MONTHLY RECEIVING WATERS MONITORING REPORT FOR THE SOUTH BAY OCEAN OUTFALL

(SOUTH BAY WATER RECLAMATION PLANT)
NPDES PERMIT NO. CA 0109045

MARCH 2016

CITY OF SAN DIEGO
OCEAN MONITORING PROGRAM
PUBLIC UTILITIES DEPARTMENT
ENVIRONMENTAL MONITORING AND TECHNICAL SERVICES DIVISION

THE CITY OF SAN DIEGO

April 30, 2016

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

Attention: POTW Compliance Unit

Dear Mr. Gibson:

Enclosed is the March 2016 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 Public Utilities Director

TDS/ger

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

Environmental Monitoring and Technical Services Division • Public Utilities
2392 Kincaid Road • San Diego, CA 92101-0811
Tel (619) 758-2300 Fax (619) 758-2309

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

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

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

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

Offshore Stations

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

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

Bacteriological Reporting and Quality Assurance

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

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

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

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

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

Single Sample Maximums:

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

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

Quality controls of bacteriological data include laboratory and field duplicate analyses. Laboratory duplicates are performed on approximately 10% of the water quality samples, while field duplicates are performed six times a month (see Appendix A). Laboratory duplicates represent two aliquots of the original sample that are split in the laboratory and analyzed by the same analyst using identical procedures within the same analytical run. The results of these analyses provide a measure of intra-analyst precision. In contrast, field duplicates represent two separate samples collected at the same time from the same site, which are handled under identical circumstances and treated exactly the same throughout field and lab procedures. The results of these analyses provide a measure of precision associated with sample collection, preservation, storage, and lab procedures. The sign test (see Gilbert, 1987) is used to statistically compare both the results from the laboratory duplicates, as well as the results from the field duplicates. These data will be further analyzed in the City's 2016 Quality Assurance Report, which will be completed in March 2017.

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 March, three of the eight shore stations located north of the border were out of compliance with various California Ocean Plan (Ocean Plan) water contact standards (see below); these standards do not apply to stations located in Mexican waters.
    - The 30-day geometric mean standard for total coliforms was exceeded at station S10 on multiple days during the month.
    - The 30-day geometric mean standard for *Enterococcus* was exceeded at stations S4, S5, and S10 on multiple days during the month.
    - The single sample maximum (SSM) standards for total coliforms, fecal coliforms, *Enterococcus*, and the SSM standard that states total coliform

densities shall not exceed 1000 CFU/100 mL when the fecal:total ratio exceeds 0.1 were exceeded at station S5 on March 15.
    - The single sample maximum (SSM) standard for *Enterococcus* was exceeded at station S4 on March 8.
    - Per permit requirements, resamples were collected in response to these SSM exceedances (see Table 2.8 for details).
- Although the Ocean Plan standards do not apply to these stations, bacteria densities exceeded one or more benchmark levels (i.e., total coliforms >10,000 CFU/100mL; fecal coliforms >400 CFU/100 mL; *Enterococcus* >104 CFU/100 mL; total >1000 CFU/100 mL & F:T ratio >0.1) in the seawater samples collected at stations S0 and S2 on one or more days during the month.
- Historical analyses of Ocean Plan compliance rates for the South Bay outfall shoreline monitoring stations, combined with the results of satellite imagery data, suggest that outflows from the Tijuana River and Los Buenos Creek, as well as surface runoff during or after rain events (storms), are likely to be the cause of impacted water quality along the shore and in near shore recreational waters in the South Bay region. See the City of San Diego's most recent *South Bay Ocean Outfall Annual Receiving Waters Monitoring and Assessment Report* for details (http://www.sandiego.gov/mwwd/environment/oceanmonitor/reports/index.shtml).
- No notable visual observations were recorded for March at any of the shore stations.

- **Kelp Bed Water Quality Sampling**
    - Of the seven kelp bed water quality stations (I19, I24, I25, I26, I32, I39, I40), only station I39 was sampled five times during March (i.e., March 5, 10, 14, 20, 30). Stations I19, I24, I25, I26, I32, and I40 were abandoned on March 5 due to large ocean swells. Additionally, stations I25 and I26 were abandoned on March 14, also due to large ocean swells.
    - During March, all seven of these stations were in compliance with all Ocean Plan standards.
    - Water column temperatures ranged from 12.68 to 17.07°C. The difference between surface and bottom waters ranged from approximately 0.36 to 3.09°C, indicating the water column was stratified at some of these sites during the month.
    - Chlorophyll *a* concentrations ranged from 0.38 to 10.34 µg/L at these stations, suggesting the presence of phytoplankton blooms during the month.
    - Nothing of sewage origin was observed at any of the kelp bed stations.

- **Offshore Water Quality Sampling**
    - Quarterly sampling was not conducted during March at the offshore stations. The next quarterly sampling is scheduled for May 2016.

TABLES AND FIGURES

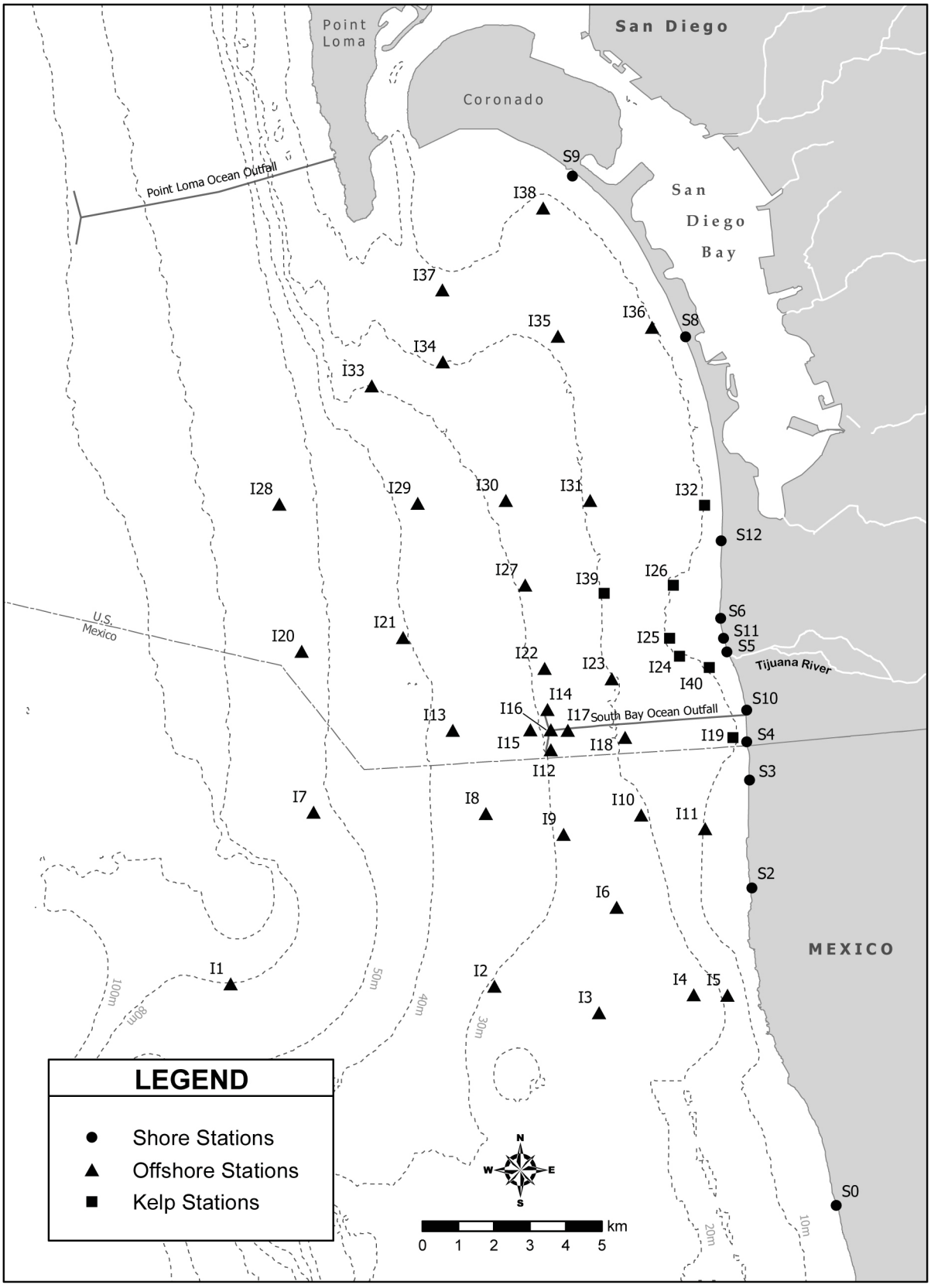

Figure 1.1 Station Map

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Shore Stations

Table 2.1

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

Date	S4	S5	S6	S8	S9	S10	S11	S12
01 Mar 2016	196	617	9	5	4	1352	9	2
02 Mar 2016	196	617	9	5	4	1352	9	2
03 Mar 2016	81	387	5*	4*	4*	1056	7*	2*
04 Mar 2016	81	387	5*	4*	4*	1056	7*	2*
05 Mar 2016	28*	208	5*	4*	4*	780	7*	2*
06 Mar 2016	28*	87	5*	4*	4*	535	7*	2*
07 Mar 2016	28*	87	5*	4*	4*	535	7*	2*
08 Mar 2016	57	26	7	7	8	337	12	3
09 Mar 2016	57	26	7	7	8	337	12	3
10 Mar 2016	22*	13*	5*	5*	6*	194	10*	4*
11 Mar 2016	22*	13*	5*	5*	6*	194	10*	4*
12 Mar 2016	22*	13*	5*	5*	6*	93	10*	4*
13 Mar 2016	22*	13*	5*	5*	6*	33	10*	4*
14 Mar 2016	22*	13*	5*	5*	6*	33	10*	4*
15 Mar 2016	41	55	4	4	8	48	9	3
16 Mar 2016	41	55	4	4	8	48	9	3
17 Mar 2016	53*	97	4*	5*	11*	50*	7*	4*
18 Mar 2016	53*	97	4*	5*	11*	50*	7*	4*
19 Mar 2016	53*	97	4*	5*	11*	50*	7*	4*
20 Mar 2016	53*	97	4*	5*	11*	50*	7*	4*
21 Mar 2016	53*	97	4*	5*	11*	50*	7*	4*
22 Mar 2016	43	75	5	7	13	41	7	5
23 Mar 2016	43	75	5	7	13	41	7	5
24 Mar 2016	66*	154	6*	9*	20*	88*	10*	6*
25 Mar 2016	66*	154	6*	9*	20*	88*	10*	6*
26 Mar 2016	66*	154	6*	9*	20*	88*	10*	6*
27 Mar 2016	66*	154	6*	9*	20*	88*	10*	6*
28 Mar 2016	66*	154	6*	9*	20*	88*	10*	6*
29 Mar 2016	51	90	6	7	13	41	10	5
30 Mar 2016	51	90	6	7	13	41	10	5
31 Mar 2016	115*	121	8*	9*	17*	88*	15*	6*

* 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 Mar 2016	13	129	2	2	2	86	2	2
02 Mar 2016	13	129	2	2	2	86	2	2
03 Mar 2016	4	76	2*	2*	2*	52	2*	2*
04 Mar 2016	4	76	2*	2*	2*	52	2*	2*
05 Mar 2016	2*	33	2*	2*	2*	26	2*	2*
06 Mar 2016	2*	11	2*	2*	2*	15	2*	2*
07 Mar 2016	2*	11	2*	2*	2*	15	2*	2*
08 Mar 2016	4	5	3	2	3	11	3	2
09 Mar 2016	4	5	3	2	3	11	3	2
10 Mar 2016	5*	3*	3*	3*	3*	5*	3*	2*
11 Mar 2016	5*	3*	3*	3*	3*	5*	3*	2*
12 Mar 2016	5*	3*	3*	3*	3*	5*	3*	2*
13 Mar 2016	5*	3*	3*	3*	3*	5*	3*	2*
14 Mar 2016	5*	3*	3*	3*	3*	5*	3*	2*
15 Mar 2016	7	11	3	2	3	9	3	2
16 Mar 2016	7	11	3	2	3	9	3	2
17 Mar 2016	10*	15	3*	3*	3*	12*	3*	2*
18 Mar 2016	10*	15	3*	3*	3*	12*	3*	2*
19 Mar 2016	10*	15	3*	3*	3*	12*	3*	2*
20 Mar 2016	10*	15	3*	3*	3*	12*	3*	2*
21 Mar 2016	10*	15	3*	3*	3*	12*	3*	2*
22 Mar 2016	7	10	3	2	3	9	3	2
23 Mar 2016	7	10	3	2	3	9	3	2
24 Mar 2016	10*	15	3*	3*	3*	12*	4*	2*
25 Mar 2016	10*	15	3*	3*	3*	12*	4*	2*
26 Mar 2016	10*	15	3*	3*	3*	12*	4*	2*
27 Mar 2016	10*	15	3*	3*	3*	12*	4*	2*
28 Mar 2016	10*	15	3*	3*	3*	12*	4*	2*
29 Mar 2016	7	10	3	2	3	9	3	2
30 Mar 2016	7	10	3	2	3	9	3	2
31 Mar 2016	10*	15	3*	3*	3*	12*	4*	2*

* 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 Mar 2016	56	224	4	3	2	154	2	2
02 Mar 2016	56	224	4	3	2	154	2	2
03 Mar 2016	31	125	3*	2*	2*	86	2*	2*
04 Mar 2016	31	125	3*	2*	2*	86	2*	2*
05 Mar 2016	21	59	3*	2*	2*	52	2*	2*
06 Mar 2016	10	20	3*	2*	2*	33	2*	2*
07 Mar 2016	10	20	3*	2*	2*	33	2*	2*
08 Mar 2016	10	6	6	3	3	25	3	3
09 Mar 2016	10	6	6	3	3	25	3	3
10 Mar 2016	10	3*	4*	3*	3*	13	3*	3*
11 Mar 2016	10	3*	4*	3*	3*	13	3*	3*
12 Mar 2016	10	3*	4*	3*	3*	10*	3*	3*
13 Mar 2016	10	3*	4*	3*	3*	10*	3*	3*
14 Mar 2016	10	3*	4*	3*	3*	10*	3*	3*
15 Mar 2016	11	9	4	3	3	14	3	3
16 Mar 2016	11	9	4	3	3	14	3	3
17 Mar 2016	15	10	4*	3*	4*	13*	3*	3*
18 Mar 2016	15	10	4*	3*	4*	13*	3*	3*
19 Mar 2016	15	10	4*	3*	4*	13*	3*	3*
20 Mar 2016	15	10	4*	3*	4*	13*	3*	3*
21 Mar 2016	15	10	4*	3*	4*	13*	3*	3*
22 Mar 2016	11	8	5	3	4	9	3	3
23 Mar 2016	11	8	5	3	4	9	3	3
24 Mar 2016	10	10	6*	3*	4*	13*	3*	3*
25 Mar 2016	10	10	6*	3*	4*	13*	3*	3*
26 Mar 2016	10	10	6*	3*	4*	13*	3*	3*
27 Mar 2016	10	10	6*	3*	4*	13*	3*	3*
28 Mar 2016	10	10	6*	3*	4*	13*	3*	3*
29 Mar 2016	8	9	5	3	4	9	3	3
30 Mar 2016	8	9	5	3	4	9	3	3
31 Mar 2016	10	12	6*	3*	4*	11*	3*	3*

* Geometric mean calculated using n<5

Table 2.4

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

Date	S4	S5	S6	S8	S9	S10	S11	S12
01 Mar 2016	IC	IC	IC	IC	IC	IC	IC	IC
08 Mar 2016	IC	IC	IC	IC	IC	IC	IC	IC
15 Mar 2016	IC	E	IC	IC	IC	IC	IC	IC
17 Mar 2016	ns	IC	ns	ns	ns	ns	ns	ns
22 Mar 2016	IC	IC	IC	IC	IC	IC	IC	IC
29 Mar 2016	IC	IC	IC	IC	IC	IC	IC	IC

IC = In Compliance
E = Exceedance
ns = not sampled

Table 2.5

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

Date	S4	S5	S6	S8	S9	S10	S11	S12
01 Mar 2016	IC	IC	IC	IC	IC	IC	IC	IC
08 Mar 2016	IC	IC	IC	IC	IC	IC	IC	IC
15 Mar 2016	IC	E	IC	IC	IC	IC	IC	IC
17 Mar 2016	ns	IC	ns	ns	ns	ns	ns	ns
22 Mar 2016	IC	IC	IC	IC	IC	IC	IC	IC
29 Mar 2016	IC	IC	IC	IC	IC	IC	IC	IC

IC = In Compliance
E = Exceedance
ns = not sampled

Table 2.6

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

Date	S4	S5	S6	S8	S9	S10	S11	S12
01 Mar 2016	IC	IC	IC	IC	IC	IC	IC	IC
08 Mar 2016	E	IC	IC	IC	IC	IC	IC	IC
10 Mar 2016	IC	ns	ns	ns	ns	ns	ns	ns
15 Mar 2016	IC	E	IC	IC	IC	IC	IC	IC
17 Mar 2016	ns	IC	ns	ns	ns	ns	ns	ns
22 Mar 2016	IC	IC	IC	IC	IC	IC	IC	IC
29 Mar 2016	IC	IC	IC	IC	IC	IC	IC	IC

IC = In Compliance
E = Exceedance
ns = not sampled

Table 2.7

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

Date	S4	S5	S6	S8	S9	S10	S11	S12
01 Mar 2016	IC	IC	IC	IC	IC	IC	IC	IC
08 Mar 2016	IC	IC	IC	IC	IC	IC	IC	IC
15 Mar 2016	IC	E	IC	IC	IC	IC	IC	IC
17 Mar 2016	ns	IC	ns	ns	ns	ns	ns	ns
22 Mar 2016	IC	IC	IC	IC	IC	IC	IC	IC
29 Mar 2016	IC	IC	IC	IC	IC	IC	IC	IC

