



SOUTH BAY OCEAN OUTFALL MONTHLY RECEIVING WATERS MONITORING REPORT

SOUTH BAY WATER RECLAMATION PLANT

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

DECEMBER 2020

Environmental Monitoring and Technical Services
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The City of
SAN DIEGO
Public Utilities Department

Environmental Monitoring & Technical Services Division

January 31, 2021

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 December 2020 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 by Order Nos. R9-2014-0094, R9-2017-0024, R9-2019-0012, 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

PV/rk

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 \geq 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 chromomorphic dissolved organic matter (CDOM). Visual observations of weather and water conditions were also recorded at all stations. Seawater samples for the analysis of indicator bacteria, suspended solids, and oil and grease concentrations were collected at 28 of the stations.

At these offshore stations, water samples for bacteriological 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, 1987²) 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 2020 Quality Assurance Report, which will be completed in March 2021.

SUMMARY OF RESULTS

As of October 2020, new 2019 Ocean Plan Water Quality Objectives are included for a six-week rolling geometric mean of *Enterococcus* density, which shall not exceed 30 cfu/100 ml, and a Statistical Threshold Value (STV) for *Enterococcus*, which shall not exceed 110 cfu/100 ml for more than 10% of samples per month (see Appendix B).

➤ Shoreline Water Quality Sampling

- Due to site access restrictions in Mexico, the South Bay shoreline sampling is typically carried out on the same day each week (i.e., Tuesday) to coordinate sampling between the Mexican and USA based stations. Seawater samples at the three shore stations located south of the USA/Mexico border (i.e., stations S0, S2 and S3) are presently collected by the Comisión Internacional de Límites y Aguas (CILA) and transported to the USIBWC for subsequent delivery to the City's Marine Microbiology Lab, while samples from the eight stations located in USA waters are sampled by City staff.
- During December, each of the shore stations north of the border were in compliance with the 2015 California Ocean Plan (Ocean Plan) water contact standards.

2 Gilbert, R.O. (1987). Statistical Methods for Environmental Pollution Monitoring. Van Nostrand Reinhold Co., New York.

- Although the Ocean Plan standards do not apply to these stations, bacteria densities exceeded one or more benchmark levels (i.e., total coliforms >10,000 CFU/100mL; fecal coliforms >400 CFU/100 mL; *Enterococcus* >104 CFU/100 mL; total >1000 CFU/100 mL & F:T ratio >0.1) in the seawater samples collected from stations S0, S2 and S3 on one or more days during December.
- Notable observations included a sewer runoff on the boardwalk at station S3 on one or more days during December.
- Historical analyses of Ocean Plan compliance rates for the South Bay outfall shore and kelp monitoring stations, combined with the results of satellite imagery data, suggest that outflows from the Tijuana River and Los Buenos Creek, as well as surface runoff during or after rain events (storms), are likely to be the cause of impacted water quality along the shore and in near shore recreational waters in the South Bay region. See the City of San Diego's most recent *Biennial Receiving Waters Monitoring and Assessment Report for the Point Loma and South Bay Ocean Outfalls* for details (<https://www.sandiego.gov/public-utilities/sustainability/ocean-monitoring/reports>).

➤ **Kelp Bed Water Quality Sampling**

- The seven kelp bed water quality stations (I19, I24, I25, I26, I32, I39, I40) were sampled on December 1, 7, 15, 21, and 27.
- During December, each of the kelp bed stations was in compliance with the 2015 California Ocean Plan (Ocean Plan) water contact standards.
- Water column temperatures ranged from 13.48 to 15.71°C. The difference between surface and bottom waters ranged from 0.08 to 1.22°C.
- Concentrations of chlorophyll *a* ranged from 0.80 to 7.14 µg/L at the kelp bed stations.
- Nothing of sewage origin was observed at any of these kelp stations.

➤ **Offshore Water Quality Sampling**

- Quarterly sampling was not conducted during December at the offshore stations. The next quarterly sampling is scheduled for February 2021.



TABLES AND FIGURES



Figure 1.1 Station Map

Shore Stations

Table 2.1

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

Date	S4	S5	S6	S8	S9	S10	S11	S12
01 Dec 2020	45	148	13	9	10	99	51	17
02 Dec 2020	45	148	13	9	10	99	51	17
03 Dec 2020	31	154	9*	6*	8*	83	49*	13*
04 Dec 2020	31	154	9*	6*	8*	83	49*	13*
05 Dec 2020	31	154	9*	6*	8*	83	49*	13*
06 Dec 2020	31	154	9*	6*	8*	83	49*	13*
07 Dec 2020	31	154	9*	6*	8*	83	49*	13*
08 Dec 2020	20	115	7	5	10	65	26	9
09 Dec 2020	20	115	7	5	10	65	26	9
10 Dec 2020	5	50	6*	6*	11*	22	11*	8*
11 Dec 2020	5	50	6*	6*	11*	22	11*	8*
12 Dec 2020	3*	19	6*	6*	11*	11*	11*	8*
13 Dec 2020	3*	19	6*	6*	11*	11*	11*	8*
14 Dec 2020	3*	19*	6*	6*	11*	11*	11*	8*
15 Dec 2020	5	19	11	13	20	13	20	14
16 Dec 2020	5	19	11	13	20	13	20	14
17 Dec 2020	6*	19*	9*	11*	20*	11*	20*	13*
18 Dec 2020	6*	19*	9*	11*	20*	11*	20*	13*
19 Dec 2020	6*	19*	9*	11*	20*	11*	20*	13*
20 Dec 2020	6*	19*	9*	11*	20*	11*	20*	13*
21 Dec 2020	6*	19*	9*	11*	20*	11*	20*	13*
22 Dec 2020	5	19	7	13	20	13	13	9
23 Dec 2020	5	19	7	13	20	13	13	9
24 Dec 2020	6*	24*	9*	20*	36*	20*	11*	13*
25 Dec 2020	6*	24*	9*	20*	36*	20*	11*	13*
26 Dec 2020	6*	24*	9*	20*	36*	20*	11*	13*
27 Dec 2020	6*	24*	9*	20*	36*	20*	11*	13*
28 Dec 2020	6*	24*	9*	20*	36*	20*	11*	13*
29 Dec 2020	14	26	14	23	36	36	14	14
30 Dec 2020	14	26	14	23	36	36	14	14
31 Dec 2020	15*	24*	13*	24*	42*	42*	13*	11*

* Geometric mean calculated using n<5

Table 2.2

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

Date	S4	S5	S6	S8	S9	S10	S11	S12
01 Dec 2020	17	28	4	4	3	28	5	3
02 Dec 2020	17	28	4	4	3	28	5	3
03 Dec 2020	14	29	3*	2*	3*	32	5*	3*
04 Dec 2020	14	29	3*	2*	3*	32	5*	3*
05 Dec 2020	14	29	3*	2*	3*	32	5*	3*
06 Dec 2020	14	29	3*	2*	3*	32	5*	3*
07 Dec 2020	14	29	3*	2*	3*	32	5*	3*
08 Dec 2020	10	22	3	2	4	20	4	3
09 Dec 2020	10	22	3	2	4	20	4	3
10 Dec 2020	3	8	3*	2*	4*	6	2*	3*
11 Dec 2020	3	8	3*	2*	4*	6	2*	3*
12 Dec 2020	2*	3	3*	2*	4*	3*	2*	3*
13 Dec 2020	2*	3	3*	2*	4*	3*	2*	3*
14 Dec 2020	2*	2*	3*	2*	4*	3*	2*	3*
15 Dec 2020	2	3	4	2	5	3	3	4
16 Dec 2020	2	3	4	2	5	3	3	4
17 Dec 2020	2*	3*	4*	2*	6*	3*	3*	3*
18 Dec 2020	2*	3*	4*	2*	6*	3*	3*	3*
19 Dec 2020	2*	3*	4*	2*	6*	3*	3*	3*
20 Dec 2020	2*	3*	4*	2*	6*	3*	3*	3*
21 Dec 2020	2*	3*	4*	2*	6*	3*	3*	3*
22 Dec 2020	2	3	4	2	5	3	3	3
23 Dec 2020	2	3	4	2	5	3	3	3
24 Dec 2020	2*	3*	4*	2*	6*	3*	3*	3*
25 Dec 2020	2*	3*	4*	2*	6*	3*	3*	3*
26 Dec 2020	2*	3*	4*	2*	6*	3*	3*	3*
27 Dec 2020	2*	3*	4*	2*	6*	3*	3*	3*
28 Dec 2020	2*	3*	4*	2*	6*	3*	3*	3*
29 Dec 2020	4	3	5	2	6	5	3	3
30 Dec 2020	4	3	5	2	6	5	3	3
31 Dec 2020	4*	3*	5*	2*	7*	4*	3*	3*

* Geometric mean calculated using n<5

Table 2.3

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

Date	S4	S5	S6	S8	S9	S10	S11	S12
01 Dec 2020	10	25	3	5	3	12	4	4
02 Dec 2020	10	25	3	5	3	12	4	4
03 Dec 2020	9	33	4*	3*	2*	11	3*	3*
04 Dec 2020	9	33	4*	3*	2*	11	3*	3*
05 Dec 2020	9	33	4*	3*	2*	11	3*	3*
06 Dec 2020	9	33	4*	3*	2*	11	3*	3*
07 Dec 2020	9	33	4*	3*	2*	11	3*	3*
08 Dec 2020	7	21	3	3	3	11	3	3
09 Dec 2020	7	21	3	3	3	11	3	3
10 Dec 2020	4	6	3*	3*	3*	5	2*	3*
11 Dec 2020	4	6	3*	3*	3*	5	2*	3*
12 Dec 2020	2*	3*	3*	3*	3*	3*	2*	3*
13 Dec 2020	2*	3*	3*	3*	3*	3*	2*	3*
14 Dec 2020	2*	3*	3*	3*	3*	3*	2*	3*
15 Dec 2020	2	6	5	6	6	3	5	5
16 Dec 2020	2	6	5	6	6	3	5	5
17 Dec 2020	2*	6*	7*	6*	6*	4*	6*	6*
18 Dec 2020	2*	6*	7*	6*	6*	4*	6*	6*
19 Dec 2020	2*	6*	7*	6*	6*	4*	6*	6*
20 Dec 2020	2*	6*	7*	6*	6*	4*	6*	6*
21 Dec 2020	2*	6*	7*	6*	6*	4*	6*	6*
22 Dec 2020	2	11	5	5	5	3	5	5
23 Dec 2020	2	11	5	5	5	3	5	5
24 Dec 2020	2*	16*	6*	6*	6*	4*	6*	6*
25 Dec 2020	2*	16*	6*	6*	6*	4*	6*	6*
26 Dec 2020	2*	16*	6*	6*	6*	4*	6*	6*
27 Dec 2020	2*	16*	6*	6*	6*	4*	6*	6*
28 Dec 2020	2*	16*	6*	6*	6*	4*	6*	6*
29 Dec 2020	4	15	7	5	8	5	7	6
30 Dec 2020	4	15	7	5	8	5	7	6
31 Dec 2020	5*	18*	8*	5*	12*	6*	10*	5*

* Geometric mean calculated using n<5

Table 2.4

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

Date	S4	S5	S6	S8	S9	S10	S11	S12
01 Dec 2020	IC	IC	IC	IC	IC	IC	IC	IC
08 Dec 2020	IC	IC	IC	IC	IC	IC	IC	IC
15 Dec 2020	IC	IC	IC	IC	IC	IC	IC	IC
22 Dec 2020	IC	IC	IC	IC	IC	IC	IC	IC
29 Dec 2020	IC	IC	IC	IC	IC	IC	IC	IC

IC = In Compliance

E = Exceedance

ns = not sampled

ND = no data

Table 2.5

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

Date	S4	S5	S6	S8	S9	S10	S11	S12
01 Dec 2020	IC	IC	IC	IC	IC	IC	IC	IC
08 Dec 2020	IC	IC	IC	IC	IC	IC	IC	IC
15 Dec 2020	IC	IC	IC	IC	IC	IC	IC	IC
22 Dec 2020	IC	IC	IC	IC	IC	IC	IC	IC
29 Dec 2020	IC	IC	IC	IC	IC	IC	IC	IC

IC = In Compliance

E = Exceedance

ns = not sampled

ND = no data

Table 2.6

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

Date	S4	S5	S6	S8	S9	S10	S11	S12
01 Dec 2020	IC	IC	IC	IC	IC	IC	IC	IC
08 Dec 2020	IC	IC	IC	IC	IC	IC	IC	IC
15 Dec 2020	IC	IC	IC	IC	IC	IC	IC	IC
22 Dec 2020	IC	IC	IC	IC	IC	IC	IC	IC
29 Dec 2020	IC	IC	IC	IC	IC	IC	IC	IC

IC = In Compliance

E = Exceedance

ns = not sampled

ND = no data

Table 2.7

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

Date	S4	S5	S6	S8	S9	S10	S11	S12
01 Dec 2020	IC	IC	IC	IC	IC	IC	IC	IC
08 Dec 2020	IC	IC	IC	IC	IC	IC	IC	IC
15 Dec 2020	IC	IC	IC	IC	IC	IC	IC	IC
22 Dec 2020	IC	IC	IC	IC	IC	IC	IC	IC
29 Dec 2020	IC	IC	IC	IC	IC	IC	IC	IC

IC = In Compliance

E = Exceedance

ns = not sampled

ND = no data

Table 2.8

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

Station	Date	Time	Total	Fecal	Enter	F:T
S0	01 Dec 2020	1108	120e	28e	34e	0.23
	08 Dec 2020	820	>16000	>12000	>12000	0.75
	15 Dec 2020	1045	>16000	9200	6200	0.57
	22 Dec 2020	1135	>16000	>12000	>12000	0.75
	29 Dec 2020	1058	>16000	3200e	3600e	0.20
S2	01 Dec 2020	1033	100e	22e	20e	0.22
	08 Dec 2020	940	760	120	72	0.16
	15 Dec 2020	1150	<20	8e	68	0.40
	22 Dec 2020	1230	100e	18e	100e	0.18
	29 Dec 2020	1005	11000	1000	680	0.09
S3	01 Dec 2020	1007	280e	32e	26e	0.11
	08 Dec 2020	910	32e	4e	<2	0.12
	15 Dec 2020	1225	120e	14e	16e	0.12
	22 Dec 2020	1250	2600e	2400e	50	0.92
	29 Dec 2020	930	1000e	140e	180e	0.14
S4	01 Dec 2020	1048	12e	2e	2e	0.17
	08 Dec 2020	952	<2	<2	2e	1.00
	15 Dec 2020	1008	<20	<2	<2	0.10
	22 Dec 2020	1002	<2	<2	<2	1.00
	29 Dec 2020	851	560	50	72	0.09
S5	01 Dec 2020	921	40e	2e	8e	0.05
	08 Dec 2020	1034	<20	4e	2e	0.20
	15 Dec 2020	1131	20e	8e	44	0.40
	22 Dec 2020	847	<20	<2	100	0.10
	29 Dec 2020	713	40e	2e	12e	0.05
S6	01 Dec 2020	943	<20	6e	4e	0.30
	08 Dec 2020	1052	2e	<2	2e	1.00
	15 Dec 2020	1146	80e	14e	66	0.17
	22 Dec 2020	909	<2	<2	<2	1.00
	29 Dec 2020	729	80e	14e	14e	0.17
S8	01 Dec 2020	834	<20	2e	6e	0.10
	08 Dec 2020	817	<2	<2	<2	1.00
	15 Dec 2020	852	<200	2e	56	0.01
	22 Dec 2020	1045	<20	4e	2e	0.20
	29 Dec 2020	1030	40e	<2	<2	0.05
S9	01 Dec 2020	811	<20	4e	<2	0.20
	08 Dec 2020	748	<20	<20	8e	1.00
	15 Dec 2020	810	<200	6e	46	0.03
	22 Dec 2020	1109	<20	<2	<2	0.10
	29 Dec 2020	1052	40e	12e	24e	0.30
S10	01 Dec 2020	1040	<20	8e	<2	0.40
	08 Dec 2020	927	<20	2e	12e	0.10
	15 Dec 2020	940	<20	2e	4e	0.10
	22 Dec 2020	947	<20	<2	<2	0.10
	29 Dec 2020	910	380e	30e	18e	0.08

Station	Date	Time	Total	Fecal	Enter	F:T
S11	01 Dec 2020	935	<20	<2	<2	0.10
	08 Dec 2020	1045	<2	2e	4e	1.00
	15 Dec 2020	1139	<200	12e	76	0.06
	22 Dec 2020	901	2e	<2	2e	1.00
	29 Dec 2020	721	40e	2e	14e	0.05
S12	01 Dec 2020	855	40e	6e	12e	0.15
	08 Dec 2020	841	<2	<2	<2	1.00
	15 Dec 2020	1048	<200	6e	24e	0.03
	22 Dec 2020	827	<2	<2	<2	1.00
	29 Dec 2020	751	<20	<2	8e	0.10

ns = not sampled

ND = no data

Table 2.9

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

Station	Date	Parameter	Value
S0	01 Dec 2020	Arrive Time	1108
S0	01 Dec 2020	Weather	Sunny
S0	01 Dec 2020	Wind Speed (kts)	1.3
S0	01 Dec 2020	Wind Dir	NW
S0	01 Dec 2020	Animal Life	15 Shorebirds; 3 Dogs
S0	01 Dec 2020	Floatables	None
S0	01 Dec 2020	Water Color	Green
S0	01 Dec 2020	Current Direction	N
S0	01 Dec 2020	Water Temp (C)	15
S0	01 Dec 2020	Wave Height Low (ft)	3
S0	01 Dec 2020	High Tide (ft)	5.9
S0	01 Dec 2020	High Tide Time	835
S0	01 Dec 2020	Low Tide (ft)	-0.4
S0	01 Dec 2020	Low Tide Time	1556
S0	01 Dec 2020	Comments	Kelp; Water turbid; 0.5 L/sec water flowing from storm drain
S0	08 Dec 2020	Arrive Time	820
S0	08 Dec 2020	Weather	Cloudy
S0	08 Dec 2020	Wind Speed (kts)	2.7
S0	08 Dec 2020	Wind Dir	NE
S0	08 Dec 2020	Animal Life	10 Shorebirds
S0	08 Dec 2020	Floatables	None
S0	08 Dec 2020	Water Color	Green
S0	08 Dec 2020	Current Direction	N
S0	08 Dec 2020	Water Temp (C)	14
S0	08 Dec 2020	Wave Height Low (ft)	4
S0	08 Dec 2020	High Tide (ft)	4.4
S0	08 Dec 2020	High Tide Time	404
S0	08 Dec 2020	Low Tide (ft)	2.2
S0	08 Dec 2020	Low Tide Time	1000
S0	08 Dec 2020	Comments	Kelp; 10 Surfers; Water clear; 0.5 L/sec water flowing from storm drain
S0	15 Dec 2020	Arrive Time	1045
S0	15 Dec 2020	Weather	Sunny
S0	15 Dec 2020	Wind Speed (kts)	0.8
S0	15 Dec 2020	Wind Dir	NW
S0	15 Dec 2020	Animal Life	None
S0	15 Dec 2020	Floatables	None
S0	15 Dec 2020	Water Color	Green
S0	15 Dec 2020	Current Direction	N
S0	15 Dec 2020	Water Temp (C)	15
S0	15 Dec 2020	Wave Height Low (ft)	4
S0	15 Dec 2020	High Tide (ft)	6.8
S0	15 Dec 2020	High Tide Time	838
S0	15 Dec 2020	Low Tide (ft)	-1.5
S0	15 Dec 2020	Low Tide Time	1559
S0	15 Dec 2020	Comments	Water clear; 0.5 L/sec water flowing from storm drain
S0	22 Dec 2020	Arrive Time	1135
S0	22 Dec 2020	Weather	Sunny
S0	22 Dec 2020	Wind Speed (kts)	2.2
S0	22 Dec 2020	Wind Dir	NW
S0	22 Dec 2020	Animal Life	15 Shorebirds; 1 Dog
S0	22 Dec 2020	Floatables	None
S0	22 Dec 2020	Water Color	Green
S0	22 Dec 2020	Current Direction	N

Station	Date	Parameter	Value
S0	22 Dec 2020	Water Temp (C)	15
S0	22 Dec 2020	Wave Height Low (ft)	3
S0	22 Dec 2020	High Tide (ft)	3.3
S0	22 Dec 2020	High Tide Time	1541
S0	22 Dec 2020	Low Tide (ft)	2.1
S0	22 Dec 2020	Low Tide Time	1037
S0	22 Dec 2020	Comments	Kelp; Water turbid; 5.0 L/sec water flowing from storm drain
S0	29 Dec 2020	Arrive Time	1058
S0	29 Dec 2020	Weather	Cloudy
S0	29 Dec 2020	Wind Speed (kts)	6
S0	29 Dec 2020	Wind Dir	E
S0	29 Dec 2020	Animal Life	5 Seagulls
S0	29 Dec 2020	Floatables	None
S0	29 Dec 2020	Water Color	Green
S0	29 Dec 2020	Current Direction	N
S0	29 Dec 2020	Water Temp (C)	14
S0	29 Dec 2020	Wave Height Low (ft)	6
S0	29 Dec 2020	High Tide (ft)	6
S0	29 Dec 2020	High Tide Time	750
S0	29 Dec 2020	Low Tide (ft)	-0.8
S0	29 Dec 2020	Low Tide Time	1510
S0	29 Dec 2020	Comments	Water clear; Rain at dawn; 3.0 L/sec water flowing from storm drain
S2	01 Dec 2020	Arrive Time	1033
S2	01 Dec 2020	Weather	Sunny
S2	01 Dec 2020	Wind Speed (kts)	0.9
S2	01 Dec 2020	Wind Dir	NW
S2	01 Dec 2020	Animal Life	15 Shorebirds
S2	01 Dec 2020	Floatables	None
S2	01 Dec 2020	Water Color	Green
S2	01 Dec 2020	Current Direction	N
S2	01 Dec 2020	Water Temp (C)	15
S2	01 Dec 2020	Wave Height Low (ft)	3
S2	01 Dec 2020	High Tide (ft)	5.9
S2	01 Dec 2020	High Tide Time	835
S2	01 Dec 2020	Low Tide (ft)	-0.4
S2	01 Dec 2020	Low Tide Time	1556
S2	01 Dec 2020	Comments	Kelp; Water turbid; No flow from storm drain
S2	08 Dec 2020	Arrive Time	940
S2	08 Dec 2020	Weather	Cloudy
S2	08 Dec 2020	Wind Speed (kts)	2.9
S2	08 Dec 2020	Wind Dir	NE
S2	08 Dec 2020	Animal Life	20 Shorebirds; 2 Dogs
S2	08 Dec 2020	Floatables	None
S2	08 Dec 2020	Water Color	Green
S2	08 Dec 2020	Current Direction	N
S2	08 Dec 2020	Water Temp (C)	14
S2	08 Dec 2020	Wave Height Low (ft)	4
S2	08 Dec 2020	High Tide (ft)	4.4
S2	08 Dec 2020	High Tide Time	404
S2	08 Dec 2020	Low Tide (ft)	2.2
S2	08 Dec 2020	Low Tide Time	1000
S2	08 Dec 2020	Comments	Kelp; 5 Persons; Water clear; No flow from storm drain
S2	15 Dec 2020	Arrive Time	1150
S2	15 Dec 2020	Weather	Sunny
S2	15 Dec 2020	Wind Speed (kts)	1.4
S2	15 Dec 2020	Wind Dir	NW
S2	15 Dec 2020	Animal Life	10 Shorebirds; 1 Dog

Station	Date	Parameter	Value
S2	15 Dec 2020	Floatables	None
S2	15 Dec 2020	Water Color	Green
S2	15 Dec 2020	Current Direction	N
S2	15 Dec 2020	Water Temp (C)	15
S2	15 Dec 2020	Wave Height Low (ft)	3
S2	15 Dec 2020	High Tide (ft)	6.8
S2	15 Dec 2020	High Tide Time	838
S2	15 Dec 2020	Low Tide (ft)	-1.5
S2	15 Dec 2020	Low Tide Time	1559
S2	15 Dec 2020	Comments	4 Persons; Water clear; No flow from storm drain; Rain without discharge
S2	22 Dec 2020	Arrive Time	1230
S2	22 Dec 2020	Weather	Sunny
S2	22 Dec 2020	Wind Speed (kts)	2
S2	22 Dec 2020	Wind Dir	NW
S2	22 Dec 2020	Animal Life	15 Shorebirds
S2	22 Dec 2020	Floatables	None
S2	22 Dec 2020	Water Color	Green
S2	22 Dec 2020	Current Direction	N
S2	22 Dec 2020	Water Temp (C)	15
S2	22 Dec 2020	Wave Height Low (ft)	3
S2	22 Dec 2020	High Tide (ft)	3.3
S2	22 Dec 2020	High Tide Time	1541
S2	22 Dec 2020	Low Tide (ft)	2.1
S2	22 Dec 2020	Low Tide Time	1037
S2	22 Dec 2020	Comments	Kelp; Water turbid; No flow from storm drain
S2	29 Dec 2020	Arrive Time	1005
S2	29 Dec 2020	Weather	Cloudy
S2	29 Dec 2020	Wind Speed (kts)	12
S2	29 Dec 2020	Wind Dir	E
S2	29 Dec 2020	Animal Life	5 Seagulls
S2	29 Dec 2020	Floatables	Plastics
S2	29 Dec 2020	Water Color	Black
S2	29 Dec 2020	Current Direction	N
S2	29 Dec 2020	Water Temp (C)	14
S2	29 Dec 2020	Wave Height Low (ft)	9
S2	29 Dec 2020	High Tide (ft)	6
S2	29 Dec 2020	High Tide Time	750
S2	29 Dec 2020	Low Tide (ft)	-0.8
S2	29 Dec 2020	Low Tide Time	1510
S2	29 Dec 2020	Comments	Kelp; Water turbid; Rain at dawn; No flow from storm drain
S3	01 Dec 2020	Arrive Time	1007
S3	01 Dec 2020	Weather	Sunny
S3	01 Dec 2020	Wind Speed (kts)	1.2
S3	01 Dec 2020	Wind Dir	NW
S3	01 Dec 2020	Animal Life	20 Shorebirds
S3	01 Dec 2020	Floatables	None
S3	01 Dec 2020	Water Color	Green
S3	01 Dec 2020	Current Direction	N
S3	01 Dec 2020	Water Temp (C)	15
S3	01 Dec 2020	Wave Height Low (ft)	3
S3	01 Dec 2020	High Tide (ft)	5.9
S3	01 Dec 2020	High Tide Time	835
S3	01 Dec 2020	Low Tide (ft)	-0.4
S3	01 Dec 2020	Low Tide Time	1556
S3	01 Dec 2020	Comments	Algae; Water turbid; No flow from storm drain
S3	08 Dec 2020	Arrive Time	910
S3	08 Dec 2020	Weather	Cloudy

Station	Date	Parameter	Value
S3	08 Dec 2020	Wind Speed (kts)	2.8
S3	08 Dec 2020	Wind Dir	NE
S3	08 Dec 2020	Animal Life	20 Shorebirds
S3	08 Dec 2020	Floatables	None
S3	08 Dec 2020	Water Color	Green
S3	08 Dec 2020	Current Direction	N
S3	08 Dec 2020	Water Temp (C)	14
S3	08 Dec 2020	Wave Height Low (ft)	4
S3	08 Dec 2020	High Tide (ft)	4.4
S3	08 Dec 2020	High Tide Time	404
S3	08 Dec 2020	Low Tide (ft)	2.2
S3	08 Dec 2020	Low Tide Time	1000
S3	08 Dec 2020	Comments	Kelp; 3 Persons; Water clear; 0.5 L/sec water flowing from storm drain
S3	15 Dec 2020	Arrive Time	1225
S3	15 Dec 2020	Weather	Sunny
S3	15 Dec 2020	Wind Speed (kts)	2.6
S3	15 Dec 2020	Wind Dir	NW
S3	15 Dec 2020	Animal Life	20 Shorebirds
S3	15 Dec 2020	Floatables	None
S3	15 Dec 2020	Water Color	Green
S3	15 Dec 2020	Current Direction	N
S3	15 Dec 2020	Water Temp (C)	15
S3	15 Dec 2020	Wave Height Low (ft)	3
S3	15 Dec 2020	High Tide (ft)	6.8
S3	15 Dec 2020	High Tide Time	838
S3	15 Dec 2020	Low Tide (ft)	-1.5
S3	15 Dec 2020	Low Tide Time	1559
S3	15 Dec 2020	Comments	Water clear; 0.5 L/sec water flowing from storm drain
S3	22 Dec 2020	Arrive Time	1250
S3	22 Dec 2020	Weather	Sunny
S3	22 Dec 2020	Wind Speed (kts)	1.9
S3	22 Dec 2020	Wind Dir	NW
S3	22 Dec 2020	Animal Life	15 Shorebirds
S3	22 Dec 2020	Floatables	None
S3	22 Dec 2020	Water Color	Green
S3	22 Dec 2020	Current Direction	N
S3	22 Dec 2020	Water Temp (C)	15
S3	22 Dec 2020	Wave Height Low (ft)	3
S3	22 Dec 2020	High Tide (ft)	3.3
S3	22 Dec 2020	High Tide Time	1541
S3	22 Dec 2020	Low Tide (ft)	2.1
S3	22 Dec 2020	Low Tide Time	1037
S3	22 Dec 2020	Comments	Kelp; Water turbid; Runoff of sewer on boardwalk; 0.5 L/sec water flowing from storm drain
S3	29 Dec 2020	Arrive Time	930
S3	29 Dec 2020	Weather	Sunny
S3	29 Dec 2020	Wind Speed (kts)	11
S3	29 Dec 2020	Wind Dir	E
S3	29 Dec 2020	Animal Life	5 Seagulls
S3	29 Dec 2020	Floatables	None
S3	29 Dec 2020	Water Color	Blue
S3	29 Dec 2020	Current Direction	N
S3	29 Dec 2020	Water Temp (C)	14
S3	29 Dec 2020	Wave Height Low (ft)	9
S3	29 Dec 2020	High Tide (ft)	6
S3	29 Dec 2020	High Tide Time	750
S3	29 Dec 2020	Low Tide (ft)	-0.8
S3	29 Dec 2020	Low Tide Time	1510

