6.28121E-08	1.696E-06	2	0.00695
477230.59	0.00364	1.26E-06	3.8E-06	2.2E-06	1.99E-06	9.1E-07	4.94501E-08	1.19447E-06	0	1.31633E-06	2.00211E-07	2.76E-06	3	0.00073
477330.59	0.00373	1.29E-06	3.9E-06	2.26E-06	2.04E-06	9.33E-07	5.06994E-08	1.22465E-06	0	1.34959E-06	2.05269E-07	2.83E-06	3	0.00075
477430.59	0.00373	1.29E-06	3.89E-06	2.25E-06	2.04E-06	9.33E-07	5.06717E-08	1.22398E-06	0	1.34885E-06	2.05157E-07	2.829E-06	3	0.00075
477530.59	0.00377	1.31E-06	3.94E-06	2.28E-06	2.07E-06	9.44E-07	5.1284E-08	1.23877E-06	0	1.36515E-06	2.07636E-07	2.863E-06	3	0.00075
477630.59	0.00388	1.34E-06	4.05E-06	2.35E-06	2.13E-06	9.7E-07	5.27131E-08	1.27329E-06	0	1.40319E-06	2.13422E-07	2.943E-06	3	0.00078
477730.59	0.00403	1.39E-06	4.21E-06	2.44E-06	2.21E-06	1.01E-06	5.47665E-08	1.32289E-06	0	1.45785E-06	2.21736E-07	3.057E-06	3	0.00081
477830.59	0.00419	1.45E-06	4.38E-06	2.53E-06	2.3E-06	1.05E-06	5.69745E-08	1.37623E-06	0	1.51663E-06	2.30676E-07	3.181E-06	3	0.00084
477930.59	0.00437	1.51E-06	4.57E-06	2.65E-06	2.4E-06	1.09E-06	5.94594E-08	1.43625E-06	0	1.58277E-06	2.40736E-07	3.319E-06	3	0.00087

Multi-Purpose General Cargo

X	ug/m3	Dose Inhalation: 3rd tri	0<2	2<9	2<16	16<30	Risk (Residential 30-yr; school 9-yr; park 15-year): 3rd tri	0<2	2<9	2<16	16<30	Summed Risk	Cases Per Million	Chronic HI
485730.59	5E-03	0E+00	5E-07	2E-07	2E-07	9E-08	0E+00	1E-07	8E-08	0E+00	9E-09	2.3E-07	0.234	0.00096
485830.59	5E-03	0E+00	5E-07	2E-07	2E-07	9E-08	0E+00	1E-07	8E-08	0E+00	9E-09	2.4E-07	0.237	0.00097
477230.59	7E-04	2E-07	7E-07	4E-07	4E-07	2E-07	1E-08	2E-07	0E+00	3E-07	4E-08	5.4E-07	0.539	0.00014
477330.59	7E-04	3E-07	8E-07	4E-07	4E-07	2E-07	1E-08	2E-07	0E+00	3E-07	4E-08	5.6E-07	0.558	0.00015
477430.59	7E-04	3E-07	8E-07	4E-07	4E-07	2E-07	1E-08	2E-07	0E+00	3E-07	4E-08	5.6E-07	0.559	0.00015
477530.59	8E-04	3E-07	8E-07	5E-07	4E-07	2E-07	1E-08	2E-07	0E+00	3E-07	4E-08	5.7E-07	0.569	0.00015
477630.59	8E-04	3E-07	8E-07	5E-07	4E-07	2E-07	1E-08	3E-07	0E+00	3E-07	4E-08	5.9E-07	0.594	0.00016
477730.59	8E-04	3E-07	9E-07	5E-07	5E-07	2E-07	1E-08	3E-07	0E+00	3E-07	5E-08	6.3E-07	0.629	0.00017
477830.59	9E-04	3E-07	9E-07	5E-07	5E-07	2E-07	1E-08	3E-07	0E+00	3E-07	5E-08	6.7E-07	0.668	0.00018
477930.59	9E-04	3E-07	1E-06	6E-07	5E-07	2E-07	1E-08	3E-07	0E+00	3E-07	5E-08	7.1E-07	0.713	0.00019

Dry Bulk

X	ug/m3	Dose Inhalation: 3rd tri	0<2	2<9	2<16	16<30	Risk (Residential 30-yr; school 9-yr; park 15-year): 3rd tri	0<2	2<9	2<16	16<30	Summed Risk	Cases Per Million	Chronic HI
485730.59	7E-03	0E+00	6E-07	3E-07	3E-07	1E-07	0E+00	2E-07	1E-07	0E+00	1E-08	3.2E-07	0.323	0.00132
485830.59	7E-03	0E+00	6E-07	3E-07	3E-07	1E-07	0E+00	2E-07	1E-07	0E+00	1E-08	3.3E-07	0.329	0.00135
477230.59	8E-04	3E-07	9E-07	5E-07	5E-07	2E-07	1E-08	3E-07	0E+00	3E-07	5E-08	6.3E-07	0.632	0.00017
477330.59	9E-04	3E-07	9E-07	5E-07	5E-07	2E-07	1E-08	3E-07	0E+00	3E-07	5E-08	6.5E-07	0.654	0.00017
477430.59	9E-04	3E-07	9E-07	5E-07	5E-07	2E-07	1E-08	3E-07	0E+00	3E-07	5E-08	6.5E-07	0.654	0.00017
477530.59	9E-04	3E-07	9E-07	5E-07	5E-07	2E-07	1E-08	3E-07	0E+00	3E-07	5E-08	6.7E-07	0.665	0.00018
477630.59	9E-04	3E-07	1E-06	6E-07	5E-07	2E-07	1E-08	3E-07	0E+00	3E-07	5E-08	6.9E-07	0.693	0.00018
477730.59	1E-03	3E-07	1E-06	6E-07	5E-07	2E-07	1E-08	3E-07	0E+00	3E-07	5E-08	7.3E-07	0.732	0.00019
477830.59	1E-03	4E-07	1E-06	6E-07	6E-07	3E-07	1E-08	3E-07	0E+00	4E-07	6E-08	7.8E-07	0.776	0.0002
477930.59	1E-03	4E-07	1E-06	7E-07	6E-07	3E-07	1E-08	4E-07	0E+00	4E-07	6E-08	8.2E-07	0.825	0.00022

TAMT Risk Assessment - DPM Cancer and Chronic HI

AERMOD Output

Discrete Receptor ID (Group Name)		X	Y	Equipment: Multi-Purpose General CargoSTC UNMIT	Equipment: Dry BulkSTC UNMIT	Locomotives: All	Locomotives: Refrigerated Containers STC UNMIT	Locomotives: Multi-Purpose General CargoSTC UNMIT	Locomotives: Dry BulkSTC UNMIT	Trucks: All	Trucks: Refrigerated Containers STC UNMIT	Trucks: Multi-Purpose General CargoSTC UNMIT	Trucks: Dry BulkSTC UNMIT	All
				17%	45%	100%	0%	54%	46%	100%	62%	4%	34%	
residential	REC_100N	477830.59	3621125.04	5E-05	1E-04	4E-05	0E+00	2E-05	2E-05	3.5E-06	2.16E-06	1.50952E-07	1.18E-06	0.01
residential	REC_100N	477930.59	3621125.04	5E-05	1E-04	4E-05	0E+00	2E-05	2E-05	3.6E-06	2.2E-06	1.53718E-07	1.2E-06	0.01
residential	REC_100N	478030.59	3621125.04	6E-05	2E-04	4E-05	0E+00	2E-05	2E-05	3.6E-06	2.25E-06	1.57258E-07	1.23E-06	0.01
residential	REC_100N	478130.59	3621125.04	6E-05	2E-04	4E-05	0E+00	2E-05	2E-05	3.7E-06	2.28E-06	1.59531E-07	1.25E-06	0.01
residential	REC_100N	478230.59	3621125.04	6E-05	2E-04	4E-05	0E+00	2E-05	2E-05	3.7E-06	2.3E-06	1.60788E-07	1.26E-06	0.01
residential	REC_100N	478330.59	3621125.04	6E-05	2E-04	4E-05	0E+00	2E-05	2E-05	3.7E-06	2.3E-06	1.60899E-07	1.26E-06	0.01
residential	REC_100N	478430.59	3621125.04	6E-05	2E-04	4E-05	0E+00	2E-05	2E-05	3.8E-06	2.33E-06	1.62547E-07	1.27E-06	0.01
residential	REC_100N	478530.59	3621125.04	6E-05	2E-04	4E-05	0E+00	2E-05	2E-05	3.8E-06	2.36E-06	1.65131E-07	1.29E-06	0.01
residential	REC_100N	478630.59	3621125.04	6E-05	2E-04	5E-05	0E+00	3E-05	2E-05	3.9E-06	2.4E-06	1.67857E-07	1.31E-06	0.01
residential	REC_100N	478730.59	3621125.04	7E-05	2E-04	5E-05	0E+00	3E-05	2E-05	3.9E-06	2.43E-06	1.6943E-07	1.32E-06	0.01
residential	REC_100N	478830.59	3621125.04	7E-05	2E-04	5E-05	0E+00	3E-05	2E-05	4E-06	2.45E-06	1.70873E-07	1.34E-06	0.01
residential	REC_100N	478930.59	3621125.04	7E-05	2E-04	5E-05	0E+00	3E-05	2E-05	4E-06	2.47E-06	1.72364E-07	1.35E-06	0.01
residential	REC_100N	479030.59	3621125.04	7E-05	2E-04	5E-05	0E+00	3E-05	2E-05	4E-06	2.49E-06	1.73893E-07	1.36E-06	0.01
residential	REC_100N	479130.59	3621125.04	7E-05	2E-04	5E-05	0E+00	3E-05	2E-05	4.1E-06	2.51E-06	1.75387E-07	1.37E-06	0.01
residential	REC_100N	479230.59	3621125.04	7E-05	2E-04	5E-05	0E+00	3E-05	2E-05	4.1E-06	2.53E-06	1.76872E-07	1.38E-06	0.01
residential	REC_100N	479330.59	3621125.04	7E-05	2E-04	6E-05	0E+00	3E-05	3E-05	4.1E-06	2.55E-06	1.78367E-07	1.39E-06	0.01
residential	REC_100N	479430.59	3621125.04	7E-05	2E-04	6E-05	0E+00	3E-05	3E-05	4.2E-06	2.57E-06	1.79881E-07	1.41E-06	0.01
residential	REC_100N	479530.59	3621125.04	7E-05	2E-04	6E-05	0E+00	3E-05	3E-05	4.2E-06	2.6E-06	1.81458E-07	1.42E-06	0.01
residential	REC_100N	479630.59	3621125.04	7E-05	2E-04	6E-05	0E+00	3E-05	3E-05	4.2E-06	2.62E-06	1.82993E-07	1.43E-06	0.01
recreational	park	481430.59	3621125.04	9E-05	2E-04	9E-05	0E+00	5E-05	4E-05	5E-06	3.09E-06	2.15949E-07	1.69E-06	0.01
recreational	park	481530.59	3621125.04	9E-05	3E-04	9E-05	0E+00	5E-05	4E-05	5.1E-06	3.13E-06	2.18695E-07	1.71E-06	0.01
recreational	park	481630.59	3621125.04	9E-05	3E-04	1E-04	0E+00	5E-05	4E-05	5.1E-06	3.17E-06	2.21523E-07	1.73E-06	0.01
recreational	park	481730.59	3621125.04	1E-04	3E-04	1E-04	0E+00	5E-05	4E-05	5.2E-06	3.21E-06	2.24487E-07	1.75E-06	0.01
recreational	park	481830.59	3621125.04	1E-04	3E-04	1E-04	0E+00	5E-05	5E-05	5.3E-06	3.26E-06	2.27809E-07	1.78E-06	0.01
recreational	park	481930.59	3621125.04	1E-04	3E-04	1E-04	0E+00	5E-05	5E-05	5.3E-06	3.31E-06	2.31127E-07	1.81E-06	0.01
recreational	park	482030.59	3621125.04	1E-04	3E-04	1E-04	0E+00	6E-05	5E-05	5.4E-06	3.36E-06	2.34787E-07	1.83E-06	0.01
recreational	park	482130.59	3621125.04	1E-04	3E-04	1E-04	0E+00	6E-05	5E-05	5.5E-06	3.42E-06	2.38741E-07	1.87E-06	0.01
recreational	park	482230.59	3621125.04	1E-04	3E-04	1E-04	0E+00	6E-05	5E-05	5.6E-06	3.48E-06	2.43133E-07	1.9E-06	0.01
recreational	park	482330.59	3621125.04	1E-04	3E-04	1E-04	0E+00	6E-05	5E-05	5.7E-06	3.55E-06	2.47807E-07	1.94E-06	0.01
recreational	park	482430.59	3621125.04	1E-04	3E-04	1E-04	0E+00	6E-05	5E-05	5.9E-06	3.62E-06	2.53218E-07	1.98E-06	0.01
recreational	park	482530.59	3621125.04	1E-04	3E-04	1E-04	0E+00	6E-05	5E-05	6E-06	3.7E-06	2.58833E-07	2.02E-06	0.01
residential	REC_100N	483830.59	3621125.04	2E-04	7E-04	2E-04	0E+00	8E-05	7E-05	1.1E-05	6.54E-06	4.5662E-07	3.57E-06	0.02
residential	REC_100N	483930.59	3621125.04	2E-04	7E-04	2E-04	0E+00	8E-05	7E-05	1.1E-05	6.82E-06	4.76516E-07	3.72E-06	0.02
residential	REC_100N	484030.59	3621125.04	3E-04	7E-04	2E-04	0E+00	9E-05	7E-05	1.1E-05	7.12E-06	4.97205E-07	3.89E-06	0.02
residential	REC_100N	484130.59	3621125.04	3E-04	8E-04	2E-04	0E+00	9E-05	8E-05	1.2E-05	7.46E-06	5.21182E-07	4.07E-06	0.02
residential	REC_100N	484230.59	3621125.04	3E-04	8E-04	2E-04	0E+00	9E-05	8E-05	1.2E-05	7.58E-06	5.29386E-07	4.14E-06	0.02
residential	REC_100N	477930.59	3621225.04	5E-05	1E-04	4E-05	0E+00	2E-05	2E-05	3.4E-06	2.13E-06	1.4904E-07	1.16E-06	0.01
residential	REC_100N	478030.59	3621225.04	5E-05	1E-04	4E-05	0E+00	2E-05	2E-05	3.5E-06	2.19E-06	1.52671E-07	1.19E-06	0.01
residential	REC_100N	478130.59	3621225.04	5E-05	1E-04	4E-05	0E+00	2E-05	2E-05	3.6E-06	2.21E-06	1.54103E-07	1.2E-06	0.01
residential	REC_100N	478230.59	3621225.04	6E-05	2E-04	4E-05	0E+00	2E-05	2E-05	3.6E-06	2.22E-06	1.54982E-07	1.21E-06	0.01
residential	REC_100N	478330.59	3621225.04	6E-05	2E-04	4E-05	0E+00	2E-05	2E-05	3.6E-06	2.26E-06	1.55725E-07	1.22E-06	0.01
residential	REC_100N	478430.59	3621225.04	6E-05	2E-04	4E-05	0E+00	2E-05	2E-05	3.6E-06	2.25E-06	1.5729E-07	1.23E-06	0.01
residential	REC_100N	478530.59	3621225.04	6E-05	2E-04	4E-05	0E+00	2E-05	2E-05	3.7E-06	2.29E-06	1.59881E-07	1.25E-06	0.01
residential	REC_100N	478630.59	3621225.04	6E-05	2E-04	5E-05	0E+00	3E-05	2E-05	3.8E-06	2.34E-06	1.63151E-07	1.28E-06	0.01
residential	REC_100N	478730.59	3621225.04	6E-05	2E-04	5E-05	0E+00	3E-05	2E-05	3.8E-06	2.36E-06	1.64597E-07	1.29E-06	0.01
residential	REC_100N	478830.59	3621225.04	7E-05	2E-04	5E-05	0E+00	3E-05	2E-05	3.9E-06	2.38E-06	1.65974E-07	1.3E-06	0.01
residential	REC_100N	478930.59	3621225.04	7E-05	2E-04	5E-05	0E+00	3E-05	2E-05	3.9E-06	2.4E-06	1.6734E-07	1.31E-06	0.01
residential	REC_100N	479030.59	3621225.04	7E-05	2E-04	5E-05	0E+00	3E-05	2E-05	3.9E-06	2.42E-06	1.68765E-07	1.32E-06	0.01
residential	REC_100N	479130.59	3621225.04	7E-05	2E-04	5E-05	0E+00	3E-05	2E-05	3.9E-06	2.44E-06	1.7013E-07	1.33E-06	0.01
residential	REC_100N	479230.59	3621225.04	7E-05	2E-04	5E-05	0E+00	3E-05	2E-05	4E-06	2.46E-06	1.71548E-07	1.34E-06	0.01
residential	REC_100N	479330.59	3621225.04	7E-05	2E-04	5E-05	0E+00	3E-05	2E-05	4E-06	2.48E-06	1.72962E-07	1.35E-06	0.01
residential	REC_100N	479430.59	3621225.04	7E-05	2E-04	6E-05	0E+00	3E-05	3E-05	4E-06	2.5E-06	1.74333E-07	1.36E-06	0.01
residential	REC_100N	479530.59	3621225.04	7E-05	2E-04	6E-05	0E+00	3E-05	3E-05	4.1E-06	2.52E-06	1.75817E-07	1.37E-06	0.01
residential	REC_100N	479630.59	3621225.04	7E-05	2E-04	6E-05	0E+00	3E-05	3E-05	4.1E-06	2.54E-06	1.77281E-07	1.39E-06	0.01
residential	REC_100N	479730.59	3621225.04	7E-05	2E-04	6E-05	0E+00	3E-05	3E-05	4.1E-06	2.56E-06	1.78895E-07	1.4E-06	0.01
residential	REC_100N	479830.59	3621225.04	7E-05	2E-04	6E-05	0E+00	3E-05	3E-05	4.2E-06	2.58E-06	1.80179E-07	1.41E-06	0.01
residential	REC_100N	479930.59	3621225.04	7E-05	2E-04	6E-05	0E+00	3E-05	3E-05	4.2E-06	2.6E-06	1.81596E-07	1.42E-06	0.01
residential	REC_100N	480030.59	3621225.04	7E-05	2E-04	6E-05	0E+00	3E-05	3E-05	4.2E-06	2.62E-06	1.83251E-07	1.43E-06	0.01
recreational	park	480130.59	3621225.04	7E-05	2E-04	7E-05	0E+00	4E-05	3E-05	4.3E-06	2.64E-06	1.84779E-07	1.44E-06	0.01
recreational	park	480230.59	3621225.04	7E-05	2E-04	7E-05	0E+00	4E-05	3E-05	4.3E-06	2.67E-06	1.86293E-07	1.46E-06	0.01
recreational	park	480330.59	3621225.04	8E-05	2E-04	7E-05	0E+00	4E-05	3E-05	4.3E-06	2.69E-06	1.87915E-07	1.47E-06	0.01
recreational	park	480430.59	3621225.04	8E-05	2E-04	7E-05	0E+00	4E-05	3E-05	4.4E-06	2.71E-06	1.89477E-07	1.48E-06	0.01
recreational	park	480530.59	3621225.04	8E-05	2E-04	8E-05	0E+00	4E-05	3E-05	4.4E-06	2.74E-06	1.91135E-07	1.49E-06	0.01
recreational	park	480630.59	3621225.04	8E-05	2E-04	8E-05	0E+00	4E-05	3E-05	4.5E-06	2.76E-06	1.9284E-07	1.51E-06	0.01
recreational	park	480730.59	3621225.04	8E-05	2E-04	8E-05	0E+00	4E-05	4E-05	4.5E-06	2.78E-06	1.94528E-07	1.52E-06	0.01
recreational	park	480830.59	3621225.04	8E-05	2E-04	8E-05	0E+00	4E-05	4E-05	4.5E-06	2.81E-06	1.96399E-07	1.53E-06	0.01
recreational	park	480930.59	3621225.04	8E-05	2E-04	8E-05	0E+00	4E-05	4E-05	4.6E-06	2.84E-06	1.98156E-07	1.55E-06	0.01
recreational	park	481030.59	3621225.04	9E-05	2E-04	8E-05	0E+00	4E-05	4E-05	4.6E-06	2.86E-06	2.00119E-07	1.56E-06	0.01
recreational	park	481130.59	3621225.04	9E-05	2E-04	9E-05	0E+00	5E-05	4E-05	4.8E-06	2.96E-06	2.06727E-07	1.62E-06	0.01
recreational	park	481230.59	3621225.04	9E-05	2E-04	9E-05	0E+00	5E-05	4E-05	4.8E-06	3E-06	2.09387E-07	1.64E-06	0.01
recreational	park	481330.59	3621225.04	9E-05	2E-04	9E-05	0E+00	5E-05	4E-05	4.9E-06	3.03E-06	2.11921E-07	1.66E-06	0.01
recreational	park	481430.59	3621225.04	9E-05	3E-04	9E-05	0E+00	5E-05	4E-05	5E-06	3.07E-06	2.14805E-07	1.68E-06	0.01
recreational	park	481530.59	3621225.04	9E-05	3E-04	9E-05	0E+00	5E-05	4E-05	5E-06	3.12E-06	2.17769E-07	1.7E-06	0.01
recreational	park	481630.59	3621225.04	9E-05	3E-04	1E-04	0E+00	5E-05	4E-05	5.1E-06	3.17E-06	2.21148E-07	1.73E-06	0.01
recreational	park	481730.59	3621225.04	1E-04	3E-04	1E-04	0E+00	5E-05	4E-05	5.1E-06	3.22E-06	2.24676E-07	1.76E-06	0.01
recreational	park	481830.59	3621225.04	1E-04	3E-04	1E-04	0E+00	5E-05	5E-05	5.2E-06	3.27E-06	2.28286E-07	1.78E-06	0.01
recreational	park	481930.59	3621225.04	1E-04	3E-04	1E-04	0E+00	5E-05	5E-05	5.3E-06	3.32E-06	2.32478E-07	1.82E-06	0.01
recreational	park	482030.59	3621225.04	1E-04	3E-04	1E-04	0E+00	6E-05	5E-05	5.4E-06	3.39E-06	2.36954E-07	1.85E-06	0.01
recreational	park	482130.59	3621225.04	1E-04	3E-04	1E-04	0E+00	6E-05	5E-05	5.6E-06	3.46E-06	2.41899E-07	1.89E-06	0.01
recreational	park	482230.59	3621225.04	1E-04	3E-04	1E-04	0E+00	6E-05	5E-05	5.7E-06	3.54E-06	2.47356E-07	1.93E-06	0.01
recreational	park	482330.59	3621225.04	1E-04	3E-04	1E-04	0E+00	6E-05	5E-05	5.9E-06	3.63E-06	2.53496E-07	1.98E-06	0.01
residential	REC_100N	482430.59	3621225.04	1E-04	4E-04	1E-04	0E+00	6E-05	5E-05	6E-06	3.73E-06	2.60548E-07	2.04E-06	0.01
residential	REC_100N	483830.59	3621225.04	2E-04	7E-04	2E-04	0E+00	8E-05	7E-05	1E-05	6.45E-06	4.52168E-07	3.53E-06	0.02
residential	REC_100N	483930.59	3621225.04	2E-04	7E-04	2E-04	0E+00	8E-05	7E-05	1.1E-05	6.68E-06	4.66519E-07	3.65E-06	0.02
residential	REC_100N	484030.59	3621225.04	3E-04	7E-04	2E-04	0E+00	9E-05	7E-05	1.1E-05	6.9E-06	4.88918E-07	3.82E-06	0.02
residential	REC_100N	484130.59	3621225.04	3E-04	7E-04	2E-04	0E+00	9E-05	7E-05	1.1E-05	7E-06	5.00717E-07	3.91E-06	0.02
school	127 (schoo	485901.79	3618344.73	2E-02	6E-02	2E-02	0E+00	8E-03	7E-03	0.00167	0.001034	7.22676E-05	0.000565	0.26

Refrigerated Containers

X	ug/m3	Dose Inhallation: 3rd tri	0<2	2<9	2<16	16<30	Risk (Residential 30-yr; school 9-yr; park 15-year): 3rd tri	0<2	2<9	2<16	16<30	Summed Risk	Cases Per Million	Chronic HI
477830.59	0.00356	1.23E-06	3.72E-06	2.16E-06	1.95E-06	8.91E-07	4.84415E-08	1.17011E-06	0	1.28948E-06	1.96128E-07	2.704E-06	3	0.00071
477930.59	0.00364	1.26E-06	3.81E-06	2.2E-06	2E-06	9.12E-07	4.95306E-08	1.19642E-06	0	1.31847E-06	2.00537E-07	2.765E-06	3	0.00073
478030.59	0.00377	1.3E-06	3.94E-06	2.28E-06	2.07E-06	9.43E-07	5.12435E-08	1.23779E-06	0	1.36407E-06	2.07472E-07	2.861E-06	3	0.00075
478130.59	0.00389	1.35E-06	4.07E-06	2.36E-06	2.14E-06	9.74E-07	5.29351E-08	1.27865E-06	0	1.4091E-06	2.14321E-07	2.955E-06	3	0.00078
478230.59	0.00404	1.4E-06	4.23E-06	2.45E-06	2.22E-06	1.01E-06	5.49939E-08	1.32838E-06	0	1.4639E-06	2.22657E-07	3.07E-06	3	0.00081
478330.59	0.00424	1.47E-06	4.43E-06	2.57E-06	2.33E-06	1.06E-06	5.76735E-08	1.39311E-06	0	1.53523E-06	2.33506E-07	3.22E-06	3	0.00085
478430.59	0.00441	1.53E-06	4.61E-06	2.67E-06	2.42E-06	1.1E-06	5.99533E-08	1.44818E-06	0	1.59592E-06	2.42736E-07	3.347E-06	3	0.00088
478530.59	0.00456	1.58E-06	4.76E-06	2.76E-06	2.5E-06	1.14E-06	6.19526E-08	1.49647E-06	0	1.64914E-06	2.50831E-07	3.458E-06	3	0.00091
478630.59	0.00475	1.64E-06	4.96E-06	2.87E-06	2.6E-06	1.19E-06	6.45697E-08	1.55969E-06	0	1.71881E-06	2.61427E-07	3.604E-06	4	0.00095
478730.59	0.00488	1.69E-06	5.1E-06	2.95E-06	2.68E-06	1.22E-06	6.63385E-08	1.60241E-06	0	1.76589E-06	2.68588E-07	3.703E-06	4	0.00098
478830.59	0.00501	1.74E-06	5.24E-06	3.03E-06	2.75E-06	1.26E-06	6.81948E-08	1.64725E-06	0	1.81531E-06	2.76104E-07	3.807E-06	4	0.001
478930.59	0.00515	1.78E-06	5.38E-06	3.12E-06	2.83E-06	1.29E-06	7.00447E-08	1.69194E-06	0	1.86455E-06	2.83594E-07	3.91E-06	4	0.00103
479030.59	0.0052	1.8E-06	5.44E-06	3.15E-06	2.85E-06	1.3E-06	7.07405E-08	1.70874E-06	0	1.88307E-06	2.86411E-07	3.949E-06	4	0.00104
479130.59	0.00528	1.83E-06	5.52E-06	3.19E-06	2.9E-06	1.32E-06	7.1786E-08	1.734E-06	0	1.9109E-06	2.90644E-07	4.007E-06	4	0.00106
479230.59	0.00538	1.86E-06	5.62E-06	3.25E-06	2.95E-06	1.35E-06	7.31203E-08	1.76623E-06	0	1.94642E-06	2.96046E-07	4.082E-06	4	0.00108
479330.59	0.00551	1.91E-06	5.76E-06	3.33E-06	3.02E-06	1.38E-06	7.4885E-08	1.80886E-06	0	1.99339E-06	3.03191E-07	4.18E-06	4	0.0011
479430.59	0.00565	1.96E-06	5.91E-06	3.42E-06	3.1E-06	1.41E-06	7.68308E-08	1.85586E-06	0	2.04519E-06	3.11069E-07	4.289E-06	4	0.00113
479530.59	0.00579	2E-06	6.05E-06	3.5E-06	3.18E-06	1.45E-06	7.87636E-08	1.90254E-06	0	2.09664E-06	3.18894E-07	4.397E-06	4	0.00116
479630.59	0.00593	2.05E-06	6.2E-06	3.59E-06	3.25E-06	1.48E-06	8.06867E-08	1.949E-06	0	2.14783E-06	3.2668E-07	4.504E-06	5	0.00119
481430.59	0.00812	0	7.79E-07	4.15E-07	3.37E-07	1.56E-07	0	2.44722E-07	1.4E-07	0	1.46833E-08	3.964E-07	0	0.00162
481530.59	0.00823	0	7.89E-07	4.21E-07	3.42E-07	1.58E-07	0	2.48103E-07	1.4E-07	0	1.48862E-08	4.019E-07	0	0.00165
481630.59	0.00832	0	7.98E-07	4.26E-07	3.46E-07	1.6E-07	0	2.5082E-07	1.4E-07	0	1.50492E-08	4.063E-07	0	0.00166
481730.59	0.00843	0	8.08E-07	4.31E-07	3.5E-07	1.62E-07	0	2.53979E-07	1.4E-07	0	1.52388E-08	4.114E-07	0	0.00169
481830.59	0.00853	0	8.18E-07	4.36E-07	3.55E-07	1.64E-07	0	2.57167E-07	1.4E-07	0	1.543E-08	4.166E-07	0	0.00171
481930.59	0.00868	0	8.32E-07	4.44E-07	3.61E-07	1.66E-07	0	2.61509E-07	1.5E-07	0	1.56905E-08	4.236E-07	0	0.00174
482030.59	0.0088	0	8.44E-07	4.5E-07	3.66E-07	1.69E-07	0	2.65332E-07	1.5E-07	0	1.59199E-08	4.298E-07	0	0.00176
482130.59	0.00889	0	8.52E-07	4.55E-07	3.69E-07	1.7E-07	0	2.67842E-07	1.5E-07	0	1.60705E-08	4.339E-07	0	0.00178
482230.59	0.00896	0	8.59E-07	4.58E-07	3.72E-07	1.72E-07	0	2.70027E-07	1.5E-07	0	1.62016E-08	4.374E-07	0	0.00179
482330.59	0.00909	0	8.71E-07	4.65E-07	3.78E-07	1.74E-07	0	2.73804E-07	1.5E-07	0	1.64283E-08	4.436E-07	0	0.00182
482430.59	0.00924	0	8.86E-07	4.72E-07	3.84E-07	1.77E-07	0	2.78387E-07	1.6E-07	0	1.67032E-08	4.51E-07	0	0.00185
482530.59	0.0096	0	9.2E-07	4.91E-07	3.99E-07	1.84E-07	0	2.89193E-07	1.6E-07	0	1.73516E-08	4.685E-07	0	0.00192
483830.59	0.01239	4.29E-06	1.3E-05	7.5E-06	6.8E-06	3.1E-06	1.68538E-07	4.07106E-06	0	4.48638E-06	6.8237E-07	9.408E-06	9	0.00248
483930.59	0.01262	4.37E-06	1.32E-05	7.63E-06	6.92E-06	3.16E-06	1.7156E-07	4.14404E-06	0	4.56681E-06	6.94603E-07	9.577E-06	10	0.00252
484030.59	0.01279	4.43E-06	1.34E-05	7.74E-06	7.02E-06	3.2E-06	1.73991E-07	4.20278E-06	0	4.63154E-06	7.04447E-07	9.713E-06	10	0.00256
484130.59	0.01319	4.57E-06	1.38E-05	7.98E-06	7.23E-06	3.3E-06	1.79342E-07	4.33203E-06	0	4.77398E-06	7.26112E-07	1.001E-05	10	0.00264
484230.59	0.01334	4.62E-06	1.39E-05	8.07E-06	7.32E-06	3.34E-06	1.8147E-07	4.38344E-06	0	4.83063E-06	7.34728E-07	1.013E-05	10	0.00267
477930.59	0.00353	1.22E-06	3.69E-06	2.14E-06	1.94E-06	8.84E-07	4.80434E-08	1.16049E-06	0	1.27889E-06	1.94516E-07	2.682E-06	3	0.00071
478030.59	0.00367	1.27E-06	3.84E-06	2.22E-06	2.01E-06	9.18E-07	4.99089E-08	1.20556E-06	0	1.32854E-06	2.02069E-07	2.786E-06	3	0.00073
478130.59	0.00377	1.31E-06	3.94E-06	2.28E-06	2.07E-06	9.44E-07	5.13E-08	1.23916E-06	0	1.36557E-06	2.07701E-07	2.864E-06	3	0.00075
478230.59	0.00387	1.34E-06	4.05E-06	2.34E-06	2.13E-06	9.7E-07	5.26932E-08	1.27281E-06	0	1.40266E-06	2.13342E-07	2.942E-06	3	0.00077
478330.59	0.00398	1.38E-06	4.16E-06	2.41E-06	2.18E-06	9.95E-07	5.40784E-08	1.30627E-06	0	1.43953E-06	2.1895E-07	3.019E-06	3	0.0008
478430.59	0.00424	1.47E-06	4.43E-06	2.56E-06	2.33E-06	1.06E-06	5.76474E-08	1.39248E-06	0	1.53454E-06	2.334E-07	3.218E-06	3	0.00085
478530.59	0.00438	1.52E-06	4.58E-06	2.65E-06	2.41E-06	1.1E-06	5.96321E-08	1.44042E-06	0	1.58737E-06	2.41436E-07	3.329E-06	3	0.00088
478630.59	0.00454	1.57E-06	4.75E-06	2.75E-06	2.49E-06	1.14E-06	6.17827E-08	1.49237E-06	0	1.64462E-06	2.50143E-07	3.449E-06	3	0.00091
478730.59	0.00467	1.62E-06	4.88E-06	2.82E-06	2.56E-06	1.17E-06	6.34785E-08	1.53333E-06	0	1.68976E-06	2.57009E-07	3.544E-06	4	0.00093
478830.59	0.00479	1.66E-06	5.01E-06	2.9E-06	2.63E-06	1.2E-06	6.51866E-08	1.57459E-06	0	1.73523E-06	2.63924E-07	3.639E-06	4	0.00096
478930.59	0.00489	1.69E-06	5.12E-06	2.96E-06	2.68E-06	1.23E-06	6.65665E-08	1.60792E-06	0	1.77196E-06	2.69511E-07	3.716E-06	4	0.00098
479030.59	0.00498	1.72E-06	5.2E-06	3.01E-06	2.73E-06	1.25E-06	6.76781E-08	1.63477E-06	0	1.80155E-06	2.74012E-07	3.778E-06	4	0.001
479130.59	0.00509	1.76E-06	5.32E-06	3.08E-06	2.79E-06	1.27E-06	6.92483E-08	1.6727E-06	0	1.84335E-06	2.80369E-07	3.866E-06	4	0.00102
479230.59	0.0052	1.8E-06	5.44E-06	3.15E-06	2.85E-06	1.3E-06	7.07715E-08	1.7095E-06	0	1.8839E-06	2.86537E-07	3.951E-06	4	0.00104
479330.59	0.0053	1.83E-06	5.54E-06	3.21E-06	2.91E-06	1.33E-06	7.20564E-08	1.74053E-06	0	1.9181E-06	2.91739E-07	4.022E-06	4	0.00106
479430.59	0.00544	1.88E-06	5.68E-06	3.29E-06	2.98E-06	1.36E-06	7.39544E-08	1.78638E-06	0	1.96862E-06	2.99423E-07	4.128E-06	4	0.00109
479530.59	0.00557	1.93E-06	5.83E-06	3.37E-06	3.06E-06	1.4E-06	7.5812E-08	1.83125E-06	0	2.01807E-06	3.06944E-07	4.232E-06	4	0.00111
479630.59	0.00569	1.97E-06	5.95E-06	3.44E-06	3.12E-06	1.42E-06	7.73607E-08	1.86866E-06	0	2.05929E-06	3.13214E-07	4.319E-06	4	0.00114
479730.59	0.00584	2.02E-06	6.1E-06	3.53E-06	3.2E-06	1.46E-06	7.93895E-08	1.91766E-06	0	2.1133E-06	3.21428E-07	4.432E-06	4	0.00117
479830.59	0.00605	2.09E-06	6.32E-06	3.66E-06	3.32E-06	1.51E-06	8.2274E-08	1.98734E-06	0	2.19008E-06	3.33107E-07	4.593E-06	5	0.00121
479930.59	0.00623	2.16E-06	6.51E-06	3.77E-06	3.42E-06	1.56E-06	8.4716E-08	2.04633E-06	0	2.25509E-06	3.42994E-07	4.729E-06	5	0.00125
480030.59	0.00612	2.12E-06	6.4E-06	3.7E-06	3.36E-06	1.53E-06	8.32143E-08	2.01005E-06	0	2.21511E-06	3.36914E-07	4.645E-06	5	0.00122
480130.59	0.00633	0	6.07E-07	3.24E-07	2.63E-07	1.21E-07	0	1.90716E-07	1.1E-07	0	1.1443E-08	3.09E-07	0	0.00127
480230.59	0.00652	0	6.25E-07	3.33E-07	2.71E-07	1.25E-07	0	1.96376E-07	1.1E-07	0	1.17826E-08	3.181E-07	0	0.0013
480330.59	0.00662	0	6.35E-07	3.39E-07	2.75E-07	1.27E-07	0	1.99619E-07	1.1E-07	0	1.19771E-08	3.234E-07	0	0.00132
480430.59	0.00677	0	6.5E-07	3.46E-07	2.81E-07	1.3E-07	0	2.04149E-07	1.1E-07	0	1.2249E-08	3.307E-07	0	0.00135
480530.59	0.00693	0	6.64E-07	3.54E-07	2.88E-07	1.33E-07	0	2.08839E-07	1.2E-07	0	1.25303E-08	3.383E-07	0	0.00139
480630.59	0.00702	0	6.73E-07	3.59E-07	2.92E-07	1.35E-07	0	2.11584E-07	1.2E-07	0	1.2695E-08	3.428E-07	0	0.0014
480730.59	0.00713	0	6.84E-07	3.65E-07	2.96E-07	1.37E-07	0	2.14959E-07	1.2E-07	0	1.28975E-08	3.482E-07	0	0.00143
480830.59	0.00728	0	6.98E-07	3.72E-07	3.02E-07	1.4E-07	0	2.1933E-07	1.2E-07	0	1.31598E-08	3.553E-07	0	0.00146
480930.59	0.0074	0	7.09E-07	3.78E-07	3.07E-07	1.42E-07	0	2.22897E-07	1.2E-07	0	1.33738E-08	3.611E-07	0	0.00148
481030.59	0.00749	0	7.19E-07	3.83E-07	3.11E-07	1.44E-07	0	2.25861E-07	1.3E-07	0	1.35517E-08	3.659E-07	0	0.0015
481130.59	0.00777	0	7.45E-07	3.97E-07	3.23E-07	1.49E-07	0	2.34049E-07	1.3E-07	0	1.4043E-08	3.792E-07	0	0.00155
481230.59	0.00784	0	7.51E-07	4.01E-07	3.26E-07	1.5E-07	0	2.36181E-07	1.3E-07	0	1.41708E-08	3.826E-07	0	0.00157
481330.59	0.00794	0	7.62E-07	4.06E-07	3.3E-07	1.52E-07	0	2.39332E-07	1.3E-07	0	1.43599E-08	3.877E-07	0	0.00159
481430.59	0.00801	0	7.68E-07	4.1E-07	3.33E-07	1.54E-07	0	2.41374E-07	1.4E-07	0	1.44824E-08	3.91E-07	0	0.0016
481530.59	0.00813	0	7.8E-07	4.16E-07	3.38E-07	1.56E-07	0	2.45005E-07	1.4E-07	0	1.47003E-08	3.969E-07	0	0.00163
481630.59	0.00823	0	7.89E-07	4.21E-07	3.42E-07	1.58E-07	0	2.48E-07	1.4E-07	0	1.488E-08	4.018E-07	0	0.00165
481730.59	0.00834	0	8E-07	4.27E-07	3.47E-07	1.6E-07	0	2.51418E-07	1.4E-07	0	1.50851E-08	4.073E-07	0	0.00167
481830.59	0.00846	0	8.11E-07	4.33E-07	3.52E-07	1.62E-07	0	2.55013E-07	1.4E-07	0	1.53008E-08	4.131E-07	0	0.00169
481930.59	0.00856	0	8.21E-07	4.38E-07	3.56E-07	1.64E-07	0	2.58053E-07	1.4E-07	0	1.54832E-08	4.18E-07	0	0.00171
482030.59	0.00865	0	8.3E-07	4.43E-07	3.6E-07	1.66E-07	0	2.60802E-07	1.5E-07	0	1.56481E-08	4.225E-07	0	0.00173
482130.59	0.00877	0	8.41E-07	4.49E-07	3.64E-07	1.68E-07	0	2.64319E-07	1.5E-07	0	1.58592E-08	4.282E-07	0	0.00175
482230.59	0.00892	0	8.55E-07	4.56E-07	3.71E-07	1.71E-07	0	2.68724E-07	1.5E-07	0	1.61234E-08	4.353E-07	0	0.00178
482330.59	0.00907	0	8.7E-07	4.64E-07	3.77E-07	1.74E-07	0	2.73342E-07	1.5E-07	0	1.64005E-08	4.428E-07	0	0.00181
482430.59	0.00927	3.21E-06	9.69E-06	5.61E-06	5.08E-06	2.32E-06	1.26048E-07	3.04472E-06	0	3.35533E-06	5.10339E-07	7.036E-06	7	0.00185
483830.59	0.01208	4.18E-06	1.26E-05	7.31E-06	6.63E-06	3.02E-06	1.64319E-07	3.96915E-06	0	4.37408E-06	6.65288E-07	9.173E-06	9	0.00242
483930.59	0.01218	4.22E-06	1.27E-05	7.37E-06	6.68E-06	3.05E-06	1.65681E-07	4.00205E-06	0	4.41033E-06	6.70802E-07	9.249E-06	9	0.00244
484030.59	0.01246	4.31E-06	1.3E-05	7.54E-06	6.84E-06	3.12E-06	1.69514E-07	4.09463E-06	0	4.51235E-06	6.86319E-07	9.463E-06	9	0.00249
484130.59	0.01253	4.34E-06	1.31E-05	7.58E-06	6.87E-06	3.14E-06	1.70449E-07	4.11722E-06	0	4.53725E-06	6.90106E-07	9.515E-06	10	0.00251
485901.79	0.13697	0	2.03E-05	1.08E-05	8.78E-06	4.05E-06	0	0	1.2E-05	2.78188E-06	0	1.477E-05	15	0.02739

Multi-Purpose General Cargo

X	ug/m3	Dose Inhallation: 3rd tri	0<2	2<9	2<16	16<30	Risk (Residential 30-yr; school 9-yr; park 15-year): 3rd tri	0<2	2<9	2<16	16<30	Summed Risk	Cases Per Million	Chronic HI
477830.59	7E-04	2E-07	7E-07	4E-07	4E-07	2E-07	1E-08	2E-07	0E+00	3E-07	4E-08	5.4E-07	0.538	0.00014
477930.59	7E-04	3E-07	8E-07	4E-07	4E-07	2E-07	1E-08	2E-07	0E+00	3E-07	4E-08	5.6E-07	0.559	0.00015
478030.59	8E-04	3E-07	8E-07	5E-07	4E-07	2E-07	1E-08	3E-07	0E+00	3E-07	4E-08	5.9E-07	0.590	0.00016
478130.59	8E-04	3E-07	9E-07	5E-07	4E-07	2E-07	1E-08	3E-07	0E+00	3E-07	5E-08	6.2E-07	0.621	0.00016
478230.59	9E-04	3E-07	9E-07	5E-07	5E-07	2E-07	1E-08	3E-07	0E+00	3E-07	5E-08	6.6E-07	0.659	0.00017
478330.59	9E-04	3E-07	1E-06	6E-07	5E-07	2E-07	1E-08	3E-07	0E+00	3E-07	5E-08	7.0E-07	0.704	0.00019
478430.59	1E-03	3E-07	1E-06	6E-07	5E-07	2E-07	1E-08	3E-07	0E+00	4E-07	5E-08	7.4E-07	0.744	0.0002
478530.59	1E-03	4E-07	1E-06	6E-07	6E-07	3E-07	1E-08	3E-07	0E+00	4E-07	6E-08	7.8E-07	0.784	0.00021
478630.59	1E-03	4E-07	1E-06	7E-07	6E-07	3E-07	2E-08	4E-07	0E+00	4E-07	6E-08	8.4E-07	0.839	0.00022
478730.59	1E-03	4E-07	1E-06	7E-07	6E-07	3E-07	2E-08	4E-07	0E+00	4E-07	6E-08	8.7E-07	0.875	0.00023
478830.59	1E-03	4E-07	1E-06	7E-07	7E-07	3E-07	2E-08	4E-07	0E+00	4E-07	7E-08	9.1E-07	0.914	0.00024
478930.59	1E-03	4E-07	1E-06	8E-07	7E-07	3E-07	2E-08	4E-07	0E+00	5E-07	7E-08	9.5E-07	0.951	0.00025
479030.59	1E-03	4E-07	1E-06	8E-07	7E-07	3E-07	2E-08	4E-07	0E+00	5E-07	7E-08	9.7E-07	0.970	0.00026
479130.59	1E-03	5E-07	1E-06	8E-07	7E-07	3E-07	2E-08	4E-07	0E+00	5E-07	7E-08	1.0E-06	1.000	0.00026
479230.59	1E-03	5E-07	1E-06	8E-07	7E-07	3E-07	2E-08	4E-07	0E+00	5E-07	7E-08	1.0E-06	1.029	0.00027
479330.59	1E-03	5E-07	1E-06	9E-07	8E-07	4E-07	2E-08	5E-07	0E+00	5E-07	8E-08	1.1E-06	1.067	0.00028
479430.59	1E-03	5E-07	2E-06	9E-07	8E-07	4E-07	2E-08	5E-07	0E+00	5E-07	8E-08	1.1E-06	1.110	0.00029
479530.59	2E-03	5E-07	2E-06	9E-07	8E-07	4E-07	2E-08	5E-07	0E+00	5E-07	8E-08	1.2E-06	1.152	0.0003
479630.59	2E-03	5E-07	2E-06	1E-06	9E-07	4E-07	2E-08	5E-07	0E+00	6E-07	9E-08	1.2E-06	1.194	0.00031
481430.59	2E-03	0E+00	2E-07	1E-07	1E-07	4E-08	0E+00	7E-08	4E-08	0E+00	4E-09	1.1E-07	0.112	0.00046
481530.59	2E-03	0E+00	2E-07	1E-07	1E-07	4E-08	0E+00	7E-08	4E-08	0E+00	4E-09	1.1E-07	0.113	0.00046
481630.59	2E-03	0E+00	2E-07	1E-07	1E-07	4E-08	0E+00	7E-08	4E-08	0E+00	4E-09	1.1E-07	0.113	0.00046
481730.59	2E-03	0E+00	2E-07	1E-07	1E-07	4E-08	0E+00	7E-08	4E-08	0E+00	4E-09	1.1E-07	0.113	0.00046
481830.59	2E-03	0E+00	2E-07	1E-07	1E-07	4E-08	0E+00	7E-08	4E-08	0E+00	4E-09	1.1E-07	0.114	0.00047
481930.59	2E-03	0E+00	2E-07	1E-07	1E-07	4E-08	0E+00	7E-08	4E-08	0E+00	4E-09	1.1E-07	0.114	0.00047
482030.59	2E-03	0E+00	2E-07	1E-07	1E-07	4E-08	0E+00	7E-08	4E-08	0E+00	4E-09	1.1E-07	0.114	0.00047
482130.59	2E-03	0E+00	2E-07	1E-07	1E-07	4E-08	0E+00	7E-08	4E-08	0E+00	4E-09	1.1E-07	0.114	0.00047
482230.59	2E-03	0E+00	2E-07	1E-07	1E-07	4E-08	0E+00	7E-08	4E-08	0E+00	4E-09	1.1E-07	0.114	0.00047
482330.59	2E-03	0E+00	2E-07	1E-07	1E-07	4E-08	0E+00	7E-08	4E-08	0E+00	4E-09	1.1E-07	0.113	0.00046
482430.59	2E-03	0E+00	2E-07	1E-07	1E-07	4E-08	0E+00	7E-08	4E-08	0E+00	4E-09	1.1E-07	0.113	0.00046
482530.59	2E-03	0E+00	2E-07	1E-07	1E-07	4E-08	0E+00	7E-08	4E-08	0E+00	4E-09	1.1E-07	0.115	0.00047
483830.59	2E-03	8E-07	2E-06	1E-06	1E-06	6E-07	3E-08	8E-07	0E+00	9E-07	1E-07	1.8E-06	1.797	0.00047
483930.59	2E-03	8E-07	2E-06	1E-06	1E-06	6E-07	3E-08	8E-07	0E+00	9E-07	1E-07	1.8E-06	1.793	0.00047
484030.59	2E-03	8E-07	2E-06	1E-06	1E-06	6E-07	3E-08	8E-07	0E+00	8E-07	1E-07	1.8E-06	1.777	0.00047
484130.59	2E-03	8E-07	2E-06	1E-06	1E-06	6E-07	3E-08	8E-07	0E+00	8E-07	1E-07	1.8E-06	1.776	0.00047
484230.59	2E-03	8E-07	2E-06	1E-06	1E-06	6E-07	3E-08	7E-07	0E+00	8E-07	1E-07	1.7E-06	1.720	0.00045
477930.59	7E-04	2E-07	7E-07	4E-07	4E-07	2E-07	1E-08	2E-07	0E+00	3E-07	4E-08	5.4E-07	0.538	0.00014
478030.59	8E-04	3E-07	8E-07	5E-07	4E-07	2E-07	1E-08	2E-07	0E+00	3E-07	4E-08	5.7E-07	0.572	0.00015
478130.59	8E-04	3E-07	8E-07	5E-07	4E-07	2E-07	1E-08	3E-07	0E+00	3E-07	4E-08	6.0E-07	0.597	0.00016
478230.59	8E-04	3E-07	9E-07	5E-07	4E-07	2E-07	1E-08	3E-07	0E+00	3E-07	5E-08	6.2E-07	0.622	0.00016
478330.59	9E-04	3E-07	9E-07	5E-07	5E-07	2E-07	1E-08	3E-07	0E+00	3E-07	5E-08	6.5E-07	0.650	0.00017
478430.59	9E-04	3E-07	1E-06	6E-07	5E-07	2E-07	1E-08	3E-07	0E+00	3E-07	5E-08	7.1E-07	0.707	0.00019
478530.59	1E-03	3E-07	1E-06	6E-07	5E-07	2E-07	1E-08	3E-07	0E+00	4E-07	5E-08	7.4E-07	0.744	0.0002
478630.59	1E-03	4E-07	1E-06	6E-07	6E-07	3E-07	1E-08	3E-07	0E+00	4E-07	6E-08	7.9E-07	0.787	0.00021
478730.59	1E-03	4E-07	1E-06	7E-07	6E-07	3E-07	1E-08	4E-07	0E+00	4E-07	6E-08	8.2E-07	0.823	0.00022
478830.59	1E-03	4E-07	1E-06	7E-07	6E-07	3E-07	2E-08	4E-07	0E+00	4E-07	6E-08	8.6E-07	0.858	0.00023
478930.59	1E-03	4E-07	1E-06	7E-07	6E-07	3E-07	2E-08	4E-07	0E+00	4E-07	6E-08	8.9E-07	0.891	0.00023
479030.59	1E-03	4E-07	1E-06	7E-07	7E-07	3E-07	2E-08	4E-07	0E+00	4E-07	7E-08	9.2E-07	0.917	0.00024
479130.59	1E-03	4E-07	1E-06	8E-07	7E-07	3E-07	2E-08	4E-07	0E+00	5E-07	7E-08	9.5E-07	0.949	0.00025
479230.59	1E-03	4E-07	1E-06	8E-07	7E-07	3E-07	2E-08	4E-07	0E+00	5E-07	7E-08	9.8E-07	0.982	0.00026
479330.59	1E-03	5E-07	1E-06	8E-07	7E-07	3E-07	2E-08	4E-07	0E+00	5E-07	7E-08	1.0E-06	1.009	0.00027
479430.59	1E-03	5E-07	1E-06	8E-07	8E-07	3E-07	2E-08	5E-07	0E+00	5E-07	8E-08	1.1E-06	1.053	0.00028
479530.59	1E-03	5E-07	2E-06	9E-07	8E-07	4E-07	2E-08	5E-07	0E+00	5E-07	8E-08	1.1E-06	1.090	0.00029
479630.59	1E-03	5E-07	2E-06	9E-07	8E-07	4E-07	2E-08	5E-07	0E+00	5E-07	8E-08	1.1E-06	1.126	0.0003
479730.59	2E-03	5E-07	2E-06	9E-07	8E-07	4E-07	2E-08	5E-07	0E+00	6E-07	8E-08	1.2E-06	1.167	0.00031
479830.59	2E-03	6E-07	2E-06	1E-06	9E-07	4E-07	2E-08	5E-07	0E+00	6E-07	9E-08	1.2E-06	1.219	0.00032
479930.59	2E-03	6E-07	2E-06	1E-06	9E-07	4E-07	2E-08	5E-07	0E+00	6E-07	9E-08	1.3E-06	1.269	0.00033
480030.59	2E-03	6E-07	2E-06	1E-06	9E-07	4E-07	2E-08	5E-07	0E+00	6E-07	9E-08	1.3E-06	1.257	0.00033
480130.59	2E-03	0E+00	2E-07	9E-08	7E-08	3E-08	0E+00	5E-08	3E-08	0E+00	3E-09	8.4E-08	0.084	0.00035
480230.59	2E-03	0E+00	2E-07	9E-08	7E-08	3E-08	0E+00	5E-08	3E-08	0E+00	3E-09	8.7E-08	0.087	0.00036
480330.59	2E-03	0E+00	2E-07	9E-08	8E-08	4E-08	0E+00	6E-08	3E-08	0E+00	3E-09	8.9E-08	0.089	0.00037
480430.59	2E-03	0E+00	2E-07	1E-07	8E-08	4E-08	0E+00	6E-08	3E-08	0E+00	3E-09	9.2E-08	0.092	0.00038
480530.59	2E-03	0E+00	2E-07	1E-07	8E-08	4E-08	0E+00	6E-08	3E-08	0E+00	3E-09	9.4E-08	0.094	0.00038
480630.59	2E-03	0E+00	2E-07	1E-07	8E-08	4E-08	0E+00	6E-08	3E-08	0E+00	4E-09	9.6E-08	0.096	0.00039
480730.59	2E-03	0E+00	2E-07	1E-07	8E-08	4E-08	0E+00	6E-08	3E-08	0E+00	4E-09	9.8E-08	0.098	0.0004
480830.59	2E-03	0E+00	2E-07	1E-07	8E-08	4E-08	0E+00	6E-08	3E-08	0E+00	4E-09	1.0E-07	0.100	0.00041
480930.59	2E-03	0E+00	2E-07	1E-07	9E-08	4E-08	0E+00	6E-08	3E-08	0E+00	4E-09	1.0E-07	0.101	0.00041
481030.59	2E-03	0E+00	2E-07	1E-07	9E-08	4E-08	0E+00	6E-08	4E-08	0E+00	4E-09	1.0E-07	0.103	0.00042
481130.59	2E-03	0E+00	2E-07	1E-07	9E-08	4E-08	0E+00	7E-08	4E-08	0E+00	4E-09	1.1E-07	0.106	0.00043
481230.59	2E-03	0E+00	2E-07	1E-07	9E-08	4E-08	0E+00	7E-08	4E-08	0E+00	4E-09	1.1E-07	0.106	0.00044
481330.59	2E-03	0E+00	2E-07	1E-07	9E-08	4E-08	0E+00	7E-08	4E-08	0E+00	4E-09	1.1E-07	0.107	0.00044
481430.59	2E-03	0E+00	2E-07	1E-07	9E-08	4E-08	0E+00	7E-08	4E-08	0E+00	4E-09	1.1E-07	0.107	0.00044
481530.59	2E-03	0E+00	2E-07	1E-07	9E-08	4E-08	0E+00	7E-08	4E-08	0E+00	4E-09	1.1E-07	0.108	0.00044
481630.59	2E-03	0E+00	2E-07	1E-07	9E-08	4E-08	0E+00	7E-08	4E-08	0E+00	4E-09	1.1E-07	0.108	0.00044
481730.59	2E-03	0E+00	2E-07	1E-07	9E-08	4E-08	0E+00	7E-08	4E-08	0E+00	4E-09	1.1E-07	0.108	0.00044
481830.59	2E-03	0E+00	2E-07	1E-07	9E-08	4E-08	0E+00	7E-08	4E-08	0E+00	4E-09	1.1E-07	0.109	0.00045
481930.59	2E-03	0E+00	2E-07	1E-07	9E-08	4E-08	0E+00	7E-08	4E-08	0E+00	4E-09	1.1E-07	0.109	0.00045
482030.59	2E-03	0E+00	2E-07	1E-07	9E-08	4E-08	0E+00	7E-08	4E-08	0E+00	4E-09	1.1E-07	0.109	0.00045
482130.59	2E-03	0E+00	2E-07	1E-07	9E-08	4E-08	0E+00	7E-08	4E-08	0E+00	4E-09	1.1E-07	0.109	0.00045
482230.59	2E-03	0E+00	2E-07	1E-07	9E-08	4E-08	0E+00	7E-08	4E-08	0E+00	4E-09	1.1E-07	0.109	0.00045
482330.59	2E-03	0E+00	2E-07	1E-07	9E-08	4E-08	0E+00	7E-08	4E-08	0E+00	4E-09	1.1E-07	0.109	0.00045
482430.59	2E-03	8E-07	2E-06	1E-06	1E-06	6E-07	3E-08	7E-07	0E+00	8E-07	1E-07	1.7E-06	1.694	0.00045
483830.59	2E-03	8E-07	2E-06	1E-06	1E-06	6E-07	3E-08	8E-07	0E+00	8E-07	1E-07	1.7E-06	1.748	0.00046
483930.59	2E-03	8E-07	2E-06	1E-06	1E-06	6E-07	3E-08	7E-07	0E+00	8E-07	1E-07	1.7E-06	1.733	0.00046
484030.59	2E-03	8E-07	2E-06	1E-06	1E-06	6E-07	3E-08	7E-07	0E+00	8E-07	1E-07	1.7E-06	1.727	0.00045
484130.59	2E-03	8E-07	2E-06	1E-06	1E-06	6E-07	3E-08	7E-07	0E+00	8E-07	1E-07	1.7E-06	1.675	0.00044
485901.79	4E-02	0E+00	6E-06	3E-06	3E-06	1E-06	0E+00	0E+00	4E-06	8E-07	0E+00	4.4E-06	4.435	0.00823

Dry Bulk

X	ug/m3	Dose Inhallation: 3rd tri	0<2	2<9	2<16	16<30	Risk (Residential 30-yr; school 9-yr; park 15-year): 3rd tri	0<2	2<9	2<16	16<30	Summed Risk	Cases Per Million	Chronic HI
477830.59	8E-04	3E-07	9E-07	5E-07	5E-07	2E-07	1E-08	3E-07	0E+00	3E-07	5E-08	6.3E-07	0.630	0.00017
477930.59	9E-04	3E-07	9E-07	5E-07	5E-07	2E-07	1E-08	3E-07	0E+00	3E-07	5E-08	6.5E-07	0.653	0.00017
478030.59	9E-04	3E-07	9E-07	5E-07	5E-07	2E-07	1E-08	3E-07	0E+00	3E-07	5E-08	6.9E-07	0.686	0.00018
478130.59	9E-04	3E-07	1E-06	6E-07	5E-07	2E-07	1E-08	3E-07	0E+00	3E-07	5E-08	7.2E-07	0.720	0.00019
478230.59	1E-03	3E-07	1E-06	6E-07	5E-07	3E-07	1E-08	3E-07	0E+00	4E-07	6E-08	7.6E-07	0.761	0.0002
478330.59	1E-03	4E-07	1E-06	6E-07	6E-07	3E-07	1E-08	3E-07	0E+00	4E-07	6E-08	8.1E-07	0.808	0.00021
478430.59	1E-03	4E-07	1E-06	7E-07	6E-07	3E-07	2E-08	4E-07	0E+00	4E-07	6E-08	8.5E-07	0.851	0.00022
478530.59	1E-03	4E-07	1E-06	7E-07	6E-07	3E-07	2E-08	4E-07	0E+00	4E-07	6E-08	8.9E-07	0.891	0.00023
478630.59	1E-03	4E-07	1E-06	8E-07	7E-07	3E-07	2E-08	4E-07	0E+00	5E-07	7E-08	9.5E-07	0.954	0.00025
478730.59	1E-03	5E-07	1E-06	8E-07	7E-07	3E-07	2E-08	4E-07	0E+00	5E-07	7E-08	9.9E-07	0.990	0.00026
478830.59	1E-03	5E-07	1E-06	8E-07	7E-07	3E-07	2E-08	4E-07	0E+00	5E-07	7E-08	1.0E-06	1.029	0.00027
478930.59	1E-03	5E-07	1E-06	9E-07	8E-07	4E-07	2E-08	5E-07	0E+00	5E-07	8E-08	1.1E-06	1.069	0.00028
479030.59	1E-03	5E-07	1E-06	9E-07	8E-07	4E-07	2E-08	5E-07	0E+00	5E-07	8E-08	1.1E-06	1.089	0.00029
479130.59	1E-03	5E-07	2E-06	9E-07	8E-07	4E-07	2E-08	5E-07	0E+00	5E-07	8E-08	1.1E-06	1.119	0.00029
479230.59	2E-03	5E-07	2E-06	9E-07	8E-07	4E-07	2E-08	5E-07	0E+00	5E-07	8E-08	1.1E-06	1.149	0.0003
479330.59	2E-03	5E-07	2E-06	9E-07	9E-07	4E-07	2E-08	5E-07	0E+00	6E-07	9E-08	1.2E-06	1.188	0.00031
479430.59	2E-03	6E-07	2E-06	1E-06	9E-07	4E-07	2E-08	5E-07	0E+00	6E-07	9E-08	1.2E-06	1.234	0.00032
479530.59	2E-03	6E-07	2E-06	1E-06	9E-07	4E-07	2E-08	6E-07	0E+00	6E-07	9E-08	1.3E-06	1.277	0.00034
479630.59	2E-03	6E-07	2E-06	1E-06	1E-06	4E-07	2E-08	6E-07	0E+00	6E-07	1E-07	1.3E-06	1.320	0.00035
481430.59	2E-03	0E+00	2E-07	1E-07	1E-07	5E-08	0E+00	8E-08	4E-08	0E+00	5E-09	1.2E-07	0.122	0.0005
481530.59	3E-03	0E+00	2E-07	1E-07	1E-07	5E-08	0E+00	8E-08	4E-08	0E+00	5E-09	1.2E-07	0.123	0.0005
481630.59	3E-03	0E+00	2E-07	1E-07	1E-07	5E-08	0E+00	8E-08	4E-08	0E+00	5E-09	1.2E-07	0.123	0.0005
481730.59	3E-03	0E+00	2E-07	1E-07	1E-07	5E-08	0E+00	8E-08	4E-08	0E+00	5E-09	1.2E-07	0.124	0.00051
481830.59	3E-03	0E+00	2E-07	1E-07	1E-07	5E-08	0E+00	8E-08	4E-08	0E+00	5E-09	1.2E-07	0.124	0.00051
481930.59	3E-03	0E+00	2E-07	1E-07	1E-07	5E-08	0E+00	8E-08	4E-08	0E+00	5E-09	1.2E-07	0.125	0.00051
482030.59	3E-03	0E+00	2E-07	1E-07	1E-07	5E-08	0E+00	8E-08	4E-08	0E+00	5E-09	1.2E-07	0.125	0.00051
482130.59	3E-03	0E+00	2E-07	1E-07	1E-07	5E-08	0E+00	8E-08	4E-08	0E+00	5E-09	1.3E-07	0.125	0.00051
482230.59	3E-03	0E+00	2E-07	1E-07	1E-07	5E-08	0E+00	8E-08	4E-08	0E+00	5E-09	1.2E-07	0.125	0.00051
482330.59	3E-03	0E+00	2E-07	1E-07	1E-07	5E-08	0E+00	8E-08	4E-08	0E+00	5E-09	1.3E-07	0.125	0.00051
482430.59	3E-03	0E+00	2E-07	1E-07	1E-07	5E-08	0E+00	8E-08	4E-08	0E+00	5E-09	1.3E-07	0.125	0.00051
482530.59	3E-03	0E+00	2E-07	1E-07	1E-07	5E-08	0E+00	8E-08	4E-08	0E+00	5E-09	1.3E-07	0.127	0.00052
483830.59	3E-03	1E-06	3E-06	2E-06	2E-06	7E-07	4E-08	9E-07	0E+00	1E-06	2E-07	2.1E-06	2.124	0.00056
483930.59	3E-03	1E-06	3E-06	2E-06	2E-06	7E-07	4E-08	9E-07	0E+00	1E-06	2E-07	2.1E-06	2.130	0.00056
484030.59	3E-03	1E-06	3E-06	2E-06	2E-06	7E-07	4E-08	9E-07	0E+00	1E-06	2E-07	2.1E-06	2.119	0.00056
484130.59	3E-03	1E-06	3E-06	2E-06	2E-06	7E-07	4E-08	9E-07	0E+00	1E-06	2E-07	2.1E-06	2.127	0.00056
484230.59	3E-03	9E-07	3E-06	2E-06	1E-06	7E-07	4E-08	9E-07	0E+00	1E-06	1E-07	2.1E-06	2.063	0.00054
477930.59	8E-04	3E-07	9E-07	5E-07	5E-07	2E-07	1E-08	3E-07	0E+00	3E-07	5E-08	6.3E-07	0.629	0.00017
478030.59	9E-04	3E-07	9E-07	5E-07	5E-07	2E-07	1E-08	3E-07	0E+00	3E-07	5E-08	6.7E-07	0.665	0.00018
478130.59	9E-04	3E-07	1E-06	6E-07	5E-07	2E-07	1E-08	3E-07	0E+00	3E-07	5E-08	6.9E-07	0.692	0.00018
478230.59	9E-04	3E-07	1E-06	6E-07	5E-07	2E-07	1E-08	3E-07	0E+00	3E-07	5E-08	7.2E-07	0.720	0.00019
478330.59	1E-03	3E-07	1E-06	6E-07	5E-07	2E-07	1E-08	3E-07	0E+00	4E-07	5E-08	7.5E-07	0.749	0.0002
478430.59	1E-03	4E-07	1E-06	6E-07	6E-07	3E-07	1E-08	4E-07	0E+00	4E-07	6E-08	8.1E-07	0.811	0.00021
478530.59	1E-03	4E-07	1E-06	7E-07	6E-07	3E-07	2E-08	4E-07	0E+00	4E-07	6E-08	8.5E-07	0.850	0.00022
478630.59	1E-03	4E-07	1E-06	7E-07	6E-07	3E-07	2E-08	4E-07	0E+00	4E-07	6E-08	8.9E-07	0.893	0.00024
478730.59	1E-03	4E-07	1E-06	7E-07	7E-07	3E-07	2E-08	4E-07	0E+00	4E-07	7E-08	9.3E-07	0.931	0.00025
478830.59	1E-03	4E-07	1E-06	8E-07	7E-07	3E-07	2E-08	4E-07	0E+00	5E-07	7E-08	9.7E-07	0.972	0.00026
478930.59	1E-03	5E-07	1E-06	8E-07	7E-07	3E-07	2E-08	4E-07	0E+00	5E-07	7E-08	1.0E-06	1.005	0.00026
479030.59	1E-03	5E-07	1E-06	8E-07	7E-07	3E-07	2E-08	4E-07	0E+00	5E-07	7E-08	1.0E-06	1.032	0.00027
479130.59	1E-03	5E-07	1E-06	8E-07	8E-07	4E-07	2E-08	5E-07	0E+00	5E-07	8E-08	1.1E-06	1.064	0.00028
479230.59	1E-03	5E-07	2E-06	9E-07	8E-07	4E-07	2E-08	5E-07	0E+00	5E-07	8E-08	1.1E-06	1.100	0.00029
479330.59	1E-03	5E-07	2E-06	9E-07	8E-07	4E-07	2E-08	5E-07	0E+00	5E-07	8E-08	1.1E-06	1.128	0.0003
479430.59	2E-03	5E-07	2E-06	9E-07	8E-07	4E-07	2E-08	5E-07	0E+00	6E-07	9E-08	1.2E-06	1.173	0.00031
479530.59	2E-03	6E-07	2E-06	1E-06	9E-07	4E-07	2E-08	5E-07	0E+00	6E-07	9E-08	1.2E-06	1.213	0.00032
479630.59	2E-03	6E-07	2E-06	1E-06	9E-07	4E-07	2E-08	5E-07	0E+00	6E-07	9E-08	1.2E-06	1.248	0.00033
479730.59	2E-03	6E-07	2E-06	1E-06	9E-07	4E-07	2E-08	6E-07	0E+00	6E-07	9E-08	1.3E-06	1.292	0.00034
479830.59	2E-03	6E-07	2E-06	1E-06	1E-06	4E-07	2E-08	6E-07	0E+00	6E-07	1E-07	1.3E-06	1.347	0.00035
479930.59	2E-03	6E-07	2E-06	1E-06	1E-06	5E-07	3E-08	6E-07	0E+00	7E-07	1E-07	1.4E-06	1.399	0.00037
480030.59	2E-03	6E-07	2E-06	1E-06	1E-06	5E-07	2E-08	6E-07	0E+00	7E-07	1E-07	1.4E-06	1.384	0.00036
480130.59	2E-03	0E+00	2E-07	1E-07	8E-08	4E-08	0E+00	6E-08	3E-08	0E+00	3E-09	9.3E-08	0.093	0.00038
480230.59	2E-03	0E+00	2E-07	1E-07	8E-08	4E-08	0E+00	6E-08	3E-08	0E+00	4E-09	9.6E-08	0.096	0.00039
480330.59	2E-03	0E+00	2E-07	1E-07	8E-08	4E-08	0E+00	6E-08	3E-08	0E+00	4E-09	9.8E-08	0.098	0.0004
480430.59	2E-03	0E+00	2E-07	1E-07	9E-08	4E-08	0E+00	6E-08	3E-08	0E+00	4E-09	1.0E-07	0.100	0.00041
480530.59	2E-03	0E+00	2E-07	1E-07	9E-08	4E-08	0E+00	6E-08	4E-08	0E+00	4E-09	1.0E-07	0.103	0.00042
480630.59	2E-03	0E+00	2E-07	1E-07	9E-08	4E-08	0E+00	6E-08	4E-08	0E+00	4E-09	1.0E-07	0.105	0.00043
480730.59	2E-03	0E+00	2E-07	1E-07	9E-08	4E-08	0E+00	7E-08	4E-08	0E+00	4E-09	1.1E-07	0.107	0.00044
480830.59	2E-03	0E+00	2E-07	1E-07	9E-08	4E-08	0E+00	7E-08	4E-08	0E+00	4E-09	1.1E-07	0.109	0.00045
480930.59	2E-03	0E+00	2E-07	1E-07	9E-08	4E-08	0E+00	7E-08	4E-08	0E+00	4E-09	1.1E-07	0.111	0.00045
481030.59	2E-03	0E+00	2E-07	1E-07	1E-07	4E-08	0E+00	7E-08	4E-08	0E+00	4E-09	1.1E-07	0.112	0.00046
481130.59	2E-03	0E+00	2E-07	1E-07	1E-07	5E-08	0E+00	7E-08	4E-08	0E+00	4E-09	1.2E-07	0.115	0.00047
481230.59	2E-03	0E+00	2E-07	1E-07	1E-07	5E-08	0E+00	7E-08	4E-08	0E+00	4E-09	1.2E-07	0.116	0.00048
481330.59	2E-03	0E+00	2E-07	1E-07	1E-07	5E-08	0E+00	7E-08	4E-08	0E+00	4E-09	1.2E-07	0.117	0.00048
481430.59	2E-03	0E+00	2E-07	1E-07	1E-07	5E-08	0E+00	7E-08	4E-08	0E+00	4E-09	1.2E-07	0.117	0.00048
481530.59	2E-03	0E+00	2E-07	1E-07	1E-07	5E-08	0E+00	7E-08	4E-08	0E+00	4E-09	1.2E-07	0.118	0.00048
481630.59	2E-03	0E+00	2E-07	1E-07	1E-07	5E-08	0E+00	7E-08	4E-08	0E+00	4E-09	1.2E-07	0.118	0.00049
481730.59	2E-03	0E+00	2E-07	1E-07	1E-07	5E-08	0E+00	7E-08	4E-08	0E+00	4E-09	1.2E-07	0.119	0.00049
481830.59	2E-03	0E+00	2E-07	1E-07	1E-07	5E-08	0E+00	7E-08	4E-08	0E+00	4E-09	1.2E-07	0.119	0.00049
481930.59	2E-03	0E+00	2E-07	1E-07	1E-07	5E-08	0E+00	7E-08	4E-08	0E+00	4E-09	1.2E-07	0.120	0.00049
482030.59	2E-03	0E+00	2E-07	1E-07	1E-07	5E-08	0E+00	7E-08	4E-08	0E+00	4E-09	1.2E-07	0.120	0.00049
482130.59	2E-03	0E+00	2E-07	1E-07	1E-07	5E-08	0E+00	7E-08	4E-08	0E+00	4E-09	1.2E-07	0.120	0.00049
482230.59	2E-03	0E+00	2E-07	1E-07	1E-07	5E-08	0E+00	7E-08	4E-08	0E+00	4E-09	1.2E-07	0.121	0.00049
482330.59	2E-03	0E+00	2E-07	1E-07	1E-07	5E-08	0E+00	7E-08	4E-08	0E+00	4E-09	1.2E-07	0.121	0.00049
482430.59	2E-03	9E-07	3E-06	2E-06	1E-06	6E-07	3E-08	8E-07	0E+00	9E-07	1E-07	1.9E-06	1.887	0.0005
483830.59	3E-03	9E-07	3E-06	2E-06	1E-06	7E-07	4E-08	9E-07	0E+00	1E-06	2E-07	2.1E-06	2.068	0.00054
483930.59	3E-03	9E-07	3E-06	2E-06	1E-06	7E-07	4E-08	9E-07	0E+00	1E-06	1E-07	2.1E-06	2.057	0.00054
484030.59	3E-03	9E-07	3E-06	2E-06	1E-06	7E-07	4E-08	9E-07	0E+00	1E-06	1E-07	2.1E-06	2.060	0.00054
484130.59	3E-03	9E-07	3E-06	2E-06	1E-06	7E-07	4E-08	9E-07	0E+00	1E-06	1E-07	2.0E-06	2.003	0.00053
485901.79	8E-02	0E+00	1E-05	6E-06	5E-06	2E-06	0E+00	0E+00	7E-06	2E-06	0E+00	8.3E-06	8.325	0.01545

TAMT Risk Assessment - DPM Cancer and Chronic HI

AERMOD Output

Source Group in AERMOD

TAMT Risk Assessment - DPM Cancer and Chronic HI

AERMOD Output

Source Group in AERMOD

	Discrete Receptor ID (Group Name)	X	Y	B10_1_AUX (1)	B10_2_AUX (3)	B10_3_AUX (5)	B10_4_AUX (7)	B10_5_AUX (9)	B10_6_AUX (11)	B10_7_AUX (13)	B10_8_AUX (15)	CHE_1 (17)	LOC_SWTCH EMP (18)	LOC_SWTCH LOA (19)	OGV_PATH _BLR (20)	OGV_PATH _DPM (21)	TR_28TH (22)	TR_BAYMA R (23)	TR_BOSTON (24)	TR_CROSBY (25)	TR_HARBOR CHA (26)	TR_HARBOR SAM (27)	TUG_PATH _DPM (28)
residential	REC_100M	485230.59	3615725.04	2.0E-01	1.9E-01	2.1E-01	2.3E-01	2.6E-01	2.9E-01	2.9E-01	2.9E-01	2.3E+05	3.1E-01	3.4E-01	8.5E-02	8.5E-02	6.1E-01	2.9E-02	5.7E-01	9.7E-01	6.6E-01	8.6E-01	9.0E-02
residential	REC_100M	485330.59	3615725.04	1.9E-01	1.8E-01	2.1E-01	2.3E-01	2.5E-01	2.8E-01	2.9E-01	2.9E-01	2.1E+05	3.1E-01	3.4E-01	8.3E-02	8.3E-02	6.5E-01	3.0E-02	6.1E-01	9.6E-01	6.4E-01	9.0E-01	8.8E-02
residential	REC_100M	485230.59	3615825.04	2.0E-01	1.9E-01	2.2E-01	2.4E-01	2.7E-01	3.1E-01	3.1E-01	3.0E-01	2.4E+05	3.4E-01	3.7E-01	8.8E-02	8.8E-02	6.2E-01	2.8E-02	5.8E-01	1.0E+00	7.1E-01	9.0E-01	9.5E-02
residential	REC_100M	489130.59	3615925.04	7.4E-02	7.6E-02	8.3E-02	8.8E-02	9.6E-02	1.0E-01	1.0E-01	1.0E-01	5.2E+04	9.2E-02	9.9E-02	4.1E-02	4.1E-02	3.3E-01	1.6E-01	3.3E-01	1.7E-01	1.3E-01	2.5E-01	3.9E-02
residential	REC_100M	489030.59	3616025.04	7.9E-02	8.0E-02	8.8E-02	9.4E-02	1.0E-01	1.1E-01	1.1E-01	1.1E-01	5.6E+04	9.8E-02	1.1E-01	4.3E-02	4.3E-02	3.7E-01	1.4E-01	3.8E-01	1.8E-01	1.4E-01	2.9E-01	4.1E-02
residential	REC_100M	489130.59	3616025.04	7.8E-02	8.0E-02	8.7E-02	9.3E-02	1.0E-01	1.1E-01	1.1E-01	1.1E-01	5.5E+04	9.5E-02	1.0E-01	4.3E-02	4.3E-02	3.6E-01	1.5E-01	3.6E-01	1.8E-01	1.4E-01	2.9E-01	4.0E-02
residential	REC_100M	488930.59	3616125.04	8.3E-02	8.5E-02	9.3E-02	9.9E-02	1.1E-01	1.2E-01	1.2E-01	1.2E-01	6.0E+04	1.0E-01	1.1E-01	4.5E-02	4.5E-02	4.3E-01	1.2E-01	4.3E-01	2.0E-01	1.6E-01	3.4E-01	4.3E-02
residential	REC_100M	489030.59	3616125.04	8.2E-02	8.4E-02	9.2E-02	9.8E-02	1.1E-01	1.2E-01	1.2E-01	1.2E-01	5.9E+04	1.0E-01	1.1E-01	4.4E-02	4.4E-02	4.1E-01	1.3E-01	4.1E-01	2.0E-01	1.5E-01	3.4E-01	4.2E-02
residential	REC_100M	489130.59	3616125.04	8.2E-02	8.3E-02	9.1E-02	9.7E-02	1.1E-01	1.1E-01	1.2E-01	1.2E-01	5.8E+04	9.9E-02	1.1E-01	4.4E-02	4.4E-02	4.0E-01	1.5E-01	4.0E-01	2.0E-01	1.5E-01	3.3E-01	4.2E-02
residential	REC_100M	488730.59	3616225.04	8.9E-02	9.1E-02	1.0E-01	1.1E-01	1.2E-01	1.3E-01	1.3E-01	1.3E-01	6.6E+04	1.2E-01	1.3E-01	4.7E-02	4.7E-02	5.1E-01	1.0E-01	5.2E-01	2.3E-01	1.7E-01	3.9E-01	4.5E-02
residential	REC_100M	488830.59	3616225.04	8.8E-02	9.0E-02	9.9E-02	1.1E-01	1.2E-01	1.3E-01	1.3E-01	1.3E-01	6.5E+04	1.1E-01	1.2E-01	4.7E-02	4.7E-02	4.9E-01	1.1E-01	5.0E-01	2.3E-01	1.7E-01	3.9E-01	4.5E-02
residential	REC_100M	488930.59	3616225.04	8.7E-02	8.9E-02	9.8E-02	1.0E-01	1.1E-01	1.2E-01	1.3E-01	1.3E-01	6.3E+04	1.1E-01	1.2E-01	4.6E-02	4.6E-02	4.8E-01	1.2E-01	4.7E-01	2.3E-01	1.7E-01	3.9E-01	4.4E-02
residential	REC_100M	489030.59	3616225.04	8.6E-02	8.8E-02	9.6E-02	1.0E-01	1.1E-01	1.2E-01	1.2E-01	1.2E-01	6.2E+04	1.1E-01	1.2E-01	4.6E-02	4.6E-02	4.6E-01	1.3E-01	4.6E-01	2.2E-01	1.7E-01	3.9E-01	4.4E-02
residential	REC_100M	489130.59	3616225.04	8.6E-02	8.7E-02	9.5E-02	1.0E-01	1.1E-01	1.2E-01	1.2E-01	1.2E-01	6.1E+04	1.0E-01	1.1E-01	4.5E-02	4.5E-02	4.5E-01	1.4E-01	4.4E-01	2.2E-01	1.6E-01	3.8E-01	4.3E-02
residential	REC_100M	488630.59	3616325.04	9.5E-02	9.7E-02	1.1E-01	1.1E-01	1.3E-01	1.4E-01	1.4E-01	1.4E-01	7.1E+04	1.3E-01	1.4E-01	4.9E-02	4.9E-02	6.1E-01	9.3E-02	6.2E-01	2.5E-01	1.9E-01	4.7E-01	4.8E-02
residential	REC_100M	488730.59	3616325.04	9.4E-02	9.5E-02	1.1E-01	1.1E-01	1.2E-01	1.4E-01	1.4E-01	1.4E-01	7.0E+04	1.2E-01	1.3E-01	4.9E-02	4.9E-02	5.8E-01	9.9E-02	5.8E-01	2.5E-01	1.9E-01	4.6E-01	4.8E-02
residential	REC_100M	488830.59	3616325.04	9.3E-02	9.4E-02	1.0E-01	1.1E-01	1.2E-01	1.3E-01	1.3E-01	1.3E-01	6.9E+04	1.2E-01	1.3E-01	4.8E-02	4.8E-02	5.6E-01	1.1E-01	5.5E-01	2.5E-01	1.8E-01	4.6E-01	4.7E-02
residential	REC_100M	488930.59	3616325.04	9.2E-02	9.3E-02	1.0E-01	1.1E-01	1.2E-01	1.3E-01	1.3E-01	1.3E-01	6.7E+04	1.1E-01	1.2E-01	4.7E-02	4.7E-02	5.4E-01	1.1E-01	5.3E-01	2.5E-01	1.8E-01	4.5E-01	4.6E-02

divide by --> / g/s -->

Receptor (X, Y)	B10_1_AUX	B10_2_AUX	B10_3_AUX	B10_4_AUX	B10_5_AUX	B10_6_AUX	B10_7_AUX	B10_8_AUX	CHE_1	LOC_SWTCHEMP	LOC_SWTCHLOA	OGV_PATH_DPM	TR_28TH	TR_BAYMAR	TR_BOSTON	TR_CROSBY	TR_HARBORCHA	TR_HARBORSAM	TUG_PATH_DPM	SUM
divide by -->	4	4	4	4	2	2	2	2	1	2	2	1	1	1	1	1	1	1	1	
	Refrigerated ContainersSTC MIT	Refrigerated ContainersSTC MIT	Refrigerated ContainersSTC MIT	Refrigerated ContainersSTC MIT	Multi-Purpose General CargoSTC MIT	Multi-Purpose General CargoSTC MIT	Dry BulkSTC MIT	Dry BulkSTC MIT	AllSTC MIT	AllSTC MIT	AllSTC MIT	AllSTC MIT	TR_28THSTC MIT	TR_BAYMARSTC MIT	TR_BOSTONSTC MIT	TR_CROSBYSTC MIT	TR_HARBORCHASTC MIT	TR_HARBORSAMSTC MIT	AllSTC MIT	
g/s -->	8.4E-03	8.4E-03	8.4E-03	8.4E-03	8.7E-03	8.7E-03	9.4E-03	9.4E-03	1.0E-08	1.8E-03	1.8E-03	3.0E-02	7.1E-06	8.6E-06	2.3E-05	4.8E-05	1.1E-04	1.1E-04	1.8E-03	
	1	3	5	7	9	11	13	15	17	18	19	21	22	23	24	25	26	27	28	
485230.59, 3615725.04	1.6E-03	1.6E-03	1.8E-03	2.0E-03	2.3E-03	2.5E-03	2.7E-03	2.7E-03	2.3E-03	5.5E-04	6.0E-04	2.6E-03	4.3E-06	2.5E-07	1.3E-05	4.7E-05	7.1E-05	9.2E-05	1.6E-04	2.4E-02
485330.59, 3615725.04	1.6E-03	1.5E-03	1.8E-03	1.9E-03	2.2E-03	2.5E-03	2.7E-03	2.7E-03	2.2E-03	5.5E-04	6.0E-04	2.5E-03	4.6E-06	2.6E-07	1.4E-05	4.7E-05	6.9E-05	9.7E-05	1.6E-04	2.3E-02
485230.59, 3615825.04	1.7E-03	1.6E-03	1.9E-03	2.1E-03	2.4E-03	2.7E-03	2.9E-03	2.8E-03	2.5E-03	5.9E-04	6.5E-04	2.7E-03	4.4E-06	2.4E-07	1.3E-05	5.1E-05	7.6E-05	9.6E-05	1.7E-04	2.5E-02
489130.59, 3615925.04	6.3E-04	6.4E-04	7.0E-04	7.5E-04	8.4E-04	9.1E-04	9.8E-04	9.7E-04	5.4E-04	1.6E-04	1.7E-04	1.2E-03	2.3E-06	1.4E-06	7.5E-06	8.0E-06	1.4E-05	2.7E-05	6.9E-05	8.7E-03
489030.59, 3616025.04	6.6E-04	6.8E-04	7.4E-04	7.9E-04	8.9E-04	9.7E-04	1.0E-03	1.0E-03	5.8E-04	1.7E-04	1.9E-04	1.3E-03	2.7E-06	1.2E-06	8.5E-06	8.9E-06	1.6E-05	3.1E-05	7.2E-05	9.2E-03
489130.59, 3616025.04	6.6E-04	6.7E-04	7.4E-04	7.8E-04	8.8E-04	9.6E-04	1.0E-03	1.0E-03	5.7E-04	1.7E-04	1.8E-04	1.3E-03	2.6E-06	1.3E-06	8.2E-06	8.9E-06	1.5E-05	3.1E-05	7.1E-05	9.1E-03
488930.59, 3616125.04	7.0E-04	7.1E-04	7.9E-04	8.4E-04	9.5E-04	1.0E-03	1.1E-03	1.1E-03	6.2E-04	1.8E-04	2.0E-04	1.3E-03	3.0E-06	1.1E-06	9.7E-06	9.8E-06	1.7E-05	3.6E-05	7.6E-05	9.8E-03
489030.59, 3616125.04	6.9E-04	7.1E-04	7.8E-04	8.3E-04	9.3E-04	1.0E-03	1.1E-03	1.1E-03	6.1E-04	1.8E-04	1.9E-04	1.3E-03	2.9E-06	1.1E-06	9.3E-06	9.8E-06	1.7E-05	3.6E-05	7.5E-05	9.6E-03
489130.59, 3616125.04	6.9E-04	7.0E-04	7.7E-04	8.2E-04	9.2E-04	1.0E-03	1.1E-03	1.1E-03	6.0E-04	1.8E-04	1.9E-04	1.3E-03	2.8E-06	1.3E-06	9.0E-06	9.8E-06	1.6E-05	3.6E-05	7.4E-05	9.5E-03
488730.59, 3616225.04	7.5E-04	7.7E-04	8.5E-04	9.1E-04	1.0E-03	1.1E-03	1.2E-03	1.2E-03	6.8E-04	2.0E-04	2.2E-04	1.4E-03	3.7E-06	8.8E-07	1.2E-05	1.1E-05	1.8E-05	4.2E-05	8.0E-05	1.1E-02
488830.59, 3616225.04	7.4E-04	7.6E-04	8.4E-04	9.0E-04	1.0E-03	1.1E-03	1.2E-03	1.2E-03	6.7E-04	2.0E-04	2.1E-04	1.4E-03	3.5E-06	9.4E-07	1.1E-05	1.1E-05	1.8E-05	4.2E-05	7.9E-05	1.0E-02
488930.59, 3616225.04	7.4E-04	7.5E-04	8.3E-04	8.8E-04	9.9E-04	1.1E-03	1.2E-03	1.2E-03	6.6E-04	1.9E-04	2.1E-04	1.4E-03	3.4E-06	1.0E-06	1.1E-05	1.1E-05	1.8E-05	4.2E-05	7.8E-05	1.0E-02
489030.59, 3616225.04	7.3E-04	7.4E-04	8.1E-04	8.7E-04	9.8E-04	1.1E-03	1.2E-03	1.1E-03	6.5E-04	1.9E-04	2.1E-04	1.4E-03	3.3E-06	1.1E-06	1.0E-05	1.1E-05	1.8E-05	4.1E-05	7.8E-05	1.0E-02
489130.59, 3616225.04	7.2E-04	7.3E-04	8.0E-04	8.5E-04	9.6E-04	1.0E-03	1.1E-03	1.1E-03	6.4E-04	1.8E-04	2.0E-04	1.4E-03	3.2E-06	1.2E-06	1.0E-05	1.1E-05	1.8E-05	4.1E-05	7.7E-05	9.9E-03
488630.59, 3616325.04	8.0E-04	8.1E-04	9.0E-04	9.7E-04	1.1E-03	1.2E-03	1.3E-03	1.3E-03	7.4E-04	2.2E-04	2.4E-04	1.5E-03	4.3E-06	8.0E-07	1.4E-05	1.2E-05	2.0E-05	5.0E-05	8.5E-05	1.1E-02
488730.59, 3616325.04	7.9E-04	8.0E-04	8.9E-04	9.5E-04	1.1E-03	1.2E-03	1.3E-03	1.3E-03	7.3E-04	2.2E-04	2.3E-04	1.5E-03	4.1E-06	8.4E-07	1.3E-05	1.2E-05	2.0E-05	5.0E-05	8.4E-05	1.1E-02
488830.59, 3616325.04	7.8E-04	8.0E-04	8.8E-04	9.4E-04	1.1E-03	1.2E-03	1.3E-03	1.3E-03	7.1E-04	2.1E-04	2.3E-04	1.4E-03	4.0E-06	9.0E-07	1.3E-05	1.2E-05	2.0E-05	4.9E-05	8.2E-05	1.1E-02
488930.59, 3616325.04	7.8E-04	7.8E-04	8.7E-04	9.2E-04	1.0E-03	1.1E-03	1.2E-03	1.2E-03	7.0E-04	2.0E-04	2.1E-04	1.4E-03	3.8E-06	9.7E-07	1.2E-05	1.2E-05	1.9E-05	4.8E-05	8.0E-05	1.1E-02

Receptor (X, Y)	Vessel Hoteling All 100%	Vessel Hoteling Refrigerated ContainersSTC MIT 48%	Vessel Hoteling Multi-Purpose General CargoSTC MIT 25%	Vessel Hoteling Dry BulkSTC MIT 27%	Vessel Transit All 100%	Vessel Transit Refrigerated ContainersSTC MIT 46%	Vessel Transit Multi-Purpose General CargoSTC MIT 25%	Vessel Transit Dry BulkSTC MIT 28%	Tug/Barge Transit All 100%	Tug/Barge Transit Refrigerated ContainersSTC MIT 21%	Tug/Barge Transit Multi-Purpose General CargoSTC MIT 54%	Tug/Barge Transit Dry BulkSTC MIT 25%	Terminal E All 100%	Terminal E Refrigerated ContainersSTC MIT 30%
485230.59, 3615725.04	1.7E-02	7E-03	5E-03	5E-03	3E-03	1E-03	6E-04	7E-04	2E-04	3E-05	9E-05	4E-05	2E-03	7E-04
485330.59, 3615725.04	1.7E-02	7E-03	5E-03	5E-03	2E-03	1E-03	6E-04	7E-04	2E-04	3E-05	8E-05	4E-05	2E-03	7E-04
485230.59, 3615825.04	1.8E-02	7E-03	5E-03	6E-03	3E-03	1E-03	7E-04	8E-04	2E-04	3E-05	9E-05	4E-05	3E-03	8E-04
489130.59, 3615925.04	6.4E-03	3E-03	2E-03	2E-03	1E-03	6E-04	3E-04	4E-04	7E-05	1E-05	4E-05	2E-05	5E-04	2E-04
489030.59, 3616025.04	6.8E-03	3E-03	2E-03	2E-03	1E-03	6E-04	3E-04	4E-04	7E-05	2E-05	4E-05	2E-05	6E-04	2E-04
489130.59, 3616025.04	6.7E-03	3E-03	2E-03	2E-03	1E-03	6E-04	3E-04	4E-04	7E-05	1E-05	4E-05	2E-05	6E-04	2E-04
488930.59, 3616125.04	7.3E-03	3E-03	2E-03	2E-03	1E-03	6E-04	3E-04	4E-04	8E-05	2E-05	4E-05	2E-05	6E-04	2E-04
489030.59, 3616125.04	7.2E-03	3E-03	2E-03	2E-03	1E-03	6E-04	3E-04	4E-04	7E-05	2E-05	4E-05	2E-05	6E-04	2E-04
489130.59, 3616125.04	7.1E-03	3E-03	2E-03	2E-03	1E-03	6E-04	3E-04	4E-04	7E-05	2E-05	4E-05	2E-05	6E-04	2E-04
488730.59, 3616225.04	7.9E-03	3E-03	2E-03	2E-03	1E-03	7E-04	4E-04	4E-04	8E-05	2E-05	4E-05	2E-05	7E-04	2E-04
488830.59, 3616225.04	7.7E-03	3E-03	2E-03	2E-03	1E-03	7E-04	4E-04	4E-04	8E-05	2E-05	4E-05	2E-05	7E-04	2E-04
488930.59, 3616225.04	7.6E-03	3E-03	2E-03	2E-03	1E-03	6E-04	3E-04	4E-04	8E-05	2E-05	4E-05	2E-05	7E-04	2E-04
489030.59, 3616225.04	7.5E-03	3E-03	2E-03	2E-03	1E-03	6E-04	3E-04	4E-04	8E-05	2E-05	4E-05	2E-05	6E-04	2E-04
489130.59, 3616225.04	7.4E-03	3E-03	2E-03	2E-03	1E-03	6E-04	3E-04	4E-04	8E-05	2E-05	4E-05	2E-05	6E-04	2E-04
488630.59, 3616325.04	8.4E-03	3E-03	2E-03	3E-03	1E-03	7E-04	4E-04	4E-04	8E-05	2E-05	5E-05	2E-05	7E-04	2E-04
488730.59, 3616325.04	8.2E-03	3E-03	2E-03	3E-03	1E-03	7E-04	4E-04	4E-04	8E-05	2E-05	5E-05	2E-05	7E-04	2E-04
488830.59, 3616325.04	8.1E-03	3E-03	2E-03	3E-03	1E-03	7E-04	4E-04	4E-04	8E-05	2E-05	4E-05	2E-05	7E-04	2E-04
488930.59, 3616325.04	8.0E-03	3E-03	2E-03	2E-03	1E-03	7E-04	4E-04	4E-04	8E-05	2E-05	4E-05	2E-05	7E-04	2E-04

TAMT Risk Assessment - DPM Cancer and Chronic HI

AERMOD Output

Land use	Discrete Receptor ID (Group Name)	X	Y	B10_1_AUX (1)	B10_2_AUX (3)	B10_3_AUX (5)	B10_4_AUX (7)	B10_5_AUX (9)	B10_6_AUX (11)	B10_7_AUX (13)	B10_8_AUX (15)	CHE_1 (17)	LOC_SWTCHEMP (18)	LOC_SWTCHLOA (19)	OGV_PATH_BLR (20)	OGV_PATH_DPM (21)	TR_28TH (22)	TR_BAYMAR (23)	TR_BOSTON (24)	TR_CROSBY (25)	TR_HARBORCHA (26)	TR_HARBORSAM (27)	TUG_PATH_DPM (28)	g/s B10_1_AUX (Refrigerated ContainersSTC MIT, ÷4, 8.4E-03, 1)	g/s B10_2_AUX (Refrigerated ContainersSTC MIT, ÷4, 8.4E-03, 3)	g/s B10_3_AUX (Refrigerated ContainersSTC MIT, ÷4, 8.4E-03, 5)	g/s B10_4_AUX (Refrigerated ContainersSTC MIT, ÷4, 8.4E-03, 7)	g/s B10_5_AUX (Multi-Purpose General CargoSTC MIT, ÷2, 8.7E-03, 9)	g/s B10_6_AUX (Multi-Purpose General CargoSTC MIT, ÷2, 8.7E-03, 11)
residential	REC_100!	483430.59	3617525.04	2.5E-01	2.9E-01	2.5E-01	2.2E-01	1.9E-01	1.6E-01	1.5E-01	1.5E-01	2.5E+05	3.0E-01	2.7E-01	2.3E-01	2.3E-01	1.1E-01	1.3E-02	1.1E-01	3.1E-01	5.3E-01	1.6E-01	3.1E-01	2.1E-03	2.4E-03	2.1E-03	1.9E-03	1.7E-03	1.4E-03
residential	REC_100!	483530.59	3617525.04	2.7E-01	3.0E-01	2.6E-01	2.4E-01	2.0E-01	1.7E-01	1.6E-01	1.5E-01	2.8E+05	3.3E-01	3.0E-01	2.3E-01	2.3E-01	1.1E-01	1.3E-02	1.1E-01	3.3E-01	5.8E-01	1.6E-01	3.2E-01	2.2E-03	2.6E-03	2.2E-03	2.0E-03	1.7E-03	1.5E-03
residential	REC_100!	483630.59	3617525.04	2.8E-01	3.2E-01	2.8E-01	2.5E-01	2.1E-01	1.8E-01	1.7E-01	1.7E-01	3.1E+05	3.5E-01	3.2E-01	2.4E-01	2.4E-01	1.2E-01	1.3E-02	1.1E-01	3.6E-01	6.3E-01	1.7E-01	3.3E-01	2.4E-03	2.7E-03	2.4E-03	2.1E-03	1.9E-03	1.6E-03
residential	REC_100!	483730.59	3617525.04	3.0E-01	3.4E-01	3.0E-01	2.7E-01	2.3E-01	1.9E-01	1.8E-01	1.7E-01	3.5E+05	3.9E-01	3.5E-01	2.4E-01	2.4E-01	1.2E-01	1.3E-02	1.2E-01	3.9E-01	6.9E-01	1.8E-01	3.4E-01	2.5E-03	2.9E-03	2.5E-03	2.3E-03	2.0E-03	1.7E-03
residential	REC_100!	483830.59	3617525.04	3.2E-01	3.6E-01	3.2E-01	2.9E-01	2.4E-01	2.0E-01	1.9E-01	1.9E-01	3.9E+05	4.2E-01	3.8E-01	2.5E-01	2.5E-01	1.3E-01	1.3E-02	1.2E-01	4.3E-01	7.6E-01	1.9E-01	3.5E-01	2.7E-03	3.0E-03	2.7E-03	2.4E-03	2.1E-03	1.8E-03
residential	REC_100!	483930.59	3617525.04	3.3E-01	3.7E-01	3.4E-01	3.1E-01	2.6E-01	2.1E-01	2.1E-01	2.0E-01	4.5E+05	4.6E-01	4.1E-01	2.5E-01	2.5E-01	1.3E-01	1.3E-02	1.3E-01	4.7E-01	8.3E-01	2.1E-01	3.6E-01	2.8E-03	3.2E-03	2.9E-03	2.6E-03	2.3E-03	1.9E-03
residential	REC_100!	484030.59	3617525.04	3.6E-01	4.0E-01	3.6E-01	3.3E-01	2.8E-01	2.3E-01	2.2E-01	2.1E-01	5.1E+05	4.9E-01	4.4E-01	2.6E-01	2.6E-01	1.4E-01	1.3E-02	1.4E-01	5.2E-01	9.2E-01	2.2E-01	3.7E-01	3.0E-03	3.3E-03	3.1E-03	2.8E-03	2.5E-03	2.0E-03
residential	REC_100!	484130.59	3617525.04	3.8E-01	4.1E-01	3.8E-01	3.5E-01	3.0E-01	2.5E-01	2.4E-01	2.3E-01	5.8E+05	5.3E-01	4.8E-01	2.7E-01	2.7E-01	1.5E-01	1.4E-02	1.4E-01	5.8E-01	1.0E+00	2.3E-01	3.8E-01	3.2E-03	3.5E-03	3.2E-03	3.0E-03	2.6E-03	2.2E-03
residential	REC_100!	484230.59	3617525.04	4.0E-01	4.2E-01	4.0E-01	3.7E-01	3.2E-01	2.7E-01	2.6E-01	2.5E-01	6.7E+05	5.7E-01	5.2E-01	2.8E-01	2.8E-01	1.5E-01	1.4E-02	1.5E-01	6.4E-01	1.1E+00	2.5E-01	3.9E-01	3.4E-03	3.5E-03	3.4E-03	3.1E-03	2.8E-03	2.3E-03
residential	REC_100!	484330.59	3617525.04	4.1E-01	4.3E-01	4.1E-01	3.8E-01	3.4E-01	2.8E-01	2.7E-01	2.6E-01	7.8E+05	6.3E-01	5.7E-01	2.8E-01	2.8E-01	1.6E-01	1.4E-02	1.5E-01	7.2E-01	1.3E+00	2.7E-01	4.1E-01	3.5E-03	3.6E-03	3.4E-03	3.2E-03	2.9E-03	2.5E-03
residential	REC_100!	484430.59	3617525.04	4.2E-01	4.2E-01	4.1E-01	3.9E-01	3.5E-01	3.0E-01	2.9E-01	2.8E-01	9.3E+05	7.1E-01	6.4E-01	2.9E-01	2.9E-01	1.7E-01	1.4E-02	1.6E-01	8.2E-01	1.4E+00	2.9E-01	4.3E-01	3.6E-03	3.6E-03	3.5E-03	3.3E-03	3.1E-03	2.6E-03
residential	REC_100!	486730.59	3617525.04	2.6E-01	2.7E-01	3.1E-01	3.4E-01	3.8E-01	4.2E-01	4.5E-01	4.9E-01	4.4E+05	8.3E-01	1.1E+00	1.1E-01	1.1E-01	1.3E+00	2.6E-02	1.0E+00	3.7E+00	1.4E+00	2.2E+01	1.3E-01	2.2E-03	2.2E-03	2.6E-03	2.9E-03	3.4E-03	3.6E-03
residential	REC_100!	486830.59	3617525.04	2.6E-01	2.6E-01	3.0E-01	3.3E-01	3.6E-01	3.9E-01	4.2E-01	4.6E-01	4.0E+05	7.7E-01	9.7E-01	1.0E-01	1.0E-01	1.5E+00	2.7E-02	1.2E+00	3.2E+00	1.3E+00	1.4E+01	1.3E-01	2.2E-03	2.2E-03	2.5E-03	2.7E-03	3.1E-03	3.4E-03
residential	REC_100!	486930.59	3617525.04	2.5E-01	2.5E-01	2.8E-01	3.1E-01	3.4E-01	3.6E-01	3.9E-01	4.3E-01	3.7E+05	7.1E-01	8.9E-01	9.9E-02	9.9E-02	1.9E+00	2.8E-02	1.4E+00	2.7E+00	1.2E+00	1.0E+01	1.2E-01	2.1E-03	2.1E-03	2.4E-03	2.6E-03	3.0E-03	3.2E-03
residential	REC_100!	487030.59	3617525.04	2.4E-01	2.4E-01	2.7E-01	2.9E-01	3.2E-01	3.4E-01	3.7E-01	4.0E-01	3.4E+05	6.7E-01	8.2E-01	9.5E-02	9.5E-02	2.6E+00	2.9E-02	1.7E+00	2.4E+00	1.1E+00	8.0E+00	1.2E-01	2.0E-03	2.0E-03	2.3E-03	2.5E-03	2.8E-03	3.0E-03
residential	REC_100!	487130.59	3617525.04	2.4E-01	2.3E-01	2.6E-01	2.8E-01	3.0E-01	3.2E-01	3.4E-01	3.7E-01	3.1E+05	6.3E-01	7.6E-01	9.2E-02	9.2E-02	3.7E+00	3.0E-02	2.1E+00	2.1E+00	1.1E+00	6.6E+00	1.2E-01	2.0E-03	1.9E-03	2.2E-03	2.3E-03	2.6E-03	2.8E-03
residential	REC_100!	487230.59	3617525.04	2.3E-01	2.2E-01	2.5E-01	2.6E-01	2.8E-01	3.0E-01	3.2E-01	3.5E-01	2.9E+05	5.9E-01	7.0E-01	8.9E-02	8.9E-02	6.1E+00	3.2E-02	2.7E+00	1.8E+00	1.0E+00	5.6E+00	1.1E-01	1.9E-03	1.8E-03	2.1E-03	2.2E-03	2.5E-03	2.6E-03
residential	REC_100!	487630.59	3617525.04	2.0E-01	1.9E-01	2.1E-01	2.2E-01	2.3E-01	2.4E-01	2.6E-01	2.8E-01	2.2E+05	4.7E-01	5.3E-01	7.9E-02	7.9E-02	2.8E+01	3.8E-02	3.6E+01	1.1E+00	7.7E-01	3.2E+00	1.0E-01	1.7E-03	1.6E-03	1.7E-03	1.8E-03	2.0E-03	2.1E-03
residential	REC_100!	487730.59	3617525.04	1.9E-01	1.8E-01	2.0E-01	2.1E-01	2.2E-01	2.3E-01	2.4E-01	2.6E-01	2.0E+05	4.4E-01	4.9E-01	7.7E-02	7.7E-02	1.5E+01	4.0E-02	3.1E+01	1.0E+00	7.2E-01	2.7E+00	9.7E-02	1.6E-03	1.5E-03	1.7E-03	1.8E-03	1.9E-03	2.0E-03
residential	REC_100!	487830.59	3617525.04	1.9E-01	1.7E-01	1.9E-01	2.0E-01	2.1E-01	2.2E-01	2.3E-01	2.5E-01	1.9E+05	4.1E-01	4.6E-01	7.5E-02	7.5E-02	9.6E+00	4.2E-02	1.7E+01	9.4E-01	6.8E-01	2.2E+00	9.4E-02	1.6E-03	1.5E-03	1.6E-03	1.7E-03	1.8E-03	1.9E-03
residential	REC_100!	487930.59	3617525.04	1.8E-01	1.7E-01	1.8E-01	1.9E-01	2.0E-01	2.1E-01	2.2E-01	2.4E-01	1.8E+05	3.9E-01	4.3E-01	7.4E-02	7.4E-02	6.6E+00	4.4E-02	9.3E+00	8.6E-01	6.4E-01	1.8E+00	9.2E-02	1.5E-03	1.4E-03	1.5E-03	1.6E-03	1.7E-03	1.8E-03
residential	REC_100!	488030.59	3617525.04	1.7E-01	1.6E-01	1.8E-01	1.8E-01	1.9E-01	2.0E-01	2.1E-01	2.2E-01	1.7E+05	3.7E-01	4.0E-01	7.2E-02	7.2E-02	4.8E+00	4.6E-02	6.0E+00	7.9E-01	6.0E-01	1.5E+00	9.0E-02	1.5E-03	1.4E-03	1.5E-03	1.5E-03	1.7E-03	1.7E-03
residential	REC_100!	488130.59	3617525.04	1.7E-01	1.6E-01	1.7E-01	1.7E-01	1.8E-01	1.9E-01	2.0E-01	2.1E-01	1.6E+05	3.5E-01	3.8E-01	7.0E-02	7.0E-02	3.6E+00	4.8E-02	4.3E+00	7.3E-01	5.6E-01	1.2E+00	8.7E-02	1.4E-03	1.3E-03	1.4E-03	1.5E-03	1.6E-03	1.6E-03
residential	REC_100!	488230.59	3617525.04	1.6E-01	1.5E-01	1.6E-01	1.7E-01	1.8E-01	1.8E-01	1.9E-01	2.0E-01	1.5E+05	3.3E-01	3.6E-01	6.9E-02	6.9E-02	2.9E+00	5.1E-02	3.4E+00	6.8E-01	5.3E-01	1.1E+00	8.5E-02	1.4E-03	1.3E-03	1.4E-03	1.4E-03	1.5E-03	1.6E-03
residential	REC_100!	488330.59	3617525.04	1.6E-01	1.5E-01	1.6E-01	1.6E-01	1.7E-01	1.8E-01	1.9E-01	2.0E-01	1.4E+05	3.1E-01	3.4E-01	6.8E-02	6.8E-02	2.4E+00	5.4E-02	2.9E+00	6.3E-01	5.0E-01	9.7E-01	8.2E-02	1.3E-03	1.2E-03	1.3E-03	1.4E-03	1.5E-03	1.5E-03
residential	REC_100!	488430.59	3617525.04	1.6E-01	1.5E-01	1.6E-01	1.7E-01	1.8E-01	1.8E-01	1.9E-01	2.0E-01	1.3E+05	2.2E-01	2.4E-01	6.7E-02	6.7E-02	1.9E+00	5.7E-02	2.4E+00	5.7E-01	4.4E-01	8.9E-01	6.5E-02	1.4E-03	1.3E-03	1.4E-03	1.4E-03	1.5E-03	1.6E-03
residential	REC_100!	488530.59	3617525.04	1.6E-01	1.4E-01	1.6E-01	1.6E-01	1.7E-01	1.7E-01	1.8E-01	1.9E-01	1.2E+05	2.0E-01	2.2E-01	6.6E-02	6.6E-02	1.7E+00	6.0E-02	2.0E+00	5.3E-01	4.2E-01	8.1E-01	6.5E-02	1.3E-03	1.2E-03	1.3E-03	1.4E-03	1.5E-03	1.5E-03
residential	REC_100!	488730.59	3617525.04	1.4E-01	1.3E-01	1.4E-01	1.5E-01	1.5E-01	1.6E-01	1.6E-01	1.7E-01	1.2E+05	2.4E-01	2.5E-01	6.3E-02	6.3E-02	1.3E+00	6.6E-02	1.5E+00	4.7E-01	4.0E-01	6.7E-01	7.0E-02	1.2E-03	1.1E-03	1.2E-03	1.2E-03	1.3E-03	1.4E-03
residential	REC_100!	488830.59	3617525.04	1.4E-01	1.3E-01	1.4E-01	1.4E-01	1.4E-01	1.5E-01	1.6E-01	1.6E-01	1.1E+05	2.3E-01	2.5E-01	6.1E-02	6.1E-02	1.1E+00	7.2E-02	1.3E+00	4.5E-01	3.8E-01	6.2E-01	7.0E-02	1.2E-03	1.1E-03	1.1E-03	1.2E-03	1.3E-03	1.3E-03
residential	REC_100!	488930.59	3617525.04	1.3E-01	1.2E-01	1.3E-01	1.3E-01	1.4E-01	1.4E-01	1.5E-01	1.6E-01	1.1E+05	2.3E-01	2.4E-01	6.0E-02	6.0E-02	1.0E+00	7.7E-02	1.2E+00	4.3E-01	3.7E-01	5.7E-01	7.0E-02	1.1E-03	1.0E-03	1.1E-03	1.1E-03	1.2E-03	1.2E-03
residential	REC_100!	489030.59	3617525.04	1.3E-01	1.2E-01	1.3E-01	1.3E-01	1.3E-01	1.4E-01	1.4E-01	1.5E-01	1.0E+05	2.2E-01	2.3E-01	5.9E-02	5.9E-02	9.3E-01	8.3E-02	1.1E+00	4.0E-01	3.5E-01	5.3E-01	6.9E-02	1.1E-03	1.0E-03	1.1E-03	1.1E-03	1.2E-03	1.2E-03
residential	REC_100!	489130.59	3617525.04	1.3E-01	1.2E-01	1.2E-01	1.3E-01	1.3E-01	1.4E-01	1.4E-01	1.5E-01	9.9E+04	1.9E-01	2.0E-01	5.8E-02	5.8E-02	8.4E-01	8.8E-02	9.6E-01	3.7E-01	3.2E-01	5.0E-01	6.3E-02	1.1E-03	9.9E-04	1.0E-03	1.1E-03	1.2E-03	1.2E-03

X	g/s B10_7_AUX (Dry BulkSTC MIT, ÷2, 9.4E-03, 13)	g/s B10_8_AUX (Dry BulkSTC MIT, ÷2, 9.4E-03, 15)	g/s CHE_1 (AllSTC MIT, ÷1, 1.0E-08, 17)	g/s LOC_SWTCHEMP (AllSTC MIT, ÷2, 1.8E-03, 18)	g/s LOC_SWTCHLOA (AllSTC MIT, ÷2, 1.8E-03, 19)	g/s OGV_PATH_DPM (AllSTC MIT, ÷1, 3.0E-02, 21)	g/s TR_28TH (TR_28THSTC MIT, ÷1, 7.1E-06, 22)	g/s TR_BAYMAR (TR_BAYMARSTC MIT, ÷1, 8.6E-06, 23)	g/s TR_BOSTON (TR_BOSTONSTC MIT, ÷1, 2.3E-05, 24)	g/s TR_CROSBY (TR_CROSBYSTC MIT, ÷1, 4.8E-05, 25)	g/s TR_HARBORCHA (TR_HARBORCHASTC MIT, ÷1, 1.1E-04, 26)	g/s TR_HARBORSAM (TR_HARBORSAMSTC MIT, ÷1, 1.1E-04, 27)	g/s TUG_PATH_DPM (AllSTC MIT, ÷1, 1.8E-03, 28)	SUM	Vessel Hoteling All 100%	Vessel Hoteling Refrigerated ContainersSTC MIT 48%	Vessel Hoteling Multi-Purpose General CargoSTC MIT 25%	Vessel Hoteling Dry BulkSTC MIT 27%	Vessel Transit All 100%	Vessel Transit Refrigerated ContainersSTC MIT 46%	Vessel Transit Multi-Purpose General CargoSTC MIT 25%	Vessel Transit Dry BulkSTC MIT 28%	Tug/Barge Transit All 100%	Tug/Barge Transit Refrigerated ContainersSTC MIT 21%	Tug/Barge Transit Multi-Purpose General CargoSTC MIT 54%	Tug/Barge Transit Dry BulkSTC MIT 25%	Terminal E All 100%	Terminal E Refrigerated ContainersSTC MIT 30%
483430.59	1.4E-03	1.4E-03	2.6E-03	5.3E-04	4.8E-04	6.9E-03	7.8E-07	1.1E-07	2.4E-06	1.5E-05	5.7E-05	1.7E-05	5.4E-04	2.6E-02	1.5E-02	9E-03	3E-03	3E-03	7E-03	3E-03	2E-03	2E-03	5E-04	1E-04	3E-04	1E-04	3E-03	8E-04
483530.59	1.5E-03	1.5E-03	2.9E-03	5.8E-04	5.2E-04	6.9E-03	8.1E-07	1.1E-07	2.5E-06	1.6E-05	6.2E-05	1.8E-05	5.6E-04	2.7E-02	1.5E-02	9E-03	3E-03	3E-03	7E-03	3E-03	2E-03	2E-03	6E-04	1E-04	3E-04	1E-04	3E-03	9E-04
483630.59	1.6E-03	1.6E-03	3.2E-03	6.2E-04	5.6E-04	7.1E-03	8.4E-07	1.1E-07	2.6E-06	1.8E-05	6.8E-05	1.9E-05	5.8E-04	2.8E-02	1.6E-02	1E-02	3E-03	3E-03	7E-03	3E-03	2E-03	2E-03	6E-04	1E-04	3E-04	1E-04	3E-03	1E-03
483730.59	1.7E-03	1.6E-03	3.6E-03	6.8E-04	6.1E-04	7.3E-03	8.8E-07	1.1E-07	2.7E-06	1.9E-05	7.4E-05	2.0E-05	6.0E-04	3.0E-02	1.7E-02	1E-02	4E-03	3E-03	7E-03	3E-03	2E-03	2E-03	6E-04	1E-04	3E-04	1E-04	4E-03	1E-03
483830.59	1.8E-03	1.7E-03	4.1E-03	7.4E-04	6.7E-04	7.4E-03	9.1E-07	1.1E-07	2.8E-06	2.1E-05	8.1E-05	2.1E-05	6.2E-04	3.2E-02	1.8E-02	1E-02	4E-03	4E-03	7E-03	3E-03	2E-03	2E-03	6E-04	1E-04	3E-04	2E-04	4E-03	1E-03
483930.59	1.9E-03	1.8E-03	4.6E-03	8.0E-04	7.3E-04	7.6E-03	9.5E-07	1.1E-07	2.9E-06	2.3E-05	8.9E-05	2.2E-05	6.4E-04	3.4E-02	1.9E-02	1E-02	4E-03	4E-03	8E-03	4E-03	2E-03	2E-03	6E-04	1E-04	3E-04	2E-04	5E-03	1E-03
484030.59	2.1E-03	2.0E-03	5.3E-03	8.5E-04	7.7E-04	7.8E-03	9.9E-07	1.2E-07	3.1E-06	2.5E-05	9.8E-05	2.4E-05	6.5E-04	3.6E-02	2.1E-02	1E-02	4E-03	4E-03	8E-03	4E-03	2E-03	2E-03	6E-04	1E-04	3E-04	2E-04	5E-03	2E-03
484130.59	2.2E-03	2.1E-03	6.1E-03	9.3E-04	8.4E-04	8.0E-03	1.0E-06	1.2E-07	3.2E-06	2.8E-05	1.1E-04	2.5E-05	6.7E-04	3.9E-02	2.2E-02	1E-02	5E-03	4E-03	8E-03	4E-03	2E-03	2E-03	7E-04	1E-04	4E-04	2E-04	6E-03	2E-03
484230.59	2.4E-03	2.3E-03	7.0E-03	1.0E-03	9.2E-04	8.3E-03	1.1E-06	1.2E-07	3.3E-06	3.1E-05	1.2E-04	2.7E-05	6.9E-04	4.1E-02	2.3E-02	1E-02	5E-03	5E-03	8E-03	4E-03	2E-03	2E-03	7E-04	1E-04	4E-04	2E-04	7E-03	2E-03
484330.59	2.6E-03	2.5E-03	8.2E-03	1.1E-03	1.0E-03	8.5E-03	1.1E-06	1.2E-07	3.5E-06	3.5E-05	1.4E-04	2.9E-05	7.2E-04	4.4E-02	2.4E-02	1E-02	5E-03	5E-03	8E-03	4E-03	2E-03	2E-03	7E-04	2E-04	4E-04	2E-04	8E-03	2E-03
484430.59	2.7E-03	2.6E-03	9.6E-03	1.2E-03	1.1E-03	8.7E-03	1.2E-06	1.2E-07	3.7E-06	3.9E-05	1.5E-04	3.1E-05	7.6E-04	4.7E-02	2.5E-02	1E-02	6E-03	5E-03	9E-03	4E-03	2E-03	2E-03	8E-04	2E-04	4E-04	2E-04	1E-02	3E-03
486730.59	4.3E-03	4.6E-03	4.5E-03	1.5E-03	1.9E-03	3.2E-03	9.0E-06	2.2E-07	2.4E-05	1.8E-04	1.5E-04	2.3E-03	2.3E-04	4.0E-02	2.6E-02	1E-02	7E-03	9E-03	3E-03	1E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	5E-03	1E-03
486830.59	4.0E-03	4.3E-03	4.2E-03	1.3E-03	1.7E-03	3.1E-03	1.1E-05	2.3E-07	2.8E-05	1.5E-04	1.4E-04	1.5E-03	2.3E-04	3.7E-02	2.4E-02	1E-02	7E-03	8E-03	3E-03	1E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	4E-03	1E-03
486930.59	3.7E-03	4.0E-03	3.8E-03	1.3E-03	1.6E-03	3.0E-03	1.4E-05	2.4E-07	3.3E-05	1.3E-04	1.3E-04	1.1E-03	2.2E-04	3.4E-02	2.3E-02	9E-03	6E-03	8E-03	3E-03	1E-03	7E-04	8E-04	2E-04	5E-05	1E-04	5E-05	4E-03	1E-03
487030.59	3.4E-03	3.7E-03	3.5E-03	1.2E-03	1.4E-03	2.9E-03	1.8E-05	2.5E-07	3.9E-05	1.1E-04	1.2E-04	8.6E-04	2.1E-04	3.2E-02	2.2E-02	9E-03	6E-03	7E-03	3E-03	1E-03	7E-04	8E-04	2E-04	4E-05	1E-04	5E-05	4E-03	1E-03
487130.59	3.2E-03	3.5E-03	3.3E-03	1.1E-03	1.3E-03	2.8E-03	2.6E-05	2.6E-07	4.8E-05	9.9E-05	1.1E-04	7.1E-04	2.1E-04	3.0E-02	2.1E-02	8E-03	5E-03	7E-03	3E-03	1E-03	7E-04	8E-04	2E-04	4E-05	1E-04	5E-05	3E-03	1E-03
487230.59	3.0E-03	3.3E-03	3.0E-03	1.0E-03	1.2E-03	2.7E-03	4.3E-05	2.7E-07	6.1E-05	8.7E-05	1.1E-04	6.1E-04	2.0E-04	2.9E-02	1.9E-02	8E-03	5E-03	6E-03	3E-03	1E-03	7E-04	8E-04	2E-04	4E-05	1E-04	5E-05	3E-03	9E-04
487630.59	2.4E-03	2.6E-03	2.3E-03	8.2E-04	9.3E-04	2.4E-03	2.0E-04	3.3E-07	8.1E-04	5.5E-05	8.3E-05	3.4E-04	1.8E-04	2.4E-02	1.6E-02	7E-03	4E-03	5E-03	2E-03	1E-03	6E-04	7E-04	2E-04	4E-05	1E-04	4E-05	2E-03	7E-04
487730.59	2.3E-03	2.5E-03	2.1E-03	7.7E-04	8.6E-04	2.3E-03	1.1E-04	3.4E-07	7.0E-04	5.0E-05	7.7E-05	2.9E-04	1.7E-04	2.3E-02	1.5E-02	7E-03	4E-03	5E-03	2E-03	1E-03	6E-04	7E-04	2E-04	4E-05	9E-05	4E-05	2E-03	6E-04
487830.59	2.2E-03	2.3E-03	2.0E-03	7.3E-04	8.1E-04	2.3E-03	6.9E-05	3.6E-07	3.9E-04	4.5E-05	7.3E-05	2.3E-04	1.7E-04	2.1E-02	1.5E-02	6E-03	4E-03	5E-03	2E-03	1E-03	6E-04	6E-04	2E-04	3E-05	9E-05	4E-05	2E-03	6E-04
487930.59	2.1E-03	2.2E-03	1.9E-03	6.9E-04	7.6E-04	2.2E-03	4.7E-05	3.8E-07	2.1E-04	4.2E-05	6.8E-05	1.9E-04	1.6E-04	2.0E-02	1.4E-02	6E-03	4E-03	4E-03	2E-03	1E-03	6E-04	6E-04	2E-04	3E-05	9E-05	4E-05	2E-03	6E-04
488030.59	2.0E-03	2.1E-03	1.8E-03	6.5E-04	7.1E-04	2.2E-03	3.4E-05	4.0E-07	1.4E-04	3.8E-05	6.4E-05	1.6E-04	1.6E-04	1.9E-02	1.3E-02	6E-03	3E-03	4E-03	2E-03	1E-03	5E-04	6E-04	2E-04	3E-05	9E-05	4E-05	2E-03	5E-04
488130.59	1.9E-03	2.0E-03	1.7E-03	6.2E-04	6.7E-04	2.1E-03	2.6E-05	4.1E-07	9.7E-05	3.5E-05	6.0E-05	1.3E-04	1.5E-04	1.8E-02	1.3E-02	6E-03	3E-03	4E-03	2E-03	1E-03	5E-04	6E-04	2E-04	3E-05	8E-05	4E-05	2E-03	5E-04
488230.59	1.8E-03	1.9E-03	1.6E-03	5.8E-04	6.3E-04	2.1E-03	2.1E-05	4.4E-07	7.8E-05	3.3E-05	5.7E-05	1.2E-04	1.5E-04	1.8E-02	1.2E-02	5E-03	3E-03	4E-03	2E-03	1E-03	5E-04	6E-04	1E-04	3E-05	8E-05	4E-05	2E-03	5E-04
488330.59	1.7E-03	1.8E-03	1.5E-03	5.5E-04	5.9E-04	2.0E-03	1.7E-05	4.6E-07	6.6E-05	3.0E-05	5.4E-05	1.0E-04	1.4E-04	1.7E-02	1.2E-02	5E-03	3E-03	4E-03	2E-03	9E-04	5E-04	6E-04	1E-04	3E-05	8E-05	4E-05	2E-03	5E-04
488430.59	1.8E-03	1.9E-03	1.3E-03	3.8E-04	4.1E-04	2.0E-03	1.4E-05	4.9E-07	5.4E-05	2.7E-05	4.7E-05	9.5E-05	1.1E-04	1.7E-02	1.2E-02	5E-03	3E-03	4E-03	2E-03	9E-04	5E-04	6E-04	1E-04	2E-05	6E-05	3E-05	1E-03	4E-04
488530.59	1.7E-03	1.8E-03	1.3E-03	3.6E-04	3.9E-04	2.0E-03	1.2E-05	5.1E-07	4.6E-05	2.6E-05	4.5E-05	8.6E-05	1.1E-04	1.6E-02	1.2E-02	5E-03	3E-03	4E-03	2E-03	9E-04	5E-04	6E-04	1E-04	2E-05	6E-05	3E-05	1E-03	4E-04
488730.59	1.5E-03	1.6E-03	1.2E-03	4.2E-04	4.4E-04	1.9E-03	9.2E-06	5.7E-07	3.5E-05	2.3E-05	4.3E-05	7.2E-05	1.2E-04	1.5E-02	1.1E-02	5E-03	3E-03	3E-03	2E-03	9E-04	5E-04	5E-04	1E-04	3E-05	7E-05	3E-05	1E-03	4E-04
488830.59	1.5E-03	1.5E-03	1.2E-03	4.1E-04	4.3E-04	1.8E-03	8.2E-06	6.2E-07	3.0E-05	2.2E-05	4.1E-05	6.6E-05	1.2E-04	1.4E-02	1.0E-02	5E-03	3E-03	3E-03	2E-03	9E-04	5E-04	5E-04	1E-04	3E-05	7E-05	3E-05	1E-03	4E-04
488930.59	1.4E-03	1.5E-03	1.1E-03	4.0E-04	4.2E-04	1.8E-03	7.4E-06	6.6E-07	2.7E-05	2.1E-05	3.9E-05	6.1E-05	1.2E-04	1.4E-02	9.7E-03	4E-03	2E-03	3E-03	2E-03	8E-04	5E-04	5E-04	1E-04	3E-05	7E-05	3E-05	1E-03	3E-04
489030.59	1.3E-03	1.4E-03	1.1E-03	3.9E-04	4.1E-04	1.8E-03	6.7E-06	7.1E-07	2.4E-05	2.0E-05	3.7E-05	5.7E-05	1.2E-04	1.3E-02	9.3E-03	4E-03	2E-03	3E-03	2E-03	8E-04	4E-04	5E-04	1E-04	3E-05	7E-05	3E-05	1E-03	3E-04
489130.59	1.3E-03	1.4E-03	1.0E-03	3.4E-04	3.6E-04	1.7E-03	6.0E-06	7.6E-07	2.2E-05	1.8E-05	3.5E-05	5.4E-05	1.1E-04	1.3E-02	9.2E-03	4E-03	2E-03	3E-03	2E-03	8E-04	4E-04	5E-04	1E-04	2E-05	6E-05	3E-05	1E-03	3E-04

TAMT Risk Assessment - DPM Cancer and Chronic HI

AERMOD Output

Receptor type	Discrete Receptor ID (Group Name)	X	Y	B10_1_AUX (1)	B10_2_AUX (3)	B10_3_AUX (5)	B10_4_AUX (7)	B10_5_AUX (9)	B10_6_AUX (11)	B10_7_AUX (13)	B10_8_AUX (15)	CHE_1 (17)	LOC_SWTCH EMP (18)	LOC_SWTCH LOA (19)	OGV_PATH _BLR (20)	OGV_PATH _DPM (21)	TR_28TH (22)	TR_BAYMA R (23)	TR_BOSTON (24)	TR_CROSBY (25)	TR_HARBOR CHA (26)	TR_HARBOR SAM (27)	TUG_PATH _DPM (28)	B10_1_AUX (1; divide by 4; Refrigerated ContainersSTC MIT; 8.4E-03 g/s)	B10_2_AUX (3; 4; Refrigerated ContainersSTC MIT; 8.4E-03)	B10_3_AUX (5; 4; Refrigerated ContainersSTC MIT; 8.4E-03)	B10_4_AUX (7; 4; Refrigerated ContainersSTC MIT; 8.4E-03)	B10_5_AUX (9; 2; Multi-Purpose General CargoSTC MIT; 8.7E-03)	B10_6_AUX (11; 2; Multi-Purpose General CargoSTC MIT; 8.7E-03)	B10_7_AUX (13; 2; Dry BulkSTC MIT; 9.4E-03)	B10_8_AUX (15; 2; Dry BulkSTC MIT; 9.4E-03)	CHE_1 (17; 1; AllSTC MIT; 1.0E-08)	LOC_SWTCHE MP (18; 2; AllSTC MIT; 1.8E-03)	LOC_SWTCHL OA (19; 2; AllSTC MIT; 1.8E-03)	OGV_PATH_ DPM (21; 1; AllSTC MIT; 3.0E-02)	TR_28TH (22; 1; TR_28THSTC MIT; 7.1E-06)	TR_BAYMA R (23; 1; TR_BAYMARSTC MIT; 8.6E-06)	TR_BOSTON (24; 1; TR_BOSTONSTC MIT; 2.3E-05)	TR_CROSBY (25; 1; TR_CROSBYSTC MIT; 4.8E-05)	TR_HARBOR CHA (26; 1; TR_HARBORCHASTC MIT; 1.1E-04)	TR_HARBOR SAM (27; 1; TR_HARBORSAMSTC MIT; 1.1E-04)	TUG_PATH_D PM (28; 1; AllSTC MIT; 1.8E-03)	SUM	Vessel Hoteling All 100%	Vessel Hoteling Refrigerated ContainersSTC MIT 48%	Vessel Hoteling Multi-Purpose General CargoSTC MIT 25%	Vessel Hoteling Dry BulkSTC MIT 27%	Vessel Transit All 100%	Vessel Transit Refrigerated ContainersSTC MIT 46%	Vessel Transit Multi-Purpose General CargoSTC MIT 25%	Vessel Transit Dry BulkSTC MIT 28%	Tug/Barge Transit All 100%	Tug/Barge Transit Refrigerated ContainersSTC MIT 21%	Tug/Barge Transit Multi-Purpose General CargoSTC MIT 54%	Tug/Barge Transit Dry BulkSTC MIT 25%	Terminal E All 100%	Terminal E Refrigerated ContainersSTC MIT 30%
residential	REC_100	484030.59	3617925.04	3.5E-01	3.5E-01	2.9E-01	2.6E-01	2.1E-01	1.7E-01	1.7E-01	1.6E-01	3.6E+05	4.5E-01	3.9E-01	3.4E-01	3.4E-01	1.0E-01	1.2E-02	9.8E-02	3.0E-01	7.3E-01	1.4E-01	5.2E-01	2.9E-03	3.0E-03	2.5E-03	2.2E-03	1.8E-03	1.5E-03	1.6E-03	1.5E-03	3.7E-03	7.8E-04	6.9E-04	1.0E-02	7.1E-07	1.0E-07	2.2E-06	1.4E-05	7.9E-05	1.5E-05	9.2E-04	3.3E-02	1.7E-02	1E-02	3E-03	3E-03	1E-02	5E-03	3E-03	3E-03	9E-04	2E-04	5E-04	2E-04	4E-03	1E-03
residential	REC_100	484130.59	3617925.04	3.7E-01	3.6E-01	3.2E-01	2.8E-01	2.3E-01	1.9E-01	1.8E-01	1.8E-01	4.2E+05	4.9E-01	4.2E-01	3.6E-01	3.6E-01	1.0E-01	1.2E-02	1.0E-01	3.2E-01	8.3E-01	1.5E-01	5.4E-01	3.1E-03	3.0E-03	2.7E-03	2.3E-03	2.0E-03	1.6E-03	1.7E-03	1.7E-03	4.3E-03	8.6E-04	7.5E-04	1.1E-02	7.4E-07	1.1E-07	2.3E-06	1.5E-05	8.9E-05	1.6E-05	9.6E-04	3.6E-02	1.8E-02	1E-02	4E-03	3E-03	1E-02	5E-03	3E-03	3E-03	1E-03	2E-04	5E-04	2E-04	4E-03	1E-03
residential	REC_100	486330.59	3617925.04	4.1E-01	3.7E-01	4.0E-01	4.0E-01	3.8E-01	3.4E-01	3.7E-01	4.1E-01	9.0E+05	2.2E+00	2.8E+00	1.3E-01	1.3E-01	2.9E-01	2.1E-02	2.7E-01	1.3E+01	9.9E+00	8.2E+00	1.8E-01	3.5E-03	3.1E-03	3.4E-03	3.4E-03	3.3E-03	3.0E-03	3.5E-03	3.9E-03	9.3E-03	3.8E-03	4.9E-03	4.0E-03	2.1E-06	1.8E-07	6.2E-06	6.5E-04	1.1E-03	8.7E-04	3.1E-04	5.2E-02	2.7E-02	1E-02	6E-03	7E-03	4E-03	2E-03	1E-03	1E-03	3E-04	7E-05	2E-04	8E-05	9E-03	3E-03
residential	REC_100	486430.59	3617925.04	3.9E-01	3.4E-01	3.7E-01	3.8E-01	3.6E-01	3.3E-01	3.6E-01	4.0E-01	7.6E+05	1.9E+00	2.3E+00	1.3E-01	1.3E-01	3.1E-01	2.2E-02	2.9E-01	7.0E+00	6.2E+00	6.8E+00	1.7E-01	3.3E-03	2.9E-03	3.2E-03	3.2E-03	3.2E-03	2.9E-03	3.3E-03	3.7E-03	7.9E-03	3.3E-03	4.0E-03	3.8E-03	2.2E-06	1.9E-07	6.6E-06	3.4E-04	6.6E-04	7.3E-04	3.0E-04	4.7E-02	2.6E-02	1E-02	6E-03	7E-03	4E-03	2E-03	1E-03	1E-03	3E-04	6E-05	2E-04	7E-05	8E-03	2E-03
residential	REC_100	486530.59	3617925.04	3.7E-01	3.2E-01	3.5E-01	3.5E-01	3.4E-01	3.2E-01	3.4E-01	3.8E-01	6.5E+05	1.6E+00	1.9E+00	1.2E-01	1.2E-01	3.4E-01	2.2E-02	3.1E-01	4.6E+00	4.5E+00	5.7E+00	1.6E-01	3.1E-03	2.7E-03	2.9E-03	3.0E-03	3.0E-03	2.8E-03	3.2E-03	3.6E-03	6.7E-03	2.8E-03	3.3E-03	3.6E-03	2.4E-06	1.9E-07	7.0E-06	2.2E-04	4.8E-04	6.1E-04	2.8E-04	4.2E-02	2.4E-02	1E-02	6E-03	7E-03	4E-03	2E-03	9E-04	1E-03	3E-04	6E-05	2E-04	7E-05	7E-03	2E-03
residential	REC_100	486630.59	3617925.04	3.5E-01	3.0E-01	3.3E-01	3.3E-01	3.2E-01	3.0E-01	3.3E-01	3.6E-01	5.5E+05	1.4E+00	1.6E+00	1.2E-01	1.2E-01	3.7E-01	2.3E-02	3.3E-01	3.4E+00	3.4E+00	4.9E+00	1.5E-01	2.9E-03	2.5E-03	2.7E-03	2.8E-03	2.8E-03	2.6E-03	3.1E-03	3.4E-03	5.8E-03	2.5E-03	2.8E-03	3.5E-03	2.6E-06	2.0E-07	7.5E-06	1.7E-04	3.7E-04	5.2E-04	2.7E-04	3.9E-02	2.3E-02	1E-02	5E-03	6E-03	3E-03	2E-03	9E-04	1E-03	3E-04	6E-05	1E-04	7E-05	6E-03	2E-03
residential	REC_100	486730.59	3617925.04	3.3E-01	2.8E-01	3.0E-01	3.1E-01	3.0E-01	2.9E-01	3.2E-01	3.5E-01	4.7E+05	1.2E+00	1.3E+00	1.1E-01	1.1E-01	4.1E-01	2.4E-02	3.2E-01	2.6E+00	2.7E+00	4.1E+00	1.5E-01	2.8E-03	2.4E-03	2.6E-03	2.6E-03	2.7E-03	2.5E-03	3.0E-03	3.3E-03	4.9E-03	2.1E-03	2.4E-03	3.3E-03	2.9E-06	2.1E-07	7.3E-06	1.3E-04	2.9E-04	4.4E-04	2.6E-04	3.6E-02	2.2E-02	1E-02	5E-03	6E-03	3E-03	2E-03	8E-04	9E-04	3E-04	5E-05	1E-04	6E-05	5E-03	1E-03
residential	REC_100	486830.59	3617925.04	3.1E-01	2.7E-01	2.9E-01	2.9E-01	2.9E-01	2.7E-01	3.0E-01	3.3E-01	4.2E+05	1.1E+00	1.2E+00	1.0E-01	1.0E-01	4.7E-01	2.5E-02	3.5E-01	2.2E+00	2.3E+00	3.7E+00	1.4E-01	2.6E-03	2.3E-03	2.4E-03	2.4E-03	2.5E-03	2.4E-03	2.8E-03	3.1E-03	4.4E-03	1.9E-03	2.1E-03	3.1E-03	3.3E-06	2.2E-07	8.0E-06	1.0E-04	2.4E-04	4.0E-04	2.5E-04	3.3E-02	2.1E-02	1E-02	5E-03	6E-03	3E-03	1E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	4E-03	1E-03
residential	REC_100	487030.59	3617925.04	2.8E-01	2.4E-01	2.5E-01	2.6E-01	2.6E-01	2.5E-01	2.7E-01	3.0E-01	3.3E+05	8.5E-01	9.0E-01	9.7E-02	9.7E-02	6.5E-01	2.7E-02	4.7E-01	1.5E+00	1.6E+00	3.0E+00	1.3E-01	2.3E-03	2.0E-03	2.2E-03	2.2E-03	2.2E-03	2.2E-03	2.5E-03	2.8E-03	3.5E-03	1.5E-03	1.6E-03	2.9E-03	4.6E-06	2.3E-07	1.1E-05	7.4E-05	1.7E-04	3.2E-04	2.3E-04	2.9E-02	1.8E-02	9E-03	4E-03	5E-03	3E-03	1E-03	7E-04	8E-04	2E-04	5E-05	1E-04	6E-05	3E-03	1E-03
residential	REC_100	487130.59	3617925.04	2.6E-01	2.3E-01	2.4E-01	2.4E-01	2.4E-01	2.4E-01	2.6E-01	2.8E-01	3.0E+05	7.6E-01	8.0E-01	9.3E-02	9.3E-02	8.6E-01	2.8E-02	6.1E-01	1.3E+00	1.4E+00	2.7E+00	1.2E-01	2.2E-03	1.9E-03	2.0E-03	2.1E-03	2.1E-03	2.1E-03	2.4E-03	2.7E-03	3.1E-03	1.3E-03	1.4E-03	2.8E-03	6.2E-06	2.4E-07	1.4E-05	6.4E-05	1.5E-04	2.9E-04	2.2E-04	2.7E-02	1.7E-02	8E-03	4E-03	5E-03	3E-03	1E-03	7E-04	8E-04	2E-04	5E-05	1E-04	5E-05	3E-03	9E-04
residential	REC_100	487230.59	3617925.04	2.5E-01	2.2E-01	2.3E-01	2.3E-01	2.3E-01	2.3E-01	2.4E-01	2.7E-01	2.8E+05	6.9E-01	7.2E-01	9.0E-02	9.0E-02	1.2E+00	2.9E-02	8.4E-01	1.2E+00	1.3E+00	2.5E+00	1.2E-01	2.1E-03	1.8E-03	1.9E-03	2.0E-03	2.0E-03	2.0E-03	2.3E-03	2.5E-03	2.9E-03	1.2E-03	1.3E-03	2.7E-03	8.7E-06	2.5E-07	1.9E-05	5.7E-05	1.4E-04	2.7E-04	2.1E-04	2.5E-02	1.7E-02	8E-03	4E-03	5E-03	3E-03	1E-03	7E-04	8E-04	2E-04	4E-05	1E-04	5E-05	3E-03	9E-04

TAMT Risk Assessment - DPM Cancer and Chronic HI

AERMOD Output

Source Group in AERMOD

				B10_1_AUX	B10_2_AUX	B10_3_AUX	B10_4_AUX	B10_5_AUX	B10_6_AUX	B10_7_AUX	B10_8_AUX	CHE_1	LOC_SWTCH EMP	LOC_SWTCH LOA	OGV_PATH _BLR	OGV_PATH _DPM	TR_28TH	TR_BAYMA R	TR_BOSTON	TR_CROSBY	TR_HARBOR CHA	TR_HARBOR SAM	TUG_PATH _DPM
	Discrete Receptor ID (Group Name)	X	Y	1	3	5	7	9	11	13	15	17	18	19	20	21	22	23	24	25	26	27	28
residential	REC_100F	488230.59	3618325.04	1.4E-01	1.3E-01	1.3E-01	1.3E-01	1.2E-01	1.2E-01	1.3E-01	1.4E-01	1.2E+05	2.8E-01	2.7E-01	6.8E-02	6.8E-02	1.8E+00	4.2E-02	2.0E+00	3.8E-01	4.4E-01	8.4E-01	8.5E-02
residential	REC_100F	488330.59	3618325.04	1.4E-01	1.2E-01	1.2E-01	1.2E-01	1.2E-01	1.2E-01	1.2E-01	1.3E-01	1.1E+05	2.6E-01	2.5E-01	6.6E-02	6.6E-02	1.7E+00	4.4E-02	1.9E+00	3.6E-01	4.1E-01	7.5E-01	8.3E-02
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

divide by -->

Refrigerated ContainersSTC MIT	Refrigerated ContainersSTC MIT	Refrigerated ContainersSTC MIT	Refrigerated ContainersSTC MIT	Multi-Purpose General CargoSTC MIT	Multi-Purpose General CargoSTC MIT	Dry BulkSTC MIT	Dry BulkSTC MIT	AllSTC MIT	AllSTC MIT	AllSTC MIT	AllSTC MIT	TR_28THST C MIT	TR_BAYMA RSTC MIT	TR_BOSTON STC MIT	TR_CROSBY STC MIT	TR_HARBOR CHASTC MIT	TR_HARBOR SAMSTC MIT	AllSTC MIT	
4	4	4	4	2	2	2	2	1	2	2	1	1	1	1	1	1	1	1	
8.4E-03	8.4E-03	8.4E-03	8.4E-03	8.7E-03	8.7E-03	9.4E-03	9.4E-03	1.0E-08	1.8E-03	1.8E-03	3.0E-02	7.3E-06	8.6E-06	2.3E-05	4.8E-05	1.1E-04	1.1E-04	1.8E-03	
B10_1_AUX	B10_2_AUX	B10_3_AUX	B10_4_AUX	B10_5_AUX	B10_6_AUX	B10_7_AUX	B10_8_AUX	CHE_1	LOC_SWTCHE MP	LOC_SWTCHL OA	OGV_PATH_ DPM	TR_28TH	TR_BAYMA R	TR_BOSTON	TR_CROSBY	TR_HARBOR CHA	TR_HARBOR SAM	TUG_PATH_D PM	SUM
1	3	5	7	9	11	13	15	17	18	19	21	22	23	24	25	26	27	28	
1.2E-03	1.1E-03	1.1E-03	1.1E-03	1.1E-03	1.1E-03	1.2E-03	1.3E-03	1.2E-03	4.9E-04	4.8E-04	2.1E-03	1.3E-05	3.6E-07	4.5E-05	1.8E-05	4.8E-05	9.0E-05	1.5E-04	1.4E-02
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Vessel Hoteling				Vessel Transit				Tug/Barge Transit				Terminal E	
All	Refrigerated ContainersSTC MIT	Multi-Purpose General CargoSTC MIT	Dry BulkSTC MIT	All	Refrigerated ContainersSTC MIT	Multi-Purpose General CargoSTC MIT	Dry BulkSTC MIT	All	Refrigerated ContainersSTC MIT	Multi-Purpose General CargoSTC MIT	Dry BulkSTC MIT	All	Refrigerated ContainersSTC MIT
100%	48%	25%	27%	100%	46%	25%	28%	100%	21%	54%	25%	100%	30%
9.1E-03	4E-03	2E-03	2E-03	2E-03	1E-03	5E-04	6E-04	1E-04	3E-05	8E-05	4E-05	1E-03	4E-04
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

TAMT Risk Assessment - DPM Cancer and Chronic HI

AERMOD Output

Source Group in AERMOD

Discrete Receptor ID (Group Name)		X	Y	B10_1_AUX (1)	B10_2_AUX (3)	B10_3_AUX (5)	B10_4_AUX (7)	B10_5_AUX (9)	B10_6_AUX (11)	B10_7_AUX (13)	B10_8_AUX (15)	CHE_1 (17)	LOC_SWTCH EMP (18)	LOC_SWTCH LOA (19)	OGV_PATH _BLR (20)	OGV_PATH _DPM (21)	TR_28TH (22)	TR_BAYMA R (23)	TR_BOSTON (24)	TR_CROSBY (25)	TR_HARBOR CHA (26)	TR_HARBOR SAM (27)	TUG_PATH _DPM (28)
residential	REC_100!	486330.59	3618825.04	2.5E-01	2.1E-01	2.5E-01	2.7E-01	3.0E-01	3.0E-01	3.1E-01	3.2E-01	5.1E+05	1.3E+00	1.2E+00	1.2E-01	1.2E-01	1.3E-01	1.9E-02	1.1E-01	1.5E+00	2.3E+00	4.9E-01	1.7E-01
residential	REC_100!	486430.59	3618825.04	2.4E-01	2.0E-01	2.3E-01	2.5E-01	2.8E-01	3.0E-01	3.1E-01	3.2E-01	4.5E+05	1.1E+00	1.1E+00	1.1E-01	1.1E-01	1.4E-01	2.0E-02	1.2E-01	1.6E+00	2.1E+00	5.7E-01	1.6E-01
residential	REC_100!	486530.59	3618825.04	2.2E-01	1.9E-01	2.1E-01	2.4E-01	2.7E-01	2.9E-01	3.0E-01	3.2E-01	3.9E+05	9.6E-01	1.0E+00	1.1E-01	1.1E-01	1.6E-01	2.0E-02	1.4E-01	1.6E+00	1.9E+00	6.5E-01	1.5E-01
residential	REC_100!	486630.59	3618825.04	2.1E-01	1.8E-01	2.0E-01	2.2E-01	2.5E-01	2.7E-01	2.9E-01	3.0E-01	3.6E+05	8.6E-01	9.5E-01	1.1E-01	1.1E-01	1.9E-01	2.1E-02	1.6E-01	1.7E+00	1.8E+00	7.4E-01	1.4E-01
residential	REC_100!	486730.59	3618825.04	2.0E-01	1.7E-01	1.9E-01	2.0E-01	2.3E-01	2.5E-01	2.7E-01	2.9E-01	3.2E+05	7.5E-01	8.5E-01	1.0E-01	1.0E-01	2.1E-01	2.2E-02	1.8E-01	1.7E+00	1.6E+00	8.2E-01	1.4E-01
residential	REC_100!	486830.59	3618825.04	1.9E-01	1.7E-01	1.8E-01	1.9E-01	2.2E-01	2.4E-01	2.6E-01	2.8E-01	2.8E+05	6.5E-01	7.5E-01	9.9E-02	9.9E-02	2.4E-01	2.3E-02	2.1E-01	1.6E+00	1.4E+00	8.8E-01	1.3E-01
residential	REC_100!	486930.59	3618825.04	1.8E-01	1.6E-01	1.7E-01	1.8E-01	2.0E-01	2.3E-01	2.4E-01	2.6E-01	2.5E+05	5.7E-01	6.5E-01	9.5E-02	9.5E-02	2.7E-01	2.4E-02	2.3E-01	1.4E+00	1.2E+00	9.3E-01	1.2E-01
residential	REC_100!	487030.59	3618825.04	1.7E-01	1.5E-01	1.6E-01	1.7E-01	1.9E-01	2.1E-01	2.3E-01	2.5E-01	2.2E+05	5.0E-01	5.8E-01	9.1E-02	9.1E-02	3.0E-01	2.4E-02	2.7E-01	1.3E+00	1.1E+00	9.6E-01	1.2E-01
residential	REC_100!	487130.59	3618825.04	1.7E-01	1.5E-01	1.5E-01	1.6E-01	1.8E-01	2.0E-01	2.1E-01	2.3E-01	2.0E+05	4.6E-01	5.2E-01	8.8E-02	8.8E-02	3.5E-01	2.5E-02	3.1E-01	1.2E+00	9.3E-01	9.9E-01	1.1E-01
residential	REC_100!	487230.59	3618825.04	1.6E-01	1.4E-01	1.5E-01	1.5E-01	1.7E-01	1.9E-01	2.0E-01	2.1E-01	1.8E+05	4.1E-01	4.6E-01	8.5E-02	8.5E-02	4.3E-01	2.6E-02	3.5E-01	1.1E+00	8.2E-01	1.0E+00	1.1E-01
residential	REC_100!	487330.59	3618825.04	1.5E-01	1.4E-01	1.4E-01	1.5E-01	1.6E-01	1.8E-01	1.9E-01	2.0E-01	1.6E+05	3.8E-01	4.1E-01	8.3E-02	8.3E-02	5.3E-01	2.7E-02	4.2E-01	9.5E-01	7.2E-01	1.0E+00	1.1E-01

divide by --> / g/s -->

Receptor X	B10_1_AUX	B10_2_AUX	B10_3_AUX	B10_4_AUX	B10_5_AUX	B10_6_AUX	B10_7_AUX	B10_8_AUX	CHE_1	LOC_SWTCHE MP	LOC_SWTCHL OA	OGV_PATH_ DPM	TR_28TH	TR_BAYMA R	TR_BOSTON	TR_CROSBY	TR_HARBOR CHA	TR_HARBOR SAM	TUG_PATH_D PM	SUM
divide by	4	4	4	4	2	2	2	2	1	2	2	1	1	1	1	1	1	1	1	
	Refrigerated ContainersSTC MIT	Refrigerated ContainersSTC MIT	Refrigerated ContainersSTC MIT	Refrigerated ContainersSTC MIT	Multi-Purpose General CargoSTC MIT	Multi-Purpose General CargoSTC MIT	Dry BulkSTC MIT	Dry BulkSTC MIT	AllSTC MIT	AllSTC MIT	AllSTC MIT	AllSTC MIT	TR_28THSTC MIT	TR_BAYMARSTC MIT	TR_BOSTONSTC MIT	TR_CROSBYSTC MIT	TR_HARBORCHASTC MIT	TR_HARBORSAMSTC MIT	AllSTC MIT	
g/s	8.4E-03	8.4E-03	8.4E-03	8.4E-03	8.7E-03	8.7E-03	9.4E-03	9.4E-03	1.0E-08	1.8E-03	1.8E-03	3.0E-02	7.1E-06	8.6E-06	2.3E-05	4.8E-05	1.1E-04	1.1E-04	1.8E-03	
Source group	1	3	5	7	9	11	13	15	17	18	19	21	22	23	24	25	26	27	28	
486330.59	2.1E-03	1.8E-03	2.1E-03	2.3E-03	2.6E-03	2.7E-03	2.9E-03	3.0E-03	5.3E-03	2.2E-03	2.2E-03	3.6E-03	9.2E-07	1.6E-07	2.4E-06	7.3E-05	2.5E-04	5.2E-05	2.9E-04	3.4E-02
486430.59	2.0E-03	1.7E-03	1.9E-03	2.1E-03	2.5E-03	2.6E-03	2.9E-03	3.0E-03	4.6E-03	1.9E-03	2.0E-03	3.4E-03	9.9E-07	1.7E-07	2.7E-06	7.6E-05	2.3E-04	6.1E-05	2.8E-04	3.1E-02
486530.59	1.9E-03	1.6E-03	1.8E-03	2.0E-03	2.3E-03	2.5E-03	2.8E-03	3.0E-03	4.1E-03	1.7E-03	1.8E-03	3.3E-03	1.1E-06	1.7E-07	3.1E-06	7.8E-05	2.1E-04	7.0E-05	2.6E-04	2.9E-02
486630.59	1.8E-03	1.5E-03	1.7E-03	1.8E-03	2.2E-03	2.4E-03	2.7E-03	2.8E-03	3.7E-03	1.5E-03	1.7E-03	3.2E-03	1.3E-06	1.8E-07	3.6E-06	8.2E-05	1.9E-04	7.9E-05	2.5E-04	2.8E-02
486730.59	1.7E-03	1.5E-03	1.6E-03	1.7E-03	2.0E-03	2.2E-03	2.5E-03	2.7E-03	3.3E-03	1.3E-03	1.5E-03	3.1E-03	1.5E-06	1.9E-07	4.1E-06	8.1E-05	1.7E-04	8.8E-05	2.4E-04	2.6E-02
486830.59	1.6E-03	1.4E-03	1.5E-03	1.6E-03	1.9E-03	2.1E-03	2.4E-03	2.6E-03	2.9E-03	1.2E-03	1.3E-03	3.0E-03	1.7E-06	2.0E-07	4.7E-06	7.6E-05	1.5E-04	9.5E-05	2.3E-04	2.4E-02
486930.59	1.5E-03	1.3E-03	1.4E-03	1.5E-03	1.8E-03	2.0E-03	2.3E-03	2.4E-03	2.6E-03	1.0E-03	1.1E-03	2.8E-03	1.9E-06	2.0E-07	5.3E-06	7.0E-05	1.3E-04	9.9E-05	2.2E-04	2.2E-02
487030.59	1.5E-03	1.3E-03	1.4E-03	1.4E-03	1.7E-03	1.9E-03	2.1E-03	2.3E-03	2.3E-03	8.9E-04	1.0E-03	2.7E-03	2.2E-06	2.1E-07	6.0E-06	6.4E-05	1.1E-04	1.0E-04	2.1E-04	2.1E-02
487130.59	1.4E-03	1.2E-03	1.3E-03	1.4E-03	1.6E-03	1.7E-03	2.0E-03	2.2E-03	2.1E-03	8.1E-04	9.1E-04	2.7E-03	2.5E-06	2.2E-07	6.9E-06	5.9E-05	1.0E-04	1.1E-04	2.0E-04	2.0E-02
487230.59	1.4E-03	1.2E-03	1.2E-03	1.3E-03	1.5E-03	1.6E-03	1.9E-03	2.0E-03	1.9E-03	7.3E-04	8.1E-04	2.6E-03	3.0E-06	2.3E-07	8.0E-06	5.2E-05	8.8E-05	1.1E-04	1.9E-04	1.9E-02
487330.59	1.3E-03	1.1E-03	1.2E-03	1.2E-03	1.4E-03	1.5E-03	1.8E-03	1.9E-03	1.7E-03	6.6E-04	7.3E-04	2.5E-03	3.8E-06	2.3E-07	9.6E-06	4.6E-05	7.8E-05	1.1E-04	1.9E-04	1.7E-02

Receptor X	Vessel Hoteling All	Refrigerated ContainersSTC MIT	Multi-Purpose General CargoSTC MIT	Dry BulkSTC MIT	Vessel Transit All	Refrigerated ContainersSTC MIT	Multi-Purpose General CargoSTC MIT	Dry BulkSTC MIT	Tug/Barge Transit All	Refrigerated ContainersSTC MIT	Multi-Purpose General CargoSTC MIT	Dry BulkSTC MIT	Terminal E All	Refrigerated ContainersSTC MIT
	100%	48%	25%	27%	100%	46%	25%	28%	100%	21%	54%	25%	100%	30%
486330.59	2.0E-02	8E-03	5E-03	6E-03	4E-03	2E-03	9E-04	1E-03	3E-04	6E-05	2E-04	7E-05	5E-03	2E-03
486430.59	1.9E-02	8E-03	5E-03	6E-03	3E-03	2E-03	9E-04	1E-03	3E-04	6E-05	2E-04	7E-05	5E-03	1E-03
486530.59	1.8E-02	7E-03	5E-03	6E-03	3E-03	2E-03	8E-04	9E-04	3E-04	5E-05	1E-04	7E-05	4E-03	1E-03
486630.59	1.7E-02	7E-03	5E-03	6E-03	3E-03	1E-03	8E-04	9E-04	3E-04	5E-05	1E-04	6E-05	4E-03	1E-03
486730.59	1.6E-02	6E-03	4E-03	5E-03	3E-03	1E-03	8E-04	9E-04	2E-04	5E-05	1E-04	6E-05	3E-03	1E-03
486830.59	1.5E-02	6E-03	4E-03	5E-03	3E-03	1E-03	7E-04	8E-04	2E-04	5E-05	1E-04	6E-05	3E-03	9E-04
486930.59	1.4E-02	6E-03	4E-03	5E-03	3E-03	1E-03	7E-04	8E-04	2E-04	5E-05	1E-04	5E-05	3E-03	8E-04
487030.59	1.4E-02	6E-03	4E-03	4E-03	3E-03	1E-03	7E-04	8E-04	2E-04	4E-05	1E-04	5E-05	2E-03	7E-04
487130.59	1.3E-02	5E-03	3E-03	4E-03	3E-03	1E-03	7E-04	8E-04	2E-04	4E-05	1E-04	5E-05	2E-03	6E-04
487230.59	1.2E-02	5E-03	3E-03	4E-03	3E-03	1E-03	6E-04	7E-04	2E-04	4E-05	1E-04	5E-05	2E-03	6E-04
487330.59	1.1E-02	5E-03	3E-03	4E-03	2E-03	1E-03	6E-04	7E-04	2E-04	4E-05	1E-04	5E-05	2E-03	5E-04

TAMT Risk Assessment - DPM Cancer and Chronic HI

AERMOD Output

Source Group in AERMOD

	Discrete Receptor ID (Group Name)	X	Y	B10_1_AUX	B10_2_AUX	B10_3_AUX	B10_4_AUX	B10_5_AUX	B10_6_AUX	B10_7_AUX	B10_8_AUX	CHE_1	LOC_SWTCH EMP	LOC_SWTCH LOA	OGV_PATH_BLR	OGV_PATH_DPM	TR_28TH	TR_BAYMAR	TR_BOSTON	TR_CROSBY	TR_HARBOR CHA	TR_HARBOR SAM	TUG_PATH_DPM	B10_1_AUX	B10_2_AUX	B10_3_AUX	B10_4_AUX	B10_5_AUX	B10_6_AUX	B10_7_AUX	B10_8_AUX	CHE_1	LOC_SWTCHEMP	LOC_SWTCHLOA	OGV_PATH_DPM	TR_28TH	TR_BAYMAR	TR_BOSTON	TR_CROSBY	TR_HARBOR CHA	TR_HARBOR SAM	TUG_PATH_DPM	SUM	Vessel Hoteling All	Vessel Hoteling Refrigerated ContainersSTC MIT	Vessel Hoteling Multi-Purpose General CargoSTC MIT	Vessel Hoteling Dry BulkSTC MIT	Vessel Transit All	Vessel Transit Refrigerated ContainersSTC MIT	Vessel Transit Multi-Purpose General CargoSTC MIT	Vessel Transit Dry BulkSTC MIT	Tug/Barge Transit All	Tug/Barge Transit Refrigerated ContainersSTC MIT	Tug/Barge Transit Multi-Purpose General CargoSTC MIT	Tug/Barge Transit Dry BulkSTC MIT	Terminal E All	Terminal E Refrigerated ContainersSTC MIT
divide by -->																								4	4	4	4	2	2	2	2	1	2	2	1	1	1	1	1	1	1	1															
																								Refrigerated ContainersSTC MIT	Refrigerated ContainersSTC MIT	Refrigerated ContainersSTC MIT	Refrigerated ContainersSTC MIT	Multi-Purpose General CargoSTC MIT	Multi-Purpose General CargoSTC MIT	Dry BulkSTC MIT	Dry BulkSTC MIT	AllSTC MIT	AllSTC MIT	AllSTC MIT	AllSTC MIT	TR_28THSTC MIT	TR_BAYMARSTC MIT	TR_BOSTONSTC MIT	TR_CROSBYSTC MIT	TR_HARBORCHASTC MIT	TR_HARBORSAMSTC MIT	AllSTC MIT															
g/s -->																								8.4E-03	8.4E-03	8.4E-03	8.4E-03	8.7E-03	8.7E-03	9.4E-03	9.4E-03	1.0E-08	1.8E-03	1.8E-03	3.0E-02	7.1E-06	8.6E-06	2.3E-05	4.8E-05	1.1E-04	1.1E-04	1.8E-03		100%	48%	25%	27%	100%	46%	25%	28%	100%	21%	54%	25%	100%	30%
				1	3	5	7	9	11	13	15	17	18	19	20	21	22	23	24	25	26	27	28	1	3	5	7	9	11	13	15	17	18	19	21	22	23	24	25	26	27	28															
residential	REC_100I	487630.59	3619125.04	1.2E-01	1.1E-01	1.2E-01	1.2E-01	1.4E-01	1.5E-01	1.6E-01	1.7E-01	1.2E+05	2.7E-01	3.0E-01	7.1E-02	7.1E-02	6.6E-01	2.8E-02	5.8E-01	6.3E-01	4.9E-01	7.0E-01	9.0E-02	1.0E-03	9.2E-04	9.9E-04	1.0E-03	1.2E-03	1.3E-03	1.5E-03	1.6E-03	1.3E-03	4.8E-04	5.3E-04	2.1E-03	4.7E-06	2.4E-07	1.3E-05	3.1E-05	5.3E-05	7.5E-05	1.6E-04	1.4E-02	9.6E-03	4E-03	2E-03	3E-03	2E-03	1E-03	5E-04	6E-04	2E-04	3E-05	9E-05	4E-05	1E-03	4E-04
residential	REC_100I	487730.59	3619125.04	1.2E-01	1.1E-01	1.1E-01	1.2E-01	1.3E-01	1.4E-01	1.5E-01	1.6E-01	1.1E+05	2.6E-01	2.9E-01	6.9E-02	6.9E-02	6.9E-01	3.0E-02	6.5E-01	5.9E-01	4.6E-01	7.0E-01	8.8E-02	1.0E-03	9.0E-04	9.6E-04	1.0E-03	1.1E-03	1.2E-03	1.4E-03	1.5E-03	1.2E-03	4.6E-04	5.0E-04	2.1E-03	4.9E-06	2.5E-07	1.5E-05	2.8E-05	4.9E-05	7.5E-05	1.5E-04	1.4E-02	9.2E-03	4E-03	2E-03	3E-03	2E-03	1E-03	5E-04	6E-04	2E-04	3E-05	8E-05	4E-05	1E-03	4E-04
residential	REC_100I	487830.59	3619125.04	1.2E-01	1.0E-01	1.1E-01	1.1E-01	1.2E-01	1.4E-01	1.4E-01	1.5E-01	1.1E+05	2.5E-01	2.7E-01	6.8E-02	6.8E-02	7.1E-01	3.1E-02	6.9E-01	5.4E-01	4.3E-01	6.9E-01	8.5E-02	9.7E-04	8.7E-04	9.3E-04	9.7E-04	1.1E-03	1.2E-03	1.3E-03	1.4E-03	1.1E-03	4.4E-04	4.7E-04	2.0E-03	5.1E-06	2.6E-07	1.6E-05	2.6E-05	4.6E-05	7.4E-05	1.5E-04	1.3E-02	8.8E-03	4E-03	2E-03	3E-03	2E-03	1E-03	5E-04	6E-04	2E-04	3E-05	8E-05	4E-05	1E-03	3E-04
residential	REC_100I	487930.59	3619125.04	1.1E-01	1.0E-01	1.1E-01	1.1E-01	1.2E-01	1.3E-01	1.4E-01	1.5E-01	1.0E+05	2.4E-01	2.5E-01	6.7E-02	6.7E-02	7.3E-01	3.2E-02	7.1E-01	5.0E-01	4.0E-01	6.8E-01	8.3E-02	9.5E-04	8.5E-04	9.0E-04	9.4E-04	1.0E-03	1.1E-03	1.3E-03	1.4E-03	1.1E-03	4.1E-04	4.5E-04	2.0E-03	5.2E-06	2.8E-07	1.6E-05	2.4E-05	4.3E-05	7.3E-05	1.5E-04	1.3E-02	8.5E-03	4E-03	2E-03	3E-03	2E-03	9E-04	5E-04	6E-04	1E-04	3E-05	8E-05	4E-05	1E-03	3E-04
residential	REC_100I	488030.59	3619125.04	1.1E-01	9.8E-02	1.0E-01	1.1E-01	1.1E-01	1.2E-01	1.3E-01	1.4E-01	9.7E+04	2.2E-01	2.4E-01	6.5E-02	6.5E-02	7.4E-01	3.3E-02	7.1E-01	4.5E-01	3.7E-01	6.6E-01	8.1E-02	9.2E-04	8.3E-04	8.7E-04	9.0E-04	1.0E-03	1.1E-03	1.2E-03	1.3E-03	1.0E-03	3.9E-04	4.1E-04	2.0E-03	5.3E-06	2.9E-07	1.6E-05	2.2E-05	3.9E-05	7.1E-05	1.4E-04	1.2E-02	8.1E-03	4E-03	2E-03	3E-03	2E-03	9E-04	5E-04	6E-04	1E-04	3E-05	8E-05	4E-05	1E-03	3E-04
residential	REC_100I	488130.59	3619125.04	1.1E-01	9.5E-02	9.9E-02	1.0E-01	1.1E-01	1.2E-01	1.2E-01	1.3E-01	9.1E+04	2.1E-01	2.2E-01	6.4E-02	6.4E-02	7.5E-01	3.5E-02	7.2E-01	4.1E-01	3.4E-01	6.4E-01	7.8E-02	8.9E-04	8.0E-04	8.4E-04	8.7E-04	9.5E-04	1.0E-03	1.2E-03	1.2E-03	9.4E-04	3.6E-04	3.9E-04	1.9E-03	5.3E-06	3.0E-07	1.6E-05	2.0E-05	3.6E-05	6.8E-05	1.4E-04	1.2E-02	7.8E-03	3E-03	2E-03	2E-03	2E-03	9E-04	5E-04	5E-04	1E-04	3E-05	7E-05	3E-05	9E-04	3E-04
residential	REC_100I	476730.59	3619225.04	1.5E-02	1.5E-02	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	6.5E+03	1.3E-02	1.2E-02	5.6E-02	5.6E-02	1.2E-02	5.1E-03	1.2E-02	1.5E-02	1.9E-02	1.2E-02	5.6E-02	1.3E-04	1.3E-04	1.2E-04	1.2E-04	1.2E-04	1.1E-04	1.2E-04	1.2E-04	6.8E-05	2.3E-05	2.2E-05	1.7E-03	8.7E-08	4.4E-08	2.7E-07	7.1E-07	2.0E-06	1.3E-06	9.9E-05	2.9E-03	9.5E-04	5E-04	2E-04	2E-04	2E-03	8E-04	4E-04	5E-04	1E-04	2E-05	5E-05	2E-05	7E-05	2E-05
residential	REC_100I	476830.59	3619225.04	1.5E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	6.7E+03	1.3E-02	1.3E-02	5.9E-02	5.9E-02	1.2E-02	5.1E-03	1.2E-02	1.5E-02	1.9E-02	1.3E-02	6.0E-02	1.3E-04	1.3E-04	1.2E-04	1.2E-04	1.2E-04	1.1E-04	1.2E-04	1.2E-04	6.9E-05	2.4E-05	2.2E-05	1.8E-03	8.9E-08	4.4E-08	2.8E-07	7.3E-07	2.0E-06	1.3E-06	1.1E-04	3.0E-03	9.7E-04	5E-04	2E-04	2E-04	2E-03	8E-04	4E-04	5E-04	1E-04	2E-05	6E-05	3E-05	7E-05	2E-05
residential	REC_100I	476930.59	3619225.04	1.6E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	6.7E+03	1.4E-02	1.3E-02	6.1E-02	6.1E-02	1.2E-02	5.1E-03	1.2E-02	1.5E-02	1.9E-02	1.3E-02	6.4E-02	1.3E-04	1.3E-04	1.3E-04	1.2E-04	1.2E-04	1.1E-04	1.2E-04	1.2E-04	7.0E-05	2.4E-05	2.3E-05	1.8E-03	8.9E-08	4.4E-08	2.8E-07	7.3E-07	2.1E-06	1.4E-06	1.1E-04	3.1E-03	9.9E-04	5E-04	2E-04	2E-04	2E-03	9E-04	5E-04	5E-04	1E-04	2E-05	6E-05	3E-05	7E-05	2E-05
residential	REC_100I	477030.59	3619225.04	1.6E-02	1.6E-02	1.5E-02	1.5E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	6.7E+03	1.4E-02	1.3E-02	6.3E-02	6.3E-02	1.2E-02	5.1E-03	1.2E-02	1.5E-02	1.9E-02	1.3E-02	6.7E-02	1.3E-04	1.3E-04	1.3E-04	1.2E-04	1.2E-04	1.2E-04	1.2E-04	1.2E-04	7.0E-05	2.4E-05	2.3E-05	1.9E-03	8.9E-08	4.4E-08	2.8E-07	7.3E-07	2.1E-06	1.4E-06	1.2E-04	3.1E-03	1.0E-03	5E-04	2E-04	2E-04	2E-03	9E-04	5E-04	5E-04	1E-04	2E-05	6E-05	3E-05	7E-05	2E-05
residential	REC_100I	477130.59	3619225.04	1.6E-02	1.6E-02	1.5E-02	1.5E-02	1.4E-02	1.4E-02	1.3E-02	1.3E-02	6.9E+03	1.4E-02	1.3E-02	6.8E-02	6.8E-02	1.3E-02	5.1E-03	1.3E-02	1.5E-02	2.0E-02	1.3E-02	7.3E-02	1.4E-04	1.4E-04	1.3E-04	1.3E-04	1.2E-04	1.2E-04	1.3E-04	1.2E-04	7.2E-05	2.5E-05	2.4E-05	2.0E-03	9.1E-08	4.4E-08	2.8E-07	7.4E-07	2.1E-06	1.4E-06	1.3E-04	3.3E-03	1.0E-03	5E-04	2E-04	2E-04	2E-03	9E-04	5E-04	6E-04	1E-04	3E-05	7E-05	3E-05	7E-05	2E-05

TAMT Risk Assessment - DPM Cancer and Chronic HI

AERMOD Output

	Discrete Receptor ID (Group Name)	X	Y	1 B10_1_AUX	3 B10_2_AUX	5 B10_3_AUX	7 B10_4_AUX	9 B10_5_AUX	11 B10_6_AUX	13 B10_7_AUX	15 B10_8_AUX	17 CHE_1	18 LOC_SWTCH EMP	19 LOC_SWTCH LOA	20 OGV_PATH _BLR	21 OGV_PATH _DPM	22 TR_28TH	23 TR_BAYMA R	24 TR_BOSTON	25 TR_CROSBY	26 TR_HARBOR CHA	27 TR_HARBOR SAM	28 TUG_PATH _DPM	divide by --> 4, Refrigerated ContainersSTC MIT, g/s --> 8.4E-03, 1 B10_1_AUX	4, Refrigerated ContainersSTC MIT, 8.4E-03, 3 B10_2_AUX	4, Refrigerated ContainersSTC MIT, 8.4E-03, 5 B10_3_AUX	4, Refrigerated ContainersSTC MIT, 8.4E-03, 7 B10_4_AUX	2, Multi-Purpose General CargoSTC MIT, 8.7E-03, 9 B10_5_AUX	2, Multi-Purpose General CargoSTC MIT, 8.7E-03, 11 B10_6_AUX	2, Dry BulkSTC MIT, 9.4E-03, 13 B10_7_AUX	2, Dry BulkSTC MIT, 9.4E-03, 15 B10_8_AUX	1, AllSTC MIT, 1.0E-08, 17 CHE_1	2, AllSTC MIT, 1.8E-03, 18 LOC_SWTCHE MP	2, AllSTC MIT, 1.8E-03, 19 LOC_SWTCHL OA	1, AllSTC MIT, 3.0E-02, 21 OGV_PATH_ DPM	1, TR_28THST C MIT, 7.1E-06, 22 TR_28TH	1, TR_BAYMA RSTC MIT, 8.6E-06, 23 TR_BAYMA R	1, TR_BOSTON STC MIT, 2.3E-05, 24 TR_BOSTON	1, TR_CROSBY STC MIT, 4.8E-05, 25 TR_CROSBY	1, TR_HARBOR CHASTC MIT, 1.1E-04, 26 TR_HARBOR CHA	1, TR_HARBOR SAMSTC MIT, 1.1E-04, 27 TR_HARBOR SAM	1, AllSTC MIT, 1.8E-03, 28 TUG_PATH_D PM	SUM	Vessel Hoteling All 100%	Vessel Hoteling Refrigerated ContainersSTC MIT 48%	Vessel Hoteling Multi-Purpose General CargoSTC MIT 25%	Vessel Hoteling Dry BulkSTC MIT 27%	Vessel Transit All 100%	Vessel Transit Refrigerated ContainersSTC MIT 46%	Vessel Transit Multi-Purpose General CargoSTC MIT 25%	Vessel Transit Dry BulkSTC MIT 28%	Tug/Barge Transit All 100%	Tug/Barge Transit Refrigerated ContainersSTC MIT 21%	Tug/Barge Transit Multi-Purpose General CargoSTC MIT 54%	Tug/Barge Transit Dry BulkSTC MIT 25%	Terminal E All 100%	Terminal E Refrigerated ContainersSTC MIT 30%
residential	REC_100I	486830.59	3619425.04	1.8E-01	1.6E-01	1.8E-01	1.9E-01	2.1E-01	2.1E-01	2.1E-01	2.2E-01	1.9E+05	4.3E-01	4.3E-01	8.0E-02	8.0E-02	1.5E-01	2.0E-02	1.3E-01	6.0E-01	7.2E-01	3.5E-01	1.0E-01	1.5E-03	1.3E-03	1.5E-03	1.6E-03	1.8E-03	1.8E-03	2.0E-03	2.1E-03	2.0E-03	7.6E-04	7.5E-04	2.4E-03	1.0E-06	1.7E-07	2.9E-06	2.9E-05	7.7E-05	3.7E-05	1.8E-04	2.0E-02	1.4E-02	6E-03	4E-03	4E-03	2E-03	1E-03	6E-04	7E-04	2E-04	4E-05	1E-04	5E-05	2E-03	6E-04
residential	REC_100I	486930.59	3619425.04	1.7E-01	1.5E-01	1.7E-01	1.9E-01	2.0E-01	2.0E-01	2.1E-01	2.2E-01	1.9E+05	4.4E-01	4.4E-01	8.0E-02	8.0E-02	1.7E-01	2.1E-02	1.5E-01	6.7E-01	7.3E-01	4.0E-01	1.0E-01	1.5E-03	1.3E-03	1.5E-03	1.6E-03	1.7E-03	1.8E-03	2.0E-03	2.1E-03	2.0E-03	7.7E-04	7.8E-04	2.4E-03	1.2E-06	1.8E-07	3.4E-06	3.2E-05	7.9E-05	4.3E-05	1.8E-04	2.0E-02	1.3E-02	6E-03	4E-03	4E-03	2E-03	1E-03	6E-04	7E-04	2E-04	4E-05	1E-04	5E-05	2E-03	6E-04
residential	REC_100I	487030.59	3619425.04	1.6E-01	1.4E-01	1.6E-01	1.7E-01	1.9E-01	2.0E-01	2.1E-01	2.2E-01	1.7E+05	3.8E-01	4.0E-01	7.6E-02	7.6E-02	1.9E-01	2.1E-02	1.6E-01	6.4E-01	6.5E-01	4.0E-01	9.6E-02	1.4E-03	1.2E-03	1.3E-03	1.5E-03	1.6E-03	1.7E-03	1.9E-03	2.0E-03	1.7E-03	6.8E-04	7.0E-04	2.3E-03	1.3E-06	1.8E-07	3.6E-06	3.1E-05	7.0E-05	4.3E-05	1.7E-04	1.8E-02	1.3E-02	5E-03	3E-03	4E-03	2E-03	1E-03	6E-04	6E-04	2E-04	4E-05	9E-05	4E-05	2E-03	5E-04
residential	REC_100I	487130.59	3619425.04	1.5E-01	1.3E-01	1.5E-01	1.6E-01	1.8E-01	1.9E-01	2.0E-01	2.1E-01	1.5E+05	3.5E-01	3.7E-01	7.3E-02	7.3E-02	2.1E-01	2.2E-02	1.8E-01	6.1E-01	6.0E-01	4.2E-01	9.2E-02	1.3E-03	1.1E-03	1.3E-03	1.4E-03	1.6E-03	1.6E-03	1.8E-03	2.0E-03	1.6E-03	6.2E-04	6.5E-04	2.2E-03	1.5E-06	1.9E-07	4.0E-06	2.9E-05	6.4E-05	4.5E-05	1.6E-04	1.7E-02	1.2E-02	5E-03	3E-03	4E-03	2E-03	1E-03	6E-04	6E-04	2E-04	3E-05	9E-05	4E-05	2E-03	5E-04
residential	REC_100I	487230.59	3619425.04	1.4E-01	1.3E-01	1.4E-01	1.5E-01	1.7E-01	1.8E-01	1.9E-01	2.0E-01	1.5E+05	3.5E-01	3.7E-01	7.2E-02	7.2E-02	2.6E-01	2.3E-02	2.1E-01	6.1E-01	5.9E-01	4.6E-01	9.2E-02	1.2E-03	1.1E-03	1.2E-03	1.3E-03	1.5E-03	1.6E-03	1.8E-03	1.9E-03	1.6E-03	6.1E-04	6.5E-04	2.2E-03	1.8E-06	2.0E-07	4.8E-06	3.0E-05	6.3E-05	4.9E-05	1.6E-04	1.7E-02	1.2E-02	5E-03	3E-03	4E-03	2E-03	1E-03	5E-04	6E-04	2E-04	3E-05	9E-05	4E-05	2E-03	5E-04
residential	REC_100I	487330.59	3619425.04	1.3E-01	1.2E-01	1.3E-01	1.4E-01	1.6E-01	1.7E-01	1.8E-01	1.9E-01	1.3E+05	2.9E-01	3.1E-01	6.8E-02	6.8E-02	2.8E-01	2.3E-02	2.3E-01	5.4E-01	5.0E-01	4.3E-01	8.4E-02	1.1E-03	9.8E-04	1.1E-03	1.2E-03	1.4E-03	1.5E-03	1.7E-03	1.8E-03	1.3E-03	5.1E-04	5.5E-04	2.0E-03	2.0E-06	2.0E-07	5.2E-06	2.6E-05	5.4E-05	4.6E-05	1.5E-04	1.5E-02	1.1E-02	4E-03	3E-03	3E-03	2E-03	9E-04	5E-04	6E-04	1E-04	3E-05	8E-05	4E-05	1E-03	4E-04
residential	REC_100I	487430.59	3619425.04	1.3E-01	1.2E-01	1.3E-01	1.4E-01	1.5E-01	1.7E-01	1.8E-01	1.9E-01	1.4E+05	3.2E-01	3.4E-01	7.0E-02	7.0E-02	3.8E-01	2.5E-02	3.1E-01	6.1E-01	5.5E-01	5.2E-01	8.9E-02	1.1E-03	9.7E-04	1.1E-03	1.2E-03	1.3E-03	1.5E-03	1.7E-03	1.8E-03	1.4E-03	5.6E-04	6.0E-04	2.1E-03	2.7E-06	2.1E-07	7.0E-06	3.0E-05	5.9E-05	5.5E-05	1.6E-04	1.6E-02	1.1E-02	4E-03	3E-03	3E-03	2E-03	1E-03	5E-04	6E-04	2E-04	3E-05	9E-05	4E-05	1E-03	4E-04
residential	REC_100I	487530.59	3619425.04	1.2E-01	1.1E-01	1.2E-01	1.3E-01	1.5E-01	1.6E-01	1.7E-01	1.8E-01	1.3E+05	2.9E-01	3.2E-01	6.8E-02	6.8E-02	4.4E-01	2.6E-02	3.7E-01	5.9E-01	5.1E-01	5.2E-01	8.6E-02	1.0E-03	9.3E-04	1.0E-03	1.1E-03	1.3E-03	1.4E-03	1.6E-03	1.7E-03	1.3E-03	5.1E-04	5.6E-04	2.0E-03	3.2E-06	2.2E-07	8.4E-06	2.9E-05	5.4E-05	5.6E-05	1.5E-04	1.5E-02	1.0E-02	4E-03	3E-03	3E-03	2E-03	9E-04	5E-04	6E-04	2E-04	3E-05	8E-05	4E-05	1E-03	4E-04
residential	REC_100I	487630.59	3619425.04	1.2E-01	1.0E-01	1.1E-01	1.2E-01	1.4E-01	1.5E-01	1.6E-01	1.7E-01	1.1E+05	2.5E-01	2.8E-01	6.5E-02	6.5E-02	4.7E-01	2.6E-02	4.1E-01	5.4E-01	4.4E-01	4.9E-01	8.1E-02	9.8E-04	8.7E-04	9.7E-04	1.0E-03	1.2E-03	1.3E-03	1.5E-03	1.6E-03	1.1E-03	4.5E-04	4.9E-04	1.9E-03	3.3E-06	2.2E-07	9.2E-06	2.6E-05	4.7E-05	5.2E-05	1.4E-04	1.4E-02	9.4E-03	4E-03	2E-03	3E-03	2E-03	9E-04	5E-04	5E-04	1E-04	3E-05	8E-05	4E-05	1E-03	3E-04
residential	REC_100I	487730.59	3619425.04	1.1E-01	9.9E-02	1.1E-01	1.2E-01	1.3E-01	1.4E-01	1.5E-01	1.6E-01	1.0E+05	2.4E-01	2.6E-01	6.3E-02	6.3E-02	4.8E-01	2.7E-02	4.5E-01	5.1E-01	4.0E-01	4.9E-01	7.9E-02	9.4E-04	8.4E-04	9.2E-04	9.9E-04	1.1E-03	1.2E-03	1.4E-03	1.5E-03	1.1E-03	4.1E-04	4.5E-04	1.9E-03	3.5E-06	2.3E-07	1.0E-05	2.5E-05	4.3E-05	5.3E-05	1.4E-04	1.3E-02	9.0E-03	4E-03	2E-03	3E-03	2E-03	9E-04	5E-04	5E-04	1E-04	3E-05	8E-05	3E-05	1E-03	3E-04
residential	REC_100I	487830.59	3619425.04	1.1E-01	9.4E-02	1.0E-01	1.1E-01	1.2E-01	1.3E-01	1.4E-01	1.5E-01	9.3E+04	2.1E-01	2.3E-01	6.1E-02	6.1E-02	4.8E-01	2.8E-02	4.5E-01	4.6E-01	3.6E-01	4.7E-01	7.5E-02	8.9E-04	8.0E-04	8.7E-04	9.3E-04	1.1E-03	1.2E-03	1.3E-03	1.4E-03	9.7E-04	3.7E-04	4.1E-04	1.8E-03	3.4E-06	2.4E-07	1.0E-05	2.2E-05	3.9E-05	5.1E-05	1.3E-04	1.2E-02	8.4E-03	3E-03	2E-03	3E-03	2E-03	8E-04	5E-04	5E-04	1E-04	3E-05	7E-05	3E-05	1E-03	3E-04

TAMT Risk Assessment - DPM Cancer and Chronic HI

divide by -->: 4 (Refrigerated ContainersSTC MIT), 4 (Refrigerated ContainersSTC MIT), 4 (Refrigerated ContainersSTC MIT), 4 (Refrigerated ContainersSTC MIT), 2 (Multi-Purpose General CargoSTC MIT), 2 (Multi-Purpose General CargoSTC MIT), 2 (Dry BulkSTC MIT), 2 (Dry BulkSTC MIT), 1 (AllSTC MIT), 2 (AllSTC MIT), 2 (AllSTC MIT), 1 (AllSTC MIT), 1 (TR_28THSTC MIT), 1 (TR_BAYMARSTC MIT), 1 (TR_BOSTON STC MIT), 1 (TR_CROSBY STC MIT), 1 (TR_HARBOR CHASTC MIT), 1 (TR_HARBOR SAMSTC MIT), 1 (AllSTC MIT)

g/s -->: 8.4E-03, 8.4E-03, 8.4E-03, 8.4E-03, 8.7E-03, 8.7E-03, 9.4E-03, 9.4E-03, 1.0E-08, 1.8E-03, 1.8E-03, 3.0E-02, 7.1E-06, 8.6E-06, 2.3E-05, 4.8E-05, 1.1E-04, 1.1E-04, 1.8E-03

Source Group in AERMOD: 1, 3, 5, 7, 9, 11, 13, 15, 17, 18, 19, 21, 22, 23, 24, 25, 26, 27, 28

Vessel Hoteling: All 100% | Refrigerated ContainersSTC MIT 48% | Multi-Purpose General CargoSTC MIT 25% | Dry BulkSTC MIT 27%

Vessel Transit: All 100% | Refrigerated ContainersSTC MIT 46% | Multi-Purpose General CargoSTC MIT 25% | Dry BulkSTC MIT 28%

Tug/Barge Transit: All 100% | Refrigerated ContainersSTC MIT 21% | Multi-Purpose General CargoSTC MIT 54% | Dry BulkSTC MIT 25%

Terminal E: All 100% | Refrigerated ContainersSTC MIT 30%

AERMOD Output

	Discrete Receptor ID (Group Name)	X	Y	B10_1_AUX	B10_2_AUX	B10_3_AUX	B10_4_AUX	B10_5_AUX	B10_6_AUX	B10_7_AUX	B10_8_AUX	CHE_1	LOC_SWTCH EMP	LOC_SWTCH LOA
residential	REC_100M	485530.59	3619825.04	2.1E-01	2.2E-01	1.8E-01	1.6E-01	1.4E-01	1.2E-01	1.1E-01	1.1E-01	2.1E+05	2.9E-01	2.4E-01
residential	REC_100M	485630.59	3619825.04	2.2E-01	2.2E-01	1.9E-01	1.7E-01	1.5E-01	1.3E-01	1.2E-01	1.1E-01	2.2E+05	3.2E-01	2.6E-01
residential	REC_100M	485730.59	3619825.04	2.3E-01	2.2E-01	2.0E-01	1.8E-01	1.6E-01	1.4E-01	1.3E-01	1.2E-01	2.3E+05	3.6E-01	3.0E-01
residential	REC_100M	485830.59	3619825.04	2.3E-01	2.3E-01	2.0E-01	1.8E-01	1.6E-01	1.4E-01	1.4E-01	1.3E-01	2.4E+05	3.9E-01	3.2E-01
residential	REC_100M	485930.59	3619825.04	2.4E-01	2.3E-01	2.1E-01	1.9E-01	1.7E-01	1.5E-01	1.4E-01	1.4E-01	2.5E+05	4.2E-01	3.5E-01
residential	REC_100M	486030.59	3619825.04	2.4E-01	2.2E-01	2.1E-01	1.9E-01	1.7E-01	1.5E-01	1.5E-01	1.4E-01	2.5E+05	4.5E-01	3.8E-01
residential	REC_100M	476730.59	3619925.04	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.1E-02	1.1E-02	5.3E+03	1.1E-02	1.1E-02
residential	REC_100M	476830.59	3619925.04	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	1.1E-02	5.4E+03	1.2E-02	1.1E-02
residential	REC_100M	476930.59	3619925.04	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	1.2E-02	5.3E+03	1.2E-02	1.1E-02
residential	REC_100M	477030.59	3619925.04	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	1.2E-02	5.3E+03	1.2E-02	1.1E-02
residential	REC_100M	477130.59	3619925.04	1.4E-02	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	5.4E+03	1.2E-02	1.1E-02
residential	REC_100M	477230.59	3619925.04	1.5E-02	1.5E-02	1.4E-02	1.4E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	5.6E+03	1.2E-02	1.2E-02
residential	REC_100M	477330.59	3619925.04	1.5E-02	1.5E-02	1.5E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	1.3E-02	5.9E+03	1.3E-02	1.3E-02
residential	REC_100M	477430.59	3619925.04	1.5E-02	1.5E-02	1.5E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	1.3E-02	5.8E+03	1.3E-02	1.2E-02
residential	REC_100M	477530.59	3619925.04	1.5E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	5.9E+03	1.3E-02	1.3E-02
residential	REC_100M	477630.59	3619925.04	1.6E-02	1.6E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	1.3E-02	6.4E+03	1.4E-02	1.4E-02
residential	REC_100M	477730.59	3619925.04	1.7E-02	1.7E-02	1.6E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	6.8E+03	1.5E-02	1.4E-02
residential	REC_100M	477830.59	3619925.04	1.8E-02	1.8E-02	1.7E-02	1.7E-02	1.6E-02	1.5E-02	1.5E-02	1.5E-02	7.3E+03	1.6E-02	1.5E-02
recreational	park	477930.59	3619925.04	1.9E-02	2.0E-02	1.8E-02	1.8E-02	1.7E-02	1.6E-02	1.6E-02	1.6E-02	7.7E+03	1.7E-02	1.6E-02
recreational	park	479030.59	3619925.04	2.4E-02	2.4E-02	2.2E-02	2.1E-02	2.0E-02	1.9E-02	1.9E-02	1.9E-02	9.5E+03	2.3E-02	2.1E-02
recreational	park	479130.59	3619925.04	2.4E-02	2.4E-02	2.3E-02	2.2E-02	2.0E-02	1.9E-02	1.9E-02	1.9E-02	9.6E+03	2.3E-02	2.2E-02
recreational	park	479230.59	3619925.04	2.5E-02	2.5E-02	2.3E-02	2.2E-02	2.1E-02	2.0E-02	1.9E-02	1.9E-02	9.8E+03	2.4E-02	2.2E-02
recreational	park	483530.59	3619925.04	6.2E-02	6.4E-02	5.7E-02	5.2E-02	4.7E-02	4.3E-02	4.2E-02	4.2E-02	2.3E+04	8.3E-02	7.4E-02
recreational	park	483630.59	3619925.04	6.5E-02	6.7E-02	6.0E-02	5.5E-02	4.9E-02	4.4E-02	4.4E-02	4.3E-02	2.5E+04	8.7E-02	7.7E-02
recreational	park	483730.59	3619925.04	6.7E-02	7.0E-02	6.1E-02	5.6E-02	5.1E-02	4.6E-02	4.5E-02	4.4E-02	2.7E+04	9.0E-02	8.0E-02
recreational	park	483830.59	3619925.04	6.8E-02	7.1E-02	6.2E-02	5.7E-02	5.1E-02	4.6E-02	4.5E-02	4.4E-02	2.9E+04	9.4E-02	8.3E-02
recreational	park	483930.59	3619925.04	7.1E-02	7.5E-02	6.5E-02	6.0E-02	5.4E-02	4.8E-02	4.7E-02	4.6E-02	3.2E+04	9.8E-02	8.6E-02
residential	REC_100M	484030.59	3619925.04	7.3E-02	7.8E-02	6.8E-02	6.2E-02	5.5E-02	5.0E-02	4.8E-02	4.7E-02	3.5E+04	1.0E-01	8.9E-02
residential	REC_100M	484130.59	3619925.04	7.5E-02	8.3E-02	7.0E-02	6.4E-02	5.6E-02	5.1E-02	5.0E-02	4.8E-02	3.7E+04	1.0E-01	8.9E-02
residential	REC_100M	484230.59	3619925.04	7.7E-02	8.7E-02	7.3E-02	6.6E-02	5.8E-02	5.2E-02	5.0E-02	4.9E-02	4.0E+04	1.0E-01	8.9E-02
residential	REC_100M	484330.59	3619925.04	8.0E-02	9.3E-02	7.7E-02	6.9E-02	6.0E-02	5.4E-02	5.1E-02	5.0E-02	4.5E+04	1.0E-01	8.9E-02
residential	REC_100M	484430.59	3619925.04	8.5E-02	1.0E-01	8.2E-02	7.3E-02	6.3E-02	5.6E-02	5.3E-02	5.1E-02	4.9E+04	1.0E-01	9.2E-02
residential	REC_100M	484530.59	3619925.04	9.0E-02	1.1E-01	8.7E-02	7.7E-02	6.6E-02	5.8E-02	5.5E-02	5.3E-02	5.4E+04	1.1E-01	9.5E-02
residential	REC_100M	484630.59	3619925.04	9.8E-02	1.2E-01	9.4E-02	8.3E-02	7.0E-02	6.1E-02	5.8E-02	5.5E-02	6.0E+04	1.1E-01	1.0E-01
residential	REC_100M	484730.59	3619925.04	1.1E-01	1.3E-01	1.0E-01	8.9E-02	7.5E-02	6.5E-02	6.1E-02	5.8E-02	6.7E+04	1.2E-01	1.0E-01
residential	REC_100M	484830.59	3619925.04	1.2E-01	1.4E-01	1.1E-01	9.7E-02	8.1E-02	6.9E-02	6.5E-02	6.1E-02	7.5E+04	1.3E-01	1.1E-01
residential	REC_100M	484930.59	3619925.04	1.3E-01	1.5E-01	1.2E-01	1.1E-01	8.8E-02	7.4E-02	6.9E-02	6.4E-02	8.6E+04	1.4E-01	1.2E-01
residential	REC_100M	485030.59	3619925.04	1.4E-01	1.6E-01	1.3E-01	1.1E-01	9.5E-02	8.0E-02	7.4E-02	6.8E-02	9.8E+04	1.5E-01	1.3E-01
residential	REC_100M	485130.59	3619925.04	1.5E-01	1.7E-01	1.4E-01	1.2E-01	1.0E-01	8.6E-02	7.9E-02	7.4E-02	1.1E+05	1.7E-01	1.4E-01
residential	REC_100M	485230.59	3619925.04	1.7E-01	1.8E-01	1.5E-01	1.3E-01	1.1E-01	9.3E-02	8.6E-02	7.9E-02	1.3E+05	1.9E-01	1.5E-01
residential	REC_100M	485330.59	3619925.04	1.8E-01	1.9E-01	1.6E-01	1.4E-01	1.2E-01	1.0E-01	9.3E-02	8.6E-02	1.5E+05	2.1E-01	1.7E-01
residential	REC_100M	485430.59	3619925.04	1.9E-01	2.0E-01	1.7E-01	1.5E-01	1.3E-01	1.1E-01	1.0E-01	9.3E-02	1.7E+05	2.3E-01	1.9E-01
residential	REC_100M	485530.59	3619925.04	2.0E-01	2.0E-01	1.7E-01	1.6E-01	1.3E-01	1.2E-01	1.1E-01	1.0E-01	1.8E+05	2.6E-01	2.1E-01
residential	REC_100M	485630.59	3619925.04	2.1E-01	2.1E-01	1.8E-01	1.6E-01	1.4E-01	1.2E-01	1.2E-01	1.1E-01	1.9E+05	2.9E-01	2.4E-01
residential	REC_100M	485730.59	3619925.04	2.1E-01	2.1E-01	1.8E-01	1.7E-01	1.5E-01	1.3E-01	1.2E-01	1.2E-01	2.0E+05	3.2E-01	2.7E-01
residential	REC_100M	485830.59	3619925.04	2.2E-01	2.2E-01	1.9E-01	1.7E-01	1.5E-01	1.3E-01	1.3E-01	1.2E-01	2.0E+05	3.4E-01	2.9E-01
residential	REC_100M	485930.59	3619925.04	2.2E-01	2.2E-01	1.9E-01	1.8E-01	1.6E-01	1.4E-01	1.4E-01	1.3E-01	2.1E+05	3.7E-01	3.1E-01
residential	REC_100M	486030.59	3619925.04	2.2E-01	2.1E-01	2.0E-01	1.8E-01	1.6E-01	1.4E-01	1.4E-01	1.4E-01	2.3E+05	4.1E-01	3.4E-01
residential	REC_100M	476730.59	3620025.04	1.3E-02	1.4E-02	1.3E-02	1.2E-02	1.2E-02	1.1E-02	1.1E-02	1.1E-02	5.1E+03	1.1E-02	1.1E-02
residential	REC_100M	476830.59	3620025.04	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.1E-02	1.1E-02	5.3E+03	1.2E-02	1.1E-02
residential	REC_100M	476930.59	3620025.04	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	1.1E-02	5.3E+03	1.2E-02	1.1E-02
residential	REC_100M	477030.59	3620025.04	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	1.2E-02	5.2E+03	1.2E-02	1.1E-02
residential	REC_100M	477130.59	3620025.04	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	1.2E-02	5.2E+03	1.2E-02	1.1E-02
residential	REC_100M	477230.59	3620025.04	1.4E-02	1.5E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	5.4E+03	1.2E-02	1.2E-02
residential	REC_100M	477330.59	3620025.04	1.5E-02	1.5E-02	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	5.7E+03	1.3E-02	1.2E-02
residential	REC_100M	477430.59	3620025.04	1.5E-02	1.5E-02	1.5E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	1.3E-02	5.8E+03	1.3E-02	1.2E-02

