

SOUTH BAY OCEAN OUTFALL MONTHLY RECEIVING WATERS MONITORING REPORT

SOUTH BAY WATER RECLAMATION PLANT

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

JANUARY 2018

Environmental Monitoring and Technical Services
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February 28, 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 January 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, suspended solids, and oil and grease analyses were typically collected using a rosette sampler with Niskin bottles. Measurements of the physical/chemical parameters listed above were taken using a Sea-Bird CTD. Additionally, CTD profile data for depths closest to those at which bacteriological samples were collected were extracted from the CTD profiles and are presented with the bacteriological data.

Bacteriological Reporting and Quality Assurance

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

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

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

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

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

Single Sample Maximums:

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

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

Quality controls of bacteriological data include laboratory and field duplicate analyses. Laboratory duplicates are performed on approximately 10% of the water quality samples, while field duplicates are performed six times a month (see Appendix A). Laboratory duplicates represent two aliquots of the original sample that are split in the laboratory and analyzed by the same analyst using identical procedures within the same analytical run. The results of these analyses provide a measure of intra-analyst precision. In contrast, field duplicates represent two separate samples collected at the same time from the same site, which are handled under identical circumstances and treated exactly the same throughout field and lab procedures. The results of these analyses provide a measure of precision associated with sample collection, preservation, storage, and lab procedures. The sign test (see Gilbert, 1987) is used to statistically compare both the results from the laboratory duplicates, as well as the results from the field duplicates. These data will be further analyzed in the City's 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 January, seven of the eight shore stations located north of the border were out of compliance with various California Ocean Plan (Ocean Plan) water contact standards (see below); these standards do not apply to stations located in Mexican waters.
 - The 30-day geometric mean standard for total coliform bacteria was exceeded at station S4 on multiple days during the month.
 - The 30-day geometric mean standard for fecal coliform bacteria was exceeded at station S10 on multiple days during the month.
 - The 30-day geometric mean standard for *Enterococcus* was exceeded at stations S4, S5, S6, S10, and S11 on multiple days during the month.

- The single sample maximum (SSM) standards for total coliform and fecal coliform bacteria were exceeded at stations S4, S6, S10, S11, and S12 on one or more days during the month.
 - The SSM standard for *Enterococcus* was exceeded at all stations except station S9 on one or more days during the month.
 - The SSM standard that states total coliform densities shall not exceed 1000 CFU/100 mL when the fecal:total ratio exceeds 0.1 was exceeded at stations S4, S6, S10, and S11 on one or more days during the month.
 - 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 these stations, bacteria densities exceeded one or more benchmark levels (i.e., total coliforms >10,000 CFU/100mL; fecal coliforms >400 CFU/100 mL; *Enterococcus* >104 CFU/100 mL; total >1000 CFU/100 mL & F:T ratio >0.1) in seawater samples collected at stations S0, S2, and S3 on one or more days during the month.
- 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>).
- Notable visual observations for January included: a sewage-like odor at stations S5, S6, and S11, a detergent odor at station S5, and water flowing from a storm drain at stations S0, S2 and S3. These observations were made on one or more days during the month.

➤ **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. January 3, 11, 16, 22, 29).
- During January, six of the seven stations were out of compliance with various Ocean Plan water contact standards (see below).
 - The SSM standards for total coliform and fecal coliform bacteria were exceeded at stations I19 and I40 on January 11 at one or more depths.
 - The SSM standard for *Enterococcus* was exceeded at all stations except I32 on January 11 at one or more depths.
 - The SSM standard that states total coliform densities shall not exceed 1000 CFU/100 mL when the fecal:total ratio exceeds 0.1 was exceeded at stations I19 and I40 on January 11 at one or more depths.
- Water column temperatures ranged from 13.03 to 16.20°C. The difference between surface and bottom waters ranged from 0.05 to 1.83°C, indicating the water column was stratified at some of these sites during the month.
- Chlorophyll *a* concentrations ranged from 0.61 to 5.22 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 bed stations.

➤ **Offshore Water Quality Sampling**

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

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TABLES AND FIGURES

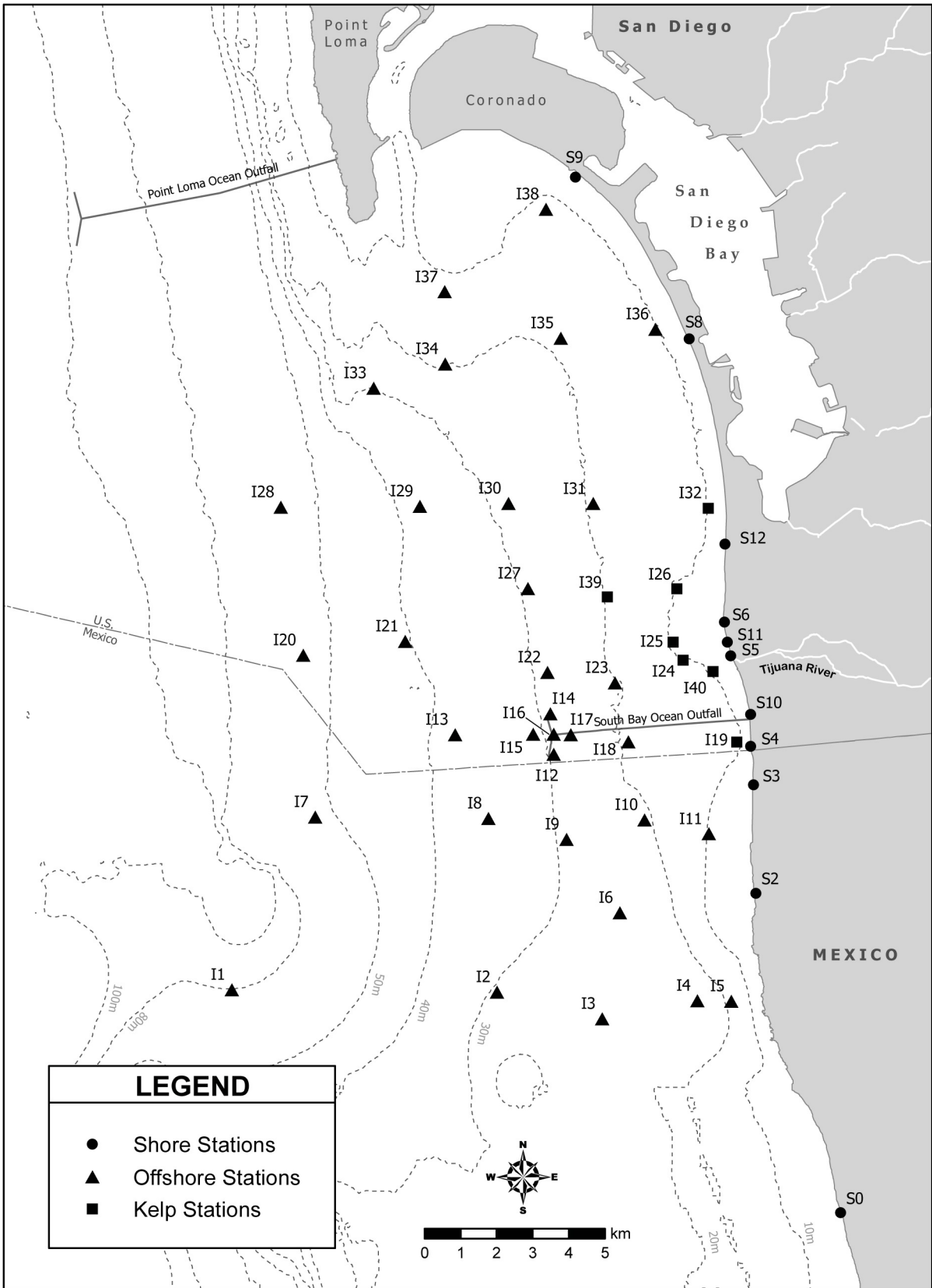


Figure 1.1 Station Map

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 Jan 2018	4*	4*	6*	6*	6*	6*	4*	4*
02 Jan 2018	6	4	6	5	7	5	6	5
03 Jan 2018	6	4	6	5	7	5	6	5
04 Jan 2018	4*	3*	4*	4*	6*	3*	4*	4*
05 Jan 2018	4*	3*	4*	4*	6*	3*	4*	4*
06 Jan 2018	4*	3*	4*	4*	6*	3*	4*	4*
07 Jan 2018	4*	3*	4*	4*	6*	3*	4*	4*
08 Jan 2018	4*	3*	4*	4*	6*	3*	4*	4*
09 Jan 2018	22	11	22	11	8	18	22	18
10 Jan 2018	22	11	22	11	8	18	22	18
11 Jan 2018	135	15*	65	9*	12*	96	101	56
12 Jan 2018	299	15*	65	9*	12*	225	101	56
13 Jan 2018	299	15*	65	9*	12*	225	101	56
14 Jan 2018	354	15*	65	9*	12*	293	101	56
15 Jan 2018	354	15*	65	9*	12*	293	101	56
16 Jan 2018	420	40	79	11	13	304	126	47
17 Jan 2018	420	40	79	11	13	304	126	47
18 Jan 2018	902	86*	164	17*	13*	512	290	88
19 Jan 2018	902	86*	164	17*	13*	512	290	88
20 Jan 2018	902	86*	164	17*	13*	512	290	88
21 Jan 2018	902	86*	164	17*	13*	512	290	88
22 Jan 2018	902	86*	164	17*	13*	512	290	88
23 Jan 2018	685	56	115	17	14	427	186	47
24 Jan 2018	685	56	115	17	14	427	186	47
25 Jan 2018	1577	128*	260	30*	24*	918	459	88
26 Jan 2018	1577	128*	260	30*	24*	918	459	88
27 Jan 2018	1577	128*	260	30*	24*	918	459	88
28 Jan 2018	1577	128*	260	30*	24*	918	459	88
29 Jan 2018	1577	128*	260	30*	24*	918	459	88
30 Jan 2018	924	56	115	20	14	427	272	69
31 Jan 2018	924	56	115	20	14	427	272	69

* 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 Jan 2018	2*	2*	2*	4*	2*	2*	2*	2*
02 Jan 2018	3	2	2	3	2	2	2	2
03 Jan 2018	3	2	2	3	2	2	2	2
04 Jan 2018	3*	2*	2*	4*	2*	2*	2*	2*
05 Jan 2018	3*	2*	2*	4*	2*	2*	2*	2*
06 Jan 2018	3*	2*	2*	4*	2*	2*	2*	2*
07 Jan 2018	3*	2*	2*	4*	2*	2*	2*	2*
08 Jan 2018	3*	2*	2*	4*	2*	2*	2*	2*
09 Jan 2018	15	5	8	7	2	10	10	7
10 Jan 2018	15	5	8	7	2	10	10	7
11 Jan 2018	59	6*	20	5*	2*	54	22	9
12 Jan 2018	94	6*	20	5*	2*	94	22	9
13 Jan 2018	94	6*	20	5*	2*	94	22	9
14 Jan 2018	70	6*	20	5*	2*	98	22	9
15 Jan 2018	70	6*	20	5*	2*	98	22	9
16 Jan 2018	70	13	22	4	3	92	21	7
17 Jan 2018	70	13	22	4	3	92	21	7
18 Jan 2018	116	17*	35	5*	3*	159	34	9
19 Jan 2018	116	17*	35	5*	3*	159	34	9
20 Jan 2018	116	17*	35	5*	3*	159	34	9
21 Jan 2018	116	17*	35	5*	3*	159	34	9
22 Jan 2018	116	17*	35	5*	3*	159	34	9
23 Jan 2018	109	11	22	4	3	139	21	7
24 Jan 2018	109	11	22	4	3	139	21	7
25 Jan 2018	192	17*	35	5*	3*	255	34	9
26 Jan 2018	192	17*	35	5*	3*	255	34	9
27 Jan 2018	192	17*	35	5*	3*	255	34	9
28 Jan 2018	192	17*	35	5*	3*	255	34	9
29 Jan 2018	192	17*	35	5*	3*	255	34	9
30 Jan 2018	143	11	22	4	3	139	21	7
31 Jan 2018	143	11	22	4	3	139	21	7

* 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 Jan 2018	2*	3*	2*	3*	2*	3*	2*	2*
02 Jan 2018	3	2	2	3	2	3	2	2
03 Jan 2018	3	2	2	3	2	3	2	2
04 Jan 2018	3*	2*	3*	3*	2*	3*	2*	2*
05 Jan 2018	3*	2*	3*	3*	2*	3*	2*	2*
06 Jan 2018	3*	2*	3*	3*	2*	3*	2*	2*
07 Jan 2018	3*	2*	3*	3*	2*	3*	2*	2*
08 Jan 2018	3*	2*	3*	3*	2*	3*	2*	2*
09 Jan 2018	17	6	13	7	2	16	11	9
10 Jan 2018	17	6	13	7	2	16	11	9
11 Jan 2018	88	34	36	9	2*	93	33	16
12 Jan 2018	107	90	32	9	2*	124	31	16
13 Jan 2018	107	90	32	9	2*	124	31	16
14 Jan 2018	86	86	32	9	2*	115	31	16
15 Jan 2018	86	86	32	9	2*	115	31	16
16 Jan 2018	90	91	31	7	5	125	26	18
17 Jan 2018	90	91	31	7	5	125	26	18
18 Jan 2018	123	91	49	9	6*	119	41	27
19 Jan 2018	123	91	49	9	6*	119	41	27
20 Jan 2018	123	91	49	9	6*	119	41	27
21 Jan 2018	123	91	49	9	6*	119	41	27
22 Jan 2018	123	91	49	9	6*	119	41	27
23 Jan 2018	117	60	31	9	5	113	26	18
24 Jan 2018	117	60	31	9	5	113	26	18
25 Jan 2018	195	91	49	12	6*	188	41	27
26 Jan 2018	195	91	49	12	6*	188	41	27
27 Jan 2018	195	91	49	12	6*	188	41	27
28 Jan 2018	195	91	49	12	6*	188	41	27
29 Jan 2018	195	91	49	12	6*	188	41	27
30 Jan 2018	179	69	31	10	7	128	26	18
31 Jan 2018	179	69	31	10	7	128	26	18

* 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
02 Jan 2018	IC	IC	IC	IC	IC	IC	IC	IC
09 Jan 2018	E	IC	E	IC	IC	E	E	E
11 Jan 2018	E	ns	IC	ns	ns	E	IC	IC
12 Jan 2018	E	ns	ns	ns	ns	E	ns	ns
14 Jan 2018	IC	ns	ns	ns	ns	IC	ns	ns
16 Jan 2018	IC	IC	IC	IC	IC	IC	IC	IC
23 Jan 2018	IC	IC	IC	IC	IC	IC	IC	IC
30 Jan 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
02 Jan 2018	IC	IC	IC	IC	IC	IC	IC	IC
09 Jan 2018	E	IC	E	IC	IC	E	E	E
11 Jan 2018	E	ns	IC	ns	ns	E	IC	IC
12 Jan 2018	E	ns	ns	ns	ns	E	ns	ns
14 Jan 2018	IC	ns	ns	ns	ns	IC	ns	ns
16 Jan 2018	IC	IC	IC	IC	IC	IC	IC	IC
23 Jan 2018	IC	IC	IC	IC	IC	IC	IC	IC
30 Jan 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
02 Jan 2018	IC	IC	IC	IC	IC	IC	IC	IC
09 Jan 2018	E	E	E	E	IC	E	E	E
11 Jan 2018	E	E	E	IC	ns	E	E	IC
12 Jan 2018	E	E	IC	ns	ns	E	IC	ns
14 Jan 2018	IC	IC	ns	ns	ns	IC	ns	ns
16 Jan 2018	E	E	IC	IC	IC	E	IC	IC
18 Jan 2018	IC	IC	ns	ns	ns	IC	ns	ns
23 Jan 2018	IC	IC	IC	IC	IC	IC	IC	IC
30 Jan 2018	IC	IC	IC	IC	IC	IC	IC	IC

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
02 Jan 2018	IC	IC	IC	IC	IC	IC	IC	IC
09 Jan 2018	E	IC	E	IC	IC	E	E	IC
11 Jan 2018	E	ns	IC	ns	ns	E	IC	IC
12 Jan 2018	IC	ns	ns	ns	ns	IC	ns	ns
14 Jan 2018	IC	ns	ns	ns	ns	IC	ns	ns
16 Jan 2018	IC	IC	IC	IC	IC	IC	IC	IC
23 Jan 2018	IC	IC	IC	IC	IC	IC	IC	IC
30 Jan 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	02 Jan 2018	1130	500	6e	32e	0.01
S0	09 Jan 2018	1025	>16000	980	3600e	0.06
S0	16 Jan 2018	1035	600e	140e	500	0.23
S0	23 Jan 2018	1015	1600e	110	260e	0.07
S0	30 Jan 2018	1010	1500	460	560	0.31
S2	02 Jan 2018	1255	<2	<2	30e	1.00
S2	09 Jan 2018	1230	>16000	940	2400e	0.06
S2	16 Jan 2018	1215	760	24e	44	0.03
S2	23 Jan 2018	1255	110	<2	24e	0.02
S2	30 Jan 2018	1110	<2	<2	2e	1.00
S3	02 Jan 2018	1215	2e	<2	12e	1.00
S3	09 Jan 2018	1140	>16000	1200e	6200	0.07
S3	16 Jan 2018	1130	460	44	30e	0.10
S3	23 Jan 2018	1210	660	62	10e	0.09
S3	30 Jan 2018	1145	6e	<2	<2	0.33
S4	02 Jan 2018	902	44	18e	14e	0.41
S4	09 Jan 2018	833	>16000	5000	>12000	0.31
S4	11 Jan 2018	836	>16000	2000e	7800	0.12
S4	12 Jan 2018	1040	>16000	980	280e	0.06
S4	14 Jan 2018	1015	960	12e	24e	0.01
S4	16 Jan 2018	834	1400e	66	120	0.05
S4	18 Jan 2018	1147	ns	ns	24e	ns
S4	23 Jan 2018	822	100	70	82	0.70
S4	30 Jan 2018	836	22e	18e	90	0.82
S5	02 Jan 2018	1028	4e	<2	<2	0.50
S5	09 Jan 2018	1035	2800e	80e	460	0.03
S5	11 Jan 2018	925	ns	ns	>12000	ns
S5	12 Jan 2018	1137	ns	ns	>12000	ns
S5	14 Jan 2018	1131	ns	ns	68	ns
S5	16 Jan 2018	1005	2400e	240e	130e	0.10
S5	18 Jan 2018	1304	ns	ns	2e	ns
S5	23 Jan 2018	1026	10e	2e	<2	0.20
S5	30 Jan 2018	1015	<2	<2	8e	1.00
S6	02 Jan 2018	1016	4e	<2	6e	0.50
S6	09 Jan 2018	1025	>16000	2200e	7000	0.14
S6	11 Jan 2018	917	4600	180e	360e	0.04
S6	12 Jan 2018	1147	ns	ns	18e	ns
S6	16 Jan 2018	952	200e	34e	26e	0.17
S6	23 Jan 2018	1105	<20	<2	<2	0.10
S6	30 Jan 2018	953	2e	<2	<2	1.00
S8	02 Jan 2018	1142	<2	<2	<2	1.00
S8	09 Jan 2018	1108	1000e	100	220e	0.10
S8	11 Jan 2018	1009	ns	ns	32e	ns

Station	Date	Time	Total	Fecal	Entero	F:T
S8	16 Jan 2018	1101	20e	<2	<2	0.10
S8	23 Jan 2018	1159	<20	<2	8e	0.10
S8	30 Jan 2018	1104	4e	<2	4e	0.50
S9	02 Jan 2018	1208	<20	<2	2e	0.10
S9	09 Jan 2018	1131	40e	<2	4e	0.05
S9	16 Jan 2018	1123	<20	10e	58	0.50
S9	23 Jan 2018	1220	<20	<2	<2	0.10
S9	30 Jan 2018	1126	2e	<2	14e	1.00
S10	02 Jan 2018	856	<2	<2	4e	1.00
S10	09 Jan 2018	824	>16000	5000	>12000	0.31
S10	11 Jan 2018	830	>16000	>12000	>12000	0.75
S10	12 Jan 2018	1044	>16000	1400	520	0.09
S10	14 Jan 2018	1045	1400e	130e	76	0.09
S10	16 Jan 2018	827	400e	58	220e	0.14
S10	18 Jan 2018	1158	ns	ns	4e	ns
S10	23 Jan 2018	852	120	56	78	0.47
S10	30 Jan 2018	830	2e	<2	6e	1.00
S11	02 Jan 2018	1021	<20	<2	<2	0.10
S11	09 Jan 2018	1029	>16000	5000	9600	0.31
S11	11 Jan 2018	920	8400	120e	480	0.01
S11	12 Jan 2018	1143	ns	ns	24e	ns
S11	16 Jan 2018	958	380e	18e	10e	0.05
S11	23 Jan 2018	1044	<20	<2	<2	0.10
S11	30 Jan 2018	1005	<20	<2	<2	0.10
S12	02 Jan 2018	1003	<20	2e	2e	0.10
S12	09 Jan 2018	1014	11000	1000	3400e	0.09
S12	11 Jan 2018	938	600e	8e	44	0.01
S12	16 Jan 2018	934	20e	2e	26e	0.10
S12	23 Jan 2018	1137	<2	<2	<2	1.00
S12	30 Jan 2018	942	<20	<2	<2	0.10

ns = not sampled

ND = no data

Comments

Station	Date	Depth	Parameter	Comments
S4	11 Jan 2018			Resample
S5	11 Jan 2018			Resample
S6	11 Jan 2018			Resample
S8	11 Jan 2018			Resample
S10	11 Jan 2018			Resample
S11	11 Jan 2018			Resample
S12	11 Jan 2018			Resample
S4	12 Jan 2018			Resample
S5	12 Jan 2018			Resample
S6	12 Jan 2018			Resample
S10	12 Jan 2018			Resample
S11	12 Jan 2018			Resample
S4	14 Jan 2018			Resample
S5	14 Jan 2018			Resample
S10	14 Jan 2018			Resample
S4	18 Jan 2018			Resample
S5	18 Jan 2018			Resample
S10	18 Jan 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	02 Jan 2018	Arrive Time	1130
S0	02 Jan 2018	Weather	Cloudy
S0	02 Jan 2018	Wind Speed (kts)	6.1
S0	02 Jan 2018	Wind Dir	NE
S0	02 Jan 2018	Animal Life	7 Birds; 2 Dogs
S0	02 Jan 2018	Floatables	None
S0	02 Jan 2018	Water Color	Green
S0	02 Jan 2018	Current Direction	N
S0	02 Jan 2018	Water Temp (C)	16
S0	02 Jan 2018	Wave Height Low (ft)	3
S0	02 Jan 2018	High Tide (ft)	6.9
S0	02 Jan 2018	High Tide Time	828
S0	02 Jan 2018	Low Tide (ft)	-1.8
S0	02 Jan 2018	Low Tide Time	1542
S0	02 Jan 2018	Comments	Kelp; Algae; 2 Persons; Water clear; Flow from storm drain approx 0.5L/sec
S0	09 Jan 2018	Arrive Time	1025
S0	09 Jan 2018	Weather	Moderate Rain
S0	09 Jan 2018	Wind Speed (kts)	4.3
S0	09 Jan 2018	Wind Dir	NE
S0	09 Jan 2018	Animal Life	20 Shorebirds; 10 Seagulls
S0	09 Jan 2018	Floatables	None
S0	09 Jan 2018	Water Color	Green
S0	09 Jan 2018	Current Direction	N
S0	09 Jan 2018	Water Temp (C)	13
S0	09 Jan 2018	Wave Height Low (ft)	3
S0	09 Jan 2018	High Tide (ft)	3.1
S0	09 Jan 2018	High Tide Time	1556
S0	09 Jan 2018	Low Tide (ft)	1.4
S0	09 Jan 2018	Low Tide Time	1032
S0	09 Jan 2018	Comments	Kelp; Algae; Water turbid; Flow from storm drain 1L/sec
S0	16 Jan 2018	Arrive Time	1035
S0	16 Jan 2018	Weather	Cloudy
S0	16 Jan 2018	Wind Speed (kts)	2.4
S0	16 Jan 2018	Wind Dir	NW
S0	16 Jan 2018	Animal Life	18 Shorebirds; 1 Pelican; 6 Seagulls
S0	16 Jan 2018	Floatables	None
S0	16 Jan 2018	Water Color	Green
S0	16 Jan 2018	Current Direction	N
S0	16 Jan 2018	Water Temp (C)	17
S0	16 Jan 2018	Wave Height Low (ft)	7
S0	16 Jan 2018	High Tide (ft)	5.7
S0	16 Jan 2018	High Tide Time	806
S0	16 Jan 2018	Low Tide (ft)	-0.7
S0	16 Jan 2018	Low Tide Time	1517
S0	16 Jan 2018	Comments	Seagrass; Algae; 1 Person; Water clear; Flow from storm drain 2L/sec
S0	23 Jan 2018	Arrive Time	1015

