

SOUTH BAY OCEAN OUTFALL MONTHLY RECEIVING WATERS MONITORING REPORT

SOUTH BAY WATER RECLAMATION PLANT

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

DECEMBER 2024

Environmental Monitoring and Technical Services
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January 31, 2025

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

Attention: POTW Compliance Unit

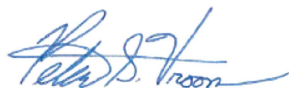
Dear Mr. Gibson:

Enclosed is the December 2024 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 weekly 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.

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 quarterly 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 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 chromomorphpic 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 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

Shellfish Harvesting Standards

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.

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 2024 Quality Assurance Report, which will be completed in March 2025.

SUMMARY OF RESULTS

➤ Shoreline Water Quality Sampling

- Due to site access restrictions in Mexico, the South Bay shoreline sampling is typically carried out on the same day each week (i.e., Tuesday) to coordinate sampling between the Mexican and USA based stations. Seawater samples at the three shore stations located south of the USA/Mexico border (i.e., stations S0, S2 and S3) are presently collected by the Comisión Internacional de Límites y Aguas (CILA) and transported to the USIBWC for subsequent delivery to the City's Marine Microbiology Lab, while samples from the eight stations located in USA waters are sampled by City staff.
- During December, six of the eight shore stations located north of the border were 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 station S5.
 - The statistical threshold value (STV) standard for fecal coliforms was exceeded at stations S4, S5, and S10.
 - The 6-week running geometric mean standard for *Enterococcus* was exceeded at stations S4, S5, S10, and S11.
 - The STV standard for *Enterococcus* was exceeded at stations S4, S5, S10, and S11.

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

- The 30-day running median standard for total coliforms was exceeded at stations S4, S5, S6, S9, S10, and S11.
 - The STV standard for total coliforms was exceeded at stations S4, S5, S6, and S10.
 - A sewage-like odor was observed at station S5 on one or more days in December.
 - Historical analyses of Ocean Plan compliance rates for the South Bay outfall shore and kelp monitoring stations, combined with the results of satellite imagery data, suggest that outflows from the Tijuana River and Los Buenos Creek, as well as surface runoff during or after rain events (storms), are likely to be the cause of impacted water quality along the shore and in near shore recreational waters in the South Bay region. See the City of San Diego’s most recent *Biennial Receiving Waters Monitoring and Assessment Report for the Point Loma and South Bay Ocean Outfalls* for details (<https://www.sandiego.gov/public-utilities/sustainability/ocean-monitoring/reports>).

➤ **Kelp Bed Water Quality Sampling**

- The seven kelp bed water quality stations (I19, I24, I25, I26, I32, I39, I40) were sampled on December 2, 11, 17, 26, and 30.
- During December, six of the seven kelp bed stations were out of compliance with the various 2019 Ocean Plan water contact standards on one or more days as follows:
 - The single sample maximum standard for fecal coliforms was exceeded at stations I24 and I40.
 - The 6-week running geometric mean standard for *Enterococcus* was exceeded at station I40.
 - The STV standard for *Enterococcus* was exceeded at station 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, and I40.
- Water column temperatures ranged from 11.71 to 13.37°C. The difference between surface and bottom waters ranged from 0.09 to 1.54°C.
- Concentrations of chlorophyll *a* ranged from 0.21 to 12.80 µg/L at the kelp bed stations.
- Nothing of sewage origin was observed at SBOO kelp stations in December.

➤ **Offshore Water Quality Sampling**

- Quarterly sampling was not conducted during December at the offshore stations. The next quarterly sampling is scheduled for February 2025.



TABLES AND FIGURES

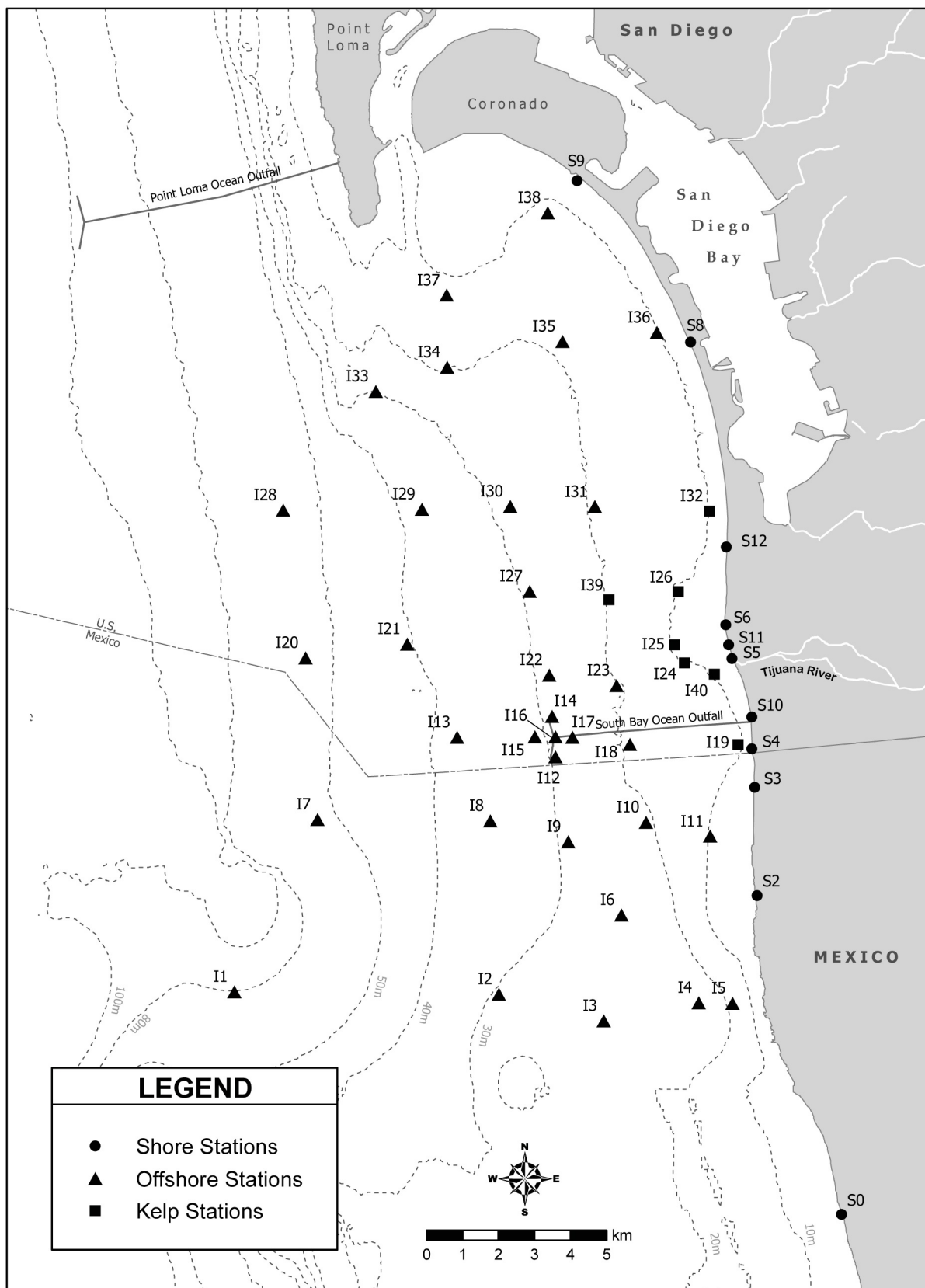


Figure 1.1 Station Map

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Shore Stations

Table 2.1

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

Date	S4	S5	S6	S8	S9	S10	S11	S12
01 Dec 2024	*77	*1275	*10	*2	*6	*131	*47	*17
02 Dec 2024	*77	*1275	*10	*2	*6	*131	*47	*17
03 Dec 2024	42	556	17	2	5	57	49	13
04 Dec 2024	42	556	17	2	5	57	49	13
05 Dec 2024	*26	*853	*28	*2	*4	*33	*110	*20
06 Dec 2024	*26	*853	*28	*2	*4	*33	*110	*20
07 Dec 2024	*26	*853	*28	*2	*4	*33	*110	*20
08 Dec 2024	*26	*853	*28	*2	*4	*33	*110	*20
09 Dec 2024	*26	*853	*28	*2	*4	*33	*110	*20
10 Dec 2024	22	1447	23	2	3	29	84	13
11 Dec 2024	22	1447	23	2	3	29	84	13
12 Dec 2024	*10	*1023	*42	*2	*4	*15	*123	*11
13 Dec 2024	*10	*1023	*42	*2	*4	*15	*123	*11
14 Dec 2024	*10	*1023	*42	*2	*4	*15	*123	*11
15 Dec 2024	*10	*1023	*42	*2	*4	*15	*123	*11
16 Dec 2024	*10	*1023	*42	*2	*4	*15	*123	*11
17 Dec 2024	16	839	23	2	4	17	54	11
18 Dec 2024	16	839	23	2	4	17	54	11
19 Dec 2024	*9	*1023	*16	*2	*3	*11	*47	*6
20 Dec 2024	*9	*1023	*16	*2	*3	*11	*47	*6
21 Dec 2024	*9	*1023	*16	*2	*3	*11	*47	*6
22 Dec 2024	*9	*1023	*16	*2	*3	*11	*47	*6
23 Dec 2024	30	1674	12	2	4	39	25	6
24 Dec 2024	30	1674	12	2	4	39	25	6
25 Dec 2024	30	1674	12	2	4	39	25	6
26 Dec 2024	*58	*1023	*10	*2	*5	*49	*9	*5
27 Dec 2024	*58	*1023	*10	*2	*5	*49	*9	*5
28 Dec 2024	*58	*1023	*10	*2	*5	*49	*9	*5
29 Dec 2024	*58	*1023	*10	*2	*5	*49	*9	*5
30 Dec 2024	49	337	7	2	4	79	7	5
31 Dec 2024	49	337	7	2	4	79	7	5

* Geometric mean calculated using n<5

Table 2.2

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

Date	S4	S5	S6	S8	S9	S10	S11	S12
03 Dec 2024	IC	IC	IC	IC	IC	IC	IC	IC
10 Dec 2024	IC	E	IC	IC	IC	IC	IC	IC
17 Dec 2024	IC	IC	IC	IC	IC	IC	IC	IC
23 Dec 2024	E	E	IC	IC	IC	E	IC	IC
30 Dec 2024	IC	IC	IC	IC	IC	E	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 Dec 2024	13	133	13	5	7	36	30	12
02 Dec 2024	13	133	13	5	7	36	30	12
03 Dec 2024	18	177	18	4	8	36	47	6
04 Dec 2024	18	177	18	4	8	36	47	6
05 Dec 2024	18	177	18	4	8	36	47	6
06 Dec 2024	18	177	18	4	8	36	47	6
07 Dec 2024	18	177	18	4	8	36	47	6
08 Dec 2024	18	177	18	4	8	36	47	6
09 Dec 2024	18	177	18	4	8	36	47	6
10 Dec 2024	20	457	13	3	5	47	65	6
11 Dec 2024	20	457	13	3	5	47	65	6
12 Dec 2024	20	457	13	3	5	47	65	6
13 Dec 2024	20	457	13	3	5	47	65	6
14 Dec 2024	20	457	13	3	5	47	65	6
15 Dec 2024	20	457	13	3	5	47	65	6
16 Dec 2024	20	457	13	3	5	47	65	6
17 Dec 2024	17	425	15	3	4	27	65	6
18 Dec 2024	17	425	15	3	4	27	65	6
19 Dec 2024	17	425	15	3	4	27	65	6
20 Dec 2024	17	425	15	3	4	27	65	6
21 Dec 2024	17	425	15	3	4	27	65	6
22 Dec 2024	17	425	15	3	4	27	65	6
23 Dec 2024	31	686	11	3	3	59	43	5
24 Dec 2024	25	680	13	3	3	59	49	4
25 Dec 2024	25	680	13	3	3	59	49	4
26 Dec 2024	25	680	13	3	3	59	49	4
27 Dec 2024	25	680	13	3	3	59	49	4
28 Dec 2024	25	680	13	3	3	59	49	4
29 Dec 2024	25	680	13	3	3	59	49	4
30 Dec 2024	24	411	10	3	3	80	31	4
31 Dec 2024	23	520	8	3	3	79	32	3

* 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
December	E	E	IC	IC	IC	E	E	IC

IC = In Compliance

E = Exceedance

ns = not sampled

ND = no data

Table 2.5

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

Date	S4	S5	S6	S8	S9	S10	S11	S12
01 Dec 2024	*900	*8900	*140	*20	*110	*1100	*430	*30
02 Dec 2024	*900	*8900	*140	*20	*110	*1100	*430	*30
03 Dec 2024	600	1800	200	20	20	1000	200	20
04 Dec 2024	600	1800	200	20	20	1000	200	20
05 Dec 2024	*370	*8900	*210	*20	*20	*530	*460	*30
06 Dec 2024	*370	*8900	*210	*20	*20	*530	*460	*30
07 Dec 2024	*370	*8900	*210	*20	*20	*530	*460	*30
08 Dec 2024	*370	*8900	*210	*20	*20	*530	*460	*30
09 Dec 2024	*370	*8900	*210	*20	*20	*530	*460	*30
10 Dec 2024	140	16000	80	20	20	160	200	20
11 Dec 2024	140	16000	80	20	20	160	200	20
12 Dec 2024	*120	*8900	*210	*20	*20	*110	*460	*23
13 Dec 2024	*120	*8900	*210	*20	*20	*110	*460	*23
14 Dec 2024	*120	*8900	*210	*20	*20	*110	*460	*23
15 Dec 2024	*120	*8900	*210	*20	*20	*110	*460	*23
16 Dec 2024	*120	*8900	*210	*20	*20	*110	*460	*23
17 Dec 2024	140	1800	80	20	20	160	200	20
18 Dec 2024	140	1800	80	20	20	160	200	20
19 Dec 2024	*120	*8900	*50	*20	*20	*110	*170	*13
20 Dec 2024	*120	*8900	*50	*20	*20	*110	*170	*13
21 Dec 2024	*120	*8900	*50	*20	*20	*110	*170	*13
22 Dec 2024	*120	*8900	*50	*20	*20	*110	*170	*13
23 Dec 2024	140	16000	40	20	20	160	140	20
24 Dec 2024	140	16000	40	20	20	160	140	20
25 Dec 2024	140	16000	40	20	20	160	140	20
26 Dec 2024	*170	*8900	*30	*20	*20	*180	*80	*13
27 Dec 2024	*170	*8900	*30	*20	*20	*180	*80	*13
28 Dec 2024	*170	*8900	*30	*20	*20	*180	*80	*13
29 Dec 2024	*170	*8900	*30	*20	*20	*180	*80	*13
30 Dec 2024	140	1800	20	20	20	200	20	20
31 Dec 2024	140	1800	20	20	20	200	20	20

* Median calculated using n<5

Table 2.6

Summary of compliance at the SBOO shore stations with the Ocean Plan's Statistical Threshold Value 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
December	E	E	E	IC	IC	E	IC	IC

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 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 Dec 2024	830	6600	1100	460
S0	10 Dec 2024	830	16000	1600e	1100
S0	17 Dec 2024	825	>16000	>12000	12000
S0	23 Dec 2024	835	>16000	>12000	>12000
S0	30 Dec 2024	920	>16000	>12000	>12000
S10	03 Dec 2024	1054	20e	2e	<2
S10	10 Dec 2024	1138	160e	18e	58
S10	17 Dec 2024	1032	<200	30e	2e
S10	23 Dec 2024	1059	>16000	5200	6800
S10	30 Dec 2024	1036	2400e	560	500
S11	03 Dec 2024	1001	200e	62	120e
S11	10 Dec 2024	1039	140e	28e	100e
S11	17 Dec 2024	946	<20	2e	2e
S11	23 Dec 2024	955	<20	2e	4e
S11	30 Dec 2024	950	<20	<2	<2
S12	03 Dec 2024	852	<2	4e	2e
S12	10 Dec 2024	913	6e	<2	<2
S12	17 Dec 2024	837	20e	12e	<2
S12	23 Dec 2024	856	<20	8e	2e
S12	30 Dec 2024	849	<20	4e	2e
S2	03 Dec 2024	935	>16000	7200	5800
S2	10 Dec 2024	935	1100	54	40e
S2	17 Dec 2024	950	440	74	14e
S2	23 Dec 2024	940	580	360e	20e
S2	30 Dec 2024	1010	2200e	760	240e
S3	03 Dec 2024	910	100e	16e	60e
S3	10 Dec 2024	910	200e	28e	14e
S3	17 Dec 2024	910	1600	520	84
S3	23 Dec 2024	905	300e	120e	20e
S3	30 Dec 2024	955	520	120e	78
S4	03 Dec 2024	1110	140e	4e	18e
S4	10 Dec 2024	1152	100e	10e	12e
S4	17 Dec 2024	1051	200e	84	6e
S4	23 Dec 2024	1113	10000	3400e	1400e
S4	30 Dec 2024	1051	80e	26e	22e
S5	03 Dec 2024	936	60e	<20	22e
S5	10 Dec 2024	1024	>16000	>12000	>12000
S5	17 Dec 2024	921	1800e	380e	26e
S5	23 Dec 2024	938	>16000	>12000	>12000
S5	30 Dec 2024	928	20e	4e	20e
S6	03 Dec 2024	1018	340e	120e	80e
S6	10 Dec 2024	1050	20e	10e	<2
S6	17 Dec 2024	1001	4e	2e	4e
S6	23 Dec 2024	1002	40e	4e	<2
S6	30 Dec 2024	1002	<20	<2	2e
S8	03 Dec 2024	833	2e	<2	2e

Station	Date	Time	Total	Fecal	Entero
S8	10 Dec 2024	851	<20	<2	2e
S8	17 Dec 2024	819	<20	<2	2e
S8	23 Dec 2024	838	<20	<2	2e
S8	30 Dec 2024	831	<20	2e	4e
S9	03 Dec 2024	817	<20	<2	4e
S9	10 Dec 2024	833	20e	<2	6e
S9	17 Dec 2024	804	60e	10e	<2
S9	23 Dec 2024	819	<20	<20	2e
S9	30 Dec 2024	811	<20	2e	<2

ns = not sampled
ND = no data

Comments

date	station	depth	parmcode	comments
23-Dec-2024	S4			Colony found on nonselective media, but no colonies found on selective media. This doesn't impact results.
23-Dec-2024	S5			Colony found on nonselective media, but no colonies found on selective media. This doesn't impact results.
23-Dec-2024	S6			Colony found on nonselective media, but no colonies found on selective media. This doesn't impact results.
23-Dec-2024	S8			Colony found on nonselective media, but no colonies found on selective media. This doesn't impact results.
23-Dec-2024	S9			Colony found on nonselective media, but no colonies found on selective media. This doesn't impact results.
23-Dec-2024	S10			Colony found on nonselective media, but no colonies found on selective media. This doesn't impact results.

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 Dec 2024	Arrive Time	830
S0	03 Dec 2024	Wind Speed (kts)	1.3
S0	03 Dec 2024	Wind Dir	NE
S0	03 Dec 2024	Animal Life	Seagull-20;
S0	03 Dec 2024	Floatables	None
S0	03 Dec 2024	Current Direction	S
S0	03 Dec 2024	Water Temp (C)	12
S0	03 Dec 2024	High Tide Time	905
S0	03 Dec 2024	Low Tide Time	246
S0	03 Dec 2024	Comments	Water turbid; Trash-0; Kelp; 1.0 L/s water flowing from storm drain
S0	10 Dec 2024	Arrive Time	830
S0	10 Dec 2024	Wind Speed (kts)	12
S0	10 Dec 2024	Wind Dir	NE
S0	10 Dec 2024	Animal Life	
S0	10 Dec 2024	Floatables	None
S0	10 Dec 2024	Current Direction	S
S0	10 Dec 2024	Water Temp (C)	11
S0	10 Dec 2024	High Tide Time	441
S0	10 Dec 2024	Low Tide Time	1132
S0	10 Dec 2024	Comments	Water turbid; Trash-0; Kelp; 1.0 L/s water flowing from storm drain
S0	17 Dec 2024	Arrive Time	825
S0	17 Dec 2024	Wind Speed (kts)	1.1
S0	17 Dec 2024	Wind Dir	NE
S0	17 Dec 2024	Animal Life	Dog-1; Seagull-20;
S0	17 Dec 2024	Floatables	None
S0	17 Dec 2024	Current Direction	S
S0	17 Dec 2024	Water Temp (C)	12
S0	17 Dec 2024	High Tide Time	929
S0	17 Dec 2024	Low Tide Time	319
S0	17 Dec 2024	Comments	Water turbid; Trash-0; Kelp; 1.0 L/s water flowing from storm drain
S0	23 Dec 2024	Arrive Time	835
S0	23 Dec 2024	Wind Speed (kts)	0
S0	23 Dec 2024	Wind Dir	XX
S0	23 Dec 2024	Animal Life	Dog-2; Seagull-20;
S0	23 Dec 2024	Floatables	None
S0	23 Dec 2024	Current Direction	S
S0	23 Dec 2024	Water Temp (C)	13
S0	23 Dec 2024	High Tide Time	351
S0	23 Dec 2024	Low Tide Time	1040
S0	23 Dec 2024	Comments	Water turbid; Trash-0; Kelp; Algae; Anemometer malfunctioned; Observed cork plug and plastics on the beach; 0.5L/sec water flowing from storm drain
S0	30 Dec 2024	Arrive Time	920
S0	30 Dec 2024	Wind Speed (kts)	1.3
S0	30 Dec 2024	Wind Dir	NE
S0	30 Dec 2024	Animal Life	Seagull-10;
S0	30 Dec 2024	Floatables	None
S0	30 Dec 2024	Current Direction	N
S0	30 Dec 2024	Water Temp (C)	11

Station	Date	Parameter	Value
S0	30 Dec 2024	High Tide Time	752
S0	30 Dec 2024	Low Tide Time	139
S0	30 Dec 2024	Comments	Water clear; Trash-0; Kelp; Person/Walker/Jogger-2; 0.5L/sec water flowing from storm drain
S2	03 Dec 2024	Arrive Time	935
S2	03 Dec 2024	Wind Speed (kts)	1.5
S2	03 Dec 2024	Wind Dir	NE
S2	03 Dec 2024	Animal Life	Dog-1; Seagull-20;
S2	03 Dec 2024	Floatables	None
S2	03 Dec 2024	Current Direction	S
S2	03 Dec 2024	Water Temp (C)	12
S2	03 Dec 2024	High Tide Time	905
S2	03 Dec 2024	Low Tide Time	246
S2	03 Dec 2024	Comments	Water turbid; Trash-0; Kelp; No flow from storm drain
S2	10 Dec 2024	Arrive Time	935
S2	10 Dec 2024	Wind Speed (kts)	7
S2	10 Dec 2024	Wind Dir	NE
S2	10 Dec 2024	Animal Life	Dog-2; Seagull-20;
S2	10 Dec 2024	Floatables	None
S2	10 Dec 2024	Current Direction	S
S2	10 Dec 2024	Water Temp (C)	13
S2	10 Dec 2024	High Tide Time	441
S2	10 Dec 2024	Low Tide Time	1132
S2	10 Dec 2024	Comments	Water turbid; Trash-0; Kelp; No flow from storm drain
S2	17 Dec 2024	Arrive Time	950
S2	17 Dec 2024	Wind Speed (kts)	1.1
S2	17 Dec 2024	Wind Dir	NE
S2	17 Dec 2024	Animal Life	Dog-3; Seagull-20;
S2	17 Dec 2024	Floatables	None
S2	17 Dec 2024	Current Direction	S
S2	17 Dec 2024	Water Temp (C)	12
S2	17 Dec 2024	High Tide Time	929
S2	17 Dec 2024	Low Tide Time	319
S2	17 Dec 2024	Comments	Water turbid; Trash-0; Kelp; No flow from storm drain
S2	23 Dec 2024	Arrive Time	940
S2	23 Dec 2024	Wind Speed (kts)	0
S2	23 Dec 2024	Wind Dir	XX
S2	23 Dec 2024	Animal Life	Seagull-20;
S2	23 Dec 2024	Floatables	None
S2	23 Dec 2024	Current Direction	S
S2	23 Dec 2024	Water Temp (C)	13
S2	23 Dec 2024	High Tide Time	351
S2	23 Dec 2024	Low Tide Time	1040
S2	23 Dec 2024	Comments	Water turbid; Trash-0; Kelp; Algae; Anemometer malfunctioned; No flow from storm drain
S2	30 Dec 2024	Arrive Time	1020
S2	30 Dec 2024	Wind Speed (kts)	1.6
S2	30 Dec 2024	Wind Dir	NE
S2	30 Dec 2024	Animal Life	Dog-2; Seagull-10;
S2	30 Dec 2024	Floatables	None
S2	30 Dec 2024	Current Direction	N
S2	30 Dec 2024	Water Temp (C)	11
S2	30 Dec 2024	High Tide Time	752
S2	30 Dec 2024	Low Tide Time	139
S2	30 Dec 2024	Comments	Water clear; Trash-0; Kelp; Person/Walker/Jogger-6; No flow from storm drain

