

# **SOUTH BAY OCEAN OUTFALL MONTHLY RECEIVING WATERS MONITORING REPORT**

## **SOUTH BAY WATER RECLAMATION PLANT**

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

# **OCTOBER 2024**

Environmental Monitoring and Technical Services  
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November 30, 2024

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

Attention: POTW Compliance Unit

Dear Mr. Gibson:

Enclosed is the October 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  $\geq 4$  scans per second. The data were then internally averaged using the CTD proprietary software, Seasoft, to create water column profiles equivalent to one reading per meter. Additionally, CTD profile data for each water sample depth are presented

with the bacteriological data.

### ***Offshore Stations***

Quarterly offshore water quality sampling is typically conducted over three days during February, May, August, and November for a total of 40 stations during each month (see station locations map). These offshore stations (I1–I40) are arranged in a grid surrounding the discharge site, and are generally located along the 9, 19, 28, 38, and 55-m depth contours. The seven offshore sites designated as kelp bed stations (described above) are included as part of the 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 chromomorphoc 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)<sup>1</sup>. 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**

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<sup>1</sup> 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, 1987<sup>2</sup>) 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 October, each of the eight shore stations located north of the border was out of compliance with the 2019 California Ocean Plan (Ocean Plan) water contact standards on one or more days as follows:
  - The 6-week running geometric mean standard for *Enterococcus* was exceeded at stations S5 and S10.
  - The statistical threshold value (STV) standard for *Enterococcus* was exceeded at station S12.
  - The 30-day running median standard for total coliforms was exceeded at stations S4, S5, S6, S10, S11, and S12.
  - The STV standard for total coliforms was exceeded at stations S8, S9, and S12.
- Nothing of sewage origin was observed at SBOO shore stations in October.

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

- Historical analyses of Ocean Plan compliance rates for the South Bay outfall shore and kelp monitoring stations, combined with the results of satellite imagery data, suggest that outflows from the Tijuana River and Los Buenos Creek, as well as surface runoff during or after rain events (storms), are likely to be the cause of impacted water quality along the shore and in near shore recreational waters in the South Bay region. See the City of San Diego's most recent *Biennial Receiving Waters Monitoring and Assessment Report for the Point Loma and South Bay Ocean Outfalls* for details (<https://www.sandiego.gov/public-utilities/sustainability/ocean-monitoring/reports>).

➤ **Kelp Bed Water Quality Sampling**

- The seven kelp bed water quality stations (I19, I24, I25, I26, I32, I39, I40) were sampled on October 8, 15, 21, and 30.
- During October, three 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 30-day running median standard for total coliforms was exceeded at station I40.
  - The STV standard for total coliforms was exceeded at stations I24, I32, and I40.
- Water column temperatures ranged from 11.94 to 17.49°C. The difference between surface and bottom waters ranged from 0.63 to 3.91°C.
- Concentrations of chlorophyll *a* ranged from 0.48 to 6.97 µg/L at the kelp bed stations.
- Nothing of sewage origin was observed at SBOO kelp stations in October.

➤ **Offshore Water Quality Sampling**

- Quarterly sampling was not conducted during October at the offshore stations. The next quarterly sampling is scheduled for November 2024.





# TABLES AND FIGURES



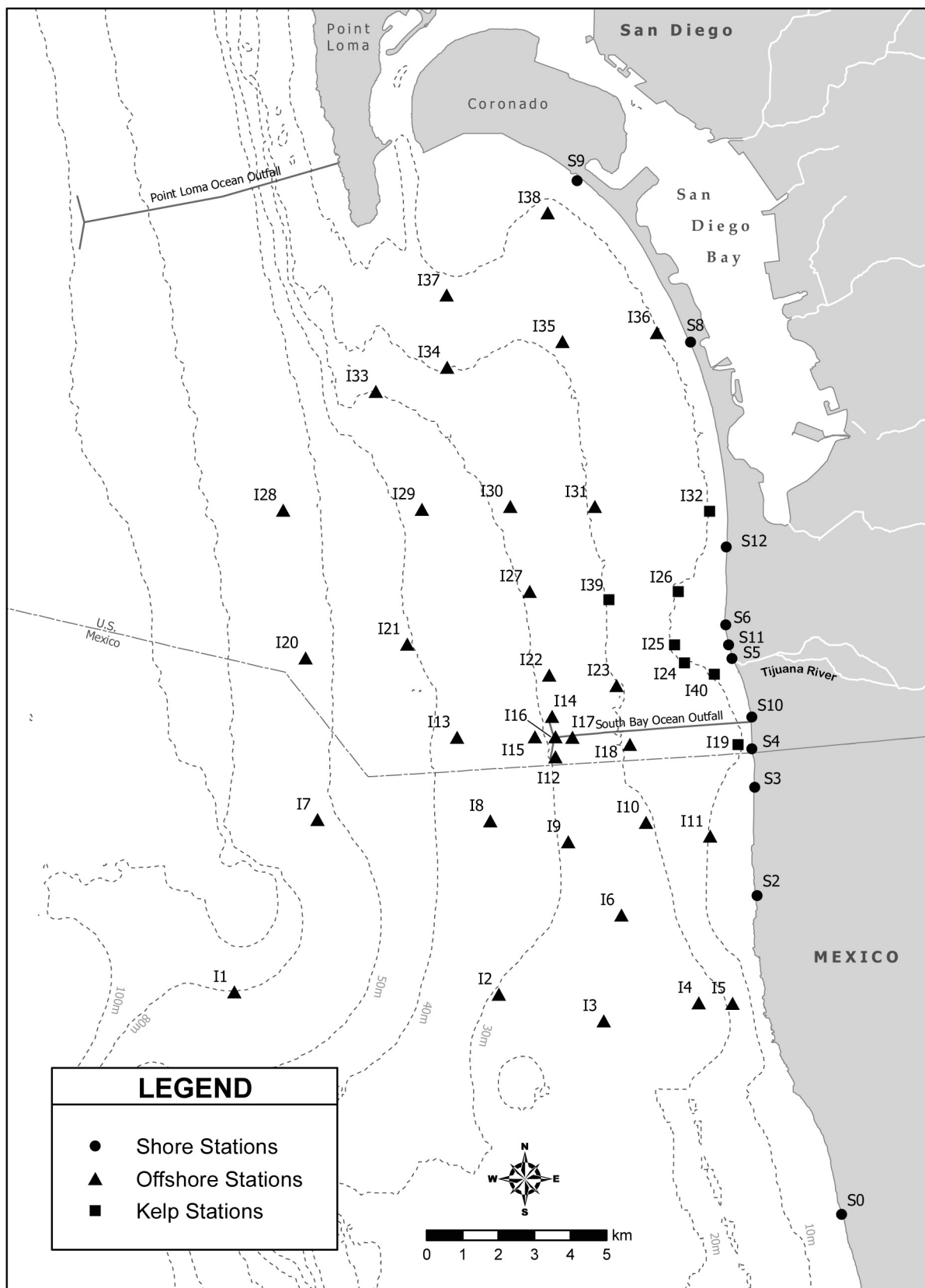


Figure 1.1 Station Map

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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 Oct 2024	6	65	5	3	2	42	5	2
02 Oct 2024	6	65	5	3	2	42	5	2
03 Oct 2024	*6	*46	*4	*4	*3	*37	*3	*2
04 Oct 2024	*6	*46	*4	*4	*3	*37	*3	*2
05 Oct 2024	*6	*46	*4	*4	*3	*37	*3	*2
06 Oct 2024	*6	*46	*4	*4	*3	*37	*3	*2
07 Oct 2024	*6	*46	*4	*4	*3	*37	*3	*2
08 Oct 2024	10	39	3	3	4	21	5	4
09 Oct 2024	10	39	3	3	4	21	5	4
10 Oct 2024	*7	*14	*2	*2	*4	*10	*4	*5
11 Oct 2024	*7	*14	*2	*2	*4	*10	*4	*5
12 Oct 2024	*7	*14	*2	*2	*4	*10	*4	*5
13 Oct 2024	*7	*14	*2	*2	*4	*10	*4	*5
14 Oct 2024	*7	*14	*2	*2	*4	*10	*4	*5
15 Oct 2024	9	13	2	2	3	10	3	4
16 Oct 2024	9	13	2	2	3	10	3	4
17 Oct 2024	*8	*13	*2	*2	*4	*9	*4	*5
18 Oct 2024	*8	*13	*2	*2	*4	*9	*4	*5
19 Oct 2024	*8	*13	*2	*2	*4	*9	*4	*5
20 Oct 2024	*8	*13	*2	*2	*4	*9	*4	*5
21 Oct 2024	*8	*13	*2	*2	*4	*9	*4	*5
22 Oct 2024	6	12	2	2	3	7	4	11
23 Oct 2024	6	12	2	2	3	7	4	11
24 Oct 2024	6	12	2	2	3	7	4	11
25 Oct 2024	*8	*11	*3	*2	*4	*3	*5	*17
26 Oct 2024	*8	*11	*3	*2	*4	*3	*5	*17
27 Oct 2024	*8	*11	*3	*2	*4	*3	*5	*17
28 Oct 2024	*8	*11	*3	*2	*4	*3	*5	*17
29 Oct 2024	9	13	3	4	5	3	7	11
30 Oct 2024	9	13	3	4	5	3	7	11
31 Oct 2024	*14	*14	*4	*4	*6	*4	*9	*14

\* 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
01 Oct 2024	IC	IC	IC	IC	IC	IC	IC	IC
08 Oct 2024	IC	IC	IC	IC	IC	IC	IC	IC
15 Oct 2024	IC	IC	IC	IC	IC	IC	IC	IC
22 Oct 2024	IC	IC	IC	IC	IC	IC	IC	IC
29 Oct 2024	IC	IC	IC	IC	IC	IC	IC	IC

IC = In Compliance

E = Exceedance

ns = not sampled

ND = no data



**Table 2.3**

Summary of compliance with the Ocean Plan's 6-week Geometric Mean standard for *Enterococcus* at the SBOO shore stations. Data are based on the geometric mean of the five most recent samples from each site over the previous 6 weeks unless otherwise noted (\*). Values >30 CFU/100 mL exceed the standard.

Date	S4	S5	S6	S8	S9	S10	S11	S12
01 Oct 2024	29	<b>263</b>	14	4	3	<b>168</b>	19	7
02 Oct 2024	29	<b>263</b>	14	4	3	<b>168</b>	19	7
03 Oct 2024	29	<b>263</b>	14	4	3	<b>168</b>	19	7
04 Oct 2024	29	<b>263</b>	14	4	3	<b>168</b>	19	7
05 Oct 2024	29	<b>263</b>	14	4	3	<b>168</b>	19	7
06 Oct 2024	29	<b>263</b>	14	4	3	<b>168</b>	19	7
07 Oct 2024	29	<b>263</b>	14	4	3	<b>168</b>	19	7
08 Oct 2024	15	<b>81</b>	14	4	6	<b>50</b>	11	12
09 Oct 2024	15	<b>81</b>	14	4	6	<b>50</b>	11	12
10 Oct 2024	15	<b>81</b>	14	4	6	<b>50</b>	11	12
11 Oct 2024	15	<b>81</b>	14	4	6	<b>50</b>	11	12
12 Oct 2024	15	<b>81</b>	14	4	6	<b>50</b>	11	12
13 Oct 2024	15	<b>81</b>	14	4	6	<b>50</b>	11	12
14 Oct 2024	15	<b>81</b>	14	4	6	<b>50</b>	11	12
15 Oct 2024	19	<b>40</b>	11	4	6	25	9	11
16 Oct 2024	19	<b>40</b>	11	4	6	25	9	11
17 Oct 2024	19	<b>40</b>	11	4	6	25	9	11
18 Oct 2024	19	<b>40</b>	11	4	6	25	9	11
19 Oct 2024	19	<b>40</b>	11	4	6	25	9	11
20 Oct 2024	19	<b>40</b>	11	4	6	25	9	11
21 Oct 2024	19	<b>40</b>	11	4	6	25	9	11
22 Oct 2024	12	17	8	3	4	13	7	15
23 Oct 2024	12	17	8	3	4	13	7	15
24 Oct 2024	12	17	8	3	4	13	7	15
25 Oct 2024	12	17	8	3	4	13	7	15
26 Oct 2024	12	17	8	3	4	13	7	15
27 Oct 2024	12	17	8	3	4	13	7	15
28 Oct 2024	12	17	8	3	4	13	7	15
29 Oct 2024	7	18	8	5	7	9	8	15
30 Oct 2024	7	18	8	5	7	9	8	15
31 Oct 2024	7	18	8	5	7	9	8	15

\* Geometric mean calculated using n<5

## Table 2.4

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

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

IC = In Compliance

E = Exceedance

ns = not sampled

ND = no data

**Table 2.5**

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

Date	S4	S5	S6	S8	S9	S10	S11	S12
01 Oct 2024	80	180	200	20	20	200	160	20
02 Oct 2024	80	180	200	20	20	200	160	20
03 Oct 2024	*70	*130	*110	*20	*20	*210	*90	*20
04 Oct 2024	*70	*130	*110	*20	*20	*210	*90	*20
05 Oct 2024	*70	*130	*110	*20	*20	*210	*90	*20
06 Oct 2024	*70	*130	*110	*20	*20	*210	*90	*20
07 Oct 2024	*70	*130	*110	*20	*20	*210	*90	*20
08 Oct 2024	80	80	20	20	20	20	160	20
09 Oct 2024	80	80	20	20	20	20	160	20
10 Oct 2024	*70	*80	*20	*20	*20	*20	*90	*20
11 Oct 2024	*70	*80	*20	*20	*20	*20	*90	*20
12 Oct 2024	*70	*80	*20	*20	*20	*20	*90	*20
13 Oct 2024	*70	*80	*20	*20	*20	*20	*90	*20
14 Oct 2024	*70	*80	*20	*20	*20	*20	*90	*20
15 Oct 2024	80	80	20	20	20	20	20	20
16 Oct 2024	80	80	20	20	20	20	20	20
17 Oct 2024	*130	*80	*20	*20	*20	*20	*20	*30
18 Oct 2024	*130	*80	*20	*20	*20	*20	*20	*30
19 Oct 2024	*130	*80	*20	*20	*20	*20	*20	*30
20 Oct 2024	*130	*80	*20	*20	*20	*20	*20	*30
21 Oct 2024	*130	*80	*20	*20	*20	*20	*20	*30
22 Oct 2024	60	80	20	20	20	20	20	40
23 Oct 2024	60	80	20	20	20	20	20	40
24 Oct 2024	60	80	20	20	20	20	20	40
25 Oct 2024	*110	*60	*20	*20	*20	*20	*50	*120
26 Oct 2024	*110	*60	*20	*20	*20	*20	*50	*120
27 Oct 2024	*110	*60	*20	*20	*20	*20	*50	*120
28 Oct 2024	*110	*60	*20	*20	*20	*20	*50	*120
29 Oct 2024	200	80	20	20	20	20	40	200
30 Oct 2024	200	80	20	20	20	20	40	200
31 Oct 2024	*200	*60	*20	*20	*50	*20	*60	*200

\* 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.

