

SOUTH BAY OCEAN OUTFALL MONTHLY RECEIVING WATERS MONITORING REPORT

SOUTH BAY WATER RECLAMATION PLANT

NPDES Permit No. CA0109045
SDRWQCB Order No. R9-2021-0011

OCTOBER 2023

Environmental Monitoring and Technical Services
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November 30, 2023

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 October 2023 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 Director, Public Utilities Department

PV/rk

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

INTRODUCTION

Monthly reports of water quality and ocean conditions from Playa Blanco, Mexico to Coronado, USA are submitted to the San Diego Regional Water Quality Control Board and U.S. EPA Region 9 in accordance with Order No. R9-2021-0011, 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 2023 Quality Assurance Report, which will be completed in March 2024.

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.
 - Samples collected from stations S0, S2, and S3 on October 17, 2023 were not analyzed due to an exceedance of the holding time.
- During October, each of the eight shore stations located north of the border was out of compliance with the 2019 California Ocean Plan (Ocean Plan) water contact standards on one or more days as follows:
 - The 30-day running geometric mean standard for fecal coliforms was exceeded at stations S4, S5, S6, and S11.
 - The single sample maximum (SSM) standard for fecal coliforms was exceeded at stations S4, S5, S6, S10, S11, and S12.

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

- The 6-week running geometric mean standard for *Enterococcus* was exceeded at stations S4, S5, S6, S8, S10, S11, and S12.
 - The statistical threshold value (STV) standard for *Enterococcus* was exceeded at stations S4, S5, S6, S10, S11, and S12.
 - The 30-day running median standard for total coliforms was exceeded at stations S4, S5, S6, S9, S10, S11, and S12.
 - The STV standard for total coliforms was exceeded at stations S4, S5, S6, S10, S11, and S12.
- A sewage-like odor was observed at stations S4 and S10 on one or more days in October.
- 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 October 2, 9, 16, 24, and 30.
- During October, each of the seven kelp bed stations was out of compliance with the various 2019 Ocean Plan water contact standards on one or more days as follows:
 - The SSM standard for fecal coliforms was exceeded at station I40.
 - The 6-week running geometric mean standard for *Enterococcus* was exceeded at stations I32 and I40.
 - The STV standard for *Enterococcus* was exceeded at stations I19, I24, I25, I26, I39, and I40.
 - The 30-day running median standard for total coliforms was exceeded at stations I19, I24, I25, I26, I32, and I40.
 - The STV standard for total coliforms was exceeded at stations I19, I24, I25, I26, I32, and I40.
- Water column temperatures ranged from 13.92 to 20.15°C. The difference between surface and bottom waters ranged from 0.29 to 4.04°C.
- Concentrations of chlorophyll a ranged from 0.42 to 15.81 µg/L at the kelp bed stations.
- Nothing of sewage origin was observed at SBOO kelp stations in October.

➤ **Offshore Water Quality Sampling**

- Quarterly sampling was not conducted during October at the offshore stations. The next quarterly sampling is scheduled for November 2023.



TABLES AND FIGURES

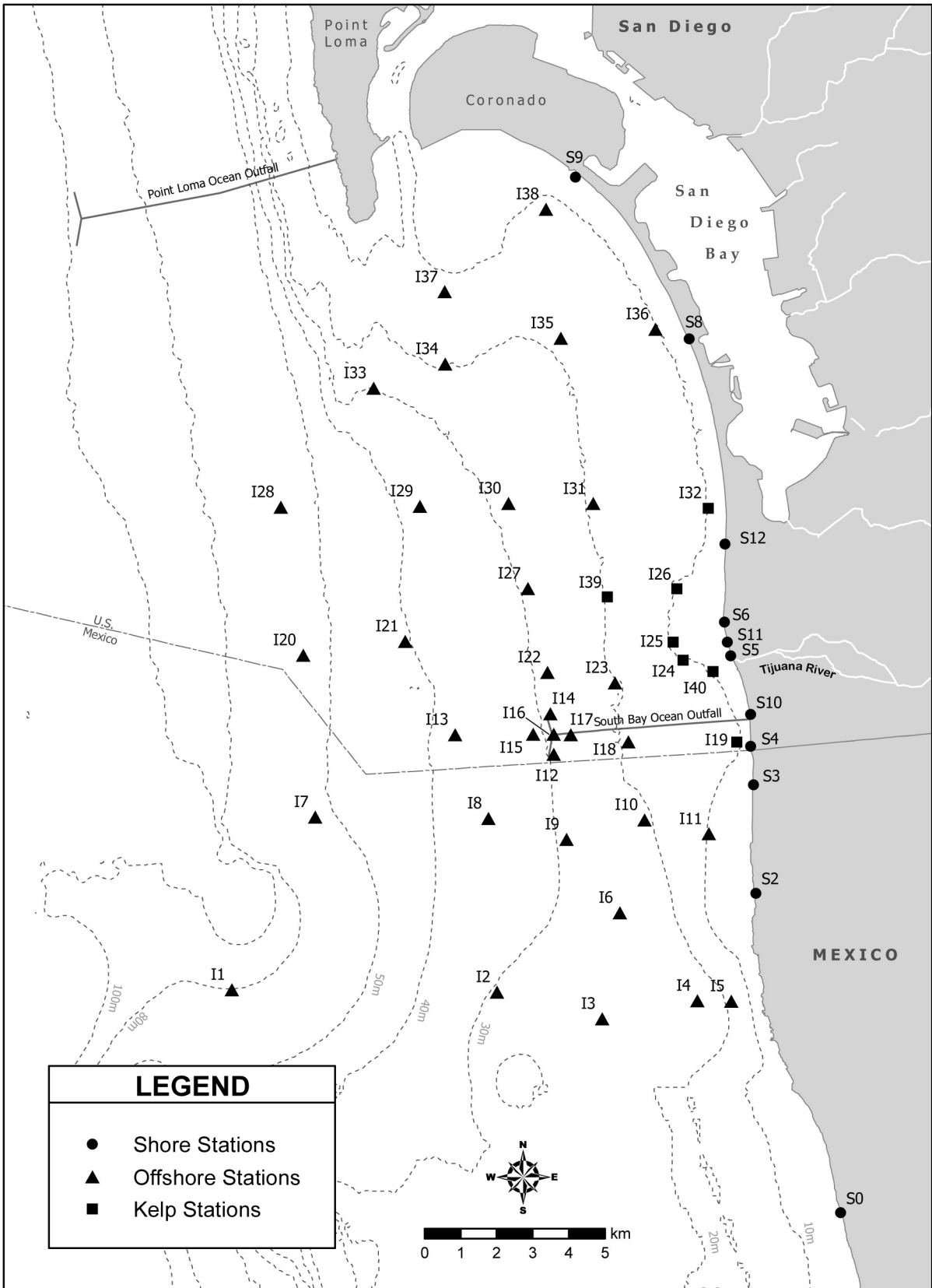


Figure 1.1 Station Map

Shore Stations

Table 2.1

Summary of compliance with the Ocean Plan's 30-day Geometric Mean standard for 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 Oct 2023	136	1336	554	19	10	42	383	188
02 Oct 2023	136	1336	554	19	10	42	383	188
03 Oct 2023	206	2036	1025	12	16	71	764	94
04 Oct 2023	206	2036	1025	12	16	71	764	94
05 Oct 2023	179	2623	986	4	12	51	759	28
06 Oct 2023	179	2623	986	4	12	51	759	28
07 Oct 2023	179	2623	986	4	12	51	759	28
08 Oct 2023	179	2623	986	4	12	51	759	28
09 Oct 2023	179	2623	986	4	12	51	759	28
10 Oct 2023	91	2243	1263	3	8	38	1156	94
11 Oct 2023	91	2243	1263	3	8	38	1156	94
12 Oct 2023	118	2052	786	2	10	53	748	41
13 Oct 2023	118	2052	786	2	10	53	748	41
14 Oct 2023	118	2052	786	2	10	53	748	41
15 Oct 2023	118	2052	786	2	10	53	748	41
16 Oct 2023	118	2052	786	2	10	53	748	41
17 Oct 2023	171	1812	789	2	7	108	792	59
18 Oct 2023	171	1812	789	2	7	108	792	59
19 Oct 2023	134	2611	875	2	5	105	1222	77
20 Oct 2023	134	2611	875	2	5	105	1222	77
21 Oct 2023	134	2611	875	2	5	105	1222	77
22 Oct 2023	134	2611	875	2	5	105	1222	77
23 Oct 2023	134	2611	875	2	5	105	1222	77
24 Oct 2023	58	2155	1033	2	6	104	1290	42
25 Oct 2023	58	2155	1033	2	6	104	1290	42
26 Oct 2023	56	1952	2842	3	8	186	3303	91
27 Oct 2023	56	1952	2842	3	8	186	3303	91
28 Oct 2023	56	1952	2842	3	8	186	3303	91
29 Oct 2023	56	1952	2842	3	8	186	3303	91
30 Oct 2023	56	1952	2842	3	8	186	3303	91
31 Oct 2023	36	868	1094	2	6	108	1108	96

* 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
03 Oct 2023	E	E	E	IC	IC	E	E	IC
10 Oct 2023	IC	E	E	IC	IC	IC	E	E
17 Oct 2023	E	E	E	IC	IC	E	E	IC
24 Oct 2023	IC	E	E	IC	IC	IC	E	IC
31 Oct 2023	IC	IC	IC	IC	IC	IC	IC	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 Oct 2023	229	936	935	45	26	137	753	595
02 Oct 2023	229	936	935	45	26	137	753	595
03 Oct 2023	150	734	791	12	8	112	697	165
04 Oct 2023	150	734	791	12	8	112	697	165
05 Oct 2023	150	734	791	12	8	112	697	165
06 Oct 2023	150	734	791	12	8	112	697	165
07 Oct 2023	150	734	791	12	8	112	697	165
08 Oct 2023	150	734	791	12	8	112	697	165
09 Oct 2023	150	734	791	12	8	112	697	165
10 Oct 2023	134	780	726	9	7	121	839	162
11 Oct 2023	134	780	726	9	7	121	839	162
12 Oct 2023	134	780	726	9	7	121	839	162
13 Oct 2023	134	780	726	9	7	121	839	162
14 Oct 2023	134	780	726	9	7	121	839	162
15 Oct 2023	134	780	726	9	7	121	839	162
16 Oct 2023	134	780	726	9	7	121	839	162
17 Oct 2023	149	1171	902	3	5	163	960	92
18 Oct 2023	149	1171	902	3	5	163	960	92
19 Oct 2023	149	1171	902	3	5	163	960	92
20 Oct 2023	149	1171	902	3	5	163	960	92
21 Oct 2023	149	1171	902	3	5	163	960	92
22 Oct 2023	149	1171	902	3	5	163	960	92
23 Oct 2023	149	1171	902	3	5	163	960	92
24 Oct 2023	128	1142	702	2	5	243	740	39
25 Oct 2023	128	1142	702	2	5	243	740	39
26 Oct 2023	128	1142	702	2	5	243	740	39
27 Oct 2023	128	1142	702	2	5	243	740	39
28 Oct 2023	128	1142	702	2	5	243	740	39
29 Oct 2023	128	1142	702	2	5	243	740	39
30 Oct 2023	128	1142	702	2	5	243	740	39
31 Oct 2023	78	810	510	3	5	129	622	45

* 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
October	E	E	E	IC	IC	E	E	E

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 Oct 2023	870	6200	5400	60	200	360	2600	7100
02 Oct 2023	870	6200	5400	60	200	360	2600	7100
03 Oct 2023	1400	9000	7200	20	200	640	4400	200
04 Oct 2023	1400	9000	7200	20	200	640	4400	200
05 Oct 2023	1570	9000	9800	20	200	360	8400	110
06 Oct 2023	1570	9000	9800	20	200	360	8400	110
07 Oct 2023	1570	9000	9800	20	200	360	8400	110
08 Oct 2023	1570	9000	9800	20	200	360	8400	110
09 Oct 2023	1570	9000	9800	20	200	360	8400	110
10 Oct 2023	340	9000	9400	20	200	80	16000	200
11 Oct 2023	340	9000	9400	20	200	80	16000	200
12 Oct 2023	1570	7000	6500	13	180	360	8400	110
13 Oct 2023	1570	7000	6500	13	180	360	8400	110
14 Oct 2023	1570	7000	6500	13	180	360	8400	110
15 Oct 2023	1570	7000	6500	13	180	360	8400	110
16 Oct 2023	1570	7000	6500	13	180	360	8400	110
17 Oct 2023	2800	5800	6800	20	160	640	8000	200
18 Oct 2023	2800	5800	6800	20	160	640	8000	200
19 Oct 2023	2070	7400	8100	13	90	3440	12000	510
20 Oct 2023	2070	7400	8100	13	90	3440	12000	510
21 Oct 2023	2070	7400	8100	13	90	3440	12000	510
22 Oct 2023	2070	7400	8100	13	90	3440	12000	510
23 Oct 2023	2070	7400	8100	13	90	3440	12000	510
24 Oct 2023	340	7200	6800	6	20	540	8000	20
25 Oct 2023	340	7200	6800	6	20	540	8000	20
26 Oct 2023	1920	6500	8100	4	20	3670	12000	510
27 Oct 2023	1920	6500	8100	4	20	3670	12000	510
28 Oct 2023	1920	6500	8100	4	20	3670	12000	510
29 Oct 2023	1920	6500	8100	4	20	3670	12000	510
30 Oct 2023	1920	6500	8100	4	20	3670	12000	510
31 Oct 2023	40	5800	6800	6	20	540	8000	260

* 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
October	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	03 Oct 2023	900	11000	3000e	2400e
S0	10 Oct 2023	830	7000	2200e	2000e
S0	24 Oct 2023	900	>16000	>12000	11000
S0	31 Oct 2023	950	2000e	400	220e
S2	03 Oct 2023	1010	<200	12e	10e
S2	10 Oct 2023	925	<200	8e	14e
S2	24 Oct 2023	950	380e	100	72
S2	31 Oct 2023	1105	280e	34e	110
S3	03 Oct 2023	950	400e	10e	8e
S3	10 Oct 2023	905	<200	28e	10e
S3	24 Oct 2023	935	<20	2e	12e
S3	31 Oct 2023	1025	62	32e	76
S4	03 Oct 2023	756	6200	1100	360e
S4	10 Oct 2023	933	40e	6e	14e
S4	17 Oct 2023	829	3800e	760	740
S4	24 Oct 2023	1032	<20	<2	12e
S4	31 Oct 2023	827	20e	6e	20e
S5	03 Oct 2023	835	>16000	11000	2800e
S5	10 Oct 2023	845	5000	1200e	520
S5	17 Oct 2023	1021	5800	1100	1600e
S5	24 Oct 2023	842	7200	1000	1200e
S5	31 Oct 2023	1016	320e	34e	46
S6	03 Oct 2023	848	>16000	>12000	4400
S6	10 Oct 2023	859	9400	3400e	840
S6	17 Oct 2023	1053	6800	800e	2200e
S6	24 Oct 2023	904	4400	2000e	800e
S6	31 Oct 2023	1045	100e	24e	80e
S8	03 Oct 2023	914	6e	2e	<2
S8	10 Oct 2023	814	2e	2e	2e
S8	17 Oct 2023	1123	<20	2e	<2
S8	24 Oct 2023	757	2e	6e	<2
S8	31 Oct 2023	1122	<20	2e	16e
S9	03 Oct 2023	929	160e	110	4e
S9	10 Oct 2023	800	20e	2e	6e
S9	17 Oct 2023	1146	<20	2e	4e
S9	24 Oct 2023	741	<20	10e	10e
S9	31 Oct 2023	1137	<20	2e	10e
S10	03 Oct 2023	804	6800	560	260e
S10	10 Oct 2023	941	80e	12e	22e
S10	17 Oct 2023	847	7200	1800e	1400e
S10	24 Oct 2023	936	540	100e	180e
S10	31 Oct 2023	859	22e	12e	8e
S11	03 Oct 2023	842	>16000	>12000	5400
S11	10 Oct 2023	853	>16000	6200	1400e
S11	17 Oct 2023	1032	8000	1000	1400e

Station	Date	Time	Total	Fecal	Enteroc
S11	24 Oct 2023	856	5200	1600e	960
S11	31 Oct 2023	1035	80e	14e	92
S12	03 Oct 2023	858	10e	6e	2e
S12	10 Oct 2023	831	>16000	>12000	4600
S12	17 Oct 2023	1105	1000e	240e	300e
S12	24 Oct 2023	814	<20	4e	6e
S12	31 Oct 2023	1100	260e	120	240e

ns = not sampled
ND = no data

Comments

Station	Date	Depth	Parameter	Comments
	10 Oct 2023			mEI negative QC grew typical colonies.
	10 Oct 2023			Repeated test showed no contamination of media buffer or control cultures. Anomalous result was likely due to cross contamination during setup.
	10 Oct 2023			QC setup was performed separately, this is not believed to have effected the sample results.
S0	17 Oct 2023			Samples not delivered due to exceeding holding time
S2	17 Oct 2023			Samples not delivered due to exceeding holding time
S3	17 Oct 2023			Samples not delivered due to exceeding holding time

Table 2.8

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

Station	Date	Parameter	Value
S0	03 Oct 2023	Arrive Time	900
S0	03 Oct 2023	Weather	Sunny
S0	03 Oct 2023	Wind Speed (kts)	1.8
S0	03 Oct 2023	Wind Dir	NE
S0	03 Oct 2023	Animal Life	Dog-5; Seagull-20;
S0	03 Oct 2023	Floatables	None
S0	03 Oct 2023	Water Color	Green
S0	03 Oct 2023	Current Direction	N
S0	03 Oct 2023	Water Temp (C)	14
S0	03 Oct 2023	Wave Height Low (ft)	2
S0	03 Oct 2023	High Tide (ft)	3.81
S0	03 Oct 2023	High Tide Time	28
S0	03 Oct 2023	Low Tide (ft)	2.08
S0	03 Oct 2023	Low Tide Time	531
S0	03 Oct 2023	Comments	Water turbid; Trash-1; Kelp;Algae; 2lps of water flowing from storm drain.
S0	10 Oct 2023	Arrive Time	830
S0	10 Oct 2023	Weather	Cloudy
S0	10 Oct 2023	Wind Speed (kts)	15
S0	10 Oct 2023	Wind Dir	NE
S0	10 Oct 2023	Animal Life	Seagull-20;
S0	10 Oct 2023	Floatables	None
S0	10 Oct 2023	Water Color	Green
S0	10 Oct 2023	Current Direction	N
S0	10 Oct 2023	Water Temp (C)	15
S0	10 Oct 2023	Wave Height Low (ft)	2
S0	10 Oct 2023	High Tide (ft)	4.55
S0	10 Oct 2023	High Tide Time	800
S0	10 Oct 2023	Low Tide (ft)	0.42
S0	10 Oct 2023	Low Tide Time	142
S0	10 Oct 2023	Comments	Water turbid; Trash-1; Kelp;Algae; Water flowing from storm drain 1 lps; rain present
S0	24 Oct 2023	Arrive Time	900
S0	24 Oct 2023	Weather	Sunny
S0	24 Oct 2023	Wind Speed (kts)	1.1
S0	24 Oct 2023	Wind Dir	S
S0	24 Oct 2023	Animal Life	Seagull-20;
S0	24 Oct 2023	Floatables	None
S0	24 Oct 2023	Water Color	Green
S0	24 Oct 2023	Current Direction	S
S0	24 Oct 2023	Water Temp (C)	14
S0	24 Oct 2023	Wave Height Low (ft)	2
S0	24 Oct 2023	High Tide (ft)	4.69
S0	24 Oct 2023	High Tide Time	657
S0	24 Oct 2023	Low Tide (ft)	-0.07
S0	24 Oct 2023	Low Tide Time	29
S0	24 Oct 2023	Comments	Water turbid; Trash-1; Kelp;Algae; Water flowing at 1 lps from storm drain.
S0	31 Oct 2023	Arrive Time	950
S0	31 Oct 2023	Weather	Sunny
S0	31 Oct 2023	Wind Speed (kts)	1.8
S0	31 Oct 2023	Wind Dir	NE
S0	31 Oct 2023	Animal Life	Dog-2; Seagull-10;

Station	Date	Parameter	Value
S0	31 Oct 2023	Floatables	None
S0	31 Oct 2023	Water Color	Green
S0	31 Oct 2023	Current Direction	N
S0	31 Oct 2023	Water Temp (C)	16
S0	31 Oct 2023	Wave Height Low (ft)	3
S0	31 Oct 2023	High Tide (ft)	6.09
S0	31 Oct 2023	High Tide Time	1035
S0	31 Oct 2023	Low Tide (ft)	2.06
S0	31 Oct 2023	Low Tide Time	422
S0	31 Oct 2023	Comments	Water clear; Trash-1; Kelp;Algae; Person/Walker/Jogger-2; .5 lps water flowing from storm drain.
S2	03 Oct 2023	Arrive Time	1010
S2	03 Oct 2023	Weather	Sunny
S2	03 Oct 2023	Wind Speed (kts)	1.6
S2	03 Oct 2023	Wind Dir	NE
S2	03 Oct 2023	Animal Life	Dog-6; Seagull-20;
S2	03 Oct 2023	Floatables	None
S2	03 Oct 2023	Water Color	Green
S2	03 Oct 2023	Current Direction	N
S2	03 Oct 2023	Water Temp (C)	15
S2	03 Oct 2023	Wave Height Low (ft)	2
S2	03 Oct 2023	High Tide (ft)	3.81
S2	03 Oct 2023	High Tide Time	28
S2	03 Oct 2023	Low Tide (ft)	2.08
S2	03 Oct 2023	Low Tide Time	531
S2	03 Oct 2023	Comments	Water turbid; Trash-1; Kelp;Algae; No water flow from storm drain.
S2	10 Oct 2023	Arrive Time	925
S2	10 Oct 2023	Weather	Cloudy
S2	10 Oct 2023	Wind Speed (kts)	3.6
S2	10 Oct 2023	Wind Dir	SE
S2	10 Oct 2023	Animal Life	Seagull-20;
S2	10 Oct 2023	Floatables	None
S2	10 Oct 2023	Water Color	Green
S2	10 Oct 2023	Current Direction	N
S2	10 Oct 2023	Water Temp (C)	14
S2	10 Oct 2023	Wave Height Low (ft)	2
S2	10 Oct 2023	High Tide (ft)	4.55
S2	10 Oct 2023	High Tide Time	800
S2	10 Oct 2023	Low Tide (ft)	0.42
S2	10 Oct 2023	Low Tide Time	142
S2	10 Oct 2023	Comments	Water turbid; Trash-1; Kelp;Algae; No flow from storm drain.
S2	24 Oct 2023	Arrive Time	950
S2	24 Oct 2023	Weather	Sunny
S2	24 Oct 2023	Wind Speed (kts)	0.9
S2	24 Oct 2023	Wind Dir	NE
S2	24 Oct 2023	Animal Life	Dog-3; Seagull-20;
S2	24 Oct 2023	Floatables	None
S2	24 Oct 2023	Water Color	Green
S2	24 Oct 2023	Current Direction	S
S2	24 Oct 2023	Water Temp (C)	15
S2	24 Oct 2023	Wave Height Low (ft)	2
S2	24 Oct 2023	High Tide (ft)	4.69
S2	24 Oct 2023	High Tide Time	657
S2	24 Oct 2023	Low Tide (ft)	-0.07
S2	24 Oct 2023	Low Tide Time	29
S2	24 Oct 2023	Comments	Water turbid; Trash-1; Kelp;Algae; No water flowing from the storm drain.

Station	Date	Parameter	Value
S2	31 Oct 2023	Arrive Time	1105
S2	31 Oct 2023	Weather	Sunny
S2	31 Oct 2023	Wind Speed (kts)	2
S2	31 Oct 2023	Wind Dir	NE
S2	31 Oct 2023	Animal Life	Dog-4; Seagull-20;
S2	31 Oct 2023	Floatables	None
S2	31 Oct 2023	Water Color	Green
S2	31 Oct 2023	Current Direction	N
S2	31 Oct 2023	Water Temp (C)	16
S2	31 Oct 2023	Wave Height Low (ft)	3
S2	31 Oct 2023	High Tide (ft)	6.09
S2	31 Oct 2023	High Tide Time	1035
S2	31 Oct 2023	Low Tide (ft)	2.06
S2	31 Oct 2023	Low Tide Time	422
S2	31 Oct 2023	Comments	Water clear; Trash-1; Kelp;Algae; Person/Walker/Jogger-5; No water flow from storm drain.
S3	03 Oct 2023	Arrive Time	950
S3	03 Oct 2023	Weather	Sunny
S3	03 Oct 2023	Wind Speed (kts)	1.1
S3	03 Oct 2023	Wind Dir	NE
S3	03 Oct 2023	Animal Life	Dog-2; Seagull-20;
S3	03 Oct 2023	Floatables	None
S3	03 Oct 2023	Water Color	Green
S3	03 Oct 2023	Current Direction	N
S3	03 Oct 2023	Water Temp (C)	15
S3	03 Oct 2023	Wave Height Low (ft)	2
S3	03 Oct 2023	High Tide (ft)	3.81
S3	03 Oct 2023	High Tide Time	28
S3	03 Oct 2023	Low Tide (ft)	2.08
S3	03 Oct 2023	Low Tide Time	531
S3	03 Oct 2023	Comments	Water turbid; Trash-1; Kelp;Algae; Person/Walker/Jogger-3; No water flow from storm drain.
S3	10 Oct 2023	Arrive Time	905
S3	10 Oct 2023	Weather	Cloudy
S3	10 Oct 2023	Wind Speed (kts)	2.3
S3	10 Oct 2023	Wind Dir	SE
S3	10 Oct 2023	Animal Life	Dog-6; Seagull-20;
S3	10 Oct 2023	Floatables	None
S3	10 Oct 2023	Water Color	Green
S3	10 Oct 2023	Current Direction	N
S3	10 Oct 2023	Water Temp (C)	14
S3	10 Oct 2023	Wave Height Low (ft)	2
S3	10 Oct 2023	High Tide (ft)	4.55
S3	10 Oct 2023	High Tide Time	800
S3	10 Oct 2023	Low Tide (ft)	0.42
S3	10 Oct 2023	Low Tide Time	142
S3	10 Oct 2023	Comments	Water turbid; Trash-1; Kelp;Algae; No flow; but wet.
S3	24 Oct 2023	Arrive Time	935
S3	24 Oct 2023	Weather	Sunny
S3	24 Oct 2023	Wind Speed (kts)	1.3
S3	24 Oct 2023	Wind Dir	NE
S3	24 Oct 2023	Animal Life	Dog-2;
S3	24 Oct 2023	Floatables	None
S3	24 Oct 2023	Water Color	Green
S3	24 Oct 2023	Current Direction	S
S3	24 Oct 2023	Water Temp (C)	14
S3	24 Oct 2023	Wave Height Low (ft)	2