Station	Date	Parameter	Value
S3	03 Dec 2024	Arrive Time	910
S3	03 Dec 2024	Wind Speed (kts)	1.8
S3	03 Dec 2024	Wind Dir	NE
S3	03 Dec 2024	Animal Life	Seagull-20;
S3	03 Dec 2024	Floatables	None
S3	03 Dec 2024	Current Direction	S
S3	03 Dec 2024	Water Temp (C)	12
S3	03 Dec 2024	High Tide Time	905
S3	03 Dec 2024	Low Tide Time	246
S3	03 Dec 2024	Comments	Waer turbid; Trash-0; Kelp; No flow from storm drain
S3	10 Dec 2024	Arrive Time	910
S3	10 Dec 2024	Wind Speed (kts)	9
S3	10 Dec 2024	Wind Dir	NE
S3	10 Dec 2024	Animal Life	Seagull-20;
S3	10 Dec 2024	Floatables	None
S3	10 Dec 2024	Current Direction	S
S3	10 Dec 2024	Water Temp (C)	13
S3	10 Dec 2024	High Tide Time	441
S3	10 Dec 2024	Low Tide Time	1132
S3	10 Dec 2024	Comments	Water turbid; Trash-0; Kelp; No flow from storm drain
S3	17 Dec 2024	Arrive Time	910
S3	17 Dec 2024	Wind Speed (kts)	0.9
S3	17 Dec 2024	Wind Dir	NE
S3	17 Dec 2024	Animal Life	Seagull-20;
S3	17 Dec 2024	Floatables	None
S3	17 Dec 2024	Current Direction	S
S3	17 Dec 2024	Water Temp (C)	12
S3	17 Dec 2024	High Tide Time	929
S3	17 Dec 2024	Low Tide Time	319
S3	17 Dec 2024	Comments	Water turbid; Trash-0; Kelp; No flow from storm drain
S3	23 Dec 2024	Arrive Time	905
S3	23 Dec 2024	Wind Speed (kts)	0
S3	23 Dec 2024	Wind Dir	XX
S3	23 Dec 2024	Animal Life	Seagull-20;
S3	23 Dec 2024	Floatables	None
S3	23 Dec 2024	Current Direction	S
S3	23 Dec 2024	Water Temp (C)	13
S3	23 Dec 2024	High Tide Time	351
S3	23 Dec 2024	Low Tide Time	1040
S3	23 Dec 2024	Comments	Water turbid; Trash-0; Kelp; Algae; Anemometer malfunctioned; No flow from storm drain
S3	30 Dec 2024	Arrive Time	955
S3	30 Dec 2024	Wind Speed (kts)	1.2
S3	30 Dec 2024	Wind Dir	NE
S3	30 Dec 2024	Animal Life	Seagull-10;
S3	30 Dec 2024	Floatables	None
S3	30 Dec 2024	Current Direction	N
S3	30 Dec 2024	Water Temp (C)	11
S3	30 Dec 2024	High Tide Time	752
S3	30 Dec 2024	Low Tide Time	139
S3	30 Dec 2024	Comments	Water clear; Trash-0; Kelp; Person/Walker/Jogger-3; No flow from storm drain
S4	03 Dec 2024	Arrive Time	1110
S4	03 Dec 2024	Wind Speed (kts)	3.7
S4	03 Dec 2024	Wind Dir	W

Station	Date	Parameter	Value
S4	03 Dec 2024	Animal Life	
S4	03 Dec 2024	Floatables	Foam
S4	03 Dec 2024	Current Direction	E
S4	03 Dec 2024	Water Temp (C)	14.1
S4	03 Dec 2024	High Tide Time	905
S4	03 Dec 2024	Low Tide Time	246
S4	03 Dec 2024	Comments	Water clear; Trash-1; Kelp;Seagrass;Debris
S4	10 Dec 2024	Arrive Time	1152
S4	10 Dec 2024	Wind Speed (kts)	6.9
S4	10 Dec 2024	Wind Dir	N
S4	10 Dec 2024	Animal Life	
S4	10 Dec 2024	Floatables	None
S4	10 Dec 2024	Current Direction	S
S4	10 Dec 2024	Water Temp (C)	10.9
S4	10 Dec 2024	High Tide Time	441
S4	10 Dec 2024	Low Tide Time	1132
S4	10 Dec 2024	Comments	Water clear; Trash-1; Kelp;Seagrass
S4	17 Dec 2024	Arrive Time	1051
S4	17 Dec 2024	Wind Speed (kts)	3.8
S4	17 Dec 2024	Wind Dir	W
S4	17 Dec 2024	Animal Life	
S4	17 Dec 2024	Floatables	None
S4	17 Dec 2024	Current Direction	E
S4	17 Dec 2024	Water Temp (C)	13.9
S4	17 Dec 2024	High Tide Time	929
S4	17 Dec 2024	Low Tide Time	319
S4	17 Dec 2024	Comments	Water clear; Trash-1; Kelp;Debris;Seagrass
S4	23 Dec 2024	Arrive Time	1113
S4	23 Dec 2024	Wind Speed (kts)	4.2
S4	23 Dec 2024	Wind Dir	W
S4	23 Dec 2024	Animal Life	
S4	23 Dec 2024	Floatables	None
S4	23 Dec 2024	Current Direction	S
S4	23 Dec 2024	Water Temp (C)	13.2
S4	23 Dec 2024	High Tide Time	351
S4	23 Dec 2024	Low Tide Time	1040
S4	23 Dec 2024	Comments	Water clear; Trash-1; Seagrass;Kelp; R
S4	30 Dec 2024	Arrive Time	1051
S4	30 Dec 2024	Wind Speed (kts)	5.2
S4	30 Dec 2024	Wind Dir	NW
S4	30 Dec 2024	Animal Life	
S4	30 Dec 2024	Floatables	None
S4	30 Dec 2024	Current Direction	S
S4	30 Dec 2024	Water Temp (C)	13.6
S4	30 Dec 2024	High Tide Time	752
S4	30 Dec 2024	Low Tide Time	139
S4	30 Dec 2024	Comments	Water clear; Trash-2; Kelp;Debris
S10	03 Dec 2024	Arrive Time	1054
S10	03 Dec 2024	Wind Speed (kts)	2.8
S10	03 Dec 2024	Wind Dir	SW
S10	03 Dec 2024	Animal Life	
S10	03 Dec 2024	Floatables	None
S10	03 Dec 2024	Current Direction	E
S10	03 Dec 2024	Water Temp (C)	14.7
S10	03 Dec 2024	High Tide Time	905
S10	03 Dec 2024	Low Tide Time	246

Station	Date	Parameter	Value
S10	03 Dec 2024	Comments	Water clear; Trash-1; Kelp;Seagrass;Debris
S10	10 Dec 2024	Arrive Time	1138
S10	10 Dec 2024	Wind Speed (kts)	7.9
S10	10 Dec 2024	Wind Dir	N
S10	10 Dec 2024	Animal Life	
S10	10 Dec 2024	Floatables	None
S10	10 Dec 2024	Current Direction	S
S10	10 Dec 2024	Water Temp (C)	14.5
S10	10 Dec 2024	High Tide Time	441
S10	10 Dec 2024	Low Tide Time	1132
S10	10 Dec 2024	Comments	Water clear; Trash-1; Kelp;Seagrass; Person/Walker/Jogger-2
S10	17 Dec 2024	Arrive Time	1032
S10	17 Dec 2024	Wind Speed (kts)	4.4
S10	17 Dec 2024	Wind Dir	W
S10	17 Dec 2024	Animal Life	
S10	17 Dec 2024	Floatables	None
S10	17 Dec 2024	Current Direction	E
S10	17 Dec 2024	Water Temp (C)	14.3
S10	17 Dec 2024	High Tide Time	929
S10	17 Dec 2024	Low Tide Time	319
S10	17 Dec 2024	Comments	Water clear; Trash-1; Kelp;Seagrass;Debris
S10	23 Dec 2024	Arrive Time	1059
S10	23 Dec 2024	Wind Speed (kts)	23
S10	23 Dec 2024	Wind Dir	N
S10	23 Dec 2024	Animal Life	
S10	23 Dec 2024	Floatables	None
S10	23 Dec 2024	Current Direction	S
S10	23 Dec 2024	Water Temp (C)	12.3
S10	23 Dec 2024	High Tide Time	351
S10	23 Dec 2024	Low Tide Time	1040
S10	23 Dec 2024	Comments	Water clear; Trash-1; Kelp;Seagrass
S10	30 Dec 2024	Arrive Time	1036
S10	30 Dec 2024	Wind Speed (kts)	4.7
S10	30 Dec 2024	Wind Dir	NW
S10	30 Dec 2024	Animal Life	
S10	30 Dec 2024	Floatables	Diaper; Horse poop
S10	30 Dec 2024	Current Direction	S
S10	30 Dec 2024	Water Temp (C)	12.5
S10	30 Dec 2024	High Tide Time	752
S10	30 Dec 2024	Low Tide Time	139
S10	30 Dec 2024	Comments	Water clear; Trash-3; Kelp;Seagrass;Debris
S5	03 Dec 2024	Arrive Time	936
S5	03 Dec 2024	Wind Speed (kts)	2.1
S5	03 Dec 2024	Wind Dir	SW
S5	03 Dec 2024	Animal Life	
S5	03 Dec 2024	Floatables	None
S5	03 Dec 2024	Current Direction	E
S5	03 Dec 2024	Water Temp (C)	11.8
S5	03 Dec 2024	High Tide Time	905
S5	03 Dec 2024	Low Tide Time	246
S5	03 Dec 2024	Comments	Water clear; Trash-1; Person/Walker/Jogger-1
S5	10 Dec 2024	Arrive Time	1024
S5	10 Dec 2024	Wind Speed (kts)	3.1
S5	10 Dec 2024	Wind Dir	NW

Station	Date	Parameter	Value
S5	10 Dec 2024	Animal Life	
S5	10 Dec 2024	Floating	Toilet tissues
S5	10 Dec 2024	Current Direction	S
S5	10 Dec 2024	Water Temp (C)	12.3
S5	10 Dec 2024	High Tide Time	441
S5	10 Dec 2024	Low Tide Time	1132
S5	10 Dec 2024	Comments	Water clear; Trash-1; Seagrass;Kelp; Person/Walker/Jogger-6
S5	17 Dec 2024	Arrive Time	921
S5	17 Dec 2024	Wind Speed (kts)	5.2
S5	17 Dec 2024	Wind Dir	W
S5	17 Dec 2024	Animal Life	
S5	17 Dec 2024	Floating	None
S5	17 Dec 2024	Current Direction	E
S5	17 Dec 2024	Water Temp (C)	13.3
S5	17 Dec 2024	High Tide Time	929
S5	17 Dec 2024	Low Tide Time	319
S5	17 Dec 2024	Comments	Water clear; Trash-1; Kelp;Seagrass;Debris
S5	23 Dec 2024	Arrive Time	938
S5	23 Dec 2024	Wind Speed (kts)	5.6
S5	23 Dec 2024	Wind Dir	NW
S5	23 Dec 2024	Animal Life	
S5	23 Dec 2024	Floating	None
S5	23 Dec 2024	Current Direction	S
S5	23 Dec 2024	Water Temp (C)	13.2
S5	23 Dec 2024	High Tide Time	351
S5	23 Dec 2024	Low Tide Time	1040
S5	23 Dec 2024	Comments	Water clear; Trash-1; Kelp;Seagrass
S5	30 Dec 2024	Arrive Time	928
S5	30 Dec 2024	Wind Speed (kts)	4.2
S5	30 Dec 2024	Wind Dir	NE
S5	30 Dec 2024	Animal Life	Bird-5;
S5	30 Dec 2024	Floating	Foam
S5	30 Dec 2024	Current Direction	S
S5	30 Dec 2024	Water Temp (C)	12.4
S5	30 Dec 2024	High Tide Time	752
S5	30 Dec 2024	Low Tide Time	139
S5	30 Dec 2024	Comments	Water clear; Trash-2; Kelp;Seagrass;Debris; Sewage-like odor
S11	03 Dec 2024	Arrive Time	1001
S11	03 Dec 2024	Wind Speed (kts)	3.2
S11	03 Dec 2024	Wind Dir	W
S11	03 Dec 2024	Animal Life	
S11	03 Dec 2024	Floating	None
S11	03 Dec 2024	Current Direction	E
S11	03 Dec 2024	Water Temp (C)	11.3
S11	03 Dec 2024	High Tide Time	905
S11	03 Dec 2024	Low Tide Time	246
S11	03 Dec 2024	Comments	Water clear; Trash-1; Kelp;Seagrass;Debris
S11	10 Dec 2024	Arrive Time	1039
S11	10 Dec 2024	Wind Speed (kts)	3.1
S11	10 Dec 2024	Wind Dir	N
S11	10 Dec 2024	Animal Life	
S11	10 Dec 2024	Floating	None
S11	10 Dec 2024	Current Direction	S
S11	10 Dec 2024	Water Temp (C)	12.7

Station	Date	Parameter	Value
S11	10 Dec 2024	High Tide Time	441
S11	10 Dec 2024	Low Tide Time	1132
S11	10 Dec 2024	Comments	Water clear; Trash-1; Kelp;Seagrass;Algae; Person/Walker/Jogger-4
S11	17 Dec 2024	Arrive Time	946
S11	17 Dec 2024	Wind Speed (kts)	2.5
S11	17 Dec 2024	Wind Dir	NW
S11	17 Dec 2024	Animal Life	
S11	17 Dec 2024	Floatables	None
S11	17 Dec 2024	Current Direction	E
S11	17 Dec 2024	Water Temp (C)	14.7
S11	17 Dec 2024	High Tide Time	929
S11	17 Dec 2024	Low Tide Time	319
S11	17 Dec 2024	Comments	Water clear; Trash-1; Kelp;Seagrass;Debris
S11	23 Dec 2024	Arrive Time	955
S11	23 Dec 2024	Wind Speed (kts)	3
S11	23 Dec 2024	Wind Dir	NW
S11	23 Dec 2024	Animal Life	
S11	23 Dec 2024	Floatables	None
S11	23 Dec 2024	Current Direction	S
S11	23 Dec 2024	Water Temp (C)	13.1
S11	23 Dec 2024	High Tide Time	351
S11	23 Dec 2024	Low Tide Time	1040
S11	23 Dec 2024	Comments	Water clear; Trash-2; Kelp;Seagrass
S11	30 Dec 2024	Arrive Time	950
S11	30 Dec 2024	Wind Speed (kts)	2.1
S11	30 Dec 2024	Wind Dir	N
S11	30 Dec 2024	Animal Life	Bird-1;
S11	30 Dec 2024	Floatables	Foam; Dead animals
S11	30 Dec 2024	Current Direction	S
S11	30 Dec 2024	Water Temp (C)	12.7
S11	30 Dec 2024	High Tide Time	752
S11	30 Dec 2024	Low Tide Time	139
S11	30 Dec 2024	Comments	Water clear; Trash-2; Kelp;Seagrass;Debris
S6	03 Dec 2024	Arrive Time	1018
S6	03 Dec 2024	Wind Speed (kts)	2.7
S6	03 Dec 2024	Wind Dir	W
S6	03 Dec 2024	Animal Life	
S6	03 Dec 2024	Floatables	Foam
S6	03 Dec 2024	Current Direction	E
S6	03 Dec 2024	Water Temp (C)	13.7
S6	03 Dec 2024	High Tide Time	905
S6	03 Dec 2024	Low Tide Time	246
S6	03 Dec 2024	Comments	Water clear; Trash-1; Kelp;Seagrass;Algae;Debris
S6	10 Dec 2024	Arrive Time	1050
S6	10 Dec 2024	Wind Speed (kts)	4.2
S6	10 Dec 2024	Wind Dir	NW
S6	10 Dec 2024	Animal Life	
S6	10 Dec 2024	Floatables	None
S6	10 Dec 2024	Current Direction	S
S6	10 Dec 2024	Water Temp (C)	13.7
S6	10 Dec 2024	High Tide Time	441
S6	10 Dec 2024	Low Tide Time	1132
S6	10 Dec 2024	Comments	Water clear; Surfer/Paddle boarder-2; Trash-1; Kelp;Seagrass;Algae; Person/Walker/Jogger-2

Station	Date	Parameter	Value
S6	17 Dec 2024	Arrive Time	1001
S6	17 Dec 2024	Wind Speed (kts)	0
S6	17 Dec 2024	Wind Dir	W
S6	17 Dec 2024	Animal Life	
S6	17 Dec 2024	Floatables	None
S6	17 Dec 2024	Current Direction	E
S6	17 Dec 2024	Water Temp (C)	12
S6	17 Dec 2024	High Tide Time	929
S6	17 Dec 2024	Low Tide Time	319
S6	17 Dec 2024	Comments	Water clear; Trash-1; Kelp;Seagrass;Algae
S6	23 Dec 2024	Arrive Time	1007
S6	23 Dec 2024	Wind Speed (kts)	2.9
S6	23 Dec 2024	Wind Dir	NW
S6	23 Dec 2024	Animal Life	
S6	23 Dec 2024	Floatables	None
S6	23 Dec 2024	Current Direction	S
S6	23 Dec 2024	Water Temp (C)	12.7
S6	23 Dec 2024	High Tide Time	351
S6	23 Dec 2024	Low Tide Time	1040
S6	23 Dec 2024	Comments	Water clear; Trash-2; Kelp;Seagrass;Algae
S6	30 Dec 2024	Arrive Time	1002
S6	30 Dec 2024	Wind Speed (kts)	3.2666
S6	30 Dec 2024	Wind Dir	N
S6	30 Dec 2024	Animal Life	Bird-20;
S6	30 Dec 2024	Floatables	None
S6	30 Dec 2024	Current Direction	S
S6	30 Dec 2024	Water Temp (C)	12.7
S6	30 Dec 2024	High Tide Time	752
S6	30 Dec 2024	Low Tide Time	139
S6	30 Dec 2024	Comments	Water clear; Trash-2; Kelp;Seagrass; Person/Walker/Jogger-4
S12	03 Dec 2024	Arrive Time	852
S12	03 Dec 2024	Wind Speed (kts)	0.9
S12	03 Dec 2024	Wind Dir	SW
S12	03 Dec 2024	Animal Life	
S12	03 Dec 2024	Floatables	None
S12	03 Dec 2024	Current Direction	E
S12	03 Dec 2024	Water Temp (C)	13.3
S12	03 Dec 2024	High Tide Time	905
S12	03 Dec 2024	Low Tide Time	246
S12	03 Dec 2024	Comments	Water clear; Trash-1; Kelp;Seagrass;Debris
S12	10 Dec 2024	Arrive Time	913
S12	10 Dec 2024	Wind Speed (kts)	6
S12	10 Dec 2024	Wind Dir	NW
S12	10 Dec 2024	Animal Life	
S12	10 Dec 2024	Floatables	None
S12	10 Dec 2024	Current Direction	S
S12	10 Dec 2024	Water Temp (C)	12.9
S12	10 Dec 2024	High Tide Time	441
S12	10 Dec 2024	Low Tide Time	1132
S12	10 Dec 2024	Comments	Water clear; Trash-1; Seagrass;Kelp; Person/Walker/Jogger-6
S12	17 Dec 2024	Arrive Time	837
S12	17 Dec 2024	Wind Speed (kts)	2.9
S12	17 Dec 2024	Wind Dir	SW
S12	17 Dec 2024	Animal Life	

Station	Date	Parameter	Value
S12	17 Dec 2024	Floatables	None
S12	17 Dec 2024	Current Direction	E
S12	17 Dec 2024	Water Temp (C)	13.4
S12	17 Dec 2024	High Tide Time	929
S12	17 Dec 2024	Low Tide Time	319
S12	17 Dec 2024	Comments	Water clear; Trash-1; Kelp;Seagrass;Debris
S12	23 Dec 2024	Arrive Time	856
S12	23 Dec 2024	Wind Speed (kts)	0.7
S12	23 Dec 2024	Wind Dir	W
S12	23 Dec 2024	Animal Life	
S12	23 Dec 2024	Floatables	None
S12	23 Dec 2024	Current Direction	S
S12	23 Dec 2024	Water Temp (C)	13
S12	23 Dec 2024	High Tide Time	351
S12	23 Dec 2024	Low Tide Time	1040
S12	23 Dec 2024	Comments	Water clear; Trash-1; Seagrass;Kelp; Person/Walker/Jogger-3
S12	30 Dec 2024	Arrive Time	849
S12	30 Dec 2024	Wind Speed (kts)	0.3
S12	30 Dec 2024	Wind Dir	W
S12	30 Dec 2024	Animal Life	
S12	30 Dec 2024	Floatables	None
S12	30 Dec 2024	Current Direction	E
S12	30 Dec 2024	Water Temp (C)	12
S12	30 Dec 2024	High Tide Time	752
S12	30 Dec 2024	Low Tide Time	139
S12	30 Dec 2024	Comments	Water clear; Trash-1; Kelp;Seagrass;Debris
S8	03 Dec 2024	Arrive Time	833
S8	03 Dec 2024	Wind Speed (kts)	0.7
S8	03 Dec 2024	Wind Dir	S
S8	03 Dec 2024	Animal Life	
S8	03 Dec 2024	Floatables	None
S8	03 Dec 2024	Current Direction	E
S8	03 Dec 2024	Water Temp (C)	12.9
S8	03 Dec 2024	High Tide Time	905
S8	03 Dec 2024	Low Tide Time	246
S8	03 Dec 2024	Comments	Water clear; Trash-1; Kelp;Seagrass;Debris
S8	10 Dec 2024	Arrive Time	851
S8	10 Dec 2024	Wind Speed (kts)	1.5
S8	10 Dec 2024	Wind Dir	N
S8	10 Dec 2024	Animal Life	
S8	10 Dec 2024	Floatables	None
S8	10 Dec 2024	Current Direction	S
S8	10 Dec 2024	Water Temp (C)	12.1
S8	10 Dec 2024	High Tide Time	441
S8	10 Dec 2024	Low Tide Time	1132
S8	10 Dec 2024	Comments	Water clear; Trash-1; Kelp;Seagrass
S8	17 Dec 2024	Arrive Time	819
S8	17 Dec 2024	Wind Speed (kts)	1
S8	17 Dec 2024	Wind Dir	W
S8	17 Dec 2024	Animal Life	
S8	17 Dec 2024	Floatables	None
S8	17 Dec 2024	Current Direction	E
S8	17 Dec 2024	Water Temp (C)	11.8
S8	17 Dec 2024	High Tide Time	929
S8	17 Dec 2024	Low Tide Time	319