<b>Date</b>	<b>S4</b>	<b>S5</b>	<b>S6</b>	<b>S8</b>	<b>S9</b>	<b>S10</b>	<b>S11</b>	<b>S12</b>
October	IC	IC	IC	E	E	IC	IC	E

IC = In Compliance

E = Exceedance

ns = not sampled

ND = no data

**Table 2.7**

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

Station	Date	Time	Total	Fecal	Entero
S0	02 Oct 2024	830	3800e	840	520
S0	08 Oct 2024	815	9000	4800	1400
S0	15 Oct 2024	815	11000	4200	1800e
S0	22 Oct 2024	820	9200	3400e	4600
S0	29 Oct 2024	925	>16000	>12000	>12000
S10	01 Oct 2024	904	<20	<2	<2
S10	08 Oct 2024	1056	<20	2e	8e
S10	15 Oct 2024	943	<20	10e	2e
S10	22 Oct 2024	1055	4e	<2	<2
S10	29 Oct 2024	837	<200	6e	12e
S11	01 Oct 2024	1048	<20	2e	4e
S11	08 Oct 2024	1008	160e	20e	30e
S11	15 Oct 2024	1155	20e	2e	14e
S11	22 Oct 2024	1007	80e	10e	8e
S11	29 Oct 2024	1042	40e	20e	14e
S12	01 Oct 2024	1120	<20	4e	44
S12	08 Oct 2024	855	<200	40e	66
S12	15 Oct 2024	1235	40e	2e	8e
S12	22 Oct 2024	907	2200e	240e	140e
S12	29 Oct 2024	1126	<200	2e	<2
S2	02 Oct 2024	935	<20	6e	<2
S2	08 Oct 2024	925	40e	2e	10e
S2	15 Oct 2024	720	20e	4e	10e
S2	22 Oct 2024	935	<20	<2	<2
S2	29 Oct 2024	1030	40e	16e	30e
S3	02 Oct 2024	910	<20	2e	2e
S3	08 Oct 2024	855	80e	12e	6e
S3	15 Oct 2024	700	40e	2e	<20
S3	22 Oct 2024	910	8e	4e	<20
S3	29 Oct 2024	1000	20e	16e	10e
S4	01 Oct 2024	930	<20	<2	2e
S4	08 Oct 2024	1114	200e	60e	70
S4	15 Oct 2024	1012	<200	<20	30e
S4	22 Oct 2024	1113	6e	2e	<2
S4	29 Oct 2024	859	<200	14e	6e
S5	01 Oct 2024	1028	80e	10e	38e
S5	08 Oct 2024	944	80e	<20	10e
S5	15 Oct 2024	1132	40e	8e	10e
S5	22 Oct 2024	947	20e	8e	4e
S5	29 Oct 2024	1021	200e	34e	40
S6	01 Oct 2024	1100	<20	<2	<2
S6	08 Oct 2024	1020	<20	<2	<2
S6	15 Oct 2024	1211	40e	2e	<20
S6	22 Oct 2024	1021	20e	6e	14e
S6	29 Oct 2024	1056	20e	8e	10e
S8	01 Oct 2024	1137	<20	<2	26e

Station	Date	Time	Total	Fecal	Entero
S8	08 Oct 2024	837	<20	<2	<2
S8	15 Oct 2024	1259	<20	2e	2e
S8	22 Oct 2024	848	<20	<2	4e
S8	29 Oct 2024	1149	>16000	40e	18e
S9	01 Oct 2024	1156	<20	<2	<2
S9	08 Oct 2024	819	80e	20e	62
S9	15 Oct 2024	1328	<20	<2	<2
S9	22 Oct 2024	832	<20	<2	<2
S9	29 Oct 2024	1214	>16000	14e	100e

ns = not sampled  
ND = no data

**Table 2.8**

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

Station	Date	Parameter	Value
S0	02 Oct 2024	Arrive Time	830
S0	02 Oct 2024	Wind Speed (kts)	0
S0	02 Oct 2024	Wind Dir	XX
S0	02 Oct 2024	Animal Life	Dog-3; Seagull-20;
S0	02 Oct 2024	Floatables	None
S0	02 Oct 2024	Current Direction	S
S0	02 Oct 2024	Water Temp (C)	15
S0	02 Oct 2024	High Tide Time	924
S0	02 Oct 2024	Low Tide Time	321
S0	02 Oct 2024	Comments	Water turbid; Trash-0; Algae;Kelp; 1.0 L/sec water flowing from storm drain
S0	08 Oct 2024	Arrive Time	815
S0	08 Oct 2024	Wind Speed (kts)	0.9
S0	08 Oct 2024	Wind Dir	S
S0	08 Oct 2024	Animal Life	
S0	08 Oct 2024	Floatables	None
S0	08 Oct 2024	Current Direction	S
S0	08 Oct 2024	Water Temp (C)	14
S0	08 Oct 2024	High Tide Time	134
S0	08 Oct 2024	Low Tide Time	435
S0	08 Oct 2024	Comments	Water turbid; Trash-0; Algae;Kelp; 0.5 L/sec water flow from storm drain
S0	15 Oct 2024	Arrive Time	815
S0	15 Oct 2024	Wind Speed (kts)	0.8
S0	15 Oct 2024	Wind Dir	S
S0	15 Oct 2024	Animal Life	Seagull-20;
S0	15 Oct 2024	Floatables	None
S0	15 Oct 2024	Current Direction	S
S0	15 Oct 2024	Water Temp (C)	14
S0	15 Oct 2024	High Tide Time	808
S0	15 Oct 2024	Low Tide Time	200
S0	15 Oct 2024	Comments	Water turbid; Trash-0; Algae;Kelp; 0.5 L/sec water flow from storm drain
S0	22 Oct 2024	Arrive Time	820
S0	22 Oct 2024	Wind Speed (kts)	1.8
S0	22 Oct 2024	Wind Dir	SW
S0	22 Oct 2024	Animal Life	Bird-20; Dog-5;
S0	22 Oct 2024	Floatables	None
S0	22 Oct 2024	Current Direction	S
S0	22 Oct 2024	Water Temp (C)	14
S0	22 Oct 2024	High Tide Time	236
S0	22 Oct 2024	Low Tide Time	608
S0	22 Oct 2024	Comments	Water turbid; Trash-0; Kelp; 9.0 L/sec water flow from storm drain
S0	29 Oct 2024	Arrive Time	925
S0	29 Oct 2024	Wind Speed (kts)	4.8
S0	29 Oct 2024	Wind Dir	NE
S0	29 Oct 2024	Animal Life	Bird-10; Dog-2;
S0	29 Oct 2024	Floatables	None
S0	29 Oct 2024	Current Direction	N
S0	29 Oct 2024	Water Temp (C)	13
S0	29 Oct 2024	High Tide Time	801

Station	Date	Parameter	Value
S0	29 Oct 2024	Low Tide Time	151
S0	29 Oct 2024	Comments	Water clear; Trash-0; Kelp; Person/Walker/Jogger-2
S2	02 Oct 2024	Arrive Time	935
S2	02 Oct 2024	Wind Speed (kts)	1.3
S2	02 Oct 2024	Wind Dir	S
S2	02 Oct 2024	Animal Life	Seagull-20;
S2	02 Oct 2024	Floatables	None
S2	02 Oct 2024	Current Direction	S
S2	02 Oct 2024	Water Temp (C)	16
S2	02 Oct 2024	High Tide Time	924
S2	02 Oct 2024	Low Tide Time	321
S2	02 Oct 2024	Comments	Water turbid; Trash-0; Kelp;Algae; No water flow from storm drain
S2	08 Oct 2024	Arrive Time	925
S2	08 Oct 2024	Wind Speed (kts)	1.8
S2	08 Oct 2024	Wind Dir	S
S2	08 Oct 2024	Animal Life	Dog-5; Seagull-20;
S2	08 Oct 2024	Floatables	None
S2	08 Oct 2024	Current Direction	S
S2	08 Oct 2024	Water Temp (C)	14
S2	08 Oct 2024	High Tide Time	134
S2	08 Oct 2024	Low Tide Time	435
S2	08 Oct 2024	Comments	Water turbid; Trash-0; Kelp;Algae; No water flow from storm drain
S2	15 Oct 2024	Arrive Time	720
S2	15 Oct 2024	Wind Speed (kts)	1.3
S2	15 Oct 2024	Wind Dir	S
S2	15 Oct 2024	Animal Life	Dog-2; Seagull-20;
S2	15 Oct 2024	Floatables	None
S2	15 Oct 2024	Current Direction	S
S2	15 Oct 2024	Water Temp (C)	14
S2	15 Oct 2024	High Tide Time	808
S2	15 Oct 2024	Low Tide Time	200
S2	15 Oct 2024	Comments	Water turbid; Trash-0; Kelp;Algae; No water flow from storm drain
S2	22 Oct 2024	Arrive Time	935
S2	22 Oct 2024	Wind Speed (kts)	1.1
S2	22 Oct 2024	Wind Dir	SW
S2	22 Oct 2024	Animal Life	Bird-20; Dog-3;
S2	22 Oct 2024	Floatables	None
S2	22 Oct 2024	Current Direction	S
S2	22 Oct 2024	Water Temp (C)	14
S2	22 Oct 2024	High Tide Time	236
S2	22 Oct 2024	Low Tide Time	608
S2	22 Oct 2024	Comments	Water turbid; Trash-0; Kelp
S2	29 Oct 2024	Arrive Time	1030
S2	29 Oct 2024	Wind Speed (kts)	5.7
S2	29 Oct 2024	Wind Dir	NE
S2	29 Oct 2024	Animal Life	Dog-2;
S2	29 Oct 2024	Floatables	None
S2	29 Oct 2024	Current Direction	N
S2	29 Oct 2024	Water Temp (C)	13
S2	29 Oct 2024	High Tide Time	801
S2	29 Oct 2024	Low Tide Time	151
S2	29 Oct 2024	Comments	Water clear; Trash-0; Kelp; Person/Walker/Jogger-10



Station	Date	Parameter	Value
S3	02 Oct 2024	Arrive Time	910
S3	02 Oct 2024	Wind Speed (kts)	1.1
S3	02 Oct 2024	Wind Dir	S
S3	02 Oct 2024	Animal Life	Seagull-20;
S3	02 Oct 2024	Floatables	None
S3	02 Oct 2024	Current Direction	S
S3	02 Oct 2024	Water Temp (C)	15
S3	02 Oct 2024	High Tide Time	924
S3	02 Oct 2024	Low Tide Time	321
S3	02 Oct 2024	Comments	Water turbid; Trash-0; Kelp;Algae; No water flow from storm drain
S3	08 Oct 2024	Arrive Time	855
S3	08 Oct 2024	Wind Speed (kts)	1.1
S3	08 Oct 2024	Wind Dir	S
S3	08 Oct 2024	Animal Life	Dog-2; Seagull-20;
S3	08 Oct 2024	Floatables	None
S3	08 Oct 2024	Current Direction	S
S3	08 Oct 2024	Water Temp (C)	14
S3	08 Oct 2024	High Tide Time	134
S3	08 Oct 2024	Low Tide Time	435
S3	08 Oct 2024	Comments	Water turbid; Trash-0; Kelp;Algae; No water flow from storm drain
S3	15 Oct 2024	Arrive Time	700
S3	15 Oct 2024	Wind Speed (kts)	1.1
S3	15 Oct 2024	Wind Dir	S
S3	15 Oct 2024	Animal Life	
S3	15 Oct 2024	Floatables	None
S3	15 Oct 2024	Current Direction	S
S3	15 Oct 2024	Water Temp (C)	14
S3	15 Oct 2024	High Tide Time	808
S3	15 Oct 2024	Low Tide Time	200
S3	15 Oct 2024	Comments	Water turbid; Trash-0; No water flow from storm drain
S3	22 Oct 2024	Arrive Time	910
S3	22 Oct 2024	Wind Speed (kts)	1.6
S3	22 Oct 2024	Wind Dir	SW
S3	22 Oct 2024	Animal Life	Bird-20;
S3	22 Oct 2024	Floatables	None
S3	22 Oct 2024	Current Direction	S
S3	22 Oct 2024	Water Temp (C)	14
S3	22 Oct 2024	High Tide Time	236
S3	22 Oct 2024	Low Tide Time	608
S3	22 Oct 2024	Comments	Water turbid; Trash-0; Kelp; A comment that translated to ""machinery working""; Maybe that means construction worker
S3	29 Oct 2024	Arrive Time	1000
S3	29 Oct 2024	Wind Speed (kts)	6.8
S3	29 Oct 2024	Wind Dir	NE
S3	29 Oct 2024	Animal Life	Bird-10; Dog-4;
S3	29 Oct 2024	Floatables	None
S3	29 Oct 2024	Current Direction	N
S3	29 Oct 2024	Water Temp (C)	13
S3	29 Oct 2024	High Tide Time	801
S3	29 Oct 2024	Low Tide Time	151
S3	29 Oct 2024	Comments	Water clear; Trash-0; Kelp; Person/Walker/Jogger-10
S4	01 Oct 2024	Arrive Time	930
S4	01 Oct 2024	Wind Speed (kts)	3.6

Station	Date	Parameter	Value
S4	01 Oct 2024	Wind Dir	SW
S4	01 Oct 2024	Animal Life	
S4	01 Oct 2024	Floatables	None
S4	01 Oct 2024	Current Direction	S
S4	01 Oct 2024	Water Temp (C)	13.9
S4	01 Oct 2024	High Tide Time	905
S4	01 Oct 2024	Low Tide Time	302
S4	01 Oct 2024	Comments	Water clear; Trash-1; Kelp;Seagrass;Debris
S4	08 Oct 2024	Arrive Time	1114
S4	08 Oct 2024	Wind Speed (kts)	1.1
S4	08 Oct 2024	Wind Dir	NW
S4	08 Oct 2024	Animal Life	
S4	08 Oct 2024	Floatables	None
S4	08 Oct 2024	Current Direction	S
S4	08 Oct 2024	Water Temp (C)	17.3
S4	08 Oct 2024	High Tide Time	134
S4	08 Oct 2024	Low Tide Time	435
S4	08 Oct 2024	Comments	Water clear; Trash-1; Seagrass
S4	15 Oct 2024	Arrive Time	1012
S4	15 Oct 2024	Wind Speed (kts)	3.2
S4	15 Oct 2024	Wind Dir	W
S4	15 Oct 2024	Animal Life	
S4	15 Oct 2024	Floatables	None
S4	15 Oct 2024	Current Direction	S
S4	15 Oct 2024	Water Temp (C)	15.9
S4	15 Oct 2024	High Tide Time	808
S4	15 Oct 2024	Low Tide Time	200
S4	15 Oct 2024	Comments	Water clear; Trash-1; Seagrass;Kelp
S4	22 Oct 2024	Arrive Time	1113
S4	22 Oct 2024	Wind Speed (kts)	1
S4	22 Oct 2024	Wind Dir	SW
S4	22 Oct 2024	Animal Life	
S4	22 Oct 2024	Floatables	None
S4	22 Oct 2024	Current Direction	W
S4	22 Oct 2024	Water Temp (C)	16.7
S4	22 Oct 2024	High Tide Time	236
S4	22 Oct 2024	Low Tide Time	608
S4	22 Oct 2024	Comments	Water clear; Trash-1; Kelp;Seagrass;Debris
S4	29 Oct 2024	Arrive Time	859
S4	29 Oct 2024	Wind Speed (kts)	7.3
S4	29 Oct 2024	Wind Dir	W
S4	29 Oct 2024	Animal Life	
S4	29 Oct 2024	Floatables	None
S4	29 Oct 2024	Current Direction	S
S4	29 Oct 2024	Water Temp (C)	15.5
S4	29 Oct 2024	High Tide Time	801
S4	29 Oct 2024	Low Tide Time	151
S4	29 Oct 2024	Comments	Water clear; Trash-2; Kelp;Seagrass
S10	01 Oct 2024	Arrive Time	904
S10	01 Oct 2024	Wind Speed (kts)	4
S10	01 Oct 2024	Wind Dir	SW
S10	01 Oct 2024	Animal Life	
S10	01 Oct 2024	Floatables	None
S10	01 Oct 2024	Current Direction	S
S10	01 Oct 2024	Water Temp (C)	13
S10	01 Oct 2024	High Tide Time	905

Station	Date	Parameter	Value
S10	01 Oct 2024	Low Tide Time	302
S10	01 Oct 2024	Comments	Water clear; Trash-1; Kelp;Seagrass;Debris
S10	08 Oct 2024	Arrive Time	1056
S10	08 Oct 2024	Wind Speed (kts)	4.6
S10	08 Oct 2024	Wind Dir	W
S10	08 Oct 2024	Animal Life	
S10	08 Oct 2024	Floatables	None
S10	08 Oct 2024	Current Direction	S
S10	08 Oct 2024	Water Temp (C)	16.4
S10	08 Oct 2024	High Tide Time	134
S10	08 Oct 2024	Low Tide Time	435
S10	08 Oct 2024	Comments	Water clear; Trash-1; Seagrass
S10	15 Oct 2024	Arrive Time	943
S10	15 Oct 2024	Wind Speed (kts)	4.6
S10	15 Oct 2024	Wind Dir	W
S10	15 Oct 2024	Animal Life	Bird-20;
S10	15 Oct 2024	Floatables	None
S10	15 Oct 2024	Current Direction	S
S10	15 Oct 2024	Water Temp (C)	15.2
S10	15 Oct 2024	High Tide Time	808
S10	15 Oct 2024	Low Tide Time	200
S10	15 Oct 2024	Comments	Water clear; Trash-1; Seagrass
S10	22 Oct 2024	Arrive Time	1055
S10	22 Oct 2024	Wind Speed (kts)	2.9
S10	22 Oct 2024	Wind Dir	W
S10	22 Oct 2024	Animal Life	
S10	22 Oct 2024	Floatables	None
S10	22 Oct 2024	Current Direction	W
S10	22 Oct 2024	Water Temp (C)	16.2
S10	22 Oct 2024	High Tide Time	236
S10	22 Oct 2024	Low Tide Time	608
S10	22 Oct 2024	Comments	Water clear; Trash-1; Kelp;Seagrass;Debris
S10	29 Oct 2024	Arrive Time	837
S10	29 Oct 2024	Wind Speed (kts)	10.4
S10	29 Oct 2024	Wind Dir	W
S10	29 Oct 2024	Animal Life	
S10	29 Oct 2024	Floatables	None
S10	29 Oct 2024	Current Direction	S
S10	29 Oct 2024	Water Temp (C)	16.8
S10	29 Oct 2024	High Tide Time	801
S10	29 Oct 2024	Low Tide Time	151
S10	29 Oct 2024	Comments	Water clear; Trash-2; Seagrass;Kelp
S5	01 Oct 2024	Arrive Time	1028
S5	01 Oct 2024	Wind Speed (kts)	4.6
S5	01 Oct 2024	Wind Dir	S
S5	01 Oct 2024	Animal Life	
S5	01 Oct 2024	Floatables	None
S5	01 Oct 2024	Current Direction	S
S5	01 Oct 2024	Water Temp (C)	16.5
S5	01 Oct 2024	High Tide Time	905
S5	01 Oct 2024	Low Tide Time	302
S5	01 Oct 2024	Comments	Water clear; Trash-1; Kelp;Debris;Seagrass
S5	08 Oct 2024	Arrive Time	944
S5	08 Oct 2024	Wind Speed (kts)	2.5
S5	08 Oct 2024	Wind Dir	N

