

SOUTH BAY OCEAN OUTFALL MONTHLY RECEIVING WATERS MONITORING REPORT

SOUTH BAY WATER RECLAMATION PLANT

NPDES Permit No. CA0109045
SDRWQCB Order No. R9-2013-0006

JUNE 2018

Environmental Monitoring and Technical Services
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July 31, 2018

Mr. David W. 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 2018 Monthly Receiving Waters Monitoring Report for the South Bay Ocean Outfall, South Bay Water Reclamation Plant as required per Order No. R9-2013-0006 as amended by Order Nos. R9-2014-0071 and R9-2017-0023, 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 as amended Order Nos. R9-2014-0094 and R9-2017-0024, 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/rjg

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 as amended by Order Nos. R9-2014-0071 and R9-2017-0023, NPDES Permit No. CA0109045, for the South Bay Water Reclamation Plant (SBWRP), South Bay Ocean Outfall (SBOO). 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 also 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 weekly 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.

Routine monitoring at each kelp site consisted 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 were also recorded at all stations.

Seawater samples at the kelp bed stations were 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 ≥ 4 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 at 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 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 were collected at 28 of the stations.

At these offshore stations, water samples for bacteriological analyses were collected using a CTD-integrated 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 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 2018 Quality Assurance Report, which will be completed in March 2019.

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, seven of the eight shore stations located north of the border were out of compliance with various California Ocean Plan (Ocean Plan) water contact standards (see below); these standards do not apply to stations located in Mexican waters.
 - The 30-day geometric mean standard for *Enterococcus* was exceeded at station S9 on one or more days in June.
 - The Single Sample Maximum (SSM) standard for *Enterococcus* was exceeded at stations S4, S5, S6, S9, S10, S11, and S12 on one or more days during June.
 - Per permit requirements, resamples were collected in response to these SSM exceedances (see Table 2.8 for details).

- o Although the Ocean Plan standards do not apply to these stations, 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 seawater sample collected at station S0 on June 19.
- o 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 (<http://www.sandiego.gov/mwwd/environment/oceanmonitor/reports/index.shtml>).
- o Notable visual observations for June included: a sewage-like odor at stations S4, S5, S10, and S11.

➤ **Kelp Bed Water Quality Sampling**

- o The seven kelp bed water quality stations (I19, I24, I25, I26, I32, I39, I40) were sampled four times during the month (i.e. June 4, 11, 18, 25).
- o During June, four of the seven stations were out of compliance with various Ocean Plan water contact standards (see below).
 - The SSM standard for *Enterococcus* bacteria was exceeded at stations I19, I24, I25, and I40 on June 11 at one or more depths.
- o Water column temperatures ranged from 11.51 to 20.64°C. The difference between surface and bottom waters ranged from 0.74 to 6.74°C, indicating the water column was stratified at some of these sites during the month.
- o Chlorophyll *a* concentrations ranged from 0.15 to 58.96 µg/L at the kelp bed stations, suggesting the presence of phytoplankton blooms during the month.
- o Nothing of sewage origin was observed at any of the kelp bed stations.

➤ **Offshore Water Quality Sampling**

- o Quarterly sampling was not conducted during June at the offshore stations. The next quarterly sampling is scheduled for August 2018.



TABLES AND FIGURES

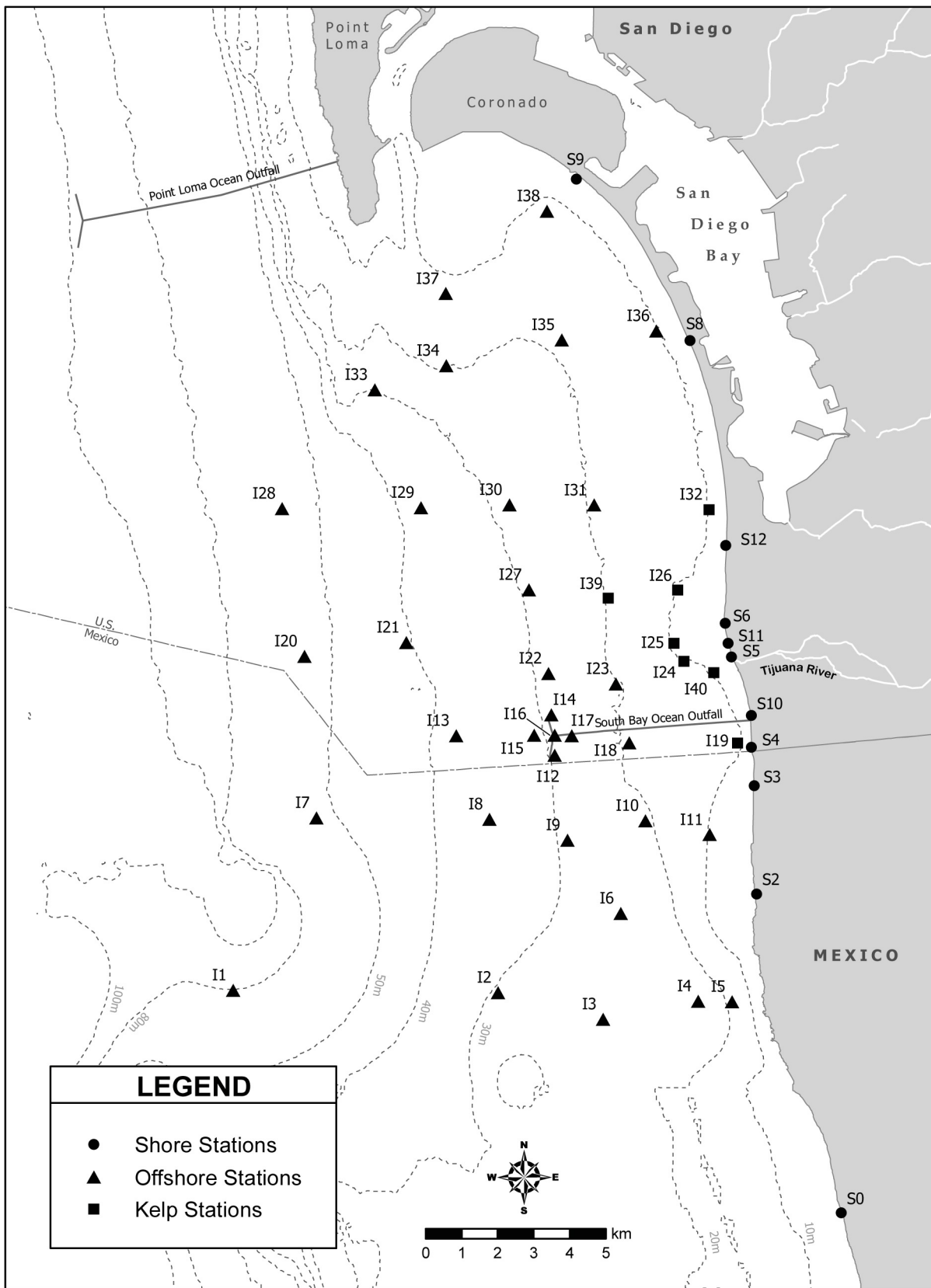


Figure 1.1 Station Map

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 2018	15*	13*	6*	2*	11*	11*	11*	19*
02 Jun 2018	15*	13*	6*	2*	11*	11*	11*	19*
03 Jun 2018	15*	13*	6*	2*	11*	11*	11*	19*
04 Jun 2018	15*	13*	6*	2*	11*	11*	11*	19*
05 Jun 2018	10	12	5	2	11	10	8	12
06 Jun 2018	10	12	5	2	11	10	8	12
07 Jun 2018	8*	9*	6*	3*	9*	8*	6*	13*
08 Jun 2018	8*	9*	6*	3*	9*	8*	6*	13*
09 Jun 2018	8*	9*	6*	3*	9*	8*	6*	13*
10 Jun 2018	8*	9*	6*	3*	9*	8*	6*	13*
11 Jun 2018	8*	9*	6*	3*	9*	8*	6*	13*
12 Jun 2018	25	19	13	4	11	22	14	20
13 Jun 2018	25	19	13	4	11	22	14	20
14 Jun 2018	46*	34*	21*	5*	9*	23*	22*	20*
15 Jun 2018	46*	34*	21*	5*	9*	23*	22*	20*
16 Jun 2018	46*	34*	21*	5*	9*	23*	22*	20*
17 Jun 2018	46*	34*	21*	5*	9*	23*	22*	20*
18 Jun 2018	46*	34*	21*	5*	9*	23*	22*	20*
19 Jun 2018	39	35	21	6	11	22	27	20
20 Jun 2018	39	35	21	6	11	22	27	20
21 Jun 2018	39*	41*	24*	8*	17*	24*	29*	17*
22 Jun 2018	39*	41*	24*	8*	17*	24*	29*	17*
23 Jun 2018	39*	41*	24*	8*	17*	24*	29*	17*
24 Jun 2018	39*	41*	24*	8*	17*	24*	29*	17*
25 Jun 2018	39*	41*	24*	8*	17*	24*	29*	17*
26 Jun 2018	32	35	23	10	36	29	20	17
27 Jun 2018	32	35	23	10	36	29	20	17
28 Jun 2018	37*	41*	24*	15*	42*	56*	19*	17*
29 Jun 2018	37*	41*	24*	15*	42*	56*	19*	17*
30 Jun 2018	37*	41*	24*	15*	42*	56*	19*	17*

* 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 2018	3*	4*	2*	2*	2*	2*	2*	3*
02 Jun 2018	3*	4*	2*	2*	2*	2*	2*	3*
03 Jun 2018	3*	4*	2*	2*	2*	2*	2*	3*
04 Jun 2018	3*	4*	2*	2*	2*	2*	2*	3*
05 Jun 2018	2	4	2	2	3	2	2	3
06 Jun 2018	2	4	2	2	3	2	2	3
07 Jun 2018	3*	2*	2*	3*	3*	2*	2*	3*
08 Jun 2018	3*	2*	2*	3*	3*	2*	2*	3*
09 Jun 2018	3*	2*	2*	3*	3*	2*	2*	3*
10 Jun 2018	3*	2*	2*	3*	3*	2*	2*	3*
11 Jun 2018	3*	2*	2*	3*	3*	2*	2*	3*
12 Jun 2018	6	3	3	2	3	4	3	3
13 Jun 2018	6	3	3	2	3	4	3	3
14 Jun 2018	7*	3*	3*	3*	3*	4*	4*	3*
15 Jun 2018	7*	3*	3*	3*	3*	4*	4*	3*
16 Jun 2018	7*	3*	3*	3*	3*	4*	4*	3*
17 Jun 2018	7*	3*	3*	3*	3*	4*	4*	3*
18 Jun 2018	7*	3*	3*	3*	3*	4*	4*	3*
19 Jun 2018	6	3	3	2	3	4	3	3
20 Jun 2018	6	3	3	2	3	4	3	3
21 Jun 2018	5*	3*	4*	3*	3*	4*	4*	3*
22 Jun 2018	5*	3*	4*	3*	3*	4*	4*	3*
23 Jun 2018	5*	3*	4*	3*	3*	4*	4*	3*
24 Jun 2018	5*	3*	4*	3*	3*	4*	4*	3*
25 Jun 2018	5*	3*	4*	3*	3*	4*	4*	3*
26 Jun 2018	4	3	3	2	7	5	3	3
27 Jun 2018	4	3	3	2	7	5	3	3
28 Jun 2018	5*	3*	4*	3*	9*	6*	4*	3*
29 Jun 2018	5*	3*	4*	3*	9*	6*	4*	3*
30 Jun 2018	5*	3*	4*	3*	9*	6*	4*	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 2018	5*	4*	2*	2*	3*	2*	3*	2*
02 Jun 2018	5*	4*	2*	2*	3*	2*	3*	2*
03 Jun 2018	5*	4*	2*	2*	3*	2*	3*	2*
04 Jun 2018	5*	4*	2*	2*	3*	2*	3*	2*
05 Jun 2018	5	4	2	2	3	2	3	2
06 Jun 2018	5	4	2	2	3	2	3	2
07 Jun 2018	3*	2*	2*	2*	3*	2*	3*	2*
08 Jun 2018	3*	2*	2*	2*	3*	2*	3*	2*
09 Jun 2018	3*	2*	2*	2*	3*	2*	3*	2*
10 Jun 2018	3*	2*	2*	2*	3*	2*	3*	2*
11 Jun 2018	3*	2*	2*	2*	3*	2*	3*	2*
12 Jun 2018	9	6	7	3	3	7	8	5
13 Jun 2018	9	6	7	3	3	7	8	5
14 Jun 2018	9	8	7	3*	2*	7	8	6
15 Jun 2018	9	8	7	3*	2*	7	8	6
16 Jun 2018	9	8	7	3*	2*	7	8	6
17 Jun 2018	9	8	7	3*	2*	7	8	6
18 Jun 2018	9	8	7	3*	2*	7	8	6
19 Jun 2018	9	6	6	3	2	5	6	5
20 Jun 2018	9	6	6	3	2	5	6	5
21 Jun 2018	13	8	7	3*	3*	7	6	6
22 Jun 2018	13	8	7	3*	3*	7	6	6
23 Jun 2018	13	8	7	3*	3*	7	6	6
24 Jun 2018	13	8	7	3*	3*	7	6	6
25 Jun 2018	13	8	7	3*	3*	7	6	6
26 Jun 2018	11	6	6	3	12	6	5	5
27 Jun 2018	11	6	6	3	12	6	5	5
28 Jun 2018	13	8	7	3*	34	8	6	6
29 Jun 2018	13	8	7	3*	53	8	6	6
30 Jun 2018	13	8	7	3*	53	8	6	6

* 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
05 Jun 2018	IC	IC	IC	IC	IC	IC	IC	IC
12 Jun 2018	IC	IC	IC	IC	IC	IC	IC	IC
19 Jun 2018	IC	IC	IC	IC	IC	IC	IC	IC
26 Jun 2018	IC	IC	IC	IC	IC	IC	IC	IC

IC = In Compliance

E = Exceedance

ns = not sampled

ND = no data

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
05 Jun 2018	IC	IC	IC	IC	IC	IC	IC	IC
12 Jun 2018	IC	IC	IC	IC	IC	IC	IC	IC
19 Jun 2018	IC	IC	IC	IC	IC	IC	IC	IC
26 Jun 2018	IC	IC	IC	IC	IC	IC	IC	IC

IC = In Compliance

E = Exceedance

ns = not sampled

ND = no data

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
05 Jun 2018	ND	ND	ND	ND	ND	ND	ND	ND
12 Jun 2018	E	E	E	IC	IC	E	E	E
14 Jun 2018	IC	IC	IC	ns	ns	IC	IC	IC
19 Jun 2018	IC	IC	IC	IC	IC	IC	IC	IC
26 Jun 2018	IC	IC	IC	IC	E	IC	IC	IC
28 Jun 2018	ns	ns	ns	ns	E	ns	ns	ns
29 Jun 2018	ns	ns	ns	ns	E	ns	ns	ns

IC = In Compliance

E = Exceedance

ns = not sampled

ND = no data

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
05 Jun 2018	IC	IC	IC	IC	IC	IC	IC	IC
12 Jun 2018	IC	IC	IC	IC	IC	IC	IC	IC
19 Jun 2018	IC	IC	IC	IC	IC	IC	IC	IC
26 Jun 2018	IC	IC	IC	IC	IC	IC	IC	IC

IC = In Compliance

E = Exceedance

ns = not sampled

ND = no data

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* (Entero) 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	Entero	F:T
S0	05 Jun 2018	1015	60	2e	ND	0.033
S0	12 Jun 2018	1110	<20	<2	6e	0.100
S0	19 Jun 2018	1045	1300	10e	200e	0.008
S0	26 Jun 2018	1040	240e	<2	40	0.008
S2	05 Jun 2018	1055	<2	<2	ND	1.000
S2	12 Jun 2018	1110	60e	6e	74	0.100
S2	19 Jun 2018	925	<20	<2	<2	0.100
S2	26 Jun 2018	1125	<2	<2	<2	1.000
S3	05 Jun 2018	1125	<2	<2	ND	1.000
S3	12 Jun 2018	1020	20e	<2	4e	0.100
S3	19 Jun 2018	955	<20	<2	10e	0.100
S3	26 Jun 2018	1145	4e	<2	10e	0.500
S4	05 Jun 2018	812	<2	<2	ND	1.000
S4	12 Jun 2018	837	2800e	110	400	0.039
S4	14 Jun 2018	846	ns	ns	<2	ns
S4	19 Jun 2018	1129	20e	2e	10e	0.100
S4	26 Jun 2018	900	16e	<2	4e	0.125
S5	05 Jun 2018	905	8e	2e	ND	0.250
S5	12 Jun 2018	939	440	18e	180e	0.041
S5	14 Jun 2018	949	ns	ns	6e	ns
S5	19 Jun 2018	935	40e	2e	<2	0.050
S5	26 Jun 2018	1023	<20	<2	<2	0.100
S6	05 Jun 2018	916	<2	<2	ND	1.000
S6	12 Jun 2018	950	400e	14e	320e	0.035
S6	14 Jun 2018	959	ns	ns	<2	ns
S6	19 Jun 2018	948	<20	4e	<2	0.200
S6	26 Jun 2018	1033	<20	<2	<2	0.100
S8	05 Jun 2018	1027	6e	6e	ND	1.000
S8	12 Jun 2018	1122	<20	2e	6e	0.100
S8	19 Jun 2018	845	<20	<2	2e	0.100
S8	26 Jun 2018	1200	<20	2e	2e	0.100
S9	05 Jun 2018	1102	10e	10e	ND	1.000
S9	12 Jun 2018	1205	<20	<2	2e	0.100
S9	19 Jun 2018	815	<20	<2	4e	0.100
S9	26 Jun 2018	1242	800e	200e	1200e	0.250
S9	28 Jun 2018	843	ns	ns	140e	ns
S9	29 Jun 2018	951	ns	ns	320e	ns
S10	05 Jun 2018	807	6e	2e	ND	0.333
S10	12 Jun 2018	832	1400e	50	240e	0.036
S10	14 Jun 2018	840	ns	ns	2e	ns
S10	19 Jun 2018	1123	<20	<2	2e	0.100