Station	Date	Parameter	Value
S3	29 Dec 2020	Comments	Water clear; Rain at dawn; No flow from storm drain
S4	01 Dec 2020	Arrive Time	1048
S4	01 Dec 2020	Weather	Sunny
S4	01 Dec 2020	Wind Speed (kts)	2.9
S4	01 Dec 2020	Wind Dir	SW
S4	01 Dec 2020	Animal Life	1 Plover
S4	01 Dec 2020	Floatables	Foam
S4	01 Dec 2020	Water Color	Green
S4	01 Dec 2020	Current Direction	S
S4	01 Dec 2020	Water Temp (C)	15.2
S4	01 Dec 2020	Wave Height Low (ft)	3
S4	01 Dec 2020	High Tide (ft)	5.9
S4	01 Dec 2020	High Tide Time	835
S4	01 Dec 2020	Low Tide (ft)	-0.4
S4	01 Dec 2020	Low Tide Time	1556
S4	01 Dec 2020	Comments	Kelp; Seagrass; Debris; Water clear; Debris 2
S4	08 Dec 2020	Arrive Time	952
S4	08 Dec 2020	Weather	Cloudy
S4	08 Dec 2020	Wind Speed (kts)	17
S4	08 Dec 2020	Wind Dir	E
S4	08 Dec 2020	Animal Life	11 Cormorants; 16 Godwits; 1 Grebe; 8 Seagulls
S4	08 Dec 2020	Floatables	None
S4	08 Dec 2020	Water Color	Blue
S4	08 Dec 2020	Current Direction	N
S4	08 Dec 2020	Water Temp (C)	18.2
S4	08 Dec 2020	Wave Height Low (ft)	5
S4	08 Dec 2020	High Tide (ft)	3.9
S4	08 Dec 2020	High Tide Time	1517
S4	08 Dec 2020	Low Tide (ft)	2.2
S4	08 Dec 2020	Low Tide Time	1000
S4	08 Dec 2020	Comments	Water turbid; Debris-1
S4	15 Dec 2020	Arrive Time	1008
S4	15 Dec 2020	Weather	Sunny
S4	15 Dec 2020	Wind Speed (kts)	1.5
S4	15 Dec 2020	Wind Dir	N
S4	15 Dec 2020	Animal Life	12 Cormorants
S4	15 Dec 2020	Floatables	None
S4	15 Dec 2020	Water Color	Green
S4	15 Dec 2020	Current Direction	S
S4	15 Dec 2020	Water Temp (C)	16
S4	15 Dec 2020	Wave Height Low (ft)	5
S4	15 Dec 2020	High Tide (ft)	6.8
S4	15 Dec 2020	High Tide Time	838
S4	15 Dec 2020	Low Tide (ft)	-1.5
S4	15 Dec 2020	Low Tide Time	1559
S4	15 Dec 2020	Comments	Seagrass; Water clear
S4	22 Dec 2020	Arrive Time	1002
S4	22 Dec 2020	Weather	Sunny
S4	22 Dec 2020	Wind Speed (kts)	4.8
S4	22 Dec 2020	Wind Dir	W
S4	22 Dec 2020	Animal Life	4 Godwits
S4	22 Dec 2020	Floatables	None
S4	22 Dec 2020	Water Color	Green
S4	22 Dec 2020	Current Direction	N
S4	22 Dec 2020	Water Temp (C)	16.1
S4	22 Dec 2020	Wave Height Low (ft)	2
S4	22 Dec 2020	High Tide (ft)	3.3

Station	Date	Parameter	Value
S4	22 Dec 2020	High Tide Time	1541
S4	22 Dec 2020	Low Tide (ft)	2.1
S4	22 Dec 2020	Low Tide Time	1037
S4	22 Dec 2020	Comments	Kelp; Seagrass; Debris; Water clear; Debris 1
S4	29 Dec 2020	Arrive Time	851
S4	29 Dec 2020	Weather	Sunny
S4	29 Dec 2020	Wind Speed (kts)	3.3
S4	29 Dec 2020	Wind Dir	SE
S4	29 Dec 2020	Animal Life	1 Shorebird
S4	29 Dec 2020	Floatables	Foam
S4	29 Dec 2020	Water Color	Green
S4	29 Dec 2020	Current Direction	S
S4	29 Dec 2020	Water Temp (C)	14.6
S4	29 Dec 2020	Wave Height Low (ft)	4
S4	29 Dec 2020	High Tide (ft)	6
S4	29 Dec 2020	High Tide Time	750
S4	29 Dec 2020	Low Tide (ft)	-0.8
S4	29 Dec 2020	Low Tide Time	1510
S4	29 Dec 2020	Comments	Kelp; Seagrass; Water turbid; Debris-1
S5	01 Dec 2020	Arrive Time	921
S5	01 Dec 2020	Weather	Sunny
S5	01 Dec 2020	Wind Speed (kts)	4.8
S5	01 Dec 2020	Wind Dir	NW
S5	01 Dec 2020	Animal Life	5 Pelicans; 7 Seagulls; 1 Tern
S5	01 Dec 2020	Floatables	Foam
S5	01 Dec 2020	Water Color	Green
S5	01 Dec 2020	Current Direction	S
S5	01 Dec 2020	Water Temp (C)	15
S5	01 Dec 2020	Wave Height Low (ft)	2
S5	01 Dec 2020	High Tide (ft)	5.9
S5	01 Dec 2020	High Tide Time	835
S5	01 Dec 2020	Low Tide (ft)	-0.4
S5	01 Dec 2020	Low Tide Time	1556
S5	01 Dec 2020	Comments	Kelp; Seagrass; Algae; Water clear
S5	08 Dec 2020	Arrive Time	1034
S5	08 Dec 2020	Weather	Cloudy
S5	08 Dec 2020	Wind Speed (kts)	13.4
S5	08 Dec 2020	Wind Dir	E
S5	08 Dec 2020	Animal Life	None
S5	08 Dec 2020	Floatables	None
S5	08 Dec 2020	Water Color	Blue
S5	08 Dec 2020	Current Direction	N
S5	08 Dec 2020	Water Temp (C)	15
S5	08 Dec 2020	Wave Height Low (ft)	5
S5	08 Dec 2020	High Tide (ft)	3.9
S5	08 Dec 2020	High Tide Time	1517
S5	08 Dec 2020	Low Tide (ft)	2.2
S5	08 Dec 2020	Low Tide Time	1000
S5	08 Dec 2020	Comments	Water clear
S5	15 Dec 2020	Arrive Time	1131
S5	15 Dec 2020	Weather	Sunny
S5	15 Dec 2020	Wind Speed (kts)	6.4
S5	15 Dec 2020	Wind Dir	N
S5	15 Dec 2020	Animal Life	1 Godwit; 2 Pelicans; 22 Seagulls
S5	15 Dec 2020	Floatables	None
S5	15 Dec 2020	Water Color	Green
S5	15 Dec 2020	Current Direction	S

Station	Date	Parameter	Value
S5	15 Dec 2020	Water Temp (C)	17
S5	15 Dec 2020	Wave Height Low (ft)	3
S5	15 Dec 2020	High Tide (ft)	6.8
S5	15 Dec 2020	High Tide Time	838
S5	15 Dec 2020	Low Tide (ft)	-1.5
S5	15 Dec 2020	Low Tide Time	1559
S5	15 Dec 2020	Comments	Water clear
S5	22 Dec 2020	Arrive Time	847
S5	22 Dec 2020	Weather	Hazy
S5	22 Dec 2020	Wind Speed (kts)	0.9
S5	22 Dec 2020	Wind Dir	SE
S5	22 Dec 2020	Animal Life	1 Godwit; 1 Seagull; 1 Tern
S5	22 Dec 2020	Floatables	Foam
S5	22 Dec 2020	Water Color	Green
S5	22 Dec 2020	Current Direction	S
S5	22 Dec 2020	Water Temp (C)	14.4
S5	22 Dec 2020	Wave Height Low (ft)	1
S5	22 Dec 2020	High Tide (ft)	4.3
S5	22 Dec 2020	High Tide Time	407
S5	22 Dec 2020	Low Tide (ft)	2.1
S5	22 Dec 2020	Low Tide Time	1037
S5	22 Dec 2020	Comments	Kelp; 1 Person; Water clear
S5	29 Dec 2020	Arrive Time	713
S5	29 Dec 2020	Weather	Partly Cloudy
S5	29 Dec 2020	Wind Speed (kts)	3.3
S5	29 Dec 2020	Wind Dir	E
S5	29 Dec 2020	Animal Life	2 Terns
S5	29 Dec 2020	Floatables	None
S5	29 Dec 2020	Water Color	Grey
S5	29 Dec 2020	Current Direction	S
S5	29 Dec 2020	Water Temp (C)	14.2
S5	29 Dec 2020	Wave Height Low (ft)	3
S5	29 Dec 2020	High Tide (ft)	6
S5	29 Dec 2020	High Tide Time	750
S5	29 Dec 2020	Low Tide (ft)	2
S5	29 Dec 2020	Low Tide Time	142
S5	29 Dec 2020	Comments	Kelp; Water turbid
S6	01 Dec 2020	Arrive Time	943
S6	01 Dec 2020	Weather	Sunny
S6	01 Dec 2020	Wind Speed (kts)	6.4
S6	01 Dec 2020	Wind Dir	W
S6	01 Dec 2020	Animal Life	1 Seagull
S6	01 Dec 2020	Floatables	Foam
S6	01 Dec 2020	Water Color	Green
S6	01 Dec 2020	Current Direction	S
S6	01 Dec 2020	Water Temp (C)	14.5
S6	01 Dec 2020	Wave Height Low (ft)	4
S6	01 Dec 2020	High Tide (ft)	5.9
S6	01 Dec 2020	High Tide Time	835
S6	01 Dec 2020	Low Tide (ft)	-0.4
S6	01 Dec 2020	Low Tide Time	1556
S6	01 Dec 2020	Comments	Kelp; Seagrass; Algae; 4 Persons; 6 Surfers; Water clear
S6	08 Dec 2020	Arrive Time	1052
S6	08 Dec 2020	Weather	Cloudy
S6	08 Dec 2020	Wind Speed (kts)	13.8
S6	08 Dec 2020	Wind Dir	E
S6	08 Dec 2020	Animal Life	2 Dogs; 7 Terns; 1 Dead seal

Station	Date	Parameter	Value
S6	08 Dec 2020	Floatables	None
S6	08 Dec 2020	Water Color	Blue
S6	08 Dec 2020	Current Direction	N
S6	08 Dec 2020	Water Temp (C)	17.8
S6	08 Dec 2020	Wave Height Low (ft)	5
S6	08 Dec 2020	High Tide (ft)	3.9
S6	08 Dec 2020	High Tide Time	1517
S6	08 Dec 2020	Low Tide (ft)	2.2
S6	08 Dec 2020	Low Tide Time	1000
S6	08 Dec 2020	Comments	10 Persons; 2 Surfers; Water clear
S6	15 Dec 2020	Arrive Time	1146
S6	15 Dec 2020	Weather	Sunny
S6	15 Dec 2020	Wind Speed (kts)	5.2
S6	15 Dec 2020	Wind Dir	N
S6	15 Dec 2020	Animal Life	1 Dog; 3 Godwits; 2 Seagulls
S6	15 Dec 2020	Floatables	None
S6	15 Dec 2020	Water Color	Green
S6	15 Dec 2020	Current Direction	S
S6	15 Dec 2020	Water Temp (C)	17.5
S6	15 Dec 2020	Wave Height Low (ft)	4
S6	15 Dec 2020	High Tide (ft)	6.8
S6	15 Dec 2020	High Tide Time	838
S6	15 Dec 2020	Low Tide (ft)	-1.5
S6	15 Dec 2020	Low Tide Time	1559
S6	15 Dec 2020	Comments	Seagrass; 4 Persons; Water clear
S6	22 Dec 2020	Arrive Time	909
S6	22 Dec 2020	Weather	Sunny
S6	22 Dec 2020	Wind Speed (kts)	2.3
S6	22 Dec 2020	Wind Dir	SW
S6	22 Dec 2020	Animal Life	1 Seagull
S6	22 Dec 2020	Floatables	Foam
S6	22 Dec 2020	Water Color	Green
S6	22 Dec 2020	Current Direction	S
S6	22 Dec 2020	Water Temp (C)	14.8
S6	22 Dec 2020	Wave Height Low (ft)	3
S6	22 Dec 2020	High Tide (ft)	4.3
S6	22 Dec 2020	High Tide Time	407
S6	22 Dec 2020	Low Tide (ft)	2.1
S6	22 Dec 2020	Low Tide Time	1037
S6	22 Dec 2020	Comments	Kelp; Seagrass; 8 Persons; 15 Surfers; Water clear
S6	29 Dec 2020	Arrive Time	729
S6	29 Dec 2020	Weather	Partly Cloudy
S6	29 Dec 2020	Wind Speed (kts)	5
S6	29 Dec 2020	Wind Dir	E
S6	29 Dec 2020	Animal Life	2 Godwits; 1 Grebe; 1 Seagull
S6	29 Dec 2020	Floatables	None
S6	29 Dec 2020	Water Color	Grey
S6	29 Dec 2020	Current Direction	S
S6	29 Dec 2020	Water Temp (C)	13.9
S6	29 Dec 2020	Wave Height Low (ft)	4
S6	29 Dec 2020	High Tide (ft)	6
S6	29 Dec 2020	High Tide Time	750
S6	29 Dec 2020	Low Tide (ft)	2
S6	29 Dec 2020	Low Tide Time	142
S6	29 Dec 2020	Comments	Kelp; 4 Persons; Water turbid; Debris-1
S8	01 Dec 2020	Arrive Time	834
S8	01 Dec 2020	Weather	Sunny

Station	Date	Parameter	Value
S8	01 Dec 2020	Wind Speed (kts)	5.6
S8	01 Dec 2020	Wind Dir	E
S8	01 Dec 2020	Animal Life	22 Grebes; 21 Seagulls
S8	01 Dec 2020	Floatables	None
S8	01 Dec 2020	Water Color	Green
S8	01 Dec 2020	Current Direction	N
S8	01 Dec 2020	Water Temp (C)	13.6
S8	01 Dec 2020	Wave Height Low (ft)	3
S8	01 Dec 2020	High Tide (ft)	5.9
S8	01 Dec 2020	High Tide Time	835
S8	01 Dec 2020	Low Tide (ft)	2.1
S8	01 Dec 2020	Low Tide Time	226
S8	01 Dec 2020	Comments	Kelp; 1 Fisherman; Water clear
S8	08 Dec 2020	Arrive Time	817
S8	08 Dec 2020	Weather	Cloudy
S8	08 Dec 2020	Wind Speed (kts)	7.3
S8	08 Dec 2020	Wind Dir	SE
S8	08 Dec 2020	Animal Life	100 Grebes; 4 Seagulls
S8	08 Dec 2020	Floatables	None
S8	08 Dec 2020	Water Color	Grey
S8	08 Dec 2020	Current Direction	S
S8	08 Dec 2020	Water Temp (C)	14.8
S8	08 Dec 2020	Wave Height Low (ft)	5
S8	08 Dec 2020	High Tide (ft)	4.4
S8	08 Dec 2020	High Tide Time	404
S8	08 Dec 2020	Low Tide (ft)	2.2
S8	08 Dec 2020	Low Tide Time	1000
S8	08 Dec 2020	Comments	Kelp; Water turbid
S8	15 Dec 2020	Arrive Time	852
S8	15 Dec 2020	Weather	Sunny
S8	15 Dec 2020	Wind Speed (kts)	2.7
S8	15 Dec 2020	Wind Dir	E
S8	15 Dec 2020	Animal Life	40 Cormorants
S8	15 Dec 2020	Floatables	None
S8	15 Dec 2020	Water Color	Green
S8	15 Dec 2020	Current Direction	N
S8	15 Dec 2020	Water Temp (C)	15
S8	15 Dec 2020	Wave Height Low (ft)	3
S8	15 Dec 2020	High Tide (ft)	6.8
S8	15 Dec 2020	High Tide Time	838
S8	15 Dec 2020	Low Tide (ft)	1.7
S8	15 Dec 2020	Low Tide Time	227
S8	15 Dec 2020	Comments	Kelp; Seagrass; Water turbid
S8	22 Dec 2020	Arrive Time	1045
S8	22 Dec 2020	Weather	Sunny
S8	22 Dec 2020	Wind Speed (kts)	5
S8	22 Dec 2020	Wind Dir	S
S8	22 Dec 2020	Animal Life	70 Grebes; 13 Seagulls
S8	22 Dec 2020	Floatables	Foam
S8	22 Dec 2020	Water Color	Green
S8	22 Dec 2020	Current Direction	N
S8	22 Dec 2020	Water Temp (C)	15.6
S8	22 Dec 2020	Wave Height Low (ft)	1
S8	22 Dec 2020	High Tide (ft)	3.3
S8	22 Dec 2020	High Tide Time	1541
S8	22 Dec 2020	Low Tide (ft)	2.1
S8	22 Dec 2020	Low Tide Time	1037
S8	22 Dec 2020	Comments	Kelp; Water clear

Station	Date	Parameter	Value
S8	29 Dec 2020	Arrive Time	1030
S8	29 Dec 2020	Weather	Sunny
S8	29 Dec 2020	Wind Speed (kts)	3.6
S8	29 Dec 2020	Wind Dir	W
S8	29 Dec 2020	Animal Life	35 Cormorants; 1 Seagull
S8	29 Dec 2020	Floatables	None
S8	29 Dec 2020	Water Color	Brown
S8	29 Dec 2020	Current Direction	S
S8	29 Dec 2020	Water Temp (C)	17.2
S8	29 Dec 2020	Wave Height Low (ft)	2
S8	29 Dec 2020	High Tide (ft)	6
S8	29 Dec 2020	High Tide Time	750
S8	29 Dec 2020	Low Tide (ft)	-0.8
S8	29 Dec 2020	Low Tide Time	1510
S8	29 Dec 2020	Comments	Kelp; Seagrass; Water turbid
S9	01 Dec 2020	Arrive Time	811
S9	01 Dec 2020	Weather	Sunny
S9	01 Dec 2020	Wind Speed (kts)	5.4
S9	01 Dec 2020	Wind Dir	E
S9	01 Dec 2020	Animal Life	1 Pelican
S9	01 Dec 2020	Floatables	Foam
S9	01 Dec 2020	Water Color	Green
S9	01 Dec 2020	Current Direction	S
S9	01 Dec 2020	Water Temp (C)	14
S9	01 Dec 2020	Wave Height Low (ft)	2
S9	01 Dec 2020	High Tide (ft)	5.9
S9	01 Dec 2020	High Tide Time	835
S9	01 Dec 2020	Low Tide (ft)	2.1
S9	01 Dec 2020	Low Tide Time	226
S9	01 Dec 2020	Comments	4 Persons; 4 Boats; 20 Swimmers; Water clear
S9	08 Dec 2020	Arrive Time	748
S9	08 Dec 2020	Weather	Cloudy
S9	08 Dec 2020	Wind Speed (kts)	1.5
S9	08 Dec 2020	Wind Dir	N
S9	08 Dec 2020	Animal Life	10 Seagulls
S9	08 Dec 2020	Floatables	None
S9	08 Dec 2020	Water Color	Grey
S9	08 Dec 2020	Current Direction	S
S9	08 Dec 2020	Water Temp (C)	14.4
S9	08 Dec 2020	Wave Height Low (ft)	5
S9	08 Dec 2020	High Tide (ft)	4.4
S9	08 Dec 2020	High Tide Time	404
S9	08 Dec 2020	Low Tide (ft)	2.2
S9	08 Dec 2020	Low Tide Time	1000
S9	08 Dec 2020	Comments	Kelp; 2 Joggers; 3 Persons; Water turbid
S9	15 Dec 2020	Arrive Time	810
S9	15 Dec 2020	Weather	Sunny
S9	15 Dec 2020	Wind Speed (kts)	0
S9	15 Dec 2020	Wind Dir	
S9	15 Dec 2020	Animal Life	None
S9	15 Dec 2020	Floatables	Foam
S9	15 Dec 2020	Water Color	Green
S9	15 Dec 2020	Current Direction	S
S9	15 Dec 2020	Water Temp (C)	15.4
S9	15 Dec 2020	Wave Height Low (ft)	5
S9	15 Dec 2020	High Tide (ft)	6.8
S9	15 Dec 2020	High Tide Time	838

Station	Date	Parameter	Value
S9	15 Dec 2020	Low Tide (ft)	1.7
S9	15 Dec 2020	Low Tide Time	227
S9	15 Dec 2020	Comments	1 Person; Water turbid
S9	22 Dec 2020	Arrive Time	1109
S9	22 Dec 2020	Weather	Sunny
S9	22 Dec 2020	Wind Speed (kts)	3.3
S9	22 Dec 2020	Wind Dir	SE
S9	22 Dec 2020	Animal Life	1 Seagull
S9	22 Dec 2020	Floatables	Foam
S9	22 Dec 2020	Water Color	Green
S9	22 Dec 2020	Current Direction	S
S9	22 Dec 2020	Water Temp (C)	16.3
S9	22 Dec 2020	Wave Height Low (ft)	1
S9	22 Dec 2020	High Tide (ft)	3.3
S9	22 Dec 2020	High Tide Time	1541
S9	22 Dec 2020	Low Tide (ft)	2.1
S9	22 Dec 2020	Low Tide Time	1037
S9	22 Dec 2020	Comments	2 Joggers; 6 Persons; Water clear
S9	29 Dec 2020	Arrive Time	1052
S9	29 Dec 2020	Weather	Partly Cloudy
S9	29 Dec 2020	Wind Speed (kts)	2.7
S9	29 Dec 2020	Wind Dir	W
S9	29 Dec 2020	Animal Life	1 Seagull
S9	29 Dec 2020	Floatables	None
S9	29 Dec 2020	Water Color	Green
S9	29 Dec 2020	Current Direction	S
S9	29 Dec 2020	Water Temp (C)	15.4
S9	29 Dec 2020	Wave Height Low (ft)	3
S9	29 Dec 2020	High Tide (ft)	6
S9	29 Dec 2020	High Tide Time	750
S9	29 Dec 2020	Low Tide (ft)	-0.8
S9	29 Dec 2020	Low Tide Time	1510
S9	29 Dec 2020	Comments	Kelp; 12 Persons; Water turbid
S10	01 Dec 2020	Arrive Time	1040
S10	01 Dec 2020	Weather	Sunny
S10	01 Dec 2020	Wind Speed (kts)	3.4
S10	01 Dec 2020	Wind Dir	SW
S10	01 Dec 2020	Animal Life	1 Dolphin; 3 Plovers
S10	01 Dec 2020	Floatables	Foam
S10	01 Dec 2020	Water Color	Green
S10	01 Dec 2020	Current Direction	S
S10	01 Dec 2020	Water Temp (C)	14.7
S10	01 Dec 2020	Wave Height Low (ft)	3
S10	01 Dec 2020	High Tide (ft)	5.9
S10	01 Dec 2020	High Tide Time	835
S10	01 Dec 2020	Low Tide (ft)	-0.4
S10	01 Dec 2020	Low Tide Time	1556
S10	01 Dec 2020	Comments	Seagrass; Water clear
S10	08 Dec 2020	Arrive Time	927
S10	08 Dec 2020	Weather	Cloudy
S10	08 Dec 2020	Wind Speed (kts)	8.9
S10	08 Dec 2020	Wind Dir	E
S10	08 Dec 2020	Animal Life	4 Dolphins; 1 Seagull
S10	08 Dec 2020	Floatables	None
S10	08 Dec 2020	Water Color	Blue
S10	08 Dec 2020	Current Direction	N
S10	08 Dec 2020	Water Temp (C)	18.8

Station	Date	Parameter	Value
S10	08 Dec 2020	Wave Height Low (ft)	6
S10	08 Dec 2020	High Tide (ft)	4.4
S10	08 Dec 2020	High Tide Time	404
S10	08 Dec 2020	Low Tide (ft)	2.2
S10	08 Dec 2020	Low Tide Time	1000
S10	08 Dec 2020	Comments	Water turbid; Debris-1
S10	15 Dec 2020	Arrive Time	940
S10	15 Dec 2020	Weather	Sunny
S10	15 Dec 2020	Wind Speed (kts)	3.6
S10	15 Dec 2020	Wind Dir	E
S10	15 Dec 2020	Animal Life	3 Godwits
S10	15 Dec 2020	Floatables	None
S10	15 Dec 2020	Water Color	Green
S10	15 Dec 2020	Current Direction	N
S10	15 Dec 2020	Water Temp (C)	16.8
S10	15 Dec 2020	Wave Height Low (ft)	5
S10	15 Dec 2020	High Tide (ft)	6.8
S10	15 Dec 2020	High Tide Time	838
S10	15 Dec 2020	Low Tide (ft)	-1.5
S10	15 Dec 2020	Low Tide Time	1559
S10	15 Dec 2020	Comments	Kelp; Seagrass; 1 Person; Water clear; Debris-1
S10	22 Dec 2020	Arrive Time	947
S10	22 Dec 2020	Weather	Sunny
S10	22 Dec 2020	Wind Speed (kts)	2.5
S10	22 Dec 2020	Wind Dir	W
S10	22 Dec 2020	Animal Life	3 Dolphins; 4 Grebes
S10	22 Dec 2020	Floatables	Foam
S10	22 Dec 2020	Water Color	Green
S10	22 Dec 2020	Current Direction	N
S10	22 Dec 2020	Water Temp (C)	15.6
S10	22 Dec 2020	Wave Height Low (ft)	1
S10	22 Dec 2020	High Tide (ft)	4.3
S10	22 Dec 2020	High Tide Time	407
S10	22 Dec 2020	Low Tide (ft)	2.1
S10	22 Dec 2020	Low Tide Time	1037
S10	22 Dec 2020	Comments	Kelp; Seagrass; Water clear
S10	29 Dec 2020	Arrive Time	910
S10	29 Dec 2020	Weather	Sunny
S10	29 Dec 2020	Wind Speed (kts)	4.2
S10	29 Dec 2020	Wind Dir	SE
S10	29 Dec 2020	Animal Life	1 Seagull; 2 Terns
S10	29 Dec 2020	Floatables	Foam
S10	29 Dec 2020	Water Color	Green
S10	29 Dec 2020	Current Direction	S
S10	29 Dec 2020	Water Temp (C)	16.2
S10	29 Dec 2020	Wave Height Low (ft)	4
S10	29 Dec 2020	High Tide (ft)	6
S10	29 Dec 2020	High Tide Time	750
S10	29 Dec 2020	Low Tide (ft)	-0.8
S10	29 Dec 2020	Low Tide Time	1510
S10	29 Dec 2020	Comments	Seagrass; Water turbid
S11	01 Dec 2020	Arrive Time	935
S11	01 Dec 2020	Weather	Sunny
S11	01 Dec 2020	Wind Speed (kts)	4.8
S11	01 Dec 2020	Wind Dir	W
S11	01 Dec 2020	Animal Life	None
S11	01 Dec 2020	Floatables	Foam

