

SOUTH BAY OCEAN OUTFALL MONTHLY RECEIVING WATERS MONITORING REPORT

SOUTH BAY WATER RECLAMATION PLANT

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

JANUARY 2022

Environmental Monitoring and Technical Services
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February 28, 2022

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

Attention: POTW Compliance Unit

Dear Mr. Gibson:

Enclosed is the January 2022 Monthly Receiving Waters Monitoring Report for the South Bay Ocean Outfall, South Bay Water Reclamation Plant as required per Order No. R9-2021-0011, 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. R9-2021-0001, NPDES Permit No. CA0108928).

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

Sincerely,



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

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. R9-2021-0011, NPDES Permit No. CA0109045, for the South Bay Water Reclamation Plant (SBWRP), South Bay Ocean Outfall (SBOO). This report includes receiving waters monitoring data collected from all shore, kelp and offshore stations specified in the above order. Data for influent and effluent monitoring activities for the SBWRP are presented in separate reports.

MATERIALS AND METHODS

Shore Stations

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

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

Kelp Bed Stations

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

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

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

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

Offshore Stations

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

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

Bacteriological Reporting and Quality Assurance

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

Results of the bacteriological analysis of seawater samples collected from each of the shore, kelp bed, and offshore stations located within State waters are assessed relative to the water-contact standards specified in the 2019 California Ocean Plan (Ocean Plan). The six standards are defined as follows:

Water-Contact Objectives

Fecal coliform:

- (1) The 30-day geometric mean (GM) of fecal coliform density not to exceed 200 CFU/100 mL, calculated based on the five most recent samples from each site
- (2) The single sample maximum (SSM) not to exceed 400 CFU/100 mL

Enterococci:

- (1) The six-week rolling GM of *Enterococci* not to exceed 30 CFU/100 mL, calculated weekly
- (2) The statistical threshold value (STV) of 110 CFU/100 mL not to be exceeded by more than 10 percent of the samples collected in a calendar month, calculated in a static manner

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.

Shellfish Harvesting Standards

Total coliform:

- (1) The median total coliform density shall not exceed 70 CFU/100 mL
- (2) The STV of 230 CFU/100 mL not to be exceeded by more than 10 percent of the samples collected in a calendar month, calculated in a static manner

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 2022 Quality Assurance Report, which will be completed in March 2023.

SUMMARY OF RESULTS

➤ 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 January, six of the eight shore stations located north of the border were out of compliance with 2019 California Ocean Plan (Ocean Plan) water contact standards on one or more days as follows:
 - The 30-day geometric mean standard for fecal coliform was exceeded at stations S4, S5, and S10.
 - The single sample maximum (SSM) standard for fecal coliform was exceeded at stations S4, S5, S6, S10, and S11.
 - The 6-week geometric mean standard for *Enterococcus* was exceeded at stations S4, S5, S10, and S11.
 - The statistical threshold value (STV) standard for *Enterococcus* was exceeded at stations S4, S5, S6, S10, and S11.

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

- The 30-day running median standard for total coliform was exceeded at stations S4, S5, S6, S10, and S11.
 - The STV standard for total coliform was exceeded at stations S4, S5, S6, S10, S11, and S12.
- A sewage-like odor was observed at stations S5 and S6 on one or more days in January.
- 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 January 4, 10, 18, 24, and 31.
- During January, each of the seven kelp stations was out of compliance with 2019 Ocean Plan water contact standards on one or more days as follows:
 - The 30-day geometric mean standard for fecal coliform was exceeded at stations I19 and I40.
 - The SSM standard for fecal coliform was exceeded at stations I19, I24, I25, and I40.
 - The 6-week geometric mean standard for *Enterococcus* was exceeded at stations I19, I24 and I40.
 - The STV standard for *Enterococcus* was exceeded at stations I19, I24, I25, I39, and I40.
 - The 30-day running median standard for total coliform was exceeded at stations I19, I24, I25, I26, I32, I39, and I40.
 - The STV standard for total coliforms was exceeded at stations I19, I24, I25, I26, I32, I39, and I40.
- Water column temperatures ranged from 13.92 to 15.58°C. The difference between surface and bottom waters ranged from 0.09 to 0.81°C.
- Concentrations of chlorophyll *a* ranged from 0.80 to 21.71 µg/L at the kelp bed stations.
- A sewage-like odor was observed at station I40 on one or more days in January.

➤ **Offshore Water Quality Sampling**

- Quarterly sampling was not conducted during January at the offshore stations. The next quarterly sampling is scheduled for February 2022.



TABLES AND FIGURES

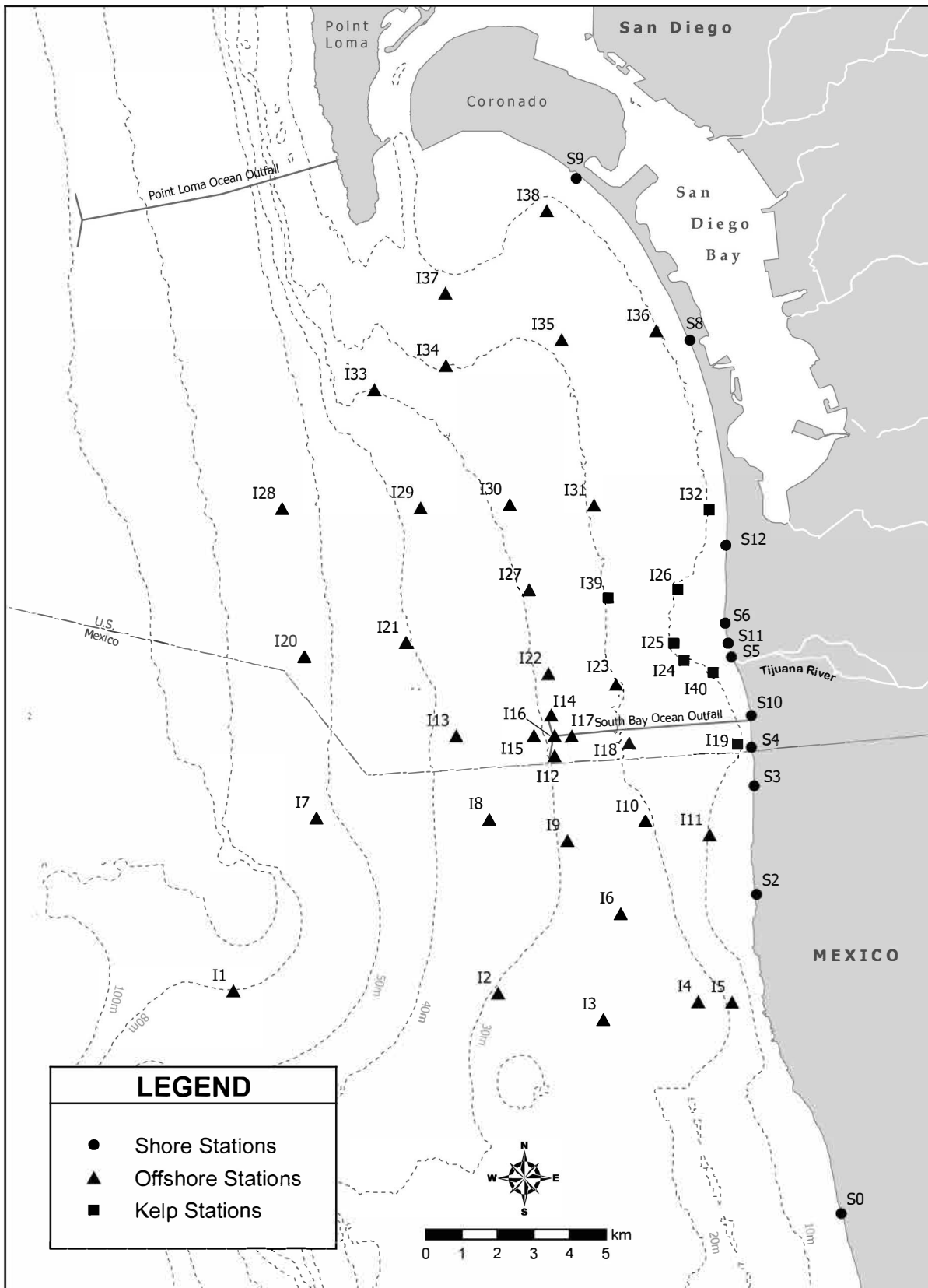


Figure 1.1 Station Map

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Shore Stations

Table 2.1

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

Date	S4	S5	S6	S8	S9	S10	S11	S12
01 Jan 2022	860	177	24	6	7	936	34	12
02 Jan 2022	860	177	24	6	7	936	34	12
03 Jan 2022	860	177	24	6	7	936	34	12
04 Jan 2022	706	204	15	5	5	790	19	8
05 Jan 2022	706	204	15	5	5	790	19	8
06 Jan 2022	452	648	24	5	6	782	28	10
07 Jan 2022	452	648	24	5	6	782	28	10
08 Jan 2022	452	648	24	5	6	782	28	10
09 Jan 2022	452	648	24	5	6	782	28	10
10 Jan 2022	452	648	24	5	6	782	28	10
11 Jan 2022	384	1162	15	4	5	646	17	7
12 Jan 2022	384	1162	15	4	5	646	17	7
13 Jan 2022	324	1579	7	2	3	579	9	3
14 Jan 2022	324	1579	7	2	3	579	9	3
15 Jan 2022	324	1579	7	2	3	579	9	3
16 Jan 2022	324	1579	7	2	3	579	9	3
17 Jan 2022	324	1579	7	2	3	579	9	3
18 Jan 2022	466	1862	18	3	3	646	23	7
19 Jan 2022	466	1862	18	3	3	646	23	7
20 Jan 2022	959	3696	16	3	3	1095	18	7
21 Jan 2022	959	3696	16	3	3	1095	18	7
22 Jan 2022	959	3696	16	3	3	1095	18	7
23 Jan 2022	959	3696	16	3	3	1095	18	7
24 Jan 2022	959	3696	16	3	3	1095	18	7
25 Jan 2022	1589	4678	34	3	2	1768	34	6
26 Jan 2022	1589	4678	34	3	2	1768	34	6
27 Jan 2022	1113	3696	39	3	2	1095	39	5
28 Jan 2022	1113	3696	39	3	2	1095	39	5
29 Jan 2022	1113	3696	39	3	2	1095	39	5
30 Jan 2022	1113	3696	39	3	2	1095	39	5
31 Jan 2022	1113	3696	39	3	2	1095	39	5

* Geometric mean calculated using n<5

Table 2.2

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
04 Jan 2022	IC	IC	IC	IC	IC	IC	IC	IC
11 Jan 2022	IC	E	IC	IC	IC	IC	IC	IC
18 Jan 2022	E	E	E	IC	IC	E	E	IC
25 Jan 2022	E	E	E	IC	IC	E	E	IC

IC = In Compliance

E = Exceedance

ns = not sampled

ND = no data

Table 2.3

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 Jan 2022	100	38	19	4	4	130	21	9
02 Jan 2022	100	38	19	4	4	130	21	9
03 Jan 2022	100	38	19	4	4	130	21	9
04 Jan 2022	155	72	21	4	4	193	21	9
05 Jan 2022	155	72	21	4	4	193	21	9
06 Jan 2022	155	72	21	4	4	193	21	9
07 Jan 2022	155	72	21	4	4	193	21	9
08 Jan 2022	155	72	21	4	4	193	21	9
09 Jan 2022	155	72	21	4	4	193	21	9
10 Jan 2022	155	72	21	4	4	193	21	9
11 Jan 2022	293	308	13	4	4	348	15	9
12 Jan 2022	293	308	13	4	4	348	15	9
13 Jan 2022	293	308	13	4	4	348	15	9
14 Jan 2022	293	308	13	4	4	348	15	9
15 Jan 2022	293	308	13	4	4	348	15	9
16 Jan 2022	293	308	13	4	4	348	15	9
17 Jan 2022	293	308	13	4	4	348	15	9
18 Jan 2022	226	792	30	4	2	314	31	16
19 Jan 2022	226	792	30	4	2	314	31	16
20 Jan 2022	226	792	30	4	2	314	31	16
21 Jan 2022	226	792	30	4	2	314	31	16
22 Jan 2022	226	792	30	4	2	314	31	16
23 Jan 2022	226	792	30	4	2	314	31	16
24 Jan 2022	226	792	30	4	2	314	31	16
25 Jan 2022	323	1663	23	2	2	476	23	11
26 Jan 2022	323	1663	23	2	2	476	23	11
27 Jan 2022	323	1663	23	2	2	476	23	11
28 Jan 2022	323	1663	23	2	2	476	23	11
29 Jan 2022	323	1663	23	2	2	476	23	11
30 Jan 2022	323	1663	23	2	2	476	23	11
31 Jan 2022	323	1663	23	2	2	476	23	11

* Geometric mean calculated using n<5

Table 2.4

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
January	E	E	E	IC	IC	E	E	IC

IC = In Compliance

E = Exceedance

ns = not sampled

ND = no data

Table 2.5

Summary of compliance with the Ocean Plan's 30-day Median standard for total coliform bacteria at the SBOO shore stations. Data are based on the median of the five most recent samples from each site over the previous 30 days unless otherwise noted (*). Values >70 CFU/100 mL exceed the standard.

Date	S4	S5	S6	S8	S9	S10	S11	S12
01 Jan 2022	10500	3600	630	40	20	6900	900	33
02 Jan 2022	10500	3600	630	40	20	6900	900	33
03 Jan 2022	10500	3600	630	40	20	6900	900	33
04 Jan 2022	5000	3800	60	20	20	6000	200	6
05 Jan 2022	5000	3800	60	20	20	6000	200	6
06 Jan 2022	3200	3800	630	34	12	4500	900	33
07 Jan 2022	3200	3800	630	34	12	4500	900	33
08 Jan 2022	3200	3800	630	34	12	4500	900	33
09 Jan 2022	3200	3800	630	34	12	4500	900	33
10 Jan 2022	3200	3800	630	34	12	4500	900	33
11 Jan 2022	1400	3800	60	8	4	2400	200	6
12 Jan 2022	1400	3800	60	8	4	2400	200	6
13 Jan 2022	1400	9900	40	7	3	1800	105	5
14 Jan 2022	1400	9900	40	7	3	1800	105	5
15 Jan 2022	1400	9900	40	7	3	1800	105	5
16 Jan 2022	1400	9900	40	7	3	1800	105	5
17 Jan 2022	1400	9900	40	7	3	1800	105	5
18 Jan 2022	1400	6800	60	8	4	2400	200	6
19 Jan 2022	1400	6800	60	8	4	2400	200	6
20 Jan 2022	6200	11400	40	17	11	4300	105	32
21 Jan 2022	6200	11400	40	17	11	4300	105	32
22 Jan 2022	6200	11400	40	17	11	4300	105	32
23 Jan 2022	6200	11400	40	17	11	4300	105	32
24 Jan 2022	6200	11400	40	17	11	4300	105	32
25 Jan 2022	11000	16000	60	8	2	6200	200	16
26 Jan 2022	11000	16000	60	8	2	6200	200	16
27 Jan 2022	6200	11400	610	5	2	4300	905	10
28 Jan 2022	6200	11400	610	5	2	4300	905	10
29 Jan 2022	6200	11400	610	5	2	4300	905	10
30 Jan 2022	6200	11400	610	5	2	4300	905	10
31 Jan 2022	6200	11400	610	5	2	4300	905	10

* Median calculated using n<5

Table 2.6

Summary of compliance at the SBOO shore stations with the Ocean Plan's Statistical Threshold Value standard for total coliform bacteria, which states that total coliform density shall not exceed 230 CFU/100 mL in more than 10% of samples per month.

Date	S4	S5	S6	S8	S9	S10	S11	S12
January	E	E	E	IC	IC	E	E	E

IC = In Compliance

E = Exceedance

ns = not sampled

ND = no data

Table 2.7

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

Station	Date	Time	Total	Fecal	Entero
S0	04 Jan 2022	755	>16000	5400	8600
S0	11 Jan 2022	835	800e	64	66
S0	18 Jan 2022	855	1600	380e	640
S0	25 Jan 2022	945	>16000	6200	6000
S2	04 Jan 2022	835	240e	34e	42
S2	11 Jan 2022	930	200e	70	40
S2	18 Jan 2022	955	1600e	340e	360e
S2	25 Jan 2022	1035	4600	480	110
S3	04 Jan 2022	825	2000e	92	120e
S3	11 Jan 2022	910	1200e	300e	92
S3	18 Jan 2022	935	5800	1400e	600
S3	25 Jan 2022	1015	13000	4600	720
S4	04 Jan 2022	928	1400e	320e	110
S4	11 Jan 2022	914	1400	200e	90
S4	18 Jan 2022	1018	11000	2000	380
S4	25 Jan 2022	843	>16000	>12000	9400
S5	04 Jan 2022	1034	3800e	360e	96
S5	11 Jan 2022	1015	>16000	>12000	>12000
S5	18 Jan 2022	908	6800	3600	580
S5	25 Jan 2022	918	>16000	>12000	>12000
S6	04 Jan 2022	1056	6e	<2	4e
S6	11 Jan 2022	1028	<20	<2	2e
S6	18 Jan 2022	929	4200	860	340
S6	25 Jan 2022	940	1200e	680	72
S8	04 Jan 2022	826	8e	<2	2e
S8	11 Jan 2022	1137	<2	<2	<2
S8	18 Jan 2022	819	26e	14e	2e
S8	25 Jan 2022	1034	<2	<2	<2
S9	04 Jan 2022	758	2e	<2	<2
S9	11 Jan 2022	1205	<2	<2	<2
S9	18 Jan 2022	804	40e	2e	2e
S9	25 Jan 2022	1101	<2	<2	<2
S10	04 Jan 2022	915	1200e	400	64
S10	11 Jan 2022	903	2400e	300e	140e
S10	18 Jan 2022	1043	6200	1000	280
S10	25 Jan 2022	830	>16000	>12000	>12000
S11	04 Jan 2022	1040	6e	<2	<2
S11	11 Jan 2022	1023	10e	<2	2e
S11	18 Jan 2022	921	8600	1200	660
S11	25 Jan 2022	927	1800e	480	88
S12	04 Jan 2022	1011	<2	<2	2e
S12	11 Jan 2022	1038	4e	<2	<2
S12	18 Jan 2022	838	720	96	56

Station	Date	Time	Total	Fecal	Entero
S12	25 Jan 2022	953	16e	<2	22e

ns = not sampled

ND = no data

Table 2.8

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

Station	Date	Parameter	Value
S0	04 Jan 2022	Arrive Time	755
S0	04 Jan 2022	Weather	Sunny
S0	04 Jan 2022	Wind Speed (kts)	3.9
S0	04 Jan 2022	Wind Dir	S
S0	04 Jan 2022	Animal Life	Dog-2; Seagull-20
S0	04 Jan 2022	Floatables	None
S0	04 Jan 2022	Water Color	Green
S0	04 Jan 2022	Current Direction	S
S0	04 Jan 2022	Water Temp (C)	9
S0	04 Jan 2022	Wave Height Low (ft)	2
S0	04 Jan 2022	High Tide (ft)	6.61
S0	04 Jan 2022	High Tide Time	929
S0	04 Jan 2022	Low Tide (ft)	1.81
S0	04 Jan 2022	Low Tide Time	321
S0	04 Jan 2022	Comments	Kelp; ~ 1L/sec water flowing from storm drain. There were rains in the previous days.
S0	11 Jan 2022	Arrive Time	835
S0	11 Jan 2022	Weather	Sunny
S0	11 Jan 2022	Wind Speed (kts)	8.1
S0	11 Jan 2022	Wind Dir	N
S0	11 Jan 2022	Animal Life	Bird-10
S0	11 Jan 2022	Floatables	None
S0	11 Jan 2022	Water Color	Green
S0	11 Jan 2022	Current Direction	N
S0	11 Jan 2022	Water Temp (C)	15
S0	11 Jan 2022	Wave Height Low (ft)	4
S0	11 Jan 2022	High Tide (ft)	4.78
S0	11 Jan 2022	High Tide Time	426
S0	11 Jan 2022	Low Tide (ft)	0.81
S0	11 Jan 2022	Low Tide Time	1201
S0	11 Jan 2022	Comments	Kelp; 0.5 L/sec water flowing from storm drain; towards the sea; damp
S0	18 Jan 2022	Arrive Time	855
S0	18 Jan 2022	Weather	Cloudy
S0	18 Jan 2022	Wind Speed (kts)	1.3
S0	18 Jan 2022	Wind Dir	S
S0	18 Jan 2022	Animal Life	Bird-20
S0	18 Jan 2022	Floatables	None
S0	18 Jan 2022	Water Color	Green
S0	18 Jan 2022	Current Direction	S
S0	18 Jan 2022	Water Temp (C)	15
S0	18 Jan 2022	Wave Height Low (ft)	3
S0	18 Jan 2022	High Tide (ft)	5.85
S0	18 Jan 2022	High Tide Time	839
S0	18 Jan 2022	Low Tide (ft)	1.95
S0	18 Jan 2022	Low Tide Time	235
S0	18 Jan 2022	Comments	Kelp; 1L/sec water flowing from storm drain
S0	25 Jan 2022	Arrive Time	945
S0	25 Jan 2022	Weather	Sunny
S0	25 Jan 2022	Wind Speed (kts)	7.1
S0	25 Jan 2022	Wind Dir	NE
S0	25 Jan 2022	Animal Life	Bird-10
S0	25 Jan 2022	Floatables	None

Station	Date	Parameter	Value
S0	25 Jan 2022	Water Color	Green
S0	25 Jan 2022	Current Direction	N
S0	25 Jan 2022	Water Temp (C)	11
S0	25 Jan 2022	Wave Height Low (ft)	5
S0	25 Jan 2022	High Tide (ft)	4.52
S0	25 Jan 2022	High Tide Time	215
S0	25 Jan 2022	Low Tide (ft)	1.33
S0	25 Jan 2022	Low Tide Time	927
S0	25 Jan 2022	Comments	Water clear; Trash-0; Kelp; Person/Walker/Jogger-4; 0.5 L/sec water flowing from storm drain
S2	04 Jan 2022	Arrive Time	835
S2	04 Jan 2022	Weather	Sunny
S2	04 Jan 2022	Wind Speed (kts)	2.7
S2	04 Jan 2022	Wind Dir	S
S2	04 Jan 2022	Animal Life	Dog-1; Seagull-20
S2	04 Jan 2022	Floatables	None
S2	04 Jan 2022	Water Color	Green
S2	04 Jan 2022	Current Direction	S
S2	04 Jan 2022	Water Temp (C)	10
S2	04 Jan 2022	Wave Height Low (ft)	5
S2	04 Jan 2022	High Tide (ft)	6.61
S2	04 Jan 2022	High Tide Time	929
S2	04 Jan 2022	Low Tide (ft)	1.81
S2	04 Jan 2022	Low Tide Time	321
S2	04 Jan 2022	Comments	Kelp; High tide. There were rains in the previous days. No flow from storm drain.
S2	11 Jan 2022	Arrive Time	930
S2	11 Jan 2022	Weather	Sunny
S2	11 Jan 2022	Wind Speed (kts)	7.5
S2	11 Jan 2022	Wind Dir	N
S2	11 Jan 2022	Animal Life	Bird-5; Dog-3
S2	11 Jan 2022	Floatables	None
S2	11 Jan 2022	Water Color	Green
S2	11 Jan 2022	Current Direction	N
S2	11 Jan 2022	Water Temp (C)	15
S2	11 Jan 2022	Wave Height Low (ft)	4
S2	11 Jan 2022	High Tide (ft)	4.78
S2	11 Jan 2022	High Tide Time	426
S2	11 Jan 2022	Low Tide (ft)	0.81
S2	11 Jan 2022	Low Tide Time	1201
S2	11 Jan 2022	Comments	Water clear; Trash-0; Kelp; Person/Walker/Jogger-6; No flow from storm drain
S2	18 Jan 2022	Arrive Time	955
S2	18 Jan 2022	Weather	Cloudy
S2	18 Jan 2022	Wind Speed (kts)	2.1
S2	18 Jan 2022	Wind Dir	S
S2	18 Jan 2022	Animal Life	Bird-20; Dog-3
S2	18 Jan 2022	Floatables	None
S2	18 Jan 2022	Water Color	Green
S2	18 Jan 2022	Current Direction	S
S2	18 Jan 2022	Water Temp (C)	15
S2	18 Jan 2022	Wave Height Low (ft)	3
S2	18 Jan 2022	High Tide (ft)	5.85
S2	18 Jan 2022	High Tide Time	839
S2	18 Jan 2022	Low Tide (ft)	1.95
S2	18 Jan 2022	Low Tide Time	235
S2	18 Jan 2022	Comments	Kelp; No flow from storm drain

Station	Date	Parameter	Value
S2	25 Jan 2022	Arrive Time	1035
S2	25 Jan 2022	Weather	Sunny
S2	25 Jan 2022	Wind Speed (kts)	6.9
S2	25 Jan 2022	Wind Dir	NE
S2	25 Jan 2022	Animal Life	Bird-10; Dog-3
S2	25 Jan 2022	Floatables	None
S2	25 Jan 2022	Water Color	Green
S2	25 Jan 2022	Current Direction	N
S2	25 Jan 2022	Water Temp (C)	11
S2	25 Jan 2022	Wave Height Low (ft)	5
S2	25 Jan 2022	High Tide (ft)	4.52
S2	25 Jan 2022	High Tide Time	215
S2	25 Jan 2022	Low Tide (ft)	1.33
S2	25 Jan 2022	Low Tide Time	927
S2	25 Jan 2022	Comments	Water clear; Trash-0; Kelp; Person/Walker/Jogger-10; No flow from storm drain
S3	04 Jan 2022	Arrive Time	825
S3	04 Jan 2022	Weather	Sunny
S3	04 Jan 2022	Wind Speed (kts)	3.8
S3	04 Jan 2022	Wind Dir	S
S3	04 Jan 2022	Animal Life	Seagull-5
S3	04 Jan 2022	Floatables	None
S3	04 Jan 2022	Water Color	Green
S3	04 Jan 2022	Current Direction	S
S3	04 Jan 2022	Water Temp (C)	10
S3	04 Jan 2022	Wave Height Low (ft)	5
S3	04 Jan 2022	High Tide (ft)	6.61
S3	04 Jan 2022	High Tide Time	929
S3	04 Jan 2022	Low Tide (ft)	1.81
S3	04 Jan 2022	Low Tide Time	321
S3	04 Jan 2022	Comments	Kelp; High Tide. There were rains in previous days. No flow from storm drain.
S3	11 Jan 2022	Arrive Time	910
S3	11 Jan 2022	Weather	Sunny
S3	11 Jan 2022	Wind Speed (kts)	7.9
S3	11 Jan 2022	Wind Dir	N
S3	11 Jan 2022	Animal Life	Bird-10; Dog-4
S3	11 Jan 2022	Floatables	None
S3	11 Jan 2022	Water Color	Green
S3	11 Jan 2022	Current Direction	N
S3	11 Jan 2022	Water Temp (C)	15
S3	11 Jan 2022	Wave Height Low (ft)	4
S3	11 Jan 2022	High Tide (ft)	4.78
S3	11 Jan 2022	High Tide Time	426
S3	11 Jan 2022	Low Tide (ft)	0.81
S3	11 Jan 2022	Low Tide Time	1201
S3	11 Jan 2022	Comments	Water clear; Surfer/Paddle boarder-2; Trash-0; Kelp; Person/Walker/Jogger-10; no flow from storm drain
S3	18 Jan 2022	Arrive Time	935
S3	18 Jan 2022	Weather	Cloudy
S3	18 Jan 2022	Wind Speed (kts)	2.3
S3	18 Jan 2022	Wind Dir	S
S3	18 Jan 2022	Animal Life	Seagull-20
S3	18 Jan 2022	Floatables	None
S3	18 Jan 2022	Water Color	Green
S3	18 Jan 2022	Current Direction	S
S3	18 Jan 2022	Water Temp (C)	15
S3	18 Jan 2022	Wave Height Low (ft)	3