Station	Date	Parameter	Value
S3	24 Oct 2023	High Tide (ft)	4.69
S3	24 Oct 2023	High Tide Time	657
S3	24 Oct 2023	Low Tide (ft)	-0.07
S3	24 Oct 2023	Low Tide Time	29
S3	24 Oct 2023	Comments	Water turbid; Trash-1; Kelp;Algae; Was wet.
S3	31 Oct 2023	Arrive Time	1025
S3	31 Oct 2023	Weather	Sunny
S3	31 Oct 2023	Wind Speed (kts)	1.6
S3	31 Oct 2023	Wind Dir	NE
S3	31 Oct 2023	Animal Life	Dog-5; Seagull-10;
S3	31 Oct 2023	Floatables	None
S3	31 Oct 2023	Water Color	Green
S3	31 Oct 2023	Current Direction	N
S3	31 Oct 2023	Water Temp (C)	16
S3	31 Oct 2023	Wave Height Low (ft)	3
S3	31 Oct 2023	High Tide (ft)	6.09
S3	31 Oct 2023	High Tide Time	1035
S3	31 Oct 2023	Low Tide (ft)	2.06
S3	31 Oct 2023	Low Tide Time	422
S3	31 Oct 2023	Comments	Water clear; Trash-1; Kelp;Algae; Person/Walker/Jogger-10; No water flow from storm drain.
S4	03 Oct 2023	Arrive Time	756
S4	03 Oct 2023	Weather	Sunny
S4	03 Oct 2023	Wind Speed (kts)	2.3
S4	03 Oct 2023	Wind Dir	E
S4	03 Oct 2023	Animal Life	
S4	03 Oct 2023	Floatables	None
S4	03 Oct 2023	Water Color	Green
S4	03 Oct 2023	Current Direction	S
S4	03 Oct 2023	Water Temp (C)	14
S4	03 Oct 2023	Wave Height Low (ft)	3
S4	03 Oct 2023	High Tide (ft)	3.81
S4	03 Oct 2023	High Tide Time	28
S4	03 Oct 2023	Low Tide (ft)	2.08
S4	03 Oct 2023	Low Tide Time	531
S4	03 Oct 2023	Comments	Water clear; Trash-3; Kelp;Seagrass
S4	10 Oct 2023	Arrive Time	933
S4	10 Oct 2023	Weather	Partly cloudy
S4	10 Oct 2023	Wind Speed (kts)	1.6
S4	10 Oct 2023	Wind Dir	SW
S4	10 Oct 2023	Animal Life	
S4	10 Oct 2023	Floatables	None
S4	10 Oct 2023	Water Color	Green
S4	10 Oct 2023	Current Direction	S
S4	10 Oct 2023	Water Temp (C)	15
S4	10 Oct 2023	Wave Height Low (ft)	3
S4	10 Oct 2023	High Tide (ft)	4.55
S4	10 Oct 2023	High Tide Time	800
S4	10 Oct 2023	Low Tide (ft)	0.42
S4	10 Oct 2023	Low Tide Time	142
S4	10 Oct 2023	Comments	Water clear; Trash-2; Kelp;Seagrass;Algae
S4	17 Oct 2023	Arrive Time	829
S4	17 Oct 2023	Weather	Cloudy
S4	17 Oct 2023	Wind Speed (kts)	4.5
S4	17 Oct 2023	Wind Dir	SW
S4	17 Oct 2023	Animal Life	
S4	17 Oct 2023	Floatables	None

Station	Date	Parameter	Value
S4	17 Oct 2023	Water Color	Green
S4	17 Oct 2023	Current Direction	S
S4	17 Oct 2023	Water Temp (C)	14
S4	17 Oct 2023	Wave Height Low (ft)	4
S4	17 Oct 2023	High Tide (ft)	5.72
S4	17 Oct 2023	High Tide Time	1022
S4	17 Oct 2023	Low Tide (ft)	1.88
S4	17 Oct 2023	Low Tide Time	410
S4	17 Oct 2023	Comments	Water clear; Trash-1; Sewage-like odor
S4	24 Oct 2023	Arrive Time	1032
S4	24 Oct 2023	Weather	Sunny
S4	24 Oct 2023	Wind Speed (kts)	5.7
S4	24 Oct 2023	Wind Dir	SW
S4	24 Oct 2023	Animal Life	
S4	24 Oct 2023	Floatables	None
S4	24 Oct 2023	Water Color	Green
S4	24 Oct 2023	Current Direction	S
S4	24 Oct 2023	Water Temp (C)	14
S4	24 Oct 2023	Wave Height Low (ft)	5
S4	24 Oct 2023	High Tide (ft)	4.69
S4	24 Oct 2023	High Tide Time	657
S4	24 Oct 2023	Low Tide (ft)	-0.07
S4	24 Oct 2023	Low Tide Time	29
S4	24 Oct 2023	Comments	Water clear; Trash-2; Seagrass;Kelp;Debris
S4	31 Oct 2023	Arrive Time	827
S4	31 Oct 2023	Weather	Sunny
S4	31 Oct 2023	Wind Speed (kts)	1.8
S4	31 Oct 2023	Wind Dir	NW
S4	31 Oct 2023	Animal Life	
S4	31 Oct 2023	Floatables	None
S4	31 Oct 2023	Water Color	Green
S4	31 Oct 2023	Current Direction	S
S4	31 Oct 2023	Water Temp (C)	10
S4	31 Oct 2023	Wave Height Low (ft)	4
S4	31 Oct 2023	High Tide (ft)	6.09
S4	31 Oct 2023	High Tide Time	1035
S4	31 Oct 2023	Low Tide (ft)	2.06
S4	31 Oct 2023	Low Tide Time	422
S4	31 Oct 2023	Comments	Water clear; Trash-4; Kelp;Seagrass;Debris; Sewage-like odor
S5	03 Oct 2023	Arrive Time	835
S5	03 Oct 2023	Weather	Sunny
S5	03 Oct 2023	Wind Speed (kts)	0
S5	03 Oct 2023	Wind Dir	
S5	03 Oct 2023	Animal Life	
S5	03 Oct 2023	Floatables	None
S5	03 Oct 2023	Water Color	Green
S5	03 Oct 2023	Current Direction	S
S5	03 Oct 2023	Water Temp (C)	16
S5	03 Oct 2023	Wave Height Low (ft)	2
S5	03 Oct 2023	High Tide (ft)	3.81
S5	03 Oct 2023	High Tide Time	28
S5	03 Oct 2023	Low Tide (ft)	2.08
S5	03 Oct 2023	Low Tide Time	531
S5	03 Oct 2023	Comments	Water clear; Trash-1; Kelp;Seagrass;Debris
S5	10 Oct 2023	Arrive Time	845
S5	10 Oct 2023	Weather	Cloudy

Station	Date	Parameter	Value
S5	10 Oct 2023	Wind Speed (kts)	3.1
S5	10 Oct 2023	Wind Dir	SW
S5	10 Oct 2023	Animal Life	Bird-10;
S5	10 Oct 2023	Floatables	None
S5	10 Oct 2023	Water Color	Green
S5	10 Oct 2023	Current Direction	S
S5	10 Oct 2023	Water Temp (C)	14
S5	10 Oct 2023	Wave Height Low (ft)	3
S5	10 Oct 2023	High Tide (ft)	4.55
S5	10 Oct 2023	High Tide Time	800
S5	10 Oct 2023	Low Tide (ft)	0.42
S5	10 Oct 2023	Low Tide Time	142
S5	10 Oct 2023	Comments	Water clear; Trash-2; Kelp;Seagrass;Debris
S5	17 Oct 2023	Arrive Time	1021
S5	17 Oct 2023	Weather	Cloudy
S5	17 Oct 2023	Wind Speed (kts)	6.2
S5	17 Oct 2023	Wind Dir	W
S5	17 Oct 2023	Animal Life	
S5	17 Oct 2023	Floatables	None
S5	17 Oct 2023	Water Color	Green
S5	17 Oct 2023	Current Direction	S
S5	17 Oct 2023	Water Temp (C)	14
S5	17 Oct 2023	Wave Height Low (ft)	3
S5	17 Oct 2023	High Tide (ft)	5.72
S5	17 Oct 2023	High Tide Time	1022
S5	17 Oct 2023	Low Tide (ft)	1.88
S5	17 Oct 2023	Low Tide Time	410
S5	17 Oct 2023	Comments	Water clear; Trash-1; Kelp;Seagrass; Person/Walker/Jogger-1
S5	24 Oct 2023	Arrive Time	842
S5	24 Oct 2023	Weather	Sunny
S5	24 Oct 2023	Wind Speed (kts)	3
S5	24 Oct 2023	Wind Dir	SE
S5	24 Oct 2023	Animal Life	
S5	24 Oct 2023	Floatables	None
S5	24 Oct 2023	Water Color	Green
S5	24 Oct 2023	Current Direction	S
S5	24 Oct 2023	Water Temp (C)	15
S5	24 Oct 2023	Wave Height Low (ft)	3
S5	24 Oct 2023	High Tide (ft)	4.69
S5	24 Oct 2023	High Tide Time	657
S5	24 Oct 2023	Low Tide (ft)	-0.07
S5	24 Oct 2023	Low Tide Time	29
S5	24 Oct 2023	Comments	Water clear; Trash-1; Kelp;Seagrass
S5	31 Oct 2023	Arrive Time	1016
S5	31 Oct 2023	Weather	Sunny
S5	31 Oct 2023	Wind Speed (kts)	6
S5	31 Oct 2023	Wind Dir	NW
S5	31 Oct 2023	Animal Life	
S5	31 Oct 2023	Floatables	None
S5	31 Oct 2023	Water Color	Green
S5	31 Oct 2023	Current Direction	S
S5	31 Oct 2023	Water Temp (C)	13
S5	31 Oct 2023	Wave Height Low (ft)	3
S5	31 Oct 2023	High Tide (ft)	6.09
S5	31 Oct 2023	High Tide Time	1035
S5	31 Oct 2023	Low Tide (ft)	2.06
S5	31 Oct 2023	Low Tide Time	422

Station	Date	Parameter	Value
S5	31 Oct 2023	Comments	Water clear; Trash-4; Kelp;Seagrass;Debris
S6	03 Oct 2023	Arrive Time	848
S6	03 Oct 2023	Weather	Sunny
S6	03 Oct 2023	Wind Speed (kts)	1.5
S6	03 Oct 2023	Wind Dir	NW
S6	03 Oct 2023	Animal Life	
S6	03 Oct 2023	Floatables	None
S6	03 Oct 2023	Water Color	Green
S6	03 Oct 2023	Current Direction	S
S6	03 Oct 2023	Water Temp (C)	15
S6	03 Oct 2023	Wave Height Low (ft)	4
S6	03 Oct 2023	High Tide (ft)	3.81
S6	03 Oct 2023	High Tide Time	28
S6	03 Oct 2023	Low Tide (ft)	2.08
S6	03 Oct 2023	Low Tide Time	531
S6	03 Oct 2023	Comments	Water clear; Trash-1; Kelp;Seagrass; Person/Walker/Jogger-2
S6	10 Oct 2023	Arrive Time	859
S6	10 Oct 2023	Weather	Cloudy
S6	10 Oct 2023	Wind Speed (kts)	0.7
S6	10 Oct 2023	Wind Dir	SW
S6	10 Oct 2023	Animal Life	Bird-1;
S6	10 Oct 2023	Floatables	None
S6	10 Oct 2023	Water Color	Green
S6	10 Oct 2023	Current Direction	S
S6	10 Oct 2023	Water Temp (C)	14
S6	10 Oct 2023	Wave Height Low (ft)	3
S6	10 Oct 2023	High Tide (ft)	4.55
S6	10 Oct 2023	High Tide Time	800
S6	10 Oct 2023	Low Tide (ft)	0.42
S6	10 Oct 2023	Low Tide Time	142
S6	10 Oct 2023	Comments	Water clear; Trash-2; Kelp;Debris;Algae;Seagrass
S6	17 Oct 2023	Arrive Time	1053
S6	17 Oct 2023	Weather	Cloudy
S6	17 Oct 2023	Wind Speed (kts)	1.5
S6	17 Oct 2023	Wind Dir	W
S6	17 Oct 2023	Animal Life	
S6	17 Oct 2023	Floatables	None
S6	17 Oct 2023	Water Color	Green
S6	17 Oct 2023	Current Direction	S
S6	17 Oct 2023	Water Temp (C)	14
S6	17 Oct 2023	Wave Height Low (ft)	5
S6	17 Oct 2023	High Tide (ft)	5.72
S6	17 Oct 2023	High Tide Time	1022
S6	17 Oct 2023	Low Tide (ft)	1.88
S6	17 Oct 2023	Low Tide Time	410
S6	17 Oct 2023	Comments	Water clear; Trash-1; Kelp;Seagrass;Algae
S6	24 Oct 2023	Arrive Time	904
S6	24 Oct 2023	Weather	Sunny
S6	24 Oct 2023	Wind Speed (kts)	2.8
S6	24 Oct 2023	Wind Dir	E
S6	24 Oct 2023	Animal Life	
S6	24 Oct 2023	Floatables	None
S6	24 Oct 2023	Water Color	Green
S6	24 Oct 2023	Current Direction	S
S6	24 Oct 2023	Water Temp (C)	14
S6	24 Oct 2023	Wave Height Low (ft)	4

Station	Date	Parameter	Value
S6	24 Oct 2023	High Tide (ft)	4.69
S6	24 Oct 2023	High Tide Time	657
S6	24 Oct 2023	Low Tide (ft)	-0.07
S6	24 Oct 2023	Low Tide Time	29
S6	24 Oct 2023	Comments	Water clear; Trash-1; Kelp;Seagrass;Algae; Person/Walker/Jogger-2
S6	31 Oct 2023	Arrive Time	1045
S6	31 Oct 2023	Weather	Sunny
S6	31 Oct 2023	Wind Speed (kts)	0.6
S6	31 Oct 2023	Wind Dir	NW
S6	31 Oct 2023	Animal Life	
S6	31 Oct 2023	Floatables	None
S6	31 Oct 2023	Water Color	Green
S6	31 Oct 2023	Current Direction	S
S6	31 Oct 2023	Water Temp (C)	12
S6	31 Oct 2023	Wave Height Low (ft)	4
S6	31 Oct 2023	High Tide (ft)	6.09
S6	31 Oct 2023	High Tide Time	1035
S6	31 Oct 2023	Low Tide (ft)	2.06
S6	31 Oct 2023	Low Tide Time	422
S6	31 Oct 2023	Comments	Water clear; Trash-4; Kelp;Seagrass;Debris;Algae
S8	03 Oct 2023	Arrive Time	914
S8	03 Oct 2023	Weather	Sunny
S8	03 Oct 2023	Wind Speed (kts)	3.7
S8	03 Oct 2023	Wind Dir	W
S8	03 Oct 2023	Animal Life	
S8	03 Oct 2023	Floatables	None
S8	03 Oct 2023	Water Color	Green
S8	03 Oct 2023	Current Direction	S
S8	03 Oct 2023	Water Temp (C)	16
S8	03 Oct 2023	Wave Height Low (ft)	3
S8	03 Oct 2023	High Tide (ft)	3.81
S8	03 Oct 2023	High Tide Time	28
S8	03 Oct 2023	Low Tide (ft)	2.08
S8	03 Oct 2023	Low Tide Time	531
S8	03 Oct 2023	Comments	Water clear; Trash-1; Kelp;Seagrass;Debris
S8	10 Oct 2023	Arrive Time	814
S8	10 Oct 2023	Weather	Cloudy
S8	10 Oct 2023	Wind Speed (kts)	1.4
S8	10 Oct 2023	Wind Dir	SW
S8	10 Oct 2023	Animal Life	
S8	10 Oct 2023	Floatables	None
S8	10 Oct 2023	Water Color	Green
S8	10 Oct 2023	Current Direction	S
S8	10 Oct 2023	Water Temp (C)	13
S8	10 Oct 2023	Wave Height Low (ft)	3
S8	10 Oct 2023	High Tide (ft)	4.55
S8	10 Oct 2023	High Tide Time	800
S8	10 Oct 2023	Low Tide (ft)	0.42
S8	10 Oct 2023	Low Tide Time	142
S8	10 Oct 2023	Comments	Water clear; Trash-2; Kelp;Seagrass;Debris
S8	17 Oct 2023	Arrive Time	1123
S8	17 Oct 2023	Weather	Cloudy
S8	17 Oct 2023	Wind Speed (kts)	1.1
S8	17 Oct 2023	Wind Dir	W
S8	17 Oct 2023	Animal Life	
S8	17 Oct 2023	Floatables	None

Station	Date	Parameter	Value
S8	17 Oct 2023	Water Color	Green
S8	17 Oct 2023	Current Direction	S
S8	17 Oct 2023	Water Temp (C)	16
S8	17 Oct 2023	Wave Height Low (ft)	2
S8	17 Oct 2023	High Tide (ft)	5.72
S8	17 Oct 2023	High Tide Time	1022
S8	17 Oct 2023	Low Tide (ft)	1.88
S8	17 Oct 2023	Low Tide Time	410
S8	17 Oct 2023	Comments	Water clear; Trash-1; Kelp;Seagrass
S8	24 Oct 2023	Arrive Time	757
S8	24 Oct 2023	Weather	Sunny
S8	24 Oct 2023	Wind Speed (kts)	2.8
S8	24 Oct 2023	Wind Dir	E
S8	24 Oct 2023	Animal Life	
S8	24 Oct 2023	Floatables	None
S8	24 Oct 2023	Water Color	Green
S8	24 Oct 2023	Current Direction	S
S8	24 Oct 2023	Water Temp (C)	13
S8	24 Oct 2023	Wave Height Low (ft)	3
S8	24 Oct 2023	High Tide (ft)	4.69
S8	24 Oct 2023	High Tide Time	657
S8	24 Oct 2023	Low Tide (ft)	-0.07
S8	24 Oct 2023	Low Tide Time	29
S8	24 Oct 2023	Comments	Water clear; Trash-2; Kelp;Seagrass
S8	31 Oct 2023	Arrive Time	1122
S8	31 Oct 2023	Weather	Sunny
S8	31 Oct 2023	Wind Speed (kts)	2.4
S8	31 Oct 2023	Wind Dir	NW
S8	31 Oct 2023	Animal Life	
S8	31 Oct 2023	Floatables	None
S8	31 Oct 2023	Water Color	Green
S8	31 Oct 2023	Current Direction	S
S8	31 Oct 2023	Water Temp (C)	17
S8	31 Oct 2023	Wave Height Low (ft)	4
S8	31 Oct 2023	High Tide (ft)	6.09
S8	31 Oct 2023	High Tide Time	1035
S8	31 Oct 2023	Low Tide (ft)	2.06
S8	31 Oct 2023	Low Tide Time	422
S8	31 Oct 2023	Comments	Water clear; Trash-3; Kelp;Seagrass;Debris
S9	03 Oct 2023	Arrive Time	929
S9	03 Oct 2023	Weather	Sunny
S9	03 Oct 2023	Wind Speed (kts)	2.8
S9	03 Oct 2023	Wind Dir	W
S9	03 Oct 2023	Animal Life	
S9	03 Oct 2023	Floatables	None
S9	03 Oct 2023	Water Color	Green
S9	03 Oct 2023	Current Direction	S
S9	03 Oct 2023	Water Temp (C)	16
S9	03 Oct 2023	Wave Height Low (ft)	2
S9	03 Oct 2023	High Tide (ft)	3.81
S9	03 Oct 2023	High Tide Time	28
S9	03 Oct 2023	Low Tide (ft)	2.08
S9	03 Oct 2023	Low Tide Time	531
S9	03 Oct 2023	Comments	Water clear; Trash-1; Seagrass;Kelp; Person/Walker/Jogger-1
S9	10 Oct 2023	Arrive Time	800
S9	10 Oct 2023	Weather	Cloudy

Station	Date	Parameter	Value
S9	10 Oct 2023	Wind Speed (kts)	2.1
S9	10 Oct 2023	Wind Dir	SW
S9	10 Oct 2023	Animal Life	Bird-1;
S9	10 Oct 2023	Floatables	None
S9	10 Oct 2023	Water Color	Green
S9	10 Oct 2023	Current Direction	S
S9	10 Oct 2023	Water Temp (C)	13
S9	10 Oct 2023	Wave Height Low (ft)	2
S9	10 Oct 2023	High Tide (ft)	4.55
S9	10 Oct 2023	High Tide Time	800
S9	10 Oct 2023	Low Tide (ft)	0.42
S9	10 Oct 2023	Low Tide Time	142
S9	10 Oct 2023	Comments	Water clear; Trash-2; Kelp;Seagrass;Debris
S9	17 Oct 2023	Arrive Time	1146
S9	17 Oct 2023	Weather	Cloudy
S9	17 Oct 2023	Wind Speed (kts)	2
S9	17 Oct 2023	Wind Dir	W
S9	17 Oct 2023	Animal Life	
S9	17 Oct 2023	Floatables	None
S9	17 Oct 2023	Water Color	Green
S9	17 Oct 2023	Current Direction	S
S9	17 Oct 2023	Water Temp (C)	17
S9	17 Oct 2023	Wave Height Low (ft)	1
S9	17 Oct 2023	High Tide (ft)	5.72
S9	17 Oct 2023	High Tide Time	1022
S9	17 Oct 2023	Low Tide (ft)	1.88
S9	17 Oct 2023	Low Tide Time	410
S9	17 Oct 2023	Comments	Water clear; Trash-1; Kelp; Person/Walker/Jogger-2
S9	24 Oct 2023	Arrive Time	741
S9	24 Oct 2023	Weather	Hazy
S9	24 Oct 2023	Wind Speed (kts)	1.3
S9	24 Oct 2023	Wind Dir	E
S9	24 Oct 2023	Animal Life	
S9	24 Oct 2023	Floatables	None
S9	24 Oct 2023	Water Color	Green
S9	24 Oct 2023	Current Direction	S
S9	24 Oct 2023	Water Temp (C)	12
S9	24 Oct 2023	Wave Height Low (ft)	3
S9	24 Oct 2023	High Tide (ft)	4.69
S9	24 Oct 2023	High Tide Time	657
S9	24 Oct 2023	Low Tide (ft)	-0.07
S9	24 Oct 2023	Low Tide Time	29
S9	24 Oct 2023	Comments	Water clear; Trash-1; Kelp;Seagrass;Algae; Person/Walker/Jogger-1
S9	31 Oct 2023	Arrive Time	1137
S9	31 Oct 2023	Weather	Sunny
S9	31 Oct 2023	Wind Speed (kts)	1.1
S9	31 Oct 2023	Wind Dir	NW
S9	31 Oct 2023	Animal Life	
S9	31 Oct 2023	Floatables	None
S9	31 Oct 2023	Water Color	Green
S9	31 Oct 2023	Current Direction	S
S9	31 Oct 2023	Water Temp (C)	15
S9	31 Oct 2023	Wave Height Low (ft)	3
S9	31 Oct 2023	High Tide (ft)	6.09
S9	31 Oct 2023	High Tide Time	1035
S9	31 Oct 2023	Low Tide (ft)	2.06
S9	31 Oct 2023	Low Tide Time	422

Station	Date	Parameter	Value
S9	31 Oct 2023	Comments	Water clear; Surfer/Paddle boarder-1; Trash-2; Kelp;Seagrass;Debris; Person/Walker/Jogger-2
S10	03 Oct 2023	Arrive Time	804
S10	03 Oct 2023	Weather	Sunny
S10	03 Oct 2023	Wind Speed (kts)	1.9
S10	03 Oct 2023	Wind Dir	E
S10	03 Oct 2023	Animal Life	
S10	03 Oct 2023	Floatables	None
S10	03 Oct 2023	Water Color	Green
S10	03 Oct 2023	Current Direction	S
S10	03 Oct 2023	Water Temp (C)	15
S10	03 Oct 2023	Wave Height Low (ft)	3
S10	03 Oct 2023	High Tide (ft)	3.81
S10	03 Oct 2023	High Tide Time	28
S10	03 Oct 2023	Low Tide (ft)	2.08
S10	03 Oct 2023	Low Tide Time	531
S10	03 Oct 2023	Comments	Water clear; Trash-4; Seagrass;Kelp; Sewage-like odor
S10	10 Oct 2023	Arrive Time	941
S10	10 Oct 2023	Weather	Partly cloudy
S10	10 Oct 2023	Wind Speed (kts)	0.6
S10	10 Oct 2023	Wind Dir	SW
S10	10 Oct 2023	Animal Life	Dolphin-4;
S10	10 Oct 2023	Floatables	None
S10	10 Oct 2023	Water Color	Green
S10	10 Oct 2023	Current Direction	S
S10	10 Oct 2023	Water Temp (C)	16
S10	10 Oct 2023	Wave Height Low (ft)	3
S10	10 Oct 2023	High Tide (ft)	4.55
S10	10 Oct 2023	High Tide Time	800
S10	10 Oct 2023	Low Tide (ft)	0.42
S10	10 Oct 2023	Low Tide Time	142
S10	10 Oct 2023	Comments	Water clear; Trash-1; Kelp;Seagrass;Debris
S10	17 Oct 2023	Arrive Time	847
S10	17 Oct 2023	Weather	Cloudy
S10	17 Oct 2023	Wind Speed (kts)	7.8
S10	17 Oct 2023	Wind Dir	W
S10	17 Oct 2023	Animal Life	
S10	17 Oct 2023	Floatables	None
S10	17 Oct 2023	Water Color	Green
S10	17 Oct 2023	Current Direction	S
S10	17 Oct 2023	Water Temp (C)	14
S10	17 Oct 2023	Wave Height Low (ft)	3
S10	17 Oct 2023	High Tide (ft)	5.72
S10	17 Oct 2023	High Tide Time	1022
S10	17 Oct 2023	Low Tide (ft)	1.88
S10	17 Oct 2023	Low Tide Time	410
S10	17 Oct 2023	Comments	Water clear; Trash-1; Kelp;Seagrass
S10	24 Oct 2023	Arrive Time	936
S10	24 Oct 2023	Weather	Sunny
S10	24 Oct 2023	Wind Speed (kts)	1.1
S10	24 Oct 2023	Wind Dir	E
S10	24 Oct 2023	Animal Life	
S10	24 Oct 2023	Floatables	None
S10	24 Oct 2023	Water Color	Green
S10	24 Oct 2023	Current Direction	S
S10	24 Oct 2023	Water Temp (C)	14
S10	24 Oct 2023	Wave Height Low (ft)	3

Station	Date	Parameter	Value
S10	24 Oct 2023	High Tide (ft)	4.69
S10	24 Oct 2023	High Tide Time	657
S10	24 Oct 2023	Low Tide (ft)	-0.07
S10	24 Oct 2023	Low Tide Time	29
S10	24 Oct 2023	Comments	Water clear; Trash-2; Kelp;Seagrass
S10	31 Oct 2023	Arrive Time	859
S10	31 Oct 2023	Weather	Sunny
S10	31 Oct 2023	Wind Speed (kts)	0.6
S10	31 Oct 2023	Wind Dir	NW
S10	31 Oct 2023	Animal Life	Bird-5;
S10	31 Oct 2023	Floatables	None
S10	31 Oct 2023	Water Color	Green
S10	31 Oct 2023	Current Direction	S
S10	31 Oct 2023	Water Temp (C)	12
S10	31 Oct 2023	Wave Height Low (ft)	4
S10	31 Oct 2023	High Tide (ft)	6.09
S10	31 Oct 2023	High Tide Time	1035
S10	31 Oct 2023	Low Tide (ft)	2.06
S10	31 Oct 2023	Low Tide Time	422
S10	31 Oct 2023	Comments	Water clear; Trash-4; Kelp;Seagrass;Debris; Sewage-like odor
S11	03 Oct 2023	Arrive Time	842
S11	03 Oct 2023	Weather	Sunny
S11	03 Oct 2023	Wind Speed (kts)	1.3
S11	03 Oct 2023	Wind Dir	E
S11	03 Oct 2023	Animal Life	
S11	03 Oct 2023	Floatables	None
S11	03 Oct 2023	Water Color	Green
S11	03 Oct 2023	Current Direction	S
S11	03 Oct 2023	Water Temp (C)	15
S11	03 Oct 2023	Wave Height Low (ft)	3
S11	03 Oct 2023	High Tide (ft)	3.81
S11	03 Oct 2023	High Tide Time	28
S11	03 Oct 2023	Low Tide (ft)	2.08
S11	03 Oct 2023	Low Tide Time	531
S11	03 Oct 2023	Comments	Water clear; Trash-2; Kelp;Seagrass;Debris
S11	10 Oct 2023	Arrive Time	853
S11	10 Oct 2023	Weather	Cloudy
S11	10 Oct 2023	Wind Speed (kts)	2.4
S11	10 Oct 2023	Wind Dir	SW
S11	10 Oct 2023	Animal Life	
S11	10 Oct 2023	Floatables	None
S11	10 Oct 2023	Water Color	Green
S11	10 Oct 2023	Current Direction	S
S11	10 Oct 2023	Water Temp (C)	14
S11	10 Oct 2023	Wave Height Low (ft)	4
S11	10 Oct 2023	High Tide (ft)	4.55
S11	10 Oct 2023	High Tide Time	800
S11	10 Oct 2023	Low Tide (ft)	0.42
S11	10 Oct 2023	Low Tide Time	142
S11	10 Oct 2023	Comments	Water clear; Trash-2; Kelp;Seagrass;Debris
S11	17 Oct 2023	Arrive Time	1042
S11	17 Oct 2023	Weather	Cloudy
S11	17 Oct 2023	Wind Speed (kts)	2.5
S11	17 Oct 2023	Wind Dir	SW
S11	17 Oct 2023	Animal Life	
S11	17 Oct 2023	Floatables	None