Station	Date	Parameter	Value
S11	01 Dec 2020	Water Color	Green
S11	01 Dec 2020	Current Direction	S
S11	01 Dec 2020	Water Temp (C)	14
S11	01 Dec 2020	Wave Height Low (ft)	4
S11	01 Dec 2020	High Tide (ft)	5.9
S11	01 Dec 2020	High Tide Time	835
S11	01 Dec 2020	Low Tide (ft)	-0.4
S11	01 Dec 2020	Low Tide Time	1556
S11	01 Dec 2020	Comments	Kelp; Seagrass; 2 Persons; 8 Surfers; Water clear
S11	08 Dec 2020	Arrive Time	1045
S11	08 Dec 2020	Weather	Cloudy
S11	08 Dec 2020	Wind Speed (kts)	11.4
S11	08 Dec 2020	Wind Dir	E
S11	08 Dec 2020	Animal Life	None
S11	08 Dec 2020	Floatables	None
S11	08 Dec 2020	Water Color	Blue
S11	08 Dec 2020	Current Direction	N
S11	08 Dec 2020	Water Temp (C)	15.8
S11	08 Dec 2020	Wave Height Low (ft)	5
S11	08 Dec 2020	High Tide (ft)	3.9
S11	08 Dec 2020	High Tide Time	1517
S11	08 Dec 2020	Low Tide (ft)	2.2
S11	08 Dec 2020	Low Tide Time	1000
S11	08 Dec 2020	Comments	2 Surfers; Water clear
S11	15 Dec 2020	Arrive Time	1139
S11	15 Dec 2020	Weather	Sunny
S11	15 Dec 2020	Wind Speed (kts)	5
S11	15 Dec 2020	Wind Dir	N
S11	15 Dec 2020	Animal Life	3 Godwits
S11	15 Dec 2020	Floatables	None
S11	15 Dec 2020	Water Color	Green
S11	15 Dec 2020	Current Direction	S
S11	15 Dec 2020	Water Temp (C)	16.5
S11	15 Dec 2020	Wave Height Low (ft)	4
S11	15 Dec 2020	High Tide (ft)	6.8
S11	15 Dec 2020	High Tide Time	838
S11	15 Dec 2020	Low Tide (ft)	-1.5
S11	15 Dec 2020	Low Tide Time	1559
S11	15 Dec 2020	Comments	Water clear; Debris-1
S11	22 Dec 2020	Arrive Time	901
S11	22 Dec 2020	Weather	Sunny
S11	22 Dec 2020	Wind Speed (kts)	3.3
S11	22 Dec 2020	Wind Dir	SW
S11	22 Dec 2020	Animal Life	1 Godwit
S11	22 Dec 2020	Floatables	Foam
S11	22 Dec 2020	Water Color	Green
S11	22 Dec 2020	Current Direction	N
S11	22 Dec 2020	Water Temp (C)	14.3
S11	22 Dec 2020	Wave Height Low (ft)	1
S11	22 Dec 2020	High Tide (ft)	4.3
S11	22 Dec 2020	High Tide Time	407
S11	22 Dec 2020	Low Tide (ft)	2.1
S11	22 Dec 2020	Low Tide Time	1037
S11	22 Dec 2020	Comments	1 Jogger; 1 Person; Water clear
S11	29 Dec 2020	Arrive Time	721
S11	29 Dec 2020	Weather	Partly Cloudy
S11	29 Dec 2020	Wind Speed (kts)	2.9

Station	Date	Parameter	Value
S11	29 Dec 2020	Wind Dir	E
S11	29 Dec 2020	Animal Life	13 Grebes; 1 Seagull; 1 Tern
S11	29 Dec 2020	Floatables	None
S11	29 Dec 2020	Water Color	Grey
S11	29 Dec 2020	Current Direction	S
S11	29 Dec 2020	Water Temp (C)	14.4
S11	29 Dec 2020	Wave Height Low (ft)	4
S11	29 Dec 2020	High Tide (ft)	6
S11	29 Dec 2020	High Tide Time	750
S11	29 Dec 2020	Low Tide (ft)	2
S11	29 Dec 2020	Low Tide Time	142
S11	29 Dec 2020	Comments	Kelp; 3 Persons; Water turbid
S12	01 Dec 2020	Arrive Time	855
S12	01 Dec 2020	Weather	Sunny
S12	01 Dec 2020	Wind Speed (kts)	1.5
S12	01 Dec 2020	Wind Dir	E
S12	01 Dec 2020	Animal Life	None
S12	01 Dec 2020	Floatables	Foam
S12	01 Dec 2020	Water Color	Green
S12	01 Dec 2020	Current Direction	S
S12	01 Dec 2020	Water Temp (C)	14.3
S12	01 Dec 2020	Wave Height Low (ft)	3
S12	01 Dec 2020	High Tide (ft)	5.9
S12	01 Dec 2020	High Tide Time	835
S12	01 Dec 2020	Low Tide (ft)	2.1
S12	01 Dec 2020	Low Tide Time	226
S12	01 Dec 2020	Comments	Kelp; Seagrass; 5 Persons; 1 Fisherman; Water clear
S12	08 Dec 2020	Arrive Time	841
S12	08 Dec 2020	Weather	Cloudy
S12	08 Dec 2020	Wind Speed (kts)	3.1
S12	08 Dec 2020	Wind Dir	E
S12	08 Dec 2020	Animal Life	2 Dogs; 1 Seagull
S12	08 Dec 2020	Floatables	None
S12	08 Dec 2020	Water Color	Blue
S12	08 Dec 2020	Current Direction	N
S12	08 Dec 2020	Water Temp (C)	17.4
S12	08 Dec 2020	Wave Height Low (ft)	7
S12	08 Dec 2020	High Tide (ft)	4.4
S12	08 Dec 2020	High Tide Time	404
S12	08 Dec 2020	Low Tide (ft)	2.2
S12	08 Dec 2020	Low Tide Time	1000
S12	08 Dec 2020	Comments	Kelp; 4 Persons; Water turbid
S12	15 Dec 2020	Arrive Time	1048
S12	15 Dec 2020	Weather	Sunny
S12	15 Dec 2020	Wind Speed (kts)	4
S12	15 Dec 2020	Wind Dir	N
S12	15 Dec 2020	Animal Life	2 Godwits
S12	15 Dec 2020	Floatables	None
S12	15 Dec 2020	Water Color	Green
S12	15 Dec 2020	Current Direction	S
S12	15 Dec 2020	Water Temp (C)	16.3
S12	15 Dec 2020	Wave Height Low (ft)	5
S12	15 Dec 2020	High Tide (ft)	6.8
S12	15 Dec 2020	High Tide Time	838
S12	15 Dec 2020	Low Tide (ft)	-1.5
S12	15 Dec 2020	Low Tide Time	1559
S12	15 Dec 2020	Comments	1 Person; Water clear

Station	Date	Parameter	Value
S12	22 Dec 2020	Arrive Time	827
S12	22 Dec 2020	Weather	Foggy
S12	22 Dec 2020	Wind Speed (kts)	0.1
S12	22 Dec 2020	Wind Dir	E
S12	22 Dec 2020	Animal Life	1 Dog; 1 Godwit; 4 Grebes; 2 Seagulls
S12	22 Dec 2020	Floatables	None
S12	22 Dec 2020	Water Color	Green
S12	22 Dec 2020	Current Direction	S
S12	22 Dec 2020	Water Temp (C)	14.6
S12	22 Dec 2020	Wave Height Low (ft)	2
S12	22 Dec 2020	High Tide (ft)	4.3
S12	22 Dec 2020	High Tide Time	407
S12	22 Dec 2020	Low Tide (ft)	2.1
S12	22 Dec 2020	Low Tide Time	1037
S12	22 Dec 2020	Comments	Kelp; Seagrass; 1 Jogger; 4 Persons; Water clear
S12	29 Dec 2020	Arrive Time	751
S12	29 Dec 2020	Weather	Partly Cloudy
S12	29 Dec 2020	Wind Speed (kts)	1.7
S12	29 Dec 2020	Wind Dir	E
S12	29 Dec 2020	Animal Life	3 Cormorants; 2 Godwits; 8 Grebes
S12	29 Dec 2020	Floatables	None
S12	29 Dec 2020	Water Color	Grey
S12	29 Dec 2020	Current Direction	S
S12	29 Dec 2020	Water Temp (C)	14.3
S12	29 Dec 2020	Wave Height Low (ft)	4
S12	29 Dec 2020	High Tide (ft)	6
S12	29 Dec 2020	High Tide Time	750
S12	29 Dec 2020	Low Tide (ft)	2
S12	29 Dec 2020	Low Tide Time	142
S12	29 Dec 2020	Comments	4 Persons; Water turbid

Kelp Stations

Table 3.1

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

Date	I19	I24	I25	I26	I32	I39	I40
01 Dec 2020	13	23	17	3	9	4	34
02 Dec 2020	12*	19*	21*	2*	8*	5*	49*
03 Dec 2020	12*	19*	21*	2*	8*	5*	49*
04 Dec 2020	12*	19*	21*	2*	8*	5*	49*
05 Dec 2020	12*	19*	21*	2*	8*	5*	49*
06 Dec 2020	12*	19*	21*	2*	8*	5*	49*
07 Dec 2020	8	12	13	3	6	5	26
08 Dec 2020	8	12	13	3	6	5	26
09 Dec 2020	8	12	13	3	6	5	26
10 Dec 2020	8	12	13	3	6	5	26
11 Dec 2020	4*	3*	3*	3*	5*	7*	7*
12 Dec 2020	4*	3*	3*	3*	5*	7*	7*
13 Dec 2020	4*	3*	3*	3*	5*	7*	7*
14 Dec 2020	4*	3*	3*	3*	5*	7*	7*
15 Dec 2020	5	6	3	3	4	6	11
16 Dec 2020	5	6	3	3	4	6	11
17 Dec 2020	5*	7*	4*	3*	3*	8*	10*
18 Dec 2020	5*	7*	4*	3*	3*	8*	10*
19 Dec 2020	5*	7*	4*	3*	3*	8*	10*
20 Dec 2020	5*	7*	4*	3*	3*	8*	10*
21 Dec 2020	4	5	3	3	3	6	7
22 Dec 2020	4	5	3	3	3	6	7
23 Dec 2020	4*	7*	3*	3*	2*	3*	7*
24 Dec 2020	4*	7*	3*	3*	2*	3*	7*
25 Dec 2020	4*	7*	3*	3*	2*	3*	7*
26 Dec 2020	4*	7*	3*	3*	2*	3*	7*
27 Dec 2020	4	7	5	5	3	7	7
28 Dec 2020	4	7	5	5	3	7	7
29 Dec 2020	4	7	5	5	3	7	7
30 Dec 2020	4	7	5	5	3	7	7
31 Dec 2020	5*	7*	6*	6*	3*	9*	7*

* Geometric mean calculated using n<5

Table 3.2

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

Date	I19	I24	I25	I26	I32	I39	I40
01 Dec 2020	3	6	6	2	2	2	6
02 Dec 2020	4*	7*	8*	2*	2*	2*	7*
03 Dec 2020	4*	7*	8*	2*	2*	2*	7*
04 Dec 2020	4*	7*	8*	2*	2*	2*	7*
05 Dec 2020	4*	7*	8*	2*	2*	2*	7*
06 Dec 2020	4*	7*	8*	2*	2*	2*	7*
07 Dec 2020	3	5	6	2	2	2	6
08 Dec 2020	3	5	6	2	2	2	6
09 Dec 2020	3	5	6	2	2	2	6
10 Dec 2020	3	5	6	2	2	2	6
11 Dec 2020	2*	2*	2*	2*	2*	2*	2*
12 Dec 2020	2*	2*	2*	2*	2*	2*	2*
13 Dec 2020	2*	2*	2*	2*	2*	2*	2*
14 Dec 2020	2*	2*	2*	2*	2*	2*	2*
15 Dec 2020	2	2	2	2	2	2	2
16 Dec 2020	2	2	2	2	2	2	2
17 Dec 2020	2*	2*	2*	2*	2*	2*	2*
18 Dec 2020	2*	2*	2*	2*	2*	2*	2*
19 Dec 2020	2*	2*	2*	2*	2*	2*	2*
20 Dec 2020	2*	2*	2*	2*	2*	2*	2*
21 Dec 2020	2	2	2	2	2	2	2
22 Dec 2020	2	2	2	2	2	2	2
23 Dec 2020	2*	2*	2*	2*	2*	2*	2*
24 Dec 2020	2*	2*	2*	2*	2*	2*	2*
25 Dec 2020	2*	2*	2*	2*	2*	2*	2*
26 Dec 2020	2*	2*	2*	2*	2*	2*	2*
27 Dec 2020	2	2	2	2	2	3	2
28 Dec 2020	2	2	2	2	2	3	2
29 Dec 2020	2	2	2	2	2	3	2
30 Dec 2020	2	2	2	2	2	3	2
31 Dec 2020	2*	2*	2*	2*	2*	4*	2*

* Geometric mean calculated using n<5

Table 3.3

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

Date	I19	I24	I25	I26	I32	I39	I40
01 Dec 2020	3	2	3	2	2	2	2
02 Dec 2020	2*	2*	3*	2*	2*	2*	2*
03 Dec 2020	2*	2*	3*	2*	2*	2*	2*
04 Dec 2020	2*	2*	3*	2*	2*	2*	2*
05 Dec 2020	2*	2*	3*	2*	2*	2*	2*
06 Dec 2020	2*	2*	3*	2*	2*	2*	2*
07 Dec 2020	2	2	3	2	2	2	2
08 Dec 2020	2	2	3	2	2	2	2
09 Dec 2020	2	2	3	2	2	2	2
10 Dec 2020	2	2	3	2	2	2	2
11 Dec 2020	2*	2*	2*	2*	2*	2*	2*
12 Dec 2020	2*	2*	2*	2*	2*	2*	2*
13 Dec 2020	2*	2*	2*	2*	2*	2*	2*
14 Dec 2020	2*	2*	2*	2*	2*	2*	2*
15 Dec 2020	2	2	2	2	2	2	2
16 Dec 2020	2	2	2	2	2	2	2
17 Dec 2020	2*	2*	2*	2*	2*	2*	2*
18 Dec 2020	2*	2*	2*	2*	2*	2*	2*
19 Dec 2020	2*	2*	2*	2*	2*	2*	2*
20 Dec 2020	2*	2*	2*	2*	2*	2*	2*
21 Dec 2020	2	2	2	2	2	2	2
22 Dec 2020	2	2	2	2	2	2	2
23 Dec 2020	2*	2*	2*	2*	2*	2*	2*
24 Dec 2020	2*	2*	2*	2*	2*	2*	2*
25 Dec 2020	2*	2*	2*	2*	2*	2*	2*
26 Dec 2020	2*	2*	2*	2*	2*	2*	2*
27 Dec 2020	2	2	2	2	2	3	2
28 Dec 2020	2	2	2	2	2	3	2
29 Dec 2020	2	2	2	2	2	3	2
30 Dec 2020	2	2	2	2	2	3	2
31 Dec 2020	2*	2*	2*	2*	2*	3*	2*

* 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
01 Dec 2020	IC						
07 Dec 2020	IC						
15 Dec 2020	IC						
21 Dec 2020	IC						
27 Dec 2020	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
01 Dec 2020	IC						
07 Dec 2020	IC						
15 Dec 2020	IC						
21 Dec 2020	IC						
27 Dec 2020	IC						

IC = In Compliance

E = Exceedance

ns = not sampled

ND = no data

Table 3.6

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

Date	I19	I24	I25	I26	I32	I39	I40
01 Dec 2020	IC						
07 Dec 2020	IC						
15 Dec 2020	IC						
21 Dec 2020	IC						
27 Dec 2020	IC						

IC = In Compliance

E = Exceedance

ns = not sampled

ND = no data

Table 3.7

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

Date	I19	I24	I25	I26	I32	I39	I40
01 Dec 2020	IC						
07 Dec 2020	IC						
15 Dec 2020	IC						
21 Dec 2020	IC						
27 Dec 2020	IC						

IC = In Compliance

E = Exceedance

ns = not sampled

ND = no data

Table 3.8

Summary of water quality parameters at the SBOO kelp stations for each sample date. Densities of total coliform (Total), fecal coliform (Fecal) and *Enterococcus* (Enter) 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	Enter	F:T	Temp	XMS	DO	Sal	pH
I19	01 Dec 2020	1043	2	<2	<2	<2	1.00	14.2	73.72	7.1	33.55	8.0
I19	01 Dec 2020	1043	6	2e	<2	<2	1.00	13.9	68.61	6.8	33.53	8.0
I19	01 Dec 2020	1043	11	<2	<2	<2	1.00	13.7	80.34	6.1	33.53	8.0
I19	07 Dec 2020	1055	2	<2	<2	<2	1.00	14.4	NA	8.0	33.57	8.0
I19	07 Dec 2020	1055	6	<2	<2	<2	1.00	14.3	NA	7.8	33.57	8.0
I19	07 Dec 2020	1055	11	<2	<2	<2	1.00	14.2	NA	8.0	33.58	8.0
I19	15 Dec 2020	1203	2	<2	<2	<2	1.00	15.7	76.79	8.0	33.60	8.2
I19	15 Dec 2020	1203	6	<20	<2	<2	0.10	15.6	77.34	8.1	33.59	8.2
I19	15 Dec 2020	1203	11	<20	<2	2e	0.10	15.5	63.39	7.8	33.60	8.1
I19	21 Dec 2020	1057	2	<2	<2	<2	1.00	14.2	79.62	7.8	33.59	8.0
I19	21 Dec 2020	1057	6	6e	2e	<2	0.33	14.1	74.23	7.6	33.59	8.0
I19	21 Dec 2020	1057	11	<2	2e	<2	1.00	14.0	75.08	7.6	33.59	8.0
I19	27 Dec 2020	1038	2	2e	<2	<2	1.00	14.8	83.70	8.1	33.61	8.1
I19	27 Dec 2020	1038	6	8e	<2	<2	0.25	14.7	80.57	8.0	33.61	8.1
I19	27 Dec 2020	1038	11	4e	<2	<2	0.50	14.6	67.28	7.9	33.61	8.1
I24	01 Dec 2020	1105	2	<2	<2	<2	1.00	14.3	81.97	6.8	33.55	8.0
I24	01 Dec 2020	1105	6	<20	<2	<2	0.10	14.0	80.14	6.8	33.54	8.0
I24	01 Dec 2020	1105	11	<2	<2	<2	1.00	13.8	66.40	6.2	33.53	8.0
I24	07 Dec 2020	1114	2	<2	<2	<2	1.00	14.8	NA	7.9	33.56	8.1
I24	07 Dec 2020	1114	6	<2	<2	<2	1.00	14.5	NA	8.0	33.58	8.1
I24	07 Dec 2020	1114	11	<2	<2	<2	1.00	14.1	NA	7.4	33.57	8.0
I24	15 Dec 2020	1233	2	<200	<2	<2	0.01	15.6	66.66	7.9	33.60	8.1
I24	15 Dec 2020	1233	6	<2	<2	<2	1.00	15.5	65.53	7.9	33.60	8.1
I24	15 Dec 2020	1233	11	<20	<2	<2	0.10	15.3	66.88	7.3	33.60	8.1
I24	21 Dec 2020	1117	2	2e	2e	<2	1.00	14.1	73.73	7.4	33.59	8.0
I24	21 Dec 2020	1117	6	<2	<2	<2	1.00	14.0	72.77	7.2	33.59	8.0
I24	21 Dec 2020	1117	11	<2	<2	2e	1.00	14.0	57.63	7.2	33.59	8.0
I24	27 Dec 2020	1058	2	<2	<2	<2	1.00	14.8	85.90	8.0	33.61	8.1
I24	27 Dec 2020	1058	6	8e	<2	<2	0.25	14.7	84.17	8.0	33.61	8.1
I24	27 Dec 2020	1058	11	20e	6e	<2	0.30	14.6	66.94	7.6	33.61	8.1
I25	01 Dec 2020	1112	2	<2	<2	<2	1.00	14.4	81.01	6.9	33.55	8.0
I25	01 Dec 2020	1112	6	<2	<2	<2	1.00	14.0	78.30	6.8	33.54	8.0
I25	01 Dec 2020	1112	9	<2	<2	<2	1.00	13.9	71.37	6.5	33.54	8.0
I25	07 Dec 2020	1121	2	<2	<2	<2	1.00	14.9	NA	7.9	33.56	8.1
I25	07 Dec 2020	1121	6	<2	<2	<2	1.00	14.7	NA	7.8	33.56	8.1
I25	07 Dec 2020	1121	9	<2	<2	<2	1.00	14.1	NA	7.4	33.57	8.0
I25	15 Dec 2020	1241	2	<2	<2	<2	1.00	15.6	69.53	7.9	33.61	8.1
I25	15 Dec 2020	1241	6	<20	<2	4e	0.10	15.4	68.20	7.9	33.60	8.1
I25	15 Dec 2020	1241	9	<2	2e	2e	1.00	15.4	57.30	7.9	33.60	8.1
I25	21 Dec 2020	1123	2	<2	<2	<2	1.00	14.1	76.42	7.5	33.59	8.0

Station	Date	Time	Depth	Total	Fecal	Enter	F:T	Temp	XMS	DO	Sal	pH
I25	21 Dec 2020	1123	6	<2	<2	<2	1.00	14.0	65.65	7.2	33.59	8.0
I25	21 Dec 2020	1123	9	<2	<2	<2	1.00	14.0	59.83	7.2	33.59	8.0
I25	27 Dec 2020	1104	2	<2	<2	<2	1.00	14.8	85.71	8.0	33.61	8.1
I25	27 Dec 2020	1104	6	60e	4e	<2	0.07	14.6	83.02	7.7	33.61	8.1
I25	27 Dec 2020	1104	9	38e	6e	2e	0.16	14.6	53.54	7.2	33.60	8.0
I26	01 Dec 2020	1123	2	<2	<2	<2	1.00	14.8	79.32	7.3	33.56	8.1
I26	01 Dec 2020	1123	6	<2	<2	<2	1.00	14.0	82.14	6.1	33.53	8.0
I26	01 Dec 2020	1123	9	<2	<2	<2	1.00	13.8	72.99	5.8	33.52	7.9
I26	07 Dec 2020	1131	2	<2	<2	<2	1.00	14.8	NA	7.9	33.56	8.1
I26	07 Dec 2020	1131	6	<20	<2	<2	0.10	14.5	NA	8.0	33.57	8.1
I26	07 Dec 2020	1131	9	<2	<2	<2	1.00	14.2	NA	7.9	33.58	8.0
I26	15 Dec 2020	1253	2	<2	<2	2e	1.00	15.7	64.78	8.1	33.61	8.2
I26	15 Dec 2020	1253	6	<2	<2	<2	1.00	14.9	53.73	7.3	33.59	8.1
I26	15 Dec 2020	1253	9	2e	<2	<2	1.00	14.8	24.94	7.1	33.58	8.1
I26	21 Dec 2020	1133	2	<2	<2	<2	1.00	14.3	75.24	7.2	33.60	8.0
I26	21 Dec 2020	1133	6	<2	<2	<2	1.00	13.9	71.04	7.1	33.59	8.0
I26	21 Dec 2020	1133	9	<2	<2	<2	1.00	13.9	63.30	7.0	33.59	8.0
I26	27 Dec 2020	1115	2	<2	<2	<2	1.00	14.7	83.36	8.1	33.61	8.1
I26	27 Dec 2020	1115	6	2e	<2	2e	1.00	14.5	80.77	7.9	33.61	8.1
I26	27 Dec 2020	1115	9	160e	6e	<2	0.04	14.4	78.36	7.5	33.61	8.1
I32	01 Dec 2020	1138	2	<2	<2	<2	1.00	14.3	71.08	6.7	33.56	8.0
I32	01 Dec 2020	1138	6	2e	2e	<2	1.00	14.1	64.69	6.9	33.55	8.0
I32	01 Dec 2020	1138	9	<2	<2	<2	1.00	14.0	60.69	6.4	33.53	8.0
I32	07 Dec 2020	1144	2	<2	<2	<2	1.00	14.3	NA	8.4	33.58	8.1
I32	07 Dec 2020	1144	6	<2	<2	<2	1.00	14.2	NA	8.3	33.58	8.1
I32	07 Dec 2020	1144	9	<2	<2	<2	1.00	14.2	NA	8.1	33.58	8.0
I32	15 Dec 2020	1310	2	<2	<2	<2	1.00	15.7	58.50	8.3	33.52	8.2
I32	15 Dec 2020	1310	6	<2	<2	<2	1.00	15.5	66.97	8.3	33.61	8.2
I32	15 Dec 2020	1310	9	<2	<2	<2	1.00	15.4	66.57	8.2	33.60	8.2
I32	21 Dec 2020	1145	2	<2	<2	<2	1.00	14.3	66.82	7.0	33.62	8.0
I32	21 Dec 2020	1145	6	<2	<2	<2	1.00	14.0	60.83	6.7	33.60	8.0
I32	21 Dec 2020	1145	9	2e	2e	<2	1.00	14.0	61.89	6.8	33.60	8.0
I32	27 Dec 2020	1127	2	<2	<2	<2	1.00	14.4	71.02	8.1	33.62	8.1
I32	27 Dec 2020	1127	6	<2	<2	<2	1.00	14.3	69.09	8.1	33.62	8.1
I32	27 Dec 2020	1127	9	<20	<2	<2	0.10	14.3	62.93	7.9	33.62	8.1
I39	01 Dec 2020	1017	2	<2	<2	<2	1.00	14.7	83.96	7.3	33.57	8.0
I39	01 Dec 2020	1017	12	<2	<2	<2	1.00	14.2	84.67	6.8	33.55	8.0
I39	01 Dec 2020	1017	18	<2	2e	<2	1.00	13.5	83.13	5.9	33.52	7.9
I39	07 Dec 2020	1032	2	<2	<2	<2	1.00	15.0	NA	7.8	33.56	8.1
I39	07 Dec 2020	1032	12	<2	<2	<2	1.00	14.5	NA	7.4	33.53	8.0
I39	07 Dec 2020	1032	18	<20	<2	<2	0.10	14.1	NA	7.0	33.54	8.0
I39	15 Dec 2020	1104	2	<2	<2	<2	1.00	15.5	84.98	7.9	33.59	8.2
I39	15 Dec 2020	1104	12	<2	<2	<2	1.00	15.2	85.48	7.8	33.58	8.1
I39	15 Dec 2020	1104	18	6e	<2	<2	0.33	14.6	88.93	7.2	33.58	8.1
I39	21 Dec 2020	1034	2	<2	<2	<2	1.00	14.2	85.80	7.4	33.57	8.0
I39	21 Dec 2020	1034	12	<2	<2	<2	1.00	14.1	85.34	7.3	33.57	8.0

Station	Date	Time	Depth	Total	Fecal	Enter	F:T	Temp	XMS	DO	Sal	pH
I39	21 Dec 2020	1034	18	<2	<2	<2	1.00	14.0	79.20	6.9	33.58	8.0
I39	27 Dec 2020	1016	2	<2	<2	<2	1.00	14.6	84.86	8.1	33.61	8.1
I39	27 Dec 2020	1016	12	6e	<2	2e	0.33	14.2	84.24	7.8	33.62	8.1
I39	27 Dec 2020	1016	18	340e	94	30e	0.28	14.1	77.81	7.3	33.61	8.0
I40	01 Dec 2020	1056	2	<2	<2	<2	1.00	14.1	66.78	6.6	33.54	8.0
I40	01 Dec 2020	1056	6	2e	<2	<2	1.00	13.9	59.85	6.0	33.53	8.0
I40	01 Dec 2020	1056	9	<20	<2	<2	0.10	13.8	71.00	5.9	33.53	8.0
I40	07 Dec 2020	1106	2	<2	<2	<2	1.00	14.5	NA	8.1	33.57	8.1
I40	07 Dec 2020	1106	6	<2	<2	<2	1.00	14.4	NA	8.0	33.57	8.1
I40	07 Dec 2020	1106	9	<2	<2	<2	1.00	14.2	NA	7.9	33.57	8.0
I40	15 Dec 2020	1218	2	<200	<2	<2	0.01	15.6	75.65	8.0	33.60	8.2
I40	15 Dec 2020	1218	6	<20	<2	<2	0.10	15.5	71.49	7.9	33.60	8.2
I40	15 Dec 2020	1218	9	<2	<2	<2	1.00	15.5	56.72	7.7	33.60	8.1
I40	21 Dec 2020	1109	2	<2	<2	<2	1.00	14.3	74.61	7.6	33.60	8.0
I40	21 Dec 2020	1109	6	<2	<2	<2	1.00	14.0	71.70	7.5	33.59	8.0
I40	21 Dec 2020	1109	9	<2	<2	<2	1.00	13.9	68.98	7.4	33.60	8.0
I40	27 Dec 2020	1051	2	4e	<2	<2	0.50	14.6	74.49	8.0	33.62	8.1
I40	27 Dec 2020	1051	6	<20	<2	2e	0.10	14.5	73.14	8.0	33.62	8.1
I40	27 Dec 2020	1051	9	6e	<2	<2	0.33	14.5	72.57	7.9	33.62	8.1

