

SOUTH BAY OCEAN OUTFALL MONTHLY RECEIVING WATERS MONITORING REPORT

SOUTH BAY WATER RECLAMATION PLANT

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

JANUARY 2019

Environmental Monitoring and Technical Services
2392 Kincaid Road • Mail Station 45A • San Diego, CA 92101
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February 28, 2019

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

Attention: POTW Compliance Unit

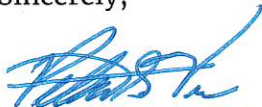
Dear Mr. Gibson:

Enclosed is the January 2019 Monthly Receiving Waters Monitoring Report for the South Bay Ocean Outfall, South Bay Water Reclamation Plant as required per Order No. R9-2013-0006 as amended by Order Nos. R9-2014-0071 and R9-2017-0023, NPDES Permit No. CA0109045.

This report includes raw ocean monitoring data and summaries of water quality parameters and ocean conditions measured during the month for the South Bay outfall region. Also included are summaries of compliance with the bacterial water-contact standards specified in the California Ocean Plan. These data are also presented in the monthly report submitted by the International Boundary and Water Commission, U.S. Section for discharge from the South Bay International Wastewater Treatment Plant (Order No. R9-2014-0009 as amended Order Nos. R9-2014-0094 and R9-2017-0024, NPDES Permit No. CA0108928).

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

Sincerely,



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

TS/amw

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

INTRODUCTION

Monthly reports of water quality and ocean conditions from Playa Blanco, Mexico to Coronado, USA are submitted to the San Diego Regional Water Quality Control Board and U.S. EPA Region 9 in accordance with Order No. R9-2013-0006 as amended by Order Nos. R9-2014-0071 and R9-2017-0023, NPDES Permit No. CA0109045, for the South Bay Water Reclamation Plant (SBWRP), South Bay Ocean Outfall (SBOO). This report includes receiving waters monitoring data collected from all shore, kelp and offshore stations specified in the above order. Data for influent and effluent monitoring activities for the SBWRP are presented in separate reports.

MATERIALS AND METHODS

Shore Stations

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

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

Kelp Bed Stations

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

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

Seawater samples at the kelp bed stations are primarily collected using a CTD-integrated rosette sampler with Niskin bottles. Aliquots for bacteriological analyses were drawn from these bottles into sterile sample bottles for processing at the City's Marine Microbiology Laboratory. Water column profiles of the various physical/chemical parameters were taken using a CTD. The CTD collected these physical/chemical data at a rate ≥ 4 scans per second. The data were then internally averaged using the CTD proprietary software, Seasoft, to create water column profiles equivalent

to one reading per meter. Additionally, CTD profile data for each water sample depth are presented with the bacteriological data.

Offshore Stations

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

At these offshore stations, water samples for bacteriological analyses were 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 2019 Quality Assurance Report, which will be completed in March 2020.

SUMMARY OF RESULTS

Shore Stations

- During January, one of the eight shore stations was out of compliance with one of the California Ocean Plan (Ocean Plan) water-contact standards.
 - o The single sample maximum (SSM) standard for *Enterococcus* was exceeded at station D11 on one or more days during the month.
 - o Per permit requirements, resamples were collected in response to SSM exceedances (see Table 2.8 for details).
- Over the years, elevated bacteria levels at shore and kelp bed stations have tended to be associated with rainfall events, heavy recreational use, or the presence of seabirds or decaying kelp and surfgrass. See the City of San Diego's most recent *Biennial Receiving Waters Monitoring and Assessment Report for the Point Loma and South Bay Ocean Outfalls* details (<http://www.sandiego.gov/mwwd/environment/oceanmonitor/reports/index.shtml>).
- Notable observations for January included a sewage-like odor at station D11 on January 9.

Kelp Bed Stations

- The eight kelp bed water quality stations (A1, A6, A7, C4, C5, C6, C7, C8) were sampled five times during the month (i.e. January 2, 7, 14, 23, 28).
- During January, two of the kelp bed stations were out of compliance with one or more water-contact standards specified in the Ocean Plan.
 - o The SSM standard for *Enterococcus* was exceeded at station A1 on January 23.
 - o The SSM standard that states total coliform densities shall not exceed 1000 CFU/100 mL when the fecal:total ratio exceeds 0.1 was exceeded at stations A1 and A7 on January 23.
- Water column temperatures ranged from 13.01 to 15.83°C during the month. The difference between surface and bottom waters ranged from 0.01 to 2.24°C, indicating that the water column was stratified at some of the kelp bed stations during the month.
- Chlorophyll *a* concentrations ranged from 0 to 20.83 µg/L during January, suggesting the presence of phytoplankton blooms during the month.
- Nothing of sewage origin was observed at any of the kelp stations.

Offshore Stations

- Quarterly sampling was not conducted during January at the offshore stations. The next quarterly sampling is scheduled for February 2019.



TABLES AND FIGURES

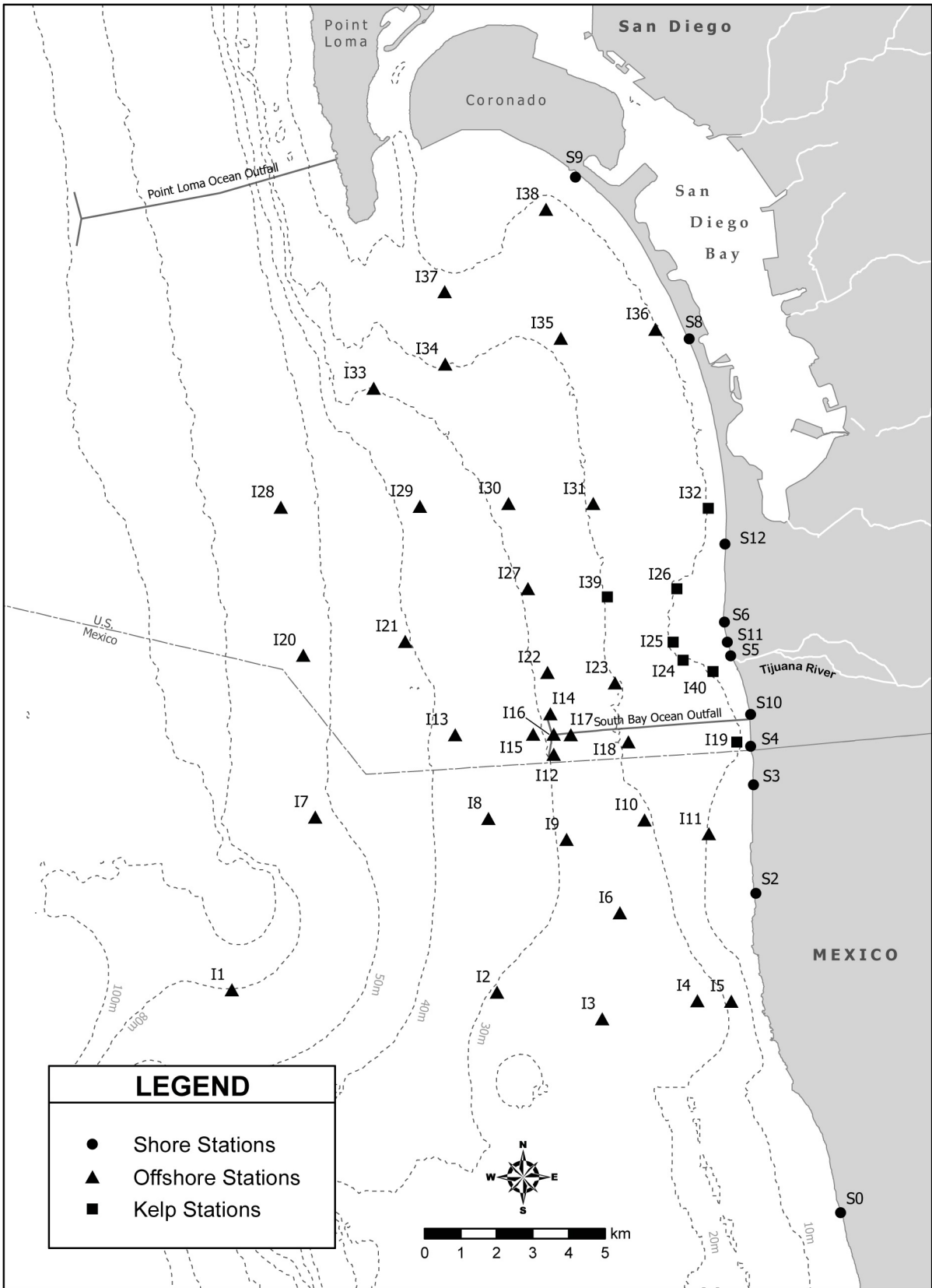


Figure 1.1 Station Map

Shore Stations

Table 2.1

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

Date	S4	S5	S6	S8	S9	S10	S11	S12
01 Jan 2019	5176	4025	423	20*	10*	11238	2673	53*
02 Jan 2019	4280	4563	195	13	8	9071	1301	28
03 Jan 2019	5062	4025	107	11*	10*	8683	1076	30*
04 Jan 2019	5062	3433	107	11*	10*	8683	1076	30*
05 Jan 2019	5062	2944	107	11*	10*	8252	768	30*
06 Jan 2019	5062	2439	107	11*	10*	7770	498	30*
07 Jan 2019	5062	2439	107	11*	10*	7770	498	30*
08 Jan 2019	5355	2269	81	8	7	8233	218	28
09 Jan 2019	5355	2269	81	8	7	8233	218	28
10 Jan 2019	4781	1801	46	6*	8*	6375	107	17*
11 Jan 2019	4599	1801	46	6*	8*	6375	107	17*
12 Jan 2019	4106	1421	19*	6*	8*	5814	54	17*
13 Jan 2019	4383	1005	19*	6*	8*	5196	19*	17*
14 Jan 2019	4383	1005	19*	6*	8*	5196	19*	17*
15 Jan 2019	4088	1542	73	20	9	4514	75	65
16 Jan 2019	4088	1542	73	20	9	4514	75	65
17 Jan 2019	3874	3035	225	30	8*	3250	263	94
18 Jan 2019	3874	3736	202	30	8*	3250	272	94
19 Jan 2019	3874	3736	202	30	8*	3250	272	94
20 Jan 2019	3874	3842	202	30	8*	3250	272	94
21 Jan 2019	3874	3842	202	30	8*	3250	272	94
22 Jan 2019	3867	2535	161	28	9	3044	187	106
23 Jan 2019	3867	2535	161	28	9	3044	187	106
24 Jan 2019	4164	2535	161	28	9	3044	187	106
25 Jan 2019	4532	3213	180	30	8*	2474	189	148
26 Jan 2019	4041	3213	180	30	8*	1895	189	148
27 Jan 2019	4532	3213	180	30	8*	1895	189	148
28 Jan 2019	4064	3213	180	30	8*	1328	189	148
29 Jan 2019	2464	3772	196	19	6	1554	190	114
30 Jan 2019	2679	3772	196	19	6	1547	190	114
31 Jan 2019	2679	3772	196	19	6	1547	190	114

* Geometric mean calculated using n<5

Table 2.2

Summary of compliance with the Ocean Plan's 30-day Geometric Mean standard for fecal coliform bacteria at the SBOO shore stations. Data are based on the geometric mean of the five most recent samples from each site over the previous 30 days unless otherwise noted (*). Values >200 CFU/100 mL exceed the standard.

Date	S4	S5	S6	S8	S9	S10	S11	S12
01 Jan 2019	885	926	39	2*	3*	1937	334	5*
02 Jan 2019	691	1169	24	2	3	1462	200	4
03 Jan 2019	838	926	16	2*	3*	1508	171	5*
04 Jan 2019	838	741	16	2*	3*	1508	171	5*
05 Jan 2019	838	561	16	2*	3*	1518	100	5*
06 Jan 2019	838	399	16	2*	3*	1494	56	5*
07 Jan 2019	838	399	16	2*	3*	1494	56	5*
08 Jan 2019	922	415	14	2	3	1523	23	4
09 Jan 2019	922	415	14	2	3	1523	23	4
10 Jan 2019	791	320	8	2*	3*	1057	13	3*
11 Jan 2019	759	320	8	2*	3*	1057	13	3*
12 Jan 2019	590	269	5*	2*	3*	829	7	3*
13 Jan 2019	639	178	5*	2*	3*	616	3*	3*
14 Jan 2019	639	178	5*	2*	3*	616	3*	3*
15 Jan 2019	548	353	17	6	4	477	12	12
16 Jan 2019	548	353	17	6	4	477	12	12
17 Jan 2019	543	858	61	12	4*	375	50	24
18 Jan 2019	543	1193	57	12	4*	375	56	39
19 Jan 2019	543	1193	57	12	4*	375	56	39
20 Jan 2019	543	1224	57	12	4*	375	56	36
21 Jan 2019	543	1224	57	12	4*	375	56	36
22 Jan 2019	533	793	39	9	5	341	39	32
23 Jan 2019	533	793	39	9	5	341	39	32
24 Jan 2019	604	793	39	9	5	341	39	32
25 Jan 2019	698	1106	43	12	6*	298	50	48
26 Jan 2019	607	1106	43	12	6*	244	50	48
27 Jan 2019	698	1106	43	12	6*	244	50	48
28 Jan 2019	619	1106	43	12	6*	126	50	48
29 Jan 2019	407	1403	48	9	5	168	67	39
30 Jan 2019	490	1403	48	9	5	169	67	39
31 Jan 2019	490	1403	48	9	5	169	67	39

* Geometric mean calculated using n<5

Table 2.3

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

Date	S4	S5	S6	S8	S9	S10	S11	S12
01 Jan 2019	321	1159	65	3*	5*	662	74	12
02 Jan 2019	267	1378	39	3	4	549	47	9
03 Jan 2019	318	1242	41	3*	5*	549	42	12
04 Jan 2019	318	1087	41	3*	5*	549	42	12
05 Jan 2019	318	890	41	3*	5*	485	42	12
06 Jan 2019	318	606	41	3*	5*	414	42	12
07 Jan 2019	318	606	41	3*	5*	414	42	12
08 Jan 2019	332	591	27	3	4	442	29	9
09 Jan 2019	332	591	27	3	4	442	29	9
10 Jan 2019	269	465	16	3*	4*	347	19	5
11 Jan 2019	239	465	16	3*	4*	347	19	5
12 Jan 2019	189	472	10	3*	4*	277	14	4*
13 Jan 2019	172	398	6*	3*	4*	210	9	4*
14 Jan 2019	172	398	6*	3*	4*	210	9	4*
15 Jan 2019	160	621	18	5	5	223	19	10
16 Jan 2019	160	621	18	5	5	223	19	10
17 Jan 2019	194	621	31	5*	3*	202	35	13
18 Jan 2019	151	813	29	5*	3*	202	29	13
19 Jan 2019	151	611	29	5*	3*	229	29	13
20 Jan 2019	151	541	29	5*	3*	229	29	13
21 Jan 2019	151	723	29	5*	3*	229	29	13
22 Jan 2019	134	511	20	4	3	192	25	19
23 Jan 2019	134	511	20	4	3	192	25	19
24 Jan 2019	134	511	20	4	3	192	25	14
25 Jan 2019	114	700	22	5*	3*	147	28	19
26 Jan 2019	96	700	22	5*	3*	125	28	19
27 Jan 2019	96	700	22	5*	3*	125	28	19
28 Jan 2019	80	700	22	5*	3*	69	28	19
29 Jan 2019	62	906	27	5	3	83	37	15
30 Jan 2019	62	906	27	5	3	83	37	15
31 Jan 2019	62	906	27	5	3	83	37	15

* Geometric mean calculated using n<5

Table 2.4

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

Date	S4	S5	S6	S8	S9	S10	S11	S12
02 Jan 2019	IC	E	IC	IC	IC	IC	IC	IC
04 Jan 2019	ns	IC	ns	ns	ns	ns	ns	ns
08 Jan 2019	IC	IC	IC	IC	IC	IC	IC	IC
10 Jan 2019	IC	IC	ns	ns	ns	IC	ns	ns
11 Jan 2019	IC	ns	ns	ns	ns	ns	ns	ns
13 Jan 2019	E	ns	ns	ns	ns	ns	ns	ns
15 Jan 2019	ns	E	E	IC	IC	ns	E	E
17 Jan 2019	IC	E	IC	IC	ns	IC	E	IC
18 Jan 2019	ns	E	IC	ns	ns	ns	IC	ns
20 Jan 2019	ns	IC	ns	ns	ns	ns	ns	ns
22 Jan 2019	IC	IC	IC	IC	IC	IC	IC	IC
24 Jan 2019	IC	ns	ns	ns	ns	ns	ns	ns
25 Jan 2019	E	ns	ns	ns	ns	ns	ns	ns
27 Jan 2019	E	ns	ns	ns	ns	ns	ns	ns
29 Jan 2019	IC	E	IC	IC	IC	IC	IC	IC
31 Jan 2019	ns	ns	ns	ns	ns	ns	ns	ns

IC = In Compliance
E = Exceedance
ns = not sampled
ND = no data

Table 2.5

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

Date	S4	S5	S6	S8	S9	S10	S11	S12
02 Jan 2019	IC	E	IC	IC	IC	IC	IC	IC
04 Jan 2019	ns	IC	ns	ns	ns	ns	ns	ns
08 Jan 2019	E	E	IC	IC	IC	E	IC	IC
10 Jan 2019	E	IC	ns	ns	ns	IC	ns	ns
11 Jan 2019	E	ns	ns	ns	ns	ns	ns	ns
13 Jan 2019	E	ns	ns	ns	ns	ns	ns	ns
15 Jan 2019	ns	E	E	E	IC	ns	E	E
17 Jan 2019	IC	E	E	IC	ns	IC	E	E
18 Jan 2019	ns	E	IC	ns	ns	ns	IC	E
20 Jan 2019	ns	E	ns	ns	ns	ns	ns	IC
22 Jan 2019	E	IC	IC	IC	IC	IC	IC	IC
24 Jan 2019	E	ns	ns	ns	ns	ns	ns	ns
25 Jan 2019	E	ns	ns	ns	ns	ns	ns	ns
27 Jan 2019	E	ns	ns	ns	ns	ns	ns	ns
29 Jan 2019	IC	E	IC	IC	IC	E	IC	IC
31 Jan 2019	ns	ns	ns	ns	ns	ns	ns	ns

IC = In Compliance
E = Exceedance
ns = not sampled
ND = no data

Table 2.6

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

Date	S4	S5	S6	S8	S9	S10	S11	S12
02 Jan 2019	IC	E	IC	IC	IC	IC	IC	IC
04 Jan 2019	ns	E	ns	ns	ns	ns	ns	ns
06 Jan 2019	ns	E	ns	ns	ns	ns	ns	ns
08 Jan 2019	E	E	IC	IC	IC	E	IC	IC
10 Jan 2019	E	IC	ns	ns	ns	IC	ns	ns
11 Jan 2019	IC	ns	ns	ns	ns	ns	ns	ns
15 Jan 2019	ns	E	E	IC	IC	ns	E	E
17 Jan 2019	E	E	E	ns	ns	IC	E	IC
18 Jan 2019	IC	E	IC	ns	ns	ns	IC	ns
20 Jan 2019	ns	E	ns	ns	ns	ns	ns	ns
22 Jan 2019	IC	IC	IC	IC	IC	IC	IC	E
24 Jan 2019	ns	ns	ns	ns	ns	ns	ns	IC
29 Jan 2019	IC	E	E	IC	IC	E	E	IC
31 Jan 2019	ns	ns	ns	ns	ns	ns	ns	ns

IC = In Compliance

E = Exceedance

ns = not sampled

ND = no data

Table 2.7

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

Date	S4	S5	S6	S8	S9	S10	S11	S12
02 Jan 2019	IC	E	IC	IC	IC	IC	IC	IC
04 Jan 2019	ns	IC	ns	ns	ns	ns	ns	ns
08 Jan 2019	E	E	IC	IC	IC	E	IC	IC
10 Jan 2019	E	IC	ns	ns	ns	IC	ns	ns
11 Jan 2019	E	ns	ns	ns	ns	ns	ns	ns
13 Jan 2019	E	ns	ns	ns	ns	ns	ns	ns
15 Jan 2019	ns	E	E	E	IC	ns	E	E
17 Jan 2019	IC	E	E	IC	ns	IC	E	IC
18 Jan 2019	ns	E	IC	ns	ns	ns	IC	ND
20 Jan 2019	ns	E	ns	ns	ns	ns	ns	ND
22 Jan 2019	E	IC	IC	IC	IC	IC	IC	IC
24 Jan 2019	E	ns	ns	ns	ns	ns	ns	ns
25 Jan 2019	E	ns	ns	ns	ns	ns	ns	ns
27 Jan 2019	E	ns	ns	ns	ns	ns	ns	ns
29 Jan 2019	IC	E	IC	IC	IC	E	IC	IC

IC = In Compliance

E = Exceedance

ns = not sampled

ND = no data

Table 2.8

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

Station	Date	Time	Total	Fecal	Entero	F:T
S0	02 Jan 2019	1020	960	48	88	0.05
S0	08 Jan 2019	1145	12000	420	1800e	0.04
S0	15 Jan 2019	1140	7400	740	1400e	0.10
S0	22 Jan 2019	1120	>16000	2000e	2200e	0.12
S0	29 Jan 2019	1140	160e	10e	20e	0.06
S2	02 Jan 2019	1220	6e	2e	4e	0.33
S2	08 Jan 2019	1040	7600	560	80e	0.07
S2	15 Jan 2019	1055	15000	2200e	5200	0.15
S2	22 Jan 2019	1310	2400e	200e	22e	0.08
S2	29 Jan 2019	1300	56	14e	4e	0.25
S3	02 Jan 2019	1135	14e	<2	2e	0.14
S3	08 Jan 2019	955	>16000	1100	220e	0.07
S3	15 Jan 2019	1020	>16000	1400e	2000e	0.09
S3	22 Jan 2019	1220	2600e	340e	42	0.13
S3	29 Jan 2019	1220	4e	<2	<2	0.50
S4	02 Jan 2019	821	640	58	42	0.09
S4	08 Jan 2019	838	9400	2400e	500	0.26
S4	10 Jan 2019	821	4600	700	120e	0.15
S4	11 Jan 2019	1255	3000e	480	66	0.16
S4	13 Jan 2019	804	>16000	2400e	ns	0.15
S4	15 Jan 2019	1138	ns	ns	ns	ns
S4	17 Jan 2019	943	420	72	260e	0.17
S4	18 Jan 2019	946	ns	ns	16e	ns
S4	22 Jan 2019	1120	3800e	440	40	0.12
S4	24 Jan 2019	716	9400	2400e	ns	0.26
S4	25 Jan 2019	922	>16000	3600e	ns	0.22
S4	27 Jan 2019	755	>16000	3200e	ns	0.20
S4	29 Jan 2019	1112	10e	4e	8e	0.40
S5	02 Jan 2019	1152	>16000	>12000	11000	0.75
S5	04 Jan 2019	1057	700	80e	220e	0.11
S5	06 Jan 2019	814	ns	ns	120	ns
S5	08 Jan 2019	1022	4600	940	440	0.20
S5	10 Jan 2019	929	600	66	50	0.11
S5	15 Jan 2019	1010	>16000	>12000	>12000	0.75
S5	17 Jan 2019	1045	>16000	>12000	>12000	0.75
S5	18 Jan 2019	1130	>16000	>12000	>12000	0.75
S5	20 Jan 2019	945	4800	1500e	160e	0.31
S5	22 Jan 2019	945	60e	16e	16e	0.27
S5	29 Jan 2019	947	>16000	>12000	>12000	0.75
S5	31 Jan 2019	813	ns	ns	ns	ns
S6	02 Jan 2019	1204	4e	<2	<2	0.50
S6	08 Jan 2019	1053	20e	6e	2e	0.30
S6	15 Jan 2019	1022	>16000	3000e	1600e	0.19
S6	17 Jan 2019	1053	5600	1100	400	0.20

Station	Date	Time	Total	Fecal	Entero	F:T
S6	18 Jan 2019	1138	120e	40e	<20	0.33
S6	22 Jan 2019	959	40e	4e	2e	0.10
S6	29 Jan 2019	959	320e	88	110	0.28
S6	31 Jan 2019	824	ns	ns	ns	ns
S8	02 Jan 2019	924	2e	<2	<2	1.00
S8	08 Jan 2019	1214	<2	<2	<2	1.00
S8	15 Jan 2019	917	1800e	480	62	0.27
S8	17 Jan 2019	1221	160e	60	ns	0.38
S8	22 Jan 2019	832	20e	<2	<2	0.10
S8	29 Jan 2019	843	<2	<2	4e	1.00
S9	02 Jan 2019	1003	4e	4e	<2	1.00
S9	08 Jan 2019	1245	<2	4e	<2	2.00
S9	15 Jan 2019	852	<20	10e	8e	0.50
S9	22 Jan 2019	808	20e	6e	2e	0.30
S9	29 Jan 2019	811	<2	<2	6e	1.00
S10	02 Jan 2019	801	560	38e	40	0.07
S10	08 Jan 2019	833	6800	840	220e	0.12
S10	10 Jan 2019	805	960	54	38e	0.06
S10	15 Jan 2019	1140	ns	ns	ns	ns
S10	17 Jan 2019	938	520	90	80e	0.17
S10	22 Jan 2019	1114	1800e	160e	46	0.09
S10	29 Jan 2019	1107	4000	940	260e	0.23
S10	31 Jan 2019	727	ns	ns	ns	ns
S11	02 Jan 2019	1159	2e	<2	2e	1.00
S11	08 Jan 2019	1038	<20	<2	2e	0.10
S11	15 Jan 2019	1016	>16000	3600e	2000e	0.22
S11	17 Jan 2019	1049	11000	2800e	580	0.25
S11	18 Jan 2019	1134	320e	100e	10e	0.31
S11	22 Jan 2019	952	<20	4e	10e	0.20
S11	29 Jan 2019	953	200e	360e	200e	1.80
S11	31 Jan 2019	819	ns	ns	ns	ns
S12	02 Jan 2019	1224	<2	<2	<2	1.00
S12	08 Jan 2019	1111	<20	<2	<2	0.10
S12	15 Jan 2019	1030	15000	2200e	400	0.15
S12	17 Jan 2019	1103	600e	440	100	0.73
S12	18 Jan 2019	1108	ns	440	ns	ns
S12	20 Jan 2019	1029	ns	24e	ns	ns
S12	22 Jan 2019	921	<200	14e	160e	0.07
S12	24 Jan 2019	756	ns	ns	2e	ns
S12	29 Jan 2019	930	30e	10e	4e	0.33

ns = not sampled
ND = no data

Comments

Station	Date	Depth	Parameter	Comments
S10	10 Jan 2019			Resample
S4	10 Jan 2019			Resample
S5	10 Jan 2019			Resample
S10	10 Jan 2019			Resample
S4	11 Jan 2019			Resample
S4	13 Jan 2019			Resample
S4	15 Jan 2019			Site inaccessible due to flooded road
S10	15 Jan 2019			Site inaccessible due to flooded road
S4	17 Jan 2019			Resample
S5	17 Jan 2019			Resample
S6	17 Jan 2019			Resample
S8	17 Jan 2019			Resample
S10	17 Jan 2019			Resample
S11	17 Jan 2019			Resample
S12	17 Jan 2019			Resample
S12	20 Jan 2019			Resample
S5	20 Jan 2019			Resample
S12	24 Jan 2019			Resample
S4	24 Jan 2019			Resample
S4	25 Jan 2019			Resample
S4	27 Jan 2019			Resample

Table 2.9

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

Station	Date	Parameter	Value
S0	02 Jan 2019	Arrive Time	1020
S0	02 Jan 2019	Weather	Sunny
S0	02 Jan 2019	Wind Speed (kts)	2.1
S0	02 Jan 2019	Wind Dir	NE
S0	02 Jan 2019	Animal Life	20 Shorebirds
S0	02 Jan 2019	Floatables	None
S0	02 Jan 2019	Water Color	Green
S0	02 Jan 2019	Current Direction	N
S0	02 Jan 2019	Water Temp (C)	11
S0	02 Jan 2019	Wave Height Low (ft)	4
S0	02 Jan 2019	High Tide (ft)	5.8
S0	02 Jan 2019	High Tide Time	618
S0	02 Jan 2019	Low Tide (ft)	-0.4
S0	02 Jan 2019	Low Tide Time	1333
S0	02 Jan 2019	Comments	Kelp; Algae; 4 Persons; Water clear; 0.5 L/sec water flowing from storm drain
S0	08 Jan 2019	Arrive Time	1145
S0	08 Jan 2019	Weather	Sunny
S0	08 Jan 2019	Wind Speed (kts)	4
S0	08 Jan 2019	Wind Dir	NE
S0	08 Jan 2019	Animal Life	10 Shorebirds
S0	08 Jan 2019	Floatables	None
S0	08 Jan 2019	Water Color	Green
S0	08 Jan 2019	Current Direction	N
S0	08 Jan 2019	Water Temp (C)	15
S0	08 Jan 2019	Wave Height Low (ft)	4
S0	08 Jan 2019	High Tide (ft)	5.4
S0	08 Jan 2019	High Tide Time	936
S0	08 Jan 2019	Low Tide (ft)	-0.4
S0	08 Jan 2019	Low Tide Time	1653
S0	08 Jan 2019	Comments	Kelp; Algae; 2 Persons; Water clear; 0.8 L/sec water flowing from storm drain
S0	15 Jan 2019	Arrive Time	1140
S0	15 Jan 2019	Weather	Heavy Rain
S0	15 Jan 2019	Wind Speed (kts)	0.6
S0	15 Jan 2019	Wind Dir	SW
S0	15 Jan 2019	Animal Life	20 Birds
S0	15 Jan 2019	Floatables	None
S0	15 Jan 2019	Water Color	Green
S0	15 Jan 2019	Current Direction	N
S0	15 Jan 2019	Water Temp (C)	12
S0	15 Jan 2019	Wave Height Low (ft)	3
S0	15 Jan 2019	High Tide (ft)	2.9
S0	15 Jan 2019	High Tide Time	1701
S0	15 Jan 2019	Low Tide (ft)	1.1
S0	15 Jan 2019	Low Tide Time	1116
S0	15 Jan 2019	Comments	Water clear; Rough seas; High tide; 3.0 L/sec water flowing from storm drain

Station	Date	Parameter	Value
S0	22 Jan 2019	Arrive Time	1120
S0	22 Jan 2019	Weather	Sunny
S0	22 Jan 2019	Wind Speed (kts)	4
S0	22 Jan 2019	Wind Dir	NE
S0	22 Jan 2019	Animal Life	20 Shorebirds
S0	22 Jan 2019	Floatables	None
S0	22 Jan 2019	Water Color	Green
S0	22 Jan 2019	Current Direction	N
S0	22 Jan 2019	Water Temp (C)	15
S0	22 Jan 2019	Wave Height Low (ft)	4
S0	22 Jan 2019	High Tide (ft)	6.7
S0	22 Jan 2019	High Tide Time	917
S0	22 Jan 2019	Low Tide (ft)	-1.6
S0	22 Jan 2019	Low Tide Time	1625
S0	22 Jan 2019	Comments	Kelp; Algae; 5 Persons; Water clear; 0.5 L/sec water flowing from storm drain
S0	29 Jan 2019	Arrive Time	1140
S0	29 Jan 2019	Weather	Cloudy
S0	29 Jan 2019	Wind Speed (kts)	1.8
S0	29 Jan 2019	Wind Dir	SE
S0	29 Jan 2019	Animal Life	3 Dogs; 20 Seagulls
S0	29 Jan 2019	Floatables	None
S0	29 Jan 2019	Water Color	Green
S0	29 Jan 2019	Current Direction	N
S0	29 Jan 2019	Water Temp (C)	15
S0	29 Jan 2019	Wave Height Low (ft)	2
S0	29 Jan 2019	High Tide (ft)	3
S0	29 Jan 2019	High Tide Time	1805
S0	29 Jan 2019	Low Tide (ft)	0.4
S0	29 Jan 2019	Low Tide Time	1150
S0	29 Jan 2019	Comments	Kelp; Algae; Water turbid; 1.0 L/sec water flowing from storm drain
S2	02 Jan 2019	Arrive Time	1220
S2	02 Jan 2019	Weather	Sunny
S2	02 Jan 2019	Wind Speed (kts)	1.9
S2	02 Jan 2019	Wind Dir	NE
S2	02 Jan 2019	Animal Life	10 Shorebirds; 1 Dog
S2	02 Jan 2019	Floatables	None
S2	02 Jan 2019	Water Color	Green
S2	02 Jan 2019	Current Direction	N
S2	02 Jan 2019	Water Temp (C)	11
S2	02 Jan 2019	Wave Height Low (ft)	4
S2	02 Jan 2019	High Tide (ft)	5.8
S2	02 Jan 2019	High Tide Time	618
S2	02 Jan 2019	Low Tide (ft)	-0.4
S2	02 Jan 2019	Low Tide Time	1333
S2	02 Jan 2019	Comments	Kelp; Algae; 3 Persons; Water clear; No flow from storm drain
S2	08 Jan 2019	Arrive Time	1040
S2	08 Jan 2019	Weather	Sunny
S2	08 Jan 2019	Wind Speed (kts)	4.1
S2	08 Jan 2019	Wind Dir	NE
S2	08 Jan 2019	Animal Life	10 Shorebirds
S2	08 Jan 2019	Floatables	None

