

MONTHLY RECEIVING WATERS MONITORING REPORT FOR THE SOUTH BAY OCEAN OUTFALL

SOUTH BAY WATER RECLAMATION PLANT

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

SEPTEMBER 2017

Environmental Monitoring and Technical Services
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October 31, 2017

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

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

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

Sincerely,



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

TS/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, NPDES Permit No. CA0109045, for the South Bay Water Reclamation Plant (SBWRP), South Bay Ocean Outfall (SBOO). Order No. R9-2013-0006 superseded Order No. R9-2006-0067 effective April 4, 2013. This report includes receiving waters monitoring data collected from all shore, kelp and offshore stations specified in the above order. Data for influent and effluent monitoring activities for the SBWRP are presented in separate reports.

MATERIALS AND METHODS

Shore Stations

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

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

Kelp Bed Stations

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

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

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

internally averaged using the CTD proprietary software, Seasoftware, 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 chromomorphonic dissolved organic matter (CDOM). Visual observations of weather and water conditions were also recorded at all stations. Seawater samples for the analysis of indicator bacteria, suspended solids, and oil and grease concentrations were collected at 28 of the stations.

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

Bacteriological Reporting and Quality Assurance

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

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

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

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

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

Single Sample Maximums:

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

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

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

SUMMARY OF RESULTS

➤ **Shoreline Water Quality Sampling**

- Because of site access restrictions in Mexico, the South Bay shoreline sampling is carried out on the same day each week (i.e., Tuesday) in order to coordinate sampling between the Mexican and USA based stations. Seawater samples at the three shore stations located south of the USA/Mexico border (i.e., stations S0, S2 and S3) are presently collected by the Comisión Internacional de Límites y Aguas (CILA) and transported to the IBWC for subsequent delivery to the City's Marine Microbiology Lab, while samples from the eight stations located in USA waters are sampled by City staff.
- During September, two of the eight shore stations located north of the border were out of compliance with a California Ocean Plan (Ocean Plan) water-contact standard (see below); these standards do not apply to stations located in Mexican waters.
 - The single sample maximum (SSM) standard for *Enterococcus* was exceeded at stations S4 and S10 on September 5.
 - Per permit requirements, resamples were collected in response to these SSM exceedances (see Table 2.8 for details).
- Although the Ocean Plan standards do not apply to this station, bacteria densities exceeded one or more benchmark levels (i.e., total coliforms >10,000 CFU/100mL; fecal coliforms

>400 CFU/100 mL; *Enterococcus* >104 CFU/100 mL; total >1000 CFU/100 mL & F:T ratio >0.1) in the seawater samples collected at station S0 on September 5 and 19.

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

➤ **Kelp Bed Water Quality Sampling**

- The seven kelp bed water quality stations (I19, I24, I25, I26, I32, I39, I40) were sampled five times during September (i.e. September 5, 11, 16, 20, 28).
- During September, all seven stations were in compliance with all California Ocean Plan (Ocean Plan) water contact standards.
- Water column temperatures ranged from 13.46 to 20.72°C. The difference between surface and bottom waters ranged from approximately 0.23 to 6.17°C, indicating the water column was stratified at some of these sites during the month.
- Chlorophyll *a* concentrations ranged from 0.61 to 6.78 µg/L at these stations, suggesting the presence of phytoplankton blooms during the month.
- Nothing of sewage origin was observed at any of the offshore stations.

➤ **Offshore Water Quality Sampling**

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



TABLES AND FIGURES

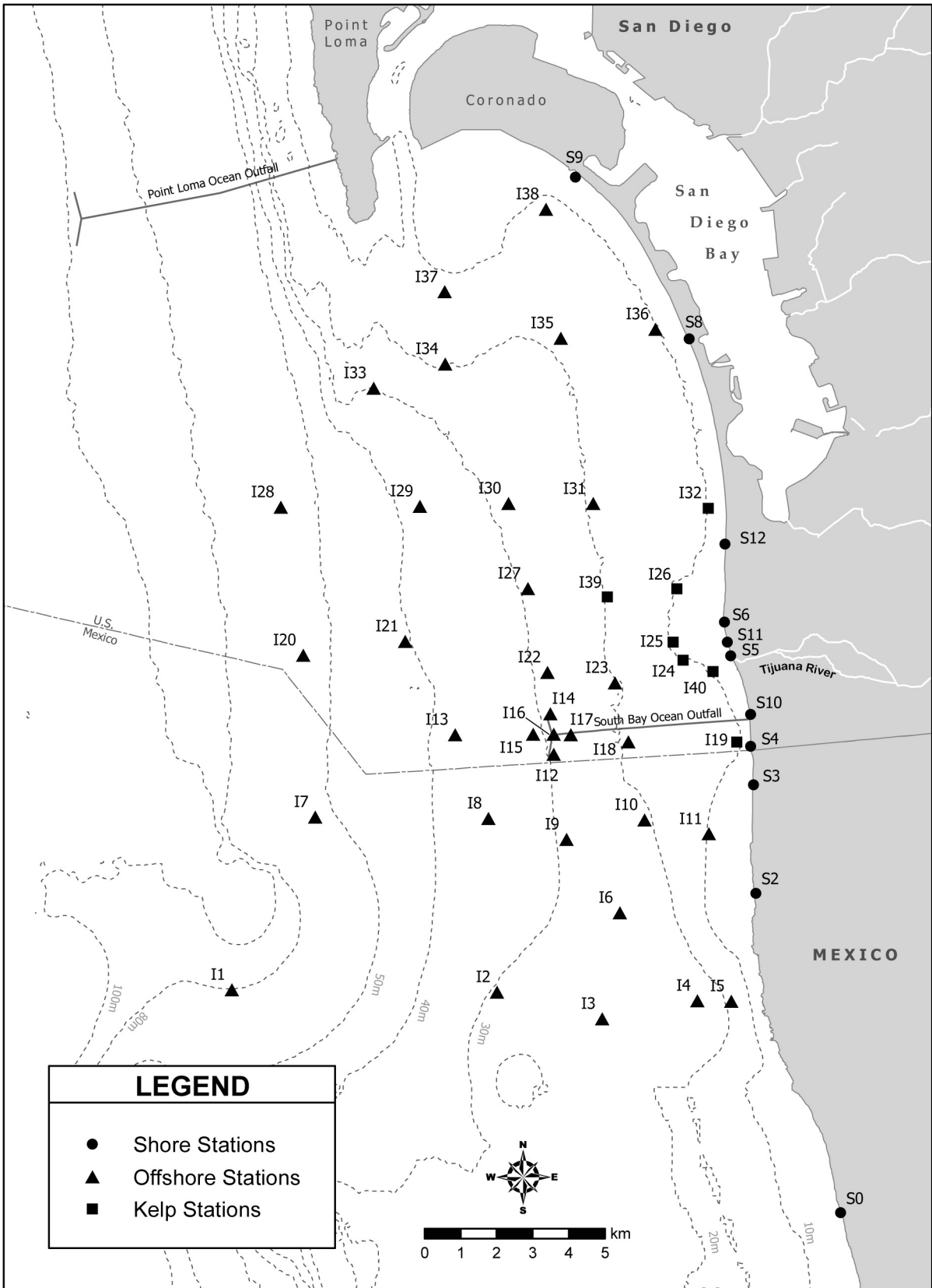


Figure 1.1 Station Map

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 Sep 2017	20*	36*	63*	20*	112*	36*	20*	36*
02 Sep 2017	20*	36*	63*	20*	112*	36*	20*	36*
03 Sep 2017	20*	36*	63*	20*	112*	36*	20*	36*
04 Sep 2017	20*	36*	63*	20*	112*	36*	20*	36*
05 Sep 2017	32	50	50	20	126	66	25	50
06 Sep 2017	32	50	50	20	126	66	25	50
07 Sep 2017	63*	63*	63*	20*	112*	89*	26*	63*
08 Sep 2017	63*	63*	63*	20*	112*	89*	26*	63*
09 Sep 2017	63*	63*	63*	20*	112*	89*	26*	63*
10 Sep 2017	63*	63*	63*	20*	112*	89*	26*	63*
11 Sep 2017	63*	63*	63*	20*	112*	89*	26*	63*
12 Sep 2017	42	32	50	13	80	48	25	50
13 Sep 2017	42	32	50	13	80	48	25	50
14 Sep 2017	28*	20*	36*	11*	63*	60*	26*	63*
15 Sep 2017	28*	20*	36*	11*	63*	60*	26*	63*
16 Sep 2017	28*	20*	36*	11*	63*	60*	26*	63*
17 Sep 2017	28*	20*	36*	11*	63*	60*	26*	63*
18 Sep 2017	28*	20*	36*	11*	63*	60*	26*	63*
19 Sep 2017	26	20	32	13	80	48	25	39
20 Sep 2017	26	20	32	13	80	48	25	39
21 Sep 2017	28*	20*	20*	11*	63*	34*	26*	26*
22 Sep 2017	28*	20*	20*	11*	63*	34*	26*	26*
23 Sep 2017	28*	20*	20*	11*	63*	34*	26*	26*
24 Sep 2017	28*	20*	20*	11*	63*	34*	26*	26*
25 Sep 2017	28*	20*	20*	11*	63*	34*	26*	26*
26 Sep 2017	26	13	20	13	50	30	25	25
27 Sep 2017	26	13	20	13	50	30	25	25
28 Sep 2017	28*	11*	20*	11*	63*	34*	26*	26*
29 Sep 2017	28*	11*	20*	11*	63*	34*	26*	26*
30 Sep 2017	28*	11*	20*	11*	63*	34*	26*	26*

* 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 Sep 2017	2*	2*	2*	2*	5*	2*	4*	2*
02 Sep 2017	2*	2*	2*	2*	5*	2*	4*	2*
03 Sep 2017	2*	2*	2*	2*	5*	2*	4*	2*
04 Sep 2017	2*	2*	2*	2*	5*	2*	4*	2*
05 Sep 2017	4	2	2	2	4	2	4	3
06 Sep 2017	4	2	2	2	4	2	4	3
07 Sep 2017	4*	2*	2*	2*	5*	3*	2*	4*
08 Sep 2017	4*	2*	2*	2*	5*	3*	2*	4*
09 Sep 2017	4*	2*	2*	2*	5*	3*	2*	4*
10 Sep 2017	4*	2*	2*	2*	5*	3*	2*	4*
11 Sep 2017	4*	2*	2*	2*	5*	3*	2*	4*
12 Sep 2017	5	2	2	2	4	4	2	4
13 Sep 2017	5	2	2	2	4	4	2	4
14 Sep 2017	5*	2*	2*	2*	5*	4*	2*	4*
15 Sep 2017	5*	2*	2*	2*	5*	4*	2*	4*
16 Sep 2017	5*	2*	2*	2*	5*	4*	2*	4*
17 Sep 2017	5*	2*	2*	2*	5*	4*	2*	4*
18 Sep 2017	5*	2*	2*	2*	5*	4*	2*	4*
19 Sep 2017	4	2	2	2	6	4	2	3
20 Sep 2017	4	2	2	2	6	4	2	3
21 Sep 2017	5*	2*	2*	2*	5*	4*	2*	4*
22 Sep 2017	5*	2*	2*	2*	5*	4*	2*	4*
23 Sep 2017	5*	2*	2*	2*	5*	4*	2*	4*
24 Sep 2017	5*	2*	2*	2*	5*	4*	2*	4*
25 Sep 2017	5*	2*	2*	2*	5*	4*	2*	4*
26 Sep 2017	4	2	2	2	4	4	2	3
27 Sep 2017	4	2	2	2	4	4	2	3
28 Sep 2017	5*	2*	2*	2*	4*	4*	2*	4*
29 Sep 2017	5*	2*	2*	2*	4*	4*	2*	4*
30 Sep 2017	5*	2*	2*	2*	4*	4*	2*	4*

* Geometric mean calculated using n<5

Table 2.3

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

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

* Geometric mean calculated using n<5

Table 2.4

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

Date	S4	S5	S6	S8	S9	S10	S11	S12
05 Sep 2017	IC	IC	IC	IC	IC	IC	IC	IC
12 Sep 2017	IC	IC	IC	IC	IC	IC	IC	IC
19 Sep 2017	IC	IC	IC	IC	IC	IC	IC	IC
26 Sep 2017	IC	IC	IC	IC	IC	IC	IC	IC

IC = In Compliance

E = Exceedance

ns = not sampled

ND = no data

Table 2.5

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

Date	S4	S5	S6	S8	S9	S10	S11	S12
05 Sep 2017	IC	IC	IC	IC	IC	IC	IC	IC
12 Sep 2017	IC	IC	IC	IC	IC	IC	IC	IC
19 Sep 2017	IC	IC	IC	IC	IC	IC	IC	IC
26 Sep 2017	IC	IC	IC	IC	IC	IC	IC	IC

IC = In Compliance

E = Exceedance

ns = not sampled

ND = no data

Table 2.6

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

Date	S4	S5	S6	S8	S9	S10	S11	S12
05 Sep 2017	E	IC	IC	IC	IC	E	IC	IC
07 Sep 2017	IC	ns	ns	ns	ns	IC	ns	ns
12 Sep 2017	IC	IC	IC	IC	IC	IC	IC	IC
19 Sep 2017	IC	IC	IC	IC	IC	IC	IC	IC
26 Sep 2017	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
05 Sep 2017	IC	IC	IC	IC	IC	IC	IC	IC
12 Sep 2017	IC	IC	IC	IC	IC	IC	IC	IC
19 Sep 2017	IC	IC	IC	IC	IC	IC	IC	IC
26 Sep 2017	IC	IC	IC	IC	IC	IC	IC	IC

IC = In Compliance

E = Exceedance

ns = not sampled

ND = no data

Table 2.8

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

Station	Date	Time	Total	Fecal	Entero	F:T
S0	05 Sep 2017	1120	280e	4e	110	0.014
S0	12 Sep 2017	1100	<20	<2	2e	0.100
S0	19 Sep 2017	1030	1400	68	480	0.049
S0	26 Sep 2017	1020	1000e	18e	54	0.018
S2	05 Sep 2017	1250	60e	2e	6e	0.033
S2	12 Sep 2017	1130	2e	<2	<2	1.000
S2	19 Sep 2017	1140	<20	<2	<2	0.100
S2	26 Sep 2017	1110	<20	<2	<2	0.100
S3	05 Sep 2017	1210	20e	<2	2e	0.100
S3	12 Sep 2017	1215	<20	2e	10e	0.100
S3	19 Sep 2017	1210	<2	<2	<2	1.000
S3	26 Sep 2017	1135	<20	<2	<2	0.100
S4	05 Sep 2017	822	<200	20e	200e	0.100
S4	07 Sep 2017	1059	ns	ns	<2	ns
S4	12 Sep 2017	1051	8e	8e	2e	1.000
S4	19 Sep 2017	858	<20	2e	<2	0.100
S4	26 Sep 2017	825	<20	<2	<2	0.100
S5	05 Sep 2017	957	<200	<2	16e	0.010
S5	12 Sep 2017	906	<2	<2	<2	1.000
S5	19 Sep 2017	1013	<20	<2	<2	0.100
S5	26 Sep 2017	1040	<2	<2	<2	1.000
S6	05 Sep 2017	947	20e	<2	16e	0.100
S6	12 Sep 2017	853	<20	<2	<2	0.100
S6	19 Sep 2017	1048	<20	<2	<2	0.100
S6	26 Sep 2017	1029	<20	<2	<2	0.100
S8	05 Sep 2017	1105	<20	<2	<2	0.100
S8	12 Sep 2017	817	<2	<2	<2	1.000
S8	19 Sep 2017	1208	<20	<2	4e	0.100
S8	26 Sep 2017	1154	<20	2e	2e	0.100
S9	05 Sep 2017	1152	<200	2e	<2	0.010
S9	12 Sep 2017	755	<20	2e	<2	0.100
S9	19 Sep 2017	1241	<200	<20	2e	0.100
S9	26 Sep 2017	1226	<20	<2	<2	0.100
S10	05 Sep 2017	815	800e	6e	120	0.007
S10	07 Sep 2017	1044	ns	ns	<2	ns
S10	12 Sep 2017	1057	4e	12e	2e	3.000
S10	19 Sep 2017	831	<20	<2	<2	0.100
S10	26 Sep 2017	819	<20	<2	<2	0.100
S11	05 Sep 2017	951	60e	2e	14e	0.033
S11	12 Sep 2017	900	<20	<2	<2	0.100

Station	Date	Time	Total	Fecal	Entero	F:T
S11	19 Sep 2017	1031	20e	<2	<2	0.100
S11	26 Sep 2017	1034	<20	2e	<2	0.100
S12	05 Sep 2017	931	<200	16e	20e	0.080
S12	12 Sep 2017	937	20e	4e	<2	0.200
S12	19 Sep 2017	1118	6e	<2	2e	0.333
S12	26 Sep 2017	1014	<20	<2	<2	0.100

ns = not sampled

ND = no data

Comments

Station	Date	Depth	Parameter	Comments
S10	07 Sep 2017			Resample
S4	07 Sep 2017			Resample

Table 2.9

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

Station	Date	Parameter	Value
S0	05 Sep 2017	Arrive Time	1120
S0	05 Sep 2017	Weather	Cloudy
S0	05 Sep 2017	Wind Speed (kts)	6.4
S0	05 Sep 2017	Wind Dir	NE
S0	05 Sep 2017	Animal Life	5 Seagulls
S0	05 Sep 2017	Floatables	None
S0	05 Sep 2017	Water Color	Green
S0	05 Sep 2017	Current Direction	S
S0	05 Sep 2017	Water Temp (C)	18
S0	05 Sep 2017	Wave Height Low (ft)	2
S0	05 Sep 2017	High Tide (ft)	4.8
S0	05 Sep 2017	High Tide Time	932
S0	05 Sep 2017	Low Tide (ft)	1.2
S0	05 Sep 2017	Low Tide Time	1516
S0	05 Sep 2017	Comments	Kelp; Seagrass; Algae; Water clear
S0	12 Sep 2017	Arrive Time	1100
S0	12 Sep 2017	Weather	Sunny
S0	12 Sep 2017	Wind Speed (kts)	3.9
S0	12 Sep 2017	Wind Dir	NW
S0	12 Sep 2017	Animal Life	10 Shorebirds; 2 Dogs
S0	12 Sep 2017	Floatables	None
S0	12 Sep 2017	Water Color	Green
S0	12 Sep 2017	Current Direction	NW
S0	12 Sep 2017	Water Temp (C)	17
S0	12 Sep 2017	Wave Height Low (ft)	3
S0	12 Sep 2017	High Tide (ft)	5.1
S0	12 Sep 2017	High Tide Time	1419
S0	12 Sep 2017	Low Tide (ft)	2.2
S0	12 Sep 2017	Low Tide Time	744
S0	12 Sep 2017	Comments	Kelp; Seagrass; 1 Person; Water clear; Flow from storm drain 0.5 L/sec
S0	19 Sep 2017	Arrive Time	1030
S0	19 Sep 2017	Weather	Cloudy
S0	19 Sep 2017	Wind Speed (kts)	1.1
S0	19 Sep 2017	Wind Dir	SW
S0	19 Sep 2017	Animal Life	15 Shorebirds; 5 Dogs
S0	19 Sep 2017	Floatables	None
S0	19 Sep 2017	Water Color	Green
S0	19 Sep 2017	Current Direction	SW
S0	19 Sep 2017	Water Temp (C)	16
S0	19 Sep 2017	Wave Height Low (ft)	2
S0	19 Sep 2017	High Tide (ft)	5.3
S0	19 Sep 2017	High Tide Time	923
S0	19 Sep 2017	Low Tide (ft)	0.6
S0	19 Sep 2017	Low Tide Time	1522
S0	19 Sep 2017	Comments	Kelp; 5 Persons; Water clear; Flow from storm drain 1.5 L/sec
S0	26 Sep 2017	Arrive Time	1020
S0	26 Sep 2017	Weather	Sunny