Station	Date	Parameter	Value
S0	23 Jan 2018	Weather	Cloudy
S0	23 Jan 2018	Wind Speed (kts)	1.8
S0	23 Jan 2018	Wind Dir	NW
S0	23 Jan 2018	Animal Life	12 Shorebirds; 2 Pelicans; 7 Seagulls
S0	23 Jan 2018	Floatables	None
S0	23 Jan 2018	Water Color	Green
S0	23 Jan 2018	Current Direction	N
S0	23 Jan 2018	Water Temp (C)	17
S0	23 Jan 2018	Wave Height Low (ft)	4
S0	23 Jan 2018	High Tide (ft)	4
S0	23 Jan 2018	High Tide Time	113
S0	23 Jan 2018	Low Tide (ft)	2
S0	23 Jan 2018	Low Tide Time	717
S0	23 Jan 2018	Comments	Kelp; Seagrass; 2 Persons; Water clear; Flow from storm drain 0.5L/sec
S0	30 Jan 2018	Arrive Time	1010
S0	30 Jan 2018	Weather	Sunny
S0	30 Jan 2018	Wind Speed (kts)	1.1
S0	30 Jan 2018	Wind Dir	SW
S0	30 Jan 2018	Animal Life	15 Shorebirds
S0	30 Jan 2018	Floatables	None
S0	30 Jan 2018	Water Color	Colorless
S0	30 Jan 2018	Current Direction	N
S0	30 Jan 2018	Water Temp (C)	16
S0	30 Jan 2018	Wave Height Low (ft)	2
S0	30 Jan 2018	High Tide (ft)	6.7
S0	30 Jan 2018	High Tide Time	735
S0	30 Jan 2018	Low Tide (ft)	-1.8
S0	30 Jan 2018	Low Tide Time	1444
S0	30 Jan 2018	Comments	Kelp; Algae; 5 Persons; Water clear; Flow from storm drain 0.5L/sec
S2	02 Jan 2018	Arrive Time	1255
S2	02 Jan 2018	Weather	Cloudy
S2	02 Jan 2018	Wind Speed (kts)	6.5
S2	02 Jan 2018	Wind Dir	NE
S2	02 Jan 2018	Animal Life	7 Birds; 1 Dog
S2	02 Jan 2018	Floatables	None
S2	02 Jan 2018	Water Color	Green
S2	02 Jan 2018	Current Direction	N
S2	02 Jan 2018	Water Temp (C)	16
S2	02 Jan 2018	Wave Height Low (ft)	3
S2	02 Jan 2018	High Tide (ft)	6.9
S2	02 Jan 2018	High Tide Time	828
S2	02 Jan 2018	Low Tide (ft)	-1.8
S2	02 Jan 2018	Low Tide Time	1542
S2	02 Jan 2018	Comments	Kelp; Algae; 5 Persons; Water clear; No flow from storm drain
S2	09 Jan 2018	Arrive Time	1230
S2	09 Jan 2018	Weather	Cloudy
S2	09 Jan 2018	Wind Speed (kts)	4.8
S2	09 Jan 2018	Wind Dir	NE
S2	09 Jan 2018	Animal Life	5 Shorebirds; 2 Seagulls
S2	09 Jan 2018	Floatables	None

Station	Date	Parameter	Value
S2	09 Jan 2018	Water Color	Green
S2	09 Jan 2018	Current Direction	N
S2	09 Jan 2018	Water Temp (C)	13
S2	09 Jan 2018	Wave Height Low (ft)	4
S2	09 Jan 2018	High Tide (ft)	3.1
S2	09 Jan 2018	High Tide Time	1556
S2	09 Jan 2018	Low Tide (ft)	1.4
S2	09 Jan 2018	Low Tide Time	1032
S2	09 Jan 2018	Comments	Kelp; Algae; Water turbid; Flow from storm drain 0.5L/sec
S2	16 Jan 2018	Arrive Time	1215
S2	16 Jan 2018	Weather	Cloudy
S2	16 Jan 2018	Wind Speed (kts)	2.3
S2	16 Jan 2018	Wind Dir	NW
S2	16 Jan 2018	Animal Life	7 Shorebirds; 4 Seagulls
S2	16 Jan 2018	Floatables	None
S2	16 Jan 2018	Water Color	Green
S2	16 Jan 2018	Current Direction	N
S2	16 Jan 2018	Water Temp (C)	17
S2	16 Jan 2018	Wave Height Low (ft)	5
S2	16 Jan 2018	High Tide (ft)	5.7
S2	16 Jan 2018	High Tide Time	806
S2	16 Jan 2018	Low Tide (ft)	-0.7
S2	16 Jan 2018	Low Tide Time	1517
S2	16 Jan 2018	Comments	Seagrass; Algae; 6 Persons; Water clear; No flow from storm drain
S2	23 Jan 2018	Arrive Time	1255
S2	23 Jan 2018	Weather	Cloudy
S2	23 Jan 2018	Wind Speed (kts)	2.2
S2	23 Jan 2018	Wind Dir	NW
S2	23 Jan 2018	Animal Life	7 Shorebirds; 7 Seagulls
S2	23 Jan 2018	Floatables	None
S2	23 Jan 2018	Water Color	Green
S2	23 Jan 2018	Current Direction	N
S2	23 Jan 2018	Water Temp (C)	17
S2	23 Jan 2018	Wave Height Low (ft)	5
S2	23 Jan 2018	High Tide (ft)	4
S2	23 Jan 2018	High Tide Time	113
S2	23 Jan 2018	Low Tide (ft)	2
S2	23 Jan 2018	Low Tide Time	717
S2	23 Jan 2018	Comments	Kelp; Seagrass; 5 Persons; Water clear; No flow from storm drain
S2	30 Jan 2018	Arrive Time	1110
S2	30 Jan 2018	Weather	Sunny
S2	30 Jan 2018	Wind Speed (kts)	1.2
S2	30 Jan 2018	Wind Dir	SW
S2	30 Jan 2018	Animal Life	15 Birds; 5 Dogs
S2	30 Jan 2018	Floatables	None
S2	30 Jan 2018	Water Color	Colorless
S2	30 Jan 2018	Current Direction	N
S2	30 Jan 2018	Water Temp (C)	16
S2	30 Jan 2018	Wave Height Low (ft)	2
S2	30 Jan 2018	High Tide (ft)	6.7
S2	30 Jan 2018	High Tide Time	735
S2	30 Jan 2018	Low Tide (ft)	-1.8

Station	Date	Parameter	Value
S2	30 Jan 2018	Low Tide Time	1444
S2	30 Jan 2018	Comments	15 Persons; Water clear; No flow from storm drain
S3	02 Jan 2018	Arrive Time	1215
S3	02 Jan 2018	Weather	Drizzle
S3	02 Jan 2018	Wind Speed (kts)	5.8
S3	02 Jan 2018	Wind Dir	NE
S3	02 Jan 2018	Animal Life	7 Birds; 2 Dogs
S3	02 Jan 2018	Floatables	None
S3	02 Jan 2018	Water Color	Green
S3	02 Jan 2018	Current Direction	N
S3	02 Jan 2018	Water Temp (C)	16
S3	02 Jan 2018	Wave Height Low (ft)	3
S3	02 Jan 2018	High Tide (ft)	6.9
S3	02 Jan 2018	High Tide Time	828
S3	02 Jan 2018	Low Tide (ft)	-1.8
S3	02 Jan 2018	Low Tide Time	1542
S3	02 Jan 2018	Comments	Kelp; Algae; 10 Persons; Water clear; No flow from storm drain
S3	09 Jan 2018	Arrive Time	1140
S3	09 Jan 2018	Weather	Cloudy
S3	09 Jan 2018	Wind Speed (kts)	5.8
S3	09 Jan 2018	Wind Dir	NE
S3	09 Jan 2018	Animal Life	5 Shorebirds; 2 Seagulls
S3	09 Jan 2018	Floatables	None
S3	09 Jan 2018	Water Color	Green
S3	09 Jan 2018	Current Direction	N
S3	09 Jan 2018	Water Temp (C)	13
S3	09 Jan 2018	Wave Height Low (ft)	4
S3	09 Jan 2018	High Tide (ft)	3.1
S3	09 Jan 2018	High Tide Time	1556
S3	09 Jan 2018	Low Tide (ft)	1.4
S3	09 Jan 2018	Low Tide Time	1032
S3	09 Jan 2018	Comments	Kelp; Algae; Water turbid; Flow from storm drain 1L/sec
S3	16 Jan 2018	Arrive Time	1130
S3	16 Jan 2018	Weather	Cloudy
S3	16 Jan 2018	Wind Speed (kts)	2.4
S3	16 Jan 2018	Wind Dir	NW
S3	16 Jan 2018	Animal Life	5 Shorebirds; 2 Seagulls
S3	16 Jan 2018	Floatables	None
S3	16 Jan 2018	Water Color	Green
S3	16 Jan 2018	Current Direction	N
S3	16 Jan 2018	Water Temp (C)	17
S3	16 Jan 2018	Wave Height Low (ft)	7
S3	16 Jan 2018	High Tide (ft)	5.7
S3	16 Jan 2018	High Tide Time	806
S3	16 Jan 2018	Low Tide (ft)	-0.7
S3	16 Jan 2018	Low Tide Time	1517
S3	16 Jan 2018	Comments	Seagrass; Algae; 6 Persons; Water clear; No flow from storm drain
S3	23 Jan 2018	Arrive Time	1210
S3	23 Jan 2018	Weather	Cloudy
S3	23 Jan 2018	Wind Speed (kts)	2
S3	23 Jan 2018	Wind Dir	NW

Station	Date	Parameter	Value
S3	23 Jan 2018	Animal Life	7 Shorebirds; 2 Seagulls
S3	23 Jan 2018	Floatables	None
S3	23 Jan 2018	Water Color	Green
S3	23 Jan 2018	Current Direction	N
S3	23 Jan 2018	Water Temp (C)	17
S3	23 Jan 2018	Wave Height Low (ft)	4
S3	23 Jan 2018	High Tide (ft)	4
S3	23 Jan 2018	High Tide Time	113
S3	23 Jan 2018	Low Tide (ft)	2
S3	23 Jan 2018	Low Tide Time	717
S3	23 Jan 2018	Comments	Kelp; Seagrass; 4 Persons; Water clear; No flow from storm drain
S3	30 Jan 2018	Arrive Time	1145
S3	30 Jan 2018	Weather	Sunny
S3	30 Jan 2018	Wind Speed (kts)	0.6
S3	30 Jan 2018	Wind Dir	SW
S3	30 Jan 2018	Animal Life	5 Shorebirds
S3	30 Jan 2018	Floatables	None
S3	30 Jan 2018	Water Color	Colorless
S3	30 Jan 2018	Current Direction	N
S3	30 Jan 2018	Water Temp (C)	16
S3	30 Jan 2018	Wave Height Low (ft)	2
S3	30 Jan 2018	High Tide (ft)	6.7
S3	30 Jan 2018	High Tide Time	735
S3	30 Jan 2018	Low Tide (ft)	-1.8
S3	30 Jan 2018	Low Tide Time	1444
S3	30 Jan 2018	Comments	5 Persons; Water clear; No flow from storm drain
S4	02 Jan 2018	Arrive Time	902
S4	02 Jan 2018	Weather	Sunny
S4	02 Jan 2018	Wind Speed (kts)	5.1
S4	02 Jan 2018	Wind Dir	E
S4	02 Jan 2018	Animal Life	None
S4	02 Jan 2018	Floatables	None
S4	02 Jan 2018	Water Color	Green
S4	02 Jan 2018	Current Direction	E
S4	02 Jan 2018	Water Temp (C)	11.6
S4	02 Jan 2018	Wave Height Low (ft)	2
S4	02 Jan 2018	High Tide (ft)	6.9
S4	02 Jan 2018	High Tide Time	828
S4	02 Jan 2018	Low Tide (ft)	1.4
S4	02 Jan 2018	Low Tide Time	221
S4	02 Jan 2018	Comments	Kelp; Water clear
S4	09 Jan 2018	Arrive Time	833
S4	09 Jan 2018	Weather	Moderate Rain
S4	09 Jan 2018	Wind Speed (kts)	12.1
S4	09 Jan 2018	Wind Dir	SE
S4	09 Jan 2018	Animal Life	None
S4	09 Jan 2018	Floatables	None
S4	09 Jan 2018	Water Color	Brown
S4	09 Jan 2018	Current Direction	N
S4	09 Jan 2018	Water Temp (C)	15.3
S4	09 Jan 2018	Wave Height Low (ft)	3
S4	09 Jan 2018	High Tide (ft)	4.6

Station	Date	Parameter	Value
S4	09 Jan 2018	High Tide Time	338
S4	09 Jan 2018	Low Tide (ft)	1.4
S4	09 Jan 2018	Low Tide Time	1032
S4	09 Jan 2018	Comments	Water clear
S4	11 Jan 2018	Arrive Time	836
S4	11 Jan 2018	Weather	Hazy
S4	11 Jan 2018	Wind Speed (kts)	2.2
S4	11 Jan 2018	Wind Dir	SE
S4	11 Jan 2018	Animal Life	None
S4	11 Jan 2018	Floatables	None
S4	11 Jan 2018	Water Color	Brown
S4	11 Jan 2018	Current Direction	N
S4	11 Jan 2018	Water Temp (C)	14.1
S4	11 Jan 2018	Wave Height Low (ft)	4
S4	11 Jan 2018	High Tide (ft)	5.1
S4	11 Jan 2018	High Tide Time	516
S4	11 Jan 2018	Low Tide (ft)	0.4
S4	11 Jan 2018	Low Tide Time	34
S4	11 Jan 2018	Comments	Kelp; Seagrass; Water clear
S4	12 Jan 2018	Arrive Time	1040
S4	12 Jan 2018	Weather	Partly Cloudy
S4	12 Jan 2018	Wind Speed (kts)	4.6
S4	12 Jan 2018	Wind Dir	W
S4	12 Jan 2018	Animal Life	None
S4	12 Jan 2018	Floatables	None
S4	12 Jan 2018	Water Color	Green
S4	12 Jan 2018	Current Direction	N
S4	12 Jan 2018	Water Temp (C)	10.3
S4	12 Jan 2018	Wave Height Low (ft)	3
S4	12 Jan 2018	High Tide (ft)	5.3
S4	12 Jan 2018	High Tide Time	555
S4	12 Jan 2018	Low Tide (ft)	0
S4	12 Jan 2018	Low Tide Time	1314
S4	12 Jan 2018	Comments	Water clear
S4	14 Jan 2018	Arrive Time	1015
S4	14 Jan 2018	Weather	Sunny
S4	14 Jan 2018	Wind Speed (kts)	4
S4	14 Jan 2018	Wind Dir	SW
S4	14 Jan 2018	Animal Life	None
S4	14 Jan 2018	Floatables	None
S4	14 Jan 2018	Water Color	Green
S4	14 Jan 2018	Current Direction	SW
S4	14 Jan 2018	Water Temp (C)	19.1
S4	14 Jan 2018	Wave Height Low (ft)	3
S4	14 Jan 2018	High Tide (ft)	5.6
S4	14 Jan 2018	High Tide Time	703
S4	14 Jan 2018	Low Tide (ft)	1.9
S4	14 Jan 2018	Low Tide Time	1253
S4	14 Jan 2018	Comments	Kelp; Seagrass; 5 Persons; Water turbid
S4	16 Jan 2018	Arrive Time	834
S4	16 Jan 2018	Weather	Sunny

Station	Date	Parameter	Value
S4	16 Jan 2018	Wind Speed (kts)	5.8
S4	16 Jan 2018	Wind Dir	E
S4	16 Jan 2018	Animal Life	None
S4	16 Jan 2018	Floatables	None
S4	16 Jan 2018	Water Color	Green
S4	16 Jan 2018	Current Direction	N
S4	16 Jan 2018	Water Temp (C)	8.6
S4	16 Jan 2018	Wave Height Low (ft)	4
S4	16 Jan 2018	High Tide (ft)	5.7
S4	16 Jan 2018	High Tide Time	806
S4	16 Jan 2018	Low Tide (ft)	1.8
S4	16 Jan 2018	Low Tide Time	201
S4	16 Jan 2018	Comments	Kelp; Debris; Water turbid
S4	18 Jan 2018	Arrive Time	1147
S4	18 Jan 2018	Weather	Sunny
S4	18 Jan 2018	Wind Speed (kts)	7
S4	18 Jan 2018	Wind Dir	SW
S4	18 Jan 2018	Animal Life	None
S4	18 Jan 2018	Floatables	None
S4	18 Jan 2018	Water Color	Green
S4	18 Jan 2018	Current Direction	SW
S4	18 Jan 2018	Water Temp (C)	16
S4	18 Jan 2018	Wave Height Low (ft)	3
S4	18 Jan 2018	High Tide (ft)	5.6
S4	18 Jan 2018	High Tide Time	908
S4	18 Jan 2018	Low Tide (ft)	-0.6
S4	18 Jan 2018	Low Tide Time	1617
S4	18 Jan 2018	Comments	Kelp; Seagrass; Water turbid
S4	23 Jan 2018	Arrive Time	822
S4	23 Jan 2018	Weather	Sunny
S4	23 Jan 2018	Wind Speed (kts)	3.2
S4	23 Jan 2018	Wind Dir	E
S4	23 Jan 2018	Animal Life	7 Plovers
S4	23 Jan 2018	Floatables	None
S4	23 Jan 2018	Water Color	Green
S4	23 Jan 2018	Current Direction	E
S4	23 Jan 2018	Water Temp (C)	10
S4	23 Jan 2018	Wave Height Low (ft)	3
S4	23 Jan 2018	High Tide (ft)	4
S4	23 Jan 2018	High Tide Time	113
S4	23 Jan 2018	Low Tide (ft)	2
S4	23 Jan 2018	Low Tide Time	717
S4	23 Jan 2018	Comments	Kelp; Seagrass; Water turbid; Contaminated H2O sign
S4	30 Jan 2018	Arrive Time	836
S4	30 Jan 2018	Weather	Partly Cloudy
S4	30 Jan 2018	Wind Speed (kts)	5.3
S4	30 Jan 2018	Wind Dir	N
S4	30 Jan 2018	Animal Life	None
S4	30 Jan 2018	Floatables	None
S4	30 Jan 2018	Water Color	Green
S4	30 Jan 2018	Current Direction	N
S4	30 Jan 2018	Water Temp (C)	11.4