Station	Date	Parameter	Value
S2	08 Jan 2019	Water Color	Green
S2	08 Jan 2019	Current Direction	N
S2	08 Jan 2019	Water Temp (C)	15
S2	08 Jan 2019	Wave Height Low (ft)	4
S2	08 Jan 2019	High Tide (ft)	5.4
S2	08 Jan 2019	High Tide Time	936
S2	08 Jan 2019	Low Tide (ft)	-0.4
S2	08 Jan 2019	Low Tide Time	1653
S2	08 Jan 2019	Comments	Kelp; Algae; 3 Persons; Water clear; No flow from storm drain
S2	15 Jan 2019	Arrive Time	1055
S2	15 Jan 2019	Weather	Heavy Rain
S2	15 Jan 2019	Wind Speed (kts)	0.9
S2	15 Jan 2019	Wind Dir	SW
S2	15 Jan 2019	Animal Life	20 Birds
S2	15 Jan 2019	Floatables	None
S2	15 Jan 2019	Water Color	Green
S2	15 Jan 2019	Current Direction	N
S2	15 Jan 2019	Water Temp (C)	12
S2	15 Jan 2019	Wave Height Low (ft)	3
S2	15 Jan 2019	High Tide (ft)	2.9
S2	15 Jan 2019	High Tide Time	1701
S2	15 Jan 2019	Low Tide (ft)	1.1
S2	15 Jan 2019	Low Tide Time	1116
S2	15 Jan 2019	Comments	Water clear; Rough seas; No flow from storm drain
S2	22 Jan 2019	Arrive Time	1310
S2	22 Jan 2019	Weather	Sunny
S2	22 Jan 2019	Wind Speed (kts)	3.9
S2	22 Jan 2019	Wind Dir	NE
S2	22 Jan 2019	Animal Life	10 Shorebirds; 1 Dog
S2	22 Jan 2019	Floatables	None
S2	22 Jan 2019	Water Color	Green
S2	22 Jan 2019	Current Direction	N
S2	22 Jan 2019	Water Temp (C)	15
S2	22 Jan 2019	Wave Height Low (ft)	4
S2	22 Jan 2019	High Tide (ft)	6.7
S2	22 Jan 2019	High Tide Time	917
S2	22 Jan 2019	Low Tide (ft)	-1.6
S2	22 Jan 2019	Low Tide Time	1625
S2	22 Jan 2019	Comments	Kelp; Algae; 2 Persons; Water clear; No flow from storm drain
S2	29 Jan 2019	Arrive Time	1300
S2	29 Jan 2019	Weather	Cloudy
S2	29 Jan 2019	Wind Speed (kts)	6.7
S2	29 Jan 2019	Wind Dir	SE
S2	29 Jan 2019	Animal Life	1 Dog; 20 Seagulls
S2	29 Jan 2019	Floatables	None
S2	29 Jan 2019	Water Color	Green
S2	29 Jan 2019	Current Direction	N
S2	29 Jan 2019	Water Temp (C)	15
S2	29 Jan 2019	Wave Height Low (ft)	2
S2	29 Jan 2019	High Tide (ft)	3
S2	29 Jan 2019	High Tide Time	1805
S2	29 Jan 2019	Low Tide (ft)	0.4

Station	Date	Parameter	Value
S2	29 Jan 2019	Low Tide Time	1150
S2	29 Jan 2019	Comments	Kelp; Algae; Water turbid; No flow from storm drain
S3	02 Jan 2019	Arrive Time	1135
S3	02 Jan 2019	Weather	Sunny
S3	02 Jan 2019	Wind Speed (kts)	1.9
S3	02 Jan 2019	Wind Dir	NE
S3	02 Jan 2019	Animal Life	10 Shorebirds; 1 Dog
S3	02 Jan 2019	Floatables	None
S3	02 Jan 2019	Water Color	Green
S3	02 Jan 2019	Current Direction	N
S3	02 Jan 2019	Water Temp (C)	11
S3	02 Jan 2019	Wave Height Low (ft)	4
S3	02 Jan 2019	High Tide (ft)	5.8
S3	02 Jan 2019	High Tide Time	618
S3	02 Jan 2019	Low Tide (ft)	-0.4
S3	02 Jan 2019	Low Tide Time	1333
S3	02 Jan 2019	Comments	Kelp; Algae; 10 Persons; 1 Swimmer; Water clear; No flow from storm drain
S3	08 Jan 2019	Arrive Time	955
S3	08 Jan 2019	Weather	Sunny
S3	08 Jan 2019	Wind Speed (kts)	4.5
S3	08 Jan 2019	Wind Dir	NE
S3	08 Jan 2019	Animal Life	20 Birds
S3	08 Jan 2019	Floatables	None
S3	08 Jan 2019	Water Color	Green
S3	08 Jan 2019	Current Direction	N
S3	08 Jan 2019	Water Temp (C)	15
S3	08 Jan 2019	Wave Height Low (ft)	4
S3	08 Jan 2019	High Tide (ft)	5.4
S3	08 Jan 2019	High Tide Time	936
S3	08 Jan 2019	Low Tide (ft)	2.1
S3	08 Jan 2019	Low Tide Time	334
S3	08 Jan 2019	Comments	Kelp; Algae; 4 Persons; Water clear; No flow from storm drain
S3	15 Jan 2019	Arrive Time	1020
S3	15 Jan 2019	Weather	Heavy Rain
S3	15 Jan 2019	Wind Speed (kts)	0.7
S3	15 Jan 2019	Wind Dir	SW
S3	15 Jan 2019	Animal Life	15 Birds; 5 Dogs
S3	15 Jan 2019	Floatables	None
S3	15 Jan 2019	Water Color	Green
S3	15 Jan 2019	Current Direction	N
S3	15 Jan 2019	Water Temp (C)	12
S3	15 Jan 2019	Wave Height Low (ft)	3
S3	15 Jan 2019	High Tide (ft)	4.6
S3	15 Jan 2019	High Tide Time	359
S3	15 Jan 2019	Low Tide (ft)	1.1
S3	15 Jan 2019	Low Tide Time	1116
S3	15 Jan 2019	Comments	Water clear; Rough seas; No flow from stormdrain
S3	22 Jan 2019	Arrive Time	1220
S3	22 Jan 2019	Weather	Sunny
S3	22 Jan 2019	Wind Speed (kts)	4.1

Station	Date	Parameter	Value
S3	22 Jan 2019	Wind Dir	NE
S3	22 Jan 2019	Animal Life	10 Shorebirds
S3	22 Jan 2019	Floatables	None
S3	22 Jan 2019	Water Color	Green
S3	22 Jan 2019	Current Direction	N
S3	22 Jan 2019	Water Temp (C)	15
S3	22 Jan 2019	Wave Height Low (ft)	4
S3	22 Jan 2019	High Tide (ft)	6.7
S3	22 Jan 2019	High Tide Time	917
S3	22 Jan 2019	Low Tide (ft)	-1.6
S3	22 Jan 2019	Low Tide Time	1625
S3	22 Jan 2019	Comments	Kelp; Algae; 5 Persons; Water clear; No flow from storm drain
S3	29 Jan 2019	Arrive Time	1220
S3	29 Jan 2019	Weather	Cloudy
S3	29 Jan 2019	Wind Speed (kts)	6.3
S3	29 Jan 2019	Wind Dir	SE
S3	29 Jan 2019	Animal Life	3 Dogs; 20 Seagulls
S3	29 Jan 2019	Floatables	None
S3	29 Jan 2019	Water Color	Green
S3	29 Jan 2019	Current Direction	N
S3	29 Jan 2019	Water Temp (C)	15
S3	29 Jan 2019	Wave Height Low (ft)	2
S3	29 Jan 2019	High Tide (ft)	3
S3	29 Jan 2019	High Tide Time	1805
S3	29 Jan 2019	Low Tide (ft)	0.4
S3	29 Jan 2019	Low Tide Time	1150
S3	29 Jan 2019	Comments	Kelp; Algae; Water turbid; No flow from storm drain
S4	02 Jan 2019	Arrive Time	821
S4	02 Jan 2019	Weather	Sunny
S4	02 Jan 2019	Wind Speed (kts)	7.5
S4	02 Jan 2019	Wind Dir	W
S4	02 Jan 2019	Animal Life	50 Shorebirds; 8 Birds; 1 Pelican
S4	02 Jan 2019	Floatables	None
S4	02 Jan 2019	Water Color	Green
S4	02 Jan 2019	Current Direction	W
S4	02 Jan 2019	Water Temp (C)	10
S4	02 Jan 2019	Wave Height Low (ft)	2
S4	02 Jan 2019	High Tide (ft)	5.8
S4	02 Jan 2019	High Tide Time	618
S4	02 Jan 2019	Low Tide (ft)	-0.4
S4	02 Jan 2019	Low Tide Time	1333
S4	02 Jan 2019	Comments	Kelp; Seagrass; Debris; Water clear
S4	08 Jan 2019	Arrive Time	838
S4	08 Jan 2019	Weather	Sunny
S4	08 Jan 2019	Wind Speed (kts)	5.7
S4	08 Jan 2019	Wind Dir	S
S4	08 Jan 2019	Animal Life	None
S4	08 Jan 2019	Floatables	None
S4	08 Jan 2019	Water Color	Green
S4	08 Jan 2019	Current Direction	N
S4	08 Jan 2019	Water Temp (C)	12
S4	08 Jan 2019	Wave Height Low (ft)	2

Station	Date	Parameter	Value
S4	08 Jan 2019	High Tide (ft)	5.4
S4	08 Jan 2019	High Tide Time	936
S4	08 Jan 2019	Low Tide (ft)	2.1
S4	08 Jan 2019	Low Tide Time	334
S4	08 Jan 2019	Comments	Kelp; Seagrass; Water clear
S4	10 Jan 2019	Arrive Time	821
S4	10 Jan 2019	Weather	Partly Cloudy
S4	10 Jan 2019	Wind Speed (kts)	5.1
S4	10 Jan 2019	Wind Dir	E
S4	10 Jan 2019	Animal Life	None
S4	10 Jan 2019	Floatables	None
S4	10 Jan 2019	Water Color	Green
S4	10 Jan 2019	Current Direction	N
S4	10 Jan 2019	Water Temp (C)	14
S4	10 Jan 2019	Wave Height Low (ft)	9
S4	10 Jan 2019	High Tide (ft)	4.7
S4	10 Jan 2019	High Tide Time	1041
S4	10 Jan 2019	Low Tide (ft)	2.3
S4	10 Jan 2019	Low Tide Time	452
S4	10 Jan 2019	Comments	Resample; Seagrass; Water clear
S4	11 Jan 2019	Arrive Time	1255
S4	11 Jan 2019	Weather	Partly Cloudy
S4	11 Jan 2019	Wind Speed (kts)	2.7
S4	11 Jan 2019	Wind Dir	W
S4	11 Jan 2019	Animal Life	None
S4	11 Jan 2019	Floatables	None
S4	11 Jan 2019	Water Color	Green
S4	11 Jan 2019	Current Direction	N
S4	11 Jan 2019	Water Temp (C)	16
S4	11 Jan 2019	Wave Height Low (ft)	3
S4	11 Jan 2019	High Tide (ft)	4.2
S4	11 Jan 2019	High Tide Time	1119
S4	11 Jan 2019	Low Tide (ft)	0.6
S4	11 Jan 2019	Low Tide Time	1839
S4	11 Jan 2019	Comments	Resample; Kelp; 3 Persons; Water clear
S4	13 Jan 2019	Arrive Time	804
S4	13 Jan 2019	Weather	Partly Cloudy
S4	13 Jan 2019	Wind Speed (kts)	2.7
S4	13 Jan 2019	Wind Dir	S
S4	13 Jan 2019	Animal Life	5 Shorebirds; 26 Cormorants
S4	13 Jan 2019	Floatables	None
S4	13 Jan 2019	Water Color	Green
S4	13 Jan 2019	Current Direction	NE
S4	13 Jan 2019	Water Temp (C)	12
S4	13 Jan 2019	Wave Height Low (ft)	5
S4	13 Jan 2019	High Tide (ft)	3.1
S4	13 Jan 2019	High Tide Time	1330
S4	13 Jan 2019	Low Tide (ft)	2.3
S4	13 Jan 2019	Low Tide Time	832
S4	13 Jan 2019	Comments	Resample; Kelp; Seagrass; Debris; Water clear
S4	15 Jan 2019	Arrive Time	1138

Station	Date	Parameter	Value
S4	15 Jan 2019	Weather	Partly Cloudy
S4	15 Jan 2019	Wind Speed (kts)	0.1
S4	15 Jan 2019	Wind Dir	S
S4	15 Jan 2019	Animal Life	None
S4	15 Jan 2019	Floatables	None
S4	15 Jan 2019	Water Color	Green
S4	15 Jan 2019	Current Direction	S
S4	15 Jan 2019	Water Temp (C)	0
S4	15 Jan 2019	Wave Height Low (ft)	0
S4	15 Jan 2019	High Tide (ft)	2.9
S4	15 Jan 2019	High Tide Time	1701
S4	15 Jan 2019	Low Tide (ft)	1.1
S4	15 Jan 2019	Low Tide Time	1116
S4	15 Jan 2019	Comments	Water clear; Site inaccessible due to flooded road
S4	17 Jan 2019	Arrive Time	943
S4	17 Jan 2019	Weather	Cloudy
S4	17 Jan 2019	Wind Speed (kts)	3.4
S4	17 Jan 2019	Wind Dir	W
S4	17 Jan 2019	Animal Life	None
S4	17 Jan 2019	Floatables	None
S4	17 Jan 2019	Water Color	Green
S4	17 Jan 2019	Current Direction	N
S4	17 Jan 2019	Water Temp (C)	17.6
S4	17 Jan 2019	Wave Height Low (ft)	3
S4	17 Jan 2019	High Tide (ft)	5.5
S4	17 Jan 2019	High Tide Time	531
S4	17 Jan 2019	Low Tide (ft)	-0.4
S4	17 Jan 2019	Low Tide Time	1253
S4	17 Jan 2019	Comments	Resample; Kelp; 1 Person; Water clear
S4	18 Jan 2019	Arrive Time	946
S4	18 Jan 2019	Weather	Sunny
S4	18 Jan 2019	Wind Speed (kts)	3.1
S4	18 Jan 2019	Wind Dir	N
S4	18 Jan 2019	Animal Life	None
S4	18 Jan 2019	Floatables	None
S4	18 Jan 2019	Water Color	Green
S4	18 Jan 2019	Current Direction	N
S4	18 Jan 2019	Water Temp (C)	14
S4	18 Jan 2019	Wave Height Low (ft)	3
S4	18 Jan 2019	High Tide (ft)	6
S4	18 Jan 2019	High Tide Time	616
S4	18 Jan 2019	Low Tide (ft)	-1
S4	18 Jan 2019	Low Tide Time	1336
S4	18 Jan 2019	Comments	Resample; Water clear
S4	22 Jan 2019	Arrive Time	1120
S4	22 Jan 2019	Weather	Sunny
S4	22 Jan 2019	Wind Speed (kts)	6
S4	22 Jan 2019	Wind Dir	N
S4	22 Jan 2019	Animal Life	None
S4	22 Jan 2019	Floatables	None
S4	22 Jan 2019	Water Color	Green
S4	22 Jan 2019	Current Direction	N

Station	Date	Parameter	Value
S4	22 Jan 2019	Water Temp (C)	13
S4	22 Jan 2019	Wave Height Low (ft)	5
S4	22 Jan 2019	High Tide (ft)	6.7
S4	22 Jan 2019	High Tide Time	917
S4	22 Jan 2019	Low Tide (ft)	-1.6
S4	22 Jan 2019	Low Tide Time	1625
S4	22 Jan 2019	Comments	2 Persons; Water clear
S4	24 Jan 2019	Arrive Time	716
S4	24 Jan 2019	Weather	Sunny
S4	24 Jan 2019	Wind Speed (kts)	3.4
S4	24 Jan 2019	Wind Dir	W
S4	24 Jan 2019	Animal Life	1 Shorebird; 40 Cormorants; 1 Pelican
S4	24 Jan 2019	Floatables	None
S4	24 Jan 2019	Water Color	Green
S4	24 Jan 2019	Current Direction	W
S4	24 Jan 2019	Water Temp (C)	12.4
S4	24 Jan 2019	Wave Height Low (ft)	2
S4	24 Jan 2019	High Tide (ft)	5.5
S4	24 Jan 2019	High Tide Time	1056
S4	24 Jan 2019	Low Tide (ft)	1.3
S4	24 Jan 2019	Low Tide Time	501
S4	24 Jan 2019	Comments	Resample; Kelp; Seagrass; Debris; Water clear
S4	25 Jan 2019	Arrive Time	922
S4	25 Jan 2019	Weather	Sunny
S4	25 Jan 2019	Wind Speed (kts)	6.6
S4	25 Jan 2019	Wind Dir	N
S4	25 Jan 2019	Animal Life	None
S4	25 Jan 2019	Floatables	None
S4	25 Jan 2019	Water Color	Green
S4	25 Jan 2019	Current Direction	S
S4	25 Jan 2019	Water Temp (C)	16.2
S4	25 Jan 2019	Wave Height Low (ft)	2
S4	25 Jan 2019	High Tide (ft)	4.7
S4	25 Jan 2019	High Tide Time	1152
S4	25 Jan 2019	Low Tide (ft)	1.4
S4	25 Jan 2019	Low Tide Time	607
S4	25 Jan 2019	Comments	Resample; Water clear
S4	27 Jan 2019	Arrive Time	755
S4	27 Jan 2019	Weather	Sunny
S4	27 Jan 2019	Wind Speed (kts)	4.4
S4	27 Jan 2019	Wind Dir	S
S4	27 Jan 2019	Animal Life	10 Shorebirds; 7 Cormorants; 1 Pelican
S4	27 Jan 2019	Floatables	None
S4	27 Jan 2019	Water Color	Green
S4	27 Jan 2019	Current Direction	S
S4	27 Jan 2019	Water Temp (C)	14.7
S4	27 Jan 2019	Wave Height Low (ft)	2
S4	27 Jan 2019	High Tide (ft)	4.6
S4	27 Jan 2019	High Tide Time	213
S4	27 Jan 2019	Low Tide (ft)	1.3
S4	27 Jan 2019	Low Tide Time	859
S4	27 Jan 2019	Comments	Resample; Debris; Water clear

Station	Date	Parameter	Value
S4	29 Jan 2019	Arrive Time	1112
S4	29 Jan 2019	Weather	Foggy
S4	29 Jan 2019	Wind Speed (kts)	5.8
S4	29 Jan 2019	Wind Dir	S
S4	29 Jan 2019	Animal Life	None
S4	29 Jan 2019	Floatables	None
S4	29 Jan 2019	Water Color	Green
S4	29 Jan 2019	Current Direction	N
S4	29 Jan 2019	Water Temp (C)	16.9
S4	29 Jan 2019	Wave Height Low (ft)	2
S4	29 Jan 2019	High Tide (ft)	4.9
S4	29 Jan 2019	High Tide Time	419
S4	29 Jan 2019	Low Tide (ft)	0.4
S4	29 Jan 2019	Low Tide Time	1150
S4	29 Jan 2019	Comments	Water clear
S5	02 Jan 2019	Arrive Time	1152
S5	02 Jan 2019	Weather	Sunny
S5	02 Jan 2019	Wind Speed (kts)	5
S5	02 Jan 2019	Wind Dir	SW
S5	02 Jan 2019	Animal Life	None
S5	02 Jan 2019	Floatables	None
S5	02 Jan 2019	Water Color	Green
S5	02 Jan 2019	Current Direction	SW
S5	02 Jan 2019	Water Temp (C)	15
S5	02 Jan 2019	Wave Height Low (ft)	2
S5	02 Jan 2019	High Tide (ft)	5.8
S5	02 Jan 2019	High Tide Time	618
S5	02 Jan 2019	Low Tide (ft)	-0.4
S5	02 Jan 2019	Low Tide Time	1333
S5	02 Jan 2019	Comments	Kelp; Seagrass; Water turbid; Detergent-like odor
S5	04 Jan 2019	Arrive Time	1057
S5	04 Jan 2019	Weather	Sunny
S5	04 Jan 2019	Wind Speed (kts)	1.2
S5	04 Jan 2019	Wind Dir	N
S5	04 Jan 2019	Animal Life	None
S5	04 Jan 2019	Floatables	None
S5	04 Jan 2019	Water Color	Green
S5	04 Jan 2019	Current Direction	N
S5	04 Jan 2019	Water Temp (C)	12
S5	04 Jan 2019	Wave Height Low (ft)	2
S5	04 Jan 2019	High Tide (ft)	6
S5	04 Jan 2019	High Tide Time	728
S5	04 Jan 2019	Low Tide (ft)	-0.8
S5	04 Jan 2019	Low Tide Time	1444
S5	04 Jan 2019	Comments	Resample; Seagrass; Water clear
S5	06 Jan 2019	Arrive Time	814
S5	06 Jan 2019	Weather	Partly Cloudy
S5	06 Jan 2019	Wind Speed (kts)	1.3
S5	06 Jan 2019	Wind Dir	NW
S5	06 Jan 2019	Animal Life	None
S5	06 Jan 2019	Floatables	None

Station	Date	Parameter	Value
S5	06 Jan 2019	Water Color	Green
S5	06 Jan 2019	Current Direction	N
S5	06 Jan 2019	Water Temp (C)	12
S5	06 Jan 2019	Wave Height Low (ft)	2
S5	06 Jan 2019	High Tide (ft)	5.8
S5	06 Jan 2019	High Tide Time	833
S5	06 Jan 2019	Low Tide (ft)	1.9
S5	06 Jan 2019	Low Tide Time	227
S5	06 Jan 2019	Comments	Resample; Seagrass; Water clear
S5	08 Jan 2019	Arrive Time	1022
S5	08 Jan 2019	Weather	Sunny
S5	08 Jan 2019	Wind Speed (kts)	5.7
S5	08 Jan 2019	Wind Dir	S
S5	08 Jan 2019	Animal Life	13 Birds
S5	08 Jan 2019	Floatables	None
S5	08 Jan 2019	Water Color	Green
S5	08 Jan 2019	Current Direction	N
S5	08 Jan 2019	Water Temp (C)	12
S5	08 Jan 2019	Wave Height Low (ft)	3
S5	08 Jan 2019	High Tide (ft)	5.4
S5	08 Jan 2019	High Tide Time	936
S5	08 Jan 2019	Low Tide (ft)	-0.4
S5	08 Jan 2019	Low Tide Time	1653
S5	08 Jan 2019	Comments	Kelp; Seagrass; Water clear
S5	10 Jan 2019	Arrive Time	929
S5	10 Jan 2019	Weather	Sunny
S5	10 Jan 2019	Wind Speed (kts)	5.2
S5	10 Jan 2019	Wind Dir	E
S5	10 Jan 2019	Animal Life	None
S5	10 Jan 2019	Floatables	None
S5	10 Jan 2019	Water Color	Green
S5	10 Jan 2019	Current Direction	N
S5	10 Jan 2019	Water Temp (C)	14
S5	10 Jan 2019	Wave Height Low (ft)	7
S5	10 Jan 2019	High Tide (ft)	4.7
S5	10 Jan 2019	High Tide Time	1041
S5	10 Jan 2019	Low Tide (ft)	2.3
S5	10 Jan 2019	Low Tide Time	452
S5	10 Jan 2019	Comments	Resample; Seagrass; Water clear
S5	15 Jan 2019	Arrive Time	1010
S5	15 Jan 2019	Weather	Moderate Rain
S5	15 Jan 2019	Wind Speed (kts)	4.6
S5	15 Jan 2019	Wind Dir	E
S5	15 Jan 2019	Animal Life	None
S5	15 Jan 2019	Floatables	None
S5	15 Jan 2019	Water Color	Brown
S5	15 Jan 2019	Current Direction	S
S5	15 Jan 2019	Water Temp (C)	12
S5	15 Jan 2019	Wave Height Low (ft)	1
S5	15 Jan 2019	High Tide (ft)	4.6
S5	15 Jan 2019	High Tide Time	359
S5	15 Jan 2019	Low Tide (ft)	1.1

Station	Date	Parameter	Value
S5	15 Jan 2019	Low Tide Time	1116
S5	15 Jan 2019	Comments	Water clear
S5	17 Jan 2019	Arrive Time	1045
S5	17 Jan 2019	Weather	Cloudy
S5	17 Jan 2019	Wind Speed (kts)	6.5
S5	17 Jan 2019	Wind Dir	W
S5	17 Jan 2019	Animal Life	None
S5	17 Jan 2019	Floatables	None
S5	17 Jan 2019	Water Color	Brown
S5	17 Jan 2019	Current Direction	N
S5	17 Jan 2019	Water Temp (C)	17
S5	17 Jan 2019	Wave Height Low (ft)	3
S5	17 Jan 2019	High Tide (ft)	5.5
S5	17 Jan 2019	High Tide Time	531
S5	17 Jan 2019	Low Tide (ft)	-0.4
S5	17 Jan 2019	Low Tide Time	1253
S5	17 Jan 2019	Comments	Resample; Water clear
S5	18 Jan 2019	Arrive Time	1130
S5	18 Jan 2019	Weather	Partly Cloudy
S5	18 Jan 2019	Wind Speed (kts)	4.4
S5	18 Jan 2019	Wind Dir	N
S5	18 Jan 2019	Animal Life	None
S5	18 Jan 2019	Floatables	None
S5	18 Jan 2019	Water Color	Brown
S5	18 Jan 2019	Current Direction	N
S5	18 Jan 2019	Water Temp (C)	16
S5	18 Jan 2019	Wave Height Low (ft)	2
S5	18 Jan 2019	High Tide (ft)	6
S5	18 Jan 2019	High Tide Time	616
S5	18 Jan 2019	Low Tide (ft)	-1
S5	18 Jan 2019	Low Tide Time	1336
S5	18 Jan 2019	Comments	Resample; Sewage-like odor; Water turbid
S5	20 Jan 2019	Arrive Time	945
S5	20 Jan 2019	Weather	Partly Cloudy
S5	20 Jan 2019	Wind Speed (kts)	2
S5	20 Jan 2019	Wind Dir	SW
S5	20 Jan 2019	Animal Life	None
S5	20 Jan 2019	Floatables	None
S5	20 Jan 2019	Water Color	Green
S5	20 Jan 2019	Current Direction	SW
S5	20 Jan 2019	Water Temp (C)	15
S5	20 Jan 2019	Wave Height Low (ft)	4
S5	20 Jan 2019	High Tide (ft)	6.7
S5	20 Jan 2019	High Tide Time	745
S5	20 Jan 2019	Low Tide (ft)	-1.8
S5	20 Jan 2019	Low Tide Time	1500
S5	20 Jan 2019	Comments	Resample; Kelp; Seagrass; 1 Person; Water turbid
S5	22 Jan 2019	Arrive Time	945
S5	22 Jan 2019	Weather	Sunny
S5	22 Jan 2019	Wind Speed (kts)	0.7
S5	22 Jan 2019	Wind Dir	E

Station	Date	Parameter	Value
S5	22 Jan 2019	Animal Life	None
S5	22 Jan 2019	Floatables	None
S5	22 Jan 2019	Water Color	Green
S5	22 Jan 2019	Current Direction	N
S5	22 Jan 2019	Water Temp (C)	12
S5	22 Jan 2019	Wave Height Low (ft)	3
S5	22 Jan 2019	High Tide (ft)	6.7
S5	22 Jan 2019	High Tide Time	917
S5	22 Jan 2019	Low Tide (ft)	1.3
S5	22 Jan 2019	Low Tide Time	313
S5	22 Jan 2019	Comments	Kelp; Seagrass; Water clear
S5	29 Jan 2019	Arrive Time	947
S5	29 Jan 2019	Weather	Foggy
S5	29 Jan 2019	Wind Speed (kts)	10.1
S5	29 Jan 2019	Wind Dir	SW
S5	29 Jan 2019	Animal Life	None
S5	29 Jan 2019	Floatables	None
S5	29 Jan 2019	Water Color	Green
S5	29 Jan 2019	Current Direction	N
S5	29 Jan 2019	Water Temp (C)	16.5
S5	29 Jan 2019	Wave Height Low (ft)	3
S5	29 Jan 2019	High Tide (ft)	4.9
S5	29 Jan 2019	High Tide Time	419
S5	29 Jan 2019	Low Tide (ft)	0.4
S5	29 Jan 2019	Low Tide Time	1150
S5	29 Jan 2019	Comments	Sewage-like odor; Water clear
S5	31 Jan 2019	Arrive Time	813
S5	31 Jan 2019	Weather	Partly Cloudy
S5	31 Jan 2019	Wind Speed (kts)	1.2
S5	31 Jan 2019	Wind Dir	W
S5	31 Jan 2019	Animal Life	None
S5	31 Jan 2019	Floatables	None
S5	31 Jan 2019	Water Color	Green
S5	31 Jan 2019	Current Direction	N
S5	31 Jan 2019	Water Temp (C)	12
S5	31 Jan 2019	Wave Height Low (ft)	3
S5	31 Jan 2019	High Tide (ft)	5.3
S5	31 Jan 2019	High Tide Time	601
S5	31 Jan 2019	Low Tide (ft)	-0.4
S5	31 Jan 2019	Low Tide Time	1325
S5	31 Jan 2019	Comments	Resample; Kelp; Water clear
S6	02 Jan 2019	Arrive Time	1204
S6	02 Jan 2019	Weather	Sunny
S6	02 Jan 2019	Wind Speed (kts)	5
S6	02 Jan 2019	Wind Dir	SW
S6	02 Jan 2019	Animal Life	None
S6	02 Jan 2019	Floatables	None
S6	02 Jan 2019	Water Color	Green
S6	02 Jan 2019	Current Direction	SW
S6	02 Jan 2019	Water Temp (C)	15
S6	02 Jan 2019	Wave Height Low (ft)	2
S6	02 Jan 2019	High Tide (ft)	5.8

Station	Date	Parameter	Value
S6	02 Jan 2019	High Tide Time	618
S6	02 Jan 2019	Low Tide (ft)	-0.4
S6	02 Jan 2019	Low Tide Time	1333
S6	02 Jan 2019	Comments	Kelp; Seagrass; 1 Person; Water turbid
S6	08 Jan 2019	Arrive Time	1053
S6	08 Jan 2019	Weather	Sunny
S6	08 Jan 2019	Wind Speed (kts)	5.1
S6	08 Jan 2019	Wind Dir	W
S6	08 Jan 2019	Animal Life	None
S6	08 Jan 2019	Floatables	None
S6	08 Jan 2019	Water Color	Green
S6	08 Jan 2019	Current Direction	N
S6	08 Jan 2019	Water Temp (C)	11
S6	08 Jan 2019	Wave Height Low (ft)	2
S6	08 Jan 2019	High Tide (ft)	5.4
S6	08 Jan 2019	High Tide Time	936
S6	08 Jan 2019	Low Tide (ft)	-0.4
S6	08 Jan 2019	Low Tide Time	1653
S6	08 Jan 2019	Comments	Kelp; Seagrass; 2 Persons; Water clear
S6	15 Jan 2019	Arrive Time	1022
S6	15 Jan 2019	Weather	Drizzle
S6	15 Jan 2019	Wind Speed (kts)	3.3
S6	15 Jan 2019	Wind Dir	S
S6	15 Jan 2019	Animal Life	None
S6	15 Jan 2019	Floatables	None
S6	15 Jan 2019	Water Color	Green
S6	15 Jan 2019	Current Direction	S
S6	15 Jan 2019	Water Temp (C)	13
S6	15 Jan 2019	Wave Height Low (ft)	3
S6	15 Jan 2019	High Tide (ft)	4.6
S6	15 Jan 2019	High Tide Time	359
S6	15 Jan 2019	Low Tide (ft)	1.1
S6	15 Jan 2019	Low Tide Time	1116
S6	15 Jan 2019	Comments	Kelp; Seagrass; Water clear
S6	17 Jan 2019	Arrive Time	1053
S6	17 Jan 2019	Weather	Cloudy
S6	17 Jan 2019	Wind Speed (kts)	4.8
S6	17 Jan 2019	Wind Dir	W
S6	17 Jan 2019	Animal Life	None
S6	17 Jan 2019	Floatables	None
S6	17 Jan 2019	Water Color	Brown
S6	17 Jan 2019	Current Direction	N
S6	17 Jan 2019	Water Temp (C)	17.6
S6	17 Jan 2019	Wave Height Low (ft)	4
S6	17 Jan 2019	High Tide (ft)	5.5
S6	17 Jan 2019	High Tide Time	531
S6	17 Jan 2019	Low Tide (ft)	-0.4
S6	17 Jan 2019	Low Tide Time	1253
S6	17 Jan 2019	Comments	Resample; 4 Persons; Water clear
S6	18 Jan 2019	Arrive Time	1138
S6	18 Jan 2019	Weather	Partly Cloudy