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	01 Dec 2020	Depth (m)	13
I19	01 Dec 2020	Arrive Time	1043
I19	01 Dec 2020	Depart Time	1046
I19	01 Dec 2020	Air Temp (C)	16
I19	01 Dec 2020	Weather	Clear
I19	01 Dec 2020	Visibility (mi)	10
I19	01 Dec 2020	Wind Speed (kts)	2
I19	01 Dec 2020	Wind Dir	S
I19	01 Dec 2020	Water Color	Bluish-Green
I19	01 Dec 2020	Wave Ht Low (ft)	4
I19	01 Dec 2020	Wave Period (sec)	13
I19	01 Dec 2020	Sea State	Wind ripples
I19	01 Dec 2020	High Tide (ft)	5.89
I19	01 Dec 2020	High Tide Time	835
I19	01 Dec 2020	Low Tide (ft)	-0.44
I19	01 Dec 2020	Low Tide Time	1556
I19	01 Dec 2020	Comments	none
I19	07 Dec 2020	Depth (m)	12
I19	07 Dec 2020	Arrive Time	1055
I19	07 Dec 2020	Depart Time	1058
I19	07 Dec 2020	Air Temp (C)	15
I19	07 Dec 2020	Weather	Continuous layer of clouds
I19	07 Dec 2020	Visibility (mi)	8
I19	07 Dec 2020	Wind Speed (kts)	3
I19	07 Dec 2020	Wind Dir	SW
I19	07 Dec 2020	Water Color	Green
I19	07 Dec 2020	Wave Ht Low (ft)	4
I19	07 Dec 2020	Wave Period (sec)	13
I19	07 Dec 2020	Sea State	Light chop
I19	07 Dec 2020	High Tide (ft)	4.15
I19	07 Dec 2020	High Tide Time	1343
I19	07 Dec 2020	Low Tide (ft)	2.83
I19	07 Dec 2020	Low Tide Time	829
I19	07 Dec 2020	Comments	none
I19	15 Dec 2020	Depth (m)	11
I19	15 Dec 2020	Arrive Time	1203
I19	15 Dec 2020	Depart Time	1205
I19	15 Dec 2020	Air Temp (C)	15
I19	15 Dec 2020	Weather	Clear
I19	15 Dec 2020	Visibility (mi)	10
I19	15 Dec 2020	Wind Speed (kts)	9
I19	15 Dec 2020	Wind Dir	NW
I19	15 Dec 2020	Water Color	Greenish-Brown
I19	15 Dec 2020	Wave Ht Low (ft)	6
I19	15 Dec 2020	Wave Period (sec)	16
I19	15 Dec 2020	Sea State	Wind ripples
I19	15 Dec 2020	High Tide (ft)	6.8
I19	15 Dec 2020	High Tide Time	838
I19	15 Dec 2020	Low Tide (ft)	-1.54
I19	15 Dec 2020	Low Tide Time	1559
I19	15 Dec 2020	Comments	none
I19	21 Dec 2020	Depth (m)	11
I19	21 Dec 2020	Arrive Time	1057

Station	Date	Parameter	Value
I19	21 Dec 2020	Depart Time	1101
I19	21 Dec 2020	Air Temp (C)	16
I19	21 Dec 2020	Weather	Haze
I19	21 Dec 2020	Visibility (mi)	15
I19	21 Dec 2020	Wind Speed (kts)	10
I19	21 Dec 2020	Wind Dir	W
I19	21 Dec 2020	Water Color	Green
I19	21 Dec 2020	Wave Ht Low (ft)	3
I19	21 Dec 2020	Wave Period (sec)	9
I19	21 Dec 2020	Sea State	Calm
I19	21 Dec 2020	High Tide (ft)	3.58
I19	21 Dec 2020	High Tide Time	1411
I19	21 Dec 2020	Low Tide (ft)	2.53
I19	21 Dec 2020	Low Tide Time	907
I19	21 Dec 2020	Comments	none
I19	27 Dec 2020	Depth (m)	10
I19	27 Dec 2020	Arrive Time	1038
I19	27 Dec 2020	Depart Time	1041
I19	27 Dec 2020	Air Temp (C)	14
I19	27 Dec 2020	Weather	Overcast
I19	27 Dec 2020	Visibility (mi)	4
I19	27 Dec 2020	Wind Speed (kts)	5
I19	27 Dec 2020	Wind Dir	SE
I19	27 Dec 2020	Water Color	Green
I19	27 Dec 2020	Wave Ht Low (ft)	5
I19	27 Dec 2020	Wave Period (sec)	13
I19	27 Dec 2020	Sea State	Calm
I19	27 Dec 2020	High Tide (ft)	5.63
I19	27 Dec 2020	High Tide Time	647
I19	27 Dec 2020	Low Tide (ft)	-0.34
I19	27 Dec 2020	Low Tide Time	1404
I19	27 Dec 2020	Comments	none
I24	01 Dec 2020	Depth (m)	11
I24	01 Dec 2020	Arrive Time	1105
I24	01 Dec 2020	Depart Time	1108
I24	01 Dec 2020	Air Temp (C)	15
I24	01 Dec 2020	Weather	Clear
I24	01 Dec 2020	Visibility (mi)	10
I24	01 Dec 2020	Wind Speed (kts)	2
I24	01 Dec 2020	Wind Dir	SW
I24	01 Dec 2020	Water Color	Bluish-Green
I24	01 Dec 2020	Wave Ht Low (ft)	4
I24	01 Dec 2020	Wave Period (sec)	13
I24	01 Dec 2020	Sea State	Wind ripples
I24	01 Dec 2020	High Tide (ft)	5.89
I24	01 Dec 2020	High Tide Time	835
I24	01 Dec 2020	Low Tide (ft)	-0.44
I24	01 Dec 2020	Low Tide Time	1556
I24	01 Dec 2020	Comments	none
I24	07 Dec 2020	Depth (m)	11
I24	07 Dec 2020	Arrive Time	1114
I24	07 Dec 2020	Depart Time	1118
I24	07 Dec 2020	Air Temp (C)	15
I24	07 Dec 2020	Weather	Continuous layer of clouds
I24	07 Dec 2020	Visibility (mi)	8
I24	07 Dec 2020	Wind Speed (kts)	4
I24	07 Dec 2020	Wind Dir	W
I24	07 Dec 2020	Water Color	Green

Station	Date	Parameter	Value
I24	07 Dec 2020	Wave Ht Low (ft)	4
I24	07 Dec 2020	Wave Period (sec)	13
I24	07 Dec 2020	Sea State	Light chop
I24	07 Dec 2020	High Tide (ft)	4.15
I24	07 Dec 2020	High Tide Time	1343
I24	07 Dec 2020	Low Tide (ft)	2.83
I24	07 Dec 2020	Low Tide Time	829
I24	07 Dec 2020	Comments	none
I24	15 Dec 2020	Depth (m)	13
I24	15 Dec 2020	Arrive Time	1233
I24	15 Dec 2020	Depart Time	1238
I24	15 Dec 2020	Air Temp (C)	15
I24	15 Dec 2020	Weather	Clear
I24	15 Dec 2020	Visibility (mi)	10
I24	15 Dec 2020	Wind Speed (kts)	9
I24	15 Dec 2020	Wind Dir	NW
I24	15 Dec 2020	Water Color	Greenish-Brown
I24	15 Dec 2020	Wave Ht Low (ft)	6
I24	15 Dec 2020	Wave Period (sec)	16
I24	15 Dec 2020	Sea State	Wind ripples
I24	15 Dec 2020	High Tide (ft)	6.8
I24	15 Dec 2020	High Tide Time	838
I24	15 Dec 2020	Low Tide (ft)	-1.54
I24	15 Dec 2020	Low Tide Time	1559
I24	15 Dec 2020	Comments	Cast made off station; Waves breaking on station; 0.26nm from station
I24	21 Dec 2020	Depth (m)	11
I24	21 Dec 2020	Arrive Time	1117
I24	21 Dec 2020	Depart Time	1120
I24	21 Dec 2020	Air Temp (C)	16
I24	21 Dec 2020	Weather	Haze
I24	21 Dec 2020	Visibility (mi)	15
I24	21 Dec 2020	Wind Speed (kts)	5
I24	21 Dec 2020	Wind Dir	SW
I24	21 Dec 2020	Water Color	Green
I24	21 Dec 2020	Wave Ht Low (ft)	3
I24	21 Dec 2020	Wave Period (sec)	9
I24	21 Dec 2020	Sea State	Calm
I24	21 Dec 2020	High Tide (ft)	3.58
I24	21 Dec 2020	High Tide Time	1411
I24	21 Dec 2020	Low Tide (ft)	2.53
I24	21 Dec 2020	Low Tide Time	907
I24	21 Dec 2020	Comments	none
I24	27 Dec 2020	Depth (m)	10
I24	27 Dec 2020	Arrive Time	1058
I24	27 Dec 2020	Depart Time	1101
I24	27 Dec 2020	Air Temp (C)	14
I24	27 Dec 2020	Weather	Overcast
I24	27 Dec 2020	Visibility (mi)	5
I24	27 Dec 2020	Wind Speed (kts)	6
I24	27 Dec 2020	Wind Dir	S
I24	27 Dec 2020	Water Color	Green
I24	27 Dec 2020	Wave Ht Low (ft)	5
I24	27 Dec 2020	Wave Period (sec)	13
I24	27 Dec 2020	Sea State	Calm
I24	27 Dec 2020	High Tide (ft)	5.63
I24	27 Dec 2020	High Tide Time	647
I24	27 Dec 2020	Low Tide (ft)	-0.34
I24	27 Dec 2020	Low Tide Time	1404

Station	Date	Parameter	Value
I24	27 Dec 2020	Comments	none
I25	01 Dec 2020	Depth (m)	10
I25	01 Dec 2020	Arrive Time	1112
I25	01 Dec 2020	Depart Time	1117
I25	01 Dec 2020	Air Temp (C)	15
I25	01 Dec 2020	Weather	Clear
I25	01 Dec 2020	Visibility (mi)	10
I25	01 Dec 2020	Wind Speed (kts)	3
I25	01 Dec 2020	Wind Dir	W
I25	01 Dec 2020	Water Color	Bluish-Green
I25	01 Dec 2020	Wave Ht Low (ft)	4
I25	01 Dec 2020	Wave Period (sec)	13
I25	01 Dec 2020	Sea State	Wind ripples
I25	01 Dec 2020	High Tide (ft)	5.89
I25	01 Dec 2020	High Tide Time	835
I25	01 Dec 2020	Low Tide (ft)	-0.44
I25	01 Dec 2020	Low Tide Time	1556
I25	01 Dec 2020	Comments	none
I25	07 Dec 2020	Depth (m)	11
I25	07 Dec 2020	Arrive Time	1121
I25	07 Dec 2020	Depart Time	1125
I25	07 Dec 2020	Air Temp (C)	14
I25	07 Dec 2020	Weather	Continuous layer of clouds
I25	07 Dec 2020	Visibility (mi)	8
I25	07 Dec 2020	Wind Speed (kts)	2
I25	07 Dec 2020	Wind Dir	N
I25	07 Dec 2020	Water Color	Green
I25	07 Dec 2020	Wave Ht Low (ft)	4
I25	07 Dec 2020	Wave Period (sec)	13
I25	07 Dec 2020	Sea State	Light chop
I25	07 Dec 2020	High Tide (ft)	4.15
I25	07 Dec 2020	High Tide Time	1343
I25	07 Dec 2020	Low Tide (ft)	2.83
I25	07 Dec 2020	Low Tide Time	829
I25	07 Dec 2020	Comments	none
I25	15 Dec 2020	Depth (m)	9
I25	15 Dec 2020	Arrive Time	1241
I25	15 Dec 2020	Depart Time	1246
I25	15 Dec 2020	Air Temp (C)	15
I25	15 Dec 2020	Weather	Clear
I25	15 Dec 2020	Visibility (mi)	10
I25	15 Dec 2020	Wind Speed (kts)	9
I25	15 Dec 2020	Wind Dir	NW
I25	15 Dec 2020	Water Color	Greenish-Brown
I25	15 Dec 2020	Wave Ht Low (ft)	6
I25	15 Dec 2020	Wave Period (sec)	16
I25	15 Dec 2020	Sea State	Wind ripples
I25	15 Dec 2020	High Tide (ft)	6.8
I25	15 Dec 2020	High Tide Time	838
I25	15 Dec 2020	Low Tide (ft)	-1.54
I25	15 Dec 2020	Low Tide Time	1559
I25	15 Dec 2020	Comments	Unable to obtain station depth
I25	21 Dec 2020	Depth (m)	10
I25	21 Dec 2020	Arrive Time	1123
I25	21 Dec 2020	Depart Time	1126
I25	21 Dec 2020	Air Temp (C)	16
I25	21 Dec 2020	Weather	Haze

Station	Date	Parameter	Value
I25	21 Dec 2020	Visibility (mi)	15
I25	21 Dec 2020	Wind Speed (kts)	2
I25	21 Dec 2020	Wind Dir	W
I25	21 Dec 2020	Water Color	Green
I25	21 Dec 2020	Wave Ht Low (ft)	3
I25	21 Dec 2020	Wave Period (sec)	9
I25	21 Dec 2020	Sea State	Calm
I25	21 Dec 2020	High Tide (ft)	3.58
I25	21 Dec 2020	High Tide Time	1411
I25	21 Dec 2020	Low Tide (ft)	2.53
I25	21 Dec 2020	Low Tide Time	907
I25	21 Dec 2020	Comments	none
I25	27 Dec 2020	Depth (m)	9
I25	27 Dec 2020	Arrive Time	1104
I25	27 Dec 2020	Depart Time	1110
I25	27 Dec 2020	Air Temp (C)	14
I25	27 Dec 2020	Weather	Overcast
I25	27 Dec 2020	Visibility (mi)	5
I25	27 Dec 2020	Wind Speed (kts)	6
I25	27 Dec 2020	Wind Dir	SE
I25	27 Dec 2020	Water Color	Green
I25	27 Dec 2020	Wave Ht Low (ft)	5
I25	27 Dec 2020	Wave Period (sec)	13
I25	27 Dec 2020	Sea State	Calm
I25	27 Dec 2020	High Tide (ft)	5.63
I25	27 Dec 2020	High Tide Time	647
I25	27 Dec 2020	Low Tide (ft)	-0.34
I25	27 Dec 2020	Low Tide Time	1404
I25	27 Dec 2020	Comments	none
I26	01 Dec 2020	Depth (m)	10
I26	01 Dec 2020	Arrive Time	1123
I26	01 Dec 2020	Depart Time	1127
I26	01 Dec 2020	Air Temp (C)	15
I26	01 Dec 2020	Weather	Clear
I26	01 Dec 2020	Visibility (mi)	10
I26	01 Dec 2020	Wind Speed (kts)	7
I26	01 Dec 2020	Wind Dir	W
I26	01 Dec 2020	Water Color	Bluish-Green
I26	01 Dec 2020	Wave Ht Low (ft)	4
I26	01 Dec 2020	Wave Period (sec)	13
I26	01 Dec 2020	Sea State	Wind ripples
I26	01 Dec 2020	High Tide (ft)	5.89
I26	01 Dec 2020	High Tide Time	835
I26	01 Dec 2020	Low Tide (ft)	-0.44
I26	01 Dec 2020	Low Tide Time	1556
I26	01 Dec 2020	Comments	none
I26	07 Dec 2020	Depth (m)	10
I26	07 Dec 2020	Arrive Time	1131
I26	07 Dec 2020	Depart Time	1134
I26	07 Dec 2020	Air Temp (C)	14
I26	07 Dec 2020	Weather	Continuous layer of clouds
I26	07 Dec 2020	Visibility (mi)	8
I26	07 Dec 2020	Wind Speed (kts)	0
I26	07 Dec 2020	Wind Dir	
I26	07 Dec 2020	Water Color	Green
I26	07 Dec 2020	Wave Ht Low (ft)	4
I26	07 Dec 2020	Wave Period (sec)	13
I26	07 Dec 2020	Sea State	Light chop

Station	Date	Parameter	Value
I26	07 Dec 2020	High Tide (ft)	4.15
I26	07 Dec 2020	High Tide Time	1343
I26	07 Dec 2020	Low Tide (ft)	2.83
I26	07 Dec 2020	Low Tide Time	829
I26	07 Dec 2020	Comments	none
I26	15 Dec 2020	Depth (m)	9
I26	15 Dec 2020	Arrive Time	1253
I26	15 Dec 2020	Depart Time	1259
I26	15 Dec 2020	Air Temp (C)	15
I26	15 Dec 2020	Weather	Clear
I26	15 Dec 2020	Visibility (mi)	10
I26	15 Dec 2020	Wind Speed (kts)	11
I26	15 Dec 2020	Wind Dir	NW
I26	15 Dec 2020	Water Color	Greenish-Brown
I26	15 Dec 2020	Wave Ht Low (ft)	6
I26	15 Dec 2020	Wave Period (sec)	16
I26	15 Dec 2020	Sea State	Wind ripples
I26	15 Dec 2020	High Tide (ft)	6.8
I26	15 Dec 2020	High Tide Time	838
I26	15 Dec 2020	Low Tide (ft)	-1.54
I26	15 Dec 2020	Low Tide Time	1559
I26	15 Dec 2020	Comments	none
I26	21 Dec 2020	Depth (m)	10
I26	21 Dec 2020	Arrive Time	1133
I26	21 Dec 2020	Depart Time	1137
I26	21 Dec 2020	Air Temp (C)	16
I26	21 Dec 2020	Weather	Haze
I26	21 Dec 2020	Visibility (mi)	15
I26	21 Dec 2020	Wind Speed (kts)	4
I26	21 Dec 2020	Wind Dir	SW
I26	21 Dec 2020	Water Color	Green
I26	21 Dec 2020	Wave Ht Low (ft)	3
I26	21 Dec 2020	Wave Period (sec)	9
I26	21 Dec 2020	Sea State	Calm
I26	21 Dec 2020	High Tide (ft)	3.58
I26	21 Dec 2020	High Tide Time	1411
I26	21 Dec 2020	Low Tide (ft)	2.53
I26	21 Dec 2020	Low Tide Time	907
I26	21 Dec 2020	Comments	none
I26	27 Dec 2020	Depth (m)	10
I26	27 Dec 2020	Arrive Time	1115
I26	27 Dec 2020	Depart Time	1120
I26	27 Dec 2020	Air Temp (C)	14
I26	27 Dec 2020	Weather	Overcast
I26	27 Dec 2020	Visibility (mi)	5
I26	27 Dec 2020	Wind Speed (kts)	6
I26	27 Dec 2020	Wind Dir	S
I26	27 Dec 2020	Water Color	Green
I26	27 Dec 2020	Wave Ht Low (ft)	5
I26	27 Dec 2020	Wave Period (sec)	13
I26	27 Dec 2020	Sea State	Calm
I26	27 Dec 2020	High Tide (ft)	5.63
I26	27 Dec 2020	High Tide Time	647
I26	27 Dec 2020	Low Tide (ft)	-0.34
I26	27 Dec 2020	Low Tide Time	1404
I26	27 Dec 2020	Comments	none
I32	01 Dec 2020	Depth (m)	11

Station	Date	Parameter	Value
I32	01 Dec 2020	Arrive Time	1138
I32	01 Dec 2020	Depart Time	1144
I32	01 Dec 2020	Air Temp (C)	15
I32	01 Dec 2020	Weather	Clear
I32	01 Dec 2020	Visibility (mi)	10
I32	01 Dec 2020	Wind Speed (kts)	9
I32	01 Dec 2020	Wind Dir	NW
I32	01 Dec 2020	Water Color	Bluish-Green
I32	01 Dec 2020	Wave Ht Low (ft)	4
I32	01 Dec 2020	Wave Period (sec)	13
I32	01 Dec 2020	Sea State	Wind ripples
I32	01 Dec 2020	High Tide (ft)	5.89
I32	01 Dec 2020	High Tide Time	835
I32	01 Dec 2020	Low Tide (ft)	-0.44
I32	01 Dec 2020	Low Tide Time	1556
I32	01 Dec 2020	Comments	none
I32	07 Dec 2020	Depth (m)	12
I32	07 Dec 2020	Arrive Time	1144
I32	07 Dec 2020	Depart Time	1149
I32	07 Dec 2020	Air Temp (C)	14
I32	07 Dec 2020	Weather	Continuous layer of clouds
I32	07 Dec 2020	Visibility (mi)	8
I32	07 Dec 2020	Wind Speed (kts)	2
I32	07 Dec 2020	Wind Dir	E
I32	07 Dec 2020	Water Color	Green
I32	07 Dec 2020	Wave Ht Low (ft)	4
I32	07 Dec 2020	Wave Period (sec)	13
I32	07 Dec 2020	Sea State	Light chop
I32	07 Dec 2020	High Tide (ft)	4.15
I32	07 Dec 2020	High Tide Time	1343
I32	07 Dec 2020	Low Tide (ft)	2.83
I32	07 Dec 2020	Low Tide Time	829
I32	07 Dec 2020	Comments	none
I32	15 Dec 2020	Depth (m)	10
I32	15 Dec 2020	Arrive Time	1310
I32	15 Dec 2020	Depart Time	1311
I32	15 Dec 2020	Air Temp (C)	15
I32	15 Dec 2020	Weather	Clear
I32	15 Dec 2020	Visibility (mi)	10
I32	15 Dec 2020	Wind Speed (kts)	10
I32	15 Dec 2020	Wind Dir	NW
I32	15 Dec 2020	Water Color	Greenish-Brown
I32	15 Dec 2020	Wave Ht Low (ft)	6
I32	15 Dec 2020	Wave Period (sec)	16
I32	15 Dec 2020	Sea State	Wind ripples
I32	15 Dec 2020	High Tide (ft)	6.8
I32	15 Dec 2020	High Tide Time	838
I32	15 Dec 2020	Low Tide (ft)	-1.54
I32	15 Dec 2020	Low Tide Time	1559
I32	15 Dec 2020	Comments	none
I32	21 Dec 2020	Depth (m)	11
I32	21 Dec 2020	Arrive Time	1145
I32	21 Dec 2020	Depart Time	1149
I32	21 Dec 2020	Air Temp (C)	16
I32	21 Dec 2020	Weather	Haze
I32	21 Dec 2020	Visibility (mi)	15
I32	21 Dec 2020	Wind Speed (kts)	3
I32	21 Dec 2020	Wind Dir	SW

Station	Date	Parameter	Value
I32	21 Dec 2020	Water Color	Green
I32	21 Dec 2020	Wave Ht Low (ft)	3
I32	21 Dec 2020	Wave Period (sec)	9
I32	21 Dec 2020	Sea State	Calm
I32	21 Dec 2020	High Tide (ft)	3.58
I32	21 Dec 2020	High Tide Time	1411
I32	21 Dec 2020	Low Tide (ft)	2.53
I32	21 Dec 2020	Low Tide Time	907
I32	21 Dec 2020	Comments	none
I32	27 Dec 2020	Depth (m)	11
I32	27 Dec 2020	Arrive Time	1127
I32	27 Dec 2020	Depart Time	1130
I32	27 Dec 2020	Air Temp (C)	14
I32	27 Dec 2020	Weather	Overcast
I32	27 Dec 2020	Visibility (mi)	5
I32	27 Dec 2020	Wind Speed (kts)	7
I32	27 Dec 2020	Wind Dir	SW
I32	27 Dec 2020	Water Color	Green
I32	27 Dec 2020	Wave Ht Low (ft)	5
I32	27 Dec 2020	Wave Period (sec)	13
I32	27 Dec 2020	Sea State	Calm
I32	27 Dec 2020	High Tide (ft)	5.63
I32	27 Dec 2020	High Tide Time	647
I32	27 Dec 2020	Low Tide (ft)	-0.34
I32	27 Dec 2020	Low Tide Time	1404
I32	27 Dec 2020	Comments	none
I39	01 Dec 2020	Depth (m)	20
I39	01 Dec 2020	Arrive Time	1017
I39	01 Dec 2020	Depart Time	1023
I39	01 Dec 2020	Air Temp (C)	15
I39	01 Dec 2020	Weather	Clear
I39	01 Dec 2020	Visibility (mi)	10
I39	01 Dec 2020	Wind Speed (kts)	4
I39	01 Dec 2020	Wind Dir	N
I39	01 Dec 2020	Water Color	Bluish-Green
I39	01 Dec 2020	Wave Ht Low (ft)	4
I39	01 Dec 2020	Wave Period (sec)	13
I39	01 Dec 2020	Sea State	Wind ripples
I39	01 Dec 2020	High Tide (ft)	5.89
I39	01 Dec 2020	High Tide Time	835
I39	01 Dec 2020	Low Tide (ft)	-0.44
I39	01 Dec 2020	Low Tide Time	1556
I39	01 Dec 2020	Comments	none
I39	07 Dec 2020	Depth (m)	20
I39	07 Dec 2020	Arrive Time	1032
I39	07 Dec 2020	Depart Time	1037
I39	07 Dec 2020	Air Temp (C)	14
I39	07 Dec 2020	Weather	Continuous layer of clouds
I39	07 Dec 2020	Visibility (mi)	8
I39	07 Dec 2020	Wind Speed (kts)	2
I39	07 Dec 2020	Wind Dir	S
I39	07 Dec 2020	Water Color	Green
I39	07 Dec 2020	Wave Ht Low (ft)	4
I39	07 Dec 2020	Wave Period (sec)	13
I39	07 Dec 2020	Sea State	Light chop
I39	07 Dec 2020	High Tide (ft)	4.15
I39	07 Dec 2020	High Tide Time	1343
I39	07 Dec 2020	Low Tide (ft)	2.83

Station	Date	Parameter	Value
I39	07 Dec 2020	Low Tide Time	829
I39	07 Dec 2020	Comments	none
I39	15 Dec 2020	Depth (m)	21
I39	15 Dec 2020	Arrive Time	1104
I39	15 Dec 2020	Depart Time	1111
I39	15 Dec 2020	Air Temp (C)	15
I39	15 Dec 2020	Weather	Clear
I39	15 Dec 2020	Visibility (mi)	10
I39	15 Dec 2020	Wind Speed (kts)	4
I39	15 Dec 2020	Wind Dir	N
I39	15 Dec 2020	Water Color	Greenish-Brown
I39	15 Dec 2020	Wave Ht Low (ft)	6
I39	15 Dec 2020	Wave Period (sec)	16
I39	15 Dec 2020	Sea State	Wind ripples
I39	15 Dec 2020	High Tide (ft)	6.8
I39	15 Dec 2020	High Tide Time	838
I39	15 Dec 2020	Low Tide (ft)	-1.54
I39	15 Dec 2020	Low Tide Time	1559
I39	15 Dec 2020	Comments	Lobster floats
I39	21 Dec 2020	Depth (m)	20
I39	21 Dec 2020	Arrive Time	1034
I39	21 Dec 2020	Depart Time	1038
I39	21 Dec 2020	Air Temp (C)	16
I39	21 Dec 2020	Weather	Haze
I39	21 Dec 2020	Visibility (mi)	15
I39	21 Dec 2020	Wind Speed (kts)	2
I39	21 Dec 2020	Wind Dir	W
I39	21 Dec 2020	Water Color	Green
I39	21 Dec 2020	Wave Ht Low (ft)	3
I39	21 Dec 2020	Wave Period (sec)	9
I39	21 Dec 2020	Sea State	Calm
I39	21 Dec 2020	High Tide (ft)	3.58
I39	21 Dec 2020	High Tide Time	1411
I39	21 Dec 2020	Low Tide (ft)	2.53
I39	21 Dec 2020	Low Tide Time	907
I39	21 Dec 2020	Comments	none
I39	27 Dec 2020	Depth (m)	20
I39	27 Dec 2020	Arrive Time	1016
I39	27 Dec 2020	Depart Time	1019
I39	27 Dec 2020	Air Temp (C)	14
I39	27 Dec 2020	Weather	Overcast
I39	27 Dec 2020	Visibility (mi)	4
I39	27 Dec 2020	Wind Speed (kts)	4
I39	27 Dec 2020	Wind Dir	S
I39	27 Dec 2020	Water Color	Green
I39	27 Dec 2020	Wave Ht Low (ft)	5
I39	27 Dec 2020	Wave Period (sec)	13
I39	27 Dec 2020	Sea State	Calm
I39	27 Dec 2020	High Tide (ft)	5.63
I39	27 Dec 2020	High Tide Time	647
I39	27 Dec 2020	Low Tide (ft)	-0.34
I39	27 Dec 2020	Low Tide Time	1404
I39	27 Dec 2020	Comments	none
I40	01 Dec 2020	Depth (m)	11
I40	01 Dec 2020	Arrive Time	1056
I40	01 Dec 2020	Depart Time	1059
I40	01 Dec 2020	Air Temp (C)	15