IC = In Compliance
E = Exceedance
ns = not sampled

Table 2.8

Summary of water quality parameters at the SBOO shore stations for each sample date. Densities of total coliform (Total), fecal coliform (Fecal), and *Enterococcus* (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	01 Mar 2016	1110	1800e	380e	860	0.211
S0	08 Mar 2016	1105	2800e	180e	800	0.064
S0	15 Mar 2016	1115	2800e	140e	740	0.050
S0	22 Mar 2016	1045	260e	8e	42	0.031
S0	29 Mar 2016	1020	4000	220e	260e	0.055
S2	01 Mar 2016	1010	20e	2e	6e	0.100
S2	08 Mar 2016	1010	1400e	120	180e	0.086
S2	15 Mar 2016	1015	60e	4e	8e	0.067
S2	22 Mar 2016	1220	180e	6e	12e	0.033
S2	29 Mar 2016	1140	12e	2e	28e	0.167
S3	01 Mar 2016	940	840	64	16e	0.076
S3	08 Mar 2016	935	620	40	96	0.065
S3	15 Mar 2016	930	220e	6e	4e	0.027
S3	22 Mar 2016	1140	400	<2	6e	0.005
S3	29 Mar 2016	1105	5800	8e	22e	0.001
S4	01 Mar 2016	1231	<2	<2	<2	1.000
S4	08 Mar 2016	917	1000e	72	110	0.072
S4	10 Mar 2016	1258	ns	ns	18e	ns
S4	15 Mar 2016	757	480	32e	12e	0.067
S4	22 Mar 2016	1231	<20	<2	2e	0.100
S4	29 Mar 2016	832	18e	2e	2e	0.111
S5	01 Mar 2016	1103	<20	<2	2e	0.100
S5	08 Mar 2016	1143	40e	8e	2e	0.200
S5	15 Mar 2016	851	>16000	2600e	600	0.163
S5	17 Mar 2016	946	340e	8e	24e	0.024
S5	22 Mar 2016	1047	<20	<2	<2	0.100
S5	29 Mar 2016	957	6e	2e	4e	0.333
S6	01 Mar 2016	1049	2e	<2	<2	1.000
S6	08 Mar 2016	1128	20e	8e	38e	0.400
S6	15 Mar 2016	902	<2	4e	2e	2.000
S6	22 Mar 2016	1031	<20	<2	10e	0.100
S6	29 Mar 2016	942	4e	2e	<2	0.500
S8	01 Mar 2016	937	<2	<2	<2	1.000
S8	08 Mar 2016	1230	80e	6e	10e	0.075
S8	15 Mar 2016	933	2e	2e	<2	1.000
S8	22 Mar 2016	949	<20	2e	<2	0.100
S8	29 Mar 2016	1113	<2	<2	<2	1.000
S9	01 Mar 2016	915	4e	2e	<2	0.500
S9	08 Mar 2016	1253	100e	8e	10e	0.080
S9	15 Mar 2016	957	<20	4e	4e	0.200
S9	22 Mar 2016	929	<20	2e	4e	0.100
S9	29 Mar 2016	1151	<2	<2	<2	1.000

Station	Date	Time	Total	Fecal	Entero	F:T
S10	01 Mar 2016	1237	2e	<2	4e	1.000
S10	08 Mar 2016	941	400	60	68	0.150
S10	15 Mar 2016	803	3800e	100e	56	0.026
S10	22 Mar 2016	1239	<20	<2	<2	0.100
S10	29 Mar 2016	842	2e	<2	<2	1.000
S11	01 Mar 2016	1056	<2	<2	<2	1.000
S11	08 Mar 2016	1135	120e	10e	16e	0.083
S11	15 Mar 2016	858	6e	2e	2e	0.333
S11	22 Mar 2016	1039	8e	6e	<2	0.750
S11	29 Mar 2016	948	10e	<2	2e	0.200
S12	01 Mar 2016	1008	2e	<2	<2	1.000
S12	08 Mar 2016	1111	<20	<2	12e	0.100
S12	15 Mar 2016	911	2e	2e	<2	1.000
S12	22 Mar 2016	1020	<20	<2	2e	0.100
S12	29 Mar 2016	931	2e	<2	<2	1.000

ns = not sampled
ND = no data

Comments

Station	Date	Depth	Parameter	Comments
S4	10 Mar 2016			Resample
S5	17 Mar 2016			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	01 Mar 2016	Arrive Time	1110
S0	01 Mar 2016	Weather	Cloudy
S0	01 Mar 2016	Wind Speed (kts)	1.2
S0	01 Mar 2016	Wind Dir	NE
S0	01 Mar 2016	Animal Life	5 Shorebirds
S0	01 Mar 2016	Floatables	None
S0	01 Mar 2016	Water Color	Green
S0	01 Mar 2016	Current Direction	N
S0	01 Mar 2016	Water Temp (C)	17
S0	01 Mar 2016	Wave Height Low (ft)	5
S0	01 Mar 2016	High Tide (ft)	2.5
S0	01 Mar 2016	High Tide Time	1552
S0	01 Mar 2016	Low Tide (ft)	1.3
S0	01 Mar 2016	Low Tide Time	928
S0	01 Mar 2016	Comments	Kelp; Water clear; Flow from stormdrain 0.5 L/sec
S0	08 Mar 2016	Arrive Time	1105
S0	08 Mar 2016	Weather	Sunny
S0	08 Mar 2016	Wind Speed (kts)	1.9
S0	08 Mar 2016	Wind Dir	NE
S0	08 Mar 2016	Animal Life	5 Shorebirds
S0	08 Mar 2016	Floatables	None
S0	08 Mar 2016	Water Color	Green
S0	08 Mar 2016	Current Direction	S
S0	08 Mar 2016	Water Temp (C)	13.6
S0	08 Mar 2016	Wave Height Low (ft)	8
S0	08 Mar 2016	High Tide (ft)	5.9
S0	08 Mar 2016	High Tide Time	812
S0	08 Mar 2016	Low Tide (ft)	-1.1
S0	08 Mar 2016	Low Tide Time	1449
S0	08 Mar 2016	Comments	Kelp; Water turbid; Flow from stormdrain 0.5L/sec
S0	15 Mar 2016	Arrive Time	1115
S0	15 Mar 2016	Weather	Sunny
S0	15 Mar 2016	Wind Speed (kts)	6.2
S0	15 Mar 2016	Wind Dir	NE
S0	15 Mar 2016	Animal Life	5 Shorebirds
S0	15 Mar 2016	Floatables	None
S0	15 Mar 2016	Water Color	Green
S0	15 Mar 2016	Current Direction	S
S0	15 Mar 2016	Water Temp (C)	15.5
S0	15 Mar 2016	Wave Height Low (ft)	3
S0	15 Mar 2016	High Tide (ft)	3.1
S0	15 Mar 2016	High Tide Time	1713
S0	15 Mar 2016	Low Tide (ft)	0.4
S0	15 Mar 2016	Low Tide Time	1025
S0	15 Mar 2016	Comments	Kelp; Water clear; No flow from stormdrain
S0	22 Mar 2016	Arrive Time	1045
S0	22 Mar 2016	Weather	Sunny
S0	22 Mar 2016	Wind Speed (kts)	4

Station	Date	Parameter	Value
S0	22 Mar 2016	Wind Dir	NE
S0	22 Mar 2016	Animal Life	＞20 Seagulls
S0	22 Mar 2016	Floatables	None
S0	22 Mar 2016	Water Color	Green
S0	22 Mar 2016	Current Direction	S
S0	22 Mar 2016	Water Temp (C)	16
S0	22 Mar 2016	Wave Height Low (ft)	3
S0	22 Mar 2016	High Tide (ft)	5
S0	22 Mar 2016	High Tide Time	916
S0	22 Mar 2016	Low Tide (ft)	-0.1
S0	22 Mar 2016	Low Tide Time	1539
S0	22 Mar 2016	Comments	Kelp; Water clear; No flow from stormdrain
S0	29 Mar 2016	Arrive Time	1020
S0	29 Mar 2016	Weather	Sunny
S0	29 Mar 2016	Wind Speed (kts)	2.4
S0	29 Mar 2016	Wind Dir	NE
S0	29 Mar 2016	Animal Life	5 Seagulls
S0	29 Mar 2016	Floatables	None
S0	29 Mar 2016	Water Color	Green
S0	29 Mar 2016	Current Direction	S
S0	29 Mar 2016	Water Temp (C)	17
S0	29 Mar 2016	Wave Height Low (ft)	3.4
S0	29 Mar 2016	High Tide (ft)	2.7
S0	29 Mar 2016	High Tide Time	1421
S0	29 Mar 2016	Low Tide (ft)	0.9
S0	29 Mar 2016	Low Tide Time	801
S0	29 Mar 2016	Comments	Kelp; Water clear; No flow from stormdrain; Trash on the shore
S2	01 Mar 2016	Arrive Time	1010
S2	01 Mar 2016	Weather	Cloudy
S2	01 Mar 2016	Wind Speed (kts)	2.7
S2	01 Mar 2016	Wind Dir	NE
S2	01 Mar 2016	Animal Life	20 Shorebirds
S2	01 Mar 2016	Floatables	None
S2	01 Mar 2016	Water Color	Green
S2	01 Mar 2016	Current Direction	N
S2	01 Mar 2016	Water Temp (C)	17
S2	01 Mar 2016	Wave Height Low (ft)	5
S2	01 Mar 2016	High Tide (ft)	2.5
S2	01 Mar 2016	High Tide Time	1552
S2	01 Mar 2016	Low Tide (ft)	1.3
S2	01 Mar 2016	Low Tide Time	928
S2	01 Mar 2016	Comments	Kelp; 1 Fisherman; Water clear; No flow from stormdrain
S2	08 Mar 2016	Arrive Time	1010
S2	08 Mar 2016	Weather	Sunny
S2	08 Mar 2016	Wind Speed (kts)	5.8
S2	08 Mar 2016	Wind Dir	NE
S2	08 Mar 2016	Animal Life	20 Shorebirds
S2	08 Mar 2016	Floatables	None
S2	08 Mar 2016	Water Color	Green
S2	08 Mar 2016	Current Direction	S
S2	08 Mar 2016	Water Temp (C)	14.3
S2	08 Mar 2016	Wave Height Low (ft)	8

Station	Date	Parameter	Value
S2	08 Mar 2016	High Tide (ft)	5.9
S2	08 Mar 2016	High Tide Time	812
S2	08 Mar 2016	Low Tide (ft)	-1.1
S2	08 Mar 2016	Low Tide Time	1449
S2	08 Mar 2016	Comments	Kelp; Water turbid; No flow from stormdrain
S2	15 Mar 2016	Arrive Time	1015
S2	15 Mar 2016	Weather	Sunny
S2	15 Mar 2016	Wind Speed (kts)	3.6
S2	15 Mar 2016	Wind Dir	NE
S2	15 Mar 2016	Animal Life	5 Shorebirds; 1 Dog
S2	15 Mar 2016	Floatables	None
S2	15 Mar 2016	Water Color	Green
S2	15 Mar 2016	Current Direction	S
S2	15 Mar 2016	Water Temp (C)	15
S2	15 Mar 2016	Wave Height Low (ft)	3
S2	15 Mar 2016	High Tide (ft)	3.1
S2	15 Mar 2016	High Tide Time	1713
S2	15 Mar 2016	Low Tide (ft)	0.4
S2	15 Mar 2016	Low Tide Time	1025
S2	15 Mar 2016	Comments	Kelp; 6 Persons; Water clear; No flow from stormdrain; Trash on the shore
S2	22 Mar 2016	Arrive Time	1220
S2	22 Mar 2016	Weather	Sunny
S2	22 Mar 2016	Wind Speed (kts)	5.5
S2	22 Mar 2016	Wind Dir	NE
S2	22 Mar 2016	Animal Life	3 Dogs
S2	22 Mar 2016	Floatables	None
S2	22 Mar 2016	Water Color	Green
S2	22 Mar 2016	Current Direction	S
S2	22 Mar 2016	Water Temp (C)	16
S2	22 Mar 2016	Wave Height Low (ft)	4
S2	22 Mar 2016	High Tide (ft)	5
S2	22 Mar 2016	High Tide Time	916
S2	22 Mar 2016	Low Tide (ft)	-0.1
S2	22 Mar 2016	Low Tide Time	1539
S2	22 Mar 2016	Comments	Kelp; 5 Persons; Water clear; No flow from stormdrain
S2	29 Mar 2016	Arrive Time	1140
S2	29 Mar 2016	Weather	Sunny
S2	29 Mar 2016	Wind Speed (kts)	4.7
S2	29 Mar 2016	Wind Dir	NE
S2	29 Mar 2016	Animal Life	5 Shorebirds; 1 Dog
S2	29 Mar 2016	Floatables	None
S2	29 Mar 2016	Water Color	Green
S2	29 Mar 2016	Current Direction	S
S2	29 Mar 2016	Water Temp (C)	17
S2	29 Mar 2016	Wave Height Low (ft)	4
S2	29 Mar 2016	High Tide (ft)	2.7
S2	29 Mar 2016	High Tide Time	1421
S2	29 Mar 2016	Low Tide (ft)	0.9
S2	29 Mar 2016	Low Tide Time	801
S2	29 Mar 2016	Comments	Kelp; 10 Persons; Water clear; No flow from stormdrain, Trash on the shore

Station	Date	Parameter	Value
S3	01 Mar 2016	Arrive Time	940
S3	01 Mar 2016	Weather	Cloudy
S3	01 Mar 2016	Wind Speed (kts)	3.4
S3	01 Mar 2016	Wind Dir	NE
S3	01 Mar 2016	Animal Life	5 Shorebirds
S3	01 Mar 2016	Floatables	None
S3	01 Mar 2016	Water Color	Green
S3	01 Mar 2016	Current Direction	N
S3	01 Mar 2016	Water Temp (C)	17
S3	01 Mar 2016	Wave Height Low (ft)	6
S3	01 Mar 2016	High Tide (ft)	2.5
S3	01 Mar 2016	High Tide Time	1552
S3	01 Mar 2016	Low Tide (ft)	1.3
S3	01 Mar 2016	Low Tide Time	928
S3	01 Mar 2016	Comments	Kelp; 2 Surfers; Water clear; No flow from stormdrain
S3	08 Mar 2016	Arrive Time	935
S3	08 Mar 2016	Weather	Sunny
S3	08 Mar 2016	Wind Speed (kts)	8
S3	08 Mar 2016	Wind Dir	NE
S3	08 Mar 2016	Animal Life	5 Shorebirds
S3	08 Mar 2016	Floatables	None
S3	08 Mar 2016	Water Color	Green
S3	08 Mar 2016	Current Direction	S
S3	08 Mar 2016	Water Temp (C)	14.2
S3	08 Mar 2016	Wave Height Low (ft)	10
S3	08 Mar 2016	High Tide (ft)	5.9
S3	08 Mar 2016	High Tide Time	812
S3	08 Mar 2016	Low Tide (ft)	-1.1
S3	08 Mar 2016	Low Tide Time	1449
S3	08 Mar 2016	Comments	Kelp; Water turbid; No flow from stormdrain
S3	15 Mar 2016	Arrive Time	930
S3	15 Mar 2016	Weather	Sunny
S3	15 Mar 2016	Wind Speed (kts)	2.9
S3	15 Mar 2016	Wind Dir	NE
S3	15 Mar 2016	Animal Life	10 Shorebirds
S3	15 Mar 2016	Floatables	None
S3	15 Mar 2016	Water Color	Green
S3	15 Mar 2016	Current Direction	S
S3	15 Mar 2016	Water Temp (C)	15
S3	15 Mar 2016	Wave Height Low (ft)	6
S3	15 Mar 2016	High Tide (ft)	4.7
S3	15 Mar 2016	High Tide Time	246
S3	15 Mar 2016	Low Tide (ft)	0.4
S3	15 Mar 2016	Low Tide Time	1025
S3	15 Mar 2016	Comments	Kelp; 2 Persons; Water clear; No flow from stormdrain
S3	22 Mar 2016	Arrive Time	1140
S3	22 Mar 2016	Weather	Cloudy
S3	22 Mar 2016	Wind Speed (kts)	4.6
S3	22 Mar 2016	Wind Dir	NE
S3	22 Mar 2016	Animal Life	5 Seagulls
S3	22 Mar 2016	Floatables	None

Station	Date	Parameter	Value
S3	22 Mar 2016	Water Color	Green
S3	22 Mar 2016	Current Direction	S
S3	22 Mar 2016	Water Temp (C)	16.5
S3	22 Mar 2016	Wave Height Low (ft)	4.5
S3	22 Mar 2016	High Tide (ft)	5
S3	22 Mar 2016	High Tide Time	916
S3	22 Mar 2016	Low Tide (ft)	-0.1
S3	22 Mar 2016	Low Tide Time	1539
S3	22 Mar 2016	Comments	Kelp; 1 Person; Water clear; No flow from stormdrain
S3	29 Mar 2016	Arrive Time	1105
S3	29 Mar 2016	Weather	Sunny
S3	29 Mar 2016	Wind Speed (kts)	2.8
S3	29 Mar 2016	Wind Dir	NE
S3	29 Mar 2016	Animal Life	15 Shorebirds; 5 Dogs
S3	29 Mar 2016	Floatables	None
S3	29 Mar 2016	Water Color	Green
S3	29 Mar 2016	Current Direction	S
S3	29 Mar 2016	Water Temp (C)	17
S3	29 Mar 2016	Wave Height Low (ft)	4
S3	29 Mar 2016	High Tide (ft)	2.7
S3	29 Mar 2016	High Tide Time	1421
S3	29 Mar 2016	Low Tide (ft)	0.9
S3	29 Mar 2016	Low Tide Time	801
S3	29 Mar 2016	Comments	Kelp; 5 Persons; Water clear; No flow from stormdrain
S4	01 Mar 2016	Arrive Time	1231
S4	01 Mar 2016	Weather	Foggy
S4	01 Mar 2016	Wind Speed (kts)	4.4
S4	01 Mar 2016	Wind Dir	S
S4	01 Mar 2016	Animal Life	None
S4	01 Mar 2016	Floatables	None
S4	01 Mar 2016	Water Color	Green
S4	01 Mar 2016	Current Direction	S
S4	01 Mar 2016	Water Temp (C)	16.8
S4	01 Mar 2016	Wave Height Low (ft)	5
S4	01 Mar 2016	High Tide (ft)	2.5
S4	01 Mar 2016	High Tide Time	1552
S4	01 Mar 2016	Low Tide (ft)	1.3
S4	01 Mar 2016	Low Tide Time	928
S4	01 Mar 2016	Comments	Water clear
S4	08 Mar 2016	Arrive Time	917
S4	08 Mar 2016	Weather	Sunny
S4	08 Mar 2016	Wind Speed (kts)	6.9
S4	08 Mar 2016	Wind Dir	E
S4	08 Mar 2016	Animal Life	None
S4	08 Mar 2016	Floatables	None
S4	08 Mar 2016	Water Color	Green
S4	08 Mar 2016	Current Direction	E
S4	08 Mar 2016	Water Temp (C)	16.2
S4	08 Mar 2016	Wave Height Low (ft)	5
S4	08 Mar 2016	High Tide (ft)	5.9
S4	08 Mar 2016	High Tide Time	812
S4	08 Mar 2016	Low Tide (ft)	-1.1

