FINAL
SHELTER ISLAND YACHT BASIN
2022 BACTERIA SPECIAL STUDY
TECHNICAL REPORT

Submitted to:

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ACRONYMS AND ABBREVIATIONS

A1	A-1 Anchorage
AB	Assembly Bill
Basin Plan	Water Quality Control Plan for the San Diego Basin
City	City of San Diego
COC	chain-of-custody
DEHQ	San Diego County Department of Environmental Health and Quality
EDD	electronic data deliverable
ELN	Environmental Laboratory Network, Inc.
FIB	fecal indicator bacteria
GM	geometric mean
ID	identifier
IDEXX	IDEXX Laboratories
ISWEBE	Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California
MC	main channel
NA	not applicable
ND	not-detected
OF	outfall
PDF	Portable Document Format
Port	San Diego Unified Port District
QA	quality assurance
QC	quality control
REC-1	“Contact Water Recreation” beneficial uses according to the Basin Plan
REF	reference
Regional Board	California Regional Water Quality Control Board, San Diego Region
SD	standard deviation
SIYB	Shelter Island Yacht Basin
SIYB Bacteria Special Study Work Plan	SIYB Bacteria Special Study Sampling and Analysis Plan & Quality Assurance Project Plan
SM	Standard Method
SSM	single sample maximum
STV	statistical threshold value
SWAMP	Surface Water Ambient Monitoring Program
TMDL	Total Maximum Daily Load
USEPA	United States Environmental Protection Agency
Wood	Wood Environment & Infrastructure Solutions, Inc.
WQO	water quality objective
YSI	YSI Incorporated

UNITS OF MEASURE

%	percent
<	less than
>	greater than
CFU	colony-forming units
gpm	gallon(s) per minute
mL	milliliter(s)
MPN	most probable number

EXECUTIVE SUMMARY

This technical report has been prepared by Wood Environment & Infrastructure Solutions, Inc. (Wood) to summarize the purpose, methods, and findings from the Bacteria Special Study conducted in Shelter Island Yacht Basin (SIYB) during May 2022. This study was undertaken by the San Diego Unified Port District (Port) to address bacterial water quality concerns from various stakeholders, including possible illicit discharge and point sources of potential pollution (e.g., storm water outfalls). Since regular monitoring of fecal indicator bacteria (FIB) is not currently performed in SIYB, this study was designed to determine overall magnitude and extent of FIB in SIYB during critical dry weather conditions. Critical spatial conditions include potential source areas, including outfalls, as well as active beach and launching areas throughout the basin. Additionally, critical temporal conditions include periods when guest vessels are permitted to anchor at the public anchorage (A-1 Anchorage) under the following conditions: 1) during a weekend, with an approved permit; or 2) during a Safe Harbor warning due to unsafe weather conditions (i.e., no permit required). To address this concern, the study also included the collection of FIB samples before, during, and after the presence of guest vessels at the A-1 Anchorage.

The principal objective of this study is to determine the overall magnitude and extent of FIB in SIYB during dry weather at these targeted areas. The design of the study included the collection of a single grab sample for FIB testing along with detailed field observations during each of the following events and specified areas:

1. Four **weekly** sampling events (i.e., before and after the presence of guest vessels at the A-1 Anchorage), samples collected from all locations.
2. Two **weekend** sampling events (i.e., while guest vessels were present at the A-1 Anchorage with approved permits), temporal samples collected within the anchorage and reference station only.
3. One **Safe Harbor** event (i.e., while guest vessels were present at the A-1 Anchorage due to unsafe weather conditions, permit not required), temporal samples collected within the anchorage and reference station only.

In addition, supplemental FIB samples were collected directly from outfalls if dry weather flow was observed during sample collection events. FIB results from all areas of interest were compared to geometric mean (GM), single sample maximum (SSM), and/or statistical threshold value (STV) regulatory thresholds used by the San Diego County Department of Environmental Health and Quality (DEHQ) or as stated in the Water Quality Control Plan for the San Diego Basin (Basin Plan) for Water Contact Recreation (REC-1) beneficial use.

Results from this study indicate that concentrations of FIB were below regulatory thresholds in nearly all samples collected from SIYB. Assembly Bill (AB) 411 SSM standards for *Enterococcus* were exceeded in receiving water samples collected adjacent to a storm water outfall near Bessemer Beach (OF-2) during multiple sampling events. *Enterococcus* SSM standards were also exceeded at one anchorage site during the Safe Harbor event and at Kellogg Beach and North Kellogg Beach sites during one weekly collection event. Of note, the single Safe Harbor exceedance result is a statistical outlier and was rejected during validation. While minor elevated FIB concentrations were observed with the presence of vessels in the A-1 Anchorage, all results remained below regulatory thresholds. Total coliform SSM regulatory standards were exceeded only in OF-2 receiving water samples that were influenced by dry weather flow. The Basin Plan STV standard for *Enterococcus* was exceeded in more than ten percent of samples at Kellogg Beach, North Kellogg Beach, and OF-2 sample sites. The GM regulatory thresholds for both *Enterococcus* and total coliforms were exceeded only in samples collected from site OF-2.

1.0 INTRODUCTION

Shelter Island Yacht Basin (SIYB) is a recreational yacht basin near the mouth of San Diego Bay, California, and is composed of marinas and yacht clubs, an anchorage, a fuel dock, and other facilities that support recreational boating, swimming, paddle boarding, beachgoing, and fishing. The basin includes the Contact Water Recreation (REC-1) beneficial use according to the Water Quality Control Plan for the San Diego Basin (Basin Plan)[1].

Recently, various stakeholders have expressed interest regarding potential water quality pollution in the basin due to possible illicit discharges and likely point sources. These areas of interest include beach areas, receiving water nears outfalls, and the public anchorage (A-1 Anchorage). Currently, monitoring for fecal indicator bacteria (FIB) is not performed regularly within SIYB[2], so it was unknown whether FIB was present and if so, to what extent. To address this data gap, the San Diego Unified Port District (Port) conducted this Bacteria Special Study in SIYB to assess FIB levels within the basin.

In collaboration with the Port, Wood Environment & Infrastructure Solutions, Inc. (Wood) developed a SIYB Bacteria Special Study Sampling and Analysis Plan & Quality Assurance Project Plan (SIYB Bacteria Special Study Work Plan; Wood, 2022), dated April 2022. This plan was designed to answer the following study questions:

- What is the extent and magnitude of ambient dry weather FIB levels within SIYB relative to REC-1 water quality objectives (WQOs)?
- Are there concentrations of FIB that exceed REC-1 WQOs associated with active periods of A-1 Anchorage weekend or Safe Harbor use?
- Are there concentrations of FIB that exceed REC-1 WQOs associated with beaches or outfalls?

1.1 Applicable Regulations and Advisories

The Basin Plan establishes WQOs to preserve and enhance water quality and to protect designated beneficial uses of regional waters. Examples of beneficial uses include: Shellfish Harvesting (SHELL), Navigation (NAV), Marine Habitat (MAR), Wildlife Habitat (WILD), Non-contact Water Recreation (REC-2), and Contact Water Recreation (REC-1), among many others. San Diego Bay, including SIYB, has multiple designated beneficial uses, including REC-1[3]. The Basin Plan has established bacterial WQOs for ocean waters designated for REC-1 water contact recreation. In September 2021, the regional Basin Plan bacterial WQOs were

[1] Water Quality Control Plan for the San Diego Basin-Region 9 (Basin Plan), California Regional Water Quality Control Board, San Diego Region (Regional Board), 1994. Updated with amendments effective on or before September 1, 2021 (https://www.waterboards.ca.gov/sandiego/water_issues/programs/basin_plan).

[2] Shelter Island Shoreline Park, a coastal access point along the southeast shoreline of Shelter Island, is regularly sampled for FIB according to the Total Maximum Daily Load (TMDL) for indicator bacteria established in Resolution No. R9-2008-0027. There is no direct contact between this site and the basin waters of SIYB.

[3] See Table 2-3 of the Basin Plan (Regional Board, 2021).

updated to reflect revisions developed by the California State Water Resources Control Board and approved by the United States Environmental Protection Agency (USEPA) in 2019. These Basin Plan updates included the removal of total and fecal coliform WQOs and established *Enterococcus* WQOs for saline inland surface waters, enclosed bays, and estuaries. Monitoring for this study followed the 2021 Basin Plan update to test for *Enterococcus* in seawater, while also screening for total coliforms as an additional line of evidence to determine the extent and magnitude of FIB in SIYB. Since there are no REC-1 WQOs for total coliforms in the 2021 Basin Plan, Assembly Bill (AB) 411 water quality standards followed by the San Diego County Department of Environmental Health and Quality (DEHQ)[4] were used for reference.

In addition to total coliforms, AB 411 includes standards for fecal coliform and *Enterococcus*. While *Escherichia coli* (*E. coli*), a subset species of fecal coliforms, were measured by the laboratory for this study, these results were not included in the analysis due to issues associated with the analytical method for the detection of *E. coli* in seawater samples (Pisciotta et al., 2002). For *Enterococcus,* AB 411 standards differ slightly from WQOs included in the Basin Plan. For example, AB 411 *Enterococcus* standards include a single-sample maximum (SSM) value, which is based on the collection of a single grab sample, while the Basin Plan provides a statistical threshold value (STV), which is calculated based on the results of multiple samples. Due to the simplicity of using the SSM to compare single values during each event, and because the DEHQ still follows the AB 411 standards, *Enterococcus* results were compared to SSM AB 411 standards in addition to the STV and geometric mean (GM) WQOs in the Basin Plan.

FIB hereafter refers to the collection and testing of *Enterococcus* and total coliforms, unless otherwise specified. The Basin Plan WQOs for *Enterococcus*, for waters with salinity greater than one part per thousand, and the AB 411 standards for total coliform and *Enterococcus* used by the DEHQ are presented in Table 1-1 and Table 1-2, respectively. For the purposes of this study, plate-based standards for colony-forming units (CFUs) are deemed equivalent to liquid-based results provided in most-probable number (MPN) units.

Table 1-1. REC-1 Basin Plan Bacteria Water Quality Objectives for Saline Waters[5]

Indicator	GM[a] (CFU/100 mL)	STV[b] (CFU/100 mL)
Enterococcus	30	110

Notes: CFU = colony-forming units; GM= geometric mean; mL = milliliter; REC-1 = Contact Water Recreation beneficial use; STV = statistical threshold value; WQO = water quality objective

a- As described in the Basin Plan, the geometric mean (GM) shall not be greater than the applicable GM magnitude in any six-week interval, calculated weekly. Due to the four-week duration of the study, a modified four-week GM was calculated and qualified when compared to the water quality objective (WQO).

b- The statistical threshold value (STV) shall not be exceeded by more than 10 percent of the samples collected in a calendar month, calculated in a static manner.

[4] Total coliform and *Enterococcus* standards are provided for the County of San Diego DEHQ Beach and Bay Monitoring Program for recreational water use and are based on AB 411 bacteria standards (https://www.sandiegocounty.gov/content/dam/sdc/deh/lwqd/Beach&Bay/DEHQ_bb_public_summary.pdf). Total coliform WQOs were previously included in the Basin Plan prior to the 2021 update and provide an additional line of evidence to assess the extent and magnitude of FIB in SIYB.

[5] Objectives are presented in the Basin Plan for water contact recreational uses (REC-1 beneficial use) in all waters where the salinity is greater than 1 part per thousand more than 5 percent of the time (Regional Board, 2021).

Table 1-2. San Diego County Department of Environmental Health and Quality Beach and Bay Monitoring Program- AB 411 Bacteria Standards[4]

Indicator	30-day GM[a] (CFU/100 mL)	SSM (CFU/100 mL)
Total coliform	1,000	10,000
Enterococcus	35[b]	104

Notes: CFU = colony-forming units; mL = milliliter; GM = geometric mean; SSM = single sample maximum; WQO = water quality objective

a- A 30-day GM calculated based on five or more samples collected in 30 days.

b- The 30-day GM for *Enterococcus* under AB 411 is presented here for reference only. All GM calculations for *Enterococcus* presented in this technical report are compared to Basin Plan GM WQOs (see Table 1-1).

2.0 METHODS

Sampling design, sample collection and handling procedures, and analytical test methods that were employed by the field and laboratory teams for the SIYB Bacteria Special Study are discussed in this section.

2.1 Bacterial Water Quality Study Design

Water samples were collected and analyzed in accordance with the SIYB Bacteria Special Study Work Plan (Wood, 2022). FIB samples were collected weekly over a four-week period (Table 2-1). Two weekends and a qualifying "Safe Harbor" event were also included in the study, aimed at sampling while transient vessels were present in the A-1 Anchorage area of the basin. Sampling locations were selected to target potential sources of bacteria such as beaches, storm water outfalls, and transitory anchorages. All sampling times were targeted during the outgoing tide and before the low tide to the extent practical. This was done to capture bacteria that may be introduced from the inner tidal flat during the receding tide. In addition, when storm drain outfalls were observed to be flowing, supplemental samples from the outfall discharge were collected prior to reaching the receiving water. FIB samples collected during weekend and Safe Harbor events at the A-1 Anchorage were collected at three locations (A1-1, A1-2, A1-3) and at three times (0, 1 hour and 2 hours) in order to evaluate temporal variability (see Table 2-1).

2.1.1 Sample Collection Locations

All samples were collected within 25 feet of the sampling locations identified in the SIYB Bacteria Special Study Work Plan (Wood, 2022) and provided in Figure 2-1. The selected sample locations are targeted by design (USEPA, 2002). Sites were selected due to their proximity to either (1) a potential pollutant source (e.g., outfall or public anchorage), or (2) a beach or launch site. Two sites in the main channel were also included to capture ambient basin conditions, in addition to one reference site outside of SIYB, as these stations are away from potential direct FIB sources.

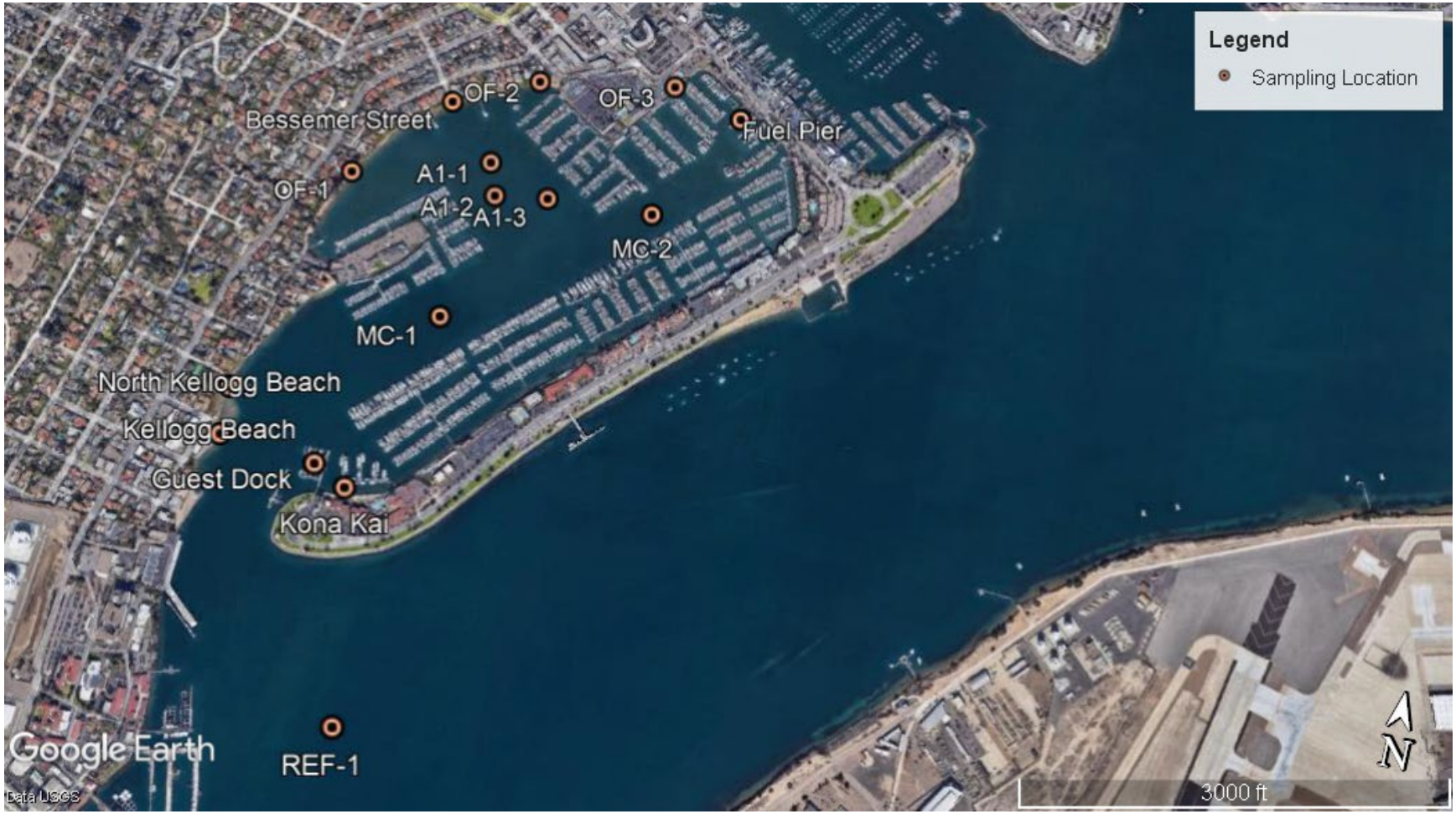
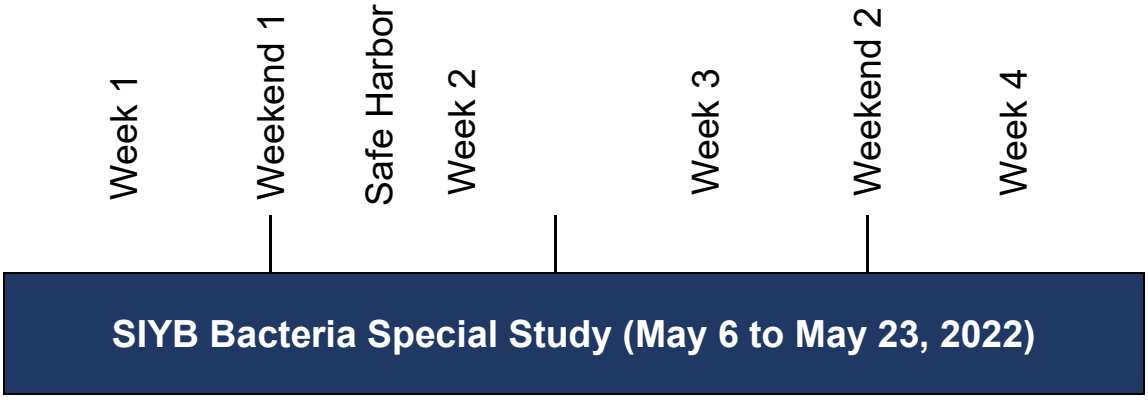


Figure 2-1. SIYB Bacteria Special Study Sampling Locations

Notes: A1 = A-1 Anchorage; MC = main channel; OF = outfall; REF = reference site

Table 2-1. Sampling Scheme and Timeline



Sampling Event	Time of Sample Collection	Time and Height of Low Tide	Number of Vessels in A-1 Anchorage	Description
Week 1 – Friday, May 6, 2022	06:00-08:45	08:13 (0.46 ft)	0-1	FIB samples were collected from all monitoring sites prior to arrival of guest vessels at the A-1 Anchorage.
Weekend 1 – Saturday, May 7, 2022	06:25-09:15	09:26 (0.58 ft)	20–21	A single reference site sample and three replicate FIB samples were collected over a two-hour period (time 0, 1, and 2) at the three A-1 Anchorage sites.
Safe Harbor Event – Tuesday, May 10, 2022	07:55-11:00	12:09 (0.40 ft)	21	A single reference site sample and three replicate FIB samples were collected over a two-hour period (time 0, 1, and 2) at the three A-1 Anchorage sites during a Safe Harbor warning (i.e., vessels do not require a permit to anchor).
Week 2 – Friday, May 13, 2022	07:50-10:30	02:05 (0.33 ft)	3	FIB samples were collected from all monitoring sites. Due to the Safe Harbor warning (Monday–Thursday), sampling was not performed until Friday prior to arrival of guest vessels.
Week 3 – Friday, May 20, 2022	05:55-08:55	07:58 (-0.89 ft)	2	FIB samples were collected from all monitoring sites prior to arrival of guest vessels at the A-1 Anchorage.
Weekend 2 – Saturday, May 21, 2022	06:15-09:00	09:07 (-0.56 ft)	15	A single reference site sample and three replicate FIB samples were collected over a two-hour period (time 0, 1, and 2) at the three A-1 Anchorage sites.
Week 4 – Monday, May 23, 2022	08:00-10:25	11:13 (-0.02 ft)	3–6	FIB samples were collected from all monitoring sites after departure of guest vessels at the A-1 Anchorage.

2.1.2 Sample Collection and Handling

For each monitoring event, Wood staff collected surface water samples from a vessel at each of the sampling locations presented in Figure 2-1. FIB samples were collected following the Surface Water Ambient Monitoring Program (SWAMP) "clean hands" sampling techniques to avoid contamination (see Section 3.4 of the SWAMP Clean Water Team Citizen Monitoring Program, Guidance Compendium for Watershed Monitoring and Assessment). Samples were always collected upwind and up current to avoid any potential influences from the monitoring vessel. For shoreline sites, surface water samples were collected in shallow water, at an approximate water depth of one to two feet. If an outfall was observed to be discharging, supplemental samples were collected directly from the discharge prior to reaching the receiving water. After collection, samples were immediately placed in a Ziploc® bag and stored in a clean cooler with frozen ice packs. After each monitoring event, samples were immediately transported to the analytical laboratory to meet holding time requirements.

2.1.3 Water Quality Measurements

In situ water quality measurements (temperature, pH, dissolved oxygen, salinity) were recorded using a YSI ProDSS handheld meter at each site. Measurements were taken near the depth where FIB samples were collected (i.e., just below the surface) and recorded on field data forms (Appendix A). Water transparency was also assessed using a Secchi disk. Tabulated data from field water quality measurements is provided in Appendix B.

2.1.4 Field Observations and Notes

During each sampling event, detailed observations and notes were recorded on field data forms (Appendix A). This included any observations regarding potentially influential factors, including but not limited to: weather conditions; tides; presence of animals, debris, people, and vessels.

2.1.5 Laboratory Analyses

After collection was completed, samples were transported to Environmental Laboratory Network, Inc. (ELN) under customary chain-of-custody (COC) protocols. Samples were analyzed for total coliforms by IDEXX Laboratories (IDEXX) Quanti-Tray Colilert method (Standard Method [SM] 9223) and for *Enterococcus* by IDEXX Quanti-Tray Enterolert method (Table 2-2).

Table 2-2.
Laboratory Analytical Methods and Target Reporting Limits

Indicator	Method	Target Reporting Limits[a]	Units
Total coliforms[b]	Enumeration IDEXX Quanti-Tray Colilert – SM9223	10 – 2,400,000	MPN/100 mL
Enterococcus	Enumeration IDEXX Quanti-Tray – Enterolert	10 – 2,400,000	MPN/100 mL

Notes: DEHQ = San Diego Department of Environmental Health and Quality; ELN = Environmental Laboratory Network, Inc.; IDEXX = IDEXX Laboratories; mL = milliliter; MPN = most probable number; SM = Standard Method; USEPA = United States Environmental Protection Agency

a- Reporting limits provided by Environmental Laboratory Network, Inc. (ELN) and are for seawater. Two dilutions were performed to capture a range of reporting limits.

b- Currently, Colilert is not USEPA-approved to measure total coliforms in ambient water; however, regional water boards may approve of this method on a case-by-case basis (e.g., DEHQ has approval). The measurement of total coliforms using the Colilert method is performed to serve as an additional line of evidence to *Enterococcus* results only.

2.1.6 Data Analysis

Calculations were performed to determine the GM and STV for each sampling location for comparison to regulatory standards. These calculations are briefly described below:

Geometric Mean (GM)

As described in the Basin Plan, the GM calculated for *Enterococcus* shall not be greater than the applicable GM magnitude in any six-week interval, calculated weekly. Due to the four-week duration of the study, a modified four-week GM was calculated and qualified when compared to the WQO. In comparison, the AB 411 standards used by the DEHQ specify a 30-day GM be calculated and applied to samples collected within the associated time period. Both GM standards recommend a minimum sample size of five. The GM was calculated regardless of sample size for the purposes of this special study; however, it should be noted that less than five samples were collected from several of the site locations (see Table 3-3). Additionally, the GM was calculated by conservatively using the method detection limit value (10 MPN/100 mL) for samples that were reported as not-detected (ND)[6]. Similar notes describing calculation methodology are included in all GM tables.

Statistical Threshold Value (STV)

The STV represents a value that is not to be exceeded by more than 10 percent of samples collected in a calendar month, thereby estimating the 90th percentile of water quality distribution. The Basin Plan STV for *Enterococcus* is 110 CFU/100 mL. The number of samples exceeding this value was divided by the total number of samples collected over the month from the corresponding sample location. If the resulting percentage was greater than 10 percent, the sample location was determined to have exceeded the STV.

[6] The GM is calculated by taking the nth root of the product of values of all monitoring results and therefore ND values cannot be considered as zero. Instead, the detection limit (10 MPN/100 mL) is used as a positive conservative value for the GM calculation. However, ND values are considered to be zero in all remaining calculations (e.g., average, standard deviation) to differentiate from the samples in which FIB concentrations were reported at the detection limit.

2.2 Quality Assurance and Quality Control

This section describes the quality assurance and quality control (QA/QC) procedures for all field activities and laboratory analyses. Specific QA/QC procedures are provided in detail in the approved project-specific SIYB Bacteria Special Study Work Plan (Wood, 2022).

2.2.1 Field QA/QC

Sampling process QA/QC included preparation prior to, during, and after sample collection to minimize the possibility of compromising sample integrity. This included ensuring proper sampling techniques were followed as described in the SIYB Bacteria Special Study Work Plan (Wood 2022), and extra precautions were taken to minimize the potential for sample contamination (i.e., using anti-bacterial wipes to clean coolers, supplies, etc.). Additionally, QA checklists are provided on the back of each field data form (Appendix A). A field blank of deionized water was collected during each field event and submitted for FIB testing. In addition, a single field duplicate sample was collected from a randomly identified station during each event.

COC procedures were used for all samples throughout the collection, transport, and analytical process. Completed COC forms are provided in the laboratory reports in Appendix C. The project-specific work plan (Wood, 2022) provides more information regarding COC procedures.

2.2.2 Laboratory Analytical QA/QC

The QA objectives for the bacteriological analysis conducted by ELN is provided in the laboratory QA manual. Results of all laboratory QA/QC analyses are reported in laboratory reports provided in Appendix C.

2.3 Data Management

The laboratory supplied analytical results in Adobe Portable Document Format (PDF) and electronic data deliverable (EDD) files. After completion of the data review by the laboratory, results were forwarded to Wood for review and reporting. All laboratory records that were submitted are included in Appendix C.

3.0 RESULTS

This section provides FIB results from the Bacteria Special Study and identifies any exceedances above AB 411 and/or Basin Plan standards. Raw FIB results are presented by event type in Sections 3.1 to 3.3 for comparison to AB 411 SSM bacteria standards. Additionally, the calculated GM and STV (used for AB 411 and/or Basin Plan standards), supplemental sampling, and QA/QC sample results are provided in Sections 3.4 to 3.6. Results that exceeded AB 411 and/or Basin Plan standards are provided in Tables 3-6 to 3-8. Graphs summarizing results for each sampling event and outfall collection are presented in Figures 3-1, 3-3, and 3-4. Field photographs are included in Figure 3-2. Tabulated field data, including water quality measurements, are provided in Appendix B.

3.1 Weekly Sampling Events

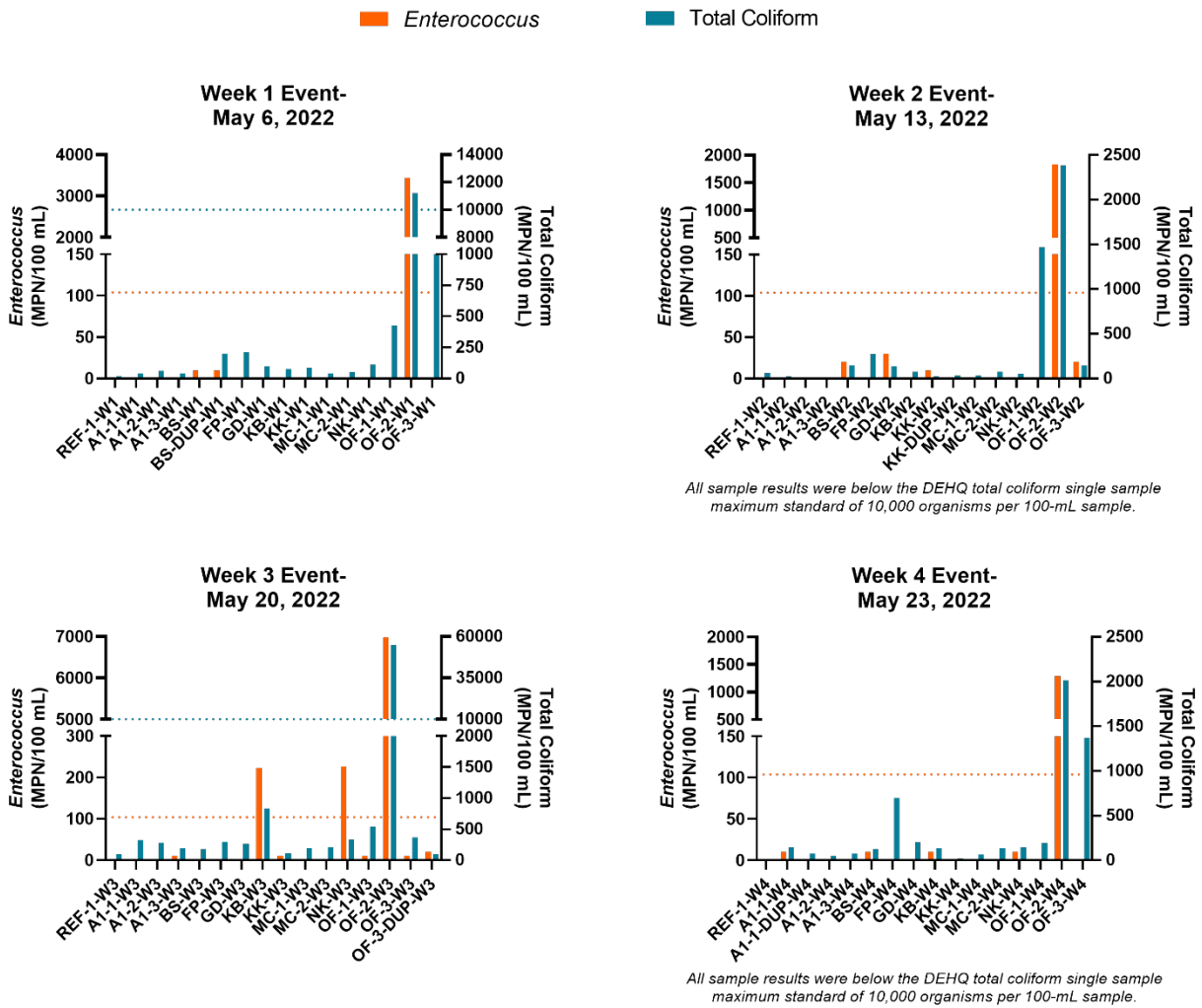
Weekly sampling results are provided in Table 3-1 and Figure 3-1; WQO exceedances are presented in Tables 3-6 through 3-8. Results from all sampling locations were below *Enterococcus* and total coliform AB 411 standards for all four weekly sampling events with the exception of OF-2 (n= 4 events), Kellogg Beach (n= 1 event), and North Kellogg Beach (n= 1 event) sites. Site OF-2, which is collected from the receiving water directly adjacent to the storm water outfall, exceeded AB 411 SSM criteria of 104 CFU/100 mL for *Enterococcus* during all four weekly sampling events. This site also exceeded AB 411 SSM criteria of 10,000 CFU/100 mL for total coliform during Week 1 and Week 3 sampling events. Discharge was observed flowing from this outfall (Figure 3-2) during all weekly sampling events, except for Week 2 when the outfall was inundated with bay water due to tidal influence. A full description of supplemental outfall sampling and a summary of outfall dry weather flow results is provided in Section 3.5.

Samples collected from Kellogg Beach and North Kellogg Beach (Figure 3-2) exceeded the AB 411 SSM criteria of 104 CFU/100 mL for *Enterococcus* during the Week 3 sampling event. *Enterococcus* results from these sites were reported at 223 MPN/100 mL and 226 MPN/100 mL, respectively. Total coliform results from these sites during the Week 3 sampling event were below SSM criteria. The calculated GM and STV results for these sites are provided in Section 3.4.

Table 3-1.
Weekly Single-Sample FIB Results Summary Table

Sample Location	Sample Results (MPN/100 mL)							
	5/6/2022		5/13/2022		5/20/2022		5/23/2022	
	Week 1		Week 2		Week 3		Week 4	
	Enterococcus	Total Coliforms	*Enterococcus*	Total Coliforms	*Enterococcus*	Total Coliforms	*Enterococcus*	Total Coliforms
A1-1	ND	41	ND	20	ND	327	10	145
A1-2	ND	63	ND	10	ND	282	ND	52
A1-3	ND	41	ND	10	10	189	ND	74
Bessemer Street	10	10	20	146	ND	175	10	122
Fuel Pier	ND	211	ND	272	ND	292	ND	697
Guest Dock	ND	97	30	135	ND	256	ND	201
Kellogg Beach	ND	75	ND	73	**223**	836	10	132
Kona Kai	ND	85	10	20	10	110	ND	20
Main Channel-1	ND	41	ND	31	ND	197	ND	63
Main Channel-2	ND	52	ND	74	ND	201	ND	134
North Kellogg Beach	ND	110	ND	52	**226**	328	10	145
OF-1	ND	426	ND	1,470	10	537	ND	193
OF-2	**3,440**	**11,200**	**1,830**	2,380	**6,970**	**54,800**	**1,290**	2,010
OF-3	ND	1,080	20	146	10	368	ND	1,370
REF	ND	20	ND	63	ND	97	ND	ND

Notes:
A1 = A-1 Anchorage; AB = Assembly Bill; CFU = colony-forming units; FIB = fecal indicator bacteria; mL = milliliter; MPN = most probable number; OF = outfall; REF = reference; SSM = single sample maximum
Values in **BOLD** indicate an exceedance of AB 411 SSM criteria (104 CFU/100 mL for *Enterococcus* and 10,000 CFU/100 mL for total coliforms).



Notes: A1 = A1 Anchorage; BS = Bessemer Street; DUP = duplicate; FP = Fuel Pier; GD = Guest Dock; KB = Kellogg Beach; KK = Kona Kai; MC = Main Channel; mL = mililiter; MPN = most probable number; NK = North Kellogg Beach; OF= Outfall; REF = reference; W = week

Figure 3-1. Weekly Single-Sample FIB Results Summary

Dashed lines indicate Assembly Bill (AB) 411 single sample maximum (SSM) criteria for Enterococci (104 colony-forming units [CFU]/100 mL; in orange) and total coliforms (10,000 CFU/100 mL; in blue). These standards are used by the San Diego County Department of Environmental Health and Quality (DEHQ).

Dry weather flow was observed during multiple sample events from the storm water outfall located adjacent to OF-2 receiving water site.

Field staff use established SWAMP field sampling techniques to collect a dry weather flow sample from OF-2.

The number of vessels present at the A-1 Anchorage was recorded during all sampling events. This photo was taken during the Safe Harbor event on May 10.

The presence of humans, birds, and animals (including dogs) was recorded on field data forms during all sampling events.

Floating eelgrass and organic debris were observed during sample collection at Kellogg and North Kellogg Beach on May 20.

Water quality measurements, including water clarity assessed using a Secchi disk, were performed at all sample locations.

Figure 3-2. Field Photographs

3.2 Weekend Sampling Events

Weekend sampling results are provided in Table 3-2 and Figure 3-3; WQO exceedances are presented in Tables 3-6 through 3-8. The calculated GM and STV results for these events are provided in Section 3.4. All A-1 Anchorage and reference samples collected during weekend sampling events were below AB 411 SSM standards. Because the storm water outfall adjacent to site OF-2 was observed to be flowing during both weekend sampling events, supplemental discharge samples were collected. During the Weekend 2 event, a supplemental receiving water sample from site OF-2 was also collected. This sample exceeded AB 411 SSM standards for both *Enterococcus* and total coliforms. Results from these supplemental samples are presented in Table 3-6.

3.3 Safe Harbor Sampling Event

Safe Harbor sampling results are provided in Table 3-2 and Figure 3-3; WQO exceedances are presented in Tables 3-6 through 3-8. The calculated GM and STV results for this event are provided in Section 3.4. All A-1 Anchorage and reference samples collected during the Safe Harbor sampling event were below AB 411 SSM standards with the exception of the second replicate sample collected from site A1-3. *Enterococcus* results from this sample were reported at 1,150 MPN/100 mL, exceeding AB 411 SSM standards of 104 CFU/100 mL. Total coliform results from this sample were reported at the detection limit (10 MPN/100 mL), significantly below SSM standards. However, during the data validation process, this result was rejected based on statistical analysis and additional lines of evidence as described in Section 4.3.

Table 3-2.
Weekend and Safe Harbor Single-Sample FIB Results Summary Table

Sample Location	Replicate (R) Number	Sample Results (MPN/100 mL)					
		5/7/2022		5/10/2022		5/21/2022	
		Weekend 1		Safe Harbor		Weekend 2	
		Enterococcus	Total Coliforms	*Enterococcus*	Total Coliforms	*Enterococcus*	Total Coliforms
A1-1	R1 (h0)	ND	86	ND	31	10	63
	R2 (h1)	20	63	ND	41	ND	41
	R3 (h2)	ND	201	10	63	10	41
	Average	7	117	3	45	7	48
	SD	9	60	5	13	5	10
A1-2	R1 (h0)	ND	86	ND	20	ND	63
	R2 (h1)	ND	20	ND	85	ND	52
	R3 (h2)	ND	201	63	1,010	20	41
	Average	0	102	21	372	7	52
	SD	0	75	30	452	9	9
A1-3	R1 (h0)	ND	41	ND	5,170	ND	74
	R2 (h1)	ND	41	**1150**[*,a]	10[a]	41	41
	R3 (h2)	ND	74	ND	1,130	40	410
	Average	0	52	0	3,150	27	175
	SD	0	16	0	2,020	19	167
All A1 Sites	*Average*	2	90	9	944	13	92
	SD	6	63	21	1,655	16	113
REF-1	NA	ND	ND	ND	31	10	31

Notes: A1 = A-1 Anchorage; AB = Assembly Bill; CFU = colony-forming units; FIB = fecal indicator bacteria; h0 = hour 0; h1 = hour 1; h2 = hour 2; mL = milliliter; MPN = most probable number; ND = not-detected; REF = reference; SD = standard deviation; SSM = single sample maximum
*-Sample result was determined to be an outlier using Grubb's Test (Grubbs, 1969).
a- Result was attributed to a transcriptional error and rejected during validation. This sample is excluded from further analyses as described in Section 4.3.
Values in **BOLD** indicate an exceedance of AB 411 SSM criteria (104 CFU/100 mL for *Enterococcus* and 10,000 CFU/100 mL for total coliforms).
ND values are assumed to be zero for calculation purposes.
Three replicate samples were collected at each A1 sample location over a two-hour period (e.g., hour 0, 1, and 2).

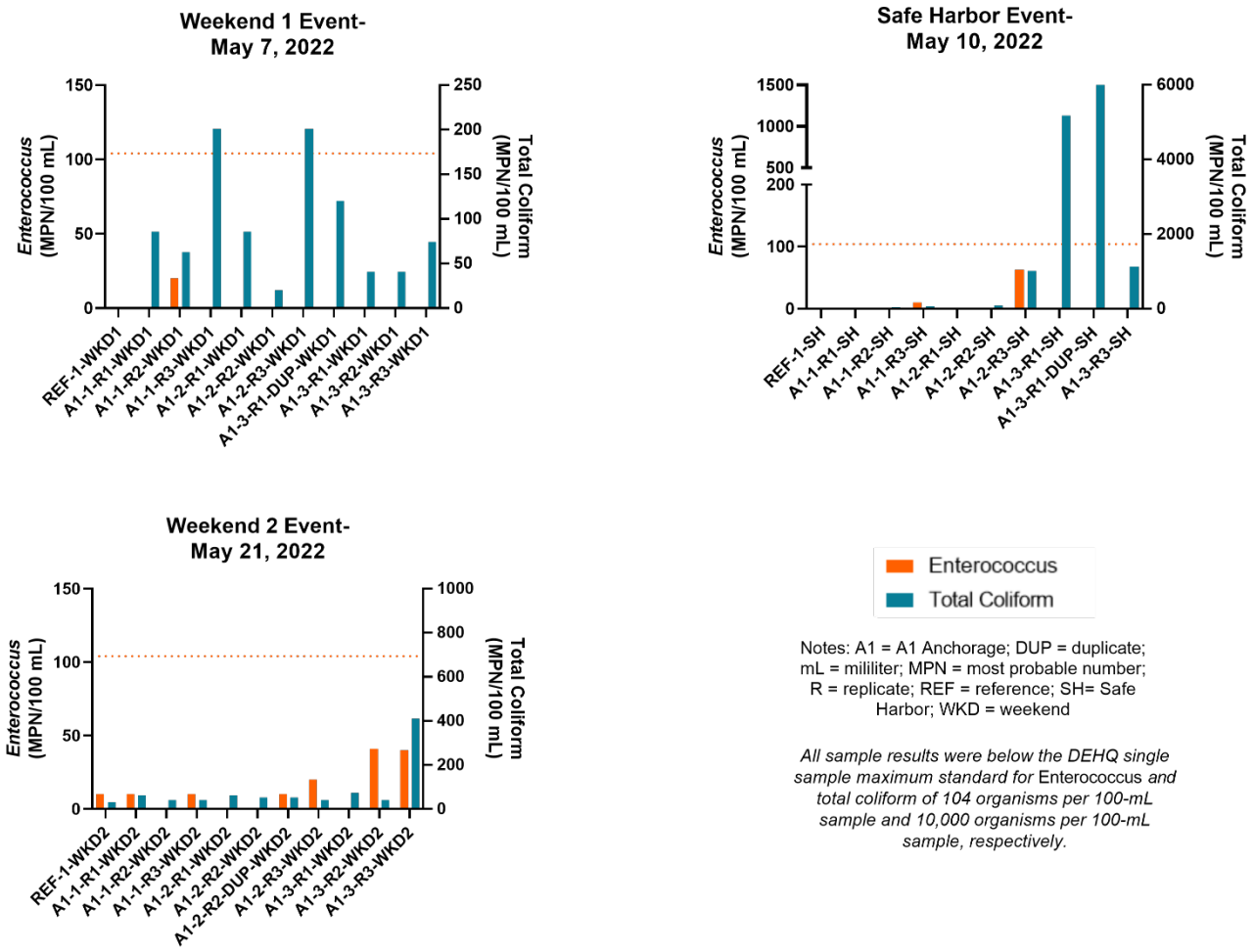


Figure 3-3. Weekend and Safe Harbor Single-Sample FIB Results Summary

Dashed lines indicate Assembly Bill (AB) 411 single sample maximum (SSM) criteria for Enterococcus (104 colony-forming units [CFU]/100 mL; in orange). AB 411 standards are used by the San Diego County Department of Environmental Health and Quality (DEHQ).

3.4 Calculated Geometric Mean (GM) and Statistical Threshold Value (STV) Results for All Locations

The GM and STV calculations were performed using results from all samples[7] collected during the study (Weekly, Weekend, and Safe Harbor) and compared to AB 411 and/or Basin Plan standards as discussed in Section 2.1.6. Results from these calculations are presented in Sections 3.4.1 and 3.4.2, respectively.

3.4.1 Geometric Mean (GM) Results

Calculated GM results are presented in Table 3-3; exceedances are presented in Table 3-7. The calculated GM[8] for all sampling locations were below AB 411 and Basin Plan standards for both *Enterococcus* and total coliform with the exception of site OF-2. The *Enterococcus* GM of 4,077 MPN/100 mL exceeded the Basin Plan WQO of 30 CFU/100 mL and the total coliform GM of 11,154 MPN/100 mL exceeded AB 411 GM standard of 1,000 CFU/100 mL for this site.

[7] One *Enterococcus* exceedance was reported in sample A1-3-R2 collected during the Safe Harbor event. This result was determined to be a statistical outlier, rejected during validation, and therefore this sample was excluded from analyses.

[8] The GM was calculated by conservatively using the method detection limit value (10 MPN/100 mL) for samples that were reported as ND as described in Section 2.1.6.

Table 3-3.
Geometric Mean (GM) FIB Results Summary Table

Station Location	Sample Size (n)[2]	*Enterococcus*	Total Coliform
		Geometric Mean[1] (MPN/100 mL)	30-Day Geometric Mean (MPN/100 mL)
A1-1	13	11	65
A1-2	13	12	69
A1-3	12	13	115
Bessemer Street	4	12	75
Fuel Pier	4	10	329
Guest Dock	4	13	161
Kellogg Beach	4	22	157
Kona Kai	4	10	44
Main Channel-1	4	10	63
Main Channel-2	4	10	101
North Kellogg	4	22	128
OF-1	4	10	505
OF-2	5	**4,077**	**11,154**
OF-3	4	12	531
REF	7	10	27

Notes:
A1 = A-1 Anchorage; AB = Assembly Bill; CFU = colony-forming units; FIB = fecal indicator bacteria; mL = milliliter; MPN = most probable number; OF = outfall; n = number of samples; REF = reference; WQO = water quality objective
Values in **BOLD** indicate an exceedance above the Basin Plan WQO for *Enterococcus* (30 CFU per 100 mL) or Assembly Bill (AB) 411 total coliform standards (1,000 CFU per 100 mL).
For the purposes of this study, plate-based standards for colony-forming units (CFUs) are deemed equivalent to liquid-based results provided in most-probable number (MPN) units.
1- As described in the Basin Plan, the geometric mean (GM) shall not be greater than the applicable GM magnitude in any six-week interval, calculated weekly, for *Enterococcus*. Due to the four-week duration of the study, a modified four-week GM for *Enterococcus* was calculated for the purposes of this study.
2- Bacteria standards outlined in both the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California (ISWEBE), of which the Basin Plan standards were derived from, and AB 411 recommend that the GM be applied to at least five samples in the given time period (e.g., six weeks or 30 days). The GM was calculated regardless of sample size for the purposes of this special study.

3.4.2 Statistical Threshold Value (STV) Results

Calculated STV results for *Enterococcus* are presented in Table 3-4; exceedances are presented in Table 3-8. Calculations were performed according to requirements in the Basin Plan, which state "the statistical threshold value (STV) shall not be exceeded by more than 10 percent of the samples collected in a calendar month, calculated in a static manner". The calculated STV for all sampling locations were below Basin Plan standards for *Enterococcus* with the exception of Kellogg Beach, North Kellogg Beach, and OF-2.

Table 3-4.
***Enterococcus* Statistical Threshold Value (STV) Results Summary Table**

Sample Location	*Enterococcus* STV Calculations		
	Number of Samples >110 CFU/100 mL	Total Number of Samples Collected	Percent (%) of Samples that Exceed STV (110 CFU/100 mL)
A1-1	0	13	0%
A1-2	0	13	0%
A1-3	0	12	0%
Bessemer Street	0	4	0%
Fuel Pier	0	4	0%
Guest Dock	0	4	0%
Kellogg Beach	1	4	**25%**
Kona Kai	0	4	0%
Main Channel-1	0	4	0%
Main Channel-2	0	4	0%
North Kellogg Beach	1	4	**25%**
OF-1	0	4	0%
OF-2	5	5	**100%**
OF-3	0	4	0%
REF	0	7	0%

Notes:
% = percent; > = greater than; A1 = A-1 Anchorage; CFU = colony-forming units; mL = milliliter; MPN = most probable number; OF = outfall; REF = reference; STV = statistical threshold value; WQO = water quality objective
Values in **BOLD** indicate an exceedance above the Basin Plan STV WQO for *Enterococcus* (110 CFU/100 mL)
Calculations are performed per requirements outlined in the Basin Plan, which state "The statistical threshold value (STV) shall not be exceeded by more than 10 percent of the samples collected in a calendar month, calculated in a static manner."

3.5 Outfall Sampling

Discharge was observed flowing from the storm water outfall adjacent to receiving water sampling location OF-2 during nearly all sampling events. Supplemental discharge samples were collected directly from the outfall during all sampling events with the exception of Week 1 and Week 2. Water quality measurements were also taken to ensure that discharge was not tidally influenced. Flow from this outfall was estimated between two to ten gallons per minute (gpm) during all

sampling events on which discharge was observed. *Enterococcus* results from dry weather discharge samples ranged from 4,110 MPN/100 mL during the Safe Harbor event to 41,100 MPN/100 mL during the Weekend 2 sampling event. Total coliforms were reported between 24,200 MPN/100 mL during the Week 4 sampling event and 411,000 MPN/100 mL during the Weekend 2 sampling event. Results are presented in Table 3-5 and Figure 3-4.

