



MONTHLY RECEIVING WATERS MONITORING REPORT FOR THE SOUTH BAY OCEAN OUTFALL

SOUTH BAY WATER RECLAMATION PLANT

NPDES PERMIT No. CA 0109045
SDRWQCB Order No. R9-2013-0006

JUNE 2017

Environmental Monitoring and Technical Services
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Public Utilities Department

Environmental Monitoring & Technical Services Division

July 31, 2017

David Gibson, Executive Officer
California Regional Water Quality Control Board
San Diego Region
2375 Northside Drive, Suite 100
San Diego, CA 92108

Attention: POTW Compliance Unit

Dear Mr. Gibson:

Enclosed is the June 2017 Monthly Receiving Waters Monitoring Report for the South Bay Ocean Outfall, South Bay Water Reclamation Plant as required per Order No. R9-2013-0006, NPDES Permit No. CA0109045.

This report includes raw ocean monitoring data and summaries of water quality parameters and ocean conditions measured during the month for the South Bay outfall region. Also included are summaries of compliance with the bacterial water-contact standards specified in the California Ocean Plan. These data are also presented in the monthly report submitted by the International Boundary and Water Commission, U.S. Section for discharge from the South Bay International Wastewater Treatment Plant (Order No. R9-2014-0009, NPDES Permit No. CA0108928).

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Sincerely,

Peter S. Vroom, Ph.D.
Deputy Director, Public Utilities Department

TS/gfw

cc: U.S. Environmental Protection Agency, Region 9

INTRODUCTION

Monthly reports of water quality and ocean conditions from Playa Blanco, Mexico to Coronado, USA are submitted to the San Diego Regional Water Quality Control Board and U.S. EPA Region 9 in accordance with Order No. R9-2013-0006, NPDES Permit No. CA0109045, for the South Bay Water Reclamation Plant (SBWRP), South Bay Ocean Outfall (SBOO). Order No. R9-2013-0006 superseded Order No. R9-2006-0067 effective April 4, 2013. This report includes receiving waters monitoring data collected from all shore, kelp and offshore stations specified in the above order. Data for influent and effluent monitoring activities for the SBWRP are presented in separate reports.

MATERIALS AND METHODS

Shore Stations

Water quality monitoring was conducted at 11 stations located along the shore from Playa Blanca, Mexico to Coronado, USA (see station locations map). Three sites are located south of the international border (stations S0, S2, S3), while eight sites are in the United States (stations S4–S6 and S8–S12).

Seawater samples were collected from the surf zone at each station on a weekly basis. These samples were subsequently transported to the City's Marine Microbiology Laboratory and analyzed for the presence of total coliform, fecal coliform, and *Enterococcus* bacteria. Visual observations of water color and clarity, surf height, human or animal activity, and weather conditions were recorded at the time of sample collection. Wind speed and direction were measured using a hand-held anemometer with a compass.

Kelp Bed Stations

Seven kelp bed and other nearshore stations (I19, I24, I25, I26, I32, I39, I40; collectively referred to as "kelp" stations herein) were sampled five times during the month according to NPDES permit specifications. Six stations (I19, I24, I25, I26, I32, I40) are located along the 9-m depth contour, and one (I39) is located along the 18-m depth contour. Three of these stations, I25, I26, and I39, were selected based on their proximity to suitable substrates for the Imperial Beach kelp bed (see station locations map); however, this kelp bed has been historically transient and variable in terms of size and density. Thus, these three stations are only occasionally located within an area where kelp is actually found.

The seven kelp stations are sampled on a weekly basis during the month. Routine monitoring at each kelp site consists of collecting seawater samples at three discrete depths for bacteriological analyses (total coliforms, fecal coliforms, and *Enterococcus* bacteria) and generating water column profiles of various physical/chemical parameters, including water temperature, salinity, density, dissolved oxygen, pH, chlorophyll *a*, and transmissivity. Visual observations of weather and water conditions are also recorded at all stations.

Seawater samples at the kelp bed stations are primarily collected using a CTD-integrated rosette sampler with Niskin bottles. Aliquots for bacteriological analyses were drawn from these bottles into sterile sample bottles for processing at the City's Marine Microbiology Laboratory. Water column profiles of the various physical/chemical parameters were taken using a CTD. The CTD collected these physical/chemical data at a rate of eight scans per second. The data were then

internally averaged using the CTD proprietary software, Seasoft, to create water column profiles equivalent to one reading per meter. Additionally, CTD profile data for each water sample depth are presented with the bacteriological data.

Offshore Stations

Quarterly offshore water quality sampling is typically conducted over three days during February, May, August, and November for a total of 40 stations during each month (see station locations map). These offshore stations (I1–I40) are arranged in a grid surrounding the discharge site, and are generally located along the 9, 19, 28, 38, and 55-m depth contours. The seven offshore sites designated as kelp bed stations (described above) are included as part of the monthly offshore water quality sampling, however the data from these seven stations are reported within the kelp bed station section of the report with the other four days of kelp bed water quality sampling. Monitoring at all sites included measurements of various physical/chemical parameters, including water temperature, salinity, density, dissolved oxygen, pH, chlorophyll *a*, transmissivity, and chromomorphic dissolved organic matter (CDOM). Visual observations of weather and water conditions were also recorded at all stations. Seawater samples for the analysis of indicator bacteria, suspended solids, and oil and grease concentrations were collected at 28 of the stations.

At these offshore stations, water samples for bacteriological, suspended solids, and oil and grease analyses were typically collected using a rosette sampler with Niskin bottles. Measurements of the physical/chemical parameters listed above were taken using a Sea-Bird CTD. Additionally, CTD profile data for depths closest to those at which bacteriological samples were collected were extracted from the CTD profiles and are presented with the bacteriological data.

Bacteriological Reporting and Quality Assurance

Estimated values for bacteriological analyses are denoted by greater than (>), less than (<), or estimated (e) qualifiers and result from plates with colony counts above or below the permissible counting limits established in Bordner et al. (1978)^[1]. This document defines membrane filtration limits of 20–80 colonies per plate for total coliforms and 20–60 colonies per plate for fecal coliforms and *Enterococcus*. No Data (ND) is reported if plate counts from all dilutions have a total colony count of >200 per plate.

Results of the bacteriological analysis of seawater samples collected from each of the shore, kelp bed, and offshore stations located within State waters are assessed relative to the geometric mean and single sample maximum water-contact standards specified in the California Ocean Plan (Ocean Plan). The seven standards are defined as follows:

30-day Geometric Mean: The following standards are based on the geometric mean of the five most recent samples from each site.

- (1) Total coliform density shall not exceed 1000 CFU/100 mL;
- (2) Fecal coliform density shall not exceed 200 CFU/100 mL;
- (3) *Enterococcus* density shall not exceed 35 CFU/100 mL.

^[1]Bordner, R., J. Winter, and P. Scarpino (eds.). (1978). Microbiological Methods for Monitoring the Environment: Water and Wastes, EPA Research and Development, EPA-600/8-78-017. 337 p.

Single Sample Maximums:

- (1) Total coliform density shall not exceed 10,000 CFU/100 mL;
- (2) Fecal coliform density shall not exceed 400 CFU/100 mL;
- (3) *Enterococcus* density shall not exceed 104 CFU/100 mL;
- (4) Total coliform density shall not exceed 1,000 CFU/100 mL when the fecal coliform/total coliform ratio exceeds 0.1.

Compliance with the seven Ocean Plan standards are summarized below for the stations located in USA waters. In contrast, no such compliance summaries are presented for the three shore stations located in Mexican waters south of the International Border (i.e., S0, S2, and S3) since this region is not subject to the Ocean Plan standards.

Quality controls of bacteriological data include laboratory and field duplicate analyses. Laboratory duplicates are performed on approximately 10% of the water quality samples, while field duplicates are performed six times a month (see Appendix A). Laboratory duplicates represent two aliquots of the original sample that are split in the laboratory and analyzed by the same analyst using identical procedures within the same analytical run. The results of these analyses provide a measure of intra-analyst precision. In contrast, field duplicates represent two separate samples collected at the same time from the same site, which are handled under identical circumstances and treated exactly the same throughout field and lab procedures. The results of these analyses provide a measure of precision associated with sample collection, preservation, storage, and lab procedures. The sign test (see Gilbert, 1987) is used to statistically compare both the results from the laboratory duplicates, as well as the results from the field duplicates. These data will be further analyzed in the City's 2017 Quality Assurance Report, which will be completed in March 2018.

SUMMARY OF RESULTS

➤ Shoreline Water Quality Sampling

- Because of site access restrictions in Mexico, the South Bay shoreline sampling is carried out on the same day each week (i.e., Tuesday) in order to coordinate sampling between the Mexican and USA based stations. Seawater samples at the three shore stations located south of the USA/Mexico border (i.e., stations S0, S2 and S3) are presently collected by the Comisión Internacional de Límites y Aguas (CILA) and transported to the IBWC for subsequent delivery to the City's Marine Microbiology Lab, while samples from the eight stations located in USA waters are sampled by City staff.
- During June, one of the eight shore stations located north of the border was out of compliance with a California Ocean Plan (Ocean Plan) water-contact standard (see below); these standards do not apply to stations located in Mexican waters.
 - The single sample maximum (SSM) standard for *Enterococcus* was exceeded at station S5 on June 27.
 - Per permit requirements, a resample was collected in response to this SSM exceedance (see Table 2.8 for details).
- Although the Ocean Plan standards do not apply to this station, bacteria densities exceeded one or more benchmark levels (i.e., total coliforms >10,000 CFU/100mL; fecal coliforms

>400 CFU/100 mL; *Enterococcus* >104 CFU/100 mL; total >1000 CFU/100 mL & F:T ratio >0.1) in the seawater sample collected at station S0 on June 27.

- Historical analyses of Ocean Plan compliance rates for the South Bay outfall shore and kelp monitoring stations, combined with the results of satellite imagery data, suggest that outflows from the Tijuana River and Los Buenos Creek, as well as surface runoff during or after rain events (storms), are likely to be the cause of impacted water quality along the shore and in near shore recreational waters in the South Bay region. See the City of San Diego's most recent *South Bay Ocean Outfall Annual Receiving Waters Monitoring and Assessment Report* for details (<https://www.sandiego.gov/mwwd/environment/oceanmonitor/reports>).
- Nothing of sewage origin was observed at any of the shore stations.

➤ **Kelp Bed Water Quality Sampling**

- The seven kelp bed water quality stations (I19, I24, I25, I26, I32, I39, I40) were sampled five times during June (i.e. June 3, 7, 13, 18, 29).
- During June, all seven stations were in compliance with all California Ocean Plan (Ocean Plan) water contact standards.
- Water column temperatures ranged from 11.41 to 20.45°C. The difference between surface and bottom waters ranged from approximately 0.42 to 8.85°C, indicating the water column was stratified at some of these sites during the month.
- Chlorophyll *a* concentrations ranged from 0.72 to 24.81 µg/L at these stations, suggesting the presence of phytoplankton blooms during the month.
- Notable visual observations for June included: a sewage-like odor at station I39 on June 3.

➤ **Offshore Water Quality Sampling**

- Quarterly sampling was not conducted during June at the offshore stations. The next quarterly sampling is scheduled for August 2017.



TABLES AND FIGURES



Figure 1.1 Station Map

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Shore Stations

Table 2.1

Summary of compliance with the Ocean Plan's 30-day Geometric Mean standard for total coliform bacteria at the SBOO shore stations. Data are based on the geometric mean of the five most recent samples from each site over the previous 30 days unless otherwise noted (*). Values >1,000 CFU/100 mL exceed the standard.

Date	S4	S5	S6	S8	S9	S10	S11	S12
01 Jun 2017	144	582	121	20*	11*	230	76	18*
02 Jun 2017	144	582	121	20*	11*	230	76	18*
03 Jun 2017	144	582	121	20*	11*	230	76	18*
04 Jun 2017	144	582	121	20*	11*	230	76	18*
05 Jun 2017	144	582	121	20*	11*	230	76	18*
06 Jun 2017	140	372	89	13	13	153	61	18
07 Jun 2017	140	372	89	13	13	153	61	18
08 Jun 2017	54	175	32	11*	11*	60	20	18*
09 Jun 2017	54	175	32	11*	11*	60	20	18*
10 Jun 2017	31*	170*	36*	11*	11*	31*	20*	18*
11 Jun 2017	31*	170*	36*	11*	11*	31*	20*	18*
12 Jun 2017	31*	170*	36*	11*	11*	31*	20*	18*
13 Jun 2017	29	111	32	13	13	29	20	18
14 Jun 2017	29	111	32	13	13	29	20	18
15 Jun 2017	31*	42*	36*	11*	20*	20*	36*	18*
16 Jun 2017	31*	42*	36*	11*	20*	20*	36*	18*
17 Jun 2017	31*	42*	36*	11*	20*	20*	36*	18*
18 Jun 2017	31*	42*	36*	11*	20*	20*	36*	18*
19 Jun 2017	31*	42*	36*	11*	20*	20*	36*	18*
20 Jun 2017	29	58	32	13	20	20	32	29
21 Jun 2017	29	58	32	13	20	20	32	29
22 Jun 2017	31*	42*	20*	11*	20*	20*	20*	36*
23 Jun 2017	31*	42*	20*	11*	20*	20*	20*	36*
24 Jun 2017	31*	42*	20*	11*	20*	20*	20*	36*
25 Jun 2017	31*	42*	20*	11*	20*	20*	20*	36*
26 Jun 2017	31*	42*	20*	11*	20*	20*	20*	36*
27 Jun 2017	29	66	20	13	32	20	23	32
28 Jun 2017	29	66	20	13	32	20	23	32
29 Jun 2017	31*	89*	20*	11*	36*	20*	24*	36*
30 Jun 2017	31*	89*	20*	11*	36*	20*	24*	36*

* Geometric mean calculated using n<5

Table 2.2

Summary of compliance with the Ocean Plan's 30-day Geometric Mean standard for fecal coliform bacteria at the SBOO shore stations. Data are based on the geometric mean of the five most recent samples from each site over the previous 30 days unless otherwise noted (*). Values >200 CFU/100 mL exceed the standard.

Date	S4	S5	S6	S8	S9	S10	S11	S12
01 Jun 2017	11	40	9	2*	2*	19	7	2*
02 Jun 2017	11	40	9	2*	2*	19	7	2*
03 Jun 2017	11	40	9	2*	2*	19	7	2*
04 Jun 2017	11	40	9	2*	2*	19	7	2*
05 Jun 2017	11	40	9	2*	2*	19	7	2*
06 Jun 2017	10	24	7	2	2	13	6	2
07 Jun 2017	10	24	7	2	2	13	6	2
08 Jun 2017	4	8	2	2*	2*	5	2	3*
09 Jun 2017	4	8	2	2*	2*	5	2	3*
10 Jun 2017	3*	6*	2*	2*	2*	4*	2*	3*
11 Jun 2017	3*	6*	2*	2*	2*	4*	2*	3*
12 Jun 2017	3*	6*	2*	2*	2*	4*	2*	3*
13 Jun 2017	2	5	2	2	2	3	2	2
14 Jun 2017	2	5	2	2	2	3	2	2
15 Jun 2017	3*	2*	2*	2*	2*	2*	2*	3*
16 Jun 2017	3*	2*	2*	2*	2*	2*	2*	3*
17 Jun 2017	3*	2*	2*	2*	2*	2*	2*	3*
18 Jun 2017	3*	2*	2*	2*	2*	2*	2*	3*
19 Jun 2017	3*	2*	2*	2*	2*	2*	2*	3*
20 Jun 2017	2	3	2	2	2	2	2	2
21 Jun 2017	2	3	2	2	2	2	2	2
22 Jun 2017	3*	4*	3*	2*	2*	2*	2*	3*
23 Jun 2017	3*	4*	3*	2*	2*	2*	2*	3*
24 Jun 2017	3*	4*	3*	2*	2*	2*	2*	3*
25 Jun 2017	3*	4*	3*	2*	2*	2*	2*	3*
26 Jun 2017	3*	4*	3*	2*	2*	2*	2*	3*
27 Jun 2017	2	7	2	2	2	2	2	3
28 Jun 2017	2	7	2	2	2	2	2	3
29 Jun 2017	3*	9*	3*	2*	2*	2*	2*	3*
30 Jun 2017	3*	9*	3*	2*	2*	2*	2*	3*

* Geometric mean calculated using n<5

Table 2.3

Summary of compliance with the Ocean Plan's 30-day Geometric Mean standard for *Enterococcus* at the SBOO shore stations. Data are based on the geometric mean of the five most recent samples from each site over the previous 30 days unless otherwise noted (*). Values >35 CFU/100 mL exceed the standard.

Date	S4	S5	S6	S8	S9	S10	S11	S12
01 Jun 2017	12	16	6	2*	2*	26	6	3*
02 Jun 2017	12	16	6	2*	2*	26	6	3*
03 Jun 2017	12	16	6	2*	2*	26	6	3*
04 Jun 2017	12	16	6	2*	2*	26	6	3*
05 Jun 2017	12	16	6	2*	2*	26	6	3*
06 Jun 2017	11	14	5	2	2	19	6	3
07 Jun 2017	11	14	5	2	2	19	6	3
08 Jun 2017	6	9	2	2*	2*	10	2	4*
09 Jun 2017	6	9	2	2*	2*	10	2	4*
10 Jun 2017	4*	8	2*	2*	2*	6*	2*	4*
11 Jun 2017	4*	8	2*	2*	2*	6*	2*	4*
12 Jun 2017	4*	8	2*	2*	2*	6*	2*	4*
13 Jun 2017	4	6	2	2	2	5	2	3
14 Jun 2017	4	6	2	2	2	5	2	3
15 Jun 2017	3*	4	2*	2*	2*	3*	2*	4*
16 Jun 2017	3*	4	2*	2*	2*	3*	2*	4*
17 Jun 2017	3*	3*	2*	2*	2*	3*	2*	4*
18 Jun 2017	3*	3*	2*	2*	2*	3*	2*	4*
19 Jun 2017	3*	3*	2*	2*	2*	3*	2*	4*
20 Jun 2017	3	3	2	2	2	3	2	4
21 Jun 2017	3	3	2	2	2	3	2	4
22 Jun 2017	3*	3*	2*	2*	2*	2*	2*	4*
23 Jun 2017	3*	3*	2*	2*	2*	2*	2*	4*
24 Jun 2017	3*	3*	2*	2*	2*	2*	2*	4*
25 Jun 2017	3*	3*	2*	2*	2*	2*	2*	4*
26 Jun 2017	3*	3*	2*	2*	2*	2*	2*	4*
27 Jun 2017	3	6	2	2	3	2	3	4
28 Jun 2017	3	6	2	2	3	2	3	4
29 Jun 2017	4*	6	2*	2*	3*	2*	4*	3*
30 Jun 2017	4*	6	2*	2*	3*	2*	4*	3*

* Geometric mean calculated using n<5

Table 2.4

Summary of compliance at the SBOO shore stations with the Ocean Plan's Single Sample Maximum standard for total coliform bacteria, which states that total coliform density shall not exceed 10,000 CFU/100 mL.

Date	S4	S5	S6	S8	S9	S10	S11	S12
06 Jun 2017	IC	IC	IC	IC	IC	IC	IC	IC
13 Jun 2017	IC	IC	IC	IC	IC	IC	IC	IC
20 Jun 2017	IC	IC	IC	IC	IC	IC	IC	IC
27 Jun 2017	IC	IC	IC	IC	IC	IC	IC	IC

IC = In Compliance

E = Exceedance

ns = not sampled

Table 2.5

Summary of compliance at the SBOO shore stations with the Ocean Plan's Single Sample Maximum standard for fecal coliform bacteria, which states that fecal coliform density shall not exceed 400 CFU/100 mL.

Date	S4	S5	S6	S8	S9	S10	S11	S12
06 Jun 2017	IC	IC	IC	IC	IC	IC	IC	IC
13 Jun 2017	IC	IC	IC	IC	IC	IC	IC	IC
20 Jun 2017	IC	IC	IC	IC	IC	IC	IC	IC
27 Jun 2017	IC	IC	IC	IC	IC	IC	IC	IC

IC = In Compliance

E = Exceedance

ns = not sampled

Table 2.6

Summary of compliance at the SBOO shore stations with the Ocean Plan's Single Sample Maximum standard for *Enterococcus* bacteria, which states that *Enterococcus* density shall not exceed 104 CFU/100 mL.