Station	Date	Parameter	Value
S5	08 Oct 2024	Animal Life	
S5	08 Oct 2024	Floatables	None
S5	08 Oct 2024	Current Direction	S
S5	08 Oct 2024	Water Temp (C)	16.5
S5	08 Oct 2024	High Tide Time	134
S5	08 Oct 2024	Low Tide Time	435
S5	08 Oct 2024	Comments	Water clear; Trash-1; Kelp;Seagrass
S5	15 Oct 2024	Arrive Time	1133
S5	15 Oct 2024	Wind Speed (kts)	2.8
S5	15 Oct 2024	Wind Dir	W
S5	15 Oct 2024	Animal Life	Bird-3;
S5	15 Oct 2024	Floatables	None
S5	15 Oct 2024	Current Direction	S
S5	15 Oct 2024	Water Temp (C)	15.9
S5	15 Oct 2024	High Tide Time	808
S5	15 Oct 2024	Low Tide Time	200
S5	15 Oct 2024	Comments	Water clear; Trash-1; Kelp;Seagrass
S5	22 Oct 2024	Arrive Time	947
S5	22 Oct 2024	Wind Speed (kts)	1.8
S5	22 Oct 2024	Wind Dir	W
S5	22 Oct 2024	Animal Life	
S5	22 Oct 2024	Floatables	None
S5	22 Oct 2024	Current Direction	W
S5	22 Oct 2024	Water Temp (C)	14.4
S5	22 Oct 2024	High Tide Time	236
S5	22 Oct 2024	Low Tide Time	608
S5	22 Oct 2024	Comments	Water clear; Trash-1; Kelp;Debris;Seagrass
S5	29 Oct 2024	Arrive Time	1021
S5	29 Oct 2024	Wind Speed (kts)	9.9
S5	29 Oct 2024	Wind Dir	W
S5	29 Oct 2024	Animal Life	
S5	29 Oct 2024	Floatables	None
S5	29 Oct 2024	Current Direction	S
S5	29 Oct 2024	Water Temp (C)	16.1
S5	29 Oct 2024	High Tide Time	801
S5	29 Oct 2024	Low Tide Time	151
S5	29 Oct 2024	Comments	Water clear; Trash-2; Kelp;Seagrass
S11	01 Oct 2024	Arrive Time	1048
S11	01 Oct 2024	Wind Speed (kts)	5
S11	01 Oct 2024	Wind Dir	NW
S11	01 Oct 2024	Animal Life	
S11	01 Oct 2024	Floatables	None
S11	01 Oct 2024	Current Direction	S
S11	01 Oct 2024	Water Temp (C)	16.3
S11	01 Oct 2024	High Tide Time	905
S11	01 Oct 2024	Low Tide Time	302
S11	01 Oct 2024	Comments	Water clear; Trash-1; Kelp;Seagrass;Debris
S11	08 Oct 2024	Arrive Time	1008
S11	08 Oct 2024	Wind Speed (kts)	0
S11	08 Oct 2024	Wind Dir	NW
S11	08 Oct 2024	Animal Life	
S11	08 Oct 2024	Floatables	None
S11	08 Oct 2024	Current Direction	S
S11	08 Oct 2024	Water Temp (C)	17.6
S11	08 Oct 2024	High Tide Time	134
S11	08 Oct 2024	Low Tide Time	435

Station	Date	Parameter	Value
S11	08 Oct 2024	Comments	Water clear; Trash-1; Seagrass
S11	15 Oct 2024	Arrive Time	1155
S11	15 Oct 2024	Wind Speed (kts)	2.8
S11	15 Oct 2024	Wind Dir	W
S11	15 Oct 2024	Animal Life	
S11	15 Oct 2024	Floatables	None
S11	15 Oct 2024	Current Direction	S
S11	15 Oct 2024	Water Temp (C)	16.3
S11	15 Oct 2024	High Tide Time	808
S11	15 Oct 2024	Low Tide Time	200
S11	15 Oct 2024	Comments	Water clear; Trash-1; Seagrass;Kelp
S11	22 Oct 2024	Arrive Time	1008
S11	22 Oct 2024	Wind Speed (kts)	3
S11	22 Oct 2024	Wind Dir	W
S11	22 Oct 2024	Animal Life	
S11	22 Oct 2024	Floatables	None
S11	22 Oct 2024	Current Direction	S
S11	22 Oct 2024	Water Temp (C)	16.1
S11	22 Oct 2024	High Tide Time	236
S11	22 Oct 2024	Low Tide Time	608
S11	22 Oct 2024	Comments	Water clear; Trash-1; Kelp;Seagrass;Debris
S11	29 Oct 2024	Arrive Time	1042
S11	29 Oct 2024	Wind Speed (kts)	9.5
S11	29 Oct 2024	Wind Dir	W
S11	29 Oct 2024	Animal Life	
S11	29 Oct 2024	Floatables	None
S11	29 Oct 2024	Current Direction	NW
S11	29 Oct 2024	Water Temp (C)	15.5
S11	29 Oct 2024	High Tide Time	801
S11	29 Oct 2024	Low Tide Time	151
S11	29 Oct 2024	Comments	Water clear; Trash-1; Seagrass;Kelp
S6	01 Oct 2024	Arrive Time	1100
S6	01 Oct 2024	Wind Speed (kts)	4.3
S6	01 Oct 2024	Wind Dir	SW
S6	01 Oct 2024	Animal Life	
S6	01 Oct 2024	Floatables	None
S6	01 Oct 2024	Current Direction	S
S6	01 Oct 2024	Water Temp (C)	14.3
S6	01 Oct 2024	High Tide Time	905
S6	01 Oct 2024	Low Tide Time	302
S6	01 Oct 2024	Comments	Water clear; Trash-1; Kelp;Seagrass;Debris
S6	08 Oct 2024	Arrive Time	1020
S6	08 Oct 2024	Wind Speed (kts)	2.6
S6	08 Oct 2024	Wind Dir	W
S6	08 Oct 2024	Animal Life	
S6	08 Oct 2024	Floatables	None
S6	08 Oct 2024	Current Direction	S
S6	08 Oct 2024	Water Temp (C)	16.7
S6	08 Oct 2024	High Tide Time	134
S6	08 Oct 2024	Low Tide Time	435
S6	08 Oct 2024	Comments	Water clear; Trash-1; Seagrass; Person/Walker/Jogger-2
S6	15 Oct 2024	Arrive Time	1211
S6	15 Oct 2024	Wind Speed (kts)	1.1
S6	15 Oct 2024	Wind Dir	W
S6	15 Oct 2024	Animal Life	

Station	Date	Parameter	Value
S6	15 Oct 2024	Floatables	None
S6	15 Oct 2024	Current Direction	S
S6	15 Oct 2024	Water Temp (C)	16.3
S6	15 Oct 2024	High Tide Time	808
S6	15 Oct 2024	Low Tide Time	200
S6	15 Oct 2024	Comments	Water clear; Trash-1; Seagrass;Kelp; Person/Walker/Jogger-2
S6	22 Oct 2024	Arrive Time	1021
S6	22 Oct 2024	Wind Speed (kts)	3.6
S6	22 Oct 2024	Wind Dir	W
S6	22 Oct 2024	Animal Life	
S6	22 Oct 2024	Floatables	None
S6	22 Oct 2024	Current Direction	W
S6	22 Oct 2024	Water Temp (C)	7.6
S6	22 Oct 2024	High Tide Time	236
S6	22 Oct 2024	Low Tide Time	608
S6	22 Oct 2024	Comments	Water clear; Trash-1; Kelp;Seagrass;Debris
S6	29 Oct 2024	Arrive Time	1056
S6	29 Oct 2024	Wind Speed (kts)	10.3
S6	29 Oct 2024	Wind Dir	W
S6	29 Oct 2024	Animal Life	
S6	29 Oct 2024	Floatables	None
S6	29 Oct 2024	Current Direction	S
S6	29 Oct 2024	Water Temp (C)	17
S6	29 Oct 2024	High Tide Time	801
S6	29 Oct 2024	Low Tide Time	151
S6	29 Oct 2024	Comments	Water clear; Trash-1; Kelp;Seagrass;Algae
S12	01 Oct 2024	Arrive Time	1120
S12	01 Oct 2024	Wind Speed (kts)	7.9
S12	01 Oct 2024	Wind Dir	W
S12	01 Oct 2024	Animal Life	
S12	01 Oct 2024	Floatables	None
S12	01 Oct 2024	Current Direction	S
S12	01 Oct 2024	Water Temp (C)	14.2
S12	01 Oct 2024	High Tide Time	905
S12	01 Oct 2024	Low Tide Time	302
S12	01 Oct 2024	Comments	Water clear; Fisherpersion-1; Trash-1; Kelp;Seagrass;Debris
S12	08 Oct 2024	Arrive Time	855
S12	08 Oct 2024	Wind Speed (kts)	2.1
S12	08 Oct 2024	Wind Dir	NW
S12	08 Oct 2024	Animal Life	
S12	08 Oct 2024	Floatables	None
S12	08 Oct 2024	Current Direction	S
S12	08 Oct 2024	Water Temp (C)	17
S12	08 Oct 2024	High Tide Time	134
S12	08 Oct 2024	Low Tide Time	435
S12	08 Oct 2024	Comments	Water clear; Trash-1; Seagrass;Kelp
S12	15 Oct 2024	Arrive Time	1235
S12	15 Oct 2024	Wind Speed (kts)	1.3
S12	15 Oct 2024	Wind Dir	W
S12	15 Oct 2024	Animal Life	Bird-5;
S12	15 Oct 2024	Floatables	None
S12	15 Oct 2024	Current Direction	S
S12	15 Oct 2024	Water Temp (C)	3.3
S12	15 Oct 2024	High Tide Time	808
S12	15 Oct 2024	Low Tide Time	200

Station	Date	Parameter	Value
S12	15 Oct 2024	Comments	Water clear; Trash-1; Kelp; Person/Walker/Jogger-1
S12	22 Oct 2024	Arrive Time	907
S12	22 Oct 2024	Wind Speed (kts)	0.7
S12	22 Oct 2024	Wind Dir	SW
S12	22 Oct 2024	Animal Life	
S12	22 Oct 2024	Floatables	None
S12	22 Oct 2024	Current Direction	W
S12	22 Oct 2024	Water Temp (C)	16.1
S12	22 Oct 2024	High Tide Time	236
S12	22 Oct 2024	Low Tide Time	608
S12	22 Oct 2024	Comments	Water clear; Trash-1; Kelp;Seagrass;Debris
S12	29 Oct 2024	Arrive Time	1126
S12	29 Oct 2024	Wind Speed (kts)	5.7
S12	29 Oct 2024	Wind Dir	W
S12	29 Oct 2024	Animal Life	
S12	29 Oct 2024	Floatables	None
S12	29 Oct 2024	Current Direction	S
S12	29 Oct 2024	Water Temp (C)	16.7
S12	29 Oct 2024	High Tide Time	801
S12	29 Oct 2024	Low Tide Time	151
S12	29 Oct 2024	Comments	Water clear; Trash-1; Kelp;Seagrass
S8	01 Oct 2024	Arrive Time	1137
S8	01 Oct 2024	Wind Speed (kts)	1.7
S8	01 Oct 2024	Wind Dir	W
S8	01 Oct 2024	Animal Life	
S8	01 Oct 2024	Floatables	None
S8	01 Oct 2024	Current Direction	S
S8	01 Oct 2024	Water Temp (C)	12
S8	01 Oct 2024	High Tide Time	905
S8	01 Oct 2024	Low Tide Time	302
S8	01 Oct 2024	Comments	Water clear; Trash-1; Kelp;Seagrass;Debris
S8	08 Oct 2024	Arrive Time	837
S8	08 Oct 2024	Wind Speed (kts)	4.7
S8	08 Oct 2024	Wind Dir	W
S8	08 Oct 2024	Animal Life	
S8	08 Oct 2024	Floatables	None
S8	08 Oct 2024	Current Direction	S
S8	08 Oct 2024	Water Temp (C)	16.5
S8	08 Oct 2024	High Tide Time	134
S8	08 Oct 2024	Low Tide Time	435
S8	08 Oct 2024	Comments	Water clear; Trash-1; Kelp;Seagrass
S8	15 Oct 2024	Arrive Time	1259
S8	15 Oct 2024	Wind Speed (kts)	0.9
S8	15 Oct 2024	Wind Dir	NW
S8	15 Oct 2024	Animal Life	
S8	15 Oct 2024	Floatables	None
S8	15 Oct 2024	Current Direction	NW
S8	15 Oct 2024	Water Temp (C)	17.2
S8	15 Oct 2024	High Tide Time	808
S8	15 Oct 2024	Low Tide Time	200
S8	15 Oct 2024	Comments	Water clear; Trash-1; Kelp
S8	22 Oct 2024	Arrive Time	848
S8	22 Oct 2024	Wind Speed (kts)	0.6
S8	22 Oct 2024	Wind Dir	SW
S8	22 Oct 2024	Animal Life	

Station	Date	Parameter	Value
S8	22 Oct 2024	Floatables	None
S8	22 Oct 2024	Current Direction	W
S8	22 Oct 2024	Water Temp (C)	17
S8	22 Oct 2024	High Tide Time	236
S8	22 Oct 2024	Low Tide Time	608
S8	22 Oct 2024	Comments	Water clear; Trash-1; Kelp;Seagrass;Debris
S8	29 Oct 2024	Arrive Time	1149
S8	29 Oct 2024	Wind Speed (kts)	7.5
S8	29 Oct 2024	Wind Dir	W
S8	29 Oct 2024	Animal Life	Bird-3;
S8	29 Oct 2024	Floatables	None
S8	29 Oct 2024	Current Direction	S
S8	29 Oct 2024	Water Temp (C)	16.6
S8	29 Oct 2024	High Tide Time	801
S8	29 Oct 2024	Low Tide Time	151
S8	29 Oct 2024	Comments	Water clear; Trash-1; Kelp;Seagrass
S9	01 Oct 2024	Arrive Time	1156
S9	01 Oct 2024	Wind Speed (kts)	6.9
S9	01 Oct 2024	Wind Dir	NW
S9	01 Oct 2024	Animal Life	
S9	01 Oct 2024	Floatables	None
S9	01 Oct 2024	Current Direction	S
S9	01 Oct 2024	Water Temp (C)	12.5
S9	01 Oct 2024	High Tide Time	905
S9	01 Oct 2024	Low Tide Time	302
S9	01 Oct 2024	Comments	Water clear; Trash-1; Seagrass;Debris
S9	08 Oct 2024	Arrive Time	819
S9	08 Oct 2024	Wind Speed (kts)	2.3
S9	08 Oct 2024	Wind Dir	NW
S9	08 Oct 2024	Animal Life	
S9	08 Oct 2024	Floatables	None
S9	08 Oct 2024	Current Direction	S
S9	08 Oct 2024	Water Temp (C)	16.8
S9	08 Oct 2024	High Tide Time	134
S9	08 Oct 2024	Low Tide Time	435
S9	08 Oct 2024	Comments	Water clear; Trash-1; Seagrass; Person/Walker/Jogger-2
S9	15 Oct 2024	Arrive Time	1328
S9	15 Oct 2024	Wind Speed (kts)	3.1
S9	15 Oct 2024	Wind Dir	W
S9	15 Oct 2024	Animal Life	
S9	15 Oct 2024	Floatables	Foam; Red algae
S9	15 Oct 2024	Current Direction	S
S9	15 Oct 2024	Water Temp (C)	17
S9	15 Oct 2024	High Tide Time	808
S9	15 Oct 2024	Low Tide Time	200
S9	15 Oct 2024	Comments	Water clear; Trash-1; Kelp;Seagrass; Person/Walker/Jogger-15
S9	22 Oct 2024	Arrive Time	832
S9	22 Oct 2024	Wind Speed (kts)	0
S9	22 Oct 2024	Wind Dir	SW
S9	22 Oct 2024	Animal Life	Bird-1;
S9	22 Oct 2024	Floatables	None
S9	22 Oct 2024	Current Direction	W
S9	22 Oct 2024	Water Temp (C)	15.6
S9	22 Oct 2024	High Tide Time	236
S9	22 Oct 2024	Low Tide Time	608