Station	Date	Parameter	Value
S6	18 Jan 2019	Wind Speed (kts)	4.4
S6	18 Jan 2019	Wind Dir	N
S6	18 Jan 2019	Animal Life	None
S6	18 Jan 2019	Floatables	None
S6	18 Jan 2019	Water Color	Green
S6	18 Jan 2019	Current Direction	N
S6	18 Jan 2019	Water Temp (C)	14
S6	18 Jan 2019	Wave Height Low (ft)	3
S6	18 Jan 2019	High Tide (ft)	6
S6	18 Jan 2019	High Tide Time	616
S6	18 Jan 2019	Low Tide (ft)	-1
S6	18 Jan 2019	Low Tide Time	1336
S6	18 Jan 2019	Comments	Resample; Water clear
S6	22 Jan 2019	Arrive Time	959
S6	22 Jan 2019	Weather	Sunny
S6	22 Jan 2019	Wind Speed (kts)	1.9
S6	22 Jan 2019	Wind Dir	E
S6	22 Jan 2019	Animal Life	None
S6	22 Jan 2019	Floatables	None
S6	22 Jan 2019	Water Color	Colorless
S6	22 Jan 2019	Current Direction	N
S6	22 Jan 2019	Water Temp (C)	12
S6	22 Jan 2019	Wave Height Low (ft)	5
S6	22 Jan 2019	High Tide (ft)	6.7
S6	22 Jan 2019	High Tide Time	917
S6	22 Jan 2019	Low Tide (ft)	-1.6
S6	22 Jan 2019	Low Tide Time	1625
S6	22 Jan 2019	Comments	10 Persons; 1 Tractor; Water clear
S6	29 Jan 2019	Arrive Time	959
S6	29 Jan 2019	Weather	Partly Cloudy
S6	29 Jan 2019	Wind Speed (kts)	4.4
S6	29 Jan 2019	Wind Dir	S
S6	29 Jan 2019	Animal Life	2 Dogs
S6	29 Jan 2019	Floatables	None
S6	29 Jan 2019	Water Color	Green
S6	29 Jan 2019	Current Direction	N
S6	29 Jan 2019	Water Temp (C)	16.4
S6	29 Jan 2019	Wave Height Low (ft)	2
S6	29 Jan 2019	High Tide (ft)	4.9
S6	29 Jan 2019	High Tide Time	419
S6	29 Jan 2019	Low Tide (ft)	0.4
S6	29 Jan 2019	Low Tide Time	1150
S6	29 Jan 2019	Comments	3 Persons; Water clear
S6	31 Jan 2019	Arrive Time	824
S6	31 Jan 2019	Weather	Partly Cloudy
S6	31 Jan 2019	Wind Speed (kts)	2.6
S6	31 Jan 2019	Wind Dir	W
S6	31 Jan 2019	Animal Life	None
S6	31 Jan 2019	Floatables	None
S6	31 Jan 2019	Water Color	Green
S6	31 Jan 2019	Current Direction	N
S6	31 Jan 2019	Water Temp (C)	12

Station	Date	Parameter	Value
S6	31 Jan 2019	Wave Height Low (ft)	3
S6	31 Jan 2019	High Tide (ft)	5.3
S6	31 Jan 2019	High Tide Time	601
S6	31 Jan 2019	Low Tide (ft)	-0.4
S6	31 Jan 2019	Low Tide Time	1325
S6	31 Jan 2019	Comments	Resample; Kelp; Water clear
S8	02 Jan 2019	Arrive Time	924
S8	02 Jan 2019	Weather	Sunny
S8	02 Jan 2019	Wind Speed (kts)	2.9
S8	02 Jan 2019	Wind Dir	W
S8	02 Jan 2019	Animal Life	2 Shorebirds
S8	02 Jan 2019	Floatables	None
S8	02 Jan 2019	Water Color	Green
S8	02 Jan 2019	Current Direction	W
S8	02 Jan 2019	Water Temp (C)	13
S8	02 Jan 2019	Wave Height Low (ft)	1
S8	02 Jan 2019	High Tide (ft)	5.8
S8	02 Jan 2019	High Tide Time	618
S8	02 Jan 2019	Low Tide (ft)	-0.4
S8	02 Jan 2019	Low Tide Time	1333
S8	02 Jan 2019	Comments	Kelp; Seagrass; Debris; 7 Persons; 2 Surfers; Water clear
S8	08 Jan 2019	Arrive Time	1214
S8	08 Jan 2019	Weather	Partly Cloudy
S8	08 Jan 2019	Wind Speed (kts)	6.6
S8	08 Jan 2019	Wind Dir	N
S8	08 Jan 2019	Animal Life	None
S8	08 Jan 2019	Floatables	None
S8	08 Jan 2019	Water Color	Green
S8	08 Jan 2019	Current Direction	N
S8	08 Jan 2019	Water Temp (C)	13
S8	08 Jan 2019	Wave Height Low (ft)	2
S8	08 Jan 2019	High Tide (ft)	5.4
S8	08 Jan 2019	High Tide Time	936
S8	08 Jan 2019	Low Tide (ft)	-0.4
S8	08 Jan 2019	Low Tide Time	1653
S8	08 Jan 2019	Comments	Seagrass; Water clear
S8	15 Jan 2019	Arrive Time	917
S8	15 Jan 2019	Weather	Moderate Rain
S8	15 Jan 2019	Wind Speed (kts)	5.3
S8	15 Jan 2019	Wind Dir	SW
S8	15 Jan 2019	Animal Life	None
S8	15 Jan 2019	Floatables	None
S8	15 Jan 2019	Water Color	Green
S8	15 Jan 2019	Current Direction	S
S8	15 Jan 2019	Water Temp (C)	15
S8	15 Jan 2019	Wave Height Low (ft)	2
S8	15 Jan 2019	High Tide (ft)	4.6
S8	15 Jan 2019	High Tide Time	359
S8	15 Jan 2019	Low Tide (ft)	1.1
S8	15 Jan 2019	Low Tide Time	1116
S8	15 Jan 2019	Comments	Water clear

Station	Date	Parameter	Value
S8	17 Jan 2019	Arrive Time	1221
S8	17 Jan 2019	Weather	Cloudy
S8	17 Jan 2019	Wind Speed (kts)	8.8
S8	17 Jan 2019	Wind Dir	W
S8	17 Jan 2019	Animal Life	None
S8	17 Jan 2019	Floatables	None
S8	17 Jan 2019	Water Color	Green
S8	17 Jan 2019	Current Direction	N
S8	17 Jan 2019	Water Temp (C)	17.6
S8	17 Jan 2019	Wave Height Low (ft)	3
S8	17 Jan 2019	High Tide (ft)	5.5
S8	17 Jan 2019	High Tide Time	531
S8	17 Jan 2019	Low Tide (ft)	-0.4
S8	17 Jan 2019	Low Tide Time	1253
S8	17 Jan 2019	Comments	Resample; Kelp; Water clear
S8	22 Jan 2019	Arrive Time	832
S8	22 Jan 2019	Weather	Sunny
S8	22 Jan 2019	Wind Speed (kts)	3.3
S8	22 Jan 2019	Wind Dir	SE
S8	22 Jan 2019	Animal Life	None
S8	22 Jan 2019	Floatables	None
S8	22 Jan 2019	Water Color	Green
S8	22 Jan 2019	Current Direction	N
S8	22 Jan 2019	Water Temp (C)	12
S8	22 Jan 2019	Wave Height Low (ft)	2
S8	22 Jan 2019	High Tide (ft)	6.7
S8	22 Jan 2019	High Tide Time	917
S8	22 Jan 2019	Low Tide (ft)	1.3
S8	22 Jan 2019	Low Tide Time	313
S8	22 Jan 2019	Comments	Kelp; Water clear
S8	29 Jan 2019	Arrive Time	843
S8	29 Jan 2019	Weather	Partly Cloudy
S8	29 Jan 2019	Wind Speed (kts)	0.1
S8	29 Jan 2019	Wind Dir	N
S8	29 Jan 2019	Animal Life	None
S8	29 Jan 2019	Floatables	None
S8	29 Jan 2019	Water Color	Green
S8	29 Jan 2019	Current Direction	N
S8	29 Jan 2019	Water Temp (C)	16.2
S8	29 Jan 2019	Wave Height Low (ft)	4
S8	29 Jan 2019	High Tide (ft)	4.9
S8	29 Jan 2019	High Tide Time	419
S8	29 Jan 2019	Low Tide (ft)	0.4
S8	29 Jan 2019	Low Tide Time	1150
S8	29 Jan 2019	Comments	Sewage-like odor; 3 Persons; Water clear
S9	02 Jan 2019	Arrive Time	1003
S9	02 Jan 2019	Weather	Sunny
S9	02 Jan 2019	Wind Speed (kts)	1.5
S9	02 Jan 2019	Wind Dir	E
S9	02 Jan 2019	Animal Life	None
S9	02 Jan 2019	Floatables	None
S9	02 Jan 2019	Water Color	Green

Station	Date	Parameter	Value
S9	02 Jan 2019	Current Direction	E
S9	02 Jan 2019	Water Temp (C)	13
S9	02 Jan 2019	Wave Height Low (ft)	1
S9	02 Jan 2019	High Tide (ft)	5.8
S9	02 Jan 2019	High Tide Time	618
S9	02 Jan 2019	Low Tide (ft)	-0.4
S9	02 Jan 2019	Low Tide Time	1333
S9	02 Jan 2019	Comments	Kelp; Seagrass; 25 Persons; 16 Surfers; Water clear
S9	08 Jan 2019	Arrive Time	1245
S9	08 Jan 2019	Weather	Sunny
S9	08 Jan 2019	Wind Speed (kts)	2.1
S9	08 Jan 2019	Wind Dir	N
S9	08 Jan 2019	Animal Life	None
S9	08 Jan 2019	Floatables	None
S9	08 Jan 2019	Water Color	Green
S9	08 Jan 2019	Current Direction	N
S9	08 Jan 2019	Water Temp (C)	14
S9	08 Jan 2019	Wave Height Low (ft)	2
S9	08 Jan 2019	High Tide (ft)	5.4
S9	08 Jan 2019	High Tide Time	936
S9	08 Jan 2019	Low Tide (ft)	-0.4
S9	08 Jan 2019	Low Tide Time	1653
S9	08 Jan 2019	Comments	Kelp; 11 Persons; Water clear
S9	15 Jan 2019	Arrive Time	852
S9	15 Jan 2019	Weather	Moderate Rain
S9	15 Jan 2019	Wind Speed (kts)	2.3
S9	15 Jan 2019	Wind Dir	S
S9	15 Jan 2019	Animal Life	None
S9	15 Jan 2019	Floatables	None
S9	15 Jan 2019	Water Color	Green
S9	15 Jan 2019	Current Direction	S
S9	15 Jan 2019	Water Temp (C)	15
S9	15 Jan 2019	Wave Height Low (ft)	3
S9	15 Jan 2019	High Tide (ft)	4.6
S9	15 Jan 2019	High Tide Time	359
S9	15 Jan 2019	Low Tide (ft)	1.1
S9	15 Jan 2019	Low Tide Time	1116
S9	15 Jan 2019	Comments	Water clear
S9	22 Jan 2019	Arrive Time	808
S9	22 Jan 2019	Weather	Sunny
S9	22 Jan 2019	Wind Speed (kts)	5.4
S9	22 Jan 2019	Wind Dir	E
S9	22 Jan 2019	Animal Life	None
S9	22 Jan 2019	Floatables	None
S9	22 Jan 2019	Water Color	Green
S9	22 Jan 2019	Current Direction	N
S9	22 Jan 2019	Water Temp (C)	12
S9	22 Jan 2019	Wave Height Low (ft)	2
S9	22 Jan 2019	High Tide (ft)	6.7
S9	22 Jan 2019	High Tide Time	917
S9	22 Jan 2019	Low Tide (ft)	1.3
S9	22 Jan 2019	Low Tide Time	313

Station	Date	Parameter	Value
S9	22 Jan 2019	Comments	Water clear
S9	29 Jan 2019	Arrive Time	811
S9	29 Jan 2019	Weather	Foggy
S9	29 Jan 2019	Wind Speed (kts)	0.8
S9	29 Jan 2019	Wind Dir	N
S9	29 Jan 2019	Animal Life	None
S9	29 Jan 2019	Floatables	None
S9	29 Jan 2019	Water Color	Green
S9	29 Jan 2019	Current Direction	N
S9	29 Jan 2019	Water Temp (C)	16
S9	29 Jan 2019	Wave Height Low (ft)	2
S9	29 Jan 2019	High Tide (ft)	4.9
S9	29 Jan 2019	High Tide Time	419
S9	29 Jan 2019	Low Tide (ft)	0.4
S9	29 Jan 2019	Low Tide Time	1150
S9	29 Jan 2019	Comments	1 Jogger; 3 Persons; 1 Surfer; Water clear
S10	02 Jan 2019	Arrive Time	801
S10	02 Jan 2019	Weather	Sunny
S10	02 Jan 2019	Wind Speed (kts)	7.5
S10	02 Jan 2019	Wind Dir	W
S10	02 Jan 2019	Animal Life	300 Cormorants
S10	02 Jan 2019	Floatables	None
S10	02 Jan 2019	Water Color	Green
S10	02 Jan 2019	Current Direction	W
S10	02 Jan 2019	Water Temp (C)	11
S10	02 Jan 2019	Wave Height Low (ft)	1
S10	02 Jan 2019	High Tide (ft)	5.8
S10	02 Jan 2019	High Tide Time	618
S10	02 Jan 2019	Low Tide (ft)	-0.4
S10	02 Jan 2019	Low Tide Time	1333
S10	02 Jan 2019	Comments	Debris; Water clear
S10	08 Jan 2019	Arrive Time	833
S10	08 Jan 2019	Weather	Sunny
S10	08 Jan 2019	Wind Speed (kts)	4.5
S10	08 Jan 2019	Wind Dir	S
S10	08 Jan 2019	Animal Life	None
S10	08 Jan 2019	Floatables	None
S10	08 Jan 2019	Water Color	Green
S10	08 Jan 2019	Current Direction	N
S10	08 Jan 2019	Water Temp (C)	14
S10	08 Jan 2019	Wave Height Low (ft)	3
S10	08 Jan 2019	High Tide (ft)	5.4
S10	08 Jan 2019	High Tide Time	936
S10	08 Jan 2019	Low Tide (ft)	2.1
S10	08 Jan 2019	Low Tide Time	334
S10	08 Jan 2019	Comments	Water clear
S10	10 Jan 2019	Arrive Time	805
S10	10 Jan 2019	Weather	Sunny
S10	10 Jan 2019	Wind Speed (kts)	3.2
S10	10 Jan 2019	Wind Dir	E
S10	10 Jan 2019	Animal Life	None

Station	Date	Parameter	Value
S10	10 Jan 2019	Floatables	None
S10	10 Jan 2019	Water Color	Green
S10	10 Jan 2019	Current Direction	N
S10	10 Jan 2019	Water Temp (C)	15
S10	10 Jan 2019	Wave Height Low (ft)	7
S10	10 Jan 2019	High Tide (ft)	4.7
S10	10 Jan 2019	High Tide Time	1041
S10	10 Jan 2019	Low Tide (ft)	2.3
S10	10 Jan 2019	Low Tide Time	452
S10	10 Jan 2019	Comments	Resample; Seagrass; Water clear
S10	15 Jan 2019	Arrive Time	1140
S10	15 Jan 2019	Weather	Partly Cloudy
S10	15 Jan 2019	Wind Speed (kts)	0.1
S10	15 Jan 2019	Wind Dir	S
S10	15 Jan 2019	Animal Life	None
S10	15 Jan 2019	Floatables	None
S10	15 Jan 2019	Water Color	Green
S10	15 Jan 2019	Current Direction	S
S10	15 Jan 2019	Water Temp (C)	0
S10	15 Jan 2019	Wave Height Low (ft)	0
S10	15 Jan 2019	High Tide (ft)	2.9
S10	15 Jan 2019	High Tide Time	1701
S10	15 Jan 2019	Low Tide (ft)	1.1
S10	15 Jan 2019	Low Tide Time	1116
S10	15 Jan 2019	Comments	Water clear; Site inaccessible due to flooded road
S10	17 Jan 2019	Arrive Time	938
S10	17 Jan 2019	Weather	Cloudy
S10	17 Jan 2019	Wind Speed (kts)	3.3
S10	17 Jan 2019	Wind Dir	W
S10	17 Jan 2019	Animal Life	None
S10	17 Jan 2019	Floatables	None
S10	17 Jan 2019	Water Color	Green
S10	17 Jan 2019	Current Direction	N
S10	17 Jan 2019	Water Temp (C)	17.8
S10	17 Jan 2019	Wave Height Low (ft)	3
S10	17 Jan 2019	High Tide (ft)	5.5
S10	17 Jan 2019	High Tide Time	531
S10	17 Jan 2019	Low Tide (ft)	-0.4
S10	17 Jan 2019	Low Tide Time	1253
S10	17 Jan 2019	Comments	Resample; Kelp; Seagrass; Water clear
S10	18 Jan 2019	Arrive Time	940
S10	18 Jan 2019	Weather	Sunny
S10	18 Jan 2019	Wind Speed (kts)	4.2
S10	18 Jan 2019	Wind Dir	N
S10	18 Jan 2019	Animal Life	None
S10	18 Jan 2019	Floatables	None
S10	18 Jan 2019	Water Color	Green
S10	18 Jan 2019	Current Direction	N
S10	18 Jan 2019	Water Temp (C)	14
S10	18 Jan 2019	Wave Height Low (ft)	4
S10	18 Jan 2019	High Tide (ft)	6
S10	18 Jan 2019	High Tide Time	616

Station	Date	Parameter	Value
S10	18 Jan 2019	Low Tide (ft)	-1
S10	18 Jan 2019	Low Tide Time	1336
S10	18 Jan 2019	Comments	Resample; Water clear
S10	22 Jan 2019	Arrive Time	1114
S10	22 Jan 2019	Weather	Sunny
S10	22 Jan 2019	Wind Speed (kts)	4.3
S10	22 Jan 2019	Wind Dir	N
S10	22 Jan 2019	Animal Life	None
S10	22 Jan 2019	Floatables	None
S10	22 Jan 2019	Water Color	Green
S10	22 Jan 2019	Current Direction	N
S10	22 Jan 2019	Water Temp (C)	13
S10	22 Jan 2019	Wave Height Low (ft)	4
S10	22 Jan 2019	High Tide (ft)	6.7
S10	22 Jan 2019	High Tide Time	917
S10	22 Jan 2019	Low Tide (ft)	-1.6
S10	22 Jan 2019	Low Tide Time	1625
S10	22 Jan 2019	Comments	Water clear
S10	29 Jan 2019	Arrive Time	1107
S10	29 Jan 2019	Weather	Foggy
S10	29 Jan 2019	Wind Speed (kts)	6.2
S10	29 Jan 2019	Wind Dir	W
S10	29 Jan 2019	Animal Life	2 Horses
S10	29 Jan 2019	Floatables	None
S10	29 Jan 2019	Water Color	Green
S10	29 Jan 2019	Current Direction	N
S10	29 Jan 2019	Water Temp (C)	16.6
S10	29 Jan 2019	Wave Height Low (ft)	2
S10	29 Jan 2019	High Tide (ft)	4.9
S10	29 Jan 2019	High Tide Time	419
S10	29 Jan 2019	Low Tide (ft)	0.4
S10	29 Jan 2019	Low Tide Time	1150
S10	29 Jan 2019	Comments	2 Persons; Water clear
S10	31 Jan 2019	Arrive Time	727
S10	31 Jan 2019	Weather	Partly Cloudy
S10	31 Jan 2019	Wind Speed (kts)	2.1
S10	31 Jan 2019	Wind Dir	W
S10	31 Jan 2019	Animal Life	None
S10	31 Jan 2019	Floatables	None
S10	31 Jan 2019	Water Color	Green
S10	31 Jan 2019	Current Direction	N
S10	31 Jan 2019	Water Temp (C)	12
S10	31 Jan 2019	Wave Height Low (ft)	4
S10	31 Jan 2019	High Tide (ft)	5.3
S10	31 Jan 2019	High Tide Time	601
S10	31 Jan 2019	Low Tide (ft)	-0.4
S10	31 Jan 2019	Low Tide Time	1325
S10	31 Jan 2019	Comments	Resample; Kelp; Water clear
S11	02 Jan 2019	Arrive Time	1159
S11	02 Jan 2019	Weather	Sunny
S11	02 Jan 2019	Wind Speed (kts)	5

Station	Date	Parameter	Value
S11	02 Jan 2019	Wind Dir	SW
S11	02 Jan 2019	Animal Life	20 Birds; 2 Dogs
S11	02 Jan 2019	Floatables	None
S11	02 Jan 2019	Water Color	Green
S11	02 Jan 2019	Current Direction	SW
S11	02 Jan 2019	Water Temp (C)	15
S11	02 Jan 2019	Wave Height Low (ft)	2
S11	02 Jan 2019	High Tide (ft)	5.8
S11	02 Jan 2019	High Tide Time	618
S11	02 Jan 2019	Low Tide (ft)	-0.4
S11	02 Jan 2019	Low Tide Time	1333
S11	02 Jan 2019	Comments	Kelp; Seagrass; 3 Persons; Water turbid
S11	08 Jan 2019	Arrive Time	1038
S11	08 Jan 2019	Weather	Sunny
S11	08 Jan 2019	Wind Speed (kts)	5.2
S11	08 Jan 2019	Wind Dir	W
S11	08 Jan 2019	Animal Life	None
S11	08 Jan 2019	Floatables	None
S11	08 Jan 2019	Water Color	Green
S11	08 Jan 2019	Current Direction	N
S11	08 Jan 2019	Water Temp (C)	12
S11	08 Jan 2019	Wave Height Low (ft)	5
S11	08 Jan 2019	High Tide (ft)	5.4
S11	08 Jan 2019	High Tide Time	936
S11	08 Jan 2019	Low Tide (ft)	-0.4
S11	08 Jan 2019	Low Tide Time	1653
S11	08 Jan 2019	Comments	Kelp; Seagrass; 3 Surfers; Water clear
S11	15 Jan 2019	Arrive Time	1016
S11	15 Jan 2019	Weather	Moderate Rain
S11	15 Jan 2019	Wind Speed (kts)	3.8
S11	15 Jan 2019	Wind Dir	E
S11	15 Jan 2019	Animal Life	None
S11	15 Jan 2019	Floatables	None
S11	15 Jan 2019	Water Color	Brown
S11	15 Jan 2019	Current Direction	S
S11	15 Jan 2019	Water Temp (C)	13
S11	15 Jan 2019	Wave Height Low (ft)	3
S11	15 Jan 2019	High Tide (ft)	4.6
S11	15 Jan 2019	High Tide Time	359
S11	15 Jan 2019	Low Tide (ft)	1.1
S11	15 Jan 2019	Low Tide Time	1116
S11	15 Jan 2019	Comments	Kelp; Seagrass; Water clear
S11	17 Jan 2019	Arrive Time	1049
S11	17 Jan 2019	Weather	Cloudy
S11	17 Jan 2019	Wind Speed (kts)	7.3
S11	17 Jan 2019	Wind Dir	W
S11	17 Jan 2019	Animal Life	None
S11	17 Jan 2019	Floatables	None
S11	17 Jan 2019	Water Color	Brown
S11	17 Jan 2019	Current Direction	N
S11	17 Jan 2019	Water Temp (C)	17.2
S11	17 Jan 2019	Wave Height Low (ft)	4

Station	Date	Parameter	Value
S11	17 Jan 2019	High Tide (ft)	5.5
S11	17 Jan 2019	High Tide Time	531
S11	17 Jan 2019	Low Tide (ft)	-0.4
S11	17 Jan 2019	Low Tide Time	1253
S11	17 Jan 2019	Comments	Resample; Water clear
S11	18 Jan 2019	Arrive Time	1134
S11	18 Jan 2019	Weather	Partly Cloudy
S11	18 Jan 2019	Wind Speed (kts)	4.5
S11	18 Jan 2019	Wind Dir	N
S11	18 Jan 2019	Animal Life	None
S11	18 Jan 2019	Floatables	None
S11	18 Jan 2019	Water Color	Brown
S11	18 Jan 2019	Current Direction	N
S11	18 Jan 2019	Water Temp (C)	14
S11	18 Jan 2019	Wave Height Low (ft)	2
S11	18 Jan 2019	High Tide (ft)	6
S11	18 Jan 2019	High Tide Time	616
S11	18 Jan 2019	Low Tide (ft)	-1
S11	18 Jan 2019	Low Tide Time	1336
S11	18 Jan 2019	Comments	Resample; Water clear
S11	22 Jan 2019	Arrive Time	952
S11	22 Jan 2019	Weather	Sunny
S11	22 Jan 2019	Wind Speed (kts)	2.3
S11	22 Jan 2019	Wind Dir	E
S11	22 Jan 2019	Animal Life	None
S11	22 Jan 2019	Floatables	None
S11	22 Jan 2019	Water Color	Green
S11	22 Jan 2019	Current Direction	N
S11	22 Jan 2019	Water Temp (C)	12
S11	22 Jan 2019	Wave Height Low (ft)	6
S11	22 Jan 2019	High Tide (ft)	6.7
S11	22 Jan 2019	High Tide Time	917
S11	22 Jan 2019	Low Tide (ft)	1.3
S11	22 Jan 2019	Low Tide Time	313
S11	22 Jan 2019	Comments	Water clear
S11	29 Jan 2019	Arrive Time	953
S11	29 Jan 2019	Weather	Foggy
S11	29 Jan 2019	Wind Speed (kts)	5.3
S11	29 Jan 2019	Wind Dir	S
S11	29 Jan 2019	Animal Life	None
S11	29 Jan 2019	Floatables	None
S11	29 Jan 2019	Water Color	Green
S11	29 Jan 2019	Current Direction	N
S11	29 Jan 2019	Water Temp (C)	16.2
S11	29 Jan 2019	Wave Height Low (ft)	2
S11	29 Jan 2019	High Tide (ft)	4.9
S11	29 Jan 2019	High Tide Time	419
S11	29 Jan 2019	Low Tide (ft)	0.4
S11	29 Jan 2019	Low Tide Time	1150
S11	29 Jan 2019	Comments	Water clear
S11	31 Jan 2019	Arrive Time	819

Station	Date	Parameter	Value
S11	31 Jan 2019	Weather	Partly Cloudy
S11	31 Jan 2019	Wind Speed (kts)	2.9
S11	31 Jan 2019	Wind Dir	W
S11	31 Jan 2019	Animal Life	None
S11	31 Jan 2019	Floatables	None
S11	31 Jan 2019	Water Color	Green
S11	31 Jan 2019	Current Direction	N
S11	31 Jan 2019	Water Temp (C)	13
S11	31 Jan 2019	Wave Height Low (ft)	3
S11	31 Jan 2019	High Tide (ft)	5.3
S11	31 Jan 2019	High Tide Time	601
S11	31 Jan 2019	Low Tide (ft)	-0.4
S11	31 Jan 2019	Low Tide Time	1325
S11	31 Jan 2019	Comments	Resample; Kelp; 1 Person; Water clear
S12	02 Jan 2019	Arrive Time	1224
S12	02 Jan 2019	Weather	Sunny
S12	02 Jan 2019	Wind Speed (kts)	2
S12	02 Jan 2019	Wind Dir	SW
S12	02 Jan 2019	Animal Life	None
S12	02 Jan 2019	Floatables	None
S12	02 Jan 2019	Water Color	Green
S12	02 Jan 2019	Current Direction	SW
S12	02 Jan 2019	Water Temp (C)	15
S12	02 Jan 2019	Wave Height Low (ft)	2
S12	02 Jan 2019	High Tide (ft)	5.8
S12	02 Jan 2019	High Tide Time	618
S12	02 Jan 2019	Low Tide (ft)	-0.4
S12	02 Jan 2019	Low Tide Time	1333
S12	02 Jan 2019	Comments	Kelp; Seagrass; 1 Person; Water turbid
S12	08 Jan 2019	Arrive Time	1111
S12	08 Jan 2019	Weather	Sunny
S12	08 Jan 2019	Wind Speed (kts)	2.3
S12	08 Jan 2019	Wind Dir	N
S12	08 Jan 2019	Animal Life	None
S12	08 Jan 2019	Floatables	None
S12	08 Jan 2019	Water Color	Green
S12	08 Jan 2019	Current Direction	N
S12	08 Jan 2019	Water Temp (C)	13
S12	08 Jan 2019	Wave Height Low (ft)	2
S12	08 Jan 2019	High Tide (ft)	5.4
S12	08 Jan 2019	High Tide Time	936
S12	08 Jan 2019	Low Tide (ft)	-0.4
S12	08 Jan 2019	Low Tide Time	1653
S12	08 Jan 2019	Comments	2 Persons; 1 Surfer; Water clear
S12	15 Jan 2019	Arrive Time	1030
S12	15 Jan 2019	Weather	Partly Cloudy
S12	15 Jan 2019	Wind Speed (kts)	2.1
S12	15 Jan 2019	Wind Dir	E
S12	15 Jan 2019	Animal Life	None
S12	15 Jan 2019	Floatables	None
S12	15 Jan 2019	Water Color	Green
S12	15 Jan 2019	Current Direction	S

Station	Date	Parameter	Value
S12	15 Jan 2019	Water Temp (C)	13
S12	15 Jan 2019	Wave Height Low (ft)	3
S12	15 Jan 2019	High Tide (ft)	4.6
S12	15 Jan 2019	High Tide Time	359
S12	15 Jan 2019	Low Tide (ft)	1.1
S12	15 Jan 2019	Low Tide Time	1116
S12	15 Jan 2019	Comments	Water clear
S12	17 Jan 2019	Arrive Time	1103
S12	17 Jan 2019	Weather	Cloudy
S12	17 Jan 2019	Wind Speed (kts)	10.1
S12	17 Jan 2019	Wind Dir	W
S12	17 Jan 2019	Animal Life	None
S12	17 Jan 2019	Floatables	None
S12	17 Jan 2019	Water Color	Green
S12	17 Jan 2019	Current Direction	N
S12	17 Jan 2019	Water Temp (C)	17.8
S12	17 Jan 2019	Wave Height Low (ft)	3
S12	17 Jan 2019	High Tide (ft)	5.5
S12	17 Jan 2019	High Tide Time	531
S12	17 Jan 2019	Low Tide (ft)	-0.4
S12	17 Jan 2019	Low Tide Time	1253
S12	17 Jan 2019	Comments	Resample; Water clear
S12	18 Jan 2019	Arrive Time	1108
S12	18 Jan 2019	Weather	Sunny
S12	18 Jan 2019	Wind Speed (kts)	3.4
S12	18 Jan 2019	Wind Dir	N
S12	18 Jan 2019	Animal Life	None
S12	18 Jan 2019	Floatables	None
S12	18 Jan 2019	Water Color	Green
S12	18 Jan 2019	Current Direction	N
S12	18 Jan 2019	Water Temp (C)	14
S12	18 Jan 2019	Wave Height Low (ft)	2
S12	18 Jan 2019	High Tide (ft)	6
S12	18 Jan 2019	High Tide Time	616
S12	18 Jan 2019	Low Tide (ft)	-1
S12	18 Jan 2019	Low Tide Time	1336
S12	18 Jan 2019	Comments	Resample; 8 Persons; 2 Surfers; Water turbid
S12	20 Jan 2019	Arrive Time	1029
S12	20 Jan 2019	Weather	Cloudy
S12	20 Jan 2019	Wind Speed (kts)	2
S12	20 Jan 2019	Wind Dir	SW
S12	20 Jan 2019	Animal Life	1 Bird
S12	20 Jan 2019	Floatables	None
S12	20 Jan 2019	Water Color	Green
S12	20 Jan 2019	Current Direction	SW
S12	20 Jan 2019	Water Temp (C)	15
S12	20 Jan 2019	Wave Height Low (ft)	4
S12	20 Jan 2019	High Tide (ft)	6.7
S12	20 Jan 2019	High Tide Time	745
S12	20 Jan 2019	Low Tide (ft)	-1.8
S12	20 Jan 2019	Low Tide Time	1500
S12	20 Jan 2019	Comments	Resample; Kelp; Seagrass; Water turbid

Station	Date	Parameter	Value
S12	22 Jan 2019	Arrive Time	921
S12	22 Jan 2019	Weather	Sunny
S12	22 Jan 2019	Wind Speed (kts)	1.2
S12	22 Jan 2019	Wind Dir	E
S12	22 Jan 2019	Animal Life	None
S12	22 Jan 2019	Floatables	None
S12	22 Jan 2019	Water Color	Green
S12	22 Jan 2019	Current Direction	N
S12	22 Jan 2019	Water Temp (C)	13
S12	22 Jan 2019	Wave Height Low (ft)	4
S12	22 Jan 2019	High Tide (ft)	6.7
S12	22 Jan 2019	High Tide Time	917
S12	22 Jan 2019	Low Tide (ft)	1.3
S12	22 Jan 2019	Low Tide Time	313
S12	22 Jan 2019	Comments	Water clear
S12	24 Jan 2019	Arrive Time	756
S12	24 Jan 2019	Weather	Sunny
S12	24 Jan 2019	Wind Speed (kts)	2.9
S12	24 Jan 2019	Wind Dir	W
S12	24 Jan 2019	Animal Life	22 Cormorants
S12	24 Jan 2019	Floatables	None
S12	24 Jan 2019	Water Color	Green
S12	24 Jan 2019	Current Direction	W
S12	24 Jan 2019	Water Temp (C)	13.8
S12	24 Jan 2019	Wave Height Low (ft)	2
S12	24 Jan 2019	High Tide (ft)	5.5
S12	24 Jan 2019	High Tide Time	1056
S12	24 Jan 2019	Low Tide (ft)	1.3
S12	24 Jan 2019	Low Tide Time	501
S12	24 Jan 2019	Comments	Resample; 5 Persons; Water clear
S12	29 Jan 2019	Arrive Time	930
S12	29 Jan 2019	Weather	Partly Cloudy
S12	29 Jan 2019	Wind Speed (kts)	5.4
S12	29 Jan 2019	Wind Dir	W
S12	29 Jan 2019	Animal Life	None
S12	29 Jan 2019	Floatables	None
S12	29 Jan 2019	Water Color	Green
S12	29 Jan 2019	Current Direction	N
S12	29 Jan 2019	Water Temp (C)	16.8
S12	29 Jan 2019	Wave Height Low (ft)	2
S12	29 Jan 2019	High Tide (ft)	4.9
S12	29 Jan 2019	High Tide Time	419
S12	29 Jan 2019	Low Tide (ft)	0.4
S12	29 Jan 2019	Low Tide Time	1150
S12	29 Jan 2019	Comments	Kelp; 2 Persons; Water clear

Kelp Stations

Table 3.1

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

Date	I19	I24	I25	I26	I32	I39	I40
01 Jan 2019	6675*	1816*	448*	32*	19*	6*	2549*
02 Jan 2019	2715*	400*	63*	21*	10*	3*	2693*
03 Jan 2019	2715*	400*	63*	21*	10*	3*	2693*
04 Jan 2019	2715*	400*	63*	21*	10*	3*	2693*
05 Jan 2019	2715*	400*	63*	21*	10*	3*	2693*
06 Jan 2019	2715*	400*	63*	21*	10*	3*	2693*
07 Jan 2019	2443	432	101	13	9	12	2296
08 Jan 2019	2443	432	101	13	9	12	2296
09 Jan 2019	1843*	188*	84*	8*	3*	11*	1641*
10 Jan 2019	1843*	188*	84*	8*	3*	11*	1641*
11 Jan 2019	1843*	188*	84*	8*	3*	11*	1641*
12 Jan 2019	1843*	188*	84*	8*	3*	11*	1641*
13 Jan 2019	1843*	188*	84*	8*	3*	11*	1641*
14 Jan 2019	1921	201	99	36	11	21	2289
15 Jan 2019	1921	201	99	36	11	21	2289
16 Jan 2019	1921	201	99	36	12*	38*	2289
17 Jan 2019	1921	201	99	36	12*	38*	2289
18 Jan 2019	1921	201	99	36	12*	38*	2289
19 Jan 2019	1738*	223*	148*	43*	12*	38*	5094*
20 Jan 2019	1738*	223*	148*	43*	12*	38*	5094*
21 Jan 2019	1738*	223*	148*	43*	12*	38*	5094*
22 Jan 2019	1738*	223*	148*	43*	12*	38*	5094*
23 Jan 2019	1721	488	80	36	10	32	5926
24 Jan 2019	1721	488	80	36	10	32	5926
25 Jan 2019	1721	488	80	36	10	32	5926
26 Jan 2019	991*	375*	39*	32*	15*	64*	4725*
27 Jan 2019	991*	375*	39*	32*	15*	64*	4725*
28 Jan 2019	612	434	53	51	21	63	3228
29 Jan 2019	612	434	53	51	21	63	3228
30 Jan 2019	612	434	53	51	21	63	3228
31 Jan 2019	612	434	53	51	21	63	3228

* Geometric mean calculated using n<5

Table 3.2

Summary of compliance with the Ocean Plan's 30-day Geometric Mean standard for fecal coliform bacteria at the SBOO kelp stations. Data are based on the geometric mean of the five most recent samples from each site over the previous 30 days unless otherwise noted (*). Values >200 CFU/100 mL exceed the standard.