Station	Date	Parameter	Value
S0	26 Sep 2017	Wind Speed (kts)	2.2
S0	26 Sep 2017	Wind Dir	SE
S0	26 Sep 2017	Animal Life	5 Shorebirds
S0	26 Sep 2017	Floatables	None
S0	26 Sep 2017	Water Color	Green
S0	26 Sep 2017	Current Direction	SE
S0	26 Sep 2017	Water Temp (C)	16
S0	26 Sep 2017	Wave Height Low (ft)	3
S0	26 Sep 2017	High Tide (ft)	4.4
S0	26 Sep 2017	High Tide Time	1321
S0	26 Sep 2017	Low Tide (ft)	2.7
S0	26 Sep 2017	Low Tide Time	647
S0	26 Sep 2017	Comments	Kelp; Water clear; Flow from storm drain 1.0 L/sec
S2	05 Sep 2017	Arrive Time	1250
S2	05 Sep 2017	Weather	Cloudy
S2	05 Sep 2017	Wind Speed (kts)	4.7
S2	05 Sep 2017	Wind Dir	NE
S2	05 Sep 2017	Animal Life	15 Seagulls
S2	05 Sep 2017	Floatables	None
S2	05 Sep 2017	Water Color	Green
S2	05 Sep 2017	Current Direction	S
S2	05 Sep 2017	Water Temp (C)	18
S2	05 Sep 2017	Wave Height Low (ft)	2.5
S2	05 Sep 2017	High Tide (ft)	4.8
S2	05 Sep 2017	High Tide Time	932
S2	05 Sep 2017	Low Tide (ft)	1.2
S2	05 Sep 2017	Low Tide Time	1516
S2	05 Sep 2017	Comments	Kelp; Algae; 2 Persons; Water clear
S2	12 Sep 2017	Arrive Time	1130
S2	12 Sep 2017	Weather	Sunny
S2	12 Sep 2017	Wind Speed (kts)	4
S2	12 Sep 2017	Wind Dir	NW
S2	12 Sep 2017	Animal Life	20 Shorebirds; 4 Dogs
S2	12 Sep 2017	Floatables	None
S2	12 Sep 2017	Water Color	Green
S2	12 Sep 2017	Current Direction	NW
S2	12 Sep 2017	Water Temp (C)	17
S2	12 Sep 2017	Wave Height Low (ft)	3
S2	12 Sep 2017	High Tide (ft)	5.1
S2	12 Sep 2017	High Tide Time	1419
S2	12 Sep 2017	Low Tide (ft)	2.2
S2	12 Sep 2017	Low Tide Time	744
S2	12 Sep 2017	Comments	Kelp; Seagrass; 6 Persons; Water clear; No flow from storm drain
S2	19 Sep 2017	Arrive Time	1140
S2	19 Sep 2017	Weather	Cloudy
S2	19 Sep 2017	Wind Speed (kts)	0.9
S2	19 Sep 2017	Wind Dir	SW
S2	19 Sep 2017	Animal Life	5 Shorebirds
S2	19 Sep 2017	Floatables	None
S2	19 Sep 2017	Water Color	Green
S2	19 Sep 2017	Current Direction	SW
S2	19 Sep 2017	Water Temp (C)	16

Station	Date	Parameter	Value
S2	19 Sep 2017	Wave Height Low (ft)	2
S2	19 Sep 2017	High Tide (ft)	5.3
S2	19 Sep 2017	High Tide Time	923
S2	19 Sep 2017	Low Tide (ft)	0.6
S2	19 Sep 2017	Low Tide Time	1522
S2	19 Sep 2017	Comments	Kelp; 5 Persons; Water clear; No flow from storm drain
S2	26 Sep 2017	Arrive Time	1110
S2	26 Sep 2017	Weather	Sunny
S2	26 Sep 2017	Wind Speed (kts)	3.2
S2	26 Sep 2017	Wind Dir	SE
S2	26 Sep 2017	Animal Life	10 Dolphins
S2	26 Sep 2017	Floatables	None
S2	26 Sep 2017	Water Color	Green
S2	26 Sep 2017	Current Direction	SE
S2	26 Sep 2017	Water Temp (C)	16
S2	26 Sep 2017	Wave Height Low (ft)	2
S2	26 Sep 2017	High Tide (ft)	4.4
S2	26 Sep 2017	High Tide Time	1321
S2	26 Sep 2017	Low Tide (ft)	2.7
S2	26 Sep 2017	Low Tide Time	647
S2	26 Sep 2017	Comments	Kelp; Water clear; No flow from storm drain
S3	05 Sep 2017	Arrive Time	1210
S3	05 Sep 2017	Weather	Cloudy
S3	05 Sep 2017	Wind Speed (kts)	3.8
S3	05 Sep 2017	Wind Dir	NE
S3	05 Sep 2017	Animal Life	10 Seagulls
S3	05 Sep 2017	Floatables	None
S3	05 Sep 2017	Water Color	Green
S3	05 Sep 2017	Current Direction	NE
S3	05 Sep 2017	Water Temp (C)	18
S3	05 Sep 2017	Wave Height Low (ft)	1.5
S3	05 Sep 2017	High Tide (ft)	4.8
S3	05 Sep 2017	High Tide Time	932
S3	05 Sep 2017	Low Tide (ft)	1.2
S3	05 Sep 2017	Low Tide Time	1516
S3	05 Sep 2017	Comments	Kelp; Seagrass; Algae; Water clear
S3	12 Sep 2017	Arrive Time	1215
S3	12 Sep 2017	Weather	Sunny
S3	12 Sep 2017	Wind Speed (kts)	4.1
S3	12 Sep 2017	Wind Dir	NW
S3	12 Sep 2017	Animal Life	12 Shorebirds; 3 Dogs
S3	12 Sep 2017	Floatables	None
S3	12 Sep 2017	Water Color	Green
S3	12 Sep 2017	Current Direction	NW
S3	12 Sep 2017	Water Temp (C)	17
S3	12 Sep 2017	Wave Height Low (ft)	3
S3	12 Sep 2017	High Tide (ft)	5.1
S3	12 Sep 2017	High Tide Time	1419
S3	12 Sep 2017	Low Tide (ft)	2.2
S3	12 Sep 2017	Low Tide Time	744
S3	12 Sep 2017	Comments	Kelp; Seagrass; 7 Persons; 5 Surfers; Water clear; No flow from storm drain

Station	Date	Parameter	Value
S3	19 Sep 2017	Arrive Time	1210
S3	19 Sep 2017	Weather	Cloudy
S3	19 Sep 2017	Wind Speed (kts)	1.1
S3	19 Sep 2017	Wind Dir	SW
S3	19 Sep 2017	Animal Life	>20 Shorebirds; 5 Dogs
S3	19 Sep 2017	Floatables	None
S3	19 Sep 2017	Water Color	Green
S3	19 Sep 2017	Current Direction	SW
S3	19 Sep 2017	Water Temp (C)	16
S3	19 Sep 2017	Wave Height Low (ft)	2
S3	19 Sep 2017	High Tide (ft)	5.3
S3	19 Sep 2017	High Tide Time	923
S3	19 Sep 2017	Low Tide (ft)	0.6
S3	19 Sep 2017	Low Tide Time	1522
S3	19 Sep 2017	Comments	Kelp; 20 Persons; Water clear; No flow from storm drain
S3	26 Sep 2017	Arrive Time	1135
S3	26 Sep 2017	Weather	Sunny
S3	26 Sep 2017	Wind Speed (kts)	2.8
S3	26 Sep 2017	Wind Dir	SE
S3	26 Sep 2017	Animal Life	5 Shorebirds; 10 Dolphins
S3	26 Sep 2017	Floatables	None
S3	26 Sep 2017	Water Color	Green
S3	26 Sep 2017	Current Direction	SE
S3	26 Sep 2017	Water Temp (C)	16
S3	26 Sep 2017	Wave Height Low (ft)	2
S3	26 Sep 2017	High Tide (ft)	4.4
S3	26 Sep 2017	High Tide Time	1321
S3	26 Sep 2017	Low Tide (ft)	2.7
S3	26 Sep 2017	Low Tide Time	647
S3	26 Sep 2017	Comments	Kelp; Water clear; No flow from storm drain
S4	05 Sep 2017	Arrive Time	822
S4	05 Sep 2017	Weather	Cloudy
S4	05 Sep 2017	Wind Speed (kts)	1.1
S4	05 Sep 2017	Wind Dir	W
S4	05 Sep 2017	Animal Life	7 Plovers
S4	05 Sep 2017	Floatables	None
S4	05 Sep 2017	Water Color	Green
S4	05 Sep 2017	Current Direction	N
S4	05 Sep 2017	Water Temp (C)	11.5
S4	05 Sep 2017	Wave Height Low (ft)	3
S4	05 Sep 2017	High Tide (ft)	4.8
S4	05 Sep 2017	High Tide Time	932
S4	05 Sep 2017	Low Tide (ft)	-0.2
S4	05 Sep 2017	Low Tide Time	326
S4	05 Sep 2017	Comments	Kelp; Seagrass; Water clear
S4	07 Sep 2017	Arrive Time	1059
S4	07 Sep 2017	Weather	Sunny
S4	07 Sep 2017	Wind Speed (kts)	5.5
S4	07 Sep 2017	Wind Dir	NW
S4	07 Sep 2017	Animal Life	None
S4	07 Sep 2017	Floatables	None

Station	Date	Parameter	Value
S4	07 Sep 2017	Water Color	Green
S4	07 Sep 2017	Current Direction	N
S4	07 Sep 2017	Water Temp (C)	18.6
S4	07 Sep 2017	Wave Height Low (ft)	2
S4	07 Sep 2017	High Tide (ft)	5.1
S4	07 Sep 2017	High Tide Time	1030
S4	07 Sep 2017	Low Tide (ft)	0.8
S4	07 Sep 2017	Low Tide Time	1631
S4	07 Sep 2017	Comments	Kelp; Seagrass; Water clear
S4	12 Sep 2017	Arrive Time	1051
S4	12 Sep 2017	Weather	Sunny
S4	12 Sep 2017	Wind Speed (kts)	2
S4	12 Sep 2017	Wind Dir	NW
S4	12 Sep 2017	Animal Life	None
S4	12 Sep 2017	Floatables	None
S4	12 Sep 2017	Water Color	Green
S4	12 Sep 2017	Current Direction	N
S4	12 Sep 2017	Water Temp (C)	19
S4	12 Sep 2017	Wave Height Low (ft)	2
S4	12 Sep 2017	High Tide (ft)	5.1
S4	12 Sep 2017	High Tide Time	1419
S4	12 Sep 2017	Low Tide (ft)	2.2
S4	12 Sep 2017	Low Tide Time	744
S4	12 Sep 2017	Comments	Kelp; Water clear
S4	19 Sep 2017	Arrive Time	858
S4	19 Sep 2017	Weather	Overcast
S4	19 Sep 2017	Wind Speed (kts)	5.6
S4	19 Sep 2017	Wind Dir	SW
S4	19 Sep 2017	Animal Life	None
S4	19 Sep 2017	Floatables	None
S4	19 Sep 2017	Water Color	Green
S4	19 Sep 2017	Current Direction	N
S4	19 Sep 2017	Water Temp (C)	13.2
S4	19 Sep 2017	Wave Height Low (ft)	1
S4	19 Sep 2017	High Tide (ft)	5.3
S4	19 Sep 2017	High Tide Time	923
S4	19 Sep 2017	Low Tide (ft)	-0.3
S4	19 Sep 2017	Low Tide Time	315
S4	19 Sep 2017	Comments	Kelp; Water clear
S4	26 Sep 2017	Arrive Time	825
S4	26 Sep 2017	Weather	Sunny
S4	26 Sep 2017	Wind Speed (kts)	2.1
S4	26 Sep 2017	Wind Dir	W
S4	26 Sep 2017	Animal Life	None
S4	26 Sep 2017	Floatables	None
S4	26 Sep 2017	Water Color	Green
S4	26 Sep 2017	Current Direction	N
S4	26 Sep 2017	Water Temp (C)	13.5
S4	26 Sep 2017	Wave Height Low (ft)	2
S4	26 Sep 2017	High Tide (ft)	4.4
S4	26 Sep 2017	High Tide Time	1321
S4	26 Sep 2017	Low Tide (ft)	2.7

Station	Date	Parameter	Value
S4	26 Sep 2017	Low Tide Time	647
S4	26 Sep 2017	Comments	Kelp; Seagrass; Water clear
S5	05 Sep 2017	Arrive Time	957
S5	05 Sep 2017	Weather	Cloudy
S5	05 Sep 2017	Wind Speed (kts)	1.3
S5	05 Sep 2017	Wind Dir	NW
S5	05 Sep 2017	Animal Life	None
S5	05 Sep 2017	Floatables	None
S5	05 Sep 2017	Water Color	Green
S5	05 Sep 2017	Current Direction	N
S5	05 Sep 2017	Water Temp (C)	15.6
S5	05 Sep 2017	Wave Height Low (ft)	3
S5	05 Sep 2017	High Tide (ft)	4.8
S5	05 Sep 2017	High Tide Time	932
S5	05 Sep 2017	Low Tide (ft)	1.2
S5	05 Sep 2017	Low Tide Time	1516
S5	05 Sep 2017	Comments	Kelp; Seagrass; Water clear
S5	12 Sep 2017	Arrive Time	906
S5	12 Sep 2017	Weather	Overcast
S5	12 Sep 2017	Wind Speed (kts)	4
S5	12 Sep 2017	Wind Dir	W
S5	12 Sep 2017	Animal Life	None
S5	12 Sep 2017	Floatables	None
S5	12 Sep 2017	Water Color	Green
S5	12 Sep 2017	Current Direction	N
S5	12 Sep 2017	Water Temp (C)	17.5
S5	12 Sep 2017	Wave Height Low (ft)	2
S5	12 Sep 2017	High Tide (ft)	5.1
S5	12 Sep 2017	High Tide Time	1419
S5	12 Sep 2017	Low Tide (ft)	2.2
S5	12 Sep 2017	Low Tide Time	744
S5	12 Sep 2017	Comments	Kelp; Seagrass; 2 Persons; Water clear
S5	19 Sep 2017	Arrive Time	1013
S5	19 Sep 2017	Weather	Sunny
S5	19 Sep 2017	Wind Speed (kts)	6.6
S5	19 Sep 2017	Wind Dir	S
S5	19 Sep 2017	Animal Life	None
S5	19 Sep 2017	Floatables	None
S5	19 Sep 2017	Water Color	Green
S5	19 Sep 2017	Current Direction	N
S5	19 Sep 2017	Water Temp (C)	16.3
S5	19 Sep 2017	Wave Height Low (ft)	2
S5	19 Sep 2017	High Tide (ft)	5.3
S5	19 Sep 2017	High Tide Time	923
S5	19 Sep 2017	Low Tide (ft)	0.6
S5	19 Sep 2017	Low Tide Time	1522
S5	19 Sep 2017	Comments	Seagrass; Water clear
S5	26 Sep 2017	Arrive Time	1040
S5	26 Sep 2017	Weather	Sunny
S5	26 Sep 2017	Wind Speed (kts)	4.1
S5	26 Sep 2017	Wind Dir	W

Station	Date	Parameter	Value
S5	26 Sep 2017	Animal Life	3 Birds
S5	26 Sep 2017	Floatables	None
S5	26 Sep 2017	Water Color	Green
S5	26 Sep 2017	Current Direction	NE
S5	26 Sep 2017	Water Temp (C)	17.6
S5	26 Sep 2017	Wave Height Low (ft)	1
S5	26 Sep 2017	High Tide (ft)	4.4
S5	26 Sep 2017	High Tide Time	1321
S5	26 Sep 2017	Low Tide (ft)	2.7
S5	26 Sep 2017	Low Tide Time	647
S5	26 Sep 2017	Comments	Water clear
S6	05 Sep 2017	Arrive Time	947
S6	05 Sep 2017	Weather	Cloudy
S6	05 Sep 2017	Wind Speed (kts)	2.7
S6	05 Sep 2017	Wind Dir	W
S6	05 Sep 2017	Animal Life	None
S6	05 Sep 2017	Floatables	None
S6	05 Sep 2017	Water Color	Green
S6	05 Sep 2017	Current Direction	N
S6	05 Sep 2017	Water Temp (C)	15.9
S6	05 Sep 2017	Wave Height Low (ft)	3
S6	05 Sep 2017	High Tide (ft)	4.8
S6	05 Sep 2017	High Tide Time	932
S6	05 Sep 2017	Low Tide (ft)	1.2
S6	05 Sep 2017	Low Tide Time	1516
S6	05 Sep 2017	Comments	Kelp; Seagrass; 3 Persons; Water clear
S6	12 Sep 2017	Arrive Time	853
S6	12 Sep 2017	Weather	Overcast
S6	12 Sep 2017	Wind Speed (kts)	3.3
S6	12 Sep 2017	Wind Dir	NW
S6	12 Sep 2017	Animal Life	None
S6	12 Sep 2017	Floatables	None
S6	12 Sep 2017	Water Color	Green
S6	12 Sep 2017	Current Direction	NW
S6	12 Sep 2017	Water Temp (C)	18
S6	12 Sep 2017	Wave Height Low (ft)	1
S6	12 Sep 2017	High Tide (ft)	5.1
S6	12 Sep 2017	High Tide Time	1419
S6	12 Sep 2017	Low Tide (ft)	2.2
S6	12 Sep 2017	Low Tide Time	744
S6	12 Sep 2017	Comments	Kelp; 2 Surfers; Water clear
S6	19 Sep 2017	Arrive Time	1048
S6	19 Sep 2017	Weather	Sunny
S6	19 Sep 2017	Wind Speed (kts)	7.5
S6	19 Sep 2017	Wind Dir	S
S6	19 Sep 2017	Animal Life	None
S6	19 Sep 2017	Floatables	None
S6	19 Sep 2017	Water Color	Green
S6	19 Sep 2017	Current Direction	N
S6	19 Sep 2017	Water Temp (C)	15.3
S6	19 Sep 2017	Wave Height Low (ft)	2
S6	19 Sep 2017	High Tide (ft)	5.3