During the last sampling event (Week 4), dry weather discharge was also observed from the storm water outfall adjacent to receiving water sampling location OF-1. Water quality measurements and a supplemental discharge sample were collected from this outfall, which was estimated to be flowing at one to two gpm. *Enterococcus* and total coliforms for this sample were reported at 3,870 MPN/100 mL and 435,000 MPN/100 mL, respectively.

Table 3-5. Outfall Dry Weather Flow Single-Sample FIB Results Summary Table

Sample Location	Sample Results (MPN/100 mL)									
	5/7/2022		5/10/2022		5/20/2022		5/21/2022		5/23/2022	
	Weekend 1		Safe Harbor		Week 3		Weekend 2		Week 4	
	Enterococcus	Total Coliforms	*Enterococcus*	Total Coliforms	*Enterococcus*	Total Coliforms	*Enterococcus*	Total Coliforms	*Enterococcus*	Total Coliforms
OF-1	NC	NC	NC	NC	NC	NC	NC	NC	3,870	435,000
OF-2	6,870	130,000	4,110	48,800	33,600	365,000	41,100	411,000	5,790	24,200

Notes: FIB = fecal indicator bacteria; mL = milliliter; MPN = most probable number; NC = not collected; OF = outfall

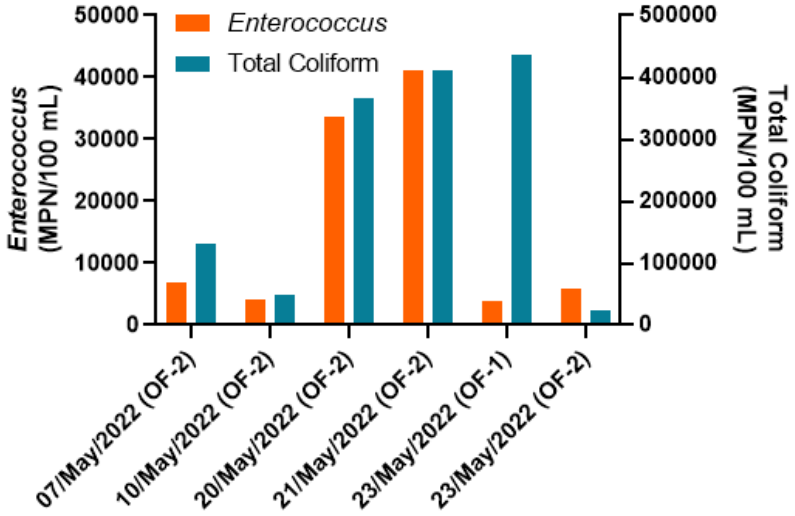


Figure 3-4. Outfall Dry Weather Flow Single-Sample FIB Results Summary

Table 3-6.
AB 411 Single-Sample Maximum (SSM) FIB Exceedances Summary

Date	Sampling Event Type	Sample Location	Result (MPN/100 mL)
***Enterococcus*[a]**			
5/6/2022	Week 1	OF-2	3,440
5/13/2022	Week 2	OF-2	1,830
5/20/2022	Week 3	Kellogg Beach	223
5/20/2022	Week 3	North Kellogg Beach	226
5/20/2022	Week 3	OF-2	6,970
5/21/2022	Weekend 2	OF-2*	19,900
5/23/2022	Week 4	OF-2	1,290
Total Coliforms[b]			
5/6/2022	Week 1	OF-2	11,200
5/20/2022	Week 3	OF-2	54,800
5/21/2022	Weekend 2	OF-2*	58,800

Notes: AB = Assembly Bill; CFU = colony-forming units; DEHQ= San Diego County Department of Environmental Health and Quality; FIB = fecal indicator bacteria; mL = milliliter; MPN = most probable number; n = number of samples; OF = outfall; SSM = single sample maximum
For the purposes of this study, plate-based standards for colony-forming units (CFUs) are considered equivalent to liquid-based results provided in most-probable number (MPN) units.
*- Supplemental FIB sample was collected from receiving water site OF-2 due to observed discharge from the outfall adjacent to this site.
a- Samples exceed the AB 411 SSM standard of 104 CFU/100 mL used by the DEHQ.
b- Samples exceed the AB 411 SSM standard of 10,000 CFU/100 mL used by the DEHQ.

Table 3-7.
Geometric Mean (GM) FIB Exceedances Summary

Sample Location	Sample Size (n)	Geometric Mean (MPN/100 mL)
***Enterococcus*[a]**		
OF-2	5	4,077
Total Coliforms[b]		
OF-2	5	11,154

Notes: AB = Assembly Bill; CFU = colony-forming units; DEHQ= San Diego County Department of Environmental Health and Quality; FIB = fecal indicator bacteria; GM = geometric mean; mL = milliliter; MPN = most probable number; n = number of samples; OF = outfall; WQO = water quality objective
For the purposes of this study, plate-based standards for colony-forming units (CFUs) are considered equivalent to liquid-based results provided in most-probable number (MPN) units.
a- Samples exceed the Basin Plan six-week geometric mean standard of 30 CFU/100 mL. Due to the four-week duration of the study, a modified four-week GM was calculated and qualified when compared to the WQO.
b- Samples exceed the AB 411 30-day GM standard of 1,000 CFU/100 mL used by the DEHQ.

Table 3-8.
Statistical Threshold Value (STV) *Enterococcus* Exceedances Summary

Sample Location	Sample Size (n)	Percent of Samples that Exceed STV (110 CFU/100 mL)
Kellogg Beach	4	25%
North Kellogg Beach	4	25%
OF-2	5	100%

Notes: CFU = colony-forming units; mL = milliliter; MPN = most probable number; n = number of samples; OF = outfall; STV = statistical threshold value
For the purposes of this study, plate-based standards for colony-forming units (CFUs) are considered equivalent to liquid-based results provided in most-probable number (MPN) units.

3.6 QA/QC Results

Laboratory Blanks

Enterococcus and total coliforms were not detected in any laboratory blank samples.

Field Blanks

Results from all field blank samples were below the method detection limit (not-detected, or ND) with the exception of the field blank sample collected during the Safe Harbor event, in which total coliforms were reported at 1,540 MPN/100 mL. *Enterococcus* was not detected in this sample. Follow-up samples collected in response to this finding are discussed in Section 4.6.

Duplicate Samples

Enterococcus results between duplicate samples and primary samples were identical (e.g., zero percent difference) for the first three sampling events. Duplicate *Enterococcus* results for remaining sampling events were reported at or near the detection limit of 10 MPN/100 mL, with an average standard deviation of 5 MPN/100 mL. These small differences in low-level detections are expected, and as such are considered valid and reported without qualification.

The relative percent difference[9] between duplicate and primary total coliform samples ranged from 0% to 181%. Total coliform results overall had greater variability which may be due to the relative magnitude and scale of reported values (e.g., results ranged from 10 to 435,000 MPN/100 mL). The largest percent difference was observed in samples collected during Week 1, in which the Bessemer Street sample was reported at 10 MPN/100 mL and the duplicate sample was reported at 199 MPN/100 mL. However, these detections are significantly below the AB 411 SSM standard of 10,000 CFU/100 mL, are considered valid, and reported without qualification.

Replicate Samples

In order to evaluate variability of FIB concentrations in the A-1 Anchorage, both spatial replicates (A1-1, A1-2, A1-3) and temporal replicates (0 hour, 1 hour and 2 hours) were collected. Calculated averages and standard deviation (SD) are provided in Table 3-2. The greatest variability was observed during the Safe Harbor event, in which the average SD for all anchorage sites was calculated at 21 MPN/100 mL for *Enterococcus* and 1,655 MPN/100 mL for total coliforms.

[9] The relative percent difference (RPD) is calculated as: RPD = $(|C_{sample} - C_{duplicate}|)/mean)*100$ (State Board, 2022).

4.0 DISCUSSION

This section discusses FIB results for samples collected during the SIYB Bacteria Special Study and notable findings.

4.1 Weekly Sampling Events

The exceedances observed in receiving water site OF-2 can largely be attributed to the discharge from the adjacent outfall, as described in Section 4.5.

Elevated concentrations of *Enterococcus* were reported in samples collected from Kellogg Beach and North Kellogg Beach during the Week 3 sampling event. Field staff noted a strong longshore tidal current, a low negative tide (approximately -0.8 ft), and floating and entrained organic debris, including kelp and eelgrass, that was present in the water during sample collection (Figure 3-2). *Enterococcus* has the potential to grow on eelgrass, which may produce a false positive result for fecal pollution (Ferguson et al., 2016). This is also supported by corresponding total coliform results from these samples, which were relatively low and did not exceed regulatory thresholds, further indicating that exceedances were likely driven by presence of eelgrass.

4.2 Weekend Sampling Events

There were 20 vessels observed in the anchorage during Weekend 1 and 15 vessels during Weekend 2 sample collections. There were no exceedances reported during either weekend or weekly events for the A-1 Anchorage indicating that vessel density did not have a significant effect on FIB concentrations compared to regulatory standards. However, some low-level detections of *Enterococcus* and total coliform during weekend sampling events may be indicative of minor contributions of bacteria from anchored vessels compared to ambient conditions (i.e., few to no vessels) as presented in Figures 4-1 and 4-2.

4.3 Safe Harbor Sampling Event

The Safe Harbor warning was in effect from Monday, May 9 to Thursday, May 12 due to a National Oceanic and Atmospheric Administration issued weather advisory. During the sampling event on Tuesday, May 10, 21 vessels were observed at the anchorage. Similar to trends observed during the weekend sampling events, slightly higher concentrations of FIB were detected with the presence of vessels compared to ambient conditions that were sampled during weekly collection events; however, all results remained below regulatory thresholds (Figures 4-1 and 4-2). One sample, the second replicate sample collected at site A1-3, exceeded the AB 411 SSM standard for *Enterococcus* during this event, at 1,150 MPN/100 mL. This was the highest *Enterococcus* value reported for this study, and the corresponding total coliform result for this sample was one of the lowest values reported (10 MPN/100 mL). These two results do not align with the range of values observed from the remaining samples collected on this day, in which *Enterococcus* results ranged from ND to 63 MPN/100 mL and total coliform results ranged from 20 to 5,170 MPN/100 mL. Based on this discrepancy in the data, the laboratory was contacted to determine whether the reported result for sample A1-3-R2 may be a data transposition error. While a transcription error was not identified after reviewing the bench logs, the lab was not able to review the test kits to confirm the reported results. Additionally, the *E. coli* result (see Section 1.1 detailing *E. coli* analysis) for this sample was not-detected (ND), serving as an additional line of evidence to indicate a laboratory reporting error. This result was also determined to be a

statistically significant outlier (p less than [<] 0.05) using Grubb's test (Grubbs, 1969). Based on the above validation checks, these data points are qualified as "R" (rejected) and are excluded from the analysis.

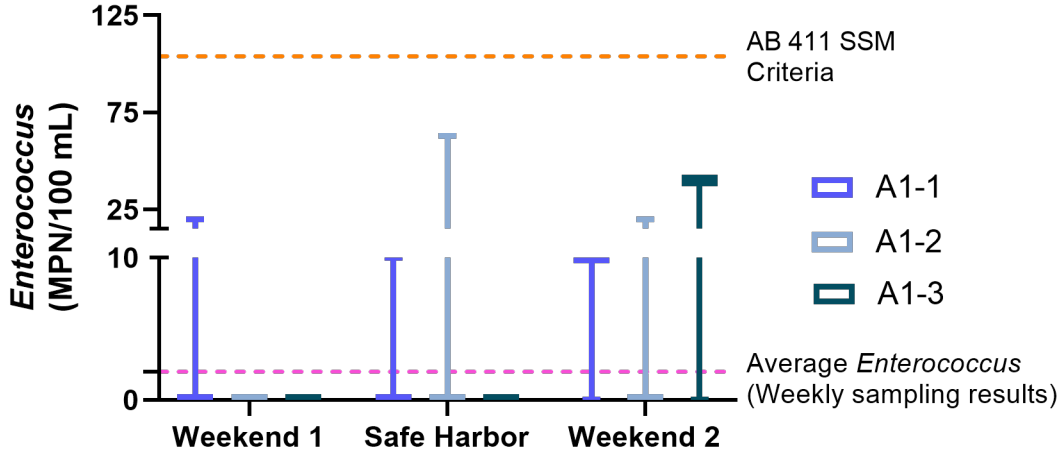


Figure 4-1. A-1 Anchorage *Enterococcus* Results Summary

Values reported as not-detected (ND) are assumed to be zero for calculation purposes. Boxes represent the median value of three replicate samples, whiskers represent the minimum and maximum results. Dashed lines indicate Assembly Bill (AB) 411 single sample maximum (SSM) criteria for Enterococcus (104 colony-forming units [CFU]/100 mL; in orange) and average Enterococcus results (2 most probable number [MPN]/100 mL, in pink) from all Weekly collection events at all A1-Anchorage sites (n=12).

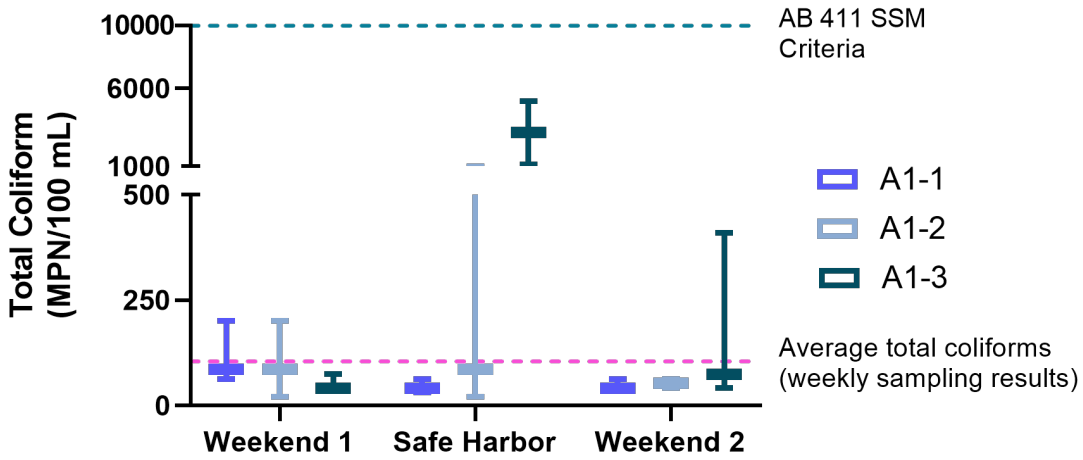


Figure 4-2. A-1 Anchorage Total Coliform Results Summary

Values reported as not-detected (ND) are assumed to be zero for calculation purposes. Boxes represent the median value of three replicate samples, whiskers represent the minimum and maximum results. Dashed lines indicate Assembly Bill (AB) 411 single sample maximum (SSM) criteria for total coliforms (10,000 colony-forming units [CFU]/100 mL; in blue) and average total coliform results (105 most probable number [MPN]/100 mL, in pink) from all Weekly collection events at all A1-Anchorage sites (n=12). All sample results were below the DEHQ total coliform SSM standard.

4.4 Calculated Geometric Mean (GM) and Statistical Threshold Value (STV) Results for All Locations

4.4.1 Geometric Mean (GM) Results

Due to the transient and variable nature of bacteria, a GM is typically calculated in addition to single sample criteria for comparison. The calculated GM for all sampling locations were below Basin Plan and AB 411 GM standards for both *Enterococcus* and total coliform except for site OF-2. This finding indicates that, with one exception in the immediate vicinity of Outfall 2, samples collected from the surface waters of SIYB are below GM regulatory criteria.

4.4.2 Statistical Threshold Value (STV) Results

Similar to the GM, the STV calculation includes the results of multiple samples to increase the statistical power and provide an overall picture of bacterial water quality. The STV was exceeded only at Kellogg Beach, North Kellogg Beach, and OF-2 sites. Of note, the STV was calculated using only four samples collected from Kellogg Beach and North Kellogg Beach, while the regulatory criteria recommend using a minimum of five samples.

4.5 Outfall Sampling

The discharge observed from the outfall directly adjacent to receiving water site OF-2, and elevated FIB results reported in both outfall and receiving water samples, indicates that this outfall is a source of FIB into SIYB. While dry weather flow was observed and elevated FIB levels were reported in OF-1 discharge samples, corresponding receiving water samples did not exceed regulatory standards. The City of San Diego (City) was notified in each instance that dry weather flows were observed. The City immediately sent an inspector to identify possible sources of the dry weather flows.

4.6 QA/QC Results

Laboratory Blanks

All laboratory blank samples met QA/QC criteria.

*Field Blank*s

In response to the total coliform result detected in the field blank sample collected during the Safe Harbor event, Wood staff collected an additional field blank during the next sampling event (Week 3). For the field blank sample submitted with the Week 3 samples, blank water was obtained from the laboratory and used for this sample. A second field blank sample was also submitted using the water from a single store-bought bottle used for field blanks from the past sampling events, including the Safe Harbor event in which total coliforms were detected. Results from both of these follow-up samples were reported as ND, indicating the detection in the Safe Harbor field blank was not due to contaminated blank water. Concern over possible laboratory contamination was discussed with the laboratory manager, who communicated these findings to lab staff. All subsequent field blank samples were reported as ND for both total coliforms and *Enterococcus*. With the exception of the Week 3 laboratory contamination of the field blank, all results were below the QA/QC criteria of less than the method detection limit.

Duplicate Samples

A default RPD criteria of 0–25% was used to evaluate duplicate precision. The duplicate precision is considered not applicable (NA) if native concentration of either sample is less than the RL. Several samples displayed relatively large percent differences in precision for total coliforms; however, this apparent discrepancy is primarily attributable to higher variability near the detection limit. These results are similar in range to site samples and results are considered representative of natural variability in total coliforms, both in the field and analytically.

Replicate Samples

During the Weekend and Safe Harbor events, temporal and spatial replicates were collected from three site at three times (0, 1, and 2 hours). *Enterococcus* averages between all three events ranged from 2–13 MPN/100 mL and average total coliforms ranged from 90 to 944 MPN/100 mL, with the highest total coliforms measured during the Safe Harbor event. The high standard deviation for total coliforms during this event was driven by site A1-3, which was calculated at 2,020 MPN/100 mL. This is due to the elevated sample results reported at this site (5,170 MPN/100 mL and 1,130 MPN/100 mL) compared to sites A1-1 and A1-2 (average results reported at 45 MPN/100 mL and 372 MPN/100 mL, respectively) and the decrease in sample size, as one of the replicate samples was removed from the analysis (see Section 4.3). However, all values are below applicable regulatory thresholds, and there is good general agreement in both temporal and spatial variability that is indicative of representative FIB levels during anchorage use.

5.0 CONCLUSIONS

Results from this study indicate that concentrations of FIB were below regulatory thresholds in nearly all samples collected from SIYB, with few exceptions. Concluding remarks are presented below based on the study questions outlined in Section 1.0.

- What is the extent and magnitude of ambient dry weather FIB levels within SIYB relative to REC-1 water quality objectives (WQOs)?
    - Over the course of the study, nearly all FIB samples collected in SIYB were below regulatory thresholds, indicating that surface waters can generally support safe water contact recreation and activities. Samples in which FIB were elevated above Basin Plan WQOs were associated with either point-source discharge (e.g., outfalls) or, for a single event, localized to a general area (e.g., Kellogg Beach and North Kellogg Beach).
- Are there concentrations of FIB that exceed REC-1 WQOs associated with active periods of A-1 Anchorage weekend or Safe Harbor use?
    - There were no exceedances of REC-1 WQOs from samples collected during either weekend or Safe Harbor event[10]. Slightly higher concentrations of FIB were detected in the A-1 Anchorage during the presence of vessels compared to ambient conditions (i.e., few to no vessels), which may be indicative of minor contributions of FIB from anchored vessels.
- Are there concentrations of FIB that exceed REC-1 WQOs associated with beaches or outfalls?
    - FIB concentrations exceeded REC-1 WQOs at two beach sites and one outfall site during the study. *Enterococcus* concentrations were elevated in samples collected from Kellogg Beach and North Kellogg Beach during one sampling event (Week 3), while total coliforms remained well-below SSM criteria. However, it is suspected that these exceedances may be a result of excessive floating organic debris (e.g., eelgrass) noted during this sampling event. Exceedances were also reported in all samples collected from receiving water site OF-2, which is adjacent to a storm water outfall. Dry weather flow was observed discharging from this outfall during most weekly sampling events. Samples collected directly from the dry weather flow indicate that this discharge was the source of FIB exceedances at site OF-2 during the study. The OF-2 area of discharge in the vicinity of the outfall is not commonly used for REC-1 use due to poor access and the steep rip rap shoreline.

[10] One *Enterococcus* exceedance was reported in sample A1-3-R2 collected during the Safe Harbor event. This result was determined to be a statistical outlier, rejected during validation, and therefore the sample was excluded from analyses.

6.0 REFERENCES

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APPENDIX A

FIELD DATA FORMS

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

Station Identification: REF1-WL2

Date: (mm/dd/yyyy) 5/6/22

Time on Station: (hh:mm) 0625

FIB SAMPLE TIME: 0625

Water Depth: 20.4m

Tide (ft): 1.0+

Time of Slack High Tide: 13:58

Weather conditions: ø calm

Wind (mph)/direction: ø

Water Visibility (ft): 2.9m

Surface Water Conditions: ca/m

Bird Enumeration: n=ø

Other Notes: including any potential confounding factors of concern observed (e.g., sheens, discoloration, odors, slicks, boat maintenance, plankton blooms, recent rain events, presence of animals, eelgrass, kelp wrack, floatable material):

ca no sheen, calm

Water Quality Measurements

Time of Measurement	Temperature (°C)	Salinity (ppt)	pH	DO (mg/L)
0628	18.7	34.45	8.09	7.95

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

QAQC Checklist:

- ☑ Field data sheet completed, notable observations recorded
- ☑ Photos taken
- ☑ All bacteria samples collected (125-mL HDPE: Total Coliform and *Enterococcus*)
- ☑ Samples collected within 25 feet of target location? If not, please describe below.
- ☑ "Clean Hands" sampling techniques followed
- ☑ Samples sealed in secondary container (plastic bag) and immediately placed on ice
- ☑ COCs filled out and cross-checked with sample labels
- ☑ Samples delivered within holding time requirements

Date: 5/6/22 Time: 10:00 Signature: Kat Gurley

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

Station Identification: KK-W1

Date: (mm/dd/yyyy) 5/6/22

Time on Station: (hh:mm) 0610

FIB SAMPLE TIME: 0610

Water Depth: 2.5m

Tide (ft): _____

Time of Slack High Tide: 23:53

Weather conditions: calm, overcast, clearing

Wind (mph)/direction: 0

Water Visibility (ft): 2.5m + (bottom)

Surface Water Conditions: calm

Bird Enumeration: n=1, no people

Other Notes: including any potential confounding factors of concern observed (e.g., sheens, discoloration, odors, slicks, boat maintenance, plankton blooms, recent rain events, presence of animals, eelgrass, kelp wrack, floatable material):

none

Water Quality Measurements

Time of Measurement	Temperature (°C)	Salinity (ppt)	pH	DO (mg/L)
0615	18.6	34.36	8.05	7.36

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

QAQC Checklist:

- ☑ Field data sheet completed, notable observations recorded
- ☑ Photos taken
- ☑ All bacteria samples collected (125-mL HDPE: Total Coliform and *Enterococcus*)
- ☑ Samples collected within 25 feet of target location? If not, please describe below.
- ☑ "Clean Hands" sampling techniques followed
- ☑ Samples sealed in secondary container (plastic bag) and immediately placed on ice
- ☑ COCs filled out and cross-checked with sample labels
- ☑ Samples delivered within holding time requirements

Date: 5/6/22 Time: 10:00 Signature: Kate Guillen

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

Station Identification: GD - W1

Date: (mm/dd/yyyy) 5/6/22

Time on Station: (hh:mm) 0600

FIB SAMPLE TIME: 0600

Water Depth: 6 meters

Tide (ft): _____

Time of Slack High Tide: 23:58

Weather conditions: calm overcast

Wind (mph)/direction: 0

Water Visibility (ft): 4.1 meters

Surface Water Conditions: calm

Bird Enumeration: 0 2 birds, no people, n = 20 boats

Other Notes: including any potential confounding factors of concern observed (e.g., sheens, discoloration, odors, slicks, boat maintenance, plankton blooms, recent rain events, presence of animals, eelgrass, kelp wrack, floatable material):

noted large sheen surface oil @ slip, moved collection location 75' west

Water Quality Measurements

Time of Measurement	Temperature (°C)	Salinity (ppt)	pH	DO (mg/L)
0605	18.5	34.15	8.02	7.82

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

QAQC Checklist:

- ☑ Field data sheet completed, notable observations recorded
- ☑ Photos taken
- ☑ All bacteria samples collected (125-mL HDPE: Total Coliform and *Enterococcus*)
- ☑ Samples collected within 25 feet of target location? If not, please describe below.
- ☑ "Clean Hands" sampling techniques followed
- ☑ Samples sealed in secondary container (plastic bag) and immediately placed on ice
- ☑ COCs filled out and cross-checked with sample labels
- ☑ Samples delivered within holding time requirements

Date: 5/16/22 Time: 10:00 Signature: [signature]

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

Station Identification: MC1-W1

Date: (mm/dd/yyyy) 5/6/22

Time on Station: (hh:mm) 0625

FIB SAMPLE TIME: 0625

Water Depth: 5.3m

Tide (ft): 1.0+

Time of Slack High Tide: 23:59

Weather conditions: calm, overcast

Wind (mph)/direction: 0

Water Visibility (ft): 2-8 meter

Surface Water Conditions: calm

Bird Enumeration: n=0

Other Notes: including any potential confounding factors of concern observed (e.g., sheens, discoloration, odors, slicks, boat maintenance, plankton blooms, recent rain events, presence of animals, eelgrass, kelp wrack, floatable material):

no sheen, surface debris or kelp

Water Quality Measurements

Time of Measurement	Temperature (°C)	Salinity (ppt)	pH	DO (mg/L)
0628	18.6	34.47	8.09	8.12

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

QAQC Checklist:

- ☑ Field data sheet completed, notable observations recorded
- ☑ Photos taken
- ☑ All bacteria samples collected (125-mL HDPE: Total Coliform and *Enterococcus*)
- ☑ Samples collected within 25 feet of target location? If not, please describe below.
- ☑ "Clean Hands" sampling techniques followed
- ☑ Samples sealed in secondary container (plastic bag) and immediately placed on ice
- ☑ COCs filled out and cross-checked with sample labels
- ☑ Samples delivered within holding time requirements

Date: 5/6/22 Time: 10:00 Signature: [signature]

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

Station Identification: MC2-W1

Date: (mm/dd/yyyy) 5/6/22

Time on Station: (hh:mm) 0645

FIB SAMPLE TIME: 0645

Water Depth: 5.0m

Tide (ft): 0.9+

Time of Slack High Tide: 23:58

Weather conditions: calm

Wind (mph)/direction: slight breeze <1kt (east)

Water Visibility (ft): 2-7m

Surface Water Conditions: calm, light ripple,

Bird Enumeration: n=0, no people

Other Notes: including any potential confounding factors of concern observed (e.g., sheens, discoloration, odors, slicks, boat maintenance, plankton blooms, recent rain events, presence of animals, eelgrass, kelp wrack, floatable material):

no surface debris or kelp

Water Quality Measurements

Time of Measurement	Temperature (°C)	Salinity (ppt)	pH	DO (mg/L)
0648	18.8	34.50	8.07	7.91

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

QAQC Checklist:

- ☑ Field data sheet completed, notable observations recorded
- ☑ Photos taken
- ☑ All bacteria samples collected (125-mL HDPE: Total Coliform and *Enterococcus*)
- ☑ Samples collected within 25 feet of target location? If not, please describe below.
- ☑ "Clean Hands" sampling techniques followed
- ☑ Samples sealed in secondary container (plastic bag) and immediately placed on ice
- ☑ COCs filled out and cross-checked with sample labels
- ☑ Samples delivered within holding time requirements

Date: 5/6/22 Time: 10:00 Signature: [signature]

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

Station Identification: FP-N1

Date: (mm/dd/yyyy) 5/6/22

Time on Station: (hh:mm) 0655

FIB SAMPLE TIME: 0655

Water Depth: 4.5m

Tide (ft): 0.85

Time of Slack High Tide: 23:58

Weather conditions: calm, overcast

Wind (mph)/direction: light breeze <1kt

Water Visibility (ft): 2.3m

Surface Water Conditions: calm

Bird Enumeration: n=0, 1 person on dock, 1 boat fueling

Other Notes: including any potential confounding factors of concern observed (e.g., sheens, discoloration, odors, slicks, boat maintenance, plankton blooms, recent rain events, presence of animals, eelgrass, kelp wrack, floatable material):

bilge running on boat getting fuel
~6 boats docked @ FP - KB

Water Quality Measurements

Time of Measurement	Temperature (°C)	Salinity (ppt)	pH	DO (mg/L)
0658	18.7	34.51	8.02	7.15

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

QAQC Checklist:

- ☑ Field data sheet completed, notable observations recorded
- ☑ Photos taken
- ☑ All bacteria samples collected (125-mL HDPE: Total Coliform and *Enterococcus*)
- ☑ Samples collected within 25 feet of target location? If not, please describe below.
- ☑ "Clean Hands" sampling techniques followed
- ☑ Samples sealed in secondary container (plastic bag) and immediately placed on ice
- ☑ COCs filled out and cross-checked with sample labels
- ☑ Samples delivered within holding time requirements

Date: 5/6/22 Time: 10:00 Signature: [signature]

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

Station Identification: OF-3-W1

Date: (mm/dd/yyyy) 5/6/22

Time on Station: (hh:mm) 0700

FIB SAMPLE TIME: 0700

Water Depth: 1.9 m

Tide (ft): 0.80+

Time of Slack High Tide: 23:58

Weather conditions: calm

Wind (mph)/direction: 0

Water Visibility (ft): 2.4m

Surface Water Conditions: calm

Bird Enumeration: n=0, 1 person on dock

Other Notes: including any potential confounding factors of concern observed (e.g., sheens, discoloration, odors, slicks, boat maintenance, plankton blooms, recent rain events, presence of animals, eelgrass, kelp wrack, floatable material):

no surf debris, no kelp

Water Quality Measurements

Time of Measurement	Temperature (°C)	Salinity (ppt)	pH	DO (mg/L)
0705	18.7	34.50	8.01	7.20

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

QAQC Checklist:

- ☑ Field data sheet completed, notable observations recorded
- ☑ Photos taken
- ☑ All bacteria samples collected (125-mL HDPE: Total Coliform and *Enterococcus*)
- ☑ Samples collected within 25 feet of target location? If not, please describe below.
- ☑ "Clean Hands" sampling techniques followed
- ☑ Samples sealed in secondary container (plastic bag) and immediately placed on ice
- ☑ COCs filled out and cross-checked with sample labels
- ☑ Samples delivered within holding time requirements

Date: 5/6/22 Time: 10:00 Signature: [signature]

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

Station Identification: OF2-W1

Date: (mm/dd/yyyy) 5/6

Time on Station: (hh:mm) 0720

FIB SAMPLE TIME: 0720

Water Depth: 0.3

Tide (ft): ~0.6 ↑

Time of Slack High Tide: 23:58

Weather conditions: calm, overcast

Wind (mph)/direction: light ~ 0-1kt

Water Visibility (ft): 0.3

Surface Water Conditions: calm

Bird Enumeration: n=0, 2 walkers

Other Notes: including any potential confounding factors of concern observed (e.g., sheens, discoloration, odors, slicks, boat maintenance, plankton blooms, recent rain events, presence of animals, eelgrass, kelp wrack, floatable material):

flow ~ 7-10 gpm salinity 1.49 @ outfall
18 inches above waterline
no surface debris -

Water Quality Measurements

Time of Measurement	Temperature (°C)	Salinity (ppt)	pH	DO (mg/L)
0725	18.6	34.39	8.04	7.18

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

QAQC Checklist:

- ☑ Field data sheet completed, notable observations recorded
- ☑ Photos taken
- ☑ All bacteria samples collected (125-mL HDPE: Total Coliform and *Enterococcus*)
- ☑ Samples collected within 25 feet of target location? If not, please describe below.
- ☑ "Clean Hands" sampling techniques followed
- ☑ Samples sealed in secondary container (plastic bag) and immediately placed on ice
- ☑ COCs filled out and cross-checked with sample labels
- ☐ Samples delivered within holding time requirements

Date: 5/6/22 Time: 10:00 Signature: [signature]

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

Station Identification: BSW1 + BS-DMP-W1

Date: (mm/dd/yyyy) 5/6/22

Time on Station: (hh:mm) 0735

FIB SAMPLE TIME: 0740 / 0741 (dup)

Water Depth: 0.3m

Tide (ft): ~0.55+

Time of Slack High Tide: 23:58

Weather conditions: calm, clearing slightly

Wind (mph)/direction: 0-2/1kt south

Water Visibility (ft): 0.3

Surface Water Conditions: calm, some small bubbles on surface

Bird Enumeration: N=0, ~~no~~ N=1 walker on path

Other Notes: including any potential confounding factors of concern observed (e.g., sheens, discoloration, odors, slicks, boat maintenance, plankton blooms, recent rain events, presence of animals, eelgrass, kelp wrack, floatable material):

no visible flow from outfall, 1 strand of feather boa
~~no~~ kelp on beach
2 strands of floating kelp 100' offshore

Water Quality Measurements

Time of Measurement	Temperature (°C)	Salinity (ppt)	pH	DO (mg/L)
0744	18.5	34.32	8.05	7.24

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

QAQC Checklist:

- ☑ Field data sheet completed, notable observations recorded
- ☑ Photos taken
- ☑ All bacteria samples collected (125-mL HDPE: Total Coliform and *Enterococcus*)
- ☑ Samples collected within 25 feet of target location? If not, please describe below.
- ☑ "Clean Hands" sampling techniques followed
- ☑ Samples sealed in secondary container (plastic bag) and immediately placed on ice
- ☑ COCs filled out and cross-checked with sample labels
- ☑ Samples delivered within holding time requirements

Date: 5/6/22 Time: 10:00 Signature: [signature]

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

Station Identification: OF1-M1

Date: (mm/dd/yyyy) 5/6/22

Time on Station: (hh:mm) 0750

FIB SAMPLE TIME: 0750

Water Depth: 0.3

Tide (ft): ~0.5 +

Time of Slack High Tide: 13:58

Weather conditions: calm overcast

Wind (mph)/direction: 0

Water Visibility (ft): >1.8 meter

Surface Water Conditions: calm

Bird Enumeration: n=0, 2 walkers on path none on beach

Other Notes: including any potential confounding factors of concern observed (e.g., sheens, discoloration, odors, slicks, boat maintenance, plankton blooms, recent rain events, presence of animals, eelgrass, kelp wrack, floatable material):

no kelp, no large algae

Water Quality Measurements

Time of Measurement	Temperature (°C)	Salinity (ppt)	pH	DO (mg/L)
0758	18.6	34.46	8.06	7.73

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

QAQC Checklist:

- ☑ Field data sheet completed, notable observations recorded
- ☑ Photos taken
- ☑ All bacteria samples collected (125-mL HDPE: Total Coliform and *Enterococcus*)
- ☑ Samples collected within 25 feet of target location? If not, please describe below.
- ☑ "Clean Hands" sampling techniques followed
- ☑ Samples sealed in secondary container (plastic bag) and immediately placed on ice
- ☑ COCs filled out and cross-checked with sample labels
- ☑ Samples delivered within holding time requirements

Date: 5/6/22 Time: 10:00 Signature: [signature]

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

Station Identification: A1-1-W1

Date: (mm/dd/yyyy) 5/6/22

Time on Station: (hh:mm) 0800

FIB SAMPLE TIME: 0800

Water Depth: 3.6m

Tide (ft): ~0.5+

Time of Slack High Tide: 23:58

Weather conditions: calm

Wind (mph)/direction: 0-2 kt south

Water Visibility (ft): 2.8m

Surface Water Conditions: calm, no surf. debris

Bird Enumeration: n=0, no people

Other Notes: including any potential confounding factors of concern observed (e.g., sheens, discoloration, odors, slicks, boat maintenance, plankton blooms, recent rain events, presence of animals, eelgrass, kelp wrack, floatable material):

none

Water Quality Measurements

Time of Measurement	Temperature (°C)	Salinity (ppt)	pH	DO (mg/L)
0802	18.6	34.49	8.09	8.10

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

QAQC Checklist:

- ☑ Field data sheet completed, notable observations recorded
- ☑ Photos taken
- ☑ All bacteria samples collected (125-mL HDPE: Total Coliform and *Enterococcus*)
- ☑ Samples collected within 25 feet of target location? If not, please describe below.
- ☑ "Clean Hands" sampling techniques followed
- ☑ Samples sealed in secondary container (plastic bag) and immediately placed on ice
- ☑ COCs filled out and cross-checked with sample labels
- ☑ Samples delivered within holding time requirements

Date: 5/6/22 Time: 10:00 Signature: [signature]

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

Station Identification: A1-2-W1

Date: (mm/dd/yyyy) 5/6/22

Time on Station: (hh:mm) 0805

FIB SAMPLE TIME: 0805

Water Depth: 4.5 m

Tide (ft): ~0.46 ft

Time of Slack High Tide: 23:58

Weather conditions: calm overcast

Wind (mph)/direction: 1-2 kt south

Water Visibility (ft): 2.9 m

Surface Water Conditions: light ripples

Bird Enumeration: none, no peeps

Other Notes: including any potential confounding factors of concern observed (e.g., sheens, discoloration, odors, slicks, boat maintenance, plankton blooms, recent rain events, presence of animals, eelgrass, kelp wrack, floatable material):

one boat anchored 150' SW during sampling

Water Quality Measurements

Time of Measurement	Temperature (°C)	Salinity (ppt)	pH	DO (mg/L)
0807	18.6	34.50	8.07	8.06

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

QAQC Checklist:

- ☑ Field data sheet completed, notable observations recorded
- ☑ Photos taken
- ☑ All bacteria samples collected (125-mL HDPE: Total Coliform and *Enterococcus*)
- ☑ Samples collected within 25 feet of target location? If not, please describe below.
- ☑ "Clean Hands" sampling techniques followed
- ☑ Samples sealed in secondary container (plastic bag) and immediately placed on ice
- ☑ COCs filled out and cross-checked with sample labels
- ☑ Samples delivered within holding time requirements

Date: 5/6/22 Time: 10:00 Signature: [signature]

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

Station Identification: A1-3-W1

Date: (mm/dd/yyyy) 5/6/22

Time on Station: (hh:mm) 0810

FIB SAMPLE TIME: 0810

Water Depth: 5.0 m

Tide (ft): ~0.48 +

Time of Slack High Tide: 23:58

Weather conditions: calm 0

Wind (mph)/direction: 0-<1kt south

Water Visibility (ft): 3.2 m

Surface Water Conditions: calm, no debris

Bird Enumeration: n=0

Other Notes: including any potential confounding factors of concern observed (e.g., sheens, discoloration, odors, slicks, boat maintenance, plankton blooms, recent rain events, presence of animals, eelgrass, kelp wrack, floatable material):

n=1 anchored boat 200ft SW

Water Quality Measurements

Time of Measurement	Temperature (°C)	Salinity (ppt)	pH	DO (mg/L)
0814	18.7	34.52	8.09	8.05

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

QAQC Checklist:

- ☑ Field data sheet completed, notable observations recorded
- ☑ Photos taken
- ☑ All bacteria samples collected (125-mL HDPE: Total Coliform and *Enterococcus*)
- ☑ Samples collected within 25 feet of target location? If not, please describe below.
- ☑ "Clean Hands" sampling techniques followed
- ☑ Samples sealed in secondary container (plastic bag) and immediately placed on ice
- ☑ COCs filled out and cross-checked with sample labels
- ☑ Samples delivered within holding time requirements

Date: 5/6/22 Time: 10:00 Signature: [signature]

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

Station Identification: NK-W1

Date: (mm/dd/yyyy) 5/6/22

Time on Station: (hh:mm) 0820

FIB SAMPLE TIME: 0820

Water Depth: 0.6 m

Tide (ft): -0.46+

Time of Slack High Tide: 23:58

Weather conditions: calm, overcast

Wind (mph)/direction: 0-1kt (South) Water Visibility (ft):

Surface Water Conditions: calm, light ripple, no debris

Bird Enumeration: n=0, 1 beach walker

Other Notes: including any potential confounding factors of concern observed (e.g., sheens, discoloration, odors, slicks, boat maintenance, plankton blooms, recent rain events, presence of animals, eelgrass, kelp wrack, floatable material):

1 small strand kelp on beach, 1 walker

Water Quality Measurements

Time of Measurement	Temperature (°C)	Salinity (ppt)	pH	DO (mg/L)
0825	18.6	34.52	8.10	8.17

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

QAQC Checklist:

- ☑ Field data sheet completed, notable observations recorded
- ☑ Photos taken
- ☑ All bacteria samples collected (125-mL HDPE: Total Coliform and *Enterococcus*)
- ☑ Samples collected within 25 feet of target location? If not, please describe below.
- ☑ "Clean Hands" sampling techniques followed
- ☑ Samples sealed in secondary container (plastic bag) and immediately placed on ice
- ☑ COCs filled out and cross-checked with sample labels
- ☑ Samples delivered within holding time requirements

Date: 5/6/22 Time: 10:00 Signature: [signature]

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

Station Identification: KB-W1

Date: (mm/dd/yyyy) 5/6/22

Time on Station: (hh:mm) 0830

FIB SAMPLE TIME: 0830

Water Depth: 0.6

Tide (ft): 0.5

Time of Slack High Tide: 23:58

Weather conditions: calm, light wind pt. cloudy

Wind (mph)/direction: 1-2 kts south

Water Visibility (ft): 0.6 –

Surface Water Conditions: ripples

Bird Enumeration: n=1, ~~4~~ 5 persons/~~3~~ 5 dogs on beach

Other Notes: including any potential confounding factors of concern observed (e.g., sheens, discoloration, odors, slicks, boat maintenance, plankton blooms, recent rain events, presence of animals, eelgrass, kelp wrack, floatable material):

filimentous green algae in nearshore

/

Water Quality Measurements

Time of Measurement	Temperature (°C)	Salinity (ppt)	pH	DO (mg/L)
0832	18.6	34.44	8.09	8.33

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

QAQC Checklist:

- ☑ Field data sheet completed, notable observations recorded
- ☑ Photos taken
- ☑ All bacteria samples collected (125-mL HDPE: Total Coliform and *Enterococcus*)
- ☑ Samples collected within 25 feet of target location? If not, please describe below.
- ☑ "Clean Hands" sampling techniques followed
- ☑ Samples sealed in secondary container (plastic bag) and immediately placed on ice
- ☑ COCs filled out and cross-checked with sample labels
- ☑ Samples delivered within holding time requirements

Date: 5/6/22 Time: 10:00 Signature: [signature]

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

Station Identification: REF1 - WKD

Date: (mm/dd/yyyy) 5/7/22

Time on Station: (hh:mm) 0620

FIB SAMPLE TIME: 0625

Water Depth: 18.4

Tide (ft): 1.5+

Time of Slack High Tide: 00:46

Weather conditions: wind 7-8KT (south) overcast

Wind (mph)/direction: 7-8KT (S)

Water Visibility (ft): 2.5m

Surface Water Conditions: light chop, no debris

Bird Enumeration: n=0

Other Notes: including any potential confounding factors of concern observed (e.g., sheens, discoloration, odors, slicks, boat maintenance, plankton blooms, recent rain events, presence of animals, eelgrass, kelp wrack, floatable material):

none

Water Quality Measurements

Time of Measurement	Temperature (°C)	Salinity (ppt)	pH	DO (mg/L)
0628	19.2	34.26	7.97	8.14

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

QAQC Checklist:

- ☑ Field data sheet completed, notable observations recorded
- ☑ Photos taken
- ☑ All bacteria samples collected (125-mL HDPE: Total Coliform and *Enterococcus*)
- ☑ Samples collected within 25 feet of target location? If not, please describe below.
- ☑ "Clean Hands" sampling techniques followed
- ☑ Samples sealed in secondary container (plastic bag) and immediately placed on ice
- ☑ COCs filled out and cross-checked with sample labels
- ☑ Samples delivered within holding time requirements

Date: 5/7/22 Time: 10:30 Signature: [signature]

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

Station Identification: AT-1-R1-WK01

Date: (mm/dd/yyyy) 5/7/22

Time on Station: (hh:mm) 0640

FIB SAMPLE TIME: 0640

Water Depth: 3.9m

Tide (ft): 1.5 +

Time of Slack High Tide: 00:48

Weather conditions: overcast (cool)

Wind (mph)/direction: 5KT (south)

Water Visibility (ft): 2.45m

Surface Water Conditions: light surface ripple

Bird Enumeration: n=0

Other Notes: including any potential confounding factors of concern observed (e.g., sheens, discoloration, odors, slicks, boat maintenance, plankton blooms, recent rain events, presence of animals, eelgrass, kelp wrack, floatable material):

n=17 vessels on anchors no. dogs observed(

Water Quality Measurements

Time of Measurement	Temperature (°C)	Salinity (ppt)	pH	DO (mg/L)
0645	19.1	34.40	8.05	8.16

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

QAQC Checklist:

- ☑ Field data sheet completed, notable observations recorded
- ☑ Photos taken
- ☑ All bacteria samples collected (125-mL HDPE: Total Coliform and *Enterococcus*)
- ☑ Samples collected within 25 feet of target location? If not, please describe below.
- ☑ "Clean Hands" sampling techniques followed
- ☑ Samples sealed in secondary container (plastic bag) and immediately placed on ice
- ☑ COCs filled out and cross-checked with sample labels
- ☑ Samples delivered within holding time requirements

Date: 5/7/22 Time: 10:30 Signature: [signature]

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

Station Identification: A1-2-R2-WKD1 (R-1)

Date (mm/dd/yyyy): 5/7/22

Time on Station (hh:mm): 0645

FIB SAMPLE TIME: 0650

Water Depth: 5.0

Tide (ft): 1.5+

Time of Slack High Tide: 00:48

Weather conditions: overcast, cool

Wind (mph)/direction: 5kt(s)

Water Visibility (ft): 2.9

Surface Water Conditions: no debris, light

Bird Enumeration: n=0

Other Notes: including any potential confounding factors of concern observed (e.g., sheens, discoloration, odors, slicks, boat maintenance, plankton blooms, recent rain events, presence of animals, eelgrass, kelp wrack, floatable material):

none (n=17 boats @ anchor) no dogs observed

Water Quality Measurements

Time of Measurement	Temperature (°C)	Salinity (ppt)	pH	DO (mg/L)
0650	19.0	34.45	8.05	8.15

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

QAQC Checklist:

- ☑ Field data sheet completed, notable observations recorded
- ☑ Photos taken
- ☑ All bacteria samples collected (125-mL HDPE: Total Coliform and *Enterococcus*)
- ☑ Samples collected within 25 feet of target location? If not, please describe below.
- ☑ "Clean Hands" sampling techniques followed
- ☑ Samples sealed in secondary container (plastic bag) and immediately placed on ice
- ☑ COCs filled out and cross-checked with sample labels
- ☑ Samples delivered within holding time requirements

Date: 5/7/22 Time: 10:30 Signature: [signature]

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

Station Identification: A1-3-R1-NKD1 + (DUP)

Date: (mm/dd/yyyy) 5/7/22

Time on Station: (hh:mm) 0655

FIB SAMPLE TIME: 0655 / 0656

Water Depth: 5.3

Tide (ft): 1.4 +

Time of Slack High Tide: 00:48

Weather conditions: overcast, cool

Wind (mph)/direction: 3.5 kt (S)

Water Visibility (ft): 3.4

Surface Water Conditions: no debris

Bird Enumeration: n=0

Other Notes: including any potential confounding factors of concern observed (e.g., sheens, discoloration, odors, slicks, boat maintenance, plankton blooms, recent rain events, presence of animals, eelgrass, kelp wrack, floatable material):

n=17 boats @ anchor, no dogs observed

Water Quality Measurements

Time of Measurement	Temperature (°C)	Salinity (ppt)	pH	DO (mg/L)
0700	17.2	34.48	8.05	8.02

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

QAQC Checklist:

- ☑ Field data sheet completed, notable observations recorded
- ☑ Photos taken
- ☑ All bacteria samples collected (125-mL HDPE: Total Coliform and *Enterococcus*)
- ☑ Samples collected within 25 feet of target location? If not, please describe below.
- ☑ "Clean Hands" sampling techniques followed
- ☑ Samples sealed in secondary container (plastic bag) and immediately placed on ice
- ☑ COCs filled out and cross-checked with sample labels
- ☑ Samples delivered within holding time requirements

Date: 5/7/22 Time: 10:30 Signature: [signature]

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

Station Identification: A1-1-R2

Date: (mm/dd/yyyy) 5/7/22

Time on Station: (hh:mm) 0740

FIB SAMPLE TIME: 0740

Water Depth: 3.8

Tide (ft): 1.0

Time of Slack High Tide: 00:48

Weather conditions: calm overcast

Wind (mph)/direction: 3kt (S)

Water Visibility (ft): 3.0

Surface Water Conditions: light ripples, no debris visible

Bird Enumeration: n=4

Other Notes: including any potential confounding factors of concern observed (e.g., sheens, discoloration, odors, slicks, boat maintenance, plankton blooms, recent rain events, presence of animals, eelgrass, kelp wrack, floatable material):

none n=17 boats, no dogs

Water Quality Measurements

Time of Measurement	Temperature (°C)	Salinity (ppt)	pH	DO (mg/L)
0742	19.0	34.44	8.11	8.13

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

QAQC Checklist:

- ☑ Field data sheet completed, notable observations recorded
- ☑ Photos taken
- ☐ All bacteria samples collected (125-mL HDPE: Total Coliform and *Enterococcus*)
- ☐ Samples collected within 25 feet of target location? If not, please describe below.
- ☑ "Clean Hands" sampling techniques followed
- ☑ Samples sealed in secondary container (plastic bag) and immediately placed on ice
- ☑ COCs filled out and cross-checked with sample labels
- ☑ Samples delivered within holding time requirements

Date: 5/7/22 Time: 10:30 Signature: [signature]

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

Station Identification: A1-2-R2

Date: (mm/dd/yyyy) 5/7/22

Time on Station: (hh:mm) 0745

FIB SAMPLE TIME: 0745

Water Depth: 5.0

Tide (ft): 1.0

Time of Slack High Tide: 00:48

Weather conditions: overcast, calm

Wind (mph)/direction: 1-2 kts (S)

Water Visibility (ft): 2.95

Surface Water Conditions: calm

Bird Enumeration: n=4

Other Notes: including any potential confounding factors of concern observed (e.g., sheens, discoloration, odors, slicks, boat maintenance, plankton blooms, recent rain events, presence of animals, eelgrass, kelp wrack, floatable material):

n=17 boats, no dogs

1 Kayaker, 2 persons on deck, one crying baby.

Water Quality Measurements

Time of Measurement	Temperature (°C)	Salinity (ppt)	pH	DO (mg/L)
0749	19.0	34.50	8.08	8.14

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

QAQC Checklist:

- ☑ Field data sheet completed, notable observations recorded
- ☑ Photos taken
- ☑ All bacteria samples collected (125-mL HDPE: Total Coliform and *Enterococcus*)
- ☑ Samples collected within 25 feet of target location? If not, please describe below.
- ☑ "Clean Hands" sampling techniques followed
- ☑ Samples sealed in secondary container (plastic bag) and immediately placed on ice
- ☑ COCs filled out and cross-checked with sample labels
- ☑ Samples delivered within holding time requirements

Date: 5/7/22 Time: 10:30 Signature: [signature]

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

Station Identification: A1-3-X2

Date: (mm/dd/yyyy) 5/7/22

Time on Station: (hh:mm) 0755

FIB SAMPLE TIME: 0755

Water Depth: 5.1

Tide (ft): 0.8

Time of Slack High Tide: 00:48

Weather conditions: calm, overcast

Wind (mph)/direction: 0-1kts (S)

Water Visibility (ft): 33

Surface Water Conditions: calm, smooth

Bird Enumeration: n=0

Other Notes: including any potential confounding factors of concern observed (e.g., sheens, discoloration, odors, slicks, boat maintenance, plankton blooms, recent rain events, presence of animals, eelgrass, kelp wrack, floatable material):

n=~~17~~ 20 boats ~ 6 people topside
vessels
*change all FDs

Water Quality Measurements

Time of Measurement	Temperature (°C)	Salinity (ppt)	pH	DO (mg/L)
0757	19.1	34.53	8.08	8.04

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

QAQC Checklist:

- ☑ Field data sheet completed, notable observations recorded
- ☑ Photos taken
- ☑ All bacteria samples collected (125-mL HDPE: Total Coliform and *Enterococcus*)
- ☑ Samples collected within 25 feet of target location? If not, please describe below.
- ☑ "Clean Hands" sampling techniques followed
- ☑ Samples sealed in secondary container (plastic bag) and immediately placed on ice
- ☑ COCs filled out and cross-checked with sample labels
- ☑ Samples delivered within holding time requirements

Date: 5/7/22 Time: 10:30 Signature: [signature]

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

Station Identification: 4-1-R3-WKD 1

Date: (mm/dd/yyyy) 5/7/22

Time on Station: (hh:mm) 0740

FIB SAMPLE TIME: 0740

Water Depth: 3.7

Tide (ft): 0.6 ft

Time of Slack High Tide: 00:48

Weather conditions: overcast, /

Wind (mph)/direction: 7.5 (S)

Water Visibility (ft): 2.4

Surface Water Conditions: no debris, light wind

Bird Enumeration: n=0

Other Notes: including any potential confounding factors of concern observed (e.g., sheens, discoloration, odors, slicks, boat maintenance, plankton blooms, recent rain events, presence of animals, eelgrass, kelp wrack, floatable material):

n=20 boats, 1=4 people topside,
2 paddle board @ Seaforth SX.

