

SOUTH BAY OCEAN OUTFALL MONTHLY RECEIVING WATERS MONITORING REPORT

SOUTH BAY WATER RECLAMATION PLANT

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

JULY 2018

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

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

Seawater samples at the kelp bed stations are primarily collected using a CTD-integrated rosette sampler with Niskin bottles. Aliquots for bacteriological analyses were drawn from these bottles into sterile sample bottles for processing at the City's Marine Microbiology Laboratory. Water column profiles of the various physical/chemical parameters were taken using a CTD. The CTD collected these physical/chemical data at a rate ≥ 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 for a total of 40 stations during each month (see station locations map). These offshore stations (I1–I40) are arranged in a grid surrounding the discharge site, and are generally located along the 9, 19, 28, 38, and 55-m depth contours. The seven offshore sites designated as kelp bed stations (described above) are included as part of the monthly offshore water quality sampling, however the data from these seven stations are reported within the kelp bed station section of the report with the other four days of kelp bed water quality sampling. Monitoring at all sites included measurements of various physical/chemical parameters, including water temperature, salinity, density, dissolved oxygen, pH, chlorophyll *a*, transmissivity, and chromomorphous dissolved organic matter (CDOM). Visual observations of weather and water conditions were also recorded at all stations. Seawater samples for the analysis of indicator bacteria, suspended solids, and oil and grease concentrations were collected at 28 of the stations.

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

Bacteriological Reporting and Quality Assurance

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

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

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

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

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

Single Sample Maximums:

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

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

Quality controls of bacteriological data include laboratory and field duplicate analyses. Laboratory duplicates are performed on approximately 10% of the water quality samples, while field duplicates are performed six times a month (see Appendix A). Laboratory duplicates represent two aliquots of the original sample that are split in the laboratory and analyzed by the same analyst using identical procedures within the same analytical run. The results of these analyses provide a measure of intra-analyst precision. In contrast, field duplicates represent two separate samples collected at the same time from the same site, which are handled under identical circumstances and treated exactly the same throughout field and lab procedures. The results of these analyses provide a measure of precision associated with sample collection, preservation, storage, and lab procedures. The sign test (see Gilbert, 1987) is used to statistically compare both the results from the laboratory duplicates, as well as the results from the field duplicates. These data will be further analyzed in the City's 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 July, two 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 July 3.
 - The SSM standard for *Enterococcus* was exceeded at stations S9 and S12 on July 3 and July 31, respectively.
 - Per permit requirements, resamples were collected in response to these SSM exceedances (see Table 2.8 for details).

- Although the Ocean Plan standards do not apply to this station, bacteria densities exceeded one or more benchmark levels (i.e., total coliforms >10,000 CFU/100mL; fecal coliforms >400 CFU/100 mL; *Enterococcus* >104 CFU/100 mL; total >1000 CFU/100 mL & F:T ratio >0.1) in the seawater sample collected at station S0 on July 3.
- 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>).
- Nothing of sewage origin was observed at any of the shore stations.

➤ **Kelp Bed Water Quality Sampling**

- The seven kelp bed water quality stations (I19, I24, I25, I26, I32, I39, I40) were sampled five times during the month (i.e. July 2, 9, 16, 23, 30).
- During July, five of the seven stations were out of compliance with various Ocean Plan water contact standards (see below).
 - The SSM standard for *Enterococcus* was exceeded at all stations except I32 and I39 on July 9 at one or more depths.
- Water column temperatures ranged from 12.42 to 23.24°C. The difference between surface and bottom waters ranged from 0.2 to 9.43°C, indicating the water column was stratified at some of these sites during the month.
- Chlorophyll *a* concentrations ranged from 0.51 to 29.42 µg/L at the kelp bed stations, suggesting the presence of phytoplankton blooms during the month.
- Nothing of sewage origin was observed at any of the kelp stations.

➤ **Offshore Water Quality Sampling**

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



TABLES AND FIGURES

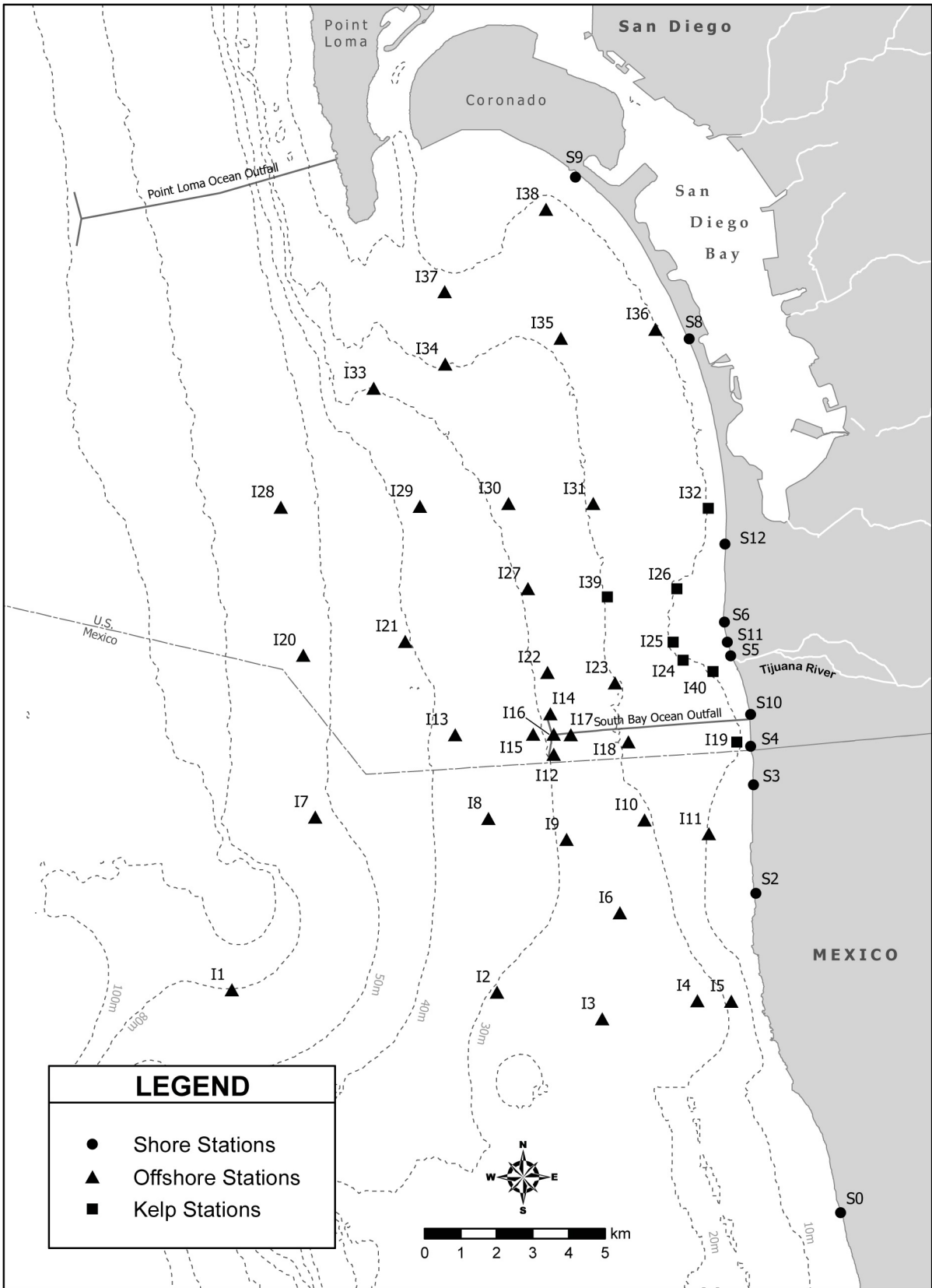


Figure 1.1 Station Map

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 Jul 2018	37*	41*	24*	15*	42*	56*	19*	17*
02 Jul 2018	37*	41*	24*	15*	42*	56*	19*	17*
03 Jul 2018	20	35	14	16	57	46	20	14
04 Jul 2018	20	35	14	16	57	46	20	14
05 Jul 2018	37*	52*	24*	20*	87*	76*	35*	24*
06 Jul 2018	37*	52*	24*	20*	87*	76*	35*	24*
07 Jul 2018	37*	52*	24*	20*	87*	76*	35*	24*
08 Jul 2018	37*	52*	24*	20*	87*	76*	35*	24*
09 Jul 2018	37*	52*	24*	20*	87*	76*	35*	24*
10 Jul 2018	32	49	23	32	103	58	31	23
11 Jul 2018	32	49	23	32	103	58	31	23
12 Jul 2018	11*	28*	11*	36*	155*	26*	18*	16*
13 Jul 2018	11*	28*	11*	36*	155*	26*	18*	16*
14 Jul 2018	11*	28*	11*	36*	155*	26*	18*	16*
15 Jul 2018	11*	28*	11*	36*	155*	26*	18*	16*
16 Jul 2018	11*	28*	11*	36*	155*	26*	18*	16*
17 Jul 2018	11	26	13	32	103	29	18	17
18 Jul 2018	11	26	13	32	103	29	18	17
19 Jul 2018	9*	24*	11*	36*	155*	31*	13*	16*
20 Jul 2018	9*	24*	11*	36*	155*	31*	13*	16*
21 Jul 2018	9*	24*	11*	36*	155*	31*	13*	16*
22 Jul 2018	9*	24*	11*	36*	155*	31*	13*	16*
23 Jul 2018	9*	24*	11*	36*	155*	31*	13*	16*
24 Jul 2018	11	23	13	50	163	29	14	17
25 Jul 2018	11	23	13	50	163	29	14	17
26 Jul 2018	9*	24*	11*	63*	110*	24*	20*	16*
27 Jul 2018	9*	24*	11*	63*	110*	24*	20*	16*
28 Jul 2018	9*	24*	11*	63*	110*	24*	20*	16*
29 Jul 2018	9*	24*	11*	63*	110*	24*	20*	16*
30 Jul 2018	9*	24*	11*	63*	110*	24*	20*	16*
31 Jul 2018	8	23	8	32	124	23	13	21

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

* 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 Jul 2018	13	8	7	3*	56	8	6	6
02 Jul 2018	13	8	7	3*	56	8	6	6
03 Jul 2018	9	6	6	5	65	6	5	6
04 Jul 2018	9	6	6	5	65	6	5	6
05 Jul 2018	9	6	6	5*	55	6	5	6
06 Jul 2018	9	6	6	5*	55	6	5	6
07 Jul 2018	9	6	6	5*	55	6	5	6
08 Jul 2018	9	6	6	5*	55	6	5	6
09 Jul 2018	9	6	6	5*	55	6	5	6
10 Jul 2018	10	7	5	4	45	6	6	5
11 Jul 2018	10	7	5	4	45	6	6	5
12 Jul 2018	5	4	2	3*	67	3	3	3
13 Jul 2018	5	4	2	3*	67	3	3	3
14 Jul 2018	6*	3*	2*	3*	67	3*	3*	2*
15 Jul 2018	6*	3*	2*	3*	67	3*	3*	2*
16 Jul 2018	6*	3*	2*	3*	67	3*	3*	2*
17 Jul 2018	5	3	2	4	59	4	3	3
18 Jul 2018	5	3	2	4	59	4	3	3
19 Jul 2018	4*	3*	2*	4*	82	4*	3*	3*
20 Jul 2018	4*	3*	2*	4*	82	4*	3*	3*
21 Jul 2018	4*	3*	2*	4*	82	4*	3*	3*
22 Jul 2018	4*	3*	2*	4*	82	4*	3*	3*
23 Jul 2018	4*	3*	2*	4*	82	4*	3*	3*
24 Jul 2018	4	3	2	4	61	4	3	3
25 Jul 2018	4	3	2	4	61	4	3	3
26 Jul 2018	4*	3*	2*	4*	42	4*	4*	3*
27 Jul 2018	4*	3*	2*	4*	42	4*	4*	3*
28 Jul 2018	4*	3*	2*	4*	36	4*	4*	3*
29 Jul 2018	4*	3*	2*	4*	25	4*	4*	3*
30 Jul 2018	4*	3*	2*	4*	25	4*	4*	3*
31 Jul 2018	5	3	2	4	14	4	3	8

* 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
03 Jul 2018	IC	IC	IC	IC	IC	IC	IC	IC
10 Jul 2018	IC	IC	IC	IC	IC	IC	IC	IC
17 Jul 2018	IC	IC	IC	IC	IC	IC	IC	IC
24 Jul 2018	IC	IC	IC	IC	IC	IC	IC	IC
31 Jul 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
03 Jul 2018	IC	IC	IC	IC	IC	IC	IC	IC
10 Jul 2018	IC	IC	IC	IC	IC	IC	IC	IC
17 Jul 2018	IC	IC	IC	IC	IC	IC	IC	IC
24 Jul 2018	IC	IC	IC	IC	IC	IC	IC	IC
31 Jul 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
01 Jul 2018	ns	ns	ns	ns	IC	ns	ns	ns
03 Jul 2018	IC	IC	IC	IC	E	IC	IC	IC
05 Jul 2018	ns	ns	ns	ns	IC	ns	ns	ns
10 Jul 2018	IC	IC	IC	IC	IC	IC	IC	IC
17 Jul 2018	IC	IC	IC	IC	IC	IC	IC	IC
24 Jul 2018	IC	IC	IC	IC	IC	IC	IC	IC
31 Jul 2018	IC	IC	IC	IC	IC	IC	IC	E

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
03 Jul 2018	IC	IC	IC	IC	IC	IC	IC	IC
10 Jul 2018	IC	IC	IC	IC	IC	IC	IC	IC
17 Jul 2018	IC	IC	IC	IC	IC	IC	IC	IC
24 Jul 2018	IC	IC	IC	IC	IC	IC	IC	IC
31 Jul 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	03 Jul 2018	1020	6400	88	140e	0.014
S0	10 Jul 2018	1058	200e	12e	32e	0.060
S0	17 Jul 2018	1040	2400e	12e	64	0.005
S0	24 Jul 2018	1120	20e	4e	28e	0.200
S0	31 Jul 2018	1055	100e	4e	38e	0.040
S2	03 Jul 2018	1100	4e	4e	2e	1.000
S2	10 Jul 2018	1143	140e	<2	6e	0.014
S2	17 Jul 2018	940	18e	<2	<2	0.111
S2	24 Jul 2018	1025	<20	<2	<2	0.100
S2	31 Jul 2018	1210	<20	<2	<2	0.100
S3	03 Jul 2018	1120	<2	<2	<2	1.000
S3	10 Jul 2018	1229	40e	<2	2e	0.050
S3	17 Jul 2018	955	4e	<2	4e	0.500
S3	24 Jul 2018	925	20e	2e	<2	0.100
S3	31 Jul 2018	1305	<20	<2	<2	0.100
S4	03 Jul 2018	849	2e	<2	<2	1.000
S4	10 Jul 2018	1034	20e	14e	12e	0.700
S4	17 Jul 2018	856	10e	<2	<2	0.200
S4	24 Jul 2018	1055	<20	<2	4e	0.100
S4	31 Jul 2018	936	4e	<2	10e	0.500
S5	03 Jul 2018	949	<20	<2	<2	0.100
S5	10 Jul 2018	854	40e	2e	14e	0.050
S5	17 Jul 2018	1008	20e	<2	2e	0.100
S5	24 Jul 2018	911	<20	<2	2e	0.100
S5	31 Jul 2018	1034	<20	<2	<2	0.100
S6	03 Jul 2018	957	2e	<2	<2	1.000
S6	10 Jul 2018	906	20e	2e	4e	0.100
S6	17 Jul 2018	1017	20e	<2	<2	0.100
S6	24 Jul 2018	923	<20	8e	<2	0.400
S6	31 Jul 2018	1042	<2	<2	<2	1.000
S8	03 Jul 2018	1147	20e	14e	18e	0.700
S8	10 Jul 2018	806	<200	<2	<2	0.010
S8	17 Jul 2018	1135	<20	<2	4e	0.100
S8	24 Jul 2018	830	<200	2e	<2	0.010
S8	31 Jul 2018	1227	<2	<2	<2	1.000
S9	01 Jul 2018	807	ns	ns	74	ns
S9	03 Jul 2018	1224	180e	52	160e	0.289
S9	05 Jul 2018	820	ns	ns	16e	ns
S9	10 Jul 2018	736	<200	<2	10e	0.010
S9	17 Jul 2018	1215	<20	<2	20e	0.100
S9	24 Jul 2018	757	<200	<2	6e	0.010
S9	31 Jul 2018	1306	<200	6e	<2	0.030

Station	Date	Time	Total	Fecal	Enteroc	F:T
S10	03 Jul 2018	846	<20	<2	<2	0.100
S10	10 Jul 2018	1040	20e	<2	6e	0.100
S10	17 Jul 2018	851	40e	<2	6e	0.050
S10	24 Jul 2018	1050	<20	<2	4e	0.100
S10	31 Jul 2018	930	<20	<2	<2	0.100
S11	03 Jul 2018	954	<20	<2	<2	0.100
S11	10 Jul 2018	901	<20	<2	12e	0.100
S11	17 Jul 2018	1013	<20	2e	2e	0.100
S11	24 Jul 2018	918	20e	<2	4e	0.100
S11	31 Jul 2018	1040	2e	2e	<2	1.000
S12	03 Jul 2018	1009	8e	6e	4e	0.750
S12	10 Jul 2018	917	<20	<2	2e	0.100
S12	17 Jul 2018	1027	20e	8e	6e	0.400
S12	24 Jul 2018	941	<20	<2	<2	0.100
S12	31 Jul 2018	1053	60e	6e	320e	0.100

ns = not sampled

ND = no data

Comments

Station	Date	Depth	Parameter	Comments
S9	01 Jul 2018			Resample for 6/29/18
S9	05 Jul 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	03 Jul 2018	Arrive Time	1020
S0	03 Jul 2018	Weather	Sunny
S0	03 Jul 2018	Wind Speed (kts)	4.3
S0	03 Jul 2018	Wind Dir	SW
S0	03 Jul 2018	Animal Life	1 Dog; 20 Seagulls
S0	03 Jul 2018	Floatables	None
S0	03 Jul 2018	Water Color	Green
S0	03 Jul 2018	Current Direction	N
S0	03 Jul 2018	Water Temp (C)	20
S0	03 Jul 2018	Wave Height Low (ft)	2
S0	03 Jul 2018	High Tide (ft)	3.8
S0	03 Jul 2018	High Tide Time	1407
S0	03 Jul 2018	Low Tide (ft)	0.3
S0	03 Jul 2018	Low Tide Time	724
S0	03 Jul 2018	Comments	Kelp; Seagrass; Algae; 12 Persons; Water clear; 1.0 L/s water flowing from storm drain
S0	10 Jul 2018	Arrive Time	1058
S0	10 Jul 2018	Weather	Cloudy
S0	10 Jul 2018	Wind Speed (kts)	5.8
S0	10 Jul 2018	Wind Dir	NE
S0	10 Jul 2018	Animal Life	5 Dogs; 15 Seagulls
S0	10 Jul 2018	Floatables	None
S0	10 Jul 2018	Water Color	Green
S0	10 Jul 2018	Current Direction	N
S0	10 Jul 2018	Water Temp (C)	22
S0	10 Jul 2018	Wave Height Low (ft)	3
S0	10 Jul 2018	High Tide (ft)	3.7
S0	10 Jul 2018	High Tide Time	814
S0	10 Jul 2018	Low Tide (ft)	1.7
S0	10 Jul 2018	Low Tide Time	1319
S0	10 Jul 2018	Comments	15 Persons; Water clear; 0.5 L/s water flowing from storm drain
S0	17 Jul 2018	Arrive Time	1040
S0	17 Jul 2018	Weather	Cloudy
S0	17 Jul 2018	Wind Speed (kts)	5.2
S0	17 Jul 2018	Wind Dir	NE
S0	17 Jul 2018	Animal Life	10 Shorebirds
S0	17 Jul 2018	Floatables	None
S0	17 Jul 2018	Water Color	Green
S0	17 Jul 2018	Current Direction	N
S0	17 Jul 2018	Water Temp (C)	20
S0	17 Jul 2018	Wave Height Low (ft)	2
S0	17 Jul 2018	High Tide (ft)	5.4
S0	17 Jul 2018	High Tide Time	1227
S0	17 Jul 2018	Low Tide (ft)	-0.3
S0	17 Jul 2018	Low Tide Time	725
S0	17 Jul 2018	Comments	Kelp; Algae; 3 Persons; Water clear; 2.0 L/S water flowing from storm drain
S0	24 Jul 2018	Arrive Time	1120