Station	Date	Time	Total	Fecal	Entero	F:T
S10	26 Jun 2018	853	60e	8e	4e	0.133
S11	05 Jun 2018	911	<2	<2	ND	1.000
S11	12 Jun 2018	946	300e	28e	200e	0.093
S11	14 Jun 2018	956	ns	ns	2e	ns
S11	19 Jun 2018	944	60e	<2	2e	0.033
S11	26 Jun 2018	1028	4e	<2	<2	0.500
S12	05 Jun 2018	925	2e	2e	ND	1.000
S12	12 Jun 2018	958	100e	8e	110	0.080
S12	14 Jun 2018	1008	ns	ns	4e	ns
S12	19 Jun 2018	959	<20	<2	<2	0.100
S12	26 Jun 2018	1041	20e	<2	<2	0.100

ns = not sampled

ND = no data

Comments

Station	Date	Depth	Parameter	Comments
	05 Jun 2018			Lab accident for Entero; Invalid data due to media not passing QA/QC
S10	14 Jun 2018			Resample
S11	14 Jun 2018			Resample
S12	14 Jun 2018			Resample
S4	14 Jun 2018			Resample
S5	14 Jun 2018			Resample
S6	14 Jun 2018			Resample
S9	28 Jun 2018			Resample
S9	28 Jun 2018			Resample
S9	29 Jun 2018			Resample
S9	29 Jun 2018			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	05 Jun 2018	Arrive Time	1015
S0	05 Jun 2018	Weather	Cloudy
S0	05 Jun 2018	Wind Speed (kts)	
S0	05 Jun 2018	Wind Dir	SW
S0	05 Jun 2018	Animal Life	5 Dogs; >20 Seagulls
S0	05 Jun 2018	Floatables	None
S0	05 Jun 2018	Water Color	Green
S0	05 Jun 2018	Current Direction	N
S0	05 Jun 2018	Water Temp (C)	15
S0	05 Jun 2018	Wave Height Low (ft)	2
S0	05 Jun 2018	High Tide (ft)	3.6
S0	05 Jun 2018	High Tide Time	1618
S0	05 Jun 2018	Low Tide (ft)	0.6
S0	05 Jun 2018	Low Tide Time	906
S0	05 Jun 2018	Comments	Kelp; Water turbid; 1L/sec water flowing from storm drain; Wind speed was not measured due to anemometer malfunction
S0	12 Jun 2018	Arrive Time	1110
S0	12 Jun 2018	Weather	Sunny
S0	12 Jun 2018	Wind Speed (kts)	1.1
S0	12 Jun 2018	Wind Dir	SW
S0	12 Jun 2018	Animal Life	5 Birds
S0	12 Jun 2018	Floatables	None
S0	12 Jun 2018	Water Color	Green
S0	12 Jun 2018	Current Direction	N
S0	12 Jun 2018	Water Temp (C)	15
S0	12 Jun 2018	Wave Height Low (ft)	2
S0	12 Jun 2018	High Tide (ft)	4
S0	12 Jun 2018	High Tide Time	911
S0	12 Jun 2018	Low Tide (ft)	1.3
S0	12 Jun 2018	Low Tide Time	1426
S0	12 Jun 2018	Comments	Water clear; 0.5L/s water flowing from storm drain
S0	19 Jun 2018	Arrive Time	1045
S0	19 Jun 2018	Weather	Sunny
S0	19 Jun 2018	Wind Speed (kts)	0.6
S0	19 Jun 2018	Wind Dir	SW
S0	19 Jun 2018	Animal Life	5 Birds
S0	19 Jun 2018	Floatables	None
S0	19 Jun 2018	Water Color	Green
S0	19 Jun 2018	Current Direction	N
S0	19 Jun 2018	Water Temp (C)	15
S0	19 Jun 2018	Wave Height Low (ft)	2
S0	19 Jun 2018	High Tide (ft)	4.4
S0	19 Jun 2018	High Tide Time	1551
S0	19 Jun 2018	Low Tide (ft)	-0.1
S0	19 Jun 2018	Low Tide Time	858
S0	19 Jun 2018	Comments	Water clear; 0.5 L/sec water flowing from storm drain
S0	26 Jun 2018	Arrive Time	1040
S0	26 Jun 2018	Weather	Sunny

Station	Date	Parameter	Value
S0	26 Jun 2018	Wind Speed (kts)	7.7
S0	26 Jun 2018	Wind Dir	NW
S0	26 Jun 2018	Animal Life	1 Seagull
S0	26 Jun 2018	Floatables	None
S0	26 Jun 2018	Water Color	Green
S0	26 Jun 2018	Current Direction	N
S0	26 Jun 2018	Water Temp (C)	16
S0	26 Jun 2018	Wave Height Low (ft)	3
S0	26 Jun 2018	High Tide (ft)	3.7
S0	26 Jun 2018	High Tide Time	934
S0	26 Jun 2018	Low Tide (ft)	1.9
S0	26 Jun 2018	Low Tide Time	1431
S0	26 Jun 2018	Comments	Kelp; Algae; 9 Persons; Water clear; 1 L/s water flowing from storm drain
S2	05 Jun 2018	Arrive Time	1055
S2	05 Jun 2018	Weather	Cloudy
S2	05 Jun 2018	Wind Speed (kts)	
S2	05 Jun 2018	Wind Dir	SW
S2	05 Jun 2018	Animal Life	2 Dogs
S2	05 Jun 2018	Floatables	None
S2	05 Jun 2018	Water Color	Green
S2	05 Jun 2018	Current Direction	N
S2	05 Jun 2018	Water Temp (C)	15
S2	05 Jun 2018	Wave Height Low (ft)	2
S2	05 Jun 2018	High Tide (ft)	3.6
S2	05 Jun 2018	High Tide Time	1618
S2	05 Jun 2018	Low Tide (ft)	0.6
S2	05 Jun 2018	Low Tide Time	906
S2	05 Jun 2018	Comments	Kelp; Water turbid; No flow from storm drain; Wind speed was not measured due to anemometer malfunction
S2	12 Jun 2018	Arrive Time	1110
S2	12 Jun 2018	Weather	Sunny
S2	12 Jun 2018	Wind Speed (kts)	1.2
S2	12 Jun 2018	Wind Dir	SW
S2	12 Jun 2018	Animal Life	5 Birds; 5 Dogs
S2	12 Jun 2018	Floatables	None
S2	12 Jun 2018	Water Color	Green
S2	12 Jun 2018	Current Direction	N
S2	12 Jun 2018	Water Temp (C)	15
S2	12 Jun 2018	Wave Height Low (ft)	2
S2	12 Jun 2018	High Tide (ft)	4
S2	12 Jun 2018	High Tide Time	911
S2	12 Jun 2018	Low Tide (ft)	1.3
S2	12 Jun 2018	Low Tide Time	1426
S2	12 Jun 2018	Comments	Water clear; No flow from storm drain
S2	19 Jun 2018	Arrive Time	925
S2	19 Jun 2018	Weather	Sunny
S2	19 Jun 2018	Wind Speed (kts)	0.8
S2	19 Jun 2018	Wind Dir	SW
S2	19 Jun 2018	Animal Life	5 Birds; 5 Dogs
S2	19 Jun 2018	Floatables	None
S2	19 Jun 2018	Water Color	Green

Station	Date	Parameter	Value
S2	19 Jun 2018	Current Direction	N
S2	19 Jun 2018	Water Temp (C)	15
S2	19 Jun 2018	Wave Height Low (ft)	2
S2	19 Jun 2018	High Tide (ft)	4.4
S2	19 Jun 2018	High Tide Time	1551
S2	19 Jun 2018	Low Tide (ft)	-0.1
S2	19 Jun 2018	Low Tide Time	858
S2	19 Jun 2018	Comments	Water clear; No flow from storm drain
S2	26 Jun 2018	Arrive Time	1125
S2	26 Jun 2018	Weather	Sunny
S2	26 Jun 2018	Wind Speed (kts)	6.6
S2	26 Jun 2018	Wind Dir	NW
S2	26 Jun 2018	Animal Life	5 Seagulls
S2	26 Jun 2018	Floatables	None
S2	26 Jun 2018	Water Color	Green
S2	26 Jun 2018	Current Direction	N
S2	26 Jun 2018	Water Temp (C)	16
S2	26 Jun 2018	Wave Height Low (ft)	3
S2	26 Jun 2018	High Tide (ft)	3.7
S2	26 Jun 2018	High Tide Time	934
S2	26 Jun 2018	Low Tide (ft)	1.9
S2	26 Jun 2018	Low Tide Time	1431
S2	26 Jun 2018	Comments	Kelp; Algae; 7 Persons; Water clear; No flow from storm drain
S3	05 Jun 2018	Arrive Time	1125
S3	05 Jun 2018	Weather	Cloudy
S3	05 Jun 2018	Wind Speed (kts)	
S3	05 Jun 2018	Wind Dir	SW
S3	05 Jun 2018	Animal Life	3 Dogs; 5 Seagulls
S3	05 Jun 2018	Floatables	None
S3	05 Jun 2018	Water Color	Green
S3	05 Jun 2018	Current Direction	N
S3	05 Jun 2018	Water Temp (C)	15
S3	05 Jun 2018	Wave Height Low (ft)	2
S3	05 Jun 2018	High Tide (ft)	3.6
S3	05 Jun 2018	High Tide Time	1618
S3	05 Jun 2018	Low Tide (ft)	0.6
S3	05 Jun 2018	Low Tide Time	906
S3	05 Jun 2018	Comments	Kelp; Water turbid; No flow from storm drain; Wind speed was not measured due to anemometer malfunction
S3	12 Jun 2018	Arrive Time	1020
S3	12 Jun 2018	Weather	Sunny
S3	12 Jun 2018	Wind Speed (kts)	1.5
S3	12 Jun 2018	Wind Dir	SW
S3	12 Jun 2018	Animal Life	15 Birds; 5 Dogs
S3	12 Jun 2018	Floatables	None
S3	12 Jun 2018	Water Color	Green
S3	12 Jun 2018	Current Direction	N
S3	12 Jun 2018	Water Temp (C)	15
S3	12 Jun 2018	Wave Height Low (ft)	2
S3	12 Jun 2018	High Tide (ft)	4
S3	12 Jun 2018	High Tide Time	911
S3	12 Jun 2018	Low Tide (ft)	1.3

Station	Date	Parameter	Value
S3	12 Jun 2018	Low Tide Time	1426
S3	12 Jun 2018	Comments	Water clear; No flow from storm drain
S3	19 Jun 2018	Arrive Time	955
S3	19 Jun 2018	Weather	Sunny
S3	19 Jun 2018	Wind Speed (kts)	0.9
S3	19 Jun 2018	Wind Dir	SW
S3	19 Jun 2018	Animal Life	5 Birds; 5 Dogs
S3	19 Jun 2018	Floatables	None
S3	19 Jun 2018	Water Color	Green
S3	19 Jun 2018	Current Direction	N
S3	19 Jun 2018	Water Temp (C)	15
S3	19 Jun 2018	Wave Height Low (ft)	2
S3	19 Jun 2018	High Tide (ft)	4.4
S3	19 Jun 2018	High Tide Time	1551
S3	19 Jun 2018	Low Tide (ft)	-0.1
S3	19 Jun 2018	Low Tide Time	858
S3	19 Jun 2018	Comments	Water clear; No flow from storm drain
S3	26 Jun 2018	Arrive Time	1145
S3	26 Jun 2018	Weather	Sunny
S3	26 Jun 2018	Wind Speed (kts)	6.2
S3	26 Jun 2018	Wind Dir	NW
S3	26 Jun 2018	Animal Life	3 Dogs
S3	26 Jun 2018	Floatables	None
S3	26 Jun 2018	Water Color	Green
S3	26 Jun 2018	Current Direction	N
S3	26 Jun 2018	Water Temp (C)	16
S3	26 Jun 2018	Wave Height Low (ft)	3
S3	26 Jun 2018	High Tide (ft)	3.7
S3	26 Jun 2018	High Tide Time	934
S3	26 Jun 2018	Low Tide (ft)	1.9
S3	26 Jun 2018	Low Tide Time	1431
S3	26 Jun 2018	Comments	Kelp; Algae; Water clear; 0.5 L/s water flowing from storm drain
S4	05 Jun 2018	Arrive Time	812
S4	05 Jun 2018	Weather	Overcast
S4	05 Jun 2018	Wind Speed (kts)	2.7
S4	05 Jun 2018	Wind Dir	W
S4	05 Jun 2018	Animal Life	None
S4	05 Jun 2018	Floatables	None
S4	05 Jun 2018	Water Color	Green
S4	05 Jun 2018	Current Direction	N
S4	05 Jun 2018	Water Temp (C)	16
S4	05 Jun 2018	Wave Height Low (ft)	2
S4	05 Jun 2018	High Tide (ft)	4
S4	05 Jun 2018	High Tide Time	116
S4	05 Jun 2018	Low Tide (ft)	0.6
S4	05 Jun 2018	Low Tide Time	906
S4	05 Jun 2018	Comments	Kelp; Water clear
S4	12 Jun 2018	Arrive Time	837
S4	12 Jun 2018	Weather	Cloudy
S4	12 Jun 2018	Wind Speed (kts)	5.1
S4	12 Jun 2018	Wind Dir	W

Station	Date	Parameter	Value
S4	12 Jun 2018	Animal Life	None
S4	12 Jun 2018	Floatables	None
S4	12 Jun 2018	Water Color	Green
S4	12 Jun 2018	Current Direction	N
S4	12 Jun 2018	Water Temp (C)	18
S4	12 Jun 2018	Wave Height Low (ft)	3
S4	12 Jun 2018	High Tide (ft)	4
S4	12 Jun 2018	High Tide Time	911
S4	12 Jun 2018	Low Tide (ft)	-0.8
S4	12 Jun 2018	Low Tide Time	302
S4	12 Jun 2018	Comments	Kelp; Seagrass; Sewage-like odor; Water clear
S4	14 Jun 2018	Arrive Time	846
S4	14 Jun 2018	Weather	Partly Cloudy
S4	14 Jun 2018	Wind Speed (kts)	6.3
S4	14 Jun 2018	Wind Dir	W
S4	14 Jun 2018	Animal Life	None
S4	14 Jun 2018	Floatables	None
S4	14 Jun 2018	Water Color	Green
S4	14 Jun 2018	Current Direction	W
S4	14 Jun 2018	Water Temp (C)	18
S4	14 Jun 2018	Wave Height Low (ft)	2
S4	14 Jun 2018	High Tide (ft)	4
S4	14 Jun 2018	High Tide Time	1052
S4	14 Jun 2018	Low Tide (ft)	-1.5
S4	14 Jun 2018	Low Tide Time	433
S4	14 Jun 2018	Comments	Kelp; Seagrass; Water clear
S4	19 Jun 2018	Arrive Time	1129
S4	19 Jun 2018	Weather	Partly Cloudy
S4	19 Jun 2018	Wind Speed (kts)	5.3
S4	19 Jun 2018	Wind Dir	N
S4	19 Jun 2018	Animal Life	4 Horses
S4	19 Jun 2018	Floatables	None
S4	19 Jun 2018	Water Color	Green
S4	19 Jun 2018	Current Direction	N
S4	19 Jun 2018	Water Temp (C)	17
S4	19 Jun 2018	Wave Height Low (ft)	2
S4	19 Jun 2018	High Tide (ft)	4.4
S4	19 Jun 2018	High Tide Time	1551
S4	19 Jun 2018	Low Tide (ft)	-0.1
S4	19 Jun 2018	Low Tide Time	858
S4	19 Jun 2018	Comments	Seagrass; 4 Persons; Water clear
S4	26 Jun 2018	Arrive Time	900
S4	26 Jun 2018	Weather	Partly Cloudy
S4	26 Jun 2018	Wind Speed (kts)	3.6
S4	26 Jun 2018	Wind Dir	N
S4	26 Jun 2018	Animal Life	None
S4	26 Jun 2018	Floatables	None
S4	26 Jun 2018	Water Color	Green
S4	26 Jun 2018	Current Direction	N
S4	26 Jun 2018	Water Temp (C)	18
S4	26 Jun 2018	Wave Height Low (ft)	2
S4	26 Jun 2018	High Tide (ft)	3.7

Station	Date	Parameter	Value
S4	26 Jun 2018	High Tide Time	934
S4	26 Jun 2018	Low Tide (ft)	1.9
S4	26 Jun 2018	Low Tide Time	1431
S4	26 Jun 2018	Comments	Water clear
S5	05 Jun 2018	Arrive Time	905
S5	05 Jun 2018	Weather	Overcast
S5	05 Jun 2018	Wind Speed (kts)	5.5
S5	05 Jun 2018	Wind Dir	SW
S5	05 Jun 2018	Animal Life	None
S5	05 Jun 2018	Floatables	None
S5	05 Jun 2018	Water Color	Green
S5	05 Jun 2018	Current Direction	N
S5	05 Jun 2018	Water Temp (C)	16
S5	05 Jun 2018	Wave Height Low (ft)	2
S5	05 Jun 2018	High Tide (ft)	3.6
S5	05 Jun 2018	High Tide Time	1618
S5	05 Jun 2018	Low Tide (ft)	0.6
S5	05 Jun 2018	Low Tide Time	906
S5	05 Jun 2018	Comments	Kelp; Seagrass; 1 Person; Water clear
S5	12 Jun 2018	Arrive Time	939
S5	12 Jun 2018	Weather	Cloudy
S5	12 Jun 2018	Wind Speed (kts)	5
S5	12 Jun 2018	Wind Dir	W
S5	12 Jun 2018	Animal Life	None
S5	12 Jun 2018	Floatables	None
S5	12 Jun 2018	Water Color	Brown
S5	12 Jun 2018	Current Direction	N
S5	12 Jun 2018	Water Temp (C)	19
S5	12 Jun 2018	Wave Height Low (ft)	3
S5	12 Jun 2018	High Tide (ft)	4
S5	12 Jun 2018	High Tide Time	911
S5	12 Jun 2018	Low Tide (ft)	1.3
S5	12 Jun 2018	Low Tide Time	1426
S5	12 Jun 2018	Comments	Kelp; Seagrass; Sewage-like odor; Water clear
S5	14 Jun 2018	Arrive Time	949
S5	14 Jun 2018	Weather	Partly Cloudy
S5	14 Jun 2018	Wind Speed (kts)	7.1
S5	14 Jun 2018	Wind Dir	SW
S5	14 Jun 2018	Animal Life	None
S5	14 Jun 2018	Floatables	None
S5	14 Jun 2018	Water Color	Green
S5	14 Jun 2018	Current Direction	N
S5	14 Jun 2018	Water Temp (C)	19
S5	14 Jun 2018	Wave Height Low (ft)	3
S5	14 Jun 2018	High Tide (ft)	4
S5	14 Jun 2018	High Tide Time	1052
S5	14 Jun 2018	Low Tide (ft)	-1.5
S5	14 Jun 2018	Low Tide Time	433
S5	14 Jun 2018	Comments	Kelp; Seagrass; 1 Jogger; Water clear
S5	19 Jun 2018	Arrive Time	935
S5	19 Jun 2018	Weather	Overcast

