



MONTHLY RECEIVING WATERS MONITORING REPORT FOR THE SOUTH BAY OCEAN OUTFALL

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

APRIL 2016

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



THE CITY OF SAN DIEGO

May 31, 2016

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

Attention: POTW Compliance Unit

Dear Mr. Gibson:

Enclosed is the April 2016 Monthly Receiving Waters Monitoring Report for the South Bay Ocean Outfall, South Bay Water Reclamation Plant as required per Order No. R9-2013-0006, NPDES Permit No. CA0109045.

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

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

Sincerely,

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

TDS/ger

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

Environmental Monitoring and Technical Services Division • Public Utilities

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INTRODUCTION

Monthly reports of water quality and ocean conditions from Playa Blanco, Mexico to Coronado, USA are submitted to the San Diego Regional Water Quality Control Board and U.S. EPA Region 9 in accordance with Order No. R9-2013-0006, NPDES Permit No. CA0109045, for the South Bay Water Reclamation Plant (SBWRP), South Bay Ocean Outfall (SBOO). Order No. R9-2013-0006 superseded Order No. R9-2006-0067 effective April 4, 2013. This report includes receiving waters monitoring data collected from all shore, kelp and offshore stations specified in the above order. Data for influent and effluent monitoring activities for the SBWRP are presented in separate reports.

MATERIALS AND METHODS

Shore Stations

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

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

Kelp Bed Stations

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

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

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

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

Offshore Stations

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

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

Bacteriological Reporting and Quality Assurance

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

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

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

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

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

Single Sample Maximums:

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

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

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

SUMMARY OF RESULTS

➤ **Shoreline Water Quality Sampling**

- Because of site access restrictions in Mexico, the South Bay shoreline sampling is carried out on the same day each week (i.e., Tuesday) in order to coordinate sampling between the Mexican and USA based stations. Seawater samples at the three shore stations located south of the USA/Mexico border (i.e., stations S0, S2 and S3) are presently collected by the Comisión Internacional de Límites y Aguas (CILA) and transported to the IBWC for subsequent delivery to the City's Marine Microbiology Lab, while samples from the eight stations located in USA waters are sampled by City staff.
- During April, all eight shore stations located north of the border were in compliance with all California Ocean Plan (Ocean Plan) water contact standards.
- Although the Ocean Plan standards do not apply to this station, bacteria densities exceeded one or more benchmark levels (i.e., total coliforms >10,000 CFU/100mL; fecal coliforms >400 CFU/100 mL; *Enterococcus* >104 CFU/100 mL; total >1000 CFU/100 mL & F:T ratio >0.1) in the seawater samples collected at station S0 on 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 April included: a sewage-like odor at station S10 on April 12.

➤ **Kelp Bed Water Quality Sampling**

- The seven kelp bed water quality stations (I19, I24, I25, I26, I32, I39, I40) were sampled five times during April (i.e. April 4, 8, 13, 19, 29).
- During April, all seven stations were in compliance with all California Ocean Plan (Ocean Plan) water contact standards.
- Water column temperatures ranged from 12.06 to 18.29°C. The difference between surface and bottom waters ranged from approximately 0.57 to 4.39°C, indicating the water column was stratified at some of these sites during the month.
- Chlorophyll *a* concentrations ranged from 0.56 to 9.75 µg/L at these stations, suggesting the presence of phytoplankton blooms during the month.
- Nothing of sewage origin was observed at any of the kelp bed stations.

➤ **Offshore Water Quality Sampling**

- Quarterly sampling was not conducted during April at the offshore stations. The next quarterly sampling is scheduled for May 2016.



TABLES AND FIGURES

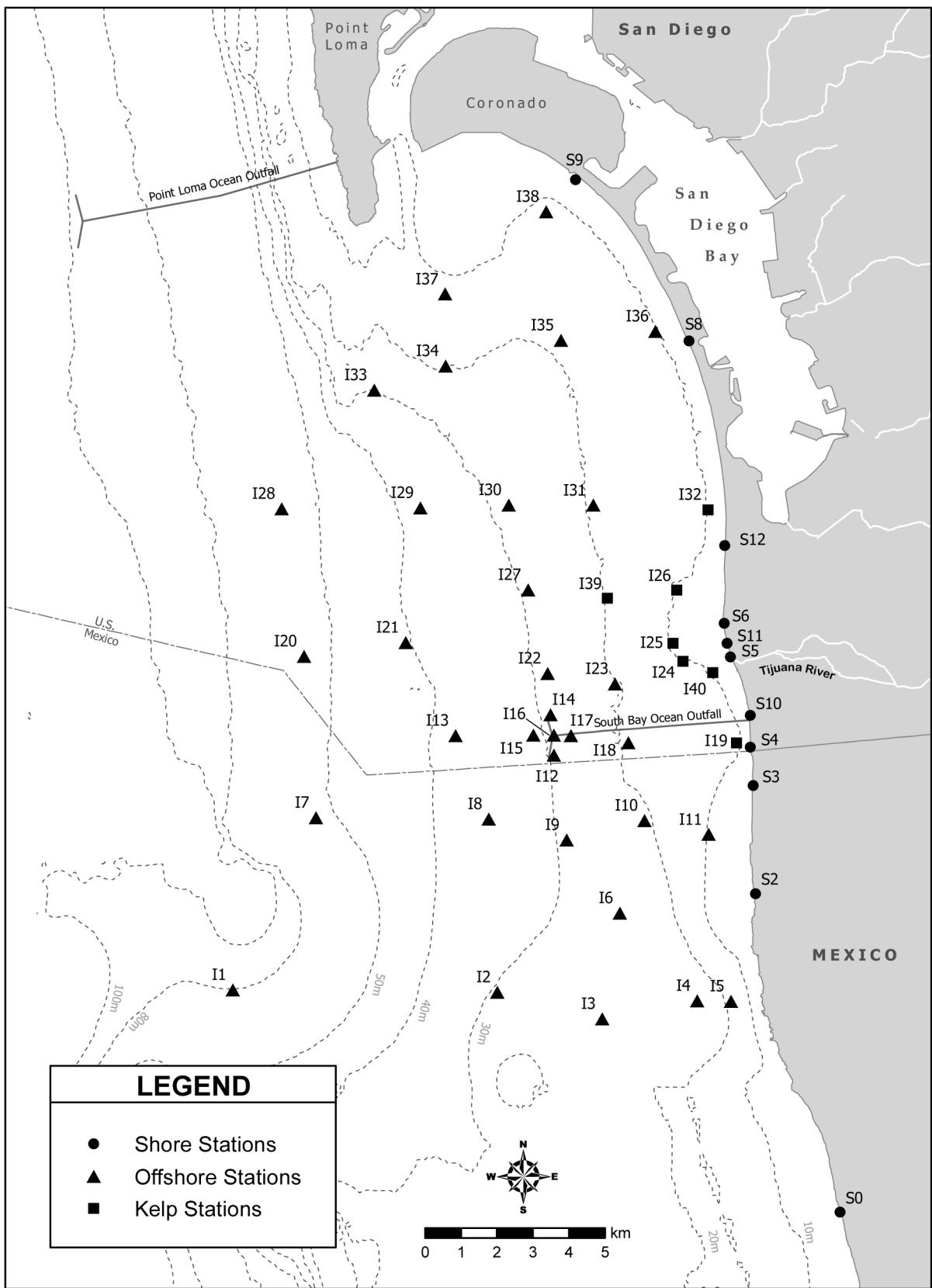


Figure 1.1 Station Map

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 Apr 2016	115*	121	8*	9*	17*	88*	15*	6*
02 Apr 2016	115*	121	8*	9*	17*	88*	15*	6*
03 Apr 2016	115*	121	8*	9*	17*	88*	15*	6*
04 Apr 2016	115*	121	8*	9*	17*	88*	15*	6*
05 Apr 2016	75	61	7	7	11	61	10	5
06 Apr 2016	75	61	7	7	11	61	10	5
07 Apr 2016	39*	67	5*	4*	6*	38*	6*	4*
08 Apr 2016	39*	67	5*	4*	6*	38*	6*	4*
09 Apr 2016	39*	67	5*	4*	6*	38*	6*	4*
10 Apr 2016	39*	67	5*	4*	6*	38*	6*	4*
11 Apr 2016	39*	67	5*	4*	6*	38*	6*	4*
12 Apr 2016	25	90	4	3	5	26	6	3
13 Apr 2016	25	90	4	3	5	26	6	3
14 Apr 2016	12*	32	5*	4*	4*	8*	6*	4*
15 Apr 2016	12*	32	5*	4*	4*	8*	6*	4*
16 Apr 2016	12*	18*	5*	4*	4*	8*	6*	4*
17 Apr 2016	12*	18*	5*	4*	4*	8*	6*	4*
18 Apr 2016	12*	18*	5*	4*	4*	8*	6*	4*
19 Apr 2016	10	11	7	3	3	7	5	4
20 Apr 2016	10	11	7	3	3	7	5	4
21 Apr 2016	8*	10*	5*	2*	2*	5*	4*	2*
22 Apr 2016	8*	10*	5*	2*	2*	5*	4*	2*
23 Apr 2016	8*	10*	5*	2*	2*	5*	4*	2*
24 Apr 2016	8*	10*	5*	2*	2*	5*	4*	2*
25 Apr 2016	8*	10*	5*	2*	2*	5*	4*	2*
26 Apr 2016	7	7	5	2	3	4	5	4
27 Apr 2016	7	7	5	2	3	4	5	4
28 Apr 2016	5*	8*	6*	2*	4*	5*	5*	4*
29 Apr 2016	5*	8*	6*	2*	4*	5*	5*	4*
30 Apr 2016	5*	8*	6*	2*	4*	5*	5*	4*

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

* Geometric mean calculated using n<5

Table 2.4

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

Date	S4	S5	S6	S8	S9	S10	S11	S12
05 Apr 2016	IC	IC	IC	IC	IC	IC	IC	IC
12 Apr 2016	IC	IC	IC	IC	IC	IC	IC	IC
19 Apr 2016	IC	IC	IC	IC	IC	IC	IC	IC
26 Apr 2016	IC	IC	IC	IC	IC	IC	IC	IC

IC = In Compliance

E = Exceedance

ns = not sampled

Table 2.5

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

Date	S4	S5	S6	S8	S9	S10	S11	S12
05 Apr 2016	IC	IC	IC	IC	IC	IC	IC	IC
12 Apr 2016	IC	IC	IC	IC	IC	IC	IC	IC
19 Apr 2016	IC	IC	IC	IC	IC	IC	IC	IC
26 Apr 2016	IC	IC	IC	IC	IC	IC	IC	IC

IC = In Compliance

E = Exceedance

ns = not sampled

Table 2.6

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

Date	S4	S5	S6	S8	S9	S10	S11	S12
05 Apr 2016	IC	IC	IC	IC	IC	IC	IC	IC
12 Apr 2016	IC	IC	IC	IC	IC	IC	IC	IC
19 Apr 2016	IC	IC	IC	IC	IC	IC	IC	IC
26 Apr 2016	IC	IC	IC	IC	IC	IC	IC	IC

IC = In Compliance

E = Exceedance

ns = not sampled

Table 2.7

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

Date	S4	S5	S6	S8	S9	S10	S11	S12
05 Apr 2016	IC	IC	IC	IC	IC	IC	IC	IC
12 Apr 2016	IC	IC	IC	IC	IC	IC	IC	IC
19 Apr 2016	IC	IC	IC	IC	IC	IC	IC	IC
26 Apr 2016	IC	IC	IC	IC	IC	IC	IC	IC

IC = In Compliance

E = Exceedance

ns = not sampled

Table 2.8

Summary of water quality parameters at the SBOO shore stations for each sample date. Densities of total coliform (Total), fecal coliform (Fecal), and *Enterococcus* (Enter) 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	Enter	F:T
S0	05 Apr 2016	1020	960	72	180e	0.07
S0	12 Apr 2016	1020	8e	<2	6e	0.25
S0	19 Apr 2016	1040	4e	<2	6e	0.50
S0	26 Apr 2016	1120	4800	120e	1400e	0.02
S2	05 Apr 2016	1110	20e	<2	12e	0.10
S2	12 Apr 2016	1110	160e	<2	6e	0.01
S2	19 Apr 2016	1115	<2	<2	<2	1.00
S2	26 Apr 2016	1022	24e	2e	42	0.08
S3	05 Apr 2016	1150	12e	<2	4e	0.17
S3	12 Apr 2016	1150	36e	4e	22e	0.11
S3	19 Apr 2016	1210	6e	<2	14e	0.33
S3	26 Apr 2016	935	20e	<2	2e	0.10
S4	05 Apr 2016	816	14e	10e	12e	0.71
S4	12 Apr 2016	1254	4e	<2	<2	0.50
S4	19 Apr 2016	918	4e	<2	<2	0.50
S4	26 Apr 2016	1209	4e	<2	<2	0.50
S5	05 Apr 2016	714	<2	<2	<2	1.00
S5	12 Apr 2016	1101	400	120	42	0.30
S5	19 Apr 2016	1129	2e	<2	<2	1.00
S5	26 Apr 2016	1032	2e	<2	<2	1.00
S6	05 Apr 2016	659	4e	<2	2e	0.50
S6	12 Apr 2016	1044	<2	2e	<2	1.00
S6	19 Apr 2016	1114	<20	<2	<2	0.10
S6	26 Apr 2016	1016	6e	<2	<2	0.33
S8	05 Apr 2016	751	<2	<2	<2	1.00
S8	12 Apr 2016	1008	2e	<2	<2	1.00
S8	19 Apr 2016	1213	<2	<2	<2	1.00
S8	26 Apr 2016	934	2e	<2	<2	1.00
S9	05 Apr 2016	818	2e	<2	<2	1.00
S9	12 Apr 2016	939	<2	<2	<2	1.00
S9	19 Apr 2016	1238	<2	<2	<2	1.00
S9	26 Apr 2016	917	<20	<2	<2	0.10
S10	05 Apr 2016	838	14e	<2	8e	0.14
S10	12 Apr 2016	1248	6e	2e	6e	0.33
S10	19 Apr 2016	925	4e	<2	<2	0.50
S10	26 Apr 2016	1226	<2	<2	<2	1.00
S11	05 Apr 2016	703	<2	<2	2e	1.00
S11	12 Apr 2016	1049	6e	2e	<2	0.33
S11	19 Apr 2016	1121	<2	<2	<2	1.00
S11	26 Apr 2016	1024	<20	6e	4e	0.30

Station	Date	Time	Total	Fecal	Enteric	F:T
S12	05 Apr 2016	644	<2	2e	<2	1.00
S12	12 Apr 2016	1031	2e	<2	4e	1.00
S12	19 Apr 2016	1049	4e	<2	2e	0.50
S12	26 Apr 2016	958	<20	2e	<2	0.10

ns = not sampled

ND = no data

Table 2.9

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

Station	Date	Parameter	Value
S0	05 Apr 2016	Arrive Time	1020
S0	05 Apr 2016	Weather	Cloudy
S0	05 Apr 2016	Wind Speed (kts)	1
S0	05 Apr 2016	Wind Dir	NE
S0	05 Apr 2016	Animal Life	15 Seagulls
S0	05 Apr 2016	Floatables	None
S0	05 Apr 2016	Water Color	Green
S0	05 Apr 2016	Current Direction	NE
S0	05 Apr 2016	Water Temp (C)	15
S0	05 Apr 2016	Wave Height Low (ft)	3.5
S0	05 Apr 2016	High Tide (ft)	5.4
S0	05 Apr 2016	High Tide Time	813
S0	05 Apr 2016	Low Tide (ft)	-0.6
S0	05 Apr 2016	Low Tide Time	1439
S0	05 Apr 2016	Comments	Kelp; Water clear; Flow from stormdrain 0.5L/sec; Trash on the shore
S0	12 Apr 2016	Arrive Time	1020
S0	12 Apr 2016	Weather	Cloudy
S0	12 Apr 2016	Wind Speed (kts)	1
S0	12 Apr 2016	Wind Dir	NE
S0	12 Apr 2016	Animal Life	15 Shorebirds
S0	12 Apr 2016	Floatables	None
S0	12 Apr 2016	Water Color	Green
S0	12 Apr 2016	Current Direction	NE
S0	12 Apr 2016	Water Temp (C)	15
S0	12 Apr 2016	Wave Height Low (ft)	3.5
S0	12 Apr 2016	High Tide (ft)	3.3
S0	12 Apr 2016	High Tide Time	1511
S0	12 Apr 2016	Low Tide (ft)	-0.1
S0	12 Apr 2016	Low Tide Time	828
S0	12 Apr 2016	Comments	Kelp; Water clear; Flow from stormdrain 0.5 L/sec
S0	19 Apr 2016	Arrive Time	1040
S0	19 Apr 2016	Weather	Sunny
S0	19 Apr 2016	Wind Speed (kts)	0.8
S0	19 Apr 2016	Wind Dir	NE
S0	19 Apr 2016	Animal Life	1 Dog
S0	19 Apr 2016	Floatables	None
S0	19 Apr 2016	Water Color	Green
S0	19 Apr 2016	Current Direction	S
S0	19 Apr 2016	Water Temp (C)	15
S0	19 Apr 2016	Wave Height Low (ft)	3.5
S0	19 Apr 2016	High Tide (ft)	4.4
S0	19 Apr 2016	High Tide Time	827
S0	19 Apr 2016	Low Tide (ft)	0.4
S0	19 Apr 2016	Low Tide Time	1435
S0	19 Apr 2016	Comments	Kelp; 5 Persons; Water clear; Flow from stormdrain 0.5 L/sec
S0	26 Apr 2016	Arrive Time	1120
S0	26 Apr 2016	Weather	Sunny