Station	Date	Parameter	Value
S8	17 Dec 2024	Comments	Water clear; Trash-1; Kelp;Seagrass;Debris; Person/Walker/Jogger-1
S8	23 Dec 2024	Arrive Time	838
S8	23 Dec 2024	Wind Speed (kts)	3.3
S8	23 Dec 2024	Wind Dir	W
S8	23 Dec 2024	Animal Life	
S8	23 Dec 2024	Floatables	None
S8	23 Dec 2024	Current Direction	S
S8	23 Dec 2024	Water Temp (C)	13.4
S8	23 Dec 2024	High Tide Time	351
S8	23 Dec 2024	Low Tide Time	1040
S8	23 Dec 2024	Comments	Water clear; Trash-1; Kelp;Seagrass
S8	30 Dec 2024	Arrive Time	831
S8	30 Dec 2024	Wind Speed (kts)	2.1
S8	30 Dec 2024	Wind Dir	N
S8	30 Dec 2024	Animal Life	
S8	30 Dec 2024	Floatables	None
S8	30 Dec 2024	Current Direction	S
S8	30 Dec 2024	Water Temp (C)	12.4
S8	30 Dec 2024	High Tide Time	752
S8	30 Dec 2024	Low Tide Time	139
S8	30 Dec 2024	Comments	Water clear; Trash-3; Debris;Kelp;Seagrass
S9	03 Dec 2024	Arrive Time	817
S9	03 Dec 2024	Wind Speed (kts)	1
S9	03 Dec 2024	Wind Dir	SW
S9	03 Dec 2024	Animal Life	
S9	03 Dec 2024	Floatables	None
S9	03 Dec 2024	Current Direction	E
S9	03 Dec 2024	Water Temp (C)	8.2
S9	03 Dec 2024	High Tide Time	905
S9	03 Dec 2024	Low Tide Time	246
S9	03 Dec 2024	Comments	Water clear; Trash-1; Kelp;Seagrass
S9	10 Dec 2024	Arrive Time	833
S9	10 Dec 2024	Wind Speed (kts)	0
S9	10 Dec 2024	Wind Dir	XX
S9	10 Dec 2024	Animal Life	Bird-6;
S9	10 Dec 2024	Floatables	None
S9	10 Dec 2024	Current Direction	S
S9	10 Dec 2024	Water Temp (C)	11.2
S9	10 Dec 2024	High Tide Time	441
S9	10 Dec 2024	Low Tide Time	1132
S9	10 Dec 2024	Comments	Water clear; Trash-1; Kelp;Seagrass; Person/Walker/Jogger-2
S9	17 Dec 2024	Arrive Time	804
S9	17 Dec 2024	Wind Speed (kts)	0.5
S9	17 Dec 2024	Wind Dir	W
S9	17 Dec 2024	Animal Life	
S9	17 Dec 2024	Floatables	None
S9	17 Dec 2024	Current Direction	E
S9	17 Dec 2024	Water Temp (C)	12.7
S9	17 Dec 2024	High Tide Time	929
S9	17 Dec 2024	Low Tide Time	319
S9	17 Dec 2024	Comments	Water clear; Trash-1; Kelp;Seagrass;Debris
S9	23 Dec 2024	Arrive Time	819
S9	23 Dec 2024	Wind Speed (kts)	1.5

Station	Date	Parameter	Value
S9	23 Dec 2024	Wind Dir	S
S9	23 Dec 2024	Animal Life	
S9	23 Dec 2024	Floatables	None
S9	23 Dec 2024	Current Direction	SW
S9	23 Dec 2024	Water Temp (C)	13.1
S9	23 Dec 2024	High Tide Time	351
S9	23 Dec 2024	Low Tide Time	1040
S9	23 Dec 2024	Comments	Water clear; Trash-1; Kelp;Seagrass; Person/Walker/Jogger-5
S9	30 Dec 2024	Arrive Time	811
S9	30 Dec 2024	Wind Speed (kts)	3.2
S9	30 Dec 2024	Wind Dir	SW
S9	30 Dec 2024	Animal Life	Bird-2;
S9	30 Dec 2024	Floatables	None
S9	30 Dec 2024	Current Direction	SW
S9	30 Dec 2024	Water Temp (C)	12.9
S9	30 Dec 2024	High Tide Time	752
S9	30 Dec 2024	Low Tide Time	139
S9	30 Dec 2024	Comments	Water clear; Trash-1; Kelp;Seagrass;Algae;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 Dec 2024	*31	*6	*11	*16	*5	*3	*27
02 Dec 2024	29	8	10	16	4	4	27
03 Dec 2024	29	8	10	16	4	4	27
04 Dec 2024	*52	*11	*15	*27	*5	*4	*51
05 Dec 2024	*52	*11	*15	*27	*5	*4	*51
06 Dec 2024	*52	*11	*15	*27	*5	*4	*51
07 Dec 2024	*52	*11	*15	*27	*5	*4	*51
08 Dec 2024	*52	*11	*15	*27	*5	*4	*51
09 Dec 2024	*52	*11	*15	*27	*5	*4	*51
10 Dec 2024	*52	*11	*15	*27	*5	*4	*51
11 Dec 2024	27	22	10	16	4	4	94
12 Dec 2024	*15	*39	*14	*21	*2	*4	*136
13 Dec 2024	*15	*39	*14	*21	*2	*4	*136
14 Dec 2024	*15	*39	*14	*21	*2	*4	*136
15 Dec 2024	*15	*39	*14	*21	*2	*4	*136
16 Dec 2024	*15	*39	*14	*21	*2	*4	*136
17 Dec 2024	22	55	9	13	2	4	157
18 Dec 2024	*10	*39	*4	*4	*2	*3	*158
19 Dec 2024	*10	*39	*4	*4	*2	*3	*158
20 Dec 2024	*10	*39	*4	*4	*2	*3	*158
21 Dec 2024	*10	*39	*4	*4	*2	*3	*158
22 Dec 2024	*10	*39	*4	*4	*2	*3	*158
23 Dec 2024	*10	*39	*4	*4	*2	*3	*158
24 Dec 2024	*10	*39	*4	*4	*2	*3	*158
25 Dec 2024	*10	*39	*4	*4	*2	*3	*158
26 Dec 2024	*27	*39	*3	*3	*2	*3	*62
27 Dec 2024	*27	*39	*3	*3	*2	*3	*62
28 Dec 2024	*27	*39	*3	*3	*2	*3	*62
29 Dec 2024	*27	*39	*3	*3	*2	*3	*62
30 Dec 2024	25	22	3	3	2	2	31
31 Dec 2024	25	22	3	3	2	2	31

* 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 Dec 2024	IC	IC	IC	IC	IC	IC	IC
11 Dec 2024	IC	E	IC	IC	IC	IC	E
17 Dec 2024	IC	IC	IC	IC	IC	IC	E
26 Dec 2024	IC	IC	IC	IC	IC	IC	IC
30 Dec 2024	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 Dec 2024	10	5	9	6	4	3	10
02 Dec 2024	17	5	9	11	5	3	15
03 Dec 2024	17	5	9	11	5	3	15
04 Dec 2024	17	5	9	11	5	3	15
05 Dec 2024	17	5	9	11	5	3	15
06 Dec 2024	17	5	9	11	5	3	15
07 Dec 2024	17	5	9	11	5	3	15
08 Dec 2024	17	5	9	11	5	3	15
09 Dec 2024	17	5	9	11	5	3	15
10 Dec 2024	17	5	9	11	5	3	15
11 Dec 2024	17	9	9	11	5	3	31
12 Dec 2024	17	9	9	11	5	3	31
13 Dec 2024	17	9	9	11	5	3	31
14 Dec 2024	17	9	9	11	5	3	31
15 Dec 2024	17	9	9	11	5	3	31
16 Dec 2024	25	12	12	15	6	3	53
17 Dec 2024	20	14	9	11	5	3	48
18 Dec 2024	20	14	9	11	5	3	48
19 Dec 2024	20	14	9	11	5	3	48
20 Dec 2024	20	14	9	11	5	3	48
21 Dec 2024	20	14	9	11	5	3	48
22 Dec 2024	20	14	9	11	5	3	48
23 Dec 2024	20	14	9	11	5	3	48
24 Dec 2024	17	20	12	9	2	3	52
25 Dec 2024	17	20	12	9	2	3	52
26 Dec 2024	21	14	9	7	3	3	30
27 Dec 2024	21	14	9	7	3	3	30
28 Dec 2024	21	14	9	7	3	3	30
29 Dec 2024	21	14	9	7	3	3	30
30 Dec 2024	16	7	4	4	3	3	19
31 Dec 2024	16	7	4	4	3	3	19

* 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
December	IC	IC	IC	IC	IC	IC	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 over the previous 30 days unless otherwise noted (*). Values >70 CFU/100 mL exceed the standard.

Date	119		124		125		126		132		139		140				
	2m	6m	11m	6m	2m	9m	2m	6m	2m	6m	2m	12m	18m	2m	6m	9m	
01 Dec 2024	*70	*496	*710	*2	*15	*41	*8	*19	*20	*51	*39	*11	*20	*20	*120	*270	
02 Dec 2024	22	260	360	2	20	22	8	36	20	40	62	20	20	80	140	300	
03 Dec 2024	22	260	360	2	20	22	8	36	20	40	62	20	20	80	140	300	
04 Dec 2024	*71	*620	*880	*19	*28	*104	*51	*91	*16	*51	*91	*81	*12	*90	*170	*320	
05 Dec 2024	*71	*620	*880	*19	*28	*104	*51	*91	*16	*51	*91	*81	*12	*90	*170	*320	
06 Dec 2024	*71	*620	*880	*19	*28	*104	*51	*91	*16	*51	*91	*81	*12	*90	*170	*320	
07 Dec 2024	*71	*620	*880	*19	*28	*104	*51	*91	*16	*51	*91	*81	*12	*90	*170	*320	
08 Dec 2024	*71	*620	*880	*19	*28	*104	*51	*91	*16	*51	*91	*81	*12	*90	*170	*320	
09 Dec 2024	*71	*620	*880	*19	*28	*104	*51	*91	*16	*51	*91	*81	*12	*90	*170	*320	
10 Dec 2024	*71	*620	*880	*19	*28	*104	*51	*91	*16	*51	*91	*81	*12	*90	*170	*320	
11 Dec 2024	22	260	360	36	54	180	22	8	12	40	62	2	2	100	200	340	
12 Dec 2024	*21	*136	*184	*518	*260	*51	*33	*81	*11	*22	*68	*2	*3	*280	*500	*1570	
13 Dec 2024	*21	*136	*184	*518	*260	*51	*33	*81	*11	*22	*68	*2	*3	*280	*500	*1570	
14 Dec 2024	*21	*136	*184	*518	*260	*51	*33	*81	*11	*22	*68	*2	*3	*280	*500	*1570	
15 Dec 2024	*21	*136	*184	*518	*260	*51	*33	*81	*11	*22	*68	*2	*3	*280	*500	*1570	
16 Dec 2024	*21	*136	*184	*518	*260	*51	*33	*81	*11	*22	*68	*2	*3	*280	*500	*1570	
17 Dec 2024	20	28	300	940	180	22	8	4	2	4	16	2	2	2	480	800	340
18 Dec 2024	*14	*20	*154	*488	*160	*15	*5	*3	*2	*3	*9	*2	*2	*940	*1000	*320	
19 Dec 2024	*14	*20	*154	*488	*160	*15	*5	*3	*2	*3	*9	*2	*2	*940	*1000	*320	
20 Dec 2024	*14	*20	*154	*488	*160	*15	*5	*3	*2	*3	*9	*2	*2	*940	*1000	*320	
21 Dec 2024	*14	*20	*154	*488	*160	*15	*5	*3	*2	*3	*9	*2	*2	*940	*1000	*320	
22 Dec 2024	*14	*20	*154	*488	*160	*15	*5	*3	*2	*3	*9	*2	*2	*940	*1000	*320	
23 Dec 2024	*14	*20	*154	*488	*160	*15	*5	*3	*2	*3	*9	*2	*2	*940	*1000	*320	
24 Dec 2024	*14	*20	*154	*488	*160	*15	*5	*3	*2	*3	*9	*2	*2	*940	*1000	*320	
25 Dec 2024	*14	*20	*154	*488	*160	*15	*5	*3	*2	*3	*9	*2	*2	*940	*1000	*320	
26 Dec 2024	*15	*144	*250	*488	*160	*6	*11	*3	*2	*2	*2	*2	*2	*717	*700	*170	
27 Dec 2024	*15	*144	*250	*488	*160	*6	*11	*3	*2	*2	*2	*2	*2	*717	*700	*170	
28 Dec 2024	*15	*144	*250	*488	*160	*6	*11	*3	*2	*2	*2	*2	*2	*717	*700	*170	
29 Dec 2024	*15	*144	*250	*488	*160	*6	*11	*3	*2	*2	*2	*2	*2	*717	*700	*170	
30 Dec 2024	22	240	200	36	54	140	4	2	2	2	2	2	2	34	200	40	
31 Dec 2024	22	240	200	36	54	140	4	2	2	2	2	2	2	34	200	40	

* Median calculated using n<5

Table 3.6

Summary of compliance at the SBOO kelp stations with the Ocean Plan's Statistical Threshold Value 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.

	I19			I24			I25			I26			I32			I39			I40		
Date	2m	6m	11m	2m	6m	11m	2m	6m	9m	2m	6m	9m	2m	6m	9m	2m	12m	18m	2m	6m	9m
December	E	E	E	E	E	E	IC	IC	IC	IC	IC	IC	IC	IC	IC	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
I19	02 Dec 2024	1009	2	22e	2e	2e
I19	02 Dec 2024	1009	6	260e	36e	64
I19	02 Dec 2024	1009	11	360e	26e	110
I19	11 Dec 2024	1036	2	<2	<2	<2
I19	11 Dec 2024	1036	6	2e	<2	<2
I19	11 Dec 2024	1036	11	8e	<2	2e
I19	17 Dec 2024	1010	2	8e	<2	<2
I19	17 Dec 2024	1010	6	28e	4e	2e
I19	17 Dec 2024	1010	11	300e	280e	14e
I19	26 Dec 2024	937	2	1600e	140e	96
I19	26 Dec 2024	937	6	800e	200e	46
I19	26 Dec 2024	937	11	200e	44	12e
I19	30 Dec 2024	1013	2	40e	26e	20e
I19	30 Dec 2024	1013	6	240e	18e	16e
I19	30 Dec 2024	1013	11	80e	14e	20e
I24	02 Dec 2024	1026	2	36e	2e	4e
I24	02 Dec 2024	1026	6	54	2e	4e
I24	02 Dec 2024	1026	11	180e	40	26e
I24	11 Dec 2024	1054	2	1000e	420	36e
I24	11 Dec 2024	1054	6	1300	240e	96
I24	11 Dec 2024	1054	11	1400	480	88
I24	17 Dec 2024	1031	2	940	340e	38
I24	17 Dec 2024	1031	6	920	240e	34e
I24	17 Dec 2024	1031	11	140	48	6e
I24	26 Dec 2024	953	2	2e	<2	<2
I24	26 Dec 2024	953	6	<2	<2	<2
I24	26 Dec 2024	953	11	<2	<2	<2
I24	30 Dec 2024	1036	2	2e	<2	<2
I24	30 Dec 2024	1036	6	4e	<2	2e
I24	30 Dec 2024	1036	11	<2	<2	<2
I25	02 Dec 2024	1033	2	22e	2e	8e
I25	02 Dec 2024	1033	6	58	2e	8e
I25	02 Dec 2024	1033	9	160e	18e	28e
I25	11 Dec 2024	1101	2	8e	2e	2e
I25	11 Dec 2024	1101	6	2e	2e	<2
I25	11 Dec 2024	1101	9	2e	<2	<2
I25	17 Dec 2024	1039	2	4e	<2	<2
I25	17 Dec 2024	1039	6	2e	2e	2e
I25	17 Dec 2024	1039	9	4e	2e	4e

Station	Date	Time	Depth	Total	Fecal	Entero
I25	26 Dec 2024	958	2	<2	<2	<2
I25	26 Dec 2024	958	6	<20	<2	<2
I25	26 Dec 2024	958	9	<2	<2	<2
I25	30 Dec 2024	1043	2	<2	<2	<2
I25	30 Dec 2024	1043	6	<2	<2	<2
I25	30 Dec 2024	1043	9	<2	<2	<2
I26	02 Dec 2024	1041	2	<2	8e	34e
I26	02 Dec 2024	1041	6	4e	10e	42
I26	02 Dec 2024	1041	9	120	30e	38e
I26	11 Dec 2024	1112	2	<2	<2	<2
I26	11 Dec 2024	1112	6	<2	<2	<2
I26	11 Dec 2024	1112	9	<2	<2	<2
I26	17 Dec 2024	1052	2	<2	<2	<2
I26	17 Dec 2024	1052	6	<2	<2	<2
I26	17 Dec 2024	1052	9	<2	<2	<2
I26	26 Dec 2024	1006	2	<2	<2	<2
I26	26 Dec 2024	1006	6	<2	2e	<2
I26	26 Dec 2024	1006	9	<2	<2	2e
I26	30 Dec 2024	1052	2	<2	<2	<2
I26	30 Dec 2024	1052	6	<2	<2	<2
I26	30 Dec 2024	1052	9	4e	2e	<2
I32	02 Dec 2024	1052	2	160e	<2	8e
I32	02 Dec 2024	1052	6	<2	<2	2e
I32	02 Dec 2024	1052	9	<2	<2	<2
I32	11 Dec 2024	1123	2	<2	<2	<2
I32	11 Dec 2024	1123	6	2e	<2	<2
I32	11 Dec 2024	1123	9	<2	<2	<2
I32	17 Dec 2024	1104	2	<2	<2	<2
I32	17 Dec 2024	1104	6	<2	<2	<2
I32	17 Dec 2024	1104	9	<2	<2	<2
I32	26 Dec 2024	1018	2	<20	4e	2e
I32	26 Dec 2024	1018	6	<20	2e	<2
I32	26 Dec 2024	1018	9	<2	<2	6e
I32	30 Dec 2024	1103	2	2e	<2	<2
I32	30 Dec 2024	1103	6	<2	<2	<2
I32	30 Dec 2024	1103	9	<2	<2	<2
I39	02 Dec 2024	950	2	<2	<2	<2
I39	02 Dec 2024	950	12	54	4e	10e
I39	02 Dec 2024	950	18	40e	12e	14e
I39	11 Dec 2024	1017	2	<2	<2	<2
I39	11 Dec 2024	1017	12	<2	<2	<2
I39	11 Dec 2024	1017	18	<2	<2	<2
I39	17 Dec 2024	954	2	<2	<2	<2
I39	17 Dec 2024	954	12	<2	<2	<2
I39	17 Dec 2024	954	18	<2	<2	<2

Station	Date	Time	Depth	Total	Fecal	Enteroc
I39	26 Dec 2024	917	2	<2	2e	<2
I39	26 Dec 2024	917	12	<2	<2	2e
I39	26 Dec 2024	917	18	<20	2e	<2
I39	30 Dec 2024	954	2	<2	<2	2e
I39	30 Dec 2024	954	12	2e	<2	<2
I39	30 Dec 2024	954	18	<2	<2	<2
I40	02 Dec 2024	1018	2	34e	<2	6e
I40	02 Dec 2024	1018	6	200e	14e	44
I40	02 Dec 2024	1018	9	300e	54	56
I40	11 Dec 2024	1046	2	1400	520	180e
I40	11 Dec 2024	1046	6	6800	1800e	240e
I40	11 Dec 2024	1046	9	3800e	980	120e
I40	17 Dec 2024	1023	2	1400e	600	46
I40	17 Dec 2024	1023	6	1200e	220e	32e
I40	17 Dec 2024	1023	9	40e	20e	8e
I40	26 Dec 2024	946	2	<2	<2	<2
I40	26 Dec 2024	946	6	2e	<2	<2
I40	26 Dec 2024	946	9	<20	2e	<2
I40	30 Dec 2024	1026	2	2e	2e	<2
I40	30 Dec 2024	1026	6	2e	2e	<2
I40	30 Dec 2024	1026	9	4e	<2	2e

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
119	02 Dec 2024	Arrive Time	1009
119	02 Dec 2024	Depart Time	1012
119	02 Dec 2024	Air Temp (C)	13.9
119	02 Dec 2024	Visibility (mi)	10
119	02 Dec 2024	Wind Speed (kts)	0.8
119	02 Dec 2024	Wind Dir	NW
119	02 Dec 2024	Sea State	Wind Ripples
119	02 Dec 2024	High Tide Time	830
119	02 Dec 2024	Low Tide Time	1606
119	02 Dec 2024	Comments	
119	11 Dec 2024	Arrive Time	1032
119	11 Dec 2024	Depart Time	1036
119	11 Dec 2024	Air Temp (C)	14.1
119	11 Dec 2024	Visibility (mi)	9
119	11 Dec 2024	Wind Speed (kts)	3.2
119	11 Dec 2024	Wind Dir	NE
119	11 Dec 2024	Sea State	Light Chop
119	11 Dec 2024	High Tide Time	518
119	11 Dec 2024	Low Tide Time	1224
119	11 Dec 2024	Comments	
119	17 Dec 2024	Arrive Time	1010
119	17 Dec 2024	Depart Time	1016
119	17 Dec 2024	Air Temp (C)	14.3
119	17 Dec 2024	Visibility (mi)	10
119	17 Dec 2024	Wind Speed (kts)	20.2
119	17 Dec 2024	Wind Dir	NW
119	17 Dec 2024	Sea State	Light Chop
119	17 Dec 2024	High Tide Time	924
119	17 Dec 2024	Low Tide Time	1700
119	17 Dec 2024	Comments	Kelp Debris
119	26 Dec 2024	Arrive Time	937
119	26 Dec 2024	Depart Time	940
119	26 Dec 2024	Air Temp (C)	12.8
119	26 Dec 2024	Visibility (mi)	8
119	26 Dec 2024	Wind Speed (kts)	7.3
119	26 Dec 2024	Wind Dir	S
119	26 Dec 2024	Sea State	Regular Swell
119	26 Dec 2024	High Tide Time	536
119	26 Dec 2024	Low Tide Time	1300
119	26 Dec 2024	Comments	
119	30 Dec 2024	Arrive Time	1013
119	30 Dec 2024	Depart Time	1018
119	30 Dec 2024	Air Temp (C)	12.8
119	30 Dec 2024	Visibility (mi)	5
119	30 Dec 2024	Wind Speed (kts)	8.6
119	30 Dec 2024	Wind Dir	N
119	30 Dec 2024	Sea State	Confused Swell
119	30 Dec 2024	High Tide Time	748
119	30 Dec 2024	Low Tide Time	1518
119	30 Dec 2024	Comments	
140	02 Dec 2024	Arrive Time	1018

Station	Date	Parameter	Value
140	02 Dec 2024	Depart Time	1020
140	02 Dec 2024	Air Temp (C)	13.7
140	02 Dec 2024	Visibility (mi)	10
140	02 Dec 2024	Wind Speed (kts)	2
140	02 Dec 2024	Wind Dir	NW
140	02 Dec 2024	Sea State	Wind Ripples
140	02 Dec 2024	High Tide Time	830
140	02 Dec 2024	Low Tide Time	1606
140	02 Dec 2024	Comments	
140	11 Dec 2024	Arrive Time	1043
140	11 Dec 2024	Depart Time	1046
140	11 Dec 2024	Air Temp (C)	13.8
140	11 Dec 2024	Visibility (mi)	9
140	11 Dec 2024	Wind Speed (kts)	19.5
140	11 Dec 2024	Wind Dir	NW
140	11 Dec 2024	Sea State	Light Chop
140	11 Dec 2024	High Tide Time	518
140	11 Dec 2024	Low Tide Time	1224
140	11 Dec 2024	Comments	
140	17 Dec 2024	Arrive Time	1023
140	17 Dec 2024	Depart Time	1028
140	17 Dec 2024	Air Temp (C)	14.4
140	17 Dec 2024	Visibility (mi)	10
140	17 Dec 2024	Wind Speed (kts)	1.8
140	17 Dec 2024	Wind Dir	NW
140	17 Dec 2024	Sea State	Light Chop
140	17 Dec 2024	High Tide Time	924
140	17 Dec 2024	Low Tide Time	1700
140	17 Dec 2024	Comments	
140	26 Dec 2024	Arrive Time	946
140	26 Dec 2024	Depart Time	950
140	26 Dec 2024	Air Temp (C)	13
140	26 Dec 2024	Visibility (mi)	8
140	26 Dec 2024	Wind Speed (kts)	3.3
140	26 Dec 2024	Wind Dir	SE
140	26 Dec 2024	Sea State	Regular Swell
140	26 Dec 2024	High Tide Time	536
140	26 Dec 2024	Low Tide Time	1300
140	26 Dec 2024	Comments	
140	30 Dec 2024	Arrive Time	1026
140	30 Dec 2024	Depart Time	1030
140	30 Dec 2024	Air Temp (C)	12.9
140	30 Dec 2024	Visibility (mi)	5
140	30 Dec 2024	Wind Speed (kts)	1.9
140	30 Dec 2024	Wind Dir	NW
140	30 Dec 2024	Sea State	Confused Swell
140	30 Dec 2024	High Tide Time	748
140	30 Dec 2024	Low Tide Time	1518
140	30 Dec 2024	Comments	
124	02 Dec 2024	Arrive Time	1026
124	02 Dec 2024	Depart Time	1029
124	02 Dec 2024	Air Temp (C)	14
124	02 Dec 2024	Visibility (mi)	10
124	02 Dec 2024	Wind Speed (kts)	2
124	02 Dec 2024	Wind Dir	N
124	02 Dec 2024	Sea State	Wind Ripples