Station	Date	Parameter	Value
S3	18 Jan 2022	High Tide (ft)	5.85
S3	18 Jan 2022	High Tide Time	839
S3	18 Jan 2022	Low Tide (ft)	1.95
S3	18 Jan 2022	Low Tide Time	235
S3	18 Jan 2022	Comments	Kelp; 2L/sec water flowing from storm drain; rain showers overnight
S3	25 Jan 2022	Arrive Time	1015
S3	25 Jan 2022	Weather	Sunny
S3	25 Jan 2022	Wind Speed (kts)	6.8
S3	25 Jan 2022	Wind Dir	NE
S3	25 Jan 2022	Animal Life	Bird-10; Dog-2
S3	25 Jan 2022	Floatables	None
S3	25 Jan 2022	Water Color	Green
S3	25 Jan 2022	Current Direction	N
S3	25 Jan 2022	Water Temp (C)	11
S3	25 Jan 2022	Wave Height Low (ft)	5
S3	25 Jan 2022	High Tide (ft)	4.52
S3	25 Jan 2022	High Tide Time	215
S3	25 Jan 2022	Low Tide (ft)	1.33
S3	25 Jan 2022	Low Tide Time	927
S3	25 Jan 2022	Comments	Water clear; Trash-0; Kelp; Person/Walker/Jogger-10; No flow from storm drain
S4	04 Jan 2022	Arrive Time	928
S4	04 Jan 2022	Weather	Sunny
S4	04 Jan 2022	Wind Speed (kts)	4.5
S4	04 Jan 2022	Wind Dir	NE
S4	04 Jan 2022	Animal Life	Bird-6
S4	04 Jan 2022	Floatables	Foam
S4	04 Jan 2022	Water Color	Green
S4	04 Jan 2022	Current Direction	S
S4	04 Jan 2022	Water Temp (C)	14.8
S4	04 Jan 2022	Wave Height Low (ft)	3
S4	04 Jan 2022	High Tide (ft)	6.61
S4	04 Jan 2022	High Tide Time	929
S4	04 Jan 2022	Low Tide (ft)	1.81
S4	04 Jan 2022	Low Tide Time	321
S4	04 Jan 2022	Comments	Kelp; Seagrass; Debris
S4	11 Jan 2022	Arrive Time	914
S4	11 Jan 2022	Weather	Sunny
S4	11 Jan 2022	Wind Speed (kts)	14.7
S4	11 Jan 2022	Wind Dir	SE
S4	11 Jan 2022	Animal Life	
S4	11 Jan 2022	Floatables	None
S4	11 Jan 2022	Water Color	Green
S4	11 Jan 2022	Current Direction	N
S4	11 Jan 2022	Water Temp (C)	15.9
S4	11 Jan 2022	Wave Height Low (ft)	2
S4	11 Jan 2022	High Tide (ft)	4.78
S4	11 Jan 2022	High Tide Time	426
S4	11 Jan 2022	Low Tide (ft)	0.81
S4	11 Jan 2022	Low Tide Time	1201
S4	11 Jan 2022	Comments	Debris
S4	18 Jan 2022	Arrive Time	1018
S4	18 Jan 2022	Weather	Cloudy
S4	18 Jan 2022	Wind Speed (kts)	2.1
S4	18 Jan 2022	Wind Dir	W
S4	18 Jan 2022	Animal Life	Bird-20; Pelican-2

Station	Date	Parameter	Value
S4	18 Jan 2022	Floatables	Foam; Film
S4	18 Jan 2022	Water Color	Green
S4	18 Jan 2022	Current Direction	N
S4	18 Jan 2022	Water Temp (C)	17
S4	18 Jan 2022	Wave Height Low (ft)	4
S4	18 Jan 2022	High Tide (ft)	5.85
S4	18 Jan 2022	High Tide Time	839
S4	18 Jan 2022	Low Tide (ft)	1.95
S4	18 Jan 2022	Low Tide Time	235
S4	18 Jan 2022	Comments	Seagrass; Kelp; Debris
S4	25 Jan 2022	Arrive Time	843
S4	25 Jan 2022	Weather	Sunny
S4	25 Jan 2022	Wind Speed (kts)	5.4
S4	25 Jan 2022	Wind Dir	S
S4	25 Jan 2022	Animal Life	Bird-3
S4	25 Jan 2022	Floatables	Foam; Film
S4	25 Jan 2022	Water Color	Green
S4	25 Jan 2022	Current Direction	N
S4	25 Jan 2022	Water Temp (C)	16.1
S4	25 Jan 2022	Wave Height Low (ft)	4
S4	25 Jan 2022	High Tide (ft)	4.52
S4	25 Jan 2022	High Tide Time	215
S4	25 Jan 2022	Low Tide (ft)	1.33
S4	25 Jan 2022	Low Tide Time	927
S4	25 Jan 2022	Comments	none
S5	04 Jan 2022	Arrive Time	1034
S5	04 Jan 2022	Weather	Sunny
S5	04 Jan 2022	Wind Speed (kts)	4.3
S5	04 Jan 2022	Wind Dir	N
S5	04 Jan 2022	Animal Life	
S5	04 Jan 2022	Floatables	Foam
S5	04 Jan 2022	Water Color	Green
S5	04 Jan 2022	Current Direction	S
S5	04 Jan 2022	Water Temp (C)	16.1
S5	04 Jan 2022	Wave Height Low (ft)	1
S5	04 Jan 2022	High Tide (ft)	6.61
S5	04 Jan 2022	High Tide Time	929
S5	04 Jan 2022	Low Tide (ft)	1.81
S5	04 Jan 2022	Low Tide Time	321
S5	04 Jan 2022	Comments	Water clear; Trash-1; Kelp; Seagrass; Debris; Person/Walker/Jogger-2
S5	11 Jan 2022	Arrive Time	1015
S5	11 Jan 2022	Weather	Sunny
S5	11 Jan 2022	Wind Speed (kts)	5.7
S5	11 Jan 2022	Wind Dir	NE
S5	11 Jan 2022	Animal Life	Bird-100; Dog-1; Pelican-34; Seagull-55
S5	11 Jan 2022	Floatables	None
S5	11 Jan 2022	Water Color	Green
S5	11 Jan 2022	Current Direction	S
S5	11 Jan 2022	Water Temp (C)	16.4
S5	11 Jan 2022	Wave Height Low (ft)	1
S5	11 Jan 2022	High Tide (ft)	4.78
S5	11 Jan 2022	High Tide Time	426
S5	11 Jan 2022	Low Tide (ft)	0.81
S5	11 Jan 2022	Low Tide Time	1201
S5	11 Jan 2022	Comments	Water turbid; Trash-1; Kelp; Algae; Debris; Person/Walker/Jogger-3

Station	Date	Parameter	Value
S5	18 Jan 2022	Arrive Time	908
S5	18 Jan 2022	Weather	Overcast
S5	18 Jan 2022	Wind Speed (kts)	2.4
S5	18 Jan 2022	Wind Dir	W
S5	18 Jan 2022	Animal Life	Bird-3; Pelican-2; Seagull-50
S5	18 Jan 2022	Floatables	None
S5	18 Jan 2022	Water Color	Green
S5	18 Jan 2022	Current Direction	S
S5	18 Jan 2022	Water Temp (C)	16.7
S5	18 Jan 2022	Wave Height Low (ft)	3
S5	18 Jan 2022	High Tide (ft)	5.85
S5	18 Jan 2022	High Tide Time	839
S5	18 Jan 2022	Low Tide (ft)	1.95
S5	18 Jan 2022	Low Tide Time	235
S5	18 Jan 2022	Comments	Water clear; Trash-1; Kelp; Seagrass; Debris; Person/Walker/Jogger-1
S5	25 Jan 2022	Arrive Time	918
S5	25 Jan 2022	Weather	Sunny
S5	25 Jan 2022	Wind Speed (kts)	7.6
S5	25 Jan 2022	Wind Dir	SW
S5	25 Jan 2022	Animal Life	
S5	25 Jan 2022	Floatables	Foam
S5	25 Jan 2022	Water Color	Green
S5	25 Jan 2022	Current Direction	N
S5	25 Jan 2022	Water Temp (C)	15.1
S5	25 Jan 2022	Wave Height Low (ft)	2
S5	25 Jan 2022	High Tide (ft)	4.52
S5	25 Jan 2022	High Tide Time	215
S5	25 Jan 2022	Low Tide (ft)	1.33
S5	25 Jan 2022	Low Tide Time	927
S5	25 Jan 2022	Comments	Water turbid; Trash-1; Debris; Person/Walker/Jogger-2; Sewage-like odor
S6	04 Jan 2022	Arrive Time	1056
S6	04 Jan 2022	Weather	Sunny
S6	04 Jan 2022	Wind Speed (kts)	3.6
S6	04 Jan 2022	Wind Dir	NW
S6	04 Jan 2022	Animal Life	Bird-70
S6	04 Jan 2022	Floatables	Foam
S6	04 Jan 2022	Water Color	Green
S6	04 Jan 2022	Current Direction	S
S6	04 Jan 2022	Water Temp (C)	15.8
S6	04 Jan 2022	Wave Height Low (ft)	2
S6	04 Jan 2022	High Tide (ft)	6.61
S6	04 Jan 2022	High Tide Time	929
S6	04 Jan 2022	Low Tide (ft)	1.81
S6	04 Jan 2022	Low Tide Time	321
S6	04 Jan 2022	Comments	Water clear; Trash-1; Kelp; Seagrass; Debris; Person/Walker/Jogger-3
S6	11 Jan 2022	Arrive Time	1028
S6	11 Jan 2022	Weather	Sunny
S6	11 Jan 2022	Wind Speed (kts)	9.6
S6	11 Jan 2022	Wind Dir	NW
S6	11 Jan 2022	Animal Life	Bird-60
S6	11 Jan 2022	Floatables	Foam
S6	11 Jan 2022	Water Color	Green
S6	11 Jan 2022	Current Direction	S
S6	11 Jan 2022	Water Temp (C)	16.4
S6	11 Jan 2022	Wave Height Low (ft)	1

Station	Date	Parameter	Value
S6	11 Jan 2022	High Tide (ft)	4.78
S6	11 Jan 2022	High Tide Time	426
S6	11 Jan 2022	Low Tide (ft)	0.81
S6	11 Jan 2022	Low Tide Time	1201
S6	11 Jan 2022	Comments	Water turbid; Surfer/Paddle boarder-3; Trash-1; Kelp; Person/Walker/Jogger-6
S6	18 Jan 2022	Arrive Time	929
S6	18 Jan 2022	Weather	Overcast
S6	18 Jan 2022	Wind Speed (kts)	0.8
S6	18 Jan 2022	Wind Dir	W
S6	18 Jan 2022	Animal Life	
S6	18 Jan 2022	Floatables	Foam; Film
S6	18 Jan 2022	Water Color	Green
S6	18 Jan 2022	Current Direction	S
S6	18 Jan 2022	Water Temp (C)	16.7
S6	18 Jan 2022	Wave Height Low (ft)	4
S6	18 Jan 2022	High Tide (ft)	5.85
S6	18 Jan 2022	High Tide Time	839
S6	18 Jan 2022	Low Tide (ft)	1.95
S6	18 Jan 2022	Low Tide Time	235
S6	18 Jan 2022	Comments	Water clear; Surfer/Paddle boarder-17; Trash-2; Kelp; Sea-grass; Debris; Algae; Person/Walker/Jogger-4; Sewage-like odor
S6	25 Jan 2022	Arrive Time	940
S6	25 Jan 2022	Weather	Sunny
S6	25 Jan 2022	Wind Speed (kts)	7.7
S6	25 Jan 2022	Wind Dir	S
S6	25 Jan 2022	Animal Life	Bird-1
S6	25 Jan 2022	Floatables	Film; Foam
S6	25 Jan 2022	Water Color	Green
S6	25 Jan 2022	Current Direction	N
S6	25 Jan 2022	Water Temp (C)	15.9
S6	25 Jan 2022	Wave Height Low (ft)	5
S6	25 Jan 2022	High Tide (ft)	4.52
S6	25 Jan 2022	High Tide Time	215
S6	25 Jan 2022	Low Tide (ft)	1.33
S6	25 Jan 2022	Low Tide Time	927
S6	25 Jan 2022	Comments	Water turbid; Surfer/Paddle boarder-4; Trash-1; Person/Walker/Jogger-1
S8	04 Jan 2022	Arrive Time	826
S8	04 Jan 2022	Weather	Sunny
S8	04 Jan 2022	Wind Speed (kts)	2.4
S8	04 Jan 2022	Wind Dir	E
S8	04 Jan 2022	Animal Life	Bird-50
S8	04 Jan 2022	Floatables	Foam
S8	04 Jan 2022	Water Color	Green
S8	04 Jan 2022	Current Direction	N
S8	04 Jan 2022	Water Temp (C)	13.1
S8	04 Jan 2022	Wave Height Low (ft)	2
S8	04 Jan 2022	High Tide (ft)	6.61
S8	04 Jan 2022	High Tide Time	929
S8	04 Jan 2022	Low Tide (ft)	1.81
S8	04 Jan 2022	Low Tide Time	321
S8	04 Jan 2022	Comments	Kelp; Seagrass
S8	11 Jan 2022	Arrive Time	1137
S8	11 Jan 2022	Weather	Sunny
S8	11 Jan 2022	Wind Speed (kts)	4.5

Station	Date	Parameter	Value
S8	11 Jan 2022	Wind Dir	W
S8	11 Jan 2022	Animal Life	Seagull-5
S8	11 Jan 2022	Floatables	None
S8	11 Jan 2022	Water Color	Green
S8	11 Jan 2022	Current Direction	S
S8	11 Jan 2022	Water Temp (C)	17.6
S8	11 Jan 2022	Wave Height Low (ft)	1
S8	11 Jan 2022	High Tide (ft)	4.78
S8	11 Jan 2022	High Tide Time	426
S8	11 Jan 2022	Low Tide (ft)	0.81
S8	11 Jan 2022	Low Tide Time	1201
S8	11 Jan 2022	Comments	Water clear; Trash-1; Seagrass; Person/Walker/Jogger-2
S8	18 Jan 2022	Arrive Time	819
S8	18 Jan 2022	Weather	Overcast
S8	18 Jan 2022	Wind Speed (kts)	0.6
S8	18 Jan 2022	Wind Dir	W
S8	18 Jan 2022	Animal Life	Seagull-1
S8	18 Jan 2022	Floatables	None; Dead animals
S8	18 Jan 2022	Water Color	Green
S8	18 Jan 2022	Current Direction	S
S8	18 Jan 2022	Water Temp (C)	15.9
S8	18 Jan 2022	Wave Height Low (ft)	2
S8	18 Jan 2022	High Tide (ft)	5.85
S8	18 Jan 2022	High Tide Time	839
S8	18 Jan 2022	Low Tide (ft)	1.95
S8	18 Jan 2022	Low Tide Time	235
S8	18 Jan 2022	Comments	Water clear; Trash-1; Kelp; Seagrass; Debris; Person/Walker/Jogger-4
S8	25 Jan 2022	Arrive Time	1034
S8	25 Jan 2022	Weather	Sunny
S8	25 Jan 2022	Wind Speed (kts)	10.9
S8	25 Jan 2022	Wind Dir	SW
S8	25 Jan 2022	Animal Life	
S8	25 Jan 2022	Floatables	Foam
S8	25 Jan 2022	Water Color	Green
S8	25 Jan 2022	Current Direction	N
S8	25 Jan 2022	Water Temp (C)	17.4
S8	25 Jan 2022	Wave Height Low (ft)	2
S8	25 Jan 2022	High Tide (ft)	4.52
S8	25 Jan 2022	High Tide Time	215
S8	25 Jan 2022	Low Tide (ft)	1.33
S8	25 Jan 2022	Low Tide Time	927
S8	25 Jan 2022	Comments	Water turbid; Trash-1; Kelp; Seagrass; Person/Walker/Jogger-4
S9	04 Jan 2022	Arrive Time	758
S9	04 Jan 2022	Weather	Sunny
S9	04 Jan 2022	Wind Speed (kts)	1.9
S9	04 Jan 2022	Wind Dir	E
S9	04 Jan 2022	Animal Life	Bird-7; Seagull-1
S9	04 Jan 2022	Floatables	Foam
S9	04 Jan 2022	Water Color	Green
S9	04 Jan 2022	Current Direction	N
S9	04 Jan 2022	Water Temp (C)	13.3
S9	04 Jan 2022	Wave Height Low (ft)	1
S9	04 Jan 2022	High Tide (ft)	6.61
S9	04 Jan 2022	High Tide Time	929
S9	04 Jan 2022	Low Tide (ft)	1.81
S9	04 Jan 2022	Low Tide Time	321

Station	Date	Parameter	Value
S9	04 Jan 2022	Comments	Kelp; Seagrass
S9	11 Jan 2022	Arrive Time	1205
S9	11 Jan 2022	Weather	Sunny
S9	11 Jan 2022	Wind Speed (kts)	5.1
S9	11 Jan 2022	Wind Dir	NW
S9	11 Jan 2022	Animal Life	Seagull-2
S9	11 Jan 2022	Floatables	None
S9	11 Jan 2022	Water Color	Green
S9	11 Jan 2022	Current Direction	S
S9	11 Jan 2022	Water Temp (C)	18.5
S9	11 Jan 2022	Wave Height Low (ft)	1
S9	11 Jan 2022	High Tide (ft)	4.78
S9	11 Jan 2022	High Tide Time	426
S9	11 Jan 2022	Low Tide (ft)	0.81
S9	11 Jan 2022	Low Tide Time	1201
S9	11 Jan 2022	Comments	Water clear; Boater/Kayaker-1; Trash-1; Person/Walker/Jogger-10
S9	18 Jan 2022	Arrive Time	804
S9	18 Jan 2022	Weather	Overcast
S9	18 Jan 2022	Wind Speed (kts)	1.1
S9	18 Jan 2022	Wind Dir	W
S9	18 Jan 2022	Animal Life	Seagull-4
S9	18 Jan 2022	Floatables	Foam
S9	18 Jan 2022	Water Color	Green
S9	18 Jan 2022	Current Direction	S
S9	18 Jan 2022	Water Temp (C)	16.2
S9	18 Jan 2022	Wave Height Low (ft)	2
S9	18 Jan 2022	High Tide (ft)	5.85
S9	18 Jan 2022	High Tide Time	839
S9	18 Jan 2022	Low Tide (ft)	1.95
S9	18 Jan 2022	Low Tide Time	235
S9	18 Jan 2022	Comments	Water clear; Surfer/Paddle boarder-5; Trash-1; Kelp; Seagrass; Person/Walker/Jogger-4
S9	25 Jan 2022	Arrive Time	1101
S9	25 Jan 2022	Weather	Sunny
S9	25 Jan 2022	Wind Speed (kts)	7.1
S9	25 Jan 2022	Wind Dir	SW
S9	25 Jan 2022	Animal Life	Seagull-6
S9	25 Jan 2022	Floatables	Foam
S9	25 Jan 2022	Water Color	Green
S9	25 Jan 2022	Current Direction	N
S9	25 Jan 2022	Water Temp (C)	18.2
S9	25 Jan 2022	Wave Height Low (ft)	2
S9	25 Jan 2022	High Tide (ft)	4.52
S9	25 Jan 2022	High Tide Time	215
S9	25 Jan 2022	Low Tide (ft)	1.33
S9	25 Jan 2022	Low Tide Time	927
S9	25 Jan 2022	Comments	Water turbid; Trash-1; Kelp; Person/Walker/Jogger-5
S10	04 Jan 2022	Arrive Time	915
S10	04 Jan 2022	Weather	Sunny
S10	04 Jan 2022	Wind Speed (kts)	4.2
S10	04 Jan 2022	Wind Dir	E
S10	04 Jan 2022	Animal Life	
S10	04 Jan 2022	Floatables	Foam
S10	04 Jan 2022	Water Color	Green
S10	04 Jan 2022	Current Direction	S
S10	04 Jan 2022	Water Temp (C)	14.7

Station	Date	Parameter	Value
S10	04 Jan 2022	Wave Height Low (ft)	2
S10	04 Jan 2022	High Tide (ft)	6.61
S10	04 Jan 2022	High Tide Time	929
S10	04 Jan 2022	Low Tide (ft)	1.81
S10	04 Jan 2022	Low Tide Time	321
S10	04 Jan 2022	Comments	Kelp; Seagrass; Debris
S10	11 Jan 2022	Arrive Time	903
S10	11 Jan 2022	Weather	Sunny
S10	11 Jan 2022	Wind Speed (kts)	15.3
S10	11 Jan 2022	Wind Dir	SE
S10	11 Jan 2022	Animal Life	Bird-2
S10	11 Jan 2022	Floatables	None
S10	11 Jan 2022	Water Color	Green
S10	11 Jan 2022	Current Direction	N
S10	11 Jan 2022	Water Temp (C)	15.9
S10	11 Jan 2022	Wave Height Low (ft)	2
S10	11 Jan 2022	High Tide (ft)	4.78
S10	11 Jan 2022	High Tide Time	426
S10	11 Jan 2022	Low Tide (ft)	0.81
S10	11 Jan 2022	Low Tide Time	1201
S10	11 Jan 2022	Comments	none
S10	18 Jan 2022	Arrive Time	1043
S10	18 Jan 2022	Weather	Overcast
S10	18 Jan 2022	Wind Speed (kts)	3.3
S10	18 Jan 2022	Wind Dir	W
S10	18 Jan 2022	Animal Life	
S10	18 Jan 2022	Floatables	None
S10	18 Jan 2022	Water Color	Green
S10	18 Jan 2022	Current Direction	N
S10	18 Jan 2022	Water Temp (C)	17.4
S10	18 Jan 2022	Wave Height Low (ft)	4
S10	18 Jan 2022	High Tide (ft)	5.85
S10	18 Jan 2022	High Tide Time	839
S10	18 Jan 2022	Low Tide (ft)	1.95
S10	18 Jan 2022	Low Tide Time	235
S10	18 Jan 2022	Comments	Debris
S10	25 Jan 2022	Arrive Time	830
S10	25 Jan 2022	Weather	Sunny
S10	25 Jan 2022	Wind Speed (kts)	1.9
S10	25 Jan 2022	Wind Dir	SW
S10	25 Jan 2022	Animal Life	Bird-1
S10	25 Jan 2022	Floatables	Foam; Film
S10	25 Jan 2022	Water Color	Green
S10	25 Jan 2022	Current Direction	N
S10	25 Jan 2022	Water Temp (C)	16.6
S10	25 Jan 2022	Wave Height Low (ft)	1
S10	25 Jan 2022	High Tide (ft)	4.52
S10	25 Jan 2022	High Tide Time	215
S10	25 Jan 2022	Low Tide (ft)	1.33
S10	25 Jan 2022	Low Tide Time	927
S10	25 Jan 2022	Comments	none
S11	04 Jan 2022	Arrive Time	1046
S11	04 Jan 2022	Weather	Sunny
S11	04 Jan 2022	Wind Speed (kts)	3.9
S11	04 Jan 2022	Wind Dir	N
S11	04 Jan 2022	Animal Life	Seagull-1
S11	04 Jan 2022	Floatables	Foam

Station	Date	Parameter	Value
S11	04 Jan 2022	Water Color	Green
S11	04 Jan 2022	Current Direction	S
S11	04 Jan 2022	Water Temp (C)	17.2
S11	04 Jan 2022	Wave Height Low (ft)	2
S11	04 Jan 2022	High Tide (ft)	6.61
S11	04 Jan 2022	High Tide Time	929
S11	04 Jan 2022	Low Tide (ft)	1.81
S11	04 Jan 2022	Low Tide Time	321
S11	04 Jan 2022	Comments	Water clear; Trash-1; Kelp; Seagrass; Debris; Person/Walker/Jogger-2
S11	11 Jan 2022	Arrive Time	1023
S11	11 Jan 2022	Weather	Sunny
S11	11 Jan 2022	Wind Speed (kts)	8.5
S11	11 Jan 2022	Wind Dir	N
S11	11 Jan 2022	Animal Life	
S11	11 Jan 2022	Floatables	Foam
S11	11 Jan 2022	Water Color	Green
S11	11 Jan 2022	Current Direction	S
S11	11 Jan 2022	Water Temp (C)	16.1
S11	11 Jan 2022	Wave Height Low (ft)	2
S11	11 Jan 2022	High Tide (ft)	4.78
S11	11 Jan 2022	High Tide Time	426
S11	11 Jan 2022	Low Tide (ft)	0.81
S11	11 Jan 2022	Low Tide Time	1201
S11	11 Jan 2022	Comments	Water clear; Trash-1; Kelp; Seagrass; Person/Walker/Jogger-3
S11	18 Jan 2022	Arrive Time	921
S11	18 Jan 2022	Weather	Overcast
S11	18 Jan 2022	Wind Speed (kts)	1.8
S11	18 Jan 2022	Wind Dir	W
S11	18 Jan 2022	Animal Life	Bird-1
S11	18 Jan 2022	Floatables	Foam; Film
S11	18 Jan 2022	Water Color	Green
S11	18 Jan 2022	Current Direction	S
S11	18 Jan 2022	Water Temp (C)	17
S11	18 Jan 2022	Wave Height Low (ft)	3
S11	18 Jan 2022	High Tide (ft)	5.85
S11	18 Jan 2022	High Tide Time	839
S11	18 Jan 2022	Low Tide (ft)	1.95
S11	18 Jan 2022	Low Tide Time	235
S11	18 Jan 2022	Comments	Seagrass; Kelp; Debris
S11	25 Jan 2022	Arrive Time	927
S11	25 Jan 2022	Weather	Sunny
S11	25 Jan 2022	Wind Speed (kts)	6.5
S11	25 Jan 2022	Wind Dir	S
S11	25 Jan 2022	Animal Life	Bird-92
S11	25 Jan 2022	Floatables	Foam; Film
S11	25 Jan 2022	Water Color	Green
S11	25 Jan 2022	Current Direction	N
S11	25 Jan 2022	Water Temp (C)	15.8
S11	25 Jan 2022	Wave Height Low (ft)	4
S11	25 Jan 2022	High Tide (ft)	4.52
S11	25 Jan 2022	High Tide Time	215
S11	25 Jan 2022	Low Tide (ft)	1.33
S11	25 Jan 2022	Low Tide Time	927
S11	25 Jan 2022	Comments	Water turbid; Trash-1; Person/Walker/Jogger-2
S12	04 Jan 2022	Arrive Time	1011