Station	Date	Parameter	Value
S4	08 Mar 2016	Low Tide Time	1449
S4	08 Mar 2016	Comments	Seagrass; Water clear
S4	10 Mar 2016	Arrive Time	1258
S4	10 Mar 2016	Weather	Partly Cloudy
S4	10 Mar 2016	Wind Speed (kts)	6.2
S4	10 Mar 2016	Wind Dir	W
S4	10 Mar 2016	Animal Life	None
S4	10 Mar 2016	Floatables	None
S4	10 Mar 2016	Water Color	Green
S4	10 Mar 2016	Current Direction	S
S4	10 Mar 2016	Water Temp (C)	17.2
S4	10 Mar 2016	Wave Height Low (ft)	5
S4	10 Mar 2016	High Tide (ft)	5.4
S4	10 Mar 2016	High Tide Time	941
S4	10 Mar 2016	Low Tide (ft)	-0.5
S4	10 Mar 2016	Low Tide Time	1602
S4	10 Mar 2016	Comments	Seagrass; Water clear
S4	15 Mar 2016	Arrive Time	757
S4	15 Mar 2016	Weather	Partly Cloudy
S4	15 Mar 2016	Wind Speed (kts)	0.7
S4	15 Mar 2016	Wind Dir	SW
S4	15 Mar 2016	Animal Life	None
S4	15 Mar 2016	Floatables	None
S4	15 Mar 2016	Water Color	Green
S4	15 Mar 2016	Current Direction	SW
S4	15 Mar 2016	Water Temp (C)	14.6
S4	15 Mar 2016	Wave Height Low (ft)	3
S4	15 Mar 2016	High Tide (ft)	4.7
S4	15 Mar 2016	High Tide Time	246
S4	15 Mar 2016	Low Tide (ft)	0.4
S4	15 Mar 2016	Low Tide Time	1025
S4	15 Mar 2016	Comments	Kelp; Seagrass; Water clear
S4	22 Mar 2016	Arrive Time	1231
S4	22 Mar 2016	Weather	Partly Cloudy
S4	22 Mar 2016	Wind Speed (kts)	9.7
S4	22 Mar 2016	Wind Dir	W
S4	22 Mar 2016	Animal Life	None
S4	22 Mar 2016	Floatables	None
S4	22 Mar 2016	Water Color	Green
S4	22 Mar 2016	Current Direction	W
S4	22 Mar 2016	Water Temp (C)	16
S4	22 Mar 2016	Wave Height Low (ft)	4
S4	22 Mar 2016	High Tide (ft)	5
S4	22 Mar 2016	High Tide Time	916
S4	22 Mar 2016	Low Tide (ft)	-0.1
S4	22 Mar 2016	Low Tide Time	1539
S4	22 Mar 2016	Comments	Water clear
S4	29 Mar 2016	Arrive Time	832
S4	29 Mar 2016	Weather	Cloudy
S4	29 Mar 2016	Wind Speed (kts)	8.5
S4	29 Mar 2016	Wind Dir	NW

Station	Date	Parameter	Value
S4	29 Mar 2016	Animal Life	None
S4	29 Mar 2016	Floatables	None
S4	29 Mar 2016	Water Color	Green
S4	29 Mar 2016	Current Direction	NW
S4	29 Mar 2016	Water Temp (C)	15.2
S4	29 Mar 2016	Wave Height Low (ft)	2
S4	29 Mar 2016	High Tide (ft)	2.7
S4	29 Mar 2016	High Tide Time	1421
S4	29 Mar 2016	Low Tide (ft)	0.9
S4	29 Mar 2016	Low Tide Time	801
S4	29 Mar 2016	Comments	Kelp; Seagrass; Water clear
S5	01 Mar 2016	Arrive Time	1103
S5	01 Mar 2016	Weather	Foggy
S5	01 Mar 2016	Wind Speed (kts)	3.6
S5	01 Mar 2016	Wind Dir	S
S5	01 Mar 2016	Animal Life	None
S5	01 Mar 2016	Floatables	None
S5	01 Mar 2016	Water Color	Green
S5	01 Mar 2016	Current Direction	S
S5	01 Mar 2016	Water Temp (C)	16.6
S5	01 Mar 2016	Wave Height Low (ft)	6
S5	01 Mar 2016	High Tide (ft)	2.5
S5	01 Mar 2016	High Tide Time	1552
S5	01 Mar 2016	Low Tide (ft)	1.3
S5	01 Mar 2016	Low Tide Time	928
S5	01 Mar 2016	Comments	Water clear
S5	08 Mar 2016	Arrive Time	1143
S5	08 Mar 2016	Weather	Sunny
S5	08 Mar 2016	Wind Speed (kts)	7.1
S5	08 Mar 2016	Wind Dir	W
S5	08 Mar 2016	Animal Life	2 Birds
S5	08 Mar 2016	Floatables	None
S5	08 Mar 2016	Water Color	Green
S5	08 Mar 2016	Current Direction	W
S5	08 Mar 2016	Water Temp (C)	16.4
S5	08 Mar 2016	Wave Height Low (ft)	5
S5	08 Mar 2016	High Tide (ft)	5.9
S5	08 Mar 2016	High Tide Time	812
S5	08 Mar 2016	Low Tide (ft)	-1.1
S5	08 Mar 2016	Low Tide Time	1449
S5	08 Mar 2016	Comments	Kelp; Water clear
S5	15 Mar 2016	Arrive Time	851
S5	15 Mar 2016	Weather	Partly Cloudy
S5	15 Mar 2016	Wind Speed (kts)	1.7
S5	15 Mar 2016	Wind Dir	E
S5	15 Mar 2016	Animal Life	None
S5	15 Mar 2016	Floatables	None
S5	15 Mar 2016	Water Color	Green
S5	15 Mar 2016	Current Direction	SW
S5	15 Mar 2016	Water Temp (C)	15
S5	15 Mar 2016	Wave Height Low (ft)	3
S5	15 Mar 2016	High Tide (ft)	4.7

Station	Date	Parameter	Value
S5	15 Mar 2016	High Tide Time	246
S5	15 Mar 2016	Low Tide (ft)	0.4
S5	15 Mar 2016	Low Tide Time	1025
S5	15 Mar 2016	Comments	Kelp; Seagrass; Water clear
S5	17 Mar 2016	Arrive Time	946
S5	17 Mar 2016	Weather	Cloudy
S5	17 Mar 2016	Wind Speed (kts)	3.5
S5	17 Mar 2016	Wind Dir	W
S5	17 Mar 2016	Animal Life	None
S5	17 Mar 2016	Floatables	None
S5	17 Mar 2016	Water Color	Green
S5	17 Mar 2016	Current Direction	S
S5	17 Mar 2016	Water Temp (C)	15.4
S5	17 Mar 2016	Wave Height Low (ft)	3
S5	17 Mar 2016	High Tide (ft)	4.6
S5	17 Mar 2016	High Tide Time	532
S5	17 Mar 2016	Low Tide (ft)	-0.1
S5	17 Mar 2016	Low Tide Time	1254
S5	17 Mar 2016	Comments	Seagrass; Water clear
S5	22 Mar 2016	Arrive Time	1047
S5	22 Mar 2016	Weather	Partly Cloudy
S5	22 Mar 2016	Wind Speed (kts)	12.2
S5	22 Mar 2016	Wind Dir	W
S5	22 Mar 2016	Animal Life	None
S5	22 Mar 2016	Floatables	None
S5	22 Mar 2016	Water Color	Green
S5	22 Mar 2016	Current Direction	W
S5	22 Mar 2016	Water Temp (C)	14
S5	22 Mar 2016	Wave Height Low (ft)	4
S5	22 Mar 2016	High Tide (ft)	5
S5	22 Mar 2016	High Tide Time	916
S5	22 Mar 2016	Low Tide (ft)	-0.1
S5	22 Mar 2016	Low Tide Time	1539
S5	22 Mar 2016	Comments	Water clear
S5	29 Mar 2016	Arrive Time	957
S5	29 Mar 2016	Weather	Partly Cloudy
S5	29 Mar 2016	Wind Speed (kts)	7.1
S5	29 Mar 2016	Wind Dir	NW
S5	29 Mar 2016	Animal Life	None
S5	29 Mar 2016	Floatables	None
S5	29 Mar 2016	Water Color	Green
S5	29 Mar 2016	Current Direction	NW
S5	29 Mar 2016	Water Temp (C)	16.2
S5	29 Mar 2016	Wave Height Low (ft)	2
S5	29 Mar 2016	High Tide (ft)	2.7
S5	29 Mar 2016	High Tide Time	1421
S5	29 Mar 2016	Low Tide (ft)	0.9
S5	29 Mar 2016	Low Tide Time	801
S5	29 Mar 2016	Comments	Kelp; Seagrass; Water clear; River mouth closed
S6	01 Mar 2016	Arrive Time	1049
S6	01 Mar 2016	Weather	Foggy

Station	Date	Parameter	Value
S6	01 Mar 2016	Wind Speed (kts)	3.6
S6	01 Mar 2016	Wind Dir	S
S6	01 Mar 2016	Animal Life	None
S6	01 Mar 2016	Floatables	None
S6	01 Mar 2016	Water Color	Green
S6	01 Mar 2016	Current Direction	S
S6	01 Mar 2016	Water Temp (C)	17.2
S6	01 Mar 2016	Wave Height Low (ft)	5
S6	01 Mar 2016	High Tide (ft)	2.5
S6	01 Mar 2016	High Tide Time	1552
S6	01 Mar 2016	Low Tide (ft)	1.3
S6	01 Mar 2016	Low Tide Time	928
S6	01 Mar 2016	Comments	Water clear
S6	08 Mar 2016	Arrive Time	1128
S6	08 Mar 2016	Weather	Sunny
S6	08 Mar 2016	Wind Speed (kts)	7.3
S6	08 Mar 2016	Wind Dir	W
S6	08 Mar 2016	Animal Life	None
S6	08 Mar 2016	Floatables	None
S6	08 Mar 2016	Water Color	Green
S6	08 Mar 2016	Current Direction	W
S6	08 Mar 2016	Water Temp (C)	17.2
S6	08 Mar 2016	Wave Height Low (ft)	5
S6	08 Mar 2016	High Tide (ft)	5.9
S6	08 Mar 2016	High Tide Time	812
S6	08 Mar 2016	Low Tide (ft)	-1.1
S6	08 Mar 2016	Low Tide Time	1449
S6	08 Mar 2016	Comments	Water clear
S6	15 Mar 2016	Arrive Time	902
S6	15 Mar 2016	Weather	Partly Cloudy
S6	15 Mar 2016	Wind Speed (kts)	0
S6	15 Mar 2016	Wind Dir	
S6	15 Mar 2016	Animal Life	None
S6	15 Mar 2016	Floatables	None
S6	15 Mar 2016	Water Color	Green
S6	15 Mar 2016	Current Direction	SW
S6	15 Mar 2016	Water Temp (C)	15.2
S6	15 Mar 2016	Wave Height Low (ft)	3
S6	15 Mar 2016	High Tide (ft)	4.7
S6	15 Mar 2016	High Tide Time	246
S6	15 Mar 2016	Low Tide (ft)	0.4
S6	15 Mar 2016	Low Tide Time	1025
S6	15 Mar 2016	Comments	Kelp; Seagrass; Water clear
S6	22 Mar 2016	Arrive Time	1031
S6	22 Mar 2016	Weather	Partly Cloudy
S6	22 Mar 2016	Wind Speed (kts)	15.3
S6	22 Mar 2016	Wind Dir	W
S6	22 Mar 2016	Animal Life	None
S6	22 Mar 2016	Floatables	None
S6	22 Mar 2016	Water Color	Green
S6	22 Mar 2016	Current Direction	W
S6	22 Mar 2016	Water Temp (C)	14.6

Station	Date	Parameter	Value
S6	22 Mar 2016	Wave Height Low (ft)	5
S6	22 Mar 2016	High Tide (ft)	5
S6	22 Mar 2016	High Tide Time	916
S6	22 Mar 2016	Low Tide (ft)	-0.1
S6	22 Mar 2016	Low Tide Time	1539
S6	22 Mar 2016	Comments	Water clear
S6	29 Mar 2016	Arrive Time	942
S6	29 Mar 2016	Weather	Cloudy
S6	29 Mar 2016	Wind Speed (kts)	9.7
S6	29 Mar 2016	Wind Dir	NW
S6	29 Mar 2016	Animal Life	None
S6	29 Mar 2016	Floatables	None
S6	29 Mar 2016	Water Color	Green
S6	29 Mar 2016	Current Direction	NW
S6	29 Mar 2016	Water Temp (C)	14.8
S6	29 Mar 2016	Wave Height Low (ft)	3
S6	29 Mar 2016	High Tide (ft)	2.7
S6	29 Mar 2016	High Tide Time	1421
S6	29 Mar 2016	Low Tide (ft)	0.9
S6	29 Mar 2016	Low Tide Time	801
S6	29 Mar 2016	Comments	Kelp; Seagrass; Water clear
S8	01 Mar 2016	Arrive Time	937
S8	01 Mar 2016	Weather	Foggy
S8	01 Mar 2016	Wind Speed (kts)	4
S8	01 Mar 2016	Wind Dir	S
S8	01 Mar 2016	Animal Life	None
S8	01 Mar 2016	Floatables	None
S8	01 Mar 2016	Water Color	Green
S8	01 Mar 2016	Current Direction	S
S8	01 Mar 2016	Water Temp (C)	16.8
S8	01 Mar 2016	Wave Height Low (ft)	6
S8	01 Mar 2016	High Tide (ft)	2.5
S8	01 Mar 2016	High Tide Time	1552
S8	01 Mar 2016	Low Tide (ft)	1.3
S8	01 Mar 2016	Low Tide Time	928
S8	01 Mar 2016	Comments	Water clear
S8	08 Mar 2016	Arrive Time	1230
S8	08 Mar 2016	Weather	Sunny
S8	08 Mar 2016	Wind Speed (kts)	9.5
S8	08 Mar 2016	Wind Dir	W
S8	08 Mar 2016	Animal Life	None
S8	08 Mar 2016	Floatables	None
S8	08 Mar 2016	Water Color	Green
S8	08 Mar 2016	Current Direction	W
S8	08 Mar 2016	Water Temp (C)	16.8
S8	08 Mar 2016	Wave Height Low (ft)	5
S8	08 Mar 2016	High Tide (ft)	5.9
S8	08 Mar 2016	High Tide Time	812
S8	08 Mar 2016	Low Tide (ft)	-1.1
S8	08 Mar 2016	Low Tide Time	1449
S8	08 Mar 2016	Comments	Water clear; Beached whale half mile south

Station	Date	Parameter	Value
S8	15 Mar 2016	Arrive Time	933
S8	15 Mar 2016	Weather	Overcast
S8	15 Mar 2016	Wind Speed (kts)	1.9
S8	15 Mar 2016	Wind Dir	SW
S8	15 Mar 2016	Animal Life	None
S8	15 Mar 2016	Floatables	None
S8	15 Mar 2016	Water Color	Green
S8	15 Mar 2016	Current Direction	SW
S8	15 Mar 2016	Water Temp (C)	16
S8	15 Mar 2016	Wave Height Low (ft)	2
S8	15 Mar 2016	High Tide (ft)	4.7
S8	15 Mar 2016	High Tide Time	246
S8	15 Mar 2016	Low Tide (ft)	0.4
S8	15 Mar 2016	Low Tide Time	1025
S8	15 Mar 2016	Comments	Kelp; Seagrass; 11 Persons; 7 Swimmers; Water clear
S8	22 Mar 2016	Arrive Time	949
S8	22 Mar 2016	Weather	Partly Cloudy
S8	22 Mar 2016	Wind Speed (kts)	12.4
S8	22 Mar 2016	Wind Dir	NE
S8	22 Mar 2016	Animal Life	None
S8	22 Mar 2016	Floatables	None
S8	22 Mar 2016	Water Color	Green
S8	22 Mar 2016	Current Direction	NE
S8	22 Mar 2016	Water Temp (C)	13.8
S8	22 Mar 2016	Wave Height Low (ft)	5
S8	22 Mar 2016	High Tide (ft)	5
S8	22 Mar 2016	High Tide Time	916
S8	22 Mar 2016	Low Tide (ft)	-0.1
S8	22 Mar 2016	Low Tide Time	1539
S8	22 Mar 2016	Comments	Water clear
S8	29 Mar 2016	Arrive Time	1113
S8	29 Mar 2016	Weather	Partly Cloudy
S8	29 Mar 2016	Wind Speed (kts)	6.8
S8	29 Mar 2016	Wind Dir	NW
S8	29 Mar 2016	Animal Life	None
S8	29 Mar 2016	Floatables	None
S8	29 Mar 2016	Water Color	Green
S8	29 Mar 2016	Current Direction	NW
S8	29 Mar 2016	Water Temp (C)	16.6
S8	29 Mar 2016	Wave Height Low (ft)	3
S8	29 Mar 2016	High Tide (ft)	2.7
S8	29 Mar 2016	High Tide Time	1421
S8	29 Mar 2016	Low Tide (ft)	0.9
S8	29 Mar 2016	Low Tide Time	801
S8	29 Mar 2016	Comments	Kelp; Seagrass; 21 Persons; 7 Swimmers; Water clear
S9	01 Mar 2016	Arrive Time	915
S9	01 Mar 2016	Weather	Foggy
S9	01 Mar 2016	Wind Speed (kts)	3.1
S9	01 Mar 2016	Wind Dir	S
S9	01 Mar 2016	Animal Life	1 Seagull
S9	01 Mar 2016	Floatables	None
S9	01 Mar 2016	Water Color	Green

Station	Date	Parameter	Value
S9	01 Mar 2016	Current Direction	S
S9	01 Mar 2016	Water Temp (C)	13.8
S9	01 Mar 2016	Wave Height Low (ft)	5
S9	01 Mar 2016	High Tide (ft)	2.5
S9	01 Mar 2016	High Tide Time	1552
S9	01 Mar 2016	Low Tide (ft)	1.3
S9	01 Mar 2016	Low Tide Time	928
S9	01 Mar 2016	Comments	Water clear
S9	08 Mar 2016	Arrive Time	1253
S9	08 Mar 2016	Weather	Sunny
S9	08 Mar 2016	Wind Speed (kts)	8.5
S9	08 Mar 2016	Wind Dir	W
S9	08 Mar 2016	Animal Life	None
S9	08 Mar 2016	Floatables	None
S9	08 Mar 2016	Water Color	Green
S9	08 Mar 2016	Current Direction	W
S9	08 Mar 2016	Water Temp (C)	16.2
S9	08 Mar 2016	Wave Height Low (ft)	5
S9	08 Mar 2016	High Tide (ft)	5.9
S9	08 Mar 2016	High Tide Time	812
S9	08 Mar 2016	Low Tide (ft)	-1.1
S9	08 Mar 2016	Low Tide Time	1449
S9	08 Mar 2016	Comments	Kelp; 3 Persons; Water clear
S9	15 Mar 2016	Arrive Time	957
S9	15 Mar 2016	Weather	Sunny
S9	15 Mar 2016	Wind Speed (kts)	4.8
S9	15 Mar 2016	Wind Dir	SW
S9	15 Mar 2016	Animal Life	None
S9	15 Mar 2016	Floatables	None
S9	15 Mar 2016	Water Color	Green
S9	15 Mar 2016	Current Direction	SW
S9	15 Mar 2016	Water Temp (C)	15.6
S9	15 Mar 2016	Wave Height Low (ft)	2
S9	15 Mar 2016	High Tide (ft)	4.7
S9	15 Mar 2016	High Tide Time	246
S9	15 Mar 2016	Low Tide (ft)	0.4
S9	15 Mar 2016	Low Tide Time	1025
S9	15 Mar 2016	Comments	Kelp; Seagrass; 1 Person; 4 Surfers; 1 Swimmer; 1 Tractor; Water clear
S9	22 Mar 2016	Arrive Time	929
S9	22 Mar 2016	Weather	Partly Cloudy
S9	22 Mar 2016	Wind Speed (kts)	4.6
S9	22 Mar 2016	Wind Dir	N
S9	22 Mar 2016	Animal Life	None
S9	22 Mar 2016	Floatables	None
S9	22 Mar 2016	Water Color	Green
S9	22 Mar 2016	Current Direction	N
S9	22 Mar 2016	Water Temp (C)	15.6
S9	22 Mar 2016	Wave Height Low (ft)	4
S9	22 Mar 2016	High Tide (ft)	5
S9	22 Mar 2016	High Tide Time	916
S9	22 Mar 2016	Low Tide (ft)	0.5