Station	Date	Parameter	Value
S0	26 Apr 2016	Wind Speed (kts)	2.8
S0	26 Apr 2016	Wind Dir	NW
S0	26 Apr 2016	Animal Life	2 Dogs; >20 Seagulls
S0	26 Apr 2016	Floatables	None
S0	26 Apr 2016	Water Color	Green
S0	26 Apr 2016	Current Direction	NW
S0	26 Apr 2016	Water Temp (C)	16.3
S0	26 Apr 2016	Wave Height Low (ft)	2
S0	26 Apr 2016	High Tide (ft)	3.1
S0	26 Apr 2016	High Tide Time	1301
S0	26 Apr 2016	Low Tide (ft)	0.2
S0	26 Apr 2016	Low Tide Time	639
S0	26 Apr 2016	Comments	Kelp; Water turbid; Flow from stormdrain 0.5 L/sec
S2	05 Apr 2016	Arrive Time	1110
S2	05 Apr 2016	Weather	Cloudy
S2	05 Apr 2016	Wind Speed (kts)	1.1
S2	05 Apr 2016	Wind Dir	NE
S2	05 Apr 2016	Animal Life	2 Dogs; 5 Seagulls
S2	05 Apr 2016	Floatables	None
S2	05 Apr 2016	Water Color	Green
S2	05 Apr 2016	Current Direction	NE
S2	05 Apr 2016	Water Temp (C)	15.5
S2	05 Apr 2016	Wave Height Low (ft)	3.5
S2	05 Apr 2016	High Tide (ft)	5.4
S2	05 Apr 2016	High Tide Time	813
S2	05 Apr 2016	Low Tide (ft)	-0.6
S2	05 Apr 2016	Low Tide Time	1439
S2	05 Apr 2016	Comments	Kelp; Water clear; No flow from stormdrain
S2	12 Apr 2016	Arrive Time	1110
S2	12 Apr 2016	Weather	Cloudy
S2	12 Apr 2016	Wind Speed (kts)	1.1
S2	12 Apr 2016	Wind Dir	S
S2	12 Apr 2016	Animal Life	2 Dogs; 5 Seagulls
S2	12 Apr 2016	Floatables	None
S2	12 Apr 2016	Water Color	Green
S2	12 Apr 2016	Current Direction	S
S2	12 Apr 2016	Water Temp (C)	15.5
S2	12 Apr 2016	Wave Height Low (ft)	3.5
S2	12 Apr 2016	High Tide (ft)	3.3
S2	12 Apr 2016	High Tide Time	1511
S2	12 Apr 2016	Low Tide (ft)	-0.1
S2	12 Apr 2016	Low Tide Time	828
S2	12 Apr 2016	Comments	Kelp; Water clear; No flow from stormdrain; Trash on the shore
S2	19 Apr 2016	Arrive Time	1115
S2	19 Apr 2016	Weather	Sunny
S2	19 Apr 2016	Wind Speed (kts)	0.7
S2	19 Apr 2016	Wind Dir	NE
S2	19 Apr 2016	Animal Life	5 Seagulls
S2	19 Apr 2016	Floatables	None
S2	19 Apr 2016	Water Color	Green
S2	19 Apr 2016	Current Direction	S
S2	19 Apr 2016	Water Temp (C)	15

Station	Date	Parameter	Value
S2	19 Apr 2016	Wave Height Low (ft)	3
S2	19 Apr 2016	High Tide (ft)	4.4
S2	19 Apr 2016	High Tide Time	827
S2	19 Apr 2016	Low Tide (ft)	0.4
S2	19 Apr 2016	Low Tide Time	1435
S2	19 Apr 2016	Comments	Kelp; 5 Persons; Water clear; No flow from stormdrain
S2	26 Apr 2016	Arrive Time	1022
S2	26 Apr 2016	Weather	Sunny
S2	26 Apr 2016	Wind Speed (kts)	3.8
S2	26 Apr 2016	Wind Dir	NW
S2	26 Apr 2016	Animal Life	3 Dogs; >20 Seagulls
S2	26 Apr 2016	Floatables	None
S2	26 Apr 2016	Water Color	Green
S2	26 Apr 2016	Current Direction	NW
S2	26 Apr 2016	Water Temp (C)	15.9
S2	26 Apr 2016	Wave Height Low (ft)	2
S2	26 Apr 2016	High Tide (ft)	3.1
S2	26 Apr 2016	High Tide Time	1301
S2	26 Apr 2016	Low Tide (ft)	0.2
S2	26 Apr 2016	Low Tide Time	639
S2	26 Apr 2016	Comments	Kelp; Water turbid; No flow from stormdrain
S3	05 Apr 2016	Arrive Time	1150
S3	05 Apr 2016	Weather	Cloudy
S3	05 Apr 2016	Wind Speed (kts)	1.7
S3	05 Apr 2016	Wind Dir	NE
S3	05 Apr 2016	Animal Life	10 Shorebirds
S3	05 Apr 2016	Floatables	None
S3	05 Apr 2016	Water Color	Green
S3	05 Apr 2016	Current Direction	NE
S3	05 Apr 2016	Water Temp (C)	16.5
S3	05 Apr 2016	Wave Height Low (ft)	3
S3	05 Apr 2016	High Tide (ft)	5.4
S3	05 Apr 2016	High Tide Time	813
S3	05 Apr 2016	Low Tide (ft)	-0.6
S3	05 Apr 2016	Low Tide Time	1439
S3	05 Apr 2016	Comments	Kelp; Water clear; No flow from stormdrain
S3	12 Apr 2016	Arrive Time	1150
S3	12 Apr 2016	Weather	Cloudy
S3	12 Apr 2016	Wind Speed (kts)	1.7
S3	12 Apr 2016	Wind Dir	NE
S3	12 Apr 2016	Animal Life	10 Shorebirds
S3	12 Apr 2016	Floatables	None
S3	12 Apr 2016	Water Color	Green
S3	12 Apr 2016	Current Direction	NE
S3	12 Apr 2016	Water Temp (C)	16.5
S3	12 Apr 2016	Wave Height Low (ft)	3
S3	12 Apr 2016	High Tide (ft)	3.3
S3	12 Apr 2016	High Tide Time	1511
S3	12 Apr 2016	Low Tide (ft)	-0.1
S3	12 Apr 2016	Low Tide Time	828
S3	12 Apr 2016	Comments	Kelp; Water clear; No flow from stormdrain

Station	Date	Parameter	Value
S3	19 Apr 2016	Arrive Time	1210
S3	19 Apr 2016	Weather	Sunny
S3	19 Apr 2016	Wind Speed (kts)	1.1
S3	19 Apr 2016	Wind Dir	SE
S3	19 Apr 2016	Animal Life	None
S3	19 Apr 2016	Floatables	None
S3	19 Apr 2016	Water Color	Green
S3	19 Apr 2016	Current Direction	SE
S3	19 Apr 2016	Water Temp (C)	16
S3	19 Apr 2016	Wave Height Low (ft)	4
S3	19 Apr 2016	High Tide (ft)	4.4
S3	19 Apr 2016	High Tide Time	827
S3	19 Apr 2016	Low Tide (ft)	0.4
S3	19 Apr 2016	Low Tide Time	1435
S3	19 Apr 2016	Comments	Kelp; 5 Persons; Water clear; No flow from stormdrain
S3	26 Apr 2016	Arrive Time	935
S3	26 Apr 2016	Weather	Sunny
S3	26 Apr 2016	Wind Speed (kts)	4.1
S3	26 Apr 2016	Wind Dir	NW
S3	26 Apr 2016	Animal Life	3 Dogs; 2 Seagulls
S3	26 Apr 2016	Floatables	None
S3	26 Apr 2016	Water Color	Green
S3	26 Apr 2016	Current Direction	NW
S3	26 Apr 2016	Water Temp (C)	16
S3	26 Apr 2016	Wave Height Low (ft)	2
S3	26 Apr 2016	High Tide (ft)	3.1
S3	26 Apr 2016	High Tide Time	1301
S3	26 Apr 2016	Low Tide (ft)	0.2
S3	26 Apr 2016	Low Tide Time	639
S3	26 Apr 2016	Comments	Kelp; Water turbid; No flow from stormdrain
S4	05 Apr 2016	Arrive Time	816
S4	05 Apr 2016	Weather	Foggy
S4	05 Apr 2016	Wind Speed (kts)	3.6
S4	05 Apr 2016	Wind Dir	W
S4	05 Apr 2016	Animal Life	None
S4	05 Apr 2016	Floatables	None
S4	05 Apr 2016	Water Color	Green
S4	05 Apr 2016	Current Direction	W
S4	05 Apr 2016	Water Temp (C)	14
S4	05 Apr 2016	Wave Height Low (ft)	3
S4	05 Apr 2016	High Tide (ft)	5.4
S4	05 Apr 2016	High Tide Time	813
S4	05 Apr 2016	Low Tide (ft)	0.3
S4	05 Apr 2016	Low Tide Time	215
S4	05 Apr 2016	Comments	Kelp; Seagrass; 1 Person; Water turbid
S4	12 Apr 2016	Arrive Time	1254
S4	12 Apr 2016	Weather	Sunny
S4	12 Apr 2016	Wind Speed (kts)	6.9
S4	12 Apr 2016	Wind Dir	W
S4	12 Apr 2016	Animal Life	None
S4	12 Apr 2016	Floatables	None
S4	12 Apr 2016	Water Color	Green

Station	Date	Parameter	Value
S4	12 Apr 2016	Current Direction	S
S4	12 Apr 2016	Water Temp (C)	19
S4	12 Apr 2016	Wave Height Low (ft)	2
S4	12 Apr 2016	High Tide (ft)	3.3
S4	12 Apr 2016	High Tide Time	1511
S4	12 Apr 2016	Low Tide (ft)	-0.1
S4	12 Apr 2016	Low Tide Time	828
S4	12 Apr 2016	Comments	Seagrass; Water clear
S4	19 Apr 2016	Arrive Time	918
S4	19 Apr 2016	Weather	Sunny
S4	19 Apr 2016	Wind Speed (kts)	3.1
S4	19 Apr 2016	Wind Dir	SW
S4	19 Apr 2016	Animal Life	None
S4	19 Apr 2016	Floatables	None
S4	19 Apr 2016	Water Color	Green
S4	19 Apr 2016	Current Direction	S
S4	19 Apr 2016	Water Temp (C)	17.6
S4	19 Apr 2016	Wave Height Low (ft)	3
S4	19 Apr 2016	High Tide (ft)	4.4
S4	19 Apr 2016	High Tide Time	827
S4	19 Apr 2016	Low Tide (ft)	0.4
S4	19 Apr 2016	Low Tide Time	1435
S4	19 Apr 2016	Comments	Kelp; Water clear
S4	26 Apr 2016	Arrive Time	1209
S4	26 Apr 2016	Weather	Sunny
S4	26 Apr 2016	Wind Speed (kts)	7.9
S4	26 Apr 2016	Wind Dir	S
S4	26 Apr 2016	Animal Life	None
S4	26 Apr 2016	Floatables	None
S4	26 Apr 2016	Water Color	Green
S4	26 Apr 2016	Current Direction	S
S4	26 Apr 2016	Water Temp (C)	15.4
S4	26 Apr 2016	Wave Height Low (ft)	3
S4	26 Apr 2016	High Tide (ft)	3.1
S4	26 Apr 2016	High Tide Time	1301
S4	26 Apr 2016	Low Tide (ft)	0.2
S4	26 Apr 2016	Low Tide Time	639
S4	26 Apr 2016	Comments	Seagrass; Water clear
S5	05 Apr 2016	Arrive Time	714
S5	05 Apr 2016	Weather	Foggy
S5	05 Apr 2016	Wind Speed (kts)	0.5
S5	05 Apr 2016	Wind Dir	SW
S5	05 Apr 2016	Animal Life	None
S5	05 Apr 2016	Floatables	None
S5	05 Apr 2016	Water Color	Green
S5	05 Apr 2016	Current Direction	S
S5	05 Apr 2016	Water Temp (C)	15
S5	05 Apr 2016	Wave Height Low (ft)	2
S5	05 Apr 2016	High Tide (ft)	5.4
S5	05 Apr 2016	High Tide Time	813
S5	05 Apr 2016	Low Tide (ft)	0.3
S5	05 Apr 2016	Low Tide Time	215

Station	Date	Parameter	Value
S5	05 Apr 2016	Comments	Seagrass; Water clear
S5	12 Apr 2016	Arrive Time	1101
S5	12 Apr 2016	Weather	Sunny
S5	12 Apr 2016	Wind Speed (kts)	3.1
S5	12 Apr 2016	Wind Dir	W
S5	12 Apr 2016	Animal Life	None
S5	12 Apr 2016	Floatables	None
S5	12 Apr 2016	Water Color	Green
S5	12 Apr 2016	Current Direction	S
S5	12 Apr 2016	Water Temp (C)	19.4
S5	12 Apr 2016	Wave Height Low (ft)	2
S5	12 Apr 2016	High Tide (ft)	3.3
S5	12 Apr 2016	High Tide Time	1511
S5	12 Apr 2016	Low Tide (ft)	-0.1
S5	12 Apr 2016	Low Tide Time	828
S5	12 Apr 2016	Comments	Algae; Water clear
S5	19 Apr 2016	Arrive Time	1129
S5	19 Apr 2016	Weather	Sunny
S5	19 Apr 2016	Wind Speed (kts)	4.2
S5	19 Apr 2016	Wind Dir	W
S5	19 Apr 2016	Animal Life	None
S5	19 Apr 2016	Floatables	None
S5	19 Apr 2016	Water Color	Green
S5	19 Apr 2016	Current Direction	S
S5	19 Apr 2016	Water Temp (C)	20.2
S5	19 Apr 2016	Wave Height Low (ft)	3
S5	19 Apr 2016	High Tide (ft)	4.4
S5	19 Apr 2016	High Tide Time	827
S5	19 Apr 2016	Low Tide (ft)	0.4
S5	19 Apr 2016	Low Tide Time	1435
S5	19 Apr 2016	Comments	Seagrass; Water clear
S5	26 Apr 2016	Arrive Time	1032
S5	26 Apr 2016	Weather	Sunny
S5	26 Apr 2016	Wind Speed (kts)	8.7
S5	26 Apr 2016	Wind Dir	S
S5	26 Apr 2016	Animal Life	None
S5	26 Apr 2016	Floatables	None
S5	26 Apr 2016	Water Color	Green
S5	26 Apr 2016	Current Direction	S
S5	26 Apr 2016	Water Temp (C)	14.6
S5	26 Apr 2016	Wave Height Low (ft)	2
S5	26 Apr 2016	High Tide (ft)	3.1
S5	26 Apr 2016	High Tide Time	1301
S5	26 Apr 2016	Low Tide (ft)	0.2
S5	26 Apr 2016	Low Tide Time	639
S5	26 Apr 2016	Comments	Kelp; Seagrass; Water clear
S6	05 Apr 2016	Arrive Time	659
S6	05 Apr 2016	Weather	Foggy
S6	05 Apr 2016	Wind Speed (kts)	1.7
S6	05 Apr 2016	Wind Dir	W
S6	05 Apr 2016	Animal Life	None

Station	Date	Parameter	Value
S6	05 Apr 2016	Floatables	None
S6	05 Apr 2016	Water Color	Green
S6	05 Apr 2016	Current Direction	S
S6	05 Apr 2016	Water Temp (C)	14.4
S6	05 Apr 2016	Wave Height Low (ft)	3
S6	05 Apr 2016	High Tide (ft)	5.4
S6	05 Apr 2016	High Tide Time	813
S6	05 Apr 2016	Low Tide (ft)	0.3
S6	05 Apr 2016	Low Tide Time	215
S6	05 Apr 2016	Comments	Seagrass; Water clear
S6	12 Apr 2016	Arrive Time	1044
S6	12 Apr 2016	Weather	Sunny
S6	12 Apr 2016	Wind Speed (kts)	3.3
S6	12 Apr 2016	Wind Dir	W
S6	12 Apr 2016	Animal Life	None
S6	12 Apr 2016	Floatables	None
S6	12 Apr 2016	Water Color	Green
S6	12 Apr 2016	Current Direction	W
S6	12 Apr 2016	Water Temp (C)	18.8
S6	12 Apr 2016	Wave Height Low (ft)	2
S6	12 Apr 2016	High Tide (ft)	3.3
S6	12 Apr 2016	High Tide Time	1511
S6	12 Apr 2016	Low Tide (ft)	-0.1
S6	12 Apr 2016	Low Tide Time	828
S6	12 Apr 2016	Comments	Kelp; Water clear
S6	19 Apr 2016	Arrive Time	1114
S6	19 Apr 2016	Weather	Sunny
S6	19 Apr 2016	Wind Speed (kts)	4.6
S6	19 Apr 2016	Wind Dir	SW
S6	19 Apr 2016	Animal Life	None
S6	19 Apr 2016	Floatables	None
S6	19 Apr 2016	Water Color	Green
S6	19 Apr 2016	Current Direction	S
S6	19 Apr 2016	Water Temp (C)	19.4
S6	19 Apr 2016	Wave Height Low (ft)	3
S6	19 Apr 2016	High Tide (ft)	4.4
S6	19 Apr 2016	High Tide Time	827
S6	19 Apr 2016	Low Tide (ft)	0.4
S6	19 Apr 2016	Low Tide Time	1435
S6	19 Apr 2016	Comments	Seagrass; 6 Persons; Water clear
S6	26 Apr 2016	Arrive Time	1016
S6	26 Apr 2016	Weather	Sunny
S6	26 Apr 2016	Wind Speed (kts)	7.5
S6	26 Apr 2016	Wind Dir	S
S6	26 Apr 2016	Animal Life	None
S6	26 Apr 2016	Floatables	None
S6	26 Apr 2016	Water Color	Green
S6	26 Apr 2016	Current Direction	S
S6	26 Apr 2016	Water Temp (C)	15.4
S6	26 Apr 2016	Wave Height Low (ft)	3
S6	26 Apr 2016	High Tide (ft)	3.1
S6	26 Apr 2016	High Tide Time	1301