Station	Date	Parameter	Value
S12	04 Jan 2022	Weather	Sunny
S12	04 Jan 2022	Wind Speed (kts)	0.4
S12	04 Jan 2022	Wind Dir	NE
S12	04 Jan 2022	Animal Life	Bird-2
S12	04 Jan 2022	Floatables	Foam
S12	04 Jan 2022	Water Color	Green
S12	04 Jan 2022	Current Direction	S
S12	04 Jan 2022	Water Temp (C)	15.4
S12	04 Jan 2022	Wave Height Low (ft)	3
S12	04 Jan 2022	High Tide (ft)	6.61
S12	04 Jan 2022	High Tide Time	929
S12	04 Jan 2022	Low Tide (ft)	1.81
S12	04 Jan 2022	Low Tide Time	321
S12	04 Jan 2022	Comments	Water clear; Surfer/Paddle boarder-2; Trash-1; Kelp; Sea-grass; Person/Walker/Jogger-3
S12	11 Jan 2022	Arrive Time	1038
S12	11 Jan 2022	Weather	Sunny
S12	11 Jan 2022	Wind Speed (kts)	5.8
S12	11 Jan 2022	Wind Dir	NW
S12	11 Jan 2022	Animal Life	Bird-200
S12	11 Jan 2022	Floatables	None
S12	11 Jan 2022	Water Color	Green
S12	11 Jan 2022	Current Direction	S
S12	11 Jan 2022	Water Temp (C)	16.3
S12	11 Jan 2022	Wave Height Low (ft)	1
S12	11 Jan 2022	High Tide (ft)	4.78
S12	11 Jan 2022	High Tide Time	426
S12	11 Jan 2022	Low Tide (ft)	0.81
S12	11 Jan 2022	Low Tide Time	1201
S12	11 Jan 2022	Comments	Water clear; Trash-1; Person/Walker/Jogger-5
S12	18 Jan 2022	Arrive Time	838
S12	18 Jan 2022	Weather	Overcast
S12	18 Jan 2022	Wind Speed (kts)	2.4
S12	18 Jan 2022	Wind Dir	W
S12	18 Jan 2022	Animal Life	Bird-30
S12	18 Jan 2022	Floatables	Foam
S12	18 Jan 2022	Water Color	Green
S12	18 Jan 2022	Current Direction	S
S12	18 Jan 2022	Water Temp (C)	16.4
S12	18 Jan 2022	Wave Height Low (ft)	4
S12	18 Jan 2022	High Tide (ft)	5.85
S12	18 Jan 2022	High Tide Time	839
S12	18 Jan 2022	Low Tide (ft)	1.95
S12	18 Jan 2022	Low Tide Time	235
S12	18 Jan 2022	Comments	Kelp; Seagrass
S12	25 Jan 2022	Arrive Time	953
S12	25 Jan 2022	Weather	Sunny
S12	25 Jan 2022	Wind Speed (kts)	6.7
S12	25 Jan 2022	Wind Dir	S
S12	25 Jan 2022	Animal Life	Dog-2
S12	25 Jan 2022	Floatables	Foam; Film
S12	25 Jan 2022	Water Color	Green
S12	25 Jan 2022	Current Direction	N
S12	25 Jan 2022	Water Temp (C)	16.1
S12	25 Jan 2022	Wave Height Low (ft)	3
S12	25 Jan 2022	High Tide (ft)	4.52
S12	25 Jan 2022	High Tide Time	215
S12	25 Jan 2022	Low Tide (ft)	1.33

Station	Date	Parameter	Value
S12	25 Jan 2022	Low Tide Time	927
S12	25 Jan 2022	Comments	Water turbid; Trash-1; Seagrass; Person/Walker/Jogger-7

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Kelp Stations

Table 3.1

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

Date	I19	I24	I25	I26	I32	I39	I40
01 Jan 2022	182	14	11	6	5	3	120
02 Jan 2022	182	14	11	6	5	3	120
03 Jan 2022	182	14	11	6	5	3	120
04 Jan 2022	149	31	22	5	4	3	139
05 Jan 2022	149	31	22	5	4	3	139
06 Jan 2022	149	31	22	5	4	3	139
07 Jan 2022	142	61	40	6	5	3	354
08 Jan 2022	142	61	40	6	5	3	354
09 Jan 2022	142	61	40	6	5	3	354
10 Jan 2022	168	41	31	10	4	3	397
11 Jan 2022	168	41	31	10	4	3	397
12 Jan 2022	168	41	31	10	4	3	397
13 Jan 2022	168	41	31	10	4	3	397
14 Jan 2022	168	41	31	10	4	3	397
15 Jan 2022	168	41	31	10	4	3	397
16 Jan 2022	175	87	61	14	5	3	383
17 Jan 2022	175	87	61	14	5	3	383
18 Jan 2022	162	97	54	20	10	7	468
19 Jan 2022	162	97	54	20	10	7	468
20 Jan 2022	273	109	55	24	14	9	743
21 Jan 2022	273	109	55	24	14	9	743
22 Jan 2022	273	109	55	24	14	9	743
23 Jan 2022	273	109	55	24	14	9	743
24 Jan 2022	242	129	49	15	10	7	740
25 Jan 2022	242	129	49	15	10	7	740
26 Jan 2022	140	121	47	12	6	6	591
27 Jan 2022	140	121	47	12	6	6	591
28 Jan 2022	140	121	47	12	6	6	591
29 Jan 2022	140	121	47	12	6	6	591
30 Jan 2022	140	121	47	12	6	6	591
31 Jan 2022	102	159	78	21	5	9	502

* Geometric mean calculated using n<5

Table 3.2

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

Date	I19	I24	I25	I26	I32	I39	I40
04 Jan 2022	IC	E	E	IC	IC	IC	E
10 Jan 2022	E	IC	IC	IC	IC	IC	E
18 Jan 2022	IC	IC	IC	IC	IC	IC	E
24 Jan 2022	E	E	IC	IC	IC	IC	E
31 Jan 2022	IC	E	E	IC	IC	IC	IC

IC = In Compliance

E = Exceedance

ns = not sampled

ND = no data

Table 3.3

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 Jan 2022	40	6	4	4	4	3	21
02 Jan 2022	40	6	4	4	4	3	21
03 Jan 2022	72	7	5	4	5	3	33
04 Jan 2022	70	12	8	4	4	3	41
05 Jan 2022	70	12	8	4	4	3	41
06 Jan 2022	70	12	8	4	4	3	41
07 Jan 2022	70	12	8	4	4	3	41
08 Jan 2022	70	12	8	4	4	3	41
09 Jan 2022	70	12	8	4	4	3	41
10 Jan 2022	76	10	8	5	4	3	56
11 Jan 2022	123	14	9	6	4	3	76
12 Jan 2022	123	14	9	6	4	3	76
13 Jan 2022	123	14	9	6	4	3	76
14 Jan 2022	123	14	9	6	4	3	76
15 Jan 2022	123	14	9	6	4	3	76
16 Jan 2022	123	14	9	6	4	3	76
17 Jan 2022	123	14	9	6	4	3	76
18 Jan 2022	118	18	10	9	6	4	98
19 Jan 2022	105	26	14	11	7	5	143
20 Jan 2022	105	26	14	11	7	5	143
21 Jan 2022	105	26	14	11	7	5	143
22 Jan 2022	105	26	14	11	7	5	143
23 Jan 2022	105	26	14	11	7	5	143
24 Jan 2022	87	28	13	9	6	4	144
25 Jan 2022	87	28	13	9	6	4	144
26 Jan 2022	87	28	13	9	6	4	144
27 Jan 2022	87	28	13	9	6	4	144
28 Jan 2022	94	41	17	11	7	5	178
29 Jan 2022	94	41	17	11	7	5	178
30 Jan 2022	94	41	17	11	7	5	178
31 Jan 2022	76	53	26	15	6	7	166

* Geometric mean calculated using n<5

Table 3.4

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
January	E	E	E	IC	IC	E	E

IC = In Compliance

E = Exceedance

ns = not sampled

ND = no data

Table 3.5

Summary of compliance with the Ocean Plan’s 30-day Median standard for total coliform bacteria at the SBOO kelp stations. Data are based on the median of the five most recent samples from each site and depth over the previous 30 days unless otherwise noted (*). Values >70 CFU/100 mL exceed the standard.

Date	I19			I24			I25			I26			I32			I39			I40		
	2m	6m	11m	2m	6m	11m	2m	6m	9m	2m	6m	9m	2m	6m	9m	2m	12m	18m	2m	6m	9m
01 Jan 2022	650	1580	890	41	351	200	201	501	102	61	146	272	2	3	2	14	18	12	2040	3690	1050
02 Jan 2022	650	1580	890	41	351	200	201	501	102	61	146	272	2	3	2	14	18	12	2040	3690	1050
03 Jan 2022	650	1580	890	41	351	200	201	501	102	61	146	272	2	3	2	14	18	12	2040	3690	1050
04 Jan 2022	500	960	800	80	700	340	400	1000	200	2	12	4	2	2	2	6	8	4	2200	3200	1300
05 Jan 2022	500	960	800	80	700	340	400	1000	200	2	12	4	2	2	2	6	8	4	2200	3200	1300
06 Jan 2022	500	960	800	80	700	340	400	1000	200	2	12	4	2	2	2	6	8	4	2200	3200	1300
07 Jan 2022	500	880	740	840	1550	1070	430	1700	340	61	141	272	2	3	2	12	15	11	3100	5200	1650
08 Jan 2022	500	880	740	840	1550	1070	430	1700	340	61	141	272	2	3	2	12	15	11	3100	5200	1650
09 Jan 2022	500	880	740	840	1550	1070	430	1700	340	61	141	272	2	3	2	12	15	11	3100	5200	1650
10 Jan 2022	200	960	800	80	700	340	400	1000	240	20	200	400	2	4	2	2	20	20	4000	3200	2000
11 Jan 2022	200	960	800	80	700	340	400	1000	240	20	200	400	2	4	2	2	20	20	4000	3200	2000
12 Jan 2022	200	960	800	80	700	340	400	1000	240	20	200	400	2	4	2	2	20	20	4000	3200	2000
13 Jan 2022	200	960	800	80	700	340	400	1000	240	20	200	400	2	4	2	2	20	20	4000	3200	2000
14 Jan 2022	200	960	800	80	700	340	400	1000	240	20	200	400	2	4	2	2	20	20	4000	3200	2000
15 Jan 2022	200	960	800	80	700	340	400	1000	240	20	200	400	2	4	2	2	20	20	4000	3200	2000
16 Jan 2022	200	1700	1700	840	1550	1070	430	1700	360	70	240	470	2	12	11	12	24	31	3500	3000	1650
17 Jan 2022	200	1700	1700	840	1550	1070	430	1700	360	70	240	470	2	12	11	12	24	31	3500	3000	1650
18 Jan 2022	200	800	800	1600	700	400	460	1000	240	120	280	400	2	20	20	22	20	42	4800	2800	1300
19 Jan 2022	200	800	800	1600	700	400	460	1000	240	120	280	400	2	20	20	22	20	42	4800	2800	1300
20 Jan 2022	1400	1700	1700	3400	1310	1100	520	600	220	200	310	330	171	410	60	101	20	31	10400	3000	1400
21 Jan 2022	1400	1700	1700	3400	1310	1100	520	600	220	200	310	330	171	410	60	101	20	31	10400	3000	1400
22 Jan 2022	1400	1700	1700	3400	1310	1100	520	600	220	200	310	330	171	410	60	101	20	31	10400	3000	1400
23 Jan 2022	1400	1700	1700	3400	1310	1100	520	600	220	200	310	330	171	410	60	101	20	31	10400	3000	1400
24 Jan 2022	200	800	800	5200	620	400	640	1000	200	20	200	260	2	20	20	2	20	20	14000	3200	2000
25 Jan 2022	200	800	800	5200	620	400	640	1000	200	20	200	260	2	20	20	2	20	20	14000	3200	2000
26 Jan 2022	200	700	680	5800	420	390	920	650	220	11	101	132	2	11	20	2	11	22	9400	3000	2100
27 Jan 2022	200	700	680	5800	420	390	920	650	220	11	101	132	2	11	20	2	11	22	9400	3000	2100
28 Jan 2022	200	700	680	5800	420	390	920	650	220	11	101	132	2	11	20	2	11	22	9400	3000	2100
29 Jan 2022	200	700	680	5800	420	390	920	650	220	11	101	132	2	11	20	2	11	22	9400	3000	2100
30 Jan 2022	200	700	680	5800	420	390	920	650	220	11	101	132	2	11	20	2	11	22	9400	3000	2100
31 Jan 2022	200	600	560	5200	620	400	1200	1100	240	20	200	260	2	20	20	2	20	42	4800	2800	2000

* Median calculated using n<5

Table 3.6

Summary of compliance at the SBOO kelp stations with the Ocean Plan's Statistical Threshold standard for total coliform bacteria, which states that total coliform density shall not exceed 230 CFU/100 mL in more than 10% of samples per station by depth, per month.

Date	I19			I24			I25			I26			I32			I39			I40		
	2m	6m	11m	2m	6m	11m	2m	6m	9m	2m	6m	9m	2m	6m	9m	2m	12m	18m	2m	6m	9m
January	E	E	E	E	E	E	E	E	E	E	E	E	E	E	IC	E	IC	E	E	E	E

IC = In Compliance

E = Exceedance

ns = not sampled

ND = no data

Table 3.7

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

Station	Date	Time	Depth	Total	Fecal	Entero	Temp	XMS	DO	Sal	pH
I19	04 Jan 2022	1106	2	200e	<2	14e	15.0	75.47	8.1	33.42	8.0
I19	04 Jan 2022	1106	6	800e	110	98	14.9	73.89	8.1	33.42	8.0
I19	04 Jan 2022	1106	11	800e	90	70	14.7	70.51	8.0	33.40	8.0
I19	10 Jan 2022	1030	2	200e	72	14e	14.5	67.89	7.6	33.41	7.9
I19	10 Jan 2022	1030	6	2600e	160e	100	14.4	63.50	7.6	33.41	7.9
I19	10 Jan 2022	1030	11	2600e	740	240e	14.4	50.68	7.6	33.40	7.9
I19	18 Jan 2022	1113	2	2600e	180e	78	15.4	72.72	8.4	33.40	8.0
I19	18 Jan 2022	1113	6	600e	82	72	15.2	70.86	8.4	33.42	8.0
I19	18 Jan 2022	1113	11	560	92	120	15.0	75.96	8.3	33.42	8.0
I19	24 Jan 2022	1201	2	14e	2e	2e	14.8	72.39	8.2	33.44	8.0
I19	24 Jan 2022	1201	6	120e	8e	2e	14.6	71.56	7.5	33.45	7.9
I19	24 Jan 2022	1201	11	200e	440	82	14.2	56.59	7.3	33.44	7.9
I19	31 Jan 2022	1059	2	<20	4e	2e	14.9	66.12	9.6	33.43	8.3
I19	31 Jan 2022	1059	6	220e	30e	36e	14.7	63.04	8.6	33.44	8.2
I19	31 Jan 2022	1059	11	160e	52	22e	14.7	61.76	8.4	33.44	8.2
I24	04 Jan 2022	1127	2	6400	380e	110	14.8	73.85	8.1	33.32	8.0
I24	04 Jan 2022	1127	6	7200	760	100	14.6	69.70	7.8	33.39	7.9
I24	04 Jan 2022	1127	11	7400	880	180e	14.4	62.14	7.7	33.36	7.9
I24	10 Jan 2022	1055	2	40e	2e	<2	14.6	72.27	7.8	33.41	7.9
I24	10 Jan 2022	1055	6	80e	8e	<2	14.4	73.61	7.5	33.42	7.9
I24	10 Jan 2022	1055	11	60e	16e	10e	14.3	76.02	7.2	33.43	7.9
I24	18 Jan 2022	1139	2	5200	380e	280e	15.5	75.73	8.6	33.40	8.0
I24	18 Jan 2022	1139	6	220e	16e	16e	15.3	78.84	8.6	33.43	8.0
I24	18 Jan 2022	1139	11	400e	44	28e	14.9	74.35	8.2	33.43	8.0
I24	24 Jan 2022	1223	2	6400	640	72	14.9	69.98	7.9	33.29	8.0
I24	24 Jan 2022	1223	6	620	86	24e	14.5	66.49	6.8	33.48	7.9
I24	24 Jan 2022	1223	11	380e	36e	16e	14.3	30.82	6.0	33.45	7.8
I24	31 Jan 2022	1121	2	760	340e	180e	14.7	56.04	9.5	33.42	8.2
I24	31 Jan 2022	1121	6	4200	860	420	14.6	64.74	8.5	33.42	8.2
I24	31 Jan 2022	1121	11	600e	220e	100	14.4	69.95	7.7	33.44	8.1
I25	04 Jan 2022	1134	2	7000	400	50	14.8	68.34	8.0	33.33	8.0
I25	04 Jan 2022	1134	6	12000	760	80e	14.5	73.64	8.2	33.36	8.0
I25	04 Jan 2022	1134	9	2200e	56	22e	14.5	76.38	8.1	33.39	8.0
I25	10 Jan 2022	1102	2	20e	<2	2e	14.6	72.99	7.9	33.41	7.9
I25	10 Jan 2022	1102	6	200e	12e	14e	14.4	75.94	7.4	33.43	7.9
I25	10 Jan 2022	1102	9	240e	18e	4e	14.4	75.31	7.3	33.43	7.9
I25	18 Jan 2022	1147	2	640	50	36e	15.5	77.23	8.7	33.41	8.0
I25	18 Jan 2022	1147	6	40e	18e	8e	15.2	78.57	8.7	33.43	8.0
I25	18 Jan 2022	1147	9	160e	36e	14e	14.9	75.82	8.2	33.44	8.0

Station	Date	Time	Depth	Total	Fecal	Entero	Temp	XMS	DO	Sal	pH
I25	24 Jan 2022	1229	2	1200e	<20	14e	15.0	72.91	8.3	33.37	8.0
I25	24 Jan 2022	1229	6	1100	46	6e	14.8	70.22	7.8	33.47	8.0
I25	24 Jan 2022	1229	9	200e	28e	4e	14.7	48.39	7.3	33.46	7.9
I25	31 Jan 2022	1128	2	2200e	480	320e	14.8	69.68	8.2	33.43	8.2
I25	31 Jan 2022	1128	6	3400e	700	260e	14.6	67.79	8.2	33.42	8.2
I25	31 Jan 2022	1128	9	2200e	660	360e	14.5	71.78	7.9	33.43	8.2
I26	04 Jan 2022	1145	2	2e	<2	<2	14.9	75.75	8.2	33.44	8.0
I26	04 Jan 2022	1145	6	<2	<2	<2	14.7	75.58	8.2	33.42	8.0
I26	04 Jan 2022	1145	9	4e	<2	<2	14.6	74.95	8.2	33.42	8.0
I26	10 Jan 2022	1113	2	<20	2e	<2	14.7	72.66	8.1	33.40	7.9
I26	10 Jan 2022	1113	6	200e	26e	20e	14.6	73.54	7.9	33.40	7.9
I26	10 Jan 2022	1113	9	400e	160e	88	14.5	71.54	7.7	33.40	7.9
I26	18 Jan 2022	1159	2	1300	80e	80	15.3	63.40	8.4	33.32	7.9
I26	18 Jan 2022	1159	6	420	92	38e	15.0	74.44	8.2	33.43	8.0
I26	18 Jan 2022	1159	9	260e	64	28e	14.9	72.01	8.0	33.42	8.0
I26	24 Jan 2022	1234	2	<2	<2	<2	14.9	73.23	8.2	33.46	8.0
I26	24 Jan 2022	1234	6	<2	<2	<2	14.7	69.92	8.3	33.47	8.0
I26	24 Jan 2022	1234	9	2e	<2	<2	14.4	71.77	7.7	33.47	7.9
I26	31 Jan 2022	1138	2	480	90	110	14.7	67.19	8.5	33.42	8.2
I26	31 Jan 2022	1138	6	780	360e	60e	14.5	67.82	8.0	33.43	8.2
I26	31 Jan 2022	1138	9	860	240e	94	14.5	69.82	7.8	33.44	8.1
I32	04 Jan 2022	1200	2	<2	<2	<2	14.8	73.91	8.4	33.41	8.0
I32	04 Jan 2022	1200	6	<2	<2	<2	14.6	73.35	8.3	33.40	8.0
I32	04 Jan 2022	1200	9	<2	<2	<2	14.5	71.49	8.3	33.40	8.0
I32	10 Jan 2022	1125	2	2e	<2	<2	14.7	71.26	8.4	33.41	8.0
I32	10 Jan 2022	1125	6	<20	<2	<2	14.5	71.17	8.3	33.42	7.9
I32	10 Jan 2022	1125	9	<20	<2	2e	14.5	68.71	8.2	33.43	7.9
I32	18 Jan 2022	1218	2	1100	120e	78	15.3	66.25	8.9	33.40	8.0
I32	18 Jan 2022	1218	6	1100	300e	80	15.2	73.08	8.7	33.41	8.0
I32	18 Jan 2022	1218	9	100e	10e	12e	14.9	72.61	8.2	33.44	8.0
I32	24 Jan 2022	1248	2	2e	<2	<2	14.9	67.82	7.3	33.46	7.9
I32	24 Jan 2022	1248	6	<2	2e	<2	14.5	57.39	6.6	33.45	7.9
I32	24 Jan 2022	1248	9	<20	<2	<2	14.6	55.90	7.1	33.46	7.9
I32	31 Jan 2022	1154	2	<2	<2	<2	14.7	65.98	8.3	33.48	8.2
I32	31 Jan 2022	1154	6	<20	<2	<2	14.7	62.61	8.2	33.47	8.2
I32	31 Jan 2022	1154	9	<20	<2	<2	14.7	62.64	8.2	33.47	8.2
I39	04 Jan 2022	1044	2	<2	<2	<2	14.9	82.44	8.0	33.44	8.0
I39	04 Jan 2022	1044	12	<2	<2	<2	14.9	81.64	8.0	33.44	8.0
I39	04 Jan 2022	1044	18	<2	<2	<2	14.8	81.56	8.0	33.44	8.0
I39	10 Jan 2022	1011	2	<2	<2	<2	14.7	80.99	8.2	33.44	8.0
I39	10 Jan 2022	1011	12	<20	2e	<2	14.5	81.28	7.9	33.44	7.9
I39	10 Jan 2022	1011	18	42	<2	2e	14.3	80.04	7.4	33.43	7.9
I39	18 Jan 2022	1047	2	4800	360e	240e	15.2	75.68	8.6	33.32	8.0
I39	18 Jan 2022	1047	12	20e	10e	6e	14.6	76.82	7.8	33.44	7.9
I39	18 Jan 2022	1047	18	220e	82	26e	14.6	75.30	7.7	33.44	7.9

Station	Date	Time	Depth	Total	Fecal	Entero	Temp	XMS	DO	Sal	pH
I39	24 Jan 2022	1139	2	<2	<2	<2	14.7	80.96	8.2	33.46	8.0
I39	24 Jan 2022	1139	12	<2	<2	<2	14.5	82.10	7.9	33.47	8.0
I39	24 Jan 2022	1139	18	<2	<2	<2	13.9	79.85	6.6	33.47	7.8
I39	31 Jan 2022	1037	2	260e	84e	82	14.6	74.96	8.2	33.43	8.2
I39	31 Jan 2022	1037	12	140e	32e	12e	14.4	78.40	7.2	33.45	8.1
I39	31 Jan 2022	1037	18	320e	72	44	14.4	74.83	7.2	33.45	8.1
I40	04 Jan 2022	1118	2	2200e	66	48	14.9	76.07	8.1	33.38	8.0
I40	04 Jan 2022	1118	6	3200e	220e	78	14.8	73.74	8.0	33.40	8.0
I40	04 Jan 2022	1118	9	2000e	480	240e	14.8	72.14	8.0	33.40	8.0
I40	10 Jan 2022	1046	2	4800	1100	600	14.5	68.22	7.8	33.33	7.9
I40	10 Jan 2022	1046	6	2800e	280e	110	14.5	68.81	7.6	33.40	7.9
I40	10 Jan 2022	1046	9	2200e	500	320e	14.4	68.00	7.7	33.40	7.9
I40	18 Jan 2022	1128	2	>16000	3000e	1200	15.5	62.72	8.6	33.32	8.0
I40	18 Jan 2022	1128	6	300e	50	42	15.4	75.19	8.6	33.42	8.0
I40	18 Jan 2022	1128	9	680	100	72	15.1	76.00	8.3	33.45	8.0
I40	24 Jan 2022	1213	2	14000	680	160e	14.8	69.49	7.7	33.28	7.9
I40	24 Jan 2022	1213	6	4400	900	180e	14.4	71.79	7.3	33.43	7.9
I40	24 Jan 2022	1213	9	2600e	600	120e	14.3	51.57	6.5	33.45	7.8
I40	31 Jan 2022	1112	2	1400e	300e	120e	14.7	65.42	8.9	33.42	8.2
I40	31 Jan 2022	1112	6	680	180e	82	14.5	63.02	8.2	33.42	8.1
I40	31 Jan 2022	1112	9	680	300e	120e	14.4	60.62	8.2	33.42	8.1

ns = not sampled
ND = no data

Table 3.8

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

Station	Date	Parameter	Value
I19	04 Jan 2022	Depth (m)	11
I19	04 Jan 2022	Arrive Time	1106
I19	04 Jan 2022	Depart Time	1113
I19	04 Jan 2022	Air Temp (C)	13.1
I19	04 Jan 2022	Weather	Clear
I19	04 Jan 2022	Visibility (mi)	10
I19	04 Jan 2022	Wind Speed (kts)	2.7
I19	04 Jan 2022	Wind Dir	NW
I19	04 Jan 2022	Water Color	Green
I19	04 Jan 2022	Wave Ht Low (ft)	3.3
I19	04 Jan 2022	Wave Period (sec)	15
I19	04 Jan 2022	Sea State	Calm
I19	04 Jan 2022	High Tide (ft)	6.67
I19	04 Jan 2022	High Tide Time	1730
I19	04 Jan 2022	Low Tide (ft)	-1.58
I19	04 Jan 2022	Low Tide Time	48
I19	04 Jan 2022	Comments	none
I19	10 Jan 2022	Depth (m)	10
I19	10 Jan 2022	Arrive Time	1030
I19	10 Jan 2022	Depart Time	1038
I19	10 Jan 2022	Air Temp (C)	17.9
I19	10 Jan 2022	Weather	Partly Cloudy
I19	10 Jan 2022	Visibility (mi)	10
I19	10 Jan 2022	Wind Speed (kts)	9.8
I19	10 Jan 2022	Wind Dir	N
I19	10 Jan 2022	Water Color	Green
I19	10 Jan 2022	Wave Ht Low (ft)	3
I19	10 Jan 2022	Wave Period (sec)	14
I19	10 Jan 2022	Sea State	Light Chop
I19	10 Jan 2022	High Tide (ft)	4.58
I19	10 Jan 2022	High Tide Time	1148
I19	10 Jan 2022	Low Tide (ft)	1.41
I19	10 Jan 2022	Low Tide Time	1854
I19	10 Jan 2022	Comments	none
I19	18 Jan 2022	Depth (m)	11
I19	18 Jan 2022	Arrive Time	1113
I19	18 Jan 2022	Depart Time	1118
I19	18 Jan 2022	Air Temp (C)	14.8
I19	18 Jan 2022	Weather	Partly Cloudy
I19	18 Jan 2022	Visibility (mi)	10
I19	18 Jan 2022	Wind Speed (kts)	3
I19	18 Jan 2022	Wind Dir	W
I19	18 Jan 2022	Water Color	Green
I19	18 Jan 2022	Wave Ht Low (ft)	3
I19	18 Jan 2022	Wave Period (sec)	13
I19	18 Jan 2022	Sea State	Calm
I19	18 Jan 2022	High Tide (ft)	5.9
I19	18 Jan 2022	High Tide Time	1642
I19	18 Jan 2022	Low Tide (ft)	-0.82
I19	18 Jan 2022	Low Tide Time	2354
I19	18 Jan 2022	Comments	none
I19	24 Jan 2022	Depth (m)	11
I19	24 Jan 2022	Arrive Time	1157