Station	Date	Parameter	Value
S0	24 Jul 2018	Weather	Sunny
S0	24 Jul 2018	Wind Speed (kts)	1.1
S0	24 Jul 2018	Wind Dir	SW
S0	24 Jul 2018	Animal Life	2 Dogs
S0	24 Jul 2018	Floatables	None
S0	24 Jul 2018	Water Color	Green
S0	24 Jul 2018	Current Direction	N
S0	24 Jul 2018	Water Temp (C)	18
S0	24 Jul 2018	Wave Height Low (ft)	2
S0	24 Jul 2018	High Tide (ft)	3.7
S0	24 Jul 2018	High Tide Time	852
S0	24 Jul 2018	Low Tide (ft)	2.1
S0	24 Jul 2018	Low Tide Time	1341
S0	24 Jul 2018	Comments	Kelp; Water turbid; 1.0 L/s water flowing from storm drain
S0	31 Jul 2018	Arrive Time	1055
S0	31 Jul 2018	Weather	Sunny
S0	31 Jul 2018	Wind Speed (kts)	1.9
S0	31 Jul 2018	Wind Dir	NW
S0	31 Jul 2018	Animal Life	10 Shorebirds; 3 Seagulls
S0	31 Jul 2018	Floatables	None
S0	31 Jul 2018	Water Color	Green
S0	31 Jul 2018	Current Direction	N
S0	31 Jul 2018	Water Temp (C)	16
S0	31 Jul 2018	Wave Height Low (ft)	3
S0	31 Jul 2018	High Tide (ft)	4.2
S0	31 Jul 2018	High Tide Time	25
S0	31 Jul 2018	Low Tide (ft)	0.2
S0	31 Jul 2018	Low Tide Time	605
S0	31 Jul 2018	Comments	Seagrass; Algae; 6 Surfers; Water clear; 0.5 L/s water flowing from storm drain
S2	03 Jul 2018	Arrive Time	1100
S2	03 Jul 2018	Weather	Sunny
S2	03 Jul 2018	Wind Speed (kts)	3.6
S2	03 Jul 2018	Wind Dir	SW
S2	03 Jul 2018	Animal Life	None
S2	03 Jul 2018	Floatables	None
S2	03 Jul 2018	Water Color	Green
S2	03 Jul 2018	Current Direction	N
S2	03 Jul 2018	Water Temp (C)	20.5
S2	03 Jul 2018	Wave Height Low (ft)	2
S2	03 Jul 2018	High Tide (ft)	3.8
S2	03 Jul 2018	High Tide Time	1407
S2	03 Jul 2018	Low Tide (ft)	0.3
S2	03 Jul 2018	Low Tide Time	724
S2	03 Jul 2018	Comments	Kelp; Seagrass; Algae; Water clear; No flow from storm drain
S2	10 Jul 2018	Arrive Time	1143
S2	10 Jul 2018	Weather	Cloudy
S2	10 Jul 2018	Wind Speed (kts)	8
S2	10 Jul 2018	Wind Dir	NE
S2	10 Jul 2018	Animal Life	5 Dogs
S2	10 Jul 2018	Floatables	None
S2	10 Jul 2018	Water Color	Green

Station	Date	Parameter	Value
S2	10 Jul 2018	Current Direction	N
S2	10 Jul 2018	Water Temp (C)	21
S2	10 Jul 2018	Wave Height Low (ft)	3
S2	10 Jul 2018	High Tide (ft)	3.7
S2	10 Jul 2018	High Tide Time	814
S2	10 Jul 2018	Low Tide (ft)	1.7
S2	10 Jul 2018	Low Tide Time	1319
S2	10 Jul 2018	Comments	Kelp; Algae; Water clear; No flow from storm drain.
S2	17 Jul 2018	Arrive Time	940
S2	17 Jul 2018	Weather	Cloudy
S2	17 Jul 2018	Wind Speed (kts)	6.4
S2	17 Jul 2018	Wind Dir	NE
S2	17 Jul 2018	Animal Life	5 Shorebirds; 2 Dogs
S2	17 Jul 2018	Floatables	None
S2	17 Jul 2018	Water Color	Green
S2	17 Jul 2018	Current Direction	N
S2	17 Jul 2018	Water Temp (C)	20
S2	17 Jul 2018	Wave Height Low (ft)	2
S2	17 Jul 2018	High Tide (ft)	5.4
S2	17 Jul 2018	High Tide Time	1227
S2	17 Jul 2018	Low Tide (ft)	-0.3
S2	17 Jul 2018	Low Tide Time	725
S2	17 Jul 2018	Comments	Kelp; Algae; 5 Persons; Water clear; No flow from storm drain
S2	24 Jul 2018	Arrive Time	1025
S2	24 Jul 2018	Weather	Sunny
S2	24 Jul 2018	Wind Speed (kts)	3
S2	24 Jul 2018	Wind Dir	SW
S2	24 Jul 2018	Animal Life	2 Seagulls
S2	24 Jul 2018	Floatables	None
S2	24 Jul 2018	Water Color	Green
S2	24 Jul 2018	Current Direction	N
S2	24 Jul 2018	Water Temp (C)	18
S2	24 Jul 2018	Wave Height Low (ft)	2
S2	24 Jul 2018	High Tide (ft)	3.7
S2	24 Jul 2018	High Tide Time	852
S2	24 Jul 2018	Low Tide (ft)	2.1
S2	24 Jul 2018	Low Tide Time	1341
S2	24 Jul 2018	Comments	Kelp; Water turbid; No flow from storm drain
S2	31 Jul 2018	Arrive Time	1210
S2	31 Jul 2018	Weather	Sunny
S2	31 Jul 2018	Wind Speed (kts)	2
S2	31 Jul 2018	Wind Dir	NW
S2	31 Jul 2018	Animal Life	3 Shorebirds; 1 Dog; 4 Seagulls
S2	31 Jul 2018	Floatables	None
S2	31 Jul 2018	Water Color	Green
S2	31 Jul 2018	Current Direction	N
S2	31 Jul 2018	Water Temp (C)	17
S2	31 Jul 2018	Wave Height Low (ft)	3
S2	31 Jul 2018	High Tide (ft)	4.8
S2	31 Jul 2018	High Tide Time	2339
S2	31 Jul 2018	Low Tide (ft)	2
S2	31 Jul 2018	Low Tide Time	1751

Station	Date	Parameter	Value
S2	31 Jul 2018	Comments	Seagrass; Algae; 10 Persons; Water clear; No flow from storm drain.
S3	03 Jul 2018	Arrive Time	1120
S3	03 Jul 2018	Weather	Sunny
S3	03 Jul 2018	Wind Speed (kts)	4.2
S3	03 Jul 2018	Wind Dir	SW
S3	03 Jul 2018	Animal Life	20 Shorebirds
S3	03 Jul 2018	Floatables	None
S3	03 Jul 2018	Water Color	Green
S3	03 Jul 2018	Current Direction	N
S3	03 Jul 2018	Water Temp (C)	20.5
S3	03 Jul 2018	Wave Height Low (ft)	2
S3	03 Jul 2018	High Tide (ft)	3.8
S3	03 Jul 2018	High Tide Time	1407
S3	03 Jul 2018	Low Tide (ft)	0.3
S3	03 Jul 2018	Low Tide Time	724
S3	03 Jul 2018	Comments	Kelp; Seagrass; Algae; 20 Persons; Water clear; 0.5 L/s water flowing from storm drain
S3	10 Jul 2018	Arrive Time	1229
S3	10 Jul 2018	Weather	Cloudy
S3	10 Jul 2018	Wind Speed (kts)	8.3
S3	10 Jul 2018	Wind Dir	NE
S3	10 Jul 2018	Animal Life	5 Shorebirds; 5 Dogs
S3	10 Jul 2018	Floatables	None
S3	10 Jul 2018	Water Color	Green
S3	10 Jul 2018	Current Direction	N
S3	10 Jul 2018	Water Temp (C)	21
S3	10 Jul 2018	Wave Height Low (ft)	3
S3	10 Jul 2018	High Tide (ft)	3.7
S3	10 Jul 2018	High Tide Time	814
S3	10 Jul 2018	Low Tide (ft)	1.7
S3	10 Jul 2018	Low Tide Time	1319
S3	10 Jul 2018	Comments	Kelp; Algae; 20 Persons; Water clear; No flow from storm drain.
S3	17 Jul 2018	Arrive Time	955
S3	17 Jul 2018	Weather	Cloudy
S3	17 Jul 2018	Wind Speed (kts)	5.2
S3	17 Jul 2018	Wind Dir	NE
S3	17 Jul 2018	Animal Life	5 Shorebirds; 2 Dogs
S3	17 Jul 2018	Floatables	None
S3	17 Jul 2018	Water Color	Green
S3	17 Jul 2018	Current Direction	N
S3	17 Jul 2018	Water Temp (C)	20
S3	17 Jul 2018	Wave Height Low (ft)	2
S3	17 Jul 2018	High Tide (ft)	5.4
S3	17 Jul 2018	High Tide Time	1227
S3	17 Jul 2018	Low Tide (ft)	-0.3
S3	17 Jul 2018	Low Tide Time	725
S3	17 Jul 2018	Comments	Kelp; Algae; 5 Persons; Water clear; No flow from storm drain
S3	24 Jul 2018	Arrive Time	925
S3	24 Jul 2018	Weather	Sunny
S3	24 Jul 2018	Wind Speed (kts)	2.3

Station	Date	Parameter	Value
S3	24 Jul 2018	Wind Dir	SW
S3	24 Jul 2018	Animal Life	2 Dogs
S3	24 Jul 2018	Floatables	None
S3	24 Jul 2018	Water Color	Green
S3	24 Jul 2018	Current Direction	N
S3	24 Jul 2018	Water Temp (C)	18
S3	24 Jul 2018	Wave Height Low (ft)	2
S3	24 Jul 2018	High Tide (ft)	3.7
S3	24 Jul 2018	High Tide Time	852
S3	24 Jul 2018	Low Tide (ft)	2.1
S3	24 Jul 2018	Low Tide Time	1341
S3	24 Jul 2018	Comments	Kelp; Water turbid; 0.5 L/s water flowing from storm drain
S3	31 Jul 2018	Arrive Time	1305
S3	31 Jul 2018	Weather	Sunny
S3	31 Jul 2018	Wind Speed (kts)	1.7
S3	31 Jul 2018	Wind Dir	NW
S3	31 Jul 2018	Animal Life	3 Shorebirds; 2 Dogs; 2 Seagulls
S3	31 Jul 2018	Floatables	None
S3	31 Jul 2018	Water Color	Green
S3	31 Jul 2018	Current Direction	N
S3	31 Jul 2018	Water Temp (C)	17
S3	31 Jul 2018	Wave Height Low (ft)	3
S3	31 Jul 2018	High Tide (ft)	4.8
S3	31 Jul 2018	High Tide Time	2339
S3	31 Jul 2018	Low Tide (ft)	2
S3	31 Jul 2018	Low Tide Time	1751
S3	31 Jul 2018	Comments	Seagrass; Algae; 15 Persons; Water clear; No flow from storm drain.
S4	03 Jul 2018	Arrive Time	849
S4	03 Jul 2018	Weather	Partly Cloudy
S4	03 Jul 2018	Wind Speed (kts)	2.2
S4	03 Jul 2018	Wind Dir	W
S4	03 Jul 2018	Animal Life	None
S4	03 Jul 2018	Floatables	None
S4	03 Jul 2018	Water Color	Green
S4	03 Jul 2018	Current Direction	N
S4	03 Jul 2018	Water Temp (C)	18
S4	03 Jul 2018	Wave Height Low (ft)	3
S4	03 Jul 2018	High Tide (ft)	3.8
S4	03 Jul 2018	High Tide Time	1407
S4	03 Jul 2018	Low Tide (ft)	0.3
S4	03 Jul 2018	Low Tide Time	724
S4	03 Jul 2018	Comments	Kelp; Seagrass; Water clear
S4	10 Jul 2018	Arrive Time	1034
S4	10 Jul 2018	Weather	Overcast
S4	10 Jul 2018	Wind Speed (kts)	10.6
S4	10 Jul 2018	Wind Dir	N
S4	10 Jul 2018	Animal Life	20 Shorebirds; 100 Cormorants
S4	10 Jul 2018	Floatables	None
S4	10 Jul 2018	Water Color	Green
S4	10 Jul 2018	Current Direction	N
S4	10 Jul 2018	Water Temp (C)	22

Station	Date	Parameter	Value
S4	10 Jul 2018	Wave Height Low (ft)	1
S4	10 Jul 2018	High Tide (ft)	3.7
S4	10 Jul 2018	High Tide Time	814
S4	10 Jul 2018	Low Tide (ft)	1.7
S4	10 Jul 2018	Low Tide Time	1319
S4	10 Jul 2018	Comments	Kelp; Seagrass; Debris; 4 Persons; Water clear
S4	17 Jul 2018	Arrive Time	856
S4	17 Jul 2018	Weather	Overcast
S4	17 Jul 2018	Wind Speed (kts)	7.2
S4	17 Jul 2018	Wind Dir	N
S4	17 Jul 2018	Animal Life	30 Birds
S4	17 Jul 2018	Floatables	None
S4	17 Jul 2018	Water Color	Green
S4	17 Jul 2018	Current Direction	N
S4	17 Jul 2018	Water Temp (C)	20
S4	17 Jul 2018	Wave Height Low (ft)	1
S4	17 Jul 2018	High Tide (ft)	5.4
S4	17 Jul 2018	High Tide Time	1227
S4	17 Jul 2018	Low Tide (ft)	-0.3
S4	17 Jul 2018	Low Tide Time	725
S4	17 Jul 2018	Comments	Water clear
S4	24 Jul 2018	Arrive Time	1055
S4	24 Jul 2018	Weather	Sunny
S4	24 Jul 2018	Wind Speed (kts)	3.6
S4	24 Jul 2018	Wind Dir	W
S4	24 Jul 2018	Animal Life	None
S4	24 Jul 2018	Floatables	None
S4	24 Jul 2018	Water Color	Green
S4	24 Jul 2018	Current Direction	N
S4	24 Jul 2018	Water Temp (C)	23
S4	24 Jul 2018	Wave Height Low (ft)	3
S4	24 Jul 2018	High Tide (ft)	3.7
S4	24 Jul 2018	High Tide Time	852
S4	24 Jul 2018	Low Tide (ft)	2.1
S4	24 Jul 2018	Low Tide Time	1341
S4	24 Jul 2018	Comments	Kelp; Water clear
S4	31 Jul 2018	Arrive Time	936
S4	31 Jul 2018	Weather	Sunny
S4	31 Jul 2018	Wind Speed (kts)	4
S4	31 Jul 2018	Wind Dir	W
S4	31 Jul 2018	Animal Life	None
S4	31 Jul 2018	Floatables	None
S4	31 Jul 2018	Water Color	Green
S4	31 Jul 2018	Current Direction	N
S4	31 Jul 2018	Water Temp (C)	26
S4	31 Jul 2018	Wave Height Low (ft)	3
S4	31 Jul 2018	High Tide (ft)	4.2
S4	31 Jul 2018	High Tide Time	25
S4	31 Jul 2018	Low Tide (ft)	0.2
S4	31 Jul 2018	Low Tide Time	605
S4	31 Jul 2018	Comments	Kelp; Seagrass; Water clear

Station	Date	Parameter	Value
S5	03 Jul 2018	Arrive Time	949
S5	03 Jul 2018	Weather	Sunny
S5	03 Jul 2018	Wind Speed (kts)	6.4
S5	03 Jul 2018	Wind Dir	W
S5	03 Jul 2018	Animal Life	None
S5	03 Jul 2018	Floatables	None
S5	03 Jul 2018	Water Color	Green
S5	03 Jul 2018	Current Direction	N
S5	03 Jul 2018	Water Temp (C)	19
S5	03 Jul 2018	Wave Height Low (ft)	3
S5	03 Jul 2018	High Tide (ft)	3.8
S5	03 Jul 2018	High Tide Time	1407
S5	03 Jul 2018	Low Tide (ft)	0.3
S5	03 Jul 2018	Low Tide Time	724
S5	03 Jul 2018	Comments	Kelp; Seagrass; Water clear
S5	10 Jul 2018	Arrive Time	854
S5	10 Jul 2018	Weather	Partly Cloudy
S5	10 Jul 2018	Wind Speed (kts)	9.3
S5	10 Jul 2018	Wind Dir	N
S5	10 Jul 2018	Animal Life	1 Shorebird
S5	10 Jul 2018	Floatables	None
S5	10 Jul 2018	Water Color	Green
S5	10 Jul 2018	Current Direction	N
S5	10 Jul 2018	Water Temp (C)	22
S5	10 Jul 2018	Wave Height Low (ft)	2
S5	10 Jul 2018	High Tide (ft)	3.7
S5	10 Jul 2018	High Tide Time	814
S5	10 Jul 2018	Low Tide (ft)	1.7
S5	10 Jul 2018	Low Tide Time	1319
S5	10 Jul 2018	Comments	Kelp; Seagrass; Algae; Water clear
S5	17 Jul 2018	Arrive Time	1008
S5	17 Jul 2018	Weather	Overcast
S5	17 Jul 2018	Wind Speed (kts)	8.2
S5	17 Jul 2018	Wind Dir	W
S5	17 Jul 2018	Animal Life	None
S5	17 Jul 2018	Floatables	None
S5	17 Jul 2018	Water Color	Green
S5	17 Jul 2018	Current Direction	N
S5	17 Jul 2018	Water Temp (C)	22
S5	17 Jul 2018	Wave Height Low (ft)	1
S5	17 Jul 2018	High Tide (ft)	5.4
S5	17 Jul 2018	High Tide Time	1227
S5	17 Jul 2018	Low Tide (ft)	-0.3
S5	17 Jul 2018	Low Tide Time	725
S5	17 Jul 2018	Comments	Kelp; Water clear
S5	24 Jul 2018	Arrive Time	911
S5	24 Jul 2018	Weather	Sunny
S5	24 Jul 2018	Wind Speed (kts)	1.5
S5	24 Jul 2018	Wind Dir	N
S5	24 Jul 2018	Animal Life	None
S5	24 Jul 2018	Floatables	None
S5	24 Jul 2018	Water Color	Green

Station	Date	Parameter	Value
S5	24 Jul 2018	Current Direction	N
S5	24 Jul 2018	Water Temp (C)	20
S5	24 Jul 2018	Wave Height Low (ft)	2
S5	24 Jul 2018	High Tide (ft)	3.7
S5	24 Jul 2018	High Tide Time	852
S5	24 Jul 2018	Low Tide (ft)	2.1
S5	24 Jul 2018	Low Tide Time	1341
S5	24 Jul 2018	Comments	Kelp; Seagrass; Water clear
S5	31 Jul 2018	Arrive Time	1034
S5	31 Jul 2018	Weather	Sunny
S5	31 Jul 2018	Wind Speed (kts)	3.8
S5	31 Jul 2018	Wind Dir	W
S5	31 Jul 2018	Animal Life	None
S5	31 Jul 2018	Floatables	None
S5	31 Jul 2018	Water Color	Green
S5	31 Jul 2018	Current Direction	N
S5	31 Jul 2018	Water Temp (C)	24
S5	31 Jul 2018	Wave Height Low (ft)	2
S5	31 Jul 2018	High Tide (ft)	4.2
S5	31 Jul 2018	High Tide Time	25
S5	31 Jul 2018	Low Tide (ft)	0.2
S5	31 Jul 2018	Low Tide Time	605
S5	31 Jul 2018	Comments	Kelp; Seagrass; Water clear
S6	03 Jul 2018	Arrive Time	957
S6	03 Jul 2018	Weather	Sunny
S6	03 Jul 2018	Wind Speed (kts)	6
S6	03 Jul 2018	Wind Dir	W
S6	03 Jul 2018	Animal Life	None
S6	03 Jul 2018	Floatables	None
S6	03 Jul 2018	Water Color	Green
S6	03 Jul 2018	Current Direction	N
S6	03 Jul 2018	Water Temp (C)	18
S6	03 Jul 2018	Wave Height Low (ft)	3
S6	03 Jul 2018	High Tide (ft)	3.8
S6	03 Jul 2018	High Tide Time	1407
S6	03 Jul 2018	Low Tide (ft)	0.3
S6	03 Jul 2018	Low Tide Time	724
S6	03 Jul 2018	Comments	Kelp; Seagrass; 3 Persons; Water clear
S6	10 Jul 2018	Arrive Time	906
S6	10 Jul 2018	Weather	Partly Cloudy
S6	10 Jul 2018	Wind Speed (kts)	5.4
S6	10 Jul 2018	Wind Dir	N
S6	10 Jul 2018	Animal Life	1 Bird
S6	10 Jul 2018	Floatables	None
S6	10 Jul 2018	Water Color	Green
S6	10 Jul 2018	Current Direction	N
S6	10 Jul 2018	Water Temp (C)	22
S6	10 Jul 2018	Wave Height Low (ft)	1
S6	10 Jul 2018	High Tide (ft)	3.7
S6	10 Jul 2018	High Tide Time	814
S6	10 Jul 2018	Low Tide (ft)	1.7
S6	10 Jul 2018	Low Tide Time	1319