Station	Date	Parameter	Value
S6	26 Apr 2016	Low Tide (ft)	0.2
S6	26 Apr 2016	Low Tide Time	639
S6	26 Apr 2016	Comments	Water clear
S8	05 Apr 2016	Arrive Time	751
S8	05 Apr 2016	Weather	Foggy
S8	05 Apr 2016	Wind Speed (kts)	1.1
S8	05 Apr 2016	Wind Dir	NW
S8	05 Apr 2016	Animal Life	None
S8	05 Apr 2016	Floatables	None
S8	05 Apr 2016	Water Color	Green
S8	05 Apr 2016	Current Direction	NW
S8	05 Apr 2016	Water Temp (C)	15.2
S8	05 Apr 2016	Wave Height Low (ft)	2
S8	05 Apr 2016	High Tide (ft)	5.4
S8	05 Apr 2016	High Tide Time	813
S8	05 Apr 2016	Low Tide (ft)	0.3
S8	05 Apr 2016	Low Tide Time	215
S8	05 Apr 2016	Comments	Seagrass; Water clear
S8	12 Apr 2016	Arrive Time	1008
S8	12 Apr 2016	Weather	Partly Cloudy
S8	12 Apr 2016	Wind Speed (kts)	2.1
S8	12 Apr 2016	Wind Dir	W
S8	12 Apr 2016	Animal Life	1 Seal
S8	12 Apr 2016	Floatables	None
S8	12 Apr 2016	Water Color	Green
S8	12 Apr 2016	Current Direction	S
S8	12 Apr 2016	Water Temp (C)	18.1
S8	12 Apr 2016	Wave Height Low (ft)	3
S8	12 Apr 2016	High Tide (ft)	3.3
S8	12 Apr 2016	High Tide Time	1511
S8	12 Apr 2016	Low Tide (ft)	-0.1
S8	12 Apr 2016	Low Tide Time	828
S8	12 Apr 2016	Comments	Kelp; 2 Persons; Water clear; Beached live elephant seal 20 feet east of water line
S8	19 Apr 2016	Arrive Time	1213
S8	19 Apr 2016	Weather	Sunny
S8	19 Apr 2016	Wind Speed (kts)	4
S8	19 Apr 2016	Wind Dir	N
S8	19 Apr 2016	Animal Life	None
S8	19 Apr 2016	Floatables	None
S8	19 Apr 2016	Water Color	Green
S8	19 Apr 2016	Current Direction	S
S8	19 Apr 2016	Water Temp (C)	18.2
S8	19 Apr 2016	Wave Height Low (ft)	2
S8	19 Apr 2016	High Tide (ft)	4.4
S8	19 Apr 2016	High Tide Time	827
S8	19 Apr 2016	Low Tide (ft)	0.4
S8	19 Apr 2016	Low Tide Time	1435
S8	19 Apr 2016	Comments	Seagrass; Water clear
S8	26 Apr 2016	Arrive Time	934
S8	26 Apr 2016	Weather	Sunny

Station	Date	Parameter	Value
S8	26 Apr 2016	Wind Speed (kts)	6.9
S8	26 Apr 2016	Wind Dir	S
S8	26 Apr 2016	Animal Life	None
S8	26 Apr 2016	Floatables	None
S8	26 Apr 2016	Water Color	Green
S8	26 Apr 2016	Current Direction	S
S8	26 Apr 2016	Water Temp (C)	16.8
S8	26 Apr 2016	Wave Height Low (ft)	4
S8	26 Apr 2016	High Tide (ft)	3.1
S8	26 Apr 2016	High Tide Time	1301
S8	26 Apr 2016	Low Tide (ft)	0.2
S8	26 Apr 2016	Low Tide Time	639
S8	26 Apr 2016	Comments	Kelp; Water clear
S9	05 Apr 2016	Arrive Time	818
S9	05 Apr 2016	Weather	Foggy
S9	05 Apr 2016	Wind Speed (kts)	3.6
S9	05 Apr 2016	Wind Dir	S
S9	05 Apr 2016	Animal Life	None
S9	05 Apr 2016	Floatables	None
S9	05 Apr 2016	Water Color	Green
S9	05 Apr 2016	Current Direction	S
S9	05 Apr 2016	Water Temp (C)	15.2
S9	05 Apr 2016	Wave Height Low (ft)	2
S9	05 Apr 2016	High Tide (ft)	5.4
S9	05 Apr 2016	High Tide Time	813
S9	05 Apr 2016	Low Tide (ft)	0.3
S9	05 Apr 2016	Low Tide Time	215
S9	05 Apr 2016	Comments	Seagrass; 1 Surfer; Water clear
S9	12 Apr 2016	Arrive Time	939
S9	12 Apr 2016	Weather	Partly Cloudy
S9	12 Apr 2016	Wind Speed (kts)	1.5
S9	12 Apr 2016	Wind Dir	W
S9	12 Apr 2016	Animal Life	None
S9	12 Apr 2016	Floatables	None
S9	12 Apr 2016	Water Color	Green
S9	12 Apr 2016	Current Direction	S
S9	12 Apr 2016	Water Temp (C)	17
S9	12 Apr 2016	Wave Height Low (ft)	1
S9	12 Apr 2016	High Tide (ft)	3.3
S9	12 Apr 2016	High Tide Time	1511
S9	12 Apr 2016	Low Tide (ft)	-0.1
S9	12 Apr 2016	Low Tide Time	828
S9	12 Apr 2016	Comments	Seagrass; Water clear
S9	19 Apr 2016	Arrive Time	1238
S9	19 Apr 2016	Weather	Sunny
S9	19 Apr 2016	Wind Speed (kts)	2.1
S9	19 Apr 2016	Wind Dir	W
S9	19 Apr 2016	Animal Life	None
S9	19 Apr 2016	Floatables	None
S9	19 Apr 2016	Water Color	Green
S9	19 Apr 2016	Current Direction	S
S9	19 Apr 2016	Water Temp (C)	19.6

Station	Date	Parameter	Value
S9	19 Apr 2016	Wave Height Low (ft)	2
S9	19 Apr 2016	High Tide (ft)	4.4
S9	19 Apr 2016	High Tide Time	827
S9	19 Apr 2016	Low Tide (ft)	0.4
S9	19 Apr 2016	Low Tide Time	1435
S9	19 Apr 2016	Comments	5 Persons; 1 Surfer; Water clear
S9	26 Apr 2016	Arrive Time	917
S9	26 Apr 2016	Weather	Sunny
S9	26 Apr 2016	Wind Speed (kts)	5.8
S9	26 Apr 2016	Wind Dir	S
S9	26 Apr 2016	Animal Life	None
S9	26 Apr 2016	Floatables	None
S9	26 Apr 2016	Water Color	Green
S9	26 Apr 2016	Current Direction	S
S9	26 Apr 2016	Water Temp (C)	17
S9	26 Apr 2016	Wave Height Low (ft)	2
S9	26 Apr 2016	High Tide (ft)	3.1
S9	26 Apr 2016	High Tide Time	1301
S9	26 Apr 2016	Low Tide (ft)	0.2
S9	26 Apr 2016	Low Tide Time	639
S9	26 Apr 2016	Comments	Seagrass; Water clear
S10	05 Apr 2016	Arrive Time	838
S10	05 Apr 2016	Weather	Foggy
S10	05 Apr 2016	Wind Speed (kts)	2
S10	05 Apr 2016	Wind Dir	W
S10	05 Apr 2016	Animal Life	None
S10	05 Apr 2016	Floatables	None
S10	05 Apr 2016	Water Color	Green
S10	05 Apr 2016	Current Direction	W
S10	05 Apr 2016	Water Temp (C)	14
S10	05 Apr 2016	Wave Height Low (ft)	3
S10	05 Apr 2016	High Tide (ft)	5.4
S10	05 Apr 2016	High Tide Time	813
S10	05 Apr 2016	Low Tide (ft)	-0.6
S10	05 Apr 2016	Low Tide Time	1439
S10	05 Apr 2016	Comments	Kelp; Seagrass; Water turbid
S10	12 Apr 2016	Arrive Time	1248
S10	12 Apr 2016	Weather	Sunny
S10	12 Apr 2016	Wind Speed (kts)	6.2
S10	12 Apr 2016	Wind Dir	W
S10	12 Apr 2016	Animal Life	None
S10	12 Apr 2016	Floatables	None
S10	12 Apr 2016	Water Color	Green
S10	12 Apr 2016	Current Direction	S
S10	12 Apr 2016	Water Temp (C)	17.2
S10	12 Apr 2016	Wave Height Low (ft)	3
S10	12 Apr 2016	High Tide (ft)	3.3
S10	12 Apr 2016	High Tide Time	1511
S10	12 Apr 2016	Low Tide (ft)	-0.1
S10	12 Apr 2016	Low Tide Time	828
S10	12 Apr 2016	Comments	Seagrass; Sewage-like odor; Water clear

Station	Date	Parameter	Value
S10	19 Apr 2016	Arrive Time	925
S10	19 Apr 2016	Weather	Sunny
S10	19 Apr 2016	Wind Speed (kts)	4.2
S10	19 Apr 2016	Wind Dir	SW
S10	19 Apr 2016	Animal Life	None
S10	19 Apr 2016	Floatables	None
S10	19 Apr 2016	Water Color	Green
S10	19 Apr 2016	Current Direction	S
S10	19 Apr 2016	Water Temp (C)	17.8
S10	19 Apr 2016	Wave Height Low (ft)	2
S10	19 Apr 2016	High Tide (ft)	4.4
S10	19 Apr 2016	High Tide Time	827
S10	19 Apr 2016	Low Tide (ft)	0.4
S10	19 Apr 2016	Low Tide Time	1435
S10	19 Apr 2016	Comments	Seagrass; Water clear
S10	26 Apr 2016	Arrive Time	1226
S10	26 Apr 2016	Weather	Sunny
S10	26 Apr 2016	Wind Speed (kts)	7.7
S10	26 Apr 2016	Wind Dir	S
S10	26 Apr 2016	Animal Life	None
S10	26 Apr 2016	Floatables	None
S10	26 Apr 2016	Water Color	Green
S10	26 Apr 2016	Current Direction	S
S10	26 Apr 2016	Water Temp (C)	17.6
S10	26 Apr 2016	Wave Height Low (ft)	3
S10	26 Apr 2016	High Tide (ft)	3.1
S10	26 Apr 2016	High Tide Time	1301
S10	26 Apr 2016	Low Tide (ft)	2.2
S10	26 Apr 2016	Low Tide Time	1733
S10	26 Apr 2016	Comments	Water clear
S11	05 Apr 2016	Arrive Time	703
S11	05 Apr 2016	Weather	Foggy
S11	05 Apr 2016	Wind Speed (kts)	0.9
S11	05 Apr 2016	Wind Dir	SW
S11	05 Apr 2016	Animal Life	None
S11	05 Apr 2016	Floatables	None
S11	05 Apr 2016	Water Color	Green
S11	05 Apr 2016	Current Direction	S
S11	05 Apr 2016	Water Temp (C)	14.6
S11	05 Apr 2016	Wave Height Low (ft)	2
S11	05 Apr 2016	High Tide (ft)	5.4
S11	05 Apr 2016	High Tide Time	813
S11	05 Apr 2016	Low Tide (ft)	0.3
S11	05 Apr 2016	Low Tide Time	215
S11	05 Apr 2016	Comments	Seagrass; 2 Persons; Water clear
S11	12 Apr 2016	Arrive Time	1049
S11	12 Apr 2016	Weather	Sunny
S11	12 Apr 2016	Wind Speed (kts)	3.3
S11	12 Apr 2016	Wind Dir	W
S11	12 Apr 2016	Animal Life	None
S11	12 Apr 2016	Floatables	None
S11	12 Apr 2016	Water Color	Green

Station	Date	Parameter	Value
S11	12 Apr 2016	Current Direction	S
S11	12 Apr 2016	Water Temp (C)	18.6
S11	12 Apr 2016	Wave Height Low (ft)	2
S11	12 Apr 2016	High Tide (ft)	3.3
S11	12 Apr 2016	High Tide Time	1511
S11	12 Apr 2016	Low Tide (ft)	-0.1
S11	12 Apr 2016	Low Tide Time	828
S11	12 Apr 2016	Comments	Kelp; Seagrass; Water clear
S11	19 Apr 2016	Arrive Time	1121
S11	19 Apr 2016	Weather	Sunny
S11	19 Apr 2016	Wind Speed (kts)	3.6
S11	19 Apr 2016	Wind Dir	W
S11	19 Apr 2016	Animal Life	None
S11	19 Apr 2016	Floatables	None
S11	19 Apr 2016	Water Color	Green
S11	19 Apr 2016	Current Direction	S
S11	19 Apr 2016	Water Temp (C)	19.4
S11	19 Apr 2016	Wave Height Low (ft)	3
S11	19 Apr 2016	High Tide (ft)	4.4
S11	19 Apr 2016	High Tide Time	827
S11	19 Apr 2016	Low Tide (ft)	0.4
S11	19 Apr 2016	Low Tide Time	1435
S11	19 Apr 2016	Comments	Seagrass; Water clear
S11	26 Apr 2016	Arrive Time	1024
S11	26 Apr 2016	Weather	Sunny
S11	26 Apr 2016	Wind Speed (kts)	8.5
S11	26 Apr 2016	Wind Dir	S
S11	26 Apr 2016	Animal Life	None
S11	26 Apr 2016	Floatables	None
S11	26 Apr 2016	Water Color	Green
S11	26 Apr 2016	Current Direction	S
S11	26 Apr 2016	Water Temp (C)	15.6
S11	26 Apr 2016	Wave Height Low (ft)	3
S11	26 Apr 2016	High Tide (ft)	3.1
S11	26 Apr 2016	High Tide Time	1301
S11	26 Apr 2016	Low Tide (ft)	0.2
S11	26 Apr 2016	Low Tide Time	639
S11	26 Apr 2016	Comments	Seagrass; Water clear
S12	05 Apr 2016	Arrive Time	644
S12	05 Apr 2016	Weather	Foggy
S12	05 Apr 2016	Wind Speed (kts)	1.1
S12	05 Apr 2016	Wind Dir	W
S12	05 Apr 2016	Animal Life	None
S12	05 Apr 2016	Floatables	None
S12	05 Apr 2016	Water Color	Green
S12	05 Apr 2016	Current Direction	S
S12	05 Apr 2016	Water Temp (C)	13.8
S12	05 Apr 2016	Wave Height Low (ft)	3
S12	05 Apr 2016	High Tide (ft)	5.4
S12	05 Apr 2016	High Tide Time	813
S12	05 Apr 2016	Low Tide (ft)	0.3
S12	05 Apr 2016	Low Tide Time	215

Station	Date	Parameter	Value
S12	05 Apr 2016	Comments	Seagrass; Water clear
S12	12 Apr 2016	Arrive Time	1031
S12	12 Apr 2016	Weather	Partly Cloudy
S12	12 Apr 2016	Wind Speed (kts)	1.5
S12	12 Apr 2016	Wind Dir	W
S12	12 Apr 2016	Animal Life	None
S12	12 Apr 2016	Floatables	None
S12	12 Apr 2016	Water Color	Green
S12	12 Apr 2016	Current Direction	S
S12	12 Apr 2016	Water Temp (C)	18.2
S12	12 Apr 2016	Wave Height Low (ft)	2
S12	12 Apr 2016	High Tide (ft)	3.3
S12	12 Apr 2016	High Tide Time	1511
S12	12 Apr 2016	Low Tide (ft)	-0.1
S12	12 Apr 2016	Low Tide Time	828
S12	12 Apr 2016	Comments	Seagrass; Water clear; White fibrous debris on shore
S12	19 Apr 2016	Arrive Time	1049
S12	19 Apr 2016	Weather	Sunny
S12	19 Apr 2016	Wind Speed (kts)	3.4
S12	19 Apr 2016	Wind Dir	SW
S12	19 Apr 2016	Animal Life	None
S12	19 Apr 2016	Floatables	None
S12	19 Apr 2016	Water Color	Green
S12	19 Apr 2016	Current Direction	SW
S12	19 Apr 2016	Water Temp (C)	19
S12	19 Apr 2016	Wave Height Low (ft)	3
S12	19 Apr 2016	High Tide (ft)	4.4
S12	19 Apr 2016	High Tide Time	827
S12	19 Apr 2016	Low Tide (ft)	0.4
S12	19 Apr 2016	Low Tide Time	1435
S12	19 Apr 2016	Comments	4 Persons; 1 Surfer; Water clear
S12	26 Apr 2016	Arrive Time	958
S12	26 Apr 2016	Weather	Sunny
S12	26 Apr 2016	Wind Speed (kts)	7.3
S12	26 Apr 2016	Wind Dir	S
S12	26 Apr 2016	Animal Life	4 Dogs
S12	26 Apr 2016	Floatables	None
S12	26 Apr 2016	Water Color	Green
S12	26 Apr 2016	Current Direction	S
S12	26 Apr 2016	Water Temp (C)	15.4
S12	26 Apr 2016	Wave Height Low (ft)	3
S12	26 Apr 2016	High Tide (ft)	3.1
S12	26 Apr 2016	High Tide Time	1301
S12	26 Apr 2016	Low Tide (ft)	0.2
S12	26 Apr 2016	Low Tide Time	639
S12	26 Apr 2016	Comments	Kelp; Seagrass; 4 Persons; Water clear

Kelp Stations

Table 3.1

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

Date	I19	I24	I25	I26	I32	I39	I40
01 Apr 2016	46*	11*	3*	6*	6*	4	51*
02 Apr 2016	46*	11*	3*	6*	6*	4	51*
03 Apr 2016	46*	11*	3*	6*	6*	4	51*
04 Apr 2016	25	8	2*	5*	6	5	35
05 Apr 2016	25	8	2*	5*	6	5	35
06 Apr 2016	25	8	2*	5*	6	5	35
07 Apr 2016	25	8	2*	5*	6	5	35
08 Apr 2016	30	9	4	6	7	5	40
09 Apr 2016	25	9	5*	5*	7	6	19
10 Apr 2016	25	9	5*	5*	7	6	19
11 Apr 2016	25	9	5*	5*	7	6	19
12 Apr 2016	25	9	5*	5*	7	6	19
13 Apr 2016	19	7	4	4	6	4	24
14 Apr 2016	19	7	4	4	6	4	24
15 Apr 2016	19	7	4	4	6	4	24
16 Apr 2016	19	7	4	4	6	4	24
17 Apr 2016	19	7	4	4	6	4	24
18 Apr 2016	19	7	4	4	6	4	24
19 Apr 2016	14	6	4	3	5	3	18
20 Apr 2016	14	6	4	3	5	3	18
21 Apr 2016	14	6	4	3	5	3	18
22 Apr 2016	14	6	4	3	5	3	18
23 Apr 2016	14	6	4	3	5	3	18
24 Apr 2016	14	6	4	3	5	3	18
25 Apr 2016	14	6	4	3	5	3	18
26 Apr 2016	14	6	4	3	5	3	18
27 Apr 2016	14	6	4	3	5	3	18
28 Apr 2016	14	6	4	3	5	3	18
29 Apr 2016	13	4	4	3	7	3	17
30 Apr 2016	13	4	4	3	7	3	17