Water Quality Measurements

Time of Measurement	Temperature (°C)	Salinity (ppt)	pH	DO (mg/L)
0745	19.0	34.46	8.14	8.18

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

QAQC Checklist:

- ☑ Field data sheet completed, notable observations recorded
- ☑ Photos taken
- ☑ All bacteria samples collected (125-mL HDPE: Total Coliform and *Enterococcus*)
- ☑ Samples collected within 25 feet of target location? If not, please describe below.
- ☑ "Clean Hands" sampling techniques followed
- ☑ Samples sealed in secondary container (plastic bag) and immediately placed on ice
- ☑ COCs filled out and cross-checked with sample labels
- ☑ Samples delivered within holding time requirements

Date: 5/7/22 Time: 10:30 Signature: [signature]

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

Station Identification: A1-2-R3-WIC01

Date: (mm/dd/yyyy) 5/7/22

Time on Station: (hh:mm) 0850

FIB SAMPLE TIME: 0850

Water Depth: 4.5 m

Tide (ft): 0.5 +

Time of Slack High Tide: 00:46

Weather conditions: overcast, light breeze

Wind (mph)/direction: 7kts (S)

Water Visibility (ft): 2.5m

Surface Water Conditions: light ripple no debris -

Bird Enumeration: n=0

Other Notes: including any potential confounding factors of concern observed (e.g., sheens, discoloration, odors, slicks, boat maintenance, plankton blooms, recent rain events, presence of animals, eelgrass, kelp wrack, floatable material):

no topside activity noted

Water Quality Measurements

Time of Measurement	Temperature (°C)	Salinity (ppt)	pH	DO (mg/L)
0852	19.0	34.51	8.12	8.22

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

QAQC Checklist:

- ☑ Field data sheet completed, notable observations recorded
- ☑ Photos taken
- ☑ All bacteria samples collected (125-mL HDPE: Total Coliform and *Enterococcus*)
- ☑ Samples collected within 25 feet of target location? If not, please describe below.
- ☑ "Clean Hands" sampling techniques followed
- ☑ Samples sealed in secondary container (plastic bag) and immediately placed on ice
- ☑ COCs filled out and cross-checked with sample labels
- ☑ Samples delivered within holding time requirements

Date: 5/7/22 Time: 10:30 Signature: [signature]

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

Station Identification: A1-3-R3-WKD-1

Date: (mm/dd/yyyy) 5/7/22

Time on Station: (hh:mm) 0855

FIB SAMPLE TIME: 0855

Water Depth: 4.9m

Tide (ft): 0.5+

Time of Slack High Tide: 00:43

Weather conditions: rain, overcast

Wind (mph)/direction: 4 kt (S)

Water Visibility (ft): 3.3

Surface Water Conditions: no debris visible, light wind

Bird Enumeration: n=0

Other Notes: including any potential confounding factors of concern observed (e.g., sheens, discoloration, odors, slicks, boat maintenance, plankton blooms, recent rain events, presence of animals, eelgrass, kelp wrack, floatable material):

3 gallic board, 1 kayak no dogs

Water Quality Measurements

Time of Measurement	Temperature (°C)	Salinity (ppt)	pH	DO (mg/L)
0858	17.2	34.54	8.11	8.01

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

QAQC Checklist:

- ☑ Field data sheet completed, notable observations recorded
- ☑ Photos taken
- ☑ All bacteria samples collected (125-mL HDPE: Total Coliform and *Enterococcus*)
- ☑ Samples collected within 25 feet of target location? If not, please describe below.
- ☑ "Clean Hands" sampling techniques followed
- ☑ Samples sealed in secondary container (plastic bag) and immediately placed on ice
- ☑ COCs filled out and cross-checked with sample labels
- ☑ Samples delivered within holding time requirements

Date: 5/7/22 Time: 10:30 Signature: [signature]

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

Station Identification: OE2-DW-1

Date: (mm/dd/yyyy) 5/7/22

Time on Station: (hh:mm) 0715

FIB SAMPLE TIME: 0720

Water Depth: 0.3

Tide (ft): 1.1 ↑

Time of Slack High Tide: 00:48

Weather conditions: overcast, cool

Wind (mph)/direction: 1-2 kt (S)

Water Visibility (ft): >2 ft

Surface Water Conditions: calm

Bird Enumeration: 1=0

Other Notes: including any potential confounding factors of concern observed (e.g., sheens, discoloration, odors, slicks, boat maintenance, plankton blooms, recent rain events, presence of animals, eelgrass, kelp wrack, floatable material):

dry weather flow ~2 gal/min

Water Quality Measurements

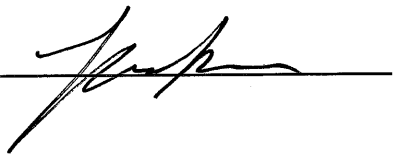
Time of Measurement	Temperature (°C)	Salinity (ppt)	pH	DO (mg/L)
0715 (direct grab)	17.7	3.28	8.48	9.04
0725 (RW)	19.1	33.80	8.02	7.45

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

QAQC Checklist:

- ☑ Field data sheet completed, notable observations recorded
- ☑ Photos taken
- ☑ All bacteria samples collected (125-mL HDPE: Total Coliform and *Enterococcus*)
- ☑ Samples collected within 25 feet of target location? If not, please describe below.
- ☑ "Clean Hands" sampling techniques followed
- ☑ Samples sealed in secondary container (plastic bag) and immediately placed on ice
- ☑ COCs filled out and cross-checked with sample labels
- ☑ Samples delivered within holding time requirements

Date: 5/7/22 Time: 10:30 Signature: 

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

Station Identification: REF 1-SH

Date: (mm/dd/yyyy) 5/16/22

Time on Station: (hh:mm) 0755

FIB SAMPLE TIME: 0755

Water Depth: 21.3

Tide (ft): ~3.0 +

Time of Slack High Tide: 0510

Weather conditions: calm, sunny ~62°

Wind (mph)/direction: 0

Water Visibility (ft): 2.3

Surface Water Conditions: calm

Bird Enumeration: 1=0

Other Notes: including any potential confounding factors of concern observed (e.g., sheens, discoloration, odors, slicks, boat maintenance, plankton blooms, recent rain events, presence of animals, eelgrass, kelp wrack, floatable material):

1 boats, no surface debris 1<21 boats @ anchor

Water Quality Measurements

Time of Measurement	Temperature (°C)	Salinity (ppt)	pH	DO (mg/L)
0757	18.5	34.20	8.06	7.83

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

QAQC Checklist:

- ☑ Field data sheet completed, notable observations recorded
- ☑ Photos taken
- ☑ All bacteria samples collected (125-mL HDPE: Total Coliform and *Enterococcus*)
- ☑ Samples collected within 25 feet of target location? If not, please describe below.
- ☑ "Clean Hands" sampling techniques followed
- ☑ Samples sealed in secondary container (plastic bag) and immediately placed on ice
- ☑ COCs filled out and cross-checked with sample labels
- ☑ Samples delivered within holding time requirements

Date: 5/10/22 Time: 12:30 Signature: [signature]

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

Station Identification: A1-1-R1-SH

Date: (mm/dd/yyyy) 5/10/22

Time on Station: (hh:mm) 0813

FIB SAMPLE TIME: 0815

Water Depth: 4.3m

Tide (ft): +3.0

Time of Slack High Tide: 05:18

Weather conditions: calm, sunny

Wind (mph)/direction: 0

Water Visibility (ft): 2.3m

Surface Water Conditions: calm, flat

Bird Enumeration: n=0, 1 person topside, 0=dogs

Other Notes: including any potential confounding factors of concern observed (e.g., sheens, discoloration, odors, slicks, boat maintenance, plankton blooms, recent rain events, presence of animals, eelgrass, kelp wrack, floatable material):

no surface debris, a few loose strands of kelp

n=21 boats @ anchor

Water Quality Measurements

Time of Measurement	Temperature (°C)	Salinity (ppt)	pH	DO (mg/L)
0816	19.2	34.49	8.11	7.85

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

QAQC Checklist:

- ☑ Field data sheet completed, notable observations recorded
- ☑ Photos taken
- ☑ All bacteria samples collected (125-mL HDPE: Total Coliform and *Enterococcus*)
- ☑ Samples collected within 25 feet of target location? If not, please describe below.
- ☑ "Clean Hands" sampling techniques followed
- ☑ Samples sealed in secondary container (plastic bag) and immediately placed on ice
- ☑ COCs filled out and cross-checked with sample labels
- ☑ Samples delivered within holding time requirements

Date: 5/10/22 Time: 12:30 Signature: [signature]

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

Station Identification: A1-2-R1-SH

Date: (mm/dd/yyyy) 5/10/22

Time on Station: (hh:mm) 0820

FIB SAMPLE TIME: 0820

Water Depth: 5.0

Tide (ft): ~2.9 ft

Time of Slack High Tide: 0518

Weather conditions: sunny, calm

Wind (mph)/direction: 0

Water Visibility (ft): 2-6 m

Surface Water Conditions: calm

Bird Enumeration: n=0, n=3 peeps tipside, n=0 dogs
n=

Other Notes: including any potential confounding factors of concern observed (e.g., sheens, discoloration, odors, slicks, boat maintenance, plankton blooms, recent rain events, presence of animals, eelgrass, kelp wrack, floatable material):

n=1 paddleboarder n=21 boats @ anchor

Water Quality Measurements

Time of Measurement	Temperature (°C)	Salinity (ppt)	pH	DO (mg/L)
0821	19.2	34.54	8.11	7.90

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

QAQC Checklist:

- ☑ Field data sheet completed, notable observations recorded
- ☑ Photos taken
- ☑ All bacteria samples collected (125-mL HDPE: Total Coliform and *Enterococcus*)
- ☑ Samples collected within 25 feet of target location? If not, please describe below.
- ☑ "Clean Hands" sampling techniques followed
- ☑ Samples sealed in secondary container (plastic bag) and immediately placed on ice
- ☑ COCs filled out and cross-checked with sample labels
- ☑ Samples delivered within holding time requirements

Date: 5/10/22 Time: 12:30 Signature: [signature]

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

Station Identification: A1-3-R1-SH (A1-3-R1-SH-DUP)

Date: (mm/dd/yyyy) 5/10/

Time on Station: (hh:mm) 0827

FIB SAMPLE TIME: 0830 / 0831 / dup

Water Depth: 5.5 m

Tide (ft): -2.8'

Time of Slack High Tide: 0518

Weather conditions: sunny, calm

Wind (mph)/direction: 0-<1 kt (S)

Water Visibility (ft): 2.5 m

Surface Water Conditions: calm

Bird Enumeration: n=6 no dogs

Other Notes: including any potential confounding factors of concern observed (e.g., sheens, discoloration, odors, slicks, boat maintenance, plankton blooms, recent rain events, presence of animals, eelgrass, kelp wrack, floatable material):

no surface debris n=21 boats @ anchor

Water Quality Measurements

Time of Measurement	Temperature (°C)	Salinity (ppt)	pH	DO (mg/L)
0832	19.4	34.56	8.11	7.8

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

QAQC Checklist:

- ☑ Field data sheet completed, notable observations recorded
- ☑ Photos taken
- ☑ All bacteria samples collected (125-mL HDPE: Total Coliform and *Enterococcus*)
- ☑ Samples collected within 25 feet of target location? If not, please describe below.
- ☑ "Clean Hands" sampling techniques followed
- ☑ Samples sealed in secondary container (plastic bag) and immediately placed on ice
- ☑ COCs filled out and cross-checked with sample labels
- ☑ Samples delivered within holding time requirements

Date: 5/10/22 Time: 12:30 Signature: 

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

Station Identification: A1-1-R2-SH

Date: (mm/dd/yyyy) 5/10/22

Time on Station: (hh:mm) 0915

FIB SAMPLE TIME: 0915

Water Depth: 4.0 m

Tide (ft): 1.8

Time of Slack High Tide: 0518

Weather conditions: sunny calm

Wind (mph)/direction: 1-3 (NW)

Water Visibility (ft): 2.3m

Surface Water Conditions: light

Bird Enumeration: n=0 birds, 2 dogs, n=5 people on

Other Notes: including any potential confounding factors of concern observed (e.g., sheens, discoloration, odors, slicks, boat maintenance, plankton blooms, recent rain events, presence of animals, eelgrass, kelp wrack, floatable material):

no surface debris.

Water Quality Measurements

Time of Measurement	Temperature (°C)	Salinity (ppt)	pH	DO (mg/L)
0922	19.4	34.60	8.18	7.90

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

QAQC Checklist:

- ☑ Field data sheet completed, notable observations recorded
- ☑ Photos taken
- ☑ All bacteria samples collected (125-mL HDPE: Total Coliform and *Enterococcus*)
- ☑ Samples collected within 25 feet of target location? If not, please describe below.
- ☑ "Clean Hands" sampling techniques followed
- ☑ Samples sealed in secondary container (plastic bag) and immediately placed on ice
- ☑ COCs filled out and cross-checked with sample labels
- ☑ Samples delivered within holding time requirements

Date: 5/10/22 Time: 12:30 Signature: [signature]

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

Station Identification: A1-2-NZ-SH

Date: (mm/dd/yyyy) 5/10/22

Time on Station: (hh:mm) 0925

FIB SAMPLE TIME: 0925

Water Depth: 4.8

Tide (ft): 10.8+

Time of Slack High Tide: 0518

Weather conditions: sunny, calm

Wind (mph)/direction: 1-2 kts (NW)

Water Visibility (ft): 2.5

Surface Water Conditions: light breeze, some bubbles

Bird Enumeration: n=0, n=3 people on deck n=2 dogs

Other Notes: including any potential confounding factors of concern observed (e.g., sheens, discoloration, odors, slicks, boat maintenance, plankton blooms, recent rain events, presence of animals, eelgrass, kelp wrack, floatable material):

few small bubbles on surface

Water Quality Measurements

Time of Measurement	Temperature (°C)	Salinity (ppt)	pH	DO (mg/L)
0926	19.4	34.59	8.13	7.92

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

QAQC Checklist:

- ☑ Field data sheet completed, notable observations recorded
- ☑ Photos taken
- ☑ All bacteria samples collected (125-mL HDPE: Total Coliform and *Enterococcus*)
- ☑ Samples collected within 25 feet of target location? If not, please describe below.
- ☑ "Clean Hands" sampling techniques followed
- ☑ Samples sealed in secondary container (plastic bag) and immediately placed on ice
- ☑ COCs filled out and cross-checked with sample labels
- ☑ Samples delivered within holding time requirements

Date: 5/10/22 Time: 12:30 Signature: [signature]

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

Station Identification: A1-3-R2-SH

Date: (mm/dd/yyyy) 5/10/22

Time on Station: (hh:mm) 0930

FIB SAMPLE TIME: 0930

Water Depth: ~~2.8m~~ 5.3 m

Tide (ft): +0.6 +1.8

Time of Slack High Tide: 0518

Weather conditions: sunny, light breeze

Wind (mph)/direction: 2-4kt(W)

Water Visibility (ft): 2.8

Surface Water Conditions: light texture, no visible debris.

Bird Enumeration: n=6, 1 paddleboard, n=2 dogs, n=3 people

Other Notes: including any potential confounding factors of concern observed (e.g., sheens, discoloration, odors, slicks, boat maintenance, plankton blooms, recent rain events, presence of animals, eelgrass, kelp wrack, floatable material):

1 diver @ SDYC @ end dock
1 boat cleaning hybride 50yds north

Water Quality Measurements

Time of Measurement	Temperature (°C)	Salinity (ppt)	pH	DO (mg/L)
0935	19.4	34.61	8.12	7.86

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

QAQC Checklist:

- ☑ Field data sheet completed, notable observations recorded
- ☑ Photos taken
- ☑ All bacteria samples collected (125-mL HDPE: Total Coliform and *Enterococcus*)
- ☑ Samples collected within 25 feet of target location? If not, please describe below.
- ☑ "Clean Hands" sampling techniques followed
- ☑ Samples sealed in secondary container (plastic bag) and immediately placed on ice
- ☑ COCs filled out and cross-checked with sample labels
- ☑ Samples delivered within holding time requirements

Date: 5/10/22 Time: 12:30 Signature: [signature]

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

Station Identification: OF2-DW-2

Date: (mm/dd/yyyy) 5/10/22

Time on Station: (hh:mm) 0945

FIB SAMPLE TIME: 0945

Water Depth: ~~1~~ 0.3 m

Tide (ft): -1.5 ft

Time of Slack High Tide: 0518

Weather conditions: sunny, calm + light breeze

Wind (mph)/direction: 1-2 kts W/NW

Water Visibility (ft): N/A

Surface Water Conditions: mostly calm

Bird Enumeration: ~30 5 people + 3 dogs (on Bessemer beach)

Other Notes: including any potential confounding factors of concern observed (e.g., sheens, discoloration, odors, slicks, boat maintenance, plankton blooms, recent rain events, presence of animals, eelgrass, kelp wrack, floatable material):

flow ~2 gpm

Water Quality Measurements

Time of Measurement	Temperature (°C)	Salinity (ppt)	pH	DO (mg/L)
0945 (SPI)	17.3	0.68	8.81	9.47
0950 (RW)	19.4	34.44	8.05	6.87

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

QAQC Checklist:

- ☑ Field data sheet completed, notable observations recorded
- ☑ Photos taken
- ☑ All bacteria samples collected (125-mL HDPE: Total Coliform and *Enterococcus*)
- ☑ Samples collected within 25 feet of target location? If not, please describe below.
- ☑ "Clean Hands" sampling techniques followed
- ☑ Samples sealed in secondary container (plastic bag) and immediately placed on ice
- ☑ COCs filled out and cross-checked with sample labels
- ☑ Samples delivered within holding time requirements

Date: 5/10/22 Time: 12:30 Signature: [signature]

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

Station Identification: A1-1-R3-SH

Date: (mm/dd/yyyy) 5/10/22

Time on Station: (hh:mm) 0812

FIB SAMPLE TIME: 1015

Water Depth: 3.6 depth m

Tide (ft): 1.2+

Time of Slack High Tide: 0518

Weather conditions: sunny, light breeze

Wind (mph)/direction: 2-4 w/nw

Water Visibility (ft): 2.7

Surface Water Conditions: light ripples, no viz. debris

Bird Enumeration: n=0, n=1 dog, no people

Other Notes: including any potential confounding factors of concern observed (e.g., sheens, discoloration, odors, slicks, boat maintenance, plankton blooms, recent rain events, presence of animals, eelgrass, kelp wrack, floatable material):

no surface debris

Water Quality Measurements

Time of Measurement	Temperature (°C)	Salinity (ppt)	pH	DO (mg/L)
1017	19.7	34.62	8.14	7.7

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

QAQC Checklist:

- ☑ Field data sheet completed, notable observations recorded
- ☑ Photos taken
- ☑ All bacteria samples collected (125-mL HDPE: Total Coliform and *Enterococcus*)
- ☑ Samples collected within 25 feet of target location? If not, please describe below.
- ☑ "Clean Hands" sampling techniques followed
- ☑ Samples sealed in secondary container (plastic bag) and immediately placed on ice
- ☑ COCs filled out and cross-checked with sample labels
- ☑ Samples delivered within holding time requirements

Date: 5/10/22 Time: 12:30 Signature: [signature]

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

Station Identification: A1-2-R3-SH

Date: (mm/dd/yyyy) 5/10/22

Time on Station: (hh:mm) 1020

FIB SAMPLE TIME: 1020

Water Depth: 4.6 m

Tide (ft): ~1.1 ft

Time of Slack High Tide: 0578

Weather conditions: sunny, light breeze

Wind (mph)/direction: 2-3 kt W/NW

Water Visibility (ft): 2.5 m

Surface Water Conditions: light texture

Bird Enumeration: = ϕ ,

Other Notes: including any potential confounding factors of concern observed (e.g., sheens, discoloration, odors, slicks, boat maintenance, plankton blooms, recent rain events, presence of animals, eelgrass, kelp wrack, floatable material):

a few surface bubbles present

Water Quality Measurements

Time of Measurement	Temperature (°C)	Salinity (ppt)	pH	DO (mg/L)
1024	19.6	34.63	8.12	7.91

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

QAQC Checklist:

- ☑ Field data sheet completed, notable observations recorded
- ☑ Photos taken
- ☑ All bacteria samples collected (125-mL HDPE: Total Coliform and *Enterococcus*)
- ☑ Samples collected within 25 feet of target location? If not, please describe below.
- ☑ "Clean Hands" sampling techniques followed
- ☑ Samples sealed in secondary container (plastic bag) and immediately placed on ice
- ☑ COCs filled out and cross-checked with sample labels
- ☑ Samples delivered within holding time requirements

Date: 5/10/22 Time: 12:30 Signature: [signature]

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

Station Identification: A1-3-R3-SH

Date: (mm/dd/yyyy) 05/10/2022

Time on Station: (hh:mm) 10:30

FIB SAMPLE TIME: 10:30

Water Depth: 5.0 m

Tide (ft): +1.0

Time of Slack High Tide: 05:18 AM

Weather conditions: Sunny, light breeze

Wind (mph)/direction: 2-4 WNW

Water Visibility (~~ft~~ m): 2.9

Surface Water Conditions: light texture

Bird Enumeration: Ø

Other Notes: including any potential confounding factors of concern observed (e.g., sheens, discoloration, odors, slicks, boat maintenance, plankton blooms, recent rain events, presence of animals, eelgrass, kelp wrack, floatable material):

2 people topside, 2 dogs on vessels w/in anchorage

Water Quality Measurements

Time of Measurement	Temperature (°C)	Salinity (ppt)	pH	DO (mg/L)
10:35	19.6	34.64	8.12	7.83

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

QAQC Checklist:

- ☑ Field data sheet completed, notable observations recorded
- ☑ Photos taken
- ☑ All bacteria samples collected (125-mL HDPE: Total Coliform and *Enterococcus*)
- ☑ Samples collected within 25 feet of target location? If not, please describe below.
- ☑ "Clean Hands" sampling techniques followed
- ☑ Samples sealed in secondary container (plastic bag) and immediately placed on ice
- ☑ COCs filled out and cross-checked with sample labels
- ☑ Samples delivered within holding time requirements

Date: 5/10/22 Time: 12:30 Signature: [signature]

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

Station Identification: REF-1-W2

Date: (mm/dd/yyyy) 5/13/22

Time on Station: (hh:mm) 0750

FIB SAMPLE TIME: 0750

Water Depth: 20.9

Tide (ft): 4.6+

Time of Slack High Tide: ~~0510~~ 0802

Weather conditions: sunny, calm

Wind (mph)/direction: calm <1kt

Water Visibility (ft): 3.7m

Surface Water Conditions: calm

Bird Enumeration: n=0

Other Notes: including any potential confounding factors of concern observed (e.g., sheens, discoloration, odors, slicks, boat maintenance, plankton blooms, recent rain events, presence of animals, eelgrass, kelp wrack, floatable material):

no significant surface debris

Water Quality Measurements : rental meter

Time of Measurement	Temperature (°C)	Salinity (ppt)	pH	DO (mg/L)
075	16.2	33.26	7.89	6.22

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

QAQC Checklist:

- ✓ Field data sheet completed, notable observations recorded
- ✓ Photos taken
- ✓ All bacteria samples collected (125-mL HDPE: Total Coliform and *Enterococcus*)
- ✓ Samples collected within 25 feet of target location? If not, please describe below.
- ✓ "Clean Hands" sampling techniques followed
- ✓ Samples sealed in secondary container (plastic bag) and immediately placed on ice
- ✓ COCs filled out and cross-checked with sample labels
- ✓ Samples delivered within holding time requirements

Date: 5/13/22 Time: 12:30 Signature: [signature]

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

Station Identification: A1-1-WC

Date: (mm/dd/yyyy) 5/13/22

Time on Station: (hh:mm) 0815

FIB SAMPLE TIME: 0815

Water Depth: 4.8 m

Tide (ft): +4.6

Time of Slack High Tide: 0802

Weather conditions: calm, sunny

Wind (mph)/direction: 0

Water Visibility (ft): 2.7m

Surface Water Conditions: calm

Bird Enumeration: n=0 [n=1 dog on beach each]

Other Notes: including any potential confounding factors of concern observed (e.g., sheens, discoloration, odors, slicks, boat maintenance, plankton blooms, recent rain events, presence of animals, eelgrass, kelp wrack, floatable material):

3 prone paddleboards → SWYC

n = 3 anchored boats

Water Quality Measurements

Time of Measurement	Temperature (°C)	Salinity (ppt)	pH	DO (mg/L)
0815	17.7	33.66	7.98	6.50

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

QAQC Checklist:

- ✓ Field data sheet completed, notable observations recorded
- ✓ Photos taken
- ✓ All bacteria samples collected (125-mL HDPE: Total Coliform and *Enterococcus*)
- ✓ Samples collected within 25 feet of target location? If not, please describe below.
- ✓ "Clean Hands" sampling techniques followed
- ✓ Samples sealed in secondary container (plastic bag) and immediately placed on ice
- ✓ COCs filled out and cross-checked with sample labels
- ✓ Samples delivered within holding time requirements

Date: 5/13/22 Time: 12:30 Signature: [signature]

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

Station Identification: A1-2-W2

Date: (mm/dd/yyyy) 5/13/22

Time on Station: (hh:mm) 0824

FIB SAMPLE TIME: 0825

Water Depth: 5.5 m

Tide (ft): 4.5 ft

Time of Slack High Tide: 0802

Weather conditions: sunny, calm

Wind (mph)/direction: <1 kt (east)

Water Visibility (ft): 28 m

Surface Water Conditions: calm, v. light breeze

Bird Enumeration: n=0, 0 dogs

Other Notes: including any potential confounding factors of concern observed (e.g., sheens, discoloration, odors, slicks, boat maintenance, plankton blooms, recent rain events, presence of animals, eelgrass, kelp wrack, floatable material):

n=3 boats @ anchor, 3 prone paddleboards / 1 standup "

Water Quality Measurements

Time of Measurement	Temperature (°C)	Salinity (ppt)	pH	DO (mg/L)
0827	17.7	33.69	8.01	6.58

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

QAQC Checklist:

- ✓ Field data sheet completed, notable observations recorded
- ✓ Photos taken
- ✓ All bacteria samples collected (125-mL HDPE: Total Coliform and *Enterococcus*)
- ✓ Samples collected within 25 feet of target location? If not, please describe below.
- ✓ "Clean Hands" sampling techniques followed
- ✓ Samples sealed in secondary container (plastic bag) and immediately placed on ice
- ✓ COCs filled out and cross-checked with sample labels
- ✓ Samples delivered within holding time requirements

Date: 5/13/22 Time: 1230 Signature: [signature]

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

Station Identification: A1-3-W2

Date: (mm/dd/yyyy) 5/13/22

Time on Station: (hh:mm) 0830

FIB SAMPLE TIME: 0830

Water Depth: 5.9

Tide (ft): ~4.5+

Time of Slack High Tide: 0802

Weather conditions: sunny, calm

Wind (mph)/direction: ~9 (e)

Water Visibility (ft): 2.6

Surface Water Conditions: calm, light surface debris (dust)

Bird Enumeration: n=4, o=dogs

Other Notes: including any potential confounding factors of concern observed (e.g., sheens, discoloration, odors, slicks, boat maintenance, plankton blooms, recent rain events, presence of animals, eelgrass, kelp wrack, floatable material):

2 people on deck
1 paddle board n=3 boats @ anchor

Water Quality Measurements

Time of Measurement	Temperature (°C)	Salinity (ppt)	pH	DO (mg/L)
0834	17.8	33.73	8.02	6.74

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

QAQC Checklist:

- ✓ Field data sheet completed, notable observations recorded
- ✓ Photos taken
- ✓ All bacteria samples collected (125-mL HDPE: Total Coliform and *Enterococcus*)
- ✓ Samples collected within 25 feet of target location? If not, please describe below.
- ✓ "Clean Hands" sampling techniques followed
- ✓ Samples sealed in secondary container (plastic bag) and immediately placed on ice
- ✓ COCs filled out and cross-checked with sample labels
- ✓ Samples delivered within holding time requirements

Date: 5/13/22 Time: 12:30 Signature: [signature]

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

Station Identification: OF1-W2

Date: (mm/dd/yyyy) 5/13/22

Time on Station: (hh:mm) 0837

FIB SAMPLE TIME: 0840

Water Depth: 0.3

Tide (ft): 4.4

Time of Slack High Tide: 0802

Weather conditions: calm, sunny

Wind (mph)/direction: none

Water Visibility (ft): 0.3

Surface Water Conditions: calm, dust moderate on surface

Bird Enumeration: n=1 (crow)

Other Notes: including any potential confounding factors of concern observed (e.g., sheens, discoloration, odors, slicks, boat maintenance, plankton blooms, recent rain events, presence of animals, eelgrass, kelp wrack, floatable material):

n=5 people on path

Water Quality Measurements

Time of Measurement	Temperature (°C)	Salinity (ppt)	pH	DO (mg/L)
0849	18.0	33.83	8.02	6.42

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

QAQC Checklist:

- ✓ Field data sheet completed, notable observations recorded
- ✓ Photos taken
- ✓ All bacteria samples collected (125-mL HDPE: Total Coliform and *Enterococcus*)
- ✓ Samples collected within 25 feet of target location? If not, please describe below.
- ✓ "Clean Hands" sampling techniques followed
- ✓ Samples sealed in secondary container (plastic bag) and immediately placed on ice
- ✓ COCs filled out and cross-checked with sample labels
- ✓ Samples delivered within holding time requirements

Date: 5/13/22 Time: 12:30 Signature: [signature]

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

Station Identification: BS-W2

Date: (mm/dd/yyyy) 5/13/22

Time on Station: (hh:mm) 0848

FIB SAMPLE TIME: 0850

Water Depth: 0.6 ~~0.3~~ (2ft)

Tide (ft): 4.3+

Time of Slack High Tide: 0802

Weather conditions: calm, sunny

Wind (mph)/direction: none

Water Visibility (ft): >~~0.3~~ 0.6

Surface Water Conditions: light → moderate surface film/dust

Bird Enumeration: n=0, dogs=0

Other Notes: including any potential confounding factors of concern observed (e.g., sheens, discoloration, odors, slicks, boat maintenance, plankton blooms, recent rain events, presence of animals, eelgrass, kelp wrack, floatable material):

n: 4 people on path, none on beach

Water Quality Measurements

Time of Measurement	Temperature (°C)	Salinity (ppt)	pH	DO (mg/L)
0853	18.1	33.76	8.03	6.05

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

QAQC Checklist:

- ✓ Field data sheet completed, notable observations recorded
- ✓ Photos taken
- ✓ All bacteria samples collected (125-mL HDPE: Total Coliform and *Enterococcus*)
- ✓ Samples collected within 25 feet of target location? If not, please describe below.
- ✓ "Clean Hands" sampling techniques followed
- ✓ Samples sealed in secondary container (plastic bag) and immediately placed on ice
- ✓ COCs filled out and cross-checked with sample labels
- ✓ Samples delivered within holding time requirements

Date: 5/13/22 Time: 12:30 Signature: [signature]

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

Station Identification: OF2-W2

Date: (mm/dd/yyyy) 5/13/22

Time on Station: (hh:mm) 0903

FIB SAMPLE TIME: 0900

Water Depth: ~~0.3~~ 1.0

Tide (ft): 4.2

Time of Slack High Tide: 0802

Weather conditions: sunny, calm

Wind (mph)/direction: 0

Water Visibility (ft): >1.0

Surface Water Conditions: calm some surface dust/debris/pollen

Bird Enumeration: n=0, n=0 dogs

Other Notes: including any potential confounding factors of concern observed (e.g., sheens, discoloration, odors, slicks, boat maintenance, plankton blooms, recent rain events, presence of animals, eelgrass, kelp wrack, floatable material):

n=6 people on path

Water Quality Measurements

Time of Measurement	Temperature (°C)	Salinity (ppt) *	pH	DO (mg/L)
0902	17.8	32.76	8.02	6.15

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

QAQC Checklist:

- ✓ Field data sheet completed, notable observations recorded
- ✓ Photos taken
- ✓ All bacteria samples collected (125-mL HDPE: Total Coliform and *Enterococcus*)
- ✓ Samples collected within 25 feet of target location? If not, please describe below.
- ✓ "Clean Hands" sampling techniques followed
- ✓ Samples sealed in secondary container (plastic bag) and immediately placed on ice
- ✓ COCs filled out and cross-checked with sample labels
- ✓ Samples delivered within holding time requirements

Date: 5/13/22 Time: 12:30 Signature: [signature]

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

Station Identification: OF3-W2

Date: (mm/dd/yyyy) 5/13/22

Time on Station: (hh:mm) 0915

FIB SAMPLE TIME: 0915

Water Depth: 3.0

Tide (ft): 4.1+

Time of Slack High Tide: 0802

Weather conditions: calm, sunny

Wind (mph)/direction: 0-2 /

Water Visibility (ft): 2-1

Surface Water Conditions: calm, moderate surface A/a

Bird Enumeration: N=0,

Other Notes: including any potential confounding factors of concern observed (e.g., sheens, discoloration, odors, slicks, boat maintenance, plankton blooms, recent rain events, presence of animals, eelgrass, kelp wrack, floatable material):

parked @ outside dock, 1-2 person on dock

Water Quality Measurements

Time of Measurement	Temperature (°C)	Salinity (ppt)	pH	DO (mg/L)
0917	18.1	33.88	8.01	6.5.49

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

QAQC Checklist:

- ✓ Field data sheet completed, notable observations recorded
- ✓ Photos taken
- ✓ All bacteria samples collected (125-mL HDPE: Total Coliform and *Enterococcus*)
- ✓ Samples collected within 25 feet of target location? If not, please describe below.
- ✓ "Clean Hands" sampling techniques followed
- ✓ Samples sealed in secondary container (plastic bag) and immediately placed on ice
- ✓ COCs filled out and cross-checked with sample labels
- ✓ Samples delivered within holding time requirements

Date: 5/13/22 Time: 12:30 Signature: [signature]

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

Station Identification: SP-W2

Date: (mm/dd/yyyy) 5/13/22

Time on Station: (hh:mm) 0925

FIB SAMPLE TIME: 0925

Water Depth: 5.4

Tide (ft): ~4.0+

Time of Slack High Tide: 0802

Weather conditions: sunny, calm

Wind (mph)/direction: 1kt (east)

Water Visibility (ft): 2.5

Surface Water Conditions: calm, light surface sheen

Bird Enumeration: 1=0

Other Notes: including any potential confounding factors of concern observed (e.g., sheens, discoloration, odors, slicks, boat maintenance, plankton blooms, recent rain events, presence of animals, eelgrass, kelp wrack, floatable material):

4 people, 1 boat fueling

Water Quality Measurements

Time of Measurement	Temperature (°C)	Salinity (ppt)	pH	DO (mg/L)
0930	18.1	33.86	7.98	5.67

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

QAQC Checklist:

- ✓ Field data sheet completed, notable observations recorded
- ✓ Photos taken
- ✓ All bacteria samples collected (125-mL HDPE: Total Coliform and *Enterococcus*)
- ✓ Samples collected within 25 feet of target location? If not, please describe below.
- ✓ "Clean Hands" sampling techniques followed
- ✓ Samples sealed in secondary container (plastic bag) and immediately placed on ice
- ✓ COCs filled out and cross-checked with sample labels
- ✓ Samples delivered within holding time requirements

Date: 5/13/22 Time: 12:30 Signature: [signature]

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

Station Identification: MC2-W2

Date: (mm/dd/yyyy) 5/13/22

Time on Station: (hh:mm) 0835

FIB SAMPLE TIME: 0835

Water Depth: 5-7m

Tide (ft): ~4.0+

Time of Slack High Tide: 0802

Weather conditions: sunny, calm

Wind (mph)/direction: <1kt

Water Visibility (ft): 2.8m

Surface Water Conditions: calm,

Bird Enumeration: n=6

Other Notes: including any potential confounding factors of concern observed (e.g., sheens, discoloration, odors, slicks, boat maintenance, plankton blooms, recent rain events, presence of animals, eelgrass, kelp wrack, floatable material):

no surface debris, 1 person on paddleboard

Water Quality Measurements

Time of Measurement	Temperature (°C)	Salinity (ppt)	pH	DO (mg/L)
0938	18.1	33.91	8.06	6.41

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

QAQC Checklist:

- ✓ Field data sheet completed, notable observations recorded
- ✓ Photos taken
- ✓ All bacteria samples collected (125-mL HDPE: Total Coliform and *Enterococcus*)
- ✓ Samples collected within 25 feet of target location? If not, please describe below.
- ✓ "Clean Hands" sampling techniques followed
- ✓ Samples sealed in secondary container (plastic bag) and immediately placed on ice
- ✓ COCs filled out and cross-checked with sample labels
- ✓ Samples delivered within holding time requirements

Date: 5/13/22 Time: 12:30 Signature: [signature]

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

Station Identification: MCI-W2

Date: (mm/dd/yyyy) 5/13/22

Time on Station: (hh:mm) 0945

FIB SAMPLE TIME: 0945

Water Depth: 6.1m

Tide (ft): ~4.0 ft

Time of Slack High Tide: 0802

Weather conditions: calm, sunny

Wind (mph)/direction: <1kt

Water Visibility (ft): 2.9m

Surface Water Conditions: calm

Bird Enumeration: n=6

Other Notes: including any potential confounding factors of concern observed (e.g., sheens, discoloration, odors, slicks, boat maintenance, plankton blooms, recent rain events, presence of animals, eelgrass, kelp wrack, floatable material):

2 paddle boarders, 2 vessels underway

Water Quality Measurements

Time of Measurement	Temperature (°C)	Salinity (ppt)	pH	DO (mg/L)
0947	18.1	33.86	8.06	7.25

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

QAQC Checklist:

- ✓ Field data sheet completed, notable observations recorded
- ✓ Photos taken
- ✓ All bacteria samples collected (125-mL HDPE: Total Coliform and *Enterococcus*)
- ✓ Samples collected within 25 feet of target location? If not, please describe below.
- ✓ "Clean Hands" sampling techniques followed
- ✓ Samples sealed in secondary container (plastic bag) and immediately placed on ice
- ✓ COCs filled out and cross-checked with sample labels
- ✓ Samples delivered within holding time requirements

Date: 5/13/22 Time: 12:30 Signature: [signature]

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

Station Identification: NK-W2

Date: (mm/dd/yyyy) 5/13/22

Time on Station: (hh:mm) 0955

FIB SAMPLE TIME: 0955

Water Depth: 0.1m

Tide (ft): -3.9 ft

Time of Slack High Tide: 0802

Weather conditions: sunny, calm

Wind (mph)/direction: <1 kt

Water Visibility (ft): > 0.1m

Surface Water Conditions: calm, some bubbles

Bird Enumeration: n=0

Other Notes: including any potential confounding factors of concern observed (e.g., sheens, discoloration, odors, slicks, boat maintenance, plankton blooms, recent rain events, presence of animals, eelgrass, kelp wrack, floatable material):

n=4 people on beach (1 fisherman @ sample point
5
1 dog

Water Quality Measurements

Time of Measurement	Temperature (°C)	Salinity (ppt)	pH	DO (mg/L)
0958	18.5	33.86	8.04	7.05

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

QAQC Checklist:

- ✓ Field data sheet completed, notable observations recorded
- ✓ Photos taken
- ✓ All bacteria samples collected (125-mL HDPE: Total Coliform and *Enterococcus*)
- ✓ Samples collected within 25 feet of target location? If not, please describe below.
- ✓ "Clean Hands" sampling techniques followed
- ✓ Samples sealed in secondary container (plastic bag) and immediately placed on ice
- ✓ COCs filled out and cross-checked with sample labels
- ✓ Samples delivered within holding time requirements

Date: 5/13/22 Time: 12:30 Signature: [signature]

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

Station Identification: KB-W2

Date: (mm/dd/yyyy) 5/13/22

Time on Station: (hh:mm) 1000

FIB SAMPLE TIME: 1000

Water Depth: 0.2

Tide (ft): 3.9+

Time of Slack High Tide: 0802

Weather conditions: sunny, calm

Wind (mph)/direction: < 1kt

Water Visibility (ft): < 0.2m

Surface Water Conditions: calm minor debris, bubbles

Bird Enumeration: n=0, 1 dog

Other Notes: including any potential confounding factors of concern observed (e.g., sheens, discoloration, odors, slicks, boat maintenance, plankton blooms, recent rain events, presence of animals, eelgrass, kelp wrack, floatable material):

n=13 people, 1 dog

Water Quality Measurements

Time of Measurement	Temperature (°C)	Salinity (ppt)	pH	DO (mg/L)
1004	18.8	33.92	8.06	7.10

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

QAQC Checklist:

- ✓ Field data sheet completed, notable observations recorded
- ✓ Photos taken
- ✓ All bacteria samples collected (125-mL HDPE: Total Coliform and *Enterococcus*)
- ✓ Samples collected within 25 feet of target location? If not, please describe below.
- ✓ "Clean Hands" sampling techniques followed
- ✓ Samples sealed in secondary container (plastic bag) and immediately placed on ice
- ✓ COCs filled out and cross-checked with sample labels
- ✓ Samples delivered within holding time requirements

Date: 5/13/22 Time: 12:30 Signature: [signature]

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

Station Identification: GD-W2

Date: (mm/dd/yyyy) 5/13/22

Time on Station: (hh:mm) 1010

FIB SAMPLE TIME: 1810

Water Depth: 6-8 m

Tide (ft): ~3.9 +

Time of Slack High Tide: 0802

Weather conditions: sunny, calm

Wind (mph)/direction: 0

Water Visibility (ft): 3-7 m

Surface Water Conditions: calm, light surface sheen, dust

Bird Enumeration: none

Other Notes: including any potential confounding factors of concern observed (e.g., sheens, discoloration, odors, slicks, boat maintenance, plankton blooms, recent rain events, presence of animals, eelgrass, kelp wrack, floatable material):

3 persons on docks

Water Quality Measurements

drifted up entire period

Time of Measurement	Temperature (°C)	Salinity (ppt)	pH	DO (mg/L)
1012	17.8	33.88	8.04	6.71

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

QAQC Checklist:

- ✓ Field data sheet completed, notable observations recorded
- ✓ Photos taken
- ✓ All bacteria samples collected (125-mL HDPE: Total Coliform and *Enterococcus*)
- ✓ Samples collected within 25 feet of target location? If not, please describe below.
- ✓ "Clean Hands" sampling techniques followed
- ✓ Samples sealed in secondary container (plastic bag) and immediately placed on ice
- ✓ COCs filled out and cross-checked with sample labels
- ✓ Samples delivered within holding time requirements

Date: 5/13/22 Time: 12:30 Signature: [signature]

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

Station Identification: KK-W2 + KK-W2-DUP

Date: (mm/dd/yyyy) 5/13/22

Time on Station: (hh:mm) 1016

FIB SAMPLE TIME: 1017/1018

Water Depth: 0.5m

Tide (ft): 3.8+

Time of Slack High Tide: 0802

Weather conditions: sunny, light breeze

Wind (mph)/direction: ~1 Kt (W)

Water Visibility (ft): < 0.5m

Surface Water Conditions: calm, no surface debris

Bird Enumeration: 1=0

Other Notes: including any potential confounding factors of concern observed (e.g., sheens, discoloration, odors, slicks, boat maintenance, plankton blooms, recent rain events, presence of animals, eelgrass, kelp wrack, floatable material):

1 person on beach

Water Quality Measurements

Time of Measurement	Temperature (°C)	Salinity (ppt)	pH	DO (mg/L)
1020	18.3	33.86	8.03	error (neg)

7.12

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

QAQC Checklist:

- ✓ Field data sheet completed, notable observations recorded
- ✓ Photos taken
- ✓ All bacteria samples collected (125-mL HDPE: Total Coliform and *Enterococcus*)
- ✓ Samples collected within 25 feet of target location? If not, please describe below.
- ✓ "Clean Hands" sampling techniques followed
- ✓ Samples sealed in secondary container (plastic bag) and immediately placed on ice
- ✓ COCs filled out and cross-checked with sample labels
- ✓ Samples delivered within holding time requirements

Date: 5/13/22 Time: 1230 Signature: [signature]