Station	Date	Parameter	Value
S6	19 Sep 2017	High Tide Time	923
S6	19 Sep 2017	Low Tide (ft)	0.6
S6	19 Sep 2017	Low Tide Time	1522
S6	19 Sep 2017	Comments	6 Persons; Water clear
S6	26 Sep 2017	Arrive Time	1029
S6	26 Sep 2017	Weather	Sunny
S6	26 Sep 2017	Wind Speed (kts)	5.2
S6	26 Sep 2017	Wind Dir	W
S6	26 Sep 2017	Animal Life	1 Dog
S6	26 Sep 2017	Floatables	None
S6	26 Sep 2017	Water Color	Green
S6	26 Sep 2017	Current Direction	N
S6	26 Sep 2017	Water Temp (C)	17.1
S6	26 Sep 2017	Wave Height Low (ft)	2
S6	26 Sep 2017	High Tide (ft)	4.4
S6	26 Sep 2017	High Tide Time	1321
S6	26 Sep 2017	Low Tide (ft)	2.7
S6	26 Sep 2017	Low Tide Time	647
S6	26 Sep 2017	Comments	Kelp; Seagrass; 1 Person; Water clear
S8	05 Sep 2017	Arrive Time	1105
S8	05 Sep 2017	Weather	Cloudy
S8	05 Sep 2017	Wind Speed (kts)	6.8
S8	05 Sep 2017	Wind Dir	W
S8	05 Sep 2017	Animal Life	3 Plovers
S8	05 Sep 2017	Floatables	None
S8	05 Sep 2017	Water Color	Green
S8	05 Sep 2017	Current Direction	N
S8	05 Sep 2017	Water Temp (C)	18.1
S8	05 Sep 2017	Wave Height Low (ft)	3
S8	05 Sep 2017	High Tide (ft)	4.8
S8	05 Sep 2017	High Tide Time	932
S8	05 Sep 2017	Low Tide (ft)	1.2
S8	05 Sep 2017	Low Tide Time	1516
S8	05 Sep 2017	Comments	Kelp; Seagrass; 1 Person; 1 Fisherman; Water clear
S8	12 Sep 2017	Arrive Time	817
S8	12 Sep 2017	Weather	Overcast
S8	12 Sep 2017	Wind Speed (kts)	2.7
S8	12 Sep 2017	Wind Dir	N
S8	12 Sep 2017	Animal Life	None
S8	12 Sep 2017	Floatables	None
S8	12 Sep 2017	Water Color	Green
S8	12 Sep 2017	Current Direction	N
S8	12 Sep 2017	Water Temp (C)	18
S8	12 Sep 2017	Wave Height Low (ft)	2
S8	12 Sep 2017	High Tide (ft)	3.4
S8	12 Sep 2017	High Tide Time	234
S8	12 Sep 2017	Low Tide (ft)	2.2
S8	12 Sep 2017	Low Tide Time	744
S8	12 Sep 2017	Comments	Kelp; 2 Persons; Water clear
S8	19 Sep 2017	Arrive Time	1208
S8	19 Sep 2017	Weather	Sunny

Station	Date	Parameter	Value
S8	19 Sep 2017	Wind Speed (kts)	6
S8	19 Sep 2017	Wind Dir	W
S8	19 Sep 2017	Animal Life	None
S8	19 Sep 2017	Floatables	None
S8	19 Sep 2017	Water Color	Colorless
S8	19 Sep 2017	Current Direction	N
S8	19 Sep 2017	Water Temp (C)	16.7
S8	19 Sep 2017	Wave Height Low (ft)	2
S8	19 Sep 2017	High Tide (ft)	5.3
S8	19 Sep 2017	High Tide Time	923
S8	19 Sep 2017	Low Tide (ft)	0.6
S8	19 Sep 2017	Low Tide Time	1522
S8	19 Sep 2017	Comments	Seagrass; 16 Persons; Water clear
S8	26 Sep 2017	Arrive Time	1154
S8	26 Sep 2017	Weather	Sunny
S8	26 Sep 2017	Wind Speed (kts)	3.6
S8	26 Sep 2017	Wind Dir	W
S8	26 Sep 2017	Animal Life	None
S8	26 Sep 2017	Floatables	None
S8	26 Sep 2017	Water Color	Green
S8	26 Sep 2017	Current Direction	N
S8	26 Sep 2017	Water Temp (C)	18.3
S8	26 Sep 2017	Wave Height Low (ft)	2
S8	26 Sep 2017	High Tide (ft)	4.4
S8	26 Sep 2017	High Tide Time	1321
S8	26 Sep 2017	Low Tide (ft)	2.7
S8	26 Sep 2017	Low Tide Time	647
S8	26 Sep 2017	Comments	Seagrass; 23 Persons; Water clear
S9	05 Sep 2017	Arrive Time	1152
S9	05 Sep 2017	Weather	Partly Cloudy
S9	05 Sep 2017	Wind Speed (kts)	7.5
S9	05 Sep 2017	Wind Dir	NW
S9	05 Sep 2017	Animal Life	None
S9	05 Sep 2017	Floatables	None
S9	05 Sep 2017	Water Color	Green
S9	05 Sep 2017	Current Direction	N
S9	05 Sep 2017	Water Temp (C)	18.3
S9	05 Sep 2017	Wave Height Low (ft)	2
S9	05 Sep 2017	High Tide (ft)	4.8
S9	05 Sep 2017	High Tide Time	932
S9	05 Sep 2017	Low Tide (ft)	1.2
S9	05 Sep 2017	Low Tide Time	1516
S9	05 Sep 2017	Comments	Kelp; Seagrass; 7 Persons; 4 Surfers; 3 Swimmers; Water clear
S9	12 Sep 2017	Arrive Time	755
S9	12 Sep 2017	Weather	Overcast
S9	12 Sep 2017	Wind Speed (kts)	1.7
S9	12 Sep 2017	Wind Dir	NW
S9	12 Sep 2017	Animal Life	None
S9	12 Sep 2017	Floatables	None
S9	12 Sep 2017	Water Color	Green
S9	12 Sep 2017	Current Direction	N
S9	12 Sep 2017	Water Temp (C)	18

Station	Date	Parameter	Value
S9	12 Sep 2017	Wave Height Low (ft)	1
S9	12 Sep 2017	High Tide (ft)	3.4
S9	12 Sep 2017	High Tide Time	234
S9	12 Sep 2017	Low Tide (ft)	2.2
S9	12 Sep 2017	Low Tide Time	744
S9	12 Sep 2017	Comments	Kelp; 4 Joggers; Water clear
S9	19 Sep 2017	Arrive Time	1241
S9	19 Sep 2017	Weather	Sunny
S9	19 Sep 2017	Wind Speed (kts)	3.6
S9	19 Sep 2017	Wind Dir	S
S9	19 Sep 2017	Animal Life	None
S9	19 Sep 2017	Floatables	None
S9	19 Sep 2017	Water Color	Green
S9	19 Sep 2017	Current Direction	N
S9	19 Sep 2017	Water Temp (C)	17
S9	19 Sep 2017	Wave Height Low (ft)	1
S9	19 Sep 2017	High Tide (ft)	5.3
S9	19 Sep 2017	High Tide Time	923
S9	19 Sep 2017	Low Tide (ft)	0.6
S9	19 Sep 2017	Low Tide Time	1522
S9	19 Sep 2017	Comments	Kelp; Seagrass; Water clear; Lots of kelp in the water
S9	26 Sep 2017	Arrive Time	1226
S9	26 Sep 2017	Weather	Sunny
S9	26 Sep 2017	Wind Speed (kts)	2.3
S9	26 Sep 2017	Wind Dir	W
S9	26 Sep 2017	Animal Life	None
S9	26 Sep 2017	Floatables	None
S9	26 Sep 2017	Water Color	Green
S9	26 Sep 2017	Current Direction	N
S9	26 Sep 2017	Water Temp (C)	18.3
S9	26 Sep 2017	Wave Height Low (ft)	2
S9	26 Sep 2017	High Tide (ft)	4.4
S9	26 Sep 2017	High Tide Time	1321
S9	26 Sep 2017	Low Tide (ft)	2.7
S9	26 Sep 2017	Low Tide Time	647
S9	26 Sep 2017	Comments	33 Persons; 5 Swimmers; Water clear
S10	05 Sep 2017	Arrive Time	815
S10	05 Sep 2017	Weather	Cloudy
S10	05 Sep 2017	Wind Speed (kts)	3.3
S10	05 Sep 2017	Wind Dir	W
S10	05 Sep 2017	Animal Life	2 Shorebirds; 1 Seagull
S10	05 Sep 2017	Floatables	None
S10	05 Sep 2017	Water Color	Green
S10	05 Sep 2017	Current Direction	N
S10	05 Sep 2017	Water Temp (C)	14.8
S10	05 Sep 2017	Wave Height Low (ft)	3
S10	05 Sep 2017	High Tide (ft)	4.8
S10	05 Sep 2017	High Tide Time	932
S10	05 Sep 2017	Low Tide (ft)	-0.2
S10	05 Sep 2017	Low Tide Time	326
S10	05 Sep 2017	Comments	Kelp; Seagrass; Water clear

Station	Date	Parameter	Value
S10	07 Sep 2017	Arrive Time	1044
S10	07 Sep 2017	Weather	Sunny
S10	07 Sep 2017	Wind Speed (kts)	5.8
S10	07 Sep 2017	Wind Dir	W
S10	07 Sep 2017	Animal Life	None
S10	07 Sep 2017	Floatables	None
S10	07 Sep 2017	Water Color	Green
S10	07 Sep 2017	Current Direction	N
S10	07 Sep 2017	Water Temp (C)	18
S10	07 Sep 2017	Wave Height Low (ft)	2
S10	07 Sep 2017	High Tide (ft)	5.1
S10	07 Sep 2017	High Tide Time	1030
S10	07 Sep 2017	Low Tide (ft)	0.8
S10	07 Sep 2017	Low Tide Time	1631
S10	07 Sep 2017	Comments	Kelp; Seagrass; Water clear
S10	12 Sep 2017	Arrive Time	1057
S10	12 Sep 2017	Weather	Sunny
S10	12 Sep 2017	Wind Speed (kts)	4.8
S10	12 Sep 2017	Wind Dir	NW
S10	12 Sep 2017	Animal Life	None
S10	12 Sep 2017	Floatables	None
S10	12 Sep 2017	Water Color	Green
S10	12 Sep 2017	Current Direction	N
S10	12 Sep 2017	Water Temp (C)	18.1
S10	12 Sep 2017	Wave Height Low (ft)	2
S10	12 Sep 2017	High Tide (ft)	5.1
S10	12 Sep 2017	High Tide Time	1419
S10	12 Sep 2017	Low Tide (ft)	2.2
S10	12 Sep 2017	Low Tide Time	744
S10	12 Sep 2017	Comments	Kelp; 1 Person; Water clear
S10	19 Sep 2017	Arrive Time	831
S10	19 Sep 2017	Weather	Overcast
S10	19 Sep 2017	Wind Speed (kts)	3.1
S10	19 Sep 2017	Wind Dir	N
S10	19 Sep 2017	Animal Life	None
S10	19 Sep 2017	Floatables	None
S10	19 Sep 2017	Water Color	Green
S10	19 Sep 2017	Current Direction	SW
S10	19 Sep 2017	Water Temp (C)	13.6
S10	19 Sep 2017	Wave Height Low (ft)	1
S10	19 Sep 2017	High Tide (ft)	5.3
S10	19 Sep 2017	High Tide Time	923
S10	19 Sep 2017	Low Tide (ft)	-0.3
S10	19 Sep 2017	Low Tide Time	315
S10	19 Sep 2017	Comments	Seagrass; Water clear
S10	26 Sep 2017	Arrive Time	819
S10	26 Sep 2017	Weather	Sunny
S10	26 Sep 2017	Wind Speed (kts)	0.1
S10	26 Sep 2017	Wind Dir	W
S10	26 Sep 2017	Animal Life	None
S10	26 Sep 2017	Floatables	None
S10	26 Sep 2017	Water Color	Green

Station	Date	Parameter	Value
S10	26 Sep 2017	Current Direction	N
S10	26 Sep 2017	Water Temp (C)	14.3
S10	26 Sep 2017	Wave Height Low (ft)	1
S10	26 Sep 2017	High Tide (ft)	4.4
S10	26 Sep 2017	High Tide Time	1321
S10	26 Sep 2017	Low Tide (ft)	2.7
S10	26 Sep 2017	Low Tide Time	647
S10	26 Sep 2017	Comments	Seagrass; Water clear
S11	05 Sep 2017	Arrive Time	951
S11	05 Sep 2017	Weather	Cloudy
S11	05 Sep 2017	Wind Speed (kts)	0.5
S11	05 Sep 2017	Wind Dir	W
S11	05 Sep 2017	Animal Life	None
S11	05 Sep 2017	Floatables	None
S11	05 Sep 2017	Water Color	Green
S11	05 Sep 2017	Current Direction	N
S11	05 Sep 2017	Water Temp (C)	15.6
S11	05 Sep 2017	Wave Height Low (ft)	3
S11	05 Sep 2017	High Tide (ft)	4.8
S11	05 Sep 2017	High Tide Time	932
S11	05 Sep 2017	Low Tide (ft)	1.2
S11	05 Sep 2017	Low Tide Time	1516
S11	05 Sep 2017	Comments	Kelp; Seagrass; 3 Persons; Water clear
S11	12 Sep 2017	Arrive Time	900
S11	12 Sep 2017	Weather	Overcast
S11	12 Sep 2017	Wind Speed (kts)	2.5
S11	12 Sep 2017	Wind Dir	W
S11	12 Sep 2017	Animal Life	None
S11	12 Sep 2017	Floatables	None
S11	12 Sep 2017	Water Color	Green
S11	12 Sep 2017	Current Direction	N
S11	12 Sep 2017	Water Temp (C)	17.2
S11	12 Sep 2017	Wave Height Low (ft)	1
S11	12 Sep 2017	High Tide (ft)	5.1
S11	12 Sep 2017	High Tide Time	1419
S11	12 Sep 2017	Low Tide (ft)	2.2
S11	12 Sep 2017	Low Tide Time	744
S11	12 Sep 2017	Comments	Kelp; 1 Person; Water clear
S11	19 Sep 2017	Arrive Time	1031
S11	19 Sep 2017	Weather	Sunny
S11	19 Sep 2017	Wind Speed (kts)	8.3
S11	19 Sep 2017	Wind Dir	S
S11	19 Sep 2017	Animal Life	None
S11	19 Sep 2017	Floatables	None
S11	19 Sep 2017	Water Color	Green
S11	19 Sep 2017	Current Direction	N
S11	19 Sep 2017	Water Temp (C)	15.1
S11	19 Sep 2017	Wave Height Low (ft)	2
S11	19 Sep 2017	High Tide (ft)	5.3
S11	19 Sep 2017	High Tide Time	923
S11	19 Sep 2017	Low Tide (ft)	0.6
S11	19 Sep 2017	Low Tide Time	1522

Station	Date	Parameter	Value
S11	19 Sep 2017	Comments	Kelp; Seagrass; Water clear
S11	26 Sep 2017	Arrive Time	1034
S11	26 Sep 2017	Weather	Sunny
S11	26 Sep 2017	Wind Speed (kts)	4.4
S11	26 Sep 2017	Wind Dir	W
S11	26 Sep 2017	Animal Life	None
S11	26 Sep 2017	Floatables	None
S11	26 Sep 2017	Water Color	Green
S11	26 Sep 2017	Current Direction	N
S11	26 Sep 2017	Water Temp (C)	17.2
S11	26 Sep 2017	Wave Height Low (ft)	2
S11	26 Sep 2017	High Tide (ft)	4.4
S11	26 Sep 2017	High Tide Time	1321
S11	26 Sep 2017	Low Tide (ft)	2.7
S11	26 Sep 2017	Low Tide Time	647
S11	26 Sep 2017	Comments	Kelp; Water clear; Lots of kelp in water
S12	05 Sep 2017	Arrive Time	931
S12	05 Sep 2017	Weather	Cloudy
S12	05 Sep 2017	Wind Speed (kts)	2.1
S12	05 Sep 2017	Wind Dir	W
S12	05 Sep 2017	Animal Life	5 Sand Pipers
S12	05 Sep 2017	Floatables	None
S12	05 Sep 2017	Water Color	Green
S12	05 Sep 2017	Current Direction	N
S12	05 Sep 2017	Water Temp (C)	16.6
S12	05 Sep 2017	Wave Height Low (ft)	2
S12	05 Sep 2017	High Tide (ft)	4.8
S12	05 Sep 2017	High Tide Time	932
S12	05 Sep 2017	Low Tide (ft)	1.2
S12	05 Sep 2017	Low Tide Time	1516
S12	05 Sep 2017	Comments	Kelp; Seagrass; Water clear
S12	12 Sep 2017	Arrive Time	937
S12	12 Sep 2017	Weather	Overcast
S12	12 Sep 2017	Wind Speed (kts)	1.7
S12	12 Sep 2017	Wind Dir	NW
S12	12 Sep 2017	Animal Life	None
S12	12 Sep 2017	Floatables	None
S12	12 Sep 2017	Water Color	Green
S12	12 Sep 2017	Current Direction	N
S12	12 Sep 2017	Water Temp (C)	18.2
S12	12 Sep 2017	Wave Height Low (ft)	1
S12	12 Sep 2017	High Tide (ft)	5.1
S12	12 Sep 2017	High Tide Time	1419
S12	12 Sep 2017	Low Tide (ft)	2.2
S12	12 Sep 2017	Low Tide Time	744
S12	12 Sep 2017	Comments	Kelp; 10 Persons; 2 Fishermen; Water clear
S12	19 Sep 2017	Arrive Time	1118
S12	19 Sep 2017	Weather	Sunny
S12	19 Sep 2017	Wind Speed (kts)	7.1
S12	19 Sep 2017	Wind Dir	SW
S12	19 Sep 2017	Animal Life	1 Dog