Station	Date	Parameter	Value
S4	30 Jan 2018	Wave Height Low (ft)	1
S4	30 Jan 2018	High Tide (ft)	6.7
S4	30 Jan 2018	High Tide Time	735
S4	30 Jan 2018	Low Tide (ft)	-1.8
S4	30 Jan 2018	Low Tide Time	1444
S4	30 Jan 2018	Comments	Kelp; Debris; Water clear
S5	02 Jan 2018	Arrive Time	1028
S5	02 Jan 2018	Weather	Sunny
S5	02 Jan 2018	Wind Speed (kts)	6
S5	02 Jan 2018	Wind Dir	S
S5	02 Jan 2018	Animal Life	None
S5	02 Jan 2018	Floatables	None
S5	02 Jan 2018	Water Color	Green
S5	02 Jan 2018	Current Direction	S
S5	02 Jan 2018	Water Temp (C)	14.1
S5	02 Jan 2018	Wave Height Low (ft)	1
S5	02 Jan 2018	High Tide (ft)	6.9
S5	02 Jan 2018	High Tide Time	828
S5	02 Jan 2018	Low Tide (ft)	-1.8
S5	02 Jan 2018	Low Tide Time	1542
S5	02 Jan 2018	Comments	Kelp; Water clear
S5	09 Jan 2018	Arrive Time	1035
S5	09 Jan 2018	Weather	Cloudy
S5	09 Jan 2018	Wind Speed (kts)	12.6
S5	09 Jan 2018	Wind Dir	SW
S5	09 Jan 2018	Animal Life	12 Plovers
S5	09 Jan 2018	Floatables	None
S5	09 Jan 2018	Water Color	Brown
S5	09 Jan 2018	Current Direction	N
S5	09 Jan 2018	Water Temp (C)	15.3
S5	09 Jan 2018	Wave Height Low (ft)	3
S5	09 Jan 2018	High Tide (ft)	3.1
S5	09 Jan 2018	High Tide Time	1556
S5	09 Jan 2018	Low Tide (ft)	1.4
S5	09 Jan 2018	Low Tide Time	1032
S5	09 Jan 2018	Comments	Kelp; Sewage-like odor; Water clear
S5	11 Jan 2018	Arrive Time	925
S5	11 Jan 2018	Weather	Sunny
S5	11 Jan 2018	Wind Speed (kts)	2
S5	11 Jan 2018	Wind Dir	SE
S5	11 Jan 2018	Animal Life	None
S5	11 Jan 2018	Floatables	None
S5	11 Jan 2018	Water Color	Brown
S5	11 Jan 2018	Current Direction	N
S5	11 Jan 2018	Water Temp (C)	14.6
S5	11 Jan 2018	Wave Height Low (ft)	2
S5	11 Jan 2018	High Tide (ft)	5.1
S5	11 Jan 2018	High Tide Time	516
S5	11 Jan 2018	Low Tide (ft)	0.4
S5	11 Jan 2018	Low Tide Time	34
S5	11 Jan 2018	Comments	Kelp; Seagrass; Water clear

Station	Date	Parameter	Value
S5	12 Jan 2018	Arrive Time	1137
S5	12 Jan 2018	Weather	Partly Cloudy
S5	12 Jan 2018	Wind Speed (kts)	6.7
S5	12 Jan 2018	Wind Dir	NW
S5	12 Jan 2018	Animal Life	None
S5	12 Jan 2018	Floatables	None
S5	12 Jan 2018	Water Color	Brown
S5	12 Jan 2018	Current Direction	N
S5	12 Jan 2018	Water Temp (C)	10.8
S5	12 Jan 2018	Wave Height Low (ft)	2
S5	12 Jan 2018	High Tide (ft)	5.3
S5	12 Jan 2018	High Tide Time	555
S5	12 Jan 2018	Low Tide (ft)	0
S5	12 Jan 2018	Low Tide Time	1314
S5	12 Jan 2018	Comments	Kelp; Seagrass; Water clear
S5	14 Jan 2018	Arrive Time	1131
S5	14 Jan 2018	Weather	Sunny
S5	14 Jan 2018	Wind Speed (kts)	4
S5	14 Jan 2018	Wind Dir	NW
S5	14 Jan 2018	Animal Life	None
S5	14 Jan 2018	Floatables	None
S5	14 Jan 2018	Water Color	Green
S5	14 Jan 2018	Current Direction	NW
S5	14 Jan 2018	Water Temp (C)	17.5
S5	14 Jan 2018	Wave Height Low (ft)	2
S5	14 Jan 2018	High Tide (ft)	5.6
S5	14 Jan 2018	High Tide Time	703
S5	14 Jan 2018	Low Tide (ft)	1.9
S5	14 Jan 2018	Low Tide Time	1253
S5	14 Jan 2018	Comments	Kelp; Seagrass; Water turbid; Detergent-odor
S5	16 Jan 2018	Arrive Time	1005
S5	16 Jan 2018	Weather	Partly Cloudy
S5	16 Jan 2018	Wind Speed (kts)	1.5
S5	16 Jan 2018	Wind Dir	NW
S5	16 Jan 2018	Animal Life	None
S5	16 Jan 2018	Floatables	None
S5	16 Jan 2018	Water Color	Green
S5	16 Jan 2018	Current Direction	N
S5	16 Jan 2018	Water Temp (C)	12.5
S5	16 Jan 2018	Wave Height Low (ft)	3
S5	16 Jan 2018	High Tide (ft)	5.7
S5	16 Jan 2018	High Tide Time	806
S5	16 Jan 2018	Low Tide (ft)	-0.7
S5	16 Jan 2018	Low Tide Time	1517
S5	16 Jan 2018	Comments	Debris; Water clear
S5	18 Jan 2018	Arrive Time	1304
S5	18 Jan 2018	Weather	Sunny
S5	18 Jan 2018	Wind Speed (kts)	7
S5	18 Jan 2018	Wind Dir	SW
S5	18 Jan 2018	Animal Life	None
S5	18 Jan 2018	Floatables	None
S5	18 Jan 2018	Water Color	Green

Station	Date	Parameter	Value
S5	18 Jan 2018	Current Direction	SW
S5	18 Jan 2018	Water Temp (C)	16
S5	18 Jan 2018	Wave Height Low (ft)	3
S5	18 Jan 2018	High Tide (ft)	5.6
S5	18 Jan 2018	High Tide Time	908
S5	18 Jan 2018	Low Tide (ft)	-0.6
S5	18 Jan 2018	Low Tide Time	1617
S5	18 Jan 2018	Comments	Kelp; Seagrass; 3 Persons; Water turbid
S5	23 Jan 2018	Arrive Time	1026
S5	23 Jan 2018	Weather	Sunny
S5	23 Jan 2018	Wind Speed (kts)	5
S5	23 Jan 2018	Wind Dir	W
S5	23 Jan 2018	Animal Life	None
S5	23 Jan 2018	Floatables	None
S5	23 Jan 2018	Water Color	Green
S5	23 Jan 2018	Current Direction	W
S5	23 Jan 2018	Water Temp (C)	15
S5	23 Jan 2018	Wave Height Low (ft)	3
S5	23 Jan 2018	High Tide (ft)	4
S5	23 Jan 2018	High Tide Time	113
S5	23 Jan 2018	Low Tide (ft)	2
S5	23 Jan 2018	Low Tide Time	717
S5	23 Jan 2018	Comments	Kelp; Seagrass; Water turbid
S5	30 Jan 2018	Arrive Time	1015
S5	30 Jan 2018	Weather	Partly Cloudy
S5	30 Jan 2018	Wind Speed (kts)	5.3
S5	30 Jan 2018	Wind Dir	N
S5	30 Jan 2018	Animal Life	None
S5	30 Jan 2018	Floatables	None
S5	30 Jan 2018	Water Color	Green
S5	30 Jan 2018	Current Direction	N
S5	30 Jan 2018	Water Temp (C)	10.1
S5	30 Jan 2018	Wave Height Low (ft)	1
S5	30 Jan 2018	High Tide (ft)	6.7
S5	30 Jan 2018	High Tide Time	735
S5	30 Jan 2018	Low Tide (ft)	-1.8
S5	30 Jan 2018	Low Tide Time	1444
S5	30 Jan 2018	Comments	Kelp; Debris; Water turbid
S6	02 Jan 2018	Arrive Time	1016
S6	02 Jan 2018	Weather	Sunny
S6	02 Jan 2018	Wind Speed (kts)	3.1
S6	02 Jan 2018	Wind Dir	SE
S6	02 Jan 2018	Animal Life	None
S6	02 Jan 2018	Floatables	None
S6	02 Jan 2018	Water Color	Green
S6	02 Jan 2018	Current Direction	SE
S6	02 Jan 2018	Water Temp (C)	12.3
S6	02 Jan 2018	Wave Height Low (ft)	2
S6	02 Jan 2018	High Tide (ft)	6.9
S6	02 Jan 2018	High Tide Time	828
S6	02 Jan 2018	Low Tide (ft)	-1.8
S6	02 Jan 2018	Low Tide Time	1542

Station	Date	Parameter	Value
S6	02 Jan 2018	Comments	Kelp; Water clear
S6	09 Jan 2018	Arrive Time	1025
S6	09 Jan 2018	Weather	Cloudy
S6	09 Jan 2018	Wind Speed (kts)	11.2
S6	09 Jan 2018	Wind Dir	SW
S6	09 Jan 2018	Animal Life	None
S6	09 Jan 2018	Floatables	None
S6	09 Jan 2018	Water Color	Brown
S6	09 Jan 2018	Current Direction	N
S6	09 Jan 2018	Water Temp (C)	15
S6	09 Jan 2018	Wave Height Low (ft)	4
S6	09 Jan 2018	High Tide (ft)	3.1
S6	09 Jan 2018	High Tide Time	1556
S6	09 Jan 2018	Low Tide (ft)	1.4
S6	09 Jan 2018	Low Tide Time	1032
S6	09 Jan 2018	Comments	Kelp; Sewage-like odor; Water clear
S6	11 Jan 2018	Arrive Time	917
S6	11 Jan 2018	Weather	Sunny
S6	11 Jan 2018	Wind Speed (kts)	3.1
S6	11 Jan 2018	Wind Dir	SE
S6	11 Jan 2018	Animal Life	None
S6	11 Jan 2018	Floatables	None
S6	11 Jan 2018	Water Color	Brown
S6	11 Jan 2018	Current Direction	N
S6	11 Jan 2018	Water Temp (C)	15.2
S6	11 Jan 2018	Wave Height Low (ft)	4
S6	11 Jan 2018	High Tide (ft)	5.1
S6	11 Jan 2018	High Tide Time	516
S6	11 Jan 2018	Low Tide (ft)	0.4
S6	11 Jan 2018	Low Tide Time	34
S6	11 Jan 2018	Comments	Kelp; Seagrass; Water clear
S6	12 Jan 2018	Arrive Time	1147
S6	12 Jan 2018	Weather	Partly Cloudy
S6	12 Jan 2018	Wind Speed (kts)	7.7
S6	12 Jan 2018	Wind Dir	NW
S6	12 Jan 2018	Animal Life	None
S6	12 Jan 2018	Floatables	None
S6	12 Jan 2018	Water Color	Green
S6	12 Jan 2018	Current Direction	N
S6	12 Jan 2018	Water Temp (C)	11.2
S6	12 Jan 2018	Wave Height Low (ft)	3
S6	12 Jan 2018	High Tide (ft)	5.3
S6	12 Jan 2018	High Tide Time	555
S6	12 Jan 2018	Low Tide (ft)	0
S6	12 Jan 2018	Low Tide Time	1314
S6	12 Jan 2018	Comments	Kelp; Seagrass; Water clear
S6	16 Jan 2018	Arrive Time	952
S6	16 Jan 2018	Weather	Partly Cloudy
S6	16 Jan 2018	Wind Speed (kts)	5.3
S6	16 Jan 2018	Wind Dir	NW
S6	16 Jan 2018	Animal Life	None

Station	Date	Parameter	Value
S6	16 Jan 2018	Floatables	None
S6	16 Jan 2018	Water Color	Green
S6	16 Jan 2018	Current Direction	N
S6	16 Jan 2018	Water Temp (C)	13
S6	16 Jan 2018	Wave Height Low (ft)	4
S6	16 Jan 2018	High Tide (ft)	5.7
S6	16 Jan 2018	High Tide Time	806
S6	16 Jan 2018	Low Tide (ft)	-0.7
S6	16 Jan 2018	Low Tide Time	1517
S6	16 Jan 2018	Comments	Kelp; Debris; 5 Persons; 1 Surfer; Water clear
S6	23 Jan 2018	Arrive Time	1105
S6	23 Jan 2018	Weather	Sunny
S6	23 Jan 2018	Wind Speed (kts)	5
S6	23 Jan 2018	Wind Dir	W
S6	23 Jan 2018	Animal Life	1 Dog
S6	23 Jan 2018	Floatables	None
S6	23 Jan 2018	Water Color	Green
S6	23 Jan 2018	Current Direction	W
S6	23 Jan 2018	Water Temp (C)	17
S6	23 Jan 2018	Wave Height Low (ft)	3
S6	23 Jan 2018	High Tide (ft)	4
S6	23 Jan 2018	High Tide Time	113
S6	23 Jan 2018	Low Tide (ft)	2
S6	23 Jan 2018	Low Tide Time	717
S6	23 Jan 2018	Comments	Kelp; Seagrass; 2 Surfers; Water turbid
S6	30 Jan 2018	Arrive Time	953
S6	30 Jan 2018	Weather	Partly Cloudy
S6	30 Jan 2018	Wind Speed (kts)	0
S6	30 Jan 2018	Wind Dir	
S6	30 Jan 2018	Animal Life	None
S6	30 Jan 2018	Floatables	None
S6	30 Jan 2018	Water Color	Green
S6	30 Jan 2018	Current Direction	
S6	30 Jan 2018	Water Temp (C)	11.4
S6	30 Jan 2018	Wave Height Low (ft)	1
S6	30 Jan 2018	High Tide (ft)	6.7
S6	30 Jan 2018	High Tide Time	735
S6	30 Jan 2018	Low Tide (ft)	-1.8
S6	30 Jan 2018	Low Tide Time	1444
S6	30 Jan 2018	Comments	Debris; 3 Persons; 1 Swimmer; Water clear
S8	02 Jan 2018	Arrive Time	1142
S8	02 Jan 2018	Weather	Sunny
S8	02 Jan 2018	Wind Speed (kts)	4.2
S8	02 Jan 2018	Wind Dir	N
S8	02 Jan 2018	Animal Life	None
S8	02 Jan 2018	Floatables	None
S8	02 Jan 2018	Water Color	Green
S8	02 Jan 2018	Current Direction	N
S8	02 Jan 2018	Water Temp (C)	11
S8	02 Jan 2018	Wave Height Low (ft)	2
S8	02 Jan 2018	High Tide (ft)	6.9
S8	02 Jan 2018	High Tide Time	828

Station	Date	Parameter	Value
S8	02 Jan 2018	Low Tide (ft)	-1.8
S8	02 Jan 2018	Low Tide Time	1542
S8	02 Jan 2018	Comments	Kelp; Water clear
S8	09 Jan 2018	Arrive Time	1108
S8	09 Jan 2018	Weather	Sunny
S8	09 Jan 2018	Wind Speed (kts)	10.6
S8	09 Jan 2018	Wind Dir	SW
S8	09 Jan 2018	Animal Life	15 Plovers
S8	09 Jan 2018	Floatables	None
S8	09 Jan 2018	Water Color	Green
S8	09 Jan 2018	Current Direction	N
S8	09 Jan 2018	Water Temp (C)	15.1
S8	09 Jan 2018	Wave Height Low (ft)	3
S8	09 Jan 2018	High Tide (ft)	3.1
S8	09 Jan 2018	High Tide Time	1556
S8	09 Jan 2018	Low Tide (ft)	1.4
S8	09 Jan 2018	Low Tide Time	1032
S8	09 Jan 2018	Comments	Kelp; Seagrass; 2 Persons; Water clear
S8	11 Jan 2018	Arrive Time	1009
S8	11 Jan 2018	Weather	Sunny
S8	11 Jan 2018	Wind Speed (kts)	0
S8	11 Jan 2018	Wind Dir	
S8	11 Jan 2018	Animal Life	None
S8	11 Jan 2018	Floatables	None
S8	11 Jan 2018	Water Color	Brown
S8	11 Jan 2018	Current Direction	N
S8	11 Jan 2018	Water Temp (C)	14.2
S8	11 Jan 2018	Wave Height Low (ft)	2
S8	11 Jan 2018	High Tide (ft)	5.1
S8	11 Jan 2018	High Tide Time	516
S8	11 Jan 2018	Low Tide (ft)	0.4
S8	11 Jan 2018	Low Tide Time	34
S8	11 Jan 2018	Comments	Kelp; Seagrass; 1 Person; Water clear
S8	16 Jan 2018	Arrive Time	1101
S8	16 Jan 2018	Weather	Sunny
S8	16 Jan 2018	Wind Speed (kts)	5.3
S8	16 Jan 2018	Wind Dir	N
S8	16 Jan 2018	Animal Life	None
S8	16 Jan 2018	Floatables	None
S8	16 Jan 2018	Water Color	Green
S8	16 Jan 2018	Current Direction	N
S8	16 Jan 2018	Water Temp (C)	14.2
S8	16 Jan 2018	Wave Height Low (ft)	2
S8	16 Jan 2018	High Tide (ft)	5.7
S8	16 Jan 2018	High Tide Time	806
S8	16 Jan 2018	Low Tide (ft)	-0.7
S8	16 Jan 2018	Low Tide Time	1517
S8	16 Jan 2018	Comments	Water clear
S8	23 Jan 2018	Arrive Time	1159
S8	23 Jan 2018	Weather	Sunny
S8	23 Jan 2018	Wind Speed (kts)	5

Station	Date	Parameter	Value
S8	23 Jan 2018	Wind Dir	W
S8	23 Jan 2018	Animal Life	None
S8	23 Jan 2018	Floatables	None
S8	23 Jan 2018	Water Color	Green
S8	23 Jan 2018	Current Direction	W
S8	23 Jan 2018	Water Temp (C)	14
S8	23 Jan 2018	Wave Height Low (ft)	2
S8	23 Jan 2018	High Tide (ft)	4
S8	23 Jan 2018	High Tide Time	113
S8	23 Jan 2018	Low Tide (ft)	2
S8	23 Jan 2018	Low Tide Time	717
S8	23 Jan 2018	Comments	Kelp; Seagrass; Water turbid
S8	30 Jan 2018	Arrive Time	1104
S8	30 Jan 2018	Weather	Partly Cloudy
S8	30 Jan 2018	Wind Speed (kts)	5.3
S8	30 Jan 2018	Wind Dir	N
S8	30 Jan 2018	Animal Life	None
S8	30 Jan 2018	Floatables	None
S8	30 Jan 2018	Water Color	Grey
S8	30 Jan 2018	Current Direction	N
S8	30 Jan 2018	Water Temp (C)	13.3
S8	30 Jan 2018	Wave Height Low (ft)	1
S8	30 Jan 2018	High Tide (ft)	6.7
S8	30 Jan 2018	High Tide Time	735
S8	30 Jan 2018	Low Tide (ft)	-1.8
S8	30 Jan 2018	Low Tide Time	1444
S8	30 Jan 2018	Comments	Kelp; 1 Person; Water clear
S9	02 Jan 2018	Arrive Time	1208
S9	02 Jan 2018	Weather	Sunny
S9	02 Jan 2018	Wind Speed (kts)	6
S9	02 Jan 2018	Wind Dir	N
S9	02 Jan 2018	Animal Life	None
S9	02 Jan 2018	Floatables	None
S9	02 Jan 2018	Water Color	Green
S9	02 Jan 2018	Current Direction	N
S9	02 Jan 2018	Water Temp (C)	12.9
S9	02 Jan 2018	Wave Height Low (ft)	1
S9	02 Jan 2018	High Tide (ft)	6.9
S9	02 Jan 2018	High Tide Time	828
S9	02 Jan 2018	Low Tide (ft)	-1.8
S9	02 Jan 2018	Low Tide Time	1542
S9	02 Jan 2018	Comments	Kelp; 15 Persons; Water clear
S9	09 Jan 2018	Arrive Time	1131
S9	09 Jan 2018	Weather	Sunny
S9	09 Jan 2018	Wind Speed (kts)	11.3
S9	09 Jan 2018	Wind Dir	SW
S9	09 Jan 2018	Animal Life	None
S9	09 Jan 2018	Floatables	None
S9	09 Jan 2018	Water Color	Green
S9	09 Jan 2018	Current Direction	N
S9	09 Jan 2018	Water Temp (C)	14.7
S9	09 Jan 2018	Wave Height Low (ft)	3

Station	Date	Parameter	Value
S9	09 Jan 2018	High Tide (ft)	3.1
S9	09 Jan 2018	High Tide Time	1556
S9	09 Jan 2018	Low Tide (ft)	1.4
S9	09 Jan 2018	Low Tide Time	1032
S9	09 Jan 2018	Comments	Kelp; Seagrass; Water clear
S9	16 Jan 2018	Arrive Time	1123
S9	16 Jan 2018	Weather	Sunny
S9	16 Jan 2018	Wind Speed (kts)	4.1
S9	16 Jan 2018	Wind Dir	N
S9	16 Jan 2018	Animal Life	None
S9	16 Jan 2018	Floatables	None
S9	16 Jan 2018	Water Color	Green
S9	16 Jan 2018	Current Direction	N
S9	16 Jan 2018	Water Temp (C)	11.2
S9	16 Jan 2018	Wave Height Low (ft)	3
S9	16 Jan 2018	High Tide (ft)	5.7
S9	16 Jan 2018	High Tide Time	806
S9	16 Jan 2018	Low Tide (ft)	-0.7
S9	16 Jan 2018	Low Tide Time	1517
S9	16 Jan 2018	Comments	Kelp; Seagrass; 3 Surfers; Water clear
S9	23 Jan 2018	Arrive Time	1220
S9	23 Jan 2018	Weather	Sunny
S9	23 Jan 2018	Wind Speed (kts)	5
S9	23 Jan 2018	Wind Dir	W
S9	23 Jan 2018	Animal Life	None
S9	23 Jan 2018	Floatables	None
S9	23 Jan 2018	Water Color	Green
S9	23 Jan 2018	Current Direction	W
S9	23 Jan 2018	Water Temp (C)	14
S9	23 Jan 2018	Wave Height Low (ft)	2
S9	23 Jan 2018	High Tide (ft)	4
S9	23 Jan 2018	High Tide Time	113
S9	23 Jan 2018	Low Tide (ft)	2
S9	23 Jan 2018	Low Tide Time	717
S9	23 Jan 2018	Comments	Kelp; Seagrass; 6 Persons; Water turbid; 6 Persons
S9	30 Jan 2018	Arrive Time	1126
S9	30 Jan 2018	Weather	Partly Cloudy
S9	30 Jan 2018	Wind Speed (kts)	0
S9	30 Jan 2018	Wind Dir	
S9	30 Jan 2018	Animal Life	None
S9	30 Jan 2018	Floatables	None
S9	30 Jan 2018	Water Color	Colorless
S9	30 Jan 2018	Current Direction	
S9	30 Jan 2018	Water Temp (C)	13.3
S9	30 Jan 2018	Wave Height Low (ft)	1
S9	30 Jan 2018	High Tide (ft)	6.7
S9	30 Jan 2018	High Tide Time	735
S9	30 Jan 2018	Low Tide (ft)	-1.8
S9	30 Jan 2018	Low Tide Time	1444
S9	30 Jan 2018	Comments	12 Persons; Water clear
S10	02 Jan 2018	Arrive Time	856