Station	Date	Parameter	Value
I24	02 Dec 2024	High Tide Time	830
I24	02 Dec 2024	Low Tide Time	1606
I24	02 Dec 2024	Comments	
I24	11 Dec 2024	Arrive Time	1051
I24	11 Dec 2024	Depart Time	1054
I24	11 Dec 2024	Air Temp (C)	13.9
I24	11 Dec 2024	Visibility (mi)	9
I24	11 Dec 2024	Wind Speed (kts)	14.6
I24	11 Dec 2024	Wind Dir	W
I24	11 Dec 2024	Sea State	Light Chop
I24	11 Dec 2024	High Tide Time	518
I24	11 Dec 2024	Low Tide Time	1224
I24	11 Dec 2024	Comments	
I24	17 Dec 2024	Arrive Time	1031
I24	17 Dec 2024	Depart Time	1037
I24	17 Dec 2024	Air Temp (C)	13.8
I24	17 Dec 2024	Visibility (mi)	10
I24	17 Dec 2024	Wind Speed (kts)	1.9
I24	17 Dec 2024	Wind Dir	W
I24	17 Dec 2024	Sea State	Light Chop
I24	17 Dec 2024	High Tide Time	924
I24	17 Dec 2024	Low Tide Time	1700
I24	17 Dec 2024	Comments	
I24	26 Dec 2024	Arrive Time	953
I24	26 Dec 2024	Depart Time	955
I24	26 Dec 2024	Air Temp (C)	13
I24	26 Dec 2024	Visibility (mi)	8
I24	26 Dec 2024	Wind Speed (kts)	4.7
I24	26 Dec 2024	Wind Dir	S
I24	26 Dec 2024	Sea State	Regular Swell
I24	26 Dec 2024	High Tide Time	536
I24	26 Dec 2024	Low Tide Time	1300
I24	26 Dec 2024	Comments	
I24	30 Dec 2024	Arrive Time	1036
I24	30 Dec 2024	Depart Time	1040
I24	30 Dec 2024	Air Temp (C)	12.9
I24	30 Dec 2024	Visibility (mi)	5
I24	30 Dec 2024	Wind Speed (kts)	2.2
I24	30 Dec 2024	Wind Dir	NW
I24	30 Dec 2024	Sea State	Confused Swell
I24	30 Dec 2024	High Tide Time	748
I24	30 Dec 2024	Low Tide Time	1518
I24	30 Dec 2024	Comments	
I25	02 Dec 2024	Arrive Time	1033
I25	02 Dec 2024	Depart Time	1036
I25	02 Dec 2024	Air Temp (C)	14.2
I25	02 Dec 2024	Visibility (mi)	10
I25	02 Dec 2024	Wind Speed (kts)	1.6
I25	02 Dec 2024	Wind Dir	NW
I25	02 Dec 2024	Sea State	Regular Swell
I25	02 Dec 2024	High Tide Time	830
I25	02 Dec 2024	Low Tide Time	1606
I25	02 Dec 2024	Comments	Long period set
I25	11 Dec 2024	Arrive Time	1058
I25	11 Dec 2024	Depart Time	1101

Station	Date	Parameter	Value
I25	11 Dec 2024	Air Temp (C)	13.9
I25	11 Dec 2024	Visibility (mi)	9
I25	11 Dec 2024	Wind Speed (kts)	18.3
I25	11 Dec 2024	Wind Dir	W
I25	11 Dec 2024	Sea State	Light Chop
I25	11 Dec 2024	High Tide Time	518
I25	11 Dec 2024	Low Tide Time	1224
I25	11 Dec 2024	Comments	
I25	17 Dec 2024	Arrive Time	1039
I25	17 Dec 2024	Depart Time	1046
I25	17 Dec 2024	Air Temp (C)	14
I25	17 Dec 2024	Visibility (mi)	10
I25	17 Dec 2024	Wind Speed (kts)	2
I25	17 Dec 2024	Wind Dir	NW
I25	17 Dec 2024	Sea State	Light Chop
I25	17 Dec 2024	High Tide Time	924
I25	17 Dec 2024	Low Tide Time	1700
I25	17 Dec 2024	Comments	
I25	26 Dec 2024	Arrive Time	958
I25	26 Dec 2024	Depart Time	1000
I25	26 Dec 2024	Air Temp (C)	13
I25	26 Dec 2024	Visibility (mi)	8
I25	26 Dec 2024	Wind Speed (kts)	6.2
I25	26 Dec 2024	Wind Dir	S
I25	26 Dec 2024	Sea State	Regular Swell
I25	26 Dec 2024	High Tide Time	536
I25	26 Dec 2024	Low Tide Time	1300
I25	26 Dec 2024	Comments	
I25	30 Dec 2024	Arrive Time	1043
I25	30 Dec 2024	Depart Time	1047
I25	30 Dec 2024	Air Temp (C)	12.9
I25	30 Dec 2024	Visibility (mi)	5
I25	30 Dec 2024	Wind Speed (kts)	1.4
I25	30 Dec 2024	Wind Dir	NW
I25	30 Dec 2024	Sea State	Confused Swell
I25	30 Dec 2024	High Tide Time	748
I25	30 Dec 2024	Low Tide Time	1518
I25	30 Dec 2024	Comments	
I39	02 Dec 2024	Arrive Time	950
I39	02 Dec 2024	Depart Time	954
I39	02 Dec 2024	Air Temp (C)	14.1
I39	02 Dec 2024	Visibility (mi)	10
I39	02 Dec 2024	Wind Speed (kts)	1
I39	02 Dec 2024	Wind Dir	S
I39	02 Dec 2024	Sea State	Wind Ripples
I39	02 Dec 2024	High Tide Time	830
I39	02 Dec 2024	Low Tide Time	1606
I39	02 Dec 2024	Comments	
I39	11 Dec 2024	Arrive Time	1013
I39	11 Dec 2024	Depart Time	1017
I39	11 Dec 2024	Air Temp (C)	14
I39	11 Dec 2024	Visibility (mi)	9
I39	11 Dec 2024	Wind Speed (kts)	3.9
I39	11 Dec 2024	Wind Dir	E
I39	11 Dec 2024	Sea State	Light Chop
I39	11 Dec 2024	High Tide Time	518

Station	Date	Parameter	Value
I39	11 Dec 2024	Low Tide Time	1224
I39	11 Dec 2024	Comments	
I39	17 Dec 2024	Arrive Time	954
I39	17 Dec 2024	Depart Time	1013
I39	17 Dec 2024	Air Temp (C)	13.6
I39	17 Dec 2024	Visibility (mi)	10
I39	17 Dec 2024	Wind Speed (kts)	2.7
I39	17 Dec 2024	Wind Dir	N
I39	17 Dec 2024	Sea State	Light Chop
I39	17 Dec 2024	High Tide Time	924
I39	17 Dec 2024	Low Tide Time	1700
I39	17 Dec 2024	Comments	
I39	26 Dec 2024	Arrive Time	917
I39	26 Dec 2024	Depart Time	920
I39	26 Dec 2024	Air Temp (C)	12.9
I39	26 Dec 2024	Visibility (mi)	8
I39	26 Dec 2024	Wind Speed (kts)	0
I39	26 Dec 2024	Wind Dir	E
I39	26 Dec 2024	Sea State	Regular Swell
I39	26 Dec 2024	High Tide Time	536
I39	26 Dec 2024	Low Tide Time	1300
I39	26 Dec 2024	Comments	
I39	30 Dec 2024	Arrive Time	954
I39	30 Dec 2024	Depart Time	959
I39	30 Dec 2024	Air Temp (C)	12.7
I39	30 Dec 2024	Visibility (mi)	5
I39	30 Dec 2024	Wind Speed (kts)	5.2
I39	30 Dec 2024	Wind Dir	N
I39	30 Dec 2024	Sea State	Confused Swell
I39	30 Dec 2024	High Tide Time	748
I39	30 Dec 2024	Low Tide Time	1518
I39	30 Dec 2024	Comments	btl 2 fired on accident
I26	02 Dec 2024	Arrive Time	1041
I26	02 Dec 2024	Depart Time	1044
I26	02 Dec 2024	Air Temp (C)	14.6
I26	02 Dec 2024	Visibility (mi)	10
I26	02 Dec 2024	Wind Speed (kts)	2
I26	02 Dec 2024	Wind Dir	W
I26	02 Dec 2024	Sea State	Regular Swell
I26	02 Dec 2024	High Tide Time	830
I26	02 Dec 2024	Low Tide Time	1606
I26	02 Dec 2024	Comments	
I26	11 Dec 2024	Arrive Time	1109
I26	11 Dec 2024	Depart Time	1112
I26	11 Dec 2024	Air Temp (C)	14
I26	11 Dec 2024	Visibility (mi)	9
I26	11 Dec 2024	Wind Speed (kts)	3.2
I26	11 Dec 2024	Wind Dir	SW
I26	11 Dec 2024	Sea State	Light Chop
I26	11 Dec 2024	High Tide Time	518
I26	11 Dec 2024	Low Tide Time	1224
I26	11 Dec 2024	Comments	
I26	17 Dec 2024	Arrive Time	1052
I26	17 Dec 2024	Depart Time	1056
I26	17 Dec 2024	Air Temp (C)	14.1

Station	Date	Parameter	Value
I26	17 Dec 2024	Visibility (mi)	10
I26	17 Dec 2024	Wind Speed (kts)	0
I26	17 Dec 2024	Wind Dir	NW
I26	17 Dec 2024	Sea State	Light Chop
I26	17 Dec 2024	High Tide Time	924
I26	17 Dec 2024	Low Tide Time	1700
I26	17 Dec 2024	Comments	
I26	26 Dec 2024	Arrive Time	1006
I26	26 Dec 2024	Depart Time	1009
I26	26 Dec 2024	Air Temp (C)	13
I26	26 Dec 2024	Visibility (mi)	8
I26	26 Dec 2024	Wind Speed (kts)	0
I26	26 Dec 2024	Wind Dir	E
I26	26 Dec 2024	Sea State	Regular Swell
I26	26 Dec 2024	High Tide Time	536
I26	26 Dec 2024	Low Tide Time	1300
I26	26 Dec 2024	Comments	
I26	30 Dec 2024	Arrive Time	1052
I26	30 Dec 2024	Depart Time	1056
I26	30 Dec 2024	Air Temp (C)	13.1
I26	30 Dec 2024	Visibility (mi)	5
I26	30 Dec 2024	Wind Speed (kts)	0
I26	30 Dec 2024	Wind Dir	S
I26	30 Dec 2024	Sea State	Confused Swell
I26	30 Dec 2024	High Tide Time	748
I26	30 Dec 2024	Low Tide Time	1518
I26	30 Dec 2024	Comments	
I32	02 Dec 2024	Arrive Time	1052
I32	02 Dec 2024	Depart Time	1054
I32	02 Dec 2024	Air Temp (C)	14.7
I32	02 Dec 2024	Visibility (mi)	10
I32	02 Dec 2024	Wind Speed (kts)	0.8
I32	02 Dec 2024	Wind Dir	E
I32	02 Dec 2024	Sea State	Wind Ripples
I32	02 Dec 2024	High Tide Time	830
I32	02 Dec 2024	Low Tide Time	1606
I32	02 Dec 2024	Comments	
I32	11 Dec 2024	Arrive Time	1120
I32	11 Dec 2024	Depart Time	1123
I32	11 Dec 2024	Air Temp (C)	14.4
I32	11 Dec 2024	Visibility (mi)	9
I32	11 Dec 2024	Wind Speed (kts)	12
I32	11 Dec 2024	Wind Dir	NW
I32	11 Dec 2024	Sea State	Light Chop
I32	11 Dec 2024	High Tide Time	518
I32	11 Dec 2024	Low Tide Time	1224
I32	11 Dec 2024	Comments	
I32	17 Dec 2024	Arrive Time	1104
I32	17 Dec 2024	Depart Time	1109
I32	17 Dec 2024	Air Temp (C)	13.9
I32	17 Dec 2024	Visibility (mi)	10
I32	17 Dec 2024	Wind Speed (kts)	1.7
I32	17 Dec 2024	Wind Dir	W
I32	17 Dec 2024	Sea State	Light Chop
I32	17 Dec 2024	High Tide Time	924
I32	17 Dec 2024	Low Tide Time	1700

Station	Date	Parameter	Value
I32	17 Dec 2024	Comments	
I32	26 Dec 2024	Arrive Time	1018
I32	26 Dec 2024	Depart Time	1023
I32	26 Dec 2024	Air Temp (C)	13.1
I32	26 Dec 2024	Visibility (mi)	8
I32	26 Dec 2024	Wind Speed (kts)	0
I32	26 Dec 2024	Wind Dir	S
I32	26 Dec 2024	Sea State	Regular Swell
I32	26 Dec 2024	High Tide Time	536
I32	26 Dec 2024	Low Tide Time	1300
I32	26 Dec 2024	Comments	
I32	30 Dec 2024	Arrive Time	1103
I32	30 Dec 2024	Depart Time	1110
I32	30 Dec 2024	Air Temp (C)	13.2
I32	30 Dec 2024	Visibility (mi)	5
I32	30 Dec 2024	Wind Speed (kts)	1
I32	30 Dec 2024	Wind Dir	NW
I32	30 Dec 2024	Sea State	Confused Swell
I32	30 Dec 2024	High Tide Time	748
I32	30 Dec 2024	Low Tide Time	1518
I32	30 Dec 2024	Comments	

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 (s-t)	Chlor (µg/L)
I19	02 Dec 2024	1	12.82	88.79	6.6	33.33	8.0	25.1	0.50
I19	02 Dec 2024	2	12.77	88.42	6.6	33.33	8.0	25.1	0.56
I19	02 Dec 2024	3	12.72	86.78	7.0	33.33	8.0	25.2	0.57
I19	02 Dec 2024	4	12.72	83.53	7.1	33.33	8.0	25.2	0.64
I19	02 Dec 2024	5	12.71	82.86	7.2	33.33	8.0	25.2	0.79
I19	02 Dec 2024	6	12.65	81.95	7.2	33.34	8.0	25.2	0.89
I19	02 Dec 2024	7	12.59	80.38	6.9	33.36	8.0	25.2	0.92
I19	02 Dec 2024	8	12.57	78.92	6.7	33.35	7.9	25.2	1.01
I19	02 Dec 2024	9	12.56	73.20	6.7	33.35	7.9	25.2	1.04
I19	02 Dec 2024	10	12.56	67.90	6.7	33.35	7.9	25.2	1.11
I19	11 Dec 2024	1	12.93	73.76	9.6	33.36	8.2	25.1	5.57
I19	11 Dec 2024	2	12.90	72.65	9.6	33.36	8.2	25.1	6.82
I19	11 Dec 2024	3	12.87	71.12	9.5	33.36	8.2	25.1	9.83
I19	11 Dec 2024	4	12.81	69.92	9.2	33.36	8.1	25.2	12.80
I19	11 Dec 2024	5	12.74	71.37	8.8	33.36	8.1	25.2	11.68
I19	11 Dec 2024	6	12.66	73.17	8.5	33.36	8.1	25.2	10.52
I19	11 Dec 2024	7	12.64	74.12	8.3	33.36	8.1	25.2	9.21
I19	11 Dec 2024	8	12.63	74.26	8.3	33.36	8.1	25.2	8.72
I19	11 Dec 2024	9	12.60	74.06	8.3	33.36	8.1	25.2	7.73
I19	11 Dec 2024	10	12.39	70.57	8.1	33.38	8.1	25.3	6.41
I19	17 Dec 2024	1	12.85	78.21	7.7	33.37	8.1	25.2	1.75
I19	17 Dec 2024	2	12.80	79.80	7.8	33.37	8.1	25.2	2.17
I19	17 Dec 2024	3	12.73	79.68	7.8	33.37	8.1	25.2	3.74
I19	17 Dec 2024	4	12.71	79.06	7.8	33.37	8.1	25.2	5.28
I19	17 Dec 2024	5	12.69	77.92	7.7	33.37	8.1	25.2	6.47
I19	17 Dec 2024	6	12.68	79.01	7.6	33.37	8.1	25.2	7.22
I19	17 Dec 2024	7	12.64	79.39	7.4	33.37	8.1	25.2	6.29
I19	17 Dec 2024	8	12.58	79.05	7.2	33.37	8.0	25.2	5.13
I19	17 Dec 2024	9	12.49	76.55	7.1	33.37	8.0	25.2	4.69
I19	17 Dec 2024	10	12.44	70.93	7.0	33.36	8.0	25.2	4.35
I19	26 Dec 2024	1	12.83	30.29	8.7	33.36	8.0	25.2	3.53
I19	26 Dec 2024	2	12.81	28.40	8.6	33.37	8.0	25.2	3.85
I19	26 Dec 2024	3	12.74	27.35	8.3	33.37	8.0	25.2	3.81
I19	26 Dec 2024	4	12.74	22.94	8.2	33.37	8.0	25.2	3.79
I19	26 Dec 2024	5	12.73	18.05	8.1	33.37	8.0	25.2	3.89
I19	26 Dec 2024	6	12.61	17.93	7.6	33.38	8.0	25.2	3.75
I19	26 Dec 2024	7	12.58	14.70	7.3	33.38	8.0	25.2	3.50
I19	26 Dec 2024	8	12.58	14.80	7.2	33.37	8.0	25.2	3.51
I19	26 Dec 2024	9	12.51	16.43	7.0	33.38	7.9	25.2	3.40
I19	26 Dec 2024	10	12.45	15.67	6.7	33.38	7.9	25.2	3.23
I19	30 Dec 2024	1	12.47	41.52	7.1	33.43	7.9	25.3	0.92
I19	30 Dec 2024	2	12.45	39.69	7.1	33.43	7.9	25.3	1.08
I19	30 Dec 2024	3	12.44	37.30	7.2	33.43	7.9	25.3	1.14
I19	30 Dec 2024	4	12.43	35.40	7.2	33.43	7.9	25.3	1.21
I19	30 Dec 2024	5	12.43	35.07	7.3	33.43	7.9	25.3	1.21
I19	30 Dec 2024	6	12.42	34.35	7.3	33.43	7.9	25.3	1.27
I19	30 Dec 2024	7	12.40	32.96	7.2	33.43	7.9	25.3	1.20
I19	30 Dec 2024	8	12.33	33.00	6.7	33.44	7.9	25.3	1.20
I19	30 Dec 2024	9	12.03	35.72	5.8	33.47	7.8	25.4	1.07
I19	30 Dec 2024	10	11.85	41.96	4.9	33.48	7.8	25.4	0.85

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/l)	Sal (ppt)	pH	Dens (s-t)	Chlor (µg/L)
I40	02 Dec 2024	1	12.83	76.38	7.2	33.31	8.0	25.1	0.34
I40	02 Dec 2024	2	12.81	81.93	7.2	33.32	8.0	25.1	0.36
I40	02 Dec 2024	3	12.68	81.84	7.1	33.32	8.0	25.2	0.45
I40	02 Dec 2024	4	12.66	82.89	7.1	33.32	8.0	25.2	0.75
I40	02 Dec 2024	5	12.65	82.97	7.0	33.32	8.0	25.2	0.99
I40	02 Dec 2024	6	12.63	83.22	6.9	33.32	8.0	25.2	1.13
I40	02 Dec 2024	7	12.62	83.47	6.7	33.33	8.0	25.2	1.11
I40	02 Dec 2024	8	12.49	85.41	6.5	33.36	7.9	25.2	1.06
I40	02 Dec 2024	9	12.45	84.02	6.5	33.36	7.9	25.2	1.10
I40	02 Dec 2024	10	12.44	75.10	6.5	33.36	7.9	25.2	1.24
I40	11 Dec 2024	1	12.47	61.59	8.0	33.36	8.0	25.2	3.75
I40	11 Dec 2024	2	12.44	57.66	7.9	33.36	8.0	25.2	4.47
I40	11 Dec 2024	3	12.31	49.25	7.7	33.36	8.0	25.3	5.20
I40	11 Dec 2024	4	12.24	57.95	7.5	33.36	8.0	25.3	5.32
I40	11 Dec 2024	5	12.21	55.89	7.4	33.36	8.0	25.3	5.22
I40	11 Dec 2024	6	12.15	52.38	7.5	33.35	8.0	25.3	5.14
I40	11 Dec 2024	7	12.14	51.61	7.7	33.35	8.0	25.3	4.98
I40	11 Dec 2024	8	12.10	51.97	7.9	33.36	8.0	25.3	5.01
I40	11 Dec 2024	9	12.06	53.26	8.1	33.36	8.0	25.3	5.04
I40	11 Dec 2024	10	12.04	54.57	8.2	33.36	8.0	25.3	4.73
I40	17 Dec 2024	1	12.84	73.11	7.6	33.34	8.0	25.1	1.51
I40	17 Dec 2024	2	12.78	73.40	7.6	33.35	8.0	25.2	1.64
I40	17 Dec 2024	3	12.71	73.14	7.5	33.35	8.0	25.2	2.68
I40	17 Dec 2024	4	12.66	72.36	7.2	33.36	8.0	25.2	4.88
I40	17 Dec 2024	5	12.62	74.62	6.9	33.36	8.0	25.2	5.67
I40	17 Dec 2024	6	12.59	76.50	6.6	33.36	8.0	25.2	6.30
I40	17 Dec 2024	7	12.48	74.87	6.3	33.37	8.0	25.2	5.55
I40	17 Dec 2024	8	12.40	71.16	6.0	33.37	7.9	25.2	4.56
I40	17 Dec 2024	9	12.39	66.36	5.8	33.37	7.9	25.2	4.62
I40	17 Dec 2024	10	12.38	57.79	5.6	33.37	7.9	25.2	5.22
I40	26 Dec 2024	1	13.18	75.01	8.3	33.35	8.1	25.1	5.23
I40	26 Dec 2024	2	13.17	74.73	8.3	33.35	8.1	25.1	5.60
I40	26 Dec 2024	3	13.15	73.54	8.3	33.35	8.1	25.1	6.39
I40	26 Dec 2024	4	13.13	72.71	8.2	33.35	8.1	25.1	6.55
I40	26 Dec 2024	5	13.10	74.90	8.0	33.35	8.1	25.1	5.71
I40	26 Dec 2024	6	13.03	78.03	7.7	33.36	8.1	25.1	4.79
I40	26 Dec 2024	7	12.93	79.15	7.3	33.36	8.0	25.1	3.52
I40	26 Dec 2024	8	12.74	72.30	6.6	33.38	8.0	25.2	3.46
I40	26 Dec 2024	9	12.22	52.49	5.5	33.40	7.9	25.3	2.74
I40	26 Dec 2024	10	12.24	42.43	4.9	33.40	7.8	25.3	2.13
I40	30 Dec 2024	1	12.81	50.30	7.5	33.41	7.9	25.2	1.06
I40	30 Dec 2024	2	12.77	50.15	7.4	33.41	7.9	25.2	1.30
I40	30 Dec 2024	3	12.75	49.80	7.4	33.41	7.9	25.2	1.69
I40	30 Dec 2024	4	12.75	49.58	7.3	33.41	7.9	25.2	1.87
I40	30 Dec 2024	5	12.71	49.91	7.2	33.41	7.9	25.2	1.66
I40	30 Dec 2024	6	12.64	49.78	7.1	33.41	7.9	25.2	1.27
I40	30 Dec 2024	7	12.42	50.46	6.4	33.44	7.9	25.3	0.93
I40	30 Dec 2024	8	12.07	53.95	5.4	33.46	7.8	25.4	0.72
I40	30 Dec 2024	9	11.99	57.83	4.7	33.45	7.8	25.4	0.70
I40	30 Dec 2024	10	11.93	49.95	4.3	33.46	7.8	25.4	0.75
I24	02 Dec 2024	1	12.52	88.40	6.3	33.34	7.9	25.2	0.53
I24	02 Dec 2024	2	12.52	88.93	6.3	33.35	7.9	25.2	0.51
I24	02 Dec 2024	3	12.50	88.50	6.3	33.35	7.9	25.2	0.48
I24	02 Dec 2024	4	12.50	88.26	6.3	33.35	7.9	25.2	0.50
I24	02 Dec 2024	5	12.48	86.82	6.3	33.35	7.9	25.2	0.52
I24	02 Dec 2024	6	12.44	82.76	6.3	33.36	7.9	25.2	0.56