Station	Date	Parameter	Value
S9	22 Mar 2016	Low Tide Time	322
S9	22 Mar 2016	Comments	Water clear
S9	29 Mar 2016	Arrive Time	1151
S9	29 Mar 2016	Weather	Partly Cloudy
S9	29 Mar 2016	Wind Speed (kts)	5
S9	29 Mar 2016	Wind Dir	NW
S9	29 Mar 2016	Animal Life	None
S9	29 Mar 2016	Floatables	None
S9	29 Mar 2016	Water Color	Green
S9	29 Mar 2016	Current Direction	NW
S9	29 Mar 2016	Water Temp (C)	16.4
S9	29 Mar 2016	Wave Height Low (ft)	1
S9	29 Mar 2016	High Tide (ft)	2.7
S9	29 Mar 2016	High Tide Time	1421
S9	29 Mar 2016	Low Tide (ft)	0.9
S9	29 Mar 2016	Low Tide Time	801
S9	29 Mar 2016	Comments	Kelp; Seagrass; 12 Persons; 4 Surfers; 2 Swimmers; Water clear
S10	01 Mar 2016	Arrive Time	1237
S10	01 Mar 2016	Weather	Foggy
S10	01 Mar 2016	Wind Speed (kts)	3.1
S10	01 Mar 2016	Wind Dir	S
S10	01 Mar 2016	Animal Life	None
S10	01 Mar 2016	Floatables	None
S10	01 Mar 2016	Water Color	Green
S10	01 Mar 2016	Current Direction	S
S10	01 Mar 2016	Water Temp (C)	16.6
S10	01 Mar 2016	Wave Height Low (ft)	6
S10	01 Mar 2016	High Tide (ft)	2.5
S10	01 Mar 2016	High Tide Time	1552
S10	01 Mar 2016	Low Tide (ft)	1.3
S10	01 Mar 2016	Low Tide Time	928
S10	01 Mar 2016	Comments	Water clear
S10	08 Mar 2016	Arrive Time	941
S10	08 Mar 2016	Weather	Sunny
S10	08 Mar 2016	Wind Speed (kts)	3.6
S10	08 Mar 2016	Wind Dir	N
S10	08 Mar 2016	Animal Life	None
S10	08 Mar 2016	Floatables	None
S10	08 Mar 2016	Water Color	Green
S10	08 Mar 2016	Current Direction	N
S10	08 Mar 2016	Water Temp (C)	16.4
S10	08 Mar 2016	Wave Height Low (ft)	5
S10	08 Mar 2016	High Tide (ft)	5.9
S10	08 Mar 2016	High Tide Time	812
S10	08 Mar 2016	Low Tide (ft)	-1.1
S10	08 Mar 2016	Low Tide Time	1449
S10	08 Mar 2016	Comments	Kelp; Seagrass; Water clear
S10	15 Mar 2016	Arrive Time	803
S10	15 Mar 2016	Weather	Partly Cloudy
S10	15 Mar 2016	Wind Speed (kts)	1.5
S10	15 Mar 2016	Wind Dir	SW

Station	Date	Parameter	Value
S10	15 Mar 2016	Animal Life	None
S10	15 Mar 2016	Floatables	None
S10	15 Mar 2016	Water Color	Green
S10	15 Mar 2016	Current Direction	SW
S10	15 Mar 2016	Water Temp (C)	14.2
S10	15 Mar 2016	Wave Height Low (ft)	3
S10	15 Mar 2016	High Tide (ft)	4.7
S10	15 Mar 2016	High Tide Time	246
S10	15 Mar 2016	Low Tide (ft)	0.4
S10	15 Mar 2016	Low Tide Time	1025
S10	15 Mar 2016	Comments	Kelp; Seagrass; Water clear
S10	22 Mar 2016	Arrive Time	1239
S10	22 Mar 2016	Weather	Partly Cloudy
S10	22 Mar 2016	Wind Speed (kts)	12.2
S10	22 Mar 2016	Wind Dir	W
S10	22 Mar 2016	Animal Life	2 Horses
S10	22 Mar 2016	Floatables	None
S10	22 Mar 2016	Water Color	Green
S10	22 Mar 2016	Current Direction	W
S10	22 Mar 2016	Water Temp (C)	15.6
S10	22 Mar 2016	Wave Height Low (ft)	4
S10	22 Mar 2016	High Tide (ft)	5
S10	22 Mar 2016	High Tide Time	916
S10	22 Mar 2016	Low Tide (ft)	-0.1
S10	22 Mar 2016	Low Tide Time	1539
S10	22 Mar 2016	Comments	6 Persons; Water clear
S10	29 Mar 2016	Arrive Time	842
S10	29 Mar 2016	Weather	Partly Cloudy
S10	29 Mar 2016	Wind Speed (kts)	10.3
S10	29 Mar 2016	Wind Dir	NW
S10	29 Mar 2016	Animal Life	None
S10	29 Mar 2016	Floatables	None
S10	29 Mar 2016	Water Color	Green
S10	29 Mar 2016	Current Direction	NW
S10	29 Mar 2016	Water Temp (C)	14.6
S10	29 Mar 2016	Wave Height Low (ft)	2
S10	29 Mar 2016	High Tide (ft)	2.7
S10	29 Mar 2016	High Tide Time	1421
S10	29 Mar 2016	Low Tide (ft)	0.9
S10	29 Mar 2016	Low Tide Time	801
S10	29 Mar 2016	Comments	Kelp; Seagrass; Water clear
S11	01 Mar 2016	Arrive Time	1056
S11	01 Mar 2016	Weather	Foggy
S11	01 Mar 2016	Wind Speed (kts)	5
S11	01 Mar 2016	Wind Dir	S
S11	01 Mar 2016	Animal Life	None
S11	01 Mar 2016	Floatables	None
S11	01 Mar 2016	Water Color	Green
S11	01 Mar 2016	Current Direction	S
S11	01 Mar 2016	Water Temp (C)	16.4
S11	01 Mar 2016	Wave Height Low (ft)	6
S11	01 Mar 2016	High Tide (ft)	2.5

Station	Date	Parameter	Value
S11	01 Mar 2016	High Tide Time	1552
S11	01 Mar 2016	Low Tide (ft)	1.3
S11	01 Mar 2016	Low Tide Time	928
S11	01 Mar 2016	Comments	Water clear
S11	08 Mar 2016	Arrive Time	1135
S11	08 Mar 2016	Weather	Sunny
S11	08 Mar 2016	Wind Speed (kts)	6.4
S11	08 Mar 2016	Wind Dir	W
S11	08 Mar 2016	Animal Life	None
S11	08 Mar 2016	Floatables	None
S11	08 Mar 2016	Water Color	Green
S11	08 Mar 2016	Current Direction	W
S11	08 Mar 2016	Water Temp (C)	16.8
S11	08 Mar 2016	Wave Height Low (ft)	5
S11	08 Mar 2016	High Tide (ft)	5.9
S11	08 Mar 2016	High Tide Time	812
S11	08 Mar 2016	Low Tide (ft)	-1.1
S11	08 Mar 2016	Low Tide Time	1449
S11	08 Mar 2016	Comments	Kelp; Water clear
S11	15 Mar 2016	Arrive Time	858
S11	15 Mar 2016	Weather	Partly Cloudy
S11	15 Mar 2016	Wind Speed (kts)	0
S11	15 Mar 2016	Wind Dir	
S11	15 Mar 2016	Animal Life	None
S11	15 Mar 2016	Floatables	None
S11	15 Mar 2016	Water Color	Green
S11	15 Mar 2016	Current Direction	SW
S11	15 Mar 2016	Water Temp (C)	15.2
S11	15 Mar 2016	Wave Height Low (ft)	3
S11	15 Mar 2016	High Tide (ft)	4.7
S11	15 Mar 2016	High Tide Time	246
S11	15 Mar 2016	Low Tide (ft)	0.4
S11	15 Mar 2016	Low Tide Time	1025
S11	15 Mar 2016	Comments	Kelp; Seagrass; Water clear
S11	22 Mar 2016	Arrive Time	1039
S11	22 Mar 2016	Weather	Partly Cloudy
S11	22 Mar 2016	Wind Speed (kts)	11.4
S11	22 Mar 2016	Wind Dir	W
S11	22 Mar 2016	Animal Life	None
S11	22 Mar 2016	Floatables	None
S11	22 Mar 2016	Water Color	Green
S11	22 Mar 2016	Current Direction	W
S11	22 Mar 2016	Water Temp (C)	15
S11	22 Mar 2016	Wave Height Low (ft)	5
S11	22 Mar 2016	High Tide (ft)	5
S11	22 Mar 2016	High Tide Time	916
S11	22 Mar 2016	Low Tide (ft)	-0.1
S11	22 Mar 2016	Low Tide Time	1539
S11	22 Mar 2016	Comments	Water clear
S11	29 Mar 2016	Arrive Time	948
S11	29 Mar 2016	Weather	Partly Cloudy

Station	Date	Parameter	Value
S11	29 Mar 2016	Wind Speed (kts)	6.6
S11	29 Mar 2016	Wind Dir	NW
S11	29 Mar 2016	Animal Life	None
S11	29 Mar 2016	Floatables	None
S11	29 Mar 2016	Water Color	Green
S11	29 Mar 2016	Current Direction	NW
S11	29 Mar 2016	Water Temp (C)	15.6
S11	29 Mar 2016	Wave Height Low (ft)	3
S11	29 Mar 2016	High Tide (ft)	2.7
S11	29 Mar 2016	High Tide Time	1421
S11	29 Mar 2016	Low Tide (ft)	0.9
S11	29 Mar 2016	Low Tide Time	801
S11	29 Mar 2016	Comments	Kelp; Seagrass; Water clear
S12	01 Mar 2016	Arrive Time	1008
S12	01 Mar 2016	Weather	Foggy
S12	01 Mar 2016	Wind Speed (kts)	3.3
S12	01 Mar 2016	Wind Dir	S
S12	01 Mar 2016	Animal Life	None
S12	01 Mar 2016	Floatables	None
S12	01 Mar 2016	Water Color	Green
S12	01 Mar 2016	Current Direction	S
S12	01 Mar 2016	Water Temp (C)	17.2
S12	01 Mar 2016	Wave Height Low (ft)	5
S12	01 Mar 2016	High Tide (ft)	2.5
S12	01 Mar 2016	High Tide Time	1552
S12	01 Mar 2016	Low Tide (ft)	1.3
S12	01 Mar 2016	Low Tide Time	928
S12	01 Mar 2016	Comments	Water clear
S12	08 Mar 2016	Arrive Time	1111
S12	08 Mar 2016	Weather	Sunny
S12	08 Mar 2016	Wind Speed (kts)	3.6
S12	08 Mar 2016	Wind Dir	W
S12	08 Mar 2016	Animal Life	None
S12	08 Mar 2016	Floatables	None
S12	08 Mar 2016	Water Color	Green
S12	08 Mar 2016	Current Direction	W
S12	08 Mar 2016	Water Temp (C)	16.4
S12	08 Mar 2016	Wave Height Low (ft)	4
S12	08 Mar 2016	High Tide (ft)	5.9
S12	08 Mar 2016	High Tide Time	812
S12	08 Mar 2016	Low Tide (ft)	-1.1
S12	08 Mar 2016	Low Tide Time	1449
S12	08 Mar 2016	Comments	Kelp; Water clear
S12	15 Mar 2016	Arrive Time	911
S12	15 Mar 2016	Weather	Partly Cloudy
S12	15 Mar 2016	Wind Speed (kts)	0.7
S12	15 Mar 2016	Wind Dir	SW
S12	15 Mar 2016	Animal Life	None
S12	15 Mar 2016	Floatables	None
S12	15 Mar 2016	Water Color	Green
S12	15 Mar 2016	Current Direction	SW
S12	15 Mar 2016	Water Temp (C)	15.2

Station	Date	Parameter	Value
S12	15 Mar 2016	Wave Height Low (ft)	2
S12	15 Mar 2016	High Tide (ft)	4.7
S12	15 Mar 2016	High Tide Time	246
S12	15 Mar 2016	Low Tide (ft)	0.4
S12	15 Mar 2016	Low Tide Time	1025
S12	15 Mar 2016	Comments	Kelp; Seagrass; Water clear
S12	22 Mar 2016	Arrive Time	1020
S12	22 Mar 2016	Weather	Partly Cloudy
S12	22 Mar 2016	Wind Speed (kts)	13.4
S12	22 Mar 2016	Wind Dir	W
S12	22 Mar 2016	Animal Life	None
S12	22 Mar 2016	Floatables	None
S12	22 Mar 2016	Water Color	Green
S12	22 Mar 2016	Current Direction	W
S12	22 Mar 2016	Water Temp (C)	14.6
S12	22 Mar 2016	Wave Height Low (ft)	5
S12	22 Mar 2016	High Tide (ft)	5
S12	22 Mar 2016	High Tide Time	916
S12	22 Mar 2016	Low Tide (ft)	-0.1
S12	22 Mar 2016	Low Tide Time	1539
S12	22 Mar 2016	Comments	Water clear
S12	29 Mar 2016	Arrive Time	931
S12	29 Mar 2016	Weather	Partly Cloudy
S12	29 Mar 2016	Wind Speed (kts)	7.3
S12	29 Mar 2016	Wind Dir	NW
S12	29 Mar 2016	Animal Life	2 Shorebirds
S12	29 Mar 2016	Floatables	None
S12	29 Mar 2016	Water Color	Green
S12	29 Mar 2016	Current Direction	NW
S12	29 Mar 2016	Water Temp (C)	15.2
S12	29 Mar 2016	Wave Height Low (ft)	2
S12	29 Mar 2016	High Tide (ft)	2.7
S12	29 Mar 2016	High Tide Time	1421
S12	29 Mar 2016	Low Tide (ft)	0.9
S12	29 Mar 2016	Low Tide Time	801
S12	29 Mar 2016	Comments	Kelp; Seagrass; 6 Persons; Water clear

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Kelp Stations

Table 3.1

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

Date	I19	I24	I25	I26	I32	I39	I40
01 Mar 2016	32	13	12	6	5	9	23
02 Mar 2016	32	13	12	6	5	9	23
03 Mar 2016	32	13	12	6	5	9	23
04 Mar 2016	32	13	12	6	5	9	23
05 Mar 2016	10*	20*	19*	8*	6*	7	15*
06 Mar 2016	10*	20*	19*	8*	6*	7	15*
07 Mar 2016	10*	20*	19*	8*	6*	7	15*
08 Mar 2016	10*	20*	19*	8*	6*	7	15*
09 Mar 2016	10*	20*	19*	8*	6*	7	15*
10 Mar 2016	15	18	12	9	6	6	40
11 Mar 2016	6*	4*	2*	4*	6	2	11*
12 Mar 2016	6*	4*	2*	4*	3*	2	11*
13 Mar 2016	6*	4*	2*	4*	3*	2	11*
14 Mar 2016	15	4	2	4	4	3	19
15 Mar 2016	15	4	2	4	4	3	19
16 Mar 2016	15	4	2	4	4	3	19
17 Mar 2016	15	4	2	4	4	3	19
18 Mar 2016	15	4	2	4	4	3	19
19 Mar 2016	15	4	2	4	4	3	19
20 Mar 2016	18	5	3	5	4	3	17
21 Mar 2016	28	6	3	6	5	4	25
22 Mar 2016	28	6	3	6	5	4	25
23 Mar 2016	28	6	3	6	5	4	25
24 Mar 2016	55*	8*	3*	8*	6*	4	47*
25 Mar 2016	55*	8*	3*	8*	6*	4	47*
26 Mar 2016	55*	8*	3*	8*	6*	4	47*
27 Mar 2016	55*	8*	3*	8*	6*	4	47*
28 Mar 2016	55*	8*	3*	8*	6*	4	47*
29 Mar 2016	55*	8*	3*	8*	6*	4	47*
30 Mar 2016	46*	11*	3*	6*	6*	4	51*
31 Mar 2016	46*	11*	3*	6*	6*	4	51*

* 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 Mar 2016	6	6	6	3	2	4	6
02 Mar 2016	6	6	6	3	2	4	6
03 Mar 2016	6	6	6	3	2	4	6
04 Mar 2016	6	6	6	3	2	4	6
05 Mar 2016	3*	9*	8*	3*	3*	4	8*
06 Mar 2016	3*	9*	8*	3*	3*	4	8*
07 Mar 2016	3*	9*	8*	3*	3*	4	8*
08 Mar 2016	3*	9*	8*	3*	3*	4	8*
09 Mar 2016	3*	9*	8*	3*	3*	4	8*
10 Mar 2016	3	7	6	3	2	4	11
11 Mar 2016	2*	2*	2*	2*	2	2	4*
12 Mar 2016	2*	2*	2*	2*	2*	2	4*
13 Mar 2016	2*	2*	2*	2*	2*	2	4*
14 Mar 2016	3	2	2	2	2	2	4
15 Mar 2016	3	2	2	2	2	2	4
16 Mar 2016	3	2	2	2	2	2	4
17 Mar 2016	3	2	2	2	2	2	4
18 Mar 2016	3	2	2	2	2	2	4
19 Mar 2016	3	2	2	2	2	2	4
20 Mar 2016	3	2	2	2	2	2	4
21 Mar 2016	3	2	2	2	2	2	4
22 Mar 2016	3	2	2	2	2	2	4
23 Mar 2016	3	2	2	2	2	2	4
24 Mar 2016	3*	2*	2*	2*	2*	2	5*
25 Mar 2016	3*	2*	2*	2*	2*	2	5*
26 Mar 2016	3*	2*	2*	2*	2*	2	5*
27 Mar 2016	3*	2*	2*	2*	2*	2	5*
28 Mar 2016	3*	2*	2*	2*	2*	2	5*
29 Mar 2016	3*	2*	2*	2*	2*	2	5*
30 Mar 2016	3*	2*	2*	2*	2*	2	5*
31 Mar 2016	3*	2*	2*	2*	2*	2	5*

