



Monthly Receiving Waters Monitoring Report for the South Bay Ocean Outfall

(South Bay Water Reclamation Plant)

NPDES Permit No. CA0109045

December 2015



City of San Diego
Ocean Monitoring Program
Public Utilities Department
Environmental Monitoring and Technical Services Division



THE CITY OF SAN DIEGO

January 31, 2016

Mr. 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 December 2015 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.

Routine monitoring at each kelp and other nearshore 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.

All water samples were collected using Van Dorn bottles arrayed at the required depths and messenger-tripped in series. Aliquots for bacteriological analyses were drawn from these bottles into sterile sample bottles for processing at the City's Marine Microbiology Laboratory. Water column profiles of the various physical/chemical parameters were taken using a CTD. The CTD collected these physical/chemical data at a rate of eight scans per second. The data were then

internally averaged using the CTD proprietary software, Seasoftware, to create water column profiles equivalent to one reading per meter. Additionally, CTD profile data for each water sample depth are presented with the bacteriological data. However, it should be noted that the CTD measurements and bacteriological samples were taken from separate hydrocasts.

Offshore Stations

Quarterly offshore water quality sampling was 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 three 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 chromophoric 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;

^[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.

- (3) *Enterococcus* density shall not exceed 35 CFU/100 mL.

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 2015 Quality Assurance Report, which will be completed in March 2016.

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 December, 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 S4 on December 31.

- The 30-day geometric mean standard for *Enterococcus* was exceeded at stations S4, S5, and S10 on one or more days during the month.
 - The single sample maximum (SSM) standard for *Enterococcus* was exceeded at stations S4, S5, and S10 on one or more days during the month.
 - The single sample maximum (SSM) standard for total coliforms was exceeded at stations S4, S5, and S10 on one or more days during the month.
 - The SSM standard for fecal coliforms was exceeded at station S10 on December 21.
 - Per permit requirements, resamples were collected in response to these SSM exceedances (see Table 2.8 for details). However, the resamples collected on December 23 at stations S4, S5, and S10 were only analyzed for *Enterococcus* due to a laboratory miscommunication. Therefore, additional resamples were collected and analyzed for the appropriate parameters on December 24.
- 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 station S0 on multiple 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>).

- Notable visual observations for December included: water flowing from a storm drain at station S0. This observation was made on one or more days during the month.

➤ **Kelp Water Quality Sampling**

- The seven kelp water quality stations (I19, I24, I25, I26, I32, I39, I40) were sampled five times during December (i.e. December 4, 9, 15, 17, 21).
- During December, one of the seven stations was out of compliance with various Ocean Plan water contact standards (see below).
 - The SSM standards for total coliforms, fecal coliforms, and *Enterococcus* were each exceeded at station I19 on December 21.
- Water column temperatures ranged from 16.05 to 18.85°C. The difference between surface and bottom waters ranged from approximately 0.06 to 0.75°C, indicating the water column was not stratified at these sites.
- Chlorophyll *a* concentrations ranged from 0.52 to 3.22 µg/L at these stations, suggesting the absence 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 December at the offshore stations. The next quarterly sampling is scheduled for February 2016.

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TABLES AND FIGURES

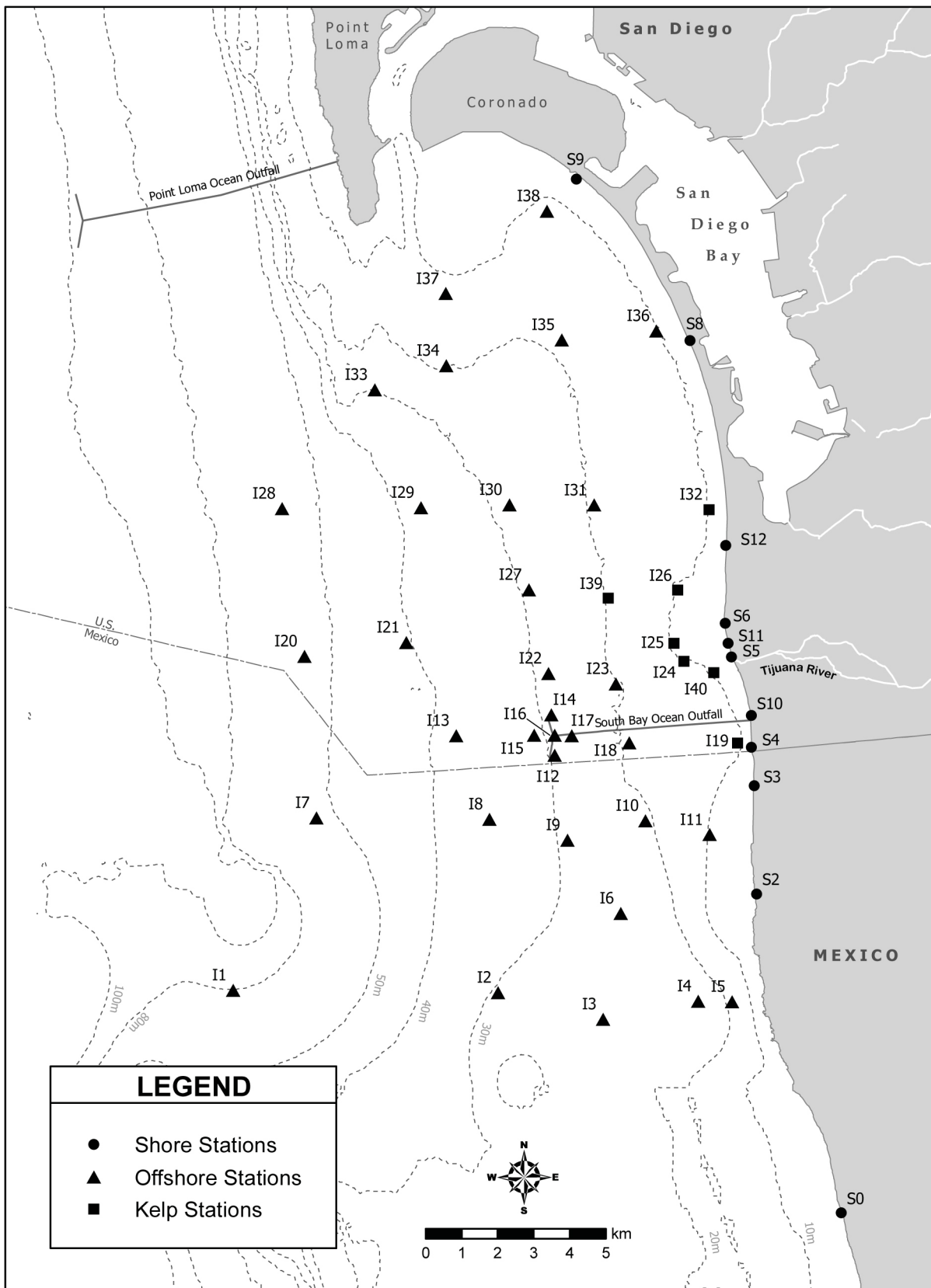


Figure 1.1 Station Map

Shore Stations

Table 2.1

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

Date	S4	S5	S6	S8	S9	S10	S11	S12
01 Dec 2015	87	13	14	5	16	61	8	13
02 Dec 2015	87	13	14	5	16	61	8	13
03 Dec 2015	116	9*	13*	6*	18*	101*	6*	11*
04 Dec 2015	116	9*	13*	6*	18*	101*	6*	11*
05 Dec 2015	116	9*	13*	6*	18*	101*	6*	11*
06 Dec 2015	116	9*	13*	6*	18*	101*	6*	11*
07 Dec 2015	116	9*	13*	6*	18*	101*	6*	11*
08 Dec 2015	97	11	14	8	11	73	5	13
09 Dec 2015	97	11	14	8	11	73	5	13
10 Dec 2015	133	9*	8*	6*	10*	71*	4*	11*
11 Dec 2015	133	9*	8*	6*	10*	71*	4*	11*
12 Dec 2015	133	9*	8*	6*	10*	71*	4*	11*
13 Dec 2015	133	9*	8*	6*	10*	71*	4*	11*
14 Dec 2015	133	9*	8*	6*	10*	71*	4*	11*
15 Dec 2015	202	11	7	5	7	101	3	8
16 Dec 2015	202	11	7	5	7	101	3	8
17 Dec 2015	125	9*	6*	6*	4*	87*	2*	6*
18 Dec 2015	125	9*	6*	6*	4*	87*	2*	6*
19 Dec 2015	111*	9*	6*	6*	4*	87*	2*	6*
20 Dec 2015	111*	9*	6*	6*	4*	87*	2*	6*
21 Dec 2015	293	44	11	5	4	247	8	8
22 Dec 2015	293	44	11	5	4	247	8	8
23 Dec 2015	293	44	11	5	4	247	8	8
24 Dec 2015	524	153	15*	4*	2*	701	12*	6*
25 Dec 2015	524	153	15*	4*	2*	701	12*	6*
26 Dec 2015	524	153	15*	4*	2*	435	12*	6*
27 Dec 2015	524	153	15*	4*	2*	435	12*	6*
28 Dec 2015	601	154	18	4	2	474	17	5
29 Dec 2015	601	154	18	4	2	474	17	5
30 Dec 2015	601	154	18	4	2	474	17	5
31 Dec 2015	1188	266	31*	5*	2*	597	29*	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 Dec 2015	13	4	4	2	5	11	2	2
02 Dec 2015	13	4	4	2	5	11	2	2
03 Dec 2015	20	3*	4*	2*	4*	17*	2*	3*
04 Dec 2015	20	3*	4*	2*	4*	17*	2*	3*
05 Dec 2015	20	3*	4*	2*	4*	17*	2*	3*
06 Dec 2015	20	3*	4*	2*	4*	17*	2*	3*
07 Dec 2015	20	3*	4*	2*	4*	17*	2*	3*
08 Dec 2015	13	3	3	2	4	11	2	2
09 Dec 2015	13	3	3	2	4	11	2	2
10 Dec 2015	20	2*	3*	2*	3*	8*	2*	2*
11 Dec 2015	20	2*	3*	2*	3*	8*	2*	2*
12 Dec 2015	20	2*	3*	2*	3*	8*	2*	2*
13 Dec 2015	20	2*	3*	2*	3*	8*	2*	2*
14 Dec 2015	20	2*	3*	2*	3*	8*	2*	2*
15 Dec 2015	27	3	3	2	3	12	2	2
16 Dec 2015	27	3	3	2	3	12	2	2
17 Dec 2015	17	3*	2*	2*	3*	10*	2*	2*
18 Dec 2015	17	3*	2*	2*	3*	10*	2*	2*
19 Dec 2015	11*	3*	2*	2*	3*	10*	2*	2*
20 Dec 2015	11*	3*	2*	2*	3*	10*	2*	2*
21 Dec 2015	17	7	3	2	3	24	3	2
22 Dec 2015	17	7	3	2	3	24	3	2
23 Dec 2015	17	7	3	2	3	24	3	2
24 Dec 2015	15*	9*	3*	2*	2*	59	3*	2*
25 Dec 2015	15*	9*	3*	2*	2*	59	3*	2*
26 Dec 2015	15*	9*	3*	2*	2*	34	3*	2*
27 Dec 2015	15*	9*	3*	2*	2*	34	3*	2*
28 Dec 2015	16	9	4	2	2	39	3	2
29 Dec 2015	16	9	4	2	2	39	3	2
30 Dec 2015	16	9	4	2	2	39	3	2
31 Dec 2015	28*	13*	5*	2*	2*	46	3*	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 Dec 2015	21	5	3	3	5	7	3	6
02 Dec 2015	21	5	3	3	5	7	3	6
03 Dec 2015	31	6*	4*	3*	7*	10*	3*	8*
04 Dec 2015	31	6*	4*	3*	7*	10*	3*	8*
05 Dec 2015	31	6*	4*	3*	7*	10*	3*	8*
06 Dec 2015	31	6*	4*	3*	7*	10*	3*	8*
07 Dec 2015	31	6*	4*	3*	7*	10*	3*	8*
08 Dec 2015	23	7	3	3	5	8	4	11
09 Dec 2015	23	7	3	3	5	8	4	11
10 Dec 2015	26	7*	2*	2*	5*	5*	3*	9*
11 Dec 2015	26	7*	2*	2*	5*	5*	3*	9*
12 Dec 2015	26	7*	2*	2*	5*	5*	3*	9*
13 Dec 2015	26	7*	2*	2*	5*	5*	3*	9*
14 Dec 2015	26	7*	2*	2*	5*	5*	3*	9*
15 Dec 2015	32	5	2	2	4	9	3	7
16 Dec 2015	32	5	2	2	4	9	3	7
17 Dec 2015	31	7*	2*	2*	5*	9*	3*	9*
18 Dec 2015	31	7*	2*	2*	5*	9*	3*	9*
19 Dec 2015	30	7*	2*	2*	5*	9*	3*	9*
20 Dec 2015	30	7*	2*	2*	5*	9*	3*	9*
21 Dec 2015	44	16	4	2	5	22	6	8
22 Dec 2015	44	16	4	2	5	22	6	8
23 Dec 2015	89	48	4	2	5	64	6	8
24 Dec 2015	79	42	4*	2*	2*	108	7*	6*
25 Dec 2015	78	42	4*	2*	2*	108	7*	6*
26 Dec 2015	78	42	4*	2*	2*	61	7*	6*
27 Dec 2015	78	42	4*	2*	2*	61	7*	6*
28 Dec 2015	74	37	5	2	2	66	7	5
29 Dec 2015	74	37	5	2	2	66	7	5
30 Dec 2015	74	37	5	2	2	62	7	5
31 Dec 2015	125	60	6*	2*	2*	94	10*	6*

* Geometric mean calculated using n<5

Table 2.4

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

Date	S4	S5	S6	S8	S9	S10	S11	S12
01 Dec 2015	IC	IC	IC	IC	IC	IC	IC	IC
08 Dec 2015	IC	IC	IC	IC	IC	IC	IC	IC
15 Dec 2015	IC	IC	IC	IC	IC	IC	IC	IC
21 Dec 2015	E	E	IC	IC	IC	E	IC	IC
23 Dec 2015	ns	ns	ns	ns	ns	ns	ns	ns
24 Dec 2015	IC	IC	ns	ns	ns	E	ns	ns
26 Dec 2015	ns	ns	ns	ns	ns	IC	ns	ns
28 Dec 2015	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 Dec 2015	IC	IC	IC	IC	IC	IC	IC	IC
08 Dec 2015	IC	IC	IC	IC	IC	IC	IC	IC
15 Dec 2015	IC	IC	IC	IC	IC	IC	IC	IC
21 Dec 2015	IC	IC	IC	IC	IC	E	IC	IC
23 Dec 2015	ns	ns	ns	ns	ns	ns	ns	ns
24 Dec 2015	ns	ns	ns	ns	ns	E	ns	ns
26 Dec 2015	ns	ns	ns	ns	ns	IC	ns	ns
28 Dec 2015	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 Dec 2015	IC	IC	IC	IC	IC	IC	IC	IC
08 Dec 2015	IC	IC	IC	IC	IC	IC	IC	IC
15 Dec 2015	E	IC	IC	IC	IC	IC	IC	IC
17 Dec 2015	IC	ns	ns	ns	ns	ns	ns	ns
21 Dec 2015	E	E	IC	IC	IC	E	IC	IC
23 Dec 2015	E	E	ns	ns	ns	E	ns	ns
24 Dec 2015	IC	IC	ns	ns	ns	E	ns	ns
26 Dec 2015	ns	ns	ns	ns	ns	IC	ns	ns
28 Dec 2015	IC	IC	IC	IC	IC	E	IC	IC
30 Dec 2015	ns	ns	ns	ns	ns	IC	ns	ns

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 Dec 2015	IC	IC	IC	IC	IC	IC	IC	IC
08 Dec 2015	IC	IC	IC	IC	IC	IC	IC	IC
15 Dec 2015	IC	IC	IC	IC	IC	IC	IC	IC
21 Dec 2015	IC	IC	IC	IC	IC	IC	IC	IC
24 Dec 2015	ns	ns	ns	ns	ns	IC	ns	ns
26 Dec 2015	ns	ns	ns	ns	ns	IC	ns	ns
28 Dec 2015	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 Dec 2015	1105	3600e	180e	1800e	0.050
S0	08 Dec 2015	1150	320e	<2	4e	0.006
S0	15 Dec 2015	950	>16000	360e	1200	0.022
S0	21 Dec 2015	1245	12000	440	4400	0.037
S0	28 Dec 2015	1058	11000	3000e	11000	0.273
S2	01 Dec 2015	1015	<20	8e	6e	0.400
S2	08 Dec 2015	1105	40e	<2	36e	0.050
S2	15 Dec 2015	1210	2600e	140e	96	0.054
S2	21 Dec 2015	1140	280e	<2	6e	0.007
S2	28 Dec 2015	1005	20e	6e	<2	0.300
S3	01 Dec 2015	940	<20	2e	2e	0.100
S3	08 Dec 2015	1035	2e	<2	4e	1.000
S3	15 Dec 2015	1125	1200e	26e	50	0.022
S3	21 Dec 2015	1045	500	4e	8e	0.008
S3	28 Dec 2015	935	86	4e	22e	0.047
S4	01 Dec 2015	842	20e	2e	2e	0.100
S4	08 Dec 2015	930	40e	<2	4e	0.050
S4	15 Dec 2015	951	1600e	120e	110	0.075
S4	17 Dec 2015	1020	ns	ns	82	ns
S4	21 Dec 2015	834	14000	100	400	0.007
S4	23 Dec 2015	1246	ns	ns	13000e	ns
S4	24 Dec 2015	1006	2200e	ns	48	ns
S4	28 Dec 2015	854	1200	24e	52	0.020
S5	01 Dec 2015	951	10e	<2	<2	0.200
S5	08 Dec 2015	1039	<20	2e	12e	0.100
S5	15 Dec 2015	1139	20e	6e	2e	0.300
S5	21 Dec 2015	949	21000e	220e	460	0.010
S5	23 Dec 2015	1339	ns	ns	12000	ns
S5	24 Dec 2015	1043	1000e	ns	22e	ns
S5	28 Dec 2015	1018	160e	12e	16e	0.075
S6	01 Dec 2015	942	<2	<2	<2	1.000
S6	08 Dec 2015	1028	20e	2e	<2	0.100
S6	15 Dec 2015	1151	6e	4e	2e	0.667
S6	21 Dec 2015	936	200e	8e	36e	0.040
S6	28 Dec 2015	1003	40e	10e	12e	0.250
S8	01 Dec 2015	1104	2e	<2	<2	1.000
S8	08 Dec 2015	1200	20e	<2	4e	0.100
S8	15 Dec 2015	1234	<2	<2	<2	1.000
S8	21 Dec 2015	1110	<2	<2	<2	1.000
S8	28 Dec 2015	1059	6e	<2	<2	0.333
S9	01 Dec 2015	1147	<2	<2	<2	1.000
S9	08 Dec 2015	1225	<2	<2	2e	1.000

Station	Date	Time	Total	Fecal	Entero	F:T
S9	15 Dec 2015	1259	<2	<2	2e	1.000
S9	21 Dec 2015	1141	4e	<2	4e	0.500
S9	28 Dec 2015	1131	<2	<2	2e	1.000
S10	01 Dec 2015	848	120e	14e	<2	0.117
S10	08 Dec 2015	936	<20	2e	4e	0.100
S10	15 Dec 2015	959	400	46	68	0.115
S10	21 Dec 2015	842	>16000	700	740	0.044
S10	23 Dec 2015	1251	ns	ns	>12000	ns
S10	24 Dec 2015	1001	11000	800	320e	0.073
S10	26 Dec 2015	935	40	<2	2e	0.050
S10	28 Dec 2015	901	800	96	120e	0.120
S10	30 Dec 2015	939	ns	ns	34e	ns
S11	01 Dec 2015	956	2e	<2	<2	1.000
S11	08 Dec 2015	1032	2e	<2	8e	1.000
S11	15 Dec 2015	1147	2e	<2	4e	1.000
S11	21 Dec 2015	941	2200e	18e	44	0.008
S11	28 Dec 2015	1011	80e	2e	6e	0.025
S12	01 Dec 2015	927	<2	<2	<2	1.000
S12	08 Dec 2015	1017	<20	<2	50	0.100
S12	15 Dec 2015	1118	2e	<2	2e	1.000
S12	21 Dec 2015	918	<20	4e	6e	0.200
S12	28 Dec 2015	951	<2	<2	<2	1.000

ns = not sampled

Comments

Station	Date	Depth	Parameter	Comments
S4	17 Dec 2015			Resample
S10	23 Dec 2015			Resample
S4	23 Dec 2015			Resample
S5	23 Dec 2015			Resample
S10	24 Dec 2015			Resample
S4	24 Dec 2015			Resample
S5	24 Dec 2015			Resample
S10	26 Dec 2015			Resample
S10	30 Dec 2015			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 Dec 2015	Arrive Time	1105
S0	01 Dec 2015	Weather	Sunny
S0	01 Dec 2015	Wind Speed (kts)	5.3
S0	01 Dec 2015	Wind Dir	NW
S0	01 Dec 2015	Animal Life	2 Dogs; >20 Flies; >20 Seagulls
S0	01 Dec 2015	Floatables	None
S0	01 Dec 2015	Water Color	Green
S0	01 Dec 2015	Current Direction	S
S0	01 Dec 2015	Water Temp (C)	16.7
S0	01 Dec 2015	Wave Height Low (ft)	3
S0	01 Dec 2015	High Tide (ft)	4.3
S0	01 Dec 2015	High Tide Time	1222
S0	01 Dec 2015	Low Tide (ft)	2.7
S0	01 Dec 2015	Low Tide Time	651
S0	01 Dec 2015	Comments	Kelp; Water turbid; Flow from stormdrain 1 L/sec
S0	08 Dec 2015	Arrive Time	1150
S0	08 Dec 2015	Weather	Sunny
S0	08 Dec 2015	Wind Speed (kts)	2.8
S0	08 Dec 2015	Wind Dir	NE
S0	08 Dec 2015	Animal Life	5 Shorebirds; 1 Dolphin
S0	08 Dec 2015	Floatables	None
S0	08 Dec 2015	Water Color	Green
S0	08 Dec 2015	Current Direction	S
S0	08 Dec 2015	Water Temp (C)	19
S0	08 Dec 2015	Wave Height Low (ft)	6
S0	08 Dec 2015	High Tide (ft)	5.6
S0	08 Dec 2015	High Tide Time	639
S0	08 Dec 2015	Low Tide (ft)	0
S0	08 Dec 2015	Low Tide Time	1340
S0	08 Dec 2015	Comments	Kelp; Water clear; Flow from stormdrain 0.2 L/sec
S0	15 Dec 2015	Arrive Time	950
S0	15 Dec 2015	Weather	Sunny
S0	15 Dec 2015	Wind Speed (kts)	1.7
S0	15 Dec 2015	Wind Dir	NE
S0	15 Dec 2015	Animal Life	None
S0	15 Dec 2015	Floatables	None
S0	15 Dec 2015	Water Color	Green
S0	15 Dec 2015	Current Direction	NE
S0	15 Dec 2015	Water Temp (C)	16
S0	15 Dec 2015	Wave Height Low (ft)	7
S0	15 Dec 2015	High Tide (ft)	5.2
S0	15 Dec 2015	High Tide Time	1044
S0	15 Dec 2015	Low Tide (ft)	2.2
S0	15 Dec 2015	Low Tide Time	448
S0	15 Dec 2015	Comments	Kelp; Algae; Water clear; Flow from stormdrain 0.5 L/sec
S0	21 Dec 2015	Arrive Time	1245
S0	21 Dec 2015	Weather	Sunny
S0	21 Dec 2015	Wind Speed (kts)	0.1