Date	S4	S5	S6	S8	S9	S10	S11	S12
06 Jun 2017	IC	IC	IC	IC	IC	IC	IC	IC
13 Jun 2017	IC	IC	IC	IC	IC	IC	IC	IC
20 Jun 2017	IC	IC	IC	IC	IC	IC	IC	IC
27 Jun 2017	IC	E	IC	IC	IC	IC	IC	IC
29 Jun 2017	ns	IC	ns	ns	ns	ns	ns	ns

IC = In Compliance

E = Exceedance

ns = not sampled

Table 2.7

Summary of compliance at the SBOO shore stations with the Ocean Plan's Single Sample Maximum standard for total coliform bacteria and the fecal/total coliform ratio (F:T), which states that total coliform density shall not exceed 1,000 CFU/100 mL when F:T > 0.1.

Date	S4	S5	S6	S8	S9	S10	S11	S12
06 Jun 2017	IC	IC	IC	IC	IC	IC	IC	IC
13 Jun 2017	IC	IC	IC	IC	IC	IC	IC	IC
20 Jun 2017	IC	IC	IC	IC	IC	IC	IC	IC
27 Jun 2017	IC	IC	IC	IC	IC	IC	IC	IC

IC = In Compliance

E = Exceedance

ns = not sampled

Table 2.8

Summary of water quality parameters at the SBOO shore stations for each sample date. Densities of total coliform (Total), fecal coliform (Fecal), and *Enterococcus* (Enter) are reported as CFU/100 mL. The fecal:total coliform ratio (F:T) is unitless. Comments follow the data summary.

Station	Date	Time	Total	Fecal	Enter	F:T
S0	06 Jun 2017	1045	380e	20e	70	0.05
S0	13 Jun 2017	1005	560	100	58	0.18
S0	20 Jun 2017	1130	400e	26e	80	0.06
S0	27 Jun 2017	1025	7200	620	1400e	0.09
S2	06 Jun 2017	1205	880	72	32e	0.08
S2	13 Jun 2017	1140	<20	<2	<2	0.10
S2	20 Jun 2017	1215	<20	<2	<2	0.10
S2	27 Jun 2017	1100	<20	<2	<2	0.10
S3	06 Jun 2017	1125	860	86	36e	0.10
S3	13 Jun 2017	1110	<20	<2	<2	0.10
S3	20 Jun 2017	1245	<20	<2	2e	0.10
S3	27 Jun 2017	1130	<20	6e	18e	0.30
S4	06 Jun 2017	847	120e	6e	8e	0.05
S4	13 Jun 2017	843	<20	<2	2e	0.10
S4	20 Jun 2017	843	<20	<2	<2	0.10
S4	27 Jun 2017	1157	<20	<2	6e	0.10
S5	06 Jun 2017	1016	40e	<2	6e	0.05
S5	13 Jun 2017	1003	<20	<2	2e	0.10
S5	20 Jun 2017	1012	<200	<20	2e	0.10
S5	27 Jun 2017	1002	400e	80e	160e	0.20
S5	29 Jun 2017	1224	ns	ns	<2	ns
S6	06 Jun 2017	1003	20e	<2	<2	0.10
S6	13 Jun 2017	955	<20	2e	<2	0.10
S6	20 Jun 2017	1002	<20	6e	2e	0.30
S6	27 Jun 2017	951	<20	<2	2e	0.10
S8	06 Jun 2017	1144	<2	<2	<2	1.00
S8	13 Jun 2017	1138	<20	<2	<2	0.10
S8	20 Jun 2017	1145	<20	<2	2e	0.10
S8	27 Jun 2017	853	<20	<2	<2	0.10
S9	06 Jun 2017	1219	<20	<2	<2	0.10
S9	13 Jun 2017	1214	<20	<2	<2	0.10
S9	20 Jun 2017	1227	<20	<2	<2	0.10
S9	27 Jun 2017	818	<200	<2	8e	0.01
S10	06 Jun 2017	853	<20	<2	4e	0.10
S10	13 Jun 2017	840	<20	2e	<2	0.10
S10	20 Jun 2017	838	<20	<2	2e	0.10
S10	27 Jun 2017	1203	<20	<2	<2	0.10
S11	06 Jun 2017	1008	<20	<2	4e	0.10
S11	13 Jun 2017	959	<20	<2	<2	0.10
S11	20 Jun 2017	1007	<20	<2	<2	0.10

Station	Date	Time	Total	Fecal	Enteric	F:T
S11	27 Jun 2017	956	40e	<2	10e	0.05
S12	06 Jun 2017	947	20e	6e	4e	0.30
S12	13 Jun 2017	936	<20	<2	<2	0.10
S12	20 Jun 2017	945	<200	2e	4e	0.01
S12	27 Jun 2017	931	<20	4e	2e	0.20

ns = not sampled

Comments

Station	Date	Depth	Parameter	Comments
S5	29 Jun 2017			Resample

Table 2.9

Summary of visual observations made during the month for each SBOO shore station by sample date.

Station	Date	Parameter	Value
S0	06 Jun 2017	Arrive Time	1045
S0	06 Jun 2017	Weather	Sunny
S0	06 Jun 2017	Wind Speed (kts)	4.9
S0	06 Jun 2017	Wind Dir	NW
S0	06 Jun 2017	Animal Life	>20 Seagulls
S0	06 Jun 2017	Floatables	None
S0	06 Jun 2017	Water Color	Green
S0	06 Jun 2017	Current Direction	N
S0	06 Jun 2017	Water Temp (C)	15
S0	06 Jun 2017	Wave Height Low (ft)	2
S0	06 Jun 2017	High Tide (ft)	3.7
S0	06 Jun 2017	High Tide Time	832
S0	06 Jun 2017	Low Tide (ft)	1.4
S0	06 Jun 2017	Low Tide Time	1353
S0	06 Jun 2017	Comments	Kelp; Water turbid; Flow from storm drain approx 1L/sec
S0	13 Jun 2017	Arrive Time	1005
S0	13 Jun 2017	Weather	Sunny
S0	13 Jun 2017	Wind Speed (kts)	0.9
S0	13 Jun 2017	Wind Dir	SE
S0	13 Jun 2017	Animal Life	5 Birds
S0	13 Jun 2017	Floatables	None
S0	13 Jun 2017	Water Color	Green
S0	13 Jun 2017	Current Direction	N
S0	13 Jun 2017	Water Temp (C)	15
S0	13 Jun 2017	Wave Height Low (ft)	2
S0	13 Jun 2017	High Tide (ft)	3.5
S0	13 Jun 2017	High Tide Time	1311
S0	13 Jun 2017	Low Tide (ft)	-0.1
S0	13 Jun 2017	Low Tide Time	636
S0	13 Jun 2017	Comments	5 Persons; Water clear; Flow from storm drain 0.5 L/sec
S0	20 Jun 2017	Arrive Time	1130
S0	20 Jun 2017	Weather	Cloudy
S0	20 Jun 2017	Wind Speed (kts)	1.3
S0	20 Jun 2017	Wind Dir	SE
S0	20 Jun 2017	Animal Life	5 Shorebirds
S0	20 Jun 2017	Floatables	None
S0	20 Jun 2017	Water Color	Green
S0	20 Jun 2017	Current Direction	N
S0	20 Jun 2017	Water Temp (C)	15
S0	20 Jun 2017	Wave Height Low (ft)	3
S0	20 Jun 2017	High Tide (ft)	3.7
S0	20 Jun 2017	High Tide Time	659
S0	20 Jun 2017	Low Tide (ft)	1.1
S0	20 Jun 2017	Low Tide Time	1232
S0	20 Jun 2017	Comments	Kelp; Algae; Water clear; Flow from stormdrain 0.5 L/sec
S0	27 Jun 2017	Arrive Time	1025
S0	27 Jun 2017	Weather	Sunny
S0	27 Jun 2017	Wind Speed (kts)	1.8

Station	Date	Parameter	Value
S0	27 Jun 2017	Wind Dir	SE
S0	27 Jun 2017	Animal Life	5 Shorebirds
S0	27 Jun 2017	Floatables	None
S0	27 Jun 2017	Water Color	Green
S0	27 Jun 2017	Current Direction	N
S0	27 Jun 2017	Water Temp (C)	17
S0	27 Jun 2017	Wave Height Low (ft)	3
S0	27 Jun 2017	High Tide (ft)	4.2
S0	27 Jun 2017	High Tide Time	1314
S0	27 Jun 2017	Low Tide (ft)	-0.9
S0	27 Jun 2017	Low Tide Time	642
S0	27 Jun 2017	Comments	Kelp; Algae; Water clear; Flow from storm drain 1.5 L/sec
S2	06 Jun 2017	Arrive Time	1205
S2	06 Jun 2017	Weather	Cloudy
S2	06 Jun 2017	Wind Speed (kts)	6.1
S2	06 Jun 2017	Wind Dir	NW
S2	06 Jun 2017	Animal Life	3 Pelicans; >20 Seagulls
S2	06 Jun 2017	Floatables	None
S2	06 Jun 2017	Water Color	Green
S2	06 Jun 2017	Current Direction	N
S2	06 Jun 2017	Water Temp (C)	16
S2	06 Jun 2017	Wave Height Low (ft)	2
S2	06 Jun 2017	High Tide (ft)	3.7
S2	06 Jun 2017	High Tide Time	832
S2	06 Jun 2017	Low Tide (ft)	1.4
S2	06 Jun 2017	Low Tide Time	1353
S2	06 Jun 2017	Comments	Kelp; Water turbid; No flow from storm drain
S2	13 Jun 2017	Arrive Time	1140
S2	13 Jun 2017	Weather	Sunny
S2	13 Jun 2017	Wind Speed (kts)	1.3
S2	13 Jun 2017	Wind Dir	SE
S2	13 Jun 2017	Animal Life	5 Birds; 5 Dogs
S2	13 Jun 2017	Floatables	None
S2	13 Jun 2017	Water Color	Green
S2	13 Jun 2017	Current Direction	N
S2	13 Jun 2017	Water Temp (C)	16
S2	13 Jun 2017	Wave Height Low (ft)	2
S2	13 Jun 2017	High Tide (ft)	3.5
S2	13 Jun 2017	High Tide Time	1311
S2	13 Jun 2017	Low Tide (ft)	-0.1
S2	13 Jun 2017	Low Tide Time	636
S2	13 Jun 2017	Comments	20 Persons; Water clear; No storm drain flow
S2	20 Jun 2017	Arrive Time	1215
S2	20 Jun 2017	Weather	Cloudy
S2	20 Jun 2017	Wind Speed (kts)	1.6
S2	20 Jun 2017	Wind Dir	SE
S2	20 Jun 2017	Animal Life	5 Shorebirds
S2	20 Jun 2017	Floatables	None
S2	20 Jun 2017	Water Color	Green
S2	20 Jun 2017	Current Direction	N
S2	20 Jun 2017	Water Temp (C)	15
S2	20 Jun 2017	Wave Height Low (ft)	3

Station	Date	Parameter	Value
S2	20 Jun 2017	High Tide (ft)	3.7
S2	20 Jun 2017	High Tide Time	659
S2	20 Jun 2017	Low Tide (ft)	1.1
S2	20 Jun 2017	Low Tide Time	1232
S2	20 Jun 2017	Comments	Kelp; Algae; Water clear
S2	27 Jun 2017	Arrive Time	1100
S2	27 Jun 2017	Weather	Sunny
S2	27 Jun 2017	Wind Speed (kts)	2.4
S2	27 Jun 2017	Wind Dir	SE
S2	27 Jun 2017	Animal Life	5 Shorebirds
S2	27 Jun 2017	Floatables	None
S2	27 Jun 2017	Water Color	Green
S2	27 Jun 2017	Current Direction	N
S2	27 Jun 2017	Water Temp (C)	18
S2	27 Jun 2017	Wave Height Low (ft)	3
S2	27 Jun 2017	High Tide (ft)	4.2
S2	27 Jun 2017	High Tide Time	1314
S2	27 Jun 2017	Low Tide (ft)	-0.9
S2	27 Jun 2017	Low Tide Time	642
S2	27 Jun 2017	Comments	Kelp; Algae; Water clear; No flow from stormdrain
S3	06 Jun 2017	Arrive Time	1125
S3	06 Jun 2017	Weather	Cloudy
S3	06 Jun 2017	Wind Speed (kts)	6.3
S3	06 Jun 2017	Wind Dir	NW
S3	06 Jun 2017	Animal Life	5 Seagulls
S3	06 Jun 2017	Floatables	None
S3	06 Jun 2017	Water Color	Green
S3	06 Jun 2017	Current Direction	N
S3	06 Jun 2017	Water Temp (C)	16
S3	06 Jun 2017	Wave Height Low (ft)	2
S3	06 Jun 2017	High Tide (ft)	3.7
S3	06 Jun 2017	High Tide Time	832
S3	06 Jun 2017	Low Tide (ft)	1.4
S3	06 Jun 2017	Low Tide Time	1353
S3	06 Jun 2017	Comments	Kelp; Water turbid; No flow from storm drain
S3	13 Jun 2017	Arrive Time	1110
S3	13 Jun 2017	Weather	Sunny
S3	13 Jun 2017	Wind Speed (kts)	0.8
S3	13 Jun 2017	Wind Dir	SE
S3	13 Jun 2017	Animal Life	3 Birds; 5 Dogs
S3	13 Jun 2017	Floatables	None
S3	13 Jun 2017	Water Color	Green
S3	13 Jun 2017	Current Direction	N
S3	13 Jun 2017	Water Temp (C)	16
S3	13 Jun 2017	Wave Height Low (ft)	2
S3	13 Jun 2017	High Tide (ft)	3.5
S3	13 Jun 2017	High Tide Time	1311
S3	13 Jun 2017	Low Tide (ft)	-0.1
S3	13 Jun 2017	Low Tide Time	636
S3	13 Jun 2017	Comments	20 Persons; Water clear; No storm drain flow
S3	20 Jun 2017	Arrive Time	1245

Station	Date	Parameter	Value
S3	20 Jun 2017	Weather	Cloudy
S3	20 Jun 2017	Wind Speed (kts)	1.8
S3	20 Jun 2017	Wind Dir	SE
S3	20 Jun 2017	Animal Life	5 Shorebirds
S3	20 Jun 2017	Floatables	None
S3	20 Jun 2017	Water Color	Green
S3	20 Jun 2017	Current Direction	N
S3	20 Jun 2017	Water Temp (C)	15
S3	20 Jun 2017	Wave Height Low (ft)	3
S3	20 Jun 2017	High Tide (ft)	3.7
S3	20 Jun 2017	High Tide Time	659
S3	20 Jun 2017	Low Tide (ft)	1.1
S3	20 Jun 2017	Low Tide Time	1232
S3	20 Jun 2017	Comments	Kelp; Algae; Water clear
S3	27 Jun 2017	Arrive Time	1130
S3	27 Jun 2017	Weather	Sunny
S3	27 Jun 2017	Wind Speed (kts)	1.4
S3	27 Jun 2017	Wind Dir	SE
S3	27 Jun 2017	Animal Life	5 Shorebirds
S3	27 Jun 2017	Floatables	None
S3	27 Jun 2017	Water Color	Green
S3	27 Jun 2017	Current Direction	N
S3	27 Jun 2017	Water Temp (C)	18
S3	27 Jun 2017	Wave Height Low (ft)	3
S3	27 Jun 2017	High Tide (ft)	4.2
S3	27 Jun 2017	High Tide Time	1314
S3	27 Jun 2017	Low Tide (ft)	-0.9
S3	27 Jun 2017	Low Tide Time	642
S3	27 Jun 2017	Comments	Kelp; Algae; Water clear
S4	06 Jun 2017	Arrive Time	847
S4	06 Jun 2017	Weather	Cloudy
S4	06 Jun 2017	Wind Speed (kts)	2.1
S4	06 Jun 2017	Wind Dir	W
S4	06 Jun 2017	Animal Life	None
S4	06 Jun 2017	Floatables	None
S4	06 Jun 2017	Water Color	Green
S4	06 Jun 2017	Current Direction	N
S4	06 Jun 2017	Water Temp (C)	14.2
S4	06 Jun 2017	Wave Height Low (ft)	2
S4	06 Jun 2017	High Tide (ft)	3.7
S4	06 Jun 2017	High Tide Time	832
S4	06 Jun 2017	Low Tide (ft)	1.4
S4	06 Jun 2017	Low Tide Time	1353
S4	06 Jun 2017	Comments	Kelp; Water clear
S4	13 Jun 2017	Arrive Time	843
S4	13 Jun 2017	Weather	Sunny
S4	13 Jun 2017	Wind Speed (kts)	3.2
S4	13 Jun 2017	Wind Dir	W
S4	13 Jun 2017	Animal Life	None
S4	13 Jun 2017	Floatables	None
S4	13 Jun 2017	Water Color	Brown
S4	13 Jun 2017	Current Direction	N

Station	Date	Parameter	Value
S4	13 Jun 2017	Water Temp (C)	14.8
S4	13 Jun 2017	Wave Height Low (ft)	3
S4	13 Jun 2017	High Tide (ft)	3.5
S4	13 Jun 2017	High Tide Time	1311
S4	13 Jun 2017	Low Tide (ft)	-0.1
S4	13 Jun 2017	Low Tide Time	636
S4	13 Jun 2017	Comments	Kelp; Seagrass; Water clear
S4	20 Jun 2017	Arrive Time	843
S4	20 Jun 2017	Weather	Foggy
S4	20 Jun 2017	Wind Speed (kts)	4.4
S4	20 Jun 2017	Wind Dir	N
S4	20 Jun 2017	Animal Life	None
S4	20 Jun 2017	Floatables	None
S4	20 Jun 2017	Water Color	Green
S4	20 Jun 2017	Current Direction	N
S4	20 Jun 2017	Water Temp (C)	13.2
S4	20 Jun 2017	Wave Height Low (ft)	1
S4	20 Jun 2017	High Tide (ft)	3.7
S4	20 Jun 2017	High Tide Time	659
S4	20 Jun 2017	Low Tide (ft)	1.1
S4	20 Jun 2017	Low Tide Time	1232
S4	20 Jun 2017	Comments	Seagrass; Water clear
S4	27 Jun 2017	Arrive Time	1157
S4	27 Jun 2017	Weather	Sunny
S4	27 Jun 2017	Wind Speed (kts)	5.8
S4	27 Jun 2017	Wind Dir	S
S4	27 Jun 2017	Animal Life	2 Horses
S4	27 Jun 2017	Floatables	None
S4	27 Jun 2017	Water Color	Green
S4	27 Jun 2017	Current Direction	N
S4	27 Jun 2017	Water Temp (C)	17.2
S4	27 Jun 2017	Wave Height Low (ft)	2
S4	27 Jun 2017	High Tide (ft)	4.2
S4	27 Jun 2017	High Tide Time	1314
S4	27 Jun 2017	Low Tide (ft)	-0.9
S4	27 Jun 2017	Low Tide Time	642
S4	27 Jun 2017	Comments	Seagrass; 2 Persons; Water clear
S5	06 Jun 2017	Arrive Time	1016
S5	06 Jun 2017	Weather	Drizzle
S5	06 Jun 2017	Wind Speed (kts)	5.5
S5	06 Jun 2017	Wind Dir	W
S5	06 Jun 2017	Animal Life	None
S5	06 Jun 2017	Floatables	None
S5	06 Jun 2017	Water Color	Green
S5	06 Jun 2017	Current Direction	N
S5	06 Jun 2017	Water Temp (C)	13.9
S5	06 Jun 2017	Wave Height Low (ft)	1
S5	06 Jun 2017	High Tide (ft)	3.7
S5	06 Jun 2017	High Tide Time	832
S5	06 Jun 2017	Low Tide (ft)	1.4
S5	06 Jun 2017	Low Tide Time	1353
S5	06 Jun 2017	Comments	Kelp; Seagrass; Water clear