Station	Date	Parameter	Value
I40	01 Dec 2020	Weather	Clear
I40	01 Dec 2020	Visibility (mi)	10
I40	01 Dec 2020	Wind Speed (kts)	4
I40	01 Dec 2020	Wind Dir	SW
I40	01 Dec 2020	Water Color	Bluish-Green
I40	01 Dec 2020	Wave Ht Low (ft)	4
I40	01 Dec 2020	Wave Period (sec)	13
I40	01 Dec 2020	Sea State	Wind ripples
I40	01 Dec 2020	High Tide (ft)	5.89
I40	01 Dec 2020	High Tide Time	835
I40	01 Dec 2020	Low Tide (ft)	-0.44
I40	01 Dec 2020	Low Tide Time	1556
I40	01 Dec 2020	Comments	none
I40	07 Dec 2020	Depth (m)	12
I40	07 Dec 2020	Arrive Time	1106
I40	07 Dec 2020	Depart Time	1109
I40	07 Dec 2020	Air Temp (C)	15
I40	07 Dec 2020	Weather	Continuous layer of clouds
I40	07 Dec 2020	Visibility (mi)	8
I40	07 Dec 2020	Wind Speed (kts)	3
I40	07 Dec 2020	Wind Dir	S
I40	07 Dec 2020	Water Color	Green
I40	07 Dec 2020	Wave Ht Low (ft)	4
I40	07 Dec 2020	Wave Period (sec)	13
I40	07 Dec 2020	Sea State	Light chop
I40	07 Dec 2020	High Tide (ft)	4.15
I40	07 Dec 2020	High Tide Time	1343
I40	07 Dec 2020	Low Tide (ft)	2.83
I40	07 Dec 2020	Low Tide Time	829
I40	07 Dec 2020	Comments	none
I40	15 Dec 2020	Depth (m)	10
I40	15 Dec 2020	Arrive Time	1218
I40	15 Dec 2020	Depart Time	1224
I40	15 Dec 2020	Air Temp (C)	15
I40	15 Dec 2020	Weather	Clear
I40	15 Dec 2020	Visibility (mi)	10
I40	15 Dec 2020	Wind Speed (kts)	10
I40	15 Dec 2020	Wind Dir	NW
I40	15 Dec 2020	Water Color	Greenish-Brown
I40	15 Dec 2020	Wave Ht Low (ft)	6
I40	15 Dec 2020	Wave Period (sec)	16
I40	15 Dec 2020	Sea State	Wind ripples
I40	15 Dec 2020	High Tide (ft)	6.8
I40	15 Dec 2020	High Tide Time	838
I40	15 Dec 2020	Low Tide (ft)	-1.54
I40	15 Dec 2020	Low Tide Time	1559
I40	15 Dec 2020	Comments	none
I40	21 Dec 2020	Depth (m)	9
I40	21 Dec 2020	Arrive Time	1109
I40	21 Dec 2020	Depart Time	1113
I40	21 Dec 2020	Air Temp (C)	16
I40	21 Dec 2020	Weather	Haze
I40	21 Dec 2020	Visibility (mi)	15
I40	21 Dec 2020	Wind Speed (kts)	6
I40	21 Dec 2020	Wind Dir	SW
I40	21 Dec 2020	Water Color	Green
I40	21 Dec 2020	Wave Ht Low (ft)	3
I40	21 Dec 2020	Wave Period (sec)	9

Station	Date	Parameter	Value
I40	21 Dec 2020	Sea State	Calm
I40	21 Dec 2020	High Tide (ft)	3.58
I40	21 Dec 2020	High Tide Time	1411
I40	21 Dec 2020	Low Tide (ft)	2.53
I40	21 Dec 2020	Low Tide Time	907
I40	21 Dec 2020	Comments	none
I40	27 Dec 2020	Depth (m)	10
I40	27 Dec 2020	Arrive Time	1051
I40	27 Dec 2020	Depart Time	1053
I40	27 Dec 2020	Air Temp (C)	14
I40	27 Dec 2020	Weather	Overcast
I40	27 Dec 2020	Visibility (mi)	5
I40	27 Dec 2020	Wind Speed (kts)	4
I40	27 Dec 2020	Wind Dir	S
I40	27 Dec 2020	Water Color	Green
I40	27 Dec 2020	Wave Ht Low (ft)	5
I40	27 Dec 2020	Wave Period (sec)	13
I40	27 Dec 2020	Sea State	Calm
I40	27 Dec 2020	High Tide (ft)	5.63
I40	27 Dec 2020	High Tide Time	647
I40	27 Dec 2020	Low Tide (ft)	-0.34
I40	27 Dec 2020	Low Tide Time	1404
I40	27 Dec 2020	Comments	none

Table 3.10

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

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (µg/L)
I19	01 Dec 2020	1	14.31	73.85	7.1	33.54	8.0	25.0	0.99
I19	01 Dec 2020	2	14.21	73.72	7.1	33.55	8.0	25.0	1.12
I19	01 Dec 2020	3	14.11	73.21	7.4	33.55	8.0	25.0	1.73
I19	01 Dec 2020	4	14.06	72.04	7.5	33.55	8.0	25.1	2.29
I19	01 Dec 2020	5	14.00	70.25	7.3	33.54	8.0	25.1	2.81
I19	01 Dec 2020	6	13.95	68.61	6.8	33.53	8.0	25.1	3.09
I19	01 Dec 2020	7	13.86	67.09	6.5	33.53	8.0	25.1	3.18
I19	01 Dec 2020	8	13.91	70.30	6.4	33.53	8.0	25.1	3.01
I19	01 Dec 2020	9	13.77	78.39	6.3	33.53	8.0	25.1	2.85
I19	01 Dec 2020	10	13.69	80.34	6.1	33.53	8.0	25.1	3.13
I19	07 Dec 2020	1	14.44	NA	8.0	33.57	8.0	25.0	2.40
I19	07 Dec 2020	2	14.44	NA	8.0	33.57	8.0	25.0	2.48
I19	07 Dec 2020	3	14.37	NA	8.0	33.57	8.0	25.0	2.91
I19	07 Dec 2020	4	14.36	NA	8.0	33.57	8.0	25.0	3.33
I19	07 Dec 2020	5	14.33	NA	8.0	33.57	8.0	25.0	3.80
I19	07 Dec 2020	6	14.32	NA	7.8	33.57	8.0	25.0	4.12
I19	07 Dec 2020	7	14.28	NA	7.8	33.57	8.0	25.0	4.08
I19	07 Dec 2020	8	14.23	NA	7.9	33.58	8.0	25.0	3.98
I19	07 Dec 2020	9	14.22	NA	8.0	33.57	8.0	25.0	3.99
I19	07 Dec 2020	10	14.16	NA	8.0	33.58	8.0	25.1	3.76
I19	15 Dec 2020	1	15.71	76.66	8.0	33.60	8.2	24.7	1.38
I19	15 Dec 2020	2	15.71	76.79	8.0	33.60	8.2	24.7	1.38
I19	15 Dec 2020	3	15.71	75.96	8.0	33.60	8.2	24.7	1.46
I19	15 Dec 2020	4	15.69	76.90	8.0	33.60	8.2	24.7	1.77
I19	15 Dec 2020	5	15.64	76.75	8.0	33.60	8.2	24.8	2.39
I19	15 Dec 2020	6	15.61	77.34	8.1	33.59	8.2	24.8	3.12
I19	15 Dec 2020	7	15.57	77.84	8.0	33.59	8.2	24.8	4.19
I19	15 Dec 2020	8	15.53	75.56	7.9	33.59	8.2	24.8	5.15
I19	15 Dec 2020	9	15.52	69.10	7.9	33.60	8.1	24.8	5.77
I19	15 Dec 2020	10	15.52	63.39	7.8	33.60	8.1	24.8	5.87
I19	21 Dec 2020	1	14.38	79.99	7.8	33.59	8.0	25.0	1.66
I19	21 Dec 2020	2	14.18	79.62	7.8	33.59	8.0	25.1	2.59
I19	21 Dec 2020	3	14.11	77.12	7.8	33.59	8.0	25.1	3.66
I19	21 Dec 2020	4	14.09	75.26	7.7	33.59	8.0	25.1	3.97
I19	21 Dec 2020	5	14.08	74.44	7.7	33.59	8.0	25.1	4.29
I19	21 Dec 2020	6	14.07	74.23	7.6	33.59	8.0	25.1	4.54
I19	21 Dec 2020	7	14.06	74.12	7.6	33.59	8.0	25.1	4.79
I19	21 Dec 2020	8	14.06	73.58	7.6	33.59	8.0	25.1	5.09
I19	21 Dec 2020	9	14.05	73.72	7.6	33.59	8.0	25.1	5.05
I19	21 Dec 2020	10	14.03	75.08	7.6	33.59	8.0	25.1	4.75
I19	27 Dec 2020	1	14.82	83.57	8.0	33.61	8.1	24.9	2.44
I19	27 Dec 2020	2	14.79	83.70	8.1	33.61	8.1	24.9	2.90
I19	27 Dec 2020	3	14.73	83.30	8.1	33.61	8.1	25.0	3.56
I19	27 Dec 2020	4	14.72	82.82	8.1	33.61	8.1	25.0	4.12
I19	27 Dec 2020	5	14.69	82.02	8.1	33.61	8.1	25.0	4.82
I19	27 Dec 2020	6	14.66	80.57	8.0	33.61	8.1	25.0	5.24
I19	27 Dec 2020	7	14.63	75.86	8.0	33.61	8.1	25.0	5.32
I19	27 Dec 2020	8	14.63	73.18	8.0	33.61	8.1	25.0	5.15
I19	27 Dec 2020	9	14.60	73.99	7.9	33.61	8.1	25.0	4.57
I19	27 Dec 2020	10	14.60	67.28	7.9	33.61	8.1	25.0	4.21
I24	01 Dec 2020	1	14.24	81.99	6.8	33.55	8.0	25.0	0.96

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens ($\sigma\text{-t}$)	Chlor ($\mu\text{g/L}$)
I24	01 Dec 2020	2	14.27	81.97	6.8	33.55	8.0	25.0	0.90
I24	01 Dec 2020	3	14.21	82.10	6.8	33.55	8.0	25.0	1.01
I24	01 Dec 2020	4	14.07	81.68	6.8	33.55	8.0	25.1	1.50
I24	01 Dec 2020	5	14.04	80.83	6.8	33.55	8.0	25.1	2.40
I24	01 Dec 2020	6	14.02	80.14	6.8	33.54	8.0	25.1	2.88
I24	01 Dec 2020	7	13.99	79.79	6.8	33.54	8.0	25.1	2.86
I24	01 Dec 2020	8	13.91	79.09	6.5	33.54	8.0	25.1	2.65
I24	01 Dec 2020	9	13.86	69.87	6.3	33.54	8.0	25.1	2.82
I24	01 Dec 2020	10	13.82	66.40	6.2	33.53	8.0	25.1	2.71
I24	07 Dec 2020	1	14.80	NA	7.9	33.56	8.1	24.9	2.21
I24	07 Dec 2020	2	14.80	NA	7.9	33.56	8.1	24.9	2.18
I24	07 Dec 2020	3	14.80	NA	7.9	33.56	8.1	24.9	2.34
I24	07 Dec 2020	4	14.78	NA	7.9	33.56	8.1	24.9	2.69
I24	07 Dec 2020	5	14.66	NA	7.9	33.57	8.1	24.9	3.20
I24	07 Dec 2020	6	14.47	NA	8.0	33.58	8.1	25.0	3.56
I24	07 Dec 2020	7	14.33	NA	7.9	33.58	8.1	25.0	3.86
I24	07 Dec 2020	8	14.16	NA	7.7	33.57	8.0	25.1	3.71
I24	07 Dec 2020	9	14.07	NA	7.5	33.57	8.0	25.1	3.32
I24	07 Dec 2020	10	14.07	NA	7.4	33.57	8.0	25.1	3.20
I24	15 Dec 2020	1	15.54	66.80	7.9	33.60	8.1	24.8	1.46
I24	15 Dec 2020	2	15.56	66.66	7.9	33.60	8.1	24.8	1.51
I24	15 Dec 2020	3	15.53	65.75	8.0	33.61	8.1	24.8	1.94
I24	15 Dec 2020	4	15.53	65.04	7.9	33.60	8.1	24.8	2.54
I24	15 Dec 2020	5	15.50	64.95	7.8	33.60	8.1	24.8	2.98
I24	15 Dec 2020	6	15.50	65.53	7.9	33.60	8.1	24.8	3.25
I24	15 Dec 2020	7	15.50	68.06	7.8	33.60	8.1	24.8	3.29
I24	15 Dec 2020	8	15.46	71.03	7.7	33.60	8.1	24.8	3.31
I24	15 Dec 2020	9	15.44	69.91	7.6	33.60	8.1	24.8	3.27
I24	15 Dec 2020	10	15.43	68.69	7.6	33.60	8.1	24.8	3.08
I24	15 Dec 2020	11	15.26	66.88	7.3	33.60	8.1	24.8	2.56
I24	21 Dec 2020	1	14.17	73.48	7.5	33.59	8.0	25.1	2.26
I24	21 Dec 2020	2	14.09	73.73	7.4	33.59	8.0	25.1	2.49
I24	21 Dec 2020	3	14.04	74.21	7.3	33.59	8.0	25.1	2.99
I24	21 Dec 2020	4	14.03	74.33	7.3	33.59	8.0	25.1	3.39
I24	21 Dec 2020	5	14.03	73.41	7.3	33.59	8.0	25.1	3.57
I24	21 Dec 2020	6	14.03	72.77	7.2	33.59	8.0	25.1	3.53
I24	21 Dec 2020	7	14.01	71.57	7.2	33.59	8.0	25.1	3.32
I24	21 Dec 2020	8	14.00	68.34	7.2	33.59	8.0	25.1	3.17
I24	21 Dec 2020	9	14.00	62.27	7.2	33.59	8.0	25.1	3.01
I24	21 Dec 2020	10	14.00	57.63	7.2	33.59	8.0	25.1	2.97
I24	27 Dec 2020	1	14.78	85.67	8.0	33.61	8.1	24.9	2.33
I24	27 Dec 2020	2	14.78	85.90	8.0	33.61	8.1	24.9	2.52
I24	27 Dec 2020	3	14.76	85.75	8.0	33.61	8.1	25.0	2.88
I24	27 Dec 2020	4	14.73	85.28	8.0	33.61	8.1	25.0	3.31
I24	27 Dec 2020	5	14.71	85.20	8.0	33.61	8.1	25.0	3.70
I24	27 Dec 2020	6	14.68	84.17	8.0	33.61	8.1	25.0	4.21
I24	27 Dec 2020	7	14.62	81.69	7.9	33.61	8.1	25.0	4.43
I24	27 Dec 2020	8	14.59	78.34	7.8	33.61	8.1	25.0	4.70
I24	27 Dec 2020	9	14.59	70.81	7.8	33.61	8.1	25.0	4.52
I24	27 Dec 2020	10	14.56	66.94	7.6	33.61	8.1	25.0	3.87
I25	01 Dec 2020	1	14.42	80.94	7.0	33.55	8.0	25.0	0.80
I25	01 Dec 2020	2	14.37	81.01	6.9	33.55	8.0	25.0	0.90
I25	01 Dec 2020	3	14.28	81.14	6.9	33.55	8.0	25.0	1.09
I25	01 Dec 2020	4	14.08	80.22	6.9	33.55	8.0	25.0	1.52
I25	01 Dec 2020	5	14.04	79.14	6.9	33.54	8.0	25.1	2.14
I25	01 Dec 2020	6	14.01	78.30	6.8	33.54	8.0	25.1	2.83

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens ($\sigma\text{-t}$)	Chlor ($\mu\text{g/L}$)
I25	01 Dec 2020	7	13.97	77.70	6.7	33.54	8.0	25.1	2.78
I25	01 Dec 2020	8	13.96	74.27	6.5	33.54	8.0	25.1	2.86
I25	01 Dec 2020	9	13.95	71.37	6.5	33.54	8.0	25.1	2.67
I25	07 Dec 2020	1	14.93	NA	7.9	33.56	8.1	24.9	1.44
I25	07 Dec 2020	2	14.94	NA	7.9	33.56	8.1	24.9	1.50
I25	07 Dec 2020	3	14.91	NA	7.9	33.56	8.1	24.9	1.65
I25	07 Dec 2020	4	14.87	NA	7.9	33.56	8.1	24.9	1.90
I25	07 Dec 2020	5	14.82	NA	7.8	33.56	8.1	24.9	2.18
I25	07 Dec 2020	6	14.71	NA	7.8	33.56	8.1	24.9	2.57
I25	07 Dec 2020	7	14.45	NA	7.8	33.58	8.1	25.0	3.07
I25	07 Dec 2020	8	14.16	NA	7.6	33.58	8.0	25.1	2.94
I25	07 Dec 2020	9	14.11	NA	7.4	33.57	8.0	25.1	2.57
I25	15 Dec 2020	1	15.64	69.49	7.9	33.61	8.1	24.8	1.54
I25	15 Dec 2020	2	15.64	69.53	7.9	33.61	8.1	24.8	1.54
I25	15 Dec 2020	3	15.59	69.57	7.9	33.61	8.1	24.8	1.95
I25	15 Dec 2020	4	15.52	70.09	7.9	33.60	8.1	24.8	2.63
I25	15 Dec 2020	5	15.47	70.03	7.9	33.60	8.1	24.8	3.14
I25	15 Dec 2020	6	15.45	68.20	7.9	33.60	8.1	24.8	3.24
I25	15 Dec 2020	7	15.40	64.01	7.8	33.60	8.1	24.8	3.17
I25	15 Dec 2020	8	15.39	58.28	7.9	33.60	8.1	24.8	3.01
I25	15 Dec 2020	9	15.41	57.30	7.9	33.60	8.1	24.8	2.95
I25	21 Dec 2020	1	14.33	76.94	7.5	33.59	8.0	25.0	1.53
I25	21 Dec 2020	2	14.12	76.42	7.5	33.59	8.0	25.1	2.11
I25	21 Dec 2020	3	14.05	75.83	7.4	33.59	8.0	25.1	2.67
I25	21 Dec 2020	4	14.03	72.98	7.3	33.59	8.0	25.1	3.00
I25	21 Dec 2020	5	14.02	67.27	7.2	33.59	8.0	25.1	3.42
I25	21 Dec 2020	6	14.02	65.65	7.2	33.59	8.0	25.1	3.50
I25	21 Dec 2020	7	14.02	64.63	7.2	33.59	8.0	25.1	3.54
I25	21 Dec 2020	8	14.02	64.13	7.2	33.59	8.0	25.1	3.49
I25	21 Dec 2020	9	14.02	59.83	7.2	33.59	8.0	25.1	3.27
I25	27 Dec 2020	1	14.76	85.65	8.0	33.61	8.1	25.0	1.76
I25	27 Dec 2020	2	14.76	85.71	8.0	33.61	8.1	25.0	1.78
I25	27 Dec 2020	3	14.74	85.73	8.0	33.61	8.1	25.0	2.15
I25	27 Dec 2020	4	14.71	85.64	8.1	33.61	8.1	25.0	2.58
I25	27 Dec 2020	5	14.69	85.30	8.0	33.61	8.1	25.0	3.26
I25	27 Dec 2020	6	14.57	83.02	7.7	33.61	8.1	25.0	3.31
I25	27 Dec 2020	7	14.54	73.66	7.3	33.61	8.0	25.0	2.84
I25	27 Dec 2020	8	14.54	56.29	7.2	33.61	8.0	25.0	2.53
I25	27 Dec 2020	9	14.55	53.54	7.2	33.60	8.0	25.0	2.51
I26	01 Dec 2020	1	14.85	81.91	7.3	33.56	8.1	24.9	0.98
I26	01 Dec 2020	2	14.80	79.32	7.3	33.56	8.1	24.9	1.05
I26	01 Dec 2020	3	14.58	82.21	7.3	33.56	8.1	25.0	1.26
I26	01 Dec 2020	4	14.43	82.08	7.1	33.56	8.0	25.0	1.73
I26	01 Dec 2020	5	14.22	81.48	6.6	33.55	8.0	25.0	1.88
I26	01 Dec 2020	6	13.96	82.14	6.1	33.53	8.0	25.1	1.47
I26	01 Dec 2020	7	13.82	81.45	5.8	33.53	7.9	25.1	1.42
I26	01 Dec 2020	8	13.80	78.24	5.8	33.52	7.9	25.1	1.50
I26	01 Dec 2020	9	13.81	72.99	5.8	33.52	7.9	25.1	1.60
I26	07 Dec 2020	1	14.83	NA	8.0	33.56	8.1	24.9	1.90
I26	07 Dec 2020	2	14.83	NA	7.9	33.56	8.1	24.9	1.97
I26	07 Dec 2020	3	14.76	NA	7.9	33.57	8.1	24.9	2.22
I26	07 Dec 2020	4	14.64	NA	7.9	33.57	8.1	24.9	2.64
I26	07 Dec 2020	5	14.56	NA	8.0	33.57	8.1	25.0	3.31
I26	07 Dec 2020	6	14.49	NA	8.0	33.57	8.1	25.0	3.92
I26	07 Dec 2020	7	14.40	NA	8.0	33.57	8.1	25.0	4.09

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens ($\sigma\text{-t}$)	Chlor ($\mu\text{g/L}$)
I26	07 Dec 2020	8	14.24	NA	7.9	33.58	8.0	25.0	3.73
I26	07 Dec 2020	9	14.21	NA	7.9	33.58	8.0	25.0	3.20
I26	15 Dec 2020	1	15.67	65.42	8.1	33.61	8.2	24.8	1.86
I26	15 Dec 2020	2	15.66	64.78	8.1	33.61	8.2	24.8	1.96
I26	15 Dec 2020	3	15.62	64.78	8.0	33.61	8.2	24.8	2.30
I26	15 Dec 2020	4	15.40	63.84	7.8	33.61	8.2	24.8	3.16
I26	15 Dec 2020	5	15.12	61.22	7.5	33.60	8.1	24.9	3.64
I26	15 Dec 2020	6	14.89	53.73	7.3	33.59	8.1	24.9	3.21
I26	15 Dec 2020	7	14.83	57.07	7.2	33.58	8.1	24.9	2.66
I26	15 Dec 2020	8	14.80	43.55	7.2	33.58	8.1	24.9	2.32
I26	15 Dec 2020	9	14.81	24.94	7.1	33.58	8.1	24.9	2.45
I26	21 Dec 2020	1	14.27	75.25	7.2	33.60	8.0	25.0	1.22
I26	21 Dec 2020	2	14.28	75.24	7.2	33.60	8.0	25.0	1.30
I26	21 Dec 2020	3	14.05	75.19	7.2	33.60	8.0	25.1	1.94
I26	21 Dec 2020	4	13.98	73.77	7.2	33.60	8.0	25.1	2.64
I26	21 Dec 2020	5	13.94	72.39	7.2	33.60	8.0	25.1	2.74
I26	21 Dec 2020	6	13.92	71.04	7.1	33.59	8.0	25.1	2.85
I26	21 Dec 2020	7	13.92	68.63	7.0	33.59	8.0	25.1	2.73
I26	21 Dec 2020	8	13.91	65.25	7.0	33.59	8.0	25.1	2.63
I26	21 Dec 2020	9	13.91	63.30	7.0	33.59	8.0	25.1	2.53
I26	27 Dec 2020	1	14.70	84.72	8.1	33.61	8.1	25.0	1.88
I26	27 Dec 2020	2	14.68	83.36	8.1	33.61	8.1	25.0	2.13
I26	27 Dec 2020	3	14.67	84.24	8.1	33.61	8.1	25.0	2.52
I26	27 Dec 2020	4	14.64	84.75	8.1	33.61	8.1	25.0	3.19
I26	27 Dec 2020	5	14.58	83.74	8.0	33.61	8.1	25.0	4.20
I26	27 Dec 2020	6	14.52	80.77	7.9	33.61	8.1	25.0	4.84
I26	27 Dec 2020	7	14.50	79.79	7.8	33.61	8.1	25.0	4.48
I26	27 Dec 2020	8	14.42	79.22	7.6	33.61	8.1	25.0	3.30
I26	27 Dec 2020	9	14.40	78.36	7.5	33.61	8.1	25.0	2.80
I32	01 Dec 2020	1	14.63	71.70	7.1	33.56	8.0	24.9	0.83
I32	01 Dec 2020	2	14.31	71.08	6.7	33.56	8.0	25.0	0.95
I32	01 Dec 2020	3	14.14	71.34	6.5	33.53	8.0	25.0	1.33
I32	01 Dec 2020	4	14.14	70.26	6.7	33.55	8.0	25.0	1.98
I32	01 Dec 2020	5	14.10	66.14	6.8	33.55	8.0	25.0	2.64
I32	01 Dec 2020	6	14.07	64.69	6.9	33.55	8.0	25.1	2.80
I32	01 Dec 2020	7	14.04	64.03	6.8	33.54	8.0	25.1	2.73
I32	01 Dec 2020	8	13.99	62.02	6.6	33.54	8.0	25.1	2.61
I32	01 Dec 2020	9	13.97	60.69	6.4	33.53	8.0	25.1	2.49
I32	01 Dec 2020	10	13.98	59.23	6.4	33.54	8.0	25.1	2.62
I32	07 Dec 2020	1	14.32	NA	8.4	33.58	8.1	25.0	2.79
I32	07 Dec 2020	2	14.29	NA	8.4	33.58	8.1	25.0	3.79
I32	07 Dec 2020	3	14.25	NA	8.4	33.58	8.1	25.0	5.76
I32	07 Dec 2020	4	14.23	NA	8.4	33.58	8.1	25.0	6.75
I32	07 Dec 2020	5	14.22	NA	8.4	33.58	8.1	25.0	7.14
I32	07 Dec 2020	6	14.20	NA	8.3	33.58	8.1	25.0	7.06
I32	07 Dec 2020	7	14.18	NA	8.2	33.58	8.1	25.1	7.05
I32	07 Dec 2020	8	14.17	NA	8.1	33.58	8.0	25.1	6.29
I32	07 Dec 2020	9	14.17	NA	8.1	33.58	8.0	25.1	6.04
I32	07 Dec 2020	10	14.11	NA	8.1	33.58	8.0	25.1	5.58
I32	15 Dec 2020	1	15.71	63.89	8.3	33.60	8.2	24.7	1.27
I32	15 Dec 2020	2	15.71	58.50	8.3	33.52	8.2	24.7	1.32
I32	15 Dec 2020	3	15.71	65.27	8.3	33.60	8.2	24.7	1.50
I32	15 Dec 2020	4	15.70	66.24	8.2	33.61	8.2	24.7	1.91
I32	15 Dec 2020	5	15.66	66.42	8.2	33.61	8.2	24.8	2.50
I32	15 Dec 2020	6	15.51	66.97	8.3	33.61	8.2	24.8	3.08

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens ($\sigma\text{-t}$)	Chlor ($\mu\text{g/L}$)
I32	15 Dec 2020	7	15.45	68.92	8.3	33.61	8.2	24.8	3.55
I32	15 Dec 2020	8	15.42	69.92	8.3	33.60	8.2	24.8	4.16
I32	15 Dec 2020	9	15.39	66.57	8.2	33.60	8.2	24.8	4.62
I32	15 Dec 2020	10	15.39	62.60	8.2	33.60	8.2	24.8	4.77
I32	21 Dec 2020	1	14.69	67.53	6.9	33.61	8.0	25.0	0.82
I32	21 Dec 2020	2	14.26	66.82	7.0	33.62	8.0	25.1	1.71
I32	21 Dec 2020	3	14.14	64.68	7.0	33.60	8.0	25.1	3.09
I32	21 Dec 2020	4	14.11	62.31	6.8	33.59	8.0	25.1	3.73
I32	21 Dec 2020	5	14.07	61.76	6.7	33.59	8.0	25.1	4.04
I32	21 Dec 2020	6	14.03	60.83	6.7	33.60	8.0	25.1	4.50
I32	21 Dec 2020	7	14.02	60.56	6.8	33.60	8.0	25.1	4.69
I32	21 Dec 2020	8	14.03	61.23	6.8	33.60	8.0	25.1	4.40
I32	21 Dec 2020	9	14.02	61.89	6.8	33.60	8.0	25.1	3.64
I32	21 Dec 2020	10	14.01	60.88	6.9	33.61	8.0	25.1	3.23
I32	27 Dec 2020	1	14.44	70.93	8.1	33.62	8.1	25.0	2.35
I32	27 Dec 2020	2	14.41	71.02	8.1	33.62	8.1	25.0	2.41
I32	27 Dec 2020	3	14.41	70.03	8.1	33.62	8.1	25.0	2.77
I32	27 Dec 2020	4	14.39	69.76	8.1	33.62	8.1	25.0	3.26
I32	27 Dec 2020	5	14.37	69.12	8.1	33.62	8.1	25.0	3.68
I32	27 Dec 2020	6	14.35	69.09	8.1	33.62	8.1	25.1	4.06
I32	27 Dec 2020	7	14.31	68.29	8.0	33.63	8.1	25.1	4.08
I32	27 Dec 2020	8	14.30	65.65	8.0	33.62	8.1	25.1	4.00
I32	27 Dec 2020	9	14.27	62.93	7.9	33.62	8.1	25.1	3.42
I32	27 Dec 2020	10	14.26	59.50	8.0	33.62	8.1	25.1	3.27
I39	01 Dec 2020	1	14.70	84.04	7.3	33.57	8.0	24.9	1.25
I39	01 Dec 2020	2	14.66	83.96	7.3	33.57	8.0	24.9	1.30
I39	01 Dec 2020	3	14.59	83.64	7.3	33.57	8.0	25.0	1.61
I39	01 Dec 2020	4	14.57	82.88	7.3	33.57	8.0	25.0	2.09
I39	01 Dec 2020	5	14.56	82.24	7.3	33.56	8.0	25.0	2.68
I39	01 Dec 2020	6	14.55	81.74	7.3	33.56	8.0	25.0	2.85
I39	01 Dec 2020	7	14.53	81.75	7.3	33.56	8.0	25.0	3.01
I39	01 Dec 2020	8	14.51	81.95	7.2	33.56	8.0	25.0	3.01
I39	01 Dec 2020	9	14.49	83.03	7.2	33.56	8.0	25.0	2.99
I39	01 Dec 2020	10	14.43	83.69	7.0	33.56	8.0	25.0	2.95
I39	01 Dec 2020	11	14.34	84.02	7.0	33.56	8.0	25.0	2.71
I39	01 Dec 2020	12	14.24	84.67	6.8	33.55	8.0	25.0	2.47
I39	01 Dec 2020	13	13.90	86.04	6.6	33.55	8.0	25.1	2.34
I39	01 Dec 2020	14	13.52	86.91	6.2	33.54	8.0	25.2	1.95
I39	01 Dec 2020	15	13.49	85.71	6.0	33.52	8.0	25.2	1.72
I39	01 Dec 2020	16	13.49	84.46	6.0	33.52	7.9	25.1	1.63
I39	01 Dec 2020	17	13.48	84.05	5.9	33.52	7.9	25.2	1.50
I39	01 Dec 2020	18	13.48	83.13	5.9	33.52	7.9	25.2	1.53
I39	07 Dec 2020	1	15.03	NA	7.8	33.56	8.1	24.9	1.57
I39	07 Dec 2020	2	15.03	NA	7.8	33.56	8.1	24.9	1.67
I39	07 Dec 2020	3	15.03	NA	7.8	33.56	8.1	24.9	1.76
I39	07 Dec 2020	4	15.02	NA	7.8	33.56	8.1	24.9	1.96
I39	07 Dec 2020	5	15.02	NA	7.8	33.56	8.1	24.9	2.02
I39	07 Dec 2020	6	15.01	NA	7.8	33.56	8.1	24.9	1.98
I39	07 Dec 2020	7	15.00	NA	7.7	33.56	8.1	24.9	2.01
I39	07 Dec 2020	8	14.96	NA	7.7	33.56	8.1	24.9	1.94
I39	07 Dec 2020	9	14.85	NA	7.6	33.54	8.1	24.9	1.91
I39	07 Dec 2020	10	14.75	NA	7.5	33.54	8.0	24.9	1.90
I39	07 Dec 2020	11	14.65	NA	7.4	33.53	8.0	24.9	1.86
I39	07 Dec 2020	12	14.54	NA	7.4	33.53	8.0	24.9	1.97
I39	07 Dec 2020	13	14.52	NA	7.4	33.54	8.0	24.9	2.11
I39	07 Dec 2020	14	14.47	NA	7.4	33.55	8.0	25.0	2.23
I39	07 Dec 2020	15	14.39	NA	7.3	33.55	8.0	25.0	2.27