Station	Date	Parameter	Value
S11	17 Oct 2023	Water Color	Green
S11	17 Oct 2023	Current Direction	S
S11	17 Oct 2023	Water Temp (C)	15
S11	17 Oct 2023	Wave Height Low (ft)	4
S11	17 Oct 2023	High Tide (ft)	5.72
S11	17 Oct 2023	High Tide Time	1022
S11	17 Oct 2023	Low Tide (ft)	1.88
S11	17 Oct 2023	Low Tide Time	410
S11	17 Oct 2023	Comments	Water clear; Trash-1; Kelp;Seagrass
S11	24 Oct 2023	Arrive Time	856
S11	24 Oct 2023	Weather	Sunny
S11	24 Oct 2023	Wind Speed (kts)	5.6
S11	24 Oct 2023	Wind Dir	SE
S11	24 Oct 2023	Animal Life	
S11	24 Oct 2023	Floatables	None
S11	24 Oct 2023	Water Color	Green
S11	24 Oct 2023	Current Direction	S
S11	24 Oct 2023	Water Temp (C)	13
S11	24 Oct 2023	Wave Height Low (ft)	4
S11	24 Oct 2023	High Tide (ft)	4.69
S11	24 Oct 2023	High Tide Time	657
S11	24 Oct 2023	Low Tide (ft)	-0.07
S11	24 Oct 2023	Low Tide Time	29
S11	24 Oct 2023	Comments	Water clear; Trash-1; Kelp;Seagrass
S11	31 Oct 2023	Arrive Time	1035
S11	31 Oct 2023	Weather	Sunny
S11	31 Oct 2023	Wind Speed (kts)	3.5
S11	31 Oct 2023	Wind Dir	NW
S11	31 Oct 2023	Animal Life	
S11	31 Oct 2023	Floatables	None
S11	31 Oct 2023	Water Color	Green
S11	31 Oct 2023	Current Direction	S
S11	31 Oct 2023	Water Temp (C)	13
S11	31 Oct 2023	Wave Height Low (ft)	4
S11	31 Oct 2023	High Tide (ft)	6.09
S11	31 Oct 2023	High Tide Time	1035
S11	31 Oct 2023	Low Tide (ft)	2.06
S11	31 Oct 2023	Low Tide Time	422
S11	31 Oct 2023	Comments	Water clear; Trash-5; Kelp;Seagrass;Debris
S12	03 Oct 2023	Arrive Time	858
S12	03 Oct 2023	Weather	Sunny
S12	03 Oct 2023	Wind Speed (kts)	4
S12	03 Oct 2023	Wind Dir	NW
S12	03 Oct 2023	Animal Life	Dog-1;
S12	03 Oct 2023	Floatables	None
S12	03 Oct 2023	Water Color	Green
S12	03 Oct 2023	Current Direction	S
S12	03 Oct 2023	Water Temp (C)	15
S12	03 Oct 2023	Wave Height Low (ft)	3
S12	03 Oct 2023	High Tide (ft)	3.81
S12	03 Oct 2023	High Tide Time	28
S12	03 Oct 2023	Low Tide (ft)	2.08
S12	03 Oct 2023	Low Tide Time	531
S12	03 Oct 2023	Comments	Water clear; Trash-1; Kelp;Seagrass; Person/Walker/Jogger-3
S12	10 Oct 2023	Arrive Time	831
S12	10 Oct 2023	Weather	Cloudy

Station	Date	Parameter	Value
S12	10 Oct 2023	Wind Speed (kts)	0
S12	10 Oct 2023	Wind Dir	
S12	10 Oct 2023	Animal Life	Bird-1;
S12	10 Oct 2023	Floatables	None
S12	10 Oct 2023	Water Color	Green
S12	10 Oct 2023	Current Direction	S
S12	10 Oct 2023	Water Temp (C)	14
S12	10 Oct 2023	Wave Height Low (ft)	2
S12	10 Oct 2023	High Tide (ft)	4.55
S12	10 Oct 2023	High Tide Time	800
S12	10 Oct 2023	Low Tide (ft)	0.42
S12	10 Oct 2023	Low Tide Time	142
S12	10 Oct 2023	Comments	Water clear; Trash-1; Kelp;Seagrass
S12	17 Oct 2023	Arrive Time	1105
S12	17 Oct 2023	Weather	Cloudy
S12	17 Oct 2023	Wind Speed (kts)	1.9
S12	17 Oct 2023	Wind Dir	W
S12	17 Oct 2023	Animal Life	
S12	17 Oct 2023	Floatables	None
S12	17 Oct 2023	Water Color	Green
S12	17 Oct 2023	Current Direction	S
S12	17 Oct 2023	Water Temp (C)	15
S12	17 Oct 2023	Wave Height Low (ft)	2
S12	17 Oct 2023	High Tide (ft)	5.72
S12	17 Oct 2023	High Tide Time	1022
S12	17 Oct 2023	Low Tide (ft)	1.88
S12	17 Oct 2023	Low Tide Time	410
S12	17 Oct 2023	Comments	Water clear; Trash-1; Kelp;Seagrass; Person/Walker/Jogger-1
S12	24 Oct 2023	Arrive Time	814
S12	24 Oct 2023	Weather	Sunny
S12	24 Oct 2023	Wind Speed (kts)	0.6
S12	24 Oct 2023	Wind Dir	W
S12	24 Oct 2023	Animal Life	
S12	24 Oct 2023	Floatables	None
S12	24 Oct 2023	Water Color	Green
S12	24 Oct 2023	Current Direction	S
S12	24 Oct 2023	Water Temp (C)	12
S12	24 Oct 2023	Wave Height Low (ft)	4
S12	24 Oct 2023	High Tide (ft)	4.69
S12	24 Oct 2023	High Tide Time	657
S12	24 Oct 2023	Low Tide (ft)	-0.07
S12	24 Oct 2023	Low Tide Time	29
S12	24 Oct 2023	Comments	Water clear; Fisherpersion-1; Trash-1; Kelp;Seagrass
S12	31 Oct 2023	Arrive Time	1100
S12	31 Oct 2023	Weather	Sunny
S12	31 Oct 2023	Wind Speed (kts)	3.1
S12	31 Oct 2023	Wind Dir	NW
S12	31 Oct 2023	Animal Life	
S12	31 Oct 2023	Floatables	None
S12	31 Oct 2023	Water Color	Green
S12	31 Oct 2023	Current Direction	S
S12	31 Oct 2023	Water Temp (C)	12
S12	31 Oct 2023	Wave Height Low (ft)	4
S12	31 Oct 2023	High Tide (ft)	6.09
S12	31 Oct 2023	High Tide Time	1035
S12	31 Oct 2023	Low Tide (ft)	2.06
S12	31 Oct 2023	Low Tide Time	422

Station	Date	Parameter	Value
S12	31 Oct 2023	Comments	Water clear; Trash-4; Kelp;Seagrass;Debris

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 Oct 2023	21	4	3	8	31	2	13
02 Oct 2023	13	4	3	11	18	3	11
03 Oct 2023	13	4	3	11	18	3	11
04 Oct 2023	13	4	3	11	18	3	11
05 Oct 2023	14	4	3	12	7	3	18
06 Oct 2023	14	4	3	12	7	3	18
07 Oct 2023	14	4	3	12	7	3	18
08 Oct 2023	14	4	3	12	7	3	18
09 Oct 2023	17	5	5	11	7	3	22
10 Oct 2023	17	5	5	11	7	3	22
11 Oct 2023	12	5	6	6	3	3	23
12 Oct 2023	12	5	6	6	3	3	23
13 Oct 2023	12	5	6	6	3	3	23
14 Oct 2023	12	5	6	6	3	3	23
15 Oct 2023	12	5	6	6	3	3	23
16 Oct 2023	13	4	4	5	3	3	39
17 Oct 2023	13	4	4	5	3	3	39
18 Oct 2023	9	5	6	6	3	3	51
19 Oct 2023	9	5	6	6	3	3	51
20 Oct 2023	9	5	6	6	3	3	51
21 Oct 2023	9	5	6	6	3	3	51
22 Oct 2023	9	5	6	6	3	3	51
23 Oct 2023	9	5	6	6	3	3	51
24 Oct 2023	10	8	8	7	3	3	65
25 Oct 2023	13	10	11	10	3	3	68
26 Oct 2023	13	10	11	10	3	3	68
27 Oct 2023	13	10	11	10	3	3	68
28 Oct 2023	13	10	11	10	3	3	68
29 Oct 2023	13	10	11	10	3	3	68
30 Oct 2023	12	14	16	7	6	3	64
31 Oct 2023	12	14	16	7	6	3	64

* 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
02 Oct 2023	IC	IC	IC	IC	IC	IC	IC
09 Oct 2023	IC	IC	IC	IC	IC	IC	IC
16 Oct 2023	IC	IC	IC	IC	IC	IC	E
24 Oct 2023	IC	IC	IC	IC	IC	IC	IC
30 Oct 2023	IC	IC	IC	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 Oct 2023	28	11	12	14	46	7	19
02 Oct 2023	19	11	12	18	30	9	20
03 Oct 2023	19	11	12	18	30	9	20
04 Oct 2023	15	7	8	16	22	7	17
05 Oct 2023	15	7	8	16	22	7	17
06 Oct 2023	15	7	8	16	22	7	17
07 Oct 2023	15	7	8	16	22	7	17
08 Oct 2023	15	7	8	16	22	7	17
09 Oct 2023	19	9	13	12	11	4	18
10 Oct 2023	19	9	13	12	11	4	18
11 Oct 2023	19	9	13	12	11	4	18
12 Oct 2023	19	9	13	12	11	4	18
13 Oct 2023	19	9	13	12	11	4	18
14 Oct 2023	19	9	13	12	11	4	18
15 Oct 2023	19	9	13	12	11	4	18
16 Oct 2023	24	9	12	10	10	4	24
17 Oct 2023	27	10	15	11	5	4	35
18 Oct 2023	27	10	15	11	5	4	35
19 Oct 2023	27	10	15	11	5	4	35
20 Oct 2023	27	10	15	11	5	4	35
21 Oct 2023	27	10	15	11	5	4	35
22 Oct 2023	27	10	15	11	5	4	35
23 Oct 2023	24	10	12	7	3	4	40
24 Oct 2023	24	14	15	11	3	4	46
25 Oct 2023	24	14	15	11	3	4	46
26 Oct 2023	24	14	15	11	3	4	46
27 Oct 2023	24	14	15	11	3	4	46
28 Oct 2023	24	14	15	11	3	4	46
29 Oct 2023	24	14	15	11	3	4	46
30 Oct 2023	21	23	23	11	4	4	56
31 Oct 2023	21	23	23	11	4	4	56

* 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
October	E	E	E	E	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. Median calculated using n<5

Date	119		124		125		126		132		139		140				
	2m	6m	2m	6m	2m	6m	2m	6m	2m	6m	2m	6m	2m	6m			
01 Oct 2023	19	34	4	42	16	23	2	11	31	11	101	1610	2	11	135	110	43
02 Oct 2023	14	8	6	26	12	20	2	20	60	2	2	20	2	20	110	20	20
03 Oct 2023	14	8	6	26	12	20	2	20	60	2	2	20	2	20	110	20	20
04 Oct 2023	14	8	6	26	12	20	2	20	60	2	2	20	2	20	110	20	20
05 Oct 2023	19	5	11	33	7	23	5	51	44	2	2	11	2	11	135	110	50
06 Oct 2023	19	5	11	33	7	23	5	51	44	2	2	11	2	11	135	110	50
07 Oct 2023	19	5	11	33	7	23	5	51	44	2	2	11	2	11	135	110	50
08 Oct 2023	19	5	11	33	7	23	5	51	44	2	2	11	2	11	135	110	50
09 Oct 2023	24	8	20	20	8	26	8	100	40	2	2	20	2	20	160	60	20
10 Oct 2023	24	8	20	20	8	26	8	100	40	2	2	20	2	20	160	60	20
11 Oct 2023	302	5	11	14	5	23	5	101	21	2	2	11	11	11	145	40	20
12 Oct 2023	302	5	11	14	5	23	5	101	21	2	2	11	11	11	145	40	20
13 Oct 2023	302	5	11	14	5	23	5	101	21	2	2	11	11	11	145	40	20
14 Oct 2023	302	5	11	14	5	23	5	101	21	2	2	11	11	11	145	40	20
15 Oct 2023	302	5	11	14	5	23	5	101	21	2	2	11	11	11	145	40	20
16 Oct 2023	200	8	20	20	2	20	8	2	2	2	2	20	2	2	180	60	20
17 Oct 2023	200	8	20	20	2	20	8	2	2	2	2	20	2	2	180	60	20
18 Oct 2023	112	6	20	20	5	23	14	110	51	11	11	20	11	11	300	230	110
19 Oct 2023	112	6	20	20	5	23	14	110	51	11	11	20	11	11	300	230	110
20 Oct 2023	112	6	20	20	5	23	14	110	51	11	11	20	11	11	300	230	110
21 Oct 2023	112	6	20	20	5	23	14	110	51	11	11	20	11	11	300	230	110
22 Oct 2023	112	6	20	20	5	23	14	110	51	11	11	20	11	11	300	230	110
23 Oct 2023	112	6	20	20	5	23	14	110	51	11	11	20	11	11	300	230	110
24 Oct 2023	200	10	20	20	8	20	20	180	20	20	20	20	2	6	420	200	200
25 Oct 2023	330	45	60	20	5	170	5	190	60	30	20	20	11	13	610	130	110
26 Oct 2023	330	45	60	20	5	170	5	190	60	30	20	20	11	13	610	130	110
27 Oct 2023	330	45	60	20	5	170	5	190	60	30	20	20	11	13	610	130	110
28 Oct 2023	330	45	60	20	5	170	5	190	60	30	20	20	11	13	610	130	110
29 Oct 2023	330	45	60	20	5	170	5	190	60	30	20	20	11	13	610	130	110
30 Oct 2023	200	14	20	20	8	20	20	180	20	20	20	20	2	6	420	200	60
31 Oct 2023	200	14	20	20	8	20	20	180	20	20	20	20	2	6	420	200	60

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
October	E	E	IC	E	E	IC	E	E	IC	E	IC	IC	IC	E	E	IC	IC	IC	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
119	02 Oct 2023	1100	2	4e	<2	<2	19.8	75.30	7.8	33.32	8.2
119	02 Oct 2023	1100	6	<2	<2	<2	17.9	86.63	8.1	33.21	8.2
119	02 Oct 2023	1100	11	<20	<2	<2	17.1	84.07	8.0	33.18	8.1
119	09 Oct 2023	1053	2	600	42	24e	16.4	68.18	8.4	33.14	8.1
119	09 Oct 2023	1053	6	600e	80e	46	15.9	73.08	8.2	33.15	8.1
119	09 Oct 2023	1053	11	20e	6e	<2	15.7	79.58	8.1	33.14	8.1
119	16 Oct 2023	1113	2	200e	42	240e	18.0	68.02	8.2	33.09	8.2
119	16 Oct 2023	1113	6	10e	6e	12e	15.9	69.78	7.4	33.14	8.1
119	16 Oct 2023	1113	11	<20	<2	2e	15.7	60.92	7.1	33.14	8.0
119	24 Oct 2023	1143	2	460	48	60	15.9	42.07	6.6	33.43	8.0
119	24 Oct 2023	1143	6	80e	12e	12e	14.8	57.75	6.8	33.56	7.9
119	24 Oct 2023	1143	11	40e	4e	<2	14.6	17.56	5.2	33.25	7.9
119	30 Oct 2023	1115	2	6e	<2	20e	15.3	75.01	8.0	33.15	8.1
119	30 Oct 2023	1115	6	14e	<2	68	15.2	71.07	8.1	33.15	8.1
119	30 Oct 2023	1115	11	80e	22e	64	15.0	74.07	7.8	33.16	8.1
124	02 Oct 2023	1122	2	<20	<2	2e	19.9	85.56	7.8	33.32	8.2
124	02 Oct 2023	1122	6	8e	<2	<2	17.6	82.51	7.8	33.20	8.1
124	02 Oct 2023	1122	11	2e	<2	22e	16.3	48.84	7.0	33.15	8.0
124	09 Oct 2023	1113	2	460	84	140e	16.2	80.38	8.6	33.12	8.2
124	09 Oct 2023	1113	6	<20	<2	2e	15.7	82.51	8.5	33.14	8.1
124	09 Oct 2023	1113	11	8e	<2	<2	15.6	81.92	8.0	33.15	8.1
124	16 Oct 2023	1134	2	<20	<2	<20	17.9	68.28	9.2	33.12	8.2
124	16 Oct 2023	1134	6	20e	2e	2e	16.5	75.78	7.3	33.14	8.1
124	16 Oct 2023	1134	11	<2	<2	<2	15.8	77.30	6.8	33.15	8.0
124	24 Oct 2023	1204	2	100e	26e	98	16.9	66.35	5.6	33.37	8.1
124	24 Oct 2023	1204	6	620	240e	68	15.1	69.07	6.2	33.66	7.9
124	24 Oct 2023	1204	11	20e	4e	4e	14.8	67.86	5.9	33.67	8.0
124	30 Oct 2023	1135	2	100e	42	66	15.2	78.32	7.7	33.18	8.1
124	30 Oct 2023	1135	6	500	92	52	14.5	67.43	6.3	33.18	8.0
124	30 Oct 2023	1135	11	40	8e	2e	14.3	66.57	5.9	33.20	7.9
125	02 Oct 2023	1129	2	8e	<2	24e	19.9	85.64	7.9	33.31	8.2
125	02 Oct 2023	1129	6	<20	<2	<2	17.6	83.46	8.0	33.19	8.1
125	02 Oct 2023	1129	9	12e	<2	<2	17.0	85.33	7.9	33.17	8.1
125	09 Oct 2023	1120	2	600e	220e	280e	16.6	80.16	8.6	33.03	8.2
125	09 Oct 2023	1120	6	80e	30e	42	15.7	83.53	8.4	33.13	8.1
125	09 Oct 2023	1120	9	20e	8e	10e	15.6	83.19	8.1	33.14	8.1
125	16 Oct 2023	1142	2	<20	<2	20e	18.1	57.39	9.8	33.12	8.3
125	16 Oct 2023	1142	6	<20	<2	<2	16.3	73.52	7.0	33.15	8.0
125	16 Oct 2023	1142	9	<20	<2	<2	16.0	76.82	6.8	33.14	8.0

Station	Date	Time	Depth	Total	Fecal	Entero	Temp	XMS	DO	Sal	pH
I25	24 Oct 2023	1211	2	320e	96	24e	17.3	63.63	6.0	33.12	8.1
I25	24 Oct 2023	1211	6	20e	2e	100	15.3	62.81	6.2	33.97	7.9
I25	24 Oct 2023	1211	9	140e	40	12e	14.7	53.11	6.4	34.02	7.9
I25	30 Oct 2023	1141	2	<2	<2	<2	15.6	78.53	8.1	33.18	8.1
I25	30 Oct 2023	1141	6	540	180e	70	14.7	76.24	7.1	33.17	8.0
I25	30 Oct 2023	1141	9	52	16e	6e	14.4	75.89	6.4	33.18	8.0
I26	02 Oct 2023	1139	2	380e	74	140e	19.9	78.07	7.7	33.24	8.2
I26	02 Oct 2023	1139	6	100	26e	32e	18.7	82.56	8.0	33.25	8.2
I26	02 Oct 2023	1139	9	86	20e	12e	16.6	88.05	8.0	33.13	8.1
I26	09 Oct 2023	1129	2	200e	12e	44	16.9	70.49	8.3	33.09	8.1
I26	09 Oct 2023	1129	6	<200	10e	6e	15.8	82.77	8.1	33.14	8.1
I26	09 Oct 2023	1129	9	40e	8e	4e	15.8	81.92	8.1	33.15	8.1
I26	16 Oct 2023	1152	2	<20	<2	<2	19.0	77.19	10.7	33.13	8.3
I26	16 Oct 2023	1152	6	<2	<2	<2	17.5	76.91	8.3	33.12	8.2
I26	16 Oct 2023	1152	9	<2	<2	<2	16.2	77.18	7.2	33.13	8.0
I26	24 Oct 2023	1221	2	180e	36e	360e	17.6	61.04	7.2	33.16	8.1
I26	24 Oct 2023	1221	6	<20	4e	12e	14.9	61.18	7.1	33.87	7.8
I26	24 Oct 2023	1221	9	20e	2e	34e	14.8	54.68	6.8	34.18	7.9
I26	30 Oct 2023	1151	2	<2	<2	<2	15.4	79.14	7.9	33.18	8.1
I26	30 Oct 2023	1151	6	<2	2e	<2	14.7	82.82	7.6	33.17	8.1
I26	30 Oct 2023	1151	9	8e	<2	<2	14.4	82.46	7.1	33.19	8.0
I32	02 Oct 2023	1153	2	2e	<2	2e	19.2	74.98	8.0	33.29	8.2
I32	02 Oct 2023	1153	6	<2	<2	<2	17.5	82.63	7.9	33.19	8.2
I32	02 Oct 2023	1153	9	2e	<2	<2	16.3	75.80	7.9	33.12	8.1
I32	09 Oct 2023	1142	2	<20	12e	8e	16.4	63.56	7.8	33.16	8.1
I32	09 Oct 2023	1142	6	<20	2e	<2	16.0	73.07	7.3	33.17	8.0
I32	09 Oct 2023	1142	9	80e	8e	2e	15.8	63.72	7.1	33.17	8.0
I32	16 Oct 2023	1205	2	<20	<2	<2	18.7	57.60	11.2	33.12	8.4
I32	16 Oct 2023	1205	6	<20	<2	<2	17.7	77.26	8.6	33.14	8.2
I32	16 Oct 2023	1205	9	20e	2e	12e	16.6	71.82	6.3	33.15	8.0
I32	24 Oct 2023	1239	2	<20	<2	<2	16.5	58.56	5.4	33.15	7.9
I32	24 Oct 2023	1239	6	<20	2e	<2	15.4	45.17	5.5	33.43	7.8
I32	24 Oct 2023	1239	9	<20	2e	<2	14.8	52.90	5.1	33.67	7.8
I32	30 Oct 2023	1202	2	<2	<2	<2	15.7	75.32	7.8	33.18	8.1
I32	30 Oct 2023	1202	6	320e	82	48	14.7	76.37	7.4	33.17	8.1
I32	30 Oct 2023	1202	9	480	220e	44	14.2	69.09	7.0	33.19	8.0
I39	02 Oct 2023	1040	2	22e	16e	180e	19.8	85.15	7.8	33.27	8.2
I39	02 Oct 2023	1040	12	20e	2e	2e	18.5	88.12	7.9	33.27	8.2
I39	02 Oct 2023	1040	18	40	4e	<2	15.7	91.53	8.3	33.07	8.1
I39	09 Oct 2023	1030	2	<20	4e	2e	17.4	55.59	8.7	33.11	8.2
I39	09 Oct 2023	1030	12	<20	2e	<2	15.2	87.09	8.1	33.13	8.1
I39	09 Oct 2023	1030	18	<20	<2	<2	15.1	85.47	7.9	33.13	8.1
I39	16 Oct 2023	1048	2	<2	<2	<2	18.6	75.46	10.3	33.13	8.3
I39	16 Oct 2023	1048	12	<2	<2	<2	16.6	85.19	8.1	33.12	8.1
I39	16 Oct 2023	1048	18	<2	2e	<2	15.3	78.41	7.0	33.15	8.0

Station	Date	Time	Depth	Total	Fecal	Entero	Temp	XMS	DO	Sal	pH
I39	24 Oct 2023	1122	2	<2	<2	<2	16.1	82.58	7.2	33.35	8.1
I39	24 Oct 2023	1122	12	6e	<2	<2	14.6	74.51	6.6	33.34	8.0
I39	24 Oct 2023	1122	18	10e	<2	<2	14.2	64.65	6.2	33.42	8.0
I39	30 Oct 2023	1055	2	<2	<2	<2	15.6	81.83	8.1	33.17	8.1
I39	30 Oct 2023	1055	12	<2	<2	2e	14.2	85.55	7.4	33.18	8.1
I39	30 Oct 2023	1055	18	<2	<2	<2	13.9	80.34	6.5	33.22	8.0
I40	02 Oct 2023	1113	2	60	18e	80e	19.9	82.02	7.9	33.29	8.2
I40	02 Oct 2023	1113	6	<20	<2	4e	17.9	74.61	7.4	33.23	8.2
I40	02 Oct 2023	1113	9	20e	<2	<2	16.8	62.35	7.3	33.18	8.1
I40	09 Oct 2023	1105	2	420	160e	82	16.2	72.99	8.4	33.15	8.1
I40	09 Oct 2023	1105	6	60e	12e	8e	15.9	77.62	8.2	33.15	8.1
I40	09 Oct 2023	1105	9	20e	4e	2e	15.9	78.28	8.1	33.16	8.1
I40	16 Oct 2023	1125	2	800e	560	340e	17.8	55.70	7.6	33.10	8.1
I40	16 Oct 2023	1125	6	800	340e	100e	17.0	70.15	7.4	33.15	8.1
I40	16 Oct 2023	1125	9	200e	38e	34e	16.1	68.58	6.4	33.15	8.0
I40	24 Oct 2023	1156	2	1000	240e	180e	16.3	54.76	6.4	33.44	8.0
I40	24 Oct 2023	1156	6	<200	180e	52	15.9	42.30	6.7	33.38	7.9
I40	24 Oct 2023	1156	9	320e	60e	26e	14.8	51.74	6.2	33.50	7.9
I40	30 Oct 2023	1126	2	420	80	80e	15.0	69.25	7.0	33.16	8.0
I40	30 Oct 2023	1126	6	300e	50	44	14.7	65.72	6.9	33.18	8.0
I40	30 Oct 2023	1126	9	60e	16e	6e	14.6	57.04	6.6	33.19	8.0

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	02 Oct 2023	Depth (m)	11
I19	02 Oct 2023	Arrive Time	1100
I19	02 Oct 2023	Depart Time	1105
I19	02 Oct 2023	Air Temp (C)	18.9
I19	02 Oct 2023	Weather	Partly Cloudy
I19	02 Oct 2023	Visibility (mi)	7
I19	02 Oct 2023	Wind Speed (kts)	0
I19	02 Oct 2023	Wind Dir	S
I19	02 Oct 2023	Water Color	Blueish-Green
I19	02 Oct 2023	Wave Ht Low (ft)	3
I19	02 Oct 2023	Wave Period (sec)	12
I19	02 Oct 2023	Sea State	Calm
I19	02 Oct 2023	High Tide (ft)	6.02
I19	02 Oct 2023	High Tide Time	1112
I19	02 Oct 2023	Low Tide (ft)	0.07
I19	02 Oct 2023	Low Tide Time	1812
I19	02 Oct 2023	Comments	none
I19	09 Oct 2023	Depth (m)	11
I19	09 Oct 2023	Arrive Time	1053
I19	09 Oct 2023	Depart Time	1057
I19	09 Oct 2023	Air Temp (C)	17.9
I19	09 Oct 2023	Weather	Overcast
I19	09 Oct 2023	Visibility (mi)	3
I19	09 Oct 2023	Wind Speed (kts)	5.1
I19	09 Oct 2023	Wind Dir	NW
I19	09 Oct 2023	Water Color	Green
I19	09 Oct 2023	Wave Ht Low (ft)	3
I19	09 Oct 2023	Wave Period (sec)	12
I19	09 Oct 2023	Sea State	Light Chop
I19	09 Oct 2023	High Tide (ft)	4.84
I19	09 Oct 2023	High Tide Time	1848
I19	09 Oct 2023	Low Tide (ft)	0.38
I19	09 Oct 2023	Low Tide Time	106
I19	09 Oct 2023	Comments	none
I19	16 Oct 2023	Depth (m)	12
I19	16 Oct 2023	Arrive Time	1113
I19	16 Oct 2023	Depart Time	1117
I19	16 Oct 2023	Air Temp (C)	17.7
I19	16 Oct 2023	Weather	Fog
I19	16 Oct 2023	Visibility (mi)	2
I19	16 Oct 2023	Wind Speed (kts)	5
I19	16 Oct 2023	Wind Dir	S
I19	16 Oct 2023	Water Color	Brownish-Green
I19	16 Oct 2023	Wave Ht Low (ft)	4
I19	16 Oct 2023	Wave Period (sec)	14
I19	16 Oct 2023	Sea State	Calm
I19	16 Oct 2023	High Tide (ft)	5.77
I19	16 Oct 2023	High Tide Time	1006
I19	16 Oct 2023	Low Tide (ft)	0.14
I19	16 Oct 2023	Low Tide Time	1654
I19	16 Oct 2023	Comments	none
I19	24 Oct 2023	Depth (m)	10
I19	24 Oct 2023	Arrive Time	1143