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/l)	Sal (ppt)	pH	Dens (s-t)	Chlor (µg/L)
I24	02 Dec 2024	7	12.39	79.09	6.3	33.37	7.9	25.2	0.67
I24	02 Dec 2024	8	12.38	75.86	6.3	33.37	7.9	25.3	0.87
I24	02 Dec 2024	9	12.36	73.43	6.3	33.37	7.9	25.3	1.02
I24	02 Dec 2024	10	12.35	69.79	6.3	33.38	7.9	25.3	1.08
I24	02 Dec 2024	11	12.35	67.55	6.3	33.38	7.9	25.3	1.03
I24	11 Dec 2024	1	12.69	72.14	7.7	33.36	8.0	25.2	2.80
I24	11 Dec 2024	2	12.68	72.29	7.7	33.36	8.0	25.2	2.92
I24	11 Dec 2024	3	12.66	72.26	7.7	33.36	8.0	25.2	3.74
I24	11 Dec 2024	4	12.63	70.36	7.7	33.36	8.0	25.2	5.08
I24	11 Dec 2024	5	12.62	69.49	7.7	33.36	8.0	25.2	5.55
I24	11 Dec 2024	6	12.61	68.71	7.6	33.36	8.0	25.2	5.35
I24	11 Dec 2024	7	12.59	67.80	7.5	33.36	8.0	25.2	5.10
I24	11 Dec 2024	8	12.56	64.82	7.2	33.36	8.0	25.2	4.86
I24	11 Dec 2024	9	12.45	56.05	6.6	33.37	8.0	25.2	4.54
I24	11 Dec 2024	10	12.36	50.05	6.0	33.38	7.9	25.3	4.57
I24	17 Dec 2024	1	12.91	72.47	8.4	33.35	8.1	25.1	3.48
I24	17 Dec 2024	2	12.90	73.05	8.4	33.35	8.1	25.1	3.60
I24	17 Dec 2024	3	12.79	71.81	8.1	33.34	8.1	25.2	3.92
I24	17 Dec 2024	4	12.79	69.53	7.9	33.35	8.1	25.2	4.66
I24	17 Dec 2024	5	12.78	70.10	7.6	33.36	8.1	25.2	4.90
I24	17 Dec 2024	6	12.67	71.31	7.2	33.37	8.0	25.2	5.00
I24	17 Dec 2024	7	12.65	70.93	6.8	33.37	8.0	25.2	5.50
I24	17 Dec 2024	8	12.61	69.26	6.6	33.37	8.0	25.2	5.81
I24	17 Dec 2024	9	12.56	67.54	6.2	33.37	8.0	25.2	5.07
I24	17 Dec 2024	10	12.49	65.33	5.9	33.37	7.9	25.2	4.92
I24	26 Dec 2024	1	13.12	79.71	8.3	33.35	8.1	25.1	3.57
I24	26 Dec 2024	2	13.11	79.86	8.2	33.35	8.1	25.1	3.79
I24	26 Dec 2024	3	13.08	79.27	8.2	33.35	8.1	25.1	4.50
I24	26 Dec 2024	4	13.06	78.32	8.2	33.35	8.1	25.1	4.95
I24	26 Dec 2024	5	13.06	78.50	8.1	33.35	8.1	25.1	5.63
I24	26 Dec 2024	6	12.99	78.75	7.9	33.36	8.1	25.1	4.41
I24	26 Dec 2024	7	12.86	78.39	7.5	33.37	8.0	25.2	3.44
I24	26 Dec 2024	8	12.52	69.77	6.8	33.41	8.0	25.3	2.37
I24	26 Dec 2024	9	12.30	67.61	6.0	33.40	7.9	25.3	1.70
I24	26 Dec 2024	10	12.36	62.37	5.8	33.39	7.9	25.3	1.49
I24	26 Dec 2024	11	12.50	59.55	6.1	33.39	7.9	25.2	1.62
I24	30 Dec 2024	1	12.71	50.28	6.7	33.40	7.9	25.2	2.41
I24	30 Dec 2024	2	12.72	50.76	6.7	33.40	7.9	25.2	2.74
I24	30 Dec 2024	3	12.64	51.79	6.6	33.41	7.9	25.2	2.66
I24	30 Dec 2024	4	12.53	48.90	6.6	33.42	7.9	25.3	2.31
I24	30 Dec 2024	5	12.43	47.00	6.7	33.43	7.9	25.3	2.06
I24	30 Dec 2024	6	12.35	31.76	6.6	33.43	7.9	25.3	1.86
I24	30 Dec 2024	7	12.29	27.71	6.4	33.44	7.8	25.3	1.59
I24	30 Dec 2024	8	12.27	26.80	6.2	33.43	7.8	25.3	1.32
I24	30 Dec 2024	9	12.27	28.58	6.1	33.44	7.8	25.3	1.32
I24	30 Dec 2024	10	12.20	28.88	5.8	33.44	7.8	25.3	1.27
I24	30 Dec 2024	11	12.17	28.32	5.5	33.44	7.8	25.3	1.13
I25	02 Dec 2024	1	12.77	88.03	6.8	33.30	8.0	25.1	0.37
I25	02 Dec 2024	2	12.65	89.15	6.5	33.33	8.0	25.2	0.37
I25	02 Dec 2024	3	12.43	91.80	6.2	33.36	8.0	25.2	0.41
I25	02 Dec 2024	4	12.40	89.77	6.2	33.36	7.9	25.2	0.46
I25	02 Dec 2024	5	12.40	86.04	6.2	33.36	7.9	25.2	0.54
I25	02 Dec 2024	6	12.40	85.07	6.2	33.36	7.9	25.2	0.62
I25	02 Dec 2024	7	12.39	84.15	6.3	33.37	7.9	25.2	0.73
I25	02 Dec 2024	8	12.38	81.28	6.3	33.37	7.9	25.2	0.85
I25	02 Dec 2024	9	12.37	75.97	6.2	33.37	7.9	25.3	0.90

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/l)	Sal (ppt)	pH	Dens (s-t)	Chlor (µg/L)
I25	11 Dec 2024	1	12.49	70.46	7.2	33.37	8.0	25.2	4.02
I25	11 Dec 2024	2	12.45	70.02	7.1	33.38	8.0	25.2	4.22
I25	11 Dec 2024	3	12.42	69.68	7.0	33.37	8.0	25.2	5.52
I25	11 Dec 2024	4	12.40	69.15	7.0	33.37	8.0	25.2	5.98
I25	11 Dec 2024	5	12.40	69.91	6.9	33.37	8.0	25.2	5.78
I25	11 Dec 2024	6	12.40	70.64	6.9	33.37	8.0	25.2	5.49
I25	11 Dec 2024	7	12.40	70.89	6.9	33.37	8.0	25.2	5.19
I25	11 Dec 2024	8	12.40	70.68	6.9	33.37	8.0	25.2	4.88
I25	11 Dec 2024	9	12.41	71.31	6.8	33.37	8.0	25.2	4.91
I25	17 Dec 2024	1	13.18	84.01	8.8	33.35	8.2	25.1	2.94
I25	17 Dec 2024	2	13.15	82.97	8.7	33.36	8.2	25.1	2.85
I25	17 Dec 2024	3	13.09	81.62	8.6	33.36	8.1	25.1	3.23
I25	17 Dec 2024	4	13.06	80.34	8.4	33.36	8.1	25.1	4.36
I25	17 Dec 2024	5	12.98	80.06	7.9	33.36	8.1	25.1	5.98
I25	17 Dec 2024	6	12.94	80.74	7.6	33.36	8.1	25.1	6.29
I25	17 Dec 2024	7	12.88	81.68	7.4	33.36	8.1	25.1	6.99
I25	17 Dec 2024	8	12.81	81.87	7.1	33.37	8.0	25.2	6.97
I25	17 Dec 2024	9	12.65	82.81	6.6	33.38	8.0	25.2	5.01
I25	26 Dec 2024	1	13.05	70.72	8.3	33.35	8.1	25.1	3.42
I25	26 Dec 2024	2	13.05	76.47	8.3	33.36	8.1	25.1	3.95
I25	26 Dec 2024	3	13.02	76.79	8.3	33.36	8.1	25.1	4.54
I25	26 Dec 2024	4	13.00	75.38	8.2	33.36	8.1	25.1	6.41
I25	26 Dec 2024	5	12.98	75.55	8.2	33.36	8.1	25.1	6.95
I25	26 Dec 2024	6	12.88	68.50	8.0	33.37	8.1	25.2	5.40
I25	26 Dec 2024	7	12.59	54.57	7.4	33.41	8.0	25.2	4.07
I25	26 Dec 2024	8	12.30	36.15	6.6	33.41	7.9	25.3	2.95
I25	26 Dec 2024	9	12.49	27.56	6.4	33.38	7.9	25.2	2.20
I25	30 Dec 2024	1	12.91	62.74	7.0	33.39	7.9	25.2	2.14
I25	30 Dec 2024	2	12.85	62.60	6.9	33.39	7.9	25.2	2.70
I25	30 Dec 2024	3	12.70	62.07	6.7	33.40	7.9	25.2	3.01
I25	30 Dec 2024	4	12.51	58.74	6.2	33.42	7.9	25.3	2.23
I25	30 Dec 2024	5	12.26	58.19	5.7	33.44	7.9	25.3	1.61
I25	30 Dec 2024	6	12.18	58.95	5.3	33.44	7.8	25.3	1.11
I25	30 Dec 2024	7	12.13	60.38	5.1	33.44	7.8	25.4	0.97
I25	30 Dec 2024	8	12.09	58.57	5.0	33.44	7.8	25.4	0.81
I25	30 Dec 2024	9	12.07	57.44	4.9	33.45	7.8	25.4	0.79
I39	02 Dec 2024	1	12.94	96.42	6.4	33.32	8.0	25.1	0.30
I39	02 Dec 2024	2	12.83	96.45	6.4	33.33	8.0	25.1	0.30
I39	02 Dec 2024	3	12.68	96.29	6.3	33.34	8.0	25.2	0.30
I39	02 Dec 2024	4	12.33	96.24	6.1	33.39	8.0	25.3	0.31
I39	02 Dec 2024	5	12.20	94.50	5.9	33.38	7.9	25.3	0.39
I39	02 Dec 2024	6	12.20	90.72	5.9	33.38	7.9	25.3	0.46
I39	02 Dec 2024	7	12.19	87.90	5.8	33.38	7.9	25.3	0.56
I39	02 Dec 2024	8	12.19	86.61	5.8	33.38	7.9	25.3	0.65
I39	02 Dec 2024	9	12.19	86.23	5.8	33.38	7.9	25.3	0.76
I39	02 Dec 2024	10	12.18	85.59	5.8	33.38	7.9	25.3	0.83
I39	02 Dec 2024	11	12.18	83.82	5.7	33.38	7.9	25.3	0.88
I39	02 Dec 2024	12	12.18	82.32	5.7	33.38	7.9	25.3	0.91
I39	02 Dec 2024	13	12.18	81.89	5.7	33.38	7.9	25.3	0.92
I39	02 Dec 2024	14	12.18	82.13	5.7	33.38	7.9	25.3	0.92
I39	02 Dec 2024	15	12.17	81.24	5.7	33.38	7.9	25.3	0.88
I39	02 Dec 2024	16	12.17	80.08	5.6	33.38	7.9	25.3	0.88
I39	02 Dec 2024	17	12.16	78.76	5.6	33.38	7.9	25.3	0.86
I39	02 Dec 2024	18	12.16	75.55	5.5	33.38	7.9	25.3	0.85
I39	11 Dec 2024	1	12.88	77.22	9.3	33.34	8.2	25.1	5.10

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/l)	Sal (ppt)	pH	Dens (s-t)	Chlor (µg/L)
I39	11 Dec 2024	2	12.88	77.86	9.3	33.34	8.2	25.1	5.23
I39	11 Dec 2024	3	12.87	77.74	9.3	33.34	8.2	25.1	5.41
I39	11 Dec 2024	4	12.85	77.23	9.3	33.34	8.2	25.1	6.65
I39	11 Dec 2024	5	12.84	76.67	9.2	33.34	8.2	25.1	7.97
I39	11 Dec 2024	6	12.83	76.23	9.2	33.34	8.2	25.1	9.37
I39	11 Dec 2024	7	12.82	75.88	9.2	33.34	8.2	25.1	10.11
I39	11 Dec 2024	8	12.81	76.18	9.1	33.34	8.1	25.1	10.14
I39	11 Dec 2024	9	12.79	75.96	9.0	33.35	8.1	25.2	10.08
I39	11 Dec 2024	10	12.77	76.59	9.0	33.35	8.1	25.2	10.50
I39	11 Dec 2024	11	12.76	75.84	9.0	33.35	8.1	25.2	9.21
I39	11 Dec 2024	12	12.74	75.76	8.9	33.35	8.1	25.2	8.96
I39	11 Dec 2024	13	12.73	76.02	8.8	33.35	8.1	25.2	9.66
I39	11 Dec 2024	14	12.69	75.34	8.4	33.36	8.1	25.2	9.05
I39	11 Dec 2024	15	12.11	75.76	7.1	33.43	8.0	25.4	7.68
I39	11 Dec 2024	16	11.97	82.22	5.8	33.40	7.9	25.4	4.04
I39	11 Dec 2024	17	11.94	86.70	5.4	33.40	7.9	25.4	2.60
I39	11 Dec 2024	18	11.90	87.31	5.2	33.40	7.9	25.4	2.06
I39	17 Dec 2024	1	13.29	87.95	7.9	33.34	8.1	25.0	2.19
I39	17 Dec 2024	2	13.28	87.85	7.9	33.34	8.1	25.0	2.11
I39	17 Dec 2024	3	13.26	87.92	7.9	33.34	8.1	25.1	2.33
I39	17 Dec 2024	4	13.22	87.60	7.9	33.34	8.1	25.1	2.84
I39	17 Dec 2024	5	13.18	87.55	7.8	33.34	8.1	25.1	3.57
I39	17 Dec 2024	6	13.17	87.35	7.8	33.34	8.1	25.1	4.26
I39	17 Dec 2024	7	13.15	87.52	7.7	33.33	8.1	25.1	4.25
I39	17 Dec 2024	8	13.12	87.94	7.7	33.33	8.1	25.1	4.43
I39	17 Dec 2024	9	13.09	88.36	7.6	33.33	8.1	25.1	3.96
I39	17 Dec 2024	10	13.06	89.33	7.5	33.33	8.1	25.1	3.16
I39	17 Dec 2024	11	12.97	90.60	7.4	33.33	8.1	25.1	3.25
I39	17 Dec 2024	12	12.98	91.39	7.3	33.32	8.1	25.1	3.09
I39	17 Dec 2024	13	12.69	92.37	7.0	33.34	8.0	25.2	2.39
I39	17 Dec 2024	14	12.48	95.13	6.7	33.34	8.0	25.2	1.95
I39	17 Dec 2024	15	12.43	95.83	6.5	33.34	8.0	25.2	1.59
I39	17 Dec 2024	16	12.21	96.35	6.2	33.36	8.0	25.3	1.49
I39	17 Dec 2024	17	11.97	96.61	5.8	33.39	7.9	25.3	1.19
I39	17 Dec 2024	18	11.75	96.50	5.2	33.42	7.9	25.4	0.87
I39	26 Dec 2024	1	12.88	60.33	7.8	33.36	8.0	25.1	3.13
I39	26 Dec 2024	2	12.86	63.29	7.8	33.37	8.0	25.2	3.05
I39	26 Dec 2024	3	12.84	62.08	7.8	33.37	8.0	25.2	3.21
I39	26 Dec 2024	4	12.83	61.10	7.8	33.37	8.0	25.2	3.22
I39	26 Dec 2024	5	12.82	61.49	7.7	33.37	8.0	25.2	3.36
I39	26 Dec 2024	6	12.75	60.27	7.6	33.38	8.0	25.2	3.50
I39	26 Dec 2024	7	12.69	57.17	7.4	33.38	8.0	25.2	2.99
I39	26 Dec 2024	8	12.68	54.51	7.3	33.38	8.0	25.2	2.65
I39	26 Dec 2024	9	12.66	52.62	7.3	33.38	8.0	25.2	2.42
I39	26 Dec 2024	10	12.63	51.41	7.2	33.38	8.0	25.2	2.22
I39	26 Dec 2024	11	12.62	51.40	7.2	33.38	8.0	25.2	2.00
I39	26 Dec 2024	12	12.57	50.65	7.1	33.39	8.0	25.2	1.85
I39	26 Dec 2024	13	12.54	50.72	7.0	33.39	8.0	25.2	1.64
I39	26 Dec 2024	14	12.41	51.48	6.7	33.40	7.9	25.3	1.50
I39	26 Dec 2024	15	12.32	56.41	6.3	33.40	7.9	25.3	1.30
I39	26 Dec 2024	16	12.20	61.39	6.0	33.42	7.9	25.3	1.10
I39	26 Dec 2024	17	11.89	80.55	5.4	33.46	7.9	25.4	0.79
I39	26 Dec 2024	18	11.77	77.28	4.8	33.45	7.8	25.4	0.65
I39	30 Dec 2024	1	13.10	79.69	7.8	33.37	8.0	25.1	2.52
I39	30 Dec 2024	2	13.10	80.71	7.8	33.38	8.0	25.1	2.68
I39	30 Dec 2024	3	13.08	81.03	7.8	33.38	8.0	25.1	3.03
I39	30 Dec 2024	4	13.06	80.00	7.8	33.38	8.0	25.1	3.33
I39	30 Dec 2024	5	13.05	80.89	7.7	33.37	8.0	25.1	3.23

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/l)	Sal (ppt)	pH	Dens (s-t)	Chlor (µg/L)
I39	30 Dec 2024	6	13.02	81.82	7.5	33.38	8.0	25.1	3.10
I39	30 Dec 2024	7	12.75	83.53	7.0	33.41	8.0	25.2	2.70
I39	30 Dec 2024	8	12.28	85.74	6.2	33.41	7.9	25.3	1.77
I39	30 Dec 2024	9	12.25	86.15	5.8	33.42	7.9	25.3	1.35
I39	30 Dec 2024	10	12.06	89.53	5.6	33.42	7.9	25.4	1.05
I39	30 Dec 2024	11	12.03	91.65	5.5	33.42	7.9	25.4	0.90
I39	30 Dec 2024	12	11.99	92.86	5.4	33.42	7.8	25.4	0.83
I39	30 Dec 2024	13	11.94	92.91	5.2	33.43	7.8	25.4	0.79
I39	30 Dec 2024	14	11.83	91.99	4.9	33.46	7.8	25.4	0.64
I39	30 Dec 2024	15	11.76	83.12	4.5	33.48	7.8	25.5	0.52
I39	30 Dec 2024	16	11.73	74.58	4.2	33.49	7.8	25.5	0.49
I39	30 Dec 2024	17	11.72	64.33	4.0	33.50	7.8	25.5	0.47
I39	30 Dec 2024	18	11.71	56.24	4.0	33.50	7.8	25.5	0.48
I26	02 Dec 2024	1	13.06	83.39	7.2	33.26	7.9	25.0	0.33
I26	02 Dec 2024	2	12.96	83.41	7.2	33.26	7.9	25.1	0.35
I26	02 Dec 2024	3	12.81	82.86	7.0	33.29	7.9	25.1	0.39
I26	02 Dec 2024	4	12.47	82.04	6.5	33.34	7.9	25.2	0.55
I26	02 Dec 2024	5	12.45	81.76	6.2	33.34	7.9	25.2	0.72
I26	02 Dec 2024	6	12.44	80.82	6.1	33.34	7.9	25.2	0.80
I26	02 Dec 2024	7	12.43	78.98	6.0	33.34	7.9	25.2	0.87
I26	02 Dec 2024	8	12.43	76.86	6.0	33.34	7.9	25.2	0.94
I26	02 Dec 2024	9	12.43	76.96	6.0	33.34	7.9	25.2	0.88
I26	11 Dec 2024	1	12.57	78.53	7.2	33.37	8.0	25.2	2.55
I26	11 Dec 2024	2	12.56	78.51	7.2	33.37	8.0	25.2	2.51
I26	11 Dec 2024	3	12.51	78.23	7.1	33.38	8.0	25.2	2.73
I26	11 Dec 2024	4	12.35	77.72	6.6	33.38	8.0	25.3	3.25
I26	11 Dec 2024	5	12.28	76.74	5.9	33.38	7.9	25.3	3.09
I26	11 Dec 2024	6	12.25	73.74	5.4	33.38	7.9	25.3	2.33
I26	11 Dec 2024	7	12.25	70.91	5.3	33.38	7.9	25.3	2.22
I26	11 Dec 2024	8	12.24	70.83	5.2	33.38	7.9	25.3	1.98
I26	17 Dec 2024	1	13.37	83.67	8.9	33.36	8.2	25.0	2.15
I26	17 Dec 2024	2	13.25	82.97	8.9	33.36	8.2	25.1	2.63
I26	17 Dec 2024	3	13.12	81.52	8.6	33.35	8.2	25.1	4.76
I26	17 Dec 2024	4	12.91	79.45	7.7	33.37	8.1	25.1	4.87
I26	17 Dec 2024	5	12.53	80.73	6.7	33.38	8.0	25.2	3.74
I26	17 Dec 2024	6	12.53	84.13	6.2	33.37	8.0	25.2	3.23
I26	17 Dec 2024	7	12.52	84.54	6.0	33.37	7.9	25.2	3.09
I26	17 Dec 2024	8	12.52	83.90	6.0	33.37	7.9	25.2	3.01
I26	17 Dec 2024	9	12.52	83.92	5.9	33.37	7.9	25.2	2.82
I26	26 Dec 2024	1	12.99	38.83	7.6	33.38	8.0	25.1	1.41
I26	26 Dec 2024	2	12.99	38.20	7.6	33.38	8.0	25.1	1.52
I26	26 Dec 2024	3	12.89	33.10	7.4	33.38	8.0	25.2	1.65
I26	26 Dec 2024	4	12.64	30.20	7.2	33.39	8.0	25.2	1.77
I26	26 Dec 2024	5	12.57	27.29	6.9	33.39	7.9	25.2	1.58
I26	26 Dec 2024	6	12.49	30.44	6.6	33.39	7.9	25.2	1.49
I26	26 Dec 2024	7	12.29	33.41	6.1	33.41	7.9	25.3	1.36
I26	26 Dec 2024	8	12.02	49.60	5.4	33.43	7.9	25.4	1.12
I26	26 Dec 2024	9	12.01	8.02	4.9	33.42	7.8	25.4	1.28
I26	30 Dec 2024	1	13.05	76.38	7.6	33.38	8.0	25.1	2.46
I26	30 Dec 2024	2	12.96	73.55	7.5	33.38	8.0	25.1	2.92
I26	30 Dec 2024	3	12.93	69.42	7.3	33.38	8.0	25.2	2.79
I26	30 Dec 2024	4	12.86	71.84	7.1	33.38	8.0	25.2	2.39
I26	30 Dec 2024	5	12.69	76.31	6.7	33.39	7.9	25.2	1.66
I26	30 Dec 2024	6	12.53	78.52	6.2	33.40	7.9	25.2	1.29
I26	30 Dec 2024	7	12.06	67.68	5.3	33.46	7.8	25.4	1.02
I26	30 Dec 2024	8	11.99	55.51	4.8	33.45	7.8	25.4	0.72