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

Station Identification: REF-1-W3

Date: (mm/dd/yyyy) 5/20/22

Time on Station: (hh:mm) 0550

FIB SAMPLE TIME: 0555

Water Depth: 20.0

Tide (ft): 0.2+

Time of Slack High Tide: 00:14

Weather conditions: breezy, overcast, light drizzle

Wind (mph)/direction: south 12-15K

Water Visibility (ft): 3.4m

Surface Water Conditions: light - mod chop 1' ww

Bird Enumeration: 1-0, 0 people, birds, dogs

Other Notes: including any potential confounding factors of concern observed (e.g., sheens, discoloration, odors, slicks, boat maintenance, plankton blooms, recent rain events, presence of animals, eelgrass, kelp wrack, floatable material):

some ocean bubbles

Water Quality Measurements

Time of Measurement	Temperature (°C)	Salinity (ppt)	pH	DO (mg/L)
0600	15.5	33.59	7.85	7.68

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

QAQC Checklist:

- ✓ Field data sheet completed, notable observations recorded
- ✓ Photos taken
- ✓ All bacteria samples collected (125-mL HDPE: Total Coliform and *Enterococcus*)
- ✓ Samples collected within 25 feet of target location? If not, please describe below.
- ✓ "Clean Hands" sampling techniques followed
- ✓ Samples sealed in secondary container (plastic bag) and immediately placed on ice
- ✓ COCs filled out and cross-checked with sample labels
- ✓ Samples delivered within holding time requirements

Date: 5/20/22 Time: 1100 Signature: [signature]

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

Station Identification: GD-W3

Date: (mm/dd/yyyy) 5/20/22

Time on Station: (hh:mm) 0604

FIB SAMPLE TIME: 0605

Water Depth: 6.0 m

Tide (ft): 0.2

Time of Slack High Tide: 00:14

Weather conditions: overcast

Wind (mph)/direction: (S) 2-3 KTS

Water Visibility (ft): 3.1

Surface Water Conditions: no debris, light wind

Bird Enumeration: n=2, no peeps, no dogs

Other Notes: including any potential confounding factors of concern observed (e.g., sheens, discoloration, odors, slicks, boat maintenance, plankton blooms, recent rain events, presence of animals, eelgrass, kelp wrack, floatable material):

~20 vessel docked

Water Quality Measurements

Time of Measurement	Temperature (°C)	Salinity (ppt)	pH	DO (mg/L)
0610	18.0	33.64	7.91	7.81

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

QAQC Checklist:

- ✓ Field data sheet completed, notable observations recorded
- ✓ Photos taken
- ✓ All bacteria samples collected (125-mL HDPE: Total Coliform and *Enterococcus*)
- ✓ Samples collected within 25 feet of target location? If not, please describe below.
- ✓ "Clean Hands" sampling techniques followed
- ✓ Samples sealed in secondary container (plastic bag) and immediately placed on ice
- ✓ COCs filled out and cross-checked with sample labels
- ✓ Samples delivered within holding time requirements

Date: 5/20/22 Time: 1100 Signature: [signature]

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

Station Identification: KK-W3

Date: (mm/dd/yyyy) 5/20/22

Time on Station: (hh:mm) 0613

FIB SAMPLE TIME: 0615

Water Depth: 0.3m

Tide (ft): 0.0

Time of Slack High Tide: 00:14

Weather conditions: Breezy, overcast

Wind (mph)/direction: south 23kts @ site

Water Visibility (ft): > 0.3m

Surface Water Conditions: light surface ripple, no debris

Bird Enumeration: n=0, no people/dogs

Other Notes: including any potential confounding factors of concern observed (e.g., sheens, discoloration, odors, slicks, boat maintenance, plankton blooms, recent rain events, presence of animals, eelgrass, kelp wrack, floatable material):

none

Water Quality Measurements

Time of Measurement	Temperature (°C)	Salinity (ppt)	pH	DO (mg/L)
0620	17.9	33.62	7.94	6.97

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

QAQC Checklist:

- ✓ Field data sheet completed, notable observations recorded
- ✓ Photos taken
- ✓ All bacteria samples collected (125-mL HDPE: Total Coliform and *Enterococcus*)
- ✓ Samples collected within 25 feet of target location? If not, please describe below.
- ✓ "Clean Hands" sampling techniques followed
- ✓ Samples sealed in secondary container (plastic bag) and immediately placed on ice
- ✓ COCs filled out and cross-checked with sample labels
- ✓ Samples delivered within holding time requirements

Date: 5/20/22 Time: 1100 Signature: [signature]

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

Station Identification: MC-1-45

Date: (mm/dd/yyyy) 5/20/22

Time on Station: (hh:mm) 0630

FIB SAMPLE TIME: 0630

Water Depth: 5.1

Tide (ft): 0.0

Time of Slack High Tide: 00:14

Weather conditions: overcast, foggy, light drizzle

Wind (mph)/direction: 5-8 kts (S)

Water Visibility (ft): 3.4

Surface Water Conditions: ripples, light chop

Bird Enumeration: n=0, no people/dogs/boats

Other Notes: including any potential confounding factors of concern observed (e.g., sheens, discoloration, odors, slicks, boat maintenance, plankton blooms, recent rain events, presence of animals, eelgrass, kelp wrack, floatable material):

no surface debris, no boats

Water Quality Measurements

Time of Measurement	Temperature (°C)	Salinity (ppt)	pH	DO (mg/L)
0632	18.2	33.72	7.97	8.24

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

QAQC Checklist:

- ✓ Field data sheet completed, notable observations recorded
- ✓ Photos taken
- ✓ All bacteria samples collected (125-mL HDPE: Total Coliform and *Enterococcus*)
- ✓ Samples collected within 25 feet of target location? If not, please describe below.
- ✓ "Clean Hands" sampling techniques followed
- ✓ Samples sealed in secondary container (plastic bag) and immediately placed on ice
- ✓ COCs filled out and cross-checked with sample labels
- ✓ Samples delivered within holding time requirements

Date: 5/20/22 Time: 11:00 Signature: [signature]

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

Station Identification: MC-2-W3

Date: (mm/dd/yyyy) 5/20/22

Time on Station: (hh:mm) 0638

FIB SAMPLE TIME: 0640

Water Depth: 4.7

Tide (ft): -0.3

Time of Slack High Tide: 00:14

Weather conditions: overcast, Greggy

Wind (mph)/direction: 5-7kt (S)

Water Visibility (ft): 3.4

Surface Water Conditions: no debris, light chop

Bird Enumeration: n=0 / no-people, dog, boats

Other Notes: including any potential confounding factors of concern observed (e.g., sheens, discoloration, odors, slicks, boat maintenance, plankton blooms, recent rain events, presence of animals, eelgrass, kelp wrack, floatable material):

none

Water Quality Measurements

Time of Measurement	Temperature (°C)	Salinity (ppt)	pH	DO (mg/L)
0642	18.3	33.74	7.99	8.30

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

QAQC Checklist:

- ✓ Field data sheet completed, notable observations recorded
- ✓ Photos taken
- ✓ All bacteria samples collected (125-mL HDPE: Total Coliform and *Enterococcus*)
- ✓ Samples collected within 25 feet of target location? If not, please describe below.
- ✓ "Clean Hands" sampling techniques followed
- ✓ Samples sealed in secondary container (plastic bag) and immediately placed on ice
- ✓ COCs filled out and cross-checked with sample labels
- ✓ Samples delivered within holding time requirements

Date: 5/20/22 Time: 1100 Signature: [signature]

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

Station Identification: FP-1-WS

Date: (mm/dd/yyyy) 5/20/22

Time on Station: (hh:mm) 0634 0644

FIB SAMPLE TIME: 0645

Water Depth: 4.2

Tide (ft): -0.4

Time of Slack High Tide: 0214

Weather conditions: cloudy overcast, breezy

Wind (mph)/direction: 2-5 kt(s)

Water Visibility (ft): 2.9

Surface Water Conditions: light chop - surface

Bird Enumeration: 1=1 mallard, 1=1 person

Other Notes: including any potential confounding factors of concern observed (e.g., sheens, discoloration, odors, slicks, boat maintenance, plankton blooms, recent rain events, presence of animals, eelgrass, kelp wrack, floatable material):

surface debris wind captured from south wind

5 vessels docked @ FP

Water Quality Measurements

Time of Measurement	Temperature (°C)	Salinity (ppt)	pH	DO (mg/L)
0650	18.3	33.73	7.97	8.06

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

QAQC Checklist:

- ✓ Field data sheet completed, notable observations recorded
- ✓ Photos taken
- ✓ All bacteria samples collected (125-mL HDPE: Total Coliform and *Enterococcus*)
- ✓ Samples collected within 25 feet of target location? If not, please describe below.
- ✓ "Clean Hands" sampling techniques followed
- ✓ Samples sealed in secondary container (plastic bag) and immediately placed on ice
- ✓ COCs filled out and cross-checked with sample labels
- ✓ Samples delivered within holding time requirements

Date: 5/20/22 Time: 1100 Signature: [signature]

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

Station Identification: OF3-W3 / OF-3-W3-DUP

Date: (mm/dd/yyyy) 5/20/22

Time on Station: (hh:mm) 0655

FIB SAMPLE TIME: 0655 / 0700

Water Depth: 1.6 m

Tide (ft): -0.5

Time of Slack High Tide: 00:14

Weather conditions: overcast

Wind (mph)/direction: 1-2 kt (S)

Water Visibility (ft): ~~2.4 m~~ >1.6 m

Surface Water Conditions: light breeze, no/very little

Bird Enumeration: none, no people, dogs

Other Notes: including any potential confounding factors of concern observed (e.g., sheens, discoloration, odors, slicks, boat maintenance, plankton blooms, recent rain events, presence of animals, eelgrass, kelp wrack, floatable material):

0 - minor surface debris

Water Quality Measurements

Time of Measurement	Temperature (°C)	Salinity (ppt)	pH	DO (mg/L)
0700	18.5	33.75	7.97	7.93

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

QAQC Checklist:

- ✓ Field data sheet completed, notable observations recorded
- ✓ Photos taken
- ✓ All bacteria samples collected (125-mL HDPE: Total Coliform and *Enterococcus*)
- ✓ Samples collected within 25 feet of target location? If not, please describe below.
- ✓ "Clean Hands" sampling techniques followed
- ✓ Samples sealed in secondary container (plastic bag) and immediately placed on ice
- ✓ COCs filled out and cross-checked with sample labels
- ✓ Samples delivered within holding time requirements

Date: 5/20/22 Time: 1100 Signature: [signature]

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

Station Identification: OF-2-W3 + OF-2-DW-3 (0720)

Date: (mm/dd/yyyy) 5/2

Time on Station: (hh:mm) 0715

FIB SAMPLE TIME: 0715 / 0720

Water Depth: 0.3

Tide (ft): -0.7

Time of Slack High Tide: 00:14

Weather conditions: cloudy / overcast, breezy

Wind (mph)/direction: 2-4 kt (S)

Water Visibility (ft): > 0.3

Surface Water Conditions: bubbles

Bird Enumeration: n=1 (heron) 1 person, 1 dog

Other Notes: including any potential confounding factors of concern observed (e.g., sheens, discoloration, odors, slicks, boat maintenance, plankton blooms, recent rain events, presence of animals, eelgrass, kelp wrack, floatable material):

0-light debris or surface sheen

Water Quality Measurements

Time of Measurement	Temperature (°C)	Salinity (ppt)	pH	DO (mg/L)
0730	18.8	31.67	7.93	7.57

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

QAQC Checklist:

- ✓ Field data sheet completed, notable observations recorded
- ✓ Photos taken
- ✓ All bacteria samples collected (125-mL HDPE: Total Coliform and *Enterococcus*)
- ✓ Samples collected within 25 feet of target location? If not, please describe below.
- ✓ "Clean Hands" sampling techniques followed
- ✓ Samples sealed in secondary container (plastic bag) and immediately placed on ice
- ✓ COCs filled out and cross-checked with sample labels
- ✓ Samples delivered within holding time requirements

Date: 5/20/22 Time: 1100 Signature: [signature]

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

Station Identification: BS-WS

Date: (mm/dd/yyyy) 5/20/22

Time on Station: (hh:mm) 0748

FIB SAMPLE TIME: 0748

Water Depth: 1.0m

Tide (ft): -0.8

Time of Slack High Tide: 00:14

Weather conditions: cl.

Wind (mph)/direction: 7-8kt (S)

Water Visibility (ft): >1.0m

Surface Water Conditions: light chop

Bird Enumeration: n=0 2 pel/l, 1 dig

Other Notes: including any potential confounding factors of concern observed (e.g., sheens, discoloration, odors, slicks, boat maintenance, plankton blooms, recent rain events, presence of animals, eelgrass, kelp wrack, floatable material):

Some beach foam

Water Quality Measurements

Time of Measurement	Temperature (°C)	Salinity (ppt)	pH	DO (mg/L)
0745	18.1	33.66	7.98	8.16

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

QAQC Checklist:

- ✓ Field data sheet completed, notable observations recorded
- ✓ Photos taken
- ✓ All bacteria samples collected (125-mL HDPE: Total Coliform and *Enterococcus*)
- ✓ Samples collected within 25 feet of target location? If not, please describe below.
- ✓ "Clean Hands" sampling techniques followed
- ✓ Samples sealed in secondary container (plastic bag) and immediately placed on ice
- ✓ COCs filled out and cross-checked with sample labels
- ✓ Samples delivered within holding time requirements

Date: 5/20/22 Time: 1100 Signature: [signature]

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

Station Identification: OF1-1-W3

Date: (mm/dd/yyyy) 5/20/22

Time on Station: (hh:mm) 0750

FIB SAMPLE TIME: 0750

Water Depth: 0.3m

Tide (ft): ~0.9

Time of Slack High Tide: 00:14

Weather conditions: cloudy

Wind (mph)/direction: 5-7 kt (S)

Water Visibility (ft): > 0.3m

Surface Water Conditions: Light chop, bubbles

Bird Enumeration: n=1, n=0 people/dogs

Other Notes: including any potential confounding factors of concern observed (e.g., sheens, discoloration, odors, slicks, boat maintenance, plankton blooms, recent rain events, presence of animals, eelgrass, kelp wrack, floatable material):

foam @ water edge

Water Quality Measurements

Time of Measurement	Temperature (°C)	Salinity (ppt)	pH	DO (mg/L)
0755	18.0	33.7	7.97	7.82

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

QAQC Checklist:

- ✓ Field data sheet completed, notable observations recorded
- ✓ Photos taken
- ✓ All bacteria samples collected (125-mL HDPE: Total Coliform and *Enterococcus*)
- ✓ Samples collected within 25 feet of target location? If not, please describe below.
- ✓ "Clean Hands" sampling techniques followed
- ✓ Samples sealed in secondary container (plastic bag) and immediately placed on ice
- ✓ COCs filled out and cross-checked with sample labels
- ✓ Samples delivered within holding time requirements

Date: 5/20/22 Time: 1100 Signature: [signature]

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

Station Identification: A1-1-W3

Date: (mm/dd/yyyy) 5/20/22

Time on Station: (hh:mm) 0800

FIB SAMPLE TIME: 0800

Water Depth: 3.3m

Tide (ft): -0.9

Time of Slack High Tide: 00:14

Weather conditions: breezy, overcast

Wind (mph)/direction: 10-12 (S)

Water Visibility (ft): 2.7

Surface Water Conditions: light chop, no debris

Bird Enumeration: n=0, no peep

Other Notes: including any potential confounding factors of concern observed (e.g., sheens, discoloration, odors, slicks, boat maintenance, plankton blooms, recent rain events, presence of animals, eelgrass, kelp wrack, floatable material):

n=2 boats, arrived @ ~0700

Water Quality Measurements

Time of Measurement	Temperature (°C)	Salinity (ppt)	pH	DO (mg/L)
0803	18.2	33.76	8.00	8.18

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

QAQC Checklist:

- ✓ Field data sheet completed, notable observations recorded
- ✓ Photos taken
- ✓ All bacteria samples collected (125-mL HDPE: Total Coliform and *Enterococcus*)
- ✓ Samples collected within 25 feet of target location? If not, please describe below.
- ✓ "Clean Hands" sampling techniques followed
- ✓ Samples sealed in secondary container (plastic bag) and immediately placed on ice
- ✓ COCs filled out and cross-checked with sample labels
- ✓ Samples delivered within holding time requirements

Date: 5/20/22 Time: 1600 Signature: [signature]

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

Station Identification: A1-2-W3

Date: (mm/dd/yyyy) 3/20/22

Time on Station: (hh:mm) 0810

FIB SAMPLE TIME: 0810

Water Depth: 4.5

Tide (ft): -0.9

Time of Slack High Tide: 00:14

Weather conditions: cloudy / overcast breezy

Wind (mph)/direction: 7-8 kt (S)

Water Visibility (ft): 2.75

Surface Water Conditions: light chop, no debris, bubbles

Bird Enumeration: n=0 / person on boat

Other Notes: including any potential confounding factors of concern observed (e.g., sheens, discoloration, odors, slicks, boat maintenance, plankton blooms, recent rain events, presence of animals, eelgrass, kelp wrack, floatable material):

n: 2 boats /

Water Quality Measurements

Time of Measurement	Temperature (°C)	Salinity (ppt)	pH	DO (mg/L)
0813	18.1	33.77	8.00	8.18

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

QAQC Checklist:

- ✓ Field data sheet completed, notable observations recorded
- ✓ Photos taken
- ✓ All bacteria samples collected (125-mL HDPE: Total Coliform and *Enterococcus*)
- ✓ Samples collected within 25 feet of target location? If not, please describe below.
- ✓ "Clean Hands" sampling techniques followed
- ✓ Samples sealed in secondary container (plastic bag) and immediately placed on ice
- ✓ COCs filled out and cross-checked with sample labels
- ✓ Samples delivered within holding time requirements

Date: 5/20/22 Time: 1100 Signature: [signature]

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

Station Identification: A1-3-W3

Date: (mm/dd/yyyy) 5/20/22

Time on Station: (hh:mm) 0815

FIB SAMPLE TIME: 0815

Water Depth: 4.5 m

Tide (ft): -0.8

Time of Slack High Tide: 00:14

Weather conditions: breeze

Wind (mph)/direction: 5-7kt (S)

Water Visibility (ft): 2-9

Surface Water Conditions: lt. choppy

Bird Enumeration: n=0

Other Notes: including any potential confounding factors of concern observed (e.g., sheens, discoloration, odors, slicks, boat maintenance, plankton blooms, recent rain events, presence of animals, eelgrass, kelp wrack, floatable material):

2 boat @ anchor arrived @ 0700

Water Quality Measurements

Time of Measurement	Temperature (°C)	Salinity (ppt)	pH	DO (mg/L)
0813 0820	18.2	33.77	8.00	8.18

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

QAQC Checklist:

- ✓ Field data sheet completed, notable observations recorded
- ✓ Photos taken
- ✓ All bacteria samples collected (125-mL HDPE: Total Coliform and *Enterococcus*)
- ✓ Samples collected within 25 feet of target location? If not, please describe below.
- ✓ "Clean Hands" sampling techniques followed
- ✓ Samples sealed in secondary container (plastic bag) and immediately placed on ice
- ✓ COCs filled out and cross-checked with sample labels
- ✓ Samples delivered within holding time requirements

Date: 5/20/22 Time: 1100 Signature: [signature]

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

Station Identification: NK-W3

Date: (mm/dd/yyyy) 5/20/22

Time on Station: (hh:mm) 0825

FIB SAMPLE TIME: 0825

Water Depth: 0.6

Tide (ft): -0.8

Time of Slack High Tide: 00:14

Weather conditions: clear cast, breezy

Wind (mph)/direction: 5-6 kt (S)

Water Visibility (ft): >0.6 m

Surface Water Conditions: light chop

Bird Enumeration: 0, 1 person/runner

Other Notes: including any potential confounding factors of concern observed (e.g., sheens, discoloration, odors, slicks, boat maintenance, plankton blooms, recent rain events, presence of animals, eelgrass, kelp wrack, floatable material):

moderate debris in water column (kelp strands, eel grass,

Water Quality Measurements

Time of Measurement	Temperature (°C)	Salinity (ppt)	pH	DO (mg/L)
0830	18.0	33.77	7.97	7.95

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

QAQC Checklist:

- ✓ Field data sheet completed, notable observations recorded
- ✓ Photos taken
- ✓ All bacteria samples collected (125-mL HDPE: Total Coliform and *Enterococcus*)
- ✓ Samples collected within 25 feet of target location? If not, please describe below.
- ✓ "Clean Hands" sampling techniques followed
- ✓ Samples sealed in secondary container (plastic bag) and immediately placed on ice
- ✓ COCs filled out and cross-checked with sample labels
- ✓ Samples delivered within holding time requirements

Date: 5/20/22 Time: 1100 Signature: [signature]

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

Station Identification: KB-W3

Date: (mm/dd/yyyy) 5/20/22

Time on Station: (hh:mm) 0835

FIB SAMPLE TIME: 0835

Water Depth: 0.3

Tide (ft): −0.8

Time of Slack High Tide: 00:14

Weather conditions: breezy

Wind (mph)/direction: 8-10kts)

Water Visibility (ft): >0.3

Surface Water Conditions: choppy ?

Bird Enumeration: n=0 / dog, / person

Other Notes: including any potential confounding factors of concern observed (e.g., sheens, discoloration, odors, slicks, boat maintenance, plankton blooms, recent rain events, presence of animals, eelgrass, kelp wrack, floatable material):

in water

Water Quality Measurements

Time of Measurement	Temperature (°C)	Salinity (ppt)	pH	DO (mg/L)
0838	17.6	33.6	797	7.88

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

QAQC Checklist:

- ✓ Field data sheet completed, notable observations recorded
- ✓ Photos taken
- ✓ All bacteria samples collected (125-mL HDPE: Total Coliform and *Enterococcus*)
- ✓ Samples collected within 25 feet of target location? If not, please describe below.
- ✓ "Clean Hands" sampling techniques followed
- ✓ Samples sealed in secondary container (plastic bag) and immediately placed on ice
- ✓ COCs filled out and cross-checked with sample labels
- Samples delivered within holding time requirements

Date: 5/20/22 Time: 1100 Signature: [signature]

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

Station Identification: ~~OSI-WS~~ FB-3 (new Lab source)

Date: (mm/dd/yyyy) 5/20/22

Time on Station: (hh:mm) 0850

FIB SAMPLE TIME: 0858

Water Depth: _____

Tide (ft): _____

Time of Slack High Tide: _____

Weather conditions: overcast, breezy

Wind (mph)/direction: _____

Water Visibility (ft): _____

Surface Water Conditions: _____

Bird Enumeration: _____

Other Notes: including any potential confounding factors of concern observed (e.g., sheens, discoloration, odors, slicks, boat maintenance, plankton blooms, recent rain events, presence of animals, eelgrass, kelp wrack, floatable material):

FB-test (0855)

Water Quality Measurements

Time of Measurement	Temperature (°C)	Salinity (ppt)	pH	DO (mg/L)

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

QAQC Checklist:

- ✓ Field data sheet completed, notable observations recorded
- ✓ Photos taken
- ✓ All bacteria samples collected (125-mL HDPE: Total Coliform and *Enterococcus*)
- ✓ Samples collected within 25 feet of target location? If not, please describe below.
- ✓ "Clean Hands" sampling techniques followed
- ✓ Samples sealed in secondary container (plastic bag) and immediately placed on ice
- ✓ COCs filled out and cross-checked with sample labels
- ✓ Samples delivered within holding time requirements

Date: 5/20/22 Time: 1100 Signature: [signature]

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

Station Identification: REF-1-WK02

Date: (mm/dd/yyyy) 3/21/22

Time on Station: (hh:mm) 0612

FIB SAMPLE TIME: 0615

Water Depth: 19.6 m

Tide (ft): 1.1 ft

Time of Slack High Tide: 01:23

Weather conditions: cloudy

Wind (mph)/direction: 3-5 KTS(S)

Water Visibility (ft): 2.6 m

Surface Water Conditions: light chop, small bubbles

Bird Enumeration: n=6, no people

Other Notes: including any potential confounding factors of concern observed (e.g., sheens, discoloration, odors, slicks, boat maintenance, plankton blooms, recent rain events, presence of animals, eelgrass, kelp wrack, floatable material):

n=2 passing boats

Water Quality Measurements

Time of Measurement	Temperature (°C)	Salinity (ppt)	pH	DO (mg/L)
0620	18.2	33.57	7.99	7.79

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

QAQC Checklist:

- ✓ Field data sheet completed, notable observations recorded
- ✓ Photos taken
- ✓ All bacteria samples collected (125-mL HDPE: Total Coliform and *Enterococcus*)
- ✓ Samples collected within 25 feet of target location? If not, please describe below.
- ✓ "Clean Hands" sampling techniques followed
- ✓ Samples sealed in secondary container (plastic bag) and immediately placed on ice
- ✓ COCs filled out and cross-checked with sample labels
- ✓ Samples delivered within holding time requirements

Date: 05/21/2022 Time: 1100 Signature: Marina Sviscenti

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

Station Identification: A1-1-R1-WKS2

Date: (mm/dd/yyyy) 5/21/22

Time on Station: (hh:mm) 0634

FIB SAMPLE TIME: 0635

Water Depth: 3.9 m

Tide (ft): 0.8 ft

Time of Slack High Tide: 01:23

Weather conditions: cloudy, light breeze

Wind (mph)/direction: ~4 kt (S)

Water Visibility (ft): 2.4 m

Surface Water Conditions: light

Bird Enumeration: n=0, no people, no dogs

Other Notes: including any potential confounding factors of concern observed (e.g., sheens, discoloration, odors, slicks, boat maintenance, plankton blooms, recent rain events, presence of animals, eelgrass, kelp wrack, floatable material):

15 boats @ anchor

Water Quality Measurements

Time of Measurement	Temperature (°C)	Salinity (ppt)	pH	DO (mg/L)
0640	18.1	33.67	7.99	8.13

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

QAQC Checklist:

- ✓ Field data sheet completed, notable observations recorded
- ✓ Photos taken
- ✓ All bacteria samples collected (125-mL HDPE: Total Coliform and *Enterococcus*)
- ✓ Samples collected within 25 feet of target location? If not, please describe below.
- ✓ "Clean Hands" sampling techniques followed
- ✓ Samples sealed in secondary container (plastic bag) and immediately placed on ice
- ✓ COCs filled out and cross-checked with sample labels
- ✓ Samples delivered within holding time requirements

Date: 05/21/2022 Time: 1100 Signature: Marina Swiderski

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

Station Identification: A1-2-~~RT~~-WKS2 R1

Date (mm/dd/yyyy): 5/21/22

Time on Station (hh:mm): 0643

FIB SAMPLE TIME: 0645

Water Depth: 4.8

Tide (ft): 0.7 +

Time of Slack High Tide: 01:23

Weather conditions: cloudy

Wind (mph)/direction: 3-4 kt (S)

Water Visibility (ft): 2.1m

Surface Water Conditions: light surface wave, no debris

Bird Enumeration: n=0, no people/dogs

Other Notes: including any potential confounding factors of concern observed (e.g., sheens, discoloration, odors, slicks, boat maintenance, plankton blooms, recent rain events, presence of animals, eelgrass, kelp wrack, floatable material):

15 boats @ anchor

Water Quality Measurements

Time of Measurement	Temperature (°C)	Salinity (ppt)	pH	DO (mg/L)
0646	18.1	33.69	7.99	8.05

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

QAQC Checklist:

- ✓ Field data sheet completed, notable observations recorded
- ✓ Photos taken
- ✓ All bacteria samples collected (125-mL HDPE: Total Coliform and *Enterococcus*)
- ✓ Samples collected within 25 feet of target location? If not, please describe below.
- ✓ "Clean Hands" sampling techniques followed
- ✓ Samples sealed in secondary container (plastic bag) and immediately placed on ice
- ✓ COCs filled out and cross-checked with sample labels
- ✓ Samples delivered within holding time requirements

Date: 05/21/2022 Time: 1100 Signature: Marisa Swiderski

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

Station Identification: A1-3-R1-WKD2

Date: (mm/dd/yyyy) 5

Time on Station: (hh:mm) 0650

FIB SAMPLE TIME: 0650

Water Depth: 5.2m

Tide (ft): 0.6+

Time of Slack High Tide: 01:23

Weather conditions: cloudy

Wind (mph)/direction: 3-4KT (S)

Water Visibility (ft): 2.4m

Surface Water Conditions: light wind chop

Bird Enumeration: n=4, n=6 people/dog

Other Notes: including any potential confounding factors of concern observed (e.g., sheens, discoloration, odors, slicks, boat maintenance, plankton blooms, recent rain events, presence of animals, eelgrass, kelp wrack, floatable material):

n=15 boats Canadian

Water Quality Measurements

Time of Measurement	Temperature (°C)	Salinity (ppt)	pH	DO (mg/L)
0655	18.2	33.69	7.99	8.05

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

QAQC Checklist:

- ✓ Field data sheet completed, notable observations recorded
- ✓ Photos taken
- ✓ All bacteria samples collected (125-mL HDPE: Total Coliform and *Enterococcus*)
- ✓ Samples collected within 25 feet of target location? If not, please describe below.
- ✓ "Clean Hands" sampling techniques followed
- ✓ Samples sealed in secondary container (plastic bag) and immediately placed on ice
- ✓ COCs filled out and cross-checked with sample labels
- ✓ Samples delivered within holding time requirements

Date: 05/21/2022 Time: 1100 Signature: Marina Swiderski

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

Station Identification: A1-1-R2-WKD2

Date: (mm/dd/yyyy) 5/21/22

Time on Station: (hh:mm) 0735

FIB SAMPLE TIME: 0735

Water Depth: 3.9m

Tide (ft): 0.1 ↑

Time of Slack High Tide: 01:23

Weather conditions: cloudy

Wind (mph)/direction: 4.5 E (B)

Water Visibility (ft): 2.4m

Surface Water Conditions: light wind

Bird Enumeration: n=0, 1 dog on paddle board

Other Notes: including any potential confounding factors of concern observed (e.g., sheens, discoloration, odors, slicks, boat maintenance, plankton blooms, recent rain events, presence of animals, eelgrass, kelp wrack, floatable material):

15 boats @ anchor

2 paddle boards + 1 dog

Water Quality Measurements

Time of Measurement	Temperature (°C)	Salinity (ppt)	pH	DO (mg/L)
0736	18.1	33.72	8.07	8.05

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

QAQC Checklist:

- ✓ Field data sheet completed, notable observations recorded
- ✓ Photos taken
- ✓ All bacteria samples collected (125-mL HDPE: Total Coliform and *Enterococcus*)
- ✓ Samples collected within 25 feet of target location? If not, please describe below.
- ✓ "Clean Hands" sampling techniques followed
- ✓ Samples sealed in secondary container (plastic bag) and immediately placed on ice
- ✓ COCs filled out and cross-checked with sample labels
- ✓ Samples delivered within holding time requirements

Date: 05/21/2022 Time: 1100 Signature: Maria Swiderski

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

Station Identification: A1-2-R2-NKD2 / A1-2-R2-NKD2

Date: (mm/dd/yyyy) 5/21/22

Time on Station: (hh:mm) 0750

FIB SAMPLE TIME: 0750/0751

Water Depth: 4.3

Tide (ft): -0.2

Time of Slack High Tide: 01:23

Weather conditions: cloudy

Wind (mph)/direction: 4-5kt (S)

Water Visibility (ft): 2-9

Surface Water Conditions: light chop, no debris

Bird Enumeration: n=0, 1 person topside

Other Notes: including any potential confounding factors of concern observed (e.g., sheens, discoloration, odors, slicks, boat maintenance, plankton blooms, recent rain events, presence of animals, eelgrass, kelp wrack, floatable material):

n=15 boats @ anchor

Water Quality Measurements

Time of Measurement	Temperature (°C)	Salinity (ppt)	pH	DO (mg/L)
0754	18.2	33.72	8.00	8.20

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

QAQC Checklist:

- ✓ Field data sheet completed, notable observations recorded
- ✓ Photos taken
- ✓ All bacteria samples collected (125-mL HDPE: Total Coliform and *Enterococcus*)
- ✓ Samples collected within 25 feet of target location? If not, please describe below.
- ✓ "Clean Hands" sampling techniques followed
- ✓ Samples sealed in secondary container (plastic bag) and immediately placed on ice
- ✓ COCs filled out and cross-checked with sample labels
- ✓ Samples delivered within holding time requirements

Date: 05/21/2022 Time: 1100 Signature: Marina Swiderski

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

Station Identification: A1-3-R2-WRS2

Date: (mm/dd/yyyy) 5/21/22

Time on Station: (hh:mm) 0800

FIB SAMPLE TIME: 0800

Water Depth: 4.9m

Tide (ft): -0.3

Time of Slack High Tide: 01:23

Weather conditions: cloudy

Wind (mph)/direction: 3-4 kts (S)

Water Visibility (ft): 2-4m

Surface Water Conditions: light chop

Bird Enumeration: n=1 gull, 1 topside

Other Notes: including any potential confounding factors of concern observed (e.g., sheens, discoloration, odors, slicks, boat maintenance, plankton blooms, recent rain events, presence of animals, eelgrass, kelp wrack, floatable material):

15 boats @ anchor

Water Quality Measurements

Time of Measurement	Temperature (°C)	Salinity (ppt)	pH	DO (mg/L)
0805	18.2	33.73	7.99	7.98

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

QAQC Checklist:

- ✓ Field data sheet completed, notable observations recorded
- ✓ Photos taken
- ✓ All bacteria samples collected (125-mL HDPE: Total Coliform and *Enterococcus*)
- ✓ Samples collected within 25 feet of target location? If not, please describe below.
- ✓ "Clean Hands" sampling techniques followed
- ✓ Samples sealed in secondary container (plastic bag) and immediately placed on ice
- ✓ COCs filled out and cross-checked with sample labels
- ✓ Samples delivered within holding time requirements

Date: 05/21/2022 Time: 1100 Signature: Marina Swiderski

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

Station Identification: A1-1-R3-WKD2

Date: (mm/dd/yyyy) 5/21/22

Time on Station: (hh:mm) 0835

FIB SAMPLE TIME: 0835

Water Depth: 3.5 m

Tide (ft): -0.4

Time of Slack High Tide: 01:23

Weather conditions: cloudy

Wind (mph)/direction: 3-5 kts (S)

Water Visibility (ft): 2.5 m

Surface Water Conditions: light surface waves, no debris

Bird Enumeration: 11-6, no people, no dogs

Other Notes: including any potential confounding factors of concern observed (e.g., sheens, discoloration, odors, slicks, boat maintenance, plankton blooms, recent rain events, presence of animals, eelgrass, kelp wrack, floatable material):

~215 boats @ anchor

Water Quality Measurements

Time of Measurement	Temperature (°C)	Salinity (ppt)	pH	DO (mg/L)
0838	18.2	33.74	8.04	8.23

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

QAQC Checklist:

- ✓ Field data sheet completed, notable observations recorded
- ✓ Photos taken
- ✓ All bacteria samples collected (125-mL HDPE: Total Coliform and *Enterococcus*)
- ✓ Samples collected within 25 feet of target location? If not, please describe below.
- ✓ "Clean Hands" sampling techniques followed
- ✓ Samples sealed in secondary container (plastic bag) and immediately placed on ice
- ✓ COCs filled out and cross-checked with sample labels
- ✓ Samples delivered within holding time requirements

Date: 05/21/2022 Time: 1100 Signature: Marisa Swiderski

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

Station Identification: A1-2-K3-WKD2

Date: (mm/dd/yyyy) 5/21/22

Time on Station: (hh:mm) 0845

FIB SAMPLE TIME: 0845

Water Depth: 4.6

Tide (ft): -0.5

Time of Slack High Tide: 01:23

Weather conditions: cloudy

Wind (mph)/direction: 3-4 kt (S)

Water Visibility (ft): 2.7m

Surface Water Conditions: light chop, no debris

Bird Enumeration: n=0 n=5 people/dog

Other Notes: including any potential confounding factors of concern observed (e.g., sheens, discoloration, odors, slicks, boat maintenance, plankton blooms, recent rain events, presence of animals, eelgrass, kelp wrack, floatable material):

n=15 boats @ anchor

Water Quality Measurements

Time of Measurement	Temperature (°C)	Salinity (ppt)	pH	DO (mg/L)
0847	18.2	33.74	8.02	8.24

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

QAQC Checklist:

- ✓ Field data sheet completed, notable observations recorded
- ✓ Photos taken
- ✓ All bacteria samples collected (125-mL HDPE: Total Coliform and *Enterococcus*)
- ✓ Samples collected within 25 feet of target location? If not, please describe below.
- ✓ "Clean Hands" sampling techniques followed
- ✓ Samples sealed in secondary container (plastic bag) and immediately placed on ice
- ✓ COCs filled out and cross-checked with sample labels
- ✓ Samples delivered within holding time requirements

Date: 05/21/2022 Time: 1100 Signature: Marisa Swiderski

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

Station Identification: A1-3-R3-WKDZ

Date: (mm/dd/yyyy) 5/21/22

Time on Station: (hh:mm) 0850

FIB SAMPLE TIME: 0850

Water Depth: 4.7m

Tide (ft): -0.5

Time of Slack High Tide: 01:23

Weather conditions: cloudy

Wind (mph)/direction: 4-5 kts (S)

Water Visibility (ft): 2.7m

Surface Water Conditions: light sw

Bird Enumeration: n=0, n=3 person to pside

Other Notes: including any potential confounding factors of concern observed (e.g., sheens, discoloration, odors, slicks, boat maintenance, plankton blooms, recent rain events, presence of animals, eelgrass, kelp wrack, floatable material):

n2/5 boats

Water Quality Measurements

Time of Measurement	Temperature (°C)	Salinity (ppt)	pH	DO (mg/L)
0853	15.2	33.74	8.00	8.04

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

QAQC Checklist:

- ✓ Field data sheet completed, notable observations recorded
- ✓ Photos taken
- ✓ All bacteria samples collected (125-mL HDPE: Total Coliform and *Enterococcus*)
- ✓ Samples collected within 25 feet of target location? If not, please describe below.
- ✓ "Clean Hands" sampling techniques followed
- ✓ Samples sealed in secondary container (plastic bag) and immediately placed on ice
- ✓ COCs filled out and cross-checked with sample labels
- ✓ Samples delivered within holding time requirements

Date: 05/21/2022 Time: 1100 Signature: Marine Swiderski

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

Station Identification: OF2-WKS2 / OF2-DW-3

Date: (mm/dd/yyyy) 5/21/22

Time on Station: (hh:mm) 0700

FIB SAMPLE TIME: 0700 / 0710

Water Depth: 1.0+

Tide (ft): 0.4+

Time of Slack High Tide: 01:23

Weather conditions: cloudy

Wind (mph)/direction: 2-3 kts

Water Visibility (ft): >1.0 m

Surface Water Conditions: light breeze, bubbles @ outfall

Bird Enumeration: n=0 bird, no people / no dogs

Other Notes: including any potential confounding factors of concern observed (e.g., sheens, discoloration, odors, slicks, boat maintenance, plankton blooms, recent rain events, presence of animals, eelgrass, kelp wrack, floatable material):

flow 2 gals/min

Water Quality Measurements

Time of Measurement	Temperature (°C)	Salinity (ppt)	pH	DO (mg/L)
0700	18.1	33.59	7.96	7.52
(DW3) 0710	17.3	0.84	8.71	9.58

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

QAQC Checklist:

- ✓ Field data sheet completed, notable observations recorded
- ✓ Photos taken
- ✓ All bacteria samples collected (125-mL HDPE: Total Coliform and *Enterococcus*)
- ✓ Samples collected within 25 feet of target location? If not, please describe below.
- ✓ "Clean Hands" sampling techniques followed
- ✓ Samples sealed in secondary container (plastic bag) and immediately placed on ice
- ✓ COCs filled out and cross-checked with sample labels
- ✓ Samples delivered within holding time requirements

Date: 05/21/2022 Time: 1100 Signature: Marisa Arredondo

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

Station Identification: REF1-W4

Date: (mm/dd/yyyy) 5/23/22

Time on Station: (hh:mm) 0800

FIB SAMPLE TIME: 0800

Water Depth: 20.8m

Tide (ft): +2.0

Time of Slack High Tide: 04:16

Weather conditions: overcast, cloudy

Wind (mph)/direction: 3 Kts (S/SW)

Water Visibility (ft): 3.1m

Surface Water Conditions: light chop

Bird Enumeration: n=0, no surface debris

Other Notes: including any potential confounding factors of concern observed (e.g., sheens, discoloration, odors, slicks, boat maintenance, plankton blooms, recent rain events, presence of animals, eelgrass, kelp wrack, floatable material):

2 passing boats

Water Quality Measurements

Time of Measurement	Temperature (°C)	Salinity (ppt)	pH	DO (mg/L)
0804	18.4	33.41	7.95	7.66

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

QAQC Checklist:

- ✓ Field data sheet completed, notable observations recorded
- ✓ Photos taken
- ✓ All bacteria samples collected (125-mL HDPE: Total Coliform and *Enterococcus*)
- ✓ Samples collected within 25 feet of target location? If not, please describe below.
- ✓ "Clean Hands" sampling techniques followed
- ✓ Samples sealed in secondary container (plastic bag) and immediately placed on ice
- ✓ COCs filled out and cross-checked with sample labels
- ✓ Samples delivered within holding time requirements

Date: 5/23/22 Time: 12:30 Signature: [signature]

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

Station Identification: GD-N4

Date: (mm/dd/yyyy) 5/23/22

Time on Station: (hh:mm) 0870

FIB SAMPLE TIME: 0810

Water Depth: 6.6

Tide (ft): 2.0+

Time of Slack High Tide: 04:16

Weather conditions: cloudy

Wind (mph)/direction: <1 kt (S/SW)

Water Visibility (ft): 4.0

Surface Water Conditions: calm, no surface debris.

Bird Enumeration: n=0, n=1 people/dog=0

Other Notes: including any potential confounding factors of concern observed (e.g., sheens, discoloration, odors, slicks, boat maintenance, plankton blooms, recent rain events, presence of animals, eelgrass, kelp wrack, floatable material):

none

Water Quality Measurements

Time of Measurement	Temperature (°C)	Salinity (ppt)	pH	DO (mg/L)
0815	18.6	33.59	7.91	7.22

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

QAQC Checklist:

- ✓ Field data sheet completed, notable observations recorded
- ✓ Photos taken
- ✓ All bacteria samples collected (125-mL HDPE: Total Coliform and *Enterococcus*)
- ✓ Samples collected within 25 feet of target location? If not, please describe below.
- ✓ "Clean Hands" sampling techniques followed
- ✓ Samples sealed in secondary container (plastic bag) and immediately placed on ice
- ✓ COCs filled out and cross-checked with sample labels
- ✓ Samples delivered within holding time requirements

Date: 5/23/22 Time: 12:30 Signature: [signature]

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

Station Identification: KK-W4

Date: (mm/dd/yyyy) 5/23/22

Time on Station: (hh:mm) 08.20m

FIB SAMPLE TIME: 0820

Water Depth: 0.3m

Tide (ft): 1.9+

Time of Slack High Tide: 04:16

Weather conditions: cloudy

Wind (mph)/direction: 1kt (S/SW)

Water Visibility (ft): >0.3m

Surface Water Conditions: light ripples

Bird Enumeration: n=0, 2 pers.

Other Notes: including any potential confounding factors of concern observed (e.g., sheens, discoloration, odors, slicks, boat maintenance, plankton blooms, recent rain events, presence of animals, eelgrass, kelp wrack, floatable material):

nmc, 1 passing vessel

Water Quality Measurements

Time of Measurement	Temperature (°C)	Salinity (ppt)	pH	DO (mg/L)
0821	18.6	33.62	7.91	7.18

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

QAQC Checklist:

- ✓ Field data sheet completed, notable observations recorded
- ✓ Photos taken
- ✓ All bacteria samples collected (125-mL HDPE: Total Coliform and *Enterococcus*)
- ✓ Samples collected within 25 feet of target location? If not, please describe below.
- ✓ "Clean Hands" sampling techniques followed
- ✓ Samples sealed in secondary container (plastic bag) and immediately placed on ice
- ✓ COCs filled out and cross-checked with sample labels
- ✓ Samples delivered within holding time requirements

Date: 5/23/22 Time: 12:30 Signature: [signature]

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

Station Identification: MC-1-WF

Date: (mm/dd/yyyy) 5/23/22

Time on Station: (hh:mm) 0827

FIB SAMPLE TIME: 0830

Water Depth: 5.5 m

Tide (ft): 1.8+

Time of Slack High Tide: 04:16

Weather conditions: cloudy

Wind (mph)/direction: 1 kt S/SW

Water Visibility (ft): 1.9 m

Surface Water Conditions: v. light ripples

Bird Enumeration: N=0

Other Notes: including any potential confounding factors of concern observed (e.g., sheens, discoloration, odors, slicks, boat maintenance, plankton blooms, recent rain events, presence of animals, eelgrass, kelp wrack, floatable material):

1 paddler, 1 strand of floating kelp

Water Quality Measurements

Time of Measurement	Temperature (°C)	Salinity (ppt)	pH	DO (mg/L)
0831	18.7	33.68	7.97	7.99

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

QAQC Checklist:

Field data sheet completed, notable observations recorded
Photos taken
All bacteria samples collected (125-mL HDPE: Total Coliform and *Enterococcus*)
Samples collected within 25 feet of target location? If not, please describe below.
"Clean Hands" sampling techniques followed
Samples sealed in secondary container (plastic bag) and immediately placed on ice
COCs filled out and cross-checked with sample labels
Samples delivered within holding time requirements

Date: 5/23/22 Time: 12:30 Signature:

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

Station Identification: MC2-W4

Date: (mm/dd/yyyy) 5/23/22

Time on Station: (hh:mm) 0835

FIB SAMPLE TIME: 0835

Water Depth: 5.3 m

Tide (ft): 1.6 ↑

Time of Slack High Tide: 04:16

Weather conditions: cloudy

Wind (mph)/direction: <1-2 kts (S/SW)

Water Visibility (ft): 3.1 m

Surface Water Conditions: light ripples, no debris, calm

Bird Enumeration: n=0, no birds, people or dog

Other Notes: including any potential confounding factors of concern observed (e.g., sheens, discoloration, odors, slicks, boat maintenance, plankton blooms, recent rain events, presence of animals, eelgrass, kelp wrack, floatable material):

none

Water Quality Measurements

Time of Measurement	Temperature (°C)	Salinity (ppt)	pH	DO (mg/L)
0837	18.9	33.70	7.96	7.86

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

QAQC Checklist:

- ✓ Field data sheet completed, notable observations recorded
- ✓ Photos taken
- ✓ All bacteria samples collected (125-mL HDPE: Total Coliform and *Enterococcus*)
- ✓ Samples collected within 25 feet of target location? If not, please describe below.
- ✓ "Clean Hands" sampling techniques followed
- ✓ Samples sealed in secondary container (plastic bag) and immediately placed on ice
- ✓ COCs filled out and cross-checked with sample labels
- ✓ Samples delivered within holding time requirements

Date: 5/23/22 Time: 12:30 Signature: [signature]

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

Station Identification: FP-N4

Date: (mm/dd/yyyy) 5/23/22

Time on Station: (hh:mm) 0845

FIB SAMPLE TIME: 0845

Water Depth: 4.5m

Tide (ft): +.5e / -.2+

Time of Slack High Tide: 04:16

Weather conditions: cloudy

Wind (mph)/direction: < 1KT

Water Visibility (ft): 2.3m

Surface Water Conditions: calm surface sheen / fuel

Bird Enumeration: 1=0, 1 person

Other Notes: including any potential confounding factors of concern observed (e.g., sheens, discoloration, odors, slicks, boat maintenance, plankton blooms, recent rain events, presence of animals, eelgrass, kelp wrack, floatable material):

oil sheen, fish waste floating
6 vessels docked @ FP

Water Quality Measurements

Time of Measurement	Temperature (°C)	Salinity (ppt)	pH	DO (mg/L)
0846	18.9	33.70	7.94	7.54

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

QAQC Checklist:

- ✓ Field data sheet completed, notable observations recorded
- ✓ Photos taken
- ✓ All bacteria samples collected (125-mL HDPE: Total Coliform and *Enterococcus*)
- ✓ Samples collected within 25 feet of target location? If not, please describe below.
- ✓ "Clean Hands" sampling techniques followed
- ✓ Samples sealed in secondary container (plastic bag) and immediately placed on ice
- ✓ COCs filled out and cross-checked with sample labels
- ✓ Samples delivered within holding time requirements

Date: 5/23/22 Time: 12:30 Signature: [signature]

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

Station Identification: OF3-W4

Date: (mm/dd/yyyy) 5/23/22

Time on Station: (hh:mm) 0850

FIB SAMPLE TIME: 0850

Water Depth: 2.0 m

Tide (ft): ~1.0+

Time of Slack High Tide: 04:16

Weather conditions: cloudy

Wind (mph)/direction: <1 kt

Water Visibility (ft): 2.1 m

Surface Water Conditions: calm, no debris

Bird Enumeration: 1=0, NF/people/no dogs

Other Notes: including any potential confounding factors of concern observed (e.g., sheens, discoloration, odors, slicks, boat maintenance, plankton blooms, recent rain events, presence of animals, eelgrass, kelp wrack, floatable material):

H= none

Water Quality Measurements

Time of Measurement	Temperature (°C)	Salinity (ppt)	pH	DO (mg/L)
0851	19.0	33.71	7.93	7.25

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

QAQC Checklist:

- ✓ Field data sheet completed, notable observations recorded
- ✓ Photos taken
- ✓ All bacteria samples collected (125-mL HDPE: Total Coliform and *Enterococcus*)
- ✓ Samples collected within 25 feet of target location? If not, please describe below.
- ✓ "Clean Hands" sampling techniques followed
- ✓ Samples sealed in secondary container (plastic bag) and immediately placed on ice
- ✓ COCs filled out and cross-checked with sample labels
- ✓ Samples delivered within holding time requirements

Date: 5/23/22 Time: 12:30 Signature: [signature]

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

Station Identification: OF2-W4 / OF2-DW-5

Date: (mm/dd/yyyy) 5/23/22

Time on Station: (hh:mm) 0905

FIB SAMPLE TIME: 0905 / 0915

Water Depth: 1.0 m

Tide (ft): -0.8 ft

Time of Slack High Tide: 04:16

Weather conditions: cloudy

Wind (mph)/direction: 1-2kts (S/SW)

Water Visibility (ft): 7 1.0m

Surface Water Conditions: v. lg LH ripples, some surface dust/debris.