TAMT Risk Assessment - DPM Cancer and Chronic HI

AERMOD Output — Source Group in AERMOD

	Discrete Receptor ID (Group Name)	X	Y	B10_1_AUX (1)	B10_2_AUX (3)	B10_3_AUX (5)	B10_4_AUX (7)	B10_5_AUX (9)	B10_6_AUX (11)	B10_7_AUX (13)	B10_8_AUX (15)	CHE_1 (17)	LOC_SWTCHEMP (18)	LOC_SWTCHLOA (19)	OGV_PATH_BLR (20)	OGV_PATH_DPM (21)	TR_28TH (22)	TR_BAYMAR (23)	TR_BOSTON (24)	TR_CROSBY (25)	TR_HARBORCHA (26)	TR_HARBORSAM (27)	TUG_PATH_DPM (28)
residential	REC_100	484230.59	3620225.04	6.9E-02	7.8E-02	6.6E-02	5.9E-02	5.2E-02	4.7E-02	4.5E-02	4.4E-02	3.7E+04	8.0E-02	7.2E-02	1.7E-01	1.7E-01	2.6E-02	9.6E-03	2.6E-02	5.5E-02	7.5E-02	3.3E-02	2.4E-01
residential	REC_100	484330.59	3620225.04	7.1E-02	8.3E-02	6.9E-02	6.2E-02	5.4E-02	4.8E-02	4.6E-02	4.4E-02	4.0E+04	8.2E-02	7.3E-02	1.6E-01	1.6E-01	2.7E-02	9.8E-03	2.7E-02	5.9E-02	8.1E-02	3.5E-02	2.4E-01
residential	REC_100	484430.59	3620225.04	7.6E-02	8.9E-02	7.3E-02	6.5E-02	5.7E-02	5.0E-02	4.8E-02	4.6E-02	4.3E+04	8.4E-02	7.5E-02	1.6E-01	1.6E-01	2.8E-02	1.0E-02	2.7E-02	6.4E-02	8.9E-02	3.8E-02	2.3E-01
residential	REC_100	484530.59	3620225.04	8.1E-02	9.7E-02	7.8E-02	6.9E-02	5.9E-02	5.2E-02	5.0E-02	4.7E-02	4.7E+04	8.8E-02	7.8E-02	1.5E-01	1.5E-01	2.9E-02	1.0E-02	2.8E-02	6.8E-02	9.7E-02	4.1E-02	2.2E-01
residential	REC_100	484630.59	3620225.04	8.7E-02	1.0E-01	8.4E-02	7.4E-02	6.3E-02	5.5E-02	5.2E-02	4.9E-02	5.1E+04	9.3E-02	8.2E-02	1.5E-01	1.5E-01	3.0E-02	1.1E-02	2.8E-02	7.3E-02	1.1E-01	4.3E-02	2.1E-01
residential	REC_100	484730.59	3620225.04	9.5E-02	1.1E-01	9.1E-02	7.9E-02	6.7E-02	5.8E-02	5.5E-02	5.1E-02	5.6E+04	9.9E-02	8.7E-02	1.4E-01	1.4E-01	3.1E-02	1.1E-02	2.9E-02	7.9E-02	1.2E-01	4.6E-02	2.0E-01
residential	REC_100	484830.59	3620225.04	1.0E-01	1.2E-01	9.8E-02	8.6E-02	7.2E-02	6.2E-02	5.8E-02	5.4E-02	6.2E+04	1.0E-01	9.3E-02	1.4E-01	1.4E-01	3.2E-02	1.1E-02	3.0E-02	8.5E-02	1.3E-01	4.8E-02	1.9E-01
residential	REC_100	484930.59	3620225.04	1.1E-01	1.3E-01	1.1E-01	9.3E-02	7.8E-02	6.7E-02	6.2E-02	5.8E-02	7.0E+04	1.1E-01	9.9E-02	1.3E-01	1.3E-01	3.3E-02	1.2E-02	3.2E-02	9.3E-02	1.4E-01	5.1E-02	1.9E-01
residential	REC_100	485030.59	3620225.04	1.2E-01	1.4E-01	1.1E-01	1.0E-01	8.4E-02	7.1E-02	6.6E-02	6.2E-02	7.8E+04	1.2E-01	1.1E-01	1.3E-01	1.3E-01	3.5E-02	1.2E-02	3.3E-02	9.9E-02	1.5E-01	5.4E-02	1.8E-01
residential	REC_100	485130.59	3620225.04	1.4E-01	1.5E-01	1.2E-01	1.1E-01	9.0E-02	7.6E-02	7.1E-02	6.5E-02	8.1E+04	1.3E-01	1.1E-01	1.2E-01	1.2E-01	3.7E-02	1.2E-02	3.5E-02	1.0E-01	1.5E-01	5.5E-02	1.6E-01
residential	REC_100	485230.59	3620225.04	1.4E-01	1.5E-01	1.3E-01	1.1E-01	9.7E-02	8.2E-02	7.6E-02	7.0E-02	8.9E+04	1.4E-01	1.2E-01	1.1E-01	1.1E-01	3.9E-02	1.2E-02	3.7E-02	1.0E-01	1.7E-01	5.8E-02	1.5E-01
residential	REC_100	485330.59	3620225.04	1.5E-01	1.6E-01	1.4E-01	1.2E-01	1.0E-01	8.9E-02	8.3E-02	7.7E-02	1.1E+05	1.6E-01	1.4E-01	1.1E-01	1.1E-01	4.2E-02	1.3E-02	4.0E-02	1.2E-01	2.1E-01	6.5E-02	1.6E-01

divide by --> / g/s -->

X	B10_1_AUX (Refrigerated ContainersSTC MIT; 4; 8.4E-03; 1)	B10_2_AUX (Refrigerated ContainersSTC MIT; 4; 8.4E-03; 3)	B10_3_AUX (Refrigerated ContainersSTC MIT; 4; 8.4E-03; 5)	B10_4_AUX (Refrigerated ContainersSTC MIT; 4; 8.4E-03; 7)	B10_5_AUX (Multi-Purpose General CargoSTC MIT; 2; 8.7E-03; 9)	B10_6_AUX (Multi-Purpose General CargoSTC MIT; 2; 8.7E-03; 11)	B10_7_AUX (Dry BulkSTC MIT; 2; 9.4E-03; 13)	B10_8_AUX (Dry BulkSTC MIT; 2; 9.4E-03; 15)	CHE_1 (AllSTC MIT; 1; 1.0E-08; 17)	LOC_SWTCHEMP (AllSTC MIT; 2; 1.8E-03; 18)	LOC_SWTCHLOA (AllSTC MIT; 2; 1.8E-03; 19)	OGV_PATH_DPM (AllSTC MIT; 1; 3.0E-02; 21)	TR_28TH (TR_28THSTC MIT; 1; 7.1E-06; 22)	TR_BAYMAR (TR_BAYMARSTC MIT; 1; 8.6E-06; 23)	TR_BOSTON (TR_BOSTONSTC MIT; 1; 2.3E-05; 24)	TR_CROSBY (TR_CROSBYSTC MIT; 1; 4.8E-05; 25)	TR_HARBORCHA (TR_HARBORCHASTC MIT; 1; 1.1E-04; 26)	TR_HARBORSAM (TR_HARBORSAMSTC MIT; 1; 1.1E-04; 27)	TUG_PATH_DPM (AllSTC MIT; 1; 1.8E-03; 28)	SUM
484230.59	5.8E-04	6.6E-04	5.5E-04	5.0E-04	4.6E-04	4.1E-04	4.2E-04	4.1E-04	3.8E-04	1.4E-04	1.3E-04	5.1E-03	1.9E-07	8.2E-08	5.9E-07	2.7E-06	8.0E-06	3.5E-06	4.3E-04	1.0E-02
484330.59	6.0E-04	7.0E-04	5.8E-04	5.2E-04	4.7E-04	4.2E-04	4.3E-04	4.2E-04	4.2E-04	1.4E-04	1.3E-04	4.9E-03	1.9E-07	8.4E-08	6.0E-07	2.9E-06	8.7E-06	3.8E-06	4.1E-04	1.0E-02
484430.59	6.4E-04	7.5E-04	6.2E-04	5.5E-04	4.9E-04	4.4E-04	4.5E-04	4.3E-04	4.5E-04	1.5E-04	1.3E-04	4.7E-03	2.0E-07	8.7E-08	6.2E-07	3.1E-06	9.5E-06	4.0E-06	4.0E-04	1.0E-02
484530.59	6.8E-04	8.2E-04	6.6E-04	5.8E-04	5.2E-04	4.6E-04	4.7E-04	4.4E-04	4.9E-04	1.6E-04	1.4E-04	4.6E-03	2.1E-07	9.0E-08	6.3E-07	3.3E-06	1.0E-05	4.3E-06	3.9E-04	1.0E-02
484630.59	7.3E-04	8.8E-04	7.1E-04	6.2E-04	5.5E-04	4.8E-04	4.9E-04	4.6E-04	5.3E-04	1.6E-04	1.5E-04	4.4E-03	2.1E-07	9.2E-08	6.5E-07	3.5E-06	1.1E-05	4.6E-06	3.7E-04	1.1E-02
484730.59	8.0E-04	9.6E-04	7.6E-04	6.7E-04	5.9E-04	5.1E-04	5.1E-04	4.8E-04	5.8E-04	1.7E-04	1.5E-04	4.2E-03	2.2E-07	9.5E-08	6.6E-07	3.8E-06	1.2E-05	4.9E-06	3.6E-04	1.1E-02
484830.59	8.7E-04	1.0E-03	8.3E-04	7.2E-04	6.3E-04	5.4E-04	5.4E-04	5.1E-04	6.4E-04	1.8E-04	1.6E-04	4.1E-03	2.3E-07	9.7E-08	6.9E-07	4.1E-06	1.3E-05	5.2E-06	3.4E-04	1.1E-02
484930.59	9.5E-04	1.1E-03	8.9E-04	7.8E-04	6.8E-04	5.8E-04	5.8E-04	5.4E-04	7.2E-04	2.0E-04	1.7E-04	4.0E-03	2.4E-07	9.9E-08	7.2E-07	4.5E-06	1.5E-05	5.5E-06	3.3E-04	1.2E-02
485030.59	1.0E-03	1.2E-03	9.6E-04	8.4E-04	7.4E-04	6.2E-04	6.2E-04	5.8E-04	8.1E-04	2.2E-04	1.9E-04	3.8E-03	2.5E-07	1.0E-07	7.6E-07	4.8E-06	1.6E-05	5.8E-06	3.2E-04	1.2E-02
485130.59	1.1E-03	1.2E-03	1.0E-03	9.1E-04	7.9E-04	6.7E-04	6.6E-04	6.1E-04	8.5E-04	2.2E-04	1.9E-04	3.6E-03	2.7E-07	1.0E-07	8.0E-07	4.8E-06	1.6E-05	5.9E-06	2.8E-04	1.2E-02
485230.59	1.2E-03	1.3E-03	1.1E-03	9.7E-04	8.5E-04	7.1E-04	7.1E-04	6.6E-04	9.3E-04	2.4E-04	2.1E-04	3.4E-03	2.8E-07	1.1E-07	8.4E-07	5.0E-06	1.8E-05	6.2E-06	2.7E-04	1.3E-02
485330.59	1.3E-03	1.3E-03	1.1E-03	1.0E-03	9.1E-04	7.8E-04	7.8E-04	7.2E-04	1.2E-03	2.9E-04	2.4E-04	3.5E-03	3.0E-07	1.1E-07	9.0E-07	5.8E-06	2.2E-05	7.0E-06	2.8E-04	1.3E-02

X	Vessel Hoteling: All (100%)	Refrigerated ContainersSTC MIT (48%)	Multi-Purpose General CargoSTC MIT (25%)	Dry BulkSTC MIT (27%)	Vessel Transit: All (100%)	Refrigerated ContainersSTC MIT (46%)	Multi-Purpose General CargoSTC MIT (25%)	Dry BulkSTC MIT (28%)	Tug/Barge Transit: All (100%)	Refrigerated ContainersSTC MIT (21%)	Multi-Purpose General CargoSTC MIT (54%)	Dry BulkSTC MIT (25%)	Terminal E: All (100%)	Refrigerated ContainersSTC MIT (30%)
484230.59	4.0E-03	2E-03	9E-04	8E-04	5E-03	2E-03	1E-03	1E-03	4E-04	9E-05	2E-04	1E-04	4E-04	1E-04
484330.59	4.1E-03	2E-03	9E-04	8E-04	5E-03	2E-03	1E-03	1E-03	4E-04	9E-05	2E-04	1E-04	4E-04	1E-04
484430.59	4.4E-03	3E-03	9E-04	9E-04	5E-03	2E-03	1E-03	1E-03	4E-04	8E-05	2E-04	1E-04	5E-04	1E-04
484530.59	4.6E-03	3E-03	1E-03	9E-04	5E-03	2E-03	1E-03	1E-03	4E-04	8E-05	2E-04	1E-04	5E-04	1E-04
484630.59	4.9E-03	3E-03	1E-03	9E-04	4E-03	2E-03	1E-03	1E-03	4E-04	8E-05	2E-04	9E-05	5E-04	2E-04
484730.59	5.3E-03	3E-03	1E-03	1E-03	4E-03	2E-03	1E-03	1E-03	4E-04	7E-05	2E-04	9E-05	6E-04	2E-04
484830.59	5.7E-03	3E-03	1E-03	1E-03	4E-03	2E-03	1E-03	1E-03	3E-04	7E-05	2E-04	9E-05	6E-04	2E-04
484930.59	6.1E-03	4E-03	1E-03	1E-03	4E-03	2E-03	1E-03	1E-03	3E-04	7E-05	2E-04	8E-05	7E-04	2E-04
485030.59	6.6E-03	4E-03	1E-03	1E-03	4E-03	2E-03	1E-03	1E-03	3E-04	7E-05	2E-04	8E-05	8E-04	2E-04
485130.59	7.1E-03	4E-03	1E-03	1E-03	4E-03	2E-03	9E-04	1E-03	3E-04	6E-05	2E-04	7E-05	8E-04	3E-04
485230.59	7.5E-03	5E-03	2E-03	1E-03	3E-03	2E-03	9E-04	1E-03	3E-04	6E-05	1E-04	7E-05	9E-04	3E-04
485330.59	8.0E-03	5E-03	2E-03	1E-03	3E-03	2E-03	9E-04	1E-03	3E-04	6E-05	2E-04	7E-05	1E-03	4E-04

TAMT Risk Assessment - DPM Cancer and Chronic HI

AERMOD Output

Source Group in AERMOD

	Discrete Receptor ID (Group Name)	X	Y	B10_1_AUX (1)	B10_2_AUX (3)	B10_3_AUX (5)	B10_4_AUX (7)	B10_5_AUX (9)	B10_6_AUX (11)	B10_7_AUX (13)	B10_8_AUX (15)	CHE_1 (17)	LOC_SWTCH EMP (18)	LOC_SWTCH LOA (19)	OGV_PATH _BLR (20)	OGV_PATH _DPM (21)	TR_28TH (22)	TR_BAYMA R (23)	TR_BOSTON (24)	TR_CROSBY (25)	TR_HARBOR CHA (26)	TR_HARBOR SAM (27)	TUG_PATH _DPM (28)
recreational	park	485630.59	3620625.04	1.3E-01	1.4E-01	1.2E-01	1.1E-01	9.9E-02	8.8E-02	8.4E-02	8.0E-02	9.6E+04	1.6E-01	1.4E-01	8.8E-02	8.8E-02	4.5E-02	1.2E-02	4.2E-02	1.4E-01	2.2E-01	6.5E-02	1.1E-01
recreational	park	485730.59	3620625.04	1.4E-01	1.4E-01	1.2E-01	1.1E-01	1.0E-01	9.1E-02	8.8E-02	8.5E-02	9.9E+04	1.7E-01	1.5E-01	8.6E-02	8.6E-02	4.7E-02	1.3E-02	4.4E-02	1.5E-01	2.4E-01	7.0E-02	1.1E-01
recreational	park	485830.59	3620625.04	1.4E-01	1.4E-01	1.2E-01	1.1E-01	1.0E-01	9.3E-02	9.1E-02	8.8E-02	9.7E+04	1.7E-01	1.5E-01	8.2E-02	8.2E-02	4.9E-02	1.3E-02	4.5E-02	1.7E-01	2.5E-01	7.4E-02	1.0E-01
residential	REC_100M	477330.59	3620725.04	1.3E-02	1.4E-02	1.3E-02	1.2E-02	1.2E-02	1.1E-02	1.1E-02	1.1E-02	5.0E+03	1.1E-02	1.1E-02	4.1E-02	4.1E-02	1.0E-02	4.4E-03	9.9E-03	1.1E-02	1.4E-02	9.6E-03	3.7E-02
residential	REC_100M	477430.59	3620725.04	1.3E-02	1.4E-02	1.3E-02	1.2E-02	1.2E-02	1.1E-02	1.1E-02	1.1E-02	4.9E+03	1.1E-02	1.1E-02	4.2E-02	4.2E-02	1.0E-02	4.4E-03	9.8E-03	1.1E-02	1.4E-02	9.5E-03	3.7E-02
residential	REC_100M	477530.59	3620725.04	1.3E-02	1.4E-02	1.3E-02	1.2E-02	1.2E-02	1.1E-02	1.1E-02	1.1E-02	4.8E+03	1.1E-02	1.1E-02	4.2E-02	4.2E-02	9.9E-03	4.3E-03	9.7E-03	1.1E-02	1.3E-02	9.4E-03	3.7E-02
residential	REC_100M	477630.59	3620725.04	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.1E-02	1.1E-02	5.0E+03	1.2E-02	1.1E-02	4.5E-02	4.5E-02	1.0E-02	4.4E-03	1.0E-02	1.1E-02	1.4E-02	9.8E-03	4.1E-02
residential	REC_100M	477730.59	3620725.04	1.4E-02	1.4E-02	1.4E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	1.2E-02	5.3E+03	1.2E-02	1.2E-02	4.9E-02	4.9E-02	1.1E-02	4.5E-03	1.0E-02	1.2E-02	1.5E-02	1.0E-02	4.7E-02
residential	REC_100M	477830.59	3620725.04	1.5E-02	1.5E-02	1.4E-02	1.4E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	5.6E+03	1.3E-02	1.2E-02	5.5E-02	5.5E-02	1.1E-02	4.6E-03	1.1E-02	1.3E-02	1.5E-02	1.1E-02	5.7E-02
residential	REC_100M	477930.59	3620725.04	1.5E-02	1.5E-02	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	1.3E-02	5.7E+03	1.3E-02	1.2E-02	5.9E-02	5.9E-02	1.1E-02	4.6E-03	1.1E-02	1.3E-02	1.6E-02	1.1E-02	6.3E-02

			divide by -->	4	4	4	4	2	2	2	2	1	2	2	1	1	1	1	1	1	1	1	
				Refrigerated ContainersSTC MIT	Refrigerated ContainersSTC MIT	Refrigerated ContainersSTC MIT	Refrigerated ContainersSTC MIT	Multi-Purpose General CargoSTC MIT	Multi-Purpose General CargoSTC MIT	Dry BulkSTC MIT	Dry BulkSTC MIT	AllSTC MIT	AllSTC MIT	AllSTC MIT	AllSTC MIT	TR_28THSTC MIT	TR_BAYMARSTC MIT	TR_BOSTON STC MIT	TR_CROSBY STC MIT	TR_HARBOR CHASTC MIT	TR_HARBOR SAMSTC MIT	AllSTC MIT	
			g/s -->	8.4E-03	8.4E-03	8.4E-03	8.4E-03	8.7E-03	8.7E-03	9.4E-03	9.4E-03	1.0E-08	1.8E-03	1.8E-03	3.0E-02	7.1E-06	8.6E-06	2.3E-05	4.8E-05	1.1E-04	1.1E-04	1.8E-03	
	Discrete Receptor ID (Group Name)	X	Y	B10_1_AUX (1)	B10_2_AUX (3)	B10_3_AUX (5)	B10_4_AUX (7)	B10_5_AUX (9)	B10_6_AUX (11)	B10_7_AUX (13)	B10_8_AUX (15)	CHE_1 (17)	LOC_SWTCHE MP (18)	LOC_SWTCHL OA (19)	OGV_PATH_ DPM (21)	TR_28TH (22)	TR_BAYMA R (23)	TR_BOSTON (24)	TR_CROSBY (25)	TR_HARBOR CHA (26)	TR_HARBOR SAM (27)	TUG_PATH_D PM (28)	SUM
recreational	park	485630.59	3620625.04	1.1E-03	1.1E-03	1.0E-03	9.3E-04	8.6E-04	7.7E-04	7.9E-04	7.5E-04	9.9E-04	2.8E-04	2.4E-04	2.7E-03	3.2E-07	1.1E-07	9.4E-07	6.6E-06	2.3E-05	7.0E-06	2.0E-04	1.2E-02
recreational	park	485730.59	3620625.04	1.2E-03	1.2E-03	1.0E-03	9.6E-04	8.9E-04	8.0E-04	8.3E-04	8.0E-04	1.0E-03	3.0E-04	2.6E-04	2.6E-03	3.4E-07	1.1E-07	9.9E-07	7.4E-06	2.6E-05	7.6E-06	1.9E-04	1.2E-02
recreational	park	485830.59	3620625.04	1.2E-03	1.2E-03	1.0E-03	9.7E-04	9.0E-04	8.1E-04	8.5E-04	8.3E-04	1.0E-03	3.0E-04	2.6E-04	2.5E-03	3.5E-07	1.1E-07	1.0E-06	8.0E-06	2.7E-05	7.9E-06	1.8E-04	1.2E-02
residential	REC_100M	477330.59	3620725.04	1.1E-04	1.1E-04	1.1E-04	1.0E-04	1.0E-04	9.9E-05	1.1E-04	1.0E-04	5.2E-05	2.0E-05	1.9E-05	1.2E-03	7.2E-08	3.7E-08	2.3E-07	5.3E-07	1.5E-06	1.0E-06	6.5E-05	2.2E-03
residential	REC_100M	477430.59	3620725.04	1.1E-04	1.1E-04	1.1E-04	1.0E-04	1.0E-04	9.9E-05	1.1E-04	1.0E-04	5.1E-05	2.0E-05	1.9E-05	1.3E-03	7.1E-08	3.7E-08	2.2E-07	5.2E-07	1.5E-06	1.0E-06	6.6E-05	2.3E-03
residential	REC_100M	477530.59	3620725.04	1.1E-04	1.1E-04	1.1E-04	1.0E-04	1.0E-04	9.9E-05	1.1E-04	1.0E-04	5.0E-05	2.0E-05	1.9E-05	1.3E-03	7.1E-08	3.7E-08	2.2E-07	5.1E-07	1.4E-06	1.0E-06	6.6E-05	2.3E-03
residential	REC_100M	477630.59	3620725.04	1.2E-04	1.2E-04	1.1E-04	1.1E-04	1.1E-04	1.0E-04	1.1E-04	1.1E-04	5.2E-05	2.0E-05	1.9E-05	1.4E-03	7.3E-08	3.8E-08	2.3E-07	5.3E-07	1.5E-06	1.1E-06	7.2E-05	2.4E-03
residential	REC_100M	477730.59	3620725.04	1.2E-04	1.2E-04	1.1E-04	1.1E-04	1.1E-04	1.0E-04	1.1E-04	1.1E-04	5.5E-05	2.1E-05	2.0E-05	1.5E-03	7.5E-08	3.9E-08	2.4E-07	5.7E-07	1.6E-06	1.1E-06	8.4E-05	2.6E-03
residential	REC_100M	477830.59	3620725.04	1.3E-04	1.3E-04	1.2E-04	1.2E-04	1.1E-04	1.1E-04	1.2E-04	1.2E-04	5.8E-05	2.2E-05	2.1E-05	1.7E-03	7.8E-08	3.9E-08	2.4E-07	6.2E-07	1.7E-06	1.2E-06	1.0E-04	2.8E-03
residential	REC_100M	477930.59	3620725.04	1.3E-04	1.3E-04	1.2E-04	1.2E-04	1.2E-04	1.1E-04	1.2E-04	1.2E-04	6.0E-05	2.3E-05	2.2E-05	1.8E-03	7.9E-08	4.0E-08	2.5E-07	6.4E-07	1.7E-06	1.2E-06	1.1E-04	3.0E-03

				Vessel Hoteling				Vessel Transit				Tug/Barge Transit				Terminal E	
	Discrete Receptor ID (Group Name)	X	Y	All 100%	Refrigerated ContainersSTC MIT 48%	Multi-Purpose General CargoSTC MIT 25%	Dry BulkSTC MIT 27%	All 100%	Refrigerated ContainersSTC MIT 46%	Multi-Purpose General CargoSTC MIT 25%	Dry BulkSTC MIT 28%	All 100%	Refrigerated ContainersSTC MIT 21%	Multi-Purpose General CargoSTC MIT 54%	Dry BulkSTC MIT 25%	All 100%	Refrigerated ContainersSTC MIT 30%
recreational	park	485630.59	3620625.04	7.4E-03	4E-03	2E-03	2E-03	3E-03	1E-03	7E-04	8E-04	2E-04	4E-05	1E-04	5E-05	1E-03	3E-04
recreational	park	485730.59	3620625.04	7.6E-03	4E-03	2E-03	2E-03	3E-03	1E-03	7E-04	7E-04	2E-04	4E-05	1E-04	5E-05	1E-03	3E-04
recreational	park	485830.59	3620625.04	7.7E-03	4E-03	2E-03	2E-03	2E-03	1E-03	6E-04	7E-04	2E-04	4E-05	1E-04	5E-05	1E-03	3E-04
residential	REC_100M	477330.59	3620725.04	8.5E-04	4E-04	2E-04	2E-04	1E-03	6E-04	3E-04	3E-04	7E-05	1E-05	4E-05	2E-05	5E-05	2E-05
residential	REC_100M	477430.59	3620725.04	8.5E-04	4E-04	2E-04	2E-04	1E-03	6E-04	3E-04	4E-04	7E-05	1E-05	4E-05	2E-05	5E-05	2E-05
residential	REC_100M	477530.59	3620725.04	8.5E-04	4E-04	2E-04	2E-04	1E-03	6E-04	3E-04	4E-04	7E-05	1E-05	4E-05	2E-05	5E-05	2E-05
residential	REC_100M	477630.59	3620725.04	8.7E-04	5E-04	2E-04	2E-04	1E-03	6E-04	3E-04	4E-04	7E-05	2E-05	4E-05	2E-05	5E-05	2E-05
residential	REC_100M	477730.59	3620725.04	9.0E-04	5E-04	2E-04	2E-04	1E-03	7E-04	4E-04	4E-04	8E-05	2E-05	5E-05	2E-05	6E-05	2E-05
residential	REC_100M	477830.59	3620725.04	9.4E-04	5E-04	2E-04	2E-04	2E-03	8E-04	4E-04	5E-04	1E-04	2E-05	5E-05	3E-05	6E-05	2E-05
residential	REC_100M	477930.59	3620725.04	9.6E-04	5E-04	2E-04	2E-04	2E-03	8E-04	4E-04	5E-04	1E-04	2E-05	6E-05	3E-05	6E-05	2E-05

TAMT Risk Assessment - DPM Cancer and Chronic HI

AERMOD Output

Source Group in AERMOD

	Discrete Receptor ID (Group Name)	X	Y	1 B10_1_AUX	3 B10_2_AUX	5 B10_3_AUX	7 B10_4_AUX	9 B10_5_AUX	11 B10_6_AUX	13 B10_7_AUX	15 B10_8_AUX	17 CHE_1	18 LOC_SWTCH EMP	19 LOC_SWTCH LOA	20 OGV_PATH _BLR	21 OGV_PATH _DPM	22 TR_28TH	23 TR_BAYMA R	24 TR_BOSTON	25 TR_CROSBY	26 TR_HARBOR CHA	27 TR_HARBOR SAM	28 TUG_PATH _DPM
residential	REC_100	483930.59	3621125.04	4.5E-02	5.0E-02	4.4E-02	4.0E-02	3.6E-02	3.3E-02	3.2E-02	3.1E-02	2.3E+04	4.6E-02	4.2E-02	1.3E-01	1.3E-01	2.0E-02	8.7E-03	2.0E-02	4.1E-02	5.2E-02	2.6E-02	1.7E-01
residential	REC_100	484030.59	3621125.04	4.6E-02	5.2E-02	4.5E-02	4.1E-02	3.7E-02	3.3E-02	3.2E-02	3.1E-02	2.4E+04	4.7E-02	4.3E-02	1.2E-01	1.2E-01	2.1E-02	8.9E-03	2.0E-02	4.2E-02	5.4E-02	2.8E-02	1.7E-01
residential	REC_100	484130.59	3621125.04	4.8E-02	5.4E-02	4.7E-02	4.2E-02	3.8E-02	3.4E-02	3.3E-02	3.1E-02	2.5E+04	4.9E-02	4.5E-02	1.2E-01	1.2E-01	2.2E-02	9.2E-03	2.1E-02	4.3E-02	5.7E-02	2.9E-02	1.6E-01
residential	REC_100	484230.59	3621125.04	4.9E-02	5.6E-02	4.8E-02	4.3E-02	3.8E-02	3.4E-02	3.3E-02	3.1E-02	2.5E+04	4.9E-02	4.5E-02	1.1E-01	1.1E-01	2.3E-02	9.4E-03	2.2E-02	4.4E-02	5.7E-02	3.0E-02	1.5E-01
residential	REC_100	477930.59	3621225.04	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.1E-02	1.1E-02	1.1E-02	1.1E-02	4.6E+03	1.0E-02	9.8E-03	4.2E-02	4.2E-02	9.7E-03	4.3E-03	9.6E-03	1.2E-02	1.3E-02	1.1E-02	3.9E-02
residential	REC_100	478030.59	3621225.04	1.3E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.1E-02	1.1E-02	1.1E-02	4.8E+03	1.1E-02	1.0E-02	4.5E-02	4.5E-02	9.8E-03	4.3E-03	9.8E-03	1.2E-02	1.4E-02	1.1E-02	4.5E-02
residential	REC_100	478130.59	3621225.04	1.3E-02	1.4E-02	1.3E-02	1.2E-02	1.2E-02	1.1E-02	1.1E-02	1.1E-02	4.9E+03	1.1E-02	1.0E-02	4.8E-02	4.8E-02	9.9E-03	4.4E-03	9.9E-03	1.2E-02	1.4E-02	1.1E-02	4.9E-02
residential	REC_100	478230.59	3621225.04	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.1E-02	1.1E-02	1.1E-02	5.0E+03	1.1E-02	1.1E-02	5.2E-02	5.2E-02	1.0E-02	4.4E-03	1.0E-02	1.2E-02	1.4E-02	1.1E-02	5.4E-02
residential	REC_100	478330.59	3621225.04	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	1.2E-02	5.0E+03	1.1E-02	1.1E-02	5.5E-02	5.5E-02	1.0E-02	4.4E-03	1.0E-02	1.2E-02	1.4E-02	1.1E-02	5.9E-02
residential	REC_100	478430.59	3621225.04	1.5E-02	1.5E-02	1.4E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	5.2E+03	1.2E-02	1.1E-02	6.1E-02	6.1E-02	1.0E-02	4.4E-03	1.0E-02	1.2E-02	1.5E-02	1.1E-02	6.7E-02
residential	REC_100	478530.59	3621225.04	1.5E-02	1.5E-02	1.4E-02	1.4E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	5.3E+03	1.2E-02	1.2E-02	6.6E-02	6.6E-02	1.1E-02	4.6E-03	1.0E-02	1.2E-02	1.5E-02	1.1E-02	7.4E-02
residential	REC_100	478630.59	3621225.04	1.5E-02	1.5E-02	1.5E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	1.3E-02	5.4E+03	1.3E-02	1.3E-02	7.1E-02	7.1E-02	1.1E-02	4.7E-03	1.1E-02	1.3E-02	1.5E-02	1.1E-02	8.4E-02
residential	REC_100	478730.59	3621225.04	1.6E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	5.4E+03	1.4E-02	1.3E-02	7.5E-02	7.5E-02	1.1E-02	4.7E-03	1.1E-02	1.3E-02	1.5E-02	1.1E-02	9.1E-02
residential	REC_100	478830.59	3621225.04	1.6E-02	1.6E-02	1.5E-02	1.5E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	5.9E+03	1.4E-02	1.4E-02	7.9E-02	7.9E-02	1.1E-02	4.8E-03	1.1E-02	1.3E-02	1.6E-02	1.1E-02	9.8E-02
residential	REC_100	478930.59	3621225.04	1.6E-02	1.6E-02	1.5E-02	1.5E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	5.9E+03	1.5E-02	1.4E-02	8.3E-02	8.3E-02	1.1E-02	4.8E-03	1.1E-02	1.3E-02	1.6E-02	1.1E-02	1.1E-01
residential	REC_100	479030.59	3621225.04	1.6E-02	1.6E-02	1.5E-02	1.5E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	6.0E+03	1.5E-02	1.4E-02	8.6E-02	8.6E-02	1.1E-02	4.8E-03	1.1E-02	1.3E-02	1.6E-02	1.1E-02	1.1E-01
residential	REC_100	479130.59	3621225.04	1.7E-02	1.7E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	1.3E-02	6.0E+03	1.5E-02	1.4E-02	9.0E-02	9.0E-02	1.1E-02	4.8E-03	1.1E-02	1.3E-02	1.6E-02	1.1E-02	1.2E-01
residential	REC_100	479230.59	3621225.04	1.7E-02	1.7E-02	1.6E-02	1.5E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	6.1E+03	1.6E-02	1.5E-02	9.4E-02	9.4E-02	1.1E-02	4.9E-03	1.1E-02	1.3E-02	1.6E-02	1.1E-02	1.2E-01
residential	REC_100	479330.59	3621225.04	1.7E-02	1.7E-02	1.6E-02	1.5E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	6.1E+03	1.6E-02	1.5E-02	9.8E-02	9.8E-02	1.1E-02	4.9E-03	1.1E-02	1.3E-02	1.6E-02	1.1E-02	1.3E-01
residential	REC_100	479430.59	3621225.04	1.7E-02	1.7E-02	1.6E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	6.2E+03	1.6E-02	1.5E-02	1.0E-01	1.0E-01	1.1E-02	4.9E-03	1.1E-02	1.3E-02	1.7E-02	1.1E-02	1.4E-01
residential	REC_100	479530.59	3621225.04	1.8E-02	1.8E-02	1.7E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.4E-02	6.3E+03	1.7E-02	1.6E-02	1.1E-01	1.1E-01	1.1E-02	5.0E-03	1.1E-02	1.3E-02	1.7E-02	1.2E-02	1.5E-01
residential	REC_100	479630.59	3621225.04	1.8E-02	1.8E-02	1.7E-02	1.6E-02	1.5E-02	1.5E-02	1.4E-02	1.4E-02	6.3E+03	1.7E-02	1.6E-02	1.1E-01	1.1E-01	1.1E-02	5.0E-03	1.1E-02	1.4E-02	1.7E-02	1.2E-02	1.5E-01
residential	REC_100	479730.59	3621225.04	1.8E-02	1.8E-02	1.7E-02	1.6E-02	1.6E-02	1.5E-02	1.5E-02	1.5E-02	6.4E+03	1.7E-02	1.6E-02	1.2E-01	1.2E-01	1.2E-02	5.0E-03	1.1E-02	1.4E-02	1.7E-02	1.2E-02	1.6E-01
residential	REC_100	479830.59	3621225.04	1.9E-02	1.9E-02	1.8E-02	1.7E-02	1.6E-02	1.5E-02	1.5E-02	1.5E-02	6.5E+03	1.8E-02	1.7E-02	1.2E-01	1.2E-01	1.2E-02	5.1E-03	1.2E-02	1.4E-02	1.7E-02	1.2E-02	1.7E-01
residential	REC_100	479930.59	3621225.04	1.9E-02	1.9E-02	1.8E-02	1.7E-02	1.6E-02	1.5E-02	1.5E-02	1.5E-02	6.5E+03	1.8E-02	1.7E-02	1.3E-01	1.3E-01	1.2E-02	5.1E-03	1.2E-02	1.4E-02	1.7E-02	1.2E-02	1.8E-01
residential	REC_100	480030.59	3621225.04	1.9E-02	1.9E-02	1.8E-02	1.7E-02	1.6E-02	1.5E-02	1.5E-02	1.5E-02	6.6E+03	1.8E-02	1.7E-02	1.3E-01	1.3E-01	1.2E-02	5.1E-03	1.2E-02	1.4E-02	1.8E-02	1.2E-02	1.8E-01
recreational	park	480130.59	3621225.04	1.9E-02	1.9E-02	1.8E-02	1.7E-02	1.6E-02	1.5E-02	1.5E-02	1.5E-02	6.7E+03	1.9E-02	1.8E-02	1.4E-01	1.4E-01	1.2E-02	5.2E-03	1.2E-02	1.4E-02	1.8E-02	1.2E-02	1.9E-01
recreational	park	480230.59	3621225.04	2.0E-02	2.0E-02	1.9E-02	1.8E-02	1.7E-02	1.6E-02	1.6E-02	1.6E-02	6.7E+03	2.0E-02	1.8E-02	1.4E-01	1.4E-01	1.2E-02	5.2E-03	1.2E-02	1.4E-02	1.8E-02	1.2E-02	1.9E-01
recreational	park	480330.59	3621225.04	2.0E-02	2.0E-02	1.9E-02	1.8E-02	1.7E-02	1.6E-02	1.6E-02	1.6E-02	6.8E+03	2.1E-02	1.9E-02	1.4E-01	1.4E-01	1.2E-02	5.2E-03	1.2E-02	1.4E-02	1.8E-02	1.2E-02	2.0E-01
recreational	park	480430.59	3621225.04	2.0E-02	2.0E-02	1.9E-02	1.8E-02	1.7E-02	1.6E-02	1.6E-02	1.6E-02	6.9E+03	2.1E-02	1.9E-02	1.5E-01	1.5E-01	1.2E-02	5.3E-03	1.2E-02	1.4E-02	1.8E-02	1.2E-02	2.1E-01
recreational	park	480530.59	3621225.04	2.1E-02	2.1E-02	2.0E-02	1.9E-02	1.8E-02	1.7E-02	1.6E-02	1.6E-02	7.0E+03	2.2E-02	2.0E-02	1.5E-01	1.5E-01	1.2E-02	5.3E-03	1.2E-02	1.4E-02	1.9E-02	1.2E-02	2.1E-01
recreational	park	480630.59	3621225.04	2.1E-02	2.1E-02	2.0E-02	1.9E-02	1.8E-02	1.7E-02	1.7E-02	1.7E-02	7.1E+03	2.2E-02	2.1E-02	1.6E-01	1.6E-01	1.2E-02	5.4E-03	1.2E-02	1.5E-02	1.9E-02	1.2E-02	2.2E-01
recreational	park	480730.59	3621225.04	2.1E-02	2.1E-02	2.0E-02	1.9E-02	1.8E-02	1.7E-02	1.7E-02	1.7E-02	7.1E+03	2.3E-02	2.1E-02	1.6E-01	1.6E-01	1.2E-02	5.4E-03	1.2E-02	1.5E-02	1.9E-02	1.2E-02	2.2E-01
recreational	park	480830.59	3621225.04	2.2E-02	2.2E-02	2.0E-02	1.9E-02	1.8E-02	1.7E-02	1.7E-02	1.7E-02	7.2E+03	2.4E-02	2.2E-02	1.6E-01	1.6E-01	1.3E-02	5.5E-03	1.3E-02	1.5E-02	1.9E-02	1.3E-02	2.3E-01
recreational	park	480930.59	3621225.04	2.2E-02	2.2E-02	2.1E-02	2.0E-02	1.9E-02	1.8E-02	1.7E-02	1.7E-02	7.3E+03	2.4E-02	2.3E-02	1.7E-01	1.7E-01	1.3E-02	5.5E-03	1.3E-02	1.5E-02	1.9E-02	1.3E-02	2.3E-01
recreational	park	481030.59	3621225.04	2.2E-02	2.2E-02	2.1E-02	2.0E-02	1.9E-02	1.8E-02	1.8E-02	1.7E-02	7.4E+03	2.5E-02	2.3E-02	1.7E-01	1.7E-01	1.3E-02	5.6E-03	1.3E-02	1.5E-02	2.0E-02	1.3E-02	2.3E-01
recreational	park	481330.59	3621225.04	2.3E-02	2.3E-02	2.2E-02	2.1E-02	2.0E-02	1.8E-02	1.8E-02	1.8E-02	7.7E+03	2.6E-02	2.4E-02	1.7E-01	1.7E-01	1.3E-02	5.7E-03	1.3E-02	1.6E-02	2.0E-02	1.3E-02	2.4E-01
recreational	park	481430.59	3621225.04	2.3E-02	2.4E-02	2.2E-02	2.1E-02	2.0E-02	1.9E-02	1.9E-02	1.8E-02	7.8E+03	2.6E-02	2.5E-02	1.7E-01	1.7E-01	1.3E-02	5.8E-03	1.3E-02	1.6E-02	2.1E-02	1.3E-02	2.4E-01
recreational	park	481530.59	3621225.04	2.4E-02	2.4E-02	2.3E-02	2.2E-02	2.0E-02	1.9E-02	1.9E-02	1.9E-02	8.0E+03	2.7E-02	2.5E-02	1.7E-01	1.7E-01	1.3E-02	5.8E-03	1.3E-02	1.6E-02	2.1E-02	1.3E-02	2.4E-01
recreational	park	481630.59	3621225.04	2.4E-02	2.4E-02	2.3E-02	2.2E-02	2.0E-02	1.9E-02	1.9E-02	1.9E-02	8.1E+03	2.7E-02	2.5E-02	1.7E-01	1.7E-01	1.4E-02	5.9E-03	1.3E-02	1.6E-02	2.1E-02	1.4E-02	2.4E-01
recreational	park	481730.59	3621225.04	2.5E-02	2.5E-02	2.3E-02	2.2E-02	2.1E-02	2.0E-02	2.0E-02	1.9E-02	8.3E+03	2.8E-02	2.6E-02	1.7E-01	1.7E-01	1.4E-02	5.9E-03	1.4E-02	1.7E-02	2.2E-02	1.4E-02	2.4E-01
recreational	park	481830.59	3621225.04	2.5E-02	2.6E-02	2.4E-02	2.2E-02	2.1E-02	2.0E-02	2.0E-02	2.0E-02	8.5E+03	2.8E-02	2.6E-02	1.7E-01	1.7E-01	1.4E-02	6.0E-03	1.4E-02	1.7E-02	2.2E-02	1.4E-02	2.4E-01
recreational	park	481930.59	3621225.04	2.6E-02	2.6E-02	2.4E-02	2.3E-02	2.2E-02	2.0E-02	2.0E-02	2.0E-02	8.7E+03	2.8E-02	2.7E-02	1.7E-01	1.7E-01	1.4E-02	6.1E-03	1.4E-02	1.7E-02	2.2E-02	1.4E-02	2.4E-01
recreational	park	482030.59	3621225.04	2.6E-02	2.7E-02	2.5E-02	2.4E-02	2.2E-02	2.1E-02	2.0E-02	2.0E-02	8.9E+03	2.9E-02	2.7E-02	1.7E-01	1.7E-01	1.4E-02	6.1E-03	1.4E-02	1.8E-02	2.3E-02	1.4E-02	2.4E-01
recreational	park	482130.59	3621225.04	2.7E-02	2.7E-02	2.5E-02	2.4E-02	2.2E-02	2.1E-02	2.1E-02	2.1E-02	9.1E+03	3.0E-02	2.8E-02	1.7E-01	1.7E-01	1.4E-02	6.2E-03	1.4E-02	1.8E-02	2.3E-02	1.5E-02	2.3E-01
recreational	park	482230.59	3621225.04	2.7E-02	2.8E-02	2.6E-02	2.5E-02	2.3E-02	2.1E-02	2.1E-02	2.1E-02	9.4E+03	3.0E-02	2.8E-02	1.7E-01	1.7E-01	1.4E-02	6.3E-03	1.4E-02	1.9E-02	2.3E-02	1.5E-02	2.3E-01
recreational	park	482330.59	3621225.04	2.8E-02	2.9E-02	2.6E-02	2.5E-02	2.3E-02	2.2E-02	2.2E-02	2.1E-02	9.8E+03	3.1E-02	2.8E-02	1.7E-01	1.7E-01	1.5E-02	6.4E-03	1.4E-02	1.9E-02	2.4E-02	1.5E-02	2.3E-01
recreational	park	482430.59	3621225.04	2.9E-02	2.9E-02	2.7E-02	2.6E-02	2.4E-02	2.2E-02	2.2E-02	2.2E-02	1.0E+04	3.1E-02	2.9E-02	1.6E-01	1.6E-01	1.5E-02	6.5E-03	1.5E-02	2.0E-02	2.5E-02	1.5E-02	2.2E-01
recreational	park	482530.59	3621225.04	2.9E-02	3.0E-02	2.8E-02	2.6E-02	2.4E-02	2.3E-02	2.2E-02	2.2E-02	1.1E+04	3.2E-02	3.0E-02	1.6E-01	1.6E-01	1.5E-02	6.6E-03	1.5E-02	2.0E-02	2.5E-02	1.6E-02	2.2E-01
residential	REC_100	482630.59	3621225.04	3.0E-02	3.1E-02	2.9E-02	2.7E-02	2.5E-02	2.4E-02	2.3E-02	2.3E-02	1.1E+04	3.3E-02	3.1E-02	1.6E-01	1.6E-01	1.5E-02	6.7E-03	1.5E-02	2.1E-02	2.6E-02	1.6E-02	2.1E-01
residential	REC_100	483830.59	3621225.04	4.3E-02	4.7E-02	4.2E-02	3.8E-02	3.5E-02	3.2E-02	3.1E-02	3.0E-02	2.1E+04	4.4E-02	4.0E-02	1.3E-01	1.3E-01	1.9E-02	8.4E-03	1.9E-02	3.8E-02	5.0E-02	2.5E-02	1.6E-01
residential	REC_100	483930.59	3621225.04	4.3E-02	4.9E-02	4.2E-02	3.9E-02	3.5E-02	3.2E-02	3.1E-02	3.0E-02	2.2E+04	4.4E-02	4.1E-02	1.2E-01	1.2E-01	2.0E-02	8.6E-03	1.9E-02	4.0E-02	5.1E-02	2.6E-02	1.6E-01
residential	REC_100	484030.59	3621225.04	4.5E-02	5.1E-02	4.4E-02	4.0E-02	3.6E-02	3.3E-02	3.1E-02	3.0E-02	2.3E+04	4.5E-02	4.2E-02	1.2E-01	1.2E-01	2.1E-02	8.9E-03	2.0E-02	4.1E-02	5.3E-02	2.8E-02	1.6E-01
residential	REC_100	484130.59	3621225.04	4.5E-02	5.2E-02	4.4E-02	4.1E-02	3.6E-02	3.3E-02	3.1E-02	3.0E-02	2.4E+04	4.6E-02	4.2E-02	1.1E-01	1.1E-01	2.1E-02	9.1E-03	2.1E-02	4.2E-02	5.4E-02	2.9E-02	1.5E-01
school	127 (scho	485901.79	3618344.73	4.6E-01	3.7E-01	3.3E-01	3.3E-01	3.8E-01	4.0E-01	4.1E-01	4.0E-01	1.9E+06	4.7E+00	4.2E+00	1.7E-01	1.7E-01	1.3E-01	1.7E-02	1.2E-01	2.3E+00	1.4E+01	2.8E-01	2.3E-01

		divide by -->	4	4	4	4	2	2	2	2	1	2	2	1	1	1	1	1	1	1	1	
			Refrigerated ContainersSTC MIT	Refrigerated ContainersSTC MIT	Refrigerated ContainersSTC MIT	Refrigerated ContainersSTC MIT	Multi-Purpose General CargoSTC MIT	Multi-Purpose General CargoSTC MIT	Dry BulkSTC MIT	Dry BulkSTC MIT	AllSTC MIT	AllSTC MIT	AllSTC MIT	AllSTC MIT	TR_28THSTC MIT	TR_BAYMARSTC MIT	TR_BOSTONSTC MIT	TR_CROSBYSTC MIT	TR_HARBORCHASTC MIT	TR_HARBORSAMSTC MIT	AllSTC MIT	
		g/s -->	8.4E-03	8.4E-03	8.4E-03	8.4E-03	8.7E-03	8.7E-03	9.4E-03	9.4E-03	1.0E-08	1.8E-03	1.8E-03	3.0E-02	7.3E-06	8.6E-06	2.3E-05	4.8E-05	1.1E-04	1.1E-04	1.8E-03	
			1	3	5	7	9	11	13	15	17	18	19	21	22	23	24	25	26	27	28	
Type	ID	X	B10_1_AUX	B10_2_AUX	B10_3_AUX	B10_4_AUX	B10_5_AUX	B10_6_AUX	B10_7_AUX	B10_8_AUX	CHE_1	LOC_SWTCHEMP	LOC_SWTCHLOA	OGV_PATH_DPM	TR_28TH	TR_BAYMAR	TR_BOSTON	TR_CROSBY	TR_HARBORCHA	TR_HARBORSAM	TUG_PATH_DPM	SUM
residential	REC_100	483930.59	3.8E-04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	7.2E-03
residential	REC_100	484030.59	3.9E-04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	7.1E-03
residential	REC_100	484130.59	4.0E-04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	7.1E-03
residential	REC_100	484230.59	4.1E-04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	6.8E-03
residential	REC_100	477930.59	1.1E-04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	2.2E-03
residential	REC_100	478030.59	1.1E-04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	2.4E-03
residential	REC_100	478130.59	1.1E-04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	2.5E-03
residential	REC_100	478230.59	1.2E-04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	2.6E-03
residential	REC_100	478330.59	1.2E-04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	2.7E-03
residential	REC_100	478430.59	1.2E-04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	3.0E-03
residential	REC_100	478530.59	1.3E-04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	3.2E-03
residential	REC_100	478630.59	1.3E-04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	3.3E-03
residential	REC_100	478730.59	1.3E-04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	3.5E-03
residential	REC_100	478830.59	1.4E-04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	3.7E-03
residential	REC_100	478930.59	1.4E-04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	3.8E-03
residential	REC_100	479030.59	1.4E-04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	3.9E-03
residential	REC_100	479130.59	1.4E-04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	4.1E-03
residential	REC_100	479230.59	1.4E-04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	4.2E-03
residential	REC_100	479330.59	1.4E-04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	4.3E-03
residential	REC_100	479430.59	1.5E-04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	4.5E-03
residential	REC_100	479530.59	1.5E-04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	4.7E-03
residential	REC_100	479630.59	1.5E-04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	4.9E-03
residential	REC_100	479730.59	1.5E-04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	5.1E-03
residential	REC_100	479830.59	1.6E-04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	5.3E-03
residential	REC_100	479930.59	1.6E-04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	5.5E-03
residential	REC_100	480030.59	1.6E-04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	5.5E-03
recreational	park	480130.59	1.6E-04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	5.7E-03
recreational	park	480230.59	1.7E-04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	5.9E-03
recreational	park	480330.59	1.7E-04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	6.1E-03
recreational	park	480430.59	1.7E-04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	6.3E-03
recreational	park	480530.59	1.7E-04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	6.4E-03
recreational	park	480630.59	1.8E-04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	6.5E-03
recreational	park	480730.59	1.8E-04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	6.7E-03
recreational	park	480830.59	1.8E-04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	6.8E-03
recreational	park	480930.59	1.9E-04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	6.9E-03
recreational	park	481030.59	1.9E-04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	7.0E-03
recreational	park	481330.59	2.0E-04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	7.2E-03
recreational	park	481430.59	2.0E-04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	7.3E-03
recreational	park	481530.59	2.0E-04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	7.3E-03
recreational	park	481630.59	2.0E-04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	7.3E-03
recreational	park	481730.59	2.1E-04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	7.3E-03
recreational	park	481830.59	2.1E-04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	7.4E-03
recreational	park	481930.59	2.2E-04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	7.4E-03
recreational	park	482030.59	2.2E-04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	7.4E-03
recreational	park	482130.59	2.3E-04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	7.4E-03
recreational	park	482230.59	2.3E-04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	7.3E-03
recreational	park	482330.59	2.4E-04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	7.3E-03
recreational	park	482430.59	2.4E-04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	7.3E-03
recreational	park	482530.59	2.5E-04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	7.3E-03
residential	REC_100	482630.59	2.5E-04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	7.3E-03
residential	REC_100	483830.59	3.6E-04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	7.1E-03
residential	REC_100	483930.59	3.7E-04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	7.0E-03
residential	REC_100	484030.59	3.8E-04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	6.9E-03
residential	REC_100	484130.59	3.8E-04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	5.0E-02
school	127 (scho	485901.79	3.9E-03	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	6.9E-02

	Vessel Hoteling				Vessel Transit				Tug/Barge Transit				Terminal E	
	All	Refrigerated ContainersSTC MIT	Multi-Purpose General CargoSTC MIT	Dry BulkSTC MIT	All	Refrigerated ContainersSTC MIT	Multi-Purpose General CargoSTC MIT	Dry BulkSTC MIT	All	Refrigerated ContainersSTC MIT	Multi-Purpose General CargoSTC MIT	Dry BulkSTC MIT	All	Refrigerated ContainersSTC MIT
X	100%	48%	25%	27%	100%	46%	25%	28%	100%	21%	54%	25%	100%	30%
483930.59	2.7E-03	2E-03	6E-04	6E-04	4E-03	2E-03	1E-03	1E-03	3E-04	6E-05	2E-04	8E-05	2E-04	7E-05
484030.59	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
484130.59	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
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478030.59	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
478130.59	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
478230.59	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
478330.59	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
478430.59	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
478530.59	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
478630.59	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
478730.59	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
478830.59	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
478930.59	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
479030.59	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
479130.59	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
479230.59	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
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480230.59	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
480330.59	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
480430.59	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
480530.59	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
480630.59	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
480730.59	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
480830.59	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
480930.59	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
481030.59	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
481330.59	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
481430.59	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
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481830.59	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
481930.59	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
482030.59	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
482130.59	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
482230.59	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
482330.59	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
482430.59	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
482530.59	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
482630.59	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
483830.59	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
483930.59	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
484030.59	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
484130.59	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
485901.79	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

TAMT Risk Assessment - DPM Cancer and Chronic HI

AERMOD Output

Receptor type	Discrete Receptor ID (Group Name)	X	Y	quipment: Multi-Purpose General CargoSTC MIT (0.0%)	quipment: Dry BulkSTC MIT (70%)	Locomotives: All (100%)	Locomotives: Refrigerated ContainersSTC MIT (0%)	Locomotives: Multi-Purpose General CargoSTC MIT (54%)	Locomotives: Dry BulkSTC MIT (46%)	Trucks: All (100%)	Trucks: Refrigerated ContainersSTC MIT (62%)	Trucks: Multi-Purpose General CargoSTC MIT (4%)	Trucks: Dry BulkSTC MIT (34%)	All
residential	res	487479.47	3617250.73	0E+00	2E-03	1E-03	0E+00	8E-04	7E-04	5E-03	3E-03	2E-04	2E-03	0.03
residential	res	487504.47	3617250.73	0E+00	1E-03	1E-03	0E+00	8E-04	7E-04	0.00392	0.00243	0.00017	0.00133	0.03
residential	res	487529.47	3617250.73	0E+00	1E-03	1E-03	0E+00	8E-04	7E-04	0.00358	0.00221	0.00015	0.00121	0.03
residential	res	487554.47	3617250.73	0E+00	1E-03	1E-03	0E+00	8E-04	7E-04	0.00329	0.00203	0.00014	0.00111	0.03
residential	res	487579.47	3617250.73	0E+00	1E-03	1E-03	0E+00	8E-04	7E-04	0.00298	0.00185	0.00013	0.00101	0.03
residential	res	487604.47	3617250.73	0E+00	1E-03	1E-03	0E+00	8E-04	7E-04	0.00264	0.00163	0.00011	0.00089	0.02
residential	res	487629.47	3617250.73	0E+00	1E-03	1E-03	0E+00	8E-04	7E-04	0.00228	0.00141	9.8E-05	0.00077	0.02
residential	res	487654.47	3617250.73	0E+00	1E-03	1E-03	0E+00	8E-04	6E-04	0.00193	0.00119	8.3E-05	0.00065	0.02
residential	res	487679.47	3617250.73	0E+00	1E-03	1E-03	0E+00	7E-04	6E-04	0.00163	0.00101	7.1E-05	0.00055	0.02
residential	res	487704.47	3617250.73	0E+00	1E-03	1E-03	0E+00	7E-04	6E-04	0.00141	0.00087	6.1E-05	0.00048	0.02
residential	res	487729.47	3617250.73	0E+00	1E-03	1E-03	0E+00	7E-04	6E-04	0.00124	0.00077	5.4E-05	0.00042	0.02

Refrigerated Containers

X	ug/m3	Dose Inhallation: 3rd tri	0<2	2<9	2<16	16<30	Risk (Residential 30-yr; school 9-yr; park 15-year): 3rd tri	0<2	2<9	2<16	16<30	Summed Risk	Cases Per Million	Chronic HI
487479.47	0.01154	4E-06	1E-05	7E-06	6E-06	3E-06	2E-07	4E-06	0E+00	4E-06	6E-07	8.8E-06	9	0.00231
487504.47	0.01098	3.8E-06	1.15E-05	6.64E-06	6.02E-06	2.75E-06	1.5E-07	3.6E-06	0	4E-06	6E-07	8.336E-06	8	0.0022
487529.47	0.01068	3.7E-06	1.12E-05	6.46E-06	5.86E-06	2.67E-06	1.5E-07	3.5E-06	0	3.9E-06	5.9E-07	8.11E-06	8	0.00214
487554.47	0.01043	3.61E-06	1.09E-05	6.31E-06	5.72E-06	2.61E-06	1.4E-07	3.4E-06	0	3.8E-06	5.7E-07	7.915E-06	8	0.00209
487579.47	0.01016	3.52E-06	1.06E-05	6.15E-06	5.57E-06	2.54E-06	1.4E-07	3.3E-06	0	3.7E-06	5.6E-07	7.712E-06	8	0.00203
487604.47	0.00987	3.42E-06	1.03E-05	5.97E-06	5.41E-06	2.47E-06	1.3E-07	3.2E-06	0	3.6E-06	5.4E-07	7.492E-06	7	0.00197
487629.47	0.00957	3.31E-06	1E-05	5.79E-06	5.25E-06	2.4E-06	1.3E-07	3.1E-06	0	3.5E-06	5.3E-07	7.266E-06	7	0.00191
487654.47	0.00929	3.21E-06	9.7E-06	5.62E-06	5.09E-06	2.32E-06	1.3E-07	3.1E-06	0	3.4E-06	5.1E-07	7.049E-06	7	0.00186
487679.47	0.00904	3.13E-06	9.45E-06	5.47E-06	4.96E-06	2.26E-06	1.2E-07	3E-06	0	3.3E-06	5E-07	6.862E-06	7	0.00181
487704.47	0.00884	3.06E-06	9.24E-06	5.35E-06	4.85E-06	2.21E-06	1.2E-07	2.9E-06	0	3.2E-06	4.9E-07	6.709E-06	7	0.00177
487729.47	0.00868	3E-06	9.07E-06	5.25E-06	4.76E-06	2.17E-06	1.2E-07	2.9E-06	0	3.1E-06	4.8E-07	6.587E-06	7	0.00174

Multi-Purpose General Cargo

X	ug/m3	Dose Inhallation: 3rd tri	0<2	2<9	2<16	16<30	Risk (Residential 30-yr; school 9-yr; park 15-year): 3rd tri	0<2	2<9	2<16	16<30	Summed Risk	Cases Per Million	Chronic HI
487479.47	6E-03	2E-06	7E-06	4E-06	3E-06	2E-06	9E-08	2E-06	0E+00	2E-06	3E-07	4.8E-06	5	0.00127
487504.47	6E-03	2E-06	6E-06	4E-06	3E-06	2E-06	8E-08	2E-06	0E+00	2E-06	3E-07	4.7E-06	5	0.00125
487529.47	6E-03	2E-06	6E-06	4E-06	3E-06	2E-06	8E-08	2E-06	0E+00	2E-06	3E-07	4.7E-06	5	0.00123
487554.47	6E-03	2E-06	6E-06	4E-06	3E-06	2E-06	8E-08	2E-06	0E+00	2E-06	3E-07	4.6E-06	5	0.00121
487579.47	6E-03	2E-06	6E-06	4E-06	3E-06	1E-06	8E-08	2E-06	0E+00	2E-06	3E-07	4.5E-06	5	0.0012
487604.47	6E-03	2E-06	6E-06	4E-06	3E-06	1E-06	8E-08	2E-06	0E+00	2E-06	3E-07	4.5E-06	4	0.00118
487629.47	6E-03	2E-06	6E-06	4E-06	3E-06	1E-06	8E-08	2E-06	0E+00	2E-06	3E-07	4.4E-06	4	0.00116
487654.47	6E-03	2E-06	6E-06	3E-06	3E-06	1E-06	8E-08	2E-06	0E+00	2E-06	3E-07	4.4E-06	4	0.00115
487679.47	6E-03	2E-06	6E-06	3E-06	3E-06	1E-06	8E-08	2E-06	0E+00	2E-06	3E-07	4.3E-06	4	0.00113
487704.47	6E-03	2E-06	6E-06	3E-06	3E-06	1E-06	8E-08	2E-06	0E+00	2E-06	3E-07	4.3E-06	4	0.00112
487729.47	6E-03	2E-06	6E-06	3E-06	3E-06	1E-06	8E-08	2E-06	0E+00	2E-06	3E-07	4.2E-06	4	0.00111

Dry Bulk

X	ug/m3	Dose Inhallation: 3rd tri	0<2	2<9	2<16	16<30	Risk (Residential 30-yr; school 9-yr; park 15-year): 3rd tri	0<2	2<9	2<16	16<30	Summed Risk	Cases Per Million	Chronic HI
487479.47	1E-02	3E-06	1E-05	6E-06	6E-06	3E-06	1E-07	3E-06	0E+00	4E-06	6E-07	7.7E-06	8	0.00202
487504.47	1E-02	3E-06	1E-05	6E-06	5E-06	2E-06	1E-07	3E-06	0E+00	4E-06	5E-07	7.4E-06	7	0.00195
487529.47	1E-02	3E-06	1E-05	6E-06	5E-06	2E-06	1E-07	3E-06	0E+00	4E-06	5E-07	7.2E-06	7	0.0019
487554.47	9E-03	3E-06	1E-05	6E-06	5E-06	2E-06	1E-07	3E-06	0E+00	3E-06	5E-07	7.1E-06	7	0.00186
487579.47	9E-03	3E-06	1E-05	6E-06	5E-06	2E-06	1E-07	3E-06	0E+00	3E-06	5E-07	6.9E-06	7	0.00182
487604.47	9E-03	3E-06	9E-06	5E-06	5E-06	2E-06	1E-07	3E-06	0E+00	3E-06	5E-07	6.7E-06	7	0.00178
487629.47	9E-03	3E-06	9E-06	5E-06	5E-06	2E-06	1E-07	3E-06	0E+00	3E-06	5E-07	6.6E-06	7	0.00173
487654.47	8E-03	3E-06	9E-06	5E-06	5E-06	2E-06	1E-07	3E-06	0E+00	3E-06	5E-07	6.4E-06	6	0.00169
487679.47	8E-03	3E-06	9E-06	5E-06	5E-06	2E-06	1E-07	3E-06	0E+00	3E-06	5E-07	6.3E-06	6	0.00165
487704.47	8E-03	3E-06	8E-06	5E-06	4E-06	2E-06	1E-07	3E-06	0E+00	3E-06	4E-07	6.2E-06	6	0.00162
487729.47	8E-03	3E-06	8E-06	5E-06	4E-06	2E-06	1E-07	3E-06	0E+00	3E-06	4E-07	6.1E-06	6	0.00159

TAMT Risk Assessment - DPM Cancer and Chronic HI

	Discrete Receptor ID (Group Name)	X	Y	quipment: Multi-Purpose General CargoSTC MIT	quipment: Dry BulkSTC MIT	Locomotives: All	Locomotives: Refrigerated ContainersSTC MIT	Locomotives: Multi-Purpose General CargoSTC MIT	Locomotives: Dry BulkSTC MIT	Trucks: All	Trucks: Refrigerated ContainersSTC MIT	Trucks: Multi-Purpose General CargoSTC MIT	Trucks: Dry BulkSTC MIT	All	Refrigerated Containers: ug/m3	Refrigerated Containers: Dose Inhalation 3rd tri	Dose Inhalation 0<2	Dose Inhalation 2<9	Dose Inhalation 2<16	Dose Inhalation 16<30	Risk (Residential 30-yr; school 9-yr; park 15-year) 3rd tri	Risk 0<2	Risk 2<9	Risk 2<16	Risk 16<30	Summed Risk	Cases Per Million	Chronic HI	Multi-Purpose General Cargo: ug/m3	Dose Inhalation 3rd tri	Dose Inhalation 0<2	Dose Inhalation 2<9	Dose Inhalation 2<16	Dose Inhalation 16<30	Risk (Residential 30-yr; school 9-yr; park 15-year) 3rd tri	Risk 0<2	Risk 2<9	Risk 2<16	Risk 16<30	Summed Risk	Cases Per Million	Chronic HI	Dry Bulk: ug/m3	Dose Inhalation 3rd tri	Dose Inhalation 0<2	Dose Inhalation 2<9	Dose Inhalation 2<16	Dose Inhalation 16<30	Risk (Residential 30-yr; school 9-yr; park 15-year) 3rd tri	Risk 0<2	Risk 2<9	Risk 2<16	Risk 16<30	Summed Risk	Cases Per Million	Chronic HI
AERMOD Output				0.0%	70%	100%	0%	54%	46%	100%	62%	4%	34%																																											
residential	REC_100M	485230.59	3615725.04	0E+00	2E-03	1E-03	0E+00	6E-04	5E-04	0.00023	0.00014	9.8E-06	7.7E-05	0.02	0.00908	3.14E-06	9.49E-06	5.49E-06	4.98E-06	2.27E-06	1.2E-07	3E-06	0	3.3E-06	5E-07	6.894E-06	7	0.00182	6E-03	2E-06	6E-06	4E-06	3E-06	2E-06	8E-08	2E-06	0E+00	2E-06	3E-07	4.7E-06	5	0.00124	8E-03	3E-06	9E-06	5E-06	5E-06	2E-06	1E-07	3E-06	0E+00	3E-06	5E-07	6.4E-06	6	0.00169
residential	REC_100M	485330.59	3615725.04	0E+00	2E-03	1E-03	0E+00	6E-04	5E-04	0.00023	0.00014	1E-05	7.8E-05	0.02	0.0088	3.05E-06	9.2E-06	5.32E-06	4.83E-06	2.2E-06	1.2E-07	2.9E-06	0	3.2E-06	4.8E-07	6.68E-06	7	0.00176	6E-03	2E-06	6E-06	4E-06	3E-06	2E-06	8E-08	2E-06	0E+00	2E-06	3E-07	4.6E-06	5	0.00121	8E-03	3E-06	9E-06	5E-06	5E-06	2E-06	1E-07	3E-06	0E+00	3E-06	5E-07	6.3E-06	6	0.00166
residential	REC_100M	485230.59	3615825.04	0E+00	2E-03	1E-03	0E+00	7E-04	6E-04	0.00024	0.00015	1E-05	8.1E-05	0.02	0.0095	3.29E-06	9.93E-06	5.75E-06	5.21E-06	2.38E-06	1.3E-07	3.1E-06	0	3.4E-06	5.2E-07	7.209E-06	7	0.0019	7E-03	2E-06	7E-06	4E-06	4E-06	2E-06	9E-08	2E-06	0E+00	2E-06	4E-07	4.9E-06	5	0.0013	9E-03	3E-06	9E-06	5E-06	5E-06	2E-06	1E-07	3E-06	0E+00	3E-06	5E-07	6.8E-06	7	0.00179
residential	REC_100M	489130.59	3615925.04	0E+00	4E-04	3E-04	0E+00	2E-04	2E-04	6.1E-05	3.8E-05	2.6E-06	2.1E-05	0.01	0.00351	1.21E-06	3.67E-06	2.12E-06	1.92E-06	8.78E-07	4.8E-08	1.2E-06	0	1.3E-06	1.9E-07	2.664E-06	3	0.0007	2E-03	8E-07	2E-06	1E-06	1E-06	6E-07	3E-08	7E-07	0E+00	8E-07	1E-07	1.7E-06	2	0.00046	3E-03	1E-06	3E-06	2E-06	2E-06	7E-07	4E-08	9E-07	0E+00	1E-06	2E-07	2.2E-06	2	0.00057
residential	REC_100M	489030.59	3616025.04	0E+00	4E-04	4E-04	0E+00	2E-04	2E-04	6.8E-05	4.2E-05	2.9E-06	2.3E-05	0.01	0.0037	1.28E-06	3.87E-06	2.24E-06	2.03E-06	9.27E-07	5E-08	1.2E-06	0	1.3E-06	2E-07	2.812E-06	3	0.00074	2E-03	8E-07	3E-06	1E-06	1E-06	6E-07	3E-08	8E-07	0E+00	9E-07	1E-07	1.8E-06	2	0.00048	3E-03	1E-06	3E-06	2E-06	2E-06	8E-07	4E-08	1E-06	0E+00	1E-06	2E-07	2.3E-06	2	0.00061
residential	REC_100M	489130.59	3616025.04	0E+00	4E-04	3E-04	0E+00	2E-04	2E-04	6.8E-05	4.2E-05	2.9E-06	2.3E-05	0.01	0.00367	1.27E-06	3.84E-06	2.22E-06	2.01E-06	9.18E-07	5E-08	1.2E-06	0	1.3E-06	2E-07	2.786E-06	3	0.00073	2E-03	8E-07	2E-06	1E-06	1E-06	6E-07	3E-08	8E-07	0E+00	9E-07	1E-07	1.8E-06	2	0.00048	3E-03	1E-06	3E-06	2E-06	2E-06	8E-07	4E-08	1E-06	0E+00	1E-06	2E-07	2.3E-06	2	0.0006
residential	REC_100M	488930.59	3616125.04	0E+00	4E-04	4E-04	0E+00	2E-04	2E-04	7.6E-05	4.7E-05	3.3E-06	2.6E-05	0.01	0.00392	1.36E-06	4.1E-06	2.37E-06	2.15E-06	9.81E-07	5.3E-08	1.3E-06	0	1.4E-06	2.2E-07	2.976E-06	3	0.00078	3E-03	9E-07	3E-06	2E-06	1E-06	6E-07	3E-08	8E-07	0E+00	9E-07	1E-07	2.0E-06	2	0.00051	3E-03	1E-06	3E-06	2E-06	2E-06	8E-07	4E-08	1E-06	0E+00	1E-06	2E-07	2.5E-06	2	0.00065
residential	REC_100M	489030.59	3616125.04	0E+00	4E-04	4E-04	0E+00	2E-04	2E-04	7.6E-05	4.7E-05	3.3E-06	2.6E-05	0.01	0.00388	1.34E-06	4.05E-06	2.35E-06	2.13E-06	9.7E-07	5.3E-08	1.3E-06	0	1.4E-06	2.1E-07	2.943E-06	3	0.00078	3E-03	9E-07	3E-06	2E-06	1E-06	6E-07	3E-08	8E-07	0E+00	9E-07	1E-07	1.9E-06	2	0.00051	3E-03	1E-06	3E-06	2E-06	2E-06	8E-07	4E-08	1E-06	0E+00	1E-06	2E-07	2.4E-06	2	0.00064
residential	REC_100M	489130.59	3616125.04	0E+00	4E-04	4E-04	0E+00	2E-04	2E-04	7.5E-05	4.7E-05	3.3E-06	2.5E-05	0.01	0.00383	1.33E-06	4E-06	2.32E-06	2.1E-06	9.59E-07	5.2E-08	1.3E-06	0	1.4E-06	2.1E-07	2.908E-06	3	0.00077	2E-03	9E-07	3E-06	2E-06	1E-06	6E-07	3E-08	8E-07	0E+00	9E-07	1E-07	1.9E-06	2	0.0005	3E-03	1E-06	3E-06	2E-06	2E-06	8E-07	4E-08	1E-06	0E+00	1E-06	2E-07	2.4E-06	2	0.00063
residential	REC_100M	488730.59	3616225.04	0E+00	5E-04	4E-04	0E+00	2E-04	2E-04	8.8E-05	5.4E-05	3.8E-06	3E-05	0.01	0.00421	1.46E-06	4.4E-06	2.55E-06	2.31E-06	1.05E-06	5.7E-08	1.4E-06	0	1.5E-06	2.3E-07	3.199E-06	3	0.00084	3E-03	1E-06	3E-06	2E-06	2E-06	7E-07	4E-08	9E-07	0E+00	1E-06	2E-07	2.1E-06	2	0.00056	4E-03	1E-06	4E-06	2E-06	2E-06	9E-07	5E-08	1E-06	0E+00	1E-06	2E-07	2.7E-06	3	0.00071

TAMT Risk Assessment - DPM Cancer and Chronic HI

	Discrete Receptor ID (Group Name)	X	Y	quipment: Multi-Purpose General CargoSTC MIT	quipment: Dry BulkSTC MIT	Locomotives: All	Locomotives: Refrigerated ContainersSTC MIT	Locomotives: Multi-Purpose General CargoSTC MIT	Locomotives: Dry BulkSTC MIT	Trucks: All	Trucks: Refrigerated ContainersSTC MIT	Trucks: Multi-Purpose General CargoSTC MIT	Trucks: Dry BulkSTC MIT	All
AERMOD Output				0.0%	70%	100%	0%	54%	46%	100%	62%	4%	34%	
residential	REC_100M	483430.59	3617525.04	0E+00	2E-03	1E-03	0E+00	5E-04	5E-04	9.2E-05	5.7E-05	4E-06	3.1E-05	0.03
residential	REC_100M	483530.59	3617525.04	0E+00	2E-03	1E-03	0E+00	6E-04	5E-04	9.9E-05	6.1E-05	4.3E-06	3.4E-05	0.03
residential	REC_100M	483630.59	3617525.04	0E+00	2E-03	1E-03	0E+00	6E-04	5E-04	0.00011	6.6E-05	4.6E-06	3.6E-05	0.03
residential	REC_100M	483730.59	3617525.04	0E+00	3E-03	1E-03	0E+00	7E-04	6E-04	0.00012	7.2E-05	5E-06	3.9E-05	0.03
residential	REC_100M	483830.59	3617525.04	0E+00	3E-03	1E-03	0E+00	8E-04	6E-04	0.00013	7.8E-05	5.5E-06	4.3E-05	0.03
residential	REC_100M	483930.59	3617525.04	0E+00	3E-03	2E-03	0E+00	8E-04	7E-04	0.00014	8.6E-05	6E-06	4.7E-05	0.03
residential	REC_100M	484030.59	3617525.04	0E+00	4E-03	2E-03	0E+00	9E-04	7E-04	0.00015	9.3E-05	6.5E-06	5.1E-05	0.04
residential	REC_100M	484130.59	3617525.04	0E+00	4E-03	2E-03	0E+00	1E-03	8E-04	0.00017	0.0001	7.2E-06	5.6E-05	0.04
residential	REC_100M	484230.59	3617525.04	0E+00	5E-03	2E-03	0E+00	1E-03	9E-04	0.00018	0.00011	8E-06	6.2E-05	0.04
residential	REC_100M	484330.59	3617525.04	0E+00	6E-03	2E-03	0E+00	1E-03	1E-03	0.00021	0.00013	8.9E-06	6.9E-05	0.04
residential	REC_100M	484430.59	3617525.04	0E+00	7E-03	2E-03	0E+00	1E-03	1E-03	0.00023	0.00014	1E-05	7.8E-05	0.05
[illegible]														

Refrigerated Containers

X	ug/m3	Dose Inhallation: 3rd tri	0<2	2<9	2<16	16<30	Risk (Residential 30-yr; school 9-yr; park 15-year): 3rd tri	0<2	2<9	2<16	16<30	Summed Risk	Cases Per Million	Chronic HI
483430.59	0.01277	4.42E-06	1.33E-05	7.73E-06	7.01E-06	3.2E-06	1.7E-07	4.2E-06	0	4.6E-06	7E-07	9.696E-06	10	0.00255
483530.59	0.0133	4.6E-06	1.39E-05	8.05E-06	7.29E-06	3.33E-06	1.8E-07	4.4E-06	0	4.8E-06	7.3E-07	1.009E-05	10	0.00266
483630.59	0.01412	4.89E-06	1.48E-05	8.54E-06	7.75E-06	3.53E-06	1.9E-07	4.6E-06	0	5.1E-06	7.8E-07	1.072E-05	11	0.00282
483730.59	0.01486	5.14E-06	1.55E-05	8.99E-06	8.15E-06	3.72E-06	2E-07	4.9E-06	0	5.4E-06	8.2E-07	1.128E-05	11	0.00297
483830.59	0.01567	5.42E-06	1.64E-05	9.48E-06	8.6E-06	3.92E-06	2.1E-07	5.1E-06	0	5.7E-06	8.6E-07	1.19E-05	12	0.00313
483930.59	0.01653	5.72E-06	1.73E-05	1E-05	9.07E-06	4.14E-06	2.2E-07	5.4E-06	0	6E-06	9.1E-07	1.255E-05	13	0.00331
484030.59	0.01769	6.12E-06	1.85E-05	1.07E-05	9.7E-06	4.43E-06	2.4E-07	5.8E-06	0	6.4E-06	9.7E-07	1.343E-05	13	0.00354
484130.59	0.01865	6.45E-06	1.95E-05	1.13E-05	1.02E-05	4.67E-06	2.5E-07	6.1E-06	0	6.8E-06	1E-06	1.416E-05	14	0.00373
484230.59	0.01958	6.78E-06	2.05E-05	1.18E-05	1.07E-05	4.9E-06	2.7E-07	6.4E-06	0	7.1E-06	1.1E-06	1.487E-05	15	0.00392
484330.59	0.02043	7.07E-06	2.14E-05	1.24E-05	1.12E-05	5.11E-06	2.8E-07	6.7E-06	0	7.4E-06	1.1E-06	1.551E-05	16	0.00409
484430.59	0.02116	7.32E-06	2.21E-05	1.28E-05	1.16E-05	5.3E-06	2.9E-07	7E-06	0	7.7E-06	1.2E-06	1.606E-05	16	0.00423
[illegible]														

Multi-Purpose General Cargo

X	ug/m3	Dose Inhallation: 3rd tri	0<2	2<9	2<16	16<30	Risk (Residential 30-yr; school 9-yr; park 15-year): 3rd tri	0<2	2<9	2<16	16<30	Summed Risk	Cases Per Million	Chronic HI
483430.59	6E-03	2E-06	6E-06	3E-06	3E-06	1E-06	8E-08	2E-06	0E+00	2E-06	3E-07	4.3E-06	4	0.00113
483530.59	6E-03	2E-06	6E-06	4E-06	3E-06	1E-06	8E-08	2E-06	0E+00	2E-06	3E-07	4.4E-06	4	0.00117
483630.59	6E-03	2E-06	6E-06	4E-06	3E-06	2E-06	8E-08	2E-06	0E+00	2E-06	3E-07	4.7E-06	5	0.00124
483730.59	6E-03	2E-06	7E-06	4E-06	4E-06	2E-06	9E-08	2E-06	0E+00	2E-06	4E-07	4.9E-06	5	0.0013
483830.59	7E-03	2E-06	7E-06	4E-06	4E-06	2E-06	9E-08	2E-06	0E+00	2E-06	4E-07	5.2E-06	5	0.00137
483930.59	7E-03	2E-06	8E-06	4E-06	4E-06	2E-06	1E-07	2E-06	0E+00	3E-06	4E-07	5.5E-06	5	0.00144
484030.59	8E-03	3E-06	8E-06	5E-06	4E-06	2E-06	1E-07	3E-06	0E+00	3E-06	4E-07	5.8E-06	6	0.00154
484130.59	8E-03	3E-06	9E-06	5E-06	4E-06	2E-06	1E-07	3E-06	0E+00	3E-06	4E-07	6.2E-06	6	0.00163
484230.59	9E-03	3E-06	9E-06	5E-06	5E-06	2E-06	1E-07	3E-06	0E+00	3E-06	5E-07	6.6E-06	7	0.00173
484330.59	9E-03	3E-06	1E-05	6E-06	5E-06	2E-06	1E-07	3E-06	0E+00	3E-06	5E-07	6.9E-06	7	0.00182
484430.59	1E-02	3E-06	1E-05	6E-06	5E-06	2E-06	1E-07	3E-06	0E+00	3E-06	5E-07	7.2E-06	7	0.00191
[illegible]														

Dry Bulk

X	ug/m3	Dose Inhallation: 3rd tri	0<2	2<9	2<16	16<30	Risk (Residential 30-yr; school 9-yr; park 15-year): 3rd tri	0<2	2<9	2<16	16<30	Summed Risk	Cases Per Million	Chronic HI
483430.59	7E-03	3E-06	8E-06	4E-06	4E-06	2E-06	1E-07	2E-06	0E+00	3E-06	4E-07	5.5E-06	6	0.00145
483530.59	8E-03	3E-06	8E-06	5E-06	4E-06	2E-06	1E-07	3E-06	0E+00	3E-06	4E-07	5.8E-06	6	0.00153
483630.59	8E-03	3E-06	9E-06	5E-06	4E-06	2E-06	1E-07	3E-06	0E+00	3E-06	5E-07	6.2E-06	6	0.00164
483730.59	9E-03	3E-06	9E-06	5E-06	5E-06	2E-06	1E-07	3E-06	0E+00	3E-06	5E-07	6.6E-06	7	0.00174
483830.59	9E-03	3E-06	1E-05	6E-06	5E-06	2E-06	1E-07	3E-06	0E+00	3E-06	5E-07	7.1E-06	7	0.00187
483930.59	1E-02	3E-06	1E-05	6E-06	6E-06	3E-06	1E-07	3E-06	0E+00	4E-06	6E-07	7.6E-06	8	0.00201
484030.59	1E-02	4E-06	1E-05	7E-06	6E-06	3E-06	1E-07	4E-06	0E+00	4E-06	6E-07	8.3E-06	8	0.00219
484130.59	1E-02	4E-06	1E-05	7E-06	7E-06	3E-06	2E-07	4E-06	0E+00	4E-06	7E-07	9.1E-06	9	0.00239
484230.59	1E-02	5E-06	1E-05	8E-06	7E-06	3E-06	2E-07	4E-06	0E+00	5E-06	7E-07	9.9E-06	10	0.00261
484330.59	1E-02	5E-06	2E-05	9E-06	8E-06	4E-06	2E-07	5E-06	0E+00	5E-06	8E-07	1.1E-05	11	0.00287
484430.59	2E-02	5E-06	2E-05	1E-05	9E-06	4E-06	2E-07	5E-06	0E+00	6E-06	9E-07	1.2E-05	12	0.00318
[illegible]														

TAMT Risk Assessment - DPM Cancer and Chronic HI

				Equipment		Locomotives				Trucks					Refrigerated Containers													
				Multi-Purpose General CargoSTC MIT	Dry BulkSTC MIT	All	Refrigerated ContainersSTC MIT	Multi-Purpose General CargoSTC MIT	Dry BulkSTC MIT	All	Refrigerated ContainersSTC MIT	Multi-Purpose General CargoSTC MIT	Dry BulkSTC MIT	All	Dose Inhallation						Risk (Residential 30-yr; school 9-yr; park 15-year)							
AERMOD Output				0.0%	70%	100%	0%	54%	46%	100%	62%	4%	34%															
	Discrete Receptor ID (Group Name)	X	Y												ug/m3	3rd tri	0<2	2<9	2<16	16<30	3rd tri	0<2	2<9	2<16	16<30	Summed Risk	Cases Per Million	Chronic HI
residential	REC_100M	484030.59	3617925.04	0E+00	3E-03	1E-03	0E+00	8E-04	7E-04	0.00011	6.9E-05	4.8E-06	3.8E-05	0.03	0.01666	5.77E-06	1.74E-05	1.01E-05	9.14E-06	4.17E-06	2.3E-07	5.5E-06	0	6E-06	9.2E-07	1.265E-05	13	0.00333
residential	REC_100M	484130.59	3617925.04	0E+00	3E-03	2E-03	0E+00	9E-04	7E-04	0.00012	7.6E-05	5.3E-06	4.2E-05	0.04	0.01787	6.19E-06	1.87E-05	1.08E-05	9.8E-06	4.47E-06	2.4E-07	5.9E-06	0	6.5E-06	9.8E-07	1.357E-05	14	0.00357
residential	REC_100M	486330.59	3617925.04	0E+00	7E-03	9E-03	0E+00	5E-03	4E-03	0.00259	0.0016	0.00011	0.00087	0.05	0.01972	6.83E-06	2.06E-05	1.19E-05	1.08E-05	4.94E-06	2.7E-07	6.5E-06	0	7.1E-06	1.1E-06	1.497E-05	15	0.00394
residential	REC_100M	486430.59	3617925.04	0E+00	5E-03	7E-03	0E+00	4E-03	3E-03	0.00174	0.00108	7.5E-05	0.00059	0.05	0.01782	6.17E-06	1.86E-05	1.08E-05	9.77E-06	4.46E-06	2.4E-07	5.9E-06	0	6.4E-06	9.8E-07	1.353E-05	14	0.00356
residential	REC_100M	486530.59	3617925.04	0E+00	5E-03	6E-03	0E+00	3E-03	3E-03	0.00133	0.00082	5.7E-05	0.00045	0.04	0.01634	5.66E-06	1.71E-05	9.89E-06	8.96E-06	4.09E-06	2.2E-07	5.4E-06	0	5.9E-06	9E-07	1.24E-05	12	0.00327
residential	REC_100M	486630.59	3617925.04	0E+00	4E-03	5E-03	0E+00	3E-03	2E-03	0.00107	0.00066	4.6E-05	0.00036	0.04	0.01506	5.21E-06	1.57E-05	9.12E-06	8.26E-06	3.77E-06	2E-07	4.9E-06	0	5.5E-06	8.3E-07	1.144E-05	11	0.00301
residential	REC_100M	486730.59	3617925.04	0E+00	3E-03	4E-03	0E+00	2E-03	2E-03	0.00086	0.00053	3.7E-05	0.00029	0.04	0.01389	4.81E-06	1.45E-05	8.41E-06	7.62E-06	3.48E-06	1.9E-07	4.6E-06	0	5E-06	7.6E-07	1.055E-05	11	0.00278
residential	REC_100M	486830.59	3617925.04	0E+00	3E-03	4E-03	0E+00	2E-03	2E-03	0.00075	0.00047	3.3E-05	0.00025	0.03	0.01304	4.51E-06	1.36E-05	7.89E-06	7.15E-06	3.26E-06	1.8E-07	4.3E-06	0	4.7E-06	7.2E-07	9.898E-06	10	0.00261
residential	REC_100M	487030.59	3617925.04	0E+00	2E-03	3E-03	0E+00	2E-03	1E-03	0.00059	0.00036	2.5E-05	0.0002	0.03	0.0115	3.98E-06	1.2E-05	6.96E-06	6.31E-06	2.88E-06	1.6E-07	3.8E-06	0	4.2E-06	6.3E-07	8.734E-06	9	0.0023
residential	REC_100M	487130.59	3617925.04	0E+00	2E-03	3E-03	0E+00	1E-03	1E-03	0.00053	0.00033	2.3E-05	0.00018	0.03	0.01086	3.76E-06	1.14E-05	6.57E-06	5.96E-06	2.72E-06	1.5E-07	3.6E-06	0	3.9E-06	6E-07	8.247E-06	8	0.00217
residential	REC_100M	487230.59	3617925.04	0E+00	2E-03	2E-03	0E+00	1E-03	1E-03	0.00049	0.0003	2.1E-05	0.00017	0.03	0.0103	3.56E-06	1.08E-05	6.23E-06	5.65E-06	2.58E-06	1.4E-07	3.4E-06	0	3.7E-06	5.7E-07	7.818E-06	8	0.00206
residential	REC_100M	487330.59	3617925.04	0E+00	2E-03	2E-03	0E+00	1E-03	1E-03	0.00047	0.00029	2E-05	0.00016	0.02	0.00981	3.4E-06	1.03E-05	5.93E-06	5.38E-06	2.45E-06	1.3E-07	3.2E-06	0	3.6E-06	5.4E-07	7.446E-06	7	0.00196
residential	REC_100M	487430.59	3617925.04	0E+00	2E-03	2E-03	0E+00	1E-03	1E-03	0.00045	0.00028	1.9E-05	0.00015	0.02	0.00934	3.23E-06	9.76E-06	5.65E-06	5.12E-06	2.34E-06	1.3E-07	3.1E-06	0	3.4E-06	5.1E-07	7.089E-06	7	0.00187
school	BurLogan	487530.59	3617925.04	0E+00	2E-03	2E-03	0E+00	1E-03	9E-04	0.00045	0.00028	1.9E-05	0.00015	0.02	0.00891	0	1.32E-06	7.03E-07	5.71E-07	2.64E-07	0	0	7.8E-07	1.8E-07	0	9.609E-07	1	0.00178
school	BurLogan	487630.59	3617925.04	0E+00	1E-03	2E-03	0E+00	1E-03	8E-04	0.00045	0.00028	2E-05	0.00015	0.02	0.00855	0	1.27E-06	6.75E-07	5.48E-07	2.53E-07	0	0	7.5E-07	1.7E-07	0	9.22E-07	1	0.00171
school	BurLogan	487730.59	3617925.04	0E+00	1E-03	2E-03	0E+00	9E-04	8E-04	0.00044	0.00027	1.9E-05	0.00015	0.02	0.00819	0	1.21E-06	6.47E-07	5.25E-07	2.42E-07	0	0	7.2E-07	1.7E-07	0	8.834E-07	1	0.00164
school	BurLogan	487830.59	3617925.04	0E+00	1E-03	2E-03	0E+00	8E-04	7E-04	0.00042	0.00026	1.8E-05	0.00014	0.02	0.00787	0	1.17E-06	6.21E-07	5.05E-07	2.33E-07	0	0	6.9E-07	1.6E-07	0	8.489E-07	1	0.00157
residential	REC_100M	487930.59	3617925.04	0E+00	1E-03	1E-03	0E+00	8E-04	7E-04	0.0004	0.00025	1.7E-05	0.00013	0.02	0.00768	2.66E-06	8.03E-06	4.65E-06	4.21E-06	1.92E-06	1E-07	2.5E-06	0	2.8E-06	4.2E-07	5.829E-06	6	0.00154

Multi-Purpose General Cargo

Dry Bulk

TAMT Risk Assessment - DPM Cancer and Chronic HI

	Discrete Receptor ID (Group Name)	X	Y	quipment: Multi-Purpose General CargoSTC MIT	quipment: Dry BulkSTC MIT	Locomotives: All	Locomotives: Refrigerated ContainersSTC MIT	Locomotives: Multi-Purpose General CargoSTC MIT	Locomotives: Dry BulkSTC MIT	Trucks: All	Trucks: Refrigerated ContainersSTC MIT	Trucks: Multi-Purpose General CargoSTC MIT	Trucks: Dry BulkSTC MIT	All
AERMOD Output				0.0%	70%	100%	0%	54%	46%	100%	62%	4%	34%	
residential	REC_100I	488230.59	3618325.04	0E+00	8E-04	1E-03	0E+00	5E-04	4E-04	0.00021	0.00013	9.3E-06	7.3E-05	0.01
residential	REC_100I	488330.59	3618325.04	0E+00	8E-04	9E-04	0E+00	5E-04	4E-04	0.0002	0.00012	8.5E-06	6.7E-05	0.01
residential	REC_100I	488430.59	3618325.04	0E+00	8E-04	9E-04	0E+00	5E-04	4E-04	0.00019	0.00012	8.1E-06	6.3E-05	0.01
residential	REC_100I	488530.59	3618325.04	0E+00	8E-04	8E-04	0E+00	4E-04	4E-04	0.00017	0.00011	7.6E-06	5.9E-05	0.01
residential	REC_100I	488630.59	3618325.04	0E+00	7E-04	8E-04	0E+00	4E-04	4E-04	0.00016	9.9E-05	6.9E-06	5.4E-05	0.01
residential	REC_100I	488730.59	3618325.04	0E+00	7E-04	7E-04	0E+00	4E-04	3E-04	0.00015	9.1E-05	6.3E-06	5E-05	0.01
residential	REC_100I	488830.59	3618325.04	0E+00	6E-04	7E-04	0E+00	4E-04	3E-04	0.00013	8.1E-05	5.7E-06	4.4E-05	0.01
residential	REC_100I	488930.59	3618325.04	0E+00	6E-04	7E-04	0E+00	4E-04	3E-04	0.00012	7.4E-05	5.2E-06	4E-05	0.01
recreational	park	484630.59	3618425.04	0E+00	2E-03	2E-03	0E+00	1E-03	9E-04	0.0001	6.4E-05	4.5E-06	3.5E-05	0.03
recreational	park	484730.59	3618425.04	0E+00	2E-03	2E-03	0E+00	1E-03	1E-03	0.00012	7.3E-05	5.1E-06	4E-05	0.03
recreational	park	485030.59	3618425.04	0E+00	7E-03	3E-03	0E+00	2E-03	1E-03	0.00021	0.00013	9.2E-06	7.2E-05	0.04

Refrigerated Containers

Receptor (X)	ug/m3	Dose Inhallation: 3rd tri	0<2	2<9	2<16	16<30	Risk (Residential 30-yr; school 9-yr; park 15-year): 3rd tri	0<2	2<9	2<16	16<30	Summed Risk	Cases Per Million	Chronic HI
488230.59	0.00587	2.03E-06	6.14E-06	3.55E-06	3.22E-06	1.47E-06	8E-08	1.9E-06	0	2.1E-06	3.2E-07	4.46E-06	4	0.00117
488330.59	0.00563	1.95E-06	5.89E-06	3.41E-06	3.09E-06	1.41E-06	7.7E-08	1.9E-06	0	2E-06	3.1E-07	4.276E-06	4	0.00113
488430.59	0.00568	1.96E-06	5.93E-06	3.43E-06	3.11E-06	1.42E-06	7.7E-08	1.9E-06	0	2.1E-06	3.1E-07	4.308E-06	4	0.00114
488530.59	0.00571	1.98E-06	5.97E-06	3.46E-06	3.13E-06	1.43E-06	7.8E-08	1.9E-06	0	2.1E-06	3.1E-07	4.338E-06	4	0.00114
488630.59	0.0055	1.9E-06	5.75E-06	3.33E-06	3.01E-06	1.38E-06	7.5E-08	1.8E-06	0	2E-06	3E-07	4.173E-06	4	0.0011
488730.59	0.00527	1.83E-06	5.51E-06	3.19E-06	2.89E-06	1.32E-06	7.2E-08	1.7E-06	0	1.9E-06	2.9E-07	4.003E-06	4	0.00105
488830.59	0.00488	1.69E-06	5.1E-06	2.95E-06	2.68E-06	1.22E-06	6.6E-08	1.6E-06	0	1.8E-06	2.7E-07	3.703E-06	4	0.00098
488930.59	0.00469	1.63E-06	4.91E-06	2.84E-06	2.58E-06	1.18E-06	6.4E-08	1.5E-06	0	1.7E-06	2.6E-07	3.564E-06	4	0.00094
484630.59	0.01378	0	1.32E-06	7.05E-07	5.72E-07	2.64E-07	0	4.2E-07	2.3E-07	0	2.5E-08	6.726E-07	1	0.00276
484730.59	0.01425	0	1.37E-06	7.29E-07	5.92E-07	2.73E-07	0	4.3E-07	2.4E-07	0	2.6E-08	6.958E-07	1	0.00285
485030.59	0.02417	0	2.32E-06	1.24E-06	1E-06	4.64E-07	0	7.3E-07	4.1E-07	0	4.4E-08	1.18E-06	1	0.00483

Multi-Purpose General Cargo

Receptor (X)	ug/m3	Dose Inhallation: 3rd tri	0<2	2<9	2<16	16<30	Risk (Residential 30-yr; school 9-yr; park 15-year): 3rd tri	0<2	2<9	2<16	16<30	Summed Risk	Cases Per Million	Chronic HI
488230.59	3E-03	1E-06	3E-06	2E-06	2E-06	8E-07	4E-08	1E-06	0E+00	1E-06	2E-07	2.5E-06	3	0.00066
488330.59	3E-03	1E-06	3E-06	2E-06	2E-06	8E-07	4E-08	1E-06	0E+00	1E-06	2E-07	2.4E-06	2	0.00063
488430.59	3E-03	1E-06	3E-06	2E-06	2E-06	8E-07	4E-08	1E-06	0E+00	1E-06	2E-07	2.4E-06	2	0.00064
488530.59	3E-03	1E-06	3E-06	2E-06	2E-06	8E-07	4E-08	1E-06	0E+00	1E-06	2E-07	2.4E-06	2	0.00064
488630.59	3E-03	1E-06	3E-06	2E-06	2E-06	8E-07	4E-08	1E-06	0E+00	1E-06	2E-07	2.3E-06	2	0.00061
488730.59	3E-03	1E-06	3E-06	2E-06	2E-06	7E-07	4E-08	1E-06	0E+00	1E-06	2E-07	2.2E-06	2	0.00059
488830.59	3E-03	9E-07	3E-06	2E-06	1E-06	7E-07	4E-08	9E-07	0E+00	1E-06	2E-07	2.1E-06	2	0.00055
488930.59	3E-03	9E-07	3E-06	2E-06	1E-06	7E-07	4E-08	9E-07	0E+00	1E-06	1E-07	2.0E-06	2	0.00053
484630.59	7E-03	0E+00	7E-07	4E-07	3E-07	1E-07	0E+00	2E-07	1E-07	0E+00	1E-08	3.6E-07	0	0.00149
484730.59	7E-03	0E+00	7E-07	4E-07	3E-07	1E-07	0E+00	2E-07	1E-07	0E+00	1E-08	3.5E-07	0	0.00145
485030.59	7E-03	0E+00	7E-07	4E-07	3E-07	1E-07	0E+00	2E-07	1E-07	0E+00	1E-08	3.5E-07	0	0.00142

Dry Bulk

Receptor (X)	ug/m3	Dose Inhallation: 3rd tri	0<2	2<9	2<16	16<30	Risk (Residential 30-yr; school 9-yr; park 15-year): 3rd tri	0<2	2<9	2<16	16<30	Summed Risk	Cases Per Million	Chronic HI
488230.59	4E-03	2E-06	5E-06	3E-06	2E-06	1E-06	6E-08	1E-06	0E+00	2E-06	2E-07	3.4E-06	3	0.0009
488330.59	4E-03	1E-06	4E-06	3E-06	2E-06	1E-06	6E-08	1E-06	0E+00	2E-06	2E-07	3.3E-06	3	0.00086
488430.59	4E-03	1E-06	4E-06	3E-06	2E-06	1E-06	6E-08	1E-06	0E+00	2E-06	2E-07	3.3E-06	3	0.00086
488530.59	4E-03	1E-06	5E-06	3E-06	2E-06	1E-06	6E-08	1E-06	0E+00	2E-06	2E-07	3.3E-06	3	0.00086
488630.59	4E-03	1E-06	4E-06	3E-06	2E-06	1E-06	6E-08	1E-06	0E+00	1E-06	2E-07	3.1E-06	3	0.00083
488730.59	4E-03	1E-06	4E-06	2E-06	2E-06	1E-06	5E-08	1E-06	0E+00	1E-06	2E-07	3.0E-06	3	0.00079
488830.59	4E-03	1E-06	4E-06	2E-06	2E-06	9E-07	5E-08	1E-06	0E+00	1E-06	2E-07	2.8E-06	3	0.00073
488930.59	3E-03	1E-06	4E-06	2E-06	2E-06	9E-07	5E-08	1E-06	0E+00	1E-06	2E-07	2.7E-06	3	0.0007
484630.59	9E-03	0E+00	9E-07	5E-07	4E-07	2E-07	0E+00	3E-07	2E-07	0E+00	2E-08	4.6E-07	0	0.00189
484730.59	1E-02	0E+00	9E-07	5E-07	4E-07	2E-07	0E+00	3E-07	2E-07	0E+00	2E-08	4.7E-07	0	0.00194
485030.59	1E-02	0E+00	1E-06	7E-07	6E-07	3E-07	0E+00	4E-07	2E-07	0E+00	2E-08	6.7E-07	1	0.00273

TAMT Risk Assessment - DPM Cancer and Chronic HI

				quipment: Multi-Purpose General CargoSTC MIT	quipment: Dry BulkSTC MIT	Locomotives: All	Locomotives: Refrigerated ContainersSTC MIT	Locomotives: Multi-Purpose General CargoSTC MIT	Locomotives: Dry BulkSTC MIT	Trucks: All	Trucks: Refrigerated ContainersSTC MIT	Trucks: Multi-Purpose General CargoSTC MIT	Trucks: Dry BulkSTC MIT	All	Refrigerated Containers: ug/m3
AERMOD Output				0.0%	70%	100%	0%	54%	46%	100%	62%	4%	34%		
	Discrete Receptor ID (Group Name)	X	Y												
residential	REC_100M	486330.59	3618825.04	0E+00	4E-03	4E-03	0E+00	2E-03	2E-03	0.00038	0.00024	1.6E-05	0.00013	0.03	0.01184
residential	REC_100M	486430.59	3618825.04	0E+00	3E-03	4E-03	0E+00	2E-03	2E-03	0.00037	0.00023	1.6E-05	0.00012	0.03	0.01103
residential	REC_100M	486530.59	3618825.04	0E+00	3E-03	4E-03	0E+00	2E-03	2E-03	0.00036	0.00022	1.5E-05	0.00012	0.03	0.01031
residential	REC_100M	486630.59	3618825.04	0E+00	3E-03	3E-03	0E+00	2E-03	1E-03	0.00036	0.00022	1.5E-05	0.00012	0.03	0.00973
residential	REC_100M	486730.59	3618825.04	0E+00	2E-03	3E-03	0E+00	2E-03	1E-03	0.00034	0.00021	1.5E-05	0.00012	0.03	0.00918
residential	REC_100M	486830.59	3618825.04	0E+00	2E-03	2E-03	0E+00	1E-03	1E-03	0.00033	0.0002	1.4E-05	0.00011	0.02	0.00866
residential	REC_100M	486930.59	3618825.04	0E+00	2E-03	2E-03	0E+00	1E-03	1E-03	0.00031	0.00019	1.3E-05	0.0001	0.02	0.00816
residential	REC_100M	487030.59	3618825.04	0E+00	2E-03	2E-03	0E+00	1E-03	9E-04	0.00029	0.00018	1.2E-05	9.7E-05	0.02	0.00774
residential	REC_100M	487130.59	3618825.04	0E+00	1E-03	2E-03	0E+00	9E-04	8E-04	0.00028	0.00017	1.2E-05	9.3E-05	0.02	0.0074
residential	REC_100M	487230.59	3618825.04	0E+00	1E-03	2E-03	0E+00	8E-04	7E-04	0.00026	0.00016	1.1E-05	8.7E-05	0.02	0.00705
residential	REC_100M	487330.59	3618825.04	0E+00	1E-03	1E-03	0E+00	8E-04	6E-04	0.00024	0.00015	1.1E-05	8.2E-05	0.02	0.00674

Refrigerated Containers — Dose Inhallation; Risk (Residential 30-yr; school 9-yr; park 15-year)

Multi-Purpose General Cargo — Dose Inhallation; Risk (Residential 30-yr; school 9-yr; park 15-year)

RC Cases Per Million	RC Chronic HI	ug/m3	Dose 3rd tri	Dose 0<2	Dose 2<9	Dose 2<16	Dose 16<30	Risk 3rd tri	Risk 0<2	Risk 2<9	Risk 2<16	Risk 16<30	Summed Risk
9	0.00237	9E-03	3E-06	9E-06	5E-06	5E-06	2E-06	1E-07	3E-06	0E+00	3E-06	5E-07	6.6E-06
8	0.00221	8E-03	3E-06	9E-06	5E-06	5E-06	2E-06	1E-07	3E-06	0E+00	3E-06	5E-07	6.3E-06
8	0.00206	8E-03	3E-06	8E-06	5E-06	4E-06	2E-06	1E-07	3E-06	0E+00	3E-06	4E-07	5.9E-06
7	0.00195	7E-03	2E-06	8E-06	4E-06	4E-06	2E-06	1E-07	2E-06	0E+00	3E-06	4E-07	5.5E-06
7	0.00184	7E-03	2E-06	7E-06	4E-06	4E-06	2E-06	9E-08	2E-06	0E+00	2E-06	4E-07	5.1E-06
7	0.00173	6E-03	2E-06	6E-06	4E-06	3E-06	2E-06	8E-08	2E-06	0E+00	2E-06	3E-07	4.7E-06
6	0.00163	6E-03	2E-06	6E-06	3E-06	3E-06	1E-06	8E-08	2E-06	0E+00	2E-06	3E-07	4.4E-06
6	0.00155	5E-03	2E-06	6E-06	3E-06	3E-06	1E-06	7E-08	2E-06	0E+00	2E-06	3E-07	4.1E-06
6	0.00148	5E-03	2E-06	5E-06	3E-06	3E-06	1E-06	7E-08	2E-06	0E+00	2E-06	3E-07	3.8E-06
5	0.00141	5E-03	2E-06	5E-06	3E-06	3E-06	1E-06	6E-08	2E-06	0E+00	2E-06	3E-07	3.6E-06
5	0.00135	4E-03	2E-06	5E-06	3E-06	2E-06	1E-06	6E-08	1E-06	0E+00	2E-06	2E-07	3.4E-06

Dry Bulk — Dose Inhallation; Risk (Residential 30-yr; school 9-yr; park 15-year)

TAMT Risk Assessment - DPM Cancer and Chronic HI

AERMOD Output

Refrigerated Containers | Multi-Purpose General Cargo | Dry Bulk

Dose Inhallation | Risk (Residential 30-yr; school 9-yr; park 15-yr)

	Discrete Receptor ID (Group Name)	X	Y	quipment: Multi-Purpose General CargoSTC MIT 0.0%	quipment: Dry BulkSTC MIT 70%	Locomotives: All 100%	Locomotives: Refrigerated ContainersSTC MIT 0%	Locomotives: Multi-Purpose General CargoSTC MIT 54%	Locomotives: Dry BulkSTC MIT 46%	Trucks: All 100%	Trucks: Refrigerated ContainersSTC MIT 62%	Trucks: Multi-Purpose General CargoSTC MIT 4%	Trucks: Dry BulkSTC MIT 34%	All	Refrigerated Containers ug/m3
residential	REC_100M	487630.59	3619125.04	0E+00	9E-04	1E-03	0E+00	6E-04	5E-04	0.00018	0.00011	7.6E-06	5.9E-05	0.01	0.0055
residential	REC_100M	487730.59	3619125.04	0E+00	8E-04	1E-03	0E+00	5E-04	4E-04	0.00017	0.00011	7.4E-06	5.8E-05	0.01	0.00532
residential	REC_100M	487830.59	3619125.04	0E+00	8E-04	9E-04	0E+00	5E-04	4E-04	0.00017	0.0001	7.2E-06	5.6E-05	0.01	0.00517
residential	REC_100M	487930.59	3619125.04	0E+00	8E-04	9E-04	0E+00	5E-04	4E-04	0.00016	0.0001	7E-06	5.5E-05	0.01	0.00504
residential	REC_100M	488030.59	3619125.04	0E+00	7E-04	8E-04	0E+00	4E-04	4E-04	0.00015	9.5E-05	6.7E-06	5.2E-05	0.01	0.00486
residential	REC_100M	488130.59	3619125.04	0E+00	7E-04	7E-04	0E+00	4E-04	3E-04	0.00015	9.1E-05	6.3E-06	4.9E-05	0.01	0.00468
residential	REC_100M	476730.59	3619225.04	0E+00	5E-05	4E-05	0E+00	2E-05	2E-05	4.4E-06	2.7E-06	1.9E-07	1.5E-06	0.00	0.00132
residential	REC_100M	476830.59	3619225.04	0E+00	5E-05	5E-05	0E+00	2E-05	2E-05	4.5E-06	2.8E-06	2E-07	1.5E-06	0.00	0.00138
residential	REC_100M	476930.59	3619225.04	0E+00	5E-05	5E-05	0E+00	3E-05	2E-05	4.6E-06	2.8E-06	2E-07	1.5E-06	0.00	0.00142
residential	REC_100M	477030.59	3619225.04	0E+00	5E-05	5E-05	0E+00	3E-05	2E-05	4.6E-06	2.8E-06	2E-07	1.5E-06	0.00	0.00145
residential	REC_100M	477130.59	3619225.04	0E+00	5E-05	5E-05	0E+00	3E-05	2E-05	4.7E-06	2.9E-06	2E-07	1.6E-06	0.00	0.00153
residential	REC_100M	477230.59	3619225.04	0E+00	6E-05	6E-05	0E+00	3E-05	3E-05	5.3E-06	3.3E-06	2.3E-07	1.8E-06	0.00	0.00179
residential	REC_100M	477330.59	3619225.04	0E+00	6E-05	6E-05	0E+00	3E-05	3E-05	5.6E-06	3.5E-06	2.4E-07	1.9E-06	0.00	0.00199
residential	REC_100M	477430.59	3619225.04	0E+00	6E-05	6E-05	0E+00	3E-05	3E-05	5.8E-06	3.6E-06	2.5E-07	2E-06	0.00	0.00217
residential	REC_100M	477530.59	3619225.04	0E+00	7E-05	6E-05	0E+00	3E-05	3E-05	6E-06	3.7E-06	2.6E-07	2E-06	0.01	0.00236
residential	REC_100M	477630.59	3619225.04	0E+00	7E-05	6E-05	0E+00	3E-05	3E-05	6.2E-06	3.8E-06	2.7E-07	2.1E-06	0.01	0.00256
residential	REC_100M	477730.59	3619225.04	0E+00	7E-05	7E-05	0E+00	4E-05	3E-05	6.3E-06	3.9E-06	2.7E-07	2.1E-06	0.01	0.00278
recreational	park	478330.59	3619225.04	0E+00	8E-05	8E-05	0E+00	4E-05	4E-05	7E-06	4.3E-06	3E-07	2.4E-06	0.01	0.00443
recreational	park	478430.59	3619225.04	0E+00	8E-05	8E-05	0E+00	4E-05	4E-05	7.1E-06	4.4E-06	3.1E-07	2.4E-06	0.01	0.00482
recreational	park	483830.59	3619225.04	0E+00	3E-04	5E-04	0E+00	3E-04	2E-04	2E-05	1.3E-05	8.8E-07	6.9E-06	0.02	0.0089
recreational	park	483930.59	3619225.04	0E+00	3E-04	6E-04	0E+00	3E-04	3E-04	2.1E-05	1.3E-05	9E-07	7.1E-06	0.02	0.00847
recreational	park	484030.59	3619225.04	0E+00	3E-04	6E-04	0E+00	3E-04	3E-04	2.2E-05	1.3E-05	9.3E-07	7.3E-06	0.02	0.00824
recreational	park	484130.59	3619225.04	0E+00	4E-04	6E-04	0E+00	3E-04	3E-04	2.2E-05	1.4E-05	9.6E-07	7.5E-06	0.02	0.00816
residential	REC_100M	484230.59	3619225.04	0E+00	4E-04	6E-04	0E+00	4E-04	3E-04	2.3E-05	1.4E-05	1E-06	7.8E-06	0.02	0.00804
residential	REC_100M	484330.59	3619225.04	0E+00	4E-04	7E-04	0E+00	4E-04	3E-04	2.4E-05	1.5E-05	1E-06	8.1E-06	0.02	0.00809
residential	REC_100M	484430.59	3619225.04	0E+00	5E-04	7E-04	0E+00	4E-04	3E-04	2.5E-05	1.6E-05	1.1E-06	8.5E-06	0.02	0.00791
residential	REC_100M	484530.59	3619225.04	0E+00	6E-04	8E-04	0E+00	4E-04	4E-04	2.7E-05	1.6E-05	1.1E-06	9E-06	0.02	0.00814
residential	REC_100M	484630.59	3619225.04	0E+00	7E-04	8E-04	0E+00	4E-04	4E-04	2.9E-05	1.8E-05	1.2E-06	9.6E-06	0.02	0.00832
residential	REC_100M	484730.59	3619225.04	0E+00	8E-04	9E-04	0E+00	5E-04	4E-04	3.1E-05	1.9E-05	1.4E-06	1.1E-05	0.02	0.00865
residential	REC_100M	484830.59	3619225.04	0E+00	9E-04	9E-04	0E+00	5E-04	4E-04	3.5E-05	2.2E-05	1.5E-06	1.2E-05	0.02	0.00912
residential	REC_100M	484930.59	3619225.04	0E+00	1E-03	9E-04	0E+00	5E-04	4E-04	4E-05	2.5E-05	1.7E-06	1.4E-05	0.02	0.00964
residential	REC_100M	485030.59	3619225.04	0E+00	1E-03	1E-03	0E+00	5E-04	4E-04	4.7E-05	2.9E-05	2E-06	1.6E-05	0.02	0.01028
residential	REC_100M	485130.59	3619225.04	0E+00	2E-03	1E-03	0E+00	6E-04	5E-04	5.5E-05	3.4E-05	2.4E-06	1.8E-05	0.02	0.01101
residential	REC_100M	485230.59	3619225.04	0E+00	2E-03	1E-03	0E+00	6E-04	5E-04	6.5E-05	4E-05	2.8E-06	2.2E-05	0.02	0.01179
residential	REC_100M	485330.59	3619225.04	0E+00	2E-03	1E-03	0E+00	7E-04	6E-04	7.9E-05	4.9E-05	3.4E-06	2.7E-05	0.02	0.01252
residential	REC_100M	485430.59	3619225.04	0E+00	3E-03	1E-03	0E+00	8E-04	7E-04	9.9E-05	6.1E-05	4.3E-06	3.3E-05	0.03	0.01313
residential	REC_100M	485530.59	3619225.04	0E+00	3E-03	2E-03	0E+00	9E-04	8E-04	0.00012	7.6E-05	5.3E-06	4.2E-05	0.03	0.01359
residential	REC_100M	485630.59	3619225.04	0E+00	3E-03	2E-03	0E+00	1E-03	9E-04	0.00015	9.2E-05	6.4E-06	5E-05	0.03	0.01385
residential	REC_100M	485730.59	3619225.04	0E+00	4E-03	2E-03	0E+00	1E-03	1E-03	0.00017	0.00011	7.5E-06	5.9E-05	0.03	0.01392
residential	REC_100M	485830.59	3619225.04	0E+00	4E-03	3E-03	0E+00	1E-03	1E-03	0.0002	0.00012	8.7E-06	6.8E-05	0.03	0.01391
residential	REC_100M	485930.59	3619225.04	0E+00	4E-03	3E-03	0E+00	2E-03	1E-03	0.00023	0.00014	9.7E-06	7.6E-05	0.03	0.0137
residential	REC_100M	486030.59	3619225.04	0E+00	4E-03	3E-03	0E+00	2E-03	1E-03	0.00024	0.00015	1E-05	8.1E-05	0.03	0.01321
residential	REC_100M	486230.59	3619225.04	0E+00	3E-03	3E-03	0E+00	2E-03	1E-03	0.00025	0.00015	1.1E-05	8.4E-05	0.03	0.01203
residential	REC_100M	486330.59	3619225.04	0E+00	3E-03	3E-03	0E+00	2E-03	1E-03	0.00024	0.00015	1E-05	7.9E-05	0.03	0.0114
residential	REC_100M	486430.59	3619225.04	0E+00	3E-03	3E-03	0E+00	1E-03	1E-03	0.00022	0.00014	9.6E-06	7.5E-05	0.03	0.01075
residential	REC_100M	486530.59	3619225.04	0E+00	2E-03	2E-03	0E+00	1E-03	1E-03	0.00021	0.00013	9.2E-06	7.2E-05	0.03	0.01006
residential	REC_100M	486630.59	3619225.04	0E+00	2E-03	2E-03	0E+00	1E-03	1E-03	0.00021	0.00013	9.1E-06	7.1E-05	0.02	0.00942
residential	REC_100M	486730.59	3619225.04	0E+00	2E-03	2E-03	0E+00	1E-03	9E-04	0.0002	0.00012	8.6E-06	6.7E-05	0.02	0.00877
residential	REC_100M	486830.59	3619225.04	0E+00	2E-03	2E-03	0E+00	1E-03	8E-04	0.00019	0.00012	8.2E-06	6.4E-05	0.02	0.00816
residential	REC_100M	486930.59	3619225.04	0E+00	2E-03	2E-03	0E+00	1E-03	8E-04	0.0002	0.00013	8.7E-06	6.8E-05	0.02	0.00778
residential	REC_100M	487030.59	3619225.04	0E+00	1E-03	2E-03	0E+00	9E-04	7E-04	0.00018	0.00011	7.9E-06	6.2E-05	0.02	0.00722
residential	REC_100M	487130.59	3619225.04	0E+00	1E-03	1E-03	0E+00	7E-04	6E-04	0.00015	9.5E-05	6.7E-06	5.2E-05	0.02	0.0065
residential	REC_100M	487230.59	3619225.04	0E+00	1E-03	1E-03	0E+00	7E-04	6E-04	0.00017	0.0001	7.2E-06	5.6E-05	0.02	0.00639
residential	REC_100M	487330.59	3619225.04	0E+00	1E-03	1E-03	0E+00	7E-04	6E-04	0.00018	0.00011	7.8E-06	6.1E-05	0.02	0.00624
residential	REC_100M	487430.59	3619225.04	0E+00	1E-03	1E-03	0E+00	7E-04	6E-04	0.00018	0.00011	7.9E-06	6.2E-05	0.02	0.006
residential	REC_100M	487530.59	3619225.04	0E+00	9E-04	1E-03	0E+00	6E-04	5E-04	0.00017	0.00011	7.4E-06	5.8E-05	0.01	0.00566
residential	REC_100M	487630.59	3619225.04	0E+00	9E-04	1E-03	0E+00	5E-04	5E-04	0.00016	0.0001	7E-06	5.5E-05	0.01	0.00539
residential	REC_100M	487730.59	3619225.04	0E+00	8E-04	9E-04	0E+00	5E-04	4E-04	0.00015	9.2E-05	6.4E-06	5E-05	0.01	0.00508
residential	REC_100M	487830.59	3619225.04	0E+00	7E-04	9E-04	0E+00	5E-04	4E-04	0.00015	9.4E-05	6.6E-06	5.1E-05	0.01	0.00499
residential	REC_100M	487930.59	3619225.04	0E+00	7E-04	8E-04	0E+00	5E-04	4E-04	0.00015	9.5E-05	6.6E-06	5.2E-05	0.01	0.00491
residential	REC_100M	488030.59	3619225.04	0E+00	7E-04	8E-04	0E+00	4E-04	4E-04	0.00015	9.1E-05	6.4E-06	5E-05	0.01	0.00477
residential	REC_100M	476730.59	3619325.04	0E+00	5E-05	4E-05	0E+00	2E-05	2E-05	4.3E-06	2.7E-06	1.9E-07	1.5E-06	0.00	0.0013
residential	REC_100M	476830.59	3619325.04	0E+00	5E-05	5E-05	0E+00	2E-05	2E-05	4.4E-06	2.7E-06	1.9E-07	1.5E-06	0.00	0.00134
residential	REC_100M	476930.59	3619325.04	0E+00	5E-05	5E-05	0E+00	2E-05	2E-05	4.4E-06	2.7E-06	1.9E-07	1.5E-06	0.00	0.00138
residential	REC_100M	477030.59	3619325.04	0E+00	5E-05	5E-05	0E+00	2E-05	2E-05	4.4E-06	2.7E-06	1.9E-07	1.5E-06	0.00	0.00141
residential	REC_100M	477130.59	3619325.04	0E+00	5E-05	5E-05	0E+00	3E-05	2E-05	4.5E-06	2.8E-06	2E-07	1.5E-06	0.00	0.00148
residential	REC_100M	477230.59	3619325.04	0E+00	5E-05	5E-05	0E+00	3E-05	2E-05	5.1E-06	3.1E-06	2.2E-07	1.7E-06	0.00	0.0017
residential	REC_100M	477330.59	3619325.04	0E+00	6E-05	6E-05	0E+00	3E-05	3E-05	5.3E-06	3.3E-06	2.3E-07	1.8E-06	0.00	0.00185
residential	REC_100M	477430.59	3619325.04	0E+00	6E-05	6E-05	0E+00	3E-05	3E-05	5.6E-06	3.4E-06	2.4E-07	1.9E-06	0.00	0.00203
residential	REC_100M	477530.59	3619325.04	0E+00	6E-05	6E-05	0E+00	3E-05	3E-05	5.7E-06	3.6E-06	2.5E-07	1.9E-06	0.00	0.00221
residential	REC_100M	477630.59	3619325.04	0E+00	7E-05	6E-05	0E+00	3E-05	3E-05	5.9E-06	3.7E-06	2.6E-07	2E-06	0.01	0.00239
residential	REC_100M	477730.59	3619325.04	0E+00	7E-05	6E-05	0E+00	3E-05	3E-05	6.1E-06	3.8E-06	2.6E-07	2.1E-06	0.01	0.00261
recreational	park	477830.59	3619325.04	0E+00	7E-05	7E-05	0E+00	4E-05	3E-05	6.3E-06	3.9E-06	2.7E-07	2.1E-06	0.01	0.00298
recreational	park	478430.59	3619325.04	0E+00	8E-05	8E-05	0E+00	4E-05	4E-05	6.8E-06	4.2E-06	2.9E-07	2.3E-06	0.01	0.00443
recreational	park	478530.59	3619325.04	0E+00	8E-05	8E-05	0E+00	4E-05	4E-05	6.9E-06	4.3E-06	3E-07	2.3E-06	0.01	0.00489
recreational	park	478630.59	3619325.04	0E+00	8E-05	8E-05	0E+00	4E-05	4E-05	7E-06	4.3E-06	3E-07	2.4E-06	0.01	0.00556
recreational	park	483530.59	3619325.04	0E+00	2E-04	4E-04	0E+00	2E-04	2E-04	1.7E-05	1.1E-05	7.5E-07	5.8E-06	0.02	0.00925
recreational	park	483830.59	3619325.04	0E+00	3E-04	5E-04	0E+00	3E-04	2E-04	1.9E-05	1.2E-05	8E-07	6.3E-06	0.02	0.00808
recreational	park	483930.59	3619325.04	0E+00	3E-04	5E-04	0E+00	3E-04	2E-04	1.9E-05	1.2E-05	8.3E-07	6.5E-06	0.02	0.00792
residential	REC_100M	484030.59	3619325.04	0E+00	3E-04	5E-04	0E+00	3E-04	2E-04	2E-05	1.2E-05	8.5E-07	6.7E-06	0.02	0.00782
residential	REC_100M	484130.59	3619325.04	0E+00	3E-04	6E-04	0E+00	3E-04	3E-04	2E-05	1.3E-05	8.8E-07	6.9E-06	0.02	0.00774
residential	REC_100M	484230.59	3619325.04	0E+00	4E-04	6E-04	0E+00	3E-04	3E-04	2.1E-05	1.3E-05	9.1E-07	7.1E-06	0.02	0.00765
residential	REC_100M	484330.59	3619325.04	0E+00	4E-04	6E-04	0E+00	3E-04	3E-04	2.2E-05	1.4E-05	9.6E-07	7.5E-06	0.02	0.00759
residential	REC_100M	484430.59	3619325.04	0E+00	5E-04	6E-04	0E+00	3E-04	3E-04	2.3E-05	1.4E-05	1E-06	7.9E-06	0.02	0.00754
residential	REC_100M	484530.59	3619325.04	0E+00	5E-04	7E-04	0E+00	4E-04	3E-04	2.5E-05	1.5E-05	1.1E-06	8.4E-06	0.02	0.00765
residential	REC_100M	484630.59	3619325.04	0E+00	6E-04	7E-04	0E+00	4E-04	3E-04	2.7E-05	1.7E-05	1.2E-06	9.1E-06	0.02	0.00791
residential	REC_100M	484730.59	3619325.04	0E+00	7E-04	8E-04	0E+00	4E-04	3E-04	3E-05	1.9E-05	1.3E-06	1E-05	0.02	0.00826
residential	REC_100M	484830.59	3619325.04	0E+00	8E-04	8E-04	0E+00	4E-04	4E-04	3.4E-05	2.1E-05	1.5E-06	1.1E-05	0.02	0.00868
residential	REC_100M	484930.59	3619325.04	0E+00	1E-03	8E-04	0E+00	4E-04	4E-04	3.9E-05	2.4E-05	1.7E-06	1.3E-05	0.02	0.00915
residential	REC_100M	485030.59	3619325.04	0E+00	1E-03	9E-04	0E+00	5E-04	4E-04	4.4E-05	2.7E-05	1.9E-06	1.5E-05	0.02	0.00971
residential	REC_100M	485130.59	3619325.04	0E+00	1E-03	9E-04	0E+00	5E-04	4E-04	5.1E-05	3.2E-05	2.2E-06	1.7E-05	0.02	0.01034
residential	REC_100M	485230.59	3619325.04	0E+00	2E-03	1E-03	0E+00	5E-04	5E-04	6E-05	3.7E-05	2.6E-06	2E-05	0.02	0.01101
residential	REC_100M	485330.59	3619325.04	0E+00	2E-03	1E-03	0E+00	6E-04	5E-04	7.2E-05	4.4E-05	3.1E-06	2.4E-05	0.02	0.01163
residential	REC_100M	485430.59	3619325.04	0E+00	3E-03	1E-03	0E+00	7E-04	6E-04	8.8E-05	5.5E-05	3.8E-06	3E-05	0.02	0.01219
residential	REC_100M	485530.59	3619325.04	0E+00	3E-03	1E-03	0E+00	8E-04	7E-04	0.00011	6.7E-05	4.7E-06	3.6E-05	0.03	0.01262
residential	REC_100M	485630.59	3619325.04	0E+00	3E-03	2E-03	0E+00	9E-04	8E-04	0.00013	7.9E-05	5.5E-06	4.3E-05	0.03	0.01291
residential	REC_100M	485730.59	3619325.04	0E+00	3E-03	2E-03	0E+00	1E-03	9E-04	0.00015	9.2E-05	6.4E-06	5E-05	0.03	0.01304
residential	REC_100M	485830.59	3619325.04	0E+00	3E-03	2E-03	0E+00	1E-03	1E-03	0.00017	0.00011	7.5E-06	5.9E-05	0.03	0.01312
residential	REC_100M	485930.59	3619325.04	0E+00	3E-03	2E-03	0E+00	1E-03	1E-03	0.00019	0.00012	8.4E-06	6.5E-05	0.03	0.013
residential	REC_100M	486030.59	3619325.04	0E+00	3E-03	3E-03	0E+00	1E-03	1E-03	0.00021	0.00013	9.1E-06	7.1E-05	0.03	0.01267
residential	REC_100M	486230.59	3619325.04	0E+00	3E-03	3E-03	0E+00	1E-03	1E-03	0.00022	0.00014	9.5E-06	7.4E-05	0.03	0.01171
residential	REC_100M	486330.59	3619325.04	0E+00	3E-03	2E-03	0E+00	1E-03	1E-03	0.00021	0.00013	9E-06	7.1E-05	0.03	0.01118
residential	REC_100M	486430.59	3619325.04	0E+00	2E-03	2E-03	0E+00	1E-03	1E-03	0.0002	0.00012	8.5E-06	6.7E-05	0.03	0.01059
residential	REC_100M	486530.59	3619325.04	0E+00	2E-03	2E-03	0E+00	1E-03	1E-03	0.00019	0.00012	8.1E-06	6.4E-05	0.02	0.00995
residential	REC_100M	486630.59	3619325.04	0E+00	2E-03	2E-03	0E+00	1E-03	9E-04	0.00018	0.00011	7.9E-06	6.2E-05	0.02	0.00931
residential	REC_100M	486730.59	3619325.04	0E+00	2E-03	2E-03	0E+00	1E-03	8E-04	0.00017	0.00011	7.5E-06	5.9E-05	0.02	0.00866
residential	REC_100M	486830.59	3619325.04	0E+00	1E-03	2E-03	0E+00	9E-04	8E-04	0.00016	0.0001	7.1E-06	5.6E-05	0.02	0.00801
residential	REC_100M	486930.59	3619325.04	0E+00	1E-03	2E-03	0E+00	9E-04	7E-04	0.00017	0.00011	7.4E-06	5.8E-05	0.02	0.00762
residential	REC_100M	487030.59	3619325.04	0E+00	1E-03	1E-03	0E+00	8E-04	7E-04	0.00016	0.0001	7E-06	5.5E-05	0.02	0.00712
residential	REC_100M	487130.59	3619325.04	0E+00	1E-03	1E-03	0E+00	7E-04	6E-04	0.00015	9.6E-05	6.7E-06	5.2E-05	0.02	0.00666
residential	REC_100M	487230.59	3619325.04	0E+00	1E-03	1E-03	0E+00	7E-04	6E-04	0.00017	0.0001	7.2E-06	5.6E-05	0.02	0.00647
residential	REC_100M	487330.59	3619325.04	0E+00	1E-03	1E-03	0E+00	6E-04	5E-04	0.00015	9.4E-05	6.6E-06	5.2E-05	0.02	0.00604
residential	REC_100M	487430.59	3619325.04	0E+00	1E-03	1E-03	0E+00	6E-04	5E-04	0.00016	0.0001	7.1E-06	5.6E-05	0.02	0.0059
residential	REC_100M	487530.59	3619325.04	0E+00	9E-04	1E-03	0E+00	6E-04	5E-04	0.00015	9.4E-05	6.6E-06	5.1E-05	0.01	0.00553
residential	REC_100M	487630.59	3619325.04	0E+00	8E-04	1E-03	0E+00	5E-04	5E-04	0.00015	9.5E-05	6.7E-06	5.2E-05	0.01	0.00534
residential	REC_100M	487730.59	3619325.04	0E+00	8E-04	9E-04	0E+00	5E-04	4E-04	0.00014	8.8E-05	6.2E-06	4.8E-05	0.01	0.00505
residential	REC_100M	487830.59	3619325.04	0E+00	7E-04	8E-04	0E+00	4E-04	4E-04	0.00013	8.4E-05	5.8E-06	4.6E-05	0.01	0.00482
residential	REC_100M	487930.59	3619325.04	0E+00	7E-04	8E-04	0E+00	4E-04	4E-04	0.00014	8.4E-05	5.9E-06	4.6E-05	0.01	0.0047
residential	REC_100M	476730.59	3619425.04	0E+00	5E-05	4E-05	0E+00	2E-05	2E-05	4.3E-06	2.6E-06	1.8E-07	1.4E-06	0.00	0.00127
residential	REC_100M	476830.59	3619425.04	0E+00	5E-05	4E-05	0E+00	2E-05	2E-05	4.3E-06	2.7E-06	1.9E-07	1.5E-06	0.00	0.00131
residential	REC_100M	476930.59	3619425.04	0E+00	5E-05	4E-05	0E+00	2E-05	2E-05	4.3E-06	2.7E-06	1.9E-07	1.5E-06	0.00	0.00134
residential	REC_100M	477030.59	3619425.04	0E+00	5E-05	5E-05	0E+00	2E-05	2E-05	4.3E-06	2.7E-06	1.9E-07	1.5E-06	0.00	0.00137
residential	REC_100M	477130.59	3619425.04	0E+00	5E-05	5E-05	0E+00	3E-05	2E-05	4.4E-06	2.7E-06	1.9E-07	1.5E-06	0.00	0.00143
residential	REC_100M	477230.59	3619425.04	0E+00	5E-05	5E-05	0E+00	3E-05	2E-05	4.6E-06	2.8E-06	2E-07	1.5E-06	0.00	0.00152
residential	REC_100M	477330.59	3619425.04	0E+00	5E-05	5E-05	0E+00	3E-05	2E-05	4.9E-06	3E-06	2.1E-07	1.7E-06	0.00	0.00166
residential	REC_100M	477430.59	3619425.04	0E+00	6E-05	6E-05	0E+00	3E-05	3E-05	5.3E-06	3.3E-06	2.3E-07	1.8E-06	0.00	0.00188
residential	REC_100M	477530.59	3619425.04	0E+00	6E-05	6E-05	0E+00	3E-05	3E-05	5.5E-06	3.4E-06	2.4E-07	1.9E-06	0.00	0.00205
residential	REC_100M	477630.59	3619425.04	0E+00	6E-05	6E-05	0E+00	3E-05	3E-05	5.6E-06	3.5E-06	2.4E-07	1.9E-06	0.00	0.00221
residential	REC_100M	477730.59	3619425.04	0E+00	6E-05	6E-05	0E+00	3E-05	3E-05	5.8E-06	3.6E-06	2.5E-07	2E-06	0.01	0.00243
recreational	park	477830.59	3619425.04	0E+00	7E-05	7E-05	0E+00	4E-05	3E-05	6.1E-06	3.8E-06	2.6E-07	2E-06	0.01	0.00272
recreational	park	478530.59	3619425.04	0E+00	8E-05	8E-05	0E+00	4E-05	4E-05	6.6E-06	4.1E-06	2.9E-07	2.2E-06	0.01	0.00447
recreational	park	478630.59	3619425.04	0E+00	8E-05	8E-05	0E+00	4E-05	4E-05	6.7E-06	4.2E-06	2.9E-07	2.3E-06	0.01	0.00491
recreational	park	483530.59	3619425.04	0E+00	2E-04	4E-04	0E+00	2E-04	2E-04	1.6E-05	9.9E-06	6.9E-07	5.4E-06	0.02	0.00848
recreational	park	483630.59	3619425.04	0E+00	2E-04	4E-04	0E+00	2E-04	2E-04	1.6E-05	1E-05	7.1E-07	5.5E-06	0.02	0.00805
recreational	park	483730.59	3619425.04	0E+00	2E-04	4E-04	0E+00	2E-04	2E-04	1.7E-05	1E-05	7.2E-07	5.7E-06	0.02	0.00778
recreational	park	483830.59	3619425.04	0E+00	3E-04	4E-04	0E+00	2E-04	2E-04	1.7E-05	1.1E-05	7.4E-07	5.8E-06	0.02	0.00755
recreational	park	483930.59	3619425.04	0E+00	3E-04	5E-04	0E+00	3E-04	2E-04	1.8E-05	1.1E-05	7.6E-07	6E-06	0.02	0.0074
residential	REC_100M	484030.59	3619425.04	0E+00	3E-04	5E-04	0E+00	3E-04	2E-04	1.8E-05	1.1E-05	7.9E-07	6.2E-06	0.02	0.00737
residential	REC_100M	484130.59	3619425.04	0E+00	3E-04	5E-04	0E+00	3E-04	2E-04	1.9E-05	1.2E-05	8.2E-07	6.4E-06	0.02	0.00727
residential	REC_100M	484230.59	3619425.04	0E+00	4E-04	6E-04	0E+00	3E-04	3E-04	2E-05	1.2E-05	8.5E-07	6.6E-06	0.02	0.00721
residential	REC_100M	484330.59	3619425.04	0E+00	4E-04	5E-04	0E+00	3E-04	2E-04	2.1E-05	1.3E-05	8.9E-07	7E-06	0.01	0.0071
residential	REC_100M	484430.59	3619425.04	0E+00	4E-04	5E-04	0E+00	3E-04	3E-04	2.2E-05	1.4E-05	9.5E-07	7.4E-06	0.01	0.00713
residential	REC_100M	484530.59	3619425.04	0E+00	5E-04	6E-04	0E+00	3E-04	3E-04	2.4E-05	1.5E-05	1E-06	8E-06	0.02	0.00729
residential	REC_100M	484630.59	3619425.04	0E+00	6E-04	6E-04	0E+00	3E-04	3E-04	2.6E-05	1.6E-05	1.1E-06	8.8E-06	0.02	0.00756
residential	REC_100M	484730.59	3619425.04	0E+00	7E-04	7E-04	0E+00	4E-04	3E-04	2.9E-05	1.8E-05	1.3E-06	9.8E-06	0.02	0.00789
residential	REC_100M	484830.59	3619425.04	0E+00	8E-04	7E-04	0E+00	4E-04	3E-04	3.2E-05	2E-05	1.4E-06	1.1E-05	0.02	0.00824
residential	REC_100M	484930.59	3619425.04	0E+00	9E-04	7E-04	0E+00	4E-04	3E-04	3.7E-05	2.3E-05	1.6E-06	1.2E-05	0.02	0.00868
residential	REC_100M	485030.59	3619425.04	0E+00	1E-03	7E-04	0E+00	4E-04	3E-04	4.2E-05	2.6E-05	1.8E-06	1.4E-05	0.02	0.00918
residential	REC_100M	485130.59	3619425.04	0E+00	1E-03	8E-04	0E+00	4E-04	4E-04	4.8E-05	3E-05	2.1E-06	1.6E-05	0.02	0.00972
residential	REC_100M	485230.59	3619425.04	0E+00	2E-03	9E-04	0E+00	5E-04	4E-04	5.6E-05	3.5E-05	2.4E-06	1.9E-05	0.02	0.01034
residential	REC_100M	485330.59	3619425.04	0E+00	2E-03	1E-03	0E+00	5E-04	5E-04	6.5E-05	4E-05	2.8E-06	2.2E-05	0.02	0.01086
residential	REC_100M	485430.59	3619425.04	0E+00	2E-03	1E-03	0E+00	6E-04	5E-04	7.9E-05	4.9E-05	3.4E-06	2.7E-05	0.02	0.01136
residential	REC_100M	485530.59	3619425.04	0E+00	2E-03	1E-03	0E+00	7E-04	6E-04	9.6E-05	5.9E-05	4.1E-06	3.2E-05	0.02	0.01177
residential	REC_100M	485630.59	3619425.04	0E+00	3E-03	2E-03	0E+00	8E-04	7E-04	0.00011	7E-05	4.9E-06	3.8E-05	0.02	0.01206
residential	REC_100M	485730.59	3619425.04	0E+00	3E-03	2E-03	0E+00	9E-04	8E-04	0.00013	8.1E-05	5.7E-06	4.4E-05	0.03	0.01223
residential	REC_100M	485830.59	3619425.04	0E+00	3E-03	2E-03	0E+00	1E-03	9E-04	0.00015	9.4E-05	6.6E-06	5.1E-05	0.03	0.01245
residential	REC_100M	485930.59	3619425.04	0E+00	3E-03	2E-03	0E+00	1E-03	1E-03	0.00017	0.0001	7.3E-06	5.7E-05	0.03	0.0123
residential	REC_100M	486030.59	3619425.04	0E+00	3E-03	2E-03	0E+00	1E-03	1E-03	0.00018	0.00011	7.9E-06	6.2E-05	0.03	0.01207
residential	REC_100M	486230.59	3619425.04	0E+00	3E-03	2E-03	0E+00	1E-03	1E-03	0.00019	0.00012	8.4E-06	6.5E-05	0.03	0.01133
residential	REC_100M	486330.59	3619425.04	0E+00	2E-03	2E-03	0E+00	1E-03	1E-03	0.00018	0.00011	8E-06	6.2E-05	0.03	0.01089
residential	REC_100M	486430.59	3619425.04	0E+00	2E-03	2E-03	0E+00	1E-03	9E-04	0.00017	0.00011	7.5E-06	5.9E-05	0.02	0.01036
residential	REC_100M	486530.59	3619425.04	0E+00	2E-03	2E-03	0E+00	1E-03	9E-04	0.00017	0.0001	7.2E-06	5.6E-05	0.02	0.00977
residential	REC_100M	486630.59	3619425.04	0E+00	2E-03	2E-03	0E+00	1E-03	8E-04	0.00016	9.9E-05	6.9E-06	5.4E-05	0.02	0.00914
residential	REC_100M	486730.59	3619425.04	0E+00	2E-03	2E-03	0E+00	9E-04	8E-04	0.00015	9.5E-05	6.6E-06	5.2E-05	0.02	0.00849

TAMT Risk Assessment - DPM Cancer and Chronic HI

AERMOD Output

Receptor type	Discrete Receptor ID (Group Name)	X	Y	Equipment: Multi-Purpose General CargoSTC MIT (0.0%)	Equipment: Dry BulkSTC MIT (70%)	Locomotives: All (100%)	Locomotives: Refrigerated Containers STC MIT (0%)	Locomotives: Multi-Purpose General CargoSTC MIT (54%)	Locomotives: Dry BulkSTC MIT (46%)	Trucks: All (100%)	Trucks: Refrigerated Containers STC MIT (62%)	Trucks: Multi-Purpose General CargoSTC MIT (4%)	Trucks: Dry BulkSTC MIT (34%)	All	Refrigerated Containers – Dose Inhallation ug/m3
residential	REC_100	486830.59	3619425.04	0E+00	1E-03	2E-03	0E+00	8E-04	7E-04	0.00015	9.1E-05	6.4E-06	5E-05	0.02	0.00787
residential	REC_100	486930.59	3619425.04	0E+00	1E-03	2E-03	0E+00	8E-04	7E-04	0.00016	9.8E-05	6.9E-06	5.4E-05	0.02	0.00761
residential	REC_100	487030.59	3619425.04	0E+00	1E-03	1E-03	0E+00	7E-04	6E-04	0.00015	9.2E-05	6.4E-06	5E-05	0.02	0.00704
residential	REC_100	487130.59	3619425.04	0E+00	1E-03	1E-03	0E+00	7E-04	6E-04	0.00014	8.9E-05	6.2E-06	4.9E-05	0.02	0.00661
residential	REC_100	487230.59	3619425.04	0E+00	1E-03	1E-03	0E+00	7E-04	6E-04	0.00015	9.2E-05	6.4E-06	5E-05	0.02	0.00639
residential	REC_100	487330.59	3619425.04	0E+00	9E-04	1E-03	0E+00	6E-04	5E-04	0.00013	8.3E-05	5.8E-06	4.5E-05	0.02	0.00586
residential	REC_100	487430.59	3619425.04	0E+00	1E-03	1E-03	0E+00	6E-04	5E-04	0.00015	9.5E-05	6.7E-06	5.2E-05	0.02	0.00587
residential	REC_100	487530.59	3619425.04	0E+00	9E-04	1E-03	0E+00	6E-04	5E-04	0.00015	9.3E-05	6.5E-06	5.1E-05	0.01	0.00559
residential	REC_100	487630.59	3619425.04	0E+00	8E-04	9E-04	0E+00	5E-04	4E-04	0.00014	8.5E-05	6E-06	4.7E-05	0.01	0.00523
residential	REC_100	487730.59	3619425.04	0E+00	7E-04	9E-04	0E+00	5E-04	4E-04	0.00013	8.3E-05	5.8E-06	4.5E-05	0.01	0.005
residential	REC_100	487830.59	3619425.04	0E+00	7E-04	8E-04	0E+00	4E-04	4E-04	0.00013	7.8E-05	5.4E-06	4.2E-05	0.01	0.00474
residential	REC_100	476730.59	3619525.04	0E+00	4E-05	4E-05	0E+00	2E-05	2E-05	4.2E-06	2.6E-06	1.8E-07	1.4E-06	0.00	0.00124
residential	REC_100	476830.59	3619525.04	0E+00	4E-05	4E-05	0E+00	2E-05	2E-05	4.2E-06	2.6E-06	1.8E-07	1.4E-06	0.00	0.00127
residential	REC_100	476930.59	3619525.04	0E+00	4E-05	4E-05	0E+00	2E-05	2E-05	4.2E-06	2.6E-06	1.8E-07	1.4E-06	0.00	0.00129
residential	REC_100	477030.59	3619525.04	0E+00	4E-05	4E-05	0E+00	2E-05	2E-05	4.2E-06	2.6E-06	1.8E-07	1.4E-06	0.00	0.00132
residential	REC_100	477130.59	3619525.04	0E+00	5E-05	5E-05	0E+00	2E-05	2E-05	4.3E-06	2.7E-06	1.9E-07	1.5E-06	0.00	0.00139
residential	REC_100	477230.59	3619525.04	0E+00	5E-05	5E-05	0E+00	3E-05	2E-05	4.4E-06	2.8E-06	1.9E-07	1.5E-06	0.00	0.00146
residential	REC_100	477330.59	3619525.04	0E+00	5E-05	5E-05	0E+00	3E-05	2E-05	4.6E-06	2.8E-06	2E-07	1.6E-06	0.00	0.00155
residential	REC_100	477430.59	3619525.04	0E+00	5E-05	5E-05	0E+00	3E-05	2E-05	5E-06	3.1E-06	2.2E-07	1.7E-06	0.00	0.00173
residential	REC_100	477530.59	3619525.04	0E+00	6E-05	6E-05	0E+00	3E-05	3E-05	5.2E-06	3.2E-06	2.3E-07	1.8E-06	0.00	0.0019
residential	REC_100	477630.59	3619525.04	0E+00	6E-05	6E-05	0E+00	3E-05	3E-05	5.4E-06	3.3E-06	2.3E-07	1.8E-06	0.00	0.00203
residential	REC_100	477730.59	3619525.04	0E+00	6E-05	6E-05	0E+00	3E-05	3E-05	5.6E-06	3.4E-06	2.4E-07	1.9E-06	0.00	0.00225
recreational	park	477830.59	3619525.04	0E+00	6E-05	6E-05	0E+00	3E-05	3E-05	5.8E-06	3.6E-06	2.5E-07	2E-06	0.01	0.00256
recreational	park	477930.59	3619525.04	0E+00	7E-05	7E-05	0E+00	4E-05	3E-05	5.9E-06	3.7E-06	2.6E-07	2E-06	0.01	0.00283
recreational	park	478630.59	3619525.04	0E+00	8E-05	8E-05	0E+00	4E-05	4E-05	6.5E-06	4E-06	2.8E-07	2.2E-06	0.01	0.0045
recreational	park	478730.59	3619525.04	0E+00	8E-05	8E-05	0E+00	4E-05	4E-05	6.6E-06	4.1E-06	2.8E-07	2.2E-06	0.01	0.00492
recreational	park	483830.59	3619525.04	0E+00	2E-04	4E-04	0E+00	2E-04	2E-04	1.6E-05	9.9E-06	6.9E-07	5.4E-06	0.02	0.00706
recreational	park	483930.59	3619525.04	0E+00	3E-04	4E-04	0E+00	2E-04	2E-04	1.6E-05	1E-05	7.1E-07	5.6E-06	0.01	0.00696
residential	REC_100	484030.59	3619525.04	0E+00	3E-04	5E-04	0E+00	2E-04	2E-04	1.7E-05	1.1E-05	7.4E-07	5.7E-06	0.01	0.00691
residential	REC_100	484130.59	3619525.04	0E+00	3E-04	5E-04	0E+00	3E-04	2E-04	1.8E-05	1.1E-05	7.6E-07	6E-06	0.01	0.00685
residential	REC_100	484230.59	3619525.04	0E+00	3E-04	5E-04	0E+00	3E-04	2E-04	1.9E-05	1.1E-05	8E-07	6.3E-06	0.01	0.00679
residential	REC_100	484330.59	3619525.04	0E+00	4E-04	5E-04	0E+00	2E-04	2E-04	1.9E-05	1.2E-05	8.3E-07	6.5E-06	0.01	0.00663
residential	REC_100	484430.59	3619525.04	0E+00	4E-04	5E-04	0E+00	3E-04	2E-04	2.1E-05	1.3E-05	8.9E-07	7E-06	0.01	0.00677
residential	REC_100	484530.59	3619525.04	0E+00	5E-04	5E-04	0E+00	3E-04	2E-04	2.2E-05	1.4E-05	9.7E-07	7.6E-06	0.01	0.00695
residential	REC_100	484630.59	3619525.04	0E+00	5E-04	6E-04	0E+00	3E-04	3E-04	2.5E-05	1.6E-05	1.1E-06	8.5E-06	0.01	0.00723
residential	REC_100	484730.59	3619525.04	0E+00	6E-04	5E-04	0E+00	3E-04	2E-04	2.7E-05	1.7E-05	1.2E-06	9.2E-06	0.01	0.0074
residential	REC_100	484830.59	3619525.04	0E+00	7E-04	6E-04	0E+00	3E-04	3E-04	3.1E-05	1.9E-05	1.3E-06	1E-05	0.02	0.00781
residential	REC_100	484930.59	3619525.04	0E+00	8E-04	6E-04	0E+00	3E-04	3E-04	3.5E-05	2.2E-05	1.5E-06	1.2E-05	0.02	0.00823
residential	REC_100	485030.59	3619525.04	0E+00	1E-03	7E-04	0E+00	4E-04	3E-04	4E-05	2.5E-05	1.7E-06	1.3E-05	0.02	0.00868
residential	REC_100	485130.59	3619525.04	0E+00	1E-03	7E-04	0E+00	4E-04	3E-04	4.5E-05	2.8E-05	1.9E-06	1.5E-05	0.02	0.00918
residential	REC_100	485230.59	3619525.04	0E+00	1E-03	8E-04	0E+00	4E-04	4E-04	5.2E-05	3.2E-05	2.2E-06	1.7E-05	0.02	0.00969
residential	REC_100	485330.59	3619525.04	0E+00	2E-03	9E-04	0E+00	5E-04	4E-04	6E-05	3.7E-05	2.6E-06	2E-05	0.02	0.01017
residential	REC_100	485430.59	3619525.04	0E+00	2E-03	1E-03	0E+00	6E-04	5E-04	7.2E-05	4.4E-05	3.1E-06	2.4E-05	0.02	0.01062
residential	REC_100	485530.59	3619525.04	0E+00	2E-03	1E-03	0E+00	6E-04	6E-04	8.6E-05	5.3E-05	3.7E-06	2.9E-05	0.02	0.01099
residential	REC_100	485630.59	3619525.04	0E+00	2E-03	1E-03	0E+00	7E-04	6E-04	0.0001	6.2E-05	4.3E-06	3.4E-05	0.02	0.01128
residential	REC_100	485730.59	3619525.04	0E+00	2E-03	2E-03	0E+00	8E-04	7E-04	0.00012	7.2E-05	5E-06	3.9E-05	0.02	0.01147
residential	REC_100	485830.59	3619525.04	0E+00	3E-03	2E-03	0E+00	9E-04	8E-04	0.00013	8.2E-05	5.8E-06	4.5E-05	0.02	0.0116
residential	REC_100	485930.59	3619525.04	0E+00	3E-03	2E-03	0E+00	1E-03	9E-04	0.00015	9.2E-05	6.4E-06	5E-05	0.02	0.01161
residential	REC_100	486030.59	3619525.04	0E+00	2E-03	2E-03	0E+00	1E-03	9E-04	0.00016	9.7E-05	6.8E-06	5.3E-05	0.02	0.01142
residential	REC_100	486130.59	3619525.04	0E+00	3E-03	2E-03	0E+00	1E-03	1E-03	0.00017	0.00011	7.5E-06	5.9E-05	0.03	0.01128
residential	REC_100	487730.59	3619525.04	0E+00	8E-04	9E-04	0E+00	5E-04	4E-04	0.00013	7.9E-05	5.5E-06	4.3E-05	0.01	0.00499
residential	REC_100	476730.59	3619625.04	0E+00	4E-05	4E-05	0E+00	2E-05	2E-05	4E-06	2.5E-06	1.7E-07	1.4E-06	0.00	0.00119
residential	REC_100	476830.59	3619625.04	0E+00	4E-05	4E-05	0E+00	2E-05	2E-05	4.1E-06	2.5E-06	1.8E-07	1.4E-06	0.00	0.00123
residential	REC_100	476930.59	3619625.04	0E+00	4E-05	4E-05	0E+00	2E-05	2E-05	4.1E-06	2.5E-06	1.8E-07	1.4E-06	0.00	0.00124
residential	REC_100	477030.59	3619625.04	0E+00	4E-05	4E-05	0E+00	2E-05	2E-05	4.1E-06	2.6E-06	1.8E-07	1.4E-06	0.00	0.00129
residential	REC_100	477130.59	3619625.04	0E+00	4E-05	4E-05	0E+00	2E-05	2E-05	4.3E-06	2.6E-06	1.8E-07	1.4E-06	0.00	0.00135
residential	REC_100	477230.59	3619625.04	0E+00	5E-05	5E-05	0E+00	3E-05	2E-05	4.4E-06	2.7E-06	1.9E-07	1.5E-06	0.00	0.00142
residential	REC_100	477330.59	3619625.04	0E+00	5E-05	5E-05	0E+00	3E-05	2E-05	4.5E-06	2.8E-06	1.9E-07	1.5E-06	0.00	0.00148
residential	REC_100	477430.59	3619625.04	0E+00	5E-05	5E-05	0E+00	3E-05	2E-05	4.7E-06	2.9E-06	2.1E-07	1.6E-06	0.00	0.00162
residential	REC_100	477530.59	3619625.04	0E+00	5E-05	5E-05	0E+00	3E-05	2E-05	5E-06	3.1E-06	2.2E-07	1.7E-06	0.00	0.00176
residential	REC_100	477630.59	3619625.04	0E+00	5E-05	6E-05	0E+00	3E-05	3E-05	5.1E-06	3.2E-06	2.2E-07	1.7E-06	0.00	0.00185
residential	REC_100	477730.59	3619625.04	0E+00	6E-05	6E-05	0E+00	3E-05	3E-05	5.3E-06	3.3E-06	2.3E-07	1.8E-06	0.00	0.00206
recreational	park	477830.59	3619625.04	0E+00	6E-05	6E-05	0E+00	3E-05	3E-05	5.6E-06	3.5E-06	2.4E-07	1.9E-06	0.01	0.00238
recreational	park	477930.59	3619625.04	0E+00	7E-05	7E-05	0E+00	4E-05	3E-05	5.7E-06	3.5E-06	2.5E-07	1.9E-06	0.01	0.0027
recreational	park	478030.59	3619625.04	0E+00	7E-05	7E-05	0E+00	4E-05	3E-05	5.8E-06	3.6E-06	2.5E-07	2E-06	0.01	0.0028
recreational	park	478730.59	3619625.04	0E+00	7E-05	8E-05	0E+00	4E-05	4E-05	6.3E-06	3.9E-06	2.7E-07	2.1E-06	0.01	0.00452
recreational	park	478830.59	3619625.04	0E+00	8E-05	8E-05	0E+00	4E-05	4E-05	6.4E-06	4E-06	2.8E-07	2.2E-06	0.01	0.00488
recreational	park	483830.59	3619625.04	0E+00	2E-04	4E-04	0E+00	2E-04	2E-04	1.5E-05	9.2E-06	6.5E-07	5E-06	0.01	0.00663
recreational	park	483930.59	3619625.04	0E+00	3E-04	4E-04	0E+00	2E-04	2E-04	1.5E-05	9.5E-06	6.7E-07	5.2E-06	0.01	0.00655
residential	REC_100	484030.59	3619625.04	0E+00	3E-04	4E-04	0E+00	2E-04	2E-04	1.6E-05	9.9E-06	6.9E-07	5.4E-06	0.01	0.00653
residential	REC_100	484130.59	3619625.04	0E+00	3E-04	4E-04	0E+00	2E-04	2E-04	1.7E-05	1E-05	7.2E-07	5.7E-06	0.01	0.00649
residential	REC_100	484230.59	3619625.04	0E+00	3E-04	4E-04	0E+00	2E-04	2E-04	1.8E-05	1.1E-05	7.6E-07	6E-06	0.01	0.00634
residential	REC_100	484330.59	3619625.04	0E+00	4E-04	4E-04	0E+00	2E-04	2E-04	1.8E-05	1.1E-05	7.9E-07	6.2E-06	0.01	0.0063
residential	REC_100	484430.59	3619625.04	0E+00	4E-04	4E-04	0E+00	2E-04	2E-04	2E-05	1.2E-05	8.6E-07	6.7E-06	0.01	0.00647
residential	REC_100	484530.59	3619625.04	0E+00	5E-04	5E-04	0E+00	3E-04	2E-04	2.2E-05	1.3E-05	9.4E-07	7.3E-06	0.01	0.00665
residential	REC_100	484630.59	3619625.04	0E+00	5E-04	5E-04	0E+00	3E-04	2E-04	2.4E-05	1.5E-05	1E-06	8.1E-06	0.01	0.00686
residential	REC_100	484730.59	3619625.04	0E+00	6E-04	5E-04	0E+00	3E-04	2E-04	2.6E-05	1.6E-05	1.1E-06	8.9E-06	0.01	0.00704
residential	REC_100	484830.59	3619625.04	0E+00	7E-04	5E-04	0E+00	3E-04	2E-04	3E-05	1.8E-05	1.3E-06	1E-05	0.01	0.00735
residential	REC_100	484930.59	3619625.04	0E+00	8E-04	6E-04	0E+00	3E-04	3E-04	3.4E-05	2.1E-05	1.4E-06	1.1E-05	0.02	0.00783
residential	REC_100	485030.59	3619625.04	0E+00	9E-04	6E-04	0E+00	3E-04	3E-04	3.8E-05	2.3E-05	1.6E-06	1.3E-05	0.02	0.00825
residential	REC_100	485130.59	3619625.04	0E+00	1E-03	7E-04	0E+00	4E-04	3E-04	4.3E-05	2.6E-05	1.8E-06	1.4E-05	0.02	0.00869
residential	REC_100	485230.59	3619625.04	0E+00	1E-03	7E-04	0E+00	4E-04	3E-04	4.8E-05	3E-05	2.1E-06	1.6E-05	0.02	0.00914
residential	REC_100	485330.59	3619625.04	0E+00	1E-03	8E-04	0E+00	5E-04	4E-04	5.6E-05	3.4E-05	2.4E-06	1.9E-05	0.02	0.00956
residential	REC_100	485430.59	3619625.04	0E+00	2E-03	1E-03	0E+00	5E-04	4E-04	6.5E-05	4E-05	2.8E-06	2.2E-05	0.02	0.00996
residential	REC_100	485530.59	3619625.04	0E+00	2E-03	1E-03	0E+00	6E-04	5E-04	7.7E-05	4.8E-05	3.3E-06	2.6E-05	0.02	0.0103
residential	REC_100	485630.59	3619625.04	0E+00	2E-03	1E-03	0E+00	7E-04	6E-04	9E-05	5.6E-05	3.9E-06	3.1E-05	0.02	0.01056
residential	REC_100	485730.59	3619625.04	0E+00	2E-03	1E-03	0E+00	8E-04	6E-04	0.0001	6.5E-05	4.5E-06	3.5E-05	0.02	0.01076
residential	REC_100	485830.59	3619625.04	0E+00	2E-03	2E-03	0E+00	8E-04	7E-04	0.00012	7.3E-05	5.1E-06	4E-05	0.02	0.0109
residential	REC_100	485930.59	3619625.04	0E+00	2E-03	2E-03	0E+00	9E-04	8E-04	0.00013	8.2E-05	5.7E-06	4.5E-05	0.02	0.01095
residential	REC_100	486030.59	3619625.04	0E+00	2E-03	2E-03	0E+00	9E-04	8E-04	0.00014	8.6E-05	6E-06	4.7E-05	0.02	0.01084
residential	REC_100	486130.59	3619625.04	0E+00	2E-03	2E-03	0E+00	1E-03	9E-04	0.00015	9.5E-05	6.6E-06	5.2E-05	0.02	0.01074
residential	REC_100	487630.59	3619625.04	0E+00	8E-04	9E-04	0E+00	5E-04	4E-04	0.00012	7.4E-05	5.2E-06	4E-05	0.01	0.00512
residential	REC_100	476730.59	3619725.04	0E+00	4E-05	4E-05	0E+00	2E-05	2E-05	3.9E-06	2.4E-06	1.7E-07	1.3E-06	0.00	0.00115
residential	REC_100	476830.59	3619725.04	0E+00	4E-05	4E-05	0E+00	2E-05	2E-05	4E-06	2.5E-06	1.7E-07	1.3E-06	0.00	0.00118
residential	REC_100	476930.59	3619725.04	0E+00	4E-05	4E-05	0E+00	2E-05	2E-05	4E-06	2.5E-06	1.7E-07	1.3E-06	0.00	0.0012
residential	REC_100	477030.59	3619725.04	0E+00	4E-05	4E-05	0E+00	2E-05	2E-05	4.1E-06	2.5E-06	1.8E-07	1.4E-06	0.00	0.00125
residential	REC_100	477130.59	3619725.04	0E+00	4E-05	4E-05	0E+00	2E-05	2E-05	4.2E-06	2.6E-06	1.8E-07	1.4E-06	0.00	0.00131
residential	REC_100	477230.59	3619725.04	0E+00	4E-05	5E-05	0E+00	2E-05	2E-05	4.3E-06	2.6E-06	1.8E-07	1.4E-06	0.00	0.00137
residential	REC_100	477330.59	3619725.04	0E+00	4E-05	5E-05	0E+00	3E-05	2E-05	4.3E-06	2.7E-06	1.9E-07	1.5E-06	0.00	0.00142
residential	REC_100	477430.59	3619725.04	0E+00	5E-05	5E-05	0E+00	3E-05	2E-05	4.5E-06	2.8E-06	1.9E-07	1.5E-06	0.00	0.0015
residential	REC_100	477530.59	3619725.04	0E+00	5E-05	5E-05	0E+00	3E-05	2E-05	4.8E-06	3E-06	2.1E-07	1.6E-06	0.00	0.00164
residential	REC_100	477630.59	3619725.04	0E+00	5E-05	5E-05	0E+00	3E-05	2E-05	4.9E-06	3E-06	2.1E-07	1.6E-06	0.00	0.00172
residential	REC_100	477730.59	3619725.04	0E+00	5E-05	6E-05	0E+00	3E-05	3E-05	5.1E-06	3.2E-06	2.2E-07	1.7E-06	0.00	0.00192
recreational	park	477830.59	3619725.04	0E+00	6E-05	6E-05	0E+00	3E-05	3E-05	5.4E-06	3.3E-06	2.3E-07	1.8E-06	0.00	0.00223
recreational	park	478130.59	3619725.04	0E+00	7E-05	7E-05	0E+00	4E-05	3E-05	5.7E-06	3.5E-06	2.4E-07	1.9E-06	0.01	0.00282
recreational	park	478830.59	3619725.04	0E+00	7E-05	8E-05	0E+00	4E-05	4E-05	6.2E-06	3.8E-06	2.7E-07	2.1E-06	0.01	0.00452
recreational	park	478930.59	3619725.04	0E+00	7E-05	8E-05	0E+00	4E-05	4E-05	6.2E-06	3.9E-06	2.7E-07	2.1E-06	0.01	0.00481
recreational	park	479030.59	3619725.04	0E+00	8E-05	8E-05	0E+00	4E-05	4E-05	6.3E-06	3.9E-06	2.7E-07	2.1E-06	0.01	0.00536
recreational	park	483830.59	3619725.04	0E+00	2E-04	4E-04	0E+00	2E-04	2E-04	1.4E-05	8.7E-06	6.1E-07	4.8E-06	0.01	0.00624
recreational	park	483930.59	3619725.04	0E+00	2E-04	4E-04	0E+00	2E-04	2E-04	1.5E-05	9E-06	6.3E-07	4.9E-06	0.01	0.00618
residential	REC_100	484030.59	3619725.04	0E+00	3E-04	4E-04	0E+00	2E-04	2E-04	1.5E-05	9.4E-06	6.6E-07	5.1E-06	0.01	0.00618
residential	REC_100	484130.59	3619725.04	0E+00	3E-04	4E-04	0E+00	2E-04	2E-04	1.6E-05	9.9E-06	6.9E-07	5.4E-06	0.01	0.00634
residential	REC_100	484230.59	3619725.04	0E+00	3E-04	4E-04	0E+00	2E-04	2E-04	1.7E-05	1E-05	7.3E-07	5.7E-06	0.01	0.0061
residential	REC_100	484330.59	3619725.04	0E+00	3E-04	4E-04	0E+00	2E-04	2E-04	1.8E-05	1.1E-05	7.8E-07	6.1E-06	0.01	0.00613
residential	REC_100	484430.59	3619725.04	0E+00	4E-04	4E-04	0E+00	2E-04	2E-04	1.9E-05	1.2E-05	8.3E-07	6.5E-06	0.01	0.00616
residential	REC_100	484530.59	3619725.04	0E+00	4E-04	4E-04	0E+00	2E-04	2E-04	2.1E-05	1.3E-05	9.1E-07	7.1E-06	0.01	0.00632
residential	REC_100	484630.59	3619725.04	0E+00	5E-04	4E-04	0E+00	2E-04	2E-04	2.3E-05	1.4E-05	1E-06	7.8E-06	0.01	0.00653
residential	REC_100	484730.59	3619725.04	0E+00	5E-04	5E-04	0E+00	2E-04	2E-04	2.6E-05	1.6E-05	1.1E-06	8.7E-06	0.01	0.00679
residential	REC_100	484830.59	3619725.04	0E+00	6E-04	5E-04	0E+00	3E-04	2E-04	2.9E-05	1.8E-05	1.2E-06	9.7E-06	0.01	0.00709
residential	REC_100	484930.59	3619725.04	0E+00	7E-04	5E-04	0E+00	3E-04	2E-04	3.2E-05	2E-05	1.4E-06	1.1E-05	0.01	0.00748
residential	REC_100	485030.59	3619725.04	0E+00	8E-04	6E-04	0E+00	3E-04	3E-04	3.6E-05	2.2E-05	1.5E-06	1.2E-05	0.02	0.00783
residential	REC_100	485130.59	3619725.04	0E+00	1E-03	6E-04	0E+00	3E-04	3E-04	4E-05	2.5E-05	1.7E-06	1.4E-05	0.02	0.00823
residential	REC_100	485230.59	3619725.04	0E+00	1E-03	7E-04	0E+00	4E-04	3E-04	4.5E-05	2.8E-05	2E-06	1.5E-05	0.02	0.00863
residential	REC_100	485330.59	3619725.04	0E+00	1E-03	8E-04	0E+00	4E-04	4E-04	5.2E-05	3.2E-05	2.2E-06	1.7E-05	0.02	0.00901
residential	REC_100	485430.59	3619725.04	0E+00	2E-03	9E-04	0E+00	5E-04	4E-04	6E-05	3.7E-05	2.6E-06	2E-05	0.02	0.00936
residential	REC_100	485530.59	3619725.04	0E+00	2E-03	1E-03	0E+00	5E-04	5E-04	7E-05	4.4E-05	3E-06	2.4E-05	0.02	0.00967
residential	REC_100	485630.59	3619725.04	0E+00	2E-03	1E-03	0E+00	6E-04	5E-04	8.2E-05	5.1E-05	3.5E-06	2.8E-05	0.02	0.00991
residential	REC_100	485730.59	3619725.04	0E+00	2E-03	1E-03	0E+00	7E-04	6E-04	9.5E-05	5.9E-05	4.1E-06	3.2E-05	0.02	0.01013
residential	REC_100	485830.59	3619725.04	0E+00	2E-03	1E-03	0E+00	8E-04	6E-04	0.00011	6.7E-05	4.6E-06	3.6E-05	0.02	0.01029
residential	REC_100	485930.59	3619725.04	0E+00	2E-03	2E-03	0E+00	8E-04	7E-04	0.00012	7.3E-05	5.1E-06	4E-05	0.02	0.01034
residential	REC_100	486030.59	3619725.04	0E+00	2E-03	2E-03	0E+00	9E-04	7E-04	0.00013	8E-05	5.6E-06	4.4E-05	0.02	0.01031
residential	REC_100	476730.59	3619825.04	0E+00	4E-05	4E-05	0E+00	2E-05	2E-05	3.8E-06	2.4E-06	1.7E-07	1.3E-06	0.00	0.00112
residential	REC_100	476830.59	3619825.04	0E+00	4E-05	4E-05	0E+00	2E-05	2E-05	3.9E-06	2.4E-06	1.7E-07	1.3E-06	0.00	0.00115
residential	REC_100	476930.59	3619825.04	0E+00	4E-05	4E-05	0E+00	2E-05	2E-05	3.9E-06	2.4E-06	1.7E-07	1.3E-06	0.00	0.00117
residential	REC_100	477030.59	3619825.04	0E+00	4E-05	4E-05	0E+00	2E-05	2E-05	3.9E-06	2.4E-06	1.7E-07	1.3E-06	0.00	0.0012
residential	REC_100	477130.59	3619825.04	0E+00	4E-05	4E-05	0E+00	2E-05	2E-05	4E-06	2.5E-06	1.7E-07	1.4E-06	0.00	0.00126
residential	REC_100	477230.59	3619825.04	0E+00	4E-05	4E-05	0E+00	2E-05	2E-05	4.1E-06	2.6E-06	1.8E-07	1.4E-06	0.00	0.00131
residential	REC_100	477330.59	3619825.04	0E+00	4E-05	5E-05	0E+00	2E-05	2E-05	4.3E-06	2.6E-06	1.8E-07	1.4E-06	0.00	0.00137
residential	REC_100	477430.59	3619825.04	0E+00	4E-05	5E-05	0E+00	2E-05	2E-05	4.2E-06	2.6E-06	1.8E-07	1.4E-06	0.00	0.0014
residential	REC_100	477530.59	3619825.04	0E+00	5E-05	5E-05	0E+00	3E-05	2E-05	4.4E-06	2.7E-06	1.9E-07	1.5E-06	0.00	0.00149
residential	REC_100	477630.59	3619825.04	0E+00	5E-05	5E-05	0E+00	3E-05	2E-05	4.8E-06	2.9E-06	2.1E-07	1.6E-06	0.00	0.00166
residential	REC_100	477730.59	3619825.04	0E+00	5E-05	5E-05	0E+00	3E-05	3E-05	5E-06	3.1E-06	2.2E-07	1.7E-06	0.00	0.00183
residential	REC_100	477830.59	3619825.04	0E+00	6E-05	6E-05	0E+00	3E-05	3E-05	5.2E-06	3.2E-06	2.2E-07	1.7E-06	0.00	0.00209
recreational	park	477930.59	3619825.04	0E+00	6E-05	6E-05	0E+00	3E-05	3E-05	5.3E-06	3.3E-06	2.3E-07	1.8E-06	0.01	0.00242
recreational	park	478930.59	3619825.04	0E+00	7E-05	8E-05	0E+00	4E-05	4E-05	6E-06	3.7E-06	2.6E-07	2E-06	0.01	0.00447
recreational	park	479030.59	3619825.04	0E+00	7E-05	8E-05	0E+00	4E-05	4E-05	6.1E-06	3.8E-06	2.6E-07	2.1E-06	0.01	0.00473
recreational	park	479130.59	3619825.04	0E+00	7E-05	8E-05	0E+00	4E-05	4E-05	6.2E-06	3.8E-06	2.7E-07	2.1E-06	0.01	0.00521
recreational	park	483830.59	3619825.04	0E+00	2E-04	3E-04	0E+00	2E-04	2E-04	1.3E-05	8.3E-06	5.8E-07	4.5E-06	0.01	0.00594
recreational	park	483930.59	3619825.04	0E+00	2E-04	3E-04	0E+00	2E-04	2E-04	1.4E-05	8.6E-06	6E-07	4.7E-06	0.01	0.00591
residential	REC_100	484030.59	3619825.04	0E+00	3E-04	4E-04	0E+00	2E-04	2E-04	1.5E-05	9E-06	6.3E-07	4.9E-06	0.01	0.00591
residential	REC_100	484130.59	3619825.04	0E+00	3E-04	4E-04	0E+00	2E-04	2E-04	1.5E-05	9.5E-06	6.7E-07	5.2E-06	0.01	0.00584
residential	REC_100	484230.59	3619825.04	0E+00	3E-04	4E-04	0E+00	2E-04	2E-04	1.6E-05	1E-05	7.1E-07	5.6E-06	0.01	0.00584
residential	REC_100	484330.59	3619825.04	0E+00	3E-04	4E-04	0E+00	2E-04	2E-04	1.8E-05	1.1E-05	7.6E-07	5.9E-06	0.01	0.00586
residential	REC_100	484430.59	3619825.04	0E+00	4E-04	4E-04	0E+00	2E-04	2E-04	1.9E-05	1.2E-05	8.2E-07	6.4E-06	0.01	0.00592
residential	REC_100	484530.59	3619825.04	0E+00	4E-04	4E-04	0E+00	2E-04	2E-04	2.1E-05	1.3E-05	8.9E-07	7E-06	0.01	0.00604
residential	REC_100	484630.59	3619825.04	0E+00	5E-04	4E-04	0E+00	2E-04	2E-04	2.3E-05	1.4E-05	9.8E-07	7.7E-06	0.01	0.00625
residential	REC_100	484730.59	3619825.04	0E+00	5E-04	4E-04	0E+00	2E-04	2E-04	2.5E-05	1.6E-05	1.1E-06	8.5E-06	0.01	0.0065
residential	REC_100	484830.59	3619825.04	0E+00	6E-04	4E-04	0E+00	2E-04	2E-04	2.8E-05	1.7E-05	1.2E-06	9.4E-06	0.01	0.00677
residential	REC_100	484930.59	3619825.04	0E+00	7E-04	5E-04	0E+00	3E-04	2E-04	3.1E-05	1.9E-05	1.3E-06	1E-05	0.01	0.0071
residential	REC_100	485030.59	3619825.04	0E+00	8E-04	5E-04	0E+00	3E-04	2E-04	3.4E-05	2.1E-05	1.5E-06	1.2E-05	0.01	0.00747
residential	REC_100	485130.59	3619825.04	0E+00	9E-04	6E-04	0E+00	3E-04	3E-04	3.8E-05	2.3E-05	1.6E-06	1.3E-05	0.02	0.00781
residential	REC_100	485230.59	3619825.04	0E+00	1E-03	6E-04	0E+00	3E-04	3E-04	4.2E-05	2.6E-05	1.8E-06	1.4E-05	0.02	0.00817
residential	REC_100	485330.59	3619825.04	0E+00	1E-03	7E-04	0E+00	4E-04	3E-04	4.8E-05	3E-05	2.1E-06	1.6E-05	0.02	0.00851
residential	REC_100	485430.59	3619825.04	0E+00	1E-03	8E-04	0E+00	4E-04	4E-04	5.6E-05	3.4E-05	2.4E-06	1.9E-05	0.02	0.00882

TAMT Risk Assessment - DPM Cancer and Chronic HI

AERMOD Output

Land use	Discrete Receptor ID (Group Name)	X	Y	Equipment: Multi-Purpose General CargoSTC MIT (0.0%)	Equipment: Dry BulkSTC MIT (70%)	Locomotives: All (100%)	Locomotives: Refrigerated ContainersSTC MIT (0%)	Locomotives: Multi-Purpose General CargoSTC MIT (54%)	Locomotives: Dry BulkSTC MIT (46%)	Trucks: All (100%)	Trucks: Refrigerated ContainersSTC MIT (62%)	Trucks: Multi-Purpose General CargoSTC MIT (4%)	Trucks: Dry BulkSTC MIT (34%)	All
residential	REC_100M	485530.59	3619825.04	0E+00	2E-03	9E-04	0E+00	5E-04	4E-04	6.7E-05	4.1E-05	2.9E-06	2.3E-05	0.02
residential	REC_100M	485630.59	3619825.04	0E+00	2E-03	1E-03	0E+00	6E-04	5E-04	7.5E-05	4.7E-05	3.3E-06	2.5E-05	0.02
residential	REC_100M	485730.59	3619825.04	0E+00	2E-03	1E-03	0E+00	6E-04	5E-04	8.6E-05	5.3E-05	3.7E-06	2.9E-05	0.02
residential	REC_100M	485830.59	3619825.04	0E+00	2E-03	1E-03	0E+00	7E-04	6E-04	9.5E-05	5.9E-05	4.1E-06	3.2E-05	0.02
residential	REC_100M	485930.59	3619825.04	0E+00	2E-03	1E-03	0E+00	7E-04	6E-04	0.00011	6.6E-05	4.6E-06	3.6E-05	0.02
residential	REC_100M	486030.59	3619825.04	0E+00	2E-03	1E-03	0E+00	8E-04	7E-04	0.00012	7.2E-05	5.1E-06	4E-05	0.02
residential	REC_100M	476730.59	3619925.04	0E+00	4E-05	4E-05	0E+00	2E-05	2E-05	3.8E-06	2.3E-06	1.6E-07	1.3E-06	0.00
residential	REC_100M	476830.59	3619925.04	0E+00	4E-05	4E-05	0E+00	2E-05	2E-05	3.9E-06	2.4E-06	1.7E-07	1.3E-06	0.00
residential	REC_100M	476930.59	3619925.04	0E+00	4E-05	4E-05	0E+00	2E-05	2E-05	3.8E-06	2.4E-06	1.7E-07	1.3E-06	0.00
residential	REC_100M	477030.59	3619925.04	0E+00	4E-05	4E-05	0E+00	2E-05	2E-05	3.8E-06	2.4E-06	1.7E-07	1.3E-06	0.00

Refrigerated Containers

X	ug/m3	Dose Inhalation 3rd tri	0<2	2<9	2<16	16<30	Risk (Residential 30-yr; school 9-yr; park 15-year) 3rd tri	0<2	2<9	2<16	16<30	Summed Risk	Cases Per Million	Chronic HI
485530.59	0.00913	3.16E-06	9.55E-06	5.53E-06	5.01E-06	2.29E-06	1.2E-07	3E-06	0	3.3E-06	5E-07	6.933E-06	7	0.00183
485630.59	0.00932	3.23E-06	9.74E-06	5.64E-06	5.11E-06	2.33E-06	1.3E-07	3.1E-06	0	3.4E-06	5.1E-07	7.075E-06	7	0.00186
485730.59	0.00952	3.3E-06	9.95E-06	5.76E-06	5.22E-06	2.38E-06	1.3E-07	3.1E-06	0	3.4E-06	5.2E-07	7.229E-06	7	0.0019
485830.59	0.00964	3.34E-06	1.01E-05	5.83E-06	5.28E-06	2.41E-06	1.3E-07	3.2E-06	0	3.5E-06	5.3E-07	7.315E-06	7	0.00193
485930.59	0.00974	3.37E-06	1.02E-05	5.89E-06	5.34E-06	2.44E-06	1.3E-07	3.2E-06	0	3.5E-06	5.4E-07	7.396E-06	7	0.00195
486030.59	0.00978	3.39E-06	1.02E-05	5.92E-06	5.36E-06	2.45E-06	1.3E-07	3.2E-06	0	3.5E-06	5.4E-07	7.425E-06	7	0.00196
476730.59	0.00109	3.76E-07	1.14E-06	6.57E-07	5.96E-07	2.72E-07	1.5E-08	3.6E-07	0	3.9E-07	6E-08	8.246E-07	1	0.00022
476830.59	0.00112	3.89E-07	1.17E-06	6.8E-07	6.16E-07	2.81E-07	1.5E-08	3.7E-07	0	4.1E-07	6.2E-08	8.531E-07	1	0.00022
476930.59	0.00114	3.93E-07	1.19E-06	6.87E-07	6.23E-07	2.84E-07	1.5E-08	3.7E-07	0	4.1E-07	6.3E-08	8.619E-07	1	0.00023
477030.59	0.00115	3.99E-07	1.21E-06	6.98E-07	6.33E-07	2.89E-07	1.6E-08	3.8E-07	0	4.2E-07	6.4E-08	8.759E-07	1	0.00023

Multi-Purpose General Cargo

X	ug/m3	Dose Inhalation 3rd tri	0<2	2<9	2<16	16<30	Risk (Residential 30-yr; school 9-yr; park 15-year) 3rd tri	0<2	2<9	2<16	16<30	Summed Risk	Cases Per Million	Chronic HI
485530.59	4E-03	1E-06	4E-06	2E-06	2E-06	1E-06	5E-08	1E-06	0E+00	1E-06	2E-07	3.0E-06	3	0.0008
485630.59	4E-03	1E-06	4E-06	2E-06	2E-06	1E-06	6E-08	1E-06	0E+00	1E-06	2E-07	3.1E-06	3	0.00082
485730.59	4E-03	1E-06	4E-06	3E-06	2E-06	1E-06	6E-08	1E-06	0E+00	2E-06	2E-07	3.2E-06	3	0.00085
485830.59	4E-03	2E-06	5E-06	3E-06	2E-06	1E-06	6E-08	1E-06	0E+00	2E-06	2E-07	3.3E-06	3	0.00088
485930.59	5E-03	2E-06	5E-06	3E-06	2E-06	1E-06	6E-08	1E-06	0E+00	2E-06	2E-07	3.4E-06	3	0.0009
486030.59	5E-03	2E-06	5E-06	3E-06	3E-06	1E-06	6E-08	2E-06	0E+00	2E-06	3E-07	3.5E-06	4	0.00092
476730.59	6E-04	2E-07	6E-07	4E-07	3E-07	1E-07	8E-09	2E-07	0E+00	2E-07	3E-08	4.5E-07	0	0.00012
476830.59	6E-04	2E-07	6E-07	4E-07	3E-07	2E-07	8E-09	2E-07	0E+00	2E-07	3E-08	4.7E-07	0	0.00012
476930.59	6E-04	2E-07	6E-07	4E-07	3E-07	2E-07	8E-09	2E-07	0E+00	2E-07	3E-08	4.7E-07	0	0.00012
477030.59	6E-04	2E-07	7E-07	4E-07	3E-07	2E-07	9E-09	2E-07	0E+00	2E-07	3E-08	4.8E-07	0	0.00013

Dry Bulk

X	ug/m3	Dose Inhalation 3rd tri	0<2	2<9	2<16	16<30	Risk (Residential 30-yr; school 9-yr; park 15-year) 3rd tri	0<2	2<9	2<16	16<30	Summed Risk	Cases Per Million	Chronic HI
485530.59	5E-03	2E-06	6E-06	3E-06	3E-06	1E-06	7E-08	2E-06	0E+00	2E-06	3E-07	4.0E-06	4	0.00106
485630.59	5E-03	2E-06	6E-06	3E-06	3E-06	1E-06	7E-08	2E-06	0E+00	2E-06	3E-07	4.1E-06	4	0.00109
485730.59	6E-03	2E-06	6E-06	3E-06	3E-06	1E-06	8E-08	2E-06	0E+00	2E-06	3E-07	4.4E-06	4	0.00115
485830.59	6E-03	2E-06	6E-06	4E-06	3E-06	1E-06	8E-08	2E-06	0E+00	2E-06	3E-07	4.5E-06	4	0.00118
485930.59	6E-03	2E-06	6E-06	4E-06	3E-06	2E-06	8E-08	2E-06	0E+00	2E-06	3E-07	4.7E-06	5	0.00123
486030.59	6E-03	2E-06	7E-06	4E-06	3E-06	2E-06	9E-08	2E-06	0E+00	2E-06	3E-07	4.8E-06	5	0.00126
476730.59	7E-04	2E-07	7E-07	4E-07	4E-07	2E-07	9E-09	2E-07	0E+00	2E-07	4E-08	5.0E-07	0	0.00013
476830.59	7E-04	2E-07	7E-07	4E-07	4E-07	2E-07	9E-09	2E-07	0E+00	2E-07	4E-08	5.2E-07	1	0.00014
476930.59	7E-04	2E-07	7E-07	4E-07	4E-07	2E-07	9E-09	2E-07	0E+00	2E-07	4E-08	5.2E-07	1	0.00014
477030.59	7E-04	2E-07	7E-07	4E-07	4E-07	2E-07	1E-08	2E-07	0E+00	3E-07	4E-08	5.3E-07	1	0.00014

TAMT Risk Assessment - DPM Cancer and Chronic HI

AERMOD Output

Discrete Receptor ID (Group Name)		X	Y	Equipment: Multi-Purpose General CargoSTC MIT (0.0%)	Equipment: Dry BulkSTC MIT (70%)	Locomotives: All (100%)	Locomotives: Refrigerated ContainersSTC MIT (0%)	Locomotives: Multi-Purpose General CargoSTC MIT (54%)	Locomotives: Dry BulkSTC MIT (46%)	Trucks: All (100%)	Trucks: Refrigerated ContainersSTC MIT (62%)	Trucks: Multi-Purpose General CargoSTC MIT (4%)	Trucks: Dry BulkSTC MIT (34%)	All
residential	REC_100N	484230.59	3620225.04	0E+00	3E-04	3E-04	0E+00	1E-04	1E-04	1.5E-05	9.3E-06	6.5E-07	5.1E-06	0.01
residential	REC_100N	484330.59	3620225.04	0E+00	3E-04	3E-04	0E+00	1E-04	1E-04	1.6E-05	1E-05	7E-07	5.5E-06	0.01
residential	REC_100N	484430.59	3620225.04	0E+00	3E-04	3E-04	0E+00	2E-04	1E-04	1.8E-05	1.1E-05	7.6E-07	5.9E-06	0.01
residential	REC_100N	484530.59	3620225.04	0E+00	3E-04	3E-04	0E+00	2E-04	1E-04	1.9E-05	1.2E-05	8.2E-07	6.4E-06	0.01
residential	REC_100N	484630.59	3620225.04	0E+00	4E-04	3E-04	0E+00	2E-04	1E-04	2E-05	1.3E-05	8.9E-07	6.9E-06	0.01
residential	REC_100N	484730.59	3620225.04	0E+00	4E-04	3E-04	0E+00	2E-04	2E-04	2.2E-05	1.4E-05	9.5E-07	7.5E-06	0.01
residential	REC_100N	484830.59	3620225.04	0E+00	4E-04	3E-04	0E+00	2E-04	2E-04	2.4E-05	1.5E-05	1E-06	8E-06	0.01
residential	REC_100N	484930.59	3620225.04	0E+00	5E-04	4E-04	0E+00	2E-04	2E-04	2.6E-05	1.6E-05	1.1E-06	8.7E-06	0.01
residential	REC_100N	485030.59	3620225.04	0E+00	6E-04	4E-04	0E+00	2E-04	2E-04	2.8E-05	1.7E-05	1.2E-06	9.4E-06	0.01
residential	REC_100N	485130.59	3620225.04	0E+00	6E-04	4E-04	0E+00	2E-04	2E-04	2.8E-05	1.8E-05	1.2E-06	9.6E-06	0.01

Refrigerated Containers

X	ug/m3	Dose Inhalation: 3rd tri	0<2	2<9	2<16	16<30	Risk (Residential 30-yr; school 9-yr; park 15-year): 3rd tri	0<2	2<9	2<16	16<30	Summed Risk	Cases Per Million	Chronic HI
484230.59	0.00487	1.69E-06	5.09E-06	2.95E-06	2.67E-06	1.22E-06	6.6E-08	1.6E-06	0	1.8E-06	2.7E-07	3.697E-06	4	0.00097
484330.59	0.0049	1.7E-06	5.12E-06	2.96E-06	2.69E-06	1.23E-06	6.7E-08	1.6E-06	0	1.8E-06	2.7E-07	3.718E-06	4	0.00098
484430.59	0.00498	1.72E-06	5.21E-06	3.01E-06	2.73E-06	1.25E-06	6.8E-08	1.6E-06	0	1.8E-06	2.7E-07	3.781E-06	4	0.001
484530.59	0.00509	1.76E-06	5.32E-06	3.08E-06	2.79E-06	1.27E-06	6.9E-08	1.7E-06	0	1.8E-06	2.8E-07	3.864E-06	4	0.00102
484630.59	0.00524	1.81E-06	5.47E-06	3.17E-06	2.87E-06	1.31E-06	7.1E-08	1.7E-06	0	1.9E-06	2.9E-07	3.976E-06	4	0.00105
484730.59	0.00543	1.88E-06	5.67E-06	3.28E-06	2.98E-06	1.36E-06	7.4E-08	1.8E-06	0	2E-06	3E-07	4.119E-06	4	0.00109
484830.59	0.00564	1.95E-06	5.9E-06	3.41E-06	3.09E-06	1.41E-06	7.7E-08	1.9E-06	0	2E-06	3.1E-07	4.284E-06	4	0.00113
484930.59	0.00589	2.04E-06	6.16E-06	3.56E-06	3.23E-06	1.47E-06	8E-08	1.9E-06	0	2.1E-06	3.2E-07	4.471E-06	4	0.00118
485030.59	0.00613	2.12E-06	6.41E-06	3.71E-06	3.36E-06	1.53E-06	8.3E-08	2E-06	0	2.2E-06	3.4E-07	4.652E-06	5	0.00123
485130.59	0.00632	2.19E-06	6.6E-06	3.82E-06	3.46E-06	1.58E-06	8.6E-08	2.1E-06	0	2.3E-06	3.5E-07	4.794E-06	5	0.00126

Multi-Purpose General Cargo

X	ug/m3	Dose Inhalation: 3rd tri	0<2	2<9	2<16	16<30	Risk (Residential 30-yr; school 9-yr; park 15-year): 3rd tri	0<2	2<9	2<16	16<30	Summed Risk	Cases Per Million	Chronic HI
484230.59	3E-03	9E-07	3E-06	2E-06	1E-06	6E-07	3E-08	8E-07	0E+00	9E-07	1E-07	1.9E-06	2	0.0005
484330.59	2E-03	9E-07	3E-06	2E-06	1E-06	6E-07	3E-08	8E-07	0E+00	9E-07	1E-07	1.9E-06	2	0.0005
484430.59	2E-03	9E-07	3E-06	2E-06	1E-06	6E-07	3E-08	8E-07	0E+00	9E-07	1E-07	1.9E-06	2	0.0005
484530.59	2E-03	9E-07	3E-06	2E-06	1E-06	6E-07	3E-08	8E-07	0E+00	9E-07	1E-07	1.9E-06	2	0.0005
484630.59	3E-03	9E-07	3E-06	2E-06	1E-06	6E-07	3E-08	8E-07	0E+00	9E-07	1E-07	1.9E-06	2	0.0005
484730.59	3E-03	9E-07	3E-06	2E-06	1E-06	6E-07	3E-08	8E-07	0E+00	9E-07	1E-07	1.9E-06	2	0.00051
484830.59	3E-03	9E-07	3E-06	2E-06	1E-06	6E-07	4E-08	8E-07	0E+00	9E-07	1E-07	2.0E-06	2	0.00052
484930.59	3E-03	9E-07	3E-06	2E-06	1E-06	7E-07	4E-08	9E-07	0E+00	1E-06	1E-07	2.0E-06	2	0.00053
485030.59	3E-03	9E-07	3E-06	2E-06	1E-06	7E-07	4E-08	9E-07	0E+00	1E-06	1E-07	2.1E-06	2	0.00054
485130.59	3E-03	9E-07	3E-06	2E-06	1E-06	7E-07	4E-08	9E-07	0E+00	1E-06	2E-07	2.1E-06	2	0.00055

Dry Bulk

X	ug/m3	Dose Inhalation: 3rd tri	0<2	2<9	2<16	16<30	Risk (Residential 30-yr; school 9-yr; park 15-year): 3rd tri	0<2	2<9	2<16	16<30	Summed Risk	Cases Per Million	Chronic HI
484230.59	3E-03	1E-06	3E-06	2E-06	2E-06	7E-07	4E-08	9E-07	0E+00	1E-06	2E-07	2.1E-06	2	0.00056
484330.59	3E-03	1E-06	3E-06	2E-06	2E-06	7E-07	4E-08	9E-07	0E+00	1E-06	2E-07	2.1E-06	2	0.00055
484430.59	3E-03	1E-06	3E-06	2E-06	2E-06	7E-07	4E-08	9E-07	0E+00	1E-06	2E-07	2.1E-06	2	0.00055
484530.59	3E-03	1E-06	3E-06	2E-06	2E-06	7E-07	4E-08	9E-07	0E+00	1E-06	2E-07	2.1E-06	2	0.00056
484630.59	3E-03	1E-06	3E-06	2E-06	2E-06	7E-07	4E-08	9E-07	0E+00	1E-06	2E-07	2.1E-06	2	0.00056
484730.59	3E-03	1E-06	3E-06	2E-06	2E-06	7E-07	4E-08	9E-07	0E+00	1E-06	2E-07	2.2E-06	2	0.00057
484830.59	3E-03	1E-06	3E-06	2E-06	2E-06	7E-07	4E-08	1E-06	0E+00	1E-06	2E-07	2.2E-06	2	0.00058
484930.59	3E-03	1E-06	3E-06	2E-06	2E-06	8E-07	4E-08	1E-06	0E+00	1E-06	2E-07	2.3E-06	2	0.0006
485030.59	3E-03	1E-06	3E-06	2E-06	2E-06	8E-07	4E-08	1E-06	0E+00	1E-06	2E-07	2.4E-06	2	0.00062
485130.59	3E-03	1E-06	3E-06	2E-06	2E-06	8E-07	4E-08	1E-06	0E+00	1E-06	2E-07	2.4E-06	2	0.00063