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/l)	Sal (ppt)	pH	Dens (s-t)	Chlor (µg/L)
I26	30 Dec 2024	9	11.94	51.71	4.6	33.46	7.8	25.4	0.64
I32	02 Dec 2024	1	13.01	88.37	6.4	33.28	7.9	25.1	0.21
I32	02 Dec 2024	2	12.99	88.42	6.4	33.28	7.9	25.1	0.22
I32	02 Dec 2024	3	12.76	88.31	6.1	33.31	7.9	25.1	0.24
I32	02 Dec 2024	4	12.48	87.72	5.7	33.32	7.9	25.2	0.29
I32	02 Dec 2024	5	12.44	92.23	5.5	33.32	7.9	25.2	0.33
I32	02 Dec 2024	6	12.43	93.84	5.4	33.32	7.9	25.2	0.39
I32	02 Dec 2024	7	12.43	93.96	5.4	33.32	7.9	25.2	0.44
I32	02 Dec 2024	8	12.43	93.78	5.3	33.32	7.9	25.2	0.53
I32	02 Dec 2024	9	12.41	92.66	5.1	33.33	7.9	25.2	0.67
I32	02 Dec 2024	10	12.40	86.54	4.9	33.33	7.9	25.2	0.92
I32	11 Dec 2024	1	12.59	66.05	7.1	33.37	8.0	25.2	3.01
I32	11 Dec 2024	2	12.53	65.88	6.8	33.38	8.0	25.2	2.93
I32	11 Dec 2024	3	12.40	65.29	6.3	33.38	7.9	25.3	3.79
I32	11 Dec 2024	4	12.34	62.88	6.3	33.38	7.9	25.3	4.21
I32	11 Dec 2024	5	12.30	57.53	6.5	33.38	7.9	25.3	4.04
I32	11 Dec 2024	6	12.28	51.98	7.0	33.38	7.9	25.3	3.85
I32	11 Dec 2024	7	12.27	45.93	7.3	33.38	7.9	25.3	3.91
I32	11 Dec 2024	8	12.28	36.96	7.4	33.38	7.9	25.3	3.91
I32	11 Dec 2024	9	12.29	28.88	7.4	33.38	7.9	25.3	3.85
I32	17 Dec 2024	1	13.35	80.13	8.6	33.37	8.1	25.1	1.99
I32	17 Dec 2024	2	13.24	80.27	8.5	33.37	8.1	25.1	2.13
I32	17 Dec 2024	3	13.05	79.35	8.5	33.37	8.1	25.1	3.10
I32	17 Dec 2024	4	12.95	74.39	8.2	33.37	8.1	25.1	4.92
I32	17 Dec 2024	5	12.84	69.11	7.9	33.37	8.1	25.2	6.21
I32	17 Dec 2024	6	12.80	68.75	7.8	33.37	8.1	25.2	7.29
I32	17 Dec 2024	7	12.75	68.55	7.8	33.37	8.1	25.2	7.38
I32	17 Dec 2024	8	12.68	65.47	7.7	33.37	8.1	25.2	6.94
I32	17 Dec 2024	9	12.62	59.28	7.3	33.37	8.0	25.2	7.01
I32	17 Dec 2024	10	12.54	53.63	6.5	33.37	8.0	25.2	7.39
I32	26 Dec 2024	1	12.57	7.33	7.6	33.38	7.9	25.2	2.20
I32	26 Dec 2024	2	12.57	7.23	7.6	33.38	7.9	25.2	2.23
I32	26 Dec 2024	3	12.57	7.06	7.5	33.38	7.9	25.2	2.22
I32	26 Dec 2024	4	12.56	7.02	7.4	33.38	7.9	25.2	2.27
I32	26 Dec 2024	5	12.56	7.01	7.3	33.38	7.9	25.2	2.20
I32	26 Dec 2024	6	12.54	7.44	7.0	33.38	7.9	25.2	2.24
I32	26 Dec 2024	7	12.46	7.90	6.3	33.39	7.9	25.2	2.08
I32	26 Dec 2024	8	12.26	9.62	5.3	33.40	7.8	25.3	1.95
I32	26 Dec 2024	9	12.07	9.85	4.3	33.40	7.8	25.3	1.93
I32	26 Dec 2024	10	12.00	5.12	3.9	33.41	7.8	25.4	1.95
I32	30 Dec 2024	1	13.00	69.15	7.3	33.38	8.0	25.1	2.14
I32	30 Dec 2024	2	12.97	68.82	7.2	33.38	8.0	25.1	2.26
I32	30 Dec 2024	3	12.88	66.20	7.0	33.39	7.9	25.2	2.16
I32	30 Dec 2024	4	12.80	66.35	6.9	33.39	7.9	25.2	2.41
I32	30 Dec 2024	5	12.62	59.35	6.9	33.39	7.9	25.2	3.84
I32	30 Dec 2024	6	12.57	48.73	6.9	33.39	7.9	25.2	3.99
I32	30 Dec 2024	7	12.52	42.92	7.0	33.40	7.9	25.2	3.14
I32	30 Dec 2024	8	12.45	37.98	6.9	33.40	7.9	25.3	2.50
I32	30 Dec 2024	9	12.40	36.91	6.7	33.40	7.8	25.3	1.88
I32	30 Dec 2024	10	12.40	39.67	6.4	33.40	7.8	25.3	1.69