Station	Date	Parameter	Value
S9	22 Oct 2024	Comments	Water clear; Trash-1; Kelp;Seagrass;Debris; Person/Walker/Jogger-1
S9	29 Oct 2024	Arrive Time	1214
S9	29 Oct 2024	Wind Speed (kts)	4.2
S9	29 Oct 2024	Wind Dir	W
S9	29 Oct 2024	Animal Life	
S9	29 Oct 2024	Floatables	None
S9	29 Oct 2024	Current Direction	S
S9	29 Oct 2024	Water Temp (C)	16.5
S9	29 Oct 2024	High Tide Time	801
S9	29 Oct 2024	Low Tide Time	151
S9	29 Oct 2024	Comments	Water clear; Surfer/Paddle boarder-6; Trash-1; Seagrass;Kelp; Person/Walker/Jogger-2

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# Kelp Stations



**Table 3.1**

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

Date	I19	I24	I25	I26	I32	I39	I40
01 Oct 2024	3	2	2	2	2	2	5
02 Oct 2024	3	2	2	2	2	2	5
03 Oct 2024	*3	*2	*2	*2	*2	*2	*5
04 Oct 2024	*3	*2	*2	*2	*2	*2	*5
05 Oct 2024	*3	*2	*2	*2	*2	*2	*5
06 Oct 2024	*3	*2	*2	*2	*2	*2	*5
07 Oct 2024	*3	*2	*2	*2	*2	*2	*5
08 Oct 2024	2	2	2	2	2	2	4
09 Oct 2024	2	2	2	2	2	2	4
10 Oct 2024	*2	*2	*2	*2	*2	*2	*2
11 Oct 2024	*2	*2	*2	*2	*2	*2	*2
12 Oct 2024	*2	*2	*2	*2	*2	*2	*2
13 Oct 2024	*2	*2	*2	*2	*2	*2	*2
14 Oct 2024	*2	*2	*2	*2	*2	*2	*2
15 Oct 2024	3	2	2	2	4	2	3
16 Oct 2024	3	2	2	2	4	2	3
17 Oct 2024	*2	*2	*2	*2	*5	*2	*3
18 Oct 2024	*2	*2	*2	*2	*5	*2	*3
19 Oct 2024	*2	*2	*2	*2	*5	*2	*3
20 Oct 2024	*2	*2	*2	*2	*5	*2	*3
21 Oct 2024	2	3	2	2	4	3	3
22 Oct 2024	2	3	2	2	4	3	3
23 Oct 2024	2	3	2	2	4	3	3
24 Oct 2024	*2	*3	*2	*2	*5	*3	*3
25 Oct 2024	*2	*3	*2	*2	*5	*3	*3
26 Oct 2024	*2	*3	*2	*2	*5	*3	*3
27 Oct 2024	*2	*3	*2	*2	*5	*3	*3
28 Oct 2024	*2	*3	*2	*2	*5	*3	*3
29 Oct 2024	*2	*3	*2	*2	*5	*3	*3
30 Oct 2024	*3	*4	*2	*2	*5	*3	*3
31 Oct 2024	*3	*4	*2	*2	*5	*3	*3

\* 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
08 Oct 2024	IC	IC	IC	IC	IC	IC	IC
15 Oct 2024	IC	IC	IC	IC	IC	IC	IC
21 Oct 2024	IC	IC	IC	IC	IC	IC	IC
30 Oct 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 Oct 2024	10	3	2	3	3	2	14
02 Oct 2024	10	3	2	3	3	2	14
03 Oct 2024	10	3	2	3	3	2	14
04 Oct 2024	10	3	2	3	3	2	14
05 Oct 2024	10	3	2	3	3	2	14
06 Oct 2024	10	3	2	3	3	2	14
07 Oct 2024	10	3	2	3	3	2	14
08 Oct 2024	4	3	2	3	3	2	7
09 Oct 2024	4	3	2	3	3	2	7
10 Oct 2024	4	3	2	3	3	2	7
11 Oct 2024	4	3	2	3	3	2	7
12 Oct 2024	4	3	2	3	3	2	7
13 Oct 2024	4	3	2	3	3	2	7
14 Oct 2024	4	3	2	3	3	2	7
15 Oct 2024	3	2	2	2	4	2	8
16 Oct 2024	3	2	2	2	4	2	8
17 Oct 2024	3	2	2	2	4	2	8
18 Oct 2024	3	2	2	2	4	2	8
19 Oct 2024	3	2	2	2	4	2	8
20 Oct 2024	3	2	2	2	4	2	8
21 Oct 2024	3	3	3	2	4	2	8
22 Oct 2024	2	3	3	2	3	3	5
23 Oct 2024	2	3	3	2	3	3	5
24 Oct 2024	2	3	3	2	3	3	5
25 Oct 2024	2	3	3	2	3	3	5
26 Oct 2024	2	3	3	2	3	3	5
27 Oct 2024	2	3	3	2	3	3	5
28 Oct 2024	2	3	3	2	3	3	5
29 Oct 2024	2	3	3	2	4	3	4
30 Oct 2024	2	3	3	2	3	3	4
31 Oct 2024	2	3	3	2	3	3	4

\* Geometric mean calculated using n<5

### Table 3.4

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

Date	I19	I24	I25	I26	I32	I39	I40
October	IC	IC	IC	IC	IC	IC	IC

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	I19			I24			I25			I26			I32			I39			I40			
	2m	6m	11m	2m	6m	11m	2m	6m	9m	2m	6m	9m	2m	6m	9m	2m	6m	12m	18m	2m	6m	9m
01 Oct 2024	4	2	20	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	8	20	20
02 Oct 2024	4	2	20	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	8	20	20
03 Oct 2024	*12	*2	*20	*2	*2	*2	*2	*2	*2	*2	*2	*2	*2	*2	*2	*2	*2	*2	*2	*14	*20	*20
04 Oct 2024	*12	*2	*20	*2	*2	*2	*2	*2	*2	*2	*2	*2	*2	*2	*2	*2	*2	*2	*2	*14	*20	*20
05 Oct 2024	*12	*2	*20	*2	*2	*2	*2	*2	*2	*2	*2	*2	*2	*2	*2	*2	*2	*2	*2	*14	*20	*20
06 Oct 2024	*12	*2	*20	*2	*2	*2	*2	*2	*2	*2	*2	*2	*2	*2	*2	*2	*2	*2	*2	*14	*20	*20
07 Oct 2024	*12	*2	*20	*2	*2	*2	*2	*2	*2	*2	*2	*2	*2	*2	*2	*2	*2	*2	*2	*14	*20	*20
08 Oct 2024	16	2	20	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	8	20	20
09 Oct 2024	16	2	20	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	8	20	20
10 Oct 2024	*18	*4	*12	*2	*2	*2	*2	*2	*2	*2	*2	*2	*2	*2	*2	*2	*2	*2	*5	*11	*12	*12
11 Oct 2024	*18	*4	*12	*2	*2	*2	*2	*2	*2	*2	*2	*2	*2	*2	*2	*2	*2	*2	*5	*11	*12	*12
12 Oct 2024	*18	*4	*12	*2	*2	*2	*2	*2	*2	*2	*2	*2	*2	*2	*2	*2	*2	*2	*5	*11	*12	*12
13 Oct 2024	*18	*4	*12	*2	*2	*2	*2	*2	*2	*2	*2	*2	*2	*2	*2	*2	*2	*2	*5	*11	*12	*12
14 Oct 2024	*18	*4	*12	*2	*2	*2	*2	*2	*2	*2	*2	*2	*2	*2	*2	*2	*2	*2	*5	*11	*12	*12
15 Oct 2024	16	6	20	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	8	20	20
16 Oct 2024	16	6	20	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	8	20	20
17 Oct 2024	*9	*4	*12	*2	*2	*11	*2	*2	*2	*2	*2	*2	*2	*3	*2	*2	*2	*2	*5	*11	*12	*12
18 Oct 2024	*9	*4	*12	*2	*2	*11	*2	*2	*2	*2	*2	*2	*2	*3	*2	*2	*2	*2	*5	*11	*12	*12
19 Oct 2024	*9	*4	*12	*2	*2	*11	*2	*2	*2	*2	*2	*2	*2	*3	*2	*2	*2	*2	*5	*11	*12	*12
20 Oct 2024	*9	*4	*12	*2	*2	*11	*2	*2	*2	*2	*2	*2	*2	*3	*2	*2	*2	*2	*5	*11	*12	*12
21 Oct 2024	2	2	4	2	2	20	2	2	2	2	2	2	2	2	2	2	2	2	2	8	8	4
22 Oct 2024	2	2	4	2	2	20	2	2	2	2	2	2	2	2	2	2	2	2	2	8	8	4
23 Oct 2024	2	2	4	2	2	20	2	2	2	2	2	2	2	2	2	2	2	2	2	8	8	4
24 Oct 2024	*9	*4	*12	*2	*2	*20	*2	*11	*2	*2	*2	*2	*2	*3	*2	*2	*2	*2	*14	*14	*14	*12
25 Oct 2024	*9	*4	*12	*2	*2	*20	*2	*11	*2	*2	*2	*2	*2	*3	*2	*2	*2	*2	*14	*14	*14	*12
26 Oct 2024	*9	*4	*12	*2	*2	*20	*2	*11	*2	*2	*2	*2	*2	*3	*2	*2	*2	*2	*14	*14	*14	*12
27 Oct 2024	*9	*4	*12	*2	*2	*20	*2	*11	*2	*2	*2	*2	*2	*3	*2	*2	*2	*2	*14	*14	*14	*12
28 Oct 2024	*9	*4	*12	*2	*2	*20	*2	*11	*2	*2	*2	*2	*2	*3	*2	*2	*2	*2	*14	*14	*14	*12
29 Oct 2024	*9	*4	*12	*2	*2	*20	*2	*11	*2	*2	*2	*2	*2	*3	*2	*2	*2	*2	*14	*14	*14	*12
30 Oct 2024	*9	*13	*12	*2	*13	*50	*2	*11	*2	*3	*11	*11	*11	*12	*21	*2	*2	*2	*110	*14	*14	*12
31 Oct 2024	*9	*13	*12	*2	*13	*50	*2	*11	*11	*3	*11	*11	*11	*12	*21	*2	*2	*2	*110	*14	*14	*12

\* 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
October	IC	IC	IC	IC	E	IC	IC	IC	IC	IC	IC	IC	IC	E	E	IC	IC	IC	E	IC	IC

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	08 Oct 2024	1040	2	16e	2e	4e
I19	08 Oct 2024	1040	6	6e	<2	<2
I19	08 Oct 2024	1040	11	4e	<2	<2
I19	15 Oct 2024	1022	2	2e	<2	<2
I19	15 Oct 2024	1022	6	<20	<2	<2
I19	15 Oct 2024	1022	11	<200	10e	4e
I19	21 Oct 2024	1044	2	<2	<2	<2
I19	21 Oct 2024	1044	6	2e	<2	<2
I19	21 Oct 2024	1044	11	2e	<2	<2
I19	30 Oct 2024	1109	2	28e	2e	<2
I19	30 Oct 2024	1109	6	80e	8e	<2
I19	30 Oct 2024	1109	11	20e	6e	2e
I24	08 Oct 2024	1100	2	2e	<2	<2
I24	08 Oct 2024	1100	6	<2	<2	<2
I24	08 Oct 2024	1100	11	<20	<2	<2
I24	15 Oct 2024	1041	2	<2	<2	<2
I24	15 Oct 2024	1041	6	<2	<2	<2
I24	15 Oct 2024	1041	11	20e	2e	<2
I24	21 Oct 2024	1108	2	2e	<2	2e
I24	21 Oct 2024	1108	6	24e	2e	22e
I24	21 Oct 2024	1108	11	80e	30e	16e
I24	30 Oct 2024	1128	2	20e	2e	<2
I24	30 Oct 2024	1128	6	800e	8e	<2
I24	30 Oct 2024	1128	11	80e	2e	<2
I25	08 Oct 2024	1106	2	<2	<2	<2
I25	08 Oct 2024	1106	6	<2	<2	<2
I25	08 Oct 2024	1106	9	2e	<2	<2
I25	15 Oct 2024	1047	2	<2	<2	<2
I25	15 Oct 2024	1047	6	<20	<2	<2
I25	15 Oct 2024	1047	9	<2	<2	<2
I25	21 Oct 2024	1116	2	4e	<2	6e
I25	21 Oct 2024	1116	6	180e	<2	16e
I25	21 Oct 2024	1116	9	80e	4e	10e
I25	30 Oct 2024	1134	2	100e	<2	<2
I25	30 Oct 2024	1134	6	<2	<2	<2
I25	30 Oct 2024	1134	9	<20	<2	<2
I26	08 Oct 2024	1116	2	<2	<2	<2
I26	08 Oct 2024	1116	6	<2	<2	<2
I26	08 Oct 2024	1116	9	<2	<2	<2

Station	Date	Time	Depth	Total	Fecal	Entero
I26	15 Oct 2024	1058	2	<2	<2	<2
I26	15 Oct 2024	1058	6	<2	<2	<2
I26	15 Oct 2024	1058	9	4e	8e	<2
I26	21 Oct 2024	1126	2	<2	<2	<2
I26	21 Oct 2024	1126	6	<2	<2	<2
I26	21 Oct 2024	1126	9	<2	<2	<2
I26	30 Oct 2024	1144	2	20e	<2	<2
I26	30 Oct 2024	1144	6	4e	<2	<2
I26	30 Oct 2024	1144	9	4e	<2	<2
I32	08 Oct 2024	1129	2	<2	<2	<2
I32	08 Oct 2024	1129	6	4e	<2	<2
I32	08 Oct 2024	1129	9	2e	<2	<2
I32	15 Oct 2024	1109	2	20e	<2	4e
I32	15 Oct 2024	1109	6	1400e	220e	76
I32	15 Oct 2024	1109	9	2800e	100e	84
I32	21 Oct 2024	1139	2	<2	<2	<2
I32	21 Oct 2024	1139	6	<2	<2	<2
I32	21 Oct 2024	1139	9	2e	<2	<2
I32	30 Oct 2024	1158	2	20e	<2	<2
I32	30 Oct 2024	1158	6	<20	<2	<2
I32	30 Oct 2024	1158	9	40e	<2	<2
I39	08 Oct 2024	1018	2	<2	<2	<2
I39	08 Oct 2024	1018	12	<2	<2	<2
I39	08 Oct 2024	1018	18	<2	<2	<2
I39	15 Oct 2024	1000	2	<2	<2	<2
I39	15 Oct 2024	1000	12	2e	<2	<2
I39	15 Oct 2024	1000	18	<2	<2	<2
I39	21 Oct 2024	1021	2	<2	<2	<2
I39	21 Oct 2024	1021	12	12e	4e	10e
I39	21 Oct 2024	1021	18	48	16e	14e
I39	30 Oct 2024	1045	2	<2	<2	<2
I39	30 Oct 2024	1045	12	<2	<2	<2
I39	30 Oct 2024	1045	18	4e	<2	<2
I40	08 Oct 2024	1052	2	2e	2e	<2
I40	08 Oct 2024	1052	6	<2	2e	<2
I40	08 Oct 2024	1052	9	<2	<2	<2
I40	15 Oct 2024	1034	2	<200	16e	66
I40	15 Oct 2024	1034	6	40e	8e	8e
I40	15 Oct 2024	1034	9	140e	18e	8e
I40	21 Oct 2024	1058	2	<20	2e	6e
I40	21 Oct 2024	1058	6	8e	2e	6e
I40	21 Oct 2024	1058	9	4e	<2	<2
I40	30 Oct 2024	1121	2	320e	<2	<2
I40	30 Oct 2024	1121	6	20e	2e	<2
I40	30 Oct 2024	1121	9	<20	<2	<2

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	08 Oct 2024	Arrive Time	1040
119	08 Oct 2024	Depart Time	1043
119	08 Oct 2024	Air Temp (C)	15.3
119	08 Oct 2024	Visibility (mi)	0
119	08 Oct 2024	Wind Speed (kts)	1.2
119	08 Oct 2024	Wind Dir	NW
119	08 Oct 2024	Sea State	Wind Ripples
119	08 Oct 2024	High Tide Time	1148
119	08 Oct 2024	Low Tide Time	2018
119	08 Oct 2024	Comments	
119	15 Oct 2024	Arrive Time	1022
119	15 Oct 2024	Depart Time	1026
119	15 Oct 2024	Air Temp (C)	17
119	15 Oct 2024	Visibility (mi)	7
119	15 Oct 2024	Wind Speed (kts)	7
119	15 Oct 2024	Wind Dir	SW
119	15 Oct 2024	Sea State	Regular Swell
119	15 Oct 2024	High Tide Time	812
119	15 Oct 2024	Low Tide Time	154
119	15 Oct 2024	Comments	
119	21 Oct 2024	Arrive Time	1044
119	21 Oct 2024	Depart Time	1049
119	21 Oct 2024	Air Temp (C)	18.1
119	21 Oct 2024	Visibility (mi)	10
119	21 Oct 2024	Wind Speed (kts)	2
119	21 Oct 2024	Wind Dir	E
119	21 Oct 2024	Sea State	Wind Ripples
119	21 Oct 2024	High Tide Time	1148
119	21 Oct 2024	Low Tide Time	1930
119	21 Oct 2024	Comments	
119	30 Oct 2024	Arrive Time	1109
119	30 Oct 2024	Depart Time	1119
119	30 Oct 2024	Air Temp (C)	16.6
119	30 Oct 2024	Visibility (mi)	8
119	30 Oct 2024	Wind Speed (kts)	7.6
119	30 Oct 2024	Wind Dir	NW
119	30 Oct 2024	Sea State	Confused Swell
119	30 Oct 2024	High Tide Time	818
119	30 Oct 2024	Low Tide Time	1454
119	30 Oct 2024	Comments	
140	08 Oct 2024	Arrive Time	1052
140	08 Oct 2024	Depart Time	1056
140	08 Oct 2024	Air Temp (C)	15.4
140	08 Oct 2024	Visibility (mi)	0
140	08 Oct 2024	Wind Speed (kts)	6.6
140	08 Oct 2024	Wind Dir	NW
140	08 Oct 2024	Sea State	Wind Ripples
140	08 Oct 2024	High Tide Time	1148
140	08 Oct 2024	Low Tide Time	2018
140	08 Oct 2024	Comments	
140	15 Oct 2024	Arrive Time	1034