Station	Date	Parameter	Value
S6	10 Jul 2018	Comments	Kelp; Seagrass; Debris; 4 Persons; Water clear
S6	17 Jul 2018	Arrive Time	1017
S6	17 Jul 2018	Weather	Sunny
S6	17 Jul 2018	Wind Speed (kts)	6.8
S6	17 Jul 2018	Wind Dir	N
S6	17 Jul 2018	Animal Life	None
S6	17 Jul 2018	Floatables	None
S6	17 Jul 2018	Water Color	Green
S6	17 Jul 2018	Current Direction	N
S6	17 Jul 2018	Water Temp (C)	20
S6	17 Jul 2018	Wave Height Low (ft)	2
S6	17 Jul 2018	High Tide (ft)	5.4
S6	17 Jul 2018	High Tide Time	1227
S6	17 Jul 2018	Low Tide (ft)	-0.3
S6	17 Jul 2018	Low Tide Time	725
S6	17 Jul 2018	Comments	Kelp; 2 Persons; Water clear
S6	24 Jul 2018	Arrive Time	923
S6	24 Jul 2018	Weather	Sunny
S6	24 Jul 2018	Wind Speed (kts)	2.3
S6	24 Jul 2018	Wind Dir	S
S6	24 Jul 2018	Animal Life	None
S6	24 Jul 2018	Floatables	None
S6	24 Jul 2018	Water Color	Green
S6	24 Jul 2018	Current Direction	N
S6	24 Jul 2018	Water Temp (C)	20
S6	24 Jul 2018	Wave Height Low (ft)	3
S6	24 Jul 2018	High Tide (ft)	3.7
S6	24 Jul 2018	High Tide Time	852
S6	24 Jul 2018	Low Tide (ft)	2.1
S6	24 Jul 2018	Low Tide Time	1341
S6	24 Jul 2018	Comments	Kelp; 2 Persons; Water clear
S6	31 Jul 2018	Arrive Time	1042
S6	31 Jul 2018	Weather	Sunny
S6	31 Jul 2018	Wind Speed (kts)	3.8
S6	31 Jul 2018	Wind Dir	W
S6	31 Jul 2018	Animal Life	None
S6	31 Jul 2018	Floatables	None
S6	31 Jul 2018	Water Color	Green
S6	31 Jul 2018	Current Direction	N
S6	31 Jul 2018	Water Temp (C)	25
S6	31 Jul 2018	Wave Height Low (ft)	3
S6	31 Jul 2018	High Tide (ft)	4.2
S6	31 Jul 2018	High Tide Time	25
S6	31 Jul 2018	Low Tide (ft)	0.2
S6	31 Jul 2018	Low Tide Time	605
S6	31 Jul 2018	Comments	Kelp; Seagrass; 1 Person; Water clear
S8	03 Jul 2018	Arrive Time	1147
S8	03 Jul 2018	Weather	Sunny
S8	03 Jul 2018	Wind Speed (kts)	6.9
S8	03 Jul 2018	Wind Dir	W
S8	03 Jul 2018	Animal Life	None

Station	Date	Parameter	Value
S8	03 Jul 2018	Floatables	None
S8	03 Jul 2018	Water Color	Green
S8	03 Jul 2018	Current Direction	N
S8	03 Jul 2018	Water Temp (C)	19
S8	03 Jul 2018	Wave Height Low (ft)	3
S8	03 Jul 2018	High Tide (ft)	3.8
S8	03 Jul 2018	High Tide Time	1407
S8	03 Jul 2018	Low Tide (ft)	0.3
S8	03 Jul 2018	Low Tide Time	724
S8	03 Jul 2018	Comments	Kelp; Seagrass; 8 Persons; 5 Swimmers; 1 Fisherman; Water clear
S8	10 Jul 2018	Arrive Time	806
S8	10 Jul 2018	Weather	Partly Cloudy
S8	10 Jul 2018	Wind Speed (kts)	5.8
S8	10 Jul 2018	Wind Dir	N
S8	10 Jul 2018	Animal Life	1 Bird
S8	10 Jul 2018	Floatables	None
S8	10 Jul 2018	Water Color	Green
S8	10 Jul 2018	Current Direction	N
S8	10 Jul 2018	Water Temp (C)	23
S8	10 Jul 2018	Wave Height Low (ft)	1
S8	10 Jul 2018	High Tide (ft)	3.7
S8	10 Jul 2018	High Tide Time	814
S8	10 Jul 2018	Low Tide (ft)	1.7
S8	10 Jul 2018	Low Tide Time	1319
S8	10 Jul 2018	Comments	Kelp; Seagrass; 8 Persons; Water clear
S8	17 Jul 2018	Arrive Time	1135
S8	17 Jul 2018	Weather	Partly Cloudy
S8	17 Jul 2018	Wind Speed (kts)	9.7
S8	17 Jul 2018	Wind Dir	N
S8	17 Jul 2018	Animal Life	None
S8	17 Jul 2018	Floatables	None
S8	17 Jul 2018	Water Color	Green
S8	17 Jul 2018	Current Direction	N
S8	17 Jul 2018	Water Temp (C)	25
S8	17 Jul 2018	Wave Height Low (ft)	2
S8	17 Jul 2018	High Tide (ft)	5.4
S8	17 Jul 2018	High Tide Time	1227
S8	17 Jul 2018	Low Tide (ft)	-0.3
S8	17 Jul 2018	Low Tide Time	725
S8	17 Jul 2018	Comments	Kelp; Seagrass; 50 Persons; Water clear
S8	24 Jul 2018	Arrive Time	830
S8	24 Jul 2018	Weather	Overcast
S8	24 Jul 2018	Wind Speed (kts)	4
S8	24 Jul 2018	Wind Dir	S
S8	24 Jul 2018	Animal Life	None
S8	24 Jul 2018	Floatables	None
S8	24 Jul 2018	Water Color	Green
S8	24 Jul 2018	Current Direction	N
S8	24 Jul 2018	Water Temp (C)	20
S8	24 Jul 2018	Wave Height Low (ft)	2
S8	24 Jul 2018	High Tide (ft)	3.7
S8	24 Jul 2018	High Tide Time	852

Station	Date	Parameter	Value
S8	24 Jul 2018	Low Tide (ft)	2.1
S8	24 Jul 2018	Low Tide Time	1341
S8	24 Jul 2018	Comments	Kelp; Seagrass; 10 Persons; Water clear
S8	31 Jul 2018	Arrive Time	1227
S8	31 Jul 2018	Weather	Partly Cloudy
S8	31 Jul 2018	Wind Speed (kts)	8.9
S8	31 Jul 2018	Wind Dir	W
S8	31 Jul 2018	Animal Life	None
S8	31 Jul 2018	Floatables	None
S8	31 Jul 2018	Water Color	Green
S8	31 Jul 2018	Current Direction	N
S8	31 Jul 2018	Water Temp (C)	25
S8	31 Jul 2018	Wave Height Low (ft)	3
S8	31 Jul 2018	High Tide (ft)	4.8
S8	31 Jul 2018	High Tide Time	2339
S8	31 Jul 2018	Low Tide (ft)	2
S8	31 Jul 2018	Low Tide Time	1751
S8	31 Jul 2018	Comments	Kelp; Seagrass; 18 Persons; 3 Swimmers; 2 Fishermen; Water clear
S9	01 Jul 2018	Arrive Time	807
S9	01 Jul 2018	Weather	Overcast
S9	01 Jul 2018	Wind Speed (kts)	1.9
S9	01 Jul 2018	Wind Dir	N
S9	01 Jul 2018	Animal Life	30 Birds
S9	01 Jul 2018	Floatables	None
S9	01 Jul 2018	Water Color	Green
S9	01 Jul 2018	Current Direction	N
S9	01 Jul 2018	Water Temp (C)	19
S9	01 Jul 2018	Wave Height Low (ft)	1
S9	01 Jul 2018	High Tide (ft)	3.7
S9	01 Jul 2018	High Tide Time	37
S9	01 Jul 2018	Low Tide (ft)	-0.2
S9	01 Jul 2018	Low Tide Time	609
S9	01 Jul 2018	Comments	Resample; Kelp; 15 Persons; 2 Swimmers; Water clear
S9	03 Jul 2018	Arrive Time	1224
S9	03 Jul 2018	Weather	Sunny
S9	03 Jul 2018	Wind Speed (kts)	9.7
S9	03 Jul 2018	Wind Dir	W
S9	03 Jul 2018	Animal Life	4 Seagulls
S9	03 Jul 2018	Floatables	None
S9	03 Jul 2018	Water Color	Green
S9	03 Jul 2018	Current Direction	N
S9	03 Jul 2018	Water Temp (C)	19
S9	03 Jul 2018	Wave Height Low (ft)	3
S9	03 Jul 2018	High Tide (ft)	3.8
S9	03 Jul 2018	High Tide Time	1407
S9	03 Jul 2018	Low Tide (ft)	0.3
S9	03 Jul 2018	Low Tide Time	724
S9	03 Jul 2018	Comments	Kelp; Seagrass; 7 Persons; 9 Surfers; Water clear
S9	05 Jul 2018	Arrive Time	820
S9	05 Jul 2018	Weather	Sunny

Station	Date	Parameter	Value
S9	05 Jul 2018	Wind Speed (kts)	3.8
S9	05 Jul 2018	Wind Dir	NW
S9	05 Jul 2018	Animal Life	None
S9	05 Jul 2018	Floatables	None
S9	05 Jul 2018	Water Color	Green
S9	05 Jul 2018	Current Direction	N
S9	05 Jul 2018	Water Temp (C)	18
S9	05 Jul 2018	Wave Height Low (ft)	2
S9	05 Jul 2018	High Tide (ft)	3.8
S9	05 Jul 2018	High Tide Time	142
S9	05 Jul 2018	Low Tide (ft)	0.9
S9	05 Jul 2018	Low Tide Time	851
S9	05 Jul 2018	Comments	Resample; Kelp; Seagrass; Water clear
S9	10 Jul 2018	Arrive Time	736
S9	10 Jul 2018	Weather	Overcast
S9	10 Jul 2018	Wind Speed (kts)	7.3
S9	10 Jul 2018	Wind Dir	N
S9	10 Jul 2018	Animal Life	2 Shorebirds
S9	10 Jul 2018	Floatables	Foam
S9	10 Jul 2018	Water Color	Green
S9	10 Jul 2018	Current Direction	N
S9	10 Jul 2018	Water Temp (C)	23
S9	10 Jul 2018	Wave Height Low (ft)	1
S9	10 Jul 2018	High Tide (ft)	3.7
S9	10 Jul 2018	High Tide Time	814
S9	10 Jul 2018	Low Tide (ft)	-0.4
S9	10 Jul 2018	Low Tide Time	205
S9	10 Jul 2018	Comments	Kelp; Seagrass; 6 Persons; Water clear
S9	17 Jul 2018	Arrive Time	1215
S9	17 Jul 2018	Weather	Sunny
S9	17 Jul 2018	Wind Speed (kts)	7.3
S9	17 Jul 2018	Wind Dir	N
S9	17 Jul 2018	Animal Life	None
S9	17 Jul 2018	Floatables	None
S9	17 Jul 2018	Water Color	Green
S9	17 Jul 2018	Current Direction	N
S9	17 Jul 2018	Water Temp (C)	28
S9	17 Jul 2018	Wave Height Low (ft)	2
S9	17 Jul 2018	High Tide (ft)	5.4
S9	17 Jul 2018	High Tide Time	1227
S9	17 Jul 2018	Low Tide (ft)	-0.3
S9	17 Jul 2018	Low Tide Time	725
S9	17 Jul 2018	Comments	Kelp; Seagrass; 60 Persons; 30 Surfers; 30 Swimmers; Water clear
S9	24 Jul 2018	Arrive Time	757
S9	24 Jul 2018	Weather	Partly Cloudy
S9	24 Jul 2018	Wind Speed (kts)	2.9
S9	24 Jul 2018	Wind Dir	W
S9	24 Jul 2018	Animal Life	None
S9	24 Jul 2018	Floatables	None
S9	24 Jul 2018	Water Color	Green
S9	24 Jul 2018	Current Direction	N

Station	Date	Parameter	Value
S9	24 Jul 2018	Water Temp (C)	21
S9	24 Jul 2018	Wave Height Low (ft)	2
S9	24 Jul 2018	High Tide (ft)	3.7
S9	24 Jul 2018	High Tide Time	852
S9	24 Jul 2018	Low Tide (ft)	-0.1
S9	24 Jul 2018	Low Tide Time	234
S9	24 Jul 2018	Comments	Seagrass; 5 Persons; 3 Surfers; Water clear
S9	31 Jul 2018	Arrive Time	1306
S9	31 Jul 2018	Weather	Sunny
S9	31 Jul 2018	Wind Speed (kts)	4.2
S9	31 Jul 2018	Wind Dir	W
S9	31 Jul 2018	Animal Life	None
S9	31 Jul 2018	Floatables	None
S9	31 Jul 2018	Water Color	Green
S9	31 Jul 2018	Current Direction	N
S9	31 Jul 2018	Water Temp (C)	26
S9	31 Jul 2018	Wave Height Low (ft)	2
S9	31 Jul 2018	High Tide (ft)	4.8
S9	31 Jul 2018	High Tide Time	2339
S9	31 Jul 2018	Low Tide (ft)	2
S9	31 Jul 2018	Low Tide Time	1751
S9	31 Jul 2018	Comments	Kelp; Seagrass; 45 Persons; 12 Surfers; 35 Swimmers; Water clear
S10	03 Jul 2018	Arrive Time	846
S10	03 Jul 2018	Weather	Partly Cloudy
S10	03 Jul 2018	Wind Speed (kts)	3.6
S10	03 Jul 2018	Wind Dir	W
S10	03 Jul 2018	Animal Life	None
S10	03 Jul 2018	Floatables	None
S10	03 Jul 2018	Water Color	Green
S10	03 Jul 2018	Current Direction	N
S10	03 Jul 2018	Water Temp (C)	19
S10	03 Jul 2018	Wave Height Low (ft)	3
S10	03 Jul 2018	High Tide (ft)	3.8
S10	03 Jul 2018	High Tide Time	1407
S10	03 Jul 2018	Low Tide (ft)	0.3
S10	03 Jul 2018	Low Tide Time	724
S10	03 Jul 2018	Comments	Kelp; Seagrass; Water clear
S10	10 Jul 2018	Arrive Time	1040
S10	10 Jul 2018	Weather	Partly Cloudy
S10	10 Jul 2018	Wind Speed (kts)	9.7
S10	10 Jul 2018	Wind Dir	N
S10	10 Jul 2018	Animal Life	1 Bird
S10	10 Jul 2018	Floatables	None
S10	10 Jul 2018	Water Color	Green
S10	10 Jul 2018	Current Direction	N
S10	10 Jul 2018	Water Temp (C)	22
S10	10 Jul 2018	Wave Height Low (ft)	1
S10	10 Jul 2018	High Tide (ft)	3.7
S10	10 Jul 2018	High Tide Time	814
S10	10 Jul 2018	Low Tide (ft)	1.7
S10	10 Jul 2018	Low Tide Time	1319

Station	Date	Parameter	Value
S10	10 Jul 2018	Comments	Kelp; Seagrass; Debris; Water clear; Trash
S10	17 Jul 2018	Arrive Time	851
S10	17 Jul 2018	Weather	Overcast
S10	17 Jul 2018	Wind Speed (kts)	7.3
S10	17 Jul 2018	Wind Dir	N
S10	17 Jul 2018	Animal Life	None
S10	17 Jul 2018	Floatables	None
S10	17 Jul 2018	Water Color	Green
S10	17 Jul 2018	Current Direction	N
S10	17 Jul 2018	Water Temp (C)	20
S10	17 Jul 2018	Wave Height Low (ft)	2
S10	17 Jul 2018	High Tide (ft)	5.4
S10	17 Jul 2018	High Tide Time	1227
S10	17 Jul 2018	Low Tide (ft)	-0.3
S10	17 Jul 2018	Low Tide Time	725
S10	17 Jul 2018	Comments	Water clear
S10	24 Jul 2018	Arrive Time	1050
S10	24 Jul 2018	Weather	Sunny
S10	24 Jul 2018	Wind Speed (kts)	5.3
S10	24 Jul 2018	Wind Dir	SW
S10	24 Jul 2018	Animal Life	None
S10	24 Jul 2018	Floatables	None
S10	24 Jul 2018	Water Color	Green
S10	24 Jul 2018	Current Direction	N
S10	24 Jul 2018	Water Temp (C)	21
S10	24 Jul 2018	Wave Height Low (ft)	4
S10	24 Jul 2018	High Tide (ft)	3.7
S10	24 Jul 2018	High Tide Time	852
S10	24 Jul 2018	Low Tide (ft)	2.1
S10	24 Jul 2018	Low Tide Time	1341
S10	24 Jul 2018	Comments	Kelp; Seagrass; Water clear
S10	31 Jul 2018	Arrive Time	930
S10	31 Jul 2018	Weather	Sunny
S10	31 Jul 2018	Wind Speed (kts)	4.6
S10	31 Jul 2018	Wind Dir	W
S10	31 Jul 2018	Animal Life	None
S10	31 Jul 2018	Floatables	None
S10	31 Jul 2018	Water Color	Green
S10	31 Jul 2018	Current Direction	N
S10	31 Jul 2018	Water Temp (C)	26
S10	31 Jul 2018	Wave Height Low (ft)	3
S10	31 Jul 2018	High Tide (ft)	4.2
S10	31 Jul 2018	High Tide Time	25
S10	31 Jul 2018	Low Tide (ft)	0.2
S10	31 Jul 2018	Low Tide Time	605
S10	31 Jul 2018	Comments	Kelp; Seagrass; Water clear
S11	03 Jul 2018	Arrive Time	954
S11	03 Jul 2018	Weather	Sunny
S11	03 Jul 2018	Wind Speed (kts)	5.6
S11	03 Jul 2018	Wind Dir	W
S11	03 Jul 2018	Animal Life	None