Station	Date	Parameter	Value
S5	19 Jun 2018	Wind Speed (kts)	3.4
S5	19 Jun 2018	Wind Dir	N
S5	19 Jun 2018	Animal Life	1 Dog
S5	19 Jun 2018	Floatables	None
S5	19 Jun 2018	Water Color	Green
S5	19 Jun 2018	Current Direction	N
S5	19 Jun 2018	Water Temp (C)	16
S5	19 Jun 2018	Wave Height Low (ft)	2
S5	19 Jun 2018	High Tide (ft)	4.4
S5	19 Jun 2018	High Tide Time	1551
S5	19 Jun 2018	Low Tide (ft)	-0.1
S5	19 Jun 2018	Low Tide Time	858
S5	19 Jun 2018	Comments	Seagrass; 5 Persons; Water clear
S5	26 Jun 2018	Arrive Time	1023
S5	26 Jun 2018	Weather	Sunny
S5	26 Jun 2018	Wind Speed (kts)	6.6
S5	26 Jun 2018	Wind Dir	N
S5	26 Jun 2018	Animal Life	None
S5	26 Jun 2018	Floatables	None
S5	26 Jun 2018	Water Color	Green
S5	26 Jun 2018	Current Direction	N
S5	26 Jun 2018	Water Temp (C)	19
S5	26 Jun 2018	Wave Height Low (ft)	1
S5	26 Jun 2018	High Tide (ft)	3.7
S5	26 Jun 2018	High Tide Time	934
S5	26 Jun 2018	Low Tide (ft)	1.9
S5	26 Jun 2018	Low Tide Time	1431
S5	26 Jun 2018	Comments	Seagrass; Water clear
S6	05 Jun 2018	Arrive Time	916
S6	05 Jun 2018	Weather	Overcast
S6	05 Jun 2018	Wind Speed (kts)	5.1
S6	05 Jun 2018	Wind Dir	S
S6	05 Jun 2018	Animal Life	None
S6	05 Jun 2018	Floatables	None
S6	05 Jun 2018	Water Color	Green
S6	05 Jun 2018	Current Direction	N
S6	05 Jun 2018	Water Temp (C)	16
S6	05 Jun 2018	Wave Height Low (ft)	2
S6	05 Jun 2018	High Tide (ft)	3.6
S6	05 Jun 2018	High Tide Time	1618
S6	05 Jun 2018	Low Tide (ft)	0.6
S6	05 Jun 2018	Low Tide Time	906
S6	05 Jun 2018	Comments	Kelp; Seagrass; 3 Persons; 2 Fishermen; Water clear
S6	12 Jun 2018	Arrive Time	950
S6	12 Jun 2018	Weather	Partly Cloudy
S6	12 Jun 2018	Wind Speed (kts)	4
S6	12 Jun 2018	Wind Dir	W
S6	12 Jun 2018	Animal Life	None
S6	12 Jun 2018	Floatables	None
S6	12 Jun 2018	Water Color	Brown
S6	12 Jun 2018	Current Direction	N
S6	12 Jun 2018	Water Temp (C)	20

Station	Date	Parameter	Value
S6	12 Jun 2018	Wave Height Low (ft)	4
S6	12 Jun 2018	High Tide (ft)	4
S6	12 Jun 2018	High Tide Time	911
S6	12 Jun 2018	Low Tide (ft)	1.3
S6	12 Jun 2018	Low Tide Time	1426
S6	12 Jun 2018	Comments	Kelp; Seagrass; Water clear
S6	14 Jun 2018	Arrive Time	959
S6	14 Jun 2018	Weather	Sunny
S6	14 Jun 2018	Wind Speed (kts)	3.8
S6	14 Jun 2018	Wind Dir	N
S6	14 Jun 2018	Animal Life	None
S6	14 Jun 2018	Floatables	None
S6	14 Jun 2018	Water Color	Brown
S6	14 Jun 2018	Current Direction	N
S6	14 Jun 2018	Water Temp (C)	21
S6	14 Jun 2018	Wave Height Low (ft)	3
S6	14 Jun 2018	High Tide (ft)	4
S6	14 Jun 2018	High Tide Time	1052
S6	14 Jun 2018	Low Tide (ft)	-1.5
S6	14 Jun 2018	Low Tide Time	433
S6	14 Jun 2018	Comments	Kelp; Seagrass; 2 Persons; Water clear
S6	19 Jun 2018	Arrive Time	948
S6	19 Jun 2018	Weather	Overcast
S6	19 Jun 2018	Wind Speed (kts)	6.6
S6	19 Jun 2018	Wind Dir	N
S6	19 Jun 2018	Animal Life	1 Dog
S6	19 Jun 2018	Floatables	None
S6	19 Jun 2018	Water Color	Green
S6	19 Jun 2018	Current Direction	N
S6	19 Jun 2018	Water Temp (C)	17
S6	19 Jun 2018	Wave Height Low (ft)	2
S6	19 Jun 2018	High Tide (ft)	4.4
S6	19 Jun 2018	High Tide Time	1551
S6	19 Jun 2018	Low Tide (ft)	-0.1
S6	19 Jun 2018	Low Tide Time	858
S6	19 Jun 2018	Comments	Seagrass; 3 Persons; Water clear
S6	26 Jun 2018	Arrive Time	1033
S6	26 Jun 2018	Weather	Sunny
S6	26 Jun 2018	Wind Speed (kts)	7.1
S6	26 Jun 2018	Wind Dir	N
S6	26 Jun 2018	Animal Life	None
S6	26 Jun 2018	Floatables	None
S6	26 Jun 2018	Water Color	Green
S6	26 Jun 2018	Current Direction	N
S6	26 Jun 2018	Water Temp (C)	19
S6	26 Jun 2018	Wave Height Low (ft)	2
S6	26 Jun 2018	High Tide (ft)	3.7
S6	26 Jun 2018	High Tide Time	934
S6	26 Jun 2018	Low Tide (ft)	1.9
S6	26 Jun 2018	Low Tide Time	1431
S6	26 Jun 2018	Comments	Kelp; Seagrass; 7 Persons; Water clear

Station	Date	Parameter	Value
S8	05 Jun 2018	Arrive Time	1027
S8	05 Jun 2018	Weather	Overcast
S8	05 Jun 2018	Wind Speed (kts)	10.1
S8	05 Jun 2018	Wind Dir	S
S8	05 Jun 2018	Animal Life	4 Birds
S8	05 Jun 2018	Floatables	None
S8	05 Jun 2018	Water Color	Green
S8	05 Jun 2018	Current Direction	N
S8	05 Jun 2018	Water Temp (C)	16
S8	05 Jun 2018	Wave Height Low (ft)	3
S8	05 Jun 2018	High Tide (ft)	3.6
S8	05 Jun 2018	High Tide Time	1618
S8	05 Jun 2018	Low Tide (ft)	0.6
S8	05 Jun 2018	Low Tide Time	906
S8	05 Jun 2018	Comments	Kelp; Seagrass; 15 Persons; Water clear
S8	12 Jun 2018	Arrive Time	1122
S8	12 Jun 2018	Weather	Partly Cloudy
S8	12 Jun 2018	Wind Speed (kts)	4.8
S8	12 Jun 2018	Wind Dir	W
S8	12 Jun 2018	Animal Life	None
S8	12 Jun 2018	Floatables	None
S8	12 Jun 2018	Water Color	Brown
S8	12 Jun 2018	Current Direction	N
S8	12 Jun 2018	Water Temp (C)	20
S8	12 Jun 2018	Wave Height Low (ft)	3
S8	12 Jun 2018	High Tide (ft)	4
S8	12 Jun 2018	High Tide Time	911
S8	12 Jun 2018	Low Tide (ft)	1.3
S8	12 Jun 2018	Low Tide Time	1426
S8	12 Jun 2018	Comments	Kelp; Seagrass; 4 Persons; Water clear
S8	19 Jun 2018	Arrive Time	845
S8	19 Jun 2018	Weather	Overcast
S8	19 Jun 2018	Wind Speed (kts)	5.5
S8	19 Jun 2018	Wind Dir	N
S8	19 Jun 2018	Animal Life	None
S8	19 Jun 2018	Floatables	None
S8	19 Jun 2018	Water Color	Brown
S8	19 Jun 2018	Current Direction	N
S8	19 Jun 2018	Water Temp (C)	17
S8	19 Jun 2018	Wave Height Low (ft)	3
S8	19 Jun 2018	High Tide (ft)	4.7
S8	19 Jun 2018	High Tide Time	148
S8	19 Jun 2018	Low Tide (ft)	-0.1
S8	19 Jun 2018	Low Tide Time	858
S8	19 Jun 2018	Comments	Seagrass; Water clear
S8	26 Jun 2018	Arrive Time	1200
S8	26 Jun 2018	Weather	Sunny
S8	26 Jun 2018	Wind Speed (kts)	13
S8	26 Jun 2018	Wind Dir	N
S8	26 Jun 2018	Animal Life	2 Birds
S8	26 Jun 2018	Floatables	None
S8	26 Jun 2018	Water Color	Green

Station	Date	Parameter	Value
S8	26 Jun 2018	Current Direction	N
S8	26 Jun 2018	Water Temp (C)	19
S8	26 Jun 2018	Wave Height Low (ft)	2
S8	26 Jun 2018	High Tide (ft)	3.7
S8	26 Jun 2018	High Tide Time	934
S8	26 Jun 2018	Low Tide (ft)	1.9
S8	26 Jun 2018	Low Tide Time	1431
S8	26 Jun 2018	Comments	33 Persons; 3 Swimmers; Water clear
S9	05 Jun 2018	Arrive Time	1102
S9	05 Jun 2018	Weather	Overcast
S9	05 Jun 2018	Wind Speed (kts)	5.5
S9	05 Jun 2018	Wind Dir	SW
S9	05 Jun 2018	Animal Life	None
S9	05 Jun 2018	Floatables	None
S9	05 Jun 2018	Water Color	Green
S9	05 Jun 2018	Current Direction	N
S9	05 Jun 2018	Water Temp (C)	18
S9	05 Jun 2018	Wave Height Low (ft)	2
S9	05 Jun 2018	High Tide (ft)	3.6
S9	05 Jun 2018	High Tide Time	1618
S9	05 Jun 2018	Low Tide (ft)	0.6
S9	05 Jun 2018	Low Tide Time	906
S9	05 Jun 2018	Comments	Seagrass; 14 Persons; 6 Surfers; 7 Swimmers; Water clear
S9	12 Jun 2018	Arrive Time	1205
S9	12 Jun 2018	Weather	Partly Cloudy
S9	12 Jun 2018	Wind Speed (kts)	3.3
S9	12 Jun 2018	Wind Dir	W
S9	12 Jun 2018	Animal Life	None
S9	12 Jun 2018	Floatables	None
S9	12 Jun 2018	Water Color	Green
S9	12 Jun 2018	Current Direction	N
S9	12 Jun 2018	Water Temp (C)	22
S9	12 Jun 2018	Wave Height Low (ft)	3
S9	12 Jun 2018	High Tide (ft)	4
S9	12 Jun 2018	High Tide Time	911
S9	12 Jun 2018	Low Tide (ft)	1.3
S9	12 Jun 2018	Low Tide Time	1426
S9	12 Jun 2018	Comments	Kelp; Seagrass; 3 Joggers; 35 Persons; 15 Surfers; 17 Swimmers; Water clear
S9	19 Jun 2018	Arrive Time	815
S9	19 Jun 2018	Weather	Overcast
S9	19 Jun 2018	Wind Speed (kts)	2.9
S9	19 Jun 2018	Wind Dir	N
S9	19 Jun 2018	Animal Life	None
S9	19 Jun 2018	Floatables	None
S9	19 Jun 2018	Water Color	Green
S9	19 Jun 2018	Current Direction	N
S9	19 Jun 2018	Water Temp (C)	17
S9	19 Jun 2018	Wave Height Low (ft)	2
S9	19 Jun 2018	High Tide (ft)	4.7
S9	19 Jun 2018	High Tide Time	148
S9	19 Jun 2018	Low Tide (ft)	-0.1

Station	Date	Parameter	Value
S9	19 Jun 2018	Low Tide Time	858
S9	19 Jun 2018	Comments	Kelp; Seagrass; 2 Joggers; 6 Persons; 1 Swimmer; Water clear
S9	26 Jun 2018	Arrive Time	1242
S9	26 Jun 2018	Weather	Sunny
S9	26 Jun 2018	Wind Speed (kts)	8.3
S9	26 Jun 2018	Wind Dir	N
S9	26 Jun 2018	Animal Life	35 Birds
S9	26 Jun 2018	Floatables	None
S9	26 Jun 2018	Water Color	Green
S9	26 Jun 2018	Current Direction	N
S9	26 Jun 2018	Water Temp (C)	20
S9	26 Jun 2018	Wave Height Low (ft)	2
S9	26 Jun 2018	High Tide (ft)	3.7
S9	26 Jun 2018	High Tide Time	934
S9	26 Jun 2018	Low Tide (ft)	1.9
S9	26 Jun 2018	Low Tide Time	1431
S9	26 Jun 2018	Comments	Kelp; Seagrass; 26 Persons; 12 Surfers; 5 Swimmers; Water turbid; Lots of kelp on the shore and in the water
S9	28 Jun 2018	Arrive Time	843
S9	28 Jun 2018	Weather	Partly Cloudy
S9	28 Jun 2018	Wind Speed (kts)	5
S9	28 Jun 2018	Wind Dir	E
S9	28 Jun 2018	Animal Life	200 Shorebirds; 25 Birds; 20 Seagulls
S9	28 Jun 2018	Floatables	None
S9	28 Jun 2018	Water Color	Green
S9	28 Jun 2018	Current Direction	E
S9	28 Jun 2018	Water Temp (C)	18
S9	28 Jun 2018	Wave Height Low (ft)	1
S9	28 Jun 2018	High Tide (ft)	3.7
S9	28 Jun 2018	High Tide Time	1045
S9	28 Jun 2018	Low Tide (ft)	-0.6
S9	28 Jun 2018	Low Tide Time	428
S9	28 Jun 2018	Comments	Resample; Kelp; 9 Persons; Water clear
S9	29 Jun 2018	Arrive Time	951
S9	29 Jun 2018	Weather	Overcast
S9	29 Jun 2018	Wind Speed (kts)	5.5
S9	29 Jun 2018	Wind Dir	SW
S9	29 Jun 2018	Animal Life	15 Birds
S9	29 Jun 2018	Floatables	None
S9	29 Jun 2018	Water Color	Green
S9	29 Jun 2018	Current Direction	N
S9	29 Jun 2018	Water Temp (C)	18
S9	29 Jun 2018	Wave Height Low (ft)	2
S9	29 Jun 2018	High Tide (ft)	3.7
S9	29 Jun 2018	High Tide Time	1121
S9	29 Jun 2018	Low Tide (ft)	-0.5
S9	29 Jun 2018	Low Tide Time	500
S9	29 Jun 2018	Comments	Resample; Seagrass; 20 Persons; Water clear
S10	05 Jun 2018	Arrive Time	807
S10	05 Jun 2018	Weather	Overcast
S10	05 Jun 2018	Wind Speed (kts)	7.1

Station	Date	Parameter	Value
S10	05 Jun 2018	Wind Dir	W
S10	05 Jun 2018	Animal Life	None
S10	05 Jun 2018	Floatables	None
S10	05 Jun 2018	Water Color	Green
S10	05 Jun 2018	Current Direction	N
S10	05 Jun 2018	Water Temp (C)	16
S10	05 Jun 2018	Wave Height Low (ft)	2
S10	05 Jun 2018	High Tide (ft)	4
S10	05 Jun 2018	High Tide Time	116
S10	05 Jun 2018	Low Tide (ft)	0.6
S10	05 Jun 2018	Low Tide Time	906
S10	05 Jun 2018	Comments	Seagrass; Water clear
S10	12 Jun 2018	Arrive Time	832
S10	12 Jun 2018	Weather	Cloudy
S10	12 Jun 2018	Wind Speed (kts)	2.1
S10	12 Jun 2018	Wind Dir	W
S10	12 Jun 2018	Animal Life	None
S10	12 Jun 2018	Floatables	None
S10	12 Jun 2018	Water Color	Green
S10	12 Jun 2018	Current Direction	N
S10	12 Jun 2018	Water Temp (C)	19
S10	12 Jun 2018	Wave Height Low (ft)	3
S10	12 Jun 2018	High Tide (ft)	4
S10	12 Jun 2018	High Tide Time	911
S10	12 Jun 2018	Low Tide (ft)	-0.8
S10	12 Jun 2018	Low Tide Time	302
S10	12 Jun 2018	Comments	Kelp; Seagrass; Sewage-like odor; Water clear
S10	14 Jun 2018	Arrive Time	840
S10	14 Jun 2018	Weather	Partly Cloudy
S10	14 Jun 2018	Wind Speed (kts)	6.8
S10	14 Jun 2018	Wind Dir	W
S10	14 Jun 2018	Animal Life	None
S10	14 Jun 2018	Floatables	None
S10	14 Jun 2018	Water Color	Green
S10	14 Jun 2018	Current Direction	N
S10	14 Jun 2018	Water Temp (C)	19
S10	14 Jun 2018	Wave Height Low (ft)	3
S10	14 Jun 2018	High Tide (ft)	4
S10	14 Jun 2018	High Tide Time	1052
S10	14 Jun 2018	Low Tide (ft)	-1.5
S10	14 Jun 2018	Low Tide Time	433
S10	14 Jun 2018	Comments	Kelp; Seagrass; Water clear
S10	19 Jun 2018	Arrive Time	1123
S10	19 Jun 2018	Weather	Partly Cloudy
S10	19 Jun 2018	Wind Speed (kts)	5.4
S10	19 Jun 2018	Wind Dir	N
S10	19 Jun 2018	Animal Life	2 Shorebirds
S10	19 Jun 2018	Floatables	Foam; Fecal Matter
S10	19 Jun 2018	Water Color	Green
S10	19 Jun 2018	Current Direction	N
S10	19 Jun 2018	Water Temp (C)	17
S10	19 Jun 2018	Wave Height Low (ft)	1