Date	I19	I24	I25	I26	I32	I39	I40
01 Jan 2019	700*	249*	56*	6*	5*	3*	330*
02 Jan 2019	328*	70*	14*	6*	5*	2*	316*
03 Jan 2019	328*	70*	14*	6*	5*	2*	316*
04 Jan 2019	328*	70*	14*	6*	5*	2*	316*
05 Jan 2019	328*	70*	14*	6*	5*	2*	316*
06 Jan 2019	328*	70*	14*	6*	5*	2*	316*
07 Jan 2019	292	72	19	5	4	5	251
08 Jan 2019	292	72	19	5	4	5	251
09 Jan 2019	212*	37*	14*	3*	2*	6*	189*
10 Jan 2019	212*	37*	14*	3*	2*	6*	189*
11 Jan 2019	212*	37*	14*	3*	2*	6*	189*
12 Jan 2019	212*	37*	14*	3*	2*	6*	189*
13 Jan 2019	212*	37*	14*	3*	2*	6*	189*
14 Jan 2019	205	35	16	11	5	9	254
15 Jan 2019	205	35	16	11	5	9	254
16 Jan 2019	205	35	16	11	6*	12*	254
17 Jan 2019	205	35	16	11	6*	12*	254
18 Jan 2019	205	35	16	11	6*	12*	254
19 Jan 2019	178*	38*	27*	17*	6*	12*	469*
20 Jan 2019	178*	38*	27*	17*	6*	12*	469*
21 Jan 2019	178*	38*	27*	17*	6*	12*	469*
22 Jan 2019	178*	38*	27*	17*	6*	12*	469*
23 Jan 2019	189	79	16	11	5	9	587
24 Jan 2019	189	79	16	11	5	9	587
25 Jan 2019	189	79	16	11	5	9	587
26 Jan 2019	112*	51*	9*	12*	6*	13*	436*
27 Jan 2019	112*	51*	9*	12*	6*	13*	436*
28 Jan 2019	90	71	11	18	8	10	357
29 Jan 2019	90	71	11	18	8	10	357
30 Jan 2019	90	71	11	18	8	10	357
31 Jan 2019	90	71	11	18	8	10	357

* Geometric mean calculated using n<5

Table 3.3

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

Date	I19	I24	I25	I26	I32	I39	I40
01 Jan 2019	120*	50*	43*	7*	8*	3*	61*
02 Jan 2019	78*	23*	20*	7*	8*	3*	93*
03 Jan 2019	78*	23*	20*	7*	8*	3*	93*
04 Jan 2019	78*	23*	20*	7*	8*	3*	93*
05 Jan 2019	78*	23*	20*	7*	8*	3*	93*
06 Jan 2019	78*	23*	20*	7*	8*	3*	93*
07 Jan 2019	80	31	25	5	6	7	102
08 Jan 2019	80	31	25	5	6	7	102
09 Jan 2019	68*	18*	21*	3*	3*	6*	92*
10 Jan 2019	68*	18*	21*	3*	3*	6*	92*
11 Jan 2019	68*	18*	21*	3*	3*	6*	92*
12 Jan 2019	68*	18*	21*	3*	3*	6*	92*
13 Jan 2019	68*	18*	21*	3*	3*	6*	92*
14 Jan 2019	81	22	23	9	6	9	108
15 Jan 2019	81	22	23	9	6	9	108
16 Jan 2019	81	22	23	9	5*	12*	108
17 Jan 2019	81	22	23	9	5*	12*	108
18 Jan 2019	81	22	23	9	5*	12*	108
19 Jan 2019	79*	29*	24*	9*	5*	12*	170*
20 Jan 2019	79*	29*	24*	9*	5*	12*	170*
21 Jan 2019	79*	29*	24*	9*	5*	12*	170*
22 Jan 2019	79*	29*	24*	9*	5*	12*	170*
23 Jan 2019	72	43	15	7	4	9	168
24 Jan 2019	72	43	15	7	4	9	168
25 Jan 2019	72	43	15	7	4	9	168
26 Jan 2019	48*	36*	10*	8*	5*	12*	150*
27 Jan 2019	48*	36*	10*	8*	5*	12*	150*
28 Jan 2019	35	54	10	10	7	9	121
29 Jan 2019	35	54	10	10	7	9	121
30 Jan 2019	35	54	10	10	7	9	121
31 Jan 2019	35	54	10	10	7	9	121

* 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
02 Jan 2019	IC	IC	IC	IC	IC	IC	IC
07 Jan 2019	IC	IC	IC	IC	IC	IC	IC
14 Jan 2019	IC	IC	IC	E	IC	IC	E
23 Jan 2019	IC	E	IC	IC	IC	IC	E
28 Jan 2019	IC	IC	IC	IC	IC	IC	IC

IC = In Compliance

E = Exceedance

ns = not sampled

ND = no data

Table 3.5

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

Date	I19	I24	I25	I26	I32	I39	I40
02 Jan 2019	IC	IC	IC	IC	IC	IC	E
07 Jan 2019	IC	IC	IC	IC	IC	IC	IC
14 Jan 2019	IC	IC	IC	E	IC	IC	E
23 Jan 2019	IC	E	IC	IC	IC	IC	E
28 Jan 2019	IC	E	IC	IC	IC	IC	E

IC = In Compliance

E = Exceedance

ns = not sampled

ND = no data

Table 3.6

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

Date	I19	I24	I25	I26	I32	I39	I40
02 Jan 2019	IC	IC	IC	IC	IC	IC	E
07 Jan 2019	E	E	IC	IC	IC	E	E
14 Jan 2019	E	IC	IC	E	IC	IC	E
23 Jan 2019	IC	E	IC	IC	IC	IC	E
28 Jan 2019	IC	E	IC	IC	IC	IC	E

IC = In Compliance

E = Exceedance

ns = not sampled

ND = no data

Table 3.7

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

Date	I19	I24	I25	I26	I32	I39	I40
02 Jan 2019	IC	IC	IC	IC	IC	IC	IC
07 Jan 2019	IC	E	IC	IC	IC	IC	IC
14 Jan 2019	E	IC	IC	E	E	IC	E
23 Jan 2019	E	E	IC	IC	IC	IC	E
28 Jan 2019	IC	E	IC	IC	IC	IC	E

IC = In Compliance

E = Exceedance

ns = not sampled

ND = no data

Table 3.8

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

Station	Date	Time	Depth	Total	Fecal	Entero	F:T	Temp	XMS	DO	Sal	pH
119	02 Jan 2019	1032	2	80e	8e	<2	0.10	15.4	74.90	7.9	33.65	8.1
119	02 Jan 2019	1032	6	42	6e	2e	0.14	15.2	73.69	7.9	33.64	8.1
119	02 Jan 2019	1032	11	360e	46	20e	0.13	14.8	72.42	8.1	33.65	8.1
119	07 Jan 2019	1102	2	180e	110	62	0.61	15.3	78.33	8.1	33.60	8.1
119	07 Jan 2019	1102	6	420	56	60	0.13	15.2	68.20	8.0	33.61	8.1
119	07 Jan 2019	1102	11	4200	380e	140e	0.09	15.1	58.57	8.2	33.59	8.1
119	14 Jan 2019	1144	2	3600e	140e	100e	0.04	15.0	44.77	8.3	33.52	8.2
119	14 Jan 2019	1144	6	1600e	220e	120e	0.14	15.0	42.70	8.2	33.52	8.2
119	14 Jan 2019	1144	11	1600e	180e	260e	0.11	14.9	39.88	8.3	33.52	8.2
119	23 Jan 2019	1052	2	360e	78	18e	0.22	14.7	58.16	7.6	33.59	8.2
119	23 Jan 2019	1052	6	1600e	400	48	0.25	14.5	57.30	7.5	33.60	8.2
119	23 Jan 2019	1052	11	3000e	240e	82	0.08	14.4	53.94	7.3	33.59	8.2
119	28 Jan 2019	1100	2	28e	6e	4e	0.21	14.9	74.36	8.6	33.62	8.2
119	28 Jan 2019	1100	6	160e	46	2e	0.29	14.9	74.82	8.4	33.61	8.2
119	28 Jan 2019	1100	11	80e	62	22e	0.78	14.8	74.54	8.3	33.61	8.2
124	02 Jan 2019	1053	2	4e	<2	<2	0.50	15.3	74.05	7.8	33.66	8.2
124	02 Jan 2019	1053	6	4e	<2	<2	0.50	15.2	69.89	7.8	33.66	8.2
124	02 Jan 2019	1053	11	26e	2e	<2	0.08	15.2	67.43	7.8	33.66	8.2
124	07 Jan 2019	1125	2	80e	10e	30e	0.12	15.3	77.75	8.1	33.61	8.2
124	07 Jan 2019	1125	6	580	58	100e	0.10	15.2	76.01	8.0	33.62	8.2
124	07 Jan 2019	1125	11	1100	180e	160e	0.16	15.1	73.70	8.0	33.61	8.1
124	14 Jan 2019	1202	2	240e	20e	40	0.08	15.1	59.59	8.3	33.55	8.2
124	14 Jan 2019	1202	6	320e	22e	44	0.07	15.1	58.43	8.2	33.56	8.2
124	14 Jan 2019	1202	11	240e	44	54	0.18	15.1	54.05	8.2	33.56	8.2
124	23 Jan 2019	1114	2	>16000	3000e	220e	0.19	14.7	50.87	7.9	33.49	8.2
124	23 Jan 2019	1114	6	>16000	1200e	320e	0.07	14.6	55.65	7.6	33.58	8.2
124	23 Jan 2019	1114	11	1500	160e	50	0.11	14.6	65.38	7.4	33.60	8.2
124	28 Jan 2019	1120	2	1800e	720	720	0.40	14.8	76.08	8.6	33.59	8.2
124	28 Jan 2019	1120	6	420e	42	44	0.10	14.7	77.82	8.4	33.61	8.2
124	28 Jan 2019	1120	11	120e	26e	10e	0.22	14.7	72.43	8.2	33.61	8.2
125	02 Jan 2019	1101	2	<2	<2	<2	1.00	15.3	74.16	7.9	33.66	8.2
125	02 Jan 2019	1101	6	2e	<2	<2	1.00	15.3	68.35	7.8	33.66	8.2
125	02 Jan 2019	1101	9	4e	<2	<2	0.50	15.3	66.77	7.8	33.66	8.2
125	07 Jan 2019	1133	2	78	10e	24e	0.13	15.3	77.96	8.1	33.61	8.2
125	07 Jan 2019	1133	6	760	52	74	0.07	15.2	76.54	8.0	33.62	8.2
125	07 Jan 2019	1133	9	1200	110	100e	0.09	15.1	75.34	8.1	33.61	8.2

Station	Date	Time	Depth	Total	Fecal	Entero	F:T	Temp	XMS	DO	Sal	pH
I25	14 Jan 2019	1209	2	200e	20e	26e	0.10	15.1	59.29	8.2	33.53	8.2
I25	14 Jan 2019	1209	6	220e	28e	42	0.13	15.1	57.86	8.1	33.56	8.2
I25	14 Jan 2019	1209	9	160e	28e	28e	0.17	15.1	55.98	8.1	33.56	8.2
I25	23 Jan 2019	1122	2	4e	<2	<2	0.50	14.9	73.65	7.8	33.61	8.2
I25	23 Jan 2019	1122	6	8e	2e	<2	0.25	14.8	72.29	7.8	33.60	8.2
I25	23 Jan 2019	1122	9	8e	<2	<2	0.25	14.8	72.57	7.8	33.60	8.2
I25	28 Jan 2019	1138	2	340e	42	14e	0.12	14.8	76.45	8.5	33.59	8.2
I25	28 Jan 2019	1138	6	80e	22e	14e	0.28	14.7	74.94	8.3	33.61	8.2
I25	28 Jan 2019	1138	9	100e	8e	2e	0.08	14.7	74.47	8.2	33.61	8.2
I26	02 Jan 2019	1111	2	<2	<2	<2	1.00	15.6	82.09	7.9	33.67	8.2
I26	02 Jan 2019	1111	6	2e	<2	<2	1.00	15.5	78.40	7.9	33.66	8.2
I26	02 Jan 2019	1111	9	<2	<2	<2	1.00	15.5	73.95	7.9	33.66	8.2
I26	07 Jan 2019	1143	2	2e	<2	<2	1.00	15.2	72.51	8.1	33.65	8.1
I26	07 Jan 2019	1143	6	2e	<2	<2	1.00	15.0	76.09	8.0	33.63	8.2
I26	07 Jan 2019	1143	9	2e	<2	<2	1.00	15.0	72.71	8.1	33.64	8.1
I26	14 Jan 2019	1219	2	>16000	2800e	520	0.17	15.0	63.88	8.2	33.45	8.2
I26	14 Jan 2019	1219	6	>16000	2000e	360e	0.12	15.1	63.45	8.1	33.48	8.2
I26	14 Jan 2019	1219	9	>16000	1800e	740	0.11	15.1	63.72	8.1	33.48	8.2
I26	23 Jan 2019	1134	2	8e	<2	<2	0.25	15.0	73.36	8.0	33.61	8.2
I26	23 Jan 2019	1134	6	20e	2e	<2	0.10	14.5	74.73	7.1	33.60	8.2
I26	23 Jan 2019	1134	9	22e	<2	2e	0.09	14.5	74.54	7.1	33.59	8.2
I26	28 Jan 2019	1148	2	280e	92	22e	0.33	14.9	75.90	8.7	33.61	8.2
I26	28 Jan 2019	1148	6	380e	110	20e	0.29	14.8	75.61	8.5	33.61	8.2
I26	28 Jan 2019	1148	9	340e	86	20e	0.25	14.8	75.39	8.6	33.61	8.2
I32	02 Jan 2019	1124	2	<2	<2	<2	1.00	15.3	74.82	7.9	33.67	8.2
I32	02 Jan 2019	1124	6	<2	<2	<2	1.00	15.1	71.47	7.9	33.66	8.2
I32	02 Jan 2019	1124	9	<2	<2	<2	1.00	14.9	70.21	8.0	33.67	8.2
I32	07 Jan 2019	1157	2	<2	<2	<2	1.00	15.4	75.23	8.0	33.65	8.2
I32	07 Jan 2019	1157	6	6e	<2	<2	0.33	15.1	73.60	8.2	33.65	8.2
I32	07 Jan 2019	1157	9	4e	<2	<2	0.50	15.1	66.67	8.3	33.65	8.2
I32	14 Jan 2019	1234	2	600e	66	56	0.11	15.1	58.49	8.2	33.48	8.2
I32	14 Jan 2019	1234	6	1000e	200e	90	0.20	15.1	62.24	8.1	33.52	8.2
I32	14 Jan 2019	1234	9	2000e	260e	96	0.13	15.1	62.44	8.1	33.53	8.2
I32	23 Jan 2019	1147	2	<2	2e	<2	1.00	15.1	70.61	8.1	33.61	8.2
I32	23 Jan 2019	1147	6	4e	2e	<2	0.50	14.7	62.39	7.8	33.60	8.2
I32	23 Jan 2019	1147	9	10e	<2	4e	0.20	14.5	53.32	7.9	33.61	8.2
I32	28 Jan 2019	1203	2	2e	<2	<20	1.00	14.9	74.36	8.6	33.61	8.2
I32	28 Jan 2019	1203	6	100e	30e	6e	0.30	14.6	71.12	8.6	33.59	8.2
I32	28 Jan 2019	1203	9	120e	52	16e	0.43	14.6	70.33	8.4	33.59	8.2
I39	02 Jan 2019	1010	2	<2	<2	<2	1.00	15.5	83.73	7.9	33.66	8.1
I39	02 Jan 2019	1010	12	<2	<2	<2	1.00	15.5	83.29	7.9	33.66	8.1

Station	Date	Time	Depth	Total	Fecal	Entero	F:T	Temp	XMS	DO	Sal	pH
I39	02 Jan 2019	1010	18	<2	<2	<2	1.00	15.5	83.18	7.9	33.66	8.1
I39	07 Jan 2019	1039	2	1200e	98	160e	0.08	15.3	81.61	8.0	33.60	8.1
I39	07 Jan 2019	1039	12	3000e	300e	320e	0.10	15.2	81.28	8.0	33.60	8.1
I39	07 Jan 2019	1039	18	1200e	100	140e	0.08	15.2	81.07	7.9	33.62	8.1
I39	14 Jan 2019	1116	2	200e	22e	22e	0.11	15.1	65.58	7.9	33.60	8.2
I39	14 Jan 2019	1116	12	420	36e	30e	0.09	15.2	64.99	7.8	33.61	8.2
I39	14 Jan 2019	1116	18	280e	48	30e	0.17	15.2	62.01	7.8	33.61	8.2
I39	23 Jan 2019	1029	2	<2	<2	<2	1.00	14.8	82.70	7.5	33.61	8.2
I39	23 Jan 2019	1029	12	2e	<2	<2	1.00	14.5	84.49	7.3	33.60	8.2
I39	23 Jan 2019	1029	18	42	4e	2e	0.10	13.8	83.22	6.7	33.58	8.1
I39	28 Jan 2019	1037	2	<2	<2	<2	1.00	14.9	82.41	8.3	33.63	8.2
I39	28 Jan 2019	1037	12	160e	6e	2e	0.04	14.6	80.10	8.0	33.61	8.2
I39	28 Jan 2019	1037	18	16e	4e	6e	0.25	14.5	78.15	8.0	33.61	8.2
I40	02 Jan 2019	1045	2	300e	88	4e	0.29	15.2	74.04	8.0	33.63	8.2
I40	02 Jan 2019	1045	6	7400	440	16e	0.06	14.9	71.55	7.9	33.61	8.2
I40	02 Jan 2019	1045	9	5400	380e	280e	0.07	14.5	61.10	8.2	33.65	8.1
I40	07 Jan 2019	1115	2	680	98	110	0.14	15.2	74.07	8.1	33.59	8.1
I40	07 Jan 2019	1115	6	2200e	180e	220e	0.08	15.0	72.38	8.1	33.59	8.1
I40	07 Jan 2019	1115	9	760	20e	120e	0.03	14.9	68.25	8.2	33.64	8.1
I40	14 Jan 2019	1155	2	>16000	1000e	220e	0.06	15.1	50.72	8.3	33.50	8.2
I40	14 Jan 2019	1155	6	7400	960	280e	0.13	15.1	49.33	8.3	33.53	8.2
I40	14 Jan 2019	1155	9	2600e	540	120e	0.21	15.1	42.65	8.3	33.55	8.2
I40	23 Jan 2019	1105	2	>16000	2000e	220e	0.12	14.8	55.02	7.8	33.49	8.2
I40	23 Jan 2019	1105	6	>16000	2200e	220e	0.14	14.6	56.52	6.8	33.60	8.2
I40	23 Jan 2019	1105	9	560	110	48	0.20	14.4	32.87	6.6	33.59	8.1
I40	28 Jan 2019	1112	2	2000e	440	140e	0.22	14.9	76.61	8.8	33.60	8.2
I40	28 Jan 2019	1112	6	50	18e	6e	0.36	14.9	78.75	8.7	33.62	8.2
I40	28 Jan 2019	1112	9	60e	22e	6e	0.37	14.8	76.34	8.6	33.62	8.2

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	02 Jan 2019	Depth (m)	11
I19	02 Jan 2019	Arrive Time	1032
I19	02 Jan 2019	Depart Time	1037
I19	02 Jan 2019	Air Temp (C)	12
I19	02 Jan 2019	Weather	Clear
I19	02 Jan 2019	Visibility (mi)	12
I19	02 Jan 2019	Wind Speed (kts)	6
I19	02 Jan 2019	Wind Dir	N
I19	02 Jan 2019	Water Color	Bluish-Green
I19	02 Jan 2019	Wave Ht Low (ft)	3
I19	02 Jan 2019	Wave Period (sec)	13
I19	02 Jan 2019	Sea State	Confused swell
I19	02 Jan 2019	High Tide (ft)	5.79
I19	02 Jan 2019	High Tide Time	618
I19	02 Jan 2019	Low Tide (ft)	-0.42
I19	02 Jan 2019	Low Tide Time	1333
I19	02 Jan 2019	Comments	Kelp debris
I19	07 Jan 2019	Depth (m)	12
I19	07 Jan 2019	Arrive Time	1102
I19	07 Jan 2019	Depart Time	1105
I19	07 Jan 2019	Air Temp (C)	15
I19	07 Jan 2019	Weather	Clear
I19	07 Jan 2019	Visibility (mi)	11
I19	07 Jan 2019	Wind Speed (kts)	6
I19	07 Jan 2019	Wind Dir	N
I19	07 Jan 2019	Water Color	Bluish-Green
I19	07 Jan 2019	Wave Ht Low (ft)	6
I19	07 Jan 2019	Wave Period (sec)	13
I19	07 Jan 2019	Sea State	Light chop
I19	07 Jan 2019	High Tide (ft)	5.66
I19	07 Jan 2019	High Tide Time	904
I19	07 Jan 2019	Low Tide (ft)	-0.6
I19	07 Jan 2019	Low Tide Time	1621
I19	07 Jan 2019	Comments	Kelp debris
I19	14 Jan 2019	Depth (m)	11
I19	14 Jan 2019	Arrive Time	1144
I19	14 Jan 2019	Depart Time	1146
I19	14 Jan 2019	Air Temp (C)	14
I19	14 Jan 2019	Weather	Rain
I19	14 Jan 2019	Visibility (mi)	1
I19	14 Jan 2019	Wind Speed (kts)	14
I19	14 Jan 2019	Wind Dir	E
I19	14 Jan 2019	Water Color	Brownish-Green
I19	14 Jan 2019	Wave Ht Low (ft)	5
I19	14 Jan 2019	Wave Period (sec)	7
I19	14 Jan 2019	Sea State	Heavy chop
I19	14 Jan 2019	High Tide (ft)	2.82
I19	14 Jan 2019	High Tide Time	1522
I19	14 Jan 2019	Low Tide (ft)	1.81

Station	Date	Parameter	Value
I19	14 Jan 2019	Low Tide Time	1006
I19	14 Jan 2019	Comments	none
I19	23 Jan 2019	Depth (m)	12
I19	23 Jan 2019	Arrive Time	1052
I19	23 Jan 2019	Depart Time	1056
I19	23 Jan 2019	Air Temp (C)	15
I19	23 Jan 2019	Weather	Clear
I19	23 Jan 2019	Visibility (mi)	11
I19	23 Jan 2019	Wind Speed (kts)	8
I19	23 Jan 2019	Wind Dir	N
I19	23 Jan 2019	Water Color	Bluish-Green
I19	23 Jan 2019	Wave Ht Low (ft)	3
I19	23 Jan 2019	Wave Period (sec)	11
I19	23 Jan 2019	Sea State	Calm
I19	23 Jan 2019	High Tide (ft)	6.21
I19	23 Jan 2019	High Tide Time	1005
I19	23 Jan 2019	Low Tide (ft)	1.24
I19	23 Jan 2019	Low Tide Time	405
I19	23 Jan 2019	Comments	none
I19	28 Jan 2019	Depth (m)	11
I19	28 Jan 2019	Arrive Time	1100
I19	28 Jan 2019	Depart Time	1102
I19	28 Jan 2019	Air Temp (C)	18
I19	28 Jan 2019	Weather	Partly Cloudy
I19	28 Jan 2019	Visibility (mi)	12
I19	28 Jan 2019	Wind Speed (kts)	6
I19	28 Jan 2019	Wind Dir	N
I19	28 Jan 2019	Water Color	Green
I19	28 Jan 2019	Wave Ht Low (ft)	3
I19	28 Jan 2019	Wave Period (sec)	13
I19	28 Jan 2019	Sea State	Calm
I19	28 Jan 2019	High Tide (ft)	2.9
I19	28 Jan 2019	High Tide Time	1624
I19	28 Jan 2019	Low Tide (ft)	0.92
I19	28 Jan 2019	Low Tide Time	1035
I19	28 Jan 2019	Comments	Sewage-like odor
I24	02 Jan 2019	Depth (m)	11
I24	02 Jan 2019	Arrive Time	1053
I24	02 Jan 2019	Depart Time	1058
I24	02 Jan 2019	Air Temp (C)	12
I24	02 Jan 2019	Weather	Clear
I24	02 Jan 2019	Visibility (mi)	12
I24	02 Jan 2019	Wind Speed (kts)	4
I24	02 Jan 2019	Wind Dir	NW
I24	02 Jan 2019	Water Color	Bluish-Green
I24	02 Jan 2019	Wave Ht Low (ft)	3
I24	02 Jan 2019	Wave Period (sec)	13
I24	02 Jan 2019	Sea State	Confused swell
I24	02 Jan 2019	High Tide (ft)	5.79
I24	02 Jan 2019	High Tide Time	618
I24	02 Jan 2019	Low Tide (ft)	-0.42
I24	02 Jan 2019	Low Tide Time	1333

Station	Date	Parameter	Value
I24	02 Jan 2019	Comments	none
I24	07 Jan 2019	Depth (m)	12
I24	07 Jan 2019	Arrive Time	1125
I24	07 Jan 2019	Depart Time	1129
I24	07 Jan 2019	Air Temp (C)	14
I24	07 Jan 2019	Weather	Clear
I24	07 Jan 2019	Visibility (mi)	11
I24	07 Jan 2019	Wind Speed (kts)	5
I24	07 Jan 2019	Wind Dir	NW
I24	07 Jan 2019	Water Color	Bluish-Green
I24	07 Jan 2019	Wave Ht Low (ft)	6
I24	07 Jan 2019	Wave Period (sec)	13
I24	07 Jan 2019	Sea State	Light chop
I24	07 Jan 2019	High Tide (ft)	5.66
I24	07 Jan 2019	High Tide Time	904
I24	07 Jan 2019	Low Tide (ft)	-0.6
I24	07 Jan 2019	Low Tide Time	1621
I24	07 Jan 2019	Comments	none
I24	14 Jan 2019	Depth (m)	11
I24	14 Jan 2019	Arrive Time	1202
I24	14 Jan 2019	Depart Time	1206
I24	14 Jan 2019	Air Temp (C)	14
I24	14 Jan 2019	Weather	Rain
I24	14 Jan 2019	Visibility (mi)	1
I24	14 Jan 2019	Wind Speed (kts)	7
I24	14 Jan 2019	Wind Dir	SE
I24	14 Jan 2019	Water Color	Brownish-Green
I24	14 Jan 2019	Wave Ht Low (ft)	5
I24	14 Jan 2019	Wave Period (sec)	7
I24	14 Jan 2019	Sea State	Heavy chop
I24	14 Jan 2019	High Tide (ft)	2.82
I24	14 Jan 2019	High Tide Time	1522
I24	14 Jan 2019	Low Tide (ft)	1.81
I24	14 Jan 2019	Low Tide Time	1006
I24	14 Jan 2019	Comments	none
I24	23 Jan 2019	Depth (m)	12
I24	23 Jan 2019	Arrive Time	1114
I24	23 Jan 2019	Depart Time	1120
I24	23 Jan 2019	Air Temp (C)	15
I24	23 Jan 2019	Weather	Clear
I24	23 Jan 2019	Visibility (mi)	11
I24	23 Jan 2019	Wind Speed (kts)	4
I24	23 Jan 2019	Wind Dir	NW
I24	23 Jan 2019	Water Color	Bluish-Green
I24	23 Jan 2019	Wave Ht Low (ft)	3
I24	23 Jan 2019	Wave Period (sec)	11
I24	23 Jan 2019	Sea State	Calm
I24	23 Jan 2019	High Tide (ft)	6.21
I24	23 Jan 2019	High Tide Time	1005
I24	23 Jan 2019	Low Tide (ft)	1.24
I24	23 Jan 2019	Low Tide Time	405
I24	23 Jan 2019	Comments	none