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens ($\sigma\text{-t}$)	Chlor ($\mu\text{g/L}$)
I39	07 Dec 2020	16	14.23	NA	7.2	33.54	8.0	25.0	2.00
I39	07 Dec 2020	17	14.14	NA	7.1	33.54	8.0	25.0	1.83
I39	07 Dec 2020	18	14.12	NA	7.0	33.54	8.0	25.0	1.73
I39	15 Dec 2020	1	15.53	84.95	7.9	33.59	8.2	24.8	1.00
I39	15 Dec 2020	2	15.53	84.98	7.9	33.59	8.2	24.8	1.04
I39	15 Dec 2020	3	15.43	84.78	8.0	33.59	8.2	24.8	1.33
I39	15 Dec 2020	4	15.41	83.86	8.0	33.59	8.2	24.8	1.65
I39	15 Dec 2020	5	15.39	83.77	8.0	33.59	8.2	24.8	2.04
I39	15 Dec 2020	6	15.37	83.73	8.0	33.59	8.2	24.8	2.49
I39	15 Dec 2020	7	15.36	83.74	8.0	33.59	8.2	24.8	2.81
I39	15 Dec 2020	8	15.35	83.97	8.0	33.59	8.2	24.8	3.12
I39	15 Dec 2020	9	15.34	84.07	7.9	33.59	8.2	24.8	3.24
I39	15 Dec 2020	10	15.31	84.19	7.9	33.59	8.1	24.8	3.40
I39	15 Dec 2020	11	15.28	84.64	7.9	33.59	8.1	24.8	3.27
I39	15 Dec 2020	12	15.22	85.48	7.8	33.58	8.1	24.8	3.29
I39	15 Dec 2020	13	15.12	86.12	7.7	33.58	8.1	24.9	3.17
I39	15 Dec 2020	14	14.98	86.47	7.6	33.58	8.1	24.9	3.11
I39	15 Dec 2020	15	14.76	86.92	7.5	33.58	8.1	24.9	2.65
I39	15 Dec 2020	16	14.64	88.32	7.3	33.58	8.1	25.0	2.18
I39	15 Dec 2020	17	14.82	88.36	7.4	33.57	8.1	24.9	2.34
I39	15 Dec 2020	18	14.61	88.93	7.2	33.58	8.1	25.0	1.83
I39	21 Dec 2020	1	14.24	85.90	7.4	33.57	8.0	25.0	1.61
I39	21 Dec 2020	2	14.19	85.80	7.4	33.57	8.0	25.0	1.74
I39	21 Dec 2020	3	14.14	85.74	7.4	33.57	8.0	25.1	2.02
I39	21 Dec 2020	4	14.12	85.52	7.4	33.57	8.0	25.1	2.26
I39	21 Dec 2020	5	14.12	85.72	7.4	33.57	8.0	25.1	2.71
I39	21 Dec 2020	6	14.11	85.66	7.4	33.57	8.0	25.1	2.99
I39	21 Dec 2020	7	14.10	85.58	7.3	33.57	8.0	25.1	3.29
I39	21 Dec 2020	8	14.09	85.66	7.3	33.57	8.0	25.1	3.40
I39	21 Dec 2020	9	14.08	85.93	7.2	33.57	8.0	25.1	3.41
I39	21 Dec 2020	10	14.08	85.94	7.2	33.57	8.0	25.1	3.64
I39	21 Dec 2020	11	14.08	85.84	7.2	33.57	8.0	25.1	3.76
I39	21 Dec 2020	12	14.07	85.34	7.3	33.57	8.0	25.1	3.90
I39	21 Dec 2020	13	14.06	84.70	7.2	33.58	8.0	25.1	3.86
I39	21 Dec 2020	14	14.03	84.16	7.2	33.58	8.0	25.1	3.64
I39	21 Dec 2020	15	14.01	82.76	7.1	33.58	8.0	25.1	3.43
I39	21 Dec 2020	16	14.01	81.67	7.0	33.58	8.0	25.1	3.33
I39	21 Dec 2020	17	13.98	80.59	7.0	33.58	8.0	25.1	3.19
I39	21 Dec 2020	18	13.97	79.20	6.9	33.58	8.0	25.1	2.87
I39	27 Dec 2020	1	14.65	85.12	8.1	33.61	8.1	25.0	2.06
I39	27 Dec 2020	2	14.61	84.86	8.1	33.61	8.1	25.0	2.44
I39	27 Dec 2020	3	14.57	84.66	8.1	33.61	8.1	25.0	2.81
I39	27 Dec 2020	4	14.53	84.38	8.1	33.61	8.1	25.0	3.14
I39	27 Dec 2020	5	14.47	84.07	8.1	33.62	8.1	25.0	3.42
I39	27 Dec 2020	6	14.40	83.53	8.1	33.62	8.1	25.0	3.65
I39	27 Dec 2020	7	14.36	83.22	8.1	33.62	8.1	25.0	3.79
I39	27 Dec 2020	8	14.33	82.86	8.0	33.62	8.1	25.1	3.51
I39	27 Dec 2020	9	14.30	82.95	8.0	33.62	8.1	25.1	3.32
I39	27 Dec 2020	10	14.26	83.55	7.9	33.62	8.1	25.1	3.09
I39	27 Dec 2020	11	14.24	83.69	7.9	33.62	8.1	25.1	2.71
I39	27 Dec 2020	12	14.23	84.24	7.8	33.62	8.1	25.1	2.38
I39	27 Dec 2020	13	14.22	84.62	7.8	33.62	8.1	25.1	2.13
I39	27 Dec 2020	14	14.22	84.63	7.8	33.62	8.1	25.1	2.18
I39	27 Dec 2020	15	14.21	84.54	7.8	33.62	8.1	25.1	2.17
I39	27 Dec 2020	16	14.18	84.56	7.7	33.61	8.1	25.1	1.94
I39	27 Dec 2020	17	14.13	83.08	7.5	33.61	8.1	25.1	1.69
I39	27 Dec 2020	18	14.11	77.81	7.3	33.61	8.0	25.1	1.46

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens ($\sigma\text{-t}$)	Chlor ($\mu\text{g/L}$)
I40	01 Dec 2020	1	14.22	66.80	6.7	33.54	8.0	25.0	1.19
I40	01 Dec 2020	2	14.06	66.78	6.6	33.54	8.0	25.0	1.63
I40	01 Dec 2020	3	13.97	65.54	6.6	33.54	8.0	25.1	2.40
I40	01 Dec 2020	4	13.92	63.48	6.4	33.53	8.0	25.1	3.24
I40	01 Dec 2020	5	13.88	62.15	6.2	33.53	8.0	25.1	3.63
I40	01 Dec 2020	6	13.86	59.85	6.0	33.53	8.0	25.1	4.03
I40	01 Dec 2020	7	13.82	59.70	6.0	33.53	8.0	25.1	3.60
I40	01 Dec 2020	8	13.78	65.18	6.0	33.53	8.0	25.1	3.28
I40	01 Dec 2020	9	13.76	71.00	5.9	33.53	8.0	25.1	3.07
I40	01 Dec 2020	10	13.74	75.74	5.8	33.53	7.9	25.1	2.81
I40	07 Dec 2020	1	14.47	NA	8.1	33.57	8.1	25.0	2.72
I40	07 Dec 2020	2	14.47	NA	8.1	33.57	8.1	25.0	2.73
I40	07 Dec 2020	3	14.45	NA	8.1	33.57	8.1	25.0	3.27
I40	07 Dec 2020	4	14.38	NA	8.1	33.57	8.1	25.0	3.90
I40	07 Dec 2020	5	14.38	NA	8.1	33.57	8.1	25.0	4.41
I40	07 Dec 2020	6	14.36	NA	8.0	33.57	8.1	25.0	4.63
I40	07 Dec 2020	7	14.32	NA	8.0	33.57	8.0	25.0	4.48
I40	07 Dec 2020	8	14.29	NA	8.0	33.57	8.0	25.0	4.22
I40	07 Dec 2020	9	14.21	NA	7.9	33.57	8.0	25.0	3.91
I40	07 Dec 2020	10	14.11	NA	7.7	33.57	8.0	25.1	3.49
I40	15 Dec 2020	1	15.61	75.88	8.0	33.60	8.2	24.8	1.48
I40	15 Dec 2020	2	15.58	75.65	8.0	33.60	8.2	24.8	1.64
I40	15 Dec 2020	3	15.53	75.42	8.0	33.60	8.2	24.8	2.07
I40	15 Dec 2020	4	15.52	74.83	8.0	33.60	8.2	24.8	2.68
I40	15 Dec 2020	5	15.51	73.35	8.0	33.60	8.2	24.8	3.62
I40	15 Dec 2020	6	15.50	71.49	7.9	33.60	8.2	24.8	4.31
I40	15 Dec 2020	7	15.50	70.77	7.8	33.60	8.2	24.8	4.62
I40	15 Dec 2020	8	15.48	69.24	7.8	33.60	8.2	24.8	4.69
I40	15 Dec 2020	9	15.47	56.72	7.7	33.60	8.1	24.8	4.21
I40	15 Dec 2020	10	15.48	40.46	7.7	33.60	8.1	24.8	3.95
I40	21 Dec 2020	1	14.39	74.76	7.6	33.59	8.0	25.0	1.29
I40	21 Dec 2020	2	14.30	74.61	7.6	33.60	8.0	25.0	1.92
I40	21 Dec 2020	3	14.10	73.99	7.7	33.59	8.1	25.1	3.96
I40	21 Dec 2020	4	14.05	70.72	7.7	33.59	8.1	25.1	5.33
I40	21 Dec 2020	5	14.01	70.22	7.6	33.59	8.0	25.1	5.77
I40	21 Dec 2020	6	13.98	71.70	7.5	33.59	8.0	25.1	5.20
I40	21 Dec 2020	7	13.96	72.34	7.4	33.59	8.0	25.1	4.37
I40	21 Dec 2020	8	13.93	71.00	7.4	33.60	8.0	25.1	3.53
I40	21 Dec 2020	9	13.87	68.98	7.4	33.60	8.0	25.1	3.02
I40	21 Dec 2020	10	13.84	61.34	7.4	33.61	8.0	25.1	2.57
I40	27 Dec 2020	1	14.57	74.65	8.1	33.62	8.1	25.0	2.90
I40	27 Dec 2020	2	14.56	74.49	8.0	33.62	8.1	25.0	3.22
I40	27 Dec 2020	3	14.53	74.27	8.0	33.62	8.1	25.0	3.58
I40	27 Dec 2020	4	14.52	73.78	8.0	33.62	8.1	25.0	3.79
I40	27 Dec 2020	5	14.51	73.34	8.0	33.62	8.1	25.0	3.85
I40	27 Dec 2020	6	14.51	73.14	8.0	33.62	8.1	25.0	3.78
I40	27 Dec 2020	7	14.51	72.95	8.0	33.62	8.1	25.0	3.65
I40	27 Dec 2020	8	14.50	73.01	8.0	33.62	8.1	25.0	3.73
I40	27 Dec 2020	9	14.50	72.57	7.9	33.62	8.1	25.0	3.45
I40	27 Dec 2020	10	14.49	69.12	7.9	33.62	8.1	25.0	3.37