Station	Date	Parameter	Value
S10	02 Jan 2018	Weather	Sunny
S10	02 Jan 2018	Wind Speed (kts)	5
S10	02 Jan 2018	Wind Dir	E
S10	02 Jan 2018	Animal Life	None
S10	02 Jan 2018	Floatables	None
S10	02 Jan 2018	Water Color	Green
S10	02 Jan 2018	Current Direction	N
S10	02 Jan 2018	Water Temp (C)	12.3
S10	02 Jan 2018	Wave Height Low (ft)	2
S10	02 Jan 2018	High Tide (ft)	6.9
S10	02 Jan 2018	High Tide Time	828
S10	02 Jan 2018	Low Tide (ft)	1.4
S10	02 Jan 2018	Low Tide Time	221
S10	02 Jan 2018	Comments	Kelp; Seagrass; Water clear
S10	09 Jan 2018	Arrive Time	824
S10	09 Jan 2018	Weather	Drizzle
S10	09 Jan 2018	Wind Speed (kts)	13.2
S10	09 Jan 2018	Wind Dir	SW
S10	09 Jan 2018	Animal Life	None
S10	09 Jan 2018	Floatables	None
S10	09 Jan 2018	Water Color	Brown
S10	09 Jan 2018	Current Direction	N
S10	09 Jan 2018	Water Temp (C)	15.7
S10	09 Jan 2018	Wave Height Low (ft)	4
S10	09 Jan 2018	High Tide (ft)	4.6
S10	09 Jan 2018	High Tide Time	338
S10	09 Jan 2018	Low Tide (ft)	1.4
S10	09 Jan 2018	Low Tide Time	1032
S10	09 Jan 2018	Comments	Kelp; Water clear
S10	11 Jan 2018	Arrive Time	830
S10	11 Jan 2018	Weather	Hazy
S10	11 Jan 2018	Wind Speed (kts)	3.2
S10	11 Jan 2018	Wind Dir	SE
S10	11 Jan 2018	Animal Life	None
S10	11 Jan 2018	Floatables	None
S10	11 Jan 2018	Water Color	Brown
S10	11 Jan 2018	Current Direction	E
S10	11 Jan 2018	Water Temp (C)	14.5
S10	11 Jan 2018	Wave Height Low (ft)	3
S10	11 Jan 2018	High Tide (ft)	5.1
S10	11 Jan 2018	High Tide Time	516
S10	11 Jan 2018	Low Tide (ft)	0.4
S10	11 Jan 2018	Low Tide Time	34
S10	11 Jan 2018	Comments	Kelp; Water clear
S10	12 Jan 2018	Arrive Time	1044
S10	12 Jan 2018	Weather	Partly Cloudy
S10	12 Jan 2018	Wind Speed (kts)	6
S10	12 Jan 2018	Wind Dir	NW
S10	12 Jan 2018	Animal Life	None
S10	12 Jan 2018	Floatables	None
S10	12 Jan 2018	Water Color	Green
S10	12 Jan 2018	Current Direction	N

Station	Date	Parameter	Value
S10	12 Jan 2018	Water Temp (C)	10.4
S10	12 Jan 2018	Wave Height Low (ft)	3
S10	12 Jan 2018	High Tide (ft)	5.3
S10	12 Jan 2018	High Tide Time	555
S10	12 Jan 2018	Low Tide (ft)	0
S10	12 Jan 2018	Low Tide Time	1314
S10	12 Jan 2018	Comments	Kelp; Water clear
S10	14 Jan 2018	Arrive Time	1045
S10	14 Jan 2018	Weather	Sunny
S10	14 Jan 2018	Wind Speed (kts)	4
S10	14 Jan 2018	Wind Dir	SW
S10	14 Jan 2018	Animal Life	None
S10	14 Jan 2018	Floatables	None
S10	14 Jan 2018	Water Color	Green
S10	14 Jan 2018	Current Direction	SW
S10	14 Jan 2018	Water Temp (C)	19.3
S10	14 Jan 2018	Wave Height Low (ft)	3
S10	14 Jan 2018	High Tide (ft)	5.6
S10	14 Jan 2018	High Tide Time	703
S10	14 Jan 2018	Low Tide (ft)	1.9
S10	14 Jan 2018	Low Tide Time	1253
S10	14 Jan 2018	Comments	Kelp; Seagrass; 1 Jogger; 1 Person; Water turbid
S10	16 Jan 2018	Arrive Time	827
S10	16 Jan 2018	Weather	Partly Cloudy
S10	16 Jan 2018	Wind Speed (kts)	3.5
S10	16 Jan 2018	Wind Dir	E
S10	16 Jan 2018	Animal Life	None
S10	16 Jan 2018	Floatables	None
S10	16 Jan 2018	Water Color	Green
S10	16 Jan 2018	Current Direction	N
S10	16 Jan 2018	Water Temp (C)	11.2
S10	16 Jan 2018	Wave Height Low (ft)	2
S10	16 Jan 2018	High Tide (ft)	5.7
S10	16 Jan 2018	High Tide Time	806
S10	16 Jan 2018	Low Tide (ft)	1.8
S10	16 Jan 2018	Low Tide Time	201
S10	16 Jan 2018	Comments	Seagrass; Water clear
S10	18 Jan 2018	Arrive Time	1158
S10	18 Jan 2018	Weather	Sunny
S10	18 Jan 2018	Wind Speed (kts)	7
S10	18 Jan 2018	Wind Dir	SW
S10	18 Jan 2018	Animal Life	None
S10	18 Jan 2018	Floatables	None
S10	18 Jan 2018	Water Color	Green
S10	18 Jan 2018	Current Direction	SW
S10	18 Jan 2018	Water Temp (C)	14
S10	18 Jan 2018	Wave Height Low (ft)	3
S10	18 Jan 2018	High Tide (ft)	5.6
S10	18 Jan 2018	High Tide Time	908
S10	18 Jan 2018	Low Tide (ft)	-0.6
S10	18 Jan 2018	Low Tide Time	1617
S10	18 Jan 2018	Comments	Kelp; Seagrass; Water turbid

Station	Date	Parameter	Value
S10	23 Jan 2018	Arrive Time	852
S10	23 Jan 2018	Weather	Sunny
S10	23 Jan 2018	Wind Speed (kts)	5
S10	23 Jan 2018	Wind Dir	E
S10	23 Jan 2018	Animal Life	None
S10	23 Jan 2018	Floatables	None
S10	23 Jan 2018	Water Color	Green
S10	23 Jan 2018	Current Direction	E
S10	23 Jan 2018	Water Temp (C)	13.5
S10	23 Jan 2018	Wave Height Low (ft)	3
S10	23 Jan 2018	High Tide (ft)	4
S10	23 Jan 2018	High Tide Time	113
S10	23 Jan 2018	Low Tide (ft)	2
S10	23 Jan 2018	Low Tide Time	717
S10	23 Jan 2018	Comments	Kelp; Seagrass; Water turbid; Seal pup carcass
S10	30 Jan 2018	Arrive Time	830
S10	30 Jan 2018	Weather	Sunny
S10	30 Jan 2018	Wind Speed (kts)	0
S10	30 Jan 2018	Wind Dir	
S10	30 Jan 2018	Animal Life	None
S10	30 Jan 2018	Floatables	None
S10	30 Jan 2018	Water Color	Green
S10	30 Jan 2018	Current Direction	
S10	30 Jan 2018	Water Temp (C)	11.8
S10	30 Jan 2018	Wave Height Low (ft)	2
S10	30 Jan 2018	High Tide (ft)	6.7
S10	30 Jan 2018	High Tide Time	735
S10	30 Jan 2018	Low Tide (ft)	-1.8
S10	30 Jan 2018	Low Tide Time	1444
S10	30 Jan 2018	Comments	Debris; Water clear
S11	02 Jan 2018	Arrive Time	1021
S11	02 Jan 2018	Weather	Sunny
S11	02 Jan 2018	Wind Speed (kts)	4.8
S11	02 Jan 2018	Wind Dir	S
S11	02 Jan 2018	Animal Life	None
S11	02 Jan 2018	Floatables	None
S11	02 Jan 2018	Water Color	Green
S11	02 Jan 2018	Current Direction	S
S11	02 Jan 2018	Water Temp (C)	12.9
S11	02 Jan 2018	Wave Height Low (ft)	2
S11	02 Jan 2018	High Tide (ft)	6.9
S11	02 Jan 2018	High Tide Time	828
S11	02 Jan 2018	Low Tide (ft)	-1.8
S11	02 Jan 2018	Low Tide Time	1542
S11	02 Jan 2018	Comments	Kelp; Water clear
S11	09 Jan 2018	Arrive Time	1029
S11	09 Jan 2018	Weather	Cloudy
S11	09 Jan 2018	Wind Speed (kts)	13
S11	09 Jan 2018	Wind Dir	SW
S11	09 Jan 2018	Animal Life	None
S11	09 Jan 2018	Floatables	None

Station	Date	Parameter	Value
S11	09 Jan 2018	Water Color	Brown
S11	09 Jan 2018	Current Direction	N
S11	09 Jan 2018	Water Temp (C)	15.6
S11	09 Jan 2018	Wave Height Low (ft)	4
S11	09 Jan 2018	High Tide (ft)	3.1
S11	09 Jan 2018	High Tide Time	1556
S11	09 Jan 2018	Low Tide (ft)	1.4
S11	09 Jan 2018	Low Tide Time	1032
S11	09 Jan 2018	Comments	Kelp; Sewage-like odor; Water clear
S11	11 Jan 2018	Arrive Time	920
S11	11 Jan 2018	Weather	Sunny
S11	11 Jan 2018	Wind Speed (kts)	2.5
S11	11 Jan 2018	Wind Dir	SE
S11	11 Jan 2018	Animal Life	None
S11	11 Jan 2018	Floatables	None
S11	11 Jan 2018	Water Color	Brown
S11	11 Jan 2018	Current Direction	N
S11	11 Jan 2018	Water Temp (C)	14.7
S11	11 Jan 2018	Wave Height Low (ft)	4
S11	11 Jan 2018	High Tide (ft)	5.1
S11	11 Jan 2018	High Tide Time	516
S11	11 Jan 2018	Low Tide (ft)	0.4
S11	11 Jan 2018	Low Tide Time	34
S11	11 Jan 2018	Comments	Kelp; 1 Jogger; Water clear
S11	12 Jan 2018	Arrive Time	1143
S11	12 Jan 2018	Weather	Partly Cloudy
S11	12 Jan 2018	Wind Speed (kts)	6.2
S11	12 Jan 2018	Wind Dir	NW
S11	12 Jan 2018	Animal Life	None
S11	12 Jan 2018	Floatables	None
S11	12 Jan 2018	Water Color	Green
S11	12 Jan 2018	Current Direction	N
S11	12 Jan 2018	Water Temp (C)	10.1
S11	12 Jan 2018	Wave Height Low (ft)	3
S11	12 Jan 2018	High Tide (ft)	5.3
S11	12 Jan 2018	High Tide Time	555
S11	12 Jan 2018	Low Tide (ft)	0
S11	12 Jan 2018	Low Tide Time	1314
S11	12 Jan 2018	Comments	Kelp; Seagrass; Water clear
S11	16 Jan 2018	Arrive Time	958
S11	16 Jan 2018	Weather	Partly Cloudy
S11	16 Jan 2018	Wind Speed (kts)	2.9
S11	16 Jan 2018	Wind Dir	NW
S11	16 Jan 2018	Animal Life	None
S11	16 Jan 2018	Floatables	None
S11	16 Jan 2018	Water Color	Green
S11	16 Jan 2018	Current Direction	N
S11	16 Jan 2018	Water Temp (C)	12.3
S11	16 Jan 2018	Wave Height Low (ft)	5
S11	16 Jan 2018	High Tide (ft)	5.7
S11	16 Jan 2018	High Tide Time	806
S11	16 Jan 2018	Low Tide (ft)	-0.7

Station	Date	Parameter	Value
S11	16 Jan 2018	Low Tide Time	1517
S11	16 Jan 2018	Comments	Kelp; Debris; 1 Surfer; Water clear
S11	23 Jan 2018	Arrive Time	1044
S11	23 Jan 2018	Weather	Sunny
S11	23 Jan 2018	Wind Speed (kts)	5
S11	23 Jan 2018	Wind Dir	W
S11	23 Jan 2018	Animal Life	1 Dog
S11	23 Jan 2018	Floatables	None
S11	23 Jan 2018	Water Color	Green
S11	23 Jan 2018	Current Direction	W
S11	23 Jan 2018	Water Temp (C)	11
S11	23 Jan 2018	Wave Height Low (ft)	3
S11	23 Jan 2018	High Tide (ft)	4
S11	23 Jan 2018	High Tide Time	113
S11	23 Jan 2018	Low Tide (ft)	2
S11	23 Jan 2018	Low Tide Time	717
S11	23 Jan 2018	Comments	Kelp; Seagrass; 1 Person; Water turbid
S11	30 Jan 2018	Arrive Time	1005
S11	30 Jan 2018	Weather	Partly Cloudy
S11	30 Jan 2018	Wind Speed (kts)	0
S11	30 Jan 2018	Wind Dir	
S11	30 Jan 2018	Animal Life	None
S11	30 Jan 2018	Floatables	None
S11	30 Jan 2018	Water Color	Green
S11	30 Jan 2018	Current Direction	
S11	30 Jan 2018	Water Temp (C)	10.5
S11	30 Jan 2018	Wave Height Low (ft)	1
S11	30 Jan 2018	High Tide (ft)	6.7
S11	30 Jan 2018	High Tide Time	735
S11	30 Jan 2018	Low Tide (ft)	-1.8
S11	30 Jan 2018	Low Tide Time	1444
S11	30 Jan 2018	Comments	Kelp; Debris; 2 Persons; Water clear
S12	02 Jan 2018	Arrive Time	1003
S12	02 Jan 2018	Weather	Sunny
S12	02 Jan 2018	Wind Speed (kts)	5.8
S12	02 Jan 2018	Wind Dir	N
S12	02 Jan 2018	Animal Life	None
S12	02 Jan 2018	Floatables	None
S12	02 Jan 2018	Water Color	Green
S12	02 Jan 2018	Current Direction	N
S12	02 Jan 2018	Water Temp (C)	13.6
S12	02 Jan 2018	Wave Height Low (ft)	3
S12	02 Jan 2018	High Tide (ft)	6.9
S12	02 Jan 2018	High Tide Time	828
S12	02 Jan 2018	Low Tide (ft)	-1.8
S12	02 Jan 2018	Low Tide Time	1542
S12	02 Jan 2018	Comments	Kelp; 2 Persons; Water clear
S12	09 Jan 2018	Arrive Time	1014
S12	09 Jan 2018	Weather	Drizzle
S12	09 Jan 2018	Wind Speed (kts)	9.7
S12	09 Jan 2018	Wind Dir	SW

Station	Date	Parameter	Value
S12	09 Jan 2018	Animal Life	None
S12	09 Jan 2018	Floatables	None
S12	09 Jan 2018	Water Color	Green
S12	09 Jan 2018	Current Direction	N
S12	09 Jan 2018	Water Temp (C)	15.2
S12	09 Jan 2018	Wave Height Low (ft)	3
S12	09 Jan 2018	High Tide (ft)	3.1
S12	09 Jan 2018	High Tide Time	1556
S12	09 Jan 2018	Low Tide (ft)	1.4
S12	09 Jan 2018	Low Tide Time	1032
S12	09 Jan 2018	Comments	Kelp; Seagrass; Water clear
S12	11 Jan 2018	Arrive Time	938
S12	11 Jan 2018	Weather	Sunny
S12	11 Jan 2018	Wind Speed (kts)	0.9
S12	11 Jan 2018	Wind Dir	E
S12	11 Jan 2018	Animal Life	None
S12	11 Jan 2018	Floatables	None
S12	11 Jan 2018	Water Color	Green
S12	11 Jan 2018	Current Direction	N
S12	11 Jan 2018	Water Temp (C)	14.4
S12	11 Jan 2018	Wave Height Low (ft)	3
S12	11 Jan 2018	High Tide (ft)	5.1
S12	11 Jan 2018	High Tide Time	516
S12	11 Jan 2018	Low Tide (ft)	0.4
S12	11 Jan 2018	Low Tide Time	34
S12	11 Jan 2018	Comments	Kelp; Seagrass; 3 Persons; Water clear
S12	16 Jan 2018	Arrive Time	934
S12	16 Jan 2018	Weather	Partly Cloudy
S12	16 Jan 2018	Wind Speed (kts)	1.7
S12	16 Jan 2018	Wind Dir	W
S12	16 Jan 2018	Animal Life	None
S12	16 Jan 2018	Floatables	None
S12	16 Jan 2018	Water Color	Green
S12	16 Jan 2018	Current Direction	N
S12	16 Jan 2018	Water Temp (C)	13
S12	16 Jan 2018	Wave Height Low (ft)	3
S12	16 Jan 2018	High Tide (ft)	5.7
S12	16 Jan 2018	High Tide Time	806
S12	16 Jan 2018	Low Tide (ft)	-0.7
S12	16 Jan 2018	Low Tide Time	1517
S12	16 Jan 2018	Comments	Kelp; Water clear
S12	23 Jan 2018	Arrive Time	1137
S12	23 Jan 2018	Weather	Sunny
S12	23 Jan 2018	Wind Speed (kts)	5
S12	23 Jan 2018	Wind Dir	W
S12	23 Jan 2018	Animal Life	None
S12	23 Jan 2018	Floatables	None
S12	23 Jan 2018	Water Color	Green
S12	23 Jan 2018	Current Direction	W
S12	23 Jan 2018	Water Temp (C)	14
S12	23 Jan 2018	Wave Height Low (ft)	2
S12	23 Jan 2018	High Tide (ft)	4

Station	Date	Parameter	Value
S12	23 Jan 2018	High Tide Time	113
S12	23 Jan 2018	Low Tide (ft)	2
S12	23 Jan 2018	Low Tide Time	717
S12	23 Jan 2018	Comments	Kelp; 3 Persons; Water turbid
S12	30 Jan 2018	Arrive Time	942
S12	30 Jan 2018	Weather	Partly Cloudy
S12	30 Jan 2018	Wind Speed (kts)	0
S12	30 Jan 2018	Wind Dir	
S12	30 Jan 2018	Animal Life	None
S12	30 Jan 2018	Floatables	None
S12	30 Jan 2018	Water Color	Green
S12	30 Jan 2018	Current Direction	
S12	30 Jan 2018	Water Temp (C)	13.1
S12	30 Jan 2018	Wave Height Low (ft)	1
S12	30 Jan 2018	High Tide (ft)	6.7
S12	30 Jan 2018	High Tide Time	735
S12	30 Jan 2018	Low Tide (ft)	-1.8
S12	30 Jan 2018	Low Tide Time	1444
S12	30 Jan 2018	Comments	3 Persons; Water clear

Kelp Stations

Table 3.1

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

Date	I19	I24	I25	I26	I32	I39	I40
01 Jan 2018	5*	3*	2*	3*	3*	4*	5*
02 Jan 2018	5*	3*	2*	3*	3*	4*	5*
03 Jan 2018	3*	2*	2*	2*	2*	3*	3*
04 Jan 2018	3*	2*	2*	2*	2*	3*	3*
05 Jan 2018	3*	2*	2*	2*	2*	3*	3*
06 Jan 2018	3*	2*	2*	2*	2*	3*	3*
07 Jan 2018	3*	2*	2*	2*	2*	3*	3*
08 Jan 2018	3*	2*	2*	2*	2*	3*	3*
09 Jan 2018	3*	2*	2*	2*	2*	3*	3*
10 Jan 2018	3*	2*	2*	2*	2*	3*	3*
11 Jan 2018	17	10	7	5	6	7	15
12 Jan 2018	17	10	7	5	6	7	15
13 Jan 2018	18*	14*	10*	6*	8*	7*	17*
14 Jan 2018	18*	14*	10*	6*	8*	7*	17*
15 Jan 2018	18*	14*	10*	6*	8*	7*	17*
16 Jan 2018	31	27	19	10	9	7	30
17 Jan 2018	31	27	19	10	9	7	30
18 Jan 2018	31	27	19	10	9	7	30
19 Jan 2018	31	27	19	10	9	7	30
20 Jan 2018	31	27	19	10	9	7	30
21 Jan 2018	62*	53*	34*	16*	13*	9*	59*
22 Jan 2018	59	40	26	14	13	7	48
23 Jan 2018	59	40	26	14	13	7	48
24 Jan 2018	59	40	26	14	13	7	48
25 Jan 2018	137*	86*	48*	22*	21*	9*	106*
26 Jan 2018	137*	86*	48*	22*	21*	9*	106*
27 Jan 2018	137*	86*	48*	22*	21*	9*	106*
28 Jan 2018	137*	86*	48*	22*	21*	9*	106*
29 Jan 2018	59	40	26	14	13	7	48
30 Jan 2018	59	40	26	14	13	7	48
31 Jan 2018	59	40	26	14	13	7	48

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

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

* Geometric mean calculated using n<5

Table 3.4

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

Date	I19	I24	I25	I26	I32	I39	I40
03 Jan 2018	IC	IC	IC	IC	IC	IC	IC
11 Jan 2018	E	IC	IC	IC	IC	IC	E
16 Jan 2018	IC	IC	IC	IC	IC	IC	IC
22 Jan 2018	IC	IC	IC	IC	IC	IC	IC
29 Jan 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
03 Jan 2018	IC	IC	IC	IC	IC	IC	IC
11 Jan 2018	E	IC	IC	IC	IC	IC	E
16 Jan 2018	IC	IC	IC	IC	IC	IC	IC
22 Jan 2018	IC	IC	IC	IC	IC	IC	IC
29 Jan 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
03 Jan 2018	IC	IC	IC	IC	IC	IC	IC
11 Jan 2018	E	E	E	E	IC	E	E
16 Jan 2018	IC	IC	IC	IC	IC	IC	IC
22 Jan 2018	IC	IC	IC	IC	IC	IC	IC
29 Jan 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
03 Jan 2018	IC	IC	IC	IC	IC	IC	IC
11 Jan 2018	E	IC	IC	IC	IC	IC	E
16 Jan 2018	IC	IC	IC	IC	IC	IC	IC
22 Jan 2018	IC	IC	IC	IC	IC	IC	IC
29 Jan 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; oil and grease samples (OG) and suspended solids (SUSO) data are reported as mg/L. Duplicates are indicated by *. Comments follow the data summary.