Station	Date	Parameter	Value
I19	24 Oct 2023	Depart Time	1150
I19	24 Oct 2023	Air Temp (C)	17.9
I19	24 Oct 2023	Weather	Clear
I19	24 Oct 2023	Visibility (mi)	8
I19	24 Oct 2023	Wind Speed (kts)	8
I19	24 Oct 2023	Wind Dir	SW
I19	24 Oct 2023	Water Color	Green
I19	24 Oct 2023	Wave Ht Low (ft)	5
I19	24 Oct 2023	Wave Period (sec)	8
I19	24 Oct 2023	Sea State	Light Chop
I19	24 Oct 2023	High Tide (ft)	5.18
I19	24 Oct 2023	High Tide Time	1818
I19	24 Oct 2023	Low Tide (ft)	-0.14
I19	24 Oct 2023	Low Tide Time	24
I19	24 Oct 2023	Comments	none
I19	30 Oct 2023	Depth (m)	12
I19	30 Oct 2023	Arrive Time	1115
I19	30 Oct 2023	Depart Time	1118
I19	30 Oct 2023	Air Temp (C)	20.1
I19	30 Oct 2023	Weather	Haze
I19	30 Oct 2023	Visibility (mi)	16
I19	30 Oct 2023	Wind Speed (kts)	6.8
I19	30 Oct 2023	Wind Dir	N
I19	30 Oct 2023	Water Color	Green
I19	30 Oct 2023	Wave Ht Low (ft)	2
I19	30 Oct 2023	Wave Period (sec)	15
I19	30 Oct 2023	Sea State	Calm
I19	30 Oct 2023	High Tide (ft)	6.44
I19	30 Oct 2023	High Tide Time	1006
I19	30 Oct 2023	Low Tide (ft)	-0.69
I19	30 Oct 2023	Low Tide Time	1712
I19	30 Oct 2023	Comments	none
I24	02 Oct 2023	Depth (m)	10
I24	02 Oct 2023	Arrive Time	1122
I24	02 Oct 2023	Depart Time	1126
I24	02 Oct 2023	Air Temp (C)	18.7
I24	02 Oct 2023	Weather	Partly Cloudy
I24	02 Oct 2023	Visibility (mi)	7
I24	02 Oct 2023	Wind Speed (kts)	0.9
I24	02 Oct 2023	Wind Dir	NW
I24	02 Oct 2023	Water Color	Blueish-Green
I24	02 Oct 2023	Wave Ht Low (ft)	3
I24	02 Oct 2023	Wave Period (sec)	12
I24	02 Oct 2023	Sea State	Calm
I24	02 Oct 2023	High Tide (ft)	6.02
I24	02 Oct 2023	High Tide Time	1112
I24	02 Oct 2023	Low Tide (ft)	0.07
I24	02 Oct 2023	Low Tide Time	1812
I24	02 Oct 2023	Comments	none
I24	09 Oct 2023	Depth (m)	10
I24	09 Oct 2023	Arrive Time	1113
I24	09 Oct 2023	Depart Time	1117
I24	09 Oct 2023	Air Temp (C)	17.7
I24	09 Oct 2023	Weather	Overcast
I24	09 Oct 2023	Visibility (mi)	3
I24	09 Oct 2023	Wind Speed (kts)	5.4
I24	09 Oct 2023	Wind Dir	NW
I24	09 Oct 2023	Water Color	Green

Station	Date	Parameter	Value
I24	09 Oct 2023	Wave Ht Low (ft)	3
I24	09 Oct 2023	Wave Period (sec)	12
I24	09 Oct 2023	Sea State	Light Chop
I24	09 Oct 2023	High Tide (ft)	4.84
I24	09 Oct 2023	High Tide Time	1848
I24	09 Oct 2023	Low Tide (ft)	0.38
I24	09 Oct 2023	Low Tide Time	106
I24	09 Oct 2023	Comments	none
I24	16 Oct 2023	Depth (m)	11
I24	16 Oct 2023	Arrive Time	1134
I24	16 Oct 2023	Depart Time	1139
I24	16 Oct 2023	Air Temp (C)	17.7
I24	16 Oct 2023	Weather	Fog
I24	16 Oct 2023	Visibility (mi)	2
I24	16 Oct 2023	Wind Speed (kts)	9.4
I24	16 Oct 2023	Wind Dir	W
I24	16 Oct 2023	Water Color	Brownish-Green
I24	16 Oct 2023	Wave Ht Low (ft)	4
I24	16 Oct 2023	Wave Period (sec)	14
I24	16 Oct 2023	Sea State	Calm
I24	16 Oct 2023	High Tide (ft)	5.77
I24	16 Oct 2023	High Tide Time	1006
I24	16 Oct 2023	Low Tide (ft)	0.14
I24	16 Oct 2023	Low Tide Time	1654
I24	16 Oct 2023	Comments	none
I24	24 Oct 2023	Depth (m)	10
I24	24 Oct 2023	Arrive Time	1204
I24	24 Oct 2023	Depart Time	1208
I24	24 Oct 2023	Air Temp (C)	17.7
I24	24 Oct 2023	Weather	Clear
I24	24 Oct 2023	Visibility (mi)	8
I24	24 Oct 2023	Wind Speed (kts)	10.4
I24	24 Oct 2023	Wind Dir	SW
I24	24 Oct 2023	Water Color	Green
I24	24 Oct 2023	Wave Ht Low (ft)	5
I24	24 Oct 2023	Wave Period (sec)	8
I24	24 Oct 2023	Sea State	Light Chop
I24	24 Oct 2023	High Tide (ft)	5.18
I24	24 Oct 2023	High Tide Time	1818
I24	24 Oct 2023	Low Tide (ft)	-0.14
I24	24 Oct 2023	Low Tide Time	24
I24	24 Oct 2023	Comments	none
I24	30 Oct 2023	Depth (m)	11
I24	30 Oct 2023	Arrive Time	1135
I24	30 Oct 2023	Depart Time	1137
I24	30 Oct 2023	Air Temp (C)	17.6
I24	30 Oct 2023	Weather	Haze
I24	30 Oct 2023	Visibility (mi)	16
I24	30 Oct 2023	Wind Speed (kts)	6.3
I24	30 Oct 2023	Wind Dir	N
I24	30 Oct 2023	Water Color	Green
I24	30 Oct 2023	Wave Ht Low (ft)	2
I24	30 Oct 2023	Wave Period (sec)	15
I24	30 Oct 2023	Sea State	Calm
I24	30 Oct 2023	High Tide (ft)	6.44
I24	30 Oct 2023	High Tide Time	1006
I24	30 Oct 2023	Low Tide (ft)	-0.69
I24	30 Oct 2023	Low Tide Time	1712

Station	Date	Parameter	Value
I24	30 Oct 2023	Comments	none
I25	02 Oct 2023	Depth (m)	10
I25	02 Oct 2023	Arrive Time	1129
I25	02 Oct 2023	Depart Time	1136
I25	02 Oct 2023	Air Temp (C)	18.7
I25	02 Oct 2023	Weather	Partly Cloudy
I25	02 Oct 2023	Visibility (mi)	7
I25	02 Oct 2023	Wind Speed (kts)	13
I25	02 Oct 2023	Wind Dir	NW
I25	02 Oct 2023	Water Color	Blueish-Green
I25	02 Oct 2023	Wave Ht Low (ft)	3
I25	02 Oct 2023	Wave Period (sec)	12
I25	02 Oct 2023	Sea State	Calm
I25	02 Oct 2023	High Tide (ft)	6.02
I25	02 Oct 2023	High Tide Time	1112
I25	02 Oct 2023	Low Tide (ft)	0.07
I25	02 Oct 2023	Low Tide Time	1812
I25	02 Oct 2023	Comments	none
I25	09 Oct 2023	Depth (m)	9
I25	09 Oct 2023	Arrive Time	1120
I25	09 Oct 2023	Depart Time	1123
I25	09 Oct 2023	Air Temp (C)	17.7
I25	09 Oct 2023	Weather	Overcast
I25	09 Oct 2023	Visibility (mi)	3
I25	09 Oct 2023	Wind Speed (kts)	4.8
I25	09 Oct 2023	Wind Dir	NW
I25	09 Oct 2023	Water Color	Green
I25	09 Oct 2023	Wave Ht Low (ft)	3
I25	09 Oct 2023	Wave Period (sec)	12
I25	09 Oct 2023	Sea State	Light Chop
I25	09 Oct 2023	High Tide (ft)	4.84
I25	09 Oct 2023	High Tide Time	1848
I25	09 Oct 2023	Low Tide (ft)	0.38
I25	09 Oct 2023	Low Tide Time	106
I25	09 Oct 2023	Comments	none
I25	16 Oct 2023	Depth (m)	10
I25	16 Oct 2023	Arrive Time	1142
I25	16 Oct 2023	Depart Time	1145
I25	16 Oct 2023	Air Temp (C)	17.9
I25	16 Oct 2023	Weather	Fog
I25	16 Oct 2023	Visibility (mi)	2
I25	16 Oct 2023	Wind Speed (kts)	3.3
I25	16 Oct 2023	Wind Dir	W
I25	16 Oct 2023	Water Color	Reddish-Brown
I25	16 Oct 2023	Wave Ht Low (ft)	4
I25	16 Oct 2023	Wave Period (sec)	14
I25	16 Oct 2023	Sea State	Calm
I25	16 Oct 2023	High Tide (ft)	5.77
I25	16 Oct 2023	High Tide Time	1006
I25	16 Oct 2023	Low Tide (ft)	0.14
I25	16 Oct 2023	Low Tide Time	1654
I25	16 Oct 2023	Comments	none
I25	24 Oct 2023	Depth (m)	11
I25	24 Oct 2023	Arrive Time	1211
I25	24 Oct 2023	Depart Time	1215
I25	24 Oct 2023	Air Temp (C)	17.8
I25	24 Oct 2023	Weather	Clear

Station	Date	Parameter	Value
I25	24 Oct 2023	Visibility (mi)	8
I25	24 Oct 2023	Wind Speed (kts)	3.9
I25	24 Oct 2023	Wind Dir	W
I25	24 Oct 2023	Water Color	Green
I25	24 Oct 2023	Wave Ht Low (ft)	5
I25	24 Oct 2023	Wave Period (sec)	8
I25	24 Oct 2023	Sea State	Light Chop
I25	24 Oct 2023	High Tide (ft)	5.18
I25	24 Oct 2023	High Tide Time	1818
I25	24 Oct 2023	Low Tide (ft)	-0.14
I25	24 Oct 2023	Low Tide Time	24
I25	24 Oct 2023	Comments	none
I25	30 Oct 2023	Depth (m)	10
I25	30 Oct 2023	Arrive Time	1141
I25	30 Oct 2023	Depart Time	1143
I25	30 Oct 2023	Air Temp (C)	17.3
I25	30 Oct 2023	Weather	Haze
I25	30 Oct 2023	Visibility (mi)	16
I25	30 Oct 2023	Wind Speed (kts)	10.1
I25	30 Oct 2023	Wind Dir	N
I25	30 Oct 2023	Water Color	Green
I25	30 Oct 2023	Wave Ht Low (ft)	2
I25	30 Oct 2023	Wave Period (sec)	15
I25	30 Oct 2023	Sea State	Calm
I25	30 Oct 2023	High Tide (ft)	6.44
I25	30 Oct 2023	High Tide Time	1006
I25	30 Oct 2023	Low Tide (ft)	-0.69
I25	30 Oct 2023	Low Tide Time	1712
I25	30 Oct 2023	Comments	none
I26	02 Oct 2023	Depth (m)	10
I26	02 Oct 2023	Arrive Time	1139
I26	02 Oct 2023	Depart Time	1145
I26	02 Oct 2023	Air Temp (C)	18.6
I26	02 Oct 2023	Weather	Partly Cloudy
I26	02 Oct 2023	Visibility (mi)	7
I26	02 Oct 2023	Wind Speed (kts)	11.4
I26	02 Oct 2023	Wind Dir	NW
I26	02 Oct 2023	Water Color	Blueish-Green
I26	02 Oct 2023	Wave Ht Low (ft)	3
I26	02 Oct 2023	Wave Period (sec)	12
I26	02 Oct 2023	Sea State	Calm
I26	02 Oct 2023	High Tide (ft)	6.02
I26	02 Oct 2023	High Tide Time	1112
I26	02 Oct 2023	Low Tide (ft)	0.07
I26	02 Oct 2023	Low Tide Time	1812
I26	02 Oct 2023	Comments	none
I26	09 Oct 2023	Depth (m)	9
I26	09 Oct 2023	Arrive Time	1129
I26	09 Oct 2023	Depart Time	1133
I26	09 Oct 2023	Air Temp (C)	17.9
I26	09 Oct 2023	Weather	Haze
I26	09 Oct 2023	Visibility (mi)	3
I26	09 Oct 2023	Wind Speed (kts)	4.3
I26	09 Oct 2023	Wind Dir	W
I26	09 Oct 2023	Water Color	Green
I26	09 Oct 2023	Wave Ht Low (ft)	3
I26	09 Oct 2023	Wave Period (sec)	12
I26	09 Oct 2023	Sea State	Light Chop

Station	Date	Parameter	Value
I26	09 Oct 2023	High Tide (ft)	4.84
I26	09 Oct 2023	High Tide Time	1848
I26	09 Oct 2023	Low Tide (ft)	0.38
I26	09 Oct 2023	Low Tide Time	106
I26	09 Oct 2023	Comments	none
I26	16 Oct 2023	Depth (m)	11
I26	16 Oct 2023	Arrive Time	1152
I26	16 Oct 2023	Depart Time	1156
I26	16 Oct 2023	Air Temp (C)	17.8
I26	16 Oct 2023	Weather	Fog
I26	16 Oct 2023	Visibility (mi)	3
I26	16 Oct 2023	Wind Speed (kts)	4.6
I26	16 Oct 2023	Wind Dir	W
I26	16 Oct 2023	Water Color	Green
I26	16 Oct 2023	Wave Ht Low (ft)	4
I26	16 Oct 2023	Wave Period (sec)	14
I26	16 Oct 2023	Sea State	Calm
I26	16 Oct 2023	High Tide (ft)	5.77
I26	16 Oct 2023	High Tide Time	1006
I26	16 Oct 2023	Low Tide (ft)	0.14
I26	16 Oct 2023	Low Tide Time	1654
I26	16 Oct 2023	Comments	none
I26	24 Oct 2023	Depth (m)	11
I26	24 Oct 2023	Arrive Time	1221
I26	24 Oct 2023	Depart Time	1232
I26	24 Oct 2023	Air Temp (C)	17.9
I26	24 Oct 2023	Weather	Clear
I26	24 Oct 2023	Visibility (mi)	8
I26	24 Oct 2023	Wind Speed (kts)	3.5
I26	24 Oct 2023	Wind Dir	W
I26	24 Oct 2023	Water Color	Green
I26	24 Oct 2023	Wave Ht Low (ft)	5
I26	24 Oct 2023	Wave Period (sec)	8
I26	24 Oct 2023	Sea State	Light Chop
I26	24 Oct 2023	High Tide (ft)	5.18
I26	24 Oct 2023	High Tide Time	1818
I26	24 Oct 2023	Low Tide (ft)	-0.14
I26	24 Oct 2023	Low Tide Time	24
I26	24 Oct 2023	Comments	none
I26	30 Oct 2023	Depth (m)	10
I26	30 Oct 2023	Arrive Time	1151
I26	30 Oct 2023	Depart Time	1153
I26	30 Oct 2023	Air Temp (C)	17.8
I26	30 Oct 2023	Weather	Haze
I26	30 Oct 2023	Visibility (mi)	16
I26	30 Oct 2023	Wind Speed (kts)	8.3
I26	30 Oct 2023	Wind Dir	NW
I26	30 Oct 2023	Water Color	Green
I26	30 Oct 2023	Wave Ht Low (ft)	2
I26	30 Oct 2023	Wave Period (sec)	15
I26	30 Oct 2023	Sea State	Calm
I26	30 Oct 2023	High Tide (ft)	6.44
I26	30 Oct 2023	High Tide Time	1006
I26	30 Oct 2023	Low Tide (ft)	-0.69
I26	30 Oct 2023	Low Tide Time	1712
I26	30 Oct 2023	Comments	none
I32	02 Oct 2023	Depth (m)	11

Station	Date	Parameter	Value
I32	02 Oct 2023	Arrive Time	1153
I32	02 Oct 2023	Depart Time	1205
I32	02 Oct 2023	Air Temp (C)	18.4
I32	02 Oct 2023	Weather	Partly Cloudy
I32	02 Oct 2023	Visibility (mi)	7
I32	02 Oct 2023	Wind Speed (kts)	4.7
I32	02 Oct 2023	Wind Dir	SW
I32	02 Oct 2023	Water Color	Blueish-Green
I32	02 Oct 2023	Wave Ht Low (ft)	3
I32	02 Oct 2023	Wave Period (sec)	12
I32	02 Oct 2023	Sea State	Calm
I32	02 Oct 2023	High Tide (ft)	6.02
I32	02 Oct 2023	High Tide Time	1112
I32	02 Oct 2023	Low Tide (ft)	0.07
I32	02 Oct 2023	Low Tide Time	1812
I32	02 Oct 2023	Comments	1m bin missing from first depth column. Second cast just for data as bottle were already collectd from first cast.
I32	09 Oct 2023	Depth (m)	11
I32	09 Oct 2023	Arrive Time	1142
I32	09 Oct 2023	Depart Time	1150
I32	09 Oct 2023	Air Temp (C)	17.8
I32	09 Oct 2023	Weather	Overcast
I32	09 Oct 2023	Visibility (mi)	3
I32	09 Oct 2023	Wind Speed (kts)	10
I32	09 Oct 2023	Wind Dir	NW
I32	09 Oct 2023	Water Color	Green
I32	09 Oct 2023	Wave Ht Low (ft)	3
I32	09 Oct 2023	Wave Period (sec)	12
I32	09 Oct 2023	Sea State	Light Chop
I32	09 Oct 2023	High Tide (ft)	4.84
I32	09 Oct 2023	High Tide Time	1848
I32	09 Oct 2023	Low Tide (ft)	0.38
I32	09 Oct 2023	Low Tide Time	106
I32	09 Oct 2023	Comments	none
I32	16 Oct 2023	Depth (m)	11
I32	16 Oct 2023	Arrive Time	1205
I32	16 Oct 2023	Depart Time	1209
I32	16 Oct 2023	Air Temp (C)	18.2
I32	16 Oct 2023	Weather	Overcast
I32	16 Oct 2023	Visibility (mi)	5
I32	16 Oct 2023	Wind Speed (kts)	3.9
I32	16 Oct 2023	Wind Dir	W
I32	16 Oct 2023	Water Color	Reddish-Brown
I32	16 Oct 2023	Wave Ht Low (ft)	4
I32	16 Oct 2023	Wave Period (sec)	14
I32	16 Oct 2023	Sea State	Calm
I32	16 Oct 2023	High Tide (ft)	5.77
I32	16 Oct 2023	High Tide Time	1006
I32	16 Oct 2023	Low Tide (ft)	0.14
I32	16 Oct 2023	Low Tide Time	1654
I32	16 Oct 2023	Comments	none
I32	24 Oct 2023	Depth (m)	10
I32	24 Oct 2023	Arrive Time	1239
I32	24 Oct 2023	Depart Time	1239
I32	24 Oct 2023	Air Temp (C)	17.6
I32	24 Oct 2023	Weather	Clear
I32	24 Oct 2023	Visibility (mi)	8
I32	24 Oct 2023	Wind Speed (kts)	12.1

Station	Date	Parameter	Value
I32	24 Oct 2023	Wind Dir	W
I32	24 Oct 2023	Water Color	Green
I32	24 Oct 2023	Wave Ht Low (ft)	5
I32	24 Oct 2023	Wave Period (sec)	8
I32	24 Oct 2023	Sea State	Light Chop
I32	24 Oct 2023	High Tide (ft)	5.18
I32	24 Oct 2023	High Tide Time	1818
I32	24 Oct 2023	Low Tide (ft)	-0.14
I32	24 Oct 2023	Low Tide Time	24
I32	24 Oct 2023	Comments	Weird salinity and CDOM all day. Not sure the cause.
I32	30 Oct 2023	Depth (m)	12
I32	30 Oct 2023	Arrive Time	1202
I32	30 Oct 2023	Depart Time	1205
I32	30 Oct 2023	Air Temp (C)	18.3
I32	30 Oct 2023	Weather	Haze
I32	30 Oct 2023	Visibility (mi)	16
I32	30 Oct 2023	Wind Speed (kts)	6.4
I32	30 Oct 2023	Wind Dir	NW
I32	30 Oct 2023	Water Color	Green
I32	30 Oct 2023	Wave Ht Low (ft)	2
I32	30 Oct 2023	Wave Period (sec)	15
I32	30 Oct 2023	Sea State	Calm
I32	30 Oct 2023	High Tide (ft)	6.44
I32	30 Oct 2023	High Tide Time	1006
I32	30 Oct 2023	Low Tide (ft)	-0.69
I32	30 Oct 2023	Low Tide Time	1712
I32	30 Oct 2023	Comments	none
I39	02 Oct 2023	Depth (m)	20
I39	02 Oct 2023	Arrive Time	1040
I39	02 Oct 2023	Depart Time	1046
I39	02 Oct 2023	Air Temp (C)	18.5
I39	02 Oct 2023	Weather	Partly Cloudy
I39	02 Oct 2023	Visibility (mi)	7
I39	02 Oct 2023	Wind Speed (kts)	8
I39	02 Oct 2023	Wind Dir	W
I39	02 Oct 2023	Water Color	Blueish-Green
I39	02 Oct 2023	Wave Ht Low (ft)	3
I39	02 Oct 2023	Wave Period (sec)	12
I39	02 Oct 2023	Sea State	Calm
I39	02 Oct 2023	High Tide (ft)	6.02
I39	02 Oct 2023	High Tide Time	1112
I39	02 Oct 2023	Low Tide (ft)	0.07
I39	02 Oct 2023	Low Tide Time	1812
I39	02 Oct 2023	Comments	Kelp Debris
I39	09 Oct 2023	Depth (m)	19
I39	09 Oct 2023	Arrive Time	1030
I39	09 Oct 2023	Depart Time	1040
I39	09 Oct 2023	Air Temp (C)	17.9
I39	09 Oct 2023	Weather	Overcast
I39	09 Oct 2023	Visibility (mi)	3
I39	09 Oct 2023	Wind Speed (kts)	8.6
I39	09 Oct 2023	Wind Dir	NW
I39	09 Oct 2023	Water Color	Brown
I39	09 Oct 2023	Wave Ht Low (ft)	3
I39	09 Oct 2023	Wave Period (sec)	12
I39	09 Oct 2023	Sea State	Light Chop
I39	09 Oct 2023	High Tide (ft)	4.84
I39	09 Oct 2023	High Tide Time	1848

Station	Date	Parameter	Value
I39	09 Oct 2023	Low Tide (ft)	0.38
I39	09 Oct 2023	Low Tide Time	106
I39	09 Oct 2023	Comments	none
I39	16 Oct 2023	Depth (m)	20
I39	16 Oct 2023	Arrive Time	1048
I39	16 Oct 2023	Depart Time	1055
I39	16 Oct 2023	Air Temp (C)	17.9
I39	16 Oct 2023	Weather	Fog
I39	16 Oct 2023	Visibility (mi)	4
I39	16 Oct 2023	Wind Speed (kts)	3.2
I39	16 Oct 2023	Wind Dir	W
I39	16 Oct 2023	Water Color	Greenish-Blue
I39	16 Oct 2023	Wave Ht Low (ft)	4
I39	16 Oct 2023	Wave Period (sec)	14
I39	16 Oct 2023	Sea State	Light Chop
I39	16 Oct 2023	High Tide (ft)	5.77
I39	16 Oct 2023	High Tide Time	1006
I39	16 Oct 2023	Low Tide (ft)	0.14
I39	16 Oct 2023	Low Tide Time	1654
I39	16 Oct 2023	Comments	none
I39	24 Oct 2023	Depth (m)	19
I39	24 Oct 2023	Arrive Time	1122
I39	24 Oct 2023	Depart Time	1127
I39	24 Oct 2023	Air Temp (C)	17.7
I39	24 Oct 2023	Weather	Clear
I39	24 Oct 2023	Visibility (mi)	8
I39	24 Oct 2023	Wind Speed (kts)	3.3
I39	24 Oct 2023	Wind Dir	SW
I39	24 Oct 2023	Water Color	Green
I39	24 Oct 2023	Wave Ht Low (ft)	5
I39	24 Oct 2023	Wave Period (sec)	8
I39	24 Oct 2023	Sea State	Light Chop
I39	24 Oct 2023	High Tide (ft)	5.18
I39	24 Oct 2023	High Tide Time	1818
I39	24 Oct 2023	Low Tide (ft)	-0.14
I39	24 Oct 2023	Low Tide Time	24
I39	24 Oct 2023	Comments	none
I39	30 Oct 2023	Depth (m)	20
I39	30 Oct 2023	Arrive Time	1055
I39	30 Oct 2023	Depart Time	1056
I39	30 Oct 2023	Air Temp (C)	18
I39	30 Oct 2023	Weather	Haze
I39	30 Oct 2023	Visibility (mi)	16
I39	30 Oct 2023	Wind Speed (kts)	8.3
I39	30 Oct 2023	Wind Dir	N
I39	30 Oct 2023	Water Color	Green
I39	30 Oct 2023	Wave Ht Low (ft)	2
I39	30 Oct 2023	Wave Period (sec)	15
I39	30 Oct 2023	Sea State	Calm
I39	30 Oct 2023	High Tide (ft)	6.44
I39	30 Oct 2023	High Tide Time	1006
I39	30 Oct 2023	Low Tide (ft)	-0.69
I39	30 Oct 2023	Low Tide Time	1712
I39	30 Oct 2023	Comments	none
I40	02 Oct 2023	Depth (m)	11
I40	02 Oct 2023	Arrive Time	1113
I40	02 Oct 2023	Depart Time	1117