NA = not available

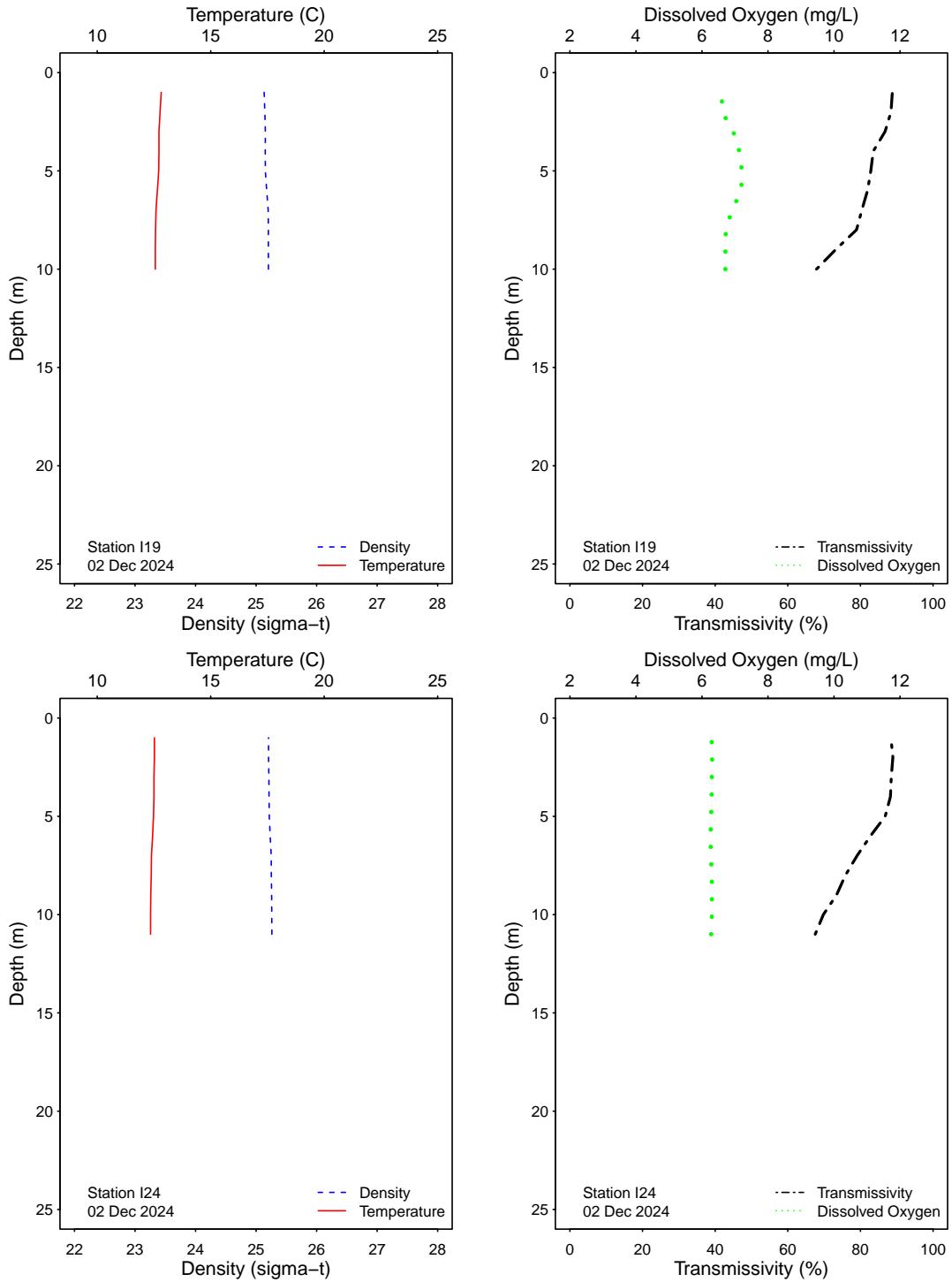


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

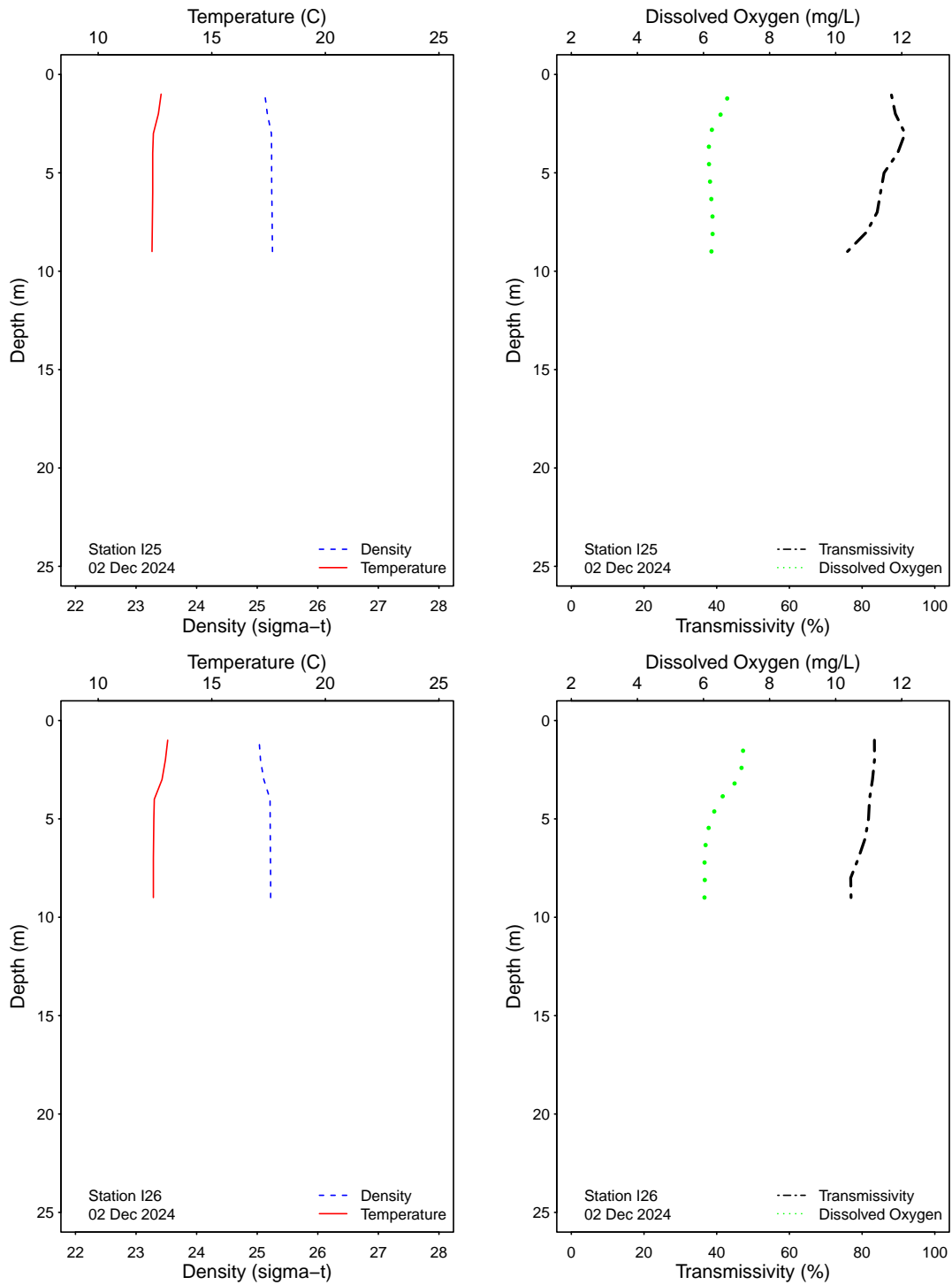


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

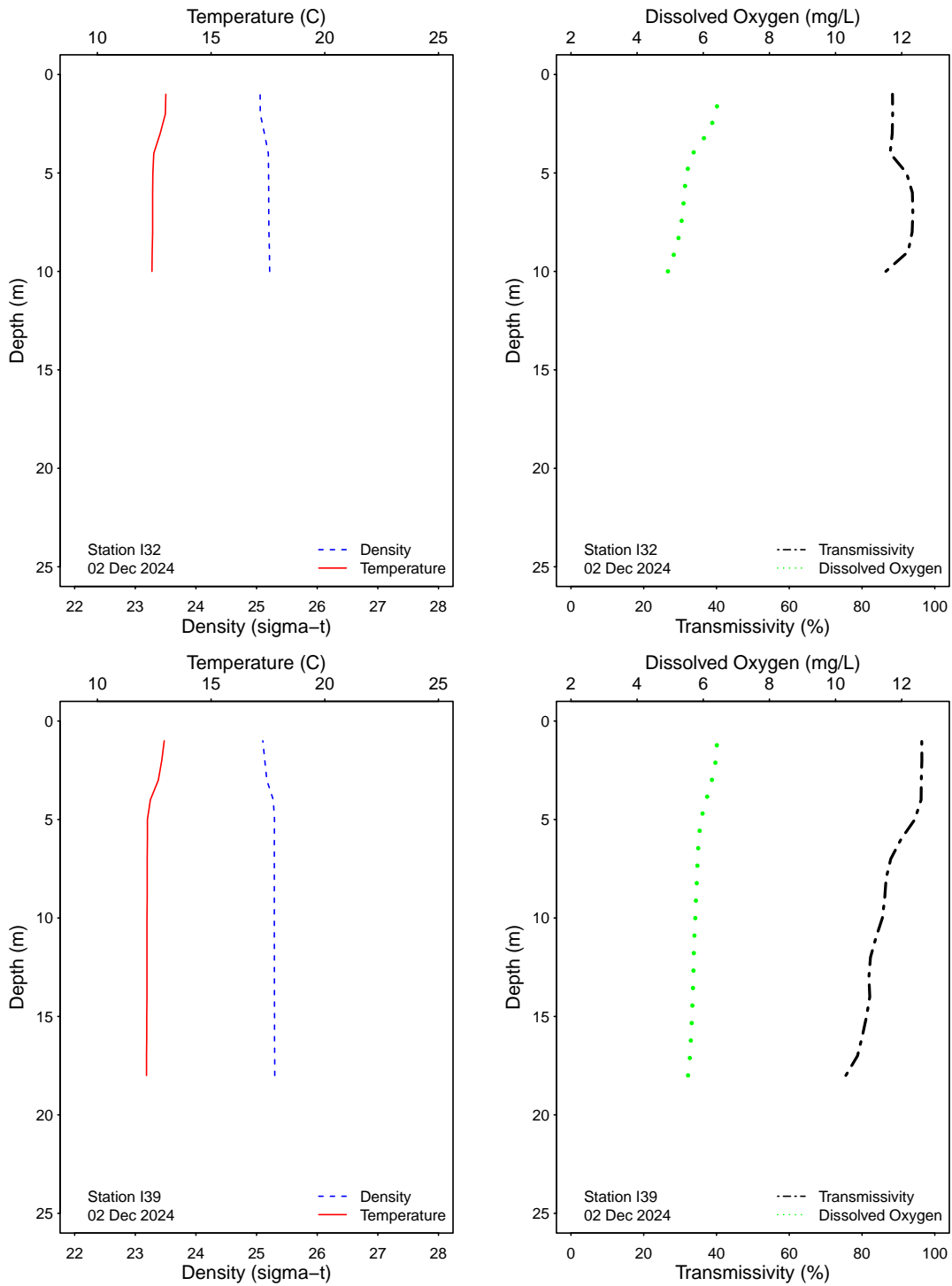


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

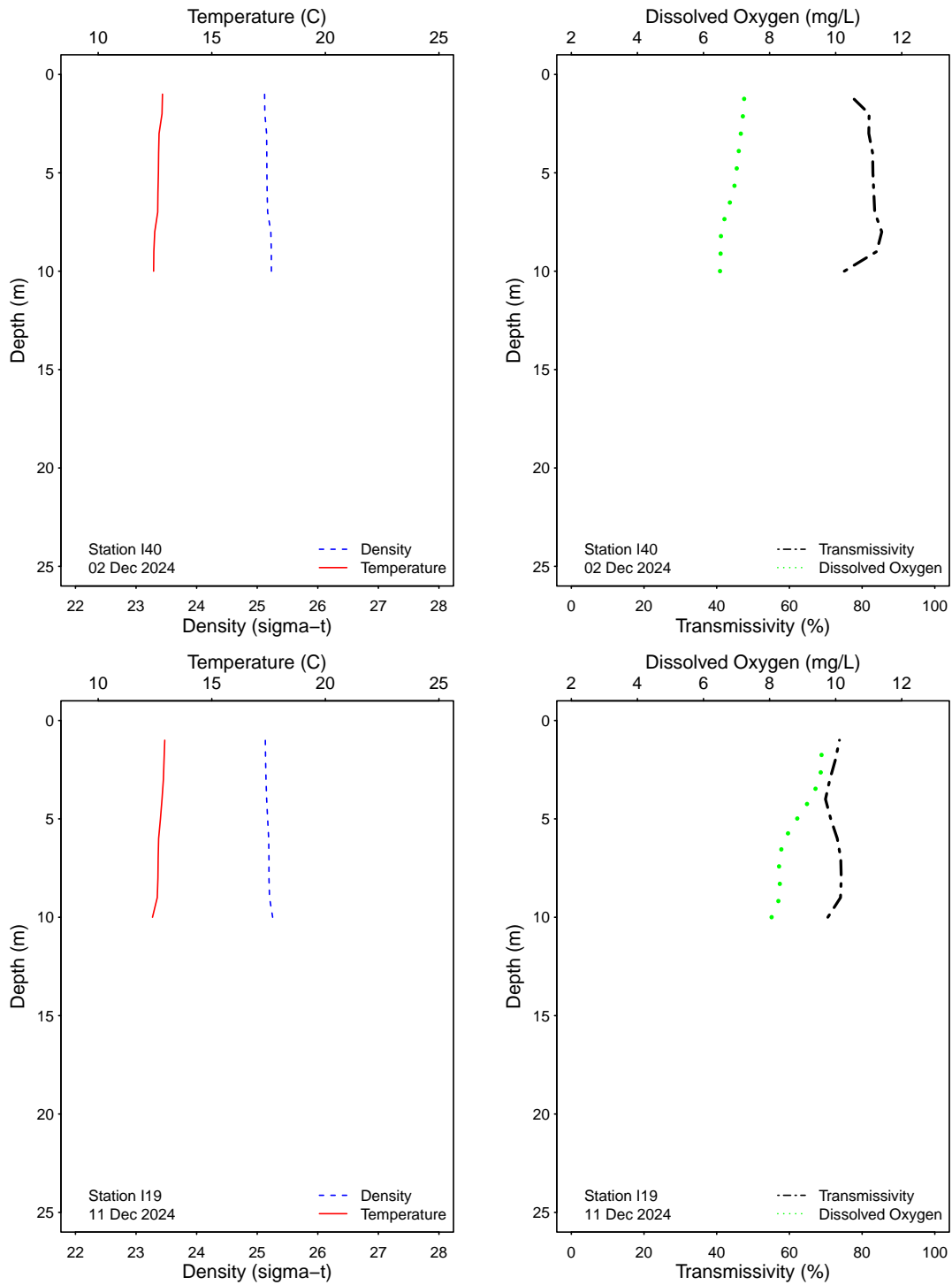


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

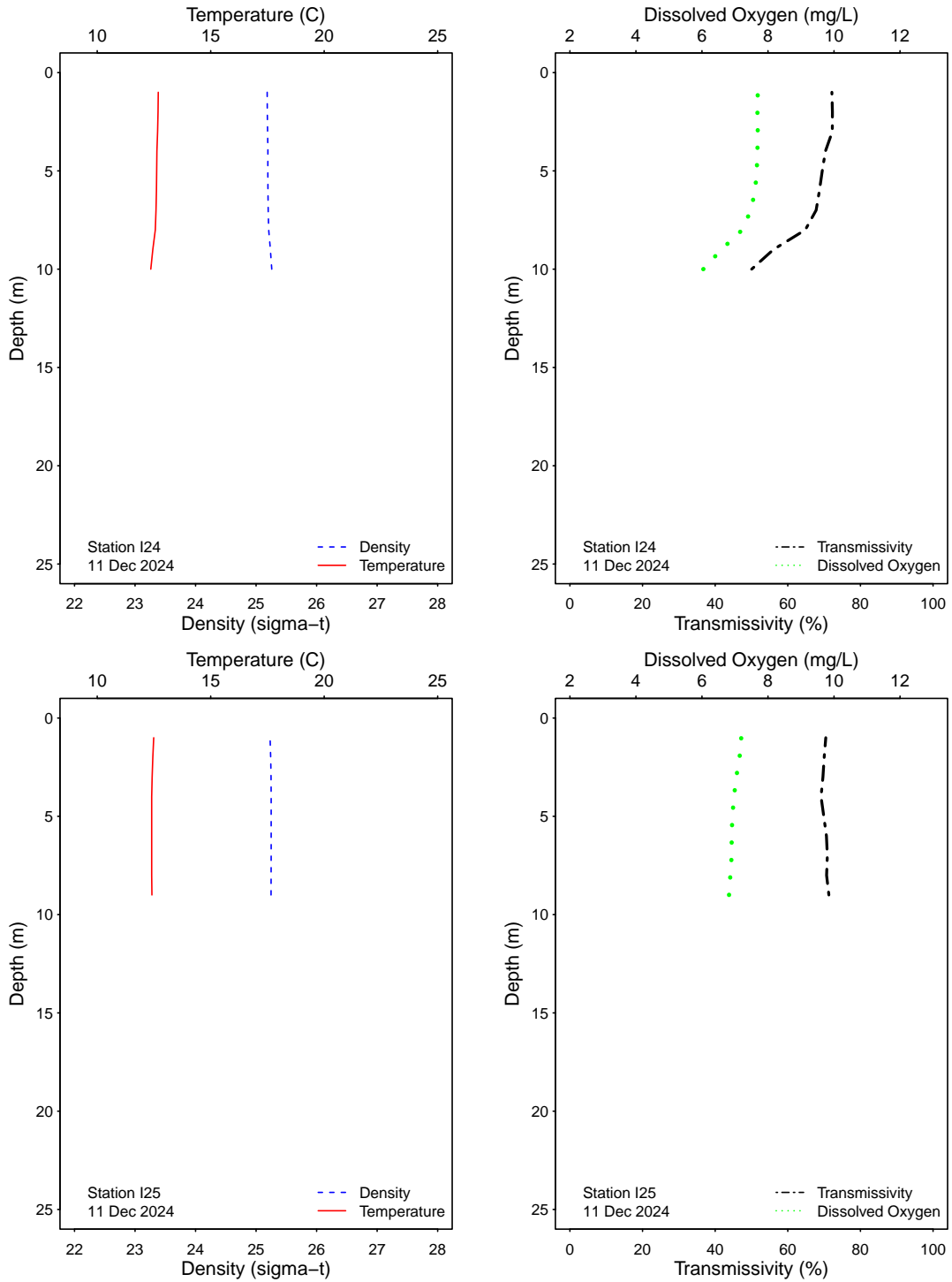


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

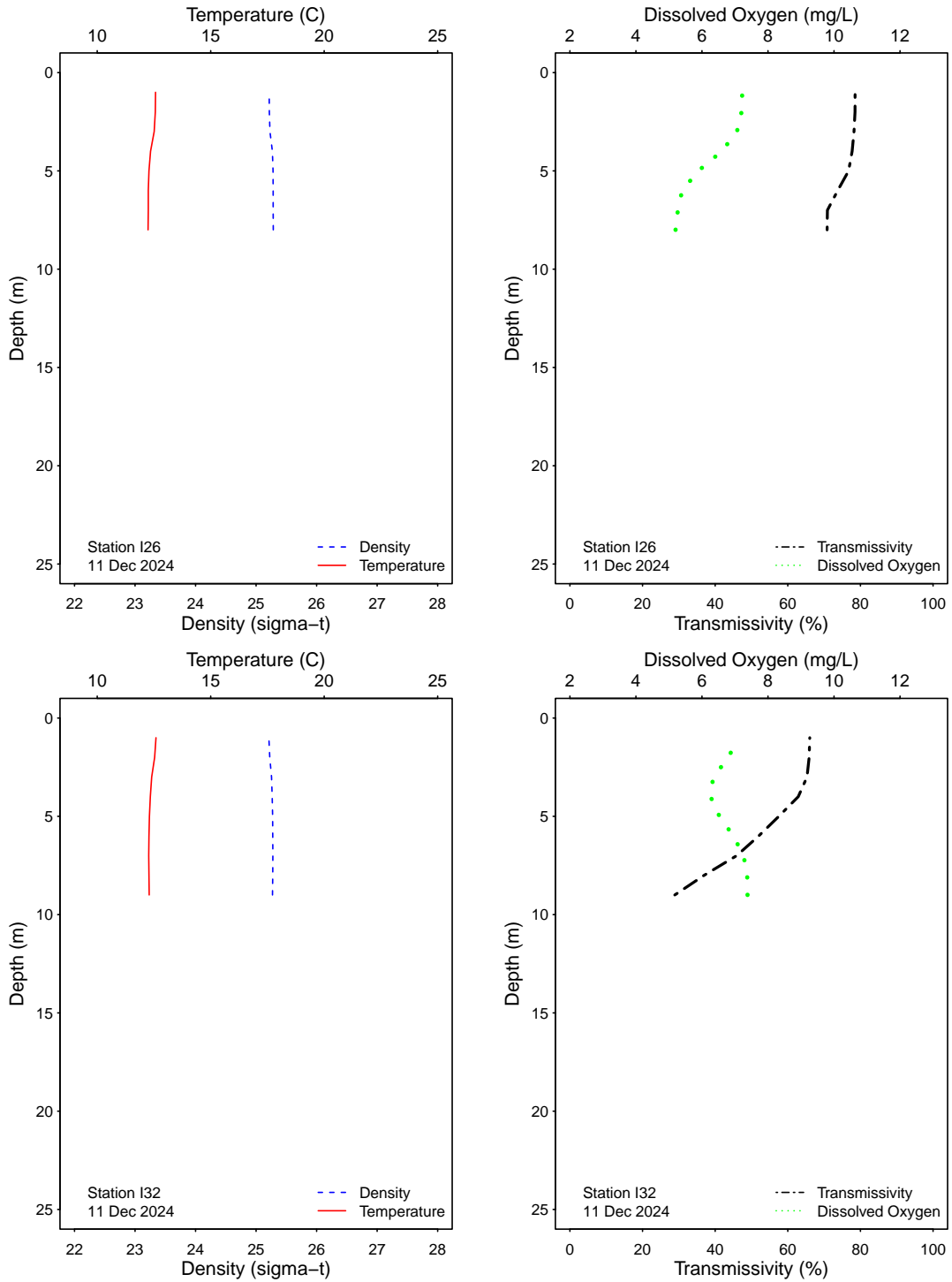


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

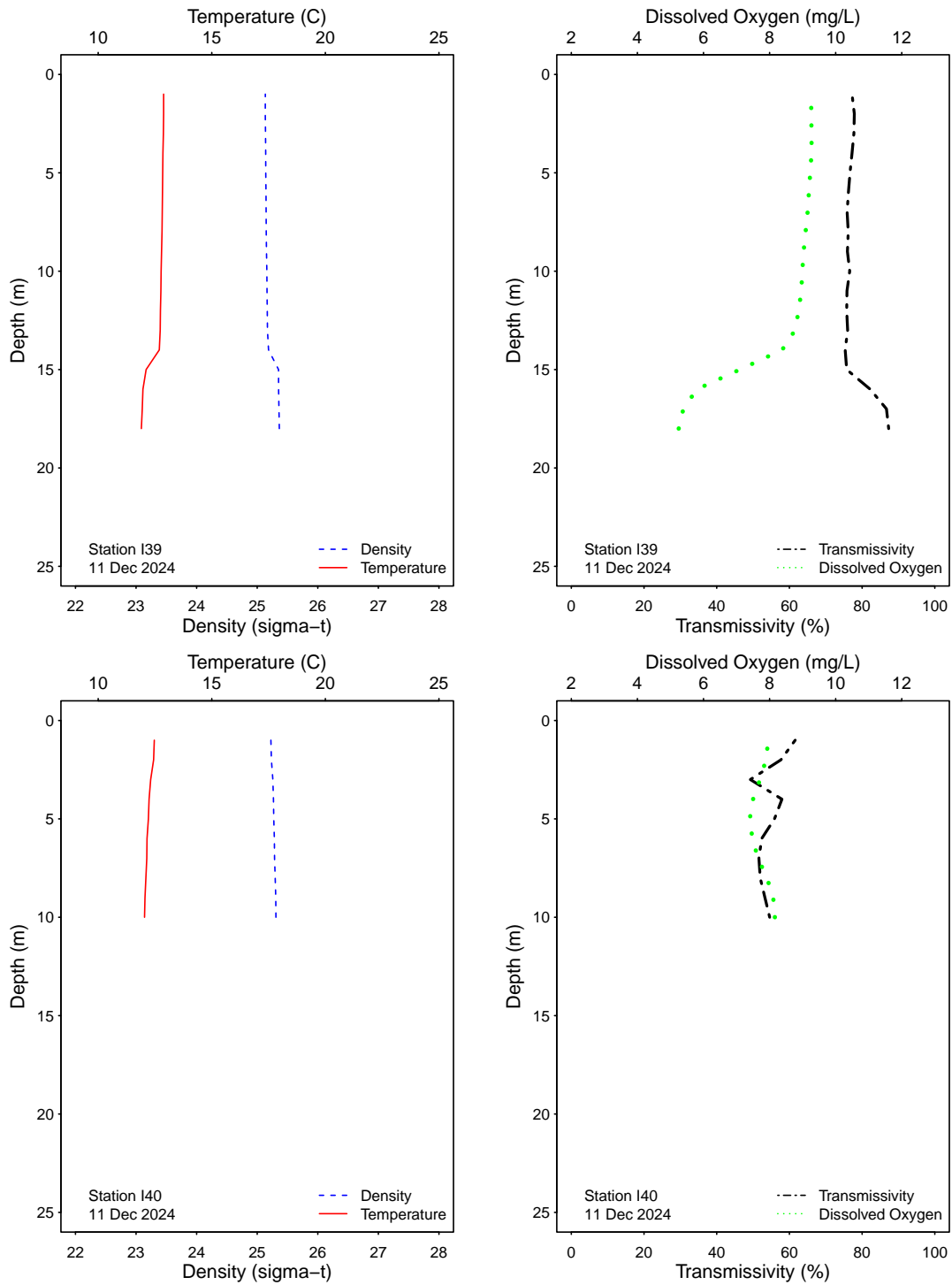


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

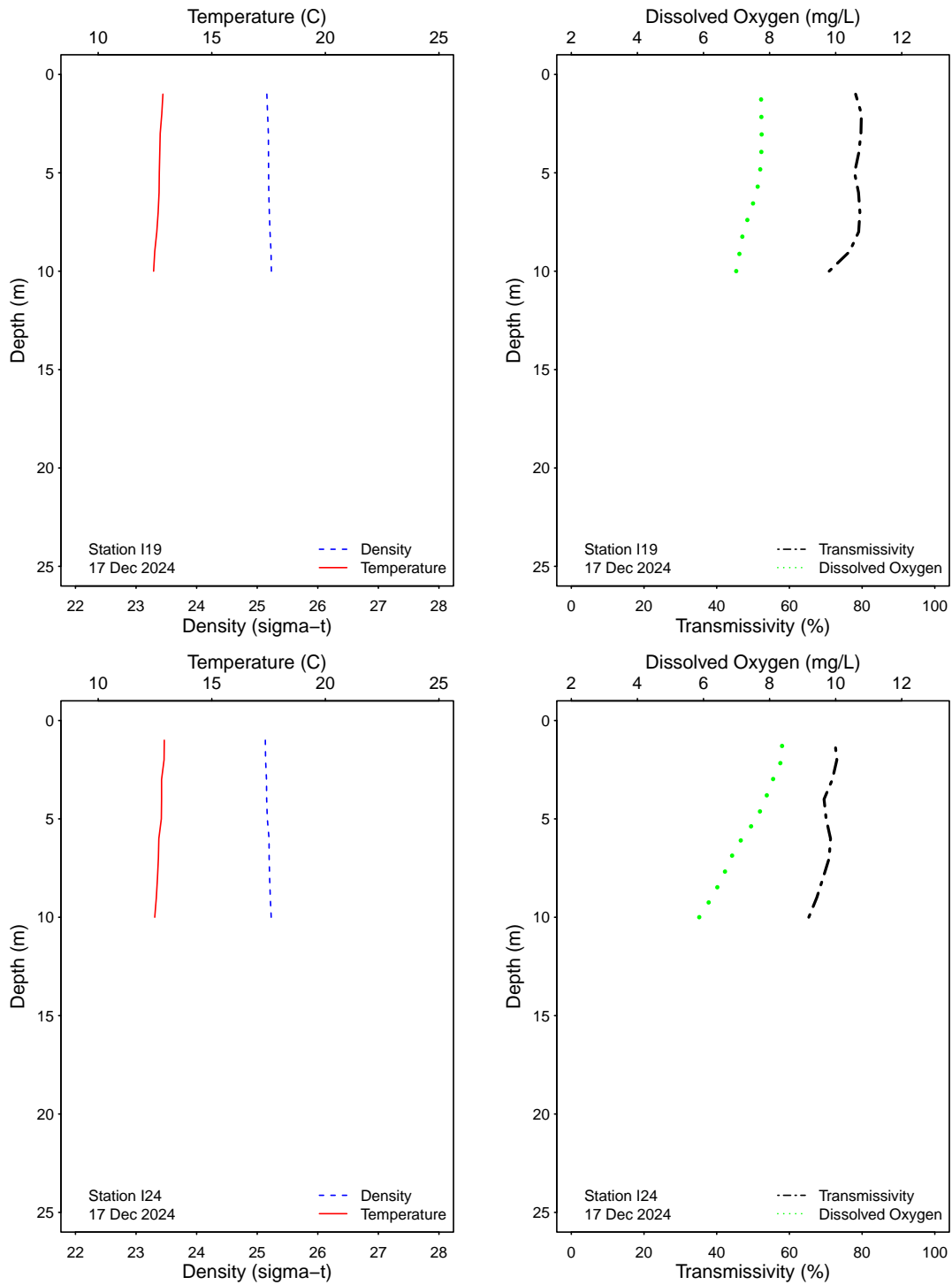


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

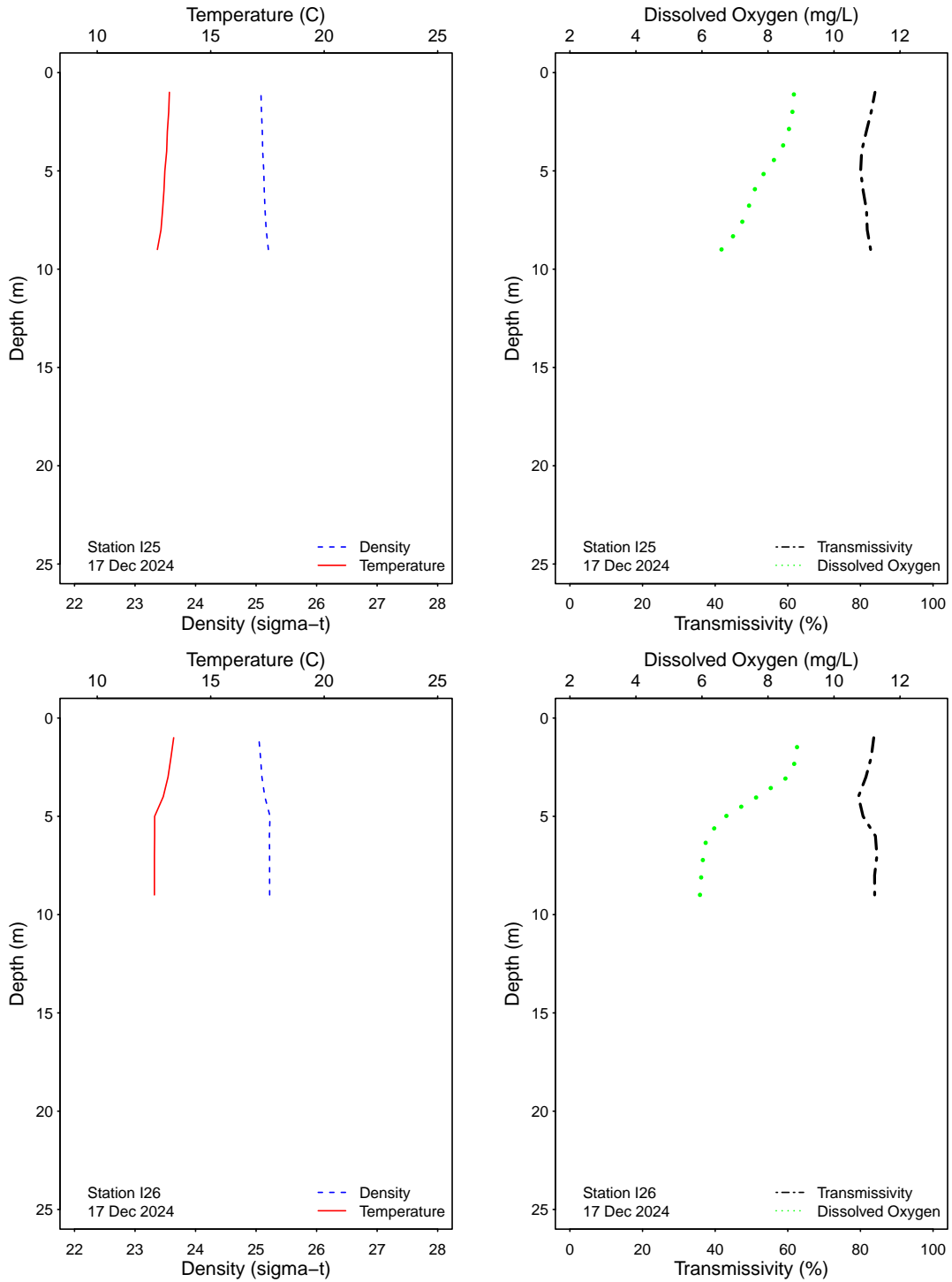


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

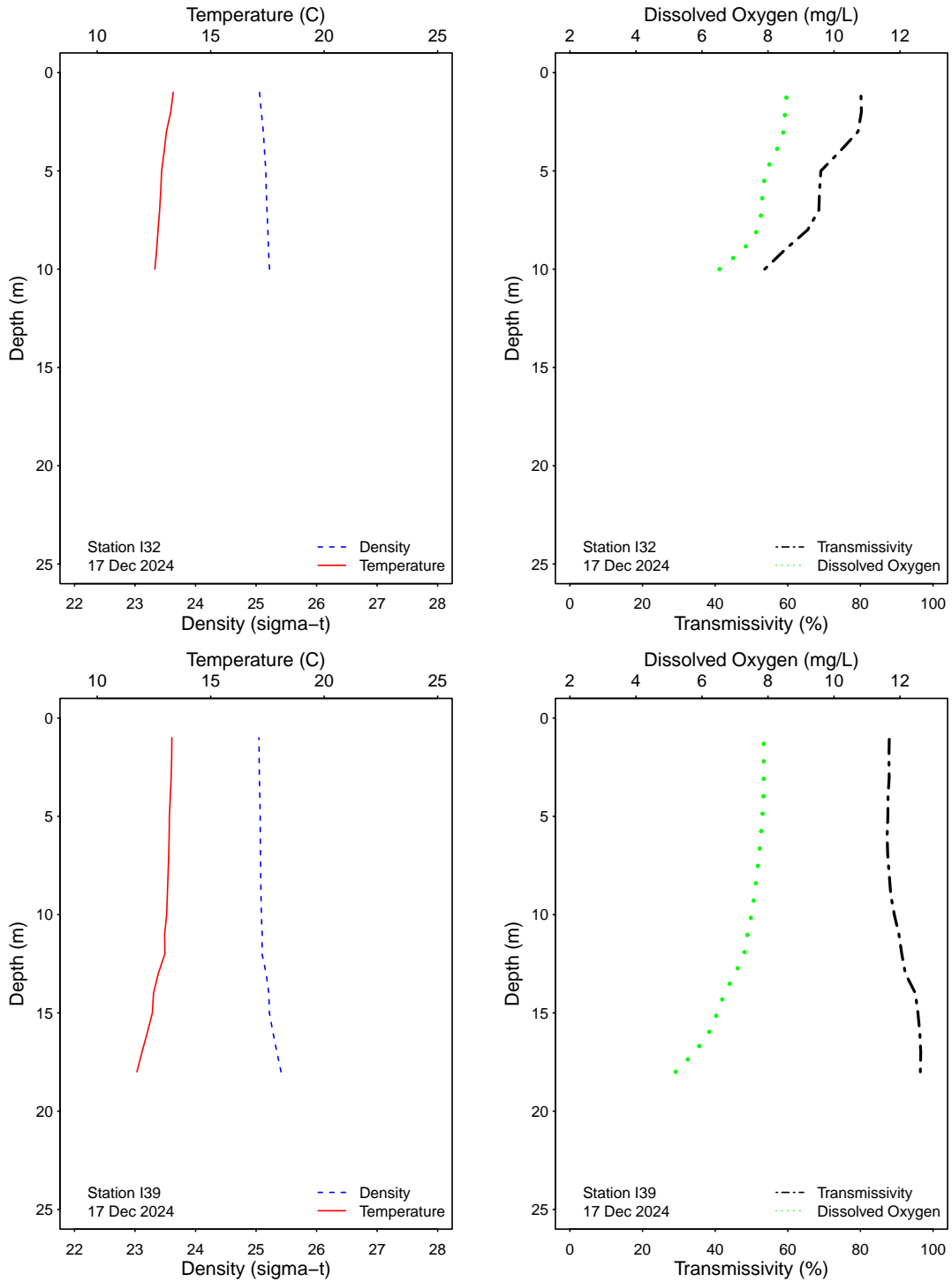


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

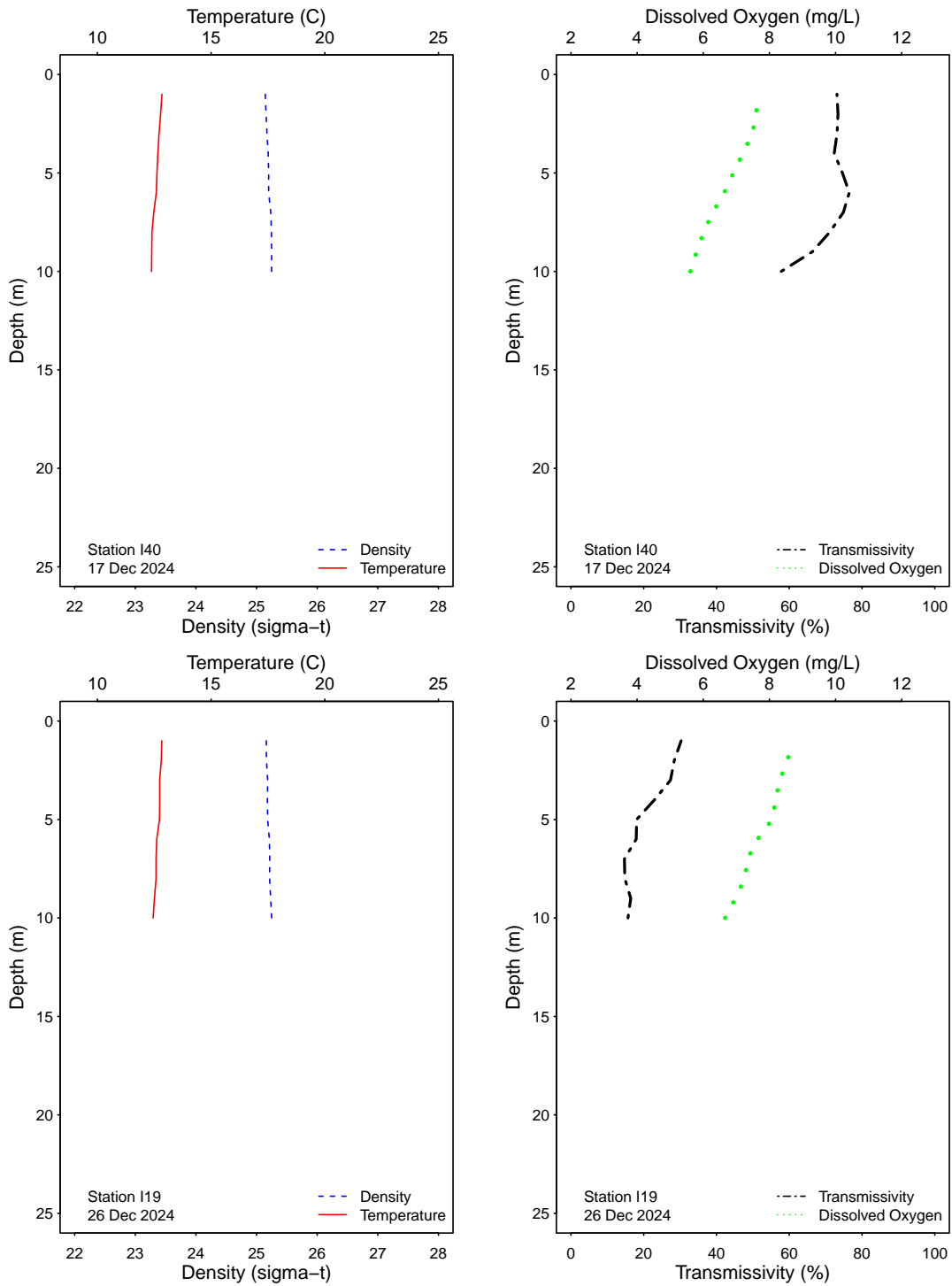


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

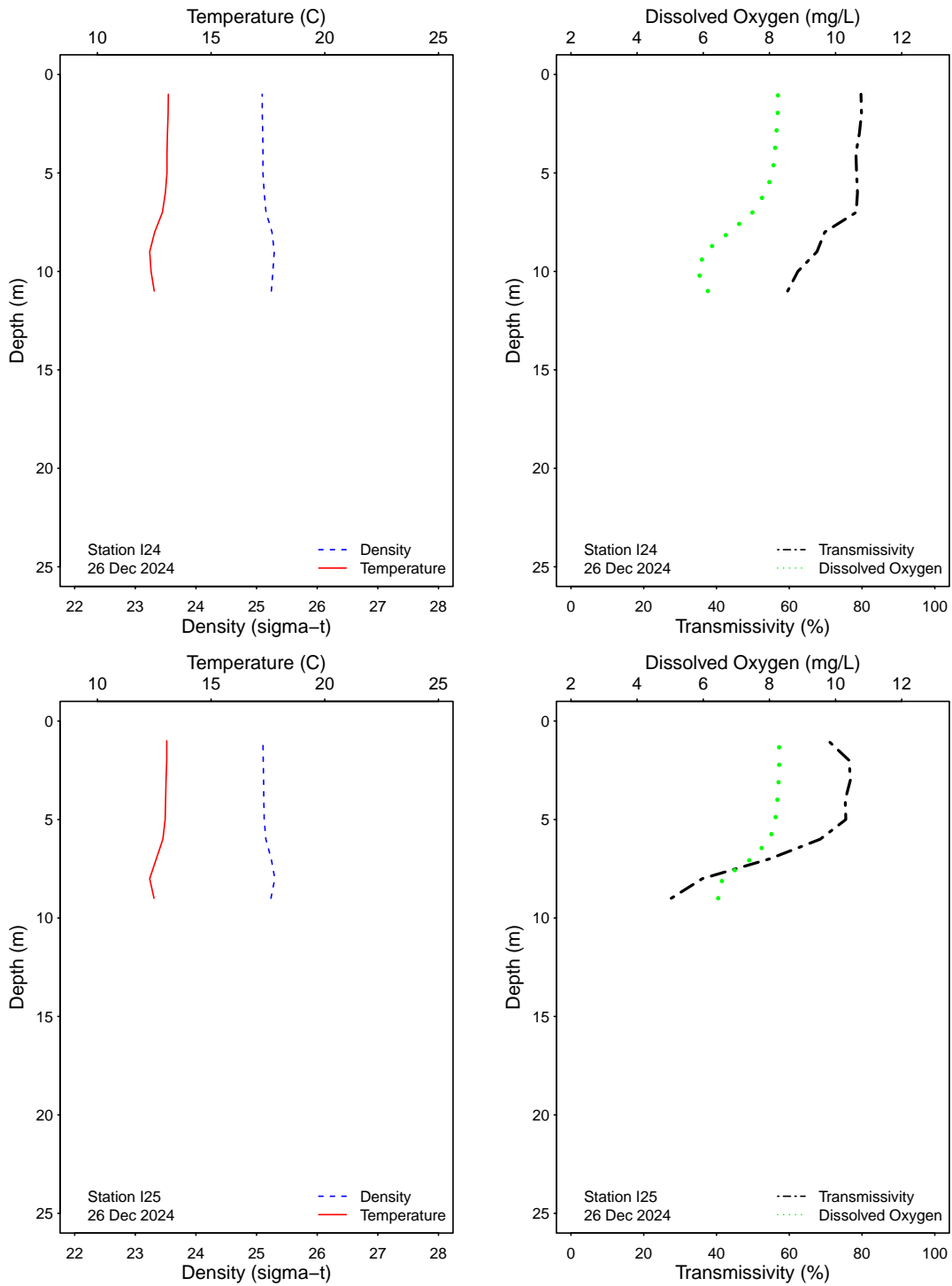


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

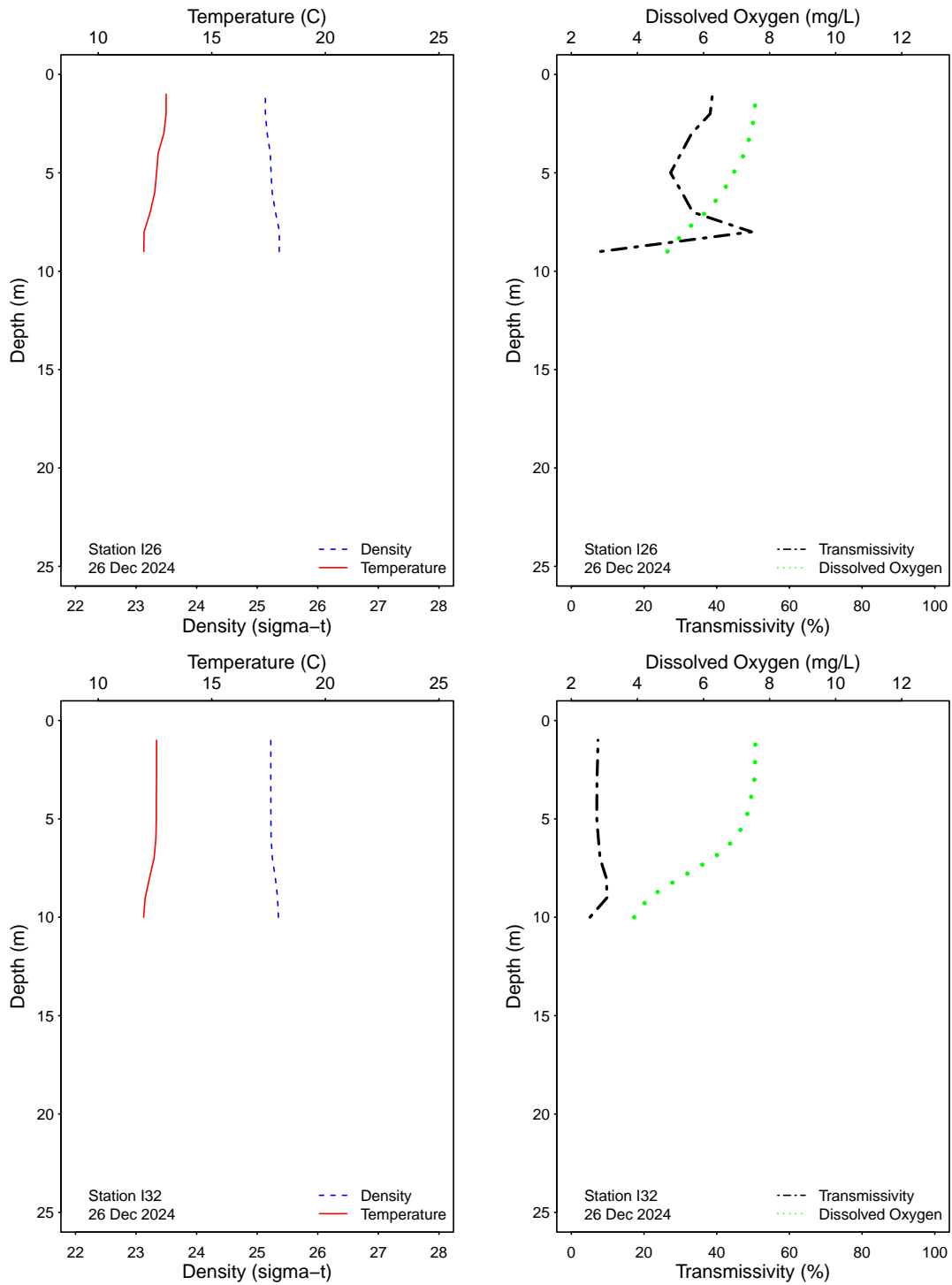


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

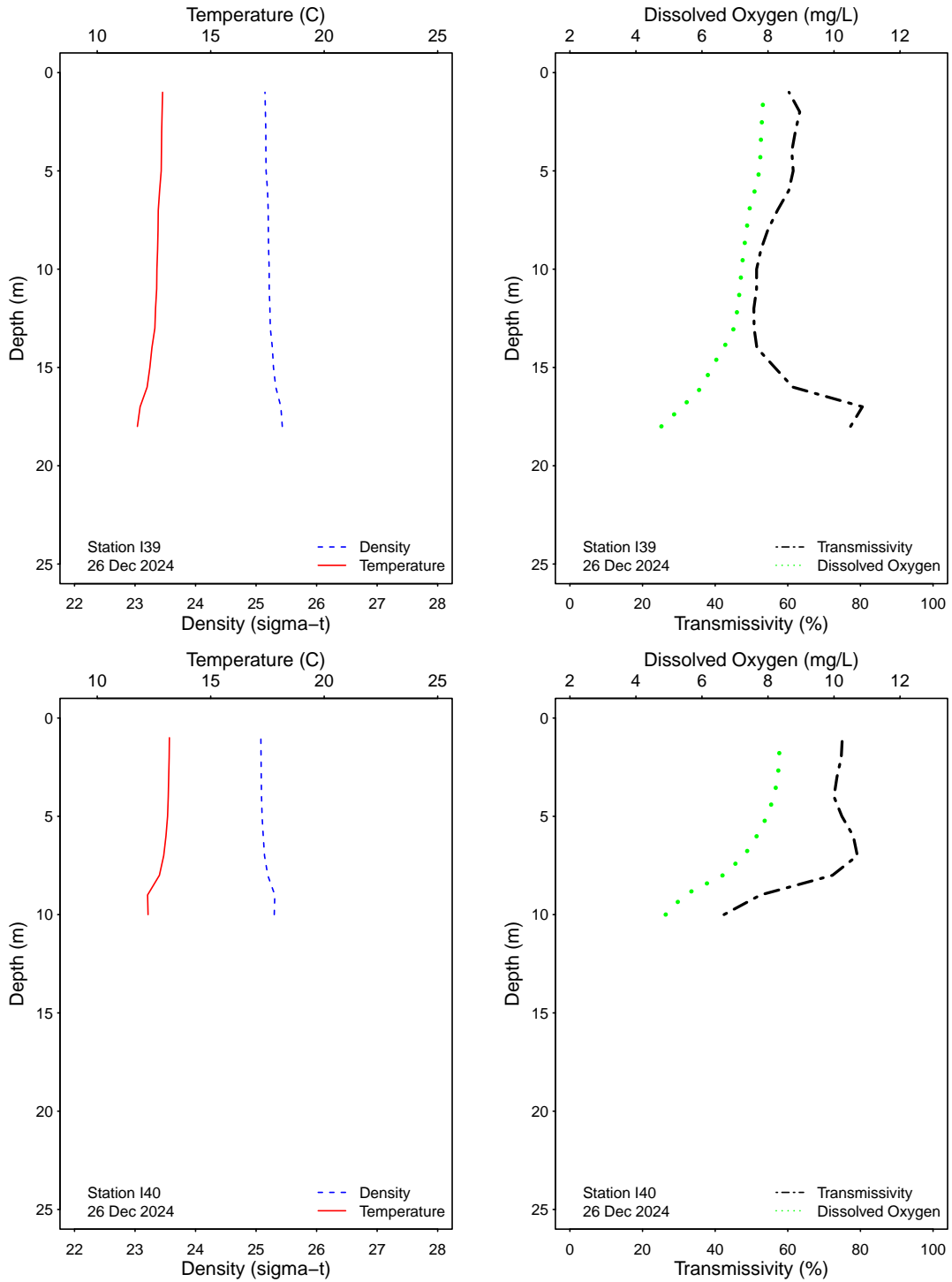


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

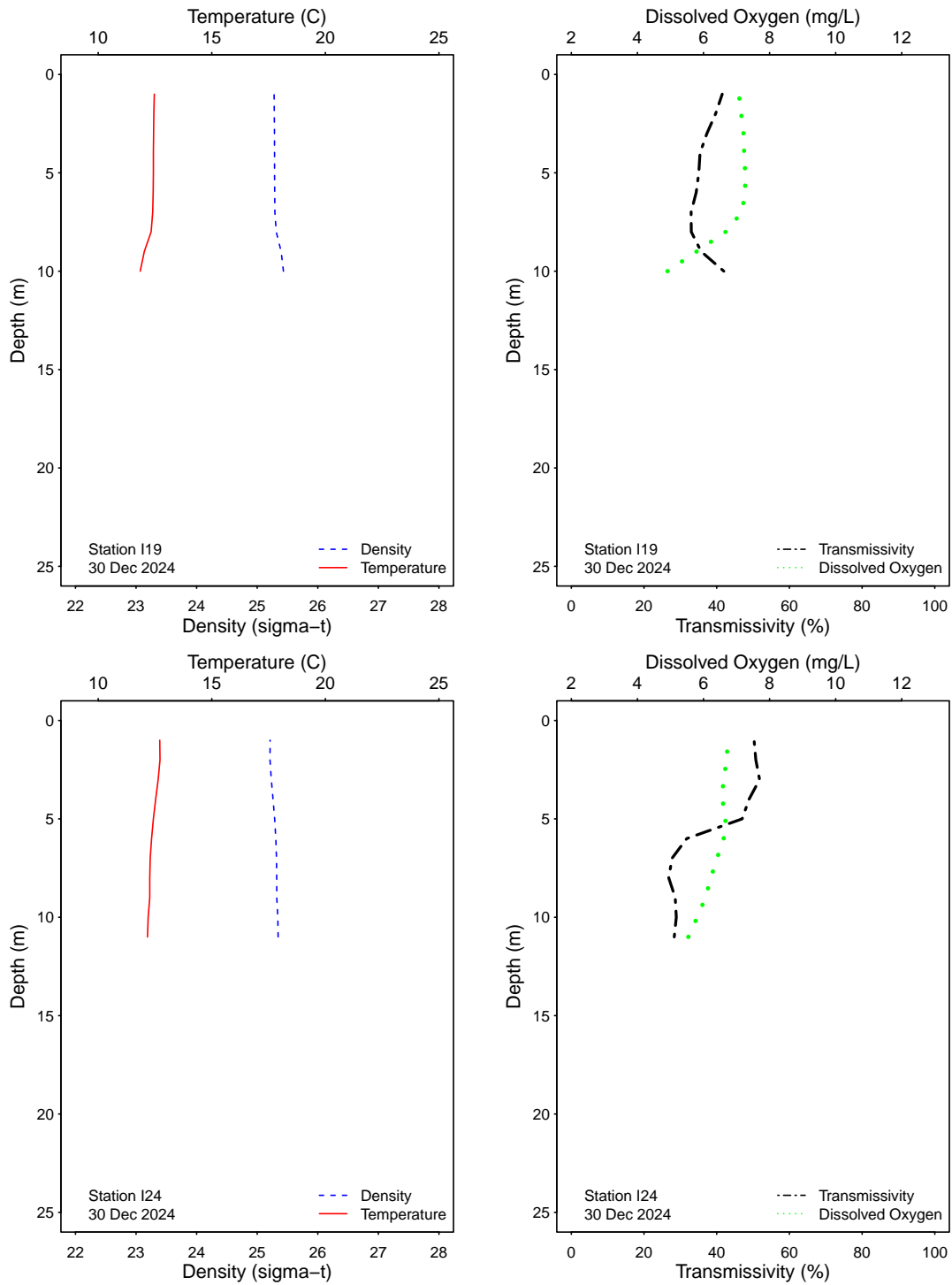


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