Station	Date	Parameter	Value
S10	19 Jun 2018	High Tide (ft)	4.4
S10	19 Jun 2018	High Tide Time	1551
S10	19 Jun 2018	Low Tide (ft)	-0.1
S10	19 Jun 2018	Low Tide Time	858
S10	19 Jun 2018	Comments	Kelp; Seagrass; 1 Person; Water clear
S10	26 Jun 2018	Arrive Time	853
S10	26 Jun 2018	Weather	Partly Cloudy
S10	26 Jun 2018	Wind Speed (kts)	3.6
S10	26 Jun 2018	Wind Dir	N
S10	26 Jun 2018	Animal Life	None
S10	26 Jun 2018	Floatables	None
S10	26 Jun 2018	Water Color	Green
S10	26 Jun 2018	Current Direction	N
S10	26 Jun 2018	Water Temp (C)	18
S10	26 Jun 2018	Wave Height Low (ft)	2
S10	26 Jun 2018	High Tide (ft)	3.7
S10	26 Jun 2018	High Tide Time	934
S10	26 Jun 2018	Low Tide (ft)	-0.4
S10	26 Jun 2018	Low Tide Time	322
S10	26 Jun 2018	Comments	Water clear
S11	05 Jun 2018	Arrive Time	911
S11	05 Jun 2018	Weather	Overcast
S11	05 Jun 2018	Wind Speed (kts)	7.6
S11	05 Jun 2018	Wind Dir	S
S11	05 Jun 2018	Animal Life	None
S11	05 Jun 2018	Floatables	None
S11	05 Jun 2018	Water Color	Green
S11	05 Jun 2018	Current Direction	N
S11	05 Jun 2018	Water Temp (C)	15
S11	05 Jun 2018	Wave Height Low (ft)	2
S11	05 Jun 2018	High Tide (ft)	3.6
S11	05 Jun 2018	High Tide Time	1618
S11	05 Jun 2018	Low Tide (ft)	0.6
S11	05 Jun 2018	Low Tide Time	906
S11	05 Jun 2018	Comments	Kelp; Seagrass; Water clear
S11	12 Jun 2018	Arrive Time	946
S11	12 Jun 2018	Weather	Partly Cloudy
S11	12 Jun 2018	Wind Speed (kts)	4.2
S11	12 Jun 2018	Wind Dir	W
S11	12 Jun 2018	Animal Life	None
S11	12 Jun 2018	Floatables	None
S11	12 Jun 2018	Water Color	Brown
S11	12 Jun 2018	Current Direction	N
S11	12 Jun 2018	Water Temp (C)	20
S11	12 Jun 2018	Wave Height Low (ft)	3
S11	12 Jun 2018	High Tide (ft)	4
S11	12 Jun 2018	High Tide Time	911
S11	12 Jun 2018	Low Tide (ft)	1.3
S11	12 Jun 2018	Low Tide Time	1426
S11	12 Jun 2018	Comments	Kelp; Seagrass; Sewage-like odor; Water clear
S11	14 Jun 2018	Arrive Time	956

Station	Date	Parameter	Value
S11	14 Jun 2018	Weather	Partly Cloudy
S11	14 Jun 2018	Wind Speed (kts)	6.6
S11	14 Jun 2018	Wind Dir	NW
S11	14 Jun 2018	Animal Life	None
S11	14 Jun 2018	Floatables	None
S11	14 Jun 2018	Water Color	Green
S11	14 Jun 2018	Current Direction	N
S11	14 Jun 2018	Water Temp (C)	20
S11	14 Jun 2018	Wave Height Low (ft)	2
S11	14 Jun 2018	High Tide (ft)	4
S11	14 Jun 2018	High Tide Time	1052
S11	14 Jun 2018	Low Tide (ft)	-1.5
S11	14 Jun 2018	Low Tide Time	433
S11	14 Jun 2018	Comments	Seagrass; Water clear
S11	19 Jun 2018	Arrive Time	944
S11	19 Jun 2018	Weather	Overcast
S11	19 Jun 2018	Wind Speed (kts)	5.8
S11	19 Jun 2018	Wind Dir	N
S11	19 Jun 2018	Animal Life	None
S11	19 Jun 2018	Floatables	None
S11	19 Jun 2018	Water Color	Green
S11	19 Jun 2018	Current Direction	N
S11	19 Jun 2018	Water Temp (C)	17
S11	19 Jun 2018	Wave Height Low (ft)	3
S11	19 Jun 2018	High Tide (ft)	4.4
S11	19 Jun 2018	High Tide Time	1551
S11	19 Jun 2018	Low Tide (ft)	-0.1
S11	19 Jun 2018	Low Tide Time	858
S11	19 Jun 2018	Comments	Seagrass; Water clear
S11	26 Jun 2018	Arrive Time	1028
S11	26 Jun 2018	Weather	Sunny
S11	26 Jun 2018	Wind Speed (kts)	7.2
S11	26 Jun 2018	Wind Dir	N
S11	26 Jun 2018	Animal Life	None
S11	26 Jun 2018	Floatables	None
S11	26 Jun 2018	Water Color	Green
S11	26 Jun 2018	Current Direction	N
S11	26 Jun 2018	Water Temp (C)	19
S11	26 Jun 2018	Wave Height Low (ft)	2
S11	26 Jun 2018	High Tide (ft)	3.7
S11	26 Jun 2018	High Tide Time	934
S11	26 Jun 2018	Low Tide (ft)	1.9
S11	26 Jun 2018	Low Tide Time	1431
S11	26 Jun 2018	Comments	Seagrass; 3 Persons; Water clear
S12	05 Jun 2018	Arrive Time	925
S12	05 Jun 2018	Weather	Overcast
S12	05 Jun 2018	Wind Speed (kts)	7.3
S12	05 Jun 2018	Wind Dir	S
S12	05 Jun 2018	Animal Life	None
S12	05 Jun 2018	Floatables	None
S12	05 Jun 2018	Water Color	Green
S12	05 Jun 2018	Current Direction	N

Station	Date	Parameter	Value
S12	05 Jun 2018	Water Temp (C)	16
S12	05 Jun 2018	Wave Height Low (ft)	3
S12	05 Jun 2018	High Tide (ft)	3.6
S12	05 Jun 2018	High Tide Time	1618
S12	05 Jun 2018	Low Tide (ft)	0.6
S12	05 Jun 2018	Low Tide Time	906
S12	05 Jun 2018	Comments	Kelp; Seagrass; 1 Person; Water clear
S12	12 Jun 2018	Arrive Time	958
S12	12 Jun 2018	Weather	Partly Cloudy
S12	12 Jun 2018	Wind Speed (kts)	4.6
S12	12 Jun 2018	Wind Dir	W
S12	12 Jun 2018	Animal Life	None
S12	12 Jun 2018	Floatables	None
S12	12 Jun 2018	Water Color	Brown
S12	12 Jun 2018	Current Direction	N
S12	12 Jun 2018	Water Temp (C)	20
S12	12 Jun 2018	Wave Height Low (ft)	3
S12	12 Jun 2018	High Tide (ft)	4
S12	12 Jun 2018	High Tide Time	911
S12	12 Jun 2018	Low Tide (ft)	1.3
S12	12 Jun 2018	Low Tide Time	1426
S12	12 Jun 2018	Comments	Kelp; Seagrass; 2 Persons; Water clear
S12	14 Jun 2018	Arrive Time	1008
S12	14 Jun 2018	Weather	Sunny
S12	14 Jun 2018	Wind Speed (kts)	4.4
S12	14 Jun 2018	Wind Dir	W
S12	14 Jun 2018	Animal Life	None
S12	14 Jun 2018	Floatables	None
S12	14 Jun 2018	Water Color	Brown
S12	14 Jun 2018	Current Direction	N
S12	14 Jun 2018	Water Temp (C)	19
S12	14 Jun 2018	Wave Height Low (ft)	2
S12	14 Jun 2018	High Tide (ft)	4
S12	14 Jun 2018	High Tide Time	1052
S12	14 Jun 2018	Low Tide (ft)	-1.5
S12	14 Jun 2018	Low Tide Time	433
S12	14 Jun 2018	Comments	Kelp; Seagrass; 4 Persons; Water clear
S12	19 Jun 2018	Arrive Time	959
S12	19 Jun 2018	Weather	Overcast
S12	19 Jun 2018	Wind Speed (kts)	5.2
S12	19 Jun 2018	Wind Dir	N
S12	19 Jun 2018	Animal Life	None
S12	19 Jun 2018	Floatables	None
S12	19 Jun 2018	Water Color	Green
S12	19 Jun 2018	Current Direction	N
S12	19 Jun 2018	Water Temp (C)	17
S12	19 Jun 2018	Wave Height Low (ft)	2
S12	19 Jun 2018	High Tide (ft)	4.4
S12	19 Jun 2018	High Tide Time	1551
S12	19 Jun 2018	Low Tide (ft)	-0.1
S12	19 Jun 2018	Low Tide Time	858
S12	19 Jun 2018	Comments	Seagrass; 11 Persons; Water clear

Station	Date	Parameter	Value
S12	26 Jun 2018	Arrive Time	1041
S12	26 Jun 2018	Weather	Sunny
S12	26 Jun 2018	Wind Speed (kts)	10.1
S12	26 Jun 2018	Wind Dir	N
S12	26 Jun 2018	Animal Life	None
S12	26 Jun 2018	Floatables	None
S12	26 Jun 2018	Water Color	Green
S12	26 Jun 2018	Current Direction	N
S12	26 Jun 2018	Water Temp (C)	19
S12	26 Jun 2018	Wave Height Low (ft)	1
S12	26 Jun 2018	High Tide (ft)	3.7
S12	26 Jun 2018	High Tide Time	934
S12	26 Jun 2018	Low Tide (ft)	1.9
S12	26 Jun 2018	Low Tide Time	1431
S12	26 Jun 2018	Comments	Seagrass; 7 Persons; 1 Surfer; 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 2018	13*	3*	2*	3*	3*	3*	5*
02 Jun 2018	13*	3*	2*	3*	3*	3*	5*
03 Jun 2018	13*	3*	2*	3*	3*	3*	5*
04 Jun 2018	12	3	2	3	3	3	6
05 Jun 2018	12	3	2	3	3	3	6
06 Jun 2018	13*	3*	2*	3*	3*	3*	7*
07 Jun 2018	13*	3*	2*	3*	3*	3*	7*
08 Jun 2018	13*	3*	2*	3*	3*	3*	7*
09 Jun 2018	13*	3*	2*	3*	3*	3*	7*
10 Jun 2018	13*	3*	2*	3*	3*	3*	7*
11 Jun 2018	22	8	5	4	5	5	19
12 Jun 2018	22	8	5	4	5	5	19
13 Jun 2018	22*	11*	6*	3*	6*	4*	20*
14 Jun 2018	22*	11*	6*	3*	6*	4*	20*
15 Jun 2018	22*	11*	6*	3*	6*	4*	20*
16 Jun 2018	22*	11*	6*	3*	6*	4*	20*
17 Jun 2018	22*	11*	6*	3*	6*	4*	20*
18 Jun 2018	18	11	5	3	5	4	13
19 Jun 2018	18	11	5	3	5	4	13
20 Jun 2018	19*	12*	6*	3*	3*	4*	13*
21 Jun 2018	19*	12*	6*	3*	3*	4*	13*
22 Jun 2018	19*	12*	6*	3*	3*	4*	13*
23 Jun 2018	19*	12*	6*	3*	3*	4*	13*
24 Jun 2018	19*	12*	6*	3*	3*	4*	13*
25 Jun 2018	20	11	5	3	3	5	11
26 Jun 2018	20	11	5	3	3	5	11
27 Jun 2018	20	11	5	3	3	5	11
28 Jun 2018	21*	17*	6*	3*	4*	6*	18*
29 Jun 2018	21*	17*	6*	3*	4*	6*	18*
30 Jun 2018	21*	17*	6*	3*	4*	6*	18*

* 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 2018	2*	2*	2*	2*	2*	2*	2*
02 Jun 2018	2*	2*	2*	2*	2*	2*	2*
03 Jun 2018	2*	2*	2*	2*	2*	2*	2*
04 Jun 2018	2	2	2	2	2	2	2
05 Jun 2018	2	2	2	2	2	2	2
06 Jun 2018	2*	2*	2*	2*	2*	2*	2*
07 Jun 2018	2*	2*	2*	2*	2*	2*	2*
08 Jun 2018	2*	2*	2*	2*	2*	2*	2*
09 Jun 2018	2*	2*	2*	2*	2*	2*	2*
10 Jun 2018	2*	2*	2*	2*	2*	2*	2*
11 Jun 2018	2	3	3	2	2	2	4
12 Jun 2018	2	3	3	2	2	2	4
13 Jun 2018	2*	4*	3*	2*	2*	2*	4*
14 Jun 2018	2*	4*	3*	2*	2*	2*	4*
15 Jun 2018	2*	4*	3*	2*	2*	2*	4*
16 Jun 2018	2*	4*	3*	2*	2*	2*	4*
17 Jun 2018	2*	4*	3*	2*	2*	2*	4*
18 Jun 2018	2	3	3	2	2	2	4
19 Jun 2018	2	3	3	2	2	2	4
20 Jun 2018	2*	4*	3*	2*	2*	2*	4*
21 Jun 2018	2*	4*	3*	2*	2*	2*	4*
22 Jun 2018	2*	4*	3*	2*	2*	2*	4*
23 Jun 2018	2*	4*	3*	2*	2*	2*	4*
24 Jun 2018	2*	4*	3*	2*	2*	2*	4*
25 Jun 2018	2	3	3	2	2	2	4
26 Jun 2018	2	3	3	2	2	2	4
27 Jun 2018	2	3	3	2	2	2	4
28 Jun 2018	2*	4*	3*	2*	2*	2*	4*
29 Jun 2018	2*	4*	3*	2*	2*	2*	4*
30 Jun 2018	2*	4*	3*	2*	2*	2*	4*

* 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 2018	2*	2*	2*	3*	2*	2*	2*
02 Jun 2018	2*	2*	2*	3*	2*	2*	2*
03 Jun 2018	2*	2*	2*	3*	2*	2*	2*
04 Jun 2018	2	2	2	3	2	3	2
05 Jun 2018	2	2	2	3	2	3	2
06 Jun 2018	2*	2*	2*	3*	2*	3*	2*
07 Jun 2018	2*	2*	2*	3*	2*	3*	2*
08 Jun 2018	2*	2*	2*	3*	2*	3*	2*
09 Jun 2018	2*	2*	2*	3*	2*	3*	2*
10 Jun 2018	2*	2*	2*	3*	2*	3*	2*
11 Jun 2018	4	5	5	3	3	5	6
12 Jun 2018	4	5	5	3	3	5	6
13 Jun 2018	5*	7*	7*	3*	3*	6*	8*
14 Jun 2018	5*	7*	7*	3*	3*	6*	8*
15 Jun 2018	5*	7*	7*	3*	3*	6*	8*
16 Jun 2018	5*	7*	7*	3*	3*	6*	8*
17 Jun 2018	5*	7*	7*	3*	3*	6*	8*
18 Jun 2018	4	5	5	3	3	5	6
19 Jun 2018	4	5	5	3	3	5	6
20 Jun 2018	5*	7*	6*	2*	3*	5*	8*
21 Jun 2018	5*	7*	6*	2*	3*	5*	8*
22 Jun 2018	5*	7*	6*	2*	3*	5*	8*
23 Jun 2018	5*	7*	6*	2*	3*	5*	8*
24 Jun 2018	5*	7*	6*	2*	3*	5*	8*
25 Jun 2018	5	5	5	2	3	4	6
26 Jun 2018	5	5	5	2	3	4	6
27 Jun 2018	5	5	5	2	3	4	6
28 Jun 2018	7*	7*	6*	2*	3*	5*	8*
29 Jun 2018	7*	7*	6*	2*	3*	5*	8*
30 Jun 2018	7*	7*	6*	2*	3*	5*	8*

* 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
04 Jun 2018	IC	IC	IC	IC	IC	IC	IC
11 Jun 2018	IC	IC	IC	IC	IC	IC	IC
18 Jun 2018	IC	IC	IC	IC	IC	IC	IC
25 Jun 2018	IC	IC	IC	IC	IC	IC	IC

IC = In Compliance

E = Exceedance

ns = not sampled

ND = no data

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
04 Jun 2018	IC	IC	IC	IC	IC	IC	IC
11 Jun 2018	IC	IC	IC	IC	IC	IC	IC
18 Jun 2018	IC	IC	IC	IC	IC	IC	IC
25 Jun 2018	IC	IC	IC	IC	IC	IC	IC

IC = In Compliance

E = Exceedance

ns = not sampled

ND = no data

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
04 Jun 2018	IC	IC	IC	IC	IC	IC	IC
11 Jun 2018	E	E	E	IC	IC	IC	E
18 Jun 2018	IC	IC	IC	IC	IC	IC	IC
25 Jun 2018	IC	IC	IC	IC	IC	IC	IC

IC = In Compliance

E = Exceedance

ns = not sampled

ND = no data

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
04 Jun 2018	IC	IC	IC	IC	IC	IC	IC
11 Jun 2018	IC	IC	IC	IC	IC	IC	IC
18 Jun 2018	IC	IC	IC	IC	IC	IC	IC
25 Jun 2018	IC	IC	IC	IC	IC	IC	IC

IC = In Compliance

E = Exceedance

ns = not sampled

ND = no data

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. Comments follow the data summary.