Station	Date	Time	Depth	Total	Fecal	Entero	F:T	Temp	XMS	DO	Sal	pH	OG	SUSO
I19	03 Jan 2018	1145	2	<2	<2	2e	1.00	16.1	79.14	8.0	33.51	8.2	ns	ns
I19	03 Jan 2018	1145	6	<2	<2	<2	1.00	16.0	73.07	7.9	33.50	8.2	ns	ns
I19	03 Jan 2018	1145	11	<2	<2	<2	1.00	16.0	71.84	7.9	33.50	8.2	ns	ns
I19	11 Jan 2018	1039	2	>16000	6000	3000e	0.38	15.8	52.47	7.8	33.11	8.1	ns	ns
I19	11 Jan 2018	1039	6	15000	1600e	1400e	0.11	15.9	76.91	7.5	33.41	8.1	ns	ns
I19	11 Jan 2018	1039	11	5800	320e	380e	0.06	15.9	60.25	7.1	33.43	8.1	ns	ns
I19	16 Jan 2018	1146	2	120e	16e	2e	0.13	15.7	64.00	8.1	33.44	8.2	ns	ns
I19	16 Jan 2018	1146	6	620	20e	16e	0.03	15.6	64.81	7.9	33.44	8.2	ns	ns
I19	16 Jan 2018	1146	11	180e	2e	4e	0.01	15.4	60.96	7.6	33.45	8.2	ns	ns
I19	22 Jan 2018	1016	2	40e	4e	4e	0.10	15.1	47.91	7.9	33.41	8.2	ns	ns
I19	22 Jan 2018	1016	6	<2	<2	2e	1.00	15.2	52.23	7.9	33.44	8.2	ns	ns
I19	22 Jan 2018	1016	11	100e	<2	6e	0.02	15.1	52.84	7.8	33.44	8.2	ns	ns
I19	29 Jan 2018	1041	2	<2	<2	<2	1.00	14.4	68.92	7.9	33.47	8.0	ns	ns
I19	29 Jan 2018	1041	6	<2	<2	<2	1.00	14.1	62.99	7.8	33.44	8.0	ns	ns
I19	29 Jan 2018	1041	11	2e	<2	<2	1.00	13.9	63.33	7.7	33.45	8.0	ns	ns
I24	03 Jan 2018	1209	2	<2	<2	<2	1.00	16.2	77.88	8.2	33.50	8.2	ns	ns
I24	03 Jan 2018	1209	6	<2	<2	<2	1.00	16.0	75.38	8.0	33.50	8.2	ns	ns
I24	03 Jan 2018	1209	11	2e	<2	<2	1.00	16.0	73.43	7.9	33.50	8.2	ns	ns
I24	11 Jan 2018	1100	2	10000	280e	560	0.03	15.7	55.45	7.8	32.96	8.2	ns	ns
I24	11 Jan 2018	1100	6	ND	400	680	ND	15.8	64.99	7.4	33.40	8.1	ns	ns
I24	11 Jan 2018	1100	11	1000e	38e	54	0.04	15.8	62.38	7.2	33.44	8.1	ns	ns
I24	16 Jan 2018	1207	2	240e	6e	8e	0.02	16.0	77.34	8.1	33.44	8.2	ns	ns
I24	16 Jan 2018	1207	6	720	24e	2e	0.03	15.7	75.68	8.1	33.45	8.2	ns	ns
I24	16 Jan 2018	1207	11	100	22e	10e	0.22	15.2	69.23	7.5	33.45	8.2	ns	ns
I24	22 Jan 2018	1034	2	<20	<2	<2	0.10	15.1	48.54	7.5	33.46	8.2	ns	ns
I24	22 Jan 2018	1034	6	<20	<2	<2	0.10	15.0	44.09	7.5	33.46	8.2	ns	ns
I24	22 Jan 2018	1034	11	<2	<2	2e	1.00	14.9	40.49	7.4	33.46	8.2	ns	ns
I24	29 Jan 2018	1110	2	<2	<2	<2	1.00	14.9	77.16	8.2	33.47	8.1	ns	ns
I24	29 Jan 2018	1110	6	<2	<2	<2	1.00	14.6	74.80	8.0	33.46	8.1	ns	ns
I24	29 Jan 2018	1110	11	<2	<2	<2	1.00	13.8	50.91	6.5	33.43	8.0	ns	ns
I25	03 Jan 2018	1215	2	<2	<2	2e	1.00	16.1	76.51	8.2	33.50	8.2	ns	ns
I25	03 Jan 2018	1215	6	<2	<2	<2	1.00	16.0	76.90	7.9	33.50	8.2	ns	ns
I25	03 Jan 2018	1215	9	<2	<2	<2	1.00	16.0	77.20	7.8	33.50	8.2	ns	ns
I25	11 Jan 2018	1108	2	3000e	60e	320e	0.02	15.6	59.50	7.7	33.10	8.2	ns	ns
I25	11 Jan 2018	1108	6	140e	12e	22e	0.09	15.8	68.47	7.3	33.45	8.1	ns	ns

Station	Date	Time	Depth	Total	Fecal	Enteroc	F:T	Temp	XMS	DO	Sal	pH	OG	SUSO
I25	11 Jan 2018	1108	9	100e	2e	16e	0.02	15.8	61.84	7.3	33.45	8.1	ns	ns
I25	16 Jan 2018	1214	2	4e	<2	2e	0.50	16.0	79.11	8.1	33.46	8.2	ns	ns
I25	16 Jan 2018	1214	6	560	16e	4e	0.03	15.7	64.45	8.2	33.44	8.2	ns	ns
I25	16 Jan 2018	1214	9	380e	6e	<2	0.02	15.3	66.57	7.6	33.43	8.2	ns	ns
I25	22 Jan 2018	1040	2	<20	<2	<2	0.10	15.1	59.81	7.7	33.46	8.2	ns	ns
I25	22 Jan 2018	1040	6	<2	<2	<2	1.00	15.1	57.69	7.6	33.46	8.2	ns	ns
I25	22 Jan 2018	1040	9	2e	<2	<2	1.00	15.1	55.68	7.6	33.46	8.2	ns	ns
I25	29 Jan 2018	1117	2	<2	<2	<2	1.00	15.0	79.33	8.2	33.48	8.1	ns	ns
I25	29 Jan 2018	1117	6	<2	<2	<2	1.00	14.6	77.46	7.9	33.46	8.1	ns	ns
I25	29 Jan 2018	1117	9	<2	<2	<2	1.00	13.8	63.62	6.6	33.46	8.0	ns	ns
I26	03 Jan 2018	1226	2	2e	<2	<2	1.00	16.1	79.21	8.2	33.50	8.2	ns	ns
I26	03 Jan 2018	1226	6	<2	<2	<2	1.00	16.0	79.49	8.1	33.50	8.2	ns	ns
I26	03 Jan 2018	1226	9	2e	<2	<2	1.00	16.0	79.54	8.0	33.50	8.2	ns	ns
I26	11 Jan 2018	1117	2	220e	22e	110	0.10	15.8	67.91	7.7	33.25	8.2	ns	ns
I26	11 Jan 2018	1117	6	260e	6e	8e	0.02	15.7	61.91	7.4	33.45	8.1	ns	ns
I26	11 Jan 2018	1117	9	100e	2e	14e	0.02	15.7	53.85	7.3	33.45	8.1	ns	ns
I26	16 Jan 2018	1224	2	8e	<2	2e	0.25	15.8	71.44	8.1	33.44	8.2	ns	ns
I26	16 Jan 2018	1224	6	58	2e	<2	0.03	15.6	71.81	7.9	33.44	8.2	ns	ns
I26	16 Jan 2018	1224	9	180e	2e	4e	0.01	15.5	62.46	7.8	33.44	8.2	ns	ns
I26	22 Jan 2018	1048	2	<2	<2	<2	1.00	15.2	64.88	7.8	33.47	8.2	ns	ns
I26	22 Jan 2018	1048	6	<2	<2	<2	1.00	15.0	66.73	7.7	33.46	8.2	ns	ns
I26	22 Jan 2018	1048	9	<20	<2	2e	0.10	15.0	62.07	7.5	33.45	8.2	ns	ns
I26	29 Jan 2018	1128	2	<2	<2	<2	1.00	14.9	78.15	8.3	33.48	8.1	ns	ns
I26	29 Jan 2018	1128	6	2e	<2	<2	1.00	14.4	76.93	7.7	33.45	8.1	ns	ns
I26	29 Jan 2018	1128	9	<2	<2	<2	1.00	14.3	78.06	7.5	33.44	8.1	ns	ns
I32	03 Jan 2018	1244	2	<2	<2	<2	1.00	16.2	76.02	8.5	33.51	8.2	ns	ns
I32	03 Jan 2018	1244	6	<2	<2	<2	1.00	16.0	75.92	8.3	33.51	8.2	ns	ns
I32	03 Jan 2018	1244	9	<2	<2	2e	1.00	16.0	76.34	8.2	33.51	8.2	ns	ns
I32	11 Jan 2018	1129	2	400	8e	34e	0.02	15.9	43.53	7.7	33.39	8.1	ns	ns
I32	11 Jan 2018	1129	6	640	22e	74	0.03	15.7	40.92	7.6	33.39	8.1	ns	ns
I32	11 Jan 2018	1129	9	380e	20e	80	0.05	15.7	36.38	7.2	33.43	8.1	ns	ns
I32	16 Jan 2018	1237	2	4e	<2	<2	0.50	15.9	57.58	8.5	33.44	8.2	ns	ns
I32	16 Jan 2018	1237	6	<20	2e	6e	0.10	15.8	56.93	8.5	33.44	8.2	ns	ns
I32	16 Jan 2018	1237	9	20e	4e	8e	0.20	15.7	49.37	8.5	33.45	8.2	ns	ns
I32	22 Jan 2018	1059	2	<2	<2	<2	1.00	15.2	53.36	7.8	33.47	8.2	ns	ns
I32	22 Jan 2018	1059	6	<20	<2	<2	0.10	15.0	43.48	7.8	33.47	8.2	ns	ns
I32	22 Jan 2018	1059	9	<20	<2	<2	0.10	14.9	37.06	7.9	33.48	8.2	ns	ns
I32	29 Jan 2018	1139	2	<2	<2	<2	1.00	15.1	75.47	8.2	33.48	8.1	ns	ns
I32	29 Jan 2018	1139	6	<2	<2	<2	1.00	14.6	61.00	8.1	33.48	8.1	ns	ns
I32	29 Jan 2018	1139	9	<2	<2	<2	1.00	14.1	40.07	6.5	33.44	8.0	ns	ns
I39	03 Jan 2018	1121	2	<2	<2	<2	1.00	16.2	84.98	7.8	33.51	8.2	ns	ns

Station	Date	Time	Depth	Total	Fecal	Entero	F:T	Temp	XMS	DO	Sal	pH	OG	SUSO
I39	03 Jan 2018	1121	12	<2	<2	<2	1.00	16.1	85.01	7.7	33.51	8.2	ns	ns
I39	03 Jan 2018	1121	18	<2	<2	<2	1.00	15.9	85.13	7.5	33.50	8.2	ns	ns
I39	11 Jan 2018	1021	2	130	28e	140e	0.22	15.7	76.46	7.6	33.36	8.1	ns	ns
I39	11 Jan 2018	1021	12	200e	14e	20e	0.07	15.7	76.54	7.4	33.44	8.1	ns	ns
I39	11 Jan 2018	1021	18	400	18e	44	0.04	15.7	70.81	7.3	33.44	8.1	ns	ns
I39	16 Jan 2018	1125	2	<2	<2	<2	1.00	16.0	82.69	8.0	33.45	8.2	ns	ns
I39	16 Jan 2018	1125	12	<2	<2	<2	1.00	15.4	82.84	7.7	33.44	8.2	ns	ns
I39	16 Jan 2018	1125	18	<20	<2	2e	0.10	14.9	68.62	7.2	33.43	8.1	ns	ns
I39	22 Jan 2018	958	2	<2	<2	<2	1.00	15.2	83.05	7.8	33.45	8.2	ns	ns
I39	22 Jan 2018	958	12	<2	<2	<2	1.00	14.4	84.82	7.4	33.42	8.2	ns	ns
I39	22 Jan 2018	958	18	<2	2e	<2	1.00	14.0	78.29	7.1	33.41	8.1	ns	ns
I39	29 Jan 2018	1013	2	<2	<2	<2	1.00	14.9	83.53	8.2	33.46	8.1	ns	ns
I39	29 Jan 2018	1013	12	<2	<2	<2	1.00	13.4	84.51	6.8	33.44	8.0	ns	ns
I39	29 Jan 2018	1013	18	<2	<2	<2	1.00	13.0	80.22	6.2	33.44	8.0	ns	ns
I40	03 Jan 2018	1201	2	<2	<2	<2	1.00	16.1	75.87	8.3	33.51	8.2	ns	ns
I40	03 Jan 2018	1201	6	<2	<2	<2	1.00	16.0	74.35	8.1	33.50	8.2	ns	ns
I40	03 Jan 2018	1201	9	<2	<2	<2	1.00	15.9	72.31	8.0	33.50	8.2	ns	ns
I40	11 Jan 2018	1052	2	> 16000	5400	3800e	0.34	15.8	48.97	7.8	32.68	8.1	ns	ns
I40	11 Jan 2018	1052	6	9200	820	1100	0.09	15.7	46.73	7.6	33.25	8.1	ns	ns
I40	11 Jan 2018	1052	9	7200	540	900	0.07	15.7	36.25	7.4	33.33	8.1	ns	ns
I40	16 Jan 2018	1159	2	200e	16e	2e	0.08	15.9	67.61	8.2	33.44	8.2	ns	ns
I40	16 Jan 2018	1159	6	640	22e	4e	0.03	15.6	61.39	7.9	33.45	8.2	ns	ns
I40	16 Jan 2018	1159	9	30e	2e	2e	0.07	15.3	59.36	7.5	33.45	8.2	ns	ns
I40	22 Jan 2018	1026	2	<20	2e	<2	0.10	15.2	43.86	8.0	33.47	8.2	ns	ns
I40	22 Jan 2018	1026	6	<20	<2	4e	0.10	15.0	36.74	8.0	33.48	8.2	ns	ns
I40	22 Jan 2018	1026	9	20e	<2	2e	0.10	14.9	31.56	8.0	33.48	8.1	ns	ns
I40	29 Jan 2018	1053	2	<2	<2	<2	1.00	14.8	62.43	7.7	33.47	8.0	ns	ns
I40	29 Jan 2018	1053	6	<2	<2	2e	1.00	14.3	58.50	7.4	33.46	8.0	ns	ns
I40	29 Jan 2018	1053	9	<2	<2	<2	1.00	13.9	61.05	7.2	33.44	8.0	ns	ns

ns = not sampled

ND = no data

Table 3.9

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

Station	Date	Parameter	Value
I19	03 Jan 2018	Depth (m)	12
I19	03 Jan 2018	Arrive Time	1145
I19	03 Jan 2018	Depart Time	1148
I19	03 Jan 2018	Air Temp (C)	16
I19	03 Jan 2018	Weather	Fog
I19	03 Jan 2018	Visibility (mi)	2
I19	03 Jan 2018	Wind Speed (kts)	1
I19	03 Jan 2018	Wind Dir	W
I19	03 Jan 2018	Water Color	Green
I19	03 Jan 2018	Wave Ht Low (ft)	3
I19	03 Jan 2018	Wave Period (sec)	13
I19	03 Jan 2018	Sea State	Calm
I19	03 Jan 2018	High Tide (ft)	6.73
I19	03 Jan 2018	High Tide Time	915
I19	03 Jan 2018	Low Tide (ft)	-1.64
I19	03 Jan 2018	Low Tide Time	1628
I19	03 Jan 2018	Comments	none
I19	11 Jan 2018	Depth (m)	12
I19	11 Jan 2018	Arrive Time	1039
I19	11 Jan 2018	Depart Time	1044
I19	11 Jan 2018	Air Temp (C)	15
I19	11 Jan 2018	Weather	Clear
I19	11 Jan 2018	Visibility (mi)	8
I19	11 Jan 2018	Wind Speed (kts)	8
I19	11 Jan 2018	Wind Dir	SW
I19	11 Jan 2018	Water Color	Green
I19	11 Jan 2018	Wave Ht Low (ft)	5
I19	11 Jan 2018	Wave Period (sec)	11
I19	11 Jan 2018	Sea State	Confused swell
I19	11 Jan 2018	High Tide (ft)	5.06
I19	11 Jan 2018	High Tide Time	516
I19	11 Jan 2018	Low Tide (ft)	0.41
I19	11 Jan 2018	Low Tide Time	34
I19	11 Jan 2018	Comments	none
I19	16 Jan 2018	Depth (m)	12
I19	16 Jan 2018	Arrive Time	1146
I19	16 Jan 2018	Depart Time	1149
I19	16 Jan 2018	Air Temp (C)	15
I19	16 Jan 2018	Weather	Partly Cloudy
I19	16 Jan 2018	Visibility (mi)	6
I19	16 Jan 2018	Wind Speed (kts)	4
I19	16 Jan 2018	Wind Dir	N
I19	16 Jan 2018	Water Color	Green
I19	16 Jan 2018	Wave Ht Low (ft)	7
I19	16 Jan 2018	Wave Period (sec)	16
I19	16 Jan 2018	Sea State	Calm
I19	16 Jan 2018	High Tide (ft)	5.73
I19	16 Jan 2018	High Tide Time	806
I19	16 Jan 2018	Low Tide (ft)	-0.71

Station	Date	Parameter	Value
I19	16 Jan 2018	Low Tide Time	1517
I19	16 Jan 2018	Comments	none
I19	22 Jan 2018	Depth (m)	12
I19	22 Jan 2018	Arrive Time	1016
I19	22 Jan 2018	Depart Time	1020
I19	22 Jan 2018	Air Temp (C)	16
I19	22 Jan 2018	Weather	Haze
I19	22 Jan 2018	Visibility (mi)	14
I19	22 Jan 2018	Wind Speed (kts)	3
I19	22 Jan 2018	Wind Dir	NW
I19	22 Jan 2018	Water Color	Green
I19	22 Jan 2018	Wave Ht Low (ft)	4
I19	22 Jan 2018	Wave Period (sec)	13
I19	22 Jan 2018	Sea State	Wind ripples
I19	22 Jan 2018	High Tide (ft)	4.07
I19	22 Jan 2018	High Tide Time	1132
I19	22 Jan 2018	Low Tide (ft)	2.02
I19	22 Jan 2018	Low Tide Time	559
I19	22 Jan 2018	Comments	none
I19	29 Jan 2018	Depth (m)	11
I19	29 Jan 2018	Arrive Time	1041
I19	29 Jan 2018	Depart Time	1044
I19	29 Jan 2018	Air Temp (C)	21
I19	29 Jan 2018	Weather	Haze
I19	29 Jan 2018	Visibility (mi)	12
I19	29 Jan 2018	Wind Speed (kts)	12
I19	29 Jan 2018	Wind Dir	W
I19	29 Jan 2018	Water Color	Greenish-Brown
I19	29 Jan 2018	Wave Ht Low (ft)	3
I19	29 Jan 2018	Wave Period (sec)	11
I19	29 Jan 2018	Sea State	Calm
I19	29 Jan 2018	High Tide (ft)	6.43
I19	29 Jan 2018	High Tide Time	648
I19	29 Jan 2018	Low Tide (ft)	1.5
I19	29 Jan 2018	Low Tide Time	1238
I19	29 Jan 2018	Comments	none
I24	03 Jan 2018	Depth (m)	11
I24	03 Jan 2018	Arrive Time	1209
I24	03 Jan 2018	Depart Time	1211
I24	03 Jan 2018	Air Temp (C)	16
I24	03 Jan 2018	Weather	Overcast
I24	03 Jan 2018	Visibility (mi)	4
I24	03 Jan 2018	Wind Speed (kts)	0
I24	03 Jan 2018	Wind Dir	
I24	03 Jan 2018	Water Color	Green
I24	03 Jan 2018	Wave Ht Low (ft)	3
I24	03 Jan 2018	Wave Period (sec)	13
I24	03 Jan 2018	Sea State	Calm
I24	03 Jan 2018	High Tide (ft)	6.73
I24	03 Jan 2018	High Tide Time	915
I24	03 Jan 2018	Low Tide (ft)	-1.64
I24	03 Jan 2018	Low Tide Time	1628

Station	Date	Parameter	Value
I24	03 Jan 2018	Comments	none
I24	11 Jan 2018	Depth (m)	10
I24	11 Jan 2018	Arrive Time	1100
I24	11 Jan 2018	Depart Time	1105
I24	11 Jan 2018	Air Temp (C)	15
I24	11 Jan 2018	Weather	Clear
I24	11 Jan 2018	Visibility (mi)	8
I24	11 Jan 2018	Wind Speed (kts)	5
I24	11 Jan 2018	Wind Dir	SW
I24	11 Jan 2018	Water Color	Green
I24	11 Jan 2018	Wave Ht Low (ft)	5
I24	11 Jan 2018	Wave Period (sec)	11
I24	11 Jan 2018	Sea State	Confused swell
I24	11 Jan 2018	High Tide (ft)	5.06
I24	11 Jan 2018	High Tide Time	516
I24	11 Jan 2018	Low Tide (ft)	0.41
I24	11 Jan 2018	Low Tide Time	34
I24	11 Jan 2018	Comments	none
I24	16 Jan 2018	Depth (m)	11
I24	16 Jan 2018	Arrive Time	1207
I24	16 Jan 2018	Depart Time	1210
I24	16 Jan 2018	Air Temp (C)	15
I24	16 Jan 2018	Weather	Partly Cloudy
I24	16 Jan 2018	Visibility (mi)	7
I24	16 Jan 2018	Wind Speed (kts)	4
I24	16 Jan 2018	Wind Dir	N
I24	16 Jan 2018	Water Color	Green
I24	16 Jan 2018	Wave Ht Low (ft)	9
I24	16 Jan 2018	Wave Period (sec)	16
I24	16 Jan 2018	Sea State	Calm
I24	16 Jan 2018	High Tide (ft)	5.73
I24	16 Jan 2018	High Tide Time	806
I24	16 Jan 2018	Low Tide (ft)	-0.71
I24	16 Jan 2018	Low Tide Time	1517
I24	16 Jan 2018	Comments	Boats
I24	22 Jan 2018	Depth (m)	11
I24	22 Jan 2018	Arrive Time	1034
I24	22 Jan 2018	Depart Time	1037
I24	22 Jan 2018	Air Temp (C)	14
I24	22 Jan 2018	Weather	Haze
I24	22 Jan 2018	Visibility (mi)	14
I24	22 Jan 2018	Wind Speed (kts)	5
I24	22 Jan 2018	Wind Dir	W
I24	22 Jan 2018	Water Color	Green
I24	22 Jan 2018	Wave Ht Low (ft)	4
I24	22 Jan 2018	Wave Period (sec)	13
I24	22 Jan 2018	Sea State	Wind ripples
I24	22 Jan 2018	High Tide (ft)	4.07
I24	22 Jan 2018	High Tide Time	1132
I24	22 Jan 2018	Low Tide (ft)	2.02
I24	22 Jan 2018	Low Tide Time	559
I24	22 Jan 2018	Comments	none