Station	Date	Parameter	Value
140	15 Oct 2024	Depart Time	1037
140	15 Oct 2024	Air Temp (C)	16.8
140	15 Oct 2024	Visibility (mi)	7
140	15 Oct 2024	Wind Speed (kts)	0.8
140	15 Oct 2024	Wind Dir	W
140	15 Oct 2024	Sea State	Regular Swell
140	15 Oct 2024	High Tide Time	812
140	15 Oct 2024	Low Tide Time	154
140	15 Oct 2024	Comments	
140	21 Oct 2024	Arrive Time	1058
140	21 Oct 2024	Depart Time	1102
140	21 Oct 2024	Air Temp (C)	17.8
140	21 Oct 2024	Visibility (mi)	10
140	21 Oct 2024	Wind Speed (kts)	7.2
140	21 Oct 2024	Wind Dir	NW
140	21 Oct 2024	Sea State	Wind Ripples
140	21 Oct 2024	High Tide Time	1148
140	21 Oct 2024	Low Tide Time	1930
140	21 Oct 2024	Comments	
140	30 Oct 2024	Arrive Time	1121
140	30 Oct 2024	Depart Time	1127
140	30 Oct 2024	Air Temp (C)	16.3
140	30 Oct 2024	Visibility (mi)	8
140	30 Oct 2024	Wind Speed (kts)	7.5
140	30 Oct 2024	Wind Dir	NW
140	30 Oct 2024	Sea State	Confused Swell
140	30 Oct 2024	High Tide Time	818
140	30 Oct 2024	Low Tide Time	1454
140	30 Oct 2024	Comments	
124	08 Oct 2024	Arrive Time	1100
124	08 Oct 2024	Depart Time	1103
124	08 Oct 2024	Air Temp (C)	15.6
124	08 Oct 2024	Visibility (mi)	0
124	08 Oct 2024	Wind Speed (kts)	9
124	08 Oct 2024	Wind Dir	NW
124	08 Oct 2024	Sea State	Wind Ripples
124	08 Oct 2024	High Tide Time	1148
124	08 Oct 2024	Low Tide Time	2018
124	08 Oct 2024	Comments	
124	15 Oct 2024	Arrive Time	1041
124	15 Oct 2024	Depart Time	1045
124	15 Oct 2024	Air Temp (C)	16.9
124	15 Oct 2024	Visibility (mi)	7
124	15 Oct 2024	Wind Speed (kts)	6.7
124	15 Oct 2024	Wind Dir	W
124	15 Oct 2024	Sea State	Regular Swell
124	15 Oct 2024	High Tide Time	812
124	15 Oct 2024	Low Tide Time	154
124	15 Oct 2024	Comments	
124	21 Oct 2024	Arrive Time	1108
124	21 Oct 2024	Depart Time	1111
124	21 Oct 2024	Air Temp (C)	17.9
124	21 Oct 2024	Visibility (mi)	10
124	21 Oct 2024	Wind Speed (kts)	7.4
124	21 Oct 2024	Wind Dir	NW
124	21 Oct 2024	Sea State	Wind Ripples

Station	Date	Parameter	Value
124	21 Oct 2024	High Tide Time	1148
124	21 Oct 2024	Low Tide Time	1930
124	21 Oct 2024	Comments	
124	30 Oct 2024	Arrive Time	1128
124	30 Oct 2024	Depart Time	1133
124	30 Oct 2024	Air Temp (C)	16.2
124	30 Oct 2024	Visibility (mi)	8
124	30 Oct 2024	Wind Speed (kts)	8.5
124	30 Oct 2024	Wind Dir	NW
124	30 Oct 2024	Sea State	Confused Swell
124	30 Oct 2024	High Tide Time	818
124	30 Oct 2024	Low Tide Time	1454
124	30 Oct 2024	Comments	niskin 4 used for surface sample
125	08 Oct 2024	Arrive Time	1106
125	08 Oct 2024	Depart Time	1109
125	08 Oct 2024	Air Temp (C)	15.7
125	08 Oct 2024	Visibility (mi)	0
125	08 Oct 2024	Wind Speed (kts)	9.7
125	08 Oct 2024	Wind Dir	NW
125	08 Oct 2024	Sea State	Wind Ripples
125	08 Oct 2024	High Tide Time	1148
125	08 Oct 2024	Low Tide Time	2018
125	08 Oct 2024	Comments	
125	15 Oct 2024	Arrive Time	1047
125	15 Oct 2024	Depart Time	1052
125	15 Oct 2024	Air Temp (C)	16.9
125	15 Oct 2024	Visibility (mi)	7
125	15 Oct 2024	Wind Speed (kts)	5.8
125	15 Oct 2024	Wind Dir	NW
125	15 Oct 2024	Sea State	Regular Swell
125	15 Oct 2024	High Tide Time	812
125	15 Oct 2024	Low Tide Time	154
125	15 Oct 2024	Comments	
125	21 Oct 2024	Arrive Time	1116
125	21 Oct 2024	Depart Time	1126
125	21 Oct 2024	Air Temp (C)	17.9
125	21 Oct 2024	Visibility (mi)	10
125	21 Oct 2024	Wind Speed (kts)	9.9
125	21 Oct 2024	Wind Dir	NW
125	21 Oct 2024	Sea State	Wind Ripples
125	21 Oct 2024	High Tide Time	1148
125	21 Oct 2024	Low Tide Time	1930
125	21 Oct 2024	Comments	
125	30 Oct 2024	Arrive Time	1134
125	30 Oct 2024	Depart Time	1141
125	30 Oct 2024	Air Temp (C)	16.1
125	30 Oct 2024	Visibility (mi)	8
125	30 Oct 2024	Wind Speed (kts)	12.1
125	30 Oct 2024	Wind Dir	NW
125	30 Oct 2024	Sea State	Confused Swell
125	30 Oct 2024	High Tide Time	818
125	30 Oct 2024	Low Tide Time	1454
125	30 Oct 2024	Comments	
139	08 Oct 2024	Arrive Time	1018
139	08 Oct 2024	Depart Time	1024

Station	Date	Parameter	Value
139	08 Oct 2024	Air Temp (C)	15.4
139	08 Oct 2024	Visibility (mi)	0
139	08 Oct 2024	Wind Speed (kts)	5.9
139	08 Oct 2024	Wind Dir	N
139	08 Oct 2024	Sea State	Wind Ripples
139	08 Oct 2024	High Tide Time	1148
139	08 Oct 2024	Low Tide Time	2018
139	08 Oct 2024	Comments	
139	15 Oct 2024	Arrive Time	1000
139	15 Oct 2024	Depart Time	1005
139	15 Oct 2024	Air Temp (C)	16.9
139	15 Oct 2024	Visibility (mi)	7
139	15 Oct 2024	Wind Speed (kts)	5.4
139	15 Oct 2024	Wind Dir	S
139	15 Oct 2024	Sea State	Regular Swell
139	15 Oct 2024	High Tide Time	812
139	15 Oct 2024	Low Tide Time	154
139	15 Oct 2024	Comments	
139	21 Oct 2024	Arrive Time	1021
139	21 Oct 2024	Depart Time	1025
139	21 Oct 2024	Air Temp (C)	18.1
139	21 Oct 2024	Visibility (mi)	10
139	21 Oct 2024	Wind Speed (kts)	5.9
139	21 Oct 2024	Wind Dir	NW
139	21 Oct 2024	Sea State	Wind Ripples
139	21 Oct 2024	High Tide Time	1148
139	21 Oct 2024	Low Tide Time	1930
139	21 Oct 2024	Comments	
139	30 Oct 2024	Arrive Time	1045
139	30 Oct 2024	Depart Time	1052
139	30 Oct 2024	Air Temp (C)	16.2
139	30 Oct 2024	Visibility (mi)	8
139	30 Oct 2024	Wind Speed (kts)	1.2
139	30 Oct 2024	Wind Dir	NW
139	30 Oct 2024	Sea State	Confused Swell
139	30 Oct 2024	High Tide Time	818
139	30 Oct 2024	Low Tide Time	1454
139	30 Oct 2024	Comments	
126	08 Oct 2024	Arrive Time	1116
126	08 Oct 2024	Depart Time	1118
126	08 Oct 2024	Air Temp (C)	15.7
126	08 Oct 2024	Visibility (mi)	0
126	08 Oct 2024	Wind Speed (kts)	9.7
126	08 Oct 2024	Wind Dir	NW
126	08 Oct 2024	Sea State	Wind Ripples
126	08 Oct 2024	High Tide Time	1148
126	08 Oct 2024	Low Tide Time	2018
126	08 Oct 2024	Comments	
126	15 Oct 2024	Arrive Time	1058
126	15 Oct 2024	Depart Time	1101
126	15 Oct 2024	Air Temp (C)	17
126	15 Oct 2024	Visibility (mi)	7
126	15 Oct 2024	Wind Speed (kts)	5.9
126	15 Oct 2024	Wind Dir	NW
126	15 Oct 2024	Sea State	Regular Swell
126	15 Oct 2024	High Tide Time	812



Station	Date	Parameter	Value
I26	15 Oct 2024	Low Tide Time	154
I26	15 Oct 2024	Comments	
I26	21 Oct 2024	Arrive Time	1126
I26	21 Oct 2024	Depart Time	1131
I26	21 Oct 2024	Air Temp (C)	17.7
I26	21 Oct 2024	Visibility (mi)	10
I26	21 Oct 2024	Wind Speed (kts)	7.6
I26	21 Oct 2024	Wind Dir	NW
I26	21 Oct 2024	Sea State	Wind Ripples
I26	21 Oct 2024	High Tide Time	1148
I26	21 Oct 2024	Low Tide Time	1930
I26	21 Oct 2024	Comments	
I26	30 Oct 2024	Arrive Time	1144
I26	30 Oct 2024	Depart Time	1150
I26	30 Oct 2024	Air Temp (C)	16.3
I26	30 Oct 2024	Visibility (mi)	8
I26	30 Oct 2024	Wind Speed (kts)	15.7
I26	30 Oct 2024	Wind Dir	NW
I26	30 Oct 2024	Sea State	Confused Swell
I26	30 Oct 2024	High Tide Time	818
I26	30 Oct 2024	Low Tide Time	1454
I26	30 Oct 2024	Comments	
I32	08 Oct 2024	Arrive Time	1129
I32	08 Oct 2024	Depart Time	1132
I32	08 Oct 2024	Air Temp (C)	15.9
I32	08 Oct 2024	Visibility (mi)	0
I32	08 Oct 2024	Wind Speed (kts)	11.2
I32	08 Oct 2024	Wind Dir	NW
I32	08 Oct 2024	Sea State	Wind Ripples
I32	08 Oct 2024	High Tide Time	1148
I32	08 Oct 2024	Low Tide Time	2018
I32	08 Oct 2024	Comments	
I32	15 Oct 2024	Arrive Time	1109
I32	15 Oct 2024	Depart Time	1114
I32	15 Oct 2024	Air Temp (C)	17
I32	15 Oct 2024	Visibility (mi)	7
I32	15 Oct 2024	Wind Speed (kts)	11.2
I32	15 Oct 2024	Wind Dir	W
I32	15 Oct 2024	Sea State	Regular Swell
I32	15 Oct 2024	High Tide Time	812
I32	15 Oct 2024	Low Tide Time	154
I32	15 Oct 2024	Comments	
I32	21 Oct 2024	Arrive Time	1139
I32	21 Oct 2024	Depart Time	1145
I32	21 Oct 2024	Air Temp (C)	17.7
I32	21 Oct 2024	Visibility (mi)	10
I32	21 Oct 2024	Wind Speed (kts)	9.9
I32	21 Oct 2024	Wind Dir	NW
I32	21 Oct 2024	Sea State	Wind Ripples
I32	21 Oct 2024	High Tide Time	1148
I32	21 Oct 2024	Low Tide Time	1930
I32	21 Oct 2024	Comments	
I32	30 Oct 2024	Arrive Time	1158
I32	30 Oct 2024	Depart Time	1201
I32	30 Oct 2024	Air Temp (C)	16.2

<b>Station</b>	<b>Date</b>	<b>Parameter</b>	<b>Value</b>
132	30 Oct 2024	Visibility (mi)	8
132	30 Oct 2024	Wind Speed (kts)	8.5
132	30 Oct 2024	Wind Dir	NW
132	30 Oct 2024	Sea State	Confused Swell
132	30 Oct 2024	High Tide Time	818
132	30 Oct 2024	Low Tide Time	1454
132	30 Oct 2024	Comments	

## Comments

date	station	depth	parmcode	comments
08-Oct-2024	I19	2		Found 1 colonies on non-selective TSA plate for QC, but none on selective mEI plate. The results not likely affected
08-Oct-2024	I19	11		Found 1 colonies on non-selective TSA plate for QC, but none on selective mEI plate. The results not likely affected
08-Oct-2024	I40	2		Found 1 colonies on non-selective TSA plate for QC, but none on selective mEI plate. The results not likely affected
08-Oct-2024	I40	9		Found 1 colonies on non-selective TSA plate for QC, but none on selective mEI plate. The results not likely affected
08-Oct-2024	I24	2		Found 1 colonies on non-selective TSA plate for QC, but none on selective mEI plate. The results not likely affected
08-Oct-2024	I24	6		Found 1 colonies on non-selective TSA plate for QC, but none on selective mEI plate. The results not likely affected
08-Oct-2024	I24	11		Found 1 colonies on non-selective TSA plate for QC, but none on selective mEI plate. The results not likely affected
08-Oct-2024	I25	2		Found 1 colonies on non-selective TSA plate for QC, but none on selective mEI plate. The results not likely affected
08-Oct-2024	I25	6		Found 1 colonies on non-selective TSA plate for QC, but none on selective mEI plate. The results not likely affected
08-Oct-2024	I25	9		Found 1 colonies on non-selective TSA plate for QC, but none on selective mEI plate. The results not likely affected
08-Oct-2024	I26	2		Found 1 colonies on non-selective TSA plate for QC, but none on selective mEI plate. The results not likely affected.
08-Oct-2024	I26	6		Found 1 colonies on non-selective TSA plate for QC, but none on selective mEI plate. The results not likely affected.
08-Oct-2024	I26	9		Found 1 colonies on non-selective TSA plate for QC, but none on selective mEI plate. The results not likely affected.
08-Oct-2024	I32	2		Found 1 colonies on non-selective TSA plate for QC, but none on selective mEI plate. The results not likely affected.
08-Oct-2024	I32	6		Found 1 colonies on non-selective TSA plate for QC, but none on selective mEI plate. The results not likely affected.
08-Oct-2024	I32	9		Found 1 colonies on non-selective TSA plate for QC, but none on selective mEI plate. The results not likely affected.