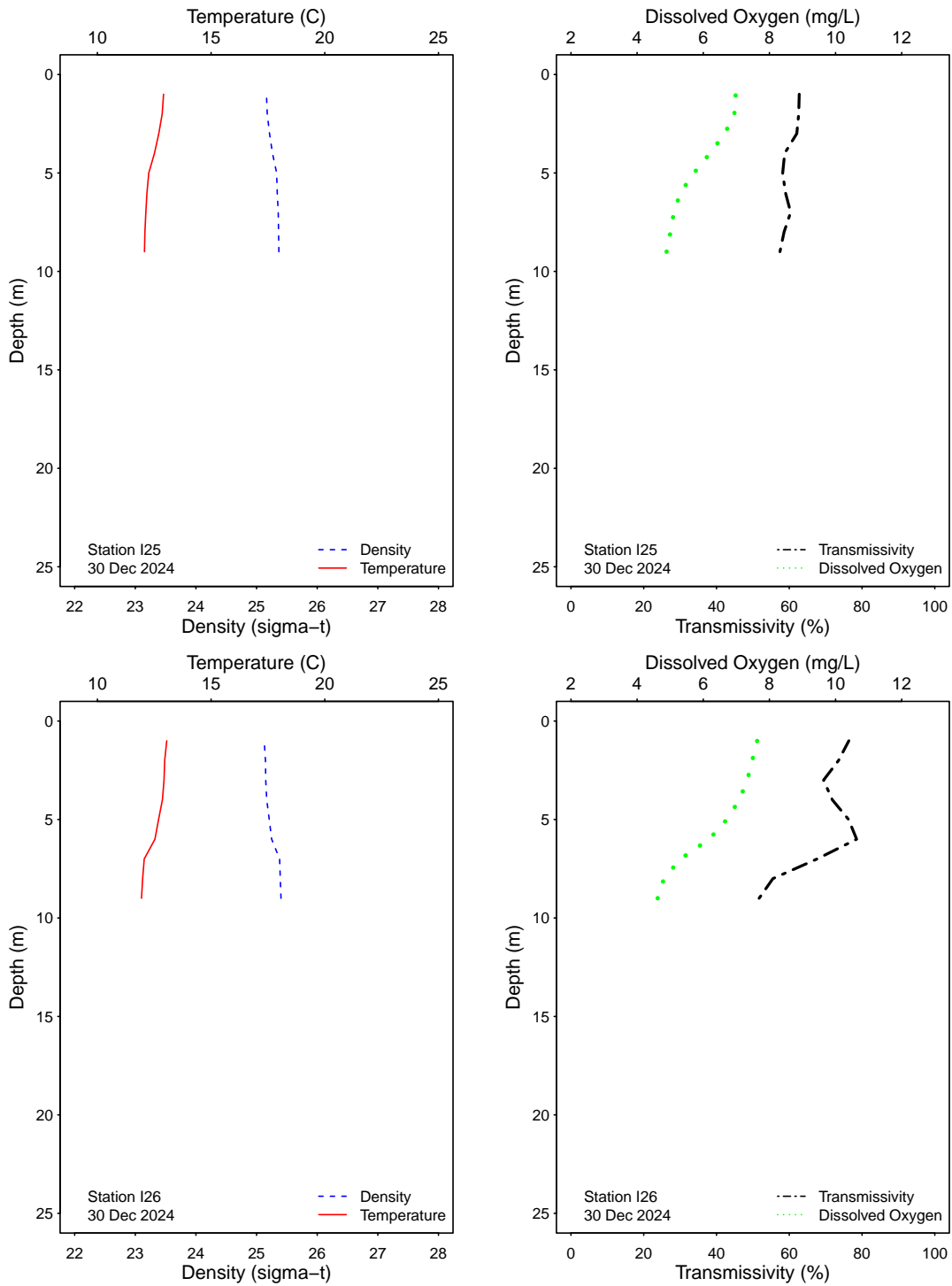


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

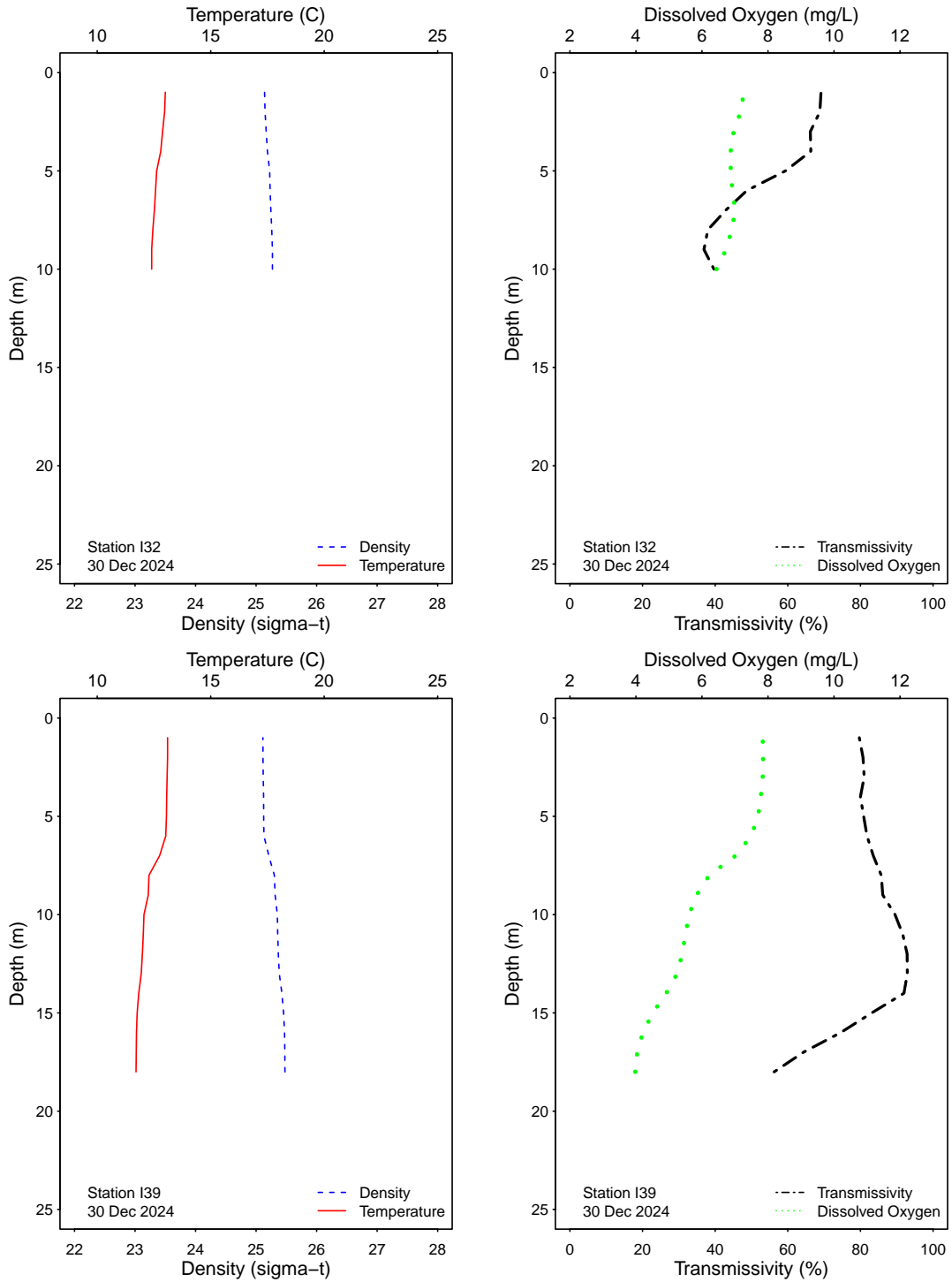


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

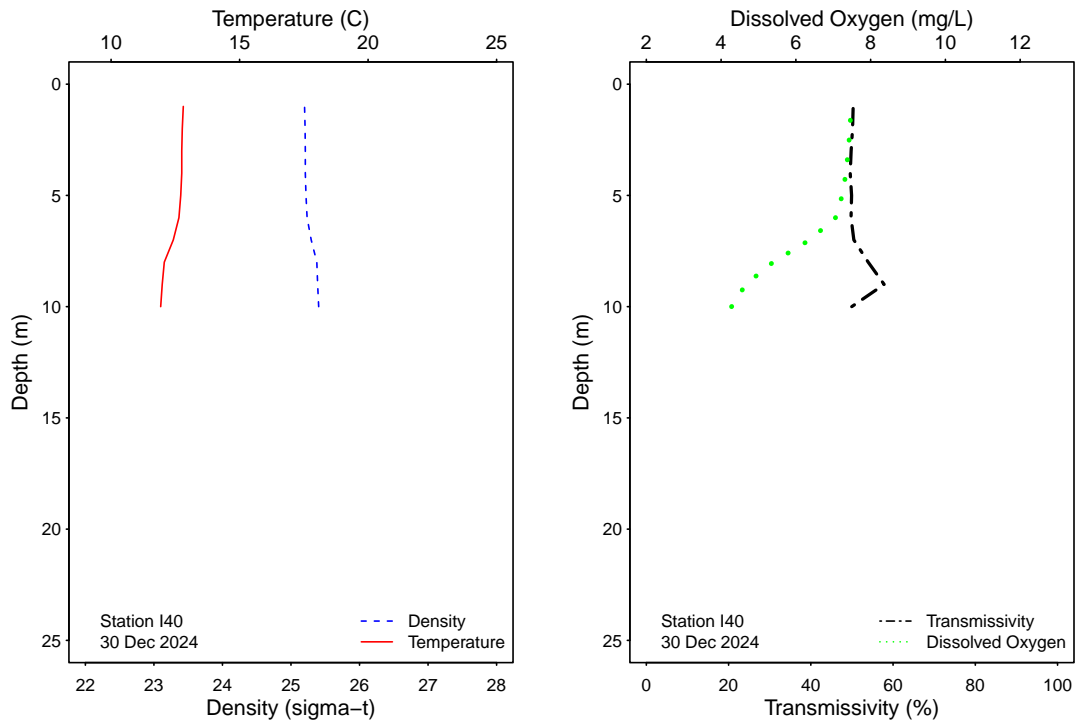


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

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APPENDIX A

Quality Assurance

Table A.1

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

Station	Date	Depth	Analyst	Procedure	Total	Fecal	Entero
I19	02 Dec 2024	6	KT	LAB DUPLICATE	300	20	88
I19	11 Dec 2024	6	ND	LAB DUPLICATE	4	4	2
I19	17 Dec 2024	6	ND	LAB DUPLICATE	20	2	2
I19	26 Dec 2024	6	JF	LAB DUPLICATE	400	140	46
I19	30 Dec 2024	6	JF	LAB DUPLICATE	40	18	8
I40	02 Dec 2024	6	KT	LAB DUPLICATE	160	16	38
I40	11 Dec 2024	6	ND	LAB DUPLICATE	7400	1000	140
I40	17 Dec 2024	6	ND	LAB DUPLICATE	2000	140	30
I40	26 Dec 2024	6	JF	LAB DUPLICATE	8	2	2
I40	30 Dec 2024	6	JF	LAB DUPLICATE	2	2	2
S12	03 Dec 2024		BS	FIELD DUPLICATE	4	4	2
S12	03 Dec 2024		BS	LAB DUPLICATE	6	2	2
S12	10 Dec 2024		KA	FIELD DUPLICATE	4	2	2
S12	10 Dec 2024		KA	LAB DUPLICATE	4	2	2
S12	17 Dec 2024		WT	LAB DUPLICATE	40	8	2
S12	17 Dec 2024		WT	FIELD DUPLICATE	20	20	2
S12	23 Dec 2024		WT	FIELD DUPLICATE	20	20	2
S12	23 Dec 2024		WT	LAB DUPLICATE	20	4	2
S12	30 Dec 2024		ND	FIELD DUPLICATE	20	2	4
S12	30 Dec 2024		ND	LAB DUPLICATE	20	2	4

ns = not sampled

ND = no data

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