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

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

* Geometric mean calculated using n<5

Table 3.4

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

Date	I19	I24	I25	I26	I32	I39	I40
04 Apr 2016	IC						
08 Apr 2016	IC						
13 Apr 2016	IC						
19 Apr 2016	IC						
29 Apr 2016	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 Apr 2016	IC						
08 Apr 2016	IC						
13 Apr 2016	IC						
19 Apr 2016	IC						
29 Apr 2016	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 Apr 2016	IC						
08 Apr 2016	IC						
13 Apr 2016	IC						
19 Apr 2016	IC						
29 Apr 2016	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 Apr 2016	IC						
08 Apr 2016	IC						
13 Apr 2016	IC						
19 Apr 2016	IC						
29 Apr 2016	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 Apr 2016	1233	2	<2	<2	<2	1.00	16.3	60.18	7.5	33.51	8.1	ns	ns
I19	04 Apr 2016	1233	6	2e	<2	<2	1.00	14.4	67.42	6.3	33.50	8.1	ns	ns
I19	04 Apr 2016	1233	11	2e	<2	<2	1.00	12.8	44.56	4.3	33.52	7.9	ns	ns
I19	08 Apr 2016	1103	2	38e	2e	4e	0.05	15.9	65.72	8.5	33.44	8.2	ns	ns
I19	08 Apr 2016	1103	6	88	6e	12e	0.07	14.7	66.38	7.6	33.49	8.1	ns	ns
I19	08 Apr 2016	1103	11	110	8e	10e	0.07	14.7	68.44	7.4	33.49	8.1	ns	ns
I19	13 Apr 2016	1200	2	160e	12e	<2	0.07	17.6	48.63	7.6	33.33	8.2	ns	ns
I19	13 Apr 2016	1200	6	200e	30e	<2	0.15	17.0	68.43	7.8	33.46	8.2	ns	ns
I19	13 Apr 2016	1200	11	60e	12e	14e	0.20	16.7	49.72	7.1	33.47	8.2	ns	ns
I19	19 Apr 2016	1105	2	<2	<2	<2	1.00	17.2	73.05	8.2	33.52	8.2	ns	ns
I19	19 Apr 2016	1105	6	<2	<2	<2	1.00	16.5	67.92	8.4	33.50	8.2	ns	ns
I19	19 Apr 2016	1105	11	<20	<2	2e	0.10	15.9	57.94	8.0	33.49	8.2	ns	ns
I19	29 Apr 2016	1148	2	<2	<2	<2	1.00	16.7	62.63	8.0	33.55	8.2	ns	ns
I19	29 Apr 2016	1148	6	2e	<2	<2	1.00	14.4	32.60	5.9	33.51	8.1	ns	ns
I19	29 Apr 2016	1148	11	2e	<2	<2	1.00	13.7	19.72	5.4	33.47	8.0	ns	ns
I24	04 Apr 2016	1355	2	<2	<2	<2	1.00	16.6	73.99	7.8	33.54	8.2	ns	ns
I24	04 Apr 2016	1355	6	<2	<2	<2	1.00	14.5	69.10	6.4	33.70	8.1	ns	ns
I24	04 Apr 2016	1355	11	2e	<2	<2	1.00	13.1	45.24	4.5	33.54	7.9	ns	ns
I24	08 Apr 2016	1125	2	<2	<2	<2	1.00	15.7	69.71	8.7	33.47	8.2	ns	ns
I24	08 Apr 2016	1125	6	20e	<2	4e	0.10	14.4	70.99	7.2	33.50	8.1	ns	ns
I24	08 Apr 2016	1125	11	40e	2e	2e	0.05	13.2	74.88	5.6	33.51	8.0	ns	ns
I24	13 Apr 2016	1222	2	2e	<2	<2	1.00	17.9	77.80	8.2	33.48	8.2	ns	ns
I24	13 Apr 2016	1222	6	2e	<2	<2	1.00	17.6	75.66	8.2	33.47	8.2	ns	ns
I24	13 Apr 2016	1222	11	<2	<2	<2	1.00	17.3	65.86	8.0	33.47	8.2	ns	ns
I24	19 Apr 2016	1129	2	<2	<2	<2	1.00	16.8	63.17	8.2	33.52	8.2	ns	ns
I24	19 Apr 2016	1129	6	<2	<2	<2	1.00	15.6	60.34	8.3	33.50	8.2	ns	ns
I24	19 Apr 2016	1129	11	<20	<2	<2	0.10	13.8	54.29	6.2	33.52	8.1	ns	ns
I24	29 Apr 2016	1214	2	<2	<2	<2	1.00	16.6	62.08	8.0	33.54	8.2	ns	ns
I24	29 Apr 2016	1214	6	2e	<2	<2	1.00	15.8	73.99	7.6	33.52	8.2	ns	ns
I24	29 Apr 2016	1214	11	<2	<2	<2	1.00	13.8	65.38	5.7	33.47	8.0	ns	ns
I25	04 Apr 2016	1409	2	<2	<2	<2	1.00	16.6	76.21	8.1	33.52	8.2	ns	ns
I25	04 Apr 2016	1409	6	<2	<2	<2	1.00	14.6	73.64	6.4	33.53	8.1	ns	ns
I25	04 Apr 2016	1409	9	<2	<2	<2	1.00	13.9	68.44	5.6	33.48	8.0	ns	ns
I25	08 Apr 2016	1132	2	4e	<2	<2	0.50	15.9	71.03	8.6	33.46	8.2	ns	ns
I25	08 Apr 2016	1132	6	24e	<2	2e	0.08	13.6	72.10	6.2	33.52	8.1	ns	ns

Station	Date	Time	Depth	Total	Fecal	Enter	F:T	Temp	XMS	DO	Sal	pH	OG	SUSO
I25	08 Apr 2016	1132	9	58	<2	2e	0.03	13.4	74.35	5.8	33.51	8.0	ns	ns
I25	13 Apr 2016	1230	2	<2	<2	<2	1.00	18.0	76.38	8.1	33.47	8.2	ns	ns
I25	13 Apr 2016	1230	6	<2	<2	<2	1.00	17.2	72.82	8.0	33.46	8.2	ns	ns
I25	13 Apr 2016	1230	9	<2	<2	<2	1.00	16.9	68.73	7.9	33.46	8.2	ns	ns
I25	19 Apr 2016	1138	2	<2	<2	<2	1.00	16.7	62.31	8.3	33.51	8.2	ns	ns
I25	19 Apr 2016	1138	6	<2	<2	<2	1.00	15.1	56.44	7.7	33.51	8.2	ns	ns
I25	19 Apr 2016	1138	9	6e	<2	<2	0.33	14.2	57.64	6.7	33.51	8.1	ns	ns
I25	29 Apr 2016	1222	2	<2	<2	<2	1.00	16.7	67.77	8.0	33.55	8.2	ns	ns
I25	29 Apr 2016	1222	6	<2	<2	<2	1.00	16.0	71.34	8.0	33.52	8.2	ns	ns
I25	29 Apr 2016	1222	9	4e	<2	<2	0.50	14.5	69.24	6.2	33.47	8.1	ns	ns
I26	04 Apr 2016	1430	2	<2	<2	<2	1.00	16.5	76.37	8.1	33.51	8.2	ns	ns
I26	04 Apr 2016	1430	6	2e	<2	<2	1.00	15.3	69.24	7.5	33.50	8.2	ns	ns
I26	04 Apr 2016	1430	9	6e	2e	2e	0.33	13.6	72.75	6.0	33.50	8.0	ns	ns
I26	08 Apr 2016	1142	2	<2	<2	<2	1.00	15.4	65.52	8.4	33.47	8.2	ns	ns
I26	08 Apr 2016	1142	6	14e	<2	<2	0.14	14.9	67.65	7.9	33.49	8.2	ns	ns
I26	08 Apr 2016	1142	9	14e	6e	<2	0.43	14.9	68.46	7.9	33.49	8.2	ns	ns
I26	13 Apr 2016	1243	2	<2	<2	<2	1.00	18.0	72.14	8.0	33.47	8.2	ns	ns
I26	13 Apr 2016	1243	6	<2	<2	<2	1.00	16.9	72.64	8.1	33.47	8.2	ns	ns
I26	13 Apr 2016	1243	9	<2	<2	<2	1.00	16.9	72.54	8.1	33.47	8.2	ns	ns
I26	19 Apr 2016	1200	2	<2	<2	<2	1.00	16.6	67.06	8.4	33.52	8.2	ns	ns
I26	19 Apr 2016	1200	6	<2	<2	<2	1.00	15.8	56.18	8.1	33.51	8.2	ns	ns
I26	19 Apr 2016	1200	9	2e	<2	<2	1.00	13.5	71.83	5.8	33.51	8.0	ns	ns
I26	29 Apr 2016	1243	2	<2	<2	<2	1.00	16.9	71.93	8.0	33.55	8.2	ns	ns
I26	29 Apr 2016	1243	6	<2	<2	<2	1.00	16.4	65.06	8.1	33.54	8.2	ns	ns
I26	29 Apr 2016	1243	9	<2	<2	<2	1.00	16.0	64.66	8.1	33.52	8.2	ns	ns
I32	04 Apr 2016	1448	2	<2	<2	2e	1.00	16.5	59.93	7.6	33.52	8.2	ns	ns
I32	04 Apr 2016	1448	6	<2	<2	<2	1.00	16.1	56.30	7.4	33.51	8.1	ns	ns
I32	04 Apr 2016	1448	9	<20	<2	<2	0.10	13.4	51.59	5.4	33.52	8.0	ns	ns
I32	08 Apr 2016	1155	2	<2	<2	<2	1.00	15.6	56.38	8.7	33.42	8.2	ns	ns
I32	08 Apr 2016	1155	6	16e	<2	2e	0.12	15.5	61.02	8.1	33.43	8.2	ns	ns
I32	08 Apr 2016	1155	9	<20	<2	2e	0.10	15.2	60.06	7.6	33.45	8.1	ns	ns
I32	13 Apr 2016	1258	2	<2	<2	<2	1.00	18.3	67.67	8.1	33.45	8.2	ns	ns
I32	13 Apr 2016	1258	6	<2	<2	<2	1.00	17.4	63.89	7.9	33.47	8.2	ns	ns
I32	13 Apr 2016	1258	9	20e	<2	<2	0.10	16.8	49.11	7.8	33.46	8.2	ns	ns
I32	19 Apr 2016	1213	2	<2	<2	2e	1.00	17.3	67.98	8.0	33.53	8.2	ns	ns
I32	19 Apr 2016	1213	6	<2	<2	<2	1.00	16.5	59.25	8.1	33.52	8.2	ns	ns
I32	19 Apr 2016	1213	9	<2	<2	<2	1.00	16.4	60.34	7.9	33.52	8.2	ns	ns
I32	29 Apr 2016	1256	2	<2	<2	<2	1.00	17.4	62.58	8.3	33.56	8.2	ns	ns
I32	29 Apr 2016	1256	6	<20	<2	<2	0.10	17.2	56.50	7.5	33.56	8.2	ns	ns
I32	29 Apr 2016	1256	9	<20	<2	<2	0.10	14.5	32.26	5.8	33.51	8.0	ns	ns
I39	04 Apr 2016	1202	2	<2	<2	<2	1.00	15.9	77.42	7.6	33.43	8.2	ns	ns

Station	Date	Time	Depth	Total	Fecal	Enterο	F:T	Temp	XMS	DO	Sal	pH	OG	SUSO
I39	04 Apr 2016	1202	12	<2	<2	<2	1.00	12.3	79.91	4.7	33.41	7.9	ns	ns
I39	04 Apr 2016	1202	18	6e	<2	<2	0.33	12.1	68.66	4.1	33.45	7.9	ns	ns
I39	08 Apr 2016	1038	2	<2	<2	<2	1.00	16.1	72.18	8.5	33.41	8.2	ns	ns
I39	08 Apr 2016	1038	12	14e	<2	<2	0.14	15.0	69.97	7.7	33.48	8.2	ns	ns
I39	08 Apr 2016	1038	18	14e	<2	<2	0.14	12.3	78.89	4.6	33.55	7.9	ns	ns
I39	13 Apr 2016	1135	2	<2	<2	<2	1.00	17.6	79.25	8.2	33.48	8.2	ns	ns
I39	13 Apr 2016	1135	12	2e	<2	<2	1.00	16.3	79.56	8.3	33.48	8.2	ns	ns
I39	13 Apr 2016	1135	18	2e	<2	<2	1.00	15.6	76.49	7.4	33.48	8.2	ns	ns
I39	19 Apr 2016	1042	2	<2	<2	<2	1.00	16.8	70.59	7.9	33.53	8.2	ns	ns
I39	19 Apr 2016	1042	12	<2	<2	2e	1.00	13.6	79.16	6.2	33.50	8.0	ns	ns
I39	19 Apr 2016	1042	18	<2	<2	<2	1.00	13.0	79.64	5.4	33.53	8.0	ns	ns
I39	29 Apr 2016	1057	2	2e	<2	2e	1.00	16.4	73.84	8.2	33.54	8.2	ns	ns
I39	29 Apr 2016	1057	12	<2	<2	<2	1.00	13.0	74.85	5.2	33.49	8.0	ns	ns
I39	29 Apr 2016	1057	18	<2	<2	<2	1.00	12.6	58.96	4.5	33.52	7.9	ns	ns
I40	04 Apr 2016	1330	2	2e	<2	<2	1.00	16.0	56.70	7.7	33.52	8.1	ns	ns
I40	04 Apr 2016	1330	6	<20	<2	<2	0.10	14.1	52.49	5.2	33.51	8.0	ns	ns
I40	04 Apr 2016	1330	9	<2	<2	<2	1.00	12.8	43.91	4.3	33.53	7.9	ns	ns
I40	08 Apr 2016	1117	2	<20	<2	<2	0.10	15.8	64.77	8.7	33.43	8.2	ns	ns
I40	08 Apr 2016	1117	6	140e	4e	2e	0.03	14.5	69.75	7.3	33.49	8.1	ns	ns
I40	08 Apr 2016	1117	9	54	2e	<2	0.04	14.4	67.19	7.2	33.49	8.1	ns	ns
I40	13 Apr 2016	1213	2	1200e	110	60	0.09	18.0	40.06	7.6	32.62	8.2	ns	ns
I40	13 Apr 2016	1213	6	300e	6e	4e	0.02	17.4	61.35	7.4	33.46	8.2	ns	ns
I40	13 Apr 2016	1213	9	260e	48	12e	0.18	16.8	44.62	6.8	33.46	8.1	ns	ns
I40	19 Apr 2016	1119	2	<2	<2	<2	1.00	16.7	65.78	8.4	33.52	8.2	ns	ns
I40	19 Apr 2016	1119	6	<2	<2	<2	1.00	16.3	61.80	8.4	33.51	8.2	ns	ns
I40	19 Apr 2016	1119	9	2e	<2	<2	1.00	15.9	60.20	8.0	33.50	8.2	ns	ns
I40	29 Apr 2016	1203	2	<2	<2	<2	1.00	16.8	53.14	7.7	33.52	8.2	ns	ns
I40	29 Apr 2016	1203	6	<2	<2	<2	1.00	15.9	50.86	7.2	33.53	8.1	ns	ns
I40	29 Apr 2016	1203	9	<2	2e	<2	1.00	13.6	46.35	5.0	33.47	8.0	ns	ns

ns = not sampled

ND = no data

Table 3.9

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

Station	Date	Parameter	Value
I19	04 Apr 2016	Depth (m)	10
I19	04 Apr 2016	Arrive Time	1233
I19	04 Apr 2016	Depart Time	1317
I19	04 Apr 2016	Air Temp (C)	15
I19	04 Apr 2016	Weather	Clear
I19	04 Apr 2016	Visibility (mi)	10
I19	04 Apr 2016	Wind Speed (kts)	4
I19	04 Apr 2016	Wind Dir	E
I19	04 Apr 2016	Water Color	Green
I19	04 Apr 2016	Wave Ht Low (ft)	2
I19	04 Apr 2016	Wave Period (sec)	9
I19	04 Apr 2016	Sea State	Calm
I19	04 Apr 2016	High Tide (ft)	5.12
I19	04 Apr 2016	High Tide Time	726
I19	04 Apr 2016	Low Tide (ft)	-0.53
I19	04 Apr 2016	Low Tide Time	1402
I19	04 Apr 2016	Comments	Issue with communication to water sampler (SBE55); Collected water with van dorn bottles side davit
I19	08 Apr 2016	Depth (m)	11
I19	08 Apr 2016	Arrive Time	1103
I19	08 Apr 2016	Depart Time	1104
I19	08 Apr 2016	Air Temp (C)	16
I19	08 Apr 2016	Weather	Drizzle
I19	08 Apr 2016	Visibility (mi)	3
I19	08 Apr 2016	Wind Speed (kts)	3
I19	08 Apr 2016	Wind Dir	SW
I19	08 Apr 2016	Water Color	Greenish-Blue
I19	08 Apr 2016	Wave Ht Low (ft)	2
I19	08 Apr 2016	Wave Period (sec)	13
I19	08 Apr 2016	Sea State	Calm
I19	08 Apr 2016	High Tide (ft)	4.92
I19	08 Apr 2016	High Tide Time	1036
I19	08 Apr 2016	Low Tide (ft)	-0.93
I19	08 Apr 2016	Low Tide Time	431
I19	08 Apr 2016	Comments	Kelp debris
I19	13 Apr 2016	Depth (m)	10
I19	13 Apr 2016	Arrive Time	1200
I19	13 Apr 2016	Depart Time	1203
I19	13 Apr 2016	Air Temp (C)	16
I19	13 Apr 2016	Weather	Partly Cloudy
I19	13 Apr 2016	Visibility (mi)	9
I19	13 Apr 2016	Wind Speed (kts)	8
I19	13 Apr 2016	Wind Dir	S
I19	13 Apr 2016	Water Color	Green
I19	13 Apr 2016	Wave Ht Low (ft)	2
I19	13 Apr 2016	Wave Period (sec)	7
I19	13 Apr 2016	Sea State	Calm
I19	13 Apr 2016	High Tide (ft)	3.39
I19	13 Apr 2016	High Tide Time	1657