**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	08 Oct 2024	1	17.01	85.75	8.2	33.20	8.2	24.1	0.92
I19	08 Oct 2024	2	16.88	85.51	8.2	33.21	8.2	24.2	1.06
I19	08 Oct 2024	3	16.50	85.97	8.4	33.22	8.2	24.3	1.19
I19	08 Oct 2024	4	15.85	88.31	8.4	33.22	8.2	24.4	1.17
I19	08 Oct 2024	5	15.49	91.35	8.4	33.19	8.2	24.5	1.17
I19	08 Oct 2024	6	15.36	92.71	8.3	33.19	8.1	24.5	1.29
I19	08 Oct 2024	7	15.07	92.85	8.2	33.18	8.1	24.6	1.77
I19	08 Oct 2024	8	14.94	92.20	8.1	33.17	8.1	24.6	2.17
I19	08 Oct 2024	9	14.74	92.29	8.0	33.17	8.1	24.6	1.98
I19	08 Oct 2024	10	14.63	92.51	7.9	33.17	8.1	24.6	1.58
I19	15 Oct 2024	1	15.66	86.56	8.3	33.23	8.2	24.5	1.88
I19	15 Oct 2024	2	15.47	86.27	8.2	33.26	8.2	24.5	1.94
I19	15 Oct 2024	3	15.12	81.58	8.2	33.24	8.2	24.6	2.46
I19	15 Oct 2024	4	15.07	82.69	8.1	33.23	8.2	24.6	3.53
I19	15 Oct 2024	5	15.01	80.84	8.1	33.23	8.2	24.6	3.92
I19	15 Oct 2024	6	14.93	80.28	8.0	33.23	8.2	24.6	3.97
I19	15 Oct 2024	7	14.90	80.69	8.0	33.23	8.2	24.6	3.95
I19	15 Oct 2024	8	14.89	80.51	8.0	33.23	8.2	24.6	3.68
I19	15 Oct 2024	9	14.91	79.22	8.0	33.23	8.2	24.6	3.32
I19	15 Oct 2024	10	14.90	76.78	7.9	33.23	8.2	24.6	3.05
I19	21 Oct 2024	1	16.15	86.07	8.3	33.20	8.2	24.3	0.72
I19	21 Oct 2024	2	16.13	86.02	8.2	33.20	8.2	24.3	0.61
I19	21 Oct 2024	3	16.02	85.77	8.3	33.20	8.2	24.4	0.70
I19	21 Oct 2024	4	15.98	85.22	8.3	33.20	8.2	24.4	0.88
I19	21 Oct 2024	5	15.97	85.06	8.3	33.20	8.2	24.4	1.13
I19	21 Oct 2024	6	15.91	85.63	8.4	33.20	8.2	24.4	1.33
I19	21 Oct 2024	7	15.70	86.68	8.4	33.21	8.2	24.4	1.55
I19	21 Oct 2024	8	15.48	87.52	8.3	33.20	8.2	24.5	1.72
I19	21 Oct 2024	9	15.41	87.48	8.2	33.20	8.2	24.5	1.78
I19	21 Oct 2024	10	15.36	86.13	8.1	33.20	8.2	24.5	1.71
I19	30 Oct 2024	1	16.29	72.51	7.7	33.22	8.1	24.3	0.57
I19	30 Oct 2024	2	16.05	71.61	7.7	33.26	8.1	24.4	0.57
I19	30 Oct 2024	3	15.75	74.40	7.6	33.23	8.1	24.4	0.58
I19	30 Oct 2024	4	15.62	81.00	7.4	33.22	8.0	24.5	0.61
I19	30 Oct 2024	5	15.52	76.39	7.2	33.22	8.0	24.5	0.77
I19	30 Oct 2024	6	15.38	57.61	7.0	33.22	8.0	24.5	1.09
I19	30 Oct 2024	7	15.26	44.02	6.9	33.22	8.0	24.5	1.46
I19	30 Oct 2024	8	15.22	46.02	7.0	33.21	8.0	24.5	1.62
I19	30 Oct 2024	9	15.17	54.37	7.0	33.21	8.0	24.6	1.52
I19	30 Oct 2024	10	15.08	60.33	7.0	33.21	8.0	24.6	1.33
I40	08 Oct 2024	1	16.71	85.26	7.8	33.21	8.1	24.2	0.93
I40	08 Oct 2024	2	16.41	85.24	7.9	33.21	8.1	24.3	1.02
I40	08 Oct 2024	3	15.91	86.08	8.4	33.20	8.2	24.4	1.15
I40	08 Oct 2024	4	15.74	90.09	8.4	33.20	8.2	24.4	1.24
I40	08 Oct 2024	5	15.64	90.80	8.3	33.19	8.2	24.4	1.31
I40	08 Oct 2024	6	15.41	91.62	8.2	33.19	8.2	24.5	1.22
I40	08 Oct 2024	7	15.32	91.88	8.2	33.18	8.1	24.5	1.19
I40	08 Oct 2024	8	15.25	92.30	8.2	33.19	8.1	24.5	1.16
I40	08 Oct 2024	9	15.07	92.76	8.2	33.18	8.1	24.6	1.23
I40	08 Oct 2024	10	15.09	91.18	8.1	33.18	8.1	24.5	1.20

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/l)	Sal (ppt)	pH	Dens (s-t)	Chlor (µg/L)
I40	15 Oct 2024	1	15.82	87.45	8.2	33.22	8.2	24.4	1.45
I40	15 Oct 2024	2	15.46	86.71	8.2	33.23	8.2	24.5	1.72
I40	15 Oct 2024	3	15.24	82.93	8.1	33.22	8.2	24.5	2.49
I40	15 Oct 2024	4	14.88	80.80	8.1	33.24	8.2	24.6	3.33
I40	15 Oct 2024	5	14.70	80.68	8.0	33.23	8.2	24.7	3.85
I40	15 Oct 2024	6	14.60	79.99	7.8	33.23	8.2	24.7	3.55
I40	15 Oct 2024	7	14.01	78.31	7.6	33.26	8.2	24.8	2.90
I40	15 Oct 2024	8	13.62	78.55	7.2	33.24	8.1	24.9	2.45
I40	15 Oct 2024	9	12.85	68.93	6.6	33.27	8.1	25.1	2.37
I40	15 Oct 2024	10	12.38	49.76	6.2	33.26	8.1	25.2	2.52
I40	21 Oct 2024	1	16.28	82.92	8.3	33.18	8.2	24.3	0.48
I40	21 Oct 2024	2	16.17	84.88	8.3	33.18	8.2	24.3	0.54
I40	21 Oct 2024	3	15.92	85.66	8.6	33.20	8.2	24.4	0.76
I40	21 Oct 2024	4	15.77	87.80	8.7	33.20	8.2	24.4	1.00
I40	21 Oct 2024	5	15.75	89.11	8.7	33.20	8.2	24.4	1.29
I40	21 Oct 2024	6	15.73	88.79	8.7	33.20	8.2	24.4	1.57
I40	21 Oct 2024	7	15.68	88.85	8.7	33.20	8.2	24.4	1.82
I40	21 Oct 2024	8	15.57	89.11	8.8	33.20	8.2	24.5	1.67
I40	21 Oct 2024	9	15.41	90.92	8.7	33.20	8.2	24.5	1.62
I40	21 Oct 2024	10	15.19	90.86	8.6	33.20	8.2	24.5	1.91
I40	30 Oct 2024	1	16.82	48.98	7.9	33.25	8.1	24.2	2.83
I40	30 Oct 2024	2	16.78	48.44	7.9	33.25	8.1	24.2	3.97
I40	30 Oct 2024	3	16.58	48.15	7.7	33.26	8.1	24.3	6.27
I40	30 Oct 2024	4	16.31	45.68	7.3	33.25	8.1	24.3	5.03
I40	30 Oct 2024	5	15.94	44.42	7.0	33.24	8.0	24.4	2.83
I40	30 Oct 2024	6	15.65	45.53	7.0	33.22	8.0	24.5	1.64
I40	30 Oct 2024	7	15.66	49.98	6.9	33.21	8.0	24.4	1.30
I40	30 Oct 2024	8	15.46	48.87	6.7	33.21	8.0	24.5	1.23
I40	30 Oct 2024	9	15.32	42.62	6.7	33.21	8.0	24.5	1.22
I40	30 Oct 2024	10	15.14	43.68	6.6	33.21	8.0	24.6	1.25
I24	08 Oct 2024	1	16.84	89.25	8.3	33.21	8.2	24.2	0.66
I24	08 Oct 2024	2	16.91	88.98	8.3	33.19	8.2	24.1	0.68
I24	08 Oct 2024	3	16.27	88.87	8.4	33.23	8.2	24.3	0.73
I24	08 Oct 2024	4	15.84	89.08	8.7	33.20	8.2	24.4	0.92
I24	08 Oct 2024	5	15.67	89.17	8.8	33.19	8.2	24.4	1.26
I24	08 Oct 2024	6	15.59	88.37	8.7	33.19	8.2	24.4	2.10
I24	08 Oct 2024	7	15.54	88.60	8.6	33.18	8.2	24.5	2.30
I24	08 Oct 2024	8	15.45	90.67	8.4	33.18	8.2	24.5	2.05
I24	08 Oct 2024	9	15.17	91.26	8.3	33.19	8.2	24.5	2.11
I24	08 Oct 2024	10	15.09	89.98	8.2	33.17	8.1	24.5	2.33
I24	08 Oct 2024	11	15.09	89.84	8.2	33.17	8.1	24.5	2.19
I24	15 Oct 2024	1	16.18	93.00	8.6	33.24	8.2	24.4	0.96
I24	15 Oct 2024	2	15.96	91.96	8.4	33.27	8.2	24.4	1.00
I24	15 Oct 2024	3	14.65	92.76	8.3	33.27	8.2	24.7	1.22
I24	15 Oct 2024	4	14.49	91.40	8.2	33.24	8.2	24.7	1.71
I24	15 Oct 2024	5	14.16	90.15	8.0	33.24	8.2	24.8	2.36
I24	15 Oct 2024	6	13.79	88.24	7.8	33.24	8.2	24.9	3.27
I24	15 Oct 2024	7	13.70	88.40	7.5	33.23	8.2	24.9	3.02
I24	15 Oct 2024	8	13.19	89.45	7.2	33.26	8.2	25.0	2.40
I24	15 Oct 2024	9	12.46	89.39	6.8	33.27	8.1	25.2	2.04
I24	15 Oct 2024	10	12.31	76.48	6.3	33.26	8.1	25.2	1.97
I24	15 Oct 2024	11	12.27	58.12	6.2	33.26	8.1	25.2	1.95
I24	21 Oct 2024	1	16.32	90.02	8.6	33.20	8.2	24.3	0.62
I24	21 Oct 2024	2	16.29	89.94	8.6	33.20	8.2	24.3	0.63
I24	21 Oct 2024	3	16.19	89.97	8.6	33.20	8.2	24.3	0.71
I24	21 Oct 2024	4	16.12	89.84	8.6	33.20	8.2	24.3	0.85

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/l)	Sal (ppt)	pH	Dens (s-t)	Chlor (µg/L)
I24	21 Oct 2024	5	16.04	88.62	8.7	33.20	8.2	24.4	1.20
I24	21 Oct 2024	6	15.98	87.46	8.7	33.19	8.2	24.4	1.60
I24	21 Oct 2024	7	15.94	87.52	8.7	33.20	8.2	24.4	1.75
I24	21 Oct 2024	8	15.89	88.59	8.7	33.20	8.2	24.4	1.74
I24	21 Oct 2024	9	15.82	88.74	8.6	33.20	8.2	24.4	1.90
I24	21 Oct 2024	10	15.31	88.64	8.5	33.21	8.2	24.5	2.14
I24	21 Oct 2024	11	15.05	88.82	8.6	33.20	8.2	24.6	1.64
I24	30 Oct 2024	1	17.09	59.44	8.2	33.20	8.1	24.1	1.39
I24	30 Oct 2024	2	16.95	59.34	8.2	33.27	8.1	24.2	1.46
I24	30 Oct 2024	3	16.72	58.69	8.2	33.27	8.1	24.3	2.89
I24	30 Oct 2024	4	16.57	52.65	7.8	33.26	8.1	24.3	6.37
I24	30 Oct 2024	5	16.48	50.17	7.5	33.25	8.1	24.3	6.42
I24	30 Oct 2024	6	16.31	51.90	7.3	33.25	8.0	24.3	4.97
I24	30 Oct 2024	7	16.13	57.25	7.2	33.24	8.0	24.4	3.11
I24	30 Oct 2024	8	15.75	66.42	7.0	33.23	8.0	24.4	1.94
I24	30 Oct 2024	9	15.67	65.59	6.9	33.22	8.0	24.4	1.41
I24	30 Oct 2024	10	15.67	57.25	6.8	33.21	8.0	24.4	1.22
I25	08 Oct 2024	1	17.49	90.24	8.6	33.21	8.2	24.0	0.72
I25	08 Oct 2024	2	17.37	90.18	8.5	33.22	8.2	24.1	0.80
I25	08 Oct 2024	3	16.40	90.03	8.8	33.24	8.2	24.3	0.84
I25	08 Oct 2024	4	15.84	91.42	9.1	33.20	8.2	24.4	0.77
I25	08 Oct 2024	5	15.56	93.30	9.0	33.18	8.2	24.4	0.87
I25	08 Oct 2024	6	15.49	93.07	8.8	33.17	8.2	24.5	1.08
I25	08 Oct 2024	7	15.20	92.08	8.6	33.17	8.2	24.5	1.70
I25	08 Oct 2024	8	15.10	90.77	8.5	33.17	8.2	24.5	2.22
I25	08 Oct 2024	9	15.06	90.34	8.4	33.16	8.2	24.5	2.44
I25	15 Oct 2024	1	16.05	92.80	8.5	33.24	8.2	24.4	1.01
I25	15 Oct 2024	2	15.88	92.77	8.4	33.25	8.2	24.4	1.12
I25	15 Oct 2024	3	14.94	92.65	8.4	33.26	8.2	24.6	1.24
I25	15 Oct 2024	4	14.31	92.53	8.4	33.24	8.2	24.8	1.90
I25	15 Oct 2024	5	13.97	91.52	8.2	33.24	8.2	24.8	3.46
I25	15 Oct 2024	6	13.84	90.68	8.0	33.23	8.2	24.9	4.52
I25	15 Oct 2024	7	13.71	88.11	7.6	33.23	8.2	24.9	4.25
I25	15 Oct 2024	8	12.95	86.49	7.1	33.26	8.1	25.1	2.66
I25	15 Oct 2024	9	12.79	84.00	6.8	33.24	8.1	25.1	1.52
I25	21 Oct 2024	1	16.41	89.98	8.8	33.19	8.2	24.3	0.56
I25	21 Oct 2024	2	16.37	90.08	8.8	33.19	8.2	24.3	0.58
I25	21 Oct 2024	3	16.27	89.82	8.8	33.20	8.2	24.3	0.70
I25	21 Oct 2024	4	16.13	88.66	8.7	33.20	8.2	24.3	0.89
I25	21 Oct 2024	5	16.03	87.77	8.7	33.20	8.2	24.4	1.13
I25	21 Oct 2024	6	15.93	87.94	8.7	33.20	8.2	24.4	1.32
I25	21 Oct 2024	7	15.92	88.15	8.7	33.20	8.2	24.4	1.64
I25	21 Oct 2024	8	15.90	88.52	8.7	33.20	8.2	24.4	1.54
I25	21 Oct 2024	9	15.78	88.95	8.6	33.20	8.2	24.4	1.75
I25	30 Oct 2024	1	16.99	61.70	7.9	33.24	8.1	24.2	1.45
I25	30 Oct 2024	2	16.61	61.39	7.7	33.27	8.1	24.3	1.72
I25	30 Oct 2024	3	15.99	61.31	7.4	33.26	8.1	24.4	2.49
I25	30 Oct 2024	4	15.64	64.09	7.2	33.24	8.0	24.5	2.63
I25	30 Oct 2024	5	15.34	69.25	7.1	33.22	8.0	24.5	2.05
I25	30 Oct 2024	6	15.32	66.64	7.0	33.20	8.0	24.5	1.64
I25	30 Oct 2024	7	15.32	62.44	7.0	33.20	8.0	24.5	1.36
I25	30 Oct 2024	8	15.32	59.62	6.9	33.20	8.0	24.5	1.17
I25	30 Oct 2024	9	15.32	57.14	6.9	33.20	8.0	24.5	1.11
I39	08 Oct 2024	1	17.47	92.58	8.6	33.23	8.2	24.0	0.63
I39	08 Oct 2024	2	17.40	92.56	8.6	33.23	8.2	24.1	0.71