TAMT Risk Assessment - DPM Cancer and Chronic HI

AERMOD Output

Discrete Receptor ID (Group Name)		X	Y	Equipment: Multi-Purpose General CargoSTC MIT (0.0%)	Equipment: Dry BulkSTC MIT (70%)	Locomotives: All (100%)	Locomotives: Refrigerated ContainersSTC MIT (0%)	Locomotives: Multi-Purpose General CargoSTC MIT (54%)	Locomotives: Dry BulkSTC MIT (46%)	Trucks: All (100%)	Trucks: Refrigerated ContainersSTC MIT (62%)	Trucks: Multi-Purpose General CargoSTC MIT (4%)	Trucks: Dry BulkSTC MIT (34%)	All
recreational	park	485630.59	3620625.04	0E+00	7E-04	5E-04	0E+00	3E-04	2E-04	3.8E-05	2.4E-05	1.7E-06	1.3E-05	0.01
recreational	park	485730.59	3620625.04	0E+00	7E-04	6E-04	0E+00	3E-04	3E-04	4.2E-05	2.6E-05	1.8E-06	1.4E-05	0.01
recreational	park	485830.59	3620625.04	0E+00	7E-04	6E-04	0E+00	3E-04	3E-04	4.4E-05	2.7E-05	1.9E-06	1.5E-05	0.01
residential	REC_100!	477330.59	3620725.04	0E+00	4E-05	4E-05	0E+00	2E-05	2E-05	3.4E-06	2.1E-06	1.5E-07	1.1E-06	0.00
residential	REC_100!	477430.59	3620725.04	0E+00	4E-05	4E-05	0E+00	2E-05	2E-05	3.4E-06	2.1E-06	1.4E-07	1.1E-06	0.00
residential	REC_100!	477530.59	3620725.04	0E+00	3E-05	4E-05	0E+00	2E-05	2E-05	3.3E-06	2E-06	1.4E-07	1.1E-06	0.00
residential	REC_100!	477630.59	3620725.04	0E+00	4E-05	4E-05	0E+00	2E-05	2E-05	3.4E-06	2.1E-06	1.5E-07	1.2E-06	0.00
residential	REC_100!	477730.59	3620725.04	0E+00	4E-05	4E-05	0E+00	2E-05	2E-05	3.6E-06	2.2E-06	1.6E-07	1.2E-06	0.00
residential	REC_100!	477830.59	3620725.04	0E+00	4E-05	4E-05	0E+00	2E-05	2E-05	3.8E-06	2.4E-06	1.7E-07	1.3E-06	0.00
residential	REC_100!	477930.59	3620725.04	0E+00	4E-05	4E-05	0E+00	2E-05	2E-05	3.9E-06	2.4E-06	1.7E-07	1.3E-06	0.00
[illegible]														

Refrigerated Containers

Receptor		X	Y	ug/m3	Dose Inhalation: 3rd tri	0<2	2<9	2<16	16<30	Risk (Residential 30-yr; school 9-yr; park 15-year): 3rd tri	0<2	2<9	2<16	16<30	Summed Risk	Cases Per Million	Chronic HI
recreational	park	485630.59	3620625.04	0.00581	0	5.57E-07	2.97E-07	2.41E-07	1.11E-07	0	1.7E-07	9.8E-08	0	1E-08	2.835E-07	0	0.00116
recreational	park	485730.59	3620625.04	0.00591	0	5.67E-07	3.02E-07	2.45E-07	1.13E-07	0	1.8E-07	1E-07	0	1.1E-08	2.884E-07	0	0.00118
recreational	park	485830.59	3620625.04	0.00588	0	5.64E-07	3.01E-07	2.44E-07	1.13E-07	0	1.8E-07	9.9E-08	0	1.1E-08	2.87E-07	0	0.00118
residential	REC_100!	477330.59	3620725.04	0.00104	3.61E-07	1.09E-06	6.31E-07	5.72E-07	2.61E-07	1.4E-08	3.4E-07	0	3.8E-07	5.7E-08	7.922E-07	1	0.00021
residential	REC_100!	477430.59	3620725.04	0.00105	3.65E-07	1.1E-06	6.37E-07	5.78E-07	2.64E-07	1.4E-08	3.5E-07	0	3.8E-07	5.8E-08	7.994E-07	1	0.00021
residential	REC_100!	477530.59	3620725.04	0.00106	3.66E-07	1.1E-06	6.39E-07	5.79E-07	2.64E-07	1.4E-08	3.5E-07	0	3.8E-07	5.8E-08	8.017E-07	1	0.00021
residential	REC_100!	477630.59	3620725.04	0.00111	3.85E-07	1.16E-06	6.72E-07	6.09E-07	2.78E-07	1.5E-08	3.6E-07	0	4E-07	6.1E-08	8.435E-07	1	0.00022
residential	REC_100!	477730.59	3620725.04	0.00119	4.12E-07	1.24E-06	7.2E-07	6.53E-07	2.98E-07	1.6E-08	3.9E-07	0	4.3E-07	6.6E-08	9.035E-07	1	0.00024
residential	REC_100!	477830.59	3620725.04	0.0013	4.5E-07	1.36E-06	7.87E-07	7.14E-07	3.26E-07	1.8E-08	4.3E-07	0	4.7E-07	7.2E-08	9.877E-07	1	0.00026
residential	REC_100!	477930.59	3620725.04	0.00137	4.74E-07	1.43E-06	8.29E-07	7.52E-07	3.43E-07	1.9E-08	4.5E-07	0	5E-07	7.5E-08	1.04E-06	1	0.00027
[illegible]																	

Multi-Purpose General Cargo

Receptor		X	Y	ug/m3	Dose Inhalation: 3rd tri	0<2	2<9	2<16	16<30	Risk (Residential 30-yr; school 9-yr; park 15-year): 3rd tri	0<2	2<9	2<16	16<30	Summed Risk	Cases Per Million	Chronic HI
recreational	park	485630.59	3620625.04	3E-03	0E+00	3E-07	1E-07	1E-07	5E-08	0E+00	8E-08	5E-08	0E+00	5E-09	1.3E-07	0	0.00054
recreational	park	485730.59	3620625.04	3E-03	0E+00	3E-07	1E-07	1E-07	5E-08	0E+00	8E-08	5E-08	0E+00	5E-09	1.3E-07	0	0.00055
recreational	park	485830.59	3620625.04	3E-03	0E+00	3E-07	1E-07	1E-07	5E-08	0E+00	8E-08	5E-08	0E+00	5E-09	1.3E-07	0	0.00055
residential	REC_100!	477330.59	3620725.04	6E-04	2E-07	6E-07	3E-07	3E-07	1E-07	8E-09	2E-07	0E+00	2E-07	3E-08	4.3E-07	0	0.00011
residential	REC_100!	477430.59	3620725.04	6E-04	2E-07	6E-07	3E-07	3E-07	1E-07	8E-09	2E-07	0E+00	2E-07	3E-08	4.4E-07	0	0.00011
residential	REC_100!	477530.59	3620725.04	6E-04	2E-07	6E-07	3E-07	3E-07	1E-07	8E-09	2E-07	0E+00	2E-07	3E-08	4.4E-07	0	0.00012
residential	REC_100!	477630.59	3620725.04	6E-04	2E-07	6E-07	4E-07	3E-07	2E-07	8E-09	2E-07	0E+00	2E-07	3E-08	4.6E-07	0	0.00012
residential	REC_100!	477730.59	3620725.04	7E-04	2E-07	7E-07	4E-07	4E-07	2E-07	9E-09	2E-07	0E+00	2E-07	4E-08	5.0E-07	0	0.00013
residential	REC_100!	477830.59	3620725.04	7E-04	2E-07	8E-07	4E-07	4E-07	2E-07	1E-08	2E-07	0E+00	3E-07	4E-08	5.5E-07	1	0.00014
residential	REC_100!	477930.59	3620725.04	8E-04	3E-07	8E-07	5E-07	4E-07	2E-07	1E-08	2E-07	0E+00	3E-07	4E-08	5.8E-07	1	0.00015
[illegible]																	

Dry Bulk

Receptor		X	Y	ug/m3	Dose Inhalation: 3rd tri	0<2	2<9	2<16	16<30	Risk (Residential 30-yr; school 9-yr; park 15-year): 3rd tri	0<2	2<9	2<16	16<30	Summed Risk	Cases Per Million	Chronic HI
recreational	park	485630.59	3620625.04	3E-03	0E+00	3E-07	2E-07	1E-07	6E-08	0E+00	1E-07	6E-08	0E+00	6E-09	1.6E-07	0	0.00066
recreational	park	485730.59	3620625.04	3E-03	0E+00	3E-07	2E-07	1E-07	7E-08	0E+00	1E-07	6E-08	0E+00	6E-09	1.7E-07	0	0.00068
recreational	park	485830.59	3620625.04	3E-03	0E+00	3E-07	2E-07	1E-07	7E-08	0E+00	1E-07	6E-08	0E+00	6E-09	1.7E-07	0	0.00068
residential	REC_100!	477330.59	3620725.04	6E-04	2E-07	7E-07	4E-07	3E-07	2E-07	9E-09	2E-07	0E+00	2E-07	3E-08	4.8E-07	0	0.00013
residential	REC_100!	477430.59	3620725.04	6E-04	2E-07	7E-07	4E-07	3E-07	2E-07	9E-09	2E-07	0E+00	2E-07	4E-08	4.8E-07	0	0.00013
residential	REC_100!	477530.59	3620725.04	6E-04	2E-07	7E-07	4E-07	3E-07	2E-07	9E-09	2E-07	0E+00	2E-07	4E-08	4.8E-07	0	0.00013
residential	REC_100!	477630.59	3620725.04	7E-04	2E-07	7E-07	4E-07	4E-07	2E-07	9E-09	2E-07	0E+00	2E-07	4E-08	5.1E-07	1	0.00013
residential	REC_100!	477730.59	3620725.04	7E-04	2E-07	8E-07	4E-07	4E-07	2E-07	1E-08	2E-07	0E+00	3E-07	4E-08	5.5E-07	1	0.00014
residential	REC_100!	477830.59	3620725.04	8E-04	3E-07	8E-07	5E-07	4E-07	2E-07	1E-08	3E-07	0E+00	3E-07	4E-08	6.0E-07	1	0.00016
residential	REC_100!	477930.59	3620725.04	8E-04	3E-07	9E-07	5E-07	5E-07	2E-07	1E-08	3E-07	0E+00	3E-07	5E-08	6.3E-07	1	0.00017
[illegible]																	

TAMT Risk Assessment - DPM Cancer and Chronic HI

AERMOD Output

	Discrete Receptor ID (Group Name)	X	Y	quipment: Multi-Purpose General CargoSTC MIT 0.0%	quipment: Dry BulkSTC MIT 70%	Locomotives: All 100%	Locomotives: Refrigerated ContainersSTC MIT 0%	Locomotives: Multi-Purpose General CargoSTC MIT 54%	Locomotives: Dry BulkSTC MIT 46%	Trucks: All 100%	Trucks: Refrigerated ContainersSTC MIT 62%	Trucks: Multi-Purpose General CargoSTC MIT 4%	Trucks: Dry BulkSTC MIT 34%	All
residential	REC_100M	483930.59	3621125.04	0E+00	2E-04	2E-04	0E+00	8E-05	7E-05	1.1E-05	6.8E-06	4.8E-07	3.7E-06	0.01
residential	REC_100M	484030.59	3621125.04	0E+00	2E-04	2E-04	0E+00	9E-05	7E-05	1.1E-05	7.1E-06	5E-07	3.9E-06	0.01
residential	REC_100M	484130.59	3621125.04	0E+00	2E-04	2E-04	0E+00	9E-05	8E-05	1.2E-05	7.5E-06	5.2E-07	4.1E-06	0.01
residential	REC_100M	484230.59	3621125.04	0E+00	2E-04	2E-04	0E+00	9E-05	8E-05	1.2E-05	7.6E-06	5.3E-07	4.1E-06	0.01
residential	REC_100M	477930.59	3621225.04	0E+00	3E-05	4E-05	0E+00	2E-05	2E-05	3.4E-06	2.1E-06	1.5E-07	1.2E-06	0.00
residential	REC_100M	478030.59	3621225.04	0E+00	3E-05	4E-05	0E+00	2E-05	2E-05	3.5E-06	2.2E-06	1.5E-07	1.2E-06	0.00
residential	REC_100M	478130.59	3621225.04	0E+00	4E-05	4E-05	0E+00	2E-05	2E-05	3.6E-06	2.2E-06	1.5E-07	1.2E-06	0.00
residential	REC_100M	478230.59	3621225.04	0E+00	4E-05	4E-05	0E+00	2E-05	2E-05	3.6E-06	2.2E-06	1.5E-07	1.2E-06	0.00
residential	REC_100M	478330.59	3621225.04	0E+00	4E-05	4E-05	0E+00	2E-05	2E-05	3.6E-06	2.2E-06	1.6E-07	1.2E-06	0.00
residential	REC_100M	478430.59	3621225.04	0E+00	4E-05	4E-05	0E+00	2E-05	2E-05	3.6E-06	2.3E-06	1.6E-07	1.2E-06	0.00
residential	REC_100M	478530.59	3621225.04	0E+00	4E-05	4E-05	0E+00	2E-05	2E-05	3.7E-06	2.3E-06	1.6E-07	1.2E-06	0.00
residential	REC_100M	478630.59	3621225.04	0E+00	4E-05	5E-05	0E+00	2E-05	2E-05	3.8E-06	2.3E-06	1.6E-07	1.3E-06	0.00
residential	REC_100M	478730.59	3621225.04	0E+00	4E-05	5E-05	0E+00	3E-05	2E-05	3.8E-06	2.4E-06	1.6E-07	1.3E-06	0.00
residential	REC_100M	478830.59	3621225.04	0E+00	4E-05	5E-05	0E+00	3E-05	2E-05	3.8E-06	2.4E-06	1.7E-07	1.3E-06	0.00
residential	REC_100M	478930.59	3621225.04	0E+00	4E-05	5E-05	0E+00	3E-05	2E-05	3.9E-06	2.4E-06	1.7E-07	1.3E-06	0.00
residential	REC_100M	479030.59	3621225.04	0E+00	4E-05	5E-05	0E+00	3E-05	2E-05	3.9E-06	2.4E-06	1.7E-07	1.3E-06	0.00
residential	REC_100M	479130.59	3621225.04	0E+00	4E-05	5E-05	0E+00	3E-05	2E-05	3.9E-06	2.4E-06	1.7E-07	1.3E-06	0.00
residential	REC_100M	479230.59	3621225.04	0E+00	4E-05	5E-05	0E+00	3E-05	2E-05	4E-06	2.5E-06	1.7E-07	1.3E-06	0.00
residential	REC_100M	479330.59	3621225.04	0E+00	4E-05	5E-05	0E+00	3E-05	2E-05	4E-06	2.5E-06	1.7E-07	1.4E-06	0.00
residential	REC_100M	479430.59	3621225.04	0E+00	5E-05	6E-05	0E+00	3E-05	3E-05	4E-06	2.5E-06	1.7E-07	1.4E-06	0.00
residential	REC_100M	479530.59	3621225.04	0E+00	5E-05	6E-05	0E+00	3E-05	3E-05	4.1E-06	2.5E-06	1.8E-07	1.4E-06	0.00
residential	REC_100M	479630.59	3621225.04	0E+00	5E-05	6E-05	0E+00	3E-05	3E-05	4.1E-06	2.5E-06	1.8E-07	1.4E-06	0.00
residential	REC_100M	479730.59	3621225.04	0E+00	5E-05	6E-05	0E+00	3E-05	3E-05	4.1E-06	2.6E-06	1.8E-07	1.4E-06	0.01
residential	REC_100M	479830.59	3621225.04	0E+00	5E-05	6E-05	0E+00	3E-05	3E-05	4.2E-06	2.6E-06	1.8E-07	1.4E-06	0.01
residential	REC_100M	479930.59	3621225.04	0E+00	5E-05	6E-05	0E+00	3E-05	3E-05	4.2E-06	2.6E-06	1.8E-07	1.4E-06	0.01
residential	REC_100M	480030.59	3621225.04	0E+00	5E-05	6E-05	0E+00	3E-05	3E-05	4.2E-06	2.6E-06	1.8E-07	1.4E-06	0.01
recreational	park	480130.59	3621225.04	0E+00	5E-05	7E-05	0E+00	4E-05	3E-05	4.3E-06	2.6E-06	1.8E-07	1.4E-06	0.01
recreational	park	480230.59	3621225.04	0E+00	5E-05	7E-05	0E+00	4E-05	3E-05	4.3E-06	2.7E-06	1.9E-07	1.5E-06	0.01
recreational	park	480330.59	3621225.04	0E+00	5E-05	7E-05	0E+00	4E-05	3E-05	4.3E-06	2.7E-06	1.9E-07	1.5E-06	0.01
recreational	park	480430.59	3621225.04	0E+00	5E-05	7E-05	0E+00	4E-05	3E-05	4.4E-06	2.7E-06	1.9E-07	1.5E-06	0.01
recreational	park	480530.59	3621225.04	0E+00	5E-05	7E-05	0E+00	4E-05	3E-05	4.4E-06	2.7E-06	1.9E-07	1.5E-06	0.01
recreational	park	480630.59	3621225.04	0E+00	5E-05	8E-05	0E+00	4E-05	3E-05	4.5E-06	2.8E-06	1.9E-07	1.5E-06	0.01
recreational	park	480730.59	3621225.04	0E+00	5E-05	8E-05	0E+00	4E-05	4E-05	4.5E-06	2.8E-06	1.9E-07	1.5E-06	0.01
recreational	park	480830.59	3621225.04	0E+00	5E-05	8E-05	0E+00	4E-05	4E-05	4.5E-06	2.8E-06	2E-07	1.5E-06	0.01
recreational	park	480930.59	3621225.04	0E+00	5E-05	8E-05	0E+00	4E-05	4E-05	4.6E-06	2.8E-06	2E-07	1.5E-06	0.01
recreational	park	481030.59	3621225.04	0E+00	5E-05	8E-05	0E+00	5E-05	4E-05	4.6E-06	2.9E-06	2E-07	1.6E-06	0.01
recreational	park	481330.59	3621225.04	0E+00	6E-05	9E-05	0E+00	5E-05	4E-05	4.8E-06	3E-06	2.1E-07	1.6E-06	0.01
recreational	park	481430.59	3621225.04	0E+00	6E-05	9E-05	0E+00	5E-05	4E-05	4.8E-06	3E-06	2.1E-07	1.6E-06	0.01
recreational	park	481530.59	3621225.04	0E+00	6E-05	9E-05	0E+00	5E-05	4E-05	4.9E-06	3E-06	2.1E-07	1.7E-06	0.01
recreational	park	481630.59	3621225.04	0E+00	6E-05	9E-05	0E+00	5E-05	4E-05	5E-06	3.1E-06	2.1E-07	1.7E-06	0.01
recreational	park	481730.59	3621225.04	0E+00	6E-05	9E-05	0E+00	5E-05	4E-05	5E-06	3.1E-06	2.2E-07	1.7E-06	0.01
recreational	park	481830.59	3621225.04	0E+00	6E-05	1E-04	0E+00	5E-05	4E-05	5.1E-06	3.2E-06	2.2E-07	1.7E-06	0.01
recreational	park	481930.59	3621225.04	0E+00	6E-05	1E-04	0E+00	5E-05	4E-05	5.2E-06	3.2E-06	2.2E-07	1.8E-06	0.01
recreational	park	482030.59	3621225.04	0E+00	6E-05	1E-04	0E+00	5E-05	5E-05	5.3E-06	3.3E-06	2.3E-07	1.8E-06	0.01
recreational	park	482130.59	3621225.04	0E+00	7E-05	1E-04	0E+00	5E-05	5E-05	5.4E-06	3.3E-06	2.3E-07	1.8E-06	0.01
recreational	park	482230.59	3621225.04	0E+00	7E-05	1E-04	0E+00	6E-05	5E-05	5.5E-06	3.4E-06	2.4E-07	1.9E-06	0.01
recreational	park	482330.59	3621225.04	0E+00	7E-05	1E-04	0E+00	6E-05	5E-05	5.6E-06	3.5E-06	2.4E-07	1.9E-06	0.01
recreational	park	482430.59	3621225.04	0E+00	7E-05	1E-04	0E+00	6E-05	5E-05	5.7E-06	3.5E-06	2.5E-07	1.9E-06	0.01
recreational	park	482530.59	3621225.04	0E+00	8E-05	1E-04	0E+00	6E-05	5E-05	5.9E-06	3.6E-06	2.5E-07	2E-06	0.01
residential	REC_100M	482630.59	3621225.04	0E+00	8E-05	1E-04	0E+00	6E-05	5E-05	6E-06	3.7E-06	2.6E-07	2E-06	0.01
residential	REC_100M	483830.59	3621225.04	0E+00	2E-04	1E-04	0E+00	8E-05	7E-05	1E-05	6.5E-06	4.5E-07	3.5E-06	0.01
residential	REC_100M	483930.59	3621225.04	0E+00	2E-04	1E-04	0E+00	8E-05	7E-05	1.1E-05	6.7E-06	4.7E-07	3.6E-06	0.01
residential	REC_100M	484030.59	3621225.04	0E+00	2E-04	2E-04	0E+00	8E-05	7E-05	1.1E-05	7E-06	4.9E-07	3.8E-06	0.01
residential	REC_100M	484130.59	3621225.04	0E+00	2E-04	2E-04	0E+00	8E-05	7E-05	1.2E-05	7.2E-06	5E-07	3.9E-06	0.01
school	127 (scho	485901.79	3618344.73	0E+00	1E-02	2E-02	0E+00	8E-03	7E-03	0.00167	0.00103	7.2E-05	0.00056	0.07

Refrigerated Containers

X	ug/m3	Dose Inhallation: 3rd tri	0<2	2<9	2<16	16<30	Risk (Residential 30-yr; school 9-yr; park 15-year): 3rd tri	0<2	2<9	2<16	16<30	Summed Risk	Cases Per Million	Chronic HI
483930.59	0.00343	1.19E-06	3.58E-06	2.07E-06	1.88E-06	8.58E-07	4.7E-08	1.1E-06	0	1.2E-06	1.9E-07	2.602E-06	3	0.00069
484030.59	0.00339	1.17E-06	3.54E-06	2.05E-06	1.86E-06	8.47E-07	4.6E-08	1.1E-06	0	1.2E-06	1.9E-07	2.57E-06	3	0.00068
484130.59	0.00339	1.17E-06	3.54E-06	2.05E-06	1.86E-06	8.47E-07	4.6E-08	1.1E-06	0	1.2E-06	1.9E-07	2.571E-06	3	0.00068
484230.59	0.0033	1.14E-06	3.45E-06	2E-06	1.81E-06	8.26E-07	4.5E-08	1.1E-06	0	1.2E-06	1.8E-07	2.505E-06	3	0.00066
477930.59	0.00103	3.58E-07	1.08E-06	6.25E-07	5.67E-07	2.59E-07	1.4E-08	3.4E-07	0	3.7E-07	5.7E-08	7.841E-07	1	0.00021
478030.59	0.0011	3.8E-07	1.15E-06	6.65E-07	6.03E-07	2.75E-07	1.5E-08	3.6E-07	0	4E-07	6E-08	8.34E-07	1	0.00022
478130.59	0.00115	3.98E-07	1.2E-06	6.96E-07	6.31E-07	2.88E-07	1.6E-08	3.8E-07	0	4.2E-07	6.3E-08	8.731E-07	1	0.00023
478230.59	0.0012	4.17E-07	1.26E-06	7.29E-07	6.6E-07	3.01E-07	1.6E-08	4E-07	0	4.4E-07	6.6E-08	9.141E-07	1	0.00024
478330.59	0.00126	4.36E-07	1.32E-06	7.62E-07	6.91E-07	3.15E-07	1.7E-08	4.1E-07	0	4.6E-07	6.9E-08	9.564E-07	1	0.00025
478430.59	0.00138	4.77E-07	1.44E-06	8.34E-07	7.56E-07	3.45E-07	1.9E-08	4.5E-07	0	5E-07	7.6E-08	1.046E-06	1	0.00028
478530.59	0.00146	5.04E-07	1.52E-06	8.8E-07	7.98E-07	3.64E-07	2E-08	4.8E-07	0	5.3E-07	8E-08	1.105E-06	1	0.00029
478630.59	0.00154	5.33E-07	1.61E-06	9.31E-07	8.44E-07	3.85E-07	2.1E-08	5.1E-07	0	5.6E-07	8.5E-08	1.169E-06	1	0.00031
478730.59	0.00161	5.58E-07	1.68E-06	9.75E-07	8.84E-07	4.03E-07	2.2E-08	5.3E-07	0	5.8E-07	8.9E-08	1.223E-06	1	0.00032
478830.59	0.00168	5.81E-07	1.75E-06	1.02E-06	9.21E-07	4.2E-07	2.3E-08	5.5E-07	0	6.1E-07	9.2E-08	1.275E-06	1	0.00034
478930.59	0.00174	6.03E-07	1.82E-06	1.05E-06	9.56E-07	4.36E-07	2.4E-08	5.7E-07	0	6.3E-07	9.6E-08	1.323E-06	1	0.00035
479030.59	0.0018	6.22E-07	1.88E-06	1.09E-06	9.85E-07	4.49E-07	2.4E-08	5.9E-07	0	6.5E-07	9.9E-08	1.363E-06	1	0.00036
479130.59	0.00186	6.45E-07	1.95E-06	1.13E-06	1.02E-06	4.66E-07	2.5E-08	6.1E-07	0	6.7E-07	1E-07	1.414E-06	1	0.00037
479230.59	0.00193	6.69E-07	2.02E-06	1.17E-06	1.06E-06	4.83E-07	2.6E-08	6.3E-07	0	7E-07	1.1E-07	1.466E-06	1	0.00039
479330.59	0.00199	6.88E-07	2.08E-06	1.2E-06	1.09E-06	4.98E-07	2.7E-08	6.5E-07	0	7.2E-07	1.1E-07	1.511E-06	2	0.0004
479430.59	0.00208	7.18E-07	2.17E-06	1.26E-06	1.14E-06	5.19E-07	2.8E-08	6.8E-07	0	7.5E-07	1.1E-07	1.576E-06	2	0.00042
479530.59	0.00216	7.46E-07	2.25E-06	1.3E-06	1.18E-06	5.39E-07	2.9E-08	7.1E-07	0	7.8E-07	1.2E-07	1.636E-06	2	0.00043
479630.59	0.00223	7.71E-07	2.33E-06	1.35E-06	1.22E-06	5.57E-07	3E-08	7.3E-07	0	8.1E-07	1.2E-07	1.69E-06	2	0.00045
479730.59	0.00231	8.01E-07	2.42E-06	1.4E-06	1.27E-06	5.79E-07	3.1E-08	7.6E-07	0	8.4E-07	1.3E-07	1.756E-06	2	0.00046
479830.59	0.00242	8.39E-07	2.53E-06	1.47E-06	1.33E-06	6.07E-07	3.3E-08	8E-07	0	8.8E-07	1.3E-07	1.841E-06	2	0.00048
479930.59	0.00253	8.76E-07	2.64E-06	1.53E-06	1.39E-06	6.33E-07	3.4E-08	8.3E-07	0	9.2E-07	1.4E-07	1.921E-06	2	0.00051
480030.59	0.0025	8.64E-07	2.61E-06	1.51E-06	1.37E-06	6.25E-07	3.4E-08	8.2E-07	0	9E-07	1.4E-07	1.895E-06	2	0.0005
480130.59	0.00261	0	2.5E-07	1.33E-07	1.08E-07	5E-08	0	7.9E-08	4.4E-08	0	4.7E-09	1.273E-07	0	0.00052
480230.59	0.0027	0	2.59E-07	1.38E-07	1.12E-07	5.18E-08	0	8.1E-08	4.6E-08	0	4.9E-09	1.32E-07	0	0.00054
480330.59	0.00277	0	2.65E-07	1.41E-07	1.15E-07	5.31E-08	0	8.3E-08	4.7E-08	0	5E-09	1.351E-07	0	0.00055
480430.59	0.00285	0	2.73E-07	1.46E-07	1.18E-07	5.46E-08	0	8.6E-08	4.8E-08	0	5.1E-09	1.39E-07	0	0.00057
480530.59	0.00292	0	2.8E-07	1.49E-07	1.21E-07	5.6E-08	0	8.8E-08	4.9E-08	0	5.3E-09	1.426E-07	0	0.00058
480630.59	0.00297	0	2.85E-07	1.52E-07	1.24E-07	5.7E-08	0	9E-08	5E-08	0	5.4E-09	1.452E-07	0	0.00059
480730.59	0.00303	0	2.91E-07	1.55E-07	1.26E-07	5.82E-08	0	9.1E-08	5.1E-08	0	5.5E-09	1.481E-07	0	0.00061
480830.59	0.0031	0	2.97E-07	1.58E-07	1.29E-07	5.94E-08	0	9.3E-08	5.2E-08	0	5.6E-09	1.512E-07	0	0.00062
480930.59	0.00315	0	3.02E-07	1.61E-07	1.31E-07	6.04E-08	0	9.5E-08	5.3E-08	0	5.7E-09	1.538E-07	0	0.00063
481030.59	0.00319	0	3.06E-07	1.63E-07	1.33E-07	6.13E-08	0	9.6E-08	5.4E-08	0	5.8E-09	1.56E-07	0	0.00064
481330.59	0.00328	0	3.15E-07	1.68E-07	1.36E-07	6.3E-08	0	9.9E-08	5.5E-08	0	5.9E-09	1.603E-07	0	0.00066
481430.59	0.0033	0	3.16E-07	1.69E-07	1.37E-07	6.33E-08	0	9.9E-08	5.6E-08	0	6E-09	1.61E-07	0	0.00066
481530.59	0.00332	0	3.18E-07	1.7E-07	1.38E-07	6.36E-08	0	1E-07	5.6E-08	0	6E-09	1.62E-07	0	0.00066
481630.59	0.00332	0	3.19E-07	1.7E-07	1.38E-07	6.38E-08	0	1E-07	5.6E-08	0	6E-09	1.623E-07	0	0.00066
481730.59	0.00334	0	3.21E-07	1.71E-07	1.39E-07	6.41E-08	0	1E-07	5.6E-08	0	6E-09	1.632E-07	0	0.00067
481830.59	0.00335	0	3.21E-07	1.71E-07	1.39E-07	6.42E-08	0	1E-07	5.7E-08	0	6.1E-09	1.636E-07	0	0.00067
481930.59	0.00336	0	3.22E-07	1.72E-07	1.39E-07	6.44E-08	0	1E-07	5.7E-08	0	6.1E-09	1.639E-07	0	0.00067
482030.59	0.00336	0	3.23E-07	1.72E-07	1.4E-07	6.45E-08	0	1E-07	5.7E-08	0	6.1E-09	1.642E-07	0	0.00067
482130.59	0.00336	0	3.22E-07	1.72E-07	1.4E-07	6.45E-08	0	1E-07	5.7E-08	0	6.1E-09	1.642E-07	0	0.00067
482230.59	0.00336	0	3.22E-07	1.72E-07	1.39E-07	6.44E-08	0	1E-07	5.7E-08	0	6.1E-09	1.639E-07	0	0.00067
482330.59	0.00335	0	3.21E-07	1.71E-07	1.39E-07	6.43E-08	0	1E-07	5.7E-08	0	6.1E-09	1.636E-07	0	0.00067
482430.59	0.00335	0	3.21E-07	1.71E-07	1.39E-07	6.42E-08	0	1E-07	5.7E-08	0	6.1E-09	1.635E-07	0	0.00067
482530.59	0.00335	0	3.21E-07	1.71E-07	1.39E-07	6.42E-08	0	1E-07	5.6E-08	0	6.1E-09	1.634E-07	0	0.00067
482630.59	0.00335	1.16E-06	3.5E-06	2.03E-06	1.84E-06	8.38E-07	4.6E-08	1.1E-06	0	1.2E-06	1.8E-07	2.543E-06	3	0.00067
483830.59	0.00335	1.16E-06	3.51E-06	2.03E-06	1.84E-06	8.39E-07	4.6E-08	1.1E-06	0	1.2E-06	1.8E-07	2.546E-06	3	0.00067
483930.59	0.00331	1.14E-06	3.46E-06	2E-06	1.81E-06	8.28E-07	4.5E-08	1.1E-06	0	1.2E-06	1.8E-07	2.51E-06	3	0.00066
484030.59	0.00329	1.14E-06	3.44E-06	1.99E-06	1.8E-06	8.24E-07	4.5E-08	1.1E-06	0	1.2E-06	1.8E-07	2.498E-06	2	0.00066
484130.59	0.0032	1.11E-06	3.34E-06	1.94E-06	1.75E-06	8E-07	4.3E-08	1.1E-06	0	1.2E-06	1.8E-07	2.428E-06	2	0.00064
485901.79	0.02195	0	3.25E-06	1.73E-06	1.41E-06	6.49E-07	0	0	1.9E-06	4.5E-07	0	2.366E-06	2	0.00439

Multi-Purpose General Cargo

X	ug/m3	Dose Inhallation: 3rd tri	0<2	2<9	2<16	16<30	Risk (Residential 30-yr; school 9-yr; park 15-year): 3rd tri	0<2	2<9	2<16	16<30	Summed Risk	Cases Per Million	Chronic HI
483930.59	2E-03	6E-07	2E-06	1E-06	1E-06	5E-07	2E-08	6E-07	0E+00	6E-07	1E-07	1.4E-06	1	0.00036
484030.59	2E-03	6E-07	2E-06	1E-06	1E-06	4E-07	2E-08	6E-07	0E+00	6E-07	1E-07	1.3E-06	1	0.00036
484130.59	2E-03	6E-07	2E-06	1E-06	1E-06	4E-07	2E-08	6E-07	0E+00	6E-07	1E-07	1.3E-06	1	0.00035
484230.59	2E-03	6E-07	2E-06	1E-06	9E-07	4E-07	2E-08	6E-07	0E+00	6E-07	9E-08	1.3E-06	1	0.00034
477930.59	6E-04	2E-07	6E-07	3E-07	3E-07	1E-07	8E-09	2E-07	0E+00	2E-07	3E-08	4.3E-07	0	0.00011
478030.59	6E-04	2E-07	6E-07	4E-07	3E-07	2E-07	8E-09	2E-07	0E+00	2E-07	3E-08	4.6E-07	0	0.00012
478130.59	6E-04	2E-07	7E-07	4E-07	3E-07	2E-07	9E-09	2E-07	0E+00	2E-07	3E-08	4.8E-07	0	0.00013
478230.59	7E-04	2E-07	7E-07	4E-07	4E-07	2E-07	9E-09	2E-07	0E+00	2E-07	4E-08	5.1E-07	1	0.00013
478330.59	7E-04	2E-07	8E-07	4E-07	4E-07	2E-07	1E-08	2E-07	0E+00	3E-07	4E-08	5.3E-07	1	0.00014
478430.59	8E-04	3E-07	8E-07	5E-07	4E-07	2E-07	1E-08	3E-07	0E+00	3E-07	4E-08	5.8E-07	1	0.00015
478530.59	8E-04	3E-07	9E-07	5E-07	4E-07	2E-07	1E-08	3E-07	0E+00	3E-07	4E-08	6.2E-07	1	0.00016
478630.59	9E-04	3E-07	9E-07	5E-07	5E-07	2E-07	1E-08	3E-07	0E+00	3E-07	5E-08	6.6E-07	1	0.00017
478730.59	9E-04	3E-07	1E-06	6E-07	5E-07	2E-07	1E-08	3E-07	0E+00	3E-07	5E-08	6.9E-07	1	0.00018
478830.59	1E-03	3E-07	1E-06	6E-07	5E-07	2E-07	1E-08	3E-07	0E+00	3E-07	5E-08	7.2E-07	1	0.00019
478930.59	1E-03	3E-07	1E-06	6E-07	5E-07	2E-07	1E-08	3E-07	0E+00	4E-07	5E-08	7.5E-07	1	0.0002
479030.59	1E-03	4E-07	1E-06	6E-07	6E-07	3E-07	1E-08	3E-07	0E+00	4E-07	6E-08	7.8E-07	1	0.0002
479130.59	1E-03	4E-07	1E-06	6E-07	6E-07	3E-07	1E-08	3E-07	0E+00	4E-07	6E-08	8.1E-07	1	0.00021
479230.59	1E-03	4E-07	1E-06	7E-07	6E-07	3E-07	2E-08	4E-07	0E+00	4E-07	6E-08	8.4E-07	1	0.00022
479330.59	1E-03	4E-07	1E-06	7E-07	6E-07	3E-07	2E-08	4E-07	0E+00	4E-07	6E-08	8.7E-07	1	0.00023
479430.59	1E-03	4E-07	1E-06	7E-07	7E-07	3E-07	2E-08	4E-07	0E+00	4E-07	7E-08	9.1E-07	1	0.00024
479530.59	1E-03	4E-07	1E-06	8E-07	7E-07	3E-07	2E-08	4E-07	0E+00	4E-07	7E-08	9.4E-07	1	0.00025
479630.59	1E-03	4E-07	1E-06	8E-07	7E-07	3E-07	2E-08	4E-07	0E+00	5E-07	7E-08	9.8E-07	1	0.00026
479730.59	1E-03	5E-07	1E-06	8E-07	7E-07	3E-07	2E-08	4E-07	0E+00	5E-07	7E-08	1.0E-06	1	0.00027
479830.59	1E-03	5E-07	1E-06	8E-07	7E-07	3E-07	2E-08	4E-07	0E+00	5E-07	8E-08	1.1E-06	1	0.00028
479930.59	1E-03	5E-07	2E-06	9E-07	8E-07	4E-07	2E-08	5E-07	0E+00	5E-07	8E-08	1.1E-06	1	0.00029
480030.59	1E-03	5E-07	2E-06	9E-07	8E-07	4E-07	2E-08	5E-07	0E+00	5E-07	8E-08	1.1E-06	1	0.00029
480130.59	2E-03	0E+00	1E-07	8E-08	6E-08	3E-08	0E+00	5E-08	3E-08	0E+00	3E-09	7.4E-08	0	0.0003
480230.59	2E-03	0E+00	2E-07	8E-08	7E-08	3E-08	0E+00	5E-08	3E-08	0E+00	3E-09	7.7E-08	0	0.00031
480330.59	2E-03	0E+00	2E-07	8E-08	7E-08	3E-08	0E+00	5E-08	3E-08	0E+00	3E-09	7.9E-08	0	0.00032
480430.59	2E-03	0E+00	2E-07	8E-08	7E-08	3E-08	0E+00	5E-08	3E-08	0E+00	3E-09	8.1E-08	0	0.00033
480530.59	2E-03	0E+00	2E-07	9E-08	7E-08	3E-08	0E+00	5E-08	3E-08	0E+00	3E-09	8.3E-08	0	0.00034
480630.59	2E-03	0E+00	2E-07	9E-08	7E-08	3E-08	0E+00	5E-08	3E-08	0E+00	3E-09	8.5E-08	0	0.00035
480730.59	2E-03	0E+00	2E-07	9E-08	7E-08	3E-08	0E+00	5E-08	3E-08	0E+00	3E-09	8.6E-08	0	0.00035
480830.59	2E-03	0E+00	2E-07	9E-08	8E-08	3E-08	0E+00	5E-08	3E-08	0E+00	3E-09	8.8E-08	0	0.00036
480930.59	2E-03	0E+00	2E-07	9E-08	8E-08	4E-08	0E+00	6E-08	3E-08	0E+00	3E-09	9.0E-08	0	0.00037
481030.59	2E-03	0E+00	2E-07	1E-07	8E-08	4E-08	0E+00	6E-08	3E-08	0E+00	3E-09	9.1E-08	0	0.00037
481330.59	2E-03	0E+00	2E-07	1E-07	8E-08	4E-08	0E+00	6E-08	3E-08	0E+00	3E-09	9.4E-08	0	0.00038
481430.59	2E-03	0E+00	2E-07	1E-07	8E-08	4E-08	0E+00	6E-08	3E-08	0E+00	3E-09	9.4E-08	0	0.00039
481530.59	2E-03	0E+00	2E-07	1E-07	8E-08	4E-08	0E+00	6E-08	3E-08	0E+00	4E-09	9.5E-08	0	0.00039
481630.59	2E-03	0E+00	2E-07	1E-07	8E-08	4E-08	0E+00	6E-08	3E-08	0E+00	4E-09	9.5E-08	0	0.00039
481730.59	2E-03	0E+00	2E-07	1E-07	8E-08	4E-08	0E+00	6E-08	3E-08	0E+00	4E-09	9.5E-08	0	0.00039
481830.59	2E-03	0E+00	2E-07	1E-07	8E-08	4E-08	0E+00	6E-08	3E-08	0E+00	4E-09	9.5E-08	0	0.00039
481930.59	2E-03	0E+00	2E-07	1E-07	8E-08	4E-08	0E+00	6E-08	3E-08	0E+00	4E-09	9.5E-08	0	0.00039
482030.59	2E-03	0E+00	2E-07	1E-07	8E-08	4E-08	0E+00	6E-08	3E-08	0E+00	4E-09	9.5E-08	0	0.00039
482130.59	2E-03	0E+00	2E-07	1E-07	8E-08	4E-08	0E+00	6E-08	3E-08	0E+00	4E-09	9.5E-08	0	0.00039
482230.59	2E-03	0E+00	2E-07	1E-07	8E-08	4E-08	0E+00	6E-08	3E-08	0E+00	3E-09	9.4E-08	0	0.00039
482330.59	2E-03	0E+00	2E-07	1E-07	8E-08	4E-08	0E+00	6E-08	3E-08	0E+00	3E-09	9.4E-08	0	0.00039
482430.59	2E-03	0E+00	2E-07	1E-07	8E-08	4E-08	0E+00	6E-08	3E-08	0E+00	3E-09	9.4E-08	0	0.00038
482530.59	2E-03	0E+00	2E-07	1E-07	8E-08	4E-08	0E+00	6E-08	3E-08	0E+00	3E-09	9.3E-08	0	0.00038
482630.59	2E-03	7E-07	2E-06	1E-06	1E-06	5E-07	3E-08	6E-07	0E+00	7E-07	1E-07	1.4E-06	1	0.00038
483830.59	2E-03	6E-07	2E-06	1E-06	1E-06	4E-07	2E-08	6E-07	0E+00	6E-07	1E-07	1.4E-06	1	0.00036
483930.59	2E-03	6E-07	2E-06	1E-06	1E-06	4E-07	2E-08	6E-07	0E+00	6E-07	1E-07	1.3E-06	1	0.00035
484030.59	2E-03	6E-07	2E-06	1E-06	9E-07	4E-07	2E-08	6E-07	0E+00	6E-07	9E-08	1.3E-06	1	0.00035
484130.59	2E-03	6E-07	2E-06	1E-06	9E-07	4E-07	2E-08	5E-07	0E+00	6E-07	9E-08	1.3E-06	1	0.00033
485901.79	2E-02	0E+00	3E-06	1E-06	1E-06	5E-07	0E+00	0E+00	1E-06	3E-07	0E+00	1.8E-06	2	0.00338

Dry Bulk

X	ug/m3	Dose Inhallation: 3rd tri	0<2	2<9	2<16	16<30	Risk (Residential 30-yr; school 9-yr; park 15-year): 3rd tri	0<2	2<9	2<16	16<30	Summed Risk	Cases Per Million	Chronic HI
483930.59	2E-03	7E-07	2E-06	1E-06	1E-06	5E-07	3E-08	7E-07	0E+00	7E-07	1E-07	1.5E-06	2	0.0004
484030.59	2E-03	7E-07	2E-06	1E-06	1E-06	5E-07	3E-08	6E-07	0E+00	7E-07	1E-07	1.5E-06	1	0.00039
484130.59	2E-03	7E-07	2E-06	1E-06	1E-06	5E-07	3E-08	6E-07	0E+00	7E-07	1E-07	1.5E-06	1	0.00039
484230.59	2E-03	6E-07	2E-06	1E-06	1E-06	5E-07	3E-08	6E-07	0E+00	7E-07	1E-07	1.4E-06	1	0.00037
477930.59	6E-04	2E-07	7E-07	4E-07	3E-07	2E-07	8E-09	2E-07	0E+00	2E-07	3E-08	4.7E-07	0	0.00012
478030.59	7E-04	2E-07	7E-07	4E-07	4E-07	2E-07	9E-09	2E-07	0E+00	2E-07	4E-08	5.1E-07	1	0.00013
478130.59	7E-04	2E-07	7E-07	4E-07	4E-07	2E-07	9E-09	2E-07	0E+00	3E-07	4E-08	5.3E-07	1	0.00014
478230.59	7E-04	3E-07	8E-07	4E-07	4E-07	2E-07	1E-08	2E-07	0E+00	3E-07	4E-08	5.6E-07	1	0.00015
478330.59	8E-04	3E-07	8E-07	5E-07	4E-07	2E-07	1E-08	3E-07	0E+00	3E-07	4E-08	5.8E-07	1	0.00015
478430.59	8E-04	3E-07	9E-07	5E-07	5E-07	2E-07	1E-08	3E-07	0E+00	3E-07	5E-08	6.4E-07	1	0.00017
478530.59	9E-04	3E-07	9E-07	5E-07	5E-07	2E-07	1E-08	3E-07	0E+00	3E-07	5E-08	6.7E-07	1	0.00018
478630.59	9E-04	3E-07	1E-06	6E-07	5E-07	2E-07	1E-08	3E-07	0E+00	3E-07	5E-08	7.1E-07	1	0.00019
478730.59	1E-03	3E-07	1E-06	6E-07	5E-07	2E-07	1E-08	3E-07	0E+00	4E-07	5E-08	7.5E-07	1	0.0002
478830.59	1E-03	4E-07	1E-06	6E-07	6E-07	3E-07	1E-08	3E-07	0E+00	4E-07	6E-08	7.8E-07	1	0.00021
478930.59	1E-03	4E-07	1E-06	6E-07	6E-07	3E-07	1E-08	4E-07	0E+00	4E-07	6E-08	8.1E-07	1	0.00021
479030.59	1E-03	4E-07	1E-06	7E-07	6E-07	3E-07	1E-08	4E-07	0E+00	4E-07	6E-08	8.4E-07	1	0.00022
479130.59	1E-03	4E-07	1E-06	7E-07	6E-07	3E-07	2E-08	4E-07	0E+00	4E-07	6E-08	8.7E-07	1	0.00023
479230.59	1E-03	4E-07	1E-06	7E-07	6E-07	3E-07	2E-08	4E-07	0E+00	4E-07	7E-08	9.0E-07	1	0.00024
479330.59	1E-03	4E-07	1E-06	7E-07	7E-07	3E-07	2E-08	4E-07	0E+00	4E-07	7E-08	9.3E-07	1	0.00024
479430.59	1E-03	4E-07	1E-06	8E-07	7E-07	3E-07	2E-08	4E-07	0E+00	5E-07	7E-08	9.7E-07	1	0.00025
479530.59	1E-03	5E-07	1E-06	8E-07	7E-07	3E-07	2E-08	4E-07	0E+00	5E-07	7E-08	1.0E-06	1	0.00026
479630.59	1E-03	5E-07	1E-06	8E-07	7E-07	3E-07	2E-08	4E-07	0E+00	5E-07	8E-08	1.0E-06	1	0.00027
479730.59	1E-03	5E-07	1E-06	9E-07	8E-07	4E-07	2E-08	5E-07	0E+00	5E-07	8E-08	1.1E-06	1	0.00028
479830.59	1E-03	5E-07	2E-06	9E-07	8E-07	4E-07	2E-08	5E-07	0E+00	5E-07	8E-08	1.1E-06	1	0.0003
479930.59	2E-03	5E-07	2E-06	9E-07	9E-07	4E-07	2E-08	5E-07	0E+00	6E-07	9E-08	1.2E-06	1	0.00031
480030.59	2E-03	5E-07	2E-06	9E-07	8E-07	4E-07	2E-08	5E-07	0E+00	6E-07	8E-08	1.2E-06	1	0.00031
480130.59	2E-03	0E+00	2E-07	8E-08	7E-08	3E-08	0E+00	5E-08	3E-08	0E+00	3E-09	7.8E-08	0	0.00032
480230.59	2E-03	0E+00	2E-07	9E-08	7E-08	3E-08	0E+00	5E-08	3E-08	0E+00	3E-09	8.1E-08	0	0.00033
480330.59	2E-03	0E+00	2E-07	9E-08	7E-08	3E-08	0E+00	5E-08	3E-08	0E+00	3E-09	8.3E-08	0	0.00034
480430.59	2E-03	0E+00	2E-07	9E-08	7E-08	3E-08	0E+00	5E-08	3E-08	0E+00	3E-09	8.6E-08	0	0.00035
480530.59	2E-03	0E+00	2E-07	9E-08	7E-08	3E-08	0E+00	5E-08	3E-08	0E+00	3E-09	8.8E-08	0	0.00036
480630.59	2E-03	0E+00	2E-07	9E-08	8E-08	4E-08	0E+00	6E-08	3E-08	0E+00	3E-09	8.9E-08	0	0.00037
480730.59	2E-03	0E+00	2E-07	1E-07	8E-08	4E-08	0E+00	6E-08	3E-08	0E+00	3E-09	9.1E-08	0	0.00037
480830.59	2E-03	0E+00	2E-07	1E-07	8E-08	4E-08	0E+00	6E-08	3E-08	0E+00	3E-09	9.3E-08	0	0.00038
480930.59	2E-03	0E+00	2E-07	1E-07	8E-08	4E-08	0E+00	6E-08	3E-08	0E+00	3E-09	9.5E-08	0	0.00039
481030.59	2E-03	0E+00	2E-07	1E-07	8E-08	4E-08	0E+00	6E-08	3E-08	0E+00	3E-09	9.6E-08	0	0.00039
481330.59	2E-03	0E+00	2E-07	1E-07	8E-08	4E-08	0E+00	6E-08	3E-08	0E+00	4E-09	9.9E-08	0	0.0004
481430.59	2E-03	0E+00	2E-07	1E-07	8E-08	4E-08	0E+00	6E-08	3E-08	0E+00	4E-09	9.9E-08	0	0.00041
481530.59	2E-03	0E+00	2E-07	1E-07	8E-08	4E-08	0E+00	6E-08	3E-08	0E+00	4E-09	1.0E-07	0	0.00041
481630.59	2E-03	0E+00	2E-07	1E-07	8E-08	4E-08	0E+00	6E-08	3E-08	0E+00	4E-09	1.0E-07	0	0.00041
481730.59	2E-03	0E+00	2E-07	1E-07	9E-08	4E-08	0E+00	6E-08	3E-08	0E+00	4E-09	1.0E-07	0	0.00041
481830.59	2E-03	0E+00	2E-07	1E-07	9E-08	4E-08	0E+00	6E-08	3E-08	0E+00	4E-09	1.0E-07	0	0.00041
481930.59	2E-03	0E+00	2E-07	1E-07	9E-08	4E-08	0E+00	6E-08	3E-08	0E+00	4E-09	1.0E-07	0	0.00041
482030.59	2E-03	0E+00	2E-07	1E-07	9E-08	4E-08	0E+00	6E-08	3E-08	0E+00	4E-09	1.0E-07	0	0.00041
482130.59	2E-03	0E+00	2E-07	1E-07	9E-08	4E-08	0E+00	6E-08	3E-08	0E+00	4E-09	1.0E-07	0	0.00041
482230.59	2E-03	0E+00	2E-07	1E-07	9E-08	4E-08	0E+00	6E-08	3E-08	0E+00	4E-09	1.0E-07	0	0.00041
482330.59	2E-03	0E+00	2E-07	1E-07	8E-08	4E-08	0E+00	6E-08	3E-08	0E+00	4E-09	1.0E-07	0	0.00041
482430.59	2E-03	0E+00	2E-07	1E-07	8E-08	4E-08	0E+00	6E-08	3E-08	0E+00	4E-09	9.9E-08	0	0.00041
482530.59	2E-03	0E+00	2E-07	1E-07	8E-08	4E-08	0E+00	6E-08	3E-08	0E+00	4E-09	9.9E-08	0	0.00041
482630.59	2E-03	7E-07	2E-06	1E-06	1E-06	5E-07	3E-08	7E-07	0E+00	7E-07	1E-07	1.5E-06	2	0.0004
483830.59	2E-03	7E-07	2E-06	1E-06	1E-06	5E-07	3E-08	6E-07	0E+00	7E-07	1E-07	1.5E-06	1	0.00039
483930.59	2E-03	7E-07	2E-06	1E-06	1E-06	5E-07	3E-08	6E-07	0E+00	7E-07	1E-07	1.5E-06	1	0.00038
484030.59	2E-03	7E-07	2E-06	1E-06	1E-06	5E-07	3E-08	6E-07	0E+00	7E-07	1E-07	1.4E-06	1	0.00038
484130.59	2E-03	6E-07	2E-06	1E-06	1E-06	5E-07	3E-08	6E-07	0E+00	7E-07	1E-07	1.4E-06	1	0.00036
485901.79	3E-02	0E+00	5E-06	2E-06	2E-06	9E-07	0E+00	0E+00	3E-06	6E-07	0E+00	3.3E-06	3	0.00609

HRA Factors and values

Dose factors		3rd tri	0<2	2<9	2<16	16<30	16-70	source
Daily Breath Rate (L/kg-day)	residential	361	1090	631	572	261	233	OEHHA 2015, Table 5.6, 95th %ile for 3rdtri-2yrs old; 80th for other age groups
	recreational	0	1200	640	520	240	230	OEHHA 2015, Table 5.8 (95th, moderate) for all bins but 3rd tri; assume no 3rd tri receptors;
	school	0	1200	640	520	240	230	same as park
A		1	1	1	1	1	1	constant
EF, Fraction of time exposed	residential	0.96	0.96	0.96	0.96	0.96	0.96	OEHHA 2015, page 5-24, 350 days/yr
	recreational	0.08	0.08	0.08	0.08	0.08	0.08	yearly, based on estimated 350 day/yr, 2 hrs/day exposure
	school	0.12	0.12	0.12	0.12	0.12	0.12	based on 180 days/yr, 6 hrs/day
Conversion Factor		1.0E-06	1.0E-06	1.0E-06	1.0E-06	1.0E-06	1.0E-06	(mg/ug + m3/L)
WAF		-	-	-	-	1	1	Source is constant; WAF of 1 assumed per OEHHA 2015 page 5-31

Risk Factors		3rd tri	0<2	2<9	2<16	16<30	16-70	source
CPF, DPM ([mg/kg-day]$^{-1}$)		1.1	1.1	1.1	1.1	1.1	1.1	OEHHA 2015, Table 7.1
ASF		10	10	3	3	1	1	Table 8.3, OEHHA 2015
Adjustment Factor (schools)		3.36	3.36	3.36	3.36	3.36	3.36	OEHHA 2015, Page 4-44 and Equation 4.1; the long term residential exposure is adjusted upward to represent th
ED, Exposure Duration (years)								
	Residential - 30yr	0.25	2.00		14.00	14.00		Equation 8.2.4 A, OEHHA 2015
	Recreational		2.00	7.00		6.00		Equation 8.2.4 B, OEHHA 2015
	School - 9yr		0.00	7.00	2.00			BAAQMD HRSA Guidalines, Jan 2010, page 3
AT, Average Time (days)		70	70	70	70	70	70	Averaging time for lifetime cancer risk (years), always 70
FAH		1.00	1.00	1.00	1.00	1.00	1.00	Table 8.4, OEHHA 2015 (only for residential, but worst-case to assume 1.0; recreation assumed to be 1.0)

Hazard Index

Chronic Inhalation Reference Exposure Level, respiratory,	5						OEHHA 2015, Table 6.3

conversions:

Second per hour	3600
Grams per ton	907184.74
Million	1,000,000
days per year	365

AERMOD Outputs are 5,000+ pages and available upon request

Sea Level Rise Calculation Sheet

Sea Level Rise Assessment

for TAMT site

3.28084 m to ft conversion

Existing Setting

	Existing tidal at POSD	
	Meters	Feet
Highest Tide Observed	2.4	7.87
Mean Higher High Water (MHHW)	1.72	5.64
Mean High Water	1.47	4.82
Mean Sea Level (MSL)	0.88	2.89
Mean Lower Low Water	0.00	0.00
Lowest Tide Observed	0.66	2.17

https://www.portofsandiego.org/maritime/check-port-and-harbor-conditions/424-tides-and-currents.html

Existing Height at TAMT:	7	"22-feet above mean sea level (amsl) in the southern portion of the site to 26 feet amsl in the northern portion of the site"
Dole lease out to approx	2036	24.5 yr signed Aug 2012

SLR Projections

Table 1. Sea-Level Rise Projections using 2000 as the Baseline

Time Period	North of Cape Mendocino[3]	South of Cape Mendocino
2000 - 2030	-4 to 23 cm (-0.13 to 0.75 ft)	4 to 30 cm (0.13 to 0.98 ft)
2000 – 2050	-3 to 48 cm (-0.1 to 1.57 ft)	12 to 61 cm (0.39 to 2.0 ft)
2000 – 2100	10 to 143 cm (0.3 to 4.69 ft)	42 to 167 cm (1.38 to 5.48 ft)

http://www.opc.ca.gov/webmaster/ftp/pdf/docs/2013_SLR_Guidance_Update_FINAL1.pdf

100-yr surge event

"The 1% annual exceedance probability levels are 0.73 meters (2.40 feet) above Mean Higher High Water and 0.82 meters (2.69 feet) below Mean Lower Low Water"

100-yr event above MHHW 2.40 ft

http://tidesandcurrents.noaa.gov/est/curves.shtml?stnid=9410170

Calculations for permanent and temporary SLR

Table XX Sea Level Rise Elevation and Projections at Harbor Island West Marina

	Existing Tidal Datum[1]		Sea Level Rise Projection[2]		Project Elevation Relative to Projections [3] - Permanent SLR		Project Elevation Relative to Projections plus Storm Surge [4]- Temporary SLR	
Year	Site Elevation above MSL	MHHW above MSL	Lower End	Upper End	Lower End	Upper End	Lower End	Upper End
2030	7.00	2.76	0.13	0.98	4.11	3.26	1.71	0.86
2050	7.00	2.76	0.39	2.00	3.85	2.24	1.45	-0.16
2100	7.00	2.76	1.38	5.48	2.86	-1.24	0.46	-3.64

1 Mean High Water Elevation above MSL calculated based on the difference between mean higher high water (5.64 feet) and MSL (2.89 feet). Obtained from: https://www.portofsandiego.org/maritime/check-port-and-harbor-conditions/424-tides-and-currents.ht

2 Based on projections for south of Cape Mendocino. Obtained from: http://www.opc.ca.gov/webmaster/ftp/pdf/docs/2013_SLR_Guidance_Update_FINAL1.pdf

3 Based on the difference between site elevation, Mean High Water Elevation above MSL, and sea level rise projects. For example, the lower end elevation for 2030 is calculated as follows: 7.00 – 2.76 – 0.13 = 4.11 feet.

4 Based on the difference between permanent SLR above MHHW and 100-yr (1% return probability) surge events. For example, the lower end elevation for 2030 is calculated as follows: 4.11 – 2.40 = 1.71 feet.

Appendix G
Transportation Impact Analysis (Revised)

Transportation Impact Analysis

Tenth Avenue Marine Terminal Redevelopment Plan

~~Revised Draft~~Final Report

Prepared for:

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~~June~~August 22~~,~~ 2016

Executive Summary

The purpose of this Transportation Impact Analysis (TIA) is to identify and document potential transportation impacts related to the implementation of the Tenth Avenue Marine Terminal Redevelopment Plan (proposed project), as well as to recommend mitigation measures, as necessary, for any identified transportation related impacts associated with the proposed project.

ES.1 Study Purpose and Project Description

The Tenth Avenue Marine Terminal (TAMT) Redevelopment Plan was developed to meet current and future market conditions at the terminal and replace the outdated 2008 Maritime Business Plan. The proposed Redevelopment Plan includes a series of infrastructure investments and other various operational improvements that may be undertaken over the short- and long-term to accommodate the need to increase the terminal's capabilities and capacity. Short-term improvements include demolition of Transit Sheds #1 and #2 to provide additional open storage space as well as an on-dock rail lubrication system and the capability to provide on-dock air brake testing. Long-term improvements include up to five gantry cranes, additional and consolidated dry bulk storage capacity, enhancements to the existing conveyor system, demolition of the molasses tanks and Warehouse C, and a new entry gate facility.

Since the proposed project is a market-based redevelopment plan and will not be implemented all at once or even in set phases. Instead, cargo throughput is anticipated to increase overtime based on market demands. However, it is anticipated that with the implementation of the proposed on-site physical improvements associated with the proposed project (demolition of the Transit Sheds #1 and #2, as well as improvements to the existing on-dock intermodal rail facilities) will allow for the terminal to serve latent throughput demand that it cannot service under current conditions. To understand the potential transportation related impacts associated with these physical improvements, which are scheduled to be constructed by Year 2021, an additional interim project scenario is also analyzed within the study.

ES.2 Project Trip Generation and Study Area

There are two main trip generators at the Tenth Avenue Marine Terminal which include freight movement (trucks) and employees. Based on the anticipated increase in site operations, the proposed project is anticipated to require 524 additional employees and 423 additional truckloads of cargo on a daily basis under full buildout conditions. This equates to 4,110 new PCE (Passenger Car Equivalent) trips, including 477 trips during the AM peak hour and 477 trips during the PM peak hour.

Interim Project Trip Generation

Based on the anticipated increase in site operations under interim project conditions, the proposed project is anticipated to require 91 additional employees and 7 additional truckloads of cargo on a daily basis under full buildout conditions. This equates to 318 new PCE trips, including 71 trips during the AM peak hour and 71 trips during the PM peak hour.

Based on the project trip assignment, the City of San Diego Traffic Impact Study Guidelines, and input from Port District staff, the following key study roadway segments were analyzed in this study:

Harbor Drive between:

- Beardsley Street & Cesar Chavez Parkway
- Cesar Chavez Parkway & Sampson Street
- Sampson Street & Schley Street
- Schley Street & 28th Street
- 28th Street & Belt Street

28th Street between:

- Harbor Drive & Main Street
- Main Street & Boston Avenue
- Boston Avenue & National Avenue

32nd Street between:

- Harbor Drive & Norman Scott Road

The following eleven (11) key study area intersections were analyzed in the study:

1. Harbor Drive / Cesar Chavez Parkway
2. Harbor Drive / Sampson Street
3. Harbor Drive / Schley Street
4. Harbor Drive / 28th Street
5. 28th Street / Main Street
6. 28th Street / Boston Avenue
7. 28th Street / National Avenue
8. I-5 NB Off-Ramp / National Avenue
9. Harbor Drive / Belt Street
10. Harbor Drive / 32nd Street
11. Norman Scott Road / 32nd Street / Wabash Boulevard

Based on the project trip assignment, the following nine (9) key freeway mainline segments were analyzed:

- I-5 between SR-94 & Imperial Avenue
- I-5 between Imperial Avenue & SR-75
- I-5 between SR-75 & 28th Street
- I-5 between 28th Street & SR-15
- I-5 between SR-15 & Main Street
- SR-15 between SR-94 & Market Street
- SR-15 between Market Street & Ocean View Boulevard
- SR-15 between Ocean View Boulevard & I-5
- SR-15 between I-5 & Norman Scott Road

It should be noted that the interim project scenarios are not projected to generate enough traffic to warrant freeway mainline analyses (50 peak hour trips on any single freeway mainline segment). Therefore, freeway mainline analyses were only conducted for the following scenarios:

- Existing
- Existing Plus Project
- Future Year 2035 Base
- Future Year 2035 Base Plus Project

ES.3 Project Impacts and Mitigation Measures

Table ES-1 summarizes the transportation related impacts that would be associated with the proposed project, and a recommended mitigation measure, for each study scenario.

Table ES-1
Project Impact and Mitigation Summary

Scenario	Impact Type	Roadway		Intersection		Freeway Mainline	
		Impact	Mitigation	Impact	Mitigation	Impact	Mitigation
Existing Plus Project	Direct	28th Street, between Boston Avenue and National Avenue	Improve roadway to a Four-Lane Major configuration.	Norman Scott Road / 32nd Street / Wabash Boulevard	Implement a westbound right-turn overlap phase.	None	N/A
Existing Plus Project-Alternative Gate	Direct	28th Street, between Boston Avenue and National Avenue	Improve roadway to a Four-Lane Major configuration.	Norman Scott Road / 32nd Street / Wabash Boulevard	Implement a westbound right-turn overlap phase.	None	N/A
Existing Plus Interim Project	Direct	None	N/A	~~Norman Scott Road / 32nd Street / Wabash Boulevard.~~None	~~Implement a westbound right-turn overlap phase.~~ N/A	N/A	N/A
Existing Plus Interim Project-Alternative Gate	Direct	None	N/A	~~Norman Scott Road / 32nd Street / Wabash Boulevard~~None	~~Implement a westbound right-turn overlap phase.~~ N/A	N/A	N/A
Near-Term Year 2021 Base Plus Interim Project	Direct	None	N/A	~~Norman Scott Road / 32nd Street / Wabash Boulevard~~None	~~Implement a westbound right-turn overlap phase.~~ N/A	N/A	N/A
Near-Term Year 2021 Base Plus Interim Project-Alternative Gate	Direct	None	N/A	~~Norman Scott Road / 32nd Street / Wabash Boulevard~~None	~~Implement a westbound right-turn overlap phase.~~ N/A	N/A	N/A
Future Year 2035 Base Plus Project	Cumulative	28th Street, between Boston Avenue and National Avenue	Improve roadway to a Four-Lane Major configuration.	Norman Scott Road / 32nd Street / Wabash Boulevard	Implement a westbound right-turn overlap phase.	• I-5 NB between SR-94 & Imperial Avenue • I-5 NB between 28th Street & I-15 • I-5 NB between I-15 & Main Street • I-15 SB between Market Street & Ocean View Boulevard	No Feasible Mitigation

Table ES-1
Project Impact and Mitigation Summary

Scenario	Impact Type	Roadway		Intersection		Freeway Mainline	
		Impact	Mitigation	Impact	Mitigation	Impact	Mitigation
Future Year 2035 Base Plus Project-Alternative Gate	Cumulative	28th Street, between Boston Avenue and National Avenue	Improve roadway to a Four-Lane Major configuration.	Norman Scott Road / 32nd Street / Wabash Boulevard	Implement a westbound right-turn overlap phase.	• I-5 NB between SR-94 & Imperial Avenue • I-5 NB between 28th Street & I-15 • I-5 NB between I-15 & Main Street • I-15 SB between Market Street & Ocean View Boulevard	No Feasible Mitigation
Existing Plus Project Construction	Direct	None	N/A	Norman Scott Road / 32nd Street / Wabash Boulevard	Develop TDM Plan during project construction phase.	None	N/A
Near-Term Year 2021 Base Plus Project Constriction	Cumulative	None	N/A	Norman Scott Road / 32nd Street / Wabash Boulevard	Develop TDM Plan during project construction phase.	None	N/A

Active Transportation and Transit

Potential impacts relate to pedestrian, bicycle and transit circulation would be considered significant if the proposed project would substantially increase hazards due to a design feature, or would conflict with the adopted policies, plans, or programs supporting alternative transportation, as outlined in Appendix G of the *California Environmental Quality Act (CEQA) Guidelines*. The project is not proposing to make any improvements to roadways or other transportation related facilities outside of the TAMT. Therefore, the proposed project would not conflict with or generate any significant impacts associated with existing pedestrian, bicycle or transit facilities, as well as the planned facilities and policies

ES.4 Site Access

Current Access

Employees will access the site (both enter and exit) from the main Tenth Avenue Marine Terminal gate located south of the Harbor Drive / Cesar Chavez Parkway intersection. Truck traffic will enter and exit the Tenth Avenue Marine Terminal through the main gate; however, Refrigerated Truck traffic will exit the terminal via another gate located on Switzer Street, to the north of the Harbor Drive and Cesar Chavez Parkway intersection.

Access gates to the TAMT are not adjacent to the external street network, therefore, no anticipated operational impacts were identified. Under this scenario there are currently no proposed changes to the existing project access points including location and traffic control; therefore, no additional sight distance analysis should be required with this study.

Alternative Gate Scenario

The Tenth Avenue Marine Terminal Plan also identifies an alternative gate concept that would serve as the primary entry and exit location for the Refrigerated Container node and the Multi-Purpose General Cargo node. The alternative gate would be located in the north-east corner of the terminal and provide access directly onto Harbor Drive. According to the Plan, the Dry Bulk and Liquid Bulk Nodes would continue to utilize the existing gate off Cesar Chavez Parkway, particularly for domestic bulk shipments.

The alternative gate should be designed to take into account project sight distance and traffic queueing at all approaches. It is assumed that the alternative access point will create new signalized intersection along Harbor Drive. The alternative gate was identified as operated at LOS D or better under all scenarios that were analyzed. Therefore, the alterative gate is not projected to be associated with any additional transportation related impacts.

ES.5 Parking

Parking should be provided on-site for all anticipated new employees that are associated with the proposed project. Similar to trip generation, as a worst case scenario, it is assumed that all new employees associated with the proposed project will drive to the project site alone. Since new employees associated with the proposed project will be split into 3 separate shifts, the proposed project will need to provide or account for additional parking spaces for the maximum number of new employees will be on the site at any given time, as well as an allowance for turn-over.

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1.0 Introduction

1.1 Purpose of the Report

The purpose of this Transportation Impact Analysis (TIA) is to identify and document potential transportation related impacts associated with the implementation of the Tenth Avenue Marine Terminal Redevelopment Plan (proposed project), as well as to recommend mitigation measures, as necessary, for any identified transportation related impacts associated with the proposed project.

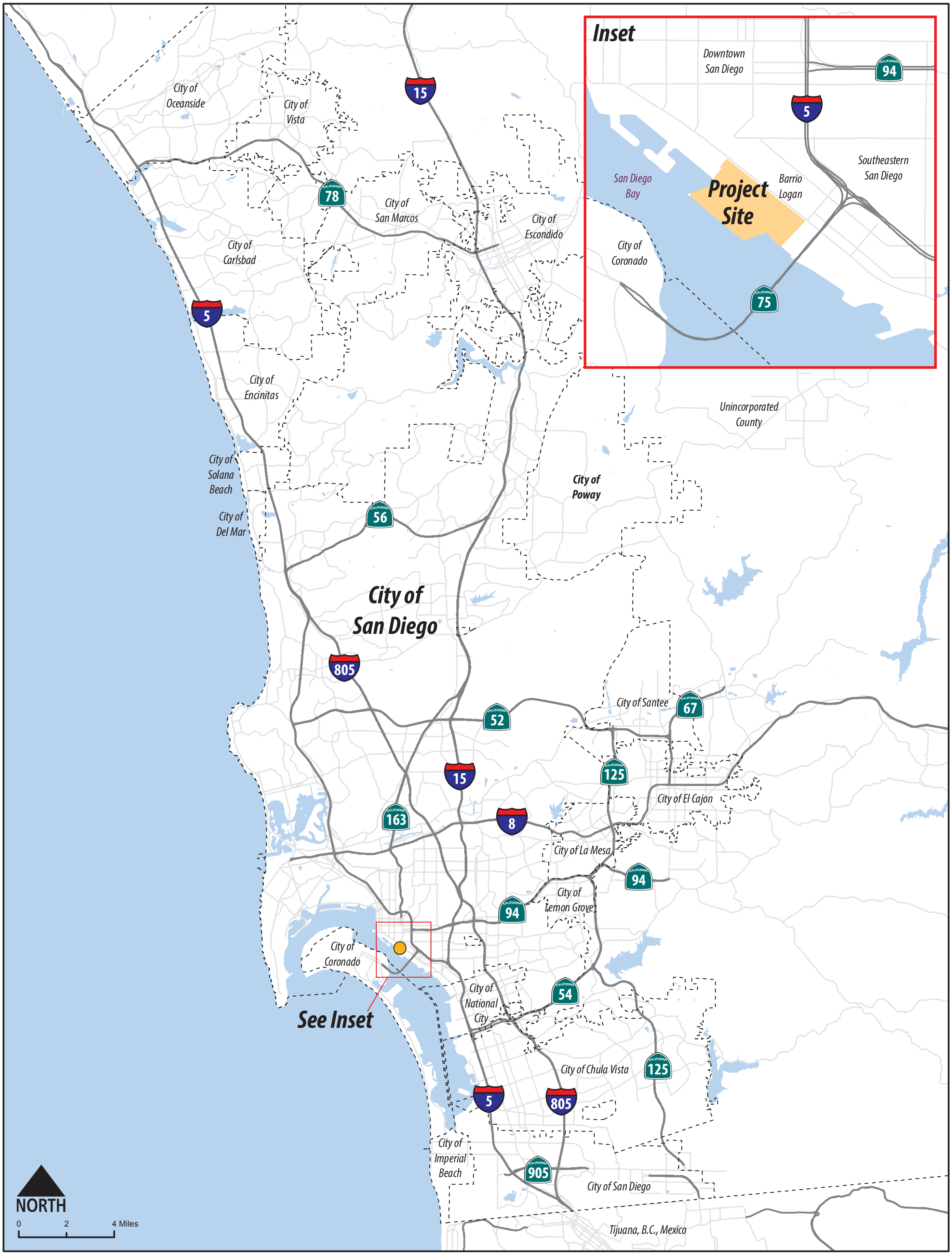
1.2 Project Background

The Tenth Avenue Marine Terminal (TAMT) Redevelopment Plan was developed to meet current and future market conditions at the terminal and replace the outdated 2008 Maritime Business Plan. The proposed Redevelopment Plan includes a series of infrastructure investments and other various operational improvements that may be undertaken over the short- and long-term to accommodate the need to increase the terminal's capabilities and capacity. Short-term improvements include demolition of Transit Sheds #1 and #2 to provide additional open storage space as well as an on-dock rail lubrication system and the capability to provide on-dock air brake testing. Long-term improvements include up to five gantry cranes, additional and consolidated dry bulk storage capacity, enhancements to the existing conveyor system, demolition of the molasses tanks and Warehouse C, and a new entry gate facility.

The entire extent of the project site is located within the Tenth Avenue Marine Terminal in San Diego, California. The regional location of the proposed project is displayed in **Figure 1-1**.

Aside from the near-term projects that include demolition of the two transit sheds, the installation of a rail lubrication system and air brake testing within the terminal, it should be noted that the remainder of the Redevelopment Plan is to be implemented over the long-term; therefore, the timing of its implementation will be based on ongoing market conditions, which means the exact timing and phasing is unknown. However, an analysis of Near-Term Year 2021 conditions (opening year) was conducted based on the anticipated market demands of cargo throughout, as well as associated with the increased capacity generated by the proposed project. Mitigation triggers, based on project traffic, have been identified for both direct and cumulative impacts to specify when the improvements are required.

Since the proposed project is a market-based redevelopment plan and will not be implemented all at once or even in set phases. Instead, cargo throughput is anticipated to increase overtime based on market demands. However, it is anticipated that with the implementation of the proposed on-site physical improvements associated with the proposed project (demolition of the Transit Sheds #1 and #2, as well as improvements to the existing on-dock intermodal rail facilities) will allow for the terminal to serve latent throughput demand that it cannot service under current conditions. To understand the potential transportation related impacts associated with these physical improvements, which are scheduled to be constructed by Year 2021, an additional interim project scenario is also analyzed within the study.



Tenth Avenue Marine Terminal Redevelopment Plan

CHEN RYAN

Figure 1-1

Project Regional Location

1.3 Report Organization

Following this Introduction chapter, this report is organized into the following chapters:

2.0 Analysis Methodology – This chapter describes the methodologies and standards utilized to analyze roadway and intersection traffic conditions.

3.0 Project Description – This chapter describes the proposed project including project trip generation, trip distribution patterns, and project trip assignments.

4.0 Existing Conditions – This chapter describes the existing traffic operations under no project, interim project and full project conditions. Direct transportation related impacts are identified under both full and interim project conditions, and associated mitigation measures are identified, if necessary.

5.0 Near-Term Year 2021 Conditions – This chapter describes near-term developments that are anticipated to generate additional trips within the project study area by Year 2021, the proposed project opening year. Analysis results are provided for the Year 2021 Base and Year 2021 Base Plus Interim Project conditions, along with recommended mitigation measures, if necessary.

6.0 Future Year 2035 Traffic Conditions – This chapter describes projected long-range traffic conditions both with and without project traffic. Mitigation measures for project-related impacts are identified for Future Year 2035 Base Plus Project conditions, if necessary.

7.0 Pedestrian, Bicycle and Transit Access – This chapter focuses on alternative modes of travel to and from the project (walking, bicycling and transit).

8.0 Project Construction – This chapter describes projected traffic operations during project construction.

9.0 Site Access and Parking – This chapter addresses access to the project site, and discusses the required parking within the project site.

2.0 Analysis Methodology

This TIA was performed in accordance with the requirements of the City of San Diego *Traffic Impact Study Manual*, and the District's California Environmental Quality Act (CEQA) project review process. Detailed information on roadway segment and intersection analysis methodologies, standards, and thresholds are discussed in the following sections.

2.1 Level of Service Definition

Level of Service (LOS) is a quantitative measure describing operational conditions within a traffic stream, and the motorist's and/or passengers' perception of operations. A LOS definition generally describes these conditions in terms of such factors as delay, speed, travel time, freedom to maneuver, interruptions in traffic flow, queuing, comfort, and convenience. **Table 2.1** describes generalized definitions of the various LOS categories (A through F) as applied to roadway operations.

Table 2.1 LOS Definitions

LOS Category	Definition of Operation
A	This LOS represents a completely free-flow condition, where the operation of vehicles is virtually unaffected by the presence of other vehicles and only constrained by the geometric features of the highway and by driver preferences.
B	This LOS represents a relatively free-flow condition, although the presence of other vehicles becomes noticeable. Average travel speeds are the same as in LOS A, but drivers have slightly less freedom to maneuver.
C	At this LOS the influence of traffic density on operations becomes marked. The ability to maneuver within the traffic stream is clearly affected by other vehicles.
D	At this LOS, the ability to maneuver is notably restricted due to traffic congestion, and only minor disruptions can be absorbed without extensive queues forming and the service deteriorating.
E	This LOS represents operations at or near capacity. LOS E is an unstable level, with vehicles operating with minimum spacing for maintaining uniform flow. At LOS E, disruptions cannot be dissipated readily thus causing deterioration down to LOS F.
F	At this LOS, forced or breakdown of traffic flow occurs, although operations appear to be at capacity, queues form behind these breakdowns. Operations within queues are highly unstable, with vehicles experiencing brief periods of movement followed by stoppages.

Source: Highway Capacity Manual 2010

2.2 Roadway Segment LOS Standards and Thresholds

Roadway segment LOS standards and thresholds provide the basis for analysis of arterial roadway segment performance. The analysis of roadway segment LOS is based on the functional classification of the roadway, the maximum capacity, roadway geometrics, and existing or forecast Average Daily Traffic (ADT) volumes. **Table 2.2** presents the roadway segment capacity and LOS standards utilized to analyze roadways evaluated in this report.

Table 2.2 City of San Diego Roadway Classifications and LOS Standards

Roadway Classification	LOS A	LOS B	LOS C	LOS D	LOS E
Expressway	30,000	42,000	60,000	**70,000**	80,000
Primer Arterial	25,000	35,000	50,000	**55,000**	60,000
Major Arterial (6-lane, divided)	< 20,000	< 28,000	< 40,000	**< 45,000**	< 50,000
Major Arterial (4-lane, divided)	< 15,000	< 21,000	< 30,000	**< 35,000**	< 40,000
Collector (4-lane w/ center lane)	< 10,000	< 14,000	< 20,000	**< 25,000**	< 30,000
Collector (4-lane w/o center lane)	< 5,000	< 10,000	< 13,000	**< 15,000**	< 20,000
Collector (2-lane w/ continuous left-turn lane)	< 5,000	< 10,000	< 13,000	**< 15,000**	< 20,000
Collector (2-lane no fronting property)	< 4,000	< 5,500	< 7,500	**< 9,000**	< 10,000
Collector (2-lane commercial-industrial fronting)	<2,500	< 3,500	< 5,000	**< 6,500**	< 8,000
Collector (2-lane multi-family)	<2,500	< 3,500	< 5000	**< 6,500**	< 8,000
Sub-Collector (2-lane single family)	-	-	2,200	-	**-**

Source: City of San Diego, Traffic Impact Study Manual, July 1998

Note:
Bold numbers indicate the ADT thresholds for acceptable LOS.

These standards are generally used as long-range planning guidelines to determine the functional classification of roadways. The actual capacity of a roadway facility varies according to its physical attributes. Typically, the performance and LOS of a roadway segment is heavily influenced by the ability of its intersections to accommodate peak hour traffic volumes. For the purposes of this traffic analysis, LOS D is considered acceptable for the analyzed roadway segments.

2.3 Peak Hour Intersection LOS Standards and Thresholds

This section presents the methodologies used to perform peak hour intersection capacity analysis for signalized intersections. The following assumptions were utilized in conducting all intersection LOS analyses:

- *Pedestrian Calls per Hour:* 10 calls per hour for each pedestrian movement was assumed.
- *Signal Timing:* Based on existing signal timing plans (as of January 2015), provided in Appendix A.
- *Peak Hour Factor*: Based on existing peak hour count data for existing conditions included in Appendix A, and 0.92 for all future conditions.

It should be noted that no unsignalized intersections, warranting analysis, are located within the project study area.

Signalized Intersection Analysis

The analysis of signalized intersections utilized the operational analysis procedures as outlined in the *2010 Highway Capacity Manual (HCM)*. This method defines LOS in terms of delay, or more specifically, average stopped delay per vehicle. Delay is a measure of driver and/or passenger discomfort, frustration, fuel consumption and lost travel time. This technique uses 1,900 vehicles per hour per lane (VPHPL) as the maximum saturation volume of an intersection. This saturation volume is adjusted to account for lane width, on-street parking, pedestrians, traffic composition (i.e., percentage trucks) and shared lane movements (i.e. through and right-turn movements originating from the same lane). The LOS criteria used for this technique are described in **Table 2.3**. The computerized analysis of intersection operations was performed utilizing the *Vistro 2.0-11* traffic analysis software.

Table 2.3 Signalized Intersection LOS Criteria

Average Stopped Delay Per Vehicle (seconds)	Level of Service (LOS) Characteristics
<10.0	*LOS A* describes operations with very low delay. This occurs when progression is extremely favorable, and most vehicles do not stop at all. Short cycle lengths may also contribute to low delay.
10.1 – 20.0	*LOS B* describes operations with generally good progression and/or short cycle lengths. More vehicles stop than for LOS A, causing higher levels of average delay.
20.1 – 35.0	*LOS C* describes operations with higher delays, which may result from fair progression and/or longer cycle lengths. Individual cycle failures may begin to appear at this level. The number of vehicles stopping is significant at this level, although many still pass through the intersection without stopping.
35.1 – 55.0	*LOS D* describes operations with high delay, resulting from some combination of unfavorable progression, long cycle lengths, or high volumes. The influence of congestion becomes more noticeable, and individual cycle failures are noticeable.
55.1 – 80.0	*LOS E* is considered the limit of acceptable delay. Individual cycle failures are frequent occurrences.
>80.0	*LOS F* describes a condition of excessively high delay, considered unacceptable to most drivers. This condition often occurs when arrival flow rates exceed the LOS D capacity of the intersection. Poor progression and long cycle lengths may also be major contributing causes to such delay.

Source: Highway Capacity Manual 2010

2.4 Ramp Intersection Capacity Analysis

Consistent with Caltrans requirements, all signalized intersections at freeway ramps were analyzed using Intersecting Lane Volume (ILV) procedures as described in Topic 406 of the Caltrans *Highway Design Manual* (HDM). This methodology is based upon an assessment of each intersection as an isolated unit, without consideration of the effects from adjacent intersections. For this reason, the ILV analysis is utilized as an additional validation of signalized ramp intersection operations derived from the 2010 Highway Capacity Manual methodology. **Table 2.4** provides values of ILV/hr associated with various traffic flow thresholds. Neither Caltrans nor the City uses ILV results in determining significance of project impacts, but the analyses are included for informational purposes.

Table 2.4 Traffic Flow Conditions at Ramp Intersections at Various Levels of Operation

ILV/hr	Description
<1200: (Under Capacity)	Stable flow with slight, but acceptable delay. Occasional signal loading may develop. Free midblock operations.
1200-1500: (At Capacity)	Unstable flow with considerable delays possible. Some vehicles occasionally wait two or more cycles to pass through the intersection. Continuous backup occurs on some approaches.
>1500: (Over Capacity)	Stop-and-go operation with severe delay and heavy congestion [1]. Traffic volume is limited by maximum discharges rates of each phase. Continuous backup in varying degrees occurs on all approaches. Where downstream capacity is restrictive, mainline congestion can impede orderly discharge through the intersection.

Source: Caltrans Highway Design Manual, Topic 406

Note:

(1) The amount of congestion depends on how much the ILV/hr value exceeds 1500. Observed flow rates will normally not exceed 1500ILV/hr, and the excess will be delayed in a queue.

2.5 Freeway Level of Service Standards and Thresholds

Freeway level of service analysis is based upon procedures developed by the California Department of Transportation (Caltrans). The procedure for calculating freeway level of service involves estimating a peak hour volume to capacity (V/C) ratio. Peak hour volumes are estimated from the application of design hour ("K"), directional ("D") and truck ("T") factors to Average Daily Traffic (ADT) volumes. The base capacities for Interstate 5 were assumed to be 2,350 passenger-car per hour per main lane (pc/h/ln) and 1,410 pc/h/ln (60% of the main lane capacity) for auxiliary lane, respectively.

The resulting V/C ratio is then compared to acceptable ranges of V/C values corresponding to the various levels of service for each facility classification, as shown in **Table 2.5**. The corresponding level of service represents an approximation of existing or anticipated future freeway operating conditions in the peak direction of travel during the peak hour. For the purpose of this study, LOS D is considered as the threshold for acceptable freeway operations. LOS D is the level at which speeds begin to decline slightly with increasing flows and density begins to increase somewhat more quickly. Freedom to maneuver within the traffic stream is more noticeably limited, and the driver experiences reduced physical and psychological comfort levels.

Table 2.5 Freeway Segment LOS Definitions

LOS	V/C	Congestion/Delay	Traffic Description
Used for freeways, expressways and conventional highways			
"A"	<0.30	None	Free flow.
"B"	0.31-0.50	None	Free to stable flow, light to moderate volumes.
"C"	0.51-0.71	None to minimal	Stable flow, moderate volumes, freedom to maneuver noticeably restricted.
"D"	0.71-0.89	Minimal to substantial	Approaches unstable flow, heavy volumes, very limited freedom to maneuver.
"E"	0.90-1.00	Significant	Extremely unstable flow, maneuverability and psychological comfort extremely poor.
Used for conventional highways			
"F"	>1.00	Considerable	Forced or breakdown flow. Delay measured in average travel speed (MPH). Signalized segments experience delays >60.0 seconds/vehicle.

Source: Caltrans – Guide for the Preparation of Traffic Impact Studies; December 2002

2.6 Determination of Significant Impacts

The City of San Diego Significance Determination Thresholds, January 2011 defines project impact thresholds by facility type. These thresholds are generally based upon an acceptable increase in the Volume / Capacity (V/C) ratio for roadway and freeway segments, and upon increases in vehicle delays for intersections and ramps.

Within the City of San Diego's jurisdiction, LOS D is considered acceptable for roadway and intersection operations. A project is considered to have a significant impact if it degrades the operations of a roadway or intersection from an acceptable LOS (D or better) to an unacceptable LOS (E or F), or if it adds additional delay to a facility already operating an unacceptable level. **Table 2.6** summarizes the impact significant thresholds as identified within the City of San Diego's guidelines beyond which mitigation measures are required.

Table 2.6 City of San Diego Measure of Significant Project Traffic Impacts

LOS with Project	Allowable Change Due to Impact					
	Freeways		Roadway Segments		Intersections	Ramp Metering
	V/C	Speed (mph)	V/C	Speed (mph)	Delay (sec)	Delay (min.)
E (or ramp meter delays above 15 min.)	0.01	1.0	0.02	1.0	2.0	2.0
F (or ramp meter delays above 15 min.)	0.005	0.5	0.01	0.5	1.0	1.0

Source: City of San Diego, Significance Determination Thresholds, January 2011

3.0 Proposed Project

This section describes the proposed project, including land uses and estimated trip generation, trip distribution, trip assignment, and project study area.

3.1 Project Description

The Tenth Avenue Marine Terminal (TAMT) Redevelopment Plan would set to meet current and future market conditions at the terminal and replace the outdated 2008 Maritime Business Plan. The proposed Redevelopment Plan includes a series of infrastructure investments and improvements that may be undertaken over the short- and long-term to accommodate the need to increase the terminal's capabilities and capacity. Short-term improvements include demolition of Transit Sheds #1 and #2 to provide additional open storage space as well as an on-dock rail lubrication system and the capability to provide on-dock air brake testing. Long-term improvements include up to five gantry cranes, additional and consolidated dry bulk storage capacity, enhancements to the existing conveyor system, demolition of the molasses tanks and Warehouse C, and a new entry gate facility.

The proposed project would establish the following nodes and infrastructure improvements:

- **Dry Bulk**: The dry bulk node will be located in the general area of the southeastern portion of the terminal, also referred to as the terminal's "backlands." This node will be served by Berths 10-5/10-6 and Berths 10-7/10-8. Infrastructure improvements would include adding a consolidated dry bulk discharge facility, upgrades to the existing bulk cargo handling and conveyor system, and new semi-permanent storage facilities for dry bulk products.

- **Liquid Bulk**: The liquid bulk node and associated terminal infrastructure will be acknowledged by the proposed plan, but no changes in location, capacity or infrastructure improvements are proposed. Preferred berths would be 10-1/10-2. This TIA does include growth associated with increased liquid bulk throughput even though the Redevelopment Plan would not directly call for any changes to existing capacity or operations at this node.

- **Refrigerated Container:** The refrigerated container node will be located on the northern portion of the terminal and served by Berths 10-3/10-4, and overflow will be handled at Berths 10-5/10-6. The boundary between the refrigerated container node and the multipurpose general cargo node will fluctuate depending on need at any one time. This open area will allow the terminal to be used for the handling of diverse cargos as market conditions and vessel schedules permit. As such, construction of the refrigerated container node and Break Bulk / Multi-purpose General Cargo node will happen simultaneously. Infrastructure improvements will include one 100-foot mobile harbor crane at Berths 10- 1/10-2 and up to three 100-foot electrical cranes at Berths 10-3/10-4 including associated electrical utility improvements to operate the cranes.

- **Break Bulk / Multi-purpose General Cargo:** The Break bulk / Multi-purpose General Cargo node will include an intermodal rail facility and would be located on the southern portion of the terminal in the area that is currently occupied by the eastern portion of Warehouse C and it would share Berths 10-3/10-4 and 10-5/10-6 with the refrigerated container node. Similar to the refrigerated container node, the boundary will fluctuate depending on need at any one time. This open area will allow the terminal to be used for the handling of diverse cargos as market conditions and vessel schedules permit. As such, construction of the refrigerated container and multi-purpose nodes will happen simultaneously. Infrastructure improvements include two gantry cranes at Berths 10-5/10-6 as well as various intermodal yard and backland improvements. Intermodal yard and backland improvements could include a bridge crane, full wheel container module with gantry cranes, rubber tired cranes for load-on and load-off, straddle carrier (stacked for the intermodal facility), additional paving to 600-per-square-foot live load and container handling equipment to handle 100kip wheel live load. Improvements will include upgrades to shore-side power capabilities to provide shore power to two vessels at the same time.

- **Central Gate Facility:** The Central gate facility is the fifth redevelopment node contemplated by the proposed Plan. It will create a common gate facility, with a new truck weigh station, in the general location of the existing gate. It will be utilized by all terminal tenants and customers.

The layout of the Tenth Avenue Marine Terminal is displayed in **Figure 3-1**.

Table 3.1 summarizes the existing cargo throughput and truck load demands of TAMT on an annual basis.

Table 3.1 TAMT Existing Operations and Demand

Type	Existing Throughput (MT)	Existing Trucks (per year)
Dry Bulk	289,864	9,995
Liquid Bulk	31,520	292
Refrigerated Containers	637,931	21,998
Multi-Purpose Cargo	85,131	1,064
Total	**1,044,446**	**33,349**

Source: Chen Ryan Associates, June 2016

As shown, The TAMT has an existing total annual throughout of 1,044,446 metric tons (FY 2013), which required 33,349 truckloads of goods distributed from the terminal.

Tenth Avenue Marine Terminal Redevelopment Plan

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Figure 3-1

Terminal Layout

The improvements proposed in TAMT Redevelopment Plan will allow for significant increases in the terminal's overall maximum practical throughput capacity. **Table 3.2** compares the terminals existing annual throughput to the projected annual maximum practical throughput capacity under buildout of the redevelopment plan.

Table 3.2 Existing Terminal Throughput vs Projected Maximum Practical Capacity

Type	Existing Throughput (MT)	Maximum Practical Capacity (MT)	Projected Increase in Throughput (MT)	Growth
Dry Bulk	289,864	2,650,000	2,360,136	814%
Liquid Bulk	31,520	239,017	207,497	658%
Refrigerated Containers	637,931	2,288,000	1,650,069	359%
Multi-Purpose Cargo	85,131	977,400	892,269	1048%
Total	**1,044,446**	**6,154,417**	**5,109,971**	**489%**

Source: Tenth Avenue Marine Terminal (TAMT) Redevelopment Plan

Note:
MT: Metric Tons of Cargo

As shown, under the buildout of the TAMT Redevelopment Plan, cargo throughput at the TAMT is projected to increase by almost 500% or more than 5 million metric tons.

3.2 Project Trip Generation, Distribution, and Assignment

Project Trip Generation

There are two main trip generators at the Tenth Avenue Marine Terminal, freight movement (trucks) and employees.

Trucks

Increases in trucking activities under the buildout of the redevelopment plan (or maximum practical capacity) conditions were developed based on existing ratios for cargo throughput per truck by cargo type. To develop this ratio, cargo throughout and the number trucks accessing the TAMT onsite was collected between July 2013 and June 2014, which is provided in **Appendix B**. **Table 3.3** displays the truck ratios by cargo type.

Table 3.3 Existing Cargo to Truck Ratios

Cargo Type	Average Throughput Per Truck
Dry Bulk	29 Metric Tons / Truck
Liquid Bulk	108 Metric Tons / Truck
Refrigerated Containers	29 Metric Tons / Truck
Multi-Purpose Cargo	80 Metric Tons / Truck

Source: Port of San Diego and Chen Ryan Associates, June 2016

To determine the increase in trucking activities associated with the proposed project, the cargo throughput ratios noted in Table 3.3 were applied to the anticipated annual growth in cargo throughput, as noted in Table 3.2. **Table 3.4** displays the anticipated annual increase in truck activities associated with the proposed project. The TAMT operates seven days a week and closes on very few holidays. Therefore, to determine the increase in daily truck activities, it was assumed that the TAMT operates 360 days a year.

Table 3.4 Increase in Truck Activity

Type	Projected Increase in Throughput (MT)	New Trucks / Year[1]	New Trucks / Day[2]
Dry Bulk	2,360,136	81,384	227
Liquid Bulk	207,497	1,921	6
Refrigerated Containers	1,650,069	56,899	159
Multi-Purpose Cargo	892,269	11,153	31
Total	**5,109,971**	**151,358**	**423**

Source: Chen Ryan Associates, June 2016

Notes:
MT: Metric Tons of Cargo
[1] Projected increase in throughput / throughput per truck (see Table 3.2)
[2] New trucks per year / 360 operational days per year

As shown in Table 3.3, the proposed project is anticipated to generate 423 additional truckloads of cargo at the TAMT each day.

Employees

District staff anticipates that the additional cargo throughout will require 63 additional administrative employees, as well as 461 additional dock workers (daily) to unload the ships.

Assumptions

The following assumptions were made in regards to truck and employee traffic:

- It is assumed that the percent of total cargo shipped via rail and barge from the TAMT will remain the same. Therefore, the cargo to truck and employ ratios remain the same under build out of the proposed project.
- Trucking will be active 24 hours a day
- New administrative employees will work daily between 8:00 AM and 5:00 PM.
- New dock workers will be spread between the following shifts:
  - Day shift: 8:00 am to 5:00 pm
  - Evening shift: 5:00 pm to 3:00 am
  - Night shift 3:00 am to 8:00 am
- To be conservative, it is assumed that additional employees will drive a personal vehicle to the Tenth Avenue Marine Terminal and no carpooling will occur.

Table 3.5 outlines the projected trip generation in both the number of trucks and employees that will access the Tenth Avenue Marine Terminal with the implementation of the proposed project.

Table 3.5 Project Trip Generation

Type	Units	Rate	PCE	ADT	AM			PM		
					Total	In	Out	Total	In	Out
Trucks	423	2 / Truck	3	2,538	106	53	53	106	53	53
Dock Workers	*461*	*3 / Employee*	*1*	*1,383*	*308*	*154*	*154*	*308*	*154*	*154*
Administrative	*63*	*3 / Employee*	*1*	*189*	*63*	*63*	*0*	*63*	*0*	*63*
			Total	**4,110**	**477**	**270**	**207**	**477**	**207**	**270**

Source: Chen Ryan Associates; June 2016

Note:
PCE = Passenger Car Equivalent, based on industry standards.

As shown, the proposed project is anticipated to generate 4,110 new PCE trips, including 477 trips during the AM peak hour and 477 trips during the PM peak hour.

Project Trip Distribution

The assumed project trip distribution for employees and trucks are displayed in **Figures 3-2A & B**, respectively. Project trip distribution for trucks was determined based on the *Port Access Projects – 10th Avenue Marine Terminal Truck O-D Study* as well as on existing truck routes. Project trip distribution for employees was based on SANDAG's *San Diego Region Major Statistical Areas*. as well as maritime operations staff input. The aforementioned documents as well as the trip calculations used to determine project trip distribution are provided in Appendix B.

Project Trip Assignment

Based upon the assumed project trip distribution, daily and AM/PM peak hour project trips were assigned to the adjacent roadway network, as displayed in **Figures 3-3A & B** for employees and **Figures 3-4A & B** for trucks.

3.3 Interim Project Trip Generation

The proposed project is a market-based redevelopment plan and will not be implemented all at once or even in set phases. Instead, cargo throughput is anticipated to increase overtime based on market demands. However, it is anticipated that with the implementation of the proposed on-site physical improvements associated with the proposed project (demolition of the Transit Sheds #1 and #2, as well as improvements to the existing on-dock intermodal rail facilities) will allow for the terminal to serve latent throughput demand that it cannot service under current conditions.

Based on this anticipated demand an interim increase in the overall throughput was derived by the District. The projected interim increase in throughput is outline in **Table 3.6**.

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Figure 3-2A

Project Trip Distribution - Employees

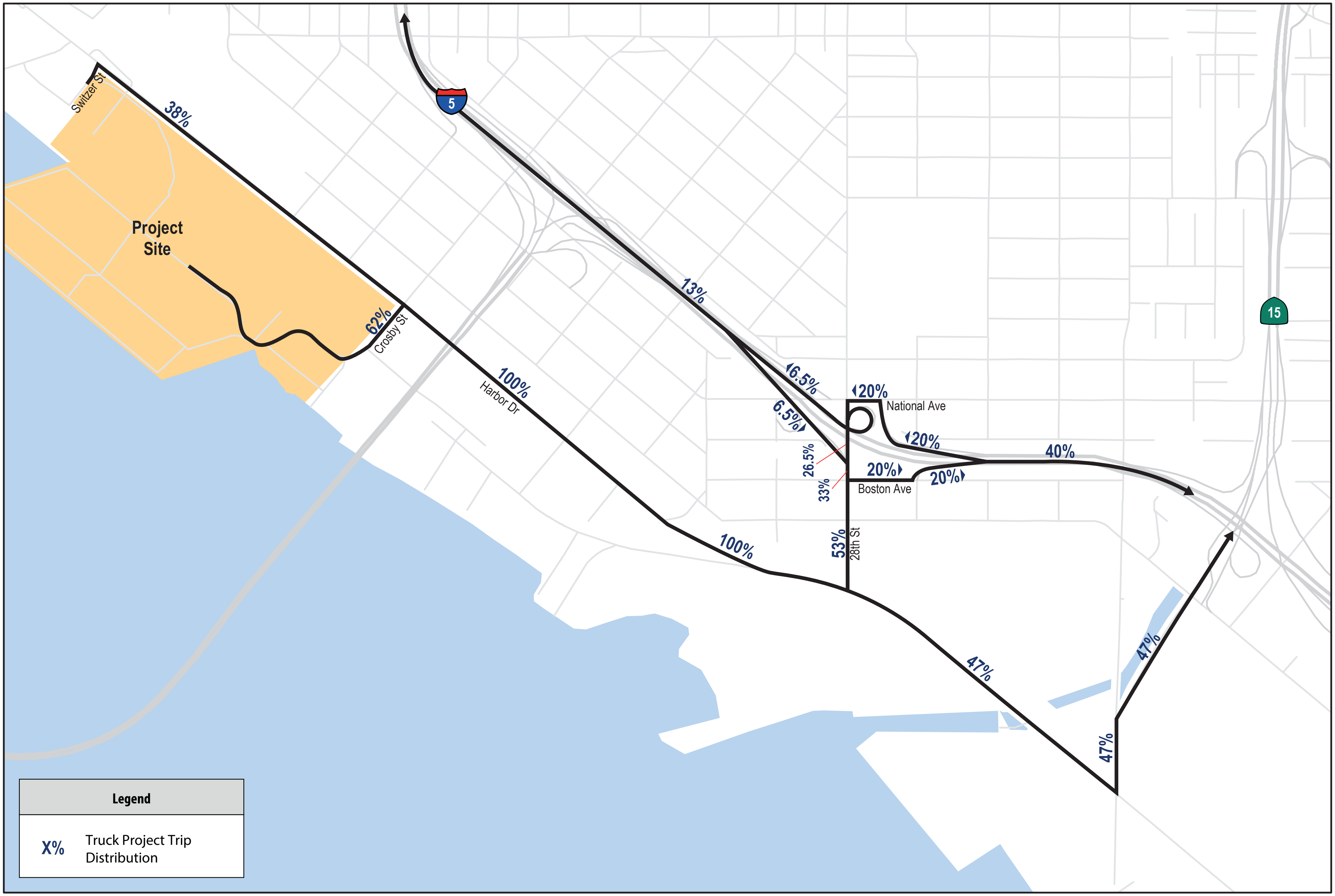

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Figure 3-2B

Project Trip Distribution - Trucks

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Figure 3-3A

Average Daily Project Trip Assignment - Employees

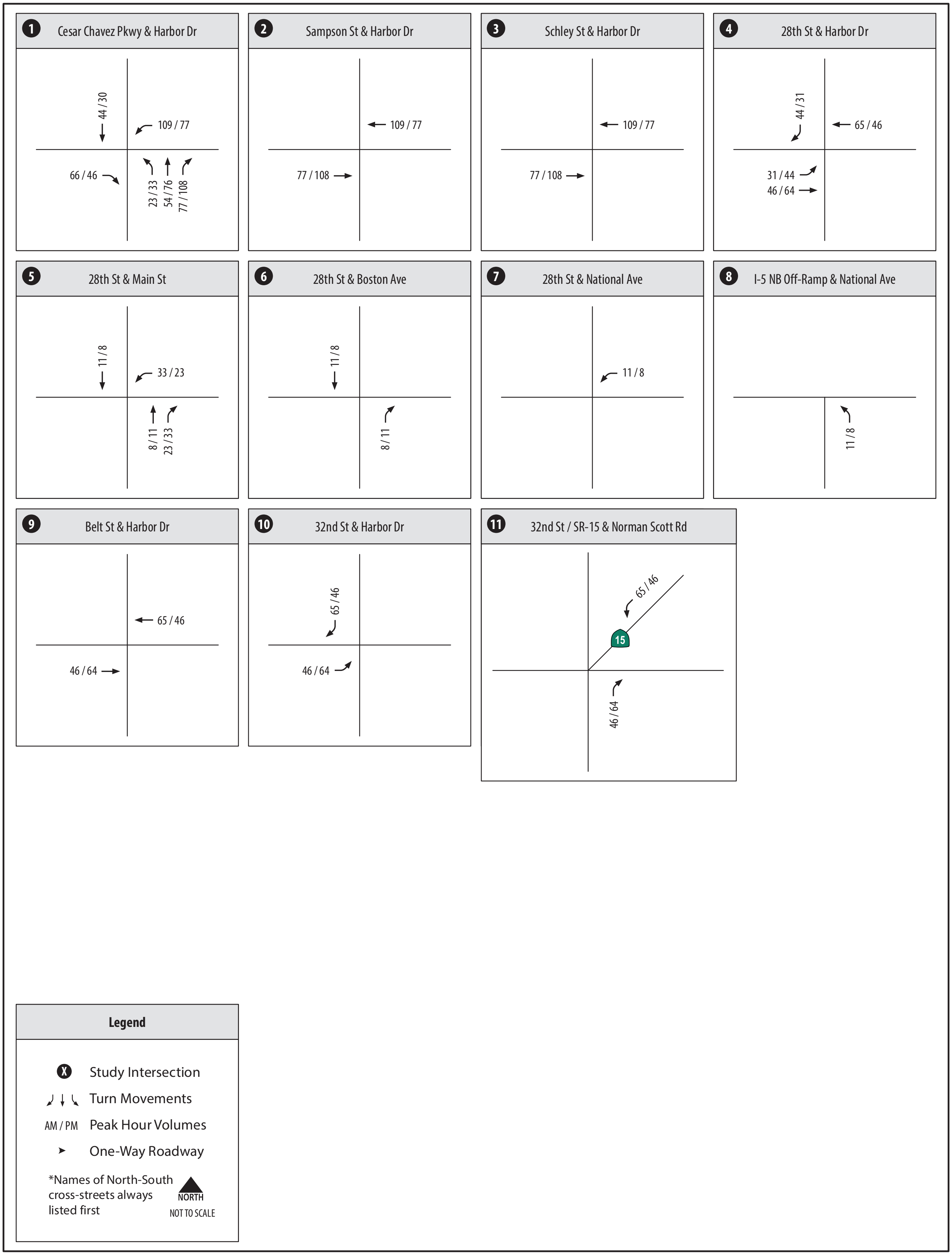

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Figure 3-3B

AM/PM Peak Hour Intersection Project Trip Assignment - Employees

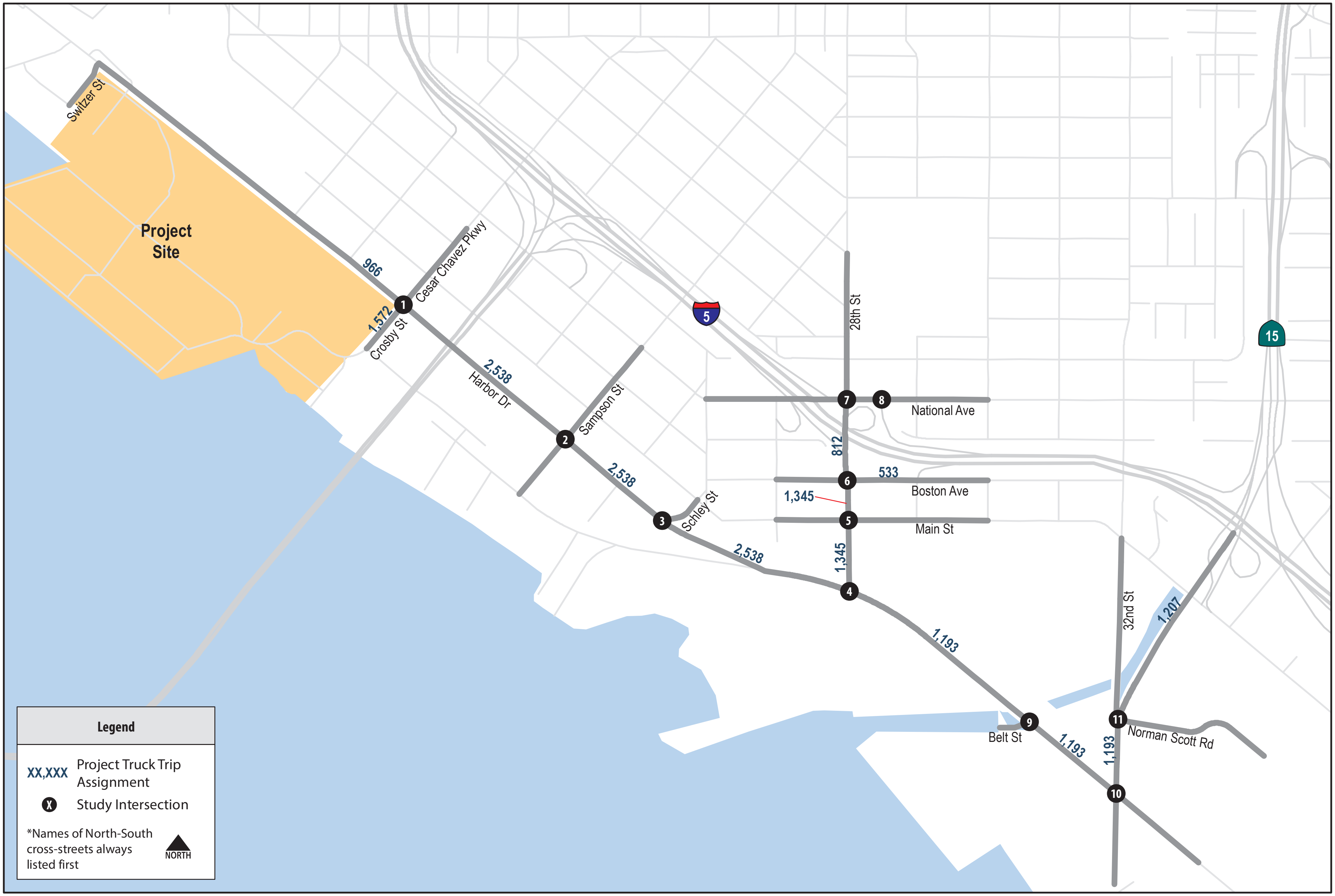

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Figure 3-4A

Average Daily Project Trip Assignment - Trucks

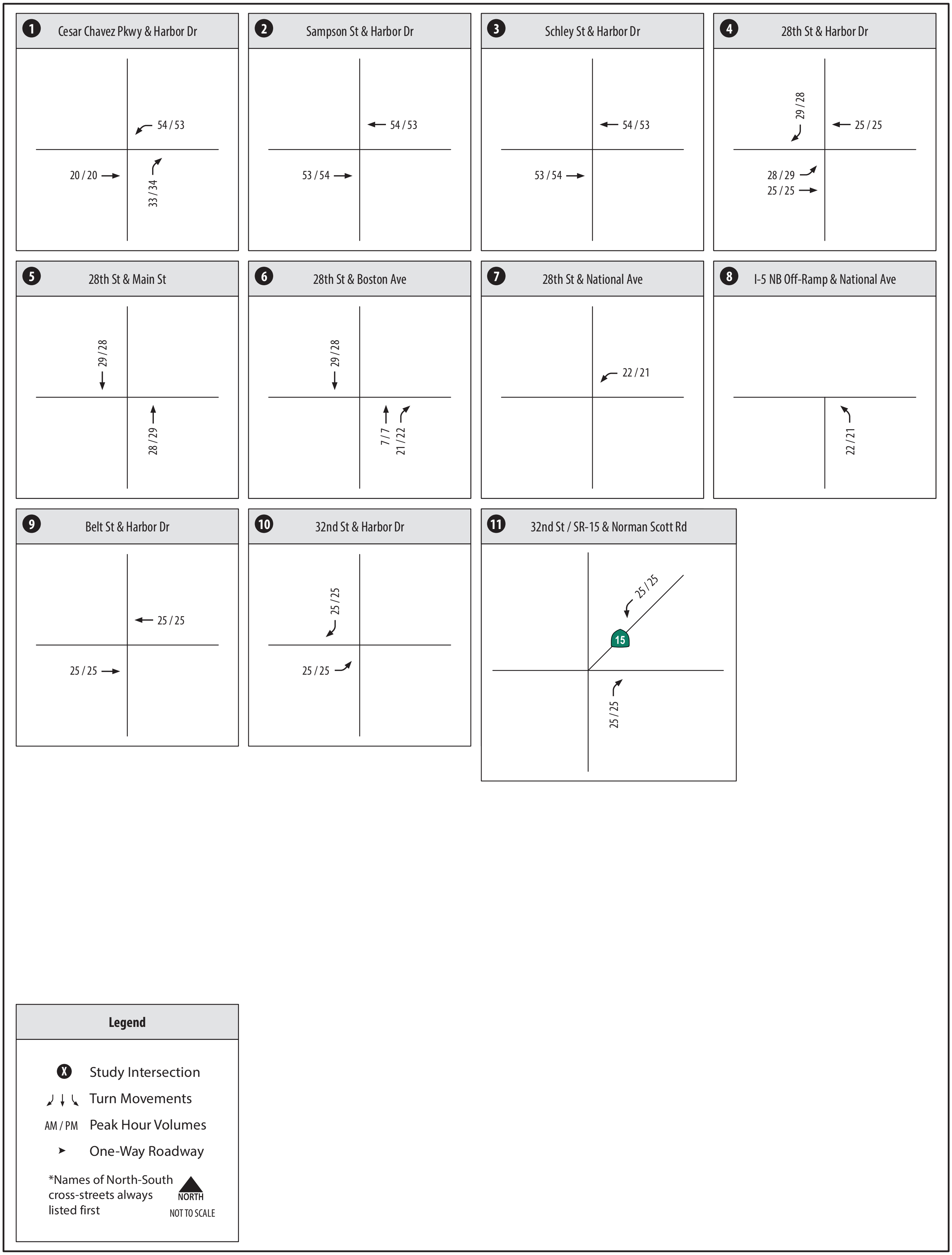

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Figure 3-4B

AM/PM Peak Hour Intersection Project Trip Assignment - Trucks

Table 3.6 Existing Terminal Throughput vs Interim Throughput

Type	Existing Throughput (MT)	Interim Throughput (MT)	Projected Increase in Throughput (MT)	Growth
Dry Bulk	289,864	289,864	0	0%
Liquid Bulk	31,520	31,520	0	0%
Refrigerated Containers	637,931	685,931	48,000	8%
Multi-Purpose Cargo	85,131	124,078	38,947	46%
Total	1,044,446	1,131,393	86,947	8%

Source: Tenth Avenue Marine Terminal (TAMT) Redevelopment Plan

Note:
MT: Metric Tons of Cargo

To determine the increase in trucking and employment activities associated with the interim condition, the cargo throughput ratios noted in Table 3.3 were applied to the anticipated annual growth in cargo throughput, as noted in Table 3.6. **Table 3.7** displays the anticipated annual increase in truck activities associated with the proposed project. The TAMT operates seven days a week and closes on very few holidays. Therefore, to determine the increase in daily truck activities, it was assumed that the TAMT operates 360 days a year.

Table 3.7 Increase in Truck Activity – Interim Conditions

Type	Projected Increase in Throughput (MT)	New Trucks / Year[1]	New Trucks / Day[2]
Dry Bulk	0	0	0
Liquid Bulk	0	0	0
Refrigerated Containers	48,000	1,655	5
Multi-Purpose Cargo	38,947	487	2
Total	86,947	2,142	7

Source: Chen Ryan Associates, June 2016

Notes:
MT: Metric Tons of Cargo
[1] Projected increase in throughput / throughput per truck (see Table 3.2)
[2] New trucks per year / 360 operational days per year

As shown, the proposed project is anticipated to generate 7 additional truckloads of cargo each day under interim conditions.

Employees

District staff anticipates that the additional cargo throughout will require 10 additional administrative employees, as well as 82 additional dock workers (daily) to unload the ships.

Table 3.8 outlines the projected trip generation in both the number of trucks and employees that will access the TAMT under interim project conditions. It should be noted that the same trip generation assumptions outlined in Section 3.2 (employee shifts, days of work, etc.) were also applied to the interim condition.

Table 3.8 Project Trip Generation – Interim Conditions

Type	Units	Rate		PCE	ADT	AM			PM		
						Total	In	Out	Total	In	Out
Trucks	7	2	/ Truck	3	42	2	1	1	2	1	1
Dock Workers	*82*	*3*	*/ Employee*	*1*	*246*	*59*	*35*	*24*	*59*	*24*	*35*
Administrative	*10*	*3*	*/ Employee*	*1*	*30*	*10*	*10*	*0*	*10*	*0*	*10*
				Total	**318**	**71**	**46**	**25**	**71**	**25**	**46**

Source: Chen Ryan Associates, June 2016

Note:
PCE = Passenger Car Equivalent, based on industry standards.

As shown, the proposed project is anticipated to generate 318 new PCE trips, including 71 trips during the AM peak hour and 71 trips during the PM peak hour.

Interim Project Trip Distribution

The same trip distribution parterres assumed for trucks and employees under the full project scenario (displayed in Figures 3-2A & B, respectively) was assumed under interim project conditions.

Interim Project Trip Assignment

Based upon the assumed project trip distribution, daily and AM/PM peak hour project trips were assigned to the adjacent roadway network, as displayed in **Figures 3-5A & B** for employees and **Figures 3-6A & B** for trucks.

3.4 Site Access and Egress

Employees will access the site (both enter and exit) from the main Tenth Avenue Marine Terminal gate located south of the Harbor Drive / Cesar Chavez Parkway intersection. Truck traffic will enter the Tenth Avenue Marine Terminal through the main gate; however, the Refrigerated Trucks will exit the terminal via another gate located on Switzer Street, to the north of the Harbor Drive and Cesar Chavez Parkway intersection.

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Figure 3-5A

Average Daily Project Trip Assignment Interim Conditions - Employees

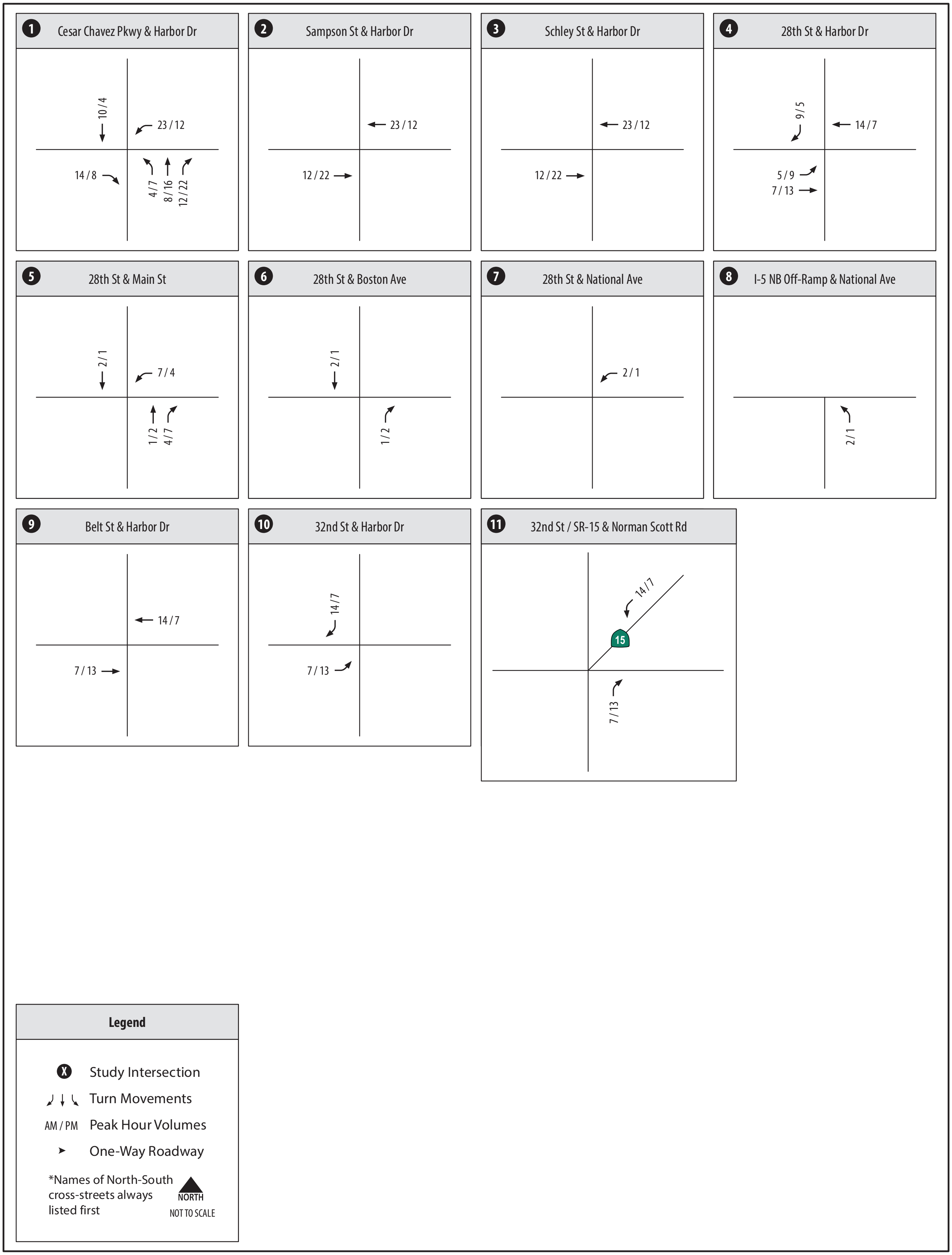

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Figure 3-5B

AM/PM Peak Hour Intersection Construction Trip Assignment
Interim Conditions - Employees

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Figure 3-6A

Average Daily Project Trip Assignment Interim Conditions - Trucks

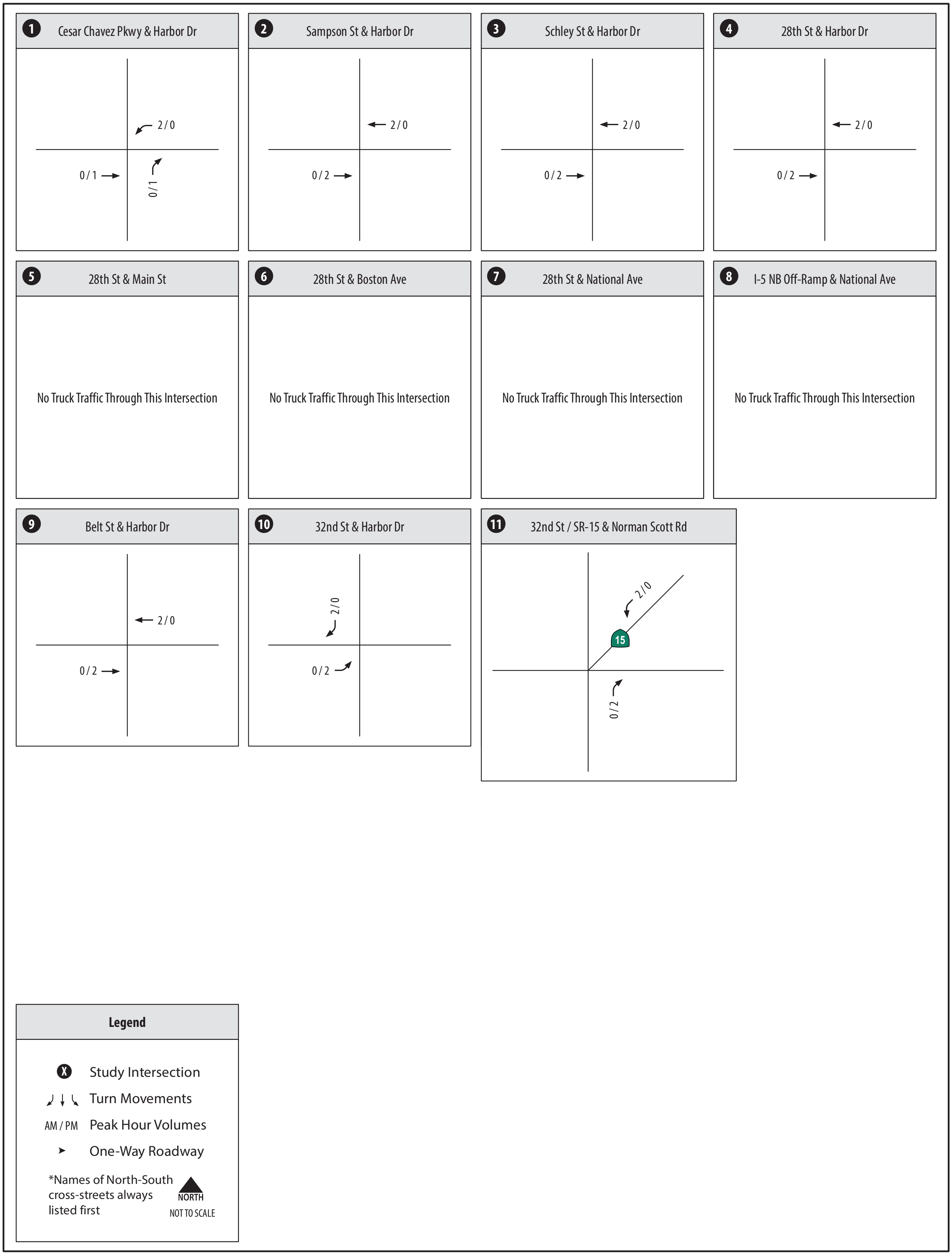

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Figure 3-6B

AM/PM Peak Hour Intersection Construction Trip Assignment
Interim Conditions - Trucks

3.5 Alternative Gate

The Tenth Avenue Marine Terminal Plan also identifies an alternative gate concept that would serve as the primary entry and exit location for the Refrigerated Container node and the Multi-Purpose General Cargo node. The alternative gate would be located in the north-east corner of the terminal and provide access directly onto Harbor Drive. According to the Plan, the Dry Bulk and Liquid Bulk Nodes would continue to utilize the existing gate off Cesar Chavez Parkway, particularly for domestic bulk shipments. Both access alternatives were analyzed as part of this study. The alternative gate location is displayed in **Figure 3-7.**

3.6 Project Study Area

This TIA was performed in accordance with the requirements of the City of San Diego Traffic Impact Study Manual, July 1998 requirements. The City of San Diego Traffic Impact Study Manual requires that the defined study area include all freeway segments, roadway segments, and intersections where the proposed project would add 50 or more peak hour trips in either direction.

Study Roadway Segments

Based on the project trip assignment and input from Port District staff, the following key study area roadway segments were analyzed:

Harbor Drive between:

- Beardsley Street & Cesar Chavez Parkway
- Cesar Chavez Parkway & Sampson Street
- Sampson Street & Schley Street
- Schley Street & 28th Street
- 28th Street & Belt Street
- Belt Street & 32nd Street

28th Street between:

- Harbor Drive & Main Street
- Main Street & Boston Avenue
- Boston Avenue & National Avenue

32nd Street between:

- Harbor Drive & Norman Scott Road

The proposed project is not anticipated to contribute more than 50 peak hour trips on Interstate 5 (I-5) nor in Interstate 15 (I-15) in either direction as shown in Figures 3-3B and 3-4B; therefore, freeway impact analyses was not conducted, as specified in the City of San Diego Traffic Impact Study Guidelines.

Study Intersections

Based on the project trip assignment, the following eleven (11) key study area intersections were analyzed:

1. Harbor Drive / Cesar Chavez Parkway
2. Harbor Drive / Sampson Street
3. Harbor Drive / Schley Street
4. Harbor Drive / 28th Street
5. 28th Street / Main Street
6. 28th Street / Boston Avenue
7. 28th Street / National Avenue
8. I-5 NB Off-Ramp / National Avenue
9. Harbor Drive / Belt Street
10. Harbor Drive / 32nd Street
11. Norman Scott Road / 32nd Street / Wabash Boulevard

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Figure 3-7

Alternative Gate Location

Study Freeway Mainline Segments

Based on the project trip assignment, the following nine (9) key freeway mainline segments were analyzed:

- I-5 between SR-94 & Imperial Avenue
- I-5 between Imperial Avenue & SR-75
- I-5 between SR-75 & 28th Street
- I-5 between 28th Street & SR-15
- I-5 between SR-15 & Main Street
- SR-15 between SR-94 & Market Street
- SR-15 between Market Street & Ocean View Boulevard
- SR-15 between Ocean View Boulevard & I-5
- SR-15 between I-5 & Norman Scott Road

It should be noted that the interim project scenarios are not projected to generate enough traffic to warrant freeway analysis (50 peak hour trips on any single freeway mainline segment). Therefore, freeway mainline analyses were only conducted for the following scenarios:

- Existing
- Existing Plus Project
- Future Year 2035 Base
- Future Year 2035 Base Plus Project

Figure 3-8 displays the project study area. All key study facilities are located within the City of San Diego.

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Figure 3-8

Project Study Area

4.0 Existing Conditions

This section provides an analysis of the current traffic conditions for the following scenarios:

- Existing Conditions
- Existing Plus Project Conditions
- Existing Plus Project Conditions – Alternative Gate
- Existing Plus Interim Project Conditions
- Existing Plus Interim Project Conditions – Alternative Gate

4.1 Existing Roadway Network

Two locally significant roadways traverse the study area. Each of the key roadways included in the study area are discussed below.

North-South Facilities

28th Street – Within the project study area, 28th Street is configured as follows:

- Between Harbor Drive and Main Street - Four-lane divided (raised median) roadway;
- Between Main Street and Boston Avenue - Four-lane roadway with a continuous two-way left-turn lane;
- Between Boston Avenue and National Avenue – Three-lane (2 northbound and 1 southbound) roadway with a continuous two-way left-turn lane.

The roadway has paved widths that range from 64 and 76 feet and a posted speed limit of 30 MPH. Parking is allowed on both sides of the roadway between Harbor Drive and Main Street, but is prohibited between Main Street and National Avenue. Pedestrian facilities (sidewalks) are present on both sides of the roadway, but bicycle facilities are not. There is currently one transit stop, serving MTS Bus Route 11, located at the intersection of 28th Street and National Avenue within the project study area.

32nd Street – Within the project study area, 32nd Street is a six-lane roadway with a raised median, a posted speed limit of 30 MPH, and a paved width of 86 feet. Parking is not allowed on either side of the roadway. Within the project study area, pedestrian facilities are present on both sides of the roadway, but bicycle facilities are not. 32nd Street intersects Wabash Boulevard, which provides access to I-15, functioning as an on-off ramp. There is currently one transit station (Pacific Fleet Station) serving the Blue Line Trolley located along 32nd Street within the project study area.

East-West Facilities

Harbor Drive – Within the project study area, Harbor Drive is a four-lane roadway with a raised median. Harbor Drive has posted speed limits of 45 and 40 MPH between Park Boulevard and Cesar Chavez Parkway, and between Cesar Chavez Parkway and 32nd Street, respectively. Paved widths along this roadway range from 85 to 110 feet. Parking is not allowed on either side of the roadway between Beardsley Street and Sampson Street; however, parking is allowed on both sides of the roadway east of Sampson Street. Within the project study area, pedestrian facilities are present on both sides of the roadway as well as Class II bicycle lanes. There are currently two transit stations (Barrio Logan Trolley Station and Harborside Trolley Station) serving the Blue Line Trolley located along Harbor Drive within the project study area.

The existing roadway and intersection geometrics are shown in **Figure 4-1A & B**, respectively.

4.2 Existing Intersection and Roadway Volumes

Figure 4-2A shows the existing ADT volumes for study area roadway segments, while **Figure 4-2B** shows the AM/PM peak hour traffic volumes for the key study area intersections. The roadway segment and study area intersection traffic counts were conducted in July 2014. Count worksheets are provided in Appendix A. Additional 24 hour tube counts along Harbor Drive were taken in March 2015 to validate that the counts taken in July 2014 were still applicable. It was found that the counts taken in March 2015 were slightly lower than the July 2014 counts. Therefore, as a worst case scenario the July 2014 counts were used in this analysis.

4.3 Existing LOS Analysis

LOS analyses under Existing conditions were conducted using the methodologies described in Chapter 2.0. Roadway segment analysis, intersection LOS analysis, freeway ramp intersection ILV analysis, and freeway mainline analysis results are discussed in the following sections.

Roadway Segment Analysis

Table 4.1 displays the LOS analysis results for key study area roadway segments under Existing conditions.

Table 4.1 Roadway Segment LOS Results - Existing Conditions

Roadway Segment	Segment	Cross-section	Threshold (LOS E)	ADT	V/C	LOS
Harbor Drive	Between Beardsley Street and Cesar Chavez Parkway	4-Lanes w/ RM	40,000	20,194	0.505	B
	Between Cesar Chavez Parkway and Sampson Street	4-Lanes w/ RM	40,000	10,546	0.264	A
	Between Sampson Street and Schley Street	4-Lanes w/ RM	40,000	12,050	0.301	A
	Between Schley Street and 28th Street	4-Lanes w/ RM	40,000	11,626	0.291	A
	Between 28th Street and Belt Street	4-Lanes w/ RM	40,000	18,050	0.451	B
	Between Belt Street and 32nd Street	4-Lanes w/ RM	40,000	16,603	0.415	B
28th Street	Between Harbor Drive and Main Street	4-Lanes w/ RM	40,000	16,134	0.403	B
	Between Main Street and Boston Avenue	4-Lanes w/TWLT	30,000	19,563	0.652	C
	Between Boston Avenue and National Avenue	3-Lanes w/TWLT	22,500[1]	22,112	0.983	**E**
32nd Street	Between Harbor Drive and Norman Scott Road	6-lanes w/ RM	50,000	19,920	0.398	A

Source: NDS, Chen Ryan Associates; June 2016

Notes:
[1] Capacity is 75% of a 4-Lane Collector w/TWLT.
V/C = Volume to Capacity Ratio.
Bold letter indicates LOS E or F.

Figure 4-1A Roadway Geometrics – Existing Conditions

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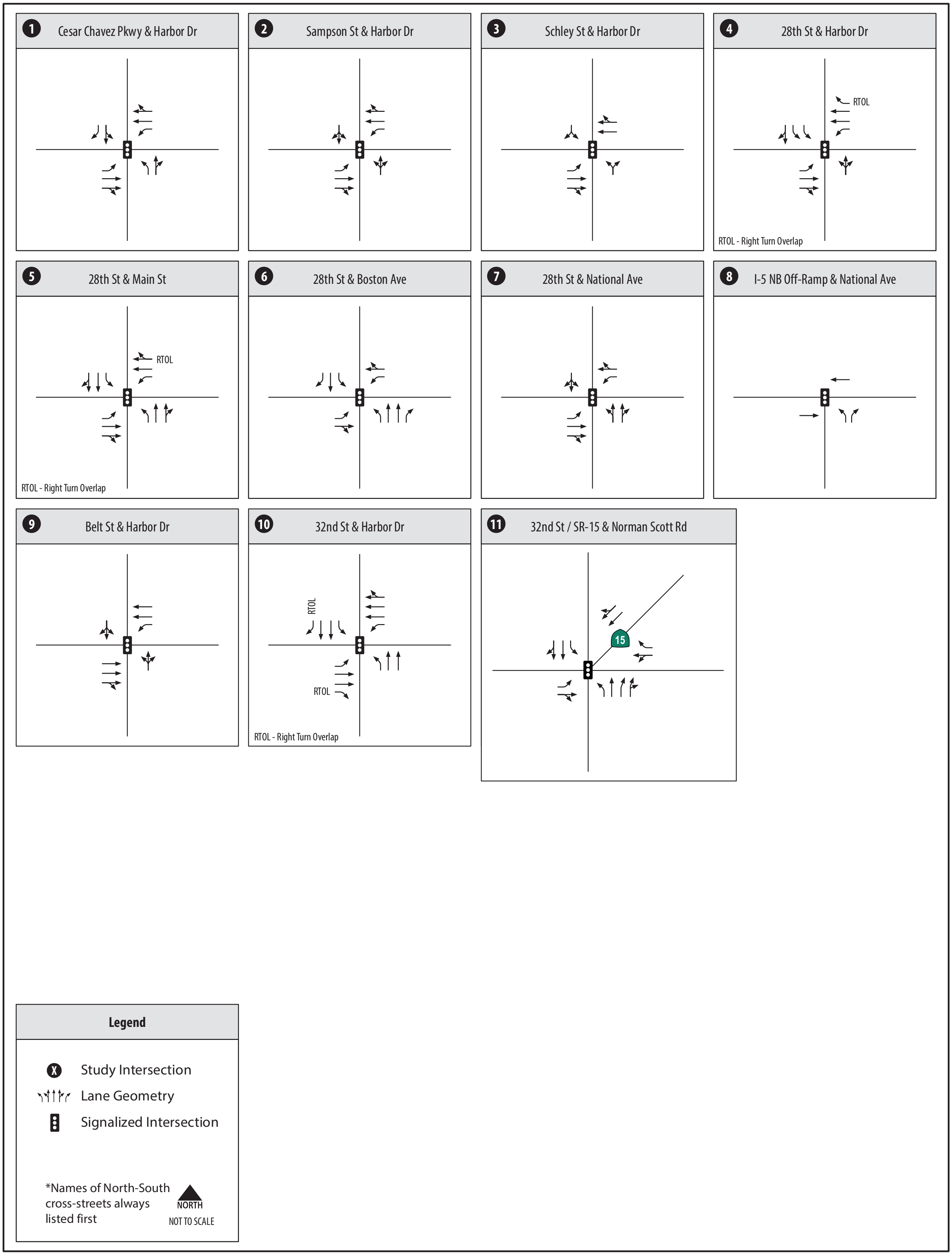
Figure 4-1A

Roadway Geometrics - Existing Conditions



Tenth Avenue Marine Terminal Redevelopment Plan

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Figure 4-1B

Intersection Geometrics - Existing Conditions

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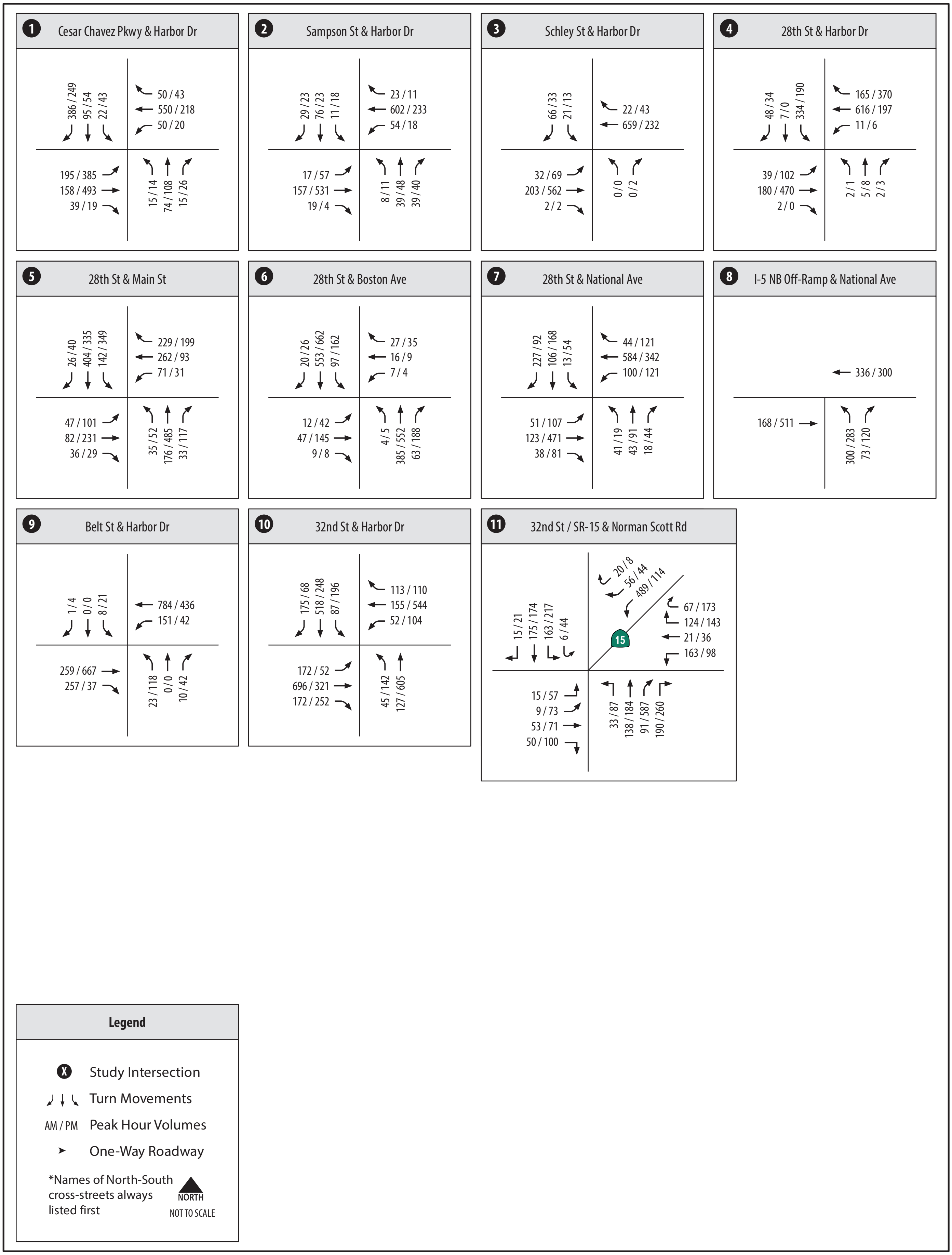
Figure 4-2A

Average Daily Segment Traffic Volumes - Existing Conditions



Tenth Avenue Marine Terminal Redevelopment Plan

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Figure 4-2B

AM/PM Peak Hour Intersection Traffic Volumes - Existing Conditions

As shown in Table 4.1, all key study roadway segments currently operate at LOS C or better with the exception of:

- 28th Street, between Boston Avenue and National Avenue (LOS E).

Intersection Analysis

Table 4.2 displays intersection LOS and average vehicle delay results for the key study area intersections under Existing conditions. All intersections are currently. LOS calculation worksheets for Existing conditions are provided in **Appendix C**.

Table 4.2 Peak Hour Intersection LOS Results - Existing Conditions

#	Intersection	AM Peak Hour		PM Peak Hour	
		Avg. Delay (sec.)	LOS	Avg. Delay (sec.)	LOS
1	Harbor Drive / Cesar Chavez Parkway	36.8	D	33.3	C
2	Harbor Drive / Sampson Street	40.4	D	40.9	D
3	Harbor Drive / Schley Street	16.7	B	15.0	B
4	Harbor Drive / 28th Street	23.1	C	20.3	C
5	Main Street / 28th Street	21.4	C	34.8	C
6	Boston Avenue / 28th Street	19.4	B	23.0	C
7	National Avenue / 28th Street	42.3	D	29.6	C
8	National Avenue / I-5 NB Off-Ramp	14.9	B	14.7	B
9	Harbor Drive / Belt Street	18.6	B	17.1	B
10	Harbor Drive / 32nd Street	28.6	C	39.9	D
11	Norman Scott Road / 32nd Street / Wabash Boulevard	95.3	**F**	66.2	**E**

Source: NDS, Chen Ryan Associates; June 2016

As shown, all key study area intersections currently operate at LOS D or better, with the exception of:

- Norman Scott Road / 32nd Street / Wabash Boulevard (LOS F in the AM peak hour and LOS E in the PM peak hour).

Ramp Intersection Capacity Analysis

Consistent with Caltrans requirements, the signalized ramp intersections of National Avenue / I-5 NB off-ramp and Norman Scott Road / 32nd Street / Wabash Boulevard were analyzed using ILV procedures, as described in Section 2.4. ILV analysis results are displayed in **Table 4.3** and analysis worksheets for Existing conditions are provided in Appendix C.

Table 4.3 Ramp Intersection Capacity Analysis - Existing Conditions

#	Intersection	Peak Hour	ILV/Hour	Description
8	National Avenue / I-5 NB Off-Ramp	AM	636	Under Capacity
		PM	794	Under Capacity
11	Norman Scott Road / 32nd Street / Wabash Boulevard	AM	956	Under Capacity
		PM	1,028	Under Capacity

Source: Chen Ryan Associates; June 2016

As shown, both signalized ramp intersections are currently operating at "Under Capacity" conditions during both the AM and PM peak hours.

Freeway Analysis

Table 4.4 displays the LOS results from the freeway segment analysis under Existing Conditions. Year 2014 freeway Annual Average Daily Traffic (AADT) volumes were obtained from Caltrans' *2014 Traffic Volumes on California State Highways* and are included in **Appendix D**.

Table 4.4 Freeway Mainline LOS Analysis Results - Existing Conditions

Freeway	Segment	ADT[(a)]	Direction	# of Lanes	Capacity [(b)]	D[(c)]	K[(d)]	HVF[(e)]	Peak Hour Volume	V/C	LOS
I-5	SR-94 & Imperial Avenue	180,000	NB	4M+1A	10,810	62.2%	8.1%	4.0%	9,600	0.89	D
			SB	4M+1A	10,810	53.2%	8.3%	4.0%	8,400	0.78	C
	Imperial Avenue & SR-75	170,000	NB	4M+1A	10,810	62.2%	8.1%	3.8%	9,100	0.84	D
			SB	4M+1A	10,810	57.7%	8.2%	3.8%	8,400	0.78	C
	SR-75 & 28th Street	167,000	NB	4M+2A	12,220	70.4%	8.4%	5.0%	10,400	0.85	D
			SB	4M+1A	10,810	57.7%	8.2%	5.0%	8,300	0.77	C
	28th Street & SR-15	165,000	NB	4M	9,400	70.4%	8.4%	5.0%	10,300	1.10	**F**
			SB	4M	9,400	57.7%	8.2%	5.0%	8,200	0.87	D
	SR-15 & Main Street	195,000	NB	4M+2A	12,220	70.4%	8.4%	5.0%	12,100	0.99	**E**
			SB	5M	11,750	65.4%	8.7%	5.0%	11,600	0.99	**E**
SR-15	SR-94 & Market Street	126,000	NB	3M+1A	8,460	59.5%	8.1%	5.1%	6,400	0.76	C
			SB	3M+1A	8,460	55.2%	9.7%	5.1%	7,100	0.84	D
	Market Street & Ocean View Boulevard	114,000	NB	3M	7,050	61.2%	8.1%	5.1%	5,900	0.84	D
			SB	3M	7,050	55.2%	9.6%	5.1%	6,400	0.91	D
	Ocean View Boulevard & I-5	103,000	NB	3M+1A	8,460	61.2%	7.0%	5.1%	4,600	0.54	B
			SB	4M+1A	10,810	55.2%	7.8%	5.1%	4,700	0.43	B
	I-5 & Norman Scott Road	7,300	NB	2M	4,700	61.2%	7.0%	5.1%	300	0.06	A
			SB	2M	4,700	54.4%	7.5%	5.1%	300	0.06	A

Source: Chen Ryan Associates; June 2016

Notes:
Bold letter indicates LOS E or F.
M = Mainline. A = Auxiliary Lane.
[a] Traffic volumes provided by Caltrans (2014).
[b] The capacity is calculated as 2,350 ADT per main lane and 1,410 ADT (60% of the main lane capacity) per auxiliary lane.
[c] D = Directional split.| [d] K = Peak hour %. | [e] HV = Heavy vehicle %.

As shown, all study freeway segments currently operate at LOS D or better with the exception of the following:

- I-5 NB between 28th Street & I-15 (LOS F)
- I-5 NB between SR-15 & Main Street (LOS E)
- I-5 SB between SR-15 & Main Street (LOS E)

4.4 Existing Plus Project Roadway Network and Traffic Volumes

Existing Plus Project traffic volumes were derived by combining the existing traffic volumes (displayed in Figure 4-2A and Figure 4-2B), the project trip assignment volumes (displayed in Figures 3-3A, 3-3B, 3-4A, and 3-4B). Daily roadway and peak hour intersection volumes are displayed in **Figure 4-3A and 4-3B**, respectively.

4.5 Existing Plus Project Traffic Conditions

Analyses were conducted using the methodologies described in Chapter 2.0. Roadway segment analysis, intersection LOS analysis, freeway ramp intersection ILV analysis, and freeway mainline analysis results are discussed in the following sections.

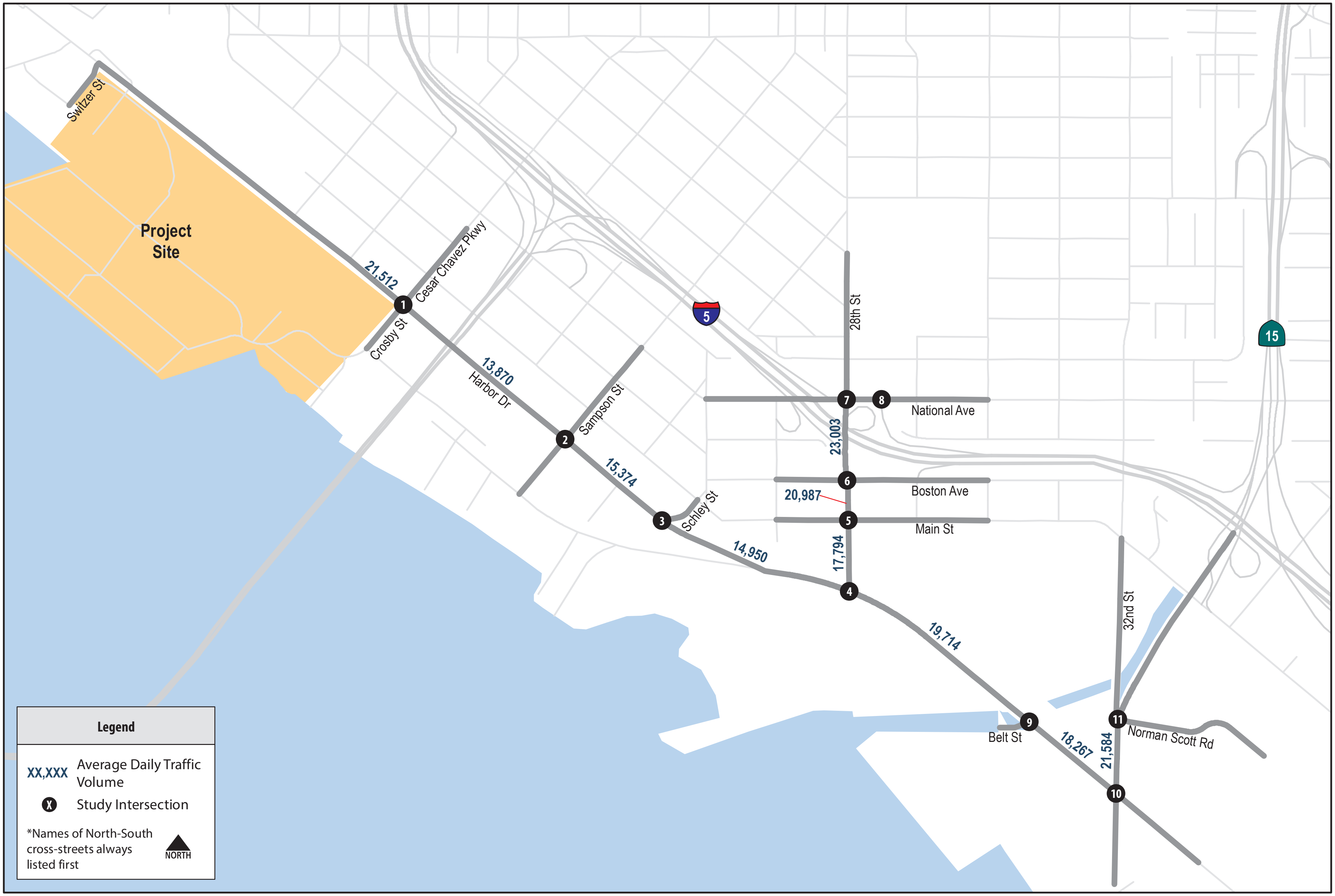
Roadway Segment Analysis

Table 4.5 displays the LOS analysis results for key roadway segments under Existing Plus Project conditions.

As shown in Table 4.5, all key study roadway segments would continue to operate at LOS D or better under Existing Plus Project conditions with the exception of:

- 28th Street, between Boston Avenue and National Avenue (LOS F).

Based on the City of San Diego's Significance Criteria, outlined in Section 2.6, the traffic associated with the proposed project would cause a significant change in the V/C ratio (add more than 0.01) to the aforementioned roadway segment, which is projected to operate at LOS F under Existing Plus Project conditions. Therefore, the implementation of the proposed project would result in a significant direct impact at 28th Street, between Boston Avenue and National Avenue.



Tenth Avenue Marine Terminal Redevelopment

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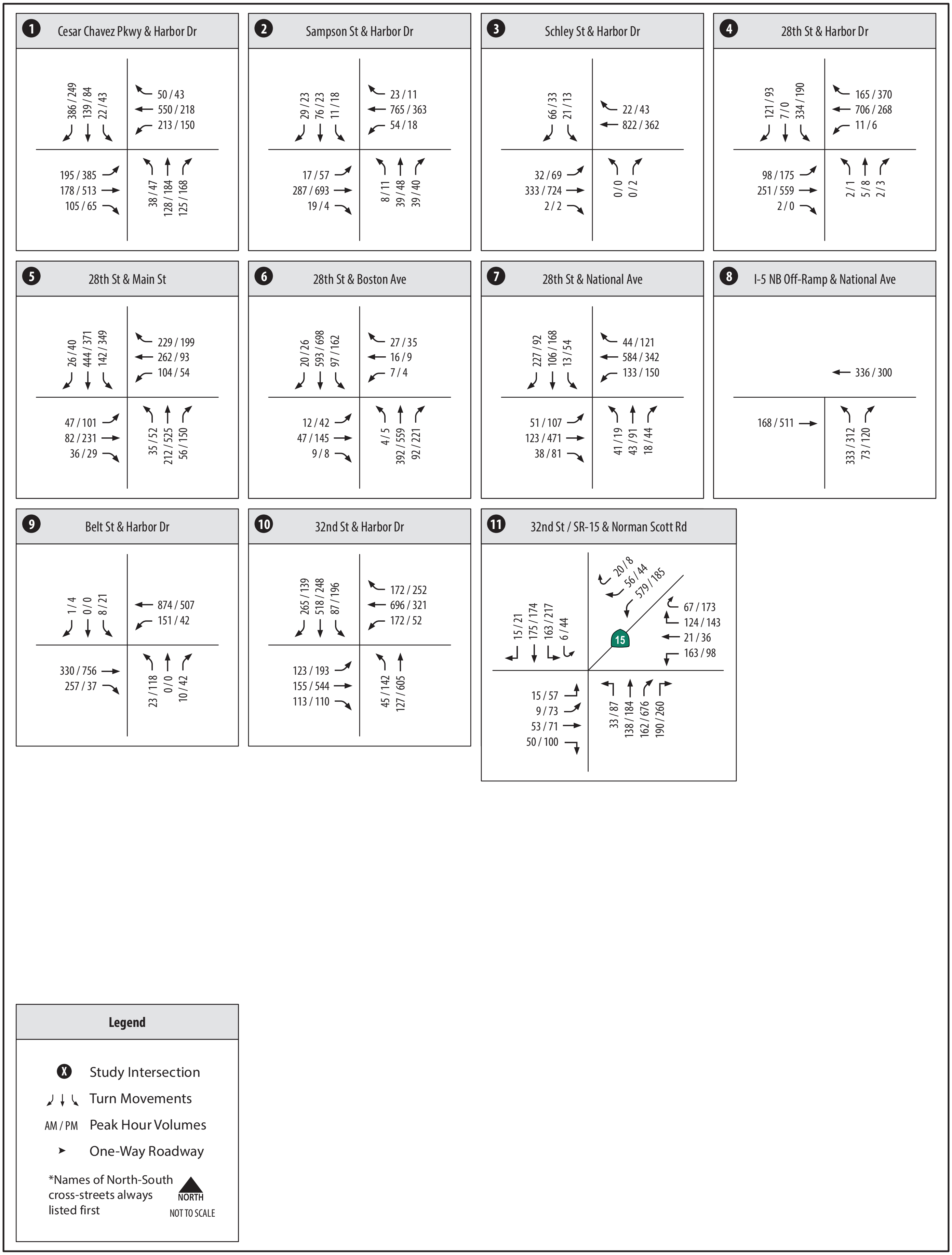
Figure 4-3A

Average Daily Segment Traffic Volumes - Existing Plus Project Conditions



Tenth Avenue Marine Terminal Redevelopment Plan

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Figure 4-3B

AM/PM Peak Hour Intersection Traffic Volumes - Existing Plus Project Conditions

Table 4.5 Roadway Segment LOS Results - Existing Plus Project Conditions

Roadway	Segment	Cross-Section	Threshold (LOS E)	Existing + Project ADT	Existing + Project V/C	Existing + Project LOS	Existing ADT / V/C / LOS	Δ	S?
Harbor Drive	Between Beardsley Street and Cesar Chavez Parkway	4-Lanes w/ RM	40,000	21,~~536~~512	0.538	C	20,194 / 0.505 / B	0.~~034~~033	N
	Between Cesar Chavez Parkway and Sampson Street	4-Lanes w/ RM	40,000	13,~~901~~870	0.~~348~~347	A	10,546 / 0.264 / A	0.~~084~~083	N
	Between Sampson Street and Schley Street	4-Lanes w/ RM	40,000	15,~~405~~374	0.~~385~~384	B	12,050 / 0.301 / A	0.~~084~~083	N
	Between Schley Street and 28th Street	4-Lanes w/ RM	40,000	14,~~981~~950	0.~~375~~374	A	11,626 / 0.291 / A	0.~~084~~083	N
	Between 28th Street and Belt Street	4-Lanes w/ RM	40,000	~~20,060~~19,714	0.~~502~~493	B	18,050 / 0.451 / B	0.~~050~~042	N
	Between Belt Street and 32nd Street	4-Lanes w/ RM	40,000	18,~~613~~267	0.~~465~~457	B	16,603 / 0.415 / B	0.~~050~~042	N
28th Street	Between Harbor Drive and Main Street	4-Lanes w/ RM	40,000	17,~~479~~794	0.~~437~~445	B	16,134 / 0.403 / B	0.~~034~~041	N
	Between Main Street and Boston Avenue	4-Lanes w/TWLT	30,000	20,~~908~~987	0.~~697~~700	D	19,563 / 0.652 / C	0.~~045~~047	N
	Between Boston Avenue and National Avenue	3-Lanes w/TWLT	22,500[1]	~~22,924~~23,003	1.~~019~~022	**F**	22,112 / 0.983 / **E**	0.~~036~~040	**Y**
32nd Street	Between Harbor Drive and Norman Scott Road	6-Lanes w/ RM	50,000	21,~~930~~584	0.~~439~~432	B	19,920 / 0.398 / A	0.~~040~~033	N

Source: Chen Ryan Associates; ~~June~~August 2016

Notes:
[1] Capacity is 75% of a 4-Lane Collector w/TWLT.
V/C = Volume to Capacity Ratio.
Δ = Change in V/C Ratio.
S? = Indicates if change in V/C ratio is significant.
Bold letter indicates LOS E or F.

Intersection Analysis

Table 4.6 displays intersection LOS and average vehicle delay results under Existing Plus Project conditions. All intersections are signalized unless otherwise noted. LOS calculation worksheets for the Existing Plus Project conditions are provided in **Appendix E**.

Table 4.6 Peak Hour Intersection LOS Results - Existing Plus Project Conditions

#	Intersection	AM Peak Hour Avg. Delay (sec.)	AM Peak Hour LOS	PM Peak Hour Avg. Delay (sec.)	PM Peak Hour LOS	Delay w/o Project (sec.) AM/PM	LOS w/o Project AM/PM	Change in Delay (sec.)	Significant Impact?
1	Harbor Drive / Cesar Chavez Parkway	~~50.4~~49.3	D	~~45.4~~43.8	D	36.8 / 33.3	D / C	~~13.6 /~~ 12.~~1~~5 / 10.5	No
2	Harbor Drive / Sampson Street	41.~~2~~1	D	42.~~5~~4	D	40.4 / 40.9	D / D	0.~~8~~7 / 1.~~6~~5	No
3	Harbor Drive / Schley Street	16.7	B	15.2	B	16.7 / 15.0	B / B	0.0 / 0.2	No
4	Harbor Drive / 28th Street	~~26.5~~32.4	C	~~22.2~~23.3	C	23.1 / 20.3	C / C	9.3~~.4 / 1.9~~ / 3.0	No
5	Main Street / 28th Street	21.~~6~~9	C	~~35.6~~38.0	D	21.4 / 34.8	C / C	0.5 / 3.2~~/ 0.8~~	No
6	Boston Avenue / 28th Street	19.4	B	23.~~1~~2	C	19.4 / 23.0	B / C	0.0 / 0.~~1~~2	No
7	National Avenue / 28th Street	42.~~3~~4	D	30.~~1~~4	C	42.3 / 29.6	D / C	0.1 / 0~~/ 0.5~~.8	No
8	National Avenue / I-5 NB Off-Ramp	15.~~4~~7	B	15.~~2~~4	B	14.9 / 14.7	B / B	0.~~5~~8 / 0.~~5~~7	No
9	Harbor Drive / Belt Street	~~19.1~~18.9	B	17.~~4~~2	B	18.6 / 17.1	B / B	0.~~5~~3 / 0.~~3~~1	No
10	Harbor Drive / 32nd Street	~~38.7~~32.1	~~D~~C	~~49~~47.4	D	28.6 / 39.9	C / D	~~10.1 / 9~~3.5 / 7.5	No
11	Norman Scott Road / 32nd Street / Wabash Boulevard	~~127.9~~114.4	**F**	74.0~~79.5~~	**E**	95.3 / 66.2	**F / E**	~~32.6 / 13.3~~19.1 / 7.8	**Yes**

Source: Chen Ryan Associates; ~~June~~August 2016

As shown, all key study intersections are projected to operate at LOS D or better under Existing Plus Project conditions, with the exception of:

- Norman Scott Road / 32nd Street / Wabash Boulevard – LOS F during AM peak hour and LOS E during PM peak hour.

Based on the City of San Diego's Significance Criteria, outlined in Section 2.6, the traffic associated with the proposed project would add delay surpassing the acceptable threshold (greater than 1 second for intersections operating at LOS F and greater than 2 seconds for intersection operating at LOS E) to the aforementioned intersection, which is projected to operate at LOS F during the AM peak hour and LOS E during the PM peak hour. Therefore, the project would result in a significant direct impact at the Norman Scott Road / 32nd Street / Wabash Boulevard intersection.

Ramp Intersection Capacity Analysis

Consistent with Caltrans requirements, the signalized ramp intersections of National Avenue / I-5 NB off-ramp and Norman Scott Road / 32nd Street / Wabash Boulevard were analyzed using ILV procedures, as described in Section 2.4. ILV analysis results are displayed in **Table 4.7** and analysis worksheets for Existing Plus Project conditions are provided in Appendix E.

Table 4.7 Ramp Intersection Capacity Analysis - Existing Plus Project Conditions

#	Intersection	Peak Hour	ILV/Hour	Description
8	National Avenue / I-5 NB Off-Ramp	AM	~~658~~669	Under Capacity
		PM	~~815~~823	Under Capacity
11	Norman Scott Road / 32nd Street / Wabash Boulevard	AM	1,~~148~~083	Under Capacity
		PM	1,~~202~~143	~~At~~Under Capacity

Source: Chen Ryan Associates; ~~June~~August 2016

As shown, the all key study signalized ramp intersections are projected to operate at "~~At~~Under Capacity"~~ or better~~ during both the AM and PM peak hours, under Existing Plus Project conditions.

Freeway Analysis

Table 4.8 displays the LOS results from the freeway segment analysis under Existing Plus Project conditions.

Table 4.8 Freeway Mainline LOS Analysis Results - Existing Plus Project Conditions

Freeway	Segment	ADT	Direction	Peak Hour Volume	With Project		Base		Δ V/C	S?
					V/C	LOS	V/C	LOS		
I-5	SR-94 & Imperial Avenue	180,700	NB	9,600	0.890	D	0.890	D	0.000	N
			SB	8,400	0.780	C	0.780	C	0.000	N
	Imperial Avenue & SR-75	170,700	NB	9,100	0.840	D	0.840	D	0.000	N
			SB	8,500	0.790	C	0.780	C	0.010	N
	SR-75 & 28th Street	167,600	NB	10,400	0.850	D	0.850	D	0.000	N
			SB	8,300	0.770	C	0.770	C	0.000	N
	28th Street & SR-15	166,200	NB	10,300	1.100	**F**	1.100	**F**	0.000	N
			SB	8,300	0.880	D	0.870	D	0.010	N
	SR-15 & Main Street	196,200	NB	12,200	1.000	**E**	0.990	**E**	0.010	N
			SB	11,700	1.000	**E**	0.990	**E**	0.010	N
SR-15	SR-94 & Market Street	128,000	NB	6,500	0.770	C	0.760	C	0.010	N
			SB	7,200	0.850	D	0.840	D	0.010	N
	Market Street & Ocean View Boulevard	116,000	NB	6,~~100~~000	0.~~870~~ 850	D	0.840	D	0.~~030~~010	N
			SB	6,500	0.920	D	0.910	D	0.010	N
	Ocean View Boulevard & I-5	105,000	NB	4,700	0.560	B	0.540	B	0.020	N
			SB	4,800	0.440	B	0.430	B	0.010	N
	I-5 & Norman Scott Road	9,300	NB	400	0.090	A	0.060	A	0.030	N
			SB	400	0.090	A	0.060	A	0.030	N

Source: Chen Ryan Associates; ~~June~~August 2016

Notes:
The capacity, Directional split, Peak hour % and Heavy vehicle % are assumed to be the same as Existing conditions.
Bold letter indicates substandard LOS E or F.
Δ = Change in V/C Ratio.
S? = Indicates if change in V/C ratio is significant

As shown, all study freeway segments currently operate at LOS D or better with the exception of the following:

- I-5 NB between 28th Street & I-15 (LOS F)
- I-5 NB between SR-15 & Main Street (LOS E)
- I-5 SB between SR-15 & Main Street (LOS E)

Based on the City of San Diego's Significance Criteria, outlined in Section 2.6, the traffic associated with the proposed project would not cause a significant change in the V/C ratio (add more than 0.010 for LOS E and 0.005 for LOS F) to any key study mainline freeway segments. Therefore, the project would not result in a significant direct impact to a freeway mainline segment.

4.6 Existing Plus Project - Alternative Gate Scenario

The Tenth Avenue Marine Terminal Plan also identifies an alternative gate concept that would serve as the primary entry and exit location for the Refrigerated Container node and the Multi-Purpose General Cargo node. The alternative gate would be located in the north-east corner of the terminal and provide access directly onto Harbor Drive. According to the Plan, the Dry Bulk and Liquid Bulk Nodes would continue to utilize the existing gate off Cesar Chavez Parkway, particularly for domestic bulk shipments.

Trip Redistribution

As stated before, the Refrigerated Container and the Multi-Purpose General Cargo nodes would utilize the alternative gate. Therefore, with the proposed implementation of the alternative gate would result in a redistribution of both existing and proposed project truck traffic from these nodes. It is assumed that employee traffic would continue to use the existing Crosby street gate. **Figure 4-4** displays the assumed redistribution of both existing and project truck traffic between the two gate locations. **Figure 4-5** displays the anticipated traffic volumes at both gates and along Harbor Drive under the Existing Plus Project – Alternative Gate Scenario.

Roadway Segment Analysis

Based on the assumed redistribution of truck trips, as displayed in Figure 4-5, Harbor Drive between Beardsley Street and Cesar Chavez Parkway is the only study roadway segment that is anticipated to experience a change in ADT due to the alternative gate. **Table 4.9** displays the LOS analysis results for the affected segment of Harbor Drive under Existing Plus Project conditions, with the proposed alternative gate.

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Figure 4-4

Truck Traffic Redistribution with Alternative Gate - Existing Plus Project Conditions

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Figure 4-5

Traffic Volumes - Existing Plus Project - Alternative Gate Scenario

Table 4.9 Roadway Segment LOS Results - Existing Plus Project Conditions – Alternative Gate Scenario

Roadway	Segment	Cross-Section	Threshold (LOS E)	Existing + Project			Existing	Δ	S?
				ADT	V/C	LOS	ADT / V/C / LOS		
Harbor Drive	Between Beardsley Street and Cesar Chavez Parkway	4-Lanes w/ RM	40,000	22,~~246~~223	0.556	C	20,194 / 0.505 / B	0.051	N

Source: Chen Ryan Associates; ~~June~~August 2016

Notes:
V/C = Volume to Capacity Ratio.
Δ = Change in V/C Ratio.
S? = Indicates if change in V/C ratio is significant.

As shown, Harbor Drive between Beardsley Street and Cesar Chavez Parkway is anticipated to operate at LOS C with the addition of the proposed project and with the alternative gate.

Based on the City of San Diego's Significance Criteria, outlined in Section 2.6, the traffic associated with the proposed alternative gate would not cause any additional roadways segments to operate at LOS E or F; therefore, the implementation of the proposed alternative gate would not result in any additional impacts.

Intersection Analysis

Based on the assumed redistribution of truck trips, as displayed in Figure 4-5, the Harbor Drive / Cesar Chavez Parkway intersection (Main Gate) is the only study intersection that is anticipated to experience a change in peak hour volumes due to the alternative gate. All other key study intersections are anticipated to operate at the same conditions as Identified in Table 4.6. **Table 4.10** displays intersection LOS and average vehicle delay results under Existing Plus Project conditions, with the alternative gate assumed. Both intersections are assumed to be signalized. LOS calculation worksheets for the Existing Plus Project conditions are provided in Appendix E.

Table 4.10 Peak Hour Intersection LOS Results - Existing Plus Project Conditions – Alternative Gate Scenario

#	Intersection	AM Peak Hour		PM Peak Hour		Delay w/o Project (sec.) AM/PM	LOS w/o Project AM/PM	Change in Delay (sec.)	Significant Impact?
		Avg. Delay (sec.)	LOS	Avg. Delay (sec.)	LOS				
1	Harbor Drive / Cesar Chavez Parkway	~~38.4~~37.9	D	40.~~3~~4	D	36.8 / 33.3	D / C	1.~~6~~1 / 7.~~0~~1	No
12	Harbor Drive / Alternative Gate	19.~~7~~8	B	26.5	C	N/A	N/A	19.~~7~~8 / 26.5	No

Source: Chen Ryan Associates; ~~June~~August 2016

As shown, both affected intersections are anticipated to operate at LOS D or better with the proposed alternative gate.

Based on the City of San Diego's Significance Criteria, outlined in Section 2.6, the traffic associated with the proposed alternative gate would not cause either intersection to operate at LOS E or F; therefore, the implementation of the proposed alternative gate would not result in any additional impacts.

4.7 Existing Plus Interim Project Roadway Network and Traffic Volumes

Existing Plus Interim Project traffic volumes were derived by combining the existing traffic volumes (displayed in Figure 4-2A and Figure 4-2B), the interim project trip assignment volumes (displayed in Figures 3-6A, 3-6B, 3-7A, and 3-7B). Daily roadway and peak hour intersection volumes are displayed in **Figure 4-6A and 4-6B**, respectively.

4.8 Existing Plus Interim Project Traffic Conditions

Analyses were conducted using the methodologies described in Chapter 2.0. Roadway segment analysis, intersection LOS analysis, and freeway ramp intersection ILV analysis results, are discussed separately below.

Roadway Segment Analysis

Table 4.11 displays the LOS analysis results for key roadway segments under Existing Plus Interim Project conditions.

As shown in Table 4.11, all key study roadway segments would continue to operate at LOS D or better under Existing Plus Interim Project conditions with the exception of:

- 28th Street, between Boston Avenue and National Avenue (LOS E).

Based on the City of San Diego's Significance Criteria, outlined in Section 2.6, the traffic associated with the proposed project would not cause a significant change in the V/C ratio (add more than 0.01) to the aforementioned roadway segment, which is projected to operate at LOS F under Existing Plus Interim Project conditions. Therefore, the project would not result in a significant direct impact at 28th Street, between Boston Avenue and National Avenue.

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Figure 4-6A

Average Daily Segment Traffic Volumes - Existing Plus Interim Project Conditions

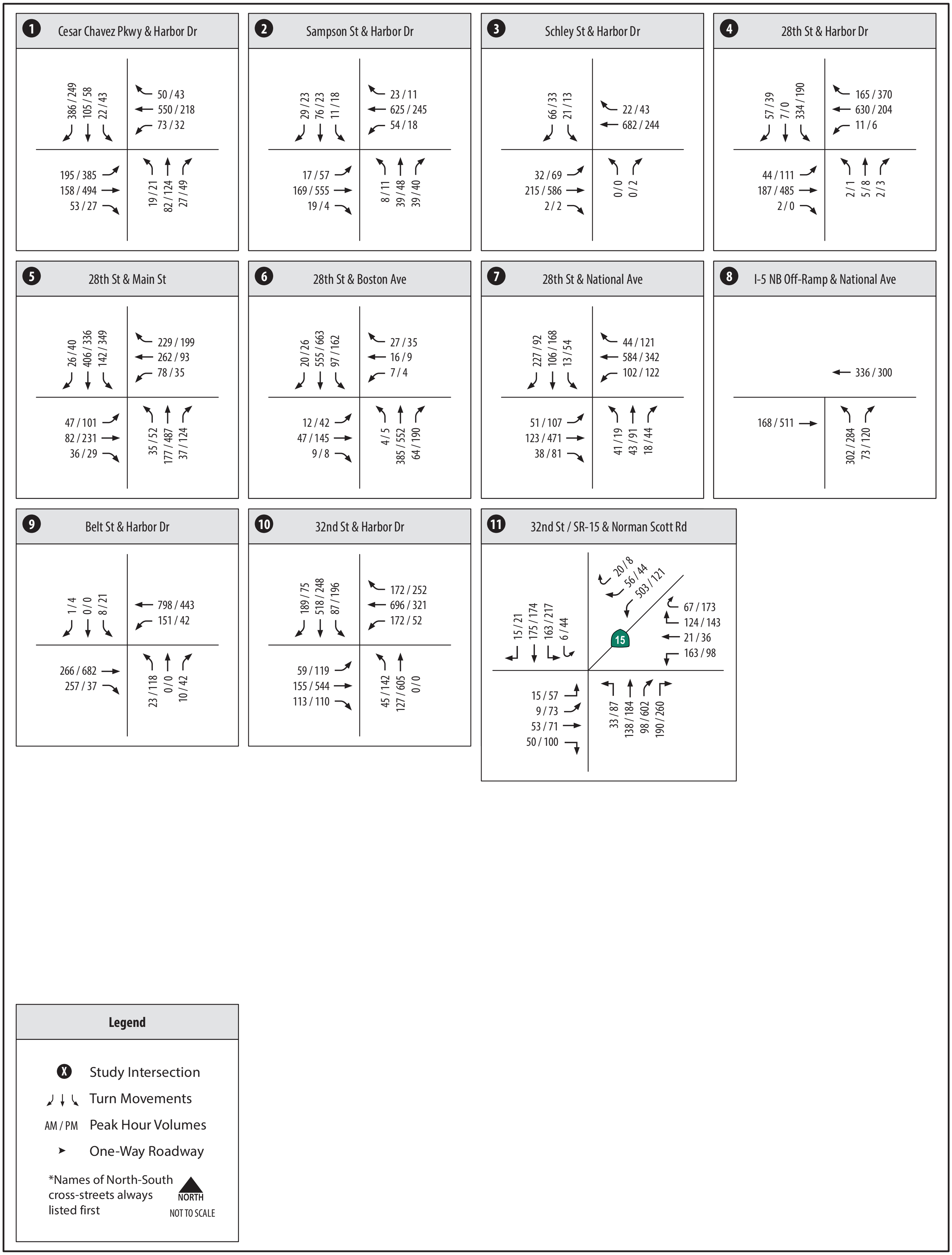

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Figure 4-6B

AM/PM Peak Hour Intersection Traffic Volumes - Existing Plus Interim Project Conditions

Table 4.11 Roadway Segment LOS Results – Existing Plus Interim Project Conditions

Roadway	Segment	Cross-Section	Threshold (LOS E)	Existing + Project			Existing	Δ	S?
				ADT	V/C	LOS	ADT / V/C / LOS		
Harbor Drive	Between Beardsley Street and Cesar Chavez Parkway	4-Lanes w/ RM	40,000	20,~~276~~272	0.507	B	20,194 / 0.505 / B	0.002	N
	Between Cesar Chavez Parkway and Sampson Street	4-Lanes w/ RM	40,000	10,~~732~~726	0.268	A	10,546 / 0.264 / A	0.~~004~~005	N
	Between Sampson Street and Schley Street	4-Lanes w/ RM	40,000	12,~~236~~230	0.306	A	12,050 / 0.301 / A	0.005	N
	Between Schley Street and 28th Street	4-Lanes w/ RM	40,000	11,~~812~~806	0.295	A	11,626 / 0.291 / A	0.~~004~~005	N
	Between 28th Street and Belt Street	4-Lanes w/ RM	40,000	18,~~213~~153	0.~~455~~454	B	18,050 / 0.451 / B	0.~~004~~003	N
	Between Belt Street and 32nd Street	4-Lanes w/ RM	40,000	16,~~766~~706	0.~~419~~418	B	16,603 / 0.415 / B	0.~~004~~003	N
28th Street	Between Harbor Drive and Main Street	4-Lanes w/ RM	40,000	16,~~156~~211	0.~~404~~405	B	16,134 / 0.403 / B	0.~~001~~002	N
	Between Main Street and Boston Avenue	4-Lanes w/TWLT	30,000	19,~~585~~599	0.653	C	19,563 / 0.652 / C	0.001	N
	Between Boston Avenue and National Avenue	3-Lanes w/TWLT	22,500[1]	22,~~125~~139	0.~~983~~984	**E**	22,112 / 0.983 / **E**	0.~~000~~001	N
32nd Street	Between Harbor Drive and Norman Scott Road	6-Lanes w/ RM	50,000	20,~~083~~023	0.~~402~~400	B	19,920 / 0.398 / A	0.~~003~~002	N

Source: Chen Ryan Associates; ~~June~~August 2016

Notes:
[1] Capacity is 75% of a 4-Lane Collector w/TWLT.
V/C = Volume to Capacity Ratio.
Δ = Change in V/C Ratio.
S? = Indicates if change in V/C ratio is significant.
Bold letter indicates LOS E or F.

Intersection Analysis

Table 4.12 displays intersection LOS and average vehicle delay results under Existing Plus Interim Project conditions. All intersections are currently signalized. LOS calculation worksheets for the Existing Plus Interim Project conditions are provided in **Appendix F**.

Table 4.12 Peak Hour Intersection LOS Results - Existing Plus Interim Project Conditions

#	Intersection	AM Peak Hour Avg. Delay (sec.)	AM Peak Hour LOS	PM Peak Hour Avg. Delay (sec.)	PM Peak Hour LOS	Delay w/o Project (sec.) AM/PM	LOS w/o Project AM/PM	Change in Delay (sec.)	Significant Impact?
1	Harbor Drive / Cesar Chavez Parkway	36.8	D	34.6	C	36.8 / 33.3	D / C	0.0 / 1.3	No
2	Harbor Drive / Sampson Street	40.4	D	41.~~1~~0	D	40.4 / 40.9	D / D	0.0 / 0.~~2~~1	No
3	Harbor Drive / Schley Street	16.7	B	~~15.0~~16.7	B	16.7 / 15.0	B / B	0.0 / ~~0.0~~1.7	No
4	Harbor Drive / 28th Street	23.~~5~~6	C	20.~~3~~5	C	23.1 / 20.3	C / C	0.~~4~~5 / 0.~~0~~2	No
5	Main Street / 28th Street	21.~~4~~5	C	~~34.8~~35.1	~~C~~D	21.4 / 34.8	C / C	0.1 / 0~~/ 0.0~~.3	No
6	Boston Avenue / 28th Street	19.4	B	23.0	C	19.4 / 23.0	B / C	0.0 / 0.0	No
7	National Avenue / 28th Street	42.3	D	29.6	C	42.3 / 29.6	D / C	0.0 / 0.0	No
8	National Avenue / I-5 NB Off-Ramp	14.9	B	14.8	B	14.9 / 14.7	B / B	0.0 / 0.1	No
9	Harbor Drive / Belt Street	18.6	B	17.1	B	18.6 / 17.1	B / B	0.0 / 0.0	No
10	Harbor Drive / 32nd Street	28.~~8~~7	C	41.~~9~~6	D	28.6 / 39.9	C / D	0.~~2 / 2.0~~1 / 1.7	No
11	Norman Scott Road / 32nd Street / Wabash Boulevard	~~100.1~~95.5	**F**	~~68.5~~67.4	**E**	95.3 / 66.2	**F / E**	~~4.8 /~~ 0.2~~.3~~ / 1.2	~~**Yes**~~No

Source: Chen Ryan Associates; ~~June~~August 2016

As shown, all key study intersections are projected to operate at LOS D or better under Existing Plus Interim Project conditions, with the exception of:

- Norman Scott Road / 32nd Street / Wabash Boulevard – LOS F during AM peak hour and LOS E during PM peak hour.

Based on the City of San Diego's Significance Criteria, outlined in Section 2.6, the traffic associated with the proposed project would not add delay surpassing the acceptable threshold (greater than 1 second for intersections operating at LOS F and greater than 2 seconds for intersection operating at LOS E) to the aforementioned intersection, which is projected to operate at LOS F during the AM peak hour and LOS E during the PM peak hour. Therefore, the project would not result in a significant direct impact at the Norman Scott Road / 32nd Street / Wabash Boulevard intersection.

Ramp Intersection Capacity Analysis

Consistent with Caltrans requirements, the signalized ramp intersections of National Avenue / I-5 NB off-ramp and Norman Scott Road / 32nd Street / Wabash Boulevard were analyzed using ILV procedures, as described in Section 2.4. ILV analysis results are displayed in **Table 4.13** and analysis worksheets for Existing Plus Interim Project conditions are provided in Appendix F.

Table 4.13 Ramp Intersection Capacity Analysis - Existing Plus Interim Project Conditions

#	Intersection	Peak Hour	ILV/Hour	Description
8	National Avenue / I-5 NB Off-Ramp	AM	~~636~~638	Under Capacity
		PM	~~794~~795	Under Capacity
11	Norman Scott Road / 32nd Street / Wabash Boulevard	AM	~~986~~974	Under Capacity
		PM	1,~~053~~042	Under Capacity

Source: Chen Ryan Associates; ~~June~~August 2016

As shown, the all key study signalized ramp intersections are projected to operate at "Under Capacity" during both the AM and PM peak hours, under Existing Interim Plus Project conditions.

4.9 Existing Plus Interim Project - Alternative Gate Scenario

The Tenth Avenue Marine Terminal Plan also identifies an alternative gate concept that would serve as the primary entry and exit location for the Refrigerated Container node and the Multi-Purpose General Cargo node. The alternative gate would be located in the north-east corner of the terminal and provide access directly onto Harbor Drive. According to the Plan, the Dry Bulk and Liquid Bulk Nodes would continue to utilize the existing gate off Cesar Chavez Parkway, particularly for domestic bulk shipments.

Trip Redistribution

As stated before, the Refrigerated Container and the Multi-Purpose General Cargo nodes would utilize the alternative gate. Therefore, with the proposed implementation of the alternative gate would result in a redistribution of both existing and proposed project truck traffic from these nodes. It is assumed that employee traffic would continue to use the existing Crosby street gate. **Figure 4-7** displays the assumed redistribution of both existing and interim project truck traffic between the two gate locations. **Figure 4-8** displays the anticipated traffic volumes at both gates and along Harbor Drive under the Existing Plus Interim Project – Alternative Gate Scenario.

Roadway Segment Analysis

Based on the assumed redistribution of truck trips, as displayed in Figure 4-7, Harbor Drive between Beardsley Street and Cesar Chavez Parkway is the only study roadway segment that is anticipated to experience a change in ADT due to the alternative gate. **Table 4.14** displays the LOS analysis results for the affected segment of Harbor Drive under Existing Plus Interim Project conditions, with the proposed alternative gate.

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Figure 4-7

Truck Traffic Redistribution with Alternative Gate - Existing Plus Interim Project Conditions

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Figure 4-8

Traffic Volumes - Existing Plus Interim Project - Alternative Gate Scenario

Table 4.14 Roadway Segment LOS Results - Existing Plus Interim Project Conditions – Alternative Gate Scenario

Roadway	Segment	Cross-Section	Threshold (LOS E)	Existing + Project			Existing	Δ	S?
				ADT	V/C	LOS	ADT / V/C / LOS		
Harbor Drive	Between Beardsley Street and Cesar Chavez Parkway	4-Lanes w/ RM	40,000	20,~~288~~284	0.507	B	20,194 / 0.505 / B	0.002	N

Source: Chen Ryan Associates; ~~June~~August 2016

Notes:
V/C = Volume to Capacity Ratio.
Δ = Change in V/C Ratio.
S? = Indicates if change in V/C ratio is significant.

As shown, Harbor Drive between Beardsley Street and Cesar Chavez Parkway is anticipated to operate at LOS B with the addition of the interim project and with the alternative gate.

Based on the City of San Diego's Significance Criteria, outlined in Section 2.6, the traffic associated with the proposed alternative gate would not cause any additional roadways segments to operate at LOS E or F; therefore, the implementation of the proposed alternative gate would not result in any additional impacts.

Intersection Analysis

Based on the assumed redistribution of truck trips, as displayed in Figure 4-7, the Harbor Drive / Cesar Chavez Parkway intersection (Main Gate) is the only study intersection that is anticipated to experience a change in peak hour volumes due to the alternative gate. All other key study intersections are anticipated to operate at the same conditions as Identified in Table 4.12. **Table 4.15** displays intersection LOS and average vehicle delay results under Existing Plus Interim Project conditions, with the alternative gate assumed. Both intersections are assumed to be signalized. LOS calculation worksheets for the Existing Plus Interim Project conditions are provided in Appendix F.

Table 4.15 Peak Hour Intersection LOS Results - Existing Plus Interim Project Conditions – Alternative Gate Scenario

#	Intersection	AM Peak Hour		PM Peak Hour		Delay w/o Project (sec.) AM/PM	LOS w/o Project AM/PM	Change in Delay (sec.)	Significant Impact?
		Avg. Delay (sec.)	LOS	Avg. Delay (sec.)	LOS				
1	Harbor Drive / Cesar Chavez Parkway	37.~~6~~5	D	34.6	C	36.8 / 33.3	D / C	0.~~8~~7 / 1.3	No
12	Harbor Drive / Alternative Gate	18.2	B	24.2	C	N/A	N/A	18.2 / 24.2	No

Source: Chen Ryan Associates; ~~June~~August 2016

As shown, both affected intersections are anticipated to operate at LOS D or better with the proposed alternative gate.

Based on the City of San Diego's Significance Criteria, outlined in Section 2.6, the traffic associated with the proposed alternative gate would not cause either intersection to operate at LOS E or F; therefore, the implementation of the proposed alternative gate would not result in any additional impacts.

4.10 Impact Significance and Mitigation

Roadway Segments

Existing Plus Project Conditions

Based upon the significance criteria presented in Section 2.6 of this report, the addition of project traffic would have a significant direct traffic impact on the following roadway segment under the following Scenarios:

- 28th Street, between Boston Avenue and National Avenue

This section of 28th Street is currently constructed as a Three-Lane Collector with a daily capacity of 22,500 trips. However, the Barrio Logan Community Plan classifies this section of 28th Street as a Four-Lane Major Arterial which would carry a daily capacity of 40,000 trips. Improving the roadway to its ultimate classification as a Four-Lane Major Arterial would improve the traffic operations at this impacted segment to LOS C, reducing the impact to less than significant. Based on a comparison of the project traffic added to the roadway segment (891 daily trips) to the traffic projected to be on this segment under Existing Plus Project conditions (23,003) the project would be responsible for a 3.9% fair-share contribution of the cost to widen the roadway to a 4-Lane Major classification.

As noted previously, the proposed project is a long-range redevelopment plan and will not be developed all at once or even in set phases. Instead cargo throughput is anticipated to increase overtime based on market demands. Therefore, the time period in which this impact is anticipated to occur is not known at this time. Thus, the implementation of this impact should be based on when the project traffic is anticipated to reach a critical level or trigger point where the project related impact moves from less than significant to significant. It is estimated that this impact will occur when ~~the project is 28% built out or is generating 1,135~~161 new truck loads of cargo go through the terminal on a daily basis. ~~daily trips.~~ This is the point in which the project will add more than 0.02 V/C to the failing segment and therefore be associated with a significant impact.

Existing Plus Project Conditions – Alternative Gate

The addition of the proposed alternative gate is not anticipated to result in any additional significant impacts to study roadway segments. However, it should be noted that all of the impacts listed above would still occur both with and without the alternative gate.

Existing Plus Interim Project Conditions

- None

Existing Plus Interim Project Conditions – Alternative Gate

- None

Intersections

Existing Plus Project Conditions

Based upon the significance criteria presented in Section 2.6 of this report, the proposed project would contribute to a direct traffic impact at the following intersection under Existing Plus Project conditions:

- Norman Scott Road / 32nd Street / Wabash Boulevard

However, as shown in **Table 4.16**, the following recommended improvement would reduce the overall intersection delay to predevelopment conditions:

- Add a westbound right-turn overlap phase.

Table 4.16 Peak Hour Intersection LOS – Mitigated Intersection - Existing Plus Project Conditions

#	Intersection	AM Peak Hour		PM Peak Hour		Delay w/o Project (sec.) AM/PM	LOS w/o Project AM/PM	Change in Delay (sec.)	Significant Impact?
		Avg. Delay (sec.)	LOS	Avg. Delay (sec.)	LOS				
11	Norman Scott Road / 32nd Street / Wabash Boulevard	93.6	F	54.1	D	95.3 / 66.2	F / E	-1.7 / -12.1	No

Source: Chen Ryan Associates; August 2016

As noted previously, the proposed project is a long-range redevelopment plan and will not be developed all at once or even in set phases. Instead cargo throughput is anticipated to increase overtime based on market demands. Therefore, the time period in which this impact is anticipated to occur is not known at this time. Thus, the implementation of this impact should be based on when the project traffic is anticipated to reach a critical level or trigger point where the project related impact moves from less than significant to significant. It is estimated that this impact will occur when the project ~~is 8% built out or is~~is generating ~~331~~ 195 new daily trips. This is the amount of traffic the project can generate before it add vs more than one second of delay to the failing Norman Scott Road / 32nd Street / Wabash Boulevard intersection. However, this intersection is controlled by Caltrans and the Port District does not have jurisdiction at this intention; therefore, this impact is considered significant and unavoidable.

In addition to the aforementioned mitigation measure, Caltrans is currently working on a truck access improvement study which will identify several potential improvements to this intersection, including a potential grade separation. It is recommended that the District continues to coordinate with Caltrans as the TAMT develops to determine if the proposed mitigation measure is relevant at the time of implementation or if the District can participate in a larger improvement program for the intersection.

Existing Plus Project Conditions – Alternative Gate

The addition of the proposed alternative gate is not anticipated to result in any additional significant impacts to study intersections. However, it should be noted that all of the impacts listed above would still occur both with and without the alternative gate.

Existing Plus Interim Project Conditions

~~Based upon the significance criteria presented in Section 2.6~~ The addition of ~~this report, the proposed~~interim project ~~would contribute to a direct~~ traffic ~~impact at the following intersection under Existing Plus Project conditions:~~

- ~~Norman Scott Road / 32nd Street / Wabash Boulevard~~

~~However, as shown in **Table 4.17**, the following recommended improvement would reduce the overall intersection delay to predevelopment conditions:~~

- ~~Add a westbound right-turn overlap phase.~~

~~**Table 4.17 Peak Hour Intersection LOS – Mitigated Intersection - Existing Plus Interim Project Conditions**~~

~~#~~	~~Intersection~~	~~AM Peak Hour Avg. Delay (sec.)~~	~~AM Peak Hour LOS~~	~~PM Peak Hour Avg. Delay (sec.)~~	~~PM Peak Hour LOS~~	~~Delay w/o Project (sec.) AM/PM~~	~~LOS w/o Project AM/PM~~	~~Change in Delay (sec.)~~	~~Significant Impact?~~
~~11~~	~~Norman Scott Road / 32nd Street / Wabash Boulevard~~	~~94.1~~	~~F~~	~~55.7~~	~~E~~	~~95.3 / 66.2~~	~~F / E~~	~~-1.2 / -10.5~~	~~No~~

~~*Source: Chen Ryan Associates; June 2016*~~

~~This intersection~~ is ~~controlled by Caltrans and the Port District does~~ not ~~have jurisdiction at this intention; therefore, this impact is considered~~anticipated to result in any additional significant ~~and unavoidable.~~

~~In addition to the aforementioned mitigation measure, Caltrans is currently working on a truck access improvement~~ impacts to study ~~which will identify several potential improvements to this intersection, including a potential grade separation. It is recommended that the District continues to coordinate with Caltrans as the TAMT develops to determine if the proposed mitigation measure is relevant at the time of implementation or if the District can participate in a larger improvement program for the intersection.~~intersections.

Existing Plus Interim Project Conditions – Alternative Gate

The addition of the proposed alternative gate is not anticipated to result in any additional significant impacts to study intersections. However, it should be noted that all of the impacts listed above would still occur both with and without the alternative gate.

Freeway Mainline Segments

Existing Plus Project Conditions

- None

Existing Plus Project Conditions – Alternative Gate

- None

5.0 Near-Term Year 2021 Base Conditions

This section provides an analysis of Year 2021 (project interim year) traffic conditions both with and without project traffic. The scenarios analyzed in this section include:

- Near-Term Year 2021 Base
- Near-Term Year 2021 Base Plus Interim Project
- Near-Term Year 2021 Base Plus Interim Project – Alternative Gate Scenario

5.1 Other Project Traffic

The Port of San Diego and the City of San Diego identified fourteen (14) cumulative projects within close proximity to the project site, which could potentially contribute traffic to the transportation network within the project study area. These projects have been included in the Near-Term Year 2021 Base conditions scenario to provide an accurate background for comparing traffic impacts associated with the construction of the project improvements. **Figure 5-1** displays the locations of these projects. **Table 5.1** displays the trip generation for the cumulative projects.

1. *Shipyard Sediment Remediation Project* – This project consists of dredging sediment adjacent to shipyards in the San Diego Bay, the dewatering, and possible solidification of the dredged material on-shore, potential treatment of decanted water, and the transport of the removed material to an appropriate landfill for disposal. The project will include numerous staging area located at the Tenth Avenue Marine Terminal, Commercial Berthing Pier adjacent to Coronado Bridge, SDG&E/BAE/BAE and NASSCO Parking lot, and 24th Street Marine Terminal. This project is anticipated to generate an average daily traffic volume of 348 with 59 trips occurring during both the AM and PM peak hours.