Bird Enumeration: n=0, n=4 seagulls / 100 m² days

Other Notes: including any potential confounding factors of concern observed (e.g., sheens, discoloration, odors, slicks, boat maintenance, plankton blooms, recent rain events, presence of animals, eelgrass, kelp wrack, floatable material):

bubbles @ water surface,
flow ~ 4 gal/min

Water Quality Measurements

Time of Measurement	Temperature (°C)	Salinity (ppt)	pH	DO (mg/L)
0909	18.8	32.70	7.93	6.77
OF2-DW-5 0915	17.8	0.61	8.76	9.49

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

QAQC Checklist:

- ✓ Field data sheet completed, notable observations recorded
- ✓ Photos taken
- ✓ All bacteria samples collected (125-mL HDPE: Total Coliform and *Enterococcus*)
- ✓ Samples collected within 25 feet of target location? If not, please describe below.
- ✓ "Clean Hands" sampling techniques followed
- ✓ Samples sealed in secondary container (plastic bag) and immediately placed on ice
- ✓ COCs filled out and cross-checked with sample labels
- ✓ Samples delivered within holding time requirements

Date: 5/23/22 Time: 12:30 Signature: [signature]

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

Station Identification: BS-W4

Date: (mm/dd/yyyy) 5/23/22

Time on Station: (hh:mm) 0920

FIB SAMPLE TIME: 0920

Water Depth: 0.3

Tide (ft): ~0.4+

Time of Slack High Tide: 04:16

Weather conditions: cloudy

Wind (mph)/direction: 2-3 kts (~SSW)

Water Visibility (ft): >0.3

Surface Water Conditions: light chop no surface

Bird Enumeration: n=2 (Heron), n=10 people, n=3 dogs

Other Notes: including any potential confounding factors of concern observed (e.g., sheens, discoloration, odors, slicks, boat maintenance, plankton blooms, recent rain events, presence of animals, eelgrass, kelp wrack, floatable material):

2 people on beach, others on yacht + 1 dog.

Water Quality Measurements

Time of Measurement	Temperature (°C)	Salinity (ppt)	pH	DO (mg/L)
0925	18.7	33.67	7.93	7.29

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

QAQC Checklist:

- ✓ Field data sheet completed, notable observations recorded
- ✓ Photos taken
- ✓ All bacteria samples collected (125-mL HDPE: Total Coliform and *Enterococcus*)
- ✓ Samples collected within 25 feet of target location? If not, please describe below.
- ✓ "Clean Hands" sampling techniques followed
- ✓ Samples sealed in secondary container (plastic bag) and immediately placed on ice
- ✓ COCs filled out and cross-checked with sample labels
- ✓ Samples delivered within holding time requirements

Date: 5/23/22 Time: 12:30 Signature: [signature]

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

Station Identification: OF1-N4 / OF1-DW-1

Date: (mm/dd/yyyy) 5/23/

Time on Station: (hh:mm) 0930

FIB SAMPLE TIME: 0930 / 0835

Water Depth: 0.3

Tide (ft): ~0.3 +

Time of Slack High Tide: 04:16

Weather conditions: cloudy

Wind (mph)/direction: 1-2 kts (S/SW)

Water Visibility (ft): ≥ 0.3

Surface Water Conditions: light wind, no debris

Bird Enumeration: =ø n=1 dog, n=1 person

Other Notes: including any potential confounding factors of concern observed (e.g., sheens, discoloration, odors, slicks, boat maintenance, plankton blooms, recent rain events, presence of animals, eelgrass, kelp wrack, floatable material):

outfall flowing ~1 gal/min

Water Quality Measurements

Time of Measurement	Temperature (°C)	Salinity (ppt)	pH	DO (mg/L)
0932	18.7	23.65	7.97	7.80
OF-1-DW-1 0935	17.9	0.73	8.43	8.87

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

QAQC Checklist:

- ✓ Field data sheet completed, notable observations recorded
- ✓ Photos taken
- ✓ All bacteria samples collected (125-mL HDPE: Total Coliform and *Enterococcus*)
- ✓ Samples collected within 25 feet of target location? If not, please describe below.
- ✓ "Clean Hands" sampling techniques followed
- ✓ Samples sealed in secondary container (plastic bag) and immediately placed on ice
- ✓ COCs filled out and cross-checked with sample labels
- ✓ Samples delivered within holding time requirements

Date: 5/23/22 Time: 12:30 Signature: [signature]

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

Station Identification: A1-1-W4 / A1-1-W4 dup

Date: (mm/dd/yyyy) 5/23/22

Time on Station: (hh:mm) 0945

FIB SAMPLE TIME: 0941 / 0946

Water Depth: 3.6m

Tide (ft): ~0.2+

Time of Slack High Tide: 04:16

Weather conditions: cloudy

Wind (mph)/direction: 2-3 S/SW

Water Visibility (ft): 2.0 m

Surface Water Conditions: light chop, no debris

Bird Enumeration: n=0, 4 people, 2 dogs on deck

Other Notes: including any potential confounding factors of concern observed (e.g., sheens, discoloration, odors, slicks, boat maintenance, plankton blooms, recent rain events, presence of animals, eelgrass, kelp wrack, floatable material):

n=6 boats @ sample time, several boats pulling anchor

1 boat in near vicinity during sampling ~40ft.

Water Quality Measurements

Time of Measurement	Temperature (°C)	Salinity (ppt)	pH	DO (mg/L)
0950	18.8	33.72	7.97	7.65

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

QAQC Checklist:

- ✓ Field data sheet completed, notable observations recorded
- ✓ Photos taken
- ✓ All bacteria samples collected (125-mL HDPE: Total Coliform and *Enterococcus*)
- ✓ Samples collected within 25 feet of target location? If not, please describe below.
- ✓ "Clean Hands" sampling techniques followed
- ✓ Samples sealed in secondary container (plastic bag) and immediately placed on ice
- ✓ COCs filled out and cross-checked with sample labels
- ✓ Samples delivered within holding time requirements

Date: 5/23/22 Time: 12:30 Signature: [signature]

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

Station Identification: A1-2-W4

Date: (mm/dd/yyyy) 5/23/22

Time on Station: (hh:mm) 0955

FIB SAMPLE TIME: 0955

Water Depth: 4.8m

Tide (ft): ~0.2+

Time of Slack High Tide: 04:16

Weather conditions: cloudy

Wind (mph)/direction: 1-3 Kts S/SW

Water Visibility (ft): 2.7m

Surface Water Conditions: Light ripples, no debris

Bird Enumeration: n=0, 2 people 1 dog

Other Notes: including any potential confounding factors of concern observed (e.g., sheens, discoloration, odors, slicks, boat maintenance, plankton blooms, recent rain events, presence of animals, eelgrass, kelp wrack, floatable material):

n = 3 boats @ anchor, none in vicinity of sample

Water Quality Measurements

Time of Measurement	Temperature (°C)	Salinity (ppt)	pH	DO (mg/L)
1050	18.8	33.73	7.99	7.99

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

QAQC Checklist:

- ✓ Field data sheet completed, notable observations recorded
- ✓ Photos taken
- ✓ All bacteria samples collected (125-mL HDPE: Total Coliform and *Enterococcus*)
- ✓ Samples collected within 25 feet of target location? If not, please describe below.
- ✓ "Clean Hands" sampling techniques followed
- ✓ Samples sealed in secondary container (plastic bag) and immediately placed on ice
- ✓ COCs filled out and cross-checked with sample labels
- ✓ Samples delivered within holding time requirements

Date: 5/23/22 Time: 12:30 Signature: [signature]

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

Station Identification: A1-3-WY

Date: (mm/dd/yyyy) 5/23/22

Time on Station: (hh:mm) 1000

FIB SAMPLE TIME: 1000

Water Depth: 4.9

Tide (ft): ~0.2 ft

Time of Slack High Tide: 04:16

Weather conditions: cloudy

Wind (mph)/direction: 2-3kts (S/SW)

Water Visibility (ft): 2.5m

Surface Water Conditions: light chop

Bird Enumeration: n=0, n=2 people, 0 dogs

Other Notes: including any potential confounding factors of concern observed (e.g., sheens, discoloration, odors, slicks, boat maintenance, plankton blooms, recent rain events, presence of animals, eelgrass, kelp wrack, floatable material):

n=3 boats @ anchor
no boats in vicinity during sampling

Water Quality Measurements

Time of Measurement	Temperature (°C)	Salinity (ppt)	pH	DO (mg/L)
1003	18.9	33.74	7.99	7.91

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

QAQC Checklist:

- ✓ Field data sheet completed, notable observations recorded
- ✓ Photos taken
- ✓ All bacteria samples collected (125-mL HDPE: Total Coliform and *Enterococcus*)
- ✓ Samples collected within 25 feet of target location? If not, please describe below.
- ✓ "Clean Hands" sampling techniques followed
- ✓ Samples sealed in secondary container (plastic bag) and immediately placed on ice
- ✓ COCs filled out and cross-checked with sample labels
- ✓ Samples delivered within holding time requirements

Date: 5/23/22 Time: 12:20 Signature: [signature]

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

Station Identification: NK-W4

Date: (mm/dd/yyyy) 5/23/22

Time on Station: (hh:mm) 1016

FIB SAMPLE TIME: 1010

Water Depth: 0.3

Tide (ft): +0.1+

Time of Slack High Tide: 04:16

Weather conditions: cloudy

Wind (mph)/direction: 1-3 kts S/SW

Water Visibility (ft): > 0.3

Surface Water Conditions: calm, no debris.

Bird Enumeration: 7=6, 9 people on beach, no dogs

Other Notes: including any potential confounding factors of concern observed (e.g., sheens, discoloration, odors, slicks, boat maintenance, plankton blooms, recent rain events, presence of animals, eelgrass, kelp wrack, floatable material):

nil Kayak on beach.

4 boats reachored from la playa 150 yards south of NK Beach

Water Quality Measurements

Time of Measurement	Temperature (°C)	Salinity (ppt)	pH	DO (mg/L)
1012	18.8	33.76	7.97	7.80

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

QAQC Checklist:

- ✓ Field data sheet completed, notable observations recorded
- ✓ Photos taken
- ✓ All bacteria samples collected (125-mL HDPE: Total Coliform and *Enterococcus*)
- ✓ Samples collected within 25 feet of target location? If not, please describe below.
- ✓ "Clean Hands" sampling techniques followed
- ✓ Samples sealed in secondary container (plastic bag) and immediately placed on ice
- ✓ COCs filled out and cross-checked with sample labels
- ✓ Samples delivered within holding time requirements

Date: 5/23/22 Time: 12:30 Signature: [signature]

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

Station Identification: IB-W4

Date: (mm/dd/yyyy) ~~2020~~ 5/23/22 Time on Station: (hh:mm) 1020

FIB SAMPLE TIME: 1020 Water Depth: 0.3

Tide (ft): ~0.1 ft Time of Slack High Tide: 04:16

Weather conditions: cloudy

Wind (mph)/direction: 2-3 kt (S/SW) Water Visibility (ft): >0.3

Surface Water Conditions: light chop, no debris

Bird Enumeration: n=1 gull, n=4 people, one swimmer on beach n=2 dogs.

Other Notes: including any potential confounding factors of concern observed (e.g., sheens, discoloration, odors, slicks, boat maintenance, plankton blooms, recent rain events, presence of animals, eelgrass, kelp wrack, floatable material):

none

Water Quality Measurements

Time of Measurement	Temperature (°C)	Salinity (ppt)	pH	DO (mg/L)
1022	19.2	33.80	7.98	8.15

PORT OF SAN DIEGO
SHELTER ISLAND YACHT BASIN
2022 Bacteria Special Study

FIELD WATER QUALITY DATA FORM

QAQC Checklist:

- ✓ Field data sheet completed, notable observations recorded
- ✓ Photos taken
- ✓ All bacteria samples collected (125-mL HDPE: Total Coliform and *Enterococcus*)
- ✓ Samples collected within 25 feet of target location? If not, please describe below.
- ✓ "Clean Hands" sampling techniques followed
- ✓ Samples sealed in secondary container (plastic bag) and immediately placed on ice
- ✓ COCs filled out and cross-checked with sample labels
- ✓ Samples delivered within holding time requirements

Date: 5/23/22 Time: 12:30 Signature: [signature]

APPENDIX B

FIELD DATA SUMMARY TABLES

Station Identification	Further Identification	Survey Date	Time on Station	FIB Sample Time	Water Depth (m)	Tide (ft)	Time of Slack High Tide	Weather Conditions	Wind Direction	Wind Speed Minimum (mph)	Wind Speed Maximum (mph)	Water Visibility (m)	Surface Water Conditions	Number of Birds	Number of People	Number of Vessels	Number of Dogs	Water Quality - Time of Measurement	Water Quality - Temperature (◦C)	Water Quality - Salinity (ppt)	Water Quality - pH	Water Quality - DO (mg/L)	Other Notes
Guest Dock	W1	05/06/22	6:00	6:00	6.0	1.4	23:58	Cloudy, Calm	NA	0	0	4.1	Calm	2	0	~20	0	6:05	18.5	34.15	8.02	7.82	Sample collected in marina/harbor, number of vessels is approximate. Some oily sheen throughout docks. Patchy, avoided during sampling by moving 75ft west
Kona Kai	W1	05/06/22	6:10	6:10	2.5	1.1	23:58	Cloudy, Calm (clearing)	NA	0	0	2.5	Calm	1	0	~20	0	6:15	18.6	34.36	8.05	7.36	Sample collected in marina/harbor, number of vessels is approximate.
REF-1	W1	05/06/22	6:25	6:25	20.4	1.0	23:58	Cloudy, calm	NA	0	0	2.9	Calm, some texture	0	0	0	0	6:28	18.7	34.45	8.09	7.95	.
MC-1	W1	05/06/22	6:35	6:35	5.3	1.0	23:58	Cloudy, Calm	NA	0	0	2.8	Calm	0	0	0	0	6:38	18.6	34.47	8.09	8.12	no sheen or surface debris or kelp
MC-2	W1	05/06/22	6:45	6:45	5.0	0.9	23:58	Calm	E	0	1	2.7	Calm, slight texture	0	0	0	0	6:48	18.8	34.50	8.07	7.91	no surface debris or kelp
Fuel Pier	W1	05/06/22	6:55	6:55	4.5	0.9	23:58	Cloudy, calm	E	0	1	2.3	Calm	0	1	6	0	6:58	18.7	34.51	8.02	7.15	Vessel running bilge while fueling within 10 yds of sampling location
OF-3	W1	05/06/22	7:00	7:00	1.9	0.8	23:58	Calm	NA	0	0	2.4	Calm	0	0	~20	0	7:05	18.7	34.50	8.01	7.20	Sample collected in marina/harbor, number of vessels is approximate. Sample collected in marina/harbor, number of vessels is approximate.no surface debris or kelp
OF-2	W1	05/06/22	7:20	7:20	0.3	0.6	23:58	Cloudy, calm	S	0	1	0.3	Calm	0	2	0	0	7:25	18.6	34.39	8.04	7.18	Discharge from OF2 observed, salinity 1.49ppt and 18 inches above waterline. No Surface debris
Bessemer Street	W1	05/06/22	7:35	7:40	0.3	0.6	23:58	Cloudy, Calm	S	0	1	0.3	Calm, some bubbles on surface	0	1	0	0	7:44	18.5	34.32	8.05	7.24	DUP collected at 0741. No discharge from outfall, one strand of feather boa kelp on beach. Some floating kelp offshore
OF-1	W1	05/06/22	7:50	7:50	0.3	0.5	23:58	Cloudy, calm	NA	0	0	1.8	Calm	0	2	0	0	7:58	18.6	34.46	8.06	7.73	No discharge from OF1
A1-1	W1	05/06/22	8:00	8:00	3.6	0.5	23:58	Calm	S	0	1	2.8	Calm	0	0	0	0	8:02	18.6	34.49	8.09	8.10	.
A1-2	W1	05/06/22	8:05	8:05	4.5	0.5	23:58	Cloudy, Calm	S	1	2	2.9	Some texture	0	0	1	0	8:07	18.6	34.50	8.09	8.06	One boat anchored 150 ft SW during sampling
A1-3	W1	05/06/22	8:10	8:10	5.0	0.5	23:58	Cloudy, calm	S	0	1	3.2	Calm	0	0	1	0	8:14	18.7	34.52	8.09	8.05	One vessel anchored 200 ft SW
North Kellogg	W1	05/06/22	8:20	8:20	0.6	0.5	23:58	Cloudy, calm	S	0	1	0.6	calm, slight texture	0	1	0	0	8:25	18.6	34.52	8.10	8.17	Sandy bottom, one piece of eelgrass floating, avoided during sampling
Kellogg Beach	W1	05/06/22	8:30	8:30	0.6	0.5	23:58	Cloudy, Breezy	S	1	2	0.6	Some texture	1	5	0	5	8:32	18.6	34.44	8.09	8.33	Filamentous green algae growing on bottom, see photos.
REF-1	WKD	05/07/22	6:20	6:25	18.4	1.5	0:48	Cloudy, Breezy	S	7	8	2.5	Textured	0	0	0	0	6:28	19.2	34.26	7.97	8.14	.
A1-1	R1-WKD1	05/07/22	6:40	6:40	3.9	1.5	0:48	Cloudy, Breezy	S	5	5	2.5	Slight texture	0	0	20	0	6:45	19.1	34.40	8.05	8.16	.
A1-2	R1-WKD1	05/07/22	6:45	6:50	5.0	1.5	0:48	Cloudy, Breezy	S	5	5	2.9	Slight texture	0	0	20	0	6:50	19.0	34.45	8.05	8.15	.
A1-3	R1-WKD1	05/07/22	6:55	6:55	5.3	1.4	0:48	Cloudy, Breezy	S	3.5	3.5	3.4	Slight texture	0	0	20	0	7:00	19.2	34.48	8.05	8.02	DUP Collected at 06:56
OF-2-DW1	WKD1	05/07/22	7:15	7:20	0.3	1.1	0:48	Cloudy, Breezy	S	1	2	2	calm, Some bubbling	0	0	0	0	7:15	17.7	3.28	8.48	9.04	Flow from outfall estimated at 2 gpm. WQ from RW: Temp (19.1), Salinity (33.80), pH (8.02), DO (7.45)
A1-1	R2-WKD1	05/07/22	7:40	7:40	3.8	1.0	0:48	Cloudy, Calm	S	3	3	2.5	Light texture	0	0	20	0	7:42	19.0	34.44	8.11	8.13	.
A1-2	R2-WKD1	05/07/22	7:45	7:45	5.0	1.0	0:48	Cloudy, Calm	S	1	2	3.0	Calm	0	3	20	0	7:49	19.0	34.50	8.08	8.14	Paddle boarder along Bessemer (1)
A1-3	R2-WKD1	05/07/22	7:55	7:55	5.1	0.8	0:48	Cloudy, Calm	S	0	1	3.3	Calm	0	6	20	0	7:57	19.1	34.53	8.08	8.04	All people topside
A1-1	R3-WKD1	05/07/22	8:40	8:40	3.7	0.6	0:48	Cloudy, Breezy	S	7.5	7.5	2.4	Slight texture	0	6	20	0	7:45	19.0	34.46	8.14	8.18	2 paddle boarders
A1-2	R3-WKD1	05/07/22	8:50	8:50	4.5	0.5	0:48	Cloudy, Breezy	S	7	7	2.8	Light texture	0	0	20	0	8:52	19.0	34.51	8.12	8.22	.
A1-3	R3-WKD1	05/07/22	8:55	8:55	4.9	0.5	0:48	Cloudy, Calm	S	4	4	3.3	Slight texture	0	4	21	0	8:58	19.2	34.54	8.11	8.06	3 paddle boarders, 1 kayaker nearby
REF-1	SH	05/10/22	7:55	7:55	21.3	3.0	5:18	Sunny, Calm	NA	0	0	2.3	Calm	0	0	21	0	7:57	18.5	34.20	8.06	7.83	.
A1-1	R1-SH	05/10/22	8:13	8:15	4.3	3.0	5:18	Sunny, Calm	NA	0	0	2.3	Calm	0	1	21	0	8:16	19.2	34.49	8.11	7.85	a few strands of kelp on surface
A1-2	R1-SH	05/10/22	8:20	8:20	5.0	2.9	5:18	Sunny, Calm	NA	0	0	2.6	Calm	0	4	21	0	8:21	19.2	34.54	8.11	7.90	One paddle boarder and three people topside
A1-3	R1-SH	05/10/22	8:27	8:30	5.5	2.8	5:18	Sunny, Calm	S	0	1	2.5	Calm	0	0	21	0	8:32	19.4	34.56	8.11	7.80	A1-3-R1-SH-DUP conducted at 0831
A1-1	R2-SH	05/10/22	9:15	9:15	4.0	1.8	5:18	Sunny, mostly calm	NW	1	3	2.3	Mostly calm	0	5	21	2	9:22	19.4	34.60	8.18	7.90	Dogs on two different vessels. One kayaker. Some people out on dinghy's.
A1-2	R2-SH	05/10/22	9:25	9:25	4.8	1.8	5:18	Sunny, mostly calm	NW	1	2	2.5	light breeze, some bubbles	0	3	21	2	9:26	19.4	34.59	8.13	7.92	.
A1-3	R2-SH	05/10/22	9:30	9:30	5.3	1.8	5:18	Sunny, light breeze	W	2	4	2.8	Slight texture	0	7	21	2	9:35	19.4	34.61	8.12	7.86	One paddle boarded and one diver, one topside cleaner ~50 yds of sample collection (polishing). See photo.
OF-2-DW2	SH	05/10/22	9:45	9:45	0.3	1.5	5:18	Sunny, light breeze	W, NW	1	2	NA	Mostly calm	0	5	0	3	9:45	17.3	0.68	8.81	9.47	DW-2 Flow ~2 gpm. From RW: temp 19.4, sal: 34.44, pH: 8.05, DO: 6.87. Taken at 1 ft depth 1 ft from outfall
A1-1	R3-SH	05/10/22	10:12	10:15	3.6	1.2	5:18	Sunny, light breeze	W, NW	2	4	2.7	Light texture	0	0	21	1	10:17	19.7	34.62	8.14	7.70	Several dinghy's out, on beach
A1-2	R3-SH	05/10/22	10:20	10:20	4.6	1.1	5:18	Sunny, light breeze	W, NW	2	3	2.5	Light texture	0	3	21	2	10:24	19.6	34.63	8.12	7.91	.
A1-3	R3-SH	05/10/22	10:30	10:30	5.0	1.0	5:18	Sunny, light breeze	W, NW	2	4	2.9	Light texture	0	2	21	2	10:35	19.6	34.64	8.12	7.83	.
REF-1	W2	05/13/22	7:50	7:50	20.9	4.6	8:02	Sunny, Calm	NA	0	1	3.7	Calm	0	0	0	0	7:58	16.2	33.26	7.89	6.22	Rental meter used for WQ readings.
A1-1	W2	05/13/22	8:15	8:15	4.8	4.6	8:02	Sunny, Calm	NA	0	0	2.7	Calm	0	3	3	1	8:20	17.7	33.66	7.98	6.50	Some dust/debris on water after several days of high winds, Santa Ana's last night. A couple boats remaining in the anchorage.
A1-2	W2	05/13/22	8:24	8:25	5.5	4.5	8:02	Sunny, Calm	E	0	1	2.8	Mostly calm	0	4	3	0	8:27	17.7	33.69	8.01	6.58	3 prone paddlebroads and 1 standup
A1-3	W2	05/13/22	8:30	8:30	5.9	4.5	8:02	Sunny, Calm	E	0	1	2.6	Calm, minor dust/debris	0	3	3	0	8:34	17.8	33.73	8.02	6.74	2 people on deck, 1 paddleboard
OF-1	W2	05/13/22	8:37	8:40	0.3	4.4	8:02	Sunny, Calm	NA	0	0	0.3	calm, Some pollen/debris. See photo.	1	5	0	1	8:44	18.0	33.83	8.02	6.42	5 people on walking path
Bessemer Street	W2	05/13/22	8:48	8:50	0.6	4.3	8:02	Sunny, Calm	NA	0	0	0.6	Some surface film/bubble see photo	0	4	0	0	8:53	18.1	33.76	8.03	6.05	4 people on walking path
OF-2	W2	05/13/22	9:00	9:00	1.0	4.2	8:02	Sunny, Calm	NA	0	0	1	Some pollen/ surface debris	0	6	0	0	9:02	17.8	32.76	8.02	6.15	6 people on walking path. Outfall inundated with bay water due to tide.
OF-3	W2	05/13/22	9:15	9:15	3.0	4.1	8:02	Sunny, Calm	NA	0	1	2.1	Some surface film/ dust, see photo	0	1	~20	0	9:17	18.1	33.88	8.01	5.49	Sample collected in marina/harbor, number of vessels is approximate. 1 person on dock
Fuel Pier	W2	05/13/22	9:25	9:25	5.4	4.0	8:02	Sunny, Calm	E	1	1	2.5	Some sheen near sample area avoided during sampling	0	4	1	0	9:30	18.1	33.86	7.98	5.67	.
MC-2	W2	05/13/22	9:35	9:35	5.7	4.0	8:02	Sunny, Calm	E	1	1	2.8	Mostly calm	0	1	0	0	9:38	18.1	33.91	8.06	6.41	Topside cleaning within 50 yds
MC-1	W2	05/13/22	9:45	9:45	6.1	4.0	8:02	Sunny, Calm	E	0	1	2.9	Mostly calm	0	2	2	0	9:47	18.1	33.86	8.06	7.25	.
North Kellogg	W2	05/13/22	9:55	9:55	0.1	3.9	8:02	Sunny, Calm	E	0	1	0.1	Calm, some bubbles	0	5	0	1	9:58	18.5	33.86	8.04	7.05	.
Kellogg Beach	W2	05/13/22	10:00	10:00	0.2	3.9	8:02	Sunny, Calm	E	0	1	0.2	Calm, \Some bubble, algae debris	0	13	0	1	10:04	18.8	33.92	8.06	7.10	.
Guest Dock	W2	05/13/22	10:10	10:10	6.8	3.9	8:02	Sunny, Calm	NA	0	0	3.7	Calm, Some dust/debris	0	3	~20	0	10:12	17.8	33.88	8.04	6.71	Sample collected in marina/harbor, number of vessels is approximate. 3 people on docks
Kona Kai	W2	05/13/22	10:16	10:17	0.5	3.8	8:02	Sunny, light breeze	W	1	1	0.5	Calm	0	1	~20	0	10:20	18.3	33.86	8.03	7.12	Sample collected in marina/harbor, number of vessels is approximate. KK-W2-DUP collected at 10:18. 1 person on beach.
REF-1	W3	05/20/22	5:50	5:55	20.0	0.2	0:14	Sunny, Calm	S	12	15	3.4	Some sea foam bubbles	0	0	0	0	6:00	18.5	33.59	7.85	7.68	.
Guest Dock	W3	05/20/22	6:04	6:05	6.0	0.2	0:14	Overcast, Breezy	S	2	5	3.1	No debris light wind	2	0	~20	0	6:10	18.0	33.64	7.91	7.81	Sample collected in marina/harbor, number of vessels is approximate.
Kona Kai	W3	05/20/22	6:13	6:15	0.3	0.0	0:14	Overcast, Breezy	S	2	3	0.3	Slight texture	0	0	~20	0	6:20	17.9	33.62	7.94	6.97	Sample collected in marina/harbor, number of vessels is approximate.
MC-1	W3	05/20/22	6:30	6:30	5.1	0.0	0:14	Overcast, Breezy	S	5	8	3.4	Slight texture	0	0	0	0	6:32	18.2	33.72	7.97	8.24	.
Fuel Pier	W3	05/20/22	6:44	6:45	4.2	-0.4	0:14	Overcast, Breezy	S	2	5	2.9	Slight texture	1	1	5	0	6:50	18.3	33.73	7.97	8.06	.
MC-2	W3	05/20/22	6:38	6:40	4.7	-0.3	0:14	Overcast, Breezy	S	5	7	3.4	Moderate texture	0	0	0	0	6:42	18.3	33.74	7.99	8.30	.
OF-3	W3	05/20/22	6:55	6:55	1.6	-0.5	0:14	Overcast, Breezy	S	1	2	1.6	Clear. Some surface debris.	0	0	~20	0	7:00	18.5	33.75	7.97	7.93	Sample collected in marina/harbor, number of vessels is approximate. OF-3-W3-DUP collected at 7:00
OF-2	W3	05/20/22	7:15	7:15	0.3	-0.7	0:14	Overcast, Breezy	S	2	4	0.3	Bubbles from discharging outfall, some sheen	1	1	0	1	7:30	18.0	31.67	7.93	7.57	OF discharge sample also collected (7:20). WQ: temp- 17.5, sal: 0.75, pH- 8.45, DO- 9.03
Bessemer Street	W3	05/20/22	7:40	7:40	1.0	-0.8	0:14	Overcast, Breezy	S	7	8	1	Some foam on beach along water	0	2	0	1	7:45	18.1	33.66	7.98	8.16	.
OF-1	W3	05/20/22	7:50	7:50	0.3	-0.9	0:14	Overcast, Breezy	S	5	7	0.3	Some light foam on beach	1	0	0	0	7:55	18.0	33.70	7.97	7.82	.
A1-1	W3	05/20/22	8:00	8:00	3.3	-0.9	0:14	Overcast, Breezy	S	10	12	2.7	Mild chop	0	0	2	0	8:03	18.2	33.76	8.00	8.18	2 vessels arrived ~0700 in anchorage
A1-2	W3	05/20/22	8:10	8:10	4.5	-0.9	0:14	Overcast, Breezy	S	7	8	2.75	Mild chop	0	1	2	0	8:13	18.1	33.77	8.00	8.18	1 person on boat
A1-3	W3	05/20/22	8:15	8:15	4.5	-0.8	0:14	Overcast, Breezy	S	5	7	2.9	Mild chop	0	1	2	0	8:20	18.2	33.77	8.00	8.18	.
North Kellogg	W3	05/20/22	8:25	8:25	0.6	-0.8	0:14	Overcast, Breezy	S	5	6	0.6	Some floating eelgrass, kelp in water along beach, see Rolf's photo	0	1	0	1	8:30	18.0	33.77	7.97	7.95	Moderate debris in water column (kelp strands, eelgrass)
Kellogg Beach	W3	05/20/22	8:35	8:35	0.3	-0.8	0:14	Overcast, Breezy	S	8	10	0.3	Choppy	0	1	0	1	8:38	17.6	33.60	7.97	7.88	Some debris. Small waves on beach
REF-1	WKD2	05/21/22	6:12	6:15	19.6	1.1	1:23	Cloudy	S	3	5	2.6	Light chop, bubbles on surface	0	0	2	0	6:20	18.2	33.57	7.94	7.79	2 passing boats
A1-1	R1-WKD2	05/21/22	6:34	6:35	3.9	0.8	1:23	Cloudy, Breezy	S	4	4	2.4	Light ripples	0	0	15	0	6:40	18.1	33.67	7.99	8.13	.
A1-2	R1-WKD2	05/21/22	6:43	6:45	4.8	0.7	1:23	Cloudy, Breezy	S	3	4	2.1	Light surface waves, no debris	0	0	15	0	6:46	18.1	33.69	7.99	8.05	.
A1-3	R1-WKD2	05/21/22	6:50	6:50	5.2	0.6	1:23	Cloudy, Breezy	S	3	4	2.4	Light wind chop	4	0	15	0	6:55	18.2	33.69	7.99	8.05	.
OF-2	WKD2	05/21/22	7:00	7:00	1.0	0.4	1:23	Cloudy, Breezy	S	2	3	1	Bubbles on surface	0	0	0	0	7:00	18.1	33.59	7.96	7.52	OF DW Flow = 2 gal/min; DW flow sample collected at 0710, Temp: 17.3, Salinity: 0.84, pH: 8.71, DO: 9.58
A1-1	R2-WKD2	05/21/22	7:35	7:35	3.9	0.1	1:23	Cloudy, Breezy	S	4	5	2.4	Light ripples	0	2	15	1	7:36	18.1	33.72	8.07	8.05	2 paddle boarders, 1 dog on paddle board
A1-2	R2-WKD2	05/21/22	7:50	7:50	4.3	-0.2	1:23	Cloudy, Breezy	S	4	5	2.9	Light chop, no debris	0	1	15	0	7:54	18.2	33.72	8.00	8.20	DUP collected at 07:51; 1 person topside
A1-3	R2-WKD2	05/21/22	8:00	8:00	4.9	-0.3	1:23	Cloudy, Breezy	S	3	4	2.4	Light chop, no debris	1	1	15	0	8:05	18.2	33.73	7.99	7.98	1 person topside, 1 gull
A1-1	R3-WKD2	05/21/22	8:35	8:35	3.5	-0.4	1:23	Cloudy, Breezy	S	3	5	2.5	Light chop, no debris	0	0	15	0	8:38	18.2	33.74	8.04	8.23	.

Station Identification	Further Identification	Survey Date	Time on Station	FIB Sample Time	Water Depth (m)	Tide (ft)	Time of Slack High Tide	Weather Conditions	Wind Direction	Wind Speed Minimum (mph)	Wind Speed Maximum (mph)	Water Visibility (m)	Surface Water Conditions	Number of Birds	Number of People	Number of Vessels	Number of Dogs	Water Quality - Time of Measurement	Water Quality - Temperature (·C)	Water Quality - Salinity (ppt)	Water Quality - pH	Water Quality - DO (mg/L)	Other Notes
A1-2	R3-WKD2	05/21/22	8:45	8:45	4.6	-0.5	1:23	Cloudy, Breezy	S	3	4	2.7	Light chop, no debris	0	0	15	0	8:47	18.2	33.74	8.02	8.24	.
A1-3	R3-WKD2	05/21/22	8:50	8:50	4.7	-0.5	1:23	Cloudy, Breezy	S	4	5	2.7	Light chop, no debris	0	3	15	0	8:53	18.2	33.74	8.00	8.04	3 people topside
REF-1	W4	05/23/22	8:00	8:00	20.8	2.0	4:16	Cloudy, Breezy	S, SW	3	3	3.1	Slight texture	0	0	2	0	8:04	18.4	33.46	7.95	7.66	2 passing boats
Guest Dock	W4	05/23/22	8:10	8:10	6.6	2.0	4:16	Cloudy	S, SW	0	1	4	Calm	0	1	~20	0	8:15	18.6	33.59	7.91	7.22	Sample collected in marina/harbor, number of vessels is approximate.
Kona Kai	W4	05/23/22	8:20	8:20	0.3	1.9	4:16	Cloudy, calm	S, SW	1	1	0.3	light ripples	0	2	~20	0	8:21	18.6	33.62	7.91	7.18	Sample collected in marina/harbor, number of vessels is approximate. 1 passing vessel
MC-1	W4	05/23/22	8:27	8:30	5.5	1.8	4:16	Cloudy, calm	S, SW	1	1	1.9	light ripples	0	1	0	0	8:31	18.7	33.68	7.97	7.99	1 strand of kelp on surface
MC-2	W4	05/23/22	8:35	8:35	5.3	1.6	4:16	Cloudy, Breezy	S, SW	1	2	3.1	Light ripples	0	0	0	0	8:37	18.9	33.70	7.96	7.86	.
Fuel Pier	W4	05/23/22	8:45	8:45	4.5	1.2	4:16	Cloudy, calm	S, SW	0	1	2.3	Sheen, some debris including fish waste	0	1	6	0	8:46	18.9	33.70	7.94	7.54	some debris including fish waste .
OF-3	W4	05/23/22	8:50	8:50	2.0	1.0	4:16	Cloudy, calm	S, SW	0	1	2.1	Calm	0	1	~20	0	8:51	19.0	33.71	7.93	7.25	Sample collected in marina/harbor, number of vessels is approximate.
OF-2	W4	05/23/22	9:05	9:05	1.0	0.8	4:16	Cloudy, Breezy	S, SW	1	2	1	Bubbles from discharge	0	4	0	2	9:09	18.8	32.70	7.93	6.77	OF 2 flowing at ~4 gpm. OF2- DW -5: temp-17.8, sal- 0.61, ph-8.76, DO- 9.49. Sample collected at 0915
Bessemer Street	W4	05/23/22	9:20	9:20	0.3	0.4	4:16	Cloudy, Calm	S, SW	2	3	0.3	light chop	1	10	0	3	9:25	18.7	33.67	7.93	7.29	.
OF-1	W4	05/23/22	9:30	9:30	0.3	0.3	4:16	Cloudy, Breezy	S, SW	1	2	0.3	light wind	0	1	0	1	9:32	18.7	33.65	7.97	7.80	Outfall actively discharging (~1 gpm). From discharge: Temp- 17.9, sal-0.73, ph- 8.43, DO- 8.87. Sample collected at 0935.
A1-1	W4	05/23/22	9:45	9:45	3.6	0.2	4:16	Cloudy, Breezy	S, SW	2	3	2	light chop	0	4	6	2	9:50	18.8	33.72	7.97	7.65	6 vessels remaining in anchorage. One leaving at 0947, 2 others preparing to leave. 1 boat ~40 ft from sampling location. 11 counted at 0830 before sampling. DUP collected at 0946.
A1-2	W4	05/23/22	9:55	9:55	4.8	0.2	4:16	Cloudy	S, SW	1	3	2.7	light ripples	0	2	3	1	10:00	18.8	33.73	7.99	7.99	3 vessels in anchorage. 3 others recently departed.
A1-3	W4	05/23/22	10:00	10:00	4.9	0.2	4:16	Cloudy	S, SW	2	3	2.5	Light chop	0	2	3	0	10:03	18.9	33.74	7.99	7.91	3 vessels in anchorage, none in vicinity during sampling
North Kellogg	W4	05/23/22	10:10	10:10	0.3	0.1	4:16	Cloudy, Breezy	S, SW	1	3	0.3	Clear, calm	0	4	1	0	10:12	18.8	33.76	7.97	7.80	1 kayak and 4 people on beach. 4 vessels anchored at moorings nearby, ~150 yds south. See photo. Appeared to have re-anchored form La playa
Kellogg Beach	W4	05/23/22	10:20	10:20	0.3	0.1	4:16	Cloudy, Breezy	S, SW	2	3	0.3	light chop	1	4	0	2	10:22	19.2	33.80	7.98	8.05	One swimmer, 2 dogs, 4 people and one gull observed on beach

Notes: A1 = A-1 Anchorage; DO = dissolved oxygen; DW = dry weather flow (discharge observed from outfall); gpm = gallons per minute; MC = main channel; mg/L = milligrams per liter; NA = not applicable; NR = not recorded; NW = northwest; OF = Outfall; ppt = parts per thousand; REF = reference; RW = receiving water; S = south; SW = southwest; W = west; W# = week #; WKD = weekend; WQ = water quality

SIYB Bacteria Special Study 2022- Field Water Quality Data Summary: Dry Weather Flow and Receiving Water									
Sample Date	Station Identification	FIB Sample Time	Discharge or Receiving Water (RW)?	Water Quality - Temperature (◦C)	Water Quality - Salinity (ppt)	Water Quality - pH	Water Quality - DO (mg/L)	Estimated Flow (gpm)	Notes
5/6/2022	OF-2-W1	NA	Discharge	NA	1.49	NA	NA	NR	No discharge FIB sample collected, salinity measurement only.
5/7/2022	OF-2-DW1-WKD1	7:20	Discharge	17.7	3.28	8.48	9.04	2	Discharge FIB sample.
5/7/2022	OF-2-WKD1	NA	RW	19.1	33.8	8.02	7.45	NA	No receiving water FIB sample collected, WQ only.
5/10/2022	OF-2-DW2-SH	9:45	Discharge	17.3	0.68	8.81	9.47	2	Discharge FIB sample.
5/10/2022	OF-2-SH	NA	RW	19.4	34.44	8.05	6.87	NA	No receiving water FIB sample collected, WQ only.
5/13/2022	OF-2-W2	9:00	RW	17.8	32.76	8.02	6.15	NA	No discharge FIB sample collected, outfall inundated with bay water due to high tide.
5/20/2022	OF-2-DW3-W3	7:20	Discharge	17.5	0.75	8.45	9.03	NR	Discharge FIB sample.
5/20/2022	OF-2-W3	7:15	RW	18.0	31.67	7.93	7.57	NA	Receiving water FIB sample.
5/21/2022	OF-2-DW3-WKD2	7:10	Discharge	17.3	0.84	8.71	9.58	2	Discharge FIB sample. Sample incorrectly labelled "DW3", should be "DW4".
5/21/2022	OF-2-WKD2	7:00	RW	18.1	33.59	7.96	7.52	NA	Receiving water FIB sample.
5/23/2022	OF-2-DW5-W4	9:15	Discharge	17.8	0.61	8.76	9.49	4	Discharge FIB sample.
5/23/2022	OF-2-W4	9:05	RW	18.8	32.7	7.93	6.77	NA	Receiving water FIB sample.
5/23/2022	OF-1-DW1-W4	9:35	Discharge	17.9	0.73	8.43	8.87	1	Discharge FIB sample.
5/23/2022	OF-1-W4	9:30	RW	18.7	33.65	7.97	7.8	NA	Receiving water FIB sample.

Notes: DO = dissolved oxygen; DW = dry weather flow (discharge observed from outfall); FIB = fecal indictor bacteria; gpm = gallons per minute; mg/L = milligrams per liter; NA = not applocable; NR = not recorded; OF = Outfall; ppt = parts per thousand; RW = receiving water; WQ = water quality

APPENDIX C

MICROBIOLOGY LABORATORY REPORTS

Environmental Laboratory Network, Inc.
dba EnviroMatrix Analytical

13 May 2022

Wood Environment & Infrastructure Solutions, Inc. **EMA Log #: 22E0190**
Attn: Kate Buckley
9177 Sky Park Court
San Diego, CA 92123

Project: POSD-Bacteria Shelter Island San Diego Bay/POSD - SIYB Bacteria Special Study/Project:2015100116/ Org:3151/GL:573000

Enclosed are the results of analyses for samples received by the laboratory on 05/06/22 09:45. Samples were analyzed pursuant to client request utilizing EPA or other ELAP approved methodologies. Environmental Laboratory Network, Inc. certifies that this data is in compliance both technically and for completeness.