Station	Date	Parameter	Value
S0	21 Dec 2015	Wind Dir	NE
S0	21 Dec 2015	Animal Life	1 Dog; >10 Seagulls
S0	21 Dec 2015	Floatables	None
S0	21 Dec 2015	Water Color	Green
S0	21 Dec 2015	Current Direction	NE
S0	21 Dec 2015	Water Temp (C)	13.6
S0	21 Dec 2015	Wave Height Low (ft)	3
S0	21 Dec 2015	High Tide (ft)	3.7
S0	21 Dec 2015	High Tide Time	1828
S0	21 Dec 2015	Low Tide (ft)	-0.1
S0	21 Dec 2015	Low Tide Time	1229
S0	21 Dec 2015	Comments	Kelp; 3 Persons; Water clear; Flow from stormdrain 0.5 L/sec
S0	28 Dec 2015	Arrive Time	1058
S0	28 Dec 2015	Weather	Sunny
S0	28 Dec 2015	Wind Speed (kts)	0.1
S0	28 Dec 2015	Wind Dir	NE
S0	28 Dec 2015	Animal Life	5 Shorebirds
S0	28 Dec 2015	Floatables	None
S0	28 Dec 2015	Water Color	Green
S0	28 Dec 2015	Current Direction	N
S0	28 Dec 2015	Water Temp (C)	15
S0	28 Dec 2015	Wave Height Low (ft)	3
S0	28 Dec 2015	High Tide (ft)	5.5
S0	28 Dec 2015	High Tide Time	1013
S0	28 Dec 2015	Low Tide (ft)	-0.4
S0	28 Dec 2015	Low Tide Time	1720
S0	28 Dec 2015	Comments	Kelp; Water clear; No flow from stormdrain
S2	01 Dec 2015	Arrive Time	1015
S2	01 Dec 2015	Weather	Sunny
S2	01 Dec 2015	Wind Speed (kts)	5.6
S2	01 Dec 2015	Wind Dir	NW
S2	01 Dec 2015	Animal Life	3 Dogs; >20 Flies; >20 Seagulls
S2	01 Dec 2015	Floatables	None
S2	01 Dec 2015	Water Color	Green
S2	01 Dec 2015	Current Direction	S
S2	01 Dec 2015	Water Temp (C)	15.2
S2	01 Dec 2015	Wave Height Low (ft)	2
S2	01 Dec 2015	High Tide (ft)	4.3
S2	01 Dec 2015	High Tide Time	1222
S2	01 Dec 2015	Low Tide (ft)	2.7
S2	01 Dec 2015	Low Tide Time	651
S2	01 Dec 2015	Comments	Kelp; Water turbid; No flow from stormdrain
S2	08 Dec 2015	Arrive Time	1105
S2	08 Dec 2015	Weather	Sunny
S2	08 Dec 2015	Wind Speed (kts)	2.6
S2	08 Dec 2015	Wind Dir	NE
S2	08 Dec 2015	Animal Life	5 Shorebirds
S2	08 Dec 2015	Floatables	None
S2	08 Dec 2015	Water Color	Green
S2	08 Dec 2015	Current Direction	S
S2	08 Dec 2015	Water Temp (C)	19
S2	08 Dec 2015	Wave Height Low (ft)	6

Station	Date	Parameter	Value
S2	08 Dec 2015	High Tide (ft)	5.6
S2	08 Dec 2015	High Tide Time	639
S2	08 Dec 2015	Low Tide (ft)	0
S2	08 Dec 2015	Low Tide Time	1340
S2	08 Dec 2015	Comments	Kelp; Water clear; No flow from stormdrain
S2	15 Dec 2015	Arrive Time	1210
S2	15 Dec 2015	Weather	Sunny
S2	15 Dec 2015	Wind Speed (kts)	1.2
S2	15 Dec 2015	Wind Dir	NE
S2	15 Dec 2015	Animal Life	20 Shorebirds; 20 Seagulls
S2	15 Dec 2015	Floatables	None
S2	15 Dec 2015	Water Color	Green
S2	15 Dec 2015	Current Direction	NE
S2	15 Dec 2015	Water Temp (C)	16
S2	15 Dec 2015	Wave Height Low (ft)	6
S2	15 Dec 2015	High Tide (ft)	5.2
S2	15 Dec 2015	High Tide Time	1044
S2	15 Dec 2015	Low Tide (ft)	-0.2
S2	15 Dec 2015	Low Tide Time	1807
S2	15 Dec 2015	Comments	Kelp; Water clear; No flow from stormdrain; Trash on the shore
S2	21 Dec 2015	Arrive Time	1140
S2	21 Dec 2015	Weather	Sunny
S2	21 Dec 2015	Wind Speed (kts)	0.1
S2	21 Dec 2015	Wind Dir	NE
S2	21 Dec 2015	Animal Life	1 Dog; >10 Seagulls
S2	21 Dec 2015	Floatables	None
S2	21 Dec 2015	Water Color	Green
S2	21 Dec 2015	Current Direction	NE
S2	21 Dec 2015	Water Temp (C)	13.5
S2	21 Dec 2015	Wave Height Low (ft)	3
S2	21 Dec 2015	High Tide (ft)	5.9
S2	21 Dec 2015	High Tide Time	523
S2	21 Dec 2015	Low Tide (ft)	-0.1
S2	21 Dec 2015	Low Tide Time	1229
S2	21 Dec 2015	Comments	Kelp; 50 Persons; Water clear; No flow from stormdrain
S2	28 Dec 2015	Arrive Time	1005
S2	28 Dec 2015	Weather	Sunny
S2	28 Dec 2015	Wind Speed (kts)	0.1
S2	28 Dec 2015	Wind Dir	NE
S2	28 Dec 2015	Animal Life	5 Shorebirds; 35 Dolphins
S2	28 Dec 2015	Floatables	None
S2	28 Dec 2015	Water Color	Green
S2	28 Dec 2015	Current Direction	N
S2	28 Dec 2015	Water Temp (C)	10.5
S2	28 Dec 2015	Wave Height Low (ft)	3
S2	28 Dec 2015	High Tide (ft)	5.5
S2	28 Dec 2015	High Tide Time	1013
S2	28 Dec 2015	Low Tide (ft)	1.9
S2	28 Dec 2015	Low Tide Time	419
S2	28 Dec 2015	Comments	Kelp; Water clear; No flow from stormdrain
S3	01 Dec 2015	Arrive Time	940

Station	Date	Parameter	Value
S3	01 Dec 2015	Weather	Sunny
S3	01 Dec 2015	Wind Speed (kts)	3.6
S3	01 Dec 2015	Wind Dir	NW
S3	01 Dec 2015	Animal Life	2 Dogs; >20 Flies; >20 Seagulls
S3	01 Dec 2015	Floatables	None
S3	01 Dec 2015	Water Color	Green
S3	01 Dec 2015	Current Direction	S
S3	01 Dec 2015	Water Temp (C)	16.5
S3	01 Dec 2015	Wave Height Low (ft)	2
S3	01 Dec 2015	High Tide (ft)	4.3
S3	01 Dec 2015	High Tide Time	1222
S3	01 Dec 2015	Low Tide (ft)	2.7
S3	01 Dec 2015	Low Tide Time	651
S3	01 Dec 2015	Comments	Kelp; Water turbid; No flow from stormdrain
S3	08 Dec 2015	Arrive Time	1035
S3	08 Dec 2015	Weather	Sunny
S3	08 Dec 2015	Wind Speed (kts)	1.9
S3	08 Dec 2015	Wind Dir	NE
S3	08 Dec 2015	Animal Life	5 Shorebirds
S3	08 Dec 2015	Floatables	None
S3	08 Dec 2015	Water Color	Green
S3	08 Dec 2015	Current Direction	NE
S3	08 Dec 2015	Water Temp (C)	17.6
S3	08 Dec 2015	Wave Height Low (ft)	7
S3	08 Dec 2015	High Tide (ft)	5.6
S3	08 Dec 2015	High Tide Time	639
S3	08 Dec 2015	Low Tide (ft)	0
S3	08 Dec 2015	Low Tide Time	1340
S3	08 Dec 2015	Comments	Kelp; 2 Persons; Water clear; No flow from stormdrain
S3	15 Dec 2015	Arrive Time	1125
S3	15 Dec 2015	Weather	Sunny
S3	15 Dec 2015	Wind Speed (kts)	2.3
S3	15 Dec 2015	Wind Dir	NE
S3	15 Dec 2015	Animal Life	5 Shorebirds
S3	15 Dec 2015	Floatables	None
S3	15 Dec 2015	Water Color	Green
S3	15 Dec 2015	Current Direction	NE
S3	15 Dec 2015	Water Temp (C)	15.5
S3	15 Dec 2015	Wave Height Low (ft)	7
S3	15 Dec 2015	High Tide (ft)	5.2
S3	15 Dec 2015	High Tide Time	1044
S3	15 Dec 2015	Low Tide (ft)	2.2
S3	15 Dec 2015	Low Tide Time	448
S3	15 Dec 2015	Comments	Kelp; 1 Surfer; Water clear; No flow from stormdrain
S3	21 Dec 2015	Arrive Time	1045
S3	21 Dec 2015	Weather	Sunny
S3	21 Dec 2015	Wind Speed (kts)	0.1
S3	21 Dec 2015	Wind Dir	NE
S3	21 Dec 2015	Animal Life	1 Dog; >10 Seagulls
S3	21 Dec 2015	Floatables	None
S3	21 Dec 2015	Water Color	Green
S3	21 Dec 2015	Current Direction	NE

Station	Date	Parameter	Value
S3	21 Dec 2015	Water Temp (C)	10.5
S3	21 Dec 2015	Wave Height Low (ft)	3
S3	21 Dec 2015	High Tide (ft)	5.9
S3	21 Dec 2015	High Tide Time	523
S3	21 Dec 2015	Low Tide (ft)	-0.1
S3	21 Dec 2015	Low Tide Time	1229
S3	21 Dec 2015	Comments	Kelp; 7 Persons; Water clear; No flow from stormdrain
S3	28 Dec 2015	Arrive Time	935
S3	28 Dec 2015	Weather	Sunny
S3	28 Dec 2015	Wind Speed (kts)	0.1
S3	28 Dec 2015	Wind Dir	NE
S3	28 Dec 2015	Animal Life	5 Shorebirds
S3	28 Dec 2015	Floatables	None
S3	28 Dec 2015	Water Color	Green
S3	28 Dec 2015	Current Direction	N
S3	28 Dec 2015	Water Temp (C)	10.6
S3	28 Dec 2015	Wave Height Low (ft)	3
S3	28 Dec 2015	High Tide (ft)	5.5
S3	28 Dec 2015	High Tide Time	1013
S3	28 Dec 2015	Low Tide (ft)	1.9
S3	28 Dec 2015	Low Tide Time	419
S3	28 Dec 2015	Comments	Kelp; Water clear; No flow from stormdrain
S4	01 Dec 2015	Arrive Time	842
S4	01 Dec 2015	Weather	Sunny
S4	01 Dec 2015	Wind Speed (kts)	3.3
S4	01 Dec 2015	Wind Dir	W
S4	01 Dec 2015	Animal Life	None
S4	01 Dec 2015	Floatables	None
S4	01 Dec 2015	Water Color	Green
S4	01 Dec 2015	Current Direction	S
S4	01 Dec 2015	Water Temp (C)	16.4
S4	01 Dec 2015	Wave Height Low (ft)	2
S4	01 Dec 2015	High Tide (ft)	4.3
S4	01 Dec 2015	High Tide Time	1222
S4	01 Dec 2015	Low Tide (ft)	2.7
S4	01 Dec 2015	Low Tide Time	651
S4	01 Dec 2015	Comments	Kelp; Seagrass; Water clear
S4	08 Dec 2015	Arrive Time	930
S4	08 Dec 2015	Weather	Sunny
S4	08 Dec 2015	Wind Speed (kts)	3.6
S4	08 Dec 2015	Wind Dir	NW
S4	08 Dec 2015	Animal Life	None
S4	08 Dec 2015	Floatables	None
S4	08 Dec 2015	Water Color	Green
S4	08 Dec 2015	Current Direction	S
S4	08 Dec 2015	Water Temp (C)	17.6
S4	08 Dec 2015	Wave Height Low (ft)	3
S4	08 Dec 2015	High Tide (ft)	5.6
S4	08 Dec 2015	High Tide Time	639
S4	08 Dec 2015	Low Tide (ft)	0
S4	08 Dec 2015	Low Tide Time	1340
S4	08 Dec 2015	Comments	Kelp; Seagrass; Water clear

Station	Date	Parameter	Value
S4	15 Dec 2015	Arrive Time	951
S4	15 Dec 2015	Weather	Sunny
S4	15 Dec 2015	Wind Speed (kts)	6.6
S4	15 Dec 2015	Wind Dir	E
S4	15 Dec 2015	Animal Life	None
S4	15 Dec 2015	Floatables	None
S4	15 Dec 2015	Water Color	Green
S4	15 Dec 2015	Current Direction	S
S4	15 Dec 2015	Water Temp (C)	15.8
S4	15 Dec 2015	Wave Height Low (ft)	4
S4	15 Dec 2015	High Tide (ft)	5.2
S4	15 Dec 2015	High Tide Time	1044
S4	15 Dec 2015	Low Tide (ft)	2.2
S4	15 Dec 2015	Low Tide Time	448
S4	15 Dec 2015	Comments	Kelp; Water clear
S4	17 Dec 2015	Arrive Time	1020
S4	17 Dec 2015	Weather	Sunny
S4	17 Dec 2015	Wind Speed (kts)	5.6
S4	17 Dec 2015	Wind Dir	NW
S4	17 Dec 2015	Animal Life	None
S4	17 Dec 2015	Floatables	None
S4	17 Dec 2015	Water Color	Green
S4	17 Dec 2015	Current Direction	S
S4	17 Dec 2015	Water Temp (C)	14.6
S4	17 Dec 2015	Wave Height Low (ft)	4
S4	17 Dec 2015	High Tide (ft)	4.1
S4	17 Dec 2015	High Tide Time	1253
S4	17 Dec 2015	Low Tide (ft)	2.3
S4	17 Dec 2015	Low Tide Time	724
S4	17 Dec 2015	Comments	Seagrass; Water clear
S4	21 Dec 2015	Arrive Time	834
S4	21 Dec 2015	Weather	Sunny
S4	21 Dec 2015	Wind Speed (kts)	5.2
S4	21 Dec 2015	Wind Dir	E
S4	21 Dec 2015	Animal Life	None
S4	21 Dec 2015	Floatables	None
S4	21 Dec 2015	Water Color	Green
S4	21 Dec 2015	Current Direction	S
S4	21 Dec 2015	Water Temp (C)	14.8
S4	21 Dec 2015	Wave Height Low (ft)	3
S4	21 Dec 2015	High Tide (ft)	5.9
S4	21 Dec 2015	High Tide Time	523
S4	21 Dec 2015	Low Tide (ft)	-0.1
S4	21 Dec 2015	Low Tide Time	1229
S4	21 Dec 2015	Comments	Kelp; Seagrass; Water clear
S4	23 Dec 2015	Arrive Time	1246
S4	23 Dec 2015	Weather	Cloudy
S4	23 Dec 2015	Wind Speed (kts)	8.1
S4	23 Dec 2015	Wind Dir	SW
S4	23 Dec 2015	Animal Life	None
S4	23 Dec 2015	Floatables	None

Station	Date	Parameter	Value
S4	23 Dec 2015	Water Color	Green
S4	23 Dec 2015	Current Direction	SW
S4	23 Dec 2015	Water Temp (C)	17.8
S4	23 Dec 2015	Wave Height Low (ft)	4
S4	23 Dec 2015	High Tide (ft)	6.5
S4	23 Dec 2015	High Tide Time	651
S4	23 Dec 2015	Low Tide (ft)	-1.1
S4	23 Dec 2015	Low Tide Time	1401
S4	23 Dec 2015	Comments	Kelp; Seagrass; Water clear
S4	24 Dec 2015	Arrive Time	1006
S4	24 Dec 2015	Weather	Partly Cloudy
S4	24 Dec 2015	Wind Speed (kts)	5.6
S4	24 Dec 2015	Wind Dir	SW
S4	24 Dec 2015	Animal Life	None
S4	24 Dec 2015	Floatables	None
S4	24 Dec 2015	Water Color	Green
S4	24 Dec 2015	Current Direction	SW
S4	24 Dec 2015	Water Temp (C)	16.8
S4	24 Dec 2015	Wave Height Low (ft)	4
S4	24 Dec 2015	High Tide (ft)	6.6
S4	24 Dec 2015	High Tide Time	733
S4	24 Dec 2015	Low Tide (ft)	-1.3
S4	24 Dec 2015	Low Tide Time	1443
S4	24 Dec 2015	Comments	Kelp; Seagrass; Water clear
S4	28 Dec 2015	Arrive Time	854
S4	28 Dec 2015	Weather	Partly Cloudy
S4	28 Dec 2015	Wind Speed (kts)	1.1
S4	28 Dec 2015	Wind Dir	E
S4	28 Dec 2015	Animal Life	None
S4	28 Dec 2015	Floatables	None
S4	28 Dec 2015	Water Color	Green
S4	28 Dec 2015	Current Direction	S
S4	28 Dec 2015	Water Temp (C)	13.8
S4	28 Dec 2015	Wave Height Low (ft)	2
S4	28 Dec 2015	High Tide (ft)	5.5
S4	28 Dec 2015	High Tide Time	1013
S4	28 Dec 2015	Low Tide (ft)	1.9
S4	28 Dec 2015	Low Tide Time	419
S4	28 Dec 2015	Comments	Kelp; Seagrass; Water clear
S5	01 Dec 2015	Arrive Time	951
S5	01 Dec 2015	Weather	Sunny
S5	01 Dec 2015	Wind Speed (kts)	0
S5	01 Dec 2015	Wind Dir	
S5	01 Dec 2015	Animal Life	None
S5	01 Dec 2015	Floatables	None
S5	01 Dec 2015	Water Color	Green
S5	01 Dec 2015	Current Direction	S
S5	01 Dec 2015	Water Temp (C)	17.8
S5	01 Dec 2015	Wave Height Low (ft)	2
S5	01 Dec 2015	High Tide (ft)	4.3
S5	01 Dec 2015	High Tide Time	1222
S5	01 Dec 2015	Low Tide (ft)	2.7