Station	Date	Parameter	Value
S12	19 Sep 2017	Floatables	None
S12	19 Sep 2017	Water Color	Green
S12	19 Sep 2017	Current Direction	N
S12	19 Sep 2017	Water Temp (C)	16.1
S12	19 Sep 2017	Wave Height Low (ft)	1
S12	19 Sep 2017	High Tide (ft)	5.3
S12	19 Sep 2017	High Tide Time	923
S12	19 Sep 2017	Low Tide (ft)	0.6
S12	19 Sep 2017	Low Tide Time	1522
S12	19 Sep 2017	Comments	Kelp; Seagrass; 4 Persons; Water clear
S12	26 Sep 2017	Arrive Time	1014
S12	26 Sep 2017	Weather	Sunny
S12	26 Sep 2017	Wind Speed (kts)	2.4
S12	26 Sep 2017	Wind Dir	W
S12	26 Sep 2017	Animal Life	None
S12	26 Sep 2017	Floatables	None
S12	26 Sep 2017	Water Color	Green
S12	26 Sep 2017	Current Direction	N
S12	26 Sep 2017	Water Temp (C)	16
S12	26 Sep 2017	Wave Height Low (ft)	2
S12	26 Sep 2017	High Tide (ft)	4.4
S12	26 Sep 2017	High Tide Time	1321
S12	26 Sep 2017	Low Tide (ft)	2.7
S12	26 Sep 2017	Low Tide Time	647
S12	26 Sep 2017	Comments	Kelp; Seagrass; 5 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 Sep 2017	6*	3*	3*	2*	8	4*	12*
02 Sep 2017	6*	3*	3*	2*	7*	4*	12*
03 Sep 2017	6*	3*	3*	2*	7*	4*	12*
04 Sep 2017	6*	3*	3*	2*	7*	4*	12*
05 Sep 2017	9	5	7	4	7	5	14
06 Sep 2017	9	5	7	4	7	5	14
07 Sep 2017	9	5	7	4	7	5	14
08 Sep 2017	9	5	7	4	7	5	14
09 Sep 2017	7*	4*	6*	4*	6*	6*	16*
10 Sep 2017	7*	4*	6*	4*	6*	6*	16*
11 Sep 2017	7	5	5	4	7	5	11
12 Sep 2017	7	5	5	4	7	5	11
13 Sep 2017	7	5	5	4	7	5	11
14 Sep 2017	7	5	5	4	7	5	11
15 Sep 2017	7	5	5	4	7	5	11
16 Sep 2017	7	5	4	3	7	4	10
17 Sep 2017	7	5	4	3	7	4	10
18 Sep 2017	10	6	5	4	6	3	10
19 Sep 2017	10	6	5	4	6	3	10
20 Sep 2017	7	5	4	4	7	4	7
21 Sep 2017	7	5	4	4	7	4	7
22 Sep 2017	7	6	5	5	10	4	6
23 Sep 2017	7	6	5	5	10	4	6
24 Sep 2017	7	6	5	5	10	4	6
25 Sep 2017	7	6	5	5	10	4	6
26 Sep 2017	7	6	5	5	10	4	6
27 Sep 2017	9*	8*	5*	6*	12*	5*	6*
28 Sep 2017	7	6	4	5	8	4	5
29 Sep 2017	7	6	4	5	8	4	5
30 Sep 2017	7	6	4	5	8	4	5

* 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 Sep 2017	2*	2*	2*	2*	2	2*	2*
02 Sep 2017	2*	2*	2*	2*	2*	2*	2*
03 Sep 2017	2*	2*	2*	2*	2*	2*	2*
04 Sep 2017	2*	2*	2*	2*	2*	2*	2*
05 Sep 2017	2	2	2	2	2	2	2
06 Sep 2017	2	2	2	2	2	2	2
07 Sep 2017	2	2	2	2	2	2	2
08 Sep 2017	2	2	2	2	2	2	2
09 Sep 2017	2*	2*	2*	2*	2*	2*	2*
10 Sep 2017	2*	2*	2*	2*	2*	2*	2*
11 Sep 2017	2	2	2	2	2	2	2
12 Sep 2017	2	2	2	2	2	2	2
13 Sep 2017	2	2	2	2	2	2	2
14 Sep 2017	2	2	2	2	2	2	2
15 Sep 2017	2	2	2	2	2	2	2
16 Sep 2017	2	2	2	2	2	2	2
17 Sep 2017	2	2	2	2	2	2	2
18 Sep 2017	2	2	2	2	2	2	2
19 Sep 2017	2	2	2	2	2	2	2
20 Sep 2017	2	2	2	2	2	2	2
21 Sep 2017	2	2	2	2	2	2	2
22 Sep 2017	2	2	2	2	2	2	2
23 Sep 2017	2	2	2	2	2	2	2
24 Sep 2017	2	2	2	2	2	2	2
25 Sep 2017	2	2	2	2	2	2	2
26 Sep 2017	2	2	2	2	2	2	2
27 Sep 2017	2*	2*	2*	2*	2*	2*	2*
28 Sep 2017	2	2	2	2	2	2	2
29 Sep 2017	2	2	2	2	2	2	2
30 Sep 2017	2	2	2	2	2	2	2

* Geometric mean calculated using n<5

Table 3.3

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

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

* 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
05 Sep 2017	IC	IC	IC	IC	IC	IC	IC
11 Sep 2017	IC	IC	IC	IC	IC	IC	IC
16 Sep 2017	IC	IC	IC	IC	IC	IC	IC
20 Sep 2017	IC	IC	IC	IC	IC	IC	IC
28 Sep 2017	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
05 Sep 2017	IC	IC	IC	IC	IC	IC	IC
11 Sep 2017	IC	IC	IC	IC	IC	IC	IC
16 Sep 2017	IC	IC	IC	IC	IC	IC	IC
20 Sep 2017	IC	IC	IC	IC	IC	IC	IC
28 Sep 2017	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
05 Sep 2017	IC	IC	IC	IC	IC	IC	IC
11 Sep 2017	IC	IC	IC	IC	IC	IC	IC
16 Sep 2017	IC	IC	IC	IC	IC	IC	IC
20 Sep 2017	IC	IC	IC	IC	IC	IC	IC
28 Sep 2017	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
05 Sep 2017	IC	IC	IC	IC	IC	IC	IC
11 Sep 2017	IC	IC	IC	IC	IC	IC	IC
16 Sep 2017	IC	IC	IC	IC	IC	IC	IC
20 Sep 2017	IC	IC	IC	IC	IC	IC	IC
28 Sep 2017	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
119	05 Sep 2017	1125	2	20e	<2	8e	0.10	19.6	74.11	8.0	33.33	8.3	ns	ns
119	05 Sep 2017	1125	6	60e	2e	8e	0.03	18.6	67.96	8.2	33.35	8.3	ns	ns
119	05 Sep 2017	1125	11	60e	2e	12e	0.03	18.4	74.85	8.3	33.34	8.3	ns	ns
119	11 Sep 2017	1200	2	<2	<2	<2	1.00	18.7	84.14	8.0	33.40	8.2	ns	ns
119	11 Sep 2017	1200	6	<2	<2	<2	1.00	16.4	78.38	7.9	33.39	8.2	ns	ns
119	11 Sep 2017	1200	11	<20	<2	<2	0.10	14.6	73.23	7.4	33.37	8.2	ns	ns
119	16 Sep 2017	1107	2	<2	<2	<2	1.00	18.5	75.43	8.3	33.36	8.2	ns	ns
119	16 Sep 2017	1107	6	<2	<2	<2	1.00	17.1	61.64	8.1	33.34	8.1	ns	ns
119	16 Sep 2017	1107	11	20e	2e	<2	0.10	14.7	39.89	6.8	33.41	7.9	ns	ns
119	20 Sep 2017	1042	2	<2	<2	<2	1.00	18.7	80.56	8.3	33.35	8.2	ns	ns
119	20 Sep 2017	1042	6	<2	<2	<2	1.00	18.4	79.50	8.3	33.35	8.2	ns	ns
119	20 Sep 2017	1042	11	<2	<2	<2	1.00	17.8	75.35	8.1	33.35	8.2	ns	ns
119	28 Sep 2017	1112	2	<2	<2	<2	1.00	18.9	76.65	7.9	33.40	8.2	ns	ns
119	28 Sep 2017	1112	6	<2	<2	<2	1.00	16.2	78.28	8.2	33.36	8.1	ns	ns
119	28 Sep 2017	1112	11	<2	<2	<2	1.00	15.5	70.30	7.4	33.33	8.1	ns	ns
124	05 Sep 2017	1147	2	<20	<2	18e	0.10	19.8	73.89	8.3	33.36	8.3	ns	ns
124	05 Sep 2017	1147	6	60e	2e	6e	0.03	18.4	79.72	8.4	33.37	8.3	ns	ns
124	05 Sep 2017	1147	11	20e	2e	4e	0.10	18.1	78.48	8.4	33.35	8.3	ns	ns
124	11 Sep 2017	1227	2	<2	<2	<2	1.00	18.4	83.94	8.1	33.37	8.2	ns	ns
124	11 Sep 2017	1227	6	<2	<2	<2	1.00	15.8	76.08	8.2	33.38	8.2	ns	ns
124	11 Sep 2017	1227	11	<20	<2	<2	0.10	14.1	71.88	7.2	33.35	8.1	ns	ns
124	16 Sep 2017	1126	2	<2	<2	<2	1.00	17.5	76.52	8.5	33.34	8.1	ns	ns
124	16 Sep 2017	1126	6	<2	<2	<2	1.00	15.7	63.97	7.6	33.34	8.0	ns	ns
124	16 Sep 2017	1126	11	<20	<2	<2	0.10	14.4	55.65	6.7	33.34	7.9	ns	ns
124	20 Sep 2017	1101	2	<2	<2	<2	1.00	17.9	81.86	8.3	33.35	8.2	ns	ns
124	20 Sep 2017	1101	6	<2	<2	<2	1.00	17.8	81.19	8.3	33.35	8.2	ns	ns
124	20 Sep 2017	1101	11	<2	<2	<2	1.00	14.9	67.44	7.3	33.47	8.0	ns	ns
124	28 Sep 2017	1133	2	<2	<2	<2	1.00	19.1	83.80	8.1	33.42	8.2	ns	ns
124	28 Sep 2017	1133	6	<2	<2	<2	1.00	16.0	81.50	8.2	33.35	8.2	ns	ns
124	28 Sep 2017	1133	11	<2	<2	<2	1.00	14.8	72.52	7.4	33.32	8.1	ns	ns
125	05 Sep 2017	1155	2	60e	<2	30e	0.03	19.9	76.17	8.3	33.34	8.3	ns	ns
125	05 Sep 2017	1155	6	160e	<2	14e	0.01	18.5	79.88	8.5	33.37	8.3	ns	ns
125	05 Sep 2017	1155	9	60e	<2	8e	0.03	18.2	78.79	8.6	33.35	8.3	ns	ns
125	11 Sep 2017	1234	2	<2	<2	<2	1.00	18.9	84.73	8.1	33.38	8.2	ns	ns
125	11 Sep 2017	1234	6	<2	<2	<2	1.00	16.2	79.59	8.2	33.35	8.2	ns	ns

Station	Date	Time	Depth	Total	Fecal	Entero	F:T	Temp	XMS	DO	Sal	pH	OG	SUSO
I25	11 Sep 2017	1234	9	2e	<2	<2	1.00	14.2	74.64	7.5	33.35	8.2	ns	ns
I25	16 Sep 2017	1134	2	<2	<2	<2	1.00	17.7	82.27	8.3	33.35	8.2	ns	ns
I25	16 Sep 2017	1134	6	<2	<2	<2	1.00	16.0	75.42	7.9	33.40	8.1	ns	ns
I25	16 Sep 2017	1134	9	2e	<2	<2	1.00	15.0	63.93	7.3	33.34	8.0	ns	ns
I25	20 Sep 2017	1110	2	<2	<2	<2	1.00	17.9	80.66	8.3	33.36	8.2	ns	ns
I25	20 Sep 2017	1110	6	<2	<2	<2	1.00	17.9	84.06	8.4	33.36	8.2	ns	ns
I25	20 Sep 2017	1110	9	2e	<2	<2	1.00	16.7	80.73	7.9	33.39	8.2	ns	ns
I25	28 Sep 2017	1142	2	<2	<2	<2	1.00	19.2	85.25	8.2	33.41	8.2	ns	ns
I25	28 Sep 2017	1142	6	<2	<2	<2	1.00	17.0	84.64	8.4	33.36	8.2	ns	ns
I25	28 Sep 2017	1142	9	<2	<2	<2	1.00	15.3	76.37	8.0	33.32	8.1	ns	ns
I26	05 Sep 2017	1205	2	<20	<2	2e	0.10	19.5	79.05	8.3	33.36	8.3	ns	ns
I26	05 Sep 2017	1205	6	60e	2e	2e	0.03	18.8	79.75	8.5	33.35	8.3	ns	ns
I26	05 Sep 2017	1205	9	20e	<2	4e	0.10	18.8	79.55	8.4	33.35	8.3	ns	ns
I26	11 Sep 2017	1243	2	<2	<2	<2	1.00	18.7	84.48	8.1	33.38	8.2	ns	ns
I26	11 Sep 2017	1243	6	<2	<2	<2	1.00	17.0	79.57	8.2	33.37	8.2	ns	ns
I26	11 Sep 2017	1243	9	<2	<2	<2	1.00	14.8	74.80	7.5	33.37	8.2	ns	ns
I26	16 Sep 2017	1143	2	<2	<2	<2	1.00	18.2	83.34	8.3	33.32	8.2	ns	ns
I26	16 Sep 2017	1143	6	<2	<2	<2	1.00	16.6	75.93	8.1	33.41	8.2	ns	ns
I26	16 Sep 2017	1143	9	<2	<2	<2	1.00	14.6	68.61	7.6	33.34	8.0	ns	ns
I26	20 Sep 2017	1119	2	<2	<2	<2	1.00	18.1	77.13	8.3	33.36	8.2	ns	ns
I26	20 Sep 2017	1119	6	<2	<2	<2	1.00	17.8	78.92	8.4	33.36	8.2	ns	ns
I26	20 Sep 2017	1119	9	<20	<2	<2	0.10	17.0	75.91	7.7	33.35	8.1	ns	ns
I26	28 Sep 2017	1153	2	<2	<2	<2	1.00	19.4	78.39	8.3	33.41	8.2	ns	ns
I26	28 Sep 2017	1153	6	<2	<2	<2	1.00	17.1	84.15	8.4	33.38	8.2	ns	ns
I26	28 Sep 2017	1153	9	<2	<2	<2	1.00	15.4	77.31	8.0	33.32	8.1	ns	ns
I32	05 Sep 2017	1218	2	<2	<2	<2	1.00	20.7	71.54	8.5	33.38	8.3	ns	ns
I32	05 Sep 2017	1218	6	<20	<2	2e	0.10	20.0	68.83	8.2	33.38	8.3	ns	ns
I32	05 Sep 2017	1218	9	2e	<2	4e	1.00	19.2	72.76	8.4	33.36	8.3	ns	ns
I32	11 Sep 2017	1255	2	<20	<2	<2	0.10	17.9	75.78	8.1	33.35	8.2	ns	ns
I32	11 Sep 2017	1255	6	<20	<2	<2	0.10	16.4	73.04	8.0	33.36	8.2	ns	ns
I32	11 Sep 2017	1255	9	<2	<2	<2	1.00	15.7	77.94	8.0	33.36	8.2	ns	ns
I32	16 Sep 2017	1153	2	<2	<2	<2	1.00	18.6	77.64	8.4	33.35	8.2	ns	ns
I32	16 Sep 2017	1153	6	<2	<2	<2	1.00	17.1	70.05	8.2	33.37	8.1	ns	ns
I32	16 Sep 2017	1153	9	<20	<2	<2	0.10	14.8	52.15	7.6	33.34	8.0	ns	ns
I32	20 Sep 2017	1130	2	<20	<2	<2	0.10	18.8	76.02	8.2	33.36	8.2	ns	ns
I32	20 Sep 2017	1130	6	<20	<2	<2	0.10	18.7	75.85	8.2	33.36	8.2	ns	ns
I32	20 Sep 2017	1130	9	<20	<2	2e	0.10	18.6	74.37	8.1	33.36	8.2	ns	ns
I32	28 Sep 2017	1206	2	<2	<2	<2	1.00	19.3	78.60	8.4	33.40	8.2	ns	ns
I32	28 Sep 2017	1206	6	<2	2e	<2	1.00	17.4	72.61	8.2	33.38	8.2	ns	ns
I32	28 Sep 2017	1206	9	<2	2e	4e	1.00	16.1	74.31	8.3	33.35	8.2	ns	ns
I39	05 Sep 2017	1101	2	4e	<2	4e	0.50	20.3	84.79	8.2	33.38	8.3	ns	ns