Station	Date	Parameter	Value
I40	02 Oct 2023	Air Temp (C)	18.6
I40	02 Oct 2023	Weather	Partly Cloudy
I40	02 Oct 2023	Visibility (mi)	7
I40	02 Oct 2023	Wind Speed (kts)	3.3
I40	02 Oct 2023	Wind Dir	NW
I40	02 Oct 2023	Water Color	Blueish-Green
I40	02 Oct 2023	Wave Ht Low (ft)	3
I40	02 Oct 2023	Wave Period (sec)	12
I40	02 Oct 2023	Sea State	Calm
I40	02 Oct 2023	High Tide (ft)	6.02
I40	02 Oct 2023	High Tide Time	1112
I40	02 Oct 2023	Low Tide (ft)	0.07
I40	02 Oct 2023	Low Tide Time	1812
I40	02 Oct 2023	Comments	none
I40	09 Oct 2023	Depth (m)	10
I40	09 Oct 2023	Arrive Time	1105
I40	09 Oct 2023	Depart Time	1110
I40	09 Oct 2023	Air Temp (C)	17.8
I40	09 Oct 2023	Weather	Overcast
I40	09 Oct 2023	Visibility (mi)	3
I40	09 Oct 2023	Wind Speed (kts)	6
I40	09 Oct 2023	Wind Dir	NW
I40	09 Oct 2023	Water Color	Green
I40	09 Oct 2023	Wave Ht Low (ft)	3
I40	09 Oct 2023	Wave Period (sec)	12
I40	09 Oct 2023	Sea State	Light Chop
I40	09 Oct 2023	High Tide (ft)	4.84
I40	09 Oct 2023	High Tide Time	1848
I40	09 Oct 2023	Low Tide (ft)	0.38
I40	09 Oct 2023	Low Tide Time	106
I40	09 Oct 2023	Comments	none
I40	16 Oct 2023	Depth (m)	11
I40	16 Oct 2023	Arrive Time	1125
I40	16 Oct 2023	Depart Time	1129
I40	16 Oct 2023	Air Temp (C)	17.6
I40	16 Oct 2023	Weather	Fog
I40	16 Oct 2023	Visibility (mi)	2
I40	16 Oct 2023	Wind Speed (kts)	6.5
I40	16 Oct 2023	Wind Dir	NW
I40	16 Oct 2023	Water Color	Reddish-Brown
I40	16 Oct 2023	Wave Ht Low (ft)	4
I40	16 Oct 2023	Wave Period (sec)	14
I40	16 Oct 2023	Sea State	Calm
I40	16 Oct 2023	High Tide (ft)	5.77
I40	16 Oct 2023	High Tide Time	1006
I40	16 Oct 2023	Low Tide (ft)	0.14
I40	16 Oct 2023	Low Tide Time	1654
I40	16 Oct 2023	Comments	none
I40	24 Oct 2023	Depth (m)	10
I40	24 Oct 2023	Arrive Time	1156
I40	24 Oct 2023	Depart Time	1202
I40	24 Oct 2023	Air Temp (C)	17.7
I40	24 Oct 2023	Weather	Clear
I40	24 Oct 2023	Visibility (mi)	8
I40	24 Oct 2023	Wind Speed (kts)	4.3
I40	24 Oct 2023	Wind Dir	W
I40	24 Oct 2023	Water Color	Green
I40	24 Oct 2023	Wave Ht Low (ft)	5

Station	Date	Parameter	Value
I40	24 Oct 2023	Wave Period (sec)	8
I40	24 Oct 2023	Sea State	Light Chop
I40	24 Oct 2023	High Tide (ft)	5.18
I40	24 Oct 2023	High Tide Time	1818
I40	24 Oct 2023	Low Tide (ft)	-0.14
I40	24 Oct 2023	Low Tide Time	24
I40	24 Oct 2023	Comments	Kelp; one stipe; surface sample taken from niskin 4
I40	30 Oct 2023	Depth (m)	12
I40	30 Oct 2023	Arrive Time	1126
I40	30 Oct 2023	Depart Time	1129
I40	30 Oct 2023	Air Temp (C)	18.7
I40	30 Oct 2023	Weather	Haze
I40	30 Oct 2023	Visibility (mi)	16
I40	30 Oct 2023	Wind Speed (kts)	7.5
I40	30 Oct 2023	Wind Dir	N
I40	30 Oct 2023	Water Color	Green
I40	30 Oct 2023	Wave Ht Low (ft)	2
I40	30 Oct 2023	Wave Period (sec)	15
I40	30 Oct 2023	Sea State	Calm
I40	30 Oct 2023	High Tide (ft)	6.44
I40	30 Oct 2023	High Tide Time	1006
I40	30 Oct 2023	Low Tide (ft)	-0.69
I40	30 Oct 2023	Low Tide Time	1712
I40	30 Oct 2023	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	02 Oct 2023	1	19.80	75.83	7.8	33.31	8.2	23.5	1.08
I19	02 Oct 2023	2	19.77	75.30	7.8	33.32	8.2	23.5	1.15
I19	02 Oct 2023	3	19.29	75.34	7.9	33.29	8.2	23.6	1.14
I19	02 Oct 2023	4	18.79	78.76	8.0	33.26	8.2	23.7	0.97
I19	02 Oct 2023	5	18.47	83.70	8.1	33.24	8.2	23.8	0.84
I19	02 Oct 2023	6	17.91	86.63	8.1	33.21	8.2	23.9	0.82
I19	02 Oct 2023	7	17.52	87.93	8.2	33.19	8.2	24.0	0.87
I19	02 Oct 2023	8	17.43	87.97	8.2	33.19	8.2	24.0	0.97
I19	02 Oct 2023	9	17.23	86.76	8.2	33.19	8.2	24.1	1.09
I19	02 Oct 2023	10	17.07	84.07	8.0	33.18	8.1	24.1	1.36
I19	09 Oct 2023	1	16.40	69.88	8.4	33.14	8.1	24.2	2.75
I19	09 Oct 2023	2	16.38	68.18	8.4	33.14	8.1	24.2	3.06
I19	09 Oct 2023	3	16.39	71.84	8.3	33.14	8.1	24.2	3.29
I19	09 Oct 2023	4	16.13	71.75	8.2	33.14	8.1	24.3	4.54
I19	09 Oct 2023	5	16.06	72.15	8.2	33.14	8.1	24.3	5.71
I19	09 Oct 2023	6	15.92	73.08	8.2	33.15	8.1	24.3	6.21
I19	09 Oct 2023	7	15.91	74.60	8.2	33.15	8.1	24.3	6.11
I19	09 Oct 2023	8	15.85	76.67	8.2	33.14	8.1	24.4	4.68
I19	09 Oct 2023	9	15.77	78.78	8.2	33.14	8.1	24.4	2.85
I19	09 Oct 2023	10	15.72	79.58	8.1	33.14	8.1	24.4	2.09
I19	16 Oct 2023	1	18.25	68.90	8.6	33.10	8.2	23.8	2.94
I19	16 Oct 2023	2	18.03	68.02	8.2	33.09	8.2	23.8	3.49
I19	16 Oct 2023	3	16.99	66.73	7.8	33.14	8.1	24.1	4.47
I19	16 Oct 2023	4	16.78	69.85	7.6	33.13	8.1	24.1	4.66
I19	16 Oct 2023	5	16.31	68.48	7.5	33.14	8.1	24.2	3.80
I19	16 Oct 2023	6	15.93	69.78	7.4	33.14	8.1	24.3	3.18
I19	16 Oct 2023	7	15.80	72.39	7.2	33.14	8.0	24.4	2.83
I19	16 Oct 2023	8	15.79	68.76	7.2	33.13	8.0	24.4	2.77
I19	16 Oct 2023	9	15.74	65.54	7.1	33.14	8.0	24.4	2.74
I19	16 Oct 2023	10	15.69	60.92	7.1	33.14	8.0	24.4	2.68
I19	24 Oct 2023	1	16.20	43.85	6.3	33.31	8.0	24.4	0.74
I19	24 Oct 2023	2	15.88	42.07	6.6	33.43	8.0	24.6	0.74
I19	24 Oct 2023	3	15.63	40.94	6.8	33.42	8.0	24.6	0.73
I19	24 Oct 2023	4	15.32	40.25	6.5	33.76	7.9	24.9	0.77
I19	24 Oct 2023	5	14.96	46.38	6.6	33.79	7.9	25.1	0.91
I19	24 Oct 2023	6	14.79	57.75	6.8	33.56	7.9	24.9	0.93
I19	24 Oct 2023	7	14.69	57.28	6.4	33.32	7.9	24.7	0.89
I19	24 Oct 2023	8	14.65	50.73	5.8	33.27	7.9	24.7	0.87
I19	24 Oct 2023	9	14.62	41.21	5.5	33.24	7.9	24.7	0.90
I19	24 Oct 2023	10	14.60	17.56	5.2	33.25	7.9	24.7	0.74
I19	30 Oct 2023	1	15.33	75.05	8.0	33.15	8.1	24.5	1.29
I19	30 Oct 2023	2	15.29	75.01	8.0	33.15	8.1	24.5	1.44
I19	30 Oct 2023	3	15.27	73.93	8.0	33.15	8.1	24.5	1.89
I19	30 Oct 2023	4	15.25	73.19	8.0	33.15	8.1	24.5	2.85
I19	30 Oct 2023	5	15.24	72.54	8.0	33.15	8.1	24.5	4.37
I19	30 Oct 2023	6	15.21	71.07	8.1	33.15	8.1	24.5	7.32
I19	30 Oct 2023	7	15.18	69.14	8.1	33.15	8.1	24.5	8.87
I19	30 Oct 2023	8	15.09	70.36	7.9	33.16	8.1	24.5	7.55
I19	30 Oct 2023	9	15.07	73.32	7.8	33.16	8.1	24.5	5.71
I19	30 Oct 2023	10	15.04	74.07	7.8	33.16	8.1	24.5	4.83

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ -t)	Chlor (μ g/L)
I24	02 Oct 2023	1	20.15	85.58	7.9	33.30	8.2	23.4	0.54
I24	02 Oct 2023	2	19.95	85.56	7.8	33.32	8.2	23.5	0.63
I24	02 Oct 2023	3	19.22	85.16	7.8	33.29	8.2	23.7	0.84
I24	02 Oct 2023	4	18.44	84.17	7.8	33.24	8.2	23.8	0.98
I24	02 Oct 2023	5	18.01	80.89	7.8	33.22	8.2	23.9	1.09
I24	02 Oct 2023	6	17.60	82.51	7.8	33.20	8.1	24.0	1.29
I24	02 Oct 2023	7	17.53	82.17	7.6	33.19	8.1	24.0	1.39
I24	02 Oct 2023	8	17.02	79.01	7.1	33.19	8.1	24.1	1.28
I24	02 Oct 2023	9	16.37	69.83	6.9	33.17	8.1	24.3	1.66
I24	02 Oct 2023	10	16.29	58.53	6.9	33.15	8.1	24.3	1.87
I24	02 Oct 2023	11	16.30	48.84	7.0	33.15	8.0	24.3	1.89
I24	09 Oct 2023	1	16.44	81.63	8.7	33.10	8.2	24.2	1.11
I24	09 Oct 2023	2	16.17	80.38	8.6	33.12	8.2	24.3	1.18
I24	09 Oct 2023	3	15.75	77.88	8.5	33.15	8.1	24.4	1.28
I24	09 Oct 2023	4	15.74	81.89	8.5	33.14	8.1	24.4	1.53
I24	09 Oct 2023	5	15.73	82.51	8.4	33.14	8.1	24.4	1.75
I24	09 Oct 2023	6	15.69	82.51	8.5	33.14	8.1	24.4	2.01
I24	09 Oct 2023	7	15.66	82.69	8.5	33.14	8.1	24.4	2.39
I24	09 Oct 2023	8	15.62	83.37	8.3	33.14	8.1	24.4	2.14
I24	09 Oct 2023	9	15.58	82.79	8.1	33.15	8.1	24.4	1.68
I24	09 Oct 2023	10	15.56	81.92	8.0	33.15	8.1	24.4	1.46
I24	16 Oct 2023	1	18.69	67.42	9.8	33.07	8.3	23.6	5.68
I24	16 Oct 2023	2	17.86	68.28	9.2	33.12	8.2	23.9	6.21
I24	16 Oct 2023	3	17.53	69.19	8.5	33.14	8.2	24.0	4.93
I24	16 Oct 2023	4	17.09	77.34	7.4	33.13	8.1	24.1	4.41
I24	16 Oct 2023	5	16.51	74.94	7.2	33.15	8.0	24.2	3.48
I24	16 Oct 2023	6	16.51	75.78	7.3	33.14	8.1	24.2	3.13
I24	16 Oct 2023	7	16.17	76.29	7.6	33.14	8.1	24.3	3.16
I24	16 Oct 2023	8	16.08	77.60	7.6	33.14	8.1	24.3	3.09
I24	16 Oct 2023	9	16.01	78.91	7.3	33.14	8.1	24.3	2.81
I24	16 Oct 2023	10	15.84	77.30	6.8	33.15	8.0	24.4	2.03
I24	24 Oct 2023	1	17.49	66.85	5.3	32.70	8.1	23.6	0.73
I24	24 Oct 2023	2	16.95	66.35	5.6	33.37	8.1	24.3	0.74
I24	24 Oct 2023	3	16.06	62.43	6.0	33.60	8.0	24.7	0.74
I24	24 Oct 2023	4	15.60	58.45	5.8	33.65	7.9	24.8	0.74
I24	24 Oct 2023	5	15.12	63.23	5.8	34.01	7.9	25.2	0.72
I24	24 Oct 2023	6	15.05	69.07	6.2	33.66	7.9	24.9	0.71
I24	24 Oct 2023	7	14.83	70.49	6.2	33.59	8.0	24.9	0.71
I24	24 Oct 2023	8	15.01	70.21	5.9	33.79	8.0	25.0	0.70
I24	24 Oct 2023	9	14.75	67.86	5.9	33.67	8.0	25.0	0.70
I24	30 Oct 2023	1	15.57	78.78	7.9	33.17	8.1	24.4	1.09
I24	30 Oct 2023	2	15.25	78.32	7.7	33.18	8.1	24.5	1.10
I24	30 Oct 2023	3	15.02	74.98	7.3	33.18	8.0	24.6	1.42
I24	30 Oct 2023	4	14.91	73.59	6.9	33.17	8.0	24.6	1.62
I24	30 Oct 2023	5	14.67	70.40	6.3	33.19	8.0	24.6	1.74
I24	30 Oct 2023	6	14.52	67.43	6.3	33.18	8.0	24.7	1.73
I24	30 Oct 2023	7	14.50	73.15	6.4	33.18	8.0	24.7	1.57
I24	30 Oct 2023	8	14.36	75.37	6.2	33.19	8.0	24.7	1.48
I24	30 Oct 2023	9	14.29	71.97	6.0	33.19	8.0	24.7	1.52
I24	30 Oct 2023	10	14.27	70.16	6.0	33.19	7.9	24.7	1.54
I24	30 Oct 2023	11	14.26	66.57	5.9	33.20	7.9	24.7	1.49
I25	02 Oct 2023	1	19.99	85.28	7.8	33.31	8.2	23.5	0.49
I25	02 Oct 2023	2	19.87	85.64	7.9	33.31	8.2	23.5	0.55
I25	02 Oct 2023	3	19.15	85.08	7.8	33.30	8.2	23.7	0.76
I25	02 Oct 2023	4	18.20	84.01	7.9	33.24	8.2	23.9	0.79
I25	02 Oct 2023	5	18.01	85.33	7.8	33.24	8.2	23.9	0.85

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ -t)	Chlor (μ g/L)
I25	02 Oct 2023	6	17.55	83.46	8.0	33.19	8.1	24.0	0.92
I25	02 Oct 2023	7	17.44	85.45	8.2	33.18	8.2	24.0	1.00
I25	02 Oct 2023	8	17.38	86.36	8.0	33.18	8.2	24.0	1.04
I25	02 Oct 2023	9	17.00	85.33	7.9	33.17	8.1	24.1	0.90
I25	09 Oct 2023	1	16.71	80.60	8.7	33.02	8.2	24.1	0.93
I25	09 Oct 2023	2	16.56	80.16	8.6	33.03	8.2	24.1	1.08
I25	09 Oct 2023	3	16.03	79.48	8.6	33.12	8.2	24.3	1.32
I25	09 Oct 2023	4	15.95	80.17	8.5	33.10	8.1	24.3	1.41
I25	09 Oct 2023	5	15.68	82.65	8.4	33.14	8.1	24.4	1.36
I25	09 Oct 2023	6	15.68	83.53	8.4	33.13	8.1	24.4	1.40
I25	09 Oct 2023	7	15.61	83.56	8.3	33.14	8.1	24.4	1.58
I25	09 Oct 2023	8	15.57	83.19	8.2	33.14	8.1	24.4	1.43
I25	09 Oct 2023	9	15.56	83.19	8.1	33.14	8.1	24.4	1.30
I25	16 Oct 2023	1	18.73	54.94	10.7	33.09	8.3	23.6	12.00
I25	16 Oct 2023	2	18.11	57.39	9.8	33.12	8.3	23.8	10.49
I25	16 Oct 2023	3	17.37	66.70	8.4	33.13	8.2	24.0	7.50
I25	16 Oct 2023	4	16.59	78.61	7.1	33.14	8.1	24.2	5.27
I25	16 Oct 2023	5	16.34	76.87	6.8	33.14	8.0	24.2	4.24
I25	16 Oct 2023	6	16.29	73.52	7.0	33.15	8.0	24.3	3.81
I25	16 Oct 2023	7	16.26	75.54	7.0	33.14	8.0	24.3	3.79
I25	16 Oct 2023	8	16.09	76.26	7.0	33.14	8.0	24.3	3.44
I25	16 Oct 2023	9	15.98	76.82	6.8	33.14	8.0	24.3	2.86
I25	24 Oct 2023	1	17.50	64.72	6.0	32.87	8.1	23.8	0.74
I25	24 Oct 2023	2	17.29	63.63	6.0	33.12	8.1	24.0	0.74
I25	24 Oct 2023	3	16.72	62.18	6.5	33.42	8.1	24.4	0.74
I25	24 Oct 2023	4	16.05	58.67	6.6	33.58	8.0	24.6	0.75
I25	24 Oct 2023	5	15.63	56.69	6.4	33.62	7.9	24.8	0.74
I25	24 Oct 2023	6	15.30	62.81	6.2	33.97	7.9	25.1	0.71
I25	24 Oct 2023	7	14.88	65.48	6.2	33.97	7.9	25.2	0.69
I25	24 Oct 2023	8	14.72	56.87	6.5	33.72	7.9	25.0	0.72
I25	24 Oct 2023	9	14.70	53.11	6.4	34.02	7.9	25.3	0.71
I25	30 Oct 2023	1	15.70	78.86	8.0	33.18	8.1	24.4	0.81
I25	30 Oct 2023	2	15.64	78.53	8.1	33.18	8.1	24.4	0.93
I25	30 Oct 2023	3	15.55	77.50	8.1	33.17	8.1	24.4	1.53
I25	30 Oct 2023	4	15.43	72.86	8.1	33.17	8.1	24.5	3.64
I25	30 Oct 2023	5	15.26	70.48	7.6	33.16	8.1	24.5	4.03
I25	30 Oct 2023	6	14.74	76.24	7.1	33.17	8.0	24.6	2.50
I25	30 Oct 2023	7	14.65	77.67	6.9	33.17	8.0	24.6	1.84
I25	30 Oct 2023	8	14.43	78.70	6.7	33.18	8.0	24.7	1.51
I25	30 Oct 2023	9	14.36	75.89	6.4	33.18	8.0	24.7	1.44
I26	02 Oct 2023	1	20.05	77.66	7.7	33.20	8.2	23.4	0.78
I26	02 Oct 2023	2	19.90	78.07	7.7	33.24	8.2	23.4	0.96
I26	02 Oct 2023	3	19.85	78.05	7.7	33.28	8.2	23.5	1.10
I26	02 Oct 2023	4	19.73	77.39	7.7	33.30	8.2	23.5	1.27
I26	02 Oct 2023	5	19.13	78.43	7.8	33.28	8.2	23.7	1.23
I26	02 Oct 2023	6	18.74	82.56	8.0	33.25	8.2	23.7	1.03
I26	02 Oct 2023	7	18.22	86.23	8.0	33.21	8.2	23.9	0.86
I26	02 Oct 2023	8	16.99	88.15	8.0	33.16	8.2	24.1	0.72
I26	02 Oct 2023	9	16.63	88.05	8.0	33.13	8.1	24.2	0.73
I26	09 Oct 2023	1	17.07	71.02	8.6	33.09	8.1	24.0	2.31
I26	09 Oct 2023	2	16.95	70.49	8.3	33.09	8.1	24.1	2.28
I26	09 Oct 2023	3	15.92	71.31	8.1	33.16	8.1	24.4	1.90
I26	09 Oct 2023	4	15.82	76.55	8.1	33.15	8.1	24.4	1.37
I26	09 Oct 2023	5	15.81	81.83	8.1	33.14	8.1	24.4	1.19
I26	09 Oct 2023	6	15.81	82.77	8.1	33.14	8.1	24.4	1.18

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ -t)	Chlor (μ g/L)
I26	09 Oct 2023	7	15.81	82.50	8.1	33.15	8.1	24.4	1.25
I26	09 Oct 2023	8	15.81	82.24	8.1	33.15	8.1	24.4	1.22
I26	09 Oct 2023	9	15.82	81.92	8.1	33.15	8.1	24.4	1.16
I26	16 Oct 2023	1	18.99	77.31	10.8	33.13	8.3	23.6	1.68
I26	16 Oct 2023	2	18.96	77.19	10.7	33.13	8.3	23.6	1.73
I26	16 Oct 2023	3	18.91	77.15	10.6	33.13	8.3	23.6	1.80
I26	16 Oct 2023	4	18.78	77.13	10.3	33.14	8.3	23.7	1.92
I26	16 Oct 2023	5	18.31	77.08	9.3	33.11	8.3	23.7	2.36
I26	16 Oct 2023	6	17.48	76.91	8.3	33.12	8.2	24.0	2.60
I26	16 Oct 2023	7	16.78	76.86	7.7	33.10	8.2	24.1	2.37
I26	16 Oct 2023	8	16.12	79.89	7.2	33.15	8.1	24.3	2.34
I26	16 Oct 2023	9	16.19	77.18	7.2	33.13	8.0	24.3	2.18
I26	24 Oct 2023	1	17.86	62.64	6.8	32.84	8.1	23.7	0.75
I26	24 Oct 2023	2	17.62	61.04	7.2	33.16	8.1	24.0	0.73
I26	24 Oct 2023	3	16.77	56.67	7.0	33.58	8.1	24.5	0.74
I26	24 Oct 2023	4	15.92	55.02	7.1	33.97	7.9	25.0	0.74
I26	24 Oct 2023	5	15.23	57.65	7.4	34.00	7.8	25.1	0.74
I26	24 Oct 2023	6	14.91	61.18	7.1	33.87	7.8	25.1	0.74
I26	24 Oct 2023	7	14.78	63.74	6.8	33.93	7.9	25.2	0.74
I26	24 Oct 2023	8	14.75	58.11	6.7	33.73	7.9	25.0	0.73
I26	24 Oct 2023	9	14.85	54.68	6.8	34.18	7.9	25.4	0.72
I26	30 Oct 2023	1	15.57	79.18	7.9	33.18	8.1	24.4	0.75
I26	30 Oct 2023	2	15.42	79.14	7.9	33.18	8.1	24.5	0.80
I26	30 Oct 2023	3	15.13	78.96	7.8	33.17	8.1	24.5	1.10
I26	30 Oct 2023	4	14.93	77.30	7.7	33.17	8.1	24.6	1.41
I26	30 Oct 2023	5	14.77	78.75	7.6	33.17	8.1	24.6	1.42
I26	30 Oct 2023	6	14.67	82.82	7.6	33.17	8.1	24.6	1.45
I26	30 Oct 2023	7	14.66	83.81	7.6	33.17	8.1	24.6	1.53
I26	30 Oct 2023	8	14.60	83.91	7.4	33.17	8.1	24.6	1.66
I26	30 Oct 2023	9	14.40	82.46	7.1	33.19	8.0	24.7	1.55
I32	02 Oct 2023	1	19.37	74.92	8.0	33.29	8.2	23.6	1.04
I32	02 Oct 2023	2	19.23	74.98	8.0	33.29	8.2	23.7	1.29
I32	02 Oct 2023	3	18.94	75.17	8.0	33.27	8.2	23.7	1.93
I32	02 Oct 2023	4	18.58	76.95	8.0	33.24	8.2	23.8	1.86
I32	02 Oct 2023	5	18.00	80.91	8.0	33.21	8.2	23.9	1.51
I32	02 Oct 2023	6	17.53	82.63	7.9	33.19	8.2	24.0	1.29
I32	02 Oct 2023	7	16.75	82.56	7.8	33.15	8.1	24.2	1.18
I32	02 Oct 2023	8	16.34	76.12	7.8	33.13	8.1	24.2	1.23
I32	02 Oct 2023	9	16.26	75.80	7.9	33.12	8.1	24.2	1.31
I32	02 Oct 2023	10	16.20	74.54	7.9	33.12	8.1	24.3	1.27
I32	09 Oct 2023	1	16.99	62.66	8.0	33.13	8.1	24.1	3.16
I32	09 Oct 2023	2	16.45	63.56	7.8	33.16	8.1	24.2	3.08
I32	09 Oct 2023	3	16.33	70.25	7.5	33.16	8.1	24.3	2.77
I32	09 Oct 2023	4	16.14	71.61	7.3	33.16	8.1	24.3	2.61
I32	09 Oct 2023	5	16.03	71.61	7.3	33.17	8.1	24.3	2.39
I32	09 Oct 2023	6	16.02	73.07	7.3	33.17	8.0	24.3	2.41
I32	09 Oct 2023	7	15.98	72.53	7.2	33.17	8.0	24.3	2.37
I32	09 Oct 2023	8	15.92	70.57	7.1	33.16	8.0	24.4	2.30
I32	09 Oct 2023	9	15.83	63.72	7.1	33.17	8.0	24.4	2.21
I32	09 Oct 2023	10	15.83	56.68	7.1	33.17	8.0	24.4	2.16
I32	16 Oct 2023	1	18.87	55.71	11.4	33.12	8.4	23.6	6.71
I32	16 Oct 2023	2	18.71	57.60	11.2	33.12	8.4	23.7	10.88
I32	16 Oct 2023	3	18.58	56.10	10.9	33.13	8.3	23.7	15.12
I32	16 Oct 2023	4	18.31	55.32	9.9	33.12	8.3	23.8	13.40
I32	16 Oct 2023	5	17.81	66.99	9.1	33.14	8.2	23.9	7.00