Station	Date	Parameter	Value
S5	01 Dec 2015	Low Tide Time	651
S5	01 Dec 2015	Comments	Kelp; Seagrass; Water clear
S5	08 Dec 2015	Arrive Time	1039
S5	08 Dec 2015	Weather	Sunny
S5	08 Dec 2015	Wind Speed (kts)	4.4
S5	08 Dec 2015	Wind Dir	NW
S5	08 Dec 2015	Animal Life	None
S5	08 Dec 2015	Floatables	None
S5	08 Dec 2015	Water Color	Green
S5	08 Dec 2015	Current Direction	S
S5	08 Dec 2015	Water Temp (C)	19
S5	08 Dec 2015	Wave Height Low (ft)	3
S5	08 Dec 2015	High Tide (ft)	5.6
S5	08 Dec 2015	High Tide Time	639
S5	08 Dec 2015	Low Tide (ft)	0
S5	08 Dec 2015	Low Tide Time	1340
S5	08 Dec 2015	Comments	Seagrass; Water clear
S5	15 Dec 2015	Arrive Time	1139
S5	15 Dec 2015	Weather	Sunny
S5	15 Dec 2015	Wind Speed (kts)	5.5
S5	15 Dec 2015	Wind Dir	W
S5	15 Dec 2015	Animal Life	None
S5	15 Dec 2015	Floatables	None
S5	15 Dec 2015	Water Color	Green
S5	15 Dec 2015	Current Direction	S
S5	15 Dec 2015	Water Temp (C)	16
S5	15 Dec 2015	Wave Height Low (ft)	3
S5	15 Dec 2015	High Tide (ft)	5.2
S5	15 Dec 2015	High Tide Time	1044
S5	15 Dec 2015	Low Tide (ft)	-0.2
S5	15 Dec 2015	Low Tide Time	1807
S5	15 Dec 2015	Comments	Kelp; Seagrass; Water clear
S5	21 Dec 2015	Arrive Time	949
S5	21 Dec 2015	Weather	Sunny
S5	21 Dec 2015	Wind Speed (kts)	5.2
S5	21 Dec 2015	Wind Dir	NE
S5	21 Dec 2015	Animal Life	None
S5	21 Dec 2015	Floatables	None
S5	21 Dec 2015	Water Color	Green
S5	21 Dec 2015	Current Direction	W
S5	21 Dec 2015	Water Temp (C)	16
S5	21 Dec 2015	Wave Height Low (ft)	2
S5	21 Dec 2015	High Tide (ft)	5.9
S5	21 Dec 2015	High Tide Time	523
S5	21 Dec 2015	Low Tide (ft)	-0.1
S5	21 Dec 2015	Low Tide Time	1229
S5	21 Dec 2015	Comments	Kelp; Seagrass; Debris; Water clear
S5	23 Dec 2015	Arrive Time	1339
S5	23 Dec 2015	Weather	Partly Cloudy
S5	23 Dec 2015	Wind Speed (kts)	5.8
S5	23 Dec 2015	Wind Dir	SW

Station	Date	Parameter	Value
S5	23 Dec 2015	Animal Life	None
S5	23 Dec 2015	Floatables	None
S5	23 Dec 2015	Water Color	Green
S5	23 Dec 2015	Current Direction	SW
S5	23 Dec 2015	Water Temp (C)	16.6
S5	23 Dec 2015	Wave Height Low (ft)	3
S5	23 Dec 2015	High Tide (ft)	4.1
S5	23 Dec 2015	High Tide Time	2013
S5	23 Dec 2015	Low Tide (ft)	-1.1
S5	23 Dec 2015	Low Tide Time	1401
S5	23 Dec 2015	Comments	Kelp; Seagrass; Water clear
S5	24 Dec 2015	Arrive Time	1043
S5	24 Dec 2015	Weather	Partly Cloudy
S5	24 Dec 2015	Wind Speed (kts)	4.6
S5	24 Dec 2015	Wind Dir	SW
S5	24 Dec 2015	Animal Life	None
S5	24 Dec 2015	Floatables	None
S5	24 Dec 2015	Water Color	Green
S5	24 Dec 2015	Current Direction	SW
S5	24 Dec 2015	Water Temp (C)	17.4
S5	24 Dec 2015	Wave Height Low (ft)	3
S5	24 Dec 2015	High Tide (ft)	6.6
S5	24 Dec 2015	High Tide Time	733
S5	24 Dec 2015	Low Tide (ft)	-1.3
S5	24 Dec 2015	Low Tide Time	1443
S5	24 Dec 2015	Comments	Kelp; Seagrass; Water clear
S5	28 Dec 2015	Arrive Time	1018
S5	28 Dec 2015	Weather	Partly Cloudy
S5	28 Dec 2015	Wind Speed (kts)	6
S5	28 Dec 2015	Wind Dir	E
S5	28 Dec 2015	Animal Life	None
S5	28 Dec 2015	Floatables	None
S5	28 Dec 2015	Water Color	Green
S5	28 Dec 2015	Current Direction	S
S5	28 Dec 2015	Water Temp (C)	14
S5	28 Dec 2015	Wave Height Low (ft)	3
S5	28 Dec 2015	High Tide (ft)	5.5
S5	28 Dec 2015	High Tide Time	1013
S5	28 Dec 2015	Low Tide (ft)	1.9
S5	28 Dec 2015	Low Tide Time	419
S5	28 Dec 2015	Comments	Kelp; Seagrass; Water clear
S6	01 Dec 2015	Arrive Time	942
S6	01 Dec 2015	Weather	Sunny
S6	01 Dec 2015	Wind Speed (kts)	0
S6	01 Dec 2015	Wind Dir	
S6	01 Dec 2015	Animal Life	None
S6	01 Dec 2015	Floatables	None
S6	01 Dec 2015	Water Color	Green
S6	01 Dec 2015	Current Direction	S
S6	01 Dec 2015	Water Temp (C)	17.4
S6	01 Dec 2015	Wave Height Low (ft)	3
S6	01 Dec 2015	High Tide (ft)	4.3

Station	Date	Parameter	Value
S6	01 Dec 2015	High Tide Time	1222
S6	01 Dec 2015	Low Tide (ft)	2.7
S6	01 Dec 2015	Low Tide Time	651
S6	01 Dec 2015	Comments	Kelp; Seagrass; Water clear
S6	08 Dec 2015	Arrive Time	1028
S6	08 Dec 2015	Weather	Sunny
S6	08 Dec 2015	Wind Speed (kts)	2.7
S6	08 Dec 2015	Wind Dir	NW
S6	08 Dec 2015	Animal Life	None
S6	08 Dec 2015	Floatables	None
S6	08 Dec 2015	Water Color	Green
S6	08 Dec 2015	Current Direction	S
S6	08 Dec 2015	Water Temp (C)	18.8
S6	08 Dec 2015	Wave Height Low (ft)	5
S6	08 Dec 2015	High Tide (ft)	5.6
S6	08 Dec 2015	High Tide Time	639
S6	08 Dec 2015	Low Tide (ft)	0
S6	08 Dec 2015	Low Tide Time	1340
S6	08 Dec 2015	Comments	Seagrass; Water clear
S6	15 Dec 2015	Arrive Time	1151
S6	15 Dec 2015	Weather	Sunny
S6	15 Dec 2015	Wind Speed (kts)	6
S6	15 Dec 2015	Wind Dir	W
S6	15 Dec 2015	Animal Life	None
S6	15 Dec 2015	Floatables	None
S6	15 Dec 2015	Water Color	Green
S6	15 Dec 2015	Current Direction	S
S6	15 Dec 2015	Water Temp (C)	16.2
S6	15 Dec 2015	Wave Height Low (ft)	4
S6	15 Dec 2015	High Tide (ft)	5.2
S6	15 Dec 2015	High Tide Time	1044
S6	15 Dec 2015	Low Tide (ft)	-0.2
S6	15 Dec 2015	Low Tide Time	1807
S6	15 Dec 2015	Comments	Kelp; Water clear
S6	21 Dec 2015	Arrive Time	936
S6	21 Dec 2015	Weather	Sunny
S6	21 Dec 2015	Wind Speed (kts)	3
S6	21 Dec 2015	Wind Dir	E
S6	21 Dec 2015	Animal Life	None
S6	21 Dec 2015	Floatables	None
S6	21 Dec 2015	Water Color	Green
S6	21 Dec 2015	Current Direction	S
S6	21 Dec 2015	Water Temp (C)	16.2
S6	21 Dec 2015	Wave Height Low (ft)	3
S6	21 Dec 2015	High Tide (ft)	5.9
S6	21 Dec 2015	High Tide Time	523
S6	21 Dec 2015	Low Tide (ft)	-0.1
S6	21 Dec 2015	Low Tide Time	1229
S6	21 Dec 2015	Comments	Kelp; Seagrass; 3 Persons; 2 Surfers; Water clear
S6	28 Dec 2015	Arrive Time	1003
S6	28 Dec 2015	Weather	Partly Cloudy

Station	Date	Parameter	Value
S6	28 Dec 2015	Wind Speed (kts)	5.6
S6	28 Dec 2015	Wind Dir	E
S6	28 Dec 2015	Animal Life	None
S6	28 Dec 2015	Floatables	None
S6	28 Dec 2015	Water Color	Green
S6	28 Dec 2015	Current Direction	S
S6	28 Dec 2015	Water Temp (C)	14.1
S6	28 Dec 2015	Wave Height Low (ft)	3
S6	28 Dec 2015	High Tide (ft)	5.5
S6	28 Dec 2015	High Tide Time	1013
S6	28 Dec 2015	Low Tide (ft)	1.9
S6	28 Dec 2015	Low Tide Time	419
S6	28 Dec 2015	Comments	Kelp; Seagrass; Water clear
S8	01 Dec 2015	Arrive Time	1104
S8	01 Dec 2015	Weather	Sunny
S8	01 Dec 2015	Wind Speed (kts)	2.8
S8	01 Dec 2015	Wind Dir	W
S8	01 Dec 2015	Animal Life	None
S8	01 Dec 2015	Floatables	None
S8	01 Dec 2015	Water Color	Green
S8	01 Dec 2015	Current Direction	S
S8	01 Dec 2015	Water Temp (C)	16.8
S8	01 Dec 2015	Wave Height Low (ft)	2
S8	01 Dec 2015	High Tide (ft)	4.3
S8	01 Dec 2015	High Tide Time	1222
S8	01 Dec 2015	Low Tide (ft)	2.7
S8	01 Dec 2015	Low Tide Time	651
S8	01 Dec 2015	Comments	Kelp; Seagrass; Water clear
S8	08 Dec 2015	Arrive Time	1200
S8	08 Dec 2015	Weather	Sunny
S8	08 Dec 2015	Wind Speed (kts)	5
S8	08 Dec 2015	Wind Dir	W
S8	08 Dec 2015	Animal Life	None
S8	08 Dec 2015	Floatables	None
S8	08 Dec 2015	Water Color	Green
S8	08 Dec 2015	Current Direction	S
S8	08 Dec 2015	Water Temp (C)	18.2
S8	08 Dec 2015	Wave Height Low (ft)	4
S8	08 Dec 2015	High Tide (ft)	5.6
S8	08 Dec 2015	High Tide Time	639
S8	08 Dec 2015	Low Tide (ft)	0
S8	08 Dec 2015	Low Tide Time	1340
S8	08 Dec 2015	Comments	Kelp; Seagrass; Water clear
S8	15 Dec 2015	Arrive Time	1234
S8	15 Dec 2015	Weather	Sunny
S8	15 Dec 2015	Wind Speed (kts)	3.6
S8	15 Dec 2015	Wind Dir	W
S8	15 Dec 2015	Animal Life	None
S8	15 Dec 2015	Floatables	Boat washed ashore
S8	15 Dec 2015	Water Color	Green
S8	15 Dec 2015	Current Direction	S
S8	15 Dec 2015	Water Temp (C)	16

Station	Date	Parameter	Value
S8	15 Dec 2015	Wave Height Low (ft)	4
S8	15 Dec 2015	High Tide (ft)	5.2
S8	15 Dec 2015	High Tide Time	1044
S8	15 Dec 2015	Low Tide (ft)	-0.2
S8	15 Dec 2015	Low Tide Time	1807
S8	15 Dec 2015	Comments	Kelp; Water clear
S8	21 Dec 2015	Arrive Time	1110
S8	21 Dec 2015	Weather	Sunny
S8	21 Dec 2015	Wind Speed (kts)	4
S8	21 Dec 2015	Wind Dir	NW
S8	21 Dec 2015	Animal Life	None
S8	21 Dec 2015	Floatables	None
S8	21 Dec 2015	Water Color	Green
S8	21 Dec 2015	Current Direction	S
S8	21 Dec 2015	Water Temp (C)	17
S8	21 Dec 2015	Wave Height Low (ft)	2
S8	21 Dec 2015	High Tide (ft)	5.9
S8	21 Dec 2015	High Tide Time	523
S8	21 Dec 2015	Low Tide (ft)	-0.1
S8	21 Dec 2015	Low Tide Time	1229
S8	21 Dec 2015	Comments	Kelp; Seagrass; 5 Persons; Water clear
S8	28 Dec 2015	Arrive Time	1059
S8	28 Dec 2015	Weather	Partly Cloudy
S8	28 Dec 2015	Wind Speed (kts)	0.5
S8	28 Dec 2015	Wind Dir	E
S8	28 Dec 2015	Animal Life	None
S8	28 Dec 2015	Floatables	None
S8	28 Dec 2015	Water Color	Green
S8	28 Dec 2015	Current Direction	S
S8	28 Dec 2015	Water Temp (C)	15
S8	28 Dec 2015	Wave Height Low (ft)	1
S8	28 Dec 2015	High Tide (ft)	5.5
S8	28 Dec 2015	High Tide Time	1013
S8	28 Dec 2015	Low Tide (ft)	-0.4
S8	28 Dec 2015	Low Tide Time	1720
S8	28 Dec 2015	Comments	Kelp; Seagrass; Water clear
S9	01 Dec 2015	Arrive Time	1147
S9	01 Dec 2015	Weather	Sunny
S9	01 Dec 2015	Wind Speed (kts)	5.8
S9	01 Dec 2015	Wind Dir	W
S9	01 Dec 2015	Animal Life	None
S9	01 Dec 2015	Floatables	None
S9	01 Dec 2015	Water Color	Green
S9	01 Dec 2015	Current Direction	S
S9	01 Dec 2015	Water Temp (C)	16.2
S9	01 Dec 2015	Wave Height Low (ft)	2
S9	01 Dec 2015	High Tide (ft)	4.3
S9	01 Dec 2015	High Tide Time	1222
S9	01 Dec 2015	Low Tide (ft)	2.7
S9	01 Dec 2015	Low Tide Time	651
S9	01 Dec 2015	Comments	Kelp; Seagrass; Water clear

Station	Date	Parameter	Value
S9	08 Dec 2015	Arrive Time	1225
S9	08 Dec 2015	Weather	Sunny
S9	08 Dec 2015	Wind Speed (kts)	2.9
S9	08 Dec 2015	Wind Dir	W
S9	08 Dec 2015	Animal Life	None
S9	08 Dec 2015	Floatables	None
S9	08 Dec 2015	Water Color	Green
S9	08 Dec 2015	Current Direction	S
S9	08 Dec 2015	Water Temp (C)	19.8
S9	08 Dec 2015	Wave Height Low (ft)	3
S9	08 Dec 2015	High Tide (ft)	5.6
S9	08 Dec 2015	High Tide Time	639
S9	08 Dec 2015	Low Tide (ft)	0
S9	08 Dec 2015	Low Tide Time	1340
S9	08 Dec 2015	Comments	Seagrass; 7 Persons; Water clear
S9	15 Dec 2015	Arrive Time	1259
S9	15 Dec 2015	Weather	Sunny
S9	15 Dec 2015	Wind Speed (kts)	2.9
S9	15 Dec 2015	Wind Dir	W
S9	15 Dec 2015	Animal Life	None
S9	15 Dec 2015	Floatables	None
S9	15 Dec 2015	Water Color	Green
S9	15 Dec 2015	Current Direction	S
S9	15 Dec 2015	Water Temp (C)	16.2
S9	15 Dec 2015	Wave Height Low (ft)	3
S9	15 Dec 2015	High Tide (ft)	5.2
S9	15 Dec 2015	High Tide Time	1044
S9	15 Dec 2015	Low Tide (ft)	-0.2
S9	15 Dec 2015	Low Tide Time	1807
S9	15 Dec 2015	Comments	Seagrass; Water clear
S9	21 Dec 2015	Arrive Time	1141
S9	21 Dec 2015	Weather	Sunny
S9	21 Dec 2015	Wind Speed (kts)	8.3
S9	21 Dec 2015	Wind Dir	NE
S9	21 Dec 2015	Animal Life	None
S9	21 Dec 2015	Floatables	None
S9	21 Dec 2015	Water Color	Green
S9	21 Dec 2015	Current Direction	S
S9	21 Dec 2015	Water Temp (C)	17
S9	21 Dec 2015	Wave Height Low (ft)	2
S9	21 Dec 2015	High Tide (ft)	5.9
S9	21 Dec 2015	High Tide Time	523
S9	21 Dec 2015	Low Tide (ft)	-0.1
S9	21 Dec 2015	Low Tide Time	1229
S9	21 Dec 2015	Comments	Kelp; Seagrass; 7 Persons; Water clear
S9	28 Dec 2015	Arrive Time	1131
S9	28 Dec 2015	Weather	Partly Cloudy
S9	28 Dec 2015	Wind Speed (kts)	1.9
S9	28 Dec 2015	Wind Dir	SW
S9	28 Dec 2015	Animal Life	None
S9	28 Dec 2015	Floatables	None
S9	28 Dec 2015	Water Color	Green

Station	Date	Parameter	Value
S9	28 Dec 2015	Current Direction	SW
S9	28 Dec 2015	Water Temp (C)	16.6
S9	28 Dec 2015	Wave Height Low (ft)	1
S9	28 Dec 2015	High Tide (ft)	5.5
S9	28 Dec 2015	High Tide Time	1013
S9	28 Dec 2015	Low Tide (ft)	-0.4
S9	28 Dec 2015	Low Tide Time	1720
S9	28 Dec 2015	Comments	Kelp; Seagrass; Water clear
S10	01 Dec 2015	Arrive Time	848
S10	01 Dec 2015	Weather	Sunny
S10	01 Dec 2015	Wind Speed (kts)	1.1
S10	01 Dec 2015	Wind Dir	W
S10	01 Dec 2015	Animal Life	None
S10	01 Dec 2015	Floatables	None
S10	01 Dec 2015	Water Color	Green
S10	01 Dec 2015	Current Direction	S
S10	01 Dec 2015	Water Temp (C)	16.8
S10	01 Dec 2015	Wave Height Low (ft)	3
S10	01 Dec 2015	High Tide (ft)	4.3
S10	01 Dec 2015	High Tide Time	1222
S10	01 Dec 2015	Low Tide (ft)	2.7
S10	01 Dec 2015	Low Tide Time	651
S10	01 Dec 2015	Comments	Kelp; Seagrass; Water clear
S10	08 Dec 2015	Arrive Time	936
S10	08 Dec 2015	Weather	Sunny
S10	08 Dec 2015	Wind Speed (kts)	4.2
S10	08 Dec 2015	Wind Dir	NW
S10	08 Dec 2015	Animal Life	None
S10	08 Dec 2015	Floatables	None
S10	08 Dec 2015	Water Color	Green
S10	08 Dec 2015	Current Direction	S
S10	08 Dec 2015	Water Temp (C)	17.4
S10	08 Dec 2015	Wave Height Low (ft)	3
S10	08 Dec 2015	High Tide (ft)	5.6
S10	08 Dec 2015	High Tide Time	639
S10	08 Dec 2015	Low Tide (ft)	0
S10	08 Dec 2015	Low Tide Time	1340
S10	08 Dec 2015	Comments	Kelp; Seagrass; Water clear
S10	15 Dec 2015	Arrive Time	959
S10	15 Dec 2015	Weather	Sunny
S10	15 Dec 2015	Wind Speed (kts)	5.6
S10	15 Dec 2015	Wind Dir	E
S10	15 Dec 2015	Animal Life	None
S10	15 Dec 2015	Floatables	None
S10	15 Dec 2015	Water Color	Green
S10	15 Dec 2015	Current Direction	S
S10	15 Dec 2015	Water Temp (C)	15.2
S10	15 Dec 2015	Wave Height Low (ft)	4
S10	15 Dec 2015	High Tide (ft)	5.2
S10	15 Dec 2015	High Tide Time	1044
S10	15 Dec 2015	Low Tide (ft)	2.2
S10	15 Dec 2015	Low Tide Time	448

Station	Date	Parameter	Value
S10	15 Dec 2015	Comments	Kelp; Water clear
S10	21 Dec 2015	Arrive Time	842
S10	21 Dec 2015	Weather	Sunny
S10	21 Dec 2015	Wind Speed (kts)	5
S10	21 Dec 2015	Wind Dir	E
S10	21 Dec 2015	Animal Life	None
S10	21 Dec 2015	Floatables	None
S10	21 Dec 2015	Water Color	Green
S10	21 Dec 2015	Current Direction	S
S10	21 Dec 2015	Water Temp (C)	15.4
S10	21 Dec 2015	Wave Height Low (ft)	3
S10	21 Dec 2015	High Tide (ft)	5.9
S10	21 Dec 2015	High Tide Time	523
S10	21 Dec 2015	Low Tide (ft)	-0.1
S10	21 Dec 2015	Low Tide Time	1229
S10	21 Dec 2015	Comments	Kelp; Seagrass; Water clear
S10	23 Dec 2015	Arrive Time	1251
S10	23 Dec 2015	Weather	Cloudy
S10	23 Dec 2015	Wind Speed (kts)	8.3
S10	23 Dec 2015	Wind Dir	SW
S10	23 Dec 2015	Animal Life	None
S10	23 Dec 2015	Floatables	None
S10	23 Dec 2015	Water Color	Green
S10	23 Dec 2015	Current Direction	SW
S10	23 Dec 2015	Water Temp (C)	16.2
S10	23 Dec 2015	Wave Height Low (ft)	3
S10	23 Dec 2015	High Tide (ft)	6.5
S10	23 Dec 2015	High Tide Time	651
S10	23 Dec 2015	Low Tide (ft)	-1.1
S10	23 Dec 2015	Low Tide Time	1401
S10	23 Dec 2015	Comments	Seagrass; Water clear
S10	24 Dec 2015	Arrive Time	1001
S10	24 Dec 2015	Weather	Partly Cloudy
S10	24 Dec 2015	Wind Speed (kts)	5.8
S10	24 Dec 2015	Wind Dir	SW
S10	24 Dec 2015	Animal Life	None
S10	24 Dec 2015	Floatables	None
S10	24 Dec 2015	Water Color	Green
S10	24 Dec 2015	Current Direction	SW
S10	24 Dec 2015	Water Temp (C)	16.6
S10	24 Dec 2015	Wave Height Low (ft)	4
S10	24 Dec 2015	High Tide (ft)	6.6
S10	24 Dec 2015	High Tide Time	733
S10	24 Dec 2015	Low Tide (ft)	-1.3
S10	24 Dec 2015	Low Tide Time	1443
S10	24 Dec 2015	Comments	Kelp; Seagrass; Water turbid
S10	26 Dec 2015	Arrive Time	935
S10	26 Dec 2015	Weather	Sunny
S10	26 Dec 2015	Wind Speed (kts)	8.5
S10	26 Dec 2015	Wind Dir	NW
S10	26 Dec 2015	Animal Life	1 Shorebird