Station	Date	Time	Depth	Total	Fecal	Entero	F:T	Temp	XMS	DO	Sal	pH	OG	SUSO
I39	05 Sep 2017	1101	12	30e	<2	2e	0.07	17.0	79.61	8.6	33.37	8.3	ns	ns
I39	05 Sep 2017	1101	18	2e	2e	<2	1.00	15.1	80.14	8.0	33.40	8.2	ns	ns
I39	11 Sep 2017	1139	2	<2	<2	<2	1.00	19.3	86.12	8.1	33.38	8.2	ns	ns
I39	11 Sep 2017	1139	12	<2	<2	<2	1.00	13.8	81.62	7.6	33.35	8.2	ns	ns
I39	11 Sep 2017	1139	18	<2	<2	<2	1.00	13.5	82.12	7.1	33.36	8.1	ns	ns
I39	16 Sep 2017	1050	2	<2	<2	<2	1.00	18.1	84.43	8.3	33.35	8.1	ns	ns
I39	16 Sep 2017	1050	12	<2	<2	<2	1.00	14.7	82.78	8.3	33.33	8.0	ns	ns
I39	16 Sep 2017	1050	18	<2	<2	<2	1.00	13.5	80.93	6.8	33.35	7.8	ns	ns
I39	20 Sep 2017	1018	2	4e	2e	<2	0.50	17.6	82.21	8.4	33.37	8.2	ns	ns
I39	20 Sep 2017	1018	12	8e	2e	<2	0.25	15.5	77.71	8.3	33.32	8.1	ns	ns
I39	20 Sep 2017	1018	18	<20	2e	<2	0.10	14.3	79.49	7.3	33.35	8.0	ns	ns
I39	28 Sep 2017	1048	2	<2	<2	<2	1.00	19.8	79.36	8.3	33.42	8.2	ns	ns
I39	28 Sep 2017	1048	12	<2	<2	<2	1.00	15.3	81.60	8.5	33.33	8.2	ns	ns
I39	28 Sep 2017	1048	18	<2	<2	<2	1.00	14.2	80.95	6.9	33.34	8.1	ns	ns
I40	05 Sep 2017	1138	2	28e	2e	2e	0.07	20.0	70.40	8.4	33.35	8.3	ns	ns
I40	05 Sep 2017	1138	6	32e	<2	18e	0.06	19.3	76.34	8.4	33.33	8.3	ns	ns
I40	05 Sep 2017	1138	9	34e	<2	4e	0.06	18.4	78.71	8.4	33.37	8.3	ns	ns
I40	11 Sep 2017	1218	2	<2	<2	<2	1.00	17.8	81.58	8.1	33.38	8.2	ns	ns
I40	11 Sep 2017	1218	6	<2	<2	<2	1.00	15.6	77.16	7.9	33.35	8.2	ns	ns
I40	11 Sep 2017	1218	9	<2	<2	<2	1.00	14.6	76.56	7.9	33.34	8.2	ns	ns
I40	16 Sep 2017	1118	2	<2	<2	<2	1.00	18.2	69.18	8.3	33.35	8.2	ns	ns
I40	16 Sep 2017	1118	6	<20	<2	<2	0.10	16.1	62.05	7.6	33.38	8.1	ns	ns
I40	16 Sep 2017	1118	9	<2	<2	<2	1.00	15.0	65.91	7.4	33.36	8.0	ns	ns
I40	20 Sep 2017	1053	2	<2	<2	<2	1.00	18.5	84.08	8.3	33.36	8.2	ns	ns
I40	20 Sep 2017	1053	6	<2	<2	<2	1.00	18.3	82.61	8.3	33.36	8.2	ns	ns
I40	20 Sep 2017	1053	9	<2	<2	<2	1.00	18.2	81.14	8.2	33.35	8.2	ns	ns
I40	28 Sep 2017	1124	2	<2	<2	<2	1.00	18.8	79.19	8.3	33.39	8.2	ns	ns
I40	28 Sep 2017	1124	6	<2	<2	<2	1.00	15.7	75.54	7.7	33.35	8.1	ns	ns
I40	28 Sep 2017	1124	9	2e	<2	2e	1.00	15.3	62.42	7.4	33.32	8.1	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	05 Sep 2017	Depth (m)	12
I19	05 Sep 2017	Arrive Time	1125
I19	05 Sep 2017	Depart Time	1128
I19	05 Sep 2017	Air Temp (C)	21
I19	05 Sep 2017	Weather	Overcast
I19	05 Sep 2017	Visibility (mi)	6
I19	05 Sep 2017	Wind Speed (kts)	7
I19	05 Sep 2017	Wind Dir	SW
I19	05 Sep 2017	Water Color	Green
I19	05 Sep 2017	Wave Ht Low (ft)	3
I19	05 Sep 2017	Wave Period (sec)	13
I19	05 Sep 2017	Sea State	Calm
I19	05 Sep 2017	High Tide (ft)	4.8
I19	05 Sep 2017	High Tide Time	932
I19	05 Sep 2017	Low Tide (ft)	1.2
I19	05 Sep 2017	Low Tide Time	1516
I19	05 Sep 2017	Comments	
I19	11 Sep 2017	Depth (m)	12
I19	11 Sep 2017	Arrive Time	1200
I19	11 Sep 2017	Depart Time	1209
I19	11 Sep 2017	Air Temp (C)	21
I19	11 Sep 2017	Weather	Partly Cloudy
I19	11 Sep 2017	Visibility (mi)	11
I19	11 Sep 2017	Wind Speed (kts)	3
I19	11 Sep 2017	Wind Dir	E
I19	11 Sep 2017	Water Color	Green
I19	11 Sep 2017	Wave Ht Low (ft)	2
I19	11 Sep 2017	Wave Period (sec)	13
I19	11 Sep 2017	Sea State	Calm
I19	11 Sep 2017	High Tide (ft)	5.2
I19	11 Sep 2017	High Tide Time	1311
I19	11 Sep 2017	Low Tide (ft)	1.7
I19	11 Sep 2017	Low Tide Time	645
I19	11 Sep 2017	Comments	
I19	16 Sep 2017	Depth (m)	10
I19	16 Sep 2017	Arrive Time	1107
I19	16 Sep 2017	Depart Time	1111
I19	16 Sep 2017	Air Temp (C)	19
I19	16 Sep 2017	Weather	Partly Cloudy
I19	16 Sep 2017	Visibility (mi)	12
I19	16 Sep 2017	Wind Speed (kts)	5
I19	16 Sep 2017	Wind Dir	NE
I19	16 Sep 2017	Water Color	Green
I19	16 Sep 2017	Wave Ht Low (ft)	4
I19	16 Sep 2017	Wave Period (sec)	7
I19	16 Sep 2017	Sea State	Calm
I19	16 Sep 2017	High Tide (ft)	4.5
I19	16 Sep 2017	High Tide Time	743
I19	16 Sep 2017	Low Tide (ft)	1.7

Station	Date	Parameter	Value
I19	16 Sep 2017	Low Tide Time	1310
I19	16 Sep 2017	Comments	2-3 seals on station
I19	20 Sep 2017	Depth (m)	12
I19	20 Sep 2017	Arrive Time	1042
I19	20 Sep 2017	Depart Time	1045
I19	20 Sep 2017	Air Temp (C)	19
I19	20 Sep 2017	Weather	Cloudy
I19	20 Sep 2017	Visibility (mi)	7
I19	20 Sep 2017	Wind Speed (kts)	12
I19	20 Sep 2017	Wind Dir	W
I19	20 Sep 2017	Water Color	Brown
I19	20 Sep 2017	Wave Ht Low (ft)	4
I19	20 Sep 2017	Wave Period (sec)	7
I19	20 Sep 2017	Sea State	Heavy chop
I19	20 Sep 2017	High Tide (ft)	5.4
I19	20 Sep 2017	High Tide Time	953
I19	20 Sep 2017	Low Tide (ft)	0.5
I19	20 Sep 2017	Low Tide Time	1602
I19	20 Sep 2017	Comments	
I19	28 Sep 2017	Depth (m)	12
I19	28 Sep 2017	Arrive Time	1112
I19	28 Sep 2017	Depart Time	1116
I19	28 Sep 2017	Air Temp (C)	19
I19	28 Sep 2017	Weather	Clear
I19	28 Sep 2017	Visibility (mi)	12
I19	28 Sep 2017	Wind Speed (kts)	7
I19	28 Sep 2017	Wind Dir	NE
I19	28 Sep 2017	Water Color	Bluish-Green
I19	28 Sep 2017	Wave Ht Low (ft)	3
I19	28 Sep 2017	Wave Period (sec)	11
I19	28 Sep 2017	Sea State	Wind ripples
I19	28 Sep 2017	High Tide (ft)	3.4
I19	28 Sep 2017	High Tide Time	625
I19	28 Sep 2017	Low Tide (ft)	3.1
I19	28 Sep 2017	Low Tide Time	1022
I19	28 Sep 2017	Comments	
I24	05 Sep 2017	Depth (m)	11
I24	05 Sep 2017	Arrive Time	1147
I24	05 Sep 2017	Depart Time	1150
I24	05 Sep 2017	Air Temp (C)	21
I24	05 Sep 2017	Weather	Overcast
I24	05 Sep 2017	Visibility (mi)	6
I24	05 Sep 2017	Wind Speed (kts)	9
I24	05 Sep 2017	Wind Dir	W
I24	05 Sep 2017	Water Color	Green
I24	05 Sep 2017	Wave Ht Low (ft)	3
I24	05 Sep 2017	Wave Period (sec)	13
I24	05 Sep 2017	Sea State	Calm
I24	05 Sep 2017	High Tide (ft)	4.8
I24	05 Sep 2017	High Tide Time	932
I24	05 Sep 2017	Low Tide (ft)	1.2
I24	05 Sep 2017	Low Tide Time	1516

Station	Date	Parameter	Value
I24	05 Sep 2017	Comments	
I24	11 Sep 2017	Depth (m)	11
I24	11 Sep 2017	Arrive Time	1227
I24	11 Sep 2017	Depart Time	1229
I24	11 Sep 2017	Air Temp (C)	21
I24	11 Sep 2017	Weather	Cloudy
I24	11 Sep 2017	Visibility (mi)	8
I24	11 Sep 2017	Wind Speed (kts)	4
I24	11 Sep 2017	Wind Dir	E
I24	11 Sep 2017	Water Color	Green
I24	11 Sep 2017	Wave Ht Low (ft)	2
I24	11 Sep 2017	Wave Period (sec)	13
I24	11 Sep 2017	Sea State	Calm
I24	11 Sep 2017	High Tide (ft)	5.2
I24	11 Sep 2017	High Tide Time	1311
I24	11 Sep 2017	Low Tide (ft)	1.7
I24	11 Sep 2017	Low Tide Time	645
I24	11 Sep 2017	Comments	
I24	16 Sep 2017	Depth (m)	9
I24	16 Sep 2017	Arrive Time	1126
I24	16 Sep 2017	Depart Time	1128
I24	16 Sep 2017	Air Temp (C)	20
I24	16 Sep 2017	Weather	Partly Cloudy
I24	16 Sep 2017	Visibility (mi)	12
I24	16 Sep 2017	Wind Speed (kts)	4
I24	16 Sep 2017	Wind Dir	W
I24	16 Sep 2017	Water Color	Green
I24	16 Sep 2017	Wave Ht Low (ft)	4
I24	16 Sep 2017	Wave Period (sec)	7
I24	16 Sep 2017	Sea State	Calm
I24	16 Sep 2017	High Tide (ft)	4.5
I24	16 Sep 2017	High Tide Time	743
I24	16 Sep 2017	Low Tide (ft)	1.7
I24	16 Sep 2017	Low Tide Time	1310
I24	16 Sep 2017	Comments	Boats
I24	20 Sep 2017	Depth (m)	11
I24	20 Sep 2017	Arrive Time	1101
I24	20 Sep 2017	Depart Time	1104
I24	20 Sep 2017	Air Temp (C)	19
I24	20 Sep 2017	Weather	Cloudy
I24	20 Sep 2017	Visibility (mi)	7
I24	20 Sep 2017	Wind Speed (kts)	10
I24	20 Sep 2017	Wind Dir	NW
I24	20 Sep 2017	Water Color	Brownish-Green
I24	20 Sep 2017	Wave Ht Low (ft)	4
I24	20 Sep 2017	Wave Period (sec)	7
I24	20 Sep 2017	Sea State	Heavy chop
I24	20 Sep 2017	High Tide (ft)	5.4
I24	20 Sep 2017	High Tide Time	953
I24	20 Sep 2017	Low Tide (ft)	0.5
I24	20 Sep 2017	Low Tide Time	1602
I24	20 Sep 2017	Comments	

Station	Date	Parameter	Value
I24	28 Sep 2017	Depth (m)	12
I24	28 Sep 2017	Arrive Time	1133
I24	28 Sep 2017	Depart Time	1138
I24	28 Sep 2017	Air Temp (C)	19
I24	28 Sep 2017	Weather	Clear
I24	28 Sep 2017	Visibility (mi)	12
I24	28 Sep 2017	Wind Speed (kts)	9
I24	28 Sep 2017	Wind Dir	NW
I24	28 Sep 2017	Water Color	Bluish-Green
I24	28 Sep 2017	Wave Ht Low (ft)	3
I24	28 Sep 2017	Wave Period (sec)	11
I24	28 Sep 2017	Sea State	Wind ripples
I24	28 Sep 2017	High Tide (ft)	3.4
I24	28 Sep 2017	High Tide Time	625
I24	28 Sep 2017	Low Tide (ft)	3.1
I24	28 Sep 2017	Low Tide Time	1022
I24	28 Sep 2017	Comments	
I25	05 Sep 2017	Depth (m)	10
I25	05 Sep 2017	Arrive Time	1155
I25	05 Sep 2017	Depart Time	1157
I25	05 Sep 2017	Air Temp (C)	21
I25	05 Sep 2017	Weather	Overcast
I25	05 Sep 2017	Visibility (mi)	6
I25	05 Sep 2017	Wind Speed (kts)	9
I25	05 Sep 2017	Wind Dir	SE
I25	05 Sep 2017	Water Color	Green
I25	05 Sep 2017	Wave Ht Low (ft)	3
I25	05 Sep 2017	Wave Period (sec)	13
I25	05 Sep 2017	Sea State	Calm
I25	05 Sep 2017	High Tide (ft)	4.8
I25	05 Sep 2017	High Tide Time	932
I25	05 Sep 2017	Low Tide (ft)	1.2
I25	05 Sep 2017	Low Tide Time	1516
I25	05 Sep 2017	Comments	
I25	11 Sep 2017	Depth (m)	10
I25	11 Sep 2017	Arrive Time	1234
I25	11 Sep 2017	Depart Time	1236
I25	11 Sep 2017	Air Temp (C)	22
I25	11 Sep 2017	Weather	Cloudy
I25	11 Sep 2017	Visibility (mi)	8
I25	11 Sep 2017	Wind Speed (kts)	5
I25	11 Sep 2017	Wind Dir	S
I25	11 Sep 2017	Water Color	Green
I25	11 Sep 2017	Wave Ht Low (ft)	2
I25	11 Sep 2017	Wave Period (sec)	13
I25	11 Sep 2017	Sea State	Calm
I25	11 Sep 2017	High Tide (ft)	5.2
I25	11 Sep 2017	High Tide Time	1311
I25	11 Sep 2017	Low Tide (ft)	1.7
I25	11 Sep 2017	Low Tide Time	645
I25	11 Sep 2017	Comments	

Station	Date	Parameter	Value
I25	16 Sep 2017	Depth (m)	10
I25	16 Sep 2017	Arrive Time	1134
I25	16 Sep 2017	Depart Time	1135
I25	16 Sep 2017	Air Temp (C)	20
I25	16 Sep 2017	Weather	Partly Cloudy
I25	16 Sep 2017	Visibility (mi)	12
I25	16 Sep 2017	Wind Speed (kts)	5
I25	16 Sep 2017	Wind Dir	E
I25	16 Sep 2017	Water Color	Green
I25	16 Sep 2017	Wave Ht Low (ft)	4
I25	16 Sep 2017	Wave Period (sec)	7
I25	16 Sep 2017	Sea State	Calm
I25	16 Sep 2017	High Tide (ft)	4.5
I25	16 Sep 2017	High Tide Time	743
I25	16 Sep 2017	Low Tide (ft)	1.7
I25	16 Sep 2017	Low Tide Time	1310
I25	16 Sep 2017	Comments	Boats
I25	20 Sep 2017	Depth (m)	9
I25	20 Sep 2017	Arrive Time	1110
I25	20 Sep 2017	Depart Time	1112
I25	20 Sep 2017	Air Temp (C)	19
I25	20 Sep 2017	Weather	Cloudy
I25	20 Sep 2017	Visibility (mi)	7
I25	20 Sep 2017	Wind Speed (kts)	8
I25	20 Sep 2017	Wind Dir	SE
I25	20 Sep 2017	Water Color	Brownish-Green
I25	20 Sep 2017	Wave Ht Low (ft)	4
I25	20 Sep 2017	Wave Period (sec)	7
I25	20 Sep 2017	Sea State	Heavy chop
I25	20 Sep 2017	High Tide (ft)	5.4
I25	20 Sep 2017	High Tide Time	953
I25	20 Sep 2017	Low Tide (ft)	0.5
I25	20 Sep 2017	Low Tide Time	1602
I25	20 Sep 2017	Comments	
I25	28 Sep 2017	Depth (m)	10
I25	28 Sep 2017	Arrive Time	1142
I25	28 Sep 2017	Depart Time	1147
I25	28 Sep 2017	Air Temp (C)	19
I25	28 Sep 2017	Weather	Clear
I25	28 Sep 2017	Visibility (mi)	12
I25	28 Sep 2017	Wind Speed (kts)	10
I25	28 Sep 2017	Wind Dir	NE
I25	28 Sep 2017	Water Color	Bluish-Green
I25	28 Sep 2017	Wave Ht Low (ft)	3
I25	28 Sep 2017	Wave Period (sec)	11
I25	28 Sep 2017	Sea State	Wind ripples
I25	28 Sep 2017	High Tide (ft)	3.4
I25	28 Sep 2017	High Tide Time	625
I25	28 Sep 2017	Low Tide (ft)	3.1
I25	28 Sep 2017	Low Tide Time	1022
I25	28 Sep 2017	Comments	
I26	05 Sep 2017	Depth (m)	10

Station	Date	Parameter	Value
I26	05 Sep 2017	Arrive Time	1205
I26	05 Sep 2017	Depart Time	1207
I26	05 Sep 2017	Air Temp (C)	21
I26	05 Sep 2017	Weather	Overcast
I26	05 Sep 2017	Visibility (mi)	6
I26	05 Sep 2017	Wind Speed (kts)	7
I26	05 Sep 2017	Wind Dir	NW
I26	05 Sep 2017	Water Color	Green
I26	05 Sep 2017	Wave Ht Low (ft)	3
I26	05 Sep 2017	Wave Period (sec)	13
I26	05 Sep 2017	Sea State	Calm
I26	05 Sep 2017	High Tide (ft)	4.8
I26	05 Sep 2017	High Tide Time	932
I26	05 Sep 2017	Low Tide (ft)	1.2
I26	05 Sep 2017	Low Tide Time	1516
I26	05 Sep 2017	Comments	
I26	11 Sep 2017	Depth (m)	9
I26	11 Sep 2017	Arrive Time	1243
I26	11 Sep 2017	Depart Time	1245
I26	11 Sep 2017	Air Temp (C)	21
I26	11 Sep 2017	Weather	Cloudy
I26	11 Sep 2017	Visibility (mi)	6
I26	11 Sep 2017	Wind Speed (kts)	5
I26	11 Sep 2017	Wind Dir	E
I26	11 Sep 2017	Water Color	Green
I26	11 Sep 2017	Wave Ht Low (ft)	2
I26	11 Sep 2017	Wave Period (sec)	13
I26	11 Sep 2017	Sea State	Calm
I26	11 Sep 2017	High Tide (ft)	5.2
I26	11 Sep 2017	High Tide Time	1311
I26	11 Sep 2017	Low Tide (ft)	1.7
I26	11 Sep 2017	Low Tide Time	645
I26	11 Sep 2017	Comments	
I26	16 Sep 2017	Depth (m)	11
I26	16 Sep 2017	Arrive Time	1143
I26	16 Sep 2017	Depart Time	1146
I26	16 Sep 2017	Air Temp (C)	20
I26	16 Sep 2017	Weather	Partly Cloudy
I26	16 Sep 2017	Visibility (mi)	12
I26	16 Sep 2017	Wind Speed (kts)	6
I26	16 Sep 2017	Wind Dir	S
I26	16 Sep 2017	Water Color	Green
I26	16 Sep 2017	Wave Ht Low (ft)	4
I26	16 Sep 2017	Wave Period (sec)	7
I26	16 Sep 2017	Sea State	Calm
I26	16 Sep 2017	High Tide (ft)	4.5
I26	16 Sep 2017	High Tide Time	743
I26	16 Sep 2017	Low Tide (ft)	1.7
I26	16 Sep 2017	Low Tide Time	1310
I26	16 Sep 2017	Comments	
I26	20 Sep 2017	Depth (m)	10
I26	20 Sep 2017	Arrive Time	1119