Station	Date	Time	Depth	Total	Fecal	Entero	F:T	Temp	XMS	DO	Sal	pH
I19	04 Jun 2018	1132	2	<2	<2	<2	1.000	18.4	74.87	9.0	33.67	8.2
I19	04 Jun 2018	1132	6	<2	<2	<2	1.000	17.8	66.84	8.4	33.67	8.2
I19	04 Jun 2018	1132	11	<20	<2	<2	0.100	12.4	28.71	4.2	33.63	7.7
I19	11 Jun 2018	1126	2	4e	<2	6e	0.500	19.7	47.06	14.3	33.62	8.5
I19	11 Jun 2018	1126	6	180e	<2	220e	0.011	18.4	24.45	13.5	33.58	8.4
I19	11 Jun 2018	1126	11	280e	2e	80e	0.007	18.3	23.53	13.2	33.57	8.4
I19	18 Jun 2018	1118	2	2e	<2	<2	1.000	20.1	67.57	8.9	33.73	8.3
I19	18 Jun 2018	1118	6	<2	<2	<2	1.000	19.6	62.94	9.2	33.73	8.3
I19	18 Jun 2018	1118	11	<20	2e	<2	0.100	16.7	30.45	9.2	33.64	8.2
I19	25 Jun 2018	1245	2	<2	<2	<2	1.000	19.0	76.88	9.2	33.65	8.2
I19	25 Jun 2018	1245	6	2e	<2	<2	1.000	18.5	58.48	10.3	33.61	8.3
I19	25 Jun 2018	1245	11	60e	<2	12e	0.033	17.6	72.27	8.7	33.64	8.2
I24	04 Jun 2018	1158	2	<2	<2	<2	1.000	18.2	75.17	9.6	33.66	8.2
I24	04 Jun 2018	1158	6	<2	<2	<2	1.000	17.1	75.96	10.4	33.65	8.3
I24	04 Jun 2018	1158	11	<2	<2	<2	1.000	13.0	78.41	6.8	33.52	7.9
I24	11 Jun 2018	1155	2	60	2e	140e	0.033	19.9	68.30	14.3	33.66	8.4
I24	11 Jun 2018	1155	6	740	32e	440	0.043	17.8	51.11	9.8	33.68	8.2
I24	11 Jun 2018	1155	11	440	36e	160e	0.082	15.7	57.75	9.2	33.67	8.1
I24	18 Jun 2018	1141	2	<2	<2	<2	1.000	20.5	71.62	10.2	33.74	8.4
I24	18 Jun 2018	1141	6	20e	<2	<2	0.100	19.5	63.61	9.3	33.73	8.3
I24	18 Jun 2018	1141	11	<20	<2	<2	0.100	15.3	60.46	6.8	33.62	8.1
I24	25 Jun 2018	1304	2	<2	<2	<2	1.000	19.1	86.26	8.3	33.73	8.2
I24	25 Jun 2018	1304	6	<2	<2	<2	1.000	18.3	84.23	9.1	33.72	8.2
I24	25 Jun 2018	1304	11	<20	<2	<2	0.100	17.5	67.68	9.7	33.65	8.2
I25	04 Jun 2018	1208	2	<2	<2	<2	1.000	17.8	78.51	9.9	33.66	8.3
I25	04 Jun 2018	1208	6	<2	<2	<2	1.000	16.9	77.65	10.4	33.65	8.3
I25	04 Jun 2018	1208	9	<2	<2	<2	1.000	16.2	71.74	10.3	33.62	8.2
I25	11 Jun 2018	1205	2	<2	<2	4e	1.000	19.8	65.32	14.3	33.66	8.5
I25	11 Jun 2018	1205	6	280e	24e	280e	0.086	18.5	26.59	11.8	33.61	8.4
I25	11 Jun 2018	1205	9	320e	24e	120e	0.075	16.4	52.53	9.7	33.73	8.2
I25	18 Jun 2018	1149	2	<2	<2	<2	1.000	20.5	70.70	10.3	33.74	8.5
I25	18 Jun 2018	1149	6	<2	<2	<2	1.000	19.1	69.81	10.8	33.73	8.4
I25	18 Jun 2018	1149	9	<2	<2	<2	1.000	17.1	68.67	8.8	33.63	8.2
I25	25 Jun 2018	1312	2	<2	<2	<2	1.000	19.2	86.26	8.2	33.74	8.2
I25	25 Jun 2018	1312	6	<2	<2	<2	1.000	18.2	82.13	9.0	33.72	8.2
I25	25 Jun 2018	1312	9	<2	<2	<2	1.000	18.2	76.81	9.1	33.67	8.2

Station	Date	Time	Depth	Total	Fecal	Entero	F:T	Temp	XMS	DO	Sal	pH
I26	04 Jun 2018	1221	2	<2	<2	<2	1.000	18.3	76.36	9.6	33.67	8.2
I26	04 Jun 2018	1221	6	<2	<2	<2	1.000	17.8	74.06	9.8	33.66	8.2
I26	04 Jun 2018	1221	9	2e	<2	<2	1.000	15.0	68.38	9.4	33.70	8.2
I26	11 Jun 2018	1218	2	<2	<2	<2	1.000	19.9	69.45	13.2	33.67	8.4
I26	11 Jun 2018	1218	6	10e	<2	4e	0.200	18.8	52.72	11.7	33.67	8.3
I26	11 Jun 2018	1218	9	8e	<2	4e	0.250	17.1	64.26	10.0	33.64	8.2
I26	18 Jun 2018	1200	2	<2	<2	<2	1.000	20.6	70.45	10.7	33.73	8.5
I26	18 Jun 2018	1200	6	<2	<2	<2	1.000	20.4	70.35	11.0	33.73	8.5
I26	18 Jun 2018	1200	9	<2	<2	<2	1.000	16.5	58.20	10.3	33.71	8.3
I26	25 Jun 2018	1322	2	<2	<2	<2	1.000	19.1	85.18	8.5	33.72	8.2
I26	25 Jun 2018	1322	6	2e	<2	<2	1.000	18.7	75.97	9.2	33.68	8.2
I26	25 Jun 2018	1322	9	<2	<2	<2	1.000	18.1	77.69	8.7	33.68	8.2
I32	04 Jun 2018	1238	2	<2	<2	<2	1.000	18.4	71.89	9.2	33.67	8.2
I32	04 Jun 2018	1238	6	<2	<2	<2	1.000	13.1	59.87	8.6	33.64	8.1
I32	04 Jun 2018	1238	9	<2	<2	<2	1.000	12.4	63.46	6.5	33.55	7.9
I32	11 Jun 2018	1231	2	<2	<2	<2	1.000	20.0	78.62	8.9	33.70	8.2
I32	11 Jun 2018	1231	6	12e	<2	10e	0.167	19.4	64.39	8.7	33.69	8.2
I32	11 Jun 2018	1231	9	40	4e	30e	0.100	18.7	54.58	8.2	33.69	8.1
I32	18 Jun 2018	1214	2	<2	<2	<2	1.000	20.6	66.13	10.7	33.73	8.5
I32	18 Jun 2018	1214	6	<2	<2	<2	1.000	20.6	65.34	10.6	33.73	8.5
I32	18 Jun 2018	1214	9	<2	<2	<2	1.000	20.3	61.48	9.7	33.73	8.5
I32	25 Jun 2018	1333	2	<2	<2	<2	1.000	19.4	80.34	8.6	33.71	8.2
I32	25 Jun 2018	1333	6	<2	<2	<2	1.000	19.0	75.17	8.8	33.68	8.2
I32	25 Jun 2018	1333	9	6e	2e	<2	0.333	18.7	72.81	8.7	33.67	8.2
I39	04 Jun 2018	1106	2	<2	<2	<2	1.000	17.1	80.71	9.4	33.65	8.2
I39	04 Jun 2018	1106	12	<2	<2	<2	1.000	12.3	72.62	6.5	33.63	8.0
I39	04 Jun 2018	1106	18	<2	<2	<20	1.000	11.5	83.30	4.0	33.60	7.7
I39	11 Jun 2018	1102	2	<2	<2	<2	1.000	19.6	81.55	9.5	33.70	8.2
I39	11 Jun 2018	1102	12	120	8e	74	0.067	14.6	66.77	9.1	33.61	8.1
I39	11 Jun 2018	1102	18	10e	<2	<2	0.200	12.9	64.74	5.1	33.61	7.7
I39	18 Jun 2018	1052	2	<2	<2	<2	1.000	20.5	75.58	10.2	33.72	8.5
I39	18 Jun 2018	1052	12	<2	<2	<2	1.000	16.9	70.48	11.4	33.67	8.3
I39	18 Jun 2018	1052	18	<2	<2	<2	1.000	14.3	70.85	7.0	33.59	8.0
I39	25 Jun 2018	1226	2	<2	<2	<2	1.000	19.3	84.68	8.1	33.73	8.2
I39	25 Jun 2018	1226	12	20e	<2	2e	0.100	14.5	71.07	8.2	33.61	8.1
I39	25 Jun 2018	1226	18	2e	<2	<2	1.000	12.7	76.91	6.0	33.58	7.9
I40	04 Jun 2018	1146	2	<2	<2	<2	1.000	18.5	73.58	9.2	33.67	8.2
I40	04 Jun 2018	1146	6	<2	<2	<2	1.000	18.2	70.91	9.0	33.66	8.2
I40	04 Jun 2018	1146	9	<20	<2	4e	0.100	13.1	54.66	6.1	33.66	7.9
I40	11 Jun 2018	1144	2	60e	4e	160e	0.067	19.1	25.87	14.5	33.61	8.5
I40	11 Jun 2018	1144	6	960	40e	600	0.042	17.8	38.91	8.6	33.58	8.2

Station	Date	Time	Depth	Total	Fecal	Enteroc	F:T	Temp	XMS	DO	Sal	pH
I40	11 Jun 2018	1144	9	1300	68e	480	0.052	17.0	26.87	8.0	33.59	8.1
I40	18 Jun 2018	1131	2	<2	<2	<2	1.000	20.1	64.84	8.5	33.74	8.3
I40	18 Jun 2018	1131	6	<2	<2	<2	1.000	19.9	65.78	8.6	33.74	8.3
I40	18 Jun 2018	1131	9	<2	2e	<2	1.000	16.8	55.27	9.4	33.74	8.3
I40	25 Jun 2018	1256	2	<2	<2	<2	1.000	19.0	76.38	8.9	33.67	8.2
I40	25 Jun 2018	1256	6	<2	<2	<2	1.000	18.5	78.34	9.1	33.69	8.2
I40	25 Jun 2018	1256	9	20e	<2	<2	0.100	18.0	68.88	9.2	33.66	8.2

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	04 Jun 2018	Depth (m)	11
I19	04 Jun 2018	Arrive Time	1132
I19	04 Jun 2018	Depart Time	1134
I19	04 Jun 2018	Air Temp (C)	16
I19	04 Jun 2018	Weather	Overcast
I19	04 Jun 2018	Visibility (mi)	6
I19	04 Jun 2018	Wind Speed (kts)	8
I19	04 Jun 2018	Wind Dir	SW
I19	04 Jun 2018	Water Color	Green
I19	04 Jun 2018	Wave Ht Low (ft)	3
I19	04 Jun 2018	Wave Period (sec)	16
I19	04 Jun 2018	Sea State	Calm
I19	04 Jun 2018	High Tide (ft)	4.41
I19	04 Jun 2018	High Tide Time	1220
I19	04 Jun 2018	Low Tide (ft)	0.39
I19	04 Jun 2018	Low Tide Time	812
I19	04 Jun 2018	Comments	none
I19	11 Jun 2018	Depth (m)	10
I19	11 Jun 2018	Arrive Time	1126
I19	11 Jun 2018	Depart Time	1135
I19	11 Jun 2018	Air Temp (C)	18
I19	11 Jun 2018	Weather	Continuous layer of clouds
I19	11 Jun 2018	Visibility (mi)	8
I19	11 Jun 2018	Wind Speed (kts)	8
I19	11 Jun 2018	Wind Dir	SW
I19	11 Jun 2018	Water Color	Brown
I19	11 Jun 2018	Wave Ht Low (ft)	4
I19	11 Jun 2018	Wave Period (sec)	11
I19	11 Jun 2018	Sea State	Light chop
I19	11 Jun 2018	High Tide (ft)	3.87
I19	11 Jun 2018	High Tide Time	820
I19	11 Jun 2018	Low Tide (ft)	1.2
I19	11 Jun 2018	Low Tide Time	1344
I19	11 Jun 2018	Comments	Possible red tide
I19	18 Jun 2018	Depth (m)	11
I19	18 Jun 2018	Arrive Time	1118
I19	18 Jun 2018	Depart Time	1122
I19	18 Jun 2018	Air Temp (C)	18
I19	18 Jun 2018	Weather	Partly Cloudy
I19	18 Jun 2018	Visibility (mi)	12
I19	18 Jun 2018	Wind Speed (kts)	12
I19	18 Jun 2018	Wind Dir	W
I19	18 Jun 2018	Water Color	Green
I19	18 Jun 2018	Wave Ht Low (ft)	4
I19	18 Jun 2018	Wave Period (sec)	13
I19	18 Jun 2018	Sea State	Heavy chop
I19	18 Jun 2018	High Tide (ft)	5.41
I19	18 Jun 2018	High Tide Time	1241
I19	18 Jun 2018	Low Tide (ft)	-0.55

Station	Date	Parameter	Value
I19	18 Jun 2018	Low Tide Time	800
I19	18 Jun 2018	Comments	none
I19	25 Jun 2018	Depth (m)	11
I19	25 Jun 2018	Arrive Time	1245
I19	25 Jun 2018	Depart Time	1248
I19	25 Jun 2018	Air Temp (C)	18
I19	25 Jun 2018	Weather	Partly Cloudy
I19	25 Jun 2018	Visibility (mi)	12
I19	25 Jun 2018	Wind Speed (kts)	4
I19	25 Jun 2018	Wind Dir	SW
I19	25 Jun 2018	Water Color	Brown
I19	25 Jun 2018	Wave Ht Low (ft)	2
I19	25 Jun 2018	Wave Period (sec)	16
I19	25 Jun 2018	Sea State	Light chop
I19	25 Jun 2018	High Tide (ft)	3.62
I19	25 Jun 2018	High Tide Time	854
I19	25 Jun 2018	Low Tide (ft)	1.75
I19	25 Jun 2018	Low Tide Time	1355
I19	25 Jun 2018	Comments	none
I24	04 Jun 2018	Depth (m)	11
I24	04 Jun 2018	Arrive Time	1158
I24	04 Jun 2018	Depart Time	1201
I24	04 Jun 2018	Air Temp (C)	17
I24	04 Jun 2018	Weather	Overcast
I24	04 Jun 2018	Visibility (mi)	6
I24	04 Jun 2018	Wind Speed (kts)	7
I24	04 Jun 2018	Wind Dir	S
I24	04 Jun 2018	Water Color	Green
I24	04 Jun 2018	Wave Ht Low (ft)	3
I24	04 Jun 2018	Wave Period (sec)	16
I24	04 Jun 2018	Sea State	Calm
I24	04 Jun 2018	High Tide (ft)	4.41
I24	04 Jun 2018	High Tide Time	1220
I24	04 Jun 2018	Low Tide (ft)	0.39
I24	04 Jun 2018	Low Tide Time	812
I24	04 Jun 2018	Comments	none
I24	11 Jun 2018	Depth (m)	11
I24	11 Jun 2018	Arrive Time	1155
I24	11 Jun 2018	Depart Time	1200
I24	11 Jun 2018	Air Temp (C)	18
I24	11 Jun 2018	Weather	Continuous layer of clouds
I24	11 Jun 2018	Visibility (mi)	8
I24	11 Jun 2018	Wind Speed (kts)	7
I24	11 Jun 2018	Wind Dir	SW
I24	11 Jun 2018	Water Color	Brownish-Green
I24	11 Jun 2018	Wave Ht Low (ft)	4
I24	11 Jun 2018	Wave Period (sec)	11
I24	11 Jun 2018	Sea State	Light chop
I24	11 Jun 2018	High Tide (ft)	3.87
I24	11 Jun 2018	High Tide Time	820
I24	11 Jun 2018	Low Tide (ft)	1.2
I24	11 Jun 2018	Low Tide Time	1344