Station	Date	Parameter	Value
I19	24 Jan 2022	Depart Time	1203
I19	24 Jan 2022	Air Temp (C)	15.3
I19	24 Jan 2022	Weather	Clear
I19	24 Jan 2022	Visibility (mi)	10
I19	24 Jan 2022	Wind Speed (kts)	16.9
I19	24 Jan 2022	Wind Dir	S
I19	24 Jan 2022	Water Color	Brownish-Green
I19	24 Jan 2022	Wave Ht Low (ft)	4
I19	24 Jan 2022	Wave Period (sec)	18
I19	24 Jan 2022	Sea State	Wind Ripples
I19	24 Jan 2022	High Tide (ft)	4.23
I19	24 Jan 2022	High Tide Time	924
I19	24 Jan 2022	Low Tide (ft)	1.19
I19	24 Jan 2022	Low Tide Time	306
I19	24 Jan 2022	Comments	none
I19	31 Jan 2022	Depth (m)	11
I19	31 Jan 2022	Arrive Time	1059
I19	31 Jan 2022	Depart Time	1108
I19	31 Jan 2022	Air Temp (C)	13.8
I19	31 Jan 2022	Weather	Partly Cloudy
I19	31 Jan 2022	Visibility (mi)	10
I19	31 Jan 2022	Wind Speed (kts)	1.1
I19	31 Jan 2022	Wind Dir	SE
I19	31 Jan 2022	Water Color	Green
I19	31 Jan 2022	Wave Ht Low (ft)	2
I19	31 Jan 2022	Wave Period (sec)	12
I19	31 Jan 2022	Sea State	Light Chop
I19	31 Jan 2022	High Tide (ft)	6.74
I19	31 Jan 2022	High Tide Time	1554
I19	31 Jan 2022	Low Tide (ft)	-1.86
I19	31 Jan 2022	Low Tide Time	2306
I19	31 Jan 2022	Comments	none
I24	04 Jan 2022	Depth (m)	11
I24	04 Jan 2022	Arrive Time	1127
I24	04 Jan 2022	Depart Time	1131
I24	04 Jan 2022	Air Temp (C)	12.8
I24	04 Jan 2022	Weather	Clear
I24	04 Jan 2022	Visibility (mi)	10
I24	04 Jan 2022	Wind Speed (kts)	3.8
I24	04 Jan 2022	Wind Dir	NW
I24	04 Jan 2022	Water Color	Green
I24	04 Jan 2022	Wave Ht Low (ft)	3.3
I24	04 Jan 2022	Wave Period (sec)	15
I24	04 Jan 2022	Sea State	Calm
I24	04 Jan 2022	High Tide (ft)	6.67
I24	04 Jan 2022	High Tide Time	1730
I24	04 Jan 2022	Low Tide (ft)	-1.58
I24	04 Jan 2022	Low Tide Time	48
I24	04 Jan 2022	Comments	none
I24	10 Jan 2022	Depth (m)	10
I24	10 Jan 2022	Arrive Time	1055
I24	10 Jan 2022	Depart Time	1059
I24	10 Jan 2022	Air Temp (C)	16.3
I24	10 Jan 2022	Weather	Cloudy
I24	10 Jan 2022	Visibility (mi)	10
I24	10 Jan 2022	Wind Speed (kts)	7.9
I24	10 Jan 2022	Wind Dir	N
I24	10 Jan 2022	Water Color	Green

Station	Date	Parameter	Value
I24	10 Jan 2022	Wave Ht Low (ft)	3
I24	10 Jan 2022	Wave Period (sec)	14
I24	10 Jan 2022	Sea State	Light Chop
I24	10 Jan 2022	High Tide (ft)	4.58
I24	10 Jan 2022	High Tide Time	1148
I24	10 Jan 2022	Low Tide (ft)	1.41
I24	10 Jan 2022	Low Tide Time	1854
I24	10 Jan 2022	Comments	none
I24	18 Jan 2022	Depth (m)	10
I24	18 Jan 2022	Arrive Time	1139
I24	18 Jan 2022	Depart Time	1143
I24	18 Jan 2022	Air Temp (C)	14.8
I24	18 Jan 2022	Weather	Partly Cloudy
I24	18 Jan 2022	Visibility (mi)	10
I24	18 Jan 2022	Wind Speed (kts)	4.9
I24	18 Jan 2022	Wind Dir	NW
I24	18 Jan 2022	Water Color	Green
I24	18 Jan 2022	Wave Ht Low (ft)	3
I24	18 Jan 2022	Wave Period (sec)	13
I24	18 Jan 2022	Sea State	Calm
I24	18 Jan 2022	High Tide (ft)	5.9
I24	18 Jan 2022	High Tide Time	1642
I24	18 Jan 2022	Low Tide (ft)	-0.82
I24	18 Jan 2022	Low Tide Time	2354
I24	18 Jan 2022	Comments	none
I24	24 Jan 2022	Depth (m)	10
I24	24 Jan 2022	Arrive Time	1219
I24	24 Jan 2022	Depart Time	1223
I24	24 Jan 2022	Air Temp (C)	15.2
I24	24 Jan 2022	Weather	Clear
I24	24 Jan 2022	Visibility (mi)	10
I24	24 Jan 2022	Wind Speed (kts)	9.4
I24	24 Jan 2022	Wind Dir	S
I24	24 Jan 2022	Water Color	Green
I24	24 Jan 2022	Wave Ht Low (ft)	4
I24	24 Jan 2022	Wave Period (sec)	18
I24	24 Jan 2022	Sea State	Wind Ripples
I24	24 Jan 2022	High Tide (ft)	4.23
I24	24 Jan 2022	High Tide Time	924
I24	24 Jan 2022	Low Tide (ft)	1.19
I24	24 Jan 2022	Low Tide Time	306
I24	24 Jan 2022	Comments	none
I24	31 Jan 2022	Depth (m)	10
I24	31 Jan 2022	Arrive Time	1121
I24	31 Jan 2022	Depart Time	1126
I24	31 Jan 2022	Air Temp (C)	13.8
I24	31 Jan 2022	Weather	Partly Cloudy
I24	31 Jan 2022	Visibility (mi)	10
I24	31 Jan 2022	Wind Speed (kts)	5.9
I24	31 Jan 2022	Wind Dir	W
I24	31 Jan 2022	Water Color	Brown
I24	31 Jan 2022	Wave Ht Low (ft)	2
I24	31 Jan 2022	Wave Period (sec)	12
I24	31 Jan 2022	Sea State	Light Chop
I24	31 Jan 2022	High Tide (ft)	6.74
I24	31 Jan 2022	High Tide Time	1554
I24	31 Jan 2022	Low Tide (ft)	-1.86
I24	31 Jan 2022	Low Tide Time	2306

Station	Date	Parameter	Value
I24	31 Jan 2022	Comments	none
I25	04 Jan 2022	Depth (m)	10
I25	04 Jan 2022	Arrive Time	1134
I25	04 Jan 2022	Depart Time	1136
I25	04 Jan 2022	Air Temp (C)	12.7
I25	04 Jan 2022	Weather	Clear
I25	04 Jan 2022	Visibility (mi)	10
I25	04 Jan 2022	Wind Speed (kts)	3.8
I25	04 Jan 2022	Wind Dir	NW
I25	04 Jan 2022	Water Color	Green
I25	04 Jan 2022	Wave Ht Low (ft)	3.3
I25	04 Jan 2022	Wave Period (sec)	15
I25	04 Jan 2022	Sea State	Calm
I25	04 Jan 2022	High Tide (ft)	6.67
I25	04 Jan 2022	High Tide Time	1730
I25	04 Jan 2022	Low Tide (ft)	-1.58
I25	04 Jan 2022	Low Tide Time	48
I25	04 Jan 2022	Comments	none
I25	10 Jan 2022	Depth (m)	9
I25	10 Jan 2022	Arrive Time	1102
I25	10 Jan 2022	Depart Time	1107
I25	10 Jan 2022	Air Temp (C)	16.2
I25	10 Jan 2022	Weather	Cloudy
I25	10 Jan 2022	Visibility (mi)	10
I25	10 Jan 2022	Wind Speed (kts)	7.6
I25	10 Jan 2022	Wind Dir	N
I25	10 Jan 2022	Water Color	Green
I25	10 Jan 2022	Wave Ht Low (ft)	3
I25	10 Jan 2022	Wave Period (sec)	14
I25	10 Jan 2022	Sea State	Light Chop
I25	10 Jan 2022	High Tide (ft)	4.58
I25	10 Jan 2022	High Tide Time	1148
I25	10 Jan 2022	Low Tide (ft)	1.41
I25	10 Jan 2022	Low Tide Time	1854
I25	10 Jan 2022	Comments	none
I25	18 Jan 2022	Depth (m)	9
I25	18 Jan 2022	Arrive Time	1147
I25	18 Jan 2022	Depart Time	1153
I25	18 Jan 2022	Air Temp (C)	15
I25	18 Jan 2022	Weather	Partly Cloudy
I25	18 Jan 2022	Visibility (mi)	10
I25	18 Jan 2022	Wind Speed (kts)	5.8
I25	18 Jan 2022	Wind Dir	NW
I25	18 Jan 2022	Water Color	Green
I25	18 Jan 2022	Wave Ht Low (ft)	3
I25	18 Jan 2022	Wave Period (sec)	13
I25	18 Jan 2022	Sea State	Calm
I25	18 Jan 2022	High Tide (ft)	5.9
I25	18 Jan 2022	High Tide Time	1642
I25	18 Jan 2022	Low Tide (ft)	-0.82
I25	18 Jan 2022	Low Tide Time	2354
I25	18 Jan 2022	Comments	none
I25	24 Jan 2022	Depth (m)	9
I25	24 Jan 2022	Arrive Time	1226
I25	24 Jan 2022	Depart Time	1233
I25	24 Jan 2022	Air Temp (C)	15.2
I25	24 Jan 2022	Weather	Clear

Station	Date	Parameter	Value
I25	24 Jan 2022	Visibility (mi)	10
I25	24 Jan 2022	Wind Speed (kts)	9.1
I25	24 Jan 2022	Wind Dir	S
I25	24 Jan 2022	Water Color	Green
I25	24 Jan 2022	Wave Ht Low (ft)	4
I25	24 Jan 2022	Wave Period (sec)	18
I25	24 Jan 2022	Sea State	Wind Ripples
I25	24 Jan 2022	High Tide (ft)	4.23
I25	24 Jan 2022	High Tide Time	924
I25	24 Jan 2022	Low Tide (ft)	1.19
I25	24 Jan 2022	Low Tide Time	306
I25	24 Jan 2022	Comments	none
I25	31 Jan 2022	Depth (m)	9
I25	31 Jan 2022	Arrive Time	1128
I25	31 Jan 2022	Depart Time	1132
I25	31 Jan 2022	Air Temp (C)	14
I25	31 Jan 2022	Weather	Partly Cloudy
I25	31 Jan 2022	Visibility (mi)	10
I25	31 Jan 2022	Wind Speed (kts)	8.2
I25	31 Jan 2022	Wind Dir	NW
I25	31 Jan 2022	Water Color	Brown
I25	31 Jan 2022	Wave Ht Low (ft)	2
I25	31 Jan 2022	Wave Period (sec)	12
I25	31 Jan 2022	Sea State	Light Chop
I25	31 Jan 2022	High Tide (ft)	6.74
I25	31 Jan 2022	High Tide Time	1554
I25	31 Jan 2022	Low Tide (ft)	-1.86
I25	31 Jan 2022	Low Tide Time	2306
I25	31 Jan 2022	Comments	none
I26	04 Jan 2022	Depth (m)	10
I26	04 Jan 2022	Arrive Time	1145
I26	04 Jan 2022	Depart Time	1150
I26	04 Jan 2022	Air Temp (C)	13
I26	04 Jan 2022	Weather	Clear
I26	04 Jan 2022	Visibility (mi)	10
I26	04 Jan 2022	Wind Speed (kts)	5.3
I26	04 Jan 2022	Wind Dir	NW
I26	04 Jan 2022	Water Color	Green
I26	04 Jan 2022	Wave Ht Low (ft)	3.3
I26	04 Jan 2022	Wave Period (sec)	15
I26	04 Jan 2022	Sea State	Calm
I26	04 Jan 2022	High Tide (ft)	6.67
I26	04 Jan 2022	High Tide Time	1730
I26	04 Jan 2022	Low Tide (ft)	-1.58
I26	04 Jan 2022	Low Tide Time	48
I26	04 Jan 2022	Comments	CTD recast
I26	10 Jan 2022	Depth (m)	9
I26	10 Jan 2022	Arrive Time	1113
I26	10 Jan 2022	Depart Time	1116
I26	10 Jan 2022	Air Temp (C)	16
I26	10 Jan 2022	Weather	Cloudy
I26	10 Jan 2022	Visibility (mi)	10
I26	10 Jan 2022	Wind Speed (kts)	8.8
I26	10 Jan 2022	Wind Dir	N
I26	10 Jan 2022	Water Color	Green
I26	10 Jan 2022	Wave Ht Low (ft)	3
I26	10 Jan 2022	Wave Period (sec)	14
I26	10 Jan 2022	Sea State	Light Chop

Station	Date	Parameter	Value
I26	10 Jan 2022	High Tide (ft)	4.58
I26	10 Jan 2022	High Tide Time	1148
I26	10 Jan 2022	Low Tide (ft)	1.41
I26	10 Jan 2022	Low Tide Time	1854
I26	10 Jan 2022	Comments	none
I26	18 Jan 2022	Depth (m)	9
I26	18 Jan 2022	Arrive Time	1159
I26	18 Jan 2022	Depart Time	1204
I26	18 Jan 2022	Air Temp (C)	14.8
I26	18 Jan 2022	Weather	Partly Cloudy
I26	18 Jan 2022	Visibility (mi)	10
I26	18 Jan 2022	Wind Speed (kts)	7.1
I26	18 Jan 2022	Wind Dir	NW
I26	18 Jan 2022	Water Color	Green
I26	18 Jan 2022	Wave Ht Low (ft)	3
I26	18 Jan 2022	Wave Period (sec)	13
I26	18 Jan 2022	Sea State	Calm
I26	18 Jan 2022	High Tide (ft)	5.9
I26	18 Jan 2022	High Tide Time	1642
I26	18 Jan 2022	Low Tide (ft)	-0.82
I26	18 Jan 2022	Low Tide Time	2354
I26	18 Jan 2022	Comments	none
I26	24 Jan 2022	Depth (m)	10
I26	24 Jan 2022	Arrive Time	1234
I26	24 Jan 2022	Depart Time	1238
I26	24 Jan 2022	Air Temp (C)	15.3
I26	24 Jan 2022	Weather	Clear
I26	24 Jan 2022	Visibility (mi)	10
I26	24 Jan 2022	Wind Speed (kts)	8.2
I26	24 Jan 2022	Wind Dir	S
I26	24 Jan 2022	Water Color	Green
I26	24 Jan 2022	Wave Ht Low (ft)	4
I26	24 Jan 2022	Wave Period (sec)	18
I26	24 Jan 2022	Sea State	Wind Ripples
I26	24 Jan 2022	High Tide (ft)	4.23
I26	24 Jan 2022	High Tide Time	924
I26	24 Jan 2022	Low Tide (ft)	1.19
I26	24 Jan 2022	Low Tide Time	306
I26	24 Jan 2022	Comments	none
I26	31 Jan 2022	Depth (m)	9
I26	31 Jan 2022	Arrive Time	1138
I26	31 Jan 2022	Depart Time	1141
I26	31 Jan 2022	Air Temp (C)	13.8
I26	31 Jan 2022	Weather	Partly Cloudy
I26	31 Jan 2022	Visibility (mi)	10
I26	31 Jan 2022	Wind Speed (kts)	4.3
I26	31 Jan 2022	Wind Dir	NW
I26	31 Jan 2022	Water Color	Greenish-Brown
I26	31 Jan 2022	Wave Ht Low (ft)	2
I26	31 Jan 2022	Wave Period (sec)	12
I26	31 Jan 2022	Sea State	Light Chop
I26	31 Jan 2022	High Tide (ft)	6.74
I26	31 Jan 2022	High Tide Time	1554
I26	31 Jan 2022	Low Tide (ft)	-1.86
I26	31 Jan 2022	Low Tide Time	2306
I26	31 Jan 2022	Comments	none
I32	04 Jan 2022	Depth (m)	11

Station	Date	Parameter	Value
I32	04 Jan 2022	Arrive Time	1200
I32	04 Jan 2022	Depart Time	1203
I32	04 Jan 2022	Air Temp (C)	13
I32	04 Jan 2022	Weather	Clear
I32	04 Jan 2022	Visibility (mi)	10
I32	04 Jan 2022	Wind Speed (kts)	7
I32	04 Jan 2022	Wind Dir	W
I32	04 Jan 2022	Water Color	Green
I32	04 Jan 2022	Wave Ht Low (ft)	3.3
I32	04 Jan 2022	Wave Period (sec)	15
I32	04 Jan 2022	Sea State	Calm
I32	04 Jan 2022	High Tide (ft)	6.67
I32	04 Jan 2022	High Tide Time	1730
I32	04 Jan 2022	Low Tide (ft)	-1.58
I32	04 Jan 2022	Low Tide Time	48
I32	04 Jan 2022	Comments	none
I32	10 Jan 2022	Depth (m)	10
I32	10 Jan 2022	Arrive Time	1125
I32	10 Jan 2022	Depart Time	1130
I32	10 Jan 2022	Air Temp (C)	16.1
I32	10 Jan 2022	Weather	Cloudy
I32	10 Jan 2022	Visibility (mi)	10
I32	10 Jan 2022	Wind Speed (kts)	6.9
I32	10 Jan 2022	Wind Dir	N
I32	10 Jan 2022	Water Color	Green
I32	10 Jan 2022	Wave Ht Low (ft)	3
I32	10 Jan 2022	Wave Period (sec)	14
I32	10 Jan 2022	Sea State	Light Chop
I32	10 Jan 2022	High Tide (ft)	4.58
I32	10 Jan 2022	High Tide Time	1148
I32	10 Jan 2022	Low Tide (ft)	1.41
I32	10 Jan 2022	Low Tide Time	1854
I32	10 Jan 2022	Comments	none
I32	18 Jan 2022	Depth (m)	9
I32	18 Jan 2022	Arrive Time	1218
I32	18 Jan 2022	Depart Time	1228
I32	18 Jan 2022	Air Temp (C)	14.9
I32	18 Jan 2022	Weather	Partly Cloudy
I32	18 Jan 2022	Visibility (mi)	10
I32	18 Jan 2022	Wind Speed (kts)	8.5
I32	18 Jan 2022	Wind Dir	W
I32	18 Jan 2022	Water Color	Green
I32	18 Jan 2022	Wave Ht Low (ft)	3
I32	18 Jan 2022	Wave Period (sec)	13
I32	18 Jan 2022	Sea State	Calm
I32	18 Jan 2022	High Tide (ft)	5.9
I32	18 Jan 2022	High Tide Time	1642
I32	18 Jan 2022	Low Tide (ft)	-0.82
I32	18 Jan 2022	Low Tide Time	2354
I32	18 Jan 2022	Comments	none
I32	24 Jan 2022	Depth (m)	11
I32	24 Jan 2022	Arrive Time	1245
I32	24 Jan 2022	Depart Time	1250
I32	24 Jan 2022	Air Temp (C)	15.5
I32	24 Jan 2022	Weather	Clear
I32	24 Jan 2022	Visibility (mi)	10
I32	24 Jan 2022	Wind Speed (kts)	10.6
I32	24 Jan 2022	Wind Dir	S

Station	Date	Parameter	Value
I32	24 Jan 2022	Water Color	Green
I32	24 Jan 2022	Wave Ht Low (ft)	4
I32	24 Jan 2022	Wave Period (sec)	18
I32	24 Jan 2022	Sea State	Wind Ripples
I32	24 Jan 2022	High Tide (ft)	4.23
I32	24 Jan 2022	High Tide Time	924
I32	24 Jan 2022	Low Tide (ft)	1.19
I32	24 Jan 2022	Low Tide Time	306
I32	24 Jan 2022	Comments	none
I32	31 Jan 2022	Depth (m)	10
I32	31 Jan 2022	Arrive Time	1154
I32	31 Jan 2022	Depart Time	1157
I32	31 Jan 2022	Air Temp (C)	14
I32	31 Jan 2022	Weather	Partly Cloudy
I32	31 Jan 2022	Visibility (mi)	10
I32	31 Jan 2022	Wind Speed (kts)	8.1
I32	31 Jan 2022	Wind Dir	W
I32	31 Jan 2022	Water Color	Greenish-Brown
I32	31 Jan 2022	Wave Ht Low (ft)	2
I32	31 Jan 2022	Wave Period (sec)	12
I32	31 Jan 2022	Sea State	Light Chop
I32	31 Jan 2022	High Tide (ft)	6.74
I32	31 Jan 2022	High Tide Time	1554
I32	31 Jan 2022	Low Tide (ft)	-1.86
I32	31 Jan 2022	Low Tide Time	2306
I32	31 Jan 2022	Comments	none
I39	04 Jan 2022	Depth (m)	20
I39	04 Jan 2022	Arrive Time	1044
I39	04 Jan 2022	Depart Time	1049
I39	04 Jan 2022	Air Temp (C)	12.3
I39	04 Jan 2022	Weather	Clear
I39	04 Jan 2022	Visibility (mi)	10
I39	04 Jan 2022	Wind Speed (kts)	1.7
I39	04 Jan 2022	Wind Dir	NE
I39	04 Jan 2022	Water Color	Blueish-Green
I39	04 Jan 2022	Wave Ht Low (ft)	3.3
I39	04 Jan 2022	Wave Period (sec)	15
I39	04 Jan 2022	Sea State	Calm
I39	04 Jan 2022	High Tide (ft)	6.67
I39	04 Jan 2022	High Tide Time	1730
I39	04 Jan 2022	Low Tide (ft)	-1.58
I39	04 Jan 2022	Low Tide Time	48
I39	04 Jan 2022	Comments	none
I39	10 Jan 2022	Depth (m)	19
I39	10 Jan 2022	Arrive Time	1011
I39	10 Jan 2022	Depart Time	1015
I39	10 Jan 2022	Air Temp (C)	15.6
I39	10 Jan 2022	Weather	Partly Cloudy
I39	10 Jan 2022	Visibility (mi)	10
I39	10 Jan 2022	Wind Speed (kts)	7
I39	10 Jan 2022	Wind Dir	N
I39	10 Jan 2022	Water Color	Green
I39	10 Jan 2022	Wave Ht Low (ft)	3
I39	10 Jan 2022	Wave Period (sec)	14
I39	10 Jan 2022	Sea State	Light Chop
I39	10 Jan 2022	High Tide (ft)	4.58
I39	10 Jan 2022	High Tide Time	1148
I39	10 Jan 2022	Low Tide (ft)	1.41

Station	Date	Parameter	Value
I39	10 Jan 2022	Low Tide Time	1854
I39	10 Jan 2022	Comments	Seagrass
I39	18 Jan 2022	Depth (m)	19
I39	18 Jan 2022	Arrive Time	1047
I39	18 Jan 2022	Depart Time	1052
I39	18 Jan 2022	Air Temp (C)	14.7
I39	18 Jan 2022	Weather	Partly Cloudy
I39	18 Jan 2022	Visibility (mi)	10
I39	18 Jan 2022	Wind Speed (kts)	2.3
I39	18 Jan 2022	Wind Dir	NW
I39	18 Jan 2022	Water Color	Green
I39	18 Jan 2022	Wave Ht Low (ft)	3
I39	18 Jan 2022	Wave Period (sec)	13
I39	18 Jan 2022	Sea State	Calm
I39	18 Jan 2022	High Tide (ft)	5.9
I39	18 Jan 2022	High Tide Time	1642
I39	18 Jan 2022	Low Tide (ft)	-0.82
I39	18 Jan 2022	Low Tide Time	2354
I39	18 Jan 2022	Comments	Lobster Floats
I39	24 Jan 2022	Depth (m)	18
I39	24 Jan 2022	Arrive Time	1136
I39	24 Jan 2022	Depart Time	1140
I39	24 Jan 2022	Air Temp (C)	15.2
I39	24 Jan 2022	Weather	Clear
I39	24 Jan 2022	Visibility (mi)	10
I39	24 Jan 2022	Wind Speed (kts)	9.6
I39	24 Jan 2022	Wind Dir	S
I39	24 Jan 2022	Water Color	Blueish-Green
I39	24 Jan 2022	Wave Ht Low (ft)	4
I39	24 Jan 2022	Wave Period (sec)	18
I39	24 Jan 2022	Sea State	Wind Ripples
I39	24 Jan 2022	High Tide (ft)	4.23
I39	24 Jan 2022	High Tide Time	924
I39	24 Jan 2022	Low Tide (ft)	1.19
I39	24 Jan 2022	Low Tide Time	306
I39	24 Jan 2022	Comments	none
I39	31 Jan 2022	Depth (m)	19
I39	31 Jan 2022	Arrive Time	1037
I39	31 Jan 2022	Depart Time	1054
I39	31 Jan 2022	Air Temp (C)	13
I39	31 Jan 2022	Weather	Partly Cloudy
I39	31 Jan 2022	Visibility (mi)	10
I39	31 Jan 2022	Wind Speed (kts)	4.3
I39	31 Jan 2022	Wind Dir	E
I39	31 Jan 2022	Water Color	Blueish-Green
I39	31 Jan 2022	Wave Ht Low (ft)	2
I39	31 Jan 2022	Wave Period (sec)	12
I39	31 Jan 2022	Sea State	Light Chop
I39	31 Jan 2022	High Tide (ft)	6.74
I39	31 Jan 2022	High Tide Time	1554
I39	31 Jan 2022	Low Tide (ft)	-1.86
I39	31 Jan 2022	Low Tide Time	2306
I39	31 Jan 2022	Comments	none
I40	04 Jan 2022	Depth (m)	11
I40	04 Jan 2022	Arrive Time	1119
I40	04 Jan 2022	Depart Time	1122
I40	04 Jan 2022	Air Temp (C)	12.8

Station	Date	Parameter	Value
I40	04 Jan 2022	Weather	Clear
I40	04 Jan 2022	Visibility (mi)	10
I40	04 Jan 2022	Wind Speed (kts)	3.1
I40	04 Jan 2022	Wind Dir	NW
I40	04 Jan 2022	Water Color	Green
I40	04 Jan 2022	Wave Ht Low (ft)	3.3
I40	04 Jan 2022	Wave Period (sec)	15
I40	04 Jan 2022	Sea State	Calm
I40	04 Jan 2022	High Tide (ft)	6.67
I40	04 Jan 2022	High Tide Time	1730
I40	04 Jan 2022	Low Tide (ft)	-1.58
I40	04 Jan 2022	Low Tide Time	48
I40	04 Jan 2022	Comments	none
I40	10 Jan 2022	Depth (m)	10
I40	10 Jan 2022	Arrive Time	1046
I40	10 Jan 2022	Depart Time	1049
I40	10 Jan 2022	Air Temp (C)	17.4
I40	10 Jan 2022	Weather	Partly Cloudy
I40	10 Jan 2022	Visibility (mi)	10
I40	10 Jan 2022	Wind Speed (kts)	8.3
I40	10 Jan 2022	Wind Dir	N
I40	10 Jan 2022	Water Color	Green
I40	10 Jan 2022	Wave Ht Low (ft)	3
I40	10 Jan 2022	Wave Period (sec)	14
I40	10 Jan 2022	Sea State	Light Chop
I40	10 Jan 2022	High Tide (ft)	4.58
I40	10 Jan 2022	High Tide Time	1148
I40	10 Jan 2022	Low Tide (ft)	1.41
I40	10 Jan 2022	Low Tide Time	1854
I40	10 Jan 2022	Comments	none
I40	18 Jan 2022	Depth (m)	10
I40	18 Jan 2022	Arrive Time	1128
I40	18 Jan 2022	Depart Time	1135
I40	18 Jan 2022	Air Temp (C)	14.9
I40	18 Jan 2022	Weather	Partly Cloudy
I40	18 Jan 2022	Visibility (mi)	10
I40	18 Jan 2022	Wind Speed (kts)	3.6
I40	18 Jan 2022	Wind Dir	NW
I40	18 Jan 2022	Water Color	Green
I40	18 Jan 2022	Wave Ht Low (ft)	3
I40	18 Jan 2022	Wave Period (sec)	13
I40	18 Jan 2022	Sea State	Calm
I40	18 Jan 2022	High Tide (ft)	5.9
I40	18 Jan 2022	High Tide Time	1642
I40	18 Jan 2022	Low Tide (ft)	-0.82
I40	18 Jan 2022	Low Tide Time	2354
I40	18 Jan 2022	Comments	Sewage-like odor
I40	24 Jan 2022	Depth (m)	10
I40	24 Jan 2022	Arrive Time	1210
I40	24 Jan 2022	Depart Time	1214
I40	24 Jan 2022	Air Temp (C)	15.2
I40	24 Jan 2022	Weather	Clear
I40	24 Jan 2022	Visibility (mi)	10
I40	24 Jan 2022	Wind Speed (kts)	10.6
I40	24 Jan 2022	Wind Dir	SW
I40	24 Jan 2022	Water Color	Green
I40	24 Jan 2022	Wave Ht Low (ft)	4
I40	24 Jan 2022	Wave Period (sec)	18