Station	Date	Parameter	Value
S5	13 Jun 2017	Arrive Time	1003
S5	13 Jun 2017	Weather	Sunny
S5	13 Jun 2017	Wind Speed (kts)	4.6
S5	13 Jun 2017	Wind Dir	W
S5	13 Jun 2017	Animal Life	None
S5	13 Jun 2017	Floatables	None
S5	13 Jun 2017	Water Color	Green
S5	13 Jun 2017	Current Direction	N
S5	13 Jun 2017	Water Temp (C)	15.7
S5	13 Jun 2017	Wave Height Low (ft)	3
S5	13 Jun 2017	High Tide (ft)	3.5
S5	13 Jun 2017	High Tide Time	1311
S5	13 Jun 2017	Low Tide (ft)	-0.1
S5	13 Jun 2017	Low Tide Time	636
S5	13 Jun 2017	Comments	Kelp; Seagrass; Water clear
S5	20 Jun 2017	Arrive Time	1012
S5	20 Jun 2017	Weather	Cloudy
S5	20 Jun 2017	Wind Speed (kts)	5.6
S5	20 Jun 2017	Wind Dir	N
S5	20 Jun 2017	Animal Life	1 Dog
S5	20 Jun 2017	Floatables	None
S5	20 Jun 2017	Water Color	Green
S5	20 Jun 2017	Current Direction	N
S5	20 Jun 2017	Water Temp (C)	14.9
S5	20 Jun 2017	Wave Height Low (ft)	2
S5	20 Jun 2017	High Tide (ft)	3.7
S5	20 Jun 2017	High Tide Time	659
S5	20 Jun 2017	Low Tide (ft)	1.1
S5	20 Jun 2017	Low Tide Time	1232
S5	20 Jun 2017	Comments	Kelp; Seagrass; 2 Persons; Water clear
S5	27 Jun 2017	Arrive Time	1002
S5	27 Jun 2017	Weather	Sunny
S5	27 Jun 2017	Wind Speed (kts)	3.4
S5	27 Jun 2017	Wind Dir	S
S5	27 Jun 2017	Animal Life	None
S5	27 Jun 2017	Floatables	None
S5	27 Jun 2017	Water Color	Green
S5	27 Jun 2017	Current Direction	N
S5	27 Jun 2017	Water Temp (C)	15.2
S5	27 Jun 2017	Wave Height Low (ft)	1
S5	27 Jun 2017	High Tide (ft)	4.2
S5	27 Jun 2017	High Tide Time	1314
S5	27 Jun 2017	Low Tide (ft)	-0.9
S5	27 Jun 2017	Low Tide Time	642
S5	27 Jun 2017	Comments	Kelp; Seagrass; 2 Persons; Water clear
S5	29 Jun 2017	Arrive Time	1224
S5	29 Jun 2017	Weather	Sunny
S5	29 Jun 2017	Wind Speed (kts)	8.5
S5	29 Jun 2017	Wind Dir	W
S5	29 Jun 2017	Animal Life	None
S5	29 Jun 2017	Floatables	None

Station	Date	Parameter	Value
S5	29 Jun 2017	Water Color	Green
S5	29 Jun 2017	Current Direction	N
S5	29 Jun 2017	Water Temp (C)	21.3
S5	29 Jun 2017	Wave Height Low (ft)	2
S5	29 Jun 2017	High Tide (ft)	4.4
S5	29 Jun 2017	High Tide Time	1511
S5	29 Jun 2017	Low Tide (ft)	0.1
S5	29 Jun 2017	Low Tide Time	823
S5	29 Jun 2017	Comments	Kelp; Seagrass; 3 Persons; Water clear
S6	06 Jun 2017	Arrive Time	1003
S6	06 Jun 2017	Weather	Drizzle
S6	06 Jun 2017	Wind Speed (kts)	4.5
S6	06 Jun 2017	Wind Dir	W
S6	06 Jun 2017	Animal Life	None
S6	06 Jun 2017	Floatables	None
S6	06 Jun 2017	Water Color	Green
S6	06 Jun 2017	Current Direction	N
S6	06 Jun 2017	Water Temp (C)	14.3
S6	06 Jun 2017	Wave Height Low (ft)	3
S6	06 Jun 2017	High Tide (ft)	3.7
S6	06 Jun 2017	High Tide Time	832
S6	06 Jun 2017	Low Tide (ft)	1.4
S6	06 Jun 2017	Low Tide Time	1353
S6	06 Jun 2017	Comments	Seagrass; 3 Persons; Water clear
S6	13 Jun 2017	Arrive Time	955
S6	13 Jun 2017	Weather	Sunny
S6	13 Jun 2017	Wind Speed (kts)	4
S6	13 Jun 2017	Wind Dir	W
S6	13 Jun 2017	Animal Life	None
S6	13 Jun 2017	Floatables	None
S6	13 Jun 2017	Water Color	Brown
S6	13 Jun 2017	Current Direction	N
S6	13 Jun 2017	Water Temp (C)	15.4
S6	13 Jun 2017	Wave Height Low (ft)	3
S6	13 Jun 2017	High Tide (ft)	3.5
S6	13 Jun 2017	High Tide Time	1311
S6	13 Jun 2017	Low Tide (ft)	-0.1
S6	13 Jun 2017	Low Tide Time	636
S6	13 Jun 2017	Comments	Kelp; Seagrass; 6 Persons; Water clear
S6	20 Jun 2017	Arrive Time	1002
S6	20 Jun 2017	Weather	Cloudy
S6	20 Jun 2017	Wind Speed (kts)	8.6
S6	20 Jun 2017	Wind Dir	NW
S6	20 Jun 2017	Animal Life	None
S6	20 Jun 2017	Floatables	None
S6	20 Jun 2017	Water Color	Green
S6	20 Jun 2017	Current Direction	N
S6	20 Jun 2017	Water Temp (C)	14.9
S6	20 Jun 2017	Wave Height Low (ft)	3
S6	20 Jun 2017	High Tide (ft)	3.7
S6	20 Jun 2017	High Tide Time	659
S6	20 Jun 2017	Low Tide (ft)	1.1

Station	Date	Parameter	Value
S6	20 Jun 2017	Low Tide Time	1232
S6	20 Jun 2017	Comments	Kelp; 3 Persons; Water clear
S6	27 Jun 2017	Arrive Time	951
S6	27 Jun 2017	Weather	Sunny
S6	27 Jun 2017	Wind Speed (kts)	3.1
S6	27 Jun 2017	Wind Dir	SW
S6	27 Jun 2017	Animal Life	2 Dogs
S6	27 Jun 2017	Floatables	None
S6	27 Jun 2017	Water Color	Green
S6	27 Jun 2017	Current Direction	N
S6	27 Jun 2017	Water Temp (C)	15.1
S6	27 Jun 2017	Wave Height Low (ft)	1
S6	27 Jun 2017	High Tide (ft)	4.2
S6	27 Jun 2017	High Tide Time	1314
S6	27 Jun 2017	Low Tide (ft)	-0.9
S6	27 Jun 2017	Low Tide Time	642
S6	27 Jun 2017	Comments	6 Persons; Water clear
S8	06 Jun 2017	Arrive Time	1144
S8	06 Jun 2017	Weather	Drizzle
S8	06 Jun 2017	Wind Speed (kts)	3.4
S8	06 Jun 2017	Wind Dir	W
S8	06 Jun 2017	Animal Life	None
S8	06 Jun 2017	Floatables	None
S8	06 Jun 2017	Water Color	Green
S8	06 Jun 2017	Current Direction	N
S8	06 Jun 2017	Water Temp (C)	14.4
S8	06 Jun 2017	Wave Height Low (ft)	3
S8	06 Jun 2017	High Tide (ft)	3.7
S8	06 Jun 2017	High Tide Time	832
S8	06 Jun 2017	Low Tide (ft)	1.4
S8	06 Jun 2017	Low Tide Time	1353
S8	06 Jun 2017	Comments	Seagrass; 5 Persons; Water clear
S8	13 Jun 2017	Arrive Time	1138
S8	13 Jun 2017	Weather	Sunny
S8	13 Jun 2017	Wind Speed (kts)	4.4
S8	13 Jun 2017	Wind Dir	W
S8	13 Jun 2017	Animal Life	None
S8	13 Jun 2017	Floatables	None
S8	13 Jun 2017	Water Color	Green
S8	13 Jun 2017	Current Direction	N
S8	13 Jun 2017	Water Temp (C)	17.5
S8	13 Jun 2017	Wave Height Low (ft)	2
S8	13 Jun 2017	High Tide (ft)	3.5
S8	13 Jun 2017	High Tide Time	1311
S8	13 Jun 2017	Low Tide (ft)	-0.1
S8	13 Jun 2017	Low Tide Time	636
S8	13 Jun 2017	Comments	Kelp; Seagrass; 1 Jogger; 11 Persons; 3 Swimmers; Water clear
S8	20 Jun 2017	Arrive Time	1145
S8	20 Jun 2017	Weather	Sunny
S8	20 Jun 2017	Wind Speed (kts)	8.3
S8	20 Jun 2017	Wind Dir	W

Station	Date	Parameter	Value
S8	20 Jun 2017	Animal Life	None
S8	20 Jun 2017	Floatables	None
S8	20 Jun 2017	Water Color	Green
S8	20 Jun 2017	Current Direction	N
S8	20 Jun 2017	Water Temp (C)	17.2
S8	20 Jun 2017	Wave Height Low (ft)	2
S8	20 Jun 2017	High Tide (ft)	3.7
S8	20 Jun 2017	High Tide Time	659
S8	20 Jun 2017	Low Tide (ft)	1.1
S8	20 Jun 2017	Low Tide Time	1232
S8	20 Jun 2017	Comments	Kelp; 32 Persons; 4 Surfers; 8 Swimmers; Water clear
S8	27 Jun 2017	Arrive Time	853
S8	27 Jun 2017	Weather	Sunny
S8	27 Jun 2017	Wind Speed (kts)	1.7
S8	27 Jun 2017	Wind Dir	N
S8	27 Jun 2017	Animal Life	None
S8	27 Jun 2017	Floatables	None
S8	27 Jun 2017	Water Color	Green
S8	27 Jun 2017	Current Direction	N
S8	27 Jun 2017	Water Temp (C)	13.9
S8	27 Jun 2017	Wave Height Low (ft)	1
S8	27 Jun 2017	High Tide (ft)	4.2
S8	27 Jun 2017	High Tide Time	1314
S8	27 Jun 2017	Low Tide (ft)	-0.9
S8	27 Jun 2017	Low Tide Time	642
S8	27 Jun 2017	Comments	Seagrass; 2 Persons; 2 Swimmers; Water clear
S9	06 Jun 2017	Arrive Time	1219
S9	06 Jun 2017	Weather	Cloudy
S9	06 Jun 2017	Wind Speed (kts)	4.8
S9	06 Jun 2017	Wind Dir	W
S9	06 Jun 2017	Animal Life	None
S9	06 Jun 2017	Floatables	None
S9	06 Jun 2017	Water Color	Green
S9	06 Jun 2017	Current Direction	N
S9	06 Jun 2017	Water Temp (C)	16.1
S9	06 Jun 2017	Wave Height Low (ft)	2
S9	06 Jun 2017	High Tide (ft)	3.7
S9	06 Jun 2017	High Tide Time	832
S9	06 Jun 2017	Low Tide (ft)	1.4
S9	06 Jun 2017	Low Tide Time	1353
S9	06 Jun 2017	Comments	Seagrass; 22 Persons; 2 Surfers; 3 Swimmers; Water clear
S9	13 Jun 2017	Arrive Time	1214
S9	13 Jun 2017	Weather	Sunny
S9	13 Jun 2017	Wind Speed (kts)	3.3
S9	13 Jun 2017	Wind Dir	W
S9	13 Jun 2017	Animal Life	None
S9	13 Jun 2017	Floatables	None
S9	13 Jun 2017	Water Color	Green
S9	13 Jun 2017	Current Direction	N
S9	13 Jun 2017	Water Temp (C)	17.8
S9	13 Jun 2017	Wave Height Low (ft)	2
S9	13 Jun 2017	High Tide (ft)	3.5

Station	Date	Parameter	Value
S9	13 Jun 2017	High Tide Time	1311
S9	13 Jun 2017	Low Tide (ft)	-0.1
S9	13 Jun 2017	Low Tide Time	636
S9	13 Jun 2017	Comments	Kelp; Seagrass; 35 Persons; 8 Surfers; 5 Swimmers; Water clear
S9	20 Jun 2017	Arrive Time	1227
S9	20 Jun 2017	Weather	Sunny
S9	20 Jun 2017	Wind Speed (kts)	10.8
S9	20 Jun 2017	Wind Dir	N
S9	20 Jun 2017	Animal Life	None
S9	20 Jun 2017	Floatables	None
S9	20 Jun 2017	Water Color	Green
S9	20 Jun 2017	Current Direction	N
S9	20 Jun 2017	Water Temp (C)	16.3
S9	20 Jun 2017	Wave Height Low (ft)	2
S9	20 Jun 2017	High Tide (ft)	3.7
S9	20 Jun 2017	High Tide Time	659
S9	20 Jun 2017	Low Tide (ft)	1.1
S9	20 Jun 2017	Low Tide Time	1232
S9	20 Jun 2017	Comments	42 Persons; 10 Surfers; 15 Swimmers; Water clear
S9	27 Jun 2017	Arrive Time	818
S9	27 Jun 2017	Weather	Sunny
S9	27 Jun 2017	Wind Speed (kts)	3.4
S9	27 Jun 2017	Wind Dir	W
S9	27 Jun 2017	Animal Life	None
S9	27 Jun 2017	Floatables	None
S9	27 Jun 2017	Water Color	Green
S9	27 Jun 2017	Current Direction	N
S9	27 Jun 2017	Water Temp (C)	14.9
S9	27 Jun 2017	Wave Height Low (ft)	1
S9	27 Jun 2017	High Tide (ft)	4.2
S9	27 Jun 2017	High Tide Time	1314
S9	27 Jun 2017	Low Tide (ft)	-0.9
S9	27 Jun 2017	Low Tide Time	642
S9	27 Jun 2017	Comments	Kelp; Seagrass; Water clear
S10	06 Jun 2017	Arrive Time	853
S10	06 Jun 2017	Weather	Cloudy
S10	06 Jun 2017	Wind Speed (kts)	3.6
S10	06 Jun 2017	Wind Dir	W
S10	06 Jun 2017	Animal Life	None
S10	06 Jun 2017	Floatables	None
S10	06 Jun 2017	Water Color	Green
S10	06 Jun 2017	Current Direction	N
S10	06 Jun 2017	Water Temp (C)	14.1
S10	06 Jun 2017	Wave Height Low (ft)	1
S10	06 Jun 2017	High Tide (ft)	3.7
S10	06 Jun 2017	High Tide Time	832
S10	06 Jun 2017	Low Tide (ft)	1.4
S10	06 Jun 2017	Low Tide Time	1353
S10	06 Jun 2017	Comments	Kelp; Water clear
S10	13 Jun 2017	Arrive Time	840
S10	13 Jun 2017	Weather	Sunny

Station	Date	Parameter	Value
S10	13 Jun 2017	Wind Speed (kts)	3.6
S10	13 Jun 2017	Wind Dir	W
S10	13 Jun 2017	Animal Life	None
S10	13 Jun 2017	Floatables	None
S10	13 Jun 2017	Water Color	Brown
S10	13 Jun 2017	Current Direction	N
S10	13 Jun 2017	Water Temp (C)	14.6
S10	13 Jun 2017	Wave Height Low (ft)	2
S10	13 Jun 2017	High Tide (ft)	3.5
S10	13 Jun 2017	High Tide Time	1311
S10	13 Jun 2017	Low Tide (ft)	-0.1
S10	13 Jun 2017	Low Tide Time	636
S10	13 Jun 2017	Comments	Kelp; Seagrass; Water clear
S10	20 Jun 2017	Arrive Time	838
S10	20 Jun 2017	Weather	Foggy
S10	20 Jun 2017	Wind Speed (kts)	5.6
S10	20 Jun 2017	Wind Dir	NW
S10	20 Jun 2017	Animal Life	None
S10	20 Jun 2017	Floatables	None
S10	20 Jun 2017	Water Color	Green
S10	20 Jun 2017	Current Direction	N
S10	20 Jun 2017	Water Temp (C)	13.2
S10	20 Jun 2017	Wave Height Low (ft)	2
S10	20 Jun 2017	High Tide (ft)	3.7
S10	20 Jun 2017	High Tide Time	659
S10	20 Jun 2017	Low Tide (ft)	1.1
S10	20 Jun 2017	Low Tide Time	1232
S10	20 Jun 2017	Comments	Seagrass; Water clear
S10	27 Jun 2017	Arrive Time	1203
S10	27 Jun 2017	Weather	Sunny
S10	27 Jun 2017	Wind Speed (kts)	4.6
S10	27 Jun 2017	Wind Dir	SW
S10	27 Jun 2017	Animal Life	None
S10	27 Jun 2017	Floatables	None
S10	27 Jun 2017	Water Color	Green
S10	27 Jun 2017	Current Direction	N
S10	27 Jun 2017	Water Temp (C)	16
S10	27 Jun 2017	Wave Height Low (ft)	2
S10	27 Jun 2017	High Tide (ft)	4.2
S10	27 Jun 2017	High Tide Time	1314
S10	27 Jun 2017	Low Tide (ft)	-0.9
S10	27 Jun 2017	Low Tide Time	642
S10	27 Jun 2017	Comments	Kelp; Seagrass; Water clear
S11	06 Jun 2017	Arrive Time	1008
S11	06 Jun 2017	Weather	Drizzle
S11	06 Jun 2017	Wind Speed (kts)	6.2
S11	06 Jun 2017	Wind Dir	SW
S11	06 Jun 2017	Animal Life	None
S11	06 Jun 2017	Floatables	None
S11	06 Jun 2017	Water Color	Green
S11	06 Jun 2017	Current Direction	N
S11	06 Jun 2017	Water Temp (C)	13.2

Station	Date	Parameter	Value
S11	06 Jun 2017	Wave Height Low (ft)	2
S11	06 Jun 2017	High Tide (ft)	3.7
S11	06 Jun 2017	High Tide Time	832
S11	06 Jun 2017	Low Tide (ft)	1.4
S11	06 Jun 2017	Low Tide Time	1353
S11	06 Jun 2017	Comments	Seagrass; Water clear
S11	13 Jun 2017	Arrive Time	959
S11	13 Jun 2017	Weather	Sunny
S11	13 Jun 2017	Wind Speed (kts)	4.6
S11	13 Jun 2017	Wind Dir	W
S11	13 Jun 2017	Animal Life	2 Dogs
S11	13 Jun 2017	Floatables	None
S11	13 Jun 2017	Water Color	Brown
S11	13 Jun 2017	Current Direction	N
S11	13 Jun 2017	Water Temp (C)	15.6
S11	13 Jun 2017	Wave Height Low (ft)	3
S11	13 Jun 2017	High Tide (ft)	3.5
S11	13 Jun 2017	High Tide Time	1311
S11	13 Jun 2017	Low Tide (ft)	-0.1
S11	13 Jun 2017	Low Tide Time	636
S11	13 Jun 2017	Comments	Kelp; Seagrass; 1 Person; Water clear
S11	20 Jun 2017	Arrive Time	1007
S11	20 Jun 2017	Weather	Cloudy
S11	20 Jun 2017	Wind Speed (kts)	7.1
S11	20 Jun 2017	Wind Dir	N
S11	20 Jun 2017	Animal Life	None
S11	20 Jun 2017	Floatables	None
S11	20 Jun 2017	Water Color	Green
S11	20 Jun 2017	Current Direction	N
S11	20 Jun 2017	Water Temp (C)	15.6
S11	20 Jun 2017	Wave Height Low (ft)	2
S11	20 Jun 2017	High Tide (ft)	3.7
S11	20 Jun 2017	High Tide Time	659
S11	20 Jun 2017	Low Tide (ft)	1.1
S11	20 Jun 2017	Low Tide Time	1232
S11	20 Jun 2017	Comments	Seagrass; 2 Persons; Water clear
S11	27 Jun 2017	Arrive Time	956
S11	27 Jun 2017	Weather	Sunny
S11	27 Jun 2017	Wind Speed (kts)	5.2
S11	27 Jun 2017	Wind Dir	S
S11	27 Jun 2017	Animal Life	None
S11	27 Jun 2017	Floatables	None
S11	27 Jun 2017	Water Color	Green
S11	27 Jun 2017	Current Direction	N
S11	27 Jun 2017	Water Temp (C)	16.4
S11	27 Jun 2017	Wave Height Low (ft)	2
S11	27 Jun 2017	High Tide (ft)	4.2
S11	27 Jun 2017	High Tide Time	1314
S11	27 Jun 2017	Low Tide (ft)	-0.9
S11	27 Jun 2017	Low Tide Time	642
S11	27 Jun 2017	Comments	2 Persons; Water clear