Station	Date	Parameter	Value
S11	03 Jul 2018	Floatables	None
S11	03 Jul 2018	Water Color	Green
S11	03 Jul 2018	Current Direction	N
S11	03 Jul 2018	Water Temp (C)	19
S11	03 Jul 2018	Wave Height Low (ft)	3
S11	03 Jul 2018	High Tide (ft)	3.8
S11	03 Jul 2018	High Tide Time	1407
S11	03 Jul 2018	Low Tide (ft)	0.3
S11	03 Jul 2018	Low Tide Time	724
S11	03 Jul 2018	Comments	Kelp; Seagrass; 2 Persons; Water clear
S11	10 Jul 2018	Arrive Time	901
S11	10 Jul 2018	Weather	Partly Cloudy
S11	10 Jul 2018	Wind Speed (kts)	7.1
S11	10 Jul 2018	Wind Dir	N
S11	10 Jul 2018	Animal Life	1 Shorebird; 2 Birds; 1 Dog
S11	10 Jul 2018	Floatables	None
S11	10 Jul 2018	Water Color	Green
S11	10 Jul 2018	Current Direction	N
S11	10 Jul 2018	Water Temp (C)	21
S11	10 Jul 2018	Wave Height Low (ft)	1
S11	10 Jul 2018	High Tide (ft)	3.7
S11	10 Jul 2018	High Tide Time	814
S11	10 Jul 2018	Low Tide (ft)	1.7
S11	10 Jul 2018	Low Tide Time	1319
S11	10 Jul 2018	Comments	Kelp; Seagrass; Debris; 4 Persons; Water clear
S11	17 Jul 2018	Arrive Time	1013
S11	17 Jul 2018	Weather	Partly Cloudy
S11	17 Jul 2018	Wind Speed (kts)	5.7
S11	17 Jul 2018	Wind Dir	N
S11	17 Jul 2018	Animal Life	None
S11	17 Jul 2018	Floatables	None
S11	17 Jul 2018	Water Color	Green
S11	17 Jul 2018	Current Direction	N
S11	17 Jul 2018	Water Temp (C)	22
S11	17 Jul 2018	Wave Height Low (ft)	1
S11	17 Jul 2018	High Tide (ft)	5.4
S11	17 Jul 2018	High Tide Time	1227
S11	17 Jul 2018	Low Tide (ft)	-0.3
S11	17 Jul 2018	Low Tide Time	725
S11	17 Jul 2018	Comments	Kelp; Seagrass; Water clear
S11	24 Jul 2018	Arrive Time	918
S11	24 Jul 2018	Weather	Sunny
S11	24 Jul 2018	Wind Speed (kts)	2.3
S11	24 Jul 2018	Wind Dir	S
S11	24 Jul 2018	Animal Life	None
S11	24 Jul 2018	Floatables	None
S11	24 Jul 2018	Water Color	Green
S11	24 Jul 2018	Current Direction	N
S11	24 Jul 2018	Water Temp (C)	20
S11	24 Jul 2018	Wave Height Low (ft)	2
S11	24 Jul 2018	High Tide (ft)	3.7
S11	24 Jul 2018	High Tide Time	852

Station	Date	Parameter	Value
S11	24 Jul 2018	Low Tide (ft)	2.1
S11	24 Jul 2018	Low Tide Time	1341
S11	24 Jul 2018	Comments	Kelp; 1 Person; Water clear
S11	31 Jul 2018	Arrive Time	1040
S11	31 Jul 2018	Weather	Sunny
S11	31 Jul 2018	Wind Speed (kts)	3.6
S11	31 Jul 2018	Wind Dir	W
S11	31 Jul 2018	Animal Life	None
S11	31 Jul 2018	Floatables	None
S11	31 Jul 2018	Water Color	Green
S11	31 Jul 2018	Current Direction	N
S11	31 Jul 2018	Water Temp (C)	25
S11	31 Jul 2018	Wave Height Low (ft)	3
S11	31 Jul 2018	High Tide (ft)	4.2
S11	31 Jul 2018	High Tide Time	25
S11	31 Jul 2018	Low Tide (ft)	0.2
S11	31 Jul 2018	Low Tide Time	605
S11	31 Jul 2018	Comments	Kelp; Seagrass; 3 Persons; Water clear
S12	03 Jul 2018	Arrive Time	1009
S12	03 Jul 2018	Weather	Sunny
S12	03 Jul 2018	Wind Speed (kts)	6.8
S12	03 Jul 2018	Wind Dir	W
S12	03 Jul 2018	Animal Life	None
S12	03 Jul 2018	Floatables	None
S12	03 Jul 2018	Water Color	Green
S12	03 Jul 2018	Current Direction	N
S12	03 Jul 2018	Water Temp (C)	19
S12	03 Jul 2018	Wave Height Low (ft)	3
S12	03 Jul 2018	High Tide (ft)	3.8
S12	03 Jul 2018	High Tide Time	1407
S12	03 Jul 2018	Low Tide (ft)	0.3
S12	03 Jul 2018	Low Tide Time	724
S12	03 Jul 2018	Comments	Kelp; Seagrass; Water clear
S12	10 Jul 2018	Arrive Time	917
S12	10 Jul 2018	Weather	Partly Cloudy
S12	10 Jul 2018	Wind Speed (kts)	5.6
S12	10 Jul 2018	Wind Dir	W
S12	10 Jul 2018	Animal Life	10 Birds
S12	10 Jul 2018	Floatables	None
S12	10 Jul 2018	Water Color	Green
S12	10 Jul 2018	Current Direction	W
S12	10 Jul 2018	Water Temp (C)	23
S12	10 Jul 2018	Wave Height Low (ft)	1
S12	10 Jul 2018	High Tide (ft)	3.7
S12	10 Jul 2018	High Tide Time	814
S12	10 Jul 2018	Low Tide (ft)	1.7
S12	10 Jul 2018	Low Tide Time	1319
S12	10 Jul 2018	Comments	Kelp; Seagrass; Debris; Water clear
S12	17 Jul 2018	Arrive Time	1027
S12	17 Jul 2018	Weather	Partly Cloudy
S12	17 Jul 2018	Wind Speed (kts)	5.6

Station	Date	Parameter	Value
S12	17 Jul 2018	Wind Dir	N
S12	17 Jul 2018	Animal Life	None
S12	17 Jul 2018	Floatables	None
S12	17 Jul 2018	Water Color	Green
S12	17 Jul 2018	Current Direction	N
S12	17 Jul 2018	Water Temp (C)	22
S12	17 Jul 2018	Wave Height Low (ft)	2
S12	17 Jul 2018	High Tide (ft)	5.4
S12	17 Jul 2018	High Tide Time	1227
S12	17 Jul 2018	Low Tide (ft)	-0.3
S12	17 Jul 2018	Low Tide Time	725
S12	17 Jul 2018	Comments	Kelp; Seagrass; 18 Persons; 4 Swimmers; Water clear
S12	24 Jul 2018	Arrive Time	941
S12	24 Jul 2018	Weather	Sunny
S12	24 Jul 2018	Wind Speed (kts)	3.3
S12	24 Jul 2018	Wind Dir	W
S12	24 Jul 2018	Animal Life	None
S12	24 Jul 2018	Floatables	None
S12	24 Jul 2018	Water Color	Green
S12	24 Jul 2018	Current Direction	N
S12	24 Jul 2018	Water Temp (C)	21
S12	24 Jul 2018	Wave Height Low (ft)	2
S12	24 Jul 2018	High Tide (ft)	3.7
S12	24 Jul 2018	High Tide Time	852
S12	24 Jul 2018	Low Tide (ft)	2.1
S12	24 Jul 2018	Low Tide Time	1341
S12	24 Jul 2018	Comments	Kelp; 9 Persons; Water clear
S12	31 Jul 2018	Arrive Time	1053
S12	31 Jul 2018	Weather	Sunny
S12	31 Jul 2018	Wind Speed (kts)	3.6
S12	31 Jul 2018	Wind Dir	W
S12	31 Jul 2018	Animal Life	None
S12	31 Jul 2018	Floatables	None
S12	31 Jul 2018	Water Color	Green
S12	31 Jul 2018	Current Direction	N
S12	31 Jul 2018	Water Temp (C)	25
S12	31 Jul 2018	Wave Height Low (ft)	3
S12	31 Jul 2018	High Tide (ft)	4.2
S12	31 Jul 2018	High Tide Time	25
S12	31 Jul 2018	Low Tide (ft)	0.2
S12	31 Jul 2018	Low Tide Time	605
S12	31 Jul 2018	Comments	Kelp; Seagrass; 4 Persons; 3 Surfers; 4 Swimmers; Water clear

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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 Jul 2018	21*	17*	6*	3*	4*	6*	18*
02 Jul 2018	16	12	5	3	3	5	14
03 Jul 2018	16	12	5	3	3	5	14
04 Jul 2018	19*	19*	7*	3*	4*	6*	16*
05 Jul 2018	19*	19*	7*	3*	4*	6*	16*
06 Jul 2018	19*	19*	7*	3*	4*	6*	16*
07 Jul 2018	19*	19*	7*	3*	4*	6*	16*
08 Jul 2018	19*	19*	7*	3*	4*	6*	16*
09 Jul 2018	49	44	22	11	5	7	37
10 Jul 2018	49	44	22	11	5	7	37
11 Jul 2018	37*	25*	12*	13*	4*	5*	18*
12 Jul 2018	37*	25*	12*	13*	4*	5*	18*
13 Jul 2018	37*	25*	12*	13*	4*	5*	18*
14 Jul 2018	37*	25*	12*	13*	4*	5*	18*
15 Jul 2018	37*	25*	12*	13*	4*	5*	18*
16 Jul 2018	30	15	9	9	5	4	15
17 Jul 2018	30	15	9	9	5	4	15
18 Jul 2018	42*	15*	12*	13*	6*	5*	25*
19 Jul 2018	42*	15*	12*	13*	6*	5*	25*
20 Jul 2018	42*	15*	12*	13*	6*	5*	25*
21 Jul 2018	42*	15*	12*	13*	6*	5*	25*
22 Jul 2018	42*	15*	12*	13*	6*	5*	25*
23 Jul 2018	30	15	11	12	7	4	20
24 Jul 2018	30	15	11	12	7	4	20
25 Jul 2018	33*	18*	18*	18*	9*	3*	25*
26 Jul 2018	33*	18*	18*	18*	9*	3*	25*
27 Jul 2018	33*	18*	18*	18*	9*	3*	25*
28 Jul 2018	33*	18*	18*	18*	9*	3*	25*
29 Jul 2018	33*	18*	18*	18*	9*	3*	25*
30 Jul 2018	20	12	11	12	6	3	19
31 Jul 2018	20	12	11	12	6	3	19

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

* Geometric mean calculated using n<5

Table 3.3

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

Date	I19	I24	I25	I26	I32	I39	I40
01 Jul 2018	7*	7*	6*	2*	3*	5*	8*
02 Jul 2018	5	5	5	2	3	4	6
03 Jul 2018	5	5	5	2	3	4	6
04 Jul 2018	7*	7*	6*	2*	3*	4*	8*
05 Jul 2018	7*	7*	6*	2*	3*	4*	8*
06 Jul 2018	7*	7*	6*	2*	3*	4*	8*
07 Jul 2018	7*	7*	6*	2*	3*	4*	8*
08 Jul 2018	7*	7*	6*	2*	3*	4*	8*
09 Jul 2018	13	11	11	5	3	3	14
10 Jul 2018	13	11	11	5	3	3	14
11 Jul 2018	8*	5*	6*	6*	2*	2*	6*
12 Jul 2018	8*	5*	6*	6*	2*	2*	6*
13 Jul 2018	8*	5*	6*	6*	2*	2*	6*
14 Jul 2018	8*	5*	6*	6*	2*	2*	6*
15 Jul 2018	8*	5*	6*	6*	2*	2*	6*
16 Jul 2018	6	4	5	5	2	2	5
17 Jul 2018	6	4	5	5	2	2	5
18 Jul 2018	8*	5*	6*	6*	2*	2*	6*
19 Jul 2018	8*	5*	6*	6*	2*	2*	6*
20 Jul 2018	8*	5*	6*	6*	2*	2*	6*
21 Jul 2018	8*	5*	6*	6*	2*	2*	6*
22 Jul 2018	8*	5*	6*	6*	2*	2*	6*
23 Jul 2018	6	4	5	5	2	2	5
24 Jul 2018	6	4	5	5	2	2	5
25 Jul 2018	6*	5*	6*	6*	2*	2*	6*
26 Jul 2018	6*	5*	6*	6*	2*	2*	6*
27 Jul 2018	6*	5*	6*	6*	2*	2*	6*
28 Jul 2018	6*	5*	6*	6*	2*	2*	6*
29 Jul 2018	6*	5*	6*	6*	2*	2*	6*
30 Jul 2018	5	4	5	5	2	2	5
31 Jul 2018	5	4	5	5	2	2	5

* 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
02 Jul 2018	IC	IC	IC	IC	IC	IC	IC
09 Jul 2018	IC	IC	IC	IC	IC	IC	IC
16 Jul 2018	IC	IC	IC	IC	IC	IC	IC
23 Jul 2018	IC	IC	IC	IC	IC	IC	IC
30 Jul 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
02 Jul 2018	IC	IC	IC	IC	IC	IC	IC
09 Jul 2018	IC	IC	IC	IC	IC	IC	IC
16 Jul 2018	IC	IC	IC	IC	IC	IC	IC
23 Jul 2018	IC	IC	IC	IC	IC	IC	IC
30 Jul 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
02 Jul 2018	IC	IC	IC	IC	IC	IC	IC
09 Jul 2018	E	E	E	E	IC	IC	E
16 Jul 2018	IC	IC	IC	IC	IC	IC	IC
23 Jul 2018	IC	IC	IC	IC	IC	IC	IC
30 Jul 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
02 Jul 2018	IC	IC	IC	IC	IC	IC	IC
09 Jul 2018	IC	IC	IC	IC	IC	IC	IC
16 Jul 2018	IC	IC	IC	IC	IC	IC	IC
23 Jul 2018	IC	IC	IC	IC	IC	IC	IC
30 Jul 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	02 Jul 2018	1044	2	<2	<2	<2	1.0000	19.3	76.51	8.6	33.73	8.2
I19	02 Jul 2018	1044	6	4e	<2	2e	0.5000	15.2	58.40	8.4	33.71	8.1
I19	02 Jul 2018	1044	11	10e	<2	2e	0.2000	14.3	52.30	6.5	33.60	8.0
I19	09 Jul 2018	1049	2	ND	12e	78	ND	21.2	71.97	9.7	33.67	8.4
I19	09 Jul 2018	1049	6	1300	18e	160e	0.0138	20.8	70.20	9.5	33.66	8.3
I19	09 Jul 2018	1049	11	2600e	82	260e	0.0315	20.7	62.72	9.6	33.66	8.3
I19	16 Jul 2018	1036	2	<2	<2	<2	1.0000	21.2	78.80	9.2	33.73	8.3
I19	16 Jul 2018	1036	6	<20	<2	2e	0.1000	17.5	64.72	9.0	33.68	8.3
I19	16 Jul 2018	1036	11	<20	<2	<2	0.1000	15.4	57.53	5.9	33.60	8.1
I19	23 Jul 2018	1037	2	<2	<2	<2	1.0000	18.8	69.78	8.1	33.70	8.2
I19	23 Jul 2018	1037	6	2e	<2	<2	1.0000	14.3	71.12	8.0	33.67	8.1
I19	23 Jul 2018	1037	11	20e	<2	<2	0.1000	13.2	47.68	6.8	33.55	8.0
I19	30 Jul 2018	1019	2	4e	<2	<2	0.5000	23.1	78.07	8.4	33.75	8.3
I19	30 Jul 2018	1019	6	2e	<2	<2	1.0000	19.4	77.12	8.8	33.77	8.2
I19	30 Jul 2018	1019	11	2e	<2	<2	1.0000	15.6	70.20	8.1	33.62	8.1
I24	02 Jul 2018	1107	2	<2	<2	<2	1.0000	19.2	75.04	8.5	33.74	8.2
I24	02 Jul 2018	1107	6	2e	<2	<2	1.0000	17.7	73.95	9.0	33.69	8.2
I24	02 Jul 2018	1107	11	4e	<2	<2	0.5000	14.7	71.50	7.2	33.62	8.0
I24	09 Jul 2018	1109	2	1400e	4e	86	0.0029	21.0	72.27	10.1	33.66	8.4
I24	09 Jul 2018	1109	6	1600e	12e	90	0.0075	20.4	70.82	9.9	33.65	8.3
I24	09 Jul 2018	1109	11	1000	8e	110	0.0080	20.1	69.90	9.8	33.64	8.3
I24	16 Jul 2018	1057	2	<2	<2	<2	1.0000	20.6	79.74	9.1	33.73	8.3
I24	16 Jul 2018	1057	6	<2	<2	<2	1.0000	17.7	78.31	9.8	33.71	8.3
I24	16 Jul 2018	1057	11	<2	<2	<2	1.0000	15.2	75.44	6.3	33.59	8.1
I24	23 Jul 2018	1059	2	4e	<2	<2	0.5000	20.1	75.25	8.3	33.80	8.3
I24	23 Jul 2018	1059	6	<20	<2	<2	0.1000	13.4	57.70	7.2	33.59	8.0
I24	23 Jul 2018	1059	11	20e	<2	<2	0.1000	13.0	62.03	6.6	33.55	8.0
I24	30 Jul 2018	1042	2	<2	<2	<2	1.0000	23.0	79.15	8.2	33.74	8.3
I24	30 Jul 2018	1042	6	<2	<2	<2	1.0000	18.5	77.25	8.8	33.83	8.2
I24	30 Jul 2018	1042	11	2e	<2	<2	1.0000	14.8	74.21	7.2	33.58	8.0
I25	02 Jul 2018	1115	2	<2	<2	<2	1.0000	19.5	73.36	8.6	33.74	8.2
I25	02 Jul 2018	1115	6	<2	<2	<2	1.0000	17.9	73.73	9.1	33.70	8.2
I25	02 Jul 2018	1115	9	4e	<2	<2	0.5000	15.4	68.51	8.2	33.66	8.1
I25	09 Jul 2018	1117	2	2400e	6e	84	0.0025	20.9	71.76	10.0	33.66	8.4
I25	09 Jul 2018	1117	6	1800e	18e	130e	0.0100	20.3	70.61	9.9	33.66	8.3
I25	09 Jul 2018	1117	9	2400e	10e	150e	0.0042	20.3	70.74	9.9	33.64	8.3

Station	Date	Time	Depth	Total	Fecal	Entero	F:T	Temp	XMS	DO	Sal	pH
I25	16 Jul 2018	1105	2	<2	<2	<2	1.0000	20.6	80.83	9.2	33.72	8.3
I25	16 Jul 2018	1105	6	<2	<2	<2	1.0000	17.3	78.46	9.6	33.66	8.3
I25	16 Jul 2018	1105	9	<2	<2	<2	1.0000	15.9	78.17	7.8	33.62	8.1
I25	23 Jul 2018	1107	2	<2	<2	<2	1.0000	20.3	76.35	8.4	33.82	8.3
I25	23 Jul 2018	1107	6	<2	<2	<2	1.0000	13.4	65.38	7.0	33.58	8.0
I25	23 Jul 2018	1107	9	<20	<2	<2	0.1000	13.4	67.55	6.7	33.55	8.0
I25	30 Jul 2018	1048	2	<2	<2	<2	1.0000	22.9	79.85	8.2	33.74	8.3
I25	30 Jul 2018	1048	6	<2	<2	<2	1.0000	19.0	77.62	8.7	33.73	8.2
I25	30 Jul 2018	1048	9	2e	<2	<2	1.0000	16.2	73.87	7.7	33.59	8.1
I26	02 Jul 2018	1123	2	<2	<2	<2	1.0000	19.9	71.83	8.6	33.73	8.2
I26	02 Jul 2018	1123	6	<2	2e	<2	1.0000	18.0	72.19	8.8	33.69	8.2
I26	02 Jul 2018	1123	9	<2	<2	<2	1.0000	14.0	71.95	7.4	33.62	8.0
I26	09 Jul 2018	1126	2	3600e	<2	110	0.0006	20.6	69.91	10.1	33.65	8.4
I26	09 Jul 2018	1126	6	2800e	6e	110	0.0021	20.4	70.43	10.1	33.65	8.4
I26	09 Jul 2018	1126	9	3400e	6e	140e	0.0018	20.4	70.98	10.1	33.65	8.3
I26	16 Jul 2018	1114	2	<2	<2	<2	1.0000	20.8	81.00	9.2	33.72	8.3
I26	16 Jul 2018	1114	6	<2	<2	<2	1.0000	18.9	76.88	8.7	33.72	8.3
I26	16 Jul 2018	1114	9	<2	<2	<2	1.0000	15.7	80.17	8.2	33.59	8.2
I26	23 Jul 2018	1116	2	2e	<2	<2	1.0000	20.7	75.94	8.5	33.72	8.3
I26	23 Jul 2018	1116	6	<2	<2	<2	1.0000	15.1	76.95	7.9	33.56	8.1
I26	23 Jul 2018	1116	9	<20	<2	<2	0.1000	13.7	74.57	7.3	33.54	8.0
I26	30 Jul 2018	1058	2	<2	<2	<2	1.0000	23.1	78.86	8.1	33.75	8.3
I26	30 Jul 2018	1058	6	<2	<2	<2	1.0000	20.3	79.84	8.3	33.87	8.2
I26	30 Jul 2018	1058	9	2e	<2	<2	1.0000	16.9	72.95	8.1	33.69	8.1
I32	02 Jul 2018	1135	2	<2	<2	<2	1.0000	19.6	70.59	8.3	33.73	8.2
I32	02 Jul 2018	1135	6	<2	<2	<2	1.0000	16.0	58.49	8.3	33.70	8.1
I32	02 Jul 2018	1135	9	2e	<2	<2	1.0000	14.6	48.60	8.1	33.60	8.1
I32	09 Jul 2018	1137	2	<2	<2	<2	1.0000	21.7	73.40	8.2	33.74	8.3
I32	09 Jul 2018	1137	6	18e	<2	<2	0.1111	20.0	69.70	9.7	33.65	8.3
I32	09 Jul 2018	1137	9	<20	<2	4e	0.1000	19.4	70.87	9.2	33.66	8.3
I32	16 Jul 2018	1126	2	<2	<2	<2	1.0000	21.6	72.68	8.8	33.74	8.4
I32	16 Jul 2018	1126	6	<20	<2	<2	0.1000	21.3	74.03	8.7	33.73	8.3
I32	16 Jul 2018	1126	9	<20	<2	<2	0.1000	17.0	59.83	7.5	33.68	8.2
I32	23 Jul 2018	1129	2	<2	<2	<2	1.0000	19.9	69.66	8.3	33.71	8.2
I32	23 Jul 2018	1129	6	<20	<2	<2	0.1000	15.8	72.74	8.5	33.59	8.1
I32	23 Jul 2018	1129	9	<20	<2	<2	0.1000	13.5	69.92	7.4	33.55	8.0
I32	30 Jul 2018	1116	2	<2	<2	<2	1.0000	23.1	74.02	8.3	33.74	8.3
I32	30 Jul 2018	1116	6	<2	<2	<2	1.0000	20.1	74.98	8.4	33.80	8.2
I32	30 Jul 2018	1116	9	<2	<2	<2	1.0000	16.7	72.45	8.0	33.67	8.1
I39	02 Jul 2018	1028	2	<2	<2	<2	1.0000	19.5	74.65	8.7	33.73	8.2
I39	02 Jul 2018	1028	12	<2	<2	<2	1.0000	12.7	71.45	5.9	33.58	7.9