2. *San Diego Refrigerated Services* – This project proposes to expand the operations of the existing San Diego Refrigerated Services facility to transport approximately 2,034 additional truckloads a year. This project is anticipated to generate 148 daily trips with 24 trips occurring during both the AM and PM peak hours.

3. *Pier 1 N Drydock* – This project proposes the construction of a new drydock facility on the northside of Pier 1 at the BAE Systems facility. This project is anticipated to generate 149 daily trips with 0 occurring during either the AM or PM peak hour, since work shifts are not anticipated to begin and end during off-peak times.

4. *Metro Center Project* - This project consists of 160,600 SF regional shopping center uses, 163,300 SF of retail space and a 152,000 SF lumber store. The project is located in the block bordered by Commercial Street to the north, Newton Avenue to the west, National Avenue to the east, and 16th Street to the south. This project is anticipated to generate 12,350 daily trips with 458 trips occurring during the AM peak hour and 1,110 trips occurring during the PM peak hour.

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Figure 5-1

Cumulative Project Locations

5. *San Diego Continuing Education Cesar Chavez Campus* - The new Cesar E. Chavez Campus will be a 67,924 SF school facility with 22 classrooms to serve 720 students. The facility will include a multi-purpose room and administrative offices. The school facility is anticipated to generate 1,152 daily trips with 138 trips occurring during the AM peak hour and 92 trips occurring during the PM peak hour.

6. *Jack in the Box* – This project will be located at the northwest corner of 29th Street and National Avenue. The project proposes to construct a 2,588 SF fast food restaurant with drive-thru on the existing vacant pad. This project is anticipated to generate 1,812 daily trips with 72 trips occurring during the AM peak hour and 145 trips occurring during the PM peak hour.

7. *Ballpark Village Parcel C* – This project site will be located on the block bound by Park Boulevard to the west and north, the trolley tracks/12th Avenue alignment to the east, and Imperial Avenue to the south. The project site is currently occupied by a surface parking lot. The project proposes the removal of the existing surface parking lot and the development of 646 residential units (including 280 condominiums and 366 apartments) and 41,505 SF of gross retail space. This project is anticipated to generate 3,622 daily trips with 225 trips occurring during the AM peak hour and 320 trips occurring during the PM peak hour.

8. *Ballpark Village Parcel D* – This project site is located directly across the street from the proposed Parcel C project at the southwest corner of the 11th Avenue / Imperial Avenue intersection. Per the Parcel D developer, the project is assumed to include 1,800 hotel rooms with meeting space. This project is anticipated to generate 16,200 daily trips with 972 trips occurring during the AM peak hour and 1,296 trips occurring during the PM peak hour.

9. *Park & G Street* – This project will be located on the block bounded by Park, G Street and 13th Street. The project proposes to construct 5,500 SF of retail space and 208 mid-rise and ground level apartments. In addition, the building will include common areas for residents at the ground floor and a rooftop deck. This project is anticipated to generate 931 daily trips with 71 trips occurring during the AM peak hour and 93 trips occurring during the PM peak hour.

10. *15th Street & Island* – This project will be located on the block bounded by 14th Street, 15th Street, Island Avenue, and J Street in downtown San Diego. The project includes 442 apartments, 451 condos, and 17,100 SF of commercial space. This project is anticipated to generate 3,620 daily trips with 301 trips occurring during the AM peak hour and 395 trips occurring during the PM peak hour.

11. *San Diego Convention Center Phase III Expansion and Expansion Hotel* – This project consists of approximately 315,000 SF of additional exhibition, meeting, and support space, a 500-room hotel, including banquet and conference rooms, ballroom, restaurants, and 45,000 SF of retail shops; a water transportation center. This project is anticipated to

generate 7,590 daily trips with 1,132 trips occurring during the AM peak hour and 1,309 trips occurring during the PM peak hour.

12. *Sprint Cell Tower* – The project proposes to construct, operate, and maintain an *unmanned* wireless telecommunications facility and equipment room located at Embarcadero Marina Park South. The proposed project is only anticipated to generate 2 trips each month; therefore, no daily or peak hour traffic were assumed for this project in the analysis.

13. *Dole Fresh Fruit Refrigerated Rack Improvement Project* – This project includes the installation of an additional 94 outdoor refrigerated cargo outlets to increase the site capacity from 669 outlets to 763 outlets. Improvements include five new refrigerated racks that will be stacked four containers high and five containers wide. Since existing conduits are already installed below grade at the proposed maintenance rack location, new trenching or ground disturbance will not be required. The entire project site is located within the Tenth Avenue Marine Terminal in San Diego, California. The Dole Fresh Fruit Refrigerated Rack Improvement Project is anticipated to generate 580 daily trips with 68 trips during the AM peak hour and 104 trips during the PM peak hour.

14. Mitsubishi Cement Corporation – This project includes the importation of an additional 750,000 metric tons of cement annually. The entire project site is located within the Tenth Avenue Marine Terminal in San Diego, California. The Mitsubishi Cement Project is anticipated to generate 450 daily trips with 24 trips during the AM peak hour and 24 trips during the PM peak hour.

Table 5.1 Cumulative Projects Vehicular Trip Generation

	Project	ADT	AM Peak Hour		PM Peak Hour	
			In	Out	In	Out
1	Shipyard Sediment Remediation Project[1]	348	44	15	15	44
2	San Diego Refrigerated Services (SDRS)[2]	148	16	8	8	16
3	Pier 1N Drydock Project[3]	149	0	0	0	0
4	Metro Center Project[4]	12,350	287	171	555	555
5	San Diego Continuing Education – Cesar Chavez Campus[4]	1,152	124	14	28	64
6	Jack in the Box[5]	1,812	43	29	73	72
7	Ballpark Village Parcel C[6]	3,622	52	173	217	103
8	Ballpark Village Parcel D[6]	16,200	583	389	778	518
9	Park and G[6]	931	15	56	63	30
10	15th and Island[6]	3,620	65	236	270	125
11	San Diego Convention Center Phase III Expansion and Hotel[7]	7,590	835	298	461	848
12	Sprint Cell Tower	0	0	0	0	0

Table 5.1 Cumulative Projects Vehicular Trip Generation

	Project	ADT	AM Peak Hour		PM Peak Hour	
			In	Out	In	Out
13	Dole Fresh Fruit Refrigerated Rack Improvement Project[8]	580	53	15	51	53
14	Mitsubishi Cement Corporation [9]	450	15	9	9	15
	Total	**48,952**	**2,132**	**1,413**	**2,528**	**2,443**

Source: Port of San Diego, City of San Diego, June 2016

Notes:
[1] Trip Generation obtained from *Shipyard Sediment Remediation Project – TIA by LSA Associates, Inc.*
[2] Trip Generation obtained from *SDRS Negative Declaration - Traffic Analysis Memorandum by LLG, Engineers*
[3] Trip Generation obtained from *BAE Systems Pier 1N Drydock - TIA by LSA Associates, Inc.*
[4] Trip Generation obtained from *Cesar Chavez Campus – TIA by Kimley-Horn and Associates, Inc.*
[5] Trip Generation obtained from *Jack in the Box – TIA by Darnell and Associates, Inc.*
[6] Trip Generation obtained from *Ballpark Village Parcel C – TIA by Fehr & Peers, Inc.*
[7] Trip Generation obtained from *SDCC Phase III Expansion and Expansion Hotel – TIA by Fehr & Peers, Inc.*
[8] Trip Generation obtained from Dole Fresh Fruit Refrigerated Rack Improvement – TIA by Chen Ryan Associates
[9] Trip Generation provided by the Unified Port District of San Diego.

Cumulative Trip Distribution and Assignment

The trip distribution and assignment for the various cumulative projects was obtained from their respective Traffic Impact Analysis. **Figures 5-2A and B** display the total assignment of the cumulative project trips to the study area roadways and intersections. Trip distribution and assignment data from the cumulative projects is provided in **Appendix G.**

5.2 Near-Term Year 2021 Base Roadway Network and Traffic Volumes

Roadway and intersection geometrics under Near-Term Year 2021 Base conditions were assumed to be identical to Existing conditions, as shown in Figure 4-1 previously. **Figures 5-3A and B** display average daily roadway and peak hour intersection volumes for the study roadway segments and intersections under the Near-Term Year 2021 Base conditions. These volumes were developed by adding the identified specific cumulative project traffic volumes (displayed in Figures 5-2A & B) to existing traffic volumes (displayed in Figures 4-2A & B).

5.3 Near-Term Year 2021 Base Traffic Conditions

LOS analyses for the Near-Term Year 2021 Base conditions were conducted using the methodologies described in Chapter 2.0. Roadway segment analysis, intersection LOS analysis, and freeway ramp intersection ILV analysis results, are discussed separately below.

Roadway Segment Analysis

Table 5.2 displays the LOS analysis results for key roadway segments under Near-Term Year 2021 Base conditions.

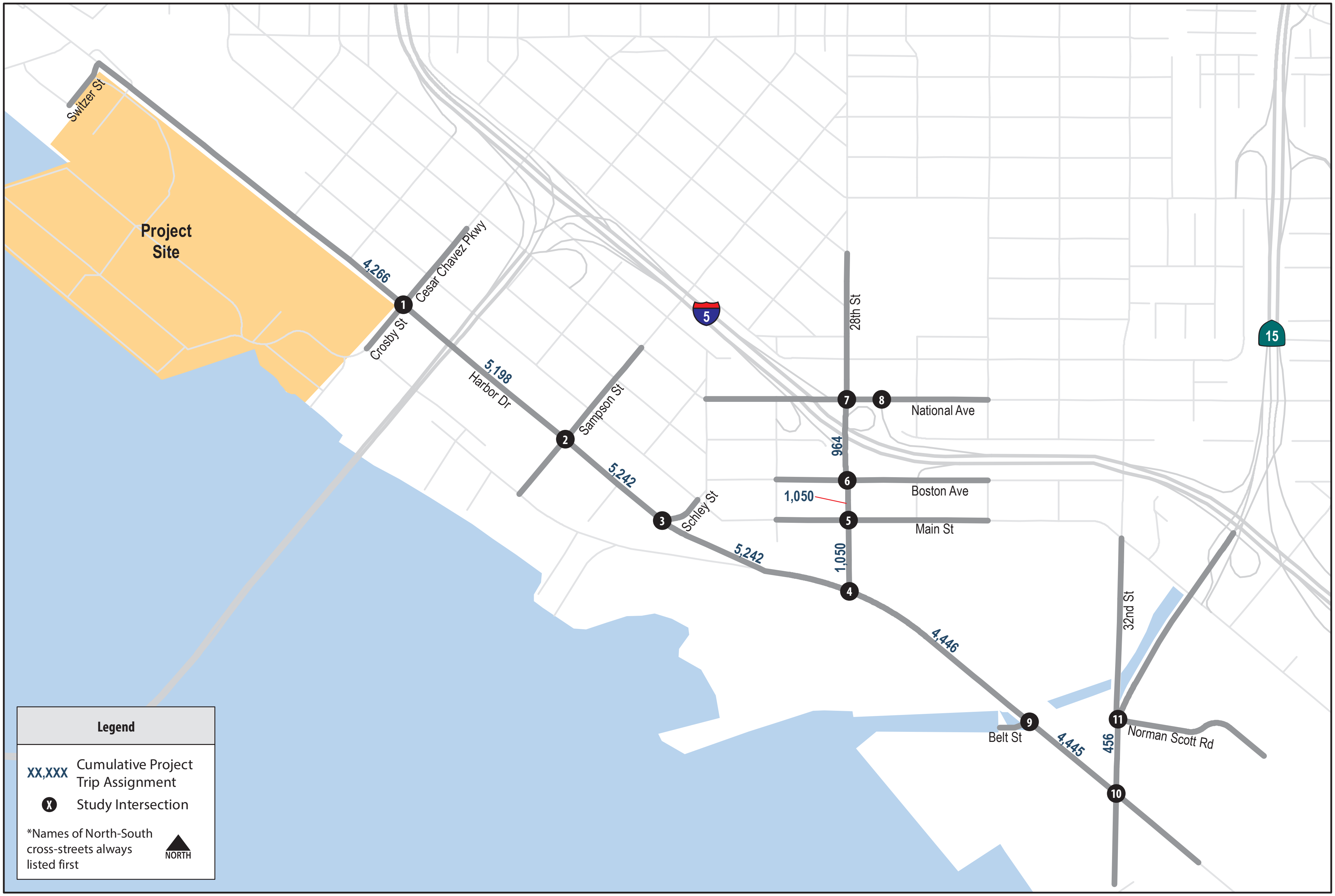

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Figure 5-2A

Average Daily Cumulative Project Trip Assignment

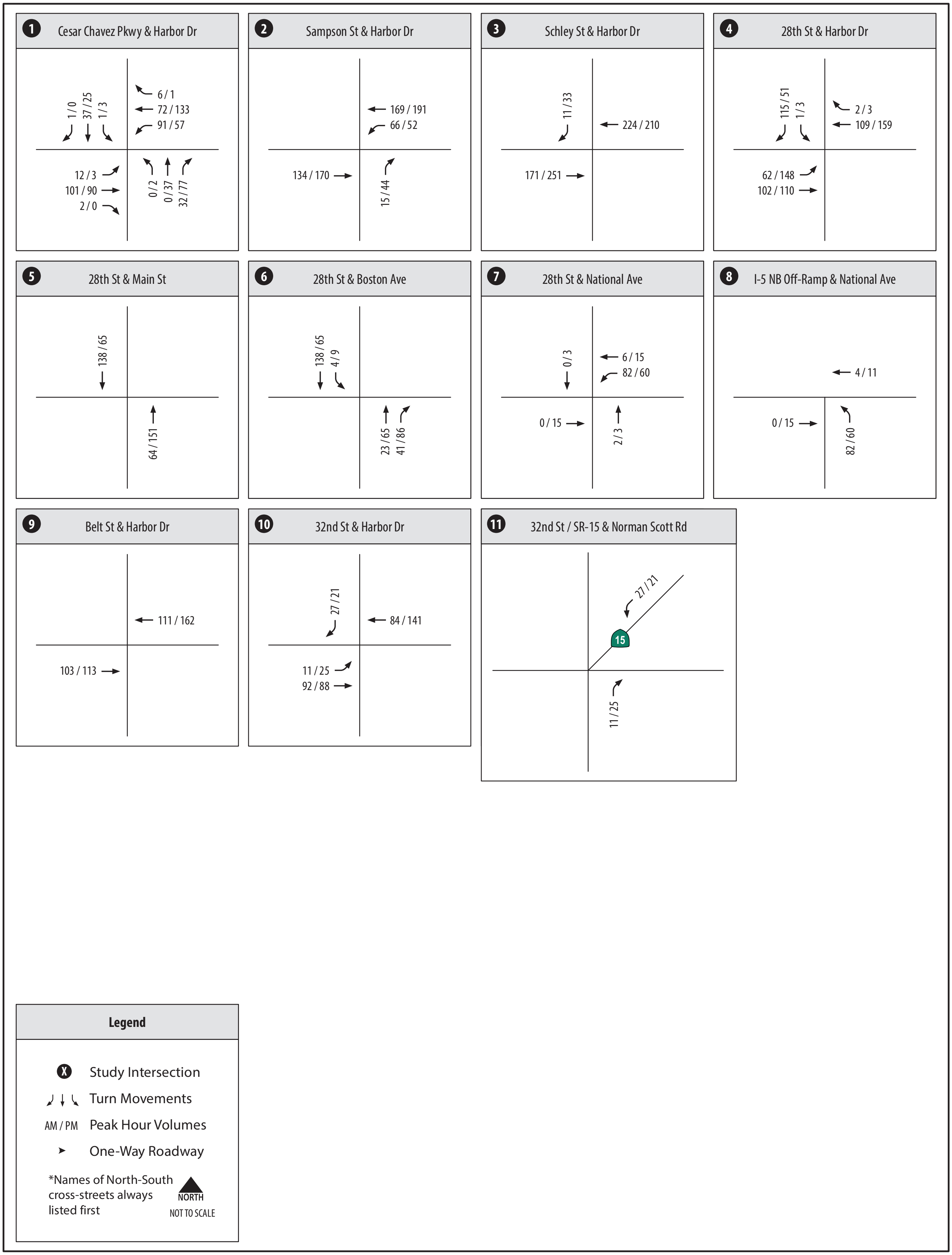

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Figure 5-2B

AM/PM Peak Hour Intersection Cumulative Project Trip Assignment

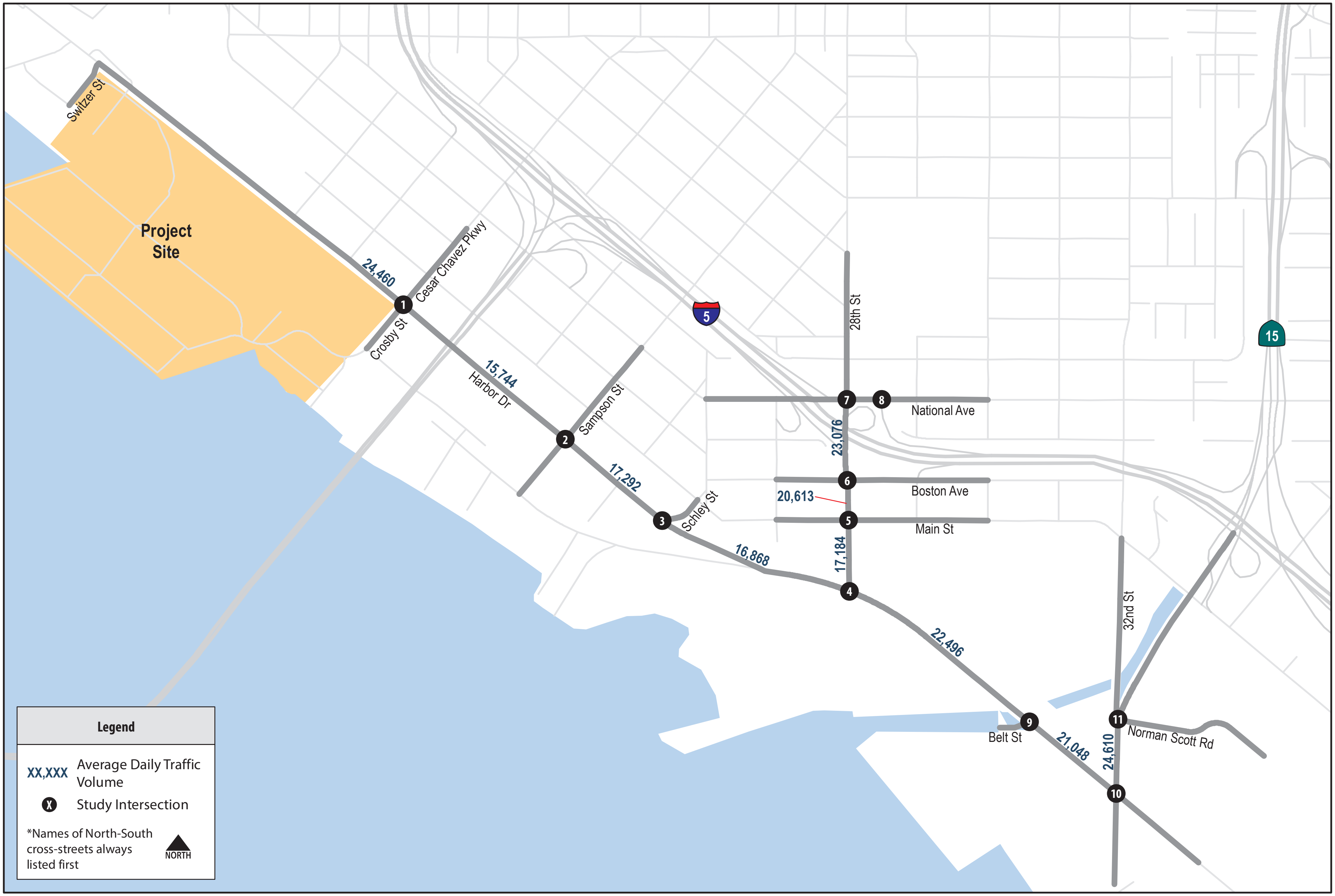

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Figure 5-3A

Average Daily Segment Traffic Volumes - Near-Term Year 2021 Base Conditions

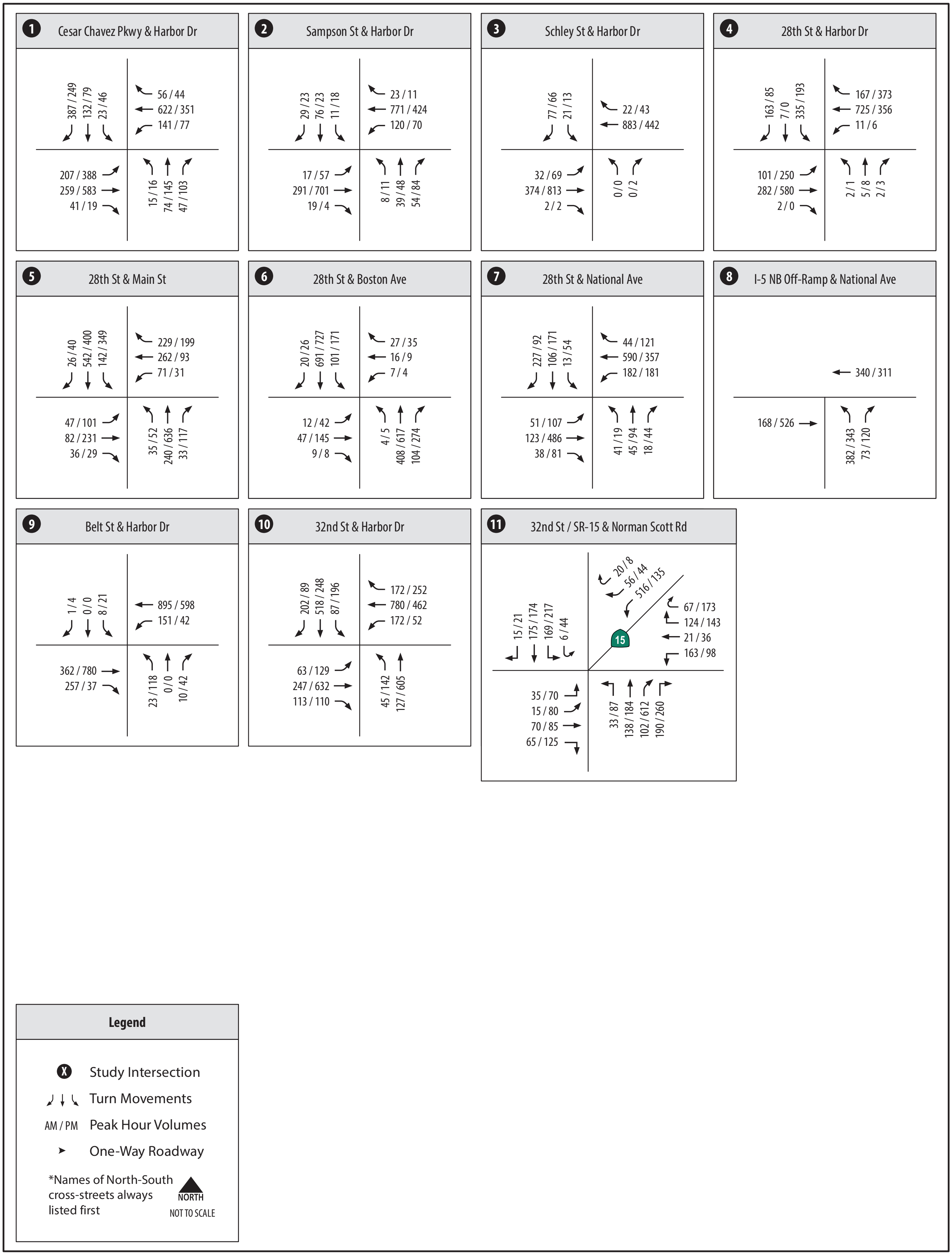

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Figure 5-3B

AM/PM Peak Hour Intersection Traffic Volumes - Near-Term Year 2021 Base Conditions

Table 5.2 Daily Roadway Segment LOS Results - Near-Term Year 2021 Base Conditions

Roadway Segment	Segment	Cross-section	Threshold (LOS E)	ADT	V/C	LOS
Harbor Drive	Between Beardsley Street and Cesar Chavez Parkway	4-Lanes w/ RM	40,000	24,460	0.612	C
	Between Cesar Chavez Parkway and Sampson Street	4-Lanes w/ RM	40,000	15,744	0.394	B
	Between Sampson Street and Schley Street	4-Lanes w/ RM	40,000	17,292	0.432	B
	Between Schley Street and 28th Street	4-Lanes w/ RM	40,000	16,868	0.422	B
	Between 28th Street and Belt Street	4-Lanes w/ RM	40,000	22,496	0.562	C
	Between Belt Street and 32nd Street	4-Lanes w/ RM	40,000	21,048	0.526	C
28th Street	Between Harbor Drive and Main Street	4-Lanes w/ RM	40,000	17,184	0.430	B
	Between Main Street and Boston Avenue	4-Lanes w/TWLT	30,000	20,613	0.687	D
	Between Boston Avenue and National Avenue	3-Lanes w/TWLT	22,500[1]	23,076	1.026	**F**
32nd Street	Between Harbor Drive and Norman Scott Road	6-lanes w/ RM	50,000	24,610	0.492	B

Source: NDS, Chen Ryan Associates; June 2016

Notes:
[1] Capacity is 75% of a 4-Lane Collector w/TWLT.
V/C = Volume to Capacity Ratio.
Bold letter indicates LOS E or F.

As shown, all key study roadway segments are projected to operate at LOS D or better under Near-Term Year 2021 Base conditions, with the exception of the following:

- 28th Street between Boston Avenue and National Avenue (LOS F)

Intersection Analysis

Table 5.3 displays intersection LOS and average vehicle delay results under Near-Term Year 2021 Base conditions. All intersections are signalized unless otherwise noted. LOS calculation worksheets for the Near-Term Year 2021 Base conditions are provided in **Appendix H**.

Table 5.3 Peak Hour Intersection LOS Results - Near-Term Year 2021 Base Conditions

#	Intersection	AM Peak Hour		PM Peak Hour	
		Avg. Delay (sec.)	LOS	Avg. Delay (sec.)	LOS
1	Harbor Drive / Cesar Chavez Parkway	41.0	D	38.0	D
2	Harbor Drive / Sampson Street	43.8	D	44.9	D
3	Harbor Drive / Schley Street	16.3	B	15.7	B
4	Harbor Drive / 28th Street	28.2	C	26.6	C
5	Main Street / 28th Street	22.2	C	38.8	D
6	Boston Avenue / 28th Street	19.1	B	23.9	C
7	National Avenue / 28th Street	42.6	D	31.5	C
8	National Avenue / I-5 NB Off-Ramp	17.4	B	14.8	B
9	Harbor Drive / Belt Street	18.8	B	17.0	B
10	Harbor Drive / 32nd Street	29.3	C	43.3	D
11	Norman Scott Road / 32nd Street / Wabash Boulevard	103.2	**F**	69.6	**E**

Source: Chen Ryan Associates; June 2016

As shown, all key study intersections are projected to operate at acceptable LOS D or better during the peak hours under Near-Term Year 2021 Base conditions, with the exception of the following:

- Norman Scott Road / 32nd Street / Wabash Boulevard – LOS F during the AM peak hour and LOS E during the PM peak hour.

Ramp Intersection Capacity Analysis

Consistent with Caltrans requirements, the signalized ramp intersection of National Avenue / I-5 NB off-ramp was analyzed using ILV procedures, as described in Section 2.4. ILV analysis results are displayed in **Table 5.4** and analysis worksheets for Near-Term Year 2021 Base conditions are provided in Appendix H.

Table 5.4 Ramp Intersection Capacity Analysis -Near-Term Year 2021 Base Conditions

#	Intersection	Peak Hour	ILV/Hour	Description
8	National Avenue / I-5 NB Off-Ramp	AM	722	Under Capacity
		PM	869	Under Capacity
11	Norman Scott Road / 32nd Street / Wabash Boulevard	AM	995	Under Capacity
		PM	1,061	Under Capacity

Source: Chen Ryan Associates; June 2016

As shown, the signalized ramp intersections of National Avenue / I-5 NB off-ramp and Norman Scott Road / 32nd Street / Wabash Boulevard are projected to operate at "Under Capacity" during both the AM and PM peak hours, under Near-Term Year 2021 Base conditions.

5.4 Near-Term Year 2021 Base Plus Interim Project Roadway Network and Traffic Volumes

Roadway and intersection geometrics under Near-Term Year 2021 Base Plus Interim Project conditions were assumed to be identical to Existing conditions, as shown in Figure 4-1 previously. Near-Term Year 2021 Base Plus Project traffic volumes were derived by combining the Near-Term Year 2021 Base traffic volumes (displayed in Figures 5-3A & B) and the project trip assignment volumes (displayed in Figures 3-6A and 3-6B for employees and Figures 3-7A and 3-7B for trucks). Daily and peak hour intersection volumes for this scenario are displayed in **Figures 5-4A & B**.

5.5 Near-Term Year 2021 Base Plus Interim Project Traffic Conditions

Analyses were conducted using the methodologies described in Chapter 2.0. Roadway segment analysis, intersection LOS analysis, and freeway ramp intersection ILV analysis results, are discussed separately below.

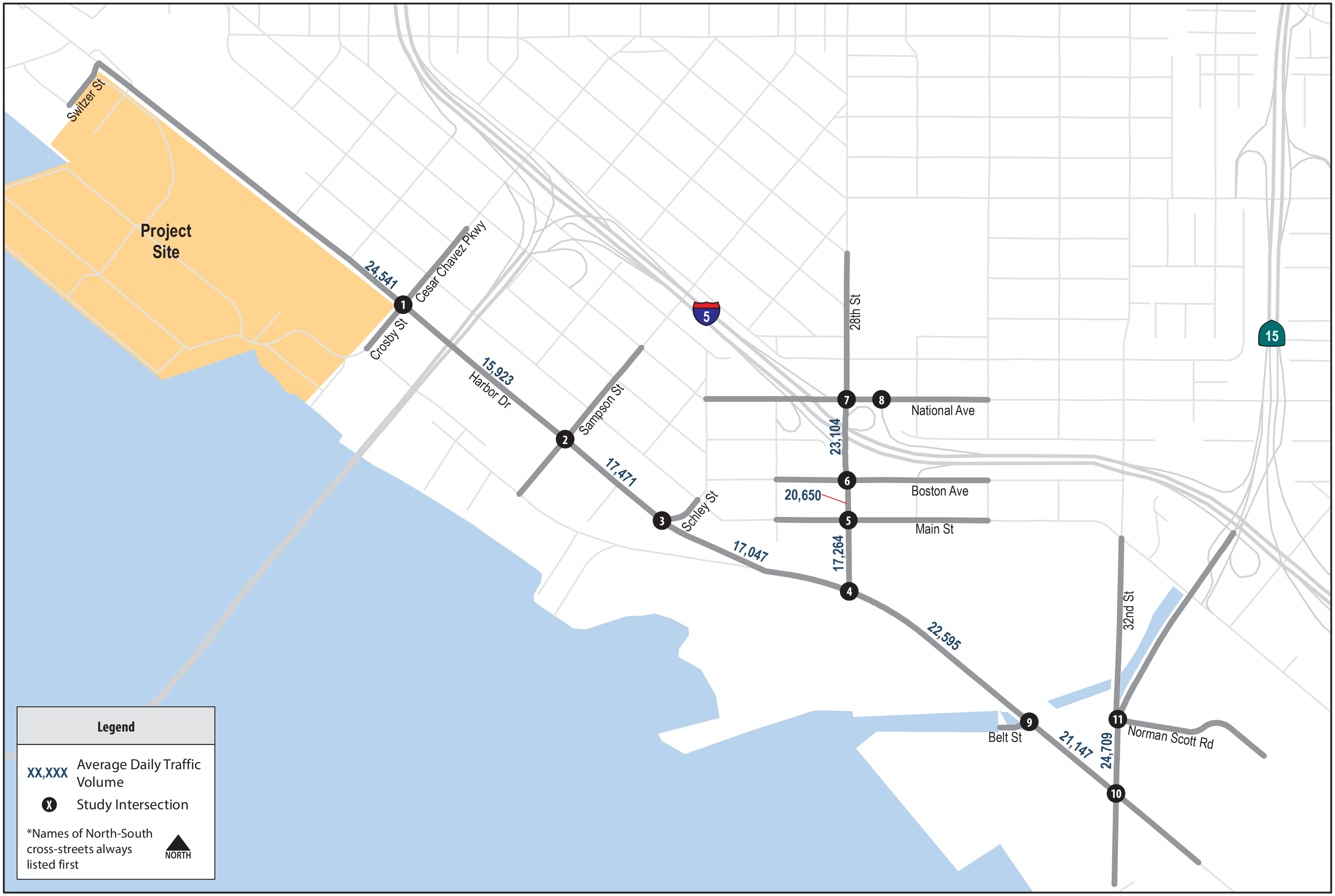

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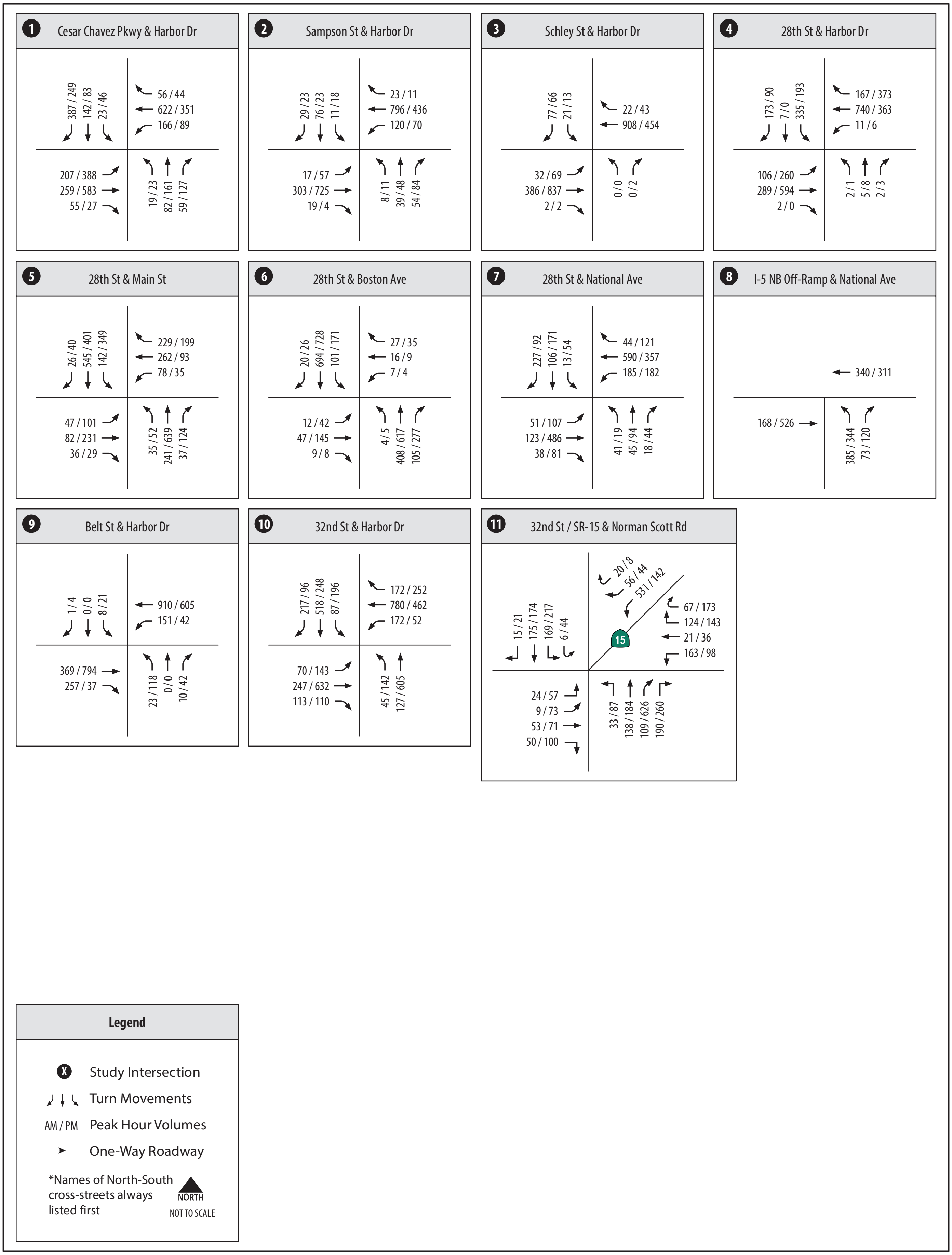
Figure 5-4A

Average Daily Segment Traffic Volumes - Near-Term Year 2021 Base Plus Project Conditions



Tenth Avenue Marine Terminal Redevelopment Plan

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Figure 5-4B

AM/PM Peak Hour Intersection Traffic Volumes - Near-Term Year 2021 Base Plus Project Conditions

Roadway Segment Analysis

Table 5.5 displays the LOS analysis results for key roadway segments under Near-Term Year 2021 Base Plus Project conditions.

Table 5.5 Roadway Segment LOS Results - Near-Term Year 2021 Base Plus Interim Project Conditions

Roadway	Segment	Cross-Section	Threshold (LOS E)	Near-Term Base + Project			Near-Term Base	Δ	S?
				ADT	V/C	LOS	ADT / V/C / LOS		
Harbor Drive	Between Beardsley Street and Cesar Chavez Parkway	4-Lanes w/ RM	40,000	24,~~543~~541	0.614	C	24,460 / 0.612 / C	0.002	N
	Between Cesar Chavez Parkway and Sampson Street	4-Lanes w/ RM	40,000	15,~~930~~923	0.398	B	15,744 / 0.394 / B	0.004	N
	Between Sampson Street and Schley Street	4-Lanes w/ RM	40,000	17,~~478~~471	0.437	B	17,292 / 0.432 / B	0.005	N
	Between Schley Street and 28th Street	4-Lanes w/ RM	40,000	17,~~054~~047	0.426	B	16,868 / 0.422 / B	0.004	N
	Between 28th Street and Belt Street	4-Lanes w/ RM	40,000	22,~~660~~595	0.~~566~~565	C	22,496 / 0.562 / C	0.~~004~~003	N
	Between Belt Street and 32nd Street	4-Lanes w/ RM	40,000	21,~~212~~147	0.~~530~~529	C	21,048 / 0.526 / C	0.~~004~~003	N
28th Street	Between Harbor Drive and Main Street	4-Lanes w/ RM	40,000	17,~~206~~264	0.~~430~~432	B	17,184 / 0.430 / B	0.~~000~~002	N
	Between Main Street and Boston Avenue	4-Lanes w/TWLT	30,000	20,~~635~~650	0.688	D	20,613 / 0.687 / D	0.001	N
	Between Boston Avenue and National Avenue	3-Lanes w/TWLT	22,500[1]	23,~~090~~104	1.~~026~~027	**F**	23,076 / 1.026 / **F**	0.~~000~~001	N
32nd Street	Between Harbor Drive and Norman Scott Road	6-Lanes w/ RM	50,000	24,~~774~~709	0.~~495~~494	B	24,610/ 0.492 / B	0.~~003~~002	N

Source: Chen Ryan Associates, ~~June~~August 2016

Notes:
[1] Capacity is 75% of a 4-Lane Collector w/TWLT.
V/C = Volume to Capacity Ratio.
Δ = Change in V/C Ratio.
S? = Indicates if change in V/C ratio is significant.
Bold letter indicates LOS E or F.

As shown, all study area roadway segments are projected to operate at LOS D or better with the addition of project traffic under Near-Term Year 2021 Base Plus Project conditions with the exception of:

- 28th Street, between Boston Avenue and National Avenue (LOS F).

Based on the City of San Diego's Significance Criteria, outlined in Section 2.6, the traffic associated with the proposed project would <u>not</u> cause any significant changes (V/C ration less than 0.01) or further deterioration in roadway segment Levels of Service under Near-Term Year 2021 Base Plus Interim Project conditions. Therefore, the project would not be associated with a significant and no mitigation is required.

Intersection Analysis

Table 5.6 displays intersection LOS and average vehicle delay results under Near-Term Year 2021 Base Plus Interim Project conditions. All intersections are currently signalized. LOS calculation worksheets for the Near-Term Year 2021 Base Plus Interim Project conditions are provided in **Appendix I**.

Table 5.6 Peak Hour Intersection LOS Results - Near-Term Year 2021 Base Plus Interim Project Conditions

#	Intersection	AM Peak Hour		PM Peak Hour		Delay w/o Project (sec.) AM/PM	LOS w/o Project AM/PM	Change in Delay (sec.)	Significant Impact?
		Avg. Delay (sec.)	LOS	Avg. Delay (sec.)	LOS				
1	Harbor Drive / Cesar Chavez Parkway	41.0	D	39.~~6~~7	D	41.0 / 38.0	D / D	0.0 / 1.~~6~~7	No
2	Harbor Drive / Sampson Street	44.0	D	45.5	D	43.8 / 44.9	D / D	0.2 / 0.6	No
3	Harbor Drive / Schley Street	16.4	B	15.7	B	16.3 / 15.7	B / B	0.1 / 0.0	No
4	Harbor Drive / 28th Street	28.~~4~~6	C	~~26.7~~27.0	C	28.2 / 26.6	C / C	0.~~2~~4 / 0.~~1~~4	No
5	Main Street / 28th Street	22.2	C	~~38.8~~39.3	D	22.2 / 38.8	C / D	0.0 / 0.~~0~~5	No
6	Boston Avenue / 28th Street	19.1	B	~~23.9~~24.0	C	19.1 / 23.9	B / C	0.0 / 0.~~0~~1	No
7	National Avenue / 28th Street	42.6	D	31.5	C	42.6 / 31.5	D / C	0.0 / 0.0	No
8	National Avenue / I-5 NB Off-Ramp	17.~~4~~6	B	16.4	B	17.4 / 14.8	B / B	0.~~0~~2 / 1.6	No
9	Harbor Drive / Belt Street	18.~~9~~8	B	17.~~2~~1	B	18.8 / 17.0	B / B	0.0 / 0.1~~ / 0.2~~	No
10	Harbor Drive / 32nd Street	~~30.2~~29.7	C	~~44.4~~43.5	D	29.3 / 43.3	C / D	0.~~9 / 1.1~~4 / 0.2	No
11	Norman Scott Road / 32nd Street / Wabash Boulevard	~~105.1~~103.6	**F**	~~70.4~~69.6	**E**	103.2 / 69.6	**F/E**	~~1.9 / ~~0.~~8~~4 / 0.0	~~**Yes**~~No

Source: Chen Ryan Associates; ~~June~~August 2016

As shown, all key study intersections are projected to operate at acceptable LOS D during both peak hours under Near-Term Year 2021 Base Plus Project conditions, with the exception of the following:

- Norman Scott Road / 32nd Street / Wabash Boulevard (AM: LOS F / PM: LOS E)

Based on the City of San Diego's Significance Criteria, outlined in Section 2.6, the traffic associated with the proposed project would not add delay surpassing the acceptable threshold (greater than 1 second for intersections operating at LOS F and greater than 2 seconds for intersection operating at LOS E) to the aforementioned intersection, which is projected to operate at LOS F during the AM peak hour and LOS E during the PM peak hour. Therefore, the project would not result in a significant cumulative impact at the Norman Scott Road / 32nd Street / Wabash Boulevard intersection.

Ramp Intersection Capacity Analysis

Consistent with Caltrans requirements, the signalized ramp intersection of National Avenue / I-5 NB off-ramp was analyzed using ILV procedures, as described in Section 2.4. ILV analysis results are displayed in **Table 5.7** and analysis worksheets for Near-Term Year 2021 Base Plus Interim Project are provided in Appendix I.

Table 5.7 Ramp Intersection Capacity Analysis - Near-Term Year 2021 Base Plus Interim Project Conditions

#	Intersection	Peak Hour	ILV/Hour	Description
8	National Avenue / I-5 NB Off-Ramp	AM	~~723~~725	Under Capacity
		PM	~~869~~870	Under Capacity
11	Norman Scott Road / 32nd Street / Wabash Boulevard	AM	1,~~026~~014	Under Capacity
		PM	1,~~086~~075	Under Capacity

Source: Chen Ryan Associates; ~~June~~August 2016

As shown, the signalized ramp intersections of National Avenue / I-5 NB off-ramp and Norman Scott Road / 32nd Street / Wabash Boulevard are projected to operate at "Under Capacity" during both the AM and PM peak hours, under Near-Term Year 2021 Base Plus Interim Project conditions.

5.6 Near-Term Year 2021 Base Plus Interim Project - Alternative Gate Scenario

As noted previously, the Tenth Avenue Marine Terminal Plan also identifies an alternative gate concept that would serve as the primary entry and exit location for the Refrigerated Container node and the Multi-Purpose General Cargo node. The alternative gate would be located in the north-east corner of the terminal and provide access directly onto Harbor Drive. According to the Plan, the Dry Bulk and Liquid Bulk Nodes would continue to utilize the existing gate off Cesar Chavez Parkway, particularly for domestic bulk shipments.

Trip Redistribution

As stated before, the Refrigerated Container and the Multi-Purpose General Cargo nodes would utilize the alternative gate. Therefore, with the proposed implementation of the alternative gate would result in a redistribution of both existing and proposed project truck traffic from these modes. It is assumed that employee traffic would continue to use the existing Crosby street gate. **Figure 5-5** displays the assumed redistribution of both existing and interim project truck traffic between the two gate locations. **Figure 5-6** displays the anticipated traffic volumes at both gates and along Harbor Drive under the Near-Term Year 2021 Base Plus Interim Project – Alternative Gate Scenario.

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Figure 5-5

Truck Traffic Redistribution with Alternative Gate - Near-Term Year 2021 Base Plus Interim Project Conditions

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Figure 5-6

Traffic Volumes - Near-Term Year 2021 Base Plus Interim Project Conditions - Alternative Gate Scenario

Roadway Segment Analysis

Based on the assumed redistribution of truck trips, as displayed in Figure 5-5, Harbor Drive between Beardsley Street and Cesar Chavez Parkway is the only study roadway segment that is anticipated to experience a change in ADT due to the Alternative gate. **Table 5.11** displays the LOS analysis results for the affected segment of Harbor Drive under Near-Term Year 2021 Base Plus Interim Project conditions, with the proposed Alternative Gate.

Table 5.8 Roadway Segment LOS Results - Near-Term Year 2021 Base Plus Interim Project Conditions – Alternative Gate Scenario

Roadway	Segment	Cross-Section	Threshold (LOS E)	Near-Term Year 2021 Base + Project			Existing	Δ	S?
				ADT	V/C	LOS	ADT / V/C / LOS		
Harbor Drive	Between Beardsley Street and Cesar Chavez Parkway	4-Lanes w/ RM	40,000	24,550	0.614	C	24,460 / 0.612 / C	0.002	N

Source: Chen Ryan Associates; ~~June~~August 2016

Notes:
V/C = Volume to Capacity Ratio.
Δ = Change in V/C Ratio.
S? = Indicates if change in V/C ratio is significant.

As shown, Harbor Drive between Beardsley Street and Cesar Chavez Parkway is anticipated to operate at LOS C with the addition of the proposed project and with the alternative gate.

Based on the City of San Diego's Significance Criteria, outlined in Section 2.6, the traffic associated with the proposed project would not cause any roadways segments to operate at LOS E or F; therefore, the implementation of the proposed alternative gate would not result in any additional impacts.

Intersection Analysis

Based on the assumed redistribution of truck trips, as displayed in Figure 5-5, the Harbor Drive / Cesar Chavez Parkway intersection (Main Gate) is the only study intersection that is anticipated to experience a change in peak hour volumes due to the alternative gate. All other key study intersections are anticipated to operate at the same conditions as identified in Table 5.6. **Table 5.9** displays intersection LOS and average vehicle delay results under Near-Term Year 2021 Base Plus Interim Project conditions, with the alternative gate assumed. Both intersections are assumed to be signalized. LOS calculation worksheets for the Near-Term Year 2021 Base Plus Interim Project conditions are provided in Appendix I.

Table 5.9 Peak Hour Intersection LOS Results - Near-Term Year 2021 Base Plus Interim Project Conditions – Alternative Gate Scenario

#	Intersection	AM Peak Hour		PM Peak Hour		Delay w/o Project (sec.) AM/PM	LOS w/o Project AM/PM	Change in Delay (sec.)	Significant Impact?
		Avg. Delay (sec.)	LOS	Avg. Delay (sec.)	LOS				
1	Harbor Drive / Cesar Chavez Parkway	41.9	D	38.~~8~~7	D	41.0 / 38.0	D / D	0.9 / 0.~~8~~7	No
12	Harbor Drive / Alternative Gate	21.~~7~~8	C	~~33.9~~34.4	C	N/A	N/A	21.~~7 / 33.9~~8 / 34.4	No

Source: Chen Ryan Associates; ~~June~~August 2016

As shown, both affected intersections are anticipated to operate at LOS D or better with the proposed alternative gate.

Based on the City of San Diego's Significance Criteria, outlined in Section 2.6, the traffic associated with the proposed project would not cause either intersection to operate at LOS E or F; therefore, the implementation of the proposed alternative gate would not result in any additional impacts.

5.7 Impact Significance and Mitigation

Roadway Segments

Near-Term Year 2021 Base Plus Interim Project Conditions

- None

Near-Term Year 2021 Base Plus Interim Project Conditions – Alternative Gate

- None

Intersections

Near-Term Year 2021 Base Plus Interim Project Conditions

~~Based upon the significance criteria presented in Section 2.6~~ The addition of ~~this report,~~ the proposed ~~project would contribute to a direct traffic impact at the following intersection under Near-Term Year 2021 Base Plus Project conditions:~~

- ~~Norman Scott Road / 32nd Street / Wabash Boulevard~~

~~However, as shown in **Table 5.10**, the following recommended improvement would reduce the overall intersection delay to predevelopment conditions:~~

- ~~Add a westbound right-turn overlap phase.~~

Table 5.10 Peak Hour Intersection LOS – Mitigated Intersection – Near-Term Year 2021 Plus Interim Project Conditions

#	Intersection	AM Peak Hour		PM Peak Hour		Delay w/o Project (sec.) AM/PM	LOS w/o Project AM/PM	Change in Delay (sec.)	Significant Impact?
		Avg. Delay (sec.)	LOS	Avg. Delay (sec.)	LOS				
11	Norman Scott Road / 32nd Street / Wabash Boulevard	100.1	F	60.1	E	103.2 / 69.6	F/E	-3.1 / -9.5	No

Source: Chen Ryan Associates; June 2016

This intersectionalternative gate is controlled by Caltrans and the Port District does not have jurisdiction at this intention; therefore, this impact is consideredanticipated to result in any additional significant and unavoidable.

In addition to the aforementioned mitigation measure, Caltrans is currently working on a truck access improvement impacts to study which will identify several potential improvements to this intersection, including a potential grade separation. It is recommended that the District continues to coordinate with Caltrans as the TAMT develops to determine if the proposed mitigation measure is relevant at the time of implementation or if the District can participate in a larger improvement program for the intersection.intersections.

Near-Term Year 2021 Base Plus Interim Project Conditions – Alternative Gate

The addition of the proposed alternative gate is not anticipated to result in any additional significant impacts to study intersections. However, it should be noted that all of the impacts listed above would still occur both with and without the alternative gate.

6.0 Future Year 2035 Traffic Conditions

This section provides a description of Future Year 2035 traffic conditions both with and without the proposed project. Scenarios analyzed in this section included:

- Future Year 2035 Base Conditions
- Future Year 2035 Base Plus Project Conditions
- Future Year 2035 Base Plus Project – Alternative Gate Scenario

6.1 Future Year 2035 Base Roadway Network and Traffic Volumes

Roadway and intersection geometrics under Future Year 2035 Base conditions were assumed to be identical to Existing conditions, as shown in Figure 4-1 previously. It should be noted that since the project is a long-range redevelopment plan, the timing of its implementation will be based on ongoing market conditions and therefore the timing of its implementation and phasing is unknown. Therefore, no mitigation measures identified under Existing Plus Project conditions were carried forward into future year conditions since it is unknown when they will actually be implemented at this time.

Figures 6-1A and 6-1B display, respectively, average daily roadway and peak hour intersection volumes for the study roadway segments and intersections under Future Year 2035 Base Conditions. Future Year 2035 Base daily roadway volumes were derived from the SANDAG Series 12 Future Year 2035 Regional Forecast Model as well as from the Barrio Logan Community Plan Update (2012) and the Southeastern Community Plan Update (2015). Peak hour intersection turning movements were developed by comparing existing daily roadway segment volumes to the forecasted Future Year 2035 daily volumes contained in the SANDAG model. Based on this comparison, the Future Year 2035 growth rates were applied to existing peak hour intersection approach and departure volumes. Manual adjustments were also made to ensure that traffic volumes among adjacent intersections are reasonably balanced. In addition, future year turning movement volumes developed for the Southeastern San Diego Community Plan were used where applicable. Barrio Logan and Southeastern San Diego Community Plan Excerpts are provided in **Appendix J**.

6.2 Future Year 2035 Base Traffic Conditions

LOS analyses for Future Year 2035 Base conditions were conducted using the methodologies described in Chapter 2.0. Roadway segment analysis, intersection LOS analysis, freeway ramp intersection ILV analysis, and freeway mainline analysis results are discussed in the following sections.

Roadway Segment Analysis

Table 6.1 displays the LOS analysis results for key roadway segments under the Future Year 2035 Base conditions.

As shown in Table 6.1, all key study area roadway segments are projected to operate at LOS D or better under Future Year 2035 Base conditions, with the exception of the following:

- 28th Street, between Boston Avenue and National Avenue (LOS F).

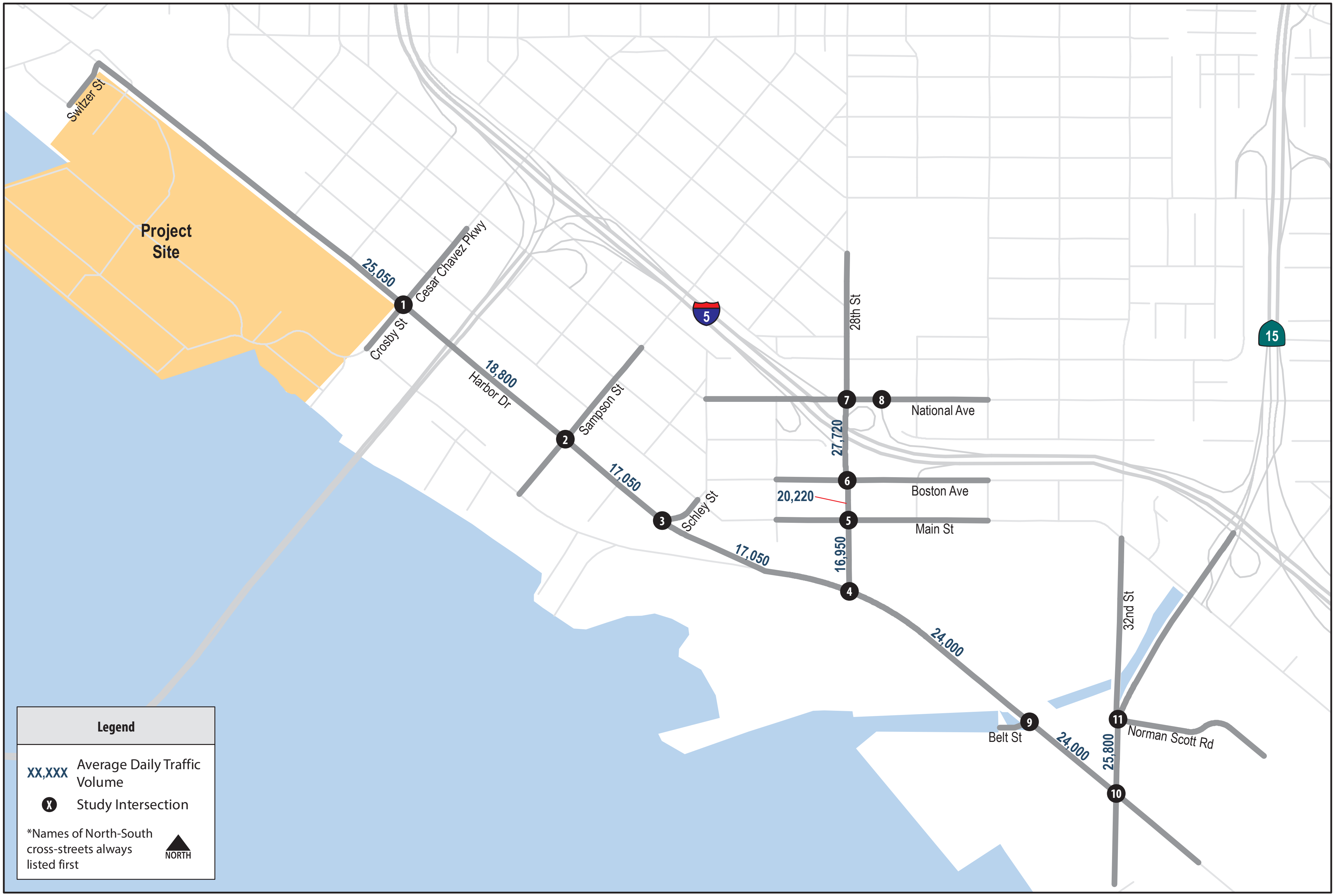

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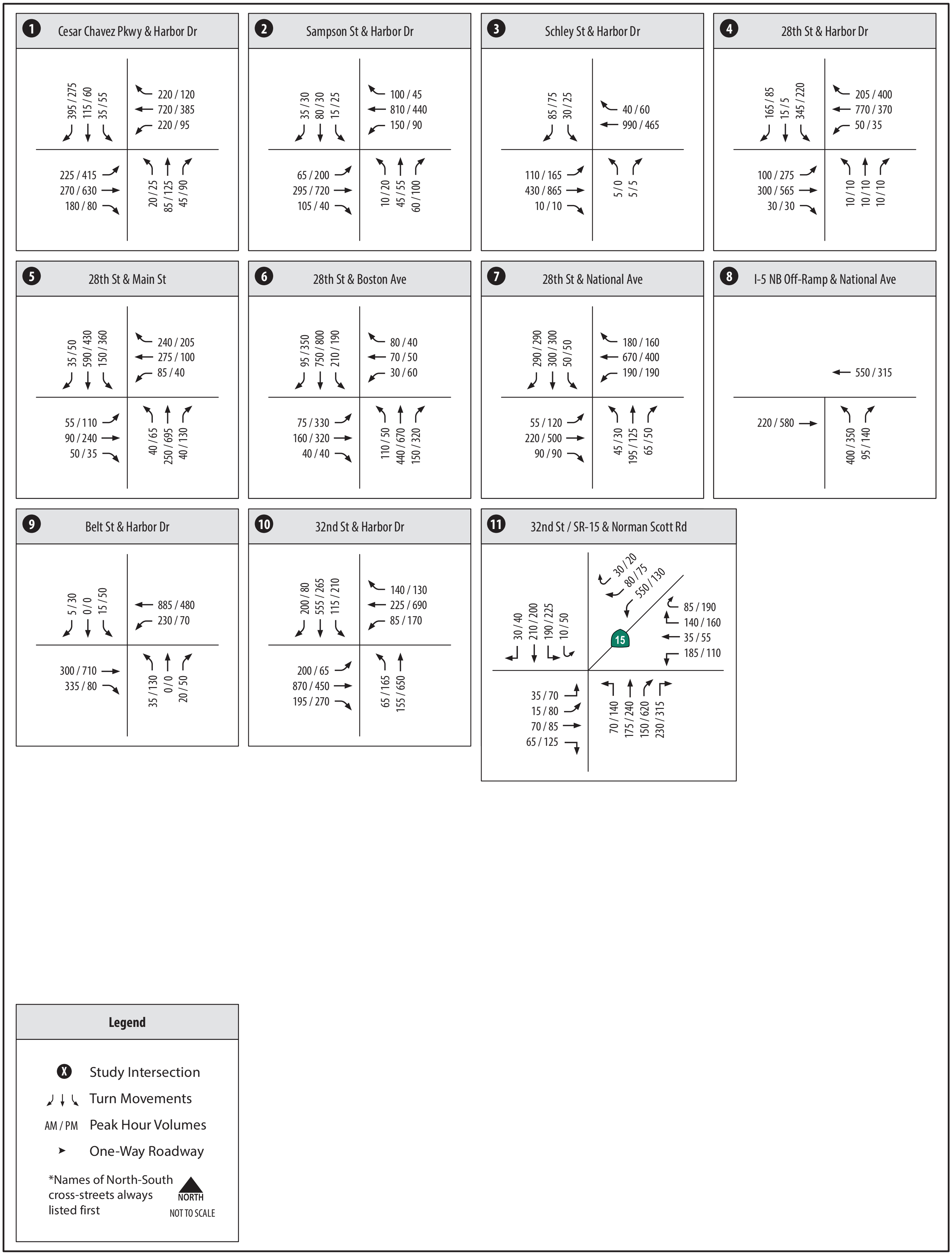
Figure 6-1A

Average Daily Segment Traffic Volumes - Future Year 2035 Base Conditions



Tenth Avenue Marine Terminal Redevelopment Plan

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Figure 6-1B

AM/PM Peak Hour Intersection Traffic Volumes - Future Year 2035 Base Conditions

Table 6.1 Roadway Segment LOS Results - Future Year 2035 Base Conditions

Roadway	Segment	Classification	Threshold (LOS E)	ADT	V/C	LOS
Harbor Drive	Between Beardsley Street and Cesar Chavez Parkway	4-Lane Major	40,000	25,050	0.626	C
	Between Cesar Chavez Parkway and Sampson Street	4-Lane Major	40,000	18,800	0.470	B
	Between Sampson Street and Schley Street	4-Lane Major	40,000	17,050	0.426	B
	Between Schley Street and 28th Street	4-Lane Major	40,000	17,050	0.426	B
	Between 28th Street and Belt Street	4-Lane Major	40,000	24,000	0.600	C
	Between Belt Street and 32nd Street	4-Lane Major	40,000	24,000	0.600	C
28th Street	Between Harbor Drive and Main Street	4-Lane Major	40,000	16,950	0.424	B
	Between Main Street and Boston Avenue	4-Lane Collector w/TWLT	30,000	20,220	0.674	D
	Between Boston Avenue and National Avenue	3-Lane Collector w/TWLT	22,500	27,720	1.232	**F**
32nd Street	Between Harbor Drive and Norman Scott Road	6-Lane Major	50,000	25,800	0.516	B

Source: Chen Ryan Associates; June 2016

Intersection Analysis

Table 6.2 displays intersection LOS and average vehicle delay results under Future Year 2035 Base conditions. All intersections are currently signalized. LOS calculation worksheets are provided in **Appendix K**. It should be noted that all intersection signal timing plans were assumed to be optimized under Future Year 2035 conditions. This may result in better signal operations at some intersections when compared to existing conditions.

Table 6.2 Peak Hour Intersection LOS Results - Future Year 2035 Base Conditions

#	Intersection	AM Peak Hour		PM Peak Hour	
		Avg. Delay (sec.)	LOS	Avg. Delay (sec.)	LOS
1	Harbor Drive / Cesar Chavez Parkway	50.6	D	39.6	D
2	Harbor Drive / Sampson Street	50.9	D	53.0	D
3	Harbor Drive / Schley Street	23.2	C	19.4	B
4	Harbor Drive / 28th Street	28.8	C	28.2	C
5	Main Street / 28th Street	22.2	C	39.2	D
6	Boston Avenue / 28th Street	27.7	C	37.4	D
7	National Avenue / 28th Street	122.5	**F**	71.4	**E**
8	National Avenue / I-5 NB Off-Ramp	18.9	B	17.5	B
9	Harbor Drive / Belt Street	22.3	C	19.1	B
10	Harbor Drive / 32nd Street	32.3	C	44.2	D
11	Norman Scott Road / 32nd Street / Wabash Boulevard	81.5	**F**	67.2	**E**

Source: Chen Ryan Associates; June 2016

As shown, all key study intersections are projected to operate at LOS D or better during both the peak hours under Future Year 2035 Base conditions, with the exception of the following two (2) intersections:

- National Avenue / 28th Street – LOS F during AM peak hour and LOS E during PM peak hour; and
- Norman Scott Road / 32nd Street / Wabash Boulevard – LOS F during AM peak hour and LOS E during the PM peak hour.

Ramp Intersection Capacity Analysis

Consistent with Caltrans requirements, the signalized ramp intersections of National Avenue / I-5 NB off-ramp and Norman Scott Road / 32nd Street / Wabash Boulevard were analyzed using ILV procedures, as described in Section 2.4. ILV analysis results are displayed in **Table 6.3** and analysis worksheets for Future Year 2035 Base conditions are provided in Appendix K.

Table 6.3 Ramp Intersection Capacity Analysis - Future Year 2035 Base Conditions

#	Intersection	Peak Hour	ILV/Hour	Description
8	National Avenue / I-5 NB Off-Ramp	AM	950	Under Capacity
		PM	930	Under Capacity
11	Norman Scott Road / 32nd Street / Wabash Boulevard	AM	1,095	Under Capacity
		PM	1,083	Under Capacity

Source: Chen Ryan Associates; June 2016

As shown, the key study signalized ramp intersections are projected to operate at "Under Capacity" during both the AM and PM peak hour, under Future Year 2035 Base conditions.

Freeway Analysis

Table 6.4 displays the LOS results from the freeway segment analysis under Future Year 2035 Base conditions.

As shown in Table 6.4, all study freeway segments currently operate at LOS D or better with the exception of the following:

- I-5 NB between SR-94 & Imperial Avenue (LOS F)
- I-5 SB between SR-94 & Imperial Avenue (LOS E)
- I-5 NB between Imperial Avenue & SR-75 (LOS E)
- I-5 NB between SR-75 & 28th Street (LOS F)
- I-5 SB between SR-75 & 28th Street (LOS E)
- I-5 NB between 28th Street & SR-15 (LOS F)
- I-5 NB between SR-15 & Main Street (LOS F)
- I-5 SB between SR-15 & Main Street (LOS F)
- SR-15 NB between Market Street & Ocean View Boulevard (LOS E)
- SR-15 NB between Market Street & Ocean View Boulevard (LOS F)

Table 6.4 Freeway Mainline LOS Analysis Results – Future Year 2035 Base Conditions

Freeway	Segment	ADT[(a)]	Direction	# of Lanes	Capacity[(b)]	D[(c)]	K[(d)]	HVF[(e)]	Peak Hour Volume	V/C	LOS
I-5	SR-94 & Imperial Avenue	218,400	NB	4M+1A	10,810	0.0%	8.1%	4.0%	11,600	1.07	**F**
			SB	4M+1A	10,810	0.0%	8.3%	4.0%	10,200	0.94	**E**
	Imperial Avenue & SR-75	195,700	NB	4M+1A	10,810	0.0%	8.1%	3.8%	10,400	0.96	**E**
			SB	4M+1A	10,810	0.0%	8.2%	3.8%	9,700	0.90	D
	SR-75 & 28th Street	191,100	NB	4M+2A	12,220	0.0%	8.4%	5.0%	11,900	0.97	**E**
			SB	4M+1A	10,810	0.0%	8.2%	5.0%	9,500	0.88	D
	28th Street & SR-15	176,800	NB	4M	9,400	0.0%	8.4%	5.0%	11,000	1.17	**F**
			SB	4M	9,400	0.0%	8.2%	5.0%	8,800	0.94	**E**
	SR-15 & Main Street	220,300	NB	4M+2A	12,220	0.0%	8.4%	5.0%	13,700	1.12	**F**
			SB	5M	11,750	0.0%	8.7%	5.0%	13,200	1.12	**F**
SR-15	SR-94 & Market Street	120,800	NB	3M+1A	8,460	0.0%	8.1%	5.1%	6,100	0.72	C
			SB	3M+1A	8,460	0.0%	9.7%	5.1%	6,800	0.80	D
	Market Street & Ocean View Boulevard	129,100	NB	3M	7,050	0.0%	8.1%	5.1%	6,700	0.95	**E**
			SB	3M	7,050	0.0%	9.6%	5.1%	7,200	1.02	**F**
	Ocean View Boulevard & I-5	122,000	NB	3M+1A	8,460	0.0%	7.0%	5.1%	5,500	0.65	C
			SB	4M+1A	10,810	0.0%	7.8%	5.1%	5,500	0.51	B
	I-5 & Norman Scott Road	30,400	NB	2M	4,700	0.0%	7.0%	5.1%	1,400	0.30	A
			SB	2M	4,700	0.0%	7.5%	5.1%	1,300	0.28	A

Source: Chen Ryan Associates; June 2016

Notes:
Bold letter indicates LOS E or F.
M = Mainline. A = Auxiliary Lane.
[a] Traffic volumes provided by Caltrans (2014).
[b] The capacity is calculated as 2,350 ADT per main lane and 1,410 ADT (60% of the main lane capacity) per auxiliary lane.
[c] D = Directional split.| [d] K = Peak hour %. | [e] HV = Heavy vehicle %.

6.3 Future Year 2035 Base Plus Project Roadway Network and Traffic Volumes

Roadway and intersection geometrics under Future Year 2035 Base Plus Project conditions were assumed to be identical to Existing conditions geometrics, as shown in Figure 4-1.

Future Year 2035 Base Plus Project traffic volumes were derived by combining the Future Year 2035 Base traffic volumes (displayed in Figure 6-1A and 6-1B) and the project trip assignment volumes (displayed in Figures 3-4A and 3-4B for employees and Figures 3-5A and 3-5B for trucks). Daily and peak hour intersection volumes for this scenario are displayed in **Figure 6-2A and 6-2B**, respectively.

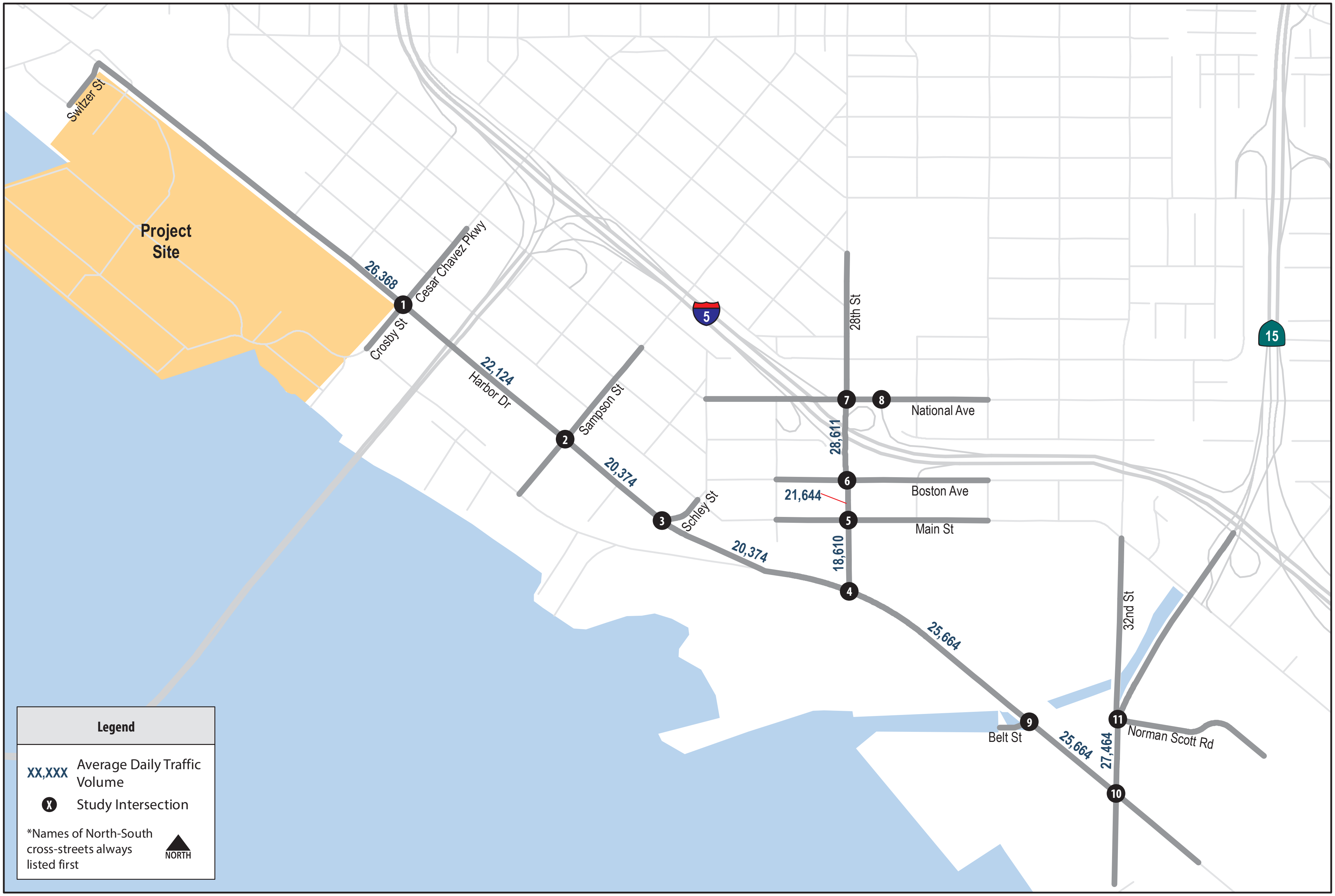

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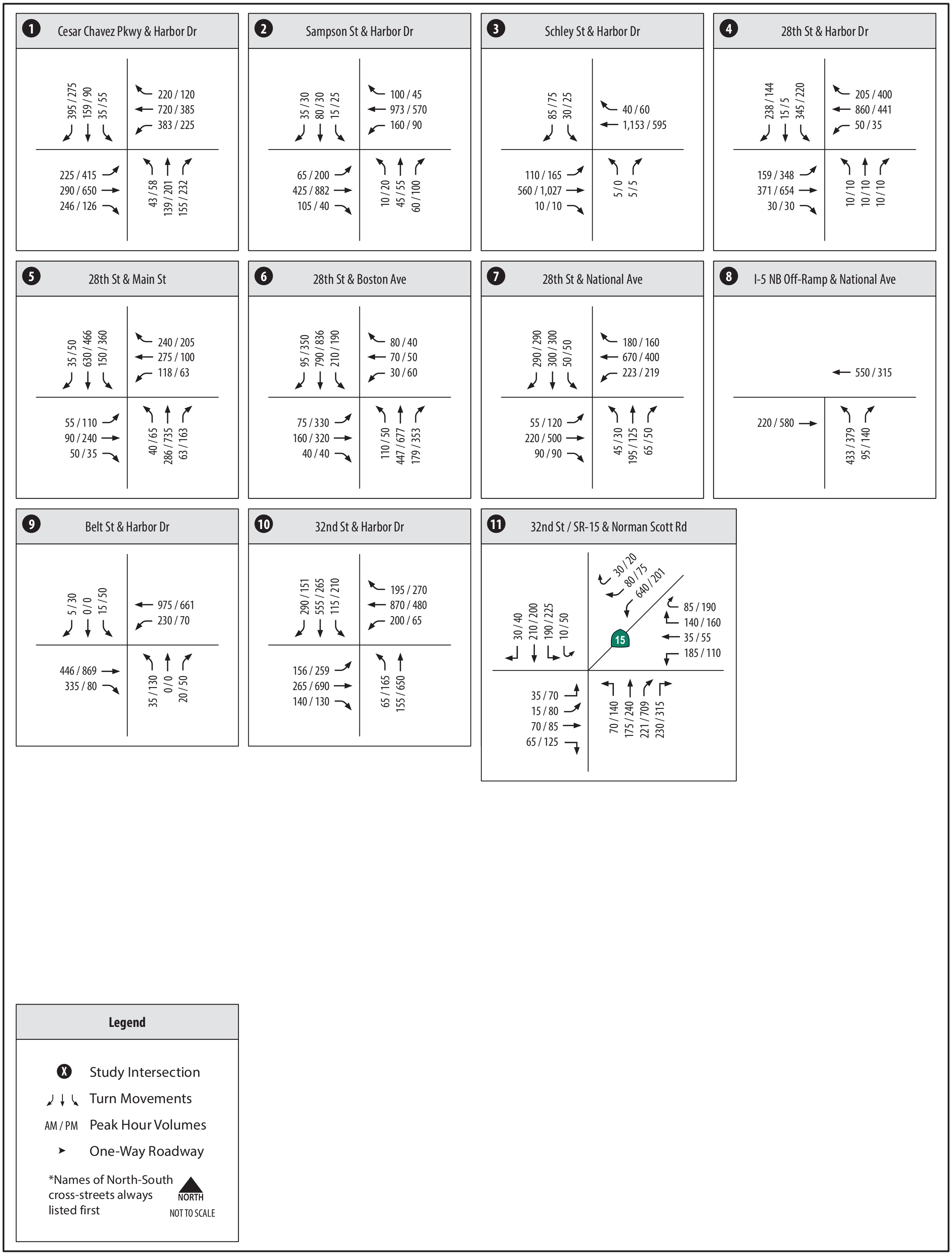
Figure 6-2A

Average Daily Segment Traffic Volumes - Future Year 2035 Base Plus Project Conditions



Tenth Avenue Marine Terminal Redevelopment Plan

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Figure 6-2B

AM/PM Peak Hour Intersection Traffic Volumes - Future Year 2035 Base Plus Project Conditions

6.4 Future Year 2035 Base Plus Project Traffic Conditions

LOS analyses were conducted using the methodologies described in Chapter 2.0. Roadway segment analysis, intersection LOS analysis, freeway ramp intersection ILV analysis, and freeway mainline analysis results are discussed in the following sections.

Roadway Segment Analysis

Table 6.5 displays the LOS analysis results for key roadway segments under Future Year 2035 Base Plus Project conditions.

Table 6.5 Roadway Segment LOS Results - Future Year 2035 Base Plus Project Conditions

Roadway	Segment	Classification	Threshold (LOS E)	Future Year 2035+ Project ADT	Future Year 2035+ Project V/C	Future Year 2035+ Project LOS	Future Year 2035Base ADT / V/C / LOS	Δ	S?
Harbor Drive	Between Beardsley Street and Cesar Chavez Parkway	4-Lane Major	40,000	26,~~392~~ 368	0.~~660~~ 659	C	25,050 / 0.626 / C	0.~~034~~ 033	No
	Between Cesar Chavez Parkway and Sampson Street	4-Lane Major	40,000	22,~~155~~ 124	0.~~554~~ 553	C	18,800 / 0.470 / B	0.~~084~~ 083	No
	Between Sampson Street and Schley Street	4-Lane Major	40,000	20,~~405~~ 374	0.~~510~~ 509	B	17,050 / 0.426 / B	0.~~084~~ 083	No
	Between Schley Street and 28th Street	4-Lane Major	40,000	20,~~405~~ 374	0.~~510~~ 509	B	17,050 / 0.426 / B	0.~~084~~ 083	No
	Between 28th Street and Belt Street	4-Lane Major	40,000	~~26,010~~ 25,664	0.~~650~~ 642	C	24,000 / 0.600 / C	0.~~050~~ 042	No
	Between Belt Street and 32nd Street	4-Lane Major	40,000	~~26,010~~ 25,664	0.~~650~~ 642	C	24,000 / 0.600 / C	0.~~050~~ 042	No
28th Street	Between Harbor Drive and Main Street	4-Lane Major	40,000	18,~~295~~ 610	0.~~457~~ 465	B	16,950 / 0.424 / B	0.~~034~~ 041	No
	Between Main Street and Boston Avenue	4-Lane Collector w/TWLT	30,000	21,~~565~~ 644	0.~~719~~ 721	D	20,220 / 0.674 / D	0.~~045~~ 047	No
	Between Boston Avenue and National Avenue	3-Lanes Collector w/TWLT	22,500	28,~~532~~ 611	1.~~268~~ 272	**F**	27,720 / 1.232 / **F**	0.~~036~~ 040	**Yes**
32nd Street	Between Harbor Drive and Norman Scott Road	6-Lane Major	50,000	27,~~810~~ 464	0.~~556~~ 549	B	25,800 / 0.516 / B	0.~~040~~ 033	No

Source: Chen Ryan Associates; ~~June~~August 2016

As shown, all key study roadway segments are projected to operate at acceptable LOS D or better under Future Year 2035 Base Plus Project conditions, with the exception of the following roadway segments:

- 28th Street, between Boston Avenue and National Avenue (LOS F).

Based on the City of San Diego's Significance Criteria, outlined in Section 2.6, the traffic associated with the proposed project would cause a significant change in the V/C ratio (add more than 0.01) to the aforementioned roadway segment, which is projected to operate at LOS F under Future Year Base Project conditions. Therefore, the project would result in a significant cumulative impact on 28th Street, between Boston Avenue and National Avenue. It should be noted that this impact was also identified as a direct impact under Existing Plus Project conditions.

Intersection Analysis

Table 6.6 displays intersection LOS and average vehicle delay results under Future Year 2035 Base Plus Project conditions. All intersections are currently signalized. LOS calculation worksheets for this scenario are provided in **Appendix L**.

Table 6.6 Peak Hour Intersection LOS Results - Future Year 2035 Base Plus Project Conditions

#	Intersection	AM Peak Hour Avg. Delay (sec.)	AM Peak Hour LOS	PM Peak Hour Avg. Delay (sec.)	PM Peak Hour LOS	Delay w/o Project (sec) AM/PM	LOS w/o Project AM/PM	Change in Delay (sec)	Significant Impact?
1	Harbor Drive / Cesar Chavez Parkway	53.~~5~~9	D	~~52.4~~53.0	D	50.6 / 39.6	D / D	~~2.9/12.8~~ 3.3/13.4	No
2	Harbor Drive / Sampson Street	53.~~7~~6	D	53.~~1~~0	D	50.9 / 53.0	D / D	2.~~8~~7 / 0.~~1~~0	No
3	Harbor Drive / Schley Street	26.6	C	20.4	C	23.2 / 19.4	B / B	3.4 / 1.0	No
4	Harbor Drive / 28th Street	32.~~4~~7	C	~~30.1~~32.9	C	28.8 / 28.2	C / C	3.~~6 / 1.~~9 / 4.7	No
5	Main Street / 28th Street	22.~~4~~7	C	~~39.9~~42.5	D	22.2 / 39.2	C / D	0.~~2 / 0.7~~5 / 3.3	No
6	Boston Avenue / 28th Street	28.~~0~~1	C	~~38.7~~39.2	D	27.7 / 37.4	C / D	0.~~3~~4 / 1.~~3~~8	No
7	National Avenue / 28th Street	122.5	**F**	72.~~0~~3	**E**	122.5 / 71.4	**F / E**	0.0 / 0.~~6~~9	No
8	National Avenue / I-5 NB Off-Ramp	~~19.7~~20.1	B	18.~~2~~5	B	18.9 / 17.5	B / B	1.2 / 1.0~~.8 / 0.7~~	No
9	Harbor Drive / Belt Street	~~23.2~~22.9	C	~~20.1~~19.8	C	22.3 / 19.1	C / B	0.~~9 / 1.~~6 / 0.7	No
10	Harbor Drive / 32nd Street	~~41.8~~36.6	C	~~53.8~~51.7	D	32.3 / 44.2	C / D	~~9~~4.3 / 7.5~~ / 9.6~~	No
11	Norman Scott Road / 32nd Street / Wabash Boulevard	~~106.5~~99.0	**F**	~~81~~75.4	**F**	81.5 / 67.2	**E / E**	~~25.0 / 14~~17.5 / 8.2	**Yes**

Source: Chen Ryan Associates; ~~June~~August 2016

As shown, all key study intersections are projected to operate at acceptable LOS D or better under Future Year 2035 Base Plus Project conditions, with the exception of the following two (2) intersections:

- National Avenue and 28th Street – LOS F during AM peak hour and LOS E during PM peak hour; and

- Norman Scott Road / 32nd Street / Wabash Boulevard – LOS F during both AM and PM peak hours.

Based on the City of San Diego's Significance Criteria, outlined in Section 2.6, the traffic associated with the proposed project would add delay surpassing the acceptable threshold (greater than 1 second for intersections operating at LOS F and greater than 2 seconds for intersection operating at LOS E) to the aforementioned intersection, which is projected to operate at LOS F during both the AM and PM peak hours. Therefore, the project would result in a significant cumulative impact at the Norman Scott Road / 32nd Street / Wabash Boulevard intersection.

Ramp Intersection Capacity Analysis

Consistent with Caltrans requirements, the signalized ramp intersections of National Avenue / I-5 NB off-ramp and Norman Scott Road / 32nd Street / Wabash Boulevard were analyzed using ILV procedures, as described in Section 2.4. ILV analysis results are displayed in **Table 6.7** and analysis worksheets for Future Year 2035 Base Plus Project conditions are provided in Appendix L.

Table 6.7 Ramp Intersection Capacity Analysis - Future Year 2035 Base Plus Project Conditions

#	Intersection	Peak Hour	ILV/Hour	Description
8	National Avenue / I-5 NB Off-Ramp	AM	~~972~~983	Under Capacity
		PM	~~951~~959	Under Capacity
11	Norman Scott Road / 32nd Street / Wabash Boulevard	AM	1,~~286~~221	At Capacity
		PM	1,~~257~~198	~~At~~Under Capacity

Source: Chen Ryan Associates; ~~June~~August 2016

As shown in Table 6.6, the key study signalized ramp intersections are projected to operate at "At Capacity" or better during both the AM and PM peak hour, under Future Year 2035 Base Plus Project conditions.

Freeway Analysis

Table 6.8 displays the LOS results from the freeway segment analysis under Future Year 2035 Base Plus Project conditions.

Table 6.8 Freeway Mainline LOS Analysis Results - Future Year 2035 Base Plus Project Conditions

Freeway	Segment	ADT	Direction	Peak Hour Volume	With Project		Base		Δ V/C	S?
					V/C	LOS	V/C	LOS		
I-5	SR-94 & Imperial Avenue	219,100	NB	11,700	1.080	**F**	1.070	**F**	0.010	**Y**
			SB	10,200	0.940	**E**	0.940	**E**	0.000	N
	Imperial Avenue & SR-75	196,400	NB	10,500	0.970	**E**	0.960	**E**	0.010	N
			SB	9,700	0.900	D	0.900	D	0.000	N
	SR-75 & 28th Street	191,600	NB	11,900	0.970	**E**	0.970	**E**	0.000	N
			SB	9,500	0.880	D	0.880	D	0.000	N
	28th Street & SR-15	178,000	NB	11,100	1.180	**F**	1.170	**F**	0.010	**Y**
			SB	8,800	0.940	**E**	0.940	**E**	0.000	N
	SR-15 & Main Street	221,500	NB	13,800	1.130	**F**	1.120	**F**	0.010	**Y**
			SB	13,200	1.120	**F**	1.120	**F**	0.000	N
SR-15	SR-94 & Market Street	122,800	NB	6,200	0.730	C	0.720	C	0.010	N
			SB	6,900	0.820	D	0.800	D	0.020	N
	Market Street & Ocean View Boulevard	131,200	NB	6,800	0.960	**E**	0.950	**E**	0.010	N
			SB	7,~~400~~300	1.~~050~~040	**F**	1.020	**F**	0.~~030~~020	**Y**
	Ocean View Boulevard & I-5	124,000	NB	5,600	0.660	C	0.650	C	0.010	N
			SB	5,600	0.520	B	0.510	B	0.010	N
	I-5 & Norman Scott Road	32,400	NB	1,400	0.300	A	0.300	A	0.000	N
			SB	1,400	0.300	A	0.280	A	0.020	N

Source: Chen Ryan Associates; ~~June~~August 2016

Notes:
The capacity, Directional split, Peak hour % and Heavy vehicle % are assumed to be the same as Existing conditions.
Bold letter indicates substandard LOS E or F.
Δ = Change in V/C Ratio.
S? = Indicates if change in V/C ratio is significant

As shown, all study freeway segments currently operate at LOS D or better with the exception of the following:

- I-5 NB between SR-94 & Imperial Avenue (LOS F)
- I-5 SB between SR-94 & Imperial Avenue (LOS E)
- I-5 NB between Imperial Avenue & SR-75 (LOS E)
- I-5 NB between SR-75 & 28th Street (LOS E)
- I-5 NB between 28th Street & SR-15 (LOS F)
- I-5 SB between 28th Street & SR-15 (LOS E)
- I-5 NB between SR-15 & Main Street (LOS F)
- I-5 SB between SR-15 & Main Street (LOS F)
- SR-15 NB between Market Street & Ocean View Boulevard (LOS E)
- SR-15 SB between Market Street & Ocean View Boulevard (LOS F).

Based on the City of San Diego's Significance Criteria, outlined in Section 2.6, the traffic associated with the proposed project would cause a significant change in the V/C ratio (add more than 0.01 for LOS E and 0.005 for LOS F) to the following key study mainline freeway segments:

- I-5 NB between SR-94 & Imperial Avenue (LOS F)
- I-5 NB between 28th Street & SR-15 (LOS F)
- I-5 NB between SR-15 & Main Street (LOS F)
- SR-15 SB between Market Street & Ocean View Boulevard (LOS F).

Therefore, the project would result in a significant cumulative impact to the aforementioned freeway mainline segments.

6.5 Future Year 2035 Plus Project - Alternative Gate Scenario

The Tenth Avenue Marine Terminal Plan also identifies an alternative gate concept that would serve as the primary entry and exit location for the Refrigerated Container node and the Multi-Purpose General Cargo node. The alternative gate would be located in the north-east corner of the terminal and provide access directly onto Harbor Drive. According to the Plan, the Dry Bulk and Liquid Bulk Nodes would continue to utilize the existing gate off Cesar Chavez Parkway, particularly for domestic bulk shipments.

Trip Redistribution

As stated before, the Refrigerated Container and the Multi-Purpose General Cargo nodes would utilize the alternative gate. Therefore, with the proposed implementation of the alternative gate would result in a redistribution of both existing and proposed project truck traffic from these modes. It is assumed that employee traffic would continue to use the existing Crosby street gate. **Figure 6-3** displays the assumed redistribution of both existing and project truck traffic between the two gate locations. **Figure 6-4** displays the anticipated traffic volumes at both gates and along Harbor Drive under the Future Year 2035 Plus Project – Alternative Gate Scenario.

Roadway Segment Analysis

Based on the assumed redistribution of truck trips, as displayed in Figure 6-3, Harbor Drive between Beardsley Street and Cesar Chavez Parkway is the only study roadway segment that is anticipated to experience a change in ADT due to the alternative gate. **Table 6.9** displays the LOS analysis results for the affected segment of Harbor Drive under Future Year 2035 Plus Project conditions, with the proposed alternative gate point.

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Figure 6-3

Truck Traffic Redistribution with Alternative Gate - Future Year 2035 Base Plus Project Conditions

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Figure 6-4

Traffic Volumes - Future Year 2035 Base Plus Project Conditions - Alternative Gate Scenario

Table 6.9 Roadway Segment LOS Results - Future Year 2035 Plus Project Conditions – Alternative Gate Scenario

Roadway	Segment	Cross-Section	Threshold (LOS E)	Existing + Project ADT	Existing + Project V/C	Existing + Project LOS	Existing ADT / V/C / LOS	Δ	S?
Harbor Drive	Between Beardsley Street and Cesar Chavez Parkway	4-Lanes w/ RM	40,000	27,~~102~~079	0.~~678~~677	C	25,050 / 0.626 / C	0.~~052~~051	N

Source: Chen Ryan Associates; ~~June~~August 2016

Notes:
V/C = Volume to Capacity Ratio.
Δ = Change in V/C Ratio.
S? = Indicates if change in V/C ratio is significant.

As shown, Harbor Drive between Beardsley Street and Cesar Chavez Parkway is anticipated to operate at LOS C with the addition of the proposed project and with the alternative gate.

Based on the City of San Diego's Significance Criteria, outlined in Section 2.5, the traffic associated with the proposed project would not cause any roadways segments to operate at LOS E or F; therefore, the implementation of the proposed alternative gate would not result in any additional impacts.

Intersection Analysis

Based on the assumed redistribution of truck trips, as displayed in Figure 6-5, the Harbor Drive / Cesar Chavez Parkway intersection (Main Gate) is the only study intersection that is anticipated to experience a change in peak hour volumes due to the alternative gate. All other key study intersections are anticipated to operate at the same conditions as Identified in Table 6.6. **Table 6.10** displays intersection LOS and average vehicle delay results under Future Year 2035 Plus Project conditions, with the alternative gate assumed. Both intersections are assumed to be signalized. LOS calculation worksheets for the Future Year 2035 Plus Project conditions are provided in Appendix L.

Table 6.10 Peak Hour Intersection LOS Results - Future Year 2035 Plus Project Conditions – Alternative Gate Scenario

#	Intersection	AM Peak Hour Avg. Delay (sec.)	AM Peak Hour LOS	PM Peak Hour Avg. Delay (sec.)	PM Peak Hour LOS	Delay w/o Project (sec.) AM/PM	LOS w/o Project AM/PM	Change in Delay (sec.)	Significant Impact?
1	Harbor Drive / Cesar Chavez Parkway	53.4	D	50.~~6~~1	D	50.6 / 39.6	D / D	2.8 / ~~11.0~~10.5	No
12	Harbor Drive / Alternative Gate	~~33.2~~34.1	C	37.~~0~~7	D	N/A	N/A	~~33.2~~34.1 / 37.~~0~~7	No

Source: Chen Ryan Associates; ~~June~~August 2016

As shown, both affected intersections are anticipated to operate at LOS D or better with the proposed alternative gate.

Based on the City of San Diego's Significance Criteria, outlined in Section 2.5, the traffic associated with the proposed project would not cause either intersection to operate at LOS E or F; therefore, the implementation of the proposed alternative gate would not result in any additional impacts.

6.6 Impact Significance and Mitigation

Roadway Segments

Future Year 2035 Plus Project Conditions

Based upon the significance criteria presented in Section 2.6 of this report, the addition of project traffic would have an identified significant cumulative traffic impact at the following roadway segment under Future Year 2035 Base Plus Project conditions:

- 28th Street, between Boston Avenue and National Avenue (LOS F).

As previously noted in Section 4.6, this section of 28th Street is currently constructed as a Three-Lane Collector with a daily capacity of 22,500 trips. However, the Barrio Logan Community Plan classifies this section of 28th Street as a Four-Lane Major Arterial which would carry a daily capacity of 40,000 trips. Improving the roadway to its ultimate classification as a Four-Lane Major Arterial would improve the traffic operations at this impacted segment to LOS C, reducing the impact to less than significant.

As noted previously, the proposed project is a long-range redevelopment plan and will not be developed all at once or even in set phases. Instead cargo throughput is anticipated to increase overtime based on market demands. Therefore, the time period in which this impact is anticipated to occur is not known at this time. The implementation of this impact should be based on when the project traffic is anticipated to reach a critical level or trigger point where the project related impact moves from less than significant to significant, as noted in Section 4.6.

Future Year 2035 Plus Project Conditions – Alternative Gate Scenario

The addition of the proposed alternative gate is not anticipated to result in any additional significant impacts to key study roadway segments. However, it should be noted that all of the impacts listed above would still occur both with and without the alternative gate.

Intersections

Future Year 2035 Plus Project Conditions

Based upon the significance criteria presented in Section 2.6 of this report, the proposed project would contribute to a traffic impact at the following intersection under Future Year 2035 Base Plus Project conditions:

- Norman Scott Road / 32nd Street / Wabash Boulevard

However, as shown in **Table 6.11,** the following recommended improvement would improve the overall intersection delay under Future Year 2035 Base Plus Project conditions to predevelopment conditions:

- Add a westbound right-turn overlap phase.

Table 6.11 Peak hour intersection LOS – Mitigated Intersection - Future year 2035 Base Plus Project conditions

#	Intersection	AM Peak Hour		PM Peak Hour		Delay w/o Project (sec.) AM/PM	LOS w/o Project AM/PM	Change in Delay (sec.)	Significant Impact?
		Avg. Delay (sec.)	LOS	Avg. Delay (sec.)	LOS				
11	Norman Scott Road / 32nd Street / Wabash Boulevard	79.5~~81.1~~	F	~~59.3~~57.2	E	81.5 / 67.2	F / E	-2.0~~.4 / -7.9~~ / -10.0	No

Source: Chen Ryan Associates; ~~June~~August 2016

As noted previously, the proposed project is a long-range redevelopment plan and will not be developed all at once or even in set phases. Instead cargo throughput is anticipated to increase overtime based on market demands. Therefore, the time period in which this impact is anticipated to occur is not known at this time. The implementation of this impact should be based on when the project traffic is anticipated to reach a critical level or trigger point where the project related impact moves from less than significant to significant, as noted in Section 4.6. However, this intersection is controlled by Caltrans and the Port District does not have jurisdiction at this intention; therefore, this impact is considered significant and unavoidable.
In addition to the aforementioned mitigation measure, Caltrans is currently working on a truck access improvement study which will identify several potential improvements to this intersection, including a potential grade separation. It is recommended that the project applicant continues to coordinate with Caltrans as the TAMT develops to determine if the proposed mitigation measure is relevant at the time of implementation or if the project applicant can participate in a larger improvement program for the intersection.

Future Year 2035 Plus Project Conditions – Alternative Gate Scenario

The addition of the proposed alternative gate is not anticipated to result in any additional significant impacts to study intersections. However, it should be noted that all of the impacts listed above would still occur both with and without the alternative gate.

Freeway Mainline Segments

Future Year 2035 Plus Project Conditions

Based on the City of San Diego's Significance Criteria, outlined in Section 2.6, the traffic associated with the proposed project would cause a significant change in the V/C ratio (add more than 0.010 for LOS E and 0.005 for LOS F) to the following key study mainline freeway segments:

- I-5 NB between SR-94 & Imperial Avenue (LOS F)

- I-5 NB between 28th Street & I-15 (LOS F)
- I-5 NB between I-15 & Main Street (LOS F)
- I-15 SB between Market Street & Ocean View Boulevard (LOS F).

SANDAG has plans to construct two managed lanes (one in each direction) on Interstate 5 between I-15 and Palomar Street by the year 2030 as well as two additional lanes multi-purpose lanes and two managed lanes on SR-15 between I-5 and SR-94 by the year 2050, however, these plans are subject to budget availability and coordination with Caltrans. The following fair-share percentages, per facility, should serve as guidance to the amount the District should pay towards a program or plan for the aforementioned freeway facility improvements to be constructed:

- I-5 NB between SR-94 & Imperial Avenue – 5% of the total cost for improvements to this segment.

- I-5 NB between 28th Street & SR-15 –7 13% of the total cost for improvements to this segment.

- I-5 NB between I-15 & Main Street – The Port of San Diego shall contribute with 146% of the total cost for improvements at this segment.

- SR-15 SB between Market Street & Ocean View Boulevard – 2511% of the total cost for improvements to this segment.

At the moment, there is no program in place into which the District could pay its fair-share towards the cost of such improvements. Therefore, improvements are considered infeasible and the impacts along I-5 and SR-15 would remain significant and unavoidable.

7.0 Pedestrian, Bicycle and Transit Assessment

This chapter discusses the project's potential impacts to active transportation modes (bicycling and walking) and transit.

Pedestrians

As noted in the roadway facility descriptions contained in Section 4.1, Harbor Drive, 28th Street, and 32nd Street currently have sidewalk facilities on both sides of the roadway within the project study area.

Bicyclists

As shown in the diagram to the right, Harbor Drive is currently designated and signed with Class II Bicycle Lanes in each direction and is part of the Bayshore Bikeway. The Bayshore Bikeway is a 24-mile bicycle facility around the San Diego Bay.

Bayshore Bikeway – Existing Configuration

Transit

There are currently three trolley stations located along Harbor Drive and 32nd Street within the project study area, which are:

- 28th Street Trolley Station
- Harborside Trolley Station
- Pacific Fleet Trolley Station

These stations provide service from the MTS Blue Line Trolley service which connects between San Ysidro and Downtown San Diego. There is also an MTS Bus Route 11 stop on the corner of 28th Street and National Boulevard.

Project Impacts

Potential impacts relating to pedestrian, bicycle and transit circulation would be considered significant if the proposed project would substantially increase hazards due to a design feature, or would conflict with the adopted policies, plans, or programs supporting alternative transportation, as outlined in Appendix G of the *California Environmental Quality Act (CEQA) Guidelines*. The project is not proposing to make any improvements to roadways or other transportation related facilities outside of the TAMT. Therefore, the proposed project would not conflict with or generate any significant impacts associated with existing pedestrian, bicycle or transit facilities, as well as the planned facilities and policies included in the following documents:

- The City of San Diego Bicycle Master Plan
- The City of San Diego Pedestrian Master Plan
- 2050 Regional Transportation Plan
- Riding to 2050, the San Diego Regional Bike Plan

8.0 Project Construction

As noted previously, the proposed project is a market-based redevelopment plan and will not be implemented all at once or even in set phases. Instead, cargo throughput is anticipated to increase overtime based on market demands. Therefore, the time period in which this impact is anticipated to occur is not known at this time. However, the proposed project does include certain physical improvements such as the demolition of the Transit Sheds #1 and #2, as well as improvements to the existing on-dock intermodal rail facilities including a rail lubrication system to improve train maneuverability at the TAMT and air brake testing onsite. Construction of these facilities will generate additional trips during a near-term time period and could potentially be associated with temporary impacts. Therefore, both existing (direct) and Near-Term Year 2021 (cumulative) conditions were analyzed both with and without construction traffic to identify any potential traffic related impacts associated with the construction.

8.1 Construction Trip Generation

The peak of project construction will occur with the demolition and grading of Transit Shed #2. During this phase, it is anticipated that 79 haul trucks will be required to access the project site on a daily basis, as well as 50 construction workers. As a worst case scenario, it was assumed that all workers would drive individual vehicles to the project site and would arrive and depart during the AM and PM peak hours, respectively. It was also assumed that the delivery trucks/vans would arrive and depart during each peak hour as well. **Table 8.1** displays the assumed vehicle trip generation during the peak of project construction.

Table 8.1
Project Construction Trip Generation

Use	Units	Vehicle Conversion Rate	Rate	ADT	AM Peak Hour			PM Peak Hour		
					Total	In	Out	Total	In	Out
Construction Worker Traffic	50	1	3 / Worker	150	50	50	0	50	0	50
Construction Truck Traffic	79	3	2 / Truck	474	63	32	31	63	31	32
			Total	**624**	**113**	**82**	**31**	**113**	**31**	**82**

Source: Chen Ryan Associates; June 2016

As shown, the proposed project construction is anticipated to generate approximately 624 daily trips including 113 trips during the AM and PM peak hours.

Project construction traffic were assigned to the roadway network based on the assumed project distribution patterns displayed in Figures 3-2a and 3-2b. Based upon the assumed project trip distribution, daily peak hour project trips were assigned to the adjacent roadway network, as displayed in **Figures 8-1A & B** for employees and **Figures 8-2A & B** for trucks.

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Figure 8-1A

Average Daily Project Construction Trip Assignment - Workers

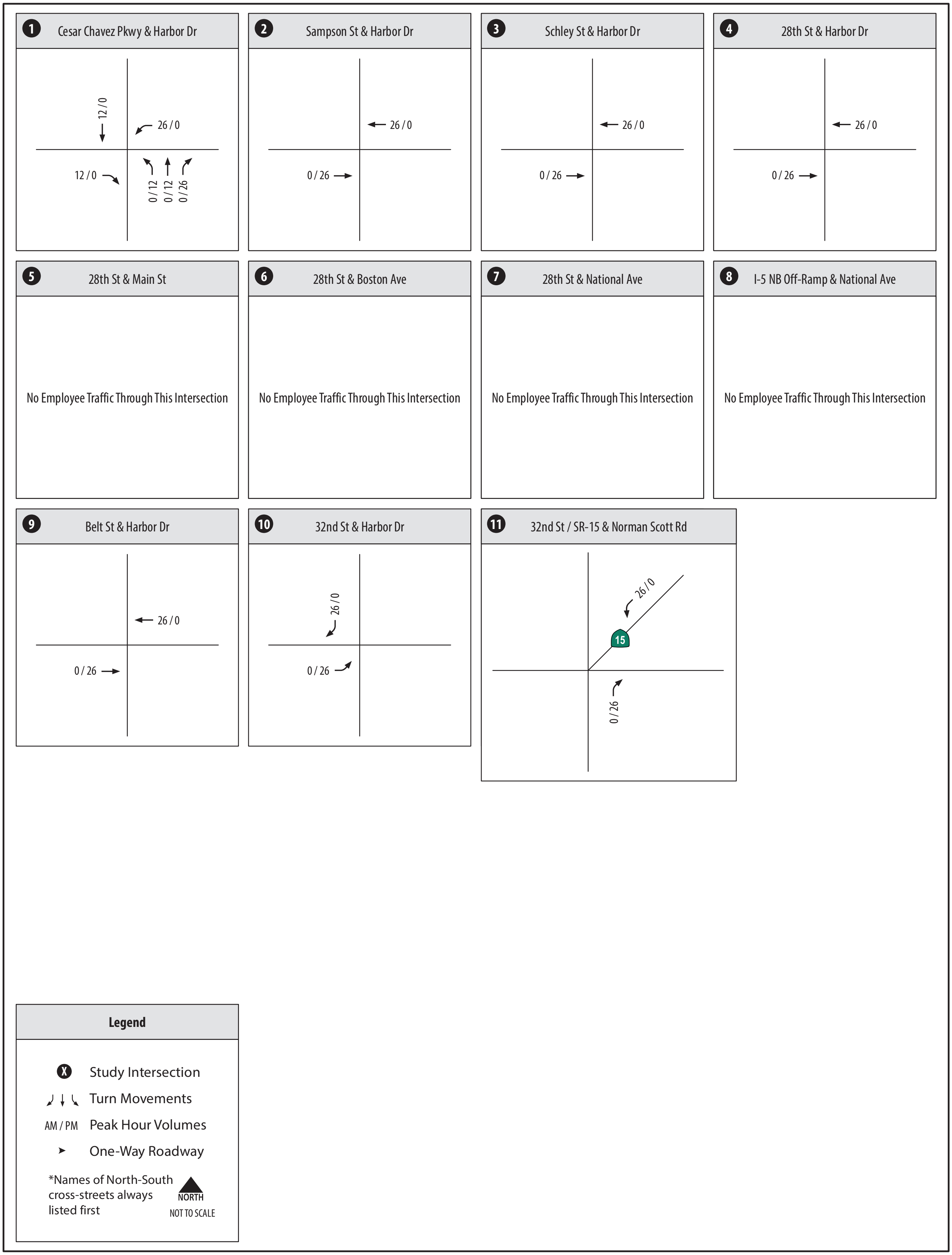

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Figure 8-1B

AM/PM Peak Hour Intersection Construction Trip Assignment - Workers

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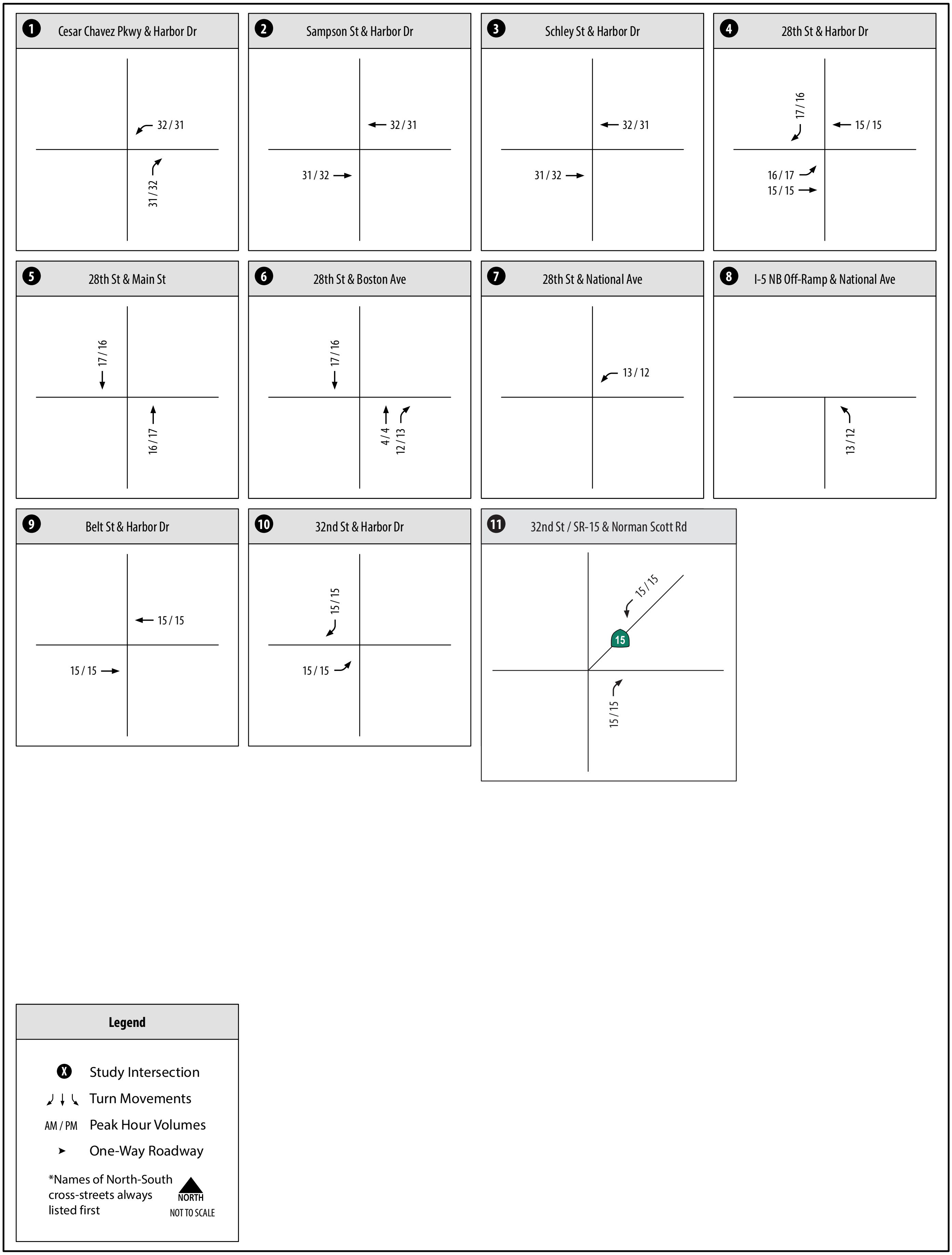
Figure 8-2A

Average Daily Project Construction Trip Assignment - Trucks



Tenth Avenue Marine Terminal Redevelopment Plan

CHEN RYAN

Figure 8-2B

AM/PM Peak Hour Intersection Construction Trip Assignment - Trucks

8.2 Existing Plus Project Construction Conditions

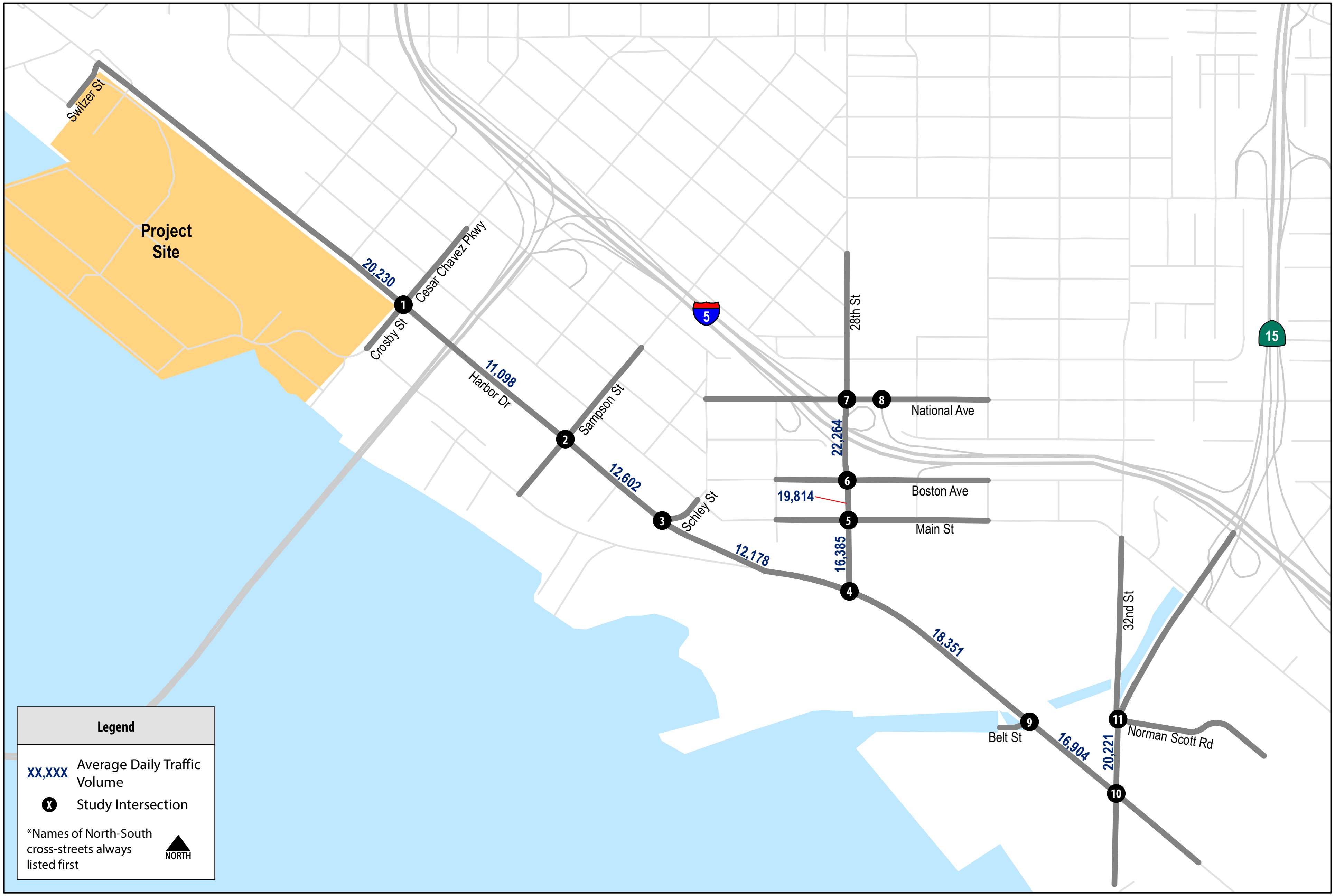
Existing Plus Project Construction traffic volumes were derived by combining the existing traffic volumes (displayed in Figure 4-2A and 4-2B) and the project trip assignment volumes (displayed in Figures 8-1A and 8-1B for employees and Figures 8-2A and 8-2B for trucks). Daily and peak hour intersection volumes for this scenario are displayed in **Figure 8-3A and 8-3B**, respectively.

LOS analyses under Existing Plus Project Construction conditions were conducted at the key study roadway segments and intersections using the methodologies described in Chapter 2.0.

Table 8.2 displays the daily roadway segment LOS results for both Existing and Existing Plus Project Construction conditions.

As shown in Table 8.2, all study area roadway segments are projected to operate at LOS D or better during the peak of project construction, with the exception of 28th Street, between Boston Avenue and National Avenue which is projected to operate at LOS E. However, the project's construction traffic is not anticipated to change the V/C ratio for this segment by more than 0.02; therefore, the construction traffic associated with the proposed project would not result in a significant impact.

Table 8.3 displays the intersection LOS and average vehicle delay results for both Existing and Existing Plus Project Construction conditions. LOS calculation worksheets are provided in **Appendix M.**



Tenth Avenue Marine Terminal Redevelopment

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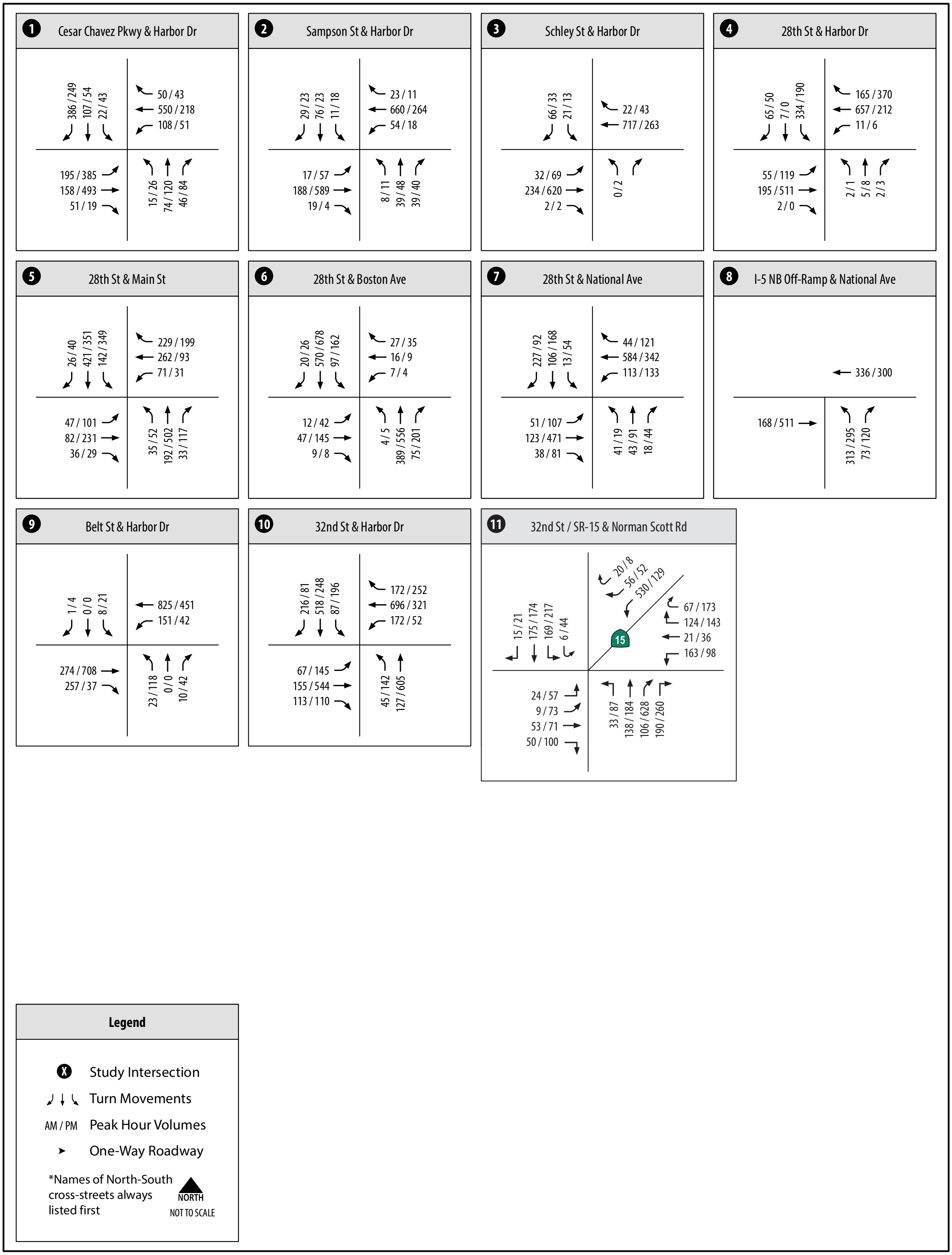
Figure 8-3A

Average Daily Segment Traffic Volumes - Existing Plus Project Construction Conditions



Tenth Avenue Marine Terminal Redevelopment Plan

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Figure 8-3B

AM/PM Peak Hour Intersection Traffic Volumes - Existing Plus Project Construction Conditions

Table 8.2 Daily Roadway Segment LOS Results – Existing Plus Project Construction Conditions

Roadway Segment	Segment	Cross-section	Threshold (LOS E)	Project Construction			Existing			Change in V/C	S?
				ADT	V/C	LOS	ADT	V/C	LOS		
Harbor Drive	Between Beardsley Street and Cesar Chavez Parkway	4-Lanes w/ RM	40,000	20,230	0.506	B	20,194	0.505	B	0.001	No
	Between Cesar Chavez Parkway and Sampson Street	4-Lanes w/ RM	40,000	11,098	0.277	A	10,546	0.264	A	0.014	No
	Between Sampson Street and Schley Street	4-Lanes w/ RM	40,000	12,602	0.315	A	12,050	0.301	A	0.014	No
	Between Schley Street and 28th Street	4-Lanes w/ RM	40,000	12,178	0.304	A	11,626	0.291	A	0.014	No
	Between 28th Street and Belt Street	4-Lanes w/ RM	40,000	18,351	0.459	B	18,050	0.451	B	0.008	No
	Between Belt Street and 32nd Street	4-Lanes w/ RM	40,000	16,904	0.423	B	16,603	0.415	B	0.008	No
28th Street	Between Harbor Drive and Main Street	4-Lanes w/ RM	40,000	16,385	0.410	B	16,134	0.403	B	0.006	No
	Between Main Street and Boston Avenue	4-Lanes w/TWLT	30,000	19,814	0.660	C	19,563	0.652	C	0.008	No
	Between Boston Avenue and National Avenue	3-Lanes w/TWLT	22,500[1]	22,264	0.989	**E**	22,112	0.983	**E**	0.007	No
32nd Street	Between Harbor Drive and Norman Scott Road	6-lanes w/ RM	50,000	20,221	0.404	B	19,920	0.398	A	0.006	No

Source: NDS, Chen Ryan Associates; June 2016

Notes:
[1] Capacity is 75% of a 4-Lane Collector w/TWLT.
V/C = Volume to Capacity Ratio.
Bold letter indicates LOS E or F.
S?: Significant impact

Table 8.3 Peak Hour Intersection LOS Results – Existing Plus Project Construction Conditions

#	Intersection	AM Peak Hour				PM Peak Hour				Change in Delay			
		Project Construction		Existing		Project Construction		Existing		AM Peak Hour		PM Peak Hour	
		Delay (Sec)	LOS	Delay (Sec)	LOS	Delay (Sec)	LOS	Delay (Sec)	LOS	Change	S?	Change	S?
1	Harbor Drive / Cesar Chavez Parkway	37.3	D	36.8	D	35.2	D	33.3	C	0.5	No	1.9	No
2	Harbor Drive / Sampson Street	40.5	D	40.4	D	41.3	D	40.9	D	0.1	No	0.4	No
3	Harbor Drive / Schley Street	16.7	B	16.7	B	15.0	B	15.0	B	0.0	No	0.0	No
4	Harbor Drive / 28th Street	24.6	C	23.1	C	20.9	C	20.3	C	1.5	No	0.6	No
5	Main Street / 28th Street	21.6	C	21.4	C	35.2	D	34.8	C	0.2	No	0.4	No
6	Boston Avenue / 28th Street	19.4	B	19.4	B	23.1	C	23.0	C	0.0	No	0.1	No
7	National Avenue / 28th Street	42.3	D	42.3	D	29.8	C	29.6	C	0.0	No	0.2	No
8	National Avenue / I-5 NB Off-Ramp	15.2	B	14.9	B	15.0	B	14.7	B	0.3	No	0.3	No
9	Harbor Drive / Belt Street	18.6	B	18.6	B	17.2	B	17.1	B	0.0	No	0.1	No
10	Harbor Drive / 32nd Street	28.8	C	28.6	C	47.5	D	39.9	D	0.2	No	7.6	No
11	Norman Scott Road / 32nd Street / Wabash Boulevard	104.0	**F**	95.3	**F**	70.4	**E**	66.2	**E**	8.7	**Yes**	4.2	**Yes**

Source: Chen Ryan Associates, June 2016

Notes:
Bold letter indicates LOS E or F.
S?: Significant impact

As shown in Table 8.3, all study area intersections are projected to operate at LOS D or better during the peak of project construction, with the exception of Norman Scott Road / 32nd Street / Wabash Boulevard which is projected to operate at LOS F. The project's construction traffic is anticipated to add more than 1 second of delay to the intersection; therefore, the construction traffic associated with the proposed project would result in a significant impact.

Ramp Intersection Capacity Analysis

Consistent with Caltrans requirements, the signalized ramp intersections of National Avenue / I-5 NB off-ramp and Norman Scott Road / 32nd Street / Wabash Boulevard were analyzed using ILV procedures, as described in Section 2.4. ILV analysis results are displayed in **Table 8.4** and analysis worksheets for Existing Plus Project Construction conditions are provided in Appendix M.

Table 8.4 Ramp Intersection Capacity Analysis – Existing Plus Project Construction Conditions

#	Intersection	Project Construction Conditions			Existing Conditions		
		Peak Hour	ILV/Hour	Description	Peak Hour	ILV/Hour	Description
8	National Avenue / I-5 NB Off-Ramp	AM	649	Under Capacity	AM	636	Under Capacity
		PM	806	Under Capacity	PM	794	Under Capacity
11	Norman Scott Road / 32nd Street / Wabash Boulevard	AM	1,005	Under Capacity	AM	956	Under Capacity
		PM	1,063	Under Capacity	PM	1,028	Under Capacity

Source: Chen Ryan Associates; June 2016

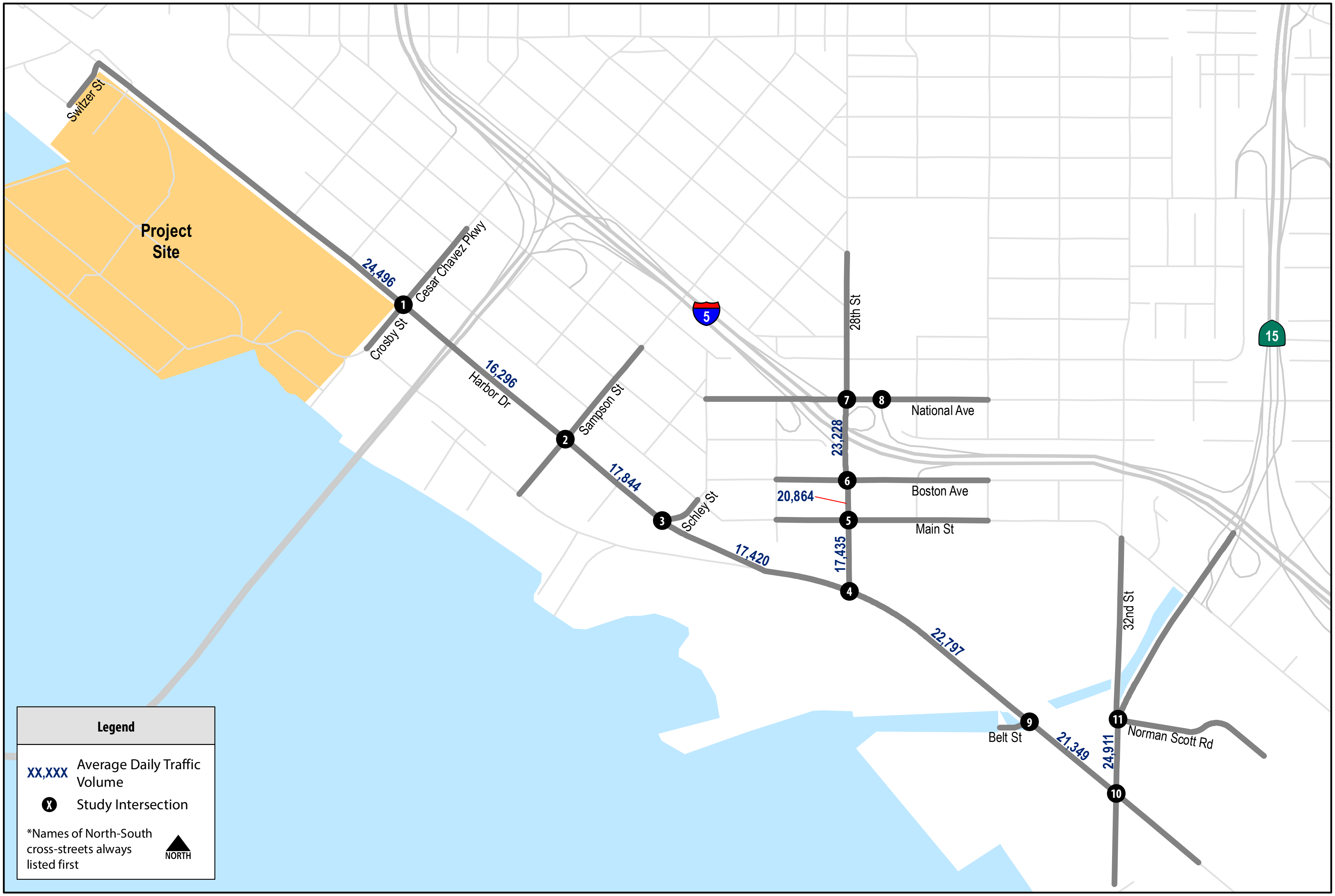
As shown in Table 8.5, the key study signalized ramp intersections are projected to operate at "Under Capacity" during both the AM and PM peak hour, under Existing Plus Project Construction conditions.

8.3 Near-Term Year 2021 Plus Construction Conditions

Near-Term Year 2021 with Project Construction traffic volumes were derived by combining the Near-Term Year 2021 Base traffic volumes (displayed in Figure 5-3a and 5-3b) and the project trip assignment volumes (displayed in Figures 8-1A and 8-1B for employees and Figures 8-2A and 8-2B for trucks). Daily and peak hour intersection volumes for this scenario are displayed in **Figure 8-4A and 8-4B**, respectively.

LOS analyses under Construction Traffic conditions were conducted at the key study roadway segments and intersections using the methodologies described in Chapter 2.0.

Table 8.5 displays the daily roadway segment LOS results for both Near-Term Year 2021 Base and Near-Term Year 2021 Base Plus Construction conditions. It should be noted that all intersection signal timing plans were assumed to be optimized under Near-Term Year 2021 conditions. This may result in better signal operations at some intersections when compared to existing conditions.



Tenth Avenue Marine Terminal Redevelopment

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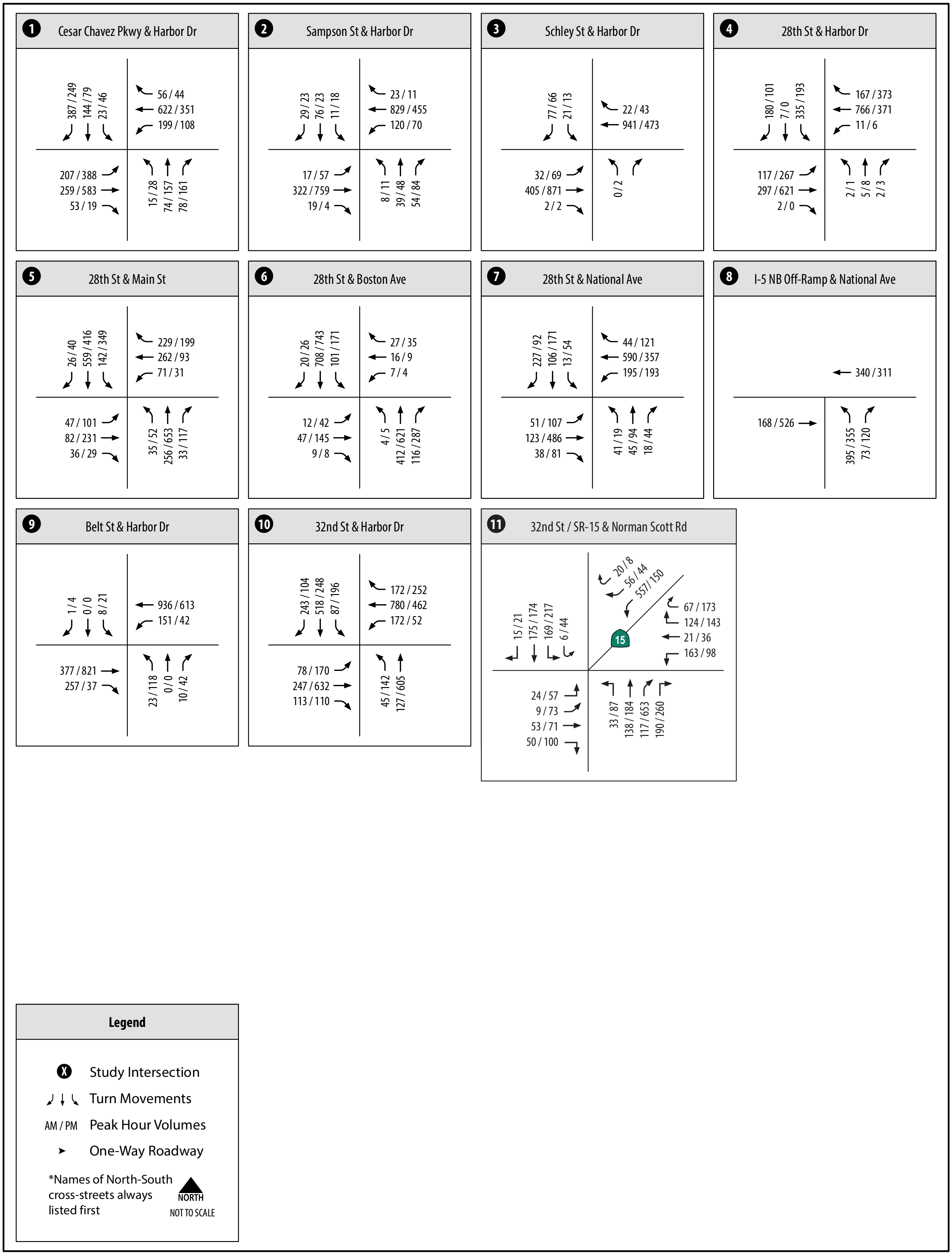
Figure 8-4A

Average Daily Segment Traffic Volumes - Near-Term Year 2021 Base Plus Construction Conditions



Tenth Avenue Marine Terminal Redevelopment Plan

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Figure 8-4B

AM/PM Peak Hour Intersection Traffic Volumes - Near-Term Base Year 2021 Plus Project Construction

Table 8.5 Daily Roadway Segment LOS Results – Near-Term Year 2021 Base Plus Project Construction Conditions

Roadway Segment	Segment	Cross-section	Threshold (LOS E)	Project Construction			Near-Term Year 2021 Base			Change in V/C	S?
				ADT	V/C	LOS	ADT	V/C	LOS		
Harbor Drive	Between Beardsley Street and Cesar Chavez Parkway	4-Lanes w/ RM	40,000	24,496	0.612	C	24,460	0.612	C	0.000	No
	Between Cesar Chavez Parkway and Sampson Street	4-Lanes w/ RM	40,000	16,296	0.407	B	15,744	0.394	B	0.013	No
	Between Sampson Street and Schley Street	4-Lanes w/ RM	40,000	17,844	0.446	B	17,292	0.432	B	0.014	No
	Between Schley Street and 28th Street	4-Lanes w/ RM	40,000	17,420	0.436	B	16,868	0.422	B	0.014	No
	Between 28th Street and Belt Street	4-Lanes w/ RM	40,000	22,797	0.570	C	22,496	0.562	C	0.008	No
	Between Belt Street and 32nd Street	4-Lanes w/ RM	40,000	21,349	0.534	C	21,048	0.526	C	0.008	No
28th Street	Between Harbor Drive and Main Street	4-Lanes w/ RM	40,000	17,435	0.436	B	17,184	0.430	B	0.006	No
	Between Main Street and Boston Avenue	4-Lanes w/TWLT	30,000	20,864	0.695	D	20,613	0.687	D	0.008	No
	Between Boston Avenue and National Avenue	3-Lanes w/TWLT	22,500[1]	23,228	1.032	**F**	23,076	1.026	**F**	0.006	No
32nd Street	Between Harbor Drive and Norman Scott Road	6-lanes w/ RM	50,000	24,911	0.498	B	24,610	0.492	B	0.006	No

Source: NDS, Chen Ryan Associates; June 2016

Notes:
[1] Capacity is 75% of a 4-Lane Collector w/TWLT.
V/C = Volume to Capacity Ratio.
Bold letter indicates LOS E or F.
S?: Significant impact

As shown in Table 8.5, all study area roadway segments are projected to operate at LOS D or better during the peak of project construction, with the exception of 28th Street, between Boston Avenue and National Avenue which is projected to operate at LOS F. However, the project's construction traffic is not anticipated to change the V/C ratio for this segment by more than 0.01; therefore, the construction traffic associated with the proposed project would not result in a significant impact.

Table 8.6 displays the intersection LOS and average vehicle delay results for both Near-Term Year 2021 Base and Near-Term Year 2021 Base Plus Construction conditions. LOS calculation worksheets are provided in **Appendix N.**

As shown in Table 8.6, all study area intersections are projected to operate at LOS D or better during the peak of project construction, with the exception of Norman Scott Road / 32nd Street / Wabash Boulevard which is projected to operate at LOS F. The project's construction traffic is anticipated to add more than 1 second of delay to the intersection; therefore, the construction traffic associated with the proposed project would result in a significant impact.

Table 8.6 Peak Hour Intersection LOS Results – Near-Term Year 2021 Base Plus Project Construction Conditions

#	Intersection	AM Peak Hour				PM Peak Hour				Change in Delay			
		Project Construction		Near-Term Year 2021 Base		Project Construction		Near-Term Year 2021 Base		AM Peak Hour		PM Peak Hour	
		Delay (Sec)	LOS	Delay (Sec)	LOS	Delay (Sec)	LOS	Delay (Sec)	LOS	Change	S?	Change	S?
1	Harbor Drive / Cesar Chavez Parkway	41.6	D	41.0	D	42.5	D	38.0	D	0.6	No	4.5	No
2	Harbor Drive / Sampson Street	44.2	D	43.8	D	46.0	D	44.9	D	0.4	No	1.0	No
3	Harbor Drive / Schley Street	16.4	B	16.3	B	15.7	B	15.7	B	0.1	No	0.0	No
4	Harbor Drive / 28th Street	29.4	C	28.2	C	27.4	C	26.6	C	1.2	No	0.8	No
5	Main Street / 28th Street	22.3	C	22.2	C	39.4	D	38.8	D	0.2	No	0.5	No
6	Boston Avenue / 28th Street	19.1	B	19.1	B	24.1	C	23.9	C	0.0	No	0.1	No
7	National Avenue / 28th Street	42.6	D	42.6	D	31.8	C	31.5	C	0.0	No	0.3	No
8	National Avenue / I-5 NB Off-Ramp	18.0	B	17.4	B	16.7	B	14.8	B	0.6	No	1.8	No
9	Harbor Drive / Belt Street	18.8	B	18.8	B	17.3	B	17.0	B	0.0	No	0.3	No
10	Harbor Drive / 32nd Street	30.4	C	29.3	C	46.1	D	43.3	D	1.1	No	2.8	No
11	Norman Scott Road / 32nd Street / Wabash Boulevard	110.5	**F**	103.2	**F**	72.2	**E**	69.6	**E**	7.3	**Yes**	2.6	**Yes**

Source: Chen Ryan Associates, June 2016

Notes:
Bold letter indicates LOS E or F.
S?: Significant impact

Ramp Intersection Capacity Analysis

Consistent with Caltrans requirements, the signalized ramp intersections of National Avenue / I-5 NB off-ramp and Norman Scott Road / 32nd Street / Wabash Boulevard were analyzed using ILV procedures, as described in Section 2.4. ILV analysis results are displayed in **Table 8.7** and analysis worksheets for Near-Term Year 2021 Base Plus Project Construction conditions are provided in Appendix N.

Table 8.7 Ramp Intersection Capacity Analysis – Near-Term Year 2021 Base Plus Construction Conditions

#	Intersection	Project Construction Conditions			Near-Term Year 2021 Base Conditions		
		Peak Hour	ILV/Hour	Description	Peak Hour	ILV/Hour	Description
8	National Avenue / I-5 NB Off-Ramp	AM	735	Under Capacity	AM	722	Under Capacity
		PM	881	Under Capacity	PM	869	Under Capacity
11	Norman Scott Road / 32nd Street / Wabash Boulevard	AM	1,044	Under Capacity	AM	995	Under Capacity
		PM	1,097	Under Capacity	PM	1,061	Under Capacity

Source: Chen Ryan Associates; June 2016

As shown, the key study signalized ramp intersections are projected to operate at "Under Capacity" during both the AM and PM peak hour, under Near-Term Year 2021 Base Plus Project Construction conditions.

8.4 Impact Significance and Mitigation

Roadway Segments

<u>Existing Plus Project Construction Conditions</u>

- None

<u>Near-Term Year 2021 Base Plus Construction Conditions</u>

- None

Intersections

<u>Existing Plus Project Construction Conditions</u>

- Norman Scott Road / 32nd Street / Wabash Boulevard

<u>Near-Term Year 2021 Base Plus Construction Conditions</u>

- Norman Scott Road / 32nd Street / Wabash Boulevard

Since project construction conditions are temporary, no physical mitigation measures are recommended. Instead, it is recommended that a Transportation Demand Management Plan is developed to limit the number of construction worker trips that travel through the impacted intersection during peak periods. The following lists a series of TDM strategies that would be appropriate during project construction.

- Implementation of a ride-sharing program to encourage carpooling amongst workers.
- Adjusting work schedules so workers do not access the site during the peak hours.
- Provide off-site parking locations for workers outside of the area with shuttle services to bring them on-site.
- Provide subsidized transit passes for construction workers

In order to help reduce the temporary transportation and parking related impacts associated with project construction, it is recommended that the project applicant develop a TDM plan utilizing one or multiple of the strategies listed above during the construction of the proposed project.

9.0 Site Access and Parking

This chapter addresses access to the project site and assess the projected parking demand of the proposed project.

9.1 Site Access

Current Configuration

Employees will access the site (both enter and exit) from the main Tenth Avenue Marine Terminal gate located south of the Harbor Drive / Cesar Chavez Parkway intersection. Truck traffic will enter and exit thought the Tenth Avenue Marine Terminal through the main gate; however, Refrigerated Truck traffic will exit the terminal via another gate located on Switzer Street, to the north of the Harbor Drive and Cesar Chavez Parkway intersection.

Access to the TAMT does not impact the operations of the external street network. There are currently no proposed changes to the existing project access points including location and traffic control; therefore, no additional sight distance analysis should be required with this study.

Alternative Gate Scenario

The Tenth Avenue Marine Terminal Plan also identifies an alternative gate concept that would serve as the primary entry and exit location for the Refrigerated Container node and the Multi-Purpose General Cargo node. The alternative gate would be located in the north-east corner of the terminal and provide access directly onto Harbor Drive. According to the Plan, the Dry Bulk and Liquid Bulk Nodes would continue to utilize the existing gate off Cesar Chavez Parkway, particularly for domestic bulk shipments.

The alternative gate should be designed to take into account project sight distance and traffic queueing at all approaches. It is assumed that the alternative access point will create new signalized intersection along Harbor Drive. The alternative gate was identified as operated at LOS D or better under all scenarios that were analyzed. Therefore, the alterative gate is not projected to associated with any additional transportation related impacts.

9.2 Parking

As of the time this report was drafted, the project applicant has not submitted any plans that identify where or how the additional parking demand associated with the proposed project will be addressed. Therefore, this report can only address what additional parking demand could potentially be associated with the proposed project, and not if the proposed project can/will meet this demand.

Parking should be provided on-site for all anticipated new employees that are associated with the proposed project. Similar to trip generation, as a worst case scenario, it is assumed that all new employees associated with the proposed project will drive to the project site alone. Since new employees associated with the proposed project will be split into 3 separate shifts, the proposed project will need to provide or account for additional parking spaces for the maximum number of new employees will be on the site at any given time, as well as an allowance for turn-over.

It should be noted that parking associated with the proposed project can be reduced with the development of a parking management plan which would be enforced by the project applicant. The parking management plan would consist of site specific measures and strategies that are designed to reduce single occupancy trips to and from the project site. Measures and strategies could include the following:

- Employee Vanpool Program
- Preferential Parking for Carpools / Vanpools
- Employee shuttles to/from the Union Hall at Shift Changes
- Employer Coordination with SANDAG's iCommute Program

Project specific parking space reductions can be negotiated with the District after the submittal of a parking management plan.

Because of space constraints and their size (nearly 2,000 pages), the appendices to the *Transportation Impact Analysis*, prepared by Chen Ryan, dated August 22, 2016, have been removed from Volume II. However, upon request, the appendices will be provided within 2 business days of the request.

<u>Appendices to the Transportation Impact Analysis, which can be provided upon request, include:</u>

Appendix A	Count Data and Signal Timing Plans
Appendix B	Trip Distribution Worksheets
Appendix C	Peak Hour Intersection LOS Worksheets & ILV Worksheets –Existing Conditions
Appendix D	Freeway Information
Appendix E	Peak Hour Intersection LOS Worksheets & ILV Worksheets – Existing Plus Project Conditions
Appendix F	Peak Hour Intersection LOS Worksheets & ILV Worksheets – Existing Plus Interim Project Conditions
Appendix G	Cumulative Project Information
Appendix H	Peak Hour Intersection LOS Worksheets & ILV Worksheets – Near-Term Year 2021 Base Conditions
Appendix I	Peak Hour Intersection LOS Worksheets & ILV Worksheets – Near-Term Year 2021 Base Plus Interim Project Conditions
Appendix J	City of San Diego – Southeastern San Diego and Barrio Logan Community Plan Update Excerpts
Appendix K	Peak Hour Intersection LOS Worksheets & ILV Worksheets –Future Year 2035 Base Conditions
Appendix L	Peak Hour Intersection LOS Worksheets & ILV Worksheets –Future Year 2035 Base Plus Project Conditions
Appendix M	Peak Hour Intersection LOS Worksheets & ILV Worksheets –Existing Plus Project Construction Conditions
Appendix N	Peak Hour Intersection LOS Worksheets & ILV Worksheets – Near-Term Year 2021 Base Plus Project Construction Conditions

Appendix G-1
Sustainable Terminal Capacity Alternative Traffic Analysis

CHEN RYAN

MEMORANDUM

TO: Charlie Richmond, ICF International

FROM: Jonathan Sanchez, Chen Ryan Associates
Stephen Cook, PE, Chen Ryan Associates

DATE: November 28, 2016

RE: Tenth Avenue Marine Terminal Redevelopment Plan project - Sustainable Terminal Capacity Alternative Traffic Analysis

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The purpose of this technical memorandum is to document any vehicular impacts associated with the Sustainable Terminal Capacity Alternative, which represents a 75% throughput scenario for the Tenth Avenue Marine Terminal Redevelopment Plan project.

1.0 Sustainable Terminal Capacity Alternative

The Sustainable Terminal Capacity (STC) Alternative represents a 75% throughput scenario for the Tenth Avenue Marine Terminal Redevelopment Plan project. **Table 1.1** displays existing terminal throughput and it compares it to the Sustainable Terminal Capacity Alternative Throughput and the Maximum Practical Capacity throughput.

Table 1.1 Existing Terminal Throughput vs STCA vs MPC

Type	Existing Throughput (MT)	Sustainable Terminal Capacity Alternative (MT)	Maximum Practical Capacity (MT)
Dry Bulk	289,864	1,987,500	2,650,000
Liquid Bulk	31,520	239,017*	239,017
Refrigerated Containers	637,931	1,716,000	2,288,000
Multi-Purpose Cargo	85,131	733,050	977,400
Total	**1,044,446**	**4,675,567**	**6,154,417**

Source: Chen Ryan Associates, October 2016.

Notes:
*Liquid Bulk is unaffected.

1.1 Project Trip Generation

Project trip generation represents 75% of the trip generation presented in the Tenth Avenue Marine Terminal Redevelopment Plan Project report. **Table 1.2** outlines the projected trip generation in both the number of trucks and employees that will access the Tenth Avenue Marine Terminal under the Sustainable Terminal Capacity Alternative scenario.

Table 1.2 Project Trip Generation

Type	Units	Rate	PCE	ADT	AM			PM		
					Total	In	Out	Total	In	Out
Trucks	296	2 / Truck	3	1,776	74	37	37	74	37	37
Dock Workers	*461*	*3 / Employee*	*1*	*1,383*	*308*	*154*	*154*	*308*	*154*	*154*
Administrative	*63*	*3 / Employee*	*1*	*189*	*63*	*63*	*0*	*63*	*0*	*63*
			Total	**3,348**	**445**	**254**	**191**	**445**	**191**	**254**

Source: Chen Ryan Associates, November 2016.

As shown, the proposed project is anticipated to generate 3,348 new PCE trips, including 445 trips (254-in / 191-out) during the AM peak hour and 445 trips (191-in / 254-out) during the PM peak hour.

1.2 Project Trip Distribution

The same trip distribution parterres assumed for trucks and employees under the full project scenario presented in the Tenth Avenue Marine Terminal Redevelopment Plan Project report was assumed under the Sustainable Terminal Capacity Alternative conditions.

1.3 Project Trip Assignment

Based upon the assumed project trip distribution presented in the Tenth Avenue Marine Terminal Redevelopment Plan Project report, daily and AM/PM peak hour project trips were assigned to the adjacent roadway network.

2.0 Existing Plus STC Project Traffic Conditions

Analyses were conducted using the same methodologies described in Chapter 2.0 of the Tenth Avenue Marine Terminal Redevelopment Plan Project report. Roadway segment analysis, intersections LOS analysis, freeway ramp intersection ILV analysis, and freeway analysis results are discussed in the following sections.

2.1 Roadway Segment Analysis

Table 2.1 displays the LOS analysis results for key roadway segments under Existing Plus STC Project conditions.

Table 2.1 Roadway Segment LOS Results – Existing Plus STC Project Conditions

Roadway	Segment	Cross-Section	Threshold (LOS E)	Existing + STC Project			Existing	Δ	S?
				ADT	V/C	LOS	ADT / V/C / LOS		
Harbor Drive	Between Beardsley Street and Cesar Chavez Parkway	4-Lanes w/ RM	40,000	21,223	0.531	C	20,194 / 0.505 / B	0.026	N
	Between Cesar Chavez Parkway and Sampson Street	4-Lanes w/ RM	40,000	13,108	0.328	A	10,546 / 0.264 / A	0.064	N
	Between Sampson Street and Schley Street	4-Lanes w/ RM	40,000	14,612	0.365	A	12,050 / 0.301 / A	0.064	N
Harbor Drive	Between Schley Street and 28th Street	4-Lanes w/ RM	40,000	14,188	0.355	A	11,626 / 0.291 / A	0.064	N
	Between 28th Street and Belt Street	4-Lanes w/ RM	40,000	19,356	0.484	B	18,050 / 0.451 / B	0.033	N
	Between Belt Street and 32nd Street	4-Lanes w/ RM	40,000	17,909	0.448	B	16,603 / 0.415 / B	0.033	N
28th Street	Between Harbor Drive and Main Street	4-Lanes w/ RM	40,000	17,390	0.435	B	16,134 / 0.403 / B	0.032	N
	Between Main Street and Boston Avenue	4-Lanes w/TWLT	30,000	20,583	0.686	D	19,563 / 0.652 / C	0.034	N
	Between Boston Avenue and National Avenue	3-Lanes w/TWLT	22,500[1]	22,759	1.012	**F**	22,112 / 0.983 / **E**	0.029	**Y**
32nd Street	Between Harbor Drive and Norman Scott Road	6-Lanes w/ RM	50,000	21,226	0.425	B	19,920 / 0.398 / A	0.027	N

Source: Chen Ryan Associates, November 2016.

As shown in the table above, all key study roadway segments would continue to operate at LOS D or better under Existing Plus STC Project conditions with the exception of:

- 28th Street, between Boston Avenue and National Avenue (LOS F).

Based on the City of San Diego's Significance Criteria, outlined in Section 2.6 of the Tenth Avenue Marine Terminal Redevelopment Plan Project report, the traffic associated with the proposed project would cause a significant change in the V/C ratio (add more than 0.01) to the aforementioned roadway segment, which is projected to operate at LOS F under Existing Plus STC Project conditions. Therefore, the implementation of the proposed project would result in a significant direct impact at 28th Street, between Boston Avenue and National Avenue.

2.2 Intersection Analysis

Table 2.2 displays intersection LOS and average vehicle delay results under Existing Plus STC Project conditions. All intersections are signalized unless otherwise noted. LOS calculation worksheets for Existing Plus STC Project conditions are provided in **Appendix A**.

Table 2.2 Peak Hour Intersection LOS Results – Existing Plus STC Project Conditions

#	Intersection	AM Peak Hour		PM Peak Hour		Delay w/o Project (sec.) AM/PM	LOS w/o Project AM/PM	Change in Delay (sec.)	Significant Impact?
		Avg. Delay (sec.)	LOS	Avg. Delay (sec.)	LOS				
1	Harbor Drive / Cesar Chavez Parkway	45.4	D	43.6	D	36.8 / 33.3	D / C	8.6 / 10.3	No
2	Harbor Drive / Sampson Street	41.0	D	42.2	D	40.4 / 40.9	D / D	0.6 / 1.3	No
3	Harbor Drive / Schley Street	16.7	B	15.1	B	16.7 / 15.0	B / B	0.0 / 0.1	No
4	Harbor Drive / 28th Street	30.1	C	22.8	C	23.1 / 20.3	C / C	7.0 / 2.5	No
5	Main Street / 28th Street	21.9	C	37.5	D	21.4 / 34.8	C / C	0.5 / 2.7	No
6	Boston Avenue / 28th Street	19.4	B	23.2	C	19.4 / 23.0	B / C	0.0 / 0.2	No
7	National Avenue / 28th Street	42.4	D	30.2	C	42.3 / 29.6	D / C	0.1 / 0.6	No
8	National Avenue / I-5 NB Off-Ramp	15.5	B	15.3	B	14.9 / 14.7	B / B	0.6 / 0.6	No
9	Harbor Drive / Belt Street	18.8	B	17.2	B	18.6 / 17.1	B / B	0.2 / 0.1	No
10	Harbor Drive / 32nd Street	31.1	C	47.3	D	28.6 / 39.9	C / D	2.5 / 7.4	No
11	Norman Scott Road / 32nd Street / Wabash Boulevard	113.0	**F**	73.4	**E**	95.3 / 66.2	**F / E**	17.7 / 7.2	**Yes**

Source: Chen Ryan Associates, November 2016.

As shown in the table above, all key study intersections are projected to operate at LOS D or better under Existing Plus STC Project conditions, with the exception of:

- Norman Scott Road / 32nd Street / Wabash Boulevard – LOS F during AM peak hour and LOS E during PM peak hour.

Based on the City of San Diego's Significance Criteria, outlined in Section 2.6 of the Tenth Avenue Marine Terminal Redevelopment Plan Project report, the traffic associated with the proposed project would add delay surpassing the acceptable threshold (greater than 1 second for intersections operating at LOS F and greater than 2 seconds for intersection operating at LOS E) to the aforementioned intersection, which is projected to operate at LOS F during the AM peak hour and LOS E during the PM peak hour. Therefore, the project would result in a significant direct impact at the Norman Scott Road / 32nd Street / Wabash Boulevard intersection.

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2.3 Ramp Intersection Capacity Analysis

Consistent with Caltrans requirements, the signalized ramp intersections of National Avenue / I-5 NB off-ramp and Norman Scott Road / 32nd Street / Wabash Boulevard were analyzed using ILV procedures, as described in Section 2.4. of the Tenth Avenue Marine Terminal Redevelopment Plan Project report. ILV analysis results are displayed in **Table 2.3** and analysis worksheets for Existing Plus STC Project conditions are provided in Appendix A.

Table 2.3 Ramp Intersection Capacity Analysis - Existing Plus STC Project Conditions

#	Intersection	Peak Hour	ILV/Hour	Description
8	National Avenue / I-5 NB Off-Ramp	AM	662	Under Capacity
		PM	817	Under Capacity
11	Norman Scott Road / 32nd Street / Wabash Boulevard	AM	1,071	Under Capacity
		PM	1,132	Under Capacity

Source: Chen Ryan Associates; November 2016

As shown, the all key study signalized ramp intersections are projected to operate at "Under Capacity" during both the AM and PM peak hours, under Existing Plus STC Project conditions.

2.4 Freeway Analysis

Table 2.4 displays the LOS results from the freeway segment analysis under Existing Plus STC Project conditions.

Table 2.4 Freeway Mainline LOS Analysis Results - Existing Plus STC Project Conditions

Freeway	Segment	ADT	Direction	Peak Hour Volume	With Project		Base		Δ V/C	S?
					V/C	LOS	V/C	LOS		
I-5	SR-94 & Imperial Avenue	180,500	NB	9,600	0.890	D	0.890	D	0.000	N
			SB	8,400	0.780	C	0.780	C	0.000	N
	Imperial Avenue & SR-75	170,500	NB	9,100	0.840	D	0.840	D	0.000	N
			SB	8,500	0.790	C	0.780	C	0.010	N
	SR-75 & 28th Street	167,400	NB	10,400	0.850	D	0.850	D	0.000	N
			SB	8,300	0.770	C	0.770	C	0.000	N
	28th Street & SR-15	165,900	NB	10,300	1.100	**F**	1.100	**F**	0.000	N
			SB	8,200	0.870	D	0.870	D	0.000	N

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Table 2.4 Freeway Mainline LOS Analysis Results - Existing Plus STC Project Conditions

Freeway	Segment	ADT	Direction	Peak Hour Volume	With Project		Base		Δ V/C	S?
					V/C	LOS	V/C	LOS		
I-5	SR-15 & Main Street	195,900	NB	12,200	1.000	**E**	0.990	**E**	0.010	N
			SB	11,700	1.000	**E**	0.990	**E**	0.010	N
SR-15	SR-94 & Market Street	127,400	NB	6,500	0.770	C	0.760	C	0.010	N
			SB	7,200	0.850	D	0.840	D	0.010	N
	Market Street & Ocean View Boulevard	115,400	NB	6,000	0.850	D	0.840	D	0.010	N
			SB	6,500	0.920	D	0.910	D	0.010	N
	Ocean View Boulevard & I-5	104,400	NB	4,700	0.560	B	0.540	B	0.020	N
			SB	4,700	0.430	B	0.430	B	0.000	N
	I-5 & Norman Scott Road	8,700	NB	400	0.090	A	0.060	A	0.030	N
			SB	400	0.090	A	0.060	A	0.030	N

Source: Chen Ryan Associates; November 2016.

Notes:
The capacity, Directional split, Peak hour % and Heavy vehicle % are assumed to be the same as Existing conditions.
Bold letter indicates substandard LOS E or F.
Δ = Change in V/C Ratio.
S? = Indicates if change in V/C ratio is significant

As shown, all study freeway segments currently operate at LOS D or better with the exception of the following:

- I-5 NB between 28th Street & I-15 (LOS F)
- I-5 NB between SR-15 & Main Street (LOS E)
- I-5 SB between SR-15 & Main Street (LOS E)

Based on the City of San Diego's Significance Criteria, outlined in Section 2.6 of the Tenth Avenue Marine Terminal Redevelopment Plan Project report, the traffic associated with the proposed project would not cause a significant change in the V/C ratio (add more than 0.010 for LOS E and 0.005 for LOS F) to any key study mainline freeway segments. Therefore, the project would not result in a significant direct impact to a freeway mainline segment.

3.0 Existing Plus STC Project – Alternative Gate Scenario

The Tenth Avenue Marine Terminal Plan also identifies an alternative gate concept that would serve as the primary entry and exit location for the Refrigerated Container node and the Multi-Purpose General Cargo node. The alternative gate would be located in the north-east corner of the terminal and provide access directly onto Harbor Drive. According to the Plan, the Dry Bulk and Liquid Bulk Nodes would continue to utilize the existing gate off Cesar Chavez Parkway, particularly for domestic bulk shipments.

3.1 Project Trip Redistribution

The same trip distribution parterres assumed for trucks and employees under the Alternative Gate scenario was assumed under the Sustainable Terminal Capacity Alternative conditions.

3.2 Roadway Segment Analysis

Table 3.1 displays the LOS analysis results for the affected segment of Harbor Drive under Existing Plus STC Project conditions, with the proposed alternative gate.

Table 3.1 Roadway Segment LOS Results - Existing Plus STC Project Conditions – Alternative Gate Scenario

Roadway	Segment	Cross-Section	Threshold (LOS E)	Existing + Project			Existing	Δ	S?
				ADT	V/C	LOS	ADT / V/C / LOS		
Harbor Drive	Between Beardsley Street and Cesar Chavez Parkway	4-Lanes w/ RM	40,000	21,743	0.544	C	20,194 / 0.505 / B	0.039	N

Source: Chen Ryan Associates; November 2016.

Notes:
V/C = Volume to Capacity Ratio.
Δ = Change in V/C Ratio.
S? = Indicates if change in V/C ratio is significant.

As shown, Harbor Drive between Beardsley Street and Cesar Chavez Parkway is anticipated to operate at LOS C with the addition of the proposed project and with the alternative gate.

Based on the City of San Diego's Significance Criteria, outlined in Section 2.6 of the Tenth Avenue Marine Terminal Redevelopment Plan Project report, the traffic associated with the proposed alternative gate would not cause any additional roadways segments to operate at LOS E or F; therefore, the implementation of the proposed alternative gate would not result in any additional impacts.

3.3 Intersection Analysis

Table 3.2 displays intersection LOS and average vehicle delay results under Existing Plus STC Project conditions, with the alternative gate assumed. Both intersections are assumed to be signalized. LOS calculation worksheets for the Existing Plus STC Project conditions are provided in **Appendix B.**

Table 3.2 Peak Hour Intersection LOS Results - Existing Plus STC Project Conditions – Alternative Gate Scenario

#	Intersection	AM Peak Hour		PM Peak Hour		Delay w/o Project (sec.) AM/PM	LOS w/o Project AM/PM	Change in Delay (sec.)	Significant Impact?
		Avg. Delay (sec.)	LOS	Avg. Delay (sec.)	LOS				
1	Harbor Drive / Cesar Chavez Parkway	37.5	D	38.1	D	36.8 / 33.3	D / C	0.7 / 4.8	No
12	Harbor Drive / Alternative Gate	19.4	B	25.5	C	N/A	N/A	19.4 / 25.5	No

Source: Chen Ryan Associates; November 2016

As shown, both affected intersections are anticipated to operate at LOS D or better with the proposed alternative gate.

Based on the City of San Diego's Significance Criteria, outlined in Section 2.6 of the Tenth Avenue Marine Terminal Redevelopment Plan Project report, the traffic associated with the proposed alternative gate would not cause either intersection to operate at LOS E or F; therefore, the implementation of the proposed alternative gate would not result in any additional impacts.

4.0 Future Year 2035 Base Plus STC Project Traffic Conditions

LOS analyses were conducted using the methodologies described in Chapter 2.0 of the Tenth Avenue Marine Terminal Redevelopment Plan Project report. Roadway segment analysis, intersection LOS analysis, freeway ramp intersection ILV analysis, and freeway mainline analysis results are discussed in the following sections.

4.1 Roadway Segment Analysis

Table 4.1 displays the LOS analysis results for key roadway segments under Future Year 2035 Base Plus STC Project conditions.

As shown, all key study roadway segments are projected to operate at acceptable LOS D or better under Future Year 2035 Base Plus STC Project conditions, with the exception of the following roadway segments:

- 28th Street, between Boston Avenue and National Avenue (LOS F).

Based on the City of San Diego's Significance Criteria, outlined in Section 2.6 of the Tenth Avenue Marine Terminal Redevelopment Plan Project report, the traffic associated with the proposed project would cause a significant change in the V/C ratio (add more than 0.01) to the aforementioned roadway segment, which is projected to operate at LOS F under Future Year Base Project conditions. Therefore, the project would result in a significant cumulative impact on 28th Street, between Boston Avenue and National Avenue. It should be noted that this impact was also identified as a direct impact under Existing Plus STC Project conditions.

Table 4.1 Roadway Segment LOS Results - Future Year 2035 Base Plus STC Project Conditions

Roadway	Segment	Classification	Threshold (LOS E)	Future Year 2035+ STC Project			Future Year 2035Base	Δ	S?
				ADT	V/C	LOS	ADT / V/C / LOS		
Harbor Drive	Between Beardsley Street and Cesar Chavez Parkway	4-Lane Major	40,000	26,079	0.652	C	25,050 / 0.626 / C	0.026	No
	Between Cesar Chavez Parkway and Sampson Street	4-Lane Major	40,000	21,362	0.534	C	18,800 / 0.470 / B	0.064	No
	Between Sampson Street and Schley Street	4-Lane Major	40,000	19,612	0.490	B	17,050 / 0.426 / B	0.064	No
	Between Schley Street and 28th Street	4-Lane Major	40,000	19,612	0.490	B	17,050 / 0.426 / B	0.064	No
	Between 28th Street and Belt Street	4-Lane Major	40,000	25,306	0.633	C	24,000 / 0.600 / C	0.033	No
	Between Belt Street and 32nd Street	4-Lane Major	40,000	25,306	0.633	C	24,000 / 0.600 / C	0.033	No
28th Street	Between Harbor Drive and Main Street	4-Lane Major	40,000	18,206	0.455	B	16,950 / 0.424 / B	0.031	No
	Between Main Street and Boston Avenue	4-Lane Collector w/TWLT	30,000	21,240	0.708	D	20,220 / 0.674 / D	0.034	No
	Between Boston Avenue and National Avenue	3-Lanes Collector w/TWLT	22,500	28,367	1.261	**F**	27,720 / 1.232 / **F**	0.029	**Yes**
32nd Street	Between Harbor Drive and Norman Scott Road	6-Lane Major	50,000	27,106	0.542	B	25,800 / 0.516 / B	0.026	No

Source: Chen Ryan Associates; November 2016

4.2 Intersection Analysis

Table 4.2 displays intersection LOS and average vehicle delay results under Future Year 2035 Base Plus STC Project conditions. All intersections are currently signalized. LOS calculation worksheets for this scenario are provided in **Appendix C**.

Table 4.2 Peak Hour Intersection LOS Results - Future Year 2035 Base Plus STC Project Conditions

#	Intersection	AM Peak Hour		PM Peak Hour		Delay w/o Project (sec) AM/PM	LOS w/o Project AM/PM	Change in Delay (sec)	Significant Impact?
		Avg. Delay (sec.)	LOS	Avg. Delay (sec.)	LOS				
1	Harbor Drive / Cesar Chavez Parkway	53.2	D	51.7	D	50.6 / 39.6	D / D	2.6 / 12.1	No
2	Harbor Drive / Sampson Street	53.2	D	53.0	D	50.9 / 53.0	D / D	2.3 / 0.0	No
3	Harbor Drive / Schley Street	26.7	C	20.3	C	23.2 / 19.4	B / B	3.5 / 0.9	No
4	Harbor Drive / 28th Street	32.0	C	32.0	C	28.8 / 28.2	C / C	3.2 / 3.8	No
5	Main Street / 28th Street	22.6	C	42.0	D	22.2 / 39.2	C / D	0.4 / 2.8	No
6	Boston Avenue / 28th Street	28.0	C	38.8	D	27.7 / 37.4	C / D	0.3 / 1.4	No
7	National Avenue / 28th Street	122.5	**F**	72.1	**E**	122.5 / 71.4	**F / E**	0.0 / 0.7	No
8	National Avenue / I-5 NB Off-Ramp	19.8	B	18.3	B	18.9 / 17.5	B / B	0.9 / 0.8	No
9	Harbor Drive / Belt Street	22.8	C	19.8	C	22.3 / 19.1	C / B	0.5 / 0.7	No
10	Harbor Drive / 32nd Street	35.8	C	51.6	D	32.3 / 44.2	C / D	3.5 / 7.4	No
11	Norman Scott Road / 32nd Street / Wabash Boulevard	97.6	**F**	74.6	**F**	81.5 / 67.2	**E / E**	16.1 / 7.4	**Yes**

Source: Chen Ryan Associates; November 2016

As shown, all key study intersections are projected to operate at acceptable LOS D or better under Future Year 2035 Base Plus STC Project conditions, with the exception of the following two (2) intersections:

- National Avenue and 28th Street – LOS F during AM peak hour and LOS E during PM peak hour; and
- Norman Scott Road / 32nd Street / Wabash Boulevard – LOS F during both AM and PM peak hours.

Based on the City of San Diego's Significance Criteria, outlined in Section 2.6 of the Tenth Avenue Marine Terminal Redevelopment Plan Project report, the traffic associated with the proposed project would add delay surpassing the acceptable threshold (greater than 1 second for intersections operating at LOS F and greater than 2 seconds for intersection operating at LOS E) to the Norman Scott Road / 32nd Street / Wabash Boulevard intersection, which is projected to operate at LOS F during both the AM and PM peak hours. Therefore, the project would result in a significant cumulative impact at the Norman Scott Road / 32nd Street / Wabash Boulevard intersection.

4.3 Ramp Intersection Capacity Analysis

Consistent with Caltrans requirements, the signalized ramp intersections of National Avenue / I-5 NB off-ramp and Norman Scott Road / 32nd Street / Wabash Boulevard were analyzed using ILV procedures, as described in Section 2.4 of the Tenth Avenue Marine Terminal Redevelopment Plan Project report Tenth Avenue Marine Terminal Redevelopment Plan Project report. ILV analysis results are displayed in **Table 4.3** and analysis worksheets for Future Year 2035 Base Plus STC Project conditions are provided in Appendix C.

Table 4.3 Ramp Intersection Capacity Analysis - Future Year 2035 Base Plus STC Project Conditions

#	Intersection	Peak Hour	ILV/Hour	Description
8	National Avenue / I-5 NB Off-Ramp	AM	976	Under Capacity
		PM	953	Under Capacity
11	Norman Scott Road / 32nd Street / Wabash Boulevard	AM	1,210	At Capacity
		PM	1,187	Under Capacity

Source: Chen Ryan Associates; November 2016

As shown, the key study signalized ramp intersections are projected to operate at "At Capacity" or better during both the AM and PM peak hour, under Future Year 2035 Base Plus STC Project conditions.

4.4 Freeway Analysis

Table 4.4 displays the LOS results from the freeway segment analysis under Future Year 2035 Base Plus STC Project conditions.

Table 4.4 Freeway Mainline LOS Analysis Results - Future Year 2035 Base Plus STC Project Conditions

Freeway	Segment	ADT	Direction	Peak Hour Volume	With STC Project		Base		Δ V/C	S?
					V/C	LOS	V/C	LOS		
I-5	SR-94 & Imperial Avenue	218,900	NB	11,700	1.080	**F**	1.070	**F**	0.010	**Y**
			SB	10,200	0.940	**E**	0.940	**E**	0.000	N
	Imperial Avenue & SR-75	196,200	NB	10,500	0.970	**E**	0.960	**E**	0.010	N
			SB	9,700	0.900	D	0.900	D	0.000	N
	SR-75 & 28th Street	191,400	NB	11,900	0.970	**E**	0.970	**E**	0.000	N
			SB	9,500	0.880	D	0.880	D	0.000	N
I-5	28th Street & SR-15	177,700	NB	11,000	1.170	**F**	1.170	**F**	0.000	N
			SB	8,800	0.940	**E**	0.940	**E**	0.000	N
	SR-15 & Main Street	221,200	NB	13,800	1.130	**F**	1.120	**F**	0.010	**Y**
			SB	13,200	1.120	**F**	1.120	**F**	0.000	N
SR-15	SR-94 & Market Street	122,200	NB	6,200	0.730	C	0.720	C	0.010	N
			SB	6,900	0.820	D	0.800	D	0.020	N
	Market Street & Ocean View Boulevard	130,600	NB	6,800	0.960	**E**	0.950	**E**	0.010	N
			SB	7,300	1.040	**F**	1.020	**F**	0.020	**Y**

Table 4.4 Freeway Mainline LOS Analysis Results - Future Year 2035 Base Plus STC Project Conditions

Freeway	Segment	ADT	Direction	Peak Hour Volume	With STC Project		Base		Δ V/C	S?
					V/C	LOS	V/C	LOS		
SR-15	Ocean View Boulevard & I-5	123,400	NB	5,500	0.650	C	0.650	C	0.000	N
			SB	5,600	0.520	B	0.510	B	0.010	N
	I-5 & Norman Scott Road	31,900	NB	1,400	0.300	A	0.300	A	0.000	N
			SB	1,400	0.300	A	0.280	A	0.020	N

Source: Chen Ryan Associates; November 2016

Notes:
The capacity, Directional split, Peak hour % and Heavy vehicle % are assumed to be the same as Existing conditions.
Bold letter indicates substandard LOS E or F.
Δ = Change in V/C Ratio.
S? = Indicates if change in V/C ratio is significant

As shown, all study freeway segments currently operate at LOS D or better with the exception of the following:

- I-5 NB between SR-94 & Imperial Avenue (LOS F)
- I-5 SB between SR-94 & Imperial Avenue (LOS E)
- I-5 NB between Imperial Avenue & SR-75 (LOS E)
- I-5 NB between SR-75 & 28th Street (LOS E)
- I-5 NB between 28th Street & SR-15 (LOS F)
- I-5 SB between 28th Street & SR-15 (LOS E)
- I-5 NB between SR-15 & Main Street (LOS F)
- I-5 SB between SR-15 & Main Street (LOS F)
- SR-15 NB between Market Street & Ocean View Boulevard (LOS E)
- SR-15 SB between Market Street & Ocean View Boulevard (LOS F).

Based on the City of San Diego's Significance Criteria, outlined in Section 2.6 of the Tenth Avenue Marine Terminal Redevelopment Plan Project report, the traffic associated with the proposed project would cause a significant change in the V/C ratio (add more than 0.01 for LOS E and 0.005 for LOS F) to the following key study mainline freeway segments:

- I-5 NB between SR-94 & Imperial Avenue (LOS F)
- I-5 NB between SR-15 & Main Street (LOS F)
- SR-15 SB between Market Street & Ocean View Boulevard (LOS F).

Therefore, the project would result in a significant cumulative impact to the aforementioned freeway mainline segments.

5.0 Future Year 2035 Plus STC Project – Alternative Gate Scenario

The Tenth Avenue Marine Terminal Plan also identifies an alternative gate concept that would serve as the primary entry and exit location for the Refrigerated Container node and the Multi-Purpose General Cargo node. The alternative gate would be located in the north-east corner of the terminal and provide access directly onto Harbor Drive. According to the Plan, the Dry Bulk and Liquid Bulk Nodes would continue to utilize the existing gate off Cesar Chavez Parkway, particularly for domestic bulk shipments.

5.1 Project Trip Redistribution

The same trip distribution parterres assumed for trucks and employees under the Alternative Gate scenario was assumed under the Sustainable Terminal Capacity Alternative conditions.

5.2 Roadway Segment Analysis

Table 5.1 displays the LOS analysis results for the affected segment of Harbor Drive under Future Year 2035 Plus STC Project conditions, with the proposed alternative gate point.

Table 5.1 Roadway Segment LOS Results - Future Year 2035 Plus STC Project Conditions – Alternative Gate Scenario

Roadway	Segment	Cross-Section	Threshold (LOS E)	Existing + STC Project			Existing	Δ	S?
				ADT	V/C	LOS	ADT / V/C / LOS		
Harbor Drive	Between Beardsley Street and Cesar Chavez Parkway	4-Lanes w/ RM	40,000	26,599	0.665	C	25,050 / 0.626 / C	0.039	N

Source: Chen Ryan Associates; November 2016

Notes:
V/C = Volume to Capacity Ratio.
Δ = Change in V/C Ratio.
S? = Indicates if change in V/C ratio is significant.

As shown, Harbor Drive between Beardsley Street and Cesar Chavez Parkway is anticipated to operate at LOS C with the addition of the proposed project and with the alternative gate.

Based on the City of San Diego's Significance Criteria, outlined in Section 2.6 of the Tenth Avenue Marine Terminal Redevelopment Plan Project report, the traffic associated with the proposed project would not cause any roadways segments to operate at LOS E or F; therefore, the implementation of the proposed alternative gate would not result in any additional impacts.

5.3 Intersection Analysis

Table 5.2 displays intersection LOS and average vehicle delay results under Future Year 2035 Plus STC Project conditions, with the alternative gate assumed. Both intersections are assumed to be signalized.

LOS calculation worksheets for the Future Year 2035 Plus STC Project conditions are provided in **Appendix D.**

Table 5.2 Peak Hour Intersection LOS Results - Future Year 2035 Plus STC Project Conditions – Alternative Gate Scenario

#	Intersection	AM Peak Hour Avg. Delay (sec.)	AM Peak Hour LOS	PM Peak Hour Avg. Delay (sec.)	PM Peak Hour LOS	Delay w/o Project (sec.) AM/PM	LOS w/o Project AM/PM	Change in Delay (sec.)	Significant Impact?
1	Harbor Drive / Cesar Chavez Parkway	52.7	D	49.4	D	50.6 / 39.6	D / D	2.1 / 9.8	No
12	Harbor Drive / Alternative Gate	33.2	C	37.0	D	N/A	N/A	33.2 / 37.0	No

Source: Chen Ryan Associates; November 2016

As shown, both affected intersections are anticipated to operate at LOS D or better with the proposed alternative gate.

Based on the City of San Diego's Significance Criteria, outlined in Section 2.6 of the Tenth Avenue Marine Terminal Redevelopment Plan Project report, the traffic associated with the proposed project would not cause either intersection to operate at LOS E or F; therefore, the implementation of the proposed alternative gate would not result in any additional impacts.

6.0 Impact Significance and Mitigation

6.1 Roadway Segments

Existing Plus STC Project Conditions

Based upon the significance criteria presented in Section 2.6 of the Tenth Avenue Marine Terminal Redevelopment Plan Project report, the addition of project traffic would have a significant direct traffic impact on the following roadway segment under the following Scenarios:

- 28th Street, between Boston Avenue and National Avenue

This section of 28th Street is currently constructed as a Three-Lane Collector with a daily capacity of 22,500 trips. However, the Barrio Logan Community Plan classifies this section of 28th Street as a Four-Lane Major Arterial which would carry a daily capacity of 40,000 trips. Improving the roadway to its ultimate classification as a Four-Lane Major Arterial would improve the traffic operations at this impacted segment to LOS C, reducing the impact to less than significant. Based on a comparison of the project traffic added to the roadway segment (647 daily trips) to the traffic projected to be on this segment under Existing Plus STC Project conditions (22,759) the project would be responsible for a 2.8% fair-share contribution of the cost to widen the roadway to a 4-Lane Major classification.

The proposed project is a long-range redevelopment plan and will not be developed all at once or even in set phases. Instead cargo throughput is anticipated to increase overtime based on market demands. Therefore, the time period in which this impact is anticipated to occur is not known at this time. Thus, the implementation of this impact should be based on when the project traffic is anticipated to reach a critical level or trigger point where the project related impact moves from less than significant to significant. It is estimated that this impact will occur when 161 new truck loads of cargo go through the terminal on a daily basis. This is the point in which the project will add more than 0.02 V/C to the failing segment and therefore be associated with a significant impact.

Existing Plus STC Project Conditions – Alternative Gate

The addition of the proposed alternative gate is not anticipated to result in any additional significant impacts to study roadway segments. However, it should be noted that all of the impacts listed above would still occur both with and without the alternative gate.

Future Year 2035 Plus STC Project Conditions

Based upon the significance criteria presented in Section 2.6 of the Tenth Avenue Marine Terminal Redevelopment Plan Project report, the addition of project traffic would have an identified significant cumulative traffic impact at the following roadway segment under Future Year 2035 Base Plus STC Project conditions:

- 28th Street, between Boston Avenue and National Avenue (LOS F).

This section of 28th Street is currently constructed as a Three-Lane Collector with a daily capacity of 22,500 trips. However, the Barrio Logan Community Plan classifies this section of 28th Street as a Four-Lane Major Arterial which would carry a daily capacity of 40,000 trips. Improving the roadway to its ultimate classification as a Four-Lane Major Arterial would improve the traffic operations at this impacted segment to LOS C, reducing the impact to less than significant.

The proposed project is a long-range redevelopment plan and will not be developed all at once or even in set phases. Instead cargo throughput is anticipated to increase overtime based on market demands. Therefore, the time period in which this impact is anticipated to occur is not known at this time. The implementation of this impact should be based on when the project traffic is anticipated to reach a critical level or trigger point where the project related impact moves from less than significant to significant, as noted in Section 2.6 of the Tenth Avenue Marine Terminal Redevelopment Plan Project report.

Future Year 2035 Plus STC Project Conditions – Alternative Gate Scenario

The addition of the proposed alternative gate is not anticipated to result in any additional significant impacts to key study roadway segments. However, it should be noted that all of the impacts listed above would still occur both with and without the alternative gate.

6.2 Intersections

Existing Plus STC Project Conditions

Based upon the significance criteria presented in Section 2.6 of the Tenth Avenue Marine Terminal Redevelopment Plan Project report, the proposed project would contribute to a direct traffic impact at the following intersection under Existing Plus STC Project conditions:

- Norman Scott Road / 32nd Street / Wabash Boulevard

However, as shown in **Table 6.1**, the following recommended improvement would reduce the overall intersection delay to predevelopment conditions:

- Add a westbound right-turn overlap phase.

Table 6.1 Peak Hour Intersection LOS – Mitigated Intersection - Existing Plus STC Project Conditions

#	Intersection	AM Peak Hour Avg. Delay (sec.)	AM Peak Hour LOS	PM Peak Hour Avg. Delay (sec.)	PM Peak Hour LOS	Delay w/o Project (sec.) AM/PM	LOS w/o Project AM/PM	Change in Delay (sec.)	Significant Impact?
11	Norman Scott Road / 32nd Street / Wabash Boulevard	93.6	**F**	54.1	D	95.3 / 66.2	**F / E**	-1.7 / -12.1	No

Source: Chen Ryan Associates; October 2016

The proposed project is a long-range redevelopment plan and will not be developed all at once or even in set phases. Instead cargo throughput is anticipated to increase overtime based on market demands. Therefore, the time period in which this impact is anticipated to occur is not known at this time. Thus, the implementation of this impact should be based on when the project traffic is anticipated to reach a critical level or trigger point where the project related impact moves from less than significant to significant. It is estimated that this impact will occur when the project is generating 195 new daily trips. This is the amount of traffic the project can generate before it adds more than one second of delay to the failing Norman Scott Road / 32nd Street / Wabash Boulevard intersection. However, this intersection is controlled by Caltrans and the Port District does not have jurisdiction at this intention; therefore, this impact is considered significant and unavoidable.

In addition to the aforementioned mitigation measure, Caltrans is currently working on a truck access improvement study which will identify several potential improvements to this intersection, including a potential grade separation. It is recommended that the District continues to coordinate with Caltrans as the TAMT develops to determine if the proposed mitigation measure is relevant at the time of implementation or if the District can participate in a larger improvement program for the intersection.

Existing Plus STC Project Conditions – Alternative Gate

The addition of the proposed alternative gate is not anticipated to result in any additional significant impacts to study intersections. However, it should be noted that all of the impacts listed above would still occur both with and without the alternative gate.

Future Year 2035 Plus STC Project Conditions

Based upon the significance criteria presented in Section 2.6 of the Tenth Avenue Marine Terminal Redevelopment Plan Project report, the proposed project would contribute to a traffic impact at the following intersection under Future Year 2035 Base Plus STC Project conditions:

- Norman Scott Road / 32nd Street / Wabash Boulevard

However, as shown in **Table 6.2,** the following recommended improvement would improve the overall intersection delay under Future Year 2035 Base Plus STC Project conditions to predevelopment conditions:

- Add a westbound right-turn overlap phase.

Table 6.2 Peak hour intersection LOS – Mitigated Intersection - Future Year 2035 Base Plus STC Project conditions

#	Intersection	AM Peak Hour Avg. Delay (sec.)	AM Peak Hour LOS	PM Peak Hour Avg. Delay (sec.)	PM Peak Hour LOS	Delay w/o Project (sec.) AM/PM	LOS w/o Project AM/PM	Change in Delay (sec.)	Significant Impact?
11	Norman Scott Road / 32nd Street / Wabash Boulevard	79.5	F	57.2	E	81.5 / 67.2	F / E	-2.0 / -10.0	No

Source: Chen Ryan Associates; October 2016

The proposed project is a long-range redevelopment plan and will not be developed all at once or even in set phases. Instead cargo throughput is anticipated to increase overtime based on market demands. Therefore, the time period in which this impact is anticipated to occur is not known at this time. The implementation of this impact should be based on when the project traffic is anticipated to reach a critical level or trigger point where the project related impact moves from less than significant to significant, as noted in Section 2.6 of the Tenth Avenue Marine Terminal Redevelopment Plan Project report. However, this intersection is controlled by Caltrans and the Port District does not have jurisdiction at this intention; therefore, this impact is considered significant and unavoidable.

In addition to the aforementioned mitigation measure, Caltrans is currently working on a truck access improvement study which will identify several potential improvements to this intersection, including a potential grade separation. It is recommended that the project applicant continues to coordinate with Caltrans as the TAMT develops to determine if the proposed mitigation measure is relevant at the time of implementation or if the project applicant can participate in a larger improvement program for the intersection.

Future Year 2035 Plus STC Project Conditions – Alternative Gate Scenario

The addition of the proposed alternative gate is not anticipated to result in any additional significant impacts to study intersections. However, it should be noted that all of the impacts listed above would still occur both with and without the alternative gate.

6.3 Freeway Mainline Segments

Existing Plus STC Project Conditions

- None

Existing Plus STC Project Conditions – Alternative Gate

- None

Future Year 2035 Plus STC Project Conditions

Based on the City of San Diego's Significance Criteria, outlined in Section 2.6 of the Tenth Avenue Marine Terminal Redevelopment Plan Project report, the traffic associated with the proposed project would cause a significant change in the V/C ratio (add more than 0.010 for LOS E and 0.005 for LOS F) to the following key study mainline freeway segments:

- I-5 NB between SR-94 & Imperial Avenue (LOS F)
- I-5 NB between I-15 & Main Street (LOS F)
- I-15 SB between Market Street & Ocean View Boulevard (LOS F).

SANDAG has plans to construct two managed lanes (one in each direction) on Interstate 5 between I-15 and Palomar Street by the year 2030 as well as two additional lanes multi-purpose lanes and two managed lanes on SR-15 between I-5 and SR-94 by the year 2050, however, these plans are subject to budget availability and coordination with Caltrans. The following fair-share percentages, per facility, should serve as guidance to the amount the District should pay towards a program or plan for the aforementioned freeway facility improvements to be constructed:

- I-5 NB between SR-94 & Imperial Avenue – 5% of the total cost for improvements to this segment.

- I-5 NB between I-15 & Main Street – 6% of the total cost for improvements at this segment.

- SR-15 SB between Market Street & Ocean View Boulevard – 11% of the total cost for improvements to this segment.

At the moment, there is no program in place into which the District could pay its fair-share towards the cost of such improvements. Therefore, improvements are considered infeasible and the impacts along I-5 and SR-15 would remain significant and unavoidable.

Future Year 2035 Plus STC Project Conditions – Alternative Gate

No additional freeway impacts would be associated with the Alternative gate scenario. It should be noted that all freeway related impacts identified under Future Year 2035 Plus STC Project conditions would also occur under the Alternative Gate Scenario.

Appendix H
Cultural Study

CULTURAL RESOURCES INVENTORY AND EVALUATION REPORT FOR THE TENTH AVENUE MARINE TERMINAL REDEVELOPMENT PLAN AND DEMOLITION AND INITIAL RAIL COMPONENT, SAN DIEGO, CALIFORNIA

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ICF INTERNATIONAL

ICF International. 2016. Cultural Resources Inventory and Evaluation Report for the Tenth Avenue Marine Terminal Redevelopment Plan and Demolition and Initial Rail Component, San Diego, California. April. (ICF 00165.14) San Diego, CA. Prepared for the San Diego Unified Port District, San Diego, CA.

Contents

Tables and Figures

Acronyms and Abbreviations

BNSF	Burlington Northern Santa Fe
BP	before present
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
cimuL	consanguineal kin group
CRHR	California Register of Historical Resources
DPR	Department of Parks and Recreation
ICF	ICF International
MT	metric ton
NAHC	Native American Heritage Commission
NRHP	National Register of Historic Places
Port District	San Diego Unified Port District
PRC	Public Resources Code
Santa Fe	Atchison, Topeka, and Santa Fe Railroad
SCIC	South Coastal Information Center
SD&A	San Diego and Arizona
SD&AE	San Diego and Arizona Eastern
TAMT	Tenth Avenue Marine Terminal
TAMT Plan	Tenth Avenue Marine Terminal Redevelopment Plan

Executive Summary

ICF International (ICF) was retained by the San Diego Unified Port District (Port District) to conduct a cultural resources inventory and evaluation study for the Tenth Avenue Marine Terminal Redevelopment Plan (TAMT Plan) and Demolition and Initial Rail Component. The study has been prepared to support the Port District, the lead agency under the California Environmental Quality Act (CEQA), in preparation of an Environmental Impact Report for the proposed TAMT Plan. The purpose of the study is to identify cultural resources within the project study area, evaluate any identified cultural resources that have not been evaluated previously, and provide management recommendations regarding any significant or potentially significant cultural resources within the TAMT Plan area.

During a site visit to the terminal on April 21, 2014, an ICF archaeologist determined that the site had been too thoroughly developed with paving, buildings, structures, and railroad lines to necessitate systematic archaeological surveying. Therefore, no intensive archaeological survey was conducted. On May 14, 2014, an ICF historian/architectural historian performed an intensive level survey of the historic-period built environment. Prior to the current study, two cultural resources had previously and erroneously been recorded within the project area: CA-SDI-13073H, the historic-period alignment of the Coronado Railroad, and CA-SDI-16385H, the historic-period alignment of the Atchison, Topeka, and Santa Fe Railway, both constructed in the 1880s. CA-SDI-16385H has been evaluated for National Register of Historic Places eligibility. The evaluation found that the railroad alignment lacked sufficient historical integrity to relate to its period of significance. Research for this study shows that both CA-SDI-16385H and CA-SDI-13073H were actually aligned to the east and north of the project study area

ICF identified 10 intact or partially intact built-environment resources 45 years of age or older within the project study area. These 10 historic-era resources include Transit Sheds #1 and #2, the bunker fuel tank complex, a molasses tank complex, a truck scale building, the terminal's bulk loader system, Warehouses B and C, numerous railroad tracks that run throughout the terminal, and the terminal's dry-bulk silo complex. ICF has evaluated the 10 resources for individual California Register of Historical Resources (CRHR) eligibility and found that none of them appear to meet any of the CRHR significance criteria. None of the resources, therefore, appear to qualify as historical resources for the purposes of CEQA. Nine of the resources (all but the silo complex) were determined to compose a potential historic district. ICF has evaluated this potential district and found that it does not appear to meet any of the CRHR significance criteria, and therefore does not appear to qualify as a historical resource for the purposes of CEQA. Consequently, the proposed project does not appear to have the potential to result in any impacts on historical resources.

No prehistoric archaeological resources were identified with the study area. However, CA-SDI-5931, an extensive prehistoric artifact scatter containing Native American burials, is within 200 feet east-northeast of the study area. Due to the presence of CA-SDI-5931, the resource's unknown southern boundary, and its high sensitivity, archaeological monitoring is recommended for all ground-disturbing activities occurring in areas east of Warehouse C, southeast of the rail car unloading building, and both north and east of the terminal entrance at Crosby Road. The area of sensitivity includes the molasses tanks, the rail tracks north, east, and southeast of the molasses tanks, and the paved and unpaved parking areas east of the Crosby Road entrance.

Project Description

The Tenth Avenue Marine Terminal (TAMT) is a 96-acre marine-related industrial shipping facility located along the northeast shoreline of San Diego Harbor opposite Coronado at the western edge of Barrio Logan, south of downtown San Diego and northwest of the Coronado Bridge (Figures 1 and 2). Terminal infrastructure consists of concrete bulkheads at ship berths, two transit sheds (Transit Sheds #1 and #2), two warehouses (Warehouses B and C), two bulk liquid storage facilities, a silo complex and conveyer system (bulk loader), on-dock rail tracks, and an entrance gate into the terminal with a security guard structure at the end of Crosby Road. The remaining areas within the site are dedicated to grounded refrigerated container storage, limited stacked containers, and open space for the handling and staging of import and export general, breakbulk, and roll-on or roll-off cargos.

The Tenth Avenue Marine Terminal Redevelopment Plan (TAMT Plan) would replace the existing 2008 Maritime Business Plan to provide greater flexibility and meet current and future market conditions at the terminal. Substantial flexibility has been built into the TAMT Plan. This technical study supports assessment of the TAMT Plan's "worst-case" effect on the environment, and thereby assumes that the terminal would operate at maximum capacity during the long-term planning horizon and that all potential structures identified in the TAMT Plan would be developed. Although terminal operation would not result in impacts on cultural resources, the potential exists for developmental components of the TAMT Plan to result in impacts on cultural resources.

The Demolition and Initial Rail Component is an initial project-level component of the TAMT Plan. Under this component, Transit Sheds #1 and #2 would be demolished to allow the San Diego Unified Port District (Port District) to use contemporary technologies and handling techniques to serve the needs of specialized and refrigerated cargos in an open area. Following demolition, subsurface conduit and other electrical improvements would be installed to allow future electrification of the terminal, including shore power capabilities at Berths 10-5/10-6. The transit shed sites would then be re-graded and paved to create an open lay-down area linking cargo from vessels to a multi-modal regional transportation system that includes industrial cross-docking facilities, cold storage facilities, rail facilities, and highways without the operational impediments under existing conditions.

To replace the demolished Transit Shed #2 headhouse, an approximately 3,600-square-foot modular building with marine operation offices, a conference room, a work area, and a break room for up to 15 employees would be constructed in the southeastern portion of the terminal, south of the existing molasses tanks and north of the main gate at Crosby Road. Underground water, sewer, and electrical utilities would be installed to support the proposed modular structure. Additional buildings and facilities would be developed to the west, where Transit Sheds #1 and #2 are currently located. An electrical gear room (276 square feet), restroom facility (368 square feet), and information technology room (138 square feet) would be developed within the current footprint of Transit Shed #1. An outdoor storage area (850 square feet) with chain link fencing would also be developed in this area.