Station	Date	Parameter	Value
S10	26 Dec 2015	Floatables	None
S10	26 Dec 2015	Water Color	Blue
S10	26 Dec 2015	Current Direction	NW
S10	26 Dec 2015	Water Temp (C)	15
S10	26 Dec 2015	Wave Height Low (ft)	5
S10	26 Dec 2015	High Tide (ft)	6.3
S10	26 Dec 2015	High Tide Time	854
S10	26 Dec 2015	Low Tide (ft)	-1.1
S10	26 Dec 2015	Low Tide Time	1603
S10	26 Dec 2015	Comments	Kelp; Seagrass; 2 Joggers; 1 Person; Water clear
S10	28 Dec 2015	Arrive Time	901
S10	28 Dec 2015	Weather	Partly Cloudy
S10	28 Dec 2015	Wind Speed (kts)	6.3
S10	28 Dec 2015	Wind Dir	E
S10	28 Dec 2015	Animal Life	None
S10	28 Dec 2015	Floatables	None
S10	28 Dec 2015	Water Color	Green
S10	28 Dec 2015	Current Direction	S
S10	28 Dec 2015	Water Temp (C)	14.2
S10	28 Dec 2015	Wave Height Low (ft)	3
S10	28 Dec 2015	High Tide (ft)	5.5
S10	28 Dec 2015	High Tide Time	1013
S10	28 Dec 2015	Low Tide (ft)	1.9
S10	28 Dec 2015	Low Tide Time	419
S10	28 Dec 2015	Comments	Kelp; Seagrass; Water clear
S10	30 Dec 2015	Arrive Time	939
S10	30 Dec 2015	Weather	Sunny
S10	30 Dec 2015	Wind Speed (kts)	5.4
S10	30 Dec 2015	Wind Dir	E
S10	30 Dec 2015	Animal Life	None
S10	30 Dec 2015	Floatables	None
S10	30 Dec 2015	Water Color	Green
S10	30 Dec 2015	Current Direction	S
S10	30 Dec 2015	Water Temp (C)	14.2
S10	30 Dec 2015	Wave Height Low (ft)	3
S10	30 Dec 2015	High Tide (ft)	4.3
S10	30 Dec 2015	High Tide Time	1137
S10	30 Dec 2015	Low Tide (ft)	2.3
S10	30 Dec 2015	Low Tide Time	604
S10	30 Dec 2015	Comments	Kelp; Seagrass; Water clear
S11	01 Dec 2015	Arrive Time	956
S11	01 Dec 2015	Weather	Sunny
S11	01 Dec 2015	Wind Speed (kts)	4.4
S11	01 Dec 2015	Wind Dir	W
S11	01 Dec 2015	Animal Life	None
S11	01 Dec 2015	Floatables	None
S11	01 Dec 2015	Water Color	Green
S11	01 Dec 2015	Current Direction	S
S11	01 Dec 2015	Water Temp (C)	18.4
S11	01 Dec 2015	Wave Height Low (ft)	4
S11	01 Dec 2015	High Tide (ft)	4.3
S11	01 Dec 2015	High Tide Time	1222

Station	Date	Parameter	Value
S11	01 Dec 2015	Low Tide (ft)	2.7
S11	01 Dec 2015	Low Tide Time	651
S11	01 Dec 2015	Comments	Kelp; Seagrass; 8 Surfers; Water clear
S11	08 Dec 2015	Arrive Time	1032
S11	08 Dec 2015	Weather	Sunny
S11	08 Dec 2015	Wind Speed (kts)	3.6
S11	08 Dec 2015	Wind Dir	NW
S11	08 Dec 2015	Animal Life	None
S11	08 Dec 2015	Floatables	None
S11	08 Dec 2015	Water Color	Green
S11	08 Dec 2015	Current Direction	S
S11	08 Dec 2015	Water Temp (C)	18.4
S11	08 Dec 2015	Wave Height Low (ft)	5
S11	08 Dec 2015	High Tide (ft)	5.6
S11	08 Dec 2015	High Tide Time	639
S11	08 Dec 2015	Low Tide (ft)	0
S11	08 Dec 2015	Low Tide Time	1340
S11	08 Dec 2015	Comments	Seagrass; Water clear
S11	15 Dec 2015	Arrive Time	1147
S11	15 Dec 2015	Weather	Sunny
S11	15 Dec 2015	Wind Speed (kts)	5.6
S11	15 Dec 2015	Wind Dir	W
S11	15 Dec 2015	Animal Life	None
S11	15 Dec 2015	Floatables	None
S11	15 Dec 2015	Water Color	Green
S11	15 Dec 2015	Current Direction	S
S11	15 Dec 2015	Water Temp (C)	16.4
S11	15 Dec 2015	Wave Height Low (ft)	4
S11	15 Dec 2015	High Tide (ft)	5.2
S11	15 Dec 2015	High Tide Time	1044
S11	15 Dec 2015	Low Tide (ft)	-0.2
S11	15 Dec 2015	Low Tide Time	1807
S11	15 Dec 2015	Comments	Kelp; Water clear
S11	21 Dec 2015	Arrive Time	941
S11	21 Dec 2015	Weather	Sunny
S11	21 Dec 2015	Wind Speed (kts)	4
S11	21 Dec 2015	Wind Dir	E
S11	21 Dec 2015	Animal Life	None
S11	21 Dec 2015	Floatables	None
S11	21 Dec 2015	Water Color	Green
S11	21 Dec 2015	Current Direction	S
S11	21 Dec 2015	Water Temp (C)	16
S11	21 Dec 2015	Wave Height Low (ft)	3
S11	21 Dec 2015	High Tide (ft)	5.9
S11	21 Dec 2015	High Tide Time	523
S11	21 Dec 2015	Low Tide (ft)	-0.1
S11	21 Dec 2015	Low Tide Time	1229
S11	21 Dec 2015	Comments	Kelp; Seagrass; 1 Person; 1 Surfer; Water clear
S11	28 Dec 2015	Arrive Time	1011
S11	28 Dec 2015	Weather	Partly Cloudy
S11	28 Dec 2015	Wind Speed (kts)	6.4

Station	Date	Parameter	Value
S11	28 Dec 2015	Wind Dir	E
S11	28 Dec 2015	Animal Life	None
S11	28 Dec 2015	Floatables	None
S11	28 Dec 2015	Water Color	Green
S11	28 Dec 2015	Current Direction	S
S11	28 Dec 2015	Water Temp (C)	14.2
S11	28 Dec 2015	Wave Height Low (ft)	3
S11	28 Dec 2015	High Tide (ft)	5.5
S11	28 Dec 2015	High Tide Time	1013
S11	28 Dec 2015	Low Tide (ft)	1.9
S11	28 Dec 2015	Low Tide Time	419
S11	28 Dec 2015	Comments	Kelp; Seagrass; Water clear
S12	01 Dec 2015	Arrive Time	927
S12	01 Dec 2015	Weather	Sunny
S12	01 Dec 2015	Wind Speed (kts)	2.7
S12	01 Dec 2015	Wind Dir	SW
S12	01 Dec 2015	Animal Life	None
S12	01 Dec 2015	Floatables	None
S12	01 Dec 2015	Water Color	Green
S12	01 Dec 2015	Current Direction	S
S12	01 Dec 2015	Water Temp (C)	16.8
S12	01 Dec 2015	Wave Height Low (ft)	2
S12	01 Dec 2015	High Tide (ft)	4.3
S12	01 Dec 2015	High Tide Time	1222
S12	01 Dec 2015	Low Tide (ft)	2.7
S12	01 Dec 2015	Low Tide Time	651
S12	01 Dec 2015	Comments	Kelp; Seagrass; Water clear
S12	08 Dec 2015	Arrive Time	1017
S12	08 Dec 2015	Weather	Sunny
S12	08 Dec 2015	Wind Speed (kts)	3.4
S12	08 Dec 2015	Wind Dir	NW
S12	08 Dec 2015	Animal Life	None
S12	08 Dec 2015	Floatables	None
S12	08 Dec 2015	Water Color	Green
S12	08 Dec 2015	Current Direction	S
S12	08 Dec 2015	Water Temp (C)	18.8
S12	08 Dec 2015	Wave Height Low (ft)	3
S12	08 Dec 2015	High Tide (ft)	5.6
S12	08 Dec 2015	High Tide Time	639
S12	08 Dec 2015	Low Tide (ft)	0
S12	08 Dec 2015	Low Tide Time	1340
S12	08 Dec 2015	Comments	Seagrass; Water clear
S12	15 Dec 2015	Arrive Time	1118
S12	15 Dec 2015	Weather	Sunny
S12	15 Dec 2015	Wind Speed (kts)	5
S12	15 Dec 2015	Wind Dir	W
S12	15 Dec 2015	Animal Life	None
S12	15 Dec 2015	Floatables	None
S12	15 Dec 2015	Water Color	Green
S12	15 Dec 2015	Current Direction	S
S12	15 Dec 2015	Water Temp (C)	15.6
S12	15 Dec 2015	Wave Height Low (ft)	4

Station	Date	Parameter	Value
S12	15 Dec 2015	High Tide (ft)	5.2
S12	15 Dec 2015	High Tide Time	1044
S12	15 Dec 2015	Low Tide (ft)	2.2
S12	15 Dec 2015	Low Tide Time	448
S12	15 Dec 2015	Comments	Kelp; Seagrass; Water clear
S12	21 Dec 2015	Arrive Time	918
S12	21 Dec 2015	Weather	Sunny
S12	21 Dec 2015	Wind Speed (kts)	2.1
S12	21 Dec 2015	Wind Dir	NW
S12	21 Dec 2015	Animal Life	None
S12	21 Dec 2015	Floatables	None
S12	21 Dec 2015	Water Color	Green
S12	21 Dec 2015	Current Direction	S
S12	21 Dec 2015	Water Temp (C)	15.2
S12	21 Dec 2015	Wave Height Low (ft)	2
S12	21 Dec 2015	High Tide (ft)	5.9
S12	21 Dec 2015	High Tide Time	523
S12	21 Dec 2015	Low Tide (ft)	-0.1
S12	21 Dec 2015	Low Tide Time	1229
S12	21 Dec 2015	Comments	Kelp; Seagrass; Water clear
S12	28 Dec 2015	Arrive Time	951
S12	28 Dec 2015	Weather	Partly Cloudy
S12	28 Dec 2015	Wind Speed (kts)	0
S12	28 Dec 2015	Wind Dir	
S12	28 Dec 2015	Animal Life	None
S12	28 Dec 2015	Floatables	None
S12	28 Dec 2015	Water Color	Green
S12	28 Dec 2015	Current Direction	S
S12	28 Dec 2015	Water Temp (C)	14
S12	28 Dec 2015	Wave Height Low (ft)	3
S12	28 Dec 2015	High Tide (ft)	5.5
S12	28 Dec 2015	High Tide Time	1013
S12	28 Dec 2015	Low Tide (ft)	1.9
S12	28 Dec 2015	Low Tide Time	419
S12	28 Dec 2015	Comments	Kelp; Seagrass; Water clear

Kelp Stations

Table 3.1

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

Date	I19	I24	I25	I26	I32	I39	I40
01 Dec 2015	56	4	3	3	3	4	50
02 Dec 2015	56	4	3	3	3	4	50
03 Dec 2015	56	4	3	3	3	4	50
04 Dec 2015	32	4	3	3	3	4	29
05 Dec 2015	32	4	3	3	3	4	29
06 Dec 2015	32	4	3	3	3	4	29
07 Dec 2015	24	4	3	3	3	4	18
08 Dec 2015	24	4	3	3	3	4	18
09 Dec 2015	17	4	3	3	3	4	13
10 Dec 2015	17	4	3	3	3	4	13
11 Dec 2015	17	4	3	3	3	4	13
12 Dec 2015	17	4	3	3	3	4	13
13 Dec 2015	16	4	3	3	3	4	11
14 Dec 2015	16	4	3	3	3	4	11
15 Dec 2015	23	5	4	3	3	7	15
16 Dec 2015	23	5	4	3	3	7	15
17 Dec 2015	38	4	3	3	3	9	22
18 Dec 2015	38	4	3	3	3	9	22
19 Dec 2015	38	4	3	3	3	9	22
20 Dec 2015	36	3	3	3	3	7	26
21 Dec 2015	82	7	7	3	3	6	56
22 Dec 2015	82	7	7	3	3	6	56
23 Dec 2015	82	7	7	3	3	6	56
24 Dec 2015	153	7	9	3	3	6	87
25 Dec 2015	153	7	9	3	3	6	87
26 Dec 2015	153	7	9	3	3	6	87
27 Dec 2015	153	7	9	3	3	6	87
28 Dec 2015	153	7	9	3	3	6	87
29 Dec 2015	153	7	9	3	3	6	87
30 Dec 2015	95	9	12	3	3	8	56
31 Dec 2015	95	9	12	3	3	8	56

* 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 Dec 2015	9	2	2	2	2	3	13
02 Dec 2015	9	2	2	2	2	3	13
03 Dec 2015	9	2	2	2	2	3	13
04 Dec 2015	7	2	2	2	2	3	9
05 Dec 2015	7	2	2	2	2	3	9
06 Dec 2015	7	2	2	2	2	3	9
07 Dec 2015	6	2	2	2	2	2	7
08 Dec 2015	6	2	2	2	2	2	7
09 Dec 2015	5	2	2	2	2	2	6
10 Dec 2015	5	2	2	2	2	2	6
11 Dec 2015	5	2	2	2	2	2	6
12 Dec 2015	5	2	2	2	2	2	6
13 Dec 2015	5	2	2	2	2	2	5
14 Dec 2015	5	2	2	2	2	2	5
15 Dec 2015	6	2	2	2	2	2	4
16 Dec 2015	6	2	2	2	2	2	4
17 Dec 2015	7	2	2	2	2	2	5
18 Dec 2015	7	2	2	2	2	2	5
19 Dec 2015	7	2	2	2	2	2	5
20 Dec 2015	9	2	2	2	2	2	6
21 Dec 2015	14	3	3	2	2	2	9
22 Dec 2015	14	3	3	2	2	2	9
23 Dec 2015	14	3	3	2	2	2	9
24 Dec 2015	20	3	3	2	2	2	11
25 Dec 2015	20	3	3	2	2	2	11
26 Dec 2015	20	3	3	2	2	2	11
27 Dec 2015	20	3	3	2	2	2	11
28 Dec 2015	20	3	3	2	2	2	11
29 Dec 2015	20	3	3	2	2	2	11
30 Dec 2015	13	3	4	2	2	2	6
31 Dec 2015	13	3	4	2	2	2	6

* 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 Dec 2015	6	2	2	2	2	2	6
02 Dec 2015	6	2	2	2	2	2	6
03 Dec 2015	6	2	2	2	2	2	6
04 Dec 2015	5	2	2	2	2	2	5
05 Dec 2015	5	2	2	2	2	2	5
06 Dec 2015	5	2	2	2	2	2	5
07 Dec 2015	5	2	2	2	2	2	5
08 Dec 2015	5	2	2	2	2	2	5
09 Dec 2015	5	2	2	2	2	2	4
10 Dec 2015	5	2	2	2	2	2	4
11 Dec 2015	5	2	2	2	2	2	4
12 Dec 2015	5	2	2	2	2	2	4
13 Dec 2015	5	2	2	2	2	2	5
14 Dec 2015	5	2	2	2	2	2	5
15 Dec 2015	7	2	2	2	2	2	4
16 Dec 2015	7	2	2	2	2	2	4
17 Dec 2015	8	2	2	2	2	2	4
18 Dec 2015	8	2	2	2	2	2	4
19 Dec 2015	8	2	2	2	2	2	4
20 Dec 2015	10	2	2	2	2	3	5
21 Dec 2015	15	3	3	2	2	2	7
22 Dec 2015	15	3	3	2	2	2	7
23 Dec 2015	15	3	3	2	2	2	7
24 Dec 2015	17	3	4	2	2	2	7
25 Dec 2015	17	3	4	2	2	2	7
26 Dec 2015	17	3	4	2	2	2	7
27 Dec 2015	17	3	4	2	2	2	7
28 Dec 2015	17	3	4	2	2	2	7
29 Dec 2015	17	3	4	2	2	2	7
30 Dec 2015	14	3	4	2	2	3	5
31 Dec 2015	14	3	4	2	2	3	5

* Geometric mean calculated using n<5

Table 3.4

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

Date	I19	I24	I25	I26	I32	I39	I40
04 Dec 2015	IC	IC	IC	IC	IC	IC	IC
09 Dec 2015	IC	IC	IC	IC	IC	IC	IC
15 Dec 2015	IC	IC	IC	IC	IC	IC	IC
17 Dec 2015	IC	IC	IC	IC	IC	IC	IC
21 Dec 2015	E	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
04 Dec 2015	IC	IC	IC	IC	IC	IC	IC
09 Dec 2015	IC	IC	IC	IC	IC	IC	IC
15 Dec 2015	IC	IC	IC	IC	IC	IC	IC
17 Dec 2015	IC	IC	IC	IC	IC	IC	IC
21 Dec 2015	E	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
04 Dec 2015	IC	IC	IC	IC	IC	IC	IC
09 Dec 2015	IC	IC	IC	IC	IC	IC	IC
15 Dec 2015	IC	IC	IC	IC	IC	IC	IC
17 Dec 2015	IC	IC	IC	IC	IC	IC	IC
21 Dec 2015	E	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
04 Dec 2015	IC	IC	IC	IC	IC	IC	IC
09 Dec 2015	IC	IC	IC	IC	IC	IC	IC
15 Dec 2015	IC	IC	IC	IC	IC	IC	IC
17 Dec 2015	IC	IC	IC	IC	IC	IC	IC
21 Dec 2015	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	04 Dec 2015	1011	2	<2	<2	<2	1.000	17.8	82.21	7.5	33.63	8.2	ns	ns
I19	04 Dec 2015	1011	6	2e	<2	<2	1.000	17.8	82.50	7.5	33.63	8.2	ns	ns
I19	04 Dec 2015	1011	11	<2	<2	<2	1.000	17.6	79.52	7.8	33.65	8.2	ns	ns
I19	09 Dec 2015	1111	2	<2	<2	2e	1.000	18.7	77.40	7.4	33.77	8.2	ns	ns
I19	09 Dec 2015	1111	6	<2	<2	2e	1.000	18.6	81.37	7.5	33.76	8.2	ns	ns
I19	09 Dec 2015	1111	11	4e	<2	4e	0.500	18.5	63.14	7.5	33.76	8.2	ns	ns
I19	15 Dec 2015	1134	2	<200	<2	<2	0.010	17.2	75.77	7.0	33.72	8.2	ns	ns
I19	15 Dec 2015	1134	6	72	4e	2e	0.056	17.1	73.81	7.0	33.72	8.2	ns	ns
I19	15 Dec 2015	1134	11	<200	70	56	0.350	16.8	59.35	7.5	33.76	8.2	ns	ns
I19	17 Dec 2015	1120	2	360e	4e	10e	0.011	16.4	67.75	7.5	33.73	8.1	ns	ns
I19	17 Dec 2015	1120	6	700	16e	32e	0.023	16.3	66.54	7.4	33.73	8.1	ns	ns
I19	17 Dec 2015	1120	11	1200	22e	42	0.018	16.3	66.24	7.4	33.73	8.1	ns	ns
I19	21 Dec 2015	1059	2	9000	120e	78	0.013	16.4	77.11	7.6	33.54	8.1	ns	ns
I19	21 Dec 2015	1059	6	9800	520	220e	0.053	16.2	76.18	7.8	33.60	8.1	ns	ns
I19	21 Dec 2015	1059	11	17000e	150e	200e	0.009	16.1	71.90	7.8	33.61	8.1	ns	ns
I24	04 Dec 2015	1030	2	<2	<2	<2	1.000	17.6	82.81	7.5	33.65	8.2	ns	ns
I24	04 Dec 2015	1030	6	<2	<2	<2	1.000	17.6	79.72	7.5	33.66	8.2	ns	ns
I24	04 Dec 2015	1030	11	<2	<2	<2	1.000	17.5	75.84	7.5	33.66	8.2	ns	ns
I24	09 Dec 2015	1137	2	<2	<2	<2	1.000	18.7	88.89	7.2	33.76	8.2	ns	ns
I24	09 Dec 2015	1137	6	<2	<2	<2	1.000	18.6	88.31	7.2	33.76	8.2	ns	ns
I24	09 Dec 2015	1137	11	<2	<2	<2	1.000	18.6	78.36	7.3	33.76	8.2	ns	ns
I24	15 Dec 2015	1204	2	<20	<2	<2	0.100	17.2	69.82	7.2	33.77	8.2	ns	ns
I24	15 Dec 2015	1204	6	4e	<2	<2	0.500	16.9	62.24	7.2	33.76	8.2	ns	ns
I24	15 Dec 2015	1204	11	<2	<2	<2	1.000	16.9	45.90	7.0	33.76	8.2	ns	ns
I24	17 Dec 2015	1148	2	<2	<2	<2	1.000	16.6	68.90	7.0	33.73	8.1	ns	ns
I24	17 Dec 2015	1148	6	<2	<2	<2	1.000	16.5	67.71	7.0	33.73	8.1	ns	ns
I24	17 Dec 2015	1148	11	<2	<2	<2	1.000	16.4	55.06	6.8	33.74	8.1	ns	ns
I24	21 Dec 2015	1126	2	360e	6e	28e	0.017	16.5	85.90	7.3	33.64	8.1	ns	ns
I24	21 Dec 2015	1126	6	1600e	48	22e	0.030	16.4	84.87	7.3	33.65	8.1	ns	ns
I24	21 Dec 2015	1126	11	1300	16e	26e	0.012	16.4	79.03	7.3	33.65	8.1	ns	ns
I25	04 Dec 2015	1036	2	<2	<2	<2	1.000	17.6	79.30	7.5	33.66	8.2	ns	ns
I25	04 Dec 2015	1036	6	<2	<2	<2	1.000	17.6	79.67	7.6	33.66	8.2	ns	ns
I25	04 Dec 2015	1036	9	<2	<2	<2	1.000	17.6	79.82	7.6	33.66	8.2	ns	ns
I25	09 Dec 2015	1146	2	<2	<2	<2	1.000	18.8	89.94	7.2	33.76	8.2	ns	ns
I25	09 Dec 2015	1146	6	<2	<2	<2	1.000	18.6	87.97	7.2	33.76	8.2	ns	ns