Station	Date	Time	Depth	Total	Fecal	Entero	F:T	Temp	XMS	DO	Sal	pH
I39	02 Jul 2018	1028	18	<2	<2	<2	1.0000	12.4	70.18	4.7	33.61	7.8
I39	09 Jul 2018	1025	2	<2	<2	<2	1.0000	21.1	78.57	9.0	33.72	8.3
I39	09 Jul 2018	1025	12	14e	<2	2e	0.1429	16.4	66.50	11.1	33.62	8.3
I39	09 Jul 2018	1025	18	28e	2e	<2	0.0714	13.9	74.29	7.8	33.60	8.1
I39	16 Jul 2018	1013	2	<2	<2	<2	1.0000	19.8	80.20	9.5	33.73	8.3
I39	16 Jul 2018	1013	12	<2	<2	<2	1.0000	14.6	83.88	9.0	33.59	8.2
I39	16 Jul 2018	1013	18	2e	<2	<2	1.0000	13.3	84.24	6.5	33.57	8.0
I39	23 Jul 2018	1017	2	2e	<2	<2	1.0000	21.3	78.31	8.6	33.68	8.3
I39	23 Jul 2018	1017	12	2e	<2	<2	1.0000	12.9	85.77	7.0	33.52	8.0
I39	23 Jul 2018	1017	18	<2	<2	<2	1.0000	12.9	84.15	7.0	33.55	8.0
I39	30 Jul 2018	1000	2	<2	<2	<2	1.0000	22.9	79.87	8.1	33.74	8.3
I39	30 Jul 2018	1000	12	<2	<2	<2	1.0000	14.5	78.83	8.3	33.58	8.1
I39	30 Jul 2018	1000	18	<2	<2	<2	1.0000	13.5	82.26	7.3	33.55	8.0
I40	02 Jul 2018	1058	2	<2	<2	<2	1.0000	19.3	75.57	8.6	33.70	8.2
I40	02 Jul 2018	1058	6	2e	<2	<2	1.0000	17.6	72.16	9.0	33.74	8.2
I40	02 Jul 2018	1058	9	12e	<2	<2	0.1667	15.6	64.82	8.0	33.68	8.1
I40	09 Jul 2018	1100	2	480	2e	42	0.0042	20.8	71.29	9.9	33.67	8.4
I40	09 Jul 2018	1100	6	2000e	4e	340e	0.0020	20.3	68.83	9.6	33.64	8.3
I40	09 Jul 2018	1100	9	840	12e	86	0.0143	19.9	68.63	9.2	33.63	8.3
I40	16 Jul 2018	1048	2	<20	<2	<2	0.1000	21.1	79.86	9.2	33.73	8.3
I40	16 Jul 2018	1048	6	<2	<2	<2	1.0000	17.0	74.78	8.3	33.71	8.2
I40	16 Jul 2018	1048	9	<2	<2	<2	1.0000	15.3	65.73	6.4	33.61	8.1
I40	23 Jul 2018	1049	2	<20	<2	<2	0.1000	19.7	69.67	8.1	33.64	8.2
I40	23 Jul 2018	1049	6	2e	<2	<2	1.0000	15.1	68.32	8.2	33.54	8.1
I40	23 Jul 2018	1049	9	2e	<2	<2	1.0000	13.7	64.65	7.3	33.55	8.0
I40	30 Jul 2018	1033	2	4e	<2	<2	0.5000	21.5	75.29	8.5	33.73	8.3
I40	30 Jul 2018	1033	6	6e	<2	<2	0.3333	17.6	73.25	8.7	33.68	8.2
I40	30 Jul 2018	1033	9	10e	2e	<2	0.2000	16.9	72.55	8.4	33.59	8.2

ns = not sampled

ND = no data

Comments

Station	Date	Depth	Parameter	Comments
119	09 Jul 2018	2		ND = > 200 colonies of non-specific growth

Table 3.9

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

Station	Date	Parameter	Value
I19	02 Jul 2018	Depth (m)	11
I19	02 Jul 2018	Arrive Time	1044
I19	02 Jul 2018	Depart Time	1052
I19	02 Jul 2018	Air Temp (C)	19
I19	02 Jul 2018	Weather	Partly Cloudy
I19	02 Jul 2018	Visibility (mi)	12
I19	02 Jul 2018	Wind Speed (kts)	5
I19	02 Jul 2018	Wind Dir	SW
I19	02 Jul 2018	Water Color	Green
I19	02 Jul 2018	Wave Ht Low (ft)	2
I19	02 Jul 2018	Wave Period (sec)	11
I19	02 Jul 2018	Sea State	Light chop
I19	02 Jul 2018	High Tide (ft)	3.68
I19	02 Jul 2018	High Tide Time	1321
I19	02 Jul 2018	Low Tide (ft)	0.04
I19	02 Jul 2018	Low Tide Time	645
I19	02 Jul 2018	Comments	none
I19	09 Jul 2018	Depth (m)	11
I19	09 Jul 2018	Arrive Time	1049
I19	09 Jul 2018	Depart Time	1051
I19	09 Jul 2018	Air Temp (C)	22
I19	09 Jul 2018	Weather	Partly Cloudy
I19	09 Jul 2018	Visibility (mi)	6
I19	09 Jul 2018	Wind Speed (kts)	2
I19	09 Jul 2018	Wind Dir	W
I19	09 Jul 2018	Water Color	Green
I19	09 Jul 2018	Wave Ht Low (ft)	2
I19	09 Jul 2018	Wave Period (sec)	9
I19	09 Jul 2018	Sea State	Calm
I19	09 Jul 2018	High Tide (ft)	3.46
I19	09 Jul 2018	High Tide Time	718
I19	09 Jul 2018	Low Tide (ft)	0.33
I19	09 Jul 2018	Low Tide Time	118
I19	09 Jul 2018	Comments	none
I19	16 Jul 2018	Depth (m)	11
I19	16 Jul 2018	Arrive Time	1036
I19	16 Jul 2018	Depart Time	1041
I19	16 Jul 2018	Air Temp (C)	20
I19	16 Jul 2018	Weather	Overcast
I19	16 Jul 2018	Visibility (mi)	10
I19	16 Jul 2018	Wind Speed (kts)	2
I19	16 Jul 2018	Wind Dir	SE
I19	16 Jul 2018	Water Color	Green
I19	16 Jul 2018	Wave Ht Low (ft)	3
I19	16 Jul 2018	Wave Period (sec)	13
I19	16 Jul 2018	Sea State	Wind ripples
I19	16 Jul 2018	High Tide (ft)	4.53
I19	16 Jul 2018	High Tide Time	1304
I19	16 Jul 2018	Low Tide (ft)	-0.81

Station	Date	Parameter	Value
I19	16 Jul 2018	Low Tide Time	637
I19	16 Jul 2018	Comments	none
I19	23 Jul 2018	Depth (m)	11
I19	23 Jul 2018	Arrive Time	1037
I19	23 Jul 2018	Depart Time	1041
I19	23 Jul 2018	Air Temp (C)	22
I19	23 Jul 2018	Weather	Clear
I19	23 Jul 2018	Visibility (mi)	12
I19	23 Jul 2018	Wind Speed (kts)	4
I19	23 Jul 2018	Wind Dir	S
I19	23 Jul 2018	Water Color	Green
I19	23 Jul 2018	Wave Ht Low (ft)	4
I19	23 Jul 2018	Wave Period (sec)	4
I19	23 Jul 2018	Sea State	Calm
I19	23 Jul 2018	High Tide (ft)	3.5
I19	23 Jul 2018	High Tide Time	811
I19	23 Jul 2018	Low Tide (ft)	0.24
I19	23 Jul 2018	Low Tide Time	156
I19	23 Jul 2018	Comments	none
I19	30 Jul 2018	Depth (m)	11
I19	30 Jul 2018	Arrive Time	1019
I19	30 Jul 2018	Depart Time	1024
I19	30 Jul 2018	Air Temp (C)	23
I19	30 Jul 2018	Weather	Partly Cloudy
I19	30 Jul 2018	Visibility (mi)	12
I19	30 Jul 2018	Wind Speed (kts)	3
I19	30 Jul 2018	Wind Dir	S
I19	30 Jul 2018	Water Color	Green
I19	30 Jul 2018	Wave Ht Low (ft)	2
I19	30 Jul 2018	Wave Period (sec)	9
I19	30 Jul 2018	Sea State	Calm
I19	30 Jul 2018	High Tide (ft)	4.11
I19	30 Jul 2018	High Tide Time	1151
I19	30 Jul 2018	Low Tide (ft)	-0.09
I19	30 Jul 2018	Low Tide Time	535
I19	30 Jul 2018	Comments	none
I24	02 Jul 2018	Depth (m)	11
I24	02 Jul 2018	Arrive Time	1107
I24	02 Jul 2018	Depart Time	1110
I24	02 Jul 2018	Air Temp (C)	19
I24	02 Jul 2018	Weather	Partly Cloudy
I24	02 Jul 2018	Visibility (mi)	14
I24	02 Jul 2018	Wind Speed (kts)	7
I24	02 Jul 2018	Wind Dir	SW
I24	02 Jul 2018	Water Color	Green
I24	02 Jul 2018	Wave Ht Low (ft)	2
I24	02 Jul 2018	Wave Period (sec)	11
I24	02 Jul 2018	Sea State	Light chop
I24	02 Jul 2018	High Tide (ft)	3.68
I24	02 Jul 2018	High Tide Time	1321
I24	02 Jul 2018	Low Tide (ft)	0.04
I24	02 Jul 2018	Low Tide Time	645

Station	Date	Parameter	Value
I24	02 Jul 2018	Comments	none
I24	09 Jul 2018	Depth (m)	11
I24	09 Jul 2018	Arrive Time	1109
I24	09 Jul 2018	Depart Time	1113
I24	09 Jul 2018	Air Temp (C)	22
I24	09 Jul 2018	Weather	Partly Cloudy
I24	09 Jul 2018	Visibility (mi)	6
I24	09 Jul 2018	Wind Speed (kts)	1
I24	09 Jul 2018	Wind Dir	E
I24	09 Jul 2018	Water Color	Green
I24	09 Jul 2018	Wave Ht Low (ft)	2
I24	09 Jul 2018	Wave Period (sec)	9
I24	09 Jul 2018	Sea State	Calm
I24	09 Jul 2018	High Tide (ft)	3.46
I24	09 Jul 2018	High Tide Time	718
I24	09 Jul 2018	Low Tide (ft)	0.33
I24	09 Jul 2018	Low Tide Time	118
I24	09 Jul 2018	Comments	none
I24	16 Jul 2018	Depth (m)	10
I24	16 Jul 2018	Arrive Time	1057
I24	16 Jul 2018	Depart Time	1103
I24	16 Jul 2018	Air Temp (C)	20
I24	16 Jul 2018	Weather	Overcast
I24	16 Jul 2018	Visibility (mi)	11
I24	16 Jul 2018	Wind Speed (kts)	5
I24	16 Jul 2018	Wind Dir	SE
I24	16 Jul 2018	Water Color	Bluish-Green
I24	16 Jul 2018	Wave Ht Low (ft)	3
I24	16 Jul 2018	Wave Period (sec)	13
I24	16 Jul 2018	Sea State	Wind ripples
I24	16 Jul 2018	High Tide (ft)	4.53
I24	16 Jul 2018	High Tide Time	1304
I24	16 Jul 2018	Low Tide (ft)	-0.81
I24	16 Jul 2018	Low Tide Time	637
I24	16 Jul 2018	Comments	none
I24	23 Jul 2018	Depth (m)	11
I24	23 Jul 2018	Arrive Time	1059
I24	23 Jul 2018	Depart Time	1103
I24	23 Jul 2018	Air Temp (C)	22
I24	23 Jul 2018	Weather	Clear
I24	23 Jul 2018	Visibility (mi)	12
I24	23 Jul 2018	Wind Speed (kts)	6
I24	23 Jul 2018	Wind Dir	SW
I24	23 Jul 2018	Water Color	Green
I24	23 Jul 2018	Wave Ht Low (ft)	4
I24	23 Jul 2018	Wave Period (sec)	4
I24	23 Jul 2018	Sea State	Calm
I24	23 Jul 2018	High Tide (ft)	3.5
I24	23 Jul 2018	High Tide Time	811
I24	23 Jul 2018	Low Tide (ft)	0.24
I24	23 Jul 2018	Low Tide Time	156
I24	23 Jul 2018	Comments	none

Station	Date	Parameter	Value
I24	30 Jul 2018	Depth (m)	10
I24	30 Jul 2018	Arrive Time	1042
I24	30 Jul 2018	Depart Time	1046
I24	30 Jul 2018	Air Temp (C)	23
I24	30 Jul 2018	Weather	Partly Cloudy
I24	30 Jul 2018	Visibility (mi)	12
I24	30 Jul 2018	Wind Speed (kts)	6
I24	30 Jul 2018	Wind Dir	S
I24	30 Jul 2018	Water Color	Green
I24	30 Jul 2018	Wave Ht Low (ft)	2
I24	30 Jul 2018	Wave Period (sec)	9
I24	30 Jul 2018	Sea State	Calm
I24	30 Jul 2018	High Tide (ft)	4.11
I24	30 Jul 2018	High Tide Time	1151
I24	30 Jul 2018	Low Tide (ft)	-0.09
I24	30 Jul 2018	Low Tide Time	535
I24	30 Jul 2018	Comments	Foam at surface
I25	02 Jul 2018	Depth (m)	10
I25	02 Jul 2018	Arrive Time	1115
I25	02 Jul 2018	Depart Time	1118
I25	02 Jul 2018	Air Temp (C)	19
I25	02 Jul 2018	Weather	Partly Cloudy
I25	02 Jul 2018	Visibility (mi)	14
I25	02 Jul 2018	Wind Speed (kts)	6
I25	02 Jul 2018	Wind Dir	SW
I25	02 Jul 2018	Water Color	Bluish-Green
I25	02 Jul 2018	Wave Ht Low (ft)	2
I25	02 Jul 2018	Wave Period (sec)	11
I25	02 Jul 2018	Sea State	Light chop
I25	02 Jul 2018	High Tide (ft)	3.68
I25	02 Jul 2018	High Tide Time	1321
I25	02 Jul 2018	Low Tide (ft)	0.04
I25	02 Jul 2018	Low Tide Time	645
I25	02 Jul 2018	Comments	none
I25	09 Jul 2018	Depth (m)	9
I25	09 Jul 2018	Arrive Time	1117
I25	09 Jul 2018	Depart Time	1119
I25	09 Jul 2018	Air Temp (C)	22
I25	09 Jul 2018	Weather	Partly Cloudy
I25	09 Jul 2018	Visibility (mi)	6
I25	09 Jul 2018	Wind Speed (kts)	0
I25	09 Jul 2018	Wind Dir	
I25	09 Jul 2018	Water Color	Green
I25	09 Jul 2018	Wave Ht Low (ft)	2
I25	09 Jul 2018	Wave Period (sec)	9
I25	09 Jul 2018	Sea State	Calm
I25	09 Jul 2018	High Tide (ft)	3.46
I25	09 Jul 2018	High Tide Time	718
I25	09 Jul 2018	Low Tide (ft)	0.33
I25	09 Jul 2018	Low Tide Time	118
I25	09 Jul 2018	Comments	none

Station	Date	Parameter	Value
I25	16 Jul 2018	Depth (m)	11
I25	16 Jul 2018	Arrive Time	1105
I25	16 Jul 2018	Depart Time	1110
I25	16 Jul 2018	Air Temp (C)	20
I25	16 Jul 2018	Weather	Overcast
I25	16 Jul 2018	Visibility (mi)	11
I25	16 Jul 2018	Wind Speed (kts)	5
I25	16 Jul 2018	Wind Dir	S
I25	16 Jul 2018	Water Color	Bluish-Green
I25	16 Jul 2018	Wave Ht Low (ft)	3
I25	16 Jul 2018	Wave Period (sec)	13
I25	16 Jul 2018	Sea State	Wind ripples
I25	16 Jul 2018	High Tide (ft)	4.53
I25	16 Jul 2018	High Tide Time	1304
I25	16 Jul 2018	Low Tide (ft)	-0.81
I25	16 Jul 2018	Low Tide Time	637
I25	16 Jul 2018	Comments	none
I25	23 Jul 2018	Depth (m)	9
I25	23 Jul 2018	Arrive Time	1107
I25	23 Jul 2018	Depart Time	1110
I25	23 Jul 2018	Air Temp (C)	22
I25	23 Jul 2018	Weather	Clear
I25	23 Jul 2018	Visibility (mi)	12
I25	23 Jul 2018	Wind Speed (kts)	8
I25	23 Jul 2018	Wind Dir	SW
I25	23 Jul 2018	Water Color	Green
I25	23 Jul 2018	Wave Ht Low (ft)	4
I25	23 Jul 2018	Wave Period (sec)	4
I25	23 Jul 2018	Sea State	Calm
I25	23 Jul 2018	High Tide (ft)	3.5
I25	23 Jul 2018	High Tide Time	811
I25	23 Jul 2018	Low Tide (ft)	0.24
I25	23 Jul 2018	Low Tide Time	156
I25	23 Jul 2018	Comments	none
I25	30 Jul 2018	Depth (m)	9
I25	30 Jul 2018	Arrive Time	1048
I25	30 Jul 2018	Depart Time	1052
I25	30 Jul 2018	Air Temp (C)	23
I25	30 Jul 2018	Weather	Partly Cloudy
I25	30 Jul 2018	Visibility (mi)	12
I25	30 Jul 2018	Wind Speed (kts)	9
I25	30 Jul 2018	Wind Dir	SE
I25	30 Jul 2018	Water Color	Green
I25	30 Jul 2018	Wave Ht Low (ft)	2
I25	30 Jul 2018	Wave Period (sec)	9
I25	30 Jul 2018	Sea State	Calm
I25	30 Jul 2018	High Tide (ft)	4.11
I25	30 Jul 2018	High Tide Time	1151
I25	30 Jul 2018	Low Tide (ft)	-0.09
I25	30 Jul 2018	Low Tide Time	535
I25	30 Jul 2018	Comments	none
I26	02 Jul 2018	Depth (m)	10