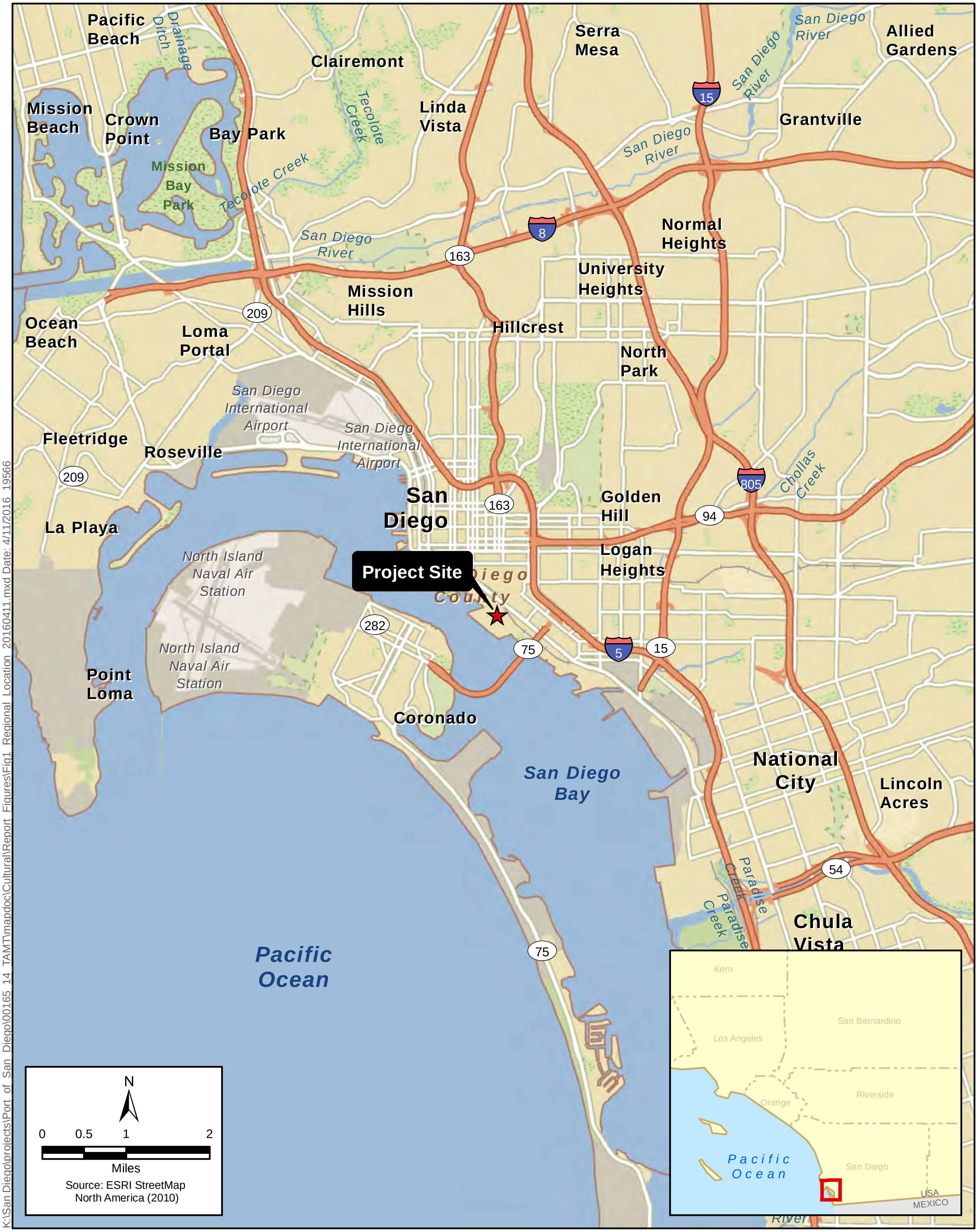

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Figure 1
Regional Location
Tenth Avenue Marine Terminal Redevelopment Plan and Demolition and Initial Rail Component

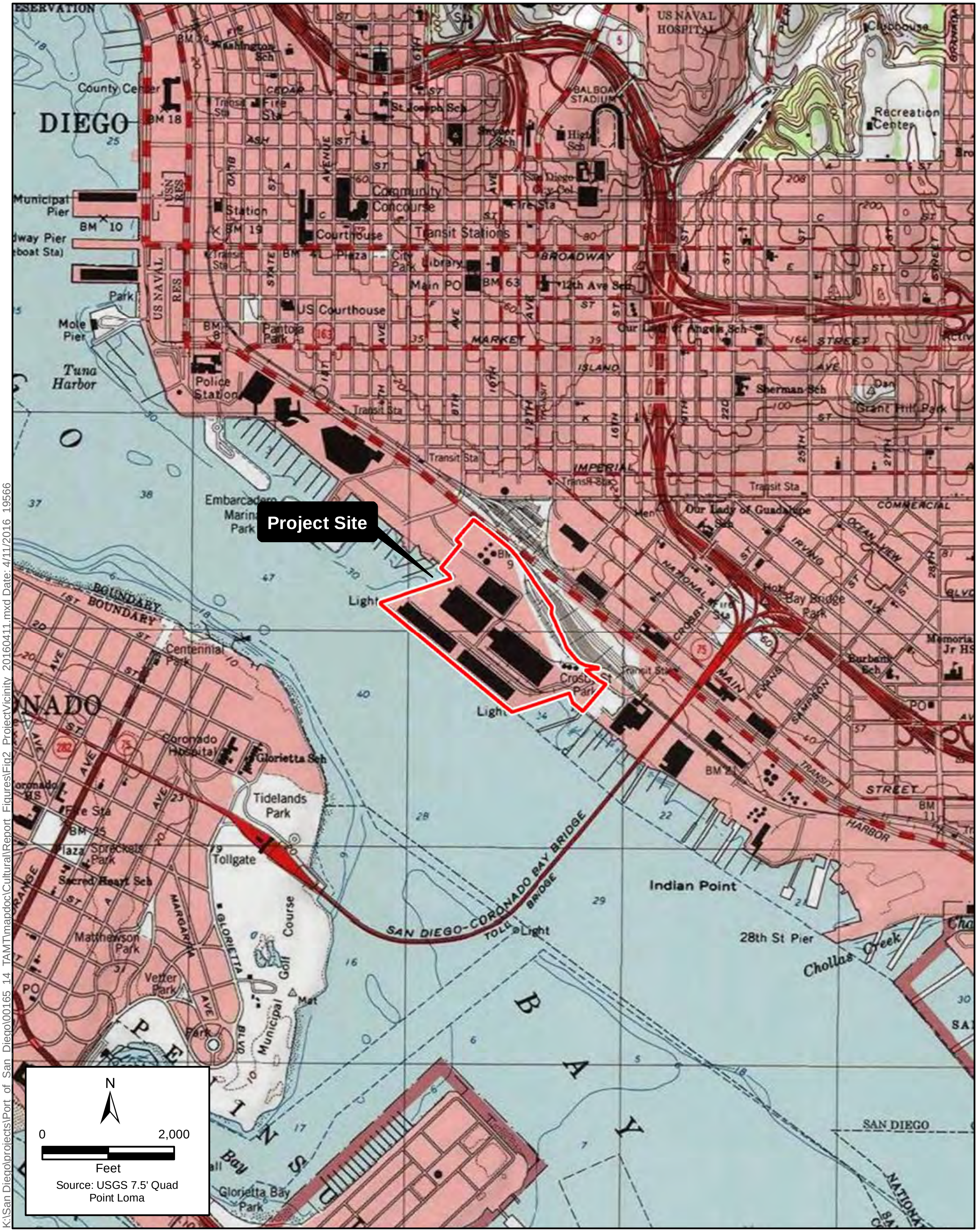

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Figure 2
Project Vicinity
Tenth Avenue Marine Terminal Redevelopment Plan and Demolition and Initial Rail Component

Rail improvements would include an automatic rail lubricator system installed in the southeastern portion of the terminal, just southeast of the molasses tanks, which would replace an existing manual process. Installation of air brake testing equipment, including a 100-square-foot structure and subsurface piping (approximately 15 feet), in the northeastern portion of the terminal would allow safety inspections to take place on the terminal, replacing the need for an additional stop at the adjacent railyard facility. Elimination of this additional stop, without compromising safety, would contribute directly to improved safety, efficiency, and emissions reductions. An additional generator and associated subsurface piping would also be installed in the northwestern portion of the current Transit Shed #1 footprint.

Other terminal improvements would involve the TAMT Plan's Dry Bulk, Refrigerated Container, and Multi-Purpose General Cargo nodes, and the central gate facilities. The Dry Bulk node would be located in a 15-acre area at the southeastern portion of the terminal that would be served primarily by Berths 10-7/10-8 and secondarily by Berths 10-5/10-6. The existing conveyor system (bulk loader) would be upgraded to handle multiple bulk commodities such as cement, bauxite, or soda ash. The Dry Bulk node would also maintain 5 acres of existing open storage space between Water Street and Terminal Street, and would add a consolidated bulk discharge unloader using a 2,000-metric-ton (MT) per hour vacuum for cementitious materials at Berths 10-7/10-8 (either a Kovaco, Siwertell, or equivalent system). The existing molasses tanks and Warehouse C would be demolished in association with the Dry Bulk and Multi-Purpose General Cargo nodes. The TAMT Plan's Dry Bulk node would also construct a multi-purpose dry bulk facility with two cement terminals and a new semi-permanent storage facility (up to a 100,000-square-foot horizontal structure and/or an equivalent vertical storage facility) to store dry bulk products. Various combinations of the following options could be developed: a new semi-permanent Rubb style of building up to 100,000 square feet for the storage of dry bulk products; six 9,000 MT silos to store up to 54,000 MT of bulk cement at each terminal; two domes that would each store up to 54,000 MT of bulk cement at each terminal; and any combination of buildings, silos, and domes to allow up to 108,000 MT of bulk cement storage capacity.

The Refrigerated Container node would be on approximately 40 acres within the northern portion of the terminal served by Berths 10-1/10-2 and 10-3/10-4, with overflow handled at Berths 10-5/10-6. The boundaries between the Refrigerated Container and Multi-Purpose General Cargo nodes would be flexible to allow the terminal to be used for the handling of diverse cargos as market conditions and vessel schedules permit. The Refrigerated Container node would maintain approximately 16 acres of existing outside storage space for refrigerated containers as well as the existing 294,000 square feet of cold storage facility (Warehouse B) and would add rail-mounted gauge electrical gantry cranes up to 100 feet tall at Berths 10-1/10-2 (two cranes) and Berths 10-3/10-4 (two cranes).

The Multi-Purpose General Cargo node would comprise approximately 30 acres in the central portion of the terminal and would be primarily served by Berths 10-5/10-6, with overflow handled at Berths 10-3/10-4. The boundary would be flexible to accommodate market needs and facilitate the handling of diverse cargos as market conditions and vessel schedules permit. Proposed improvements associated with this node would include the following: installation of up to two rail-mounted gauge electrical gantry cranes up to 100 feet tall at Berths 10-5/10-6; demolition of Warehouse C to create up to 20 acres of open storage space; and other improvements that would require separate environmental analysis.

Finally, the central gate facility in the southeastern corner of the terminal would also be altered. A new truck weigh station would be installed, after which the existing station would be sold for reuse or disposed of in a landfill. The TAMT Plan also identifies an alternative gate concept for the Refrigerated Container node and the Multi-Purpose General Cargo node. The alternative gate would be sited in the northeast corner of the terminal and provide access directly onto Harbor Drive. It would serve as the primary entry and exit location for "freight only" movements for the Refrigerated Container node and Multi-Purpose General Cargo node. According to the TAMT Plan, however, the Dry Bulk node would continue to utilize the existing gate off Caesar Chavez Parkway, particularly for domestic bulk shipments.

Cultural Resources Study Area

The cultural resources study area encompasses the Port District's entire 96-acre TAMT property (Figure 3). Although separated from other terminal facilities by fencing and a slope, four rail lines at the central far eastern side of the study area are within the terminal property. Those four rail lines are at a lower grade than the portion of the terminal property to the immediate west, and at the same grade as nearby rail lines in the Burlington Northern Santa Fe (BNSF) railyard immediately east of the terminal site. However, those four lines are integral to the terminal's operations, and they are not part BNSF railroad yard. The majority of the study area is underlain with dredged fill and has been developed with buildings, structures, and rail lines. The entire surface of the terminal site has been disturbed and most areas between buildings and structures are paved. Parking areas near the terminal entrance at Crosby Road are covered with gravel. Small strips or patches of unpaved surface or deteriorated pavement are covered with gravel or weed growth in the area north of Crosby Road and east of Warehouse C. Prior to filling of the site in the late 1950s, most of the eastern portions of the study area consisted of tideland shoreline. A variety of industrial uses took place along that shoreline prior to development of the terminal. Some of these industrial uses took place at the far northeastern corner and the southeastern portion of the cultural resources study area.

Figure 3
Project Area
Tenth Avenue Marine Terminal Redevelopment Plan and Demolition and Initial Rail Component

California Environmental Quality Act and Cultural Resources

The California Environmental Quality Act (CEQA) requires public agencies to evaluate the implications of their project(s) on the environment and includes significant historic resources as part of the environment. Public agencies must treat any cultural resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant (California Code of Regulations [CCR] Title 14 §15064.5). A historic resource is considered significant if it meets the definition of *historical resource* or *unique archaeological resource*, as defined below.

Historical Resources

The term *historical resource* includes, but is not limited to any object, building, structure, site, area, place, record, or manuscript which is historically or archaeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of the California Public Resources Code (PRC) (PRC §5020.1(j)). Historical resources may be designated as such through three different processes:

1. Official designation or recognition by a local government pursuant to local ordinance or resolution (PRC §5020.1(k))
2. A local survey conducted pursuant to PRC §5024.1(g)
3. The property is listed in or eligible for listing in the National Register of Historic Places (NRHP) (PRC §5024.1(d)(1))

The process for identifying historical resources is typically accomplished by applying the criteria for listing in the California Register of Historical Resources (CRHR) (CCR Title 14 §4852), which states that a historical resource must be significant at the local, state, or national level under one or more of the following four criteria.

1. It is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.
2. It is associated with the lives of persons important in our past.
3. It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master or possesses high artistic values.
4. It has yielded, or may be likely to yield, information important in prehistory or history.

To be considered a *historical resource* for the purpose of CEQA, the resource must also have integrity, which is the authenticity of a resource's physical identity evidenced by the survival of characteristics that existed during the resource's period of significance.

Resources, therefore, must retain enough of their historic character or appearance to be recognizable as historical resources and to convey the reasons for their significance. Integrity is evaluated with regard to the retention of location, design, setting, materials, workmanship, feeling, and association. It must also be judged with reference to the particular criteria under which a resource is eligible for listing in the CRHR (CCR Title 14 §4852(c)).

Unique Archaeological Resources

A *unique archaeological resource* is defined in section 21083.2 of the PRC as an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria.

- Contains information needed to answer important scientific research questions and for which there is a demonstrable public interest
- Has a special and particular quality such as being the oldest of its type or the best available example of its type
- Is directly associated with a scientifically recognized important prehistoric or historic event or person

In most situations, resources that meet the definition of a unique archaeological resource also meet the definition of *historical resource*. As a result, it is current professional practice to evaluate cultural resources for significance based on their eligibility for listing in the CRHR. For the purposes of this CEQA cultural resources study, a resource is considered significant if it meets the CRHR eligibility (significance and integrity) criteria. Individual resource assessments of eligibility are provided in this report.

Even without a formal determination of significance and nomination for listing in the CRHR, the lead agency can determine that a resource is potentially eligible for such listing, to aid in determining whether a significant impact would occur. The fact that a resource is not listed in the CRHR, or has not been determined eligible for such listing, and is not included in a local register of historic resources, does not preclude an agency from determining that a resource may be a historical resource for the purposes of CEQA.

Discovery of Human Remains

With respect to the potential discovery of human remains, Section 7050.5 of the California Health and Human Safety Code states the following.

a. Every person who knowingly mutilates or disinters, wantonly disturbs, or willfully removes any human remains in or from any location other than a dedicated cemetery without authority of law is guilty of a misdemeanor, except as provided in Section 5097.99 of the Public Resources Code. The provisions of this subdivision shall not apply to any person carrying out an agreement developed pursuant to subdivision (l) of Section 5097.94 of the Public Resources Code or to any person authorized to implement Section 5097.98 of the Public Resources Code.

b. In the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the human remains are discovered has determined, in accordance with Chapter 10 (commencing with Section 27460) of Part 3 of Division 2 of Title 3 of the Government Code, that the remains are not subject to the provisions of Section 27491 of the Government Code or any other related provisions of law concerning investigation of the circumstances, manner and cause of any death, and the recommendations concerning the treatment and disposition of the human remains have been made to the person responsible for the excavation, or to his or her authorized representative, in the manner provided in Section 5097.98 of the Public Resources Code. The coroner shall make his or her determination within two working days from the time the person responsible for the excavation, or his or her authorized representative, notifies the coroner of the discovery or recognition of the human remains.

c. If the coroner determines that the remains are not subject to his or her authority and if the coroner recognizes the human remains to be those of a Native American, or has reason to believe that they are those of a Native American, he or she shall contact, by telephone within 24 hours, the Native American Heritage Commission.

Of particular note to cultural resources is subsection (c), requiring the coroner to contact the Native American Heritage Commission (NAHC) within 24 hours if discovered human remains are thought to potentially be those of Native American origin. After notification, NAHC will follow the procedures outlined in PRC Section 5097.98, which include notification of most likely descendants, if possible, and recommendations for treatment of the remains. Also, knowing or willful possession of Native American human remains or artifacts taken from a grave or cairn is a felony under State law (PRC §5097.99).

Thresholds of Significance

According to CEQA, a project that causes a *substantial adverse change* in the significance of a *historical resource* or a *unique archaeological resource* has a significant effect on the environment (CCR Title 14 §15064.5; PRC §21083.2). CEQA defines a *substantial adverse change* as (CCR Title 14 §15064.5(b)):

- Physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of a historical resource would be materially impaired; or
- Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register of Historical Resources; or
- Demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources pursuant to section 5020.1(k) of the Public Resources Code or its identification in an historical resource survey meeting the requirements of section 5024.1(g) of the Public Resources Code, unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or
- Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its eligibility for inclusion in the California Register of Historical Resources as determined by the lead agency.

City of San Diego

The TAMT is not within the jurisdiction of the City of San Diego. The Historical Resource provisions in the City's Land Development Code do not apply to the TAMT. For this reason, the evaluations of historic-period resources in this cultural resources study do not apply City of San Diego Historical Resources Register significance criteria.

The TAMT is a developed marine-related industrial area situated south of downtown San Diego and northwest of the Coronado Bridge. The 96-acre terminal site is a paved landfill with concrete bulkheads and rubber or timber finders along each berth face. The terminal currently serves as an omni breakbulk, bulk, project cargo, and niche container facility. Buildings and structures at the site include transit sheds and warehouses, silos, a dry-bulk conveyor system, rail tracks, and an entrance gate with a security guard structure at the end of Crosby Road. The remaining areas within the terminal site are dedicated to grounded refrigerated container storage, limited stacked containers, and open space for the handling and staging of import and export cargo. The terminal does not include any formally dedicated streets or roads. However, three distinct paved areas essentially function as roads; these are referred to by terminal users as Terminal Street, Switzer Street, and Water Street. The site does not contain any vegetation, and is underlain with fill placed to create it in the 1950s. The majority of the site is covered by asphalt, although there is a small 1-acre portion of the site at the entrance that is unpaved.

Three water-dependent shipyards are located immediately south of the terminal. Other industrial uses in the vicinity include a BNSF rail facility, located between the terminal and Harbor Drive, and a Metropolitan Transit System yard, located north and east of the terminal, which serves the San Diego Trolley system. The nearby shipyards, BNSF rail facility, and Restaurant Depot (a wholesale distribution warehouse located off tidelands, just east of the terminal) are all industrial uses in the immediate area. The Barrio Logan neighborhood, immediately east of the terminal, includes a mix of light industrial, commercial, residential, school, and park uses. Other areas near the terminal include a baseball stadium (i.e., Petco Park), several hotels, and the San Diego Convention Center.

Cultural Setting

Prehistoric Context

The following culture history outlines and briefly describes the known prehistoric cultural traditions of the region. The approximately 10,000 years of documented prehistory of the San Diego region has often been divided into three periods: Early Period (San Dieguito tradition/complex), Archaic Period (Milling Stone Horizon, Encinitas tradition, La Jolla and Pauma complexes), and Late Prehistoric Period (Cuyamaca and San Luis Rey complexes).

Early Period Complexes

The Early Period encompasses the earliest documented human habitation in the region. The “San Dieguito complex” is the earliest reliably dated occupation of the area. The assemblage of artifacts associated with the San Dieguito complex has been studied and elaborated upon extensively (Rogers 1939, 1945, 1966; Warren and True 1961; Warren 1967; Moriarty 1969, 1987). The complex correlates with Wallace’s (1955) “Early Man Horizon,” and Warren subsequently defined a broader San Dieguito tradition (1968). The earliest component of the Harris Site (CA-SDI-149/316/4935B) is located along the San Dieguito River and is characteristic of the San Dieguito complex (Warren 1966, 1967; Warren and True 1961). Artifacts from the lower levels of the site include leaf-shaped knives, ovoid bifaces, flake tools, choppers, core and pebble hammerstones; several types of scrapers, crescents, and short-bladed shouldered points (Warren and True 1961; Warren 1966). Little evidence for the San Dieguito Complex/Early Man Horizon has been discovered north of San Diego County.

Some researchers interpret the San Dieguito complex as having a primarily, but not exclusively, hunting subsistence orientation (Warren 1967, 1968, 1987; Warren et al. 1998). Others see a more diversified San Dieguito subsistence system as possibly ancestral to, or as a developmental stage for, the subsequent, predominantly gathering oriented complex denoted as the "La Jolla/Pauma complex" (cf. Bull 1983; Ezell 1987; Gallegos 1985, 1987, 1991; Koerper et al. 1991).

Archaic Period Complexes

In the southern coastal region of California, the Archaic Period dates from circa 8,600 years before present (BP) to circa 1300 BP (Warren et al. 1998). During the Archaic Period, the La Jolla/Pauma complexes have been identified from the content of archaeological site assemblages dating to this period. These assemblages occur at a range of coastal and inland sites, and appear to indicate that a relatively stable and sedentary hunting and gathering complex, possibly associated with one people, was present in the coastal and immediately inland areas of San Diego County for more than 7,000 years. La Jolla/Pauma complex sites are considered to be part of Warren's (1968) "Encinitas tradition" and Wallace's (1955) "Milling Stone Horizon." The inland or "Pauma complex" aspect of this culture lacks shellfish remains, but is otherwise similar to the La Jolla complex and may, therefore, simply represent a non-coastal expression of the La Jolla complex (True 1958, 1980; True and Beemer 1982). The content of these site assemblages is characterized by manos and metates, shell middens, terrestrial and marine mammal remains, burials, rock features, cobble-based tools at coastal sites and increased hunting equipment and quarry-based tools at inland sites. Artifact assemblages can also include bone tools, doughnut stones, discoidals, stone balls, plummets, biface points/knives, Elko-eared dart points, and beads made of stone, bone, and shell. Beginning approximately 5500 BP, and continuing during the latter half of the Archaic Period, evidence of hunting and the gathering and processing of acorns gradually increases through time. The evidence in the archaeological record consists of artifacts such as dart points and the mortar and pestle, which are essentially absent during the early Archaic Period. The initial and subsequent increasing use of these technologies during the middle and late Archaic constitutes a major transition in how the prehistoric populations interacted with their environment in the southern coastal region. The period of this shift, from ca. 4000 to 1300 BP, has been designated as the Final Archaic Period (Warren et al. 1998).

Late Prehistoric Period Complexes

In the San Diego area, the Late Prehistoric Period has been described as a time characterized by an increased number of sites, and "many technological innovations, and new patterns in material culture and belief systems" (McDonald and Eighmey 1998). This description, in fact, aptly describes the period for the entire San Diego County area. Changes in tool and ornament types, burial practices, and site location choices, from those documented for the earlier periods, are well documented in the archaeological record and are described below.

As with the earlier periods, archaeologists have defined distinctive complexes for the Late Prehistoric Period prehistoric cultures of the area. Two complexes have been defined for the protohistoric occupants of the area. One, designated as "San Luis Rey," is identified in the southern Orange, western Riverside, and northern San Diego counties areas; the other, "Cuyamaca," is identified in southern San Diego County (Meighan 1954; True 1966, 1970; True et al. 1974). The San Luis Rey complex is believed to be the progenitor of the Shoshonean-speaking peoples (Luiseño/Juaneño culture) living in the area at the time of historic contact in northern San Diego County (referred to as San Luis Rey of Shoshonean origin) (cf. Koerper 1979). Those of southern San Diego County (Cuyamaca, Yuman), are believed to be the ancestors of the Hokan-speaking Diegueño or Kumeyaay (Ipai/Tipai) occupying southern San Diego County at contact. The demarcation line between the San Luis Rey complex and the Cuyamaca complex is believed to be near the historic separation of the tribal territories of the Luiseño/Juaneño and Diegueño. It is highly unlikely, however, that the boundary remained static over time. During Late Prehistoric times, the project area would have been within the area commonly associated with the archaeologically defined Diegueño or Kumeyaay (Ipai/Tipai) complex.

Hearths documented at southern San Diego County sites are often clay-lined, yet this type of hearth is not found in the northern county sites. The Luiseño/Juaneño of southern Orange and northern San Diego counties appear to have primarily practiced cremation (Kroeber 1925), but may also have occasionally buried the dead by inhumation. The use of special burial urns for cremations, however, was apparently not commonly practiced.

Ethnographic Context

The project site is situated within the traditional territory of the people known to the Spaniards as the Diegueño, a term derived from the San Diego Mission Alcalá, with which these people came to be associated. This term was later adopted by anthropologists (Kroeber 1925) and further divided into the southern and northern Diegueño. Shipek (1982) later initiated use of a Yuman language term "Kumeyaay" for the people formerly designated as the Diegueño. The Kumeyaay are traditionally considered to be a hunter-gatherer society characterized by central-based nomadism.

The linguistic and language boundaries as seen by Shipek (1982) subsume the Yuman speakers into a single nomenclature, the Kumeyaay, a name applied previously to the mountain Tipai or Southern Diegueño by Lee (1937), while Almstedt (1974) noted that ‘Ipai applied to the Northern Diegueño with Tipai and Kumeyaay for the Southern Diegueño. However, Luomala (1978) has suggested that while these groups consisted of over 30 patrilineal clans, no singular tribal name was used and she referred to the Yuman-speaking people as Iipai/Tipai (Carrico 1998).

As with most hunting-gathering societies (Service 1966), Kumeyaay social organization was formed around culturally defined kinship ties. More specifically, the Kumeyaay possessed a patrilocal type of band organization with band exogamy (marriage outside of one's band) and virilocal marital residence (the married couple integrates into the male's band). The band is often considered synonymous with a village or rancheria, which is a political entity. Following White (1963), Almstedt (1980) has suggested that the term rancheria be applied to both a social and geographical unit, as well as to the particular population and territory held in common by a native group or band. She also stressed that the territory for a rancheria might comprise a 30-square-mile area. Many households would constitute a village or rancheria and several villages were part of a much larger social system usually referred to as a consanguineal kin group (cimuL). The cimuL is typically an exogamous, multilocal, patrilineal, consanguineal descent unit, often widely dispersed in local lineage. The members of the cimuL do not intermarry because of their presumed common ancestry, but they maintain close relations and often share territory and resources (Sahlins 1968; Service 1971; Luomala 1963).

Other researchers have designated the San Diego River as a natural feature dividing the Kumeyaay with those people living north of it being the 'Iipai (Northern Diegueño), and those south of the River and into Baja California being the Tipai (Southern Diegueño) (Langdon 1975; Hedges 1975). With a history stretching back at least 2,000 years, the Kumeyaay at the point of contact were, as described by Carrico, settled in permanent villages or rancherias with strong alliances. Carrico has indicated the possible locations for a number of these villages in the San Diego County area (Carrico 1998).

While the Kumeyaay exploited a large variety of terrestrial and marine food sources, emphasis was placed on acorn procurement and processing, as well as the capture of rabbit and deer. Shipek (1989) has strongly suggested that the Kumeyaay, or at least some bands of the Kumeyaay, were practicing proto-agriculture at the time of Spanish contact. While the evidence is problematic, the Kumeyaay were certainly adept land and resource managers with a history of intensive plant husbandry.

The Kumeyaay practiced many forms of spiritualism with the assistance of shamans (kuessay) and cimuL leaders. Spiritual leaders were neither elected nor inherited their position, but achieved status because they knew all the songs involved in ceremonies (Shipek 1991) and had an inclination toward the supernatural. Important Kumeyaay ceremonies included male and female puberty rites, the fire ceremony, the whirling dance, the eclipse ceremony, the eagle dance and the cremation ceremony, as well as the yearly mourning ceremony (Spier 1923). The primary ceremonial direction among the Kumeyaay is east, with rock art and entrances to ceremonial enclosures usually facing this direction (Kroeber 1925). The Kumeyaay are the only California tribe known to possess a color-direction system where white represents the east, green-blue the south, black the west, and red the north (Kroeber 1925).

Historic Context

San Diego, the Harbor, and the Tidelands in the Nineteenth Century

During the Spanish and Mexican periods of California history, and the first years of the American period, San Diego's population and development remained centered in Old Town, approximately 4 miles northwest of the terminal site. During these periods, Native Americans made use of the marshy tidelands south of Old Town, in the vicinity of today's downtown San Diego and areas farther south, but European colonists and Hispanic settlers did not frequent these areas (Brian F. Smith and Associates 2011:18, 20).

William Heath Davis made the first attempt to promote settlement and development beyond Old Town. In 1850 Davis acquired land near Punta de los Muertos, the original Spanish harbor-landing point, and constructed a wharf and a cluster of homes on several nearby lots. Davis's "New Town San Diego" ultimately failed and became known as Davis's folly. During the Civil War, the population of Old Town declined from 731 people to a mere 200 by 1865. In 1867, Alonzo Horton purchased 800 acres of land around New Town. Horton succeeded where Davis had failed. By 1870 Horton's Addition—the second New Town San Diego—had 2,300 residents and a growing number of hotels, warehouses, and industrial and residential buildings that formed an increasingly urbanized built environment. The terminal study area is south of Horton's Addition. It appears that a small portion of the southeastern study area may have been situated within the southwestern corner of a subdivision acquired and laid out by Joseph Mannasse and Marcus Schiller in 1870. City leaders set aside the area east of Mannasse and Schiller's Addition, known as the East End, for the planned terminus of a transcontinental railroad line into San Diego, which failed to be developed during the 1870s (Brian F. Smith and Associates 2011:22; Pourade 1964:22–29).

Near the end of that decade, National City's Frank Kimball persuaded the Atchison, Topeka, and Santa Fe Railroad (Santa Fe) to support construction of a transcontinental connection from San Bernardino south to San Diego and National City. This line, the California Southern Railroad, was completed during the early 1880s and eventually acquired by the Santa Fe. Washouts plagued the Temecula Canyon portion of the line approximately 45 miles north of San Diego, which the Santa Fe ultimately abandoned. San Diego became dependent on a coastal branch line north to the main Santa Fe line at Fullerton. The Santa Fe never fulfilled an earlier agreement to locate its shops at National City. Although the railroad helped swell San Diego's population with newcomers and raised property values, the land boom of the 1880s created a speculative bubble that eventually burst. With the rising tide of incoming migration during the boom, San Diego's population reached 40,000 in 1888. But after the bust, the ebb of outmigration left the city with 16,000 residents in 1890. Despite the bust, the Mannasse and Schiller subdivision and the East End benefited from their proximity to downtown San Diego and the bay. They continued to grow, albeit slowly (Brian F. Smith and Associates 2011:24, 27–28; Irwin 1970:8–11).

San Diego's main nineteenth-century commercial port facilities consisted of a wharf built in 1850 near the south end of today's Kettner Boulevard, and the wharf constructed in 1868 by Alonzo Horton. The City of San Diego constructed no other major wharfs until the twentieth century. In 1891 the War Department improved the navigation channel north of Ballast Point. At that time San Diego had almost no industrial activity. Its maritime exports remained limited to sand and rocks extracted at Ballast Point and hinterland agricultural products. Commercial trade through the harbor averaged only $70,000 per year throughout the 1890s. At the end of the decade, the Zuniga Jetty was built south from the west end of North Island at the harbor entrance (Harbor Department 1948: 65; Irwin 1970:11–12; Port District ca. 1974:1).

San Diego Harbor during the First Half of the Twentieth Century

San Diego was fortunate to have an ideal natural harbor, and much of its citizenry supported industrial tideland development and expanded port commerce, but in terms of waterborne shipping, the city and harbor would remained challenged by geography and regional patterns of transportation development. Separated from San Diego by an extensive mountain range, the agriculturally productive Imperial Valley formed its own county in 1905. Imperial Valley growers made use of the Southern Pacific Railroad's main line from Arizona to Los Angeles, where convenient railroad connections, increasing agricultural output, and booming petroleum production helped support increasing trade through that city's engineered port. Regardless of San Diego's demand for imports, it lacked the export commodity production necessary to fill the hulls of outgoing ships and thereby support expanded trade through its harbor. Although John D. Spreckels' San Diego and Arizona (SD&A) Railroad completed a line east to Imperial Valley in 1919, E.H. Harriman of the Southern Pacific—with its competing interests in the Port of Los Angeles—was a silent partner in that project. During the pre-World War II decades, the SD&A Railroad, which was renamed the San Diego and Arizona Eastern (SD&AE) would never carry more than a small freight volume, and never generate any consequential increase in maritime trade through San Diego Harbor (Hennessey 1993:129–30; Irwin 1970:12-17).

Still, San Diegans remained eager to reap the economic benefits that could be gained through harbor and waterfront development. In 1911 the State of California handed control of tidelands to local governments that agreed to invest at least $1,000,000 in tideland improvements. San Diego voters approved $1,000,000 and $400,000 bond issues for harbor improvements in 1912 and 1914 respectively. In 1912, in anticipation of new municipal wharf development, the City arranged for dredging of a 30-foot-wide channel from the shoreline near the west end of D Street (today's Broadway Street) to the harbor's entry channel (Irwin 1970:30–31, 44; Port District ca. 1974:2).

This initial phase of twentieth-century harbor development occurred as part of the planning for the Panama-California Exposition of 1915, one of the most formative events in San Diego history. Although San Diegans across the political spectrum would come to embrace the exposition, municipal plans for commercial pier development in advance of the exposition generated significant disagreement, and revealed emerging tensions that would shape San Diego politics and public debates over waterfront development into the latter twentieth century.

Opposing the new pier was a progressive reform-oriented coalition that advocated park development, nature conservation, and the kind of comprehensive city planning and aesthetic improvement associated with the City Beautiful Movement, the latter of which had been inspired in large part by the Chicago's 1893 Columbia Exposition. Committed to promoting tourism, these San Diegans also viewed the City's pier development plans as a violation of John Nolan's 1908 plan for San Diego. Embodying City Beautiful ideals, Nolan's plan had put significant emphasis on the waterfront and attempted to balance commercial development with aesthetically pleasing civic and recreational space. Nolan had envisioned a public plaza and transportation terminals at the end of D Street, with the waterfront to the north reserved for recreation and the waterfront south of E Street reserved for commercial and industrial development. Nolan had been recruited by George Marston, the influential moderate-progressive department store owner, City Beautiful advocate, and nature conservationist whose land donations would eventually provide for the creation of Torrey Pines and Anza Borrego State Parks (Polos 1984; Pourade 1965:99–105). Acting on behalf of Marston and other influential progressive-minded defenders of the Nolan Plan, San Diego's Civic Improvement Association attempted to postpone decision on the bonds for development of the pier's bulkhead until after the upcoming 1913 election, in which Marston which ran for mayor as the progressive candidate.

Business interests committed to commercial and industrial development supported the new pier over strict adherence to the Nolan Plan. Representing those interests, Frederick J. Lea, manager of a building materials company and chair of the Exposition Executive Committee, responded to the Civic Improvement Association by declaring that no "reputable taxpayer or citizen or businessman in San Diego has the nerve to help openly defeat these bonds," and warning that if any influential citizens "secretly oppose the bonds, we will find it out and their names will be published." Shortly thereafter, the Civic Improvement Association announced its support of the bonds, and the City proceeded with construction of 2,675 feet of downtown harbor bulkhead and the abutting commercial pier. Marston ran for mayor in 1913 and 1917. During the latter election, his younger opponent, Louis Wilde, represented business interests seeking more aggressive industrial development and cast the elder Marston as an effete elitist. Wilde would eventually win the election with a campaign centered on the slogan: "Smokestacks versus Geraniums" (Polos 1984; Pourade 1965:99–105, 135–36 [135 quoted]). The Nolan Plan, and the political divide over it, would shape the course of San Diego Harbor development throughout the twentieth century.

Figure 4. Broadway and B Street Piers (also known as the Embarcadero Piers), circa 1928 (San Diego History Center Photograph Collection, Sensor 52-46)

The completed D Street (Broadway) Pier included a building with architectural elements in keeping with designs of the buildings constructed for the Panama-California Exposition grounds in Balboa Park, which reflected and helped shape an emerging regional revivalist architecture commemorating California's Spanish colonial past. The pier's warehouse office front, or "headhouse," was designed in the Mission Revival style. It featured a shaped parapet over a large arched main warehouse entry, on each side of which rose pilasters incorporating narrow niche-like arches crowned by finials (Irwin 1970:44; Pourade 1965:135, 165, 193, 216; San Diego History Center 1925). In 1926 the City completed construction of the B Street Pier to the north of the D Street (Broadway) pier. The two piers would also become known as the Embarcadero Piers. The architecture of the office headhouse fronting the B Street Pier's transit shed reflected the rise of Art Deco during the 1920s and incorporated Jacobean elements (Irwin 1970:44; Port District ca. 1974:2; San Diego History Center 1929).

According to historian Richard Pourade, completion of the B Street Pier and associated industrial development "brought a realization...that with rapid growth of the city there had to be some plan if there was to be any orderly development at all" (Pourade 1967:29). During the 1920s, the Marston contingent of progressive City Beautiful advocates found a receptive mayor in John Bacon and a city council willing to have Nolan update his plan for San Diego. Nolan proposed a waterfront civic center along the lines of the County Administration Center that would eventually be developed north of the municipal piers, and a scenic waterfront drive that would follow the northerly curve of the bay toward Point Loma. He recommended no more commercial piers north of the B Street Pier, consigned commercial-industrial development to the area south of Market Street, and envisioned development of an airport adjacent to the drive on the north side of the harbor. Nolan's second plan also incorporated military facilities that had been developed west and northwest of the airport site. In 1926, the city council adopted Nolan's new plan as a development guide, but not as an official plan

(Pourade 1967:36–45). By then, federal military investment had come to dominate harbor development and the local San Diego economy generally.

San Diego began courting the military in 1912, when Congressman William Kettner and local Chamber of Commerce Secretary Rufus Choate lobbied the federal government for appropriations to widen and deepen the harbor entrance, ostensibly for commercial purposes. In the subsequent competition among Pacific coastal cities for federal military appropriations, Kettner spearheaded ongoing lobbying efforts on behalf of his hometown, while Navy Admiral George Dewey helped sway congress in favor of investment in San Diego harbor, and the city's citizens voted to lease or deed extensive tideland acreage for naval development. During the years 1916–17, the first West Coast Marine Corps Advance Base, the Naval Hospital, and Rockwell Field (later the North Island Naval Air Station) were established in San Diego. After World War I, Navy planners became convinced that Japan posed the greatest immediate threat to U.S. interests and committed to moving half of the nation's fleet to the West Coast. San Diego became the home of the Pacific Destroyer Force. By the mid-1920s, the federal government had completed or begun developing the Destroyer Base (today's Naval Base San Diego), the Naval Training Station, the Marine Corps Recruit Base, the Naval Radio Station, the Fleet Fuel Depot, the U.S. Coast Guard Base, and Fort Rosecrans (Hennessey 1993:130–133; 143; Shragge 1994:338–39).

During the 1920s, federal investment in naval facility development and operation became the largest factor in the local economy, generating an economic boom that in turn led to increased non-military infrastructural development. The military payroll in San Diego reached $15 million during that decade, and the local population nearly doubled to 147,995. New housing subdivisions spread east, the central business district expanded, and manufacturing activity increased. In conjunction with the Navy's plans for increased harbor dredging to accommodate aircraft carriers, San Diego voters approved a $650,000 bond in 1928 to develop the first phase of the airport that would become Lindbergh Field on reclaimed land north of the Embarcadero Piers and east of the Marine Corps Recruit Base (Hennessey 1993:138–43; Shragge 1994:340–355).

Ever since the days of the first Nolan Plan, many influential San Diegans had wanted to reserve as much harbor space as possible for recreation, which had the economic benefit of attracting tourism. But others had hoped that military investment would help transform the city's harbor into a thriving shipping hub. The latter group believed shipping and industrial production along the harbor's tidelands would nurture one another and boost overall economic growth (Emblen 1949:15; Hennessey 1993:136–37). In 1920, 557,224 tons of material valued at $19,370,400 was shipped commercially through San Diego harbor. By 1927, shipping volume had increased to 942,476 tons valued at $46,803,000. However, there remained a striking imbalance in favor of imports. Of the total material handled, inbound cargo made up 93% (522,696 tons) in 1920 and 95% (900,781 tons) in 1927. Shipping volumes declined during the Great Depression of the 1930s, and by the end of that decade, San Diego's commercial shipping volume ranked it 23rd of 24 West Coast ports (Klaus 1928:24–25; Hennessey 1993:137; Irwin 1970: 22–23).

By the onset of World War II, ports in other West Coast cities had developed commercial shipping facilities that dwarfed San Diego's modest Embarcadero Piers in terms of size and capacity. Portland, for example, had four marine terminals (including one incorporating three major piers) that featured warehouses, transit sheds, and facilities for efficiently conveying dry bulk commodities such as rock, ores, coal, sulfur, and grain from rail cars to ships. As early as 1922, these dry bulk facilities included a rail car unloader that tipped and tilted cars to empty their contents out of opened doors, as well as extensive conveyor-belt systems that transported bulk commodities to traveling dockside loading towers and with spouts that deposited such commodities directly into ship hulls (Figures 5 and 6). These kinds of dry bulk rail-car unloading and dockside ship-loading facilities would not be developed in San Diego until the 1960s (Port of Portland 1922; Portland City Club 1944:135).

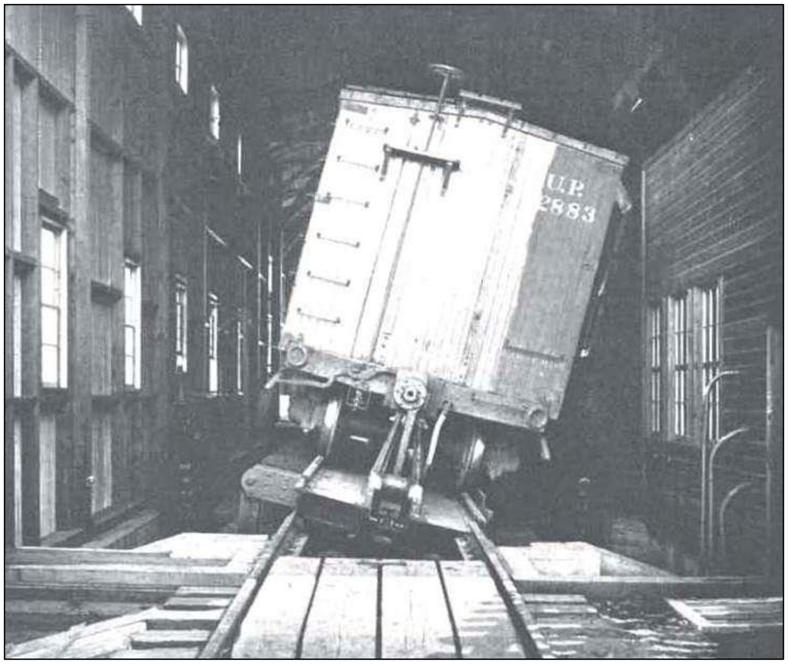

Figure 5. Tilted boxcar at early-twentieth-century rail car unloading facility, Terminal 4, Pier 5, Port of Portland (from Port of Portland 1922)

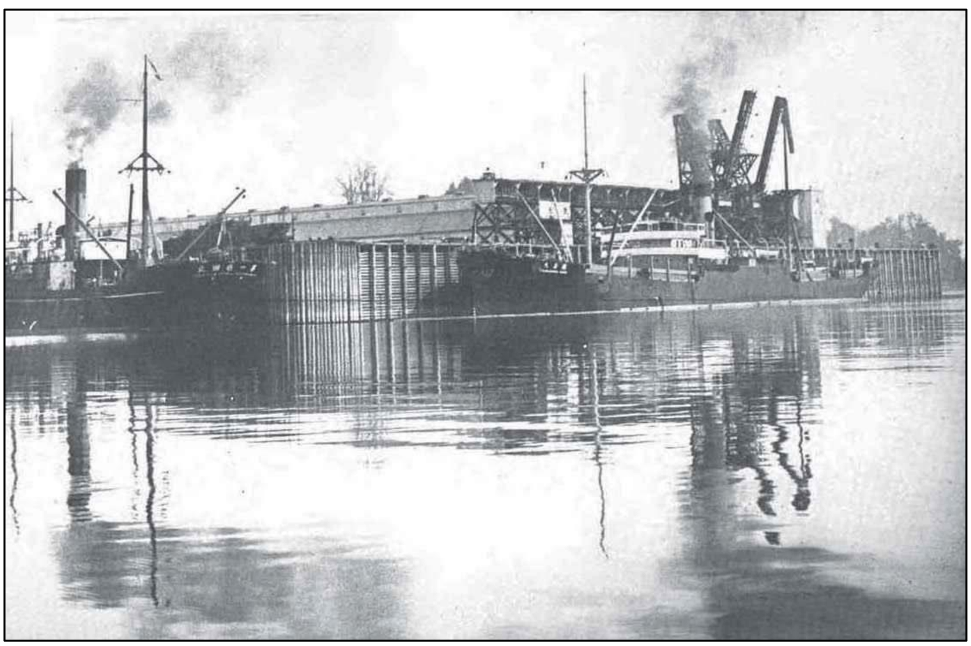

Figure 6. Early-twentieth-century bulk commodity plant, including loading conveyor belt and traveling ship-loading towers (upper right) at Terminal 4, Pier 5, Port of Portland (from Port of Portland 1922)

Commercial Port Development and the Post-World War II San Diego Harbor

During the post-World War II decades of the historic period, the City of San Diego undertook to make its harbor a competitive commercial shipping port. Although San Diego harbor had become a major center of non-military economic activity prior to World War II, it continued to falter as a waterborne shipping hub immediately following the war. The longstanding tuna fishing industry continued to flourish, and construction of the G Street Mole Pier added to the harbor's approximately 15,000 feet of berthing space at commercial fishing piers across the harbor. Shipbuilding and repair facilities operated by the Martinolich Ship Building Company, the Lynch Shipbuilding Company, the National Steel and Shipbuilding Corporation, the Campbell Shipbuilding Company, and the San Diego Marine Construction Company all thrived. San Diego's population exploded during the war and continued to grow afterward. New construction helped support tideland lumber yards and joined with the shipbuilding industry and the growing aircraft and defense industries to increase demand for steel products fabricated at tideland plants. Compared to other California and West Coast harbor cities, however, San Diego's shipping activity languished on the heels of the war. Cargo ships supplied San Diego with petroleum, copra, newsprint, fish, fruits and vegetables, coffee, and livestock, then left the harbor carrying export products such as beer, juice, cans, iron and steel, machinery, salt, gypsum, chemicals, feeds, grain, and airplane parts. In 1948, 2.6 million pounds of material with a shipping value of $300,000 moved through the harbor. This gave San Diego a ranking of last among 13 California shipping ports and 24th among 25 West Coast shipping ports (Harbor Department 1948:11–12, 20-41; U.S. Department of Commerce 1950).

Beginning in the late 1940s, John Bate, the Port Director of the City's Harbor Department, endeavored to secure a greater share of West Coast shipping business for San Diego. No individual had more influence in shaping San Diego port development and governance during the post-war era. Implementing steps recommended in a study commissioned by previous Port Director Joe Brennan, Bate acted to market the harbor more aggressively and solve the problem of securing export commodities. He initiated and marshaled through plans to create facilities that could accommodate greater numbers of cargo ships. He traveled widely and lobbied aggressively to attract foreign interest, secure improved railroad freight rates, and overcome commercial shipping associations' dismissal of San Diego as a harbor that lacked viable export commodities and remained dominated by the U.S Navy. Over the longer term, Bate was also instrumental in creating an independent port authority to manage the tidelands across San Diego harbor. Assessing Bate's efforts in 1957, *San Diego Magazine* reporter Ruth Nuttall described him as a "dragon-slayer even in a business suit," and quoted a Bate ally who characterized the Port Director as a man who "no longer knows where the legend ends and Bate begins," whose "key words are 'challenge' and 'impossible'" (Emblen 1949:15, 37–38; Irwin 1970:38–39; Nuttall 1957:41, 76–79 [78-79 quoted]; Nuttall 1958:92; Pourade 1977:111–13). An engineer by training who resided on a houseboat, Bate would be memorialized in a 1983 obituary as a "farsighted leader," the man who "led—and sometimes dragged—the port into the twentieth century," and ultimately "turned the harbor around" (Gross 1983:A1, A14).

As historian Richard Pourade explains, in terms of long-range planning, Bate's post-war Harbor Department "made a concession to the Nolan Plan, and to the lure of recreational attractions, by dividing the waterfront for three uses," and assigning the lands south of Market Street to National City for industrial purposes. "Lands from there north to a point just beyond the City-County Administration building were assigned to commerce, with commercial piers extending out from in front of the Administration building...Between the commercial piers and the Coast Guard Station, was to be a small protected harbor for the commercial fishing fleet. Recreation was to be assigned to the lee side of Point Loma, behind the two sheltering arms of a narrow island-like area which had been built up with sand from dredging operations and connected to the mainland by a causeway" (Pourade 1977:80–81 [quoted], 82, 111–12). Initially opposed by many Point Loma residents and dismissed as "Bate's Folly," the latter feature would become Shelter Island. It would accommodate boat slips, restaurants, hotels, and a shipping pier that San Diegans would come to cherish (Gross 1983:A-14).

A favorable global market for cotton, coupled with increased cotton production from the Imperial Valley and the Mexicali Valley south of the border, provided Bate with a potential initial solution to San Diego's export commodity problem. Transported from the Imperial Valley on the underused SD&AE Railroad, the ostensible "white gold" of cotton promised to increase shipping traffic through the harbor by providing the so-called "bottom cargo" that would fill ship hulls emptied of import goods and commodities. Indeed by 1955 San Diego had surpassed the Port of Los Angeles in cotton shipments, which overwhelmed the existing municipal port facilities at the Broadway and B Street Piers. Shipping revenues stood at $31,000 in 1948 but ballooned to $215,000 by 1956. Amid the cotton boom, San Diegans voted in November 1955 at a ratio of 3-to-1 in favor of a $9,699,000 bond issue to fund development of the TAMT. As *San Diego Union* reporter Joe Brooks explained several years later, cotton and a new marine terminal promised to empower San Diego with the means to "shake off the shackles of a top-heavy Navy-aircraft industry economy, to broaden its economic base with electronic plants, scientific centers and world commerce that are not dependent on hot and cold wars" (Brooks 1958:C-1 [quoted], C-4; Irwin 1970:181–82; Pourade 1977:111–113).

The TAMT was not developed without controversy, especially after San Diegans learned that Mexican cotton growers planned to ship more of that nation's supply to Japan via Ensenada port facilities undergoing expansion. As early as 1953, San Diegan Charles D. Wood had published an article in *Businessweek* mocking Bate's effort to expand commercial shipping. Wood had argued that San Diego lacked the highway connections, railroad lines, and hinterland economy necessary to support a viable shipping port. By 1958, Wood and other critics were characterizing the TAMT as a "white elephant" of wasteful public infrastructure development. Some accused Bate of grandstanding by allowing cotton bales to accumulate at the Embarcadero Piers as San Diegans prepared to vote on the bond issue for the terminal (Brooks 1958:C-1, C-4; Nuttall 1958:41, 92).

Bate countered by arguing that San Diego harbor officials were turning away hundreds of thousands of cotton bales and thereby giving business away to other regional ports. He also predicted that the new terminal would quickly reach 100% capacity. Implying that additional port facilities would need to be developed, Bate argued that the new terminal would soon be "completely inadequate to handle the cargos that will be forced through it." Arnold Mueller, president of the Mueller Trucking Company committed to investing in a new truck freight facility adjacent to the new marine terminal, which he considered "the greatest investment San Diego has ever made." An unnamed businessman quoted in a 1958 *San Diego Magazine* article on the terminal's development captured the sentiments of supporters, declaring that with the new facility, San Diego would attain "terminal status" and enter "the big league of waterborne commerce. Asking if this facility is a white elephant is like asking if the seed is really necessary to agriculture" (Brooks 1958:C-1, C-4; Nuttall 1958:92 [quoted]).

Development of the new TAMT site began in 1956, when the City started dredging channels and placing fill west of the Benson Lumber Company and American Processing Company facilities at the foot of Sigsbee and Beardsley Streets, and south of the recently constructed Harbor Department warehouse on Gull Street (Warehouse A). By fall 1958, two 200,000-square-foot transit sheds began housing cargo from ships docked at the terminal's nine 500-foot berths. By 1963 the terminal also included a substantial bulk loader modeled after similar dry bulk commodity conveying facilities at other ports, including a rail car unloader, an extensive conveyor, and a modern traveling ship-loading tower. The site also had several large tanks for storage of imported molasses, a Harbor Department office building/union hall, and several truck repair buildings. In 1962 and 1964, respectively, Warehouses B and C would each add 290,646 square feet of storage space. Whereas the transit sheds and warehouses at the B Street and Broadway Piers had 240,190 and 90,980 square feet of storage, respectively, the TAMT provided approximately 1,000,000 square feet of covered storage. The history of the terminal site's development is discussed in more detail below (Brooks 1958; Irwin 1970:46–48; Ninyo & Moore 1999: Appendix A; Port District ca. 1974:4; U.S. Army Corps of Engineers 1956:43–45).

The TAMT and Bate's efforts on behalf of bringing San Diego into the big league of commercial ports succeeded in generating a substantial increase in shipping activity and improving San Diego Harbor's ranking as a shipping port. But San Diego would not rival the larger and longer-established port facilities at Los Angeles, Long Beach, San Francisco Bay, Portland, and Puget Sound. In 1948, San Diego had ranked last among California ports and second to last among West Coast ports. In 1957, prior to opening of the TAMT, San Diego had an outgoing shipping volume of 146.2 million pounds with a value of $36.7 million, giving it a volume ranking of 12th and a value ranking of 8th among 14 California ports. Among 26 West Coast ports, it ranked 19th for outgoing volume and 13th for value of those shipments in 1957. By comparison, Los Angeles handled 5,696.9 million pounds of outgoing material for a value of $279 million. In 1965, the year after initial development plans for the TAMT were completed, San Diego port facilities handled 1,037 million pounds of outgoing material with a value of $52.4 million, giving it an export volume ranking of 7th and a value ranking of 6th among 14 active California ports, as well as a volume ranking of 11th and a value ranking of 10th among 28 active West Coast ports. By comparison, in 1965 Los Angeles handled 4,893 million pounds of outgoing cargo for a value of $319.4 million; Long Beach handled 9,329.2 million pounds for a value of $307 million; and Portland handled 7,233 million pounds for a value of $267.3 million. In the competition among West Coast port facilities, San Diego did not pose a significant threat to larger and longer established West Coast commercial facilities. However, by 1965 the TAMT's outgoing shipments had increased San Diego's share of West Coast shipping revenues compared to its share during previous decades (U.S. Department of Commerce 1958, 1966).

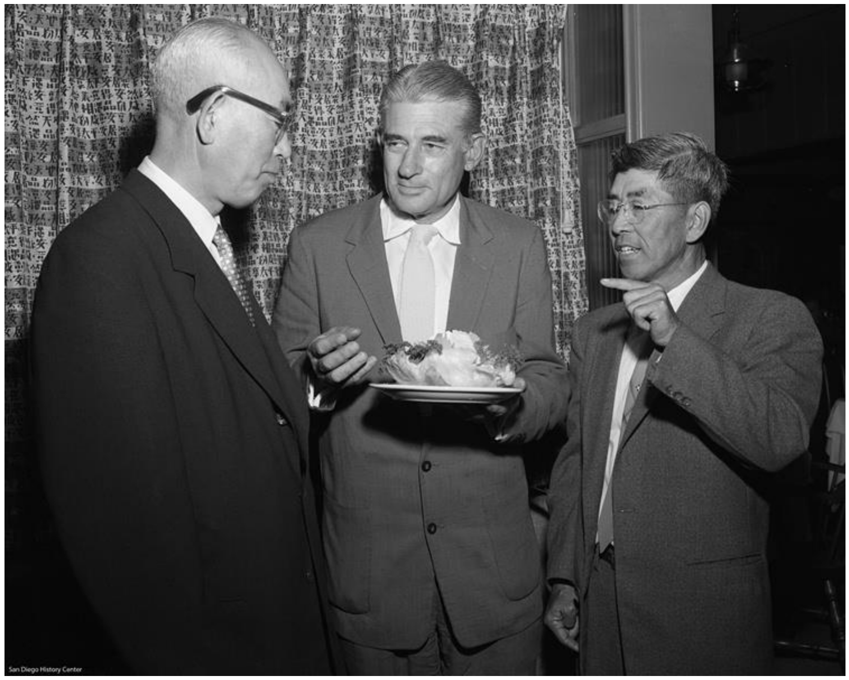

Figure 7. Harbor Department/Port District Director John Bate (center) meeting with officials from Yokohama, Japan in 1957 (from San Diego History Center Photograph Collection, UT-85.D338, No. 8)

Bate ultimately won the struggle for commercial shipping in San Diego Harbor and marshaled through the creation or improvement of additional municipal transportation and recreational facilities. During the first half of the 1960s, San Diego voters approved multiple bonds for continued development of the TAMT. In 1962, the $2.4 million bond for construction of Warehouses B and C at the TAMT won more votes than the other four City propositions for ongoing Mission Bay development, parks and community centers, development of Harbor Island, and changes in the tidelands revenue charter to create the San Diego Unified Port District (Pourade 1977:200; *San Diego Union* 1960:A-12; 1962A:A-14; 1962B:A20). Bate oversaw the creation of Harbor Island from material dredged to deepen the channel between the outer bay and the aircraft carrier docks at North Island. This recreational destination would front Lindbergh Field, which would receive new facilities enabling it to accommodate an annual increase from 390,427 travelers in 1952, to 1,900,000 in 1965–66, and 4,441,619 in 1974 (Pourade 1977:200, 216; Port District ca. 1974:4–5).

The concept of a San Diego Unified Port District encompassing all the harbor-fronting municipalities had been suggested in 1956 by California Attorney General Edmund G. “Pat” Brown. Bate embraced and promoted the concept. For harbor-front municipalities outside the City of San Diego, unification offered a way to benefit from tideland development without excessive taxation. Although Coronado initially resisted, unification eventually became a reality in 1963. The Port District’s management structure included a port director, the director’s staff, and seven commissioners appointed by municipalities with tideland assets along the bay. The City of San Diego received three commission seats, and the cities of Imperial Beach, Coronado, National City, and Chula Vista each received one seat each. As historian Richard Pourade explains, with creation of the Port District, “Bate now seemed to be lord of all he surveyed” (Irwin 1970:38; Pourade 1977:156, 199–200, 201 quoted).

San Diego's second modern shipping terminal would be developed at the tidelands of National City. Anticipating that the TAMT would reach capacity and that San Diego would need additional cargo facilities, Bate called for development of a new terminal at Fifth Avenue as early as 1961. However, creation of the Port District provided him with a newly expanded planning area. In 1964 the Port District announced plans for development of the Twenty-Fourth Street Marine Terminal at tidelands south of San Diego in National City subject to voter approval of Proposition J. Voters would approve the new terminal, which would eventually become known as the National City Marine Terminal, and would eventually be expanded into a modern container-handling facility (Martin 1961:A-15; Port District 2012:77, 2014a, 2014b; Pourade 1977:216; Shepard 1964A:A-15).

Initially developed for the Panama-California Exposition, San Diego's original municipal piers became obsolete for shipping purposes. In 1972, the Port District completed renovation of the Broadway Street Pier with construction of a passenger platform, customs building, parking spaces, light fixtures, and landscaping that converted the historic cargo facility into bayside park and cruise ship facility. This was the product of a plan created under Port Director Bate. His TAMT, coupled with the new access to southern harbor tidelands for commercial-industrial development, allowed the Port District to begin redeveloping the old municipal shipping piers for recreation and tourism, the original uses envisioned for the downtown waterfront in the 1908 Nolan Plan (Irwin 1970:45, 51; Port District ca. 1974:5–7; Pourade 1977:201).

Illness was the official reason for Bate leaving the Port Directorship in 1966, though rumors of forced retirement abounded. A workaholic, Bate had a reputation for remaining on the job in excess of 16 hours a day and taking few vacations. Despite backing recreational development that nurtured tourism, his role as figurehead of harbor shipping and industrial development became problematic as powerful interests sought to put renewed emphasis on waterfront recreation and tourism. Aspects of Bate's ultimate vision for the harbor were never realized, including a second deep-water channel through the Silver Strand between Coronado and Imperial Beach, outlawing high-rise buildings at Harbor Island, and his most grandiose plan of all, a shipping channel at the Tijuana River south of Imperial Beach. But Bate helped San Diego move beyond dependence on federal naval operations, fishing, and shipbuilding. His planning diversified the economy of San Diego's treasured natural harbor to include new recreational facilities in conjunction with modern shipping facilities. Bate died on April 28, 1983 (Gross 1983:A-1; Pourade 1977:230–231).

Although Bate played the most important role of any individual in the non-military planning and development of San Diego harbor during the post-World War II decades, his TAMT had mixed results during the 1960s and early 1970s. The terminal helped San Diego improve its share of the west-coast maritime shipping economy, but it did not equip San Diego to rival larger, earlier-developed and expanding shipping ports at Los Angeles, Long Beach, and farther north. Federal military operations, defense contracting, the aircraft industry, the shipbuilding industry, and tourism would continue to be far more important to San Diego's economy than waterborne shipping. Moreover, the rise of container cargo shipping would require the development of another terminal—the National City Marine Terminal—to ensure that the Port of San Diego could continue to compete for a share of the West Coast shipping market (Irwin 1970:51, 64–67; Pourade 1977: 194–96, 222–223).

Rising revenues allowed the Port District to become self-supporting and go off the tax rolls at the end of the 1960s, but the Port District's Marine Operations division (which managed the marine terminals) was far less profitable than its other two divisions: the Properties Operations division, which leased property for industrial, recreational, and other land uses, and the Airport Operations division, which managed Lindbergh Field. In 1968–69, for example, the Marine Operations division earned the Port District approximately $1.1 million, whereas the Properties Operations division earned $2.2 million, and the Airport Operations division earned $2.5 million. As historian Richard Pourade explained during the latter 1970s, in the last of his six-volume history of San Diego, by the late 1960s the Port District was "faced with the prospect that it could be cheaper to unload a ship at the port of Los Angeles [or Long Beach], and truck goods to San Diego, than to make a separate call at San Diego" (Irwin 1970:40–43; Pourade 1977:232).

While maritime trade increased overall during the 1960s, from 1965—the year after the TAMT was completed as originally planned—to 1971, the Port of San Diego did not improve its overall ranking among West Coast shipping ports. In 1965, San Diego port facilities handled 1,037 million pounds of outgoing material with a value of $52.4 million, giving it a ranking of 7th for outgoing volume and a ranking of 6th for the value of that volume among 14 active California ports. San Diego's total outgoing material handled, and the value of that material, fluctuated from 993 million pounds ($43 million) in 1966, to 1,119 million pounds in 1969 ($39 million), to 976 million pounds ($54 million) in 1971. San Diego's ranking among active California ports handling outgoing dry cargo stood at 6th among 15 in 1966, declined to 9th among 13 in 1969, and remained 9th among 17 in 1971. San Diego's ranking among West Coast ports handling outgoing dry cargo stood at 10th among 30 in 1966, declined to 18th among 31 in 1969, but improved to 11th among 34 in 1971. The earlier trend of San Diego steadily improving its ranking among active West Coast and California ports reversed between 1966 and 1969. While San Diego improved its position between 1969 and 1971, its ranking declined slightly overall during this period (Pourade 1977:231; U.S. Department of Commerce 1967, 1970, 1972).

History of the Tenth Avenue Marine Terminal Property

Early History

During the late nineteenth century, the TAMT site was within the waters of San Diego Bay. By the early twentieth century, industrial development had occurred within the tidelands at the northeastern edge of the TAMT Plan study area and areas further east. During the first part of the century, a railroad bridge carried the Santa Fe line across the former tidal zone at the northeastern edge of the terminal, most of which remained within the waters of the bay at that time. Beginning in 1907, the Benson Lumber Company made use of the far southeastern portion of the site at the foot of Sigsbee Street. The western end of the Benson Lumber Company's mill building stood at the edge of the study area. Within the site to the north, west, and south the Benson facility included a wharf, several sheds, and numerous mill refuse areas in the tidal zone. By the mid-1920s several buildings and wharves had been established by the West Coast Crab & Lobster Company and the Southern Reduction Company to the southeast of the lumber facility. Fill gradually extended the shoreline west and south of the Benson Lumber Company property within the study area. At the expanded shoreline in the far southeastern portion of the study area, the American Processing Company established facilities and constructed several tanks for fish tallow and oil at the shoreline by the 1950s. Also by the 1950s, an auto repair shop had been constructed adjacent to the tanks, and the Benson Lumber Company facilities had expanded southwestward to include a larger mill building, a refuse burner, a lumber shed, and multiple smaller buildings (Ninyo & Moore 1999:3–10, Appendix A).

Industrial development also occurred at the northeast edge of the terminal site. In 1913 the City of San Diego built an incinerator facility just north of the study area boundary near the south end of Eighth Street, an area long used as a refuse dump. This and a subsequent incineration facility built at roughly the same location in the 1930s could not keep pace with the accumulation of garbage in the area, which became a public nuisance. The far northeast corner of the site was occupied by a structure identified in Sanborn maps as a “Gas Works Refuse Settling Tank” as early as the 1920s. Aligned immediately north of the settling tank was saltwater tunnel associated with San Diego Gas & Electric facilities located at Ninth Street and Imperial Avenue. By the mid-1930s, fill had extended the shoreline to the west in the northeastern study area, and a channel had been created along the northwestern edge of the terminal site. Near the shoreline south of the channel, immediately north of the study area boundary, General Petroleum Corporation of California constructed several gas and oil tanks circa 1936. Around the same time, several small buildings and a structure identified in aerial photographs as a “ramp/garbage harper” were built at the dump area in the northeast portion of the study area. During the early 1950s, additional fill expanded the shoreline in this area. Gull and Water Streets, as well as a large building that housed an automobile and truck sales and service center, were constructed at the former dump site. Farther south along Gull Street, the City of San Diego Harbor Department also constructed a warehouse by 1955. Eventually designated Warehouse A, this building was the first public harbor facility to be constructed within the boundaries of the site that would become the TAMT (Ninyo & Moore 1999:3–10, Appendix A).

The Tenth Avenue Marine Terminal

Development of the TAMT site (Figure 8) began in 1956. The City of San Diego’s Harbor Department contracted for spoil from channel dredging to fill the shoreline westward at the terminal site. Harbor Department engineers chose a “mole” or “marginal wharf” design rather than finger piers such as the Embarcadero Piers. The mole design had several advantages. Solid fill would support more weight than pier pilings. A wide mole terminal would provide more space for storage structures and railroad and truck access. Ships could also berth more conveniently along bulkheads than along finger piers. Adjacent to channels dredged to depths of 37 feet, a bulkhead or quay resembling a gravity dam was constructed of rock and concrete. Tubular rubber fenders lined the three sides of the bulkheads, which provided for nine ship berths and had lengths of 1,118 feet at the north, 2,580 feet along the harbor-facing southwest side of the terminal, and 920 feet at the southeast side. The terminal’s berths and mole arrangement were designed by the Harbor Department’s Engineering Division, headed by J. E. Liebmann. Standard Dredging Company performed the dredge work, and M.H. Golden Construction Company built the bulkhead (Liebmann and Ferver 1958:40; Morin 1957A:A-8, 1957B:A-26; Ninyo & Moore 1999: Appendix A; Port District 1992:8; *San Diego Union* 1958A:C-5).

The first two major buildings on the property were Transit Sheds #1 and #2, designed by San Diego structural engineer E. L. Freeland. The job of building the transit sheds was awarded to the F. E. Young Construction Company, which began work on the northerly Transit Shed #1 in 1957. These storage buildings were constructed of tilt-up fireproof concrete walls with steel roof trusses. In addition to the elevation walls, three interior, transversely positioned walls divided the approximately 200,000-square-foot rectilinear plans of each building into four interior storage spaces. Some of the wall slabs featured modest decorative scoring in the form of fluted panels and Moderne-style signage identifying berth numbers or the Port of San Diego and the year 1957. An extensive interior sprinkler system coupled with the fireproof construction provided for the facility to receive preferred insurance rates for cargo storage and attract shipping companies to lease entire compartments for exclusive use. The major engineering challenge posed by construction of the transit sheds was their weight and location atop dredged fill in an earthquake prone region. For each transit shed, 370 concrete piles with steel shells were driven to minimum depths of 40 feet or to a resistance of 35 tons. Steel wall columns were installed above each pile. At the base of the longitudinal walls, the tops of the piles were connected to a continuous concrete beam that functioned like a strut (Freeland 1957; Liebmann and Ferver 1958:40, 43; Ninyo & Moore 1999:10, Appendix A; Morin 1957C; Port District 1992:8; *San Diego Union* 1958B:C-6).

Transit Sheds #1 and #2 also incorporated mutually facing two-story headhouses accommodating office space at the southeast elevation of the northerly Transit Shed #1 and the northwest elevation of the southerly Transit Shed #2. The two headhouses were designed by local architect Louis Bodmer. The headhouses' flat roofs, overhanging cantilevered second stories, and horizontal bands of flush steel-frame windows registered the influence of the more current International Style. The headhouses included several circular second-story windows and other elements that evoked nautical associations as well. Between the headhouses, the Harbor Department constructed an oval traffic control island with a concrete pillar featuring signage identifying the terminal and transit sheds. This was flanked by tenant directories for the transit sheds. When the terminal was formally dedicated to "Commerce for the people of the West" on November 21, 1958, a variety of civic and business leaders addressed the assembled crowd from a platform adjacent to the traffic island and pillar, and a band played intermittently from the opposite side of the island (Figure 9). The traffic island and pillar, as well as the southeastern portion of Transit Shed #1, including the headhouse, have been demolished (Figure 9) (Bodmer 1957A, 1957B; *San Diego Union* 1958C:A-19).

Figure 8. Tenth Avenue Marine Terminal Site Map (note that the southeastern portion of Transit Shed #1 visible in this map has been demolished)

By the time the terminal was dedicated, Union Oil had begun construction of the facility's four large bunker fuel tanks. Bate announced that ship fuel stored in the tanks would be sold at the same prices offered at Los Angeles and Long Beach port facilities, where barges and tugboats provided for ship refueling. At San Diego, pipes connected to tanks at the north end of the terminal site conveyed the fuel directly to docked ships, while other pipes running from each berth provided for docked ships to empty the ballast water in their fuel tanks. Although their development did not require major engineering innovation for the period, the bunker fuel facilities offered convenience and efficiency, which provided a crucial element of the Harbor Department's marketing efforts to attract ships to San Diego (Bate 1958:C-3; Brooks 1958:C-1; Liebmann 1960:69–72; Ninyo & Moore 1999:11, Appendix A; Irwin 1970:57–58).

Figure 9. Dedication of the Tenth Avenue Marine Terminal, November 1958; note that the traffic island, pillar, and signage at left have been demolished along with the Transit Shed #1 headhouse visible in the right background (from San Diego History Center Photograph Collection, S-4868-2).

By 1963 two smaller tanks had been constructed immediately east of the larger Union Oil tanks. Several buildings had also been constructed by that time. One of these was a building located immediately south of the Union Oil tanks that served as Harbor Department offices and a union hall. Two truck repair buildings were also constructed south of the office/union hall building and north of an area then used as a scrap metal yard. The automobile and truck sales building at the far northern portion of the site appears to have been converted to a maintenance shop by 1963. These four buildings are no longer present at the site (Ninyo & Moore 1999:12, Appendix A).

Southeast of the scrap metal yard, the San Francisco-based Pacific Molasses Company constructed a $150,000 distribution plant consisting of three large tanks and several smaller tanks. In late 1961 the *San Diego Union* reported that, due to construction delays, the plant would not be completed until February 1962. Imported molasses stored in the tanks was trucked to the Imperial Valley and processed into cattle feed. A large molasses tank was later built north of the Union Oil tanks by a different company than Pacific Molasses. The Pacific Molasses facility remains intact; the other molasses tank near the Union Oil Tanks has been demolished. A small truck scale building that remains present today was also constructed south of the three Pacific Molasses tanks by 1963 (Irwin 1970:50–51; Morin 1961A:A-27; Morin 1961B:A-13; Ninyo & Moore 1999:12, Appendix A).

The bulk loader system, one of the terminal's most promoted and expensive facilities, was completed by 1963. Planning for the bulk loader began years earlier, when City Harbor Department officials inspected bulk loading systems on the east coast, at Houston, and at Stockton. Aware of growing demand for raw materials in Asia, Bate and other officials sought a bulk loader for speedy automated transfer of raw materials from railcars and storage facilities to ship hulls. In California, only the Port of Stockton had bulk loading facilities comparable to the one planned for the TAMT. The Harbor Department contracted the Diversified Builders Inc. of Los Angeles and the McDowell Company of Cleveland to build the system, which would have a maximum conveyance capacity of 2,000 tons of dry bulk material per hour. The system would include a rail car unloader, a junction house, a conveyor, and a traveling ship loader. Such systems were first developed in the early twentieth century. The Port of Portland had a dry-bulk loader system by the 1920s that included a rail car unloader that tipped cars to the side to empty their contents, a conveyor, and two early dockside traveling ship-loader towers. The Port of Stockton appears to have had the most advanced bulk loader in California by the 1950s. The Port of Long Beach developed an up-to-date bulk loader at the same time as the TAMT's was developed (Irwin 1970:48–49; Morin 1961C:A-20; Morin 1962A:B-16; Port of Long Beach 1963:6–11; Port of Portland 1922; Shepard 1962:A-45).

To create the system, rail spurs were constructed from the rail lines east of the terminal to the site of the rail car unloading building, approximately 100 yards north of the Pacific Molasses tanks. Rail cars were unloaded in one of the utilitarian unloading building's two dumping facilities. The westerly one collected materials dumped through doors in the bottom of rail cars. The easterly bay accommodated a 100-ton car dumper. Once clamped into place, the dumper rotated open-top rail cars more than 90 degrees to empty their contents (Figures 10 and 11). Underground conveyor belts transferred the unloaded material west to the system's junction house. From there, 3,600 feet of conveyor belts transferred the material to the traveling ship loader, located along the berths at the south side of the terminal. Reminiscent of a crane, the traveling ship loader was designed as a steel boom that could move parallel to the conveyor in order to be positioned optimally above ship compartments, into which a telescoping chute would convey dry bulk commodities. According to Bate, the system provided for a 10,000 ton freighter to be loaded in five hours, a job that took 40 hours prior to installation of the bulk loader. The bulk loader was created to handle mainly potash from New Mexico, but also flaxseed and alfalfa pellets from Arizona and the Imperial Valley. Over the course of the 1960s, soda ash, borax, phosphates, copper or concentrates, and gypsum would also be conveyed to ships for export by the bulk loader (Irwin 1970:48–49; Morin 1961C:A-20; Morin 1962A:B-16; Shepard 1962:A-45).

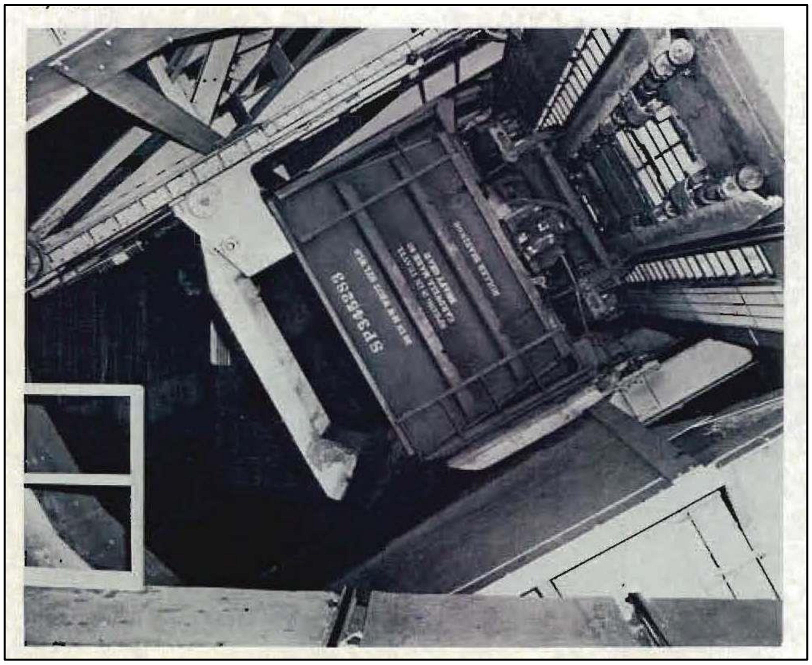

Figure 10. Rail car unloader at Port of the Long Beach's Bulk Loading Terminal, 1963 (from Port of Long Beach 1963:10).

Figure 11. Demonstration of rail car unloader during 1963 dedication of the Tenth Avenue Marine Terminal's bulk loader system; Port Director John Bate at far right (from San Diego History Center Photograph Collection, UT-85.D338, No. 8)

As the bulk loader was constructed, the Harbor Department initiated development of buildings that would add significantly to the covered storage space provided by Warehouse A and Transit Sheds #1 and #2. The Harbor Department (later the Port District) contracted I.C. Curry, Inc. to construct

Warehouses B and C, each of which would expand the terminal's storage space by 300,000 square feet. The warehouses appear to have part of the Harbor Department's original plans for the terminal's development. Warehouse B was completed in 1962 and Warehouse C was completed in 1964. Both warehouses were constructed of tilt-up fireproof concrete walls. The two utilitarian buildings lacked the architectural elements of the transit sheds. The new warehouses did not feature exterior fluted panels or Modern-style headhouses, although wall slabs at the corners of the buildings identified them as "Warehouse B" and "Warehouse C" in Moderne lettering. In contrast to the two transit sheds, the two warehouses had wider rectilinear plans, and they each incorporated a central longitudinal interior wall and two transverse interior walls to form six interior storage spaces (Magee 1961:B-16; Ninyo & Moore 1999:12, Appendix A; *San Diego Union* 1962C:A-24; Morin 1964:A-29; Port District 1992:8).

Figure 12. Aerial photograph of Tenth Avenue Marine Terminal in 1965, showing the facility's originally planned elements developed during its 1957–1964 period of potential significance, looking northwest (from San Diego History Center Photograph Collection, Kazikowski 4-17-65 No. 81)

By the end of 1964, the TAMT site included Transit Sheds #1 and #2, Warehouses A, B, and C, the Union Oil bunker fuel tanks and smaller associated tanks, a maintenance shop building, an office/ union hall building, two truck repair buildings, the bulk loader, the Pacific Molasses Company tanks, and the truck scale building. South of the molasses tanks, in the vicinity of today's main entrance to the site, was a collection of steel fish oil and tallow tanks (Ninyo & Moore 1999:12, Appendix A). The completion of the two warehouse buildings marks the end of the TAMT's 1957–1964 period of potential significance, during which the terminal's originally planned historic-period features were developed.

As of 1964, the TAMT offered better centralized onsite cargo handling, warehousing space, onsite distribution services, and bunker fueling capability than the Ports of Los Angeles and Long Beach. However, the Port of Long Beach had developed bulk loading facilities that would compete with the terminal's and cut into San Diego's potential share of the market for shipping dry bulk commodities produced in the American southwest. The TAMT had facilities that provided for ships to be unloaded, serviced with fuel and ballast-water removal, and loaded with export material more quickly than at most other West Coast ports. However, the terminal's bulk loader would have a variety of problems, and although the terminal improved San Diego's share of commercial-port shipping business on the West Coast, it would never allow for the Port of San Diego to compete at the level of earlier-established and larger commercial-shipping port facilities to the north. Moreover, in order to maintain its mid-level position in the west-coast maritime shipping economy, the Port of San Diego would be forced to alter the TAMT from its original design and development during the 1957–1964 period of potential significance.

The bulk loader became the most problematic and controversial element of the TAMT. According to the *San Diego Union*'s Howard Morin, the McDowell-Wellman Company had declared that the terminal's bulk loader would "be one of the fastest ship-loaders on the Pacific Coast even though the conveyor system extends half a mile" (Morin 1962B:A-29). One Port District official quoted in the *Union* had stated that the system's "advanced concepts" would "assure costs so low they can absorb rate disadvantages on rail hauls to San Diego." In the same article, the Union reported that the system "features dust containment [at] all transfer points minimizing air contamination" (*San Diego Union* 1963:H-11). However, the bulk loader broke down repeatedly during its first several years of operation due in part to potash dust short-circuiting the electrical system. Additionally, the bulk loader lost an estimated $100,000 annually during its first 2 years of operation. According to Port District officials, the $2.8 million system needed to handle 500,000 tons of cargo to break even on annual amortization costs. Through the year 1968, however, the bulk loader handled no more than 340,000 tons in a single year. The TAMT continued to suffer from competition at Long Beach, while competition from cheap potash producers in Canada slowed output in New Mexico, the source of San Diego's potash exports. At the same time, larger dry-bulk cargo ships began to be developed that could not pass through San Diego's harbor channels. Finally, dry bulk shipments from the TAMT were dependent on stockpiling enough commodity-filled railroad cars to fill an outgoing ship hull (*San Diego Union* 1965:A-22; Shepard 1964B:A-15, 1968:A-13, 1969A:B-1).

Hoping to increase the volume of commodities handled by the bulk loader, the Port District joined with a private organization, San Diego Bulk Terminal, to develop 12 silos for onsite storage of livestock feed and other grain products. The Port District devoted $100,000 to preparing the site and San Diego Bulk Terminal built the silo complex for $1 million. With a storage capacity of 15,000 tons, the silo complex was completed in early 1970 (Morin 1969:A-23; Ninyo & Moore 1999: Appendix A; Port District 1973:5; Shepard 1969B:B-1).

Problems continued to arise. In 1971, as a result of complaints about dust clouds from residents downwind of the terminal, the Air Pollution Control Board threatened to force suspension of bulk loader operations, which prompted the Port District to invest nearly $300,000 in additional dust control technology. Referring to the bulk loader and its history of problems, one frustrated stevedore told the *San Diego Union* that "there ought to be some Chinese proverb to describe this thing" (Shepard 1971:B-1). Port District officials readily admitted that the bulk loader had lost money and that market fluctuations had frustrated their efforts to secure the dry bulk exports necessary to pay for the facility, However, the Port District also insisted that the TAMT's bulk loader represented a "loss leader" that brought cargo ships to the harbor that would not do business in San Diego if the terminal had no bulk loader (Shepard 1971:B-5). As the global economic recession of the early 1970s cut into San Diego's share of West Coast shipping, the Port District worked with the Garnac Grain Company and Koppel Inc. to stockpile wheat at the terminal's silos and thereby increase shipments out of San Diego. But in 1976, damage to the railroad line between Imperial Valley and San Diego threatened to cut heavily into wheat shipments (*San Diego Union* 1973:D-5; Hudson 1976:B-1). From the bulk loader's 1963 debut into the 1970s, the facility never reached the annual 500,000 ton mark necessary to pay for its outlay and maintenance costs. The TAMT had helped give San Diego a share of the West Coast shipping business, but the bulk loader's "loss leader," or opportunity costs, had proved high.

Prior to the 1970 construction of the silo facility, the terminal had been altered in several other ways. In 1967 the Port Authority installed a bulk commodity bagging plant to bag material that could not be shipped to underdeveloped ports lacking facilities for unloading the free-flowing material conveyed by the bulk loader. In 1969 a number of structures were constructed at the terminal that have since been removed, including the molasses tank near the bunker fuel tanks, an addition to the northwest elevation of Warehouse C, and two rectangular structures (likely covered storage) between Transit Shed #1 and Warehouse B (Irwin 1970:49–50; Ninyo & Moore 1999:12, Appendix A).

The development of the TAMT advanced San Diego from the bottom to the middle ranks of West Coast shipping ports, created jobs and stimulated economic activity locally. However, it did not transform the San Diego economy or become an essential element of the city's economy during the 1960s and 1970s. During those decades, the Navy continued to maintain its historic role as the most important infrastructural and economic presence in San Diego Harbor. Federal spending on naval facilities in the harbor and elsewhere in the county, defense contracting, the aircraft industry, shipbuilding, and the growing tourism industry would all prove to be larger factors in San Diego's economy than the Port District's commercial shipping activities. The Ports of Los Angeles and Long Beach would continue to benefit from better connections both to national railroad networks and to an earlier developed highway network that provided for cargo shipment in trucks. After 1964, the TAMT would have to be altered substantially in order to make it an economically worthwhile public investment. Moreover, the advent of container cargo shipping would require the Port of San Diego to develop a second major terminal—the National City Marine Terminal—to ensure that it could continue to compete for a share of the West Coast shipping market. San Diego would have survived economically and grown during the 1960s and early 1970s without the TAMT, though the facility certainly qualified as a local economic asset, and continues to do so today (Irwin 1970:53–57, 64–66, 177, 183).

Since 1970, the TAMT has undergone substantial alteration (compare Figure 12 above to Figure 13 below). After 1970, Warehouse C received an addition at its northwest elevation that was later demolished, and the large addition at its southeast end that remains present today. In 1975 a large building, the Van Camp Tuna Cannery, was constructed immediately northeast of Warehouse B. The cannery facility operated for several decades. The northern portion of Warehouse C was converted to a cold storage facility in the 1990s, and the building received a small addition and refrigeration machinery at its northwest elevation at that time. The northern portion of the cannery building was demolished by 1998, and the remainder of the building was demolished several years later. Also by 1998, the truck repair buildings north of the silos had been demolished, smaller buildings and fish oil and tallow tanks had been removed from the area southeast of the Pacific Molasses Company tanks, and several new piers extended into the bay from this area. By 1998 the south portion of Transit Shed #2 had been fitted with large cement unloading and conveyance machinery. Over the next decade, Warehouse A was demolished along with the molasses tank north of the bunker fuel tanks. The maintenance shop farther north was also demolished along with the Harbor Department office/union hall building. The 1970 silo complex was altered in the mid-1980s when two new silos, both much larger than the original ones, were added to the north side of the facility. A rectangular, multi-story corrugated metal element with steel stairs on the southeast side of the original silos appears to have been built in the mid-1980s. A large non-original conduit that extends southeast from the top of the southeast silos, a new junction structure, and a conveyor connecting the new junction house to the original bulk loader junction house were installed by 2006. The traffic island, pillar, and signage between the transit sheds—which formed the focal point of the terminal's 1958 dedication ceremonies—were demolished at an unknown date. Finally, the headhouse at the south side of Transit Shed #1 and the southernmost of that transit shed's storage spaces were demolished after 2000 (Ninyo & Moore 1999: Appendix A; *San Diego Union* 1976:B-3).

Background research and field studies were conducted in compliance with CEQA as amended (PRC §21000 et seq.), pursuant to the *Guidelines for Implementation of the California Environmental Quality Act* (CCR Title 14 §15000 et seq.), and in accordance with industry standards for similar projects in San Diego County. The effort to identify cultural resources in the TAMT Plan study area included records searches of previous cultural resource investigations and recorded sites; background research and a review of literature relevant to the prehistory, ethnography, and history of the terminal site and TAMT Plan vicinity; consultation with NAHC and Native Americans; and site visits.

Research

Records Search

ICF International (ICF) obtained a cultural resources record search form the South Coastal Information Center (SCIC), which is located at San Diego State University and is part of the California Historical Resources Information System. The records search and literature review provides for identification of previously documented archaeological, historic, and architectural resources within and near the cultural resources study area, and is useful for developing a context to frame assessments of resource significance. The SCIC reported results of the record search on June 15, 2014. The following is a summary of the records search used in this study.

The records searches revealed that a total of 136 cultural resources surveys have been conducted within a half-mile radius of the project area (Table 1). Of these, 10 have covered at least some portion of the TAMT Plan study area. Within a half-mile radius of the TAMT Plan study area, the record search revealed the presence of 54 previously recorded cultural resources (Table 2). Of these, one is a prehistoric resource and 53 are historic period resources.

Historic maps and aerial photographs indicate that one previously recorded cultural resource, CA-SDI-16385H, the historic-period Santa Fe Railway (constructed in 1882–83), was close to the eastern boundary of the study area. That segment of the Santa Fe Railway line was part of a larger 5.9-mile segment surveyed and evaluated for NRHP eligibility in 2002, and found to have insufficient historical integrity to convey any significance attributable to it. The 2002 survey results indicated that most of the 5.9-mile segment consisted of modern tracks and associated railroad features, not track or associated features dating to the late nineteenth or early twentieth centuries (Ballester and Woodard 2002). During the built environment survey conducted for this study, no railroad tracks or associated features pre-dating the development of the terminal in the late 1950s and early 1960s were identified in the easternmost portion of the study area adjacent to the BNSF railyard.

The record search yielded a site record for an additional historic-period railroad resource, CA-SDI-13073H, the historic Coronado Railroad alignment. That site record, which does not make reference to Sanborn fire insurance maps, incorrectly places this resource along the alignment of the Santa Fe Railway (Laylander 1993). Sanborn maps dating to 1906 indicate that the Coronado Railroad and segments of several other early San Diego railroad alignments were farther east and north of the project study area. The Coronado Railroad segment nearest to the project study area was approximately 100 yards north of the study area's northeastern corner (Sanborn Map Company 1906A, 1906B, 1906C, 1906D, 1906E). A brief update to CA-SDI-13073H accurately indicating its historic-period alignment in the vicinity of the study area is included with the existing site record for the resource in Appendix B.

The study area does not include any resources listed on the City of San Diego's Register of Historical Resources or the County of San Diego's Historic Property Listing (City of San Diego 2014; County of San Diego 2012).

Table 1. Previous Studies in the Project Vicinity

NADB #*	Year	Author	Title	Within Project Area
1120260	1989	Cardenas, Sean D.	Cultural Resources Check for Pump Station No. 5 (DEP No. 89-0696), City of San Diego, Planning Department	No
1120304	1978	Carrico, Richard, and Lesley C. Eckhardt	Cultural Resources Reconnaissance of the San Diego Fixed Guideway Project Centre City to San Ysidro, San Diego Metropolitan Transit Development Board	No
1121022	1986	Gallegos, Dennis, Dayle Cheever, and Richard Carrico	Cultural Resources Survey for the MTDB Bayside LRT Extension, Metropolitan Transit Development Board	No
1121100	1981	Lloyd, Deborah T.	Archaeological/Historical Study of Two Alternate Project Locations for the San Diego Energy Recovery (Sander) Project, San Diego County Department of Public Works	No
1122060	1979	City of San Diego	Environmental Impact Statement marina/Columbia Residential Development, City of San Diego	No
1122596	1990	Solheid, Vicki, and Roger D. Mason	Cultural Resources Records Search for the Barrio Logan Project Area within City of San Diego	No
1122631	1991	Carrico, Richard and et al.	Archaeological Survey, Monitoring and Testing Report for the AT&SF Railway Company Crosby Street TOFC Yard, CA-SDI-5931, San Diego County	Yes
1122708	1993	Bergin, Kathleen	Archaeological Monitoring Phase 2 Remediation Activities San Diego Railyard, San Diego	No
1122794	1994	Robbins-Wade, Mary and Stephen Van Wormer, Richard Schultz	Archaeological Monitoring for the Logan Heights Family Center, San Diego County	No
1122812	1993	Smith, Brian	A Cultural Resources Study for the Sewer Pump Station No. 5 Project, San Diego	No
1123382	1998	Case, Robert P., and Richard Carrico	Cultural Resources Survey for Sewer Group Job 619, Three Pipeline Segments in the Mission Hills District, San Diego	No

NADB #*	Year	Author	Title	Within Project Area
1123457	1998	Brown, Joan	Archaeological Monitoring of Excavation During Construction for the Sewer and Water Group 55 Project	No
1123496	1999	Gilmer, Jo Anne, and Dayle M. Cheever	Results of Archaeological Monitoring of the San Diego Convention Center Expansion Construction Grading, San Diego	No
1123863	2000	Jones & Stokes	Cultural Resources Investigation for the Nextlink Fiber Optic Project, San Diego County	No
1123934	2001	Various	Julian Produce Company Warehouse Building	No
1123976	2001	Various	Savage Tire Company/Aztec Brewery/Aztec Brewery Artwork	No
1124058	2001	Various	Southern California Baking Company	No
1124309	1990	Carrico, Richard and Steven Briggs	Draft Archaeological Survey, Monitoring & Testing Report for the AT&SF Railway Company Crosby Street TOFC Yard CA-SDI-5931	Yes
1124354	1995	Carrico, Richard L.	Draft Archaeological Survey, Monitoring & Testing Report for the AT&SF Railway Company Crosby Street TOFC Yard CA-SDI-12,093 & CA-SDI-5931, San Diego	Yes
1124358	1991	Carrico, Richard L.	Archaeological Survey, Monitoring & Testing Report for the AT&SF Railway Company Crosby Street TOFC Yard CA-SDI-5931, San Diego	Yes
1124391	1996	Rosen, Martin	Negative Archaeological Survey Report – Retrofit of San Diego Coronado Bay Bridge	No
1124420	1996	Fisher, Jim	Historical Resource Evaluation Report for the San Diego-Coronado Bay Bridge [#57-857], Chicano Park and the Chicano Park Murals, San Diego County	No
1124599	1991	City of San Diego	Public Notice of Proposed Mitigated Negative Declaration Santa Fe TOFC Yard, City of San Diego	Yes
1124713	1999	Schaefer, Jerry	San Diego Ballpark Archaeology Management Plan	No
1124737	1997	Caltrans	Historic Property Survey Reports for the San Diego-Coronado Bay Bridge Seismic Retrofit Projects 1, 2, and 3.	No
1124756	1997	Caltrans and Martin Rosen	Historic Property Survey Report San Diego-Coronado Bay Bridge, Seismic Retrofit Project, 11-SD-75, PMR21.9-R22.3	No
1124761	1998	Rosen, Martin	Historical Resources Compliance Report – Sand Diego-Coronado Bay Bridge Seismic Retrofit Project 4.	No
1125150	2001	Project Design Consultants	Environmental Secondary Study for 5th and “K” Condos – Gaslamp Quarter	No

NADB #*	Year	Author	Title	Within Project Area
1125303	1998	Van Wormer, Stephen R. and Ruth Alter	At Home on Gold Mountain, An Historic and Archaeological Study of Chinese Americans in San Diego, California	No
1125462	2000	Smith, Brian E.	An Archaeological/Historical Survey and Evaluation Report for the Mercado Report	No
1125654	1994	City of San Diego	Mitigated Negative Declaration of the Sewer Pump Station No. 5, City of San Diego	No
1125681	1985	Sturm, Bradley	Cultural Resources Appendix San Diego Milcon Project P-283	No
1125915	1996	City of San Diego	Mitigated Negative Declaration for Sewer and Water Group Job No. 639, City of San Diego	No
1125924	1997	City of San Diego	Mitigated Negative Declaration for Addition to Sewer Pump Station No. 22, City of San Diego	Yes
1126071	2001	City of San Diego	Environmental Secondary Study for Rosario Hall Relocation, City of San Diego	No
1126074	2000	Phillips, Roxanna	Historical Archaeological Evaluation of the Noto Property at 637 19th Street, San Diego, California	No
1126355	2000	Smith, Brian	An Archaeological Historical Survey and Evaluation Report for the Mercado Project	No
1126541	1995	McNeil, Paul	Memorandum: 630 Market Street Demolition, Centre City Development Corporation	No
1127147	1999	City of San Diego	Historical Site Board Agenda of May 27, 1999, Action Item #10 – Ballpark Site Buildings – Bayside/East Village	No
1127517	2002	N/A	Cultural Resource Monitoring for the Villa Harvey Mandel Project, City of San Diego	No
1127549	2002	Duke, Curt	Cultural Resource Assessment Cingular Wireless Facility No. SD 804-01 San Diego County, California	No
1127630	1999	Burke Lia, Marie	1995 Warehouse District Proposal for Centre City East	No
1127693	2000	Pierson, Larry	An Archaeological Report for the Mitigation, Monitoring, and Reporting Program at the Water and Sewer Group Job 464A, City of San Diego	No
1127697	2000	Pierson, Larry	An Archaeological Report for the Mitigation, Monitoring, and Reporting Program at Sewer and Water Group 636, City of San Diego	No
1127749	1997	City of San Diego	EIR for Bridgeworks, City of San Diego	No
1127766	2001	Pierson, Larry J.	Results for Archaeological Monitoring at the Parkloft Project, San Diego	No
1127770	2001	Pierson, Larry J.	Results of the Archaeological Mitigation, Monitoring, and Reporting Program at the Westin Park Place Hotel Project	No
1127819	2002	Duke, Curt	Cingular Wireless Facility No. SD 804-04	No

NADB #*	Year	Author	Title	Within Project Area
1127998	2002	May, Ronald V.	Historical Nomination of the South Park Commercial Transit Historic District	Yes
1128450	1981	Brandes, Ray	Historic Resources Inventory for Uptown Area, San Diego, California	No
1128451	1981	Brandes, Ray	Historic Resources Inventory for Middletown Area, San Diego, California	No
1128468	2003	Gilmer, Joh Anne	Results of the Cultural Resource Monitoring for the Park Avenue East Project at 12 and Island Avenue, San Diego	No
1128552	2004	Smith, Brian F. and Kyle Guerrero	An Archaeological Report for the Mitigation, Monitoring, and Reporting Program at the Diamond Terrace Project	No
1128634	2003	Carrico, Richard L.	Historical and Architectural Assessment of 1401 J Street, San Diego, California	No
1128848	2003	Carrico, Richard L.	Historical and Architectural Assessment of 1401 J Street, San Diego, California	No
1128988	2004	Zepeda-Herman, Carmen	Results of Archaeological Monitoring for the M2I Project, San Diego, California	No
1129016	2003	Dolan, Christy, and Stephanie Rose Fitzsimons	Archaeological Monitoring Report for San Diego Gas and Electric Station A (SDI-8723H) Sanborn Block 157, San Diego, California	No
1129024	2004	Zapeda-Herman, Carmen	Results of Archaeological Monitoring for the M2I Project, San Diego, California	No
1129191	2004	Brown, Joan C., Robert Hermann, Jason Miller, and Gian Villareal	Archaeological Monitoring and Historic Era Trash Recovery During Excavations for the Construction of the Sewer Replacement Group 623B Project, LDR No. 41-0170, City of San Diego	No
1129262	2004	Buysse, Johnna L.	Mitigation Monitoring Report for the Trellis Project at 5th and K Street, Center City Development Corporation, Gaslamp Quarter Special Permit #41-0546	No
1129389	2005	Moomjian, Scott	Modified Historic American Buildings Survey of the Manos Produce Company Building and the Greenbaum Market Building	No
1129445	2004	Ni Ghabhlain, Sinead	Cultural Resources Survey Report for the Centre City Pedestrian Bridge Project, San Diego, California	No
1129604	2005	Rosen, Martin	Completion of Section 106 Responsibilities for Filing of Historic Property Survey Report	No
1129679	2005	Buysse, Johnna L.	Mitigation Monitoring Report for the Park Terrace Project	No
1129897	2006	Crawford, Kathleen	Historical Assessment of the 536 Seventh Avenue Building, San Diego, California	No
1129966	2006	Crawford, Kathleen	Historical Assessment of the 502-522 Seventh Avenue Building, San Diego, California	No

NADB #*	Year	Author	Title	Within Project Area
1130089	2005	Ni Ghabhlain, Sinead	Historic Property Survey Report for the Harbor Drive Pedestrian Overcrossing Bridge Project, City of San Diego, California	No
1130179	2005	Crawford, Kathleen	Historical Assessment of the Properties Located at 1721-1795 Logan Avenue, San Diego, California	No
1130182	2006	Sherwood, Allison, and Robert J. Manis	Public Notice of a Draft Mitigation Negative Declaration of Barrio Logan Community Planning Area: La Entrada Apartments, City of San Diego	No
1130210	2004	Rosen, Martin	Historical Property Survey Report for the California Department of Transportation Enhancement Activities Grant to Perform Restoration of Murals in Chicano Park, Barrio Logan, City of San Diego, California	No
1130534	2006	Moomjian, Scott A.	Historical Assessment of the 1701-1715 National Avenue Commercial Buildings San Diego, California	No
1130541	2006	Crawford, Kathleen	Historical Assessment of the Building Located at 1629 National Avenue San Diego, California	No
1130546	2004	Carrico, Richard L., and Stacy Jordan	Centre City Development Corporation Downtown San Diego African-American Heritage Study	No
1130642	N/A	Various	Miscellaneous File Folder with Multiple Reports for the Asian Pacific Thematic Historical District	No
1130654	2006	Pierson, Larry J.	An Archaeological Report for the Mitigation Monitoring and Reporting Program at the Hilton San Diego Convention Center Hotel, Port of San Diego/Centre City Development Corporation	Yes
1130667	2005	Pierson, Larry J.	A Historical Significance Evaluation of the Workman Hotel, San Diego, California	No
1130671	2006	Pierson, Larry J.	Mitigation Monitoring of the Central Police Garage Demolition Project, W. O. No. 350821, LDR No. 41-0980	No
1130711	N/A	Various	Multiple Reports for the Barrio Logan District	No
1130722	2006	Pierson, Larry J.	Archaeological Monitoring at the Legend, San Diego, California	No
1130723	2005	Buysse, Johnna L.	Mitigation Monitoring Report for the Alta Project	No
1130724	2007	Buysse, Johnna L., and Larry J. Pierson	Mitigation Monitoring Report for the Icon Project	No
1130726	2006	Buysse, Johnna L.	Mitigation Monitoring and Reporting for the Mark Project	No
1130746	1993	Robbins-Wade, Mary, Stephen R. Van Wormer, and Richard Schultz	Archaeological Monitoring Report for the Logan Heights Family Health Center, San Diego, California	No

NADB #*	Year	Author	Title	Within Project Area
1130756	1996	Smith, Brian F.	Report on Archeological Monitoring at the Sewer Pump Station 5 Project	No
1130778	2007	Burke Lia, Marie	Joseph Ireland Building and Rood Rental	No
1130809	N/A	Various	Fire Station #4, 400 8th Avenue, San Diego, California	No
1130854	N/A	Various	Bay Bridge Park (Chicano Peoples Park)	No
1130859	N/A	Various	Gaslamp Quarter Historic District	No
1130870	N/A	Various	Miscellaneous Papers on Coronado	No
1130876	N/A	Various	Survey of the Davis Horton House	No
1130917	N/A	Various	Report for the Simon Levi Company Building	No
1130918	N/A	Donaldson, Wayne Milford, and Ray Brandes	Report for the Levi Wholesale Grocery Building	No
1130973	N/A	Various	Klauber-Wagenheim Company, 611 Island Avenue, San Diego, California	No
1131126	2002	Berryman, Judy A.	Cultural Resource Survey of the Silver Gate Power Plant, San Diego, California	No
1131210	2007	McGinnis, Patrick	Archaeological Monitoring for the City of Coronado Transbay Sanitary Sewer Force Main Project	No
1131242	N/A	Various	Queen Anne Cottages, 21 16th Street (APN 535-623-06), 22 16th Street (APN 535-623-05), 53 16th Street (APN 535-623-03), 10 17th Avenue (APN 535-623-09), San Diego, California	No
1131260	N/A	Various	San Diego Gas & Electric Power Plant, 75 9th Avenue, San Diego, California	No
1131263	N/A	Various	San Diego Ice and Cold Storage Company, 808-822, 825 Imperial Avenue, San Diego, California	No
1131264	N/A	Various	San Diego Rowing Club / Excelsior Rowing & Swimming Club, 525 E. Harbor Drive, San Diego, California	No
1131283	N/A	Various	Showley Brothers Candy Factory, 305-308 Eighth Avenue, San Diego, California	No
1131342	N/A	Various	Western metal Supply Company, 215 Seventh Avenue, San Diego, California	No
1131383	2007	Case, Robert P., Andrea M. Craft, and Carol J. Serr	Cultural Resources Mitigation Monitoring Report for the Central Police Garage Remediation Project (LDF No. 41-0980A), East Village Community, City of San Diego, California	No

NADB #*	Year	Author	Title	Within Project Area
1131463	2007	Case, Robert P.	Final Cultural Resources mitigation Monitoring Report for the Graybill Terminal Remediation Project (W.O. 426597; PTS 105988; CCD Permit No. 2006-55), east Village Community, City of San Diego, California	No
1131532	2007	Pierson, Larry J.	Archaeological Resource Report Form: Mitigation Monitoring of the Logan Heights Family Health Center Project	No
1131681	2007	Burke Lia, Marie	1220 J Street/406 12th Street, San Diego, California	No
1131721	2008	Burke Lia, Marie	416 13th Street, San Diego, California	No
1131826	2008	Robbins-Wade, Mary	Archaeological Resources Analysis for the Master Stormwater System Maintenance Program, San Diego, California	No
1131920	2005	Schaefer, Jerry, Sinead Ni Ghabhlain, and Drew Pallette	Archaeological Investigations on Block 138 (CA-SDI-16, 822): Location of the Heerandner Planning Mill and Residence, the Eureka Hotel/Ocean House Hotel, and a Lodgings House, Downtown San Diego	No
1132092	2009	Robbins-Wade, Mary	Thomas Jefferson School of Law Archaeological Monitoring	No
1132200	2009	Herrmann, Myra	Draft Environmental Impact Report for the Master Storm Water System Maintenance Program, City of San Diego Development Services Department	Yes
1132366	2009	Pierson, Larry J.	Archaeological Mitigation Monitoring Report for the Los Vientos Project	No
1132371	2009	Clowery-Moreno, Sara and Brian F. Smith	Mitigation Monitoring Report for the Parkside Terrace Project	No
1132392	2008	Pierson, Larry J.	5th Avenue Landing Hotel: Mitigation Monitoring and Reporting Program	No
1132416	2008	Clowery-Moreno, Sara, and Brian F. Smith	Mitigation Monitoring Report for the Hotel Indigo Project	No
1132420	2009	Schafer, Jerry, Sinead Ni Ghabhlain, and Walter Enterprises	Labor and Life-Styles Among San Diego's Working Class: Historical Archaeology on Block 112 (CA-SDI-19, 435)	No
1132517	2010	Moomjian, Scott A.	Historical Assessment Addendum for the Isaac Lyon Building, 1479 J Street, San Diego (East Village)	No
1132709	2009	White, Laura S., and Robert S. White	An Archaeological Assessment of the 5.17-Acre Restaurant Depot Project Located Immediately South of the Intersection of E. Harbor Drive and Cesar E. Chavez Parkway, City of San Diego, California	No

NADB #*	Year	Author	Title	Within Project Area
1132710	2010	Van Horn, David, Laura S. White, and Robert S. White	An Archaeological Assessment of the 5.17-Acre Restaurant Depot Project Located Immediately South of the Intersection of E. Harbor Drive and Cesar E. Chavez Parkway, City of San Diego, California	No
1132778	2010	Van Wormer, Stephen R., Susan D. Walter, and Jerry Schaefer	From Painted Porcelain to Pumpkinseed Flasks: Historic Patterns of Daily Life on Block 108 (CA-SDI-19, 606) in Downtown, San Diego, California	No
1132811	2010	Bowden-Renna, Cheryl	Cultural Resources Monitoring for Relocation of Underground Facilities for the New San Diego Main Library, Park Avenue and J Street, San Diego, California	No
1133201	2011	Rosen, Martin D.	San Diego Convention Center Expansion and Expansion Hotel Project	No
1133271	2012	Burke Lia, Marie	Addendum to the Historical Resources Research Report for 1310 K Street, Downtown San Diego	No
1133351	2012	Price, Harry J., and Carmen Zepeda-Herman	Results of the Archaeological Monitoring Program for the Restaurant Depot Project, Project No. 180219/I. O. No. 23432387/Sch No. N/A	No
1133799	2011	City of San Diego	Addendum to Mitigated Negative Declaration No. 255100, Sewer and Water Group 957, City of San Diego	No
1133902	2012	Bonner, Wayne	Cultural Resource Records Search and Site Visit Results for T-Mobile USA Candidate SD06811-U (Sprint Tower), 1402 K Street, San Diego	No
1133914	2009	Ninyo and Moore	Phase I Environmental Site Assessment 1901 Main Street, San Diego	No
1133974	2012	Stropes, Tracy A., and Brian F. Smith	Mitigation Monitoring Report for the Mercado Del Barrio Project	No
1134021	2012	Ni Ghabhlain, Sinead	Archaeological Monitoring and Testing Plan for the Monarch School Project, San Diego, California	No
1134036	2011	Ni Ghabhlain, Sinead	Archaeological Resource Initial Evaluation and Testing Plan for the Tenth Avenue Apartments Project, Downtown San Diego	No
1134070	2010	Potter, Elizabeth, and Sinead Ni Ghabhlain	Results of Archaeological Monitoring of the Seventh and Market Street Soil Remediation and Construction Project	No
1134161	2012	Stropes, Tracy A., and Brian F. Smith	A Phase I Cultural Resources Study for the 7th and Islands Project, San Diego	No
1134225	2012	Crawford, Kathleen	372 Fourth Avenue, San Diego	No

NADB #*	Year	Author	Title	Within Project Area
1134538	2013	Wilson, Stacie	Letter Report: ETS 25341 – Cultural Resources Monitoring Report for Replacement Activities for Pole P1942472392, Chula Vista	No
1134595	2007	McGinnis, Patrick	Re: Archaeological Monitoring for the City of Coronado Transbay Sanitary Sewer Force Main Project	No
1134718	2013	Heritage Architecture & Planning	Historical Resource Research Report Bay View Hotel 509 Park Boulevard, San Diego	No
1134730	2013	Davison, Kristina, and Mary Robbins-Wade	Lake Morena's Oak Shores Mutual Water Company Water System Improvements Project Phase 2 Archaeological Monitoring	Yes

* NADB: National Archaeological Database

Table 2. Previously Recorded Resources in the Project Vicinity

Site #	Recorded By	Year	Description	Within Project Area
CA-SDI-05931	Ballester; Clevenger and Briggs; Eckhardt	2002; 1993; 1978	Prehistoric human remains hammerstone-pounder, blade fragment, mano fragments, metate fragments, groundstone fragments, flakes, flaking fragments, shell beads, midden	No
CA-SDI-08723H	Lloyd	1981	Historic generating station complex	Demolished
CA-SDI-13073H	Pigniolo; Laylander	2000; 1999, 1993,	Historic Coronado Railroad line	No
CA-SDI-13123	Shultz, Van Wormer, and Robbins-Wade	1992	Historic trash pit	No
CA-SDI-14792; P-37-016300	Alter	1998	Historic building foundation, trash pits, privy vaults	No
CA-SDI-15118; P-37-017104	Pierson	2006	Tidelands city dump	No
CA-SDI-15688; P-37-018822	May	2000	Historic privy	No
CA-SDI-15930; P-37-023708	Benjamin	2001	Historic artifact deposit	No
CA-SDI-15978; P-37-023865	Pierson	2001	Historic trash deposit	No
CA-SDI-16285; P037-024552	Pierson	2002	Historic trash and building debris deposit	No
CA-SDI-16385H; P-37-024739	Stiefel and Gunderman; Ballester and Woodward	2009, 2007; 2002	Atchison, Topeka, and Santa Fe Railway	No

Site #	Recorded By	Year	Description	Within Project Area
CA-SDI-16424: P-37-024791	Brian F. Smith & Associates	2002	Historic trash deposit ["trench spoil pile"]	No
CA-SDI-16633; P-37-025103	James	2001	Historic trash deposits, privy	No
CA-SDI-16782; P-37-025304	Brian F. Smith & Associates	2000	Historic trash deposits and pits, catchment basin, trenches, building debris	No
CA-SDI-16783; P-37-025305	Brian F. Smith & Associates	2000	Historic trash pit and pit feature	No
CA-SDI-16784; P-37-025306	Brian F. Smith & Associates	2000	Historic trash pit, privy, building debris, brick feature	No
CA-SDI-16822; P-37-025359	Pallette	2003	Historic privies, trash pit , brick foundation	No
CA-SDI-16848; P-37-025401	Brian F. Smith & Associates	2000	Historic cistern	No
CA-SDI-16888; P-37-025443	Brian F. Smith & Associates	2004	Historic structural foundation, privy, well, trash deposits, artifact concentrations	No
CA-SDI-16915; P-37-025477	Zepeda-Herman	2004	Historic cisterns, well	No
CA-SDI-17546; P-37-026838	Brian F. Smith & Associates	2005	Historic cistern, trash deposits, isolated artifacts, surface scatters	No
CA-SDI-17590; P-37-026908	Brian F. Smith & Associates	2005	Historic privies, trash pits, wells, cisterns	No
CA-SDI-18106; P-37-027847	Craft	2006	Historic concrete boxes, foundation, shafts, platform, ramped pit with drain, wood planks	No
CA-SDI-18107; P-37-027848	Craft	2006	Historic refuse deposits	No
CA-SDI-18140; P-37-027308	Ghabhlain	2006	Historic privies, trash pits, dipping furnace, industrial waste deposit	No
CA-SDI-18349; P-37-028388	Pierson	2007	Historic artifact scatter	No
CA-SDI-18360; P-37-028472	Case	2007	Historic cistern and artifact scatter, site of former Graybill Fuel Terminal	No
CA-SDI-18378; P-37-028565	Briggs, Jams	2007	Historic household refuse and building debris deposit	No
CA-SDI-18583; P-37-028978	Murphy	2007	Historic trash dump	No
CA-SDI-18588; P-37-029022	Case	2007	Historic trash deposits and brick cistern	No
CA-SDI-18593; P-37-029027	Pigniolo, Davidson, Roy	2007	Historic trash deposits and brick well, prehistoric rock concentration and artifacts	No
CA-SDI-18997; P-37-029702	Cowery-Moreno	2008	Historic trash deposit, well feature, and isolate	No

Site #	Recorded By	Year	Description	Within Project Area
CA-SDI-19240; P-37-030198	Pierson	2008	Historic domestic refuse deposit	No
CA-SDI-19262; P-37-030243	Clowery-Moreno	2008	Historic cistern and trash scatter	No
CA-SDI-19465; P-37-030639	Schaefer	2001	Historic sell, privies, and trash pits	No
CA-SDI-19606; P-37-030891	Schaefer	2009	Historic trash and privy pits	No
CA-SDI-20232; P-37-031961	Price	2010	Historic trash deposits, brick cisterns, trench filled with construction debris, and spur rail line	No
CA-SDI-20719; P-37-032774	Stropes	2012	Historic refuse deposits and well deposit	No
CA-SDI-20750; P-37-032825	Dietler	2004	Historic domestic refuse deposit	No
CA-SDI-20764; P-37-032850	May	2004	Historic building materials deposit and domestic refuse	No
CA-SDI-21117; P-37-033605	Stropes	2014	Historic building materials deposit and domestic refuse	No
P-37-016030	Alter	1997	Historic trash scatter	No
P-37-016280	Fisher; Barley and Pearlman	1996; 1979	Chicano Park mural art on highway bridge columns	No
P-37-016282	Fisher	1996	San Diego-Coronado Bay Bridge	No
P-37-025680	Daniels, Jale, Comeau, Giacinto; Williams; Wee, Ferrell	2013; 2009; 2000	San Diego & Arizona Railway	No
P-37-028387	Olmos	1980	La Tierra Mia-Chicano Park	No
P-37-028475	N/A	N/A	Historic Simon Levy Company building	No
P-37-028476	N/A	N/A	Historic Simon Levy Company building	No
P-37-028495	N/A	N/A	Gaslamp Quarter Historic District	No
P-37-030420	Gilieti	2008	Historic concrete slab and foundation wall remains	No
P-37-033175	Kraft	2013	Isolate building debris	No

Historical Research

Historical research for this study was conducted at multiple repositories in the San Diego area. These included the Main Branch of the San Diego Public Library and the historical collection housed in its California Room, the San Diego History Center, and Geisel Library, the central library at the University of California, San Diego. Extensive use was made of the Newsbank database at Geisel Library, which provides digital, full-text searchable access to the historical *San Diego Evening Tribune* and *San Diego Union*. Sources were also gathered through online searches of Google, the full-text searchable JSTOR database of academic journals, and the Internet Archive. The Port District provided ICF staff with several useful sources, including the original plans for the terminal's two

1958 transit sheds, and an extensive site history of the terminal prepared by Ninyo & Moore that includes numerous historic aerial and bird's-eye views of the terminal site from the early twentieth to the early twenty-first century.

Outreach to Interested Parties

On June 16, 2014, ICF archaeologist Karolina Chmiel contacted NAHC requesting a review of its Sacred Lands Files. NAHC responded on June 30, 2014, stating that the sacred lands file failed to indicate the presence of Native American cultural resources in the study area. NAHC also provided a list of 19 Native American individuals and organizations that may have knowledge of cultural resources in the study area. On May 14, 2015, ICF sent outreach letters to all 19 individuals and organizations identified by NAHC. On May 26, 2015, a letter was received from the Viejas Band of Kumeyaay Indians stating that the study area has cultural significance or ties to Viejas. The letter requests the presence of a Kumeyaay Cultural Monitor on site for all ground-disturbing activities (Appendix A).

Archaeological Inventory

On April 21, 2014, ICF archaeologist Karolina Chmiel assessed the potential for archaeological surface deposits in the TAMT Plan area during a site visit and tour of the facility attended by ICF environmental staff. Most of the terminal is underlain by fill material placed there in the late 1950s. An overwhelming majority of the 96-acre site is developed with buildings, structures, pavement, and railroad lines, some with ballast. A small 1-acre area at the southeastern portion of the terminal remains unpaved, along with several much smaller areas. These unpaved areas have been graded, driven over or used for vehicle parking, or otherwise disturbed. The potential for archaeological deposits within the TAMT Plan study area is limited to subsurface deposits. For these reasons, the cultural resources study area was not subjected to a formal archaeological survey.

Built Environment Inventory

On May 14, 2014, ICF historian/architectural historian Tim Yates, PhD, surveyed the TAMT Plan study area for intact built-environment resources 45 years of age or older. Yates determined that the terminal represents a potential historic district, and identified 10 individual resources 45 years of age or older during the site visit. These 10 historic-period built environment resources include: Transit Sheds #1 and #2; the bunker fuel complex of tanks and buildings at the northeastern portion of the site; the molasses tanks and truck scale building at the southeastern portion of the site; the bulk loader system at the eastern and southern portions of the terminal; Warehouses B and C; numerous railroad tracks that run throughout the terminal; and the terminal's dry-bulk silo complex. California Department of Parks and Recreation (DPR) forms for these resources are included in Appendix B of this report.

Archaeological Resources

A record search performed by the SCIC failed to identify archaeological resources within the TAMT Plan study area. A formal archaeological survey was not performed due to the fact that majority of the project area is fully paved, built over, or covered in fill. The study area conditions were confirmed during a site visit by archaeologist Karolina Chmiel on April 21, 2014.

Built Environment Resources

Potential Tenth Avenue Marine Terminal Historic District

Description

The TAMT occupies a 96-acre site located along the northeast shoreline of San Diego Harbor, south of downtown San Diego and north of the Coronado Bridge. The terminal's remaining original elements dating to the 1957–64 period of its initial development include Transit Sheds #1 and #2, Warehouses B and C, the bunker fuel complex at the northeast corner of the site, the truck scale building and Pacific Molasses Company tanks at the southeast corner of the site, the bulk loader, and rail lines that run throughout the site (Figure 8). These features are described briefly here, and more detailed descriptions of each individual resource are provided below.

The TAMT is a mole wharf (also known as marginal wharf) formed of dredged fill and rock-and-concrete bulkhead walls (or quay walls) adjacent to ship channels. The terminal provides nine ship-berthing spaces.

The two transit sheds and two warehouse buildings are formed of tilt-up concrete walls and steel roof trusses (Figures 14 through 18). These buildings have numerous warehouse entries secured by roll-up metal doors. Some of the transit shed wall slabs are scored with decorative fluted panels and Moderne-style signage identifying the Port of San Diego or individual ship berths (Figures 15, 17). At the northwest elevation of Transit Shed #2 is a Modern-style two-story headhouse with circular windows and other elements intended to evoke nautical associations (Figure 16). Transit Shed #1's headhouse and its southeastern storage space have been demolished (Figure 15). The original traffic island, pillar, and signage located between the two transit sheds have also been demolished. Warehouses B and C are more utilitarian than the transit sheds, with decorative features limited to modest-sized scored concrete signage with Moderne-style lettering identifying the buildings at their corners (Figures 15, 17). A small addition and refrigeration machinery have been added to the northwest elevation of Warehouse B in recent decades (Figure 26), and Warehouse C has a large 1970s addition the southeastern portion of the plan (Figure 28). Transit Shed #2 has non-original concrete unloading and conveyance machinery at the southeastern portion of the plan.

Two smaller buildings are associated with and located on the southeast side of the bunker fuel complex's five sizeable steel tanks, which are situated at the northeast corner of the terminal site (Figure 19). The complex originally had four larger tanks and multiple smaller acid and oil tanks.

Located at the southeast corner of the site near the terminal's main entrance are the predominantly utilitarian truck scale building (Figure 21), which features a Modern-style flat overhanging roof, and the three sizeable steel Pacific Molasses Company tanks (Figure 20).

The bulk loader consists of a rail car unloading building, an underground conveyor that transmits dry bulk material to a junction house west of the rail car unloading building and northeast of Warehouse C, an elevated conveyor system that stretches from the junction house to the terminal's southern berths, and an elevated conveyor connected to traveling ship loader that extends across the southern berths (Figures 22 through 24). The rail car unloading building and the junction house are utilitarian structures with corrugated-metal roofs and cladding. The bulk loader's original junction house is connected to a non-original junction house by a non-original conveyor segment. The non-original junction house is connected by a non-original cylindrical conduit to the tops of a non-original silo complex constructed west of the rail car unloading building east of Warehouse C's north corner in the 1970, and subsequently expanded with additional silos and utilitarian buildings (Figures 31 and 32).

Figure 13. Recent aerial photograph of Tenth Avenue Marine Terminal; compare to the 1965 Figure 12 aerial photograph: at the upper right a high-rise hotel stands where Warehouse A stood in 1965; refrigerated truck containers occupy areas where the truck repair buildings and office/union hall building stood in 1965; silos, conduits, and a junction house developed in 1970 and later are located east of Warehouse C, which has a large 1970s addition at its southeast end; the headhouse and southeastern storage space of Transit Shed #1 have been demolished along with the original traffic island and sign between the two transit sheds (from San Diego Unified Port District)

Evaluation

The TAMT does not appear to be eligible for listing on the CRHR as a historic district. Consequently, the terminal does not appear to compose a district qualifying as a historical resource for the purposes of CEQA.

The development of the TAMT does not appear to qualify as an event meriting the site for listing on the CRHR as a historic district. The Embarcadero Piers were San Diego's first municipally developed commercial maritime shipping facility, not the TAMT. Although the terminal's development was associated with overall post-World War II economic growth in San Diego, such association is too commonplace to qualify the terminal for CRHR listing. All infrastructure is developed to spur growth or accommodate existing or anticipated growth. It is undeniable that the TAMT increased San Diego's share of the California and west-coast commercial-port shipping business, and that the terminal represented an economic asset to the city that made use of the advantages afforded by the city's natural harbor. However, the TAMT did not equip San Diego to move up beyond a middle-range status among West Coast ports and seriously rival larger, more established commercial shipping facilities at the Ports of Los Angeles and Long Beach and at major West Coast ports farther north. In fact, the Port of San Diego's position relative to California and other West Coast ports actually weakened slightly overall following the 1957–64 period of potential significance, during the latter 1960s and early 1970s. With the advent of container shipping, the National City Marine Terminal would need to be developed into a container facility to maintain the Port of San Diego's position as a middle-level player in the commercial port-shipping business on the West Coast.

Other economic factors were far more important to San Diego's post-World War II economic growth than the TAMT. San Diego had become a military town by the 1920s. World War II increased the U.S. Navy's longstanding and leading in role the local economy, as well as its physical presence in San Diego Harbor. After World War II, federal military spending would continue to be far more important to the San Diego economy than the terminal's commercial shipping activities, as would local economic factors such as defense contracting, the aircraft industry, shipbuilding, and tourism. After 1965, problems with the bulk loader and changing economic conditions would require the terminal to be altered from its original design and initial 1957–1964 development. The Port District's airport and property management revenues would dramatically exceed revenues from terminal operations during the latter 1960s. The TAMT did not, in itself, transform San Diego's economy. San Diego's economic prospects during the latter 1960s and early 1970s were enhanced by the terminal and numerous other factors, but it does not appear that the city's economic prospects depended on the terminal from the late 1950s to the early 1970s. For these reasons, the TAMT does not appear to meet CRHR Criterion 1.

Development of the TAMT was one of multiple major harbor projects and initiatives completed or planned under City Harbor Department/Port District Director John Bate, who is a significant figure in post-World War II San Diego history. In addition to the terminal, harbor-related projects and initiatives completed under Bate's leadership from the late 1940s to 1966 included the creation of Shelter Island, the expansion and modernization of Lindbergh Field, the creation of Harbor Island, planning for conversion of the Embarcadero Piers to recreation and tourism uses, and planning for development of the National City Marine Terminal. Bate was also the organizational and political architect of the Port District. Although Bate was an engineer by training, his role in shaping the non-military features of San Diego's evolving post-World War II Harbor was primarily as a manager and planner. The engineering team that worked under Harbor Department/Port District Director Bate designed the TAMT. As a *San Diego Evening Tribune* editorial explained soon after Bate's death in 1983,

> If one person were to be picked out of the beautiful crowd as most responsible for San Diego's beautiful harbor, it would have to be John Bate...Most of his dreams became realities. He helped to develop the bay into a playground and seaport any city in the world would envy. If he could never make it the major terminus for commercial shipping that he envisioned, it was not for lack of trying (*San Diego Evening Tribune* 1983).

The TAMT was part of Bate's evolving efforts to diversify San Diego Harbor uses beyond military facilities, ship building, and the tuna industry by creating new commercial-shipping and tourist-oriented facilities.

The TAMT does not, however, appear to have sufficiently direct association with Bate under Criterion 2 to qualify for listing on the CRHR as a historic district. Bate did not reside at the terminal. Although the TAMT had onsite Harbor Department/Port District offices (which have been demolished), it was not Bate's primary workplace as Harbor Department/Port District Director. The Harbor Department's headquarters were over a mile northwest of the terminal in a building at Harbor Drive and Ash Street that has been demolished. Several years after the creation of the Port District, and a year before Bate's retirement, the Port District's headquarters were relocated farther north to the current Port District headquarters building on Pacific Coast Highway (Port District ca. 1974:5). For these reasons, the TAMT does not appear eligible for CRHR listing as a historic district under Criterion 2. Moreover, even if the terminal did have significance under Criterion 2, it does not retain sufficient historical integrity to convey significance attributable to it under any of the CRHR criteria. The terminal's substantially diminished historical integrity is addressed in more detail below.

The TAMT does not appear to be significant for its overall design and engineering, or for the limited architectural elements of its larger 1957–64 period buildings. The terminal's mole (or marginal) design and construction does not appear to have represented a major milestone in harbor engineering. Harbor Department Chief Engineer J. E. Liebmann and engineer Greer W. Ferver likened its concrete and rock bulkhead walls to the well-established technology of the gravity dam (Liebmann and Ferver 1958:40). In terms of engineering, the creation of large, seismically safe, fireproof transit sheds and warehouse buildings with concrete walls atop fill appears to have been the most challenging element of the terminal's design and construction. For the transit sheds, which were designed by E. L. Freeland, this was achieved through the use of established technology, by driving 370 foundation piles of an existing type (Raymond step-taper piles), and attaching the tops of the piles below longitudinal walls to a concrete grade beam that functioned as a strut. While this solution to the threat of subsidence was described in a 1958 article authored by Liebmann and Ferver in *Civil Engineering*, it does not appear to represent a major milestone in design and construction of port facilities, and the article appears to have served in part as a means to promote the new terminal (Liebmann and Ferver 1958:43).

The terminal's bunker fuel facilities represented its most innovative feature, and Liebmann touted the terminal's ship fueling and ballast water removal facilities in a second *Civil Engineering* article on the terminal in 1960. While this element of the terminal made it a more attractive shipping facility by providing for ships to be conveniently serviced on site with refueling at competitive prices during cargo unloading and loading activities, the creation of these facilities did not involve historic engineering milestones. The bunker fuel and ballast water removal facilities provided a notable service that helped the terminal compete for several years after it opened for business in 1958.

However, this initially successful feature was undermined fairly quickly during the 1960s as ports in Japan began selling ship fuel at substantially lower prices than other Pacific ports (Irwin 1970:57; Liebmann 1960:69–72).

Other elements of the TAMT—the surviving architectural features of the transit sheds, the extensive bulk loader system—do not appear to have sufficient historical significance to qualify the terminal for CRHR listing as a historic district for design or engineering attributes. The terminal's bulk loader was an example of technology developed beginning in the early twentieth century that evolved over the course of the century. The Port of Long Beach developed comparable bulk loader facilities at the same time that the TAMT developed its bulk loader facilities. Most of the surviving buildings at the terminal are primarily utilitarian in design. Non-utilitarian architectural features include the decorative fluted panels on some transit-shed wall slabs, the overall Modern architecture and nautically oriented design elements of the surviving transit shed headhouse, and the somewhat retrograde (for the late 1950s) Moderne lettering of scored signage on limited portions of the transit sheds' and warehouses' concrete wall slabs. These features do not appear to have sufficient importance to qualify the terminal for CRHR listing as a historic district. For these reasons, the TAMT does not appear to meet Criterion 3 for listing on the CRHR.

Alterations have substantially diminished the TAMT's historical integrity since its 1957–64 period of significance, the years during which the terminal's originally planned elements were constructed. Arguably the most noteworthy diminishment of historical integrity has occurred in the area where the terminal's dedication ceremonies took place in November 1958, between the transit shed headhouses. There, the original traffic island, pillar, and signage formed the symbolic focal point of the dedication ceremonies, and throughout the 1957–64 period of potential significance these elements were integral to the heavily traveled space between the transit sheds (Figure 9). Sometime after the period of significance, the traffic island, pillar, and signage were demolished. Transit Shed #1's headhouse and the southeastern quarter of its storage space were demolished more recently. The demolition of these elements has substantially altered the terminal's original design, and notably diminished the historic feeling and setting in this area of the terminal. Extensive concrete unloading and conveyance machinery was also added to the southeast of portion of Transit Shed #2 after the 1970s, which has diminished integrity of design and feeling at this portion of the building.

Numerous buildings present at the terminal to the northeast and east of Warehouse B during the 1957–64 period of potential significance have been demolished, including Warehouse A, the Harbor Department office building/union hall, and two truck repair buildings. The silos constructed by 1970 east of Warehouse C were created to enhance the terminal's disappointing dry-bulk export output. Rising much higher than other structures at the site, the silos significantly altered terminal viewsheds. Two larger silos and multiple utilitarian buildings were added to the silo complex in subsequent decades. A major, inharmonious addition to the southeast elevation of Warehouse C that does not have concrete walls was constructed during the 1970s. This has reduced the warehouse's integrity of design and materials, the terminal's design, and the setting and feeling in that area of the terminal. The bunker fuel complex now has five larger tanks when it originally had four, and its original smaller oil and acid tanks have been removed. The original rotary unloading machinery in the rail car unloader building has been removed. Altering viewsheds further, by 2006 a large non-original conduit had been installed that extends from the tops of the southeastern 1970s silos to a new junction structure connected to the bulk loader conveyor. A new conveyor segment also connected the new junction structure to the bulk loader's original junction house. Collectively, these changes have diminished the terminal's integrity of design, setting, and feeling.

In summary, the TAMT does not appear to be eligible for CRHR listing as a historic district. Consequently, the terminal does not appear to compose a district qualifying as a historical resource for the purposes of CEQA.

Transit Shed #1

Description

Located at the northwest portion of the terminal site, Transit Shed #1 has a long rectilinear plan and is constructed of tilt-up fireproof concrete walls and steel roof trusses. Two transverse concrete walls divide the approximately 145,000-square-foot building into three interior storage spaces. Square-shaped concrete wall slabs at each end of the interior transverse walls, and rectangular-shaped wall slabs at the ends of the northwest and southeast elevations rise higher than adjacent wall slabs to form parapets. These parapet-topped concrete wall slabs are scored with decorative Moderne-style fluted panels and signage identifying berth numbers, or the Port of San Diego and the year 1957—the year construction began on the terminal's transit sheds. The roofs of the building's three interior spaces slope downward to the southwest and northeast from central ridges. Each of the building's three interior spaces has five large loading entries with roll-up metal warehouse doors along the southwest and northeast elevations. Concrete truck-loading platforms extend along most of the building's northeast elevation. The southeast and northwest elevations each have a single centered entry large enough to allow trucks to enter the building. These are also secured by metal roll-up warehouse doors. Industrial-grade pedestrian doors provide access to the building at various locations. The southwest elevation features windows at two locations, including a pair of original steel-frame windows that appear to incorporate awning or hopper sashes.

Transit Shed #1 has undergone several notable alterations. A corrugated-metal shed addition was constructed at the northwest elevation sometime after 1970. Originally, the building had four rather than three interior storage spaces, and its southern end consisted of Modern style headhouse offices. Both have been demolished. Now the southeast elevation consists of a concrete wall with two buttresses. Historic photographs indicate that the Transit Shed #1 headhouse was identical to the intact Modern-style headhouse at the northwest end of Transit Shed #2. Originally, an oval traffic control island with a concrete pillar was situated between Transit Sheds #1 and #2. The pillar featured signage identifying the terminal and transit sheds, and was flanked by tenant directories for the transit sheds. The traffic island, pillar, and associated directories have been removed from the site.

Figure 14. Former interior concrete wall that now forms the southwest elevation of Transit Shed #1, which faces Transit Shed #2's surviving headhouse; note partially remaining "Berth 4" signage (upper right) indicating extent of demolition at southern end of building, looking west

Figure 15. Transit Shed #1 wall slab with Moderne signage and decorative fluting, looking south

Evaluation

As discussed above, the terminal site does not appear to be eligible for CRHR listing as a historic district; therefore, the transit shed does not appear to contribute to a historic district. The following discussion addresses the potential for Transit Shed #1 to qualify as an individual historical resource.

Aerial photographs indicate that the construction of Transit Shed #1 began in 1957. Plans on file at the Unified Port of San Diego indicate that the portion of the building devoted to storage was designed by E. L. Freeland, Structural Engineer of San Diego. Freeland appears to have worked with Harbor Department engineering team headed by J. E. Liebmann in the design of the terminal's two transit sheds. Local architect Louis Bodmer designed Transit Shed #1's original Modern-style headhouse (no longer present). Bodmer also designed the traffic island, pillar, and flanking transit shed tenant directories originally situated between Transit Sheds #1 and #2 (no longer present). The F. E. Young construction company won the contract to build Transit Shed #1 and completed the building by 1958 (Bodmer 1957A, 1957B; Freeland 1957; Liebmann and Ferver 1958:43; Ninyo & Moore 1999: Appendix A; Morin 1957C; San Diego Union 1958A:C-6).

Transit Shed #1 does not appear to be individually eligible for the CRHR. Research efforts have yielded no evidence that Transit Shed #1 is associated with important historical events or patterns of events. Nor has research revealed evidence that a noteworthy individual performed historically important work at the transit shed building. The building does not have a direct enough association with Harbor Department/Port Director John Bate to confer significance upon it. Consequently, the building does not appear to meet or Criteria 1 or 2 for listing in the CRHR.

Research yielded no evidence that E. L. Freeland distinguished himself as an engineer in a manner that would confer historical significance upon Transit Shed #1. The building has limited decorative elements—concrete wall slabs scored with Moderne-style fluting and signage in some places—and does not appear to reach the threshold of significance necessary for CRHR listing as an important example of port architecture. As explained above, although the building's development involved the challenge of potential subsidence because of its weight and location on fill, the measures employed to make it structurally sound—370 concrete Raymond step-taper piles and a concrete grade beam below longitudinal walls that acted like a strut—do not appear to have represented major milestones in port engineering. The building has also been substantially altered. Its original Modern-style headhouse, southeastern-most storage space, and the associated traffic island originally situated near the building's headhouse have all been demolished. A shed-roofed corrugated-metal addition has also been constructed at the building's northwest elevation. These alterations have diminished its integrity of design, materials, workmanship, and feeling. For these reasons, Transit Shed #1 does not appear to meet Criterion 3 for individual CRHR listing.

Transit Shed #2

Description

Occupying the southwest portion of the terminal site, Transit Shed #2 is a cargo storage building that incorporates headhouse offices at the northwest elevation. The 194,000-square-foot building has a long rectilinear plan. Most of the building consists of tilt-up fireproof concrete walls and steel roof trusses that enclose large interior storage spaces southeast of the headhouse. The two-story Modern-style headhouse has a centered cargo-loading bay large enough to accommodate trucks, and pedestrian entries at the façade's first-floor offices, and atop stairways leading to the second story.

One stairway is located at the northwest elevation, and the other two are located within the central bay. Clad mostly in stucco, the headhouse has a slightly pitched shed roof that overhangs broadly at the northwest and northeast (front) elevations to shelter the northwest stairway and the first-floor entries. The second story is slightly cantilevered. Fenestration consists mainly of rectangular banks of multi-pane aluminum-frame windows. On each side of the central bay, the façade's second-story windows are framed by long rectangular surrounds incorporating mullion-like fluted panels. Aluminum-frame glass doors with transoms are integrated into the window banks along the first floor.

The walls at the ends of the headhouse and on each side of the central bay feature circular windows. Six steel poles extend from the sides of each stairway to the overhanging roof. The circular windows, the steel poles lining the stairways, and the headhouse's overall resemblance to a ship's navigation bridge are reminiscent of Streamline Moderne architecture's references to transportation technology. However, the headhouse's horizontal emphasis, window bands, sharp corners, and overhanging projections make it a Modern building registering the post-World War II influence of the International Style.

The remainder of the transit shed to the southwest of the headhouse is formed of tilt-up concrete elevation walls and three tilt-up, concrete, interior transverse walls. These create four interior storage spaces. Square shaped concrete wall slabs at each end of the interior transverse walls, and rectangular-shaped wall slabs at the ends of the northwest and southeast elevations, rise higher than adjacent wall slabs to form parapets. These parapet-topped concrete wall slabs are scored with decorative Moderne-style fluted panels and signage identifying berth numbers, or the Port of San Diego and the year 1957—the year construction began on the terminal's transit sheds.

The roofs of the four interior spaces slope downward to the southwest and northeast from central ridges. Each of the building's four interior spaces has five large loading entries with roll-up metal warehouse doors along the southwest and northeast elevations. Concrete truck-loading platforms extend along most of the building's northeast elevation. Industrial-grade pedestrian doors provide access to the building's storage spaces at various locations. The southwest elevation features windows at two locations, including a pair of original steel-frame windows that appear to incorporate awning or hopper sashes. The southeastern portion of the building incorporates multiple non-original structures, including a ship unloader and associated conveyance machinery at the southwest and northeast elevations, and across the building's roof. The original construction of Transit Sheds #1 and #2 included an oval traffic control island with a concrete pillar situated between the two buildings' headhouses. The pillar featured signage identifying the terminal and transit sheds, and was flanked by tenant directories for the two buildings. The traffic island, pillar, and associated directories have been removed from the site.

Figure 16. Transit Shed #2's surviving headhouse, looking south-southwest

Figure 17. Harbor-facing southwest elevation near non-original cement unloading and conveyance facilities; note Moderne lettering and decorative fluted-concrete wall, looking east

Figure 18. Non original cement unloading and conveyance facilities at south end of southeast elevation, looking north-northwest

Evaluation

As discussed above, the terminal site does not appear to be eligible for CRHR listing as a historic district; therefore, the transit shed does not appear to contribute to a historic district. The following discussion addresses the potential for Transit Shed #2 to qualify as an individual historical resource.

Transit Shed #2 has the same development history as Transit Shed #1. Aerial photographs indicate that the construction of Transit Shed #2 began in 1957. Plans on file at the Unified Port of San Diego show that the portion of the building devoted to storage was designed by E. L. Freeland, Structural Engineer of San Diego, in consultation with the Harbor Department engineering team lead by J. E. Liebmann. Local architect Louis Bodmer designed Transit Shed #2's Modern-style headhouse. Bodmer also designed the traffic island, pillar, and flanking transit shed directories originally situated between Transit Sheds #1 and #2. The F. E. Young construction company won the contract to build Transit Sheds #1 and #2 and completed the buildings by 1958 (Bodmer 1957A, 1957B; Freeland 1957; Liebmann and Ferver 1958; Ninyo & Moore 1999:Appendix A; Morin 1957C; San Diego Union 1958A:C-6).

Transit Shed #2 does not appear to be individually eligible for the CRHR. Research revealed no evidence that the building has direct individual associations with an important event or pattern of events, nor has research revealed any evidence that a noteworthy individual performed historically important work that was strongly associated with Transit Shed #2. The building does not have sufficiently direct association with Harbor Department/Port Director John Bate to confer significance upon it. Consequently, the building does not appear to meet Criteria 1 or 2 for listing in the CRHR.

Research yielded no evidence that either E. L. Freeland or Harbor Department chief engineer J.E. Liebmann distinguished themselves as engineers in a manner that would confer historical significance upon Transit Shed #2. As explained above, although the development of the building's extensive storage spaces involved the challenge of potential subsidence because of the structure's weight and location on fill, the measures employed to make it structurally sound—370 concrete Raymond step-taper piles and a concrete grade beam below longitudinal walls that acted like a strut—do not appear to have represented major milestones in port engineering. Sources on master architects and architectural Modernism in San Diego offer no evidence that Louis Bodmer distinguished himself as an important designer of post-World War II buildings (City of San Diego 2007; Freeley et al. 2011; Modern San Diego Real Estate 2014). The building's storage portion incorporates limited ornamental features at some concrete wall slabs in the form of scored Moderne-style fluting and signage. The headhouse is a commonplace example of Modern architecture that incorporates limited design elements evoking nautical associations—some circular windows, steel poles lining stairways, and an overall resemblance to a ship's navigation bridge. These elements gave the 1958 headhouse qualities reminiscent of older Streamline Moderne design at a moment when Modernism evolving out of the International Style was ascendant in San Diego and across the United States. In contrast to architecturally significant port buildings designed in Modernist idioms, such as the International-style Los Angeles Cruise Terminal at the Port of Los Angeles (1963)(Applied Earth Works, Inc. 2013:19–21, 24), Transit Shed #2 does not achieve high artistic values and does not exhibit innovative architectural design. Overall, Transit Shed #2 does not appear to meet the threshold of architectural or engineering significance appropriate for CRHR listing. For these reasons, Transit Shed #2 does not appear to be eligible for individual CRHR listing under Criterion 3.

Bunker Fuel Complex

Description

Located at the northeastern portion of the TAMT site, the above-ground portion of the bunker fuel complex consists of five large steel tanks and two buildings secured by chain-link fences topped with barbed wire. The two steel tanks closest to the buildings at the southeast side of the complex appear to be equivalent in size and have diameters of approximately 100 feet. Immediately northwest of those tanks are two additional tanks. The southern one has a diameter of approximately 80 feet and the one to the northeast has a diameter of approximately 55 feet. An additional tank at the northernmost portion of the complex was constructed within the last decade. The buildings on the site appear to function as a utility building (eastern) and a small office (western). Both are utilitarian in design with concrete-block walls and flat roofs with broadly overhanging eaves. The western building has several window openings. Access restrictions during the field visit prohibited clear observation of the contents of the window openings.

Figure 19. Bunker Fuel Complex tanks, looking west-northwest

Evaluation

As discussed above, the terminal site does not appear to be eligible for CRHR listing as a historic district; therefore, the bunker fuel complex does not appear to contribute to a historic district. The following discussion addresses the potential for the bunker fuel complex to qualify as an individual historical resource.

The terminal's bunker fuel complex was completed in 1959. An in-depth history of the terminal site's development has identified the owner of the tank complex from 1959 through 1971 as Union Oil of California. Several smaller original tanks have been removed from the complex. The purpose of the tanks was to store ship fuel and provide refueling services to ships docked at the terminal. Pipes from the tanks conveyed fuel directly to terminal berths so that ships could refuel during cargo loading or unloading. The same pipes provided for removal of ballast water from arriving ships' fuel tanks. At most earlier-developed West Coast ports during the 1950s and 1960s, cargo ships were refueled from barges or tugboats. Harbor Department officials heavily promoted the terminal's bunker fuel facilities. Although their development does not appear to have required major engineering innovation for the period, the bunker fuel facilities offered convenience and promoted efficiency, and provided a crucial element of the Harbor Department's marketing efforts to attract ships to San Diego. While the bunker fuel facilities helped make the Port of San Diego more competitive in the West Coast shipping market for a time, this initially successful feature was undermined fairly quickly during the 1960s as ports in Japan began selling ship fuel at substantially lower prices than other Pacific ports (Bate 1958:C-3; Brooks 1958:C-1; Liebmann 1960:69–72; Ninyo & Moore 1999:11, Appendix A; Irwin 1970:57–58).

The TAMT's bunker fuel complex does not appear to be individually eligible for the CRHR. As part of the terminal's bunker fuel facilities, the bunker fuel complex does not appear to have direct individual associations with important events or patterns of events. As explained above, although the terminal's bunker fuel capabilities were an important element of the Harbor Department officials' efforts to create a terminal that offered superior maintenance services to ships, the competitiveness provided by the facility was undermined fairly quickly in the 1960s by cheaper fuel prices at Japanese ports. Research has revealed no evidence that a noteworthy individual performed historically important work that was strongly associated with the bunker fuel complex. The building does not have sufficiently direct association with Harbor Department/Port Director John Bate to confer significance upon it. Consequently, the complex does not appear to meet Criteria 1 or 2 for listing in the CRHR.

Research efforts did not reveal any evidence that the bunker fuel complex is significant as the work of a master engineer or builder. Neither the tank complex nor the underground pipeline system for conveying fuel and ballast water appear to qualify as engineering masterworks. The system appears to be the product of technology that was well established by the late 1950s. Tanks comparable in size, with equivalent steel construction, are commonplace elements of the historic-period industrial built environment at numerous ports and other industrial complexes in California and across the West Coast. The two small buildings associated with the tanks are also commonplace examples of utilitarian 1950s buildings. For these reasons, the bunker fuel complex does not appear to meet Criterion 3 for listing individual listing in the CRHR.

Molasses Tanks

Description

The terminal's remaining tanks for molasses storage are approximately 170 feet east of Warehouse C's southeastern corner. The three steel molasses tanks appear to be the same size and have diameters of approximately 70 feet. The tops are connected by steel catwalks. The lower circumference of the eastern tank and the entire circumference of the central tank have been covered with non-original insulating material. Various associated pipes and valves are located on the south side of the tanks.

Figure 20. Molasses Tanks, looking north

Evaluation

As discussed above, the terminal site does not appear to be eligible for CRHR listing as a historic district; therefore, the molasses tanks do not appear to contribute to a historic district. The following discussion addresses the potential for the molasses tanks to qualify as an individual historical resource.

The San Francisco-based Pacific Molasses Company arranged for construction of the three large tanks for $150,000 as a distribution plant. A newspaper report in December 1961 noted that, due to construction delays, the plant would not be completed until the following February. It appears that the plant was completed in 1962; it is present in a 1963 aerial photograph. Imported molasses stored in the tanks was trucked to the Imperial Valley and processed into cattle feed. The Pacific Molasses Company tanks remain intact; an additional molasses tank constructed near the bunker fuel tank complex by a different company than Pacific Molasses was later demolished. Several smaller tanks constructed at the same time as the Pacific Molasses tanks and located immediately north of them have been removed from the site (Irwin 1970:50–51; Morin 1961A:A-27; Morin 1961B; Ninyo & Moore 1999:12, Appendix A).

The molasses tanks developed by the Pacific Molasses Company at the TAMT do not appear to be individually eligible for the CRHR. The molasses tanks do not appear to have significance for direct individual association with a historically important event or pattern of events. Research has revealed no evidence that a noteworthy individual performed historically important work that was strongly associated with the molasses tanks. The tank complex does not have sufficiently direct association with Harbor Department/Port Director John Bate to confer significance upon it. Consequently, the tanks do does not appear to meet Criteria 1 or 2 for listing in the CRHR.

Research efforts did not reveal any evidence that the molasses tanks are significant as the work of a master engineer or builder. The tanks do not appear to be an engineering masterwork. Tanks comparable in size, with equivalent steel construction, are commonplace elements of the industrial built environment in numerous cities in California and across the West Coast. For these reasons, the molasses tanks do not appear to meet Criterion 3 for listing in the CRHR. Additionally, two of the tanks have been entirely or partially covered with non-original insulating material, which has diminished their historical integrity of design, materials, and feeling. The integrity of the site as whole has also been compromised by the removal of the smaller tanks originally installed immediately north of the existing three larger tanks.

Truck Scale Building

Description

The Truck Scale Building faces southwest and is immediately south of the terminal's molasses tanks. The predominantly utilitarian building has a rectangular plan with a small projecting square element at the southwest elevation that accommodates the main drive-up window. The building's concrete block walls support a flat roof outlined by low parapets atop the square element, and a flat-roof Modern-style roof with broadly projecting eave overhangs and angled fascia boards across the main rectangular mass. Most windows are inset, horizontally sliding aluminum-frame units above wood sills. Two non-original horizontally sliding vinyl windows are located at the northwest portion of the southwest elevation. Wood doors with upper glazing provide access at the northwest and southeast sides of the drive-up window projection, as well as the southwest elevation of the main rectangular element. The northwest elevation of the main rectangular element has a metal door that slides horizontally on a mounted track.

Figure 21. Northwest and southwest elevations of truck scale building, looking north

Evaluation

As discussed above, the terminal site does not appear to be eligible for CRHR listing as a historic district; therefore, the truck scale building does not appear to contribute to a historic district. The following discussion addresses the potential for truck scale building to qualify as an individual historical resource.

The truck scale building was constructed by 1963. It is unclear whether the Pacific Molasses Company constructed the building or whether the building was developed by Westside Metals/Scrap Metals, which operated a scrap metal yard during the early 1960s at the terminal near the northeast side of Warehouse C (Ninyo & Moore 1999:12, Appendix A).

The truck scale building does not appear to be individually eligible for the CRHR. As discussed in detail above, the larger terminal does not appear to qualify for CRHR listing under Criterion 1 as a historic district for association with a historically important event or pattern of events. Research efforts have revealed no evidence that a noteworthy individual performed historically important work that was strongly associated with the building, which does not have sufficiently direct association with Harbor Department/Port Director John Bate to confer significance upon it. Individually, therefore, the building does not appear to meet Criteria 1 or 2 for listing in the CRHR.

Research efforts did not reveal any evidence that the truck scale building was designed by a master architect or builder. The building does not have high artistic value and does not appear to be a distinctive example of any architectural style or building technique. The building registers the influence of Modern architecture in its flat roof and broadly overhanding eaves. But such elements are commonplace among buildings constructed at industrial sites throughout California during the 1950s and 1960s. For these reasons, the truck scale building does not appear to meet Criterion 3 for listing in the CRHR.

Bulk Loader System

Description

The TAMT's bulk loader is a multicomponent system for conveying dry bulk commodities from railroad cars and onsite storage structures to the two terminal's two southernmost berths. Its original elements consist of a rail car unloading building, an underground conveyor from the rail car unloading building to a junction house to the west, a much longer conveyor extending from south of the junction house south to the southernmost berths, and a conveyor and traveling loader that provided for bulk commodities to be dumped directly into ship hulls. Original portions of the system total approximately 1,600 feet in length. The commodities delivered to ships through the system included potash, soda ash, grain, alfalfa pellets, and chemical fertilizers. The bulk loader's capacity was originally 2,000 tons per hour. In more recent decades, its capacity has been rated from 1,200 to 1,800 tons per hour (Irwin 1970:49–50; World Port Source 2014; Port District 1992:13).

The historic-era portion of the system begins at the rail car unloading building, which is north of the molasses tanks, east of Warehouse C, and southeast of the silo complex, along spur tracks connected to the railroad lines that run east of the site. The building's corrugated-metal rectangular western portion has a low-pitched gable roof and two large openings at the northwest and southeast elevations. This portion of the building contains facilities for receiving materials dumped from the bottoms of cars through steel grills to a conveyor system underneath the building. A corrugated metal shelter projects from the building's northeast elevation and is supported at the northeast side by several steel posts. Under the shelter along the northeast wall of the building is an elevated operations room accessed at a steel stairway. A rotary car dumper was originally located in this part of the building.

Commodity materials received at the rail car unloading building are conveyed underground and within a corrugated metal conveyance structure to the corrugated metal junction house approximately 200 feet to the west. Originally, the system's 42-inch-wide conveyor belt extended from the junction house south to the terminal's southern berthing area. Within the past decade, however, the system has been altered in the vicinity of the original junction house. A second, taller junction structure was built south of the original structure. This new structure incorporates a four-sided conduit with a conveyor that extends to the original junction house, as well as a long cylindrical conduit with three sets of support legs. This conduit connects to the top of the grain silo complex. Steel conveyance structures located between the aforementioned features and the concrete ramp to the south have been introduced to the system since 1970 (Ninyo & Moore 1999: Appendix A).

The elevated steel frame of the 42-inch conveyor belt extends from the newer junction structure (rather than the original junction structure) approximately 600 feet south to an additional rectangular corrugated metal junction structure in the vicinity of Berth 8. Comparison of historic and current aerial imagery indicates that the junction structure near Berth 8 has been altered, and that it originally incorporated several windows (Ninyo & Moore 1999: Appendix A).

Figure 22. Railcar unloader building, looking northwest

Figure 23. Bulk loader system from non-original junction structure (monolithic darker gray structure center right) to east end of southern berthing area, looking north

Figure 24. Southern segment of bulk loader system, including elevated conveyor, corrugated metal conveyor shelter, and traveling loader with telescoping chute (center-right background), looking east-southeast

The remainder of the system consists of an elevated steel structure incorporating a conveyor belt, a corrugated metal shelter, and an affixed track along which the system's steel traveling ship loader (or boom conveyor) is connected. The loader moves parallel to the elevated conveyor structure to allow for optimal positioning relative to berthed ships. Once positioned, the traveling loader conveys material to a vertical telescoping chute with a dust suppressor, which transmits the material directly into ship compartments.

Evaluation

As discussed above, the terminal site does not appear to be eligible for CRHR listing as a historic district; therefore, the bulk loader does not appear to contribute to a historic district. The following discussion addresses the potential for the terminal's bulk loader system to qualify as an individual historical resource.

The bulk loader system, one of the terminal's most heavily promoted features, was put into service in early 1963. Planning for the bulk loader began years earlier, when Harbor Department officials inspected bulk loading systems on the east coast, the gulf coast, and the West Coast. Aware of growing demand for raw materials in Asia, Harbor Department officials sought bulk-loading facilities for speedier, automated transfer of raw materials from railcars and storage facilities to ship hulls. It appears that in California prior to the 1960s, only the Port of Stockton had bulk-loading facilities comparable to the one planned for the TAMT. The Port of Portland had industrial bulk loading facilities as early as the 1920s. The Port of Long Beach developed up-to-date bulk loading facilities, including a rotary rail car unloader, at the same time that TAMT's bulk loader was developed. San Diego's Harbor Department contracted the Diversified Builders Inc. of Los Angeles and the McDowell Company of Cleveland (later the McDowell-Wellman Company) to build the system, which would have a capacity to load 2,000 tons per hour. Initially the loader handled exports such as potash from New Mexico and flaxseed and alfalfa pellets from Arizona and the Imperial Valley. During the first decade of its existence, soda ash, borax, phosphates, coper or concentrates, and gypsum would subsequently be conveyed to ships for export by the bulk loader (Irwin 1970:48–49; Morin 1961C:A-20; Morin 1962A:B-16; Port of Long Beach 1963:6-1; Port of Portland 1922; Shepard 1962:A-45).

As explained in detail above in the historic context for the TAMT, the bulk loader proved to be the most problematic and controversial element of the terminal after the system was completed in 1964. It broke down repeatedly and never handled enough material to break even on its amortization costs during the 1960s and early 1970s. It was developed to handle mainly potash, but during the 1960s, new cheap sources of potash from Canada undermined output from New Mexico, the source of San Diego's potash exports. The disappointing economic performance of the terminal's bulk loader forced the Port District joined with a private organization to develop the silo complex for onsite storage of livestock feed and other grain products to increase dry bulk exports (Morin 1969:A-23; San Diego Union 1963:H-11; San Diego Union 1965:A-22; Shepard 1964B:A-15; Shepard 1968:A-13; Shepard 1969A:B-1).

The TAMT's bulk loader system does not appear to be eligible for the CRHR. The bulk loader does not appear to have significance for direct association with a historically important event or pattern of events. Research has revealed no evidence that a noteworthy individual performed historically important work that was strongly associated the bulk loader. The bulk loader does not have sufficiently direct association with Harbor Department/Port Director John Bate to confer significance upon it. Consequently, the bulk loader does not appear to meet Criteria 1 or 2 for individual listing in the CRHR.

As an engineering structure, the bulk loader has impressive size and capacity both in terms of its conveyance speed and the rate at which its rail car unloading machinery could intake railroad cargo.

However, it does not appear that the TAMT's bulk loader has historic engineering or technological significance qualifying it for CRHR listing. As explained above, Portland had bulk loading facilities in the early twentieth century. Bulk-loading technology advanced over the course of the twentieth century. San Diego's bulk loader was developed on the basis of similar existing facilities on the East Coast, in Houston, and in Stockton. City Harbor Department officials planned and developed the bulk loader at the same time that the Port of Long Beach developed its modern bulk loader. It does not appear that San Diego's bulk loader was particularly unique, or that its development represented a milestone in port engineering history. For these reasons, the bulk loader does not appear to meet Criterion 3 for individual listing in the CRHR.

Warehouse B

Description

Warehouse B has a rectangular plan and provides approximately 300,000 square feet of storage space. It is constructed of tilt-up fireproof concrete walls and steel roof trusses. One interior longitudinal concrete wall and two interior transverse concrete walls divide the building into six interior storage spaces. Along the southwest and northeast elevations, rectangular- and square-shaped wall slabs rise higher than adjacent wall slabs to form parapets. The walls across the northwest and southeast elevations are as high as the parapet-topped wall slabs along the southwest and northeast elevations. The roof is slightly angled downward to the northeast and southwest from the top of the central interior longitudinal wall.

Numerous cargo loading bays secured by metal roll-up doors are distributed across the exterior walls. These open to concrete loading platforms along the southwest and northeast elevations. The platforms have steel railing and concrete stairs in some places. Warehouse B does not have any of the decorative fluting visible on Transit Sheds #1 and #2, but at several places the building is identified by concrete-scored Moderne lettering similar to the signage lettering of the transit sheds. Pedestrian entries and windows are concentrated at the building's west and south corners, and at the southern portion of the northeast elevation. Solid industrial-grade doors secure the pedestrian entries. The windows have steel frames and appear to be original awning or hopper units. They include single-pane, three-pane, and 12-pane windows.

The building has been altered in several places. The loading bays at the northwest portion of the northeast elevation are covered by a non-original metal shelter. Non-original refrigeration machinery is concentrated at the center of the northwest elevation. In recent decades, an addition with a curving roof has been constructed at the northeast portion of the northwest elevation.

Figure 25. Southwest and partial northwest elevations of Warehouse B, looking southeast

Figure 26. Northwest elevation of Warehouse B; note non-original refrigeration machinery and recent addition with curved roof, looking east

Evaluation

As discussed above, the terminal site does not appear to be eligible for CRHR listing as a historic district; therefore, Warehouse B does not appear to contribute to a historic district. The following discussion addresses the potential for Warehouse B to qualify as an individual historical resource.

The Harbor Department contracted I.C. Curry, Inc. to construct Warehouse B, which added 300,000 square feet of covered storage protected by fireproof concrete walls and steel roof trusses to the TAMT. Warehouse B was completed in 1962 (Magee 1961:B-16; Ninyo & Moore 1999:12, Appendix A; San Diego Union 1962C:A-24; Port District 1992:8).

Warehouse B does not appear to be individually eligible for the CRHR. The building does not appear to be associated with an important event or pattern of events that would confer individual significance upon it. Research efforts have revealed no evidence that a noteworthy individual performed historically important work that was strongly associated with Warehouse B. The building does not have sufficiently direct association with Harbor Department/Port Director John Bate to confer significance upon it. Individually, therefore, the building does not appear to meet Criteria 1 or 2 for listing in the CRHR.

Research efforts did not reveal who designed Warehouse B. However, its utilitarian design essentially repeats the arrangement and materials of the concrete walls and steel roof trusses that compose the majority of the terminal's earlier-built transit shed buildings. Limited concrete-scored Moderne signage identifies the warehouse at several corners of the building. Apart from this decorative element, the warehouse lacks the kinds of architectural elements observable on the earlier transit sheds. The warehouse is not an architectural masterwork, does not embody high artistic value, and is not the product of an important milestone in engineering or building techniques. For these reasons, the Warehouse B does not appear to meet Criterion 3 for individual listing in the CRHR.

Warehouse C

Description

Warehouse C was designed similarly to Warehouse B, but has been altered with a large addition at the southeast end of the building. The building has a rectangular plan and its original portion is constructed of tilt-up fireproof concrete walls and steel roof trusses. One interior longitudinal concrete wall and two interior transverse concrete walls divide the original portion of the building into six interior storage spaces. Along original portions of the southwest and northeast elevations, rectangular- and square-shaped wall slabs rise higher than adjacent wall slabs to form parapets. The northwest elevation wall and the original interior transverse walls are as high as the parapet-topped wall slabs along the southwest and northeast elevations. The roof of the original portion of the building is slightly angled downward to the northeast and southwest from the top of the central interior longitudinal wall.

Figure 27. Warehouse C, northeast and northwest elevation, looking south

Figure 28. Southwest and southeast elevations of addition at southeast side of Warehouse C, looking north

Numerous cargo loading bays secured by metal roll-up doors are distributed across the exterior walls. These open to concrete loading platforms along the southwest and northeast elevations. The platforms have steel railing and concrete stairs in some places. Like Warehouse B, Warehouse C does not have any of the decorative fluting visible on Transit Sheds #1 and #2, but at several places the building is identified by concrete-scored Moderne signage with lettering similar to the signage on the transit sheds. Pedestrian entries and windows are concentrated near the center of the building's northeast elevation, and the center and southeast end of the original portion of the building's southwest elevation. Solid industrial-grade doors secure the pedestrian entries. The windows appear to be original steel frame units with an upper two-pane awning sash and a lower single-pane fixed sash.

The exterior of the large addition forming the southeast end of Warehouse C is concrete at the wall bases and sheathed in metal cladding at the upper portions. The addition has multiple loading bays with role-up metal doors. The far southeast portion of the building does not form a corner. Instead, the addition is shaped so as not to interfere with immediately adjacent bulk-loader conveyor.

Evaluation

As discussed above, the terminal site does not appear to be eligible for CRHR listing as a historic district; therefore, Warehouse C does not appear to contribute to a historic district. The following discussion addresses the potential for Warehouse C to qualify as an individual historical resource.

The Harbor Department contracted I.C. Curry, Inc. to construct Warehouse C, which essentially repeated the design of Warehouse B. Warehouse C added another 300,000 square feet of covered storage protected by fireproof concrete walls and steel roof trusses to the TAMT. I.C. Curry, Inc. completed Warehouse C in 1964 for a price of $1.4 million. The building received a major addition at its southeast end during the 1970s (Morin 1964:A-29; Ninyo & Moore 1999: Appendix A; Port District 1992:8).

Warehouse C does not appear to be individually eligible for the CRHR. The building does not appear to be associated with an important event or pattern of events that would confer individual significance upon it. Research efforts have revealed no evidence that a noteworthy individual performed historically important work that was strongly associated with Warehouse C. The building does not have sufficiently direct association with Harbor Department/Port Director John Bate to confer significance upon it. Individually, therefore, Warehouse C does not appear to meet Criteria 1 or 2 for listing in the CRHR.

Research efforts did not reveal who designed Warehouse C. However, its utilitarian design essentially repeats Warehouse B, built 2 years earlier. Moreover, Warehouses B and C repeated the arrangement and materials of the concrete walls and steel roof trusses that composed the majority of the terminal's earlier-built transit shed buildings. Limited Moderne signage identifies the warehouse at several corners of the building, which lacks the kinds of other architectural elements observable on the earlier transit sheds. The warehouse is not an architectural masterwork, does not exhibit high artistic value, and does not embody an important milestone in engineering or building techniques. For these reasons, Warehouse C does not appear to meet Criterion 3 for individual listing in the CRHR.

Rail Tracks

Description

Numerous historic-era railroad tracks are located within the TAMT property. The rail lines within the terminal were installed as part of the facility's initial development in the late 1950s and early 1960s. They represent standard railroad construction. They consist of steel rails affixed to cross-ties across a layer of ballast, or tracks imbedded in asphalt pavement or in concrete. The track within the terminal property totals over 50,000 linear feet. Four tracks within the eastern portion of the terminal property east of the silo complex are aligned adjacent to the BNSF (former Santa Fe) railyard. The four tracks adjacent to the yard are at the same grade as the yard tracks, and are demarcated from other terminal facilities by a fence and a slope (Figure 29). Trains access the terminal site proper via a spur from the BNSF railyard that enters the terminal at the southeast corner of the site, east of the molasses tanks and north of the main gate.

Just east of the molasses tanks, the spur splits into multiple lines running to the southwest and northwest. The line to the northwest splits into multiple tracks to provide for railcars to be conveyed to the bulk loader's rail car unloading building. An additional connecting track extends between the track leading to the rail car unloading building and tracks running south of the molasses tanks. Northwest of the rail car unloading building, these lines converge into a single track in the vicinity of the bunker fuel complex. That single track continues to the northwest beyond the terminal site.

Multiple tracks run parallel to one another south of the molasses tanks toward the traveling ship loader at Berths 7 and 8. These split near Berth 8 into multiple tracks extending southwest and west. The line running southwest wraps around the south end of the bulk loader system and Transit Shed #2, and then splits into two lines that extend to the northwest along the southwest sides of the both transit sheds. The line running west from the vicinity of Berth 8 splits into multiple tracks that extend along the northeast sides of the transit sheds and the southwest sides of Warehouses B and C. Several tracks extend across the paved space between the transit sheds and warehouses.

The railroad tracks have undergone periodic alteration in the form of repair, replacement, and even realignment over the decades. Tracks that formerly provided for rail cars to be conveyed northwest from the north side of the molasses tanks to the northeast sides of Warehouses B and C have been removed or abandoned.

Figure 29. Marine Terminal tracks within central-northeast study area boundary, immediately west of BNSF yard, looking northwest

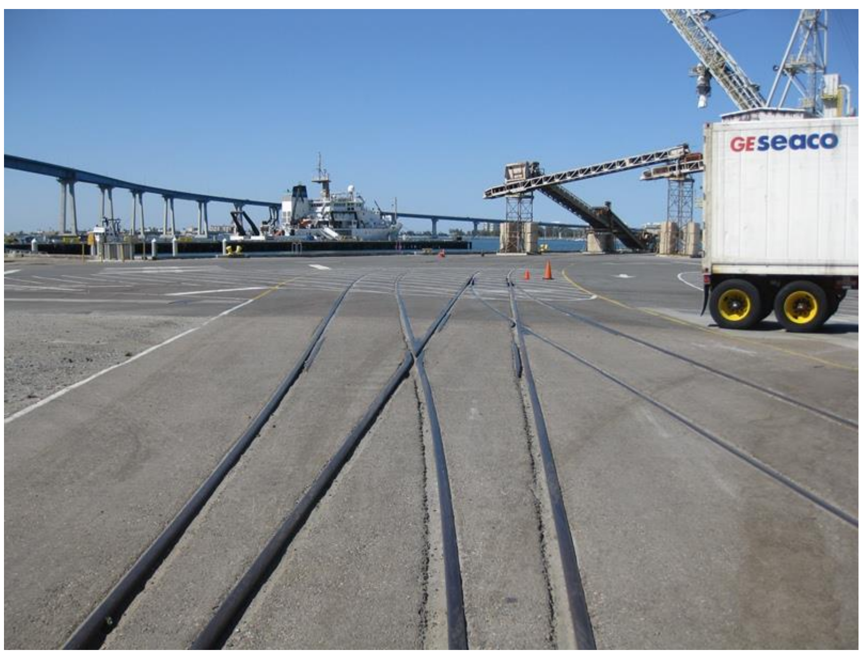

Figure 30. Spur from BNSF track extending into Tenth Avenue Marine Terminal east of molasses tanks, looking east

Evaluation

As discussed above, the terminal site does not appear to be eligible for CRHR listing as a historic district; therefore, the terminal's rail tracks do not appear to contribute to a historic district. The following discussion addresses the potential for the terminal's rail tracks to qualify as a historical resource individually.

None of the rail lines within the study area were part of the original Santa Fe Railway line constructed during the early 1880s, which was aligned nearby and to the east of the eastern study area boundary, nor were any of the tracks within the terminal part of sidings associated with the Santa Fe Line. The Santa Fe Railway alignment's proximity to the eastern boundary of the study area circa 1928–29, prior to development of the TAMT, is illustrated in Figure 31 below. The original spur line into the terminal property and various tracks within the site were constructed during the terminal's initial development in the late 1950s and early 1960s. A maintenance evaluation of the terminal's rail system conducted in the 1990s states that some of the track alignments within the site were added in the 1970s and 1980s, and that tracks along some of the original rail alignments within the terminal were replaced prior to the 1990s. The evaluation recommended replacing much of the track present at that time. Therefore, like most historic-period rail lines generally, the terminal's tracks have been subject to repeated maintenance and replacement (Frederick R. Harris, Inc. 1994:IV).

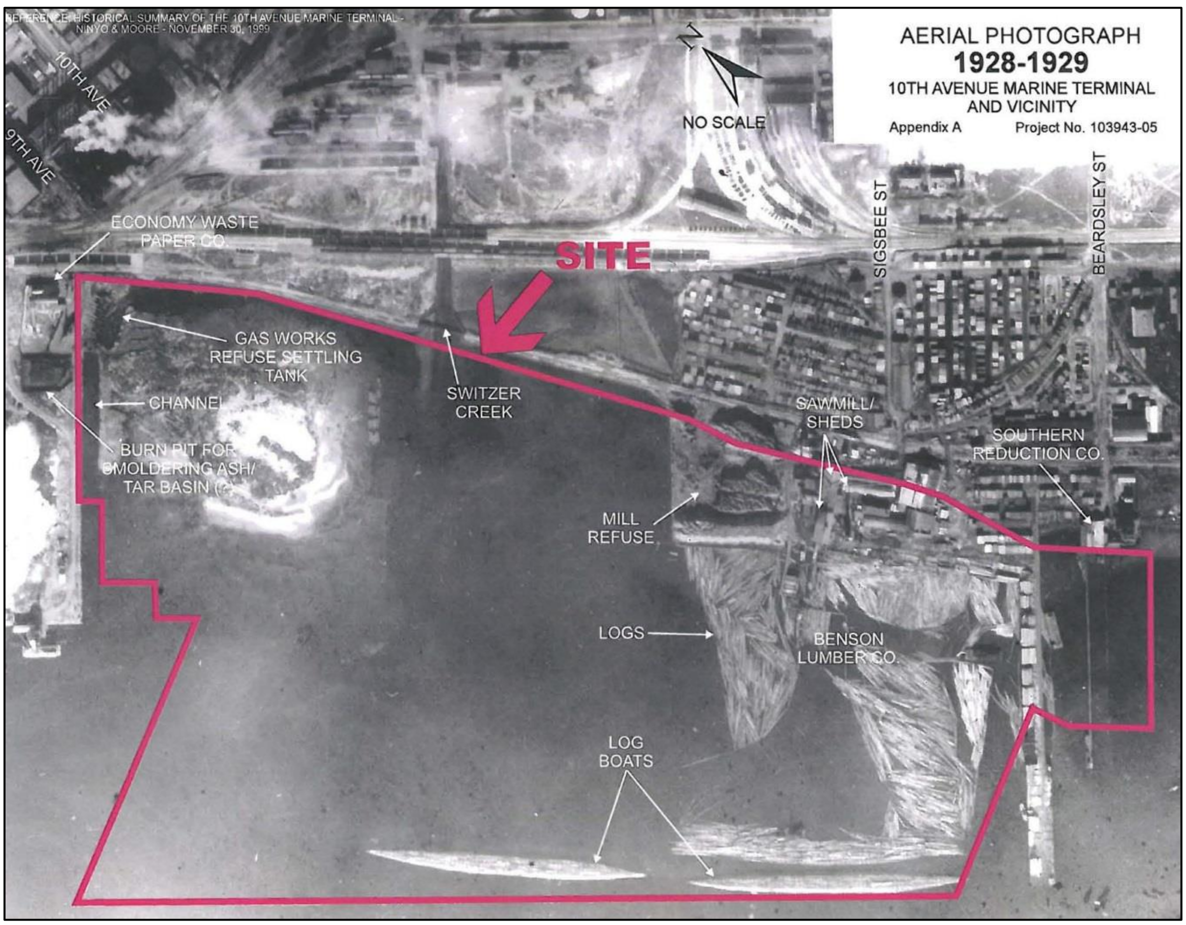

Figure 31. Aerial view of shoreline with overlay of Tenth Avenue Marine Terminal site. The Santa Fe Railway line is visible near the eastern boundary of the terminal. The arrow with the identifier "Switzer Creek" points to a bridge that carried the Santa Fe Railway line over the creek. South of the bridge, a causeway carried the line through the tidal zone (Ninyo & Moore 1999, Historical Study, Tenth Avenue Marine Terminal, Appendix B).

The system of railroad tracks at the TAMT does not appear to be eligible for the CRHR. The terminal's tracks do not appear to be associated with an important event or pattern of events that would confer individual significance upon them. Research efforts have revealed no evidence that a noteworthy individual performed historically important work with the terminal's internal rail lines. This rail track system does not have sufficiently direct association with Harbor Department/Port Director John Bate to confer significance upon it. Individually, therefore, the terminal's rail tracks do not appear to meet Criteria 1 or 2 for listing in the CRHR.

Railroad tracks represent a ubiquitous, commonplace form of infrastructure. Research has revealed no evidence that the terminal's rail tracks have significance for any association with a master engineer or builder, and they do not represent an engineering masterwork. They are entirely commonplace features of the industrial built environment that can be observed at shipping facilities throughout California and the nation. For these reasons, the terminal's railroad tracks do not appear to meet Criterion 3 for listing in the CRHR. As stated above, the railroad tracks have been subject to repair, replacement, and even realignment for decades, and little if any of the tracks' current materials are original to the terminal site.

Silo Complex

Description

Twelve silos originally constructed for storage of food grains are located immediately northeast of the northwest half of Warehouse C and west of the bulk loader rail-car unloading building. The 12 original silos have flat roofs and are constructed of concrete. They rise approximately 75 feet in height. The utilitarian corrugated metal building on the on the southwest side of the northwestern silos appears to have been constructed along with the original 12 silos. Numerous associated features have been added to the silo complex since the 1970s. Two much bulkier silo structures and associated steel conduits and catwalks were added to the northeast side of the original 12 silos. The rectangular, multi-story corrugated metal element with steel stairs on the southeast side of the original silos, which is not present in a 1976 bird's eye aerial photograph of the site, appears to have been built along with the two larger non-original silos. Two manufactured buildings and an open-sided shelter have also been introduced to the site since that time. The large elevated cylindrical conduit that connects to the square element above the southernmost original silos was introduced to the site during alterations to the bulk loader system within the last decade.

Figure 32. Silos looking east-northeast

Figure 33. View showing relationship between silo cluster (right) and recently added conduit and junction structure; note later-constructed silo at lower far right, looking west-northwest

Evaluation

The silo complex at the TAMT is not considered a resource that can contribute to a potential TAMT historic district because its original structures were completed in 1970, well after the terminal's 1957–64 period of potential significance as a historic district.

The 12 silos at the TAMT were constructed to store new kinds of bulk dry commodities at the terminal in order to boost exports and help the $2.8 million bulk loader break even on amortization costs. Port officials had anticipated that the bulk loader would be conveying 900,000 tons annually, or 400,000 more than it needed to break even, but by the late 1960s, it had yet to reach the 400,000 ton mark. Hoping to increase exports of feed products and grain, the Port District joined with a private organization, San Diego Bulk Terminal, to develop the silos. The Port District devoted $100,000 to preparing the site and San Diego Bulk Terminal built the silo complex for $1 million. With a storage capacity of 15,000 tons, the silo complex was completed in early 1970. The complex was altered in the mid-1980s when two new silos, both much larger than the original ones, were added to the north side of the facility. The rectangular, multi-story corrugated metal element with steel stairs on the southeast side of the original silos appears to have been built in the mid-1980s as well. The large conduit that currently extends from the top of the southeast silos to the bulk loader was installed within the past decade (Morin 1969:A-23; Ninyo & Moore 1999: Appendix A; Port District 1973:5; Shepard 1969A:B-1, 1969B: B-1).

The silo complex at the TAMT does not appear to be individually eligible for the CRHR. The complex does not appear to have significance for direct individual associations with a historically important event or pattern of events. Research has revealed no evidence that a noteworthy individual performed historically important work that was strongly associated the silo complex. Consequently, the complex do does not appear to meet Criteria 1 or 2 for CRHR listing. Research efforts did not reveal any evidence that the silo complex is significant as the work of a master engineer or builder, and the original silos do not appear to be an engineering masterwork. Silo structures comparable in size, with equivalent reinforced-concrete construction, can be encountered throughout California and across the West Coast. The same can be said for the complex's original and entirely commonplace utilitarian corrugated-metal building. For these reasons, the silo complex does not appear to meet Criterion 3 for listing in the CRHR.

Conclusions

Archaeological Resources

While the record search failed to indicate the presence of archaeological resources within the study area, there exists potential for subsurface resources in the southeastern section of the study area due to the presence of an extensive prehistoric resource nearby. CA-SDI-5931 is approximately 200 feet northeast of the study area boundary and consists of an extensive artifact scatter and included one Native American burial found during grading activities within the BNSF railyard. The site was tested in 1993 within the railyard and yielded multiple artifacts. The record suggests the possibility of intact buried deposits and possible other human burials within the railyard beyond the areas tested in 1993 (Treganza, Gross, and Bull n.d.). Because the exact site boundary of CA-SDI-5931 is not known, and due to the proximity of the railyard to the study area, it is possible that the site extends within the TAMT Plan study area.

Built Environment Resources

The records search and research identified no built resources within the study area that have been determined or recommended eligible for the CRHR or the NRHP, or that have been previously designated by the City of San Diego or the County of San Diego as locally significant resources. ICF's historical resource evaluation of the potential TAMT historic district finds that the terminal does not appear to be eligible for the CRHR as a historic district. ICF's evaluations of surviving individual historic-period resources find that no resource within the TAMT Plan study area appears to be eligible for individual listing on the CRHR. Consequently, none of the historic-period built environment resources identified within the study area appear to qualify as a historical resource for the purposes of CEQA.

Recommendation 1. Provide Archaeological Monitor in Areas of Sensitivity

While no resources were identified within the study area, the possibility of subsurface archaeological deposits within the southeastern portion of the study area exists due to the presence of CA-SDI-5931 near the study area boundary. Archaeological monitoring is recommended because the exact southern boundary of CA-SDI-5931 is not known and the resource is extremely sensitive due to previously discovered Native American burials. Based on the currently known extent of CA-SDI-5931 and a review of maps to determine historic shorelines, monitoring is recommended for all ground-disturbing activities occurring within the area of archaeological sensitivity. The monitoring will be conducted by a qualified archaeologist(s), who meets the Secretary of the Interior's Professional Qualifications Standards as promulgated in 36 CFR 61, and a Native American cultural monitor, the latter of which has been requested by the Viejas Band of Kumeyaay Indians (Appendix A). The sensitive portion of the project area, where it is possible that artifacts associated with CA-SDI-5931 could be buried, is immediately east of Warehouse C and south and east of the silo complex and the rail car unloading building. The sensitive area includes the molasses tanks, truck scale building, spur lines north, east, and south of the molasses tanks, and paved and unpaved parking areas near the Crosby Road entrance.

The qualified archaeologist shall participate in a preconstruction meeting to inform all personnel of the potential for historical archaeological materials to be encountered during ground-disturbing activities.

If an isolated artifact or historic-period deposit is discovered that requires salvaging, the qualified archaeologist shall have the authority to temporarily halt construction activities within 100 feet of the find and shall be given sufficient time to recover the item(s) and map its location with a global positioning system device.

If buried cultural resources are discovered inadvertently during ground-disturbing activities, work should be temporarily halted in the area and within 100 feet of the find until a qualified archaeologist can assess the significance of the find and, if necessary, develop appropriate treatment measures in consultation with the Port District, the Viejas Band of Kumeyaay Indians, who have expressed interest and concern regarding the TAMT Plan study area, and any other appropriate agencies.

The qualified archaeologist shall treat recovered items in accordance with current professional standards by properly provenancing, cleaning, analyzing, researching, reporting, and curating them in a collection facility meeting the Secretary of the Interior's Standards as promulgated in 36 CFR 79, such as the San Diego Archaeological Center.

Within 60 days after completion of the ground-disturbing activity, the qualified archaeologist shall prepare and submit a final report to the Port District for review and approval, which shall discuss the monitoring program and its results, and provide interpretations about the recovered materials, noting to the extent feasible each item's class, material, function, and origin.

Impacts on discovered cultural resources would be reduced to a less-than-significant level because the recommended monitoring of any ground-disturbing activities in the area near CA-SDI-5931, and treatment of any discoveries, would minimize the potential of damage or loss of unknown subsurface archaeological resources.

Recommendation 2. Contact Authorities if Human Remains Are Encountered

No human remains are known to be located in the project area. However, there is the possibility that unmarked burials could be present within the study area, particularly at the southeastern portion of the study area in the vicinity of site CA-SDI-5931. Section 7050.5 of the California Health and Safety Code requires that construction or excavation be stopped in the vicinity of discovered human remains and that no further disturbance can occur until the county coroner has made a determination of origin and disposition pursuant to PRC Section 5097.98. If the remains are determined to be Native American, the coroner must contact NAHC, who will assign a most likely descendant to participate in determining the disposition of the remains. In addition, according to the California Health and Safety Code, six or more human burials at one location constitute a cemetery (Section 8100), and disturbance of Native American cemeteries is a felony (Section 7052). Given the highly unlikely chance that human remains would be encountered and the presence of regulations that would avoid any significant impacts on human remains, the project would result in no impact related to the disturbance of human remains.

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Appendix A
Correspondence

June 16, 2014

Mr. Dave Singleton
Native American Heritage Commission
915 Capitol Mall, Room 364
Sacramento, California 95814

Re: Tenth Avenue Marine Terminal Optimization Project and Business Plan Update Initial Study

Dear Mr. Singleton:

This letter is a request for review of the Sacred Lands File for the Tenth Avenue Marine Terminal Optimization Project and Business Plan Update Initial Study (Project). Any information you are able to provide would be appreciated. Appropriate and other knowledgeable tribal members whose names and addresses you provide will be contacted.

ICF International is preparing an initial study for the Port of San Diego. The Project involves terminal upgrades and the adoption of a business plan to serve as a guide for future operations over the next 30 years. The terminal improvements would involve the demolition of two transit sheds, upgrades to on-terminal rail infrastructure, and the construction of modular office and restroom facilities. The terminal consists of 96 acres.

The project site is located along the San Diego Bay just west of Harbor Drive, near downtown San Diego. Specifically, the project site is located within La Nacion Land Grant as mapped on the United States Geological Survey (USGS) 7.5 minute Series National City, California quadrangle.

A record search conducted at the South Coastal Information Center on June 16, 2014 reported no previously identified prehistoric resources within the project area.

If you have any questions please feel free to contact me by telephone at 858-444-3936 or e-mail at Karolina.Chmiel@icfi.com. Our fax number is 858-578-0573.

Thank you,

Karolina Chmiel

Encl. Figure 1 – Project Location

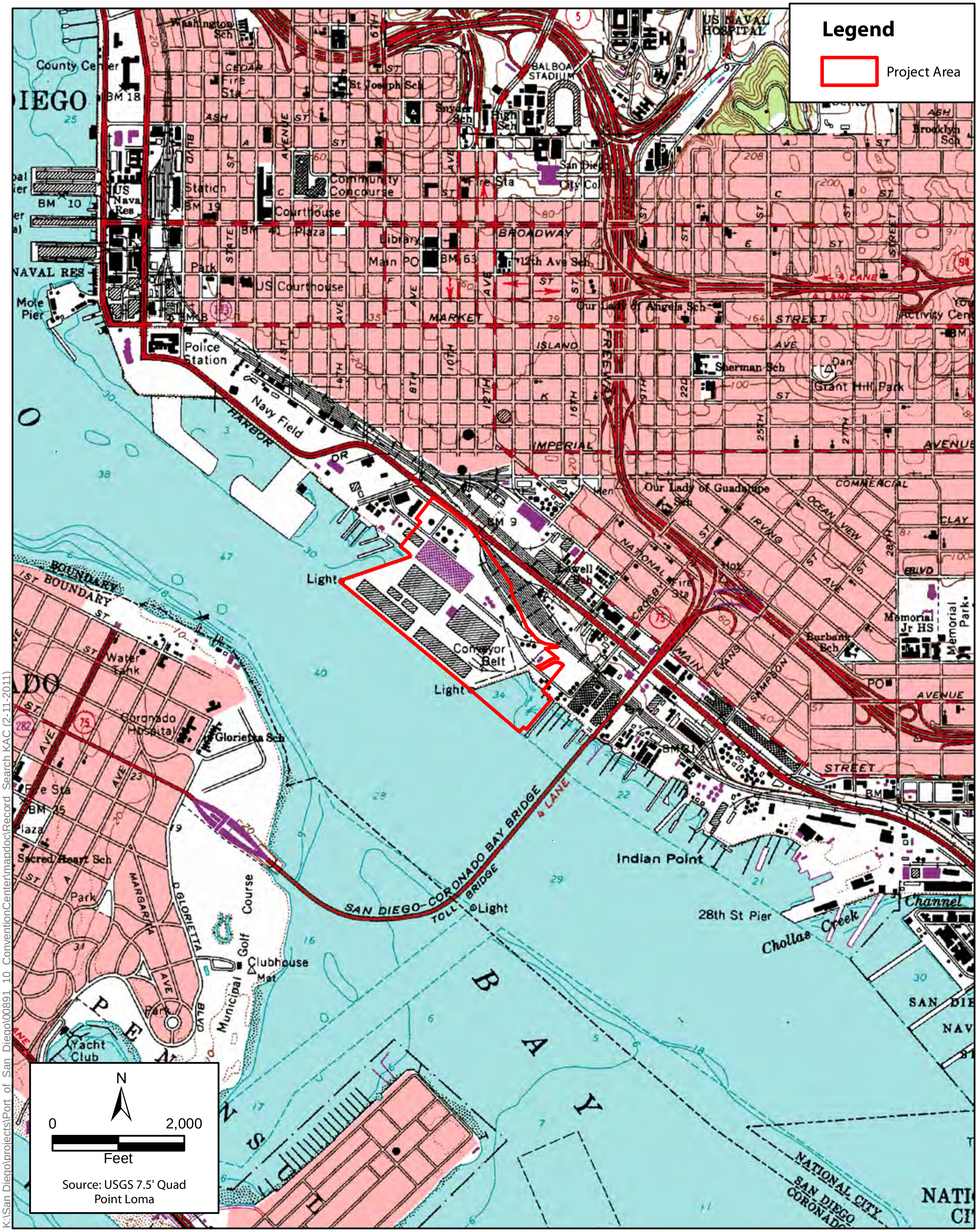

Figure 1
Project Location
Tenth Avenue Marine Terminal

K:\San Diego\projects\Port_of_San_Diego\00891_10_ConventionCenter\mapdoc\Record_Search KAC (2-11-2011)

STATE OF CALIFORNIA Edmund G. Brown, Jr., Governor

NATIVE AMERICAN HERITAGE COMMISSION
1550 Harbor Boulevard, Suite 100
West Sacramento, CA 95691
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Ds_nahc@pacbell.net

June 30, 2014

Ms. Karolina Chmiel, M.A., Archaeologist
ICF INTERNATIONAL
9775 Businesspark Avenue, Suite 200
San Diego, CA 92131

Sent by FAX to: 858-578-0573
No. of Pages: 5

RE: Sacred Lands File Search and Native American Contacts list for the **"Tenth Avenue Marine Terminal Project and Business Plan Update Initial Study (for the Port of San Diego)"** located along Harbor Drive near Downtown San Diego; San Diego County, California

Dear Ms. Chmiel:

A record search of the NAHC Sacred Lands Inventory **failed to indicate** the presence of Native American traditional sites/places of the Project site(s) or 'areas of Potential effect' (APEs), submitted to this office. Note also hat the absence of archaeological features, Native American cultural resources does not preclude their existence at the subsurface level.

In the 1985 Appellate Court decision (170 Cal App 3rd 604), the Court held that the NAHC has jurisdiction and special expertise, as a state agency, over affected Native American resources impacted by proposed projects, including archaeological places of religious significance to Native Americans, and to Native American burial sites.

When the project becomes public, please inform the Native American contacts as to the nature of the project (e.g. residential, renewable energy, infrastructure or other appropriate type). Attached is a list of Native American tribes, Native American individuals or organizations that may have knowledge of cultural resources in or near the proposed project area (APE). As part of the consultation process, the NAHC recommends that local government and project developers contact the tribal governments and Native American individuals on the list in order to determine if the proposed action might impact any cultural places or sacred sites. If a response from those listed on the attachment is not received in two weeks of notification, the NAHC recommends that a follow-up telephone call be made to ensure the project information has been received.

California Government Code Sections 65040.12(e) defines 'environmental justice' to provide "fair treatment of people...with respect to the development, adoption, implementation, and enforcement of environmental laws, regulations and policies." Also, Executive Order B-10-11 requires that state agencies "consult with Native American tribes, their elected officials and other representatives of tribal governments in order to provide meaningful input into...the development of legislation, regulations, rules and policies on matter that may affect tribal communities."

If you have any questions or need additional information, please contact me at (916) 373-3715.

Sincerely,

Dave Singleton
Program Analyst

Attachments

Native American Contacts
San Diego County California
June 27, 2014

Barona Group of the Capitan Grande
Clifford LaChappa, Chairperson
1095 Barona Road — Diegueno
Lakeside , CA 92040
sue@barona-nsn.gov
(619) 443-6612
(6190 443-0681

Sycuan Band of the Kumeyaay Nation
Daniel Tucker, Chairperson
5459 Sycuan Road — Diegueno/Kumeyaay
El Cajon , CA 92019
ssilva@sycuan-nsn.gov
(619) 445-2613
(619) 445-1927 Fax

La Posta Band of Mission Indians
Gwendolyn Parada, Chairperson
8 Crestwood Road — Diegueno/Kumeyaay
Boulevard , CA 91905
gparada@lapostacasino.
(619) 478-2113
(619) 478-2125

Viejas Band of Kumeyaay Indians
Anthony R. Pico, Chairperson
P.O. Box 908 — Diegueno/Kumeyaay
Alpine , CA 91903
jhagen@viejas-nsn.gov
(619) 445-3810
(619) 445-5337 Fax

Manzanita Band of Kumeyaay Nation
Leroy J. Elliott, Chairperson
P.O. Box 1302 — Diegueno/Kumeyaay
Boulevard , CA 91905
ljbirdsinger@aol.com
(619) 766-4930
(619) 766-4957 Fax

Kumeyaay Cultural Historic Committee
Ron Christman
56 Viejas Grade Road — Diegueno/Kumeyaay
Alpine , CA 92001
(619) 445-0385

San Pasqual Band of Mission Indians
Allen E. Lawson, Chairperson
P.O. Box 365 — Diegueno
Valley Center, CA 92082
allenl@sanpasqualband.com
(760) 749-3200
(760) 749-3876 Fax

Campo Band of Mission Indians
Ralph Goff, Chairperson
36190 Church Road, Suite 1 — Diegueno/Kumeyaay
Campo , CA 91906
chairgoff@aol.com
(619) 478-9046
(619) 478-5818 Fax

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of the statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list s only applicable for contacting locative Americans with regard to cultural resources for the proposed Tenth Avenue Marine Terminal Optimization Project and Business Plan/Initial Study; located along Harbor Drive near Downtown San Diego; San Diego County, California for which a Sacred Lands File search and Native American Contacts list were requested.

Native American Contacts
San Diego County California
June 27, 2014

Jamul Indian Village
Raymond Hunter, Chairperson
P.O. Box 612 Dieguено/Kumeyaay
Jamul , CA 91935
jamulrez@sctdv.net
(619) 669-4785

Kumeyaay Cultural Repatriation Committee
Steve Banegas, Spokesperson
1095 Barona Road Dieguено/Kumeyaay
Lakeside , CA 92040
sbenegas50@gmail.com
(619) 742-5587
(619) 443-0681 Fax

Mesa Grande Band of Mission Indians
Mark Romero, Chairperson
P.O Box 270 Dieguено
Santa Ysabel, CA 92070
mesagrandeband@msn.com
(760) 782-3818
(760) 782-9092 Fax

Viejas Band of Kumeyaay Indians
ATTN: Julie Hagen, Cultural Resources
P.O. Box 908 Dieguено/Kumeyaay
Alpine , CA 91903
jhagen@viejas-nsn.gov
(619) 445-3810
(619) 445-5337

Kwaaymii Laguna Band of Mission Indians
Carmen Lucas
P.O. Box 775 Dieguено-Kwaaymii
Pine Valley , CA 91962
(619) 709-4207

Ewiiaapaayp Tribal Office
Will Micklin, Executive Director
4054 Willows Road Dieguено/Kumeyaay
Alpine , CA 91901
wmicklin@leaningrock.net
(619) 445-6315
(619) 445-9126 Fax

Inaja Band of Mission Indians
Rebecca Osuna, Chairman
2005 S. Escondido Blvd. Dieguено
Escondido , CA 92025
(760) 737-7628
(760) 747-8568 Fax

Ipay Nation of Santa Ysabel
Clint Linton, Director of Cultural Resources
P.O. Box 507 Dieguено/Kumeyaay
Santa Ysabel, CA 92070
cjlinton73@aol.com
(760) 803-5694

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Native American Contacts
San Diego County California
June 27, 2014

Kumeyaay Diegueno Land Conservancy
Mr. Kim Bactad, Executive Director
2 Kwaaypaay Court — Diegueno/Kumeyaay
El Cajon , CA 91919
kimbactad@gmail.com
(619) 659-1008 Office
(619) 445-0238 Fax

Inter-Tribal Cultural Resource Protection Council
Frank Brown, Coordinator
240 Brown Road — Diegueno/Kumeyaay
Alpine , CA 91901
frbrown@viejas-nsn.gov
(619) 884-6437

Kumeyaay Cultural Repatriation Committee
Bernice Paipa, Vice Spokesperson
P.O. 937 — Diegueno/Kumeyaay
Boulevard , CA 91905
bernicepaipa@gmail.com

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of the statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting locative Americans with regard to cultural resources for the proposed Tenth Avenue Marine Terminal Optimization Project and Business Plan/Initial Study; located along Harbor Drive near Downtown San Diego; San Diego County, California for which a Sacred Lands File search and Native American Contacts list were requested.