Station	Date	Time	Depth	Total	Fecal	Entero	F:T	Temp	XMS	DO	Sal	pH	OG	SUSO
I25	09 Dec 2015	1146	9	<2	<2	<2	1.000	18.6	74.74	7.1	33.76	8.2	ns	ns
I25	15 Dec 2015	1214	2	<20	<2	<2	0.100	17.3	72.73	6.9	33.78	8.2	ns	ns
I25	15 Dec 2015	1214	6	<2	<2	<2	1.000	17.0	62.30	7.1	33.77	8.2	ns	ns
I25	15 Dec 2015	1214	9	4e	<2	2e	0.500	16.6	54.99	7.0	33.77	8.2	ns	ns
I25	17 Dec 2015	1159	2	2e	<2	<2	1.000	16.7	69.25	7.0	33.73	8.1	ns	ns
I25	17 Dec 2015	1159	6	<2	<2	<2	1.000	16.5	64.49	7.0	33.73	8.1	ns	ns
I25	17 Dec 2015	1159	9	<2	<2	2e	1.000	16.5	56.57	6.9	33.73	8.1	ns	ns
I25	21 Dec 2015	1136	2	1200	10e	22e	0.008	16.5	86.11	7.3	33.64	8.1	ns	ns
I25	21 Dec 2015	1136	6	5200	76	68	0.015	16.1	82.91	7.5	33.69	8.1	ns	ns
I25	21 Dec 2015	1136	9	4400	70	88	0.016	16.1	79.13	7.5	33.69	8.1	ns	ns
I26	04 Dec 2015	1048	2	<2	<2	<2	1.000	17.7	84.04	7.3	33.64	8.2	ns	ns
I26	04 Dec 2015	1048	6	<2	<2	<2	1.000	17.6	82.65	7.4	33.64	8.2	ns	ns
I26	04 Dec 2015	1048	9	<2	<2	<2	1.000	17.6	79.92	7.4	33.64	8.2	ns	ns
I26	09 Dec 2015	1201	2	<2	<2	<2	1.000	18.8	84.82	7.2	33.75	8.2	ns	ns
I26	09 Dec 2015	1201	6	<2	<2	<2	1.000	18.6	86.20	7.2	33.75	8.2	ns	ns
I26	09 Dec 2015	1201	9	<2	<2	<2	1.000	18.3	78.54	7.2	33.74	8.2	ns	ns
I26	15 Dec 2015	1227	2	<20	<2	<2	0.100	17.2	57.88	7.0	33.75	8.2	ns	ns
I26	15 Dec 2015	1227	6	4e	<2	<2	0.500	16.9	51.64	7.0	33.75	8.2	ns	ns
I26	15 Dec 2015	1227	9	<2	<2	<2	1.000	16.9	45.19	7.0	33.76	8.2	ns	ns
I26	17 Dec 2015	1213	2	2e	<2	<2	1.000	16.6	67.81	6.9	33.71	8.1	ns	ns
I26	17 Dec 2015	1213	6	<2	<2	<2	1.000	16.6	64.56	7.0	33.72	8.1	ns	ns
I26	17 Dec 2015	1213	9	<2	<2	<2	1.000	16.6	56.68	6.9	33.72	8.1	ns	ns
I26	21 Dec 2015	1156	2	<2	<2	<2	1.000	16.6	84.10	7.2	33.68	8.1	ns	ns
I26	21 Dec 2015	1156	6	8e	<2	<2	0.250	16.4	81.29	7.3	33.68	8.1	ns	ns
I26	21 Dec 2015	1156	9	<2	<2	<2	1.000	16.5	76.53	7.3	33.68	8.1	ns	ns
I32	04 Dec 2015	1059	2	<2	<2	<2	1.000	17.5	80.53	7.5	33.67	8.2	ns	ns
I32	04 Dec 2015	1059	6	<2	<2	<2	1.000	17.4	80.30	7.6	33.67	8.2	ns	ns
I32	04 Dec 2015	1059	9	<2	<2	<2	1.000	17.4	79.84	7.6	33.67	8.2	ns	ns
I32	09 Dec 2015	1214	2	<2	<2	<2	1.000	18.5	84.46	7.5	33.74	8.2	ns	ns
I32	09 Dec 2015	1214	6	<2	<2	<2	1.000	18.4	83.98	7.5	33.74	8.2	ns	ns
I32	09 Dec 2015	1214	9	4e	2e	<2	0.500	18.4	76.72	7.5	33.74	8.2	ns	ns
I32	15 Dec 2015	1240	2	<20	<2	<2	0.100	17.1	62.46	6.9	33.78	8.2	ns	ns
I32	15 Dec 2015	1240	6	<2	<2	<2	1.000	17.1	62.94	7.1	33.75	8.2	ns	ns
I32	15 Dec 2015	1240	9	<2	<2	<2	1.000	16.8	62.36	7.2	33.76	8.2	ns	ns
I32	17 Dec 2015	1227	2	<2	<2	<2	1.000	16.8	67.09	7.0	33.71	8.1	ns	ns
I32	17 Dec 2015	1227	6	2e	<2	<2	1.000	16.6	65.18	7.0	33.71	8.1	ns	ns
I32	17 Dec 2015	1227	9	4e	<2	<2	0.500	16.5	62.47	7.0	33.72	8.1	ns	ns
I32	21 Dec 2015	1211	2	<2	<2	<2	1.000	16.6	76.55	7.4	33.69	8.1	ns	ns
I32	21 Dec 2015	1211	6	<2	<2	<2	1.000	16.3	78.96	7.5	33.70	8.1	ns	ns
I32	21 Dec 2015	1211	9	<2	<2	<2	1.000	16.2	67.93	7.4	33.71	8.1	ns	ns
I39	04 Dec 2015	952	2	<2	<2	<2	1.000	17.9	85.20	7.3	33.60	8.2	ns	ns

Station	Date	Time	Depth	Total	Fecal	Entero	F:T	Temp	XMS	DO	Sal	pH	OG	SUSO
I39	04 Dec 2015	952	12	<2	<2	<2	1.000	17.9	85.39	7.3	33.60	8.2	ns	ns
I39	04 Dec 2015	952	18	<2	<2	<2	1.000	17.7	84.57	7.1	33.63	8.2	ns	ns
I39	09 Dec 2015	1049	2	<2	<2	<2	1.000	18.8	92.28	6.7	33.74	8.2	ns	ns
I39	09 Dec 2015	1049	12	<2	<2	<2	1.000	18.8	89.45	7.0	33.76	8.2	ns	ns
I39	09 Dec 2015	1049	18	2e	<2	<2	1.000	18.3	87.94	6.9	33.73	8.2	ns	ns
I39	15 Dec 2015	1112	2	<20	<2	<2	0.100	17.1	82.22	6.5	33.65	8.2	ns	ns
I39	15 Dec 2015	1112	12	76	<2	2e	0.026	17.1	82.57	6.4	33.64	8.2	ns	ns
I39	15 Dec 2015	1112	18	260e	8e	12e	0.031	17.0	81.63	6.1	33.63	8.2	ns	ns
I39	17 Dec 2015	1058	2	20e	<2	<2	0.100	16.7	78.24	6.9	33.70	8.1	ns	ns
I39	17 Dec 2015	1058	12	12e	<2	<2	0.167	16.5	65.35	6.3	33.68	8.1	ns	ns
I39	17 Dec 2015	1058	18	72	<2	4e	0.028	16.6	69.56	6.9	33.73	8.1	ns	ns
I39	21 Dec 2015	1038	2	<2	<2	<2	1.000	16.7	83.32	7.1	33.68	8.1	ns	ns
I39	21 Dec 2015	1038	12	<2	<2	<2	1.000	16.6	77.74	7.0	33.68	8.1	ns	ns
I39	21 Dec 2015	1038	18	<2	<2	<2	1.000	16.4	64.16	6.8	33.69	8.1	ns	ns
I40	04 Dec 2015	1022	2	<2	<2	<2	1.000	17.7	80.16	7.6	33.65	8.2	ns	ns
I40	04 Dec 2015	1022	6	<2	<2	<2	1.000	17.6	79.18	7.6	33.66	8.2	ns	ns
I40	04 Dec 2015	1022	9	2e	<2	<2	1.000	17.6	73.55	7.5	33.66	8.2	ns	ns
I40	09 Dec 2015	1126	2	2e	<2	<2	1.000	18.6	85.66	7.2	33.76	8.2	ns	ns
I40	09 Dec 2015	1126	6	<2	<2	<2	1.000	18.4	67.88	7.2	33.76	8.2	ns	ns
I40	09 Dec 2015	1126	9	4e	<2	<2	0.500	18.4	57.58	7.2	33.76	8.2	ns	ns
I40	15 Dec 2015	1153	2	<200	<2	<2	0.010	17.2	74.05	7.2	33.74	8.2	ns	ns
I40	15 Dec 2015	1153	6	2e	<2	<2	1.000	17.0	65.36	7.2	33.76	8.2	ns	ns
I40	15 Dec 2015	1153	9	24e	4e	<2	0.167	16.9	60.49	7.4	33.76	8.2	ns	ns
I40	17 Dec 2015	1134	2	20e	<2	<2	0.100	16.5	66.50	7.3	33.75	8.1	ns	ns
I40	17 Dec 2015	1134	6	260e	18e	22e	0.069	16.3	61.31	7.4	33.75	8.1	ns	ns
I40	17 Dec 2015	1134	9	500	16e	2e	0.032	16.1	62.64	7.4	33.76	8.1	ns	ns
I40	21 Dec 2015	1113	2	9600	18e	18e	0.002	16.5	82.16	7.2	33.64	8.1	ns	ns
I40	21 Dec 2015	1113	6	2800e	130e	44	0.046	16.4	82.79	7.2	33.65	8.1	ns	ns
I40	21 Dec 2015	1113	9	2800e	84	68	0.030	16.3	83.18	7.3	33.67	8.1	ns	ns

NA = not available

ns = not sampled

Table 3.9

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

Station	Date	Parameter	Value
I19	04 Dec 2015	Depth (m)	11
I19	04 Dec 2015	Arrive Time	1011
I19	04 Dec 2015	Depart Time	1014
I19	04 Dec 2015	Air Temp (C)	18
I19	04 Dec 2015	Weather	Partly Cloudy
I19	04 Dec 2015	Visibility (mi)	5
I19	04 Dec 2015	Wind Speed (kts)	3
I19	04 Dec 2015	Wind Dir	S
I19	04 Dec 2015	Water Color	Greenish-Brown
I19	04 Dec 2015	Wave Ht Low (ft)	3
I19	04 Dec 2015	Wave Period (sec)	9
I19	04 Dec 2015	Sea State	Calm
I19	04 Dec 2015	High Tide (ft)	4.46
I19	04 Dec 2015	High Tide Time	435
I19	04 Dec 2015	Low Tide (ft)	1.86
I19	04 Dec 2015	Low Tide Time	1109
I19	04 Dec 2015	Comments	
I19	09 Dec 2015	Depth (m)	12
I19	09 Dec 2015	Arrive Time	1111
I19	09 Dec 2015	Depart Time	1121
I19	09 Dec 2015	Air Temp (C)	17
I19	09 Dec 2015	Weather	Partly Cloudy
I19	09 Dec 2015	Visibility (mi)	12
I19	09 Dec 2015	Wind Speed (kts)	5
I19	09 Dec 2015	Wind Dir	N
I19	09 Dec 2015	Water Color	Green
I19	09 Dec 2015	Wave Ht Low (ft)	6
I19	09 Dec 2015	Wave Period (sec)	9
I19	09 Dec 2015	Sea State	Calm
I19	09 Dec 2015	High Tide (ft)	5.8
I19	09 Dec 2015	High Tide Time	709
I19	09 Dec 2015	Low Tide (ft)	-0.34
I19	09 Dec 2015	Low Tide Time	1413
I19	09 Dec 2015	Comments	
I19	15 Dec 2015	Depth (m)	12
I19	15 Dec 2015	Arrive Time	1134
I19	15 Dec 2015	Depart Time	1138
I19	15 Dec 2015	Air Temp (C)	15
I19	15 Dec 2015	Weather	Clear
I19	15 Dec 2015	Visibility (mi)	12
I19	15 Dec 2015	Wind Speed (kts)	6
I19	15 Dec 2015	Wind Dir	W
I19	15 Dec 2015	Water Color	Green
I19	15 Dec 2015	Wave Ht Low (ft)	6
I19	15 Dec 2015	Wave Period (sec)	11
I19	15 Dec 2015	Sea State	Confused swell
I19	15 Dec 2015	High Tide (ft)	5.23
I19	15 Dec 2015	High Tide Time	1044
I19	15 Dec 2015	Low Tide (ft)	2.24

Station	Date	Parameter	Value
I19	15 Dec 2015	Low Tide Time	448
I19	15 Dec 2015	Comments	
I19	17 Dec 2015	Depth (m)	11
I19	17 Dec 2015	Arrive Time	1120
I19	17 Dec 2015	Depart Time	1133
I19	17 Dec 2015	Air Temp (C)	15
I19	17 Dec 2015	Weather	Clear
I19	17 Dec 2015	Visibility (mi)	9
I19	17 Dec 2015	Wind Speed (kts)	4
I19	17 Dec 2015	Wind Dir	S
I19	17 Dec 2015	Water Color	Green
I19	17 Dec 2015	Wave Ht Low (ft)	3
I19	17 Dec 2015	Wave Period (sec)	7
I19	17 Dec 2015	Sea State	Calm
I19	17 Dec 2015	High Tide (ft)	4.14
I19	17 Dec 2015	High Tide Time	1253
I19	17 Dec 2015	Low Tide (ft)	2.32
I19	17 Dec 2015	Low Tide Time	724
I19	17 Dec 2015	Comments	
I19	21 Dec 2015	Depth (m)	10
I19	21 Dec 2015	Arrive Time	1059
I19	21 Dec 2015	Depart Time	1105
I19	21 Dec 2015	Air Temp (C)	16
I19	21 Dec 2015	Weather	Clear
I19	21 Dec 2015	Visibility (mi)	10
I19	21 Dec 2015	Wind Speed (kts)	7
I19	21 Dec 2015	Wind Dir	SW
I19	21 Dec 2015	Water Color	Green
I19	21 Dec 2015	Wave Ht Low (ft)	4
I19	21 Dec 2015	Wave Period (sec)	7
I19	21 Dec 2015	Sea State	Light chop
I19	21 Dec 2015	High Tide (ft)	5.85
I19	21 Dec 2015	High Tide Time	523
I19	21 Dec 2015	Low Tide (ft)	-0.12
I19	21 Dec 2015	Low Tide Time	1229
I19	21 Dec 2015	Comments	Kelp debris
I24	04 Dec 2015	Depth (m)	10
I24	04 Dec 2015	Arrive Time	1030
I24	04 Dec 2015	Depart Time	1035
I24	04 Dec 2015	Air Temp (C)	17
I24	04 Dec 2015	Weather	Partly Cloudy
I24	04 Dec 2015	Visibility (mi)	12
I24	04 Dec 2015	Wind Speed (kts)	0
I24	04 Dec 2015	Wind Dir	
I24	04 Dec 2015	Water Color	Greenish-Brown
I24	04 Dec 2015	Wave Ht Low (ft)	3
I24	04 Dec 2015	Wave Period (sec)	11
I24	04 Dec 2015	Sea State	Calm
I24	04 Dec 2015	High Tide (ft)	4.46
I24	04 Dec 2015	High Tide Time	435
I24	04 Dec 2015	Low Tide (ft)	1.86
I24	04 Dec 2015	Low Tide Time	1109

Station	Date	Parameter	Value
I24	04 Dec 2015	Comments	Unable to obtain station target depth of 11 m within in 0.05 nm of station because of low tide
I24	09 Dec 2015	Depth (m)	10
I24	09 Dec 2015	Arrive Time	1137
I24	09 Dec 2015	Depart Time	1143
I24	09 Dec 2015	Air Temp (C)	17
I24	09 Dec 2015	Weather	Partly Cloudy
I24	09 Dec 2015	Visibility (mi)	12
I24	09 Dec 2015	Wind Speed (kts)	5
I24	09 Dec 2015	Wind Dir	SW
I24	09 Dec 2015	Water Color	Green
I24	09 Dec 2015	Wave Ht Low (ft)	6
I24	09 Dec 2015	Wave Period (sec)	9
I24	09 Dec 2015	Sea State	Calm
I24	09 Dec 2015	High Tide (ft)	5.8
I24	09 Dec 2015	High Tide Time	709
I24	09 Dec 2015	Low Tide (ft)	-0.34
I24	09 Dec 2015	Low Tide Time	1413
I24	09 Dec 2015	Comments	Kelp
I24	15 Dec 2015	Depth (m)	12
I24	15 Dec 2015	Arrive Time	1204
I24	15 Dec 2015	Depart Time	1206
I24	15 Dec 2015	Air Temp (C)	14
I24	15 Dec 2015	Weather	Clear
I24	15 Dec 2015	Visibility (mi)	12
I24	15 Dec 2015	Wind Speed (kts)	8
I24	15 Dec 2015	Wind Dir	SE
I24	15 Dec 2015	Water Color	Green
I24	15 Dec 2015	Wave Ht Low (ft)	6
I24	15 Dec 2015	Wave Period (sec)	11
I24	15 Dec 2015	Sea State	Confused swell
I24	15 Dec 2015	High Tide (ft)	5.23
I24	15 Dec 2015	High Tide Time	1044
I24	15 Dec 2015	Low Tide (ft)	2.24
I24	15 Dec 2015	Low Tide Time	448
I24	15 Dec 2015	Comments	
I24	17 Dec 2015	Depth (m)	12
I24	17 Dec 2015	Arrive Time	1148
I24	17 Dec 2015	Depart Time	1156
I24	17 Dec 2015	Air Temp (C)	15
I24	17 Dec 2015	Weather	Clear
I24	17 Dec 2015	Visibility (mi)	9
I24	17 Dec 2015	Wind Speed (kts)	8
I24	17 Dec 2015	Wind Dir	SE
I24	17 Dec 2015	Water Color	Green
I24	17 Dec 2015	Wave Ht Low (ft)	3
I24	17 Dec 2015	Wave Period (sec)	7
I24	17 Dec 2015	Sea State	Calm
I24	17 Dec 2015	High Tide (ft)	4.14
I24	17 Dec 2015	High Tide Time	1253
I24	17 Dec 2015	Low Tide (ft)	2.32
I24	17 Dec 2015	Low Tide Time	724

Station	Date	Parameter	Value
I24	17 Dec 2015	Comments	Lobster floats
I24	21 Dec 2015	Depth (m)	10
I24	21 Dec 2015	Arrive Time	1126
I24	21 Dec 2015	Depart Time	1132
I24	21 Dec 2015	Air Temp (C)	15
I24	21 Dec 2015	Weather	Clear
I24	21 Dec 2015	Visibility (mi)	10
I24	21 Dec 2015	Wind Speed (kts)	7
I24	21 Dec 2015	Wind Dir	W
I24	21 Dec 2015	Water Color	Bluish-Green
I24	21 Dec 2015	Wave Ht Low (ft)	4
I24	21 Dec 2015	Wave Period (sec)	7
I24	21 Dec 2015	Sea State	Light chop
I24	21 Dec 2015	High Tide (ft)	5.85
I24	21 Dec 2015	High Tide Time	523
I24	21 Dec 2015	Low Tide (ft)	-0.12
I24	21 Dec 2015	Low Tide Time	1229
I24	21 Dec 2015	Comments	
I25	04 Dec 2015	Depth (m)	9
I25	04 Dec 2015	Arrive Time	1036
I25	04 Dec 2015	Depart Time	1041
I25	04 Dec 2015	Air Temp (C)	17
I25	04 Dec 2015	Weather	Partly Cloudy
I25	04 Dec 2015	Visibility (mi)	12
I25	04 Dec 2015	Wind Speed (kts)	2
I25	04 Dec 2015	Wind Dir	SW
I25	04 Dec 2015	Water Color	Greenish-Brown
I25	04 Dec 2015	Wave Ht Low (ft)	3
I25	04 Dec 2015	Wave Period (sec)	11
I25	04 Dec 2015	Sea State	Calm
I25	04 Dec 2015	High Tide (ft)	4.46
I25	04 Dec 2015	High Tide Time	435
I25	04 Dec 2015	Low Tide (ft)	1.86
I25	04 Dec 2015	Low Tide Time	1109
I25	04 Dec 2015	Comments	
I25	09 Dec 2015	Depth (m)	9
I25	09 Dec 2015	Arrive Time	1146
I25	09 Dec 2015	Depart Time	1155
I25	09 Dec 2015	Air Temp (C)	17
I25	09 Dec 2015	Weather	Partly Cloudy
I25	09 Dec 2015	Visibility (mi)	12
I25	09 Dec 2015	Wind Speed (kts)	5
I25	09 Dec 2015	Wind Dir	SW
I25	09 Dec 2015	Water Color	Green
I25	09 Dec 2015	Wave Ht Low (ft)	6
I25	09 Dec 2015	Wave Period (sec)	9
I25	09 Dec 2015	Sea State	Calm
I25	09 Dec 2015	High Tide (ft)	5.8
I25	09 Dec 2015	High Tide Time	709
I25	09 Dec 2015	Low Tide (ft)	-0.34
I25	09 Dec 2015	Low Tide Time	1413
I25	09 Dec 2015	Comments	Kelp debris