Station	Date	Parameter	Value
I26	02 Jul 2018	Arrive Time	1123
I26	02 Jul 2018	Depart Time	1130
I26	02 Jul 2018	Air Temp (C)	19
I26	02 Jul 2018	Weather	Partly Cloudy
I26	02 Jul 2018	Visibility (mi)	14
I26	02 Jul 2018	Wind Speed (kts)	10
I26	02 Jul 2018	Wind Dir	SW
I26	02 Jul 2018	Water Color	Bluish-Green
I26	02 Jul 2018	Wave Ht Low (ft)	2
I26	02 Jul 2018	Wave Period (sec)	11
I26	02 Jul 2018	Sea State	Light chop
I26	02 Jul 2018	High Tide (ft)	3.68
I26	02 Jul 2018	High Tide Time	1321
I26	02 Jul 2018	Low Tide (ft)	0.04
I26	02 Jul 2018	Low Tide Time	645
I26	02 Jul 2018	Comments	none
I26	09 Jul 2018	Depth (m)	9
I26	09 Jul 2018	Arrive Time	1126
I26	09 Jul 2018	Depart Time	1130
I26	09 Jul 2018	Air Temp (C)	22
I26	09 Jul 2018	Weather	Partly Cloudy
I26	09 Jul 2018	Visibility (mi)	6
I26	09 Jul 2018	Wind Speed (kts)	2
I26	09 Jul 2018	Wind Dir	S
I26	09 Jul 2018	Water Color	Green
I26	09 Jul 2018	Wave Ht Low (ft)	2
I26	09 Jul 2018	Wave Period (sec)	9
I26	09 Jul 2018	Sea State	Calm
I26	09 Jul 2018	High Tide (ft)	3.46
I26	09 Jul 2018	High Tide Time	718
I26	09 Jul 2018	Low Tide (ft)	0.33
I26	09 Jul 2018	Low Tide Time	118
I26	09 Jul 2018	Comments	none
I26	16 Jul 2018	Depth (m)	10
I26	16 Jul 2018	Arrive Time	1114
I26	16 Jul 2018	Depart Time	1119
I26	16 Jul 2018	Air Temp (C)	20
I26	16 Jul 2018	Weather	Overcast
I26	16 Jul 2018	Visibility (mi)	11
I26	16 Jul 2018	Wind Speed (kts)	4
I26	16 Jul 2018	Wind Dir	SE
I26	16 Jul 2018	Water Color	Bluish-Green
I26	16 Jul 2018	Wave Ht Low (ft)	3
I26	16 Jul 2018	Wave Period (sec)	13
I26	16 Jul 2018	Sea State	Wind ripples
I26	16 Jul 2018	High Tide (ft)	4.53
I26	16 Jul 2018	High Tide Time	1304
I26	16 Jul 2018	Low Tide (ft)	-0.81
I26	16 Jul 2018	Low Tide Time	637
I26	16 Jul 2018	Comments	none
I26	23 Jul 2018	Depth (m)	9
I26	23 Jul 2018	Arrive Time	1116

Station	Date	Parameter	Value
I26	23 Jul 2018	Depart Time	1119
I26	23 Jul 2018	Air Temp (C)	22
I26	23 Jul 2018	Weather	Clear
I26	23 Jul 2018	Visibility (mi)	12
I26	23 Jul 2018	Wind Speed (kts)	7
I26	23 Jul 2018	Wind Dir	SW
I26	23 Jul 2018	Water Color	Green
I26	23 Jul 2018	Wave Ht Low (ft)	4
I26	23 Jul 2018	Wave Period (sec)	4
I26	23 Jul 2018	Sea State	Calm
I26	23 Jul 2018	High Tide (ft)	3.5
I26	23 Jul 2018	High Tide Time	811
I26	23 Jul 2018	Low Tide (ft)	0.24
I26	23 Jul 2018	Low Tide Time	156
I26	23 Jul 2018	Comments	none
I26	30 Jul 2018	Depth (m)	10
I26	30 Jul 2018	Arrive Time	1058
I26	30 Jul 2018	Depart Time	1102
I26	30 Jul 2018	Air Temp (C)	23
I26	30 Jul 2018	Weather	Partly Cloudy
I26	30 Jul 2018	Visibility (mi)	12
I26	30 Jul 2018	Wind Speed (kts)	3
I26	30 Jul 2018	Wind Dir	S
I26	30 Jul 2018	Water Color	Greenish-Blue
I26	30 Jul 2018	Wave Ht Low (ft)	2
I26	30 Jul 2018	Wave Period (sec)	9
I26	30 Jul 2018	Sea State	Calm
I26	30 Jul 2018	High Tide (ft)	4.11
I26	30 Jul 2018	High Tide Time	1151
I26	30 Jul 2018	Low Tide (ft)	-0.09
I26	30 Jul 2018	Low Tide Time	535
I26	30 Jul 2018	Comments	none
I32	02 Jul 2018	Depth (m)	11
I32	02 Jul 2018	Arrive Time	1135
I32	02 Jul 2018	Depart Time	1140
I32	02 Jul 2018	Air Temp (C)	19
I32	02 Jul 2018	Weather	Clear
I32	02 Jul 2018	Visibility (mi)	14
I32	02 Jul 2018	Wind Speed (kts)	15
I32	02 Jul 2018	Wind Dir	S
I32	02 Jul 2018	Water Color	Bluish-Green
I32	02 Jul 2018	Wave Ht Low (ft)	2
I32	02 Jul 2018	Wave Period (sec)	11
I32	02 Jul 2018	Sea State	Light chop
I32	02 Jul 2018	High Tide (ft)	3.68
I32	02 Jul 2018	High Tide Time	1321
I32	02 Jul 2018	Low Tide (ft)	0.04
I32	02 Jul 2018	Low Tide Time	645
I32	02 Jul 2018	Comments	none
I32	09 Jul 2018	Depth (m)	11
I32	09 Jul 2018	Arrive Time	1137
I32	09 Jul 2018	Depart Time	1143

Station	Date	Parameter	Value
I32	09 Jul 2018	Air Temp (C)	22
I32	09 Jul 2018	Weather	Partly Cloudy
I32	09 Jul 2018	Visibility (mi)	6
I32	09 Jul 2018	Wind Speed (kts)	4
I32	09 Jul 2018	Wind Dir	SW
I32	09 Jul 2018	Water Color	Green
I32	09 Jul 2018	Wave Ht Low (ft)	2
I32	09 Jul 2018	Wave Period (sec)	9
I32	09 Jul 2018	Sea State	Calm
I32	09 Jul 2018	High Tide (ft)	3.46
I32	09 Jul 2018	High Tide Time	718
I32	09 Jul 2018	Low Tide (ft)	0.33
I32	09 Jul 2018	Low Tide Time	118
I32	09 Jul 2018	Comments	none
I32	16 Jul 2018	Depth (m)	10
I32	16 Jul 2018	Arrive Time	1126
I32	16 Jul 2018	Depart Time	1134
I32	16 Jul 2018	Air Temp (C)	20
I32	16 Jul 2018	Weather	Overcast
I32	16 Jul 2018	Visibility (mi)	11
I32	16 Jul 2018	Wind Speed (kts)	5
I32	16 Jul 2018	Wind Dir	SE
I32	16 Jul 2018	Water Color	Bluish-Green
I32	16 Jul 2018	Wave Ht Low (ft)	3
I32	16 Jul 2018	Wave Period (sec)	13
I32	16 Jul 2018	Sea State	Wind ripples
I32	16 Jul 2018	High Tide (ft)	4.53
I32	16 Jul 2018	High Tide Time	1304
I32	16 Jul 2018	Low Tide (ft)	-0.81
I32	16 Jul 2018	Low Tide Time	637
I32	16 Jul 2018	Comments	none
I32	23 Jul 2018	Depth (m)	11
I32	23 Jul 2018	Arrive Time	1129
I32	23 Jul 2018	Depart Time	1132
I32	23 Jul 2018	Air Temp (C)	22
I32	23 Jul 2018	Weather	Clear
I32	23 Jul 2018	Visibility (mi)	12
I32	23 Jul 2018	Wind Speed (kts)	7
I32	23 Jul 2018	Wind Dir	SW
I32	23 Jul 2018	Water Color	Green
I32	23 Jul 2018	Wave Ht Low (ft)	4
I32	23 Jul 2018	Wave Period (sec)	4
I32	23 Jul 2018	Sea State	Calm
I32	23 Jul 2018	High Tide (ft)	3.5
I32	23 Jul 2018	High Tide Time	811
I32	23 Jul 2018	Low Tide (ft)	0.24
I32	23 Jul 2018	Low Tide Time	156
I32	23 Jul 2018	Comments	Kelp debris
I32	30 Jul 2018	Depth (m)	11
I32	30 Jul 2018	Arrive Time	1116
I32	30 Jul 2018	Depart Time	1116
I32	30 Jul 2018	Air Temp (C)	23

Station	Date	Parameter	Value
I32	30 Jul 2018	Weather	Partly Cloudy
I32	30 Jul 2018	Visibility (mi)	12
I32	30 Jul 2018	Wind Speed (kts)	14
I32	30 Jul 2018	Wind Dir	SW
I32	30 Jul 2018	Water Color	Greenish-Blue
I32	30 Jul 2018	Wave Ht Low (ft)	2
I32	30 Jul 2018	Wave Period (sec)	9
I32	30 Jul 2018	Sea State	Calm
I32	30 Jul 2018	High Tide (ft)	4.11
I32	30 Jul 2018	High Tide Time	1151
I32	30 Jul 2018	Low Tide (ft)	-0.09
I32	30 Jul 2018	Low Tide Time	535
I32	30 Jul 2018	Comments	none
I39	02 Jul 2018	Depth (m)	19
I39	02 Jul 2018	Arrive Time	1028
I39	02 Jul 2018	Depart Time	1035
I39	02 Jul 2018	Air Temp (C)	19
I39	02 Jul 2018	Weather	Partly Cloudy
I39	02 Jul 2018	Visibility (mi)	12
I39	02 Jul 2018	Wind Speed (kts)	8
I39	02 Jul 2018	Wind Dir	SW
I39	02 Jul 2018	Water Color	Green
I39	02 Jul 2018	Wave Ht Low (ft)	2
I39	02 Jul 2018	Wave Period (sec)	11
I39	02 Jul 2018	Sea State	Light chop
I39	02 Jul 2018	High Tide (ft)	3.68
I39	02 Jul 2018	High Tide Time	1321
I39	02 Jul 2018	Low Tide (ft)	0.04
I39	02 Jul 2018	Low Tide Time	645
I39	02 Jul 2018	Comments	none
I39	09 Jul 2018	Depth (m)	18
I39	09 Jul 2018	Arrive Time	1025
I39	09 Jul 2018	Depart Time	1040
I39	09 Jul 2018	Air Temp (C)	22
I39	09 Jul 2018	Weather	Partly Cloudy
I39	09 Jul 2018	Visibility (mi)	6
I39	09 Jul 2018	Wind Speed (kts)	3
I39	09 Jul 2018	Wind Dir	S
I39	09 Jul 2018	Water Color	Green
I39	09 Jul 2018	Wave Ht Low (ft)	2
I39	09 Jul 2018	Wave Period (sec)	9
I39	09 Jul 2018	Sea State	Calm
I39	09 Jul 2018	High Tide (ft)	3.46
I39	09 Jul 2018	High Tide Time	718
I39	09 Jul 2018	Low Tide (ft)	0.33
I39	09 Jul 2018	Low Tide Time	118
I39	09 Jul 2018	Comments	none
I39	16 Jul 2018	Depth (m)	19
I39	16 Jul 2018	Arrive Time	1013
I39	16 Jul 2018	Depart Time	1020
I39	16 Jul 2018	Air Temp (C)	19
I39	16 Jul 2018	Weather	Overcast

Station	Date	Parameter	Value
I39	16 Jul 2018	Visibility (mi)	10
I39	16 Jul 2018	Wind Speed (kts)	4
I39	16 Jul 2018	Wind Dir	SE
I39	16 Jul 2018	Water Color	Green
I39	16 Jul 2018	Wave Ht Low (ft)	3
I39	16 Jul 2018	Wave Period (sec)	13
I39	16 Jul 2018	Sea State	Wind ripples
I39	16 Jul 2018	High Tide (ft)	4.53
I39	16 Jul 2018	High Tide Time	1304
I39	16 Jul 2018	Low Tide (ft)	-0.81
I39	16 Jul 2018	Low Tide Time	637
I39	16 Jul 2018	Comments	none
I39	23 Jul 2018	Depth (m)	19
I39	23 Jul 2018	Arrive Time	1017
I39	23 Jul 2018	Depart Time	1021
I39	23 Jul 2018	Air Temp (C)	22
I39	23 Jul 2018	Weather	Clear
I39	23 Jul 2018	Visibility (mi)	12
I39	23 Jul 2018	Wind Speed (kts)	5
I39	23 Jul 2018	Wind Dir	SW
I39	23 Jul 2018	Water Color	Green
I39	23 Jul 2018	Wave Ht Low (ft)	4
I39	23 Jul 2018	Wave Period (sec)	4
I39	23 Jul 2018	Sea State	Calm
I39	23 Jul 2018	High Tide (ft)	3.5
I39	23 Jul 2018	High Tide Time	811
I39	23 Jul 2018	Low Tide (ft)	0.24
I39	23 Jul 2018	Low Tide Time	156
I39	23 Jul 2018	Comments	Boats
I39	30 Jul 2018	Depth (m)	19
I39	30 Jul 2018	Arrive Time	1000
I39	30 Jul 2018	Depart Time	1005
I39	30 Jul 2018	Air Temp (C)	23
I39	30 Jul 2018	Weather	Partly Cloudy
I39	30 Jul 2018	Visibility (mi)	12
I39	30 Jul 2018	Wind Speed (kts)	5
I39	30 Jul 2018	Wind Dir	S
I39	30 Jul 2018	Water Color	Green
I39	30 Jul 2018	Wave Ht Low (ft)	2
I39	30 Jul 2018	Wave Period (sec)	9
I39	30 Jul 2018	Sea State	Calm
I39	30 Jul 2018	High Tide (ft)	4.11
I39	30 Jul 2018	High Tide Time	1151
I39	30 Jul 2018	Low Tide (ft)	-0.09
I39	30 Jul 2018	Low Tide Time	535
I39	30 Jul 2018	Comments	none
I40	02 Jul 2018	Depth (m)	11
I40	02 Jul 2018	Arrive Time	1058
I40	02 Jul 2018	Depart Time	1101
I40	02 Jul 2018	Air Temp (C)	19
I40	02 Jul 2018	Weather	Partly Cloudy
I40	02 Jul 2018	Visibility (mi)	12

Station	Date	Parameter	Value
I40	02 Jul 2018	Wind Speed (kts)	8
I40	02 Jul 2018	Wind Dir	SW
I40	02 Jul 2018	Water Color	Green
I40	02 Jul 2018	Wave Ht Low (ft)	2
I40	02 Jul 2018	Wave Period (sec)	11
I40	02 Jul 2018	Sea State	Light chop
I40	02 Jul 2018	High Tide (ft)	3.68
I40	02 Jul 2018	High Tide Time	1321
I40	02 Jul 2018	Low Tide (ft)	0.04
I40	02 Jul 2018	Low Tide Time	645
I40	02 Jul 2018	Comments	none
I40	09 Jul 2018	Depth (m)	10
I40	09 Jul 2018	Arrive Time	1100
I40	09 Jul 2018	Depart Time	1104
I40	09 Jul 2018	Air Temp (C)	22
I40	09 Jul 2018	Weather	Partly Cloudy
I40	09 Jul 2018	Visibility (mi)	6
I40	09 Jul 2018	Wind Speed (kts)	2
I40	09 Jul 2018	Wind Dir	N
I40	09 Jul 2018	Water Color	Green
I40	09 Jul 2018	Wave Ht Low (ft)	2
I40	09 Jul 2018	Wave Period (sec)	9
I40	09 Jul 2018	Sea State	Calm
I40	09 Jul 2018	High Tide (ft)	3.46
I40	09 Jul 2018	High Tide Time	718
I40	09 Jul 2018	Low Tide (ft)	0.33
I40	09 Jul 2018	Low Tide Time	118
I40	09 Jul 2018	Comments	Kelp
I40	16 Jul 2018	Depth (m)	11
I40	16 Jul 2018	Arrive Time	1048
I40	16 Jul 2018	Depart Time	1053
I40	16 Jul 2018	Air Temp (C)	20
I40	16 Jul 2018	Weather	Overcast
I40	16 Jul 2018	Visibility (mi)	10
I40	16 Jul 2018	Wind Speed (kts)	3
I40	16 Jul 2018	Wind Dir	SE
I40	16 Jul 2018	Water Color	Green
I40	16 Jul 2018	Wave Ht Low (ft)	3
I40	16 Jul 2018	Wave Period (sec)	13
I40	16 Jul 2018	Sea State	Wind ripples
I40	16 Jul 2018	High Tide (ft)	4.53
I40	16 Jul 2018	High Tide Time	1304
I40	16 Jul 2018	Low Tide (ft)	-0.81
I40	16 Jul 2018	Low Tide Time	637
I40	16 Jul 2018	Comments	none
I40	23 Jul 2018	Depth (m)	11
I40	23 Jul 2018	Arrive Time	1049
I40	23 Jul 2018	Depart Time	1054
I40	23 Jul 2018	Air Temp (C)	22
I40	23 Jul 2018	Weather	Clear
I40	23 Jul 2018	Visibility (mi)	12
I40	23 Jul 2018	Wind Speed (kts)	5