Station	Date	Parameter	Value
I26	20 Sep 2017	Depart Time	1121
I26	20 Sep 2017	Air Temp (C)	19
I26	20 Sep 2017	Weather	Cloudy
I26	20 Sep 2017	Visibility (mi)	7
I26	20 Sep 2017	Wind Speed (kts)	11
I26	20 Sep 2017	Wind Dir	SE
I26	20 Sep 2017	Water Color	Greenish-Brown
I26	20 Sep 2017	Wave Ht Low (ft)	4
I26	20 Sep 2017	Wave Period (sec)	7
I26	20 Sep 2017	Sea State	Heavy chop
I26	20 Sep 2017	High Tide (ft)	5.4
I26	20 Sep 2017	High Tide Time	953
I26	20 Sep 2017	Low Tide (ft)	0.5
I26	20 Sep 2017	Low Tide Time	1602
I26	20 Sep 2017	Comments	
I26	28 Sep 2017	Depth (m)	10
I26	28 Sep 2017	Arrive Time	1153
I26	28 Sep 2017	Depart Time	1158
I26	28 Sep 2017	Air Temp (C)	19
I26	28 Sep 2017	Weather	Clear
I26	28 Sep 2017	Visibility (mi)	12
I26	28 Sep 2017	Wind Speed (kts)	9
I26	28 Sep 2017	Wind Dir	S
I26	28 Sep 2017	Water Color	Bluish-Green
I26	28 Sep 2017	Wave Ht Low (ft)	3
I26	28 Sep 2017	Wave Period (sec)	11
I26	28 Sep 2017	Sea State	Wind ripples
I26	28 Sep 2017	High Tide (ft)	3.4
I26	28 Sep 2017	High Tide Time	625
I26	28 Sep 2017	Low Tide (ft)	3.1
I26	28 Sep 2017	Low Tide Time	1022
I26	28 Sep 2017	Comments	
I32	05 Sep 2017	Depth (m)	11
I32	05 Sep 2017	Arrive Time	1218
I32	05 Sep 2017	Depart Time	1221
I32	05 Sep 2017	Air Temp (C)	21
I32	05 Sep 2017	Weather	Overcast
I32	05 Sep 2017	Visibility (mi)	6
I32	05 Sep 2017	Wind Speed (kts)	8
I32	05 Sep 2017	Wind Dir	NE
I32	05 Sep 2017	Water Color	Green
I32	05 Sep 2017	Wave Ht Low (ft)	3
I32	05 Sep 2017	Wave Period (sec)	13
I32	05 Sep 2017	Sea State	Calm
I32	05 Sep 2017	High Tide (ft)	4.8
I32	05 Sep 2017	High Tide Time	932
I32	05 Sep 2017	Low Tide (ft)	1.2
I32	05 Sep 2017	Low Tide Time	1516
I32	05 Sep 2017	Comments	
I32	11 Sep 2017	Depth (m)	9
I32	11 Sep 2017	Arrive Time	1255
I32	11 Sep 2017	Depart Time	1257

Station	Date	Parameter	Value
I32	11 Sep 2017	Air Temp (C)	21
I32	11 Sep 2017	Weather	Cloudy
I32	11 Sep 2017	Visibility (mi)	6
I32	11 Sep 2017	Wind Speed (kts)	3
I32	11 Sep 2017	Wind Dir	SE
I32	11 Sep 2017	Water Color	Green
I32	11 Sep 2017	Wave Ht Low (ft)	2
I32	11 Sep 2017	Wave Period (sec)	13
I32	11 Sep 2017	Sea State	Calm
I32	11 Sep 2017	High Tide (ft)	5.2
I32	11 Sep 2017	High Tide Time	1311
I32	11 Sep 2017	Low Tide (ft)	1.7
I32	11 Sep 2017	Low Tide Time	645
I32	11 Sep 2017	Comments	
I32	16 Sep 2017	Depth (m)	9
I32	16 Sep 2017	Arrive Time	1153
I32	16 Sep 2017	Depart Time	1157
I32	16 Sep 2017	Air Temp (C)	20
I32	16 Sep 2017	Weather	Clear
I32	16 Sep 2017	Visibility (mi)	12
I32	16 Sep 2017	Wind Speed (kts)	7
I32	16 Sep 2017	Wind Dir	E
I32	16 Sep 2017	Water Color	Green
I32	16 Sep 2017	Wave Ht Low (ft)	4
I32	16 Sep 2017	Wave Period (sec)	7
I32	16 Sep 2017	Sea State	Calm
I32	16 Sep 2017	High Tide (ft)	4.5
I32	16 Sep 2017	High Tide Time	743
I32	16 Sep 2017	Low Tide (ft)	1.7
I32	16 Sep 2017	Low Tide Time	1310
I32	16 Sep 2017	Comments	
I32	20 Sep 2017	Depth (m)	11
I32	20 Sep 2017	Arrive Time	1130
I32	20 Sep 2017	Depart Time	1133
I32	20 Sep 2017	Air Temp (C)	19
I32	20 Sep 2017	Weather	Cloudy
I32	20 Sep 2017	Visibility (mi)	10
I32	20 Sep 2017	Wind Speed (kts)	10
I32	20 Sep 2017	Wind Dir	NW
I32	20 Sep 2017	Water Color	Brownish-Green
I32	20 Sep 2017	Wave Ht Low (ft)	3
I32	20 Sep 2017	Wave Period (sec)	9
I32	20 Sep 2017	Sea State	Heavy chop
I32	20 Sep 2017	High Tide (ft)	5.4
I32	20 Sep 2017	High Tide Time	953
I32	20 Sep 2017	Low Tide (ft)	0.5
I32	20 Sep 2017	Low Tide Time	1602
I32	20 Sep 2017	Comments	
I32	28 Sep 2017	Depth (m)	11
I32	28 Sep 2017	Arrive Time	1206
I32	28 Sep 2017	Depart Time	1212
I32	28 Sep 2017	Air Temp (C)	19

Station	Date	Parameter	Value
I32	28 Sep 2017	Weather	Clear
I32	28 Sep 2017	Visibility (mi)	12
I32	28 Sep 2017	Wind Speed (kts)	9
I32	28 Sep 2017	Wind Dir	SE
I32	28 Sep 2017	Water Color	Bluish-Green
I32	28 Sep 2017	Wave Ht Low (ft)	3
I32	28 Sep 2017	Wave Period (sec)	11
I32	28 Sep 2017	Sea State	Light chop
I32	28 Sep 2017	High Tide (ft)	3.4
I32	28 Sep 2017	High Tide Time	625
I32	28 Sep 2017	Low Tide (ft)	3.1
I32	28 Sep 2017	Low Tide Time	1022
I32	28 Sep 2017	Comments	
I39	05 Sep 2017	Depth (m)	20
I39	05 Sep 2017	Arrive Time	1101
I39	05 Sep 2017	Depart Time	1104
I39	05 Sep 2017	Air Temp (C)	22
I39	05 Sep 2017	Weather	Overcast
I39	05 Sep 2017	Visibility (mi)	6
I39	05 Sep 2017	Wind Speed (kts)	9
I39	05 Sep 2017	Wind Dir	N
I39	05 Sep 2017	Water Color	Green
I39	05 Sep 2017	Wave Ht Low (ft)	3
I39	05 Sep 2017	Wave Period (sec)	13
I39	05 Sep 2017	Sea State	Calm
I39	05 Sep 2017	High Tide (ft)	4.8
I39	05 Sep 2017	High Tide Time	932
I39	05 Sep 2017	Low Tide (ft)	1.2
I39	05 Sep 2017	Low Tide Time	1516
I39	05 Sep 2017	Comments	Kelp debris
I39	11 Sep 2017	Depth (m)	18
I39	11 Sep 2017	Arrive Time	1139
I39	11 Sep 2017	Depart Time	1142
I39	11 Sep 2017	Air Temp (C)	21
I39	11 Sep 2017	Weather	Partly Cloudy
I39	11 Sep 2017	Visibility (mi)	11
I39	11 Sep 2017	Wind Speed (kts)	4
I39	11 Sep 2017	Wind Dir	NW
I39	11 Sep 2017	Water Color	Green
I39	11 Sep 2017	Wave Ht Low (ft)	2
I39	11 Sep 2017	Wave Period (sec)	13
I39	11 Sep 2017	Sea State	Calm
I39	11 Sep 2017	High Tide (ft)	5.2
I39	11 Sep 2017	High Tide Time	1311
I39	11 Sep 2017	Low Tide (ft)	1.7
I39	11 Sep 2017	Low Tide Time	645
I39	11 Sep 2017	Comments	
I39	16 Sep 2017	Depth (m)	18
I39	16 Sep 2017	Arrive Time	1050
I39	16 Sep 2017	Depart Time	1052
I39	16 Sep 2017	Air Temp (C)	19
I39	16 Sep 2017	Weather	Partly Cloudy

Station	Date	Parameter	Value
I39	16 Sep 2017	Visibility (mi)	6
I39	16 Sep 2017	Wind Speed (kts)	5
I39	16 Sep 2017	Wind Dir	S
I39	16 Sep 2017	Water Color	Green
I39	16 Sep 2017	Wave Ht Low (ft)	4
I39	16 Sep 2017	Wave Period (sec)	7
I39	16 Sep 2017	Sea State	Calm
I39	16 Sep 2017	High Tide (ft)	4.5
I39	16 Sep 2017	High Tide Time	743
I39	16 Sep 2017	Low Tide (ft)	1.7
I39	16 Sep 2017	Low Tide Time	1310
I39	16 Sep 2017	Comments	
I39	20 Sep 2017	Depth (m)	18
I39	20 Sep 2017	Arrive Time	1018
I39	20 Sep 2017	Depart Time	1020
I39	20 Sep 2017	Air Temp (C)	19
I39	20 Sep 2017	Weather	Cloudy
I39	20 Sep 2017	Visibility (mi)	7
I39	20 Sep 2017	Wind Speed (kts)	12
I39	20 Sep 2017	Wind Dir	NW
I39	20 Sep 2017	Water Color	Green
I39	20 Sep 2017	Wave Ht Low (ft)	4
I39	20 Sep 2017	Wave Period (sec)	7
I39	20 Sep 2017	Sea State	Heavy chop
I39	20 Sep 2017	High Tide (ft)	5.4
I39	20 Sep 2017	High Tide Time	953
I39	20 Sep 2017	Low Tide (ft)	0.5
I39	20 Sep 2017	Low Tide Time	1602
I39	20 Sep 2017	Comments	
I39	28 Sep 2017	Depth (m)	20
I39	28 Sep 2017	Arrive Time	1048
I39	28 Sep 2017	Depart Time	1053
I39	28 Sep 2017	Air Temp (C)	19
I39	28 Sep 2017	Weather	Clear
I39	28 Sep 2017	Visibility (mi)	12
I39	28 Sep 2017	Wind Speed (kts)	7
I39	28 Sep 2017	Wind Dir	NW
I39	28 Sep 2017	Water Color	Bluish-Green
I39	28 Sep 2017	Wave Ht Low (ft)	3
I39	28 Sep 2017	Wave Period (sec)	11
I39	28 Sep 2017	Sea State	Wind ripples
I39	28 Sep 2017	High Tide (ft)	3.4
I39	28 Sep 2017	High Tide Time	625
I39	28 Sep 2017	Low Tide (ft)	3.1
I39	28 Sep 2017	Low Tide Time	1022
I39	28 Sep 2017	Comments	
I40	05 Sep 2017	Depth (m)	11
I40	05 Sep 2017	Arrive Time	1138
I40	05 Sep 2017	Depart Time	1145
I40	05 Sep 2017	Air Temp (C)	21
I40	05 Sep 2017	Weather	Overcast
I40	05 Sep 2017	Visibility (mi)	6

Station	Date	Parameter	Value
I40	05 Sep 2017	Wind Speed (kts)	8
I40	05 Sep 2017	Wind Dir	NE
I40	05 Sep 2017	Water Color	Green
I40	05 Sep 2017	Wave Ht Low (ft)	3
I40	05 Sep 2017	Wave Period (sec)	13
I40	05 Sep 2017	Sea State	Calm
I40	05 Sep 2017	High Tide (ft)	4.8
I40	05 Sep 2017	High Tide Time	932
I40	05 Sep 2017	Low Tide (ft)	1.2
I40	05 Sep 2017	Low Tide Time	1516
I40	05 Sep 2017	Comments	
I40	11 Sep 2017	Depth (m)	11
I40	11 Sep 2017	Arrive Time	1218
I40	11 Sep 2017	Depart Time	1220
I40	11 Sep 2017	Air Temp (C)	21
I40	11 Sep 2017	Weather	Cloudy
I40	11 Sep 2017	Visibility (mi)	8
I40	11 Sep 2017	Wind Speed (kts)	4
I40	11 Sep 2017	Wind Dir	SW
I40	11 Sep 2017	Water Color	Green
I40	11 Sep 2017	Wave Ht Low (ft)	2
I40	11 Sep 2017	Wave Period (sec)	13
I40	11 Sep 2017	Sea State	Calm
I40	11 Sep 2017	High Tide (ft)	5.2
I40	11 Sep 2017	High Tide Time	1311
I40	11 Sep 2017	Low Tide (ft)	1.7
I40	11 Sep 2017	Low Tide Time	645
I40	11 Sep 2017	Comments	
I40	16 Sep 2017	Depth (m)	12
I40	16 Sep 2017	Arrive Time	1118
I40	16 Sep 2017	Depart Time	1120
I40	16 Sep 2017	Air Temp (C)	20
I40	16 Sep 2017	Weather	Partly Cloudy
I40	16 Sep 2017	Visibility (mi)	12
I40	16 Sep 2017	Wind Speed (kts)	4
I40	16 Sep 2017	Wind Dir	S
I40	16 Sep 2017	Water Color	Green
I40	16 Sep 2017	Wave Ht Low (ft)	4
I40	16 Sep 2017	Wave Period (sec)	7
I40	16 Sep 2017	Sea State	Calm
I40	16 Sep 2017	High Tide (ft)	4.5
I40	16 Sep 2017	High Tide Time	743
I40	16 Sep 2017	Low Tide (ft)	1.7
I40	16 Sep 2017	Low Tide Time	1310
I40	16 Sep 2017	Comments	
I40	20 Sep 2017	Depth (m)	11
I40	20 Sep 2017	Arrive Time	1053
I40	20 Sep 2017	Depart Time	1055
I40	20 Sep 2017	Air Temp (C)	19
I40	20 Sep 2017	Weather	Cloudy
I40	20 Sep 2017	Visibility (mi)	7
I40	20 Sep 2017	Wind Speed (kts)	11

Station	Date	Parameter	Value
I40	20 Sep 2017	Wind Dir	W
I40	20 Sep 2017	Water Color	Brown
I40	20 Sep 2017	Wave Ht Low (ft)	4
I40	20 Sep 2017	Wave Period (sec)	7
I40	20 Sep 2017	Sea State	Heavy chop
I40	20 Sep 2017	High Tide (ft)	5.4
I40	20 Sep 2017	High Tide Time	953
I40	20 Sep 2017	Low Tide (ft)	0.5
I40	20 Sep 2017	Low Tide Time	1602
I40	20 Sep 2017	Comments	
I40	28 Sep 2017	Depth (m)	11
I40	28 Sep 2017	Arrive Time	1124
I40	28 Sep 2017	Depart Time	1128
I40	28 Sep 2017	Air Temp (C)	19
I40	28 Sep 2017	Weather	Clear
I40	28 Sep 2017	Visibility (mi)	12
I40	28 Sep 2017	Wind Speed (kts)	9
I40	28 Sep 2017	Wind Dir	S
I40	28 Sep 2017	Water Color	Bluish-Green
I40	28 Sep 2017	Wave Ht Low (ft)	3
I40	28 Sep 2017	Wave Period (sec)	11
I40	28 Sep 2017	Sea State	Wind ripples
I40	28 Sep 2017	High Tide (ft)	3.4
I40	28 Sep 2017	High Tide Time	625
I40	28 Sep 2017	Low Tide (ft)	3.1
I40	28 Sep 2017	Low Tide Time	1022
I40	28 Sep 2017	Comments	

Table 3.10

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

Station	Date	Depth (m)	Temp (°C)	XMS (‰)	DO (mg/L)	Sal (ppt)	pH	Dens (σ -t)	Chlor (μ g/L)
I19	05 Sep 2017	1	19.74	74.13	8.1	33.31	8.3	23.5	1.71
I19	05 Sep 2017	2	19.58	74.11	8.0	33.33	8.3	23.6	1.85
I19	05 Sep 2017	3	19.23	73.86	8.0	33.33	8.3	23.7	2.02
I19	05 Sep 2017	4	19.11	72.18	8.0	33.32	8.3	23.7	2.28
I19	05 Sep 2017	5	18.87	70.34	8.0	33.35	8.3	23.8	2.57
I19	05 Sep 2017	6	18.63	67.96	8.2	33.35	8.3	23.9	2.85
I19	05 Sep 2017	7	18.46	69.90	8.3	33.35	8.3	23.9	2.98
I19	05 Sep 2017	8	18.42	72.68	8.3	33.34	8.3	23.9	3.05
I19	05 Sep 2017	9	18.40	73.51	8.3	33.34	8.3	23.9	3.06
I19	05 Sep 2017	10	18.38	74.85	8.3	33.34	8.3	23.9	2.98
I19	11 Sep 2017	1	18.88	84.07	8.1	33.35	8.2	23.8	0.74
I19	11 Sep 2017	2	18.74	84.14	8.0	33.40	8.2	23.9	0.74
I19	11 Sep 2017	3	18.13	84.92	8.0	33.40	8.2	24.0	0.72
I19	11 Sep 2017	4	17.20	84.22	8.1	33.40	8.2	24.2	1.00
I19	11 Sep 2017	5	16.80	79.50	8.1	33.37	8.2	24.3	1.32
I19	11 Sep 2017	6	16.40	78.38	7.9	33.39	8.2	24.4	1.39
I19	11 Sep 2017	7	15.53	76.94	7.8	33.40	8.2	24.6	1.51
I19	11 Sep 2017	8	15.25	76.13	7.8	33.34	8.2	24.6	2.09
I19	11 Sep 2017	9	14.90	74.85	7.6	33.40	8.2	24.8	2.61
I19	11 Sep 2017	10	14.59	73.23	7.4	33.37	8.2	24.8	3.48
I19	16 Sep 2017	1	18.76	74.40	8.4	33.33	8.2	23.8	1.28
I19	16 Sep 2017	2	18.51	75.43	8.3	33.36	8.2	23.9	1.40
I19	16 Sep 2017	3	17.95	72.77	8.4	33.34	8.1	24.0	1.76
I19	16 Sep 2017	4	17.88	71.54	8.3	33.34	8.1	24.0	2.07
I19	16 Sep 2017	5	17.26	66.87	8.2	33.37	8.1	24.2	3.02
I19	16 Sep 2017	6	17.12	61.64	8.1	33.34	8.1	24.2	3.89
I19	16 Sep 2017	7	17.13	58.91	8.1	33.34	8.1	24.2	4.18
I19	16 Sep 2017	8	17.04	58.46	7.8	33.35	8.1	24.2	4.21
I19	16 Sep 2017	9	15.95	50.92	7.1	33.41	8.0	24.5	4.21
I19	16 Sep 2017	10	14.72	39.89	6.8	33.41	7.9	24.8	4.86
I19	20 Sep 2017	1	18.71	80.18	8.3	33.35	8.2	23.8	2.05
I19	20 Sep 2017	2	18.71	80.56	8.3	33.35	8.2	23.8	2.09
I19	20 Sep 2017	3	18.70	80.31	8.3	33.35	8.2	23.8	2.20
I19	20 Sep 2017	4	18.68	80.54	8.3	33.35	8.2	23.8	2.39
I19	20 Sep 2017	5	18.51	80.01	8.3	33.35	8.2	23.9	2.73
I19	20 Sep 2017	6	18.37	79.50	8.3	33.35	8.2	23.9	3.15
I19	20 Sep 2017	7	18.16	78.02	8.3	33.35	8.2	24.0	3.66
I19	20 Sep 2017	8	18.03	76.08	8.3	33.35	8.2	24.0	3.95
I19	20 Sep 2017	9	17.90	75.76	8.2	33.35	8.2	24.0	4.01
I19	20 Sep 2017	10	17.84	75.35	8.1	33.35	8.2	24.0	3.94
I19	28 Sep 2017	1	18.92	76.87	8.1	33.39	8.2	23.8	1.44
I19	28 Sep 2017	2	18.86	76.65	7.9	33.40	8.2	23.8	1.51
I19	28 Sep 2017	3	17.83	75.41	7.9	33.43	8.1	24.1	1.65
I19	28 Sep 2017	4	16.97	74.92	8.2	33.40	8.1	24.3	1.67
I19	28 Sep 2017	5	16.51	77.58	8.2	33.36	8.1	24.4	1.75
I19	28 Sep 2017	6	16.16	78.28	8.2	33.36	8.1	24.4	1.91
I19	28 Sep 2017	7	15.81	79.23	8.1	33.35	8.1	24.5	2.07