Station	Date	Parameter	Value
I25	15 Dec 2015	Depth (m)	9
I25	15 Dec 2015	Arrive Time	1214
I25	15 Dec 2015	Depart Time	1217
I25	15 Dec 2015	Air Temp (C)	14
I25	15 Dec 2015	Weather	Clear
I25	15 Dec 2015	Visibility (mi)	12
I25	15 Dec 2015	Wind Speed (kts)	6
I25	15 Dec 2015	Wind Dir	W
I25	15 Dec 2015	Water Color	Green
I25	15 Dec 2015	Wave Ht Low (ft)	6
I25	15 Dec 2015	Wave Period (sec)	11
I25	15 Dec 2015	Sea State	Confused swell
I25	15 Dec 2015	High Tide (ft)	5.23
I25	15 Dec 2015	High Tide Time	1044
I25	15 Dec 2015	Low Tide (ft)	2.24
I25	15 Dec 2015	Low Tide Time	448
I25	15 Dec 2015	Comments	
I25	17 Dec 2015	Depth (m)	10
I25	17 Dec 2015	Arrive Time	1159
I25	17 Dec 2015	Depart Time	1206
I25	17 Dec 2015	Air Temp (C)	15
I25	17 Dec 2015	Weather	Clear
I25	17 Dec 2015	Visibility (mi)	9
I25	17 Dec 2015	Wind Speed (kts)	7
I25	17 Dec 2015	Wind Dir	S
I25	17 Dec 2015	Water Color	Green
I25	17 Dec 2015	Wave Ht Low (ft)	3
I25	17 Dec 2015	Wave Period (sec)	7
I25	17 Dec 2015	Sea State	Calm
I25	17 Dec 2015	High Tide (ft)	4.14
I25	17 Dec 2015	High Tide Time	1253
I25	17 Dec 2015	Low Tide (ft)	2.32
I25	17 Dec 2015	Low Tide Time	724
I25	17 Dec 2015	Comments	
I25	21 Dec 2015	Depth (m)	9
I25	21 Dec 2015	Arrive Time	1136
I25	21 Dec 2015	Depart Time	1151
I25	21 Dec 2015	Air Temp (C)	15
I25	21 Dec 2015	Weather	Clear
I25	21 Dec 2015	Visibility (mi)	10
I25	21 Dec 2015	Wind Speed (kts)	6
I25	21 Dec 2015	Wind Dir	S
I25	21 Dec 2015	Water Color	Bluish-Green
I25	21 Dec 2015	Wave Ht Low (ft)	4
I25	21 Dec 2015	Wave Period (sec)	7
I25	21 Dec 2015	Sea State	Light chop
I25	21 Dec 2015	High Tide (ft)	5.85
I25	21 Dec 2015	High Tide Time	523
I25	21 Dec 2015	Low Tide (ft)	-0.12
I25	21 Dec 2015	Low Tide Time	1229
I25	21 Dec 2015	Comments	Hard time getting depth, possibly due to low tide

Station	Date	Parameter	Value
I26	04 Dec 2015	Depth (m)	9
I26	04 Dec 2015	Arrive Time	1048
I26	04 Dec 2015	Depart Time	1051
I26	04 Dec 2015	Air Temp (C)	18
I26	04 Dec 2015	Weather	Partly Cloudy
I26	04 Dec 2015	Visibility (mi)	12
I26	04 Dec 2015	Wind Speed (kts)	1
I26	04 Dec 2015	Wind Dir	SE
I26	04 Dec 2015	Water Color	Greenish-Brown
I26	04 Dec 2015	Wave Ht Low (ft)	3
I26	04 Dec 2015	Wave Period (sec)	11
I26	04 Dec 2015	Sea State	Calm
I26	04 Dec 2015	High Tide (ft)	4.46
I26	04 Dec 2015	High Tide Time	435
I26	04 Dec 2015	Low Tide (ft)	1.86
I26	04 Dec 2015	Low Tide Time	1109
I26	04 Dec 2015	Comments	
I26	09 Dec 2015	Depth (m)	10
I26	09 Dec 2015	Arrive Time	1201
I26	09 Dec 2015	Depart Time	1207
I26	09 Dec 2015	Air Temp (C)	17
I26	09 Dec 2015	Weather	Partly Cloudy
I26	09 Dec 2015	Visibility (mi)	12
I26	09 Dec 2015	Wind Speed (kts)	4
I26	09 Dec 2015	Wind Dir	E
I26	09 Dec 2015	Water Color	Green
I26	09 Dec 2015	Wave Ht Low (ft)	6
I26	09 Dec 2015	Wave Period (sec)	9
I26	09 Dec 2015	Sea State	Calm
I26	09 Dec 2015	High Tide (ft)	5.8
I26	09 Dec 2015	High Tide Time	709
I26	09 Dec 2015	Low Tide (ft)	-0.34
I26	09 Dec 2015	Low Tide Time	1413
I26	09 Dec 2015	Comments	
I26	15 Dec 2015	Depth (m)	12
I26	15 Dec 2015	Arrive Time	1227
I26	15 Dec 2015	Depart Time	1229
I26	15 Dec 2015	Air Temp (C)	14
I26	15 Dec 2015	Weather	Clear
I26	15 Dec 2015	Visibility (mi)	12
I26	15 Dec 2015	Wind Speed (kts)	8
I26	15 Dec 2015	Wind Dir	W
I26	15 Dec 2015	Water Color	Green
I26	15 Dec 2015	Wave Ht Low (ft)	6
I26	15 Dec 2015	Wave Period (sec)	11
I26	15 Dec 2015	Sea State	Confused swell
I26	15 Dec 2015	High Tide (ft)	5.23
I26	15 Dec 2015	High Tide Time	1044
I26	15 Dec 2015	Low Tide (ft)	2.24
I26	15 Dec 2015	Low Tide Time	448
I26	15 Dec 2015	Comments	
I26	17 Dec 2015	Depth (m)	10

Station	Date	Parameter	Value
I26	17 Dec 2015	Arrive Time	1213
I26	17 Dec 2015	Depart Time	1218
I26	17 Dec 2015	Air Temp (C)	15
I26	17 Dec 2015	Weather	Clear
I26	17 Dec 2015	Visibility (mi)	9
I26	17 Dec 2015	Wind Speed (kts)	6
I26	17 Dec 2015	Wind Dir	W
I26	17 Dec 2015	Water Color	Green
I26	17 Dec 2015	Wave Ht Low (ft)	3
I26	17 Dec 2015	Wave Period (sec)	7
I26	17 Dec 2015	Sea State	Calm
I26	17 Dec 2015	High Tide (ft)	4.14
I26	17 Dec 2015	High Tide Time	1253
I26	17 Dec 2015	Low Tide (ft)	2.32
I26	17 Dec 2015	Low Tide Time	724
I26	17 Dec 2015	Comments	
I26	21 Dec 2015	Depth (m)	9
I26	21 Dec 2015	Arrive Time	1156
I26	21 Dec 2015	Depart Time	1203
I26	21 Dec 2015	Air Temp (C)	15
I26	21 Dec 2015	Weather	Clear
I26	21 Dec 2015	Visibility (mi)	10
I26	21 Dec 2015	Wind Speed (kts)	3
I26	21 Dec 2015	Wind Dir	W
I26	21 Dec 2015	Water Color	Bluish-Green
I26	21 Dec 2015	Wave Ht Low (ft)	4
I26	21 Dec 2015	Wave Period (sec)	7
I26	21 Dec 2015	Sea State	Light chop
I26	21 Dec 2015	High Tide (ft)	5.85
I26	21 Dec 2015	High Tide Time	523
I26	21 Dec 2015	Low Tide (ft)	-0.12
I26	21 Dec 2015	Low Tide Time	1229
I26	21 Dec 2015	Comments	
I32	04 Dec 2015	Depth (m)	10
I32	04 Dec 2015	Arrive Time	1059
I32	04 Dec 2015	Depart Time	1103
I32	04 Dec 2015	Air Temp (C)	18
I32	04 Dec 2015	Weather	Partly Cloudy
I32	04 Dec 2015	Visibility (mi)	12
I32	04 Dec 2015	Wind Speed (kts)	0
I32	04 Dec 2015	Wind Dir	
I32	04 Dec 2015	Water Color	Greenish-Brown
I32	04 Dec 2015	Wave Ht Low (ft)	3
I32	04 Dec 2015	Wave Period (sec)	11
I32	04 Dec 2015	Sea State	Calm
I32	04 Dec 2015	High Tide (ft)	4.46
I32	04 Dec 2015	High Tide Time	435
I32	04 Dec 2015	Low Tide (ft)	1.86
I32	04 Dec 2015	Low Tide Time	1109
I32	04 Dec 2015	Comments	
I32	09 Dec 2015	Depth (m)	10
I32	09 Dec 2015	Arrive Time	1214

Station	Date	Parameter	Value
I32	09 Dec 2015	Depart Time	1222
I32	09 Dec 2015	Air Temp (C)	17
I32	09 Dec 2015	Weather	Partly Cloudy
I32	09 Dec 2015	Visibility (mi)	12
I32	09 Dec 2015	Wind Speed (kts)	5
I32	09 Dec 2015	Wind Dir	SE
I32	09 Dec 2015	Water Color	Green
I32	09 Dec 2015	Wave Ht Low (ft)	6
I32	09 Dec 2015	Wave Period (sec)	9
I32	09 Dec 2015	Sea State	Calm
I32	09 Dec 2015	High Tide (ft)	5.8
I32	09 Dec 2015	High Tide Time	709
I32	09 Dec 2015	Low Tide (ft)	-0.34
I32	09 Dec 2015	Low Tide Time	1413
I32	09 Dec 2015	Comments	
I32	15 Dec 2015	Depth (m)	11
I32	15 Dec 2015	Arrive Time	1240
I32	15 Dec 2015	Depart Time	1243
I32	15 Dec 2015	Air Temp (C)	14
I32	15 Dec 2015	Weather	Clear
I32	15 Dec 2015	Visibility (mi)	12
I32	15 Dec 2015	Wind Speed (kts)	10
I32	15 Dec 2015	Wind Dir	S
I32	15 Dec 2015	Water Color	Green
I32	15 Dec 2015	Wave Ht Low (ft)	6
I32	15 Dec 2015	Wave Period (sec)	11
I32	15 Dec 2015	Sea State	Confused swell
I32	15 Dec 2015	High Tide (ft)	5.23
I32	15 Dec 2015	High Tide Time	1044
I32	15 Dec 2015	Low Tide (ft)	2.24
I32	15 Dec 2015	Low Tide Time	448
I32	15 Dec 2015	Comments	
I32	17 Dec 2015	Depth (m)	11
I32	17 Dec 2015	Arrive Time	1227
I32	17 Dec 2015	Depart Time	1232
I32	17 Dec 2015	Air Temp (C)	15
I32	17 Dec 2015	Weather	Clear
I32	17 Dec 2015	Visibility (mi)	9
I32	17 Dec 2015	Wind Speed (kts)	7
I32	17 Dec 2015	Wind Dir	N
I32	17 Dec 2015	Water Color	Green
I32	17 Dec 2015	Wave Ht Low (ft)	3
I32	17 Dec 2015	Wave Period (sec)	7
I32	17 Dec 2015	Sea State	Calm
I32	17 Dec 2015	High Tide (ft)	4.14
I32	17 Dec 2015	High Tide Time	1253
I32	17 Dec 2015	Low Tide (ft)	2.32
I32	17 Dec 2015	Low Tide Time	724
I32	17 Dec 2015	Comments	
I32	21 Dec 2015	Depth (m)	10
I32	21 Dec 2015	Arrive Time	1211
I32	21 Dec 2015	Depart Time	1228

Station	Date	Parameter	Value
I32	21 Dec 2015	Air Temp (C)	15
I32	21 Dec 2015	Weather	Clear
I32	21 Dec 2015	Visibility (mi)	10
I32	21 Dec 2015	Wind Speed (kts)	3
I32	21 Dec 2015	Wind Dir	N
I32	21 Dec 2015	Water Color	Bluish-Green
I32	21 Dec 2015	Wave Ht Low (ft)	4
I32	21 Dec 2015	Wave Period (sec)	7
I32	21 Dec 2015	Sea State	Light chop
I32	21 Dec 2015	High Tide (ft)	5.85
I32	21 Dec 2015	High Tide Time	523
I32	21 Dec 2015	Low Tide (ft)	-0.12
I32	21 Dec 2015	Low Tide Time	1229
I32	21 Dec 2015	Comments	Did not get depth: Repositioned and tried multiple times, possibly due to low tide
I39	04 Dec 2015	Depth (m)	19
I39	04 Dec 2015	Arrive Time	952
I39	04 Dec 2015	Depart Time	955
I39	04 Dec 2015	Air Temp (C)	17
I39	04 Dec 2015	Weather	Partly Cloudy
I39	04 Dec 2015	Visibility (mi)	5
I39	04 Dec 2015	Wind Speed (kts)	2
I39	04 Dec 2015	Wind Dir	S
I39	04 Dec 2015	Water Color	Greenish-Blue
I39	04 Dec 2015	Wave Ht Low (ft)	3
I39	04 Dec 2015	Wave Period (sec)	9
I39	04 Dec 2015	Sea State	Calm
I39	04 Dec 2015	High Tide (ft)	4.46
I39	04 Dec 2015	High Tide Time	435
I39	04 Dec 2015	Low Tide (ft)	1.86
I39	04 Dec 2015	Low Tide Time	1109
I39	04 Dec 2015	Comments	Kelp
I39	09 Dec 2015	Depth (m)	19
I39	09 Dec 2015	Arrive Time	1049
I39	09 Dec 2015	Depart Time	1055
I39	09 Dec 2015	Air Temp (C)	17
I39	09 Dec 2015	Weather	Partly Cloudy
I39	09 Dec 2015	Visibility (mi)	12
I39	09 Dec 2015	Wind Speed (kts)	4
I39	09 Dec 2015	Wind Dir	E
I39	09 Dec 2015	Water Color	Green
I39	09 Dec 2015	Wave Ht Low (ft)	6
I39	09 Dec 2015	Wave Period (sec)	9
I39	09 Dec 2015	Sea State	Calm
I39	09 Dec 2015	High Tide (ft)	5.8
I39	09 Dec 2015	High Tide Time	709
I39	09 Dec 2015	Low Tide (ft)	-0.34
I39	09 Dec 2015	Low Tide Time	1413
I39	09 Dec 2015	Comments	Kelp
I39	15 Dec 2015	Depth (m)	20
I39	15 Dec 2015	Arrive Time	1112
I39	15 Dec 2015	Depart Time	1115

Station	Date	Parameter	Value
I39	15 Dec 2015	Air Temp (C)	14
I39	15 Dec 2015	Weather	Clear
I39	15 Dec 2015	Visibility (mi)	12
I39	15 Dec 2015	Wind Speed (kts)	0
I39	15 Dec 2015	Wind Dir	
I39	15 Dec 2015	Water Color	Green
I39	15 Dec 2015	Wave Ht Low (ft)	6
I39	15 Dec 2015	Wave Period (sec)	11
I39	15 Dec 2015	Sea State	Confused swell
I39	15 Dec 2015	High Tide (ft)	5.23
I39	15 Dec 2015	High Tide Time	1044
I39	15 Dec 2015	Low Tide (ft)	2.24
I39	15 Dec 2015	Low Tide Time	448
I39	15 Dec 2015	Comments	Kelp
I39	17 Dec 2015	Depth (m)	19
I39	17 Dec 2015	Arrive Time	1058
I39	17 Dec 2015	Depart Time	1106
I39	17 Dec 2015	Air Temp (C)	14
I39	17 Dec 2015	Weather	Clear
I39	17 Dec 2015	Visibility (mi)	9
I39	17 Dec 2015	Wind Speed (kts)	5
I39	17 Dec 2015	Wind Dir	S
I39	17 Dec 2015	Water Color	Green
I39	17 Dec 2015	Wave Ht Low (ft)	3
I39	17 Dec 2015	Wave Period (sec)	7
I39	17 Dec 2015	Sea State	Calm
I39	17 Dec 2015	High Tide (ft)	4.14
I39	17 Dec 2015	High Tide Time	1253
I39	17 Dec 2015	Low Tide (ft)	2.32
I39	17 Dec 2015	Low Tide Time	724
I39	17 Dec 2015	Comments	Kelp debris; Lobster floats
I39	21 Dec 2015	Depth (m)	19
I39	21 Dec 2015	Arrive Time	1038
I39	21 Dec 2015	Depart Time	1044
I39	21 Dec 2015	Air Temp (C)	15
I39	21 Dec 2015	Weather	Clear
I39	21 Dec 2015	Visibility (mi)	10
I39	21 Dec 2015	Wind Speed (kts)	4
I39	21 Dec 2015	Wind Dir	SW
I39	21 Dec 2015	Water Color	Green
I39	21 Dec 2015	Wave Ht Low (ft)	4
I39	21 Dec 2015	Wave Period (sec)	7
I39	21 Dec 2015	Sea State	Light chop
I39	21 Dec 2015	High Tide (ft)	5.85
I39	21 Dec 2015	High Tide Time	523
I39	21 Dec 2015	Low Tide (ft)	-0.12
I39	21 Dec 2015	Low Tide Time	1229
I39	21 Dec 2015	Comments	Kelp debris; Lobster floats
I40	04 Dec 2015	Depth (m)	10
I40	04 Dec 2015	Arrive Time	1022
I40	04 Dec 2015	Depart Time	1026
I40	04 Dec 2015	Air Temp (C)	17

Station	Date	Parameter	Value
I40	04 Dec 2015	Weather	Partly Cloudy
I40	04 Dec 2015	Visibility (mi)	12
I40	04 Dec 2015	Wind Speed (kts)	4
I40	04 Dec 2015	Wind Dir	E
I40	04 Dec 2015	Water Color	Greenish-Brown
I40	04 Dec 2015	Wave Ht Low (ft)	3
I40	04 Dec 2015	Wave Period (sec)	11
I40	04 Dec 2015	Sea State	Calm
I40	04 Dec 2015	High Tide (ft)	4.46
I40	04 Dec 2015	High Tide Time	435
I40	04 Dec 2015	Low Tide (ft)	1.86
I40	04 Dec 2015	Low Tide Time	1109
I40	04 Dec 2015	Comments	
I40	09 Dec 2015	Depth (m)	10
I40	09 Dec 2015	Arrive Time	1126
I40	09 Dec 2015	Depart Time	1133
I40	09 Dec 2015	Air Temp (C)	17
I40	09 Dec 2015	Weather	Partly Cloudy
I40	09 Dec 2015	Visibility (mi)	12
I40	09 Dec 2015	Wind Speed (kts)	7
I40	09 Dec 2015	Wind Dir	SE
I40	09 Dec 2015	Water Color	Green
I40	09 Dec 2015	Wave Ht Low (ft)	6
I40	09 Dec 2015	Wave Period (sec)	9
I40	09 Dec 2015	Sea State	Calm
I40	09 Dec 2015	High Tide (ft)	5.8
I40	09 Dec 2015	High Tide Time	709
I40	09 Dec 2015	Low Tide (ft)	-0.34
I40	09 Dec 2015	Low Tide Time	1413
I40	09 Dec 2015	Comments	
I40	15 Dec 2015	Depth (m)	11
I40	15 Dec 2015	Arrive Time	1153
I40	15 Dec 2015	Depart Time	1157
I40	15 Dec 2015	Air Temp (C)	14
I40	15 Dec 2015	Weather	Clear
I40	15 Dec 2015	Visibility (mi)	12
I40	15 Dec 2015	Wind Speed (kts)	9
I40	15 Dec 2015	Wind Dir	S
I40	15 Dec 2015	Water Color	Green
I40	15 Dec 2015	Wave Ht Low (ft)	6
I40	15 Dec 2015	Wave Period (sec)	11
I40	15 Dec 2015	Sea State	Confused swell
I40	15 Dec 2015	High Tide (ft)	5.23
I40	15 Dec 2015	High Tide Time	1044
I40	15 Dec 2015	Low Tide (ft)	2.24
I40	15 Dec 2015	Low Tide Time	448
I40	15 Dec 2015	Comments	
I40	17 Dec 2015	Depth (m)	11
I40	17 Dec 2015	Arrive Time	1134
I40	17 Dec 2015	Depart Time	1143
I40	17 Dec 2015	Air Temp (C)	14
I40	17 Dec 2015	Weather	Clear