Station	Date	Parameter	Value
I19	13 Apr 2016	Low Tide (ft)	0.13
I19	13 Apr 2016	Low Tide Time	951
I19	13 Apr 2016	Comments	Boats; 20 to 40 birds offshore off station
I19	19 Apr 2016	Depth (m)	10
I19	19 Apr 2016	Arrive Time	1105
I19	19 Apr 2016	Depart Time	1108
I19	19 Apr 2016	Air Temp (C)	18
I19	19 Apr 2016	Weather	Partly Cloudy
I19	19 Apr 2016	Visibility (mi)	14
I19	19 Apr 2016	Wind Speed (kts)	4
I19	19 Apr 2016	Wind Dir	SE
I19	19 Apr 2016	Water Color	Greenish-Brown
I19	19 Apr 2016	Wave Ht Low (ft)	3
I19	19 Apr 2016	Wave Period (sec)	13
I19	19 Apr 2016	Sea State	Calm
I19	19 Apr 2016	High Tide (ft)	4.41
I19	19 Apr 2016	High Tide Time	827
I19	19 Apr 2016	Low Tide (ft)	0.41
I19	19 Apr 2016	Low Tide Time	1435
I19	19 Apr 2016	Comments	
I19	29 Apr 2016	Depth (m)	10
I19	29 Apr 2016	Arrive Time	1148
I19	29 Apr 2016	Depart Time	1153
I19	29 Apr 2016	Air Temp (C)	15
I19	29 Apr 2016	Weather	Partly Cloudy
I19	29 Apr 2016	Visibility (mi)	8
I19	29 Apr 2016	Wind Speed (kts)	6
I19	29 Apr 2016	Wind Dir	SW
I19	29 Apr 2016	Water Color	Bluish-Green
I19	29 Apr 2016	Wave Ht Low (ft)	5
I19	29 Apr 2016	Wave Period (sec)	9
I19	29 Apr 2016	Sea State	Wind ripples
I19	29 Apr 2016	High Tide (ft)	3.36
I19	29 Apr 2016	High Tide Time	1656
I19	29 Apr 2016	Low Tide (ft)	0.45
I19	29 Apr 2016	Low Tide Time	952
I19	29 Apr 2016	Comments	
I24	04 Apr 2016	Depth (m)	9
I24	04 Apr 2016	Arrive Time	1355
I24	04 Apr 2016	Depart Time	1403
I24	04 Apr 2016	Air Temp (C)	16
I24	04 Apr 2016	Weather	Clear
I24	04 Apr 2016	Visibility (mi)	10
I24	04 Apr 2016	Wind Speed (kts)	8
I24	04 Apr 2016	Wind Dir	NW
I24	04 Apr 2016	Water Color	Green
I24	04 Apr 2016	Wave Ht Low (ft)	2
I24	04 Apr 2016	Wave Period (sec)	9
I24	04 Apr 2016	Sea State	Calm
I24	04 Apr 2016	High Tide (ft)	5.12
I24	04 Apr 2016	High Tide Time	726
I24	04 Apr 2016	Low Tide (ft)	-0.53

Station	Date	Parameter	Value
I24	04 Apr 2016	Low Tide Time	1402
I24	04 Apr 2016	Comments	Collected water sample with Van Dorn bottles from side davit
I24	08 Apr 2016	Depth (m)	11
I24	08 Apr 2016	Arrive Time	1125
I24	08 Apr 2016	Depart Time	1129
I24	08 Apr 2016	Air Temp (C)	16
I24	08 Apr 2016	Weather	Drizzle
I24	08 Apr 2016	Visibility (mi)	3
I24	08 Apr 2016	Wind Speed (kts)	5
I24	08 Apr 2016	Wind Dir	NW
I24	08 Apr 2016	Water Color	Greenish-Blue
I24	08 Apr 2016	Wave Ht Low (ft)	2
I24	08 Apr 2016	Wave Period (sec)	13
I24	08 Apr 2016	Sea State	Calm
I24	08 Apr 2016	High Tide (ft)	4.92
I24	08 Apr 2016	High Tide Time	1036
I24	08 Apr 2016	Low Tide (ft)	-0.93
I24	08 Apr 2016	Low Tide Time	431
I24	08 Apr 2016	Comments	
I24	13 Apr 2016	Depth (m)	9
I24	13 Apr 2016	Arrive Time	1222
I24	13 Apr 2016	Depart Time	1225
I24	13 Apr 2016	Air Temp (C)	16
I24	13 Apr 2016	Weather	Partly Cloudy
I24	13 Apr 2016	Visibility (mi)	9
I24	13 Apr 2016	Wind Speed (kts)	7
I24	13 Apr 2016	Wind Dir	NE
I24	13 Apr 2016	Water Color	Green
I24	13 Apr 2016	Wave Ht Low (ft)	2
I24	13 Apr 2016	Wave Period (sec)	7
I24	13 Apr 2016	Sea State	Calm
I24	13 Apr 2016	High Tide (ft)	3.39
I24	13 Apr 2016	High Tide Time	1657
I24	13 Apr 2016	Low Tide (ft)	0.13
I24	13 Apr 2016	Low Tide Time	951
I24	13 Apr 2016	Comments	
I24	19 Apr 2016	Depth (m)	10
I24	19 Apr 2016	Arrive Time	1129
I24	19 Apr 2016	Depart Time	1131
I24	19 Apr 2016	Air Temp (C)	18
I24	19 Apr 2016	Weather	Partly Cloudy
I24	19 Apr 2016	Visibility (mi)	14
I24	19 Apr 2016	Wind Speed (kts)	4
I24	19 Apr 2016	Wind Dir	SE
I24	19 Apr 2016	Water Color	Greenish-Brown
I24	19 Apr 2016	Wave Ht Low (ft)	2
I24	19 Apr 2016	Wave Period (sec)	13
I24	19 Apr 2016	Sea State	Calm
I24	19 Apr 2016	High Tide (ft)	4.41
I24	19 Apr 2016	High Tide Time	827
I24	19 Apr 2016	Low Tide (ft)	0.41
I24	19 Apr 2016	Low Tide Time	1435

Station	Date	Parameter	Value
I24	19 Apr 2016	Comments	
I24	29 Apr 2016	Depth (m)	10
I24	29 Apr 2016	Arrive Time	1214
I24	29 Apr 2016	Depart Time	1219
I24	29 Apr 2016	Air Temp (C)	15
I24	29 Apr 2016	Weather	Partly Cloudy
I24	29 Apr 2016	Visibility (mi)	8
I24	29 Apr 2016	Wind Speed (kts)	9
I24	29 Apr 2016	Wind Dir	NW
I24	29 Apr 2016	Water Color	Bluish-Green
I24	29 Apr 2016	Wave Ht Low (ft)	5
I24	29 Apr 2016	Wave Period (sec)	9
I24	29 Apr 2016	Sea State	Wind ripples
I24	29 Apr 2016	High Tide (ft)	3.36
I24	29 Apr 2016	High Tide Time	1656
I24	29 Apr 2016	Low Tide (ft)	0.45
I24	29 Apr 2016	Low Tide Time	952
I24	29 Apr 2016	Comments	
I25	04 Apr 2016	Depth (m)	9
I25	04 Apr 2016	Arrive Time	1409
I25	04 Apr 2016	Depart Time	1421
I25	04 Apr 2016	Air Temp (C)	16
I25	04 Apr 2016	Weather	Clear
I25	04 Apr 2016	Visibility (mi)	10
I25	04 Apr 2016	Wind Speed (kts)	10
I25	04 Apr 2016	Wind Dir	S
I25	04 Apr 2016	Water Color	Green
I25	04 Apr 2016	Wave Ht Low (ft)	2
I25	04 Apr 2016	Wave Period (sec)	9
I25	04 Apr 2016	Sea State	Calm
I25	04 Apr 2016	High Tide (ft)	5.12
I25	04 Apr 2016	High Tide Time	726
I25	04 Apr 2016	Low Tide (ft)	-0.53
I25	04 Apr 2016	Low Tide Time	1402
I25	04 Apr 2016	Comments	Water sample collected with Van Dorn bottles from side davit
I25	08 Apr 2016	Depth (m)	9
I25	08 Apr 2016	Arrive Time	1132
I25	08 Apr 2016	Depart Time	1134
I25	08 Apr 2016	Air Temp (C)	16
I25	08 Apr 2016	Weather	Continuous layer of clouds
I25	08 Apr 2016	Visibility (mi)	3
I25	08 Apr 2016	Wind Speed (kts)	4
I25	08 Apr 2016	Wind Dir	E
I25	08 Apr 2016	Water Color	Greenish-Blue
I25	08 Apr 2016	Wave Ht Low (ft)	2
I25	08 Apr 2016	Wave Period (sec)	13
I25	08 Apr 2016	Sea State	Calm
I25	08 Apr 2016	High Tide (ft)	4.92
I25	08 Apr 2016	High Tide Time	1036
I25	08 Apr 2016	Low Tide (ft)	-0.93
I25	08 Apr 2016	Low Tide Time	431
I25	08 Apr 2016	Comments	

Station	Date	Parameter	Value
I25	13 Apr 2016	Depth (m)	10
I25	13 Apr 2016	Arrive Time	1230
I25	13 Apr 2016	Depart Time	1232
I25	13 Apr 2016	Air Temp (C)	16
I25	13 Apr 2016	Weather	Clear
I25	13 Apr 2016	Visibility (mi)	11
I25	13 Apr 2016	Wind Speed (kts)	6
I25	13 Apr 2016	Wind Dir	S
I25	13 Apr 2016	Water Color	Green
I25	13 Apr 2016	Wave Ht Low (ft)	2
I25	13 Apr 2016	Wave Period (sec)	7
I25	13 Apr 2016	Sea State	Calm
I25	13 Apr 2016	High Tide (ft)	3.39
I25	13 Apr 2016	High Tide Time	1657
I25	13 Apr 2016	Low Tide (ft)	0.13
I25	13 Apr 2016	Low Tide Time	951
I25	13 Apr 2016	Comments	Kelp debris
I25	19 Apr 2016	Depth (m)	9
I25	19 Apr 2016	Arrive Time	1138
I25	19 Apr 2016	Depart Time	1159
I25	19 Apr 2016	Air Temp (C)	18
I25	19 Apr 2016	Weather	Partly Cloudy
I25	19 Apr 2016	Visibility (mi)	14
I25	19 Apr 2016	Wind Speed (kts)	5
I25	19 Apr 2016	Wind Dir	E
I25	19 Apr 2016	Water Color	Greenish-Brown
I25	19 Apr 2016	Wave Ht Low (ft)	2
I25	19 Apr 2016	Wave Period (sec)	13
I25	19 Apr 2016	Sea State	Calm
I25	19 Apr 2016	High Tide (ft)	4.41
I25	19 Apr 2016	High Tide Time	827
I25	19 Apr 2016	Low Tide (ft)	0.41
I25	19 Apr 2016	Low Tide Time	1435
I25	19 Apr 2016	Comments	
I25	29 Apr 2016	Depth (m)	9
I25	29 Apr 2016	Arrive Time	1222
I25	29 Apr 2016	Depart Time	1236
I25	29 Apr 2016	Air Temp (C)	15
I25	29 Apr 2016	Weather	Partly Cloudy
I25	29 Apr 2016	Visibility (mi)	8
I25	29 Apr 2016	Wind Speed (kts)	8
I25	29 Apr 2016	Wind Dir	SE
I25	29 Apr 2016	Water Color	Bluish-Green
I25	29 Apr 2016	Wave Ht Low (ft)	5
I25	29 Apr 2016	Wave Period (sec)	9
I25	29 Apr 2016	Sea State	Wind ripples
I25	29 Apr 2016	High Tide (ft)	3.36
I25	29 Apr 2016	High Tide Time	1656
I25	29 Apr 2016	Low Tide (ft)	0.45
I25	29 Apr 2016	Low Tide Time	952
I25	29 Apr 2016	Comments	Kelp

Station	Date	Parameter	Value
I26	04 Apr 2016	Depth (m)	9
I26	04 Apr 2016	Arrive Time	1430
I26	04 Apr 2016	Depart Time	1436
I26	04 Apr 2016	Air Temp (C)	16
I26	04 Apr 2016	Weather	Clear
I26	04 Apr 2016	Visibility (mi)	10
I26	04 Apr 2016	Wind Speed (kts)	7
I26	04 Apr 2016	Wind Dir	S
I26	04 Apr 2016	Water Color	Green
I26	04 Apr 2016	Wave Ht Low (ft)	2
I26	04 Apr 2016	Wave Period (sec)	9
I26	04 Apr 2016	Sea State	Calm
I26	04 Apr 2016	High Tide (ft)	5.12
I26	04 Apr 2016	High Tide Time	726
I26	04 Apr 2016	Low Tide (ft)	-0.53
I26	04 Apr 2016	Low Tide Time	1402
I26	04 Apr 2016	Comments	Sample water collected with Van dorn bottles from side davit
I26	08 Apr 2016	Depth (m)	9
I26	08 Apr 2016	Arrive Time	1142
I26	08 Apr 2016	Depart Time	1144
I26	08 Apr 2016	Air Temp (C)	16
I26	08 Apr 2016	Weather	Continuous layer of clouds
I26	08 Apr 2016	Visibility (mi)	3
I26	08 Apr 2016	Wind Speed (kts)	4
I26	08 Apr 2016	Wind Dir	SW
I26	08 Apr 2016	Water Color	Greenish-Blue
I26	08 Apr 2016	Wave Ht Low (ft)	2
I26	08 Apr 2016	Wave Period (sec)	13
I26	08 Apr 2016	Sea State	Calm
I26	08 Apr 2016	High Tide (ft)	4.92
I26	08 Apr 2016	High Tide Time	1036
I26	08 Apr 2016	Low Tide (ft)	-0.93
I26	08 Apr 2016	Low Tide Time	431
I26	08 Apr 2016	Comments	
I26	13 Apr 2016	Depth (m)	9
I26	13 Apr 2016	Arrive Time	1243
I26	13 Apr 2016	Depart Time	1246
I26	13 Apr 2016	Air Temp (C)	16
I26	13 Apr 2016	Weather	Clear
I26	13 Apr 2016	Visibility (mi)	11
I26	13 Apr 2016	Wind Speed (kts)	9
I26	13 Apr 2016	Wind Dir	N
I26	13 Apr 2016	Water Color	Green
I26	13 Apr 2016	Wave Ht Low (ft)	2
I26	13 Apr 2016	Wave Period (sec)	7
I26	13 Apr 2016	Sea State	Calm
I26	13 Apr 2016	High Tide (ft)	3.39
I26	13 Apr 2016	High Tide Time	1657
I26	13 Apr 2016	Low Tide (ft)	0.13
I26	13 Apr 2016	Low Tide Time	951
I26	13 Apr 2016	Comments	
I26	19 Apr 2016	Depth (m)	9

Station	Date	Parameter	Value
I26	19 Apr 2016	Arrive Time	1200
I26	19 Apr 2016	Depart Time	1202
I26	19 Apr 2016	Air Temp (C)	18
I26	19 Apr 2016	Weather	Partly Cloudy
I26	19 Apr 2016	Visibility (mi)	14
I26	19 Apr 2016	Wind Speed (kts)	4
I26	19 Apr 2016	Wind Dir	SE
I26	19 Apr 2016	Water Color	Greenish-Brown
I26	19 Apr 2016	Wave Ht Low (ft)	2
I26	19 Apr 2016	Wave Period (sec)	13
I26	19 Apr 2016	Sea State	Calm
I26	19 Apr 2016	High Tide (ft)	4.41
I26	19 Apr 2016	High Tide Time	827
I26	19 Apr 2016	Low Tide (ft)	0.41
I26	19 Apr 2016	Low Tide Time	1435
I26	19 Apr 2016	Comments	
I26	29 Apr 2016	Depth (m)	9
I26	29 Apr 2016	Arrive Time	1243
I26	29 Apr 2016	Depart Time	1248
I26	29 Apr 2016	Air Temp (C)	15
I26	29 Apr 2016	Weather	Partly Cloudy
I26	29 Apr 2016	Visibility (mi)	8
I26	29 Apr 2016	Wind Speed (kts)	11
I26	29 Apr 2016	Wind Dir	NE
I26	29 Apr 2016	Water Color	Bluish-Green
I26	29 Apr 2016	Wave Ht Low (ft)	5
I26	29 Apr 2016	Wave Period (sec)	9
I26	29 Apr 2016	Sea State	Wind ripples
I26	29 Apr 2016	High Tide (ft)	3.36
I26	29 Apr 2016	High Tide Time	1656
I26	29 Apr 2016	Low Tide (ft)	0.45
I26	29 Apr 2016	Low Tide Time	952
I26	29 Apr 2016	Comments	
I32	04 Apr 2016	Depth (m)	9
I32	04 Apr 2016	Arrive Time	1448
I32	04 Apr 2016	Depart Time	1453
I32	04 Apr 2016	Air Temp (C)	16
I32	04 Apr 2016	Weather	Clear
I32	04 Apr 2016	Visibility (mi)	10
I32	04 Apr 2016	Wind Speed (kts)	8
I32	04 Apr 2016	Wind Dir	N
I32	04 Apr 2016	Water Color	Green
I32	04 Apr 2016	Wave Ht Low (ft)	2
I32	04 Apr 2016	Wave Period (sec)	9
I32	04 Apr 2016	Sea State	Calm
I32	04 Apr 2016	High Tide (ft)	5.12
I32	04 Apr 2016	High Tide Time	726
I32	04 Apr 2016	Low Tide (ft)	-0.53
I32	04 Apr 2016	Low Tide Time	1402
I32	04 Apr 2016	Comments	Water samples collected with Van Dorn bottles from side davit
I32	08 Apr 2016	Depth (m)	10
I32	08 Apr 2016	Arrive Time	1155