Station	Date	Parameter	Value
I40	23 Jul 2018	Wind Dir	SW
I40	23 Jul 2018	Water Color	Green
I40	23 Jul 2018	Wave Ht Low (ft)	4
I40	23 Jul 2018	Wave Period (sec)	4
I40	23 Jul 2018	Sea State	Calm
I40	23 Jul 2018	High Tide (ft)	3.5
I40	23 Jul 2018	High Tide Time	811
I40	23 Jul 2018	Low Tide (ft)	0.24
I40	23 Jul 2018	Low Tide Time	156
I40	23 Jul 2018	Comments	Boats
I40	30 Jul 2018	Depth (m)	11
I40	30 Jul 2018	Arrive Time	1033
I40	30 Jul 2018	Depart Time	1037
I40	30 Jul 2018	Air Temp (C)	23
I40	30 Jul 2018	Weather	Partly Cloudy
I40	30 Jul 2018	Visibility (mi)	12
I40	30 Jul 2018	Wind Speed (kts)	7
I40	30 Jul 2018	Wind Dir	S
I40	30 Jul 2018	Water Color	Green
I40	30 Jul 2018	Wave Ht Low (ft)	2
I40	30 Jul 2018	Wave Period (sec)	9
I40	30 Jul 2018	Sea State	Calm
I40	30 Jul 2018	High Tide (ft)	4.11
I40	30 Jul 2018	High Tide Time	1151
I40	30 Jul 2018	Low Tide (ft)	-0.09
I40	30 Jul 2018	Low Tide Time	535
I40	30 Jul 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	02 Jul 2018	1	19.45	76.57	8.7	33.69	8.2	23.9	0.84
I19	02 Jul 2018	2	19.27	76.51	8.6	33.73	8.2	24.0	0.86
I19	02 Jul 2018	3	18.61	70.66	9.0	33.72	8.2	24.1	1.21
I19	02 Jul 2018	4	17.19	33.34	9.7	33.77	8.3	24.5	8.33
I19	02 Jul 2018	5	16.43	37.33	9.1	33.64	8.2	24.6	27.98
I19	02 Jul 2018	6	15.25	58.40	8.4	33.71	8.1	24.9	25.92
I19	02 Jul 2018	7	14.90	59.23	7.9	33.62	8.1	24.9	17.48
I19	02 Jul 2018	8	14.61	55.20	7.4	33.61	8.0	25.0	15.69
I19	02 Jul 2018	9	14.42	54.06	6.9	33.61	8.0	25.0	14.20
I19	02 Jul 2018	10	14.28	52.30	6.5	33.60	8.0	25.0	10.71
I19	09 Jul 2018	1	21.16	72.11	9.7	33.68	8.4	23.4	1.99
I19	09 Jul 2018	2	21.16	71.97	9.7	33.67	8.4	23.4	2.11
I19	09 Jul 2018	3	21.01	72.13	9.6	33.68	8.4	23.5	2.27
I19	09 Jul 2018	4	20.92	71.28	9.6	33.67	8.4	23.5	2.59
I19	09 Jul 2018	5	20.85	70.59	9.6	33.66	8.3	23.5	2.86
I19	09 Jul 2018	6	20.83	70.20	9.5	33.66	8.3	23.5	3.02
I19	09 Jul 2018	7	20.78	69.70	9.5	33.66	8.3	23.5	3.07
I19	09 Jul 2018	8	20.76	69.50	9.5	33.66	8.3	23.5	3.16
I19	09 Jul 2018	9	20.73	67.02	9.5	33.66	8.3	23.5	3.31
I19	09 Jul 2018	10	20.71	62.72	9.6	33.66	8.3	23.6	3.40
I19	16 Jul 2018	1	21.26	78.58	9.2	33.73	8.3	23.5	1.09
I19	16 Jul 2018	2	21.21	78.80	9.2	33.73	8.3	23.5	1.16
I19	16 Jul 2018	3	21.02	79.23	9.2	33.73	8.3	23.5	1.23
I19	16 Jul 2018	4	20.03	79.65	9.6	33.76	8.3	23.8	1.21
I19	16 Jul 2018	5	18.28	73.55	10.4	33.67	8.3	24.2	1.89
I19	16 Jul 2018	6	17.46	64.72	9.0	33.68	8.3	24.4	7.03
I19	16 Jul 2018	7	15.87	54.00	7.0	33.64	8.1	24.7	10.27
I19	16 Jul 2018	8	15.75	59.83	6.5	33.60	8.1	24.7	9.65
I19	16 Jul 2018	9	15.49	61.43	6.3	33.60	8.1	24.8	10.45
I19	16 Jul 2018	10	15.39	57.53	5.9	33.60	8.1	24.8	8.67
I19	23 Jul 2018	1	19.88	69.87	8.3	33.67	8.2	23.8	0.99
I19	23 Jul 2018	2	18.84	69.78	8.1	33.70	8.2	24.1	1.02
I19	23 Jul 2018	3	17.53	70.13	8.0	33.72	8.2	24.4	1.03
I19	23 Jul 2018	4	16.17	69.78	8.2	33.68	8.2	24.7	1.13
I19	23 Jul 2018	5	15.83	67.81	8.2	33.57	8.1	24.7	1.55
I19	23 Jul 2018	6	14.29	71.12	8.0	33.67	8.1	25.1	1.75
I19	23 Jul 2018	7	13.60	78.72	7.8	33.58	8.1	25.2	1.70
I19	23 Jul 2018	8	13.34	77.14	7.5	33.56	8.1	25.2	2.06
I19	23 Jul 2018	9	13.14	66.99	7.0	33.56	8.0	25.2	3.01
I19	23 Jul 2018	10	13.23	47.68	6.8	33.55	8.0	25.2	6.05
I19	30 Jul 2018	1	23.03	78.08	8.5	33.75	8.3	23.0	1.14
I19	30 Jul 2018	2	23.11	78.07	8.4	33.75	8.3	23.0	1.19
I19	30 Jul 2018	3	22.63	77.72	8.2	33.75	8.3	23.1	1.38
I19	30 Jul 2018	4	22.12	76.00	8.3	33.74	8.3	23.2	1.67
I19	30 Jul 2018	5	21.26	76.59	8.6	33.76	8.3	23.5	1.89
I19	30 Jul 2018	6	19.45	77.12	8.8	33.77	8.2	24.0	1.95
I19	30 Jul 2018	7	18.03	76.42	8.9	33.68	8.2	24.3	2.06

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ -t)	Chlor (μ g/L)
I19	30 Jul 2018	8	17.80	74.72	8.6	33.61	8.2	24.3	2.56
I19	30 Jul 2018	9	17.02	73.26	8.3	33.66	8.2	24.5	3.15
I19	30 Jul 2018	10	15.61	70.20	8.1	33.62	8.1	24.8	3.71
I24	02 Jul 2018	1	19.57	74.36	8.5	33.68	8.2	23.9	0.91
I24	02 Jul 2018	2	19.16	75.04	8.5	33.74	8.2	24.0	0.88
I24	02 Jul 2018	3	18.58	76.69	8.6	33.73	8.2	24.2	0.85
I24	02 Jul 2018	4	18.33	76.67	8.9	33.70	8.2	24.2	0.85
I24	02 Jul 2018	5	18.06	75.78	9.1	33.69	8.2	24.3	0.96
I24	02 Jul 2018	6	17.73	73.95	9.0	33.69	8.2	24.3	1.16
I24	02 Jul 2018	7	17.11	73.42	9.1	33.71	8.2	24.5	1.44
I24	02 Jul 2018	8	16.50	73.44	9.3	33.69	8.2	24.6	1.87
I24	02 Jul 2018	9	16.05	71.23	9.0	33.66	8.2	24.7	2.90
I24	02 Jul 2018	10	15.28	70.92	8.2	33.69	8.1	24.9	3.87
I24	02 Jul 2018	11	14.74	71.50	7.2	33.62	8.0	25.0	3.29
I24	09 Jul 2018	1	21.03	72.30	10.1	33.66	8.4	23.5	1.94
I24	09 Jul 2018	2	20.99	72.27	10.1	33.66	8.4	23.5	2.21
I24	09 Jul 2018	3	20.89	71.99	10.1	33.66	8.4	23.5	2.52
I24	09 Jul 2018	4	20.68	71.58	10.1	33.66	8.4	23.6	2.94
I24	09 Jul 2018	5	20.48	71.00	10.0	33.66	8.4	23.6	3.38
I24	09 Jul 2018	6	20.44	70.82	9.9	33.65	8.3	23.6	3.52
I24	09 Jul 2018	7	20.21	70.45	9.9	33.65	8.3	23.7	3.52
I24	09 Jul 2018	8	20.18	70.17	9.9	33.64	8.3	23.7	3.66
I24	09 Jul 2018	9	20.09	70.03	9.8	33.64	8.3	23.7	3.60
I24	09 Jul 2018	10	20.13	69.90	9.8	33.64	8.3	23.7	3.59
I24	16 Jul 2018	1	20.79	79.44	9.1	33.72	8.3	23.6	0.67
I24	16 Jul 2018	2	20.64	79.74	9.1	33.73	8.3	23.6	0.70
I24	16 Jul 2018	3	20.44	80.21	9.2	33.72	8.3	23.7	0.74
I24	16 Jul 2018	4	20.05	80.21	9.2	33.75	8.3	23.8	0.81
I24	16 Jul 2018	5	18.60	80.07	9.7	33.77	8.3	24.2	1.05
I24	16 Jul 2018	6	17.67	78.31	9.8	33.71	8.3	24.4	1.84
I24	16 Jul 2018	7	16.95	75.69	8.9	33.66	8.2	24.5	2.93
I24	16 Jul 2018	8	15.95	78.30	7.7	33.69	8.2	24.8	3.14
I24	16 Jul 2018	9	15.09	78.17	6.5	33.62	8.1	24.9	2.76
I24	16 Jul 2018	10	15.16	75.44	6.3	33.59	8.1	24.9	1.91
I24	23 Jul 2018	1	21.11	75.73	8.5	33.70	8.3	23.5	0.70
I24	23 Jul 2018	2	20.08	75.25	8.3	33.80	8.3	23.8	0.75
I24	23 Jul 2018	3	18.88	72.82	8.4	33.68	8.2	24.0	0.77
I24	23 Jul 2018	4	15.40	64.25	7.8	33.87	8.1	25.0	0.90
I24	23 Jul 2018	5	14.16	54.80	7.4	33.60	8.1	25.1	1.72
I24	23 Jul 2018	6	13.40	57.70	7.2	33.59	8.0	25.2	3.39
I24	23 Jul 2018	7	13.12	66.16	7.1	33.56	8.0	25.3	4.87
I24	23 Jul 2018	8	12.98	66.16	6.8	33.54	8.0	25.3	4.62
I24	23 Jul 2018	9	13.05	63.84	6.8	33.54	8.0	25.3	4.12
I24	23 Jul 2018	10	12.99	62.29	6.7	33.55	8.0	25.3	4.00
I24	23 Jul 2018	11	12.99	62.03	6.6	33.55	8.0	25.3	3.51
I24	30 Jul 2018	1	22.82	78.73	8.2	33.73	8.3	23.0	0.62
I24	30 Jul 2018	2	22.99	79.15	8.2	33.74	8.3	23.0	0.63
I24	30 Jul 2018	3	22.41	79.55	8.2	33.82	8.3	23.2	0.61
I24	30 Jul 2018	4	21.46	79.84	8.3	33.83	8.2	23.5	0.63
I24	30 Jul 2018	5	20.16	78.93	8.6	33.84	8.2	23.8	0.68

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (µg/L)
I24	30 Jul 2018	6	18.53	77.25	8.8	33.83	8.2	24.2	0.89
I24	30 Jul 2018	7	17.30	76.06	8.9	33.76	8.2	24.5	1.20
I24	30 Jul 2018	8	16.38	75.40	8.6	33.73	8.2	24.7	1.50
I24	30 Jul 2018	9	15.65	72.11	7.9	33.64	8.1	24.8	2.31
I24	30 Jul 2018	10	15.23	71.24	7.4	33.62	8.1	24.9	3.76
I24	30 Jul 2018	11	14.85	74.21	7.2	33.58	8.0	24.9	3.52
I25	02 Jul 2018	1	19.76	73.10	8.8	33.71	8.2	23.8	1.12
I25	02 Jul 2018	2	19.48	73.36	8.6	33.74	8.2	23.9	1.10
I25	02 Jul 2018	3	18.91	74.78	8.6	33.73	8.2	24.1	1.06
I25	02 Jul 2018	4	18.67	76.19	8.6	33.69	8.2	24.1	1.13
I25	02 Jul 2018	5	18.44	76.03	8.8	33.70	8.2	24.2	1.34
I25	02 Jul 2018	6	17.94	73.73	9.1	33.70	8.2	24.3	1.88
I25	02 Jul 2018	7	17.12	74.18	9.4	33.70	8.2	24.5	2.33
I25	02 Jul 2018	8	16.33	74.00	9.3	33.67	8.2	24.6	2.96
I25	02 Jul 2018	9	15.43	68.51	8.2	33.66	8.1	24.8	5.16
I25	09 Jul 2018	1	21.08	71.98	10.0	33.65	8.4	23.4	1.67
I25	09 Jul 2018	2	20.95	71.76	10.0	33.66	8.4	23.5	1.87
I25	09 Jul 2018	3	20.84	71.15	10.1	33.66	8.4	23.5	2.39
I25	09 Jul 2018	4	20.67	70.85	10.0	33.66	8.4	23.6	2.80
I25	09 Jul 2018	5	20.48	70.55	10.0	33.66	8.4	23.6	3.10
I25	09 Jul 2018	6	20.27	70.61	9.9	33.66	8.3	23.7	3.38
I25	09 Jul 2018	7	20.25	70.55	9.9	33.65	8.3	23.7	3.45
I25	09 Jul 2018	8	20.23	70.65	9.9	33.65	8.3	23.7	3.44
I25	09 Jul 2018	9	20.29	70.74	9.9	33.64	8.3	23.7	3.44
I25	16 Jul 2018	1	20.65	80.92	9.2	33.71	8.3	23.6	0.61
I25	16 Jul 2018	2	20.62	80.83	9.2	33.72	8.3	23.6	0.62
I25	16 Jul 2018	3	20.21	81.08	9.3	33.73	8.3	23.7	0.63
I25	16 Jul 2018	4	19.63	80.76	9.6	33.73	8.3	23.9	0.78
I25	16 Jul 2018	5	17.84	80.41	9.8	33.74	8.3	24.3	1.19
I25	16 Jul 2018	6	17.28	78.46	9.6	33.66	8.3	24.4	2.13
I25	16 Jul 2018	7	16.90	75.59	8.8	33.64	8.2	24.5	3.29
I25	16 Jul 2018	8	16.30	77.34	8.3	33.65	8.2	24.6	3.38
I25	16 Jul 2018	9	15.88	78.17	7.8	33.62	8.1	24.7	2.48
I25	23 Jul 2018	1	21.25	76.28	8.5	33.70	8.3	23.4	0.63
I25	23 Jul 2018	2	20.33	76.35	8.4	33.82	8.3	23.8	0.65
I25	23 Jul 2018	3	18.39	76.75	8.5	33.78	8.2	24.2	0.63
I25	23 Jul 2018	4	15.69	64.21	7.7	33.84	8.1	24.9	0.70
I25	23 Jul 2018	5	14.12	56.30	7.1	33.70	8.0	25.2	1.35
I25	23 Jul 2018	6	13.42	65.38	7.0	33.58	8.0	25.2	2.53
I25	23 Jul 2018	7	13.29	67.94	6.8	33.56	8.0	25.2	3.23
I25	23 Jul 2018	8	13.26	67.95	6.7	33.55	8.0	25.2	3.31
I25	23 Jul 2018	9	13.39	67.55	6.7	33.55	8.0	25.2	3.26
I25	30 Jul 2018	1	22.83	79.58	8.2	33.73	8.3	23.0	0.53
I25	30 Jul 2018	2	22.95	79.85	8.2	33.74	8.3	23.0	0.54
I25	30 Jul 2018	3	22.75	79.97	8.1	33.74	8.3	23.1	0.59
I25	30 Jul 2018	4	22.09	79.99	8.1	33.80	8.3	23.3	0.67
I25	30 Jul 2018	5	20.34	79.66	8.5	33.78	8.2	23.7	0.79
I25	30 Jul 2018	6	18.98	77.62	8.7	33.73	8.2	24.1	1.14
I25	30 Jul 2018	7	18.00	75.89	8.6	33.70	8.2	24.3	1.47
I25	30 Jul 2018	8	16.84	73.35	8.2	33.69	8.2	24.5	2.16

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ -t)	Chlor (μ g/L)
I25	30 Jul 2018	9	16.21	73.87	7.7	33.59	8.1	24.6	2.44
I26	02 Jul 2018	1	19.97	71.34	8.6	33.72	8.2	23.8	1.13
I26	02 Jul 2018	2	19.90	71.83	8.6	33.73	8.2	23.8	1.14
I26	02 Jul 2018	3	19.36	73.89	8.7	33.75	8.2	24.0	1.10
I26	02 Jul 2018	4	18.75	77.15	8.8	33.73	8.2	24.1	0.95
I26	02 Jul 2018	5	18.31	74.84	9.0	33.69	8.2	24.2	1.13
I26	02 Jul 2018	6	18.01	72.19	8.8	33.69	8.2	24.3	1.69
I26	02 Jul 2018	7	16.37	42.49	9.3	33.73	8.2	24.7	17.24
I26	02 Jul 2018	8	15.31	59.66	8.8	33.65	8.1	24.9	29.42
I26	02 Jul 2018	9	14.01	71.95	7.4	33.62	8.0	25.1	18.37
I26	09 Jul 2018	1	20.58	70.01	10.1	33.65	8.4	23.6	2.29
I26	09 Jul 2018	2	20.55	69.91	10.1	33.65	8.4	23.6	2.56
I26	09 Jul 2018	3	20.49	70.18	10.1	33.65	8.4	23.6	2.92
I26	09 Jul 2018	4	20.46	70.43	10.2	33.65	8.4	23.6	3.08
I26	09 Jul 2018	5	20.45	70.42	10.1	33.65	8.4	23.6	3.12
I26	09 Jul 2018	6	20.45	70.43	10.1	33.65	8.4	23.6	3.20
I26	09 Jul 2018	7	20.43	70.73	10.1	33.65	8.4	23.6	3.18
I26	09 Jul 2018	8	20.40	70.97	10.1	33.65	8.3	23.6	3.21
I26	09 Jul 2018	9	20.38	70.98	10.1	33.65	8.3	23.6	3.13
I26	16 Jul 2018	1	20.87	80.70	9.3	33.72	8.3	23.6	0.64
I26	16 Jul 2018	2	20.80	81.00	9.2	33.72	8.3	23.6	0.64
I26	16 Jul 2018	3	20.71	81.25	9.2	33.72	8.3	23.6	0.70
I26	16 Jul 2018	4	20.44	80.95	9.4	33.73	8.3	23.7	0.79
I26	16 Jul 2018	5	19.85	79.11	9.5	33.71	8.3	23.8	1.23
I26	16 Jul 2018	6	18.95	76.88	8.7	33.72	8.3	24.1	1.85
I26	16 Jul 2018	7	17.25	77.70	8.3	33.70	8.2	24.5	2.08
I26	16 Jul 2018	8	15.86	79.93	8.3	33.66	8.2	24.7	1.55
I26	16 Jul 2018	9	15.67	80.17	8.2	33.59	8.2	24.7	1.05
I26	23 Jul 2018	1	21.19	75.41	8.6	33.71	8.3	23.5	0.63
I26	23 Jul 2018	2	20.67	75.94	8.5	33.72	8.3	23.6	0.65
I26	23 Jul 2018	3	18.76	75.56	8.4	33.73	8.2	24.1	0.68
I26	23 Jul 2018	4	15.98	75.56	8.4	33.72	8.2	24.8	0.72
I26	23 Jul 2018	5	14.60	77.31	8.4	33.58	8.1	25.0	0.84
I26	23 Jul 2018	6	15.10	76.95	7.9	33.56	8.1	24.8	0.90
I26	23 Jul 2018	7	13.93	76.04	7.4	33.57	8.1	25.1	0.91
I26	23 Jul 2018	8	13.66	76.23	7.3	33.54	8.0	25.1	1.01
I26	23 Jul 2018	9	13.70	74.57	7.3	33.54	8.0	25.1	1.08
I26	30 Jul 2018	1	23.10	77.92	8.1	33.74	8.3	22.9	0.51
I26	30 Jul 2018	2	23.08	78.86	8.1	33.75	8.3	23.0	0.52
I26	30 Jul 2018	3	22.99	79.59	8.1	33.76	8.3	23.0	0.55
I26	30 Jul 2018	4	22.81	79.77	8.1	33.76	8.3	23.0	0.61
I26	30 Jul 2018	5	22.40	80.15	8.0	33.82	8.3	23.2	0.66
I26	30 Jul 2018	6	20.29	79.84	8.3	33.87	8.2	23.8	0.79
I26	30 Jul 2018	7	18.75	77.62	8.6	33.77	8.2	24.1	1.02
I26	30 Jul 2018	8	18.05	75.18	8.5	33.70	8.2	24.3	1.54
I26	30 Jul 2018	9	16.93	72.95	8.1	33.69	8.1	24.5	2.19
I32	02 Jul 2018	1	19.79	70.63	8.5	33.70	8.2	23.8	1.17
I32	02 Jul 2018	2	19.63	70.59	8.3	33.73	8.2	23.9	1.20
I32	02 Jul 2018	3	18.50	70.45	8.5	33.78	8.2	24.2	1.24