* 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 Mar 2016	7	5	5	3	2	4	5
02 Mar 2016	7	5	5	3	2	4	5
03 Mar 2016	7	5	5	3	2	4	5
04 Mar 2016	7	5	5	3	2	4	5
05 Mar 2016	4*	6*	6*	3*	2*	4	6*
06 Mar 2016	4*	6*	6*	3*	2*	4	6*
07 Mar 2016	4*	6*	6*	3*	2*	4	6*
08 Mar 2016	4*	6*	6*	3*	2*	4	6*
09 Mar 2016	4*	6*	6*	3*	2*	4	6*
10 Mar 2016	3	5	5	3	2	3	6
11 Mar 2016	2*	2*	2*	2*	2	2	3*
12 Mar 2016	2*	2*	2*	2*	2*	2	3*
13 Mar 2016	2*	2*	2*	2*	2*	2	3*
14 Mar 2016	3	2	2	2	3	2	3
15 Mar 2016	3	2	2	2	3	2	3
16 Mar 2016	3	2	2	2	3	2	3
17 Mar 2016	3	2	2	2	3	2	3
18 Mar 2016	3	2	2	2	3	2	3
19 Mar 2016	3	2	2	2	3	2	3
20 Mar 2016	3	2	2	2	2	2	3
21 Mar 2016	3	2	2	2	3	2	3
22 Mar 2016	3	2	2	2	3	2	3
23 Mar 2016	3	2	2	2	3	2	3
24 Mar 2016	4*	2*	2*	2*	3*	2	3*
25 Mar 2016	4*	2*	2*	2*	3*	2	3*
26 Mar 2016	4*	2*	2*	2*	3*	2	3*
27 Mar 2016	4*	2*	2*	2*	3*	2	3*
28 Mar 2016	4*	2*	2*	2*	3*	2	3*
29 Mar 2016	4*	2*	2*	2*	3*	2	3*
30 Mar 2016	4*	2*	2*	2*	3*	2	3*
31 Mar 2016	4*	2*	2*	2*	3*	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 Mar 2016	ns	ns	ns	ns	ns	IC	ns
10 Mar 2016	IC	IC	IC	IC	IC	IC	IC
14 Mar 2016	IC	IC	ns	ns	IC	IC	IC
20 Mar 2016	IC	IC	IC	IC	IC	IC	IC
30 Mar 2016	IC	IC	IC	IC	IC	IC	IC

IC = In Compliance
E = Exceedance
ns = not sampled

Table 3.5

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

Date	I19	I24	I25	I26	I32	I39	I40
05 Mar 2016	ns	ns	ns	ns	ns	IC	ns
10 Mar 2016	IC	IC	IC	IC	IC	IC	IC
14 Mar 2016	IC	IC	ns	ns	IC	IC	IC
20 Mar 2016	IC	IC	IC	IC	IC	IC	IC
30 Mar 2016	IC	IC	IC	IC	IC	IC	IC

IC = In Compliance
E = Exceedance
ns = not sampled

Table 3.6

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

Date	I19	I24	I25	I26	I32	I39	I40
05 Mar 2016	ns	ns	ns	ns	ns	IC	ns
10 Mar 2016	IC	IC	IC	IC	IC	IC	IC
14 Mar 2016	IC	IC	ns	ns	IC	IC	IC
20 Mar 2016	IC	IC	IC	IC	IC	IC	IC
30 Mar 2016	IC	IC	IC	IC	IC	IC	IC

IC = In Compliance
E = Exceedance
ns = not sampled

Table 3.7

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

Date	I19	I24	I25	I26	I32	I39	I40
05 Mar 2016	ns	ns	ns	ns	ns	IC	ns
10 Mar 2016	IC	IC	IC	IC	IC	IC	IC
14 Mar 2016	IC	IC	ns	ns	IC	IC	IC
20 Mar 2016	IC	IC	IC	IC	IC	IC	IC
30 Mar 2016	IC	IC	IC	IC	IC	IC	IC

IC = In Compliance
E = Exceedance
ns = not sampled

Table 3.8

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

Station	Date	Time	Depth	Total	Fecal	Entero	F:T	Temp	XMS	DO	Sal	pH	OG	SUSO
I19	10 Mar 2016	1125	2	2e	<2	<2	1.000	16.3	44.91	7.5	33.52	8.1	ns	ns
I19	10 Mar 2016	1125	6	220e	2e	<2	0.009	15.4	53.62	6.9	33.51	8.1	ns	ns
I19	10 Mar 2016	1125	11	12e	<2	4e	0.167	15.1	53.86	6.6	33.50	8.1	ns	ns
I19	14 Mar 2016	1224	2	1400e	42	10e	0.030	13.5	37.71	6.6	33.36	8.0	ns	ns
I19	14 Mar 2016	1224	6	110	6e	<2	0.055	13.1	66.51	5.5	33.37	8.0	ns	ns
I19	14 Mar 2016	1224	11	60e	8e	24e	0.133	12.7	22.13	5.4	33.42	7.9	ns	ns
I19	20 Mar 2016	1116	2	<2	<2	<2	1.000	15.4	66.84	8.3	33.46	8.1	ns	ns
I19	20 Mar 2016	1116	6	22e	<2	<2	0.091	14.7	70.52	7.5	33.48	8.1	ns	ns
I19	20 Mar 2016	1116	11	100e	<2	6e	0.020	14.2	64.62	7.2	33.45	8.0	ns	ns
I19	30 Mar 2016	1122	2	<2	<2	<2	1.000	16.0	76.19	8.5	33.50	8.3	ns	ns
I19	30 Mar 2016	1122	6	<2	<2	<2	1.000	15.8	69.54	8.3	33.50	8.3	ns	ns
I19	30 Mar 2016	1122	11	4e	<2	<2	0.500	15.6	62.49	8.4	33.49	8.3	ns	ns
I24	10 Mar 2016	1155	2	<2	<2	<2	1.000	16.3	35.89	7.6	33.51	8.1	ns	ns
I24	10 Mar 2016	1155	6	20e	2e	<2	0.100	15.6	44.90	7.0	33.51	8.1	ns	ns
I24	10 Mar 2016	1155	11	14e	4e	<2	0.286	15.4	39.03	6.9	33.50	8.1	ns	ns
I24	14 Mar 2016	1253	2	<2	<2	<2	1.000	14.8	66.64	6.8	33.47	8.1	ns	ns
I24	14 Mar 2016	1253	6	4e	<2	<2	0.500	13.8	62.56	5.8	33.44	8.0	ns	ns
I24	14 Mar 2016	1253	11	18e	2e	<2	0.111	13.3	16.89	5.6	33.43	8.0	ns	ns
I24	20 Mar 2016	1138	2	2e	<2	<2	1.000	16.3	67.31	8.6	33.45	8.2	ns	ns
I24	20 Mar 2016	1138	6	6e	2e	<2	0.333	14.8	63.67	8.4	33.45	8.1	ns	ns
I24	20 Mar 2016	1138	11	24e	<2	<2	0.083	14.5	64.14	8.0	33.44	8.1	ns	ns
I24	30 Mar 2016	1143	2	4e	2e	<2	0.500	16.4	60.96	7.8	33.53	8.2	ns	ns
I24	30 Mar 2016	1143	6	<20	<2	<2	0.100	16.1	53.07	7.9	33.51	8.3	ns	ns
I24	30 Mar 2016	1143	11	<20	2e	<2	0.100	16.1	36.57	7.9	33.51	8.3	ns	ns
I25	10 Mar 2016	1207	2	<2	<2	<2	1.000	16.3	53.90	7.6	33.52	8.2	ns	ns
I25	10 Mar 2016	1207	6	<2	<2	<2	1.000	15.1	52.63	6.8	33.50	8.1	ns	ns
I25	10 Mar 2016	1207	9	2e	<2	<2	1.000	15.1	54.22	6.7	33.49	8.1	ns	ns
I25	20 Mar 2016	1145	2	4e	<2	<2	0.500	16.1	64.20	8.4	33.45	8.2	ns	ns
I25	20 Mar 2016	1145	6	<2	<2	<2	1.000	14.7	72.40	7.5	33.46	8.1	ns	ns
I25	20 Mar 2016	1145	9	8e	<2	<2	0.250	14.6	59.65	7.3	33.45	8.1	ns	ns
I25	30 Mar 2016	1152	2	<2	<2	<2	1.000	16.4	60.82	7.9	33.53	8.3	ns	ns
I25	30 Mar 2016	1152	6	<2	<2	<2	1.000	16.1	72.58	8.3	33.51	8.3	ns	ns
I25	30 Mar 2016	1152	9	<2	<2	<2	1.000	16.0	69.08	8.4	33.51	8.3	ns	ns
I26	10 Mar 2016	1220	2	<2	<2	<2	1.000	16.0	54.24	7.3	33.51	8.2	ns	ns
I26	10 Mar 2016	1220	6	<20	<2	<2	0.100	14.9	47.16	6.6	33.49	8.1	ns	ns

Station	Date	Time	Depth	Total	Fecal	Entero	F:T	Temp	XMS	DO	Sal	pH	OG	SUSO
I26	10 Mar 2016	1220	9	<20	2e	<2	0.100	14.8	28.86	6.5	33.49	8.1	ns	ns
I26	20 Mar 2016	1155	2	<2	<2	<2	1.000	16.6	66.39	9.3	33.44	8.2	ns	ns
I26	20 Mar 2016	1155	6	4e	<2	<2	0.500	14.6	67.78	8.1	33.44	8.1	ns	ns
I26	20 Mar 2016	1155	9	20e	<2	<2	0.100	14.4	43.13	7.5	33.43	8.1	ns	ns
I26	30 Mar 2016	1202	2	<2	<2	<2	1.000	16.2	75.64	8.4	33.51	8.3	ns	ns
I26	30 Mar 2016	1202	6	<2	<2	<2	1.000	15.8	78.74	8.8	33.50	8.3	ns	ns
I26	30 Mar 2016	1202	9	<2	<2	<2	1.000	15.8	77.84	9.0	33.50	8.3	ns	ns
I32	10 Mar 2016	1236	2	<2	<2	<2	1.000	16.3	36.79	7.6	33.51	8.1	ns	ns
I32	10 Mar 2016	1236	6	<2	<2	<2	1.000	15.4	22.69	6.9	33.50	8.1	ns	ns
I32	10 Mar 2016	1236	9	<20	<2	<2	0.100	15.1	23.70	6.5	33.50	8.1	ns	ns
I32	14 Mar 2016	1320	2	4e	<2	<2	0.500	14.9	37.81	7.6	33.47	8.1	ns	ns
I32	14 Mar 2016	1320	6	22e	<2	4e	0.091	13.4	26.50	5.4	33.43	8.0	ns	ns
I32	14 Mar 2016	1320	9	28e	4e	14e	0.143	13.4	13.39	5.4	33.43	8.0	ns	ns
I32	20 Mar 2016	1209	2	6e	<2	<2	0.333	16.6	70.67	8.9	33.45	8.2	ns	ns
I32	20 Mar 2016	1209	6	<2	<2	<2	1.000	15.1	62.30	7.9	33.43	8.1	ns	ns
I32	20 Mar 2016	1209	9	<2	<2	<2	1.000	14.3	62.38	7.7	33.43	8.1	ns	ns
I32	30 Mar 2016	1216	2	<2	<2	<2	1.000	16.3	66.19	8.3	33.51	8.3	ns	ns
I32	30 Mar 2016	1216	6	<2	<2	<2	1.000	16.0	68.45	8.5	33.50	8.3	ns	ns
I32	30 Mar 2016	1216	9	<2	2e	<2	1.000	15.7	40.82	8.3	33.49	8.3	ns	ns
I39	05 Mar 2016	1036	2	<2	<2	<2	1.000	17.0	83.42	7.9	33.56	8.2	ns	ns
I39	05 Mar 2016	1036	12	<2	<2	<2	1.000	15.2	71.84	7.0	33.51	8.2	ns	ns
I39	05 Mar 2016	1036	18	2e	<2	<2	1.000	15.0	60.33	6.8	33.51	8.1	ns	ns
I39	10 Mar 2016	1101	2	<2	<2	<2	1.000	16.4	68.40	7.8	33.52	8.2	ns	ns
I39	10 Mar 2016	1101	12	4e	<2	<2	0.500	15.6	75.76	7.4	33.51	8.2	ns	ns
I39	10 Mar 2016	1101	18	4e	<2	<2	0.500	14.6	66.51	6.5	33.49	8.1	ns	ns
I39	14 Mar 2016	1159	2	<2	<2	<2	1.000	15.7	71.67	7.9	33.50	8.2	ns	ns
I39	14 Mar 2016	1159	12	8e	<2	<2	0.250	14.8	78.17	6.8	33.47	8.1	ns	ns
I39	14 Mar 2016	1159	18	52	<2	8e	0.038	13.4	47.13	5.6	33.41	8.0	ns	ns
I39	20 Mar 2016	1049	2	<2	<2	<2	1.000	16.4	68.19	9.2	33.45	8.2	ns	ns
I39	20 Mar 2016	1049	12	8e	<2	<2	0.250	13.8	70.67	6.7	33.44	8.0	ns	ns
I39	20 Mar 2016	1049	18	4e	<2	<2	0.500	13.4	68.86	6.0	33.45	8.0	ns	ns
I39	30 Mar 2016	1048	2	<2	<2	<2	1.000	15.9	81.59	8.7	33.50	8.3	ns	ns
I39	30 Mar 2016	1048	12	2e	4e	<2	2.000	14.3	70.82	7.1	33.47	8.1	ns	ns
I39	30 Mar 2016	1048	18	<2	<2	<2	1.000	14.1	68.74	6.9	33.47	8.1	ns	ns
I40	10 Mar 2016	1143	2	32e	<2	2e	0.062	16.2	24.18	7.8	33.52	8.1	ns	ns
I40	10 Mar 2016	1143	6	1300e	40	2e	0.031	15.7	26.66	7.2	33.49	8.1	ns	ns
I40	10 Mar 2016	1143	9	4000	82	14e	0.020	15.4	29.65	6.8	33.49	8.1	ns	ns
I40	14 Mar 2016	1241	2	280e	8e	<2	0.029	15.2	47.03	7.3	33.41	8.1	ns	ns
I40	14 Mar 2016	1241	6	60e	2e	2e	0.033	14.1	46.16	6.4	33.46	8.0	ns	ns
I40	14 Mar 2016	1241	9	120e	2e	8e	0.017	13.1	19.53	5.5	33.42	8.0	ns	ns
I40	20 Mar 2016	1129	2	6e	<2	<2	0.333	16.3	57.72	8.3	33.45	8.1	ns	ns

Station	Date	Time	Depth	Total	Fecal	Entero	F:T	Temp	XMS	DO	Sal	pH	OG	SUSO
I40	20 Mar 2016	1129	6	6e	<2	<2	0.333	15.2	55.79	8.3	33.44	8.1	ns	ns
I40	20 Mar 2016	1129	9	16e	<2	<2	0.125	14.8	60.42	8.0	33.44	8.1	ns	ns
I40	30 Mar 2016	1134	2	<2	<2	<2	1.000	16.3	70.25	8.1	33.52	8.3	ns	ns
I40	30 Mar 2016	1134	6	<2	<2	<2	1.000	16.2	70.04	7.9	33.52	8.3	ns	ns
I40	30 Mar 2016	1134	9	4e	<2	<2	0.500	15.8	42.75	7.8	33.49	8.2	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	10 Mar 2016	Depth (m)	11
I19	10 Mar 2016	Arrive Time	1125
I19	10 Mar 2016	Depart Time	1131
I19	10 Mar 2016	Air Temp (C)	16
I19	10 Mar 2016	Weather	Clear
I19	10 Mar 2016	Visibility (mi)	12
I19	10 Mar 2016	Wind Speed (kts)	5
I19	10 Mar 2016	Wind Dir	SW
I19	10 Mar 2016	Water Color	Green
I19	10 Mar 2016	Wave Ht Low (ft)	5
I19	10 Mar 2016	Wave Period (sec)	13
I19	10 Mar 2016	Sea State	Wind ripples
I19	10 Mar 2016	High Tide (ft)	5.41
I19	10 Mar 2016	High Tide Time	941
I19	10 Mar 2016	Low Tide (ft)	-0.46
I19	10 Mar 2016	Low Tide Time	1602
I19	10 Mar 2016	Comments	
I19	14 Mar 2016	Depth (m)	11
I19	14 Mar 2016	Arrive Time	1224
I19	14 Mar 2016	Depart Time	1229
I19	14 Mar 2016	Air Temp (C)	16
I19	14 Mar 2016	Weather	Overcast
I19	14 Mar 2016	Visibility (mi)	5
I19	14 Mar 2016	Wind Speed (kts)	5
I19	14 Mar 2016	Wind Dir	S
I19	14 Mar 2016	Water Color	Green
I19	14 Mar 2016	Wave Ht Low (ft)	5
I19	14 Mar 2016	Wave Period (sec)	13
I19	14 Mar 2016	Sea State	Heavy chop
I19	14 Mar 2016	High Tide (ft)	3.04
I19	14 Mar 2016	High Tide Time	1510
I19	14 Mar 2016	Low Tide (ft)	0.35
I19	14 Mar 2016	Low Tide Time	850
I19	14 Mar 2016	Comments	
I19	20 Mar 2016	Depth (m)	10
I19	20 Mar 2016	Arrive Time	1116
I19	20 Mar 2016	Depart Time	1119
I19	20 Mar 2016	Air Temp (C)	15
I19	20 Mar 2016	Weather	Partly Cloudy
I19	20 Mar 2016	Visibility (mi)	7
I19	20 Mar 2016	Wind Speed (kts)	5
I19	20 Mar 2016	Wind Dir	E
I19	20 Mar 2016	Water Color	Green
I19	20 Mar 2016	Wave Ht Low (ft)	3
I19	20 Mar 2016	Wave Period (sec)	9
I19	20 Mar 2016	Sea State	Calm
I19	20 Mar 2016	High Tide (ft)	5.06
I19	20 Mar 2016	High Tide Time	807
I19	20 Mar 2016	Low Tide (ft)	-0.35