May 11, 2015

[NAME]
[ADDRESS]
[ADRESS]
[ADDRESS]

Subject: Cultural Resources Documentation for the Tenth Avenue Marine Terminal Near-Term Optimization Improvements Project and Maritime Cargo Redevelopment Plan, San Diego, California.

Dear [NAME]:

I'm writing to inform you that ICF International is preparing cultural resources documentation in support of an environmental impact report (EIR) for the Tenth Avenue Marine Terminal (TAMT) Near-term Optimization Improvements Project (Near-term Project) and the TAMT Maritime Cargo Redevelopment Plan (Plan) Project. The project is located at 623 Switzer Street, San Diego, CA 92101, just south of Downtown San Diego. The project is located in Pueblo Lands of San Diego, on the Point Loma California USGS 7.5-minute series topographic maps (Figure 1).

The proposed Near-term Project would include demolition of two obsolete and underutilized transit sheds, installation of a rail lubricator and compressed air system on the existing track to improve rail operations, installation of additional refrigerated plugs and a racking system to accommodate additional near-term throughput for container cargo, and construction of a modular office with restroom facilities. These proposed changes are anticipated to begin in approximately 2016 and be completed within 29 weeks.

The proposed Plan would replace an existing 2008 plan to provide greater flexibility and meet current and future market conditions at the terminal. Depending on market opportunities, some improvements identified in the Plan may occur within a 5- to 10-year (Year 2025) planning horizon, whereas others may not occur until the 10- to 20-year (Year 2035) planning horizon. The proposed Plan includes a variety of infrastructure investments that may be undertaken over the long-term to accommodate a need to increase the terminal's capabilities and capacity. These include gantry cranes, additional dry bulk storage capacity, enhancements to the existing conveyor system, demolition of the molasses tanks and Warehouse C, additional open storage space, and on-dock intermodal rail facilities.

ICF International has been retained to conduct cultural resources documentation in support of the EIR. A site visit conducted by ICF archaeologist noted that the whole project area is currently paved over or covered in buildings. A record search conducted by the South Coastal Information Center (SCIC) revealed the presence of two resources (historic era railroads) in the project area and multiple resources within a half-mile buffer including one prehistoric artifact scatter located 160 feet northeast of the project boundary.

The Native American Heritage Commission (NAHC) completed a search of the Sacred Lands File which failed to indicate the presence of Native American cultural resources in the area. The NAHC also identify you as a person who may have concerns or knowledge of cultural resources in the project area. Any information you might be able to share about the Project Area would greatly enhance the study and would be most appreciated.

If you have any concerns or recommendations regarding the Project, please respond to this letter so that they can be incorporate them into our draft report. As required by State law, all site data and other culturally sensitive information will not be released to the general public and will be kept strictly confidential.

I may be reached by letter, email (Karolina.chmiel@icfi.com) or phone (858-444-3936). Thank you for your time.

Sincerely,

Karolina Chmiel, MA
Archaeologist

Encl. Figure 1

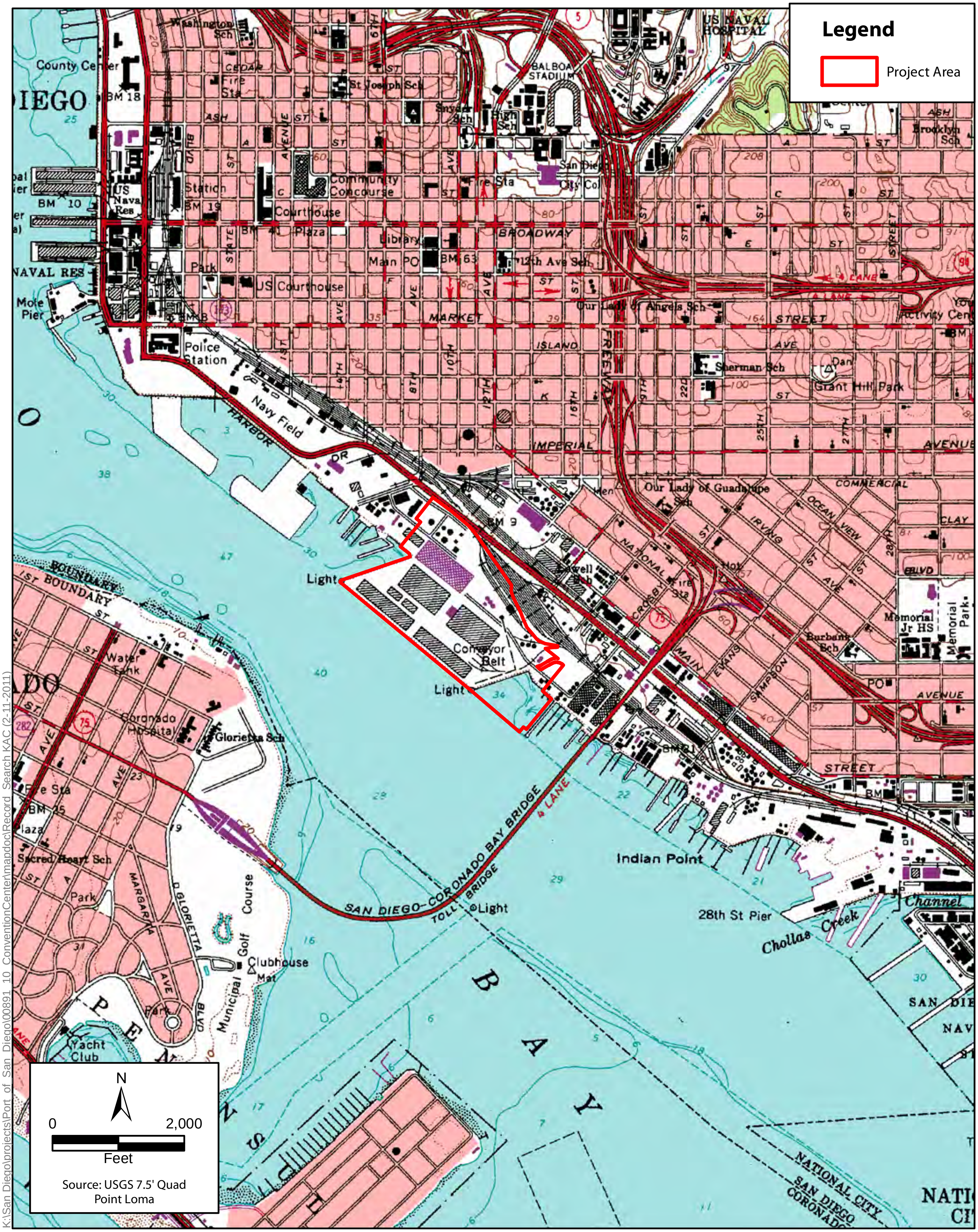


Figure 1
Project Location
Tenth Avenue Marine Terminal

VIEJAS
TRIBAL GOVERNMENT

P.O. Box 908
Alpine, CA 91903
#1 Viejas Grade Road
Alpine, CA 91901

Phone: 619.445.3810
Fax: 619.445.5337
viejas.com

May 26, 2015

Karolina Chmiel
9775 Businesspark Ave., Suite 200
San Diego, CA 92131

RE: Tenth Avenue Marine Terminal

Dear Ms. Chmiel,

The Viejas Band of Kumeyaay Indians ("Viejas") has reviewed the proposed project and at this time we have determined that the project site is has cultural significance or ties to Viejas. Viejas Band request that a Kumeyaay Cultural Monitor be on site for all ground disturbing activities to inform us of any new developments such as inadvertent discovery of cultural artifacts, cremation sites, or human remains. Please call Julie Hagen for scheduling at 619-659-2339 or email jhagen@viejas-nsn.gov. Thank you

Sincerely,

VIEJAS BAND OF KUMEYAAY INDIANS

Appendix B
CA DPR 523 Forms

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code(s) 6Z

Other Listings
Review Code **Reviewer** **Date**

 ***Resource Name or #:** Tenth Avenue Marine Terminal

P1. Other Identifier:
***P2. Location:** ☐ **Not for Publication** ☒ **Unrestricted** ***a. County:** San Diego
***b. USGS 7.5' Quad:** Point Loma **Date:** 1967 (PR 1975) **T**17S **R**3W; **¼ of Sec** N/A (Pueblo Lands of San Diego Land Grant); San Bernardino **B.M.**
c. Address: 623 Switzer Street **City**: San Diego **Zip**: 92101
d. UTM: See accompanying forms for individual resources
e. Other Locational Data: Elevation:

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

The Tenth Avenue Marine Terminal occupies a 96-acre site located along the northeast shoreline of San Diego Harbor, south of downtown San Diego and north of the Coronado Bridge. The terminal is a mole wharf (also known as marginal wharf) formed of dredged fill and rock-and-concrete bulkhead walls (or quay walls) adjacent to ship channels. The terminal provides nine ship-berthing spaces. The terminal's remaining original elements dating the 1957-64 period of its initial development include Transit Sheds 1 and 2, Warehouses B and C, the bunker fuel complex at the northeast corner of the site, the truck scale building and Pacific Molasses Company tanks at the southeast corner of the site, the bulk loader, and rail lines that run throughout the site. The terminal includes a silo complex and associated conveyance conduits and features, as well as other structures and ancillary buildings developed after 1964.

***P3b. Resource Attributes:** (List attributes and codes) HP11.Engineering structure; HP8. Industrial building
***P4. Resources Present:** ☐Building ☐Structure ☐Object ☐Site ☒District ☐Element of District ☐Other (Isolates, etc.)

P5b. Description of Photo: (View, date, accession #) Tenth Avenue Marine Terminal from Coronado Bridge, looking northwest

***P6. Date Constructed/Age and Sources:** ☒Historic ☐Prehistoric ☐Both
1957-64 (see 523D Form and page 8 Continuation Sheet)

***P7. Owner and Address:**
Unified Port of San Diego
3165 Pacific Highway
San Diego, CA 92101

***P8. Recorded by:** (Name, affiliation, and address):
Tim Yates, ICF International
575 B Street, Ste. 1700
San Diego, CA 92101

***P9. Date Recorded:** May 14, 2014
***P10. Survey Type:** Intensive

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.") ICF International. 2016. Cultural Resources Inventory and Evaluation Report for the Tenth Avenue Marine Terminal Redevelopment Plan and Demolition and Initial Rail Component (ICF 00165.14). San Diego, CA. Prepared for the San Diego Unified Port District

***Attachments:** ☐NONE ☒Location Map ☒Sketch Map ☒Continuation Sheet ☐Building, Structure, and Object Record ☐Archaeological Record ☒District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record ☐Artifact Record ☐Photograph Record ☐ Other (List):

***NRHP Status Code:** 6Z

***Resource Name or #** (Assigned by Recorder): Tenth Avenue Marine Terminal

D1. Historic Name: Tenth Avenue Marine Terminal **D2. Common Name**: Tenth Avenue Marine Terminal

***D3. Detailed Description** (discuss overall coherence of the district, its setting, visual characteristics, and minor features. List all elements of the district):

The Tenth Avenue Marine Terminal occupies a 96-acre site located along the northeast shoreline of San Diego Harbor, south of downtown San Diego and north of the Coronado Bridge. The terminal is a mole wharf (also known as marginal wharf) formed of dredged fill and rock-and-concrete bulkhead walls (or quay walls) adjacent to ship channels. The terminal provides nine ship-berthing spaces. The terminal's surviving original elements dating to the 1957-64 period of its initial development include Transit Sheds 1 and 2 (portions of Transit Shed 1 have been demolished), Warehouses B and C, the bunker fuel complex at the northeast corner of the site, the truck scale building and molasses tanks at the southeast corner of the site, the bulk loader system, and rail lines that run throughout the site. The terminal also includes a silo complex and associated conveyance conduits and features, as well as other structures and ancillary buildings developed after 1964 (see Continuation Sheet).

***D4. Boundary Description** (describe limits of district and attach map showing boundary and district elements):

The limits of the potential Tenth Avenue Marine Terminal historic district are the terminal's 96-acre property boundary. See page 4 Sketch Map.

***D5. Boundary Justification**:

The boundary of this potential district corresponds roughly to the Tenth Avenue Marine Terminal's boundaries during the 1957-64 period of potential significance, and encompasses all surviving elements of the Tenth Avenue Marine Terminal dating to that period.

***D6. Significance: Theme**: N/A **Area**: N/A
Period of Significance: N/A **Applicable Criteria**: N/A
(Discuss district's importance in terms of its historical context as defined by theme, period of significance, and geographic scope. Also address the integrity of the district as a whole)

The Tenth Avenue Marine Terminal does not appear to be eligible for listing on the CRHR as a historic district. Consequently, the terminal does not appear to comprise a district qualifying as a historical resource for the purposes of CEQA. This evaluation is based on the extensive historical context included in the cultural resources technical study to which this District DPR form set has been appended. Evaluations of individual resources addressed in this district evaluation are included below (see Continuation Sheet).

***D7. References** (Give full citations including the names and addresses of any informants, where possible):

This district evaluation makes limited reference to historical sources, which are listed below on the page 8 Continuation Sheet. To review the historical context that has framed this district evaluation and the full range historical sources referenced in the historical context, the reader is invited to consult the technical study: ICF International. 2016. Cultural Resources Inventory and Evaluation Report for the Tenth Avenue Marine Terminal Redevelopment Plan and Demolition and Initial Rail Component (ICF 00165.14). San Diego, CA. Prepared for the San Diego Unified Port District.

***D8. Evaluator**: Timothy Yates, Ph.D.

Date: May 15, 2015

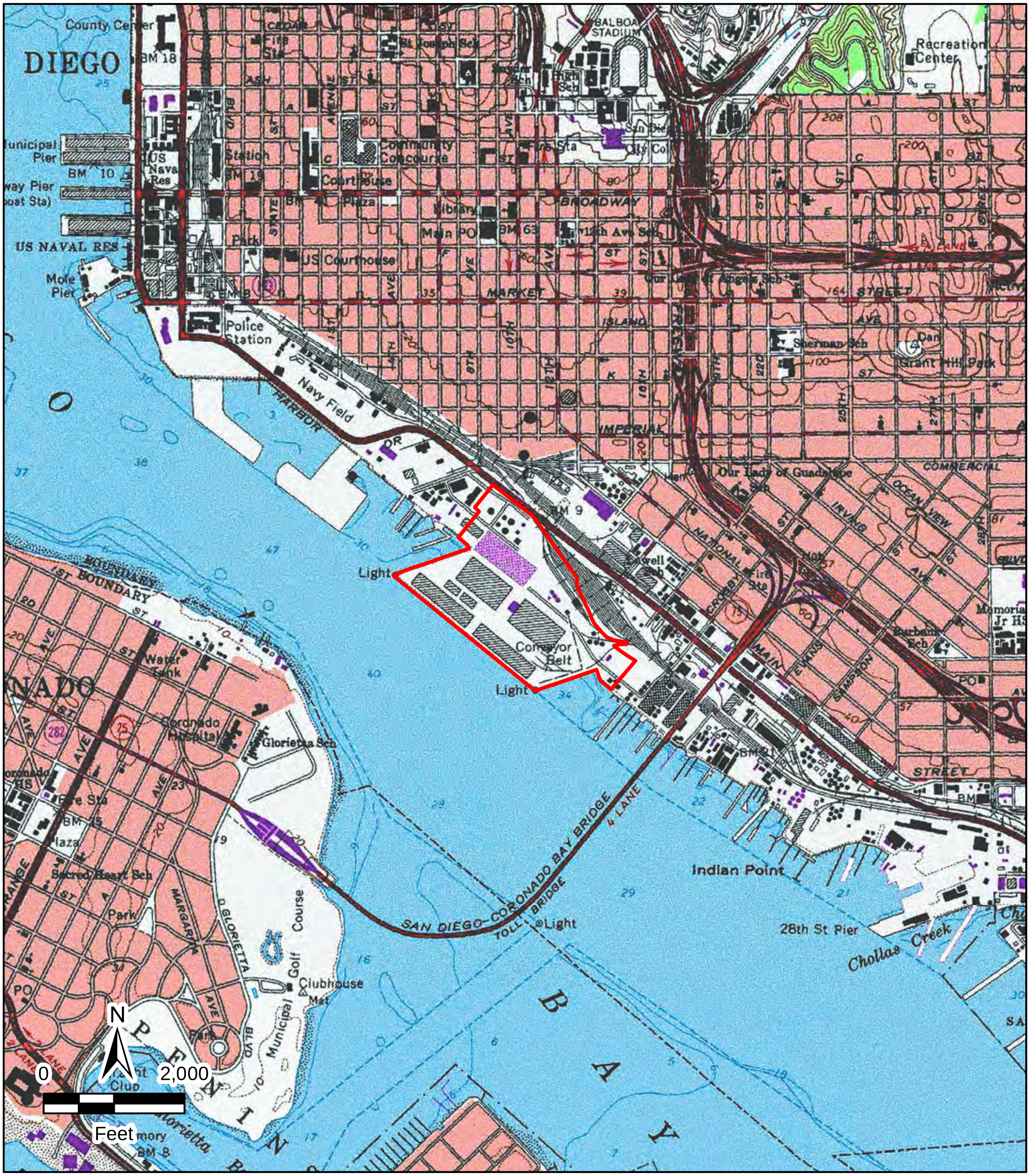
Affiliation and Address: ICF International, 575 B Street, Ste. 1700, San Diego, CA 92101

State of California - The Resource Agency
DEPARTMENT OF PARKS AND RECREATION
LOCATION MAP

Primary #: ____________________
Trinomial: ____________________

Resource Name or #: Tenth Avenue Marine Terminal

Map Name: Point Loma, CA **Scale:** 1:24,000 **Date of Map:** 1967 (1975)



Required information is bold

State of California – The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
SKETCH MAP

Primary # ______
HRI # ______
Trinomial ______

***Resource Name or #** (Assigned by recorder) Tenth Avenue Marine Terminal
***Drawn By** K. Chmiel
***Date of Map** May 15, 2015

***D3. Detailed Description** (continued):

The two transit sheds and two warehouse buildings are formed of tilt-up concrete walls and steel roof trusses. These buildings have numerous warehouse entries secured by roll-up metal doors. Some of the transit-shed wall slabs are scored with decorative fluted panels and Moderne-style signage identifying the Port of San Diego or individual ship berths. At the northwest elevation of Transit Shed 2 is a Modern-style two-story headhouse with circular windows and other elements intended to evoke nautical associations. Transit Shed 1's headhouse and its southeastern storage space have been demolished. The original traffic island, pillar, and signage located between the two transit sheds have also been demolished. Warehouses B and C are more utilitarian than the Transit Sheds, with decorative features limited to modest-sized scored concrete signage with Moderne-style lettering identifying the buildings at their corners. A small addition and refrigeration machinery have been added to the northwest elevation of Warehouse B in recent decades, and Warehouse C has a large 1970s addition the southeastern portion of the plan. Transit Shed 2 has non-original concrete unloading and conveyance machinery at the southeastern portion of the plan.

Two smaller buildings are associated with and located on the southeast side of the bunker fuel complex's five sizeable steel tanks, which are situated at the northeast corner of the terminal site. The complex originally had four larger tanks and multiple smaller acid and oil tanks. Located at the southeast corner of the site near the terminal's main entrance are the predominantly utilitarian truck scale building, which features a Modern-style flat overhanging roof, and the three sizeable steel Pacific Molasses Company tanks.

The bulk loader consists of a rail car unloading building, an underground conveyor that transmits dry bulk material to a junction house west of the rail car unloading building and northeast of Warehouse C, an elevated conveyor system that stretches from the junction house to the terminal's southern births, and an elevated conveyor connected to traveling ship loader that extends across the southern births. The rail car unloading building and the junction house are utilitarian structures with corrugated-metal roofs and cladding. The bulk loader's original junction house is connected to a non-original junction house by a non-original conveyor segment. The non-original junction house is connected by a non-original cylindrical conduit to the tops of a non-original silo complex constructed west of the rail car unloading building east of Warehouse C's north corner in the 1970, and subsequently expanded with additional silos and utilitarian buildings. Because it was constructed over five years after the potential period of district significance, the silo complex is not considered a potential contributor. Individual DPR 523A and 523B forms for the resources comprising the potential district's individual potential contributors are included below.

***D6. Significance** (continued):

The development of the Tenth Avenue Marine Terminal does not appear to qualify as an event meriting the site for listing on the CRHR as a historic district. The Embarcadero Piers were San Diego's first municipally developed commercial maritime shipping facility, not the Tenth Avenue Marine Terminal. Although the terminal's development was associated with overall post-World War II economic growth in San Diego, such association is too commonplace to qualify the terminal for CRHR listing. All infrastructure is developed to spur growth or accommodate existing or anticipated growth. It is undeniable that the Tenth Avenue Marine Terminal increased San Diego's share of the California and west-coast commercial-port shipping business, and that the terminal represented an economic asset to the city that made use of the advantages afforded by the city's natural harbor. However, the Tenth Avenue Marine Terminal did not equip San Diego to move up beyond a middle-range status among west coast ports and seriously rival larger, more established commercial shipping facilities at the Ports of Los Angeles and Long Beach and at major west coast ports farther north. In fact, the Port of San Diego's position relative to California and other west coast ports actually weakened slightly overall following the 1957-64 period of potential significance, during the latter 1960s and early 1970s. With the advent of container shipping, the National City Marine Terminal would need to be developed into a container facility to maintain the Port of San Diego's position as a middle-level player in the commercial port-shipping business on the west coast.

Other economic factors were far more important to San Diego's post-World War II economic growth than the Tenth Avenue Marine Terminal. San Diego had become a military town by the 1920s. World War II increased the U.S. Navy's longstanding and leading in role the local economy, as well as its physical presence in San Diego Harbor. After World War II, federal military spending would continue to be far more important to the San Diego economy than the terminal's commercial shipping activities, as would local economic factors such as defense contracting, the aircraft industry, shipbuilding, and tourism. After 1965, problems with the bulk loader and changing economic conditions would require the terminal to be altered from its original design and initial 1957-1964 development. The Port District's airport and property management revenues would dramatically exceed revenues from terminal operations during the latter 1960s. The Tenth Avenue Marine Terminal did not, in itself, transform San Diego's economy. San Diego's economic prospects during the latter 1960s and early 1970s were enhanced by the terminal and numerous other factors, but it does not appear that the city's economic prospects depended on the terminal from the late 1950s to the early 1970s. For these reasons, the Tenth Avenue Marine Terminal does not appear to meet CRHR Criterion 1.

Development of the Tenth Avenue Marine Terminal was one of multiple major harbor projects and initiatives completed or planned under City Harbor Department/Port District Director John Bate, who is a significant figure in post-World War II San Diego history. In addition to the Tenth Avenue Marine Terminal, included the creation of Shelter Island, the expansion and modernization of Lindbergh Field, the creation of Harbor Island, planning for conversion of the Embarcadero Piers to recreation and tourism uses, and planning for development of the National City Marine Terminal. Bate was also the organizational and political architect of San Diego's Unified Port District. Although Bate was an engineer by training, his role in shaping the non-military features of San Diego's evolving post-World War II Harbor was primarily as a manager and planner. The engineering team that worked under Harbor Department/Port District Director Bate designed the Tenth Avenue Marine Terminal. As a *San Diego Evening Tribune* editorial explained soon after Bate's death in 1983,"if one person were to be picked out of the beautiful crowd as most responsible for San Diego's beautiful harbor, it would have to be John Bate . . . Most of his dreams became realities. He helped to develop the bay into a playground and seaport any city in the world would envy. If he could never make it the major terminus for commercial shipping that he envisioned, it was not for lack of trying (*San Diego Evening Tribune* 1983). The Tenth Avenue Marine Terminal was part of Bate's evolving efforts to diversify San Diego Harbor uses beyond military facilities, ship building, and the tuna industry by creating new commercial-shipping and tourist-oriented facilities.

The Tenth Avenue Marine Terminal does not, however, appear to have sufficiently direct association with Bate under Criterion 2 to qualify for listing on the CRHR as a historic district. Bate did not reside at the terminal. Although the Tenth Avenue Marine Terminal had on-site Harbor Department/Port District offices (which have been demolished), it was not Bate's primary workplace as Harbor Department/Port District Director. The City Harbor Department's headquarters were located over a mile northwest of the terminal in a building at Harbor Drive and Ash Street that has been demolished. Several years after the creation of the Unified Port District, and a year before Bate's retirement, the Port District's headquarters were relocated farther north to the current Port District headquarters building on Pacific Coast Highway (Port District ca. 1974:5). For these reasons, the Tenth Avenue Marine Terminal does not appear eligible for CRHR listing as a historic district under Criterion 2. Moreover, even if the terminal did have significance under Criterion 2, it does not retain sufficient historical integrity to convey significance attributable to it under any of the CRHR Criteria. The terminal's substantially diminished historical integrity is addressed in more detail below.

Aerial photograph of Tenth Avenue Marine Terminal in 1965, showing the facility's originally planned elements developed during its 1957-1964 period of potential significance, looking northwest (from San Diego History Center Photograph Collection, Kazikowski 4-17-65 No. 81)

Recent aerial photograph of Tenth Avenue Marine Terminal, compare to the 1965 aerial photograph above: at the upper right a high-rise hotel stands where Warehouse A stood in 1965; refrigerated truck containers occupy areas where the truck repair buildings and union hall/office building offices stood in 1965; silos, conduits, and a junction house developed in 1970 and later are located east of Warehouse C, which has a large 1970s addition at its southeast end; the headhouse and southeastern storage space of Transit Shed 1 have been demolished along with the original traffic island and sign between the two transit sheds (From San Diego Unified Port District)

The Tenth Avenue Marine Terminal does not appear to be significant for its overall design and engineering, or for the limited architectural elements of its larger 1957-64 period buildings. The terminal's mole (or marginal) design and construction does not appear to have represented a major milestone in harbor engineering. Harbor Department Chief Engineer J. E. Liebmann and engineer Greer W. Ferver likened its concrete and rock bulkhead walls to the well-established technology of the gravity dam (Liebmann and Greer 1958:40). In terms of engineering, the creation of large, seismically safe, fire-proof transit sheds and warehouse buildings with concrete walls atop fill appears to have been the most challenging element of the terminal's design and construction. For the transit sheds, this was achieved through the use of established technology, by driving 370 foundation piles of an existing type (Raymond step-taper piles), and attaching the tops of the piles below longitudinal walls to a concrete grade beam that functioned as a strut. While this solution to the threat of subsidence was described in a 1958 article authored by Liebmann and Greer in *Civil Engineering*, it does not appear to represent a major milestone in design and construction of port facilities, and the article appears to have served in part as a means to promote the new terminal (Liebmann and Greer 1958: 43).

The terminal's bunker fuel facilities represented its most innovative feature, and Liebmann touted the terminal's ship fueling and ballast water removal facilities in a second *Civil Engineering* article on the terminal in 1960. While this element of the terminal made it a more attractive shipping facility by providing for ships to be conveniently serviced on site with refueling at competitive prices during cargo unloading and loading activities, it does not appear that creation of these facilities involved historic engineering milestones. The bunker fuel and ballast water removal facilities provided a notable service that helped the terminal compete for several years after it opened for business in 1958. However, this initially successful feature was undermined fairly quickly during the 1960s as ports in Japan began selling ship fuel at substantially lower prices than other Pacific ports (Irwin 1970:57; Liebmann 1960:69-72).

Other elements of the Tenth Avenue Marine Terminal—the surviving architectural features of the transit sheds, the extensive bulk loader system—do not appear to have sufficient historical significance to qualify the terminal for CRHR listing as a historic district for design or engineering attributes. The terminal's bulkloader was an example of technology developed beginning in the early twentieth century that evolved over the course of the century. The Port of Long Beach developed comparable bulk loader facilities at the same time that the Tenth Avenue Marine Terminal developed its bulk loader facilities. Most of the surviving buildings at the terminal are primarily utilitarian in design. Non-utilitarian architectural features include the decorative fluted panels on some transit-shed wall slabs, the overall Modern architecture and nautically oriented design elements of the surviving transit shed headhouse, and the somewhat retrograde (for the late 1950s) Moderne lettering of scored signage on limited portions of the transit sheds' and warehouses' concrete wall slabs. These features do not appear to have sufficient importance to qualify the terminal for CRHR listing as a historic district. For these reasons, the Tenth Avenue Marine Terminal does not appear to meet Criterion 3 for listing on the CRHR.

Alterations have substantially diminished the Tenth Avenue Marine Terminal's historical integrity since its 1957-64 period of significance, the years during which the terminal's originally planned elements were constructed. Arguably the most noteworthy diminishment of historical integrity has occurred in the area where the terminal's dedication ceremonies took place in November 1958, between the transit shed headhouses. There, the original traffic island, pillar, and signage formed the symbolic focal point of the dedication ceremonies, and throughout the 1957-64 period of potential significance these elements were integral to the heavily trafficked space between the transit sheds. Sometime after the period of significance, the traffic island, pillar, and signage were demolished. Transit Shed 1's headhouse and the southeastern quarter of its storage space were demolished more recently. Demolition of these elements has substantially altered the terminal's original design, and notably diminished the historic feeling and setting in this area of the terminal. Extensive concrete unloading and conveyance machinery was also added to the southeast of portion of Transit Shed 2 after the 1970s, which has diminished integrity of design and feeling at this portion of the building.

Numerous buildings present at the terminal to the northeast and east of Warehouse B during the 1957-64 period of potential significance have been demolished, including Warehouse A, the Harbor Department office building/union hall, and two truck repair buildings. The silos constructed by 1970 east of Warehouse C were created to enhance the terminal's disappointing dry-bulk export output. Rising much higher than other structures at the site, the silos significantly altered terminal viewsheds. Two larger silos and multiple utilitarian buildings were added to the silo complex in subsequent decades. A major, inharmonious addition to the southeast elevation of Warehouse C that does not have concrete walls was constructed during the 1970s. This has reduced the warehouse's integrity of design and materials, the terminal's design, and the setting and feeling in that area of the terminal. The bunker fuel complex now has five larger tanks when it originally had four, and its original smaller oil and acid tanks have been removed. The original rotary unloading machinery in the rail car unloader building has been removed. Altering viewsheds further, by 2006 a large non-original conduit had been installed that extends from the tops of the southeastern 1970s silos to a new junction structure connected to the bulk loader conveyor. A new conveyor segment also connected the new junction structure to the bulk loader's original junction house. Collectively, these changes have diminished the terminal's integrity of design, setting, and feeling.

In summary, the Tenth Avenue Marine Terminal does not appear to be eligible for CRHR listing as a historic district. Consequently, the terminal does not appear to comprise a district qualifying as a historical resource for the purposes of CEQA.

***D7. References** (continued):

Irwin, Wayne Ray. 1970. The Port of San Diego: An Economic Geography of Waterborne Trade. Master's Thesis in Geography, San Diego State College, San Diego, California.

Liebmann, Joachim E (J.E.). Ship Bunkering Facilities for a Cargo Pier. *Civil Engineering.* 30 (March): 69-72.

Liebmann, Joachim E. (J.E.), and Greer W. Ferver. Twin Dock-Side Transit Sheds for San Diego. *Civil Engineering.* 28 (November): 40-43.

San Diego Evening Tribune. 1983. John Bate Brought Sparkle to Our Bay. April 30. Un-paginated newspaper clipping from Biographic Files, Burr-Baz. San Diego History Center, San Diego, California.

San Diego Unified Port District (Port District). Ca. 1974. History and Development of the Port of San Diego. Unpublished Pamphlet on File at the San Diego Public Library, Ninth Floor San Diego Heritage Room.

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code(s) 6Z

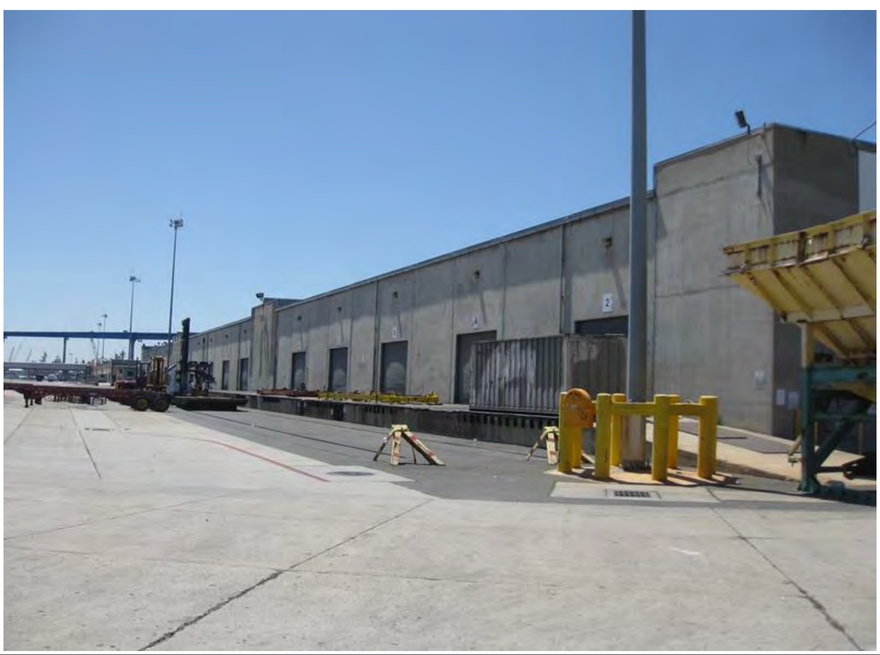
Other Listings
Review Code Reviewer Date

 *Resource Name or #: Transit Shed 1, Tenth Avenue Marine Terminal

P1. Other Identifier:
***P2. Location:** ☐ Not for Publication ☒ Unrestricted ***a. County:** San Diego
***b. USGS 7.5' Quad:** Point Loma **Date:** 1967 (PR 1975) **T**17S **R**3W; **¼ of Sec** N/A (Pueblo Lands of San Diego Land Grant); San Bernardino **B.M.**
c. Address: 623 Switzer Street **City**: San Diego **Zip**: 92101
d. UTM: Zone: 11 (NAD 83); 485059 mE/ 3618050 mN (G.P.S.) (approximate center of building footprint)
e. Other Locational Data: Elevation:

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)
Located at the northwest portion of the terminal site, Transit Shed 1 has a long rectilinear plan and is constructed of tilt-up fireproof concrete walls and steel roof trusses. Two transverse concrete walls divide the approximately 145,000 square-foot building into three interior storage spaces. Square shaped concrete wall slabs at each end of the interior transverse walls, and rectangular-shaped wall slabs at the ends of the northwest and southeast elevations rise higher than adjacent wall slabs to form parapets. These parapet-topped concrete wall slabs are scored with decorative Moderne-style fluted panels and signage identifying berth numbers, or the Port of San Diego and the year 1957—the year construction began on the terminal's transit sheds. The roofs of the building's three interior spaces slope downward to the southwest and northeast from central ridges. Each of the building's three interior spaces has five large loading entries with roll-up metal warehouse doors along the southwest and northeast elevations. Concrete truck-loading platforms extend along most of the building's northeast elevation. The southeast and northwest elevations each have a single centered entry large enough to allow trucks to enter the building. These are also secured by metal roll-up warehouse doors. Industrial-grade pedestrian doors provide access to the building at various locations. The southwest elevation features windows at two locations, including a pair of original steel-frame windows that appear to incorporate awning or hopper sashes (see Continuation Sheet).

***P3b. Resource Attributes:** (List attributes and codes) HP8. Industrial building
***P4. Resources Present:** ☒Building ☐Structure ☐Object ☐Site ☐District ☐Element of District ☐Other (Isolates, etc.)



P5b. Description of Photo: (View, date, accession #) Northeast elevation, looking southeast
***P6. Date Constructed/Age and Sources:** ☒Historic ☐Prehistoric ☐Both
1957-58 (see references on page 14 Continuation Sheet)
***P7. Owner and Address:**
Unified Port of San Diego
3165 Pacific Highway
San Diego, CA 92101

***P8. Recorded by:** (Name, affiliation, and address):
Tim Yates, ICF International
575 B Street, Ste. 1700
San Diego, CA 92101

***P9. Date Recorded:** May 14, 2014

***P10. Survey Type:** Intensive

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.") ICF International. 2016. Cultural Resources Inventory and Evaluation Report for the Tenth Avenue Marine Terminal Redevelopment Plan and Demolition and Initial Rail Component (ICF 00165.14). San Diego, CA. Prepared for the San Diego Unified Port District

***Attachments:** ☐NONE ☐Location Map ☐Sketch Map ☒Continuation Sheet ☒Building, Structure, and Object Record ☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record ☐Artifact Record ☐Photograph Record ☐ Other (List):

BUILDING, STRUCTURE, AND OBJECT RECORD

 ***NRHP Status Code** 6Z

***Resource Name or #:** Transit Shed 1, Tenth Avenue Marine Terminal

B1. Historic Name: Transit Shed 1
B2. Common Name: Transit Shed 1
B3. Original Use: Cargo storage **B4. Present Use**: Cargo storage
***B5. Architectural Style:**
***B6. Construction History:** (Construction date, alterations, and date of alterations) The building was constructed in 1957-58. Portions of it were demolished within the past decade.

***B7. Moved?** ☒**No** ☐**Yes** ☐**Unknown** **Date:** **Original Location:**
***B8. Related Features:** Transit Shed 2
B9a. Architect: Louis Bodmer (headhouse); E. L. Freeland (storage portion of building) **b. Builder**. F.E. Young Construction Company
***B10. Significance: Theme:** N/A **Area:** N/A
Period of Significance: N/A **Property Type:** N/A **Applicable Criteria:** N/A
(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.)

As discussed above, the terminal site does not appear to be eligible for CRHR listing as a historic district. Therefore the transit shed does not appear to contribute to a historic district. The following evaluation addresses the potential for Transit Shed 1 to qualify as an individual historical resource.

Aerial photographs indicate that the construction of Transit Shed 1 began in 1957. Plans on file at the Unified Port of San Diego indicate that the portion of the building devoted to storage was designed by E. L. Freeland, Structural Engineer of San Diego. Freeland appears to have worked with Harbor Department engineering team headed by J. E. Liebmann in the design of the terminal's two transit sheds. Local architect Louis Bodmer designed Transit Shed 1's original Modern-style headhouse (no longer present). Bodmer also designed the traffic island, pillar, and flanking transit shed tenant directories originally situated between Transit Sheds 1 and 2 (no longer present). The F. E. Young construction company won the contract to build Transit Shed 1 and completed the building by 1958. (Bodmer 1957A, 1957B; Freeland 1957; Liebmann and Greer 1958: 43; Ninyo & Moore 1999: Appendix A; Morin 1957; *San Diego Union* 1958:C-6).

Transit Shed 1 does not appear to be individually eligible for the CRHR. Research efforts have yielded no evidence that Transit Shed 1 is associated with important historical events or patterns of events. Nor has research revealed evidence that a noteworthy individual performed historically important work at the transit shed building. The building does not have a direct enough association with Harbor Department/Port Director John Bate to confer significance upon it. Consequently, the building does not appear to meet or Criteria 1 or 2 for listing in the CRHR (see Continuation Sheet).

B11. Additional Resource Attributes: (List attributes and codes)
***B12. References:**

See page 14 Continuation Sheet

B13. Remarks:

***B14. Evaluator:**

Tim Yates, Ph.D., ICF International

***Date of Evaluation:** May 15, 2015

(This space reserved for official comments.)

***Recorded by**: T. Yates, ICF International ***Date**: May 14, 2014 ☒**Continuation** ☐ **Update**

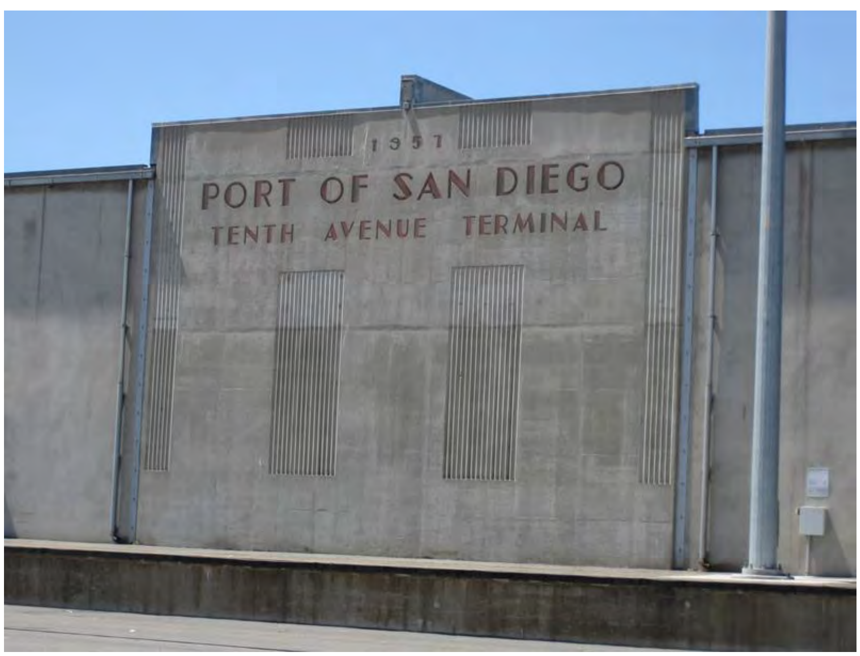
***P3a. Description** (continued):

Transit Shed 1 has undergone several notable alterations. A corrugated-metal shed addition was constructed at the northwest elevation sometime after 1970. Originally the building had four rather than three interior storage spaces, and its southern end consisted of Modern-style headhouse offices. Both have been demolished. Now the southeast elevation consists of a concrete wall with two buttresses. Historic photographs indicate that the Transit Shed 1 headhouse was identical to the intact Modern-style headhouse at the northwest end of Transit Shed 2. Originally, an oval traffic control island with a concrete pillar was situated between Transit Sheds 1 and 2. The pillar featured signage identifying the terminal and transit sheds, and was flanked by tenant directories for the transit sheds. The traffic island, pillar, and associated directories have been removed from the site (Ninyo & Moore 1999: 10, Appendix A; Morin 1957; San Diego History Center 1958; *San Diego Union* 1958:C-6).

***B10. Significance** (continued):

Research yielded no evidence that E. L. Freeland distinguished himself as an engineer in a manner that would confer historical significance upon Transit Shed 1. The building has limited decorative elements—concrete wall slabs scored with Moderne-style fluting and signage in some places—and does not appear to reach the threshold of significance necessary for CRHR listing as an important example of port architecture. As explained above, although the building's development involved the challenge of potential subsidence because of its weight and location on fill, the measures employed to make it structurally sound—370 concrete Raymond step-taper piles and a concrete grade beam below longitudinal walls that acted like a strut—do not appear to have represented major milestones in port engineering. The building has also been substantially altered. Its original Modern-style headhouse, southeastern-most storage space, and the associated traffic island originally situated near the building's headhouse have all been demolished. A shed-roofed corrugated-metal addition has also been constructed at the building's northwest elevation. These alterations have diminished its integrity of design, materials, workmanship, and feeling. For these reasons, Transit Shed 1 does not appear to meet Criterion 3 for individual CRHR listing.

***P5a. Photographs** (continued):



Photograph 2: Wall slab with decorative fluting and signage at northeast elevation, looking south

Photograph 3: Southeast elevation, note partially remaining "Berth 4" signage indicating extent of demolition at building's southern end, including the headhouse, looking west

Photograph 4: Harbor-facing southwest elevation (left) and west end of southeast elevation, looking north

***Resource Name or #** (Assigned by recorder) Transit Shed 1, Tenth Avenue Marine Terminal

***Recorded by**: T. Yates, ICF International ***Date**: May 14, 2014 ☒**Continuation** ☐ **Update**

***P5a. Photographs** (continued):

Photograph 4: Harbor-facing southwest elevation (left) and west end of southeast elevation, looking north

Photograph 5: Southwest elevation, looking north

***P5a. Photographs** (continued):

Photograph 6: Northwest elevation, looking east

***B12. References** (continued):

Bodmer, Louis. 1957A. Tenth Avenue Marine Terminal Headhouses, Nos. 1 & 2, Front Elevation, Details. Sheet 4 of 12. November. On file at the Unified Port of San Diego, San Diego, California.

____________. 1957B. Tenth Avenue Marine Terminal Headhouses 1 & 2, Traffic Control Island, Reflected Ceiling Plan, Details. Sheet 6 of 12. November. On file at the Unified Port of San Diego, San Diego, California.

City of San Diego. 2007. San Diego Modernism Historic Context Statement. Prepared by the Historical Resources Board, City of San Diego Planning and Community Investment Department, and Heritage Architecture and Planning, for submission to the State of California, Office of Historic Preservation. San Diego, California. Available: <http://ohp.parks.ca.gov/ pages/1054/files/san%20diego%20modenism%20context.pdf>. Downloaded June, 2012.

Freeland, E. L. 1957. Tenth Avenue Marine Terminal Transit Sheds No. 1 & 2, Plot Plan. Sheet 1 of 30. City of San Diego, Harbor Department. March 28. On file at the Unified Port of San Diego, San Diego, California.

Freeley, Jennifer, Tricia Olsen, Ricki Siegel, Ginger Weatherford, and Historic Resources Board Staff . 2011. Biographies of Established Masters. San Diego Historic Resources Board. Available: <http://www.sandiego.gov/planning/programs/historical/pdf/ 201109biographies.pdf>. Downloaded July, 2012.

Liebmann, Joachim E. (J.E.), and Greer W. Ferver. Twin Dock-Side Transit Sheds for San Diego. *Civil Engineering*. 28 (November): 40-43.

Modern San Diego Real Estate. 2014. Modern San Diego Real Estate—Architects. Internet Website Available: <http://www.modernsandiego.com/>. Accessed August 12, 2014.

***B12. References** (continued):

Morin, Howard. 1957. Contract of $1,460,501 Awarded for Tenth Avenue Pier Transit Sheds. *San Diego Union*. [no date or page number]. Newspaper clipping on file at the San Diego History Center: Subject Files—Harbors—Harbor Department.

Ninyo & Moore Geotechnical and Environmental Sciences Consultants (Ninyo and Moore). 1999. Historical Study, 10^{th} Avenue Marine Terminal, San Diego, California. Prepared for the San Diego Unified Port District. November 30, Project No. 103943-05 [the Appendix of this report features over 50 aerial photographs of the terminal site dating from late 1920s through the 2000s].

San Diego History Center. 1958. Photograph of Tenth Avenue Marine Terminal Dedication. # S-4868. November 21. Booth Historical Photo Archive: San Diego Harbor: 1952-79, Book 10 of 12.

San Diego Union. 1958. Terminal: Shipping Facilitated. November 23:C-6.

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code(s) 6Z

Other Listings
Review Code | Reviewer | Date

 *Resource Name or #: Transit Shed 2, Tenth Avenue Marine Terminal

P1. Other Identifier:
***P2. Location:** ☐ Not for Publication ☒ Unrestricted ***a. County:** San Diego
***b. USGS 7.5' Quad:** Point Loma **Date:** 1967 (PR 1975) **T**17S **R**3W; **¼ of Sec** N/A (Pueblo Lands of San Diego Land Grant); San Bernardino **B.M.**
c. Address: 623 Switzer Street **City**: San Diego **Zip**: 92101
d. UTM: Zone: 11 (NAD 83); 485366 mE/ 3617803 mN (G.P.S.) (approximate center of building footprint)
e. Other Locational Data: APN Elevation:

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)
Occupying the southwest portion of the terminal site, Transit Shed 2 is a cargo storage building that incorporates headhouse offices at the northwest elevation. The approximately 194,000 square-foot building has a long rectilinear plan. Most of the building consists of tilt-up fireproof concrete walls and steel roof trusses that enclose large interior storage spaces southeast of the headhouse. The two-story Modern-style headhouse has a centered cargo-loading bay large enough to accommodate trucks, and pedestrian entries at the façade's first-floor offices, and atop stairways leading to the second story. One stairway is located at the northwest elevation, and the other two are located within the central bay. Clad mostly in stucco, the headhouse has a slightly pitched shed roof that overhangs broadly at the northwest and northeast (front) elevations to shelter the northwest stairway and the first-floor entries. The second story is slightly cantilevered. Fenestration consists mainly of rectangular banks of multi-pane aluminum-frame windows. On each side of the central bay, the façade's second-story windows are framed by long rectangular surrounds incorporating mullion-like fluted panels. Aluminum-frame glass doors with transoms are integrated into the window banks along the first floor (see Continuation Sheet).

***P3b. Resource Attributes:** (List attributes and codes) HP8. Industrial building; HP6. 1-3 story commercial building
***P4. Resources Present:** ☒Building ☐Structure ☐Object ☐Site ☐District ☐Element of District ☐Other (Isolates, etc.)

P5b. Description of Photo: (View, date, accession #) Transit Shed 2 headhouse, northwest and partial ,.northeast elevations, looking south

***P6. Date Constructed/Age and Sources:** ☒Historic ☐Prehistoric ☐Both
1957-58 (see references on page 22 Continuation Sheet)

***P7. Owner and Address:**
Unified Port of San Diego
3165 Pacific Highway
San Diego, CA 92101

***P8. Recorded by:** (Name, affiliation, and address):
Tim Yates, ICF International
575 B Street, Ste. 1700
San Diego, CA 92101

***P9. Date Recorded:** May 14, 2014

***P10. Survey Type:** Intensive

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.") ICF International. 2016. Cultural Resources Inventory and Evaluation Report for the Tenth Avenue Marine Terminal Redevelopment Plan and Demolition and Initial Rail Component (ICF 00165.14). San Diego, CA. Prepared for the San Diego Unified Port District

***Attachments:** ☐NONE ☐Location Map ☐Sketch Map ☒Continuation Sheet ☒Building, Structure, and Object Record ☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record ☐Artifact Record ☐Photograph Record ☐ Other (List):

BUILDING, STRUCTURE, AND OBJECT RECORD

***NRHP Status Code** 6Z

***Resource Name or #:** Transit Shed 2, Tenth Avenue Marine Terminal

B1. Historic Name: Transit Shed 2
B2. Common Name: Transit Shed 2
B3. Original Use: Cargo storage; offices **B4. Present Use**: Cargo storage; offices
***B5. Architectural Style:**
***B6. Construction History:** (Construction date, alterations, and date of alterations)

***B7. Moved?** ☒**No** ☐**Yes** ☐**Unknown** **Date:** **Original Location:**
***B8. Related Features:** Transit Shed 2
B9a. Architect: Louis Bodmer (headhouse); E. L. Freeland (storage portion of building) **b. Builder**: F.E. Young Construction Company
***B10. Significance: Theme:** N/A **Area:** N/A
Period of Significance: N/A **Property Type:** N/A **Applicable Criteria:** N/A
(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.)

As discussed above, the terminal site does not appear to be eligible for CRHR listing as a historic district. Therefore the transit shed does not appear to contribute to a historic district. The following evaluation addresses the potential for Transit Shed 2 to qualify as an individual historical resource.

Transit Shed 2 has the same development history as Transit Shed 1. Aerial photographs indicate that the construction of Transit Shed 2 began in 1957. Plans on file at the Unified Port of San Diego show that the portion of the building devoted to storage was designed by E. L. Freeland, Structural Engineer of San Diego, on consultation with the Harbor Department engineering team lead by J. E. Liebmann. Local architect Louis Bodmer designed Transit Shed 2's Modern-style headhouse. Bodmer also designed the traffic island, pillar, and flanking transit shed directories originally situated between Transit Sheds 1 and 2. The F. E. Young construction company won the contract to build Transit Sheds 1 and 2 and completed the buildings by 1958 (Bodmer 1957A, 1957B; Freeland 1957; Liebmann and Greer 1958; Ninyo & Moore 1999:Appendix A; Morin 1957; *San Diego Union* 1958:C-6).

Transit Shed 2 does not appear to be individually eligible for the CRHR. Research revealed no evidence that the building has direct individual associations with an important event or pattern of events. Nor has research revealed any evidence that a noteworthy individual performed historically important work that was strongly associated with Transit Shed 2. The building does not have sufficiently direct association with Harbor Department/Port Director John Bate to confer significance upon it. Consequently, the building does not appear to meet Criteria 1 or 2 for listing in the CRHR (see Continuation Sheet).

B11. Additional Resource Attributes: (List attributes and codes)
***B12. References:**

See page 22 Continuation Sheet

B13. Remarks:

***B14. Evaluator:**

Tim Yates, Ph.D., ICF International

***Date of Evaluation:** May 15, 2015

(This space reserved for official comments.)

***P3a. Description** (continued):

The walls at the ends of the headhouse and on each side of the central bay feature circular windows. Six steel poles extend from the sides of each stairway to the overhanging roof. The circular windows, the steel poles lining the stairways, and the headhouse's overall resemblance to a ship's navigation bridge are reminiscent of Streamline Moderne architecture's references to transportation technology. However, the headhouse's horizontal emphasis, window bands, sharp corners, and overhanging projections make it a Modern building registering the post-World War II influence of the International Style.

The remainder of the transit shed to the southwest of the headhouse is formed of tilt-up concrete elevation walls and three tilt-up, concrete, interior transverse walls. These create four interior storage spaces. Square shaped concrete wall slabs at each end of the interior transverse walls, and rectangular-shaped wall slabs at the ends of the northwest and southeast elevations, rise higher than adjacent wall slabs to form parapets. These parapet-topped concrete wall slabs are scored with decorative Moderne-style fluted panels and signage identifying berth numbers, or the Port of San Diego and the year 1957—the year construction began on the terminal's transit sheds.

The roofs of the four interior spaces slope downward to the southwest and northeast from central ridges. Each of the buildings four interior spaces has five large loading entries with roll-up metal warehouse doors along the southwest and northeast elevations. Concrete truck-loading platforms extend along most of the building's northeast elevation. Industrial-grade pedestrian doors provide access to the building's storage spaces at various locations. The southwest elevation features windows at two locations, including a pair of original steel-frame windows that appear to incorporate awning or hopper sashes. The southeastern portion of the building incorporates multiple non-original structures, including a ship unloader and associated conveyance machinery at the southwest and northeast elevations, and across the building's roof. The original construction of Transit Sheds 1 and 2 included an oval traffic control island with a concrete pillar situated between the two buildings' headhouses. The pillar featured signage identifying the terminal and transit sheds, and was flanked by tenant directories for the two buildings. The traffic island, pillar, and associated directories have been removed from the site (Ninyo & Moore 1999: 10, Appendix A; Morin 1957; San Diego History Center 1958; *San Diego Union* 1958: C-6)

***B10. Significance** (continued):

Research yielded no evidence that either E. L. Freeland or Harbor Department chief engineer J.E. Liebmann distinguished themselves as engineers in a manner that would confer historical significance upon Transit Shed 2. As explained above, although the development of the building's extensive storage spaces involved the challenge of potential subsidence because of the structure's weight and location on fill, the measures employed to make it structurally sound—370 concrete Raymond step-taper piles and a concrete grade beam below longitudinal walls that acted like a strut—do not appear to have represented major milestones in port engineering. Sources on master architects and architectural Modernism in San Diego offer no evidence that Louis Bodmer distinguished himself as an important designer of post-World War II buildings (City of San Diego 2007; Freeley et al. 2001; Modern San Diego Real Estate 2014). The building's storage portion incorporates limited ornamental features at some concrete wall slabs in the form of scored Moderne-style fluting and signage. The headhouse is a commonplace example of Modern architecture that incorporates limited design elements evoking nautical associations—some circular windows, steel poles lining stairways, and an overall resemblance to a ship's navigation bridge. These elements gave the 1958 headhouse qualities reminiscent of older Streamline Moderne design at a moment when Modernist evolving out of the International Style was ascendant in San Diego and across the United States. In contrast to architecturally significant port buildings designed in Modernism idioms, such as the International-style Los Angeles Cruise Terminal at the Port of Los Angeles (1963) for example (Applied Earth Works, Inc.: 2013:19-21, 24), the Tenth Avenue Marine Terminal's Transit Shed 2 does not achieve high artistic values and does not exhibit innovative architectural design. Overall, Transit Shed 2 does not appear to meet the threshold of architectural or engineering significance appropriate for CRHR listing. For these reasons, Transit Shed 2 does not appear to be eligible for individual CRHR listing under Criterion 3.

***Resource Name or #** (Assigned by recorder) Transit Shed 2, Tenth Avenue Marine Terminal

***Recorded by**: T. Yates, ICF International ***Date**: May 14, 2014 ☒**Continuation** ☐ **Update**

***P5a. Photographs** (continued):

Photograph 2: Transit shed headhouse, northwest and southwest elevations, looking east

Photograph 3: Northeast elevation, note non-original cement company conduits and machinery at roof and elevation wall, looking south-southeast

***Resource Name or #** (Assigned by recorder) Transit Shed 2, Tenth Avenue Marine Terminal

***Recorded by**: T. Yates, ICF International ***Date**: May 14, 2014 ☒**Continuation** ☐ **Update**

***P5a. Photographs** (continued):

Photograph 4: Harbor-facing southwest elevation at Berth 5, looking east

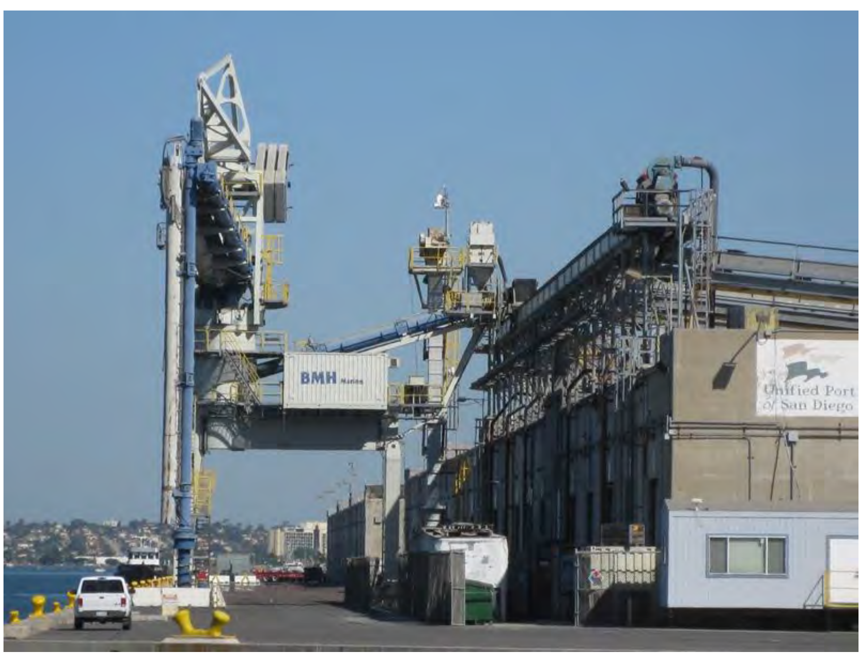
Photograph 5: Northeast elevation, looking south

***Resource Name or #** (Assigned by recorder) Transit Shed 2, Tenth Avenue Marine Terminal

***Recorded by**: T. Yates, ICF International ***Date**: May 14, 2014 ☒**Continuation** ☐ **Update**

***P5a. Photographs** (continued):

Photograph 6: Harbor-facing southwest elevation near non-original cement unloading and conveyance machinery, looking east



Photograph 7: Non-original cement unloading and conveyor machinery at south end of southeast elevation, looking north-northwest.

 ***Resource Name or #** (Assigned by recorder) Transit Shed 2, Tenth Avenue Marine Terminal

***Recorded by**: T. Yates, ICF International ***Date**: May 14, 2014 ☒**Continuation** ☐ **Update**

***P5a. Photographs** (continued):

Photograph 8: Southeast elevation, note bagging plant dating to after 1970 at right, looking north

***B12. References** (continued):

Applied Earth Works, Inc. 2013. Historic Resources Evaluation Report for the Port of Los Angeles Master Plan Update. February. Prepared for Science Applications International Corporation and the Port of Los Angeles.

Bodmer, Louis. 1957A. Tenth Avenue Marine Terminal Headhouses, Nos. 1 & 2, Front Elevation, Details. Sheet 4 of 12. November. On file at the Unified Port of San Diego, San Diego, California.

____________. 1957B. Tenth Avenue Marine Terminal Headhouses 1 & 2, Traffic Control Island, Reflected Ceiling Plan, Details. Sheet 6 of 12. November. On file at the Unified Port of San Diego, San Diego, California.

City of San Diego. 2007. San Diego Modernism Historic Context Statement. Prepared by the Historical Resources Board, City of San Diego Planning and Community Investment Department, and Heritage Architecture and Planning, for submission to the State of California, Office of Historic Preservation. San Diego, California. Available: <http://ohp.parks.ca.gov/ pages/1054/files/san%20diego%20modenism%20context.pdf>. Downloaded June, 2012.

Freeland, E. L. 1957. Tenth Avenue Marine Terminal Transit Sheds No. 1 & 2, Plot Plan. Sheet 1 of 30. City of San Diego, Harbor Department. March 28. On file at the Unified Port of San Diego, San Diego, California.

Freeley, Jennifer, Tricia Olsen, Ricki Siegel, Ginger Weatherford, and Historic Resources Board Staff . 2011. Biographies of Established Masters. San Diego Historic Resources Board. Available: <http://www.sandiego.gov/planning/programs/historical/pdf/ 201109biographies.pdf>. Downloaded July, 2012.

Modern San Diego Real Estate. 2014. Modern San Diego Real Estate—Architects. Internet Website Available: <http://www.modernsandiego.com/>. Accessed August 12, 2014.

***B12. References** (continued):

Morin, Howard. 1957. Contract of $1,460,501 Awarded for Tenth Avenue Pier Transit Sheds. San Diego Union. [no date or page number]. Newspaper clipping on file at the San Diego History Center: Subject Files—Harbors—Harbor Department.

Ninyo & Moore Geotechnical and Environmental Sciences Consultants (Ninyo and Moore). 1999. Historical Study, 10th Avenue Marine Terminal, San Diego, California. Prepared for the San Diego Unified Port District. November 30, Project No. 103943-05 [the Appendix of this report features over 50 aerial photographs of the terminal site dating from late 1920s through the 2000s].

San Diego History Center. 1958. Photograph of Tenth Avenue Marine Terminal Dedication. # S-4868. November 21. Booth Historical Photo Archive: San Diego Harbor: 1952-79, Book 10 of 12.

San Diego Union. 1958. Terminal: Shipping Facilitated. November 23: C-6.

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code(s) 6Z

Other Listings
Review Code **Reviewer** **Date**

 ***Resource Name or #:** Bunker Fuel Complex, Tenth Avenue Marine Terminal

P1. Other Identifier:
***P2. Location:** ☐ **Not for Publication** ☒ **Unrestricted** ***a. County:** San Diego
***b. USGS 7.5' Quad:** Point Loma **Date:** 1967 (PR 1975) **T**17S **R**3W; **¼ of Sec** N/A (Pueblo Lands of San Diego Land Grant); San Bernardino **B.M.**
c. Address: 623 Switzer Street **City**: San Diego **Zip**: 92101
d. UTM: See page 26 Continuation Sheet
e. Other Locational Data: APN Elevation:

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

Located at the northeastern portion of the Tenth Avenue Marine Terminal site, the above ground portion of the bunker fuel complex consists of five large steel tanks and two buildings secured by chain-link fences topped with barbed wire. The two steel tanks closest to the buildings at the southeast side of the complex appear to be equivalent in size and have diameters of approximately 100 feet. Immediately northwest of those tanks are two additional tanks. The southern one has a diameter of approximately 80 feet and the one to the northeast has a diameter of approximately 55 feet. An additional tank at the northernmost portion of the complex was constructed within the last decade. The buildings on the site appear to function as a utility building (eastern) and a small office (western). Both are utilitarian in design with concrete-block walls and flat roofs with broadly overhanging eaves. The western building has several window openings. Access restrictions during the field visit prohibited clear observation of the contents of the window openings.

***P3b. Resource Attributes:** (List attributes and codes) HP11.Engineering structure; HP8. Industrial building
***P4. Resources Present:** ☒Building ☒Structure ☐Object ☐Site ☐District ☐Element of District ☐Other (Isolates, etc.)2

P5a. Photograph 20.

P5b. Description of Photo: (View, date, accession #) Tanks at bunker fuel complex, looking west-northwest

***P6. Date Constructed/Age and Sources:** ☒Historic ☐Prehistoric ☐Both
1959 (see references on page 26 Continuation Sheet)

***P7. Owner and Address:**
Unified Port of San Diego
3165 Pacific Highway
San Diego, CA 92101

***P8. Recorded by:** (Name, affiliation, and address):
Tim Yates, ICF International
575 B Street, Ste. 1700
San Diego, CA 92101

***P9. Date Recorded:** May 14, 2014

***P10. Survey Type:** Intensive

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.") ICF International. 2016. Cultural Resources Inventory and Evaluation Report for the Tenth Avenue Marine Terminal Redevelopment Plan and Demolition and Initial Rail Component (ICF 00165.14). San Diego, CA. Prepared for the San Diego Unified Port District

***Attachments:** ☐NONE ☐Location Map ☐Sketch Map ☒Continuation Sheet ☒Building, Structure, and Object Record ☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record ☐Artifact Record ☐Photograph Record ☐ Other (List):

BUILDING, STRUCTURE, AND OBJECT RECORD

***NRHP Status Code** 6Z

***Resource Name or #:** Bunker Fuel Complex, Tenth Avenue Marine Terminal

B1. Historic Name: Bunker Fuel Complex
B2. Common Name: Bunker Fuel Complex
B3. Original Use: Fuel storage and conveyance **B4. Present Use**: Fuel storage and conveyance
***B5. Architectural Style:** Utilitarian
***B6. Construction History:** (Construction date, alterations, and date of alterations). The original portions of the facility were completed in 1959. Several smaller tanks originally located northeast of the larger original tanks have been demolished. The complex's northern-most tank was constructed within the past decade.

***B7. Moved?** ☒**No** ☐**Yes** ☐**Unknown** **Date:** **Original Location:**
***B8. Related Features:**
B9a. Architect: J. E. Liebmann and Harbor Department engineering staff **b. Builder**: Unknown
***B10. Significance: Theme:** N/A **Area:** N/A
Period of Significance: N/A **Property Type:** Marine terminal **Applicable Criteria:** N/A
(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.)

As discussed above, the terminal site does not appear to be eligible for CRHR listing as a historic district. Therefore, the bunker fuel complex does not appear to contribute to a historic district. The following evaluation addresses the potential for the bunker fuel complex to qualify as an individual historical resource.

The terminal's bunker fuel complex was completed in 1959. An in-depth history of the terminal site's development has identified the owner of the tank complex from 1959 through 1971 as Union Oil of California. Several smaller original tanks have been removed from the complex. The purpose of the tanks was to store ship fuel and provide refueling services to ships docked at the terminal. Pipes from the tanks conveyed fuel directly to terminal berths so that ships could refuel during cargo loading or unloading. The same pipes provided for removal of ballast water from arriving ships' fuel tanks. At most earlier developed west coast ports during the1950s and 60s, cargo ships were refueled from barges or tugboats. Harbor Department officials heavily promoted the terminal's bunker fuel facilities. Although their development does not appear to have required major engineering innovation for the period, the bunker fuel facilities offered convenience and promoted efficiency, and provided a crucial element of the Harbor Department's marketing efforts to attract ships to San Diego. While the bunker fuel facilities helped make the Port of San Diego more competitive in the west coast shipping market for a time, this initially successful feature was undermined fairly quickly during the 1960s as ports in Japan began selling ship fuel at substantially lower prices than other Pacific ports (Bate 1958: C-3; Brooks 1958: C-1; Liebmann 1960:69-72; Ninyo & Moore 1999:11, Appendix A; Irwin 1970:57-58) (see Continuation Sheet).

B11. Additional Resource Attributes: (List attributes and codes)
***B12. References:**

See page 28 Continuation Sheet

B13. Remarks:

***B14. Evaluator:**

Tim Yates, Ph.D., ICF International

***Date of Evaluation:** May 15, 2015

(This space reserved for official comments.)

***P2. Location** (continued)
d. UTM: Zone: 11 (NAD 83); 485357 mE/ 3618350 mN (G.P.S.) (center of northern original tank)
Zone: 11 (NAD 83); 485334 mE/ 3618350 mN (G.P.S.) (center of western original tank)
Zone: 11 (NAD 83); 485392 mE/ 3618359 mN (G.P.S.) (center of eastern original tank)
Zone: 11 (NAD 83); 485392 mE/ 3618359 mN (G.P.S.) (center of southern original tank)
Zone: 11 (NAD 83); 485441 mE/ 3618346 mN (G.P.S.) (center of eastern building)
Zone: 11 (NAD 83); 485417 mE/ 3618317 mN (G.P.S.) (center of western building)

***B10. Significance** (continued):

The Tenth Avenue Marine Terminal's bunker fuel complex does not appear to be individually eligible for the CRHR. As part of the terminal's bunker fuel facilities, the bunker fuel complex does not appear to have direct individual associations with important events or patterns of events. As explained above, although the terminal's bunker fuel capabilities were an important element of the Harbor Department officials' efforts to create a terminal that offered superior maintenance services to ships, the competitiveness provided by the facility was undermined fairly quickly in the 1960s by cheaper fuel prices at Japanese ports. Research has revealed no evidence that a noteworthy individual performed historically important work that was strongly associated with bunker fuel complex. The building does not have sufficiently direct association with Harbor Department/Port Director John Bate to confer significance upon it. Consequently, the complex does not appear to meet Criteria 1 or 2 for listing in the CRHR.

Research efforts did not reveal any evidence that the bunker fuel complex is significant as the work of a master engineer or builder. Neither the tank complex nor the underground pipeline system for conveying fuel and ballast water appear to qualify as engineering masterworks. The system appears to be the product of technology that was well-established by the late 1950s. Tanks comparable in size, with equivalent steel construction, are commonplace elements of the historic-period industrial built environment at numerous ports and other industrial complexes in California and across the west coast. The two small buildings associated with the tanks are also commonplace examples of utilitarian 1950s buildings. For these reasons, the bunker fuel complex does not appear to meet Criterion 3 for listing individual listing in the CRHR.

***P5a. Photographs** (continued):

Photograph 2: Eastern building at bunker fuel complex, looking west-southwest

***P5a. Photographs** (continued):

Photograph 3: Eastern building at bunker fuel complex, looking west-southwest

Photograph 4: Western building at bunker fuel complex, looking southwest

***Resource Name or #** (Assigned by recorder) Bunker Fuel Complex, Tenth Avenue Marine Terminal

***Recorded by**: T. Yates, ICF International ***Date**: May 14, 2014 ☒**Continuation** ☐ **Update**

***B12. References:** (continued):

Bate, John. 1958. On The Move: Terminal One Big Step Toward Port Potential, Director Says. *San Diego Union*. November 23: C-3.

Brooks, Joe. 1958. New Terminal Makes San Diego Hub of Export-Import Trade: Facility's Value to City, Southwest Unlimited. *San Diego Union.* November 23: C-1, C-4.

Irwin, Wayne Ray. 1970. The Port of San Diego: An Economic Geography of Waterborne Trade. Master's Thesis in Geography, San Diego State College.

Liebmann, Joachim E. (J.E.), and Greer W. Ferver. Twin Dock-Side Transit Sheds for San Diego. *Civil Engineering*. 28 (November): 40-43.

Ninyo & Moore Geotechnical and Environmental Sciences Consultants (Ninyo and Moore). 1999. Historical Study, 10th Avenue Marine Terminal, San Diego, California. Prepared for the San Diego Unified Port District. November 30, Project No. 103943-05 [the Appendix of this report features over 50 aerial photographs of the terminal site dating from late 1920s through the 2000s].

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code(s) 6Z

Other Listings
Review Code **Reviewer** **Date**

 ***Resource Name or #:** Molasses Tanks, Tenth Avenue Marine Terminal

P1. Other Identifier:
***P2. Location:** ☐ **Not for Publication** ☒ **Unrestricted** ***a. County:** San Diego
***b. USGS 7.5' Quad:** Point Loma **Date:** 1967 (PR 1975) **T**17S **R**3W; **¼ of Sec** N/A (Pueblo Lands of San Diego Land Grant); San Bernardino **B.M.**
c. Address: 623 Switzer Street **City**: San Diego **Zip**: 92101
d. UTM: See page 31 Continuation Sheet
e. Other Locational Data: APN Elevation:

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

The terminal's remaining tanks for molasses storage are located approximately 170 feet east of Warehouse C's southeastern corner. The three steel molasses tanks appear to be the same size and have diameters of approximately 70 feet. The tops are connected by steel catwalks. The lower circumference of the eastern tank and the entire circumference of the central tank have been covered with non-original insulating material. Various associated pipes and valves are located on the south side of the tanks.

***P3b. Resource Attributes:** (List attributes and codes) HP11. Engineering structure
***P4. Resources Present:** ☐Building ☒Structure ☐Object ☐Site ☐District ☐Element of District ☐Other (Isolates, etc.)

P5a. Photograph 23.

P5b. Description of Photo: (View, date, accession #) Molasses Tanks, looking north

***P6. Date Constructed/Age and Sources:** ☒Historic ☐Prehistoric ☐Both
1963 (see references on page 32 Continuation Sheet)

***P7. Owner and Address:**
Unified Port of San Diego
3165 Pacific Highway
San Diego, CA 92101

***P8. Recorded by:** (Name, affiliation, and address):
Tim Yates, ICF International
575 B Street, Ste. 1700
San Diego, CA 92101

***P9. Date Recorded:** May 14, 2014

***P10. Survey Type:** Intensive

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.") ICF International. 2016. Cultural Resources Inventory and Evaluation Report for the Tenth Avenue Marine Terminal Redevelopment Plan and Demolition and Initial Rail Component (ICF 00165.14). San Diego, CA. Prepared for the San Diego Unified Port District

***Attachments:** ☐NONE ☐Location Map ☐Sketch Map ☒Continuation Sheet ☒Building, Structure, and Object Record ☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record ☐Artifact Record ☐Photograph Record ☐ Other (List):

Primary #
HRI #

BUILDING, STRUCTURE, AND OBJECT RECORD

***NRHP Status Code** 6Z

***Resource Name or #:** Molasses Tanks, Tenth Avenue Marine Terminal

B1. Historic Name: Molasses Tanks
B2. Common Name: Molasses Tanks
B3. Original Use: Molasses storage **B4. Present Use**: Unknown
***B5. Architectural Style:**
***B6. Construction History:** (Construction date, alterations, and date of alterations): The Molasses Tanks built by Pacific Molasses Company at the Tenth Avenue Marine Terminal were completed by 1963.

***B7. Moved?** ☐**No** ☐**Yes** ☐**Unknown** **Date:** **Original Location:**
***B8. Related Features:**
B9a. Architect: Unknown **b. Builder**: Unknown
***B10. Significance: Theme:** N/A **Area:** N/A
Period of Significance: N/A **Property Type:** N/A **Applicable Criteria:** N/A
(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.)

As discussed above, the terminal site does not appear to be eligible for CRHR listing as a historic district. Therefore, the molasses tanks do not appear to contribute to a historic district. The following evaluation addresses the potential for the molasses tanks to qualify as an individual historical resource.

The San Francisco-based Pacific Molasses Company arranged for construction of the three large tanks for $150,000 as a distribution plant. A newspaper report in December 1961 noted that, due to construction delays, the plant would not be completed until the following February. It appears that the plant was completed in 1962; it is present in a 1963 aerial photograph. Imported Molasses stored in the tanks was trucked to the Imperial Valley and processed into cattle feed. The Pacific Molasses Company tanks remain intact; an additional molasses tank constructed near the bunker fuel tank complex by a different company than Pacific Molasses was later demolished. Several smaller tanks constructed at the same time as the Pacific Molasses tanks and located immediately north of them have been removed from the site (Irwin 1970:50-51; Morin 1961A:A-27; Morin 1961B; Ninyo & Moore 1999: 12, Appendix A) (see Continuation Sheet).

B11. Additional Resource Attributes: (List attributes and codes)
***B12. References:**

See page 32 Continuation Sheet

B13. Remarks:

***B14. Evaluator:**

Tim Yates, Ph.D., ICF International

***Date of Evaluation:** May 15, 2015

(This space reserved for official comments.)

***Resource Name or #** (Assigned by recorder) Molasses Tanks, Tenth Avenue Marine Terminal

***Recorded by**: T. Yates, ICF International ***Date**: May 14, 2014 ☒**Continuation** ☐ **Update**

***P2. Location** (continued):

d. UTM: Zone: 11 (NAD 83); 485727 mE/ 3617841 mN (G.P.S.) (approximate center of west tank)
Zone: 11 (NAD 83); 485754 mE/ 3617837 mN (G.P.S.) (approximate center of central tank)
Zone: 11 (NAD 83); 485781 mE/ 3617834 mN (G.P.S.) (Approximate center of east tank)

***B10. Significance** (continued):

The Molasses Tanks developed by the Pacific Molasses Company at the Tenth Avenue Marine Terminal do not appear to be individually eligible for the CRHR. The Molasses Tanks do not appear to have significance for direct individual association with a historically important event or pattern of events. Research has revealed no evidence that a noteworthy individual performed historically important work that was strongly associated with the Molasses Tanks. The tank complex does not have sufficiently direct association with Harbor Department/Port Director John Bate to confer significance upon it. Consequently, the tanks do does not appear to meet Criteria 1 or 2 for listing in the CRHR (see Continuation Sheet).

Research efforts did not reveal any evidence that the Molasses Tanks are significant as the work of a master engineer or builder. The tanks do not appear to be an engineering masterwork. Tanks comparable in size, with equivalent steel construction, are commonplace elements of the industrial built environment in numerous cities in California and across the west coast. For these reasons, the Molasses Tanks do not appear to meet Criterion 3 for listing in the CRHR. Additionally, two of the tanks have been entirely or partially covered with non-original insulating material, which has diminished their historical integrity of design, materials, and feeling. The integrity of the site as whole has also been compromised by the removal of the smaller tanks originally installed immediately north of the existing three larger tanks.

***P5a. Photographs** (continued):

Photograph 24: Looking west

***B12. References** (continued):

Irwin, Wayne Ray. 1970. The Port of San Diego: An Economic Geography of Waterborne Trade. Master's Thesis in Geography, San Diego State College.

Morin, Howard. 1961A. Multimillion Port Plan Outline Set. *San Diego Union*. October 29: A-27.

____________. 1961B. Molasses Plans Bog Down. *San Diego Union.* December 12: A-13.

Ninyo & Moore Geotechnical and Environmental Sciences Consultants (Ninyo and Moore). 1999. Historical Study, 10th Avenue Marine Terminal, San Diego, California. Prepared for the San Diego Unified Port District. November 30, Project No. 103943-05 [the Appendix of this report features over 50 aerial photographs of the terminal site dating from late 1920s through the 2000s].

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code(s) 6Z

Other Listings
Review Code **Reviewer** **Date**

 ***Resource Name or #:** Truck Scale Building, Tenth Avenue Marine Terminal

P1. Other Identifier:
***P2. Location:** ☐ **Not for Publication** ☒ **Unrestricted** ***a. County:** San Diego
***b. USGS 7.5' Quad:** Point Loma **Date:** 1967 (PR 1975) **T**17S **R**3W; **¼ of Sec** N/A (Pueblo Lands of San Diego Land Grant); San Bernardino **B.M.**
c. Address: 623 Switzer Street **City**: San Diego **Zip**: 92101
d. UTM: Zone: 11 (NAD 83); 485752 mE/ 3617805 mN (G.P.S.) (approximate center of building footprint)
e. Other Locational Data: APN Elevation:

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)
The Track Scale Building faces southwest and is located immediately south of the terminal's molasses tanks. The predominantly utilitarian building has a rectangular plan with a small projecting square element at the southwest elevation that accommodates the main drive-up window. The building's concrete block walls support a flat roof outlined by low parapets atop the square element, and a flat-roof Modern-style roof with broadly projecting eave overhangs and angled fascia boards across the main rectangular mass. Most windows are inset, horizontally sliding aluminum-frame units above wood sills. Two non-original horizontally sliding vinyl windows are located at the northwest portion of the southwest elevation. Wood doors with upper glazing provide access at the northwest and southeast sides of the drive-up window projection, as well as the southwest elevation of the main rectangular element. The northwest elevation of the main rectangular element has a metal door that slides horizontally on a mounted track.

***P3b. Resource Attributes:** (List attributes and codes) HP8. Industrial building
***P4. Resources Present:** ☒Building ☐Structure ☐Object ☐Site ☐District ☐Element of District ☐Other (Isolates, etc.)

P5b. Description of Photo: (View, date, accession #)
Northwest and southwest elevations, looking facing north

***P6. Date Constructed/Age and Sources:** ☒Historic ☐Prehistoric ☐Both
1963 (see references on 523B Form)

***P7. Owner and Address:**
Unified Port of San Diego
3165 Pacific Highway
San Diego, CA 92101

***P8. Recorded by:** (Name, affiliation, and address):
Tim Yates, ICF International
575 B Street, Ste. 1700
San Diego, CA 92101

***P9. Date Recorded:** May 14, 2014

***P10. Survey Type:** Intensive

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.") ICF International. 2016. Cultural Resources Inventory and Evaluation Report for the Tenth Avenue Marine Terminal Redevelopment Plan and Demolition and Initial Rail Component (ICF 00165.14). San Diego, CA. Prepared for the San Diego Unified Port District

***Attachments:** ☐NONE ☐Location Map ☐Sketch Map ☒Continuation Sheet ☒Building, Structure, and Object Record ☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record ☐Artifact Record ☐Photograph Record ☐ Other (List):

BUILDING, STRUCTURE, AND OBJECT RECORD

***NRHP Status Code** 6Z

***Resource Name or #:** Truck Scale Building, Tenth Avenue Marine Terminal

B1. Historic Name: Unknown
B2. Common Name: Truck Scale Building
B3. Original Use: Truck Scale Building **B4. Present Use**: Truck Scale Building
***B5. Architectural Style:** Predominantly utilitarian with Modern-style roof
***B6. Construction History:** (Construction date, alterations, and date of alterations) The Truck Scale Building was constructed by 1963.

***B7. Moved?** ☒**No** ☐**Yes** ☐**Unknown** **Date:** **Original Location:**
***B8. Related Features:**
B9a. Architect: Unknown **b. Builder**: Unknown
***B10. Significance: Theme:** N/A **Area:** N/A
Period of Significance: N/A **Property Type:** N/A **Applicable Criteria:** N/A
(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.)

As discussed above, the terminal site does not appear to be eligible for CRHR listing as a historic district. Therefore, the truck scale building does not appear to contribute to a historic district. The following evaluation addresses the potential for truck scale building to qualify as an individual historical resource.

The Tenth Avenue Marine Terminal's Truck Scale Building was constructed by 1963. It is unclear whether the Pacific Molasses Company constructed the building or whether the building was developed by Westside Metals/Scrap Metals, which operated a scrap metal yard during the early 1960s at the terminal near the northeast side of Warehouse C (Ninyo & Moore 1999: 12, Appendix A).

The Truck Scale Building does not appear to be individually eligible for the CRHR. The Truck Scale Building does not appear to have significance for direct individual association with a historically important event or pattern of events. Research efforts have revealed no evidence that a noteworthy individual performed historically important work that was strongly associated with the building, which does not have sufficiently direct association with Harbor Department/Port Director John Bate to confer significance upon it. Individually, therefore, the building does not appear to meet Criteria 1 or 2 for listing in the CRHR (see Continuation Sheet).

B11. Additional Resource Attributes: (List attributes and codes)
***B12. References:**

Ninyo & Moore Geotechnical and Environmental Sciences Consultants (Ninyo and Moore). 1999. Historical Study, 10th Avenue Marine Terminal, San Diego, California. Prepared for the San Diego Unified Port District. November 30, Project No. 103943-05 [the Appendix of this report features over 50 aerial photographs of the terminal site dating from late 1920s through the 2000s].

B13. Remarks:

***B14. Evaluator:**

Tim Yates, Ph.D., ICF International

***Date of Evaluation:** May 15, 2015

(This space reserved for official comments.)

***Resource Name or #** (Assigned by recorder) Truck Scale Building, Tenth Avenue Marine Terminal

***Recorded by**: T. Yates, ICF International ***Date**: May 14, 2014 ☒**Continuation** ☐ **Update**

***B10. Significance** (continued):

Research efforts did not reveal any evidence that the Truck Scale Building was designed by a master architect or builder. The building does not have high artistic value and does not appear to be a distinctive example of any architectural style or building technique. The building registers the influence of Modern architecture in its flat roof and broadly overhanding eaves. But such elements are entirely commonplace among buildings constructed at industrial sites throughout California during the 1950s and 1960s. For these reasons, the Truck Scale Building does not appear to meet Criterion 3 for listing in the CRHR.

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code(s) 6Z

Other Listings
Review Code Reviewer Date

 ***Resource Name or #:** Bulk Loader, Tenth Avenue Marine Terminal

P1. Other Identifier:
***P2. Location:** ☐ Not for Publication ☒ Unrestricted ***a. County:** San Diego
***b. USGS 7.5' Quad:** Point Loma **Date:** 1967 (PR 1975) **T**17S **R**3W; **¼ of Sec** N/A (Pueblo Lands of San Diego Land Grant); San Bernardino **B.M.**
c. Address: 623 Switzer Street **City**: San Diego **Zip**: 92101
d. UTM: See page 38 Continuation Sheet
e. Other Locational Data: APN Elevation:

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)
The Tenth Avenue Marine Terminal's bulk loader is a multicomponent system for conveying dry bulk commodities from railroad cars and on-site storage structures to Berths 7 and 8 at the terminal's southern edge. Its original elements consist of a rail car unloading building, an underground conveyor from the rail car unloading building to a junction house to the west, a much longer conveyor extending from south of the junction house south to Berths 7 and 8, and a conveyor and traveling loader at Berths 7 and 8 that provided for bulk commodities to be dumped directly into ship hulls. Original portions of the system total approximately 1600 feet in length. The Commodities delivered to ships through the system included potash, soda ash, grain, alfalfa pellets, and chemical fertilizers. The bulk loder's capacity was originally 2,000 tons per hour. In more recent decades its capacity has been rated from 1,200 to 1,800 tons per hour (Irwin 1970:49-50; World Port Source 2012; Unified Port of San Diego 1992:13) (see Continuation Sheet).

***P3b. Resource Attributes:** (List attributes and codes) HP11. Engineering structure; HP8. Industrial building
***P4. Resources Present:** ☒Building ☒Structure ☐Object ☐Site ☐District ☐Element of District ☐Other (Isolates, etc.)

P5b. Description of Photo: (View, date, accession #) Camera facing north, note traveling loader (booms conveyor) positioned near east end of southern berthing area, looking northwest

***P6. Date Constructed/Age and Sources:** ☒Historic ☐Prehistoric ☐Both
1962 (see references on page 43 Continuation Sheet)

***P7. Owner and Address:**
Unified Port of San Diego
3165 Pacific Highway
San Diego, CA 92101

***P8. Recorded by:** (Name, affiliation, and address):
Tim Yates, ICF International
575 B Street, Ste. 1700
San Diego, CA 92101

***P9. Date Recorded:** May 14, 2014

***P10. Survey Type:** Intensive

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.") ICF International. 2016. Cultural Resources Inventory and Evaluation Report for the Tenth Avenue Marine Terminal Redevelopment Plan and Demolition and Initial Rail Component (ICF 00165.14). San Diego, CA. Prepared for the San Diego Unified Port District

***Attachments:** ☐NONE ☐Location Map ☐Sketch Map ☒Continuation Sheet ☒Building, Structure, and Object Record ☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record ☐Artifact Record ☐Photograph Record ☐ Other (List):

BUILDING, STRUCTURE, AND OBJECT RECORD

***NRHP Status Code** 6Z

***Resource Name or #:** Bulk Loader, Tenth Avenue Marine Terminal

B1. Historic Name: Bulk Loader
B2. Common Name: Bulk Loader
B3. Original Use: Dry bulk commodity conveyance **B4. Present Use**: Dry bulk export commodity conveyance
***B5. Architectural Style:**
***B6. Construction History:** (Construction date, alterations, and date of alterations): Construction of the bulk loader was completed in 1963. It has been altered in recent years with a new junction house and a large conduit that connects to the top of the terminal's Silo Complex.

***B7. Moved?** ☒**No** ☐**Yes** ☐**Unknown** **Date:** **Original Location:**
***B8. Related Features:**
B9a. Architect: Unknown **b. Builder**: McDowell Company (McDowell Wellman Company); Diversified Builders Inc.
***B10. Significance: Theme:** N/A **Area:** N/A
Period of Significance: N/A **Property Type:** N/A **Applicable Criteria:** N/A
(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.)

As discussed above, the terminal site does not appear to be eligible for CRHR listing as a historic district. Therefore the bulk loader does not appear to contribute to a historic district. The following evaluation addresses the potential for the terminal's bulk loader system to qualify as an individual historical resource.

The bulk loader system, one of the terminal's most heavily promoted features, was completed and put into service in 1963. Planning for the bulk loader began years earlier, when City Harbor Department officials inspected bulk loading systems on the east coast, the gulf coast, and the west coast. Aware of growing demand for raw materials in Asia, Harbor Department officials sought bulk-loading facilities for speedier, automated transfer of raw materials from railcars and storage facilities to ship hulls. It appears that prior to the 1960s, only the port of Stockton had bulk-loading facilities comparable to the one planned for the Tenth Avenue Marine Terminal, although such facilities existed, for example, at the Port of Portland, and were developed in the early 1960s for both San Diego and the Port of Long Beach. By 1963, both San Diego and Long Beach would have bulk-loading systems with similar rail-car unloading facilities, including rotary rail-car dumpers. The Harbor Department contracted the Diversified Builders Inc. of Los Angeles and the McDowell Company of Cleveland (later the McDowell-Wellman Company) to build the system, which would have a capacity to load 2,000 tons per hour. Initially the loader handled exports such as potash from New Mexico and flaxseed and alfalfa pellets from Arizona and the Imperial Valley. During the first decade of its existence, it also handled soda ash, borax, phosphates, coper or concentrates, and gypsum would subsequently be conveyed to ships for export by the bulk loader (Irwin 1970: 48-49; Morin 1961:A-20; Morin 1962A:B-16; Port of Long Beach 1963: 6-1; Port of Portland 1922; Shepard 1962:A-45) (see Continuation Sheet).

B11. Additional Resource Attributes: (List attributes and codes)
***B12. References:**

See page 43 Continuation Sheet

B13. Remarks:

***B14. Evaluator:**

Tim Yates, Ph.D., ICF International

***Date of Evaluation:** May 15, 2015

(This space reserved for official comments.)

***P2. Location** (continued)

d. UTM:
Zone: 11 (NAD 83); 485670 mE/ 3618012 mN (G.P.S.) (approximate center of rail car unloading building).
Zone: 11 (NAD 83); 485630 mE/ 3617970 mN (G.P.S.) (approximate center of original junction house)
Zone: 11 (NAD 83); 485635 mE/ 3617960 mN (G.P.S.) (approximate north end of conveyor)
Zone: 11 (NAD 83); 485698 mE/ 3617731 mN (G.P.S.) (approximate south end of conveyor and east end of ship-loading track)
Zone: 11 (NAD 83); 485514 mE/ 3617661 mN (G.P.S.) (approximate west end of ship-loading track).

***P3a. Description** (continued):

The historic-era portion of the system begins at the rail car unloading building, which is located north of the molasses tanks, east of Warehouse C, and southeast of the grain silos, along spur tracks connected to the railroad lines that run east of the site. The building's corrugated-metal rectangular western portion has a low-pitched gable roof and two large openings at the northwest and southeast elevations. This portion of the building contains facilities for receiving materials dumped from the bottoms of cars through steel grills to a conveyor system underneath the building. A corrugated metal shelter projects from the building's northeast elevation and is supported at the northeast side by several steel posts. Under the shelter along the northeast wall of the building is an elevated operations room accessed at a steel stairway. A rotary car dumper was originally located in this part of the building.

Commodity materials received at the rail car unloading building are conveyed underground and within a corrugated metal conveyance structure to the corrugated metal junction house approximately 200 feet to the west. Originally, the system's 42-inch wide conveyor belt extended from the junction house south to the terminal's southern berthing area. Within the past decade, however, the system has been altered in the vicinity of the original junction house. A second, taller junction structure was built south of the original structure. This new structure incorporates a four-sided conduit with a conveyor that extends to the original junction house, as well as a long cylindrical conduit with three sets of support legs. This conduit connects to the top of the grain silo complex. Steel conveyance structures located between the aforementioned features and the concrete ramp to the south have been introduced to the system since 1970 (Ninyo & Moore 1999: Appendix A).

The elevated steel frame of the 42-inch conveyor belt extends from the newer junction structure (rather than the original junction structure) approximately 600 feet south to an additional rectangular corrugated metal junction structure in the vicinity of Berth 8 Comparison of historic and current aerial imagery indicates that the junction structure near Berth 8 has been altered, and that it originally incorporated several windows (Ninyo & Moore 1999: Appendix A).

The remainder of the system consists of an elevated steel structure incorporating a conveyor belt, a corrugated metal shelter, and an affixed track along which the system's steel traveling ship loader (or boom conveyor) is connected. The loader moves parallel to the elevated conveyor structure to allow for optimal positioning relative to berthed ships. Once positioned, the traveling loader conveys material to a vertical telescoping chute with a dust suppressor, which transmits the material directly into ship compartments.

***B10. Significance** (continued):

The bulk loader proved to be the most problematic and controversial element of the terminal after the system was completed in 1964. It broke down repeatedly and never handled enough material to break even on its amortization costs during the 1960s and early 1970s. It was developed to handle mainly potash, but during the 1960s, new cheap sources of potash in Canada undermined output from New Mexico the source of San Diego's potash exports. Its disappointing economic performance forced the Port District joined with a private organization to develop the silo complex for on-site storage of livestock feed and other grain products to increase dry bulk exports (Morin 1969:A-23; San Diego Union 1963:H-11; San Diego Union 1965:A-22; Shepard 1964B:A-15; Shepard 1968:A-13; Shepard 1969A:B-1).

The Tenth Avenue Marine Terminal's bulk loader system does not appear to be individually eligible for the CRHR. The bulk loader does not appear to have significance for direct individual association with a historically important event or pattern of events. Research has revealed no evidence that a noteworthy individual performed historically important work that was strongly associated the bulk loader. The bulk loader does not have sufficiently direct association with Harbor Department/Port Director John Bate to confer significance upon it. Consequently, the bulk loader does not appear to meet Criteria 1 or 2 for individual listing in the CRHR.

As an engineering structure, the bulk loader has impressive size and capacity both in terms of its conveyance speed and the rate at which its rail car unloading machinery could intake railroad cargo. However, it does not appear that the Tenth Avenue Marine Terminal's bulk loader has historic engineering or technological significance qualifying it for CRHR listing. Portland had bulk loading facilities in the early twentieth century. Bulk-loading technology advanced over the course of the twentieth century. San Diego's bulk loader was developed on the basis of similar existing facilities on the east coast, in Houston, and in Stockton. City Harbor Department officials planned and developed the bulk loader at the same time that the Port of Long Beach developed its modern bulk loader. It does not appear that San Diego's bulk loader was particularly unique, or that its development represented a milestone in port engineering history. For these reasons, the bulk loader does not appear to meet Criterion 3 for individual listing in the CRHR.

***P5a. Photographs** (continued):

Photograph 1: Rail car Unloader Building, looking northwest

Photograph 2: Rail car Unloader Building, looking southeast

Photograph 3: Steel grills for dumping of commodities underneath rail cars within westerly enclosed portion of rail car Unloading Building, looking southeast

Photograph 4: Rotary car unloading facility underneath projecting shelter on northeast side of rail car unloader building, looking southeast

Photograph 5: Original bulk loader junction house west of rail car unloading building. Note elements constructed within the past decade, including four-sided conduit (dark gray) extending south from original junction house to recently constructed junction house, and conduit from recently constructed junction house to top of silos looking west-northwest

***Recorded by**: T. Yates, ICF International ***Date**: May 14, 2014 ☒**Continuation** ☐ **Update**

Photograph 6: View highlighting elements of bulk loader system added within the past decade, including recent junction structure and conduit four-sided conduit connecting to original junction house (dark gray, left), and elevated cylindrical conduit extending from the top of the silo complex to the recently constructed junction structure. The steel conveyor apparatuses between the aforementioned features and the concrete ramp at the right are also elements of the system introduced after 1970, looking north-northwest.

Photograph 7: Bulk loader from recent junction structure (dark gray, center right) to east end of southern berthing area, looking north

***P5a. Photographs** (continued):

Photograph 8: Southern end of bulk loader system, including elevated conveyor, corrugated metal conveyor shelter, and traveling loader with telescoping chute (center-right background), looking east-southeast

***B12. References** (continued):

Hudson, Ken. 1976. Storm Damage May Affect Grain Shipments Here. *San Diego Union*. September 28: B-1.

Irwin, Wayne Ray. 1970. The Port of San Diego: An Economic Geography of Waterborne Trade. Master's Thesis in Geography, San Diego State College.

Morin, Howard. 1961. Bids to be Asked on Bulk Loader at Port Terminal. *San Diego Union*. June 2: A-20.

____________. 1962A. Commission Told of Bulk Loader Plans. *San Diego Union*. April 25:B-16.

____________. 1962B. Bulk Loader Harbor Unit's Last Big Task. *San Diego Union*. November 11, 1962: A-29.

____________. 1969. Grain Silos Being Built at Terminal. May 8: A-23.

Ninyo & Moore Geotechnical and Environmental Sciences Consultants (Ninyo and Moore). 1999. Historical Study, 10th Avenue Marine Terminal, San Diego, California. Prepared for the San Diego Unified Port District. November 30, Project No. 103943-05 [the Appendix of this report features over 50 aerial photographs of the terminal site dating from late 1920s through the 2000s].

Port of Long Beach. 1961. The Port's First 50 Years. *Port Highlights*, 7 (Winter): 1-18.

_____________ __. 1963. New Bulk-Loading Terminal Opens: Mountains of Ore and Other Bulk Cargoes now Move at a Record Pace through the Port of Long Beach. *Port Highlights*, 9 (First Edition): 6-11.

Port of Portland (and Commission of Public Docks). 1922. *The World's Sea Lanes Lead to the Port of Portland, Portland, Oregon, U.S.A: Development Progress and Facilities of the Port*. Port of Portland and Commission of Public Docks. Portland, Oregon.

Shepard, Tim. 1962. Automated Loader to Speed Ship Handling at Terminal. *San Diego Union.* October 14: A-45.

__________. 1968. Port Plans to Attract Cargo from Competitors. *San Diego Union*. June 3: A-13.

__________. 1969A. Record Year Forecast for Bulk Loader. *San Diego Union*. February 1: B-1.

__________. 1969B. New Bulk Facility to Boost Port. *San Diego Union*. September 4: B-1.

__________. 1971. Bulk Loader Pacts a Cargo of Woes. *San Diego Union.* November 9: B-1; B-5.

San Diego Union. 1961. Weston to Tour Cotton Shipping. August 13: A-20.

_____________. 1963. Bulk Loader Expected to Boost Port Outflow. January 6: H-11.

_____________. 1965. Port Bulk Loader Loses $100,000. December 1: A-22.

_____________. 1973. Grain Shipments to Help Lagging Port Business. December 25: 1973.

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code(s) 6Z

Other Listings
Review Code **Reviewer** **Date**

 ***Resource Name or #:** Warehouse B, Tenth Avenue Marine Terminal

P1. Other Identifier:
***P2. Location:** ☐ **Not for Publication** ☒ **Unrestricted** ***a. County:** San Diego
***b. USGS 7.5' Quad:** Point Loma **Date:** 1967 (PR 1975) **T**17S **R**3W; **¼ of Sec** N/A (Pueblo Lands of San Diego Land Grant); San Bernardino **B.M.**
c. Address: 623 Switzer Street **City**: San Diego **Zip**: 92101
d. UTM: Zone: 11 (NAD 83); 485273 mE/ 3618094 mN (G.P.S.) (approximate center of building footprint)
e. Other Locational Data: APN Elevation:

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

Warehouse B has a rectangular plan and provides approximately 300,000 square feet of storage space. It is constructed of tilt-up fire-proof concrete walls and steel roof trusses. One interior longitudinal concrete wall and two interior transverse concrete walls divide the building into six interior storage spaces. Along the southwest and northeast elevations, rectangular and square shaped wall slabs rise higher than adjacent wall slabs to form parapets. The walls across the northwest and southeast elevations are as high as the parapet-topped wall slabs along the southwest and northeast elevations. The roof is slightly angled downward to the northeast and southwest from the top of the central interior longitudinal wall (see Continuation Sheet).

***P3b. Resource Attributes:** (List attributes and codes) HP8. Industrial building
***P4. Resources Present:** ☒Building ☐Structure ☐Object ☐Site ☐District ☐Element of District ☐Other (Isolates, etc.)

P5b. Description of Photo: (View, date, accession #) Southwest and partial northwest elevations, looking southeast

***P6. Date Constructed/Age and Sources:** ☒Historic ☐Prehistoric ☐Both
1962 (see references on page 49 Continuation Sheet)

***P7. Owner and Address:**
Unified Port of San Diego
3165 Pacific Highway
San Diego, CA 92101

***P8. Recorded by:** (Name, affiliation, and address):
Tim Yates, ICF International
575 B Street, Ste. 1700
San Diego, CA 92101

***P9. Date Recorded:** May 14, 2014

***P10. Survey Type:** Intensive

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.") ICF International. 2016. Cultural Resources Inventory and Evaluation Report for the Tenth Avenue Marine Terminal Redevelopment Plan and Demolition and Initial Rail Component (ICF 00165.14). San Diego, CA. Prepared for the San Diego Unified Port District

***Attachments:** ☐NONE ☐Location Map ☐Sketch Map ☒Continuation Sheet ☒Building, Structure, and Object Record ☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record ☐Artifact Record ☐Photograph Record ☐ Other (List):

BUILDING, STRUCTURE, AND OBJECT RECORD

***NRHP Status Code** 6Z

***Resource Name or #:** Warehouse B, Tenth Avenue Marine Terminal

B1. Historic Name: Warehouse B
B2. Common Name: Warehouse B
B3. Original Use: Cargo storage **B4. Present Use**: Cold storage
***B5. Architectural Style:** N/A (utilitarian)
***B6. Construction History:** (Construction date, alterations, and date of alterations): Warehouse B was completed in 1962. It received several additions decades later when it was converted into a cold storage facility.

***B7. Moved?** ☒**No** ☐**Yes** ☐**Unknown** **Date:** **Original Location:**
***B8. Related Features:**
B9a. Architect: Unknown **b. Builder**: I. C. Curry Construction Compnay.
***B10. Significance: Theme:** N/A **Area:** N/A
Period of Significance: N/A **Property Type:** N/A **Applicable Criteria:** N/A
(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.)

As discussed above, the terminal site does not appear to be eligible for CRHR listing as a historic district. Therefore Warehouse B does not appear to contribute to a historic district. The following evaluation addresses the potential for Warehouse B to qualify as an individual historical resource.

The Harbor Department contracted I.C. Curry, Inc. to construct Warehouse B, which added 300,000 square feet of covered storage protected by fire-proof concrete walls and steel roof trusses to the Tenth Avenue Marine Terminal. Warehouse B was completed in 1962. The building was dedicated along with the bulk loader on February 9 of that year (Magee 1961:B-16; Ninyo & Moore 1999: 12, Appendix A; *San Diego Union* 1962:A-24; Port District 1992: 8).

Warehouse B does not appear to be individually eligible for the CRHR. The building does not appear to be associated with an important event or pattern of events that would confer individual significance upon it. Research efforts have revealed no evidence that a noteworthy individual performed historically important work that was strongly associated with the Warehouse B. The building does not have sufficiently direct association with Harbor Department/Port Director John Bate to confer significance upon it. Individually, therefore, the building does not appear to meet Criteria 1 or 2 for listing in the CRHR (see Continuation Sheet).

B11. Additional Resource Attributes: (List attributes and codes)
***B12. References:**

See page 49 Continuation Sheet

B13. Remarks:

***B14. Evaluator:**

Tim Yates, Ph.D., ICF International

***Date of Evaluation:** May 15, 2015

(This space reserved for official comments.)

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET

Primary #
HRI #
Trinomial

***Resource Name or #** (Assigned by recorder) Warehouse B, Tenth Avenue Marine Terminal

***Recorded by**: T. Yates, ICF International ***Date**: May 14, 2014 ☒**Continuation** ☐ **Update**

***P3a. Description** (continued):

Numerous cargo loading bays secured by metal-roll up doors are distributed across the exterior walls. These open to concrete loading platforms along the southwest and northeast elevations. The platforms have steel railing and concrete stairs in some places. Warehouse B does not have any of the decorative fluting visible on Transit Sheds 1 and 2, but at several places the building is identified by concrete-scored Moderne lettering similar to the signage lettering of the transit sheds. Pedestrian entries and windows are concentrated at the building's west and south corners, and at the southern portion of the northeast elevation. Solid Industrial-grade doors secure the pedestrian entries. The windows have steel frames and appear to be original awning or hopper units. They include single-pane, three-pane, and 12-pane windows.

The building has been altered in several places. The loading bays at the northwest portion of the northeast elevation are covered by a non-original metal shelter. Non-original refrigeration machinery is concentrated at the center of the northwest elevation. In recent decades, an addition with a curving roof has been constructed at the northeast portion of the northwest elevation.

***B10. Significance** (continued):

Research efforts did not reveal who designed Warehouse B. However, its utilitarian design essentially repeats the arrangement and materials of the concrete walls and steel roof trusses that comprise the majority of the terminal's earlier-built transit shed buildings. Limited concrete-scored Moderne signage identifies the warehouse at several corners of the building. Apart from this decorative element, the warehouse lacks the kinds of architectural elements observable on the earlier transit sheds. The warehouse is not an architectural masterwork, does not embody high artistic value, and is not the product of an important milestone in engineering or building techniques. For these reasons, the Warehouse B does not appear to meet Criterion 3 for individual listing in the CRHR.

***P5a. Photographs** (continued):

Photograph 2: Southwest and southeast elevations, looking north-northwest

***Resource Name or #** (Assigned by recorder) Warehouse B, Tenth Avenue Marine Terminal

***Recorded by**: T. Yates, ICF International ***Date**: May 14, 2014 ☒**Continuation** ☐ **Update**

Photograph 3: Detail view of original windows at south corner of Warehouse B, looking north-northwest

Photograph 4: Detail view of signage and windows at north corner of Warehouse B, looking southeast

***P5a. Photographs** (continued):

Photograph 5: Northwest elevation, note non-original refrigeration machinery and recent addition with curved roof, looking east

***B12. References** (continued):

Magee, Jack. 1961. Two Warehouse Units Due By September. *San Diego Union*. June 18: B-16.

Ninyo & Moore Geotechnical and Environmental Sciences Consultants (Ninyo and Moore). 1999. Historical Study, 10th Avenue Marine Terminal, San Diego, California. Prepared for the San Diego Unified Port District. November 30, Project No. 103943-05 [the Appendix of this report features over 50 aerial photographs of the terminal site dating from late 1920s through the 2000s].

San Diego Unified Port District (Port District). 1992. A Complete Guide to the Port of San Diego. Port of San Diego, Trade Development Department. San Diego, California.

San Diego Union. 1962. Port Warehouse Opened. February 10: A-24.

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code(s) 6Z

Other Listings
Review Code   Reviewer   Date

    ***Resource Name or #:** Warehouse C, Tenth Avenue Marine Terminal

P1. Other Identifier:
***P2. Location:** ☐ **Not for Publication** ☒ **Unrestricted** ***a. County:** San Diego
***b. USGS 7.5' Quad:** Point Loma **Date:** 1967 (PR 1975) **T**17S **R**3W; **¼ of Sec** N/A (Pueblo Lands of San Diego Land Grant); San Bernardino **B.M.**
c. Address: 623 Switzer Street **City**: San Diego **Zip**: 92101
d. UTM: Zone: 11 (NAD 83); 485501 mE/ 3617908 mN (G.P.S.) (approximate center of original building footprint)
e. Other Locational Data: APN Elevation:

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

Warehouse C was designed similarly to Warehouse B, but has been altered with a large addition at the southeast end of the building. The building has a rectangular plan and its original portion is constructed of tilt-up fire-proof concrete walls and steel roof trusses. One interior longitudinal concrete wall and two interior transverse concrete walls divide the original portion of the building into six interior storage spaces. Along original portions of the southwest and northeast elevations, rectangular and square shaped wall slabs rise higher than adjacent wall slabs to form parapets. The northwest elevation wall and the original interior transverse walls are as high as the parapet-topped wall slabs along the southwest and northeast elevations. The roof of the original portion of the building is slightly angled downward to the northeast and southwest from the top of the central interior longitudinal wall (see Continuation Sheet).

***P3b. Resource Attributes:** (List attributes and codes)
***P4. Resources Present:** ☒Building ☐Structure ☐Object ☐Site ☐District ☐Element of District ☐Other (Isolates, etc.)

P5a. Photograph 41.

P5b. Description of Photo: (View, date, accession #) Northwest elevation, northwest end of southwest elevation, looking east. Note that the crane is mobile

***P6. Date Constructed/Age and Sources:** ☒Historic ☐Prehistoric ☐Both
1964 (see references on page 55 Continuation Sheet)

***P7. Owner and Address:**
Unified Port of San Diego
3165 Pacific Highway
San Diego, CA 92101

***P8. Recorded by:** (Name, affiliation, and address):
Tim Yates, ICF International
575 B Street, Ste. 1700
San Diego, CA 92101

***P9. Date Recorded:** May 14, 2014

***P10. Survey Type:** Intensive

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.") ICF International. 2016. Cultural Resources Inventory and Evaluation Report for the Tenth Avenue Marine Terminal Redevelopment Plan and Demolition and Initial Rail Component (ICF 00165.14). San Diego, CA. Prepared for the San Diego Unified Port District

***Attachments:** ☐NONE ☐Location Map ☐Sketch Map ☒Continuation Sheet ☒Building, Structure, and Object Record ☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record ☐Artifact Record ☐Photograph Record ☐ Other (List):

Primary #
HRI #

BUILDING, STRUCTURE, AND OBJECT RECORD

***NRHP Status Code** 6Z

***Resource Name or #:** Warehouse C, Tenth Avenue Marine Terminal

B1. Historic Name: Warehouse C
B2. Common Name: Warehouse C
B3. Original Use: Cargo storage **B4. Present Use**: Cargo storage
***B5. Architectural Style:**
***B6. Construction History:** (Construction date, alterations, and date of alterations) Warehouse C was constructed in 1964 and received a major addition in the 1970s.

***B7. Moved?** ☒**No** ☐**Yes** ☐**Unknown** **Date:** **Original Location:**
***B8. Related Features:**
B9a. Architect: Unknown **b. Builder**: I.C. Curry, Inc.
***B10. Significance: Theme:** N/A **Area:** N/A
Period of Significance: N/A **Property Type:** N/A **Applicable Criteria:** N/A
(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.)

As discussed above, the terminal site does not appear to be eligible for CRHR listing as a historic district. Therefore Warehouse C does not appear to contribute to a historic district. The following evaluation addresses the potential for Warehouse C to qualify as an individual historical resource.

The Harbor Department contracted I.C. Curry, Inc. to construct Warehouse C, which essentially repeated the design of Warehouse B. Warehouse C added another 300,000 square feet of covered storage protected by fire-proof concrete walls and steel roof trusses to the Tenth Avenue Marine Terminal. I.C. Curry, Inc. completed Warehouse C in 1962 for a price of $1.4 million. The building received a major addition at its southeast end during the 1970s (Morin 1964:A-29; Ninyo & Moore 1999: Appendix A; Port District 1992: 8).

Warehouse C does not appear to be individually eligible for the CRHR. Nor does the building appear to be associated with an important event or pattern of events that would confer individual significance upon it. Research efforts have revealed no evidence that a noteworthy individual performed historically important work that was strongly associated with the Warehouse C. The building does not have sufficiently direct association with Harbor Department/Port Director John Bate to confer significance upon it. Individually, therefore, Warehouse C does not appear to meet Criteria 1 or 2 for listing in the CRHR (see Continuation Sheet).

B11. Additional Resource Attributes: (List attributes and codes)
***B12. References:**

See page 55 Continuation Sheet

B13. Remarks:

***B14. Evaluator:**

Tim Yates, Ph.D., ICF International

***Date of Evaluation:** May 15, 2015

(This space reserved for official comments.)

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET

Primary #
HRI #
Trinomial

 ***Resource Name or #** (Assigned by recorder) Warehouse C, Tenth Avenue Marine Terminal

***Recorded by**: T. Yates, ICF International ***Date**: May 14, 2014 ☒**Continuation** ☐ **Update**

***P3a. Description** (continued):

Numerous cargo loading bays secured by metal-roll up doors are distributed across the exterior walls. These open to concrete loading platforms along the southwest and northeast elevations. The platforms have steel railing and concrete stairs in some places. Like Warehouse B, Warehouse C does not have any of the decorative fluting visible on Transit Sheds 1 and 2, but at several places the building is identified by concrete-scored Moderne signage with lettering similar to the signage on the transit sheds. Pedestrian entries and windows are concentrated near the center of the building's northeast elevation, and the center and southeast end of the original portion of the building's southwest elevation. Solid Industrial-grade doors secure the pedestrian entries. The windows appear to be original steel frame units with an upper two-pane awning sash and a lower single-pane fixed sash.

The exterior of the large addition forming the southeast end of Warehouse C is concrete at the wall bases and metal at the upper portions. The addition has multiple loading bays with role-up metal doors. The far southeast portion of the building does not form a corner. Instead, the addition is shaped so as not to interfere with immediately adjacent bulk-loader conveyor.

***B10. Significance** (continued):

Research efforts did not reveal who designed Warehouse C. However, its utilitarian design essentially repeats Warehouse B, built two years earlier. Moreover, Warehouse B and C repeated the arrangement and materials of the concrete walls and steel roof trusses that comprised the majority of the terminal's earlier-built transit shed buildings. Limited Moderne signage identifies the warehouse at several corners of the building, which lacks the kinds of other architectural elements observable on the earlier transit sheds. The warehouse is not an architectural masterwork, does not exhibit high artistic value, and does not embody an important milestone in engineering or building techniques. For these reasons, Warehouse C does not appear to meet Criterion 3 for individual listing in the CRHR.

***P5a. Photographs** (continued):

Photograph 2: Northeast and northwest elevation, looking south

***Resource Name or #** (Assigned by recorder) Warehouse C, Tenth Avenue Marine Terminal

***Recorded by**: T. Yates, ICF International ***Date**: May 14, 2014 ☒**Continuation** ☐ **Update**

Photograph 3: Southwest elevation, looking southeast

Photograph 4: Detail of original windows and signage at southwest elevation, looking northeast

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET

Primary #
HRI #
Trinomial

 ***Resource Name or #** (Assigned by recorder) Warehouse C, Tenth Avenue Marine Terminal

***Recorded by**: T. Yates, ICF International ***Date**: May 14, 2014 ☒**Continuation** ☐ **Update**

***P5a. Photographs** (continued):

Photograph 5: Southwest and southeast elevations of addition to southeast side of building, looking north

Photograph 6: View of addition form pier south of bulk loader and Berths 7 and 8, camera facing north

***B12. References** (continued):

Morin, Howard. 1964. $1.4 Million Warehouse Completed. *San Diego Union*. April 26: A-29.

Ninyo & Moore Geotechnical and Environmental Sciences Consultants (Ninyo and Moore). 1999. Historical Study, 10th Avenue Marine Terminal, San Diego, California. Prepared for the San Diego Unified Port District. November 30, Project No. 103943-05 [the Appendix of this report features over 50 aerial photographs of the terminal site dating from late 1920s through the 2000s].

San Diego Unified Port District (Port District). 1992. A Complete Guide to the Port of San Diego. Port of San Diego, Trade Development Department. San Diego, California.

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code(s) 6Z

Other Listings
Review Code Reviewer Date

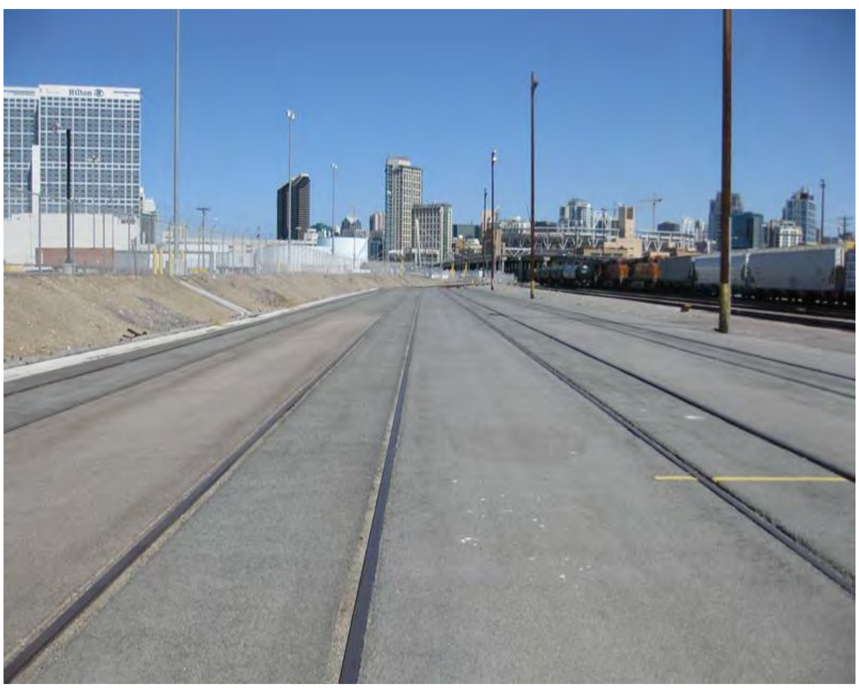
  ***Resource Name or #:** Railroad Tracks, Tenth Avenue Marine Terminal

P1. Other Identifier:
***P2. Location:** ☐ **Not for Publication** ☒ **Unrestricted** ***a. County:** San Diego
***b. USGS 7.5' Quad:** Point Loma **Date:** 1967 (PR 1975) **T**17S **R**3W; **¼ of Sec** N/A (Pueblo Lands of San Diego Land Grant); San Bernardino **B.M.**
c. Address: 623 Switzer Street **City**: San Diego **Zip**: 92101
d. UTM:
e. Other Locational Data: APN Elevation:

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

Numerous historic-era railroad tracks are located within the Tenth Avenue Marine Terminal property. The rail lines within terminal were installed as part of the facility's initial development in the late 1950s and early 1960s. They represent standard railroad construction. They consist of steel rails affixed to cross-ties across a layer of ballast, or tracks imbedded in asphalt pavement or in concrete. The track within the terminal property totals over 50,000 linear feet. Four tracks within the eastern portion of the terminal property east of the silo complex are aligned adjacent to the BNSF (former Santa Fe) railroad yard. The four tracks adjacent to the yard are at the same grade as the yard tracks, and are demarcated from other terminal facilities by a fence and a slope (Photograph 1). Trains access the terminal site proper via a spur from the BNSF rail yard that enters the terminal at the southeast corner of the site, east of the molasses tanks and north of the main gate (see Continuation Sheet).

***P3b. Resource Attributes:** (List attributes and codes): HP39. Other
***P4. Resources Present:** ☐Building ☒Structure ☐Object ☐Site ☐District ☐Element of District ☐Other (Isolates, etc.)



P5b. Description of Photo: (View, date, accession #) Photograph 1. Marine terminal tracks immediately west of BNSF railroad yard, looking northwest

***P6. Date Constructed/Age and Sources:** ☒Historic ☐Prehistoric ☐Both
1958-1964 (see 523B form)

***P7. Owner and Address:**
Unified Port of San Diego
3165 Pacific Highway
San Diego, CA 92101

***P8. Recorded by:** (Name, affiliation, and address):
Tim Yates, ICF International
575 B Street, Ste. 1700
San Diego, CA 92101

***P9. Date Recorded:** May 14, 2014

***P10. Survey Type:** Intensive

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.") ICF International. 2016. Cultural Resources Inventory and Evaluation Report for the Tenth Avenue Marine Terminal Redevelopment Plan and Demolition and Initial Rail Component (ICF 00165.14). San Diego, CA. Prepared for the San Diego Unified Port District

***Attachments:** ☐NONE ☐Location Map ☐Sketch Map ☒Continuation Sheet ☒Building, Structure, and Object Record ☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record ☐Artifact Record ☐Photograph Record ☐ Other (List):

BUILDING, STRUCTURE, AND OBJECT RECORD

***NRHP Status Code** 6Z

***Resource Name or #:** Railroad Tracks, Tenth Avenue Marine Terminal

B1. Historic Name: Rail spurs, tracks
B2. Common Name: Rail spurs, tracks
B3. Original Use: Cargo transport **B4. Present Use**: Cargo transport
***B5. Architectural Style:** N/A
***B6. Construction History:** (Construction date, alterations, and date of alterations)

***B7. Moved?** ☐**No** ☐**Yes** ☐**Unknown** **Date:** **Original Location:**
***B8. Related Features:**
B9a. Architect: Unknown **b. Builder**: Unknown
***B10. Significance: Theme:** N/A **Area:** N/A
Period of Significance: N/A **Property Type:** N/A **Applicable Criteria:** N/A
(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.)

As discussed above, the terminal site does not appear to be eligible for CRHR listing as a historic district. Therefore, the terminal's rail tracks do not appear to contribute to a historic district. The following text addresses the potential for the terminal's rail tracks to qualify as a historical resource individually.

None of the rail lines within the terminal were part of the original Santa Fe Railway line constructed during the early 1880s, which was aligned nearby and to the east of the eastern terminal boundary. Nor were any of the tracks within the terminal part of sidings associated with the Santa Fe Line. The Santa Fe Railway alignment's proximity to the eastern boundary of the terminal circa 1928-29, prior to the terminal's development, is illustrated in Photograph 2 below. The original spur line into the terminal property and various tracks within the site were constructed during the terminal's initial development in the late 1950s and early 1960s. A maintenance evaluation of the terminal's rail system conducted in the 1990s states that some of the track alignments within the site were added in the 1970s and 1980s, and that tracks along some of the original rail alignments within the terminal were replaced prior to the 1990s. The evaluation recommended replacing much of the track present at that time. Hence, like most historic-period rail lines generally, the terminal's tracks have been subject to repeated maintenance and replacement (Frederick R. Harris, Inc. 1994:IV).

B11. Additional Resource Attributes: (List attributes and codes)
***B12. References:**

Frederick R. Harris, Inc. 1994. Evaluate Conditions of Railroad Tracks at Tenth Avenue Marine Terminal, San Diego, and National City Marine Terminal, National City, California. Report prepared for the San Diego Unified Port District. On file at the San Diego Unified Port District; Ninyo & Moore. 1999. Historical Study, 10th Avenue Marine Terminal, San Diego, California. Prepared for the San Diego Unified Port District. November 30, Project No. 103943-05. Unified Port of San Diego, San Diego, California.

B13. Remarks:

***B14. Evaluator:**

Tim Yates, Ph.D., ICF International

***Date of Evaluation:** May 15, 2015

(This space reserved for official comments.)

Sketch Map

 ***Resource Name or #** (Assigned by recorder) Railroad Tracks, Tenth Avenue Marine Terminal

***Recorded by**: T. Yates, ICF International ***Date**: May 14, 2014 ☒**Continuation** ☐ **Update**

***P3a. Description** (continued):

Just east of the molasses tanks, the spur splits into multiple lines running to the southwest and northwest. The line to the northwest splits into multiple tracks to provide for railcars to be conveyed to the bulk loader's rail car unloading building. An additional connecting track extends between the track leading to the rail car unloading building and tracks running south of the molasses tanks. Northwest of the rail car unloading building, these lines converge into a single track in the vicinity of the bunker fuel complex. That single track continues to the northwest beyond the terminal site.

Multiple tracks run parallel to one another south of the molasses tanks toward the traveling ship loader at Berths 7 and 8. These split near Berth 8 into multiple tracks extending southwest and west. The line running southwest wraps around the south end of the bulk loader system and Transit Shed 2, and then splits into two lines that extend to the northwest along the southwest sides of the both transit sheds. The line running west from the vicinity of Berth 8 splits into multiple tracks that extend along the northeast sides of the transit sheds and the southwest sides of Warehouses B and C. Several tracks extend across the paved space between the transit sheds and warehouses.

The railroad tracks have undergone periodic alteration in the form of repair, replacement, and even realignment over the decades. Tracks that formerly provided for rail cars to be conveyed northwest from the north side of the molasses tanks to the northeast sides of Warehouses B and C have been removed or abandoned.

***B10. Significance** (continued):

The system of railroad tracks at the Tenth Avenue Marine Terminal do not appear to be eligible for the CRHR. The terminal's tracks do not appear to be associated with an important event or pattern of events that would confer individual significance upon them. Research efforts have revealed no evidence that a noteworthy individual performed historically important work with the terminal's internal rail lines. These rail track system does not have sufficiently direct association with Harbor Department/Port Director John Bate to confer significance upon it. Individually, therefore, the terminal's rail tracks do not appear to meet Criteria 1 or 2 for listing in the CRHR.

Railroad tracks represent a ubiquitous, commonplace form of infrastructure. Research has revealed no evidence that the terminal's rail tracks have significance for any association with a master engineer or builder, and they do not represent an engineering masterwork. They are entirely commonplace features of the industrial built environment that can be observed at shipping facilities throughout California and the nation. For these reasons, the terminal's railroad tracks do not appear to meet Criterion 3 for listing in the CRHR. As stated above, the railroad tracks have been subject to repair, replacement, and even realignment for decades, and little if any of the tracks' current materials are original to the terminal site.

Railroad tracks represent a ubiquitous, commonplace form of infrastructure. Research has revealed no evidence that the terminal's internal tracks have significance for any association with a master engineer or builder, and they do not represent an engineering masterwork. They are entirely commonplace features of the industrial built environment that can be observed at shipping facilities throughout California and the nation. For these reasons, the terminal's railroad tracks do not appear to meet Criterion 3 for listing in the CRHR. As stated above, the railroad tracks have been subject to repair, replacement, and even realignment for decades, and little if any of the tracks' current constituent materials are original to the terminal site.

***P5a. Photographs** (continued below):

***Resource Name or #** (Assigned by recorder) Railroad Tracks, Tenth Avenue Marine Terminal

***Recorded by**: T. Yates, ICF International ***Date**: May 14, 2014 ☒**Continuation** ☐ **Update**

Photograph 2: Aerial view of shoreline with overlay of Tenth Avenue Marine Terminal site. The Santa Fe Railway line is visible near the east boundary of the terminal. The arrow with the identifier “Switzer Creek,” for example, points to a bridge that carried the Santa Fe Railway line over the creek (Ninyo and Moore, 1999)

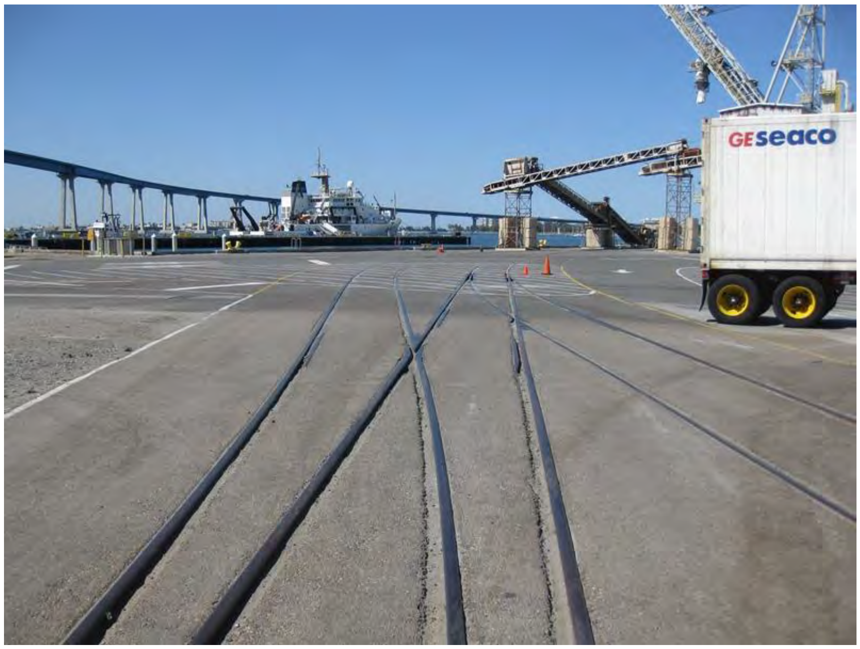
***P5a. Photographs** (continued):

Photograph 3: Spur from BNSF track extending into Tenth Avenue Marine Terminal east of molasses tanks, looking east

Photograph 4: Rail tracks extending toward the bulk loader's rail car unloading building, view from just east of molasses tanks, looking northwest

***Resource Name or #** (Assigned by recorder) Railroad Tracks, Tenth Avenue Marine Terminal

***Recorded by**: T. Yates, ICF International ***Date**: May 14, 2014 ☒**Continuation** ☐ **Update**



Photograph 5: Intersecting tracks extending toward bulk loader's traveling ship loader at Berths 7 and 8, view from south of molasses tanks, looking southwest

Photograph 6: Rail tracks along northeast side of Transit Shed 1, looking northwest

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code(s) 6Z

Other Listings
Review Code **Reviewer** **Date**

 *__Resource Name or #:__ Silo Complex, Tenth Avenue Marine Terminal

P1. Other Identifier:
***P2. Location:** ☐ Not for Publication ☒ Unrestricted ***a. County:** San Diego
***b. USGS 7.5' Quad:** Point Loma **Date:** 1967 (PR 1975) **T**17S **R**3W; **¼ of Sec** N/A (Pueblo Lands of San Diego Land Grant); San Bernardino **B.M.**
c. Address: 623 Switzer Street **City**: San Diego **Zip**: 92101
d. UTM: Zone: 11 (NAD 83); 485577 mE/ 3618034 mN (G.P.S.) (center of original silos)
e. Other Locational Data: APN Elevation:

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

Twelve silos originally constructed for storage of food grains are located immediately northeast of the northwest half of Warehouse C and west of the bulk loader rail-car unloading building. The twelve original silos have flat roofs and are constructed of concrete. They rise approximately 75 feet in height. The utilitarian corrugated metal building on the on the southwest side of the northwestern silos appears to have been constructed along with the original 12 silos. Numerous associated features have been added to the silo complex since the 1970s. Two much bulkier silo structures and associated steel conduits and catwalks were added to the northeast side of the original twelve silos. The rectangular, multi-story corrugated metal element with steel stairs on the southeast side of the original silos, which is not present in a 1976 bird's eye aerial photograph of the site, appears to have been built along with the two larger non-original silos. Two manufactured buildings and an open-sided shelter have also been introduced to the site since that time. The large elevated cylindrical conduit that connects to the square element above the southern-most original silos was introduced to the site during alterations to the bulk loader system within the last decade (NETR 2009; Ninyo & Moore 1999: Appendix A).

***P3b. Resource Attributes:** (List attributes and codes) HP11. Engineering structure
***P4. Resources Present:** ☒Building ☒Structure ☐Object ☐Site ☐District ☐Element of District ☐Other (Isolates, etc.)

P5b. Description of Photo: (View, date, accession #) Silos looking east-northeast

***P6. Date Constructed/Age and Sources:** ☒Historic ☐Prehistoric ☐Both
1970 (see references on page 6 Continuation Sheet)

***P7. Owner and Address:**
Unified Port of San Diego
3165 Pacific Highway
San Diego, CA 92101

***P8. Recorded by:** (Name, affiliation, and address):
Tim Yates, ICF International
575 B Street, Ste. 1700
San Diego, CA 92101

***P9. Date Recorded:** May 14, 2014

***P10. Survey Type:** Intensive

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.") ICF International. 2016. Cultural Resources Inventory and Evaluation Report for the Tenth Avenue Marine Terminal Redevelopment Plan and Demolition and Initial Rail Component (ICF 00165.14). San Diego, CA. Prepared for the San Diego Unified Port District

***Attachments:** ☐NONE ☐Location Map ☐Sketch Map ☒Continuation Sheet ☒Building, Structure, and Object Record ☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record ☐Artifact Record ☐Photograph Record ☐ Other (List):

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

Primary #
HRI #

BUILDING, STRUCTURE, AND OBJECT RECORD

***NRHP Status Code** 6Z

***Resource Name or #:** Silos, Tenth Avenue Marine Terminal

B1. Historic Name: Grain Silos
B2. Common Name: Silos
B3. Original Use: Storage of food grains
B4. Present Use: Storage of food grains and minerals
***B5. Architectural Style:**
***B6. Construction History:** (Construction date, alterations, and date of alterations) The silo complex was constructed in 1970. Numerous alterations to the site have occurred since the 1970s and are discussed in more detail below.

***B7. Moved?** ☒No ☐Yes ☐Unknown **Date:** **Original Location:**
***B8. Related Features:**
B9a. Architect: N/A **b. Builder**: San Diego Bulk Terminal
***B10. Significance: Theme:** N/A **Area:** N/A
Period of Significance: N/A **Property Type:** N/A **Applicable Criteria:** N/A
(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.)

The silo complex at the Tenth Avenue Marine Terminal is not considered a resource that can contribute to a potential Tenth Avenue Marine Terminal District because its original structures were completed in 1970, well after the terminal's 1957-64 period of potential significance as a historic district.

The twelve Silos at the Tenth Avenue Marine Terminal were constructed to store new kinds of bulk dry commodities at the terminal in order to boost exports and help the $2.8 million bulk loader break even on amortization costs. Port officials had anticipated that the bulk loader would be conveying 900,000 tons annually, or 400,000 more than it needed to break even, but by the late 1960s, it had yet to reach the 400,000 ton mark. Hoping to increase exports of feed products and grain, the Port District joined with a private organization, San Diego Bulk Terminal, to develop the silos. The Port District devoted $100,000 to preparing the site and San Diego Bulk Terminal built the silo complex for $1 million. With a storage capacity of 15,000 tons, the silo complex was completed in early 1970. The complex was altered in the mid-1980s when two new silos, both much larger than the original ones, were added to the north side of the facility. The rectangular, multi-story corrugated metal element with steel stairs on the southeast side of the original silos appears to have been built in the mid-1980s as well. The large conduit that currently extends from the top of the southeast silos to the bulk loader was installed within the past decade (Morin 1969:A-23; Ninyo & Moore 1999: Appendix A San Diego Unified Port District 1973: 5; Shepard 1969: B-1) (see Continuation Sheet).

B11. Additional Resource Attributes: (List attributes and codes)
***B12. References:**

See page 6 Continuation Sheet

B13. Remarks:

***B14. Evaluator:**

Tim Yates, Ph.D., ICF International

***Date of Evaluation:** May 15, 2015

(This space reserved for official comments.)

Sketch Map

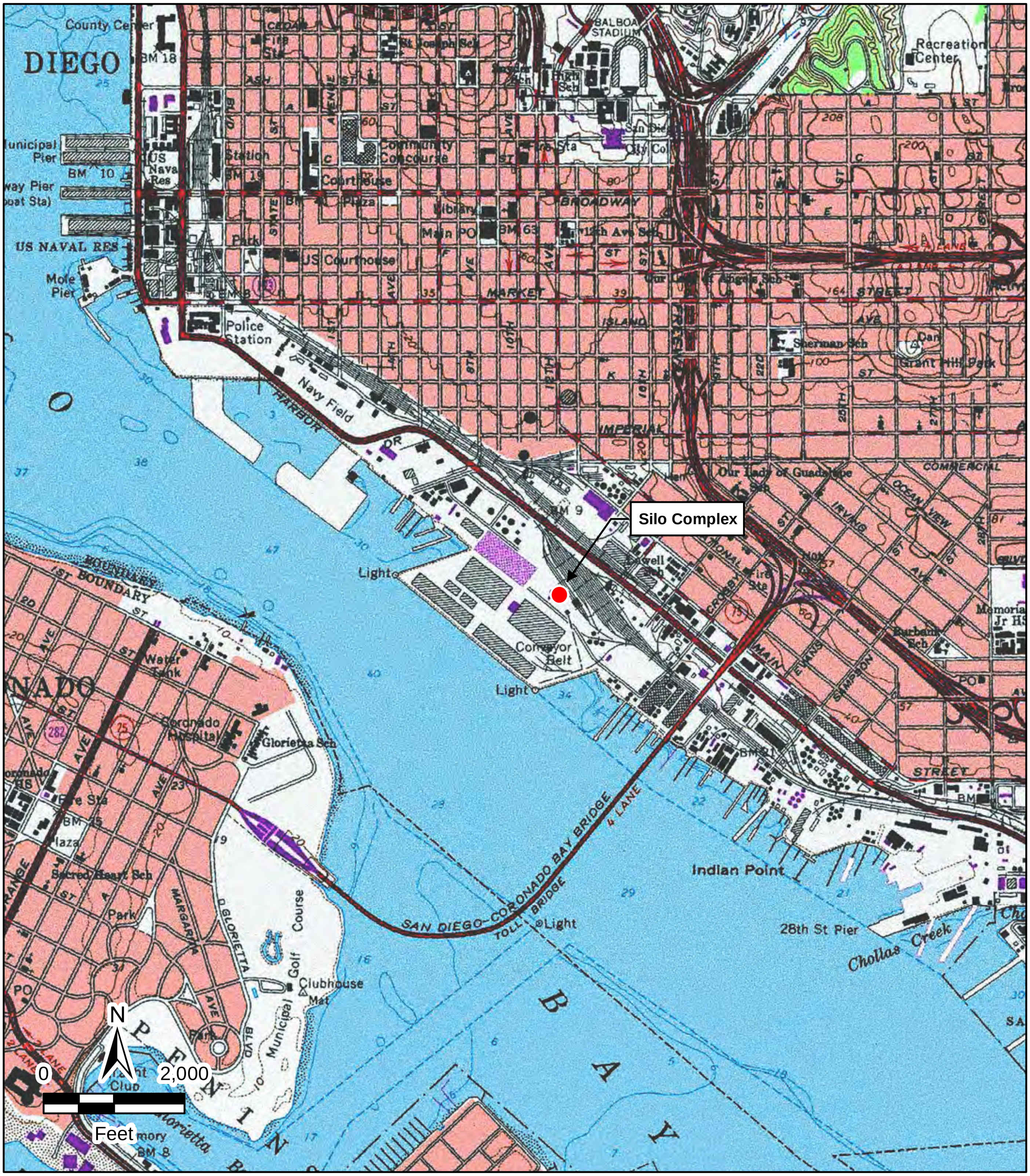
See DPR page 4 Sketch Map

State of California - The Resource Agency
DEPARTMENT OF PARKS AND RECREATION
LOCATION MAP

Primary #: ______________________
Trinomial: ______________________

Resource Name or #: Silo Complex, Tenth Avenue Marine Terminal

Map Name: Point Loma, CA **Scale:** 1:24,000 **Date of Map:** 1967 (1975)



Required information is bold

State of California – The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
SKETCH MAP

Primary # ________
HRI # ________
Trinomial ________

Page 4 **of** 6 ***Resource Name or #** (Assigned by recorder) Silo Complex, Tenth Avenue Marine Terminal

***Drawn By** K. Chmiel ***Date of Map** May 19, 2015

DPR 523K (1/95) ***Required Information**

***Resource Name or #** (Assigned by recorder) Silos, Tenth Avenue Marine Terminal

***Recorded by**: T. Yates, ICF International ***Date**: May 14, 2014 ☒**Continuation** ☐ **Update**

***B10. Significance** (continued):

The silo complex at the Tenth Avenue Marine Terminal does not appear to be individually eligible for the CRHR. The complex was constructed in 1970, well after the 1957-64 period of potential significance for the rest of the terminal's features, and well after John Bate retired as Port District Director The complex does not appear to have significance for direct individual associations with a historically important event or pattern of events. Research has revealed no evidence that a noteworthy individual performed historically important work that was strongly associated the silo complex. Consequently, the complex do does not appear to meet Criteria 1 or 2 for CRHR listing.

Research efforts did not reveal any evidence that the silo complex is significant as the work of a master engineer or builder, and the original silos do not appear to be an engineering masterwork. Silo structures comparable in size, with equivalent reinforced-concrete construction, can be encountered throughout California and across the west coast. The same can be said for the complex's original and entirely commonplace utilitarian corrugated-metal building. For these reasons, the silo complex does not appear to meet Criterion 3 for listing in the CRHR.

***P5a. Photographs** (continued):

Photograph 2: Northeast side of silo cluster, note two larger silos constructed since the 1970s, and multistory corrugated-metal structure (far left) that appears to have been built with the larger silos. Also note elevated conduit and square element constructed within the past decade (upper left). Looking west-southwest

***Resource Name or #** (Assigned by recorder) Silos, Tenth Avenue Marine Terminal

***Recorded by**: T. Yates, ICF International ***Date**: May 14, 2014 ☒**Continuation** ☐ **Update**

Photograph 3: View showing relationship between silo cluster (right) and recently added conduit and junction structure, looking west-northwest

***B12. References** (continued):

Morin, Howard. 1969. Grain Silos Being Built at Terminal. *San Diego Union*, May 8: A-23.

Ninyo & Moore Geotechnical and Environmental Sciences Consultants (Ninyo and Moore). 1999. Historical Study, 10th Avenue Marine Terminal, San Diego, California. Prepared for the San Diego Unified Port District. November 30, Project No. 103943-05 [the Appendix of this report features over 50 aerial photographs of the terminal site dating from late 1920s through the 2000s].

San Diego Unified Port District (Port District). 1973. Port of San Diego. Pamphlet advertising Port of San Diego services, on file at the San Diego Public Library.

Shepard, Tim. 1969. New Bulk Facility to Boost Port. *San Diego Union*. September 4: B-1.

State of California – The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET

Primary # ______________________
HRI # ______________________
Trinomial ______________________

 ***Resource Name or #** (Assigned by recorder) CA-SDI-13073 (Coronado Railroad)

***Recorded by**: T. Yates, ICF International ***Date**: April 7, 2016 ☒ Continuation ☐ Update

Location maps in the CA-SDI-13073 site record appended to this update form incorrectly indicate that, in the vicinity of today's Coronado Bridge and the Tenth Avenue Marine Terminal, the historic Coronado Railroad was aligned parallel to the Atchison, Topeka and Santa Fe Railway (Santa Fe) line, both of which were built in the 1880s. Sanborn fire insurance maps dating to 1906 show that the Coronado Railroad in the vicinity of today's Coronado Bridge and the Tenth Avenue Marine Terminal was actually aligned to the east of the Santa Fe line. The National City and Otay Railroad (which in 1906 leased, later acquired, and then in 1908 sold the Coronado Railroad to the San Diego Southern Railway Company) was also aligned east of the Santa Fe line. Indeed in the area bordered today at the southeast by the Coronado Bridge and at the northwest by the San Diego Convention Center, the historic Coronado Railroad segment nearest to the Santa Fe line was situated approximately 100 yards north of the Tenth Avenue Marine Terminal's northeast corner (Robertson 1998:115; Sanborn Map Company 1906A, 1906B, 1906C, 1906D, 1906E). An approximately 1.5 segment of the original Coronado Railroad alignment located approximately seven miles southeast of the Coronado Bridge has been designated as a City of San Diego Historical Landmark (City of San Diego 2014; Coons 2005)

1906 Sanborn index map showing railroad alignments in southern San Diego near today's Coronado Bridge, Tenth Avenue Marine Terminal, and Convention Center.

***Resource Name or #** (Assigned by recorder) CA-SDI-13073 (Coronado Railroad)

***Recorded by**: T. Yates, ICF International ***Date**: April 7, 2016 ☒ Continuation ☐ Update

Railroad lines as represented in 1906 Sanborn maps overlaid on current aerial view

References:

Coons, Bruce. 2005. Historic Designation of Coronado Railroad Upheld By City Council. Save Our Heritage Organization Website. Available: <http://www.sohosandiego.org/reflections/2005-4/execmess.htm>. Accessed May 27, 2015.

City of San Diego. 2014. San Diego Register of Historic Resources. July, 24. Maintained by the City of San Diego Historical Resources Board. Available: <http://www.sandiego.gov/planning/programs/historical/pdf/2014/register140724.pdf >. Accessed May 14, 2015.

Robertson, Donald B. 1998. *Encyclopedia of Western Railroad History, Volume IV, California*. Caxton Printers, Ltd., Caldwell, Idaho.

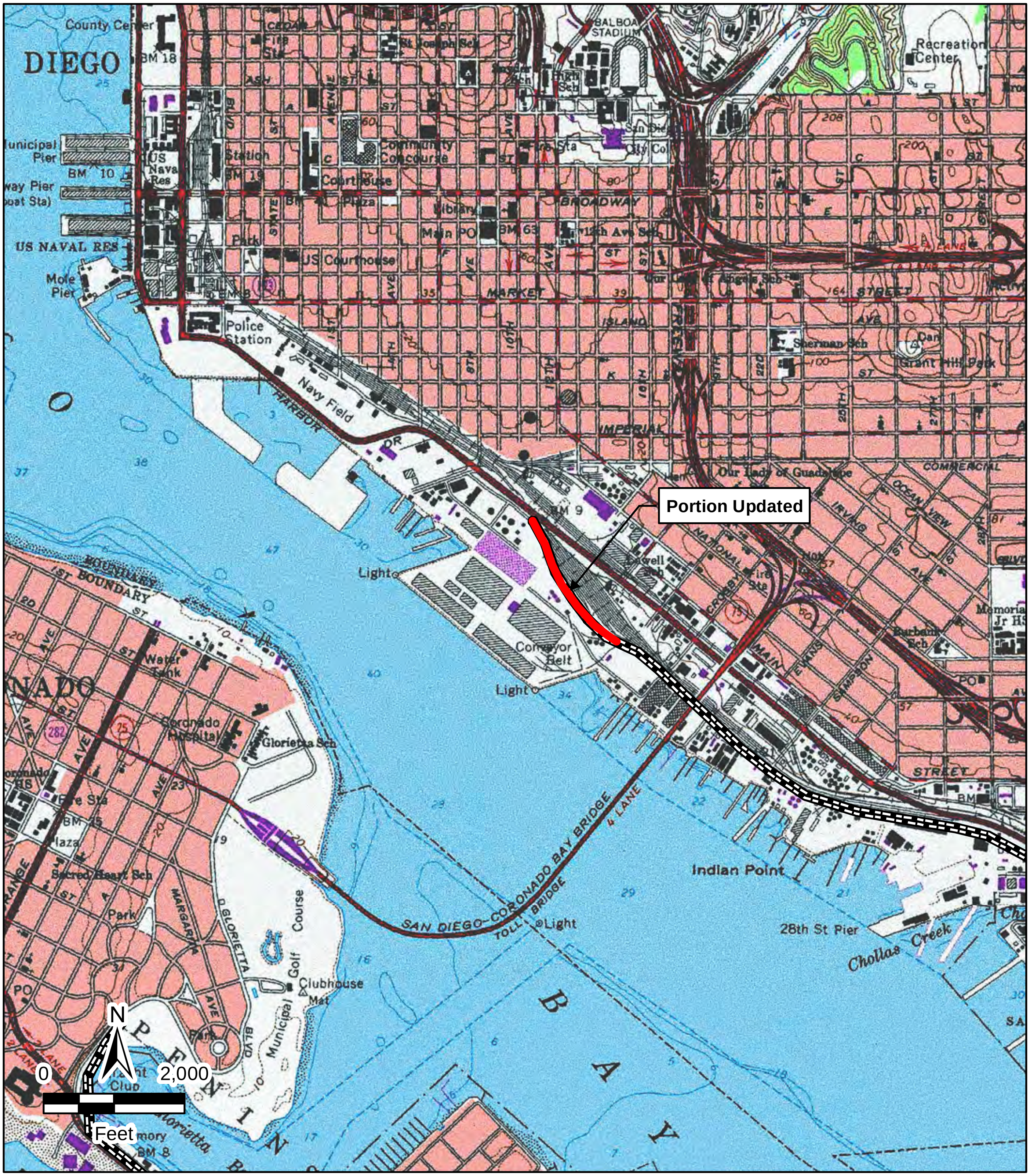
Sanborn Map Company. 1906A. San Diego, California. Sheet 0d. Sanborn Map Company, New York, New York.
____________________. 1906B. San Diego, California. Sheet 1. Sanborn Map Company, New York, New York.
____________________. 1906C. San Diego, California. Sheet 13. Sanborn Map Company, New York, New York.
____________________. 1906D. San Diego, California. Sheet 15. Sanborn Map Company, New York, New York.
____________________. 1906E. San Diego, California. Sheet 16. Sanborn Map Company, New York, New York.

State of California - The Resource Agency
DEPARTMENT OF PARKS AND RECREATION
LOCATION MAP

Primary #:
Trinomial: CA-SDI-13073H

Resource Name or #: Coronado Railroad

Map Name: Point Loma, CA **Scale:** 1:24,000 **Date of Map:** 1967 (1975)



State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #:
HRI #:
Trinomial: CA-SDI-13,073H (update)
NRHP Status Code:
Other Listings:
Review Code: Reviewer: Date:

Resource Name or #: (Assigned by recorder): CA-SDI-13,073H

UPDATE

P1. **Other Identifier**: None

P2. **Location:** ■ Not for Publication ☐ Unrestricted **a. County**: San Diego
and (P2b and P2c or P2d. Attach a Location Map as necessary.)

b. **USGS 7.5' Quad**: Imperial Beach, CA Date:1967 (Photorevised 1975) T18 S ; R 2 W; south half of section 16, northwest corner of Section 21 and the eastern half of Section 20; S.B.M.

c. **Address**: None City: Zip:

d. **UTM**: Zone 17 ; NAD 1927 ; A: 491370 mE/ 3606900 mN; B: 490160mE/ 3605440mN

e. **Other Locational Data** (e.g., parcel #, directions to resource, elevation, etc., as appropriate):Site is located along the southeastern margins of the San Diego Bay.

P3a. **Description** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries): This site consists of a portion of the historic Coronado Railroad within the project APE. The railroad alignment is not in use and has been fenced off near the Western Salt Plant. Several portions of the track have been undermined by erosion while others have been partially covered by erosion from the nearby berm. The track south of the APE has been removed. The two tressels withing the APE are both in poor condition. A portion of the southern tressels has been removed to limit access across the channel. The remainder has seriously deteriorated and has been tagged by graffiti. The northern tressel is also heavily deteriorated and a portion has been burned. The overall integrity of CA-SDI-13,073H within the APE is poor.

P3b. **Resource Attributes** (List attributes and codes): AH7. Railroad grades.

P4. **Resources Present:** ☐Building ☐Structure ☐Object ■Site ☐District ☐Element of District ☐Other (Isolates, etc.)

P5a. Photograph or Drawing (Photo required for buildings, structures, and objects)

P5b. Description of Photo (View, date, accession #):

P6. **Age and Sources:** ■Historic ☐Prehistoric ☐Both

P7. **Owner and Address:**
Western Salt Co.
1470 Bav Blvd.
Chula Vista, CA 91910

P8. **Recorded by** (Name, affiliation, and address):
Andrew R. Pigniolo
Tierra Environmental Services
9903-E Businesspark Avenue
San Diego, CA 92131

P9. **Date Recorded:**
November 3, 1999

P10. **Survey Type** (Describe):
Intensive Surface Inventory

P11. **Report Citation** (Cite survey report and other sources, or enter "none"):Pigniolo, Andrew R. and Michael Baksh 2000 Draft Archaeological Survey Report for the Bayshore Bikeway Project, City of San Diego, California.

Attachments: ☐ NONE ■ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record ☐ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record ☐ Photograph Record ☐ Other (List):

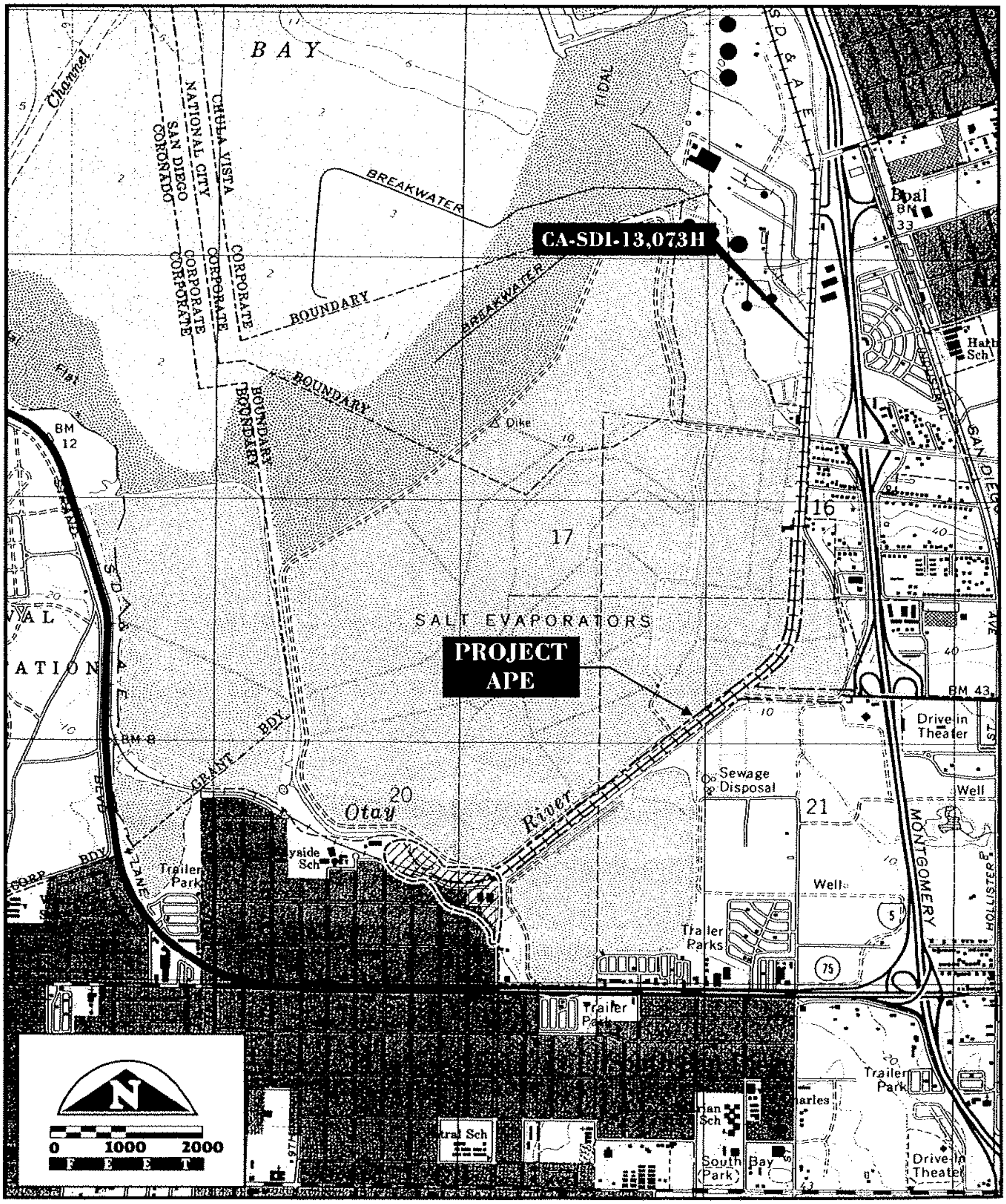
State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
LOCATION MAP

Primary #:
Trinomial: CA-SDI-13,073H

UPDATE

Resource Name or #: (Assigned by recorder):

Map Name: USGS Quad Map (Imperial Beach) **Scale:** 1:24,000 **Date of Map:** 1967 (photorevised 1975)



Required information is bold

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #: P-37-013073H
HRI #:
Trinomial: CA-SDI-13,073H
NRHP Status Code:
Other Listings:
Review Code: Reviewer: Date:

Resource Name or #: (Assigned by recorder): CA-SDI-13,073H

UPDATE

P1. Other Identifier: None

P2. **Location:** ■ Not for Publication ☐ Unrestricted **a. County:** San Diego
and (P2b and P2c or P2d. Attach a Location Map as necessary.)
b. **USGS 7.5' Quad:** Imperial Beach, CA Date:1967 (Photorevised 1975) T18 S ; R 2 W; south half of section 16, northwest corner of Section 21 and the eastern half of Section 20; S.B.M.

c. Address: None City: Zip:
d. UTM: Zone 17 ; NAD 1927 ; A: 491370 mE/ 3606900 mN
B: 490160mE/ 3605440mN
e. Other Locational Data (e.g., parcel #, directions to resource, elevation, etc., as appropriate):Site is located along the southeastern margins of the San Diego Bay.

P3a. **Description** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries): This site consists of a portion of the historic Coronado Railroad within the project APE. The railroad alignment The alignment is not in use and has been fenced off near the Western Salt Plant. Several portions of the track have been undermined by erosion while others have been partially covered by erosion from the nearby berm. The track south of the APE has been removed. The two tressels withing the APE are both in poor condition. A portion of the southern tressels has been removed to limit access across the channel. The remainder has seriously deteriorated and has been tagged by graffiti. The northern tressel is also heavily deteriorated and a portion has been burned. The overall integrity of CA-SDI-13,073H within the APE is poor.
P3b. **Resource Attributes** (List attributes and codes): AH7. Railroad grades.
P4. **Resources Present:** ☐Building ☐Structure ☐Object ■Site ☐District ☐Element of District ☐Other (Isolates, etc.)

P5a. Photograph or Drawing (Photo required for buildings, structures, and objects)

P5b. Description of Photo (View, date, accession #):

P6. **Age and Sources:**
■Historic ☐Prehistoric
☐Both

P7. Owner and Address:
Western Salt Co.
1470 Bay Blvd.
Chula Vista, CA 91910

P8. **Recorded by** (Name, affiliation, and address):
Andrew R. Pigniolo
Tierra Environmental Services
9903-E Businesspark Avenue
San Diego, CA 92131

P9. **Date Recorded:**
November 3, 1999

P10. **Survey Type** (Describe):
Intensive Surface Inventory

P11. Report Citation (Cite survey report and other sources, or enter "none"):Pigniolo, Andrew R. and Michael Baksh 2000 Draft Archaeological Survey Report for the Bayshore Bikeway Project, City of San Diego, California.

Attachments: ☐ NONE ■ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record ☐ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record ☐ Photograph Record ☐ Other (List):

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

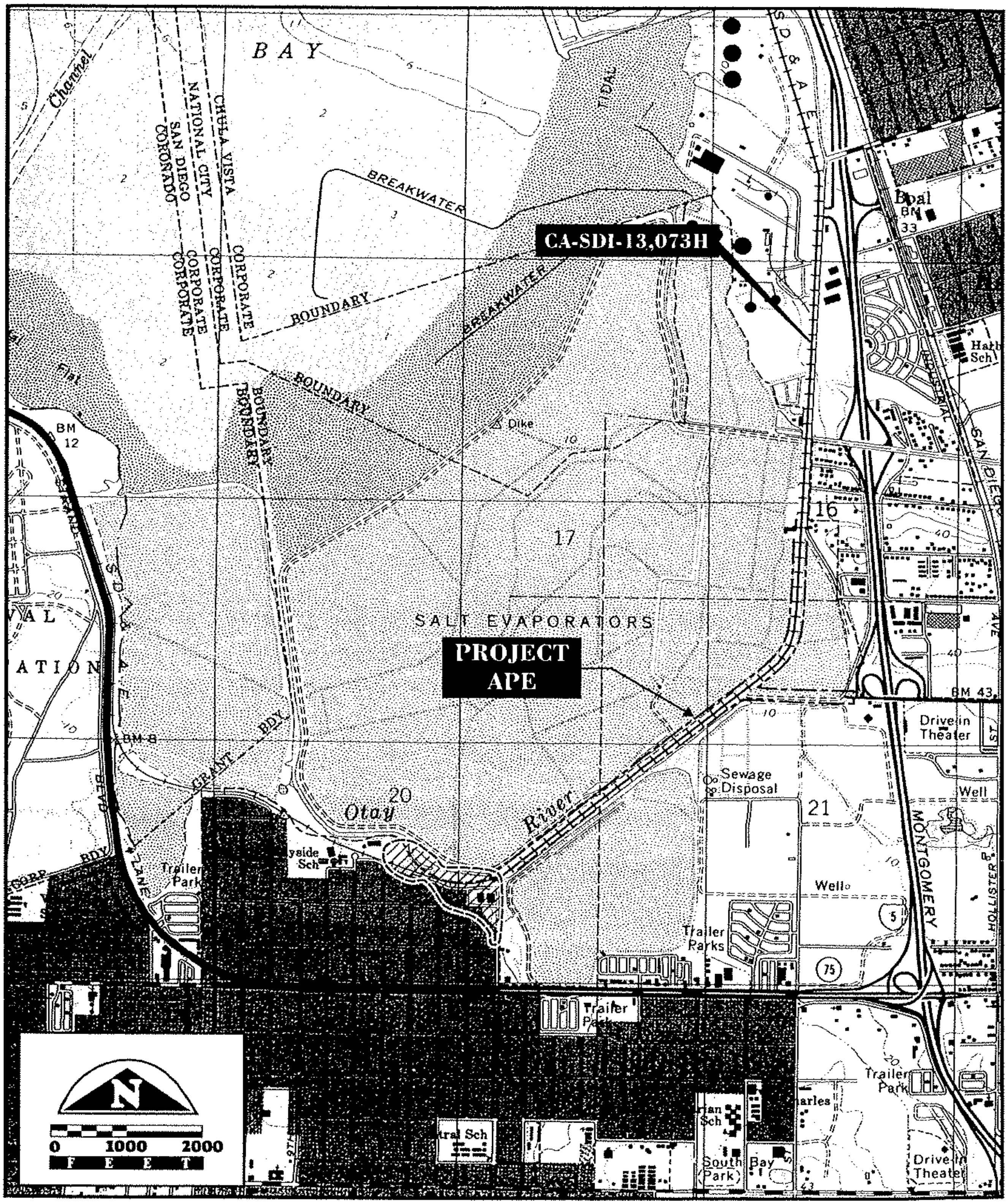
Primary #: P-37-013073H
Trinomial: CA-SDI-13,073H

LOCATION MAP

UPDATE

Resource Name or #: (Assigned by recorder):

Map Name: USGS Quad Map (Imperial Beach) **Scale:** 1:24,000 **Date of Map:** 1967 (photorevised 1975)



Required information is bold

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #: P-37-013073H
HRI #:
Trinomial: CA-SDI-13073H
NRHP Status Code:
Other Listings:
Review Code: Reviewer: Date:

Resource Name or #: (Assigned by recorder):

UPDATE

P1. Other Identifier: None

P2. **Location:** ■ Not for Publication ☐ Unrestricted **a. County:** San Diego
and (P2b and P2c or P2d. Attach a Location Map as necessary.)
b. **USGS 7.5' Quad:** Imperial Beach, National City, Point Loma **Date:** 1967, photrevised 1975 **T** 17S,18S ; **R** 2W,3w Unsectioned; SBM
c. Address: None
d. UTM: Zone 11 ; NAD 1927 ; A:485580mE/ 3618150N B:491250mE /3606400N C: 488500mE/ 3605950mN D: 483800mE /3616000mN
e. Other Locational Data (e.g., parcel #, directions to resource, elevation, etc.,as appropriate):This site is located along the southern margins of San Diego Bay, from San Diego to Coronado.

P3a. **Description** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries): This site includes the railroad grade, track ties and bridges of which the tracks and ties have been removed. Only the bed of the railroad remains. It has been heavily impacted by construction of the Bayshore Bikeway and parking facilities. The vegetation community includes salt marsh.

P3b. **Resource Attributes** (List attributes and codes): AH7:Railroad grades

P4. **Resources Present:** ☐Building ☐Structure ☐Object ■Site ☐District ☐Element of District ☐Other (Isolates, etc.)

P5a. Photograph or Drawing (Photo required for buildings, structures, and objects)

P5b. Description of Photo (View, date, accession #):

P6. **Age and Sources:** ■ Historic ☐ Prehistoric ☐ Both

P7. **Owner and Address:** unknown

P8. **Recorded by** (Name, affiliation, and address):
Andrew R. Pigniolo
Tierra Environmental Services
9903-E Businesspark Avenue
San Diego, CA 92131

P9. **Date Recorded:** October 5, 2000

P10. **Survey Type** (Describe): Intensive Surface Inventory

P11. **Report Citation** (Cite survey report and other sources, or enter "none"): Pigniolo, Andrew R. Archaeological Survey Report for the Coronado Undergrounding Project, City of Coronado, California.

Attachments: ☐ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record ☐ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record ☐ Photograph Record ☐ Other (List):

State of California - The Resources Agency
Department of Parks and Recreation

Permanent Trinomial: CA-SDI-

Supplement:

ARCHAEOLOGICAL SITE RECORD

Other Designations: Coronado Railroad

1. **County:** San Diego

2. **USGS Quads:** Imperial Beach, National City, Point Loma (7.5') 1967 (15')
Photorevised: 1975

3. **UTM Coordinates: Zone** 11, 485~~650~~ 580 m **Easting** 3618150 m **Northing**
491250 m 3606400 m
488500 m 3605950 m
483800 m 36160~~50~~ 00 m

4. **Townships** 17 & 18 South, **Ranges** 2 & 3 West, SBM

5. **Map Coordinates:** N/A 6. **Elevation:** about 5 to 25 feet above sea level

7. **Location:** Along the southern margins of San Diego Bay, from San Diego to Coronado

8. **Prehistoric** **Historic** X **Protohistoric**

9. **Site Description:** Historic railroad grade

10. **Area:** 18 linear miles (30,000 m) x 3± m = 90,000 m²
Method of Determination: U.S.G.S. mapping

11. **Depth:** N/A **Method of Determination:** N/A

12. **Features:** Railroad grade, tracks, ties, bridges

13. **Artifacts:** None observed

14. **Non-artifactual Constituents and Faunal Remains:** N/A

15. **Date Recorded:** 3/93 16. **Recorded by:** D. Laylander

17. **Affiliation and Address:** Caltrans District 11, 2829 Juan Street, San Diego, CA 92186-5406

18. **Human Remains:** None observed

19. **Site Disturbance:** Probable periodic repair and replacement of original features

20. **Nearest Water (type, distance and direction):** Adjacent to San Diego Bay; crosses Sweetwater River, Otay River, etc.

State of California - The Resources Agency
Department of Parks and Recreation

Permanent Trinomial: CA-SDI-

Month/Year: 3/93

ARCHAEOLOGICAL SITE RECORD

Other Designations: Coronado Railroad

21. **Vegetation Community (site vicinity):** Salt marsh and various others

22. **Vegetation (on site):** Same as vicinity

23. **Site Soil:** Urban land, made land, tidal flats, coastal beaches, Marine loamy coarse sand, Huerhuero loam, Salinas clay loam

24. **Surrounding Soil:** Same as site

25. **Geology:** Quaternary alluvium, dune sand, Pleistocene marine and marine terrace deposits

26. **Landform:** Bay margin 27. **Slope:** 0-1% 28. **Exposure:** Open

29. **Landowner(s) (and/or tenants) and Address:** Unknown

30. **Remarks:** The Coronado Railroad was constructed in the late 1880s. The route has been variously labelled on maps and in publications the Coronado Belt Line, Coronado Railroad, San Diego Southern, San Diego & Southeastern, San Diego and Arizona - Southern Pacific Lines, A. T. & S. F. - San Diego and Arizona Eastern.

31. **References:** Richard F. Pourade, 1964, "The History of San Diego: The Glory Years"; Philip R. Pryde (ed.), 1984, "San Diego: An Introduction to the Region", pp. 171-188; Robert M. Hanft, 1984, "San Diego & Arizona: The Impossible Railroad"; Don Laylander, 1993, "An Archaeological Survey for the Bay Route Bikeway, Chula Vista and National City, California"

32. **Name of Project:** Bay Route Bikeway 33. **Type of Investigation:** Survey

34. **Site Accession Number:** N/A **Curated At:** N/A 35. **Photos:** None

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

ARCHEOLOGICAL SITE MAP

Page 3 of 8.

Permanent Trinomial: CA-SDI / 13073 H

Temporary Number:

Agency Designation:

CA-SDI 13073 H

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

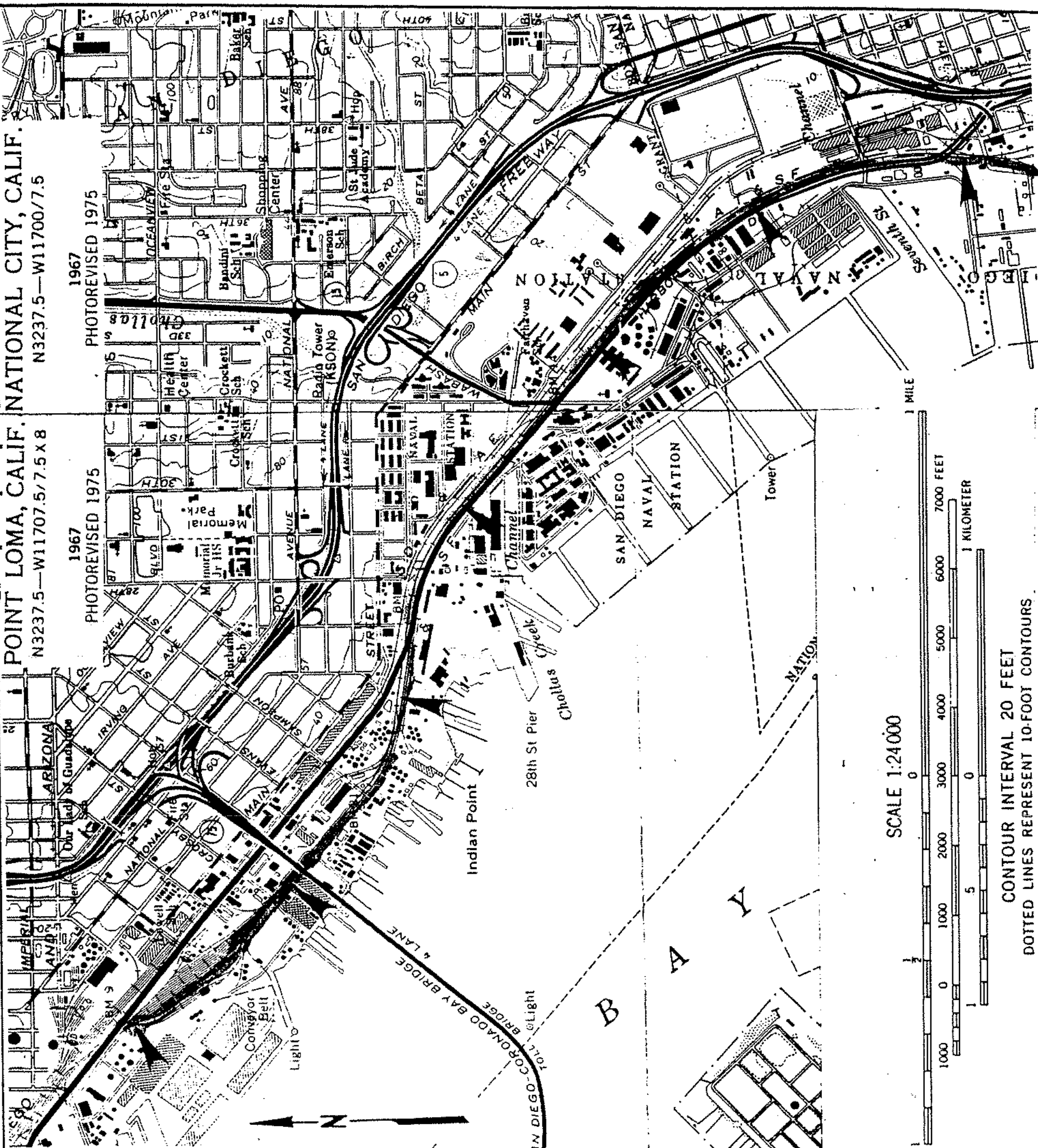
ARCHEOLOGICAL SITE LOCATION MAP

Page 4 of 8.

Permanent Trinomial: CA-SDI / 13073 (mo. yr.)

Temporary Number: ____

Agency Designation: ____



State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

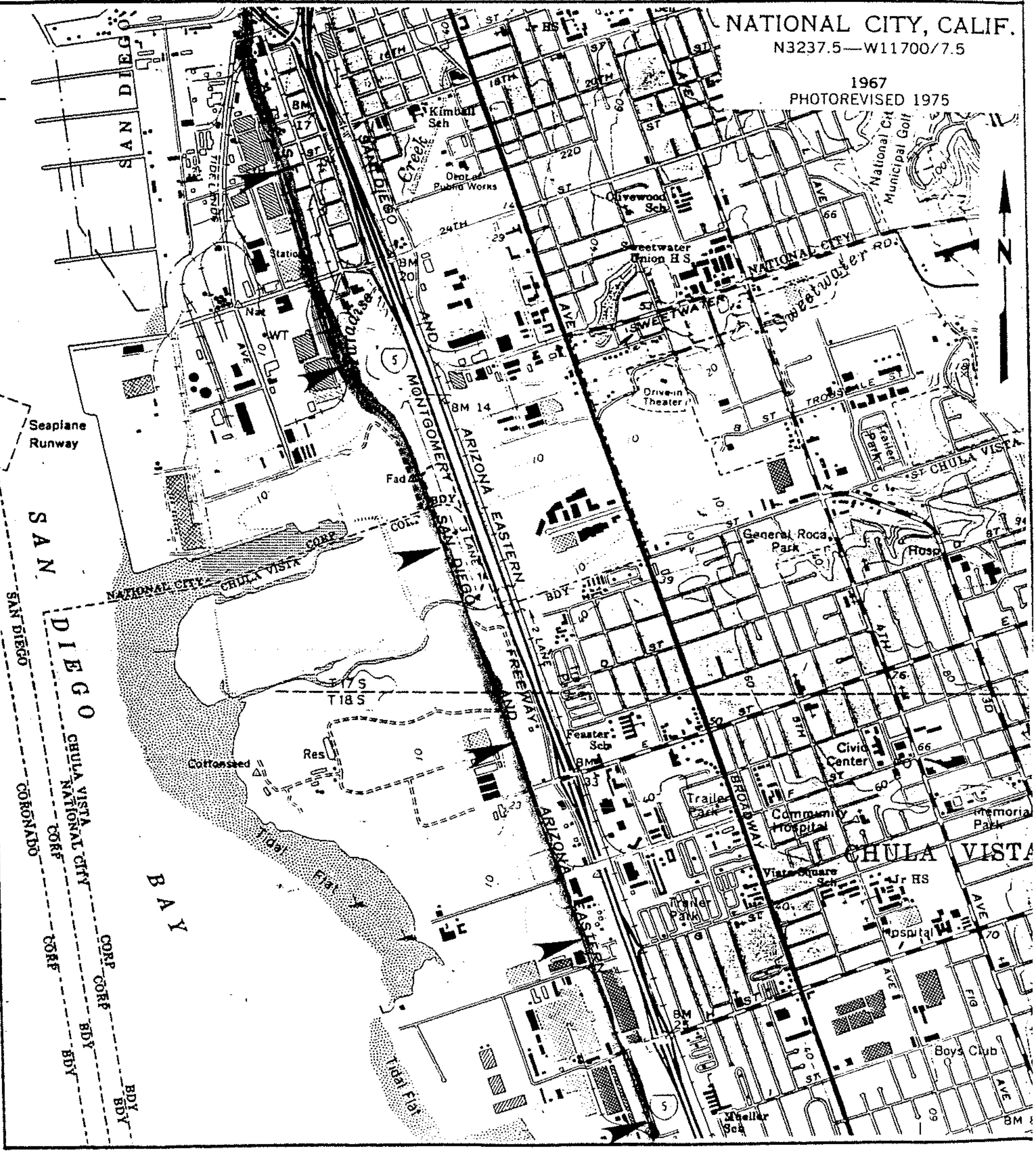
ARCHEOLOGICAL SITE LOCATION MAP

Page 5 of 8.

Permanent Trinomial: CA-SDI /13078 H
mo. yr.

Temporary Number:

Agency Designation:



H

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

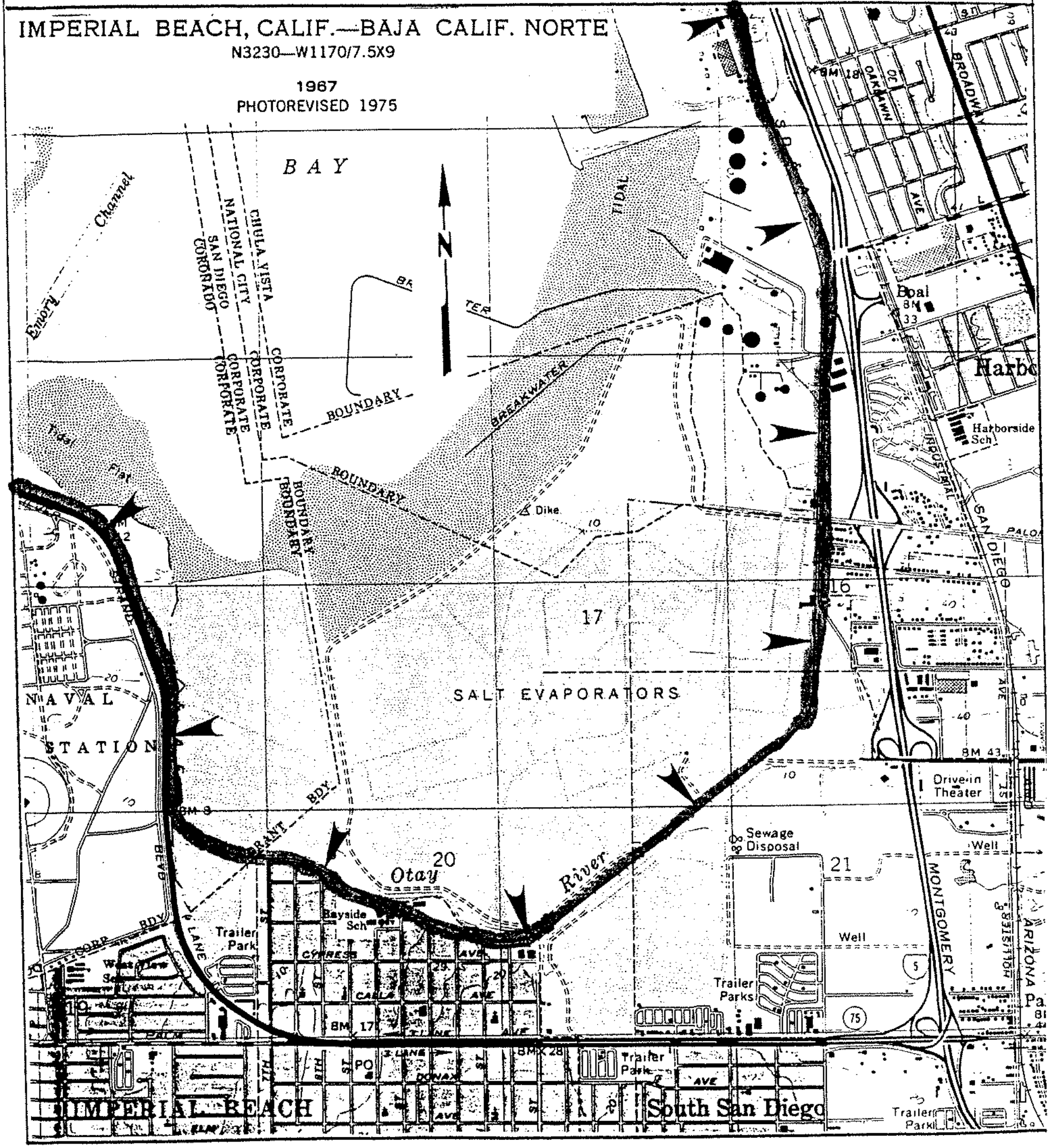
ARCHEOLOGICAL SITE LOCATION MAP

Page 6 of 8.

Permanent Trinomial: CA-SDI / 13073

Temporary Number:

Agency Designation:



CA-SDI 13073 H

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

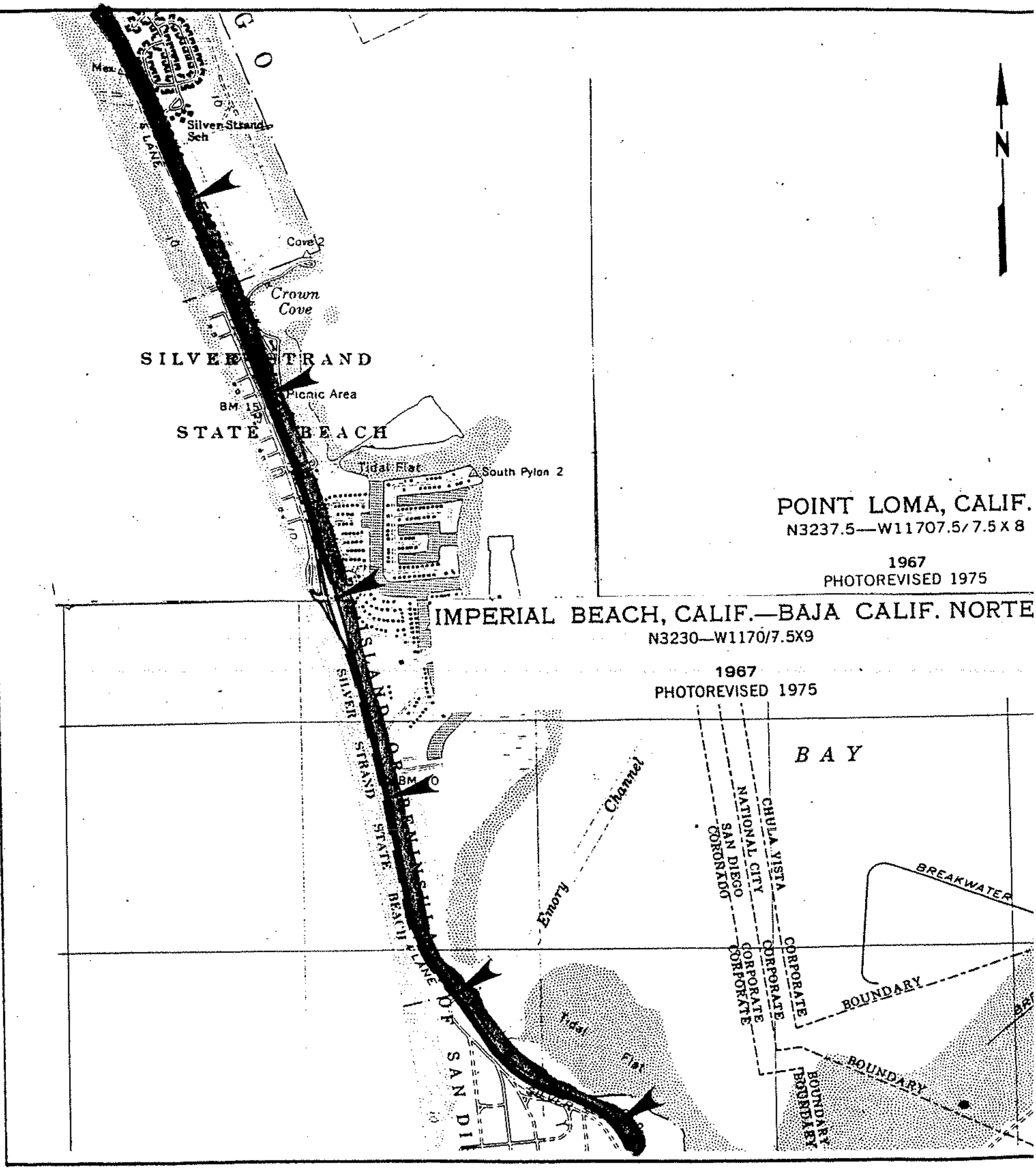
ARCHEOLOGICAL SITE LOCATION MAP

Page 7 of 8.

Permanent Trinomial: ______ / ______ mo. yr.

Temporary Number: ______

Agency Designation: ______



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CA-SDI 13073H

State of California – The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

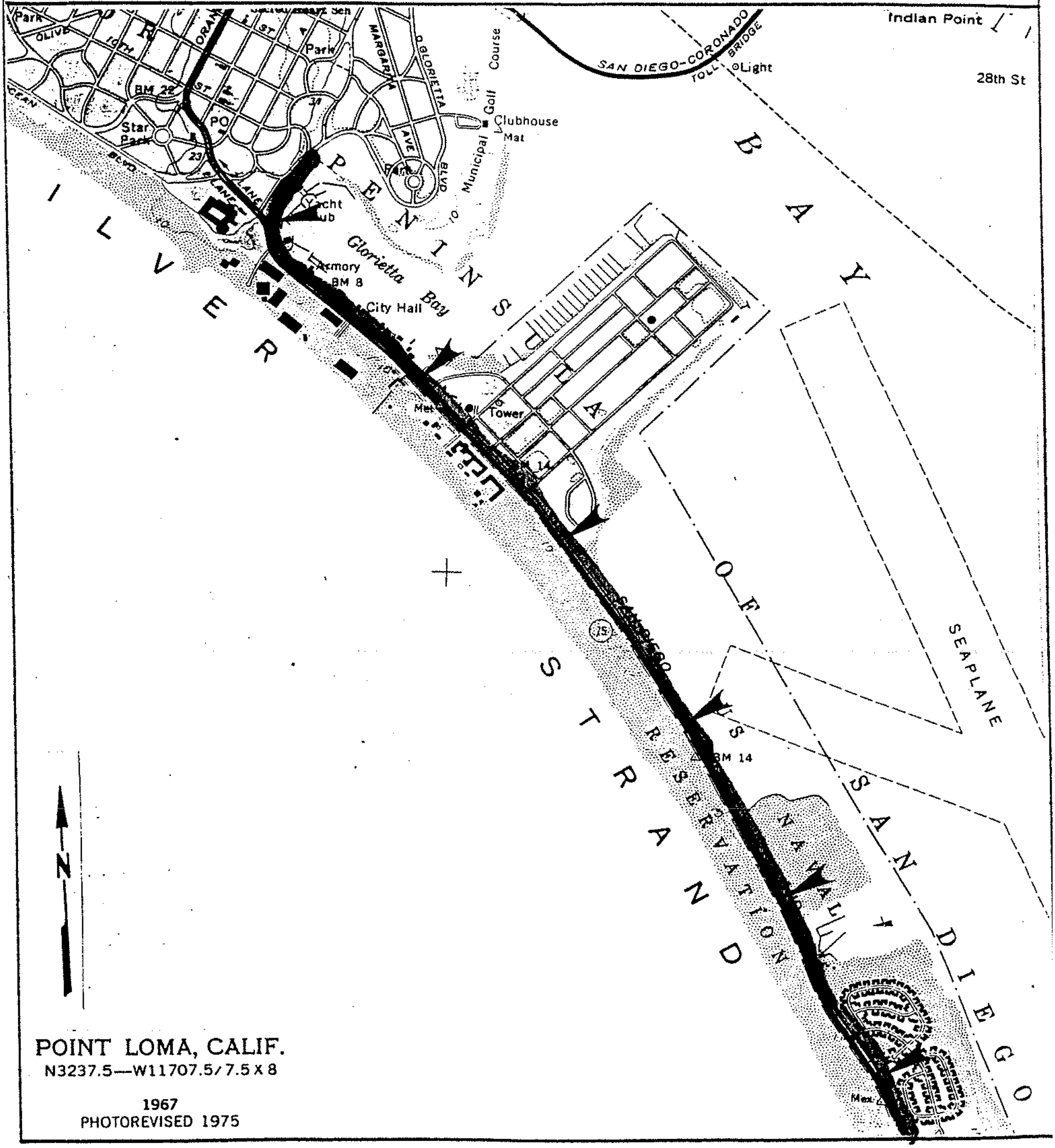
ARCHEOLOGICAL SITE LOCATION MAP

Page 8 of 8.

Permanent Trinomial: ______ / ______ mo. yr.

Temporary Number: ______

Agency Designation: ______



POINT LOMA, CALIF.
N3237.5—W11707.5/7.5 X 8

1967
PHOTOREVISED 1975

Appendix I
Geology Studies

GEOTECHNICAL EVALUATION
PROPOSED LIGHT POLES
BAY D AND HEADHOUSE 1 OF TRANSIT SHED 1
10TH AVENUE MARINE TERMINAL
SAN DIEGO, CALIFORNIA

PREPARED FOR:
Jacobs
1455 Frazee Road, Suite 300
San Diego, California 92108

PREPARED BY:
Ninyo & Moore
Geotechnical and Environmental Sciences Consultants
5710 Ruffin Road
San Diego, California 92123

December 16, 2011
Project No. 107049004

Ninyo & Moore
Geotechnical and Environmental Sciences Consultants

December 16, 2011
Project No. 107049004

Mr. Bill Zondorak
Jacobs
1455 Frazee Road, Suite 300
San Diego, California 92108

Subject: Geotechnical Evaluation
Proposed Light Poles
Bay D and Headhouse 1 of Transit Shed 1
10th Avenue Marine Terminal
San Diego, California

Dear Mr. Zondorak:

In accordance with your request and authorization, we have performed a geotechnical evaluation for the proposed light poles at Bay D and Head House 1 of Transit Shed 1 at the 10th Avenue Marine Terminal in San Diego. This report presents our geotechnical findings, conclusions, and recommendations regarding the proposed project. Our report was prepared in accordance with our revised September 29, 2011 proposal.

We appreciate the opportunity to be of service on this project.

Sincerely,
NINYO & MOORE

Madan Chirumalla, PE
Project Engineer

REGISTERED PROFESSIONAL ENGINEER MADAN CHIRUMALLA, PE No. 74186 Exp. 6/30/13 CIVIL STATE OF CALIFORNIA

Jonathan Goodmacher, PG, CEG
Manager/Principal Geologist

PROFESSIONAL GEOLOGIST JONATHAN C. GOODMACHER Exp. 10/31/13 No. 2136 CERTIFIED ENGINEERING GEOLOGIST STATE OF CALIFORNIA

Soumitra Guha, PhD, GE
Principal Engineer

REGISTERED PROFESSIONAL ENGINEER SOUMITRA GUHA NO. GE 2632 EXP. 6/30/13 GEOTECHNICAL STATE OF CALIFORNIA

MAC/JG/SG/mmd

Distribution: (1) Addressee (via e-mail)

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Appendices

1. INTRODUCTION

In accordance with your request, we have performed a limited geotechnical evaluation for the proposed light poles at Bay D and Head House 1 of Transit Shed 1 at the 10th Avenue Marine Terminal in San Diego, California (Figure 1). This report presents the results of our field exploration and laboratory testing, our conclusions regarding the geotechnical conditions at the subject site, and our recommendations for the design and construction of this project. Ninyo & Moore previously submitted a geotechnical report (dated August 1, 2011) for the proposed pavement at the project site.

2. SCOPE OF SERVICES

The scope of services for this study included the following:

- Reviewing background data listed in the References section of this report. The data reviewed included geotechnical reports, topographic maps, geologic data, stereoscopic aerial photographs, fault maps, and a site plan of the site.
- Obtaining a boring permit from the County of San Diego Department of Environmental Health.
- Performing a field reconnaissance to observe site conditions and to locate and mark proposed exploratory borings.
- Coordinating with Underground Service Alert to mark underground utilities near the proposed borings.
- Coordinating and mobilizing for the subsurface exploration.
- Performing a subsurface evaluation consisting of the drilling, logging, and sampling of two exploratory borings with a truck-mounted drill rig to a depth of approximately 56.5 feet. Samples were obtained at selected intervals from the borings.
- Performing geotechnical laboratory testing on selected soil samples obtained from our borings.
- Compiling and analyzing the engineering data obtained from our background, laboratory, and field evaluations.
- Preparing this report presenting our findings, conclusions, and recommendations regarding the geotechnical design and construction of the project.

3. SITE AND PROJECT DESCRIPTION

The 10th Avenue Marine Terminal is located along the eastern shore of San Diego Bay (Figure 1), approximately 0.5 miles south of downtown San Diego. The project area is located northwest of Crosby Road and south of Water Street. The site is currently occupied by Transit Sheds Nos. 1 and 2 and Warehouses B and C (San Diego Unified Port District [SDUPD], 2011). The site is traversed by existing utilities including water lines, storm drains, sewer pipes, electric lines, and other utilities. The marine terminal is at an elevation of approximately 9 to 15 feet above mean sea level.

It is our understanding that the project will include the demolition of Bay D, Headroom Nos. 1 and 2, and the transformer room within Transit Shed No. 2. The project will also include removal of the existing asphalt concrete floor from Bay D, re-grading, and re-paving of the project area, the recommendations for which were presented in our previous geotechnical report (referenced). Based on the review of site plans by SDUPD (dated April 18, 2011) and Lopez Engineering (dated September 20, 2011), four light pole structures are planned for the current project. We understand that the light poles will be approximately 90 feet high. We further understand that deep foundations are planned for the proposed light poles.

4. SUBSURFACE EXPLORATION AND LABORATORY TESTING

Our subsurface exploration was conducted on November 10, 2011 and consisted of drilling, logging, and sampling two borings. The borings were drilled to a depth of approximately 56.5 feet below existing grades with a truck-mounted, continuous flight auger drill rig. Bag and relatively undisturbed soil samples were obtained from the borings. The samples were then transported to our in-house geotechnical laboratory for testing. The approximate locations of the exploratory borings are shown on Figure 2. Logs of the borings are included in Appendix A.

Laboratory testing of representative soil samples included in-situ moisture content and dry density, gradation, direct shear strength, and soil corrosivity. The results of the in-situ moisture content and dry density tests are presented on the boring logs in Appendix A. The results of the other laboratory tests are presented in Appendix B.

5. GEOLOGY AND SUBSURFACE CONDITIONS

Our findings regarding regional and local geology, liquefaction, and groundwater conditions at the subject site are provided in the following sections.

5.1. Regional Geologic Setting

The project area is situated in the western San Diego County section of the Peninsular Ranges Geomorphic Province. This geomorphic province encompasses an area that extends approximately 1,450 km (900 miles) from the Transverse Ranges and the Los Angeles Basin south to the southern tip of Baja California (Norris and Webb, 1990). The province varies in width from approximately 48 to 160 km (30 to 100 miles). In general, the province consists of rugged mountains underlain by Jurassic metavolcanic and metasedimentary rocks, and Cretaceous igneous rocks of the southern California batholith. The portion of the province in San Diego County that includes the project area consists generally of uplifted Tertiary sedimentary rock, Jurassic metamorphic rock, and Cretaceous granitic rock. Figure 3 is a map of the local geology (see discussion below).