Station	Date	Parameter	Value
S12	06 Jun 2017	Arrive Time	947
S12	06 Jun 2017	Weather	Cloudy
S12	06 Jun 2017	Wind Speed (kts)	5
S12	06 Jun 2017	Wind Dir	W
S12	06 Jun 2017	Animal Life	None
S12	06 Jun 2017	Floatables	None
S12	06 Jun 2017	Water Color	Green
S12	06 Jun 2017	Current Direction	N
S12	06 Jun 2017	Water Temp (C)	15.8
S12	06 Jun 2017	Wave Height Low (ft)	2
S12	06 Jun 2017	High Tide (ft)	3.7
S12	06 Jun 2017	High Tide Time	832
S12	06 Jun 2017	Low Tide (ft)	1.4
S12	06 Jun 2017	Low Tide Time	1353
S12	06 Jun 2017	Comments	Seagrass; 6 Persons; Water clear; Dolphin carcass less than 100 yards south of sample point
S12	13 Jun 2017	Arrive Time	936
S12	13 Jun 2017	Weather	Sunny
S12	13 Jun 2017	Wind Speed (kts)	5.6
S12	13 Jun 2017	Wind Dir	W
S12	13 Jun 2017	Animal Life	2 Dogs
S12	13 Jun 2017	Floatables	None
S12	13 Jun 2017	Water Color	Brown
S12	13 Jun 2017	Current Direction	N
S12	13 Jun 2017	Water Temp (C)	15.3
S12	13 Jun 2017	Wave Height Low (ft)	3
S12	13 Jun 2017	High Tide (ft)	3.5
S12	13 Jun 2017	High Tide Time	1311
S12	13 Jun 2017	Low Tide (ft)	-0.1
S12	13 Jun 2017	Low Tide Time	636
S12	13 Jun 2017	Comments	Kelp; Seagrass; 2 Persons; Water clear
S12	20 Jun 2017	Arrive Time	945
S12	20 Jun 2017	Weather	Cloudy
S12	20 Jun 2017	Wind Speed (kts)	7.5
S12	20 Jun 2017	Wind Dir	N
S12	20 Jun 2017	Animal Life	1 Bird
S12	20 Jun 2017	Floatables	None
S12	20 Jun 2017	Water Color	Green
S12	20 Jun 2017	Current Direction	N
S12	20 Jun 2017	Water Temp (C)	15.9
S12	20 Jun 2017	Wave Height Low (ft)	2
S12	20 Jun 2017	High Tide (ft)	3.7
S12	20 Jun 2017	High Tide Time	659
S12	20 Jun 2017	Low Tide (ft)	1.1
S12	20 Jun 2017	Low Tide Time	1232
S12	20 Jun 2017	Comments	Seagrass; 3 Persons; Water clear
S12	27 Jun 2017	Arrive Time	931
S12	27 Jun 2017	Weather	Sunny
S12	27 Jun 2017	Wind Speed (kts)	3.6
S12	27 Jun 2017	Wind Dir	SW
S12	27 Jun 2017	Animal Life	12 Birds
S12	27 Jun 2017	Floatables	None

Station	Date	Parameter	Value
S12	27 Jun 2017	Water Color	Green
S12	27 Jun 2017	Current Direction	N
S12	27 Jun 2017	Water Temp (C)	15.2
S12	27 Jun 2017	Wave Height Low (ft)	1
S12	27 Jun 2017	High Tide (ft)	4.2
S12	27 Jun 2017	High Tide Time	1314
S12	27 Jun 2017	Low Tide (ft)	-0.9
S12	27 Jun 2017	Low Tide Time	642
S12	27 Jun 2017	Comments	3 Persons; Water clear

Kelp Stations

Table 3.1

Summary of compliance with the Ocean Plan's 30-day Geometric Mean standard for total coliform bacteria at the SBOO kelp stations. Data are based on the geometric mean of the five most recent samples from each site over the previous 30 days unless otherwise noted (*). Values >1,000 CFU/100 mL exceed the standard.

Date	I19	I24	I25	I26	I32	I39	I40
01 Jun 2017	27	12	10	6	13*	10	31
02 Jun 2017	29*	13*	10*	8*	13*	9*	31*
03 Jun 2017	27	13	11	9	14	11	28
04 Jun 2017	27	13	11	9	14	11	28
05 Jun 2017	27	13	11	9	14	11	28
06 Jun 2017	27	13	11	9	14	11	28
07 Jun 2017	28	12	10	7	13	8	25
08 Jun 2017	28	12	10	7	13	8	25
09 Jun 2017	28	12	10	7	13	8	25
10 Jun 2017	19	7	6	5	12	4	19
11 Jun 2017	19	7	6	5	12	4	19
12 Jun 2017	19	7	6	5	12	4	19
13 Jun 2017	18	8	5	6	13	4	18
14 Jun 2017	18	8	5	6	13	4	18
15 Jun 2017	18	8	5	6	13	4	18
16 Jun 2017	18	8	5	6	13	4	18
17 Jun 2017	18	8	5	6	13	4	18
18 Jun 2017	13	8	5	6	11	3	11
19 Jun 2017	13	8	5	6	11	3	11
20 Jun 2017	13	8	5	6	11	3	11
21 Jun 2017	13	8	5	6	11	3	11
22 Jun 2017	13	8	5	6	11	3	11
23 Jun 2017	13	8	5	6	11	3	11
24 Jun 2017	12	7	4	5	9	3	10
25 Jun 2017	12	7	4	5	9	3	10
26 Jun 2017	12	7	4	5	9	3	10
27 Jun 2017	12	7	4	5	9	3	10
28 Jun 2017	12	7	4	5	9	3	10
29 Jun 2017	12	5	5	5	9	4	10
30 Jun 2017	12	5	5	5	9	4	10

* Geometric mean calculated using n<5

Table 3.2

Summary of compliance with the Ocean Plan's 30-day Geometric Mean standard for fecal coliform bacteria at the SBOO kelp stations. Data are based on the geometric mean of the five most recent samples from each site over the previous 30 days unless otherwise noted (*). Values >200 CFU/100 mL exceed the standard.

Date	I19	I24	I25	I26	I32	I39	I40
01 Jun 2017	4	3	2	3	2*	3	3
02 Jun 2017	4*	3*	3*	3*	2*	3*	3*
03 Jun 2017	4	3	2	3	3	3	3
04 Jun 2017	4	3	2	3	3	3	3
05 Jun 2017	4	3	2	3	3	3	3
06 Jun 2017	4	3	2	3	3	3	3
07 Jun 2017	4	3	2	3	2	3	3
08 Jun 2017	4	3	2	3	2	3	3
09 Jun 2017	4	3	2	3	2	3	3
10 Jun 2017	3	2	2	2	2	2	2
11 Jun 2017	3	2	2	2	2	2	2
12 Jun 2017	3	2	2	2	2	2	2
13 Jun 2017	3	2	2	2	2	2	2
14 Jun 2017	3	2	2	2	2	2	2
15 Jun 2017	3	2	2	2	2	2	2
16 Jun 2017	3	2	2	2	2	2	2
17 Jun 2017	3	2	2	2	2	2	2
18 Jun 2017	3	2	2	2	2	2	2
19 Jun 2017	3	2	2	2	2	2	2
20 Jun 2017	3	2	2	2	2	2	2
21 Jun 2017	3	2	2	2	2	2	2
22 Jun 2017	3	2	2	2	2	2	2
23 Jun 2017	3	2	2	2	2	2	2
24 Jun 2017	3	2	2	2	2	2	2
25 Jun 2017	3	2	2	2	2	2	2
26 Jun 2017	3	2	2	2	2	2	2
27 Jun 2017	3	2	2	2	2	2	2
28 Jun 2017	3	2	2	2	2	2	2
29 Jun 2017	3	2	2	2	2	2	2
30 Jun 2017	3	2	2	2	2	2	2

* Geometric mean calculated using n<5

Table 3.3

Summary of compliance with the Ocean Plan's 30-day Geometric Mean standard for *Enterococcus* at the SBOO kelp stations. Data are based on the geometric mean of the five most recent samples from each site over the previous 30 days unless otherwise noted (*). Values >35 CFU/100 mL exceed the standard.

Date	I19	I24	I25	I26	I32	I39	I40
01 Jun 2017	8	5	3	2	2*	3	4
02 Jun 2017	11*	6*	3*	2*	2*	4*	5*
03 Jun 2017	9	5	3	2	2	4	5
04 Jun 2017	9	5	3	2	2	4	5
05 Jun 2017	9	5	3	2	2	4	5
06 Jun 2017	9	5	3	2	2	4	5
07 Jun 2017	8	4	3	2	2	3	4
08 Jun 2017	8	4	3	2	2	3	4
09 Jun 2017	8	4	3	2	2	3	4
10 Jun 2017	6	3	2	2	2	2	3
11 Jun 2017	6	3	2	2	2	2	3
12 Jun 2017	6	3	2	2	2	2	3
13 Jun 2017	6	3	2	2	2	2	3
14 Jun 2017	6	3	2	2	2	2	3
15 Jun 2017	6	3	2	2	2	2	3
16 Jun 2017	6	3	2	2	2	2	3
17 Jun 2017	6	3	2	2	2	2	3
18 Jun 2017	6	3	2	2	2	2	3
19 Jun 2017	6	3	2	2	2	2	3
20 Jun 2017	6	3	2	2	2	2	3
21 Jun 2017	6	3	2	2	2	2	3
22 Jun 2017	6	3	2	2	2	2	3
23 Jun 2017	6	3	2	2	2	2	3
24 Jun 2017	8	2	2	2	2	2	2
25 Jun 2017	8	2	2	2	2	2	2
26 Jun 2017	8	2	2	2	2	2	2
27 Jun 2017	8	2	2	2	2	2	2
28 Jun 2017	8	2	2	2	2	2	2
29 Jun 2017	5	2	2	2	2	2	2
30 Jun 2017	5	2	2	2	2	2	2

* Geometric mean calculated using n<5

Table 3.4

Summary of compliance at the SBOO kelp stations with the Ocean Plan's Single Sample Maximum standard for total coliform bacteria, which states that total coliform density shall not exceed 10,000 CFU/100 mL.

Date	I19	I24	I25	I26	I32	I39	I40
03 Jun 2017	IC						
07 Jun 2017	IC						
13 Jun 2017	IC						
18 Jun 2017	IC						
29 Jun 2017	IC						

IC = In Compliance

E = Exceedance

ns = not sampled

Table 3.5

Summary of compliance at the SBOO kelp stations with the Ocean Plan's Single Sample Maximum standard for fecal coliform bacteria, which states that fecal coliform density shall not exceed 400 CFU/100 mL.

Date	I19	I24	I25	I26	I32	I39	I40
03 Jun 2017	IC						
07 Jun 2017	IC						
13 Jun 2017	IC						
18 Jun 2017	IC						
29 Jun 2017	IC						

IC = In Compliance

E = Exceedance

ns = not sampled

Table 3.6

Summary of compliance at the SBOO kelp stations with the Ocean Plan's Single Sample Maximum standard for *Enterococcus* bacteria, which states that *Enterococcus* density shall not exceed 104 CFU/100 mL.

Date	I19	I24	I25	I26	I32	I39	I40
03 Jun 2017	IC						
07 Jun 2017	IC						
13 Jun 2017	IC						
18 Jun 2017	IC						
29 Jun 2017	IC						

IC = In Compliance

E = Exceedance

ns = not sampled

Table 3.7

Summary of compliance at the SBOO kelp stations with the Ocean Plan's Single Sample Maximum standard for total coliform bacteria and the fecal/total coliform ratio (F:T), which states that total coliform density shall not exceed 1,000 CFU/100 mL when F:T > 0.1.

Date	I19	I24	I25	I26	I32	I39	I40
03 Jun 2017	IC						
07 Jun 2017	IC						
13 Jun 2017	IC						
18 Jun 2017	IC						
29 Jun 2017	IC						

IC = In Compliance

E = Exceedance

ns = not sampled

Table 3.8

Summary of water quality parameters at the SBOO kelp stations for each sample date. Densities of total coliform (Total), fecal coliform (Fecal) and *Enterococcus* (Entero) bacteria are reported as CFU/100 mL; the fecal:total coliform ratio (F:T) is unitless; values for temperature (Temp, °C), transmissivity (XMS, %), dissolved oxygen (DO, mg/L), salinity (Sal, ppt) and pH were extracted from CTD profile data for depths closest to those at which the bacteriological samples were collected; oil and grease samples (OG) and suspended solids (SUSO) data are reported as mg/L. Duplicates are indicated by *. Comments follow the data summary.

Station	Date	Time	Depth	Total	Fecal	Entero	F:T	Temp	XMS	DO	Sal	pH	OG	SUSO
I19	03 Jun 2017	1052	2	<20	<2	<2	0.10	15.8	73.14	7.44	33.53	8.16	ns	ns
I19	03 Jun 2017	1052	6	<20	<2	<2	0.10	14.3	71.83	5.15	33.51	8.06	ns	ns
I19	03 Jun 2017	1052	11	<20	6e	6e	0.30	13.4	68.03	4.76	33.53	7.88	ns	ns
I19	07 Jun 2017	1043	2	<20	<2	<2	0.10	17.6	66.74	8.79	33.48	8.23	ns	ns
I19	07 Jun 2017	1043	6	20e	6e	<2	0.30	17.3	73.67	7.56	33.48	8.21	ns	ns
I19	07 Jun 2017	1043	11	60e	16e	16e	0.27	16.5	65.65	6.90	33.47	8.14	ns	ns
I19	13 Jun 2017	1055	2	<2	<2	<2	1.00	17.8	73.60	8.21	33.54	8.28	ns	ns
I19	13 Jun 2017	1055	6	20e	<2	4e	0.10	15.6	46.05	4.97	33.44	8.15	ns	ns
I19	13 Jun 2017	1055	11	<20	2e	20e	0.10	12.7	13.36	4.17	33.47	7.81	ns	ns
I19	18 Jun 2017	1019	2	<2	<2	<2	1.00	19.4	61.69	7.85	33.49	8.28	ns	ns
I19	18 Jun 2017	1019	6	2e	<2	<2	1.00	15.9	55.80	3.11	33.37	8.17	ns	ns
I19	18 Jun 2017	1019	11	2e	<2	12e	1.00	11.9	24.24	3.02	33.43	7.73	ns	ns
I19	29 Jun 2017	1145	2	<2	<2	<2	1.00	18.4	74.72	9.70	33.52	8.29	ns	ns
I19	29 Jun 2017	1145	6	<20	<2	<2	0.10	15.3	67.85	7.53	33.47	8.30	ns	ns
I19	29 Jun 2017	1145	11	<20	<2	<2	0.10	12.7	37.44	5.79	33.44	7.94	ns	ns
I24	03 Jun 2017	1115	2	4e	<2	<2	0.50	17.3	61.51	8.74	33.49	8.38	ns	ns
I24	03 Jun 2017	1115	6	<20	2e	4e	0.10	14.9	62.86	6.20	33.51	8.11	ns	ns
I24	03 Jun 2017	1115	11	16e	4e	2e	0.25	13.5	69.54	6.43	33.52	7.86	ns	ns
I24	07 Jun 2017	1107	2	<2	<2	<2	1.00	17.8	84.06	8.85	33.51	8.23	ns	ns
I24	07 Jun 2017	1107	6	2e	2e	<2	1.00	17.8	83.09	8.92	33.51	8.24	ns	ns
I24	07 Jun 2017	1107	11	16e	2e	<2	0.12	16.3	75.37	7.41	33.50	8.15	ns	ns
I24	13 Jun 2017	1114	2	<2	<2	<2	1.00	18.1	74.23	9.21	33.53	8.34	ns	ns
I24	13 Jun 2017	1114	6	<20	<2	<2	0.10	14.5	48.12	4.99	33.48	8.05	ns	ns
I24	13 Jun 2017	1114	11	<20	<2	<2	0.10	12.4	35.56	4.42	33.46	7.83	ns	ns
I24	18 Jun 2017	1037	2	<2	<2	<2	1.00	20.1	63.43	8.16	33.54	8.37	ns	ns
I24	18 Jun 2017	1037	6	<2	<2	<2	1.00	16.5	65.92	6.09	33.47	8.26	ns	ns
I24	18 Jun 2017	1037	11	<2	<2	<2	1.00	12.3	71.98	6.77	33.46	7.80	ns	ns
I24	29 Jun 2017	1206	2	<2	<2	<2	1.00	18.6	68.44	10.26	33.52	8.33	ns	ns
I24	29 Jun 2017	1206	6	<2	<2	<2	1.00	15.4	65.26	11.67	33.44	8.32	ns	ns
I24	29 Jun 2017	1206	11	<2	<2	<2	1.00	12.7	61.23	6.89	33.46	7.98	ns	ns
I25	03 Jun 2017	1121	2	2e	<2	<2	1.00	17.5	65.52	8.65	33.49	8.40	ns	ns
I25	03 Jun 2017	1121	6	<20	<2	<2	0.10	15.6	75.81	6.06	33.49	8.14	ns	ns
I25	03 Jun 2017	1121	9	20e	2e	6e	0.10	14.0	74.75	6.70	33.51	7.92	ns	ns
I25	07 Jun 2017	1116	2	<2	<2	<2	1.00	17.9	84.43	8.93	33.51	8.24	ns	ns
I25	07 Jun 2017	1116	6	<2	<2	<2	1.00	17.8	83.98	8.75	33.51	8.24	ns	ns

Station	Date	Time	Depth	Total	Fecal	Enteric	F:T	Temp	XMS	DO	Sal	pH	OG	SUSO
I25	07 Jun 2017	1116	9	12e	<2	<2	0.17	16.8	75.80	8.75	33.50	8.17	ns	ns
I25	13 Jun 2017	1121	2	<2	<2	<2	1.00	17.4	67.36	9.56	33.52	8.32	ns	ns
I25	13 Jun 2017	1121	6	<2	<2	<2	1.00	13.5	59.57	4.38	33.46	8.08	ns	ns
I25	13 Jun 2017	1121	9	2e	<2	<2	1.00	13.1	69.53	5.77	33.46	7.93	ns	ns
I25	18 Jun 2017	1044	2	<2	<2	<2	1.00	20.2	57.76	8.47	33.54	8.40	ns	ns
I25	18 Jun 2017	1044	6	<2	<2	<2	1.00	15.8	66.63	3.30	33.40	8.30	ns	ns
I25	18 Jun 2017	1044	9	<2	<2	<2	1.00	12.4	70.72	3.57	33.45	7.82	ns	ns
I25	29 Jun 2017	1214	2	<2	<2	<2	1.00	18.4	72.92	10.74	33.52	8.35	ns	ns
I25	29 Jun 2017	1214	6	2e	<2	<2	1.00	15.5	47.85	10.23	33.44	8.29	ns	ns
I25	29 Jun 2017	1214	9	<20	<2	<2	0.10	13.5	62.49	9.59	33.45	8.12	ns	ns
I26	03 Jun 2017	1132	2	<20	<2	2e	0.10	17.5	50.38	8.05	33.50	8.45	ns	ns
I26	03 Jun 2017	1132	6	10e	<2	<2	0.20	15.2	69.53	5.13	33.51	8.16	ns	ns
I26	03 Jun 2017	1132	9	26e	<2	<2	0.08	13.2	77.74	4.57	33.52	7.83	ns	ns
I26	07 Jun 2017	1126	2	<2	<2	<2	1.00	17.8	81.86	9.16	33.51	8.25	ns	ns
I26	07 Jun 2017	1126	6	<2	<2	<2	1.00	17.7	80.61	7.65	33.50	8.25	ns	ns
I26	07 Jun 2017	1126	9	<2	2e	<2	1.00	16.2	71.32	8.30	33.51	8.15	ns	ns
I26	13 Jun 2017	1131	2	<2	<2	<2	1.00	18.2	75.10	9.20	33.54	8.33	ns	ns
I26	13 Jun 2017	1131	6	<20	<2	<2	0.10	15.7	60.20	5.27	33.43	8.25	ns	ns
I26	13 Jun 2017	1131	9	<20	<2	<2	0.10	12.8	64.40	5.97	33.48	7.91	ns	ns
I26	18 Jun 2017	1053	2	2e	<2	<2	1.00	20.1	60.56	9.51	33.54	8.39	ns	ns
I26	18 Jun 2017	1053	6	<2	<2	<2	1.00	15.6	60.38	3.25	33.46	8.35	ns	ns
I26	18 Jun 2017	1053	9	<2	<2	<2	1.00	12.0	71.38	3.28	33.44	7.77	ns	ns
I26	29 Jun 2017	1224	2	<2	<2	<2	1.00	18.7	71.43	10.83	33.52	8.35	ns	ns
I26	29 Jun 2017	1224	6	<2	<2	<2	1.00	17.4	71.39	7.24	33.44	8.33	ns	ns
I26	29 Jun 2017	1224	9	<2	<2	<2	1.00	13.3	66.05	6.20	33.47	8.00	ns	ns
I32	03 Jun 2017	1145	2	<20	2e	6e	0.10	17.7	54.25	9.14	33.51	8.47	ns	ns
I32	03 Jun 2017	1145	6	20e	4e	<2	0.20	15.5	78.19	5.88	33.49	8.11	ns	ns
I32	03 Jun 2017	1145	9	20e	4e	2e	0.20	13.6	55.29	4.71	33.48	7.89	ns	ns
I32	07 Jun 2017	1140	2	<2	<2	4e	1.00	17.8	77.68	8.84	33.51	8.25	ns	ns
I32	07 Jun 2017	1140	6	<2	<2	<2	1.00	17.7	75.05	8.46	33.51	8.25	ns	ns
I32	07 Jun 2017	1140	9	20e	<2	<2	0.10	17.6	75.09	7.34	33.50	8.24	ns	ns
I32	13 Jun 2017	1142	2	<20	<2	<2	0.10	16.4	56.65	7.58	33.51	8.16	ns	ns
I32	13 Jun 2017	1142	6	<20	<2	<2	0.10	13.9	26.57	3.68	33.46	7.91	ns	ns
I32	13 Jun 2017	1142	9	<20	<2	2e	0.10	12.6	23.69	4.07	33.49	7.81	ns	ns
I32	18 Jun 2017	1105	2	<2	<2	<2	1.00	20.4	58.19	8.07	33.55	8.42	ns	ns
I32	18 Jun 2017	1105	6	4e	<2	<2	0.50	15.0	46.58	0.82	33.48	8.18	ns	ns
I32	18 Jun 2017	1105	9	<2	<2	<2	1.00	12.3	32.50	1.09	33.45	7.56	ns	ns
I32	29 Jun 2017	1236	2	<2	<2	<2	1.00	18.8	69.41	10.17	33.52	8.33	ns	ns
I32	29 Jun 2017	1236	6	2e	<2	2e	1.00	18.5	67.79	9.16	33.51	8.33	ns	ns
I32	29 Jun 2017	1236	9	<20	<2	<2	0.10	13.5	42.77	7.35	33.47	8.20	ns	ns
I39	03 Jun 2017	1029	2	<20	<2	<2	0.10	17.5	52.54	9.39	33.49	8.42	ns	ns