Station	Date	Parameter	Value
I24	11 Jun 2018	Comments	none
I24	18 Jun 2018	Depth (m)	11
I24	18 Jun 2018	Arrive Time	1141
I24	18 Jun 2018	Depart Time	1146
I24	18 Jun 2018	Air Temp (C)	18
I24	18 Jun 2018	Weather	Partly Cloudy
I24	18 Jun 2018	Visibility (mi)	12
I24	18 Jun 2018	Wind Speed (kts)	13
I24	18 Jun 2018	Wind Dir	SW
I24	18 Jun 2018	Water Color	Green
I24	18 Jun 2018	Wave Ht Low (ft)	4
I24	18 Jun 2018	Wave Period (sec)	13
I24	18 Jun 2018	Sea State	Heavy chop
I24	18 Jun 2018	High Tide (ft)	5.41
I24	18 Jun 2018	High Tide Time	1241
I24	18 Jun 2018	Low Tide (ft)	-0.55
I24	18 Jun 2018	Low Tide Time	800
I24	18 Jun 2018	Comments	none
I24	25 Jun 2018	Depth (m)	10
I24	25 Jun 2018	Arrive Time	1304
I24	25 Jun 2018	Depart Time	1307
I24	25 Jun 2018	Air Temp (C)	18
I24	25 Jun 2018	Weather	Partly Cloudy
I24	25 Jun 2018	Visibility (mi)	12
I24	25 Jun 2018	Wind Speed (kts)	6
I24	25 Jun 2018	Wind Dir	S
I24	25 Jun 2018	Water Color	Brownish-Green
I24	25 Jun 2018	Wave Ht Low (ft)	2
I24	25 Jun 2018	Wave Period (sec)	16
I24	25 Jun 2018	Sea State	Light chop
I24	25 Jun 2018	High Tide (ft)	3.62
I24	25 Jun 2018	High Tide Time	854
I24	25 Jun 2018	Low Tide (ft)	1.75
I24	25 Jun 2018	Low Tide Time	1355
I24	25 Jun 2018	Comments	none
I25	04 Jun 2018	Depth (m)	10
I25	04 Jun 2018	Arrive Time	1208
I25	04 Jun 2018	Depart Time	1210
I25	04 Jun 2018	Air Temp (C)	17
I25	04 Jun 2018	Weather	Overcast
I25	04 Jun 2018	Visibility (mi)	6
I25	04 Jun 2018	Wind Speed (kts)	7
I25	04 Jun 2018	Wind Dir	SW
I25	04 Jun 2018	Water Color	Green
I25	04 Jun 2018	Wave Ht Low (ft)	3
I25	04 Jun 2018	Wave Period (sec)	16
I25	04 Jun 2018	Sea State	Calm
I25	04 Jun 2018	High Tide (ft)	4.41
I25	04 Jun 2018	High Tide Time	1220
I25	04 Jun 2018	Low Tide (ft)	0.39
I25	04 Jun 2018	Low Tide Time	812
I25	04 Jun 2018	Comments	Boats

Station	Date	Parameter	Value
I25	11 Jun 2018	Depth (m)	9
I25	11 Jun 2018	Arrive Time	1205
I25	11 Jun 2018	Depart Time	1213
I25	11 Jun 2018	Air Temp (C)	18
I25	11 Jun 2018	Weather	Continuous layer of clouds
I25	11 Jun 2018	Visibility (mi)	8
I25	11 Jun 2018	Wind Speed (kts)	7
I25	11 Jun 2018	Wind Dir	SW
I25	11 Jun 2018	Water Color	Brownish-Green
I25	11 Jun 2018	Wave Ht Low (ft)	4
I25	11 Jun 2018	Wave Period (sec)	11
I25	11 Jun 2018	Sea State	Light chop
I25	11 Jun 2018	High Tide (ft)	3.87
I25	11 Jun 2018	High Tide Time	820
I25	11 Jun 2018	Low Tide (ft)	1.2
I25	11 Jun 2018	Low Tide Time	1344
I25	11 Jun 2018	Comments	Possible red tide
I25	18 Jun 2018	Depth (m)	10
I25	18 Jun 2018	Arrive Time	1149
I25	18 Jun 2018	Depart Time	1154
I25	18 Jun 2018	Air Temp (C)	19
I25	18 Jun 2018	Weather	Partly Cloudy
I25	18 Jun 2018	Visibility (mi)	12
I25	18 Jun 2018	Wind Speed (kts)	13
I25	18 Jun 2018	Wind Dir	SW
I25	18 Jun 2018	Water Color	Green
I25	18 Jun 2018	Wave Ht Low (ft)	4
I25	18 Jun 2018	Wave Period (sec)	13
I25	18 Jun 2018	Sea State	Heavy chop
I25	18 Jun 2018	High Tide (ft)	5.41
I25	18 Jun 2018	High Tide Time	1241
I25	18 Jun 2018	Low Tide (ft)	-0.55
I25	18 Jun 2018	Low Tide Time	800
I25	18 Jun 2018	Comments	none
I25	25 Jun 2018	Depth (m)	9
I25	25 Jun 2018	Arrive Time	1312
I25	25 Jun 2018	Depart Time	1315
I25	25 Jun 2018	Air Temp (C)	18
I25	25 Jun 2018	Weather	Partly Cloudy
I25	25 Jun 2018	Visibility (mi)	12
I25	25 Jun 2018	Wind Speed (kts)	7
I25	25 Jun 2018	Wind Dir	S
I25	25 Jun 2018	Water Color	Brownish-Green
I25	25 Jun 2018	Wave Ht Low (ft)	2
I25	25 Jun 2018	Wave Period (sec)	16
I25	25 Jun 2018	Sea State	Light chop
I25	25 Jun 2018	High Tide (ft)	3.62
I25	25 Jun 2018	High Tide Time	854
I25	25 Jun 2018	Low Tide (ft)	1.75
I25	25 Jun 2018	Low Tide Time	1355
I25	25 Jun 2018	Comments	none

Station	Date	Parameter	Value
I26	04 Jun 2018	Depth (m)	9
I26	04 Jun 2018	Arrive Time	1221
I26	04 Jun 2018	Depart Time	1226
I26	04 Jun 2018	Air Temp (C)	17
I26	04 Jun 2018	Weather	Overcast
I26	04 Jun 2018	Visibility (mi)	6
I26	04 Jun 2018	Wind Speed (kts)	8
I26	04 Jun 2018	Wind Dir	SW
I26	04 Jun 2018	Water Color	Green
I26	04 Jun 2018	Wave Ht Low (ft)	3
I26	04 Jun 2018	Wave Period (sec)	16
I26	04 Jun 2018	Sea State	Calm
I26	04 Jun 2018	High Tide (ft)	4.41
I26	04 Jun 2018	High Tide Time	1220
I26	04 Jun 2018	Low Tide (ft)	0.39
I26	04 Jun 2018	Low Tide Time	812
I26	04 Jun 2018	Comments	none
I26	11 Jun 2018	Depth (m)	9
I26	11 Jun 2018	Arrive Time	1218
I26	11 Jun 2018	Depart Time	
I26	11 Jun 2018	Air Temp (C)	18
I26	11 Jun 2018	Weather	Continuous layer of clouds
I26	11 Jun 2018	Visibility (mi)	8
I26	11 Jun 2018	Wind Speed (kts)	7
I26	11 Jun 2018	Wind Dir	SW
I26	11 Jun 2018	Water Color	Brownish-Green
I26	11 Jun 2018	Wave Ht Low (ft)	4
I26	11 Jun 2018	Wave Period (sec)	11
I26	11 Jun 2018	Sea State	Light chop
I26	11 Jun 2018	High Tide (ft)	3.87
I26	11 Jun 2018	High Tide Time	820
I26	11 Jun 2018	Low Tide (ft)	1.2
I26	11 Jun 2018	Low Tide Time	1344
I26	11 Jun 2018	Comments	Possible red tide
I26	18 Jun 2018	Depth (m)	10
I26	18 Jun 2018	Arrive Time	1200
I26	18 Jun 2018	Depart Time	1205
I26	18 Jun 2018	Air Temp (C)	18
I26	18 Jun 2018	Weather	Partly Cloudy
I26	18 Jun 2018	Visibility (mi)	12
I26	18 Jun 2018	Wind Speed (kts)	12
I26	18 Jun 2018	Wind Dir	SW
I26	18 Jun 2018	Water Color	Green
I26	18 Jun 2018	Wave Ht Low (ft)	4
I26	18 Jun 2018	Wave Period (sec)	13
I26	18 Jun 2018	Sea State	Heavy chop
I26	18 Jun 2018	High Tide (ft)	5.41
I26	18 Jun 2018	High Tide Time	1241
I26	18 Jun 2018	Low Tide (ft)	-0.55
I26	18 Jun 2018	Low Tide Time	800
I26	18 Jun 2018	Comments	none
I26	25 Jun 2018	Depth (m)	9

Station	Date	Parameter	Value
I26	25 Jun 2018	Arrive Time	1322
I26	25 Jun 2018	Depart Time	1324
I26	25 Jun 2018	Air Temp (C)	18
I26	25 Jun 2018	Weather	Partly Cloudy
I26	25 Jun 2018	Visibility (mi)	12
I26	25 Jun 2018	Wind Speed (kts)	8
I26	25 Jun 2018	Wind Dir	S
I26	25 Jun 2018	Water Color	Greenish-Blue
I26	25 Jun 2018	Wave Ht Low (ft)	2
I26	25 Jun 2018	Wave Period (sec)	16
I26	25 Jun 2018	Sea State	Light chop
I26	25 Jun 2018	High Tide (ft)	3.62
I26	25 Jun 2018	High Tide Time	854
I26	25 Jun 2018	Low Tide (ft)	1.75
I26	25 Jun 2018	Low Tide Time	1355
I26	25 Jun 2018	Comments	none
I32	04 Jun 2018	Depth (m)	11
I32	04 Jun 2018	Arrive Time	1238
I32	04 Jun 2018	Depart Time	1243
I32	04 Jun 2018	Air Temp (C)	17
I32	04 Jun 2018	Weather	Overcast
I32	04 Jun 2018	Visibility (mi)	6
I32	04 Jun 2018	Wind Speed (kts)	7
I32	04 Jun 2018	Wind Dir	SW
I32	04 Jun 2018	Water Color	Green
I32	04 Jun 2018	Wave Ht Low (ft)	3
I32	04 Jun 2018	Wave Period (sec)	16
I32	04 Jun 2018	Sea State	Calm
I32	04 Jun 2018	High Tide (ft)	4.41
I32	04 Jun 2018	High Tide Time	1220
I32	04 Jun 2018	Low Tide (ft)	0.39
I32	04 Jun 2018	Low Tide Time	812
I32	04 Jun 2018	Comments	none
I32	11 Jun 2018	Depth (m)	9
I32	11 Jun 2018	Arrive Time	1231
I32	11 Jun 2018	Depart Time	1235
I32	11 Jun 2018	Air Temp (C)	18
I32	11 Jun 2018	Weather	Continuous layer of clouds
I32	11 Jun 2018	Visibility (mi)	8
I32	11 Jun 2018	Wind Speed (kts)	7
I32	11 Jun 2018	Wind Dir	SW
I32	11 Jun 2018	Water Color	Greenish-Blue
I32	11 Jun 2018	Wave Ht Low (ft)	4
I32	11 Jun 2018	Wave Period (sec)	11
I32	11 Jun 2018	Sea State	Light chop
I32	11 Jun 2018	High Tide (ft)	3.87
I32	11 Jun 2018	High Tide Time	820
I32	11 Jun 2018	Low Tide (ft)	1.2
I32	11 Jun 2018	Low Tide Time	1344
I32	11 Jun 2018	Comments	none
I32	18 Jun 2018	Depth (m)	11
I32	18 Jun 2018	Arrive Time	1214

Station	Date	Parameter	Value
I32	18 Jun 2018	Depart Time	1222
I32	18 Jun 2018	Air Temp (C)	19
I32	18 Jun 2018	Weather	Partly Cloudy
I32	18 Jun 2018	Visibility (mi)	12
I32	18 Jun 2018	Wind Speed (kts)	14
I32	18 Jun 2018	Wind Dir	SW
I32	18 Jun 2018	Water Color	Green
I32	18 Jun 2018	Wave Ht Low (ft)	4
I32	18 Jun 2018	Wave Period (sec)	13
I32	18 Jun 2018	Sea State	Heavy chop
I32	18 Jun 2018	High Tide (ft)	5.41
I32	18 Jun 2018	High Tide Time	1241
I32	18 Jun 2018	Low Tide (ft)	-0.55
I32	18 Jun 2018	Low Tide Time	800
I32	18 Jun 2018	Comments	none
I32	25 Jun 2018	Depth (m)	10
I32	25 Jun 2018	Arrive Time	1333
I32	25 Jun 2018	Depart Time	1336
I32	25 Jun 2018	Air Temp (C)	18
I32	25 Jun 2018	Weather	Partly Cloudy
I32	25 Jun 2018	Visibility (mi)	12
I32	25 Jun 2018	Wind Speed (kts)	9
I32	25 Jun 2018	Wind Dir	SW
I32	25 Jun 2018	Water Color	Green
I32	25 Jun 2018	Wave Ht Low (ft)	2
I32	25 Jun 2018	Wave Period (sec)	16
I32	25 Jun 2018	Sea State	Light chop
I32	25 Jun 2018	High Tide (ft)	3.62
I32	25 Jun 2018	High Tide Time	854
I32	25 Jun 2018	Low Tide (ft)	1.75
I32	25 Jun 2018	Low Tide Time	1355
I32	25 Jun 2018	Comments	none
I39	04 Jun 2018	Depth (m)	18
I39	04 Jun 2018	Arrive Time	1106
I39	04 Jun 2018	Depart Time	1111
I39	04 Jun 2018	Air Temp (C)	16
I39	04 Jun 2018	Weather	Overcast
I39	04 Jun 2018	Visibility (mi)	6
I39	04 Jun 2018	Wind Speed (kts)	7
I39	04 Jun 2018	Wind Dir	SW
I39	04 Jun 2018	Water Color	Green
I39	04 Jun 2018	Wave Ht Low (ft)	3
I39	04 Jun 2018	Wave Period (sec)	16
I39	04 Jun 2018	Sea State	Calm
I39	04 Jun 2018	High Tide (ft)	4.41
I39	04 Jun 2018	High Tide Time	1220
I39	04 Jun 2018	Low Tide (ft)	0.39
I39	04 Jun 2018	Low Tide Time	812
I39	04 Jun 2018	Comments	none
I39	11 Jun 2018	Depth (m)	20
I39	11 Jun 2018	Arrive Time	1102
I39	11 Jun 2018	Depart Time	1106

Station	Date	Parameter	Value
I39	11 Jun 2018	Air Temp (C)	18
I39	11 Jun 2018	Weather	Continuous layer of clouds
I39	11 Jun 2018	Visibility (mi)	8
I39	11 Jun 2018	Wind Speed (kts)	3
I39	11 Jun 2018	Wind Dir	SW
I39	11 Jun 2018	Water Color	Greenish-Blue
I39	11 Jun 2018	Wave Ht Low (ft)	4
I39	11 Jun 2018	Wave Period (sec)	11
I39	11 Jun 2018	Sea State	Light chop
I39	11 Jun 2018	High Tide (ft)	3.87
I39	11 Jun 2018	High Tide Time	820
I39	11 Jun 2018	Low Tide (ft)	1.2
I39	11 Jun 2018	Low Tide Time	1344
I39	11 Jun 2018	Comments	none
I39	18 Jun 2018	Depth (m)	18
I39	18 Jun 2018	Arrive Time	1052
I39	18 Jun 2018	Depart Time	1101
I39	18 Jun 2018	Air Temp (C)	19
I39	18 Jun 2018	Weather	Partly Cloudy
I39	18 Jun 2018	Visibility (mi)	12
I39	18 Jun 2018	Wind Speed (kts)	9
I39	18 Jun 2018	Wind Dir	W
I39	18 Jun 2018	Water Color	Bluish-Green
I39	18 Jun 2018	Wave Ht Low (ft)	4
I39	18 Jun 2018	Wave Period (sec)	13
I39	18 Jun 2018	Sea State	Light chop
I39	18 Jun 2018	High Tide (ft)	5.41
I39	18 Jun 2018	High Tide Time	1241
I39	18 Jun 2018	Low Tide (ft)	-0.55
I39	18 Jun 2018	Low Tide Time	800
I39	18 Jun 2018	Comments	none
I39	25 Jun 2018	Depth (m)	20
I39	25 Jun 2018	Arrive Time	1226
I39	25 Jun 2018	Depart Time	1228
I39	25 Jun 2018	Air Temp (C)	18
I39	25 Jun 2018	Weather	Partly Cloudy
I39	25 Jun 2018	Visibility (mi)	10
I39	25 Jun 2018	Wind Speed (kts)	9
I39	25 Jun 2018	Wind Dir	S
I39	25 Jun 2018	Water Color	Greenish-Blue
I39	25 Jun 2018	Wave Ht Low (ft)	3
I39	25 Jun 2018	Wave Period (sec)	16
I39	25 Jun 2018	Sea State	Calm
I39	25 Jun 2018	High Tide (ft)	3.62
I39	25 Jun 2018	High Tide Time	854
I39	25 Jun 2018	Low Tide (ft)	1.75
I39	25 Jun 2018	Low Tide Time	1355
I39	25 Jun 2018	Comments	none
I40	04 Jun 2018	Depth (m)	10
I40	04 Jun 2018	Arrive Time	1146
I40	04 Jun 2018	Depart Time	1149
I40	04 Jun 2018	Air Temp (C)	17