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ -t)	Chlor (μ g/L)
I32	16 Oct 2023	6	17.71	77.26	8.6	33.14	8.2	23.9	4.04
I32	16 Oct 2023	7	17.45	78.96	7.6	33.11	8.2	24.0	2.90
I32	16 Oct 2023	8	16.84	75.78	6.7	33.13	8.1	24.1	2.23
I32	16 Oct 2023	9	16.59	71.82	6.3	33.15	8.0	24.2	1.79
I32	16 Oct 2023	10	16.38	64.60	5.6	33.14	7.9	24.2	1.82
I32	24 Oct 2023	1	16.55	59.46	5.5	33.02	7.9	24.1	0.74
I32	24 Oct 2023	2	16.48	58.56	5.4	33.15	7.9	24.2	0.74
I32	24 Oct 2023	3	16.18	56.52	5.4	33.30	7.9	24.4	0.74
I32	24 Oct 2023	4	15.80	51.81	5.1	33.45	7.9	24.6	0.74
I32	24 Oct 2023	5	15.63	45.06	5.2	33.48	7.8	24.7	0.74
I32	24 Oct 2023	6	15.36	45.17	5.5	33.43	7.8	24.7	0.74
I32	24 Oct 2023	7	14.94	49.56	5.3	33.68	7.8	25.0	0.74
I32	24 Oct 2023	8	14.86	53.82	5.1	33.64	7.8	25.0	0.69
I32	24 Oct 2023	9	14.82	52.90	5.1	33.67	7.8	25.0	0.70
I32	24 Oct 2023	10	14.82	41.33	5.5	33.59	7.8	24.9	0.67
I32	30 Oct 2023	1	16.01	77.04	7.8	33.18	8.1	24.3	0.62
I32	30 Oct 2023	2	15.66	75.32	7.8	33.18	8.1	24.4	0.94
I32	30 Oct 2023	3	15.35	70.42	7.7	33.17	8.1	24.5	1.71
I32	30 Oct 2023	4	15.13	70.93	7.6	33.17	8.1	24.5	1.86
I32	30 Oct 2023	5	14.92	74.71	7.5	33.17	8.1	24.6	2.12
I32	30 Oct 2023	6	14.71	76.37	7.4	33.17	8.1	24.6	2.07
I32	30 Oct 2023	7	14.53	76.59	7.3	33.18	8.0	24.7	1.82
I32	30 Oct 2023	8	14.39	72.68	7.2	33.18	8.0	24.7	1.86
I32	30 Oct 2023	9	14.23	69.09	7.0	33.19	8.0	24.7	1.87
I32	30 Oct 2023	10	14.16	65.63	6.9	33.19	8.0	24.8	1.99
I39	02 Oct 2023	1	19.77	85.25	7.8	33.27	8.2	23.5	0.49
I39	02 Oct 2023	2	19.76	85.15	7.8	33.27	8.2	23.5	0.50
I39	02 Oct 2023	3	19.64	84.98	7.8	33.28	8.2	23.5	0.57
I39	02 Oct 2023	4	19.60	84.81	7.9	33.29	8.2	23.6	0.69
I39	02 Oct 2023	5	19.56	85.49	7.9	33.29	8.2	23.6	0.76
I39	02 Oct 2023	6	19.54	85.89	7.9	33.29	8.2	23.6	0.82
I39	02 Oct 2023	7	19.53	86.15	7.9	33.30	8.2	23.6	0.85
I39	02 Oct 2023	8	19.52	86.42	7.9	33.30	8.2	23.6	0.87
I39	02 Oct 2023	9	19.48	86.97	7.9	33.30	8.2	23.6	0.84
I39	02 Oct 2023	10	19.36	87.72	8.0	33.30	8.2	23.6	0.84
I39	02 Oct 2023	11	19.28	87.94	7.9	33.30	8.2	23.6	0.83
I39	02 Oct 2023	12	18.51	88.12	7.9	33.27	8.2	23.8	0.73
I39	02 Oct 2023	13	16.93	88.89	8.2	33.21	8.2	24.2	0.53
I39	02 Oct 2023	14	16.33	90.65	8.4	33.16	8.1	24.3	0.42
I39	02 Oct 2023	15	16.11	91.73	8.5	33.13	8.1	24.3	0.45
I39	02 Oct 2023	16	16.06	91.85	8.6	33.12	8.1	24.3	0.46
I39	02 Oct 2023	17	15.98	91.75	8.5	33.11	8.1	24.3	0.51
I39	02 Oct 2023	18	15.73	91.53	8.3	33.07	8.1	24.3	0.72
I39	09 Oct 2023	1	17.51	55.66	9.0	33.10	8.2	23.9	15.70
I39	09 Oct 2023	2	17.40	55.59	8.7	33.11	8.2	24.0	15.81
I39	09 Oct 2023	3	17.32	57.73	8.6	33.12	8.2	24.0	13.35
I39	09 Oct 2023	4	17.25	64.21	8.5	33.12	8.2	24.0	9.12
I39	09 Oct 2023	5	17.05	71.72	8.6	33.12	8.2	24.1	5.26
I39	09 Oct 2023	6	16.85	79.79	8.6	33.12	8.2	24.1	3.26
I39	09 Oct 2023	7	16.58	83.02	8.7	33.13	8.2	24.2	2.29
I39	09 Oct 2023	8	16.49	84.85	8.7	33.12	8.2	24.2	1.93
I39	09 Oct 2023	9	16.17	85.87	8.6	33.12	8.2	24.3	1.63
I39	09 Oct 2023	10	15.93	86.42	8.5	33.11	8.2	24.3	1.59
I39	09 Oct 2023	11	15.50	86.90	8.2	33.12	8.1	24.4	1.46
I39	09 Oct 2023	12	15.18	87.09	8.1	33.13	8.1	24.5	1.41
I39	09 Oct 2023	13	15.17	86.84	8.2	33.13	8.1	24.5	1.27
I39	09 Oct 2023	14	15.18	86.73	8.1	33.12	8.1	24.5	1.26

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ -t)	Chlor (μ g/L)
I39	09 Oct 2023	15	15.16	86.63	8.1	33.13	8.1	24.5	1.19
I39	09 Oct 2023	16	15.12	86.23	8.0	33.13	8.1	24.5	1.08
I39	09 Oct 2023	17	15.11	85.72	7.9	33.13	8.1	24.5	1.25
I39	09 Oct 2023	18	15.09	85.47	7.9	33.13	8.1	24.5	1.39
I39	16 Oct 2023	1	18.71	75.80	10.4	33.14	8.3	23.7	3.01
I39	16 Oct 2023	2	18.65	75.46	10.3	33.13	8.3	23.7	3.44
I39	16 Oct 2023	3	18.34	75.24	10.0	33.14	8.3	23.8	3.99
I39	16 Oct 2023	4	18.24	74.69	9.8	33.14	8.3	23.8	4.01
I39	16 Oct 2023	5	18.14	76.24	9.6	33.14	8.3	23.8	3.77
I39	16 Oct 2023	6	17.99	78.04	9.4	33.13	8.2	23.8	3.61
I39	16 Oct 2023	7	17.80	79.15	9.3	33.14	8.2	23.9	3.36
I39	16 Oct 2023	8	17.60	80.29	9.0	33.13	8.2	23.9	2.98
I39	16 Oct 2023	9	17.16	81.80	8.8	33.13	8.2	24.0	2.93
I39	16 Oct 2023	10	17.04	83.45	8.7	33.14	8.2	24.1	2.68
I39	16 Oct 2023	11	16.97	84.48	8.4	33.12	8.2	24.1	2.44
I39	16 Oct 2023	12	16.56	85.19	8.1	33.12	8.1	24.2	2.18
I39	16 Oct 2023	13	16.09	86.19	8.0	33.14	8.1	24.3	2.00
I39	16 Oct 2023	14	15.97	86.23	7.8	33.14	8.1	24.3	1.86
I39	16 Oct 2023	15	15.74	84.91	7.6	33.13	8.1	24.4	1.92
I39	16 Oct 2023	16	15.45	82.68	7.3	33.14	8.1	24.4	1.98
I39	16 Oct 2023	17	15.40	80.18	7.2	33.15	8.0	24.5	2.18
I39	16 Oct 2023	18	15.35	78.41	7.0	33.15	8.0	24.5	2.02
I39	24 Oct 2023	1	16.50	82.28	7.0	33.13	8.1	24.2	0.73
I39	24 Oct 2023	2	16.10	82.58	7.2	33.35	8.1	24.5	0.73
I39	24 Oct 2023	3	15.94	83.02	7.3	33.27	8.1	24.4	0.73
I39	24 Oct 2023	4	15.87	83.24	7.1	33.23	8.1	24.4	0.73
I39	24 Oct 2023	5	15.85	82.59	6.8	33.23	8.1	24.4	0.73
I39	24 Oct 2023	6	15.76	81.89	6.8	33.28	8.1	24.5	0.73
I39	24 Oct 2023	7	15.61	79.77	6.8	33.34	8.1	24.6	0.65
I39	24 Oct 2023	8	15.57	78.17	6.8	33.46	8.0	24.7	0.65
I39	24 Oct 2023	9	15.04	75.25	7.3	33.52	8.0	24.8	0.64
I39	24 Oct 2023	10	14.72	71.80	7.2	33.45	8.0	24.8	0.64
I39	24 Oct 2023	11	14.65	72.56	7.0	33.51	8.0	24.9	0.64
I39	24 Oct 2023	12	14.56	74.51	6.6	33.34	8.0	24.8	0.66
I39	24 Oct 2023	13	14.48	75.74	6.2	33.34	8.0	24.8	0.65
I39	24 Oct 2023	14	14.38	75.61	6.1	33.40	8.0	24.9	0.66
I39	24 Oct 2023	15	14.33	74.98	5.9	33.45	8.0	24.9	0.67
I39	24 Oct 2023	16	14.28	73.76	6.0	33.38	8.0	24.9	0.66
I39	24 Oct 2023	17	14.24	68.82	6.2	33.37	8.0	24.9	0.93
I39	24 Oct 2023	18	14.21	64.65	6.2	33.42	8.0	24.9	1.58
I39	30 Oct 2023	1	15.58	81.80	8.1	33.17	8.1	24.4	0.81
I39	30 Oct 2023	2	15.55	81.83	8.1	33.17	8.1	24.4	0.80
I39	30 Oct 2023	3	15.44	81.30	8.1	33.17	8.1	24.5	0.99
I39	30 Oct 2023	4	15.41	81.07	8.1	33.17	8.1	24.5	1.21
I39	30 Oct 2023	5	15.40	80.83	8.1	33.17	8.1	24.5	1.45
I39	30 Oct 2023	6	15.39	80.86	8.1	33.17	8.1	24.5	1.72
I39	30 Oct 2023	7	15.35	80.82	8.0	33.17	8.1	24.5	1.89
I39	30 Oct 2023	8	15.12	82.18	8.0	33.16	8.1	24.5	1.89
I39	30 Oct 2023	9	14.98	84.45	8.0	33.15	8.1	24.6	1.78
I39	30 Oct 2023	10	14.65	85.94	7.9	33.15	8.1	24.6	1.94
I39	30 Oct 2023	11	14.33	85.22	7.7	33.16	8.1	24.7	2.25
I39	30 Oct 2023	12	14.20	85.55	7.4	33.18	8.1	24.7	2.41
I39	30 Oct 2023	13	14.14	84.47	7.1	33.19	8.0	24.8	2.44
I39	30 Oct 2023	14	14.05	83.15	6.9	33.20	8.0	24.8	2.49
I39	30 Oct 2023	15	13.98	81.87	6.7	33.21	8.0	24.8	2.30
I39	30 Oct 2023	16	13.96	81.06	6.6	33.21	8.0	24.8	2.13
I39	30 Oct 2023	17	13.94	80.77	6.6	33.22	8.0	24.8	2.00
I39	30 Oct 2023	18	13.92	80.34	6.5	33.22	8.0	24.8	1.85

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ -t)	Chlor (μ g/L)
I40	02 Oct 2023	1	19.91	82.26	7.9	33.28	8.2	23.5	0.81
I40	02 Oct 2023	2	19.94	82.02	7.9	33.29	8.2	23.5	0.83
I40	02 Oct 2023	3	19.64	82.14	7.8	33.30	8.2	23.6	0.89
I40	02 Oct 2023	4	18.65	82.99	7.8	33.28	8.2	23.8	0.98
I40	02 Oct 2023	5	18.34	82.81	7.7	33.24	8.2	23.8	1.25
I40	02 Oct 2023	6	17.95	74.61	7.4	33.23	8.2	23.9	1.54
I40	02 Oct 2023	7	17.58	69.74	7.4	33.21	8.1	24.0	1.72
I40	02 Oct 2023	8	17.15	72.32	7.3	33.20	8.1	24.1	1.99
I40	02 Oct 2023	9	16.77	62.35	7.3	33.18	8.1	24.2	2.58
I40	02 Oct 2023	10	16.61	54.85	7.1	33.17	8.1	24.2	2.88
I40	09 Oct 2023	1	16.53	74.63	8.6	33.10	8.2	24.2	2.10
I40	09 Oct 2023	2	16.17	72.99	8.4	33.15	8.1	24.3	2.80
I40	09 Oct 2023	3	16.05	72.87	8.3	33.16	8.1	24.3	2.45
I40	09 Oct 2023	4	16.02	76.27	8.3	33.16	8.1	24.3	2.26
I40	09 Oct 2023	5	15.99	77.00	8.3	33.16	8.1	24.3	2.34
I40	09 Oct 2023	6	15.93	77.62	8.2	33.15	8.1	24.3	2.44
I40	09 Oct 2023	7	15.90	78.66	8.2	33.16	8.1	24.4	2.37
I40	09 Oct 2023	8	15.89	78.40	8.2	33.16	8.1	24.4	2.28
I40	09 Oct 2023	9	15.86	78.28	8.1	33.16	8.1	24.4	1.98
I40	09 Oct 2023	10	15.85	75.59	8.1	33.16	8.1	24.4	1.95
I40	16 Oct 2023	1	18.27	52.86	8.4	33.07	8.1	23.7	10.07
I40	16 Oct 2023	2	17.78	55.70	7.6	33.10	8.1	23.9	8.37
I40	16 Oct 2023	3	17.66	60.64	7.4	33.10	8.1	23.9	5.89
I40	16 Oct 2023	4	17.36	65.97	7.5	33.12	8.1	24.0	3.80
I40	16 Oct 2023	5	17.22	67.16	7.5	33.14	8.1	24.0	2.59
I40	16 Oct 2023	6	17.00	70.15	7.4	33.15	8.1	24.1	2.20
I40	16 Oct 2023	7	16.74	72.28	6.8	33.15	8.0	24.2	2.30
I40	16 Oct 2023	8	16.31	70.26	6.3	33.15	8.0	24.3	2.05
I40	16 Oct 2023	9	16.12	68.58	6.4	33.15	8.0	24.3	1.88
I40	16 Oct 2023	10	15.91	68.21	6.4	33.15	8.0	24.3	1.68
I40	24 Oct 2023	1	16.83	58.21	6.4	33.11	8.0	24.1	0.74
I40	24 Oct 2023	2	16.31	54.76	6.4	33.44	8.0	24.5	0.76
I40	24 Oct 2023	3	16.02	47.75	6.4	33.63	8.0	24.7	0.73
I40	24 Oct 2023	4	15.97	44.24	6.8	33.31	7.9	24.5	0.73
I40	24 Oct 2023	5	15.90	44.48	6.7	33.34	7.9	24.5	0.79
I40	24 Oct 2023	6	15.92	42.30	6.7	33.38	7.9	24.5	0.72
I40	24 Oct 2023	7	15.32	46.78	6.8	33.45	7.9	24.7	0.71
I40	24 Oct 2023	8	14.82	50.95	6.4	33.44	7.9	24.8	0.74
I40	24 Oct 2023	9	14.78	51.74	6.2	33.50	7.9	24.9	0.73
I40	24 Oct 2023	10	14.79	45.57	6.1	33.45	7.9	24.8	0.69
I40	30 Oct 2023	1	15.19	68.91	7.2	33.16	8.0	24.5	1.07
I40	30 Oct 2023	2	15.04	69.25	7.0	33.16	8.0	24.5	1.23
I40	30 Oct 2023	3	14.81	68.80	6.9	33.17	8.0	24.6	1.47
I40	30 Oct 2023	4	14.77	69.45	6.8	33.17	8.0	24.6	1.52
I40	30 Oct 2023	5	14.74	69.21	6.9	33.18	8.0	24.6	1.73
I40	30 Oct 2023	6	14.71	65.72	6.9	33.18	8.0	24.6	2.04
I40	30 Oct 2023	7	14.69	64.11	7.0	33.18	8.0	24.6	2.25
I40	30 Oct 2023	8	14.66	64.00	6.9	33.18	8.0	24.6	2.25
I40	30 Oct 2023	9	14.58	57.04	6.6	33.19	8.0	24.7	2.11
I40	30 Oct 2023	10	14.54	42.84	6.3	33.19	8.0	24.7	2.18