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (µg/L)
I32	02 Jul 2018	4	17.78	71.75	8.6	33.72	8.2	24.3	1.20
I32	02 Jul 2018	5	17.11	69.86	8.4	33.72	8.2	24.5	1.50
I32	02 Jul 2018	6	16.02	58.49	8.3	33.70	8.1	24.7	2.67
I32	02 Jul 2018	7	15.08	50.34	8.3	33.66	8.1	24.9	6.59
I32	02 Jul 2018	8	14.74	51.45	8.3	33.61	8.1	25.0	11.55
I32	02 Jul 2018	9	14.65	48.60	8.1	33.60	8.1	25.0	15.99
I32	02 Jul 2018	10	14.73	51.53	7.9	33.58	8.1	24.9	18.41
I32	09 Jul 2018	1	21.68	73.35	8.4	33.73	8.3	23.3	2.21
I32	09 Jul 2018	2	21.72	73.40	8.2	33.74	8.3	23.3	2.24
I32	09 Jul 2018	3	20.94	73.81	8.7	33.73	8.3	23.5	2.58
I32	09 Jul 2018	4	20.35	72.26	9.6	33.67	8.3	23.7	3.26
I32	09 Jul 2018	5	20.15	70.43	9.8	33.65	8.3	23.7	4.15
I32	09 Jul 2018	6	20.01	69.70	9.7	33.65	8.3	23.7	4.66
I32	09 Jul 2018	7	19.51	70.16	9.6	33.66	8.3	23.9	4.98
I32	09 Jul 2018	8	19.44	71.10	9.4	33.65	8.3	23.9	5.20
I32	09 Jul 2018	9	19.37	70.87	9.2	33.66	8.3	23.9	6.81
I32	09 Jul 2018	10	19.22	67.03	8.9	33.66	8.3	23.9	9.43
I32	16 Jul 2018	1	21.77	70.00	8.8	33.73	8.4	23.3	1.73
I32	16 Jul 2018	2	21.65	72.68	8.8	33.74	8.4	23.4	1.79
I32	16 Jul 2018	3	21.48	72.25	8.7	33.73	8.3	23.4	1.71
I32	16 Jul 2018	4	21.43	72.27	8.7	33.73	8.3	23.4	1.93
I32	16 Jul 2018	5	21.37	72.15	8.6	33.73	8.3	23.4	2.27
I32	16 Jul 2018	6	21.33	74.03	8.7	33.73	8.3	23.4	2.60
I32	16 Jul 2018	7	20.94	74.65	8.6	33.75	8.3	23.6	2.73
I32	16 Jul 2018	8	19.02	65.92	7.9	33.80	8.3	24.1	6.02
I32	16 Jul 2018	9	16.99	59.83	7.5	33.68	8.2	24.5	4.99
I32	16 Jul 2018	10	16.03	49.19	7.3	33.60	8.1	24.7	3.67
I32	23 Jul 2018	1	20.27	69.24	8.5	33.65	8.2	23.7	0.87
I32	23 Jul 2018	2	19.86	69.66	8.3	33.71	8.2	23.8	0.88
I32	23 Jul 2018	3	19.10	65.70	8.1	33.67	8.2	24.0	1.11
I32	23 Jul 2018	4	18.63	62.55	7.9	33.69	8.2	24.1	1.39
I32	23 Jul 2018	5	15.71	67.05	8.6	33.75	8.2	24.8	1.59
I32	23 Jul 2018	6	15.77	72.74	8.5	33.59	8.1	24.7	1.81
I32	23 Jul 2018	7	14.09	71.49	8.1	33.63	8.1	25.1	2.04
I32	23 Jul 2018	8	13.66	71.62	7.6	33.56	8.1	25.1	2.39
I32	23 Jul 2018	9	13.52	69.92	7.4	33.55	8.0	25.2	2.51
I32	23 Jul 2018	10	13.40	62.52	7.2	33.54	8.0	25.2	3.19
I32	30 Jul 2018	1	23.24	74.38	8.4	33.72	8.3	22.9	1.56
I32	30 Jul 2018	2	23.13	74.02	8.3	33.74	8.3	22.9	1.57
I32	30 Jul 2018	3	22.71	73.63	8.2	33.78	8.3	23.1	1.69
I32	30 Jul 2018	4	22.18	74.39	8.1	33.75	8.3	23.2	2.03
I32	30 Jul 2018	5	21.44	74.13	8.1	33.82	8.2	23.5	2.35
I32	30 Jul 2018	6	20.09	74.98	8.4	33.80	8.2	23.8	2.53
I32	30 Jul 2018	7	19.01	75.64	8.4	33.76	8.2	24.1	2.54
I32	30 Jul 2018	8	17.60	74.63	8.4	33.77	8.2	24.4	2.63
I32	30 Jul 2018	9	16.68	72.45	8.0	33.67	8.1	24.6	3.22
I32	30 Jul 2018	10	15.69	70.42	7.6	33.70	8.1	24.8	3.63
I39	02 Jul 2018	1	19.82	72.93	8.6	33.73	8.2	23.8	0.92
I39	02 Jul 2018	2	19.53	74.65	8.7	33.73	8.2	23.9	0.84
I39	02 Jul 2018	3	19.09	77.36	8.9	33.74	8.2	24.0	0.78

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ -t)	Chlor (μ g/L)
I39	02 Jul 2018	4	18.08	78.89	9.6	33.70	8.2	24.3	0.84
I39	02 Jul 2018	5	17.96	79.89	9.8	33.67	8.2	24.3	0.95
I39	02 Jul 2018	6	17.76	79.96	10.0	33.68	8.3	24.3	1.24
I39	02 Jul 2018	7	16.97	78.75	9.9	33.67	8.2	24.5	1.67
I39	02 Jul 2018	8	15.15	76.08	9.6	33.68	8.2	24.9	2.70
I39	02 Jul 2018	9	13.72	73.89	8.7	33.62	8.1	25.2	3.79
I39	02 Jul 2018	10	13.02	74.30	6.7	33.59	8.0	25.3	3.84
I39	02 Jul 2018	11	12.84	74.05	6.1	33.58	7.9	25.3	4.88
I39	02 Jul 2018	12	12.73	71.45	5.9	33.58	7.9	25.3	7.54
I39	02 Jul 2018	13	12.58	68.73	5.5	33.59	7.9	25.4	15.11
I39	02 Jul 2018	14	12.50	60.21	5.1	33.59	7.8	25.4	20.86
I39	02 Jul 2018	15	12.47	62.75	4.9	33.60	7.8	25.4	17.00
I39	02 Jul 2018	16	12.44	69.04	4.8	33.60	7.8	25.4	12.39
I39	02 Jul 2018	17	12.43	69.72	4.7	33.61	7.8	25.4	10.63
I39	02 Jul 2018	18	12.42	70.18	4.7	33.61	7.8	25.4	8.86
I39	09 Jul 2018	1	21.15	78.34	8.9	33.71	8.3	23.5	1.10
I39	09 Jul 2018	2	21.13	78.57	9.0	33.72	8.3	23.5	1.19
I39	09 Jul 2018	3	20.94	78.44	9.2	33.73	8.3	23.5	1.21
I39	09 Jul 2018	4	20.29	78.72	9.8	33.73	8.3	23.7	1.33
I39	09 Jul 2018	5	19.60	78.00	10.6	33.70	8.3	23.9	1.62
I39	09 Jul 2018	6	18.60	75.66	11.6	33.70	8.4	24.1	2.30
I39	09 Jul 2018	7	17.97	72.52	11.2	33.68	8.3	24.3	3.20
I39	09 Jul 2018	8	17.22	69.49	11.2	33.66	8.3	24.4	4.79
I39	09 Jul 2018	9	17.02	67.77	11.1	33.63	8.3	24.5	6.21
I39	09 Jul 2018	10	16.64	67.61	11.1	33.63	8.3	24.5	7.00
I39	09 Jul 2018	11	16.51	67.15	11.2	33.62	8.3	24.6	7.61
I39	09 Jul 2018	12	16.36	66.50	11.1	33.62	8.3	24.6	8.15
I39	09 Jul 2018	13	16.22	66.49	11.2	33.62	8.3	24.6	8.39
I39	09 Jul 2018	14	16.14	66.74	11.0	33.62	8.3	24.7	8.54
I39	09 Jul 2018	15	15.79	68.36	10.4	33.64	8.3	24.7	8.65
I39	09 Jul 2018	16	15.39	71.78	9.4	33.62	8.2	24.8	7.80
I39	09 Jul 2018	17	14.29	73.72	8.3	33.66	8.1	25.1	6.71
I39	09 Jul 2018	18	13.95	74.29	7.8	33.60	8.1	25.1	5.39
I39	16 Jul 2018	1	20.06	79.03	9.4	33.70	8.3	23.8	0.86
I39	16 Jul 2018	2	19.79	80.20	9.5	33.73	8.3	23.8	0.86
I39	16 Jul 2018	3	18.33	79.38	10.1	33.71	8.3	24.2	1.59
I39	16 Jul 2018	4	17.42	74.65	9.8	33.67	8.3	24.4	2.95
I39	16 Jul 2018	5	16.79	74.43	9.6	33.65	8.2	24.5	3.78
I39	16 Jul 2018	6	16.37	75.76	9.5	33.62	8.2	24.6	4.56
I39	16 Jul 2018	7	15.98	76.61	9.6	33.61	8.2	24.7	4.75
I39	16 Jul 2018	8	15.78	78.51	9.6	33.61	8.2	24.7	4.08
I39	16 Jul 2018	9	15.43	81.58	9.5	33.60	8.2	24.8	2.99
I39	16 Jul 2018	10	15.27	82.94	9.4	33.59	8.2	24.8	2.43
I39	16 Jul 2018	11	15.09	83.56	9.2	33.59	8.2	24.9	2.27
I39	16 Jul 2018	12	14.65	83.88	9.0	33.59	8.2	25.0	2.27
I39	16 Jul 2018	13	14.35	84.07	8.5	33.59	8.1	25.0	2.23
I39	16 Jul 2018	14	14.02	84.76	7.8	33.59	8.1	25.1	2.07
I39	16 Jul 2018	15	13.68	83.54	7.0	33.58	8.0	25.2	2.31
I39	16 Jul 2018	16	13.48	83.42	6.7	33.58	8.0	25.2	1.85
I39	16 Jul 2018	17	13.35	83.82	6.5	33.57	8.0	25.2	1.15
I39	16 Jul 2018	18	13.34	84.24	6.5	33.57	8.0	25.2	0.88
I39	23 Jul 2018	1	21.41	77.71	8.5	33.65	8.3	23.4	0.60

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ -t)	Chlor (μ g/L)
I39	23 Jul 2018	2	21.28	78.31	8.6	33.68	8.3	23.4	0.62
I39	23 Jul 2018	3	21.02	77.91	8.4	33.70	8.3	23.5	0.67
I39	23 Jul 2018	4	18.31	78.09	8.3	33.89	8.2	24.3	0.77
I39	23 Jul 2018	5	15.27	80.50	8.7	33.64	8.1	24.9	0.71
I39	23 Jul 2018	6	14.91	81.17	8.2	33.62	8.1	24.9	0.72
I39	23 Jul 2018	7	13.58	82.54	8.0	33.56	8.1	25.2	0.81
I39	23 Jul 2018	8	13.53	82.49	7.8	33.53	8.1	25.1	0.97
I39	23 Jul 2018	9	13.26	81.46	7.6	33.53	8.1	25.2	1.29
I39	23 Jul 2018	10	12.97	84.16	7.3	33.53	8.0	25.3	1.50
I39	23 Jul 2018	11	12.89	86.10	7.1	33.52	8.0	25.3	1.12
I39	23 Jul 2018	12	12.89	85.77	7.0	33.52	8.0	25.3	0.87
I39	23 Jul 2018	13	12.89	85.30	7.0	33.53	8.0	25.3	0.81
I39	23 Jul 2018	14	12.88	84.89	7.0	33.53	8.0	25.3	0.78
I39	23 Jul 2018	15	12.88	84.73	7.0	33.54	8.0	25.3	0.79
I39	23 Jul 2018	16	12.88	84.59	7.0	33.54	8.0	25.3	0.84
I39	23 Jul 2018	17	12.88	84.14	6.9	33.54	8.0	25.3	0.86
I39	23 Jul 2018	18	12.88	84.15	7.0	33.55	8.0	25.3	0.91
I39	30 Jul 2018	1	22.85	78.92	8.1	33.72	8.3	23.0	0.55
I39	30 Jul 2018	2	22.93	79.87	8.1	33.74	8.3	23.0	0.56
I39	30 Jul 2018	3	22.37	79.96	8.0	33.81	8.3	23.2	0.58
I39	30 Jul 2018	4	20.99	80.15	8.2	33.85	8.2	23.6	0.62
I39	30 Jul 2018	5	19.04	79.06	8.9	33.85	8.2	24.1	0.80
I39	30 Jul 2018	6	18.23	77.41	9.3	33.73	8.2	24.2	1.20
I39	30 Jul 2018	7	17.66	76.62	9.4	33.69	8.2	24.4	1.62
I39	30 Jul 2018	8	17.29	77.08	9.0	33.67	8.2	24.4	1.93
I39	30 Jul 2018	9	16.29	77.49	8.6	33.70	8.2	24.7	2.04
I39	30 Jul 2018	10	15.10	77.64	8.4	33.70	8.1	25.0	2.27
I39	30 Jul 2018	11	14.60	78.61	8.4	33.61	8.1	25.0	2.74
I39	30 Jul 2018	12	14.54	78.83	8.3	33.58	8.1	25.0	3.51
I39	30 Jul 2018	13	14.50	78.60	8.2	33.58	8.1	25.0	4.14
I39	30 Jul 2018	14	14.38	78.23	8.1	33.58	8.1	25.0	4.52
I39	30 Jul 2018	15	13.91	78.53	7.8	33.62	8.1	25.1	4.78
I39	30 Jul 2018	16	13.58	80.45	7.5	33.57	8.1	25.2	4.09
I39	30 Jul 2018	17	13.50	81.99	7.4	33.56	8.0	25.2	3.24
I39	30 Jul 2018	18	13.50	82.26	7.3	33.55	8.0	25.2	2.65
I40	02 Jul 2018	1	19.37	74.97	8.5	33.69	8.2	23.9	0.80
I40	02 Jul 2018	2	19.29	75.57	8.6	33.70	8.2	24.0	0.81
I40	02 Jul 2018	3	19.01	75.98	8.8	33.73	8.2	24.0	0.86
I40	02 Jul 2018	4	18.66	77.66	9.1	33.73	8.2	24.1	0.93
I40	02 Jul 2018	5	18.35	77.06	9.1	33.72	8.2	24.2	1.14
I40	02 Jul 2018	6	17.64	72.16	9.0	33.74	8.2	24.4	1.58
I40	02 Jul 2018	7	16.79	63.57	8.7	33.70	8.2	24.6	3.23
I40	02 Jul 2018	8	16.24	65.97	8.4	33.68	8.1	24.7	6.02
I40	02 Jul 2018	9	15.55	64.82	8.0	33.68	8.1	24.8	7.20
I40	02 Jul 2018	10	14.77	63.82	7.5	33.64	8.0	25.0	7.96
I40	09 Jul 2018	1	20.87	71.58	9.9	33.67	8.4	23.5	2.12
I40	09 Jul 2018	2	20.78	71.29	9.9	33.67	8.4	23.5	2.38
I40	09 Jul 2018	3	20.59	71.16	9.9	33.67	8.4	23.6	2.63
I40	09 Jul 2018	4	20.44	70.12	9.8	33.65	8.3	23.6	3.23
I40	09 Jul 2018	5	20.41	69.36	9.8	33.64	8.3	23.6	3.73
I40	09 Jul 2018	6	20.32	68.83	9.6	33.64	8.3	23.6	3.85
I40	09 Jul 2018	7	20.27	68.82	9.6	33.63	8.3	23.6	3.92

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ -t)	Chlor (μ g/L)
I40	09 Jul 2018	8	20.16	68.82	9.3	33.63	8.3	23.7	3.79
I40	09 Jul 2018	9	19.91	68.63	9.2	33.63	8.3	23.7	3.50
I40	09 Jul 2018	10	19.91	67.51	9.2	33.61	8.3	23.7	3.37
I40	16 Jul 2018	1	21.19	79.64	9.2	33.72	8.3	23.5	1.02
I40	16 Jul 2018	2	21.13	79.86	9.2	33.73	8.3	23.5	1.04
I40	16 Jul 2018	3	20.95	79.99	9.2	33.73	8.3	23.5	1.13
I40	16 Jul 2018	4	20.37	80.47	9.2	33.74	8.3	23.7	1.15
I40	16 Jul 2018	5	19.08	76.51	9.0	33.78	8.3	24.1	1.35
I40	16 Jul 2018	6	16.96	74.78	8.3	33.71	8.2	24.5	2.38
I40	16 Jul 2018	7	15.95	70.47	7.4	33.67	8.2	24.7	4.31
I40	16 Jul 2018	8	15.65	66.59	6.9	33.61	8.1	24.8	7.27
I40	16 Jul 2018	9	15.33	65.73	6.4	33.61	8.1	24.8	5.86
I40	16 Jul 2018	10	15.37	59.41	6.3	33.60	8.1	24.8	3.33
I40	23 Jul 2018	1	19.72	70.23	8.4	33.63	8.2	23.8	0.95
I40	23 Jul 2018	2	19.70	69.67	8.1	33.64	8.2	23.8	0.98
I40	23 Jul 2018	3	16.54	66.83	8.0	33.74	8.2	24.6	1.20
I40	23 Jul 2018	4	15.40	67.02	8.3	33.56	8.1	24.8	1.70
I40	23 Jul 2018	5	15.40	67.68	8.2	33.56	8.1	24.8	1.92
I40	23 Jul 2018	6	15.13	68.32	8.2	33.54	8.1	24.8	2.08
I40	23 Jul 2018	7	14.93	68.71	7.9	33.56	8.1	24.9	2.18
I40	23 Jul 2018	8	14.02	67.44	7.5	33.57	8.1	25.1	2.62
I40	23 Jul 2018	9	13.70	64.65	7.3	33.55	8.0	25.1	3.31
I40	23 Jul 2018	10	13.34	60.88	7.5	33.53	8.0	25.2	4.96
I40	30 Jul 2018	1	21.63	74.19	8.5	33.68	8.3	23.3	1.57
I40	30 Jul 2018	2	21.53	75.29	8.5	33.73	8.3	23.4	1.51
I40	30 Jul 2018	3	20.75	74.99	8.5	33.74	8.3	23.6	1.60
I40	30 Jul 2018	4	19.66	75.03	8.7	33.74	8.2	23.9	1.72
I40	30 Jul 2018	5	18.79	74.81	8.6	33.69	8.2	24.1	1.96
I40	30 Jul 2018	6	17.58	73.25	8.7	33.68	8.2	24.4	2.54
I40	30 Jul 2018	7	17.18	72.80	8.8	33.63	8.2	24.4	2.98
I40	30 Jul 2018	8	16.95	72.96	8.8	33.61	8.2	24.5	3.29
I40	30 Jul 2018	9	16.89	72.55	8.4	33.59	8.2	24.5	3.63
I40	30 Jul 2018	10	16.53	67.86	7.8	33.61	8.1	24.6	3.98

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

Station	Date	Depth	Analyst	Procedure	Total	Fecal	Enter
I19	02 Jul 2018	6	LMA	LAB DUPLICATE	2e	<2	<2
I19	09 Jul 2018	6	AE	LAB DUPLICATE	1100	8e	140e
I19	16 Jul 2018	6	AR	LAB DUPLICATE	<20	<2	<2
I19	23 Jul 2018	6	JT	LAB DUPLICATE	<2	<2	<2
I19	30 Jul 2018	6	AE	LAB DUPLICATE	<2	<2	<2
I40	02 Jul 2018	6	AE	LAB DUPLICATE	2e	<2	<2
I40	09 Jul 2018	6	AE	LAB DUPLICATE	2400e	4e	240e
I40	16 Jul 2018	6	JT	LAB DUPLICATE	<2	<2	<2
I40	23 Jul 2018	6	JT	LAB DUPLICATE	<2	<2	<2
I40	30 Jul 2018	6	AE	LAB DUPLICATE	8e	<2	<2
S12	03 Jul 2018		JT	FIELD DUPLICATE	14e	2e	8e
S12	03 Jul 2018		JT	LAB DUPLICATE	22e	4e	2e
S12	10 Jul 2018		AR	FIELD DUPLICATE	20e	2e	10e
S12	10 Jul 2018		AR	LAB DUPLICATE	<20	4e	4e
S12	17 Jul 2018		JT	FIELD DUPLICATE	80e	2e	20e
S12	17 Jul 2018		JT	LAB DUPLICATE	<20	6e	14e
S12	24 Jul 2018		AR	FIELD DUPLICATE	<200	<2	2e
S12	24 Jul 2018		AR	LAB DUPLICATE	<20	<2	4e
S12	31 Jul 2018		JT	FIELD DUPLICATE	<200	8e	320e
S12	31 Jul 2018		JT	LAB DUPLICATE	<20	6e	280e

ns = not sampled

ND = no data