Station	Date	Parameter	Value
I32	08 Apr 2016	Depart Time	1158
I32	08 Apr 2016	Air Temp (C)	16
I32	08 Apr 2016	Weather	Continuous layer of clouds
I32	08 Apr 2016	Visibility (mi)	3
I32	08 Apr 2016	Wind Speed (kts)	5
I32	08 Apr 2016	Wind Dir	NW
I32	08 Apr 2016	Water Color	Greenish-Blue
I32	08 Apr 2016	Wave Ht Low (ft)	2
I32	08 Apr 2016	Wave Period (sec)	13
I32	08 Apr 2016	Sea State	Calm
I32	08 Apr 2016	High Tide (ft)	4.92
I32	08 Apr 2016	High Tide Time	1036
I32	08 Apr 2016	Low Tide (ft)	-0.93
I32	08 Apr 2016	Low Tide Time	431
I32	08 Apr 2016	Comments	
I32	13 Apr 2016	Depth (m)	9
I32	13 Apr 2016	Arrive Time	1258
I32	13 Apr 2016	Depart Time	1306
I32	13 Apr 2016	Air Temp (C)	16
I32	13 Apr 2016	Weather	Clear
I32	13 Apr 2016	Visibility (mi)	12
I32	13 Apr 2016	Wind Speed (kts)	10
I32	13 Apr 2016	Wind Dir	NE
I32	13 Apr 2016	Water Color	Green
I32	13 Apr 2016	Wave Ht Low (ft)	2
I32	13 Apr 2016	Wave Period (sec)	7
I32	13 Apr 2016	Sea State	Calm
I32	13 Apr 2016	High Tide (ft)	3.39
I32	13 Apr 2016	High Tide Time	1657
I32	13 Apr 2016	Low Tide (ft)	0.13
I32	13 Apr 2016	Low Tide Time	951
I32	13 Apr 2016	Comments	
I32	19 Apr 2016	Depth (m)	9
I32	19 Apr 2016	Arrive Time	1213
I32	19 Apr 2016	Depart Time	1215
I32	19 Apr 2016	Air Temp (C)	18
I32	19 Apr 2016	Weather	Partly Cloudy
I32	19 Apr 2016	Visibility (mi)	14
I32	19 Apr 2016	Wind Speed (kts)	5
I32	19 Apr 2016	Wind Dir	NE
I32	19 Apr 2016	Water Color	Green
I32	19 Apr 2016	Wave Ht Low (ft)	2
I32	19 Apr 2016	Wave Period (sec)	13
I32	19 Apr 2016	Sea State	Calm
I32	19 Apr 2016	High Tide (ft)	4.41
I32	19 Apr 2016	High Tide Time	827
I32	19 Apr 2016	Low Tide (ft)	0.41
I32	19 Apr 2016	Low Tide Time	1435
I32	19 Apr 2016	Comments	
I32	29 Apr 2016	Depth (m)	9
I32	29 Apr 2016	Arrive Time	1256
I32	29 Apr 2016	Depart Time	1304

Station	Date	Parameter	Value
I32	29 Apr 2016	Air Temp (C)	15
I32	29 Apr 2016	Weather	Partly Cloudy
I32	29 Apr 2016	Visibility (mi)	8
I32	29 Apr 2016	Wind Speed (kts)	10
I32	29 Apr 2016	Wind Dir	SW
I32	29 Apr 2016	Water Color	Bluish-Green
I32	29 Apr 2016	Wave Ht Low (ft)	5
I32	29 Apr 2016	Wave Period (sec)	9
I32	29 Apr 2016	Sea State	Wind ripples
I32	29 Apr 2016	High Tide (ft)	3.36
I32	29 Apr 2016	High Tide Time	1656
I32	29 Apr 2016	Low Tide (ft)	0.45
I32	29 Apr 2016	Low Tide Time	952
I32	29 Apr 2016	Comments	Kelp debris
I39	04 Apr 2016	Depth (m)	18
I39	04 Apr 2016	Arrive Time	1202
I39	04 Apr 2016	Depart Time	1213
I39	04 Apr 2016	Air Temp (C)	15
I39	04 Apr 2016	Weather	Clear
I39	04 Apr 2016	Visibility (mi)	10
I39	04 Apr 2016	Wind Speed (kts)	7
I39	04 Apr 2016	Wind Dir	E
I39	04 Apr 2016	Water Color	Green
I39	04 Apr 2016	Wave Ht Low (ft)	2
I39	04 Apr 2016	Wave Period (sec)	9
I39	04 Apr 2016	Sea State	Calm
I39	04 Apr 2016	High Tide (ft)	5.12
I39	04 Apr 2016	High Tide Time	726
I39	04 Apr 2016	Low Tide (ft)	-0.53
I39	04 Apr 2016	Low Tide Time	1402
I39	04 Apr 2016	Comments	
I39	08 Apr 2016	Depth (m)	19
I39	08 Apr 2016	Arrive Time	1038
I39	08 Apr 2016	Depart Time	1040
I39	08 Apr 2016	Air Temp (C)	16
I39	08 Apr 2016	Weather	Drizzle
I39	08 Apr 2016	Visibility (mi)	3
I39	08 Apr 2016	Wind Speed (kts)	3
I39	08 Apr 2016	Wind Dir	W
I39	08 Apr 2016	Water Color	Greenish-Blue
I39	08 Apr 2016	Wave Ht Low (ft)	2
I39	08 Apr 2016	Wave Period (sec)	13
I39	08 Apr 2016	Sea State	Calm
I39	08 Apr 2016	High Tide (ft)	4.92
I39	08 Apr 2016	High Tide Time	1036
I39	08 Apr 2016	Low Tide (ft)	-0.93
I39	08 Apr 2016	Low Tide Time	431
I39	08 Apr 2016	Comments	
I39	13 Apr 2016	Depth (m)	18
I39	13 Apr 2016	Arrive Time	1135
I39	13 Apr 2016	Depart Time	1138
I39	13 Apr 2016	Air Temp (C)	16

Station	Date	Parameter	Value
I39	13 Apr 2016	Weather	Partly Cloudy
I39	13 Apr 2016	Visibility (mi)	9
I39	13 Apr 2016	Wind Speed (kts)	7
I39	13 Apr 2016	Wind Dir	SE
I39	13 Apr 2016	Water Color	Green
I39	13 Apr 2016	Wave Ht Low (ft)	2
I39	13 Apr 2016	Wave Period (sec)	7
I39	13 Apr 2016	Sea State	Calm
I39	13 Apr 2016	High Tide (ft)	3.39
I39	13 Apr 2016	High Tide Time	1657
I39	13 Apr 2016	Low Tide (ft)	0.13
I39	13 Apr 2016	Low Tide Time	951
I39	13 Apr 2016	Comments	
I39	19 Apr 2016	Depth (m)	18
I39	19 Apr 2016	Arrive Time	1042
I39	19 Apr 2016	Depart Time	1045
I39	19 Apr 2016	Air Temp (C)	18
I39	19 Apr 2016	Weather	Partly Cloudy
I39	19 Apr 2016	Visibility (mi)	14
I39	19 Apr 2016	Wind Speed (kts)	7
I39	19 Apr 2016	Wind Dir	SW
I39	19 Apr 2016	Water Color	Greenish-Brown
I39	19 Apr 2016	Wave Ht Low (ft)	3
I39	19 Apr 2016	Wave Period (sec)	13
I39	19 Apr 2016	Sea State	Calm
I39	19 Apr 2016	High Tide (ft)	4.41
I39	19 Apr 2016	High Tide Time	827
I39	19 Apr 2016	Low Tide (ft)	0.41
I39	19 Apr 2016	Low Tide Time	1435
I39	19 Apr 2016	Comments	
I39	29 Apr 2016	Depth (m)	18
I39	29 Apr 2016	Arrive Time	1057
I39	29 Apr 2016	Depart Time	1132
I39	29 Apr 2016	Air Temp (C)	15
I39	29 Apr 2016	Weather	Partly Cloudy
I39	29 Apr 2016	Visibility (mi)	8
I39	29 Apr 2016	Wind Speed (kts)	8
I39	29 Apr 2016	Wind Dir	SW
I39	29 Apr 2016	Water Color	Bluish-Green
I39	29 Apr 2016	Wave Ht Low (ft)	5
I39	29 Apr 2016	Wave Period (sec)	9
I39	29 Apr 2016	Sea State	Wind ripples
I39	29 Apr 2016	High Tide (ft)	3.36
I39	29 Apr 2016	High Tide Time	1656
I39	29 Apr 2016	Low Tide (ft)	0.45
I39	29 Apr 2016	Low Tide Time	952
I39	29 Apr 2016	Comments	
I40	04 Apr 2016	Depth (m)	9
I40	04 Apr 2016	Arrive Time	1330
I40	04 Apr 2016	Depart Time	1349
I40	04 Apr 2016	Air Temp (C)	16
I40	04 Apr 2016	Weather	Clear

Station	Date	Parameter	Value
I40	04 Apr 2016	Visibility (mi)	10
I40	04 Apr 2016	Wind Speed (kts)	8
I40	04 Apr 2016	Wind Dir	NW
I40	04 Apr 2016	Water Color	Green
I40	04 Apr 2016	Wave Ht Low (ft)	2
I40	04 Apr 2016	Wave Period (sec)	9
I40	04 Apr 2016	Sea State	Calm
I40	04 Apr 2016	High Tide (ft)	5.12
I40	04 Apr 2016	High Tide Time	726
I40	04 Apr 2016	Low Tide (ft)	-0.53
I40	04 Apr 2016	Low Tide Time	1402
I40	04 Apr 2016	Comments	Collected water sample with Van Dorn bottles from side davit
I40	08 Apr 2016	Depth (m)	10
I40	08 Apr 2016	Arrive Time	1117
I40	08 Apr 2016	Depart Time	1119
I40	08 Apr 2016	Air Temp (C)	16
I40	08 Apr 2016	Weather	Drizzle
I40	08 Apr 2016	Visibility (mi)	3
I40	08 Apr 2016	Wind Speed (kts)	4
I40	08 Apr 2016	Wind Dir	N
I40	08 Apr 2016	Water Color	Greenish-Blue
I40	08 Apr 2016	Wave Ht Low (ft)	2
I40	08 Apr 2016	Wave Period (sec)	13
I40	08 Apr 2016	Sea State	Calm
I40	08 Apr 2016	High Tide (ft)	4.92
I40	08 Apr 2016	High Tide Time	1036
I40	08 Apr 2016	Low Tide (ft)	-0.93
I40	08 Apr 2016	Low Tide Time	431
I40	08 Apr 2016	Comments	
I40	13 Apr 2016	Depth (m)	9
I40	13 Apr 2016	Arrive Time	1213
I40	13 Apr 2016	Depart Time	1215
I40	13 Apr 2016	Air Temp (C)	16
I40	13 Apr 2016	Weather	Partly Cloudy
I40	13 Apr 2016	Visibility (mi)	9
I40	13 Apr 2016	Wind Speed (kts)	7
I40	13 Apr 2016	Wind Dir	NE
I40	13 Apr 2016	Water Color	Brownish-Green
I40	13 Apr 2016	Wave Ht Low (ft)	2
I40	13 Apr 2016	Wave Period (sec)	7
I40	13 Apr 2016	Sea State	Calm
I40	13 Apr 2016	High Tide (ft)	3.39
I40	13 Apr 2016	High Tide Time	1657
I40	13 Apr 2016	Low Tide (ft)	0.13
I40	13 Apr 2016	Low Tide Time	951
I40	13 Apr 2016	Comments	
I40	19 Apr 2016	Depth (m)	9
I40	19 Apr 2016	Arrive Time	1119
I40	19 Apr 2016	Depart Time	1121
I40	19 Apr 2016	Air Temp (C)	18
I40	19 Apr 2016	Weather	Partly Cloudy
I40	19 Apr 2016	Visibility (mi)	14

Station	Date	Parameter	Value
I40	19 Apr 2016	Wind Speed (kts)	4
I40	19 Apr 2016	Wind Dir	NE
I40	19 Apr 2016	Water Color	Brownish-Green
I40	19 Apr 2016	Wave Ht Low (ft)	3
I40	19 Apr 2016	Wave Period (sec)	13
I40	19 Apr 2016	Sea State	Calm
I40	19 Apr 2016	High Tide (ft)	4.41
I40	19 Apr 2016	High Tide Time	827
I40	19 Apr 2016	Low Tide (ft)	0.41
I40	19 Apr 2016	Low Tide Time	1435
I40	19 Apr 2016	Comments	
I40	29 Apr 2016	Depth (m)	8
I40	29 Apr 2016	Arrive Time	1203
I40	29 Apr 2016	Depart Time	1208
I40	29 Apr 2016	Air Temp (C)	15
I40	29 Apr 2016	Weather	Partly Cloudy
I40	29 Apr 2016	Visibility (mi)	8
I40	29 Apr 2016	Wind Speed (kts)	6
I40	29 Apr 2016	Wind Dir	SW
I40	29 Apr 2016	Water Color	Bluish-Green
I40	29 Apr 2016	Wave Ht Low (ft)	5
I40	29 Apr 2016	Wave Period (sec)	9
I40	29 Apr 2016	Sea State	Wind ripples
I40	29 Apr 2016	High Tide (ft)	3.36
I40	29 Apr 2016	High Tide Time	1656
I40	29 Apr 2016	Low Tide (ft)	0.45
I40	29 Apr 2016	Low Tide Time	952
I40	29 Apr 2016	Comments	

Table 3.10

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

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens ($\sigma\text{-t}$)	Chlor ($\mu\text{g/L}$)
I19	04 Apr 2016	1	16.37	59.69	7.6	33.51	8.1	24.5	0.87
I19	04 Apr 2016	2	16.31	60.18	7.5	33.51	8.1	24.5	0.89
I19	04 Apr 2016	3	15.73	60.06	7.3	33.53	8.1	24.7	1.12
I19	04 Apr 2016	4	15.17	61.67	7.0	33.52	8.1	24.8	1.39
I19	04 Apr 2016	5	14.70	65.11	6.7	33.51	8.1	24.9	1.72
I19	04 Apr 2016	6	14.42	67.42	6.3	33.50	8.1	24.9	1.88
I19	04 Apr 2016	7	14.21	67.00	6.1	33.50	8.0	25.0	1.90
I19	04 Apr 2016	8	13.85	65.70	5.4	33.51	8.0	25.1	1.85
I19	04 Apr 2016	9	12.78	55.17	4.5	33.54	7.9	25.3	2.16
I19	04 Apr 2016	10	12.78	44.56	4.3	33.52	7.9	25.3	2.30
I19	08 Apr 2016	1	15.97	67.25	8.5	33.44	8.2	24.6	3.74
I19	08 Apr 2016	2	15.92	65.72	8.5	33.44	8.2	24.6	4.05
I19	08 Apr 2016	3	15.83	64.35	8.3	33.43	8.2	24.6	4.65
I19	08 Apr 2016	4	15.12	62.49	8.0	33.47	8.2	24.8	6.32
I19	08 Apr 2016	5	14.93	63.34	7.8	33.48	8.2	24.8	7.43
I19	08 Apr 2016	6	14.73	66.38	7.6	33.49	8.1	24.9	7.66
I19	08 Apr 2016	7	14.68	70.37	7.5	33.49	8.1	24.9	6.89
I19	08 Apr 2016	8	14.67	70.12	7.5	33.49	8.1	24.9	6.46
I19	08 Apr 2016	9	14.67	69.08	7.5	33.49	8.1	24.9	6.52
I19	08 Apr 2016	10	14.67	68.44	7.4	33.49	8.1	24.9	6.72
I19	13 Apr 2016	1	17.64	49.38	7.6	33.32	8.2	24.1	1.61
I19	13 Apr 2016	2	17.62	48.63	7.6	33.33	8.2	24.1	1.68
I19	13 Apr 2016	3	17.39	47.74	7.6	33.36	8.2	24.2	2.34
I19	13 Apr 2016	4	17.19	54.07	7.8	33.43	8.2	24.3	3.22
I19	13 Apr 2016	5	17.10	65.31	7.8	33.46	8.2	24.3	3.36
I19	13 Apr 2016	6	17.03	68.43	7.8	33.46	8.2	24.3	3.53
I19	13 Apr 2016	7	16.96	72.21	7.8	33.47	8.2	24.3	3.37
I19	13 Apr 2016	8	16.74	71.82	7.7	33.48	8.2	24.4	3.09
I19	13 Apr 2016	9	16.69	62.78	7.5	33.47	8.2	24.4	3.20
I19	13 Apr 2016	10	16.66	49.72	7.1	33.47	8.2	24.4	3.80
I19	19 Apr 2016	1	17.28	73.03	8.2	33.52	8.2	24.3	1.18
I19	19 Apr 2016	2	17.22	73.05	8.2	33.52	8.2	24.3	1.20
I19	19 Apr 2016	3	17.09	72.54	8.2	33.52	8.2	24.4	1.37
I19	19 Apr 2016	4	17.15	72.65	8.2	33.52	8.2	24.3	1.44
I19	19 Apr 2016	5	16.85	70.32	8.4	33.50	8.2	24.4	1.63
I19	19 Apr 2016	6	16.54	67.92	8.4	33.50	8.2	24.5	2.26
I19	19 Apr 2016	7	16.36	67.30	8.4	33.49	8.2	24.5	2.96
I19	19 Apr 2016	8	16.20	63.52	8.3	33.49	8.2	24.5	3.77
I19	19 Apr 2016	9	16.11	59.73	8.2	33.49	8.2	24.6	5.40
I19	19 Apr 2016	10	15.93	57.94	8.0	33.49	8.2	24.6	6.40
I19	29 Apr 2016	1	16.74	63.27	8.1	33.55	8.2	24.5	1.07
I19	29 Apr 2016	2	16.73	62.63	8.0	33.55	8.2	24.5	1.10
I19	29 Apr 2016	3	16.69	59.46	8.0	33.55	8.2	24.5	1.27
I19	29 Apr 2016	4	16.61	55.88	7.8	33.55	8.2	24.5	1.71
I19	29 Apr 2016	5	15.94	50.45	7.0	33.54	8.2	24.6	2.34
I19	29 Apr 2016	6	14.43	32.60	5.9	33.51	8.1	24.9	3.32
I19	29 Apr 2016	7	13.97	30.23	5.5	33.47	8.0	25.0	3.79