Station	Date	Time	Depth	Total	Fecal	Enter	F:T	Temp	XMS	DO	Sal	pH	OG	SUSO
I39	03 Jun 2017	1029	12	<20	<2	4e	0.10	12.3	78.92	3.55	33.51	7.78	ns	ns
I39	03 Jun 2017	1029	18	<20	<2	2e	0.10	11.4	79.17	2.67	33.52	7.65	ns	ns
I39	07 Jun 2017	1018	2	<2	<2	<2	1.00	18.0	89.12	8.52	33.51	8.20	ns	ns
I39	07 Jun 2017	1018	12	<2	<2	<2	1.00	17.8	87.41	10.13	33.50	8.22	ns	ns
I39	07 Jun 2017	1018	18	<2	<2	2e	1.00	14.2	76.86	7.38	33.50	8.06	ns	ns
I39	13 Jun 2017	136	2	<2	2e	<2	1.00	17.9	74.13	9.63	33.52	8.33	ns	ns
I39	13 Jun 2017	136	12	<2	<2	<2	1.00	12.4	72.70	4.22	33.49	7.84	ns	ns
I39	13 Jun 2017	136	18	<2	<2	2e	1.00	11.8	78.84	4.26	33.51	7.81	ns	ns
I39	18 Jun 2017	959	2	<2	<2	<2	1.00	20.1	68.52	10.23	33.55	8.40	ns	ns
I39	18 Jun 2017	959	12	<2	<2	<2	1.00	11.7	61.59	2.99	33.45	7.79	ns	ns
I39	18 Jun 2017	959	18	<2	2e	<2	1.00	11.4	78.98	3.67	33.48	7.78	ns	ns
I39	29 Jun 2017	1121	2	8e	<2	2e	0.25	18.0	77.87	11.79	33.52	8.40	ns	ns
I39	29 Jun 2017	1121	12	8e	<2	<2	0.25	12.2	73.82	3.30	33.46	7.87	ns	ns
I39	29 Jun 2017	1121	18	<2	<2	<2	1.00	11.6	75.12	3.96	33.49	7.75	ns	ns
I40	03 Jun 2017	1105	2	<20	2e	<2	0.10	16.7	57.63	6.42	33.48	8.28	ns	ns
I40	03 Jun 2017	1105	6	<20	<2	4e	0.10	13.6	73.31	4.52	33.53	7.94	ns	ns
I40	03 Jun 2017	1105	9	20e	2e	6e	0.10	13.1	68.96	5.04	33.52	7.82	ns	ns
I40	07 Jun 2017	1057	2	<2	2e	<2	1.00	17.7	59.99	9.13	33.50	8.25	ns	ns
I40	07 Jun 2017	1057	6	<2	<2	<2	1.00	17.7	74.98	8.78	33.50	8.25	ns	ns
I40	07 Jun 2017	1057	9	40	8e	2e	0.20	17.4	75.60	8.25	33.48	8.22	ns	ns
I40	13 Jun 2017	1106	2	<20	<2	<2	0.10	17.0	62.43	7.94	33.52	8.22	ns	ns
I40	13 Jun 2017	1106	6	<20	<2	<2	0.10	14.4	58.64	7.68	33.48	8.09	ns	ns
I40	13 Jun 2017	1106	9	<2	<2	<2	1.00	13.5	63.24	5.80	33.48	8.00	ns	ns
I40	18 Jun 2017	1029	2	<2	<2	<2	1.00	20.0	59.45	8.42	33.52	8.34	ns	ns
I40	18 Jun 2017	1029	6	<2	<2	<2	1.00	13.6	65.68	2.60	33.43	8.26	ns	ns
I40	18 Jun 2017	1029	9	<2	<2	<2	1.00	12.2	68.94	3.06	33.42	7.76	ns	ns
I40	29 Jun 2017	1157	2	<2	<2	<2	1.00	18.6	73.17	9.61	33.50	8.31	ns	ns
I40	29 Jun 2017	1157	6	<20	<2	<2	0.10	14.4	45.56	9.68	33.45	8.24	ns	ns
I40	29 Jun 2017	1157	9	<20	<2	<2	0.10	13.0	66.55	5.49	33.43	8.06	ns	ns

ns = not sampled

ND = no data

Table 3.9

Summary of visual observations made during the month for each SBOO kelp station by sample date.

Station	Date	Parameter	Value
I19	03 Jun 2017	Depth (m)	11
I19	03 Jun 2017	Arrive Time	1052
I19	03 Jun 2017	Depart Time	1057
I19	03 Jun 2017	Air Temp (C)	16
I19	03 Jun 2017	Weather	Fog
I19	03 Jun 2017	Visibility (mi)	1
I19	03 Jun 2017	Wind Speed (kts)	4
I19	03 Jun 2017	Wind Dir	S
I19	03 Jun 2017	Water Color	Green
I19	03 Jun 2017	Wave Ht Low (ft)	3
I19	03 Jun 2017	Wave Period (sec)	9
I19	03 Jun 2017	Sea State	Calm
I19	03 Jun 2017	High Tide (ft)	3.7
I19	03 Jun 2017	High Tide Time	550
I19	03 Jun 2017	Low Tide (ft)	0.8
I19	03 Jun 2017	Low Tide Time	1200
I19	03 Jun 2017	Comments	
I19	07 Jun 2017	Depth (m)	11
I19	07 Jun 2017	Arrive Time	1043
I19	07 Jun 2017	Depart Time	1050
I19	07 Jun 2017	Air Temp (C)	16
I19	07 Jun 2017	Weather	Overcast
I19	07 Jun 2017	Visibility (mi)	10
I19	07 Jun 2017	Wind Speed (kts)	7
I19	07 Jun 2017	Wind Dir	N
I19	07 Jun 2017	Water Color	Green
I19	07 Jun 2017	Wave Ht Low (ft)	4
I19	07 Jun 2017	Wave Period (sec)	13
I19	07 Jun 2017	Sea State	Light chop
I19	07 Jun 2017	High Tide (ft)	3.7
I19	07 Jun 2017	High Tide Time	911
I19	07 Jun 2017	Low Tide (ft)	1.6
I19	07 Jun 2017	Low Tide Time	1424
I19	07 Jun 2017	Comments	
I19	13 Jun 2017	Depth (m)	11
I19	13 Jun 2017	Arrive Time	1055
I19	13 Jun 2017	Depart Time	1057
I19	13 Jun 2017	Air Temp (C)	17
I19	13 Jun 2017	Weather	Haze
I19	13 Jun 2017	Visibility (mi)	7
I19	13 Jun 2017	Wind Speed (kts)	6
I19	13 Jun 2017	Wind Dir	E
I19	13 Jun 2017	Water Color	Green
I19	13 Jun 2017	Wave Ht Low (ft)	3
I19	13 Jun 2017	Wave Period (sec)	9
I19	13 Jun 2017	Sea State	Light chop
I19	13 Jun 2017	High Tide (ft)	3.5
I19	13 Jun 2017	High Tide Time	1311
I19	13 Jun 2017	Low Tide (ft)	-0.1

Station	Date	Parameter	Value
I19	13 Jun 2017	Low Tide Time	636
I19	13 Jun 2017	Comments	
I19	18 Jun 2017	Depth (m)	10
I19	18 Jun 2017	Arrive Time	1019
I19	18 Jun 2017	Depart Time	1023
I19	18 Jun 2017	Air Temp (C)	17
I19	18 Jun 2017	Weather	Fog
I19	18 Jun 2017	Visibility (mi)	6
I19	18 Jun 2017	Wind Speed (kts)	7
I19	18 Jun 2017	Wind Dir	NE
I19	18 Jun 2017	Water Color	Green
I19	18 Jun 2017	Wave Ht Low (ft)	4
I19	18 Jun 2017	Wave Period (sec)	13
I19	18 Jun 2017	Sea State	Light chop
I19	18 Jun 2017	High Tide (ft)	3.5
I19	18 Jun 2017	High Tide Time	427
I19	18 Jun 2017	Low Tide (ft)	0.9
I19	18 Jun 2017	Low Tide Time	1047
I19	18 Jun 2017	Comments	
I19	29 Jun 2017	Depth (m)	11
I19	29 Jun 2017	Arrive Time	1145
I19	29 Jun 2017	Depart Time	1149
I19	29 Jun 2017	Air Temp (C)	17
I19	29 Jun 2017	Weather	Partly Cloudy
I19	29 Jun 2017	Visibility (mi)	10
I19	29 Jun 2017	Wind Speed (kts)	9
I19	29 Jun 2017	Wind Dir	S
I19	29 Jun 2017	Water Color	Bluish-Green
I19	29 Jun 2017	Wave Ht Low (ft)	4
I19	29 Jun 2017	Wave Period (sec)	16
I19	29 Jun 2017	Sea State	Light chop
I19	29 Jun 2017	High Tide (ft)	4.4
I19	29 Jun 2017	High Tide Time	1511
I19	29 Jun 2017	Low Tide (ft)	0.1
I19	29 Jun 2017	Low Tide Time	823
I19	29 Jun 2017	Comments	
I24	03 Jun 2017	Depth (m)	10
I24	03 Jun 2017	Arrive Time	1115
I24	03 Jun 2017	Depart Time	1118
I24	03 Jun 2017	Air Temp (C)	16
I24	03 Jun 2017	Weather	Fog
I24	03 Jun 2017	Visibility (mi)	1
I24	03 Jun 2017	Wind Speed (kts)	5
I24	03 Jun 2017	Wind Dir	S
I24	03 Jun 2017	Water Color	Brownish-Green
I24	03 Jun 2017	Wave Ht Low (ft)	3
I24	03 Jun 2017	Wave Period (sec)	9
I24	03 Jun 2017	Sea State	Calm
I24	03 Jun 2017	High Tide (ft)	3.7
I24	03 Jun 2017	High Tide Time	550
I24	03 Jun 2017	Low Tide (ft)	0.8
I24	03 Jun 2017	Low Tide Time	1200

Station	Date	Parameter	Value
I24	03 Jun 2017	Comments	
I24	07 Jun 2017	Depth (m)	9
I24	07 Jun 2017	Arrive Time	1107
I24	07 Jun 2017	Depart Time	1114
I24	07 Jun 2017	Air Temp (C)	16
I24	07 Jun 2017	Weather	Overcast
I24	07 Jun 2017	Visibility (mi)	10
I24	07 Jun 2017	Wind Speed (kts)	10
I24	07 Jun 2017	Wind Dir	S
I24	07 Jun 2017	Water Color	Green
I24	07 Jun 2017	Wave Ht Low (ft)	4
I24	07 Jun 2017	Wave Period (sec)	13
I24	07 Jun 2017	Sea State	Light chop
I24	07 Jun 2017	High Tide (ft)	3.7
I24	07 Jun 2017	High Tide Time	911
I24	07 Jun 2017	Low Tide (ft)	1.6
I24	07 Jun 2017	Low Tide Time	1424
I24	07 Jun 2017	Comments	
I24	13 Jun 2017	Depth (m)	11
I24	13 Jun 2017	Arrive Time	1114
I24	13 Jun 2017	Depart Time	1117
I24	13 Jun 2017	Air Temp (C)	17
I24	13 Jun 2017	Weather	Haze
I24	13 Jun 2017	Visibility (mi)	7
I24	13 Jun 2017	Wind Speed (kts)	8
I24	13 Jun 2017	Wind Dir	S
I24	13 Jun 2017	Water Color	Green
I24	13 Jun 2017	Wave Ht Low (ft)	3
I24	13 Jun 2017	Wave Period (sec)	9
I24	13 Jun 2017	Sea State	Light chop
I24	13 Jun 2017	High Tide (ft)	3.5
I24	13 Jun 2017	High Tide Time	1311
I24	13 Jun 2017	Low Tide (ft)	-0.1
I24	13 Jun 2017	Low Tide Time	636
I24	13 Jun 2017	Comments	
I24	18 Jun 2017	Depth (m)	10
I24	18 Jun 2017	Arrive Time	1037
I24	18 Jun 2017	Depart Time	1041
I24	18 Jun 2017	Air Temp (C)	17
I24	18 Jun 2017	Weather	Fog
I24	18 Jun 2017	Visibility (mi)	6
I24	18 Jun 2017	Wind Speed (kts)	7
I24	18 Jun 2017	Wind Dir	SE
I24	18 Jun 2017	Water Color	Green
I24	18 Jun 2017	Wave Ht Low (ft)	4
I24	18 Jun 2017	Wave Period (sec)	13
I24	18 Jun 2017	Sea State	Light chop
I24	18 Jun 2017	High Tide (ft)	3.5
I24	18 Jun 2017	High Tide Time	427
I24	18 Jun 2017	Low Tide (ft)	0.9
I24	18 Jun 2017	Low Tide Time	1047
I24	18 Jun 2017	Comments	

Station	Date	Parameter	Value
I24	29 Jun 2017	Depth (m)	10
I24	29 Jun 2017	Arrive Time	1206
I24	29 Jun 2017	Depart Time	1210
I24	29 Jun 2017	Air Temp (C)	17
I24	29 Jun 2017	Weather	Partly Cloudy
I24	29 Jun 2017	Visibility (mi)	10
I24	29 Jun 2017	Wind Speed (kts)	10
I24	29 Jun 2017	Wind Dir	SE
I24	29 Jun 2017	Water Color	Bluish-Green
I24	29 Jun 2017	Wave Ht Low (ft)	4
I24	29 Jun 2017	Wave Period (sec)	16
I24	29 Jun 2017	Sea State	Light chop
I24	29 Jun 2017	High Tide (ft)	4.4
I24	29 Jun 2017	High Tide Time	1511
I24	29 Jun 2017	Low Tide (ft)	0.1
I24	29 Jun 2017	Low Tide Time	823
I24	29 Jun 2017	Comments	Kelp debris
I25	03 Jun 2017	Depth (m)	10
I25	03 Jun 2017	Arrive Time	1121
I25	03 Jun 2017	Depart Time	1126
I25	03 Jun 2017	Air Temp (C)	16
I25	03 Jun 2017	Weather	Fog
I25	03 Jun 2017	Visibility (mi)	1
I25	03 Jun 2017	Wind Speed (kts)	8
I25	03 Jun 2017	Wind Dir	E
I25	03 Jun 2017	Water Color	Brownish-Green
I25	03 Jun 2017	Wave Ht Low (ft)	3
I25	03 Jun 2017	Wave Period (sec)	9
I25	03 Jun 2017	Sea State	Calm
I25	03 Jun 2017	High Tide (ft)	3.7
I25	03 Jun 2017	High Tide Time	550
I25	03 Jun 2017	Low Tide (ft)	0.8
I25	03 Jun 2017	Low Tide Time	1200
I25	03 Jun 2017	Comments	
I25	07 Jun 2017	Depth (m)	9
I25	07 Jun 2017	Arrive Time	1116
I25	07 Jun 2017	Depart Time	1120
I25	07 Jun 2017	Air Temp (C)	16
I25	07 Jun 2017	Weather	Overcast
I25	07 Jun 2017	Visibility (mi)	10
I25	07 Jun 2017	Wind Speed (kts)	10
I25	07 Jun 2017	Wind Dir	W
I25	07 Jun 2017	Water Color	Green
I25	07 Jun 2017	Wave Ht Low (ft)	4
I25	07 Jun 2017	Wave Period (sec)	13
I25	07 Jun 2017	Sea State	Light chop
I25	07 Jun 2017	High Tide (ft)	3.7
I25	07 Jun 2017	High Tide Time	911
I25	07 Jun 2017	Low Tide (ft)	1.6
I25	07 Jun 2017	Low Tide Time	1424
I25	07 Jun 2017	Comments	

Station	Date	Parameter	Value
I25	13 Jun 2017	Depth (m)	9
I25	13 Jun 2017	Arrive Time	1121
I25	13 Jun 2017	Depart Time	1124
I25	13 Jun 2017	Air Temp (C)	17
I25	13 Jun 2017	Weather	Haze
I25	13 Jun 2017	Visibility (mi)	7
I25	13 Jun 2017	Wind Speed (kts)	7
I25	13 Jun 2017	Wind Dir	SW
I25	13 Jun 2017	Water Color	Green
I25	13 Jun 2017	Wave Ht Low (ft)	3
I25	13 Jun 2017	Wave Period (sec)	9
I25	13 Jun 2017	Sea State	Light chop
I25	13 Jun 2017	High Tide (ft)	3.5
I25	13 Jun 2017	High Tide Time	1311
I25	13 Jun 2017	Low Tide (ft)	-0.1
I25	13 Jun 2017	Low Tide Time	636
I25	13 Jun 2017	Comments	
I25	18 Jun 2017	Depth (m)	9
I25	18 Jun 2017	Arrive Time	1044
I25	18 Jun 2017	Depart Time	1048
I25	18 Jun 2017	Air Temp (C)	17
I25	18 Jun 2017	Weather	Fog
I25	18 Jun 2017	Visibility (mi)	6
I25	18 Jun 2017	Wind Speed (kts)	7
I25	18 Jun 2017	Wind Dir	W
I25	18 Jun 2017	Water Color	Green
I25	18 Jun 2017	Wave Ht Low (ft)	4
I25	18 Jun 2017	Wave Period (sec)	13
I25	18 Jun 2017	Sea State	Light chop
I25	18 Jun 2017	High Tide (ft)	3.5
I25	18 Jun 2017	High Tide Time	427
I25	18 Jun 2017	Low Tide (ft)	0.9
I25	18 Jun 2017	Low Tide Time	1047
I25	18 Jun 2017	Comments	
I25	29 Jun 2017	Depth (m)	8
I25	29 Jun 2017	Arrive Time	1214
I25	29 Jun 2017	Depart Time	1219
I25	29 Jun 2017	Air Temp (C)	17
I25	29 Jun 2017	Weather	Partly Cloudy
I25	29 Jun 2017	Visibility (mi)	10
I25	29 Jun 2017	Wind Speed (kts)	9
I25	29 Jun 2017	Wind Dir	SW
I25	29 Jun 2017	Water Color	Green
I25	29 Jun 2017	Wave Ht Low (ft)	4
I25	29 Jun 2017	Wave Period (sec)	16
I25	29 Jun 2017	Sea State	Light chop
I25	29 Jun 2017	High Tide (ft)	4.4
I25	29 Jun 2017	High Tide Time	1511
I25	29 Jun 2017	Low Tide (ft)	0.1
I25	29 Jun 2017	Low Tide Time	823
I25	29 Jun 2017	Comments	
I26	03 Jun 2017	Depth (m)	9