Station	Date	Parameter	Value
I40	24 Jan 2022	Sea State	Wind Ripples
I40	24 Jan 2022	High Tide (ft)	4.23
I40	24 Jan 2022	High Tide Time	924
I40	24 Jan 2022	Low Tide (ft)	1.19
I40	24 Jan 2022	Low Tide Time	306
I40	24 Jan 2022	Comments	Kelp Debris
I40	31 Jan 2022	Depth (m)	10
I40	31 Jan 2022	Arrive Time	1112
I40	31 Jan 2022	Depart Time	1120
I40	31 Jan 2022	Air Temp (C)	13.8
I40	31 Jan 2022	Weather	Partly Cloudy
I40	31 Jan 2022	Visibility (mi)	10
I40	31 Jan 2022	Wind Speed (kts)	7.8
I40	31 Jan 2022	Wind Dir	NW
I40	31 Jan 2022	Water Color	Green
I40	31 Jan 2022	Wave Ht Low (ft)	2
I40	31 Jan 2022	Wave Period (sec)	12
I40	31 Jan 2022	Sea State	Light Chop
I40	31 Jan 2022	High Tide (ft)	6.74
I40	31 Jan 2022	High Tide Time	1554
I40	31 Jan 2022	Low Tide (ft)	-1.86
I40	31 Jan 2022	Low Tide Time	2306
I40	31 Jan 2022	Comments	none

Table 3.9

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

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ -t)	Chlor (μ g/L)
I19	04 Jan 2022	1	15.03	75.61	8.1	33.42	8.0	24.7	1.07
I19	04 Jan 2022	2	15.00	75.47	8.1	33.42	8.0	24.8	1.07
I19	04 Jan 2022	3	14.95	75.10	8.2	33.42	8.0	24.8	1.14
I19	04 Jan 2022	4	14.92	75.10	8.1	33.42	8.0	24.8	1.29
I19	04 Jan 2022	5	14.90	74.75	8.1	33.42	8.0	24.8	1.64
I19	04 Jan 2022	6	14.87	73.89	8.1	33.42	8.0	24.8	2.07
I19	04 Jan 2022	7	14.83	71.95	8.1	33.41	8.0	24.8	2.59
I19	04 Jan 2022	8	14.82	70.54	8.1	33.41	8.0	24.8	2.77
I19	04 Jan 2022	9	14.79	71.15	8.0	33.41	8.0	24.8	2.84
I19	04 Jan 2022	10	14.72	70.51	8.0	33.40	8.0	24.8	3.01
I19	10 Jan 2022	1	14.50	68.93	7.6	33.41	7.9	24.9	1.14
I19	10 Jan 2022	2	14.49	67.89	7.6	33.41	7.9	24.9	1.26
I19	10 Jan 2022	3	14.48	67.58	7.6	33.41	7.9	24.9	1.39
I19	10 Jan 2022	4	14.47	67.35	7.6	33.41	7.9	24.9	1.58
I19	10 Jan 2022	5	14.44	63.80	7.5	33.41	7.9	24.9	1.85
I19	10 Jan 2022	6	14.42	63.50	7.6	33.41	7.9	24.9	2.13
I19	10 Jan 2022	7	14.41	63.04	7.6	33.40	7.9	24.9	2.24
I19	10 Jan 2022	8	14.41	61.97	7.7	33.40	7.9	24.9	2.36
I19	10 Jan 2022	9	14.40	55.84	7.6	33.40	7.9	24.9	2.50
I19	10 Jan 2022	10	14.40	50.68	7.6	33.40	7.9	24.9	2.58
I19	18 Jan 2022	1	15.51	73.23	8.4	33.39	8.0	24.6	2.22
I19	18 Jan 2022	2	15.45	72.72	8.4	33.40	8.0	24.6	2.29
I19	18 Jan 2022	3	15.39	71.94	8.4	33.39	8.0	24.6	2.72
I19	18 Jan 2022	4	15.39	71.02	8.4	33.39	8.0	24.6	3.11
I19	18 Jan 2022	5	15.33	70.11	8.4	33.40	8.0	24.7	3.36
I19	18 Jan 2022	6	15.24	70.86	8.4	33.42	8.0	24.7	3.49
I19	18 Jan 2022	7	15.14	74.43	8.4	33.43	8.0	24.7	3.22
I19	18 Jan 2022	8	15.04	76.75	8.4	33.43	8.0	24.8	2.80
I19	18 Jan 2022	9	15.01	76.51	8.3	33.42	8.0	24.8	2.47
I19	18 Jan 2022	10	14.98	75.96	8.3	33.42	8.0	24.8	2.36
I19	24 Jan 2022	1	14.75	72.29	8.2	33.44	8.0	24.8	2.48
I19	24 Jan 2022	2	14.76	72.39	8.2	33.44	8.0	24.8	2.38
I19	24 Jan 2022	3	14.74	72.39	8.2	33.45	8.0	24.8	2.37
I19	24 Jan 2022	4	14.67	72.38	8.0	33.45	8.0	24.9	2.43
I19	24 Jan 2022	5	14.61	72.31	7.7	33.45	7.9	24.9	2.72
I19	24 Jan 2022	6	14.56	71.56	7.5	33.45	7.9	24.9	3.00
I19	24 Jan 2022	7	14.43	69.07	7.3	33.46	7.9	24.9	3.19
I19	24 Jan 2022	8	14.28	66.51	7.4	33.45	7.9	24.9	3.60
I19	24 Jan 2022	9	14.25	65.35	7.5	33.44	7.9	24.9	3.91
I19	24 Jan 2022	10	14.23	56.59	7.3	33.44	7.9	24.9	3.39
I19	31 Jan 2022	1	14.94	69.71	9.7	33.43	8.3	24.8	5.67
I19	31 Jan 2022	2	14.89	66.12	9.6	33.43	8.3	24.8	7.04
I19	31 Jan 2022	3	14.75	63.51	8.6	33.44	8.2	24.8	10.18
I19	31 Jan 2022	4	14.74	63.20	8.6	33.43	8.2	24.8	11.09
I19	31 Jan 2022	5	14.73	63.16	8.6	33.44	8.2	24.8	11.24
I19	31 Jan 2022	6	14.72	63.04	8.6	33.44	8.2	24.8	10.53
I19	31 Jan 2022	7	14.71	62.94	8.6	33.44	8.2	24.8	10.09
I19	31 Jan 2022	8	14.71	62.58	8.6	33.44	8.2	24.8	10.27
I19	31 Jan 2022	9	14.70	62.46	8.6	33.44	8.2	24.8	10.13
I19	31 Jan 2022	10	14.66	61.76	8.4	33.44	8.2	24.8	8.21

Station	Date	Depth (m)	Temp (°C)	XMS (‰)	DO (mg/L)	Sal (ppt)	pH	Dens (σ -t)	Chlor (μ g/L)
I24	04 Jan 2022	1	14.76	74.53	8.1	33.32	8.0	24.7	1.19
I24	04 Jan 2022	2	14.80	73.85	8.1	33.32	8.0	24.7	1.20
I24	04 Jan 2022	3	14.79	74.40	8.1	33.32	8.0	24.7	1.28
I24	04 Jan 2022	4	14.74	74.34	8.1	33.33	8.0	24.7	1.25
I24	04 Jan 2022	5	14.76	72.48	7.9	33.38	8.0	24.8	1.42
I24	04 Jan 2022	6	14.65	69.70	7.8	33.39	7.9	24.8	1.71
I24	04 Jan 2022	7	14.63	69.03	7.8	33.37	7.9	24.8	2.14
I24	04 Jan 2022	8	14.55	68.19	7.7	33.38	7.9	24.8	2.33
I24	04 Jan 2022	9	14.44	67.57	7.7	33.37	7.9	24.8	2.17
I24	04 Jan 2022	10	14.45	64.94	7.7	33.37	7.9	24.8	1.86
I24	04 Jan 2022	11	14.41	62.14	7.7	33.36	7.9	24.8	2.07
I24	10 Jan 2022	1	14.61	72.68	7.8	33.41	7.9	24.8	1.28
I24	10 Jan 2022	2	14.60	72.27	7.8	33.41	7.9	24.8	1.36
I24	10 Jan 2022	3	14.59	71.82	7.8	33.41	7.9	24.8	1.47
I24	10 Jan 2022	4	14.56	71.81	7.8	33.41	7.9	24.8	1.79
I24	10 Jan 2022	5	14.54	72.53	7.8	33.41	7.9	24.8	2.08
I24	10 Jan 2022	6	14.45	73.61	7.5	33.42	7.9	24.9	2.17
I24	10 Jan 2022	7	14.42	74.47	7.4	33.43	7.9	24.9	2.34
I24	10 Jan 2022	8	14.39	76.06	7.4	33.43	7.9	24.9	2.53
I24	10 Jan 2022	9	14.37	76.74	7.3	33.43	7.9	24.9	2.51
I24	10 Jan 2022	10	14.35	76.02	7.2	33.43	7.9	24.9	2.69
I24	18 Jan 2022	1	15.58	73.01	8.6	33.32	8.0	24.6	1.87
I24	18 Jan 2022	2	15.50	75.73	8.6	33.40	8.0	24.6	1.91
I24	18 Jan 2022	3	15.47	77.84	8.6	33.41	8.0	24.6	1.94
I24	18 Jan 2022	4	15.45	78.45	8.7	33.42	8.0	24.7	2.09
I24	18 Jan 2022	5	15.38	78.94	8.6	33.43	8.0	24.7	2.29
I24	18 Jan 2022	6	15.32	78.84	8.6	33.43	8.0	24.7	2.39
I24	18 Jan 2022	7	15.28	77.79	8.5	33.42	8.0	24.7	2.64
I24	18 Jan 2022	8	15.19	77.24	8.4	33.44	8.0	24.7	2.88
I24	18 Jan 2022	9	14.93	76.22	8.3	33.45	8.0	24.8	2.64
I24	18 Jan 2022	10	14.91	74.35	8.2	33.43	8.0	24.8	2.37
I24	24 Jan 2022	1	14.89	70.14	7.9	33.29	8.0	24.7	1.08
I24	24 Jan 2022	2	14.88	69.98	7.9	33.29	8.0	24.7	1.16
I24	24 Jan 2022	3	14.84	69.80	7.9	33.33	8.0	24.7	1.20
I24	24 Jan 2022	4	14.74	67.79	7.7	33.44	7.9	24.8	1.38
I24	24 Jan 2022	5	14.63	66.39	7.4	33.48	7.9	24.9	1.79
I24	24 Jan 2022	6	14.46	66.49	6.8	33.48	7.9	24.9	1.90
I24	24 Jan 2022	7	14.31	66.88	6.3	33.46	7.8	24.9	1.70
I24	24 Jan 2022	8	14.30	62.18	6.2	33.46	7.8	24.9	1.51
I24	24 Jan 2022	9	14.31	42.34	6.1	33.45	7.8	24.9	1.35
I24	24 Jan 2022	10	14.33	30.82	6.0	33.45	7.8	24.9	1.34
I24	31 Jan 2022	1	14.77	59.99	9.5	33.42	8.2	24.8	12.05
I24	31 Jan 2022	2	14.73	56.04	9.5	33.42	8.2	24.8	15.15
I24	31 Jan 2022	3	14.69	55.94	9.4	33.42	8.2	24.8	21.71
I24	31 Jan 2022	4	14.66	58.00	9.2	33.42	8.2	24.8	21.01
I24	31 Jan 2022	5	14.64	60.68	8.9	33.42	8.2	24.8	17.23
I24	31 Jan 2022	6	14.61	64.74	8.5	33.42	8.2	24.8	11.68
I24	31 Jan 2022	7	14.60	68.83	8.3	33.43	8.2	24.8	7.16
I24	31 Jan 2022	8	14.57	71.91	8.0	33.44	8.2	24.9	4.55
I24	31 Jan 2022	9	14.45	72.26	7.7	33.44	8.1	24.9	2.86
I24	31 Jan 2022	10	14.43	69.95	7.7	33.44	8.1	24.9	2.21
I25	04 Jan 2022	1	14.78	71.66	8.0	33.32	8.0	24.7	1.10
I25	04 Jan 2022	2	14.76	68.34	8.0	33.33	8.0	24.7	1.09
I25	04 Jan 2022	3	14.73	71.13	8.0	33.33	8.0	24.7	1.09
I25	04 Jan 2022	4	14.74	71.30	8.0	33.33	8.0	24.7	1.27
I25	04 Jan 2022	5	14.51	70.73	8.1	33.37	8.0	24.8	1.35

Station	Date	Depth (m)	Temp (°C)	XMS (‰)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (µg/L)
I25	04 Jan 2022	6	14.52	73.64	8.2	33.36	8.0	24.8	1.92
I25	04 Jan 2022	7	14.53	74.91	8.2	33.39	8.0	24.8	2.37
I25	04 Jan 2022	8	14.52	75.86	8.1	33.39	8.0	24.8	2.35
I25	04 Jan 2022	9	14.50	76.38	8.1	33.39	8.0	24.8	2.25
I25	10 Jan 2022	1	14.61	73.15	7.9	33.40	7.9	24.8	1.59
I25	10 Jan 2022	2	14.60	72.99	7.9	33.41	7.9	24.8	1.65
I25	10 Jan 2022	3	14.57	72.92	7.9	33.41	7.9	24.8	1.63
I25	10 Jan 2022	4	14.46	74.17	7.6	33.43	7.9	24.9	1.99
I25	10 Jan 2022	5	14.43	75.84	7.5	33.43	7.9	24.9	2.12
I25	10 Jan 2022	6	14.38	75.94	7.4	33.43	7.9	24.9	2.23
I25	10 Jan 2022	7	14.38	75.75	7.4	33.43	7.9	24.9	2.31
I25	10 Jan 2022	8	14.37	75.45	7.3	33.43	7.9	24.9	2.47
I25	10 Jan 2022	9	14.37	75.31	7.3	33.43	7.9	24.9	2.29
I25	18 Jan 2022	1	15.53	76.51	8.6	33.38	8.0	24.6	1.63
I25	18 Jan 2022	2	15.49	77.23	8.7	33.41	8.0	24.6	1.58
I25	18 Jan 2022	3	15.45	78.08	8.7	33.42	8.0	24.7	1.63
I25	18 Jan 2022	4	15.39	78.48	8.7	33.43	8.0	24.7	1.79
I25	18 Jan 2022	5	15.28	78.55	8.7	33.44	8.0	24.7	2.03
I25	18 Jan 2022	6	15.25	78.57	8.7	33.43	8.0	24.7	2.22
I25	18 Jan 2022	7	15.22	77.98	8.6	33.43	8.0	24.7	2.64
I25	18 Jan 2022	8	14.97	77.48	8.4	33.45	8.0	24.8	2.88
I25	18 Jan 2022	9	14.91	75.82	8.2	33.44	8.0	24.8	2.72
I25	24 Jan 2022	1	14.99	73.20	8.3	33.37	8.0	24.7	0.90
I25	24 Jan 2022	2	14.98	72.91	8.3	33.37	8.0	24.7	0.94
I25	24 Jan 2022	3	14.96	73.09	8.3	33.38	8.0	24.7	0.99
I25	24 Jan 2022	4	14.86	72.50	8.2	33.44	8.0	24.8	1.03
I25	24 Jan 2022	5	14.77	70.98	8.0	33.47	8.0	24.8	1.35
I25	24 Jan 2022	6	14.75	70.22	7.8	33.47	8.0	24.8	1.88
I25	24 Jan 2022	7	14.68	62.38	7.6	33.47	7.9	24.9	2.17
I25	24 Jan 2022	8	14.66	51.25	7.3	33.46	7.9	24.9	2.26
I25	24 Jan 2022	9	14.67	48.39	7.3	33.46	7.9	24.9	2.24
I25	31 Jan 2022	1	14.75	69.93	8.3	33.42	8.2	24.8	3.57
I25	31 Jan 2022	2	14.75	69.68	8.2	33.43	8.2	24.8	3.13
I25	31 Jan 2022	3	14.69	68.89	8.5	33.43	8.2	24.8	3.00
I25	31 Jan 2022	4	14.60	62.82	8.6	33.42	8.2	24.8	8.03
I25	31 Jan 2022	5	14.58	65.27	8.3	33.42	8.2	24.8	9.28
I25	31 Jan 2022	6	14.56	67.79	8.2	33.42	8.2	24.9	7.11
I25	31 Jan 2022	7	14.55	70.72	8.1	33.43	8.2	24.9	5.30
I25	31 Jan 2022	8	14.53	71.90	8.0	33.43	8.2	24.9	4.09
I25	31 Jan 2022	9	14.53	71.78	7.9	33.43	8.2	24.9	3.57
I26	04 Jan 2022	1	14.95	73.91	8.2	33.43	8.0	24.8	0.81
I26	04 Jan 2022	2	14.87	75.75	8.2	33.44	8.0	24.8	0.80
I26	04 Jan 2022	3	14.72	76.60	8.2	33.44	8.0	24.8	0.87
I26	04 Jan 2022	4	14.70	76.04	8.2	33.43	8.0	24.8	1.14
I26	04 Jan 2022	5	14.67	75.49	8.2	33.43	8.0	24.8	1.42
I26	04 Jan 2022	6	14.66	75.58	8.2	33.42	8.0	24.8	1.78
I26	04 Jan 2022	7	14.65	75.49	8.1	33.42	8.0	24.8	2.00
I26	04 Jan 2022	8	14.65	75.39	8.2	33.42	8.0	24.8	2.36
I26	04 Jan 2022	9	14.65	74.95	8.2	33.42	8.0	24.8	2.16
I26	10 Jan 2022	1	14.75	72.64	8.1	33.40	7.9	24.8	1.94
I26	10 Jan 2022	2	14.74	72.66	8.1	33.40	7.9	24.8	1.99
I26	10 Jan 2022	3	14.74	72.79	8.0	33.40	7.9	24.8	2.03
I26	10 Jan 2022	4	14.71	72.69	8.0	33.40	7.9	24.8	2.28
I26	10 Jan 2022	5	14.68	72.96	8.0	33.40	7.9	24.8	2.32
I26	10 Jan 2022	6	14.65	73.54	7.9	33.40	7.9	24.8	2.43

Station	Date	Depth (m)	Temp (°C)	XMS (‰)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (µg/L)
I26	10 Jan 2022	7	14.58	73.78	7.9	33.40	7.9	24.8	2.60
I26	10 Jan 2022	8	14.56	73.06	7.8	33.40	7.9	24.8	2.76
I26	10 Jan 2022	9	14.51	71.54	7.7	33.40	7.9	24.8	2.69
I26	18 Jan 2022	1	15.45	63.62	8.4	33.27	7.9	24.5	2.10
I26	18 Jan 2022	2	15.35	63.40	8.4	33.32	7.9	24.6	2.07
I26	18 Jan 2022	3	15.34	63.96	8.6	33.39	8.0	24.7	2.41
I26	18 Jan 2022	4	15.20	68.23	8.6	33.44	8.0	24.7	2.89
I26	18 Jan 2022	5	15.01	73.27	8.4	33.44	8.0	24.8	3.31
I26	18 Jan 2022	6	14.96	74.44	8.2	33.43	8.0	24.8	3.13
I26	18 Jan 2022	7	14.95	74.09	8.1	33.43	8.0	24.8	2.74
I26	18 Jan 2022	8	14.94	73.40	8.1	33.43	8.0	24.8	2.45
I26	18 Jan 2022	9	14.93	72.01	8.0	33.42	8.0	24.8	1.95
I26	24 Jan 2022	1	14.91	73.19	8.2	33.46	8.0	24.8	1.42
I26	24 Jan 2022	2	14.90	73.23	8.2	33.46	8.0	24.8	1.46
I26	24 Jan 2022	3	14.88	72.75	8.2	33.46	8.0	24.8	1.55
I26	24 Jan 2022	4	14.82	72.11	8.2	33.47	8.0	24.8	1.70
I26	24 Jan 2022	5	14.79	70.39	8.3	33.46	8.0	24.8	2.55
I26	24 Jan 2022	6	14.72	69.92	8.3	33.47	8.0	24.9	3.92
I26	24 Jan 2022	7	14.68	70.28	8.3	33.46	8.0	24.9	5.37
I26	24 Jan 2022	8	14.62	69.46	8.2	33.47	8.0	24.9	6.51
I26	24 Jan 2022	9	14.44	71.77	7.7	33.47	7.9	24.9	6.79
I26	31 Jan 2022	1	14.74	67.65	8.5	33.41	8.2	24.8	3.37
I26	31 Jan 2022	2	14.70	67.19	8.5	33.42	8.2	24.8	4.04
I26	31 Jan 2022	3	14.56	66.79	8.3	33.42	8.2	24.8	7.07
I26	31 Jan 2022	4	14.54	66.20	8.1	33.42	8.2	24.9	8.11
I26	31 Jan 2022	5	14.53	67.01	8.0	33.43	8.2	24.9	8.02
I26	31 Jan 2022	6	14.50	67.82	8.0	33.43	8.2	24.9	6.73
I26	31 Jan 2022	7	14.49	69.31	7.9	33.44	8.2	24.9	5.27
I26	31 Jan 2022	8	14.48	69.86	7.9	33.44	8.1	24.9	3.95
I26	31 Jan 2022	9	14.49	69.82	7.8	33.44	8.1	24.9	3.85
I32	04 Jan 2022	1	14.82	74.84	8.3	33.40	8.0	24.8	0.90
I32	04 Jan 2022	2	14.75	73.91	8.4	33.41	8.0	24.8	0.92
I32	04 Jan 2022	3	14.69	72.49	8.4	33.40	8.0	24.8	1.15
I32	04 Jan 2022	4	14.66	73.15	8.4	33.40	8.0	24.8	1.78
I32	04 Jan 2022	5	14.64	72.51	8.4	33.40	8.0	24.8	2.08
I32	04 Jan 2022	6	14.63	73.35	8.3	33.40	8.0	24.8	2.66
I32	04 Jan 2022	7	14.62	73.10	8.3	33.40	8.0	24.8	2.81
I32	04 Jan 2022	8	14.58	72.67	8.3	33.40	8.0	24.8	2.62
I32	04 Jan 2022	9	14.54	71.49	8.3	33.40	8.0	24.8	2.72
I32	04 Jan 2022	10	14.51	69.01	8.3	33.40	8.0	24.8	2.79
I32	10 Jan 2022	1	14.66	71.26	8.4	33.42	8.0	24.8	3.48
I32	10 Jan 2022	2	14.67	71.26	8.4	33.41	8.0	24.8	3.33
I32	10 Jan 2022	3	14.65	71.32	8.4	33.42	8.0	24.8	3.47
I32	10 Jan 2022	4	14.56	71.30	8.4	33.42	8.0	24.9	3.55
I32	10 Jan 2022	5	14.52	71.29	8.4	33.42	8.0	24.9	4.24
I32	10 Jan 2022	6	14.52	71.17	8.3	33.42	7.9	24.9	4.52
I32	10 Jan 2022	7	14.49	70.79	8.3	33.43	7.9	24.9	4.18
I32	10 Jan 2022	8	14.48	70.10	8.3	33.43	7.9	24.9	3.75
I32	10 Jan 2022	9	14.47	68.71	8.2	33.43	7.9	24.9	3.32
I32	10 Jan 2022	10	14.46	62.34	8.1	33.43	7.9	24.9	3.19
I32	18 Jan 2022	1	15.42	66.23	9.0	33.38	8.0	24.6	3.00
I32	18 Jan 2022	2	15.33	66.25	8.9	33.40	8.0	24.7	3.10
I32	18 Jan 2022	3	15.24	66.66	8.8	33.40	8.0	24.7	3.50
I32	18 Jan 2022	4	15.20	69.39	8.7	33.40	8.0	24.7	4.34
I32	18 Jan 2022	5	15.17	73.16	8.7	33.40	8.0	24.7	4.70