Station	Date	Parameter	Value
I19	20 Mar 2016	Low Tide Time	1447
I19	20 Mar 2016	Comments	
I19	30 Mar 2016	Depth (m)	12
I19	30 Mar 2016	Arrive Time	1122
I19	30 Mar 2016	Depart Time	1124
I19	30 Mar 2016	Air Temp (C)	13
I19	30 Mar 2016	Weather	Overcast
I19	30 Mar 2016	Visibility (mi)	3
I19	30 Mar 2016	Wind Speed (kts)	6
I19	30 Mar 2016	Wind Dir	NE
I19	30 Mar 2016	Water Color	Green
I19	30 Mar 2016	Wave Ht Low (ft)	3
I19	30 Mar 2016	Wave Period (sec)	9
I19	30 Mar 2016	Sea State	Calm
I19	30 Mar 2016	High Tide (ft)	2.68
I19	30 Mar 2016	High Tide Time	1621
I19	30 Mar 2016	Low Tide (ft)	0.91
I19	30 Mar 2016	Low Tide Time	925
I19	30 Mar 2016	Comments	
I24	10 Mar 2016	Depth (m)	10
I24	10 Mar 2016	Arrive Time	1155
I24	10 Mar 2016	Depart Time	1201
I24	10 Mar 2016	Air Temp (C)	16
I24	10 Mar 2016	Weather	Clear
I24	10 Mar 2016	Visibility (mi)	12
I24	10 Mar 2016	Wind Speed (kts)	6
I24	10 Mar 2016	Wind Dir	NE
I24	10 Mar 2016	Water Color	Green
I24	10 Mar 2016	Wave Ht Low (ft)	5
I24	10 Mar 2016	Wave Period (sec)	13
I24	10 Mar 2016	Sea State	Wind ripples
I24	10 Mar 2016	High Tide (ft)	5.41
I24	10 Mar 2016	High Tide Time	941
I24	10 Mar 2016	Low Tide (ft)	-0.46
I24	10 Mar 2016	Low Tide Time	1602
I24	10 Mar 2016	Comments	
I24	14 Mar 2016	Depth (m)	12
I24	14 Mar 2016	Arrive Time	1253
I24	14 Mar 2016	Depart Time	1256
I24	14 Mar 2016	Air Temp (C)	16
I24	14 Mar 2016	Weather	Overcast
I24	14 Mar 2016	Visibility (mi)	5
I24	14 Mar 2016	Wind Speed (kts)	8
I24	14 Mar 2016	Wind Dir	NE
I24	14 Mar 2016	Water Color	Green
I24	14 Mar 2016	Wave Ht Low (ft)	5
I24	14 Mar 2016	Wave Period (sec)	13
I24	14 Mar 2016	Sea State	Heavy chop
I24	14 Mar 2016	High Tide (ft)	3.04
I24	14 Mar 2016	High Tide Time	1510
I24	14 Mar 2016	Low Tide (ft)	0.35
I24	14 Mar 2016	Low Tide Time	850

Station	Date	Parameter	Value
I24	14 Mar 2016	Comments	
I24	20 Mar 2016	Depth (m)	10
I24	20 Mar 2016	Arrive Time	1138
I24	20 Mar 2016	Depart Time	1140
I24	20 Mar 2016	Air Temp (C)	15
I24	20 Mar 2016	Weather	Partly Cloudy
I24	20 Mar 2016	Visibility (mi)	7
I24	20 Mar 2016	Wind Speed (kts)	7
I24	20 Mar 2016	Wind Dir	NE
I24	20 Mar 2016	Water Color	Green
I24	20 Mar 2016	Wave Ht Low (ft)	3
I24	20 Mar 2016	Wave Period (sec)	9
I24	20 Mar 2016	Sea State	Calm
I24	20 Mar 2016	High Tide (ft)	5.06
I24	20 Mar 2016	High Tide Time	807
I24	20 Mar 2016	Low Tide (ft)	-0.35
I24	20 Mar 2016	Low Tide Time	1447
I24	20 Mar 2016	Comments	Kelp debris
I24	30 Mar 2016	Depth (m)	9
I24	30 Mar 2016	Arrive Time	1143
I24	30 Mar 2016	Depart Time	1147
I24	30 Mar 2016	Air Temp (C)	14
I24	30 Mar 2016	Weather	Overcast
I24	30 Mar 2016	Visibility (mi)	3
I24	30 Mar 2016	Wind Speed (kts)	6
I24	30 Mar 2016	Wind Dir	NW
I24	30 Mar 2016	Water Color	Green
I24	30 Mar 2016	Wave Ht Low (ft)	3
I24	30 Mar 2016	Wave Period (sec)	9
I24	30 Mar 2016	Sea State	Calm
I24	30 Mar 2016	High Tide (ft)	2.68
I24	30 Mar 2016	High Tide Time	1621
I24	30 Mar 2016	Low Tide (ft)	0.91
I24	30 Mar 2016	Low Tide Time	925
I24	30 Mar 2016	Comments	
I25	10 Mar 2016	Depth (m)	8
I25	10 Mar 2016	Arrive Time	1207
I25	10 Mar 2016	Depart Time	1212
I25	10 Mar 2016	Air Temp (C)	16
I25	10 Mar 2016	Weather	Clear
I25	10 Mar 2016	Visibility (mi)	14
I25	10 Mar 2016	Wind Speed (kts)	8
I25	10 Mar 2016	Wind Dir	SW
I25	10 Mar 2016	Water Color	Green
I25	10 Mar 2016	Wave Ht Low (ft)	5
I25	10 Mar 2016	Wave Period (sec)	13
I25	10 Mar 2016	Sea State	Wind ripples
I25	10 Mar 2016	High Tide (ft)	5.41
I25	10 Mar 2016	High Tide Time	941
I25	10 Mar 2016	Low Tide (ft)	-0.46
I25	10 Mar 2016	Low Tide Time	1602
I25	10 Mar 2016	Comments	

Station	Date	Parameter	Value
I25	14 Mar 2016	Depth (m)	8
I25	14 Mar 2016	Arrive Time	1302
I25	14 Mar 2016	Depart Time	1303
I25	14 Mar 2016	Air Temp (C)	16
I25	14 Mar 2016	Weather	Overcast
I25	14 Mar 2016	Visibility (mi)	5
I25	14 Mar 2016	Wind Speed (kts)	8
I25	14 Mar 2016	Wind Dir	S
I25	14 Mar 2016	Water Color	Green
I25	14 Mar 2016	Wave Ht Low (ft)	5
I25	14 Mar 2016	Wave Period (sec)	13
I25	14 Mar 2016	Sea State	Heavy chop
I25	14 Mar 2016	High Tide (ft)	3.04
I25	14 Mar 2016	High Tide Time	1510
I25	14 Mar 2016	Low Tide (ft)	0.35
I25	14 Mar 2016	Low Tide Time	850
I25	14 Mar 2016	Comments	Unable to get on station due to unsafe conditions; Station Abandoned
I25	20 Mar 2016	Depth (m)	9
I25	20 Mar 2016	Arrive Time	1145
I25	20 Mar 2016	Depart Time	1148
I25	20 Mar 2016	Air Temp (C)	15
I25	20 Mar 2016	Weather	Partly Cloudy
I25	20 Mar 2016	Visibility (mi)	7
I25	20 Mar 2016	Wind Speed (kts)	6
I25	20 Mar 2016	Wind Dir	NE
I25	20 Mar 2016	Water Color	Green
I25	20 Mar 2016	Wave Ht Low (ft)	3
I25	20 Mar 2016	Wave Period (sec)	9
I25	20 Mar 2016	Sea State	Calm
I25	20 Mar 2016	High Tide (ft)	5.06
I25	20 Mar 2016	High Tide Time	807
I25	20 Mar 2016	Low Tide (ft)	-0.35
I25	20 Mar 2016	Low Tide Time	1447
I25	20 Mar 2016	Comments	
I25	30 Mar 2016	Depth (m)	9
I25	30 Mar 2016	Arrive Time	1152
I25	30 Mar 2016	Depart Time	1200
I25	30 Mar 2016	Air Temp (C)	14
I25	30 Mar 2016	Weather	Overcast
I25	30 Mar 2016	Visibility (mi)	3
I25	30 Mar 2016	Wind Speed (kts)	9
I25	30 Mar 2016	Wind Dir	N
I25	30 Mar 2016	Water Color	Green
I25	30 Mar 2016	Wave Ht Low (ft)	3
I25	30 Mar 2016	Wave Period (sec)	9
I25	30 Mar 2016	Sea State	Calm
I25	30 Mar 2016	High Tide (ft)	2.68
I25	30 Mar 2016	High Tide Time	1621
I25	30 Mar 2016	Low Tide (ft)	0.91
I25	30 Mar 2016	Low Tide Time	925
I25	30 Mar 2016	Comments	

Station	Date	Parameter	Value
I26	10 Mar 2016	Depth (m)	9
I26	10 Mar 2016	Arrive Time	1220
I26	10 Mar 2016	Depart Time	1226
I26	10 Mar 2016	Air Temp (C)	16
I26	10 Mar 2016	Weather	Clear
I26	10 Mar 2016	Visibility (mi)	14
I26	10 Mar 2016	Wind Speed (kts)	8
I26	10 Mar 2016	Wind Dir	S
I26	10 Mar 2016	Water Color	Green
I26	10 Mar 2016	Wave Ht Low (ft)	5
I26	10 Mar 2016	Wave Period (sec)	13
I26	10 Mar 2016	Sea State	Wind ripples
I26	10 Mar 2016	High Tide (ft)	5.41
I26	10 Mar 2016	High Tide Time	941
I26	10 Mar 2016	Low Tide (ft)	-0.46
I26	10 Mar 2016	Low Tide Time	1602
I26	10 Mar 2016	Comments	
I26	14 Mar 2016	Depth (m)	10
I26	14 Mar 2016	Arrive Time	1310
I26	14 Mar 2016	Depart Time	1310
I26	14 Mar 2016	Air Temp (C)	16
I26	14 Mar 2016	Weather	Overcast
I26	14 Mar 2016	Visibility (mi)	5
I26	14 Mar 2016	Wind Speed (kts)	16
I26	14 Mar 2016	Wind Dir	E
I26	14 Mar 2016	Water Color	Green
I26	14 Mar 2016	Wave Ht Low (ft)	5
I26	14 Mar 2016	Wave Period (sec)	13
I26	14 Mar 2016	Sea State	Heavy chop
I26	14 Mar 2016	High Tide (ft)	3.04
I26	14 Mar 2016	High Tide Time	1510
I26	14 Mar 2016	Low Tide (ft)	0.35
I26	14 Mar 2016	Low Tide Time	850
I26	14 Mar 2016	Comments	Unable to get on station due to unsafe conditions; Station Abandoned
I26	20 Mar 2016	Depth (m)	9
I26	20 Mar 2016	Arrive Time	1155
I26	20 Mar 2016	Depart Time	1157
I26	20 Mar 2016	Air Temp (C)	15
I26	20 Mar 2016	Weather	Partly Cloudy
I26	20 Mar 2016	Visibility (mi)	8
I26	20 Mar 2016	Wind Speed (kts)	4
I26	20 Mar 2016	Wind Dir	W
I26	20 Mar 2016	Water Color	Green
I26	20 Mar 2016	Wave Ht Low (ft)	3
I26	20 Mar 2016	Wave Period (sec)	9
I26	20 Mar 2016	Sea State	Calm
I26	20 Mar 2016	High Tide (ft)	5.06
I26	20 Mar 2016	High Tide Time	807
I26	20 Mar 2016	Low Tide (ft)	-0.35
I26	20 Mar 2016	Low Tide Time	1447
I26	20 Mar 2016	Comments	

Station	Date	Parameter	Value
I26	30 Mar 2016	Depth (m)	10
I26	30 Mar 2016	Arrive Time	1202
I26	30 Mar 2016	Depart Time	1216
I26	30 Mar 2016	Air Temp (C)	14
I26	30 Mar 2016	Weather	Overcast
I26	30 Mar 2016	Visibility (mi)	3
I26	30 Mar 2016	Wind Speed (kts)	6
I26	30 Mar 2016	Wind Dir	S
I26	30 Mar 2016	Water Color	Green
I26	30 Mar 2016	Wave Ht Low (ft)	3
I26	30 Mar 2016	Wave Period (sec)	9
I26	30 Mar 2016	Sea State	Calm
I26	30 Mar 2016	High Tide (ft)	2.68
I26	30 Mar 2016	High Tide Time	1621
I26	30 Mar 2016	Low Tide (ft)	0.91
I26	30 Mar 2016	Low Tide Time	925
I26	30 Mar 2016	Comments	
I32	10 Mar 2016	Depth (m)	9
I32	10 Mar 2016	Arrive Time	1236
I32	10 Mar 2016	Depart Time	1241
I32	10 Mar 2016	Air Temp (C)	16
I32	10 Mar 2016	Weather	Clear
I32	10 Mar 2016	Visibility (mi)	14
I32	10 Mar 2016	Wind Speed (kts)	7
I32	10 Mar 2016	Wind Dir	S
I32	10 Mar 2016	Water Color	Green
I32	10 Mar 2016	Wave Ht Low (ft)	5
I32	10 Mar 2016	Wave Period (sec)	13
I32	10 Mar 2016	Sea State	Wind ripples
I32	10 Mar 2016	High Tide (ft)	5.41
I32	10 Mar 2016	High Tide Time	941
I32	10 Mar 2016	Low Tide (ft)	-0.46
I32	10 Mar 2016	Low Tide Time	1602
I32	10 Mar 2016	Comments	
I32	14 Mar 2016	Depth (m)	10
I32	14 Mar 2016	Arrive Time	1320
I32	14 Mar 2016	Depart Time	1323
I32	14 Mar 2016	Air Temp (C)	16
I32	14 Mar 2016	Weather	Overcast
I32	14 Mar 2016	Visibility (mi)	5
I32	14 Mar 2016	Wind Speed (kts)	10
I32	14 Mar 2016	Wind Dir	SW
I32	14 Mar 2016	Water Color	Green
I32	14 Mar 2016	Wave Ht Low (ft)	5
I32	14 Mar 2016	Wave Period (sec)	13
I32	14 Mar 2016	Sea State	Heavy chop
I32	14 Mar 2016	High Tide (ft)	3.04
I32	14 Mar 2016	High Tide Time	1510
I32	14 Mar 2016	Low Tide (ft)	0.35
I32	14 Mar 2016	Low Tide Time	850
I32	14 Mar 2016	Comments	

Station	Date	Parameter	Value
I32	20 Mar 2016	Depth (m)	9
I32	20 Mar 2016	Arrive Time	1209
I32	20 Mar 2016	Depart Time	1211
I32	20 Mar 2016	Air Temp (C)	15
I32	20 Mar 2016	Weather	Partly Cloudy
I32	20 Mar 2016	Visibility (mi)	8
I32	20 Mar 2016	Wind Speed (kts)	7
I32	20 Mar 2016	Wind Dir	S
I32	20 Mar 2016	Water Color	Green
I32	20 Mar 2016	Wave Ht Low (ft)	3
I32	20 Mar 2016	Wave Period (sec)	9
I32	20 Mar 2016	Sea State	Calm
I32	20 Mar 2016	High Tide (ft)	5.06
I32	20 Mar 2016	High Tide Time	807
I32	20 Mar 2016	Low Tide (ft)	-0.35
I32	20 Mar 2016	Low Tide Time	1447
I32	20 Mar 2016	Comments	
I32	30 Mar 2016	Depth (m)	10
I32	30 Mar 2016	Arrive Time	1216
I32	30 Mar 2016	Depart Time	1219
I32	30 Mar 2016	Air Temp (C)	14
I32	30 Mar 2016	Weather	Partly Cloudy
I32	30 Mar 2016	Visibility (mi)	8
I32	30 Mar 2016	Wind Speed (kts)	8
I32	30 Mar 2016	Wind Dir	SE
I32	30 Mar 2016	Water Color	Green
I32	30 Mar 2016	Wave Ht Low (ft)	3
I32	30 Mar 2016	Wave Period (sec)	9
I32	30 Mar 2016	Sea State	Calm
I32	30 Mar 2016	High Tide (ft)	2.68
I32	30 Mar 2016	High Tide Time	1621
I32	30 Mar 2016	Low Tide (ft)	0.91
I32	30 Mar 2016	Low Tide Time	925
I32	30 Mar 2016	Comments	
I39	05 Mar 2016	Depth (m)	20
I39	05 Mar 2016	Arrive Time	1036
I39	05 Mar 2016	Depart Time	1040
I39	05 Mar 2016	Air Temp (C)	17
I39	05 Mar 2016	Weather	Cloudy
I39	05 Mar 2016	Visibility (mi)	6
I39	05 Mar 2016	Wind Speed (kts)	3
I39	05 Mar 2016	Wind Dir	NW
I39	05 Mar 2016	Water Color	Greenish-Blue
I39	05 Mar 2016	Wave Ht Low (ft)	6
I39	05 Mar 2016	Wave Period (sec)	13
I39	05 Mar 2016	Sea State	Confused swell
I39	05 Mar 2016	High Tide (ft)	5.16
I39	05 Mar 2016	High Tide Time	601
I39	05 Mar 2016	Low Tide (ft)	-0.56
I39	05 Mar 2016	Low Tide Time	1304
I39	05 Mar 2016	Comments	
I39	10 Mar 2016	Depth (m)	18

Station	Date	Parameter	Value
I39	10 Mar 2016	Arrive Time	1101
I39	10 Mar 2016	Depart Time	1106
I39	10 Mar 2016	Air Temp (C)	16
I39	10 Mar 2016	Weather	Clear
I39	10 Mar 2016	Visibility (mi)	12
I39	10 Mar 2016	Wind Speed (kts)	8
I39	10 Mar 2016	Wind Dir	N
I39	10 Mar 2016	Water Color	Green
I39	10 Mar 2016	Wave Ht Low (ft)	5
I39	10 Mar 2016	Wave Period (sec)	13
I39	10 Mar 2016	Sea State	Wind ripples
I39	10 Mar 2016	High Tide (ft)	5.41
I39	10 Mar 2016	High Tide Time	941
I39	10 Mar 2016	Low Tide (ft)	-0.46
I39	10 Mar 2016	Low Tide Time	1602
I39	10 Mar 2016	Comments	
I39	14 Mar 2016	Depth (m)	18
I39	14 Mar 2016	Arrive Time	1159
I39	14 Mar 2016	Depart Time	1205
I39	14 Mar 2016	Air Temp (C)	16
I39	14 Mar 2016	Weather	Overcast
I39	14 Mar 2016	Visibility (mi)	5
I39	14 Mar 2016	Wind Speed (kts)	10
I39	14 Mar 2016	Wind Dir	SW
I39	14 Mar 2016	Water Color	Green
I39	14 Mar 2016	Wave Ht Low (ft)	5
I39	14 Mar 2016	Wave Period (sec)	13
I39	14 Mar 2016	Sea State	Heavy chop
I39	14 Mar 2016	High Tide (ft)	3.04
I39	14 Mar 2016	High Tide Time	1510
I39	14 Mar 2016	Low Tide (ft)	0.35
I39	14 Mar 2016	Low Tide Time	850
I39	14 Mar 2016	Comments	Kelp debris
I39	20 Mar 2016	Depth (m)	18
I39	20 Mar 2016	Arrive Time	1049
I39	20 Mar 2016	Depart Time	1057
I39	20 Mar 2016	Air Temp (C)	15
I39	20 Mar 2016	Weather	Overcast
I39	20 Mar 2016	Visibility (mi)	5
I39	20 Mar 2016	Wind Speed (kts)	5
I39	20 Mar 2016	Wind Dir	N
I39	20 Mar 2016	Water Color	Green
I39	20 Mar 2016	Wave Ht Low (ft)	3
I39	20 Mar 2016	Wave Period (sec)	9
I39	20 Mar 2016	Sea State	Calm
I39	20 Mar 2016	High Tide (ft)	5.06
I39	20 Mar 2016	High Tide Time	807
I39	20 Mar 2016	Low Tide (ft)	-0.35
I39	20 Mar 2016	Low Tide Time	1447
I39	20 Mar 2016	Comments	
I39	30 Mar 2016	Depth (m)	19
I39	30 Mar 2016	Arrive Time	1048