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens ($\sigma\text{-t}$)	Chlor ($\mu\text{g/L}$)
I19	29 Apr 2016	8	13.78	24.41	5.5	33.47	8.0	25.1	3.69
I19	29 Apr 2016	9	13.76	19.60	5.4	33.47	8.0	25.1	3.62
I19	29 Apr 2016	10	13.69	19.72	5.4	33.47	8.0	25.1	3.65
I24	04 Apr 2016	1	16.66	74.51	7.5	33.50	8.2	24.4	1.01
I24	04 Apr 2016	2	16.57	73.99	7.8	33.54	8.2	24.5	1.00
I24	04 Apr 2016	3	16.34	71.64	7.8	33.57	8.2	24.6	1.04
I24	04 Apr 2016	4	15.99	68.50	7.6	33.58	8.2	24.7	1.10
I24	04 Apr 2016	5	15.73	67.93	7.3	33.55	8.2	24.7	1.32
I24	04 Apr 2016	6	14.47	69.10	6.4	33.70	8.1	25.1	1.71
I24	04 Apr 2016	7	13.85	68.89	5.3	33.57	8.0	25.1	1.74
I24	04 Apr 2016	8	13.75	65.17	4.9	33.53	8.0	25.1	1.37
I24	04 Apr 2016	9	13.27	54.49	4.7	33.58	7.9	25.2	1.27
I24	04 Apr 2016	10	13.10	45.24	4.5	33.54	7.9	25.2	1.25
I24	08 Apr 2016	1	16.19	72.12	8.5	33.45	8.2	24.5	2.14
I24	08 Apr 2016	2	15.70	69.71	8.7	33.47	8.2	24.6	2.64
I24	08 Apr 2016	3	15.50	60.87	8.7	33.44	8.2	24.7	5.32
I24	08 Apr 2016	4	15.12	59.33	8.2	33.49	8.2	24.8	8.15
I24	08 Apr 2016	5	14.74	65.22	7.7	33.50	8.2	24.9	8.80
I24	08 Apr 2016	6	14.38	70.99	7.2	33.50	8.1	25.0	8.08
I24	08 Apr 2016	7	13.81	74.14	6.5	33.52	8.1	25.1	6.91
I24	08 Apr 2016	8	13.25	76.23	5.8	33.53	8.0	25.2	5.95
I24	08 Apr 2016	9	13.21	75.05	5.5	33.51	8.0	25.2	5.39
I24	08 Apr 2016	10	13.21	74.82	5.5	33.51	8.0	25.2	4.87
I24	08 Apr 2016	11	13.21	74.88	5.6	33.51	8.0	25.2	4.84
I24	13 Apr 2016	1	17.87	77.63	8.2	33.48	8.2	24.1	0.56
I24	13 Apr 2016	2	17.86	77.80	8.2	33.48	8.2	24.1	0.57
I24	13 Apr 2016	3	17.74	77.53	8.2	33.48	8.2	24.2	0.60
I24	13 Apr 2016	4	17.66	76.49	8.1	33.47	8.2	24.2	0.68
I24	13 Apr 2016	5	17.57	75.63	8.2	33.47	8.2	24.2	0.83
I24	13 Apr 2016	6	17.57	75.66	8.2	33.47	8.2	24.2	0.97
I24	13 Apr 2016	7	17.51	74.93	8.0	33.47	8.2	24.2	1.11
I24	13 Apr 2016	8	17.40	72.72	8.0	33.47	8.2	24.2	1.36
I24	13 Apr 2016	9	17.33	67.71	8.0	33.47	8.2	24.3	1.58
I24	13 Apr 2016	10	17.30	65.86	8.0	33.47	8.2	24.3	1.89
I24	19 Apr 2016	1	16.86	63.55	8.3	33.52	8.2	24.4	1.86
I24	19 Apr 2016	2	16.76	63.17	8.2	33.52	8.2	24.4	1.93
I24	19 Apr 2016	3	16.23	63.80	8.2	33.52	8.2	24.6	2.62
I24	19 Apr 2016	4	15.88	60.85	8.1	33.52	8.2	24.6	4.13
I24	19 Apr 2016	5	15.71	59.92	8.1	33.51	8.2	24.7	6.15
I24	19 Apr 2016	6	15.61	60.34	8.3	33.50	8.2	24.7	7.52
I24	19 Apr 2016	7	15.29	60.32	7.9	33.50	8.2	24.8	8.67
I24	19 Apr 2016	8	14.95	57.54	7.3	33.51	8.2	24.8	8.76
I24	19 Apr 2016	9	14.64	57.32	6.8	33.51	8.1	24.9	7.45
I24	19 Apr 2016	10	13.82	54.29	6.2	33.52	8.1	25.1	5.89
I24	29 Apr 2016	1	16.70	56.88	7.8	33.55	8.2	24.5	0.98
I24	29 Apr 2016	2	16.65	62.08	8.0	33.54	8.2	24.5	1.05
I24	29 Apr 2016	3	16.14	63.32	8.7	33.54	8.2	24.6	2.04
I24	29 Apr 2016	4	16.02	67.33	8.5	33.53	8.2	24.6	4.01
I24	29 Apr 2016	5	15.97	71.53	8.2	33.53	8.2	24.6	4.53
I24	29 Apr 2016	6	15.79	73.99	7.6	33.52	8.2	24.7	3.69

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens ($\sigma\text{-t}$)	Chlor ($\mu\text{g/L}$)
I24	29 Apr 2016	7	14.65	72.82	6.6	33.52	8.1	24.9	3.52
I24	29 Apr 2016	8	13.98	68.50	5.9	33.48	8.0	25.0	3.44
I24	29 Apr 2016	9	13.78	65.38	5.7	33.47	8.0	25.1	3.11
I25	04 Apr 2016	1	16.61	76.32	8.1	33.52	8.2	24.5	1.03
I25	04 Apr 2016	2	16.59	76.21	8.1	33.52	8.2	24.5	1.06
I25	04 Apr 2016	3	16.53	76.09	8.1	33.52	8.2	24.5	1.21
I25	04 Apr 2016	4	16.41	74.82	7.9	33.52	8.2	24.5	1.41
I25	04 Apr 2016	5	15.99	72.32	7.3	33.52	8.2	24.6	1.69
I25	04 Apr 2016	6	14.65	73.64	6.4	33.53	8.1	24.9	1.65
I25	04 Apr 2016	7	13.98	75.20	5.8	33.51	8.0	25.0	1.34
I25	04 Apr 2016	8	13.71	70.27	5.6	33.50	8.0	25.1	1.23
I25	04 Apr 2016	9	13.86	68.44	5.6	33.48	8.0	25.0	1.19
I25	08 Apr 2016	1	16.16	71.39	8.6	33.45	8.2	24.5	2.28
I25	08 Apr 2016	2	15.90	71.03	8.6	33.46	8.2	24.6	2.59
I25	08 Apr 2016	3	15.31	67.03	8.5	33.47	8.2	24.7	4.67
I25	08 Apr 2016	4	14.86	63.37	7.8	33.49	8.2	24.8	6.37
I25	08 Apr 2016	5	14.37	67.44	7.1	33.50	8.1	25.0	6.73
I25	08 Apr 2016	6	13.59	72.10	6.2	33.52	8.1	25.1	5.98
I25	08 Apr 2016	7	13.42	73.78	5.8	33.51	8.0	25.2	5.41
I25	08 Apr 2016	8	13.39	74.39	5.8	33.51	8.0	25.2	4.99
I25	08 Apr 2016	9	13.37	74.35	5.8	33.51	8.0	25.2	4.51
I25	13 Apr 2016	1	17.96	76.37	8.1	33.47	8.2	24.1	0.64
I25	13 Apr 2016	2	17.96	76.38	8.1	33.47	8.2	24.1	0.64
I25	13 Apr 2016	3	17.91	76.39	8.1	33.47	8.2	24.1	0.66
I25	13 Apr 2016	4	17.83	76.37	8.1	33.47	8.2	24.1	0.72
I25	13 Apr 2016	5	17.43	75.36	8.1	33.47	8.2	24.2	0.82
I25	13 Apr 2016	6	17.20	72.82	8.0	33.46	8.2	24.3	1.07
I25	13 Apr 2016	7	16.97	70.66	8.0	33.47	8.2	24.3	1.47
I25	13 Apr 2016	8	16.97	70.03	8.0	33.46	8.2	24.3	1.77
I25	13 Apr 2016	9	16.93	68.73	7.9	33.46	8.2	24.4	1.77
I25	19 Apr 2016	1	16.76	62.08	8.3	33.52	8.2	24.4	2.22
I25	19 Apr 2016	2	16.73	62.31	8.3	33.51	8.2	24.4	2.37
I25	19 Apr 2016	3	16.21	61.12	8.4	33.52	8.2	24.6	4.00
I25	19 Apr 2016	4	15.85	58.26	8.4	33.51	8.2	24.6	5.76
I25	19 Apr 2016	5	15.51	57.93	8.0	33.51	8.2	24.7	7.41
I25	19 Apr 2016	6	15.12	56.44	7.7	33.51	8.2	24.8	8.29
I25	19 Apr 2016	7	15.02	54.83	7.4	33.50	8.1	24.8	8.48
I25	19 Apr 2016	8	14.48	53.97	7.0	33.51	8.1	24.9	7.35
I25	19 Apr 2016	9	14.22	57.64	6.7	33.51	8.1	25.0	5.98
I25	29 Apr 2016	1	16.83	68.37	8.0	33.55	8.2	24.4	0.84
I25	29 Apr 2016	2	16.66	67.77	8.0	33.55	8.2	24.5	0.94
I25	29 Apr 2016	3	16.22	70.21	8.2	33.54	8.2	24.6	1.22
I25	29 Apr 2016	4	16.06	72.24	8.3	33.53	8.2	24.6	1.65
I25	29 Apr 2016	5	15.99	72.64	8.3	33.53	8.2	24.6	2.21
I25	29 Apr 2016	6	15.98	71.34	8.0	33.52	8.2	24.6	3.02
I25	29 Apr 2016	7	15.41	68.80	7.1	33.52	8.2	24.7	3.76
I25	29 Apr 2016	8	14.40	68.37	6.4	33.51	8.1	25.0	3.88
I25	29 Apr 2016	9	14.50	69.24	6.2	33.47	8.1	24.9	3.51
I26	04 Apr 2016	1	16.49	76.49	8.1	33.51	8.2	24.5	1.05

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens ($\sigma\text{-t}$)	Chlor ($\mu\text{g/L}$)
I26	04 Apr 2016	2	16.46	76.37	8.1	33.51	8.2	24.5	1.12
I26	04 Apr 2016	3	16.40	75.96	8.0	33.51	8.2	24.5	1.26
I26	04 Apr 2016	4	16.07	75.14	8.0	33.51	8.2	24.6	1.50
I26	04 Apr 2016	5	15.53	72.55	7.9	33.51	8.2	24.7	2.15
I26	04 Apr 2016	6	15.29	69.24	7.5	33.50	8.2	24.8	2.81
I26	04 Apr 2016	7	15.14	66.86	6.9	33.49	8.1	24.8	2.99
I26	04 Apr 2016	8	13.68	72.05	6.1	33.53	8.1	25.1	2.24
I26	04 Apr 2016	9	13.55	72.75	6.0	33.50	8.0	25.1	1.78
I26	08 Apr 2016	1	15.95	65.88	8.7	33.44	8.2	24.6	2.86
I26	08 Apr 2016	2	15.43	65.52	8.4	33.47	8.2	24.7	3.44
I26	08 Apr 2016	3	15.10	65.73	8.2	33.48	8.2	24.8	4.80
I26	08 Apr 2016	4	15.00	66.68	8.0	33.48	8.2	24.8	5.78
I26	08 Apr 2016	5	14.98	67.25	8.0	33.48	8.2	24.8	6.82
I26	08 Apr 2016	6	14.94	67.65	7.9	33.49	8.2	24.8	7.73
I26	08 Apr 2016	7	14.93	67.85	7.9	33.49	8.2	24.8	8.12
I26	08 Apr 2016	8	14.89	68.65	7.8	33.49	8.2	24.8	8.68
I26	08 Apr 2016	9	14.88	68.46	7.9	33.49	8.2	24.8	8.65
I26	13 Apr 2016	1	18.12	69.15	8.0	33.47	8.2	24.1	0.84
I26	13 Apr 2016	2	18.02	72.14	8.0	33.47	8.2	24.1	0.83
I26	13 Apr 2016	3	17.83	73.25	8.0	33.47	8.2	24.1	0.86
I26	13 Apr 2016	4	17.46	74.43	8.1	33.48	8.2	24.2	0.93
I26	13 Apr 2016	5	17.07	74.29	8.1	33.48	8.2	24.3	1.10
I26	13 Apr 2016	6	16.89	72.64	8.1	33.47	8.2	24.4	1.31
I26	13 Apr 2016	7	16.87	72.14	8.0	33.47	8.2	24.4	1.55
I26	13 Apr 2016	8	16.85	71.77	8.0	33.47	8.2	24.4	1.76
I26	13 Apr 2016	9	16.89	72.54	8.1	33.47	8.2	24.4	1.86
I26	19 Apr 2016	1	16.87	67.34	8.3	33.52	8.2	24.4	1.65
I26	19 Apr 2016	2	16.59	67.06	8.4	33.52	8.2	24.5	1.91
I26	19 Apr 2016	3	16.40	64.24	8.5	33.52	8.2	24.5	3.05
I26	19 Apr 2016	4	16.18	59.37	8.6	33.51	8.2	24.6	5.28
I26	19 Apr 2016	5	16.02	56.67	8.5	33.51	8.2	24.6	6.95
I26	19 Apr 2016	6	15.81	56.18	8.1	33.51	8.2	24.6	7.30
I26	19 Apr 2016	7	14.94	57.49	7.0	33.52	8.2	24.8	6.39
I26	19 Apr 2016	8	13.83	66.09	6.1	33.52	8.1	25.1	4.20
I26	19 Apr 2016	9	13.46	71.83	5.8	33.51	8.0	25.1	2.88
I26	29 Apr 2016	1	16.90	70.06	8.1	33.55	8.2	24.4	0.70
I26	29 Apr 2016	2	16.90	71.93	8.0	33.55	8.2	24.4	0.71
I26	29 Apr 2016	3	16.86	71.80	8.1	33.55	8.2	24.4	0.78
I26	29 Apr 2016	4	16.84	71.57	8.0	33.55	8.2	24.4	0.88
I26	29 Apr 2016	5	16.65	67.74	8.0	33.55	8.2	24.5	1.11
I26	29 Apr 2016	6	16.35	65.06	8.1	33.54	8.2	24.5	1.76
I26	29 Apr 2016	7	16.30	67.10	8.3	33.54	8.2	24.6	2.76
I26	29 Apr 2016	8	16.11	70.74	8.2	33.53	8.2	24.6	3.69
I26	29 Apr 2016	9	15.98	64.66	8.1	33.52	8.2	24.6	4.49
I32	04 Apr 2016	1	16.53	60.92	7.6	33.51	8.2	24.5	1.17
I32	04 Apr 2016	2	16.46	59.93	7.6	33.52	8.2	24.5	1.25
I32	04 Apr 2016	3	16.30	59.20	7.5	33.52	8.2	24.5	1.46
I32	04 Apr 2016	4	16.14	57.23	7.4	33.52	8.2	24.6	1.64
I32	04 Apr 2016	5	16.10	56.14	7.4	33.51	8.1	24.6	1.91
I32	04 Apr 2016	6	16.09	56.30	7.4	33.51	8.1	24.6	2.17