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/l)	Sal (ppt)	pH	Dens (s-t)	Chlor (µg/L)
I39	08 Oct 2024	3	17.18	92.30	8.7	33.23	8.2	24.1	0.79
I39	08 Oct 2024	4	17.13	92.02	8.8	33.23	8.2	24.1	0.88
I39	08 Oct 2024	5	17.11	92.08	8.7	33.23	8.2	24.1	0.97
I39	08 Oct 2024	6	17.01	92.35	8.8	33.23	8.2	24.2	1.08
I39	08 Oct 2024	7	16.94	92.27	8.9	33.26	8.2	24.2	1.52
I39	08 Oct 2024	8	16.80	92.32	9.0	33.26	8.2	24.2	2.26
I39	08 Oct 2024	9	16.40	91.70	9.0	33.27	8.2	24.3	3.24
I39	08 Oct 2024	10	15.84	90.40	9.3	33.25	8.2	24.4	3.54
I39	08 Oct 2024	11	15.71	91.16	9.4	33.23	8.2	24.5	2.70
I39	08 Oct 2024	12	15.61	92.47	9.3	33.23	8.2	24.5	2.22
I39	08 Oct 2024	13	15.46	92.72	8.9	33.22	8.2	24.5	2.46
I39	08 Oct 2024	14	14.74	91.58	8.3	33.20	8.2	24.6	3.32
I39	08 Oct 2024	15	13.97	90.90	7.8	33.18	8.1	24.8	2.75
I39	08 Oct 2024	16	13.89	93.73	7.6	33.16	8.1	24.8	1.90
I39	08 Oct 2024	17	13.74	94.22	7.4	33.17	8.1	24.8	1.70
I39	08 Oct 2024	18	13.68	94.37	7.3	33.17	8.0	24.8	1.43
I39	15 Oct 2024	1	14.98	87.35	8.3	33.25	8.2	24.6	3.78
I39	15 Oct 2024	2	14.68	87.56	8.2	33.27	8.2	24.7	4.42
I39	15 Oct 2024	3	14.39	86.80	8.2	33.25	8.2	24.8	6.97
I39	15 Oct 2024	4	13.92	86.53	7.9	33.26	8.2	24.9	5.39
I39	15 Oct 2024	5	13.62	90.71	7.7	33.25	8.2	24.9	2.99
I39	15 Oct 2024	6	13.42	93.09	7.6	33.24	8.2	25.0	1.96
I39	15 Oct 2024	7	13.30	93.85	7.4	33.24	8.1	25.0	1.72
I39	15 Oct 2024	8	13.19	94.67	7.4	33.24	8.1	25.0	1.61
I39	15 Oct 2024	9	13.03	94.94	7.3	33.25	8.1	25.0	1.64
I39	15 Oct 2024	10	12.87	95.79	7.2	33.25	8.1	25.1	1.37
I39	15 Oct 2024	11	12.62	96.52	7.0	33.27	8.1	25.1	1.07
I39	15 Oct 2024	12	12.08	96.93	6.7	33.29	8.1	25.2	0.87
I39	15 Oct 2024	13	12.00	97.26	6.5	33.28	8.1	25.3	0.78
I39	15 Oct 2024	14	11.97	97.53	6.4	33.28	8.1	25.3	0.76
I39	15 Oct 2024	15	11.96	97.17	6.3	33.29	8.0	25.3	0.73
I39	15 Oct 2024	16	11.95	96.51	6.2	33.30	8.0	25.3	0.72
I39	15 Oct 2024	17	11.95	95.54	6.1	33.30	8.0	25.3	0.70
I39	15 Oct 2024	18	11.94	93.82	6.1	33.30	8.0	25.3	0.68
I39	21 Oct 2024	1	16.46	91.13	9.1	33.21	8.3	24.3	0.56
I39	21 Oct 2024	2	16.42	90.92	9.1	33.21	8.3	24.3	0.66
I39	21 Oct 2024	3	16.38	90.44	9.1	33.21	8.3	24.3	0.75
I39	21 Oct 2024	4	16.30	90.02	9.0	33.21	8.3	24.3	0.87
I39	21 Oct 2024	5	16.04	90.16	8.8	33.21	8.3	24.4	0.89
I39	21 Oct 2024	6	15.47	91.06	8.6	33.22	8.2	24.5	0.82
I39	21 Oct 2024	7	14.93	92.24	8.5	33.21	8.2	24.6	0.90
I39	21 Oct 2024	8	14.57	92.32	8.3	33.19	8.2	24.7	1.07
I39	21 Oct 2024	9	14.31	91.79	8.1	33.18	8.2	24.7	1.24
I39	21 Oct 2024	10	14.16	91.46	7.9	33.18	8.2	24.7	1.33
I39	21 Oct 2024	11	14.14	90.84	7.8	33.18	8.2	24.8	1.53
I39	21 Oct 2024	12	14.01	91.29	7.7	33.19	8.2	24.8	1.60
I39	21 Oct 2024	13	13.83	91.14	7.6	33.19	8.1	24.8	1.70
I39	21 Oct 2024	14	13.78	91.08	7.5	33.18	8.1	24.8	1.67
I39	21 Oct 2024	15	13.75	91.85	7.4	33.18	8.1	24.8	1.57
I39	21 Oct 2024	16	13.61	92.90	7.3	33.19	8.1	24.9	1.33
I39	21 Oct 2024	17	13.57	93.52	7.3	33.19	8.1	24.9	1.18
I39	21 Oct 2024	18	13.57	94.00	7.2	33.19	8.1	24.9	1.02
I39	30 Oct 2024	1	17.29	79.84	9.0	33.25	8.2	24.1	1.42
I39	30 Oct 2024	2	17.28	79.82	8.9	33.25	8.2	24.1	1.40
I39	30 Oct 2024	3	17.11	79.79	8.8	33.27	8.2	24.2	1.45
I39	30 Oct 2024	4	17.04	81.76	8.7	33.26	8.2	24.2	1.79
I39	30 Oct 2024	5	17.03	84.22	8.7	33.26	8.2	24.2	2.17
I39	30 Oct 2024	6	17.03	85.80	8.6	33.26	8.2	24.2	2.37

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/l)	Sal (ppt)	pH	Dens (s-t)	Chlor (µg/L)
I39	30 Oct 2024	7	17.02	87.05	8.6	33.26	8.2	24.2	2.47
I39	30 Oct 2024	8	17.02	87.97	8.5	33.27	8.2	24.2	2.41
I39	30 Oct 2024	9	16.91	88.48	8.5	33.27	8.2	24.2	2.24
I39	30 Oct 2024	10	16.77	89.53	8.2	33.26	8.2	24.2	2.00
I39	30 Oct 2024	11	15.81	89.68	7.8	33.30	8.1	24.5	1.77
I39	30 Oct 2024	12	15.17	87.77	7.3	33.23	8.0	24.6	1.35
I39	30 Oct 2024	13	14.96	83.55	7.1	33.21	8.0	24.6	1.08
I39	30 Oct 2024	14	14.80	81.49	6.9	33.21	8.0	24.6	0.88
I39	30 Oct 2024	15	14.60	79.10	6.7	33.21	8.0	24.7	0.73
I39	30 Oct 2024	16	14.60	77.52	6.7	33.19	8.0	24.7	0.70
I39	30 Oct 2024	17	14.50	76.30	6.6	33.21	8.0	24.7	0.66
I39	30 Oct 2024	18	14.43	72.76	6.5	33.20	8.0	24.7	0.68
I26	08 Oct 2024	1	17.47	89.65	8.5	33.21	8.2	24.0	0.72
I26	08 Oct 2024	2	16.94	89.67	8.5	33.23	8.2	24.2	0.69
I26	08 Oct 2024	3	15.63	90.64	8.9	33.20	8.2	24.4	0.60
I26	08 Oct 2024	4	15.44	93.42	9.0	33.18	8.2	24.5	0.77
I26	08 Oct 2024	5	15.27	92.89	8.9	33.17	8.2	24.5	1.67
I26	08 Oct 2024	6	15.16	87.10	8.8	33.16	8.2	24.5	4.18
I26	08 Oct 2024	7	15.09	82.18	8.6	33.16	8.2	24.5	6.31
I26	08 Oct 2024	8	15.01	84.39	8.4	33.16	8.2	24.6	5.51
I26	08 Oct 2024	9	14.98	88.02	8.3	33.16	8.1	24.6	3.80
I26	15 Oct 2024	1	16.38	92.36	8.5	33.24	8.2	24.3	0.82
I26	15 Oct 2024	2	16.28	92.94	8.4	33.24	8.2	24.3	0.88
I26	15 Oct 2024	3	15.44	93.01	8.4	33.27	8.2	24.5	0.90
I26	15 Oct 2024	4	14.85	93.20	8.5	33.26	8.2	24.7	0.97
I26	15 Oct 2024	5	14.29	93.22	8.5	33.24	8.2	24.8	1.46
I26	15 Oct 2024	6	14.14	91.64	8.3	33.23	8.2	24.8	2.57
I26	15 Oct 2024	7	13.88	89.66	8.1	33.25	8.2	24.9	3.73
I26	15 Oct 2024	8	13.52	88.64	7.6	33.24	8.2	24.9	2.83
I26	15 Oct 2024	9	13.10	91.07	7.1	33.26	8.1	25.0	1.51
I26	21 Oct 2024	1	16.52	88.27	9.0	33.21	8.3	24.3	0.69
I26	21 Oct 2024	2	16.54	88.38	8.9	33.21	8.3	24.2	0.68
I26	21 Oct 2024	3	16.38	88.28	8.9	33.21	8.3	24.3	0.79
I26	21 Oct 2024	4	16.30	87.81	9.0	33.21	8.3	24.3	1.04
I26	21 Oct 2024	5	16.17	86.97	8.9	33.21	8.3	24.3	1.39
I26	21 Oct 2024	6	15.83	86.71	8.8	33.21	8.2	24.4	1.57
I26	21 Oct 2024	7	15.61	88.49	8.7	33.20	8.2	24.5	1.65
I26	21 Oct 2024	8	15.38	88.10	8.5	33.20	8.2	24.5	2.24
I26	21 Oct 2024	9	14.99	86.35	8.4	33.20	8.2	24.6	3.27
I26	30 Oct 2024	1	16.17	70.40	7.5	33.28	8.1	24.4	0.68
I26	30 Oct 2024	2	15.61	69.97	7.5	33.23	8.0	24.5	0.79
I26	30 Oct 2024	3	15.40	73.65	7.5	33.22	8.0	24.5	0.95
I26	30 Oct 2024	4	15.26	80.17	7.5	33.21	8.0	24.5	1.09
I26	30 Oct 2024	5	15.17	82.76	7.4	33.21	8.0	24.6	1.12
I26	30 Oct 2024	6	15.06	84.19	7.3	33.21	8.0	24.6	1.16
I26	30 Oct 2024	7	14.89	85.73	7.2	33.21	8.0	24.6	1.19
I26	30 Oct 2024	8	14.85	77.75	7.0	33.20	8.0	24.6	1.18
I26	30 Oct 2024	9	14.85	69.71	6.9	33.20	8.0	24.6	1.10
I32	08 Oct 2024	1	16.97	84.56	8.1	33.20	8.2	24.1	0.79
I32	08 Oct 2024	2	16.45	84.50	8.0	33.22	8.2	24.3	0.86
I32	08 Oct 2024	3	15.85	84.67	8.1	33.19	8.1	24.4	0.99
I32	08 Oct 2024	4	15.61	84.81	8.4	33.19	8.2	24.4	1.29
I32	08 Oct 2024	5	15.43	84.28	8.6	33.17	8.2	24.5	2.29
I32	08 Oct 2024	6	15.33	83.75	8.6	33.17	8.2	24.5	2.54
I32	08 Oct 2024	7	15.26	87.78	8.5	33.17	8.2	24.5	2.04
I32	08 Oct 2024	8	15.22	89.27	8.5	33.17	8.2	24.5	1.86



Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/l)	Sal (ppt)	pH	Dens (s-t)	Chlor (µg/L)
I32	08 Oct 2024	9	15.20	89.63	8.5	33.17	8.2	24.5	1.82
I32	08 Oct 2024	10	15.20	89.63	8.5	33.17	8.2	24.5	1.88
I32	15 Oct 2024	1	16.06	88.86	8.3	33.23	8.2	24.4	1.53
I32	15 Oct 2024	2	15.87	88.76	8.3	33.24	8.2	24.4	1.70
I32	15 Oct 2024	3	15.55	87.37	8.2	33.23	8.2	24.5	2.11
I32	15 Oct 2024	4	15.36	85.59	8.1	33.23	8.2	24.5	2.75
I32	15 Oct 2024	5	15.21	83.53	8.0	33.21	8.2	24.5	2.50
I32	15 Oct 2024	6	15.10	81.70	7.9	33.21	8.2	24.6	2.30
I32	15 Oct 2024	7	15.01	80.21	7.9	33.21	8.2	24.6	1.98
I32	15 Oct 2024	8	14.92	79.57	7.9	33.21	8.2	24.6	1.82
I32	15 Oct 2024	9	14.87	78.71	7.9	33.22	8.2	24.6	1.89
I32	15 Oct 2024	10	14.69	79.84	7.6	33.22	8.2	24.7	1.82
I32	21 Oct 2024	1	16.27	85.26	8.5	33.20	8.2	24.3	0.66
I32	21 Oct 2024	2	16.00	85.44	8.5	33.21	8.2	24.4	0.68
I32	21 Oct 2024	3	15.60	86.17	8.6	33.20	8.2	24.5	0.80
I32	21 Oct 2024	4	15.55	86.65	8.6	33.19	8.2	24.5	0.93
I32	21 Oct 2024	5	15.49	86.62	8.6	33.19	8.2	24.5	1.08
I32	21 Oct 2024	6	15.31	86.47	8.6	33.20	8.2	24.5	1.50
I32	21 Oct 2024	7	15.14	85.28	8.5	33.19	8.2	24.5	2.34
I32	21 Oct 2024	8	15.01	82.49	8.2	33.19	8.2	24.6	2.81
I32	21 Oct 2024	9	14.98	81.47	8.1	33.19	8.2	24.6	3.02
I32	21 Oct 2024	10	14.75	78.90	7.9	33.20	8.2	24.6	2.72
I32	30 Oct 2024	1	16.67	55.68	7.5	33.24	8.0	24.2	0.85
I32	30 Oct 2024	2	16.47	55.73	7.4	33.24	8.0	24.3	0.94
I32	30 Oct 2024	3	15.77	55.45	7.4	33.24	8.0	24.4	2.00
I32	30 Oct 2024	4	15.52	58.17	7.3	33.22	8.0	24.5	3.10
I32	30 Oct 2024	5	15.48	63.37	7.3	33.21	8.0	24.5	3.10
I32	30 Oct 2024	6	15.40	60.67	7.2	33.21	8.0	24.5	2.85
I32	30 Oct 2024	7	15.37	55.87	7.2	33.21	8.0	24.5	2.43
I32	30 Oct 2024	8	15.36	54.16	7.1	33.21	8.0	24.5	2.04
I32	30 Oct 2024	9	15.26	44.90	7.0	33.21	8.0	24.5	2.01
I32	30 Oct 2024	10	15.15	41.61	7.0	33.21	8.0	24.6	2.17