Station	Date	Parameter	Value
I24	28 Jan 2019	Depth (m)	10
I24	28 Jan 2019	Arrive Time	1120
I24	28 Jan 2019	Depart Time	1123
I24	28 Jan 2019	Air Temp (C)	17
I24	28 Jan 2019	Weather	Partly Cloudy
I24	28 Jan 2019	Visibility (mi)	12
I24	28 Jan 2019	Wind Speed (kts)	3
I24	28 Jan 2019	Wind Dir	NW
I24	28 Jan 2019	Water Color	Green
I24	28 Jan 2019	Wave Ht Low (ft)	3
I24	28 Jan 2019	Wave Period (sec)	13
I24	28 Jan 2019	Sea State	Calm
I24	28 Jan 2019	High Tide (ft)	2.9
I24	28 Jan 2019	High Tide Time	1624
I24	28 Jan 2019	Low Tide (ft)	0.92
I24	28 Jan 2019	Low Tide Time	1035
I24	28 Jan 2019	Comments	none
I25	02 Jan 2019	Depth (m)	9
I25	02 Jan 2019	Arrive Time	1101
I25	02 Jan 2019	Depart Time	1107
I25	02 Jan 2019	Air Temp (C)	12
I25	02 Jan 2019	Weather	Clear
I25	02 Jan 2019	Visibility (mi)	12
I25	02 Jan 2019	Wind Speed (kts)	4
I25	02 Jan 2019	Wind Dir	N
I25	02 Jan 2019	Water Color	Green
I25	02 Jan 2019	Wave Ht Low (ft)	3
I25	02 Jan 2019	Wave Period (sec)	13
I25	02 Jan 2019	Sea State	Confused swell
I25	02 Jan 2019	High Tide (ft)	5.79
I25	02 Jan 2019	High Tide Time	618
I25	02 Jan 2019	Low Tide (ft)	-0.42
I25	02 Jan 2019	Low Tide Time	1333
I25	02 Jan 2019	Comments	none
I25	07 Jan 2019	Depth (m)	9
I25	07 Jan 2019	Arrive Time	1133
I25	07 Jan 2019	Depart Time	1137
I25	07 Jan 2019	Air Temp (C)	14
I25	07 Jan 2019	Weather	Clear
I25	07 Jan 2019	Visibility (mi)	11
I25	07 Jan 2019	Wind Speed (kts)	6
I25	07 Jan 2019	Wind Dir	NW
I25	07 Jan 2019	Water Color	Bluish-Green
I25	07 Jan 2019	Wave Ht Low (ft)	6
I25	07 Jan 2019	Wave Period (sec)	13
I25	07 Jan 2019	Sea State	Light chop
I25	07 Jan 2019	High Tide (ft)	5.66
I25	07 Jan 2019	High Tide Time	904
I25	07 Jan 2019	Low Tide (ft)	-0.6
I25	07 Jan 2019	Low Tide Time	1621
I25	07 Jan 2019	Comments	none

Station	Date	Parameter	Value
I25	14 Jan 2019	Depth (m)	9
I25	14 Jan 2019	Arrive Time	1209
I25	14 Jan 2019	Depart Time	1212
I25	14 Jan 2019	Air Temp (C)	14
I25	14 Jan 2019	Weather	Rain
I25	14 Jan 2019	Visibility (mi)	1
I25	14 Jan 2019	Wind Speed (kts)	10
I25	14 Jan 2019	Wind Dir	E
I25	14 Jan 2019	Water Color	Brownish-Green
I25	14 Jan 2019	Wave Ht Low (ft)	5
I25	14 Jan 2019	Wave Period (sec)	7
I25	14 Jan 2019	Sea State	Heavy chop
I25	14 Jan 2019	High Tide (ft)	2.82
I25	14 Jan 2019	High Tide Time	1522
I25	14 Jan 2019	Low Tide (ft)	1.81
I25	14 Jan 2019	Low Tide Time	1006
I25	14 Jan 2019	Comments	none
I25	23 Jan 2019	Depth (m)	10
I25	23 Jan 2019	Arrive Time	1122
I25	23 Jan 2019	Depart Time	1127
I25	23 Jan 2019	Air Temp (C)	15
I25	23 Jan 2019	Weather	Clear
I25	23 Jan 2019	Visibility (mi)	11
I25	23 Jan 2019	Wind Speed (kts)	5
I25	23 Jan 2019	Wind Dir	W
I25	23 Jan 2019	Water Color	Bluish-Green
I25	23 Jan 2019	Wave Ht Low (ft)	3
I25	23 Jan 2019	Wave Period (sec)	11
I25	23 Jan 2019	Sea State	Calm
I25	23 Jan 2019	High Tide (ft)	6.21
I25	23 Jan 2019	High Tide Time	1005
I25	23 Jan 2019	Low Tide (ft)	1.24
I25	23 Jan 2019	Low Tide Time	405
I25	23 Jan 2019	Comments	none
I25	28 Jan 2019	Depth (m)	9
I25	28 Jan 2019	Arrive Time	1138
I25	28 Jan 2019	Depart Time	1142
I25	28 Jan 2019	Air Temp (C)	16
I25	28 Jan 2019	Weather	Partly Cloudy
I25	28 Jan 2019	Visibility (mi)	12
I25	28 Jan 2019	Wind Speed (kts)	9
I25	28 Jan 2019	Wind Dir	W
I25	28 Jan 2019	Water Color	Green
I25	28 Jan 2019	Wave Ht Low (ft)	3
I25	28 Jan 2019	Wave Period (sec)	13
I25	28 Jan 2019	Sea State	Calm
I25	28 Jan 2019	High Tide (ft)	2.9
I25	28 Jan 2019	High Tide Time	1624
I25	28 Jan 2019	Low Tide (ft)	0.92
I25	28 Jan 2019	Low Tide Time	1035
I25	28 Jan 2019	Comments	none
I26	02 Jan 2019	Depth (m)	9

Station	Date	Parameter	Value
I26	02 Jan 2019	Arrive Time	1111
I26	02 Jan 2019	Depart Time	1117
I26	02 Jan 2019	Air Temp (C)	12
I26	02 Jan 2019	Weather	Clear
I26	02 Jan 2019	Visibility (mi)	12
I26	02 Jan 2019	Wind Speed (kts)	2
I26	02 Jan 2019	Wind Dir	N
I26	02 Jan 2019	Water Color	Green
I26	02 Jan 2019	Wave Ht Low (ft)	3
I26	02 Jan 2019	Wave Period (sec)	13
I26	02 Jan 2019	Sea State	Confused swell
I26	02 Jan 2019	High Tide (ft)	5.79
I26	02 Jan 2019	High Tide Time	618
I26	02 Jan 2019	Low Tide (ft)	-0.42
I26	02 Jan 2019	Low Tide Time	1333
I26	02 Jan 2019	Comments	none
I26	07 Jan 2019	Depth (m)	10
I26	07 Jan 2019	Arrive Time	1143
I26	07 Jan 2019	Depart Time	1147
I26	07 Jan 2019	Air Temp (C)	15
I26	07 Jan 2019	Weather	Clear
I26	07 Jan 2019	Visibility (mi)	11
I26	07 Jan 2019	Wind Speed (kts)	6
I26	07 Jan 2019	Wind Dir	NW
I26	07 Jan 2019	Water Color	Bluish-Green
I26	07 Jan 2019	Wave Ht Low (ft)	6
I26	07 Jan 2019	Wave Period (sec)	13
I26	07 Jan 2019	Sea State	Light chop
I26	07 Jan 2019	High Tide (ft)	5.66
I26	07 Jan 2019	High Tide Time	904
I26	07 Jan 2019	Low Tide (ft)	-0.6
I26	07 Jan 2019	Low Tide Time	1621
I26	07 Jan 2019	Comments	none
I26	14 Jan 2019	Depth (m)	10
I26	14 Jan 2019	Arrive Time	1219
I26	14 Jan 2019	Depart Time	1222
I26	14 Jan 2019	Air Temp (C)	13
I26	14 Jan 2019	Weather	Rain
I26	14 Jan 2019	Visibility (mi)	1
I26	14 Jan 2019	Wind Speed (kts)	14
I26	14 Jan 2019	Wind Dir	SE
I26	14 Jan 2019	Water Color	Brownish-Green
I26	14 Jan 2019	Wave Ht Low (ft)	5
I26	14 Jan 2019	Wave Period (sec)	7
I26	14 Jan 2019	Sea State	Heavy chop
I26	14 Jan 2019	High Tide (ft)	2.82
I26	14 Jan 2019	High Tide Time	1522
I26	14 Jan 2019	Low Tide (ft)	1.81
I26	14 Jan 2019	Low Tide Time	1006
I26	14 Jan 2019	Comments	none
I26	23 Jan 2019	Depth (m)	10
I26	23 Jan 2019	Arrive Time	1134

Station	Date	Parameter	Value
I26	23 Jan 2019	Depart Time	1139
I26	23 Jan 2019	Air Temp (C)	15
I26	23 Jan 2019	Weather	Clear
I26	23 Jan 2019	Visibility (mi)	11
I26	23 Jan 2019	Wind Speed (kts)	6
I26	23 Jan 2019	Wind Dir	W
I26	23 Jan 2019	Water Color	Bluish-Green
I26	23 Jan 2019	Wave Ht Low (ft)	3
I26	23 Jan 2019	Wave Period (sec)	11
I26	23 Jan 2019	Sea State	Calm
I26	23 Jan 2019	High Tide (ft)	6.21
I26	23 Jan 2019	High Tide Time	1005
I26	23 Jan 2019	Low Tide (ft)	1.24
I26	23 Jan 2019	Low Tide Time	405
I26	23 Jan 2019	Comments	none
I26	28 Jan 2019	Depth (m)	9
I26	28 Jan 2019	Arrive Time	1148
I26	28 Jan 2019	Depart Time	1201
I26	28 Jan 2019	Air Temp (C)	16
I26	28 Jan 2019	Weather	Partly Cloudy
I26	28 Jan 2019	Visibility (mi)	12
I26	28 Jan 2019	Wind Speed (kts)	9
I26	28 Jan 2019	Wind Dir	W
I26	28 Jan 2019	Water Color	Green
I26	28 Jan 2019	Wave Ht Low (ft)	3
I26	28 Jan 2019	Wave Period (sec)	13
I26	28 Jan 2019	Sea State	Calm
I26	28 Jan 2019	High Tide (ft)	2.9
I26	28 Jan 2019	High Tide Time	1624
I26	28 Jan 2019	Low Tide (ft)	0.92
I26	28 Jan 2019	Low Tide Time	1035
I26	28 Jan 2019	Comments	none
I32	02 Jan 2019	Depth (m)	9
I32	02 Jan 2019	Arrive Time	1124
I32	02 Jan 2019	Depart Time	1129
I32	02 Jan 2019	Air Temp (C)	12
I32	02 Jan 2019	Weather	Clear
I32	02 Jan 2019	Visibility (mi)	12
I32	02 Jan 2019	Wind Speed (kts)	2
I32	02 Jan 2019	Wind Dir	W
I32	02 Jan 2019	Water Color	Green
I32	02 Jan 2019	Wave Ht Low (ft)	3
I32	02 Jan 2019	Wave Period (sec)	13
I32	02 Jan 2019	Sea State	Confused swell
I32	02 Jan 2019	High Tide (ft)	5.79
I32	02 Jan 2019	High Tide Time	618
I32	02 Jan 2019	Low Tide (ft)	-0.42
I32	02 Jan 2019	Low Tide Time	1333
I32	02 Jan 2019	Comments	none
I32	07 Jan 2019	Depth (m)	10
I32	07 Jan 2019	Arrive Time	1157
I32	07 Jan 2019	Depart Time	1204

Station	Date	Parameter	Value
I32	07 Jan 2019	Air Temp (C)	15
I32	07 Jan 2019	Weather	Clear
I32	07 Jan 2019	Visibility (mi)	11
I32	07 Jan 2019	Wind Speed (kts)	5
I32	07 Jan 2019	Wind Dir	W
I32	07 Jan 2019	Water Color	Bluish-Green
I32	07 Jan 2019	Wave Ht Low (ft)	6
I32	07 Jan 2019	Wave Period (sec)	13
I32	07 Jan 2019	Sea State	Light chop
I32	07 Jan 2019	High Tide (ft)	5.66
I32	07 Jan 2019	High Tide Time	904
I32	07 Jan 2019	Low Tide (ft)	-0.6
I32	07 Jan 2019	Low Tide Time	1621
I32	07 Jan 2019	Comments	none
I32	14 Jan 2019	Depth (m)	10
I32	14 Jan 2019	Arrive Time	1234
I32	14 Jan 2019	Depart Time	1237
I32	14 Jan 2019	Air Temp (C)	13
I32	14 Jan 2019	Weather	Rain
I32	14 Jan 2019	Visibility (mi)	1
I32	14 Jan 2019	Wind Speed (kts)	14
I32	14 Jan 2019	Wind Dir	E
I32	14 Jan 2019	Water Color	Brownish-Green
I32	14 Jan 2019	Wave Ht Low (ft)	5
I32	14 Jan 2019	Wave Period (sec)	7
I32	14 Jan 2019	Sea State	Heavy chop
I32	14 Jan 2019	High Tide (ft)	2.82
I32	14 Jan 2019	High Tide Time	1522
I32	14 Jan 2019	Low Tide (ft)	1.81
I32	14 Jan 2019	Low Tide Time	1006
I32	14 Jan 2019	Comments	none
I32	23 Jan 2019	Depth (m)	11
I32	23 Jan 2019	Arrive Time	1147
I32	23 Jan 2019	Depart Time	1153
I32	23 Jan 2019	Air Temp (C)	15
I32	23 Jan 2019	Weather	Clear
I32	23 Jan 2019	Visibility (mi)	11
I32	23 Jan 2019	Wind Speed (kts)	7
I32	23 Jan 2019	Wind Dir	W
I32	23 Jan 2019	Water Color	Bluish-Green
I32	23 Jan 2019	Wave Ht Low (ft)	3
I32	23 Jan 2019	Wave Period (sec)	11
I32	23 Jan 2019	Sea State	Calm
I32	23 Jan 2019	High Tide (ft)	6.21
I32	23 Jan 2019	High Tide Time	1005
I32	23 Jan 2019	Low Tide (ft)	1.24
I32	23 Jan 2019	Low Tide Time	405
I32	23 Jan 2019	Comments	none
I32	28 Jan 2019	Depth (m)	10
I32	28 Jan 2019	Arrive Time	1203
I32	28 Jan 2019	Depart Time	1208
I32	28 Jan 2019	Air Temp (C)	15

Station	Date	Parameter	Value
I32	28 Jan 2019	Weather	Partly Cloudy
I32	28 Jan 2019	Visibility (mi)	12
I32	28 Jan 2019	Wind Speed (kts)	8
I32	28 Jan 2019	Wind Dir	W
I32	28 Jan 2019	Water Color	Green
I32	28 Jan 2019	Wave Ht Low (ft)	3
I32	28 Jan 2019	Wave Period (sec)	13
I32	28 Jan 2019	Sea State	Calm
I32	28 Jan 2019	High Tide (ft)	2.9
I32	28 Jan 2019	High Tide Time	1624
I32	28 Jan 2019	Low Tide (ft)	0.92
I32	28 Jan 2019	Low Tide Time	1035
I32	28 Jan 2019	Comments	none
I39	02 Jan 2019	Depth (m)	19
I39	02 Jan 2019	Arrive Time	1010
I39	02 Jan 2019	Depart Time	1014
I39	02 Jan 2019	Air Temp (C)	11
I39	02 Jan 2019	Weather	Clear
I39	02 Jan 2019	Visibility (mi)	12
I39	02 Jan 2019	Wind Speed (kts)	4
I39	02 Jan 2019	Wind Dir	N
I39	02 Jan 2019	Water Color	Bluish-Green
I39	02 Jan 2019	Wave Ht Low (ft)	3
I39	02 Jan 2019	Wave Period (sec)	13
I39	02 Jan 2019	Sea State	Confused swell
I39	02 Jan 2019	High Tide (ft)	5.79
I39	02 Jan 2019	High Tide Time	618
I39	02 Jan 2019	Low Tide (ft)	-0.42
I39	02 Jan 2019	Low Tide Time	1333
I39	02 Jan 2019	Comments	Kelp debris
I39	07 Jan 2019	Depth (m)	20
I39	07 Jan 2019	Arrive Time	1039
I39	07 Jan 2019	Depart Time	1043
I39	07 Jan 2019	Air Temp (C)	14
I39	07 Jan 2019	Weather	Clear
I39	07 Jan 2019	Visibility (mi)	11
I39	07 Jan 2019	Wind Speed (kts)	5
I39	07 Jan 2019	Wind Dir	NE
I39	07 Jan 2019	Water Color	Bluish-Green
I39	07 Jan 2019	Wave Ht Low (ft)	6
I39	07 Jan 2019	Wave Period (sec)	13
I39	07 Jan 2019	Sea State	Light chop
I39	07 Jan 2019	High Tide (ft)	5.66
I39	07 Jan 2019	High Tide Time	904
I39	07 Jan 2019	Low Tide (ft)	-0.6
I39	07 Jan 2019	Low Tide Time	1621
I39	07 Jan 2019	Comments	Lobster floats
I39	14 Jan 2019	Depth (m)	21
I39	14 Jan 2019	Arrive Time	1116
I39	14 Jan 2019	Depart Time	1121
I39	14 Jan 2019	Air Temp (C)	14
I39	14 Jan 2019	Weather	Rain

Station	Date	Parameter	Value
I39	14 Jan 2019	Visibility (mi)	1
I39	14 Jan 2019	Wind Speed (kts)	24
I39	14 Jan 2019	Wind Dir	SE
I39	14 Jan 2019	Water Color	Green
I39	14 Jan 2019	Wave Ht Low (ft)	5
I39	14 Jan 2019	Wave Period (sec)	7
I39	14 Jan 2019	Sea State	Heavy chop
I39	14 Jan 2019	High Tide (ft)	2.82
I39	14 Jan 2019	High Tide Time	1522
I39	14 Jan 2019	Low Tide (ft)	1.81
I39	14 Jan 2019	Low Tide Time	1006
I39	14 Jan 2019	Comments	none
I39	23 Jan 2019	Depth (m)	20
I39	23 Jan 2019	Arrive Time	1029
I39	23 Jan 2019	Depart Time	1033
I39	23 Jan 2019	Air Temp (C)	14
I39	23 Jan 2019	Weather	Clear
I39	23 Jan 2019	Visibility (mi)	11
I39	23 Jan 2019	Wind Speed (kts)	6
I39	23 Jan 2019	Wind Dir	N
I39	23 Jan 2019	Water Color	Bluish-Green
I39	23 Jan 2019	Wave Ht Low (ft)	3
I39	23 Jan 2019	Wave Period (sec)	11
I39	23 Jan 2019	Sea State	Calm
I39	23 Jan 2019	High Tide (ft)	6.21
I39	23 Jan 2019	High Tide Time	1005
I39	23 Jan 2019	Low Tide (ft)	1.24
I39	23 Jan 2019	Low Tide Time	405
I39	23 Jan 2019	Comments	none
I39	28 Jan 2019	Depth (m)	19
I39	28 Jan 2019	Arrive Time	1037
I39	28 Jan 2019	Depart Time	1041
I39	28 Jan 2019	Air Temp (C)	15
I39	28 Jan 2019	Weather	Partly Cloudy
I39	28 Jan 2019	Visibility (mi)	12
I39	28 Jan 2019	Wind Speed (kts)	3
I39	28 Jan 2019	Wind Dir	NE
I39	28 Jan 2019	Water Color	Green
I39	28 Jan 2019	Wave Ht Low (ft)	3
I39	28 Jan 2019	Wave Period (sec)	13
I39	28 Jan 2019	Sea State	Calm
I39	28 Jan 2019	High Tide (ft)	2.9
I39	28 Jan 2019	High Tide Time	1624
I39	28 Jan 2019	Low Tide (ft)	0.92
I39	28 Jan 2019	Low Tide Time	1035
I39	28 Jan 2019	Comments	none
I40	02 Jan 2019	Depth (m)	10
I40	02 Jan 2019	Arrive Time	1045
I40	02 Jan 2019	Depart Time	1050
I40	02 Jan 2019	Air Temp (C)	12
I40	02 Jan 2019	Weather	Clear
I40	02 Jan 2019	Visibility (mi)	12

Station	Date	Parameter	Value
I40	02 Jan 2019	Wind Speed (kts)	5
I40	02 Jan 2019	Wind Dir	NW
I40	02 Jan 2019	Water Color	Bluish-Green
I40	02 Jan 2019	Wave Ht Low (ft)	3
I40	02 Jan 2019	Wave Period (sec)	13
I40	02 Jan 2019	Sea State	Confused swell
I40	02 Jan 2019	High Tide (ft)	5.79
I40	02 Jan 2019	High Tide Time	618
I40	02 Jan 2019	Low Tide (ft)	-0.42
I40	02 Jan 2019	Low Tide Time	1333
I40	02 Jan 2019	Comments	Kelp debris
I40	07 Jan 2019	Depth (m)	11
I40	07 Jan 2019	Arrive Time	1115
I40	07 Jan 2019	Depart Time	1119
I40	07 Jan 2019	Air Temp (C)	14
I40	07 Jan 2019	Weather	Clear
I40	07 Jan 2019	Visibility (mi)	11
I40	07 Jan 2019	Wind Speed (kts)	7
I40	07 Jan 2019	Wind Dir	NW
I40	07 Jan 2019	Water Color	Bluish-Green
I40	07 Jan 2019	Wave Ht Low (ft)	6
I40	07 Jan 2019	Wave Period (sec)	13
I40	07 Jan 2019	Sea State	Light chop
I40	07 Jan 2019	High Tide (ft)	5.66
I40	07 Jan 2019	High Tide Time	904
I40	07 Jan 2019	Low Tide (ft)	-0.6
I40	07 Jan 2019	Low Tide Time	1621
I40	07 Jan 2019	Comments	none
I40	14 Jan 2019	Depth (m)	11
I40	14 Jan 2019	Arrive Time	1155
I40	14 Jan 2019	Depart Time	1158
I40	14 Jan 2019	Air Temp (C)	13
I40	14 Jan 2019	Weather	Rain
I40	14 Jan 2019	Visibility (mi)	1
I40	14 Jan 2019	Wind Speed (kts)	8
I40	14 Jan 2019	Wind Dir	SE
I40	14 Jan 2019	Water Color	Brownish-Green
I40	14 Jan 2019	Wave Ht Low (ft)	5
I40	14 Jan 2019	Wave Period (sec)	7
I40	14 Jan 2019	Sea State	Heavy chop
I40	14 Jan 2019	High Tide (ft)	2.82
I40	14 Jan 2019	High Tide Time	1522
I40	14 Jan 2019	Low Tide (ft)	1.81
I40	14 Jan 2019	Low Tide Time	1006
I40	14 Jan 2019	Comments	none
I40	23 Jan 2019	Depth (m)	12
I40	23 Jan 2019	Arrive Time	1105
I40	23 Jan 2019	Depart Time	1109
I40	23 Jan 2019	Air Temp (C)	14
I40	23 Jan 2019	Weather	Clear
I40	23 Jan 2019	Visibility (mi)	11
I40	23 Jan 2019	Wind Speed (kts)	4

Station	Date	Parameter	Value
I40	23 Jan 2019	Wind Dir	N
I40	23 Jan 2019	Water Color	Bluish-Green
I40	23 Jan 2019	Wave Ht Low (ft)	3
I40	23 Jan 2019	Wave Period (sec)	11
I40	23 Jan 2019	Sea State	Calm
I40	23 Jan 2019	High Tide (ft)	6.21
I40	23 Jan 2019	High Tide Time	1005
I40	23 Jan 2019	Low Tide (ft)	1.24
I40	23 Jan 2019	Low Tide Time	405
I40	23 Jan 2019	Comments	none
I40	28 Jan 2019	Depth (m)	10
I40	28 Jan 2019	Arrive Time	1112
I40	28 Jan 2019	Depart Time	1115
I40	28 Jan 2019	Air Temp (C)	17
I40	28 Jan 2019	Weather	Partly Cloudy
I40	28 Jan 2019	Visibility (mi)	12
I40	28 Jan 2019	Wind Speed (kts)	2
I40	28 Jan 2019	Wind Dir	NW
I40	28 Jan 2019	Water Color	Green
I40	28 Jan 2019	Wave Ht Low (ft)	3
I40	28 Jan 2019	Wave Period (sec)	13
I40	28 Jan 2019	Sea State	Calm
I40	28 Jan 2019	High Tide (ft)	2.9
I40	28 Jan 2019	High Tide Time	1624
I40	28 Jan 2019	Low Tide (ft)	0.92
I40	28 Jan 2019	Low Tide Time	1035
I40	28 Jan 2019	Comments	Sewage-like odor

Table 3.10

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

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ -t)	Chlor (μ g/L)
I19	02 Jan 2019	1	15.37	75.64	7.9	33.65	8.1	24.9	0.78
I19	02 Jan 2019	2	15.36	74.90	7.9	33.65	8.1	24.9	0.79
I19	02 Jan 2019	3	15.35	74.87	7.9	33.65	8.1	24.9	0.88
I19	02 Jan 2019	4	15.33	74.81	7.9	33.65	8.1	24.9	1.03
I19	02 Jan 2019	5	15.29	74.55	7.9	33.65	8.1	24.9	1.35
I19	02 Jan 2019	6	15.23	73.69	7.9	33.64	8.1	24.9	1.58
I19	02 Jan 2019	7	15.19	73.51	7.9	33.64	8.1	24.9	1.71
I19	02 Jan 2019	8	15.14	73.74	8.0	33.64	8.1	24.9	1.79
I19	02 Jan 2019	9	15.03	73.96	8.0	33.65	8.1	24.9	1.61
I19	02 Jan 2019	10	14.83	72.42	8.1	33.65	8.1	25.0	1.43
I19	07 Jan 2019	1	15.35	78.42	8.2	33.60	8.1	24.8	0.61
I19	07 Jan 2019	2	15.34	78.33	8.1	33.60	8.1	24.8	0.61
I19	07 Jan 2019	3	15.30	78.70	8.1	33.60	8.1	24.8	0.69
I19	07 Jan 2019	4	15.29	80.00	8.1	33.61	8.1	24.8	0.80
I19	07 Jan 2019	5	15.26	77.86	8.1	33.61	8.1	24.8	0.99
I19	07 Jan 2019	6	15.22	68.20	8.0	33.61	8.1	24.9	1.41
I19	07 Jan 2019	7	15.20	57.13	8.0	33.60	8.1	24.9	1.80
I19	07 Jan 2019	8	15.18	58.36	8.1	33.60	8.1	24.9	2.01
I19	07 Jan 2019	9	15.17	57.70	8.1	33.60	8.1	24.9	2.05
I19	07 Jan 2019	10	15.13	58.57	8.2	33.59	8.1	24.9	1.95
I19	14 Jan 2019	1	14.96	45.75	8.4	33.52	8.2	24.8	2.12
I19	14 Jan 2019	2	14.97	44.77	8.3	33.52	8.2	24.8	2.22
I19	14 Jan 2019	3	14.97	43.89	8.3	33.52	8.2	24.8	2.12
I19	14 Jan 2019	4	14.97	44.17	8.3	33.52	8.2	24.8	2.12
I19	14 Jan 2019	5	14.97	43.49	8.2	33.52	8.2	24.8	2.25
I19	14 Jan 2019	6	14.97	42.70	8.2	33.52	8.2	24.8	2.23
I19	14 Jan 2019	7	14.97	40.91	8.3	33.53	8.2	24.8	2.23
I19	14 Jan 2019	8	14.96	40.93	8.2	33.53	8.2	24.8	2.15
I19	14 Jan 2019	9	14.95	41.20	8.3	33.52	8.2	24.8	2.11
I19	14 Jan 2019	10	14.94	39.88	8.3	33.52	8.2	24.8	2.17
I19	23 Jan 2019	1	14.70	58.93	7.6	33.59	8.2	25.0	0.76
I19	23 Jan 2019	2	14.70	58.16	7.6	33.59	8.2	25.0	0.80
I19	23 Jan 2019	3	14.70	58.39	7.6	33.59	8.2	25.0	0.95
I19	23 Jan 2019	4	14.66	58.25	7.6	33.60	8.2	25.0	1.42
I19	23 Jan 2019	5	14.59	57.60	7.5	33.59	8.2	25.0	2.16
I19	23 Jan 2019	6	14.51	57.30	7.5	33.60	8.2	25.0	2.50
I19	23 Jan 2019	7	14.47	57.10	7.4	33.59	8.2	25.0	2.36
I19	23 Jan 2019	8	14.43	55.88	7.4	33.59	8.2	25.0	2.40
I19	23 Jan 2019	9	14.40	54.66	7.4	33.59	8.2	25.0	2.36
I19	23 Jan 2019	10	14.38	53.94	7.3	33.59	8.2	25.0	2.14
I19	28 Jan 2019	1	15.01	74.49	8.6	33.62	8.2	24.9	1.54
I19	28 Jan 2019	2	14.95	74.36	8.6	33.62	8.2	24.9	1.67
I19	28 Jan 2019	3	14.88	73.79	8.5	33.62	8.2	24.9	2.02
I19	28 Jan 2019	4	14.86	74.52	8.5	33.61	8.2	24.9	2.23
I19	28 Jan 2019	5	14.86	74.79	8.4	33.61	8.2	24.9	2.27
I19	28 Jan 2019	6	14.86	74.82	8.4	33.61	8.2	24.9	2.42
I19	28 Jan 2019	7	14.86	74.97	8.4	33.61	8.2	24.9	2.41

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ -t)	Chlor (μ g/L)
I19	28 Jan 2019	8	14.85	74.48	8.4	33.61	8.2	24.9	2.45
I19	28 Jan 2019	9	14.85	74.56	8.4	33.61	8.2	24.9	2.35
I19	28 Jan 2019	10	14.85	74.54	8.3	33.61	8.2	24.9	2.35
I24	02 Jan 2019	1	15.29	74.01	7.8	33.66	8.2	24.9	0.80
I24	02 Jan 2019	2	15.29	74.05	7.8	33.66	8.2	24.9	0.80
I24	02 Jan 2019	3	15.29	72.97	7.8	33.66	8.2	24.9	0.83
I24	02 Jan 2019	4	15.28	72.68	7.8	33.66	8.2	24.9	1.07
I24	02 Jan 2019	5	15.26	71.81	7.8	33.66	8.2	24.9	1.33
I24	02 Jan 2019	6	15.25	69.89	7.8	33.66	8.2	24.9	1.44
I24	02 Jan 2019	7	15.25	69.61	7.8	33.66	8.2	24.9	1.48
I24	02 Jan 2019	8	15.25	68.84	7.8	33.66	8.2	24.9	1.44
I24	02 Jan 2019	9	15.25	67.68	7.8	33.66	8.2	24.9	1.42
I24	02 Jan 2019	10	15.25	66.87	7.8	33.66	8.2	24.9	1.43
I24	02 Jan 2019	11	15.25	67.43	7.8	33.66	8.2	24.9	1.37
I24	07 Jan 2019	1	15.30	77.89	8.0	33.61	8.2	24.8	0.58
I24	07 Jan 2019	2	15.28	77.75	8.1	33.61	8.2	24.8	0.59
I24	07 Jan 2019	3	15.28	77.48	8.1	33.61	8.2	24.8	0.62
I24	07 Jan 2019	4	15.22	77.00	8.0	33.62	8.2	24.9	0.75
I24	07 Jan 2019	5	15.21	76.32	8.0	33.62	8.2	24.9	0.97
I24	07 Jan 2019	6	15.18	76.01	8.0	33.62	8.2	24.9	1.29
I24	07 Jan 2019	7	15.16	76.10	8.1	33.62	8.2	24.9	1.49
I24	07 Jan 2019	8	15.14	75.69	8.0	33.61	8.2	24.9	1.70
I24	07 Jan 2019	9	15.12	75.14	8.0	33.61	8.2	24.9	1.71
I24	07 Jan 2019	10	15.12	74.15	8.0	33.61	8.2	24.9	1.66
I24	07 Jan 2019	11	15.12	73.70	8.0	33.61	8.1	24.9	1.57
I24	14 Jan 2019	1	15.05	60.46	8.3	33.55	8.2	24.8	2.66
I24	14 Jan 2019	2	15.06	59.59	8.3	33.55	8.2	24.8	2.68
I24	14 Jan 2019	3	15.07	59.71	8.3	33.56	8.2	24.8	2.64
I24	14 Jan 2019	4	15.06	59.14	8.2	33.56	8.2	24.8	2.66
I24	14 Jan 2019	5	15.06	58.07	8.2	33.56	8.2	24.8	2.69
I24	14 Jan 2019	6	15.07	58.43	8.2	33.56	8.2	24.8	2.79
I24	14 Jan 2019	7	15.07	57.68	8.2	33.56	8.2	24.8	2.75
I24	14 Jan 2019	8	15.07	54.73	8.2	33.56	8.2	24.8	2.71
I24	14 Jan 2019	9	15.07	55.68	8.2	33.56	8.2	24.8	2.58
I24	14 Jan 2019	10	15.08	54.05	8.2	33.56	8.2	24.8	2.50
I24	23 Jan 2019	1	14.75	51.59	7.9	33.48	8.2	24.9	0.84
I24	23 Jan 2019	2	14.74	50.87	7.9	33.49	8.2	24.9	0.92
I24	23 Jan 2019	3	14.62	47.76	7.8	33.49	8.2	24.9	1.44
I24	23 Jan 2019	4	14.63	45.87	7.7	33.53	8.2	24.9	2.18
I24	23 Jan 2019	5	14.64	51.01	7.6	33.56	8.2	24.9	2.40
I24	23 Jan 2019	6	14.63	55.65	7.6	33.58	8.2	25.0	2.09
I24	23 Jan 2019	7	14.64	61.37	7.5	33.59	8.2	25.0	1.90
I24	23 Jan 2019	8	14.64	65.52	7.5	33.60	8.2	25.0	1.65
I24	23 Jan 2019	9	14.63	66.17	7.4	33.60	8.2	25.0	1.49
I24	23 Jan 2019	10	14.63	66.39	7.5	33.60	8.2	25.0	1.43
I24	23 Jan 2019	11	14.62	65.38	7.4	33.60	8.2	25.0	1.34
I24	28 Jan 2019	1	14.85	75.96	8.6	33.54	8.2	24.9	1.05
I24	28 Jan 2019	2	14.80	76.08	8.6	33.59	8.2	24.9	1.14
I24	28 Jan 2019	3	14.77	76.92	8.5	33.61	8.2	25.0	1.16
I24	28 Jan 2019	4	14.77	77.93	8.6	33.61	8.2	25.0	1.28