Station	Date	Parameter	Value
I26	03 Jun 2017	Arrive Time	1132
I26	03 Jun 2017	Depart Time	1135
I26	03 Jun 2017	Air Temp (C)	17
I26	03 Jun 2017	Weather	Fog
I26	03 Jun 2017	Visibility (mi)	1
I26	03 Jun 2017	Wind Speed (kts)	7
I26	03 Jun 2017	Wind Dir	W
I26	03 Jun 2017	Water Color	Brownish-Green
I26	03 Jun 2017	Wave Ht Low (ft)	3
I26	03 Jun 2017	Wave Period (sec)	9
I26	03 Jun 2017	Sea State	Calm
I26	03 Jun 2017	High Tide (ft)	3.7
I26	03 Jun 2017	High Tide Time	550
I26	03 Jun 2017	Low Tide (ft)	0.8
I26	03 Jun 2017	Low Tide Time	1200
I26	03 Jun 2017	Comments	
I26	07 Jun 2017	Depth (m)	9
I26	07 Jun 2017	Arrive Time	1126
I26	07 Jun 2017	Depart Time	1130
I26	07 Jun 2017	Air Temp (C)	16
I26	07 Jun 2017	Weather	Overcast
I26	07 Jun 2017	Visibility (mi)	10
I26	07 Jun 2017	Wind Speed (kts)	6
I26	07 Jun 2017	Wind Dir	W
I26	07 Jun 2017	Water Color	Green
I26	07 Jun 2017	Wave Ht Low (ft)	4
I26	07 Jun 2017	Wave Period (sec)	13
I26	07 Jun 2017	Sea State	Light chop
I26	07 Jun 2017	High Tide (ft)	3.7
I26	07 Jun 2017	High Tide Time	911
I26	07 Jun 2017	Low Tide (ft)	1.6
I26	07 Jun 2017	Low Tide Time	1424
I26	07 Jun 2017	Comments	
I26	13 Jun 2017	Depth (m)	9
I26	13 Jun 2017	Arrive Time	1131
I26	13 Jun 2017	Depart Time	1133
I26	13 Jun 2017	Air Temp (C)	17
I26	13 Jun 2017	Weather	Haze
I26	13 Jun 2017	Visibility (mi)	7
I26	13 Jun 2017	Wind Speed (kts)	8
I26	13 Jun 2017	Wind Dir	S
I26	13 Jun 2017	Water Color	Green
I26	13 Jun 2017	Wave Ht Low (ft)	3
I26	13 Jun 2017	Wave Period (sec)	9
I26	13 Jun 2017	Sea State	Light chop
I26	13 Jun 2017	High Tide (ft)	3.5
I26	13 Jun 2017	High Tide Time	1311
I26	13 Jun 2017	Low Tide (ft)	-0.1
I26	13 Jun 2017	Low Tide Time	636
I26	13 Jun 2017	Comments	
I26	18 Jun 2017	Depth (m)	9
I26	18 Jun 2017	Arrive Time	1053

Station	Date	Parameter	Value
I26	18 Jun 2017	Depart Time	1057
I26	18 Jun 2017	Air Temp (C)	17
I26	18 Jun 2017	Weather	Fog
I26	18 Jun 2017	Visibility (mi)	6
I26	18 Jun 2017	Wind Speed (kts)	7
I26	18 Jun 2017	Wind Dir	E
I26	18 Jun 2017	Water Color	Green
I26	18 Jun 2017	Wave Ht Low (ft)	4
I26	18 Jun 2017	Wave Period (sec)	13
I26	18 Jun 2017	Sea State	Light chop
I26	18 Jun 2017	High Tide (ft)	3.5
I26	18 Jun 2017	High Tide Time	427
I26	18 Jun 2017	Low Tide (ft)	0.9
I26	18 Jun 2017	Low Tide Time	1047
I26	18 Jun 2017	Comments	
I26	29 Jun 2017	Depth (m)	9
I26	29 Jun 2017	Arrive Time	1224
I26	29 Jun 2017	Depart Time	1229
I26	29 Jun 2017	Air Temp (C)	17
I26	29 Jun 2017	Weather	Partly Cloudy
I26	29 Jun 2017	Visibility (mi)	10
I26	29 Jun 2017	Wind Speed (kts)	9
I26	29 Jun 2017	Wind Dir	SW
I26	29 Jun 2017	Water Color	Green
I26	29 Jun 2017	Wave Ht Low (ft)	4
I26	29 Jun 2017	Wave Period (sec)	16
I26	29 Jun 2017	Sea State	Light chop
I26	29 Jun 2017	High Tide (ft)	4.4
I26	29 Jun 2017	High Tide Time	1511
I26	29 Jun 2017	Low Tide (ft)	0.1
I26	29 Jun 2017	Low Tide Time	823
I26	29 Jun 2017	Comments	
I32	03 Jun 2017	Depth (m)	9
I32	03 Jun 2017	Arrive Time	1145
I32	03 Jun 2017	Depart Time	1149
I32	03 Jun 2017	Air Temp (C)	17
I32	03 Jun 2017	Weather	Fog
I32	03 Jun 2017	Visibility (mi)	1
I32	03 Jun 2017	Wind Speed (kts)	5
I32	03 Jun 2017	Wind Dir	SW
I32	03 Jun 2017	Water Color	Reddish-Brown
I32	03 Jun 2017	Wave Ht Low (ft)	3
I32	03 Jun 2017	Wave Period (sec)	9
I32	03 Jun 2017	Sea State	Calm
I32	03 Jun 2017	High Tide (ft)	3.7
I32	03 Jun 2017	High Tide Time	550
I32	03 Jun 2017	Low Tide (ft)	0.8
I32	03 Jun 2017	Low Tide Time	1200
I32	03 Jun 2017	Comments	
I32	07 Jun 2017	Depth (m)	10
I32	07 Jun 2017	Arrive Time	1140
I32	07 Jun 2017	Depart Time	1145

Station	Date	Parameter	Value
I32	07 Jun 2017	Air Temp (C)	16
I32	07 Jun 2017	Weather	Overcast
I32	07 Jun 2017	Visibility (mi)	10
I32	07 Jun 2017	Wind Speed (kts)	5
I32	07 Jun 2017	Wind Dir	SW
I32	07 Jun 2017	Water Color	Green
I32	07 Jun 2017	Wave Ht Low (ft)	4
I32	07 Jun 2017	Wave Period (sec)	13
I32	07 Jun 2017	Sea State	Light chop
I32	07 Jun 2017	High Tide (ft)	3.7
I32	07 Jun 2017	High Tide Time	911
I32	07 Jun 2017	Low Tide (ft)	1.6
I32	07 Jun 2017	Low Tide Time	1424
I32	07 Jun 2017	Comments	
I32	13 Jun 2017	Depth (m)	9
I32	13 Jun 2017	Arrive Time	1142
I32	13 Jun 2017	Depart Time	1146
I32	13 Jun 2017	Air Temp (C)	17
I32	13 Jun 2017	Weather	Haze
I32	13 Jun 2017	Visibility (mi)	7
I32	13 Jun 2017	Wind Speed (kts)	9
I32	13 Jun 2017	Wind Dir	NW
I32	13 Jun 2017	Water Color	Green
I32	13 Jun 2017	Wave Ht Low (ft)	3
I32	13 Jun 2017	Wave Period (sec)	9
I32	13 Jun 2017	Sea State	Light chop
I32	13 Jun 2017	High Tide (ft)	3.5
I32	13 Jun 2017	High Tide Time	1311
I32	13 Jun 2017	Low Tide (ft)	-0.1
I32	13 Jun 2017	Low Tide Time	636
I32	13 Jun 2017	Comments	
I32	18 Jun 2017	Depth (m)	10
I32	18 Jun 2017	Arrive Time	1105
I32	18 Jun 2017	Depart Time	1110
I32	18 Jun 2017	Air Temp (C)	18
I32	18 Jun 2017	Weather	Fog
I32	18 Jun 2017	Visibility (mi)	6
I32	18 Jun 2017	Wind Speed (kts)	7
I32	18 Jun 2017	Wind Dir	NE
I32	18 Jun 2017	Water Color	Green
I32	18 Jun 2017	Wave Ht Low (ft)	4
I32	18 Jun 2017	Wave Period (sec)	13
I32	18 Jun 2017	Sea State	Light chop
I32	18 Jun 2017	High Tide (ft)	3.5
I32	18 Jun 2017	High Tide Time	427
I32	18 Jun 2017	Low Tide (ft)	0.9
I32	18 Jun 2017	Low Tide Time	1047
I32	18 Jun 2017	Comments	
I32	29 Jun 2017	Depth (m)	10
I32	29 Jun 2017	Arrive Time	1236
I32	29 Jun 2017	Depart Time	1242
I32	29 Jun 2017	Air Temp (C)	17

Station	Date	Parameter	Value
I32	29 Jun 2017	Weather	Partly Cloudy
I32	29 Jun 2017	Visibility (mi)	10
I32	29 Jun 2017	Wind Speed (kts)	8
I32	29 Jun 2017	Wind Dir	N
I32	29 Jun 2017	Water Color	Green
I32	29 Jun 2017	Wave Ht Low (ft)	4
I32	29 Jun 2017	Wave Period (sec)	16
I32	29 Jun 2017	Sea State	Light chop
I32	29 Jun 2017	High Tide (ft)	4.4
I32	29 Jun 2017	High Tide Time	1511
I32	29 Jun 2017	Low Tide (ft)	0.1
I32	29 Jun 2017	Low Tide Time	823
I32	29 Jun 2017	Comments	
I39	03 Jun 2017	Depth (m)	18
I39	03 Jun 2017	Arrive Time	1029
I39	03 Jun 2017	Depart Time	1034
I39	03 Jun 2017	Air Temp (C)	16
I39	03 Jun 2017	Weather	Fog
I39	03 Jun 2017	Visibility (mi)	1
I39	03 Jun 2017	Wind Speed (kts)	8
I39	03 Jun 2017	Wind Dir	N
I39	03 Jun 2017	Water Color	Reddish-Brown
I39	03 Jun 2017	Wave Ht Low (ft)	3
I39	03 Jun 2017	Wave Period (sec)	9
I39	03 Jun 2017	Sea State	Calm
I39	03 Jun 2017	High Tide (ft)	3.7
I39	03 Jun 2017	High Tide Time	550
I39	03 Jun 2017	Low Tide (ft)	0.8
I39	03 Jun 2017	Low Tide Time	1200
I39	03 Jun 2017	Comments	Sewage-like odor detected
I39	07 Jun 2017	Depth (m)	18
I39	07 Jun 2017	Arrive Time	1018
I39	07 Jun 2017	Depart Time	1024
I39	07 Jun 2017	Air Temp (C)	16
I39	07 Jun 2017	Weather	Overcast
I39	07 Jun 2017	Visibility (mi)	8
I39	07 Jun 2017	Wind Speed (kts)	7
I39	07 Jun 2017	Wind Dir	E
I39	07 Jun 2017	Water Color	Blue
I39	07 Jun 2017	Wave Ht Low (ft)	4
I39	07 Jun 2017	Wave Period (sec)	13
I39	07 Jun 2017	Sea State	Light chop
I39	07 Jun 2017	High Tide (ft)	3.7
I39	07 Jun 2017	High Tide Time	911
I39	07 Jun 2017	Low Tide (ft)	1.6
I39	07 Jun 2017	Low Tide Time	1424
I39	07 Jun 2017	Comments	
I39	13 Jun 2017	Depth (m)	18
I39	13 Jun 2017	Arrive Time	1036
I39	13 Jun 2017	Depart Time	1039
I39	13 Jun 2017	Air Temp (C)	17
I39	13 Jun 2017	Weather	Partly Cloudy

Station	Date	Parameter	Value
I39	13 Jun 2017	Visibility (mi)	7
I39	13 Jun 2017	Wind Speed (kts)	3
I39	13 Jun 2017	Wind Dir	NW
I39	13 Jun 2017	Water Color	Greenish-Blue
I39	13 Jun 2017	Wave Ht Low (ft)	4
I39	13 Jun 2017	Wave Period (sec)	7
I39	13 Jun 2017	Sea State	Light chop
I39	13 Jun 2017	High Tide (ft)	3.5
I39	13 Jun 2017	High Tide Time	1311
I39	13 Jun 2017	Low Tide (ft)	-0.1
I39	13 Jun 2017	Low Tide Time	636
I39	13 Jun 2017	Comments	
I39	18 Jun 2017	Depth (m)	18
I39	18 Jun 2017	Arrive Time	959
I39	18 Jun 2017	Depart Time	1003
I39	18 Jun 2017	Air Temp (C)	17
I39	18 Jun 2017	Weather	Overcast
I39	18 Jun 2017	Visibility (mi)	10
I39	18 Jun 2017	Wind Speed (kts)	6
I39	18 Jun 2017	Wind Dir	NE
I39	18 Jun 2017	Water Color	Bluish-Green
I39	18 Jun 2017	Wave Ht Low (ft)	4
I39	18 Jun 2017	Wave Period (sec)	13
I39	18 Jun 2017	Sea State	Wind ripples
I39	18 Jun 2017	High Tide (ft)	3.5
I39	18 Jun 2017	High Tide Time	427
I39	18 Jun 2017	Low Tide (ft)	0.9
I39	18 Jun 2017	Low Tide Time	1047
I39	18 Jun 2017	Comments	Kelp debris
I39	29 Jun 2017	Depth (m)	18
I39	29 Jun 2017	Arrive Time	1121
I39	29 Jun 2017	Depart Time	1126
I39	29 Jun 2017	Air Temp (C)	17
I39	29 Jun 2017	Weather	Partly Cloudy
I39	29 Jun 2017	Visibility (mi)	10
I39	29 Jun 2017	Wind Speed (kts)	9
I39	29 Jun 2017	Wind Dir	NE
I39	29 Jun 2017	Water Color	Bluish-Green
I39	29 Jun 2017	Wave Ht Low (ft)	4
I39	29 Jun 2017	Wave Period (sec)	16
I39	29 Jun 2017	Sea State	Wind ripples
I39	29 Jun 2017	High Tide (ft)	4.4
I39	29 Jun 2017	High Tide Time	1511
I39	29 Jun 2017	Low Tide (ft)	0.1
I39	29 Jun 2017	Low Tide Time	823
I39	29 Jun 2017	Comments	
I40	03 Jun 2017	Depth (m)	9
I40	03 Jun 2017	Arrive Time	1105
I40	03 Jun 2017	Depart Time	1109
I40	03 Jun 2017	Air Temp (C)	16
I40	03 Jun 2017	Weather	Fog
I40	03 Jun 2017	Visibility (mi)	1

Station	Date	Parameter	Value
I40	03 Jun 2017	Wind Speed (kts)	8
I40	03 Jun 2017	Wind Dir	SE
I40	03 Jun 2017	Water Color	Reddish-Brown
I40	03 Jun 2017	Wave Ht Low (ft)	3
I40	03 Jun 2017	Wave Period (sec)	9
I40	03 Jun 2017	Sea State	Calm
I40	03 Jun 2017	High Tide (ft)	3.7
I40	03 Jun 2017	High Tide Time	550
I40	03 Jun 2017	Low Tide (ft)	0.8
I40	03 Jun 2017	Low Tide Time	1200
I40	03 Jun 2017	Comments	none
I40	07 Jun 2017	Depth (m)	10
I40	07 Jun 2017	Arrive Time	1057
I40	07 Jun 2017	Depart Time	1102
I40	07 Jun 2017	Air Temp (C)	16
I40	07 Jun 2017	Weather	Overcast
I40	07 Jun 2017	Visibility (mi)	10
I40	07 Jun 2017	Wind Speed (kts)	6
I40	07 Jun 2017	Wind Dir	SW
I40	07 Jun 2017	Water Color	Green
I40	07 Jun 2017	Wave Ht Low (ft)	4
I40	07 Jun 2017	Wave Period (sec)	13
I40	07 Jun 2017	Sea State	Light chop
I40	07 Jun 2017	High Tide (ft)	3.7
I40	07 Jun 2017	High Tide Time	911
I40	07 Jun 2017	Low Tide (ft)	1.6
I40	07 Jun 2017	Low Tide Time	1424
I40	07 Jun 2017	Comments	
I40	13 Jun 2017	Depth (m)	9
I40	13 Jun 2017	Arrive Time	1106
I40	13 Jun 2017	Depart Time	1108
I40	13 Jun 2017	Air Temp (C)	17
I40	13 Jun 2017	Weather	Haze
I40	13 Jun 2017	Visibility (mi)	7
I40	13 Jun 2017	Wind Speed (kts)	9
I40	13 Jun 2017	Wind Dir	SW
I40	13 Jun 2017	Water Color	Greenish-Brown
I40	13 Jun 2017	Wave Ht Low (ft)	3
I40	13 Jun 2017	Wave Period (sec)	9
I40	13 Jun 2017	Sea State	Light chop
I40	13 Jun 2017	High Tide (ft)	3.5
I40	13 Jun 2017	High Tide Time	1311
I40	13 Jun 2017	Low Tide (ft)	-0.1
I40	13 Jun 2017	Low Tide Time	636
I40	13 Jun 2017	Comments	
I40	18 Jun 2017	Depth (m)	10
I40	18 Jun 2017	Arrive Time	1029
I40	18 Jun 2017	Depart Time	1034
I40	18 Jun 2017	Air Temp (C)	17
I40	18 Jun 2017	Weather	Fog
I40	18 Jun 2017	Visibility (mi)	6
I40	18 Jun 2017	Wind Speed (kts)	5

Station	Date	Parameter	Value
I40	18 Jun 2017	Wind Dir	E
I40	18 Jun 2017	Water Color	Green
I40	18 Jun 2017	Wave Ht Low (ft)	4
I40	18 Jun 2017	Wave Period (sec)	13
I40	18 Jun 2017	Sea State	Light chop
I40	18 Jun 2017	High Tide (ft)	3.5
I40	18 Jun 2017	High Tide Time	427
I40	18 Jun 2017	Low Tide (ft)	0.9
I40	18 Jun 2017	Low Tide Time	1047
I40	18 Jun 2017	Comments	
I40	29 Jun 2017	Depth (m)	11
I40	29 Jun 2017	Arrive Time	1157
I40	29 Jun 2017	Depart Time	1202
I40	29 Jun 2017	Air Temp (C)	17
I40	29 Jun 2017	Weather	Partly Cloudy
I40	29 Jun 2017	Visibility (mi)	10
I40	29 Jun 2017	Wind Speed (kts)	8
I40	29 Jun 2017	Wind Dir	S
I40	29 Jun 2017	Water Color	Bluish-Green
I40	29 Jun 2017	Wave Ht Low (ft)	4
I40	29 Jun 2017	Wave Period (sec)	16
I40	29 Jun 2017	Sea State	Light chop
I40	29 Jun 2017	High Tide (ft)	4.4
I40	29 Jun 2017	High Tide Time	1511
I40	29 Jun 2017	Low Tide (ft)	0.1
I40	29 Jun 2017	Low Tide Time	823
I40	29 Jun 2017	Comments	

Table 3.10

Summary of CTD profile data from the SBOO kelp stations for each sample date.