NA = not available

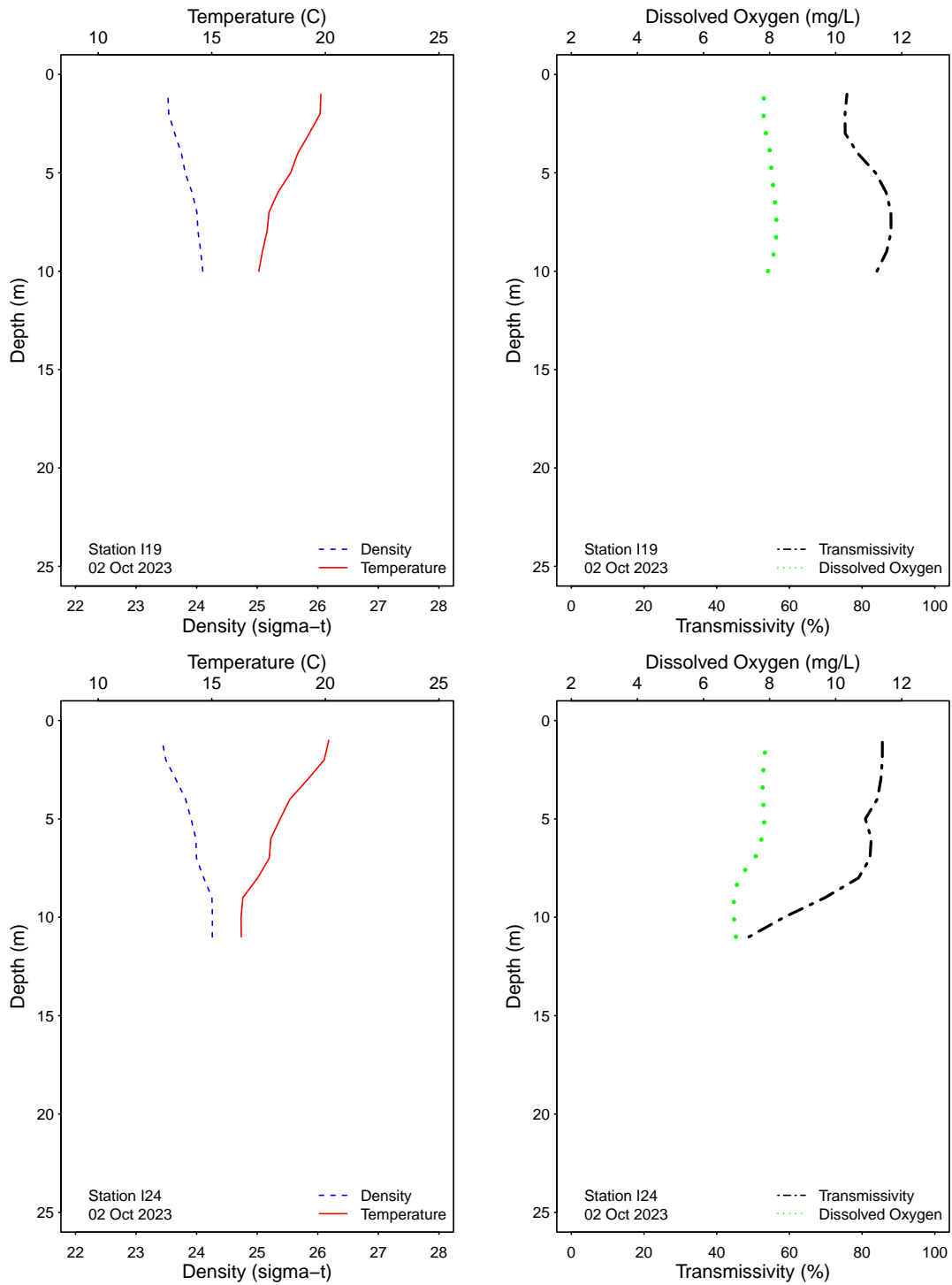


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

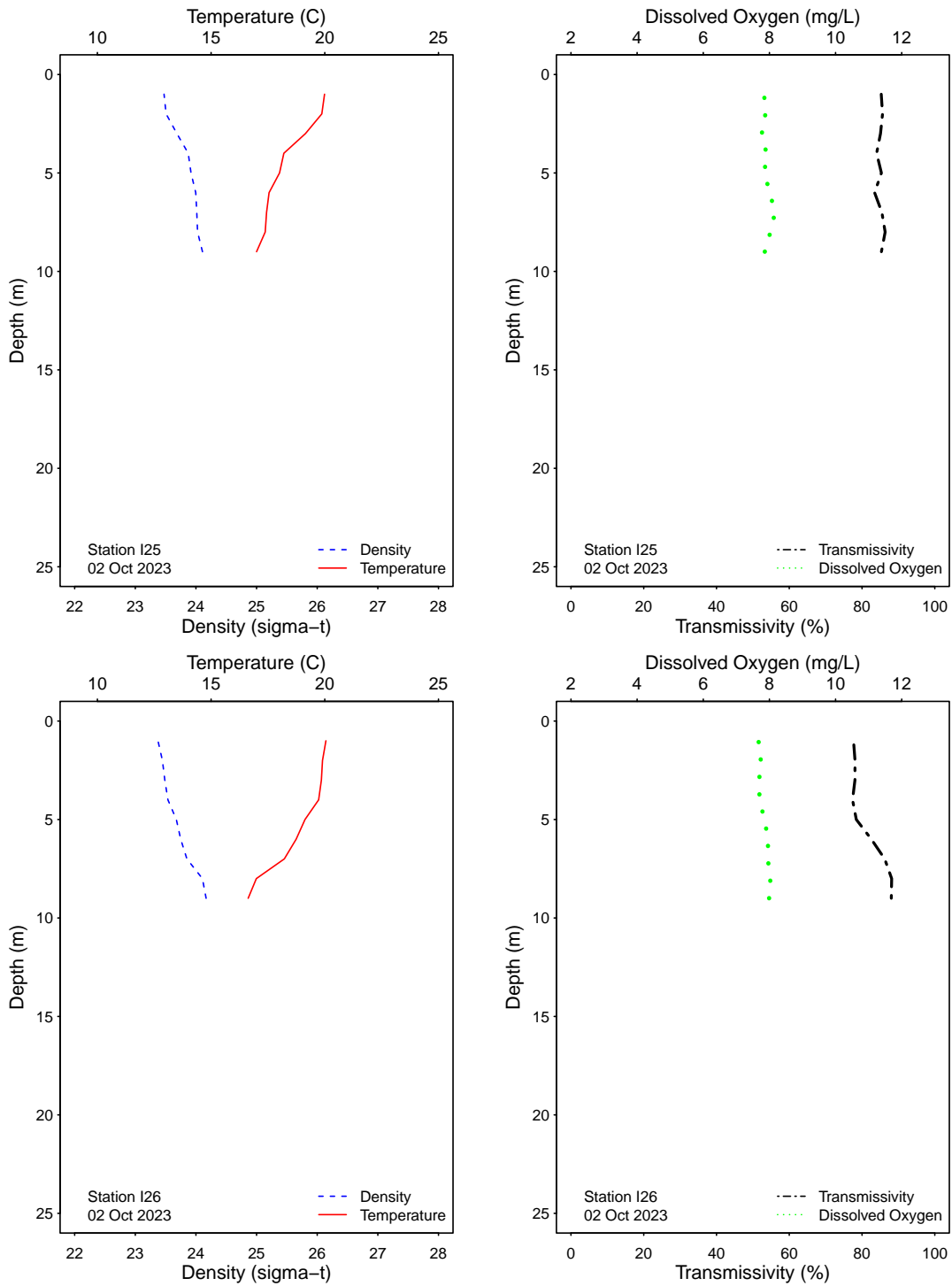


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

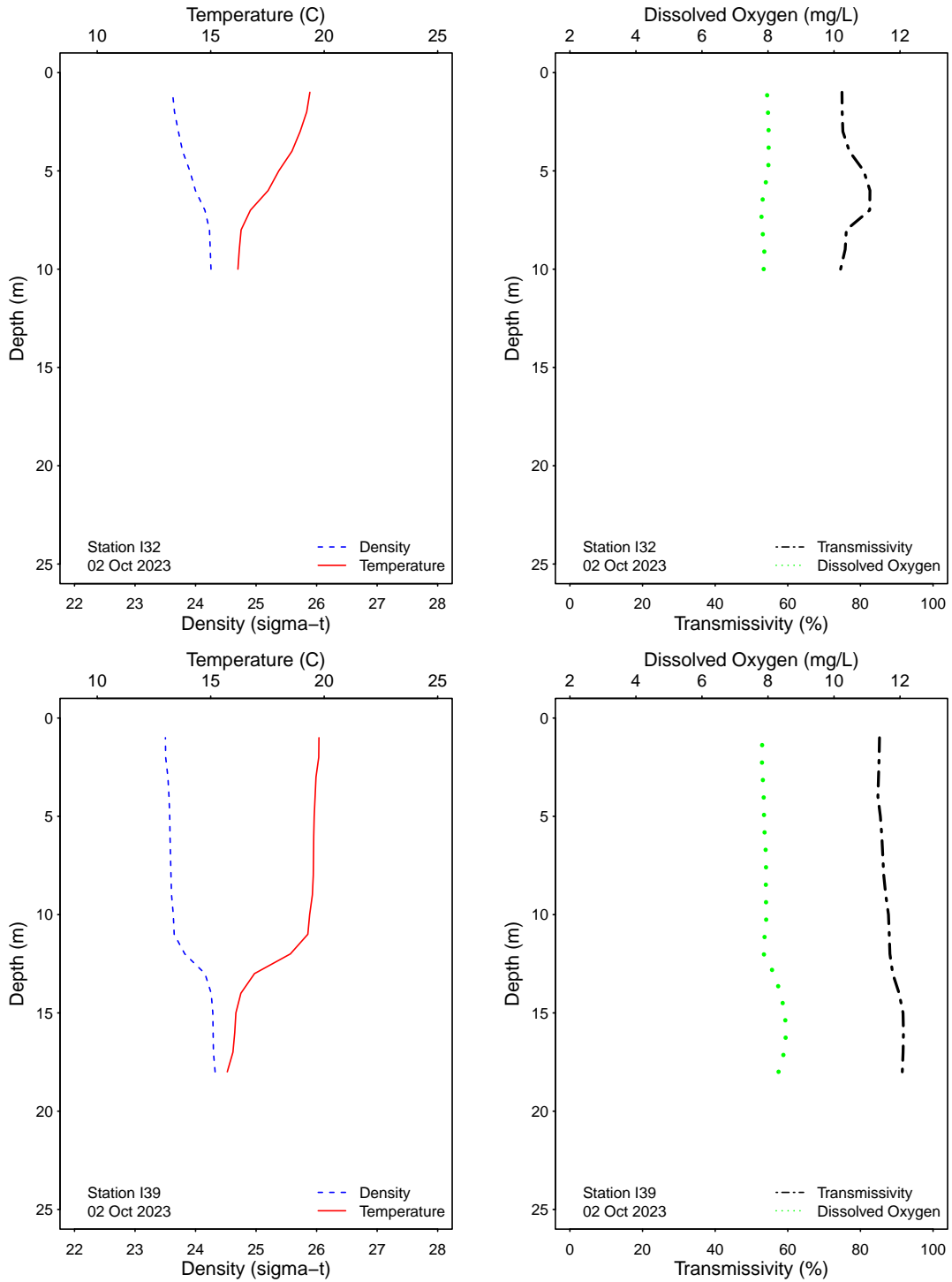


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

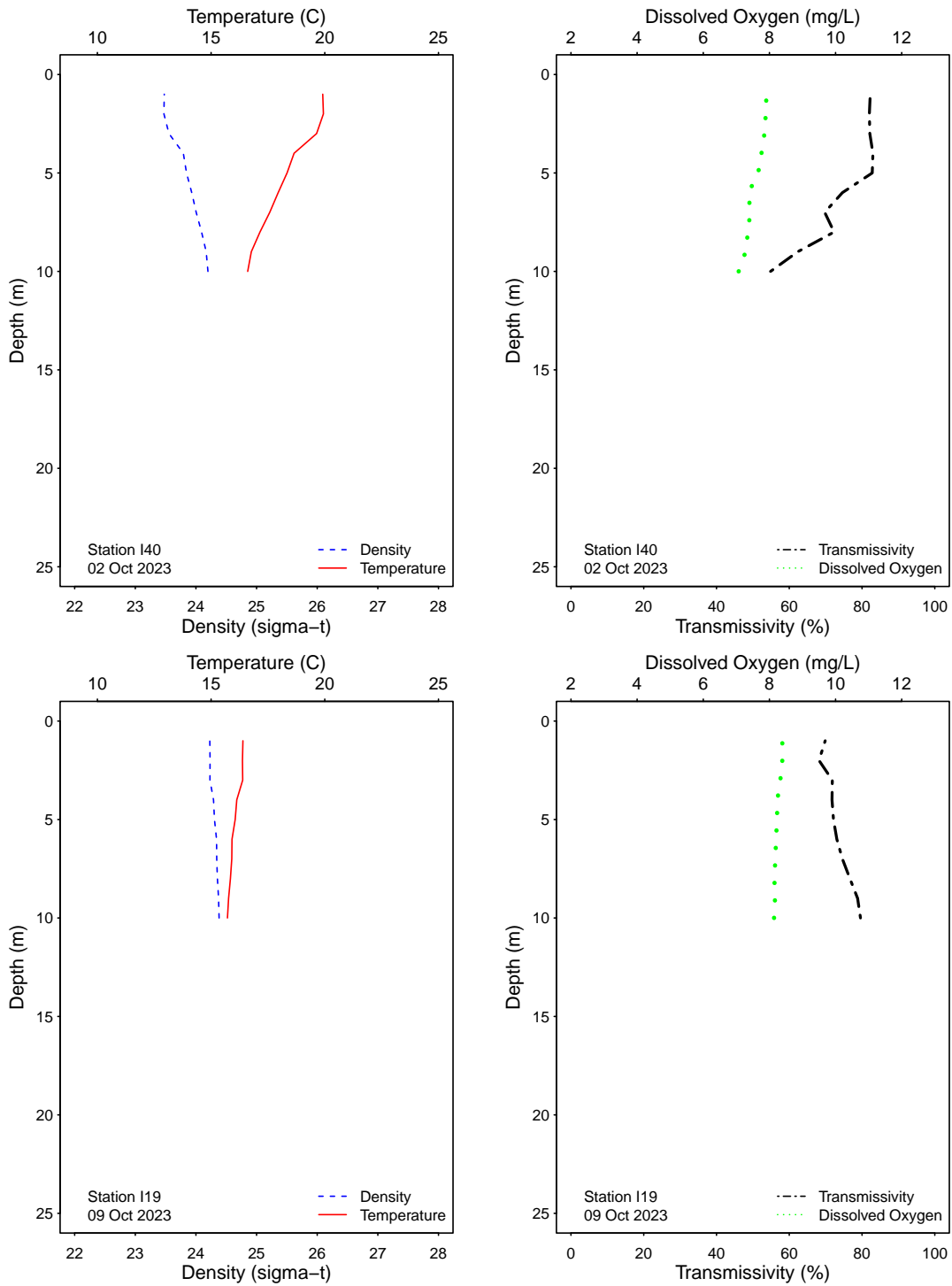


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

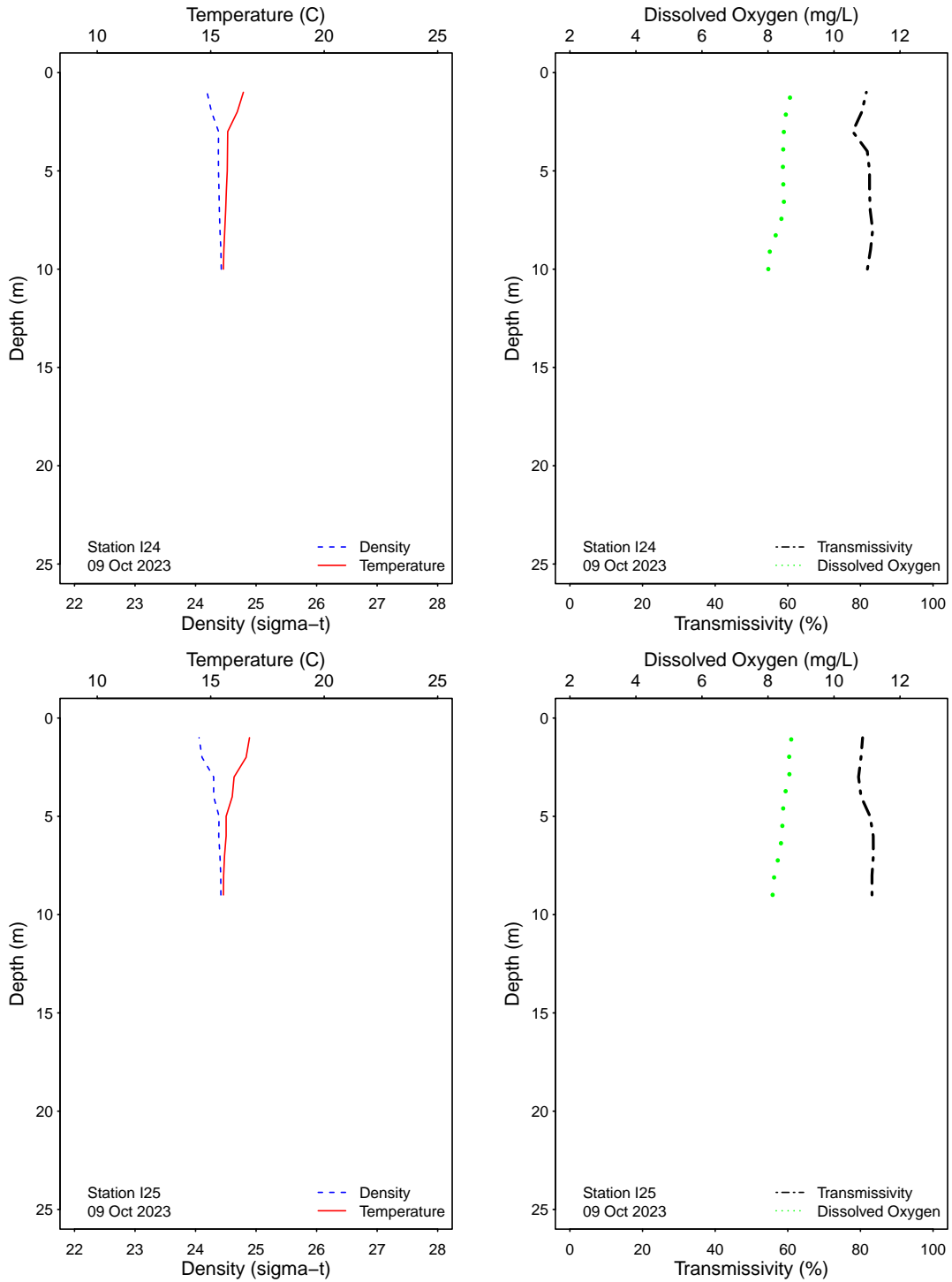


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

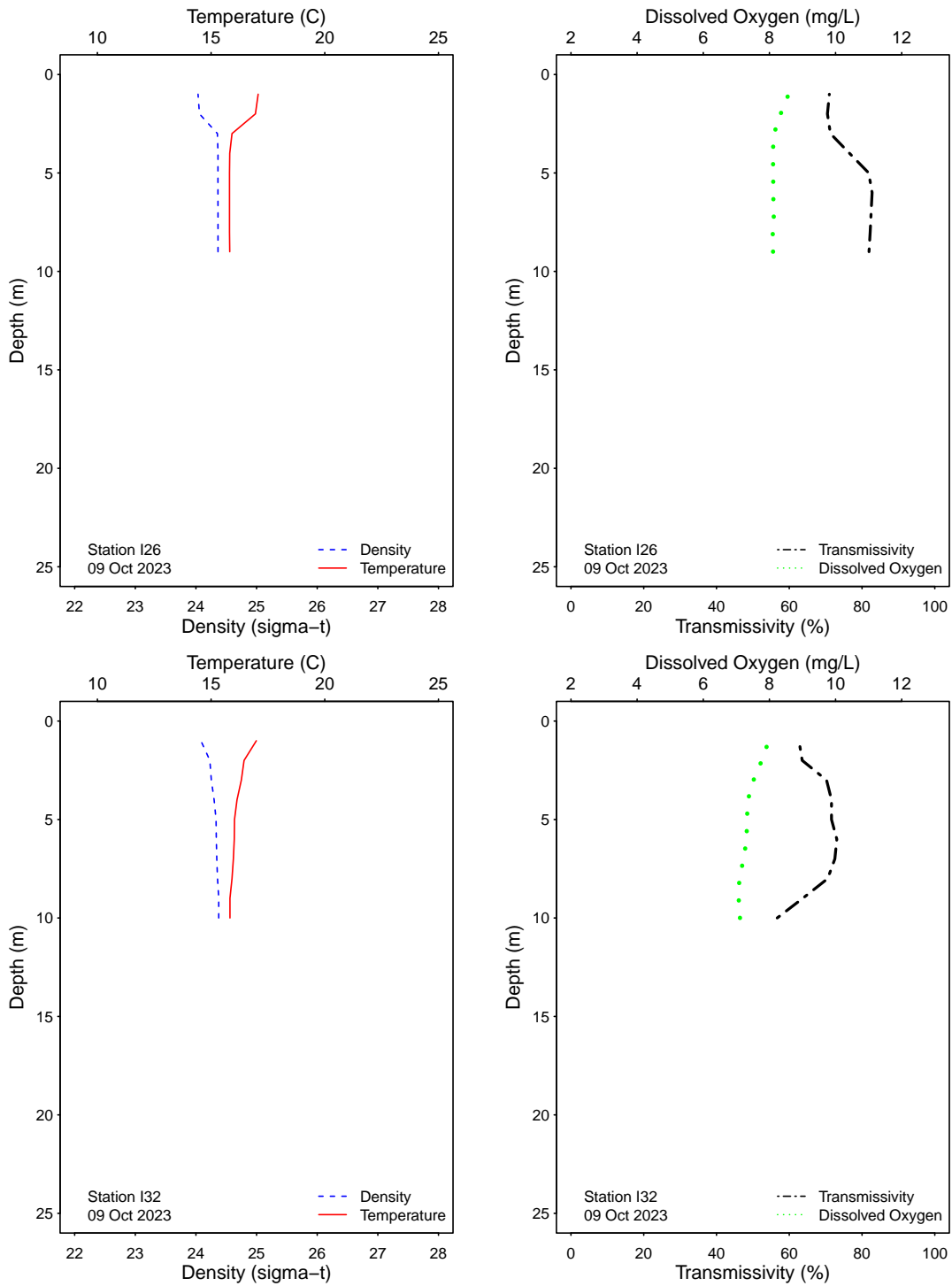


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

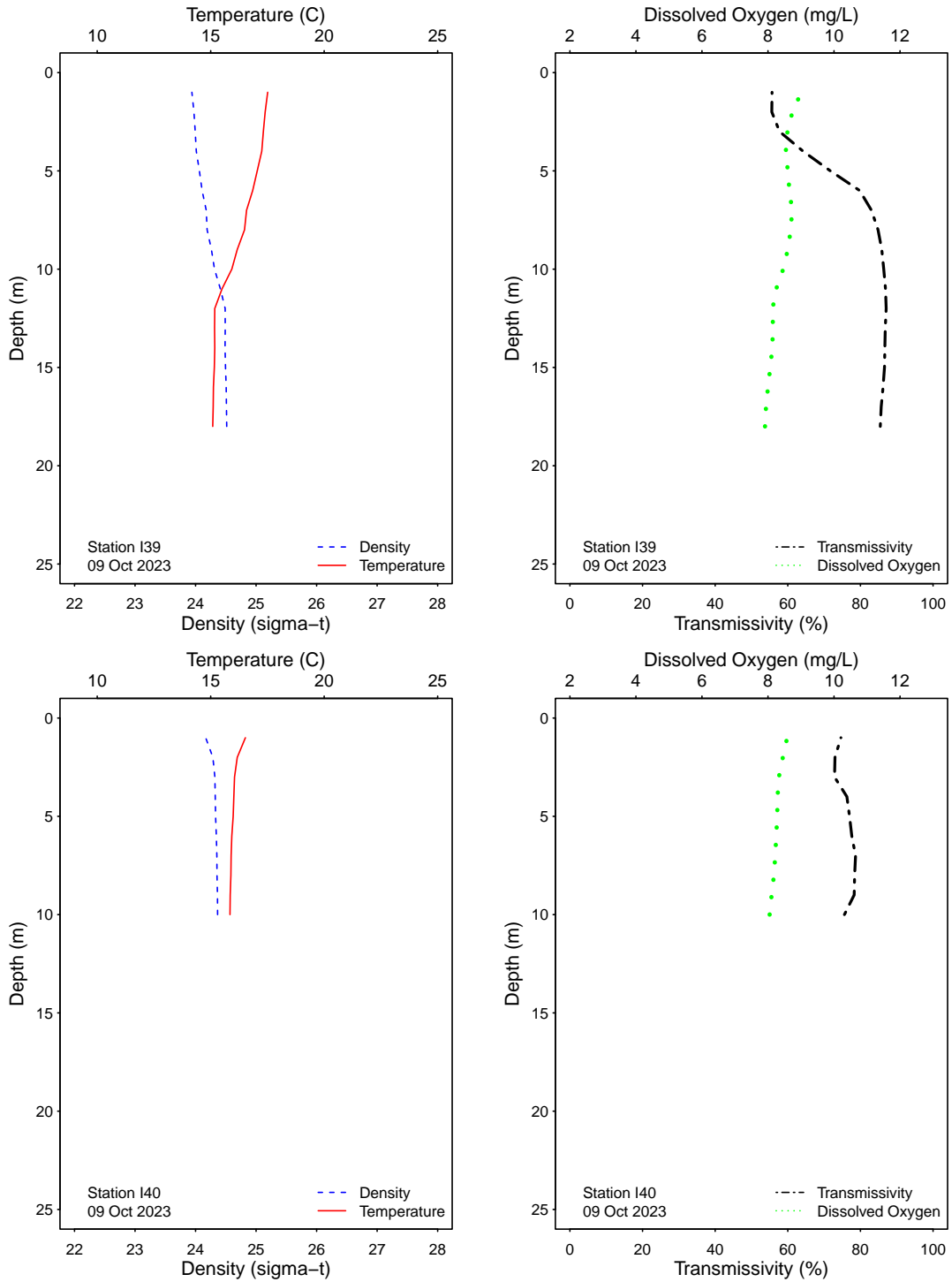


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

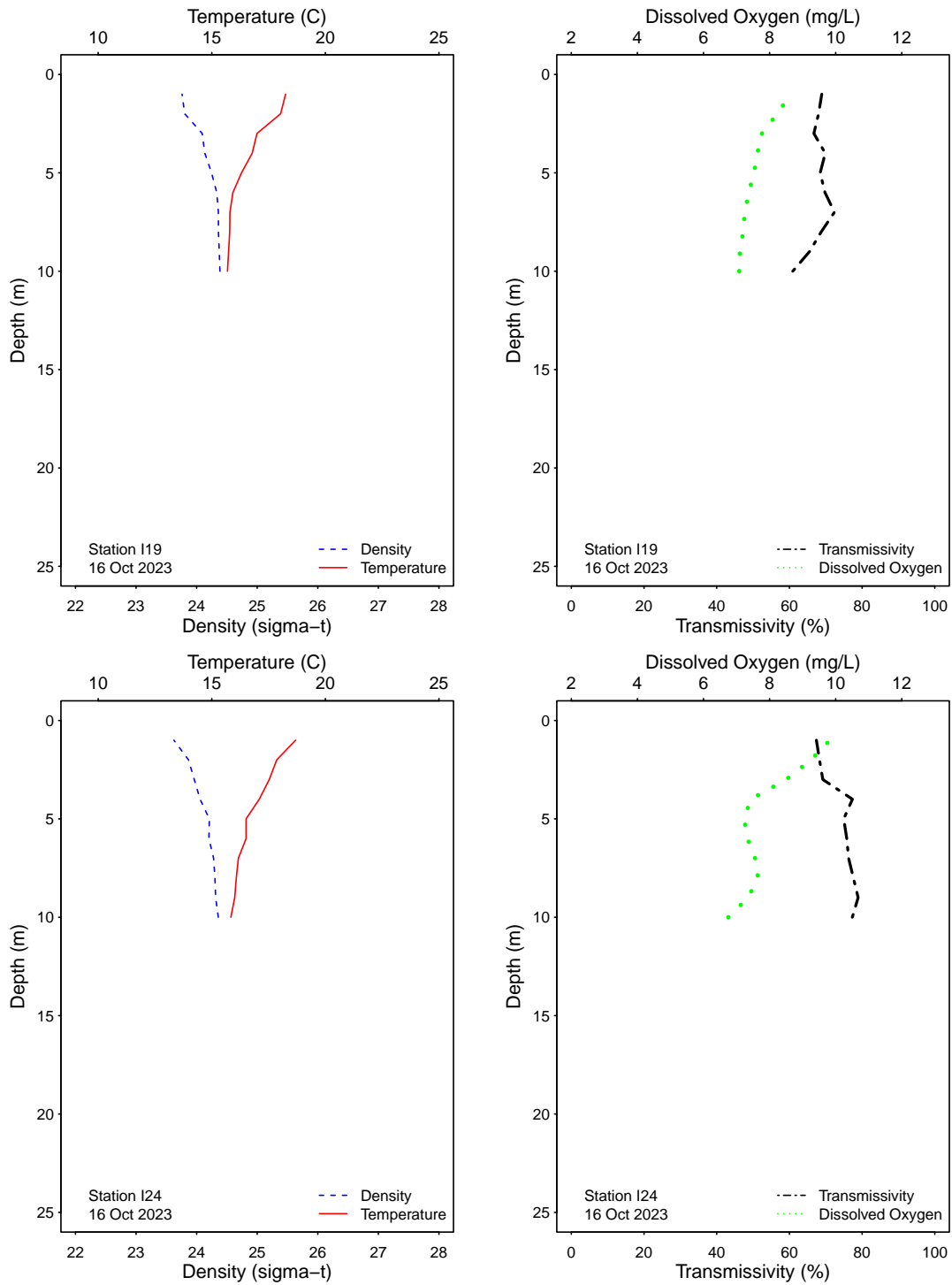


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

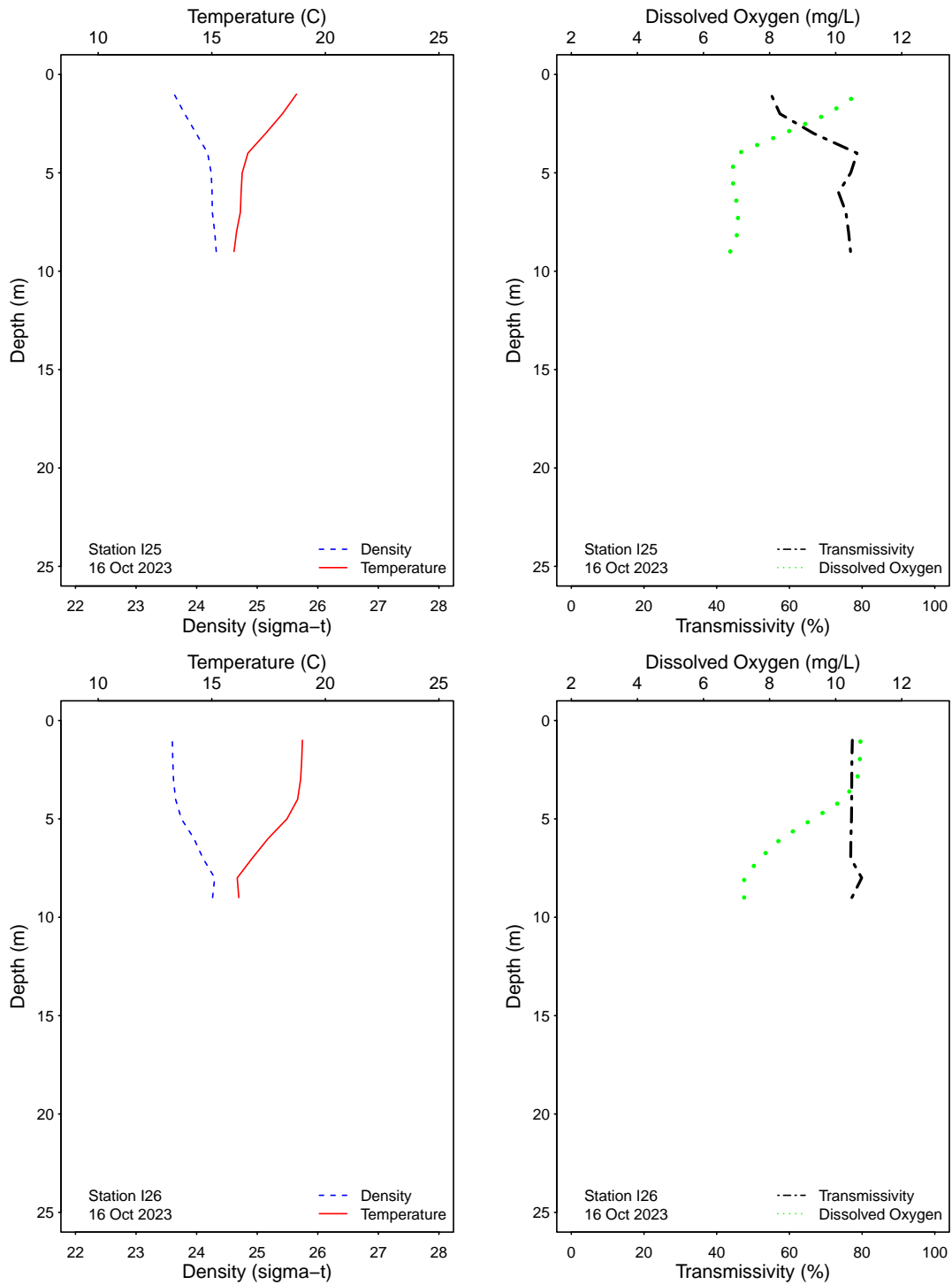


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

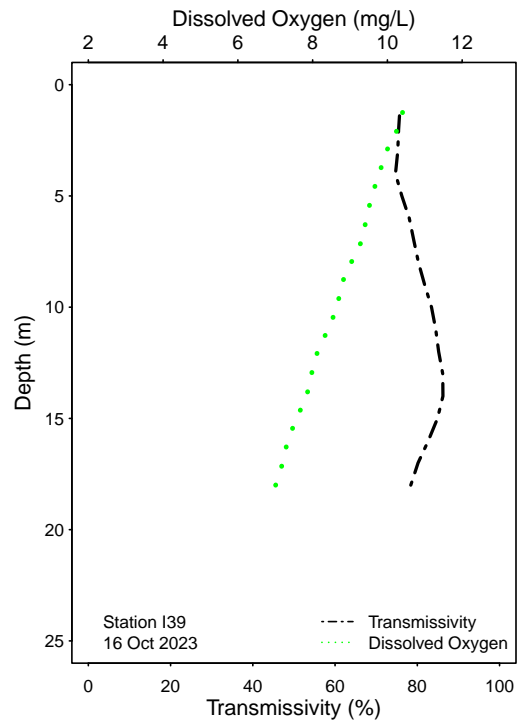
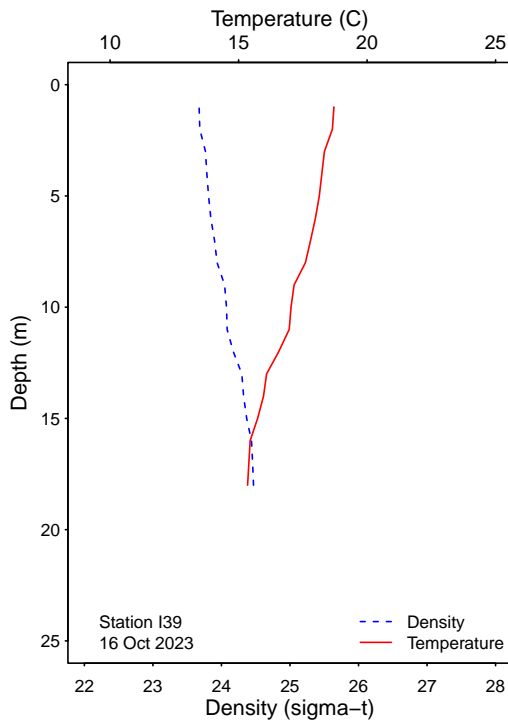
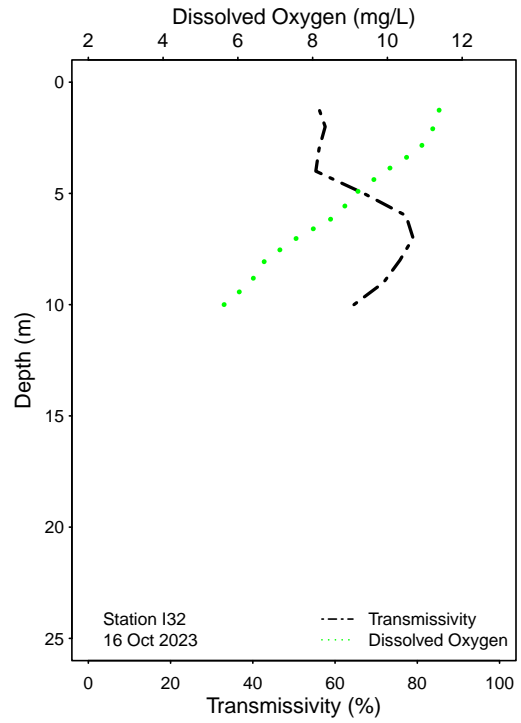
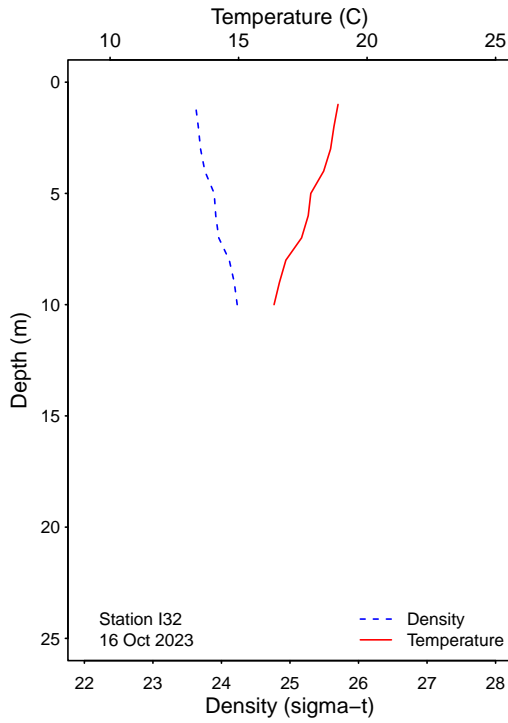