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ -t)	Chlor (μ g/L)
I24	28 Jan 2019	5	14.76	77.94	8.5	33.61	8.2	25.0	1.40
I24	28 Jan 2019	6	14.74	77.82	8.4	33.61	8.2	25.0	1.51
I24	28 Jan 2019	7	14.68	76.44	8.3	33.61	8.2	25.0	1.48
I24	28 Jan 2019	8	14.68	74.63	8.3	33.61	8.2	25.0	1.56
I24	28 Jan 2019	9	14.67	73.37	8.2	33.61	8.2	25.0	1.61
I24	28 Jan 2019	10	14.67	72.43	8.2	33.61	8.2	25.0	1.62
I25	02 Jan 2019	1	15.33	74.64	7.9	33.66	8.2	24.9	0.73
I25	02 Jan 2019	2	15.32	74.16	7.9	33.66	8.2	24.9	0.72
I25	02 Jan 2019	3	15.29	72.48	7.9	33.66	8.2	24.9	0.83
I25	02 Jan 2019	4	15.28	70.50	7.9	33.66	8.2	24.9	1.06
I25	02 Jan 2019	5	15.27	69.39	7.9	33.66	8.2	24.9	1.34
I25	02 Jan 2019	6	15.27	68.35	7.8	33.66	8.2	24.9	1.45
I25	02 Jan 2019	7	15.27	67.48	7.8	33.66	8.2	24.9	1.47
I25	02 Jan 2019	8	15.27	66.77	7.8	33.66	8.2	24.9	1.49
I25	07 Jan 2019	1	15.28	78.34	8.1	33.61	8.2	24.8	0.53
I25	07 Jan 2019	2	15.27	77.96	8.1	33.61	8.2	24.8	0.55
I25	07 Jan 2019	3	15.21	77.95	8.1	33.62	8.2	24.9	0.60
I25	07 Jan 2019	4	15.19	77.68	8.1	33.62	8.2	24.9	0.72
I25	07 Jan 2019	5	15.17	76.90	8.0	33.62	8.2	24.9	0.94
I25	07 Jan 2019	6	15.15	76.54	8.0	33.62	8.2	24.9	1.13
I25	07 Jan 2019	7	15.12	76.51	8.1	33.61	8.2	24.9	1.42
I25	07 Jan 2019	8	15.13	76.22	8.1	33.61	8.2	24.9	1.49
I25	07 Jan 2019	9	15.12	75.34	8.1	33.61	8.2	24.9	1.46
I25	14 Jan 2019	1	15.06	59.23	8.2	33.53	8.2	24.8	2.44
I25	14 Jan 2019	2	15.06	59.29	8.2	33.53	8.2	24.8	2.58
I25	14 Jan 2019	3	15.07	58.49	8.1	33.55	8.2	24.8	2.39
I25	14 Jan 2019	4	15.07	58.38	8.2	33.55	8.2	24.8	2.41
I25	14 Jan 2019	5	15.07	58.84	8.2	33.55	8.2	24.8	2.60
I25	14 Jan 2019	6	15.08	57.86	8.1	33.56	8.2	24.8	2.47
I25	14 Jan 2019	7	15.08	57.23	8.1	33.56	8.2	24.8	2.45
I25	14 Jan 2019	8	15.08	58.32	8.2	33.56	8.2	24.8	2.42
I25	14 Jan 2019	9	15.08	55.98	8.1	33.56	8.2	24.8	2.42
I25	23 Jan 2019	1	14.95	73.87	7.9	33.60	8.2	24.9	0.68
I25	23 Jan 2019	2	14.93	73.65	7.8	33.61	8.2	24.9	0.72
I25	23 Jan 2019	3	14.87	73.22	7.8	33.60	8.2	24.9	0.81
I25	23 Jan 2019	4	14.82	72.80	7.8	33.60	8.2	24.9	0.99
I25	23 Jan 2019	5	14.80	72.59	7.8	33.60	8.2	24.9	1.25
I25	23 Jan 2019	6	14.79	72.29	7.8	33.60	8.2	24.9	1.52
I25	23 Jan 2019	7	14.79	72.32	7.8	33.60	8.2	24.9	1.66
I25	23 Jan 2019	8	14.79	72.54	7.8	33.60	8.2	24.9	1.69
I25	23 Jan 2019	9	14.79	72.57	7.8	33.60	8.2	24.9	1.62
I25	28 Jan 2019	1	14.81	76.63	8.6	33.57	8.2	24.9	1.31
I25	28 Jan 2019	2	14.77	76.45	8.5	33.59	8.2	24.9	1.28
I25	28 Jan 2019	3	14.72	76.21	8.4	33.61	8.2	25.0	1.40
I25	28 Jan 2019	4	14.70	75.84	8.4	33.61	8.2	25.0	1.53
I25	28 Jan 2019	5	14.68	75.37	8.4	33.61	8.2	25.0	1.68
I25	28 Jan 2019	6	14.68	74.94	8.3	33.61	8.2	25.0	1.86
I25	28 Jan 2019	7	14.68	74.94	8.3	33.61	8.2	25.0	1.84
I25	28 Jan 2019	8	14.68	74.52	8.2	33.61	8.2	25.0	1.81
I25	28 Jan 2019	9	14.68	74.47	8.2	33.61	8.2	25.0	1.60

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ -t)	Chlor (μ g/L)
I26	02 Jan 2019	1	15.59	81.91	7.9	33.67	8.2	24.8	0.75
I26	02 Jan 2019	2	15.59	82.09	7.9	33.67	8.2	24.8	0.76
I26	02 Jan 2019	3	15.56	81.47	7.9	33.67	8.2	24.8	0.83
I26	02 Jan 2019	4	15.53	80.14	7.9	33.67	8.2	24.8	0.93
I26	02 Jan 2019	5	15.52	79.06	7.9	33.67	8.2	24.8	1.06
I26	02 Jan 2019	6	15.52	78.40	7.9	33.66	8.2	24.8	1.23
I26	02 Jan 2019	7	15.51	76.02	7.9	33.67	8.2	24.8	1.41
I26	02 Jan 2019	8	15.51	74.58	7.9	33.66	8.2	24.8	1.49
I26	02 Jan 2019	9	15.51	73.95	7.9	33.66	8.2	24.8	1.52
I26	07 Jan 2019	1	15.23	73.12	8.2	33.65	8.1	24.9	0.62
I26	07 Jan 2019	2	15.22	72.51	8.1	33.65	8.1	24.9	0.62
I26	07 Jan 2019	3	15.15	72.42	8.1	33.65	8.1	24.9	0.67
I26	07 Jan 2019	4	15.08	72.88	8.1	33.64	8.2	24.9	0.78
I26	07 Jan 2019	5	15.03	74.99	8.0	33.63	8.2	24.9	0.98
I26	07 Jan 2019	6	15.00	76.09	8.0	33.63	8.2	24.9	1.19
I26	07 Jan 2019	7	14.99	76.04	8.0	33.63	8.2	24.9	1.34
I26	07 Jan 2019	8	14.99	74.18	8.0	33.64	8.2	24.9	1.50
I26	07 Jan 2019	9	14.98	72.71	8.1	33.64	8.1	24.9	1.50
I26	14 Jan 2019	1	15.04	63.11	8.2	33.45	8.2	24.8	1.97
I26	14 Jan 2019	2	15.04	63.88	8.2	33.45	8.2	24.8	2.04
I26	14 Jan 2019	3	15.06	63.33	8.2	33.47	8.2	24.8	2.08
I26	14 Jan 2019	4	15.06	63.65	8.2	33.48	8.2	24.8	2.12
I26	14 Jan 2019	5	15.06	63.74	8.2	33.48	8.2	24.8	2.02
I26	14 Jan 2019	6	15.06	63.45	8.1	33.48	8.2	24.8	2.16
I26	14 Jan 2019	7	15.07	63.75	8.1	33.48	8.2	24.8	1.96
I26	14 Jan 2019	8	15.07	63.84	8.1	33.48	8.2	24.8	1.85
I26	14 Jan 2019	9	15.07	63.72	8.1	33.48	8.2	24.8	1.96
I26	23 Jan 2019	1	15.04	73.61	8.0	33.60	8.2	24.9	0.77
I26	23 Jan 2019	2	15.00	73.36	8.0	33.61	8.2	24.9	0.84
I26	23 Jan 2019	3	14.89	72.86	7.9	33.60	8.2	24.9	1.05
I26	23 Jan 2019	4	14.81	72.23	7.7	33.60	8.2	24.9	1.08
I26	23 Jan 2019	5	14.68	73.20	7.4	33.61	8.2	25.0	1.03
I26	23 Jan 2019	6	14.50	74.73	7.1	33.60	8.2	25.0	0.85
I26	23 Jan 2019	7	14.49	74.52	7.0	33.59	8.2	25.0	0.82
I26	23 Jan 2019	8	14.50	74.37	7.0	33.59	8.2	25.0	0.88
I26	23 Jan 2019	9	14.50	74.54	7.1	33.59	8.2	25.0	0.88
I26	28 Jan 2019	1	15.02	77.33	8.7	33.58	8.2	24.9	0.93
I26	28 Jan 2019	2	14.90	75.90	8.7	33.61	8.2	24.9	1.29
I26	28 Jan 2019	3	14.85	74.25	8.7	33.61	8.2	24.9	2.11
I26	28 Jan 2019	4	14.84	74.89	8.6	33.61	8.2	24.9	2.37
I26	28 Jan 2019	5	14.83	75.22	8.6	33.61	8.2	24.9	2.59
I26	28 Jan 2019	6	14.83	75.61	8.5	33.61	8.2	24.9	2.61
I26	28 Jan 2019	7	14.83	75.50	8.6	33.61	8.2	24.9	2.36
I26	28 Jan 2019	8	14.83	75.29	8.6	33.61	8.2	24.9	2.22
I26	28 Jan 2019	9	14.84	75.39	8.6	33.61	8.2	24.9	2.11
I32	02 Jan 2019	1	15.37	75.40	7.9	33.67	8.2	24.9	0.54
I32	02 Jan 2019	2	15.32	74.82	7.9	33.67	8.2	24.9	0.59
I32	02 Jan 2019	3	15.24	73.45	7.9	33.66	8.2	24.9	0.76
I32	02 Jan 2019	4	15.20	72.48	7.9	33.66	8.2	24.9	0.95

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ -t)	Chlor (μ g/L)
I32	02 Jan 2019	5	15.17	71.56	7.9	33.66	8.2	24.9	1.22
I32	02 Jan 2019	6	15.14	71.47	7.9	33.66	8.2	24.9	1.41
I32	02 Jan 2019	7	15.06	70.99	8.0	33.67	8.2	24.9	1.59
I32	02 Jan 2019	8	14.97	71.28	8.0	33.67	8.2	25.0	1.48
I32	02 Jan 2019	9	14.89	70.21	8.0	33.67	8.2	25.0	1.41
I32	07 Jan 2019	1	15.47	75.37	8.0	33.65	8.2	24.8	0.50
I32	07 Jan 2019	2	15.43	75.23	8.0	33.65	8.2	24.8	0.53
I32	07 Jan 2019	3	15.30	73.98	8.0	33.65	8.2	24.9	0.68
I32	07 Jan 2019	4	15.23	71.65	8.1	33.65	8.2	24.9	0.92
I32	07 Jan 2019	5	15.16	73.89	8.2	33.65	8.2	24.9	1.18
I32	07 Jan 2019	6	15.13	73.60	8.2	33.65	8.2	24.9	1.52
I32	07 Jan 2019	7	15.12	72.34	8.2	33.65	8.2	24.9	1.66
I32	07 Jan 2019	8	15.09	70.57	8.3	33.65	8.2	24.9	1.67
I32	07 Jan 2019	9	15.05	66.67	8.3	33.65	8.2	24.9	1.79
I32	07 Jan 2019	10	15.03	63.95	8.3	33.65	8.1	24.9	1.71
I32	14 Jan 2019	1	15.05	58.87	8.2	33.48	8.2	24.8	2.40
I32	14 Jan 2019	2	15.05	58.49	8.2	33.48	8.2	24.8	2.40
I32	14 Jan 2019	3	15.07	58.76	8.2	33.49	8.2	24.8	2.62
I32	14 Jan 2019	4	15.09	60.18	8.2	33.50	8.2	24.8	2.71
I32	14 Jan 2019	5	15.12	60.74	8.1	33.52	8.2	24.8	2.60
I32	14 Jan 2019	6	15.13	62.24	8.1	33.52	8.2	24.8	2.63
I32	14 Jan 2019	7	15.14	62.39	8.1	33.53	8.2	24.8	2.52
I32	14 Jan 2019	8	15.14	62.29	8.1	33.53	8.2	24.8	2.68
I32	14 Jan 2019	9	15.14	62.44	8.1	33.53	8.2	24.8	2.44
I32	14 Jan 2019	10	15.14	60.54	8.2	33.54	8.2	24.8	2.44
I32	23 Jan 2019	1	15.09	70.74	8.1	33.61	8.2	24.9	0.72
I32	23 Jan 2019	2	15.07	70.61	8.1	33.61	8.2	24.9	0.79
I32	23 Jan 2019	3	14.98	69.95	8.1	33.61	8.2	24.9	1.02
I32	23 Jan 2019	4	14.88	68.13	8.1	33.61	8.2	24.9	1.82
I32	23 Jan 2019	5	14.82	65.86	8.1	33.61	8.2	24.9	3.33
I32	23 Jan 2019	6	14.73	62.39	7.8	33.60	8.2	25.0	3.16
I32	23 Jan 2019	7	14.66	58.97	7.6	33.61	8.2	25.0	2.37
I32	23 Jan 2019	8	14.58	53.12	7.7	33.61	8.2	25.0	2.14
I32	23 Jan 2019	9	14.52	53.32	7.9	33.61	8.2	25.0	1.73
I32	23 Jan 2019	10	14.45	43.27	7.9	33.61	8.2	25.0	1.53
I32	28 Jan 2019	1	14.98	74.61	8.6	33.59	8.2	24.9	0.98
I32	28 Jan 2019	2	14.89	74.36	8.6	33.61	8.2	24.9	1.10
I32	28 Jan 2019	3	14.66	72.87	8.7	33.60	8.2	25.0	1.68
I32	28 Jan 2019	4	14.63	71.61	8.7	33.59	8.2	25.0	2.30
I32	28 Jan 2019	5	14.62	71.24	8.6	33.59	8.2	25.0	2.60
I32	28 Jan 2019	6	14.61	71.12	8.6	33.59	8.2	25.0	2.85
I32	28 Jan 2019	7	14.59	71.32	8.5	33.59	8.2	25.0	2.56
I32	28 Jan 2019	8	14.58	71.18	8.5	33.59	8.2	25.0	2.23
I32	28 Jan 2019	9	14.57	70.33	8.4	33.59	8.2	25.0	2.05
I39	02 Jan 2019	1	15.52	83.88	7.9	33.66	8.1	24.8	0.71
I39	02 Jan 2019	2	15.52	83.73	7.9	33.66	8.1	24.8	0.73
I39	02 Jan 2019	3	15.51	83.45	7.9	33.66	8.1	24.8	0.77
I39	02 Jan 2019	4	15.51	83.46	7.9	33.66	8.1	24.8	0.84
I39	02 Jan 2019	5	15.51	83.38	7.9	33.66	8.1	24.8	0.92
I39	02 Jan 2019	6	15.50	83.38	7.9	33.66	8.1	24.8	1.03

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ -t)	Chlor (μ g/L)
I39	02 Jan 2019	7	15.49	83.36	7.9	33.66	8.1	24.8	1.14
I39	02 Jan 2019	8	15.49	83.36	7.9	33.66	8.1	24.8	1.23
I39	02 Jan 2019	9	15.48	82.97	7.9	33.66	8.1	24.8	1.36
I39	02 Jan 2019	10	15.48	83.10	7.9	33.66	8.1	24.8	1.42
I39	02 Jan 2019	11	15.48	83.05	7.9	33.66	8.1	24.8	1.42
I39	02 Jan 2019	12	15.48	83.29	7.9	33.66	8.1	24.8	1.49
I39	02 Jan 2019	13	15.47	83.30	7.9	33.66	8.1	24.8	1.50
I39	02 Jan 2019	14	15.47	83.06	7.9	33.66	8.1	24.8	1.46
I39	02 Jan 2019	15	15.47	83.16	7.9	33.66	8.1	24.8	1.48
I39	02 Jan 2019	16	15.47	83.21	7.9	33.66	8.1	24.8	1.48
I39	02 Jan 2019	17	15.47	83.20	7.9	33.66	8.1	24.8	1.45
I39	02 Jan 2019	18	15.47	83.18	7.9	33.66	8.1	24.8	1.52
I39	07 Jan 2019	1	15.26	81.72	8.0	33.60	8.1	24.8	0.61
I39	07 Jan 2019	2	15.26	81.61	8.0	33.60	8.1	24.8	0.61
I39	07 Jan 2019	3	15.24	81.39	8.0	33.60	8.1	24.8	0.64
I39	07 Jan 2019	4	15.23	81.32	8.0	33.59	8.1	24.8	0.71
I39	07 Jan 2019	5	15.22	81.10	8.0	33.59	8.1	24.8	0.82
I39	07 Jan 2019	6	15.22	80.87	8.0	33.59	8.1	24.8	0.96
I39	07 Jan 2019	7	15.21	80.75	8.0	33.59	8.1	24.8	1.15
I39	07 Jan 2019	8	15.21	80.79	8.0	33.59	8.1	24.8	1.28
I39	07 Jan 2019	9	15.21	80.86	8.0	33.60	8.1	24.8	1.37
I39	07 Jan 2019	10	15.20	81.07	8.0	33.60	8.1	24.8	1.45
I39	07 Jan 2019	11	15.20	81.21	8.0	33.60	8.1	24.8	1.51
I39	07 Jan 2019	12	15.20	81.28	8.0	33.60	8.1	24.8	1.46
I39	07 Jan 2019	13	15.20	81.35	8.0	33.60	8.1	24.9	1.49
I39	07 Jan 2019	14	15.19	81.32	7.9	33.61	8.1	24.9	1.45
I39	07 Jan 2019	15	15.19	81.26	7.9	33.61	8.1	24.9	1.44
I39	07 Jan 2019	16	15.19	81.35	7.9	33.61	8.1	24.9	1.41
I39	07 Jan 2019	17	15.18	81.29	7.9	33.61	8.1	24.9	1.39
I39	07 Jan 2019	18	15.18	81.07	7.9	33.62	8.1	24.9	1.45
I39	14 Jan 2019	1	15.13	65.10	7.9	33.60	8.2	24.9	2.12
I39	14 Jan 2019	2	15.13	65.58	7.9	33.60	8.2	24.9	2.19
I39	14 Jan 2019	3	15.14	66.35	7.9	33.60	8.2	24.9	2.26
I39	14 Jan 2019	4	15.13	65.49	7.9	33.60	8.2	24.9	2.19
I39	14 Jan 2019	5	15.15	65.46	7.9	33.60	8.2	24.9	2.15
I39	14 Jan 2019	6	15.16	65.76	7.9	33.61	8.2	24.9	2.10
I39	14 Jan 2019	7	15.16	65.00	7.8	33.61	8.2	24.9	2.00
I39	14 Jan 2019	8	15.16	65.94	7.9	33.61	8.2	24.9	1.97
I39	14 Jan 2019	9	15.16	65.91	7.8	33.61	8.2	24.9	1.99
I39	14 Jan 2019	10	15.17	65.41	7.8	33.61	8.2	24.9	2.00
I39	14 Jan 2019	11	15.17	65.04	7.7	33.61	8.2	24.9	1.96
I39	14 Jan 2019	12	15.17	64.99	7.8	33.61	8.2	24.9	1.96
I39	14 Jan 2019	13	15.17	65.81	7.9	33.61	8.2	24.9	1.94
I39	14 Jan 2019	14	15.17	64.44	7.8	33.61	8.2	24.9	2.01
I39	14 Jan 2019	15	15.17	64.99	7.9	33.61	8.2	24.9	2.05
I39	14 Jan 2019	16	15.17	65.00	7.9	33.61	8.2	24.9	2.07
I39	14 Jan 2019	17	15.17	63.72	7.8	33.61	8.2	24.9	1.90
I39	14 Jan 2019	18	15.18	62.01	7.8	33.61	8.2	24.9	1.88
I39	23 Jan 2019	1	14.80	83.03	7.6	33.61	8.2	24.9	0.48
I39	23 Jan 2019	2	14.80	82.70	7.5	33.61	8.2	24.9	0.49
I39	23 Jan 2019	3	14.77	82.97	7.5	33.61	8.2	25.0	0.53
I39	23 Jan 2019	4	14.74	82.96	7.5	33.61	8.2	25.0	0.56

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ -t)	Chlor (μ g/L)
I39	23 Jan 2019	5	14.67	83.00	7.5	33.61	8.2	25.0	0.58
I39	23 Jan 2019	6	14.60	83.08	7.4	33.61	8.2	25.0	0.62
I39	23 Jan 2019	7	14.56	83.47	7.4	33.61	8.2	25.0	0.64
I39	23 Jan 2019	8	14.52	83.94	7.4	33.61	8.2	25.0	0.75
I39	23 Jan 2019	9	14.51	84.15	7.4	33.60	8.2	25.0	0.78
I39	23 Jan 2019	10	14.50	84.43	7.3	33.60	8.2	25.0	0.85
I39	23 Jan 2019	11	14.50	84.44	7.3	33.60	8.2	25.0	0.91
I39	23 Jan 2019	12	14.49	84.49	7.3	33.60	8.2	25.0	0.98
I39	23 Jan 2019	13	14.46	84.68	7.3	33.61	8.2	25.0	0.96
I39	23 Jan 2019	14	14.36	85.03	7.2	33.61	8.2	25.0	0.86
I39	23 Jan 2019	15	14.19	85.42	7.0	33.60	8.2	25.1	0.79
I39	23 Jan 2019	16	14.02	85.52	6.9	33.60	8.2	25.1	0.64
I39	23 Jan 2019	17	13.84	85.05	6.8	33.59	8.2	25.1	0.55
I39	23 Jan 2019	18	13.77	83.22	6.7	33.58	8.1	25.1	0.50
I39	28 Jan 2019	1	14.99	82.61	8.3	33.63	8.2	24.9	1.31
I39	28 Jan 2019	2	14.94	82.41	8.3	33.63	8.2	24.9	1.38
I39	28 Jan 2019	3	14.92	82.22	8.3	33.63	8.2	24.9	1.60
I39	28 Jan 2019	4	14.91	82.03	8.3	33.63	8.2	24.9	1.77
I39	28 Jan 2019	5	14.89	81.99	8.3	33.63	8.2	24.9	1.95
I39	28 Jan 2019	6	14.87	81.87	8.3	33.63	8.2	24.9	2.19
I39	28 Jan 2019	7	14.83	81.96	8.2	33.62	8.2	24.9	2.51
I39	28 Jan 2019	8	14.80	82.12	8.1	33.62	8.2	25.0	2.47
I39	28 Jan 2019	9	14.71	82.21	8.1	33.62	8.2	25.0	2.47
I39	28 Jan 2019	10	14.65	81.84	8.1	33.61	8.2	25.0	2.20
I39	28 Jan 2019	11	14.63	80.66	8.0	33.61	8.2	25.0	2.04
I39	28 Jan 2019	12	14.60	80.10	8.0	33.61	8.2	25.0	2.02
I39	28 Jan 2019	13	14.59	79.60	8.0	33.61	8.2	25.0	1.97
I39	28 Jan 2019	14	14.58	79.05	8.0	33.61	8.2	25.0	1.96
I39	28 Jan 2019	15	14.55	78.85	8.1	33.61	8.2	25.0	1.85
I39	28 Jan 2019	16	14.55	78.32	8.0	33.61	8.2	25.0	1.93
I39	28 Jan 2019	17	14.54	78.25	8.0	33.61	8.2	25.0	1.95
I39	28 Jan 2019	18	14.54	78.15	8.0	33.61	8.2	25.0	1.98
I40	02 Jan 2019	1	15.19	74.42	8.0	33.63	8.2	24.9	0.75
I40	02 Jan 2019	2	15.19	74.04	8.0	33.63	8.2	24.9	0.77
I40	02 Jan 2019	3	15.18	73.75	7.9	33.63	8.2	24.9	0.86
I40	02 Jan 2019	4	15.15	73.61	7.9	33.63	8.2	24.9	1.04
I40	02 Jan 2019	5	15.06	72.80	7.9	33.62	8.2	24.9	1.31
I40	02 Jan 2019	6	14.92	71.55	7.9	33.61	8.2	24.9	1.46
I40	02 Jan 2019	7	14.83	70.02	8.0	33.60	8.1	24.9	1.56
I40	02 Jan 2019	8	14.65	67.14	8.1	33.60	8.1	25.0	1.55
I40	02 Jan 2019	9	14.54	61.10	8.2	33.65	8.1	25.0	1.46
I40	02 Jan 2019	10	14.54	57.08	8.2	33.66	8.1	25.0	1.53
I40	07 Jan 2019	1	15.19	74.37	8.2	33.59	8.1	24.8	0.73
I40	07 Jan 2019	2	15.15	74.07	8.1	33.59	8.1	24.9	0.79
I40	07 Jan 2019	3	15.10	73.19	8.1	33.59	8.1	24.9	0.90
I40	07 Jan 2019	4	15.06	72.06	8.2	33.59	8.1	24.9	1.11
I40	07 Jan 2019	5	15.05	72.16	8.2	33.59	8.1	24.9	1.40
I40	07 Jan 2019	6	15.03	72.38	8.1	33.59	8.1	24.9	1.71
I40	07 Jan 2019	7	14.98	72.27	8.2	33.60	8.1	24.9	1.85
I40	07 Jan 2019	8	14.94	71.16	8.2	33.62	8.1	24.9	1.81
I40	07 Jan 2019	9	14.89	68.25	8.2	33.64	8.1	24.9	1.72
I40	07 Jan 2019	10	14.88	65.28	8.3	33.64	8.1	24.9	1.57

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (µg/L)
I40	14 Jan 2019	1	15.04	51.41	8.3	33.49	8.2	24.8	2.53
I40	14 Jan 2019	2	15.05	50.72	8.3	33.50	8.2	24.8	2.67
I40	14 Jan 2019	3	15.06	50.36	8.3	33.50	8.2	24.8	2.84
I40	14 Jan 2019	4	15.06	49.59	8.3	33.51	8.2	24.8	2.79
I40	14 Jan 2019	5	15.07	49.75	8.3	33.52	8.2	24.8	2.64
I40	14 Jan 2019	6	15.07	49.33	8.3	33.53	8.2	24.8	2.63
I40	14 Jan 2019	7	15.07	47.87	8.3	33.54	8.2	24.8	2.55
I40	14 Jan 2019	8	15.08	47.33	8.3	33.54	8.2	24.8	2.51
I40	14 Jan 2019	9	15.08	42.65	8.3	33.55	8.2	24.8	2.48
I40	14 Jan 2019	10	15.09	34.19	8.2	33.55	8.2	24.8	2.47
I40	23 Jan 2019	1	14.83	55.50	7.8	33.49	8.2	24.8	0.70
I40	23 Jan 2019	2	14.82	55.02	7.8	33.49	8.2	24.9	0.74
I40	23 Jan 2019	3	14.76	54.71	7.8	33.52	8.2	24.9	0.92
I40	23 Jan 2019	4	14.74	55.53	7.5	33.56	8.2	24.9	1.22
I40	23 Jan 2019	5	14.66	60.85	7.1	33.60	8.2	25.0	1.25
I40	23 Jan 2019	6	14.57	56.52	6.8	33.60	8.2	25.0	1.31
I40	23 Jan 2019	7	14.52	40.30	6.7	33.59	8.2	25.0	1.33
I40	23 Jan 2019	8	14.43	39.97	6.6	33.60	8.1	25.0	1.17
I40	23 Jan 2019	9	14.40	32.87	6.6	33.59	8.1	25.0	1.19
I40	23 Jan 2019	10	14.40	25.26	6.7	33.59	8.1	25.0	1.30
I40	28 Jan 2019	1	14.89	76.18	8.8	33.58	8.2	24.9	1.40
I40	28 Jan 2019	2	14.88	76.61	8.8	33.60	8.2	24.9	1.55
I40	28 Jan 2019	3	14.89	77.33	8.7	33.62	8.2	24.9	1.92
I40	28 Jan 2019	4	14.88	77.94	8.7	33.62	8.2	24.9	1.97
I40	28 Jan 2019	5	14.87	78.63	8.7	33.62	8.2	24.9	2.07
I40	28 Jan 2019	6	14.87	78.75	8.7	33.62	8.2	24.9	2.01
I40	28 Jan 2019	7	14.85	78.41	8.7	33.62	8.2	24.9	1.93
I40	28 Jan 2019	8	14.85	77.47	8.6	33.62	8.2	24.9	2.00
I40	28 Jan 2019	9	14.84	76.34	8.6	33.62	8.2	24.9	1.95
I40	28 Jan 2019	10	14.83	73.46	8.5	33.62	8.2	24.9	1.99