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens ($\sigma\text{-t}$)	Chlor ($\mu\text{g/L}$)
I19	03 Jun 2017	1	15.90	73.12	7.77	33.52	8.2	24.6	2.36
I19	03 Jun 2017	2	15.83	73.14	7.44	33.53	8.2	24.7	4.35
I19	03 Jun 2017	3	15.78	72.66	7.13	33.52	8.2	24.7	4.51
I19	03 Jun 2017	4	15.04	72.08	6.80	33.51	8.1	24.8	3.56
I19	03 Jun 2017	5	14.48	70.68	6.03	33.55	8.1	25.0	2.84
I19	03 Jun 2017	6	14.35	71.83	5.15	33.51	8.1	25.0	2.15
I19	03 Jun 2017	7	13.84	72.21	4.84	33.54	8.0	25.1	1.90
I19	03 Jun 2017	8	13.68	70.52	4.68	33.53	7.9	25.1	1.87
I19	03 Jun 2017	9	13.52	70.99	4.62	33.53	7.9	25.2	1.86
I19	03 Jun 2017	10	13.36	68.03	4.76	33.53	7.9	25.2	1.85
I19	07 Jun 2017	1	17.62	70.74	8.83	33.48	8.2	24.2	5.01
I19	07 Jun 2017	2	17.62	66.74	8.79	33.48	8.2	24.2	5.24
I19	07 Jun 2017	3	17.62	73.32	8.58	33.48	8.2	24.2	4.84
I19	07 Jun 2017	4	17.62	75.40	8.16	33.48	8.2	24.2	4.53
I19	07 Jun 2017	5	17.53	75.32	7.76	33.48	8.2	24.2	4.11
I19	07 Jun 2017	6	17.34	73.67	7.56	33.48	8.2	24.3	3.66
I19	07 Jun 2017	7	17.23	71.53	7.43	33.48	8.2	24.3	3.55
I19	07 Jun 2017	8	17.19	69.27	7.22	33.48	8.2	24.3	3.55
I19	07 Jun 2017	9	16.95	67.87	6.92	33.48	8.2	24.4	3.71
I19	07 Jun 2017	10	16.48	65.65	6.90	33.47	8.1	24.5	3.71
I19	13 Jun 2017	1	17.96	73.62	8.26	33.54	8.3	24.2	2.08
I19	13 Jun 2017	2	17.80	73.60	8.21	33.54	8.3	24.2	5.53
I19	13 Jun 2017	3	17.06	73.33	7.97	33.50	8.3	24.3	8.22
I19	13 Jun 2017	4	16.39	68.56	7.48	33.48	8.2	24.5	9.70
I19	13 Jun 2017	5	16.03	55.79	6.43	33.46	8.2	24.6	11.77
I19	13 Jun 2017	6	15.65	46.05	4.97	33.44	8.2	24.6	12.55
I19	13 Jun 2017	7	14.72	31.30	3.65	33.43	8.1	24.8	10.12
I19	13 Jun 2017	8	13.33	17.42	3.24	33.48	7.9	25.2	7.03
I19	13 Jun 2017	9	12.88	16.11	3.60	33.48	7.8	25.2	6.84
I19	13 Jun 2017	10	12.69	13.36	4.17	33.47	7.8	25.3	7.46
I19	18 Jun 2017	1	19.52	60.72	8.38	33.51	8.3	23.8	8.81
I19	18 Jun 2017	2	19.38	61.69	7.85	33.49	8.3	23.8	9.05
I19	18 Jun 2017	3	18.76	62.06	7.23	33.48	8.2	23.9	9.28
I19	18 Jun 2017	4	18.43	58.44	6.12	33.45	8.2	24.0	9.51
I19	18 Jun 2017	5	17.95	53.92	4.60	33.44	8.2	24.1	8.11
I19	18 Jun 2017	6	15.92	55.80	3.11	33.37	8.2	24.5	6.14
I19	18 Jun 2017	7	13.50	50.81	2.01	33.45	8.0	25.1	5.69
I19	18 Jun 2017	8	12.36	41.48	1.95	33.44	7.9	25.3	5.60
I19	18 Jun 2017	9	11.94	36.43	2.42	33.44	7.8	25.4	5.31
I19	18 Jun 2017	10	11.92	24.24	3.02	33.43	7.7	25.4	5.53
I19	29 Jun 2017	1	18.42	75.04	9.82	33.52	8.3	24.0	1.09
I19	29 Jun 2017	2	18.42	74.72	9.70	33.52	8.3	24.0	1.80
I19	29 Jun 2017	3	18.32	75.05	9.99	33.51	8.3	24.1	6.16
I19	29 Jun 2017	4	17.92	74.71	10.60	33.50	8.3	24.1	13.88
I19	29 Jun 2017	5	16.74	73.38	10.01	33.48	8.3	24.4	15.14
I19	29 Jun 2017	6	15.27	67.85	7.53	33.47	8.3	24.7	11.93
I19	29 Jun 2017	7	13.69	59.93	5.14	33.46	8.2	25.1	9.17

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens ($\sigma\text{-t}$)	Chlor ($\mu\text{g/L}$)
I19	29 Jun 2017	8	12.99	52.75	4.59	33.45	8.1	25.2	7.36
I19	29 Jun 2017	9	12.78	47.14	4.88	33.45	8.0	25.2	6.77
I19	29 Jun 2017	10	12.70	37.44	5.79	33.44	7.9	25.2	8.88
I24	03 Jun 2017	1	17.30	61.55	9.61	33.49	8.4	24.3	12.72
I24	03 Jun 2017	2	17.29	61.51	8.74	33.49	8.4	24.3	12.26
I24	03 Jun 2017	3	16.92	60.68	8.28	33.47	8.3	24.4	6.10
I24	03 Jun 2017	4	16.70	56.59	7.17	33.46	8.3	24.4	3.57
I24	03 Jun 2017	5	15.90	54.92	6.17	33.49	8.2	24.6	2.67
I24	03 Jun 2017	6	14.87	62.86	6.20	33.51	8.1	24.9	2.31
I24	03 Jun 2017	7	14.60	73.70	5.86	33.52	8.1	24.9	1.74
I24	03 Jun 2017	8	14.51	78.14	4.67	33.51	8.0	24.9	1.57
I24	03 Jun 2017	9	13.43	75.75	5.02	33.52	7.9	25.2	2.05
I24	03 Jun 2017	10	13.50	69.54	6.43	33.52	7.9	25.1	2.22
I24	07 Jun 2017	1	17.83	84.00	8.86	33.51	8.2	24.2	1.80
I24	07 Jun 2017	2	17.84	84.06	8.85	33.51	8.2	24.2	2.30
I24	07 Jun 2017	3	17.83	84.13	8.93	33.51	8.2	24.2	2.81
I24	07 Jun 2017	4	17.81	83.96	8.97	33.51	8.2	24.2	3.53
I24	07 Jun 2017	5	17.78	83.53	8.97	33.51	8.2	24.2	3.80
I24	07 Jun 2017	6	17.75	83.09	8.92	33.51	8.2	24.2	3.86
I24	07 Jun 2017	7	17.66	81.46	8.70	33.50	8.2	24.2	3.31
I24	07 Jun 2017	8	17.54	79.79	8.07	33.49	8.2	24.2	2.38
I24	07 Jun 2017	9	17.41	76.61	7.27	33.48	8.2	24.2	2.11
I24	07 Jun 2017	10	16.32	75.37	7.41	33.50	8.2	24.5	1.96
I24	13 Jun 2017	1	18.33	75.83	9.44	33.53	8.3	24.1	1.79
I24	13 Jun 2017	2	18.15	74.23	9.21	33.53	8.3	24.1	3.65
I24	13 Jun 2017	3	17.40	71.76	8.50	33.49	8.3	24.3	10.29
I24	13 Jun 2017	4	16.53	60.40	7.15	33.50	8.3	24.5	19.49
I24	13 Jun 2017	5	15.50	52.70	5.97	33.45	8.2	24.7	12.71
I24	13 Jun 2017	6	14.46	48.12	4.99	33.48	8.1	24.9	5.40
I24	13 Jun 2017	7	13.95	59.02	4.05	33.42	8.0	25.0	3.17
I24	13 Jun 2017	8	12.98	65.77	3.80	33.45	7.9	25.2	2.60
I24	13 Jun 2017	9	12.67	67.80	3.87	33.45	7.9	25.3	2.44
I24	13 Jun 2017	10	12.40	60.97	4.15	33.46	7.8	25.3	2.39
I24	13 Jun 2017	11	12.41	35.56	4.42	33.46	7.8	25.3	2.28
I24	18 Jun 2017	1	20.24	63.50	8.39	33.56	8.4	23.6	6.30
I24	18 Jun 2017	2	20.11	63.43	8.16	33.54	8.4	23.6	5.72
I24	18 Jun 2017	3	19.77	62.34	8.57	33.54	8.3	23.7	7.97
I24	18 Jun 2017	4	19.07	60.07	8.64	33.49	8.3	23.8	9.59
I24	18 Jun 2017	5	17.58	60.19	7.98	33.49	8.3	24.2	9.25
I24	18 Jun 2017	6	16.54	65.92	6.09	33.47	8.3	24.4	6.70
I24	18 Jun 2017	7	15.76	65.21	3.83	33.45	8.2	24.6	3.95
I24	18 Jun 2017	8	14.68	62.61	2.77	33.44	8.1	24.8	3.16
I24	18 Jun 2017	9	12.93	65.41	3.86	33.45	7.9	25.2	5.61
I24	18 Jun 2017	10	12.32	71.98	6.77	33.46	7.8	25.3	6.31
I24	29 Jun 2017	1	18.56	65.92	10.61	33.52	8.3	24.0	1.41
I24	29 Jun 2017	2	18.56	68.44	10.26	33.52	8.3	24.0	3.49
I24	29 Jun 2017	3	18.54	68.91	10.28	33.52	8.3	24.0	12.82
I24	29 Jun 2017	4	18.09	70.66	11.08	33.49	8.3	24.1	21.67
I24	29 Jun 2017	5	17.09	70.28	12.02	33.45	8.3	24.3	22.88
I24	29 Jun 2017	6	15.36	65.26	11.67	33.44	8.3	24.7	18.23

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens ($\sigma\text{-t}$)	Chlor ($\mu\text{g/L}$)
I24	29 Jun 2017	7	14.52	51.06	9.03	33.46	8.3	24.9	10.56
I24	29 Jun 2017	8	13.95	47.42	5.51	33.42	8.3	25.0	6.24
I24	29 Jun 2017	9	13.03	52.75	4.90	33.43	8.2	25.2	7.59
I24	29 Jun 2017	10	12.74	61.23	6.89	33.46	8.0	25.2	9.36
I25	03 Jun 2017	1	17.54	65.93	10.09	33.49	8.4	24.2	10.62
I25	03 Jun 2017	2	17.47	65.52	8.65	33.49	8.4	24.2	12.93
I25	03 Jun 2017	3	16.98	65.05	7.48	33.47	8.4	24.3	6.91
I25	03 Jun 2017	4	16.28	58.23	7.43	33.49	8.3	24.5	4.84
I25	03 Jun 2017	5	15.71	60.39	7.02	33.52	8.2	24.7	2.87
I25	03 Jun 2017	6	15.60	75.81	6.06	33.49	8.1	24.7	1.94
I25	03 Jun 2017	7	14.81	78.14	5.31	33.51	8.1	24.9	1.65
I25	03 Jun 2017	8	13.93	77.54	5.80	33.52	8.0	25.1	2.00
I25	03 Jun 2017	9	13.96	74.75	6.70	33.51	7.9	25.0	2.05
I25	07 Jun 2017	1	17.86	83.35	8.90	33.51	8.2	24.2	1.39
I25	07 Jun 2017	2	17.86	84.43	8.93	33.51	8.2	24.2	1.67
I25	07 Jun 2017	3	17.85	84.66	8.96	33.51	8.2	24.2	2.10
I25	07 Jun 2017	4	17.84	84.56	8.94	33.51	8.2	24.2	2.31
I25	07 Jun 2017	5	17.81	84.28	8.95	33.51	8.2	24.2	2.60
I25	07 Jun 2017	6	17.78	83.98	8.75	33.51	8.2	24.2	2.74
I25	07 Jun 2017	7	17.77	83.22	8.29	33.51	8.2	24.2	2.55
I25	07 Jun 2017	8	17.65	82.43	8.13	33.49	8.2	24.2	2.91
I25	07 Jun 2017	9	16.81	75.80	8.75	33.50	8.2	24.4	3.09
I25	13 Jun 2017	1	17.57	65.97	9.38	33.53	8.3	24.3	3.16
I25	13 Jun 2017	2	17.40	67.36	9.56	33.52	8.3	24.3	6.85
I25	13 Jun 2017	3	16.64	66.16	9.61	33.48	8.3	24.4	11.14
I25	13 Jun 2017	4	15.82	66.58	7.42	33.48	8.3	24.6	9.28
I25	13 Jun 2017	5	15.45	64.80	4.71	33.44	8.3	24.7	7.38
I25	13 Jun 2017	6	13.48	59.57	4.38	33.46	8.1	25.1	7.37
I25	13 Jun 2017	7	13.10	58.75	5.24	33.47	7.9	25.2	6.33
I25	13 Jun 2017	8	13.26	67.65	5.57	33.45	7.9	25.1	6.22
I25	13 Jun 2017	9	13.13	69.53	5.77	33.46	7.9	25.2	5.85
I25	18 Jun 2017	1	20.30	57.06	9.14	33.55	8.4	23.6	6.90
I25	18 Jun 2017	2	20.21	57.76	8.47	33.54	8.4	23.6	7.13
I25	18 Jun 2017	3	19.13	59.48	8.58	33.50	8.4	23.8	10.10
I25	18 Jun 2017	4	18.00	57.35	7.78	33.49	8.3	24.1	7.68
I25	18 Jun 2017	5	17.23	59.54	5.85	33.47	8.3	24.3	5.00
I25	18 Jun 2017	6	15.82	66.63	3.30	33.40	8.3	24.6	3.71
I25	18 Jun 2017	7	13.21	65.27	2.10	33.45	8.1	25.2	3.12
I25	18 Jun 2017	8	12.40	63.90	2.80	33.46	7.9	25.3	3.13
I25	18 Jun 2017	9	12.41	70.72	3.57	33.45	7.8	25.3	3.33
I25	29 Jun 2017	1	18.37	72.34	11.01	33.52	8.3	24.0	2.23
I25	29 Jun 2017	2	18.36	72.92	10.74	33.52	8.3	24.0	11.09
I25	29 Jun 2017	3	18.31	73.83	10.49	33.52	8.3	24.1	21.15
I25	29 Jun 2017	4	17.64	73.72	10.52	33.47	8.3	24.2	24.81
I25	29 Jun 2017	5	16.42	67.18	10.85	33.50	8.3	24.5	21.54
I25	29 Jun 2017	6	15.52	47.85	10.23	33.44	8.3	24.6	12.37
I25	29 Jun 2017	7	14.61	45.97	8.67	33.46	8.3	24.9	11.22
I25	29 Jun 2017	8	13.77	55.66	8.48	33.43	8.3	25.0	12.91
I25	29 Jun 2017	9	13.50	62.49	9.59	33.45	8.1	25.1	10.68

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens ($\sigma\text{-t}$)	Chlor ($\mu\text{g/L}$)
I26	03 Jun 2017	1	17.47	49.92	10.05	33.51	8.4	24.3	14.00
I26	03 Jun 2017	2	17.46	50.38	8.05	33.50	8.4	24.3	7.81
I26	03 Jun 2017	3	16.97	52.14	7.26	33.49	8.4	24.4	5.64
I26	03 Jun 2017	4	16.05	52.93	7.39	33.50	8.3	24.6	3.94
I26	03 Jun 2017	5	15.52	60.15	6.80	33.52	8.2	24.7	2.69
I26	03 Jun 2017	6	15.23	69.53	5.13	33.51	8.2	24.8	1.82
I26	03 Jun 2017	7	14.83	74.92	3.79	33.51	8.1	24.9	1.41
I26	03 Jun 2017	8	13.80	77.17	3.76	33.50	8.0	25.1	1.43
I26	03 Jun 2017	9	13.21	77.74	4.57	33.52	7.8	25.2	1.46
I26	07 Jun 2017	1	17.81	81.15	9.14	33.51	8.2	24.2	2.16
I26	07 Jun 2017	2	17.81	81.86	9.16	33.51	8.2	24.2	3.07
I26	07 Jun 2017	3	17.81	82.05	9.14	33.51	8.2	24.2	4.20
I26	07 Jun 2017	4	17.80	82.07	8.97	33.51	8.2	24.2	4.62
I26	07 Jun 2017	5	17.77	81.69	8.32	33.51	8.3	24.2	3.83
I26	07 Jun 2017	6	17.69	80.61	7.65	33.50	8.2	24.2	3.30
I26	07 Jun 2017	7	17.49	78.64	7.59	33.49	8.2	24.2	3.26
I26	07 Jun 2017	8	17.12	76.30	7.99	33.48	8.2	24.3	3.68
I26	07 Jun 2017	9	16.25	71.32	8.30	33.51	8.2	24.5	3.24
I26	13 Jun 2017	1	18.26	75.15	9.10	33.55	8.3	24.1	1.34
I26	13 Jun 2017	2	18.24	75.10	9.20	33.54	8.3	24.1	3.51
I26	13 Jun 2017	3	18.07	74.95	8.95	33.54	8.3	24.1	9.23
I26	13 Jun 2017	4	17.57	73.71	7.84	33.51	8.3	24.2	13.99
I26	13 Jun 2017	5	16.83	69.34	6.53	33.49	8.3	24.4	10.48
I26	13 Jun 2017	6	15.69	60.20	5.27	33.43	8.2	24.6	8.16
I26	13 Jun 2017	7	14.05	54.66	4.57	33.42	8.2	25.0	9.82
I26	13 Jun 2017	8	12.93	53.66	5.00	33.45	8.1	25.2	9.67
I26	13 Jun 2017	9	12.76	64.40	5.97	33.48	7.9	25.3	7.54
I26	18 Jun 2017	1	20.18	60.09	9.41	33.55	8.4	23.6	9.01
I26	18 Jun 2017	2	20.10	60.56	9.51	33.54	8.4	23.6	10.85
I26	18 Jun 2017	3	19.30	57.15	10.22	33.53	8.4	23.8	12.40
I26	18 Jun 2017	4	18.66	54.37	10.15	33.50	8.4	24.0	12.10
I26	18 Jun 2017	5	17.21	58.67	7.82	33.48	8.4	24.3	7.80
I26	18 Jun 2017	6	15.60	60.38	3.25	33.46	8.3	24.6	4.11
I26	18 Jun 2017	7	12.98	61.10	1.21	33.45	8.1	25.2	3.06
I26	18 Jun 2017	8	12.03	66.31	2.35	33.46	7.8	25.4	2.80
I26	18 Jun 2017	9	12.03	71.38	3.28	33.44	7.8	25.4	2.94
I26	29 Jun 2017	1	18.68	70.05	10.93	33.52	8.3	24.0	1.64
I26	29 Jun 2017	2	18.68	71.43	10.83	33.52	8.3	24.0	2.13
I26	29 Jun 2017	3	18.61	72.65	10.38	33.52	8.3	24.0	3.65
I26	29 Jun 2017	4	18.53	72.89	9.42	33.52	8.3	24.0	6.32
I26	29 Jun 2017	5	18.29	72.53	8.28	33.51	8.3	24.1	7.55
I26	29 Jun 2017	6	17.37	71.39	7.24	33.44	8.3	24.2	6.39
I26	29 Jun 2017	7	14.64	66.10	6.16	33.49	8.2	24.9	3.96
I26	29 Jun 2017	8	14.16	63.92	5.40	33.48	8.1	25.0	3.95
I26	29 Jun 2017	9	13.30	66.05	6.20	33.47	8.0	25.1	4.46
I32	03 Jun 2017	1	17.77	54.37	10.71	33.52	8.5	24.2	14.58
I32	03 Jun 2017	2	17.67	54.25	9.14	33.51	8.5	24.2	7.18
I32	03 Jun 2017	3	17.24	54.12	7.17	33.52	8.4	24.3	3.47
I32	03 Jun 2017	4	16.38	60.38	6.25	33.48	8.3	24.5	2.43
I32	03 Jun 2017	5	15.42	74.14	6.44	33.51	8.1	24.7	1.78