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

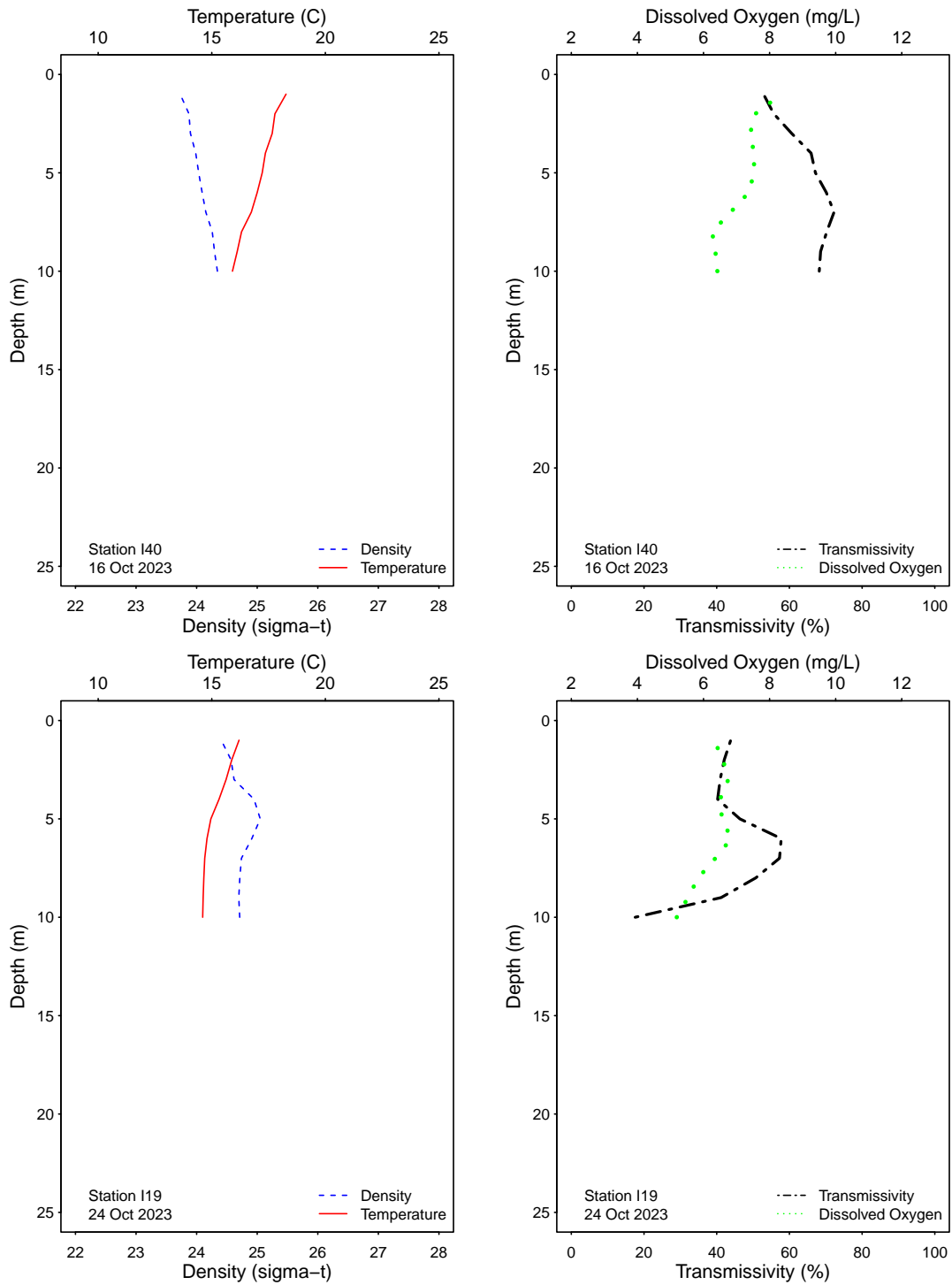


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

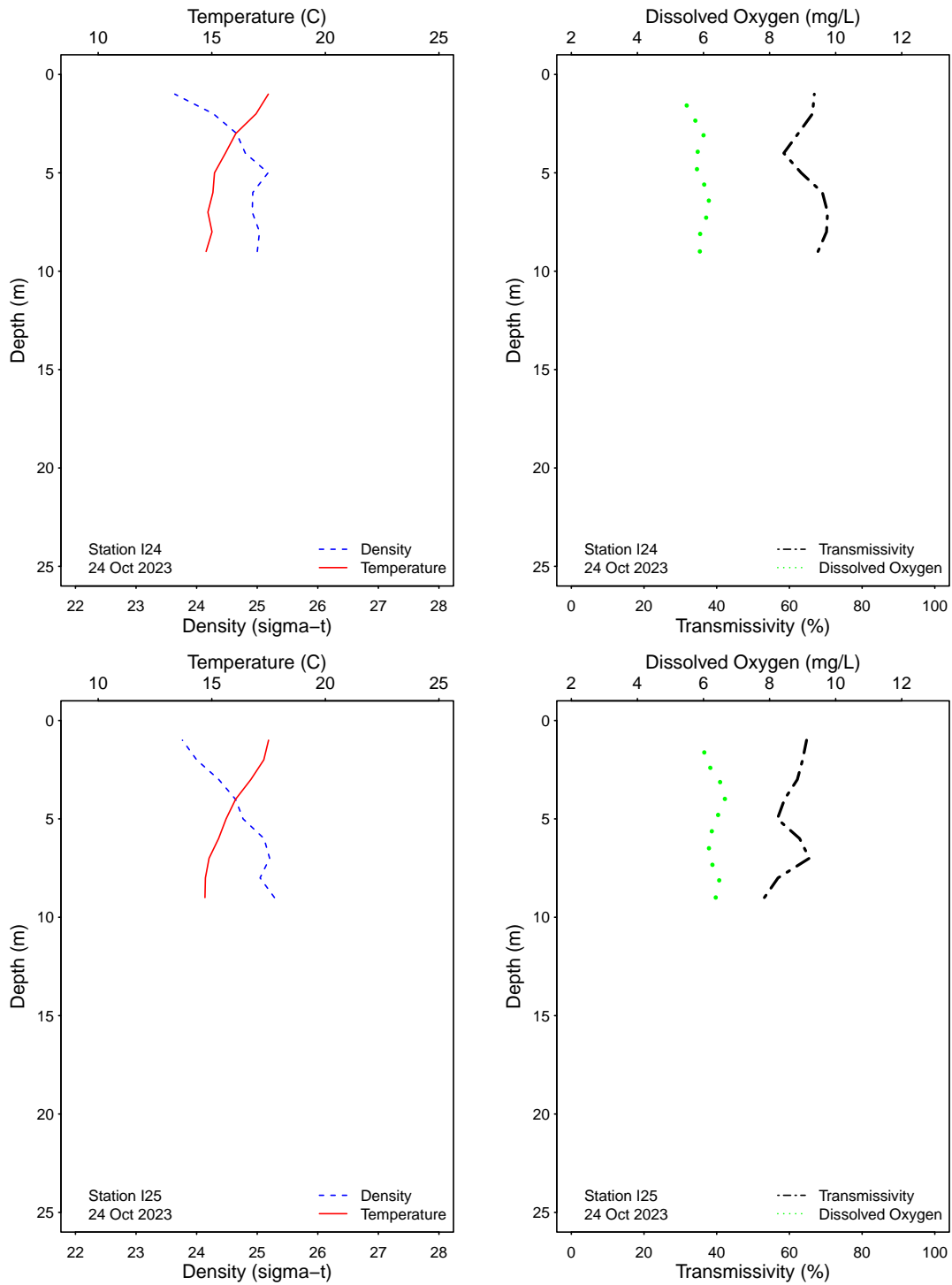


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

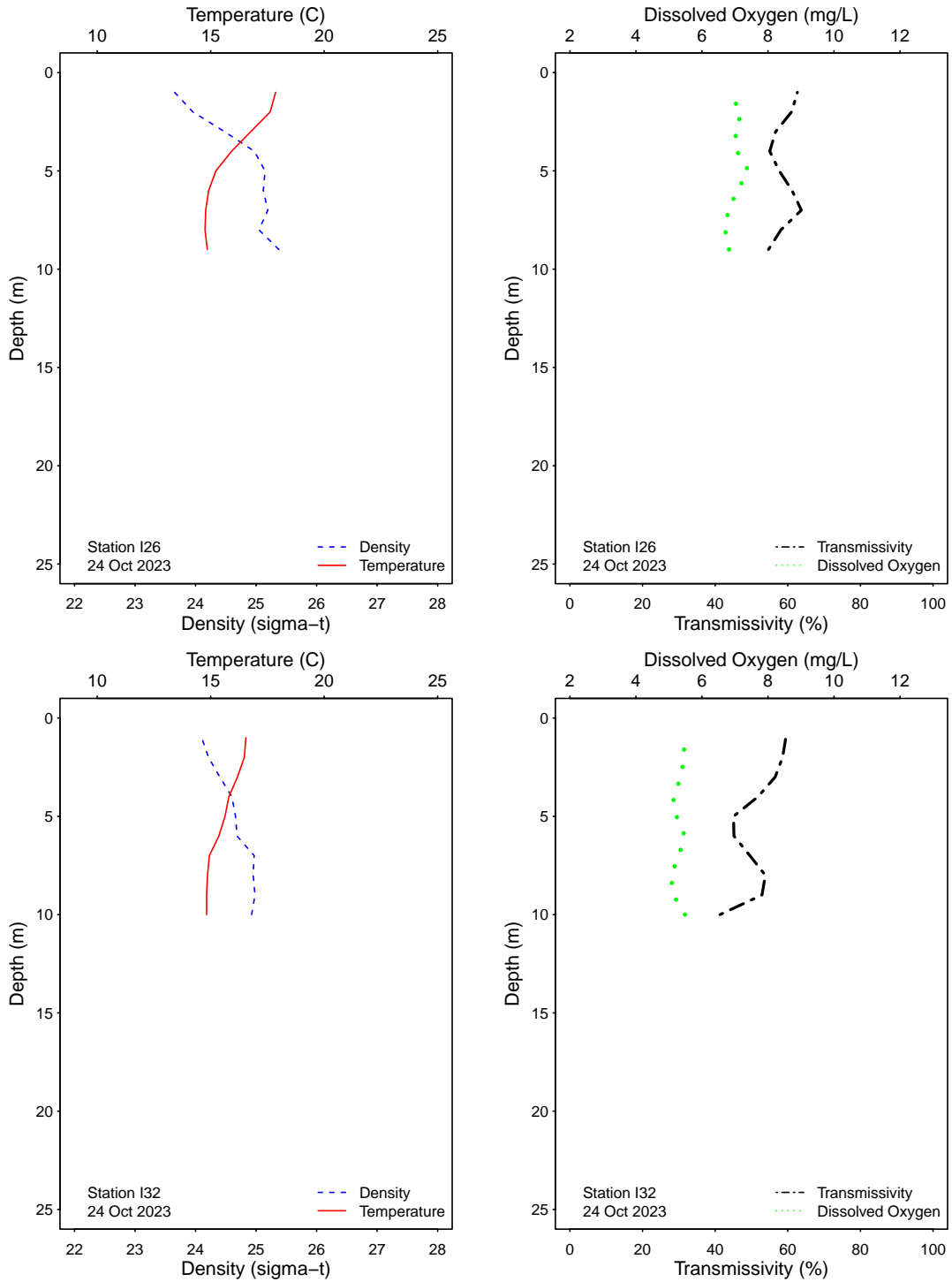


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

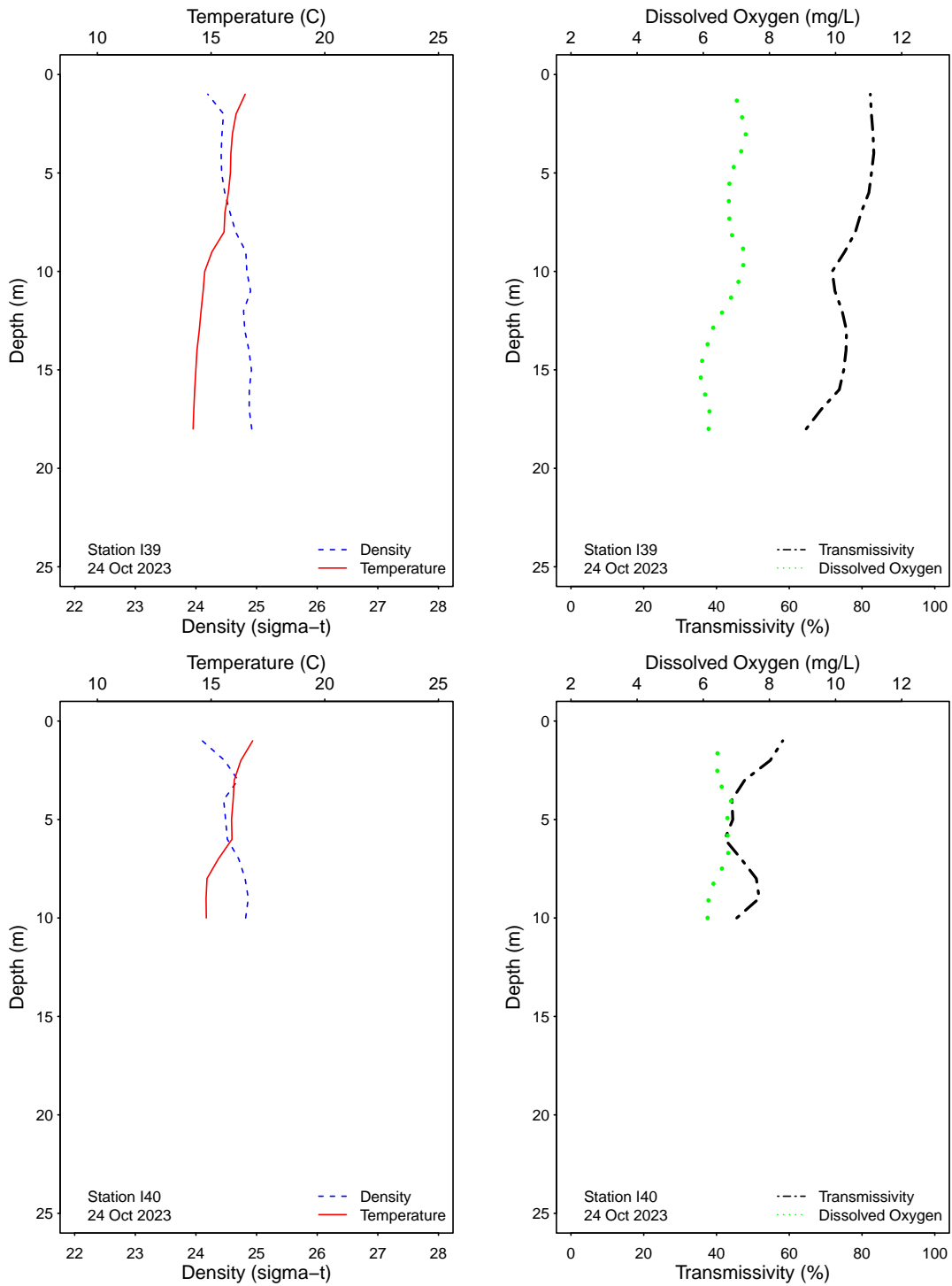


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

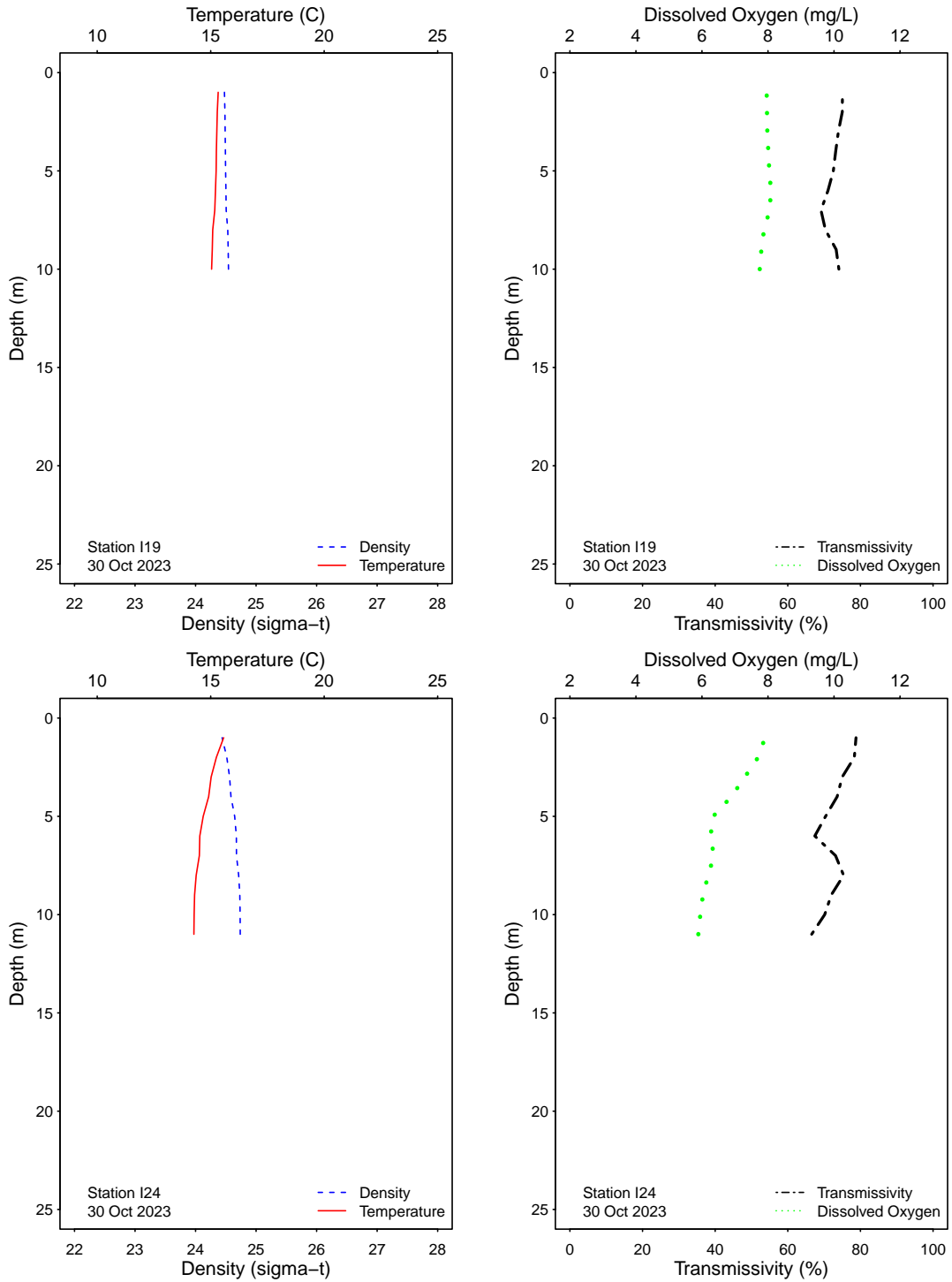


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

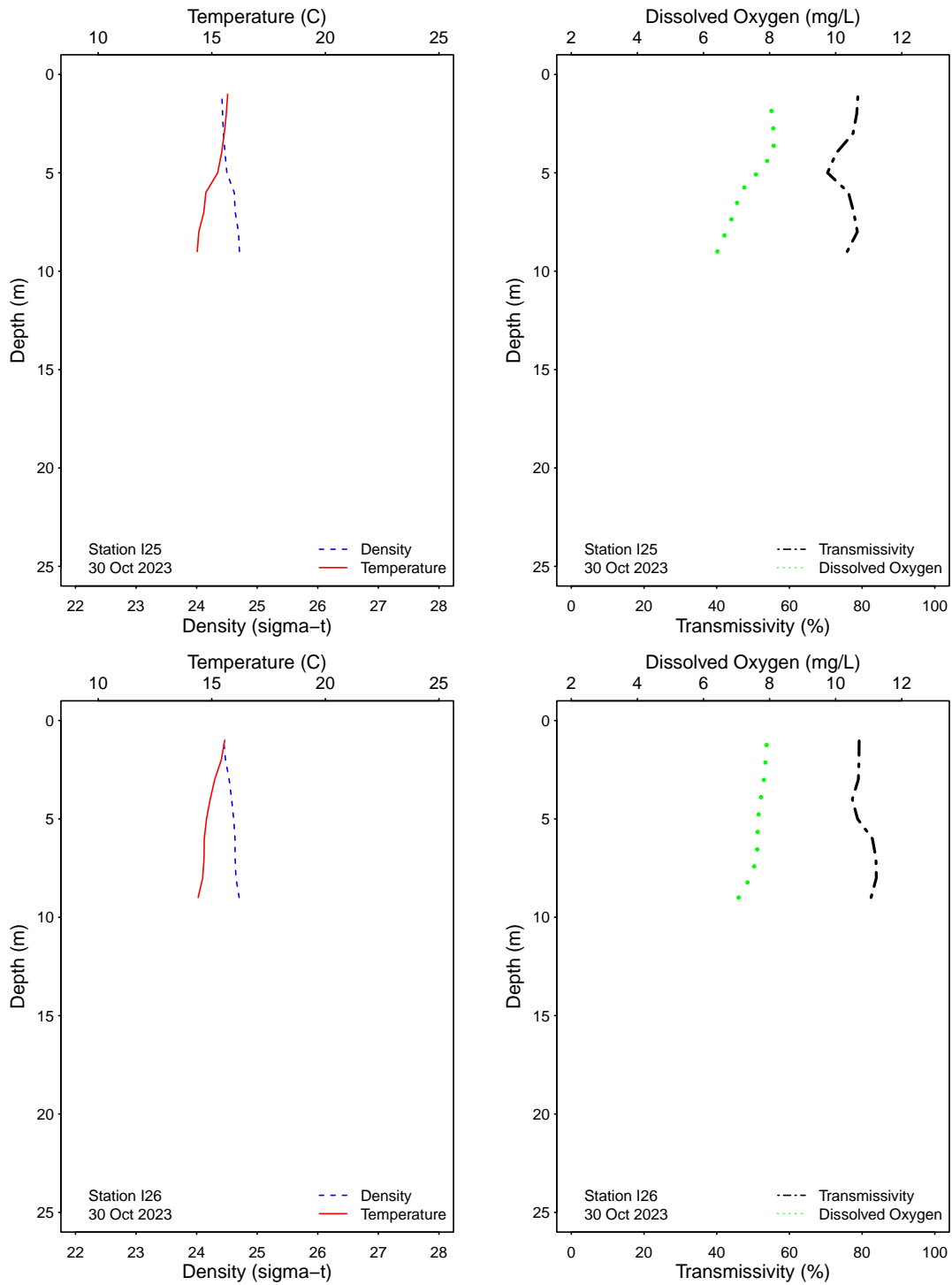


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

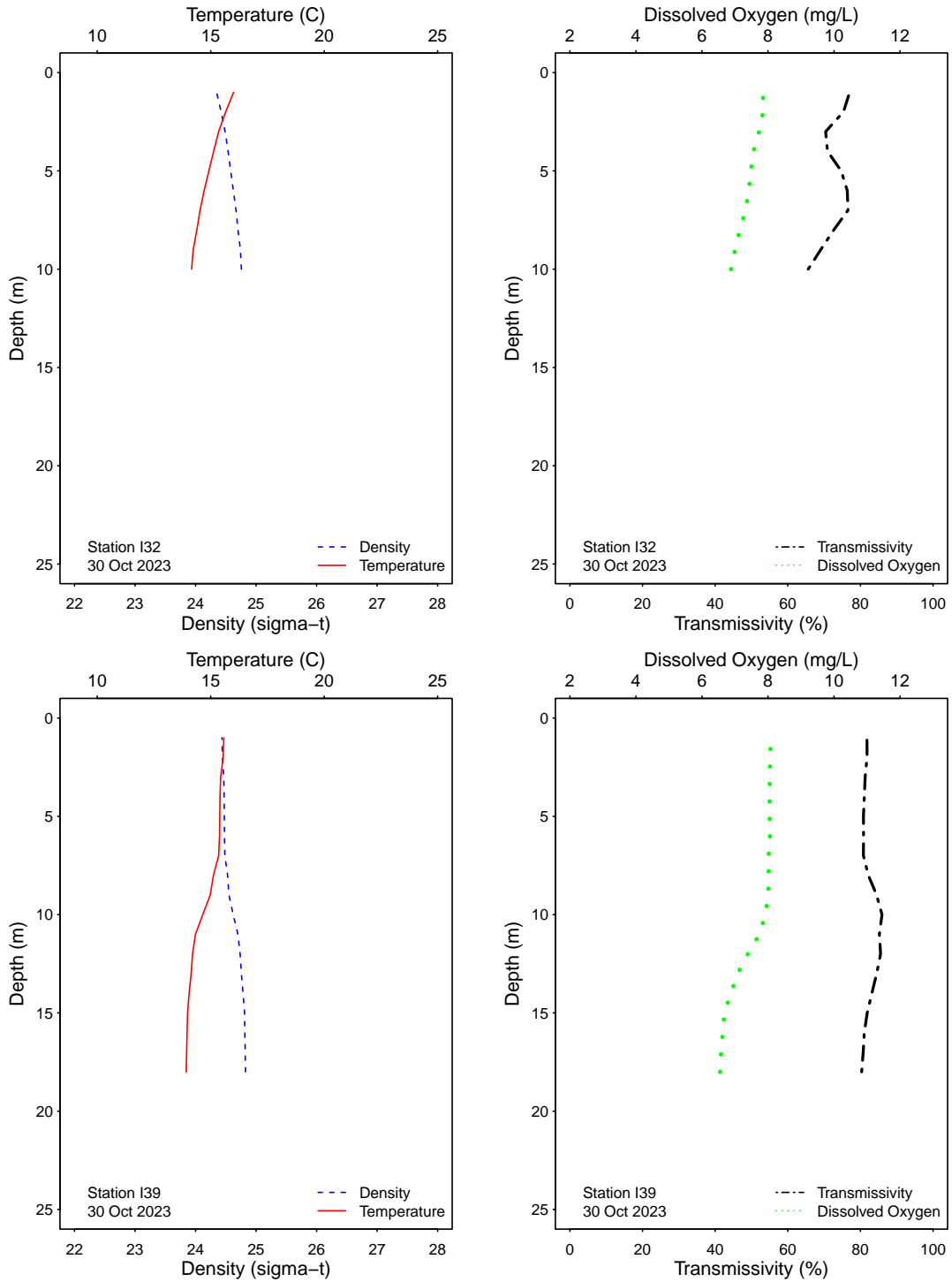


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

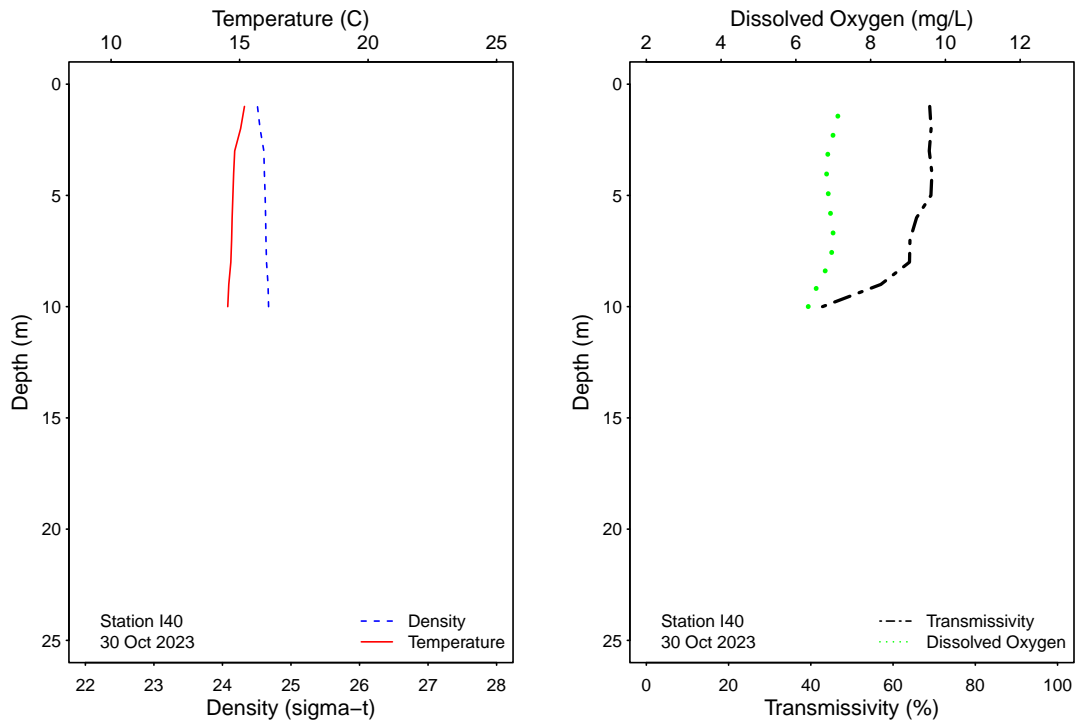


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

APPENDIX A
Quality Assurance

Table A.1

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

Station	Date	Depth	Analyst	Procedure	Total	Fecal	Entero
I19	02 Oct 2023	6	BS	LAB DUPLICATE	<2	<2	<2
I19	09 Oct 2023	6	JF	LAB DUPLICATE	400e	80e	80e
I19	16 Oct 2023	6	KA	LAB DUPLICATE	12e	4e	8e
I19	24 Oct 2023	6	KT	LAB DUPLICATE	100e	26e	6e
I19	30 Oct 2023	6	KA	LAB DUPLICATE	4e	<2	44
I40	02 Oct 2023	6	BS	LAB DUPLICATE	20e	<2	6e
I40	09 Oct 2023	6	JF	LAB DUPLICATE	120e	12e	8e
I40	16 Oct 2023	6	KA	LAB DUPLICATE	860	300e	80e
I40	24 Oct 2023	6	KT	LAB DUPLICATE	580	180e	54
I40	30 Oct 2023	6	KA	LAB DUPLICATE	300e	74	46
S12	03 Oct 2023		KT	FIELD DUPLICATE	2e	10e	2e
S12	03 Oct 2023		KT	LAB DUPLICATE	4e	4e	<2
S12	10 Oct 2023		KT	FIELD DUPLICATE	>16000	>12000	4200
S12	10 Oct 2023		KT	LAB DUPLICATE	>16000	>12000	3600e
S12	17 Oct 2023		KA	FIELD DUPLICATE	1400e	240e	440
S12	17 Oct 2023		KT	LAB DUPLICATE	1600e	260e	320e
S12	24 Oct 2023		WT	FIELD DUPLICATE	<20	<2	2e
S12	24 Oct 2023		WT	LAB DUPLICATE	<20	<2	6e
S12	31 Oct 2023		WT	FIELD DUPLICATE	340e	80	280e
S12	31 Oct 2023		WT	LAB DUPLICATE	280e	110	200e

ns = not sampled

ND = no data