Station	Date	Depth (m)	Temp (°C)	XMS (‰)	DO (mg/L)	Sal (ppt)	pH	Dens (σ -t)	Chlor (μ g/L)
I19	28 Sep 2017	8	15.63	77.83	7.8	33.33	8.1	24.6	2.59
I19	28 Sep 2017	9	15.56	72.61	7.5	33.33	8.1	24.6	3.52
I19	28 Sep 2017	10	15.53	70.30	7.4	33.33	8.1	24.6	4.30
I24	05 Sep 2017	1	20.16	73.72	8.3	33.33	8.3	23.4	2.13
I24	05 Sep 2017	2	19.82	73.89	8.3	33.36	8.3	23.6	2.14
I24	05 Sep 2017	3	19.15	76.68	8.4	33.35	8.3	23.7	1.92
I24	05 Sep 2017	4	18.90	78.06	8.4	33.35	8.3	23.8	1.94
I24	05 Sep 2017	5	18.69	79.12	8.4	33.35	8.3	23.8	1.99
I24	05 Sep 2017	6	18.35	79.72	8.4	33.37	8.3	23.9	2.12
I24	05 Sep 2017	7	18.20	78.89	8.4	33.35	8.3	24.0	2.37
I24	05 Sep 2017	8	18.17	78.48	8.4	33.35	8.3	24.0	2.47
I24	05 Sep 2017	9	18.14	78.48	8.4	33.35	8.3	24.0	2.51
I24	05 Sep 2017	10	18.14	78.48	8.4	33.35	8.3	24.0	2.47
I24	11 Sep 2017	1	18.72	83.82	8.1	33.34	8.2	23.8	0.81
I24	11 Sep 2017	2	18.45	83.94	8.1	33.37	8.2	23.9	0.82
I24	11 Sep 2017	3	17.71	84.03	8.1	33.38	8.2	24.1	0.85
I24	11 Sep 2017	4	16.44	83.81	8.3	33.37	8.2	24.4	1.10
I24	11 Sep 2017	5	16.44	78.16	8.2	33.34	8.2	24.4	1.56
I24	11 Sep 2017	6	15.75	76.08	8.2	33.38	8.2	24.6	1.93
I24	11 Sep 2017	7	14.79	79.08	8.1	33.35	8.2	24.7	2.29
I24	11 Sep 2017	8	14.33	75.61	7.7	33.34	8.2	24.8	2.85
I24	11 Sep 2017	9	14.16	73.22	7.3	33.34	8.2	24.9	3.41
I24	11 Sep 2017	10	14.13	71.88	7.2	33.35	8.1	24.9	3.58
I24	16 Sep 2017	1	17.62	76.71	8.5	33.33	8.1	24.1	1.13
I24	16 Sep 2017	2	17.51	76.52	8.5	33.34	8.1	24.1	1.18
I24	16 Sep 2017	3	17.17	73.15	8.2	33.35	8.1	24.2	1.55
I24	16 Sep 2017	4	16.11	69.00	7.9	33.39	8.1	24.5	1.84
I24	16 Sep 2017	5	15.75	66.49	7.7	33.34	8.0	24.5	2.30
I24	16 Sep 2017	6	15.67	63.97	7.6	33.34	8.0	24.5	2.95
I24	16 Sep 2017	7	15.34	63.00	7.2	33.37	8.0	24.6	3.84
I24	16 Sep 2017	8	14.68	63.22	6.8	33.37	7.9	24.8	3.84
I24	16 Sep 2017	9	14.44	63.29	6.8	33.35	7.9	24.8	3.38
I24	16 Sep 2017	10	14.36	60.86	6.7	33.34	7.9	24.8	2.63
I24	16 Sep 2017	11	14.40	55.65	6.7	33.34	7.9	24.8	2.18
I24	20 Sep 2017	1	17.88	80.46	8.3	33.35	8.2	24.0	1.55
I24	20 Sep 2017	2	17.91	81.86	8.3	33.35	8.2	24.0	1.49
I24	20 Sep 2017	3	17.86	82.06	8.3	33.36	8.2	24.0	1.45
I24	20 Sep 2017	4	17.86	81.93	8.3	33.35	8.2	24.0	1.57
I24	20 Sep 2017	5	17.83	81.64	8.3	33.35	8.2	24.1	1.70
I24	20 Sep 2017	6	17.82	81.19	8.3	33.35	8.2	24.1	1.89
I24	20 Sep 2017	7	17.81	80.97	8.3	33.35	8.2	24.1	1.99
I24	20 Sep 2017	8	17.80	80.82	8.3	33.35	8.2	24.1	2.10
I24	20 Sep 2017	9	17.78	80.40	8.0	33.35	8.2	24.1	2.27
I24	20 Sep 2017	10	16.34	76.72	7.4	33.54	8.2	24.5	2.53
I24	20 Sep 2017	11	14.86	67.44	7.3	33.47	8.0	24.8	2.82
I24	28 Sep 2017	1	19.32	83.72	8.2	33.40	8.2	23.7	0.72
I24	28 Sep 2017	2	19.09	83.80	8.1	33.42	8.2	23.8	0.72
I24	28 Sep 2017	3	18.04	84.22	8.3	33.42	8.2	24.1	0.72
I24	28 Sep 2017	4	17.15	83.99	8.4	33.40	8.2	24.2	0.73
I24	28 Sep 2017	5	16.54	82.69	8.4	33.36	8.2	24.4	0.83

Station	Date	Depth (m)	Temp (°C)	XMS (‰)	DO (mg/L)	Sal (ppt)	pH	Dens (σ -t)	Chlor (μ g/L)
I24	28 Sep 2017	6	16.00	81.50	8.2	33.35	8.2	24.5	0.94
I24	28 Sep 2017	7	15.42	77.74	7.9	33.33	8.1	24.6	1.44
I24	28 Sep 2017	8	15.28	76.04	7.8	33.32	8.1	24.6	1.78
I24	28 Sep 2017	9	15.05	75.53	7.6	33.32	8.1	24.7	2.49
I24	28 Sep 2017	10	14.86	71.46	7.4	33.32	8.1	24.7	4.01
I24	28 Sep 2017	11	14.84	72.52	7.4	33.32	8.1	24.7	4.53
I25	05 Sep 2017	1	19.94	76.20	8.4	33.32	8.3	23.5	1.80
I25	05 Sep 2017	2	19.95	76.17	8.3	33.34	8.3	23.5	1.83
I25	05 Sep 2017	3	19.62	76.97	8.4	33.36	8.3	23.6	1.86
I25	05 Sep 2017	4	19.42	78.56	8.4	33.35	8.3	23.7	1.88
I25	05 Sep 2017	5	18.97	79.73	8.3	33.38	8.3	23.8	1.95
I25	05 Sep 2017	6	18.48	79.88	8.5	33.37	8.3	23.9	2.08
I25	05 Sep 2017	7	18.43	79.52	8.5	33.36	8.3	23.9	2.26
I25	05 Sep 2017	8	18.19	79.13	8.5	33.36	8.3	24.0	2.37
I25	05 Sep 2017	9	18.18	78.79	8.6	33.35	8.3	24.0	2.43
I25	11 Sep 2017	1	19.14	84.58	8.1	33.34	8.2	23.7	0.76
I25	11 Sep 2017	2	18.85	84.73	8.1	33.38	8.2	23.8	0.78
I25	11 Sep 2017	3	17.80	84.69	8.2	33.40	8.2	24.1	0.80
I25	11 Sep 2017	4	17.22	83.86	8.2	33.39	8.2	24.2	0.86
I25	11 Sep 2017	5	16.50	82.39	8.3	33.36	8.2	24.4	0.99
I25	11 Sep 2017	6	16.19	79.59	8.2	33.35	8.2	24.4	1.38
I25	11 Sep 2017	7	14.93	76.97	7.8	33.44	8.2	24.8	1.94
I25	11 Sep 2017	8	14.19	74.78	7.5	33.35	8.2	24.9	2.63
I25	11 Sep 2017	9	14.17	74.64	7.5	33.35	8.2	24.9	2.93
I25	16 Sep 2017	1	17.96	81.99	8.3	33.34	8.2	24.0	0.83
I25	16 Sep 2017	2	17.72	82.27	8.3	33.35	8.2	24.1	0.82
I25	16 Sep 2017	3	17.42	82.73	8.4	33.36	8.2	24.2	0.84
I25	16 Sep 2017	4	17.08	82.36	8.5	33.34	8.2	24.2	0.97
I25	16 Sep 2017	5	16.81	79.98	8.3	33.35	8.2	24.3	1.19
I25	16 Sep 2017	6	16.03	75.42	7.9	33.40	8.1	24.5	1.76
I25	16 Sep 2017	7	15.20	66.83	7.5	33.39	8.1	24.7	2.64
I25	16 Sep 2017	8	14.98	64.07	7.3	33.34	8.0	24.7	2.71
I25	16 Sep 2017	9	14.97	63.93	7.3	33.34	8.0	24.7	2.43
I25	20 Sep 2017	1	17.95	79.33	8.3	33.35	8.2	24.0	1.42
I25	20 Sep 2017	2	17.94	80.66	8.3	33.36	8.2	24.0	1.45
I25	20 Sep 2017	3	17.93	83.46	8.3	33.36	8.2	24.0	1.54
I25	20 Sep 2017	4	17.94	83.78	8.3	33.36	8.2	24.0	1.60
I25	20 Sep 2017	5	17.94	83.88	8.3	33.36	8.2	24.0	1.61
I25	20 Sep 2017	6	17.91	84.06	8.4	33.36	8.2	24.0	1.70
I25	20 Sep 2017	7	17.88	84.07	8.3	33.36	8.2	24.0	1.77
I25	20 Sep 2017	8	17.71	83.41	8.1	33.36	8.2	24.1	1.95
I25	20 Sep 2017	9	16.71	80.73	7.9	33.39	8.2	24.3	2.55
I25	28 Sep 2017	1	19.44	85.20	8.2	33.41	8.2	23.7	0.61
I25	28 Sep 2017	2	19.20	85.25	8.2	33.41	8.2	23.8	0.62
I25	28 Sep 2017	3	18.26	85.39	8.3	33.40	8.2	24.0	0.63
I25	28 Sep 2017	4	17.42	84.83	8.6	33.38	8.2	24.2	0.65
I25	28 Sep 2017	5	17.36	84.78	8.6	33.36	8.2	24.2	0.64
I25	28 Sep 2017	6	16.98	84.64	8.4	33.36	8.2	24.3	0.68
I25	28 Sep 2017	7	16.20	81.88	8.3	33.34	8.2	24.4	0.79
I25	28 Sep 2017	8	15.55	76.76	8.0	33.34	8.1	24.6	1.22

Station	Date	Depth (m)	Temp (°C)	XMS (‰)	DO (mg/L)	Sal (ppt)	pH	Dens (σ -t)	Chlor (μ g/L)
I25	28 Sep 2017	9	15.32	76.37	8.0	33.32	8.1	24.6	1.68
I26	05 Sep 2017	1	19.65	78.99	8.4	33.34	8.3	23.6	1.30
I26	05 Sep 2017	2	19.46	79.05	8.3	33.36	8.3	23.7	1.30
I26	05 Sep 2017	3	18.88	79.51	8.4	33.36	8.3	23.8	1.27
I26	05 Sep 2017	4	18.81	79.71	8.5	33.35	8.3	23.8	1.30
I26	05 Sep 2017	5	18.79	79.70	8.5	33.35	8.3	23.8	1.48
I26	05 Sep 2017	6	18.78	79.75	8.5	33.35	8.3	23.8	1.63
I26	05 Sep 2017	7	18.78	79.65	8.4	33.35	8.3	23.8	1.78
I26	05 Sep 2017	8	18.77	79.66	8.4	33.35	8.3	23.8	1.87
I26	05 Sep 2017	9	18.77	79.55	8.4	33.35	8.3	23.8	1.88
I26	11 Sep 2017	1	18.72	84.41	8.2	33.35	8.2	23.8	0.86
I26	11 Sep 2017	2	18.68	84.48	8.1	33.38	8.2	23.9	0.86
I26	11 Sep 2017	3	17.86	84.09	8.2	33.39	8.2	24.1	0.94
I26	11 Sep 2017	4	17.51	82.94	8.3	33.36	8.2	24.1	1.06
I26	11 Sep 2017	5	17.35	81.29	8.3	33.36	8.2	24.2	1.29
I26	11 Sep 2017	6	17.00	79.57	8.2	33.37	8.2	24.3	1.65
I26	11 Sep 2017	7	16.40	77.99	8.0	33.38	8.2	24.4	1.99
I26	11 Sep 2017	8	15.38	76.06	7.6	33.41	8.2	24.7	2.18
I26	11 Sep 2017	9	14.85	74.80	7.5	33.37	8.2	24.7	2.15
I26	16 Sep 2017	1	17.94	83.80	8.3	33.33	8.2	24.0	0.88
I26	16 Sep 2017	2	18.19	83.34	8.3	33.32	8.2	23.9	0.87
I26	16 Sep 2017	3	17.62	83.30	8.3	33.41	8.2	24.1	0.87
I26	16 Sep 2017	4	17.15	83.02	8.4	33.35	8.2	24.2	0.91
I26	16 Sep 2017	5	17.05	79.50	8.5	33.33	8.2	24.2	1.24
I26	16 Sep 2017	6	16.63	75.93	8.1	33.41	8.2	24.4	1.55
I26	16 Sep 2017	7	14.95	71.63	7.8	33.41	8.1	24.8	1.96
I26	16 Sep 2017	8	14.62	68.92	7.6	33.35	8.0	24.8	2.43
I26	16 Sep 2017	9	14.58	68.61	7.6	33.34	8.0	24.8	2.55
I26	20 Sep 2017	1	18.13	76.78	8.3	33.36	8.2	24.0	1.24
I26	20 Sep 2017	2	18.12	77.13	8.3	33.36	8.2	24.0	1.27
I26	20 Sep 2017	3	18.12	77.97	8.3	33.36	8.2	24.0	1.31
I26	20 Sep 2017	4	18.08	78.73	8.3	33.36	8.2	24.0	1.40
I26	20 Sep 2017	5	17.95	78.98	8.4	33.36	8.2	24.0	1.47
I26	20 Sep 2017	6	17.78	78.92	8.4	33.36	8.2	24.1	1.62
I26	20 Sep 2017	7	17.69	78.34	8.4	33.35	8.2	24.1	1.86
I26	20 Sep 2017	8	17.42	77.50	8.1	33.36	8.2	24.2	2.26
I26	20 Sep 2017	9	17.01	75.91	7.7	33.35	8.1	24.2	2.65
I26	28 Sep 2017	1	19.42	77.84	8.3	33.40	8.2	23.6	0.94
I26	28 Sep 2017	2	19.37	78.39	8.3	33.41	8.2	23.7	0.95
I26	28 Sep 2017	3	19.01	78.77	8.4	33.42	8.2	23.8	0.97
I26	28 Sep 2017	4	18.67	79.86	8.4	33.40	8.2	23.9	0.98
I26	28 Sep 2017	5	17.82	82.79	8.4	33.42	8.2	24.1	0.93
I26	28 Sep 2017	6	17.13	84.15	8.4	33.38	8.2	24.2	0.91
I26	28 Sep 2017	7	16.01	82.56	8.2	33.40	8.2	24.5	1.18
I26	28 Sep 2017	8	15.40	77.26	8.0	33.33	8.2	24.6	1.96
I26	28 Sep 2017	9	15.36	77.31	8.0	33.32	8.1	24.6	2.41
I32	05 Sep 2017	1	20.72	71.78	8.5	33.38	8.3	23.3	2.50
I32	05 Sep 2017	2	20.67	71.54	8.5	33.38	8.3	23.4	2.62
I32	05 Sep 2017	3	20.54	70.71	8.5	33.38	8.3	23.4	3.35