Station	Date	Depth (m)	Temp (°C)	XMS (‰)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (µg/L)
I32	18 Jan 2022	6	15.15	73.08	8.7	33.41	8.0	24.7	4.35
I32	18 Jan 2022	7	15.07	69.29	8.4	33.42	8.0	24.7	4.02
I32	18 Jan 2022	8	15.02	74.27	8.3	33.43	8.0	24.8	3.44
I32	18 Jan 2022	9	14.94	72.61	8.2	33.44	8.0	24.8	2.83
I32	18 Jan 2022	10	14.87	60.46	8.0	33.43	7.9	24.8	2.56
I32	24 Jan 2022	1	14.86	67.85	7.3	33.46	7.9	24.8	1.23
I32	24 Jan 2022	2	14.86	67.82	7.3	33.46	7.9	24.8	1.25
I32	24 Jan 2022	3	14.76	67.30	7.2	33.47	7.9	24.8	1.28
I32	24 Jan 2022	4	14.58	63.46	6.9	33.47	7.9	24.9	1.46
I32	24 Jan 2022	5	14.53	58.93	6.7	33.45	7.9	24.9	2.15
I32	24 Jan 2022	6	14.52	57.39	6.6	33.45	7.9	24.9	2.80
I32	24 Jan 2022	7	14.52	53.95	6.6	33.45	7.9	24.9	2.98
I32	24 Jan 2022	8	14.53	54.92	6.9	33.46	7.9	24.9	3.09
I32	24 Jan 2022	9	14.55	55.90	7.1	33.46	7.9	24.9	3.02
I32	24 Jan 2022	10	14.57	56.32	7.5	33.47	7.9	24.9	2.79
I32	31 Jan 2022	1	14.81	66.64	8.4	33.48	8.2	24.8	1.88
I32	31 Jan 2022	2	14.74	65.98	8.3	33.48	8.2	24.9	2.02
I32	31 Jan 2022	3	14.71	64.84	8.3	33.48	8.2	24.9	2.37
I32	31 Jan 2022	4	14.68	63.46	8.3	33.47	8.2	24.9	3.20
I32	31 Jan 2022	5	14.67	62.75	8.3	33.47	8.2	24.9	3.91
I32	31 Jan 2022	6	14.66	62.61	8.2	33.47	8.2	24.9	4.38
I32	31 Jan 2022	7	14.66	62.62	8.3	33.47	8.2	24.9	4.49
I32	31 Jan 2022	8	14.66	62.57	8.3	33.47	8.2	24.9	4.53
I32	31 Jan 2022	9	14.66	62.64	8.2	33.47	8.2	24.9	4.58
I39	04 Jan 2022	1	14.97	82.40	8.0	33.44	8.0	24.8	0.84
I39	04 Jan 2022	2	14.95	82.44	8.0	33.44	8.0	24.8	0.83
I39	04 Jan 2022	3	14.91	81.92	8.0	33.44	8.0	24.8	0.88
I39	04 Jan 2022	4	14.91	82.06	8.0	33.44	8.0	24.8	1.00
I39	04 Jan 2022	5	14.88	81.99	8.0	33.44	8.0	24.8	1.01
I39	04 Jan 2022	6	14.89	81.80	8.0	33.44	8.0	24.8	1.21
I39	04 Jan 2022	7	14.88	81.96	8.0	33.44	8.0	24.8	1.36
I39	04 Jan 2022	8	14.88	81.85	8.0	33.44	8.0	24.8	1.58
I39	04 Jan 2022	9	14.87	81.65	8.0	33.44	8.0	24.8	1.72
I39	04 Jan 2022	10	14.87	81.58	8.0	33.44	8.0	24.8	1.96
I39	04 Jan 2022	11	14.87	81.58	8.0	33.44	8.0	24.8	2.08
I39	04 Jan 2022	12	14.87	81.64	8.0	33.44	8.0	24.8	2.09
I39	04 Jan 2022	13	14.87	81.49	8.0	33.44	8.0	24.8	2.27
I39	04 Jan 2022	14	14.86	81.34	8.0	33.44	8.0	24.8	2.39
I39	04 Jan 2022	15	14.86	81.42	8.0	33.44	8.0	24.8	2.23
I39	04 Jan 2022	16	14.86	81.65	8.0	33.44	8.0	24.8	2.26
I39	04 Jan 2022	17	14.85	81.54	8.0	33.44	8.0	24.8	2.22
I39	04 Jan 2022	18	14.85	81.56	8.0	33.44	8.0	24.8	2.26
I39	10 Jan 2022	1	14.67	81.13	8.2	33.44	8.0	24.8	1.38
I39	10 Jan 2022	2	14.66	80.99	8.2	33.44	8.0	24.8	1.38
I39	10 Jan 2022	3	14.65	80.89	8.2	33.44	8.0	24.8	1.46
I39	10 Jan 2022	4	14.65	81.01	8.2	33.44	8.0	24.8	1.67
I39	10 Jan 2022	5	14.64	80.89	8.2	33.44	8.0	24.8	1.97
I39	10 Jan 2022	6	14.64	80.87	8.2	33.44	8.0	24.8	1.95
I39	10 Jan 2022	7	14.63	80.67	8.2	33.44	8.0	24.8	2.19
I39	10 Jan 2022	8	14.62	80.89	8.2	33.44	8.0	24.8	2.28
I39	10 Jan 2022	9	14.62	81.07	8.1	33.44	8.0	24.8	2.38
I39	10 Jan 2022	10	14.62	81.21	8.1	33.44	8.0	24.9	2.28
I39	10 Jan 2022	11	14.60	81.27	8.1	33.44	7.9	24.9	2.30
I39	10 Jan 2022	12	14.50	81.28	7.9	33.44	7.9	24.9	2.09
I39	10 Jan 2022	13	14.43	80.67	7.8	33.44	7.9	24.9	2.11
I39	10 Jan 2022	14	14.38	80.10	7.6	33.44	7.9	24.9	2.09
I39	10 Jan 2022	15	14.34	80.25	7.5	33.43	7.9	24.9	2.20

Station	Date	Depth (m)	Temp (°C)	XMS (‰)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (µg/L)
I39	10 Jan 2022	16	14.32	80.11	7.5	33.43	7.9	24.9	1.91
I39	10 Jan 2022	17	14.30	80.15	7.4	33.43	7.9	24.9	1.90
I39	10 Jan 2022	18	14.28	80.04	7.4	33.43	7.9	24.9	1.99
I39	18 Jan 2022	1	15.38	74.91	8.5	33.21	8.0	24.5	1.39
I39	18 Jan 2022	2	15.24	75.68	8.6	33.32	8.0	24.6	1.44
I39	18 Jan 2022	3	15.15	78.18	8.8	33.40	8.0	24.7	1.63
I39	18 Jan 2022	4	15.10	77.59	8.9	33.41	8.0	24.7	3.04
I39	18 Jan 2022	5	14.97	75.36	8.8	33.45	8.0	24.8	5.06
I39	18 Jan 2022	6	14.79	76.37	8.5	33.46	8.0	24.8	5.26
I39	18 Jan 2022	7	14.67	77.27	8.2	33.45	8.0	24.8	4.45
I39	18 Jan 2022	8	14.63	77.72	8.0	33.44	7.9	24.9	3.91
I39	18 Jan 2022	9	14.63	77.46	7.9	33.44	7.9	24.9	3.28
I39	18 Jan 2022	10	14.63	77.13	7.9	33.44	7.9	24.9	3.02
I39	18 Jan 2022	11	14.63	76.88	7.9	33.44	7.9	24.9	2.84
I39	18 Jan 2022	12	14.63	76.82	7.8	33.44	7.9	24.9	2.56
I39	18 Jan 2022	13	14.63	76.57	7.8	33.44	7.9	24.9	2.39
I39	18 Jan 2022	14	14.63	76.55	7.8	33.44	7.9	24.9	2.30
I39	18 Jan 2022	15	14.62	76.49	7.8	33.44	7.9	24.9	2.23
I39	18 Jan 2022	16	14.62	76.49	7.8	33.44	7.9	24.9	2.25
I39	18 Jan 2022	17	14.61	76.10	7.7	33.44	7.9	24.9	1.98
I39	18 Jan 2022	18	14.61	75.30	7.7	33.44	7.9	24.9	1.81
I39	24 Jan 2022	1	14.72	80.43	8.2	33.46	8.0	24.8	0.89
I39	24 Jan 2022	2	14.73	80.96	8.2	33.46	8.0	24.8	0.91
I39	24 Jan 2022	3	14.72	81.02	8.2	33.46	8.0	24.8	0.93
I39	24 Jan 2022	4	14.72	81.07	8.2	33.46	8.0	24.8	0.97
I39	24 Jan 2022	5	14.72	81.08	8.2	33.46	8.0	24.8	1.04
I39	24 Jan 2022	6	14.71	80.88	8.2	33.46	8.0	24.8	1.10
I39	24 Jan 2022	7	14.69	80.68	8.2	33.46	8.0	24.9	1.23
I39	24 Jan 2022	8	14.69	80.58	8.2	33.46	8.0	24.9	1.47
I39	24 Jan 2022	9	14.67	80.38	8.1	33.46	8.0	24.9	1.60
I39	24 Jan 2022	10	14.63	80.26	8.2	33.46	8.0	24.9	1.83
I39	24 Jan 2022	11	14.59	80.99	8.1	33.47	8.0	24.9	1.82
I39	24 Jan 2022	12	14.48	82.10	7.9	33.47	8.0	24.9	1.87
I39	24 Jan 2022	13	14.37	82.81	7.6	33.47	7.9	24.9	1.63
I39	24 Jan 2022	14	14.16	83.16	7.1	33.49	7.9	25.0	1.49
I39	24 Jan 2022	15	13.94	82.23	6.8	33.49	7.9	25.0	1.33
I39	24 Jan 2022	16	13.95	81.42	6.6	33.47	7.8	25.0	1.12
I39	24 Jan 2022	17	13.92	80.52	6.5	33.47	7.8	25.0	1.01
I39	24 Jan 2022	18	13.92	79.85	6.6	33.47	7.8	25.0	1.02
I39	31 Jan 2022	1	14.66	75.40	8.2	33.43	8.2	24.8	2.11
I39	31 Jan 2022	2	14.65	74.96	8.2	33.43	8.2	24.8	2.39
I39	31 Jan 2022	3	14.63	74.21	8.2	33.43	8.2	24.8	2.99
I39	31 Jan 2022	4	14.61	73.78	8.3	33.43	8.2	24.8	4.18
I39	31 Jan 2022	5	14.60	73.61	8.2	33.43	8.2	24.8	5.05
I39	31 Jan 2022	6	14.59	74.84	8.1	33.43	8.2	24.9	4.78
I39	31 Jan 2022	7	14.58	76.15	8.1	33.44	8.2	24.9	3.97
I39	31 Jan 2022	8	14.57	76.75	7.9	33.44	8.2	24.9	3.52
I39	31 Jan 2022	9	14.54	77.44	7.8	33.44	8.1	24.9	2.94
I39	31 Jan 2022	10	14.47	77.87	7.5	33.45	8.1	24.9	2.57
I39	31 Jan 2022	11	14.40	78.64	7.3	33.45	8.1	24.9	2.19
I39	31 Jan 2022	12	14.40	78.40	7.2	33.45	8.1	24.9	1.89
I39	31 Jan 2022	13	14.40	78.15	7.3	33.45	8.1	24.9	1.74
I39	31 Jan 2022	14	14.39	77.92	7.3	33.45	8.1	24.9	1.59
I39	31 Jan 2022	15	14.39	77.54	7.2	33.45	8.1	24.9	1.47
I39	31 Jan 2022	16	14.39	76.79	7.2	33.45	8.1	24.9	1.35
I39	31 Jan 2022	17	14.39	75.80	7.2	33.45	8.1	24.9	1.31
I39	31 Jan 2022	18	14.39	74.83	7.2	33.45	8.1	24.9	1.30

Station	Date	Depth (m)	Temp (°C)	XMS (‰)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (µg/L)
I40	04 Jan 2022	1	14.94	76.23	8.1	33.37	8.0	24.7	1.08
I40	04 Jan 2022	2	14.92	76.07	8.1	33.38	8.0	24.7	1.08
I40	04 Jan 2022	3	14.82	75.57	8.1	33.38	8.0	24.8	1.10
I40	04 Jan 2022	4	14.82	75.62	8.1	33.38	8.0	24.8	1.18
I40	04 Jan 2022	5	14.84	75.54	8.0	33.39	8.0	24.8	1.46
I40	04 Jan 2022	6	14.84	73.74	8.0	33.40	8.0	24.8	1.97
I40	04 Jan 2022	7	14.84	73.10	8.0	33.40	8.0	24.8	2.21
I40	04 Jan 2022	8	14.82	72.75	8.0	33.40	8.0	24.8	2.68
I40	04 Jan 2022	9	14.76	72.14	8.0	33.40	8.0	24.8	2.89
I40	04 Jan 2022	10	14.65	69.80	8.0	33.38	8.0	24.8	3.12
I40	10 Jan 2022	1	14.39	64.11	7.9	33.20	7.9	24.7	1.94
I40	10 Jan 2022	2	14.46	68.22	7.8	33.33	7.9	24.8	2.04
I40	10 Jan 2022	3	14.48	70.55	7.7	33.40	7.9	24.9	2.21
I40	10 Jan 2022	4	14.47	70.71	7.7	33.40	7.9	24.9	2.31
I40	10 Jan 2022	5	14.47	68.97	7.7	33.40	7.9	24.9	2.41
I40	10 Jan 2022	6	14.46	68.81	7.6	33.40	7.9	24.9	2.70
I40	10 Jan 2022	7	14.45	69.76	7.7	33.40	7.9	24.9	2.74
I40	10 Jan 2022	8	14.45	69.66	7.7	33.40	7.9	24.9	2.95
I40	10 Jan 2022	9	14.45	68.00	7.7	33.40	7.9	24.9	2.92
I40	10 Jan 2022	10	14.44	68.88	7.7	33.40	7.9	24.9	2.81
I40	18 Jan 2022	1	15.48	59.56	8.5	33.20	8.0	24.5	4.21
I40	18 Jan 2022	2	15.46	62.72	8.6	33.32	8.0	24.6	4.50
I40	18 Jan 2022	3	15.44	67.60	8.6	33.38	8.0	24.6	4.81
I40	18 Jan 2022	4	15.44	71.19	8.6	33.40	8.0	24.6	4.91
I40	18 Jan 2022	5	15.42	74.40	8.6	33.42	8.0	24.7	4.74
I40	18 Jan 2022	6	15.41	75.19	8.6	33.42	8.0	24.7	4.47
I40	18 Jan 2022	7	15.40	75.87	8.6	33.42	8.0	24.7	4.26
I40	18 Jan 2022	8	15.35	76.33	8.5	33.43	8.0	24.7	4.13
I40	18 Jan 2022	9	15.10	76.00	8.3	33.45	8.0	24.8	3.45
I40	18 Jan 2022	10	15.01	72.56	8.2	33.43	8.0	24.8	2.70
I40	24 Jan 2022	1	14.85	69.83	7.7	33.25	7.9	24.7	0.88
I40	24 Jan 2022	2	14.79	69.49	7.7	33.28	7.9	24.7	0.88
I40	24 Jan 2022	3	14.59	69.35	7.6	33.41	7.9	24.8	0.96
I40	24 Jan 2022	4	14.44	69.20	7.5	33.45	7.9	24.9	1.28
I40	24 Jan 2022	5	14.38	70.29	7.4	33.43	7.9	24.9	1.81
I40	24 Jan 2022	6	14.37	71.79	7.3	33.43	7.9	24.9	2.49
I40	24 Jan 2022	7	14.34	72.77	7.1	33.44	7.9	24.9	2.73
I40	24 Jan 2022	8	14.33	69.94	6.8	33.45	7.9	24.9	2.55
I40	24 Jan 2022	9	14.33	51.57	6.5	33.45	7.8	24.9	2.22
I40	24 Jan 2022	10	14.34	33.57	6.3	33.45	7.8	24.9	2.27
I40	31 Jan 2022	1	14.74	65.22	8.9	33.42	8.2	24.8	4.76
I40	31 Jan 2022	2	14.71	65.42	8.9	33.42	8.2	24.8	5.83
I40	31 Jan 2022	3	14.61	63.80	8.7	33.42	8.2	24.8	8.43
I40	31 Jan 2022	4	14.54	63.59	8.4	33.42	8.2	24.9	7.53
I40	31 Jan 2022	5	14.51	63.33	8.3	33.42	8.2	24.9	6.03
I40	31 Jan 2022	6	14.47	63.02	8.2	33.42	8.1	24.9	5.01
I40	31 Jan 2022	7	14.44	62.16	8.2	33.42	8.1	24.9	4.60
I40	31 Jan 2022	8	14.42	62.06	8.2	33.42	8.1	24.9	4.38
I40	31 Jan 2022	9	14.40	60.62	8.2	33.42	8.1	24.9	3.98
I40	31 Jan 2022	10	14.40	58.26	8.2	33.42	8.1	24.9	3.81