Jenny Douglas
President/CEO
Environmental Laboratory Network, Inc.
dba EnviroMatrix Analytical

CA ELAP Certification #: 2564

Client Name: Wood Environment & Infrastructure Solutions, Inc. **EMA Log #: 22E0190**
Project Name: POSD-Bacteria Shelter Island San Diego Bay

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MC-1-W1	22E0190-01	Seawater	05/06/22 06:35	05/06/22 09:45
MC-2-W1	22E0190-02	Seawater	05/06/22 06:45	05/06/22 09:45
OF-1-W1	22E0190-03	Seawater	05/06/22 07:50	05/06/22 09:45
OF-2-W1	22E0190-04	Seawater	05/06/22 07:20	05/06/22 09:45
OF-3-W1	22E0190-05	Seawater	05/06/22 07:00	05/06/22 09:45
FP-W1	22E0190-06	Seawater	05/06/22 06:55	05/06/22 09:45
GD-W1	22E0190-07	Seawater	05/06/22 06:00	05/06/22 09:45
BS-W1	22E0190-08	Seawater	05/06/22 07:40	05/06/22 09:45
KK-W1	22E0190-09	Seawater	05/06/22 06:10	05/06/22 09:45
NK-W1	22E0190-10	Seawater	05/06/22 08:20	05/06/22 09:45
KB-W1	22E0190-11	Seawater	05/06/22 08:30	05/06/22 09:45
REF-1-W1	22E0190-12	Seawater	05/06/22 06:25	05/06/22 09:45
A1-1-W1	22E0190-13	Seawater	05/06/22 08:00	05/06/22 09:45
A1-2-W1	22E0190-14	Seawater	05/06/22 08:05	05/06/22 09:45
A1-3-W1	22E0190-15	Seawater	05/06/22 08:10	05/06/22 09:45
FB-1-W1	22E0190-16	DI Water	05/06/22 08:45	05/06/22 09:45
BS-DUP-W1	22E0190-17	Seawater	05/06/22 07:41	05/06/22 09:45

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client Name: Wood Environment & Infrastructure Solutions, Inc. **EMA Log #: 22E0190**
Project Name: POSD-Bacteria Shelter Island San Diego Bay

Microbiological Parameters by Standard Methods

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Analyst	Batch	Sample Prepared Sample Analyzed	Method	Notes
MC-1-W1 (22E0190-01) Seawater Sampled: 05/06/22 06:35 Received: 05/06/22 09:45										
Total Coliforms	**41**	10	10	MPN/100 ml	10	CC	2050966	05/06/22 13:00 05/07/22 13:00	SM9223	
E. Coli	**10**	10	10	"	"	CC	"	05/06/22 13:00 05/07/22 13:00	"	
Enterococcus	ND	10	10	"	"	CC	2050754	05/06/22 13:00 05/07/22 13:00	Idexx	
MC-2-W1 (22E0190-02) Seawater Sampled: 05/06/22 06:45 Received: 05/06/22 09:45										
Total Coliforms	**52**	10	10	MPN/100 ml	10	CC	2050966	05/06/22 13:00 05/07/22 13:00	SM9223	
E. Coli	ND	10	10	"	"	CC	"	05/06/22 13:00 05/07/22 13:00	"	
Enterococcus	ND	10	10	"	"	CC	2050754	05/06/22 13:00 05/07/22 13:00	Idexx	
OF-1-W1 (22E0190-03) Seawater Sampled: 05/06/22 07:50 Received: 05/06/22 09:45										
Total Coliforms	**426**	10	10	MPN/100 ml	10	CC	2050966	05/06/22 13:00 05/07/22 13:00	SM9223	
E. Coli	ND	10	10	"	"	CC	"	05/06/22 13:00 05/07/22 13:00	"	
Enterococcus	ND	10	10	"	"	CC	2050754	05/06/22 13:00 05/07/22 13:00	Idexx	
OF-2-W1 (22E0190-04) Seawater Sampled: 05/06/22 07:20 Received: 05/06/22 09:45										
Total Coliforms	**11200**	10	10	MPN/100 ml	10	CC	2050966	05/06/22 13:00 05/07/22 13:00	SM9223	
E. Coli	**3280**	10	10	"	"	CC	"	05/06/22 13:00 05/07/22 13:00	"	
Enterococcus	**3440**	10	10	"	"	CC	2050754	05/06/22 13:00 05/07/22 13:00	Idexx	
OF-3-W1 (22E0190-05) Seawater Sampled: 05/06/22 07:00 Received: 05/06/22 09:45										
Total Coliforms	**1080**	10	10	MPN/100 ml	10	CC	2050966	05/06/22 13:00 05/07/22 13:00	SM9223	
E. Coli	ND	10	10	"	"	CC	"	05/06/22 13:00 05/07/22 13:00	"	
Enterococcus	ND	10	10	"	"	CC	2050754	05/06/22 13:00 05/07/22 13:00	Idexx	
FP-W1 (22E0190-06) Seawater Sampled: 05/06/22 06:55 Received: 05/06/22 09:45										
Total Coliforms	**211**	10	10	MPN/100 ml	10	CC	2050966	05/06/22 13:00 05/07/22 13:00	SM9223	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client Name: Wood Environment & Infrastructure Solutions, Inc. **EMA Log #: 22E0190**
Project Name: POSD-Bacteria Shelter Island San Diego Bay

Microbiological Parameters by Standard Methods

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Analyst	Batch	Sample Prepared Sample Analyzed	Method	Notes
FP-W1 (22E0190-06) Seawater Sampled: 05/06/22 06:55 Received: 05/06/22 09:45										
E. Coli	**109**	10	10	MPN/100 ml	10	CC	2050966	05/06/22 13:00 05/07/22 13:00	SM9223	
Enterococcus	ND	10	10	"	"	CC	2050754	05/06/22 13:00 05/07/22 13:00	Idexx	
GD-W1 (22E0190-07) Seawater Sampled: 05/06/22 06:00 Received: 05/06/22 09:45										
Total Coliforms	**97**	10	10	MPN/100 ml	10	CC	2050966	05/06/22 13:00 05/07/22 13:00	SM9223	
E. Coli	**10**	10	10	"	"	CC	"	05/06/22 13:00 05/07/22 13:00	"	
Enterococcus	ND	10	10	"	"	CC	2050754	05/06/22 13:00 05/07/22 13:00	Idexx	
BS-W1 (22E0190-08) Seawater Sampled: 05/06/22 07:40 Received: 05/06/22 09:45										
Total Coliforms	**10**	10	10	MPN/100 ml	10	CC	2050966	05/06/22 13:00 05/07/22 13:00	SM9223	
E. Coli	ND	10	10	"	"	CC	"	05/06/22 13:00 05/07/22 13:00	"	
Enterococcus	**10**	10	10	"	"	CC	2050754	05/06/22 13:00 05/07/22 13:00	Idexx	
KK-W1 (22E0190-09) Seawater Sampled: 05/06/22 06:10 Received: 05/06/22 09:45										
Total Coliforms	**85**	10	10	MPN/100 ml	10	CC	2050966	05/06/22 13:00 05/07/22 13:00	SM9223	
E. Coli	ND	10	10	"	"	CC	"	05/06/22 13:00 05/07/22 13:00	"	
Enterococcus	ND	10	10	"	"	CC	2050754	05/06/22 13:00 05/07/22 13:00	Idexx	
NK-W1 (22E0190-10) Seawater Sampled: 05/06/22 08:20 Received: 05/06/22 09:45										
Total Coliforms	**110**	10	10	MPN/100 ml	10	CC	2050966	05/06/22 13:00 05/07/22 13:00	SM9223	
E. Coli	ND	10	10	"	"	CC	"	05/06/22 13:00 05/07/22 13:00	"	
Enterococcus	ND	10	10	"	"	CC	2050754	05/06/22 13:00 05/07/22 13:00	Idexx	
KB-W1 (22E0190-11) Seawater Sampled: 05/06/22 08:30 Received: 05/06/22 09:45										
Total Coliforms	**75**	10	10	MPN/100 ml	10	CC	2050966	05/06/22 13:00 05/07/22 13:00	SM9223	
E. Coli	ND	10	10	"	"	CC	"	05/06/22 13:00 05/07/22 13:00	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client Name: Wood Environment & Infrastructure Solutions, Inc. **EMA Log #: 22E0190**
Project Name: POSD-Bacteria Shelter Island San Diego Bay

Microbiological Parameters by Standard Methods

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Analyst	Batch	Sample Prepared Sample Analyzed	Method	Notes
KB-W1 (22E0190-11) Seawater Sampled: 05/06/22 08:30 Received: 05/06/22 09:45										
Enterococcus	ND	10	10	MPN/10 0 ml	10	CC	2050754	05/06/22 13:00 05/07/22 13:00	Idexx	
REF-1-W1 (22E0190-12) Seawater Sampled: 05/06/22 06:25 Received: 05/06/22 09:45										
Total Coliforms	**20**	10	10	MPN/100 ml	10	CC	2050966	05/06/22 13:00 05/07/22 13:00	SM9223	
E. Coli	ND	10	10	"	"	CC	"	05/06/22 13:00 05/07/22 13:00	"	
Enterococcus	ND	10	10	"	"	CC	2050754	05/06/22 13:00 05/07/22 13:00	Idexx	
A1-1-W1 (22E0190-13) Seawater Sampled: 05/06/22 08:00 Received: 05/06/22 09:45										
Total Coliforms	**41**	10	10	MPN/100 ml	10	CC	2050966	05/06/22 13:00 05/07/22 13:00	SM9223	
E. Coli	ND	10	10	"	"	CC	"	05/06/22 13:00 05/07/22 13:00	"	
Enterococcus	ND	10	10	"	"	CC	2050754	05/06/22 13:00 05/07/22 13:00	Idexx	
A1-2-W1 (22E0190-14) Seawater Sampled: 05/06/22 08:05 Received: 05/06/22 09:45										
Total Coliforms	**63**	10	10	MPN/100 ml	10	CC	2050966	05/06/22 13:00 05/07/22 13:00	SM9223	
E. Coli	**10**	10	10	"	"	CC	"	05/06/22 13:00 05/07/22 13:00	"	
Enterococcus	ND	10	10	"	"	CC	2050754	05/06/22 13:00 05/07/22 13:00	Idexx	
A1-3-W1 (22E0190-15) Seawater Sampled: 05/06/22 08:10 Received: 05/06/22 09:45										
Total Coliforms	**41**	10	10	MPN/100 ml	10	CC	2050966	05/06/22 13:00 05/07/22 13:00	SM9223	
E. Coli	ND	10	10	"	"	CC	"	05/06/22 13:00 05/07/22 13:00	"	
Enterococcus	ND	10	10	"	"	CC	2050754	05/06/22 13:00 05/07/22 13:00	Idexx	
FB-1-W1 (22E0190-16) DI Water Sampled: 05/06/22 08:45 Received: 05/06/22 09:45										
Total Coliforms	ND	10	10	MPN/10 0 ml	10	CC	2050966	05/06/22 13:00 05/07/22 13:00	SM9223	
E. Coli	ND	10	10	"	"	CC	"	05/06/22 13:00 05/07/22 13:00	"	
Enterococcus	ND	10	10	"	"	CC	2050754	05/06/22 13:00 05/07/22 13:00	Idexx	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client Name: Wood Environment & Infrastructure Solutions, Inc. **EMA Log #: 22E0190**
Project Name: POSD-Bacteria Shelter Island San Diego Bay

Microbiological Parameters by Standard Methods

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Analyst	Batch	Sample Prepared Sample Analyzed	Method	Notes
BS-DUP-W1 (22E0190-17) Seawater Sampled: 05/06/22 07:41 Received: 05/06/22 09:45										
Total Coliforms	**199**	10	10	MPN/100 ml	10	CC	2050966	05/06/22 13:00 05/07/22 13:00	SM9223	
E. Coli	**31**	10	10	"	"	CC	"	05/06/22 13:00 05/07/22 13:00	"	
Enterococcus	**10**	10	10	"	"	CC	2050754	05/06/22 13:00 05/07/22 13:00	Idexx	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client Name: Wood Environment & Infrastructure Solutions, Inc. **EMA Log #: 22E0190**
Project Name: POSD-Bacteria Shelter Island San Diego Bay

Microbiological Parameters by Standard Methods - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Analyst	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2050754												
Blank (2050754-BLK1)					Prepared: 05/06/22 Analyzed: 05/07/22							
Enterococcus	ND	1	1	MPN/100 ml	CC							
Batch 2050966												
Blank (2050966-BLK1)					Prepared: 05/06/22 Analyzed: 05/07/22							
Total Coliforms	ND	1	1	MPN/100 ml	CC							
E. Coli	ND	1	1	"	CC							

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client Name: Wood Environment & Infrastructure Solutions, Inc. **EMA Log #: 22E0190**
Project Name: POSD-Bacteria Shelter Island San Diego Bay

Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit (or method detection limit when specified)
NR	Not Reported
dry	Sample results reported on a dry weight basis (if indicated in units column)
RPD	Relative Percent Difference
MDL	Method detection limit (indicated per client's request)

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

22E0190

Page 1 of 2

CHAIN-OF-CUSTODY RECORD

EnviroMatrix Analytical, Inc.

9590 Chesapeake Dr, Suite 5, San Diego, CA 92123 - Phone (858) 560-7717 - Fax (858) 560-7763

EMA LOG #:

Client: Wood PLC

Attn: Kate Buckley, kate.buckley@woodplc.com

Samplers(s): Wood

Address: 9177 Sky Park Ct, San Diego, CA 92123

Phone: 760-420-5769 Fax:

Email: kate.buckley@woodplc.com

Billing Address: 9177 Sky Park Ct, San Diego, CA 92123

Project ID: POSD - SIYB Bacteria Special Study

Please include the following information on invoices: 1) Project #: 2015100116
(2) PO #: N/A (3) Org: 3151 (4) GL: 573000

Requested Analysis

ID #	Client Sample ID	Sample Date	Sample Time	Sample Matrix	Container # / Type	Coliform, X Total (Colilert)	Enterococcus, □ MTF X Enterolert
1	MC-1-W1	5/6/22	0635	sea water	2 / Bact	X	X
2	MC-2-W1		0645	sea water	2 / Bact	X	X
3	OF-1-W1		0750	sea water	2 / Bact	X	X
4	OF-2-W1		0720	sea water	2 / Bact	X	X
5	OF-3-W1		0700	sea water	2 / Bact	X	X
6	FP-W1		0655	sea water	2 / Bact	X	X
7	GD-W1		0600	sea water	2 / Bact	X	X
8	BS-W1		0740	sea water	2 / Bact	X	X
9	KK-W1		0610	sea water	2 / Bact	X	X
10	NK-W1		0820	sea water	2 / Bact	X	X

Matrix Codes: A = Air, DW = Drinking Water, GW = Groundwater, SW = Storm Water
WW = Wastewater, S = Soil, SED = Sediment, SD = Solid, T = Tissue, O = Oil, L = Liquid

Shipped By: □ Courier □ UPS □ FedEx □ USPS X Client Drop Off □ Other

[1]**Turn-Around-Time:** □ Same Day □ 1 day □ 2 day □ 3 day □ 4 day □ 5 day X STD (7 day)

[1]**Reporting Requirements:** □ Fax X PDF X Excel □ Geotracker/EDF □ Hard Copy □ EDT

[1]**Sample Disposal:** X By Laboratory □ [2]Return to Client: P/U or Delivery □ Archive

Sample Integrity

Correct Containers: Yes No N/A	Containers Properly Preseved: Yes No N/A
Custody Seals Intact: Yes No N/A	Temp @ Receipt: 4°C
COC/Labels Agree: Yes No N/A	Sampled By: Client EMA Autosampler

	RELINQUISHED BY	DATE/TIME	RECEIVED BY
Signature	Kate Buckley	5/6/22 9:45	
Print	Kate Buckley		
Company:	Wood		EM
Signature			
Print			
Company:			
Signature			
Print			
Company:			

NOTE: Please Provide SWAMP EDD. Please report true numeric results between 10-2,400,000 MPN/100mL for Total Coliform and Enterococcus using the Colilert and Enterolert methods, respectively, for each.

For each sample, conduct a 3x dilution for reportable MPN (MDL 10 - 2.4 mil).

[1]Additional costs may apply. Please note there is a $35 minimum charge for all clients.

[2]EMA reserves the right to return any samples that do not match our waste profile.

NOTE: By relinquishing samples to EMA, Inc., client agrees to pay for the services requested on this COC form and any additional analyses performed on this project. Payment for services is due within 30 days from date of invoice. Samples will be disposed of 7 days after report has been finalized unless otherwise noted. All work is subject to EMA's terms and conditions.

22E0190

CHAIN-OF-CUSTODY RECORD

EnviroMatrix Analytical, Inc.
9590 Chesapeake Dr, Suite 5, San Diego, CA 92123 - Phone (858) 560-7717 - Fax (858) 560-7763

EMA LOG #:

Client: Wood PLC
Attn: Kate Buckley, kate.buckley@woodplc.com
Samplers(s): Wood
Address: 9177 Sky Park Ct, San Diego, CA 92123

Phone: 760-420-5769 Fax:
Email: kate.buckley@woodplc.com
Billing Address: 9177 Sky Park Ct, San Diego, CA 92123
Project ID: POSD - SIYB Bacteria Special Study

Please include the following information on invoices: 1) Project #: 2015100116
(2) PO #: N/A (3) Org: 3151 (4) GL: 573000

ID #	Client Sample ID	Sample Date	Sample Time	Sample Matrix	Container # / Type	Coliform, X Total (Colilert)	Enterococcus, □ MTF X Enterolert
1	KB-W1	5/6/22	0830	sea water	2 / Bact	X	X
2	REF-1-W1		0625	sea water	2 / Bact	X	X
3	A1-1-W1		0800	sea water	2 / Bact	X	X
4	A1-2-W1		0805	sea water	2 / Bact	X	X
5	A1-3-W1		0810	sea water	2 / Bact	X	X
6	FB-1-W1		0845	sea water	2 / Bact	X	X
7	BS-DUP-W1	↓	0741	sea water	2 / Bact	X	X
8							
9							
10							

Requested Analysis

Matrix Codes: A = Air, DW = Drinking Water, GW = Groundwater, SW = Storm Water
WW = Wastewater, S = Soil, SED = Sediment, SD = Solid, T = Tissue, O = Oil, L = Liquid

Shipped By: □ Courier □ UPS □ FedEx □ USPS X Client Drop Off □ Other

[1]**Turn-Around-Time:** □ Same Day □ 1 day □ 2 day □ 3 day □ 4 day □ 5 day X STD (7 day)

[1]**Reporting Requirements:** □ Fax X PDF X Excel □ Geotracker/EDF □ Hard Copy □ EDT

[1]**Sample Disposal:** X By Laboratory □ [2]Return to Client: P/U or Delivery □ Archive

Sample Integrity

Correct Containers: Yes No N/A	Containers Properly Preseved: Yes No N/A
Custody Seals Intact: Yes No N/A	Temp @ Receipt: 4°C
COC/Labels Agree: Yes No N/A	Sampled By: Client EMA Autosampler

	RELINQUISHED BY	DATE/TIME	RECEIVED BY
Signature	Kate Buckley	5/6/22	
Print	Kate Buckley	9.45	
Company:	Wood		
Signature			
Print			
Company:			
Signature			
Print			
Company:			

NOTE: Please Provide SWAMP EDD. Please report true numeric results between 10-2,400,000 MPN/100mL for Total Coliform and Enterococcus using the Colilert and Enterolert methods, respectively, for each.

For each sample, conduct a 3x dilution for reportable MPN (MDL 10 - 2.4 mil).

[1]Additional costs may apply. Please note there is a $35 minimum charge for all clients.

[2]EMA reserves the right to return any samples that do not match our waste profile.

NOTE: By relinquishing samples to EMA, Inc., client agrees to pay for the services requested on this COC form and any additional analyses performed on this project. Payment for services is due within 30 days from date of invoice. Samples will be disposed of 7 days after report has been finalized unless otherwise noted. All work is subject to EMA's terms and conditions.

Environmental Laboratory Network, Inc.
dba EnviroMatrix Analytical

11 May 2022

Wood Environment & Infrastructure Solutions, Inc. **EMA Log #: 22E0218**
Attn: Kate Buckley
9177 Sky Park Court
San Diego, CA 92123

Project: POSD-Bacteria Shelter Island San Diego Bay

Enclosed are the results of analyses for samples received by the laboratory on 05/07/22 10:15. Samples were analyzed pursuant to client request utilizing EPA or other ELAP approved methodologies. Environmental Laboratory Network, Inc. certifies that this data is in compliance both technically and for completeness.

Jenny Douglas
President/CEO
Environmental Laboratory Network, Inc.
dba EnviroMatrix Analytical

CA ELAP Certification #: 2564

Client Name: Wood Environment & Infrastructure Solutions, Inc. **EMA Log #: 22E0218**
Project Name: POSD-Bacteria Shelter Island San Diego Bay

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
REF-1-WKD1	22E0218-01	Seawater	05/07/22 06:25	05/07/22 10:15
A1-1-R1-WKD1	22E0218-02	Seawater	05/07/22 06:40	05/07/22 10:15
A1-2-R1-WKD1	22E0218-03	Seawater	05/07/22 06:50	05/07/22 10:15
A1-3-R1-WKD1	22E0218-04	Seawater	05/07/22 06:55	05/07/22 10:15
A1-1-R2-WKD1	22E0218-05	Seawater	05/07/22 07:40	05/07/22 10:15
A1-2-R2-WKD1	22E0218-06	Seawater	05/07/22 07:45	05/07/22 10:15
A1-3-R2-WKD1	22E0218-07	Seawater	05/07/22 07:55	05/07/22 10:15
A1-1-R3-WKD1	22E0218-08	Seawater	05/07/22 08:40	05/07/22 10:15
A1-2-R3-WKD1	22E0218-09	Seawater	05/07/22 08:50	05/07/22 10:15
A1-3-R3-WKD1	22E0218-10	Seawater	05/07/22 08:55	05/07/22 10:15
FB-1-WKD1	22E0218-11	DI Water	05/07/22 09:15	05/07/22 10:15
A1-3-R1-DUP-WKD1	22E0218-12	Seawater	05/07/22 06:56	05/07/22 10:15
OF-2-DW1	22E0218-13	FreshWater	05/07/22 07:20	05/07/22 10:15

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client Name: Wood Environment & Infrastructure Solutions, Inc. **EMA Log #: 22E0218**
Project Name: POSD-Bacteria Shelter Island San Diego Bay

Microbiological Parameters by Standard Methods

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Analyst	Batch	Sample Prepared Sample Analyzed	Method	Notes
REF-1-WKD1 (22E0218-01) Seawater Sampled: 05/07/22 06:25 Received: 05/07/22 10:15										
Total Coliforms	ND	10	10	MPN/10 0 ml	10	AL	2050960	05/07/22 14:00 05/08/22 14:00	SM9223	
E. Coli	ND	10	10	"	"	AL	"	05/07/22 14:00 05/08/22 14:00	"	
Enterococcus	ND	10	10	"	"	AL	2050961	05/07/22 14:00 05/08/22 14:00	Idexx	
A1-1-R1-WKD1 (22E0218-02) Seawater Sampled: 05/07/22 06:40 Received: 05/07/22 10:15										
Total Coliforms	**86**	10	10	MPN/100 ml	10	AL	2050960	05/07/22 14:00 05/08/22 14:00	SM9223	
E. Coli	ND	10	10	"	"	AL	"	05/07/22 14:00 05/08/22 14:00	"	
Enterococcus	ND	10	10	"	"	AL	2050961	05/07/22 14:00 05/08/22 14:00	Idexx	
A1-2-R1-WKD1 (22E0218-03) Seawater Sampled: 05/07/22 06:50 Received: 05/07/22 10:15										
Total Coliforms	**86**	10	10	MPN/100 ml	10	AL	2050960	05/07/22 14:00 05/08/22 14:00	SM9223	
E. Coli	ND	10	10	"	"	AL	"	05/07/22 14:00 05/08/22 14:00	"	
Enterococcus	ND	10	10	"	"	AL	2050961	05/07/22 14:00 05/08/22 14:00	Idexx	
A1-3-R1-WKD1 (22E0218-04) Seawater Sampled: 05/07/22 06:55 Received: 05/07/22 10:15										
Total Coliforms	**41**	10	10	MPN/100 ml	10	AL	2050960	05/07/22 14:00 05/08/22 14:00	SM9223	
E. Coli	ND	10	10	"	"	AL	"	05/07/22 14:00 05/08/22 14:00	"	
Enterococcus	ND	10	10	"	"	AL	2050961	05/07/22 14:00 05/08/22 14:00	Idexx	
A1-1-R2-WKD1 (22E0218-05) Seawater Sampled: 05/07/22 07:40 Received: 05/07/22 10:15										
Total Coliforms	**63**	10	10	MPN/100 ml	10	AL	2050960	05/07/22 14:00 05/08/22 14:00	SM9223	
E. Coli	**10**	10	10	"	"	AL	"	05/07/22 14:00 05/08/22 14:00	"	
Enterococcus	**20**	10	10	"	"	AL	2050961	05/07/22 14:00 05/08/22 14:00	Idexx	
A1-2-R2-WKD1 (22E0218-06) Seawater Sampled: 05/07/22 07:45 Received: 05/07/22 10:15										
Total Coliforms	**20**	10	10	MPN/100 ml	10	AL	2050960	05/07/22 14:00 05/08/22 14:00	SM9223	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client Name: Wood Environment & Infrastructure Solutions, Inc. **EMA Log #: 22E0218**
Project Name: POSD-Bacteria Shelter Island San Diego Bay

Microbiological Parameters by Standard Methods

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Analyst	Batch	Sample Prepared Sample Analyzed	Method	Notes
A1-2-R2-WKD1 (22E0218-06) Seawater Sampled: 05/07/22 07:45 Received: 05/07/22 10:15										
E. Coli	**10**	10	10	MPN/100 ml	10	AL	2050960	05/07/22 14:00 05/08/22 14:00	SM9223	
Enterococcus	ND	10	10	"	"	AL	2050961	05/07/22 14:00 05/08/22 14:00	Idexx	
A1-3-R2-WKD1 (22E0218-07) Seawater Sampled: 05/07/22 07:55 Received: 05/07/22 10:15										
Total Coliforms	**41**	10	10	MPN/100 ml	10	AL	2050960	05/07/22 14:00 05/08/22 14:00	SM9223	
E. Coli	ND	10	10	"	"	AL	"	05/07/22 14:00 05/08/22 14:00	"	
Enterococcus	ND	10	10	"	"	AL	2050961	05/07/22 14:00 05/08/22 14:00	Idexx	
A1-1-R3-WKD1 (22E0218-08) Seawater Sampled: 05/07/22 08:40 Received: 05/07/22 10:15										
Total Coliforms	**201**	10	10	MPN/100 ml	10	AL	2050960	05/07/22 14:00 05/08/22 14:00	SM9223	
E. Coli	ND	10	10	"	"	AL	"	05/07/22 14:00 05/08/22 14:00	"	
Enterococcus	ND	10	10	"	"	AL	2050961	05/07/22 14:00 05/08/22 14:00	Idexx	
A1-2-R3-WKD1 (22E0218-09) Seawater Sampled: 05/07/22 08:50 Received: 05/07/22 10:15										
Total Coliforms	**201**	10	10	MPN/100 ml	10	AL	2050960	05/07/22 14:00 05/08/22 14:00	SM9223	
E. Coli	ND	10	10	"	"	AL	"	05/07/22 14:00 05/08/22 14:00	"	
Enterococcus	ND	10	10	"	"	AL	2050961	05/07/22 14:00 05/08/22 14:00	Idexx	
A1-3-R3-WKD1 (22E0218-10) Seawater Sampled: 05/07/22 08:55 Received: 05/07/22 10:15										
Total Coliforms	**74**	10	10	MPN/100 ml	10	AL	2050960	05/07/22 14:00 05/08/22 14:00	SM9223	
E. Coli	**41**	10	10	"	"	AL	"	05/07/22 14:00 05/08/22 14:00	"	
Enterococcus	ND	10	10	"	"	AL	2050961	05/07/22 14:00 05/08/22 14:00	Idexx	
FB-1-WKD1 (22E0218-11) DI Water Sampled: 05/07/22 09:15 Received: 05/07/22 10:15										
Total Coliforms	ND	10	10	MPN/100 ml	10	AL	2050960	05/07/22 14:00 05/08/22 14:00	SM9223	
E. Coli	ND	10	10	"	"	AL	"	05/07/22 14:00 05/08/22 14:00	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client Name: Wood Environment & Infrastructure Solutions, Inc. **EMA Log #: 22E0218**
Project Name: POSD-Bacteria Shelter Island San Diego Bay

Microbiological Parameters by Standard Methods

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Analyst	Batch	Sample Prepared / Sample Analyzed	Method	Notes
FB-1-WKD1 (22E0218-11) DI Water Sampled: 05/07/22 09:15 Received: 05/07/22 10:15										
Enterococcus	ND	10	10	MPN/10 0 ml	10	AL	2050961	05/07/22 14:00 05/08/22 14:00	Idexx	
A1-3-R1-DUP-WKD1 (22E0218-12) Seawater Sampled: 05/07/22 06:56 Received: 05/07/22 10:15										
Total Coliforms	**120**	10	10	MPN/100 ml	10	AL	2050960	05/07/22 14:00 05/08/22 14:00	SM9223	
E. Coli	**41**	10	10	"	"	AL	"	05/07/22 14:00 05/08/22 14:00	"	
Enterococcus	ND	10	10	"	"	AL	2050961	05/07/22 14:00 05/08/22 14:00	Idexx	
OF-2-DW1 (22E0218-13) FreshWater Sampled: 05/07/22 07:20 Received: 05/07/22 10:15										
Total Coliforms	**130000**	100	100	MPN/100 ml	100	AL	2050960	05/07/22 14:00 05/08/22 14:00	SM9223	
E. Coli	**2130**	100	100	"	"	AL	"	05/07/22 14:00 05/08/22 14:00	"	
Enterococcus	**6870**	10	10	"	10	AL	2050961	05/07/22 14:00 05/08/22 14:00	Idexx	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client Name: Wood Environment & Infrastructure Solutions, Inc. **EMA Log #: 22E0218**
Project Name: POSD-Bacteria Shelter Island San Diego Bay

Microbiological Parameters by Standard Methods - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Analyst	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2050960												
Blank (2050960-BLK1)					Prepared: 05/07/22 Analyzed: 05/08/22							
Total Coliforms	ND	1	1	MPN/100 ml	AL							
E. Coli	ND	1	1	"	AL							
Batch 2050961												
Blank (2050961-BLK1)					Prepared: 05/07/22 Analyzed: 05/08/22							
Enterococcus	ND	1	1	MPN/100 ml	AL							

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client Name: Wood Environment & Infrastructure Solutions, Inc. **EMA Log #: 22E0218**
Project Name: POSD-Bacteria Shelter Island San Diego Bay

Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit (or method detection limit when specified)
NR	Not Reported
dry	Sample results reported on a dry weight basis (if indicated in units column)
RPD	Relative Percent Difference
MDL	Method detection limit (indicated per client's request)

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

CHAIN-OF-CUSTODY RECORD 22E0218

EnviroMatrix Analytical, Inc.
9590 Chesapeake Dr, Suite 5, San Diego, CA 92123 - Phone (858) 560-7717 - Fax (858) 560-7763

EMA LOG #:

Client: Wood PLC

Attn: Kate Buckley, kate.buckley@woodplc.com

Samplers(s): Wood

Address: 9177 Sky Park Ct, San Diego, CA 92123

Phone: 760-420-5769 Fax:

Email: kate.buckley@woodplc.com

Billing Address: 9177 Sky Park Ct, San Diego, CA 92123

Project ID: POSD - SIYB Bacteria Special Study

Please include the following information on invoices: 1) Project #: 20151001116.0002B
(2) PO #: N/A (3) Org: 3151 (4) GL: 573000

Requested Analysis

ID #	Client Sample ID	Sample Date	Sample Time	Sample Matrix	Container # / Type	Coliform, X Total (Colilert)	Enterococcus, □ MTF X Enterolert
1	REF-1-WKD1	5/7/22	0625	sea water	2 / Bact	X	X
2	A1-1-R1-WKD1		0640	sea water	2 / Bact	X	X
3	A1-2-R1-WKD1		0650	sea water	2 / Bact	X	X
4	A1-3-R1-WKD1		0655	sea water	2 / Bact	X	X
5	A1-1-R2-WKD1		0740	sea water	2 / Bact	X	X
6	A1-2-R2-WKD1		0745	sea water	2 / Bact	X	X
7	A1-3-R2-WKD1		0755	sea water	2 / Bact	X	X
8	A1-1-R3-WKD1		0840	sea water	2 / Bact	X	X
9	A1-2-R3-WKD1		0850	sea water	2 / Bact	X	X
10	A1-3-R3-WKD1	↓	0855	sea water	2 / Bact	X	X

Matrix Codes: A = Air, DW = Drinking Water, GW = Groundwater, SW = Storm Water
WW = Wastewater, S = Soil, SED = Sediment, SD = Solid, T = Tissue, O = Oil, L = Liquid

Shipped By: □ Courier □ UPS □ FedEx □ USPS X Client Drop Off □ Other

[1]**Turn-Around-Time:** □ Same Day □ 1 day □ 2 day □ 3 day □ 4 day □ 5 day X STD (7 day)

[1]**Reporting Requirements:** □ Fax X PDF X Excel □ Geotracker/EDF □ Hard Copy □ EDT

[1]**Sample Disposal:** X By Laboratory □ [2]Return to Client: P/U or Delivery □ Archive

Sample Integrity

Correct Containers: Yes No N/A	Containers Properly Preseved: Yes No N/A
Custody Seals Intact: Yes No N/A	Temp @ Receipt: 6.0°C
COC/Labels Agree: Yes No N/A	Sampled By: Client EMA Autosampler

	RELINQUISHED BY	DATE/TIME	RECEIVED BY
Signature		5/7/22 1615	
Print	Rolf Schiffle		
Company:	Wood E&I		EMA
Signature			
Print			
Company:			
Signature			
Print			
Company:			

NOTE: Please Provide SWAMP EDD. Please report true numeric results between 10-2,400,000 MPN/100mL for Total Coliform and Enterococcus using the Colilert and Enterolert methods, respectively, for each.

For each sample, conduct a 3x dilution for reportable MPN (MDL 10 - 2.4 mil).

[1]Additional costs may apply. Please note there is a $35 minimum charge for all clients.

[2]EMA reserves the right to return any samples that do not match our waste profile.

NOTE: By relinquishing samples to EMA, Inc., client agrees to pay for the services requested on this COC form and any additional analyses performed on this project. Payment for services is due within 30 days from date of invoice. Samples will be disposed of 7 days after report has been finalized unless otherwise noted. All work is subject to EMA's terms and conditions.

CHAIN-OF-CUSTODY RECORD 22B0218

EnviroMatrix Analytical, Inc.
9590 Chesapeake Dr, Suite 5, San Diego, CA 92123 - Phone (858) 560-7717 - Fax (858) 560-7763

EMA LOG #:

Client: Wood PLC

Attn: Kate Buckley, kate.buckley@woodplc.com

Samplers(s): Wood

Address: 9177 Sky Park Ct, San Diego, CA 92123

Phone: 760-420-5769 Fax:

Email: kate.buckley@woodplc.com

Billing Address: 9177 Sky Park Ct, San Diego, CA 92123

Project ID: POSD - SIYB Bacteria Special Study

Please include the following information on invoices: 1) Project #: 20151001116.0002B
(2) PO #: N/A (3) Org: 3151 (4) GL: 573000

Requested Analysis

ID #	Client Sample ID	Sample Date	Sample Time	Sample Matrix	Container # / Type	Coliform, X Total (Colilert)	Enterococcus, □ MTF X Enterolert
1	FB-1-WKD1 *	5/7/22	0915	~~sea water~~	2 / Bact	X	X
2	~~DUP-WKD1~~ A1-3-RI-DUP-WKD1	5/7/22	0656	sea water	2 / Bact	X	X
3							
4							
5							
6							
7							
8							
9							
10							

Matrix Codes: A = Air, DW = Drinking Water, GW = Groundwater, SW = Storm Water
WW = Wastewater, S = Soil, SED = Sediment, SD = Solid, T = Tissue, O = Oil, L = Liquid

Shipped By: □ Courier □ UPS □ FedEx □ USPS X Client Drop Off □ Other

[1]**Turn-Around-Time:** □ Same Day □ 1 day □ 2 day □ 3 day □ 4 day □ 5 day X STD (7 day)

[1]**Reporting Requirements:** □ Fax X PDF X Excel □ Geotracker/EDF □ Hard Copy □ EDT

[1]**Sample Disposal:** X By Laboratory □ [2]Return to Client: P/U or Delivery □ Archive

Sample Integrity

Correct Containers: Yes No N/A	Containers Properly Preseved: Yes No N/A
Custody Seals Intact: Yes No N/A	Temp @ Receipt: 2° C ICE
COC/Labels Agree: Yes No N/A	Sampled By: Client EMA Autosampler

RELINQUISHED BY	DATE/TIME	RECEIVED BY
Signature	5/7/22 1015	Signature
Print Rob Schuttle		Print CHRISTY C
Company: WOOD E&I		Company: EMA
Signature		Signature
Print		Print
Company:		Company:
Signature		Signature
Print		Print
Company:		Company:

NOTE: Please Provide SWAMP EDD. Please report true numeric results between 10-2,400,000 MPN/100mL for Total Coliform and Enterococcus using the Colilert and Enterolert methods, respectively, for each.

For each sample, conduct a 3x dilution for reportable MPN (MDL 10 - 2.4 mil).

*Field blank is deionized water.

[1] Additional costs may apply. Please note there is a $35 minimum charge for all clients.

[2] EMA reserves the right to return any samples that do not match our waste profile.

NOTE: By relinquishing samples to EMA, Inc., client agrees to pay for the services requested on this COC form and any additional analyses performed on this project. Payment for services is due within 30 days from date of invoice. Samples will be disposed of 7 days after report has been finalized unless otherwise noted. All work is subject to EMA's terms and conditions.

22E0218

CHAIN-OF-CUSTODY RECORD

EnviroMatrix Analytical, Inc.
9590 Chesapeake Dr, Suite 5, San Diego, CA 92123 - Phone (858) 560-7717 - Fax (858) 560-7763

3 of 3 JK3

EMA LOG #:

Client: Wood PLC

Attn: Kate Buckley, kate.buckley@woodplc.com

Samplers(s): Wood

Address: 9177 Sky Park Ct, San Diego, CA 92123

Phone: 760-420-5769 Fax:

Email: kate.buckley@woodplc.com

Billing Address: 9177 Sky Park Ct, San Diego, CA 92123

Project ID: POSD - SIYB Bacteria Special Study

Please include the following information on invoices: 1) Project #: 2015100116.00028
(2) PO #: N/A (3) Org: 3151 (4) GL: 573000

Requested Analysis

ID #	Client Sample ID	Sample Date	Sample Time	Sample Matrix	Container # / Type	Coliform, X Total (Colilert)	Enterococcus, □ MTF X Enterolert
1	~~FB-1-SH~~			~~sea water~~	~~2 / Bact~~	~~X~~	~~X~~
2	~~DUP-SH~~			~~sea water~~	~~2 / Bact~~	~~X~~	~~X~~
3	OF-2-DW1*	5/7/22	0720	fresh	2/Bact	X	X
4							
5							
6							
7							
8							
9							
10							

Matrix Codes: A = Air, DW = Drinking Water, GW = Groundwater, SW = Storm Water
WW = Wastewater, S = Soil, SED = Sediment, SD = Solid, T = Tissue, O = Oil, L = Liquid

Shipped By: □ Courier □ UPS □ FedEx □ USPS X Client Drop Off □ Other

[1]**Turn-Around-Time:** □ Same Day □ 1 day □ 2 day □ 3 day □ 4 day □ 5 day X STD (7 day)

[1]**Reporting Requirements:** □ Fax X PDF X Excel □ Geotracker/EDF □ Hard Copy □ EDT

[1]**Sample Disposal:** X By Laboratory □ [2]Return to Client: P/U or Delivery □ Archive

Sample Integrity

Correct Containers: Yes No N/A	Containers Properly Preseved: Yes No N/A
Custody Seals Intact: Yes No N/A	Temp @ Receipt: 0 onice
COC/Labels Agree: Yes No N/A	Sampled By: Client EMA Autosampler

	RELINQUISHED BY	DATE/TIME	RECEIVED BY
Signature		5/7/22 1015	
Print	R.F Schulte		Christina C
Company:	Wood E&I		EMA
Signature			
Print			
Company:			
Signature			
Print			
Company:			

NOTE: Please Provide SWAMP EDD. Please report true numeric results between 10-2,400,000 MPN/100mL for Total Coliform and Enterococcus using the Colilert and Enterolert methods, respectively, for each.

For each sample, conduct a 3x dilution for reportable MPN (MDL 10 - 2.4 mil).

* Salinity = 3.3ppt

[1]Additional costs may apply. Please note there is a $35 minimum charge for all clients.

[2]EMA reserves the right to return any samples that do not match our waste profile.

NOTE: By relinquishing samples to EMA, Inc., client agrees to pay for the services requested on this COC form and any additional analyses performed on this project. Payment for services is due within 30 days from date of invoice. Samples will be disposed of 7 days after report has been finalized unless otherwise noted. All work is subject to EMA's terms and conditions.

Environmental Laboratory Network, Inc.
dba EnviroMatrix Analytical

13 May 2022

Wood Environment & Infrastructure Solutions, Inc. **EMA Log #: 22E0316**
Attn: Kate Buckley
9177 Sky Park Court
San Diego, CA 92123

Project: POSD-Bacteria Shelter Island San Diego Bay/POSD-SIYB Bacteria Special Study/Project:2015100116.0002C/ Org:3151/GL:573000

Enclosed are the results of analyses for samples received by the laboratory on 05/10/22 11:57. Samples were analyzed pursuant to client request utilizing EPA or other ELAP approved methodologies. Environmental Laboratory Network, Inc. certifies that this data is in compliance both technically and for completeness.

Jenny Douglas
President/CEO
Environmental Laboratory Network, Inc.
dba EnviroMatrix Analytical

CA ELAP Certification #: 2564

Client Name: Wood Environment & Infrastructure Solutions, Inc. **EMA Log #: 22E0316**
Project Name: POSD-Bacteria Shelter Island San Diego Bay

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
REF-1-SH	22E0316-01	Seawater	05/10/22 07:55	05/10/22 11:57
A1-1-R1-SH	22E0316-02	Seawater	05/10/22 08:15	05/10/22 11:57
A1-2-R1-SH	22E0316-03	Seawater	05/10/22 08:20	05/10/22 11:57
A1-3-R1-SH	22E0316-04	Seawater	05/10/22 08:30	05/10/22 11:57
A1-1-R2-SH	22E0316-05	Seawater	05/10/22 09:15	05/10/22 11:57
A1-2-R2-SH	22E0316-06	Seawater	05/10/22 09:25	05/10/22 11:57
A1-3-R2-SH	22E0316-07	Seawater	05/10/22 09:30	05/10/22 11:57
A1-1-R3-SH	22E0316-08	Seawater	05/10/22 10:15	05/10/22 11:57
A1-2-R3-SH	22E0316-09	Seawater	05/10/22 10:20	05/10/22 11:57
A1-3-R3-SH	22E0316-10	Seawater	05/10/22 10:30	05/10/22 11:57
FB-1-SH	22E0316-11	DI Water	05/10/22 11:00	05/10/22 11:57
A1-3-R1-DUP-SH	22E0316-12	Seawater	05/10/22 08:31	05/10/22 11:57
OF-2-DW2	22E0316-13	Freshwater	05/10/22 09:45	05/10/22 11:57

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client Name: Wood Environment & Infrastructure Solutions, Inc. **EMA Log #: 22E0316**
Project Name: POSD-Bacteria Shelter Island San Diego Bay

Microbiological Parameters by Standard Methods

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Analyst	Batch	Sample Prepared Sample Analyzed	Method	Notes
REF-1-SH (22E0316-01) Seawater Sampled: 05/10/22 07:55 Received: 05/10/22 11:57										
Total Coliforms	**31**	10	10	MPN/100 ml	10	AZ	2051038	05/10/22 13:25 05/11/22 13:25	SM9223	
E. Coli	ND	10	10	"	"	AZ	"	05/10/22 13:25 05/11/22 13:25	"	
Enterococcus	ND	10	10	"	"	AL	2051037	05/10/22 13:25 05/11/22 13:25	Idexx	
A1-1-R1-SH (22E0316-02) Seawater Sampled: 05/10/22 08:15 Received: 05/10/22 11:57										
Total Coliforms	**31**	10	10	MPN/100 ml	10	AZ	2051038	05/10/22 13:25 05/11/22 13:25	SM9223	
E. Coli	ND	10	10	"	"	AZ	"	05/10/22 13:25 05/11/22 13:25	"	
Enterococcus	ND	10	10	"	"	AL	2051037	05/10/22 13:25 05/11/22 13:25	Idexx	
A1-2-R1-SH (22E0316-03) Seawater Sampled: 05/10/22 08:20 Received: 05/10/22 11:57										
Total Coliforms	**20**	10	10	MPN/100 ml	10	AZ	2051038	05/10/22 13:25 05/11/22 13:25	SM9223	
E. Coli	**10**	10	10	"	"	AZ	"	05/10/22 13:25 05/11/22 13:25	"	
Enterococcus	ND	10	10	"	"	AL	2051037	05/10/22 13:25 05/11/22 13:25	Idexx	
A1-3-R1-SH (22E0316-04) Seawater Sampled: 05/10/22 08:30 Received: 05/10/22 11:57										
Total Coliforms	**5170**	10	10	MPN/100 ml	10	AZ	2051038	05/10/22 13:25 05/11/22 13:25	SM9223	
E. Coli	ND	10	10	"	"	AZ	"	05/10/22 13:25 05/11/22 13:25	"	
Enterococcus	ND	10	10	"	"	AL	2051037	05/10/22 13:25 05/11/22 13:25	Idexx	
A1-1-R2-SH (22E0316-05) Seawater Sampled: 05/10/22 09:15 Received: 05/10/22 11:57										
Total Coliforms	**41**	10	10	MPN/100 ml	10	AZ	2051038	05/10/22 13:25 05/11/22 13:25	SM9223	
E. Coli	ND	10	10	"	"	AZ	"	05/10/22 13:25 05/11/22 13:25	"	
Enterococcus	ND	10	10	"	"	AL	2051037	05/10/22 13:25 05/11/22 13:25	Idexx	
A1-2-R2-SH (22E0316-06) Seawater Sampled: 05/10/22 09:25 Received: 05/10/22 11:57										
Total Coliforms	**85**	10	10	MPN/100 ml	10	AZ	2051038	05/10/22 13:25 05/11/22 13:25	SM9223	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client Name: Wood Environment & Infrastructure Solutions, Inc. **EMA Log #: 22E0316**
Project Name: POSD-Bacteria Shelter Island San Diego Bay

Microbiological Parameters by Standard Methods

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Analyst	Batch	Sample Prepared / Sample Analyzed	Method	Notes
A1-2-R2-SH (22E0316-06) Seawater Sampled: 05/10/22 09:25 Received: 05/10/22 11:57										
E. Coli	ND	10	10	MPN/10 0 ml	10	AZ	2051038	05/10/22 13:25 05/11/22 13:25	SM9223	
Enterococcus	ND	10	10	"	"	AL	2051037	05/10/22 13:25 05/11/22 13:25	Idexx	
A1-3-R2-SH (22E0316-07) Seawater Sampled: 05/10/22 09:30 Received: 05/10/22 11:57										
Total Coliforms	**10**	10	10	MPN/100 ml	10	AZ	2051038	05/10/22 13:25 05/11/22 13:25	SM9223	
E. Coli	ND	10	10	"	"	AZ	"	05/10/22 13:25 05/11/22 13:25	"	
Enterococcus	**1150**	10	10	"	"	AL	2051037	05/10/22 13:25 05/11/22 13:25	Idexx	
A1-1-R3-SH (22E0316-08) Seawater Sampled: 05/10/22 10:15 Received: 05/10/22 11:57										
Total Coliforms	**63**	10	10	MPN/100 ml	10	AZ	2051038	05/10/22 13:25 05/11/22 13:25	SM9223	
E. Coli	**10**	10	10	"	"	AZ	"	05/10/22 13:25 05/11/22 13:25	"	
Enterococcus	**10**	10	10	"	"	AL	2051037	05/10/22 13:25 05/11/22 13:25	Idexx	
A1-2-R3-SH (22E0316-09) Seawater Sampled: 05/10/22 10:20 Received: 05/10/22 11:57										
Total Coliforms	**1010**	10	10	MPN/100 ml	10	AZ	2051038	05/10/22 13:25 05/11/22 13:25	SM9223	
E. Coli	ND	10	10	"	"	AZ	"	05/10/22 13:25 05/11/22 13:25	"	
Enterococcus	**63**	10	10	"	"	AL	2051037	05/10/22 13:25 05/11/22 13:25	Idexx	
A1-3-R3-SH (22E0316-10) Seawater Sampled: 05/10/22 10:30 Received: 05/10/22 11:57										
Total Coliforms	**1130**	10	10	MPN/100 ml	10	AZ	2051038	05/10/22 13:25 05/11/22 13:25	SM9223	
E. Coli	**20**	10	10	"	"	AZ	"	05/10/22 13:25 05/11/22 13:25	"	
Enterococcus	ND	10	10	"	"	AL	2051037	05/10/22 13:25 05/11/22 13:25	Idexx	
FB-1-SH (22E0316-11) DI Water Sampled: 05/10/22 11:00 Received: 05/10/22 11:57										
Total Coliforms	**1540**	10	10	MPN/100 ml	10	AZ	2051038	05/10/22 13:25 05/11/22 13:25	SM9223	
E. Coli	ND	10	10	"	"	AZ	"	05/10/22 13:25 05/11/22 13:25	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client Name: Wood Environment & Infrastructure Solutions, Inc. **EMA Log #: 22E0316**
Project Name: POSD-Bacteria Shelter Island San Diego Bay

Microbiological Parameters by Standard Methods

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Analyst	Batch	Sample Prepared / Sample Analyzed	Method	Notes
FB-1-SH (22E0316-11) DI Water Sampled: 05/10/22 11:00 Received: 05/10/22 11:57										
Enterococcus	ND	10	10	MPN/10 0 ml	10	AL	2051037	05/10/22 13:25 05/11/22 13:25	Idexx	
A1-3-R1-DUP-SH (22E0316-12) Seawater Sampled: 05/10/22 08:31 Received: 05/10/22 11:57										
Total Coliforms	**6870**	10	10	MPN/100 ml	10	AZ	2051038	05/10/22 13:25 05/11/22 13:25	SM9223	
E. Coli	ND	10	10	"	"	AZ	"	05/10/22 13:25 05/11/22 13:25	"	
Enterococcus	ND	10	10	"	"	AL	2051037	05/10/22 13:25 05/11/22 13:25	Idexx	
OF-2-DW2 (22E0316-13) Freshwater Sampled: 05/10/22 09:45 Received: 05/10/22 11:57										
Total Coliforms	**48800**	100	100	MPN/100 ml	100	AZ	2051038	05/10/22 13:25 05/11/22 13:25	SM9223	
E. Coli	**310**	100	100	"	"	AZ	"	05/10/22 13:25 05/11/22 13:25	"	
Enterococcus	**4110**	10	10	"	10	AL	2051037	05/10/22 13:25 05/11/22 13:25	Idexx	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client Name: Wood Environment & Infrastructure Solutions, Inc. **EMA Log #: 22E0316**
Project Name: POSD-Bacteria Shelter Island San Diego Bay

Microbiological Parameters by Standard Methods - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Analyst	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2051037												
Blank (2051037-BLK1)					Prepared: 05/10/22 Analyzed: 05/11/22							
Enterococcus	ND	1	1	MPN/100 ml	AL							
Batch 2051038												
Blank (2051038-BLK1)					Prepared: 05/10/22 Analyzed: 05/11/22							
Total Coliforms	ND	1	1	MPN/100 ml	AZ							
E. Coli	ND	1	1	"	AZ							

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client Name: Wood Environment & Infrastructure Solutions, Inc. **EMA Log #: 22E0316**
Project Name: POSD-Bacteria Shelter Island San Diego Bay

Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit (or method detection limit when specified)
NR	Not Reported
dry	Sample results reported on a dry weight basis (if indicated in units column)
RPD	Relative Percent Difference
MDL	Method detection limit (indicated per client's request)

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

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CHAIN-OF-CUSTODY RECORD

EnviroMatrix Analytical, Inc.

9590 Chesapeake Dr, Suite 5, San Diego, CA 92123 - Phone (858) 560-7717 - Fax (858) 560-7763

EMA LOG #:

Client: Wood PLC

Attn: Kate Buckley, kate.buckley@woodplc.com

Samplers(s): Wood

Address: 9177 Sky Park Ct, San Diego, CA 92123

Phone: 760-420-5769 Fax:

Email: kate.buckley@woodplc.com

Billing Address: 9177 Sky Park Ct, San Diego, CA 92123

Project ID: POSD - SIYB Bacteria Special Study

Please include the following information on invoices: 1) Project #: 20151001116.0002C
(2) PO #: N/A (3) Org: 3151 (4) GL: 573000

Requested Analysis

ID #	Client Sample ID	Sample Date	Sample Time	Sample Matrix	Container # / Type	Coliform, X Total (Colilert)	Enterococcus, □ MTF X Enterolert
1	REF-1-SH	5/10/22	0755	sea water	2 / Bact	X	X
2	A1-1-R1-SH		0815	sea water	2 / Bact	X	X
3	A1-2-R1-SH		0820	sea water	2 / Bact	X	X
4	A1-3-R1-SH		0830	sea water	2 / Bact	X	X
5	A1-1-R2-SH		0915	sea water	2 / Bact	X	X
6	A1-2-R2-SH		0925	sea water	2 / Bact	X	X
7	A1-3-R2-SH		0930	sea water	2 / Bact	X	X
8	A1-1-R3-SH		1015	sea water	2 / Bact	X	X
9	A1-2-R3-SH		1020	sea water	2 / Bact	X	X
10	A1-3-R3-SH		1030	sea water	2 / Bact	X	X

Matrix Codes: A = Air, DW = Drinking Water, GW = Groundwater, SW = Storm Water
WW = Wastewater, S = Soil, SED = Sediment, SD = Solid, T = Tissue, O = Oil, L = Liquid

Shipped By: □ Courier □ UPS □ FedEx □ USPS X Client Drop Off □ Other

[1]**Turn-Around-Time:** □ Same Day □ 1 day □ 2 day □ 3 day □ 4 day □ 5 day X STD (7 day)

[1]**Reporting Requirements:** □ Fax X PDF X Excel □ Geotracker/EDF □ Hard Copy □ EDT

[1]**Sample Disposal:** X By Laboratory □ [2]Return to Client: P/U or Delivery □ Archive

Sample Integrity

Correct Containers: Yes No N/A	Containers Properly Preseved: Yes No N/A
Custody Seals Intact: Yes No N/A	Temp @ Receipt: 4°C
COC/Labels Agree: Yes No N/A	Sampled By: Client EMA Autosampler

	RELINQUISHED BY	DATE/TIME	RECEIVED BY
Signature		5/10/22 11:57	
Print	RICK SCHAFFER		
Company:	WOOD E&I		
Signature			
Print			
Company:			
Signature			
Print			
Company:			

NOTE: Please Provide SWAMP EDD. Please report true numeric results between 10-2,400,000 MPN/100mL for Total Coliform and Enterococcus using the Colilert and Enterolert methods, respectively, for each.