NA = not available

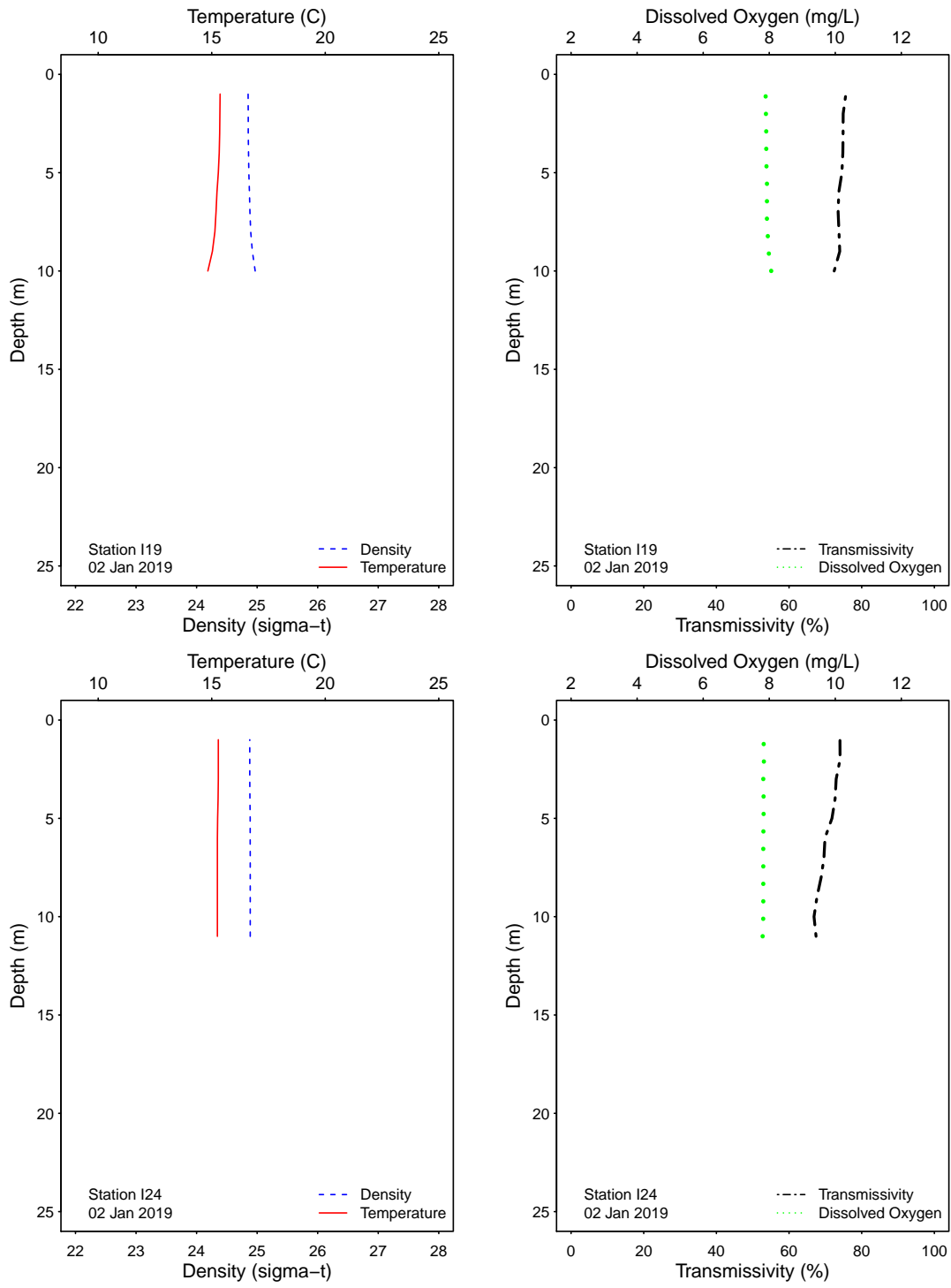


Figure 2.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

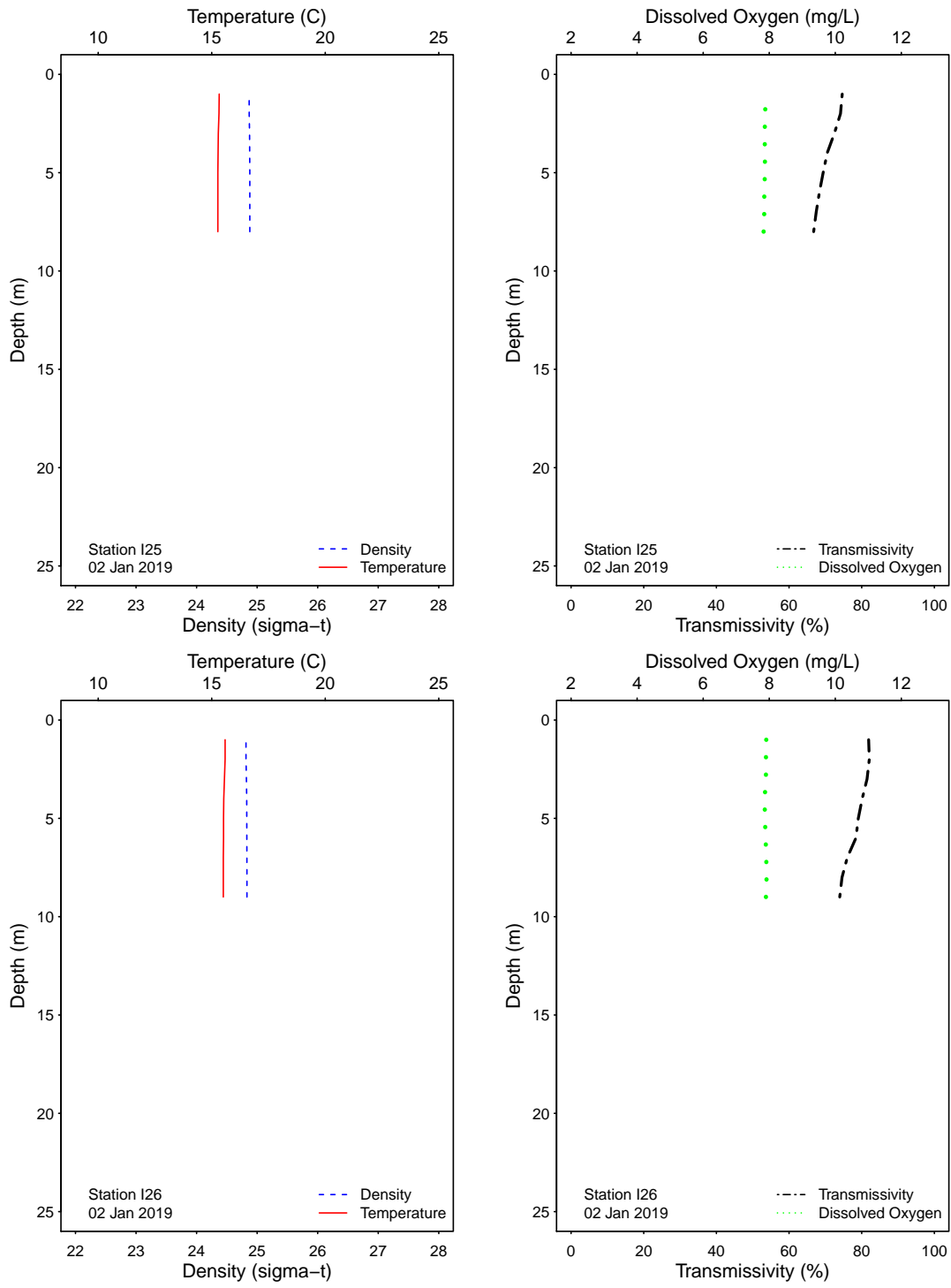


Figure 2.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

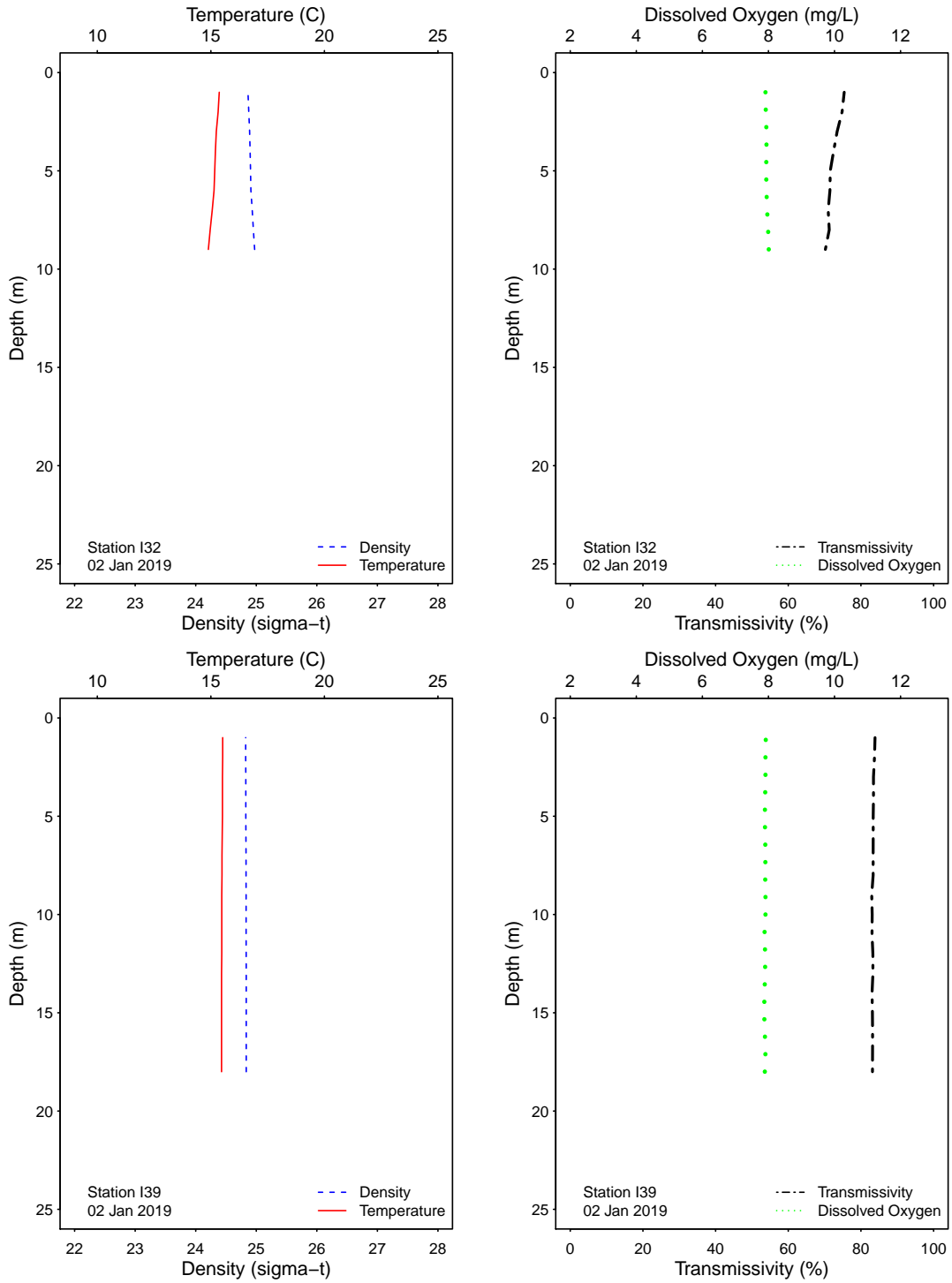


Figure 2.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

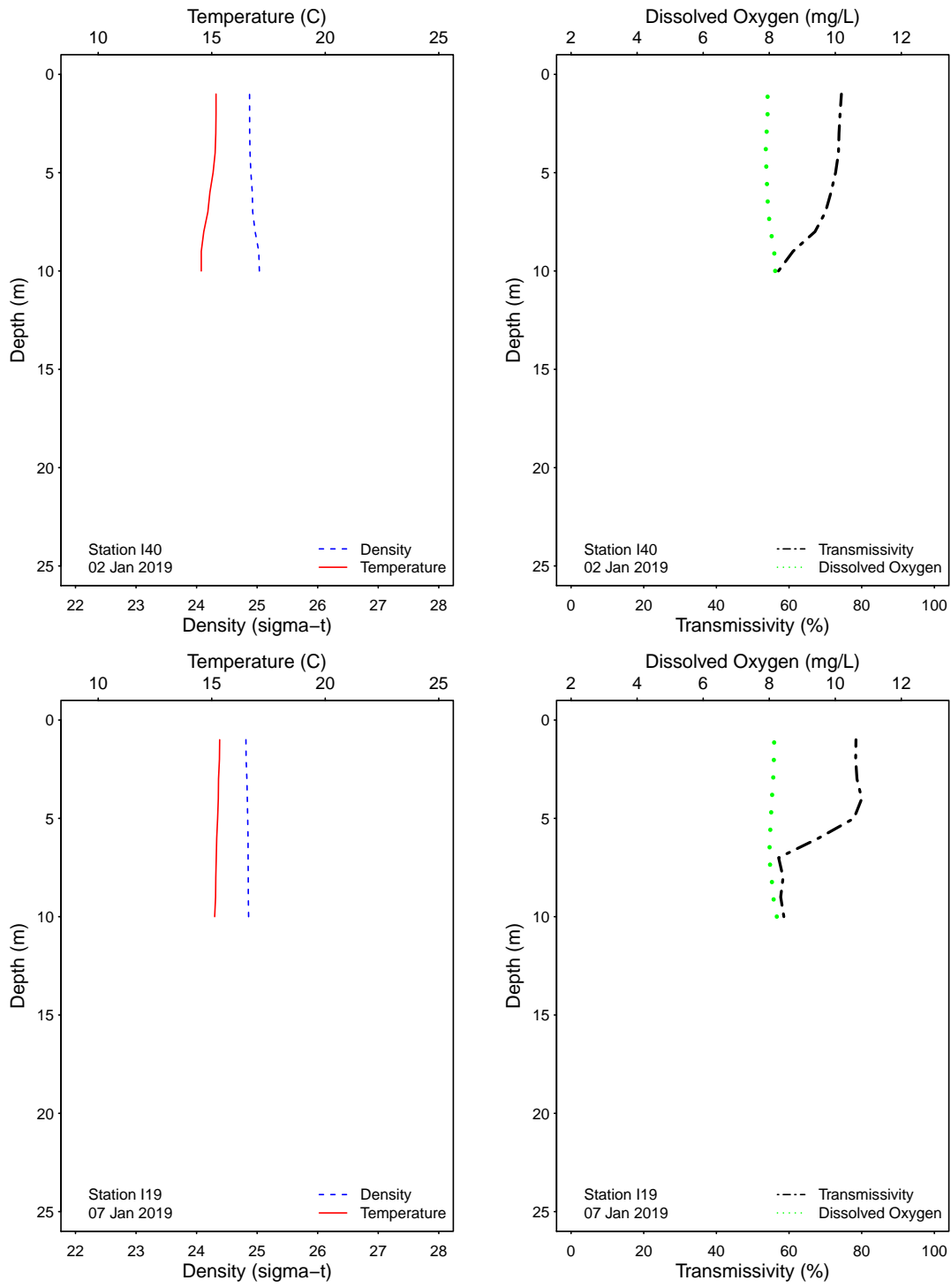


Figure 2.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

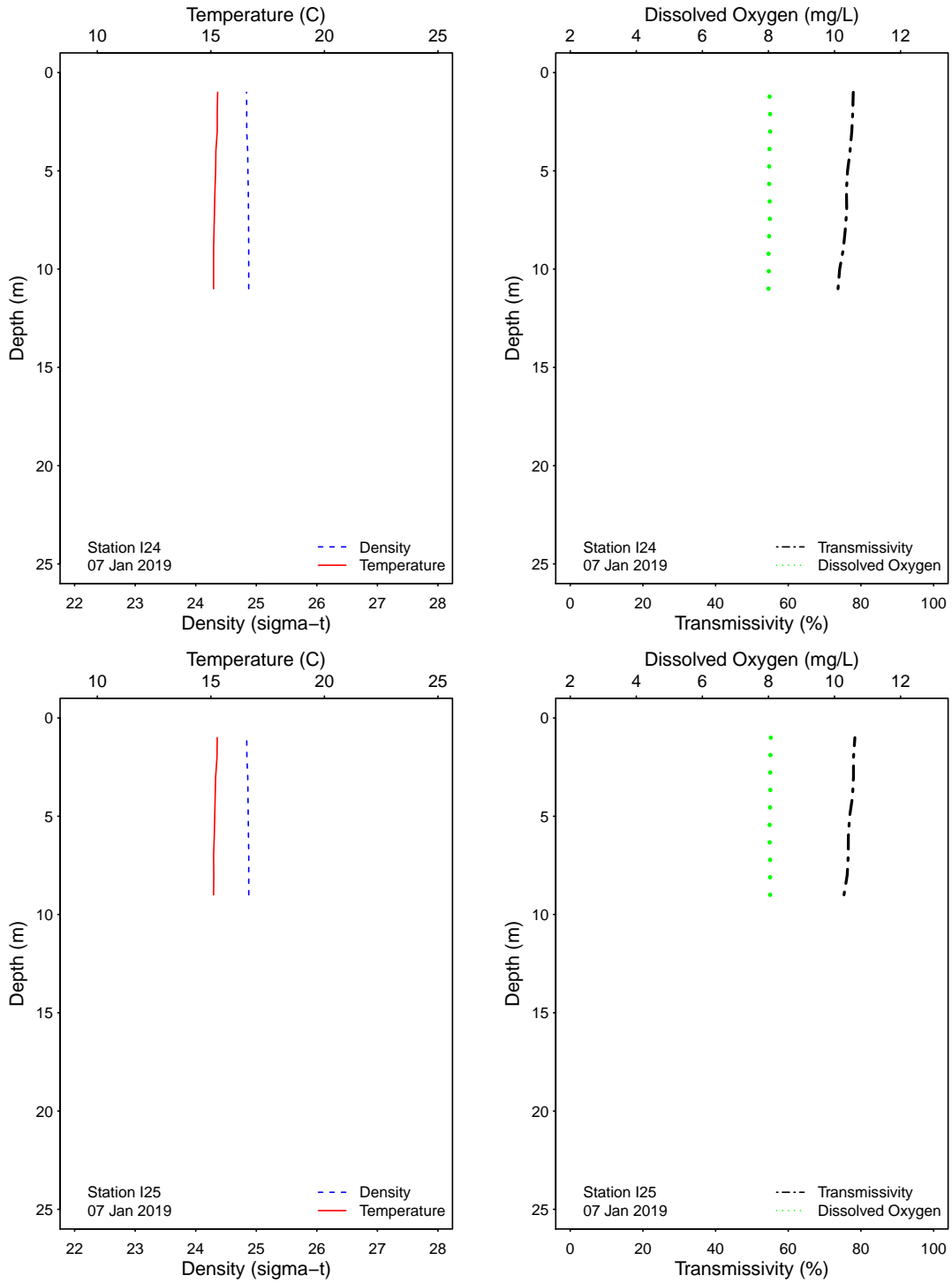


Figure 2.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

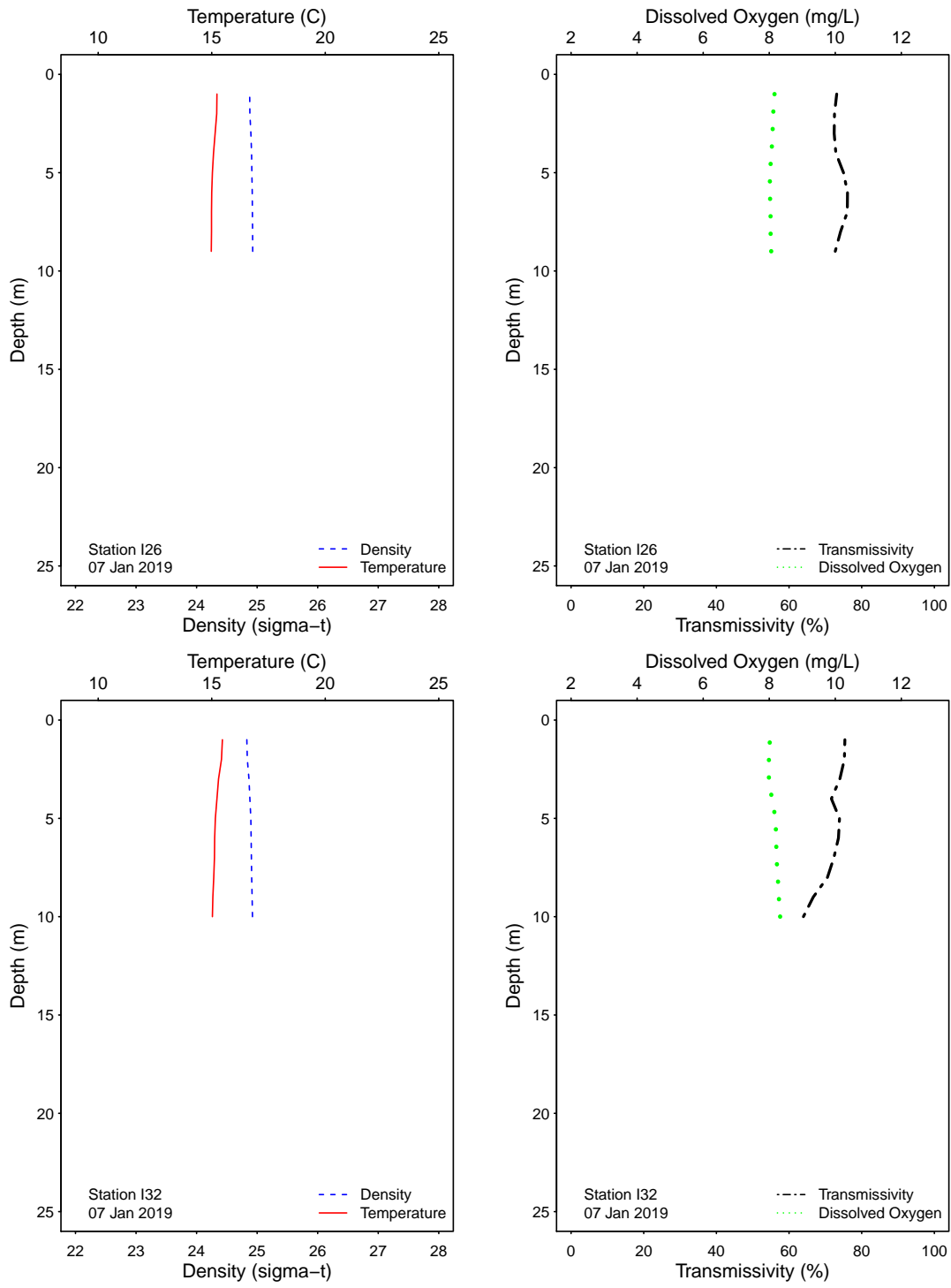


Figure 2.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

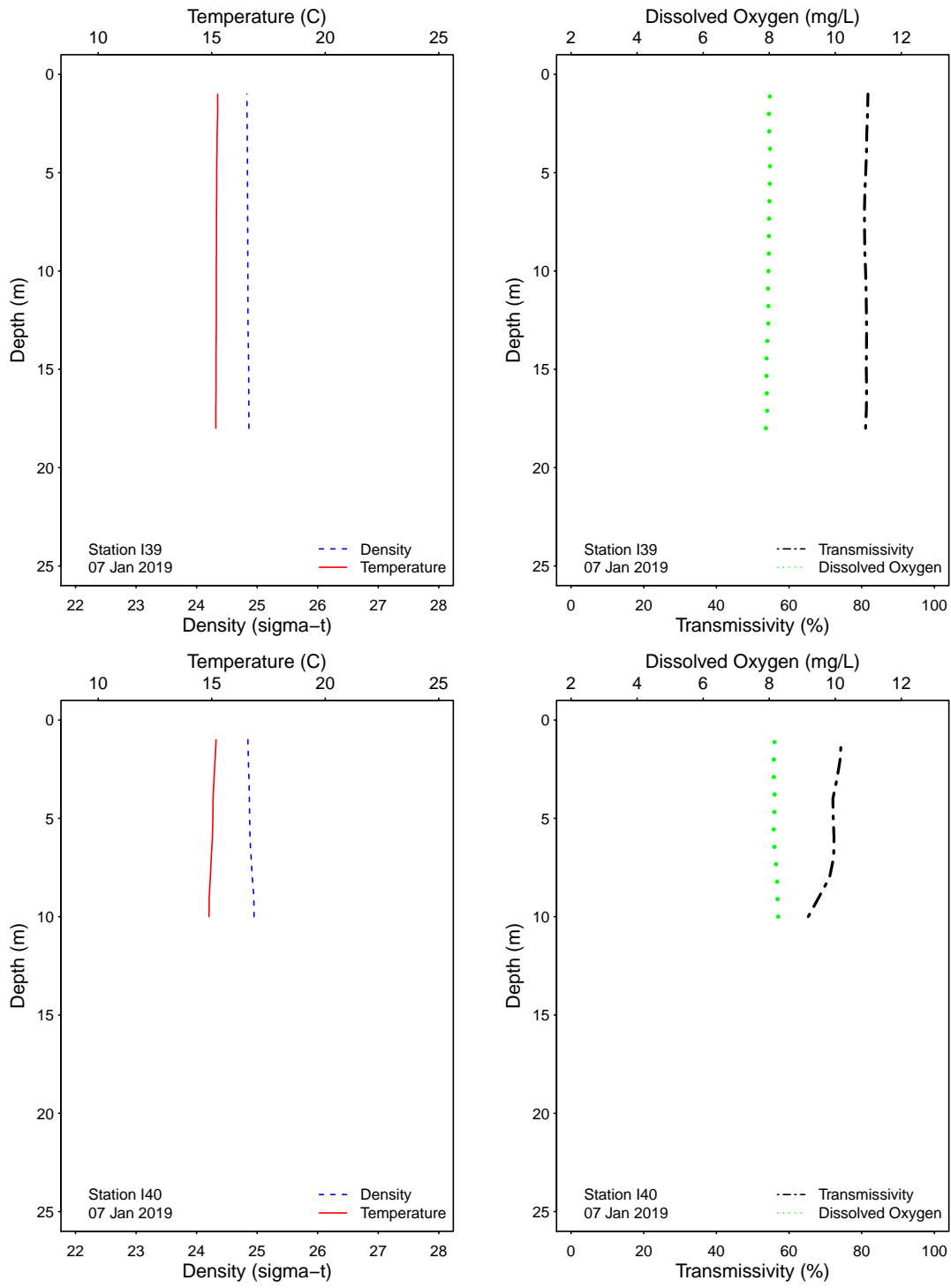


Figure 2.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

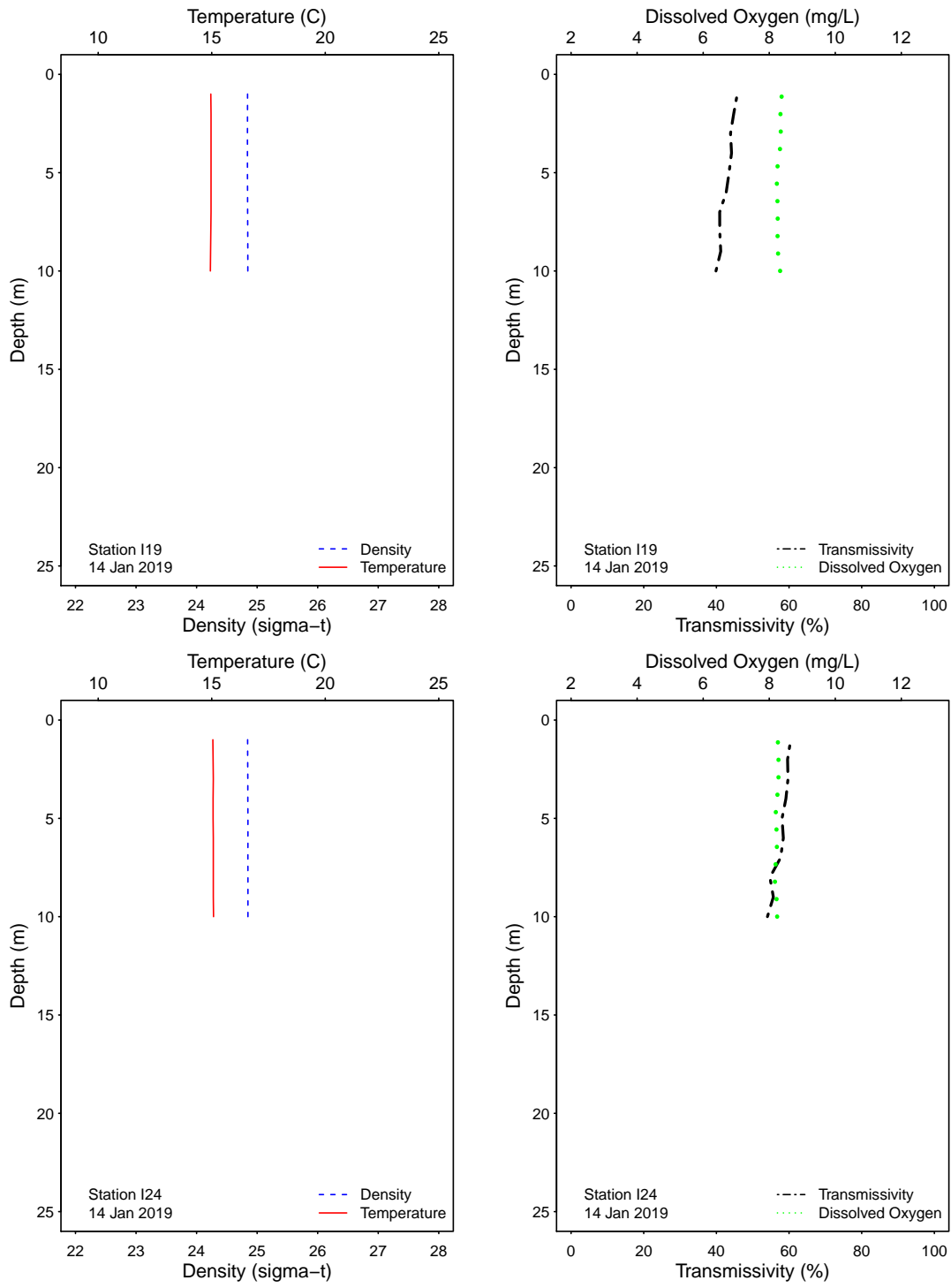


Figure 2.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

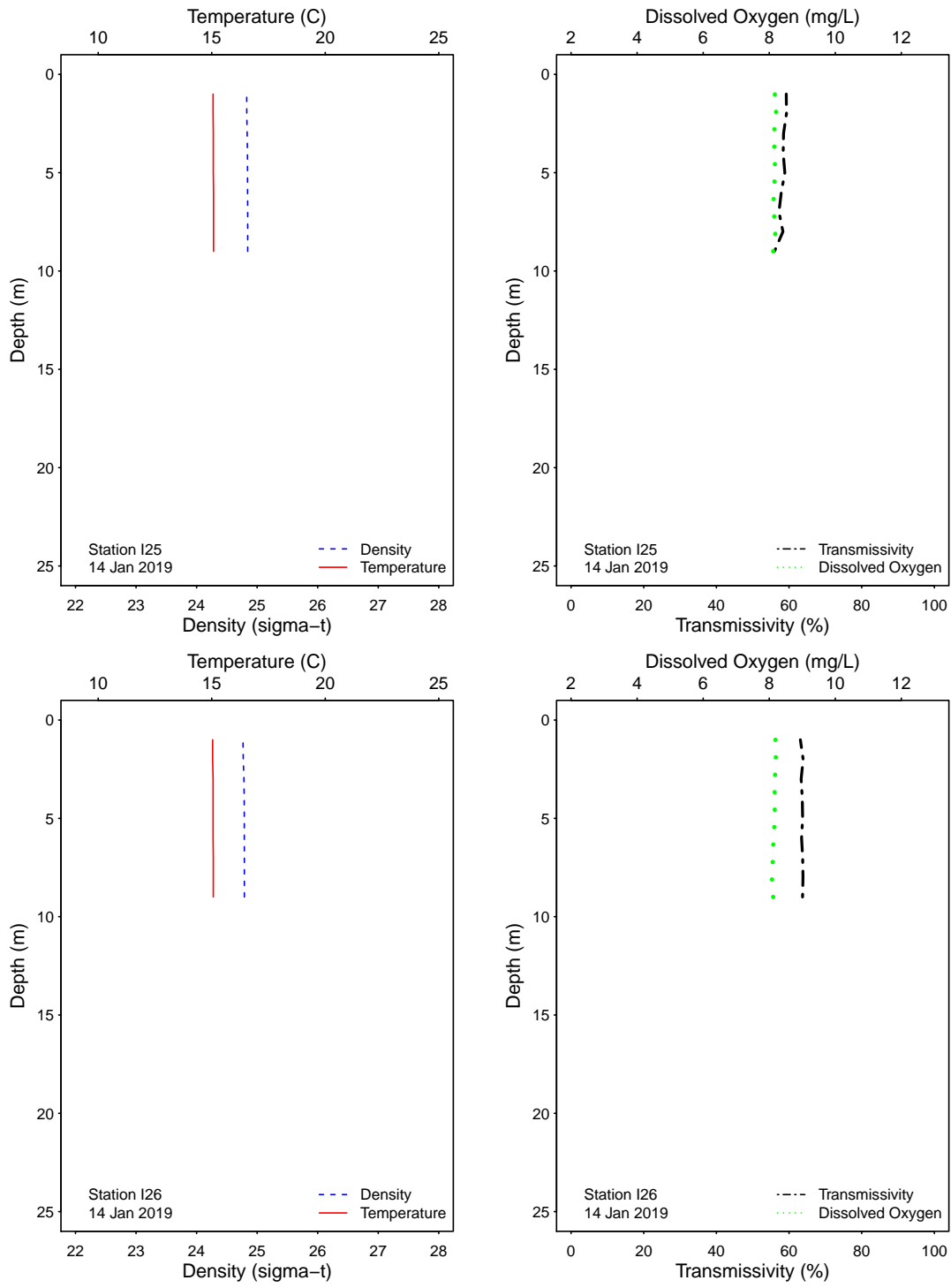


Figure 2.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

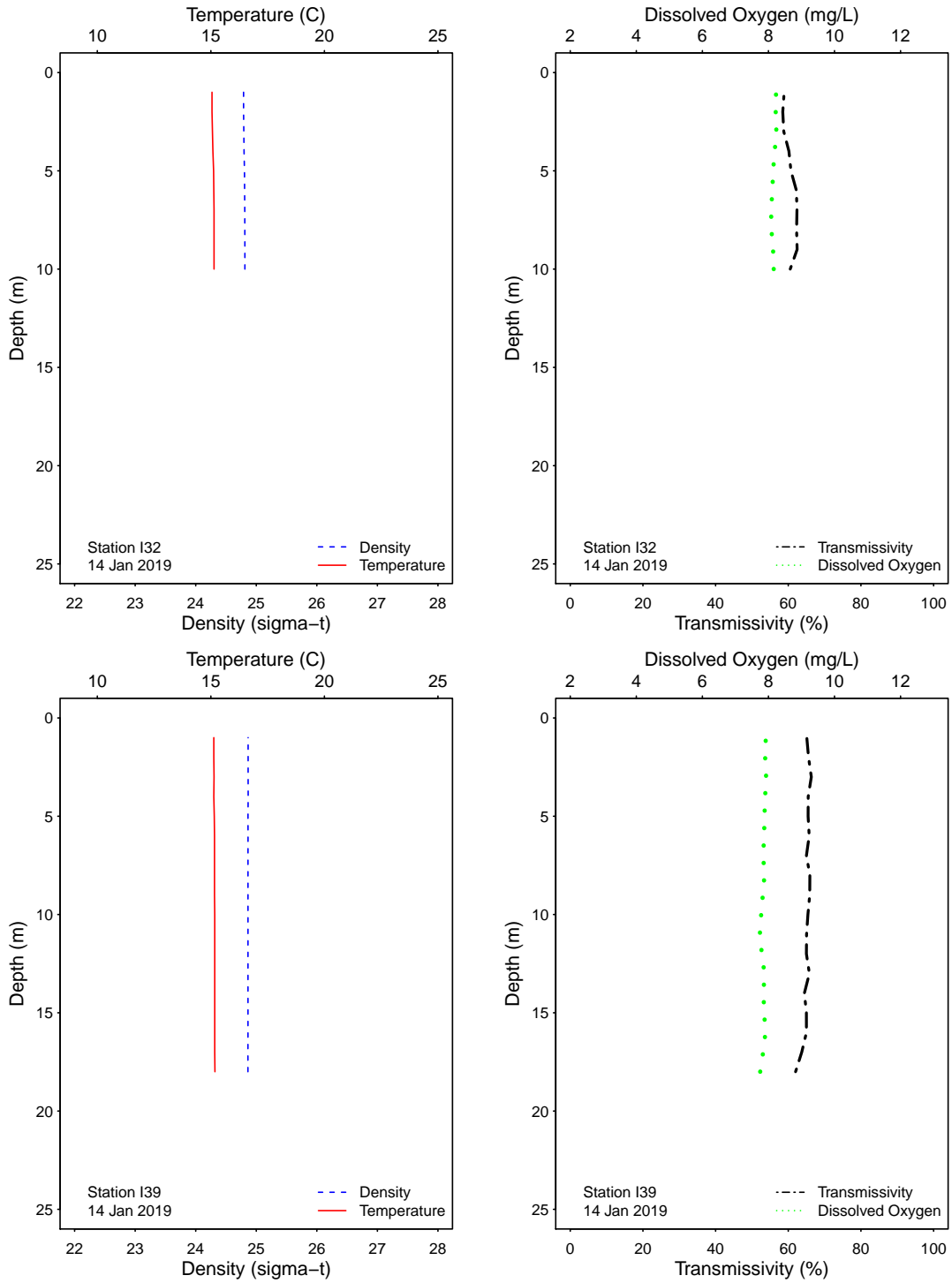


Figure 2.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

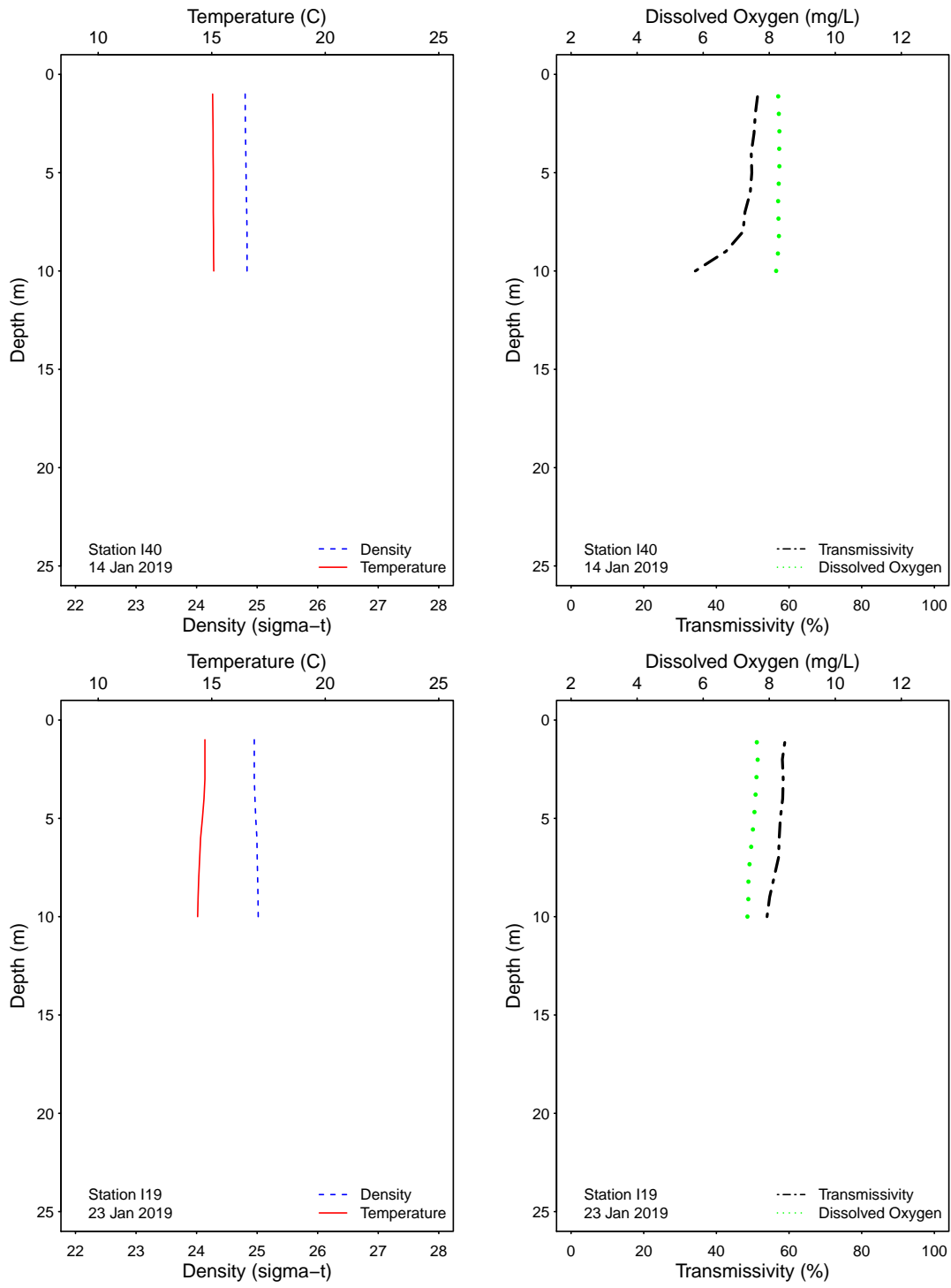


Figure 2.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

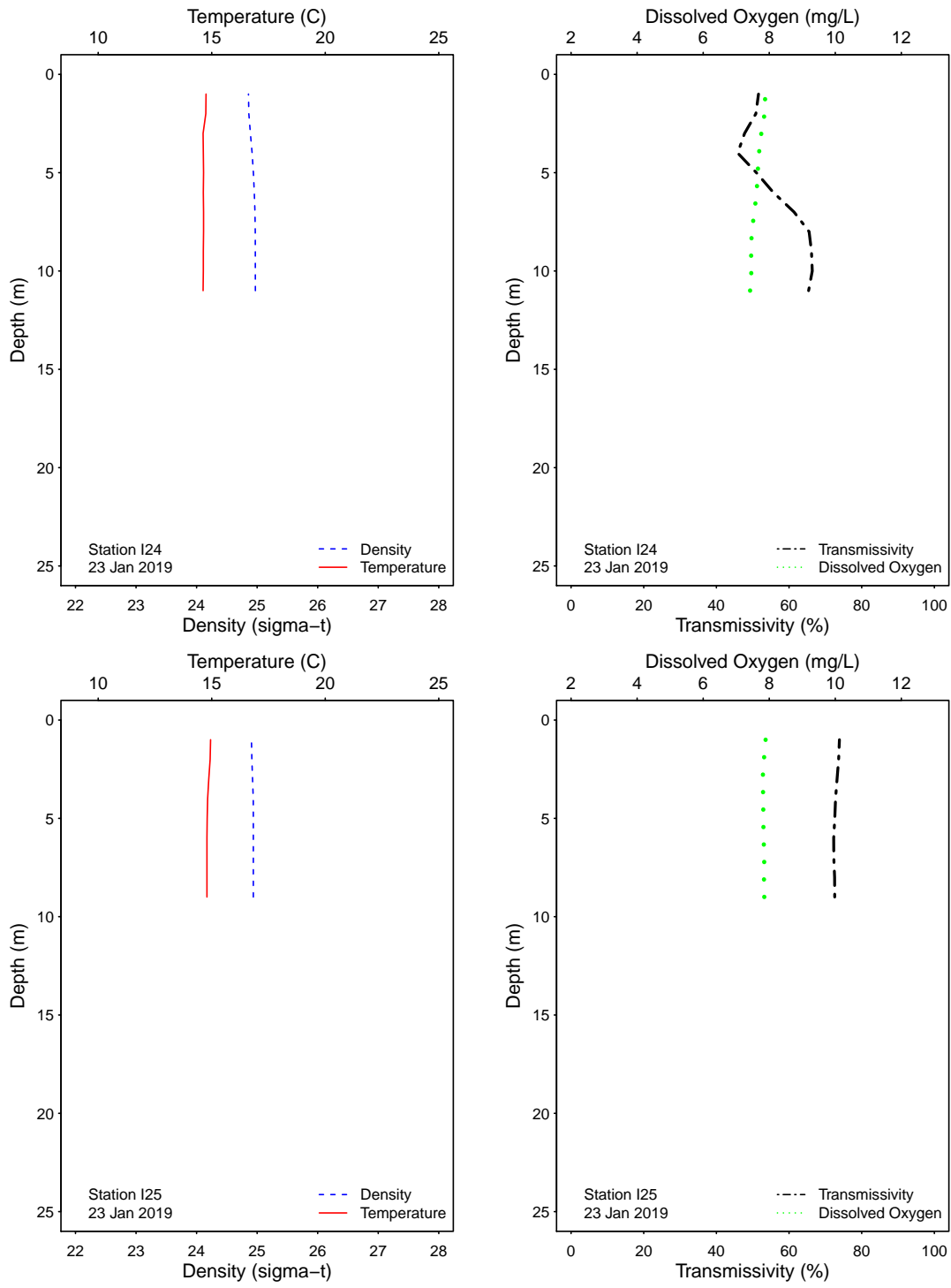


Figure 2.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

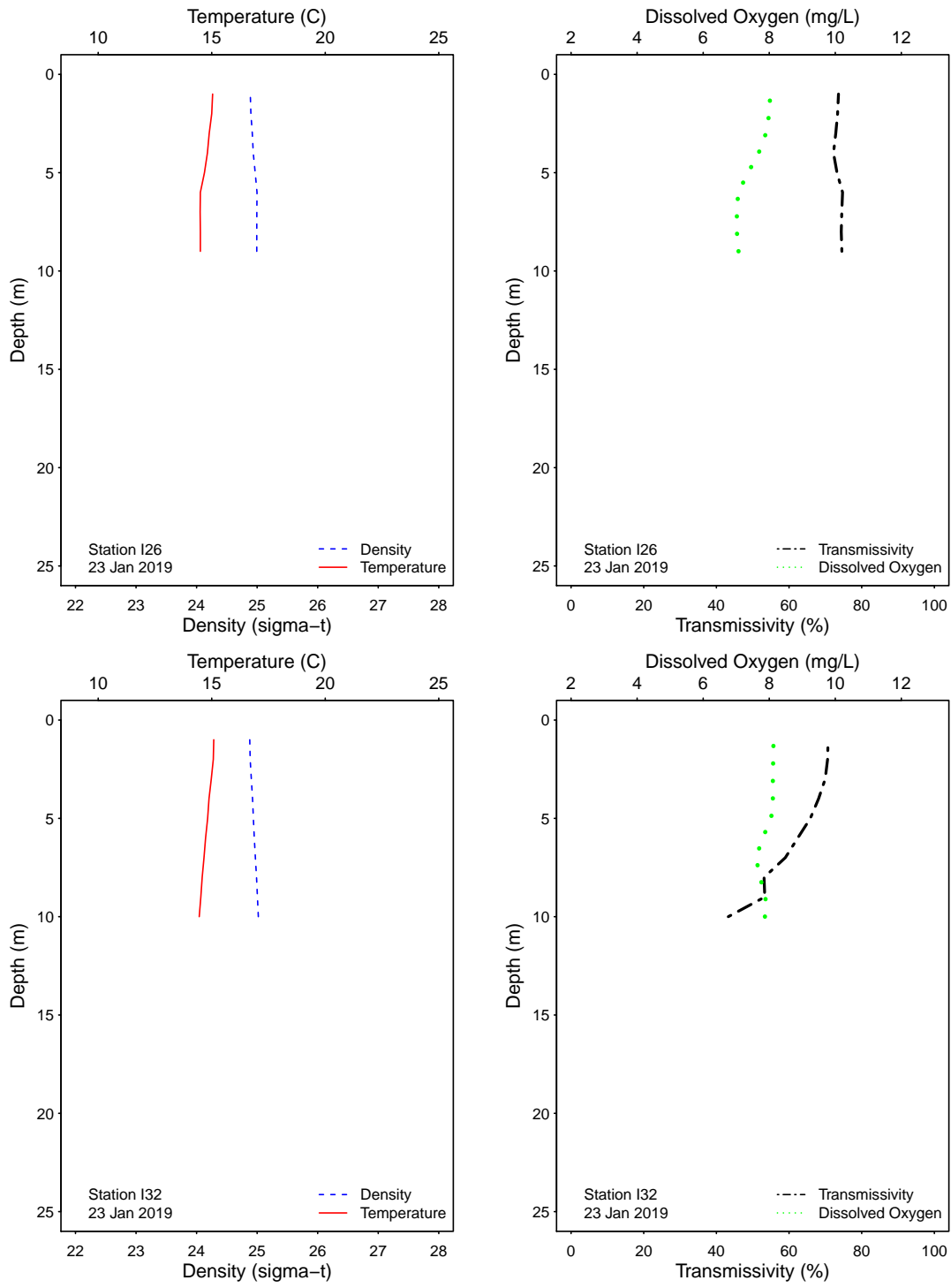


Figure 2.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

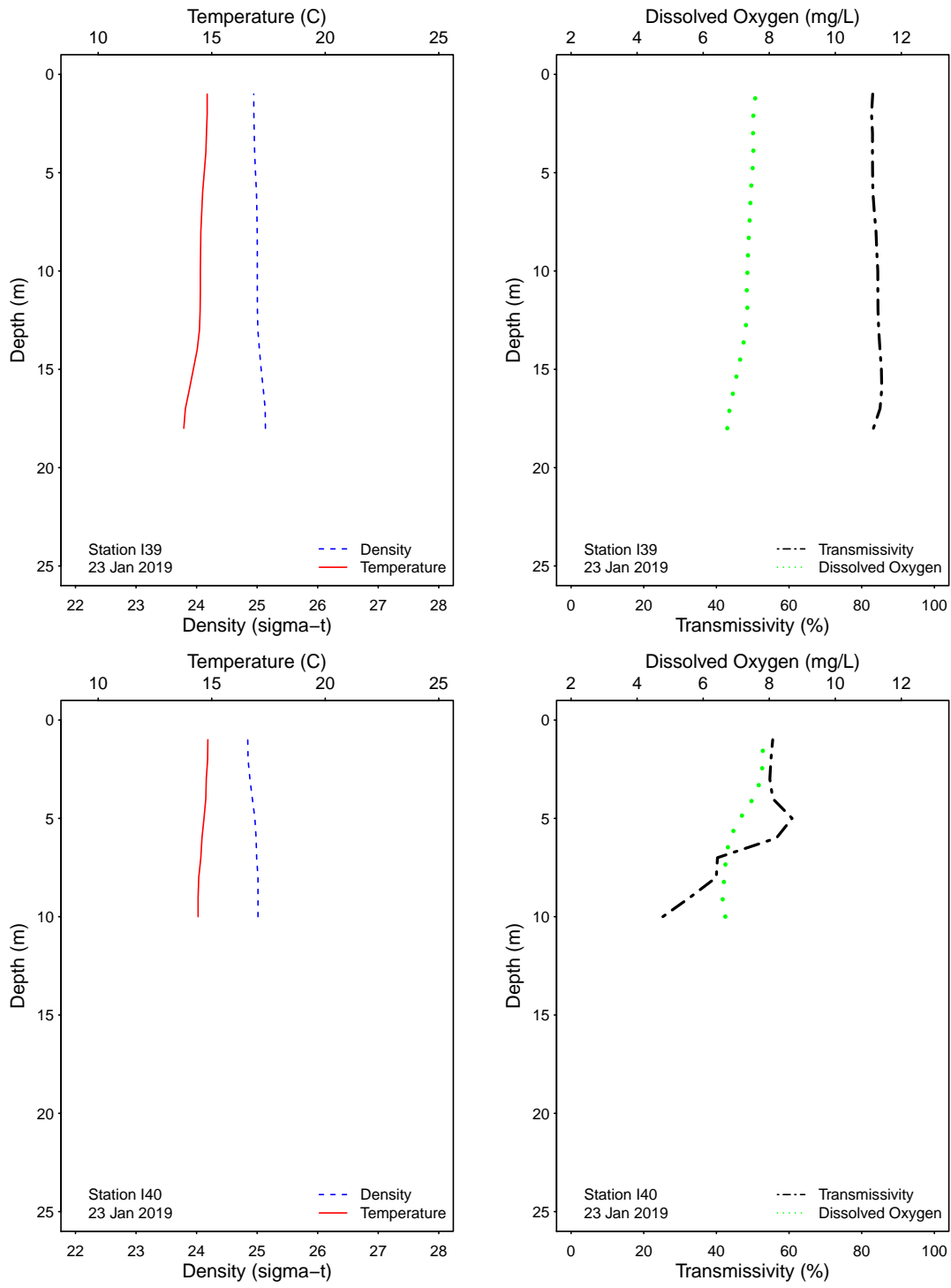


Figure 2.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

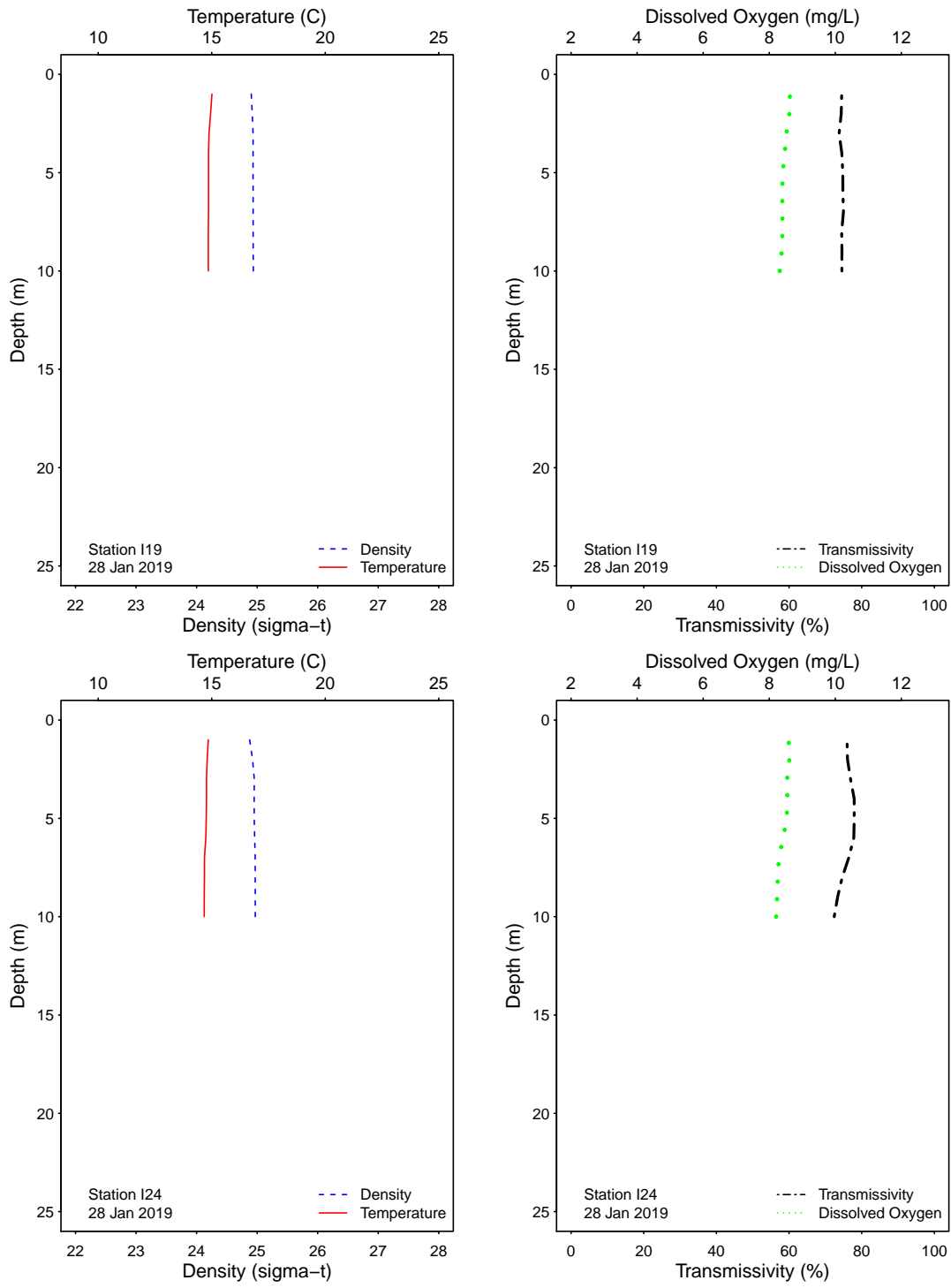


Figure 2.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