Station	Date	Parameter	Value
I24	29 Jan 2018	Depth (m)	10
I24	29 Jan 2018	Arrive Time	1110
I24	29 Jan 2018	Depart Time	1113
I24	29 Jan 2018	Air Temp (C)	20
I24	29 Jan 2018	Weather	Haze
I24	29 Jan 2018	Visibility (mi)	12
I24	29 Jan 2018	Wind Speed (kts)	8
I24	29 Jan 2018	Wind Dir	SW
I24	29 Jan 2018	Water Color	Greenish-Brown
I24	29 Jan 2018	Wave Ht Low (ft)	3
I24	29 Jan 2018	Wave Period (sec)	11
I24	29 Jan 2018	Sea State	Calm
I24	29 Jan 2018	High Tide (ft)	6.43
I24	29 Jan 2018	High Tide Time	648
I24	29 Jan 2018	Low Tide (ft)	1.5
I24	29 Jan 2018	Low Tide Time	1238
I24	29 Jan 2018	Comments	none
I25	03 Jan 2018	Depth (m)	9
I25	03 Jan 2018	Arrive Time	1215
I25	03 Jan 2018	Depart Time	1217
I25	03 Jan 2018	Air Temp (C)	16
I25	03 Jan 2018	Weather	Overcast
I25	03 Jan 2018	Visibility (mi)	4
I25	03 Jan 2018	Wind Speed (kts)	1
I25	03 Jan 2018	Wind Dir	N
I25	03 Jan 2018	Water Color	Green
I25	03 Jan 2018	Wave Ht Low (ft)	3
I25	03 Jan 2018	Wave Period (sec)	13
I25	03 Jan 2018	Sea State	Calm
I25	03 Jan 2018	High Tide (ft)	6.73
I25	03 Jan 2018	High Tide Time	915
I25	03 Jan 2018	Low Tide (ft)	-1.64
I25	03 Jan 2018	Low Tide Time	1628
I25	03 Jan 2018	Comments	none
I25	11 Jan 2018	Depth (m)	9
I25	11 Jan 2018	Arrive Time	1108
I25	11 Jan 2018	Depart Time	1113
I25	11 Jan 2018	Air Temp (C)	15
I25	11 Jan 2018	Weather	Clear
I25	11 Jan 2018	Visibility (mi)	8
I25	11 Jan 2018	Wind Speed (kts)	9
I25	11 Jan 2018	Wind Dir	W
I25	11 Jan 2018	Water Color	Green
I25	11 Jan 2018	Wave Ht Low (ft)	5
I25	11 Jan 2018	Wave Period (sec)	11
I25	11 Jan 2018	Sea State	Confused swell
I25	11 Jan 2018	High Tide (ft)	5.06
I25	11 Jan 2018	High Tide Time	516
I25	11 Jan 2018	Low Tide (ft)	0.41
I25	11 Jan 2018	Low Tide Time	34
I25	11 Jan 2018	Comments	none

Station	Date	Parameter	Value
I25	16 Jan 2018	Depth (m)	11
I25	16 Jan 2018	Arrive Time	1214
I25	16 Jan 2018	Depart Time	1218
I25	16 Jan 2018	Air Temp (C)	15
I25	16 Jan 2018	Weather	Partly Cloudy
I25	16 Jan 2018	Visibility (mi)	7
I25	16 Jan 2018	Wind Speed (kts)	4
I25	16 Jan 2018	Wind Dir	N
I25	16 Jan 2018	Water Color	Green
I25	16 Jan 2018	Wave Ht Low (ft)	9
I25	16 Jan 2018	Wave Period (sec)	16
I25	16 Jan 2018	Sea State	Calm
I25	16 Jan 2018	High Tide (ft)	5.73
I25	16 Jan 2018	High Tide Time	806
I25	16 Jan 2018	Low Tide (ft)	-0.71
I25	16 Jan 2018	Low Tide Time	1517
I25	16 Jan 2018	Comments	Boats
I25	22 Jan 2018	Depth (m)	10
I25	22 Jan 2018	Arrive Time	1040
I25	22 Jan 2018	Depart Time	1044
I25	22 Jan 2018	Air Temp (C)	15
I25	22 Jan 2018	Weather	Clear
I25	22 Jan 2018	Visibility (mi)	14
I25	22 Jan 2018	Wind Speed (kts)	5
I25	22 Jan 2018	Wind Dir	SW
I25	22 Jan 2018	Water Color	Green
I25	22 Jan 2018	Wave Ht Low (ft)	4
I25	22 Jan 2018	Wave Period (sec)	13
I25	22 Jan 2018	Sea State	Wind ripples
I25	22 Jan 2018	High Tide (ft)	4.07
I25	22 Jan 2018	High Tide Time	1132
I25	22 Jan 2018	Low Tide (ft)	2.02
I25	22 Jan 2018	Low Tide Time	559
I25	22 Jan 2018	Comments	none
I25	29 Jan 2018	Depth (m)	10
I25	29 Jan 2018	Arrive Time	1117
I25	29 Jan 2018	Depart Time	1121
I25	29 Jan 2018	Air Temp (C)	20
I25	29 Jan 2018	Weather	Haze
I25	29 Jan 2018	Visibility (mi)	12
I25	29 Jan 2018	Wind Speed (kts)	5
I25	29 Jan 2018	Wind Dir	S
I25	29 Jan 2018	Water Color	Greenish-Brown
I25	29 Jan 2018	Wave Ht Low (ft)	3
I25	29 Jan 2018	Wave Period (sec)	11
I25	29 Jan 2018	Sea State	Calm
I25	29 Jan 2018	High Tide (ft)	6.43
I25	29 Jan 2018	High Tide Time	648
I25	29 Jan 2018	Low Tide (ft)	1.5
I25	29 Jan 2018	Low Tide Time	1238
I25	29 Jan 2018	Comments	none
I26	03 Jan 2018	Depth (m)	10

Station	Date	Parameter	Value
I26	03 Jan 2018	Arrive Time	1226
I26	03 Jan 2018	Depart Time	1233
I26	03 Jan 2018	Air Temp (C)	16
I26	03 Jan 2018	Weather	Overcast
I26	03 Jan 2018	Visibility (mi)	4
I26	03 Jan 2018	Wind Speed (kts)	2
I26	03 Jan 2018	Wind Dir	N
I26	03 Jan 2018	Water Color	Green
I26	03 Jan 2018	Wave Ht Low (ft)	3
I26	03 Jan 2018	Wave Period (sec)	13
I26	03 Jan 2018	Sea State	Calm
I26	03 Jan 2018	High Tide (ft)	6.73
I26	03 Jan 2018	High Tide Time	915
I26	03 Jan 2018	Low Tide (ft)	-1.64
I26	03 Jan 2018	Low Tide Time	1628
I26	03 Jan 2018	Comments	Kelp debris
I26	11 Jan 2018	Depth (m)	10
I26	11 Jan 2018	Arrive Time	1117
I26	11 Jan 2018	Depart Time	1122
I26	11 Jan 2018	Air Temp (C)	15
I26	11 Jan 2018	Weather	Clear
I26	11 Jan 2018	Visibility (mi)	8
I26	11 Jan 2018	Wind Speed (kts)	8
I26	11 Jan 2018	Wind Dir	SW
I26	11 Jan 2018	Water Color	Green
I26	11 Jan 2018	Wave Ht Low (ft)	5
I26	11 Jan 2018	Wave Period (sec)	11
I26	11 Jan 2018	Sea State	Confused swell
I26	11 Jan 2018	High Tide (ft)	5.06
I26	11 Jan 2018	High Tide Time	516
I26	11 Jan 2018	Low Tide (ft)	0.41
I26	11 Jan 2018	Low Tide Time	34
I26	11 Jan 2018	Comments	none
I26	16 Jan 2018	Depth (m)	9
I26	16 Jan 2018	Arrive Time	1224
I26	16 Jan 2018	Depart Time	1227
I26	16 Jan 2018	Air Temp (C)	15
I26	16 Jan 2018	Weather	Partly Cloudy
I26	16 Jan 2018	Visibility (mi)	7
I26	16 Jan 2018	Wind Speed (kts)	4
I26	16 Jan 2018	Wind Dir	N
I26	16 Jan 2018	Water Color	Green
I26	16 Jan 2018	Wave Ht Low (ft)	8
I26	16 Jan 2018	Wave Period (sec)	16
I26	16 Jan 2018	Sea State	Light chop
I26	16 Jan 2018	High Tide (ft)	5.73
I26	16 Jan 2018	High Tide Time	806
I26	16 Jan 2018	Low Tide (ft)	-0.71
I26	16 Jan 2018	Low Tide Time	1517
I26	16 Jan 2018	Comments	none
I26	22 Jan 2018	Depth (m)	10
I26	22 Jan 2018	Arrive Time	1048

Station	Date	Parameter	Value
I26	22 Jan 2018	Depart Time	1052
I26	22 Jan 2018	Air Temp (C)	15
I26	22 Jan 2018	Weather	Clear
I26	22 Jan 2018	Visibility (mi)	14
I26	22 Jan 2018	Wind Speed (kts)	2
I26	22 Jan 2018	Wind Dir	SW
I26	22 Jan 2018	Water Color	Green
I26	22 Jan 2018	Wave Ht Low (ft)	4
I26	22 Jan 2018	Wave Period (sec)	13
I26	22 Jan 2018	Sea State	Wind ripples
I26	22 Jan 2018	High Tide (ft)	4.07
I26	22 Jan 2018	High Tide Time	1132
I26	22 Jan 2018	Low Tide (ft)	2.02
I26	22 Jan 2018	Low Tide Time	559
I26	22 Jan 2018	Comments	none
I26	29 Jan 2018	Depth (m)	10
I26	29 Jan 2018	Arrive Time	1128
I26	29 Jan 2018	Depart Time	1131
I26	29 Jan 2018	Air Temp (C)	19
I26	29 Jan 2018	Weather	Haze
I26	29 Jan 2018	Visibility (mi)	12
I26	29 Jan 2018	Wind Speed (kts)	15
I26	29 Jan 2018	Wind Dir	SW
I26	29 Jan 2018	Water Color	Greenish-Brown
I26	29 Jan 2018	Wave Ht Low (ft)	3
I26	29 Jan 2018	Wave Period (sec)	11
I26	29 Jan 2018	Sea State	Calm
I26	29 Jan 2018	High Tide (ft)	6.43
I26	29 Jan 2018	High Tide Time	648
I26	29 Jan 2018	Low Tide (ft)	1.5
I26	29 Jan 2018	Low Tide Time	1238
I26	29 Jan 2018	Comments	Whale on station
I32	03 Jan 2018	Depth (m)	11
I32	03 Jan 2018	Arrive Time	1244
I32	03 Jan 2018	Depart Time	1247
I32	03 Jan 2018	Air Temp (C)	16
I32	03 Jan 2018	Weather	Overcast
I32	03 Jan 2018	Visibility (mi)	4
I32	03 Jan 2018	Wind Speed (kts)	4
I32	03 Jan 2018	Wind Dir	SW
I32	03 Jan 2018	Water Color	Green
I32	03 Jan 2018	Wave Ht Low (ft)	3
I32	03 Jan 2018	Wave Period (sec)	13
I32	03 Jan 2018	Sea State	Calm
I32	03 Jan 2018	High Tide (ft)	6.73
I32	03 Jan 2018	High Tide Time	915
I32	03 Jan 2018	Low Tide (ft)	-1.64
I32	03 Jan 2018	Low Tide Time	1628
I32	03 Jan 2018	Comments	none
I32	11 Jan 2018	Depth (m)	9
I32	11 Jan 2018	Arrive Time	1129
I32	11 Jan 2018	Depart Time	1133

Station	Date	Parameter	Value
I32	11 Jan 2018	Air Temp (C)	16
I32	11 Jan 2018	Weather	Clear
I32	11 Jan 2018	Visibility (mi)	8
I32	11 Jan 2018	Wind Speed (kts)	2
I32	11 Jan 2018	Wind Dir	S
I32	11 Jan 2018	Water Color	Green
I32	11 Jan 2018	Wave Ht Low (ft)	5
I32	11 Jan 2018	Wave Period (sec)	11
I32	11 Jan 2018	Sea State	Confused swell
I32	11 Jan 2018	High Tide (ft)	5.06
I32	11 Jan 2018	High Tide Time	516
I32	11 Jan 2018	Low Tide (ft)	0.41
I32	11 Jan 2018	Low Tide Time	34
I32	11 Jan 2018	Comments	none
I32	16 Jan 2018	Depth (m)	10
I32	16 Jan 2018	Arrive Time	1237
I32	16 Jan 2018	Depart Time	1240
I32	16 Jan 2018	Air Temp (C)	15
I32	16 Jan 2018	Weather	Fog
I32	16 Jan 2018	Visibility (mi)	5
I32	16 Jan 2018	Wind Speed (kts)	4
I32	16 Jan 2018	Wind Dir	N
I32	16 Jan 2018	Water Color	Green
I32	16 Jan 2018	Wave Ht Low (ft)	8
I32	16 Jan 2018	Wave Period (sec)	16
I32	16 Jan 2018	Sea State	Light chop
I32	16 Jan 2018	High Tide (ft)	5.73
I32	16 Jan 2018	High Tide Time	806
I32	16 Jan 2018	Low Tide (ft)	-0.71
I32	16 Jan 2018	Low Tide Time	1517
I32	16 Jan 2018	Comments	
I32	22 Jan 2018	Depth (m)	11
I32	22 Jan 2018	Arrive Time	1059
I32	22 Jan 2018	Depart Time	1103
I32	22 Jan 2018	Air Temp (C)	15
I32	22 Jan 2018	Weather	Clear
I32	22 Jan 2018	Visibility (mi)	14
I32	22 Jan 2018	Wind Speed (kts)	5
I32	22 Jan 2018	Wind Dir	SW
I32	22 Jan 2018	Water Color	Green
I32	22 Jan 2018	Wave Ht Low (ft)	4
I32	22 Jan 2018	Wave Period (sec)	13
I32	22 Jan 2018	Sea State	Wind ripples
I32	22 Jan 2018	High Tide (ft)	4.07
I32	22 Jan 2018	High Tide Time	1132
I32	22 Jan 2018	Low Tide (ft)	2.02
I32	22 Jan 2018	Low Tide Time	559
I32	22 Jan 2018	Comments	none
I32	29 Jan 2018	Depth (m)	10
I32	29 Jan 2018	Arrive Time	1139
I32	29 Jan 2018	Depart Time	1142
I32	29 Jan 2018	Air Temp (C)	19

Station	Date	Parameter	Value
I32	29 Jan 2018	Weather	Haze
I32	29 Jan 2018	Visibility (mi)	12
I32	29 Jan 2018	Wind Speed (kts)	9
I32	29 Jan 2018	Wind Dir	S
I32	29 Jan 2018	Water Color	Greenish-Brown
I32	29 Jan 2018	Wave Ht Low (ft)	3
I32	29 Jan 2018	Wave Period (sec)	11
I32	29 Jan 2018	Sea State	Calm
I32	29 Jan 2018	High Tide (ft)	6.43
I32	29 Jan 2018	High Tide Time	648
I32	29 Jan 2018	Low Tide (ft)	1.5
I32	29 Jan 2018	Low Tide Time	1238
I32	29 Jan 2018	Comments	none
I39	03 Jan 2018	Depth (m)	20
I39	03 Jan 2018	Arrive Time	1121
I39	03 Jan 2018	Depart Time	1125
I39	03 Jan 2018	Air Temp (C)	16
I39	03 Jan 2018	Weather	Fog
I39	03 Jan 2018	Visibility (mi)	2
I39	03 Jan 2018	Wind Speed (kts)	0
I39	03 Jan 2018	Wind Dir	
I39	03 Jan 2018	Water Color	Bluish-Green
I39	03 Jan 2018	Wave Ht Low (ft)	3
I39	03 Jan 2018	Wave Period (sec)	13
I39	03 Jan 2018	Sea State	Calm
I39	03 Jan 2018	High Tide (ft)	6.73
I39	03 Jan 2018	High Tide Time	915
I39	03 Jan 2018	Low Tide (ft)	-1.64
I39	03 Jan 2018	Low Tide Time	1628
I39	03 Jan 2018	Comments	none
I39	11 Jan 2018	Depth (m)	20
I39	11 Jan 2018	Arrive Time	1021
I39	11 Jan 2018	Depart Time	1025
I39	11 Jan 2018	Air Temp (C)	15
I39	11 Jan 2018	Weather	Clear
I39	11 Jan 2018	Visibility (mi)	8
I39	11 Jan 2018	Wind Speed (kts)	2
I39	11 Jan 2018	Wind Dir	SW
I39	11 Jan 2018	Water Color	Green
I39	11 Jan 2018	Wave Ht Low (ft)	5
I39	11 Jan 2018	Wave Period (sec)	11
I39	11 Jan 2018	Sea State	Confused swell
I39	11 Jan 2018	High Tide (ft)	5.06
I39	11 Jan 2018	High Tide Time	516
I39	11 Jan 2018	Low Tide (ft)	0.41
I39	11 Jan 2018	Low Tide Time	34
I39	11 Jan 2018	Comments	Lobster floats
I39	16 Jan 2018	Depth (m)	19
I39	16 Jan 2018	Arrive Time	1125
I39	16 Jan 2018	Depart Time	1128
I39	16 Jan 2018	Air Temp (C)	15
I39	16 Jan 2018	Weather	Partly Cloudy

Station	Date	Parameter	Value
I39	16 Jan 2018	Visibility (mi)	6
I39	16 Jan 2018	Wind Speed (kts)	4
I39	16 Jan 2018	Wind Dir	N
I39	16 Jan 2018	Water Color	Green
I39	16 Jan 2018	Wave Ht Low (ft)	7
I39	16 Jan 2018	Wave Period (sec)	16
I39	16 Jan 2018	Sea State	Calm
I39	16 Jan 2018	High Tide (ft)	5.73
I39	16 Jan 2018	High Tide Time	806
I39	16 Jan 2018	Low Tide (ft)	-0.71
I39	16 Jan 2018	Low Tide Time	1517
I39	16 Jan 2018	Comments	none
I39	22 Jan 2018	Depth (m)	19
I39	22 Jan 2018	Arrive Time	958
I39	22 Jan 2018	Depart Time	1002
I39	22 Jan 2018	Air Temp (C)	14
I39	22 Jan 2018	Weather	Haze
I39	22 Jan 2018	Visibility (mi)	14
I39	22 Jan 2018	Wind Speed (kts)	5
I39	22 Jan 2018	Wind Dir	NW
I39	22 Jan 2018	Water Color	Green
I39	22 Jan 2018	Wave Ht Low (ft)	4
I39	22 Jan 2018	Wave Period (sec)	13
I39	22 Jan 2018	Sea State	Wind ripples
I39	22 Jan 2018	High Tide (ft)	4.07
I39	22 Jan 2018	High Tide Time	1132
I39	22 Jan 2018	Low Tide (ft)	2.02
I39	22 Jan 2018	Low Tide Time	559
I39	22 Jan 2018	Comments	Lobster floats
I39	29 Jan 2018	Depth (m)	19
I39	29 Jan 2018	Arrive Time	1013
I39	29 Jan 2018	Depart Time	1021
I39	29 Jan 2018	Air Temp (C)	18
I39	29 Jan 2018	Weather	Haze
I39	29 Jan 2018	Visibility (mi)	12
I39	29 Jan 2018	Wind Speed (kts)	6
I39	29 Jan 2018	Wind Dir	W
I39	29 Jan 2018	Water Color	Greenish-Blue
I39	29 Jan 2018	Wave Ht Low (ft)	3
I39	29 Jan 2018	Wave Period (sec)	11
I39	29 Jan 2018	Sea State	Calm
I39	29 Jan 2018	High Tide (ft)	6.43
I39	29 Jan 2018	High Tide Time	648
I39	29 Jan 2018	Low Tide (ft)	1.5
I39	29 Jan 2018	Low Tide Time	1238
I39	29 Jan 2018	Comments	none
I40	03 Jan 2018	Depth (m)	11
I40	03 Jan 2018	Arrive Time	1201
I40	03 Jan 2018	Depart Time	1203
I40	03 Jan 2018	Air Temp (C)	16
I40	03 Jan 2018	Weather	Fog
I40	03 Jan 2018	Visibility (mi)	3