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens ($\sigma\text{-t}$)	Chlor ($\mu\text{g/L}$)
I32	03 Jun 2017	6	15.47	78.19	5.88	33.49	8.1	24.7	1.44
I32	03 Jun 2017	7	14.96	74.86	5.13	33.48	8.1	24.8	1.33
I32	03 Jun 2017	8	14.37	69.07	4.49	33.50	8.0	24.9	1.34
I32	03 Jun 2017	9	13.62	55.29	4.71	33.48	7.9	25.1	1.28
I32	03 Jun 2017	10	13.50	52.05	5.19	33.50	7.8	25.1	1.30
I32	07 Jun 2017	1	17.77	77.54	8.87	33.51	8.2	24.2	2.63
I32	07 Jun 2017	2	17.77	77.68	8.84	33.51	8.2	24.2	3.35
I32	07 Jun 2017	3	17.75	77.75	8.78	33.51	8.2	24.2	3.89
I32	07 Jun 2017	4	17.73	77.20	8.69	33.51	8.2	24.2	3.89
I32	07 Jun 2017	5	17.71	76.44	8.55	33.51	8.2	24.2	3.79
I32	07 Jun 2017	6	17.68	75.05	8.46	33.51	8.2	24.2	3.60
I32	07 Jun 2017	7	17.64	74.55	8.33	33.51	8.2	24.2	3.12
I32	07 Jun 2017	8	17.62	74.71	7.84	33.51	8.2	24.2	2.71
I32	07 Jun 2017	9	17.60	75.09	7.34	33.50	8.2	24.2	2.64
I32	07 Jun 2017	10	16.68	70.87	8.00	33.51	8.2	24.4	2.80
I32	13 Jun 2017	1	16.47	57.23	7.95	33.51	8.2	24.5	1.59
I32	13 Jun 2017	2	16.38	56.65	7.58	33.51	8.2	24.5	3.82
I32	13 Jun 2017	3	16.12	54.89	6.55	33.50	8.1	24.6	8.40
I32	13 Jun 2017	4	15.41	47.86	5.43	33.47	8.1	24.7	8.69
I32	13 Jun 2017	5	14.36	32.54	4.49	33.48	8.0	24.9	8.55
I32	13 Jun 2017	6	13.95	26.57	3.68	33.46	7.9	25.0	9.63
I32	13 Jun 2017	7	13.09	32.56	3.52	33.48	7.8	25.2	7.92
I32	13 Jun 2017	8	12.71	30.00	3.76	33.48	7.8	25.3	6.59
I32	13 Jun 2017	9	12.60	23.69	4.07	33.49	7.8	25.3	7.26
I32	13 Jun 2017	10	12.59	17.60	4.27	33.50	7.8	25.3	7.29
I32	18 Jun 2017	1	20.45	57.87	9.60	33.56	8.4	23.5	10.86
I32	18 Jun 2017	2	20.41	58.19	8.07	33.55	8.4	23.6	16.51
I32	18 Jun 2017	3	20.07	58.33	6.33	33.52	8.4	23.6	18.92
I32	18 Jun 2017	4	18.76	56.36	4.60	33.49	8.4	23.9	18.38
I32	18 Jun 2017	5	17.28	50.40	2.21	33.46	8.3	24.3	17.77
I32	18 Jun 2017	6	14.98	46.58	0.82	33.48	8.2	24.8	14.60
I32	18 Jun 2017	7	13.48	35.03	NA	33.49	7.8	25.1	9.50
I32	18 Jun 2017	8	12.72	24.93	0.32	33.46	7.7	25.3	9.51
I32	18 Jun 2017	9	12.35	32.50	1.09	33.45	7.6	25.3	12.27
I32	18 Jun 2017	10	12.35	38.31	1.82	33.45	7.5	25.3	12.51
I32	29 Jun 2017	1	18.83	69.47	10.25	33.52	8.3	23.9	1.98
I32	29 Jun 2017	2	18.82	69.41	10.17	33.52	8.3	23.9	2.54
I32	29 Jun 2017	3	18.79	69.50	10.03	33.52	8.3	23.9	3.63
I32	29 Jun 2017	4	18.71	69.06	9.83	33.52	8.3	24.0	6.99
I32	29 Jun 2017	5	18.65	68.87	9.51	33.52	8.3	24.0	13.97
I32	29 Jun 2017	6	18.54	67.79	9.16	33.51	8.3	24.0	17.93
I32	29 Jun 2017	7	18.06	65.40	8.83	33.49	8.3	24.1	15.21
I32	29 Jun 2017	8	15.33	48.06	7.98	33.46	8.2	24.7	13.82
I32	29 Jun 2017	9	13.48	42.77	7.35	33.47	8.2	25.1	14.59
I32	29 Jun 2017	10	13.21	52.14	8.82	33.47	8.1	25.2	15.13
I39	03 Jun 2017	1	17.47	53.89	10.90	33.43	8.4	24.2	8.09
I39	03 Jun 2017	2	17.46	52.54	9.39	33.49	8.4	24.2	4.13
I39	03 Jun 2017	3	17.23	53.68	7.99	33.49	8.4	24.3	3.19
I39	03 Jun 2017	4	16.10	59.54	6.74	33.50	8.3	24.6	2.65
I39	03 Jun 2017	5	15.36	68.45	5.81	33.52	8.2	24.8	2.10

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens ($\sigma\text{-t}$)	Chlor ($\mu\text{g/L}$)
I39	03 Jun 2017	6	15.01	76.26	4.71	33.50	8.2	24.8	1.73
I39	03 Jun 2017	7	13.71	78.01	3.57	33.51	8.1	25.1	1.47
I39	03 Jun 2017	8	13.08	81.07	3.17	33.51	7.9	25.2	1.27
I39	03 Jun 2017	9	12.61	80.76	3.35	33.51	7.8	25.3	1.34
I39	03 Jun 2017	10	12.48	79.32	3.59	33.52	7.8	25.3	1.26
I39	03 Jun 2017	11	12.44	78.99	3.65	33.51	7.8	25.4	1.07
I39	03 Jun 2017	12	12.34	78.92	3.55	33.51	7.8	25.4	1.01
I39	03 Jun 2017	13	12.23	78.45	3.38	33.51	7.8	25.4	0.96
I39	03 Jun 2017	14	12.16	78.20	3.19	33.52	7.7	25.4	0.95
I39	03 Jun 2017	15	12.00	78.25	3.05	33.51	7.7	25.4	0.93
I39	03 Jun 2017	16	11.83	79.09	2.85	33.52	7.7	25.5	0.80
I39	03 Jun 2017	17	11.75	79.35	2.58	33.50	7.7	25.5	0.81
I39	03 Jun 2017	18	11.41	79.17	2.67	33.52	7.6	25.6	0.78
I39	07 Jun 2017	1	17.99	89.13	8.51	33.50	8.2	24.1	0.72
I39	07 Jun 2017	2	17.99	89.12	8.52	33.51	8.2	24.1	0.81
I39	07 Jun 2017	3	17.99	89.08	8.55	33.50	8.2	24.1	0.92
I39	07 Jun 2017	4	17.98	89.14	8.65	33.50	8.2	24.1	1.02
I39	07 Jun 2017	5	17.97	89.10	8.70	33.51	8.2	24.1	1.07
I39	07 Jun 2017	6	17.96	89.05	8.71	33.50	8.2	24.1	1.11
I39	07 Jun 2017	7	17.94	88.92	8.73	33.50	8.2	24.1	1.23
I39	07 Jun 2017	8	17.94	88.62	8.77	33.50	8.2	24.1	1.46
I39	07 Jun 2017	9	17.92	88.46	8.94	33.50	8.2	24.1	2.33
I39	07 Jun 2017	10	17.90	88.27	9.26	33.50	8.2	24.2	3.37
I39	07 Jun 2017	11	17.88	88.08	9.71	33.50	8.2	24.2	3.92
I39	07 Jun 2017	12	17.78	87.41	10.13	33.50	8.2	24.2	3.95
I39	07 Jun 2017	13	17.61	85.31	10.19	33.50	8.2	24.2	3.73
I39	07 Jun 2017	14	17.44	81.35	9.52	33.49	8.3	24.3	4.25
I39	07 Jun 2017	15	16.93	79.16	8.19	33.49	8.3	24.4	3.43
I39	07 Jun 2017	16	16.52	80.27	6.67	33.49	8.2	24.5	3.22
I39	07 Jun 2017	17	15.77	78.89	6.10	33.44	8.2	24.6	3.66
I39	07 Jun 2017	18	14.23	76.86	7.38	33.50	8.1	25.0	3.75
I39	13 Jun 2017	1	17.91	73.28	9.81	33.52	8.3	24.2	2.77
I39	13 Jun 2017	2	17.85	74.13	9.63	33.52	8.3	24.2	3.81
I39	13 Jun 2017	3	17.54	73.71	9.11	33.51	8.3	24.2	5.33
I39	13 Jun 2017	4	17.02	75.15	8.76	33.47	8.3	24.3	8.95
I39	13 Jun 2017	5	16.05	74.33	8.42	33.47	8.2	24.6	12.56
I39	13 Jun 2017	6	15.18	69.48	7.85	33.44	8.2	24.7	12.15
I39	13 Jun 2017	7	14.37	67.52	7.68	33.42	8.2	24.9	10.88
I39	13 Jun 2017	8	13.95	68.76	7.40	33.42	8.1	25.0	8.51
I39	13 Jun 2017	9	13.75	72.36	5.99	33.41	8.1	25.0	8.12
I39	13 Jun 2017	10	13.42	74.16	4.22	33.44	8.0	25.1	9.75
I39	13 Jun 2017	11	12.67	71.04	3.87	33.47	7.9	25.3	9.51
I39	13 Jun 2017	12	12.38	72.70	4.22	33.49	7.8	25.3	7.56
I39	13 Jun 2017	13	12.19	72.74	4.16	33.48	7.8	25.4	5.09
I39	13 Jun 2017	14	11.91	76.00	4.23	33.49	7.8	25.4	3.96
I39	13 Jun 2017	15	11.85	78.20	4.29	33.50	7.8	25.5	3.66
I39	13 Jun 2017	16	11.84	79.23	4.35	33.50	7.8	25.5	3.14
I39	13 Jun 2017	17	11.84	79.51	4.34	33.51	7.8	25.5	2.51
I39	13 Jun 2017	18	11.81	78.84	4.26	33.51	7.8	25.5	2.30
I39	18 Jun 2017	1	20.26	68.50	9.68	33.55	8.4	23.6	3.59
I39	18 Jun 2017	2	20.14	68.52	10.23	33.55	8.4	23.6	8.56
I39	18 Jun 2017	3	19.49	66.94	12.07	33.51	8.4	23.8	13.95

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens ($\sigma\text{-t}$)	Chlor ($\mu\text{g/L}$)
I39	18 Jun 2017	4	17.71	67.48	12.70	33.48	8.4	24.2	12.66
I39	18 Jun 2017	5	15.80	64.24	10.11	33.46	8.4	24.6	11.93
I39	18 Jun 2017	6	14.56	58.76	5.93	33.43	8.5	24.9	15.43
I39	18 Jun 2017	7	13.33	58.20	3.34	33.42	8.3	25.1	18.51
I39	18 Jun 2017	8	12.61	64.86	2.57	33.43	8.1	25.3	18.53
I39	18 Jun 2017	9	12.28	66.88	2.52	33.41	8.0	25.3	16.10
I39	18 Jun 2017	10	11.96	61.83	2.58	33.43	7.9	25.4	13.07
I39	18 Jun 2017	11	11.84	60.29	2.73	33.44	7.8	25.4	14.29
I39	18 Jun 2017	12	11.70	61.59	2.99	33.45	7.8	25.4	14.17
I39	18 Jun 2017	13	11.60	65.36	3.26	33.45	7.8	25.5	10.28
I39	18 Jun 2017	14	11.58	71.49	3.44	33.46	7.8	25.5	7.62
I39	18 Jun 2017	15	11.53	72.43	3.56	33.46	7.8	25.5	4.90
I39	18 Jun 2017	16	11.44	71.20	3.63	33.47	7.8	25.5	3.27
I39	18 Jun 2017	17	11.42	74.25	3.65	33.47	7.8	25.5	3.30
I39	18 Jun 2017	18	11.41	78.98	3.67	33.48	7.8	25.5	3.72
I39	29 Jun 2017	1	18.02	76.96	11.61	33.50	8.4	24.1	0.79
I39	29 Jun 2017	2	18.01	77.87	11.79	33.52	8.4	24.1	1.98
I39	29 Jun 2017	3	17.89	79.03	12.33	33.51	8.4	24.2	6.72
I39	29 Jun 2017	4	17.65	79.10	12.99	33.51	8.4	24.2	14.08
I39	29 Jun 2017	5	16.62	74.64	11.90	33.47	8.4	24.4	12.28
I39	29 Jun 2017	6	14.93	58.20	8.66	33.46	8.4	24.8	10.82
I39	29 Jun 2017	7	13.66	45.55	6.68	33.46	8.3	25.1	10.31
I39	29 Jun 2017	8	13.14	64.45	5.86	33.46	8.2	25.2	8.80
I39	29 Jun 2017	9	13.07	71.04	4.51	33.43	8.1	25.2	7.94
I39	29 Jun 2017	10	12.52	71.24	3.86	33.45	8.0	25.3	7.10
I39	29 Jun 2017	11	12.39	72.92	3.58	33.46	7.9	25.3	9.41
I39	29 Jun 2017	12	12.21	73.82	3.30	33.46	7.9	25.4	9.53
I39	29 Jun 2017	13	11.95	75.59	3.35	33.46	7.8	25.4	7.52
I39	29 Jun 2017	14	11.73	70.66	3.54	33.46	7.8	25.4	6.29
I39	29 Jun 2017	15	11.63	71.98	3.76	33.47	7.8	25.5	5.50
I39	29 Jun 2017	16	11.63	76.69	3.88	33.47	7.8	25.5	5.29
I39	29 Jun 2017	17	11.62	75.62	3.94	33.48	7.8	25.5	4.96
I39	29 Jun 2017	18	11.63	75.12	3.96	33.49	7.8	25.5	4.87
I40	03 Jun 2017	1	16.76	57.61	7.75	33.49	8.3	24.4	4.53
I40	03 Jun 2017	2	16.72	57.63	6.42	33.48	8.3	24.4	2.96
I40	03 Jun 2017	3	16.03	57.40	5.35	33.49	8.2	24.6	2.22
I40	03 Jun 2017	4	14.92	57.80	4.96	33.51	8.1	24.8	2.10
I40	03 Jun 2017	5	14.10	61.53	4.66	33.52	8.0	25.0	1.90
I40	03 Jun 2017	6	13.63	73.31	4.52	33.53	7.9	25.1	1.57
I40	03 Jun 2017	7	13.46	76.93	4.38	33.51	7.9	25.1	1.47
I40	03 Jun 2017	8	13.28	73.54	4.46	33.51	7.9	25.2	1.71
I40	03 Jun 2017	9	13.08	68.96	5.04	33.52	7.8	25.2	1.71
I40	03 Jun 2017	10	13.40	56.89	5.28	33.51	7.8	25.2	1.70
I40	07 Jun 2017	1	17.73	76.22	9.12	33.50	8.2	24.2	5.33
I40	07 Jun 2017	2	17.72	59.99	9.13	33.50	8.2	24.2	6.16
I40	07 Jun 2017	3	17.71	73.83	9.11	33.50	8.2	24.2	6.89
I40	07 Jun 2017	4	17.71	75.82	9.01	33.50	8.2	24.2	6.39
I40	07 Jun 2017	5	17.69	75.56	8.91	33.50	8.2	24.2	5.47
I40	07 Jun 2017	6	17.67	74.98	8.78	33.50	8.2	24.2	4.56
I40	07 Jun 2017	7	17.66	75.86	8.41	33.50	8.2	24.2	3.78
I40	07 Jun 2017	8	17.63	77.21	7.97	33.50	8.2	24.2	3.64
I40	07 Jun 2017	9	17.41	75.60	8.25	33.48	8.2	24.3	4.30

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens ($\sigma\text{-t}$)	Chlor ($\mu\text{g/L}$)
I40	07 Jun 2017	10	17.31	61.78	8.73	33.49	8.2	24.3	4.67
I40	13 Jun 2017	1	17.14	64.20	8.14	33.52	8.2	24.3	2.11
I40	13 Jun 2017	2	16.98	62.43	7.94	33.52	8.2	24.4	8.60
I40	13 Jun 2017	3	16.55	62.97	7.55	33.52	8.2	24.5	16.62
I40	13 Jun 2017	4	15.59	51.20	7.40	33.49	8.2	24.7	15.27
I40	13 Jun 2017	5	14.96	51.91	7.58	33.49	8.1	24.8	12.91
I40	13 Jun 2017	6	14.45	58.64	7.68	33.48	8.1	24.9	10.85
I40	13 Jun 2017	7	14.31	59.68	7.09	33.48	8.1	24.9	7.18
I40	13 Jun 2017	8	14.18	61.09	6.21	33.46	8.1	25.0	7.34
I40	13 Jun 2017	9	13.54	63.24	5.80	33.48	8.0	25.1	6.31
I40	13 Jun 2017	10	13.50	53.70	5.56	33.47	8.0	25.1	6.67
I40	18 Jun 2017	1	20.19	59.38	8.48	33.55	8.3	23.6	5.71
I40	18 Jun 2017	2	19.97	59.45	8.42	33.52	8.3	23.6	8.02
I40	18 Jun 2017	3	19.00	58.95	8.32	33.49	8.3	23.9	8.72
I40	18 Jun 2017	4	18.17	59.56	7.65	33.49	8.3	24.1	6.93
I40	18 Jun 2017	5	16.61	64.01	5.65	33.38	8.2	24.4	4.88
I40	18 Jun 2017	6	13.61	65.68	2.60	33.43	8.3	25.1	3.31
I40	18 Jun 2017	7	12.73	65.35	1.20	33.43	8.1	25.2	2.82
I40	18 Jun 2017	8	12.51	68.35	1.55	33.42	7.9	25.3	3.37
I40	18 Jun 2017	9	12.21	68.94	3.06	33.42	7.8	25.3	3.94
I40	18 Jun 2017	10	12.16	63.82	4.39	33.43	7.7	25.3	4.32
I40	29 Jun 2017	1	18.66	74.80	10.13	33.52	8.3	24.0	1.39
I40	29 Jun 2017	2	18.64	73.17	9.61	33.50	8.3	24.0	4.05
I40	29 Jun 2017	3	18.47	72.73	9.38	33.51	8.3	24.0	11.72
I40	29 Jun 2017	4	17.84	72.15	9.78	33.49	8.3	24.2	13.19
I40	29 Jun 2017	5	16.13	64.03	9.96	33.44	8.3	24.5	13.01
I40	29 Jun 2017	6	14.43	45.56	9.68	33.45	8.2	24.9	10.59
I40	29 Jun 2017	7	13.79	55.05	7.93	33.44	8.2	25.0	6.80
I40	29 Jun 2017	8	13.44	62.13	5.73	33.44	8.2	25.1	5.17
I40	29 Jun 2017	9	12.96	66.55	5.49	33.43	8.1	25.2	4.54
I40	29 Jun 2017	10	12.90	50.69	6.36	33.44	8.0	25.2	4.63

APPENDIX A

Quality Assurance

Table A.1

Summary of bacteriological quality assurance field and lab duplicate sample analyses at selected SBOO stations. Densities of total coliform (Total), fecal coliform (Fecal), and *Enterococcus* (Enter) are reported as CFU/100 mL.

Station	Date	Depth	Analyst	Procedure	Total	Fecal	Enter
I19	03 Jun 2017	6	ZV	LAB DUPLICATE	6e	<2	<2
I19	07 Jun 2017	6	LMA	LAB DUPLICATE	20e	14e	4e
I19	13 Jun 2017	6	AE	LAB DUPLICATE	<20	<2	4e
I19	18 Jun 2017	6	JT	LAB DUPLICATE	4e	<2	<2
I19	29 Jun 2017	6	LMA	LAB DUPLICATE	ns	<2	ns
I19	29 Jun 2017	6	ZV	LAB DUPLICATE	<20	ns	<2
I40	03 Jun 2017	6	ZV	LAB DUPLICATE	20e	<2	<2
I40	07 Jun 2017	6	LMA	LAB DUPLICATE	20e	2e	<2
I40	13 Jun 2017	6	ZV	LAB DUPLICATE	<20	<2	<2
I40	18 Jun 2017	6	JT	LAB DUPLICATE	<2	<2	<2
I40	29 Jun 2017	6	AR	LAB DUPLICATE	<20	ns	<2
I40	29 Jun 2017	6	LMA	LAB DUPLICATE	ns	<2	ns
S12	06 Jun 2017		LMA	FIELD DUPLICATE	40e	<2	6e
S12	06 Jun 2017		LMA	LAB DUPLICATE	40e	8e	2e
S12	13 Jun 2017		LO	FIELD DUPLICATE	<20	<2	2e
S12	13 Jun 2017		LO	LAB DUPLICATE	<20	<2	<2
S12	20 Jun 2017		AR	FIELD DUPLICATE	<20	<2	<2
S12	20 Jun 2017		AR	LAB DUPLICATE	<20	<2	2e
S12	27 Jun 2017		ZV	FIELD DUPLICATE	<20	<2	2e
S12	27 Jun 2017		ZV	LAB DUPLICATE	<20	<2	<2

ns = not sampled

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