The Peninsular Ranges Province is traversed by a group of sub-parallel faults and fault zones trending roughly northwest. Several of these faults, which are shown on Figure 4, are considered active faults. The Elsinore, San Jacinto, San Andreas and Rose Canyon faults are active fault systems located northeast of the project area and the Coronado Bank, San Diego Trough, and San Clemente faults are active faults located west of the project area. The Rose Canyon Fault Zone, the nearest active fault system, has been mapped approximately 0.2 miles east of the project site. Major tectonic activity associated with these and other faults within this regional tectonic framework consists primarily of right-lateral, strike-slip movement. Further discussion of faulting relative to the site is provided in the Faulting and Seismicity section of this report.

5.2. Site Geology

Geologic units encountered during our subsurface evaluation included fill and bay deposits. Generalized descriptions of the earth units encountered are provided in the subsequent sections. Additional descriptions of the subsurface units are provided on the boring logs in Appendix A.

5.2.1. Fill

Fill was encountered in our borings from the surface to depths of up to approximately 39 feet. As encountered, the fill generally consisted of damp to saturated, very loose to medium dense, silty sand, clayey sand, sand with silt, sand, and gravel, and firm, sandy clay.

5.2.2. Bay Deposits

Bay deposits were encountered in our borings below the fill. Bay deposits extended to the explored depth of 56.5 feet. The bay deposits generally consisted of saturated, very loose to very dense, silty sand, clayey sand, and sand, and very stiff to hard, sandy clay.

5.3. Groundwater

Groundwater was encountered in our exploratory borings at a depth of approximately 8.5 feet below the ground surface. In addition, from research on GeoTracker (2011), groundwater is present at depths of approximately 5 to 10 feet below the ground surface. Fluctuations in the groundwater level and perched conditions may occur due to variations in ground surface topography, subsurface geologic conditions and structure, rainfall, irrigation, tides, and other factors.

5.4. Faulting and Seismicity

The project area is considered to be seismically active. Based on our review of the referenced geologic maps and stereoscopic aerial photographs, as well as on our geologic field mapping, the site is not underlain by known active or potentially active faults (i.e., faults that exhibit evidence of ground displacement in the last 11,000 years and 2,000,000 years, respectively). However, the site is located in a seismically active area and the potential for strong ground motion is considered significant during the design life of the proposed structure. As noted earlier, the nearest known active fault system is the Rose Canyon fault zone, located approximately 0.2 miles east of the project site.

In general, hazards associated with seismic activity include strong ground motion, ground surface rupture, liquefaction and seismically induced settlement, and tsunamis. These hazards are discussed in the following sections.

5.4.1. Strong Ground Motion and Ground Surface Rupture

The 2010 California Building Code (CBC) recommends that the design of structures be based on the horizontal peak ground acceleration (PGA) having a 2 percent probability of exceedance in 50 years, which is defined as the Maximum Considered Earthquake (MCE). The statistical return period for PGA_{MCE} is approximately 2,475 years. Based on our review of subsurface data, the project site corresponds to a Site Class D. The site modified PGA_{MCE} was estimated to be 0.64g using the United States Geological Survey (USGS) (USGS, 2011) ground motion calculator (web-based). The site modified design PGA was estimated to be 0.42g. These estimates of ground motion do not include near-source factors that may be applicable to the design of structures on site.

5.4.2. Ground Rupture

Based on our review of the referenced literature and our site reconnaissance, no active faults are known to cross the project site. Therefore, the potential for ground rupture due to faulting at the site is not a design consideration. However, lurching or cracking of the ground surface as a result of nearby seismic events is possible.

5.4.3. Liquefaction

Liquefaction is the phenomenon in which loosely deposited granular soils with silt and clay contents of less than approximately 35 percent and non-plastic silts located below the water table undergo rapid loss of shear strength when subjected to strong earthquake-induced ground shaking. Ground shaking of sufficient duration results in the loss of grain-to-grain contact due to a rapid rise in pore water pressure, and causes the soil to behave as a fluid for a short period of time. Liquefaction is known generally to occur in saturated or near-saturated cohesionless soils at depths shallower than 50 feet below the ground surface. Factors known to influence liquefaction potential include composition and thickness of soil layers, grain size, relative density, groundwater level, degree of saturation, and both intensity and duration of ground shaking.

The liquefaction potential of subsurface soils at the project site was evaluated using the soil sampler blow counts recorded at various depths in the exploratory borings B-1 and B-2. The liquefaction analysis was based on the National Center for Earthquake Engineering Research (NCEER) procedure (Youd, et al., 2001) developed from the methods originally recommended by Seed and Idriss (1982) using the computer program LiquefyPro (CivilTech Software, 2007a). A groundwater table depth of 5 feet below the existing ground surface was used in our liquefaction evaluation. Our liquefaction analysis indicates that loose to medium dense fill soils and very loose bay deposits occurring below the assumed groundwater level of 5 feet and up to a depth of 42 feet below the surface are generally susceptible to liquefaction during the design seismic event. Further, as mapped by the City of San Diego (2008), the site is within an area with a high potential for liquefaction.

5.4.4. Dynamic Settlement of Saturated Soils

As a result of liquefaction, the proposed structures may be subject to several hazards, including liquefaction-induced settlement. In order to estimate the amount of post-earthquake settlement, the method proposed by Tokimatsu and Seed (1987) was used in which the seismically induced cyclic stress ratios and corrected N-values are related to the volumetric strain of the soil. The amount of soil settlement during a strong seismic event depends on the thickness of the liquefiable layers and the density and/or consistency of the soils.

Under the current conditions, post-earthquake total settlement of up to approximately 15 inches was calculated for the project site. Based on the guidelines presented in California Geological Survey (CGS) Special Publication 117 (2008) and assuming relatively continuous subsurface stratigraphy across the site, we estimate differential settlement on the order of 7.5 inches over a horizontal distance of 40 feet.

5.4.5. Tsunamis

Tsunamis are long wavelength seismic sea waves (long compared to the ocean depth) generated by sudden movements of the ocean bottom during submarine earthquakes, landslides, or volcanic activity. Based on our review of the tsunami hazards map prepared by the CGS (2009) the site is not located in an area subject to tsunami inundation. Therefore, tsunami inundation is not a design consideration.

5.5. Landsliding

Landslides may be induced by strong vibratory motion produced by earthquakes. Research and historical data indicate that seismically induced landslides tend to occur in weak soil and rock on sloping terrain. The process for zoning earthquake-induced landslides incorporates expected future earthquake shaking, existing landslide features, slope gradient and strength of earth materials on the slope. Based on our review of published geologic literature and our geotechnical evaluation, no landslides or related features underlie the site.

6. CONCLUSIONS

Based on our review of the referenced background data, subsurface evaluation, and laboratory testing, it is our opinion that construction of the project is feasible from a geotechnical standpoint provided the recommendations presented in this report are incorporated into the design and construction of the project. In general, the following conclusions were made:

- Based on our site reconnaissance and observations during the subsurface evaluation, the project site is underlain by fill and bay deposits.

- Groundwater was encountered in our borings at a depth of 8.5 feet and is a design and construction consideration. Our measurements during drilling and evaluation of the moisture contents obtained from the borings indicate that groundwater will likely be encountered in the excavations for deep foundation (i.e., drilled piers). The high groundwater levels and granular soils with little cohesion will likely cause caving in drilled holes. The contractor should anticipate the need to mitigate caving during construction.

- Excavations in the fill should generally be feasible with standard earth working equipment in good working order. The bay deposits may present difficult drilling and excavating conditions. Cobbles were not encountered in our borings. However, the contactor should anticipate difficult drilling conditions if gravel and cobbles are encountered during construction.

- We anticipate that the earth materials generated from the excavations in the fill should be generally suitable for use as compacted fill, if needed. Fill for use in structural areas should not contain clayey soils.
- The active Rose Canyon fault zone is located approximately 0.2 miles east of the site. Accordingly, the potential for relatively strong seismic ground motions should be considered in the project design.
- The potential for liquefaction and liquefaction induced settlement is high in soils up to a depth of about 42 feet below the surface at the project site.
- We estimated a PGA_{MCE} of 0.64g at the subject site that has a 2 percent probability of exceedance in 50 years. The Design PGA was estimated to be 0.42g.
- Based on the results of our limited soil corrosivity tests during this study and Caltrans corrosion guidelines (2003), the site would be classified as a corrosive site.

7. RECOMMENDATIONS

Based on our understanding of the project, the following recommendations are provided for the design and construction of the project. The proposed site improvements should be constructed in accordance with the requirements of the applicable governing agencies.

7.1. Earthwork

In general, earthwork should be performed in accordance with the recommendations presented in this report. Ninyo & Moore should be contacted for questions regarding the recommendations or guidelines presented herein.

7.1.1. Site Preparation

Site preparation should begin with the removal of vegetation, utility lines, asphalt, concrete, and other deleterious debris from areas to be graded. Tree stumps and roots should be removed to such a depth that organic material is generally not present. Clearing and grubbing should extend to the outside of the proposed excavation and fill areas. The debris and unsuitable material generated during clearing and grubbing should be removed from areas to be graded and disposed of at a legal dumpsite away from the project area.

7.1.2. Excavation and Drilling Characteristics

The results of our field exploration indicate that the project site is underlain by fill soils and bay deposits. The fill soils should be generally excavatable with standard earth working equipment. Difficult drilling should be anticipated in bay deposits or if gravel and cobbles are encountered.

7.1.3. Materials for Fill

On-site granular soils with an organic content of less than approximately 3 percent by volume (or 1 percent by weight) are suitable for use as fill. In general, fill material should not contain rocks or lumps over approximately 3 inches in diameter, and not more than approximately 30 percent larger than ¾ inch.

Utility trench backfill material should not contain rocks or lumps over approximately 3 inches in general. Soils classified as silts or clays should not be used for backfill in the pipe zone. Larger chunks, if generated during excavation, may be broken into acceptably sized pieces or disposed of offsite.

Imported fill material, if needed for the project, should generally be granular soils with a low expansion potential (i.e., an expansion index of 50 or less as evaluated by the American Society for Testing and Materials [ASTM] Test Method D 4829). Import material should also be non-corrosive in accordance with the Caltrans (2003) corrosion guidelines. Materials for use as fill should be evaluated by Ninyo & Moore's representative prior to filling or importing.

7.1.4. Compacted Fill

We do not anticipate compacted fill for the proposed light pole structures. However, the following general recommendations should be used if compacted fill is used for the light pole structures. Prior to placement of compacted fill, the contractor should request an evaluation of the exposed ground surface by Ninyo & Moore. The exposed ground surface should then be scarified to a depth of approximately 8 inches and moisture conditioned to near the optimum moisture content. The scarified materials should then be compacted to 90 percent of their modified Proctor density as evaluated by ASTM D 1557. The evaluation of compaction by Ninyo & Moore should not be considered to preclude any requirements for observation or approval by governing agencies. It is the contractor's responsibility to notify this office and the appropriate governing agency when project areas are ready for observation, and to provide reasonable time for that review.

Fill materials should be moisture-conditioned to near the laboratory optimum moisture content prior to placement. The optimum moisture content will vary with material type and other factors. Moisture-conditioning of fill soils should be generally consistent within the soil mass.

Prior to placement of additional compacted fill material following a delay in the grading operations, the exposed surface of previously compacted fill should be prepared to receive fill. Preparation may include scarification, moisture-conditioning, and recompaction.

Compacted fill should be placed in horizontal lifts of approximately 8 inches in loose thickness. Prior to compaction, each lift should be moisture-conditioned to near the laboratory optimum, mixed, and then compacted by mechanical methods, using sheepsfoot rollers, multiple-wheel pneumatic-tired rollers or other appropriate compacting rollers, to 90 percent of its modified Proctor density as evaluated by ASTM D 1557. Successive lifts should be treated in a like manner until the desired finished grades are achieved.

7.1.5. Temporary Excavations, Braced Excavations, and Shoring

For temporary excavations, we recommend that the following Occupational Safety and Health Administration (OSHA) soil classification be used:

Fill and bay deposits	*Type C*

Upon making the excavations, the soil classifications and excavation performance should be evaluated in the field by the contractor in accordance with the OSHA regulations. Temporary excavations should be constructed in accordance with OSHA recommendations. For trench or other excavations, OSHA requirements regarding personnel safety should be met using appropriate shoring (including trench boxes) or by laying back the slopes to no steeper than 1.5:1 (horizontal:vertical). Temporary excavations that encounter seepage may be shored or stabilized by placing sandbags or gravel along the base of the seepage zone. Excavations encountering seepage should be evaluated on a case-by-case basis. On-site safety of personnel is the responsibility of the contractor.

7.1.6. Underground Utilities

We recommend that utility lines be supported on 6 or more inches of granular bedding material such as sand with a sand equivalent value of 30 or higher. Bedding material should be placed around the pipe and 12 inches or more above the top of the pipe in accordance with specifications of the recent edition of the "Greenbook" (Standard Specifications for Public Works Construction). Special care should be taken not to allow voids beneath the pipe. Bedding material and compaction requirements should be in accordance with the recommendations of this report, the project specifications, and applicable requirements of the appropriate governing agency.

Based on our subsurface evaluation, the on-site earth materials should be generally suitable for re-use as trench backfill above the pipe zone provided they are free of organic material, clay lumps, debris, and rocks greater than approximately 3 inches in diameter. Fill should be moisture-conditioned to near the laboratory optimum. Trench backfill should be compacted to 90 percent of its modified Proctor density as evaluated by ASTM D 1557. Lift thickness for backfill will depend on the type of compaction equipment utilized, but fill should generally be placed in lifts not exceeding 8 inches in loose thickness. Special care should be exercised to avoid damaging the pipe during compaction of the backfill.

7.1.7. Seismic Design Parameters

Design of the proposed improvements should be in accordance with the requirements of governing jurisdictions and applicable building codes. Table 1 presents the seismic design parameters for the site in accordance with CBC (2010) guidelines and mapped spectral acceleration parameters (USGS, 2011).

Table 1 – 2010 California Building Code Seismic Design Criteria

Seismic Design Factors	Values
Site Class	D
Site Coefficient, F_a	1.0
Site Coefficient, F_v	1.5
Mapped Short Period Spectral Acceleration, S_S	1.591g
Mapped One-Second Period Spectral Acceleration, S_1	0.632g
Short Period Spectral Acceleration Adjusted For Site Class, S_{MS}	1.591g
One-Second Period Spectral Acceleration Adjusted For Site Class, S_{M1}	0.948g
Design Short Period Spectral Acceleration, S_{DS}	1.060g
Design One-Second Period Spectral Acceleration, S_{D1}	0.632g

7.2. Cast-In-Drilled-Hole (CIDH) Pile Foundation

Based on our discussions with the representatives of Jacobs, we understand that the proposed light poles will be supported on cast-in-drilled-hole (CIDH) piles. We further understand that the proposed diameter of CIDH piles is 48 inches. Foundations should be designed in accordance with structural considerations and the following recommendations. In addition, requirements of the appropriate governing jurisdictions and applicable building codes should be considered in the design of the structures.

7.2.1. Axial Capacity

As discussed in the earlier sections, there is a high potential for liquefaction up to a depth of approximately 42 feet below the ground surface. Due to the downdrag loads caused on piles from the liquefaction induced settlement, we recommend that CIDH piles penetrate into bay deposits, and to a depth of 10 feet or more beneath the depth of liquefaction of 42 feet. The allowable loads for the CIDH piles were analyzed using the computer program AllPile (CivilTech, 2007b) based on the assumed pile length of 52 feet.

The calculated pile capacities are based on frictional capacity; end bearing was ignored in our analysis. The results of ultimate axial pile capacity and service load evaluation for a factor of safety of 2.0 are presented in Appendix C and summarized in Table 2.

Table 2 – Axial Pile Capacity Evaluation

CIDH Pile Diameter (inches)	Pile Length (feet)	Ultimate Downward Capacity (kips)	Design (Service) Loads (kips)	
			Compression	Tension
48	52	20	10	10

7.2.2. Lateral Capacity

The lateral pile capacity for the 48-inch diameter CIDH piles was analyzed using the computer program AllPile (CivilTech, 2007b) based on the assumed pile length of 52 feet. Free-head condition was assumed for the pile. The results indicate that an assumed 52 feet long pile will have a deflection of ¼-inch or less at the pile head. Our analyses did not account for dynamic loads due to inertial loads from the structure during the design earthquake. The results of lateral capacity analysis are presented in Appendix C.

7.2.3. Construction Considerations for CIDH piles

Construction of CIDH piles should be observed by the geotechnical consultant during drilling to evaluate if the piles have been extended to the recommended depths. The drilled holes should be cleaned of loose soil and gravel. It is the contractor's responsibility to take the appropriate measures to provide for the integrity of the drilled holes and to see that the holes are cleaned and straight and that sloughed loose soil is removed from the bottom of the hole prior to the placement of concrete. Drilled CIDH piles should be checked for alignment and plumbness during installation. The amount of acceptable misalignment of a pile is approximately 3 inches from the plan location but may be reduced based on design criteria. The center-to-center spacing of piles should be no less than three times the nominal diameter of the pile.

Based on the depth to groundwater encountered in our exploratory borings (approximately 8.5 feet below the ground surface), groundwater should be anticipated within the excavation depth of foundations. We recommended that the contractor consider appropriate measures during construction to reduce the potential for caving of the drilled holes, including the use of steel casing and/or drilling mud. In addition, we recommend placement of concrete by tremie method to see that the aggregate and cement do not segregate during concrete placement.

Contractors with proven records in the installation of CIDH piles should be considered. We recommend that the drilling equipment have a rated torque of 20,000 foot-pounds or more. During construction, a certified deep foundation inspector should document the diameter, depth, vertical alignment, and the nature of the materials encountered at each pile location. Reinforcing steel and concrete placement should be continuously observed by Ninyo & Moore. A quality control report should be submitted for each pile stating, in writing, that the design details have been observed and meet the requirements.

7.3. Corrosion

Laboratory testing was performed on a representative sample of the on-site earth materials to evaluate pH and electrical resistivity, as well as chloride and sulfate contents. The pH and electrical resistivity tests were performed in accordance with California Test (CT) 643 and the sulfate and chloride content tests were performed in accordance with CT 417 and CT 422, respectively. These laboratory test results are presented in Appendix B.

The results of the corrosivity testing indicated an electrical resistivity of 770 ohm- centimeters (cm), soil pH of 7.8, chloride content of 600 parts per million (ppm) and sulfate content of 0.032 percent (i.e., 320 ppm). Based on the Caltrans corrosion (2003) criteria, the on-site soils would be classified as corrosive, which is defined as soils with more than 500 ppm chlorides, more than 0.2 percent sulfates, pH less than 5.5, or an electrical resistivity of 1,000 ohm-cm or less. Therefore, the project site would be classified as corrosive. If corrosion-susceptible improvements are planned on site, we recommend that a corrosion engineer be consulted for further evaluation and recommendations.

7.4. Concrete

Concrete in contact with soil or water that contains high concentrations of water-soluble sulfates can be subject to premature chemical and/or physical deterioration. The soil sample tested in this evaluation indicated water-soluble sulfate content of 0.032 percent by weight (320 ppm). According to American Concrete Institute (ACI) 318-08, the potential for sulfate attack is negligible for water-soluble sulfate contents in soil ranging from 0.00 to 0.10 percent by weight (i.e., 0 to 1,000 ppm). Therefore, the site soils may be considered to have a negligible potential for sulfate attack. Based on ACI (2011) criteria, Type II cement may be used for concrete construction. However, due to the potential variability of site soils, consideration should be given to using Type V cement for concrete structures in contact with soil with a water-cement ratio no higher than 0.45 by weight for normal weight aggregate concrete and a 28-day compressive strength of 4,500 pounds per square inch or more for the project.

7.5. Plan Review and Construction Observation

The conclusions and recommendations presented in this report are based on analysis of observed conditions in widely spaced exploratory borings. If conditions are found to vary from those described in this report, Ninyo & Moore should be notified, and additional recommendations will be provided upon request. Ninyo & Moore should review the final project drawings and specifications prior to the commencement of construction. Ninyo & Moore should perform the needed observation and testing services during construction operations.

The recommendations provided in this report are based on the assumption that Ninyo & Moore will provide geotechnical observation and testing services during construction. In the event that it is decided not to utilize the services of Ninyo & Moore during construction, we request that the selected consultant provide the client with a letter (with a copy to Ninyo & Moore) indicating that they fully understand Ninyo & Moore's recommendations, and that they are in full agreement with the design parameters and recommendations contained in this report. Construction of proposed improvements should be performed by qualified subcontractors utilizing appropriate techniques and construction materials.

8. LIMITATIONS

The field evaluation, laboratory testing, and geotechnical analyses presented in this report have been conducted in general accordance with current practice and the standard of care exercised by geotechnical consultants performing similar tasks in the project area. No warranty, expressed or implied, is made regarding the conclusions, recommendations, and opinions presented in this report. There is no evaluation detailed enough to reveal every subsurface condition. Variations may exist and conditions not observed or described in this report may be encountered during construction. Uncertainties relative to subsurface conditions can be reduced through additional subsurface exploration. Additional subsurface evaluation will be performed upon request. Please also note that our evaluation was limited to assessment of the geotechnical aspects of the project, and did not include evaluation of structural issues, environmental concerns, or the presence of hazardous materials.

This document is intended to be used only in its entirety. No portion of the document, by itself, is designed to completely represent any aspect of the project described herein. Ninyo & Moore should be contacted if the reader requires additional information or has questions regarding the content, interpretations presented, or completeness of this document.

This report is intended for design purposes only. It does not provide sufficient data to prepare an accurate bid by contractors. It is suggested that the bidders and their geotechnical consultant perform an independent evaluation of the subsurface conditions in the project areas. The independent evaluations may include, but not be limited to, review of other geotechnical reports prepared for the adjacent areas, site reconnaissance, and additional exploration and laboratory testing.

Our conclusions, recommendations, and opinions are based on an analysis of the observed site conditions. If geotechnical conditions different from those described in this report are encountered, our office should be notified, and additional recommendations, if warranted, will be provided upon request. It should be understood that the conditions of a site could change with time as a result of natural processes or the activities of man at the subject site or nearby sites. In addition, changes to the applicable laws, regulations, codes, and standards of practice may occur due to government action or the broadening of knowledge. The findings of this report may, therefore, be invalidated over time, in part or in whole, by changes over which Ninyo & Moore has no control.

This report is intended exclusively for use by the client. Any use or reuse of the findings, conclusions, and/or recommendations of this report by parties other than the client is undertaken at said parties' sole risk.

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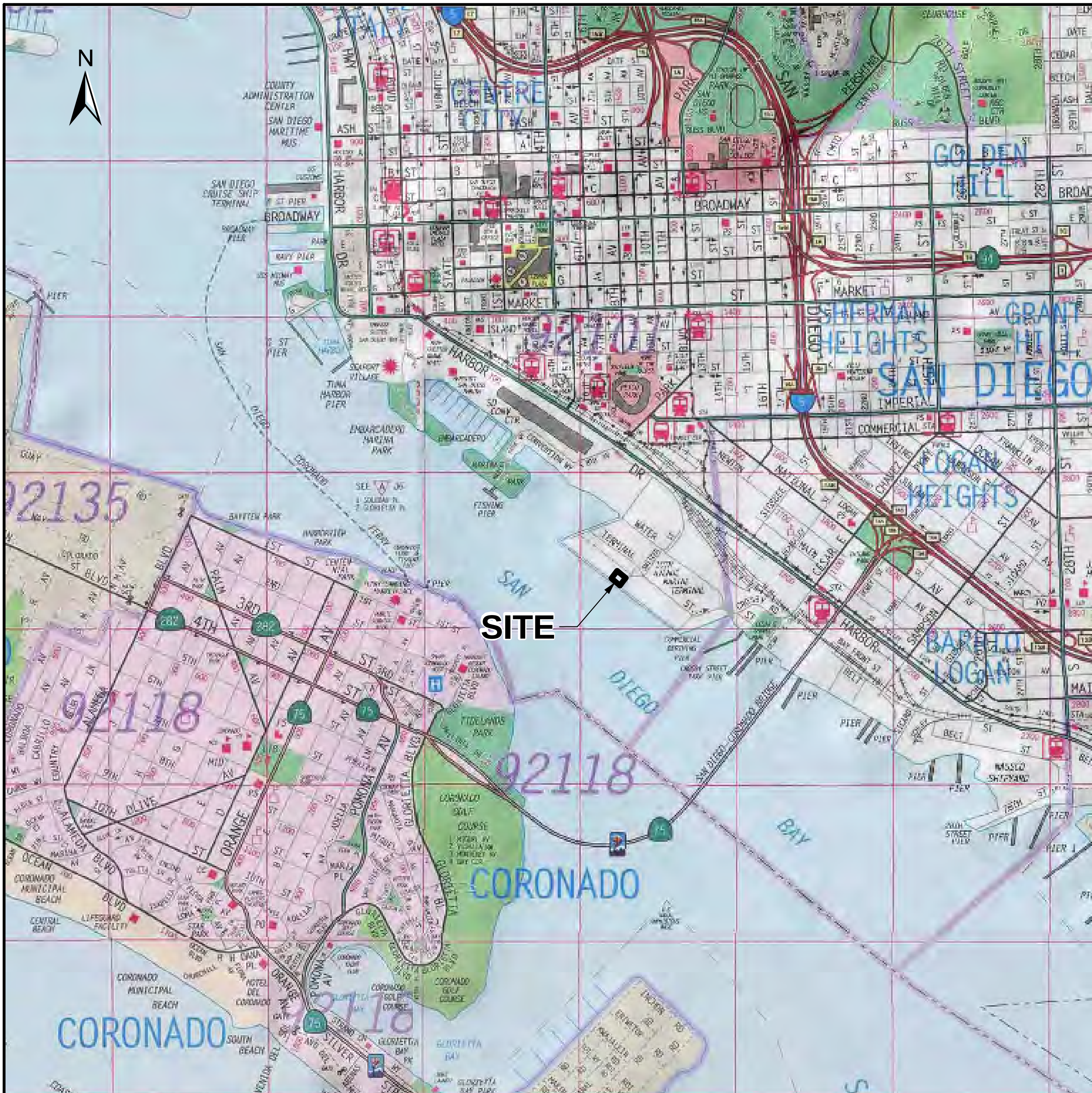
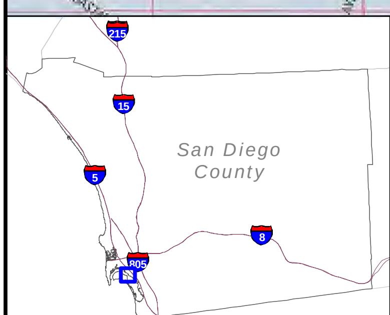
AERIAL PHOTOGRAPHS				
Source	**Date**	**Flight**	**Numbers**	**Scale**
USDA	3-31-53	AXN-3M	196 and 198	1:20,000



SOURCE: 2008 Thomas Guide for San Diego County, Street Guide and Directory; Map © Rand McNally, R.L.07-S-129



MAP EXTENT

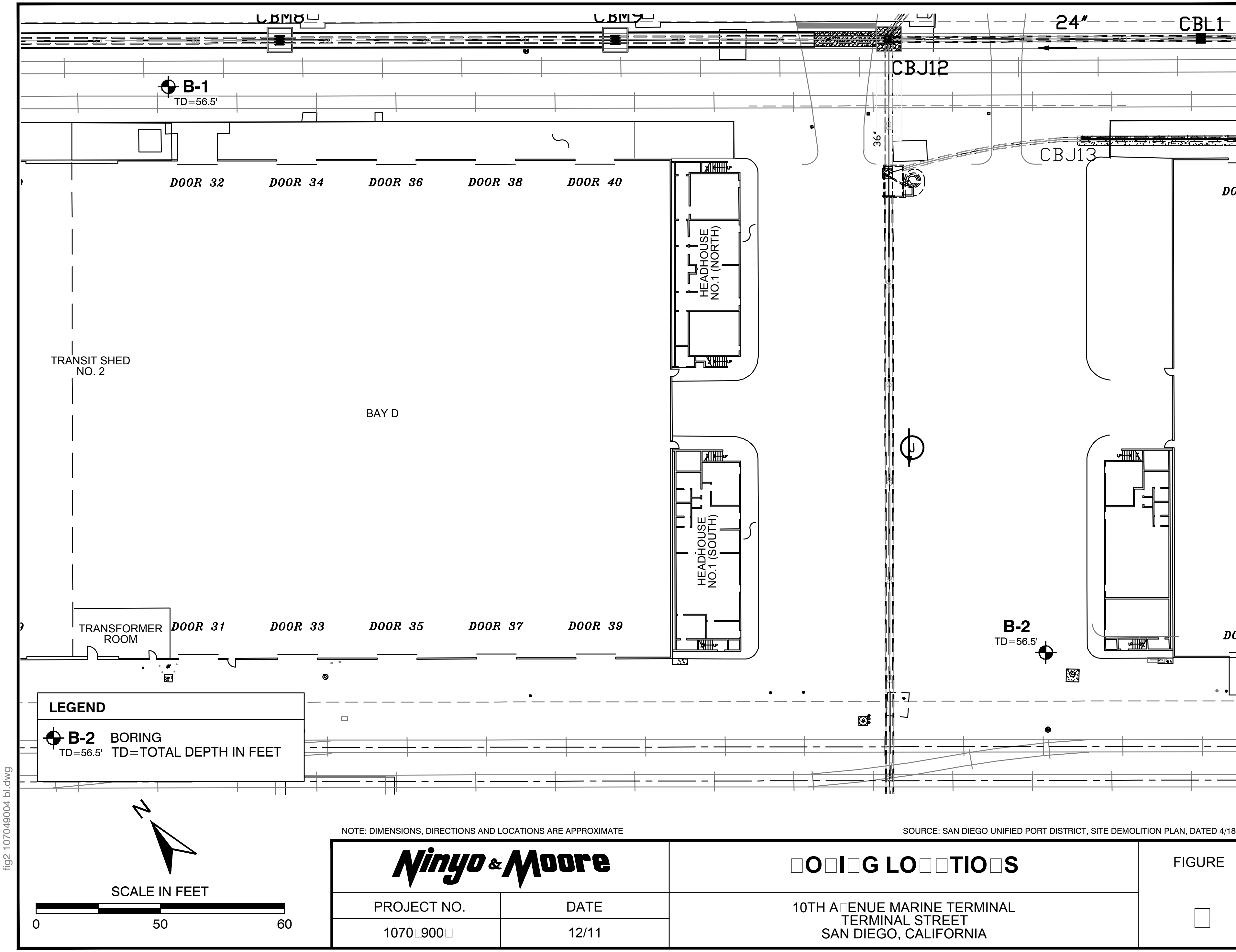
SCALE IN FEET

0 1,200 2,400 4,800

NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE

Ninyo & Moore	SITE LOCATION	FIGURE
PROJECT NO. / 107049004	DATE / 12/11	
	10TH AVENUE MARINE TERMINAL TERMINAL STREET SAN DIEGO, CALIFORNIA	1

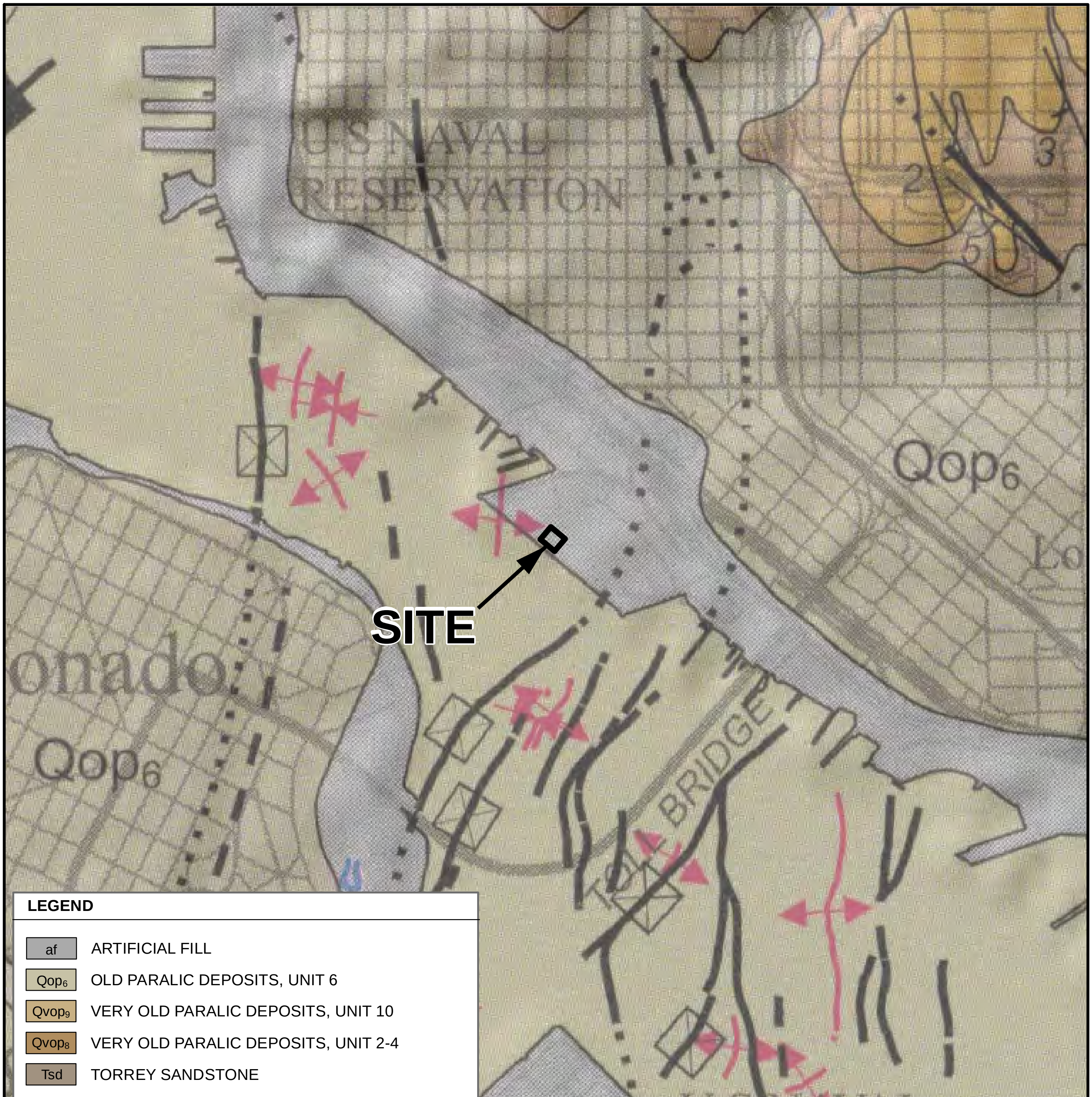
fig1_107049004_sl.mxd AOB



NOTE: DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE

SOURCE: SAN DIEGO UNIFIED PORT DISTRICT, SITE DEMOLITION PLAN, DATED 4/18/11.

Ninyo & Moore	□O□I□G LO□□TIO□S	FIGURE
PROJECT NO. 1070□900□ / DATE 12/11	10TH A□ENUE MARINE TERMINAL TERMINAL STREET SAN DIEGO, CALIFORNIA	□



SOURCE: KENNEDY, M.P., AND TAN, S.S., 2008, GEOLOGIC MAP OF THE SAN DIEGO 30' X 60' QUADRANGLE, CALIFORNIA

LEGEND

af	ARTIFICIAL FILL
Qop_6	OLD PARALIC DEPOSITS, UNIT 6
$Qvop_9$	VERY OLD PARALIC DEPOSITS, UNIT 10
$Qvop_8$	VERY OLD PARALIC DEPOSITS, UNIT 2-4
Tsd	TORREY SANDSTONE

65 U D — FAULT - SOLID WHERE ACCURATELY LOCATED, DASHED WHERE APPROXIMATE, DOTTED WHERE CONCEALED. ARROW AND NUMBER INDICATE DIRECTION AND ANGLE OF DIP OF FAULT PLANE

ANTICLINE - SOLID WHERE WELL DEFINED; SHORT DASH WHERE INFERRED

SYNCLINE - SOLID WHERE WELL DEFINED; SHORT DASH WHERE INFERRED

N

APPROXIMATE SCALE

0 2,000 4,000 FEET

NOTES: ALL DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE

fig3_107049004_geology.mxd AOB

Ninyo & Moore	GEOLOGY	FIGURE
PROJECT NO. 107049004		
DATE 12/11	10TH AVENUE MARINE TERMINAL TERMINAL STREET SAN DIEGO, CALIFORNIA	3

LEGEND

CALIFORNIA FAULT ACTIVITY

- HISTORICALLY ACTIVE
- HOLOCENE ACTIVE
- LATE QUATERNARY (POTENTIALLY ACTIVE)
- QUATERNARY (POTENTIALLY ACTIVE)
- STATE/COUNTY BOUNDARY

SOURCE: Jennings, C.W., and Bryant, W.A., 2010. Fault Activity Map of California, California Geological Survey.

APPROXIMATE SCALE

0 30 60 MILES

NOTES: ALL DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE

fig4_107049004_fault.mxd AOB

Ninyo & Moore		FAULT LOCATIONS	FIGURE
PROJECT NO.	DATE	10TH AVENUE MARINE TERMINAL TERMINAL STREET SAN DIEGO, CALIFORNIA	4
107049004	12/11		

APPENDIX A

BORING LOGS

Field Procedure for the Collection of Disturbed Samples

Disturbed soil samples were obtained in the field using a Standard Penetration Test sampler.

The Standard Penetration Test (SPT) Sampler

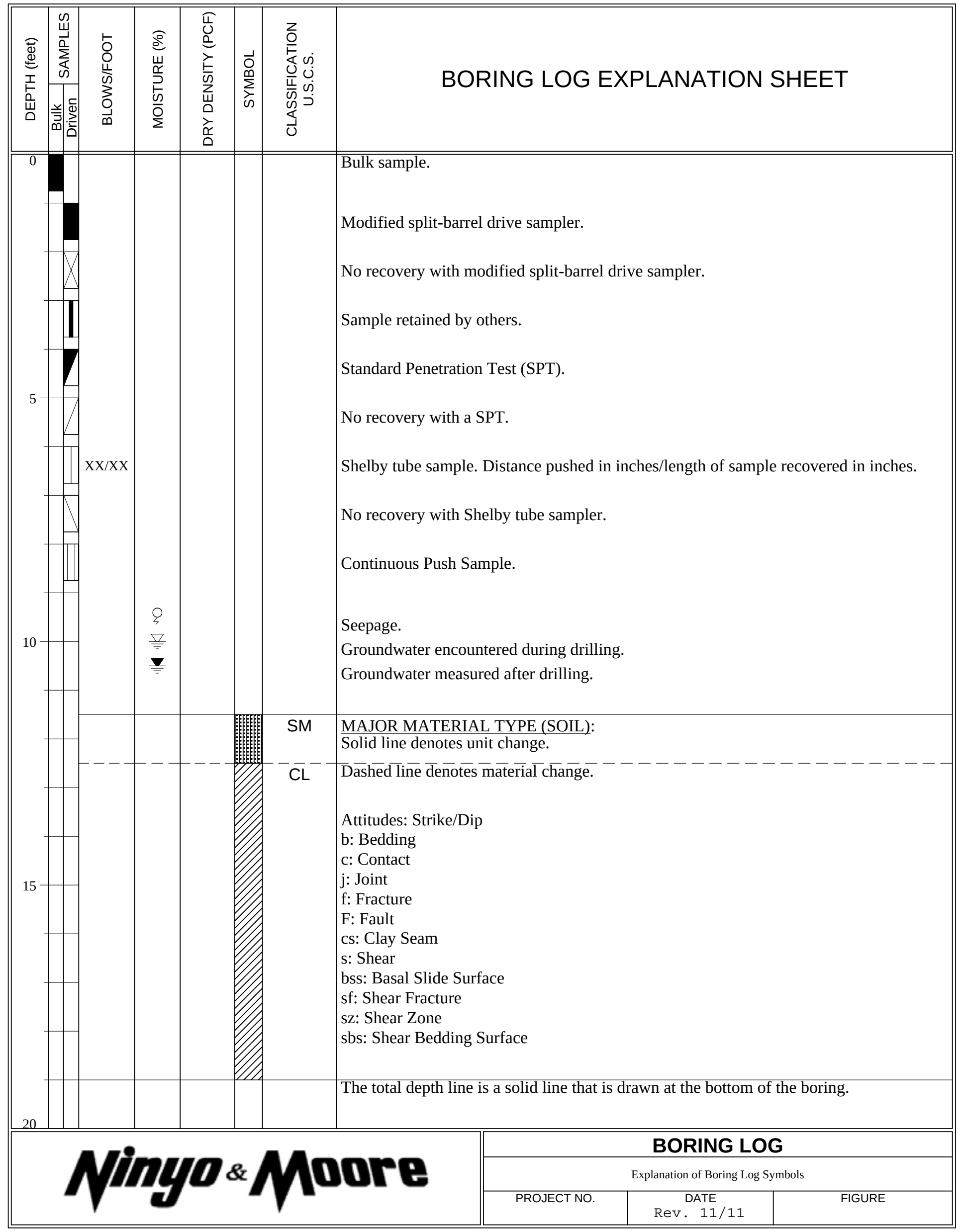
Disturbed drive samples of earth materials were obtained by means of a Standard Penetration Test sampler. The sampler is composed of a split barrel with an external diameter of 2 inches and an unlined internal diameter of 1-3/8 inches. The sampler was driven into the ground 12 to 18 inches with a 140-pound hammer falling freely from a height of 30 inches in general accordance with ASTM D 1586. The blow counts were recorded for every 6 inches of penetration; the blow counts reported on the logs are those for the last 12 inches of penetration. Soil samples were observed and removed from the sampler, bagged, sealed and transported to the laboratory for testing.

Field Procedure for the Collection of Relatively Undisturbed Samples

Relatively undisturbed soil samples were obtained in the field using a Modified Split-Barrel Drive sampler.

The Modified Split-Barrel Drive Sampler

The sampler, with an external diameter of 3.0 inches, was lined with 1-inch long, thin brass rings with inside diameters of approximately 2.4 inches. The sample barrel was driven into the ground with the weight of a hammer in general accordance with ASTM D 3550. The driving weight was permitted to fall freely. The approximate length of the fall, the weight of the hammer, and the number of blows per foot of driving are presented on the boring logs as an index to the relative resistance of the materials sampled. The samples were removed from the sample barrel in the brass rings, sealed, and transported to the laboratory for testing.



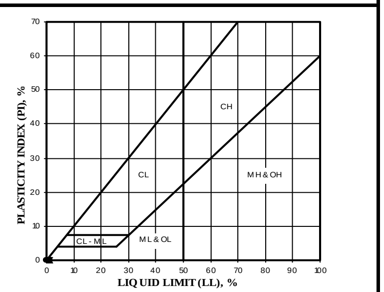
U.S.C.S. METHOD OF SOIL CLASSIFICATION

MAJOR DIVISIONS		SYMBOL	TYPICAL NAMES
COARSE-GRAINED SOILS (More than 1/2 of soil > No. 200 Sieve Size)	GRAVELS (More than 1/2 of coarse fraction > No. 4 sieve size	GW	Well graded gravels or gravel-sand mixtures, little or no fines
		GP	Poorly graded gravels or gravel-sand mixtures, little or no fines
		GM	Silty gravels, gravel-sand-silt mixtures
		GC	Clayey gravels, gravel-sand-clay mixtures
	SANDS (More than 1/2 of coarse fraction < No. 4 sieve size	SW	Well graded sands or gravelly sands, little or no fines
		SP	Poorly graded sands or gravelly sands, little or no fines
		SM	Silty sands, sand-silt mixtures
		SC	Clayey sands, sand-clay mixtures
FINE-GRAINED SOILS (More than 1/2 of soil < No. 200 sieve size)	SILTS & CLAYS Liquid Limit <50	ML	Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity
		CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays
		OL	Organic silts and organic silty clays of low plasticity
	SILTS & CLAYS Liquid Limit >50	MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts
		CH	Inorganic clays of high plasticity, fat clays
		OH	Organic clays of medium to high plasticity, organic silty clays, organic silts
HIGHLY ORGANIC SOILS		Pt	Peat and other highly organic soils

GRAIN SIZE CHART

CLASSIFICATION	RANGE OF GRAIN	
	U.S. Standard Sieve Size	Grain Size in Millimeters
BOULDERS	Above 12"	Above 305
COBBLES	12" to 3"	306 to 76.2
GRAVEL	3" to No. 4	76.2 to 4.76
Coarse	3" to 3/4"	76.2 to 19.1
Fine	3/4" to No. 4	19.1 to 4.76
SAND	No. 4 to No. 200	4.76 to 0.075
Coarse	No. 4 to No. 10	4.76 to 2.00
Medium	No. 10 to No. 40	2.00 to 0.420
Fine	No. 40 to No. 200	0.420 to 0.075
SILT & CLAY	Below No. 200	Below 0.075

PLASTICITY CHART



Ninyo & Moore

U.S.C.S. METHOD OF SOIL CLASSIFICATION

Updated Nov. 2011

DATE DRILLED 11/10/11 BORING NO. B-1

GROUND ELEVATION 9' ± (MSL) SHEET 1 OF 2

METHOD OF DRILLING 8" Diameter Hollow Stem Auger (Scott's Drilling)

DRIVE WEIGHT 140 lbs. (Auto-Trip) DROP 30"

SAMPLED BY CER LOGGED BY CER REVIEWED BY SG

DEPTH (feet)	SAMPLES Bulk / Driven	BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	CLASSIFICATION U.S.C.S.	DESCRIPTION/INTERPRETATION
0						ASPHALT CONCRETE: Approximately 8.5 inches thick.
					GP	FILL: Gray, damp, medium dense, poorly graded GRAVEL; ballast rock.
					SP-SM	Brown, moist, medium dense, poorly graded SAND; few silt and shells.
	Driven	9				
			▽		SM	Brown, wet, medium dense, silty medium SAND; few gravel and shells. Saturated. (Groundwater measured during drilling)
10	Driven	33	17.6	110.5		
	Driven	6				Loose; no recovery.
20	Driven	24	24.9	93.1	SP	Brownish gray, saturated, medium dense, poorly graded fine SAND; trace silt.
	Driven	5				Loose.
30	Driven	7	17.9	110.5	CL	Brown, saturated, firm, sandy CLAY; few shells.
	Driven	0			SM	Gray, saturated, very loose, silty fine SAND.
					CL	BAY DEPOSITS: Grayish brown, saturated, very stiff, sandy CLAY; fine SAND; few shells.
40						

Ninyo & Moore

BORING LOG

10TH AVENUE MARINE TERMINAL
TERMINAL STREET, SAN DIEGO, CALIFORNIA

PROJECT NO.	DATE	FIGURE
107049004	12/11	A-1

DATE DRILLED 11/10/11 BORING NO. B-1

GROUND ELEVATION 9' ± (MSL) SHEET 2 OF 2

METHOD OF DRILLING 8" Diameter Hollow Stem Auger (Scott's Drilling)

DRIVE WEIGHT 140 lbs. (Auto-Trip) DROP 30"

SAMPLED BY CER LOGGED BY CER REVIEWED BY SG

DEPTH (feet)	SAMPLES Bulk	SAMPLES Driven	BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DESCRIPTION/INTERPRETATION
40		■	18	28.6	98.5		CL	BAY DEPOSITS: (Continued) Grayish brown, saturated, very stiff, sandy CLAY; fine SAND; few shells.
							SP	Brown, saturated, very dense, poorly graded fine to coarse SAND.
		◢	76					
50		■	98/9"	23.6	100.9			
		◢	82					Fine to medium sand.
								Total Depth = 56.5 feet. Groundwater encountered at approximately 8.5 feet during drilling. Backfilled with approximately 19.9 cubic feet of bentonite grout and capped with black dyed concrete shortly after drilling on 11/10/11. Note: Groundwater may rise to a level higher than that measured in borehole due to seasonal variations in precipitation and several other factors as discussed in the report.
60								
70								
80								

BORING LOG

10TH AVENUE MARINE TERMINAL
TERMINAL STREET, SAN DIEGO, CALIFORNIA

PROJECT NO.	DATE	FIGURE
107049004	12/11	A-2

DATE DRILLED 11/10/11 BORING NO. B-2

GROUND ELEVATION 9' ± (MSL) SHEET 1 OF 2

METHOD OF DRILLING 8" Diameter Hollow Stem Auger (Scott's Drilling)

DRIVE WEIGHT 140 lbs. (Auto-Trip) DROP 30"

SAMPLED BY CER LOGGED BY CER REVIEWED BY SG

DEPTH (feet)	SAMPLES Bulk	SAMPLES Driven	BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DESCRIPTION/INTERPRETATION
0							SM	ASPHALT CONCRETE: Approximately 4 inches thick. FILL: Brown, damp, medium dense, silty SAND; some gravel.
							SC	Brown, moist, medium dense, clayey fine SAND.
		■	35	4.2	109.2		SP-SM	Brown, damp, medium dense, poorly graded medium SAND; few silt and shells.
				▽				Saturated. (Groundwater measured during drilling)
10		◢	7				SP	Gray, saturated, loose, poorly graded fine to coarse SAND; few shells.
		■	8	25.3	102.6			
20		◢	6				SP-SM	Gray, saturated, loose, poorly graded fine to coarse SAND with silt; trace gravel.
		■	14	16.0	106.7		SP	Gray, saturated, loose, poorly graded fine to medium SAND; trace silt.
30		◢	17				SP-SM	Brown, saturated, medium dense, poorly graded SAND; few silt and shells.
							SC	BAY DEPOSITS: Dark brown, saturated, very loose, clayey fine SAND.
		■	5					
40								

BORING LOG

10TH AVENUE MARINE TERMINAL
TERMINAL STREET, SAN DIEGO, CALIFORNIA

PROJECT NO.	DATE	FIGURE
107049004	12/11	A-3

DATE DRILLED 11/10/11 BORING NO. B-2

GROUND ELEVATION 9' ± (MSL) SHEET 2 OF 2

METHOD OF DRILLING 8" Diameter Hollow Stem Auger (Scott's Drilling)

DRIVE WEIGHT 140 lbs. (Auto-Trip) DROP 30"

SAMPLED BY CER LOGGED BY CER REVIEWED BY SG

DEPTH (feet)	SAMPLES (Bulk / Driven)	BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DESCRIPTION/INTERPRETATION
40	Driven	10				SM	BAY DEPOSITS: (Continued) Brown, saturated, medium dense, silty fine SAND.
	Driven	50/6"	15.5	110.6			Very dense; some gravel.
50	Driven	21				CL	Reddish brown, saturated, hard, sandy CLAY; fine sand.
	Driven	43	18.5	112.8		SC	Reddish brown, saturated, dense, clayey fine SAND.
							Total Depth = 56.5 feet. Groundwater encountered at approximately 8.5 feet during drilling. Backfilled with approximately 19.9 cubic feet of bentonite grout and capped with black dyed concrete shortly after drilling on 11/10/11. Note: Groundwater may rise to a level higher than that measured in borehole due to seasonal variations in precipitation and several other factors as discussed in the report.
60							
70							
80							

Ninyo & Moore

BORING LOG

10TH AVENUE MARINE TERMINAL
TERMINAL STREET, SAN DIEGO, CALIFORNIA

PROJECT NO.	DATE	FIGURE
107049004	12/11	A-4

APPENDIX B

LABORATORY TESTING

Classification

Soils were visually and texturally classified in accordance with the Unified Soil Classification System (USCS) in general accordance with ASTM D 2488. Soil classifications are indicated on the logs of the exploratory borings in Appendix A.

In-Place Moisture and Density Tests

The moisture content and dry density of relatively undisturbed samples obtained from the exploratory borings were evaluated in general accordance with ASTM D 2937. The test results are presented on the logs of the exploratory borings in Appendix A.

Gradation Analysis

Gradation analysis tests were performed on selected representative soil samples in general accordance with ASTM D 422. The grain-size distribution curves are shown on Figures B-1 through B-5. These test results were utilized in evaluating the soil classifications in accordance with the USCS.

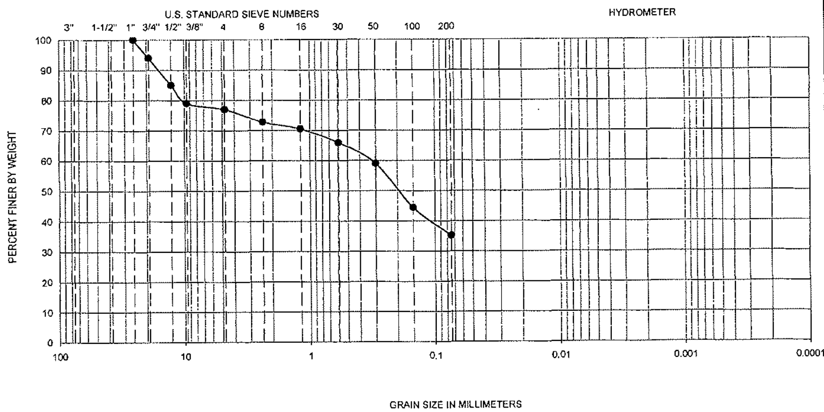
Direct Shear Tests

Direct shear tests were performed on relatively undisturbed samples in general accordance with ASTM D 3080 to evaluate the shear strength characteristics of the selected material. The sample was inundated during shearing to represent adverse field conditions. The results are shown on Figures B-6 and B-7.

Soil Corrosivity Tests

Soil pH, and resistivity tests were performed on a representative sample in general accordance with CT 643. The soluble sulfate and chloride content of the selected samples were evaluated in general accordance with CT 417 and CT 422, respectively. The test results are presented on Figure B-8.

GRAVEL		SAND			FINES	
Coarse	Fine	Coarse	Medium	Fine	Silt	Clay



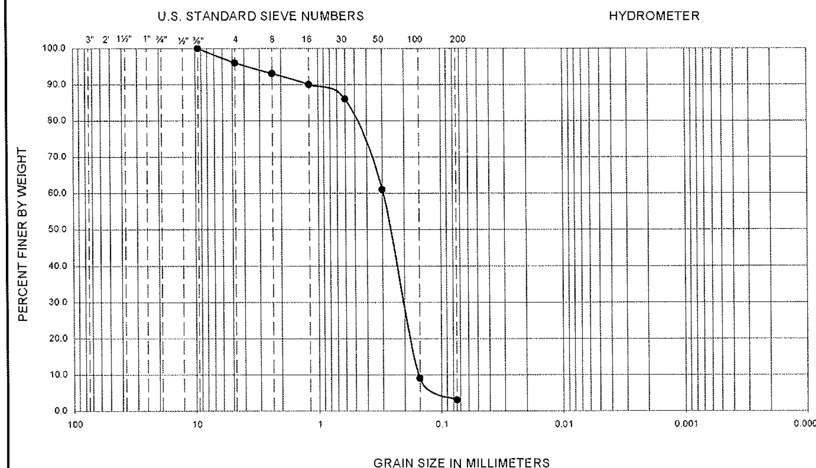
Symbol	Sample Location	Depth (ft)	Liquid Limit	Plastic Limit	Plasticity Index	D_{10}	D_{30}	D_{60}	C_u	C_c	Passing No. 200 (%)	U.S.C.S
●	B-1	10.0-11.5	--	--	--	--	--	--	--	--	35	SM

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 422

Ninyo & Moore		GRADATION TEST RESULTS	FIGURE
PROJECT NO.	DATE	10TH AVENUE MARINE TERMINAL TERMINAL STREET SAN DIEGO, CALIFORNIA	B-1
107049004	12/11		

107049004 SIEVE B-1 @ 10.0-11.5.xls

GRAVEL		SAND			FINES	
Coarse	Fine	Coarse	Medium	Fine	SILT	CLAY

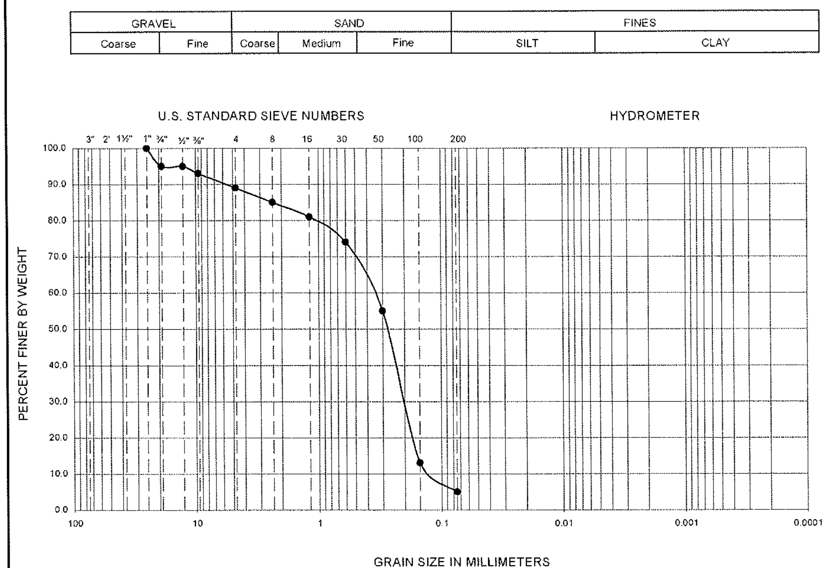


Symbol	Sample Location	Depth (ft)	Liquid Limit	Plastic Limit	Plasticity Index	D_{10}	D_{30}	D_{60}	C_u	C_c	Passing No. 200 (%)	USCS
●	B-2	10.0-11.5	--	--	--	0.15	0.20	0.30	2.0	0.9	3	SP

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 422

Ninyo & Moore		GRADATION TEST RESULTS	FIGURE
PROJECT NO.	DATE	10TH AVENUE MARINE TERMINAL TERMINAL STREET SAN DIEGO, CALIFORNIA	B-2
107049004	12/11		

107049004 SIEVE B-2 @ 10.0-11.5.xls

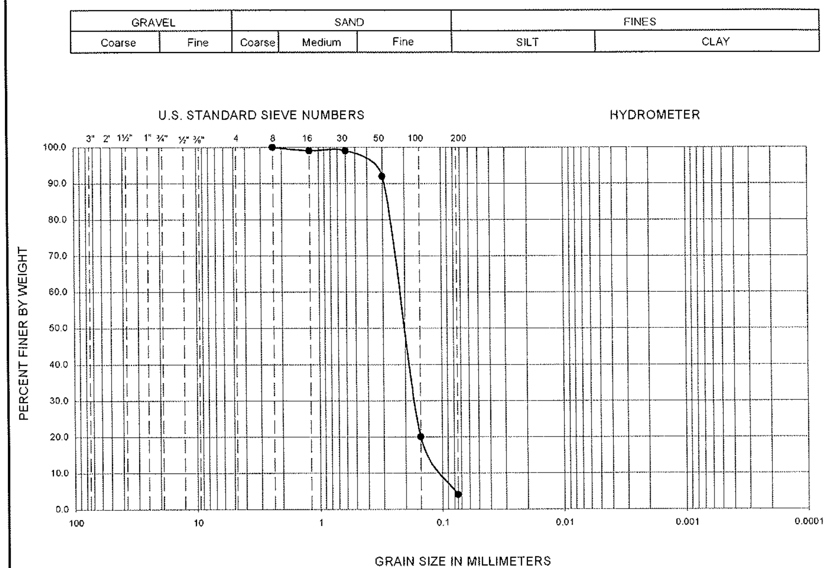


Symbol	Sample Location	Depth (ft)	Liquid Limit	Plastic Limit	Plasticity Index	D_{10}	D_{30}	D_{60}	C_u	C_c	Passing No. 200 (%)	USCS
●	B-2	20.0-21.5	--	--	--	0.13	0.20	0.34	2.6	0.9	5	SP-SM

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 422

Ninyo & Moore		GRADATION TEST RESULTS	FIGURE
PROJECT NO.	DATE	10TH AVENUE MARINE TERMINAL TERMINAL STREET SAN DIEGO, CALIFORNIA	B-3
107049004	12/11		

107049004 SIEVE B-2 @ 20.0-21.5.xls



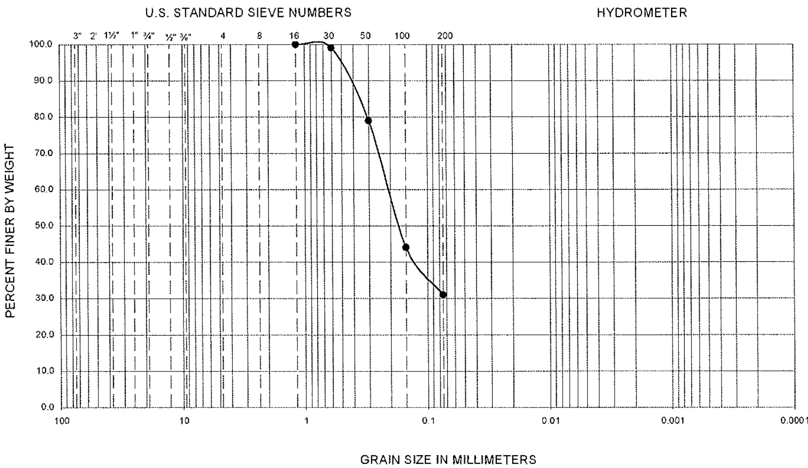
Symbol	Sample Location	Depth (ft)	Liquid Limit	Plastic Limit	Plasticity Index	D_{10}	D_{30}	D_{60}	C_u	C_c	Passing No. 200 (%)	USCS
●	B-2	25.0-26.5	--	--	--	0.11	0.17	0.21	1.9	1.3	4	SP

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 422

Ninyo & Moore		GRADATION TEST RESULTS	FIGURE
PROJECT NO.	DATE	10TH AVENUE MARINE TERMINAL TERMINAL STREET SAN DIEGO, CALIFORNIA	B-4
107049004	12/11		

107049004 SIEVE B-2 @ 25.0-26.5.xls

GRAVEL		SAND			FINES	
Coarse	Fine	Coarse	Medium	Fine	SILT	CLAY

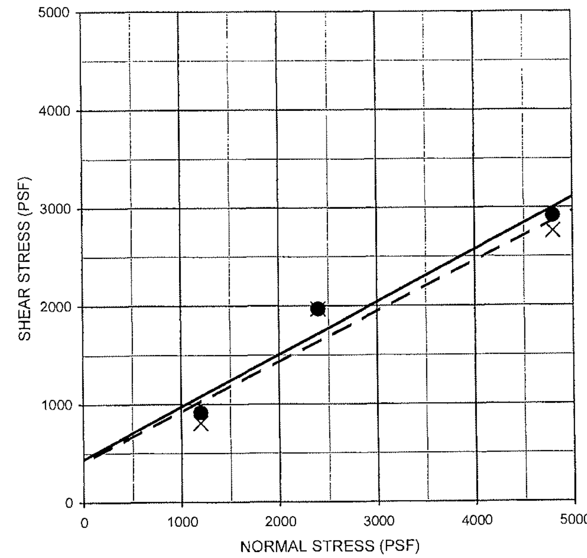


Symbol	Sample Location	Depth (ft)	Liquid Limit	Plastic Limit	Plasticity Index	D_{10}	D_{30}	D_{60}	C_u	C_c	Passing No. 200 (%)	USCS
●	B-2	40.0-41.5	--	--	--	--	--	--	--	--	31	SM

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 422

Ninyo & Moore		GRADATION TEST RESULTS	FIGURE
PROJECT NO.	DATE	10TH AVENUE MARINE TERMINAL TERMINAL STREET SAN DIEGO, CALIFORNIA	B-5
107049004	12/11		

107049004 SIEVE B-2 @ 40.0-41.5.xls

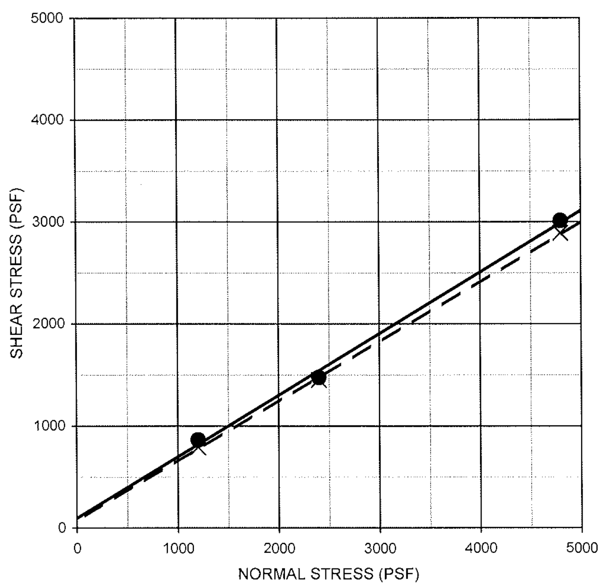


Description	Symbol	Sample Location	Depth (ft)	Shear Strength	Cohesion, c (psf)	Friction Angle, φ (degrees)	Soil Type
Sandy CLAY	—●—	B-1	30.0-31.5	Peak	440	28	CL
Sandy CLAY	- - x - -	B-1	30.0-31.5	Ultimate	410	27	CL

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 3080

Ninyo & Moore		DIRECT SHEAR TEST RESULTS	FIGURE
PROJECT NO.	DATE	10TH AVENUE MARINE TERMINAL TERMINAL STREET SAN DIEGO, CALIFORNIA	B-6
107049004	12/11		

107049004 SHEAR B-1 @ 30.0-31.5.xls



Description	Symbol	Sample Location	Depth (ft)	Shear Strength	Cohesion, c (psf)	Friction Angle, ϕ (degrees)	Soil Type
Clayey SAND	——●——	B-2	35.0-36.5	Peak	100	31	SC
Clayey SAND	- - x - -	B-2	35.0-36.5	Ultimate	70	30	SC

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 3080

Ninyo & Moore

DIRECT SHEAR TEST RESULTS

PROJECT NO.	DATE
107049004	12/11

10TH AVENUE MARINE TERMINAL
TERMINAL STREET
SAN DIEGO, CALIFORNIA

FIGURE **B-7**

107049004 SHEAR B-2 @ 35.0-36.5.xls

SAMPLE LOCATION	SAMPLE DEPTH (FT)	pH [1]	RESISTIVITY [1] (Ohm-cm)	SULFATE CONTENT [2] (ppm)	SULFATE CONTENT [2] (%)	CHLORIDE CONTENT [3] (ppm)
B-2	15.0-16.5	7.8	770	320	0.032	600

[1] PERFORMED IN GENERAL ACCORDANCE WITH CALIFORNIA TEST METHOD 643
[2] PERFORMED IN GENERAL ACCORDANCE WITH CALIFORNIA TEST METHOD 417
[3] PERFORMED IN GENERAL ACCORDANCE WITH CALIFORNIA TEST METHOD 422

Ninyo & Moore

CORROSIVITY TEST RESULTS

PROJECT NO.	DATE
107049004	12/11

10TH AVENUE MARINE TERMINAL
TERMINAL STREET
SAN DIEGO, CALIFORNIA

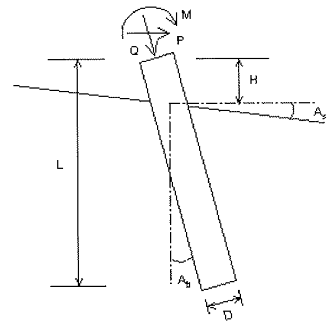
FIGURE **B-8**

107049004 CORROSIVITY Page 1.xls

APPENDIX C

PILE CAPACITY CALCULATIONS

VERTICAL ANALYSIS



Drilled Shaft (dia >24 in. or 61 cm)

Loads:
Load Factor for Vertical Loads= 1.0
Load Factor for Lateral Loads= 1.0
Loads Supported by Pile Cap= 0 %
Shear Condition: Static

Vertical Load, Q= 4.7 -kp
Shear Load, P= 1.6 -kp
Moment, M= 98.2 -kp-f

Profile:
Pile Length, L= 52.0 -ft
Top Height, H= 0 -ft
Slope Angle, As= 0
Batter Angle, Ab= 0

* Zero Friction *
Zero Friction Start: 0 -ft End: 1 -ft
* Negative Friction *
Negative Friction Start: 5 -ft End: 42 -ft with Factor: 0.6

Soil Data:

Depth -ft	Gamma -lb/f3	Phi	C -kp/f2	K -lb/i3	e50 or Dr %	Nspt
0	115	30	0.00	25	50	10
5	53	30	0.00	20	25	7
30	58	32	0.00	60	50	17
35	53	30	0.00	20	15	3
42	63	34	0.00	125	90	60
50	63	0.0	2.0	500	0.5	21
55	63	34	0.00	125	65	30

Pile Data:

Depth -ft	Width -in	Area -in2	Per. -in	I -in4	E -kp/i2	Weight -kp/f
0.0	48	1809.6	150.8	260576.3	3000	1.885
52.0						

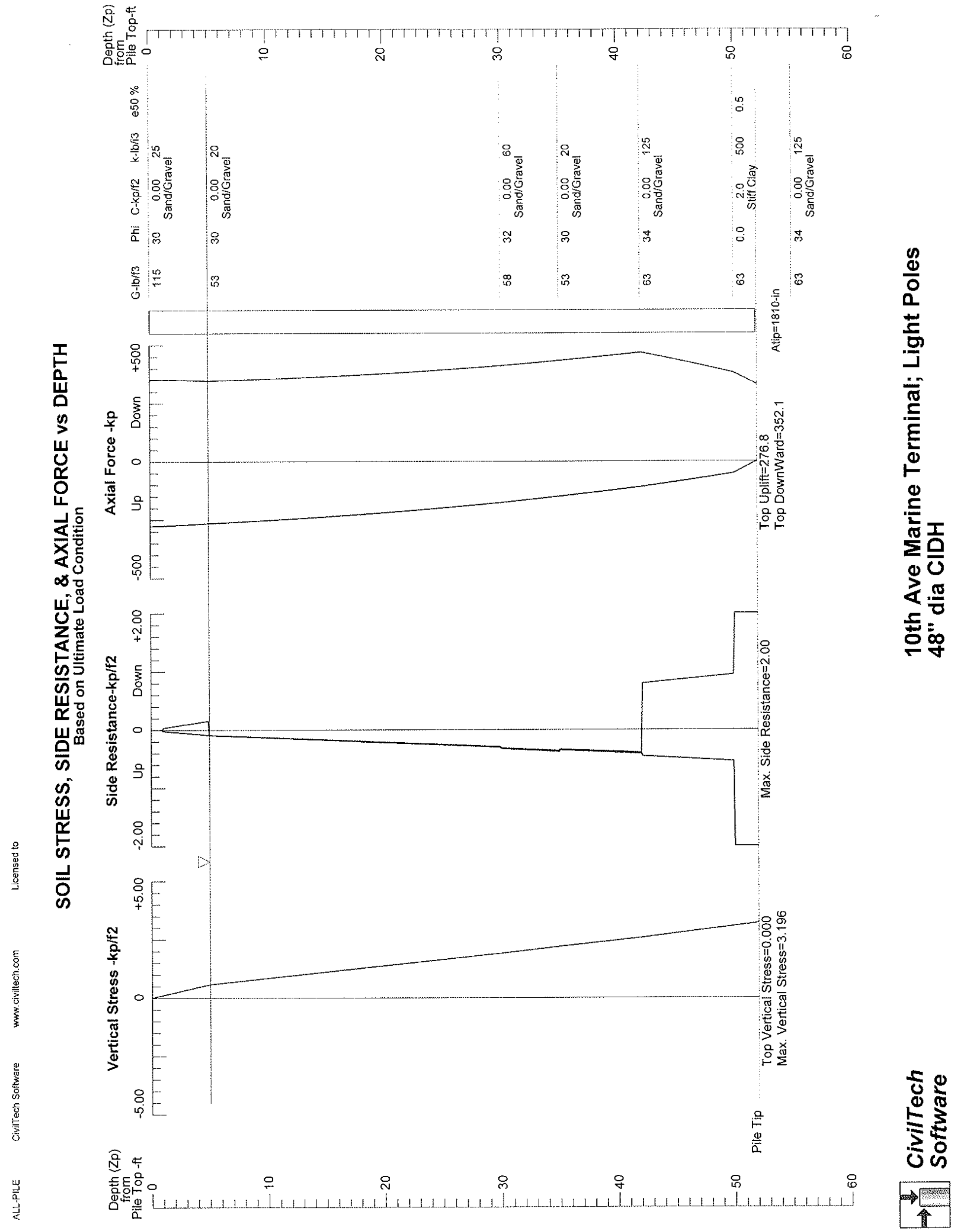
Vertical capacity:
Weight above Ground= 0.00 Total Weight= 61.17-kp *Soil Weight is not included
Side Resistance (Down)= 21.634-kp Side Resistance (Up)= 215.609-kp
Tip Resistance (Down)= 330.512-kp Tip Resistance (Up)= 0.000-kp
Total Ultimate Capacity (Down)= 352.146-kp Total Ultimate Capacity (Up)= 276.775-kp
Total Allowable Capacity (Down)= 176.073-kp Total Allowable Capacity (Up)= 138.388-kp
OK! Qallow > Q

Settlement Calculation:
At Q= 4.70-kp Settlement= 0.01701-in
At Xallow= 1.00-in Qallow= 191.74738-kp

Note: If the program cannot find a result or the result exceeds the upper limit. The result will be displayed as 99999.

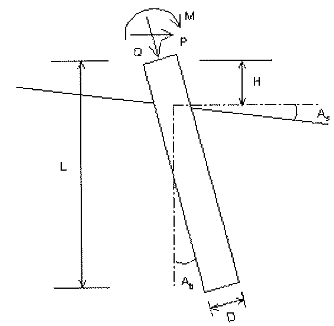
CivilTech Software

10th Ave Marine Terminal; Light Poles
48" dia CIDH



LATERAL ANALYSIS

Figure 2



Drilled Shaft (dia >24 in. or 61 cm)

Loads:
Load Factor for Vertical Loads= 1.0
Load Factor for Lateral Loads= 1.0
Loads Supported by Pile Cap= 0 %
Shear Condition: Static

Vertical Load, Q= 4.7 -kp
Shear Load, P= 1.6 -kp
Moment, M= 98.2 -kp-f

Profile:
Pile Length, L= 52.0 -ft
Top Height, H= 0 -ft
Slope Angle, As= 0
Batter Angle, Ab= 0

* Zero Friction *
Zero Friction Start: 0 -ft End: 1 -ft
* Negative Friction *
Negative Friction Start: 5 -ft End: 42 -ft with Factor: 0.6

Soil Data:

Depth -ft	Gamma -lb/f3	Phi	C -kp/f2	K -lb/i3	e50 or Dr %	Nspt
0	115	30	0.00	25	50	10
5	53	30	0.00	20	25	7
30	58	32	0.00	60	50	17
35	53	30	0.00	20	15	3
42	63	34	0.00	125	90	60
50	63	0.0	2.0	500	0.5	21
55	63	34	0.00	125	65	30

Pile Data:

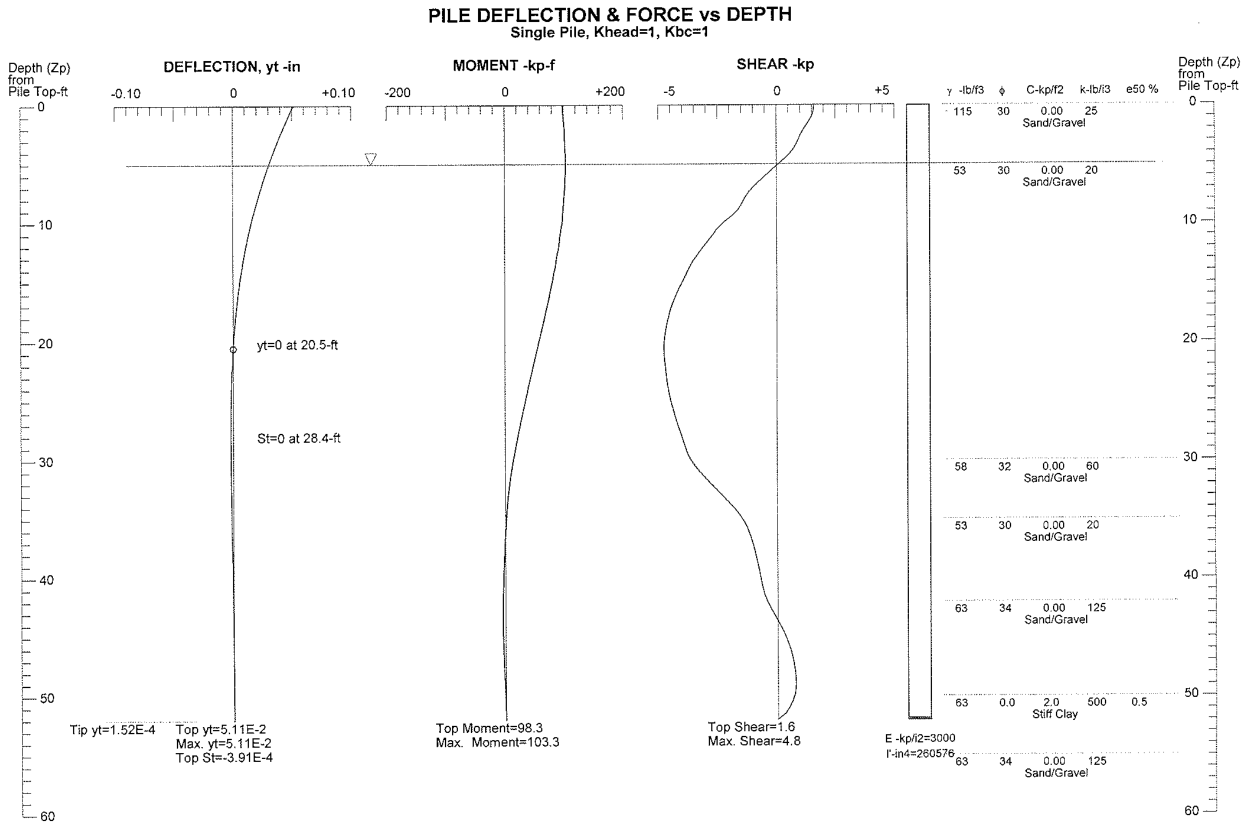
Depth -ft	Width -in	Area -in2	Per. -in	I -in4	E -kp/i2	Weight -kp/f
0.0	48	1809.6	150.8	260576.3	3000	1.885
52.0						

Single Pile Lateral Analysis:
Top Deflection, yt= 0.05110-in
Max. Moment, M= 103.33-kp-f
Top Deflection Slope, St= -0.00039
OK! Top Deflection, 0.0511-in is less than the Allowable Deflection= 0.25-in

Note: If the program cannot find a result or the result exceeds the upper limit. The result will be displayed as 99999.
The Max. Moment calculated by program is an internal force from the applied load conditions. Structural engineer has to check whether the pile has enough capacity to resist the moment with adequate factor of safety. If not, the pile may fail under the load conditions.

CivilTech Software

10th Ave Marine Terminal; Light Poles
48" dia CIDH



CivilTech Software

10th Ave Marine Terminal; Light Poles
48" dia CIDH

Figure 2

UPDATED GEOTECHNICAL AND FAULT HAZARD EVALUATION COMMERCIAL BERTHING PIER AND TAMT SAN DIEGO, CALIFORNIA

PREPARED FOR:
Port of San Diego
3165 Pacific Highway
San Diego, California 92101

PREPARED BY:
Ninyo & Moore
Geotechnical and Environmental Sciences Consultants
5710 Ruffin Road
San Diego, California 92123

December 13, 2012
Project No. 107319001

December 13, 2012
Project No. 107319001

Mr. Ernesto Medina
Port of San Diego
3165 Pacific Highway
San Diego, California 92101

Subject: Updated Geotechnical and Fault Hazard Evaluation
Commercial Berthing Pier and TAMT
San Diego, California

Dear Mr. Medina:

In accordance with Agreement No. 37-2012, Tasks 3.1 through 3.4, and 3.7 of Attachment A of the agreement, we have prepared this geotechnical and fault hazard evaluation report for the construction of the proposed site improvements at the vacant parcel along Water Street at the Tenth Avenue Marine Terminal (TAMT), in the City of San Diego, California. This report presents our geotechnical findings, conclusions, and recommendations regarding the proposed project. This report supersedes our previous report dated July 24, 2012 (referenced) for this project as some aspects of the project have changed since issuance of that report. This report also incorporates our responses to City of San Diego review comments on our earlier report. We appreciate the opportunity to be of service on this project.

Respectfully submitted,
NINYO & MOORE

REGISTERED PROFESSIONAL ENGINEER MADAN CHIRUMALLA, PE No. 74186 Exp. 6/30/13 CIVIL STATE OF CALIFORNIA

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Project Engineer

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PROFESSIONAL HYDROGEOLOGIST JONATHAN C. GOODMACHER Exp. 10/31/13 No. 860 CERTIFIED HYDROGEOLOGIST STATE OF CALIFORNIA

Soumitra Guha, PhD, PE, GE
Principal Engineer

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MAC/JG/SG/kh

Distribution: (6) Addressee

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Appendices

1. INTRODUCTION

The updated report presents the results of our geotechnical and fault hazard evaluation for the proposed site improvements at the vacant parcel along Water Street at the Tenth Avenue Marine Terminal (TAMT), in the City of San Diego, California (Figure 1). This report presents the results of our background review, subsurface evaluations, laboratory testing, geotechnical analyses, conclusions regarding the geologic and geotechnical conditions at the project site, and recommendations for design and construction of the proposed project. This report supersedes our previous report dated July 24, 2012 (referenced), and it incorporates our responses to City of San Diego review comments on our earlier report. The comments and responses are provided in Appendix F.

2. SCOPE OF SERVICES

Our scope of services included the following:

- Reviewing background information including available geotechnical evaluation reports, geologic and fault maps, stereoscopic aerial photographs, and in-house data.
- Performing geologic reconnaissance of the site to observe existing conditions and to mark out Cone Penetration Test (CPT) sounding and exploratory boring locations prior to contacting Underground Service Alert (USA).
- Notifying USA to clear CPT/boring locations for conflicts with public utilities.
- Coordinating with the Port personnel to clear CPT/boring locations for conflicts with private utilities.
- Obtaining County of San Diego Department of Environmental Health (DEH) boring permits. Work was conducted under DEH boring permit #LMON108504 and #LMON108786.
- Performing a subsurface exploration consisting of the advancement of 21 CPT soundings with a truck-mounted rig to depths of up to approximately 50½ feet below ground surface (bgs). In addition, one small diameter boring was drilled with a truck-mounted hollow-stem auger drill rig equipment to a depth of approximately 51½ feet bgs. The purpose of the CPTs and boring was to observe the subsurface conditions at the site and to collect soil samples for geotechnical testing and analysis in our in-house geotechnical laboratory. The boring was sampled continuously from a depth of approximately 10 feet bgs to its termination.
- Compiling and analyzing the data obtained from our research, subsurface exploration, and geotechnical laboratory testing.

- Preparing this update report presenting our findings, conclusions, and recommendations regarding the presence of faulting on the subject site and geotechnical design and construction aspects of the project.
- Evaluating the flood hazard potential at the site. This was performed by our sub-consultant, Alyson Consulting, and was presented as a separate transmittal (Alyson Consulting, 2012).

3. SITE AND PROJECT DESCRIPTION

The project is located near the intersection of Crosby Road and Water Street at TAMT in San Diego, California (Figure 1). Site coordinates are approximately 32.6967º Latitude and -117.1517º Longitude. Currently, the project site is vacant land and a parking lot. We understand that previous structures at the site were demolished. Concrete bulkheads were observed at the western end of the property during our site reconnaissance. The project site has an elevation of approximately 8 feet above mean sea level (MSL) (National Geodetic Vertical Datum of 1929 [NGVD 29]) and slopes gently to the east. We understand that the proposed project improvements will include the construction of a single-story, steel-framed, butler warehouse building, a pre-fabricated, modular office building, and an at-grade parking lot.

4. BACKGROUND INFORMATION

Various documents were reviewed in preparation for our subsurface explorations, including aerial photographs, geologic maps, and geotechnical evaluations performed by GeoLogic Associates (GLA, 2006). The State of California and the City of San Diego have designated the site as being within a fault-rupture hazard zone (Alquist-Priolo zone, Point Loma Quadrangle R03, Official Map of Earthquake Fault Zones delineated by the California Geological Survey (CGS) under the Alquist-Priolo Earthquake Fault Zoning Act) requiring a site-specific evaluation for the potential presence of active faults.

5. SUBSURFACE EXPLORATION AND LABORATORY TESTING

Our subsurface explorations were conducted on May 24 and May 25, and October 26, 2012, and consisted of the advancement of 21 CPT soundings (CPT-1 though CPT-21), and the drilling, logging, and sampling of one small diameter boring (B-1) using a truck-mounted hollow-stem auger drill rig. The CPT soundings were performed to an approximate depth of 50½ feet bgs. The exploratory boring was drilled to a depth of approximately 51½ feet bgs. Figure 2 shows the approximate locations of our explorations.

The primary purpose of the CPT soundings and boring was to provide information regarding subsurface conditions and to collect soil samples for geotechnical laboratory testing. The CPTs and boring were backfilled with bentonite grout. Boring and CPT logs are presented in Appendix A.

Bulk and standard penetration test (SPT) samples were collected at selected depths from the boring and were transported to our in-house laboratory for geotechnical testing. Laboratory testing included in-situ moisture content, sieve (gradation) analysis, and R-value. The result of the in-situ moisture content test is shown at the corresponding sample depth on the boring log in Appendix A. The results of the other laboratory tests performed are presented in Appendix B.

6. GEOLOGY AND SUBSURFACE CONDITIONS

Our findings regarding regional and site geology, including groundwater conditions are provided in the following sections.

6.1. Regional Geologic Setting

The project area is situated in the western San Diego County section of the Peninsular Ranges Geomorphic Province. This geomorphic province encompasses an area that extends approximately 1,450 km (900 miles) from the Transverse Ranges and the Los Angeles Basin south to the southern tip of Baja California (Norris and Webb, 1990). The province varies in width from approximately 48 to 160 km (30 to 100 miles). In general, the province consists of rugged mountains underlain by Jurassic metavolcanic and metasedimentary rocks, and Cretaceous igneous rocks of the southern California batholith. The portion of the province in San Diego County that includes the project area consists generally of uplifted Tertiary sedimentary rock, Jurassic metamorphic rock, and Cretaceous granitic rock. Figure 3 is a map of the regional geology (see discussion below).

The Peninsular Ranges Province is traversed by a group of sub-parallel faults and fault zones trending roughly northwest. Several of these faults, which are shown on Figure 4, are considered active faults. The Elsinore, San Jacinto, and San Andreas are active fault systems located northeast of the project area and the Coronado Bank, San Diego Trough, and San Clemente faults are active faults located west of the project area. Elements of the Rose Canyon Fault Zone, the nearest active fault system, have been mapped within several hundred feet of the project. Major tectonic activity associated with these and other faults within this regional tectonic framework consists primarily of right-lateral, strike-slip movement. Further discussion of faulting relative to the site is provided in the Faulting and Seismicity section of this report.

6.2. Subsurface Conditions

Based on our literature review of published geologic maps and reports, our site reconnaissance, and subsurface exploration, the geologic units underlying the project site include fill, bay deposits, and old paralic deposits. Generalized descriptions of the earth units are provided in the subsequent sections. Additional descriptions are provided on the CPT and boring logs in Appendix A. Figure 5 is our interpretation of the geology of the site. Figure 6 presents interpreted geologic cross-sections of sub-surface conditions.

6.2.1. Fill

Fill materials were encountered in our boring from the ground surface to a depth of approximately 9 feet. As encountered in our boring, the fill material generally consisted of light brown to brown, damp to moist, loose to medium dense, silty sand with gravel, and poorly-graded sand with silt and scattered shell debris. Documentation regarding placement of these fills was requested but was not made available.

6.2.2. Bay Deposits

Bay deposits were encountered below the fill. Bay deposits extended to a depth of approximately 15½ feet bgs. The bay deposits generally consisted of dark gray, saturated, very loose to medium dense, poorly-graded sand and silty sand, with scattered shell debris. The bay deposits are considered to be less than 6,500 years old (Kennedy & Clarke, 1999 a & b).

6.2.3. Old Paralic Deposits (Qop6)

Materials correlating to mapped old paralic deposits (Kennedy and Tan, 2008; formerly designated Bay Point Formation) were encountered underlying the bay deposits to the total exploration depth of approximately 51½ feet bgs. These materials generally consisted of brown to yellowish brown or grayish brown, saturated, loose to very dense, poorly-graded sand, clayey sand, silty sand, and sandy silt, and hard, clay and clayey silt.

The old paralic deposits generally consisted of two zones. An upper zone of dominantly poorly graded sand or silty or clayey sand. Contained within the upper zone was a paleosol (as evidenced by carbonate nodules). The lower zone consisting of interlayered units of the materials above but with clay and clayey silt layers. These units appear to be generally stratigraphically consistent with those observed in the upper 300 feet of the sediments in studies of faulting in San Diego Bay (Kennedy & Clarke, 1999 a & b). Per Kennedy & Clarke (1999 a & b) the upper 300 feet of sediments within San Diego Bay are interpreted to be Quaternary in age.

6.3. Groundwater

Groundwater was encountered in our boring at a depth of approximately 8 feet bgs. Groundwater was also encountered at a similar depth in the referenced geotechnical report by others (GLA, 2006). Fluctuations in the groundwater level may occur due to variations in tidal fluctuations, ground surface topography, subsurface geologic conditions and structure, rainfall, irrigation, and other factors not evident at the time of our subsurface evaluation.

7. GEOLOGIC HAZARDS

The following sections describe potential geologic hazards at the site, including faulting and seismicity, liquefaction, lateral spreading, and tsunamis.

7.1. Faulting and Seismicity

As shown on Figures 5 and 7, projections of the active Rose Canyon Fault trend in the direction of the site. As discussed below, there are indications of active or potentially active faults (i.e., faults that exhibit evidence of ground displacement in the last 11,000 years and 2,000,000 years, respectively) underlying the site.

In general, hazards associated with seismic activity include strong ground motion, ground surface rupture, liquefaction, and seismically-induced settlement. Discussion of these considerations is included in the following sections.

7.1.1. Strong Ground Motion

The 2010 California Building Code (CBC) recommends that the design of structures be based on the peak horizontal ground acceleration (PGA) having a 2 percent probability of exceedance in 50 years which is defined as the Maximum Considered Earthquake (MCE). The statistical return period for PGA_{MCE} is approximately 2,475 years. In evaluating the seismic hazards associated with the project site, we have used a Site Class D (average shear wave velocity ranging from approximately 600 to 1,200 feet per second) based on the review of our boring and CPT data, and in accordance with CBC. The United States Geological Survey (USGS) (USGS, 2011) ground motion calculator (web-based) calculates both the site modified PGA_{MCE} and the design PGA. The site modified PGA_{MCE} and the design PGA are estimated to be 0.64g and 0.43g, respectively, using the USGS ground motion calculator. The calculations are provided in Appendix C. These estimates of ground motion do not include near-source factors that may be applicable to the design of structures on site.

7.1.2. Ground Surface Rupture and Site-Specific Fault Evaluation

Due to the site being located within an Alquist-Priolo zone and the City of San Diego designated “Downtown Special Fault Zone”, a site-specific fault evaluation was performed to evaluate the presence or absence of active or potentially active faulting on the subject site. The site-specific evaluation generally followed the State of California, City of San Diego technical guidelines for fault-rupture hazard reports (City of San Diego, 2011; CGS, 2007). An active fault is defined as a fault which has had surface displacement within the Holocene time (about the last 11,000 years) and a potentially active fault is considered to have been active during the Quaternary time (last 1.6 million years). The evaluation consisted of drilling a boring and advancing CPT soundings.

The location of the evaluation was selected to intersect mapped faults in the vicinity of the site. The project is in a complex area of subsidiary fault splays associated with the Rose Canyon Fault Zone.

Our evaluation found evidence of a subsurface anomaly that is interpreted as an active or potentially active fault at the site. An offset of traceable beds was observed between CPT-4 and CPT-5 (Figure 6). Considering the close proximity to the active Rose Canyon Fault, and the amount of offset that is observed between the traceable beds near the existing ground surface, we interpret the fault to be active. The interpreted fault is located somewhere between CPT-4 and CPT-5, with an unknown exact location. We have conservatively located the fault as being adjacent to CPT-5. We note that beds to the north of the inferred fault are “warped” or tilted. This tilt is ascribed to deformation or dragging associated with movement on the fault. The interpreted location of the suspected fault is also depicted on Figure 5.

Based on our subsurface evaluation and review of background data, it is our opinion that active or potentially active faults cross the project site, and therefore, the potential for ground surface rupture due to active faulting is considered high. In accordance with the Alquist-Priolo Act, the proposed building structures for human occupancy should be offset 50 feet from the closest suspected fault location. A ‘structure for human occupancy’ is defined in CGS Special Publication 42 (2007) as any structure used or intended for supporting or sheltering any use or occupancy, which is expected to have a human occupancy rate of more than 2,000 person-hours per year. The extent of this offset is shown on Figure 5. Lurching or cracking of the ground surface as a result of nearby seismic events is also possible.

7.1.3. Liquefaction

Liquefaction is the phenomenon in which loosely deposited granular soils (with silt and clay contents of less than approximately 35 percent) and non-plastic silts located below the water table undergo rapid loss of shear strength when subjected to strong earthquake-induced ground shaking. Ground shaking of sufficient duration results in the loss of grain-to-grain contact due to a rapid rise in pore water pressure, and causes the soil to behave as a fluid for a short period of time. Liquefaction is known generally to occur in saturated or near-saturated cohesionless soils at depths shallower than 50 feet below the ground surface. Factors known to influence liquefaction potential include composition and thickness of soil layers, grain size, relative density, groundwater level, degree of saturation, and both intensity and duration of ground shaking.

An evaluation of the liquefaction potential of subsurface soils was performed using the computer program LiquefyPro (CivilTech Software, 2007a), using the data from CPT soundings. The liquefaction analysis was based on the National Center for Earthquake Engineering Research (NCEER) procedure (Youd, et al., 2001) developed from the methods originally recommended by Seed and Idriss (1982). A groundwater table depth of 5 feet below the existing ground surface was used in our liquefaction evaluation. A moment magnitude of 7.2 associated with the Rose Canyon Fault, and a design PGA of 0.43 was used in liquefaction analyses. Our analyses indicate that there is a high potential for liquefaction at the site and significant liquefiable layers occur to a depth of approximately 25 feet. Further, as mapped by the City of San Diego (2008), the site is within an area with a high potential for liquefaction, shallow groundwater, major drainages, and hydraulic fill

(Figure 8). The liquefaction analyses results are presented in Appendix D. The mitigation recommendations for liquefaction are provided in the following sections.

7.1.4. Dynamic Settlement of Saturated Soils

As a result of liquefaction, the proposed structures may be subject to several hazards, including liquefaction-induced settlement. In order to estimate the amount of post-earthquake settlement, the method proposed by Ishihara and Yoshimine (1992) was chosen for the evaluation of dynamic settlement. The amount of soil settlement during a strong seismic event depends on the thickness of the liquefiable layers and the density and/or consistency of the soils.

Under the current conditions, post-earthquake total settlement of up to approximately 5 inches was calculated for the project site using the computer program LiquefyPro (CivilTech Software, 2007a). Based on the depth of the liquefiable zone and assuming relatively continuous subsurface stratigraphy across the site, we estimate differential settlement on the order of 2.5 inches over a horizontal distance of approximately 25 feet.

7.1.5. Lateral Spreading

Lateral spreading of ground surface during an earthquake usually takes place along weak shear zones that have formed within a liquefiable soil layer. Lateral spread has generally been observed to take place in the direction of a free-face (i.e., retaining wall, slope, channel) but has also been observed to a lesser extent on ground surfaces with very gentle slopes. An empirical model developed by Youd and Bartlett (2002) is typically used to predict the amount of horizontal ground displacement within a site. For a site located in proximity to a free-face, the amount of lateral ground displacement is strongly correlated with the distance of the site from the free-face. Other factors such as earthquake magnitude, distance from the earthquake epicenter, thickness of the liquefiable layers, and the fines content and particle sizes of the liquefiable layers also affect the amount of lateral ground displacement. Based on the thickness of potentially liquefiable soil layers underlying the site, the depth of free-face, and corrected sampler blow counts (i.e., $[N1]_{60\text{-}CS}$) within the liquefiable layers that are not in excess of 15, there is a high potential for lateral spread to a depth of approximately 13 feet bgs. The mitigation recommendations for lateral spreading are provided in the following sections.

7.2. Tsunamis

Tsunamis are long wavelength seismic sea waves (long compared to the ocean depth) generated by sudden movements of the ocean bottom during submarine earthquakes, landslides, or volcanic activity. Based on our review of the tsunami hazards map prepared by the CGS (2009) the site is not located in an area subject to tsunami inundation. Therefore, tsunami inundation is not a design consideration for the proposed structures.

8. CONCLUSIONS

Based on the results of our subsurface evaluation, laboratory testing, and data analysis, construction of the proposed improvements is feasible from a geotechnical standpoint, provided the recommendations of this report are incorporated in the design and construction of the project. Geotechnical considerations include the following:

- Based on the subsurface data presented herein, it is our opinion that an active or potentially active fault crosses the project site. This fault is interpreted to be between CPT-4 and CPT-5. The proposed structures should be offset from the closest possible location of the suspected fault trace (Figure 5) for human occupancy.

- The potential for relatively strong seismic accelerations will need to be considered in the design of the proposed improvements.

- The project site is underlain by fill materials, bay deposits, and old paralic deposits. Fill materials were encountered to a depth of approximately 9 feet bgs in our boring. Surficial fill materials are not considered suitable in their current condition for support of structures. However, it is not anticipated that removal of fills to their total depth will be required given the nature of the proposed construction specifics. Recommendations for the depth of fill material removal are provided in Remedial Grading Section of this report.

- Groundwater was encountered in our boring at a depth of approximately 8 feet bgs. However, due to tidal fluctuations the groundwater may be encountered at a shallower depth.

- Based on our analyses, there is a high potential for liquefaction and lateral spreading at the site. Further, as mapped by the City of San Diego (2008), the site is within an area with a high potential for liquefaction, shallow groundwater, major drainages, and hydraulic fill. Ground improvement or deep foundations are recommended in the following sections to mitigate liquefaction and lateral spreading.

- In our opinion, the on-site materials should be generally excavatable with heavy-duty earthmoving equipment in good working condition. Excavations in or close to the groundwater will encounter wet and loose or soft ground conditions. Caving should be anticipated. Wet soils may be subject to pumping under heavy equipment loads.
- Soils derived from on-site excavations are generally considered suitable for reuse as fill material provided they meet the recommendations presented in the Materials for Fill and Compacted Fill sections of this report.
- Based on our review of the referenced report (GLA, 2006) and due to the proximity of the site to a marine environment, the project site should be considered corrosive.

9. RECOMMENDATIONS

The following sections present our geotechnical recommendations for the design and construction of the proposed improvements. We recommend that the site earthwork and construction be performed in accordance with the following recommendations and the requirements of the applicable governing agencies. We also recommend that the contractor consider appropriate measures to avoid damage to the existing bulkhead anchors during earthwork operations and building construction.

9.1. Earthwork

In general, earthwork should be performed in accordance with the recommendations presented in this report. Ninyo & Moore should be contacted for questions regarding the recommendations or guidelines presented herein.

9.1.1. Site Preparation

Site preparation should begin with the removal of vegetation, utility lines, asphalt, concrete, and other deleterious debris from areas to be graded. Tree stumps and roots should be removed to such a depth that organic material is not present. Clearing and grubbing should extend to the outside of the proposed excavation and fill areas. The debris and unsuitable material generated during clearing and grubbing should be removed from areas to be graded and disposed of at a legal dumpsite away from the project area.

9.1.2. Excavatability

Our evaluation of the excavation characteristics of the on-site materials at the subject site is based on the results of our subsurface exploration and our experience with similar materials. In our opinion, the on-site soil materials should be generally excavatable with heavy-duty earthmoving equipment in good working condition. Excavations in or close to the groundwater will encounter wet and loose or soft ground conditions. Caving should be anticipated. Wet soils may be subject to pumping under heavy equipment loads.

9.1.3. Remedial Grading

The existing surficial fill materials are considered compressible and not suitable for structural support in their present condition. To reduce the potential for settlement and provide the foundations with an engineered subgrade, we recommend that the existing undocumented fill materials be removed to a depth of approximately 5 feet below existing grade or 3 feet below the footing, whichever is greater, within the building pad and replaced with compacted fill. For the purposes of this report, the building pad is defined as the structural footprint plus a horizontal distance of 5 feet or the depth of the excavation below pad grade, whichever is greater. The extent and depths of removals should be evaluated by Ninyo & Moore's representative in the field based on the materials exposed. The resulting removal surface should be scarified approximately 8 inches, moisture-conditioned to near optimum moisture content, and recompacted to a relative compaction of 90 percent as evaluated by ASTM International (ASTM) Test Method D 1557.

9.1.4. Materials for Fill

On-site soils are generally suitable for reuse as fill. The fill material should exhibit an expansion index (EI) of 50 or less (i.e., low expansion potential) as evaluated by ASTM D 4829 and are free of trash, debris, roots, vegetation, or other deleterious materials. Fill should generally be free of rocks or lumps of material in excess of 3 inches in diameter and not more than approximately 30 percent larger than ¾ inch. Rocks or hard lumps larger than approximately 3 inches in diameter should be broken into smaller pieces or should be removed from the site. Contaminated materials should not be used as fill. Moisture-conditioning (including drying) of existing on-site materials is anticipated if reused as fill.

Imported fill material, if required, should consist of clean, granular material that generally meets Standard Specifications for Public Works Construction (Greenbook) criteria for structure backfill. Import material should consist of clean, granular soils with an EI of 50 or less. Soil should also be tested for corrosive properties prior to importing. We recommend that the imported materials satisfy the Caltrans (2003) and American Concrete Institute (ACI) 318 criteria for non-corrosive soils (i.e., soils having a chloride concentration of 500 parts per million [ppm] or less, a soluble sulfate content of approximately 0.10 percent [1,000 ppm] or less, a pH value of 5.5 or higher, or an electrical resistivity of 1,000 ohm-cm or higher). Materials for use as fill should be evaluated by Ninyo & Moore prior to importing. The contractor should be responsible for the uniformity of import material brought to the site.

To reduce the potential of importing contaminated materials to the site, prior to delivery, soil materials obtained from off-site sources should be sampled and tested in accordance with standard practice (Department of Toxic Substances Control). Soils that exhibit a known risk to human health, the environment, or both, should not be imported to the site.

9.1.5. Compacted Fill

Prior to placement of compacted fill, the contractor should request an evaluation of the exposed ground surface by Ninyo & Moore. Unless otherwise recommended, the exposed ground surface should then be scarified to a depth of approximately 8 inches and watered or dried, as needed, to achieve generally consistent moisture contents at or near the optimum moisture content. The scarified materials should then be compacted to 90 percent relative compaction as evaluated by ASTM D 1557. The evaluation of compaction by Ninyo & Moore should not be considered to preclude any requirements for observation or approval by governing agencies. It is the contractor's responsibility to notify Ninyo & Moore and the appropriate governing agency when project areas are ready for observation, and to provide reasonable time for that review.

Fill materials should be moisture-conditioned to near optimum moisture content prior to placement. The optimum moisture content will vary with material type and other factors. Moisture-conditioning of fill soils should be generally consistent within the soil mass.

Prior to placement of additional compacted fill material following a delay in the grading operations, the exposed surface of previously compacted fill should be prepared to receive fill. Preparation may include scarification, moisture-conditioning, and recompaction.

Compacted fill should be placed in horizontal lifts of approximately 8 inches in loose thickness. Prior to compaction, each lift should be watered or dried as needed to achieve near optimum moisture condition, mixed, and then compacted by mechanical methods, using sheepsfoot rollers, multiple-wheel pneumatic-tired rollers, or other appropriate compacting rollers, to a relative compaction of 90 percent as evaluated by ASTM D 1557. Successive lifts should be treated in a like manner until the desired finished grades are achieved.

9.1.6. Excavation and Shoring

We recommend that excavations be designed and constructed in accordance with California Occupational Safety and Health Administration (Cal/OSHA) regulations. These regulations provide trench sloping and shoring design parameters for excavations up to 20 feet deep based on the soil types encountered. For planning purposes, we recommend that the following Cal/OSHA soil classification be used for temporary excavations and other purposes:

Fill, Bay Deposits, and Old Paralic Deposits *Type C*

Upon making the excavations, the soil classifications and excavation performance should be evaluated in the field by the geotechnical consultant in accordance with the Cal/OSHA regulations. Temporary excavations should be constructed in accordance with Cal/OSHA recommendations. For trench or other excavations, Cal/OSHA requirements regarding personnel safety should be met using appropriate shoring (including trench boxes) or by laying back the slopes to a slope ratio no steeper than 1.5:1 (horizontal:vertical). Temporary excavations that encounter seepage may be shored or stabilized by placing sandbags or gravel along the base of the seepage zone. Excavations encountering seepage should be evaluated on a case-by-case basis. On-site safety of personnel is the responsibility of the contractor.

9.1.7. Utility Trench Backfill

Based on our subsurface exploration, the on-site earth materials should be generally suitable for re-use as trench backfill provided they are free of organic material, clay lumps, debris, and rocks greater than approximately 3 inches in diameter. We recommend that trench backfill materials be in conformance with the "Greenbook" (Standard Specifications for Public Works) specifications for structure backfill. Fill should be moisture-conditioned to generally above the laboratory optimum. Trench backfill should be compacted to a relative compaction of 90 percent except for the upper 12 inches of the backfill that should be compacted to a relative compaction of 95 percent as evaluated by ASTM D 1557. Lift thickness for backfill will depend on the type of compaction equipment utilized, but fill should generally be placed in lifts not exceeding 8 inches in loose thickness. Special care should be exercised to avoid damaging the pipe during compaction of the backfill.

9.1.8. Drainage

Roof, pad, and slope drainage should be diverted away from slopes and structures to suitable discharge areas by nonerodible devices (e.g., gutters, downspouts, concrete swales, etc.). Positive drainage adjacent to structures should be established and maintained. Positive drainage may be accomplished by providing drainage away from the foundations of the structure at a gradient of 2 percent or steeper for a distance of 5 feet outside the building perimeter, and further maintained by a graded swale leading to an appropriate outlet, in accordance with the recommendations of the project civil engineer and/or landscape architect.

Surface drainage on the site should be provided so that water is not permitted to pond. A gradient of 2 percent or steeper should be maintained over the pad area and drainage patterns should be established to divert and remove water from the site to appropriate outlets.

Care should be taken by the contractor during grading to preserve any berms, drainage terraces, interceptor swales or other drainage devices on or adjacent to the property. Drainage patterns established at the time of grading should be maintained for the life of the project. The property operators should be made aware that altering drainage patterns might be detrimental to slope stability and foundation performance.

9.2. Seismic Design Considerations

The proposed improvements should be designed in accordance with the requirements of governing jurisdictions and applicable building codes. Table 1 presents the seismic design parameters for the site in accordance with CBC (2010) guidelines and mapped spectral acceleration parameters (USGS, 2012). The calculations are provided in Appendix C.

Table 1 – 2010 California Building Code Seismic Design Criteria

Seismic Design Factors	Values
Site Class	D
Site Coefficient, F_a	1.0
Site Coefficient, F_v	1.5
Mapped Short Period Spectral Acceleration, S_S	1.60 g
Mapped One-Second Period Spectral Acceleration, S_1	0.64 g
Short Period Spectral Acceleration Adjusted For Site Class, S_{MS}	1.60 g
One-Second Period Spectral Acceleration Adjusted For Site Class, S_{M1}	0.96 g
Design Short Period Spectral Acceleration, S_{DS}	1.07 g
Design One-Second Period Spectral Acceleration, S_{D1}	0.64 g

9.3. Ground Improvement

Due to the high potential for liquefaction-induced dynamic settlement and lateral spreading, we recommend that ground improvement be performed at the site if buildings are planned to be supported on shallow or mat foundations. Ground improvement is not necessary if pile foundations are selected for the project. The primary objectives of ground improvement at the site would be to provide improved support for structures during and immediately after an earthquake, and to reduce the potential for unacceptable damage due to liquefaction of soils. Based on the results of our liquefaction and lateral spreading analyses, we are of the opinion that ground improvement should extend from depths of approximately 5 feet to 25 feet below the existing ground surface. Remedial grading was recommended in this report to a depth of approximately 5 feet from ground surface. Ground improvement methods typically include dynamic compaction, vibro-compaction, grouting, and stone columns. However, since dynamic compaction and vibro-compaction methods generate significant noise and vibration, these methods are not considered suitable for the site. Grouting is generally more expensive. Accordingly, stone columns are considered suitable for this site. A specialty contractor should design the actual size, spacing, depth, and layout of the stone columns.

9.4. Foundations

The following foundation recommendations were provided based on the geotechnical considerations and our discussions with the structural engineer for the project. The proposed warehouse and office building structures may be supported on shallow, spread or continuous footings bearing on compacted fill if ground improvements are performed as recommended; otherwise, pile foundations may be considered without ground improvement. Foundations should be designed in accordance with structural considerations and the following recommendations. In addition, requirements of the appropriate governing jurisdictions and applicable building codes should be considered in the design of the structures.

9.4.1. Shallow Footings

Shallow, spread or continuous footings founded in compacted fill, may be designed using an allowable bearing capacity of 2,500 pounds per square foot (psf). These allowable bearing capacities may be increased by ⅓ when considering loads of short duration such as wind or seismic forces. These allowable bearing capacities are based on a factor of safety of three.

Spread footings should be founded 24 inches below the lowest adjacent grade. Continuous footings should have a width of 15 inches and isolated footings should be 24 inches in width. The spread footings should be reinforced in accordance with the recommendations of the project structural engineer.

9.4.1.1. Lateral Resistance

For resistance of footings founded in compacted fill to lateral loads, we recommend that a passive pressure of 350 psf of depth be used with a value of up to 3,500 psf. This value assumes that the ground is horizontal for a distance of 10 feet, or three times the height generating the passive pressure, whichever is greater. We recommend that the upper 1 foot of soil not protected by pavement or a concrete slab be neglected when calculating passive resistance.

For frictional resistance to lateral loads, we recommend a coefficient of friction of 0.40 between soil and concrete. The allowable lateral resistance can be taken as the sum of the frictional resistance and passive resistance provided the passive resistance does not exceed ½ of the total allowable resistance. The passive resistance values may be increased by ⅓ when considering loads of short duration such as wind or seismic forces.

Trenches should not be excavated adjacent to spread footings. If trenches are to be excavated near a continuous footing, the bottom of the trench should be located above a 1:1 plane projected downward from the bottom of the footing. Utility lines that cross beneath footings should be encased in concrete below the footing.

9.4.1.2. Static Settlement

We estimate that the proposed structures, designed and constructed as recommended herein, will undergo total settlement on the order of 1 inch. Differential settlement on the order of ½ inch over a horizontal span of 40 feet should be expected.

9.4.2. Pile Foundation

If pile foundations are selected for the project, we recommend that the pile dimensions and spacing be evaluated by the project structural engineer using the recommendations presented herein. Based on our discussions with the structural engineer, the capacity of a 14-inch-square driven precast/prestressed (PC/PS) pile and a 24-inch-diameter cast-in-drilled-hole (CIDH) pile was evaluated using Allpile V.7.11A computer program (CivilTech Software, 2007b). The axial capacities (compression and uplift) of these piles were evaluated using the recommended soil parameters presented in Appendix E. Pile capacity calculations are also provided in Appendix E. Compression capacity was evaluated using frictional resistance and end bearing. Tension (uplift) capacity was evaluated using frictional resistance and weight of the pile. In evaluating pile capacity for seismic condition, downdrag was considered to a depth of 25 feet bgs (significant liquefiable zone). The results of axial pile capacity evaluation are summarized in Table 2.

Table 2 – Summary of Single Pile Axial Capacity Evaluation

Pile Type	Pile Length (feet)	Ultimate Capacity (kips)		Allowable Capacity (kips)
		Static Condition	Seismic Condition	
14-inch Square Driven PC/PS Concrete	35	167 (Compression) 57 (Uplift)	112 (Compression) 33 (Uplift)	80 (Compression) 26 (Uplift)
24-inch Diameter CIDH	35	200 (Compression) 50 (Uplift)	160 (Compression) 33 (Uplift)	100 (Compression) 26 (Uplift)

9.4.2.1. Lateral Pile Analysis

Lateral loads are not available at this time. Based on our discussions with the structural engineer, we understand that the static lateral loads are expected to be relatively small, and the pile head will be fixed. We have evaluated the lateral capacity of the piles shown in Table 2 based on assumed loading that includes the lateral load on pile from possible dynamically induced lateral spreading. Based on our analysis, the deflection of the fixed pile head will be ¼-inch or less for static condition and 1-inch or less for seismic condition. Lateral pile capacity analyses are presented in Appendix E.

For lateral loading, piles in a group may be considered to act individually when the center-to-center spacing is greater than 3D (where, D is the diameter of the pile) in the direction normal to loading and greater than 5D in the direction parallel to loading. The following table presents the lateral load reduction factors to be applied for various pile spacing for in-line loading.

Table 3 – Lateral Load Group Reduction Factors

Center-to-Center Pile Spacing for In-Line Loading	Reduction Factor*		
	Row 1	Row 2	Row 3 and higher
3D	0.8	0.40	0.3
5D	1.0	0.85	0.7

Note:
* Based on AASHTO LRFD Bridge Design Specifications, 5th Edition, 2010 Interim Revision

9.4.2.2. Construction Considerations for Driven Piles

The project site is located in a developed area. Therefore, the noise and vibrations from pile driving should be considered in project design. Driven concrete piles should be constructed and driven in accordance with the applicable project specifications and the following recommendations. Piles should be checked for alignment and plumbness. The amount of acceptable misalignment of a pile is approximately 2 to 3 inches from the plan location and it is usually acceptable for a pile to be out of plumb by one percent of the depth of the pile. Piles should be spaced no closer than three times the nominal diameter or dimension (center-to-center).

Difficult driving conditions should be anticipated if hard clays or gravel layers are encountered. For driven concrete piles, the pile hammer should be an approved steam, air or hydraulic hammer that develops sufficient energy to drive the piles at a penetration rate of not less than 1 inch per blow to the recommended tip elevation. For preliminary purposes, we recommend that a pile hammer having a rated energy of 40,000 foot-pounds or more be used. We also recommend that during the pile hammer selection Ninyo & Moore be retained to evaluate the appropriateness of the pile hammer chosen for use on the project and to evaluate capacity and refusal criteria.

9.4.2.3. Construction Considerations for Cast-In-Drilled-Hole Piles

Construction of CIDH piles should be observed by Ninyo & Moore during drilling to evaluate if the piles have been extended to the recommended depths. The drilled holes should be cleaned of loose soil and gravel. It is the contractor's responsibility to take the appropriate measures to provide for the integrity of the drilled holes and to see that the holes are cleaned and straight and that sloughed loose soil is removed from the bottom of the hole prior to the placement of concrete. Drilled CIDH piles should be checked for alignment and plumbness during installation. The amount of acceptable misalignment of a pile is approximately 3 inches from the plan location but may be reduced based on design criteria. The center-to-center spacing of piles should be no less than three times the nominal diameter of the pile.

Groundwater was encountered in our boring at a depth of approximately 8 feet bgs. As a result, we anticipate that groundwater would be encountered within the excavation depth of foundations. We recommended that the contractor consider appropriate measures during construction to reduce the potential for caving of the drilled holes, including the use of steel casing and/or drilling mud. In addition, we recommend placement of concrete by tremie method to see that the aggregate and cement do not segregate during concrete placement.

We recommend that acoustic testing of the piles, if considered, be performed in accordance with ASTM D 6760 "Integrity Testing of Concrete Deep Foundations by Ultrasonic Crosshole Testing" within a few days of casting the piles. It is recommended that acoustic-testing access tubes be included as part of the reinforcing cage prior to the placement of concrete. The acoustic-testing access tubes should consist of 2-inch internal diameter or larger, plastic (Schedule 40 PVC) pipes places longitudinally in the drilled shaft by attachment to the reinforcing cage. The lower ends of the access tubes should be plugged to keep out concrete. The tubes should be filled with water to stabilize the temperature of the tubes to keep them from de-bonding from the concrete.

Contractors with proven records in the installation of CIDH piles should be considered. During construction, a certified deep foundation inspector should document the diameter, depth, vertical alignment, and the nature of the materials encountered at each pile location. Reinforcing steel and concrete placement should be continuously observed by Ninyo & Moore. A quality control report should be submitted for each pile stating, in writing, that the design details have been observed and meet the requirements.

9.5. Slabs-on-Grade

We recommend that conventional, slab-on-grade floors, where required, be underlain by compacted fill materials of generally very low to low expansion potential, be 5 inches in thickness and be reinforced with No. 4 reinforcing bars spaced 18 inches on center each way. The reinforcing bars should be placed near the middle of the slab. As a means to help reduce shrinkage cracks, we recommend that the slabs be provided with expansion joints at intervals of approximately 12 feet each way. The slab reinforcement and expansion joint spacing should be designed by the project structural engineer.

If moisture-sensitive floor coverings are to be used, we recommend that slabs be underlain by a vapor retarder and capillary break system consisting of a 10-mil polyethylene (or equivalent) membrane placed over 4 inches of medium to coarse, clean sand or pea gravel and overlain by an additional 2 inches of sand to help protect the membrane from puncture during placement and to aid in concrete curing. The exposed subgrade should be moistened just prior to the placement of concrete.

9.6. Concrete Flatwork

Exterior concrete flatwork should be 4 inches in thickness and should be reinforced with No. 3 reinforcing bars placed at 24 inches on-center both ways. No vapor retarder is needed for exterior flatwork. To reduce the potential manifestation of distress to exterior concrete flatwork due to movement of the underlying soil, we recommend that such flatwork be installed with crack-control joints at appropriate spacing as designed by the structural engineer. Exterior slabs should be underlain by 4 inches of clean sand. The subgrade soils should be scarified to a depth of 8 inches, moisture-conditioned to generally above the laboratory optimum moisture content, and compacted to a relative compaction of 90 percent as evaluated by ASTM D 1557. Positive drainage should be established and maintained adjacent to flatwork.

9.7. Corrosion

Corrosion testing was not in our scope of study. However, we reviewed the corrosion test data in the referenced report (GLA, 2006). It was noted in the report that the soils at the site have a moderate potential for sulfate attack on concrete and a heavy potential for corrosion to uncoated metal conduits.

9.8. Concrete

Concrete in contact with soil or water that contains high concentrations of soluble sulfates can be subject to chemical deterioration. As noted in the referenced report (GLA, 2006), the soils at the site have a moderate potential for sulfate attack on concrete. Due to the potential for variability of site soils and the proximity of the site to a marine environment, we recommend using Type V cement for concrete with a water-cement ratio no higher than 0.45 by weight with normal weight aggregate concrete and a 28-day compressive strength of 4,500 pounds per square inch (psi) or more.

9.9. Preliminary Pavement Design

The on-site fill material was evaluated to have an R-value of 57. However, due to the variability of on-site soils we assumed an R-value of 40 for flexible pavement design. We recommend that the import fill materials, if used, should have an R-value of 40 or greater. Actual pavement recommendations should be based on R-value tests performed on bulk samples of the soils that are exposed at the finished subgrade elevations across the site at the completion of the mass grading operations.

We understand that traffic will consist primarily of automobiles and trucks. For design we have assumed Traffic Indices (TI) of 6.0, 7.0, 8.0, and 9.0 for site pavements. The preliminary recommended pavement sections are presented in Table 4. However, we recommend that we re-evaluate the pavement design, based on the R-value of the subgrade material exposed at the time of construction.

Table 4 – Recommended Preliminary Pavement Sections

Traffic Index	R-Value	Asphalt Concrete (AC) (in)	Class 2 Aggregate Base (AB) (in)
6.0	40	3.5	5.5
7.0	40	4.0	7.0
8.0	40	5.0	8.0
9.0	40	5.5	9.5

We recommend that the upper 12 inches of the subgrade and base materials be compacted to a relative compaction of 95 percent as evaluated by ASTM D 1557. If TI values are different from those assumed, the pavement design should be re-evaluated.

We suggest that consideration be given to using Portland cement concrete pavements in areas where dumpsters will be stored and where refuse trucks will stop and load. Experience indicates that refuse truck traffic can significantly shorten the useful life of AC sections. We recommend that in these areas, 6 inches of 600 pounds psi flexural strength Portland cement concrete reinforced with No. 3 bars, 18 inches on center, be placed over 6 inches or more of crushed aggregate base compacted to a relative compaction of 95 percent, placed over 1 or more feet of very low to low expansive fill materials compacted to the recommendations presented herein.

9.10. Pre-Construction Meeting

We recommend that a pre-construction meeting be held prior to commencement of grading. The owner or his representative, the agency representatives, the architect, the civil engineer, Ninyo & Moore, and the contractor should be in attendance to discuss the plans, the project, and the proposed construction schedule.

9.11. Plan Review and Construction Observation

The conclusions and recommendations presented in this report are based on analysis of observed conditions in our boring and CPTs. If conditions are found to vary from those described in this report, Ninyo & Moore should be notified, and additional recommendations will be provided upon request. Ninyo & Moore should review the final project drawings and specifications prior to the commencement of construction. Ninyo & Moore should perform the needed observation and testing services during construction operations.

The recommendations provided in this report are based on the assumption that Ninyo & Moore will provide geotechnical observation and testing services during construction. In the event that it is decided not to utilize the services of Ninyo & Moore during construction, we request that the selected consultant provide the client with a letter (with a copy to Ninyo & Moore) indicating that they fully understand Ninyo & Moore's recommendations, and that they are in full agreement with the design parameters and recommendations contained in this report. Construction of proposed improvements should be performed by qualified subcontractors utilizing appropriate techniques and construction materials.

10. LIMITATIONS

The field evaluation, laboratory testing, and geotechnical analyses presented in this report have been conducted in general accordance with current practice and the standard of care exercised by geotechnical consultants performing similar tasks in the project area. No warranty, expressed or implied, is made regarding the conclusions, recommendations, and opinions presented in this report. There is no evaluation detailed enough to reveal every subsurface condition. Variations may exist and conditions not observed or described in this report may be encountered during construction. Uncertainties relative to subsurface conditions can be reduced through additional subsurface exploration. Additional subsurface evaluation will be performed upon request. Please also note that our evaluation was limited to assessment of the geotechnical aspects of the project, and did not include evaluation of structural issues, environmental concerns, or the presence of hazardous materials.

This document is intended to be used only in its entirety. No portion of the document, by itself, is designed to completely represent any aspect of the project described herein. Ninyo & Moore should be contacted if the reader requires additional information or has questions regarding the content, interpretations presented, or completeness of this document.

This report is intended for design purposes only. It does not provide sufficient data to prepare an accurate bid by contractors. It is suggested that the bidders and their geotechnical consultant perform an independent evaluation of the subsurface conditions in the project areas. The independent evaluations may include, but not be limited to, review of other geotechnical reports prepared for the adjacent areas, site reconnaissance, and additional exploration and laboratory testing.

Our conclusions, recommendations, and opinions are based on an analysis of the observed site conditions. If geotechnical conditions different from those described in this report are encountered, our office should be notified, and additional recommendations, if warranted, will be provided upon request. It should be understood that the conditions of a site could change with time as a result of natural processes or the activities of man at the subject site or nearby sites. In addition, changes to the applicable laws, regulations, codes, and standards of practice may occur due to government action or the broadening of knowledge. The findings of this report may, therefore, be invalidated over time, in part or in whole, by changes over which Ninyo & Moore has no control.

This report is intended exclusively for use by the client. Any use or reuse of the findings, conclusions, and/or recommendations of this report by parties other than the client is undertaken at said parties' sole risk.

11. REFERENCES

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AERIAL PHOTOGRAPHS				
Source	**Date**	**Flight**	**Numbers**	**Scale**
USDA	3-31-53	AXN-3M	196 and 198	1:20,000

SOURCE: 2008 THOMAS GUIDE FOR SAN DIEGO COUNTY, STREET GUIDE AND DIRECTORY; MAP © RAND MCNALLY, R.L.07-S-129

MAP INDEX

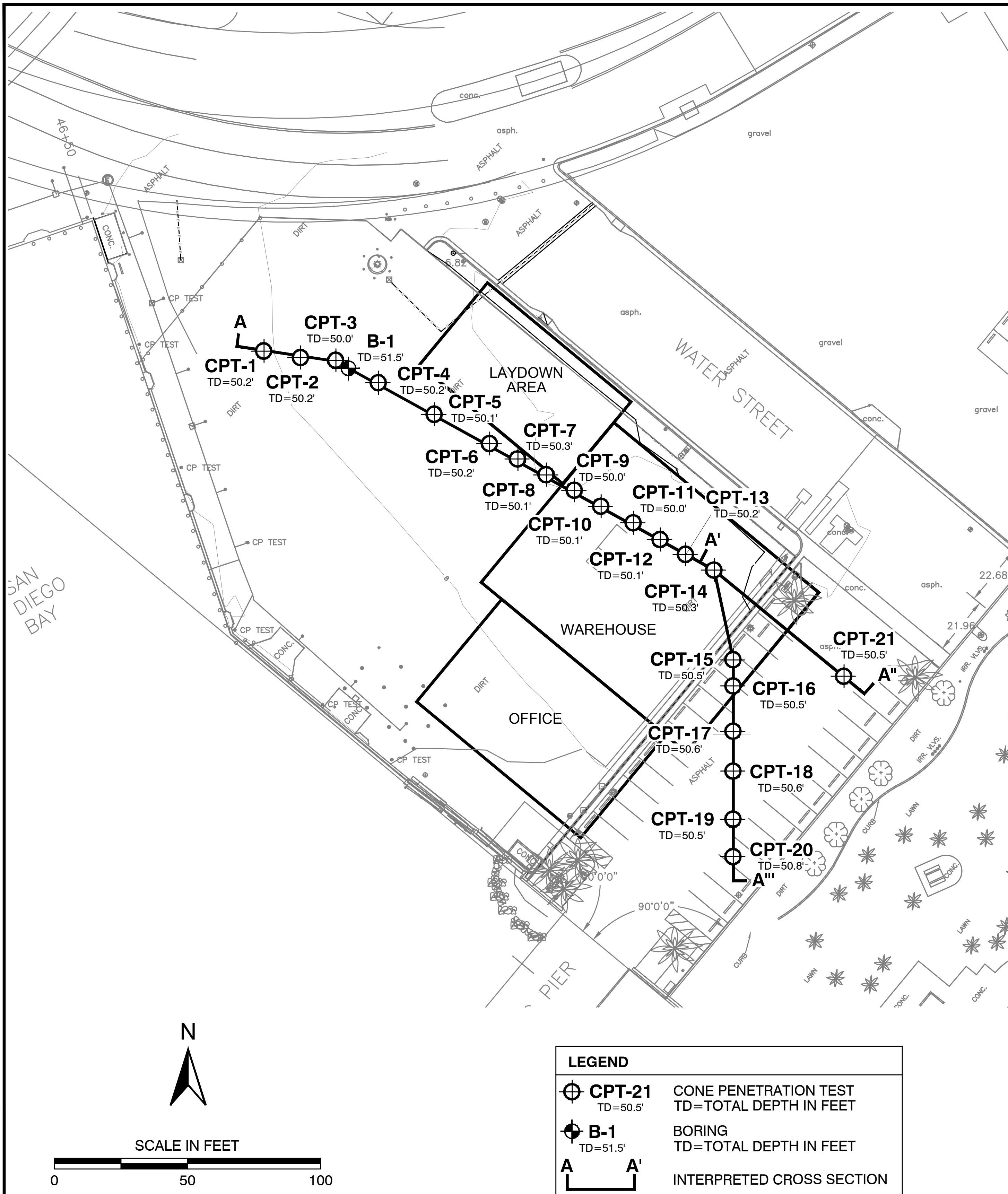
SCALE IN FEET

0 1,200 2,400 4,800

NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE

Ninyo & Moore		SITE LOCATION	FIGURE
PROJECT NO.	DATE	COMMERCIAL BERTHING PIER AND TAMT SAN DIEGO, CALIFORNIA	1
107319001	12/12		

fig1_107319001_sl.mxd AOB

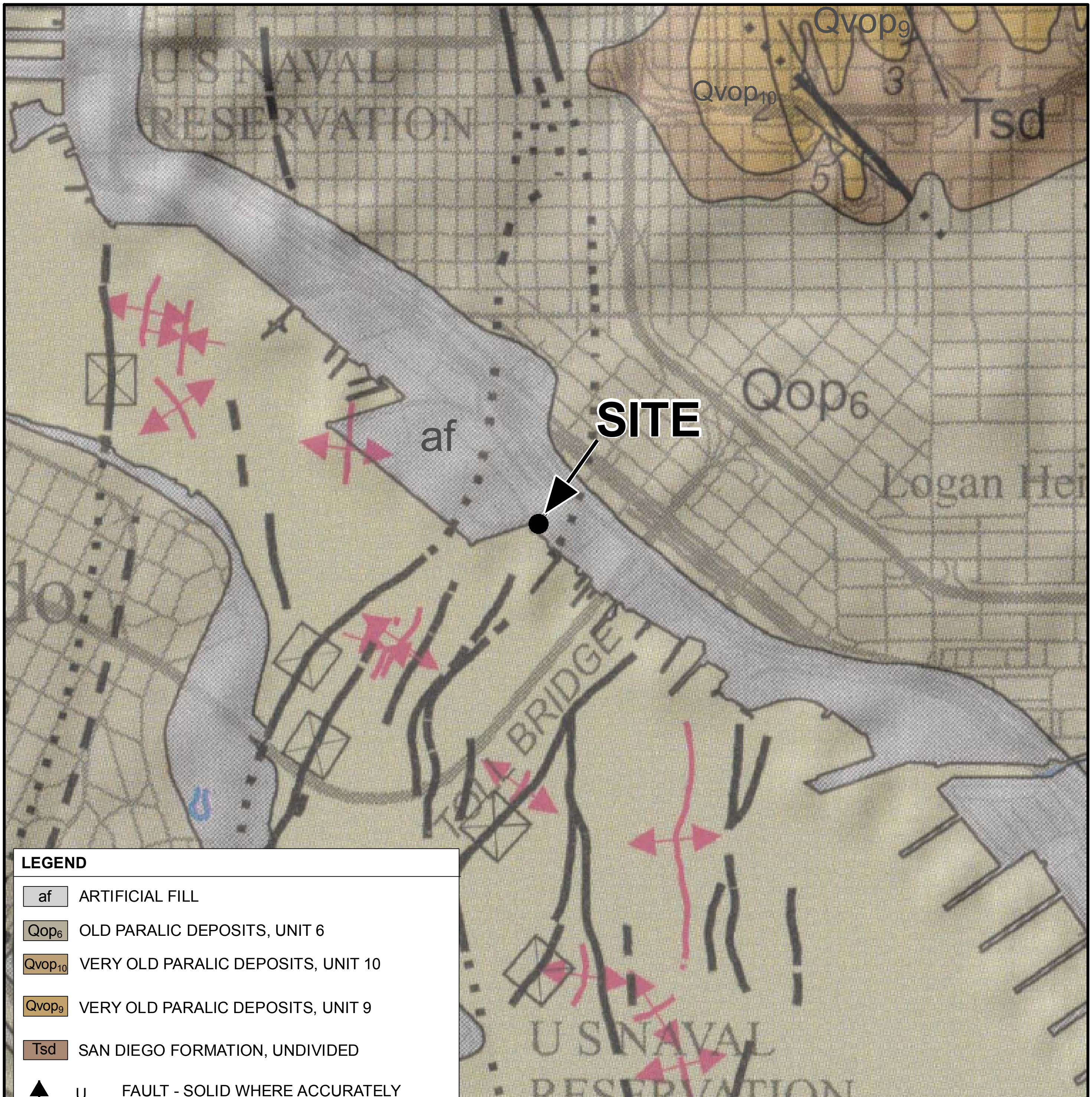


NOTE: DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE

SOURCE: SAN DIEGO UNIFIED PORT DISTRICT (SDUPD), 2011; ALYSON CONSULTING, 2012.

2 107319001 bl 11-12.dwg

Ninyo & Moore	□O□I□G □□□ □□T LO□□TIO□S	FIGURE
PROJECT NO. 107319001 / DATE 12/12	COMMERCIAL BERTHING PIER AND TAMT SAN DIEGO, CALIFORNIA	□



LEGEND

af	ARTIFICIAL FILL
Qop_6	OLD PARALIC DEPOSITS, UNIT 6
$Qvop_{10}$	VERY OLD PARALIC DEPOSITS, UNIT 10
$Qvop_9$	VERY OLD PARALIC DEPOSITS, UNIT 9
Tsd	SAN DIEGO FORMATION, UNDIVIDED
U/D	FAULT - SOLID WHERE ACCURATELY LOCATED, DASHED WHERE APPROXIMATE, DOTTED WHERE CONCEALED. ARROW AND NUMBER INDICATE DIRECTION AND ANGLE OF DIP OF FAULT PLANE
5	INCLINED
	ANTICLINE
	SYNCLINE

SOURCE: KENNEDY, M.P., AND TAN, S.S., 2008, GEOLOGIC MAP OF THE SAN DIEGO 30' X 60' QUADRANGLE, CALIFORNIA

N

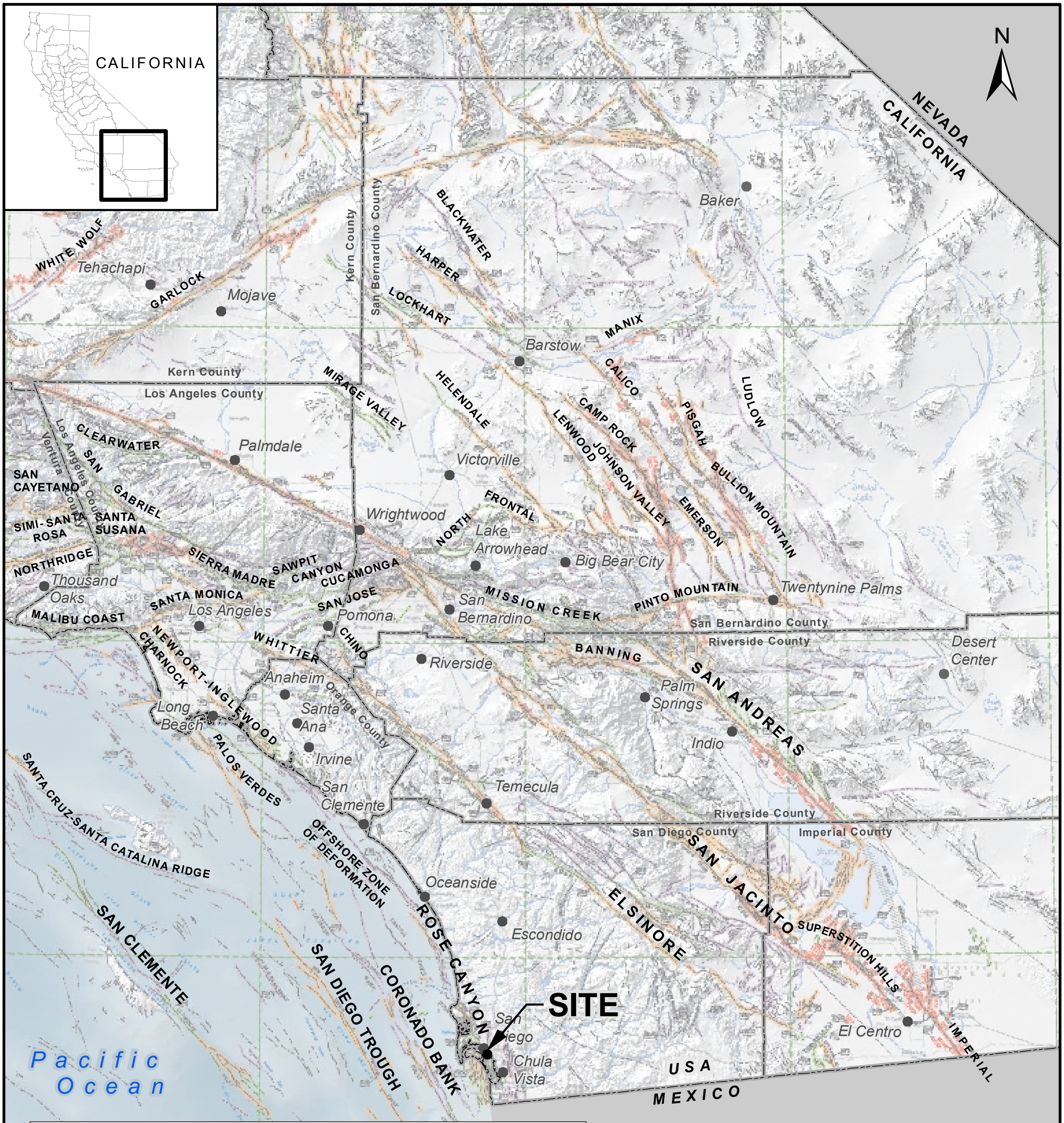
APPROXIMATE SCALE

0 2,000 4,000 FEET

NOTES: ALL DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE

fig3_107319001_geology.mxd AOB

Ninyo & Moore	REGIONAL GEOLOGY	FIGURE
PROJECT NO. 107319001	DATE 12/12	COMMERCIAL BERTHING PIER AND TAMT SAN DIEGO, CALIFORNIA	3



LEGEND

CALIFORNIA FAULT ACTIVITY

- HISTORICALLY ACTIVE
- HOLOCENE ACTIVE
- LATE QUATERNARY (POTENTIALLY ACTIVE)
- QUATERNARY (POTENTIALLY ACTIVE)
- STATE/COUNTY BOUNDARY

SOURCE: JENNINGS, C.W., AND BRYANT, W.A., 2010. FAULT ACTIVITY MAP OF CALIFORNIA.

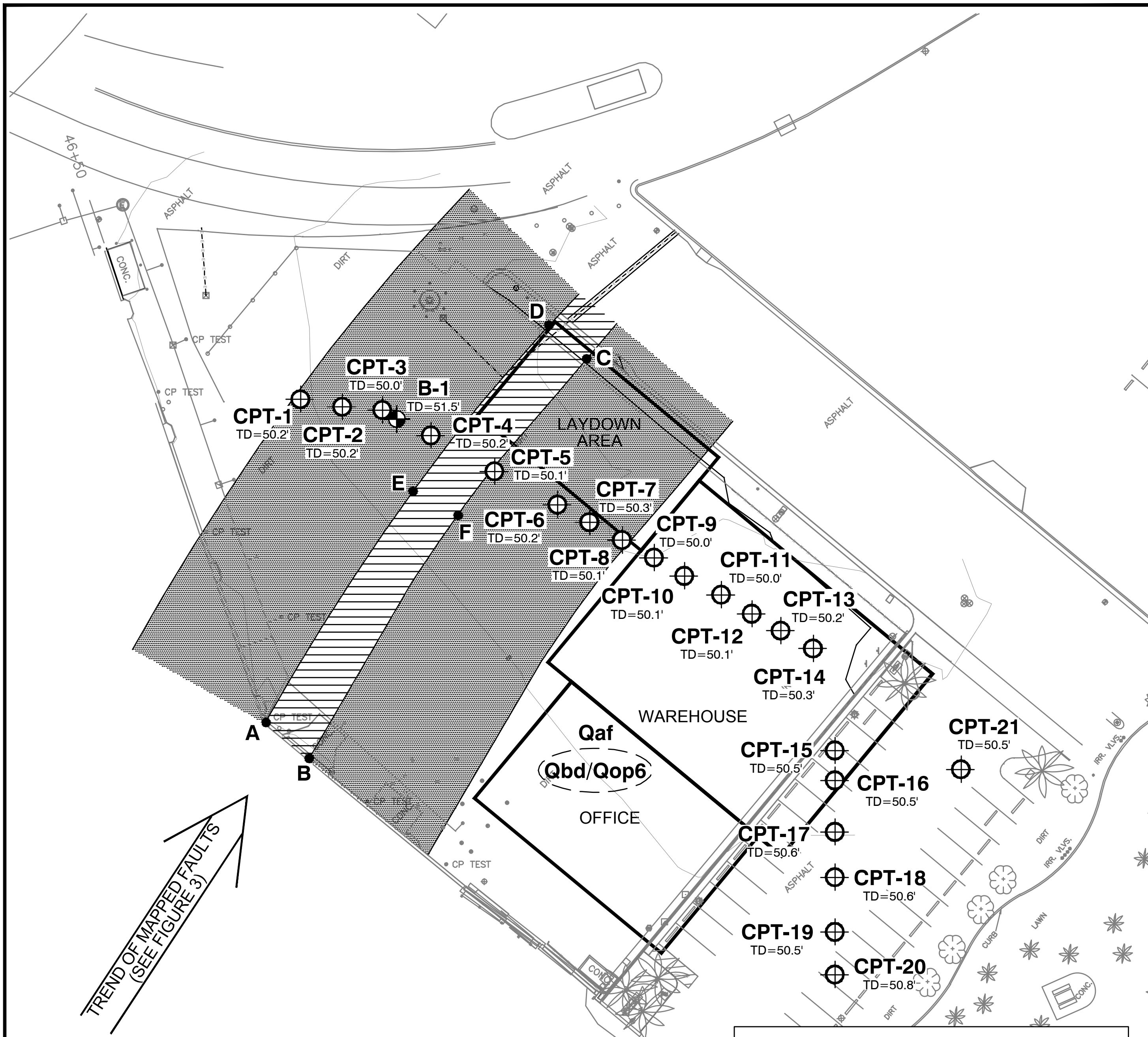
SCALE IN MILES

0 30 60

NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE.

fig4_107319001_fault.mxd AOB

Ninyo & Moore		FAULT LOCATIONS	FIGURE
PROJECT NO.	DATE	COMMERCIAL BERTHING PIER AND TAMT SAN DIEGO, CALIFORNIA	4
107319001	12/12		



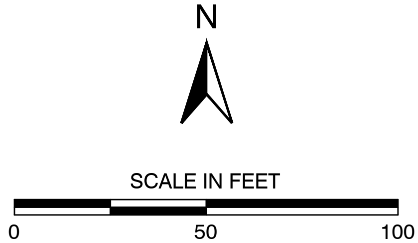
Point	Long	Lat
A	-117.1517624	32.69668758
B	-117.1517149	32.69665554
C	-117.1513886	32.69705304
D	-117.1514296	32.69707972
E	-117.1516013	32.69690316
F	-117.1515632	32.69687101

Line	Bearing	Length (FT)
AE	N 32 E	92
ED	N 39 E	83
BF	N 31 E	91
FC	N 39 E	85

NOTE: THE COORDINATES AND BEARINGS ARE BASED ON OUR INTERPRETED FAULT LOCATION

LEGEND

CPT-21 TD=50.5'	CONE PENETRATION TEST TD=TOTAL DEPTH IN FEET
B-1 TD=51.5'	BORING TD=TOTAL DEPTH IN FEET
Qaf	FILL
Qbd/Qop6	BAY DEPOSITS/ OLD PARALIC DEPOSITS, UNIT 6
	INTERPRETED FAULT LOCATION
	RECOMMENDED FAULT ZONE OFFSET



NOTE: DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE

SOURCE: SAN DIEGO UNIFIED PORT DISTRICT (SDUPD), 2011; ALYSON CONSULTING, 2012.

5 107319001 site geology.dwg

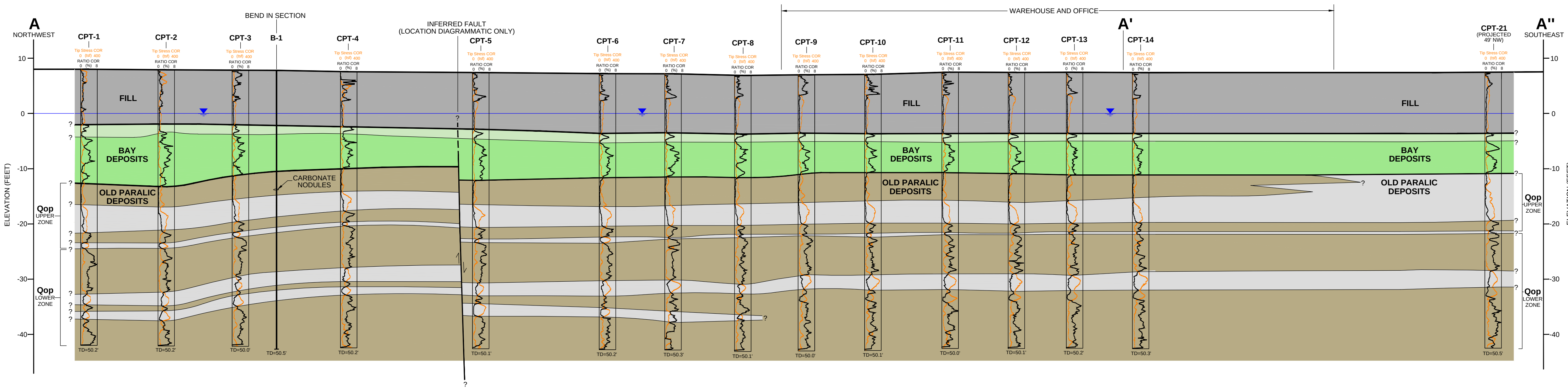
Ninyo & Moore

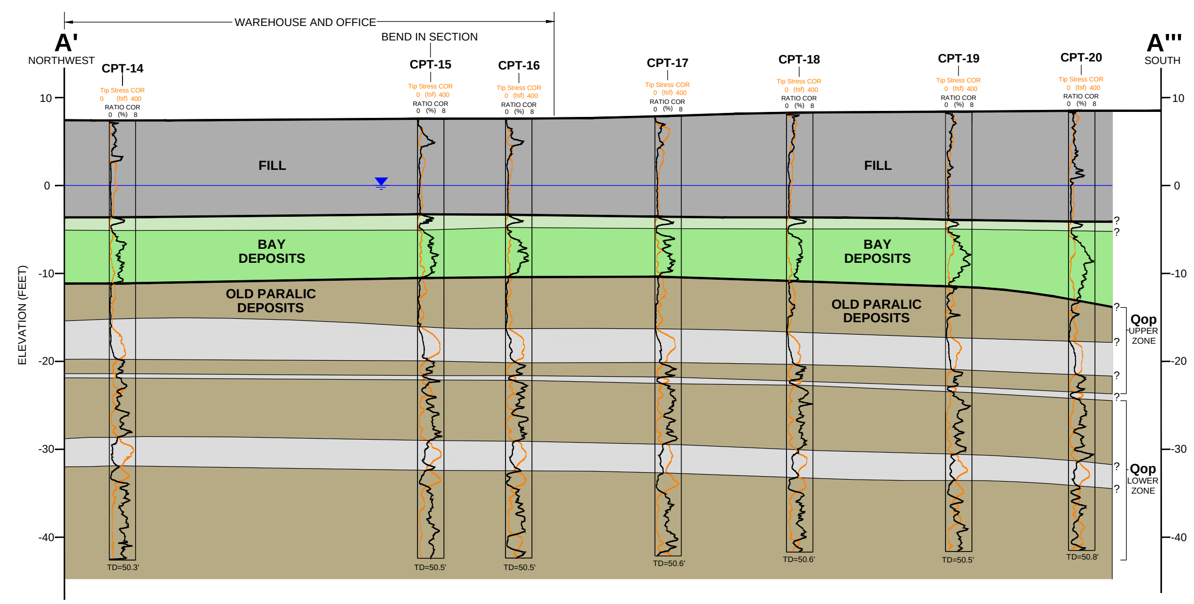
SITE GEOLOGY

PROJECT NO.	DATE
107319001	12/12

COMMERCIAL BERTHING PIER AND TAMT
SAN DIEGO, CALIFORNIA

FIGURE 5





LEGEND

B-1 (TD=50.5') BORING
TD=TOTAL DEPTH IN FEET

CPT-21 (TD=50.5') CONE PENETRATION TEST
TD=TOTAL DEPTH IN FEET

GROUNDWATER ELEVATION

GEOLOGIC CONTACT, QUERIED WHERE QUESTIONABLE

FILL: HETEROGENEOUS MATERIALS, DOMINANTLY BROWN OR LIGHT BROWN, DAMP TO MOIST, MEDIUM DENSE, SILTY FINE SAND OR POORLY GRADED FINE SAND WITH SILT; SOME SHELL DEBRIS.

BAY DEPOSITS: DARK GRAY, SATURATED, VERY LOOSE TO MEDIUM DENSE, POORLY GRADED FINE SAND OR SILTY FINE SAND; SOME SHELL DEBRIS.

OLD PARALIC DEPOSITS (Qop) - UPPER ZONE :
DOMINANTLY BROWN OR GRAYISH BROWN, SATURATED, LOOSE TO VERY DENSE, POORLY GRADED FINE SAND OR CLAYEY OR SILTY SAND. PALEOSOL PRESENT AT LOCATION OF CARBONATE NODULES (SEE TEXT FOR DISCUSSION).

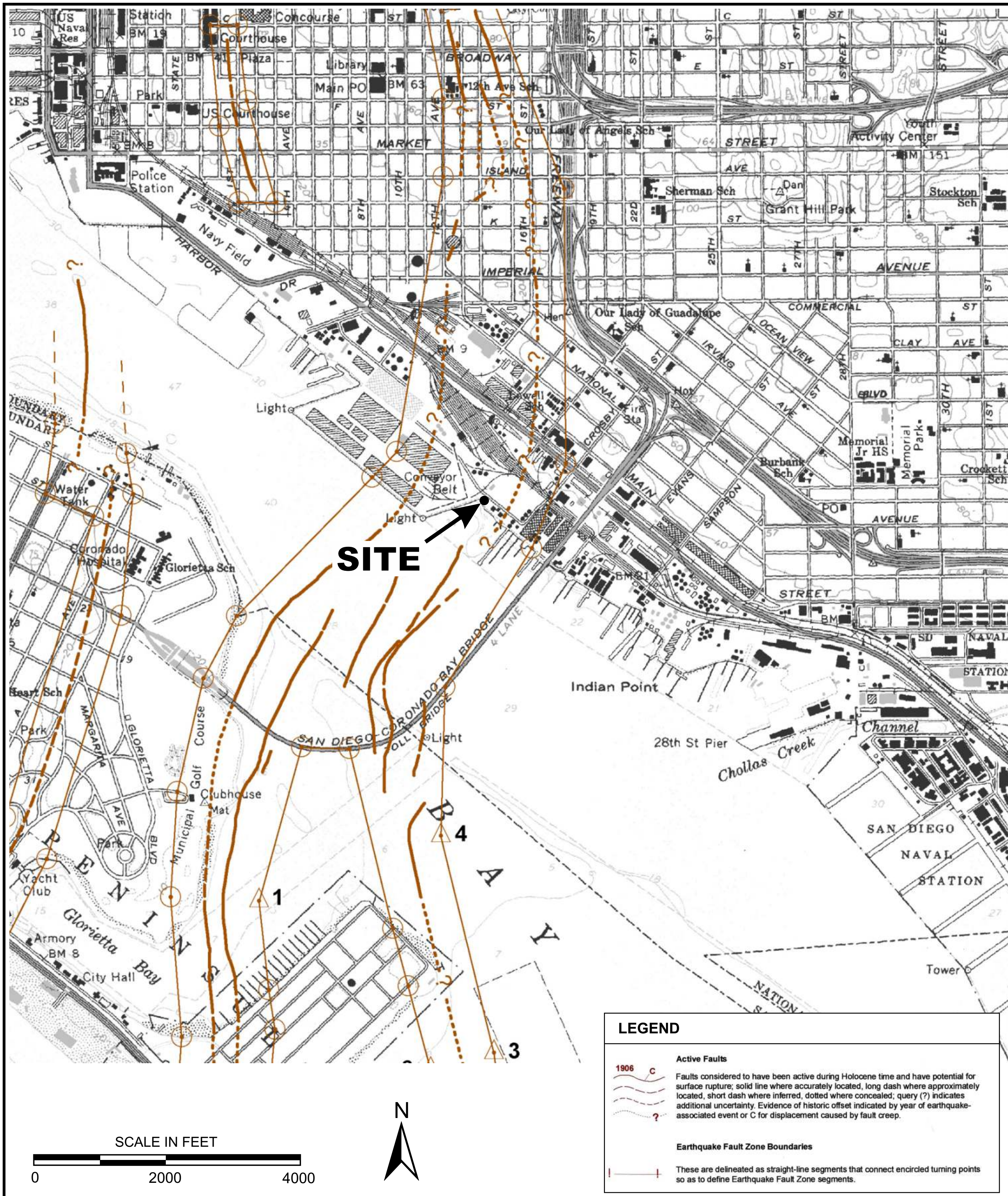
OLD PARALIC DEPOSITS (Qop) - LOWER ZONE:
AS ABOVE MIXED WITH LAYERS OF HARD CLAY AND CLAYEY SILT.

NOTE: SHADING IS ADDED TO FIGURES TO EMPHASIZE STRATIGRAPHIC LAYERS AND AID IN CORRELATING DEPOSITS.

SCALE IN FEET
0 10 20
NOTE: DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE

Ninyo & Moore		INTERPRETED CROSS SECTIONS	FIGURE
PROJECT NO.	DATE	COMMERCIAL BERTHING PIER AND TAMT SAN DIEGO, CALIFORNIA	6
107319001	12/12		

6 107319001 cpt xsec a-a' 12-12.dwg

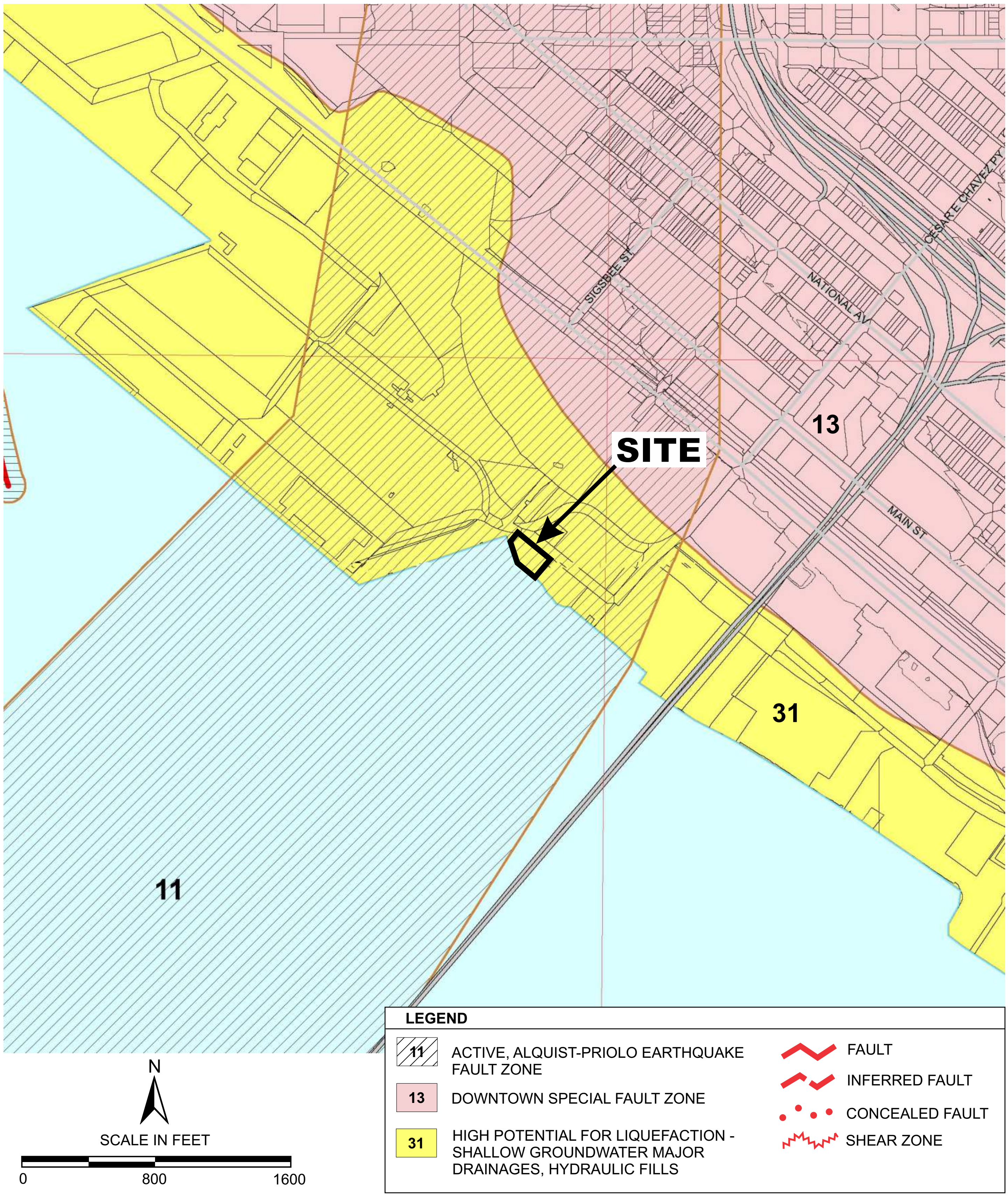


NOTE: ALL DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

REFERENCE: STATE OF CALIFORNIA EARTHQUAKE FAULT ZONES, 2003 POINT LOMA QUADRANGLE.

Ninyo & Moore		EARTHQUAKE FAULT ZONES	FIGURE
PROJECT NO.	DATE	COMMERCIAL BERTHING PIER AND TAMT SAN DIEGO, CALIFORNIA	7
107319001	12/12		

fig7 107319001 earthquake.cdr AOB



NOTE: ALL DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

REFERENCE: CITY OF SAN DIEGO SEISMIC SAFETY STUDY, 2008 .

fig8 107319001 geo haz.cdr AOB

Ninyo & Moore

GEOLOGIC HAZARDS

COMMERCIAL BERTHING PIER AND TAMT
SAN DIEGO, CALIFORNIA

PROJECT NO.	DATE	FIGURE
107319001	12/12	8

APPENDIX A

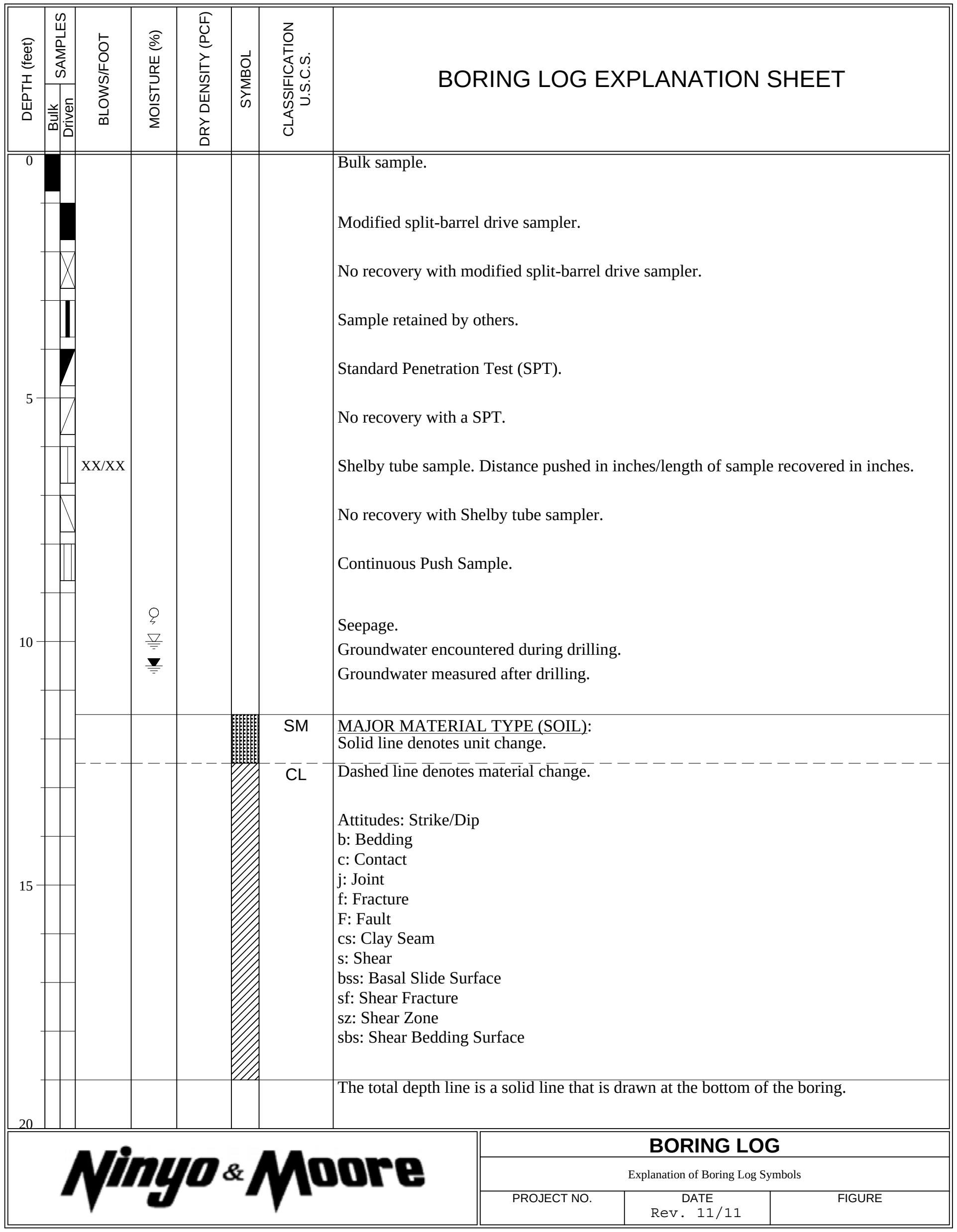
BORING LOG AND CONE PENETRATION TEST SOUNDING

<u>Field Procedure for the Collection of Disturbed Samples</u>
Disturbed soil samples were obtained in the field using the following methods.

<u>Bulk Samples</u>
A bulk sample of representative earth materials was obtained from the exploratory boring. The sample was bagged and transported to the laboratory for testing.

<u>The Standard Penetration Test (SPT) Sampler</u>
Disturbed drive samples of earth materials were obtained by means of a SPT sampler. The sampler is composed of a split barrel with an external diameter of 2 inches and an unlined internal diameter of 1⅜ inches. The sampler was driven into the ground 12 to 18 inches with a 140-pound hammer falling freely from a height of 30 inches in general accordance with ASTM D 1586. The blow counts were recorded for every 6 inches of penetration; the blow counts reported on the logs are those for the last 12 inches of penetration. Soil samples were observed and removed from the sampler, bagged, sealed and transported to the laboratory for testing.

<u>Field Procedure for CPT</u>
The CPT described in this report was conducted by Kehoe Testing Inc. of Huntington Beach, California, in general accordance with ASTM D 5778. The cone penetrometer assembly used for this project consisted of a conical tip and a cylindrical friction sleeve. The conical tip had an apex angle of 60 degrees and a diameter of approximately 1.7 inches resulting in a projected cross-sectional area of approximately 2.3 square inches. The cylindrical friction sleeve was approximately 6.33 inches long and had an outside diameter of approximately 1.7 inches, resulting in a surface area of approximately 34 square inches. The interior of the CPT probe was instrumented with strain gauges that allowed simultaneous measurement of cone tip and friction sleeve resistance during penetration. The cone was hydraulically pushed into the soil using the reaction mass of a specially designed 30-ton truck at a constant rate of approximately 4 feet per minute while the cone tip resistance and sleeve friction resistance were recorded at an approximately 1-inch interval and stored in digital form. The computer-generated logs presented in the following pages include cone resistance, friction resistance, friction ratio, equivalent SPT blow counts, and interpreted soil types. The soil type interpretations were based on the method proposed by Robertson and Campanella (1990).



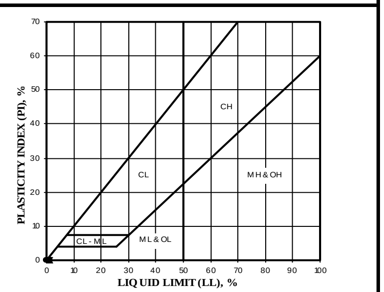
U.S.C.S. METHOD OF SOIL CLASSIFICATION

MAJOR DIVISIONS		SYMBOL	TYPICAL NAMES
COARSE-GRAINED SOILS (More than 1/2 of soil > No. 200 Sieve Size)	GRAVELS (More than 1/2 of coarse fraction > No. 4 sieve size	GW	Well graded gravels or gravel-sand mixtures, little or no fines
		GP	Poorly graded gravels or gravel-sand mixtures, little or no fines
		GM	Silty gravels, gravel-sand-silt mixtures
		GC	Clayey gravels, gravel-sand-clay mixtures
	SANDS (More than 1/2 of coarse fraction < No. 4 sieve size	SW	Well graded sands or gravelly sands, little or no fines
		SP	Poorly graded sands or gravelly sands, little or no fines
		SM	Silty sands, sand-silt mixtures
		SC	Clayey sands, sand-clay mixtures
FINE-GRAINED SOILS (More than 1/2 of soil < No. 200 sieve size)	SILTS & CLAYS Liquid Limit <50	ML	Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity
		CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays
		OL	Organic silts and organic silty clays of low plasticity
	SILTS & CLAYS Liquid Limit >50	MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts
		CH	Inorganic clays of high plasticity, fat clays
		OH	Organic clays of medium to high plasticity, organic silty clays, organic silts
HIGHLY ORGANIC SOILS		Pt	Peat and other highly organic soils

GRAIN SIZE CHART

CLASSIFICATION	RANGE OF GRAIN: U.S. Standard Sieve Size	RANGE OF GRAIN: Grain Size in Millimeters
BOULDERS	Above 12"	Above 305
COBBLES	12" to 3"	306 to 76.2
GRAVEL	3" to No. 4	76.2 to 4.76
Coarse	3" to 3/4"	76.2 to 19.1
Fine	3/4" to No. 4	19.1 to 4.76
SAND	No. 4 to No. 200	4.76 to 0.075
Coarse	No. 4 to No. 10	4.76 to 2.00
Medium	No. 10 to No. 40	2.00 to 0.420
Fine	No. 40 to No. 200	0.420 to 0.075
SILT & CLAY	Below No. 200	Below 0.075

PLASTICITY CHART



Ninyo & Moore

U.S.C.S. METHOD OF SOIL CLASSIFICATION

Updated Nov. 2011

DATE DRILLED 5/24/12 BORING NO. B-1

GROUND ELEVATION 7.80' ± (MSL) SHEET 1 OF 3

METHOD OF DRILLING 8" Diameter Hollow Stem Auger (Scott's Drilling)

DRIVE WEIGHT 140 lbs. (Auto-Trip) DROP 30"

SAMPLED BY CER LOGGED BY CER REVIEWED BY JG

DEPTH (feet)	SAMPLES (Bulk / Driven)	BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	CLASSIFICATION U.S.C.S.	DESCRIPTION/INTERPRETATION
0					SM	FILL: Brown, damp to moist, loose to medium dense, silty SAND with gravel.
	Bulk				SP-SM	Light brown, moist, loose to medium dense, poorly graded SAND with silt; scattered shells.
5						
			▽			
					SP	BAY DEPOSITS: Dark gray, saturated, loose, poorly graded, fine SAND.
10	Driven	4	24.7			
	Driven	2			SM	Dark gray, saturated, very loose, silty fine SAND; some shell debris.
	Driven	15				Medium dense.
15	Driven	20				
					SC	OLD PARALIC DEPOSITS: Brown, saturated, medium dense, clayey fine SAND.
	Driven	18				
	Driven	21				Dense.
20	Driven	12				Light brown clay; medium dense; little carbonate nodules.

Ninyo & Moore

BORING LOG

COMMERCIAL BERTHING PIER AND TAMT
SAN DIEGO, CALIFORNIA

PROJECT NO.	DATE	FIGURE
107319001	12/12	A-1

DATE DRILLED 5/24/12 BORING NO. B-1

GROUND ELEVATION 7.80' ± (MSL) SHEET 2 OF 3

METHOD OF DRILLING 8" Diameter Hollow Stem Auger (Scott's Drilling)

DRIVE WEIGHT 140 lbs. (Auto-Trip) DROP 30"

SAMPLED BY CER LOGGED BY CER REVIEWED BY JG

DEPTH (feet)	BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	CLASSIFICATION U.S.C.S.	DESCRIPTION/INTERPRETATION
20				SC	OLD PARALIC DEPOSITS: (Continued) Brown, saturated, medium dense, clayey fine SAND.
	4			SM	Brown, saturated, loose, silty SAND; some shells.
	7				Loose to medium dense.
	14			SP	Brown, saturated, medium dense, poorly graded coarse SAND; trace silt.
25	11				
	33			SP	Grayish brown, saturated, dense to very dense, poorly graded fine SAND.
	25				Dense.
30	25			SM	Brown, saturated, dense, silty fine SAND.
	27			ML	Brown, saturated, dense, sandy SILT; fine sand.
	28			SC	Brown, saturated, dense, clayey SAND; trace shells.
35	39			CL	Brown, saturated, hard, CLAY.
	25				
	18			ML	Brown to yellowish red, saturated, medium dense, sandy SILT; fine sand.
	20				Brown to yellowish brown.
40					

BORING LOG

COMMERCIAL BERTHING PIER AND TAMT
SAN DIEGO, CALIFORNIA

PROJECT NO.	DATE	FIGURE
107319001	12/12	A-2

DATE DRILLED 5/24/12 BORING NO. B-1

GROUND ELEVATION 7.80' ± (MSL) SHEET 3 OF 3

METHOD OF DRILLING 8" Diameter Hollow Stem Auger (Scott's Drilling)

DRIVE WEIGHT 140 lbs. (Auto-Trip) DROP 30"

SAMPLED BY CER LOGGED BY CER REVIEWED BY JG

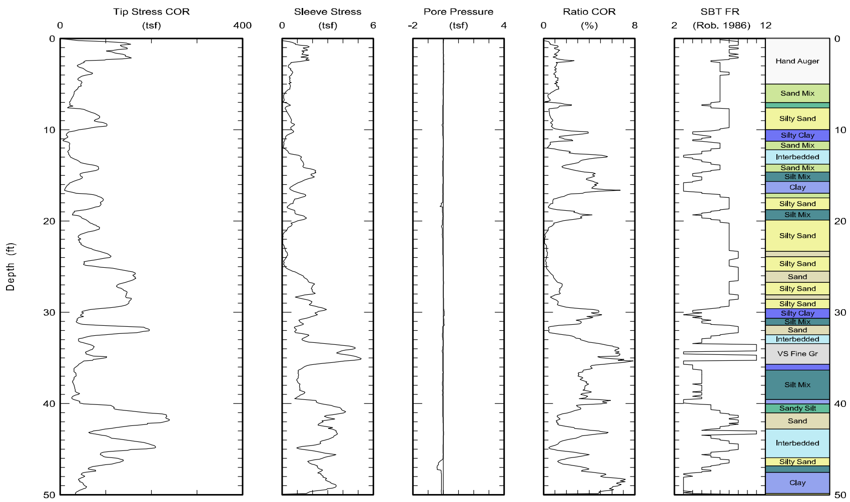
DEPTH (feet)	BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	CLASSIFICATION U.S.C.S.	DESCRIPTION/INTERPRETATION
40	25			ML	OLD PARALIC DEPOSITS: (Continued) Brown to yellowish brown, saturated, dense, sandy SILT; fine sand.
	52				Dense.
	28				Medium dense.
45	43			SP-SM	Grayish brown, saturated, dense to very dense, poorly graded medium SAND with silt.
	23			SM	Brown, saturated, very dense, silty fine SAND. Dense.
	24			ML	Brown, saturated, hard, clayey SILT; some fine sand.
50	24			CL	Brown, saturated, hard, sandy CLAY; fine sand.
					Total Depth = 51.5 feet. Groundwater encountered at 8 feet during drilling. Backfilled with approximately 17 cubic feet of bentonite grout shortly after drilling on 5/24/12. Note: Groundwater may rise to a level higher than that measured in borehole due to seasonal variations in precipitation and several other factors as discussed in the report.
55					
60					

BORING LOG

COMMERCIAL BERTHING PIER AND TAMT
SAN DIEGO, CALIFORNIA

PROJECT NO.	DATE	FIGURE
107319001	12/12	A-3

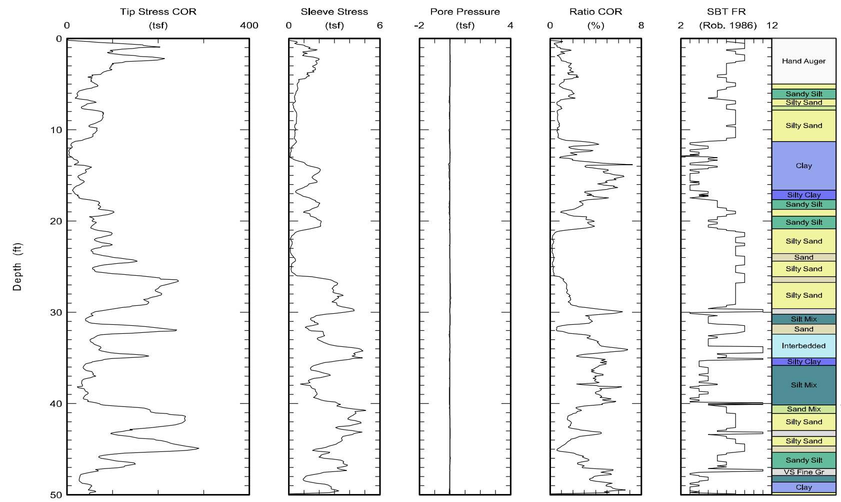
Kehoe Testing & Engineering Office: (714) 901-7270 Fax: (714) 901-7289 rich@kehoetesting.com www.kehoetesting.com	CPT Data 30 ton rig	Date: 25/May/2012 Test ID: C-1 Project: SanDiego
	Customer: Ninyo & Moore Job Site: 10th Avenue Marine Terminal	



Maximum depth: 50.22 (ft)
Page 1 of 2

Test ID: C-1
File: Z25Y1202C.ECP

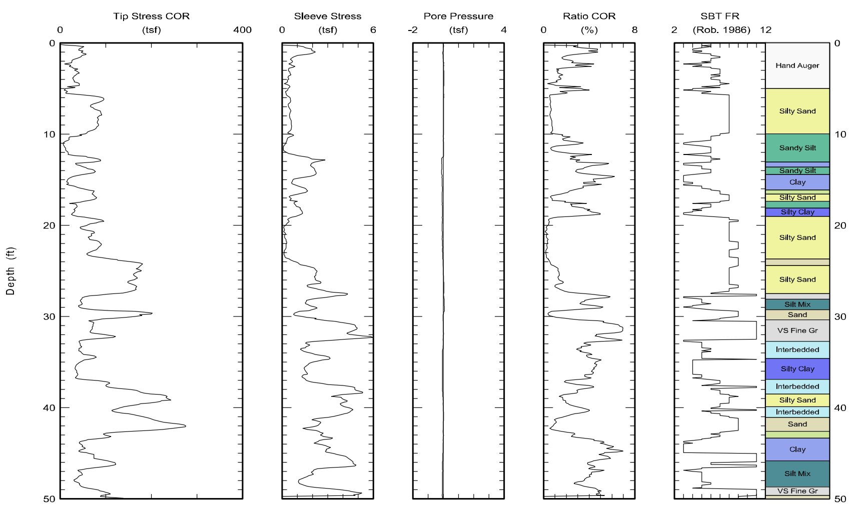
Kehoe Testing & Engineering Office: (714) 901-7270 Fax: (714) 901-7289 rich@kehoetesting.com www.kehoetesting.com	CPT Data 30 ton rig	Date: 25/May/2012 Test ID: C-2 Project: SanDiego
	Customer: Ninyo & Moore Job Site: 10th Avenue Marine Terminal	



Maximum depth: 50.18 (ft)
Page 1 of 2

Test ID: C-2
File: Z25Y1201C.ECP

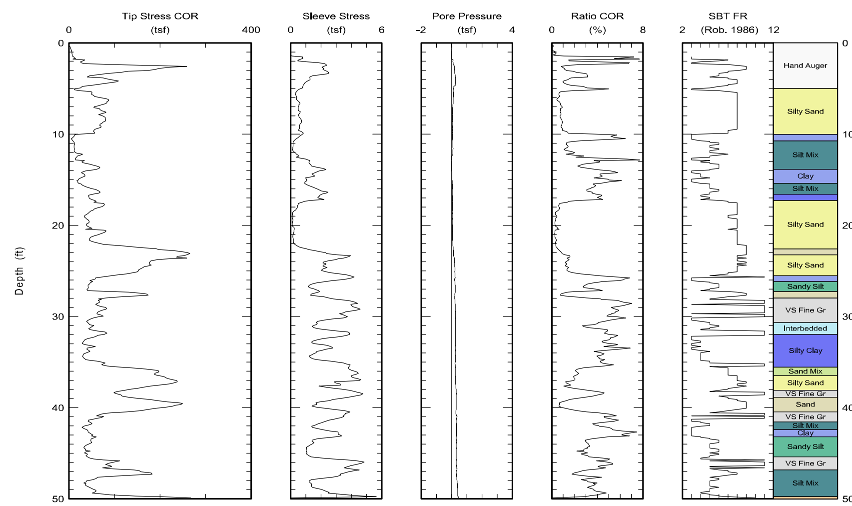
Kehoe Testing & Engineering Office: (714) 901-7270 Fax: (714) 901-7289 rich@kehoetesting.com www.kehoetesting.com	CPT Data 30 ton rig	Date: 25/May/2012 Test ID: C-3 Project: SanDiego
	Customer: Ninyo & Moore Job Site: 10th Avenue Marine Terminal	



Maximum depth: 50.03 (ft)
Page 1 of 2

Test ID: C-3
File: Z25Y1203C.ECP

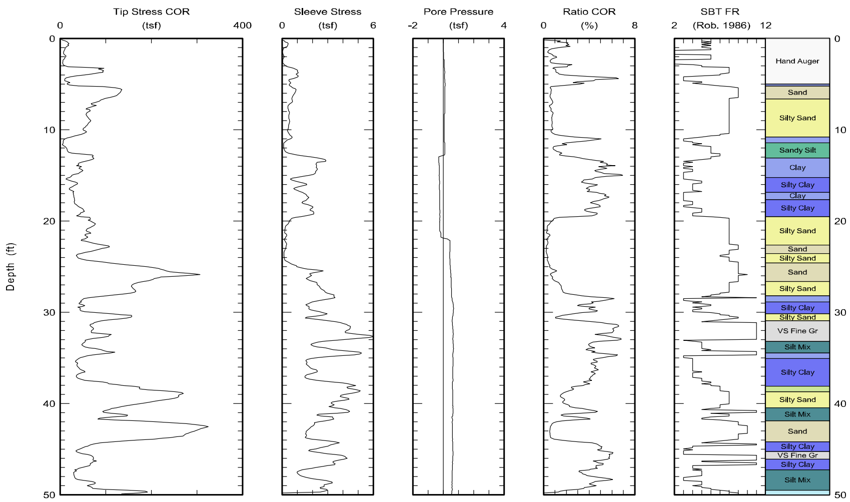
Kehoe Testing & Engineering Office: (714) 901-7270 Fax: (714) 901-7289 rich@kehoetesting.com www.kehoetesting.com	CPT Data 30 ton rig	Date: 25/May/2012 Test ID: C-4 Project: SanDiego
	Customer: Ninyo & Moore Job Site: 10th Avenue Marine Terminal	



Maximum depth: 50.24 (ft)
Page 1 of 2

Test ID: C-4
File: Z25Y1204C.ECP

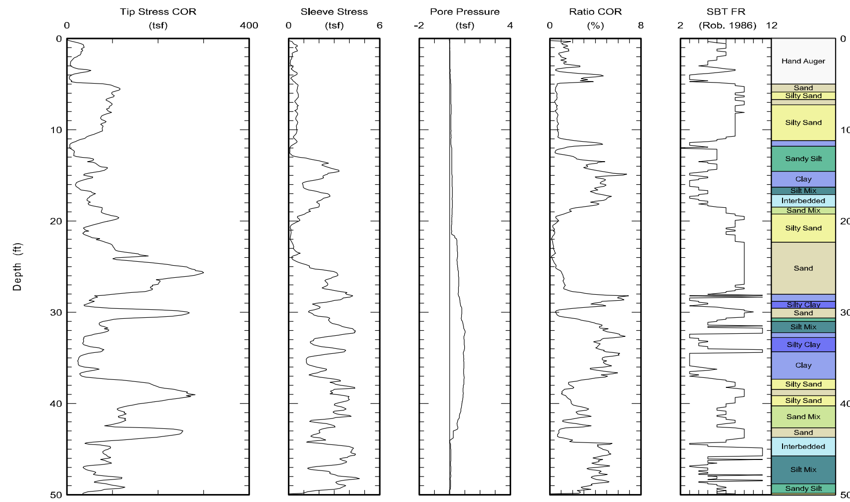
Kehoe Testing & Engineering Office: (714) 901-7270 Fax: (714) 901-7289 rich@kehoetesting.com www.kehoetesting.com	CPT Data 30 ton rig	Date: 25/May/2012 Test ID: C-5 Project: SanDiego
	Customer: Ninyo & Moore Job Site: 10th Avenue Marine Terminal	



Maximum depth: 50.12 (ft)
Page 1 of 2

Test ID: C-5
File: Z25Y1205C.ECP

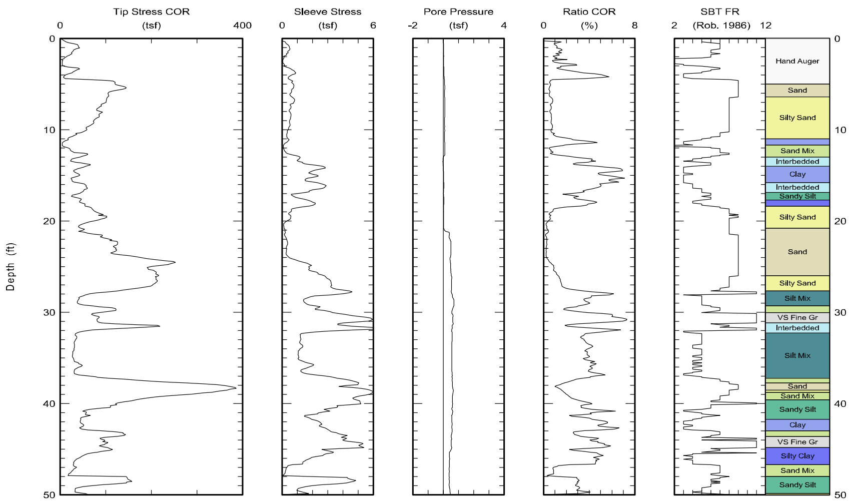
Kehoe Testing & Engineering Office: (714) 901-7270 Fax: (714) 901-7289 rich@kehoetesting.com www.kehoetesting.com	CPT Data 30 ton rig	Date: 24/May/2012 Test ID: C-6 Project: SanDiego
	Customer: Ninyo & Moore Job Site: 10th Avenue Marine Terminal	



Maximum depth: 50.22 (ft)
Page 1 of 2

Test ID: C-6
File: Z24Y1205C.ECP

Kehoe Testing & Engineering Office: (714) 901-7270 Fax: (714) 901-7289 rich@kehoetesting.com www.kehoetesting.com	CPT Data 30 ton rig	Date: 24/May/2012 Test ID: C-7 Project: SanDiego
	Customer: Ninyo & Moore Job Site: 10th Avenue Marine Terminal	

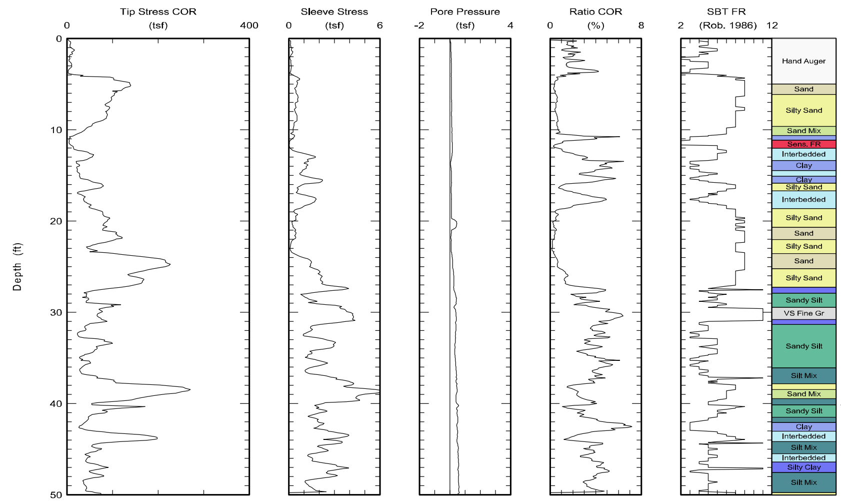


Maximum depth: 50.26 (ft)

Page 1 of 2

Test ID: C-7
File: Z24Y1208C.ECP

Kehoe Testing & Engineering Office: (714) 901-7270 Fax: (714) 901-7289 rich@kehoetesting.com www.kehoetesting.com	CPT Data 30 ton rig	Date: 24/May/2012 Test ID: C-8 Project: SanDiego
	Customer: Ninyo & Moore Job Site: 10th Avenue Marine Terminal	

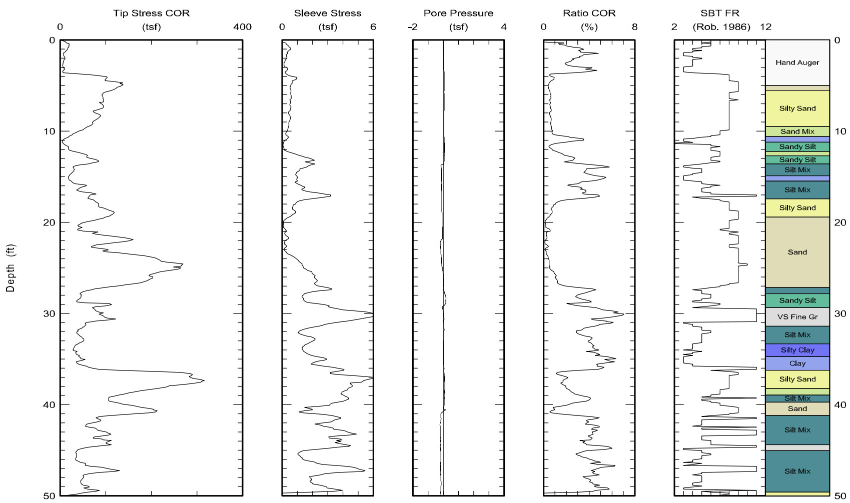


Maximum depth: 50.08 (ft)

Page 1 of 2

Test ID: C-8
File: Z24Y1207C.ECP

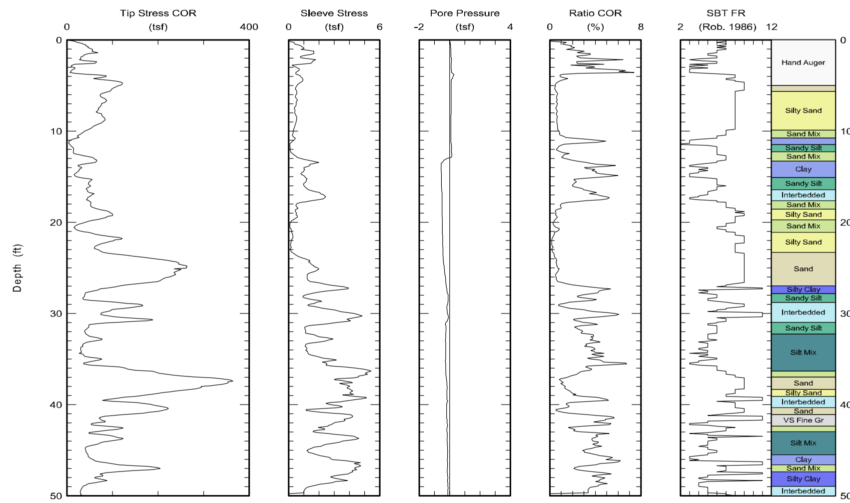
Kehoe Testing & Engineering Office: (714) 901-7270 Fax: (714) 901-7289 rich@kehoetesting.com www.kehoetesting.com	CPT Data 30 ton rig	Date: 24/May/2012 Test ID: C-9 Project: SanDiego
	Customer: Ninyo & Moore Job Site: 10th Avenue Marine Terminal	



Maximum depth: 50.03 (ft)
Page 1 of 2

Test ID: C-9
File: Z24Y1206C.ECP

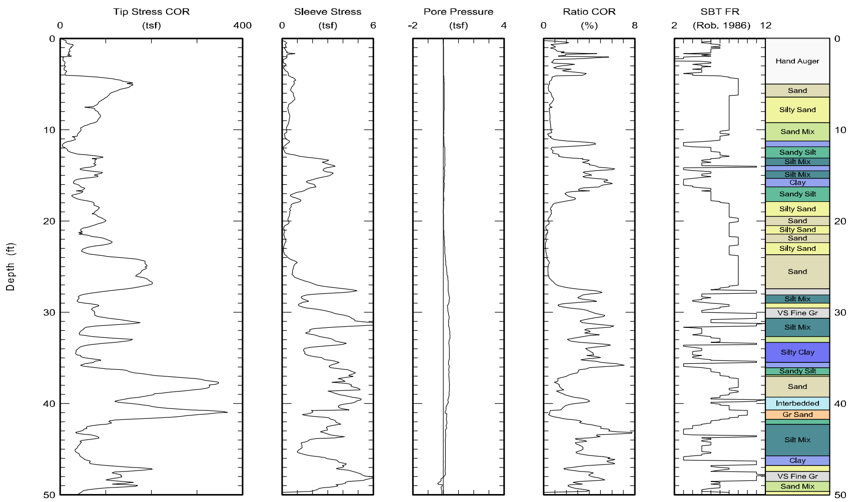
Kehoe Testing & Engineering Office: (714) 901-7270 Fax: (714) 901-7289 rich@kehoetesting.com www.kehoetesting.com	CPT Data 30 ton rig	Date: 24/May/2012 Test ID: C-10 Project: SanDiego
	Customer: Ninyo & Moore Job Site: 10th Avenue Marine Terminal	



Maximum depth: 50.10 (ft)
Page 1 of 2

Test ID: C-10
File: Z24Y1205C.ECP

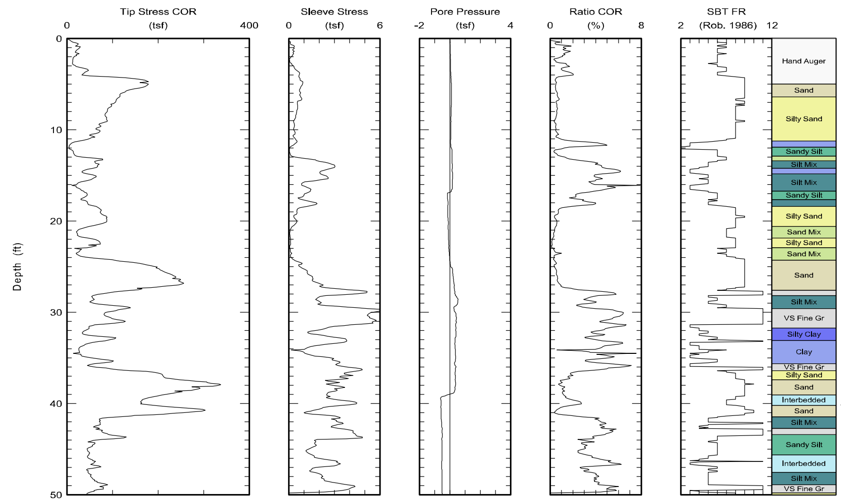
Kehoe Testing & Engineering Office: (714) 901-7270 Fax: (714) 901-7289 rich@kehoetesting.com www.kehoetesting.com	CPT Data 30 ton rig	Date: 24/May/2012 Test ID: C-11 Project: SanDiego
	Customer: Ninyo & Moore Job Site: 10th Avenue Marine Terminal	



Maximum depth: 50.04 (ft)
Page 1 of 2

Test ID: C-11
File: Z24Y1204C.ECP

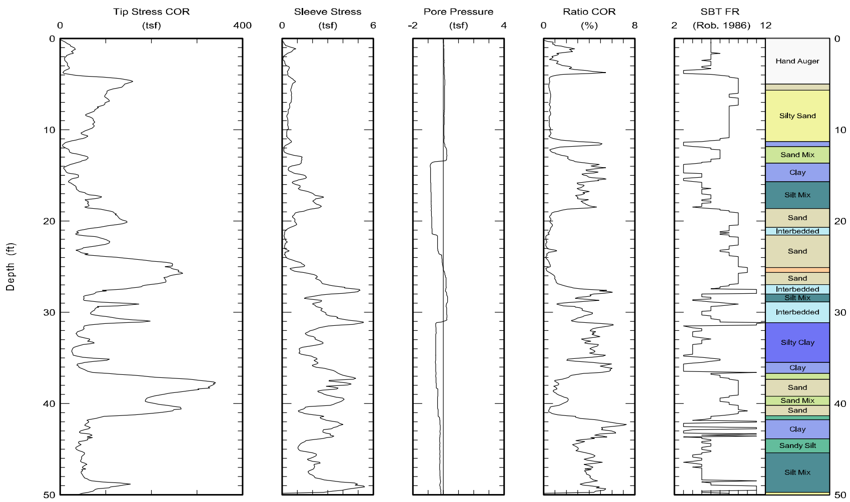
Kehoe Testing & Engineering Office: (714) 901-7270 Fax: (714) 901-7289 rich@kehoetesting.com www.kehoetesting.com	CPT Data 30 ton rig	Date: 24/May/2012 Test ID: C-12 Project: SanDiego
	Customer: Ninyo & Moore Job Site: 10th Avenue Marine Terminal	



Maximum depth: 50.12 (ft)
Page 1 of 2

Test ID: C-12
File: Z24Y1203C.ECP

Kehoe Testing & Engineering Office: (714) 901-7270 Fax: (714) 901-7289 rich@kehoetesting.com www.kehoetesting.com	CPT Data 30 ton rig	Date: 24/May/2012 Test ID: C-13 Project: SanDiego
	Customer: Ninyo & Moore Job Site: 10th Avenue Marine Terminal	

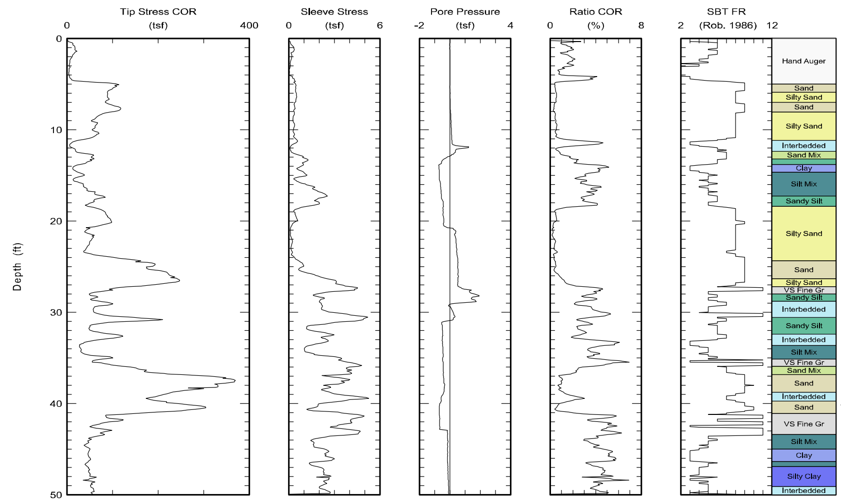


Maximum depth: 50.19 (ft)

Page 1 of 2

Test ID: C-13
File: Z24Y1202C.ECP

Kehoe Testing & Engineering Office: (714) 901-7270 Fax: (714) 901-7289 rich@kehoetesting.com www.kehoetesting.com	CPT Data 30 ton rig	Date: 24/May/2012 Test ID: C-14 Project: SanDiego
	Customer: Ninyo & Moore Job Site: 10th Avenue Marine Terminal	

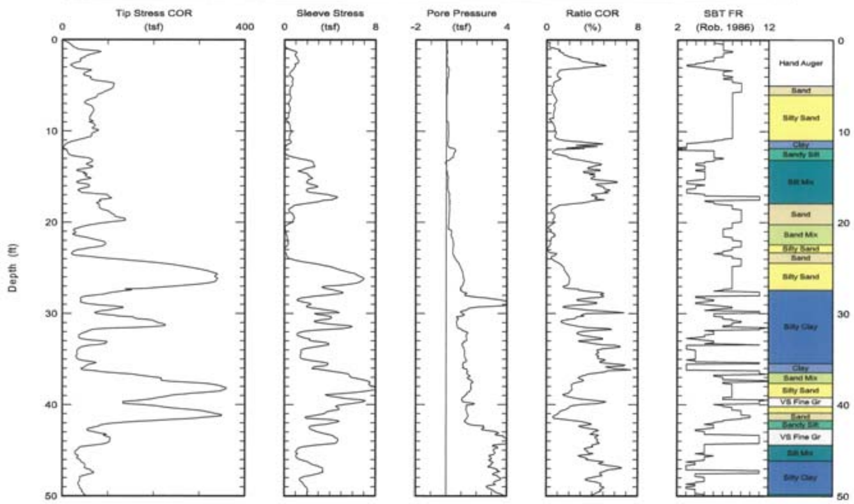


Maximum depth: 50.26 (ft)

Page 1 of 2

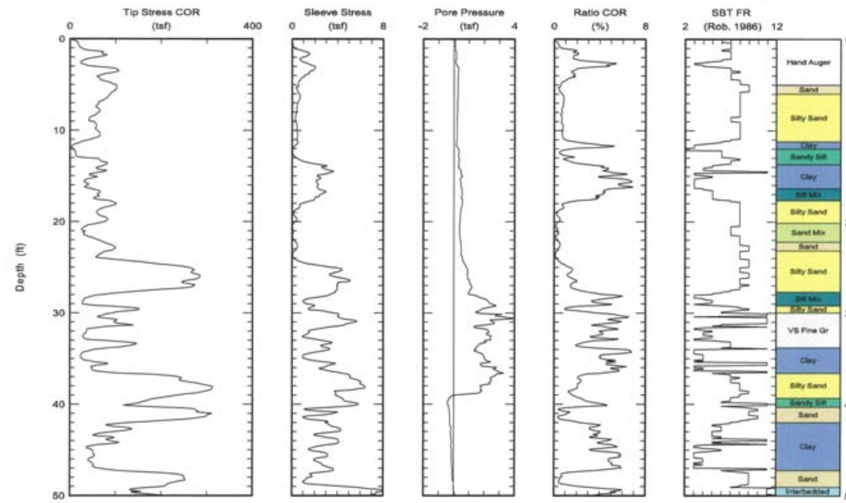
Test ID: C-14
File: Z24Y1201C.ECP

Kehoe Testing & Engineering Office: (714) 901-7270 Fax: (714) 901-7289 rich@kehoetesting.com www.kehoetesting.com	CPT Data 30 ton rig	Date: 26/Oct/2012 Test ID: CPT-15 Project: SanDiego
	Customer: Ninyo & Moore Job Site: 10th Avenue Marine Terminal	



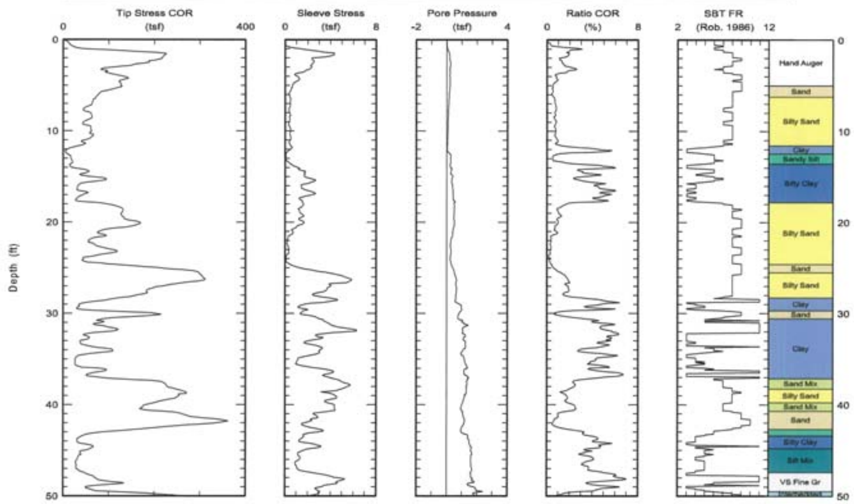
Maximum depth: 50.53 (ft)
Page 1 of 2

Kehoe Testing & Engineering Office: (714) 901-7270 Fax: (714) 901-7289 rich@kehoetesting.com www.kehoetesting.com	CPT Data 30 ton rig	Date: 26/Oct/2012 Test ID: CPT-16 Project: SanDiego
	Customer: Ninyo & Moore Job Site: 10th Avenue Marine Terminal	



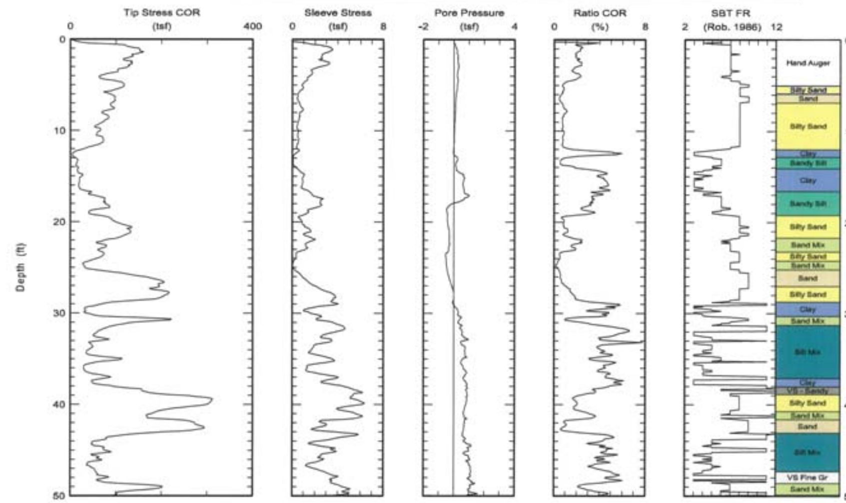
Maximum depth: 50.53 (ft)
Page 1 of 2

Kehoe Testing & Engineering Office: (714) 901-7270 Fax: (714) 901-7289 rich@kehoetesting.com www.kehoetesting.com	CPT Data 30 ton rig	Date: 26/Oct/2012 Test ID: CPT-17 Project: SanDiego
	Customer: Ninyo & Moore Job Site: 10th Avenue Marine Terminal	



Maximum depth: 50.58 (ft)
Page 1 of 2

Kehoe Testing & Engineering Office: (714) 901-7270 Fax: (714) 901-7289 rich@kehoetesting.com www.kehoetesting.com	CPT Data 30 ton rig	Date: 26/Oct/2012 Test ID: CPT-18 Project: SanDiego
	Customer: Ninyo & Moore Job Site: 10th Avenue Marine Terminal	



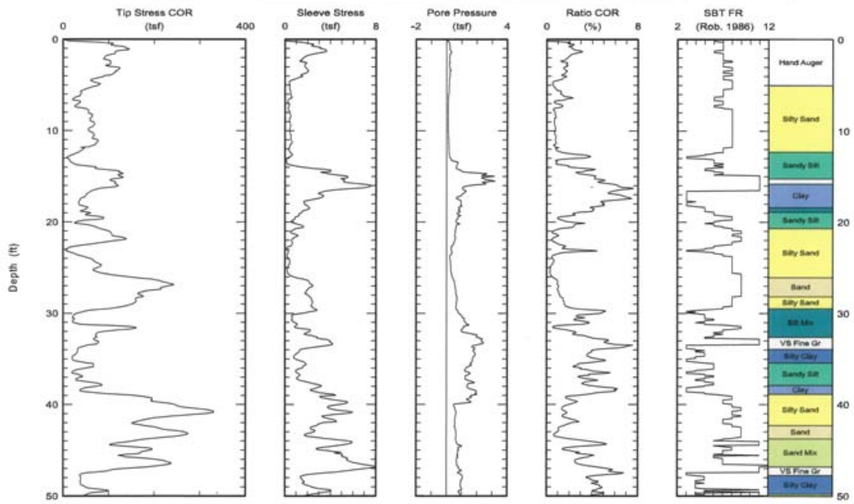
Maximum depth: 50.57 (ft)
Page 1 of 2

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 26/Oct/2012
Test ID: CPT-19
Project: SanDiego

Customer: Ninyo & Moore
Job Site: 10th Avenue Marine Terminal



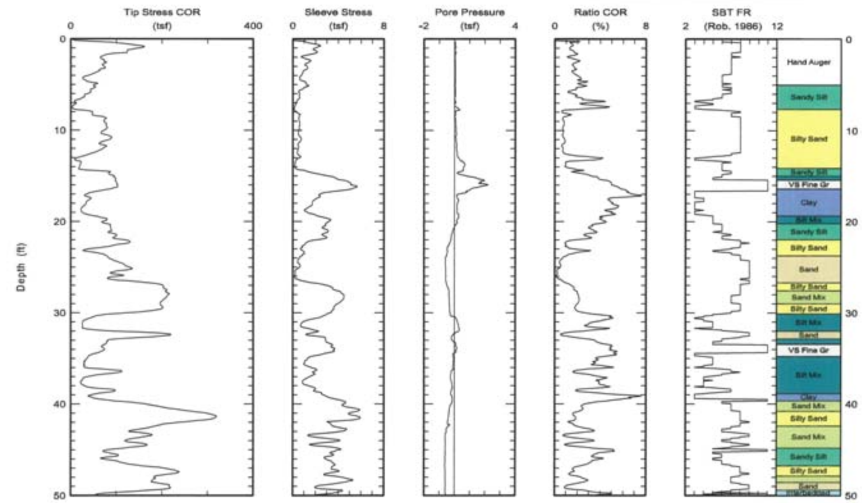
Maximum depth: 50.52 (ft)
Page 1 of 2

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

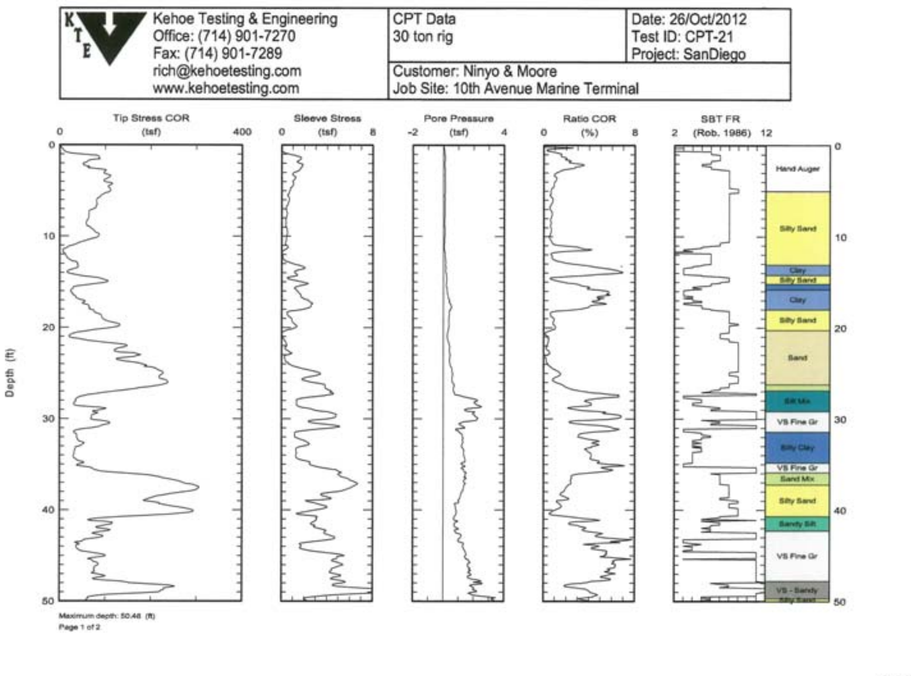
CPT Data
30 ton rig

Date: 26/Oct/2012
Test ID: CPT-20
Project: SanDiego

Customer: Ninyo & Moore
Job Site: 10th Avenue Marine Terminal



Maximum depth: 50.77 (ft)
Page 1 of 2



APPENDIX B

LABORATORY TESTING

Classification

Soils were visually and texturally classified in accordance with the Unified Soil Classification System (USCS) in general accordance with ASTM D 2488. Soil classifications are indicated on the boring log in Appendix A.