Station	Date	Parameter	Value
I40	03 Jan 2018	Wind Speed (kts)	0
I40	03 Jan 2018	Wind Dir	
I40	03 Jan 2018	Water Color	Green
I40	03 Jan 2018	Wave Ht Low (ft)	3
I40	03 Jan 2018	Wave Period (sec)	13
I40	03 Jan 2018	Sea State	Calm
I40	03 Jan 2018	High Tide (ft)	6.73
I40	03 Jan 2018	High Tide Time	915
I40	03 Jan 2018	Low Tide (ft)	-1.64
I40	03 Jan 2018	Low Tide Time	1628
I40	03 Jan 2018	Comments	none
I40	11 Jan 2018	Depth (m)	10
I40	11 Jan 2018	Arrive Time	1052
I40	11 Jan 2018	Depart Time	1059
I40	11 Jan 2018	Air Temp (C)	15
I40	11 Jan 2018	Weather	Clear
I40	11 Jan 2018	Visibility (mi)	8
I40	11 Jan 2018	Wind Speed (kts)	5
I40	11 Jan 2018	Wind Dir	SW
I40	11 Jan 2018	Water Color	Green
I40	11 Jan 2018	Wave Ht Low (ft)	5
I40	11 Jan 2018	Wave Period (sec)	11
I40	11 Jan 2018	Sea State	Confused swell
I40	11 Jan 2018	High Tide (ft)	5.06
I40	11 Jan 2018	High Tide Time	516
I40	11 Jan 2018	Low Tide (ft)	0.41
I40	11 Jan 2018	Low Tide Time	34
I40	11 Jan 2018	Comments	none
I40	16 Jan 2018	Depth (m)	12
I40	16 Jan 2018	Arrive Time	1159
I40	16 Jan 2018	Depart Time	1202
I40	16 Jan 2018	Air Temp (C)	15
I40	16 Jan 2018	Weather	Partly Cloudy
I40	16 Jan 2018	Visibility (mi)	7
I40	16 Jan 2018	Wind Speed (kts)	4
I40	16 Jan 2018	Wind Dir	N
I40	16 Jan 2018	Water Color	Green
I40	16 Jan 2018	Wave Ht Low (ft)	8
I40	16 Jan 2018	Wave Period (sec)	16
I40	16 Jan 2018	Sea State	Calm
I40	16 Jan 2018	High Tide (ft)	5.73
I40	16 Jan 2018	High Tide Time	806
I40	16 Jan 2018	Low Tide (ft)	-0.71
I40	16 Jan 2018	Low Tide Time	1517
I40	16 Jan 2018	Comments	Boats
I40	22 Jan 2018	Depth (m)	11
I40	22 Jan 2018	Arrive Time	1026
I40	22 Jan 2018	Depart Time	1030
I40	22 Jan 2018	Air Temp (C)	15
I40	22 Jan 2018	Weather	Haze
I40	22 Jan 2018	Visibility (mi)	14
I40	22 Jan 2018	Wind Speed (kts)	2

Station	Date	Parameter	Value
I40	22 Jan 2018	Wind Dir	SW
I40	22 Jan 2018	Water Color	Green
I40	22 Jan 2018	Wave Ht Low (ft)	4
I40	22 Jan 2018	Wave Period (sec)	13
I40	22 Jan 2018	Sea State	Wind ripples
I40	22 Jan 2018	High Tide (ft)	4.07
I40	22 Jan 2018	High Tide Time	1132
I40	22 Jan 2018	Low Tide (ft)	2.02
I40	22 Jan 2018	Low Tide Time	559
I40	22 Jan 2018	Comments	none
I40	29 Jan 2018	Depth (m)	10
I40	29 Jan 2018	Arrive Time	1053
I40	29 Jan 2018	Depart Time	1103
I40	29 Jan 2018	Air Temp (C)	23
I40	29 Jan 2018	Weather	Haze
I40	29 Jan 2018	Visibility (mi)	12
I40	29 Jan 2018	Wind Speed (kts)	11
I40	29 Jan 2018	Wind Dir	SW
I40	29 Jan 2018	Water Color	Greenish-Brown
I40	29 Jan 2018	Wave Ht Low (ft)	3
I40	29 Jan 2018	Wave Period (sec)	11
I40	29 Jan 2018	Sea State	Calm
I40	29 Jan 2018	High Tide (ft)	6.43
I40	29 Jan 2018	High Tide Time	648
I40	29 Jan 2018	Low Tide (ft)	1.5
I40	29 Jan 2018	Low Tide Time	1238
I40	29 Jan 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	03 Jan 2018	1	16.14	79.12	8.0	33.51	8.2	24.6	1.96
I19	03 Jan 2018	2	16.12	79.14	8.0	33.51	8.2	24.6	1.98
I19	03 Jan 2018	3	16.04	78.37	8.0	33.51	8.2	24.6	2.60
I19	03 Jan 2018	4	16.03	76.97	8.0	33.50	8.2	24.6	2.85
I19	03 Jan 2018	5	16.01	74.34	7.9	33.50	8.2	24.6	3.15
I19	03 Jan 2018	6	16.01	73.07	7.9	33.50	8.2	24.6	3.27
I19	03 Jan 2018	7	16.00	72.72	7.9	33.50	8.2	24.6	3.23
I19	03 Jan 2018	8	16.00	72.06	7.9	33.50	8.2	24.6	3.14
I19	03 Jan 2018	9	16.00	72.09	7.9	33.50	8.2	24.6	3.20
I19	03 Jan 2018	10	15.99	71.84	7.9	33.50	8.2	24.6	3.49
I19	11 Jan 2018	1	15.74	50.92	7.9	32.96	8.1	24.2	1.26
I19	11 Jan 2018	2	15.82	52.47	7.8	33.11	8.1	24.3	1.41
I19	11 Jan 2018	3	15.85	57.38	7.7	33.20	8.1	24.4	1.44
I19	11 Jan 2018	4	15.90	61.92	7.6	33.33	8.1	24.5	1.37
I19	11 Jan 2018	5	15.95	74.28	7.5	33.39	8.1	24.5	1.31
I19	11 Jan 2018	6	15.95	76.91	7.5	33.41	8.1	24.5	1.46
I19	11 Jan 2018	7	15.92	76.35	7.5	33.42	8.1	24.6	1.24
I19	11 Jan 2018	8	15.91	76.31	7.5	33.42	8.1	24.6	1.26
I19	11 Jan 2018	9	15.88	74.41	7.4	33.43	8.1	24.6	1.26
I19	11 Jan 2018	10	15.86	60.25	7.1	33.43	8.1	24.6	1.41
I19	16 Jan 2018	1	15.78	59.97	8.2	33.42	8.2	24.6	1.30
I19	16 Jan 2018	2	15.72	64.00	8.1	33.44	8.2	24.6	1.43
I19	16 Jan 2018	3	15.67	64.50	8.0	33.44	8.2	24.6	1.70
I19	16 Jan 2018	4	15.66	64.77	8.0	33.44	8.2	24.6	1.85
I19	16 Jan 2018	5	15.65	64.86	8.0	33.44	8.2	24.6	2.08
I19	16 Jan 2018	6	15.62	64.81	7.9	33.44	8.2	24.6	2.20
I19	16 Jan 2018	7	15.50	67.47	7.7	33.45	8.2	24.7	2.31
I19	16 Jan 2018	8	15.49	67.31	7.6	33.44	8.2	24.7	2.35
I19	16 Jan 2018	9	15.44	67.11	7.5	33.45	8.2	24.7	2.30
I19	16 Jan 2018	10	15.45	60.96	7.6	33.45	8.2	24.7	2.35
I19	22 Jan 2018	1	15.14	48.63	7.9	33.41	8.2	24.7	1.14
I19	22 Jan 2018	2	15.14	47.91	7.9	33.41	8.2	24.7	1.13
I19	22 Jan 2018	3	15.14	48.67	7.9	33.42	8.2	24.7	1.27
I19	22 Jan 2018	4	15.15	49.22	7.9	33.42	8.2	24.7	1.53
I19	22 Jan 2018	5	15.16	50.64	7.9	33.43	8.2	24.7	1.75
I19	22 Jan 2018	6	15.16	52.23	7.9	33.44	8.2	24.7	1.86
I19	22 Jan 2018	7	15.15	53.82	7.9	33.44	8.2	24.7	1.97
I19	22 Jan 2018	8	15.14	54.27	7.9	33.44	8.2	24.7	2.02
I19	22 Jan 2018	9	15.13	55.07	7.8	33.44	8.2	24.7	2.04
I19	22 Jan 2018	10	15.11	52.84	7.8	33.44	8.2	24.7	1.97
I19	29 Jan 2018	1	14.39	69.13	7.9	33.47	8.0	24.9	0.86
I19	29 Jan 2018	2	14.39	68.92	7.9	33.47	8.0	24.9	0.85
I19	29 Jan 2018	3	14.34	68.46	7.9	33.47	8.0	24.9	0.98
I19	29 Jan 2018	4	14.26	67.71	7.8	33.46	8.0	24.9	1.25
I19	29 Jan 2018	5	14.15	66.00	7.8	33.45	8.0	25.0	1.64
I19	29 Jan 2018	6	14.06	62.99	7.8	33.44	8.0	25.0	1.70
I19	29 Jan 2018	7	14.04	64.82	7.8	33.44	8.0	25.0	1.95

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ -t)	Chlor (μ g/L)
I19	29 Jan 2018	8	14.00	64.34	7.8	33.45	8.0	25.0	2.04
I19	29 Jan 2018	9	13.95	63.08	7.8	33.45	8.0	25.0	1.89
I19	29 Jan 2018	10	13.89	63.33	7.7	33.45	8.0	25.0	1.86
I24	03 Jan 2018	1	16.18	77.68	8.3	33.50	8.2	24.6	2.43
I24	03 Jan 2018	2	16.19	77.88	8.2	33.50	8.2	24.6	2.57
I24	03 Jan 2018	3	16.06	76.84	8.2	33.50	8.2	24.6	3.15
I24	03 Jan 2018	4	16.03	75.92	8.2	33.50	8.2	24.6	3.73
I24	03 Jan 2018	5	16.02	75.99	8.1	33.50	8.2	24.6	4.02
I24	03 Jan 2018	6	16.00	75.38	8.0	33.50	8.2	24.6	3.82
I24	03 Jan 2018	7	15.99	75.00	7.9	33.50	8.2	24.6	3.79
I24	03 Jan 2018	8	15.98	75.12	7.9	33.50	8.2	24.6	4.05
I24	03 Jan 2018	9	15.98	74.97	8.0	33.50	8.2	24.6	3.87
I24	03 Jan 2018	10	15.99	73.42	7.9	33.50	8.2	24.6	3.94
I24	03 Jan 2018	11	15.99	73.43	7.9	33.50	8.2	24.6	3.89
I24	11 Jan 2018	1	15.74	55.55	7.8	32.94	8.2	24.2	0.80
I24	11 Jan 2018	2	15.66	55.45	7.8	32.96	8.2	24.3	0.94
I24	11 Jan 2018	3	15.57	55.34	7.8	32.98	8.2	24.3	1.27
I24	11 Jan 2018	4	15.62	56.86	7.8	33.06	8.2	24.3	1.47
I24	11 Jan 2018	5	15.71	60.85	7.6	33.22	8.2	24.4	1.61
I24	11 Jan 2018	6	15.77	64.99	7.4	33.40	8.1	24.6	1.51
I24	11 Jan 2018	7	15.79	67.80	7.3	33.43	8.1	24.6	1.46
I24	11 Jan 2018	8	15.80	64.75	7.2	33.44	8.1	24.6	1.33
I24	11 Jan 2018	9	15.81	62.79	7.2	33.44	8.1	24.6	1.32
I24	11 Jan 2018	10	15.81	62.38	7.2	33.44	8.1	24.6	1.32
I24	16 Jan 2018	1	16.00	77.13	8.1	33.44	8.2	24.6	1.21
I24	16 Jan 2018	2	15.99	77.34	8.1	33.44	8.2	24.6	1.21
I24	16 Jan 2018	3	15.96	77.15	8.1	33.45	8.2	24.6	1.34
I24	16 Jan 2018	4	15.86	76.71	8.2	33.44	8.2	24.6	1.67
I24	16 Jan 2018	5	15.78	75.31	8.1	33.44	8.2	24.6	2.08
I24	16 Jan 2018	6	15.74	75.68	8.1	33.45	8.2	24.6	2.40
I24	16 Jan 2018	7	15.64	73.44	8.0	33.44	8.2	24.6	2.68
I24	16 Jan 2018	8	15.55	72.19	8.0	33.44	8.2	24.6	2.75
I24	16 Jan 2018	9	15.53	73.09	7.9	33.44	8.2	24.7	2.76
I24	16 Jan 2018	10	15.42	73.03	7.7	33.44	8.2	24.7	2.70
I24	16 Jan 2018	11	15.24	69.23	7.5	33.45	8.2	24.7	2.39
I24	22 Jan 2018	1	15.17	49.32	7.5	33.46	8.2	24.7	0.70
I24	22 Jan 2018	2	15.14	48.54	7.5	33.46	8.2	24.8	0.84
I24	22 Jan 2018	3	15.05	46.60	7.5	33.46	8.2	24.8	1.30
I24	22 Jan 2018	4	15.00	44.15	7.5	33.46	8.2	24.8	1.68
I24	22 Jan 2018	5	14.98	43.36	7.5	33.46	8.2	24.8	1.76
I24	22 Jan 2018	6	14.97	44.09	7.5	33.46	8.2	24.8	1.73
I24	22 Jan 2018	7	14.97	44.19	7.5	33.46	8.2	24.8	1.73
I24	22 Jan 2018	8	14.95	43.24	7.5	33.46	8.2	24.8	1.56
I24	22 Jan 2018	9	14.95	42.33	7.5	33.46	8.2	24.8	1.53
I24	22 Jan 2018	10	14.95	41.35	7.4	33.46	8.2	24.8	1.48
I24	22 Jan 2018	11	14.95	40.49	7.4	33.46	8.2	24.8	1.46
I24	29 Jan 2018	1	14.97	76.97	8.2	33.46	8.1	24.8	0.89
I24	29 Jan 2018	2	14.95	77.16	8.2	33.47	8.1	24.8	0.87
I24	29 Jan 2018	3	14.76	77.05	8.2	33.47	8.1	24.8	1.01
I24	29 Jan 2018	4	14.68	76.01	8.2	33.47	8.1	24.9	1.21

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ -t)	Chlor (μ g/L)
I24	29 Jan 2018	5	14.65	74.95	8.2	33.47	8.1	24.9	1.51
I24	29 Jan 2018	6	14.59	74.80	8.0	33.46	8.1	24.9	1.81
I24	29 Jan 2018	7	14.45	75.87	7.6	33.46	8.1	24.9	1.95
I24	29 Jan 2018	8	14.24	76.23	7.1	33.45	8.0	24.9	1.82
I24	29 Jan 2018	9	13.73	70.43	6.4	33.46	8.0	25.1	1.71
I24	29 Jan 2018	10	13.80	50.91	6.5	33.43	8.0	25.0	1.82
I25	03 Jan 2018	1	16.13	76.55	8.2	33.50	8.2	24.6	2.53
I25	03 Jan 2018	2	16.10	76.51	8.2	33.50	8.2	24.6	2.79
I25	03 Jan 2018	3	16.06	76.08	8.2	33.50	8.2	24.6	3.49
I25	03 Jan 2018	4	16.04	76.09	8.1	33.50	8.2	24.6	3.64
I25	03 Jan 2018	5	16.03	76.54	8.0	33.50	8.2	24.6	3.67
I25	03 Jan 2018	6	16.03	76.90	7.9	33.50	8.2	24.6	3.52
I25	03 Jan 2018	7	16.02	76.82	7.8	33.50	8.2	24.6	3.76
I25	03 Jan 2018	8	16.02	77.28	7.8	33.50	8.2	24.6	3.25
I25	03 Jan 2018	9	16.02	77.20	7.8	33.50	8.2	24.6	3.00
I25	11 Jan 2018	1	15.70	59.43	7.8	33.01	8.2	24.3	0.78
I25	11 Jan 2018	2	15.65	59.50	7.7	33.10	8.2	24.4	0.90
I25	11 Jan 2018	3	15.71	62.38	7.6	33.22	8.2	24.4	1.09
I25	11 Jan 2018	4	15.77	68.92	7.5	33.39	8.1	24.6	1.35
I25	11 Jan 2018	5	15.79	70.77	7.4	33.44	8.1	24.6	1.40
I25	11 Jan 2018	6	15.79	68.47	7.3	33.45	8.1	24.6	1.48
I25	11 Jan 2018	7	15.79	66.86	7.3	33.45	8.1	24.6	1.44
I25	11 Jan 2018	8	15.79	63.75	7.3	33.45	8.1	24.6	1.38
I25	11 Jan 2018	9	15.79	61.84	7.3	33.45	8.1	24.6	1.30
I25	16 Jan 2018	1	16.03	78.04	8.1	33.46	8.2	24.6	1.08
I25	16 Jan 2018	2	16.02	79.11	8.1	33.46	8.2	24.6	1.08
I25	16 Jan 2018	3	15.95	78.91	8.1	33.46	8.2	24.6	1.14
I25	16 Jan 2018	4	15.86	77.56	8.1	33.46	8.2	24.6	1.28
I25	16 Jan 2018	5	15.80	70.63	8.1	33.45	8.2	24.6	1.59
I25	16 Jan 2018	6	15.74	64.45	8.2	33.44	8.2	24.6	1.95
I25	16 Jan 2018	7	15.57	67.38	7.9	33.45	8.2	24.7	2.29
I25	16 Jan 2018	8	15.25	69.71	7.6	33.45	8.2	24.7	2.21
I25	16 Jan 2018	9	15.31	66.57	7.6	33.43	8.2	24.7	1.74
I25	22 Jan 2018	1	15.15	60.31	7.7	33.46	8.2	24.8	0.97
I25	22 Jan 2018	2	15.13	59.81	7.7	33.46	8.2	24.8	1.07
I25	22 Jan 2018	3	15.10	58.87	7.6	33.46	8.2	24.8	1.21
I25	22 Jan 2018	4	15.07	58.48	7.6	33.46	8.2	24.8	1.57
I25	22 Jan 2018	5	15.07	58.26	7.6	33.46	8.2	24.8	1.83
I25	22 Jan 2018	6	15.06	57.69	7.6	33.46	8.2	24.8	1.90
I25	22 Jan 2018	7	15.05	57.09	7.6	33.46	8.2	24.8	1.87
I25	22 Jan 2018	8	15.05	57.18	7.6	33.46	8.2	24.8	1.82
I25	22 Jan 2018	9	15.05	55.68	7.6	33.46	8.2	24.8	1.74
I25	29 Jan 2018	1	15.06	79.35	8.2	33.47	8.1	24.8	0.71
I25	29 Jan 2018	2	15.00	79.33	8.2	33.48	8.1	24.8	0.72
I25	29 Jan 2018	3	14.79	78.32	8.2	33.48	8.1	24.8	0.75
I25	29 Jan 2018	4	14.74	77.14	8.2	33.47	8.1	24.9	0.94
I25	29 Jan 2018	5	14.64	76.89	8.1	33.47	8.1	24.9	1.19
I25	29 Jan 2018	6	14.56	77.46	7.9	33.46	8.1	24.9	1.39
I25	29 Jan 2018	7	14.47	77.66	7.8	33.46	8.1	24.9	1.64
I25	29 Jan 2018	8	14.16	72.57	7.2	33.48	8.1	25.0	1.77

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ -t)	Chlor (μ g/L)
I25	29 Jan 2018	9	13.77	63.62	6.6	33.46	8.0	25.0	1.70
I26	03 Jan 2018	1	16.13	79.28	8.2	33.50	8.2	24.6	2.42
I26	03 Jan 2018	2	16.14	79.21	8.2	33.50	8.2	24.6	2.47
I26	03 Jan 2018	3	16.11	79.27	8.1	33.50	8.2	24.6	2.54
I26	03 Jan 2018	4	16.04	78.93	8.2	33.50	8.2	24.6	2.94
I26	03 Jan 2018	5	16.02	79.51	8.1	33.50	8.2	24.6	2.89
I26	03 Jan 2018	6	16.00	79.49	8.1	33.50	8.2	24.6	3.12
I26	03 Jan 2018	7	16.02	79.74	8.1	33.50	8.2	24.6	3.21
I26	03 Jan 2018	8	16.01	79.48	8.1	33.50	8.2	24.6	3.08
I26	03 Jan 2018	9	16.00	79.54	8.0	33.50	8.2	24.6	3.07
I26	11 Jan 2018	1	15.87	67.79	7.7	33.22	8.2	24.4	0.70
I26	11 Jan 2018	2	15.78	67.91	7.7	33.25	8.2	24.4	0.75
I26	11 Jan 2018	3	15.68	69.26	7.7	33.29	8.2	24.5	0.90
I26	11 Jan 2018	4	15.72	70.70	7.6	33.40	8.2	24.6	1.13
I26	11 Jan 2018	5	15.73	68.86	7.6	33.44	8.1	24.6	1.37
I26	11 Jan 2018	6	15.72	61.91	7.4	33.45	8.1	24.6	1.50
I26	11 Jan 2018	7	15.72	55.54	7.3	33.45	8.1	24.6	1.43
I26	11 Jan 2018	8	15.72	54.89	7.2	33.45	8.1	24.6	1.48
I26	11 Jan 2018	9	15.72	53.85	7.3	33.45	8.1	24.6	1.46
I26	16 Jan 2018	1	15.85	71.92	8.1	33.44	8.2	24.6	1.49
I26	16 Jan 2018	2	15.85	71.44	8.1	33.44	8.2	24.6	1.48
I26	16 Jan 2018	3	15.84	71.84	8.1	33.44	8.2	24.6	1.68
I26	16 Jan 2018	4	15.76	71.88	8.0	33.45	8.2	24.6	1.87
I26	16 Jan 2018	5	15.69	72.30	7.9	33.45	8.2	24.6	2.13
I26	16 Jan 2018	6	15.60	71.81	7.9	33.44	8.2	24.6	2.53
I26	16 Jan 2018	7	15.54	71.52	7.9	33.44	8.2	24.7	2.74
I26	16 Jan 2018	8	15.54	71.84	7.9	33.44	8.2	24.7	2.70
I26	16 Jan 2018	9	15.48	62.46	7.8	33.44	8.2	24.7	2.60
I26	22 Jan 2018	1	15.27	65.71	7.8	33.46	8.2	24.7	0.86
I26	22 Jan 2018	2	15.21	64.88	7.8	33.47	8.2	24.7	0.90
I26	22 Jan 2018	3	15.14	63.43	7.8	33.47	8.2	24.8	1.00
I26	22 Jan 2018	4	15.10	63.65	7.8	33.46	8.2	24.8	1.26
I26	22 Jan 2018	5	15.08	64.76	7.8	33.46	8.2	24.8	1.53
I26	22 Jan 2018	6	15.04	66.73	7.7	33.46	8.2	24.8	1.70
I26	22 Jan 2018	7	15.02	66.15	7.7	33.45	8.2	24.8	1.78
I26	22 Jan 2018	8	15.00	65.20	7.6	33.45	8.2	24.8	1.84
I26	22 Jan 2018	9	14.99	62.07	7.5	33.45	8.2	24.8	1.73
I26	29 Jan 2018	1	15.06	78.53	8.3	33.47	8.1	24.8	0.92
I26	29 Jan 2018	2	14.89	78.15	8.3	33.48	8.1	24.8	1.11
I26	29 Jan 2018	3	14.75	78.29	8.3	33.47	8.1	24.8	1.46
I26	29 Jan 2018	4	14.73	76.82	8.3	33.47	8.1	24.8	1.60
I26	29 Jan 2018	5	14.51	76.71	7.9	33.46	8.1	24.9	1.88
I26	29 Jan 2018	6	14.40	76.93	7.7	33.45	8.1	24.9	2.22
I26	29 Jan 2018	7	14.31	77.41	7.6	33.44	8.1	24.9	2.26
I26	29 Jan 2018	8	14.29	77.85	7.5	33.44	8.1	24.9	2.29
I26	29 Jan 2018	9	14.28	78.06	7.5	33.44	8.1	24.9	2.22
I32	03 Jan 2018	1	16.19	76.09	8.5	33.51	8.2	24.6	3.96
I32	03 Jan 2018	2	16.17	76.02	8.5	33.51	8.2	24.6	3.97
I32	03 Jan 2018	3	16.10	75.71	8.5	33.51	8.2	24.6	4.41