NA = not available

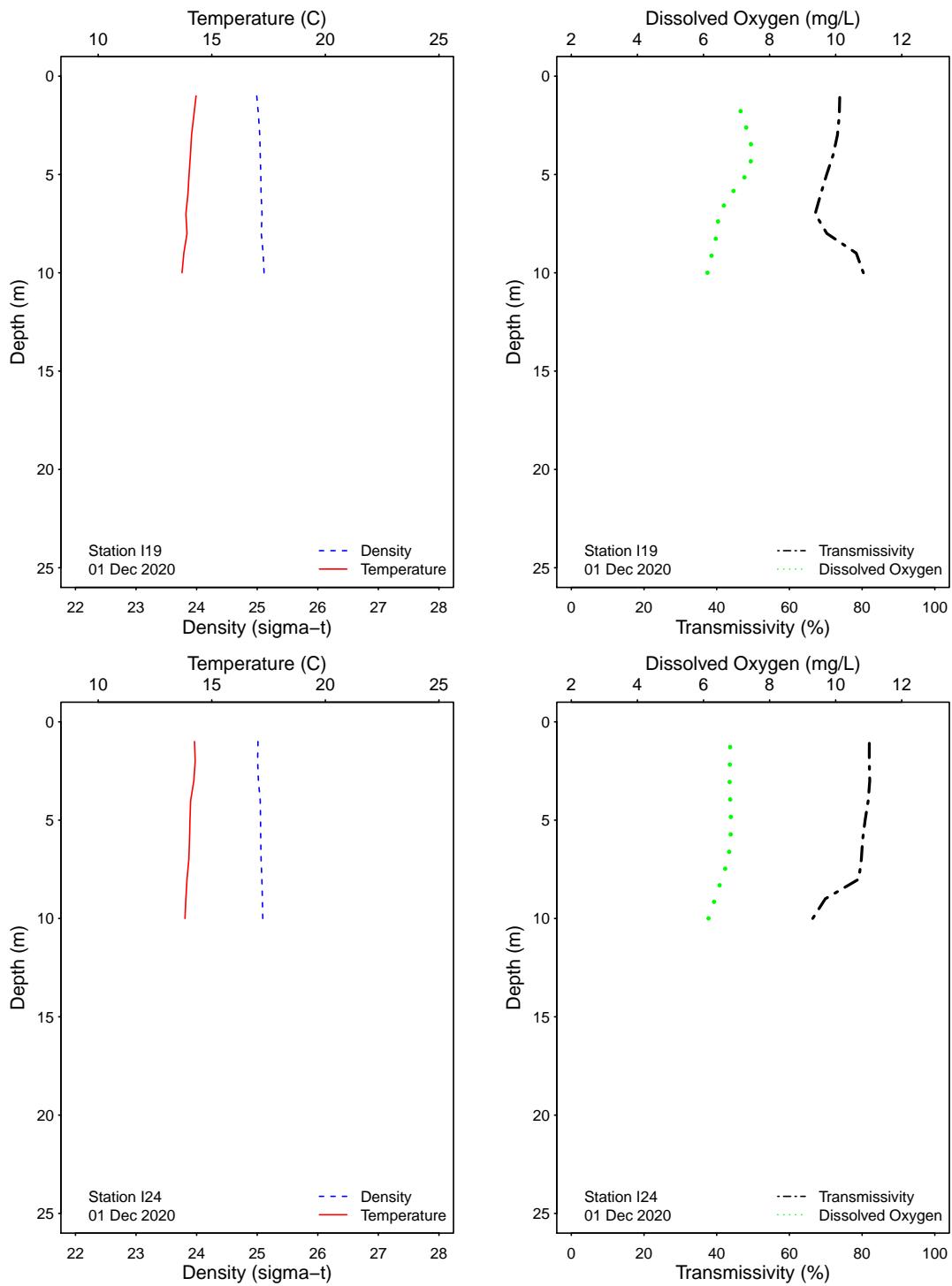


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

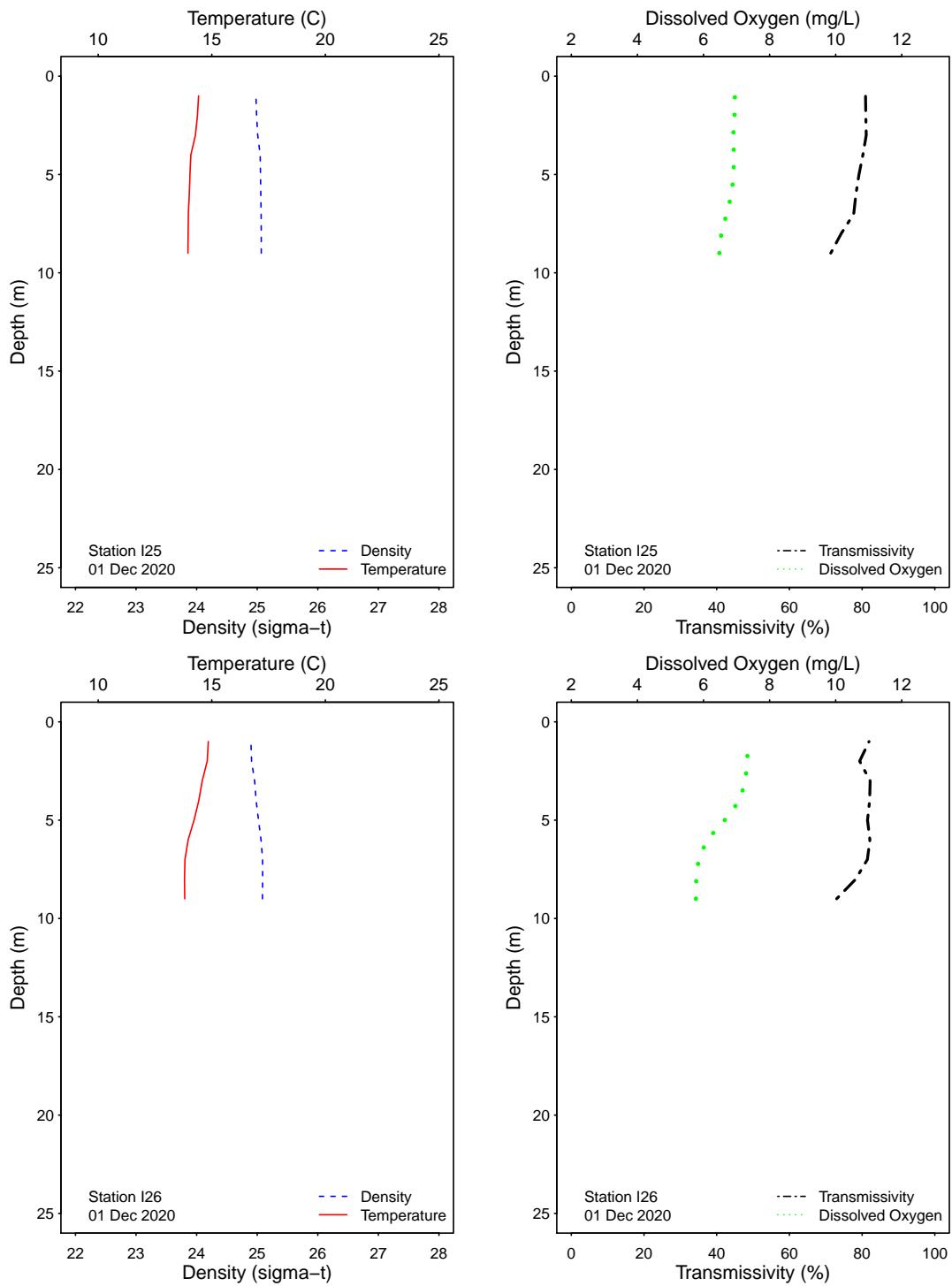


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

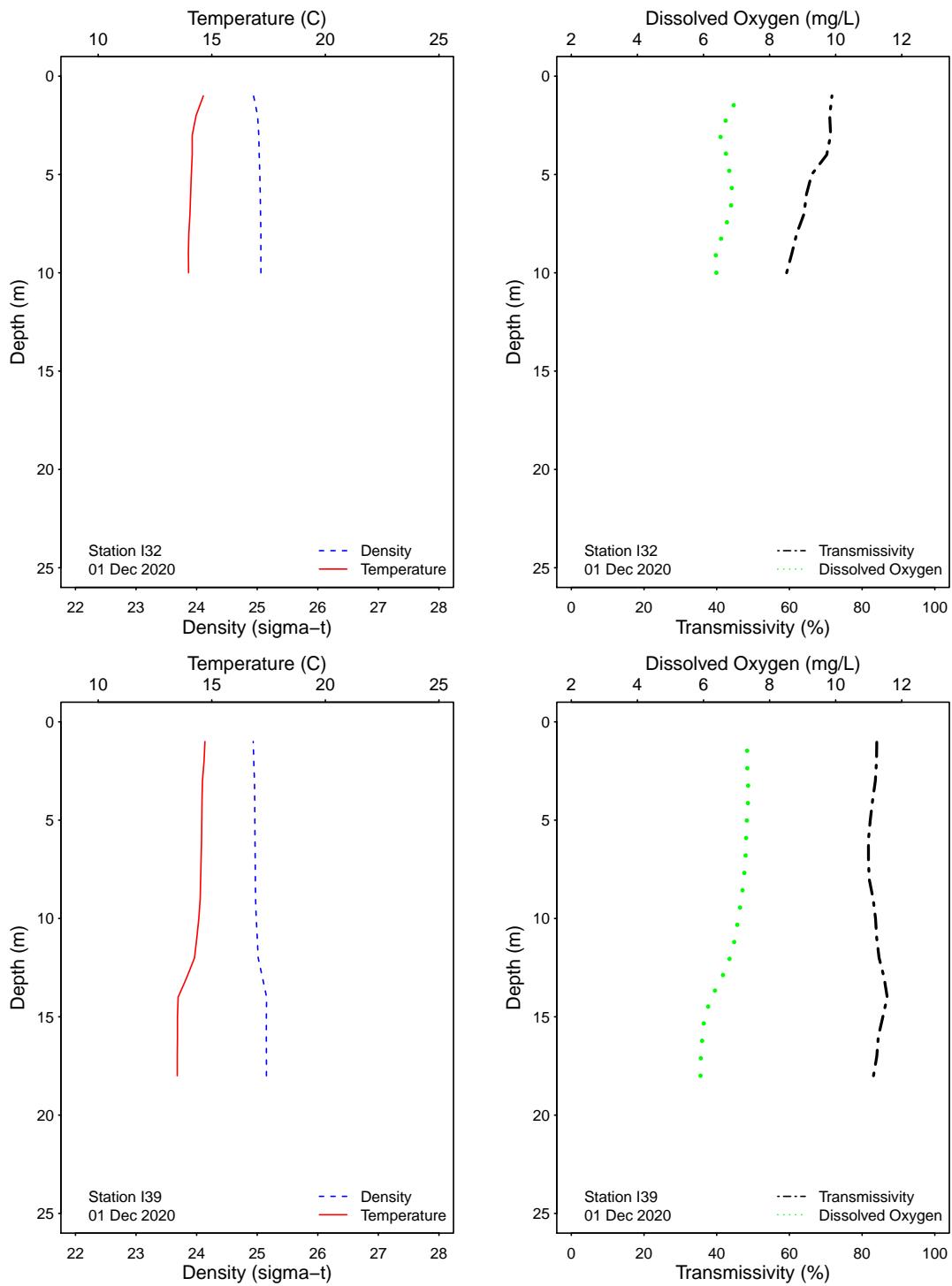


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

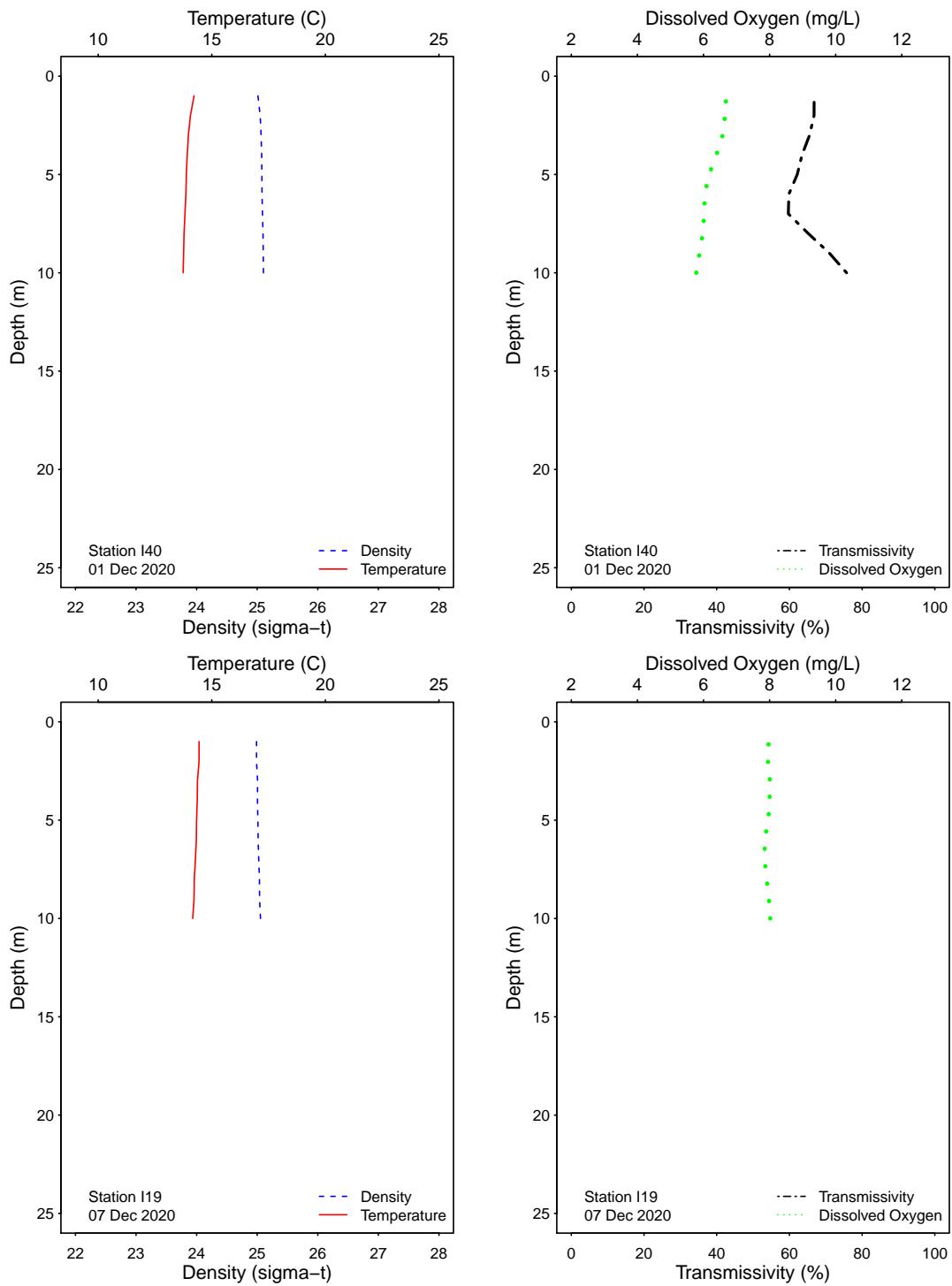


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

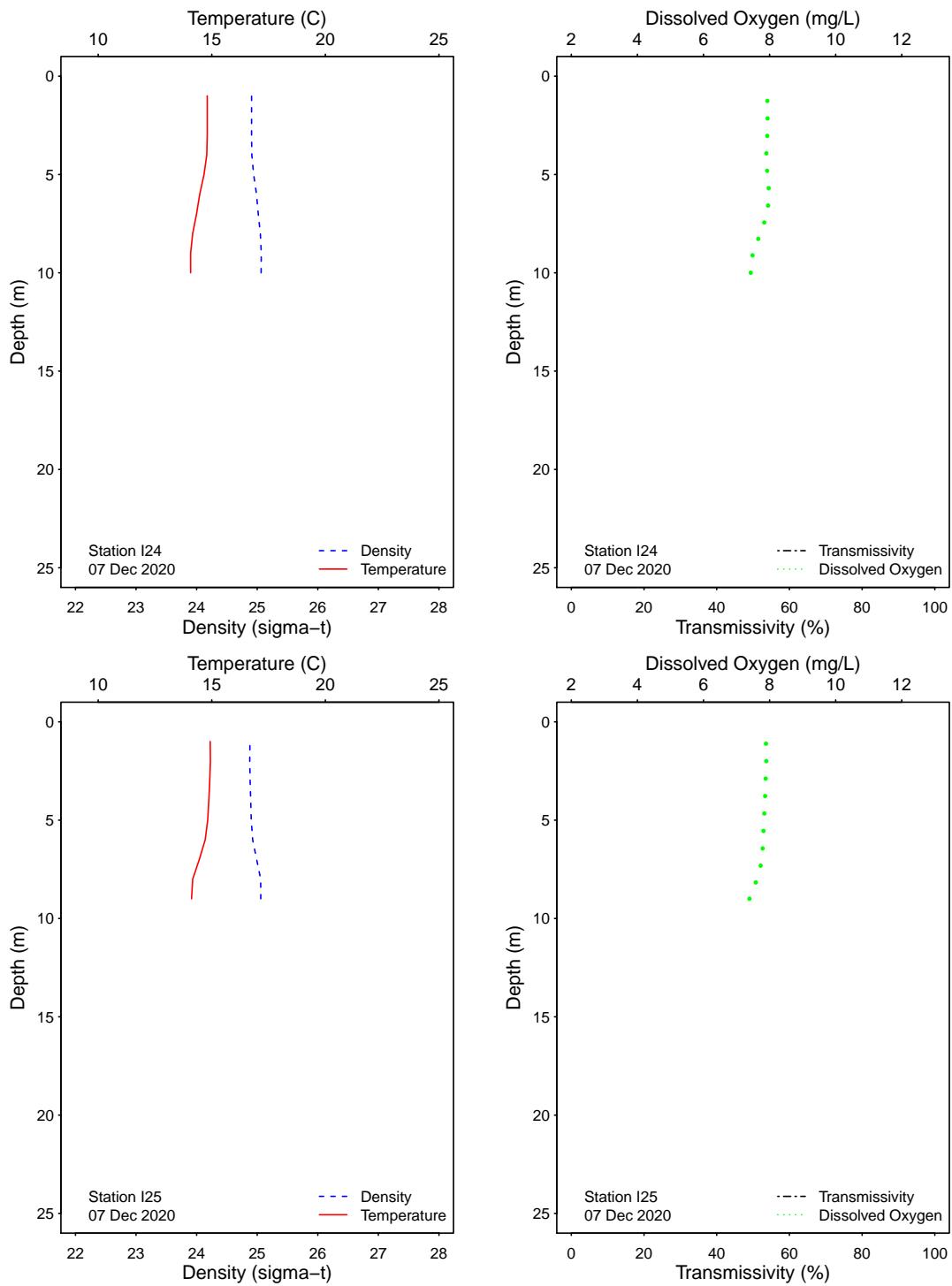


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

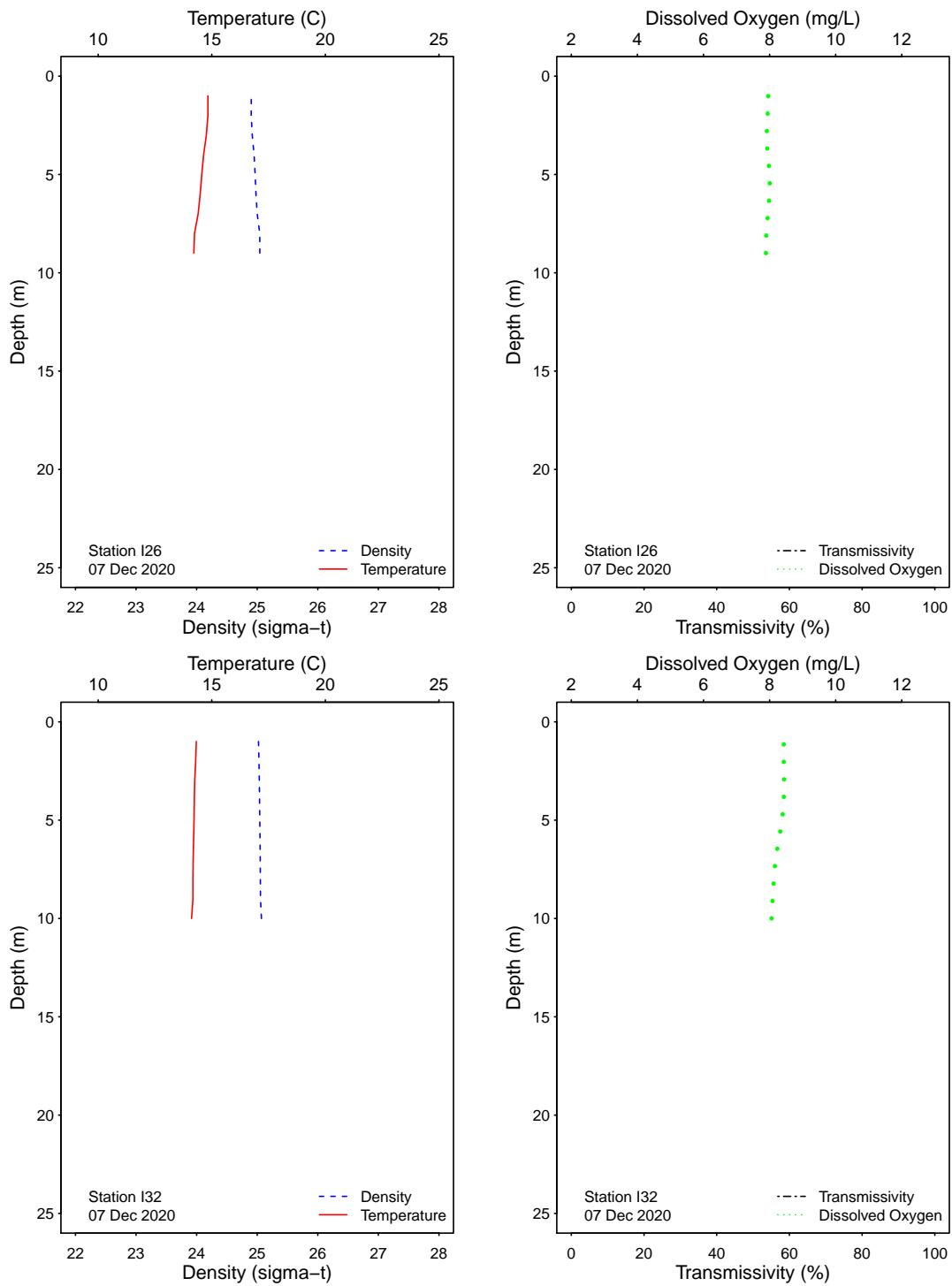


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

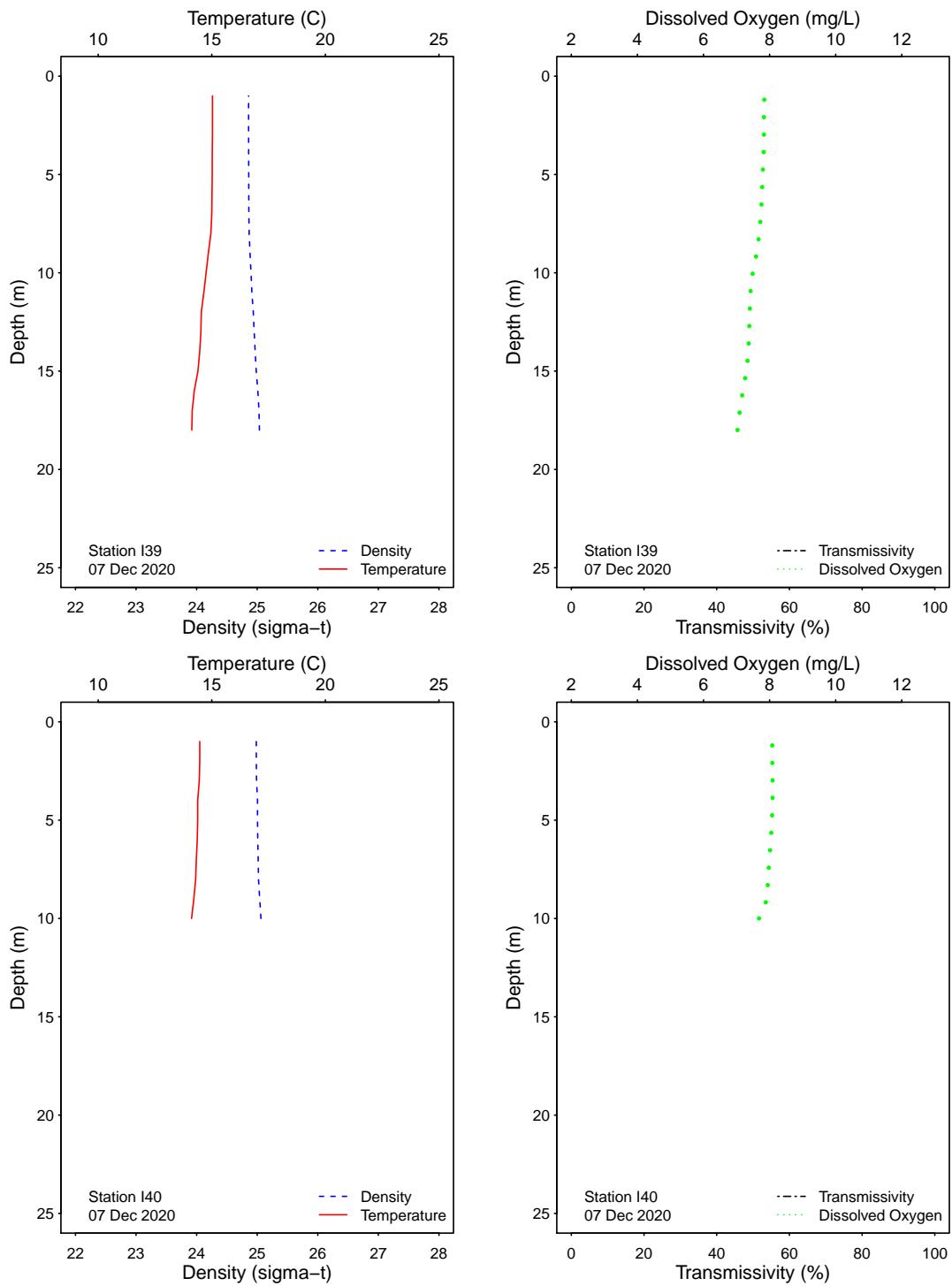


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

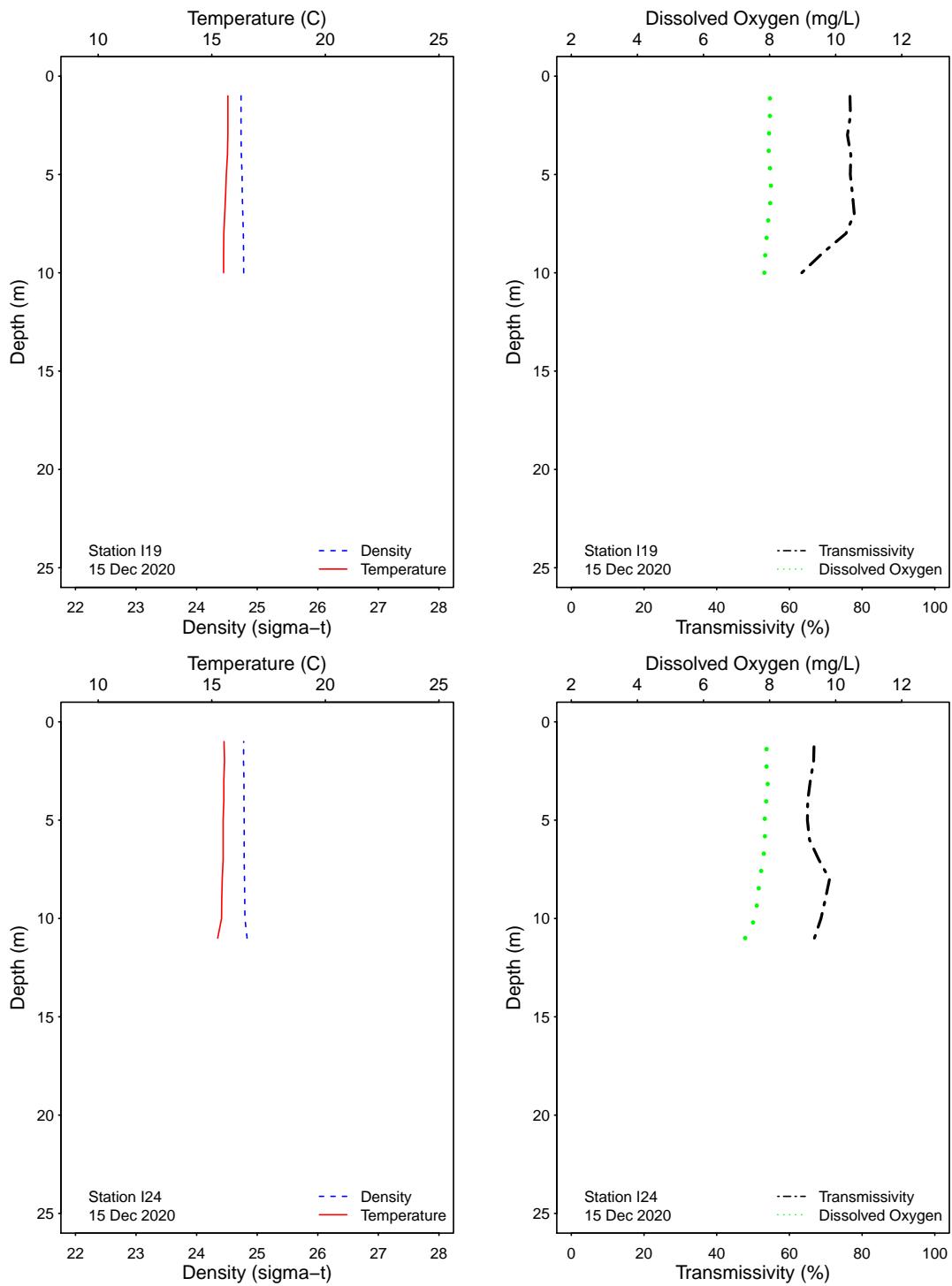


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

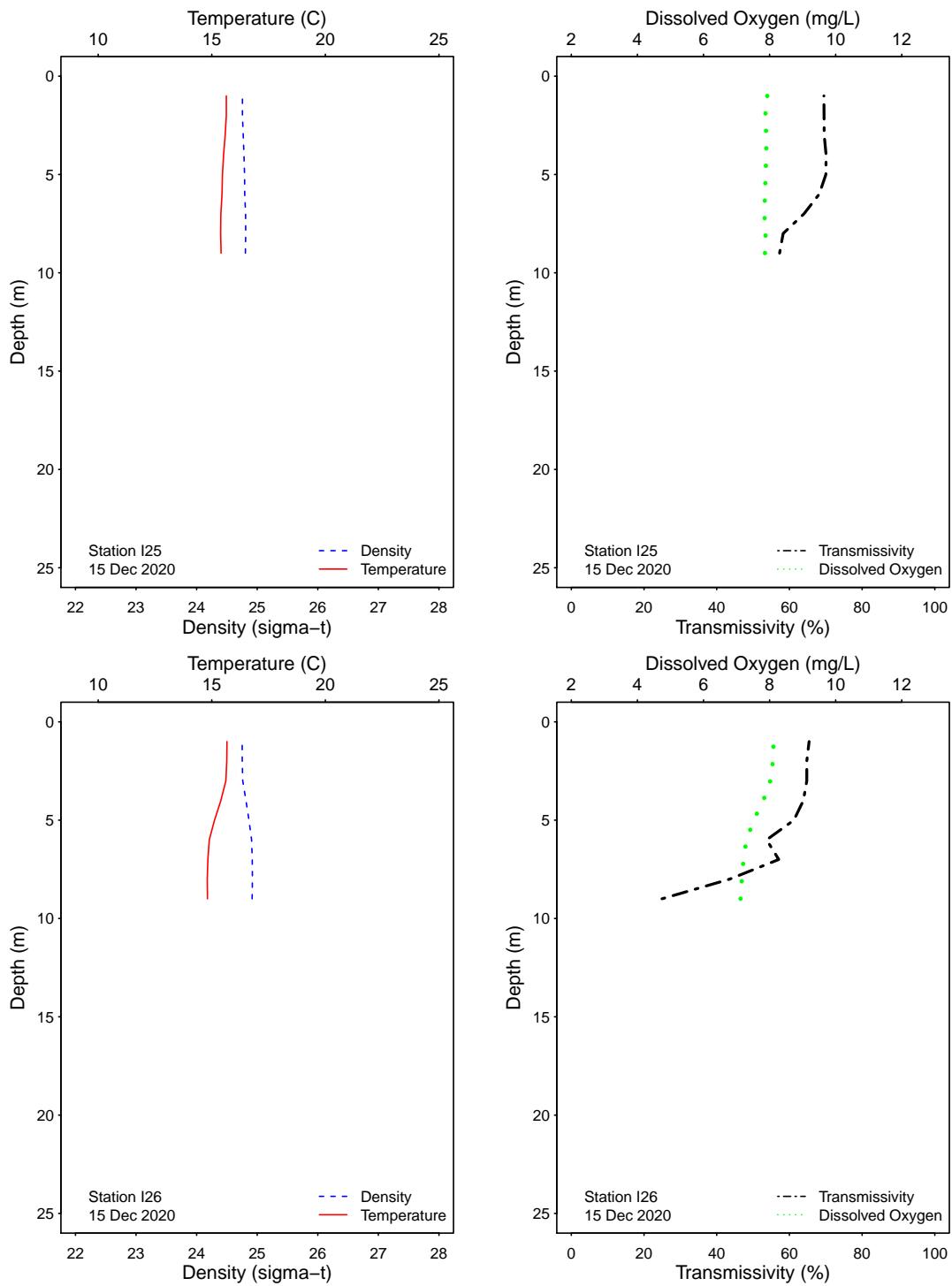


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

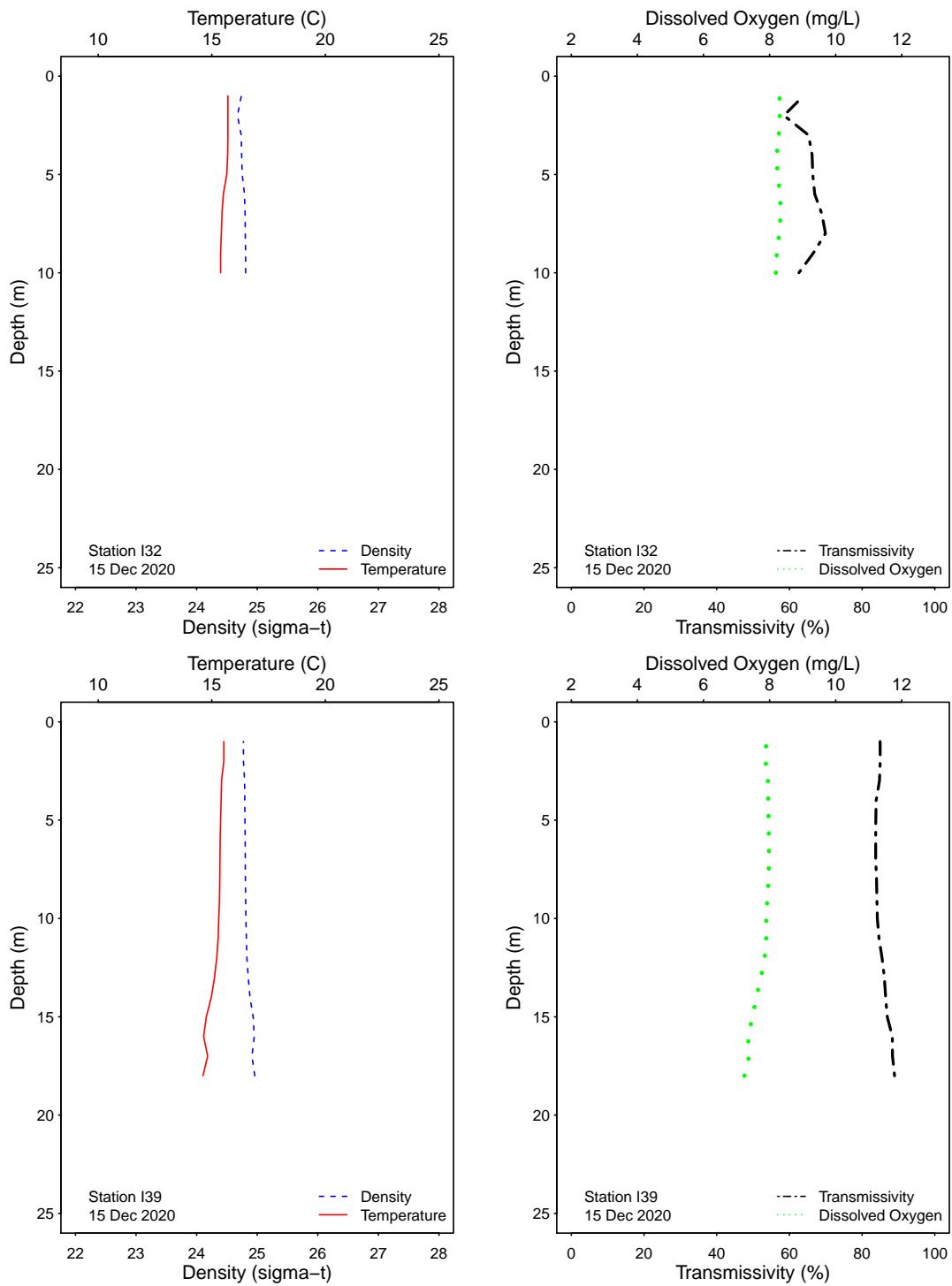


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

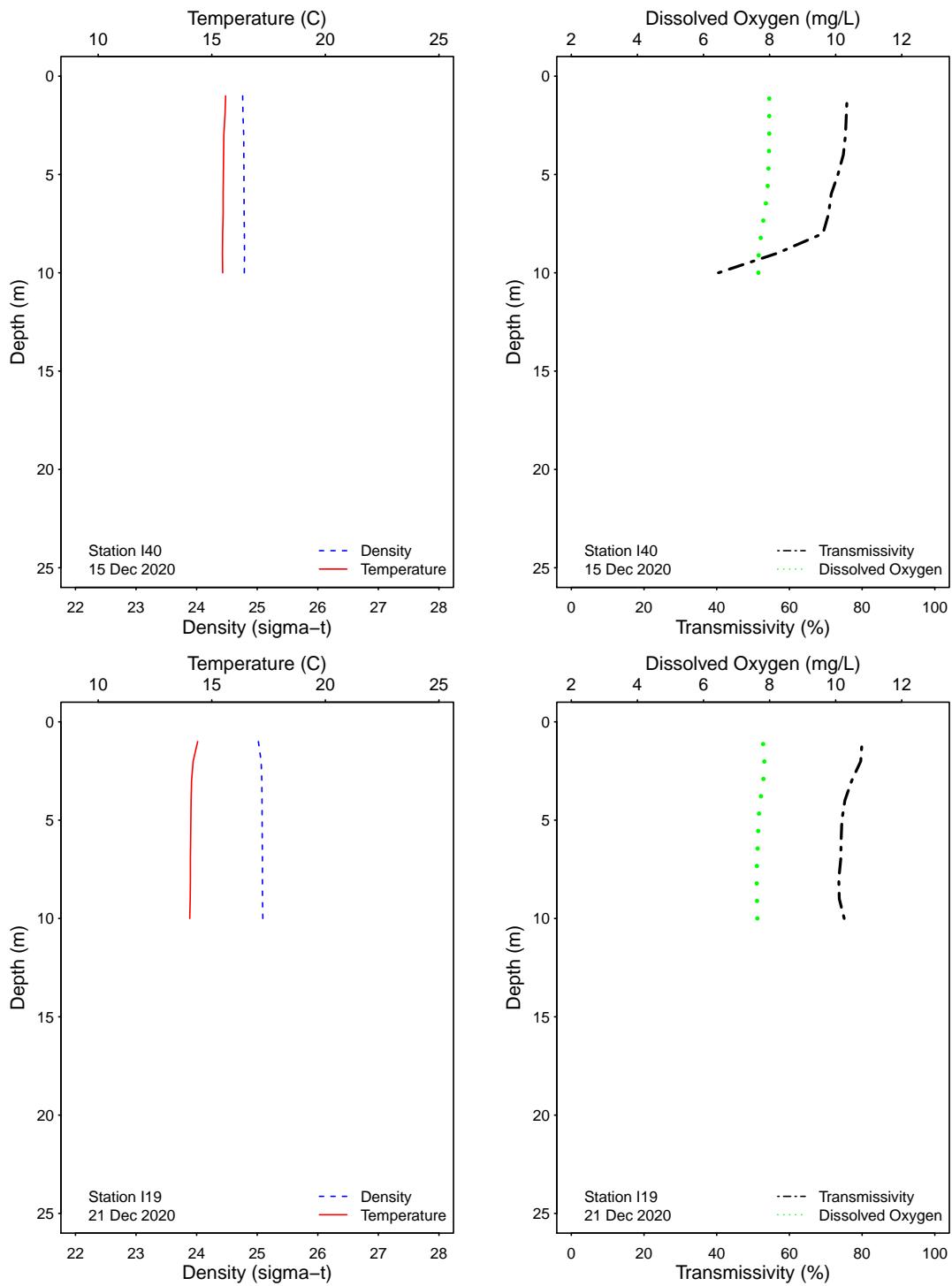


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

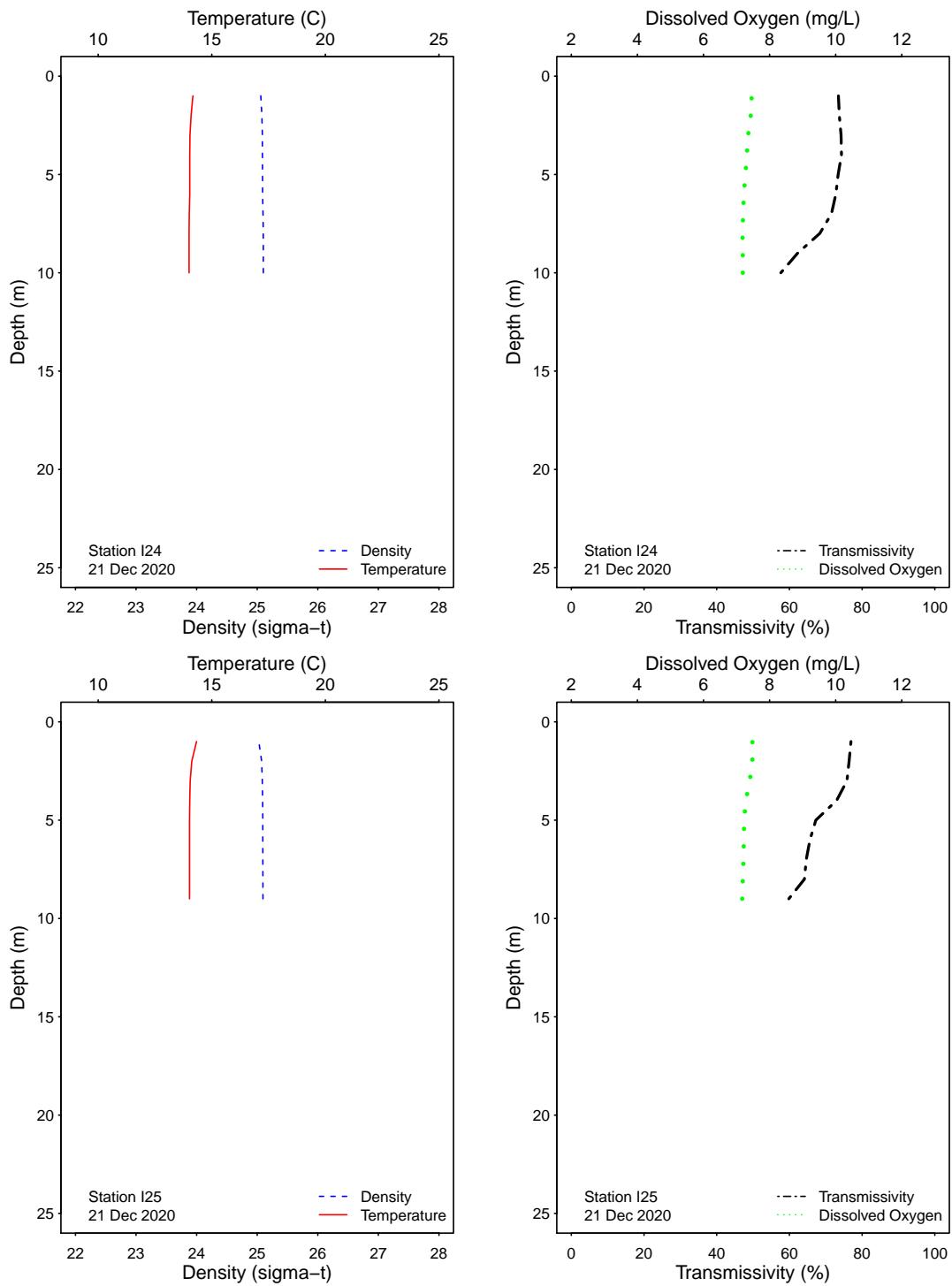


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

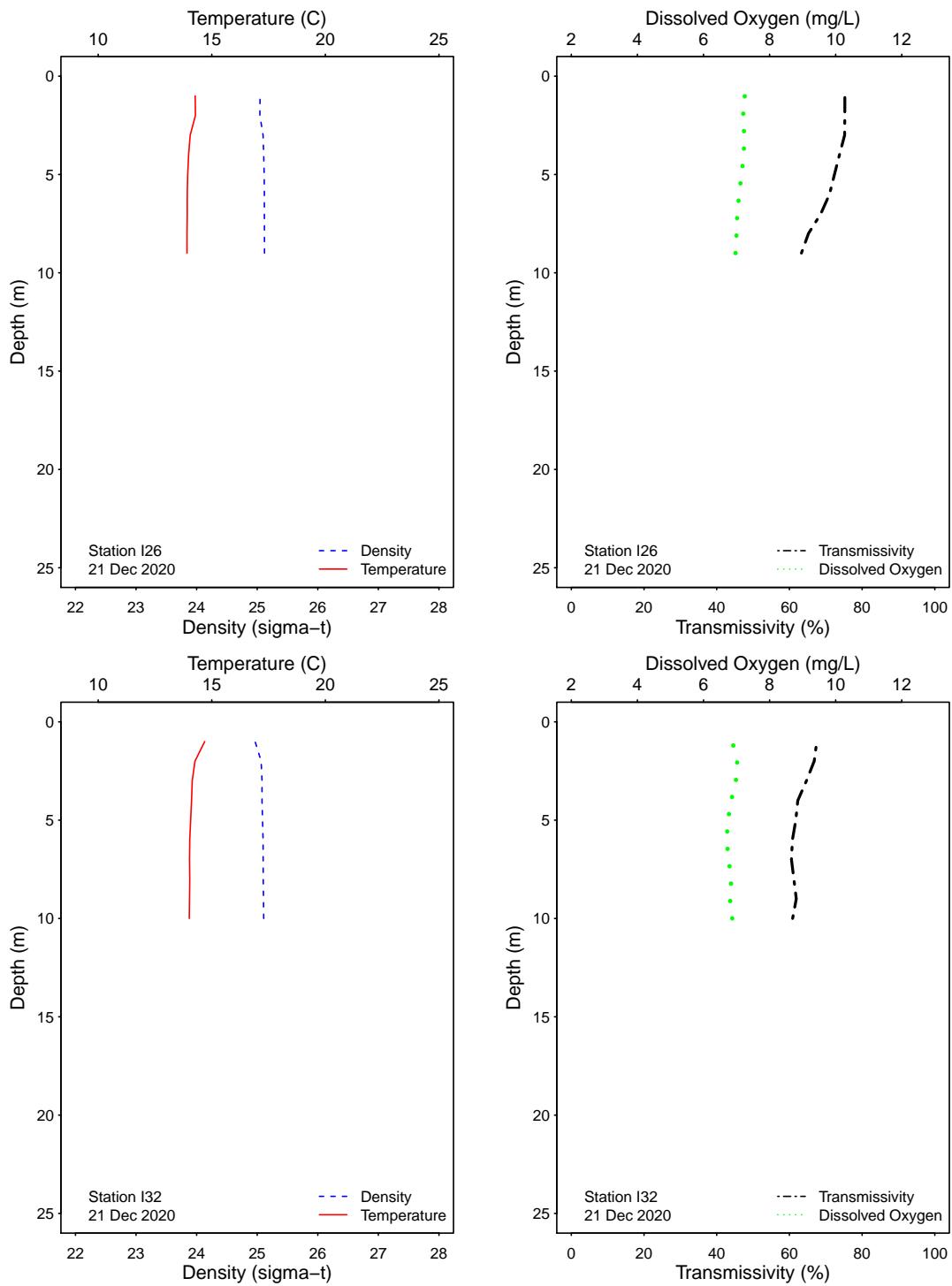


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

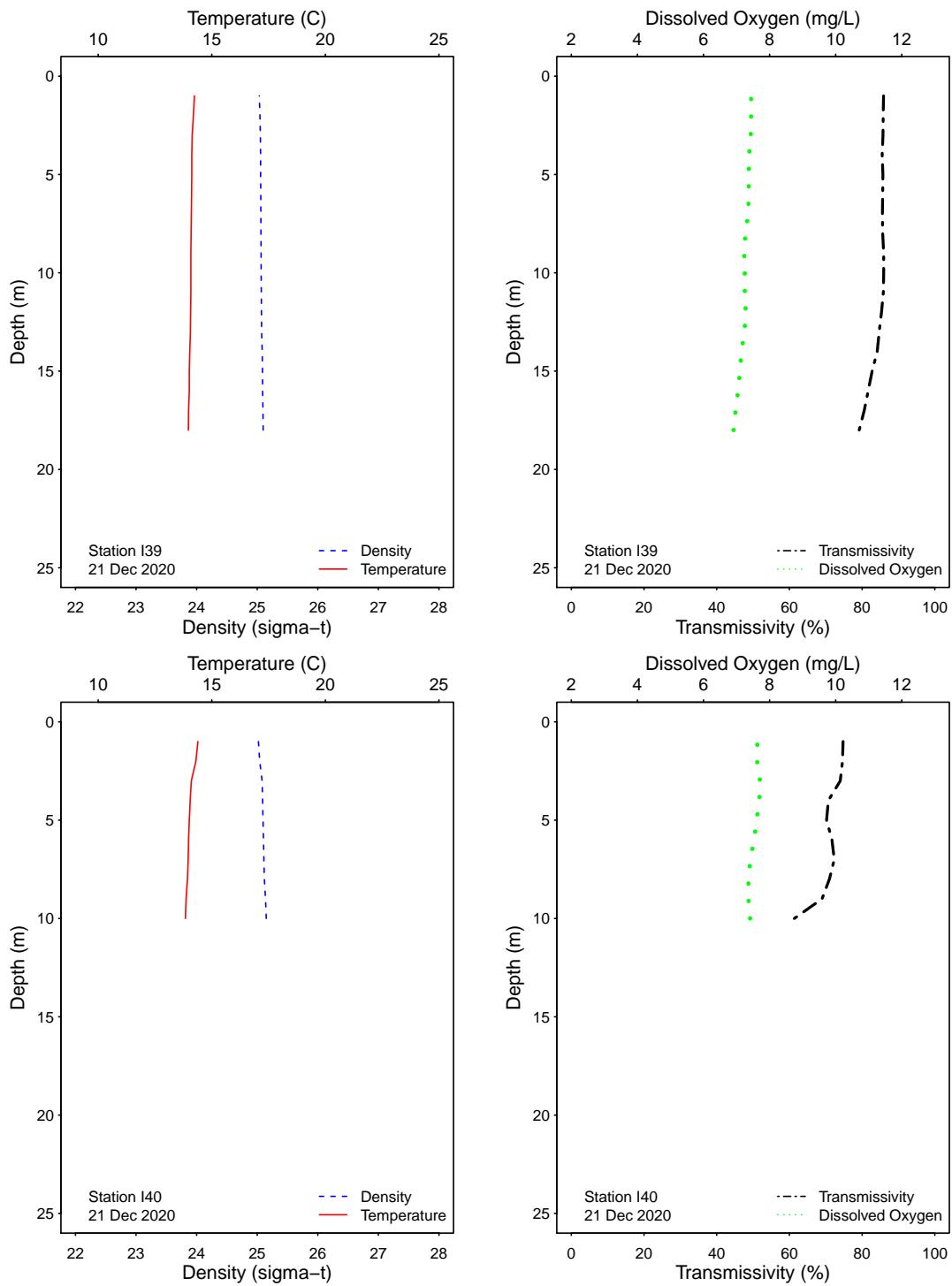


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

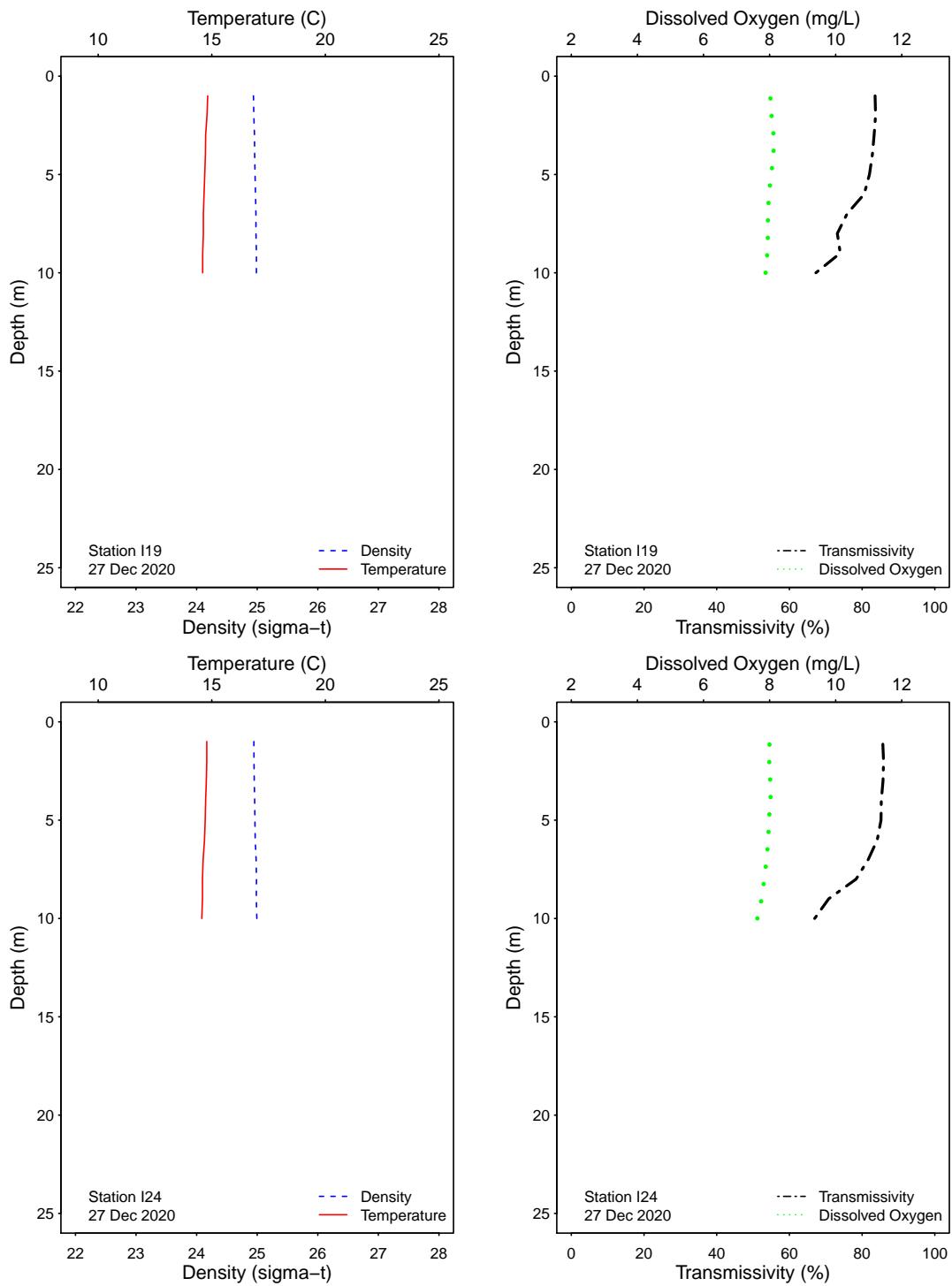


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

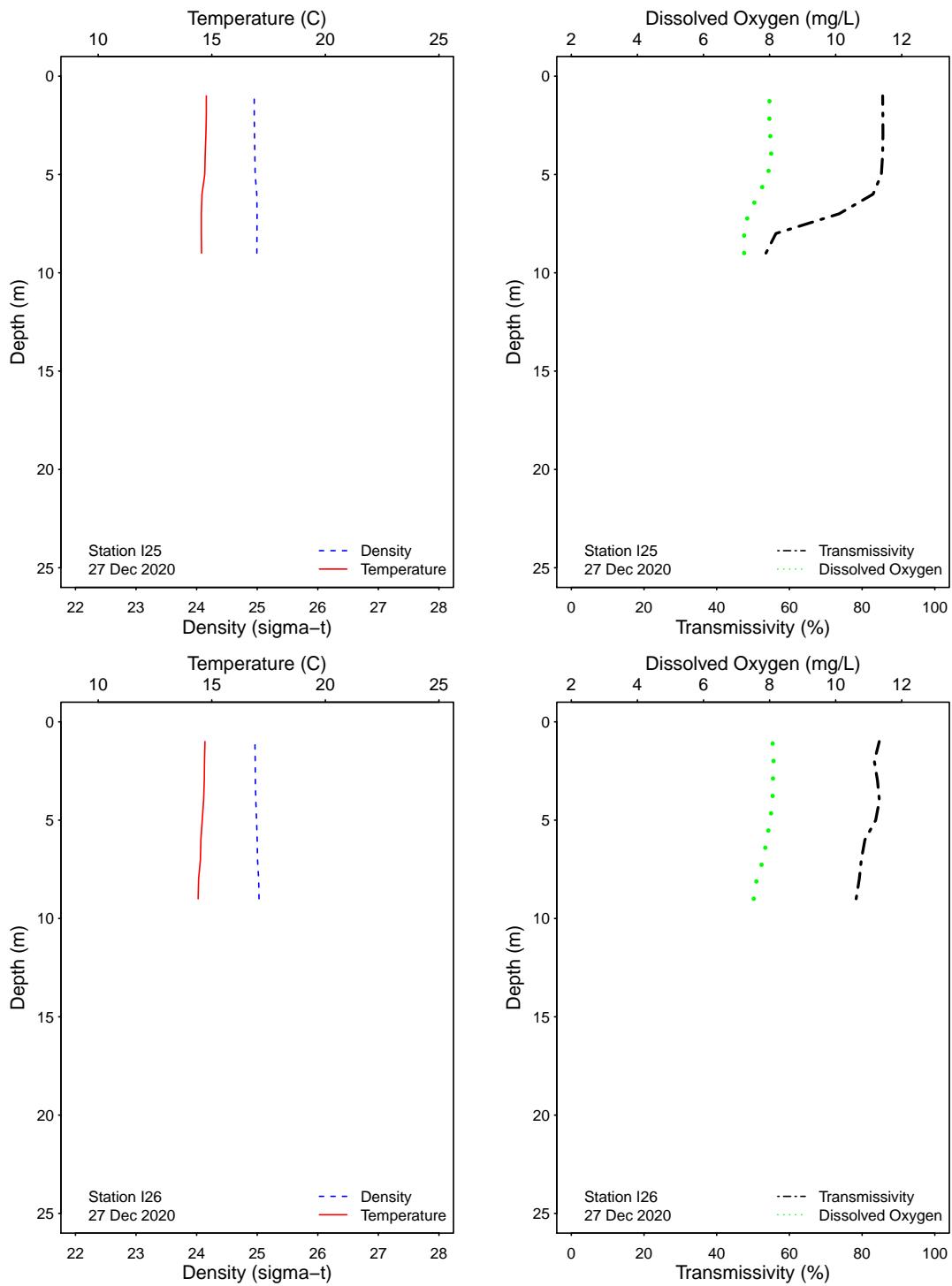


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

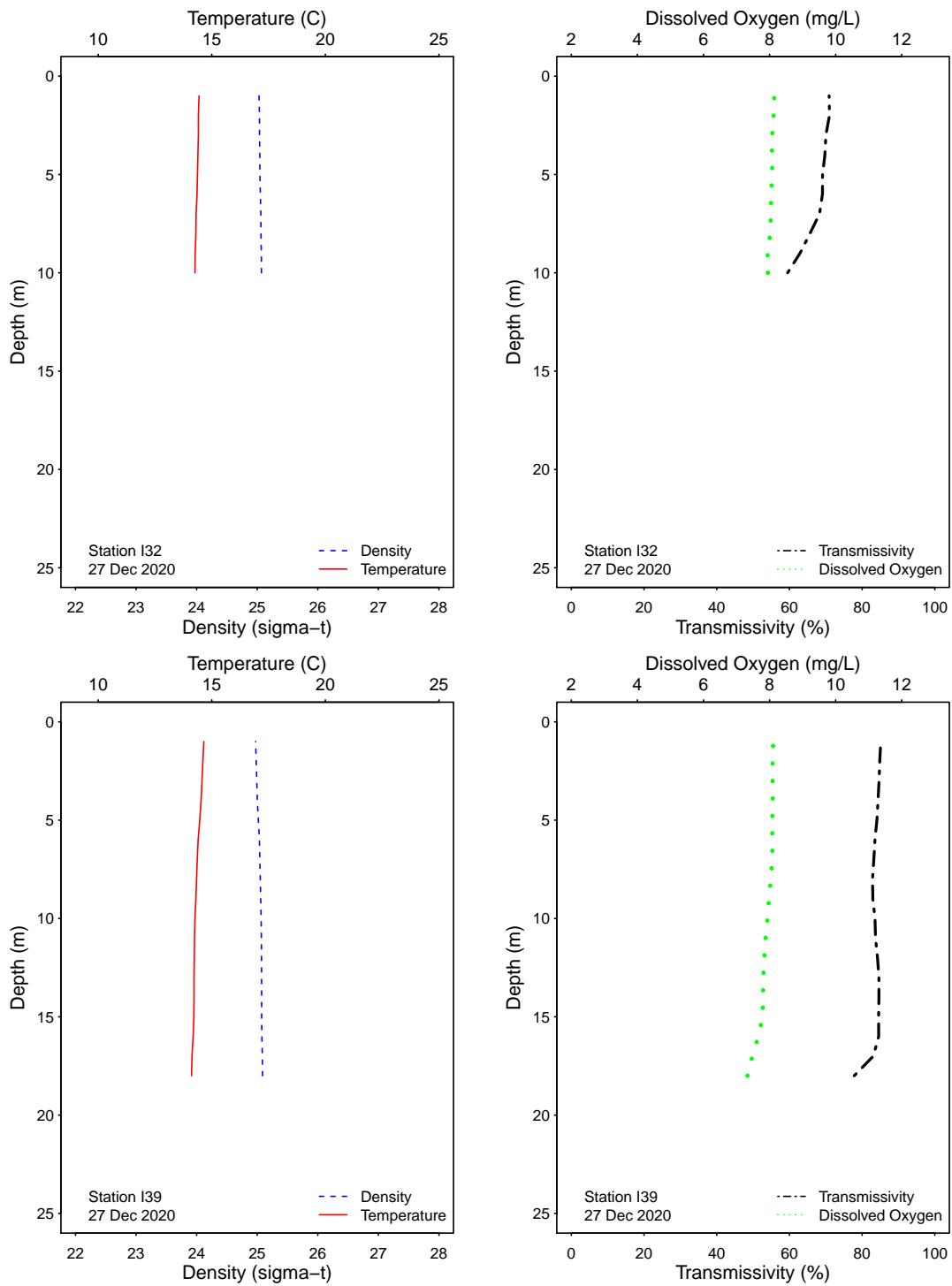


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

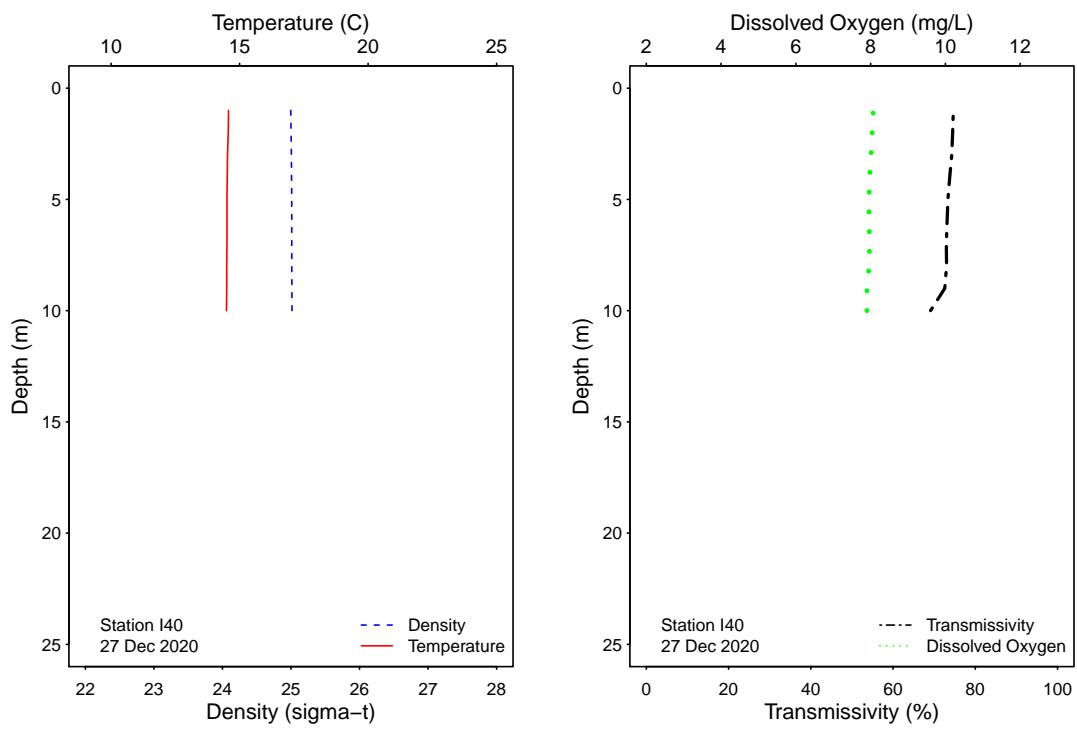


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

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

Station	Date	Depth	Analyst	Procedure	Total	Fecal	Enter
I19	01 Dec 2020	6	JF	LAB DUPLICATE	<20	<2	<2
I19	07 Dec 2020	6	JF	LAB DUPLICATE	<2	<2	<2
I19	15 Dec 2020	6	AE	LAB DUPLICATE	<2	<2	<2
I19	21 Dec 2020	6	JF	LAB DUPLICATE	2e	4e	4e
I19	27 Dec 2020	6	BS	LAB DUPLICATE	6e	2e	<2
I40	01 Dec 2020	6	JF	LAB DUPLICATE	<20	<2	<2
I40	07 Dec 2020	6	JF	LAB DUPLICATE	<2	<2	<2
I40	15 Dec 2020	6	JF	LAB DUPLICATE	<2	<2	<2
I40	21 Dec 2020	6	JF	LAB DUPLICATE	<2	<2	<2
I40	27 Dec 2020	6	BS	LAB DUPLICATE	2e	2e	2e
S12	01 Dec 2020		AE	FIELD DUPLICATE	<200	6e	4e
S12	01 Dec 2020		AE	LAB DUPLICATE	40e	2e	6e
S12	08 Dec 2020		AE	FIELD DUPLICATE	<2	<2	<2
S12	08 Dec 2020		JF	LAB DUPLICATE	<2	<2	2e
S12	15 Dec 2020		AE	FIELD DUPLICATE	<200	6e	24e
S12	15 Dec 2020		AE	LAB DUPLICATE	20e	18e	40
S12	22 Dec 2020		JF	FIELD DUPLICATE	<2	<2	<2
S12	22 Dec 2020		JF	LAB DUPLICATE	<2	<2	<2
S12	29 Dec 2020		JF	FIELD DUPLICATE	<20	4e	8e
S12	29 Dec 2020		JF	LAB DUPLICATE	40e	4e	10e

ns = not sampled

ND = no data

APPENDIX B

New 2019 Ocean Plan Water Quality Objectives

Shore Stations

Table B.1