For each sample, conduct a 3x dilution for reportable MPN (MDL 10 - 2.4 mil).

[1]Additional costs may apply. Please note there is a $35 minimum charge for all clients.

[2]EMA reserves the right to return any samples that do not match our waste profile.

NOTE: By relinquishing samples to EMA, Inc., client agrees to pay for the services requested on this COC form and any additional analyses performed on this project. Payment for services is due within 30 days from date of invoice. Samples will be disposed of 7 days after report has been finalized unless otherwise noted. All work is subject to EMA's terms and conditions.

22E0316

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CHAIN-OF-CUSTODY RECORD

– EnviroMatrix Analytical, Inc. –

9590 Chesapeake Dr, Suite 5, San Diego, CA 92123 - Phone (858) 560-7717 - Fax (858) 560-7763

EMA LOG #:

Client: Wood PLC

Attn: Kate Buckley, kate.buckley@woodplc.com

Samplers(s): Wood

Address: 9177 Sky Park Ct, San Diego, CA 92123

Phone: 760-420-5769 Fax:

Email: kate.buckley@woodplc.com

Billing Address: 9177 Sky Park Ct, San Diego, CA 92123

Project ID: POSD - SIYB Bacteria Special Study

Please include the following information on invoices: 1) Project #: 20151001116.0002C

(2) PO #: N/A (3) Org: 3151 (4) GL: 573000

Requested Analysis

ID #	Client Sample ID	Sample Date	Sample Time	Sample Matrix	Container # / Type	Coliform, X Total (Colilert)	Enterococcus, □ MTF X Enterolert
1	FB-1-SH	5/10/22	1100	sea water	2 / Bact	X	X
2	~~DUP-SH~~ A1-3-R1-DUP-SH	5/10/22	0831	sea water	2 / Bact	X	X
3							
4							
5							
6							
7							
8							
9							
10							

Matrix Codes: A = Air, DW = Drinking Water, GW = Groundwater, SW = Storm Water
WW = Wastewater, S = Soil, SED = Sediment, SD = Solid, T = Tissue, O = Oil, L = Liquid

Shipped By: □ Courier □ UPS □ FedEx □ USPS X Client Drop Off □ Other

[1]**Turn-Around-Time:** □ Same Day □ 1 day □ 2 day □ 3 day □ 4 day □ 5 day X STD (7 day)

[1]**Reporting Requirements:** □ Fax X PDF X Excel □ Geotracker/EDF □ Hard Copy □ EDT

[1]**Sample Disposal:** X By Laboratory □ [2]Return to Client: P/U or Delivery □ Archive

Sample Integrity

Correct Containers: Yes No N/A | Containers Properly Preseved: Yes No N/A

Custody Seals Intact: Yes No N/A | Temp @ Receipt: 4c

COC/Labels Agree: Yes No N/A | Sampled By: Client EMA Autosampler

RELINQUISHED BY	DATE/TIME	RECEIVED BY
Signature	5/10/22 11:57	Signature
Print: Kyle Schulte		Print: Brett Hu
Company: Wood E&I		Company: EMA
Signature		Signature
Print		Print
Company:		Company:
Signature		Signature
Print		Print
Company:		Company:

NOTE: Please Provide SWAMP EDD. Please report true numeric results between 10-2,400,000 MPN/100mL for Total Coliform and Enterococcus using the Colilert and Enterolert methods, respectively, for each.

For each sample, conduct a 3x dilution for reportable MPN (MDL 10 - 2.4 mil).

[1]Additional costs may apply. Please note there is a $35 minimum charge for all clients.

[2]EMA reserves the right to return any samples that do not match our waste profile.

NOTE: By relinquishing samples to EMA, Inc., client agrees to pay for the services requested on this COC form and any additional analyses performed on this project. Payment for services is due within 30 days from date of invoice. Samples will be disposed of 7 days after report has been finalized unless otherwise noted. All work is subject to EMA's terms and conditions.

~~22E021~~ 22E0316 BM

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CHAIN-OF-CUSTODY RECORD

EMA LOG #:

EnviroMatrix Analytical, Inc.

9590 Chesapeake Dr, Suite 5, San Diego, CA 92123 - Phone (858) 560-7717 - Fax (858) 560-7763

Client: Wood PLC

Attn: Kate Buckley, kate.buckley@woodplc.com

Samplers(s): Wood

Address: 9177 Sky Park Ct, San Diego, CA 92123

Phone: 760-420-5769 Fax:

Email: kate.buckley@woodplc.com

Billing Address: 9177 Sky Park Ct, San Diego, CA 92123

Project ID: POSD - SIYB Bacteria Special Study

Please include the following information on invoices: 1) Project #: 20151001116.0002C
(2) PO #: N/A (3) Org: 3151 (4) GL: 573000

Requested Analysis

ID #	Client Sample ID	Sample Date	Sample Time	Sample Matrix	Container # / Type	Coliform, X Total (Colilert)	Enterococcus, □ MTF X Enterolert
1	~~FB-1-WKD1~~			~~sea water~~	2 / Bact	X	X
2	~~DUP-WKD1~~			~~sea water~~	~~2 / Bact~~	X	X
3	OF-2-DW2	5/10/22	0945	FW*	2/Bact	X	X
4							
5							
6							
7							
8							
9							
10							

Matrix Codes: A = Air, DW = Drinking Water, GW = Groundwater, SW = Storm Water
WW = Wastewater, S = Soil, SED = Sediment, SD = Solid, T = Tissue, O = Oil, L = Liquid

Shipped By: □ Courier □ UPS □ FedEx □ USPS X Client Drop Off □ Other

[1]**Turn-Around-Time:** □ Same Day □ 1 day □ 2 day □ 3 day □ 4 day □ 5 day X STD (7 day)

[1]**Reporting Requirements:** □ Fax X PDF X Excel □ Geotracker/EDF □ Hard Copy □ EDT

[1]**Sample Disposal:** X By Laboratory □ [2]Return to Client: P/U or Delivery □ Archive

Sample Integrity

Correct Containers: Yes No N/A	Containers Properly Preseved: Yes No N/A
Custody Seals Intact: Yes No N/A	Temp @ Receipt: 4°C
COC/Labels Agree: Yes No N/A	Sampled By: Client EMA Autosampler

	RELINQUISHED BY	DATE/TIME	RECEIVED BY
Signature		5/10/22 11:58	
Print	RICK SCAMP		
Company:	WOOD ENV		
Signature			
Print			
Company:			
Signature			
Print			
Company:			

NOTE: Please Provide SWAMP EDD. Please report true numeric results between 10-2,400,000 MPN/100mL for Total Coliform and Enterococcus using the Colilert and Enterolert methods, respectively, for each.

For each sample, conduct a 3x dilution for reportable MPN (MDL 10 - 2.4 mil).

* FW sample, salinity: 0.68 ppt

[1]Additional costs may apply. Please note there is a $35 minimum charge for all clients.

[2]EMA reserves the right to return any samples that do not match our waste profile.

NOTE: By relinquishing samples to EMA, Inc., client agrees to pay for the services requested on this COC form and any additional analyses performed on this project. Payment for services is due within 30 days from date of invoice. Samples will be disposed of 7 days after report has been finalized unless otherwise noted. All work is subject to EMA's terms and conditions.

Environmental Laboratory Network, Inc.
dba EnviroMatrix Analytical

18 May 2022

Wood Environment & Infrastructure Solutions, Inc. **EMA Log #: 22E0454**
Attn: Kate Buckley
9177 Sky Park Court
San Diego, CA 92123

Project: POSD-Bacteria Shelter Island San Diego Bay/POSD-SIYB Bacteria Special Study/Project:2015100116.0002A/ Org:3151/GL:573000

Enclosed are the results of analyses for samples received by the laboratory on 05/13/22 11:33. Samples were analyzed pursuant to client request utilizing EPA or other ELAP approved methodologies. Environmental Laboratory Network, Inc. certifies that this data is in compliance both technically and for completeness.

Jenny Douglas
President/CEO
Environmental Laboratory Network, Inc.
dba EnviroMatrix Analytical

CA ELAP Certification #: 2564

Client Name: Wood Environment & Infrastructure Solutions, Inc. **EMA Log #: 22E0454**
Project Name: POSD-Bacteria Shelter Island San Diego Bay

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MC-1-W2	22E0454-01	Seawater	05/13/22 09:45	05/13/22 11:33
MC-2-W2	22E0454-02	Seawater	05/13/22 09:35	05/13/22 11:33
OF-1-W2	22E0454-03	Seawater	05/13/22 08:40	05/13/22 11:33
OF-2-W2	22E0454-04	Seawater	05/13/22 09:00	05/13/22 11:33
OF-3-W2	22E0454-05	Seawater	05/13/22 09:15	05/13/22 11:33
FP-W2	22E0454-06	Seawater	05/13/22 09:25	05/13/22 11:33
GD-W2	22E0454-07	Seawater	05/13/22 10:10	05/13/22 11:33
BS-W2	22E0454-08	Seawater	05/13/22 08:50	05/13/22 11:33
KK-W2	22E0454-09	Seawater	05/13/22 10:17	05/13/22 11:33
NK-W2	22E0454-10	Seawater	05/13/22 09:55	05/13/22 11:33
KB-W2	22E0454-11	Seawater	05/13/22 10:00	05/13/22 11:33
REF-1-W2	22E0454-12	Seawater	05/13/22 07:50	05/13/22 11:33
A1-1-W2	22E0454-13	Seawater	05/13/22 08:15	05/13/22 11:33
A1-2-W2	22E0454-14	Seawater	05/13/22 08:25	05/13/22 11:33
A1-3-W2	22E0454-15	Seawater	05/13/22 08:30	05/13/22 11:33
FB-1-W2	22E0454-16	Seawater	05/13/22 10:30	05/13/22 11:33
KK-DUP-W2	22E0454-17	Seawater	05/13/22 10:18	05/13/22 11:33

Client Name: Wood Environment & Infrastructure Solutions, Inc. **EMA Log #: 22E0454**
Project Name: POSD-Bacteria Shelter Island San Diego Bay

Microbiological Parameters by Standard Methods

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Analyst	Batch	Sample Prepared Sample Analyzed	Method	Notes
MC-1-W2 (22E0454-01) Seawater Sampled: 05/13/22 09:45 Received: 05/13/22 11:33										
Total Coliforms	**31**	10	10	MPN/100 ml	10	AL	2051322	05/13/22 15:30 05/14/22 15:30	SM9223	
E. Coli	**10**	10	10	"	"	AL	"	05/13/22 15:30 05/14/22 15:30	"	
Enterococcus	ND	10	10	"	"	AL	2051323	05/13/22 15:30 05/14/22 15:30	Idexx	
MC-2-W2 (22E0454-02) Seawater Sampled: 05/13/22 09:35 Received: 05/13/22 11:33										
Total Coliforms	**74**	10	10	MPN/100 ml	10	AL	2051322	05/13/22 15:30 05/14/22 15:30	SM9223	
E. Coli	ND	10	10	"	"	AL	"	05/13/22 15:30 05/14/22 15:30	"	
Enterococcus	ND	10	10	"	"	AL	2051323	05/13/22 15:30 05/14/22 15:30	Idexx	
OF-1-W2 (22E0454-03) Seawater Sampled: 05/13/22 08:40 Received: 05/13/22 11:33										
Total Coliforms	**1470**	10	10	MPN/100 ml	10	AL	2051322	05/13/22 15:30 05/14/22 15:30	SM9223	
E. Coli	**279**	10	10	"	"	AL	"	05/13/22 15:30 05/14/22 15:30	"	
Enterococcus	ND	10	10	"	"	AL	2051323	05/13/22 15:30 05/14/22 15:30	Idexx	
OF-2-W2 (22E0454-04) Seawater Sampled: 05/13/22 09:00 Received: 05/13/22 11:33										
Total Coliforms	**2380**	100	100	MPN/100 ml	100	AL	2051322	05/13/22 15:30 05/14/22 15:30	SM9223	
E. Coli	**200**	100	100	"	"	AL	"	05/13/22 15:30 05/14/22 15:30	"	
Enterococcus	**1830**	10	10	"	10	AL	2051323	05/13/22 15:30 05/14/22 15:30	Idexx	
OF-3-W2 (22E0454-05) Seawater Sampled: 05/13/22 09:15 Received: 05/13/22 11:33										
Total Coliforms	**146**	10	10	MPN/100 ml	10	AL	2051322	05/13/22 15:30 05/14/22 15:30	SM9223	
E. Coli	**10**	10	10	"	"	AL	"	05/13/22 15:30 05/14/22 15:30	"	
Enterococcus	**20**	10	10	"	"	AL	2051323	05/13/22 15:30 05/14/22 15:30	Idexx	
FP-W2 (22E0454-06) Seawater Sampled: 05/13/22 09:25 Received: 05/13/22 11:33										
Total Coliforms	**272**	10	10	MPN/100 ml	10	AL	2051322	05/13/22 15:30 05/14/22 15:30	SM9223	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client Name: Wood Environment & Infrastructure Solutions, Inc. **EMA Log #: 22E0454**
Project Name: POSD-Bacteria Shelter Island San Diego Bay

Microbiological Parameters by Standard Methods

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Analyst	Batch	Sample Prepared Sample Analyzed	Method	Notes
FP-W2 (22E0454-06) Seawater Sampled: 05/13/22 09:25 Received: 05/13/22 11:33										
E. Coli	ND	10	10	MPN/10 0 ml	10	AL	2051322	05/13/22 15:30 05/14/22 15:30	SM9223	
Enterococcus	ND	10	10	"	"	AL	2051323	05/13/22 15:30 05/14/22 15:30	Idexx	
GD-W2 (22E0454-07) Seawater Sampled: 05/13/22 10:10 Received: 05/13/22 11:33										
Total Coliforms	**135**	10	10	MPN/100 ml	10	AL	2051322	05/13/22 15:30 05/14/22 15:30	SM9223	
E. Coli	ND	10	10	"	"	AL	"	05/13/22 15:30 05/14/22 15:30	"	
Enterococcus	**30**	10	10	"	"	AL	2051323	05/13/22 15:30 05/14/22 15:30	Idexx	
BS-W2 (22E0454-08) Seawater Sampled: 05/13/22 08:50 Received: 05/13/22 11:33										
Total Coliforms	**146**	10	10	MPN/100 ml	10	AL	2051322	05/13/22 15:30 05/14/22 15:30	SM9223	
E. Coli	**20**	10	10	"	"	AL	"	05/13/22 15:30 05/14/22 15:30	"	
Enterococcus	**20**	10	10	"	"	AL	2051323	05/13/22 15:30 05/14/22 15:30	Idexx	
KK-W2 (22E0454-09) Seawater Sampled: 05/13/22 10:17 Received: 05/13/22 11:33										
Total Coliforms	**20**	10	10	MPN/100 ml	10	AL	2051322	05/13/22 15:30 05/14/22 15:30	SM9223	
E. Coli	ND	10	10	"	"	AL	"	05/13/22 15:30 05/14/22 15:30	"	
Enterococcus	**10**	10	10	"	"	AL	2051323	05/13/22 15:30 05/14/22 15:30	Idexx	
NK-W2 (22E0454-10) Seawater Sampled: 05/13/22 09:55 Received: 05/13/22 11:33										
Total Coliforms	**52**	10	10	MPN/100 ml	10	AL	2051322	05/13/22 15:30 05/14/22 15:30	SM9223	
E. Coli	ND	10	10	"	"	AL	"	05/13/22 15:30 05/14/22 15:30	"	
Enterococcus	ND	10	10	"	"	AL	2051323	05/13/22 15:30 05/14/22 15:30	Idexx	
KB-W2 (22E0454-11) Seawater Sampled: 05/13/22 10:00 Received: 05/13/22 11:33										
Total Coliforms	**73**	10	10	MPN/100 ml	10	AL	2051322	05/13/22 15:30 05/14/22 15:30	SM9223	
E. Coli	**10**	10	10	"	"	AL	"	05/13/22 15:30 05/14/22 15:30	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client Name: Wood Environment & Infrastructure Solutions, Inc. **EMA Log #: 22E0454**
Project Name: POSD-Bacteria Shelter Island San Diego Bay

Microbiological Parameters by Standard Methods

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Analyst	Batch	Sample Prepared / Sample Analyzed	Method	Notes
KB-W2 (22E0454-11) Seawater Sampled: 05/13/22 10:00 Received: 05/13/22 11:33										
Enterococcus	ND	10	10	MPN/10 0 ml	10	AL	2051323	05/13/22 15:30 05/14/22 15:30	Idexx	
REF-1-W2 (22E0454-12) Seawater Sampled: 05/13/22 07:50 Received: 05/13/22 11:33										
Total Coliforms	**63**	10	10	MPN/100 ml	10	AL	2051322	05/13/22 15:30 05/14/22 15:30	SM9223	
E. Coli	**10**	10	10	"	"	AL	"	05/13/22 15:30 05/14/22 15:30	"	
Enterococcus	ND	10	10	"	"	AL	2051323	05/13/22 15:30 05/14/22 15:30	Idexx	
A1-1-W2 (22E0454-13) Seawater Sampled: 05/13/22 08:15 Received: 05/13/22 11:33										
Total Coliforms	**20**	10	10	MPN/100 ml	10	AL	2051322	05/13/22 15:30 05/14/22 15:30	SM9223	
E. Coli	**20**	10	10	"	"	AL	"	05/13/22 15:30 05/14/22 15:30	"	
Enterococcus	ND	10	10	"	"	AL	2051323	05/13/22 15:30 05/14/22 15:30	Idexx	
A1-2-W2 (22E0454-14) Seawater Sampled: 05/13/22 08:25 Received: 05/13/22 11:33										
Total Coliforms	**10**	10	10	MPN/100 ml	10	AL	2051322	05/13/22 15:30 05/14/22 15:30	SM9223	
E. Coli	**10**	10	10	"	"	AL	"	05/13/22 15:30 05/14/22 15:30	"	
Enterococcus	ND	10	10	"	"	AL	2051323	05/13/22 15:30 05/14/22 15:30	Idexx	
A1-3-W2 (22E0454-15) Seawater Sampled: 05/13/22 08:30 Received: 05/13/22 11:33										
Total Coliforms	**10**	10	10	MPN/100 ml	10	AL	2051322	05/13/22 15:30 05/14/22 15:30	SM9223	
E. Coli	ND	10	10	"	"	AL	"	05/13/22 15:30 05/14/22 15:30	"	
Enterococcus	ND	10	10	"	"	AL	2051323	05/13/22 15:30 05/14/22 15:30	Idexx	
FB-1-W2 (22E0454-16) Seawater Sampled: 05/13/22 10:30 Received: 05/13/22 11:33										
Total Coliforms	ND	10	10	MPN/10 0 ml	10	AL	2051322	05/13/22 15:30 05/14/22 15:30	SM9223	
E. Coli	ND	10	10	"	"	AL	"	05/13/22 15:30 05/14/22 15:30	"	
Enterococcus	ND	10	10	"	"	AL	2051323	05/13/22 15:30 05/14/22 15:30	Idexx	

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Client Name: Wood Environment & Infrastructure Solutions, Inc. **EMA Log #: 22E0454**
Project Name: POSD-Bacteria Shelter Island San Diego Bay

Microbiological Parameters by Standard Methods

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Analyst	Batch	Sample Prepared Sample Analyzed	Method	Notes
KK-DUP-W2 (22E0454-17) Seawater	**Sampled: 05/13/22 10:18**		**Received: 05/13/22 11:33**							
Total Coliforms	**31**	10	10	MPN/100 ml	10	AL	2051322	05/13/22 15:30 05/14/22 15:30	SM9223	
E. Coli	ND	10	10	"	"	AL	"	05/13/22 15:30 05/14/22 15:30	"	
Enterococcus	ND	10	10	"	"	AL	2051323	05/13/22 15:30 05/14/22 15:30	Idexx	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client Name: Wood Environment & Infrastructure Solutions, Inc. **EMA Log #: 22E0454**
Project Name: POSD-Bacteria Shelter Island San Diego Bay

Microbiological Parameters by Standard Methods - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Analyst	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2051322												
Blank (2051322-BLK1)					Prepared: 05/13/22 Analyzed: 05/14/22							
Total Coliforms	ND	1	1	MPN/100 ml	AL							
E. Coli	ND	1	1	"	AL							
Batch 2051323												
Blank (2051323-BLK1)					Prepared: 05/13/22 Analyzed: 05/14/22							
Enterococcus	ND	1	1	MPN/100 ml	AL							

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client Name: Wood Environment & Infrastructure Solutions, Inc. **EMA Log #: 22E0454**
Project Name: POSD-Bacteria Shelter Island San Diego Bay

Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit (or method detection limit when specified)
NR	Not Reported
dry	Sample results reported on a dry weight basis (if indicated in units column)
RPD	Relative Percent Difference
MDL	Method detection limit (indicated per client's request)

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

22E0454

CHAIN-OF-CUSTODY RECORD

EnviroMatrix Analytical, Inc.
9590 Chesapeake Dr, Suite 5, San Diego, CA 92123 - Phone (858) 560-7717 - Fax (858) 560-7763

EMA LOG #:

Client: Wood PLC

Attn: Kate Buckley, kate.buckley@woodplc.com

Samplers(s): Wood

Address: 9177 Sky Park Ct, San Diego, CA 92123

Phone: 760-420-5769 Fax:

Email: kate.buckley@woodplc.com

Billing Address: 9177 Sky Park Ct, San Diego, CA 92123

Project ID: POSD - SIYB Bacteria Special Study

Please include the following information on invoices: 1) Project #: 2015100116.0002A.EMA (2) PO #: N/A (3) Org: 3151 (4) GL: 573000

Requested Analysis

ID #	Client Sample ID	Sample Date	Sample Time	Sample Matrix	Container # / Type	Coliform, X Total (Colilert)	Enterococcus, □ MTF X Enterolert
1	MC-1-W2	5/12/22	0945	sea water	2 / Bact	X	X
2	MC-2-W2		0935	sea water	2 / Bact	X	X
3	OF-1-W2		0840	sea water	2 / Bact	X	X
4	OF-2-W2		0900	sea water	2 / Bact	X	X
5	OF-3-W2		0915	sea water	2 / Bact	X	X
6	FP-W2		0925	sea water	2 / Bact	X	X
7	GD-W2		1010	sea water	2 / Bact	X	X
8	BS-W2		0850	sea water	2 / Bact	X	X
9	KK-W2		1017	sea water	2 / Bact	X	X
10	NK-W2		0955	sea water	2 / Bact	X	X

Matrix Codes: A = Air, DW = Drinking Water, GW = Groundwater, SW = Storm Water
WW = Wastewater, S = Soil, SED = Sediment, SD = Solid, T = Tissue, O = Oil, L = Liquid

Shipped By: □ Courier □ UPS □ FedEx □ USPS X Client Drop Off □ Other

[1]**Turn-Around-Time:** □ Same Day □ 1 day □ 2 day □ 3 day □ 4 day □ 5 day X STD (7 day)

[1]**Reporting Requirements:** □ Fax X PDF X Excel □ Geotracker/EDF □ Hard Copy □ EDT

[1]**Sample Disposal:** X By Laboratory □ [2]Return to Client: P/U or Delivery □ Archive

Sample Integrity

Correct Containers: (Yes) No N/A	Containers Properly Preseved: (Yes) No N/A
Custody Seals Intact: Yes No (N/A)	Temp @ Receipt: 4 c
COC/Labels Agree: (Yes) No N/A	Sampled By: (Client) EMA Autosampler

RELINQUISHED BY	DATE/TIME	RECEIVED BY
Signature	5/12/22 11:53	Signature
Print: Rolf Schotte		Print: Brad Mink
Company: Wood E&S		Company: EMA
Signature		Signature
Print		Print
Company:		Company:
Signature		Signature
Print		Print
Company:		Company:

NOTE: Please Provide SWAMP EDD. Please report true numeric results between 10-2,400,000 MPN/100mL for Total Coliform and Enterococcus using the Colilert and Enterolert methods, respectively, for each.

For each sample, conduct a 3x dilution for reportable MPN (MDL 10 - 2.4 mil).

[1]Additional costs may apply. Please note there is a $35 minimum charge for all clients.

[2]EMA reserves the right to return any samples that do not match our waste profile.

NOTE: By relinquishing samples to EMA, Inc., client agrees to pay for the services requested on this COC form and any additional analyses performed on this project. Payment for services is due within 30 days from date of invoice. Samples will be disposed of 7 days after report has been finalized unless otherwise noted. All work is subject to EMA's terms and conditions.

22E0454

CHAIN-OF-CUSTODY RECORD

EnviroMatrix Analytical, Inc.
9590 Chesapeake Dr, Suite 5, San Diego, CA 92123 - Phone (858) 560-7717 - Fax (858) 560-7763

EMA LOG #:

Client: Wood PLC

Attn: Kate Buckley, kate.buckley@woodplc.com

Samplers(s): Wood

Address: 9177 Sky Park Ct, San Diego, CA 92123

Phone: 760-420-5769 Fax:

Email: kate.buckley@woodplc.com

Billing Address: 9177 Sky Park Ct, San Diego, CA 92123

Project ID: POSD - SIYB Bacteria Special Study

Please include the following information on invoices: 1) Project #: 2015100116.0002A.EMA (2) PO #: N/A (3) Org: 3151 (4) GL: 573000

Requested Analysis

ID #	Client Sample ID	Sample Date	Sample Time	Sample Matrix	Container # / Type	Coliform, X Total (Colilert)	Enterococcus, □ MTF X Enterolert
1	KB-W2	5/13/22	1000	sea water	2 / Bact	X	X
2	REF-1-W2		0750	sea water	2 / Bact	X	X
3	A1-1-W2		0815	sea water	2 / Bact	X	X
4	A1-2-W2		0825	sea water	2 / Bact	X	X
5	A1-3-W2		0830	sea water	2 / Bact	X	X
6	FB-1-W2		1030	sea water	2 / Bact	X	X
7	KK-DUP-W2		1018	sea water	2 / Bact	X	X
8							
9							
10							

Matrix Codes: A = Air, DW = Drinking Water, GW = Groundwater, SW = Storm Water
WW = Wastewater, S = Soil, SED = Sediment, SD = Solid, T = Tissue, O = Oil, L = Liquid

Shipped By: □ Courier □ UPS □ FedEx □ USPS X Client Drop Off □ Other

[1]**Turn-Around-Time:** □ Same Day □ 1 day □ 2 day □ 3 day □ 4 day □ 5 day X STD (7 day)

[1]**Reporting Requirements:** □ Fax X PDF X Excel □ Geotracker/EDF □ Hard Copy □ EDT

[1]**Sample Disposal:** X By Laboratory □ [2]Return to Client: P/U or Delivery □ Archive

Sample Integrity

Correct Containers: Yes No N/A	Containers Properly Preseved: Yes No N/A
Custody Seals Intact: Yes No N/A	Temp @ Receipt: 4 C
COC/Labels Agree: Yes No N/A	Sampled By: Client EMA Autosampler

RELINQUISHED BY	DATE/TIME	RECEIVED BY
Signature	5/13/22 1130	Signature
Print Ron Schotte		Print Brett Mc
Company: Wood C&E		Company: EMA
Signature		Signature
Print		Print
Company:		Company:
Signature		Signature
Print		Print
Company:		Company:

NOTE: Please Provide SWAMP EDD. Please report true numeric results between 10-2,400,000 MPN/100mL for Total Coliform and Enterococcus using the Colilert and Enterolert methods, respectively, for each.

For each sample, conduct a 3x dilution for reportable MPN (MDL 10 - 2.4 mil).

[1]Additional costs may apply. Please note there is a $35 minimum charge for all clients.

[2]EMA reserves the right to return any samples that do not match our waste profile.

NOTE: By relinquishing samples to EMA, Inc., client agrees to pay for the services requested on this COC form and any additional analyses performed on this project. Payment for services is due within 30 days from date of invoice. Samples will be disposed of 7 days after report has been finalized unless otherwise noted. All work is subject to EMA's terms and conditions.

Environmental Laboratory Network, Inc.
dba EnviroMatrix Analytical

27 May 2022

Wood Environment & Infrastructure Solutions, Inc. **EMA Log #: 22E0691**
Attn: Kate Buckley
9177 Sky Park Court
San Diego, CA 92123

Project: POSD-Bacteria Shelter Island San Diego Bay/POSD-SIYB Bacteria Special Study/ Project:2015100116.0002A.EMA/Org:3151/GL:573000

Enclosed are the results of analyses for samples received by the laboratory on 05/20/22 10:35. Samples were analyzed pursuant to client request utilizing EPA or other ELAP approved methodologies. Environmental Laboratory Network, Inc. certifies that this data is in compliance both technically and for completeness.

Jenny Douglas
President/CEO
Environmental Laboratory Network, Inc.
dba EnviroMatrix Analytical

CA ELAP Certification #: 2564

Client Name: Wood Environment & Infrastructure Solutions, Inc. **EMA Log #: 22E0691**
Project Name: POSD-Bacteria Shelter Island San Diego Bay

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MC-1-W3	22E0691-01	Seawater	05/20/22 06:30	05/20/22 10:35
MC-2-W3	22E0691-02	Seawater	05/20/22 06:40	05/20/22 10:35
OF-1-W3	22E0691-03	Seawater	05/20/22 07:50	05/20/22 10:35
OF-2-W3	22E0691-04	Seawater	05/20/22 07:15	05/20/22 10:35
OF-3-W3	22E0691-05	Seawater	05/20/22 06:55	05/20/22 10:35
FP-W3	22E0691-06	Seawater	05/20/22 06:45	05/20/22 10:35
GD-W3	22E0691-07	Seawater	05/20/22 06:05	05/20/22 10:35
BS-W3	22E0691-08	Seawater	05/20/22 07:40	05/20/22 10:35
KK-W3	22E0691-09	Seawater	05/20/22 06:15	05/20/22 10:35
NK-W3	22E0691-10	Seawater	05/20/22 08:25	05/20/22 10:35
KB-W3	22E0691-11	Seawater	05/20/22 08:35	05/20/22 10:35
REF-1-W3	22E0691-12	Seawater	05/20/22 05:55	05/20/22 10:35
A1-1-W3	22E0691-13	Seawater	05/20/22 08:00	05/20/22 10:35
A1-2-W3	22E0691-14	Seawater	05/20/22 08:10	05/20/22 10:35
A1-3-W3	22E0691-15	Seawater	05/20/22 08:15	05/20/22 10:35
FB-W3	22E0691-16	Blank Water	05/20/22 08:50	05/20/22 10:35
OF-3-DUP-W3	22E0691-17	Seawater	05/20/22 07:00	05/20/22 10:35
FB-Test	22E0691-18	Blank Water	05/20/22 08:55	05/20/22 10:35
OF-2-DW3	22E0691-19	Fresh Water	05/20/22 07:20	05/20/22 10:35

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client Name: Wood Environment & Infrastructure Solutions, Inc. **EMA Log #: 22E0691**
Project Name: POSD-Bacteria Shelter Island San Diego Bay

Microbiological Parameters by Standard Methods

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Analyst	Batch	Sample Prepared Sample Analyzed	Method	Notes
MC-1-W3 (22E0691-01) Seawater Sampled: 05/20/22 06:30 Received: 05/20/22 10:35										
Total Coliforms	**197**	10	10	MPN/100 ml	10	AL	2052026	05/20/22 12:00 05/21/22 12:00	SM9223	
E. Coli	**30**	10	10	"	"	AL	"	05/20/22 12:00 05/21/22 12:00	"	
Enterococcus	ND	10	10	"	"	AL	2052025	05/20/22 12:00 05/21/22 12:00	Idexx	
MC-2-W3 (22E0691-02) Seawater Sampled: 05/20/22 06:40 Received: 05/20/22 10:35										
Total Coliforms	**201**	10	10	MPN/100 ml	10	AL	2052026	05/20/22 12:00 05/21/22 12:00	SM9223	
E. Coli	**98**	10	10	"	"	AL	"	05/20/22 12:00 05/21/22 12:00	"	
Enterococcus	ND	10	10	"	"	AL	2052025	05/20/22 12:00 05/21/22 12:00	Idexx	
OF-1-W3 (22E0691-03) Seawater Sampled: 05/20/22 07:50 Received: 05/20/22 10:35										
Total Coliforms	**537**	10	10	MPN/100 ml	10	AL	2052026	05/20/22 12:00 05/21/22 12:00	SM9223	
E. Coli	**41**	10	10	"	"	AL	"	05/20/22 12:00 05/21/22 12:00	"	
Enterococcus	**10**	10	10	"	"	AL	2052025	05/20/22 12:00 05/21/22 12:00	Idexx	
OF-2-W3 (22E0691-04) Seawater Sampled: 05/20/22 07:15 Received: 05/20/22 10:35										
Total Coliforms	**54800**	100	100	MPN/100 ml	100	AL	2052026	05/20/22 12:00 05/21/22 12:00	SM9223	
E. Coli	**11000**	100	100	"	"	AL	"	05/20/22 12:00 05/21/22 12:00	"	
Enterococcus	**6970**	100	100	"	"	AL	2052025	05/20/22 12:00 05/21/22 12:00	Idexx	
OF-3-W3 (22E0691-05) Seawater Sampled: 05/20/22 06:55 Received: 05/20/22 10:35										
Total Coliforms	**368**	10	10	MPN/100 ml	10	AL	2052026	05/20/22 12:00 05/21/22 12:00	SM9223	
E. Coli	**20**	10	10	"	"	AL	"	05/20/22 12:00 05/21/22 12:00	"	
Enterococcus	**10**	10	10	"	"	AL	2052025	05/20/22 12:00 05/21/22 12:00	Idexx	
FP-W3 (22E0691-06) Seawater Sampled: 05/20/22 06:45 Received: 05/20/22 10:35										
Total Coliforms	**292**	10	10	MPN/100 ml	10	AL	2052026	05/20/22 12:00 05/21/22 12:00	SM9223	

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Client Name: Wood Environment & Infrastructure Solutions, Inc. **EMA Log #: 22E0691**
Project Name: POSD-Bacteria Shelter Island San Diego Bay

Microbiological Parameters by Standard Methods

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Analyst	Batch	Sample Prepared Sample Analyzed	Method	Notes
FP-W3 (22E0691-06) Seawater Sampled: 05/20/22 06:45 Received: 05/20/22 10:35										
E. Coli	**20**	10	10	MPN/100 ml	10	AL	2052026	05/20/22 12:00 05/21/22 12:00	SM9223	
Enterococcus	ND	10	10	"	"	AL	2052025	05/20/22 12:00 05/21/22 12:00	Idexx	
GD-W3 (22E0691-07) Seawater Sampled: 05/20/22 06:05 Received: 05/20/22 10:35										
Total Coliforms	**256**	10	10	MPN/100 ml	10	AL	2052026	05/20/22 12:00 05/21/22 12:00	SM9223	
E. Coli	ND	10	10	"	"	AL	"	05/20/22 12:00 05/21/22 12:00	"	
Enterococcus	ND	10	10	"	"	AL	2052025	05/20/22 12:00 05/21/22 12:00	Idexx	
BS-W3 (22E0691-08) Seawater Sampled: 05/20/22 07:40 Received: 05/20/22 10:35										
Total Coliforms	**175**	10	10	MPN/100 ml	10	AL	2052026	05/20/22 12:00 05/21/22 12:00	SM9223	
E. Coli	**20**	10	10	"	"	AL	"	05/20/22 12:00 05/21/22 12:00	"	
Enterococcus	ND	10	10	"	"	AL	2052025	05/20/22 12:00 05/21/22 12:00	Idexx	
KK-W3 (22E0691-09) Seawater Sampled: 05/20/22 06:15 Received: 05/20/22 10:35										
Total Coliforms	**110**	10	10	MPN/100 ml	10	AL	2052026	05/20/22 12:00 05/21/22 12:00	SM9223	
E. Coli	**10**	10	10	"	"	AL	"	05/20/22 12:00 05/21/22 12:00	"	
Enterococcus	**10**	10	10	"	"	AL	2052025	05/20/22 12:00 05/21/22 12:00	Idexx	
NK-W3 (22E0691-10) Seawater Sampled: 05/20/22 08:25 Received: 05/20/22 10:35										
Total Coliforms	**328**	10	10	MPN/100 ml	10	AL	2052026	05/20/22 12:00 05/21/22 12:00	SM9223	
E. Coli	**223**	10	10	"	"	AL	"	05/20/22 12:00 05/21/22 12:00	"	
Enterococcus	**226**	10	10	"	"	AL	2052025	05/20/22 12:00 05/21/22 12:00	Idexx	
KB-W3 (22E0691-11) Seawater Sampled: 05/20/22 08:35 Received: 05/20/22 10:35										
Total Coliforms	**836**	10	10	MPN/100 ml	10	AL	2052026	05/20/22 12:00 05/21/22 12:00	SM9223	
E. Coli	**512**	10	10	"	"	AL	"	05/20/22 12:00 05/21/22 12:00	"	

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Client Name: Wood Environment & Infrastructure Solutions, Inc. **EMA Log #: 22E0691**
Project Name: POSD-Bacteria Shelter Island San Diego Bay

Microbiological Parameters by Standard Methods

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Analyst	Batch	Sample Prepared Sample Analyzed	Method	Notes
KB-W3 (22E0691-11) Seawater Sampled: 05/20/22 08:35 Received: 05/20/22 10:35										
Enterococcus	**223**	10	10	MPN/100 ml	10	AL	2052025	05/20/22 12:00 05/21/22 12:00	Idexx	
REF-1-W3 (22E0691-12) Seawater Sampled: 05/20/22 05:55 Received: 05/20/22 10:35										
Total Coliforms	**97**	10	10	MPN/100 ml	10	AL	2052026	05/20/22 12:00 05/21/22 12:00	SM9223	
E. Coli	ND	10	10	"	"	AL	"	05/20/22 12:00 05/21/22 12:00	"	
Enterococcus	ND	10	10	"	"	AL	2052025	05/20/22 12:00 05/21/22 12:00	Idexx	
A1-1-W3 (22E0691-13) Seawater Sampled: 05/20/22 08:00 Received: 05/20/22 10:35										
Total Coliforms	**327**	10	10	MPN/100 ml	10	AL	2052026	05/20/22 12:00 05/21/22 12:00	SM9223	
E. Coli	**52**	10	10	"	"	AL	"	05/20/22 12:00 05/21/22 12:00	"	
Enterococcus	ND	10	10	"	"	AL	2052025	05/20/22 12:00 05/21/22 12:00	Idexx	
A1-2-W3 (22E0691-14) Seawater Sampled: 05/20/22 08:10 Received: 05/20/22 10:35										
Total Coliforms	**282**	10	10	MPN/100 ml	10	AL	2052026	05/20/22 12:00 05/21/22 12:00	SM9223	
E. Coli	**41**	10	10	"	"	AL	"	05/20/22 12:00 05/21/22 12:00	"	
Enterococcus	ND	10	10	"	"	AL	2052025	05/20/22 12:00 05/21/22 12:00	Idexx	
A1-3-W3 (22E0691-15) Seawater Sampled: 05/20/22 08:15 Received: 05/20/22 10:35										
Total Coliforms	**189**	10	10	MPN/100 ml	10	AL	2052026	05/20/22 12:00 05/21/22 12:00	SM9223	
E. Coli	**20**	10	10	"	"	AL	"	05/20/22 12:00 05/21/22 12:00	"	
Enterococcus	**10**	10	10	"	"	AL	2052025	05/20/22 12:00 05/21/22 12:00	Idexx	
FB-W3 (22E0691-16) Blank Water Sampled: 05/20/22 08:50 Received: 05/20/22 10:35										
Total Coliforms	ND	10	10	MPN/100 ml	10	AL	2052026	05/20/22 12:00 05/21/22 12:00	SM9223	
E. Coli	ND	10	10	"	"	AL	"	05/20/22 12:00 05/21/22 12:00	"	
Enterococcus	ND	10	10	"	"	AL	2052025	05/20/22 12:00 05/21/22 12:00	Idexx	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client Name: Wood Environment & Infrastructure Solutions, Inc. **EMA Log #: 22E0691**
Project Name: POSD-Bacteria Shelter Island San Diego Bay

Microbiological Parameters by Standard Methods

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Analyst	Batch	Sample Prepared / Sample Analyzed	Method	Notes
OF-3-DUP-W3 (22E0691-17) Seawater Sampled: 05/20/22 07:00 Received: 05/20/22 10:35										
Total Coliforms	**98**	10	10	MPN/100 ml	10	AL	2052026	05/20/22 12:00 05/21/22 12:00	SM9223	
E. Coli	**10**	10	10	"	"	AL	"	05/20/22 12:00 05/21/22 12:00	"	
Enterococcus	**20**	10	10	"	"	AL	2052025	05/20/22 12:00 05/21/22 12:00	Idexx	
FB-Test (22E0691-18) Blank Water Sampled: 05/20/22 08:55 Received: 05/20/22 10:35										
Total Coliforms	ND	10	10	MPN/10 0 ml	10	AL	2052026	05/20/22 12:00 05/21/22 12:00	SM9223	
E. Coli	ND	10	10	"	"	AL	"	05/20/22 12:00 05/21/22 12:00	"	
Enterococcus	ND	10	10	"	"	AL	2052025	05/20/22 12:00 05/21/22 12:00	Idexx	
OF-2-DW3 (22E0691-19) Fresh Water Sampled: 05/20/22 07:20 Received: 05/20/22 10:35										
Total Coliforms	**365000**	1000	1000	MPN/100 ml	1000	AL	2052026	05/20/22 12:00 05/21/22 12:00	SM9223	
E. Coli	**122000**	1000	1000	"	"	AL	"	05/20/22 12:00 05/21/22 12:00	"	
Enterococcus	**33600**	1000	1000	"	"	AL	2052025	05/20/22 12:00 05/21/22 12:00	Idexx	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client Name: Wood Environment & Infrastructure Solutions, Inc. **EMA Log #: 22E0691**
Project Name: POSD-Bacteria Shelter Island San Diego Bay

Microbiological Parameters by Standard Methods - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Analyst	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2052025												
Blank (2052025-BLK1)					Prepared: 05/20/22 Analyzed: 05/21/22							
Enterococcus	ND	1	1	MPN/100 ml	AL							
Batch 2052026												
Blank (2052026-BLK1)					Prepared: 05/20/22 Analyzed: 05/21/22							
Total Coliforms	ND	1	1	MPN/100 ml	AL							
E. Coli	ND	1	1	"	AL							

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client Name: Wood Environment & Infrastructure Solutions, Inc. **EMA Log #: 22E0691**
Project Name: POSD-Bacteria Shelter Island San Diego Bay

Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit (or method detection limit when specified)
NR	Not Reported
dry	Sample results reported on a dry weight basis (if indicated in units column)
RPD	Relative Percent Difference
MDL	Method detection limit (indicated per client's request)

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

CHAIN-OF-CUSTODY RECORD 22E0691

EnviroMatrix Analytical, Inc.
9590 Chesapeake Dr, Suite 5, San Diego, CA 92123 - Phone (858) 560-7717 - Fax (858) 560-7763

9.1/3

EMA LOG #:

Client: Wood PLC

Attn: Kate Buckley, kate.buckley@woodplc.com

Samplers(s): Wood

Address: 9177 Sky Park Ct, San Diego, CA 92123

Phone: 760-420-5769 Fax:

Email: kate.buckley@woodplc.com

Billing Address: 9177 Sky Park Ct, San Diego, CA 92123

Project ID: POSD - SIYB Bacteria Special Study

Please include the following information on invoices: 1) Project #: 2015100116.0002A.EMA (2) PO #: N/A (3) Org: 3151 (4) GL: 573000

Requested Analysis

ID #	Client Sample ID	Sample Date	Sample Time	Sample Matrix	Container # / Type	Coliform, X Total (Colilert)	Enterococcus, □ MTF X Enterolert
1	MC-1-W3	5/20/2022	0630	sea water	2 / Bact	X	X
2	MC-2-W3	5/20/2022	0640	sea water	2 / Bact	X	X
3	OF-1-W3	5/20/2022	0750	sea water	2 / Bact	X	X
4	OF-2-W3	5/20/2022	0715	sea water	2 / Bact	X	X
5	OF-3-W3	5/20/2022	0655	sea water	2 / Bact	X	X
6	FP-W3	5/20/2022	0645	sea water	2 / Bact	X	X
7	GD-W3	5/20/2022	0605	sea water	2 / Bact	X	X
8	BS-W3	5/20/2022	0740	sea water	2 / Bact	X	X
9	KK-W3	5/20/2022	0615	sea water	2 / Bact	X	X
10	NK-W3	5/20/2022	0825	sea water	2 / Bact	X	X

Matrix Codes: A = Air, DW = Drinking Water, GW = Groundwater, SW = Storm Water WW = Wastewater, S = Soil, SED = Sediment, SD = Solid, T = Tissue, O = Oil, L = Liquid

Shipped By: □ Courier □ UPS □ FedEx □ USPS X Client Drop Off □ Other

[1]**Turn-Around-Time:** □ Same Day □ 1 day □ 2 day □ 3 day □ 4 day □ 5 day X STD (7 day)

[1]**Reporting Requirements:** □ Fax X PDF X Excel □ Geotracker/EDF □ Hard Copy □ EDT

[1]**Sample Disposal:** X By Laboratory □ [2]Return to Client: P/U or Delivery □ Archive

Sample Integrity

Correct Containers: Yes No N/A	Containers Properly Preseved: Yes No N/A
Custody Seals Intact: Yes No N/A	Temp @ Receipt: [illegible]
COC/Labels Agree: Yes No N/A	Sampled By: Client EMA Autosampler

RELINQUISHED BY	DATE/TIME	RECEIVED BY
Signature	5/20/22 1035	Signature
Print: Rick Schmitt		Print
Company: Wood E&I		Company: SAWA
Signature		Signature
Print		Print
Company:		Company:
Signature		Signature
Print		Print
Company:		Company:

NOTE: Please Provide SWAMP EDD. Please report true numeric results between 10-2,400,000 MPN/100mL for Total Coliform and Enterococcus using the Colilert and Enterolert methods, respectively, for each.

For each sample, conduct a 2x dilution for reportable MPN (RL 10 - 2.4 mil).

[1]Additional costs may apply. Please note there is a $35 minimum charge for all clients.

[2]EMA reserves the right to return any samples that do not match our waste profile.

NOTE: By relinquishing samples to EMA, Inc., client agrees to pay for the services requested on this COC form and any additional analyses performed on this project. Payment for services is due within 30 days from date of invoice. Samples will be disposed of 7 days after report has been finalized unless otherwise noted. All work is subject to EMA's terms and conditions.

CHAIN-OF-CUSTODY RECORD 22E0691

- EnviroMatrix Analytical, Inc.
9590 Chesapeake Dr, Suite 5, San Diego, CA 92123 - Phone (858) 560-7717 - Fax (858) 560-7763

09.2/3

EMA LOG #:

Client: Wood PLC

Attn: Kate Buckley, kate.buckley@woodplc.com

Samplers(s): Wood

Address: 9177 Sky Park Ct, San Diego, CA 92123

Phone: 760-420-5769 Fax:

Email: kate.buckley@woodplc.com

Billing Address: 9177 Sky Park Ct, San Diego, CA 92123

Project ID: POSD - SIYB Bacteria Special Study

Please include the following information on invoices: 1) Project #: 2015100116.0002A.EMA (2) PO #: N/A (3) Org: 3151 (4) GL: 573000

Requested Analysis

ID #	Client Sample ID	Sample Date	Sample Time	Sample Matrix	Container # / Type	Coliform, X Total (Colilert)	Enterococcus, ☐ MTF X Enterolert
1	KB-W3	5/20/2022	0835	sea water	2 / Bact	X	X
2	REF-1-W3	5/20/2022	0555	sea water	2 / Bact	X	X
3	A1-1-W3	5/20/2022	0800	sea water	2 / Bact	X	X
4	A1-2-W3	5/20/2022	0810	sea water	2 / Bact	X	X
5	A1-3-W3	5/20/2022	0815	sea water	2 / Bact	X	X
6	FB-W3	5/20/2022	0850	Blank water	2 / Bact	X	X
7	OF-3-DUP-W3	5/20/2022	0700	sea water	2 / Bact	X	X
8	FB-Test	5/20/22	0855	Blank	"	X	X
9							
10							

Matrix Codes: A = Air, DW = Drinking Water, GW = Groundwater, SW = Storm Water
WW = Wastewater, S = Soil, SED = Sediment, SD = Solid, T = Tissue, O = Oil, L = Liquid

Shipped By: ☐ Courier ☐ UPS ☐ FedEx ☐ USPS X Client Drop Off ☐ Other

[1]**Turn-Around-Time:** ☐ Same Day ☐ 1 day ☐ 2 day ☐ 3 day ☐ 4 day ☐ 5 day X STD (7 day)

[1]**Reporting Requirements:** ☐ Fax X PDF X Excel ☐ Geotracker/EDF ☐ Hard Copy ☐ EDT

[1]**Sample Disposal:** X By Laboratory ☐ [2]Return to Client: P/U or Delivery ☐ Archive

Sample Integrity

Correct Containers: (Yes) No N/A	Containers Properly Preseved: (Yes) No N/A
Custody Seals Intact: Yes No (N/A)	Temp @ Receipt: [illegible]
COC/Labels Agree: (Yes) No N/A	Sampled By: (Client) EMA Autosampler

RELINQUISHED BY	DATE/TIME	RECEIVED BY
Signature: [illegible] Print: [illegible] Company: [illegible]	5/20/22 1035	Signature: [illegible] Print: [illegible] Company: [illegible]
Signature Print Company:		Signature Print Company:
Signature Print Company:		Signature Print Company:

NOTE: Please Provide SWAMP EDD. Please report true numeric results between 10-2,400,000 MPN/100mL for Total Coliform and Enterococcus using the Colilert and Enterolert methods, respectively, for each.
For each sample, conduct a 2x dilution for reportable MPN (RL 10 - 2.4 mil).