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ -t)	Chlor (μ g/L)
I32	03 Jan 2018	4	16.08	75.24	8.4	33.51	8.2	24.6	4.57
I32	03 Jan 2018	5	16.06	75.38	8.4	33.51	8.2	24.6	4.58
I32	03 Jan 2018	6	16.04	75.92	8.3	33.51	8.2	24.6	5.03
I32	03 Jan 2018	7	16.04	76.12	8.3	33.51	8.2	24.6	5.22
I32	03 Jan 2018	8	16.03	76.10	8.2	33.51	8.2	24.6	5.15
I32	03 Jan 2018	9	16.03	76.34	8.2	33.51	8.2	24.6	4.93
I32	03 Jan 2018	10	16.00	76.44	8.1	33.52	8.2	24.6	4.13
I32	11 Jan 2018	1	15.93	43.57	7.7	33.39	8.1	24.5	1.35
I32	11 Jan 2018	2	15.91	43.53	7.7	33.39	8.1	24.5	1.43
I32	11 Jan 2018	3	15.77	44.08	7.6	33.39	8.1	24.6	1.70
I32	11 Jan 2018	4	15.75	42.99	7.6	33.39	8.1	24.6	1.79
I32	11 Jan 2018	5	15.74	42.39	7.6	33.39	8.1	24.6	1.74
I32	11 Jan 2018	6	15.74	40.92	7.6	33.39	8.1	24.6	1.61
I32	11 Jan 2018	7	15.74	41.75	7.6	33.39	8.1	24.6	1.53
I32	11 Jan 2018	8	15.74	40.56	7.5	33.41	8.1	24.6	1.40
I32	11 Jan 2018	9	15.74	36.38	7.2	33.43	8.1	24.6	1.25
I32	11 Jan 2018	10	15.72	21.22	7.1	33.44	8.1	24.6	1.28
I32	16 Jan 2018	1	15.86	57.53	8.5	33.44	8.2	24.6	2.58
I32	16 Jan 2018	2	15.87	57.58	8.5	33.44	8.2	24.6	2.59
I32	16 Jan 2018	3	15.87	57.55	8.5	33.44	8.2	24.6	2.69
I32	16 Jan 2018	4	15.85	57.35	8.5	33.44	8.2	24.6	3.60
I32	16 Jan 2018	5	15.83	57.08	8.5	33.44	8.2	24.6	4.44
I32	16 Jan 2018	6	15.82	56.93	8.5	33.44	8.2	24.6	4.79
I32	16 Jan 2018	7	15.81	56.98	8.5	33.44	8.2	24.6	4.84
I32	16 Jan 2018	8	15.71	50.84	8.5	33.45	8.2	24.6	4.13
I32	16 Jan 2018	9	15.70	49.37	8.5	33.45	8.2	24.6	3.81
I32	16 Jan 2018	10	15.69	43.08	8.4	33.44	8.2	24.6	3.67
I32	22 Jan 2018	1	15.28	53.94	7.8	33.46	8.2	24.7	1.05
I32	22 Jan 2018	2	15.22	53.36	7.8	33.47	8.2	24.7	1.07
I32	22 Jan 2018	3	15.09	49.28	7.7	33.47	8.2	24.8	1.36
I32	22 Jan 2018	4	15.08	47.87	7.7	33.46	8.2	24.8	1.80
I32	22 Jan 2018	5	15.07	46.79	7.7	33.46	8.2	24.8	1.94
I32	22 Jan 2018	6	15.03	43.48	7.8	33.47	8.2	24.8	2.08
I32	22 Jan 2018	7	14.99	39.08	7.9	33.47	8.2	24.8	2.07
I32	22 Jan 2018	8	14.98	37.99	7.9	33.47	8.2	24.8	2.02
I32	22 Jan 2018	9	14.95	37.06	7.9	33.48	8.2	24.8	1.91
I32	22 Jan 2018	10	14.93	35.92	8.0	33.47	8.2	24.8	1.86
I32	29 Jan 2018	1	15.18	75.51	8.2	33.47	8.1	24.8	0.91
I32	29 Jan 2018	2	15.11	75.47	8.2	33.48	8.1	24.8	0.89
I32	29 Jan 2018	3	14.73	72.41	8.3	33.49	8.1	24.9	1.08
I32	29 Jan 2018	4	14.68	69.76	8.3	33.48	8.1	24.9	1.60
I32	29 Jan 2018	5	14.64	64.11	8.2	33.48	8.1	24.9	2.16
I32	29 Jan 2018	6	14.61	61.00	8.1	33.48	8.1	24.9	2.71
I32	29 Jan 2018	7	14.58	59.94	8.0	33.48	8.1	24.9	2.78
I32	29 Jan 2018	8	14.39	51.31	7.4	33.48	8.1	24.9	2.69
I32	29 Jan 2018	9	14.13	40.07	6.5	33.44	8.0	25.0	3.13
I32	29 Jan 2018	10	13.96	38.66	6.4	33.44	8.0	25.0	3.30
I39	03 Jan 2018	1	16.20	85.40	7.8	33.51	8.2	24.6	1.01
I39	03 Jan 2018	2	16.16	84.98	7.8	33.51	8.2	24.6	1.13
I39	03 Jan 2018	3	16.11	84.98	7.8	33.51	8.2	24.6	1.23

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ -t)	Chlor (μ g/L)
I39	03 Jan 2018	4	16.10	85.16	7.8	33.51	8.2	24.6	1.29
I39	03 Jan 2018	5	16.09	85.08	7.8	33.51	8.2	24.6	1.35
I39	03 Jan 2018	6	16.09	84.89	7.8	33.51	8.2	24.6	1.36
I39	03 Jan 2018	7	16.09	85.20	7.8	33.51	8.2	24.6	1.30
I39	03 Jan 2018	8	16.08	84.64	7.8	33.51	8.2	24.6	1.34
I39	03 Jan 2018	9	16.08	85.10	7.8	33.51	8.2	24.6	1.46
I39	03 Jan 2018	10	16.07	85.28	7.7	33.51	8.2	24.6	1.46
I39	03 Jan 2018	11	16.07	85.04	7.7	33.51	8.2	24.6	1.54
I39	03 Jan 2018	12	16.07	85.01	7.7	33.51	8.2	24.6	1.55
I39	03 Jan 2018	13	16.06	84.69	7.7	33.51	8.2	24.6	1.55
I39	03 Jan 2018	14	16.04	84.57	7.6	33.51	8.2	24.6	1.63
I39	03 Jan 2018	15	15.99	84.60	7.6	33.50	8.2	24.6	1.63
I39	03 Jan 2018	16	15.96	84.99	7.6	33.50	8.2	24.6	1.51
I39	03 Jan 2018	17	15.95	84.93	7.5	33.50	8.2	24.6	1.42
I39	03 Jan 2018	18	15.94	85.13	7.5	33.50	8.2	24.6	1.37
I39	11 Jan 2018	1	15.72	75.72	7.6	33.36	8.1	24.5	0.61
I39	11 Jan 2018	2	15.69	76.46	7.6	33.36	8.1	24.6	0.64
I39	11 Jan 2018	3	15.64	76.71	7.6	33.37	8.1	24.6	0.78
I39	11 Jan 2018	4	15.63	76.66	7.6	33.37	8.1	24.6	0.86
I39	11 Jan 2018	5	15.63	76.57	7.5	33.38	8.1	24.6	1.06
I39	11 Jan 2018	6	15.64	76.55	7.5	33.38	8.1	24.6	1.18
I39	11 Jan 2018	7	15.65	76.55	7.5	33.39	8.1	24.6	1.24
I39	11 Jan 2018	8	15.65	76.62	7.5	33.40	8.1	24.6	1.25
I39	11 Jan 2018	9	15.67	76.62	7.5	33.41	8.1	24.6	1.36
I39	11 Jan 2018	10	15.71	76.57	7.4	33.43	8.1	24.6	1.34
I39	11 Jan 2018	11	15.74	76.51	7.4	33.44	8.1	24.6	1.33
I39	11 Jan 2018	12	15.74	76.54	7.4	33.44	8.1	24.6	1.23
I39	11 Jan 2018	13	15.74	76.06	7.4	33.44	8.1	24.6	1.15
I39	11 Jan 2018	14	15.74	76.28	7.4	33.45	8.1	24.6	1.10
I39	11 Jan 2018	15	15.74	75.51	7.4	33.44	8.1	24.6	1.14
I39	11 Jan 2018	16	15.74	74.57	7.4	33.44	8.1	24.6	1.12
I39	11 Jan 2018	17	15.74	72.71	7.4	33.44	8.1	24.6	1.07
I39	11 Jan 2018	18	15.74	70.81	7.3	33.44	8.1	24.6	1.02
I39	16 Jan 2018	1	16.03	82.97	8.1	33.45	8.2	24.6	0.90
I39	16 Jan 2018	2	16.02	82.69	8.0	33.45	8.2	24.6	0.92
I39	16 Jan 2018	3	15.96	82.69	8.0	33.46	8.2	24.6	0.99
I39	16 Jan 2018	4	15.90	82.33	8.1	33.45	8.2	24.6	1.27
I39	16 Jan 2018	5	15.87	81.85	8.0	33.45	8.2	24.6	1.61
I39	16 Jan 2018	6	15.85	81.96	8.0	33.45	8.2	24.6	1.85
I39	16 Jan 2018	7	15.84	82.13	8.0	33.45	8.2	24.6	1.97
I39	16 Jan 2018	8	15.62	82.15	7.9	33.45	8.2	24.6	2.08
I39	16 Jan 2018	9	15.56	82.70	7.8	33.45	8.2	24.6	2.09
I39	16 Jan 2018	10	15.41	82.66	7.7	33.44	8.2	24.7	1.93
I39	16 Jan 2018	11	15.40	82.73	7.7	33.44	8.2	24.7	1.91
I39	16 Jan 2018	12	15.41	82.84	7.7	33.44	8.2	24.7	1.88
I39	16 Jan 2018	13	15.34	82.81	7.6	33.44	8.2	24.7	1.89
I39	16 Jan 2018	14	15.24	81.52	7.6	33.44	8.2	24.7	1.89
I39	16 Jan 2018	15	15.02	75.05	7.4	33.45	8.2	24.8	1.87
I39	16 Jan 2018	16	14.90	71.07	7.2	33.43	8.1	24.8	1.87
I39	16 Jan 2018	17	14.91	70.83	7.2	33.43	8.1	24.8	1.90
I39	16 Jan 2018	18	14.89	68.62	7.2	33.43	8.1	24.8	1.82
I39	22 Jan 2018	1	15.25	83.13	7.7	33.45	8.2	24.7	0.62

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ -t)	Chlor (μ g/L)
I39	22 Jan 2018	2	15.25	83.05	7.8	33.45	8.2	24.7	0.63
I39	22 Jan 2018	3	15.23	82.71	7.8	33.45	8.2	24.7	0.64
I39	22 Jan 2018	4	15.21	82.16	7.7	33.45	8.2	24.7	0.69
I39	22 Jan 2018	5	15.18	81.78	7.7	33.45	8.2	24.7	0.73
I39	22 Jan 2018	6	15.12	81.59	7.6	33.45	8.2	24.8	0.83
I39	22 Jan 2018	7	15.00	81.05	7.5	33.45	8.2	24.8	0.88
I39	22 Jan 2018	8	14.88	80.97	7.5	33.44	8.2	24.8	0.99
I39	22 Jan 2018	9	14.78	81.78	7.4	33.44	8.2	24.8	1.05
I39	22 Jan 2018	10	14.63	82.60	7.4	33.44	8.2	24.8	1.04
I39	22 Jan 2018	11	14.51	84.32	7.4	33.43	8.2	24.9	1.05
I39	22 Jan 2018	12	14.42	84.82	7.4	33.42	8.2	24.9	1.09
I39	22 Jan 2018	13	14.34	85.40	7.4	33.42	8.2	24.9	1.14
I39	22 Jan 2018	14	14.30	85.61	7.3	33.42	8.2	24.9	1.17
I39	22 Jan 2018	15	14.18	85.33	7.2	33.42	8.1	24.9	1.15
I39	22 Jan 2018	16	14.09	82.77	7.2	33.42	8.1	24.9	1.21
I39	22 Jan 2018	17	14.04	80.01	7.1	33.41	8.1	25.0	1.23
I39	22 Jan 2018	18	14.01	78.29	7.1	33.41	8.1	25.0	1.28
I39	29 Jan 2018	1	14.86	83.59	8.2	33.45	8.1	24.8	0.71
I39	29 Jan 2018	2	14.86	83.53	8.2	33.46	8.1	24.8	0.67
I39	29 Jan 2018	3	14.84	83.28	8.1	33.46	8.1	24.8	0.68
I39	29 Jan 2018	4	14.84	83.59	8.2	33.46	8.1	24.8	0.78
I39	29 Jan 2018	5	14.83	83.51	8.1	33.46	8.1	24.8	0.81
I39	29 Jan 2018	6	14.67	83.45	8.0	33.48	8.1	24.9	0.89
I39	29 Jan 2018	7	14.41	83.36	7.8	33.46	8.1	24.9	1.14
I39	29 Jan 2018	8	14.33	83.68	7.7	33.45	8.1	24.9	1.34
I39	29 Jan 2018	9	14.21	83.73	7.6	33.46	8.1	24.9	1.46
I39	29 Jan 2018	10	14.00	84.27	7.4	33.45	8.0	25.0	1.59
I39	29 Jan 2018	11	13.67	85.04	7.1	33.46	8.0	25.1	1.48
I39	29 Jan 2018	12	13.42	84.51	6.8	33.44	8.0	25.1	1.41
I39	29 Jan 2018	13	13.32	82.42	6.6	33.44	8.0	25.1	1.35
I39	29 Jan 2018	14	13.25	82.42	6.5	33.44	8.0	25.1	1.25
I39	29 Jan 2018	15	13.14	81.40	6.4	33.44	8.0	25.2	1.14
I39	29 Jan 2018	16	13.14	80.30	6.3	33.44	8.0	25.2	1.13
I39	29 Jan 2018	17	13.05	79.92	6.2	33.44	8.0	25.2	1.11
I39	29 Jan 2018	18	13.03	80.22	6.2	33.44	8.0	25.2	1.11
I40	03 Jan 2018	1	16.14	75.98	8.3	33.50	8.2	24.6	2.45
I40	03 Jan 2018	2	16.08	75.87	8.3	33.51	8.2	24.6	2.73
I40	03 Jan 2018	3	16.01	75.54	8.2	33.50	8.2	24.6	3.40
I40	03 Jan 2018	4	16.00	75.04	8.2	33.50	8.2	24.6	4.00
I40	03 Jan 2018	5	15.98	74.78	8.1	33.50	8.2	24.6	4.27
I40	03 Jan 2018	6	15.97	74.35	8.1	33.50	8.2	24.6	4.57
I40	03 Jan 2018	7	15.96	74.55	8.1	33.50	8.2	24.6	4.50
I40	03 Jan 2018	8	15.93	73.58	8.0	33.50	8.2	24.6	4.68
I40	03 Jan 2018	9	15.93	72.31	8.0	33.50	8.2	24.6	4.62
I40	03 Jan 2018	10	15.93	70.20	7.9	33.50	8.2	24.6	4.45
I40	11 Jan 2018	1	15.78	52.18	7.8	32.73	8.1	24.1	0.91
I40	11 Jan 2018	2	15.79	48.97	7.8	32.68	8.1	24.0	0.96
I40	11 Jan 2018	3	15.75	55.57	7.7	33.01	8.1	24.3	1.18
I40	11 Jan 2018	4	15.74	55.29	7.7	33.12	8.1	24.4	1.37
I40	11 Jan 2018	5	15.69	50.69	7.6	33.21	8.1	24.4	1.44
I40	11 Jan 2018	6	15.66	46.73	7.6	33.25	8.1	24.5	1.40
I40	11 Jan 2018	7	15.65	45.14	7.6	33.26	8.1	24.5	1.34

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (µg/L)
I40	11 Jan 2018	8	15.66	39.58	7.6	33.28	8.1	24.5	1.33
I40	11 Jan 2018	9	15.70	36.25	7.4	33.33	8.1	24.5	1.33
I40	11 Jan 2018	10	15.78	38.31	7.1	33.39	8.1	24.6	1.30
I40	16 Jan 2018	1	15.95	67.47	8.2	33.43	8.2	24.6	1.32
I40	16 Jan 2018	2	15.94	67.61	8.2	33.44	8.2	24.6	1.34
I40	16 Jan 2018	3	15.90	67.59	8.2	33.44	8.2	24.6	1.37
I40	16 Jan 2018	4	15.80	67.74	8.3	33.45	8.2	24.6	1.61
I40	16 Jan 2018	5	15.70	67.54	8.2	33.44	8.2	24.6	2.02
I40	16 Jan 2018	6	15.62	61.39	7.9	33.45	8.2	24.6	2.51
I40	16 Jan 2018	7	15.42	67.53	7.7	33.46	8.2	24.7	2.84
I40	16 Jan 2018	8	15.35	69.71	7.6	33.45	8.2	24.7	2.86
I40	16 Jan 2018	9	15.34	59.36	7.5	33.45	8.2	24.7	2.74
I40	16 Jan 2018	10	15.31	66.72	7.4	33.44	8.2	24.7	2.61
I40	22 Jan 2018	1	15.24	44.15	8.0	33.47	8.2	24.7	1.12
I40	22 Jan 2018	2	15.20	43.86	8.0	33.47	8.2	24.7	1.21
I40	22 Jan 2018	3	15.16	43.38	8.0	33.47	8.2	24.8	1.57
I40	22 Jan 2018	4	15.11	38.66	8.0	33.48	8.2	24.8	1.68
I40	22 Jan 2018	5	15.07	35.62	8.0	33.47	8.2	24.8	1.66
I40	22 Jan 2018	6	15.03	36.74	8.0	33.48	8.2	24.8	1.60
I40	22 Jan 2018	7	14.97	33.88	8.0	33.48	8.2	24.8	1.55
I40	22 Jan 2018	8	14.95	32.05	8.0	33.48	8.1	24.8	1.50
I40	22 Jan 2018	9	14.94	31.56	8.0	33.48	8.1	24.8	1.42
I40	22 Jan 2018	10	14.91	26.10	8.1	33.48	8.1	24.8	1.44
I40	29 Jan 2018	1	14.77	63.00	7.7	33.47	8.0	24.8	0.97
I40	29 Jan 2018	2	14.79	62.43	7.7	33.47	8.0	24.8	0.96
I40	29 Jan 2018	3	14.74	61.80	7.6	33.47	8.0	24.8	1.27
I40	29 Jan 2018	4	14.70	61.08	7.6	33.47	8.0	24.9	1.56
I40	29 Jan 2018	5	14.52	60.18	7.4	33.47	8.0	24.9	1.92
I40	29 Jan 2018	6	14.27	58.50	7.4	33.46	8.0	24.9	2.20
I40	29 Jan 2018	7	14.18	57.24	7.4	33.45	8.0	25.0	2.33
I40	29 Jan 2018	8	14.12	57.68	7.4	33.45	8.0	25.0	2.33
I40	29 Jan 2018	9	13.93	61.05	7.2	33.44	8.0	25.0	2.36
I40	29 Jan 2018	10	13.58	60.52	6.5	33.45	8.0	25.1	2.21

NA = not available

APPENDIX A

Quality Assurance

Table A.1

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

Station	Date	Depth	Analyst	Procedure	Total	Fecal	Entero
I19	03 Jan 2018	6	JT	LAB DUPLICATE	<2	<2	<2
I19	11 Jan 2018	6	AE	LAB DUPLICATE	>16000	2400e	1600e
I19	16 Jan 2018	6	AE	LAB DUPLICATE	940	14e	8e
I19	22 Jan 2018	6	ZV	LAB DUPLICATE	20e	<2	2e
I19	29 Jan 2018	6	JT	LAB DUPLICATE	<2	<2	<2
I40	03 Jan 2018	6	JT	LAB DUPLICATE	<2	<2	<2
I40	11 Jan 2018	6	ZV	LAB DUPLICATE	9000	660	940
I40	16 Jan 2018	6	AE	LAB DUPLICATE	700	40	6e
I40	22 Jan 2018	6	AE	LAB DUPLICATE	4e	<2	4e
I40	29 Jan 2018	6	JT	LAB DUPLICATE	<2	<2	<2
S12	02 Jan 2018		AR	FIELD DUPLICATE	<20	<2	<2
S12	02 Jan 2018		AR	LAB DUPLICATE	<20	2e	ns
S12	09 Jan 2018		AE	FIELD DUPLICATE	15000	980	2000e
S12	09 Jan 2018		AE	LAB DUPLICATE	16000	1200	2200e
S12	16 Jan 2018		LMA	FIELD DUPLICATE	<20	4e	36e
S12	16 Jan 2018		LMA	LAB DUPLICATE	<20	2e	20e
S12	23 Jan 2018		AR	FIELD DUPLICATE	<20	<2	<2
S12	23 Jan 2018		AR	LAB DUPLICATE	<20	2e	<2
S12	30 Jan 2018		LMA	FIELD DUPLICATE	<2	<2	<2
S12	30 Jan 2018		LMA	LAB DUPLICATE	<2	<2	ns

ns = not sampled

ND = no data