Station	Date	Parameter	Value
I39	30 Mar 2016	Depart Time	1058
I39	30 Mar 2016	Air Temp (C)	13
I39	30 Mar 2016	Weather	Overcast
I39	30 Mar 2016	Visibility (mi)	3
I39	30 Mar 2016	Wind Speed (kts)	7
I39	30 Mar 2016	Wind Dir	S
I39	30 Mar 2016	Water Color	Green
I39	30 Mar 2016	Wave Ht Low (ft)	3
I39	30 Mar 2016	Wave Period (sec)	9
I39	30 Mar 2016	Sea State	Calm
I39	30 Mar 2016	High Tide (ft)	2.68
I39	30 Mar 2016	High Tide Time	1621
I39	30 Mar 2016	Low Tide (ft)	0.91
I39	30 Mar 2016	Low Tide Time	925
I39	30 Mar 2016	Comments	
I40	10 Mar 2016	Depth (m)	10
I40	10 Mar 2016	Arrive Time	1143
I40	10 Mar 2016	Depart Time	1149
I40	10 Mar 2016	Air Temp (C)	16
I40	10 Mar 2016	Weather	Clear
I40	10 Mar 2016	Visibility (mi)	12
I40	10 Mar 2016	Wind Speed (kts)	7
I40	10 Mar 2016	Wind Dir	W
I40	10 Mar 2016	Water Color	Green
I40	10 Mar 2016	Wave Ht Low (ft)	5
I40	10 Mar 2016	Wave Period (sec)	13
I40	10 Mar 2016	Sea State	Wind ripples
I40	10 Mar 2016	High Tide (ft)	5.41
I40	10 Mar 2016	High Tide Time	941
I40	10 Mar 2016	Low Tide (ft)	-0.46
I40	10 Mar 2016	Low Tide Time	1602
I40	10 Mar 2016	Comments	
I40	14 Mar 2016	Depth (m)	9
I40	14 Mar 2016	Arrive Time	1241
I40	14 Mar 2016	Depart Time	1245
I40	14 Mar 2016	Air Temp (C)	16
I40	14 Mar 2016	Weather	Overcast
I40	14 Mar 2016	Visibility (mi)	5
I40	14 Mar 2016	Wind Speed (kts)	12
I40	14 Mar 2016	Wind Dir	N
I40	14 Mar 2016	Water Color	Green
I40	14 Mar 2016	Wave Ht Low (ft)	5
I40	14 Mar 2016	Wave Period (sec)	13
I40	14 Mar 2016	Sea State	Heavy chop
I40	14 Mar 2016	High Tide (ft)	3.04
I40	14 Mar 2016	High Tide Time	1510
I40	14 Mar 2016	Low Tide (ft)	0.35
I40	14 Mar 2016	Low Tide Time	850
I40	14 Mar 2016	Comments	
I40	20 Mar 2016	Depth (m)	9
I40	20 Mar 2016	Arrive Time	1129
I40	20 Mar 2016	Depart Time	1131

Station	Date	Parameter	Value
I40	20 Mar 2016	Air Temp (C)	15
I40	20 Mar 2016	Weather	Partly Cloudy
I40	20 Mar 2016	Visibility (mi)	7
I40	20 Mar 2016	Wind Speed (kts)	7
I40	20 Mar 2016	Wind Dir	SW
I40	20 Mar 2016	Water Color	Green
I40	20 Mar 2016	Wave Ht Low (ft)	3
I40	20 Mar 2016	Wave Period (sec)	9
I40	20 Mar 2016	Sea State	Calm
I40	20 Mar 2016	High Tide (ft)	5.06
I40	20 Mar 2016	High Tide Time	807
I40	20 Mar 2016	Low Tide (ft)	-0.35
I40	20 Mar 2016	Low Tide Time	1447
I40	20 Mar 2016	Comments	
I40	30 Mar 2016	Depth (m)	9
I40	30 Mar 2016	Arrive Time	1134
I40	30 Mar 2016	Depart Time	1137
I40	30 Mar 2016	Air Temp (C)	14
I40	30 Mar 2016	Weather	Overcast
I40	30 Mar 2016	Visibility (mi)	3
I40	30 Mar 2016	Wind Speed (kts)	6
I40	30 Mar 2016	Wind Dir	E
I40	30 Mar 2016	Water Color	Green
I40	30 Mar 2016	Wave Ht Low (ft)	3
I40	30 Mar 2016	Wave Period (sec)	9
I40	30 Mar 2016	Sea State	Calm
I40	30 Mar 2016	High Tide (ft)	2.68
I40	30 Mar 2016	High Tide Time	1621
I40	30 Mar 2016	Low Tide (ft)	0.91
I40	30 Mar 2016	Low Tide Time	925
I40	30 Mar 2016	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 (μg/L)
I19	10 Mar 2016	1	16.40	45.35	7.7	33.52	8.1	24.5	1.07
I19	10 Mar 2016	2	16.26	44.91	7.5	33.52	8.1	24.5	1.27
I19	10 Mar 2016	3	15.91	44.88	7.4	33.51	8.1	24.6	1.78
I19	10 Mar 2016	4	15.57	44.88	7.1	33.51	8.1	24.7	2.14
I19	10 Mar 2016	5	15.44	46.91	6.9	33.51	8.1	24.7	2.35
I19	10 Mar 2016	6	15.36	53.62	6.9	33.51	8.1	24.7	2.44
I19	10 Mar 2016	7	15.32	56.02	6.8	33.50	8.1	24.7	2.43
I19	10 Mar 2016	8	15.22	57.98	6.8	33.51	8.1	24.8	2.25
I19	10 Mar 2016	9	15.20	57.28	6.8	33.51	8.1	24.8	2.12
I19	10 Mar 2016	10	15.12	53.86	6.6	33.50	8.1	24.8	2.01
I19	14 Mar 2016	1	13.56	38.17	6.8	33.35	8.0	25.0	1.14
I19	14 Mar 2016	2	13.50	37.71	6.6	33.36	8.0	25.0	1.25
I19	14 Mar 2016	3	13.48	40.42	6.4	33.38	8.0	25.0	1.61
I19	14 Mar 2016	4	13.45	49.83	6.0	33.40	8.0	25.1	1.86
I19	14 Mar 2016	5	13.39	61.37	5.7	33.42	8.0	25.1	1.84
I19	14 Mar 2016	6	13.12	66.51	5.5	33.37	8.0	25.1	1.57
I19	14 Mar 2016	7	12.86	54.88	5.5	33.42	7.9	25.2	1.28
I19	14 Mar 2016	8	12.76	34.72	5.4	33.42	7.9	25.2	1.35
I19	14 Mar 2016	9	12.68	29.18	5.4	33.42	7.9	25.2	1.60
I19	14 Mar 2016	10	12.69	22.13	5.4	33.42	7.9	25.2	1.93
I19	20 Mar 2016	1	15.54	67.88	8.4	33.46	8.1	24.7	2.01
I19	20 Mar 2016	2	15.38	66.84	8.3	33.46	8.1	24.7	2.12
I19	20 Mar 2016	3	15.14	65.81	8.2	33.46	8.1	24.8	2.41
I19	20 Mar 2016	4	15.09	65.98	8.1	33.46	8.1	24.8	3.45
I19	20 Mar 2016	5	15.02	68.28	7.8	33.47	8.1	24.8	4.65
I19	20 Mar 2016	6	14.69	70.52	7.5	33.48	8.1	24.9	4.93
I19	20 Mar 2016	7	14.35	73.93	7.3	33.47	8.1	24.9	4.61
I19	20 Mar 2016	8	14.24	69.02	7.4	33.46	8.1	24.9	4.94
I19	20 Mar 2016	9	14.19	65.60	7.3	33.45	8.1	25.0	5.99
I19	20 Mar 2016	10	14.15	64.62	7.2	33.45	8.0	25.0	6.16
I19	30 Mar 2016	1	16.01	76.35	8.5	33.50	8.3	24.6	0.82
I19	30 Mar 2016	2	16.01	76.19	8.5	33.50	8.3	24.6	0.94
I19	30 Mar 2016	3	16.00	76.01	8.5	33.50	8.3	24.6	1.00
I19	30 Mar 2016	4	15.94	74.90	8.5	33.50	8.3	24.6	1.33
I19	30 Mar 2016	5	15.91	72.25	8.4	33.50	8.3	24.6	1.64
I19	30 Mar 2016	6	15.75	69.54	8.3	33.50	8.3	24.6	1.86
I19	30 Mar 2016	7	15.71	71.15	8.4	33.49	8.3	24.7	2.07
I19	30 Mar 2016	8	15.59	67.40	8.4	33.49	8.3	24.7	2.25
I19	30 Mar 2016	9	15.57	64.55	8.4	33.49	8.3	24.7	2.48
I19	30 Mar 2016	10	15.56	62.49	8.4	33.49	8.3	24.7	2.67
I24	10 Mar 2016	1	16.41	36.18	7.6	33.51	8.1	24.5	1.14
I24	10 Mar 2016	2	16.32	35.89	7.6	33.51	8.1	24.5	1.34
I24	10 Mar 2016	3	16.14	35.95	7.5	33.51	8.1	24.6	1.87
I24	10 Mar 2016	4	15.73	36.82	7.2	33.51	8.1	24.7	2.42
I24	10 Mar 2016	5	15.55	43.36	7.1	33.51	8.1	24.7	2.55
I24	10 Mar 2016	6	15.57	44.90	7.0	33.51	8.1	24.7	2.55
I24	10 Mar 2016	7	15.42	45.53	6.9	33.50	8.1	24.7	2.46

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (μg/L)
I24	10 Mar 2016	8	15.41	46.14	7.0	33.50	8.1	24.7	2.35
I24	10 Mar 2016	9	15.41	46.39	6.9	33.50	8.1	24.7	2.31
I24	10 Mar 2016	10	15.39	42.64	6.9	33.50	8.1	24.7	2.31
I24	10 Mar 2016	11	15.39	39.03	6.9	33.50	8.1	24.7	2.33
I24	14 Mar 2016	1	14.79	66.74	6.8	33.47	8.1	24.8	0.86
I24	14 Mar 2016	2	14.80	66.64	6.8	33.47	8.1	24.8	0.89
I24	14 Mar 2016	3	14.55	67.35	6.5	33.46	8.1	24.9	0.94
I24	14 Mar 2016	4	14.24	67.10	6.3	33.46	8.0	24.9	1.10
I24	14 Mar 2016	5	13.80	62.59	6.0	33.45	8.0	25.0	1.34
I24	14 Mar 2016	6	13.75	62.56	5.8	33.44	8.0	25.0	1.65
I24	14 Mar 2016	7	13.71	65.68	5.8	33.44	8.0	25.0	1.88
I24	14 Mar 2016	8	13.49	61.95	5.7	33.44	8.0	25.1	1.88
I24	14 Mar 2016	9	13.30	33.08	5.6	33.43	8.0	25.1	1.84
I24	14 Mar 2016	10	13.29	16.89	5.6	33.43	8.0	25.1	1.69
I24	20 Mar 2016	1	16.62	67.70	8.8	33.45	8.2	24.4	1.93
I24	20 Mar 2016	2	16.27	67.31	8.6	33.45	8.2	24.5	2.20
I24	20 Mar 2016	3	15.69	63.80	8.3	33.45	8.2	24.6	2.99
I24	20 Mar 2016	4	15.06	59.95	8.4	33.44	8.1	24.8	4.54
I24	20 Mar 2016	5	14.95	61.09	8.4	33.44	8.1	24.8	7.08
I24	20 Mar 2016	6	14.75	63.67	8.4	33.45	8.1	24.8	8.90
I24	20 Mar 2016	7	14.65	65.28	8.3	33.44	8.1	24.8	10.08
I24	20 Mar 2016	8	14.58	64.13	8.2	33.44	8.1	24.9	10.34
I24	20 Mar 2016	9	14.54	64.14	8.0	33.44	8.1	24.9	9.72
I24	30 Mar 2016	1	16.41	60.91	7.8	33.53	8.2	24.5	0.76
I24	30 Mar 2016	2	16.41	60.96	7.8	33.53	8.2	24.5	0.80
I24	30 Mar 2016	3	16.36	59.46	7.7	33.53	8.2	24.5	1.10
I24	30 Mar 2016	4	16.30	55.83	7.7	33.53	8.2	24.5	1.52
I24	30 Mar 2016	5	16.19	53.93	7.8	33.52	8.2	24.6	1.81
I24	30 Mar 2016	6	16.12	53.07	7.9	33.51	8.3	24.6	1.98
I24	30 Mar 2016	7	16.08	48.58	7.8	33.51	8.2	24.6	2.25
I24	30 Mar 2016	8	16.05	41.51	7.8	33.51	8.2	24.6	2.49
I24	30 Mar 2016	9	16.06	39.46	7.9	33.51	8.2	24.6	2.68
I24	30 Mar 2016	10	16.07	36.57	7.9	33.51	8.3	24.6	2.87
I25	10 Mar 2016	1	16.41	54.24	7.6	33.51	8.2	24.5	0.81
I25	10 Mar 2016	2	16.31	53.90	7.6	33.52	8.2	24.5	0.93
I25	10 Mar 2016	3	16.18	51.56	7.5	33.52	8.2	24.6	1.21
I25	10 Mar 2016	4	15.51	44.70	7.1	33.52	8.1	24.7	1.65
I25	10 Mar 2016	5	15.20	49.52	6.8	33.50	8.1	24.8	1.92
I25	10 Mar 2016	6	15.14	52.63	6.8	33.50	8.1	24.8	2.03
I25	10 Mar 2016	7	15.10	54.71	6.8	33.50	8.1	24.8	2.05
I25	10 Mar 2016	8	15.09	54.22	6.7	33.49	8.1	24.8	1.96
I25	20 Mar 2016	1	16.38	65.09	8.5	33.44	8.2	24.5	1.71
I25	20 Mar 2016	2	16.14	64.20	8.4	33.45	8.2	24.5	2.05
I25	20 Mar 2016	3	15.57	60.94	8.4	33.45	8.1	24.6	3.20
I25	20 Mar 2016	4	15.31	59.77	8.4	33.45	8.1	24.7	4.85
I25	20 Mar 2016	5	15.03	67.38	7.9	33.47	8.1	24.8	5.69
I25	20 Mar 2016	6	14.73	72.40	7.5	33.46	8.1	24.8	4.98
I25	20 Mar 2016	7	14.66	68.15	7.5	33.45	8.1	24.9	4.86
I25	20 Mar 2016	8	14.65	62.14	7.4	33.45	8.1	24.9	4.98
I25	20 Mar 2016	9	14.65	59.65	7.3	33.45	8.1	24.9	4.99

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (μg/L)
I25	30 Mar 2016	1	16.44	60.57	7.9	33.53	8.3	24.5	0.76
I25	30 Mar 2016	2	16.44	60.82	7.9	33.53	8.3	24.5	0.80
I25	30 Mar 2016	3	16.41	63.32	7.9	33.53	8.3	24.5	0.96
I25	30 Mar 2016	4	16.37	64.27	7.9	33.52	8.3	24.5	1.21
I25	30 Mar 2016	5	16.32	65.50	8.0	33.52	8.3	24.5	1.45
I25	30 Mar 2016	6	16.11	72.58	8.3	33.51	8.3	24.6	1.82
I25	30 Mar 2016	7	15.96	74.14	8.6	33.50	8.3	24.6	1.98
I25	30 Mar 2016	8	15.99	71.62	8.5	33.50	8.3	24.6	2.10
I25	30 Mar 2016	9	16.03	69.08	8.4	33.51	8.3	24.6	2.00
I26	10 Mar 2016	1	16.27	54.84	7.6	33.51	8.2	24.5	0.93
I26	10 Mar 2016	2	15.99	54.24	7.3	33.51	8.2	24.6	1.04
I26	10 Mar 2016	3	15.25	52.07	6.8	33.51	8.1	24.8	1.20
I26	10 Mar 2016	4	14.97	55.37	6.7	33.50	8.1	24.8	1.28
I26	10 Mar 2016	5	14.90	53.33	6.6	33.49	8.1	24.8	1.40
I26	10 Mar 2016	6	14.86	47.16	6.6	33.49	8.1	24.8	1.62
I26	10 Mar 2016	7	14.85	40.66	6.6	33.49	8.1	24.8	1.84
I26	10 Mar 2016	8	14.84	32.49	6.5	33.49	8.1	24.8	1.92
I26	10 Mar 2016	9	14.85	28.86	6.5	33.49	8.1	24.8	1.96
I26	20 Mar 2016	1	16.60	66.65	9.3	33.45	8.2	24.4	3.83
I26	20 Mar 2016	2	16.64	66.39	9.3	33.44	8.2	24.4	3.93
I26	20 Mar 2016	3	16.45	66.35	9.0	33.46	8.2	24.5	4.01
I26	20 Mar 2016	4	15.43	67.10	8.5	33.49	8.2	24.7	4.97
I26	20 Mar 2016	5	14.83	67.82	8.3	33.45	8.1	24.8	5.49
I26	20 Mar 2016	6	14.65	67.78	8.1	33.44	8.1	24.8	5.82
I26	20 Mar 2016	7	14.54	69.44	8.0	33.44	8.1	24.9	6.10
I26	20 Mar 2016	8	14.46	60.27	7.7	33.44	8.1	24.9	6.39
I26	20 Mar 2016	9	14.43	43.13	7.5	33.43	8.1	24.9	6.63
I26	30 Mar 2016	1	16.21	75.68	8.4	33.51	8.3	24.6	0.56
I26	30 Mar 2016	2	16.20	75.64	8.4	33.51	8.3	24.6	0.57
I26	30 Mar 2016	3	16.16	75.70	8.5	33.51	8.3	24.6	0.63
I26	30 Mar 2016	4	16.08	76.90	8.6	33.51	8.3	24.6	0.74
I26	30 Mar 2016	5	15.93	77.31	8.7	33.50	8.3	24.6	0.90
I26	30 Mar 2016	6	15.81	78.74	8.8	33.50	8.3	24.6	1.03
I26	30 Mar 2016	7	15.80	78.64	8.9	33.50	8.3	24.6	1.12
I26	30 Mar 2016	8	15.80	78.39	9.0	33.50	8.3	24.6	1.36
I26	30 Mar 2016	9	15.80	77.84	9.0	33.50	8.3	24.6	1.44
I32	10 Mar 2016	1	16.33	39.84	7.6	33.51	8.1	24.5	1.21
I32	10 Mar 2016	2	16.27	36.79	7.6	33.51	8.1	24.5	1.45
I32	10 Mar 2016	3	16.21	34.26	7.6	33.51	8.1	24.6	1.84
I32	10 Mar 2016	4	15.98	32.04	7.3	33.52	8.1	24.6	2.21
I32	10 Mar 2016	5	15.51	29.80	7.0	33.52	8.1	24.7	2.34
I32	10 Mar 2016	6	15.45	22.69	6.9	33.50	8.1	24.7	2.31
I32	10 Mar 2016	7	15.32	20.85	6.8	33.51	8.1	24.7	2.28
I32	10 Mar 2016	8	15.28	27.02	6.8	33.50	8.1	24.8	2.25
I32	10 Mar 2016	9	15.09	23.70	6.5	33.50	8.1	24.8	2.21
I32	14 Mar 2016	1	14.93	37.59	7.6	33.47	8.1	24.8	1.64
I32	14 Mar 2016	2	14.94	37.81	7.6	33.47	8.1	24.8	1.69
I32	14 Mar 2016	3	14.72	35.14	7.1	33.46	8.1	24.8	2.17
I32	14 Mar 2016	4	13.88	28.40	6.3	33.45	8.0	25.0	2.77