Summary of compliance with the Ocean Plan's 6-week 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 6 weeks unless otherwise noted (*). Values >30 CFU/100 mL exceed the standard.

Date	S4	S5	S6	S8	S9	S10	S11	S12
01 Dec 2020	8	17	3	4	3	9	5	4
02 Dec 2020	8	17	3	4	3	9	5	4
03 Dec 2020	8	17	3	4	3	9	5	4
04 Dec 2020	8	17	3	4	3	9	5	4
05 Dec 2020	8	17	3	4	3	9	5	4
06 Dec 2020	8	17	3	4	3	9	5	4
07 Dec 2020	8	17	3	4	3	9	5	4
08 Dec 2020	8	17	3	4	3	12	4	3
09 Dec 2020	8	17	3	4	3	12	4	3
10 Dec 2020	8	17	3	4	3	12	4	3
11 Dec 2020	8	17	3	4	3	12	4	3
12 Dec 2020	8	17	3	4	3	12	4	3
13 Dec 2020	8	17	3	4	3	12	4	3
14 Dec 2020	8	17	3	4	3	12	4	3
15 Dec 2020	6	23	6	5	5	10	6	4
16 Dec 2020	6	23	6	5	5	10	6	4
17 Dec 2020	6	23	6	5	5	10	6	4
18 Dec 2020	6	23	6	5	5	10	6	4
19 Dec 2020	6	23	6	5	5	10	6	4
20 Dec 2020	6	23	6	5	5	10	6	4
21 Dec 2020	6	23	6	5	5	10	6	4
22 Dec 2020	3	12	5	5	5	4	4	4
23 Dec 2020	3	12	5	5	5	4	4	4
24 Dec 2020	2	9	5	5	5	3	4	4
25 Dec 2020	2	9	5	5	5	3	4	4
26 Dec 2020	2	9	5	5	5	3	4	4
27 Dec 2020	2	9	5	5	5	3	4	4
28 Dec 2020	2	9	5	5	5	3	4	4
29 Dec 2020	4	11	6	4	6	4	6	5
30 Dec 2020	4	11	6	4	6	4	6	5
31 Dec 2020	4	11	6	4	6	4	6	5

* Geometric mean calculated using n<5

Table B.2

Summary of compliance at the SBOO shore stations with the Ocean Plan's Statistical Threshold Value standard for *Enterococcus* bacteria, which states that *Enterococcus* density shall not exceed 110 CFU/100 mL in more than 10% of samples per month.

Date	S4	S5	S6	S8	S9	S10	S11	S12
December	IC	IC	IC	IC	IC	IC	IC	IC

IC = In Compliance

E = Exceedance

ns = not sampled

ND = no data

Kelp Stations

Table B.3

Summary of compliance with the Ocean Plan's 6-week 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 6 weeks unless otherwise noted (*). Values >30 CFU/100 mL exceed the standard.

Date	I19	I24	I25	I26	I32	I39	I40
01 Dec 2020	3	2	3	2	2	2	2
02 Dec 2020	3	2	3	2	2	2	2
03 Dec 2020	3	2	3	2	2	2	2
04 Dec 2020	3	2	3	2	2	2	2
05 Dec 2020	3	2	3	2	2	2	2
06 Dec 2020	3	2	3	2	2	2	2
07 Dec 2020	3	2	3	2	2	2	2
08 Dec 2020	3	2	3	2	2	2	2
09 Dec 2020	3	2	3	2	2	2	2
10 Dec 2020	3	2	3	2	2	2	2
11 Dec 2020	3	2	3	2	2	2	2
12 Dec 2020	3	2	3	2	2	2	2
13 Dec 2020	3	2	3	2	2	2	2
14 Dec 2020	2	2	3	2	2	2	2
15 Dec 2020	2	2	3	2	2	2	2
16 Dec 2020	2	2	3	2	2	2	2
17 Dec 2020	2	2	3	2	2	2	2
18 Dec 2020	2	2	3	2	2	2	2
19 Dec 2020	2	2	3	2	2	2	2
20 Dec 2020	2	2	3	2	2	2	2
21 Dec 2020	2	2	3	2	2	2	2
22 Dec 2020	2	2	3	2	2	2	2
23 Dec 2020	2	2	2	2	2	2	2
24 Dec 2020	2	2	2	2	2	2	2
25 Dec 2020	2	2	2	2	2	2	2
26 Dec 2020	2	2	2	2	2	2	2
27 Dec 2020	2	2	2	2	2	3	2
28 Dec 2020	2	2	2	2	2	3	2
29 Dec 2020	2	2	2	2	2	3	2
30 Dec 2020	2	2	2	2	2	3	2
31 Dec 2020	2	2	2	2	2	3	2

* Geometric mean calculated using n<5

Table B.4

Summary of compliance at the SBOO kelp stations with the Ocean Plan's Statistical Threshold Value standard for *Enterococcus* bacteria, which states that *Enterococcus* density shall not exceed 110 CFU/100 mL in more than 10% of samples per month.

Date	I19	I24	I25	I26	I32	I39	I40
December	IC						

IC = In Compliance

E = Exceedance

ns = not sampled

ND = no data