NA = not available

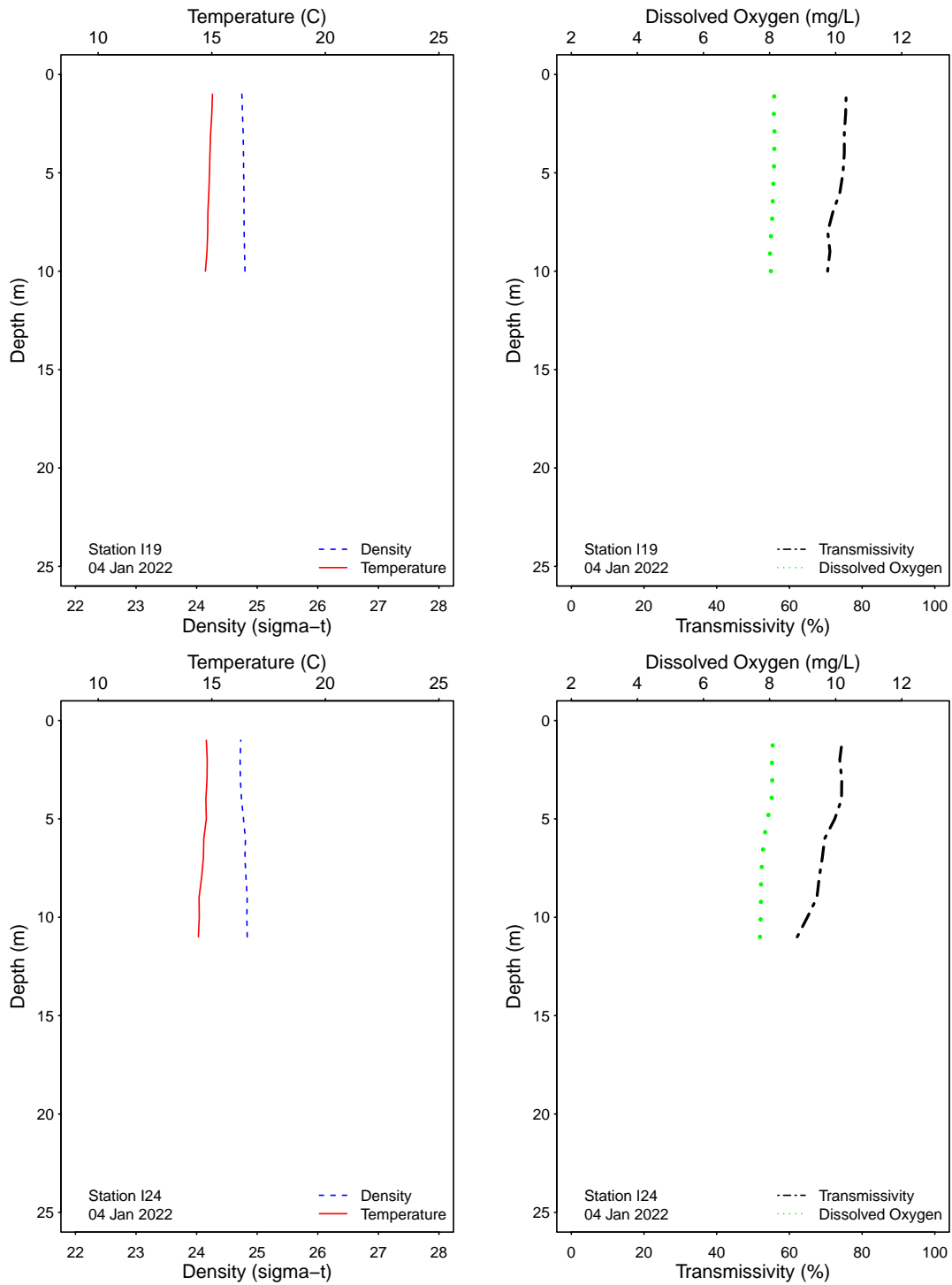


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

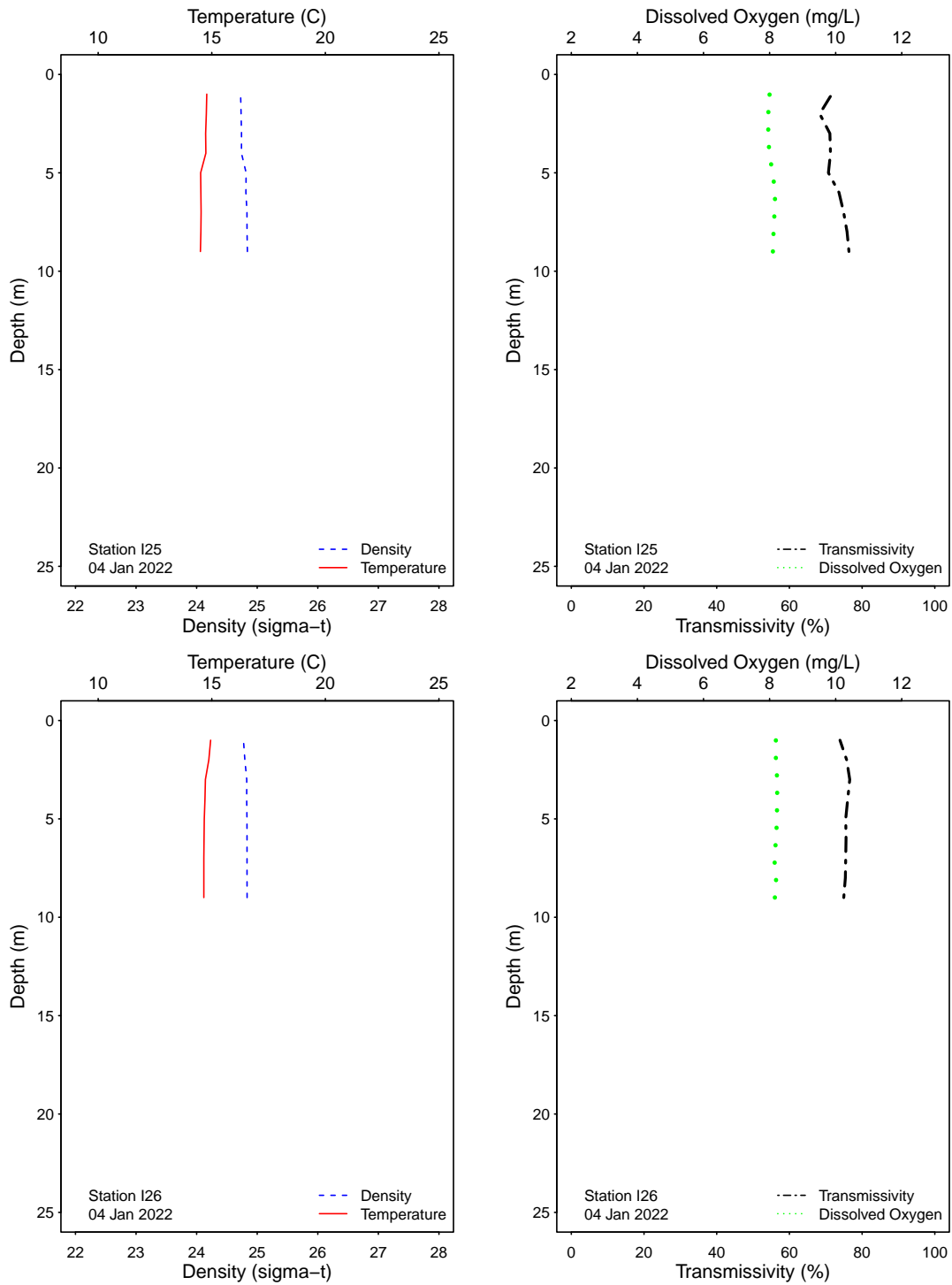


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

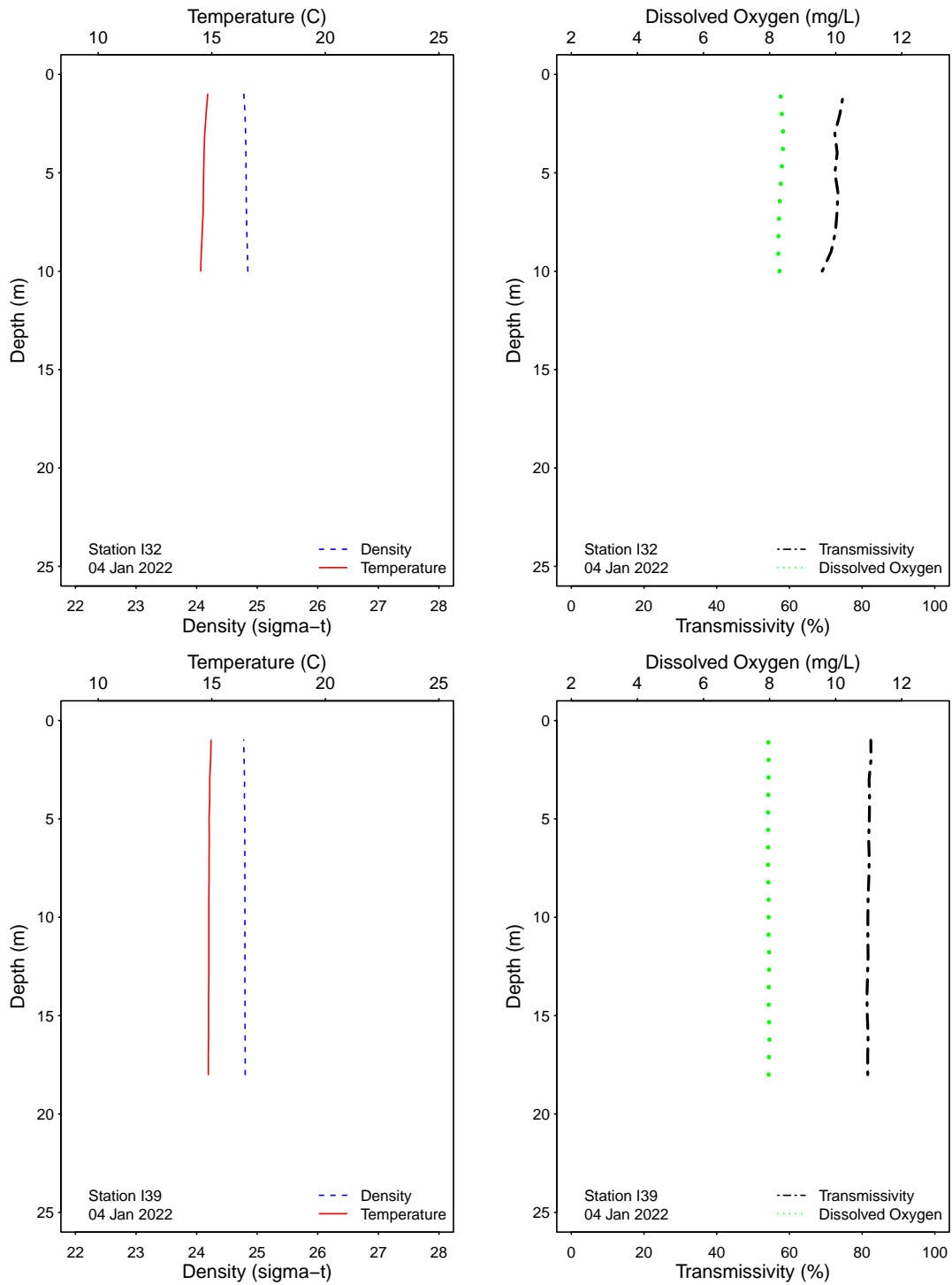


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

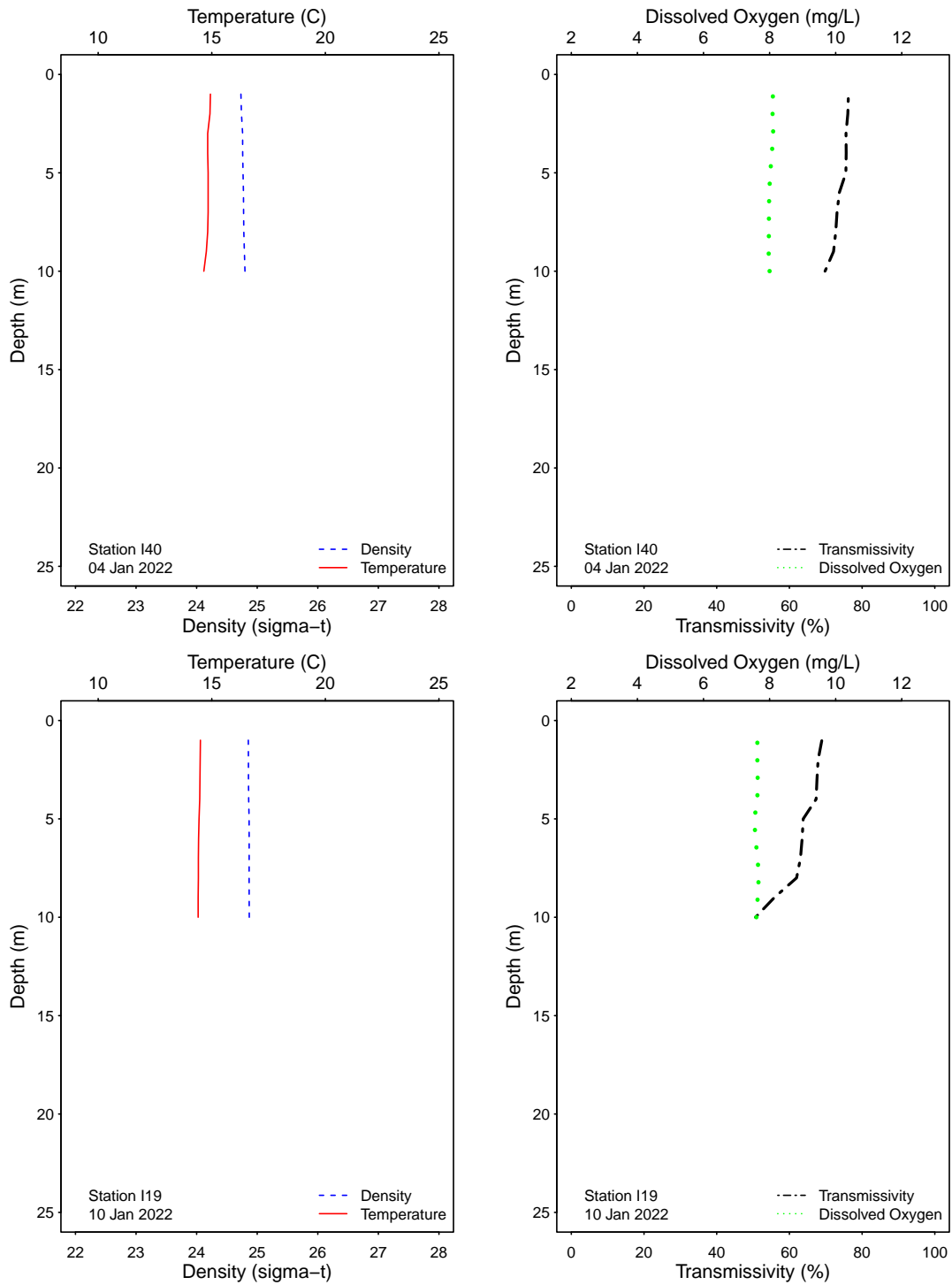


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

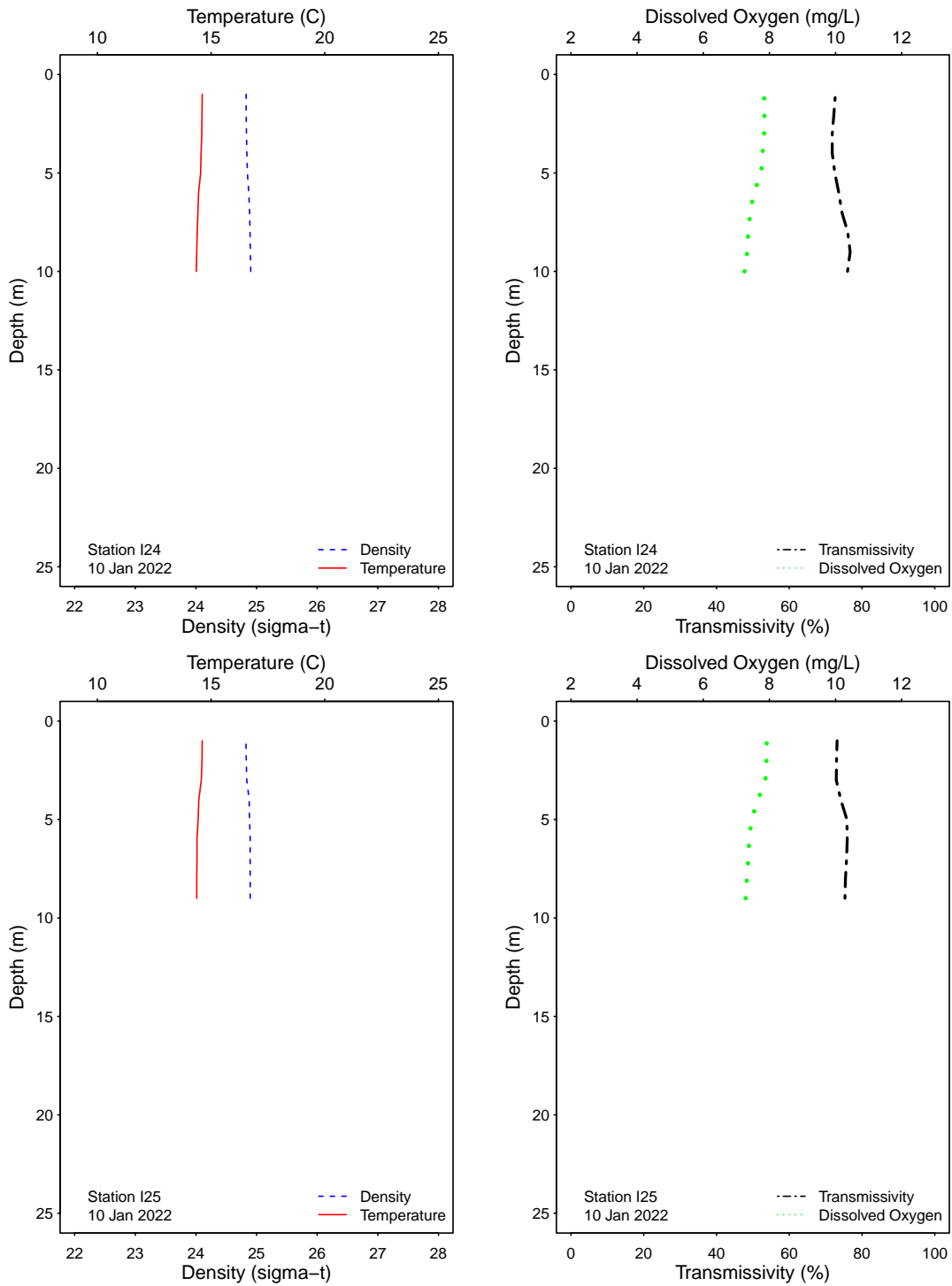


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

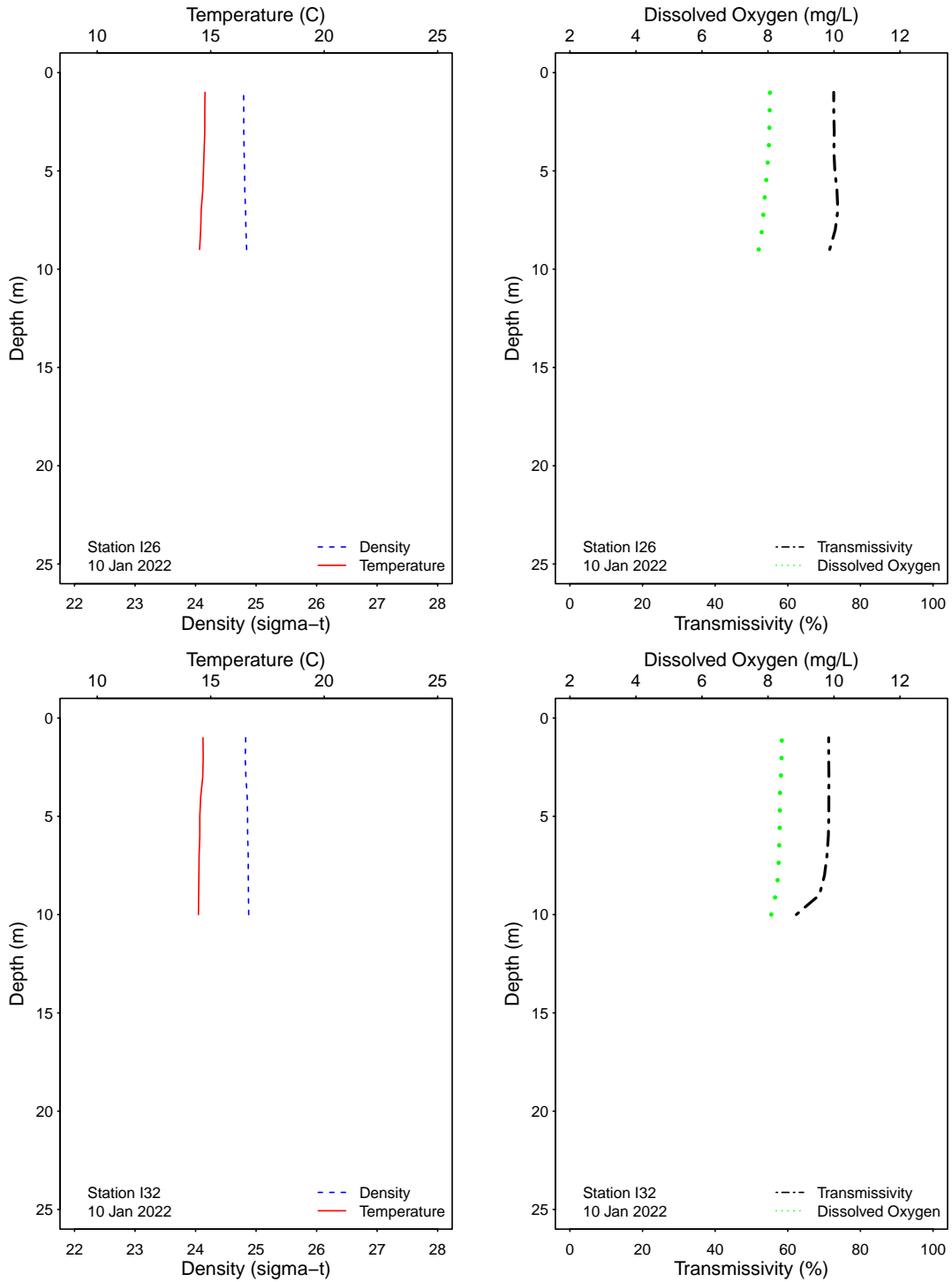


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

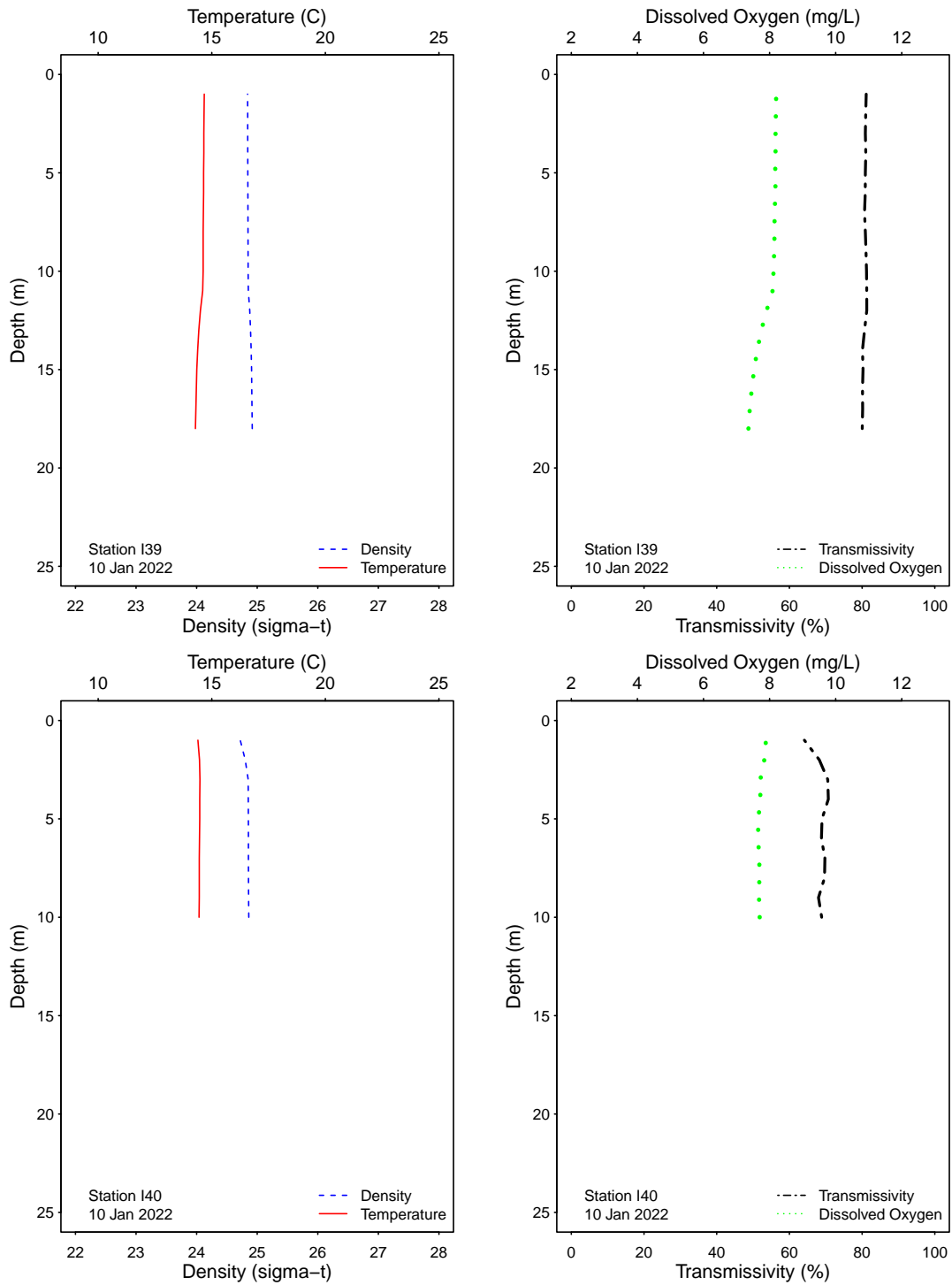


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

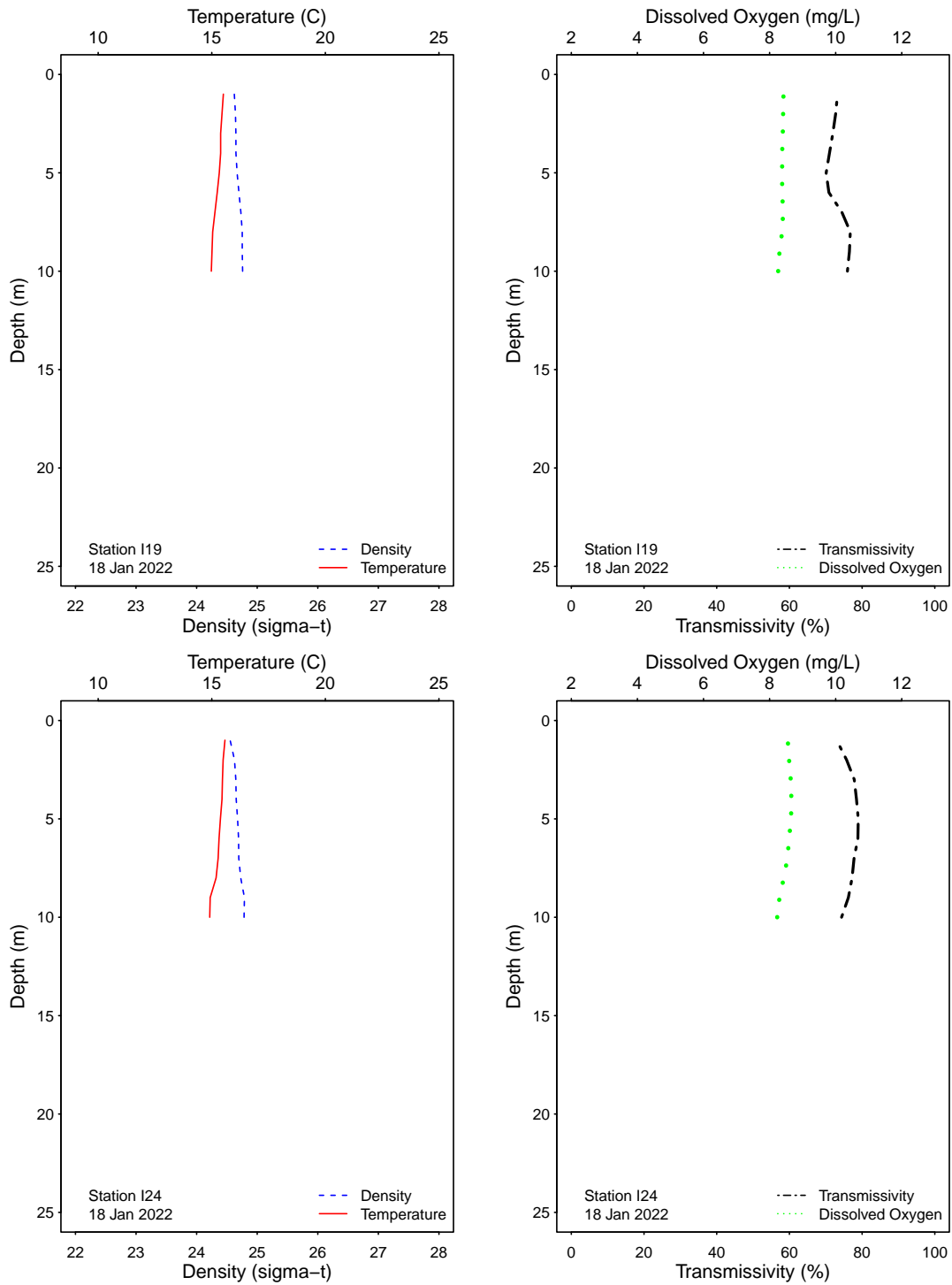


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

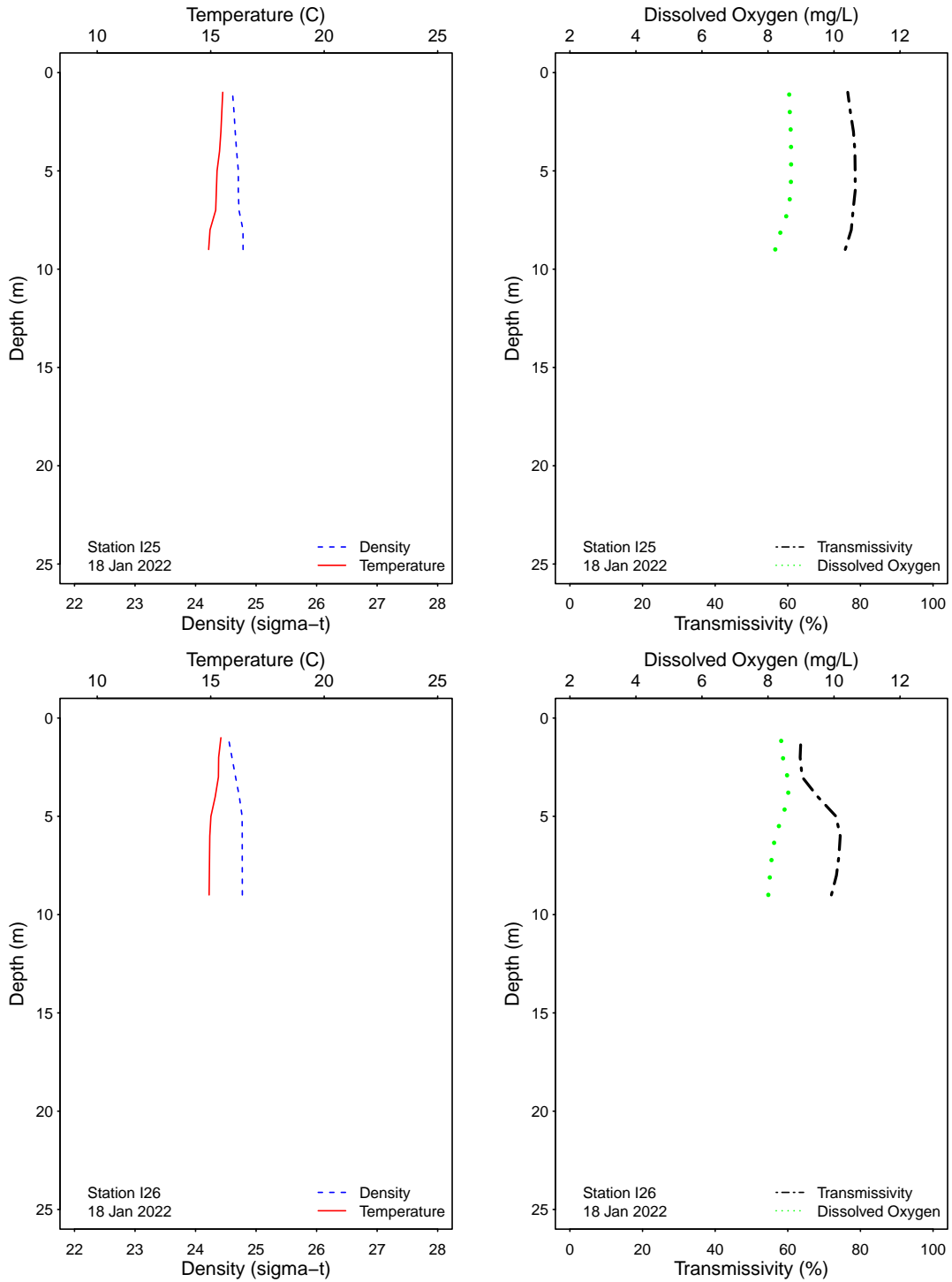


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

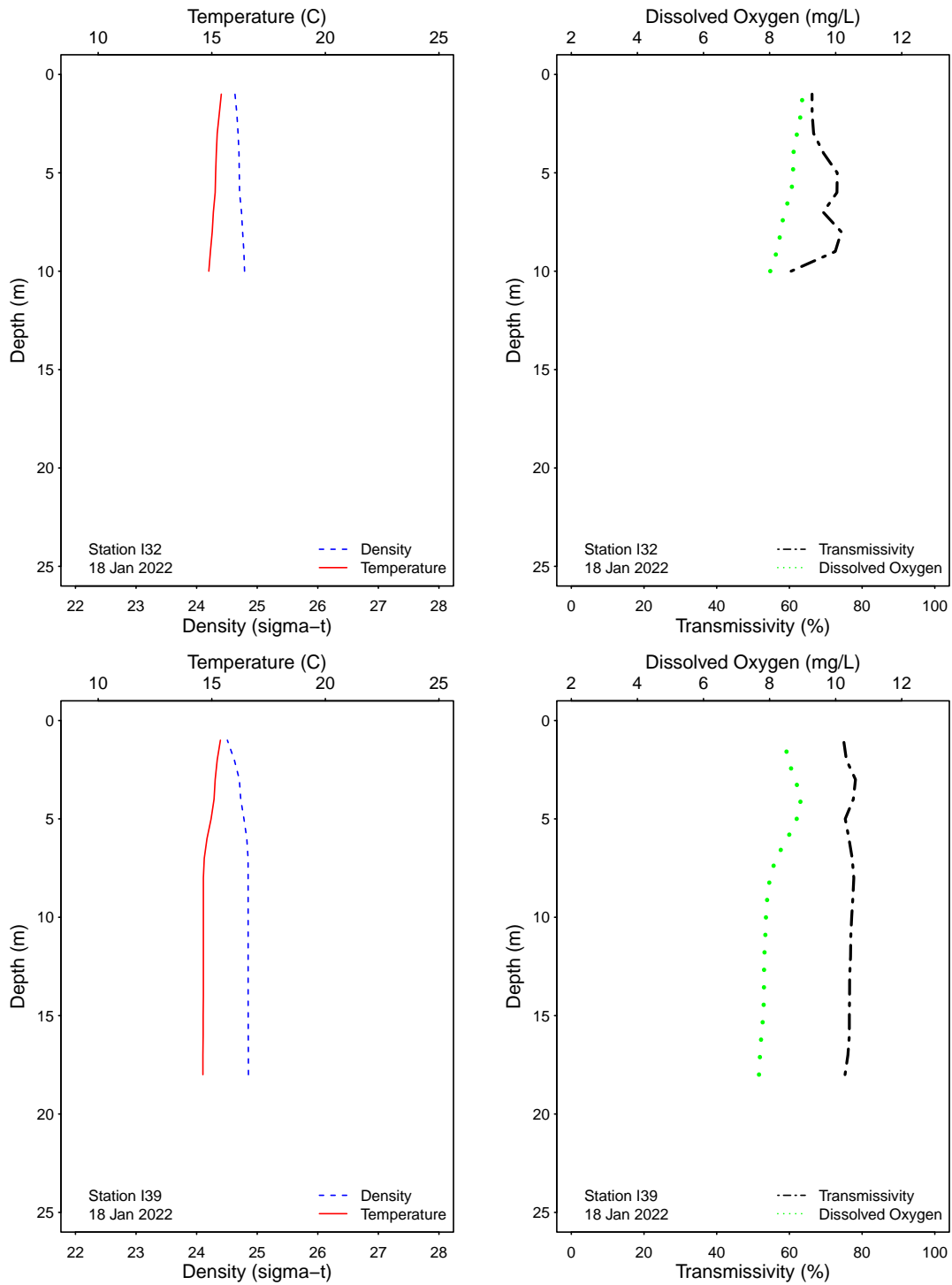


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

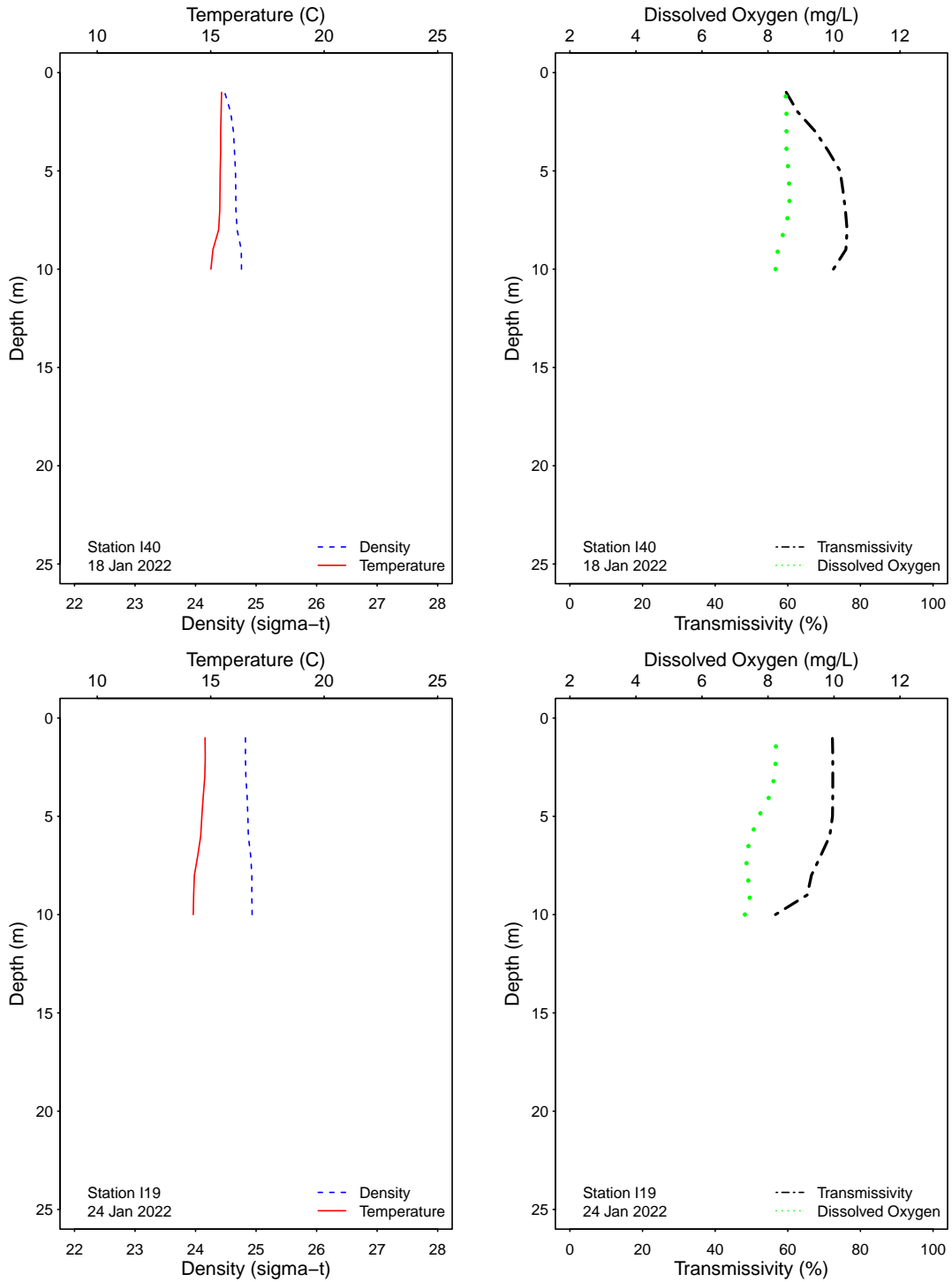


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

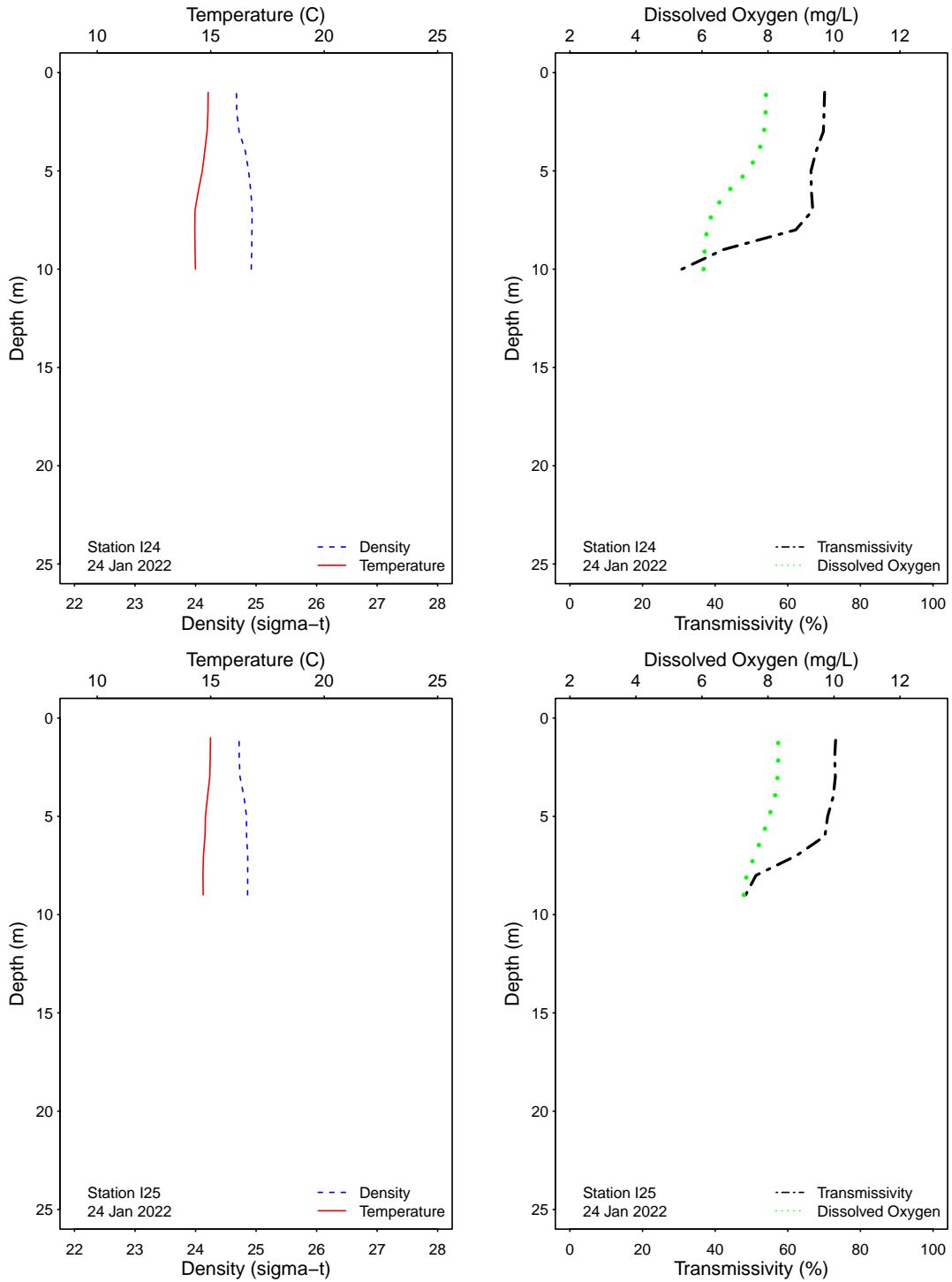


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

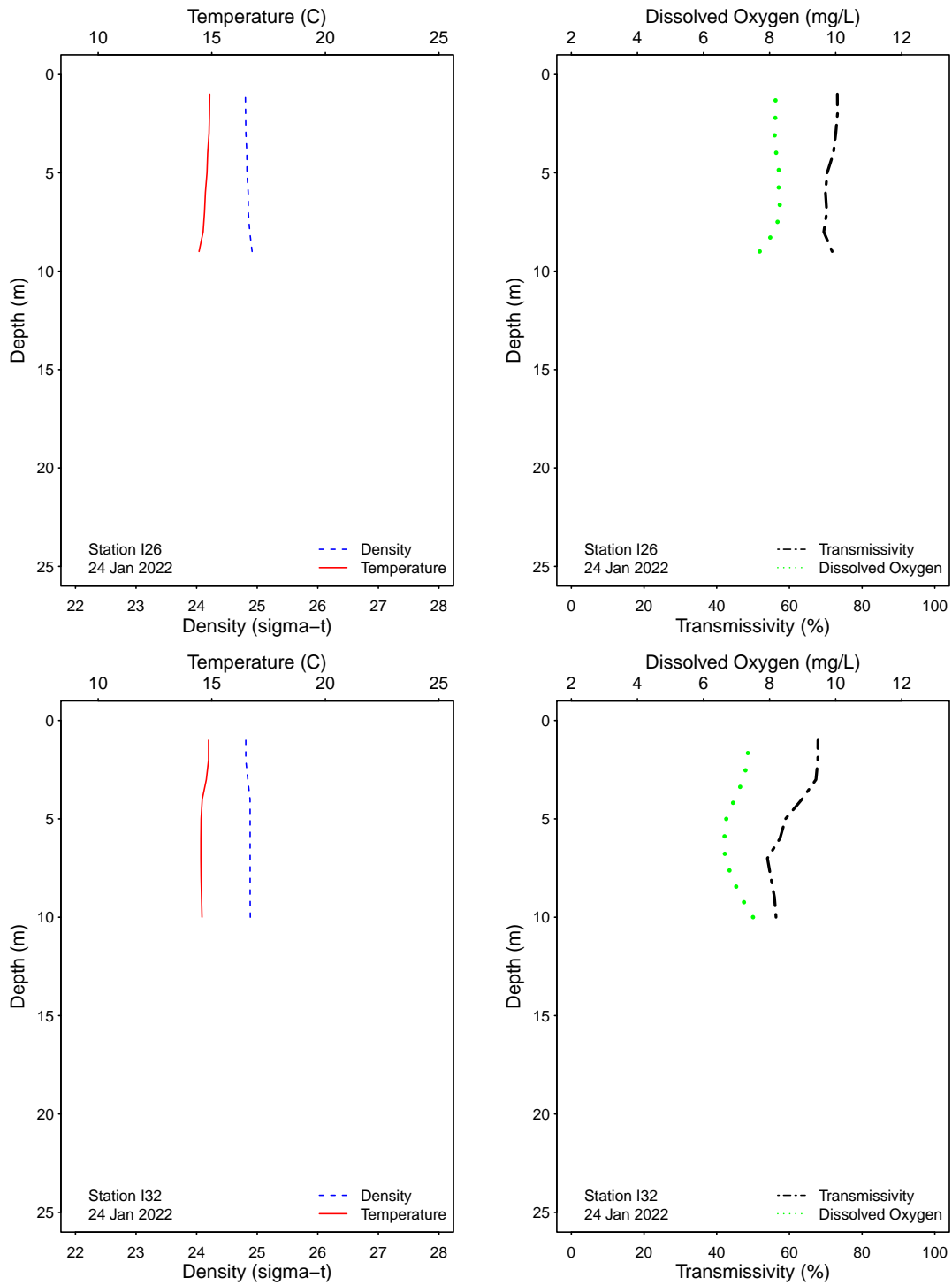


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

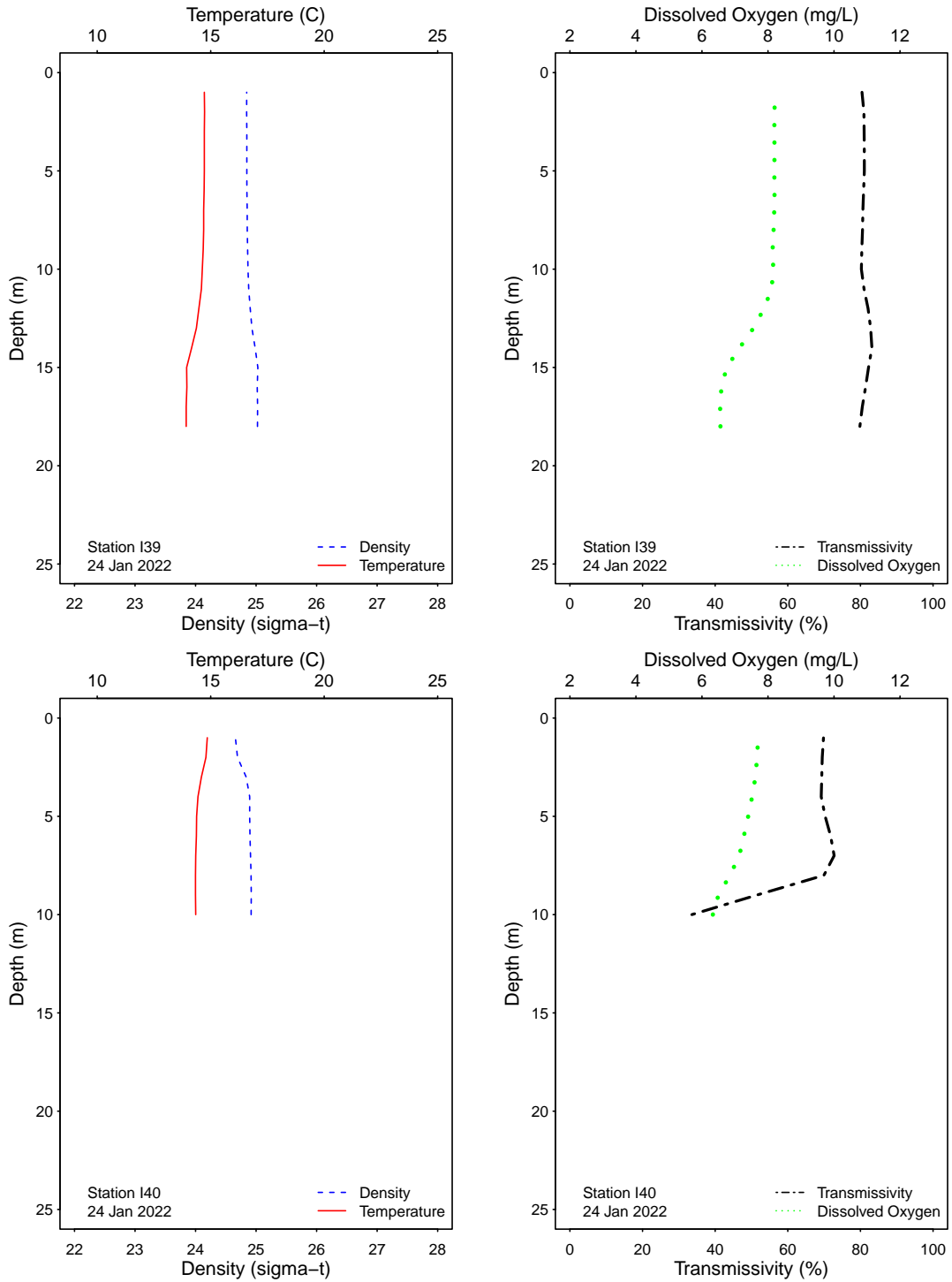


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

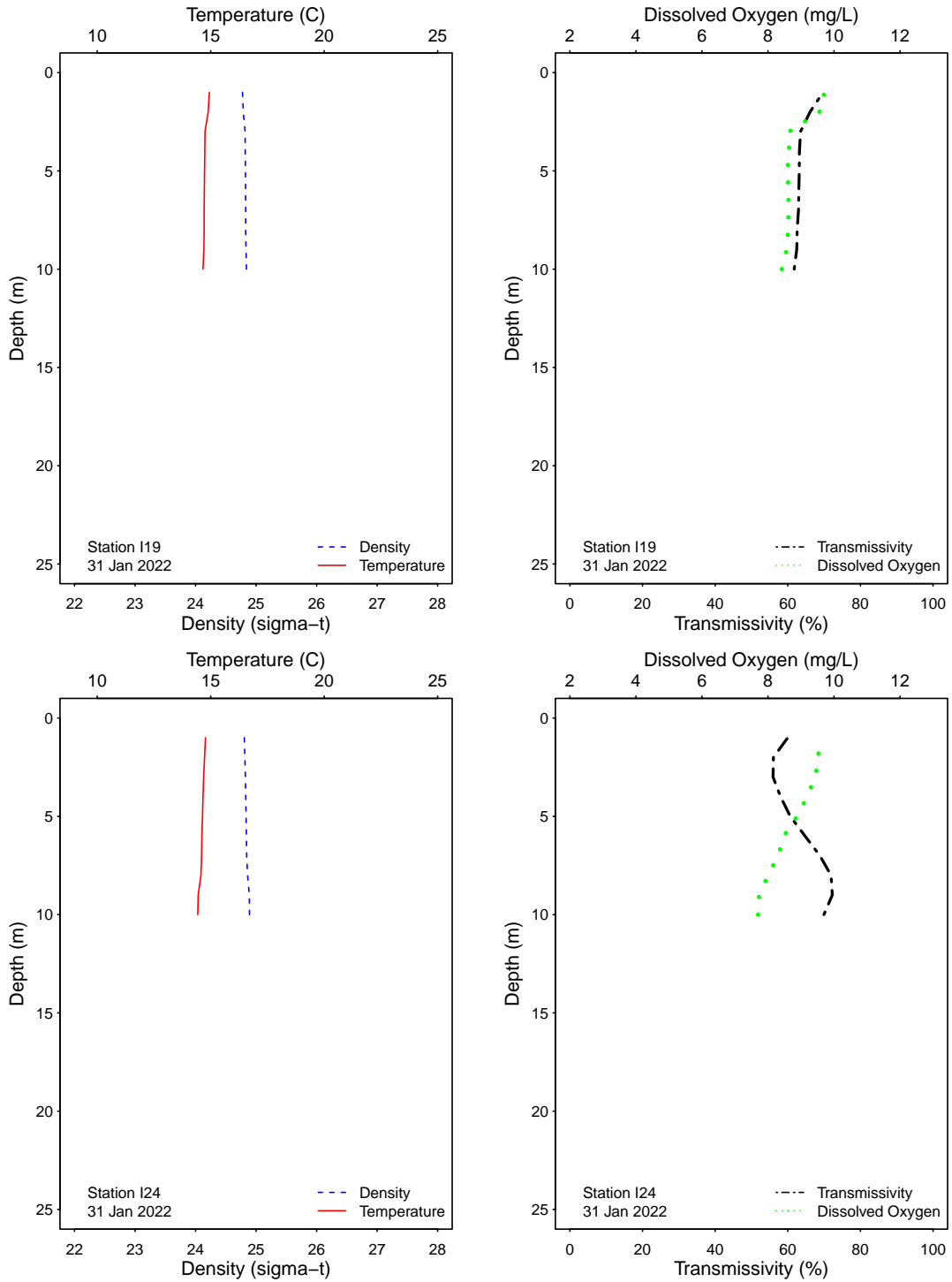