[1]Additional costs may apply. Please note there is a $35 minimum charge for all clients.

[2]EMA reserves the right to return any samples that do not match our waste profile.

NOTE: By relinquishing samples to EMA, Inc., client agrees to pay for the services requested on this COC form and any additional analyses performed on this project. Payment for services is due within 30 days from date of invoice. Samples will be disposed of 7 days after report has been finalized unless otherwise noted. All work is subject to EMA's terms and conditions.

CHAIN-OF-CUSTODY RECORD 220691

EnviroMatrix Analytical, Inc.
9590 Chesapeake Dr, Suite 5, San Diego, CA 92123 - Phone (858) 560-7717 - Fax (858) 560-7763

PG. 3/3

EMA LOG #:

Client: Wood PLC

Attn: Kate Buckley, kate.buckley@woodplc.com

Samplers(s): Wood

Address: 9177 Sky Park Ct, San Diego, CA 92123

Phone: 760-420-5769 Fax:

Email: kate.buckley@woodplc.com

Billing Address: 9177 Sky Park Ct, San Diego, CA 92123

Project ID: POSD - SIYB Bacteria Special Study

Please include the following information on invoices: 1) Project #:
(2) PO #: N/A (3) Org: 3151 (4) GL: 573000

Requested Analysis

ID #	Client Sample ID	Sample Date	Sample Time	Sample Matrix	Container # / Type	Coliform, X Total (Colilert)	Enterococcus, □ MTF X Enterolert
1	OF-2-DW3	5/20/22	0720	[illegible]	2/BAG	X	X
2							
3							
4							
5							
6							
7							
8							
9							
10							

Matrix Codes: A = Air, DW = Drinking Water, GW = Groundwater, SW = Storm Water
WW = Wastewater, S = Soil, SED = Sediment, SD = Solid, T = Tissue, O = Oil, L = Liquid

Shipped By: □ Courier □ UPS □ FedEx □ USPS X Client Drop Off □ Other

[1]**Turn-Around-Time:** □ Same Day □ 1 day □ 2 day □ 3 day □ 4 day □ 5 day X STD (7 day)

[1]**Reporting Requirements:** □ Fax X PDF X Excel □ Geotracker/EDF □ Hard Copy □ EDT

[1]**Sample Disposal:** X By Laboratory □ [2]Return to Client: P/U or Delivery □ Archive

Sample Integrity

Correct Containers: Yes No N/A	Containers Properly Preseved: Yes No N/A
Custody Seals Intact: Yes No N/A	Temp @ Receipt: [illegible]
COC/Labels Agree: Yes No N/A	Sampled By: Client EMA Autosampler

RELINQUISHED BY	DATE/TIME	RECEIVED BY
Signature	5/20/22	Signature
Print [illegible]	0735	Print [illegible]
Company: Wood PLC		Company: [illegible]
Signature		Signature
Print		Print
Company:		Company:
Signature		Signature
Print		Print
Company:		Company:

NOTE: Please Provide SWAMP EDD. Please report true numeric results between 10-2,400,000 MPN/100mL for Total Coliform and Enterococcus using the Colilert and Enterolert methods, respectively, for each.

For each sample, conduct a 2x dilution for reportable MPN (RL 10 - 2.4 mil).

Salinity measured @ 0.75 ppt

[1]Additional costs may apply. Please note there is a $35 minimum charge for all clients.

[2]EMA reserves the right to return any samples that do not match our waste profile.

NOTE: By relinquishing samples to EMA, Inc., client agrees to pay for the services requested on this COC form and any additional analyses performed on this project. Payment for services is due within 30 days from date of invoice. Samples will be disposed of 7 days after report has been finalized unless otherwise noted. All work is subject to EMA's terms and conditions.

Environmental Laboratory Network, Inc.
dba EnviroMatrix Analytical

27 May 2022

Wood Environment & Infrastructure Solutions, Inc. **EMA Log #: 22E0720**
Attn: Kate Buckley
9177 Sky Park Court
San Diego, CA 92123

Project: POSD-Bacteria Shelter Island San Diego Bay/POSD-SIYB Bacteria Special Study/ Project:2015100116.0002B.EMA/Org:3151/GL:573000

Enclosed are the results of analyses for samples received by the laboratory on 05/21/22 10:30. Samples were analyzed pursuant to client request utilizing EPA or other ELAP approved methodologies. Environmental Laboratory Network, Inc. certifies that this data is in compliance both technically and for completeness.

Jenny Douglas
President/CEO
Environmental Laboratory Network, Inc.
dba EnviroMatrix Analytical

CA ELAP Certification #: 2564

Client Name: Wood Environment & Infrastructure Solutions, Inc. **EMA Log #: 22E0720**
Project Name: POSD-Bacteria Shelter Island San Diego Bay

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
REF-1-WKD2	22E0720-01	Seawater	05/21/22 06:15	05/21/22 10:30
A1-1-R1-WKD2	22E0720-02	Seawater	05/21/22 06:35	05/21/22 10:30
A1-2-R1-WKD2	22E0720-03	Seawater	05/21/22 06:45	05/21/22 10:30
A1-3-R1-WKD2	22E0720-04	Seawater	05/21/22 06:50	05/21/22 10:30
A1-1-R2-WKD2	22E0720-05	Seawater	05/21/22 07:35	05/21/22 10:30
A1-2-R2-WKD2	22E0720-06	Seawater	05/21/22 07:50	05/21/22 10:30
A1-3-R2-WKD2	22E0720-07	Seawater	05/21/22 08:00	05/21/22 10:30
A1-1-R3-WKD2	22E0720-08	Seawater	05/21/22 08:35	05/21/22 10:30
A1-2-R3-WKD2	22E0720-09	Seawater	05/21/22 08:45	05/21/22 10:30
A1-3-R3-WKD2	22E0720-10	Seawater	05/21/22 08:50	05/21/22 10:30
FB-WKD2	22E0720-11	Blank Water	05/21/22 09:00	05/21/22 10:30
A1-2-R2-DUP-WKD2	22E0720-12	Seawater	05/21/22 07:51	05/21/22 10:30
OF2-WKD2	22E0720-13	Seawater	05/21/22 07:00	05/21/22 10:30
OF2-DW-3	22E0720-14	Seawater	05/21/22 07:10	05/21/22 10:30

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client Name: Wood Environment & Infrastructure Solutions, Inc. **EMA Log #: 22E0720**
Project Name: POSD-Bacteria Shelter Island San Diego Bay

Microbiological Parameters by Standard Methods

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Analyst	Batch	Sample Prepared Sample Analyzed	Method	Notes
REF-1-WKD2 (22E0720-01) Seawater Sampled: 05/21/22 06:15 Received: 05/21/22 10:30										
Total Coliforms	**31**	10	10	MPN/100 ml	10	CC	2052348	05/21/22 12:30 05/22/22 12:30	SM9223	
E. Coli	ND	10	10	"	"	CC	"	05/21/22 12:30 05/22/22 12:30	"	
Enterococcus	**10**	10	10	"	"	CC	2052349	05/21/22 12:30 05/22/22 12:30	Idexx	
A1-1-R1-WKD2 (22E0720-02) Seawater Sampled: 05/21/22 06:35 Received: 05/21/22 10:30										
Total Coliforms	**63**	10	10	MPN/100 ml	10	CC	2052348	05/21/22 12:30 05/22/22 12:30	SM9223	
E. Coli	**10**	10	10	"	"	CC	"	05/21/22 12:30 05/22/22 12:30	"	
Enterococcus	**10**	10	10	"	"	CC	2052349	05/21/22 12:30 05/22/22 12:30	Idexx	
A1-2-R1-WKD2 (22E0720-03) Seawater Sampled: 05/21/22 06:45 Received: 05/21/22 10:30										
Total Coliforms	**63**	10	10	MPN/100 ml	10	CC	2052348	05/21/22 12:30 05/22/22 12:30	SM9223	
E. Coli	**20**	10	10	"	"	CC	"	05/21/22 12:30 05/22/22 12:30	"	
Enterococcus	ND	10	10	"	"	CC	2052349	05/21/22 12:30 05/22/22 12:30	Idexx	
A1-3-R1-WKD2 (22E0720-04) Seawater Sampled: 05/21/22 06:50 Received: 05/21/22 10:30										
Total Coliforms	**74**	10	10	MPN/100 ml	10	CC	2052348	05/21/22 12:30 05/22/22 12:30	SM9223	
E. Coli	ND	10	10	"	"	CC	"	05/21/22 12:30 05/22/22 12:30	"	
Enterococcus	ND	10	10	"	"	CC	2052349	05/21/22 12:30 05/22/22 12:30	Idexx	
A1-1-R2-WKD2 (22E0720-05) Seawater Sampled: 05/21/22 07:35 Received: 05/21/22 10:30										
Total Coliforms	**41**	10	10	MPN/100 ml	10	CC	2052348	05/21/22 12:30 05/22/22 12:30	SM9223	
E. Coli	**10**	10	10	"	"	CC	"	05/21/22 12:30 05/22/22 12:30	"	
Enterococcus	ND	10	10	"	"	CC	2052349	05/21/22 12:30 05/22/22 12:30	Idexx	
A1-2-R2-WKD2 (22E0720-06) Seawater Sampled: 05/21/22 07:50 Received: 05/21/22 10:30										
Total Coliforms	**52**	10	10	MPN/100 ml	10	CC	2052348	05/21/22 12:30 05/22/22 12:30	SM9223	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client Name: Wood Environment & Infrastructure Solutions, Inc. **EMA Log #: 22E0720**
Project Name: POSD-Bacteria Shelter Island San Diego Bay

Microbiological Parameters by Standard Methods

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Analyst	Batch	Sample Prepared / Sample Analyzed	Method	Notes
A1-2-R2-WKD2 (22E0720-06) Seawater Sampled: 05/21/22 07:50 Received: 05/21/22 10:30										
E. Coli	ND	10	10	MPN/10 0 ml	10	CC	2052348	05/21/22 12:30 05/22/22 12:30	SM9223	
Enterococcus	ND	10	10	"	"	CC	2052349	05/21/22 12:30 05/22/22 12:30	Idexx	
A1-3-R2-WKD2 (22E0720-07) Seawater Sampled: 05/21/22 08:00 Received: 05/21/22 10:30										
Total Coliforms	**41**	10	10	MPN/100 ml	10	CC	2052348	05/21/22 12:30 05/22/22 12:30	SM9223	
E. Coli	ND	10	10	"	"	CC	"	05/21/22 12:30 05/22/22 12:30	"	
Enterococcus	**41**	10	10	"	"	CC	2052349	05/21/22 12:30 05/22/22 12:30	Idexx	
A1-1-R3-WKD2 (22E0720-08) Seawater Sampled: 05/21/22 08:35 Received: 05/21/22 10:30										
Total Coliforms	**41**	10	10	MPN/100 ml	10	CC	2052348	05/21/22 12:30 05/22/22 12:30	SM9223	
E. Coli	ND	10	10	"	"	CC	"	05/21/22 12:30 05/22/22 12:30	"	
Enterococcus	**10**	10	10	"	"	CC	2052349	05/21/22 12:30 05/22/22 12:30	Idexx	
A1-2-R3-WKD2 (22E0720-09) Seawater Sampled: 05/21/22 08:45 Received: 05/21/22 10:30										
Total Coliforms	**41**	10	10	MPN/100 ml	10	CC	2052348	05/21/22 12:30 05/22/22 12:30	SM9223	
E. Coli	ND	10	10	"	"	CC	"	05/21/22 12:30 05/22/22 12:30	"	
Enterococcus	**20**	10	10	"	"	CC	2052349	05/21/22 12:30 05/22/22 12:30	Idexx	
A1-3-R3-WKD2 (22E0720-10) Seawater Sampled: 05/21/22 08:50 Received: 05/21/22 10:30										
Total Coliforms	**410**	10	10	MPN/100 ml	10	CC	2052348	05/21/22 12:30 05/22/22 12:30	SM9223	
E. Coli	**201**	10	10	"	"	CC	"	05/21/22 12:30 05/22/22 12:30	"	
Enterococcus	**40**	10	10	"	"	CC	2052349	05/21/22 12:30 05/22/22 12:30	Idexx	
FB-WKD2 (22E0720-11) Blank Water Sampled: 05/21/22 09:00 Received: 05/21/22 10:30										
Total Coliforms	ND	10	10	MPN/10 0 ml	10	CC	2052348	05/21/22 12:30 05/22/22 12:30	SM9223	
E. Coli	ND	10	10	"	"	CC	"	05/21/22 12:30 05/22/22 12:30	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client Name: Wood Environment & Infrastructure Solutions, Inc. **EMA Log #: 22E0720**
Project Name: POSD-Bacteria Shelter Island San Diego Bay

Microbiological Parameters by Standard Methods

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Analyst	Batch	Sample Prepared / Sample Analyzed	Method	Notes
FB-WKD2 (22E0720-11) Blank Water Sampled: 05/21/22 09:00 Received: 05/21/22 10:30										
Enterococcus	ND	10	10	MPN/10 0 ml	10	CC	2052349	05/21/22 12:30 05/22/22 12:30	Idexx	
A1-2-R2-DUP-WKD2 (22E0720-12) Seawater Sampled: 05/21/22 07:51 Received: 05/21/22 10:30										
Total Coliforms	**52**	10	10	MPN/100 ml	10	CC	2052348	05/21/22 12:30 05/22/22 12:30	SM9223	
E. Coli	**10**	10	10	"	"	CC	"	05/21/22 12:30 05/22/22 12:30	"	
Enterococcus	**10**	10	10	"	"	CC	2052349	05/21/22 12:30 05/22/22 12:30	Idexx	
OF2-WKD2 (22E0720-13) Seawater Sampled: 05/21/22 07:00 Received: 05/21/22 10:30										
Total Coliforms	**58800**	1000	1000	MPN/100 ml	1000	CC	2052348	05/21/22 12:30 05/22/22 12:30	SM9223	
E. Coli	**3100**	1000	1000	"	"	CC	"	05/21/22 12:30 05/22/22 12:30	"	
Enterococcus	**19900**	10	10	"	10	CC	2052349	05/21/22 12:30 05/22/22 12:30	Idexx	
OF2-DW-3 (22E0720-14) Seawater Sampled: 05/21/22 07:10 Received: 05/21/22 10:30										
Total Coliforms	**411000**	1000	1000	MPN/100 ml	1000	CC	2052348	05/21/22 12:30 05/22/22 12:30	SM9223	
E. Coli	**2000**	1000	1000	"	"	CC	"	05/21/22 12:30 05/22/22 12:30	"	
Enterococcus	**41100**	100	100	"	100	CC	2052349	05/21/22 12:30 05/22/22 12:30	Idexx	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client Name: Wood Environment & Infrastructure Solutions, Inc. **EMA Log #: 22E0720**
Project Name: POSD-Bacteria Shelter Island San Diego Bay

Microbiological Parameters by Standard Methods - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Analyst	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2052348												
Blank (2052348-BLK1)					Prepared: 05/21/22 Analyzed: 05/22/22							
Total Coliforms	ND	1	1	MPN/100 ml	CC							
E. Coli	ND	1	1	"	CC							
Batch 2052349												
Blank (2052349-BLK1)					Prepared: 05/21/22 Analyzed: 05/22/22							
Enterococcus	ND	1	1	MPN/100 ml	CC							

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client Name: Wood Environment & Infrastructure Solutions, Inc. **EMA Log #: 22E0720**
Project Name: POSD-Bacteria Shelter Island San Diego Bay

Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit (or method detection limit when specified)
NR	Not Reported
dry	Sample results reported on a dry weight basis (if indicated in units column)
RPD	Relative Percent Difference
MDL	Method detection limit (indicated per client's request)

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

22E0720

Page 1 of 2

CHAIN-OF-CUSTODY RECORD

EnviroMatrix Analytical, Inc.

9590 Chesapeake Dr, Suite 5, San Diego, CA 92123 - Phone (858) 560-7717 - Fax (858) 560-7763

EMA LOG #:

Client: Wood PLC

Attn: Kate Buckley, kate.buckley@woodplc.com

Samplers(s): Wood

Address: 9177 Sky Park Ct, San Diego, CA 92123

Phone: 760-420-5769 Fax:

Email: kate.buckley@woodplc.com

Billing Address: 9177 Sky Park Ct, San Diego, CA 92123

Project ID: POSD - SIYB Bacteria Special Study

Please include the following information on invoices: 1) Project #: 2015100116.0002B.EMA
(2) PO #: N/A (3) Org: 3151 (4) GL: 573000

Requested Analysis

ID #	Client Sample ID	Sample Date	Sample Time	Sample Matrix	Container # / Type	Coliform, X Total (Colilert)	Enterococcus, □ MTF X Enterolert
1	REF-1-WKD2	5/21/2022	0615	sea water	1 / Bact	X	X
2	A1-1-R1-WKD2	5/21/2022	0635	sea water	1 / Bact	X	X
3	A1-2-R1-WKD2	5/21/2022	0645	sea water	1 / Bact	X	X
4	A1-3-R1-WKD2	5/21/2022	0650	sea water	1 / Bact	X	X
5	A1-1-R2-WKD2	5/21/2022	0735	sea water	1 / Bact	X	X
6	A1-2-R2-WKD2	5/21/2022	0750	sea water	1 / Bact	X	X
7	A1-3-R2-WKD2	5/21/2022	0800	sea water	1 / Bact	X	X
8	A1-1-R3-WKD2	5/21/2022	0835	sea water	1 / Bact	X	X
9	A1-2-R3-WKD2	5/21/2022	0845	sea water	1 / Bact	X	X
10	A1-3-R3-WKD2	5/21/2022	0850	sea water	1 / Bact	X	X

Matrix Codes: A = Air, DW = Drinking Water, GW = Groundwater, SW = Storm Water
WW = Wastewater, S = Soil, SED = Sediment, SD = Solid, T = Tissue, O = Oil, L = Liquid

Shipped By: □ Courier □ UPS □ FedEx □ USPS X Client Drop Off □ Other

[1]**Turn-Around-Time:** □ Same Day □ 1 day □ 2 day □ 3 day □ 4 day □ 5 day X STD (7 day)

[1]**Reporting Requirements:** □ Fax X PDF X Excel □ Geotracker/EDF □ Hard Copy □ EDT

[1]**Sample Disposal:** X By Laboratory □ [2]Return to Client: P/U or Delivery □ Archive

Sample Integrity

Correct Containers: Yes No N/A	Containers Properly Preseved: Yes No N/A
Custody Seals Intact: Yes No N/A	Temp @ Receipt: [illegible]
COC/Labels Agree: Yes No N/A	Sampled By: Client EMA Autosampler

RELINQUISHED BY	DATE/TIME	RECEIVED BY
Signature	5/21/22 1030	Signature
Print Rajesh Patel		Print Arturo Lopezgarcia
Company: WOOD CA		Company: EMA
Signature		Signature
Print		Print
Company:		Company:
Signature		Signature
Print		Print
Company:		Company:

NOTE: Please Provide SWAMP EDD. Please report true numeric results between 10-2,400,000 MPN/100mL for Total Coliform and Enterococcus using the Colilert and Enterolert methods, respectively, for each.

For each sample, conduct a 2x dilution for reportable MPN (RL 10 - 2.4 mil).

[1]Additional costs may apply. Please note there is a $35 minimum charge for all clients.

[2]EMA reserves the right to return any samples that do not match our waste profile.

NOTE: By relinquishing samples to EMA, Inc., client agrees to pay for the services requested on this COC form and any additional analyses performed on this project. Payment for services is due within 30 days from date of invoice. Samples will be disposed of 7 days after report has been finalized unless otherwise noted. All work is subject to EMA's terms and conditions.

22E0720

CHAIN-OF-CUSTODY RECORD

EnviroMatrix Analytical, Inc.
9590 Chesapeake Dr, Suite 5, San Diego, CA 92123 - Phone (858) 560-7717 - Fax (858) 560-7763

EMA LOG #:

Client: Wood PLC

Attn: Kate Buckley, kate.buckley@woodplc.com

Samplers(s): Wood

Address: 9177 Sky Park Ct, San Diego, CA 92123

Phone: 760-420-5769 Fax:

Email: kate.buckley@woodplc.com

Billing Address: 9177 Sky Park Ct, San Diego, CA 92123

Project ID: POSD - SIYB Bacteria Special Study

Please include the following information on invoices: 1) Project #: 2015100116.0002B.EMA (2) PO #: N/A (3) Org: 3151 (4) GL: 573000

Requested Analysis

ID #	Client Sample ID	Sample Date	Sample Time	Sample Matrix	Container # / Type	Coliform, X Total (Colilert)	Enterococcus, □ MTF X Enterolert
1	FB-WKD2	5/21/2022	0900	Blank water	1 / Bact	X	X
2	A1-2-R2-DUP-WKD2	5/21/2022	0751	sea water	1 / Bact	X	X
3	OF2-WKD2	5/21/2022	0700	"	"	X	X
4	OF2-DW-3	5/21/2022	0710	"	"	X	X
5							
6							
7							
8							
9							
10							

Matrix Codes: A = Air, DW = Drinking Water, GW = Groundwater, SW = Storm Water WW = Wastewater, S = Soil, SED = Sediment, SD = Solid, T = Tissue, O = Oil, L = Liquid

Shipped By: □ Courier □ UPS □ FedEx □ USPS X Client Drop Off □ Other

[1]**Turn-Around-Time:** □ Same Day □ 1 day □ 2 day □ 3 day □ 4 day □ 5 day X STD (7 day)

[1]**Reporting Requirements:** □ Fax X PDF X Excel □ Geotracker/EDF □ Hard Copy □ EDT

[1]**Sample Disposal:** X By Laboratory □ [2]Return to Client: P/U or Delivery □ Archive

Sample Integrity

Correct Containers: Yes No N/A	Containers Properly Preseved: Yes No N/A
Custody Seals Intact: Yes No N/A	Temp @ Receipt: 4°C on ice
COC/Labels Agree: Yes No N/A	Sampled By: Client EMA Autosampler

RELINQUISHED BY	DATE/TIME	RECEIVED BY
Signature	5/21/22 1030	Signature
Print Rick Schotte		Print Autumn Espejiano
Company: WSP E&I		Company: EMA
Signature		Signature
Print		Print
Company:		Company:
Signature		Signature
Print		Print
Company:		Company:

NOTE: Please Provide SWAMP EDD. Please report true numeric results between 10-2,400,000 MPN/100mL for Total Coliform and Enterococcus using the Colilert and Enterolert methods, respectively, for each.

For each sample, conduct a 2x dilution for reportable MPN (RL 10 - 2.4 mil).

[1]Additional costs may apply. Please note there is a $35 minimum charge for all clients.

[2]EMA reserves the right to return any samples that do not match our waste profile.

NOTE: By relinquishing samples to EMA, Inc., client agrees to pay for the services requested on this COC form and any additional analyses performed on this project. Payment for services is due within 30 days from date of invoice. Samples will be disposed of 7 days after report has been finalized unless otherwise noted. All work is subject to EMA's terms and conditions.

Environmental Laboratory Network, Inc.
dba EnviroMatrix Analytical

27 May 2022

Wood Environment & Infrastructure Solutions, Inc. **EMA Log #: 22E0758**
Attn: Kate Buckley
9177 Sky Park Court
San Diego, CA 92123

Project: POSD-Bacteria Shelter Island San Diego Bay/POSD-SIYB Bacteria Special Study/ Project:2015100116.0002A.EMA/Org:3151/GL:573000

Enclosed are the results of analyses for samples received by the laboratory on 05/23/22 11:43. Samples were analyzed pursuant to client request utilizing EPA or other ELAP approved methodologies. Environmental Laboratory Network, Inc. certifies that this data is in compliance both technically and for completeness.

Jenny Douglas
President/CEO
Environmental Laboratory Network, Inc.
dba EnviroMatrix Analytical

CA ELAP Certification #: 2564

Client Name: Wood Environment & Infrastructure Solutions, Inc. **EMA Log #: 22E0758**
Project Name: POSD-Bacteria Shelter Island San Diego Bay

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MC-1-W4	22E0758-01	Seawater	05/23/22 08:30	05/23/22 11:43
MC-2-W4	22E0758-02	Seawater	05/23/22 08:35	05/23/22 11:43
OF-1-W4	22E0758-03	Seawater	05/23/22 09:30	05/23/22 11:43
OF-2-W4	22E0758-04	Seawater	05/23/22 09:05	05/23/22 11:43
OF-3-W4	22E0758-05	Seawater	05/23/22 08:50	05/23/22 11:43
FP-W4	22E0758-06	Seawater	05/23/22 08:45	05/23/22 11:43
GD-W4	22E0758-07	Seawater	05/23/22 08:10	05/23/22 11:43
BS-W4	22E0758-08	Seawater	05/23/22 09:20	05/23/22 11:43
KK-W4	22E0758-09	Seawater	05/23/22 08:20	05/23/22 11:43
NK-W4	22E0758-10	Seawater	05/23/22 10:10	05/23/22 11:43
KB-W4	22E0758-11	Seawater	05/23/22 10:20	05/23/22 11:43
REF-1-W4	22E0758-12	Seawater	05/23/22 08:00	05/23/22 11:43
A1-1-W4	22E0758-13	Seawater	05/23/22 09:45	05/23/22 11:43
A1-2-W4	22E0758-14	Seawater	05/23/22 09:55	05/23/22 11:43
A1-3-W4	22E0758-15	Seawater	05/23/22 10:00	05/23/22 11:43
FB-W4	22E0758-16	Blank Water	05/23/22 10:25	05/23/22 11:43
A1-1-DUP-W4	22E0758-17	Sea Water	05/23/22 09:46	05/23/22 11:43
OF-2-DW-5	22E0758-18	Fresh Water	05/23/22 09:15	05/23/22 11:43
OF-1-DW-1	22E0758-19	Fresh Water	05/23/22 09:35	05/23/22 11:43

Client Name: Wood Environment & Infrastructure Solutions, Inc. **EMA Log #: 22E0758**
Project Name: POSD-Bacteria Shelter Island San Diego Bay

Microbiological Parameters by Standard Methods

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Analyst	Batch	Sample Prepared Sample Analyzed	Method	Notes
MC-1-W4 (22E0758-01) Seawater Sampled: 05/23/22 08:30 Received: 05/23/22 11:43										
Total Coliforms	**63**	10	10	MPN/100 ml	10	AZ	2052354	05/23/22 13:30 05/24/22 13:30	SM9223	
E. Coli	**10**	10	10	"	"	AZ	"	05/23/22 13:30 05/24/22 13:30	"	
Enterococcus	ND	10	10	"	"	AL	2052355	05/23/22 13:30 05/24/22 13:30	Idexx	
MC-2-W4 (22E0758-02) Seawater Sampled: 05/23/22 08:35 Received: 05/23/22 11:43										
Total Coliforms	**134**	10	10	MPN/100 ml	10	AZ	2052354	05/23/22 13:30 05/24/22 13:30	SM9223	
E. Coli	**41**	10	10	"	"	AZ	"	05/23/22 13:30 05/24/22 13:30	"	
Enterococcus	ND	10	10	"	"	AL	2052355	05/23/22 13:30 05/24/22 13:30	Idexx	
OF-1-W4 (22E0758-03) Seawater Sampled: 05/23/22 09:30 Received: 05/23/22 11:43										
Total Coliforms	**193**	10	10	MPN/100 ml	10	AZ	2052354	05/23/22 13:30 05/24/22 13:30	SM9223	
E. Coli	**31**	10	10	"	"	AZ	"	05/23/22 13:30 05/24/22 13:30	"	
Enterococcus	ND	10	10	"	"	AL	2052355	05/23/22 13:30 05/24/22 13:30	Idexx	
OF-2-W4 (22E0758-04) Seawater Sampled: 05/23/22 09:05 Received: 05/23/22 11:43										
Total Coliforms	**2010**	10	10	MPN/100 ml	10	AZ	2052354	05/23/22 13:30 05/24/22 13:30	SM9223	
E. Coli	**259**	10	10	"	"	AZ	"	05/23/22 13:30 05/24/22 13:30	"	
Enterococcus	**1290**	10	10	"	"	AL	2052355	05/23/22 13:30 05/24/22 13:30	Idexx	
OF-3-W4 (22E0758-05) Seawater Sampled: 05/23/22 08:50 Received: 05/23/22 11:43										
Total Coliforms	**1370**	10	10	MPN/100 ml	10	AZ	2052354	05/23/22 13:30 05/24/22 13:30	SM9223	
E. Coli	**20**	10	10	"	"	AZ	"	05/23/22 13:30 05/24/22 13:30	"	
Enterococcus	ND	10	10	"	"	AL	2052355	05/23/22 13:30 05/24/22 13:30	Idexx	
FP-W4 (22E0758-06) Seawater Sampled: 05/23/22 08:45 Received: 05/23/22 11:43										
Total Coliforms	**697**	10	10	MPN/100 ml	10	AZ	2052354	05/23/22 13:30 05/24/22 13:30	SM9223	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client Name: Wood Environment & Infrastructure Solutions, Inc. **EMA Log #: 22E0758**
Project Name: POSD-Bacteria Shelter Island San Diego Bay

Microbiological Parameters by Standard Methods

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Analyst	Batch	Sample Prepared Sample Analyzed	Method	Notes
FP-W4 (22E0758-06) Seawater Sampled: 05/23/22 08:45 Received: 05/23/22 11:43										
E. Coli	**41**	10	10	MPN/100 ml	10	AZ	2052354	05/23/22 13:30 05/24/22 13:30	SM9223	
Enterococcus	ND	10	10	"	"	AL	2052355	05/23/22 13:30 05/24/22 13:30	Idexx	
GD-W4 (22E0758-07) Seawater Sampled: 05/23/22 08:10 Received: 05/23/22 11:43										
Total Coliforms	**201**	10	10	MPN/100 ml	10	AZ	2052354	05/23/22 13:30 05/24/22 13:30	SM9223	
E. Coli	**20**	10	10	"	"	AZ	"	05/23/22 13:30 05/24/22 13:30	"	
Enterococcus	ND	10	10	"	"	AL	2052355	05/23/22 13:30 05/24/22 13:30	Idexx	
BS-W4 (22E0758-08) Seawater Sampled: 05/23/22 09:20 Received: 05/23/22 11:43										
Total Coliforms	**122**	10	10	MPN/100 ml	10	AZ	2052354	05/23/22 13:30 05/24/22 13:30	SM9223	
E. Coli	**10**	10	10	"	"	AZ	"	05/23/22 13:30 05/24/22 13:30	"	
Enterococcus	**10**	10	10	"	"	AL	2052355	05/23/22 13:30 05/24/22 13:30	Idexx	
KK-W4 (22E0758-09) Seawater Sampled: 05/23/22 08:20 Received: 05/23/22 11:43										
Total Coliforms	**20**	10	10	MPN/100 ml	10	AZ	2052354	05/23/22 13:30 05/24/22 13:30	SM9223	
E. Coli	**10**	10	10	"	"	AZ	"	05/23/22 13:30 05/24/22 13:30	"	
Enterococcus	ND	10	10	"	"	AL	2052355	05/23/22 13:30 05/24/22 13:30	Idexx	
NK-W4 (22E0758-10) Seawater Sampled: 05/23/22 10:10 Received: 05/23/22 11:43										
Total Coliforms	**145**	10	10	MPN/100 ml	10	AZ	2052354	05/23/22 13:30 05/24/22 13:30	SM9223	
E. Coli	**30**	10	10	"	"	AZ	"	05/23/22 13:30 05/24/22 13:30	"	
Enterococcus	**10**	10	10	"	"	AL	2052355	05/23/22 13:30 05/24/22 13:30	Idexx	
KB-W4 (22E0758-11) Seawater Sampled: 05/23/22 10:20 Received: 05/23/22 11:43										
Total Coliforms	**132**	10	10	MPN/100 ml	10	AZ	2052354	05/23/22 13:30 05/24/22 13:30	SM9223	
E. Coli	**85**	10	10	"	"	AZ	"	05/23/22 13:30 05/24/22 13:30	"	

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Client Name: Wood Environment & Infrastructure Solutions, Inc. **EMA Log #: 22E0758**
Project Name: POSD-Bacteria Shelter Island San Diego Bay

Microbiological Parameters by Standard Methods

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Analyst	Batch	Sample Prepared Sample Analyzed	Method	Notes
KB-W4 (22E0758-11) Seawater Sampled: 05/23/22 10:20 Received: 05/23/22 11:43										
Enterococcus	**10**	10	10	MPN/100 ml	10	AL	2052355	05/23/22 13:30 05/24/22 13:30	Idexx	
REF-1-W4 (22E0758-12) Seawater Sampled: 05/23/22 08:00 Received: 05/23/22 11:43										
Total Coliforms	ND	10	10	MPN/10 0 ml	10	AZ	2052354	05/23/22 13:30 05/24/22 13:30	SM9223	
E. Coli	ND	10	10	"	"	AZ	"	05/23/22 13:30 05/24/22 13:30	"	
Enterococcus	ND	10	10	"	"	AL	2052355	05/23/22 13:30 05/24/22 13:30	Idexx	
A1-1-W4 (22E0758-13) Seawater Sampled: 05/23/22 09:45 Received: 05/23/22 11:43										
Total Coliforms	**145**	10	10	MPN/100 ml	10	AZ	2052354	05/23/22 13:30 05/24/22 13:30	SM9223	
E. Coli	ND	10	10	"	"	AZ	"	05/23/22 13:30 05/24/22 13:30	"	
Enterococcus	**10**	10	10	"	"	AL	2052355	05/23/22 13:30 05/24/22 13:30	Idexx	
A1-2-W4 (22E0758-14) Seawater Sampled: 05/23/22 09:55 Received: 05/23/22 11:43										
Total Coliforms	**52**	10	10	MPN/100 ml	10	AZ	2052354	05/23/22 13:30 05/24/22 13:30	SM9223	
E. Coli	**20**	10	10	"	"	AZ	"	05/23/22 13:30 05/24/22 13:30	"	
Enterococcus	ND	10	10	"	"	AL	2052355	05/23/22 13:30 05/24/22 13:30	Idexx	
A1-3-W4 (22E0758-15) Seawater Sampled: 05/23/22 10:00 Received: 05/23/22 11:43										
Total Coliforms	**74**	10	10	MPN/100 ml	10	AZ	2052354	05/23/22 13:30 05/24/22 13:30	SM9223	
E. Coli	**10**	10	10	"	"	AZ	"	05/23/22 13:30 05/24/22 13:30	"	
Enterococcus	ND	10	10	"	"	AL	2052355	05/23/22 13:30 05/24/22 13:30	Idexx	
FB-W4 (22E0758-16) Blank Water Sampled: 05/23/22 10:25 Received: 05/23/22 11:43										
Total Coliforms	ND	10	10	MPN/10 0 ml	10	AZ	2052354	05/23/22 13:30 05/24/22 13:30	SM9223	
E. Coli	ND	10	10	"	"	AZ	"	05/23/22 13:30 05/24/22 13:30	"	
Enterococcus	ND	10	10	"	"	AL	2052355	05/23/22 13:30 05/24/22 13:30	Idexx	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client Name: Wood Environment & Infrastructure Solutions, Inc. **EMA Log #: 22E0758**
Project Name: POSD-Bacteria Shelter Island San Diego Bay

Microbiological Parameters by Standard Methods

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Analyst	Batch	Sample Prepared Sample Analyzed	Method	Notes
A1-1-DUP-W4 (22E0758-17) Sea Water Sampled: 05/23/22 09:46 Received: 05/23/22 11:43										
Total Coliforms	**75**	10	10	MPN/100 ml	10	AZ	2052354	05/23/22 13:30 05/24/22 13:30	SM9223	
E. Coli	**10**	10	10	"	"	AZ	"	05/23/22 13:30 05/24/22 13:30	"	
Enterococcus	ND	10	10	"	"	AL	2052355	05/23/22 13:30 05/24/22 13:30	Idexx	
OF-2-DW-5 (22E0758-18) Fresh Water Sampled: 05/23/22 09:15 Received: 05/23/22 11:43										
Total Coliforms	**24200**	10	10	MPN/100 ml	10	AZ	2052354	05/23/22 13:30 05/24/22 13:30	SM9223	
E. Coli	**1010**	10	10	"	"	AZ	"	05/23/22 13:30 05/24/22 13:30	"	
Enterococcus	**5790**	10	10	"	"	AL	2052355	05/23/22 13:30 05/24/22 13:30	Idexx	
OF-1-DW-1 (22E0758-19) Fresh Water Sampled: 05/23/22 09:35 Received: 05/23/22 11:43										
Total Coliforms	**435000**	1000	1000	MPN/100 ml	1000	AZ	2052354	05/23/22 13:30 05/24/22 13:30	SM9223	
E. Coli	**13400**	1000	1000	"	"	AZ	"	05/23/22 13:30 05/24/22 13:30	"	
Enterococcus	**3870**	10	10	"	10	AL	2052355	05/23/22 13:30 05/24/22 13:30	Idexx	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client Name: Wood Environment & Infrastructure Solutions, Inc. **EMA Log #: 22E0758**
Project Name: POSD-Bacteria Shelter Island San Diego Bay

Microbiological Parameters by Standard Methods - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Analyst	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2052354												
Blank (2052354-BLK1)					Prepared: 05/23/22 Analyzed: 05/24/22							
Total Coliforms	ND	1	1	MPN/100 ml	AZ							
E. Coli	ND	1	1	"	AZ							
Batch 2052355												
Blank (2052355-BLK1)					Prepared: 05/23/22 Analyzed: 05/24/22							
Enterococcus	ND	1	1	MPN/100 ml	AL							

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client Name: Wood Environment & Infrastructure Solutions, Inc. **EMA Log #: 22E0758**
Project Name: POSD-Bacteria Shelter Island San Diego Bay

Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit (or method detection limit when specified)
NR	Not Reported
dry	Sample results reported on a dry weight basis (if indicated in units column)
RPD	Relative Percent Difference
MDL	Method detection limit (indicated per client's request)

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

CHAIN-OF-CUSTODY RECORD 22E0758

EnviroMatrix Analytical, Inc.
9590 Chesapeake Dr, Suite 5, San Diego, CA 92123 - Phone (858) 560-7717 - Fax (858) 560-7763

EMA LOG #:

Client: Wood PLC

Attn: Kate Buckley, kate.buckley@woodplc.com

Samplers(s): Wood

Address: 9177 Sky Park Ct, San Diego, CA 92123

Phone: 760-420-5769 Fax:

Email: kate.buckley@woodplc.com

Billing Address: 9177 Sky Park Ct, San Diego, CA 92123

Project ID: POSD - SIYB Bacteria Special Study

Please include the following information on invoices: 1) Project #: 20151001116.0002A.EMA (2) PO #: N/A (3) Org: 3151 (4) GL: 573000

Requested Analysis

ID #	Client Sample ID	Sample Date	Sample Time	Sample Matrix	Container # / Type	Coliform, X Total (Colilert)	Enterococcus, □ MTF X Enterolert
1	MC-1-W4	5/23/2022	0830	sea water	1 / Bact	X	X
2	MC-2-W4	5/23/2022	0835	sea water	1 / Bact	X	X
3	OF-1-W4	5/23/2022	0930	sea water	1 / Bact	X	X
4	OF-2-W4	5/23/2022	0905	sea water	1 / Bact	X	X
5	OF-3-W4	5/23/2022	0850	sea water	1 / Bact	X	X
6	FP-W4	5/23/2022	0845	sea water	1 / Bact	X	X
7	GD-W4	5/23/2022	0910	sea water	1 / Bact	X	X
8	BS-W4	5/23/2022	0920	sea water	1 / Bact	X	X
9	KK-W4	5/23/2022	0820	sea water	1 / Bact	X	X
10	NK-W4	5/23/2022	1010	sea water	1 / Bact	X	X

Matrix Codes: A = Air, DW = Drinking Water, GW = Groundwater, SW = Storm Water WW = Wastewater, S = Soil, SED = Sediment, SD = Solid, T = Tissue, O = Oil, L = Liquid

Shipped By: □ Courier □ UPS □ FedEx □ USPS X Client Drop Off □ Other

[1]**Turn-Around-Time:** □ Same Day □ 1 day □ 2 day □ 3 day □ 4 day □ 5 day X STD (7 day)

[1]**Reporting Requirements:** □ Fax X PDF X Excel □ Geotracker/EDF □ Hard Copy □ EDT

[1]**Sample Disposal:** X By Laboratory □ [2]Return to Client: P/U or Delivery □ Archive

Sample Integrity

Correct Containers: Yes No N/A	Containers Properly Preseved: Yes No N/A
Custody Seals Intact: Yes No N/A	Temp @ Receipt: 4°C on ice
COC/Labels Agree: Yes No N/A	Sampled By: Client EMA Autosampler

	RELINQUISHED BY	DATE/TIME	RECEIVED BY
Signature	Kate Buckley	5/23/22 1143	
Print	Kate Buckley		
Company:	Wood		
Signature			
Print			
Company:			
Signature			
Print			
Company:			

NOTE: Please Provide SWAMP EDD. Please report true numeric results between 10-2,400,000 MPN/100mL for Total Coliform and Enterococcus using the Colilert and Enterolert methods, respectively, for each.

For each sample, conduct a 2x dilution for reportable MPN (RL 10 - 2.4 mil).

[1]Additional costs may apply. Please note there is a $35 minimum charge for all clients.

[2]EMA reserves the right to return any samples that do not match our waste profile.

NOTE: By relinquishing samples to EMA, Inc., client agrees to pay for the services requested on this COC form and any additional analyses performed on this project. Payment for services is due within 30 days from date of invoice. Samples will be disposed of 7 days after report has been finalized unless otherwise noted. All work is subject to EMA's terms and conditions.

CHAIN-OF-CUSTODY RECORD 22B0758

EnviroMatrix Analytical, Inc.
9590 Chesapeake Dr, Suite 5, San Diego, CA 92123 - Phone (858) 560-7717 - Fax (858) 560-7763

EMA LOG #:

Client: Wood PLC

Attn: Kate Buckley, kate.buckley@woodplc.com

Samplers(s): Wood

Address: 9177 Sky Park Ct, San Diego, CA 92123

Phone: 760-420-5769 Fax:

Email: kate.buckley@woodplc.com

Billing Address: 9177 Sky Park Ct, San Diego, CA 92123

Project ID: POSD - SIYB Bacteria Special Study

Please include the following information on invoices: 1) Project #: 20151001116.0002A.EMA (2) PO #: N/A (3) Org: 3151 (4) GL: 573000

Requested Analysis

ID #	Client Sample ID	Sample Date	Sample Time	Sample Matrix	Container # / Type	Coliform, X Total (Colilert)	Enterococcus, □ MTF X Enterolert
1	KB-W4	5/23/2022	1020	sea water	1 / Bact	X	X
2	REF-1-W4	5/23/2022	0800	sea water	1 / Bact	X	X
3	A1-1-W4	5/23/2022	0945	sea water	1 / Bact	X	X
4	A1-2-W4	5/23/2022	0955	sea water	1 / Bact	X	X
5	A1-3-W4	5/23/2022	1000	sea water	1 / Bact	X	X
6	FB-W4	5/23/2022	1025	Blank water	1 / Bact	X	X
7	~~QC-3-DUP-W4~~ A1-1-DUP-W4	5/23/2022	0946	sea water	1 / Bact	X	X
8	N/A						
9							
10							

Matrix Codes: A = Air, DW = Drinking Water, GW = Groundwater, SW = Storm Water, WW = Wastewater, S = Soil, SED = Sediment, SD = Solid, T = Tissue, O = Oil, L = Liquid

Shipped By: □ Courier □ UPS □ FedEx □ USPS X Client Drop Off □ Other

[1]**Turn-Around-Time:** □ Same Day □ 1 day □ 2 day □ 3 day □ 4 day □ 5 day X STD (7 day)

[1]**Reporting Requirements:** □ Fax X PDF X Excel □ Geotracker/EDF □ Hard Copy □ EDT

[1]**Sample Disposal:** X By Laboratory □ [2]Return to Client: P/U or Delivery □ Archive

Sample Integrity

Correct Containers: Yes No N/A	Containers Properly Preseved: Yes No N/A
Custody Seals Intact: Yes No N/A	Temp @ Receipt: 10.1°C
COC/Labels Agree: Yes No N/A	Sampled By: Client EMA Autosampler

	RELINQUISHED BY	DATE/TIME	RECEIVED BY
Signature	Kate Buckley	5/23/22 1143	Signature
Print	Kate Buckley		Print
Company:	Wood		Company:
Signature			Signature
Print			Print
Company:			Company:
Signature			Signature
Print			Print
Company:			Company:

NOTE: Please Provide SWAMP EDD. Please report true numeric results between 10-2,400,000 MPN/100mL for Total Coliform and Enterococcus using the Colilert and Enterolert methods, respectively, for each.

For each sample, conduct a 2x dilution for reportable MPN (RL 10 - 2.4 mil).

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CHAIN-OF-CUSTODY RECORD 22B0758

EnviroMatrix Analytical, Inc.
9590 Chesapeake Dr, Suite 5, San Diego, CA 92123 - Phone (858) 560-7717 - Fax (858) 560-7763

EMA LOG #:

Client: Wood PLC

Attn: Kate Buckley, kate.buckley@woodplc.com

Samplers(s): Wood

Address: 9177 Sky Park Ct, San Diego, CA 92123

Phone: 760-420-5769 Fax:

Email: kate.buckley@woodplc.com

Billing Address: 9177 Sky Park Ct, San Diego, CA 92123

Project ID: POSD - SIYB Bacteria Special Study

Please include the following information on invoices: 1) Project #:
(2) PO #: N/A (3) Org: 3151 (4) GL: 573000

Requested Analysis

ID #	Client Sample ID	Sample Date	Sample Time	Sample Matrix	Container # / Type	Coliform, X Total (Colilert)	Enterococcus, □ MTF X Enterolert
1	OF-2-DW-5	5/23/22	0915	Fresh	1/BACT	X	X
2	OF-1-DW-1	5/23/22	0935	Fresh	1/BACT	X	X
3							
4							
5							
6							
7							
8							
9							
10							

Matrix Codes: A = Air, DW = Drinking Water, GW = Groundwater, SW = Storm Water
WW = Wastewater, S = Soil, SED = Sediment, SD = Solid, T = Tissue, O = Oil, L = Liquid

Shipped By: □ Courier □ UPS □ FedEx □ USPS X Client Drop Off □ Other

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[1]**Reporting Requirements:** □ Fax X PDF X Excel □ Geotracker/EDF □ Hard Copy □ EDT

[1]**Sample Disposal:** X By Laboratory □ [2]Return to Client: P/U or Delivery □ Archive

Sample Integrity

Correct Containers: (Yes) No N/A	Containers Properly Preseved: (Yes) No N/A
Custody Seals Intact: Yes No (N/A)	Temp @ Receipt: Received
COC/Labels Agree: (Yes) No N/A	Sampled By: (Client) EMA Autosampler

	RELINQUISHED BY	DATE/TIME	RECEIVED BY
Signature	[signature]	5/23/22 1143	[signature]
Print	Kate Buckley		[signature]
Company:	Wood		[illegible]
Signature			
Print			
Company:			
Signature			
Print			
Company:			

NOTE: Please Provide SWAMP EDD. Please report true numeric results between 10-2,400,000 MPN/100mL for Total Coliform and Enterococcus using the Colilert and Enterolert methods, respectively, for each.

For each sample, conduct a 2x dilution for reportable MPN (RL 10 - 2.4 mil).

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[2]EMA reserves the right to return any samples that do not match our waste profile.

NOTE: By relinquishing samples to EMA, Inc., client agrees to pay for the services requested on this COC form and any additional analyses performed on this project. Payment for services is due within 30 days from date of invoice. Samples will be disposed of 7 days after report has been finalized unless otherwise noted. All work is subject to EMA's terms and conditions.