In-Place Moisture Test

The moisture content of a soil sample obtained from the exploratory boring was evaluated in general accordance with ASTM D 2937. The test result is presented in Appendix A.

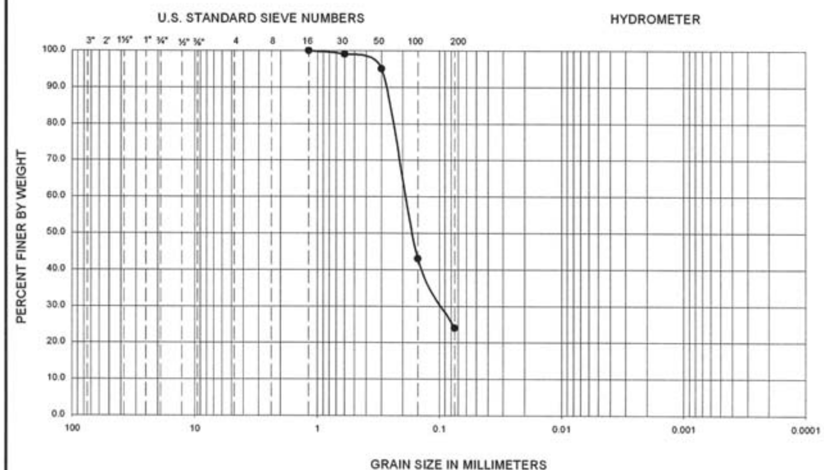
Gradation Analysis

Gradation analysis tests were performed on selected representative soil samples in general accordance with ASTM D 422. The grain-size distribution curves are shown on Figures B-1 through B-3. These test results were utilized in evaluating the soil classifications in accordance with USCS.

R-Value

The resistance value, or R-value, for site soils was evaluated in general accordance with California Test (CT) 301. Samples were prepared and evaluated for exudation pressure and expansion pressure. The equilibrium R-value is reported as the lesser or more conservative of the two calculated results. The test results are shown on Figure B-4.

GRAVEL		SAND			FINES	
Coarse	Fine	Coarse	Medium	Fine	SILT	CLAY



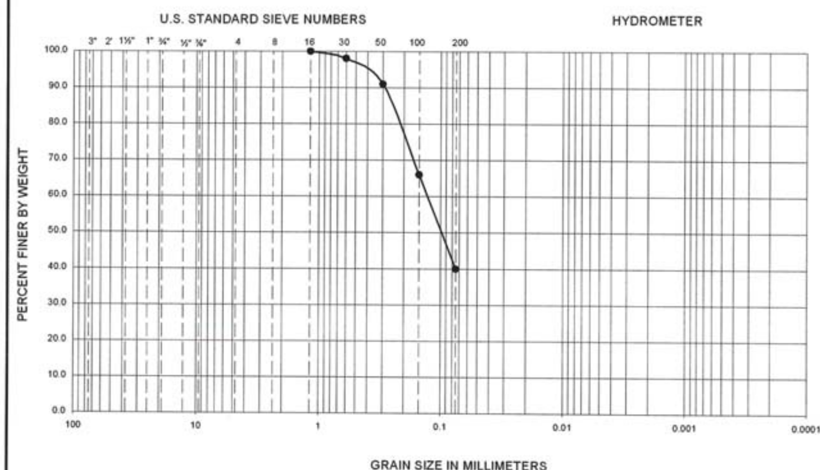
Symbol	Sample Location	Depth (ft)	Liquid Limit	Plastic Limit	Plasticity Index	D_{10}	D_{30}	D_{60}	C_u	C_c	Passing No. 200 (%)	USCS
●	B-1	11.5-13.0	--	--	--	--	--	--	--	--	24	SM

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 422

Ninyo & Moore		GRADATION TEST RESULTS	FIGURE
PROJECT NO.	DATE	COMMERCIAL BERTHING PIER AND TAMT SAN DIEGO, CALIFORNIA	B-1
107319001	12/12		

107319001_SIEVE B-1 @ 11.5-13.0.xls

GRAVEL		SAND			FINES	
Coarse	Fine	Coarse	Medium	Fine	SILT	CLAY

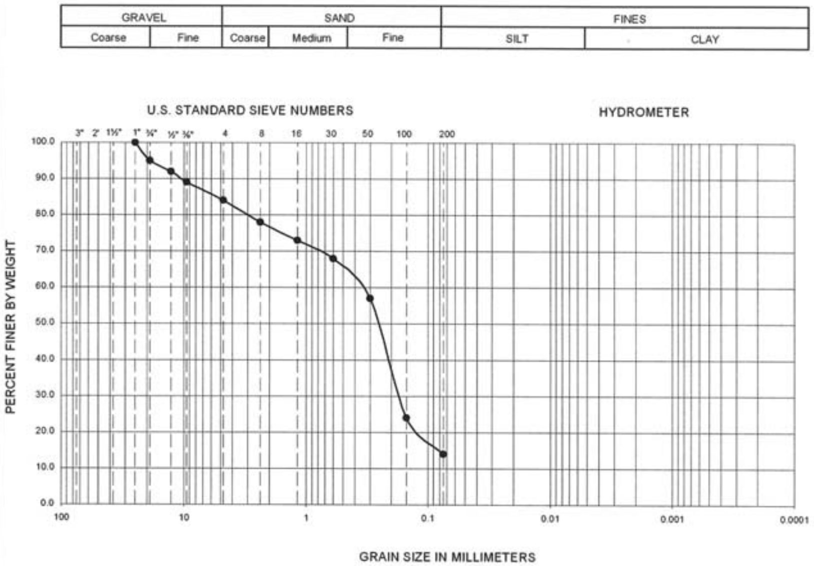


Symbol	Sample Location	Depth (ft)	Liquid Limit	Plastic Limit	Plasticity Index	D_{10}	D_{30}	D_{60}	C_u	C_c	Passing No. 200 (%)	USCS
●	B-1	16.0-17.5	--	--	--	--	--	--	--	--	40	SC

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 422

Ninyo & Moore		GRADATION TEST RESULTS	FIGURE
PROJECT NO.	DATE	COMMERCIAL BERTHING PIER AND TAMT SAN DIEGO, CALIFORNIA	B-2
107319001	12/12		

107319001_SIEVE B-1 @ 16.0-17.5.xls



Symbol	Sample Location	Depth (ft)	Liquid Limit	Plastic Limit	Plasticity Index	D_{10}	D_{30}	D_{60}	C_u	C_c	Passing No. 200 (%)	USCS
●	B-1	20.5-22.0	--	--	--	--	--	--	--	--	14	SM

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 422

Ninyo & Moore

PROJECT NO.	DATE	GRADATION TEST RESULTS	FIGURE
107319001	12/12	COMMERCIAL BERTHING PIER AND TAMT SAN DIEGO, CALIFORNIA	B-3

107319001_SIEVE B-1 @ 20.5-22.0.xls

SAMPLE LOCATION	SAMPLE DEPTH (FT)	SOIL TYPE	R-VALUE
B-1	2.5- 5.0	SAND with Silt (SP-SM)	57

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 2844/CT 301

Ninyo & Moore

PROJECT NO.	DATE	R-VALUE TEST RESULTS	FIGURE
107319001	12/12	COMMERCIAL BERTHING PIER AND TAMT SAN DIEGO, CALIFORNIA	B-4

107319001_R-Value TABLE page 1.xls

APPENDIX C

SEISMIC DESIGN PARAMETERS

Project 107319001; Commercial Berthing Pier and TAMT

Conterminous 48 States
2005 ASCE 7 Standard
Latitude = 32.6967
Longitude = -117.1517
Spectral Response Accelerations Ss and S1
Ss and S1 = Mapped Spectral Acceleration Values
Site Class B - Fa = 1.0 ,Fv = 1.0
Data are based on a 0.01 deg grid spacing

Period (sec)	Sa (g)	
0.2	1.601	(Ss, Site Class B)
1.0	0.638	(S1, Site Class B)

Conterminous 48 States
2005 ASCE 7 Standard
Latitude = 32.6967
Longitude = -117.15169999999999
Spectral Response Accelerations SMs and SM1
SMs = Fa x Ss and SM1 = Fv x S1
Site Class D - Fa = 1.0 ,Fv = 1.5

Period (sec)	Sa (g)	
0.2	1.601	(SMs, Site Class D)
1.0	0.957	(SM1, Site Class D)

Conterminous 48 States
2005 ASCE 7 Standard
Latitude = 32.6967
Longitude = -117.15169999999999
Design Spectral Response Accelerations SDs and SD1
SDs = 2/3 x SMs and SD1 = 2/3 x SM1
Site Class D - Fa = 1.0 ,Fv = 1.5

Period (sec)	Sa (g)	
0.2	1.067	(SDs, Site Class D)
1.0	0.638	(SD1, Site Class D)

Conterminous 48 States
2005 ASCE 7 Standard
Latitude = 32.6967
Longitude = -117.15169999999999
MCE Response Spectrum for Site Class B
Ss and S1 = Mapped Spectral Acceleration Values

Site Class B - Fa = 1.0 ,Fv = 1.0

Period (sec)	Sa (g)	Sd (inches)
0.000	0.640	0.000
0.080	1.601	0.099
0.200	1.601	0.626
0.399	1.601	2.485
0.400	1.595	2.493
0.500	1.276	3.117
0.600	1.063	3.740
0.700	0.911	4.363
0.800	0.797	4.987
0.900	0.709	5.610
1.000	0.638	6.233
1.100	0.580	6.857
1.200	0.532	7.480
1.300	0.491	8.103
1.400	0.456	8.726
1.500	0.425	9.350
1.600	0.399	9.973
1.700	0.375	10.596
1.800	0.354	11.220
1.900	0.336	11.843
2.000	0.319	12.466

Conterminous 48 States
2005 ASCE 7 Standard
Latitude = 32.6967
Longitude = -117.15169999999999
Site Modified Response Spectrum for Site Class D
SMs = FaSs and SM1 = FvS1
Site Class D - Fa = 1.0 ,Fv = 1.5

Period (sec)	Sa (g)	Sd (inches)
0.000	0.640	0.000
0.120	1.601	0.224
0.200	1.601	0.626
0.598	1.601	5.590
0.600	1.595	5.610
0.700	1.367	6.545
0.800	1.196	7.480
0.900	1.063	8.415
1.000	0.957	9.350
1.100	0.870	10.285
1.200	0.797	11.220
1.300	0.736	12.155

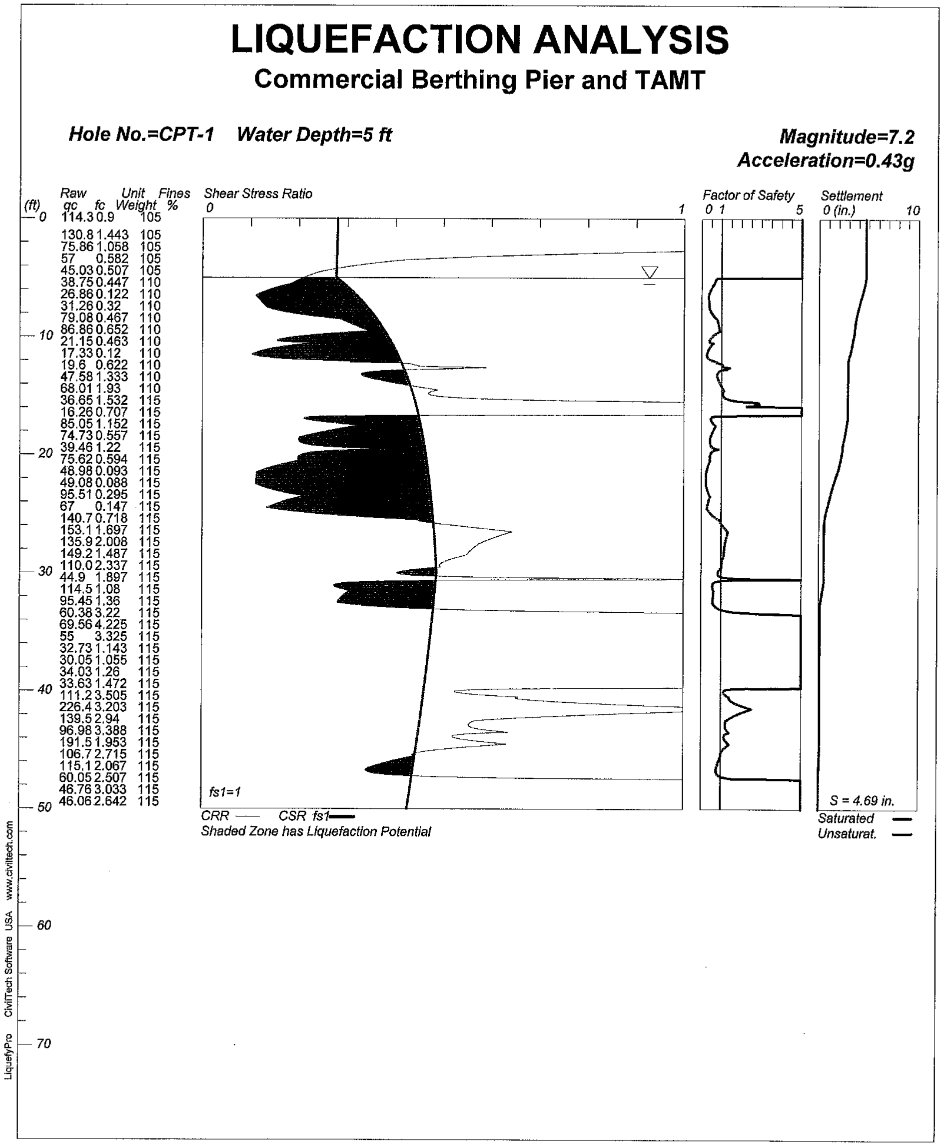
1.400	0.684	13.090
1.500	0.638	14.025
1.600	0.598	14.960
1.700	0.563	15.895
1.800	0.532	16.830
1.900	0.504	17.765
2.000	0.478	18.700

Conterminous 48 States
2005 ASCE 7 Standard
Latitude = 32.6967
Longitude = -117.15169999999999
Design Response Spectrum for Site Class D
SDs = 2/3 x SMs and SD1 = 2/3 x SM1
Site Class D - Fa = 1.0 ,Fv = 1.5

Period (sec)	Sa (g)	Sd (inches)
0.000	0.427	0.000
0.120	1.067	0.149
0.200	1.067	0.417
0.598	1.067	3.727
0.600	1.063	3.740
0.700	0.911	4.363
0.800	0.797	4.987
0.900	0.709	5.610
1.000	0.638	6.233
1.100	0.580	6.857
1.200	0.532	7.480
1.300	0.491	8.103
1.400	0.456	8.726
1.500	0.425	9.350
1.600	0.399	9.973
1.700	0.375	10.596
1.800	0.354	11.220
1.900	0.336	11.843
2.000	0.319	12.466

APPENDIX D

LIQUEFACTION ANALYSES



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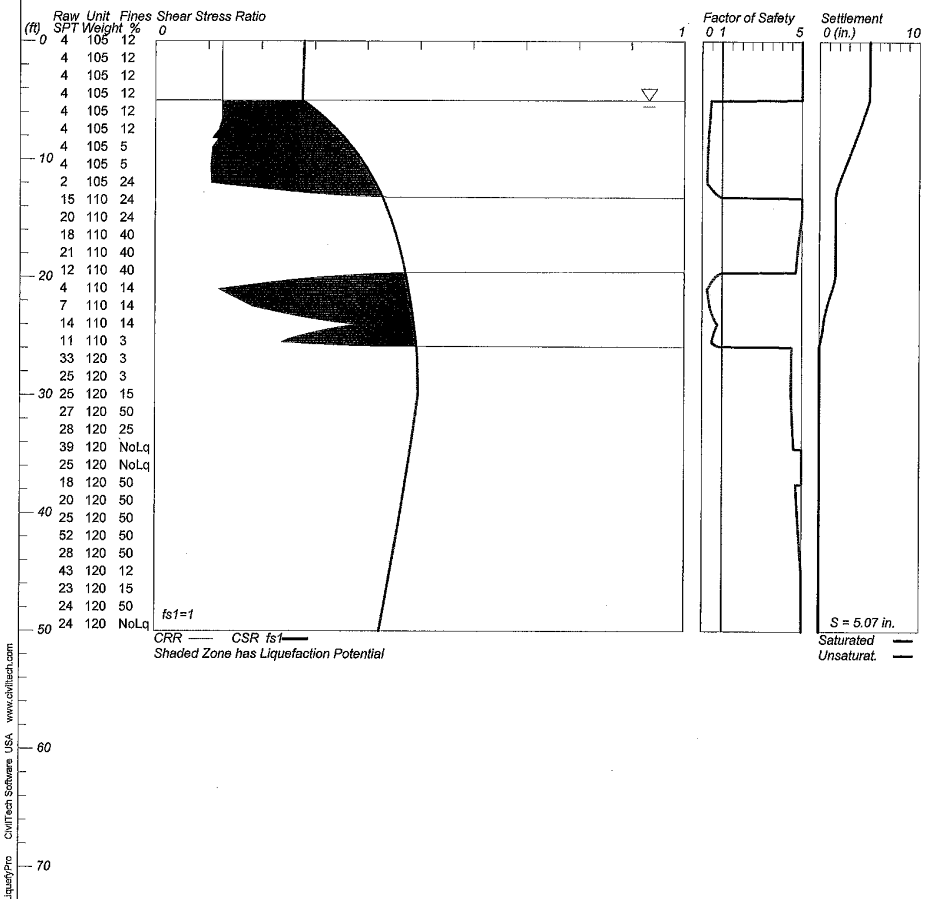
LIQUEFACTION ANALYSIS

Commercial Berthing Pier and TAMT

Hole No.=B-1 Water Depth=5 ft

Magnitude=7.2
Acceleration=0.43g

Raw SPT	Unit Weight	Fines %
4	105	12
4	105	12
4	105	12
4	105	12
4	105	12
4	105	12
4	105	5
4	105	5
2	105	24
15	110	24
20	110	24
18	110	40
21	110	40
12	110	40
4	110	14
7	110	14
14	110	14
11	110	3
33	120	3
25	120	3
25	120	15
27	120	50
28	120	25
39	120	NoLq
25	120	NoLq
18	120	50
20	120	50
25	120	50
52	120	50
28	120	50
43	120	12
23	120	15
24	120	50
24	120	NoLq



Shaded Zone has Liquefaction Potential

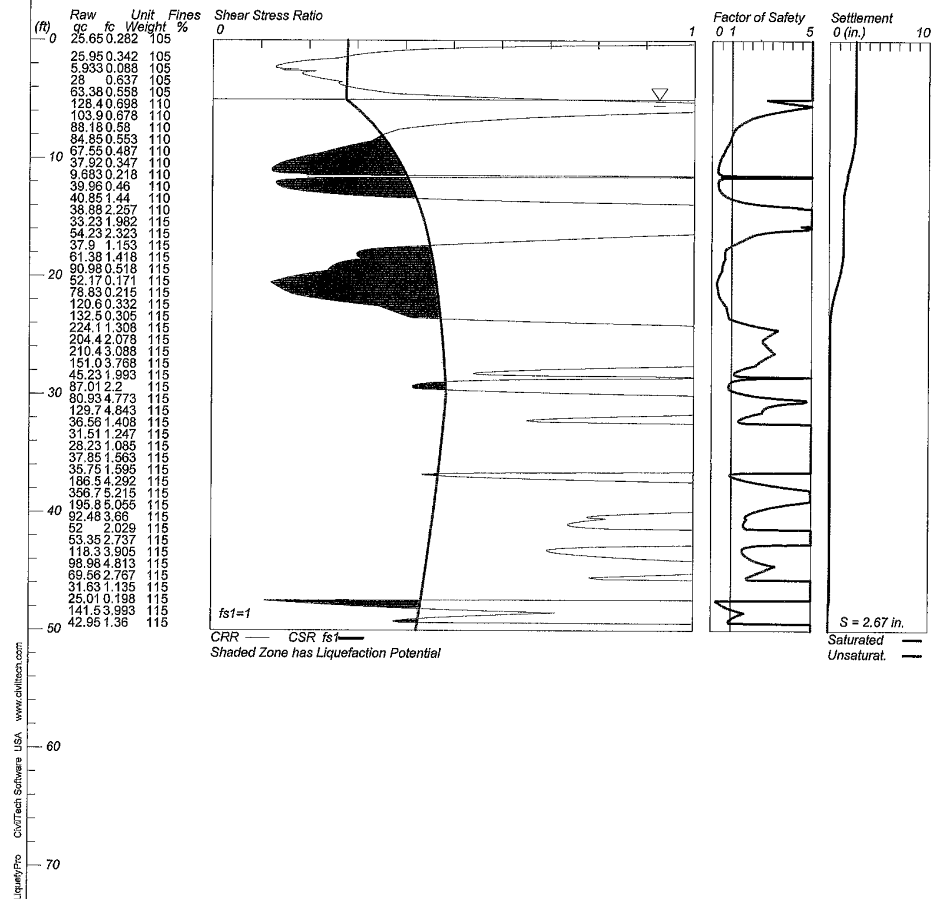
LIQUEFACTION ANALYSIS

Commercial Berthing Pier and TAMT

Hole No.=CPT-7 Water Depth=5 ft

Magnitude=7.2
Acceleration=0.43g

Raw qc	fc	Unit Weight	Fines %
25.65	0.282	105	
25.95	0.342	105	
5.933	0.088	105	
28	0.637	105	
63.38	0.558	105	
128.4	0.698	110	
103.9	0.678	110	
88.18	0.58	110	
84.85	0.553	110	
67.55	0.487	110	
37.92	0.347	110	
9.683	0.218	110	
39.96	0.46	110	
40.85	1.44	110	
38.88	2.257	110	
33.23	1.982	115	
54.23	2.323	115	
37.9	1.153	115	
61.38	1.418	115	
90.98	0.518	115	
52.17	0.171	115	
78.83	0.215	115	
120.6	0.332	115	
132.5	0.305	115	
224.1	1.308	115	
204.4	2.078	115	
210.4	3.088	115	
151.0	3.768	115	
45.23	1.993	115	
87.01	2.2	115	
80.93	4.773	115	
129.7	4.843	115	
36.56	1.408	115	
31.51	1.247	115	
28.23	1.085	115	
37.85	1.563	115	
35.75	1.595	115	
186.5	4.292	115	
356.7	5.215	115	
195.8	5.055	115	
92.48	3.66	115	
52	2.029	115	
53.35	2.737	115	
118.3	3.905	115	
98.98	4.813	115	
69.56	2.767	115	
31.63	1.135	115	
25.01	0.198	115	
141.5	3.993	115	
42.95	1.36	115	



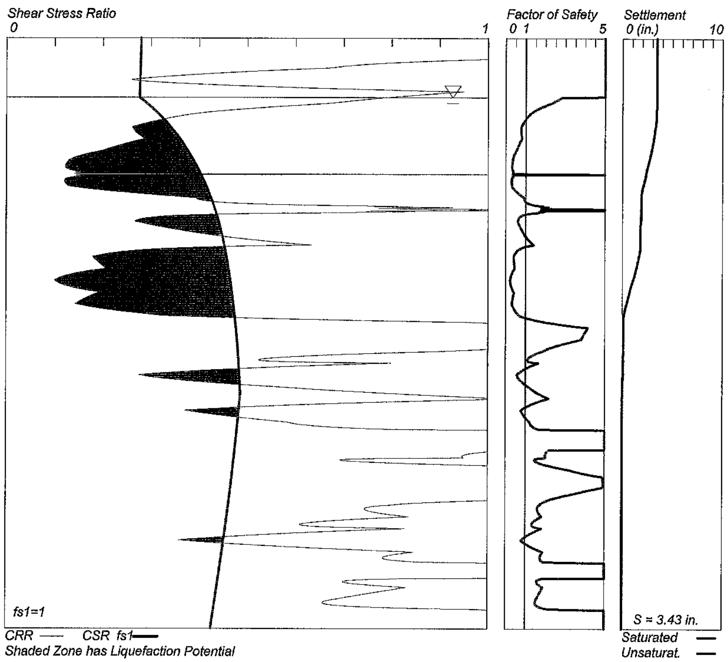
Shaded Zone has Liquefaction Potential

LIQUEFACTION ANALYSIS
Commercial Berthing Pier and TAMT

Hole No.=CPT-10 Water Depth=5 ft

Magnitude=7.2
Acceleration=0.43g

Raw qc	fc	Unit Weight	Fines %
37.16	0.563	105	
46.03	1.258	105	
33.31	1.153	105	
29.2	0.618	105	
98.61	0.81	105	
95.8	0.507	110	
80.78	0.497	110	
71.11	0.435	110	
78.71	0.495	110	
62.48	0.417	110	
25.98	0.317	110	
9.167	0.122	110	
29.91	0.345	110	
47.13	1.432	110	
23.28	0.952	110	
46.48	1.112	115	
48.88	1.508	115	
49.01	1.85	115	
67.13	0.508	115	
82.9	0.453	115	
25.8	0.129	115	
88	0.243	115	
71.85	0.143	115	
120.0	0.475	115	
242.3	1.508	115	
238.9	1.562	115	
185.1	1.728	115	
68.36	2.775	115	
61.88	1.452	115	
125.5	2.36	115	
125.3	4.325	115	
55.3	1.653	115	
57.15	2.065	115	
36.33	1.337	115	
41.93	1.627	115	
67.4	2.883	115	
195.6	5.05	115	
342.4	3.735	115	
246.2	4.067	115	
126.2	4.002	115	
203.5	2.343	115	
92.52	3.703	115	
85.46	2.19	115	
93.75	3.783	115	
55.75	2.213	115	
46.41	1.952	115	
115.3	4.263	115	
113.2	3.812	115	
62.23	2.772	115	
31.48	0.918	115	



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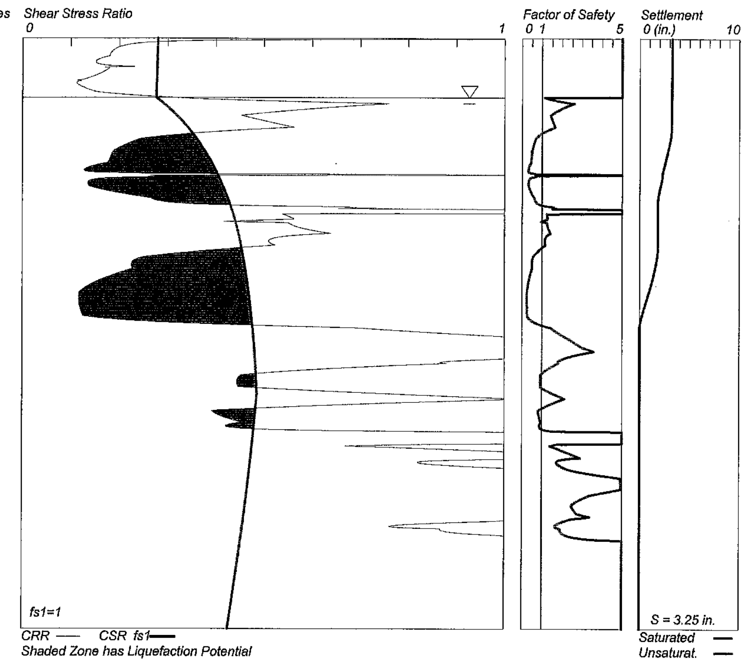
LIQUEFACTION ANALYSIS
Commercial Berthing Pier and TAMT

Hole No.=CPT-14 Water Depth=5 ft

Magnitude=7.2
Acceleration=0.43g

Raw qc	fc	Unit Weight	Fines %
10.31	0.153	105	
16.11	0.26	105	
7	0.133	105	
5.183	0.052	105	
29.4	0.305	105	
100.5	0.457	110	
89.36	0.49	110	
105.1	0.372	110	
74.83	0.323	110	
61.78	0.337	110	
59.6	0.341	110	
12.65	0.333	110	
35.86	0.413	110	
42.5	1.038	110	
22.05	0.84	110	
23.68	0.66	115	
44.86	1.693	115	
68.4	2.127	115	
58.43	1.143	115	
89.33	0.46	115	
72.34	0.236	115	
50.98	0.135	115	
48.1	0.2	115	
55.11	0.225	115	
165.0	0.752	115	
202.4	1.02	115	
232.7	2.742	115	
107.8	3.69	115	
61.08	1.98	115	
72.58	2.208	115	
119.2	4.295	115	
70.17	2.023	115	
93.93	2.43	115	
35.68	1.74	115	
49.2	1.778	115	
83.63	4.047	115	
192.4	3.647	115	
348.3	3.43	115	
281.6	2.518	115	
198.0	3.968	115	
272.6	1.753	115	
114.8	4.227	115	
72	3.662	115	
66.81	3.188	115	
44.68	1.723	115	
48.05	2.533	115	
45.7	1.997	115	
49.1	2.347	115	
53.61	2.332	115	
55.73	2.372	115	



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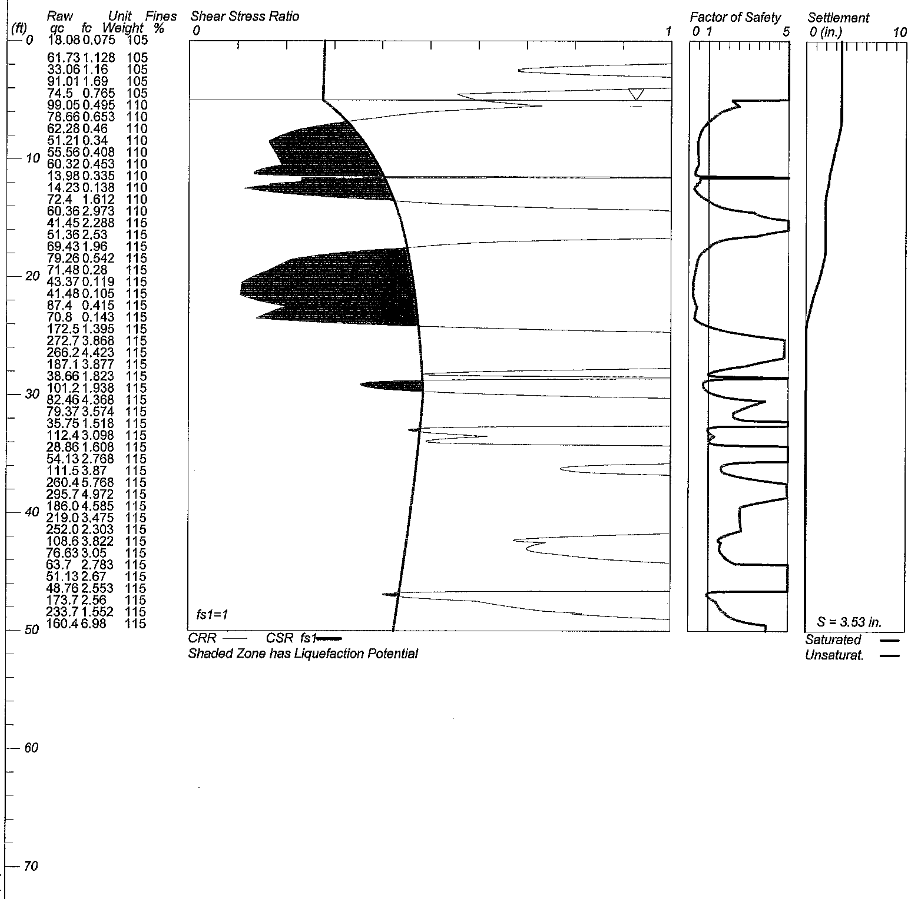
LIQUEFACTION ANALYSIS

Commercial Berthing Pier and TAMT

Hole No.=CPT-16   Water Depth=5 ft

Magnitude=7.2
Acceleration=0.43g

Raw qc	fc	Unit Weight	Fines %
18.08	0.075	105	
61.73	1.128	105	
33.06	1.16	105	
91.01	1.69	105	
74.5	0.765	105	
99.05	0.495	110	
78.66	0.653	110	
62.28	0.46	110	
51.21	0.34	110	
55.56	0.408	110	
60.32	0.453	110	
13.98	0.335	110	
14.23	0.138	110	
72.4	1.612	110	
60.36	2.973	110	
41.45	2.288	115	
51.36	2.53	115	
69.43	1.96	115	
79.26	0.542	115	
71.48	0.28	115	
43.37	0.119	115	
41.48	0.105	115	
87.4	0.415	115	
70.8	0.143	115	
172.5	1.395	115	
272.7	3.868	115	
266.2	4.423	115	
187.1	3.877	115	
38.66	1.823	115	
101.2	1.938	115	
82.46	4.368	115	
79.37	3.574	115	
35.75	1.518	115	
112.4	3.098	115	
28.86	1.608	115	
54.13	2.768	115	
111.5	3.87	115	
260.4	5.768	115	
295.7	4.972	115	
186.0	4.585	115	
219.0	3.475	115	
252.0	2.303	115	
108.6	3.822	115	
76.63	3.05	115	
63.7	2.783	115	
51.13	2.67	115	
48.76	2.553	115	
173.7	2.56	115	
233.7	1.552	115	
160.4	6.98	115	



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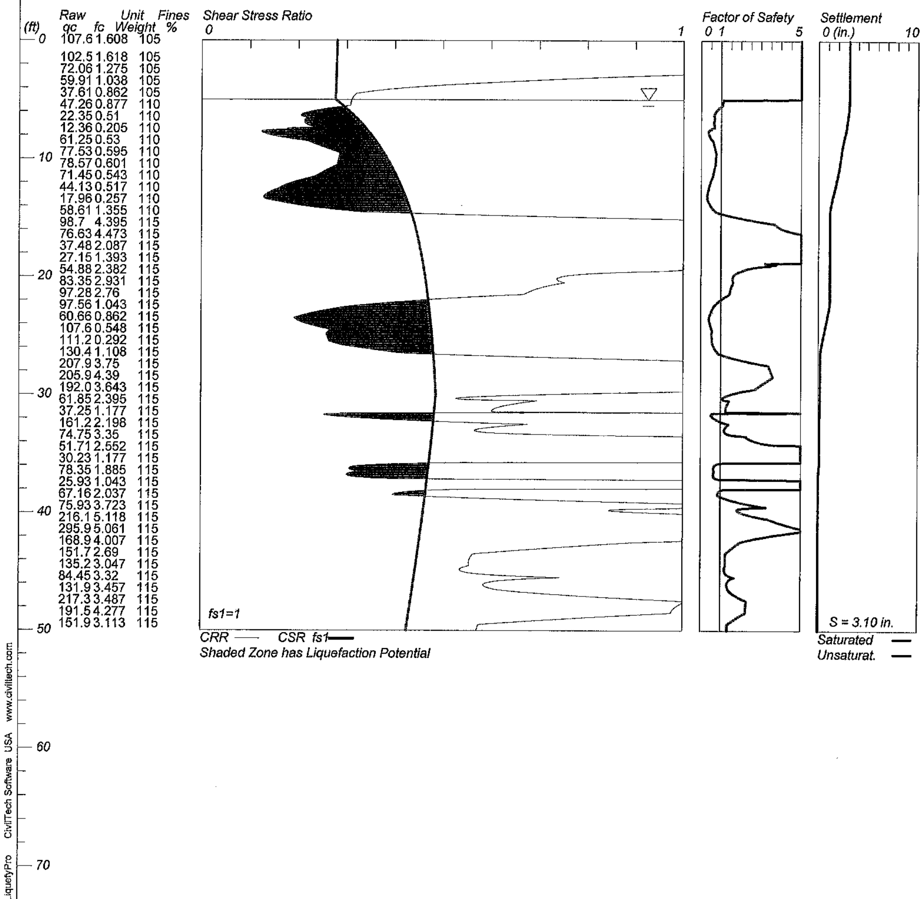
LIQUEFACTION ANALYSIS

Commercial Berthing Pier and TAMT

Hole No.=CPT-20   Water Depth=5 ft

Magnitude=7.2
Acceleration=0.43g

Raw qc	fc	Unit Weight	Fines %
107.6	1.608	105	
102.5	1.618	105	
72.06	1.275	105	
59.91	1.038	105	
37.61	0.862	105	
47.26	0.877	110	
22.35	0.51	110	
12.36	0.205	110	
61.25	0.53	110	
77.53	0.595	110	
78.57	0.601	110	
71.45	0.543	110	
44.13	0.517	110	
17.96	0.257	110	
58.61	1.355	110	
98.7	4.395	115	
76.63	4.473	115	
37.48	2.087	115	
27.15	1.393	115	
54.88	2.382	115	
83.35	2.931	115	
97.28	2.76	115	
97.56	1.043	115	
60.66	0.862	115	
107.6	0.548	115	
111.2	0.292	115	
130.4	1.108	115	
207.9	3.75	115	
205.9	4.39	115	
192.0	3.643	115	
61.85	2.395	115	
37.25	1.177	115	
161.2	2.198	115	
74.75	3.35	115	
51.71	2.552	115	
30.23	1.177	115	
78.35	1.885	115	
25.93	1.043	115	
67.16	2.037	115	
75.93	3.723	115	
216.1	5.118	115	
295.9	5.061	115	
168.9	4.007	115	
151.7	2.69	115	
135.2	3.047	115	
84.45	3.32	115	
131.9	3.457	115	
217.3	3.487	115	
191.5	4.277	115	
151.9	3.113	115	



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APPENDIX E

SOIL PARAMETERS AND PILE CAPACITY ANALYSES

Commercial Berthing Pier and TAMT
San Diego, California

December 13, 2012
Project No. 107319001

SOIL PARAMETERS FOR PILE CAPACITY ANALYSES

Table E1 – Static Condition

Layer Number	Simplified Soil Layers	Depth to Top of Layer (ft)	Depth to Bottom of Layer (ft)	Buoyant Unit Weight (pcf)	Friction Angle (degrees)	Cohesion (ksf)	e_{50} (%)	k (pci)
1	Sand	0.0	5.0	105.0	28	0	N/A	25
2	Sand	5.0	14.0	47.6	28	0	N/A	20
3	Sand	14.0	16.0	52.6	30	0	N/A	60
4	Sand	16.0	25.0	52.6	28	0	N/A	60
5	Sand	25.0	50.0	52.6	34	0	N/A	125

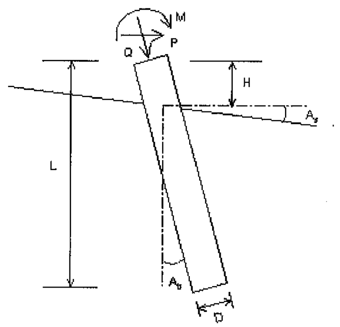
Table E2 – Seismic Condition

Layer Number	Simplified Soil Layers	Depth to Top of Layer (ft)	Depth to Bottom of Layer (ft)	Buoyant Unit Weight (pcf)	Friction Angle (degrees)	Cohesion (ksf)	e_{50} (%)	k (pci)
1	Sand	0.0	5.0	105.0	28	0	N/A	25
2*	Sand	5.0	14.0	47.6	0.1	0	N/A	5
3	Sand	14.0	16.0	52.6	30	0	N/A	60
4*	Sand	16.0	25.0	52.6	0.1	0	N/A	15
5	Sand	25.0	50.0	52.6	34	0	N/A	125

* Liquefiable soil layer.

VERTICAL ANALYSIS

Figure 1



Driving Concrete Pile

Loads:
Load Factor for Vertical Loads= 1.0
Load Factor for Lateral Loads= 1.0
Loads Supported by Pile Cap= 0 %
Shear Condition: Static

Vertical Load, Q= 80.0 -kp
Shear Load, P= 10.0 -kp
Slope Restain St= 0.00 -in/-in

Profile:
Pile Length, L= 35.0 -ft
Top Height, H= 0 -ft
Slope Angle, As= 0
Batter Angle, Ab= 0
Fixed Head Condition

Soil Data:

Depth -ft	Gamma -lb/f3	Phi	C -kp/f2	K -lb/i3	e50 or Dr %	Nspt
0	105	28	0.00	25	20	5
5	47.6	28	0.00	20	20	5
14	52.6	30	0.00	60	30	15
16	52.6	28	0.00	60	30	10
25	52.6	34	0.00	125	50	25

Pile Data:

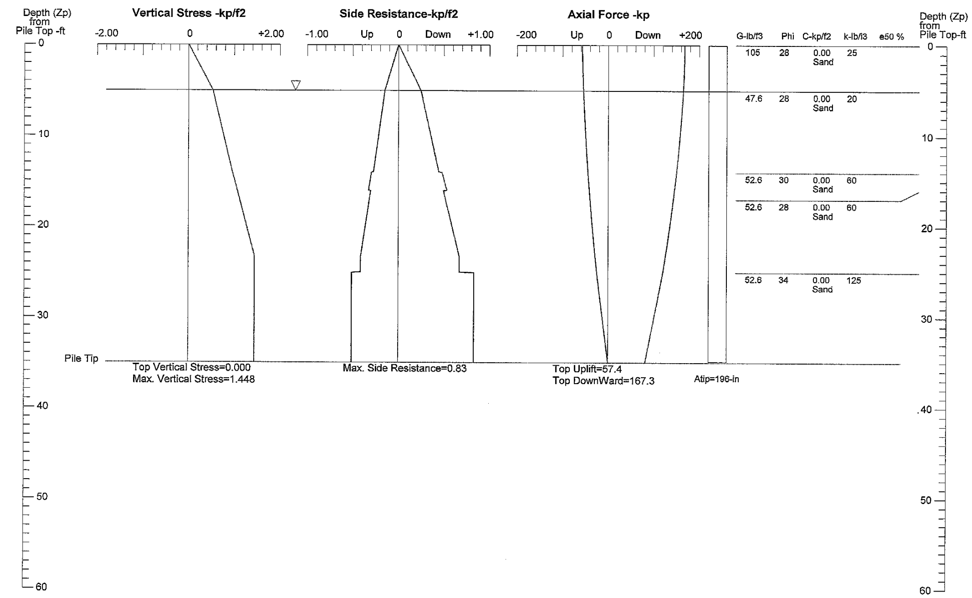
Depth -ft	Width -in	Area -in2	Per. -in	I -in4	E -kp/i2	Weight -kp/f
0.0	14	196.0	56.0	3201.3	3000	0.204
35.0						

Vertical capacity:
Weight above Ground= 0.00 Total Weight= 4.60-kp *Soil Weight is not included
Side Resistance (Down)= 85.850-kp Side Resistance (Up)= 52.831-kp
Tip Resistance (Down)= 81.470-kp Tip Resistance (Up)= 0.000-kp
Total Ultimate Capacity (Down)= 167.320-kp Total Ultimate Capacity (Up)= 57.427-kp
Total Allowable Capacity (Down)= 83.660-kp Total Allowable Capacity (Up)= 31.012-kp
OK! Qallow > Q

Settlement Calculation:
At Q= 80.00-kp Settlement= 0.05021-in
At Xallow= 1.00-in Qallow= 99999.00000-kp

Note: If the program cannot find a result or the result exceeds the upper limit. The result will be displayed as 99999.

SOIL STRESS, SIDE RESISTANCE, & AXIAL FORCE vs DEPTH
Based on Ultimate Load Condition



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Commercial Berthing Pier and TAMT
14-inch sq driven concrete_Static

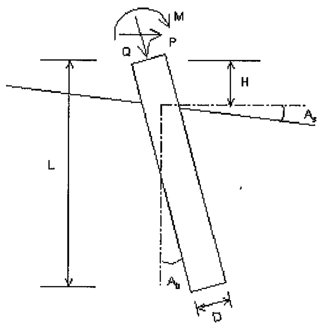
LATERAL ANALYSIS

Figure 2

Loads:
Load Factor for Vertical Loads= 1.0
Load Factor for Lateral Loads= 1.0
Loads Supported by Pile Cap= 0 %
Shear Condition: Static

Vertical Load, Q= 80.0 -kp
Shear Load, P= 10.0 -kp
Slope Restain St= 0.00 -in/-in

Profile:
Pile Length, L= 35.0 -ft
Top Height, H= 0 -ft
Slope Angle, As= 0
Batter Angle, Ab= 0
Fixed Head Condition



Driving Concrete Pile

Soil Data:

Depth -ft	Gamma -lb/f3	Phi	C -kp/f2	K -lb/i3	e50 or Dr %	Nspt
0	105	28	0.00	25	20	5
5	47.6	28	0.00	20	20	5
14	52.6	30	0.00	60	30	15
16	52.6	28	0.00	60	30	10
25	52.6	34	0.00	125	50	25

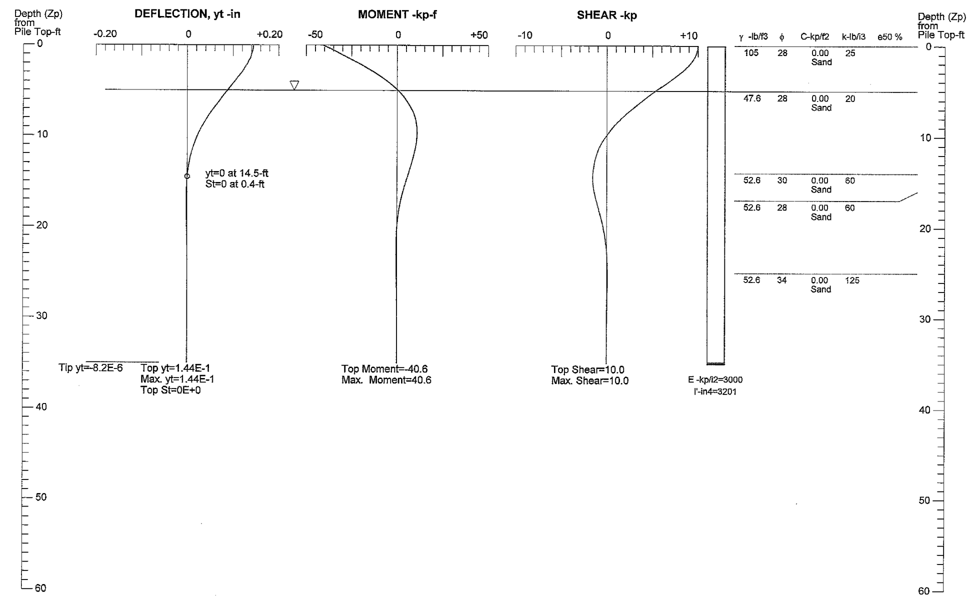
Pile Data:

Depth -ft	Width -in	Area -in2	Per. -in	I -in4	E -kp/i2	Weight -kp/f
0.0	14	196.0	56.0	3201.3	3000	0.204
35.0						

Single Pile Lateral Analysis:
Top Deflection, yt= 0.14400-in
Max. Moment, M= -40.58-kp-f
Top Deflection Slope, St= 0.00000
OK! Top Deflection, 0.1440-in is less than the Allowable Deflection= 1.00-in

Note: If the program cannot find a result or the result exceeds the upper limit. The result will be displayed as 99999.
The Max. Moment calculated by program is an internal force from the applied load conditions. Structural engineer has to check whether the pile has enough capacity to resist the moment with adequate factor of safety. If not, the pile may fail under the load conditions.

PILE DEFLECTION & FORCE vs DEPTH
Single Pile, Khead=5, Kbc=2



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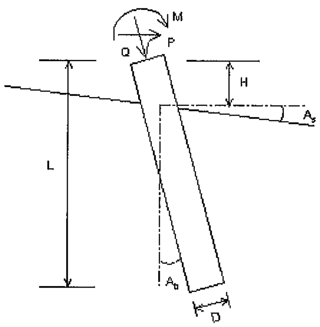
Commercial Berthing Pier and TAMT
14-inch sq driven concrete_Static

VERTICAL ANALYSIS

Figure 1



Driving Concrete Pile

Loads:
Load Factor for Vertical Loads= 1.0
Load Factor for Lateral Loads= 1.0
Loads Supported by Pile Cap= 0 %
Shear Condition: Static

Vertical Load, Q= 80.0 -kp
Shear Load, P= 20.0 -kp
Slope Restain St= 0.00 -in/-in

Profile:
Pile Length, L= 35.0 -ft
Top Height, H= 0 -ft
Slope Angle, As= 0
Batter Angle, Ab= 0

* Negative Friction *
Negative Friction Start: 0 -ft End: 25 -ft with Factor: 1.0Fixed Head

Soil Data:

Depth -ft	Gamma -lb/f3	Phi	C -kp/f2	K -lb/i3	e50 or Dr %	Nspt
0	105	28	0.00	25	20	5
5	47.6	0.1	0.00	5	20	5
14	52.6	30	0.00	60	30	15
16	52.6	0.1	0.00	15	30	10
25	52.6	34	0.00	125	50	25

Pile Data:

Depth -ft	Width -in	Area -in2	Per. -in	I -in4	E -kp/i2	Weight -kp/f
0.0	14	196.0	56.0	3201.3	3000	0.204
35.0						

Vertical capacity:
Weight above Ground= 0.00 Total Weight= 4.60-kp *Soil Weight is not included
Side Resistance (Down)= 30.771-kp Side Resistance (Up)= 28.568-kp
Tip Resistance (Down)= 81.470-kp Tip Resistance (Up)= 0.000-kp
Total Ultimate Capacity (Down)= 112.240-kp Total Ultimate Capacity (Up)= 33.164-kp
Total Allowable Capacity (Down)= 93.534-kp Total Allowable Capacity (Up)= 28.403-kp
OK! Qallow > Q

Settlement Calculation:
At Q= 80.00-kp Settlement= 0.19644-in
At Xallow= 1.00-in Qallow= 99999.00000-kp

Note: If the program cannot find a result or the result exceeds the upper limit. The result will be displayed as 99999.

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Commercial Berthing Pier and TAMT
14-inch sq driven concrete_Seismic

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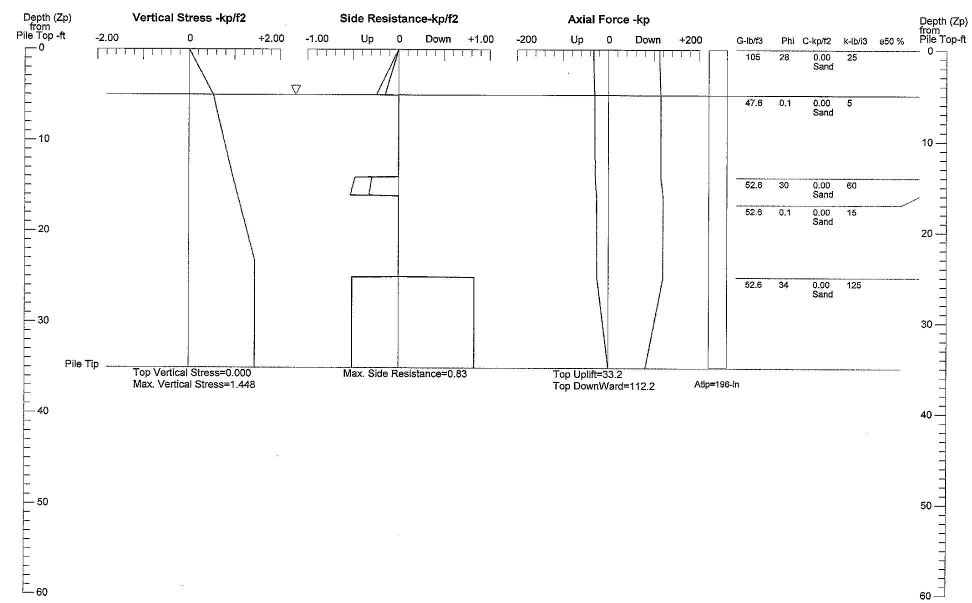
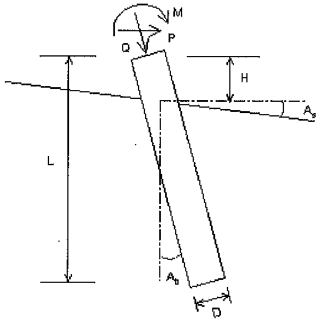


CivilTech Software

Commercial Berthing Pier and TAMT
14-inch sq driven concrete_Seismic

LATERAL ANALYSIS



Driving Concrete Pile

Loads:
Load Factor for Vertical Loads= 1.0
Load Factor for Lateral Loads= 1.0
Loads Supported by Pile Cap= 0 %
Shear Condition: Static

Vertical Load, Q= 80.0 -kp
Shear Load, P= 20.0 -kp
Slope Restain St= 0.00 -in/-in

Profile:
Pile Length, L= 35.0 -ft
Top Height, H= 0 -ft
Slope Angle, As= 0
Batter Angle, Ab= 0

* Negative Friction *
Negative Friction Start: 0 -ft End: 25 -ft with Factor: 1.0Fixed Head

Soil Data:

Depth -ft	Gamma -lb/f3	Phi	C -kp/f2	K -lb/i3	e50 or Dr %	Nspt
0	105	28	0.00	25	20	5
5	47.6	0.1	0.00	5	20	5
14	52.6	30	0.00	60	30	15
16	52.6	0.1	0.00	15	30	10
25	52.6	34	0.00	125	50	25

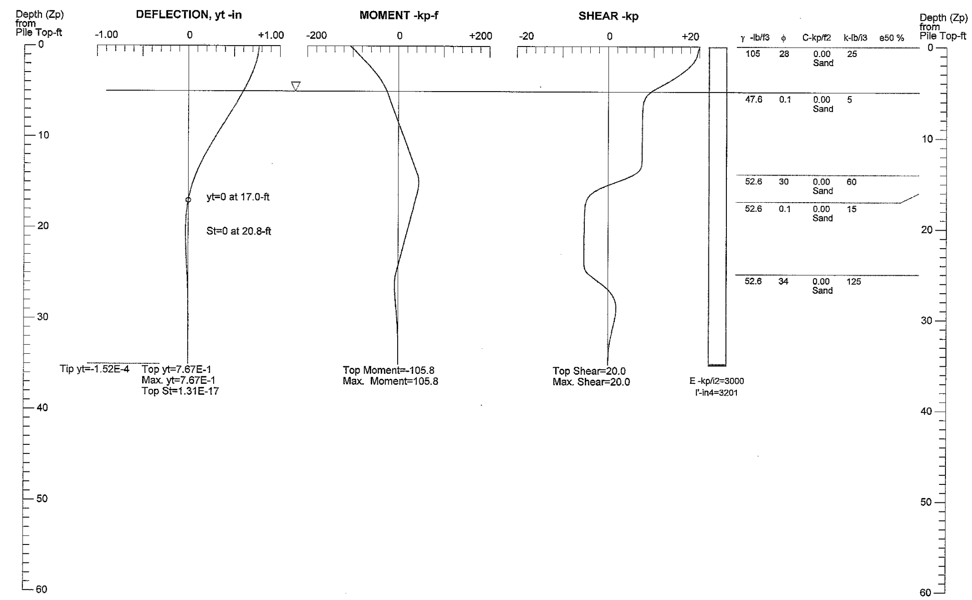
Pile Data:

Depth -ft	Width -in	Area -in2	Per. -in	I -in4	E -kp/i2	Weight -kp/f
0.0	14	196.0	56.0	3201.3	3000	0.204
35.0						

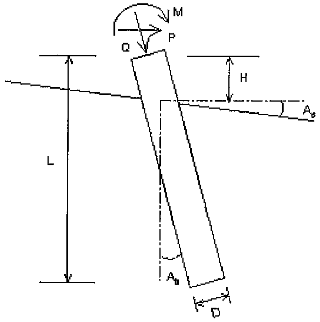
Single Pile Lateral Analysis:
Top Deflection, yt= 0.76700-in
Max. Moment, M= -105.83-kp-f
Top Deflection Slope, St= 0.00000
OK! Top Deflection, 0.7670-in is less than the Allowable Deflection= 1.00-in

Note: If the program cannot find a result or the result exceeds the upper limit. The result will be displayed as 99999.
The Max. Moment calculated by program is an internal force from the applied load conditions. Structural engineer has to check whether the pile has enough capacity to resist the moment with adequate factor of safety. If not, the pile may fail under the load conditions.

PILE DEFLECTION & FORCE vs DEPTH
Single Pile, Khead=5, Kbc=2



VERTICAL ANALYSIS



Drilled Pile (dia <=24 in. or 61 cm)

Loads:
Load Factor for Vertical Loads= 1.0
Load Factor for Lateral Loads= 1.0
Loads Supported by Pile Cap= 0 %
Shear Condition: Static

Vertical Load, Q= 100.0 -kp
Shear Load, P= 10.0 -kp
Slope Restain St= 0.00 -in/-in

Profile:
Pile Length, L= 35.0 -ft
Top Height, H= 0 -ft
Slope Angle, As= 0
Batter Angle, Ab= 0
Fixed Head Condition

Soil Data:

Depth -ft	Gamma -lb/f3	Phi	C -kp/f2	K -lb/i3	e50 or Dr %	Nspt
0	105	28	0.00	25	20	5
5	47.6	28	0.00	20	20	5
14	52.6	30	0.00	60	30	15
16	52.6	28	0.00	60	30	10
25	52.6	34	0.00	125	50	25

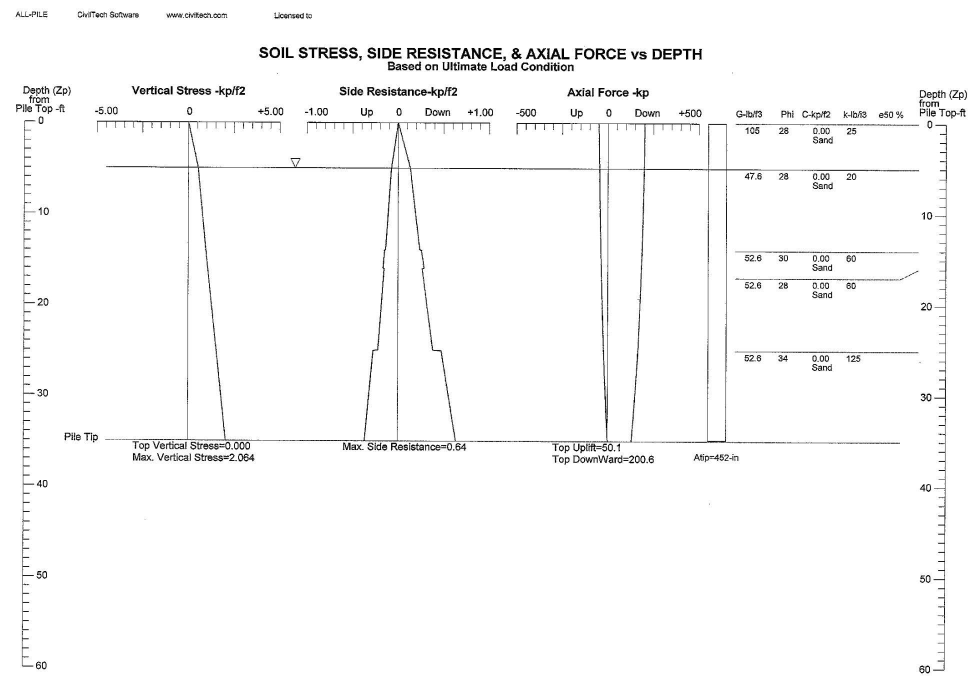
Pile Data:

Depth -ft	Width -in	Area -in2	Per. -in	I -in4	E -kp/i2	Weight -kp/f
0.0	24	452.4	75.4	16286.0	3000	0.471
35.0						

Vertical capacity:
Weight above Ground= 0.00 Total Weight= 10.61-kp *Soil Weight is not included
Side Resistance (Down)= 69.171-kp Side Resistance (Up)= 39.526-kp
Tip Resistance (Down)= 131.452-kp Tip Resistance (Up)= 0.000-kp
Total Ultimate Capacity (Down)= 200.623-kp Total Ultimate Capacity (Up)= 50.140-kp
Total Allowable Capacity (Down)= 100.311-kp Total Allowable Capacity (Up)= 30.377-kp
OK! Qallow > Q

Settlement Calculation:
At Q= 100.00-kp Settlement= 0.26269-in
At Xallow= 1.00-in Qallow= 164.15179-kp

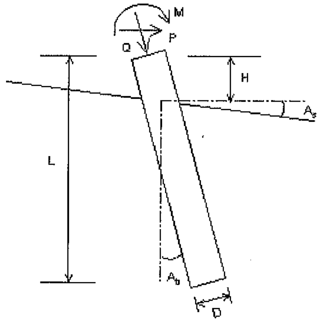
Note: If the program cannot find a result or the result exceeds the upper limit. The result will be displayed as 99999.



CivilTech Software

Commercial Berthing Pier and TAMT
24-inch diameter CIDH_Static

LATERAL ANALYSIS



Drilled Pile (dia <=24 in. or 61 cm)

Loads:
Load Factor for Vertical Loads= 1.0
Load Factor for Lateral Loads= 1.0
Loads Supported by Pile Cap= 0 %
Shear Condition: Static

Vertical Load, Q= 100.0 -kp
Shear Load, P= 10.0 -kp
Slope Restain St= 0.00 -in/-in

Profile:
Pile Length, L= 35.0 -ft
Top Height, H= 0 -ft
Slope Angle, As= 0
Batter Angle, Ab= 0
Fixed Head Condition

Soil Data:

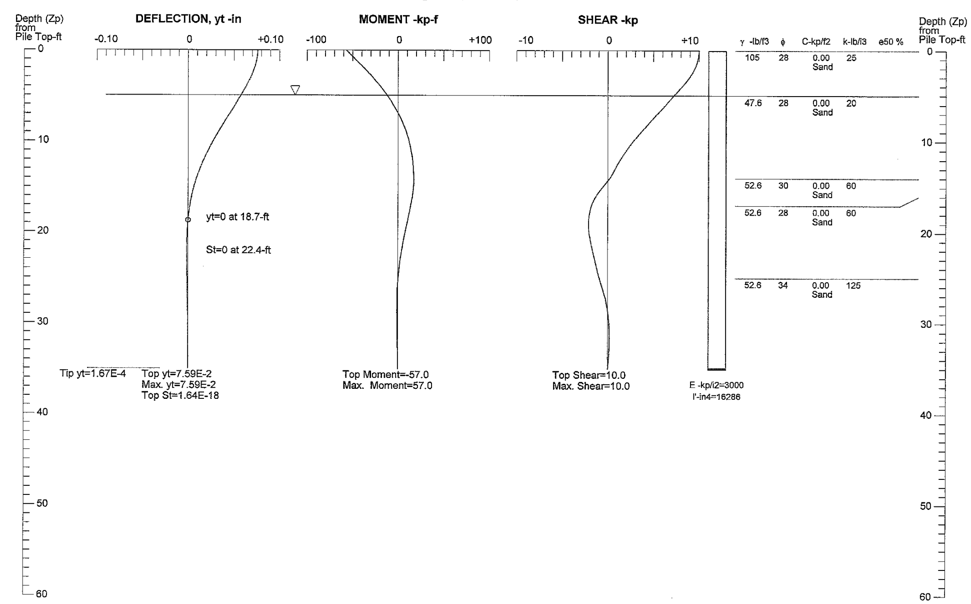
Depth -ft	Gamma -lb/f3	Phi	C -kp/f2	K -lb/i3	e50 or Dr %	Nspt
0	105	28	0.00	25	20	5
5	47.6	28	0.00	20	20	5
14	52.6	30	0.00	60	30	15
16	52.6	28	0.00	60	30	10
25	52.6	34	0.00	125	50	25

Pile Data:

Depth -ft	Width -in	Area -in2	Per. -in	I -in4	E -kp/i2	Weight -kp/f
0.0	24	452.4	75.4	16286.0	3000	0.471
35.0						

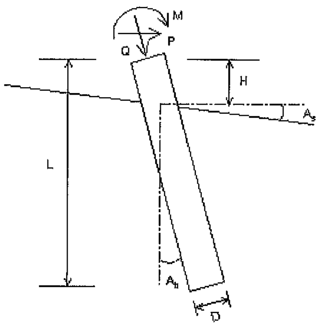
Single Pile Lateral Analysis:
Top Deflection, yt= 0.07590-in
Max. Moment, M= -57.00-kp-f
Top Deflection Slope, St= 0.00000
OK! Top Deflection, 0.0759-in is less than the Allowable Deflection= 1.00-in

Note: If the program cannot find a result or the result exceeds the upper limit. The result will be displayed as 99999.
The Max. Moment calculated by program is an internal force from the applied load conditions. Structural engineer has to check whether the pile has enough capacity to resist the moment with adequate factor of safety. If not, the pile may fail under the load conditions.



VERTICAL ANALYSIS

Figure 1



Drilled Pile (dia <=24 in. or 61 cm)

Loads:
Load Factor for Vertical Loads= 1.0
Load Factor for Lateral Loads= 1.0
Loads Supported by Pile Cap= 0 %
Shear Condition: Static

Vertical Load, Q= 100.0 -kp
Shear Load, P= 25.0 -kp
Slope Restain St= 0.00 -in/-in

Profile:
Pile Length, L= 35.0 -ft
Top Height, H= 0 -ft
Slope Angle, As= 0
Batter Angle, Ab= 0

* Negative Friction *
Negative Friction Start: 0 -ft End: 25 -ft with Factor: 1.0Fixed Head

Soil Data:

Depth -ft	Gamma -lb/f3	Phi	C -kp/f2	K -lb/i3	e50 or Dr %	Nspt
0	105	28	0.00	25	20	5
5	47.6	0.1	0.00	5	20	5
14	52.6	30	0.00	60	30	15
16	52.6	0.1	0.00	15	30	10
25	52.6	34	0.00	125	50	25

Pile Data:

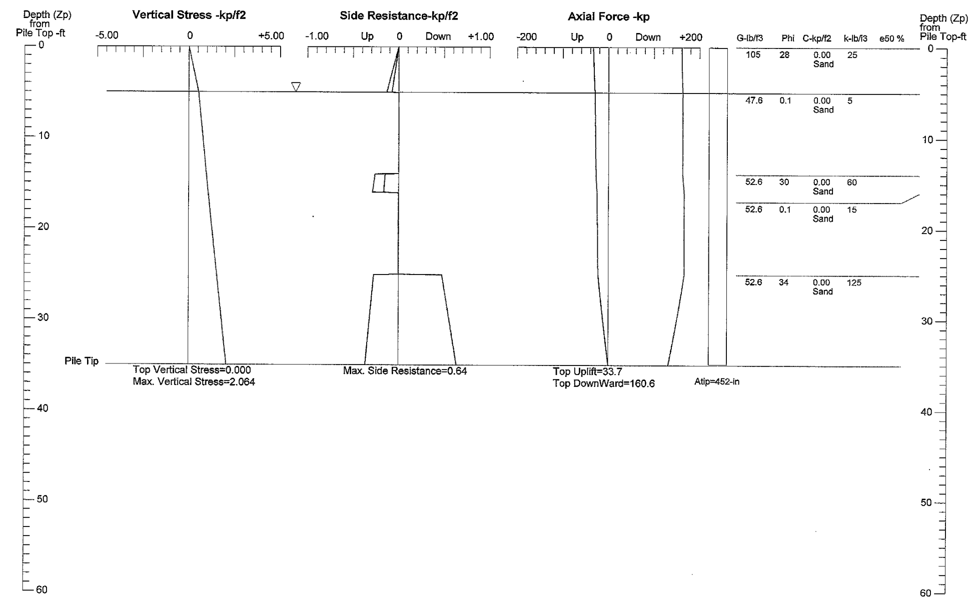
Depth -ft	Width -in	Area -in2	Per. -in	I -in4	E -kp/i2	Weight -kp/f
0.0	24	452.4	75.4	16286.0	3000	0.471
35.0						

Vertical capacity:
Weight above Ground= 0.00 Total Weight= 10.61-kp *Soil Weight is not included
Side Resistance (Down)= 29.116-kp Side Resistance (Up)= 23.123-kp
Tip Resistance (Down)= 131.452-kp Tip Resistance (Up)= 0.000-kp
Total Ultimate Capacity (Down)= 160.568-kp Total Ultimate Capacity (Up)= 33.736-kp
Total Allowable Capacity (Down)= 133.807-kp Total Allowable Capacity (Up)= 29.883-kp
OK! Qallow > Q

Settlement Calculation:
At Q= 100.00-kp Settlement= 0.64377-in
At Xallow= 1.00-in Qallow= 124.83939-kp

Note: If the program cannot find a result or the result exceeds the upper limit. The result will be displayed as 99999.

SOIL STRESS, SIDE RESISTANCE, & AXIAL FORCE vs DEPTH
Based on Ultimate Load Condition



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Commercial Berthing Pier and TAMT
24-inch diameter CIDH_Seismic

LATERAL ANALYSIS

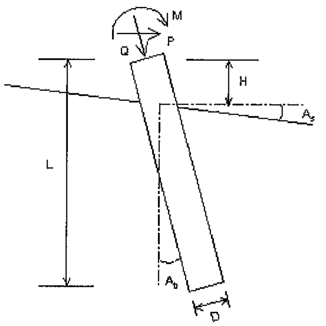
Figure 2

Loads:
Load Factor for Vertical Loads= 1.0
Load Factor for Lateral Loads= 1.0
Loads Supported by Pile Cap= 0 %
Shear Condition: Static

Vertical Load, Q= 100.0 -kp
Shear Load, P= 25.0 -kp
Slope Restain St= 0.00 -in/-in

Profile:
Pile Length, L= 35.0 -ft
Top Height, H= 0 -ft
Slope Angle, As= 0
Batter Angle, Ab= 0

* Negative Friction *
Negative Friction Start: 0 -ft End: 25 -ft with Factor: 1.0Fixed Head



Drilled Pile (dia <=24 in. or 61 cm)

Soil Data:

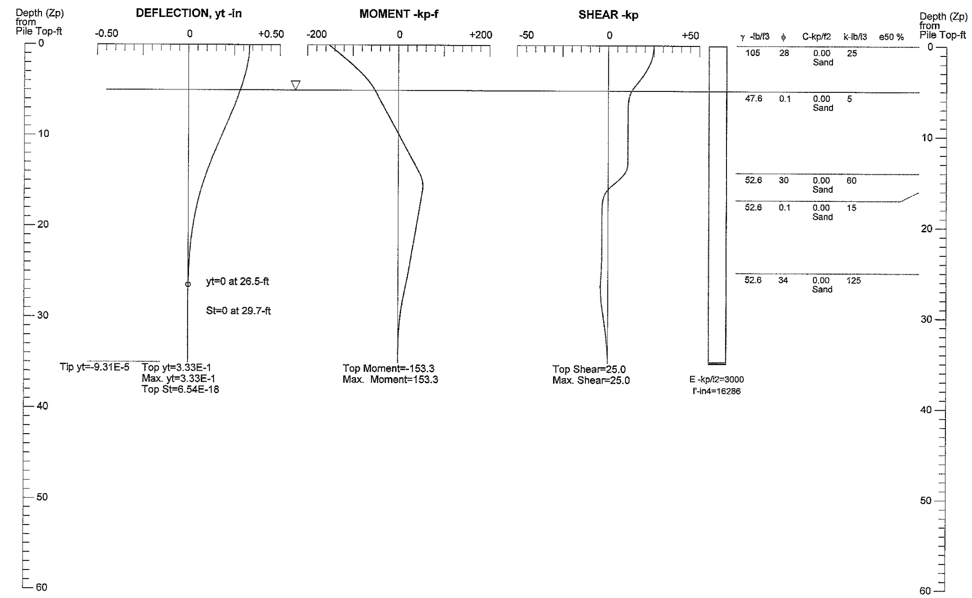
Depth -ft	Gamma -lb/f3	Phi	C -kp/f2	K -lb/i3	e50 or Dr %	Nspt
0	105	28	0.00	25	20	5
5	47.6	0.1	0.00	5	20	5
14	52.6	30	0.00	60	30	15
16	52.6	0.1	0.00	15	30	10
25	52.6	34	0.00	125	50	25

Pile Data:

Depth -ft	Width -in	Area -in2	Per. -in	I -in4	E -kp/i2	Weight -kp/f
0.0	24	452.4	75.4	16286.0	3000	0.471
35.0						

Single Pile Lateral Analysis:
Top Deflection, yt= 0.33300-in
Max. Moment, M= -153.33-kp-f
Top Deflection Slope, St= 0.00000
OK! Top Deflection, 0.3330-in is less than the Allowable Deflection= 1.00-in

Note: If the program cannot find a result or the result exceeds the upper limit. The result will be displayed as 99999.
The Max. Moment calculated by program is an internal force from the applied load conditions. Structural engineer has to check whether the pile has enough capacity to resist the moment with adequate factor of safety. If not, the pile may fail under the load conditions.



CivilTech Software

Commercial Berthing Pier and TAMT
24-inch diameter CIDH_Seismic

APPENDIX F

RESPONSES TO CITY OF SAN DIEGO REVIEW COMMENTS

Presented below are our responses to the City of San Diego preliminary review comments dated September 5, 2012 (referenced) on our earlier geotechnical and fault hazard evaluation report, dated July 24, 2012 (referenced).

Issue No. 1: *Geologic Hazard Category:*

As shown or described on the San Diego Seismic Safety Study maps, the subject property is located in Geologic Hazard Categories (GHC) 11, 13, and 31. GHC 11 is the Alquist-Priolo fault-rupture hazard zone is characterized by a high risk of geologic hazards. GHC 13 is the downtown special fault zone. GHC 31 encompasses areas with a high liquefaction potential. (New Issue)

Ninyo & Moore (N&M) Response: No Response Required.

Issue No. 2: *References:*

Geotechnical and Fault Hazard Evaluation, Commercial Berthing Pier and TAMT, San Diego, California, prepared by Ninyo & Moore, dated July 24, 2012 (their project no. 107319001)

Preliminary Review Questionnaire, Project No. 292259, prepared by Unified Port of San Diego. (New Issue)

N&M Response: No Response Required.

Issue No. 3: *Preliminary Review Question:*

Review Geotechnical and Fault Hazard Evaluation report and determination by the City Geologist. (New Issue)

N&M Response: No Response Required.

Issue No. 4: *The submitted geotechnical report includes a partial copy of Figure 6. Please provide a complete report with full size figures to facilitate this review. (New Issue)*

N&M Response: The Port of San Diego will receive additional copies with full-size figures for transmittal to the City.

Issue No. 5: *Submit three (3) complete copies of the geotechnical investigation reports addressing the faulting and surface fault-rupture hazards. (New Issue)*

N&M Response: As noted in our response to Issue 4, we are providing additional copies for retransmittal to the City of San Diego.

Issue No. 6: *The locations of the proposed structures should be shown on the geologic map. (New Issue)*

N&M Response: The proposed structures are shown on Figure 5 of this updated report.

Issue No. 7: *The project's geotechnical consultant should provide additional representative geologic cross-sections that show the relationship of the proposed construction to site stratigraphy and fault(s). Provide geologic cross-sections aligned orthogonal to the bulkhead that extend sufficiently offshore to illustrate the bathymetry of the bay slope. (New Issue)*

N&M Response: Figure 6 of this updated report shows the relationship of the proposed construction to the site stratigraphy. At this time, we are unclear as to how the bathymetry of the bay slope is a concern to the project due to the presence of the bulkhead. We are available to discuss this issue as soon as feasible for the City reviewers. However, we have provided an additional representative geologic cross-section in Figure 6 of the report based on our additional subsurface exploration performed recently (CPT-15 through CPT-21).

Issue No. 8: *Describe the criteria used to define the stratigraphic units. (New Issue)*

N&M Response: Stratigraphic units were defined based on direct observations of the soils in our boring and correlations of the boring and CPT data to other studies and maps in the project area (Kennedy and Clarke, 1999 a and b; Kennedy and Tan, 2008 [please see references in this report]).

Issue No. 9: *Describe the age-dating techniques used to determine the geochronology of the interpreted stratigraphic units and activity of faulting. (New Issue)*

N&M Response: As noted in our response to Issue 8 the stratigraphic units were correlated to well-defined and dated units as described by the California Geological Survey (Kennedy and Clarke, 1999 a and b). This is a conservative position (assuming that the Bay Deposits are Quaternary in age). Please see Section 6 of this report for additional discussion.

Issue No. 10: *The consultant identifies soil layers within the "old paralic deposits" as susceptible to liquefaction during the design seismic event. The consultant should describe implications for the age and environment of deposition of these sediments and the veracity of their identification of these sediments as old paralic deposits. (New Issue)*

N&M Response: As noted in our response to Issue 8 the stratigraphic units were correlated to well-defined and dated units as described by the California Geological Survey. Please see Section 6 of this report for additional discussion.

Issue No. 11: *The site is located in an area of transitional fault trends, based on regional geologic mapping. The trend of faulting at the site does not appear to be constrained by site-specific information. Additional subsurface exploration appears necessary to provide that constraint. (New Issue)*

N&M Response: We are of the opinion that transitional fault trends are not present in the *immediate* area of the site. As shown on Figures 3 and 7 in this report faults in the *immediate* area of the site trend to the northeast only. In addition, data from our additional evaluations confirms our opinion regarding the continuity of the units to the south and southeast.

Issue No. 12: *Possible faulting south or east of CPT-14 does not appear to be precluded by the presented information. Within the Alquist-Priolo Earthquake Zone, it is typically presumed that faulting is present beyond the demonstrated geology and an appropriate structural setback is applied. (New Issue)*

N&M Response: Please see our response to Issue 11 above.

Issue No. 13: *Address flow slide potential. (New Issue)*

N&M Response: We assume that the reviewer is referring to lateral spread potential as flow slides typically occur on sloping grounds. Lateral spread is addressed in this updated report. Mitigation recommendations for lateral spreading are also provided (Sections 9.3 and 9.4).

Issue No. 14: *Address global stability of the bulkhead if instability might impact the proposed development. (New Issue)*

N&M Response: To mitigate the instability of the proposed development during seismic event, we have provided mitigation recommendations for liquefaction and lateral spreading in this updated report (Sections 9.3 and 9.4). Furthermore, based on our discussions with the Port representatives, we understand that improvements were performed on the bulkhead recently.

Issue No. 15: *If the proposed structures require a building permit from the City of San Diego, the geotechnical report must address the requirements of the 2010 CBC and local amendments. This includes Chapter 18, Section 1802, which requires an assessment of the consequences of any liquefaction or lateral movement and shall address mitigation measures. (New Issue)*

N&M Response: As noted, mitigation recommendations for liquefaction and lateral spreading are provided in this updated report (Sections 9.3 and 9.4).

Issue No. 16: *Provide the criteria used to determine Site Class in accordance with Table 1613.5.2. For Site Class C, D, or E, provide the criteria used to determine Site Class is accordance with Section 1613.5.5 of the 2010 CBC. (New Issue)*

N&M Response: The criteria used in determining Site Class are provided in Section 7.1.1, "Strong Ground Motion", which were based on Tables 1613.5.2 and 1613.5.5 of 2010 CBC.

GEOTECHNICAL EVALUATION
PROPOSED CONTAINER STORAGE AREAS
AND LIGHT POLES
10TH AVENUE MARINE TERMINAL
SAN DIEGO, CALIFORNIA

PREPARED FOR:
Harris & Associates
750 B Street, Suite 1800
San Diego, California 92101

PREPARED BY:
Ninyo & Moore
Geotechnical and Environmental Sciences Consultants
5710 Ruffin Road
San Diego, California 92123

November 11, 2013
Project No. 107589003

November 11, 2013
Project No. 107589003

Mr. Daniel Lee
Harris & Associates
750 B Street, Suite 1800
San Diego, California 92101

Subject: Geotechnical Evaluation
Proposed Container Storage Areas and Light Poles
10th Avenue Marine Terminal
San Diego, California

Dear Mr. Lee:

In accordance with your request and authorization, we have performed a geotechnical evaluation for the proposed container storage areas and light poles at Transit Shed 1 and Warehouse C at the 10th Avenue Marine Terminal in San Diego. This report presents our geotechnical findings, conclusions, and recommendations regarding the proposed project. Our report was prepared in accordance with our proposal dated July 30, 2013.

We appreciate the opportunity to be of service on this project.

Sincerely,
NINYO & MOORE

Madan Chirumalla, PE
Project Engineer

REGISTERED PROFESSIONAL ENGINEER MADAN CHIRUMALLA, PE No. 74186 Exp. 6/30/15 CIVIL STATE OF CALIFORNIA

Ronald D. Hallum, PG, CEG
Chief Engineering Geologist

PROFESSIONAL GEOLOGIST RONALD D. HALLUM Exp. 11-30-13 No. 1484 CERTIFIED ENGINEERING GEOLOGIST STATE OF CALIFORNIA

Kenneth H. Mansir, Jr., PE, GE
Principal Engineer

REGISTERED PROFESSIONAL ENGINEER KENNETH H. MANSIR, JR. No. 2739 EXP. 06/30/14 GEOTECHNICAL STATE OF CALIFORNIA

MAC/RDH/KHM/kh

Distribution: (1) Addressee (via e-mail)

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Tables

Figures

Appendices

1. INTRODUCTION

In accordance with your request, we have performed a geotechnical evaluation for the proposed container storage areas and light poles at Transit Shed 1 and Warehouse C at the 10th Avenue Marine Terminal in San Diego, California (Figure 1). This report presents the results of our field exploration and laboratory testing, our conclusions regarding the geotechnical conditions at the subject site, and our recommendations for the design and construction of this project.

2. SCOPE OF SERVICES

The scope of services for this study included the following:

- Reviewing background data listed in the References section of this report. The data reviewed included geotechnical reports, topographic maps, geologic data, stereoscopic aerial photographs, fault maps, and a site plan of the site.
- Obtaining a boring permit from the County of San Diego, Department of Environmental Health (DEH).
- Performing a field reconnaissance to observe site conditions and to locate and mark proposed exploratory locations.
- Coordinating with Underground Service Alert (USA) and the Port of San Diego personnel to mark underground utilities at the exploration locations.
- Coordinating and mobilizing for the subsurface exploration.
- Performing coring of the existing asphalt concrete slabs to provide access to our borings.
- Performing a subsurface evaluation consisting of the advancement of four Cone Penetration Test (CPT) soundings with a truck-mounted rig to depths up to approximately 55.5 feet below the ground surface (bgs). In addition, three hand auger borings were performed to depths of up to approximately 6 feet bgs. Bulk soil samples were obtained at selected intervals from the borings.
- Performing geotechnical laboratory testing on selected soil samples obtained from our borings.
- Compiling and analyzing the engineering data obtained from our background, laboratory, and field evaluations.
- Preparing this report presenting our findings, conclusions, and recommendations regarding the geotechnical design and construction of the project.

3. SITE AND PROJECT DESCRIPTION

The 10th Avenue Marine Terminal (TAMT) is located along the eastern shore of San Diego Bay (Figure 1), approximately 0.5 mile south of downtown San Diego. The project area is located northwest of Crosby Road and south of Water Street. The site is currently occupied by Transit Sheds Nos. 1 and 2 and Warehouses B and C. The site is traversed by existing utilities including water lines, storm drains, sewer pipes, electric lines, and other utilities. The marine terminal is at an elevation of approximately 9 to 15 feet above mean sea level (MSL).

It is our understanding that the project will include the demolition of three bays of Transit Shed No. 1, the east addition to Warehouse C, and the three bays on the north side of Warehouse C (Figure 2). The purpose of the proposed demolition is to allow for the future expansion and/or renovation of the TAMT for the storage of shipping containers asphalt paved parking areas. Additional improvements will consist of 11 light pole structures, approximately 90 feet tall, for the current project at Transit Shed No. 1. Deep foundations are anticipated for the proposed light poles.

4. SUBSURFACE EXPLORATION AND LABORATORY TESTING

Our subsurface exploration was conducted on September 16, 2013 and October 11, 2013, and consisted of the advancement of four CPT soundings (CPT-1 through CPT-4), and the logging and sampling of three small diameter hand auger borings (B-1 through B-3). The CPT soundings were performed to depths of up to approximately 55.5 feet and the borings were excavated to depths of up to approximately 6 feet bgs. Refusal was encountered in CPT-2 and CPT-3 at a depth of approximately 39.5 feet. Refusal was also encountered in boring B-3 in gravel and cobbles at a depth of approximately 4 feet. Bulk soil samples were obtained from the borings. The samples were then transported to our in-house geotechnical laboratory for testing. The approximate locations of the exploratory borings are shown on Figure 2. Boring and CPT logs are included in Appendix A.

Laboratory testing of representative soil samples included in-situ moisture content, gradation, soil corrosivity, and R-value. The results of the in-situ moisture content tests are presented on the boring logs in Appendix A. The results of the other laboratory tests are presented in Appendix B.

Boring locations from a previous subsurface exploration (Ninyo & Moore, 2011) are also shown on Figure 2. The previous boring logs and laboratory tests are presented in Appendix C.

5. GEOLOGY AND SUBSURFACE CONDITIONS

Our findings regarding regional and local geology, liquefaction, and groundwater conditions at the subject site are provided in the following sections.

5.1. Regional Geologic Setting

The project area is situated in the western San Diego County section of the Peninsular Ranges Geomorphic Province. This geomorphic province encompasses an area that extends approximately 1,450 km (900 miles) from the Transverse Ranges and the Los Angeles Basin south to the southern tip of Baja California (Norris and Webb, 1990). The province varies in width from approximately 48 to 160 km (30 to 100 miles). In general, the province consists of rugged mountains underlain by Jurassic metavolcanic and metasedimentary rocks, and Cretaceous igneous rocks of the southern California batholith. The portion of the province in San Diego County that includes the project area consists generally of uplifted Tertiary sedimentary rock, Jurassic metamorphic rock, and Cretaceous granitic rock. Figure 3 is a map of the local geology.

The Peninsular Ranges Province is traversed by a group of sub-parallel faults and fault zones trending roughly northwest. Several of these faults, which are shown on Figure 4, are considered active faults. The Elsinore, San Jacinto, San Andreas and Rose Canyon faults are active fault systems located northeast of the project area and the Coronado Bank, San Diego Trough, and San Clemente faults are active faults located west of the project area. The Rose Canyon fault zone is the nearest active fault system. Strands of the Rose Canyon fault zone have been mapped as passing under or adjacent to the project site. Major tectonic activity associated with these and other faults within this regional tectonic framework consists primarily of right-lateral, strike-slip movement. Further discussion of faulting relative to the site is provided in the Faulting and Seismicity section of this report.

5.2. Site Geology

Geologic units encountered during our subsurface evaluation included fill and bay deposits. Generalized descriptions of the earth units encountered are provided in the subsequent sections. Additional descriptions of the subsurface units are provided on the boring logs in Appendix A.

5.2.1. Fill

Fill was encountered in our borings from the surface to the depths explored. Based on our CPT soundings and previous boring data (Ninyo & Moore, 2011), fill is anticipated to be encountered to depths of up to approximately 40 feet. The fill generally consisted of damp to saturated, very loose to medium dense, sand, silty sand, and clayey sand, with gravel and cobbles.

5.2.2. Bay Deposits

Based on our CPT soundings and previous boring data (Niyo & Moore, 2011), Bay deposits are anticipated to be encountered below the fill. Bay deposits extended to the explored depth of approximately 55.5 feet in CPT soundings and 56.5 feet in our previous borings. The bay deposits generally consisted of saturated, very loose to very dense, sand, silty sand, and clayey sand, and very stiff to hard, sandy clay.

5.3. Groundwater

Groundwater was encountered in our previous borings (Ninyo & Moore, 2011) at a depth of approximately 8.5 feet bgs. In addition, from research on GeoTracker (2011), groundwater is present at depths of approximately 5 to 10 feet bgs. Fluctuations in the groundwater level and perched conditions may occur due to variations in ground surface topography, subsurface geologic conditions and structure, rainfall, irrigation, tides, and other factors.

5.4. Faulting and Seismicity

The project area is considered to be seismically active. Based on our review of the referenced geologic maps and stereoscopic aerial photographs, as well as on our geologic field mapping, a strand of the Rose Canyon fault zone, the silver strand fault has been mapped as crossing the eastern portion of the site (Kennedy and Tan, 2008). The Silver Strand fault is mapped as buried or concealed where it is mapped crossing the site. The eastern portion of the site is also located within the Alquist-Priolo earthquake fault study area (California Geological Survey, 2003; City of San Diego, 2008). In addition, the site is located in a seismically active area and the potential for strong ground motion is considered significant during the design life of the proposed structure.

In general, hazards associated with seismic activity include strong ground motion, ground surface rupture, liquefaction and seismically induced settlement, and tsunamis. These hazards are discussed in the following sections.

5.4.1. Strong Ground Motion and Ground Surface Rupture

The 2010 California Building Code (CBC) recommends that the design of structures be based on the horizontal peak ground acceleration (PGA) having a 2 percent probability of exceedance in 50 years, which is defined as the Maximum Considered Earthquake (MCE). The statistical return period for PGA_{MCE} is approximately 2,475 years. Based on our review of subsurface data, the project site corresponds to a Site Class D. The site modified PGA_{MCE} was estimated to be 0.64g using the United States Geological Survey (USGS) (USGS, 2011) ground motion calculator (web-based). The site modified design PGA was estimated to be 0.42g. These estimates of ground motion do not include near-source factors that may be applicable to the design of structures on site.

5.4.2. Ground Rupture

Based on our review of the referenced literature, a strand of the Rose Canyon fault zone, the Silver Strand fault has been mapped as crossing the eastern portion of the site (Kennedy and Tan, 2008). The Silver Strand fault is mapped as buried or concealed where it is mapped crossing the site. The eastern portion of the site is also located within the Alquist-Priolo earthquake fault study area (California Geological Survey, 2003; City of San Diego, 2008). Therefore, there is a potential for ground rupture due to faulting at the site. However, based on the nature of the proposed improvements at the site (pavement and light pole standards), the potential for damage due to direct ground rupture is considered low. In addition, lurching or cracking of the ground surface as a result of nearby seismic events is possible.

5.4.3. Liquefaction

Liquefaction is the phenomenon in which loosely deposited granular soils with silt and clay contents of less than approximately 35 percent and non-plastic silts located below the water table undergo rapid loss of shear strength when subjected to strong earthquake-induced ground shaking. Ground shaking of sufficient duration results in the loss of grain-to-grain contact due to a rapid rise in pore water pressure, and causes the soil to behave as a fluid for a short period of time. Liquefaction is known generally to occur in saturated or near-saturated cohesionless soils at depths shallower than 50 feet below the ground surface. Factors known to influence liquefaction potential include composition and thickness of soil layers, grain size, relative density, groundwater level, degree of saturation, and both intensity and duration of ground shaking.

The liquefaction potential of subsurface soils at the project site was evaluated using the CPT data. The liquefaction analysis was based on the National Center for Earthquake Engineering Research (NCEER) procedure (Youd, et al., 2001) developed from the methods originally recommended by Seed and Idriss (1982) using the computer program LiquefyPro (CivilTech Software, 2007a). A groundwater table depth of 5 feet below the existing ground surface was used in our liquefaction evaluation. Our liquefaction analysis indicates that fill soils and loose bay deposits occurring below the assumed groundwater level of 5 feet and up to a depth of 43 feet below the surface are generally susceptible to liquefaction during the design seismic event. Further, as mapped by the City of San Diego (2008), the site is within an area with a high potential for liquefaction.

5.4.4. Dynamic Settlement of Saturated Soils

As a result of liquefaction, the proposed improvements may be subject to several hazards, including liquefaction-induced settlement. In order to estimate the amount of post-earthquake settlement, the method proposed by Tokimatsu and Seed (1987) was used in which the seismically induced cyclic stress ratios and corrected N-values are related to the volumetric strain of the soil. The amount of soil settlement during a strong seismic event depends on the thickness of the liquefiable layers and the density and/or consistency of the soils.

Under the current conditions, post-earthquake total settlement of up to approximately 8 inches was calculated for the project site. Assuming relatively continuous subsurface stratigraphy across the site, we estimate differential settlement on the order of 4 inches over a horizontal distance of 40 feet.

5.4.5. Lateral Spreading

Lateral spreading of ground surface during an earthquake usually takes place along weak shear zones that have formed within a liquefiable soil layer. Lateral spread has generally been observed to take place in the direction of a free-face but has also been observed to a lesser extent on ground surfaces with very gentle slopes. An empirical model developed by Youd and Bartlett (2002) is typically used to predict the amount of horizontal ground displacement within a site. For a site located in proximity to a free-face, the amount of lateral ground displacement is strongly correlated with the distance of the site from the free-face. Other factors such as earthquake magnitude, distance from the earthquake epicenter, thickness of the liquefiable layers, and the fines content and particle sizes of the liquefiable layers also affect the amount of lateral ground displacement.

Although the soils are prone to lateral spread, it is assumed that the existing bulkhead will confine it, but evaluation of bulkhead is not a part of this evaluation.

5.4.6. Tsunamis

Tsunamis are long wavelength seismic sea waves (long compared to the ocean depth) generated by sudden movements of the ocean bottom during submarine earthquakes, landslides, or volcanic activity. Based on our review of the tsunami hazards map prepared by the CGS (2009) the site is not located in an area subject to tsunami inundation. Therefore, tsunami inundation is not a design consideration.

5.5. Landsliding

Landslides may be induced by strong vibratory motion produced by earthquakes. Research and historical data indicate that seismically induced landslides tend to occur in weak soil and rock on sloping terrain. The process for zoning earthquake-induced landslides incorporates expected future earthquake shaking, existing landslide features, slope gradient and strength of earth materials on the slope. Based on our review of published geologic literature and our geotechnical evaluation, no landslides or related features underlie the site.

6. CONCLUSIONS

Based on our review of the referenced background data, subsurface evaluation, and laboratory testing, it is our opinion that construction of the project is feasible from a geotechnical standpoint provided the recommendations presented in this report are incorporated into the design and construction of the project. In general, the following conclusions were made:

- Based on our site reconnaissance and observations during the subsurface evaluation, the project site is underlain by fill and bay deposits.
- Based on our background review and subsurface exploration, groundwater is anticipated to be encountered at 5 to 10 feet bgs. Groundwater should be anticipated in the excavations for deep foundation (i.e., drilled piers). The high groundwater levels and granular soils with little cohesion will likely cause caving in drilled holes. The contractor should anticipate the need to mitigate caving during construction and the use of casing.
- Excavations in the fill should generally be feasible with standard earth working equipment in good working condition. Loose caving conditions are anticipated in fill. Very dense and hard soils were encountered in the bay deposits and may present difficult drilling and excavating conditions. Gravel and cobbles were encountered in the fill material and gravel was

encountered in the bay deposits. The contactor should also anticipate difficult drilling conditions in gravel and cobbles.

- Trench excavations that encounter wet soils or that are close to or below the water table may be unstable. Recommendations for stabilizing the excavation bottoms are provided in the following sections.

- We anticipate that the earth materials generated from the excavations in the fill should be generally suitable for use as compacted fill, if needed. Recommendations for fill are provided in the following sections.

- A strand of the Rose Canyon fault zone, the silver strand fault has been mapped as crossing the eastern portion of the site. The Silver Strand fault is mapped as buried or concealed where it is mapped crossing the site. Accordingly, the potential for relatively strong seismic ground motions should be considered in the project design.

- The potential for liquefaction and liquefaction induced settlement is high in soils up to a depth of about 43 feet below the surface at the project site. Post-earthquake total settlement of up to approximately 8 inches was calculated for the project site.

- Although the soils are prone to lateral spread, it is assumed that the bulkhead will confine it, but evaluation of bulkhead is not a part of this evaluation.

- We estimated a PGA_{MCE} of 0.64g at the subject site that has a 2 percent probability of exceedance in 50 years. The Design PGA was estimated to be 0.42g.

- Based on the results of our limited soil corrosivity tests during this study, previous study, our experience, and Caltrans corrosion guidelines (2012), the site would be classified as a corrosive site.

7. RECOMMENDATIONS

Based on our understanding of the project, the following recommendations are provided for the design and construction of the project. The proposed site improvements should be constructed in accordance with the requirements of the applicable governing agencies.

7.1. Earthwork

In general, earthwork should be performed in accordance with the recommendations presented in this report. Ninyo & Moore should be contacted for questions regarding the recommendations or guidelines presented herein.

7.1.1. Site Preparation

Site preparation should begin with the removal of vegetation, utility lines, asphalt, concrete, and other deleterious debris from areas to be graded. Tree stumps and roots should be removed to such a depth that organic material is generally not present. Clearing and grubbing should extend to the outside of the proposed excavation and fill areas. The debris and unsuitable material generated during clearing and grubbing should be removed from areas to be graded and disposed of at a legal dumpsite away from the project area.

7.1.2. Excavation and Drilling Characteristics

The results of our field exploration indicate that the project site is underlain by fill soils and bay deposits. Excavations in the fill should generally be feasible with standard earth working equipment in good working condition. Loose caving conditions are anticipated in fill. Very dense and hard soils were encountered in the bay deposits and may present difficult drilling and excavating conditions. Gravel and cobbles were encountered in the fill material and gravel was encountered in the bay deposits. The contactor should also anticipate difficult drilling conditions in gravel and cobbles.

7.1.3. Materials for Fill

On-site granular soils with an organic content of less than approximately 3 percent by volume (or 1 percent by weight) are suitable for use as fill. In general, fill material should not contain rocks or lumps over approximately 3 inches in diameter, and not more than approximately 30 percent larger than ¾-inch.

Utility trench backfill material should not contain rocks or lumps over approximately 3 inches in general. Soils classified as silts or clays should not be used for backfill in the pipe zone. Larger chunks, if generated during excavation, may be broken into acceptably sized pieces or disposed of offsite.

Imported fill material, if needed for the project, should generally be granular soils with a low expansion potential (i.e., an expansion index of 50 or less as evaluated by the ASTM International [ASTM] Test Method D 4829). Import material should also be non-corrosive in accordance with the Caltrans (2012) corrosion guidelines. Materials for use as fill should be evaluated by Ninyo & Moore's representative prior to filling or importing.

7.1.4. Use of Concrete and Asphalt as Fill

Portland cement concrete and asphalt concrete generated by on-site demolition may be reused in new structural fill if processed in accordance with the following recommendations. Concrete and asphalt to be used in structural fills should not have painted, stained, or coated surfaces, contain rebar or other metal reinforcement, vegetation, or other debris. The concrete and asphalt should be crushed to sizes of 3 inches or less. Crushed concrete and asphalt to be used as fill should be stockpiled and blended with soil prior to placement to meet the requirements of Section 7.1.3 and should be placed in accordance with Section 7.1.5.

7.1.5. Compacted Fill

The following general recommendations should be used if compacted fill is used for the project. Prior to placement of compacted fill, the contractor should request an evaluation of the exposed ground surface by Ninyo & Moore. The exposed ground surface should then be scarified to a depth of approximately 8 inches and moisture conditioned to near the optimum moisture content. The scarified materials should then be compacted to 90 percent of their modified Proctor density as evaluated by ASTM D 1557. The evaluation of compaction by Ninyo & Moore should not be considered to preclude any requirements for observation or approval by governing agencies. It is the contractor's responsibility to notify this office and the appropriate governing agency when project areas are ready for observation, and to provide reasonable time for that review.

Fill materials should be moisture-conditioned to near the laboratory optimum moisture content prior to placement. The optimum moisture content will vary with material type and other factors. Moisture-conditioning of fill soils should be generally consistent within the soil mass.

Prior to placement of additional compacted fill material following a delay in the grading operations, the exposed surface of previously compacted fill should be prepared to receive fill. Preparation may include scarification, moisture-conditioning, and recompaction.

Compacted fill should be placed in horizontal lifts of approximately 8 inches in loose thickness. Prior to compaction, each lift should be moisture-conditioned to near the laboratory optimum, mixed, and then compacted by mechanical methods, using sheepsfoot rollers, multiple-wheel pneumatic-tired rollers or other appropriate compacting rollers, to 90 percent of its modified Proctor density as evaluated by ASTM D 1557. Successive lifts should be treated in a like manner until the desired finished grades are achieved. We recommend that the upper 12 inches of the subgrade for pavements be compacted to 95 percent of its Proctor density as evaluated by ASTM D 1557. The Class 2 Aggregate Base should be compacted to 95 percent of its Proctor density as evaluated by ASTM D 1557.

7.1.6. Temporary Excavations, Braced Excavations, and Shoring

For temporary excavations, we recommend that the following Occupational Safety and Health Administration (OSHA) soil classification be used:

Fill and bay deposits	*Type C*

Upon making the excavations, the soil classifications and excavation performance should be evaluated in the field by the contractor in accordance with the OSHA regulations. Temporary excavations should be constructed in accordance with OSHA recommendations. For trench or other excavations, OSHA requirements regarding personnel safety should be met using appropriate shoring (including trench boxes) or by laying back the slopes to no steeper than 1.5:1 (horizontal:vertical). Temporary excavations that encounter seepage may be shored or stabilized by placing sandbags or gravel along the base of the seepage zone. Excavations encountering seepage should be evaluated on a case-by-case basis. On-site safety of personnel is the responsibility of the contractor.

7.1.7. Trench Bottom Stability

Trench excavations that encounter wet soils or that are close to or below the water table may be unstable. In general, unstable bottom conditions may be mitigated by using a stabilizing geogrid (such as a Tensar BX 1100 or equivalent), overexcavating the excavation bottom to suitable depths and replacing with gravel wrapped in filter fabric, or other suitable method. Recommendations for stabilizing the excavation bottoms should be based on an evaluation in the field by Ninyo & Moore at the time of construction.

7.1.8. Underground Utilities

We recommend that utility lines be supported on 6 or more inches of granular bedding material such as sand with a sand equivalent value of 30 or higher. Bedding material should be placed around the pipe and 12 inches or more above the top of the pipe in accordance with specifications of the recent edition of the “Greenbook” (Standard Specifications for Public Works Construction). Special care should be taken not to allow voids beneath the pipe. Bedding material and compaction requirements should be in accordance with the recommendations of this report, the project specifications, and applicable requirements of the appropriate governing agency.

Based on our subsurface evaluation, the on-site earth materials should be generally suitable for re-use as trench backfill above the pipe zone provided they are free of organic material, clay lumps, debris, and rocks greater than approximately 3 inches in diameter. Fill should be moisture-conditioned to near the laboratory optimum. Trench backfill should be compacted to 90 percent of its modified Proctor density as evaluated by ASTM D 1557. Lift thickness for backfill will depend on the type of compaction equipment utilized, but fill should generally be placed in lifts not exceeding 8 inches in loose thickness. Special care should be exercised to avoid damaging the pipe during compaction of the backfill.

7.1.9. Seismic Design Parameters

Design of the proposed improvements should be in accordance with the requirements of governing jurisdictions and applicable building codes. Table 1 presents the seismic design parameters for the site in accordance with CBC (2010) guidelines and mapped spectral acceleration parameters (USGS, 2011).

Table 1 – 2010 California Building Code Seismic Design Criteria

Seismic Design Factors	Values
Site Class	D
Site Coefficient, F_a	1.0
Site Coefficient, F_v	1.5
Mapped Short Period Spectral Acceleration, S_S	1.595g
Mapped One-Second Period Spectral Acceleration, S_1	0.634g
Short Period Spectral Acceleration Adjusted For Site Class, S_{MS}	1.595g
One-Second Period Spectral Acceleration Adjusted For Site Class, S_{M1}	0.951g
Design Short Period Spectral Acceleration, S_{DS}	1.063g
Design One-Second Period Spectral Acceleration, S_{D1}	0.634g

7.2. Cast-In-Drilled-Hole Pile Foundation

Based on our discussions with Harris & Associates and Kleinfelder Simon Wong (structural engineer), we understand that the proposed light poles will be supported on 30-inch diameter cast-in-drilled-hole (CIDH) piles. The pile capacities were evaluated for static and seismic conditions using the design loads provided by the structural engineer. Foundations should be designed in accordance with structural considerations and the following recommendations. In addition, requirements of the appropriate governing jurisdictions and applicable building codes should be considered in the design of the structures.

7.2.1. Axial Capacity

As discussed in the earlier sections, there is a high potential for liquefaction up to a depth of approximately 43 feet bgs. We understand the proposed light poles will be designed to mitigate liquefaction induced dynamic settlement and downdrag. We recommend that CIDH piles penetrate into bay deposits, and to a depth of 7 feet or more beneath the depth of liquefaction (43 feet). The allowable loads for the CIDH piles were analyzed using the computer program AllPile (CivilTech, 2007b) based on the assumed pile length of 50 feet. The calculated pile capacities are based on frictional capacity; end bearing was not considered in our analysis. The results are summarized in Table 2.

Table 2 – Axial Pile Capacity Evaluation

CIDH Pile Diameter (inches)	Pile Length (feet)	Loading Condition	Ultimate Downward Capacity (kips)	Allowable Loads (kips)	
				Compression	Tension
30	50	Static	180	12	12
		Seismic	14		

7.2.2. Lateral Capacity

The lateral pile capacity for 30-inch diameter CIDH piles was analyzed using the computer program AllPile (CivilTech, 2007b) based on an assumed pile length of 50 feet and the lateral loads provided by the structural engineer. Free-head conditions were assumed for the piles. The results indicate that an assumed 50 feet long pile would have a deflection of approximately ¼-inch at the pile head. The results of lateral capacity analyses are presented in Appendix D.

7.2.3. Construction Considerations for CIDH piles

Construction of CIDH piles should be observed by the geotechnical consultant during drilling to evaluate if the piles have been extended to the recommended depths. The drilled holes should be cleaned of loose soil and gravel. It is the contractor's responsibility to take the appropriate measures to provide for the integrity of the drilled holes and to see that the holes are cleaned and straight and that sloughed loose soil is removed from the bottom of the hole prior to the placement of concrete. Drilled CIDH piles should be checked for alignment and plumbness during installation. The amount of acceptable misalignment of a pile is approximately 3 inches from the plan location but may be reduced based on design criteria. The center-to-center spacing of piles should be no less than three times the nominal diameter of the pile.

Based on our boring data, groundwater should be anticipated within the excavation depth of foundations. We recommended that the contractor consider appropriate measures during construction to reduce the potential for caving of the drilled holes, including the use of steel casing and/or drilling mud. In addition, we recommend placement of concrete by tremie method to mitigate aggregate and cement segregation during concrete placement.

Contractors with proven records in the installation of CIDH piles should be considered. We recommend that the drilling equipment have a rated torque of 20,000 foot-pounds or more. During construction, a certified deep foundation inspector should document the diameter, depth, vertical alignment, and the nature of the materials encountered at each pile location. Reinforcing steel and concrete placement should be continuously observed by Ninyo & Moore. A quality control report should be submitted for each pile stating, in writing, that the design details have been observed and meet the requirements.

7.3. Corrosion

Laboratory testing was performed on a representative sample of the on-site earth materials to evaluate pH and electrical resistivity, as well as chloride and sulfate contents. The pH and electrical resistivity tests were performed in accordance with California Test (CT) 643 and the sulfate and chloride content tests were performed in accordance with CT 417 and CT 422, respectively. These laboratory test results are presented in Appendix B.

The results of the corrosivity testing indicated an electrical resistivity of 1,700 ohm-centimeters (cm), soil pH of 9.7, chloride content of 85 parts per million (ppm) and sulfate content of 0.020 percent (i.e., 200 ppm). However, the results of previous corrosivity testing on a soil sample (Ninyo & Moore, 2011) indicated an electrical resistivity of 770 ohm-cm, soil pH of 7.8, chloride content of 600 ppm and sulfate content of 0.032 percent (i.e., 320 ppm). Based on the Caltrans corrosion (2012) criteria, our test results, and the marine environment, the on-site soils would be classified as corrosive. Corrosive soils are defined as soils with more than 500 ppm chlorides, more than 0.2 percent sulfates, pH less than 5.5, or an electrical resistivity of 1,000 ohm-cm or less. If corrosion-susceptible improvements are planned on site, we recommend that a corrosion engineer be consulted for further evaluation and recommendations.

7.4. Concrete

Concrete in contact with soil or water that contains high concentrations of water-soluble sulfates can be subject to premature chemical and/or physical deterioration. The soil sample tested in this evaluation indicated water-soluble sulfate content of 0.020 percent by weight (200 ppm). According to American Concrete Institute (ACI) 318, the potential for sulfate attack is negligible for water-soluble sulfate contents in soil ranging from 0.00 to 0.10 percent by weight (i.e., 0 to 1,000 ppm). Therefore, the site soils may be considered to have a negligible potential for sulfate attack. However, due to the potential variability of site soils and the marine environment, we recommend using Type II/V cement for concrete structures in contact with soil with a water-cement ratio no higher than 0.45 by weight for normal weight aggregate concrete and a 28-day compressive strength of 4,500 pounds per square inch (psi) or more for the project.

7.5. Preliminary Pavement Design

The on-site fill material was evaluated to have an R-value of 43. We assumed an R-value of 40 for flexible pavement design. We recommend that the import fill materials, if used, should have an R-value of 40 or greater. Actual pavement recommendations should be based on R-value tests performed on bulk samples of the soils that are exposed at the finished subgrade elevations across the site at the completion of the mass grading operations.

For the design of pavements, Harris & Associates provided us a Traffic Index (TI) of 12.0 due to the anticipated heavy truck traffic, rubber-tired gantry crane or top loader traffic, and container loading. The recommended preliminary flexible pavement section alternatives are presented in Table 3. However, we recommend that we re-evaluate the pavement design, based on the R-value of the subgrade material exposed at the time of construction.

Table 3 – Recommended Preliminary Flexible Pavement Section Alternatives

Traffic Index	R-Value	Asphalt Concrete (in)	Class 2 Aggregate Base (in)	Cement Treated Base (in)
12.0	40	7.0	15.0	--
12.0	40	4.5	--	13.5

We recommend that the upper 12 inches of the subgrade be compacted to 95 percent of its Proctor density as evaluated by ASTM D 1557. The Class 2 Aggregate Base should be compacted to 95 percent of its Proctor density as evaluated by ASTM D 1557. If TI value is different from that assumed, the pavement design should be re-evaluated.

Alternatively, Portland cement concrete pavements may be used. We recommend that in these areas, 10 inches of 600 pounds per square inch (psi) flexural strength Portland cement concrete be placed over 10 inches of Class 2 Aggregate Base compacted to 95 percent of its Proctor density as evaluated by ASTM D 1557. We recommend that the concrete pavement be reinforced with No. 3 bars spaced 18 inches on center.

7.6. Plan Review and Construction Observation

The conclusions and recommendations presented in this report are based on analysis of observed conditions in widely spaced exploratory borings. If conditions are found to vary from those described in this report, Ninyo & Moore should be notified, and additional recommendations will be provided upon request. Ninyo & Moore should review the final project drawings and specifications prior to the commencement of construction. Ninyo & Moore should perform the needed observation and testing services during construction operations.

The recommendations provided in this report are based on the assumption that Ninyo & Moore will provide geotechnical observation and testing services during construction. In the event that it is decided not to utilize the services of Ninyo & Moore during construction, we request that the selected consultant provide the client with a letter (with a copy to Ninyo & Moore) indicating that they fully understand Ninyo & Moore's recommendations, and that they are in full agreement with the design parameters and recommendations contained in this report. Construction of proposed improvements should be performed by qualified subcontractors utilizing appropriate techniques and construction materials.

8. LIMITATIONS

The field evaluation, laboratory testing, and geotechnical analyses presented in this report have been conducted in general accordance with current practice and the standard of care exercised by geotechnical consultants performing similar tasks in the project area. No warranty, expressed or implied, is made regarding the conclusions, recommendations, and opinions presented in this report. There is no evaluation detailed enough to reveal every subsurface condition. Variations may exist and conditions not observed or described in this report may be encountered during construction. Uncertainties relative to subsurface conditions can be reduced through additional subsurface exploration. Additional subsurface evaluation will be performed upon request. Please also note that our evaluation was limited to assessment of the geotechnical aspects of the project, and did not include evaluation of structural issues, environmental concerns, or the presence of hazardous materials.

This document is intended to be used only in its entirety. No portion of the document, by itself, is designed to completely represent any aspect of the project described herein. Ninyo & Moore should be contacted if the reader requires additional information or has questions regarding the content, interpretations presented, or completeness of this document.

This report is intended for design purposes only. It does not provide sufficient data to prepare an accurate bid by contractors. It is suggested that the bidders and their geotechnical consultant perform an independent evaluation of the subsurface conditions in the project areas. The independent evaluations may include, but not be limited to, review of other geotechnical reports prepared for the adjacent areas, site reconnaissance, and additional exploration and laboratory testing.

Our conclusions, recommendations, and opinions are based on an analysis of the observed site conditions. If geotechnical conditions different from those described in this report are encountered, our office should be notified, and additional recommendations, if warranted, will be provided upon request. It should be understood that the conditions of a site could change with time as a result of natural processes or the activities of man at the subject site or nearby sites. In addition, changes to the applicable laws, regulations, codes, and standards of practice may occur due to government action or the broadening of knowledge. The findings of this report may, therefore, be invalidated over time, in part or in whole, by changes over which Ninyo & Moore has no control.

This report is intended exclusively for use by the client. Any use or reuse of the findings, conclusions, and/or recommendations of this report by parties other than the client is undertaken at said parties' sole risk.

9. REFERENCES

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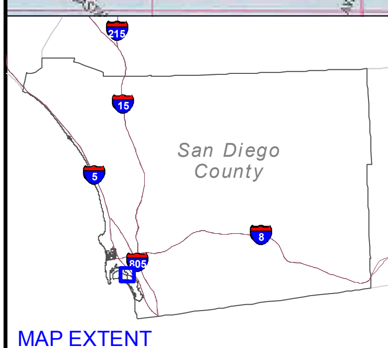
AERIAL PHOTOGRAPHS				
Source	**Date**	**Flight**	**Numbers**	**Scale**
USDA	3-31-53	AXN-3M	196 and 198	1:20,000

SOURCE: 2008 Thomas Guide for San Diego County, Street Guide and Directory; Map © Rand McNally, R.L.07-S-129



SCALE IN FEET

0 1,200 2,400 4,800

NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE

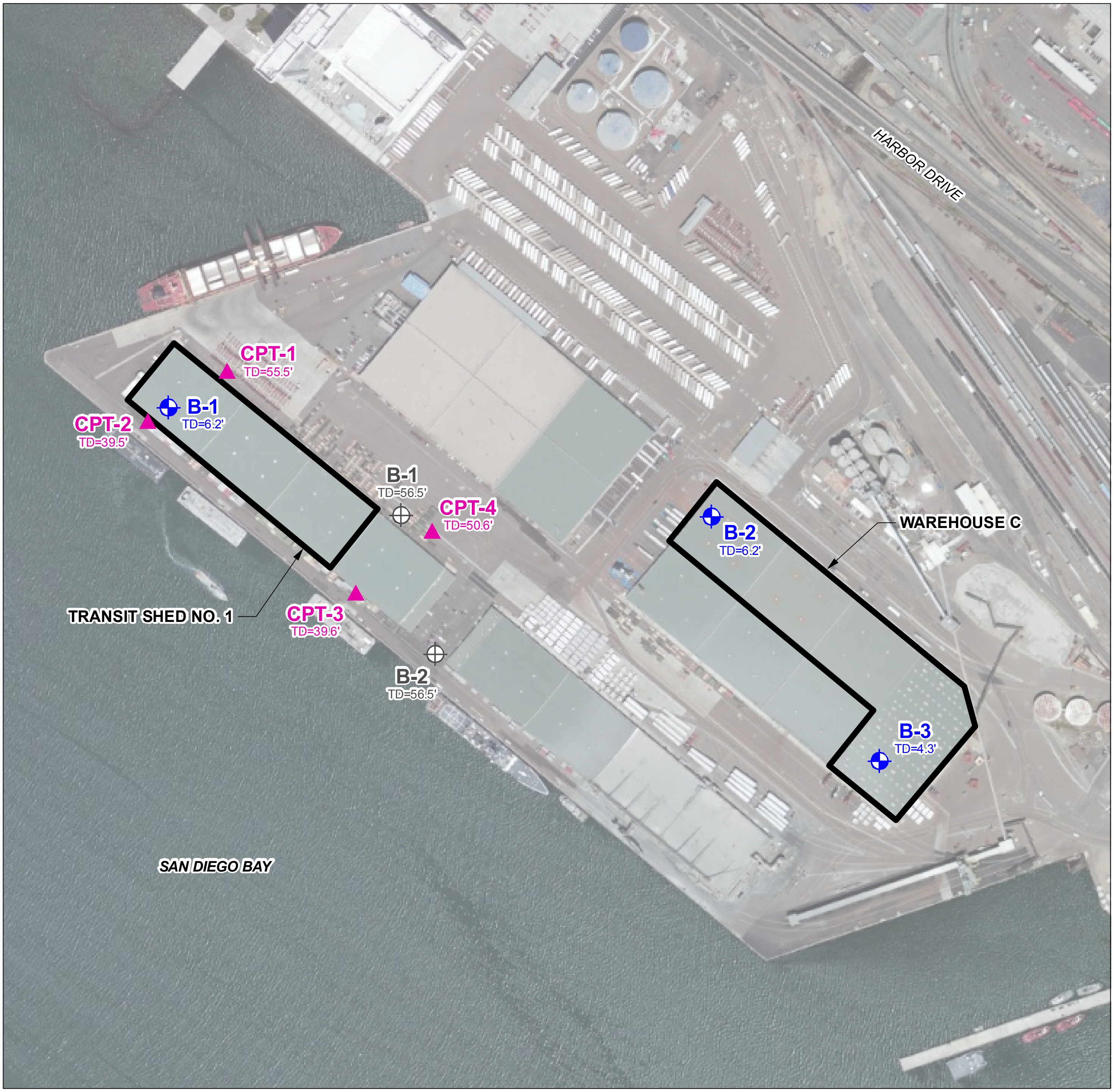
Ninyo & Moore

SITE LOCATION

PROPOSED CONTAINER STORAGE AREAS AND LIGHT POLES
10TH AVENUE MARINE TERMINAL
SAN DIEGO, CALIFORNIA

PROJECT NO.	DATE	FIGURE
107589003	11/13	1

1_107589003_SL.mxd AOB



SOURCE: Aerial Imagery - Photo Date: Feb 11, 2010, ESRI, i-cubed, USDA FSA, USGS, AEX, GeoEye, Getmapping, Aerogrid, IGP.

LEGEND

Symbol	Description
B-3 TD=4.3'	BORING TD=TOTAL DEPTH IN FEET
CPT-4 TD=50.6'	CONE PENETRATION TEST (CPT) TD=TOTAL DEPTH IN FEET
B-2 TD=56.5'	PREVIOUS NINYO & MOORE BORING (2011) TD=TOTAL DEPTH IN FEET

N

SCALE IN FEET

0 200 400 800

NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE

2_107589003_BL.mxd AOB

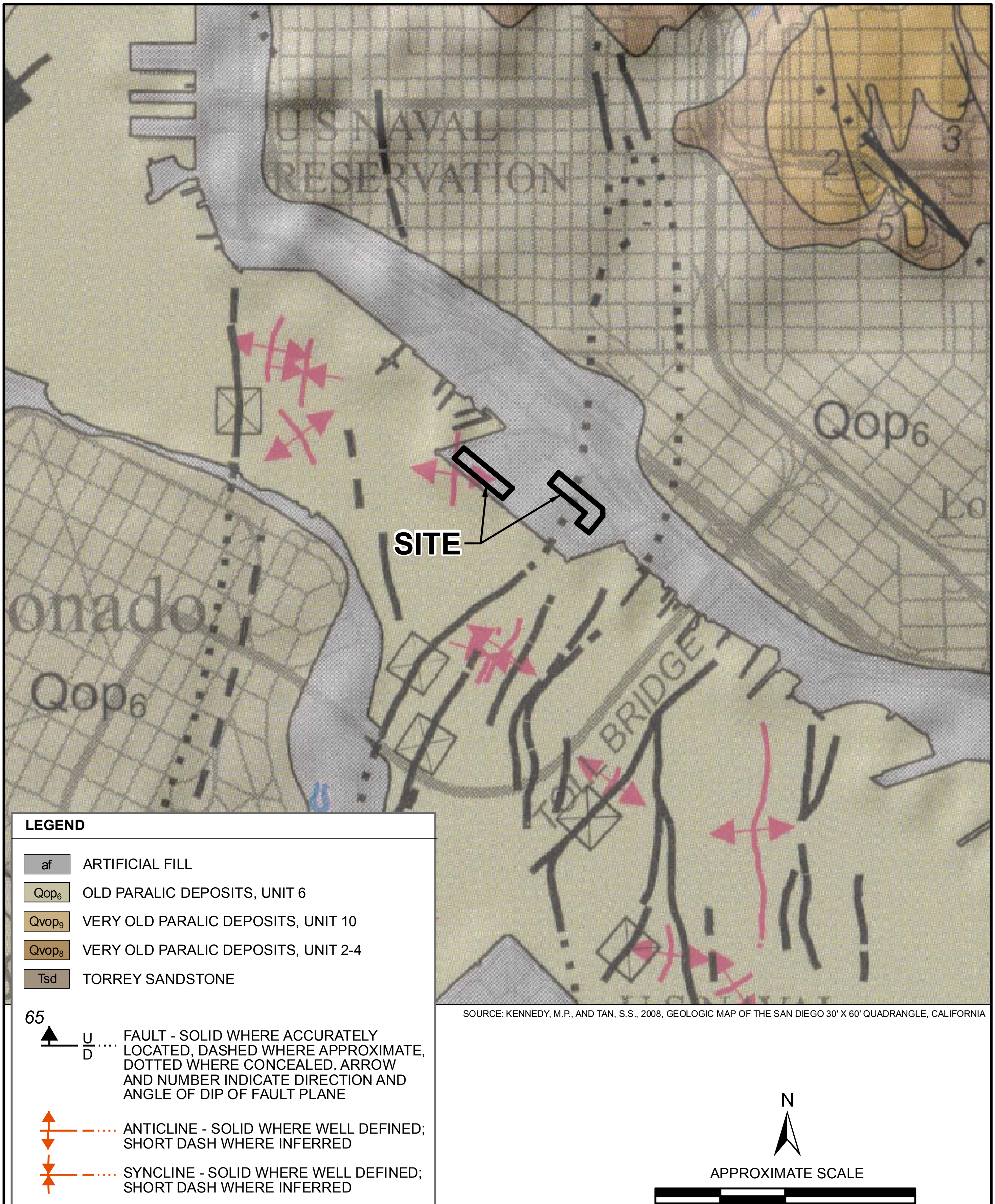
Ninyo & Moore

BORING AND CPT LOCATIONS

PROPOSED CONTAINER STORAGE AREAS AND LIGHT POLES
10TH AVENUE MARINE TERMINAL
SAN DIEGO, CALIFORNIA

PROJECT NO.	DATE
107589003	11/13

FIGURE 2

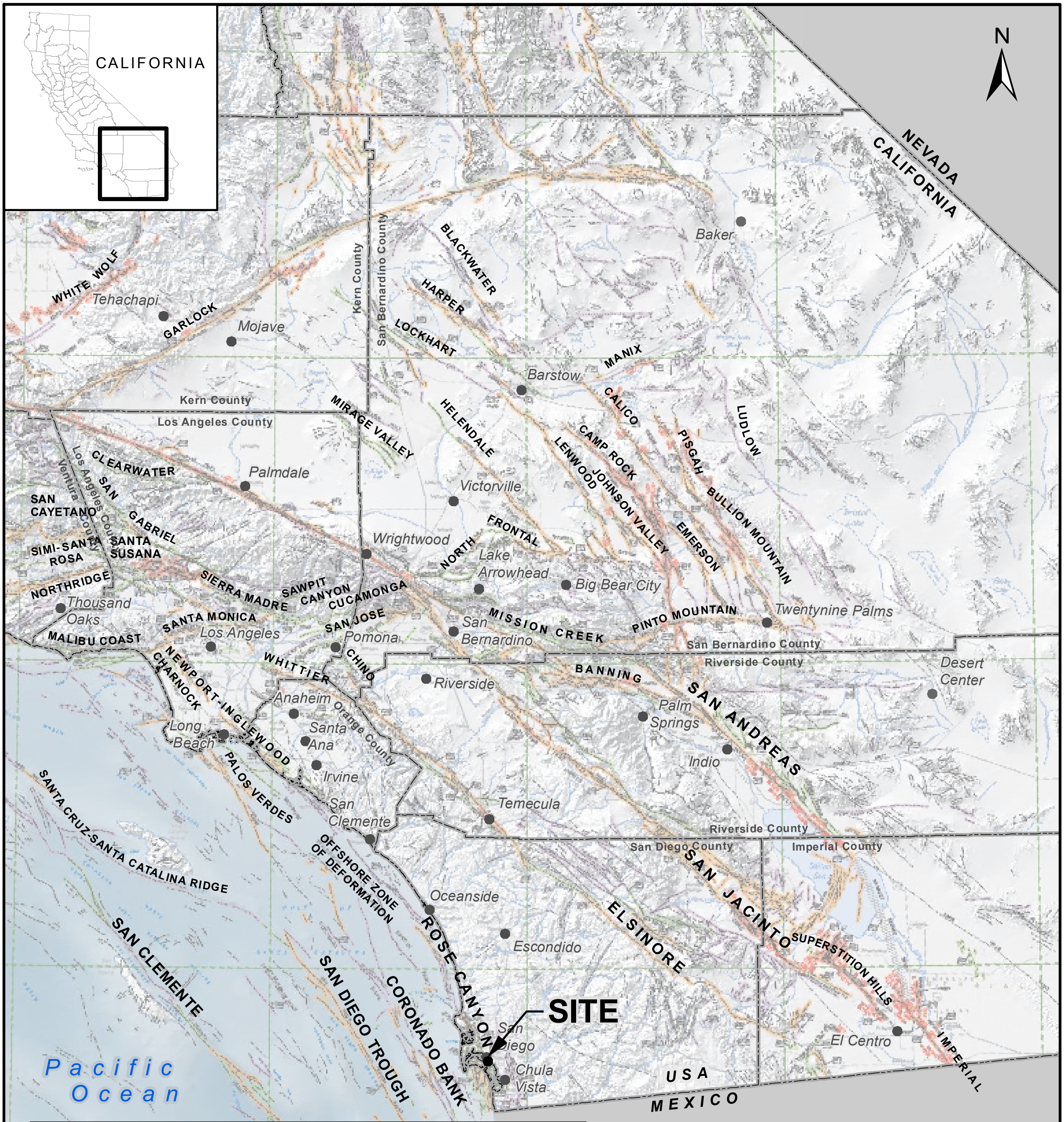


SOURCE: KENNEDY, M.P., AND TAN, S.S., 2008, GEOLOGIC MAP OF THE SAN DIEGO 30' X 60' QUADRANGLE, CALIFORNIA

NOTES: ALL DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE

3_107589003_G.mxd AOB

Ninyo & Moore	GEOLOGY	FIGURE
PROJECT NO. / DATE: 107589003 / 11/13	PROPOSED CONTAINER STORAGE AREAS AND LIGHT POLES 10TH AVENUE MARINE TERMINAL SAN DIEGO, CALIFORNIA	3



LEGEND

CALIFORNIA FAULT ACTIVITY

- HISTORICALLY ACTIVE
- HOLOCENE ACTIVE
- LATE QUATERNARY (POTENTIALLY ACTIVE)
- QUATERNARY (POTENTIALLY ACTIVE)
- STATE/COUNTY BOUNDARY

SOURCE: JENNINGS, C.W., AND BRYANT, W.A., 2010, FAULT ACTIVITY MAP OF CALIFORNIA, CALIFORNIA GEOLOGICAL SURVEY.

SCALE IN MILES

0 30 60

NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE.

4_107589003_F.mxd AOB

Ninyo & Moore		FAULT LOCATIONS	FIGURE
PROJECT NO.	DATE	PROPOSED CONTAINER STORAGE AREAS AND LIGHT POLES 10TH AVENUE MARINE TERMINAL SAN DIEGO, CALIFORNIA	4
107589003	11/13		

APPENDIX A

BORING AND CPT LOGS

Field Procedure for the Collection of Disturbed Samples
Disturbed soil samples were obtained in the field using the following method.

Bulk Samples
Bulk samples of representative earth materials were obtained from the exploratory borings. The samples were bagged and transported to the laboratory for testing.

Field Procedure for CPT
The CPT described in this report was conducted by Kehoe Testing Inc. of Huntington Beach, California, in general accordance with ASTM D 5778. The cone penetrometer assembly used for this project consisted of a conical tip and a cylindrical friction sleeve. The conical tip had an apex angle of 60 degrees and a diameter of approximately 1.7 inches resulting in a projected cross-sectional area of approximately 2.3 square inches. The cylindrical friction sleeve was approximately 6.33 inches long and had an outside diameter of approximately 1.7 inches, resulting in a surface area of approximately 34 square inches. The interior of the CPT probe was instrumented with strain gauges that allowed simultaneous measurement of cone tip and friction sleeve resistance during penetration. The cone was hydraulically pushed into the soil using the reaction mass of a specially designed 30-ton truck at a constant rate of approximately 4 feet per minute while the cone tip resistance and sleeve friction resistance were recorded at an approximately 1-inch interval and stored in digital form. The computer-generated logs presented in the following pages include cone resistance, friction resistance, friction ratio, equivalent SPT blow counts, and interpreted soil types. The soil type interpretations were based on the method proposed by Robertson and Campanella (1990).

BORING LOG EXPLANATION SHEET

DEPTH (feet)	SAMPLES (Bulk / Driven)	BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	
0							Bulk sample.
							Modified split-barrel drive sampler.
							No recovery with modified split-barrel drive sampler.
							Sample retained by others.
							Standard Penetration Test (SPT).
5							No recovery with a SPT.
		XX/XX					Shelby tube sample. Distance pushed in inches/length of sample recovered in inches.
							No recovery with Shelby tube sampler.
							Continuous Push Sample.
							Seepage.
10							Groundwater encountered during drilling.
							Groundwater measured after drilling.
						SM	ALLUVIUM: Solid line denotes unit change.
							Dashed line denotes material change.
15							Attitudes: Strike/Dip b: Bedding c: Contact j: Joint f: Fracture F: Fault cs: Clay Seam s: Shear bss: Basal Slide Surface sf: Shear Fracture sz: Shear Zone sbs: Sheared Bedding Surface
20							The total depth line is a solid line that is drawn at the bottom of the boring.

Ninyo & Moore

BORING LOG

EXPLANATION OF BORING LOG SYMBOLS

PROJECT NO.	DATE	FIGURE
	Rev. 01/03	

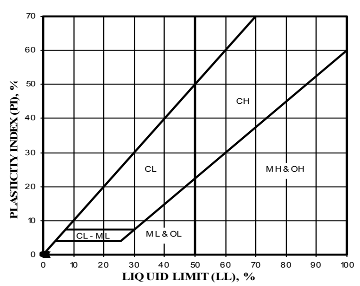
U.S.C.S. METHOD OF SOIL CLASSIFICATION

MAJOR DIVISIONS		SYMBOL	TYPICAL NAMES
COARSE-GRAINED SOILS (More than 1/2 of soil >No. 200 sieve size)	GRAVELS (More than 1/2 of coarse fraction > No. 4 sieve size)	GW	Well graded gravels or gravel-sand mixtures, little or no fines
		GP	Poorly graded gravels or gravel-sand mixtures, little or no fines
		GM	Silty gravels, gravel-sand-silt mixtures
		GC	Clayey gravels, gravel-sand-clay mixtures
	SANDS (More than 1/2 of coarse fraction <No. 4 sieve size)	SW	Well graded sands or gravelly sands, little or no fines
		SP	Poorly graded sands or gravelly sands, little or no fines
		SM	Silty sands, sand-silt mixtures
		SC	Clayey sands, sand-clay mixtures
FINE-GRAINED SOILS (More than 1/2 of soil <No. 200 sieve size)	SILTS & CLAYS Liquid Limit <50	ML	Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with
		CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean
		OL	Organic silts and organic silty clays of low plasticity
	SILTS & CLAYS Liquid Limit >50	MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts
		CH	Inorganic clays of high plasticity, fat clays
		OH	Organic clays of medium to high plasticity, organic silty clays, organic silts
HIGHLY ORGANIC SOILS		Pt	Peat and other highly organic soils

GRAIN SIZE CHART

CLASSIFICATION	RANGE OF GRAIN SIZE: U.S. Standard Sieve Size	RANGE OF GRAIN SIZE: Grain Size in Millimeters
BOULDERS	Above 12"	Above 305
COBBLES	12" to 3"	305 to 76.2
GRAVEL Coarse Fine	3" to No. 4 3" to 3/4" 3/4" to No. 4	76.2 to 4.76 76.2 to 19.1 19.1 to 4.76
SAND Coarse Medium Fine	No. 4 to No. 200 No. 4 to No. 10 No. 10 to No. 40 No. 40 to No. 200	4.76 to 0.075 4.76 to 2.00 2.00 to 0.420 0.420 to 0.075
SILT & CLAY	Below No. 200	Below 0.075

PLASTICITY CHART



Ninyo & Moore — U.S.C.S. METHOD OF SOIL CLASSIFICATION

USCS Soil Classification — Updated Nov. 2004

BORING LOG

DATE DRILLED	9/16/13	BORING NO.	B-1		
GROUND ELEVATION	10' ± (MSL)	SHEET	1	OF	1
METHOD OF DRILLING	Hand Auger				
DRIVE WEIGHT	N/A	DROP	N/A		
SAMPLED BY	GS	LOGGED BY	GS	REVIEWED BY	RDH

DEPTH (feet)	SAMPLES (Bulk / Driven)	BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DESCRIPTION/INTERPRETATION
0							ASPHALT CONCRETE: Approximately 3 inches. AGGREGATE BASE: Approximately 9 inches thick.
	Bulk					SP-SM	FILL: Grayish brown, moist, loose, poorly graded SAND with silt; scattered shell fragments; trace gravel (up to 3 inches).
5							
							Total Depth = 6.2 feet. Groundwater not encountered. Backfilled and capped with concrete on 9/16/13. Note: Groundwater, though not encountered at the time of excavation, may rise to a higher level due to seasonal variations in precipitation and several other factors as discussed in the report.
10							
15							
20							

Ninyo & Moore

BORING LOG

PROPOSED CONTAINER STORAGE AREAS AND LIGHT POLES
10TH AVENUE MARINE TERMINAL, SAN DIEGO, CALIFORNIA

PROJECT NO.	DATE	FIGURE
107589003	11/13	A-1

BORING LOG B-2

DATE DRILLED 9/16/13 BORING NO. B-2

GROUND ELEVATION 10' ± (MSL) SHEET 1 OF 1

METHOD OF DRILLING Hand Auger

DRIVE WEIGHT N/A DROP N/A

SAMPLED BY GS LOGGED BY GS REVIEWED BY RDH

DEPTH (feet)	SAMPLES Bulk	SAMPLES Driven	BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DESCRIPTION/INTERPRETATION
0								ASPHALT CONCRETE: Approximately 3-1/2 inches thick.
							SP	AGGREGATE BASE: Approximately 7-1/2 inches thick.
								FILL: Light grayish brown, damp, loose, poorly graded fine SAND.
				9.1			SC	Light grayish brown, moist, medium dense, clayey fine SAND; scattered shell fragments.
5							SP	Light grayish brown, moist to wet, loose to medium dense, poorly graded fine SAND; scattered shell fragments; trace gravel.
								Total Depth = 6.2 feet. Groundwater not encountered. Backfilled and capped with concrete on 9/16/13. Note: Groundwater, though not encountered at the time of excavation, may rise to a higher level due to seasonal variations in precipitation and several other factors as discussed in the report.
10								
15								
20								

Ninyo & Moore

BORING LOG

PROPOSED CONTAINER STORAGE AREAS AND LIGHT POLES
10TH AVENUE MARINE TERMINAL, SAN DIEGO, CALIFORNIA

PROJECT NO.	DATE	FIGURE
107589003	11/13	A-2

BORING LOG B-3

DATE DRILLED 9/16/13 BORING NO. B-3

GROUND ELEVATION 10' ± (MSL) SHEET 1 OF 1

METHOD OF DRILLING Hand Auger

DRIVE WEIGHT N/A DROP N/A

SAMPLED BY GS LOGGED BY GS REVIEWED BY RDH

DEPTH (feet)	SAMPLES Bulk	SAMPLES Driven	BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DESCRIPTION/INTERPRETATION
0								ASPHALT CONCRETE: Approximately 4 inches thick.
							SM	AGGREGATE BASE: Approximately 7 inches thick.
				10.2				FILL: Yellowish brown, moist, medium dense, silty fine SAND; trace shell fragments; trace cobbles; few gravel.
								Grinding on gravel/cobbles.
5								Total Depth = 4.3 feet. (Refusal on gravel cobbles.) Groundwater not encountered. Backfilled and capped with concrete on 9/16/13. Note: Groundwater, though not encountered at the time of excavation, may rise to a higher level due to seasonal variations in precipitation and several other factors as discussed in the report.
10								
15								
20								

Ninyo & Moore

BORING LOG

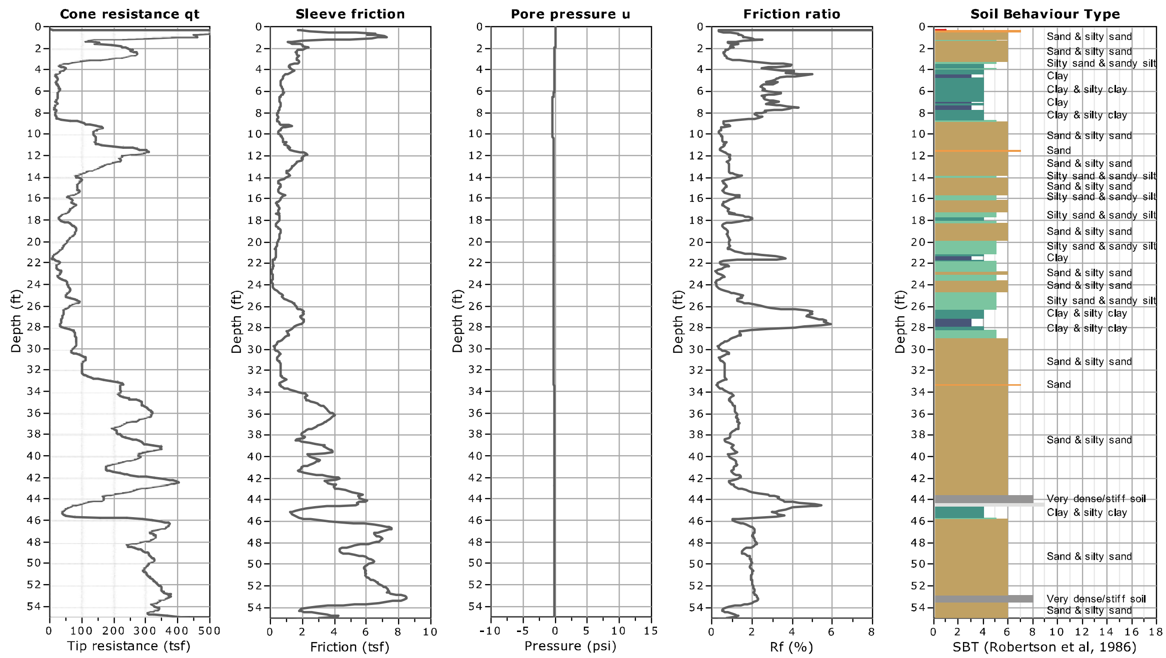
PROPOSED CONTAINER STORAGE AREAS AND LIGHT POLES
10TH AVENUE MARINE TERMINAL, SAN DIEGO, CALIFORNIA

PROJECT NO.	DATE	FIGURE
107589003	11/13	A-3

Kehoe Testing and Engineering
714-901-7270
rich@kehoetesting.com
www.kehoetesting.com

Project: Ninyo & Moore/10th Avenue Marine Terminal
Location: Water St. & Crosby Rd. San Diego, CA

CPT: CPT-1
Total depth: 55.45 ft, Date: 10/11/2013
Cone Type: Vertek



CPeT-IT v.1.7.6.3 - CPTU data presentation & interpretation software - Report created on: 10/11/2013, 3:39:02 PM
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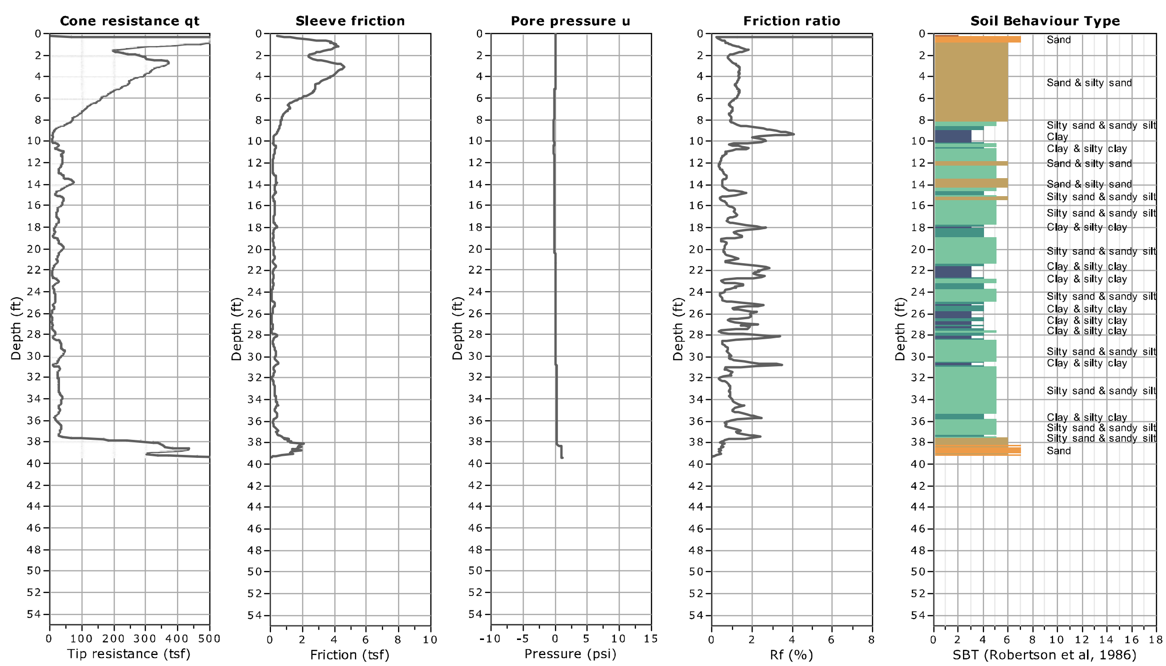
0

Kehoe Testing and Engineering
714-901-7270
rich@kehoetesting.com
www.kehoetesting.com

Project: Ninyo & Moore/10th Avenue Marine Terminal
Location: Water St. & Crosby Rd. San Diego, CA

CPT: CPT-2
Total depth: 39.47 ft, Date: 10/11/2013
Cone Type: Vertek



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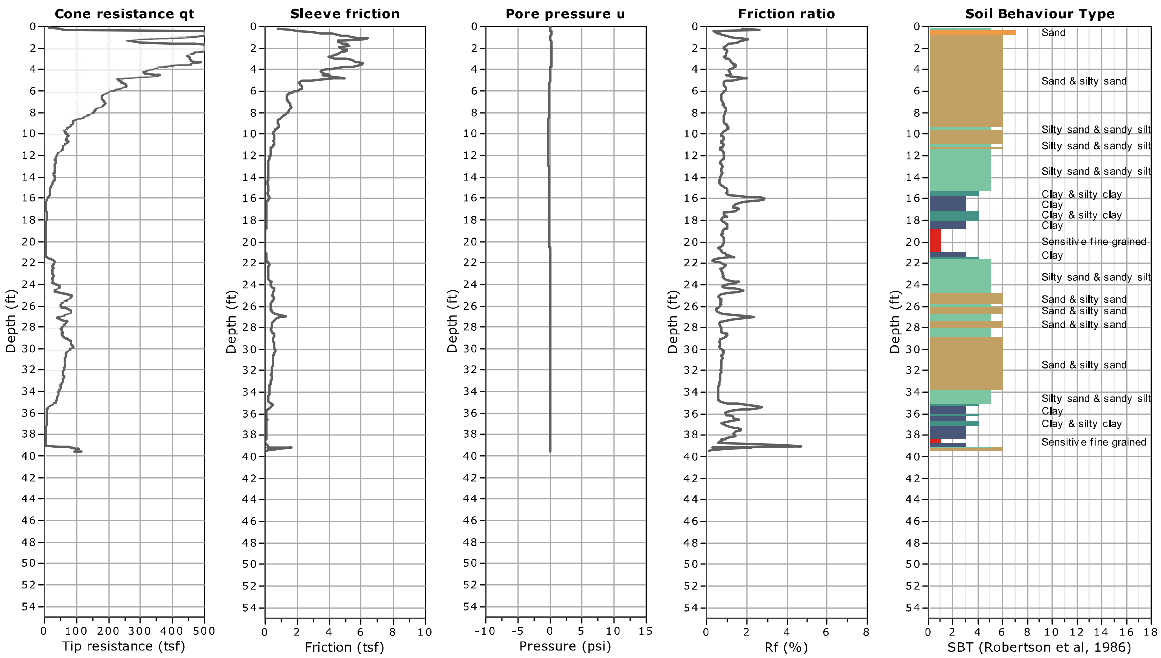
Project file: C:\NinyoSanDiego10-13\CPeT Data\Plot Data\Plots.cpt

0

Kehoe Testing and Engineering
714-901-7270
rich@kehoetesting.com
www.kehoetesting.com

Project: Ninyo & Moore/10th Avenue Marine Terminal
Location: Water St. & Crosby Rd. San Diego, CA

CPT: CPT-3
Total depth: 39.59 ft, Date: 10/11/2013
Cone Type: Vertek

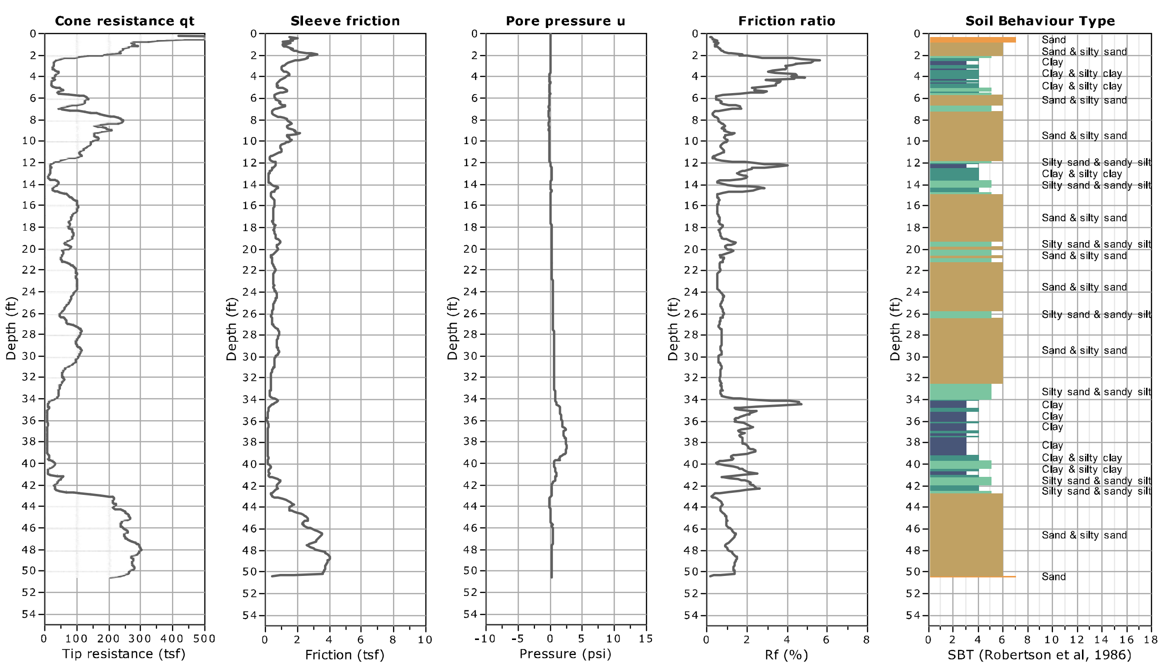


CPeT-IT v.1.7.6.3 - CPTU data presentation & interpretation software - Report created on: 10/11/2013, 3:41:54 PM 0
Project file: C:\NinyoSanDiego10-13\CPeT Data\Plot Data\Plots.cpt

Kehoe Testing and Engineering
714-901-7270
rich@kehoetesting.com
www.kehoetesting.com

Project: Ninyo & Moore/10th Avenue Marine Terminal
Location: Water St. & Crosby Rd. San Diego, CA

CPT: CPT-4
Total depth: 50.58 ft, Date: 10/11/2013
Cone Type: Vertek



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Project file: C:\NinyoSanDiego10-13\CPeT Data\Plot Data\Plots.cpt

APPENDIX B

LABORATORY TESTING

Classification

Soils were visually and texturally classified in accordance with the Unified Soil Classification System (USCS) in general accordance with ASTM D 2488. Soil classifications are indicated on the logs of the exploratory borings in Appendix A.

In-Place Moisture and Density Tests

The moisture content and dry density of relatively undisturbed samples obtained from the exploratory borings were evaluated in general accordance with ASTM D 2937. The test results are presented on the logs of the exploratory borings in Appendix A.

Gradation Analysis

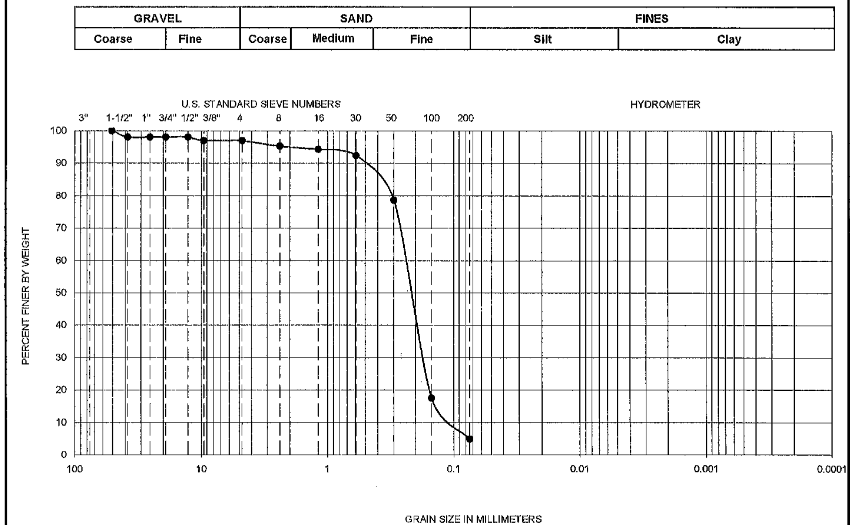
Gradation analysis tests were performed on selected representative soil sample in general accordance with ASTM D 422. The grain-size distribution curve is shown on Figures B-1. The test results were utilized in evaluating the soil classifications in accordance with the USCS.

Soil Corrosivity Tests

Soil pH, and resistivity tests were performed on a representative sample in general accordance with CT 643. The soluble sulfate and chloride content of the selected samples were evaluated in general accordance with CT 417 and CT 422, respectively. The test results are presented on Figure B-2.

R-Value

The resistance value, or R-value, for site soils was evaluated in general accordance with CT 301. Samples were prepared and evaluated for exudation pressure and expansion pressure. The equilibrium R-value is reported as the lesser or more conservative of the two calculated results. The test results are shown on Figure B-3.



Symbol	Sample Location	Depth (ft)	Liquid Limit	Plastic Limit	Plasticity Index	D_{10}	D_{30}	D_{60}	C_u	C_c	Passing No. 200 (%)	USCS
●	B-1	1.0-6.2	--	--	--	0.12	0.17	0.24	2.0	1.0	5	SP-SM

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 422

Ninyo & Moore		GRADATION TEST RESULTS	FIGURE
PROJECT NO.	DATE	PROPOSED CONTAINER STORAGE AREAS AND LIGHT POLES 10TH AVENUE MARINE TERMINAL SAN DIEGO, CALIFORNIA	B-1
107589003	11/13		

107589003_SIEVE B-1 @ 1.0-6.2.xls

SAMPLE LOCATION	SAMPLE DEPTH (FT)	pH [1]	RESISTIVITY [1] (Ohm-cm)	SULFATE CONTENT [2]		CHLORIDE CONTENT [3] (ppm)
				(ppm)	(%)	
B-2	2.5-4.5	9.7	1,700	200	0.020	85

[1] PERFORMED IN GENERAL ACCORDANCE WITH CALIFORNIA TEST METHOD 643
[2] PERFORMED IN GENERAL ACCORDANCE WITH CALIFORNIA TEST METHOD 417
[3] PERFORMED IN GENERAL ACCORDANCE WITH CALIFORNIA TEST METHOD 422

Ninyo & Moore		CORROSIVITY TEST RESULTS	FIGURE
PROJECT NO.	DATE	PROPOSED CONTAINER STORAGE AREAS AND LIGHT POLES 10TH AVENUE MARINE TERMINAL SAN DIEGO, CALIFORNIA	B-2
107589003	11/13		

SAMPLE LOCATION	SAMPLE DEPTH (FT)	SOIL TYPE	R-VALUE
B-2	2.5-4.5	Clayey SAND (SC)	43

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 2844/CT 301

Ninyo & Moore		R-VALUE TEST RESULTS	FIGURE
PROJECT NO.	DATE	PROPOSED CONTAINER STORAGE AREAS AND LIGHT POLES 10TH AVENUE MARINE TERMINAL SAN DIEGO, CALIFORNIA	B-3
107589003	11/13		

APPENDIX C

PREVIOUS BORING LOGS AND LAB DATA (2011)

DATE DRILLED 11/10/11 BORING NO. B-1
GROUND ELEVATION 9' ± (MSL) SHEET 1 OF 2
METHOD OF DRILLING 8" Diameter Hollow Stem Auger (Scott's Drilling)
DRIVE WEIGHT 140 lbs. (Auto-Trip) DROP 30"
SAMPLED BY CER LOGGED BY CER REVIEWED BY SG

DEPTH (feet)	SAMPLES (Bulk / Driven)	BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	CLASSIFICATION U.S.C.S.	DESCRIPTION/INTERPRETATION
0						ASPHALT CONCRETE: Approximately 8.5 inches thick.
					GP	FILL: Gray, damp, medium dense, poorly graded GRAVEL; ballast rock.
					SP-SM	Brown, moist, medium dense, poorly graded SAND; few silt and shells.
	Driven	9				
			▽		SM	Brown, wet, medium dense, silty medium SAND; few gravel and shells. Saturated. (Groundwater measured during drilling.)
10	Driven	33	17.6	110.5		
	Driven	6				Loose; no recovery.
20	Driven	24	24.9	93.1	SP	Brownish gray, saturated, medium dense, poorly graded fine SAND; trace silt.
	Driven	5				Loose.
30	Driven	7	17.9	110.5	CL	Brown, saturated, firm, sandy CLAY; few shells.
	Driven	0			SM	Gray, saturated, very loose, silty fine SAND.
40					CL	BAY DEPOSITS:

Ninyo & Moore

BORING LOG
10TH AVENUE MARINE TERMINAL
TERMINAL STREET, SAN DIEGO, CALIFORNIA

PROJECT NO.	DATE	FIGURE
107049004	12/11	A-1

DATE DRILLED 11/10/11 BORING NO. B-1

GROUND ELEVATION 9' ± (MSL) SHEET 2 OF 2

METHOD OF DRILLING 8" Diameter Hollow Stem Auger (Scott's Drilling)

DRIVE WEIGHT 140 lbs. (Auto-Trip) DROP 30"

SAMPLED BY CER LOGGED BY CER REVIEWED BY SG

DEPTH (feet)	SAMPLES Bulk	SAMPLES Driven	BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DESCRIPTION/INTERPRETATION
40		■	18	28.6	98.5		CL	Grayish brown, saturated, very stiff, sandy CLAY; fine sand; few shells.
								BAY DEPOSITS: (Continued) Grayish brown, saturated, very stiff, sandy CLAY; fine sand; few shells.
							SP	Brown, saturated, very dense, poorly graded fine to coarse SAND.
		◣	76					
50		■	98/9"	23.6	100.9			
		◣	82					Fine to medium sand.
								Total Depth = 56.5 feet. Groundwater encountered at approximately 8.5 feet during drilling. Backfilled with approximately 19.9 cubic feet of bentonite grout and capped with black dyed concrete shortly after drilling on 11/10/11. Note: Groundwater may rise to a level higher than that measured in borehole due to seasonal variations in precipitation and several other factors as discussed in the report.
60								
70								
80								

Ninyo & Moore

BORING LOG

10TH AVENUE MARINE TERMINAL
TERMINAL STREET, SAN DIEGO, CALIFORNIA

PROJECT NO.	DATE	FIGURE
107049004	12/11	A-2

DATE DRILLED 11/10/11 BORING NO. B-2

GROUND ELEVATION 9' ± (MSL) SHEET 1 OF 2

METHOD OF DRILLING 8" Diameter Hollow Stem Auger (Scott's Drilling)

DRIVE WEIGHT 140 lbs. (Auto-Trip) DROP 30"

SAMPLED BY CER LOGGED BY CER REVIEWED BY SG

DEPTH (feet)	SAMPLES Bulk	SAMPLES Driven	BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DESCRIPTION/INTERPRETATION
0							SM	ASPHALT CONCRETE: Approximately 4 inches thick. FILL: Brown, damp, medium dense, silty SAND; some gravel.
							SC	Brown, moist, medium dense, clayey fine SAND.
		■	35	4.2	109.2		SP-SM	Brown, damp, medium dense, poorly graded medium SAND; few silt and shells.
				▽				Saturated. (Groundwater measured during drilling)
10		◣	7				SP	Gray, saturated, loose, poorly graded fine to coarse SAND; few shells.
		■	8	25.3	102.6			
20		◣	6				SP-SM	Gray, saturated, loose, poorly graded fine to coarse SAND with silt; trace gravel.
		■	14	16.0	106.7		SP	Gray, saturated, loose, poorly graded fine to medium SAND; trace silt.
30		◣	17				SP-SM	Brown, saturated, medium dense, poorly graded SAND; few silt and shells.
							SC	BAY DEPOSITS: Dark brown, saturated, very loose, clayey fine SAND.
		■	5					
40								

Ninyo & Moore

BORING LOG

10TH AVENUE MARINE TERMINAL
TERMINAL STREET, SAN DIEGO, CALIFORNIA

PROJECT NO.	DATE	FIGURE
107049004	12/11	A-3

DEPTH (feet)	SAMPLES Bulk / Driven	BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DESCRIPTION/INTERPRETATION
40	Driven	10				SM	BAY DEPOSITS: (Continued) Brown, saturated, medium dense, silty fine SAND.
	Driven	50/6"	15.5	110.6			Very dense; some gravel.
50	Driven	21				CL	Reddish brown, saturated, hard, sandy CLAY; fine sand.
	Driven	43	18.5	112.8		SC	Reddish brown, saturated, dense, clayey fine SAND.
							Total Depth = 56.5 feet. Groundwater encountered at approximately 8.5 feet during drilling. Backfilled with approximately 19.9 cubic feet of bentonite grout and capped with black dyed concrete shortly after drilling on 11/10/11. Note: Groundwater may rise to a level higher than that measured in borehole due to seasonal variations in precipitation and several other factors as discussed in the report.
60							
70							
80							

DATE DRILLED 11/10/11 BORING NO. B-2

GROUND ELEVATION 9' ± (MSL) SHEET 2 OF 2

METHOD OF DRILLING 8" Diameter Hollow Stem Auger (Scott's Drilling)

DRIVE WEIGHT 140 lbs. (Auto-Trip) DROP 30"

SAMPLED BY CER LOGGED BY CER REVIEWED BY SG

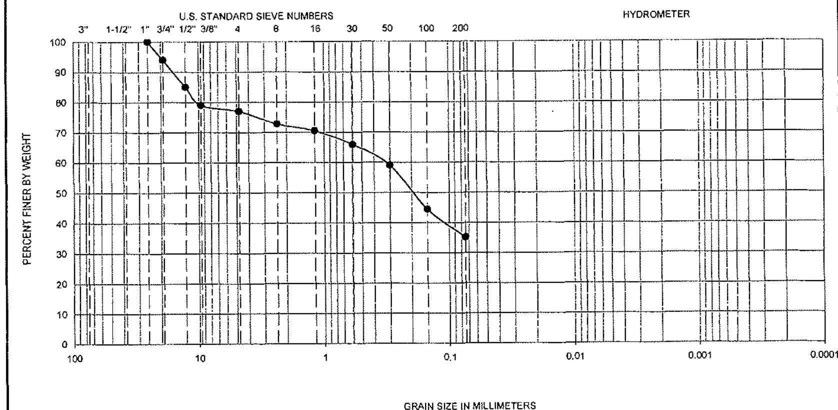
Ninyo & Moore

BORING LOG

10TH AVENUE MARINE TERMINAL
TERMINAL STREET, SAN DIEGO, CALIFORNIA

PROJECT NO.	DATE	FIGURE
107049004	12/11	A-4

GRAVEL		SAND			FINES	
Coarse	Fine	Coarse	Medium	Fine	Silt	Clay



Symbol	Sample Location	Depth (ft)	Liquid Limit	Plastic Limit	Plasticity Index	D_{10}	D_{30}	D_{60}	C_u	C_c	Passing No. 200 (%)	U.S.C.S
●	B-1	10.0-11.5	--	--	--	--	--	--	--	--	35	SM

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 422

Ninyo & Moore

GRADATION TEST RESULTS

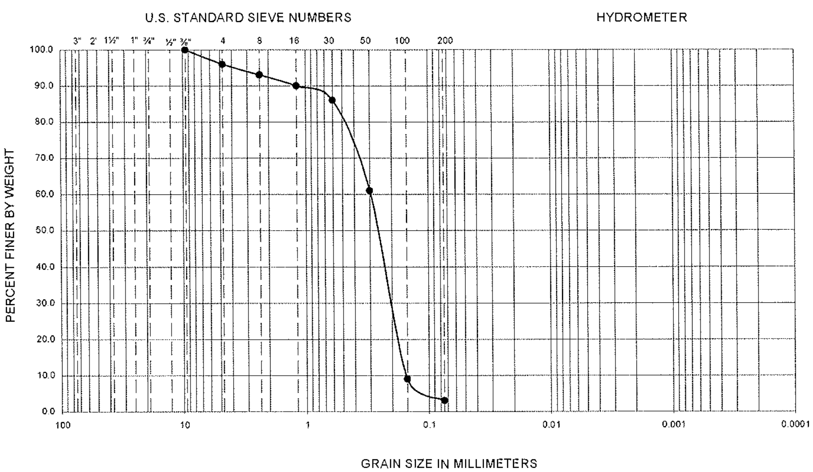
PROJECT NO.	DATE
107049004	12/11

10TH AVENUE MARINE TERMINAL
TERMINAL STREET
SAN DIEGO, CALIFORNIA

FIGURE B-1

107049004 SIEVE B-1 @ 10.0-11.5.xls

GRAVEL		SAND			FINES	
Coarse	Fine	Coarse	Medium	Fine	SILT	CLAY



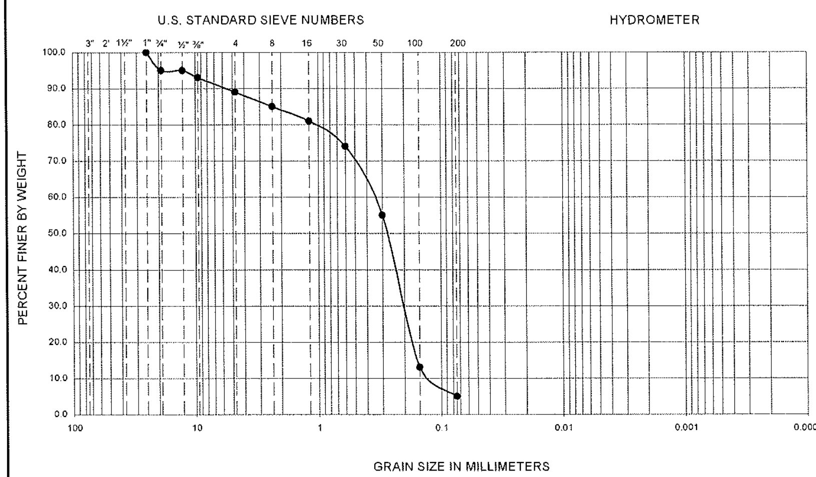
Symbol	Sample Location	Depth (ft)	Liquid Limit	Plastic Limit	Plasticity Index	D_{10}	D_{30}	D_{60}	C_u	C_c	Passing No. 200 (%)	USCS
●	B-2	10.0-11.5	--	--	--	0.15	0.20	0.30	2.0	0.9	3	SP

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 422

Ninyo & Moore		GRADATION TEST RESULTS	FIGURE
PROJECT NO.	DATE	10TH AVENUE MARINE TERMINAL TERMINAL STREET SAN DIEGO, CALIFORNIA	B-2
107049004	12/11		

107049004 SIEVE B-2 @ 10.0-11.5.xls

GRAVEL		SAND			FINES	
Coarse	Fine	Coarse	Medium	Fine	SILT	CLAY



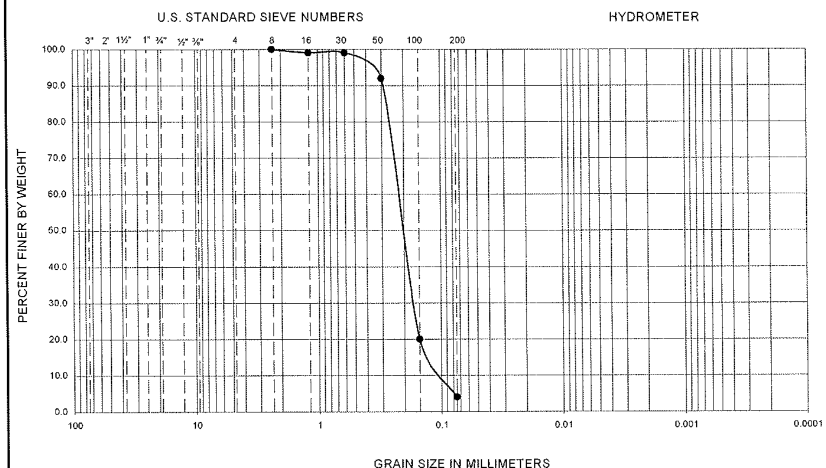
Symbol	Sample Location	Depth (ft)	Liquid Limit	Plastic Limit	Plasticity Index	D_{10}	D_{30}	D_{60}	C_u	C_c	Passing No. 200 (%)	USCS
●	B-2	20.0-21.5	--	--	--	0.13	0.20	0.34	2.6	0.9	5	SP-SM

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 422

Ninyo & Moore		GRADATION TEST RESULTS	FIGURE
PROJECT NO.	DATE	10TH AVENUE MARINE TERMINAL TERMINAL STREET SAN DIEGO, CALIFORNIA	B-3
107049004	12/11		

107049004 SIEVE B-2 @ 20.0-21.5.xls

GRAVEL		SAND			FINES	
Coarse	Fine	Coarse	Medium	Fine	SILT	CLAY



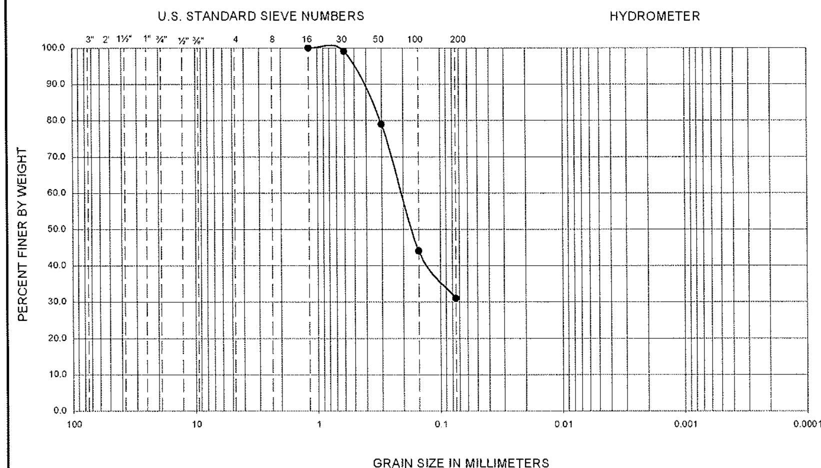
Symbol	Sample Location	Depth (ft)	Liquid Limit	Plastic Limit	Plasticity Index	D_{10}	D_{30}	D_{60}	C_u	C_c	Passing No. 200 (%)	USCS
●	B-2	25.0-26.5	--	--	--	0.11	0.17	0.21	1.9	1.3	4	SP

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 422

Ninyo & Moore		GRADATION TEST RESULTS	FIGURE
PROJECT NO.	DATE	10TH AVENUE MARINE TERMINAL TERMINAL STREET SAN DIEGO, CALIFORNIA	B-4
107049004	12/11		

107049004 SIEVE B-2 @ 25.0-26.5.xls

GRAVEL		SAND			FINES	
Coarse	Fine	Coarse	Medium	Fine	SILT	CLAY

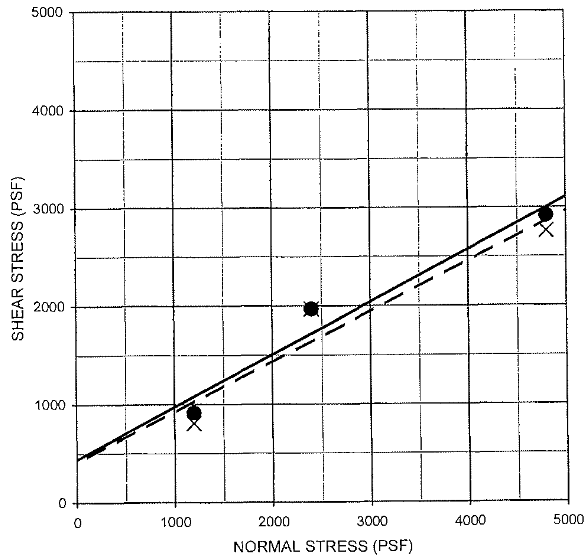


Symbol	Sample Location	Depth (ft)	Liquid Limit	Plastic Limit	Plasticity Index	D_{10}	D_{30}	D_{60}	C_u	C_c	Passing No. 200 (%)	USCS
●	B-2	40.0-41.5	--	--	--	--	--	--	--	--	31	SM

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 422

Ninyo & Moore		GRADATION TEST RESULTS	FIGURE
PROJECT NO.	DATE	10TH AVENUE MARINE TERMINAL TERMINAL STREET SAN DIEGO, CALIFORNIA	B-5
107049004	12/11		

107049004 SIEVE B-2 @ 40.0-41.5.xls

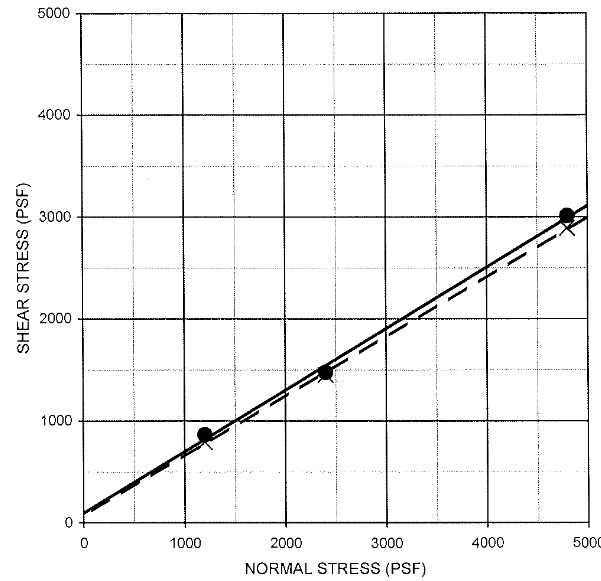


Description	Symbol	Sample Location	Depth (ft)	Shear Strength	Cohesion, c (psf)	Friction Angle, ϕ (degrees)	Soil Type
Sandy CLAY	——●——	B-1	30.0-31.5	Peak	440	28	CL
Sandy CLAY	- - X - -	B-1	30.0-31.5	Ultimate	410	27	CL

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 3080

Ninyo & Moore		DIRECT SHEAR TEST RESULTS	FIGURE
PROJECT NO.	DATE	10TH AVENUE MARINE TERMINAL TERMINAL STREET SAN DIEGO, CALIFORNIA	B-6
107049004	12/11		

107049004 SHEAR B-1 @ 30.0-31.5.xls



Description	Symbol	Sample Location	Depth (ft)	Shear Strength	Cohesion, c (psf)	Friction Angle, ϕ (degrees)	Soil Type
Clayey SAND	——●——	B-2	35.0-36.5	Peak	100	31	SC
Clayey SAND	- - X - -	B-2	35.0-36.5	Ultimate	70	30	SC

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 3080

Ninyo & Moore		DIRECT SHEAR TEST RESULTS	FIGURE
PROJECT NO.	DATE	10TH AVENUE MARINE TERMINAL TERMINAL STREET SAN DIEGO, CALIFORNIA	B-7
107049004	12/11		

107049004 SHEAR B-2 @ 35.0-36.5.xls

SAMPLE LOCATION	SAMPLE DEPTH (FT)	pH [1]	RESISTIVITY [1] (Ohm-cm)	SULFATE CONTENT [2]		CHLORIDE CONTENT [3] (ppm)
				(ppm)	(%)	
B-2	15.0-16.5	7.8	770	320	0.032	600

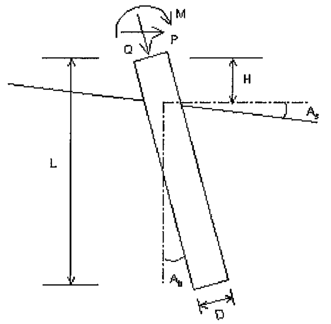
[1] PERFORMED IN GENERAL ACCORDANCE WITH CALIFORNIA TEST METHOD 643
[2] PERFORMED IN GENERAL ACCORDANCE WITH CALIFORNIA TEST METHOD 417
[3] PERFORMED IN GENERAL ACCORDANCE WITH CALIFORNIA TEST METHOD 422

Ninyo & Moore		CORROSIVITY TEST RESULTS	FIGURE
PROJECT NO.	DATE	10TH AVENUE MARINE TERMINAL TERMINAL STREET SAN DIEGO, CALIFORNIA	B-8
107049004	12/11		

APPENDIX D

LATERAL PILE CAPACITY ANALYSES

LATERAL ANALYSIS



Drilled Shaft (dia >24 in. or 61 cm)

Loads:
Load Factor for Vertical Loads= 1.0
Load Factor for Lateral Loads= 1.0
Loads Supported by Pile Cap= 0 %
Shear Condition: Static

Vertical Load, Q= 10.0 -kp
Shear Load, P= 3.8 -kp
Moment, M= 173.0 -kp-f

Profile:
Pile Length, L= 50.0 -ft
Top Height, H= 0 -ft
Slope Angle, As= 0
Batter Angle, Ab= 0

* Zero Tip Resistance *
The tip resistance is zero

Soil Data:

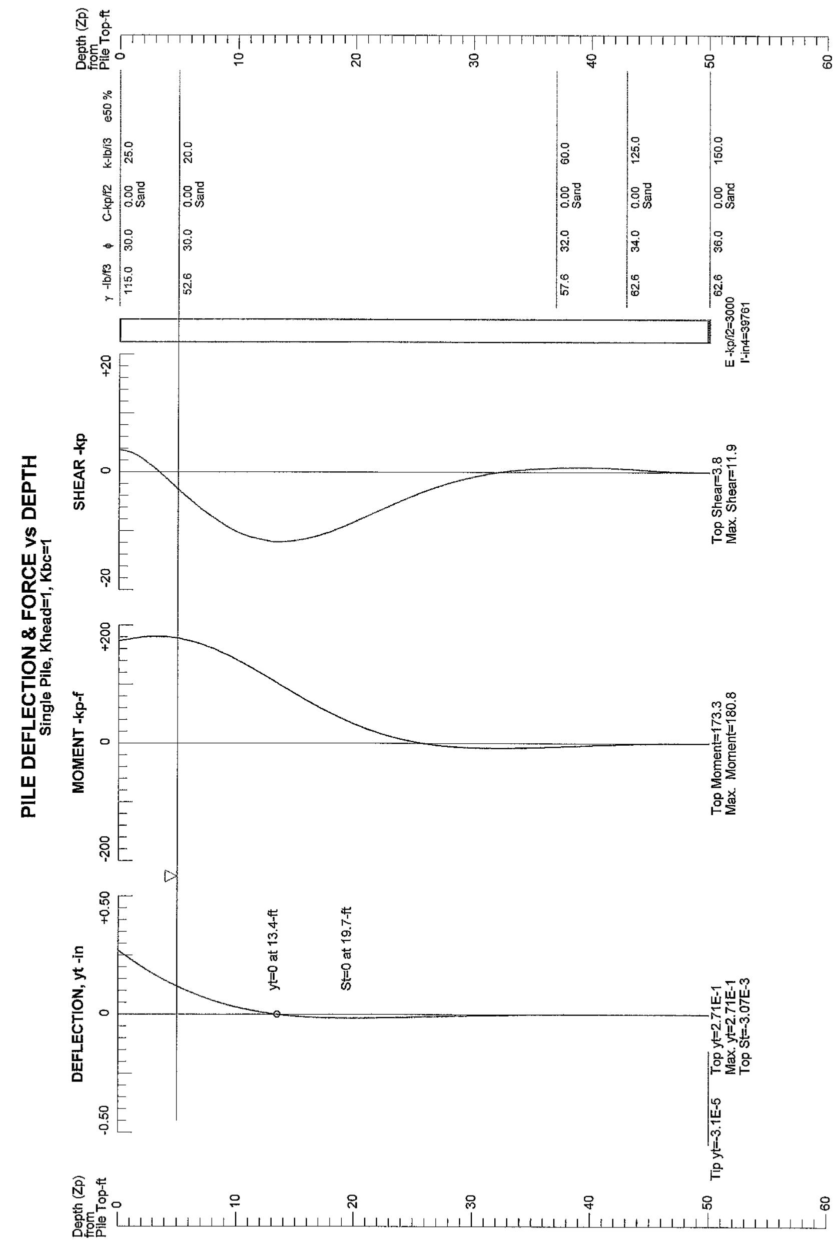
Depth -ft	Gamma -lb/f3	Phi	C -kp/f2	K -lb/i3	e50 or Dr %	Nspt
0	115.0	30.0	0.00	25.0		
5	52.6	30.0	0.00	20.0		
37	57.6	32.0	0.00	60.0		
43	62.6	34.0	0.00	125.0		
50	62.6	36.0	0.00	150.0		

Pile Data:

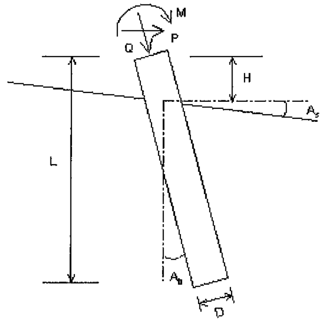
Depth -ft	Width -in	Area -in2	Per. -in	I -in4	E -kp/i2	Weight -kp/f
0.0	30	706.9	94.2	39760.8	3000	0.736
50.0						

Single Pile Lateral Analysis:
Top Deflection, yt= 0.27100-in
Max. Moment, M= 180.83-kp-f
Top Deflection Slope, St= -0.00307
OK! Top Deflection, 0.2710-in is less than the Allowable Deflection= 1.00-in

Note: If the program cannot find a result or the result exceeds the upper limit. The result will be displayed as 99999.
The Max. Moment calculated by program is an internal force from the applied load conditions. Structural engineer has to check whether the pile has enough capacity to resist the moment with adequate factor of safety. If not, the pile may fail under the load conditions.



LATERAL ANALYSIS



Drilled Shaft (dia >24 in. or 61 cm)

Loads:
Load Factor for Vertical Loads= 1.0
Load Factor for Lateral Loads= 1.0
Loads Supported by Pile Cap= 0 %
Shear Condition: Static

Vertical Load, Q= 10.0 -kp
Shear Load, P= 1.9 -kp
Moment, M= 103.0 -kp-f

Profile:
Pile Length, L= 50.0 -ft
Top Height, H= 0 -ft
Slope Angle, As= 0
Batter Angle, Ab= 0

* Zero Tip Resistance *
The tip resistance is zero
* Negative Friction *
Negative Friction Start: 0 -ft End: 43 -ft with Factor: 1

Soil Data:

Depth -ft	Gamma -lb/f3	Phi	C -kp/f2	K -lb/i3	e50 or Dr %	Nspt
0	115.0	30.0	0.00	25.0		
5	52.6	0.1	0.00	5.0		
37	57.6	0.1	0.00	15.0		
43	62.6	34.0	0.00	125.0		
50	62.6	36.0	0.00	150.0		

Pile Data:

Depth -ft	Width -in	Area -in2	Per. -in	I -in4	E -kp/i2	Weight -kp/f
0.0	30	706.9	94.2	39760.8	3000	0.736
50.0						

Single Pile Lateral Analysis:
Top Deflection, yt= 0.20300-in
Max. Moment, M= 106.67-kp-f
Top Deflection Slope, St= -0.00222
OK! Top Deflection, 0.2030-in is less than the Allowable Deflection= 1.00-in

Note: If the program cannot find a result or the result exceeds the upper limit. The result will be displayed as 99999.
The Max. Moment calculated by program is an internal force from the applied load conditions. Structural engineer has to check whether the pile has enough capacity to resist the moment with adequate factor of safety. If not, the pile may fail under the load conditions.

CivilTech Software

107589003_TAMT Light Poles
2.5 ft dia CIDH_EQ Load_Seismic