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (μg/L)
I32	14 Mar 2016	5	13.85	25.73	5.8	33.43	8.0	25.0	2.88
I32	14 Mar 2016	6	13.39	26.50	5.4	33.43	8.0	25.1	2.49
I32	14 Mar 2016	7	13.38	39.35	5.4	33.43	8.0	25.1	2.18
I32	14 Mar 2016	8	13.35	21.46	5.4	33.43	8.0	25.1	2.05
I32	14 Mar 2016	9	13.36	13.39	5.4	33.43	8.0	25.1	2.15
I32	14 Mar 2016	10	13.38	11.15	5.4	33.43	8.0	25.1	2.45
I32	20 Mar 2016	1	16.67	71.07	8.9	33.45	8.2	24.4	2.29
I32	20 Mar 2016	2	16.56	70.67	8.9	33.45	8.2	24.4	2.50
I32	20 Mar 2016	3	16.24	70.08	8.5	33.45	8.2	24.5	2.75
I32	20 Mar 2016	4	15.56	68.41	8.3	33.44	8.2	24.7	3.52
I32	20 Mar 2016	5	15.31	66.94	8.1	33.44	8.1	24.7	4.30
I32	20 Mar 2016	6	15.11	62.30	7.9	33.43	8.1	24.7	4.67
I32	20 Mar 2016	7	14.67	63.78	7.8	33.44	8.1	24.8	5.27
I32	20 Mar 2016	8	14.46	62.61	7.8	33.43	8.1	24.9	5.86
I32	20 Mar 2016	9	14.32	62.38	7.7	33.43	8.1	24.9	6.92
I32	20 Mar 2016	10	14.29	60.16	7.6	33.43	8.1	24.9	6.82
I32	30 Mar 2016	1	16.32	65.58	8.3	33.51	8.3	24.5	0.75
I32	30 Mar 2016	2	16.26	66.19	8.3	33.51	8.3	24.5	0.80
I32	30 Mar 2016	3	16.19	66.52	8.4	33.51	8.3	24.6	0.96
I32	30 Mar 2016	4	16.13	66.79	8.4	33.50	8.3	24.6	1.17
I32	30 Mar 2016	5	16.08	69.72	8.5	33.50	8.3	24.6	1.46
I32	30 Mar 2016	6	16.00	68.45	8.5	33.50	8.3	24.6	1.85
I32	30 Mar 2016	7	15.85	61.03	8.3	33.50	8.3	24.6	2.84
I32	30 Mar 2016	8	15.73	57.38	8.3	33.50	8.3	24.7	3.59
I32	30 Mar 2016	9	15.71	40.82	8.3	33.49	8.3	24.7	4.12
I39	05 Mar 2016	1	17.07	83.73	7.8	33.56	8.2	24.4	0.38
I39	05 Mar 2016	2	16.99	83.42	7.9	33.56	8.2	24.4	0.40
I39	05 Mar 2016	3	16.95	83.11	7.8	33.56	8.2	24.4	0.44
I39	05 Mar 2016	4	16.79	83.18	7.9	33.55	8.2	24.5	0.54
I39	05 Mar 2016	5	16.54	83.89	7.8	33.54	8.2	24.5	0.63
I39	05 Mar 2016	6	16.20	84.65	7.9	33.52	8.2	24.6	0.76
I39	05 Mar 2016	7	15.92	83.77	7.8	33.52	8.2	24.6	1.06
I39	05 Mar 2016	8	15.74	83.39	7.9	33.51	8.2	24.7	1.45
I39	05 Mar 2016	9	15.78	83.48	7.8	33.51	8.2	24.7	1.64
I39	05 Mar 2016	10	15.41	81.37	7.6	33.51	8.2	24.7	2.13
I39	05 Mar 2016	11	15.35	75.73	7.4	33.51	8.2	24.7	2.56
I39	05 Mar 2016	12	15.16	71.84	7.0	33.51	8.2	24.8	2.81
I39	05 Mar 2016	13	15.09	69.23	6.8	33.51	8.1	24.8	2.91
I39	05 Mar 2016	14	15.08	67.18	6.8	33.51	8.1	24.8	3.01
I39	05 Mar 2016	15	15.02	64.80	6.7	33.51	8.1	24.8	2.95
I39	05 Mar 2016	16	14.99	62.15	6.8	33.51	8.1	24.8	2.80
I39	05 Mar 2016	17	14.99	61.10	6.8	33.51	8.1	24.8	2.65
I39	05 Mar 2016	18	14.98	60.33	6.8	33.51	8.1	24.8	2.53
I39	10 Mar 2016	1	16.47	68.45	7.8	33.52	8.2	24.5	0.72
I39	10 Mar 2016	2	16.39	68.40	7.8	33.52	8.2	24.5	0.78
I39	10 Mar 2016	3	16.18	67.91	7.8	33.52	8.2	24.6	0.98
I39	10 Mar 2016	4	15.99	66.98	7.8	33.51	8.2	24.6	1.31
I39	10 Mar 2016	5	15.93	68.20	7.7	33.51	8.2	24.6	1.65
I39	10 Mar 2016	6	15.82	70.40	7.6	33.51	8.2	24.6	1.80
I39	10 Mar 2016	7	15.77	71.86	7.5	33.51	8.2	24.7	1.88
I39	10 Mar 2016	8	15.76	73.42	7.6	33.51	8.2	24.7	2.02

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (μg/L)
I39	10 Mar 2016	9	15.73	74.19	7.5	33.51	8.2	24.7	2.09
I39	10 Mar 2016	10	15.70	74.62	7.5	33.51	8.2	24.7	2.16
I39	10 Mar 2016	11	15.70	75.12	7.5	33.51	8.2	24.7	2.22
I39	10 Mar 2016	12	15.65	75.76	7.4	33.51	8.2	24.7	2.17
I39	10 Mar 2016	13	15.57	76.21	7.3	33.51	8.2	24.7	2.11
I39	10 Mar 2016	14	15.52	76.46	7.2	33.50	8.1	24.7	2.06
I39	10 Mar 2016	15	14.94	75.75	6.8	33.50	8.1	24.8	1.85
I39	10 Mar 2016	16	14.66	69.73	6.5	33.49	8.1	24.9	1.56
I39	10 Mar 2016	17	14.62	66.51	6.5	33.49	8.1	24.9	1.39
I39	14 Mar 2016	1	15.87	72.47	7.9	33.50	8.2	24.6	1.56
I39	14 Mar 2016	2	15.72	71.67	7.9	33.50	8.2	24.7	1.84
I39	14 Mar 2016	3	15.61	71.79	7.8	33.50	8.1	24.7	2.21
I39	14 Mar 2016	4	15.50	72.62	7.5	33.49	8.1	24.7	2.49
I39	14 Mar 2016	5	15.42	74.60	7.4	33.49	8.1	24.7	2.62
I39	14 Mar 2016	6	15.42	75.58	7.4	33.49	8.1	24.7	2.76
I39	14 Mar 2016	7	15.38	75.92	7.2	33.48	8.1	24.7	2.78
I39	14 Mar 2016	8	15.27	76.53	7.2	33.48	8.1	24.7	2.75
I39	14 Mar 2016	9	15.27	76.70	7.1	33.48	8.1	24.7	2.72
I39	14 Mar 2016	10	15.06	76.75	6.9	33.48	8.1	24.8	2.58
I39	14 Mar 2016	11	14.88	77.79	6.8	33.48	8.1	24.8	2.67
I39	14 Mar 2016	12	14.79	78.17	6.8	33.47	8.1	24.8	2.76
I39	14 Mar 2016	13	14.66	78.54	6.7	33.47	8.1	24.9	2.74
I39	14 Mar 2016	14	14.31	78.57	6.5	33.46	8.1	24.9	2.59
I39	14 Mar 2016	15	14.14	72.23	6.3	33.45	8.0	25.0	2.40
I39	14 Mar 2016	16	13.63	64.20	5.9	33.41	8.0	25.0	2.10
I39	14 Mar 2016	17	13.00	52.16	5.6	33.42	8.0	25.2	1.48
I39	14 Mar 2016	18	13.37	47.13	5.6	33.41	8.0	25.1	1.40
I39	20 Mar 2016	1	16.54	68.61	9.3	33.45	8.2	24.4	3.26
I39	20 Mar 2016	2	16.36	68.19	9.2	33.45	8.2	24.5	3.90
I39	20 Mar 2016	3	16.00	67.60	8.9	33.45	8.2	24.6	6.12
I39	20 Mar 2016	4	15.64	69.43	8.3	33.46	8.2	24.6	7.34
I39	20 Mar 2016	5	14.99	72.28	7.8	33.47	8.1	24.8	6.31
I39	20 Mar 2016	6	14.60	76.55	7.6	33.45	8.1	24.9	5.37
I39	20 Mar 2016	7	14.41	75.56	7.7	33.44	8.1	24.9	5.28
I39	20 Mar 2016	8	14.33	72.58	7.6	33.43	8.1	24.9	5.79
I39	20 Mar 2016	9	14.29	72.61	7.3	33.44	8.1	24.9	5.38
I39	20 Mar 2016	10	14.23	73.63	7.1	33.44	8.0	24.9	4.83
I39	20 Mar 2016	11	14.07	73.57	6.9	33.44	8.0	25.0	4.24
I39	20 Mar 2016	12	13.85	70.67	6.7	33.44	8.0	25.0	3.91
I39	20 Mar 2016	13	13.70	72.15	6.4	33.45	8.0	25.0	3.87
I39	20 Mar 2016	14	13.53	76.26	6.1	33.45	8.0	25.1	3.17
I39	20 Mar 2016	15	13.49	75.86	6.0	33.45	8.0	25.1	2.80
I39	20 Mar 2016	16	13.46	72.75	6.0	33.45	8.0	25.1	2.60
I39	20 Mar 2016	17	13.46	69.99	5.9	33.45	8.0	25.1	2.51
I39	20 Mar 2016	18	13.45	68.86	6.0	33.45	8.0	25.1	2.58
I39	30 Mar 2016	1	15.87	81.77	8.7	33.50	8.3	24.6	0.68
I39	30 Mar 2016	2	15.86	81.59	8.7	33.50	8.3	24.6	0.69
I39	30 Mar 2016	3	15.80	81.59	8.8	33.50	8.3	24.6	0.78
I39	30 Mar 2016	4	15.75	82.36	8.9	33.49	8.3	24.6	0.88
I39	30 Mar 2016	5	15.62	82.15	9.0	33.49	8.3	24.7	1.19
I39	30 Mar 2016	6	15.43	82.04	9.1	33.49	8.3	24.7	1.34
I39	30 Mar 2016	7	15.38	81.63	8.9	33.49	8.3	24.7	1.75

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (μg/L)
I39	30 Mar 2016	8	15.15	80.90	8.6	33.48	8.3	24.8	1.98
I39	30 Mar 2016	9	14.96	78.42	8.3	33.48	8.2	24.8	2.30
I39	30 Mar 2016	10	14.86	74.80	7.9	33.48	8.2	24.8	2.52
I39	30 Mar 2016	11	14.58	72.10	7.4	33.47	8.2	24.9	3.20
I39	30 Mar 2016	12	14.26	70.82	7.1	33.47	8.1	25.0	4.71
I39	30 Mar 2016	13	14.11	70.21	7.0	33.47	8.1	25.0	5.84
I39	30 Mar 2016	14	14.14	70.36	7.0	33.46	8.1	25.0	5.75
I39	30 Mar 2016	15	14.08	69.54	7.0	33.47	8.1	25.0	6.34
I39	30 Mar 2016	16	14.07	69.28	6.9	33.47	8.1	25.0	6.14
I39	30 Mar 2016	17	14.07	69.22	6.9	33.47	8.1	25.0	6.25
I39	30 Mar 2016	18	14.07	68.74	6.9	33.47	8.1	25.0	5.68
I40	10 Mar 2016	1	16.22	24.43	7.8	33.51	8.1	24.6	1.34
I40	10 Mar 2016	2	16.17	24.18	7.8	33.52	8.1	24.6	1.68
I40	10 Mar 2016	3	16.07	23.44	7.7	33.52	8.1	24.6	2.51
I40	10 Mar 2016	4	15.93	23.87	7.5	33.52	8.1	24.6	3.03
I40	10 Mar 2016	5	15.82	23.63	7.3	33.51	8.1	24.6	3.07
I40	10 Mar 2016	6	15.68	26.66	7.2	33.49	8.1	24.7	2.94
I40	10 Mar 2016	7	15.49	29.18	7.1	33.47	8.1	24.7	2.75
I40	10 Mar 2016	8	15.45	29.89	7.1	33.47	8.1	24.7	2.66
I40	10 Mar 2016	9	15.41	29.65	6.8	33.49	8.1	24.7	2.52
I40	10 Mar 2016	10	15.16	33.29	6.5	33.51	8.1	24.8	2.42
I40	14 Mar 2016	1	15.16	47.01	7.5	33.41	8.1	24.7	1.23
I40	14 Mar 2016	2	15.15	47.03	7.3	33.41	8.1	24.7	1.32
I40	14 Mar 2016	3	14.52	47.14	7.0	33.46	8.1	24.9	1.92
I40	14 Mar 2016	4	14.39	46.02	6.8	33.45	8.0	24.9	2.80
I40	14 Mar 2016	5	14.27	47.90	6.7	33.45	8.0	24.9	3.15
I40	14 Mar 2016	6	14.13	46.16	6.4	33.46	8.0	25.0	3.03
I40	14 Mar 2016	7	13.63	49.13	5.9	33.45	8.0	25.1	2.69
I40	14 Mar 2016	8	13.15	50.98	5.5	33.43	8.0	25.1	2.02
I40	14 Mar 2016	9	13.08	19.53	5.5	33.42	8.0	25.2	1.80
I40	14 Mar 2016	10	13.04	7.63	5.5	33.42	8.0	25.2	1.96
I40	20 Mar 2016	1	16.31	58.07	8.2	33.44	8.1	24.5	1.71
I40	20 Mar 2016	2	16.26	57.72	8.3	33.45	8.1	24.5	2.00
I40	20 Mar 2016	3	16.16	57.47	8.3	33.45	8.1	24.5	3.11
I40	20 Mar 2016	4	15.80	58.08	8.2	33.45	8.1	24.6	4.56
I40	20 Mar 2016	5	15.48	56.85	8.3	33.44	8.1	24.7	6.23
I40	20 Mar 2016	6	15.22	55.79	8.3	33.44	8.1	24.7	6.84
I40	20 Mar 2016	7	15.04	55.85	8.1	33.43	8.1	24.8	7.19
I40	20 Mar 2016	8	14.86	56.77	8.0	33.44	8.1	24.8	7.21
I40	20 Mar 2016	9	14.82	60.42	8.0	33.44	8.1	24.8	7.55
I40	20 Mar 2016	10	14.68	60.76	8.1	33.45	8.1	24.8	8.40
I40	30 Mar 2016	1	16.27	71.12	8.1	33.52	8.3	24.6	0.91
I40	30 Mar 2016	2	16.27	70.25	8.1	33.52	8.3	24.6	0.91
I40	30 Mar 2016	3	16.27	70.88	8.0	33.52	8.3	24.6	0.90
I40	30 Mar 2016	4	16.26	71.02	8.0	33.52	8.3	24.6	0.97
I40	30 Mar 2016	5	16.26	70.70	8.0	33.52	8.3	24.6	1.15
I40	30 Mar 2016	6	16.22	70.04	7.9	33.52	8.3	24.6	1.35
I40	30 Mar 2016	7	16.17	68.09	7.9	33.52	8.3	24.6	1.68
I40	30 Mar 2016	8	15.88	63.81	7.9	33.50	8.2	24.6	2.47
I40	30 Mar 2016	9	15.79	42.75	7.8	33.49	8.2	24.6	3.90

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	10 Mar 2016	6	SR	LAB DUPLICATE	40e	2e	<2
I19	14 Mar 2016	6	JT	LAB DUPLICATE	94	16e	2e
I19	20 Mar 2016	6	LMA	LAB DUPLICATE	18e	<2	<2
I19	30 Mar 2016	6	ZV	LAB DUPLICATE	<2	<2	4e
I40	10 Mar 2016	6	AR	LAB DUPLICATE	1300	26e	10e
I40	14 Mar 2016	6	SR	LAB DUPLICATE	40e	<2	<2
I40	20 Mar 2016	6	LMA	LAB DUPLICATE	2e	<2	<2
I40	30 Mar 2016	6	SR	LAB DUPLICATE	<2	<2	<2
S12	01 Mar 2016		JT	FIELD DUPLICATE	<2	<2	<2
S12	01 Mar 2016		JT	LAB DUPLICATE	<2	<2	<2
S12	08 Mar 2016		SR	FIELD DUPLICATE	<20	<2	6e
S12	08 Mar 2016		SR	LAB DUPLICATE	20e	2e	2e
S12	15 Mar 2016		JT	FIELD DUPLICATE	<2	<2	<2
S12	15 Mar 2016		JT	LAB DUPLICATE	<2	<2	<2
S12	22 Mar 2016		JT	FIELD DUPLICATE	20e	<2	4e
S12	22 Mar 2016		JT	LAB DUPLICATE	20e	<2	4e
S12	29 Mar 2016		ZV	FIELD DUPLICATE	4e	<2	<2
S12	29 Mar 2016		ZV	LAB DUPLICATE	<2	<2	<2

ns = not sampled
ND = no data

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