Station	Date	Parameter	Value
I40	17 Dec 2015	Visibility (mi)	9
I40	17 Dec 2015	Wind Speed (kts)	7
I40	17 Dec 2015	Wind Dir	NE
I40	17 Dec 2015	Water Color	Green
I40	17 Dec 2015	Wave Ht Low (ft)	3
I40	17 Dec 2015	Wave Period (sec)	7
I40	17 Dec 2015	Sea State	Calm
I40	17 Dec 2015	High Tide (ft)	4.14
I40	17 Dec 2015	High Tide Time	1253
I40	17 Dec 2015	Low Tide (ft)	2.32
I40	17 Dec 2015	Low Tide Time	724
I40	17 Dec 2015	Comments	
I40	21 Dec 2015	Depth (m)	10
I40	21 Dec 2015	Arrive Time	1113
I40	21 Dec 2015	Depart Time	1123
I40	21 Dec 2015	Air Temp (C)	15
I40	21 Dec 2015	Weather	Clear
I40	21 Dec 2015	Visibility (mi)	10
I40	21 Dec 2015	Wind Speed (kts)	6
I40	21 Dec 2015	Wind Dir	N
I40	21 Dec 2015	Water Color	Green
I40	21 Dec 2015	Wave Ht Low (ft)	4
I40	21 Dec 2015	Wave Period (sec)	7
I40	21 Dec 2015	Sea State	Light chop
I40	21 Dec 2015	High Tide (ft)	5.85
I40	21 Dec 2015	High Tide Time	523
I40	21 Dec 2015	Low Tide (ft)	-0.12
I40	21 Dec 2015	Low Tide Time	1229
I40	21 Dec 2015	Comments	

Table 3.10

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

Station	Date	Depth (m)	Temp (°C)	XMS (‰)	DO (mg/L)	Sal (ppt)	pH	Dens (σ -t)	Chlor (μ g/L)
I19	04 Dec 2015	1	17.85	81.85	7.5	33.64	8.2	24.3	1.41
I19	04 Dec 2015	2	17.84	82.21	7.5	33.63	8.2	24.3	1.56
I19	04 Dec 2015	3	17.83	82.07	7.5	33.63	8.2	24.3	1.69
I19	04 Dec 2015	4	17.82	82.43	7.5	33.63	8.2	24.3	1.88
I19	04 Dec 2015	5	17.82	82.53	7.5	33.63	8.2	24.3	1.90
I19	04 Dec 2015	6	17.82	82.50	7.5	33.63	8.2	24.3	2.02
I19	04 Dec 2015	7	17.80	82.18	7.6	33.64	8.2	24.3	1.91
I19	04 Dec 2015	8	17.79	81.55	7.6	33.64	8.2	24.3	1.89
I19	04 Dec 2015	9	17.73	80.44	7.8	33.64	8.2	24.3	1.89
I19	04 Dec 2015	10	17.65	79.52	7.8	33.65	8.2	24.3	1.93
I19	09 Dec 2015	1	18.73	81.94	7.4	33.77	8.2	24.1	1.06
I19	09 Dec 2015	2	18.73	77.40	7.4	33.77	8.2	24.1	1.09
I19	09 Dec 2015	3	18.73	82.26	7.4	33.77	8.2	24.1	1.17
I19	09 Dec 2015	4	18.73	82.84	7.4	33.77	8.2	24.1	1.26
I19	09 Dec 2015	5	18.67	83.06	7.4	33.75	8.2	24.2	1.47
I19	09 Dec 2015	6	18.56	81.37	7.5	33.76	8.2	24.2	1.56
I19	09 Dec 2015	7	18.53	75.67	7.5	33.76	8.2	24.2	1.63
I19	09 Dec 2015	8	18.52	68.98	7.5	33.76	8.2	24.2	1.65
I19	09 Dec 2015	9	18.54	61.51	7.5	33.76	8.2	24.2	1.64
I19	09 Dec 2015	10	18.53	63.14	7.5	33.76	8.2	24.2	1.63
I19	15 Dec 2015	1	17.23	75.72	7.0	33.72	8.2	24.5	0.82
I19	15 Dec 2015	2	17.23	75.77	7.0	33.72	8.2	24.5	0.85
I19	15 Dec 2015	3	17.19	75.46	7.0	33.72	8.2	24.5	1.07
I19	15 Dec 2015	4	17.17	74.54	7.0	33.72	8.2	24.5	1.42
I19	15 Dec 2015	5	17.15	73.73	7.0	33.72	8.2	24.5	1.66
I19	15 Dec 2015	6	17.12	73.81	7.0	33.72	8.2	24.5	1.79
I19	15 Dec 2015	7	17.09	72.91	7.1	33.73	8.2	24.5	1.91
I19	15 Dec 2015	8	17.06	69.92	7.2	33.74	8.2	24.5	1.93
I19	15 Dec 2015	9	16.94	66.71	7.3	33.75	8.2	24.6	1.93
I19	15 Dec 2015	10	16.77	59.35	7.5	33.76	8.2	24.6	1.90
I19	17 Dec 2015	1	16.40	68.15	7.5	33.73	8.1	24.7	1.35
I19	17 Dec 2015	2	16.36	67.75	7.5	33.73	8.1	24.7	1.55
I19	17 Dec 2015	3	16.34	67.18	7.5	33.73	8.1	24.7	1.88
I19	17 Dec 2015	4	16.30	66.94	7.5	33.73	8.1	24.7	2.04
I19	17 Dec 2015	5	16.30	66.67	7.5	33.73	8.1	24.7	2.11
I19	17 Dec 2015	6	16.31	66.54	7.4	33.73	8.1	24.7	2.12
I19	17 Dec 2015	7	16.30	66.51	7.5	33.73	8.1	24.7	2.01
I19	17 Dec 2015	8	16.30	66.26	7.5	33.73	8.1	24.7	1.95
I19	17 Dec 2015	9	16.29	66.37	7.4	33.73	8.1	24.7	1.75
I19	17 Dec 2015	10	16.28	66.24	7.4	33.73	8.1	24.7	1.77
I19	21 Dec 2015	1	16.39	76.89	7.6	33.54	8.1	24.5	1.11
I19	21 Dec 2015	2	16.39	77.11	7.6	33.54	8.1	24.5	1.15
I19	21 Dec 2015	3	16.40	77.26	7.6	33.58	8.1	24.6	1.26
I19	21 Dec 2015	4	16.35	77.36	7.6	33.61	8.1	24.6	1.41
I19	21 Dec 2015	5	16.20	77.47	7.7	33.61	8.1	24.6	1.54
I19	21 Dec 2015	6	16.16	76.18	7.8	33.60	8.1	24.6	1.54
I19	21 Dec 2015	7	16.11	74.82	7.9	33.59	8.1	24.6	1.53

Station	Date	Depth (m)	Temp (°C)	XMS (‰)	DO (mg/L)	Sal (ppt)	pH	Dens (σ -t)	Chlor (μ g/L)
I19	21 Dec 2015	8	16.10	74.38	7.9	33.59	8.1	24.6	1.53
I19	21 Dec 2015	9	16.10	73.71	7.9	33.60	8.1	24.7	1.63
I19	21 Dec 2015	10	16.10	71.90	7.8	33.61	8.1	24.7	1.73
I24	04 Dec 2015	1	17.63	82.86	7.5	33.65	8.2	24.3	0.89
I24	04 Dec 2015	2	17.61	82.81	7.5	33.65	8.2	24.3	1.00
I24	04 Dec 2015	3	17.58	82.58	7.5	33.65	8.2	24.3	1.13
I24	04 Dec 2015	4	17.57	82.19	7.5	33.65	8.2	24.3	1.25
I24	04 Dec 2015	5	17.55	80.81	7.5	33.66	8.2	24.4	1.44
I24	04 Dec 2015	6	17.55	79.72	7.5	33.66	8.2	24.4	1.57
I24	04 Dec 2015	7	17.54	78.61	7.5	33.66	8.2	24.4	1.69
I24	04 Dec 2015	8	17.54	77.09	7.5	33.66	8.2	24.4	1.72
I24	04 Dec 2015	9	17.54	76.48	7.5	33.66	8.2	24.4	1.60
I24	04 Dec 2015	10	17.54	75.84	7.5	33.66	8.2	24.4	1.53
I24	09 Dec 2015	1	18.78	88.48	7.2	33.76	8.2	24.1	0.70
I24	09 Dec 2015	2	18.71	88.89	7.2	33.76	8.2	24.1	0.77
I24	09 Dec 2015	3	18.69	88.95	7.2	33.76	8.2	24.2	0.82
I24	09 Dec 2015	4	18.64	88.91	7.2	33.76	8.2	24.2	0.99
I24	09 Dec 2015	5	18.56	88.83	7.2	33.76	8.2	24.2	1.24
I24	09 Dec 2015	6	18.56	88.31	7.2	33.76	8.2	24.2	1.42
I24	09 Dec 2015	7	18.55	85.96	7.3	33.76	8.2	24.2	1.59
I24	09 Dec 2015	8	18.56	81.19	7.2	33.76	8.2	24.2	1.61
I24	09 Dec 2015	9	18.56	79.08	7.2	33.76	8.2	24.2	1.60
I24	09 Dec 2015	10	18.56	78.36	7.3	33.76	8.2	24.2	1.55
I24	15 Dec 2015	1	17.20	69.75	7.2	33.77	8.2	24.5	0.93
I24	15 Dec 2015	2	17.20	69.82	7.2	33.77	8.2	24.5	0.98
I24	15 Dec 2015	3	17.15	70.32	7.2	33.76	8.2	24.5	1.35
I24	15 Dec 2015	4	16.96	69.97	7.2	33.76	8.2	24.6	1.83
I24	15 Dec 2015	5	16.92	65.47	7.2	33.76	8.2	24.6	1.92
I24	15 Dec 2015	6	16.92	62.24	7.2	33.76	8.2	24.6	1.95
I24	15 Dec 2015	7	16.91	61.56	7.3	33.76	8.2	24.6	1.98
I24	15 Dec 2015	8	16.90	61.59	7.2	33.76	8.2	24.6	1.93
I24	15 Dec 2015	9	16.86	61.13	7.2	33.76	8.2	24.6	1.77
I24	15 Dec 2015	10	16.87	55.55	7.1	33.76	8.2	24.6	1.75
I24	15 Dec 2015	11	16.88	45.90	7.0	33.76	8.2	24.6	1.74
I24	17 Dec 2015	1	16.65	69.51	7.0	33.73	8.1	24.6	1.00
I24	17 Dec 2015	2	16.62	68.90	7.0	33.73	8.1	24.6	1.27
I24	17 Dec 2015	3	16.58	68.76	7.0	33.73	8.1	24.6	1.46
I24	17 Dec 2015	4	16.55	68.67	7.0	33.73	8.1	24.6	1.56
I24	17 Dec 2015	5	16.51	68.23	7.0	33.73	8.1	24.7	1.64
I24	17 Dec 2015	6	16.48	67.71	7.0	33.73	8.1	24.7	1.66
I24	17 Dec 2015	7	16.47	66.32	6.8	33.73	8.1	24.7	1.65
I24	17 Dec 2015	8	16.45	65.13	6.8	33.73	8.1	24.7	1.62
I24	17 Dec 2015	9	16.44	62.22	6.9	33.73	8.1	24.7	1.59
I24	17 Dec 2015	10	16.42	58.33	6.8	33.73	8.1	24.7	1.58
I24	17 Dec 2015	11	16.36	55.06	6.8	33.74	8.1	24.7	1.53
I24	21 Dec 2015	1	16.51	84.90	7.2	33.64	8.1	24.6	0.52
I24	21 Dec 2015	2	16.48	85.90	7.3	33.64	8.1	24.6	0.58
I24	21 Dec 2015	3	16.46	86.21	7.3	33.64	8.1	24.6	0.66
I24	21 Dec 2015	4	16.43	86.14	7.3	33.63	8.1	24.6	0.75
I24	21 Dec 2015	5	16.40	85.73	7.3	33.64	8.1	24.6	0.93

Station	Date	Depth (m)	Temp (°C)	XMS (‰)	DO (mg/L)	Sal (ppt)	pH	Dens (σ -t)	Chlor (μ g/L)
I24	21 Dec 2015	6	16.40	84.87	7.3	33.65	8.1	24.6	1.06
I24	21 Dec 2015	7	16.40	82.65	7.3	33.65	8.1	24.6	1.17
I24	21 Dec 2015	8	16.40	81.96	7.3	33.65	8.1	24.6	1.29
I24	21 Dec 2015	9	16.40	80.00	7.3	33.65	8.1	24.6	1.18
I24	21 Dec 2015	10	16.40	79.03	7.3	33.65	8.1	24.6	1.18
I25	04 Dec 2015	1	17.62	79.30	7.6	33.66	8.2	24.3	1.22
I25	04 Dec 2015	2	17.61	79.30	7.5	33.66	8.2	24.3	1.28
I25	04 Dec 2015	3	17.61	79.54	7.5	33.66	8.2	24.3	1.34
I25	04 Dec 2015	4	17.60	79.17	7.5	33.66	8.2	24.3	1.48
I25	04 Dec 2015	5	17.59	79.30	7.6	33.66	8.2	24.3	1.50
I25	04 Dec 2015	6	17.56	79.67	7.6	33.66	8.2	24.4	1.54
I25	04 Dec 2015	7	17.56	79.70	7.6	33.66	8.2	24.4	1.49
I25	04 Dec 2015	8	17.56	79.82	7.6	33.66	8.2	24.4	1.26
I25	09 Dec 2015	1	18.85	89.97	7.2	33.76	8.2	24.1	0.69
I25	09 Dec 2015	2	18.83	89.94	7.2	33.76	8.2	24.1	0.72
I25	09 Dec 2015	3	18.71	90.17	7.2	33.75	8.2	24.1	0.80
I25	09 Dec 2015	4	18.66	89.97	7.2	33.76	8.2	24.2	0.97
I25	09 Dec 2015	5	18.63	89.73	7.2	33.76	8.2	24.2	1.23
I25	09 Dec 2015	6	18.60	87.97	7.2	33.76	8.2	24.2	1.45
I25	09 Dec 2015	7	18.60	84.30	7.1	33.76	8.2	24.2	1.57
I25	09 Dec 2015	8	18.60	76.31	7.1	33.76	8.2	24.2	1.65
I25	09 Dec 2015	9	18.60	74.74	7.1	33.76	8.2	24.2	1.70
I25	15 Dec 2015	1	17.37	70.76	6.9	33.76	8.2	24.5	0.74
I25	15 Dec 2015	2	17.29	72.73	6.9	33.78	8.2	24.5	0.77
I25	15 Dec 2015	3	17.21	72.33	7.0	33.77	8.2	24.5	0.81
I25	15 Dec 2015	4	17.08	69.09	7.0	33.79	8.2	24.6	0.91
I25	15 Dec 2015	5	17.06	66.55	7.0	33.77	8.2	24.6	1.33
I25	15 Dec 2015	6	17.03	62.30	7.1	33.77	8.2	24.6	1.71
I25	15 Dec 2015	7	16.94	60.90	7.1	33.76	8.2	24.6	1.66
I25	15 Dec 2015	8	16.70	61.75	7.1	33.77	8.2	24.6	1.86
I25	15 Dec 2015	9	16.62	54.99	7.0	33.77	8.2	24.7	1.87
I25	17 Dec 2015	1	16.70	69.47	7.0	33.73	8.1	24.6	0.98
I25	17 Dec 2015	2	16.69	69.25	7.0	33.73	8.1	24.6	1.15
I25	17 Dec 2015	3	16.64	68.92	7.0	33.73	8.1	24.6	1.46
I25	17 Dec 2015	4	16.56	68.37	7.0	33.73	8.1	24.6	1.76
I25	17 Dec 2015	5	16.55	66.49	7.0	33.73	8.1	24.6	1.87
I25	17 Dec 2015	6	16.54	64.49	7.0	33.73	8.1	24.6	1.85
I25	17 Dec 2015	7	16.53	60.19	7.0	33.73	8.1	24.6	1.78
I25	17 Dec 2015	8	16.53	58.63	6.9	33.73	8.1	24.6	1.79
I25	17 Dec 2015	9	16.53	56.57	6.9	33.73	8.1	24.6	1.74
I25	21 Dec 2015	1	16.51	86.38	7.3	33.64	8.1	24.6	0.57
I25	21 Dec 2015	2	16.48	86.11	7.3	33.64	8.1	24.6	0.62
I25	21 Dec 2015	3	16.45	85.65	7.3	33.64	8.1	24.6	0.71
I25	21 Dec 2015	4	16.40	85.51	7.3	33.65	8.1	24.6	0.86
I25	21 Dec 2015	5	16.27	84.06	7.4	33.66	8.1	24.7	1.15
I25	21 Dec 2015	6	16.15	82.91	7.5	33.69	8.1	24.7	1.28
I25	21 Dec 2015	7	16.15	80.24	7.5	33.69	8.1	24.7	1.26
I25	21 Dec 2015	8	16.15	79.13	7.5	33.69	8.1	24.7	1.25
I26	04 Dec 2015	1	17.69	83.98	7.3	33.64	8.2	24.3	0.66

Station	Date	Depth (m)	Temp (°C)	XMS (‰)	DO (mg/L)	Sal (ppt)	pH	Dens (σ -t)	Chlor (μ g/L)
I26	04 Dec 2015	2	17.70	84.04	7.3	33.64	8.2	24.3	0.71
I26	04 Dec 2015	3	17.62	83.90	7.3	33.64	8.2	24.3	0.85
I26	04 Dec 2015	4	17.59	83.58	7.3	33.64	8.2	24.3	0.96
I26	04 Dec 2015	5	17.57	83.00	7.4	33.64	8.2	24.3	1.07
I26	04 Dec 2015	6	17.57	82.65	7.4	33.64	8.2	24.3	1.18
I26	04 Dec 2015	7	17.57	82.08	7.4	33.64	8.2	24.3	1.25
I26	04 Dec 2015	8	17.57	81.25	7.4	33.64	8.2	24.3	1.27
I26	04 Dec 2015	9	17.58	79.92	7.4	33.64	8.2	24.3	1.26
I26	09 Dec 2015	1	18.82	84.78	7.3	33.75	8.2	24.1	1.08
I26	09 Dec 2015	2	18.79	84.82	7.2	33.75	8.2	24.1	1.07
I26	09 Dec 2015	3	18.75	85.02	7.3	33.75	8.2	24.1	1.11
I26	09 Dec 2015	4	18.77	85.82	7.2	33.75	8.2	24.1	1.08
I26	09 Dec 2015	5	18.77	85.64	7.2	33.75	8.2	24.1	1.13
I26	09 Dec 2015	6	18.58	86.20	7.2	33.75	8.2	24.2	1.36
I26	09 Dec 2015	7	18.39	85.96	7.2	33.75	8.2	24.2	1.62
I26	09 Dec 2015	8	18.33	83.02	7.2	33.74	8.2	24.2	1.81
I26	09 Dec 2015	9	18.33	78.54	7.2	33.74	8.2	24.2	1.88
I26	15 Dec 2015	1	17.31	57.45	7.0	33.76	8.2	24.5	0.88
I26	15 Dec 2015	2	17.21	57.88	7.0	33.75	8.2	24.5	1.29
I26	15 Dec 2015	3	17.12	58.07	7.1	33.75	8.2	24.5	1.58
I26	15 Dec 2015	4	17.05	56.42	7.1	33.75	8.2	24.5	1.67
I26	15 Dec 2015	5	17.00	56.58	7.0	33.75	8.2	24.6	1.59
I26	15 Dec 2015	6	16.95	51.64	7.0	33.75	8.2	24.6	1.55
I26	15 Dec 2015	7	16.93	44.04	7.1	33.75	8.2	24.6	1.65
I26	15 Dec 2015	8	16.92	43.42	7.0	33.76	8.2	24.6	1.60
I26	15 Dec 2015	9	16.93	45.19	7.0	33.76	8.2	24.6	1.62
I26	17 Dec 2015	1	16.62	68.69	6.9	33.71	8.1	24.6	1.45
I26	17 Dec 2015	2	16.63	67.81	6.9	33.71	8.1	24.6	1.59
I26	17 Dec 2015	3	16.62	67.59	6.9	33.71	8.1	24.6	1.72
I26	17 Dec 2015	4	16.59	67.42	7.0	33.72	8.1	24.6	1.83
I26	17 Dec 2015	5	16.57	65.72	6.9	33.72	8.1	24.6	1.89
I26	17 Dec 2015	6	16.56	64.56	7.0	33.72	8.1	24.6	1.86
I26	17 Dec 2015	7	16.56	63.98	7.0	33.72	8.1	24.6	1.83
I26	17 Dec 2015	8	16.56	60.81	6.9	33.72	8.1	24.6	1.85
I26	17 Dec 2015	9	16.56	56.68	6.9	33.72	8.1	24.6	1.79
I26	21 Dec 2015	1	16.72	84.13	7.2	33.68	8.1	24.6	0.81
I26	21 Dec 2015	2	16.65	84.10	7.2	33.68	8.1	24.6	0.90
I26	21 Dec 2015	3	16.60	83.73	7.2	33.68	8.1	24.6	1.05
I26	21 Dec 2015	4	16.51	83.15	7.2	33.68	8.1	24.6	1.22
I26	21 Dec 2015	5	16.45	83.92	7.3	33.68	8.1	24.6	1.46
I26	21 Dec 2015	6	16.45	81.29	7.3	33.68	8.1	24.6	1.65
I26	21 Dec 2015	7	16.45	79.98	7.3	33.68	8.1	24.6	1.67
I26	21 Dec 2015	8	16.46	78.19	7.3	33.68	8.1	24.6	1.64
I26	21 Dec 2015	9	16.47	76.53	7.3	33.68	8.1	24.6	1.63
I32	04 Dec 2015	1	17.55	80.26	7.5	33.67	8.2	24.4	1.22
I32	04 Dec 2015	2	17.53	80.53	7.5	33.67	8.2	24.4	1.31
I32	04 Dec 2015	3	17.52	80.49	7.5	33.66	8.2	24.4	1.37
I32	04 Dec 2015	4	17.45	80.45	7.5	33.67	8.2	24.4	1.45
I32	04 Dec 2015	5	17.44	80.40	7.5	33.67	8.2	24.4	1.45
I32	04 Dec 2015	6	17.40	80.30	7.6	33.67	8.2	24.4	1.48