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

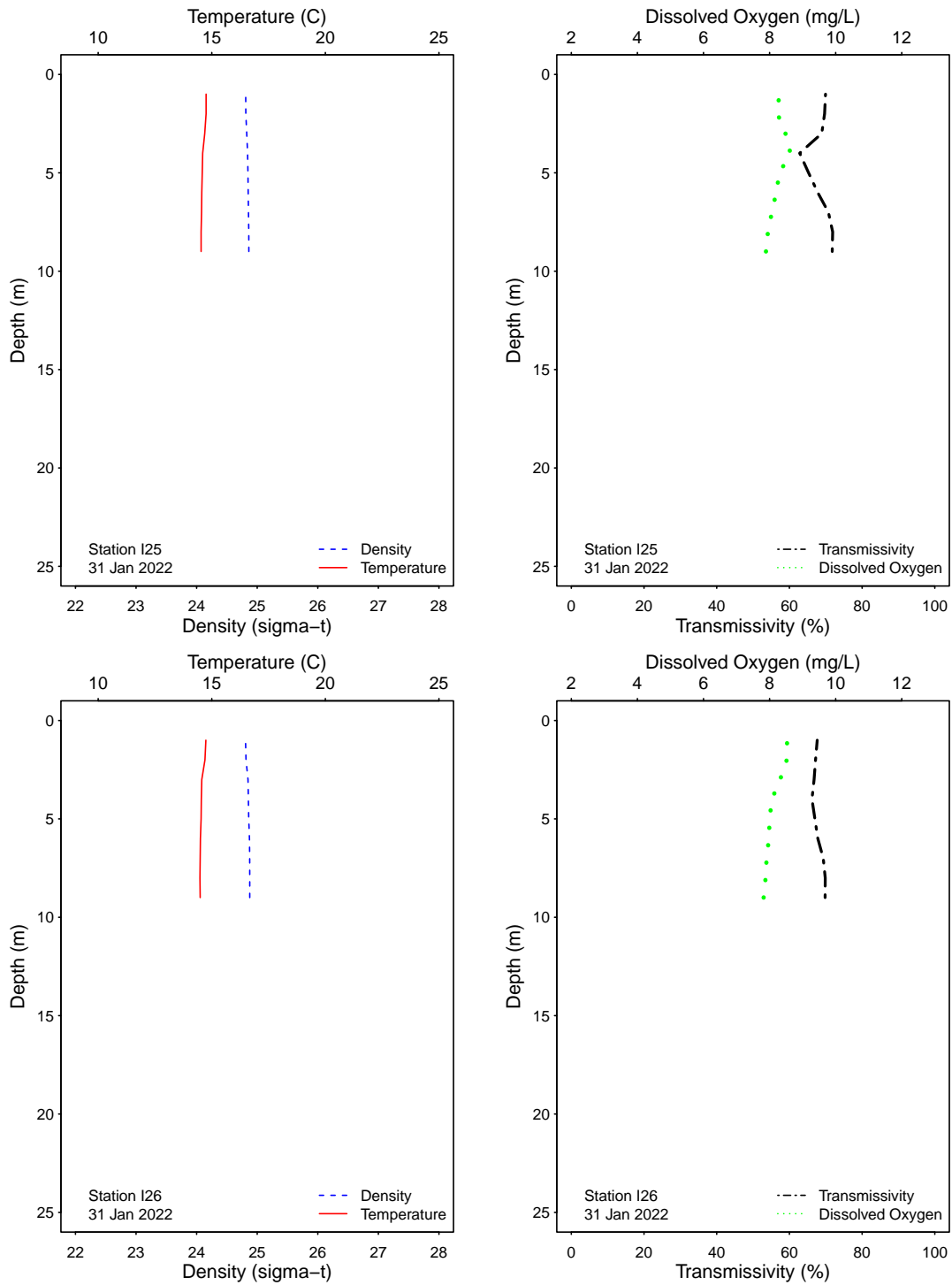


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

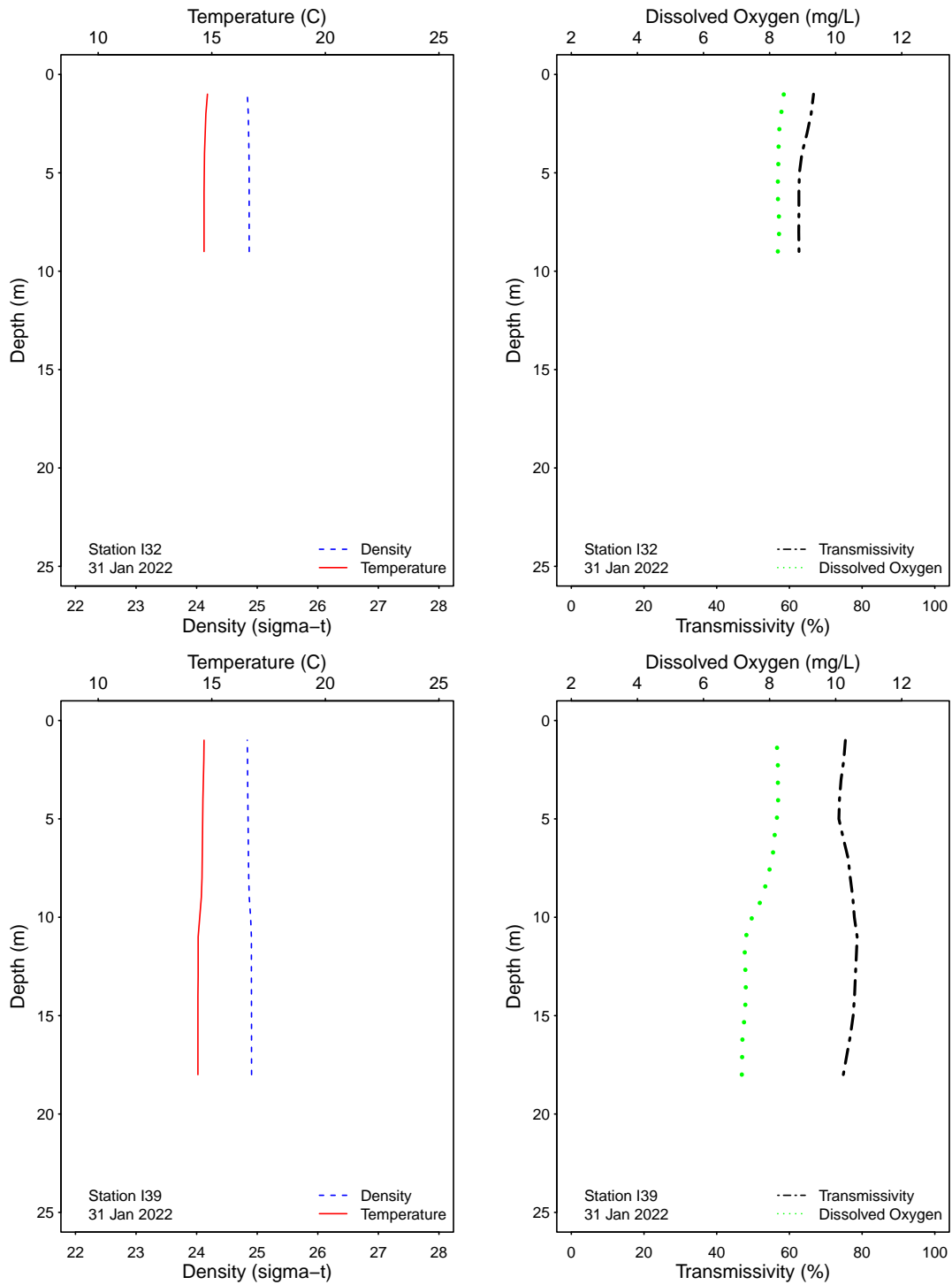


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

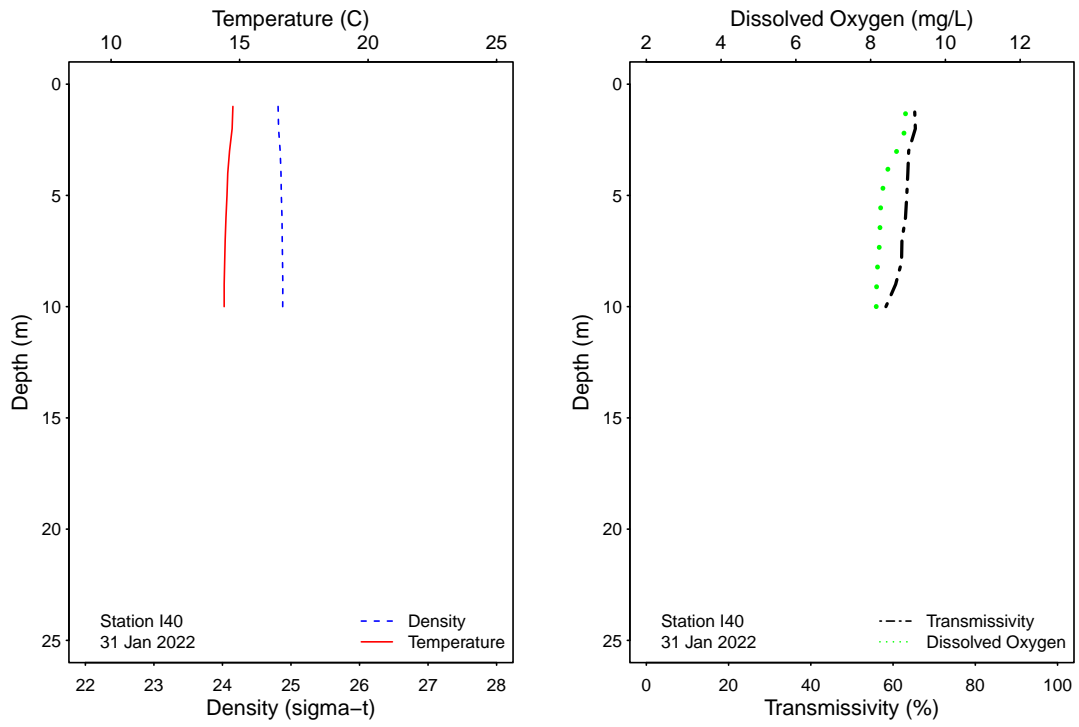


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

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APPENDIX A

Quality Assurance

Table A.1

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

Station	Date	Depth	Analyst	Procedure	Total	Fecal	Enter
I19	04 Jan 2022	6	JF	LAB DUPLICATE	1400e	70	80
I19	10 Jan 2022	6	AR	LAB DUPLICATE	1200e	360e	100
I19	18 Jan 2022	6	JF	LAB DUPLICATE	840	98	64
I19	24 Jan 2022	6	HF	LAB DUPLICATE	180e	18e	<2
I19	31 Jan 2022	6	CRE	LAB DUPLICATE	100e	34e	24e
I40	04 Jan 2022	6	JF	LAB DUPLICATE	2600e	300e	70
I40	10 Jan 2022	6	AR	LAB DUPLICATE	2200e	240e	110
I40	18 Jan 2022	6	JF	LAB DUPLICATE	300e	46	26e
I40	24 Jan 2022	6	HF	LAB DUPLICATE	5600	960	140e
I40	31 Jan 2022	6	CRE	LAB DUPLICATE	1200e	120e	88
S12	04 Jan 2022		JF	FIELD DUPLICATE	<2	<2	<2
S12	04 Jan 2022		JF	LAB DUPLICATE	4e	<2	<2
S12	11 Jan 2022		CRE	FIELD DUPLICATE	<2	<2	<2
S12	11 Jan 2022		CRE	LAB DUPLICATE	2e	2e	<2
S12	18 Jan 2022		HF	FIELD DUPLICATE	1400	110	76
S12	18 Jan 2022		HF	LAB DUPLICATE	540	100	68
S12	25 Jan 2022		KA	FIELD DUPLICATE	10e	2e	20e
S12	25 Jan 2022		KA	LAB DUPLICATE	18e	<2	24e

ns = not sampled

ND = no data

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