Station	Date	Parameter	Value
I40	04 Jun 2018	Weather	Overcast
I40	04 Jun 2018	Visibility (mi)	6
I40	04 Jun 2018	Wind Speed (kts)	8
I40	04 Jun 2018	Wind Dir	S
I40	04 Jun 2018	Water Color	Green
I40	04 Jun 2018	Wave Ht Low (ft)	3
I40	04 Jun 2018	Wave Period (sec)	16
I40	04 Jun 2018	Sea State	Calm
I40	04 Jun 2018	High Tide (ft)	4.41
I40	04 Jun 2018	High Tide Time	1220
I40	04 Jun 2018	Low Tide (ft)	0.39
I40	04 Jun 2018	Low Tide Time	812
I40	04 Jun 2018	Comments	none
I40	11 Jun 2018	Depth (m)	10
I40	11 Jun 2018	Arrive Time	1144
I40	11 Jun 2018	Depart Time	1148
I40	11 Jun 2018	Air Temp (C)	18
I40	11 Jun 2018	Weather	Continuous layer of clouds
I40	11 Jun 2018	Visibility (mi)	8
I40	11 Jun 2018	Wind Speed (kts)	8
I40	11 Jun 2018	Wind Dir	SW
I40	11 Jun 2018	Water Color	Brown
I40	11 Jun 2018	Wave Ht Low (ft)	4
I40	11 Jun 2018	Wave Period (sec)	11
I40	11 Jun 2018	Sea State	Light chop
I40	11 Jun 2018	High Tide (ft)	3.87
I40	11 Jun 2018	High Tide Time	820
I40	11 Jun 2018	Low Tide (ft)	1.2
I40	11 Jun 2018	Low Tide Time	1344
I40	11 Jun 2018	Comments	Possible red tide
I40	18 Jun 2018	Depth (m)	10
I40	18 Jun 2018	Arrive Time	1131
I40	18 Jun 2018	Depart Time	1137
I40	18 Jun 2018	Air Temp (C)	19
I40	18 Jun 2018	Weather	Partly Cloudy
I40	18 Jun 2018	Visibility (mi)	12
I40	18 Jun 2018	Wind Speed (kts)	11
I40	18 Jun 2018	Wind Dir	W
I40	18 Jun 2018	Water Color	Green
I40	18 Jun 2018	Wave Ht Low (ft)	4
I40	18 Jun 2018	Wave Period (sec)	13
I40	18 Jun 2018	Sea State	Heavy chop
I40	18 Jun 2018	High Tide (ft)	5.41
I40	18 Jun 2018	High Tide Time	1241
I40	18 Jun 2018	Low Tide (ft)	-0.55
I40	18 Jun 2018	Low Tide Time	800
I40	18 Jun 2018	Comments	none
I40	25 Jun 2018	Depth (m)	10
I40	25 Jun 2018	Arrive Time	1256
I40	25 Jun 2018	Depart Time	1259
I40	25 Jun 2018	Air Temp (C)	18
I40	25 Jun 2018	Weather	Partly Cloudy

Station	Date	Parameter	Value
I40	25 Jun 2018	Visibility (mi)	12
I40	25 Jun 2018	Wind Speed (kts)	8
I40	25 Jun 2018	Wind Dir	S
I40	25 Jun 2018	Water Color	Brown
I40	25 Jun 2018	Wave Ht Low (ft)	2
I40	25 Jun 2018	Wave Period (sec)	16
I40	25 Jun 2018	Sea State	Light chop
I40	25 Jun 2018	High Tide (ft)	3.62
I40	25 Jun 2018	High Tide Time	854
I40	25 Jun 2018	Low Tide (ft)	1.75
I40	25 Jun 2018	Low Tide Time	1355
I40	25 Jun 2018	Comments	none

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 (σ -t)	Chlor (μ g/L)
I19	04 Jun 2018	1	18.44	68.27	9.0	33.66	8.2	24.1	0.99
I19	04 Jun 2018	2	18.42	74.87	9.0	33.67	8.2	24.2	1.13
I19	04 Jun 2018	3	18.39	75.14	9.0	33.67	8.2	24.2	1.36
I19	04 Jun 2018	4	18.28	73.69	8.9	33.67	8.2	24.2	1.82
I19	04 Jun 2018	5	18.06	70.01	8.6	33.67	8.2	24.2	2.83
I19	04 Jun 2018	6	17.77	66.84	8.4	33.67	8.2	24.3	3.58
I19	04 Jun 2018	7	17.68	64.74	8.0	33.66	8.2	24.3	4.02
I19	04 Jun 2018	8	16.98	64.09	7.0	33.70	8.2	24.5	4.29
I19	04 Jun 2018	9	14.17	54.30	5.4	33.75	8.0	25.2	5.24
I19	04 Jun 2018	10	12.44	28.71	4.2	33.63	7.7	25.4	6.36
I19	11 Jun 2018	1	19.79	47.63	14.3	33.61	8.5	23.8	10.74
I19	11 Jun 2018	2	19.67	47.06	14.3	33.62	8.5	23.8	16.47
I19	11 Jun 2018	3	19.04	33.21	14.5	33.62	8.5	24.0	41.95
I19	11 Jun 2018	4	18.45	21.73	14.3	33.60	8.4	24.1	58.05
I19	11 Jun 2018	5	18.39	25.12	13.6	33.58	8.4	24.1	58.96
I19	11 Jun 2018	6	18.37	24.45	13.5	33.58	8.4	24.1	58.96
I19	11 Jun 2018	7	18.35	24.18	13.4	33.57	8.4	24.1	58.96
I19	11 Jun 2018	8	18.33	24.46	13.5	33.57	8.4	24.1	58.96
I19	11 Jun 2018	9	18.34	24.31	13.4	33.57	8.4	24.1	58.96
I19	11 Jun 2018	10	18.32	23.53	13.2	33.57	8.4	24.1	58.73
I19	18 Jun 2018	1	20.09	67.50	9.0	33.72	8.3	23.8	1.30
I19	18 Jun 2018	2	20.09	67.57	8.9	33.73	8.3	23.8	1.31
I19	18 Jun 2018	3	20.09	67.68	8.9	33.73	8.3	23.8	1.37
I19	18 Jun 2018	4	20.03	67.33	9.0	33.73	8.3	23.8	1.69
I19	18 Jun 2018	5	19.92	65.99	9.0	33.72	8.3	23.8	2.38
I19	18 Jun 2018	6	19.59	62.94	9.2	33.73	8.3	23.9	3.42
I19	18 Jun 2018	7	18.33	56.56	10.1	33.70	8.3	24.2	8.16
I19	18 Jun 2018	8	18.49	58.09	10.0	33.66	8.3	24.1	10.62
I19	18 Jun 2018	9	17.66	57.64	10.1	33.66	8.3	24.3	10.47
I19	18 Jun 2018	10	16.72	30.45	9.2	33.64	8.2	24.5	9.96
I19	25 Jun 2018	1	18.99	76.56	9.2	33.65	8.2	24.0	0.73
I19	25 Jun 2018	2	18.98	76.88	9.2	33.65	8.2	24.0	0.68
I19	25 Jun 2018	3	18.87	76.36	9.4	33.65	8.2	24.0	0.83
I19	25 Jun 2018	4	18.76	70.88	9.8	33.64	8.3	24.0	1.99
I19	25 Jun 2018	5	18.66	59.66	10.2	33.62	8.3	24.1	6.60
I19	25 Jun 2018	6	18.48	58.48	10.3	33.61	8.3	24.1	12.01
I19	25 Jun 2018	7	18.24	68.73	9.8	33.62	8.3	24.2	9.28
I19	25 Jun 2018	8	17.91	70.60	8.8	33.62	8.2	24.2	5.87
I19	25 Jun 2018	9	17.76	71.42	8.6	33.63	8.2	24.3	4.20
I19	25 Jun 2018	10	17.60	72.27	8.7	33.64	8.2	24.3	3.41
I24	04 Jun 2018	1	18.14	75.91	9.7	33.67	8.2	24.2	1.16
I24	04 Jun 2018	2	18.19	75.17	9.6	33.66	8.2	24.2	1.18
I24	04 Jun 2018	3	18.13	74.14	9.6	33.68	8.2	24.2	1.30
I24	04 Jun 2018	4	17.38	77.18	10.1	33.70	8.3	24.4	1.47
I24	04 Jun 2018	5	17.16	76.29	10.3	33.66	8.3	24.4	1.96
I24	04 Jun 2018	6	17.07	75.96	10.4	33.65	8.3	24.5	2.56
I24	04 Jun 2018	7	17.04	75.62	10.3	33.65	8.3	24.5	3.08

Station	Date	Depth (m)	Temp (°C)	XMS (‰)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (µg/L)
I24	04 Jun 2018	8	16.97	74.39	9.5	33.65	8.3	24.5	3.63
I24	04 Jun 2018	9	15.02	71.01	8.4	33.76	8.2	25.0	4.52
I24	04 Jun 2018	10	13.03	77.03	7.1	33.64	8.0	25.3	4.21
I24	04 Jun 2018	11	13.02	78.41	6.8	33.52	7.9	25.2	2.92
I24	11 Jun 2018	1	19.95	68.88	14.2	33.65	8.4	23.7	3.19
I24	11 Jun 2018	2	19.85	68.30	14.3	33.66	8.4	23.8	3.88
I24	11 Jun 2018	3	19.55	61.78	14.3	33.68	8.5	23.9	4.92
I24	11 Jun 2018	4	18.64	15.96	14.4	33.66	8.5	24.1	26.69
I24	11 Jun 2018	5	18.61	27.58	12.7	33.59	8.3	24.0	57.38
I24	11 Jun 2018	6	17.81	51.11	9.8	33.68	8.2	24.3	56.19
I24	11 Jun 2018	7	17.12	54.97	8.7	33.66	8.2	24.5	35.97
I24	11 Jun 2018	8	16.77	53.56	8.8	33.63	8.1	24.5	21.29
I24	11 Jun 2018	9	16.61	48.16	8.9	33.62	8.1	24.5	12.35
I24	11 Jun 2018	10	15.68	57.75	9.2	33.67	8.1	24.8	9.74
I24	18 Jun 2018	1	20.49	68.93	10.1	33.74	8.4	23.7	1.02
I24	18 Jun 2018	2	20.47	71.62	10.2	33.74	8.4	23.7	1.03
I24	18 Jun 2018	3	20.46	71.70	10.2	33.75	8.4	23.7	1.01
I24	18 Jun 2018	4	20.36	71.00	10.1	33.75	8.4	23.7	1.12
I24	18 Jun 2018	5	19.91	69.72	9.8	33.77	8.4	23.8	1.34
I24	18 Jun 2018	6	19.49	63.61	9.3	33.73	8.3	23.9	2.29
I24	18 Jun 2018	7	17.47	47.63	7.8	33.81	8.2	24.5	5.67
I24	18 Jun 2018	8	16.15	54.02	7.4	33.66	8.1	24.7	16.14
I24	18 Jun 2018	9	15.59	63.55	7.6	33.67	8.1	24.8	18.70
I24	18 Jun 2018	10	15.34	63.00	7.2	33.62	8.1	24.8	12.59
I24	18 Jun 2018	11	15.31	60.46	6.8	33.62	8.1	24.8	8.81
I24	25 Jun 2018	1	19.16	86.10	8.2	33.72	8.2	24.0	0.15
I24	25 Jun 2018	2	19.15	86.26	8.3	33.73	8.2	24.0	0.15
I24	25 Jun 2018	3	19.04	86.31	8.3	33.73	8.2	24.0	0.15
I24	25 Jun 2018	4	18.93	85.70	8.4	33.73	8.2	24.1	0.18
I24	25 Jun 2018	5	18.57	85.03	8.6	33.74	8.2	24.2	0.22
I24	25 Jun 2018	6	18.26	84.23	9.1	33.72	8.2	24.2	0.29
I24	25 Jun 2018	7	18.13	74.84	9.5	33.69	8.2	24.2	0.90
I24	25 Jun 2018	8	17.69	69.13	9.6	33.70	8.2	24.3	2.34
I24	25 Jun 2018	9	17.36	68.14	9.8	33.68	8.2	24.4	3.21
I24	25 Jun 2018	10	17.54	67.68	9.7	33.65	8.2	24.3	5.83
I25	04 Jun 2018	1	17.83	76.29	9.9	33.66	8.3	24.3	0.69
I25	04 Jun 2018	2	17.82	78.51	9.9	33.66	8.3	24.3	0.74
I25	04 Jun 2018	3	17.70	78.96	9.9	33.67	8.3	24.3	0.85
I25	04 Jun 2018	4	17.29	79.59	10.0	33.68	8.2	24.4	0.94
I25	04 Jun 2018	5	16.91	79.11	10.3	33.66	8.2	24.5	1.25
I25	04 Jun 2018	6	16.85	77.65	10.4	33.65	8.3	24.5	1.97
I25	04 Jun 2018	7	16.78	76.57	10.5	33.65	8.3	24.5	2.49
I25	04 Jun 2018	8	16.67	75.48	10.5	33.64	8.3	24.5	3.38
I25	04 Jun 2018	9	16.21	71.74	10.3	33.62	8.2	24.6	4.81
I25	11 Jun 2018	1	19.84	60.70	14.3	33.65	8.5	23.8	2.66
I25	11 Jun 2018	2	19.75	65.32	14.3	33.66	8.5	23.8	3.33
I25	11 Jun 2018	3	19.27	55.68	14.4	33.66	8.5	23.9	49.62
I25	11 Jun 2018	4	19.01	3.38	14.5	33.63	8.5	24.0	58.96
I25	11 Jun 2018	5	18.73	2.69	14.2	33.61	8.5	24.0	58.96
I25	11 Jun 2018	6	18.49	26.59	11.8	33.61	8.4	24.1	58.96

Station	Date	Depth (m)	Temp (°C)	XMS (‰)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (µg/L)
I25	11 Jun 2018	7	17.82	49.84	9.5	33.64	8.2	24.3	49.84
I25	11 Jun 2018	8	16.70	56.89	9.6	33.60	8.1	24.5	20.86
I25	11 Jun 2018	9	16.42	52.53	9.7	33.73	8.2	24.7	21.94
I25	18 Jun 2018	1	20.52	70.66	10.3	33.74	8.5	23.7	1.06
I25	18 Jun 2018	2	20.52	70.70	10.3	33.74	8.5	23.7	1.00
I25	18 Jun 2018	3	20.50	70.81	10.4	33.74	8.5	23.7	1.06
I25	18 Jun 2018	4	20.14	72.05	10.8	33.77	8.4	23.8	1.20
I25	18 Jun 2018	5	19.62	72.29	11.4	33.71	8.4	23.9	1.53
I25	18 Jun 2018	6	19.07	69.81	10.8	33.73	8.4	24.0	2.10
I25	18 Jun 2018	7	18.65	64.87	9.9	33.69	8.3	24.1	3.43
I25	18 Jun 2018	8	17.11	67.66	9.0	33.71	8.2	24.5	4.09
I25	18 Jun 2018	9	17.05	68.67	8.8	33.63	8.2	24.5	3.93
I25	25 Jun 2018	1	19.23	86.13	8.1	33.73	8.2	24.0	0.15
I25	25 Jun 2018	2	19.21	86.26	8.2	33.74	8.2	24.0	0.17
I25	25 Jun 2018	3	19.11	86.36	8.2	33.74	8.2	24.0	0.17
I25	25 Jun 2018	4	18.92	86.15	8.3	33.75	8.2	24.1	0.16
I25	25 Jun 2018	5	18.52	85.78	8.6	33.75	8.2	24.2	0.19
I25	25 Jun 2018	6	18.25	82.13	9.0	33.72	8.2	24.2	0.30
I25	25 Jun 2018	7	18.15	77.65	9.2	33.69	8.2	24.2	0.69
I25	25 Jun 2018	8	18.08	76.81	9.2	33.68	8.2	24.2	0.96
I25	25 Jun 2018	9	18.18	76.81	9.1	33.67	8.2	24.2	1.05
I26	04 Jun 2018	1	18.37	76.33	9.6	33.67	8.2	24.2	1.19
I26	04 Jun 2018	2	18.32	76.36	9.6	33.67	8.2	24.2	1.29
I26	04 Jun 2018	3	18.07	75.75	9.7	33.67	8.2	24.2	2.16
I26	04 Jun 2018	4	18.00	73.53	9.8	33.66	8.2	24.2	2.97
I26	04 Jun 2018	5	17.92	73.26	9.8	33.66	8.2	24.3	3.47
I26	04 Jun 2018	6	17.75	74.06	9.8	33.66	8.2	24.3	3.44
I26	04 Jun 2018	7	17.26	72.90	9.7	33.66	8.2	24.4	3.95
I26	04 Jun 2018	8	16.96	70.73	9.4	33.65	8.2	24.5	4.58
I26	04 Jun 2018	9	14.98	68.38	9.4	33.70	8.2	25.0	5.93
I26	11 Jun 2018	1	19.99	69.82	13.2	33.67	8.4	23.8	1.44
I26	11 Jun 2018	2	19.86	69.45	13.2	33.67	8.4	23.8	1.47
I26	11 Jun 2018	3	19.42	70.38	13.6	33.69	8.4	23.9	1.69
I26	11 Jun 2018	4	19.23	70.57	13.6	33.67	8.4	23.9	3.47
I26	11 Jun 2018	5	19.06	52.34	12.5	33.67	8.4	24.0	13.82
I26	11 Jun 2018	6	18.84	52.72	11.7	33.67	8.3	24.0	18.77
I26	11 Jun 2018	7	18.41	47.28	10.9	33.67	8.3	24.1	28.10
I26	11 Jun 2018	8	17.49	48.80	10.4	33.67	8.2	24.4	31.56
I26	11 Jun 2018	9	17.15	64.26	10.0	33.64	8.2	24.4	26.30
I26	18 Jun 2018	1	20.61	69.68	10.7	33.73	8.5	23.6	1.21
I26	18 Jun 2018	2	20.62	70.45	10.7	33.73	8.5	23.6	1.15
I26	18 Jun 2018	3	20.62	70.58	10.6	33.73	8.5	23.6	1.18
I26	18 Jun 2018	4	20.63	70.47	10.7	33.73	8.5	23.6	1.34
I26	18 Jun 2018	5	20.55	70.67	10.8	33.74	8.5	23.7	1.45
I26	18 Jun 2018	6	20.41	70.35	11.0	33.73	8.5	23.7	1.92
I26	18 Jun 2018	7	19.77	66.78	11.1	33.77	8.5	23.9	2.47
I26	18 Jun 2018	8	19.24	61.59	10.7	33.73	8.4	24.0	4.61
I26	18 Jun 2018	9	16.53	58.20	10.3	33.71	8.3	24.6	8.66
I26	25 Jun 2018	1	19.12	84.44	8.4	33.72	8.2	24.0	0.25