Station	Date	Depth (m)	Temp (°C)	XMS (‰)	DO (mg/L)	Sal (ppt)	pH	Dens (σ -t)	Chlor (μ g/L)
I32	04 Dec 2015	7	17.39	80.06	7.6	33.67	8.2	24.4	1.50
I32	04 Dec 2015	8	17.38	79.95	7.6	33.67	8.2	24.4	1.47
I32	04 Dec 2015	9	17.35	79.84	7.6	33.67	8.2	24.4	1.42
I32	09 Dec 2015	1	18.47	84.72	7.5	33.74	8.2	24.2	0.92
I32	09 Dec 2015	2	18.47	84.46	7.5	33.74	8.2	24.2	1.05
I32	09 Dec 2015	3	18.46	84.55	7.5	33.74	8.2	24.2	1.12
I32	09 Dec 2015	4	18.44	84.31	7.5	33.74	8.2	24.2	1.25
I32	09 Dec 2015	5	18.44	84.11	7.5	33.74	8.2	24.2	1.37
I32	09 Dec 2015	6	18.44	83.98	7.5	33.74	8.2	24.2	1.44
I32	09 Dec 2015	7	18.44	83.86	7.5	33.74	8.2	24.2	1.39
I32	09 Dec 2015	8	18.39	83.60	7.5	33.74	8.2	24.2	1.33
I32	09 Dec 2015	9	18.38	76.72	7.5	33.74	8.2	24.2	1.33
I32	09 Dec 2015	10	18.36	71.96	7.5	33.74	8.2	24.2	1.32
I32	15 Dec 2015	1	17.24	62.48	6.8	33.70	8.2	24.5	1.65
I32	15 Dec 2015	2	17.12	62.46	6.9	33.78	8.2	24.5	1.67
I32	15 Dec 2015	3	17.04	62.04	7.1	33.76	8.2	24.6	1.71
I32	15 Dec 2015	4	17.02	62.38	7.2	33.76	8.2	24.6	1.71
I32	15 Dec 2015	5	17.05	62.63	7.2	33.75	8.2	24.5	1.83
I32	15 Dec 2015	6	17.07	62.94	7.1	33.75	8.2	24.5	1.88
I32	15 Dec 2015	7	17.00	63.03	7.0	33.75	8.2	24.6	1.91
I32	15 Dec 2015	8	16.89	63.02	7.2	33.75	8.2	24.6	1.89
I32	15 Dec 2015	9	16.79	62.36	7.2	33.76	8.2	24.6	1.86
I32	15 Dec 2015	10	16.65	60.04	7.4	33.76	8.2	24.6	1.93
I32	17 Dec 2015	1	16.79	67.01	6.9	33.71	8.1	24.6	1.48
I32	17 Dec 2015	2	16.78	67.09	7.0	33.71	8.1	24.6	1.65
I32	17 Dec 2015	3	16.72	66.83	7.0	33.70	8.1	24.6	2.00
I32	17 Dec 2015	4	16.63	66.93	7.0	33.70	8.1	24.6	2.16
I32	17 Dec 2015	5	16.60	66.57	7.0	33.71	8.1	24.6	2.31
I32	17 Dec 2015	6	16.58	65.18	7.0	33.71	8.1	24.6	2.38
I32	17 Dec 2015	7	16.56	63.16	7.0	33.72	8.1	24.6	2.28
I32	17 Dec 2015	8	16.54	61.71	7.1	33.72	8.1	24.6	2.19
I32	17 Dec 2015	9	16.51	62.47	7.0	33.72	8.1	24.6	2.05
I32	17 Dec 2015	10	16.48	63.24	7.0	33.72	8.1	24.7	1.98
I32	21 Dec 2015	1	16.68	77.21	7.4	33.70	8.1	24.6	0.87
I32	21 Dec 2015	2	16.59	76.55	7.4	33.69	8.1	24.6	1.05
I32	21 Dec 2015	3	16.45	76.92	7.4	33.70	8.1	24.6	1.50
I32	21 Dec 2015	4	16.42	77.05	7.5	33.70	8.1	24.6	1.97
I32	21 Dec 2015	5	16.32	77.36	7.5	33.70	8.1	24.7	2.34
I32	21 Dec 2015	6	16.28	78.96	7.5	33.70	8.1	24.7	2.62
I32	21 Dec 2015	7	16.27	76.31	7.5	33.70	8.1	24.7	2.75
I32	21 Dec 2015	8	16.25	71.12	7.4	33.70	8.1	24.7	2.88
I32	21 Dec 2015	9	16.22	67.93	7.4	33.71	8.1	24.7	3.22
I39	04 Dec 2015	1	17.88	84.72	7.3	33.60	8.2	24.2	0.97
I39	04 Dec 2015	2	17.88	85.20	7.3	33.60	8.2	24.2	1.02
I39	04 Dec 2015	3	17.88	85.69	7.3	33.60	8.2	24.2	1.10
I39	04 Dec 2015	4	17.87	85.67	7.3	33.60	8.2	24.2	1.19
I39	04 Dec 2015	5	17.87	85.63	7.3	33.60	8.2	24.2	1.28
I39	04 Dec 2015	6	17.87	85.63	7.3	33.60	8.2	24.2	1.35
I39	04 Dec 2015	7	17.86	85.54	7.3	33.60	8.2	24.2	1.42
I39	04 Dec 2015	8	17.86	85.50	7.3	33.60	8.2	24.2	1.46

Station	Date	Depth (m)	Temp (°C)	XMS (‰)	DO (mg/L)	Sal (ppt)	pH	Dens (σ -t)	Chlor (μ g/L)
I39	04 Dec 2015	9	17.86	85.58	7.3	33.60	8.2	24.2	1.49
I39	04 Dec 2015	10	17.86	85.54	7.3	33.60	8.2	24.2	1.53
I39	04 Dec 2015	11	17.86	85.50	7.3	33.60	8.2	24.2	1.55
I39	04 Dec 2015	12	17.85	85.39	7.3	33.60	8.2	24.2	1.57
I39	04 Dec 2015	13	17.84	85.31	7.3	33.60	8.2	24.2	1.59
I39	04 Dec 2015	14	17.83	85.39	7.3	33.60	8.2	24.2	1.58
I39	04 Dec 2015	15	17.82	85.32	7.3	33.61	8.2	24.2	1.58
I39	04 Dec 2015	16	17.80	85.28	7.2	33.61	8.2	24.3	1.53
I39	04 Dec 2015	17	17.75	84.82	7.2	33.62	8.2	24.3	1.43
I39	04 Dec 2015	18	17.70	84.57	7.1	33.63	8.2	24.3	1.36
I39	09 Dec 2015	1	18.83	92.27	6.8	33.73	8.2	24.1	0.62
I39	09 Dec 2015	2	18.78	92.28	6.7	33.74	8.2	24.1	0.61
I39	09 Dec 2015	3	18.76	92.05	6.9	33.74	8.2	24.1	0.64
I39	09 Dec 2015	4	18.74	91.87	7.0	33.74	8.2	24.1	0.65
I39	09 Dec 2015	5	18.74	91.81	7.0	33.74	8.2	24.1	0.73
I39	09 Dec 2015	6	18.74	91.35	6.9	33.74	8.2	24.1	0.81
I39	09 Dec 2015	7	18.75	90.78	6.9	33.75	8.2	24.1	0.88
I39	09 Dec 2015	8	18.76	90.30	7.0	33.75	8.2	24.1	0.99
I39	09 Dec 2015	9	18.76	89.65	7.0	33.76	8.2	24.1	1.10
I39	09 Dec 2015	10	18.76	89.55	6.9	33.76	8.2	24.1	1.20
I39	09 Dec 2015	11	18.76	89.52	7.0	33.76	8.2	24.1	1.31
I39	09 Dec 2015	12	18.76	89.45	7.0	33.76	8.2	24.1	1.39
I39	09 Dec 2015	13	18.75	89.40	7.0	33.76	8.2	24.1	1.43
I39	09 Dec 2015	14	18.72	89.44	7.0	33.75	8.2	24.1	1.48
I39	09 Dec 2015	15	18.64	89.65	7.1	33.74	8.2	24.2	1.47
I39	09 Dec 2015	16	18.58	90.30	7.0	33.74	8.2	24.2	1.47
I39	09 Dec 2015	17	18.42	90.40	6.9	33.73	8.2	24.2	1.44
I39	09 Dec 2015	18	18.27	87.94	6.9	33.73	8.2	24.2	1.59
I39	15 Dec 2015	1	17.16	82.51	6.5	33.65	8.2	24.4	0.82
I39	15 Dec 2015	2	17.15	82.22	6.5	33.65	8.2	24.4	0.89
I39	15 Dec 2015	3	17.13	82.48	6.5	33.65	8.2	24.4	0.99
I39	15 Dec 2015	4	17.12	82.60	6.5	33.64	8.2	24.4	1.07
I39	15 Dec 2015	5	17.11	82.44	6.5	33.64	8.2	24.4	1.19
I39	15 Dec 2015	6	17.10	82.28	6.5	33.64	8.2	24.4	1.27
I39	15 Dec 2015	7	17.10	82.17	6.5	33.64	8.2	24.4	1.34
I39	15 Dec 2015	8	17.10	82.60	6.4	33.64	8.2	24.5	1.36
I39	15 Dec 2015	9	17.09	82.50	6.4	33.64	8.2	24.5	1.36
I39	15 Dec 2015	10	17.09	82.54	6.5	33.64	8.2	24.5	1.38
I39	15 Dec 2015	11	17.08	82.81	6.4	33.64	8.2	24.5	1.37
I39	15 Dec 2015	12	17.08	82.57	6.4	33.64	8.2	24.5	1.35
I39	15 Dec 2015	13	17.08	82.52	6.4	33.64	8.2	24.5	1.35
I39	15 Dec 2015	14	17.08	82.75	6.4	33.64	8.2	24.5	1.31
I39	15 Dec 2015	15	17.07	83.04	6.4	33.64	8.2	24.5	1.29
I39	15 Dec 2015	16	17.07	83.11	6.4	33.64	8.2	24.5	1.24
I39	15 Dec 2015	17	17.06	83.20	6.3	33.64	8.2	24.5	1.18
I39	15 Dec 2015	18	16.97	81.63	6.1	33.63	8.2	24.5	1.11
I39	17 Dec 2015	1	16.71	78.49	6.9	33.70	8.1	24.6	1.13
I39	17 Dec 2015	2	16.70	78.24	6.9	33.70	8.1	24.6	1.16
I39	17 Dec 2015	3	16.70	77.97	6.9	33.70	8.1	24.6	1.34
I39	17 Dec 2015	4	16.67	77.82	6.8	33.70	8.1	24.6	1.60
I39	17 Dec 2015	5	16.65	76.82	6.8	33.69	8.1	24.6	1.68
I39	17 Dec 2015	6	16.63	75.98	6.7	33.69	8.1	24.6	1.71

Station	Date	Depth (m)	Temp (°C)	XMS (‰)	DO (mg/L)	Sal (ppt)	pH	Dens (σ -t)	Chlor (μ g/L)
I39	17 Dec 2015	7	16.62	75.51	6.6	33.69	8.1	24.6	1.66
I39	17 Dec 2015	8	16.61	74.56	6.5	33.69	8.1	24.6	1.53
I39	17 Dec 2015	9	16.63	73.87	6.6	33.70	8.1	24.6	1.43
I39	17 Dec 2015	10	16.63	71.44	6.6	33.70	8.1	24.6	1.34
I39	17 Dec 2015	11	16.62	70.42	6.5	33.70	8.1	24.6	1.30
I39	17 Dec 2015	12	16.54	65.35	6.3	33.68	8.1	24.6	1.24
I39	17 Dec 2015	13	16.54	61.26	6.3	33.68	8.1	24.6	1.24
I39	17 Dec 2015	14	16.56	60.22	6.5	33.69	8.1	24.6	1.24
I39	17 Dec 2015	15	16.63	59.58	6.8	33.72	8.1	24.6	1.31
I39	17 Dec 2015	16	16.64	66.42	6.8	33.73	8.1	24.6	1.35
I39	17 Dec 2015	17	16.65	68.91	6.9	33.73	8.1	24.6	1.38
I39	17 Dec 2015	18	16.65	69.56	6.9	33.73	8.1	24.6	1.42
I39	21 Dec 2015	1	16.78	83.52	7.0	33.68	8.1	24.6	0.98
I39	21 Dec 2015	2	16.73	83.32	7.1	33.68	8.1	24.6	1.15
I39	21 Dec 2015	3	16.70	82.58	7.1	33.68	8.1	24.6	1.39
I39	21 Dec 2015	4	16.68	82.49	7.1	33.68	8.1	24.6	1.56
I39	21 Dec 2015	5	16.66	82.50	7.1	33.68	8.1	24.6	1.64
I39	21 Dec 2015	6	16.65	81.68	7.1	33.68	8.1	24.6	1.71
I39	21 Dec 2015	7	16.65	81.30	7.1	33.68	8.1	24.6	1.73
I39	21 Dec 2015	8	16.65	80.21	7.1	33.68	8.1	24.6	1.76
I39	21 Dec 2015	9	16.64	79.29	7.0	33.68	8.1	24.6	1.73
I39	21 Dec 2015	10	16.64	78.46	7.0	33.68	8.1	24.6	1.72
I39	21 Dec 2015	11	16.62	77.67	7.0	33.68	8.1	24.6	1.67
I39	21 Dec 2015	12	16.60	77.74	7.0	33.68	8.1	24.6	1.67
I39	21 Dec 2015	13	16.58	77.72	6.9	33.68	8.1	24.6	1.62
I39	21 Dec 2015	14	16.46	76.42	6.9	33.69	8.1	24.6	1.53
I39	21 Dec 2015	15	16.42	74.72	6.8	33.69	8.1	24.6	1.44
I39	21 Dec 2015	16	16.42	72.20	6.8	33.69	8.1	24.6	1.43
I39	21 Dec 2015	17	16.41	67.66	6.8	33.69	8.1	24.6	1.46
I39	21 Dec 2015	18	16.41	64.16	6.8	33.69	8.1	24.6	1.53
I40	04 Dec 2015	1	17.67	79.49	7.6	33.65	8.2	24.3	1.11
I40	04 Dec 2015	2	17.67	80.16	7.6	33.65	8.2	24.3	1.13
I40	04 Dec 2015	3	17.68	80.19	7.6	33.65	8.2	24.3	1.21
I40	04 Dec 2015	4	17.67	80.27	7.5	33.65	8.2	24.3	1.30
I40	04 Dec 2015	5	17.65	80.32	7.6	33.65	8.2	24.3	1.54
I40	04 Dec 2015	6	17.58	79.18	7.6	33.66	8.2	24.3	1.88
I40	04 Dec 2015	7	17.57	76.41	7.6	33.66	8.2	24.3	1.95
I40	04 Dec 2015	8	17.56	76.96	7.6	33.66	8.2	24.4	2.07
I40	04 Dec 2015	9	17.56	73.55	7.5	33.66	8.2	24.4	2.13
I40	04 Dec 2015	10	17.56	63.39	7.5	33.66	8.2	24.4	2.17
I40	09 Dec 2015	1	18.74	85.78	7.2	33.76	8.2	24.1	0.65
I40	09 Dec 2015	2	18.63	85.66	7.2	33.76	8.2	24.2	0.75
I40	09 Dec 2015	3	18.54	85.58	7.2	33.75	8.2	24.2	0.93
I40	09 Dec 2015	4	18.41	85.20	7.2	33.75	8.2	24.2	1.42
I40	09 Dec 2015	5	18.40	75.34	7.2	33.76	8.2	24.2	1.90
I40	09 Dec 2015	6	18.40	67.88	7.2	33.76	8.2	24.2	2.28
I40	09 Dec 2015	7	18.40	65.45	7.2	33.76	8.2	24.2	2.40
I40	09 Dec 2015	8	18.38	59.76	7.2	33.76	8.2	24.2	2.40
I40	09 Dec 2015	9	18.37	57.58	7.2	33.76	8.2	24.2	2.23
I40	09 Dec 2015	10	18.37	62.63	7.1	33.76	8.2	24.2	2.29
I40	15 Dec 2015	1	17.21	73.74	7.2	33.73	8.2	24.5	0.99

Station	Date	Depth (m)	Temp (°C)	XMS (‰)	DO (mg/L)	Sal (ppt)	pH	Dens (σ -t)	Chlor (μ g/L)
I40	15 Dec 2015	2	17.18	74.05	7.2	33.74	8.2	24.5	1.20
I40	15 Dec 2015	3	17.11	73.35	7.2	33.76	8.2	24.5	1.60
I40	15 Dec 2015	4	17.06	70.23	7.2	33.76	8.2	24.5	1.95
I40	15 Dec 2015	5	17.03	65.80	7.2	33.76	8.2	24.6	1.94
I40	15 Dec 2015	6	16.99	65.36	7.2	33.76	8.2	24.6	1.95
I40	15 Dec 2015	7	16.95	65.87	7.3	33.76	8.2	24.6	2.02
I40	15 Dec 2015	8	16.91	63.79	7.3	33.76	8.2	24.6	2.07
I40	15 Dec 2015	9	16.88	60.49	7.4	33.76	8.2	24.6	2.01
I40	15 Dec 2015	10	16.84	60.09	7.4	33.76	8.2	24.6	1.93
I40	17 Dec 2015	1	16.55	67.21	7.3	33.75	8.1	24.7	1.26
I40	17 Dec 2015	2	16.49	66.50	7.3	33.75	8.1	24.7	1.68
I40	17 Dec 2015	3	16.41	66.15	7.3	33.75	8.1	24.7	2.05
I40	17 Dec 2015	4	16.37	63.29	7.4	33.75	8.1	24.7	2.42
I40	17 Dec 2015	5	16.33	62.38	7.4	33.75	8.1	24.7	2.60
I40	17 Dec 2015	6	16.28	61.31	7.4	33.75	8.1	24.7	2.63
I40	17 Dec 2015	7	16.24	60.52	7.4	33.75	8.1	24.7	2.57
I40	17 Dec 2015	8	16.19	61.20	7.4	33.76	8.1	24.7	2.30
I40	17 Dec 2015	9	16.11	62.64	7.4	33.76	8.1	24.8	2.01
I40	17 Dec 2015	10	16.05	63.76	7.4	33.76	8.1	24.8	1.89
I40	21 Dec 2015	1	16.50	82.04	7.1	33.64	8.1	24.6	0.94
I40	21 Dec 2015	2	16.48	82.16	7.2	33.64	8.1	24.6	0.95
I40	21 Dec 2015	3	16.47	82.21	7.3	33.64	8.1	24.6	0.91
I40	21 Dec 2015	4	16.47	82.12	7.2	33.65	8.1	24.6	0.90
I40	21 Dec 2015	5	16.45	82.48	7.2	33.65	8.1	24.6	0.95
I40	21 Dec 2015	6	16.43	82.79	7.2	33.65	8.1	24.6	1.03
I40	21 Dec 2015	7	16.43	83.06	7.2	33.65	8.1	24.6	1.15
I40	21 Dec 2015	8	16.39	83.29	7.2	33.65	8.1	24.6	1.17
I40	21 Dec 2015	9	16.27	83.18	7.3	33.67	8.1	24.7	1.22
I40	21 Dec 2015	10	16.26	83.45	7.4	33.68	8.1	24.7	1.29

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	04 Dec 2015	6	ZV	LAB DUPLICATE	2e	<2	<2
I19	09 Dec 2015	6	SR	LAB DUPLICATE	<2	<2	<2
I19	15 Dec 2015	6	JT	LAB DUPLICATE	52	2e	2e
I19	17 Dec 2015	6	AR	LAB DUPLICATE	ns	30e	30e
I19	21 Dec 2015	6	JT	LAB DUPLICATE	9800	920	160e
I40	04 Dec 2015	6	ZV	LAB DUPLICATE	<2	<2	<2
I40	09 Dec 2015	6	SR	LAB DUPLICATE	<2	<2	<2
I40	15 Dec 2015	6	JT	LAB DUPLICATE	<2	<2	<2
I40	17 Dec 2015	6	AR	LAB DUPLICATE	360e	14e	4e
I40	21 Dec 2015	6	SR	LAB DUPLICATE	3600e	96	44
S12	01 Dec 2015		JT	FIELD DUPLICATE	<2	<2	<2
S12	01 Dec 2015		JT	LAB DUPLICATE	<2	<2	<2
S12	08 Dec 2015		AR	FIELD DUPLICATE	<20	<2	64
S12	08 Dec 2015		AR	LAB DUPLICATE	<20	2e	52
S12	15 Dec 2015		JT	FIELD DUPLICATE	2e	ns	2e
S12	15 Dec 2015		ZV	FIELD DUPLICATE	ns	<2	ns
S12	15 Dec 2015		JT	LAB DUPLICATE	4e	ns	2e
S12	15 Dec 2015		ZV	LAB DUPLICATE	ns	<2	ns
S12	21 Dec 2015		SR	FIELD DUPLICATE	<20	<2	<2
S12	21 Dec 2015		SR	LAB DUPLICATE	<20	4e	12e
S12	28 Dec 2015		LMA	FIELD DUPLICATE	70	<2	10e
S12	28 Dec 2015		LMA	LAB DUPLICATE	4e	<2	<2

ns = not sampled