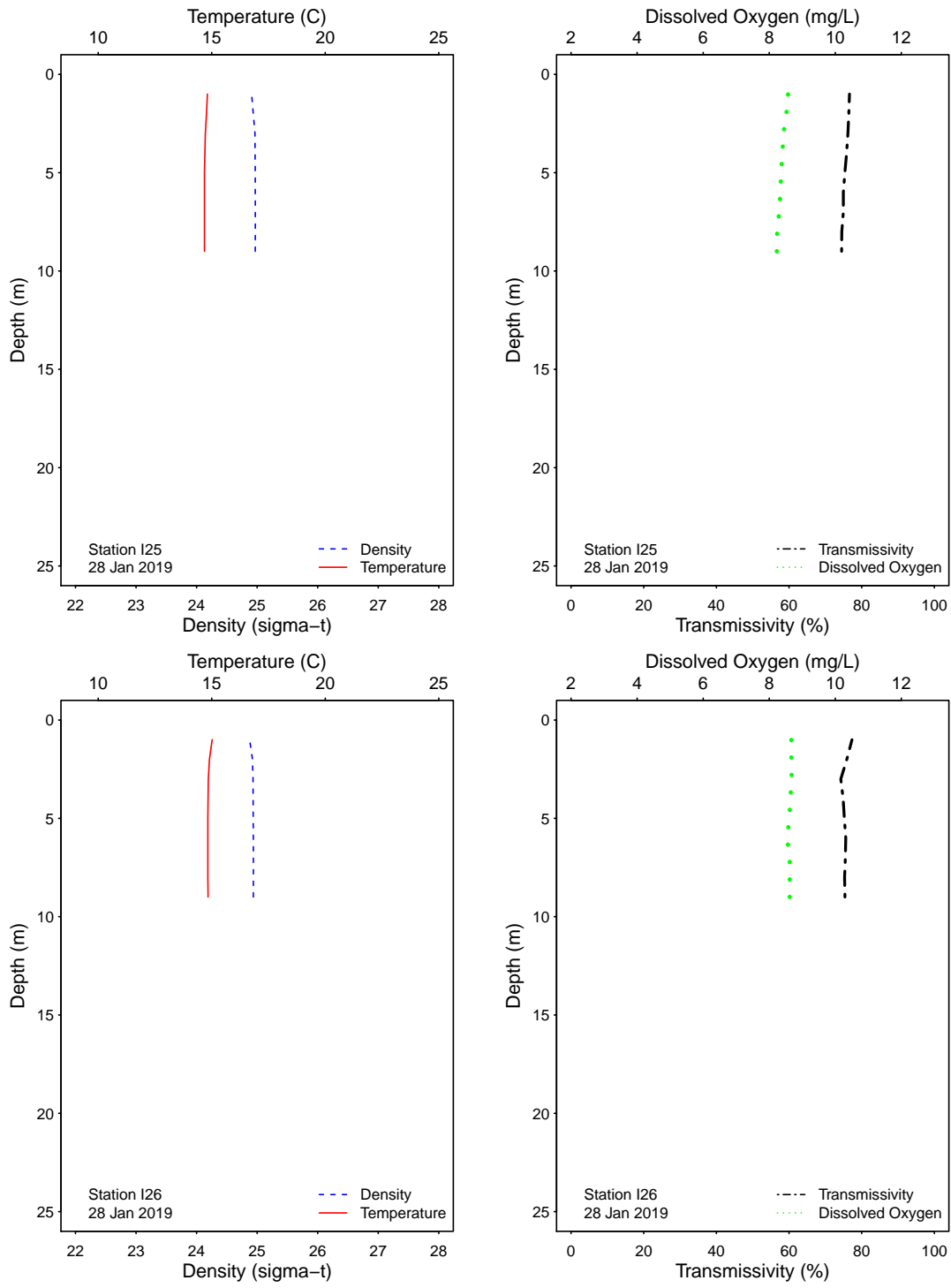


Figure 2.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

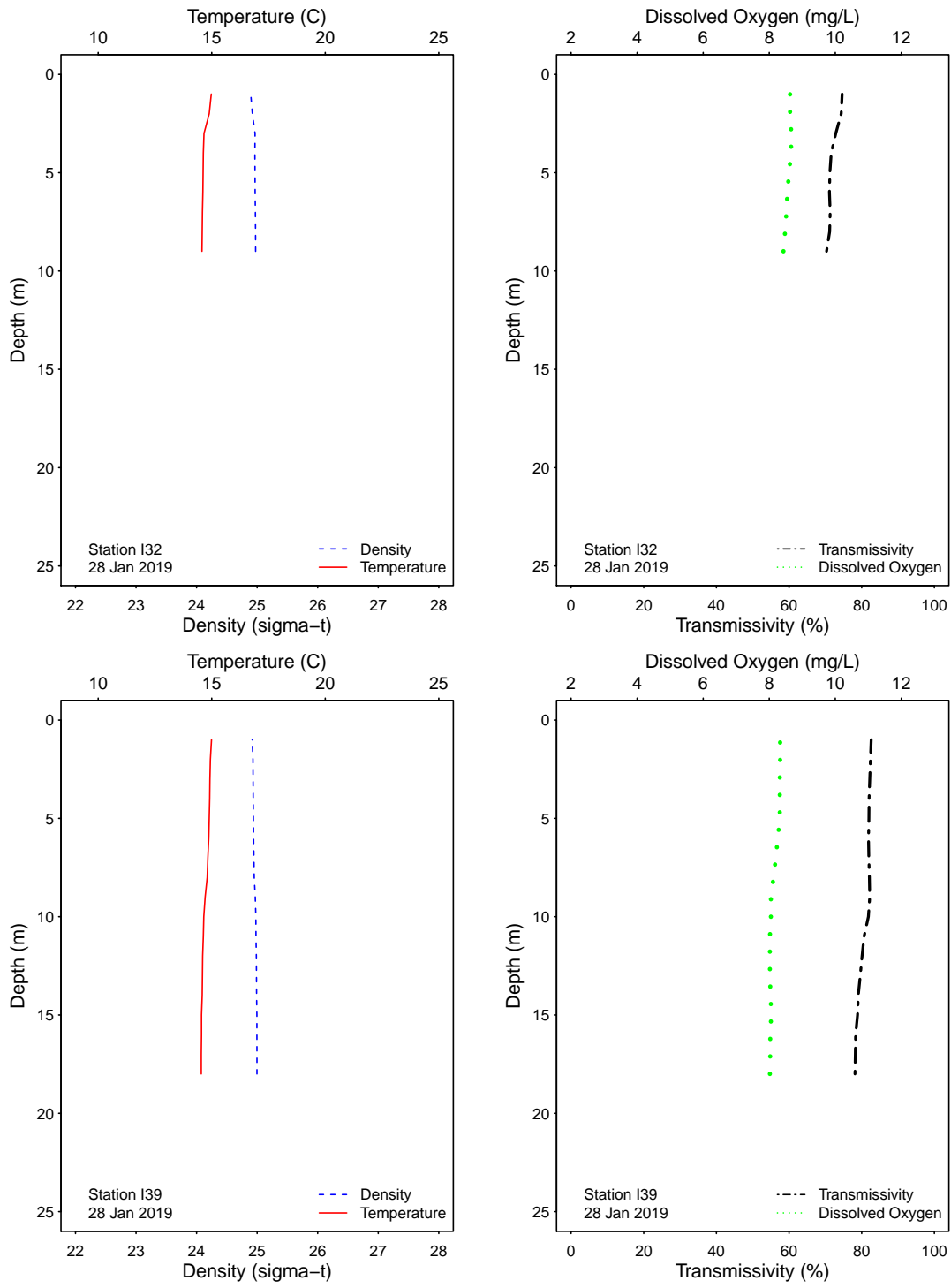


Figure 2.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

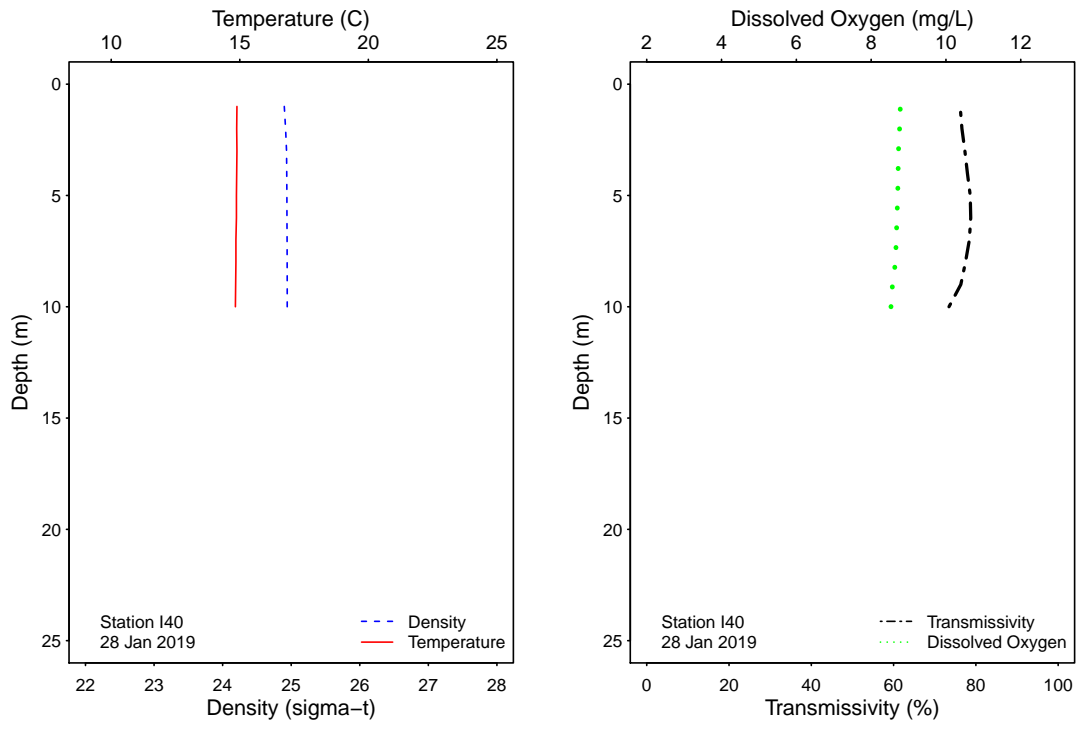


Figure 2.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

APPENDIX A

Quality Assurance

Table A.1

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

Station	Date	Depth	Analyst	Procedure	Total	Fecal	Entero
I19	02 Jan 2019	6	AE	LAB DUPLICATE	ns	6e	ns
I19	02 Jan 2019	6	JLT	LAB DUPLICATE	68	ns	2e
I19	07 Jan 2019	6	AR	LAB DUPLICATE	ns	50	ns
I19	07 Jan 2019	6	JLT	LAB DUPLICATE	500	ns	68
I19	14 Jan 2019	6	AR	LAB DUPLICATE	2400e	240e	100e
I19	23 Jan 2019	6	JT	LAB DUPLICATE	1400e	260e	58
I19	28 Jan 2019	6	JT	LAB DUPLICATE	100e	38e	10e
I40	02 Jan 2019	6	AE	LAB DUPLICATE	ns	400	ns
I40	02 Jan 2019	6	JLT	LAB DUPLICATE	3800e	ns	160e
I40	07 Jan 2019	6	AR	LAB DUPLICATE	ns	120e	ns
I40	07 Jan 2019	6	JLT	LAB DUPLICATE	2000e	ns	260e
I40	14 Jan 2019	6	AE	LAB DUPLICATE	6200	1000	120e
I40	23 Jan 2019	6	JT	LAB DUPLICATE	>16000	1600e	220e
I40	28 Jan 2019	6	JT	LAB DUPLICATE	98	28e	6e
S12	02 Jan 2019		JT	FIELD DUPLICATE	<2	<2	<2
S12	02 Jan 2019		JT	LAB DUPLICATE	<2	<2	<2
S12	08 Jan 2019		JLT	FIELD DUPLICATE	<20	2e	<2
S12	08 Jan 2019		JLT	LAB DUPLICATE	<20	<2	<2
S12	15 Jan 2019		LMA	FIELD DUPLICATE	14000	2000e	400
S12	15 Jan 2019		LMA	LAB DUPLICATE	9000	2000e	620
S12	22 Jan 2019		JT	FIELD DUPLICATE	60e	4e	48
S12	22 Jan 2019		JT	LAB DUPLICATE	<200	16e	38e
S12	29 Jan 2019		JT	FIELD DUPLICATE	30e	8e	4e
S12	29 Jan 2019		JT	LAB DUPLICATE	30e	4e	4e

ns = not sampled

ND = no data