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens ($\sigma\text{-t}$)	Chlor ($\mu\text{g/L}$)
I32	04 Apr 2016	7	15.96	56.15	7.1	33.51	8.1	24.6	2.52
I32	04 Apr 2016	8	14.69	56.99	6.4	33.51	8.1	24.9	2.87
I32	04 Apr 2016	9	13.42	51.59	5.4	33.52	8.0	25.2	3.40
I32	08 Apr 2016	1	15.76	56.71	8.7	33.42	8.2	24.6	4.60
I32	08 Apr 2016	2	15.64	56.38	8.7	33.42	8.2	24.6	5.12
I32	08 Apr 2016	3	15.55	56.78	8.6	33.42	8.2	24.6	6.64
I32	08 Apr 2016	4	15.49	58.29	8.5	33.42	8.2	24.6	8.34
I32	08 Apr 2016	5	15.49	60.25	8.4	33.43	8.2	24.7	9.30
I32	08 Apr 2016	6	15.48	61.02	8.1	33.43	8.2	24.7	9.75
I32	08 Apr 2016	7	15.37	61.42	7.7	33.44	8.2	24.7	8.32
I32	08 Apr 2016	8	15.32	60.30	7.5	33.45	8.1	24.7	6.97
I32	08 Apr 2016	9	15.25	60.06	7.6	33.45	8.1	24.7	6.49
I32	08 Apr 2016	10	15.05	60.55	7.3	33.46	8.1	24.8	6.03
I32	13 Apr 2016	1	18.29	67.43	8.1	33.45	8.2	24.0	1.02
I32	13 Apr 2016	2	18.27	67.67	8.1	33.45	8.2	24.0	1.05
I32	13 Apr 2016	3	18.13	65.02	7.9	33.46	8.2	24.1	1.20
I32	13 Apr 2016	4	17.79	57.26	7.8	33.47	8.2	24.1	1.62
I32	13 Apr 2016	5	17.62	57.51	7.8	33.46	8.2	24.2	2.23
I32	13 Apr 2016	6	17.38	63.89	7.9	33.47	8.2	24.2	2.54
I32	13 Apr 2016	7	17.07	60.27	8.0	33.46	8.2	24.3	2.82
I32	13 Apr 2016	8	16.80	62.98	8.0	33.46	8.2	24.4	3.22
I32	13 Apr 2016	9	16.79	49.11	7.8	33.46	8.2	24.4	3.80
I32	13 Apr 2016	10	16.75	33.98	7.5	33.46	8.2	24.4	4.62
I32	19 Apr 2016	1	17.52	68.42	8.0	33.53	8.2	24.3	1.27
I32	19 Apr 2016	2	17.30	67.98	8.0	33.53	8.2	24.3	1.33
I32	19 Apr 2016	3	16.82	64.46	8.1	33.53	8.2	24.4	1.56
I32	19 Apr 2016	4	16.57	61.24	8.2	33.52	8.2	24.5	2.27
I32	19 Apr 2016	5	16.47	59.29	8.2	33.52	8.2	24.5	3.23
I32	19 Apr 2016	6	16.46	59.25	8.1	33.52	8.2	24.5	3.86
I32	19 Apr 2016	7	16.44	59.71	8.0	33.52	8.2	24.5	4.20
I32	19 Apr 2016	8	16.43	59.76	8.0	33.52	8.2	24.5	4.28
I32	19 Apr 2016	9	16.39	60.34	7.9	33.52	8.2	24.5	4.18
I32	29 Apr 2016	1	17.39	62.13	8.3	33.56	8.2	24.3	1.15
I32	29 Apr 2016	2	17.38	62.58	8.3	33.56	8.2	24.3	1.14
I32	29 Apr 2016	3	17.37	62.41	8.3	33.56	8.2	24.3	1.24
I32	29 Apr 2016	4	17.33	61.89	8.3	33.56	8.2	24.3	1.51
I32	29 Apr 2016	5	17.29	59.67	8.2	33.56	8.2	24.3	1.90
I32	29 Apr 2016	6	17.16	56.50	7.5	33.56	8.2	24.4	2.56
I32	29 Apr 2016	7	15.67	38.16	6.5	33.55	8.2	24.7	3.83
I32	29 Apr 2016	8	15.00	35.32	6.0	33.52	8.0	24.8	4.50
I32	29 Apr 2016	9	14.48	32.26	5.8	33.51	8.0	24.9	4.00
I39	04 Apr 2016	1	16.45	77.00	7.9	33.41	8.2	24.4	0.84
I39	04 Apr 2016	2	15.95	77.42	7.6	33.43	8.2	24.6	0.93
I39	04 Apr 2016	3	14.59	77.65	7.1	33.43	8.1	24.9	1.17
I39	04 Apr 2016	4	14.15	78.61	6.6	33.41	8.1	24.9	1.38
I39	04 Apr 2016	5	13.53	79.63	6.2	33.38	8.1	25.0	1.57
I39	04 Apr 2016	6	13.38	80.91	6.0	33.38	8.0	25.1	1.69
I39	04 Apr 2016	7	13.06	81.82	5.8	33.39	8.0	25.1	1.63
I39	04 Apr 2016	8	12.92	81.80	5.5	33.39	8.0	25.2	1.59
I39	04 Apr 2016	9	12.76	81.26	5.2	33.40	8.0	25.2	1.53

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens ($\sigma\text{-t}$)	Chlor ($\mu\text{g/L}$)
I39	04 Apr 2016	10	12.66	80.82	5.0	33.40	8.0	25.2	1.43
I39	04 Apr 2016	11	12.49	80.67	4.8	33.40	7.9	25.3	1.38
I39	04 Apr 2016	12	12.34	79.91	4.7	33.41	7.9	25.3	1.26
I39	04 Apr 2016	13	12.28	78.70	4.5	33.42	7.9	25.3	1.15
I39	04 Apr 2016	14	12.09	75.32	4.3	33.45	7.9	25.4	1.12
I39	04 Apr 2016	15	12.10	71.04	4.2	33.45	7.9	25.4	1.25
I39	04 Apr 2016	16	12.07	69.39	4.1	33.45	7.9	25.4	1.31
I39	04 Apr 2016	17	12.06	69.23	4.1	33.45	7.9	25.4	1.44
I39	04 Apr 2016	18	12.06	68.66	4.1	33.45	7.9	25.4	1.47
I39	08 Apr 2016	1	16.04	71.88	8.5	33.41	8.2	24.5	3.78
I39	08 Apr 2016	2	16.06	72.18	8.5	33.41	8.2	24.5	3.82
I39	08 Apr 2016	3	16.05	72.25	8.4	33.41	8.2	24.5	3.88
I39	08 Apr 2016	4	15.92	71.51	8.4	33.43	8.2	24.6	4.48
I39	08 Apr 2016	5	15.81	70.11	8.4	33.44	8.2	24.6	5.73
I39	08 Apr 2016	6	15.78	69.23	8.5	33.44	8.2	24.6	6.46
I39	08 Apr 2016	7	15.74	69.55	8.5	33.44	8.2	24.6	6.79
I39	08 Apr 2016	8	15.65	69.96	8.4	33.45	8.2	24.6	6.81
I39	08 Apr 2016	9	15.63	69.93	8.3	33.45	8.2	24.6	7.07
I39	08 Apr 2016	10	15.52	69.80	8.2	33.46	8.2	24.7	7.29
I39	08 Apr 2016	11	15.27	69.41	8.0	33.47	8.2	24.7	7.63
I39	08 Apr 2016	12	14.96	69.97	7.7	33.48	8.2	24.8	7.80
I39	08 Apr 2016	13	14.64	70.65	7.5	33.48	8.1	24.9	7.85
I39	08 Apr 2016	14	14.41	71.26	7.2	33.49	8.1	24.9	7.77
I39	08 Apr 2016	15	13.88	73.47	6.4	33.51	8.1	25.1	7.19
I39	08 Apr 2016	16	12.96	76.33	5.3	33.54	8.0	25.3	5.89
I39	08 Apr 2016	17	12.44	78.40	4.7	33.55	7.9	25.4	4.70
I39	08 Apr 2016	18	12.35	78.89	4.6	33.55	7.9	25.4	3.58
I39	13 Apr 2016	1	17.60	79.27	8.2	33.48	8.2	24.2	0.63
I39	13 Apr 2016	2	17.60	79.25	8.2	33.48	8.2	24.2	0.63
I39	13 Apr 2016	3	17.60	79.23	8.1	33.48	8.2	24.2	0.63
I39	13 Apr 2016	4	17.56	79.27	8.1	33.48	8.2	24.2	0.67
I39	13 Apr 2016	5	17.25	78.70	8.2	33.48	8.2	24.3	0.87
I39	13 Apr 2016	6	17.07	78.96	8.3	33.47	8.2	24.3	1.11
I39	13 Apr 2016	7	16.94	78.47	8.2	33.48	8.2	24.4	1.52
I39	13 Apr 2016	8	16.85	78.04	8.2	33.47	8.2	24.4	1.88
I39	13 Apr 2016	9	16.67	77.71	8.2	33.48	8.2	24.4	2.33
I39	13 Apr 2016	10	16.46	78.09	8.3	33.48	8.2	24.5	2.66
I39	13 Apr 2016	11	16.39	78.85	8.3	33.48	8.2	24.5	3.04
I39	13 Apr 2016	12	16.31	79.56	8.3	33.48	8.2	24.5	3.19
I39	13 Apr 2016	13	16.19	80.09	8.3	33.49	8.2	24.5	3.15
I39	13 Apr 2016	14	16.08	80.61	8.2	33.49	8.2	24.6	3.12
I39	13 Apr 2016	15	15.90	80.38	7.9	33.49	8.2	24.6	2.86
I39	13 Apr 2016	16	15.83	79.62	7.7	33.48	8.2	24.6	2.63
I39	13 Apr 2016	17	15.79	78.49	7.6	33.48	8.2	24.6	2.21
I39	13 Apr 2016	18	15.61	76.49	7.4	33.48	8.2	24.7	1.90
I39	19 Apr 2016	1	16.82	70.48	8.0	33.52	8.2	24.4	1.90
I39	19 Apr 2016	2	16.79	70.59	7.9	33.53	8.2	24.4	1.85
I39	19 Apr 2016	3	16.46	69.17	7.9	33.53	8.2	24.5	2.25
I39	19 Apr 2016	4	16.22	68.93	7.7	33.51	8.2	24.6	2.80
I39	19 Apr 2016	5	15.40	71.74	7.4	33.52	8.2	24.7	3.25
I39	19 Apr 2016	6	14.80	74.88	7.0	33.50	8.1	24.9	3.32
I39	19 Apr 2016	7	14.39	76.48	6.8	33.49	8.1	24.9	3.42

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens ($\sigma\text{-t}$)	Chlor ($\mu\text{g/L}$)
I39	19 Apr 2016	8	14.23	76.80	6.6	33.50	8.1	25.0	3.43
I39	19 Apr 2016	9	13.80	78.17	6.4	33.50	8.1	25.1	3.42
I39	19 Apr 2016	10	13.67	79.32	6.3	33.49	8.1	25.1	3.37
I39	19 Apr 2016	11	13.61	79.43	6.2	33.50	8.0	25.1	3.35
I39	19 Apr 2016	12	13.61	79.16	6.2	33.50	8.0	25.1	3.47
I39	19 Apr 2016	13	13.60	79.00	6.1	33.51	8.0	25.1	3.35
I39	19 Apr 2016	14	13.49	78.97	6.0	33.52	8.0	25.1	3.19
I39	19 Apr 2016	15	13.43	79.34	5.9	33.52	8.0	25.2	2.98
I39	19 Apr 2016	16	13.35	79.39	5.7	33.52	8.0	25.2	2.90
I39	19 Apr 2016	17	13.08	79.76	5.5	33.53	8.0	25.2	2.42
I39	19 Apr 2016	18	13.03	79.64	5.4	33.53	8.0	25.2	2.12
I39	29 Apr 2016	1	16.42	73.85	8.2	33.54	8.2	24.5	1.04
I39	29 Apr 2016	2	16.38	73.84	8.2	33.54	8.2	24.5	1.06
I39	29 Apr 2016	3	16.30	73.91	8.2	33.54	8.2	24.6	1.19
I39	29 Apr 2016	4	16.12	74.05	8.0	33.53	8.2	24.6	1.48
I39	29 Apr 2016	5	15.57	72.80	7.7	33.53	8.2	24.7	2.51
I39	29 Apr 2016	6	14.94	71.90	7.1	33.52	8.1	24.8	3.43
I39	29 Apr 2016	7	14.47	72.98	6.6	33.50	8.1	24.9	3.57
I39	29 Apr 2016	8	14.20	73.65	6.2	33.49	8.1	25.0	3.35
I39	29 Apr 2016	9	13.83	74.03	5.9	33.49	8.0	25.1	2.88
I39	29 Apr 2016	10	13.64	73.78	5.6	33.48	8.0	25.1	2.54
I39	29 Apr 2016	11	13.18	73.07	5.3	33.49	8.0	25.2	2.19
I39	29 Apr 2016	12	13.02	74.85	5.2	33.49	8.0	25.2	1.93
I39	29 Apr 2016	13	13.12	73.62	5.1	33.50	8.0	25.2	1.85
I39	29 Apr 2016	14	12.81	70.76	4.9	33.50	7.9	25.3	1.57
I39	29 Apr 2016	15	12.74	69.68	4.7	33.51	7.9	25.3	1.41
I39	29 Apr 2016	16	12.64	68.47	4.6	33.51	7.9	25.3	1.32
I39	29 Apr 2016	17	12.61	63.06	4.5	33.52	7.9	25.3	1.30
I39	29 Apr 2016	18	12.61	58.96	4.5	33.52	7.9	25.3	1.25
I40	04 Apr 2016	1	16.22	57.02	7.8	33.50	8.1	24.5	0.82
I40	04 Apr 2016	2	16.01	56.70	7.7	33.52	8.1	24.6	0.84
I40	04 Apr 2016	3	15.55	60.47	7.3	33.52	8.1	24.7	0.96
I40	04 Apr 2016	4	14.89	63.66	6.5	33.53	8.1	24.9	1.22
I40	04 Apr 2016	5	14.43	62.34	5.8	33.52	8.0	25.0	1.39
I40	04 Apr 2016	6	14.07	52.49	5.2	33.51	8.0	25.0	1.47
I40	04 Apr 2016	7	13.51	58.49	4.7	33.53	7.9	25.1	1.63
I40	04 Apr 2016	8	13.21	65.68	4.5	33.53	7.9	25.2	1.47
I40	04 Apr 2016	9	12.82	43.91	4.3	33.53	7.9	25.3	1.46
I40	08 Apr 2016	1	16.09	67.86	8.7	33.43	8.2	24.5	2.24
I40	08 Apr 2016	2	15.82	64.77	8.7	33.43	8.2	24.6	3.25
I40	08 Apr 2016	3	15.56	62.10	8.4	33.43	8.2	24.6	5.09
I40	08 Apr 2016	4	14.95	61.40	7.8	33.48	8.2	24.8	5.80
I40	08 Apr 2016	5	14.65	66.10	7.4	33.49	8.1	24.9	5.48
I40	08 Apr 2016	6	14.54	69.75	7.3	33.49	8.1	24.9	5.40
I40	08 Apr 2016	7	14.51	69.27	7.3	33.49	8.1	24.9	5.71
I40	08 Apr 2016	8	14.46	68.54	7.2	33.49	8.1	24.9	6.09
I40	08 Apr 2016	9	14.44	67.19	7.2	33.49	8.1	24.9	6.06
I40	08 Apr 2016	10	14.43	67.17	7.2	33.49	8.1	24.9	6.14
I40	13 Apr 2016	1	18.09	37.04	7.6	32.37	8.2	23.2	2.17
I40	13 Apr 2016	2	17.99	40.06	7.6	32.62	8.2	23.5	2.22
I40	13 Apr 2016	3	17.77	54.02	7.8	33.40	8.2	24.1	2.30

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens ($\sigma\text{-t}$)	Chlor ($\mu\text{g/L}$)
I40	13 Apr 2016	4	17.72	63.00	7.8	33.45	8.2	24.2	2.39
I40	13 Apr 2016	5	17.57	61.73	7.7	33.46	8.2	24.2	2.85
I40	13 Apr 2016	6	17.44	61.35	7.4	33.46	8.2	24.2	3.30
I40	13 Apr 2016	7	16.88	58.64	7.1	33.47	8.2	24.4	3.26
I40	13 Apr 2016	8	16.77	51.79	7.0	33.46	8.2	24.4	3.40
I40	13 Apr 2016	9	16.76	44.62	6.8	33.46	8.1	24.4	4.33
I40	19 Apr 2016	1	16.76	66.78	8.3	33.52	8.2	24.4	1.69
I40	19 Apr 2016	2	16.67	65.78	8.4	33.52	8.2	24.5	1.91
I40	19 Apr 2016	3	16.63	64.89	8.5	33.52	8.2	24.5	2.37
I40	19 Apr 2016	4	16.51	64.38	8.5	33.51	8.2	24.5	3.24
I40	19 Apr 2016	5	16.29	62.53	8.6	33.50	8.2	24.5	4.36
I40	19 Apr 2016	6	16.26	61.80	8.4	33.51	8.2	24.5	5.22
I40	19 Apr 2016	7	16.26	61.77	8.3	33.51	8.2	24.5	5.58
I40	19 Apr 2016	8	16.24	61.78	8.1	33.51	8.2	24.5	5.87
I40	19 Apr 2016	9	15.86	60.20	8.0	33.50	8.2	24.6	6.41
I40	19 Apr 2016	10	15.62	56.92	7.9	33.50	8.2	24.7	6.41
I40	29 Apr 2016	1	16.83	37.28	7.8	33.48	8.2	24.4	0.95
I40	29 Apr 2016	2	16.82	53.14	7.7	33.52	8.2	24.4	1.01
I40	29 Apr 2016	3	16.67	56.22	7.7	33.55	8.2	24.5	1.18
I40	29 Apr 2016	4	16.43	55.23	7.7	33.55	8.2	24.5	1.57
I40	29 Apr 2016	5	16.20	52.06	7.6	33.55	8.2	24.6	2.20
I40	29 Apr 2016	6	15.94	50.86	7.2	33.53	8.1	24.6	2.51
I40	29 Apr 2016	7	15.02	53.96	6.1	33.52	8.1	24.8	2.53
I40	29 Apr 2016	8	13.69	48.44	5.1	33.49	8.0	25.1	2.31
I40	29 Apr 2016	9	13.63	46.35	5.0	33.47	8.0	25.1	2.14

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

Station	Date	Depth	Analyst	Procedure	Total	Fecal	Enter
I19	04 Apr 2016	6	JT	LAB DUPLICATE	<20	<2	<2
I19	08 Apr 2016	6	ZV	LAB DUPLICATE	80e	6e	12e
I19	13 Apr 2016	6	LMA	LAB DUPLICATE	200e	12e	14e
I19	19 Apr 2016	6	ZV	LAB DUPLICATE	2e	<2	<2
I19	29 Apr 2016	6	SR	LAB DUPLICATE	<2	<2	<2
I40	04 Apr 2016	6	LMA	LAB DUPLICATE	<2	<2	2e
I40	08 Apr 2016	6	ZV	LAB DUPLICATE	40e	2e	4e
I40	13 Apr 2016	6	LMA	LAB DUPLICATE	220e	10e	14e
I40	19 Apr 2016	6	ZV	LAB DUPLICATE	<2	<2	<2
I40	29 Apr 2016	6	SR	LAB DUPLICATE	4e	<2	<2
S12	05 Apr 2016		JT	FIELD DUPLICATE	<2	<2	<2
S12	05 Apr 2016		JT	LAB DUPLICATE	2e	2e	<2
S12	12 Apr 2016		SR	FIELD DUPLICATE	<2	<2	<2
S12	12 Apr 2016		SR	LAB DUPLICATE	<2	<2	2e
S12	19 Apr 2016		SR	FIELD DUPLICATE	2e	2e	<2
S12	19 Apr 2016		SR	LAB DUPLICATE	4e	<2	<2
S12	26 Apr 2016		JT	FIELD DUPLICATE	<20	<2	<2
S12	26 Apr 2016		JT	LAB DUPLICATE	<20	<2	4e

ns = not sampled

ND = no data