Station	Date	Depth (m)	Temp (°C)	XMS (‰)	DO (mg/L)	Sal (ppt)	pH	Dens (σ -t)	Chlor (μ g/L)
I32	05 Sep 2017	4	20.49	68.97	8.4	33.38	8.3	23.4	4.55
I32	05 Sep 2017	5	20.40	68.42	8.3	33.37	8.3	23.4	5.32
I32	05 Sep 2017	6	20.03	68.83	8.2	33.38	8.3	23.5	5.72
I32	05 Sep 2017	7	19.75	69.98	8.4	33.34	8.3	23.6	5.71
I32	05 Sep 2017	8	19.45	70.90	8.4	33.37	8.3	23.7	5.49
I32	05 Sep 2017	9	19.19	72.76	8.4	33.36	8.3	23.7	4.68
I32	05 Sep 2017	10	19.04	73.84	8.4	33.34	8.3	23.7	3.54
I32	11 Sep 2017	1	17.88	76.07	8.2	33.36	8.2	24.0	1.34
I32	11 Sep 2017	2	17.90	75.78	8.1	33.35	8.2	24.0	1.36
I32	11 Sep 2017	3	17.71	75.53	8.0	33.37	8.2	24.1	1.40
I32	11 Sep 2017	4	17.15	74.98	7.9	33.41	8.2	24.3	1.56
I32	11 Sep 2017	5	16.77	72.78	7.8	33.38	8.2	24.3	1.85
I32	11 Sep 2017	6	16.44	73.04	8.0	33.36	8.2	24.4	2.05
I32	11 Sep 2017	7	15.92	77.29	8.0	33.39	8.2	24.5	2.09
I32	11 Sep 2017	8	15.77	78.19	8.0	33.35	8.2	24.5	2.15
I32	11 Sep 2017	9	15.67	77.94	8.0	33.36	8.2	24.6	2.25
I32	11 Sep 2017	10	15.53	76.89	7.8	33.37	8.2	24.6	2.39
I32	16 Sep 2017	1	18.63	77.33	8.4	33.35	8.2	23.9	1.56
I32	16 Sep 2017	2	18.61	77.64	8.4	33.35	8.2	23.9	1.63
I32	16 Sep 2017	3	18.16	74.90	8.4	33.37	8.2	24.0	2.03
I32	16 Sep 2017	4	17.94	72.56	8.4	33.35	8.2	24.0	2.58
I32	16 Sep 2017	5	17.70	70.04	8.3	33.36	8.1	24.1	2.87
I32	16 Sep 2017	6	17.14	70.05	8.2	33.37	8.1	24.2	2.90
I32	16 Sep 2017	7	16.28	70.54	8.1	33.40	8.1	24.5	2.87
I32	16 Sep 2017	8	15.01	68.69	7.9	33.37	8.1	24.7	3.32
I32	16 Sep 2017	9	14.75	52.15	7.6	33.34	8.0	24.7	4.97
I32	16 Sep 2017	10	14.67	35.87	7.6	33.33	8.0	24.8	6.78
I32	20 Sep 2017	1	18.78	75.91	8.2	33.36	8.2	23.8	2.05
I32	20 Sep 2017	2	18.76	76.02	8.2	33.36	8.2	23.8	2.24
I32	20 Sep 2017	3	18.72	76.10	8.2	33.36	8.2	23.8	2.51
I32	20 Sep 2017	4	18.70	76.15	8.2	33.36	8.2	23.8	2.72
I32	20 Sep 2017	5	18.71	76.22	8.2	33.36	8.2	23.8	2.82
I32	20 Sep 2017	6	18.66	75.85	8.2	33.36	8.2	23.9	3.05
I32	20 Sep 2017	7	18.64	75.64	8.2	33.36	8.2	23.9	3.30
I32	20 Sep 2017	8	18.63	74.95	8.2	33.36	8.2	23.9	3.49
I32	20 Sep 2017	9	18.58	74.37	8.1	33.36	8.2	23.9	3.77
I32	20 Sep 2017	10	18.55	73.79	8.1	33.36	8.2	23.9	3.81
I32	28 Sep 2017	1	19.27	78.55	8.4	33.40	8.2	23.7	1.01
I32	28 Sep 2017	2	19.29	78.60	8.4	33.40	8.2	23.7	1.02
I32	28 Sep 2017	3	19.22	78.58	8.3	33.40	8.2	23.7	1.10
I32	28 Sep 2017	4	18.56	76.42	8.3	33.42	8.2	23.9	1.34
I32	28 Sep 2017	5	17.91	74.68	8.2	33.40	8.2	24.1	1.65
I32	28 Sep 2017	6	17.40	72.61	8.2	33.38	8.2	24.2	2.21
I32	28 Sep 2017	7	16.59	73.98	8.4	33.38	8.2	24.4	2.53
I32	28 Sep 2017	8	16.42	77.40	8.4	33.34	8.2	24.4	2.70
I32	28 Sep 2017	9	16.06	74.31	8.3	33.35	8.2	24.5	3.02
I32	28 Sep 2017	10	16.05	72.61	8.2	33.34	8.2	24.5	3.25
I39	05 Sep 2017	1	20.33	84.88	8.3	33.38	8.3	23.4	0.80
I39	05 Sep 2017	2	20.33	84.79	8.2	33.38	8.3	23.4	0.81
I39	05 Sep 2017	3	20.26	84.90	8.2	33.38	8.3	23.5	0.84

Station	Date	Depth (m)	Temp (°C)	XMS (‰)	DO (mg/L)	Sal (ppt)	pH	Dens (σ -t)	Chlor (μ g/L)
I39	05 Sep 2017	4	19.94	84.70	8.3	33.38	8.3	23.5	0.97
I39	05 Sep 2017	5	19.85	83.10	8.3	33.35	8.3	23.5	1.25
I39	05 Sep 2017	6	19.46	83.08	8.3	33.39	8.3	23.7	1.43
I39	05 Sep 2017	7	18.72	84.77	8.4	33.38	8.3	23.9	1.32
I39	05 Sep 2017	8	17.96	84.22	8.6	33.39	8.3	24.0	1.35
I39	05 Sep 2017	9	17.65	82.46	8.7	33.37	8.3	24.1	1.59
I39	05 Sep 2017	10	17.22	81.21	8.6	33.38	8.3	24.2	1.96
I39	05 Sep 2017	11	17.03	79.87	8.6	33.37	8.3	24.3	2.33
I39	05 Sep 2017	12	16.98	79.61	8.6	33.37	8.3	24.3	2.54
I39	05 Sep 2017	13	16.91	79.72	8.5	33.37	8.3	24.3	2.65
I39	05 Sep 2017	14	16.82	80.04	8.4	33.38	8.3	24.3	2.68
I39	05 Sep 2017	15	16.42	80.20	8.3	33.40	8.3	24.4	2.65
I39	05 Sep 2017	16	15.88	80.42	8.1	33.41	8.2	24.6	2.72
I39	05 Sep 2017	17	15.36	80.16	8.0	33.40	8.2	24.7	2.82
I39	05 Sep 2017	18	15.07	80.14	8.0	33.40	8.2	24.7	2.76
I39	11 Sep 2017	1	19.68	86.11	8.1	33.36	8.2	23.6	0.69
I39	11 Sep 2017	2	19.29	86.12	8.1	33.38	8.2	23.7	0.69
I39	11 Sep 2017	3	18.90	86.09	8.1	33.38	8.2	23.8	0.74
I39	11 Sep 2017	4	18.02	85.53	8.0	33.40	8.2	24.0	0.87
I39	11 Sep 2017	5	16.31	83.82	8.0	33.36	8.2	24.4	1.36
I39	11 Sep 2017	6	15.23	83.53	8.2	33.38	8.2	24.7	1.66
I39	11 Sep 2017	7	14.60	84.52	8.3	33.35	8.2	24.8	1.64
I39	11 Sep 2017	8	14.31	85.24	8.3	33.33	8.2	24.8	1.61
I39	11 Sep 2017	9	14.26	84.50	8.3	33.33	8.2	24.8	1.81
I39	11 Sep 2017	10	14.20	83.81	8.2	33.34	8.2	24.9	2.24
I39	11 Sep 2017	11	13.87	82.46	7.8	33.36	8.2	24.9	2.99
I39	11 Sep 2017	12	13.79	81.62	7.6	33.35	8.2	25.0	3.43
I39	11 Sep 2017	13	13.61	81.60	7.4	33.36	8.2	25.0	3.59
I39	11 Sep 2017	14	13.59	81.59	7.3	33.36	8.2	25.0	3.77
I39	11 Sep 2017	15	13.54	81.77	7.2	33.36	8.1	25.0	3.90
I39	11 Sep 2017	16	13.52	81.84	7.2	33.36	8.1	25.0	3.89
I39	11 Sep 2017	17	13.51	82.07	7.1	33.36	8.1	25.0	3.86
I39	11 Sep 2017	18	13.51	82.12	7.1	33.36	8.1	25.0	3.82
I39	16 Sep 2017	2	18.11	84.43	8.3	33.35	8.1	24.0	0.64
I39	16 Sep 2017	3	17.76	84.77	8.3	33.35	8.1	24.1	0.63
I39	16 Sep 2017	4	17.20	84.87	8.1	33.42	8.1	24.3	0.64
I39	16 Sep 2017	5	15.57	84.74	8.4	33.40	8.1	24.6	0.67
I39	16 Sep 2017	6	15.36	84.30	8.5	33.33	8.1	24.6	0.75
I39	16 Sep 2017	7	15.25	83.47	8.5	33.32	8.0	24.6	0.93
I39	16 Sep 2017	8	15.17	83.02	8.5	33.32	8.0	24.6	0.98
I39	16 Sep 2017	9	15.12	83.31	8.4	33.33	8.0	24.7	1.04
I39	16 Sep 2017	10	14.84	83.24	8.4	33.33	8.0	24.7	1.18
I39	16 Sep 2017	11	14.77	83.01	8.4	33.32	8.0	24.7	1.29
I39	16 Sep 2017	12	14.68	82.78	8.3	33.33	8.0	24.8	1.45
I39	16 Sep 2017	13	14.47	81.46	8.1	33.33	8.0	24.8	1.85
I39	16 Sep 2017	14	14.45	80.36	7.9	33.33	8.0	24.8	2.40
I39	16 Sep 2017	15	13.99	78.09	7.5	33.37	7.9	24.9	2.73
I39	16 Sep 2017	16	13.65	79.09	7.1	33.36	7.9	25.0	2.83
I39	16 Sep 2017	17	13.48	79.48	6.9	33.35	7.8	25.0	2.87
I39	16 Sep 2017	18	13.46	80.93	6.8	33.35	7.8	25.0	2.63
I39	20 Sep 2017	1	17.57	82.26	8.4	33.37	8.2	24.1	2.69
I39	20 Sep 2017	2	17.57	82.21	8.4	33.37	8.2	24.1	2.76

Station	Date	Depth (m)	Temp (°C)	XMS (‰)	DO (mg/L)	Sal (ppt)	pH	Dens (σ -t)	Chlor (μ g/L)
I39	20 Sep 2017	3	17.56	82.28	8.4	33.37	8.2	24.1	2.85
I39	20 Sep 2017	4	17.49	83.15	8.3	33.37	8.2	24.1	2.93
I39	20 Sep 2017	5	17.38	82.83	8.4	33.36	8.2	24.2	3.05
I39	20 Sep 2017	6	17.19	82.76	8.3	33.37	8.2	24.2	3.24
I39	20 Sep 2017	7	16.49	82.07	8.5	33.35	8.2	24.4	3.67
I39	20 Sep 2017	8	16.06	81.15	8.6	33.34	8.2	24.5	4.15
I39	20 Sep 2017	9	15.72	80.53	8.6	33.31	8.2	24.5	4.44
I39	20 Sep 2017	10	15.65	79.76	8.5	33.31	8.1	24.5	4.62
I39	20 Sep 2017	11	15.59	78.32	8.4	33.32	8.1	24.5	5.02
I39	20 Sep 2017	12	15.52	77.71	8.3	33.32	8.1	24.6	5.38
I39	20 Sep 2017	13	15.42	77.43	8.0	33.33	8.1	24.6	5.60
I39	20 Sep 2017	14	15.02	77.37	7.8	33.35	8.1	24.7	5.59
I39	20 Sep 2017	15	14.93	77.92	7.7	33.33	8.0	24.7	5.46
I39	20 Sep 2017	16	14.92	78.36	7.6	33.33	8.0	24.7	5.28
I39	20 Sep 2017	17	14.66	79.36	7.5	33.35	8.0	24.8	5.04
I39	20 Sep 2017	18	14.31	79.49	7.3	33.35	8.0	24.8	4.67
I39	28 Sep 2017	1	19.69	79.24	8.4	33.42	8.2	23.6	0.85
I39	28 Sep 2017	2	19.75	79.36	8.3	33.42	8.2	23.6	0.83
I39	28 Sep 2017	3	19.42	79.36	8.3	33.43	8.2	23.7	0.90
I39	28 Sep 2017	4	19.17	79.42	8.4	33.42	8.2	23.8	1.07
I39	28 Sep 2017	5	19.15	79.93	8.5	33.41	8.2	23.8	1.20
I39	28 Sep 2017	6	19.12	80.16	8.4	33.41	8.2	23.8	1.33
I39	28 Sep 2017	7	19.05	80.54	8.3	33.41	8.2	23.8	1.42
I39	28 Sep 2017	8	18.09	82.06	8.3	33.45	8.2	24.1	1.42
I39	28 Sep 2017	9	16.92	83.60	8.4	33.40	8.2	24.3	1.39
I39	28 Sep 2017	10	16.11	83.93	8.6	33.36	8.2	24.5	1.34
I39	28 Sep 2017	11	15.60	82.75	8.6	33.35	8.2	24.6	1.53
I39	28 Sep 2017	12	15.29	81.60	8.5	33.33	8.2	24.6	1.80
I39	28 Sep 2017	13	14.82	80.04	8.2	33.33	8.2	24.7	2.49
I39	28 Sep 2017	14	14.67	79.72	8.0	33.32	8.1	24.7	3.21
I39	28 Sep 2017	15	14.44	79.01	7.7	33.34	8.1	24.8	3.82
I39	28 Sep 2017	16	14.36	79.04	7.4	33.33	8.1	24.8	4.23
I39	28 Sep 2017	17	14.23	79.72	7.1	33.34	8.1	24.9	3.87
I39	28 Sep 2017	18	14.15	80.95	6.9	33.34	8.1	24.9	3.10
I40	05 Sep 2017	1	20.32	70.49	8.3	33.32	8.3	23.4	2.51
I40	05 Sep 2017	2	20.00	70.40	8.4	33.35	8.3	23.5	2.72
I40	05 Sep 2017	3	19.46	70.01	8.5	33.34	8.3	23.6	3.29
I40	05 Sep 2017	4	19.41	71.42	8.4	33.32	8.3	23.6	3.35
I40	05 Sep 2017	5	19.36	73.46	8.4	33.33	8.3	23.6	3.28
I40	05 Sep 2017	6	19.30	76.34	8.4	33.33	8.3	23.7	3.06
I40	05 Sep 2017	7	19.10	77.64	8.3	33.35	8.3	23.7	2.76
I40	05 Sep 2017	8	18.67	78.49	8.3	33.36	8.3	23.9	2.62
I40	05 Sep 2017	9	18.37	78.71	8.4	33.37	8.3	23.9	2.64
I40	05 Sep 2017	10	18.27	77.86	8.4	33.35	8.3	23.9	2.62
I40	11 Sep 2017	1	17.92	81.63	8.2	33.36	8.2	24.0	1.05
I40	11 Sep 2017	2	17.75	81.58	8.1	33.38	8.2	24.1	1.08
I40	11 Sep 2017	3	17.29	80.44	8.1	33.36	8.2	24.2	1.56
I40	11 Sep 2017	4	16.76	78.08	8.0	33.40	8.2	24.3	1.71
I40	11 Sep 2017	5	15.99	78.06	7.9	33.40	8.2	24.5	1.86
I40	11 Sep 2017	6	15.62	77.16	7.9	33.35	8.2	24.6	2.06
I40	11 Sep 2017	7	15.12	76.55	8.0	33.39	8.2	24.7	2.39
I40	11 Sep 2017	8	14.59	77.37	8.0	33.35	8.2	24.8	3.02

Station	Date	Depth (m)	Temp (°C)	XMS (‰)	DO (mg/L)	Sal (ppt)	pH	Dens (σ -t)	Chlor (μ g/L)
I40	11 Sep 2017	9	14.58	76.56	7.9	33.34	8.2	24.8	3.51
I40	11 Sep 2017	10	14.44	62.61	7.3	33.35	8.2	24.8	3.88
I40	16 Sep 2017	2	18.18	69.18	8.3	33.35	8.2	24.0	2.03
I40	16 Sep 2017	3	17.16	68.00	8.2	33.36	8.2	24.2	2.52
I40	16 Sep 2017	4	16.75	65.52	8.1	33.34	8.1	24.3	3.05
I40	16 Sep 2017	5	16.67	64.09	8.0	33.33	8.1	24.3	3.40
I40	16 Sep 2017	6	16.06	62.05	7.6	33.38	8.1	24.5	4.07
I40	16 Sep 2017	7	15.41	59.64	7.6	33.35	8.0	24.6	4.85
I40	16 Sep 2017	8	15.34	64.00	7.7	33.34	8.0	24.6	4.82
I40	16 Sep 2017	9	15.00	65.91	7.4	33.36	8.0	24.7	4.72
I40	16 Sep 2017	10	14.54	59.07	7.0	33.36	8.0	24.8	4.52
I40	20 Sep 2017	1	18.45	84.08	8.3	33.36	8.2	23.9	1.70
I40	20 Sep 2017	2	18.46	84.08	8.3	33.36	8.2	23.9	1.67
I40	20 Sep 2017	3	18.42	84.09	8.3	33.36	8.2	23.9	1.69
I40	20 Sep 2017	4	18.40	84.13	8.2	33.36	8.2	23.9	1.75
I40	20 Sep 2017	5	18.34	83.79	8.3	33.36	8.2	23.9	1.83
I40	20 Sep 2017	6	18.31	82.61	8.3	33.36	8.2	23.9	2.03
I40	20 Sep 2017	7	18.25	81.93	8.2	33.36	8.2	24.0	2.16
I40	20 Sep 2017	8	18.23	81.45	8.3	33.36	8.2	24.0	2.34
I40	20 Sep 2017	9	18.24	81.14	8.2	33.35	8.2	24.0	2.47
I40	20 Sep 2017	10	18.17	80.65	8.2	33.36	8.2	24.0	2.49
I40	28 Sep 2017	1	18.75	78.83	8.3	33.39	8.2	23.9	1.23
I40	28 Sep 2017	2	18.80	79.19	8.3	33.39	8.2	23.8	1.22
I40	28 Sep 2017	3	18.62	80.15	8.1	33.40	8.2	23.9	1.21
I40	28 Sep 2017	4	16.75	81.26	8.2	33.41	8.2	24.4	1.17
I40	28 Sep 2017	5	15.99	79.52	8.1	33.37	8.2	24.5	1.30
I40	28 Sep 2017	6	15.67	75.54	7.7	33.35	8.1	24.6	1.44
I40	28 Sep 2017	7	15.38	72.27	7.5	33.34	8.1	24.6	2.00
I40	28 Sep 2017	8	15.33	65.93	7.4	33.32	8.1	24.6	3.45
I40	28 Sep 2017	9	15.32	62.42	7.4	33.32	8.1	24.6	4.89
I40	28 Sep 2017	10	15.29	60.74	7.3	33.33	8.1	24.6	5.44

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	05 Sep 2017	6	ZV	LAB DUPLICATE	40e	<2	14e
I19	11 Sep 2017	6	JT	LAB DUPLICATE	<2	<2	<2
I19	16 Sep 2017	6	AE	LAB DUPLICATE	<2	<2	<2
I19	20 Sep 2017	6	LMA	LAB DUPLICATE	4e	<2	2e
I19	28 Sep 2017	6	AE	LAB DUPLICATE	<2	<2	<2
I40	05 Sep 2017	6	ZV	LAB DUPLICATE	26e	<2	10e
I40	11 Sep 2017	6	JT	LAB DUPLICATE	<2	<2	<2
I40	16 Sep 2017	6	LMA	LAB DUPLICATE	<20	<2	<2
I40	20 Sep 2017	6	ZV	LAB DUPLICATE	<2	<2	<2
I40	28 Sep 2017	6	ZV	LAB DUPLICATE	<2	<2	<2
S12	05 Sep 2017		AR	FIELD DUPLICATE	<200	40e	8e
S12	05 Sep 2017		AR	LAB DUPLICATE	60e	14e	4e
S12	12 Sep 2017		ZV	FIELD DUPLICATE	4e	<2	4e
S12	12 Sep 2017		ZV	LAB DUPLICATE	<20	6e	<2
S12	19 Sep 2017		AR	FIELD DUPLICATE	<20	<20	2e
S12	19 Sep 2017		AR	LAB DUPLICATE	<20	<20	2e
S12	26 Sep 2017		AE	FIELD DUPLICATE	<20	2e	<2
S12	26 Sep 2017		AE	LAB DUPLICATE	<2	<2	2e

ns = not sampled

ND = no data