Station	Date	Depth (m)	Temp (°C)	XMS (‰)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (µg/L)
I26	25 Jun 2018	2	19.12	85.18	8.5	33.72	8.2	24.0	0.23
I26	25 Jun 2018	3	19.05	84.93	8.5	33.72	8.2	24.0	0.26
I26	25 Jun 2018	4	18.98	83.80	8.6	33.71	8.2	24.0	0.35
I26	25 Jun 2018	5	18.86	80.95	8.9	33.70	8.2	24.1	0.58
I26	25 Jun 2018	6	18.67	75.97	9.2	33.68	8.2	24.1	1.09
I26	25 Jun 2018	7	18.61	75.43	9.1	33.68	8.2	24.1	1.68
I26	25 Jun 2018	8	18.48	77.80	8.9	33.70	8.2	24.2	1.91
I26	25 Jun 2018	9	18.08	77.69	8.7	33.68	8.2	24.2	1.64
I32	04 Jun 2018	1	18.35	71.87	9.3	33.67	8.2	24.2	1.27
I32	04 Jun 2018	2	18.35	71.89	9.2	33.67	8.2	24.2	1.34
I32	04 Jun 2018	3	18.28	71.75	8.9	33.67	8.2	24.2	1.74
I32	04 Jun 2018	4	17.81	69.17	8.1	33.70	8.2	24.3	3.02
I32	04 Jun 2018	5	15.49	60.88	7.9	33.77	8.1	24.9	5.47
I32	04 Jun 2018	6	13.12	59.87	8.6	33.64	8.1	25.3	7.81
I32	04 Jun 2018	7	12.78	64.83	8.1	33.57	8.1	25.3	9.41
I32	04 Jun 2018	8	12.55	66.60	7.2	33.56	8.0	25.4	10.06
I32	04 Jun 2018	9	12.38	63.46	6.5	33.55	7.9	25.4	10.49
I32	04 Jun 2018	10	12.58	64.33	6.6	33.55	7.9	25.4	8.48
I32	11 Jun 2018	1	20.06	78.57	9.0	33.70	8.2	23.8	0.65
I32	11 Jun 2018	2	20.03	78.62	8.9	33.70	8.2	23.8	0.68
I32	11 Jun 2018	3	19.87	78.45	8.7	33.70	8.2	23.8	0.91
I32	11 Jun 2018	4	19.55	74.30	8.6	33.70	8.2	23.9	1.65
I32	11 Jun 2018	5	19.45	68.24	8.6	33.69	8.2	23.9	2.77
I32	11 Jun 2018	6	19.38	64.39	8.7	33.69	8.2	23.9	5.22
I32	11 Jun 2018	7	19.20	56.28	8.7	33.69	8.2	24.0	7.14
I32	11 Jun 2018	8	19.06	57.38	8.4	33.69	8.2	24.0	6.99
I32	11 Jun 2018	9	18.67	54.58	8.2	33.69	8.1	24.1	8.01
I32	11 Jun 2018	10	18.64	52.35	8.2	33.67	8.1	24.1	8.55
I32	18 Jun 2018	1	20.64	66.16	10.7	33.73	8.5	23.6	1.97
I32	18 Jun 2018	2	20.64	66.13	10.7	33.73	8.5	23.6	1.98
I32	18 Jun 2018	3	20.61	65.70	10.6	33.73	8.5	23.6	2.21
I32	18 Jun 2018	4	20.61	65.74	10.6	33.73	8.5	23.6	2.66
I32	18 Jun 2018	5	20.60	65.39	10.6	33.73	8.5	23.6	3.36
I32	18 Jun 2018	6	20.59	65.34	10.6	33.73	8.5	23.6	3.91
I32	18 Jun 2018	7	20.57	64.84	10.6	33.73	8.5	23.6	4.48
I32	18 Jun 2018	8	20.48	64.39	10.2	33.73	8.5	23.7	4.98
I32	18 Jun 2018	9	20.26	61.48	9.7	33.73	8.5	23.7	4.94
I32	18 Jun 2018	10	19.86	55.19	9.2	33.72	8.4	23.8	4.77
I32	25 Jun 2018	1	19.41	80.42	8.6	33.70	8.2	23.9	0.55
I32	25 Jun 2018	2	19.39	80.34	8.6	33.71	8.2	23.9	0.60
I32	25 Jun 2018	3	19.28	79.81	8.7	33.70	8.2	24.0	0.73
I32	25 Jun 2018	4	19.31	78.72	8.7	33.69	8.2	23.9	0.87
I32	25 Jun 2018	5	19.22	78.03	8.7	33.69	8.2	24.0	1.01
I32	25 Jun 2018	6	19.01	75.17	8.8	33.68	8.2	24.0	1.52
I32	25 Jun 2018	7	18.91	76.54	8.9	33.69	8.2	24.0	1.79
I32	25 Jun 2018	8	18.86	80.01	8.7	33.71	8.2	24.1	1.66
I32	25 Jun 2018	9	18.67	72.81	8.7	33.67	8.2	24.1	2.59
I32	25 Jun 2018	10	18.75	55.88	8.8	33.66	8.2	24.1	5.03
I39	04 Jun 2018	1	16.96	80.54	9.5	33.65	8.2	24.5	0.55
I39	04 Jun 2018	2	17.05	80.71	9.4	33.65	8.2	24.5	0.51

Station	Date	Depth (m)	Temp (°C)	XMS (‰)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (µg/L)
I39	04 Jun 2018	3	16.96	80.80	9.4	33.65	8.2	24.5	0.58
I39	04 Jun 2018	4	16.53	80.23	9.7	33.65	8.2	24.6	0.94
I39	04 Jun 2018	5	16.12	77.88	10.0	33.65	8.2	24.7	2.66
I39	04 Jun 2018	6	15.65	72.81	10.1	33.65	8.2	24.8	5.83
I39	04 Jun 2018	7	15.48	74.69	10.0	33.63	8.2	24.8	5.25
I39	04 Jun 2018	8	15.47	75.17	10.0	33.63	8.2	24.8	5.02
I39	04 Jun 2018	9	15.42	74.83	9.8	33.63	8.2	24.8	5.33
I39	04 Jun 2018	10	14.95	74.07	9.4	33.63	8.2	24.9	6.20
I39	04 Jun 2018	11	13.68	71.28	8.3	33.63	8.1	25.2	9.19
I39	04 Jun 2018	12	12.26	72.62	6.5	33.63	8.0	25.5	9.36
I39	04 Jun 2018	13	11.96	74.78	5.4	33.58	7.8	25.5	8.40
I39	04 Jun 2018	14	11.78	76.50	4.8	33.58	7.8	25.5	6.72
I39	04 Jun 2018	15	11.55	78.81	4.3	33.60	7.8	25.6	4.40
I39	04 Jun 2018	16	11.51	82.52	4.1	33.59	7.7	25.6	2.70
I39	04 Jun 2018	17	11.53	83.42	4.0	33.60	7.7	25.6	2.06
I39	04 Jun 2018	18	11.52	83.30	4.0	33.60	7.7	25.6	1.90
I39	11 Jun 2018	1	19.66	81.16	9.5	33.69	8.2	23.9	0.54
I39	11 Jun 2018	2	19.62	81.55	9.5	33.70	8.2	23.9	0.55
I39	11 Jun 2018	3	19.41	81.32	9.7	33.70	8.2	23.9	0.66
I39	11 Jun 2018	4	19.35	81.11	9.8	33.69	8.2	23.9	0.80
I39	11 Jun 2018	5	19.28	80.83	10.1	33.69	8.2	23.9	0.97
I39	11 Jun 2018	6	18.95	79.06	11.1	33.68	8.2	24.0	1.65
I39	11 Jun 2018	7	18.83	74.77	11.4	33.66	8.3	24.0	4.31
I39	11 Jun 2018	8	17.44	53.37	12.0	33.65	8.3	24.4	16.21
I39	11 Jun 2018	9	16.14	56.98	12.0	33.61	8.3	24.6	17.64
I39	11 Jun 2018	10	15.98	60.78	11.2	33.56	8.2	24.6	16.07
I39	11 Jun 2018	11	15.31	62.67	9.9	33.60	8.2	24.8	14.59
I39	11 Jun 2018	12	14.62	66.77	9.1	33.61	8.1	25.0	12.32
I39	11 Jun 2018	13	14.42	66.15	8.7	33.60	8.0	25.0	11.31
I39	11 Jun 2018	14	14.33	58.85	8.3	33.59	8.0	25.0	13.87
I39	11 Jun 2018	15	13.85	56.20	7.7	33.61	8.0	25.1	15.67
I39	11 Jun 2018	16	13.73	63.10	6.9	33.60	7.9	25.2	13.67
I39	11 Jun 2018	17	13.30	61.78	6.0	33.61	7.9	25.3	12.16
I39	11 Jun 2018	18	12.92	64.74	5.1	33.61	7.7	25.3	8.95
I39	18 Jun 2018	1	20.53	75.48	8.4	33.69	8.5	23.6	1.01
I39	18 Jun 2018	2	20.53	75.58	10.2	33.72	8.5	23.6	1.03
I39	18 Jun 2018	3	20.50	75.28	10.2	33.73	8.5	23.7	1.01
I39	18 Jun 2018	4	20.49	75.28	10.4	33.73	8.5	23.7	0.98
I39	18 Jun 2018	5	20.19	74.84	10.7	33.79	8.4	23.8	1.11
I39	18 Jun 2018	6	19.33	73.06	11.5	33.76	8.4	24.0	1.34
I39	18 Jun 2018	7	19.33	70.45	11.5	33.69	8.4	23.9	2.57
I39	18 Jun 2018	8	18.83	68.34	10.8	33.74	8.4	24.1	3.58
I39	18 Jun 2018	9	18.00	69.47	10.9	33.72	8.4	24.3	5.92
I39	18 Jun 2018	10	17.49	69.64	11.1	33.73	8.4	24.4	8.25
I39	18 Jun 2018	11	17.17	69.82	11.5	33.66	8.4	24.4	9.82
I39	18 Jun 2018	12	16.87	70.48	11.4	33.67	8.3	24.5	10.70
I39	18 Jun 2018	13	16.71	69.49	11.2	33.65	8.3	24.5	10.42
I39	18 Jun 2018	14	16.20	63.17	10.2	33.71	8.3	24.7	11.45
I39	18 Jun 2018	15	14.69	66.54	8.2	33.68	8.1	25.0	15.65
I39	18 Jun 2018	16	14.41	70.42	7.3	33.64	8.1	25.1	14.10
I39	18 Jun 2018	17	14.28	71.21	7.0	33.63	8.0	25.1	10.13
I39	18 Jun 2018	18	14.33	70.85	7.0	33.59	8.0	25.0	8.59

Station	Date	Depth (m)	Temp (°C)	XMS (‰)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (µg/L)
I39	25 Jun 2018	1	19.29	84.56	8.1	33.73	8.2	24.0	0.20
I39	25 Jun 2018	2	19.31	84.68	8.1	33.73	8.2	24.0	0.21
I39	25 Jun 2018	3	19.24	84.93	8.1	33.74	8.2	24.0	0.21
I39	25 Jun 2018	4	19.06	85.07	8.1	33.75	8.2	24.0	0.22
I39	25 Jun 2018	5	18.79	85.26	8.2	33.74	8.2	24.1	0.22
I39	25 Jun 2018	6	18.37	85.25	8.5	33.75	8.2	24.2	0.25
I39	25 Jun 2018	7	17.83	82.00	9.2	33.71	8.2	24.3	0.36
I39	25 Jun 2018	8	17.30	74.31	9.7	33.69	8.2	24.4	0.95
I39	25 Jun 2018	9	16.76	74.78	9.9	33.66	8.2	24.5	1.72
I39	25 Jun 2018	10	16.52	74.54	9.7	33.63	8.2	24.6	2.09
I39	25 Jun 2018	11	15.46	71.53	9.1	33.63	8.2	24.8	3.60
I39	25 Jun 2018	12	14.52	71.07	8.2	33.61	8.1	25.0	5.41
I39	25 Jun 2018	13	13.56	73.64	7.5	33.63	8.0	25.2	6.58
I39	25 Jun 2018	14	12.86	64.58	6.9	33.60	8.0	25.3	11.12
I39	25 Jun 2018	15	12.79	70.90	6.4	33.58	7.9	25.3	11.27
I39	25 Jun 2018	16	12.75	73.28	6.2	33.58	7.9	25.3	9.30
I39	25 Jun 2018	17	12.72	74.63	6.0	33.58	7.9	25.3	7.86
I39	25 Jun 2018	18	12.71	76.91	6.0	33.58	7.9	25.4	6.41
I40	04 Jun 2018	1	18.52	73.59	9.2	33.67	8.2	24.1	1.16
I40	04 Jun 2018	2	18.53	73.58	9.2	33.67	8.2	24.1	1.20
I40	04 Jun 2018	3	18.51	73.56	9.2	33.67	8.2	24.1	1.43
I40	04 Jun 2018	4	18.44	73.66	9.2	33.67	8.2	24.1	1.71
I40	04 Jun 2018	5	18.22	72.74	9.2	33.67	8.2	24.2	2.18
I40	04 Jun 2018	6	18.21	70.91	9.0	33.66	8.2	24.2	2.62
I40	04 Jun 2018	7	17.31	66.14	8.3	33.68	8.2	24.4	3.67
I40	04 Jun 2018	8	15.94	62.77	7.5	33.70	8.1	24.8	4.86
I40	04 Jun 2018	9	13.13	54.66	6.1	33.66	7.9	25.3	5.52
I40	04 Jun 2018	10	12.84	50.94	5.7	33.56	7.8	25.3	4.47
I40	11 Jun 2018	1	19.45	29.88	14.4	33.59	8.5	23.8	26.66
I40	11 Jun 2018	2	19.11	25.87	14.5	33.61	8.5	23.9	41.62
I40	11 Jun 2018	3	18.60	15.77	13.6	33.59	8.4	24.0	58.96
I40	11 Jun 2018	4	18.28	7.58	10.6	33.61	8.3	24.1	58.96
I40	11 Jun 2018	5	17.83	16.82	9.0	33.61	8.2	24.3	58.50
I40	11 Jun 2018	6	17.78	38.91	8.6	33.58	8.2	24.2	45.65
I40	11 Jun 2018	7	17.62	47.94	8.3	33.59	8.2	24.3	32.94
I40	11 Jun 2018	8	17.11	45.35	8.2	33.60	8.2	24.4	19.70
I40	11 Jun 2018	9	16.97	26.87	8.0	33.59	8.1	24.4	13.76
I40	11 Jun 2018	10	16.52	21.72	8.1	33.63	8.1	24.6	10.81
I40	18 Jun 2018	1	20.13	64.56	8.4	33.73	8.3	23.8	1.84
I40	18 Jun 2018	2	20.13	64.84	8.5	33.74	8.3	23.8	1.86
I40	18 Jun 2018	3	20.11	63.17	8.5	33.74	8.3	23.8	1.88
I40	18 Jun 2018	4	20.09	64.58	8.5	33.74	8.3	23.8	2.11
I40	18 Jun 2018	5	20.05	65.03	8.5	33.74	8.3	23.8	2.44
I40	18 Jun 2018	6	19.85	65.78	8.6	33.74	8.3	23.8	2.98
I40	18 Jun 2018	7	18.25	61.59	8.8	33.85	8.3	24.3	3.66
I40	18 Jun 2018	8	16.98	54.10	9.9	33.64	8.3	24.5	9.38
I40	18 Jun 2018	9	16.75	55.27	9.4	33.74	8.3	24.6	16.70
I40	18 Jun 2018	10	16.24	42.04	8.6	33.64	8.2	24.6	16.19
I40	25 Jun 2018	1	19.04	75.73	8.9	33.67	8.2	24.0	0.62
I40	25 Jun 2018	2	19.02	76.38	8.9	33.67	8.2	24.0	0.63
I40	25 Jun 2018	3	18.92	76.42	9.1	33.67	8.2	24.0	0.73

Station	Date	Depth (m)	Temp (°C)	XMS (‰)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (µg/L)
I40	25 Jun 2018	4	18.80	75.40	9.2	33.66	8.2	24.1	0.97
I40	25 Jun 2018	5	18.56	74.20	9.2	33.67	8.2	24.1	1.06
I40	25 Jun 2018	6	18.52	78.34	9.1	33.69	8.2	24.1	1.10
I40	25 Jun 2018	7	18.44	78.20	9.2	33.68	8.2	24.2	1.27
I40	25 Jun 2018	8	18.28	77.71	9.3	33.68	8.2	24.2	1.71
I40	25 Jun 2018	9	17.99	68.88	9.2	33.66	8.2	24.2	3.07
I40	25 Jun 2018	10	18.01	58.02	9.1	33.66	8.2	24.2	5.96

NA = not available

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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* (Entero) are reported as CFU/100 mL.

Station	Date	Depth	Analyst	Procedure	Total	Fecal	Entero
I19	04 Jun 2018	6	JT	LAB DUPLICATE	<2	<2	<2
I19	11 Jun 2018	6	AE	LAB DUPLICATE	140e	4e	260e
I19	18 Jun 2018	6	AE	LAB DUPLICATE	<2	<2	<2
I19	25 Jun 2018	6	AE	LAB DUPLICATE	4e	<2	<2
I40	04 Jun 2018	6	JT	LAB DUPLICATE	<2	<2	<2
I40	11 Jun 2018	6	ZV	LAB DUPLICATE	820	66	680
I40	18 Jun 2018	6	AE	LAB DUPLICATE	<2	<2	<2
I40	25 Jun 2018	6	AE	LAB DUPLICATE	<2	<2	<2
S12	05 Jun 2018		LMA	FIELD DUPLICATE	<2	<2	ns
S12	05 Jun 2018		LMA	LAB DUPLICATE	2e	<2	ns
S12	12 Jun 2018		AE	FIELD DUPLICATE	160e	18e	110
S12	12 Jun 2018		AE	LAB DUPLICATE	140e	10e	110
S12	19 Jun 2018		AE	FIELD DUPLICATE	<20	2e	<2
S12	19 Jun 2018		AE	LAB DUPLICATE	<20	2e	2e
S12	26 Jun 2018		AE	FIELD DUPLICATE	20e	2e	<2
S12	26 Jun 2018		AE	LAB DUPLICATE	20e	2e	<2

ns = not sampled

ND = no data

