Draft Preliminary Health Risk Assessment

In Alignment with the Maritime Clean Air Strategy (MCAS)

December 14, 2021
Health Risk Assessment Procedural Steps

**STEP 1**
Emissions Inventory

- Identify emissions sources by category
- Estimate tons of Diesel Particulate Matter (DPM) by category per MCAS 2019 activity

**STEP 2**
Dispersion Modeling

- Computer simulation (AERMOD) used to estimate the concentration of DPM at specific locations
- Locations are called receptors (homes, schools, parks)

**STEP 3**
Risk Calculations

- Estimate DPM cancer risk
- Cancer risk values are conservative, health-protective and represented as the maximum risk at nearest receptor
- Cancer risk is a probability, not a guarantee, and includes uncertainty
Emission Source Locations

- Freight Rail (Blue Line)
- Meteorological Station
- Truck Activity (Yellow Lines)
- TAMT (Red Dashes)
- NCMT (Red Dashes)
- Vessel Hoteling (Red Crosshairs)
- TMT Onsite Truck Activity (Red Dashes)
- Ferry #1 (Cabrillo)
- Ferry #2 (Silvergate)
- Vessel Movement (Blue Line)
- Assist Tug (Pink Dashes)

Categories:
- Oceangoing Vessels
- Commercial Harbor Craft
- Cargo Handling Equipment
- Heavy-Duty Trucks
- Rail
Maximum Residential Cancer Risk – Baseline 2019

**Coronado**
- 22.0

**Downtown**
- 18.0

**Barrio Logan**
- 18.0

**National City**
- 20.0

*These represent specific locations for higher levels of risk within portions of each community, as identified in the HRA Summary Report.

Results are preliminary
Preliminary Results were revised on 12/13/21
The cancer risk values presented in the Health Risk Assessment are conservative, health-protective and represented as the maximum risk at nearest receptor. These represent specific locations for higher levels of risk within portions of each community, as identified in the HRA Summary Report.
Health Risk Assessment
Forecasted MCAS Reductions

<table>
<thead>
<tr>
<th>Year</th>
<th>2019</th>
<th>2026</th>
<th>2030</th>
</tr>
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<tbody>
<tr>
<td>Barrio Logan*</td>
<td>19.59</td>
<td>11.11</td>
<td>9.42</td>
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<tr>
<td>Downtown*</td>
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<td>19.22</td>
<td>19.16</td>
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<tr>
<td>Coronado*</td>
<td>17.45</td>
<td>9.63</td>
<td>8.53</td>
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<td>National City*</td>
<td>19.48</td>
<td>13.47</td>
<td>11.33</td>
</tr>
</tbody>
</table>

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Key Sources After Forecasted MCAS Reductions

Barrio Logan

2019

BASELINE

At-Berth 18.8%
Freight Rail 13.2%
Harbor Movements 9.5%
CHE 41.2%
(Tugs) 11.6%
(Ferries) 3.2%
Trucks 0.5%
Rail Switching 1.9%

HRA Value 19.59

2026

43% Near-term Risk Reduction

Freight Rail 23.2%
At-Berth 27.9%
Harbor Movements 16.8%
CHE 14.6%
(Tugs) 13.4%
(Rails) 3.4%
Trucks 0.6%
Rail Switching 4.0%

HRA Value 11.11

2030

52% Total Long-term Risk Reduction

CHE and Truck DPM eliminated

Freight Rail 27.4%
At-Berth 33%
Harbor Movements 19.9%
Rail Switching 15.8%
(Tugs) 13.4%

HRA Value 9.42

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Next Steps

- Provide fact sheet on webpage
- Conduct additional engagement, such as:
  - AB617 Portside Community Steering Committee
  - Agency planning groups
  - Resident and stakeholder meeting (virtual)
- Refine and Finalize Port’s Health Risk Assessment (Anticipated February 2022)
- Provide input to SDAPCD / CARB Staff on the AB 617 Portside Community’s Cumulative Health Risk Assessment (Anticipated Winter/Spring 2022)
Preliminary Health Risk Assessment

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