NA = not available

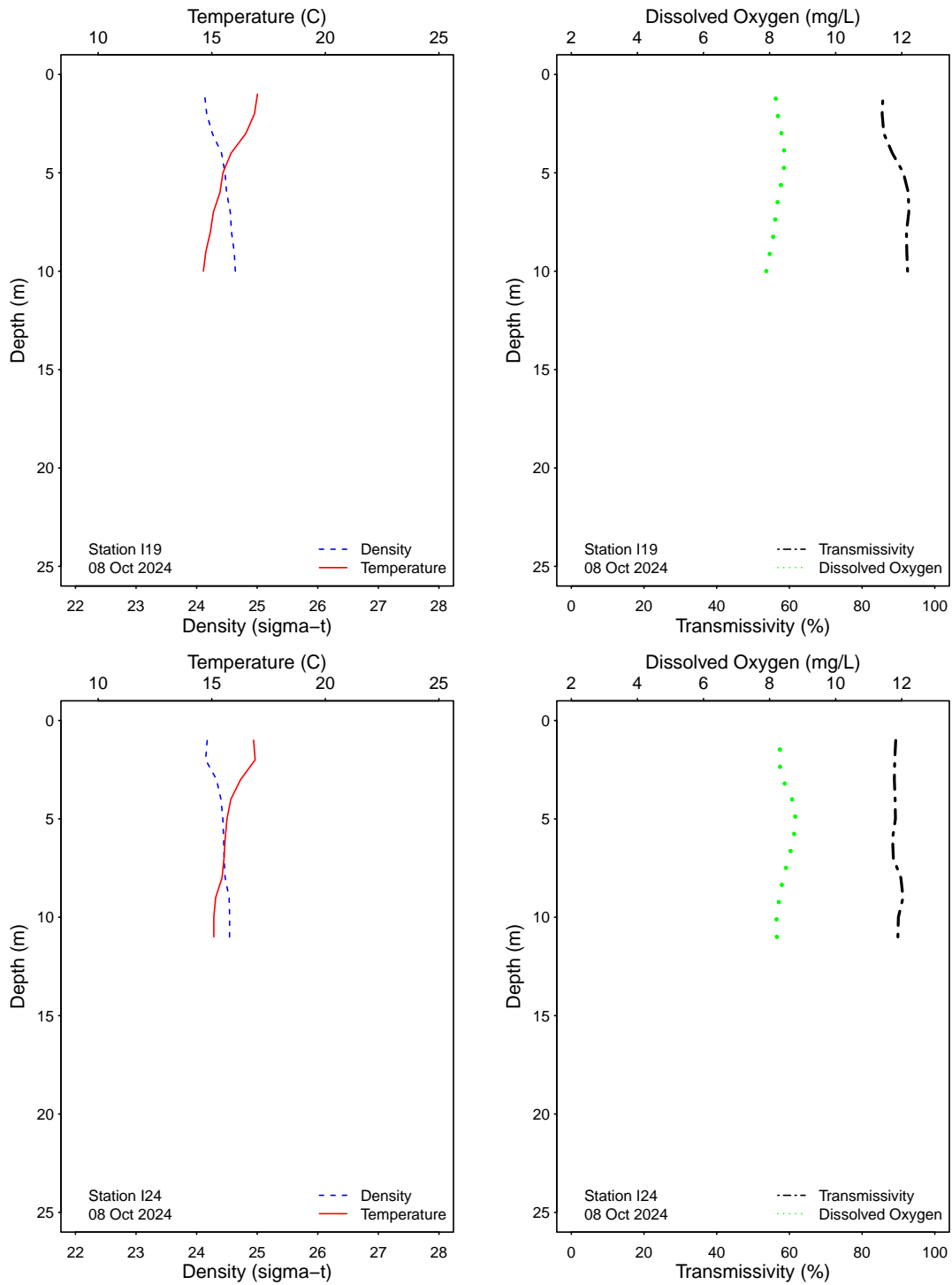


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

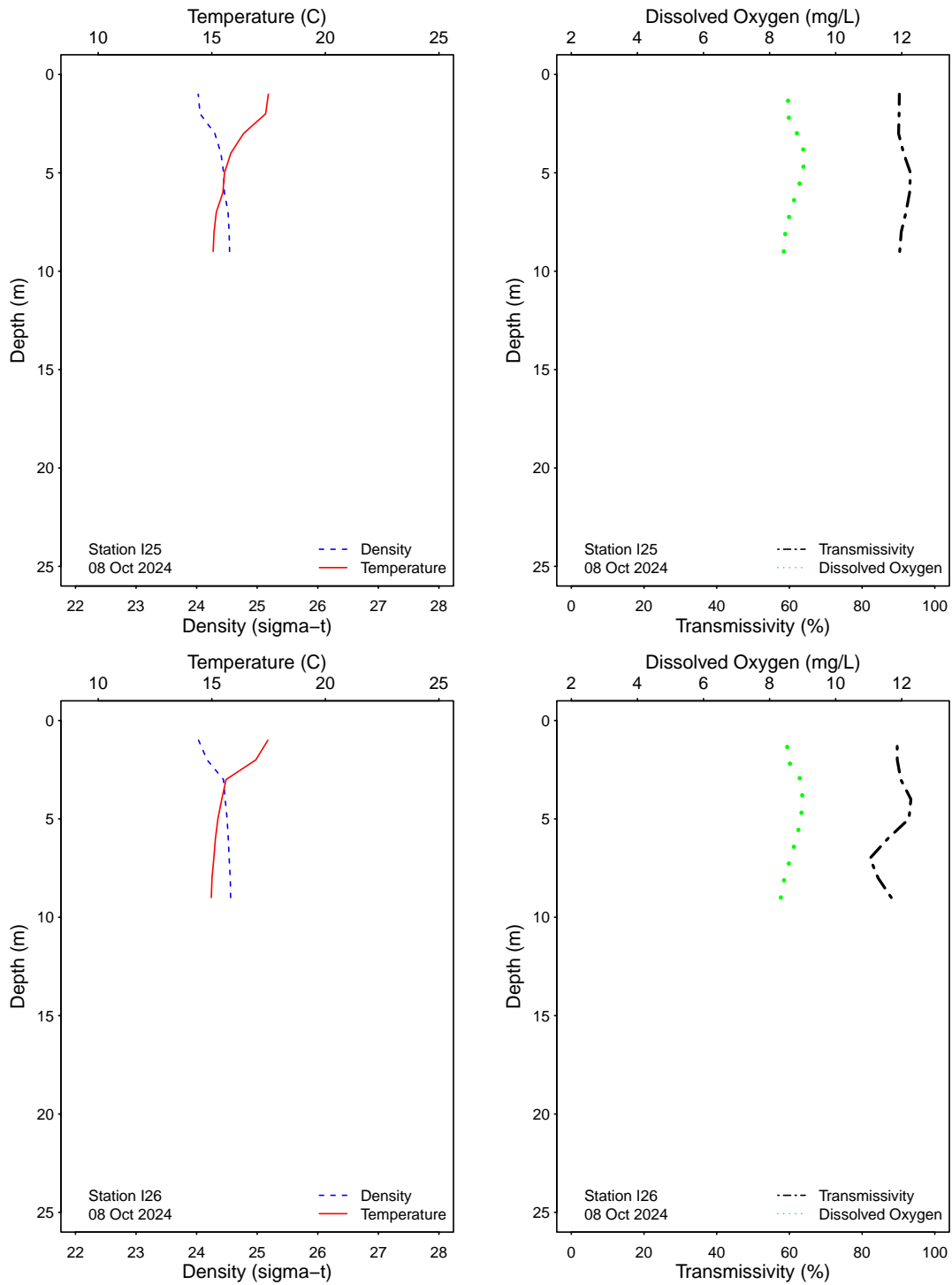


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

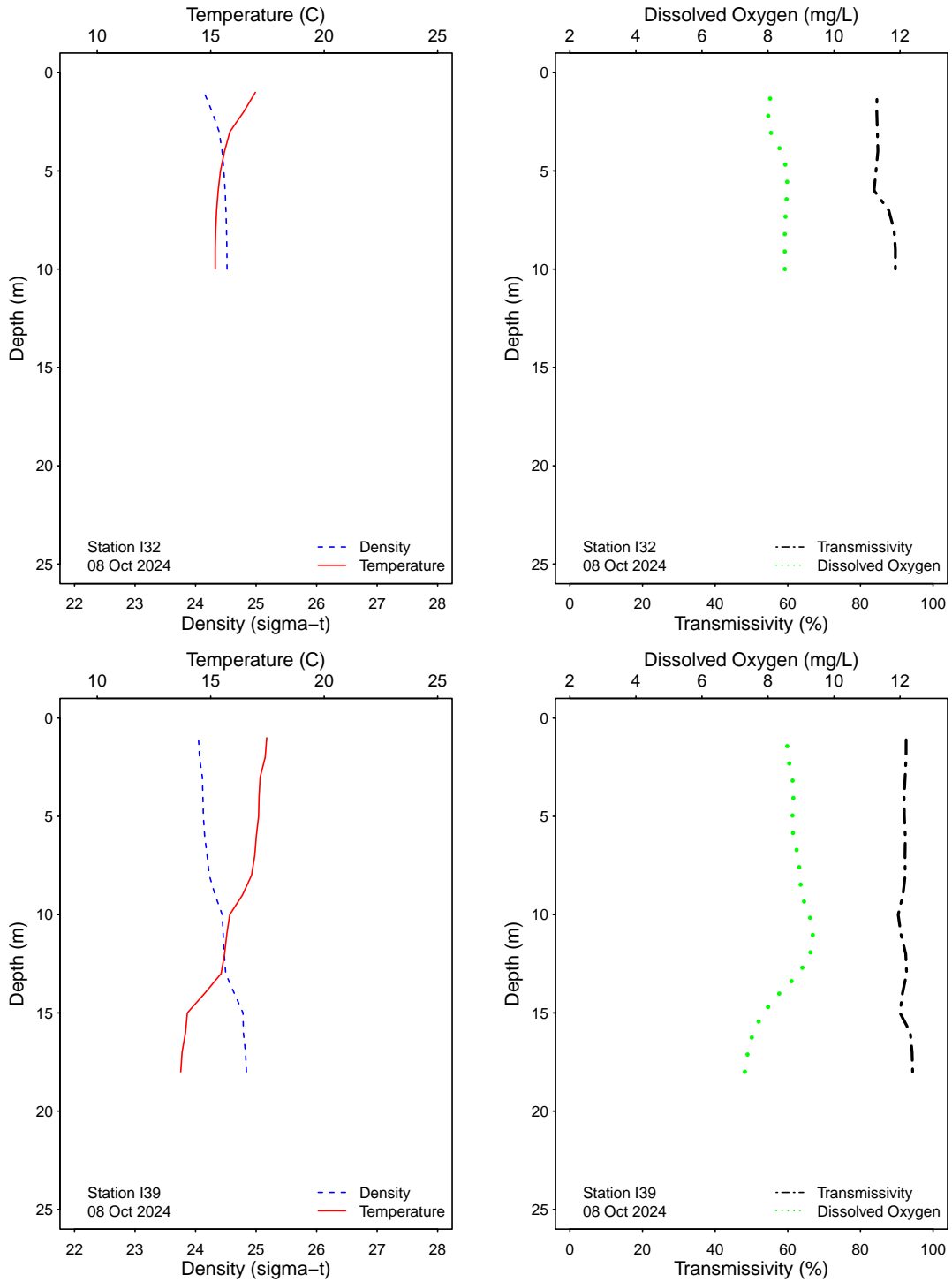


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

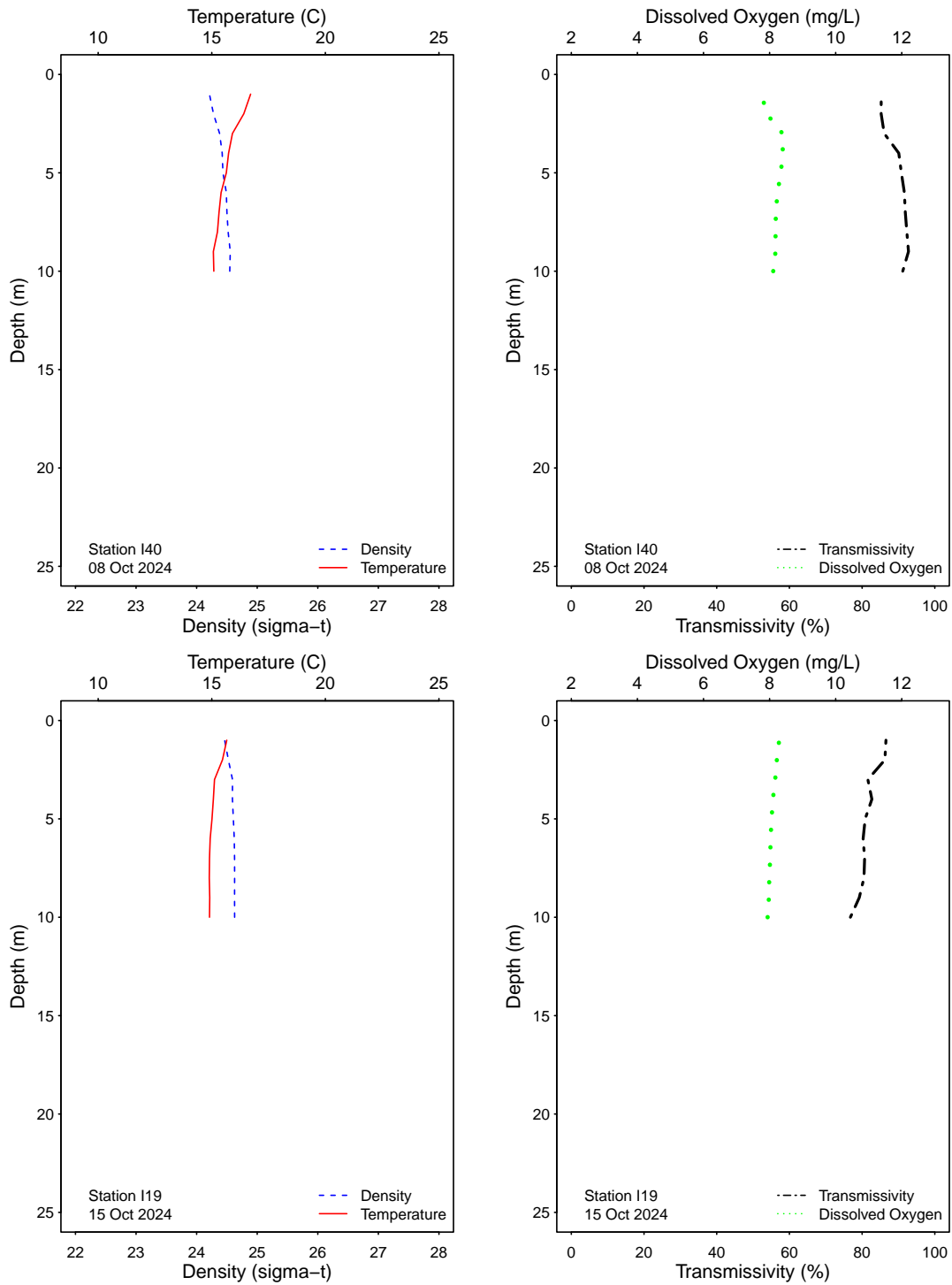


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

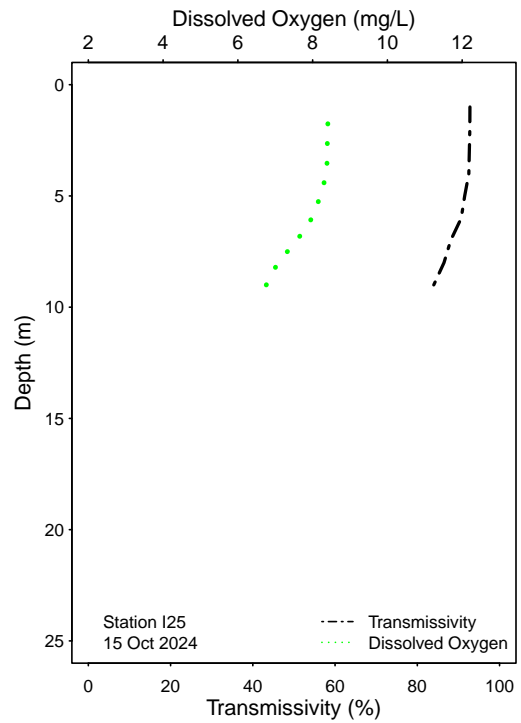
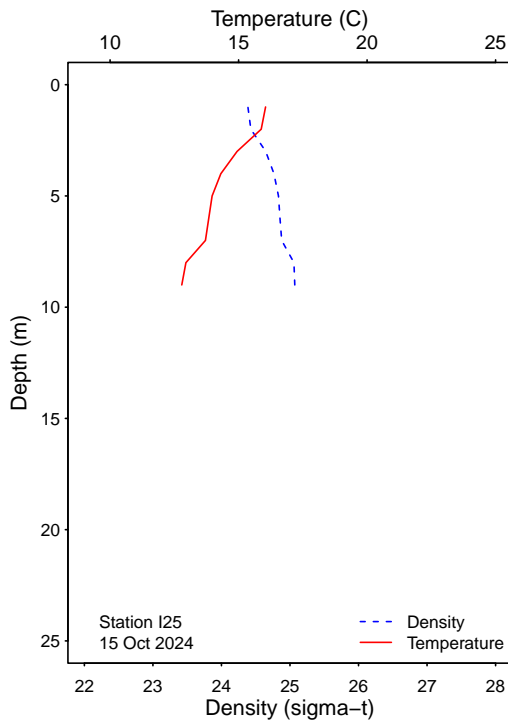
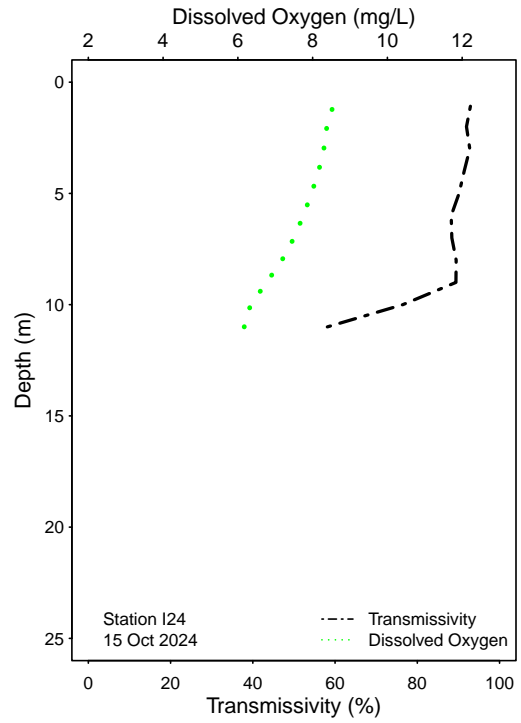
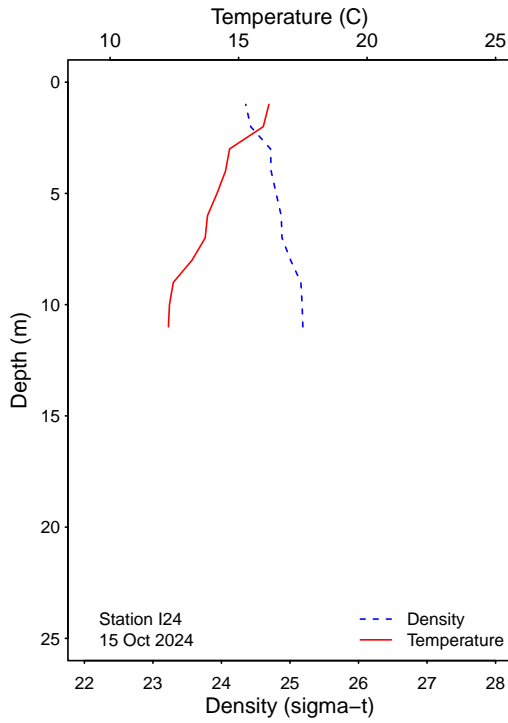


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

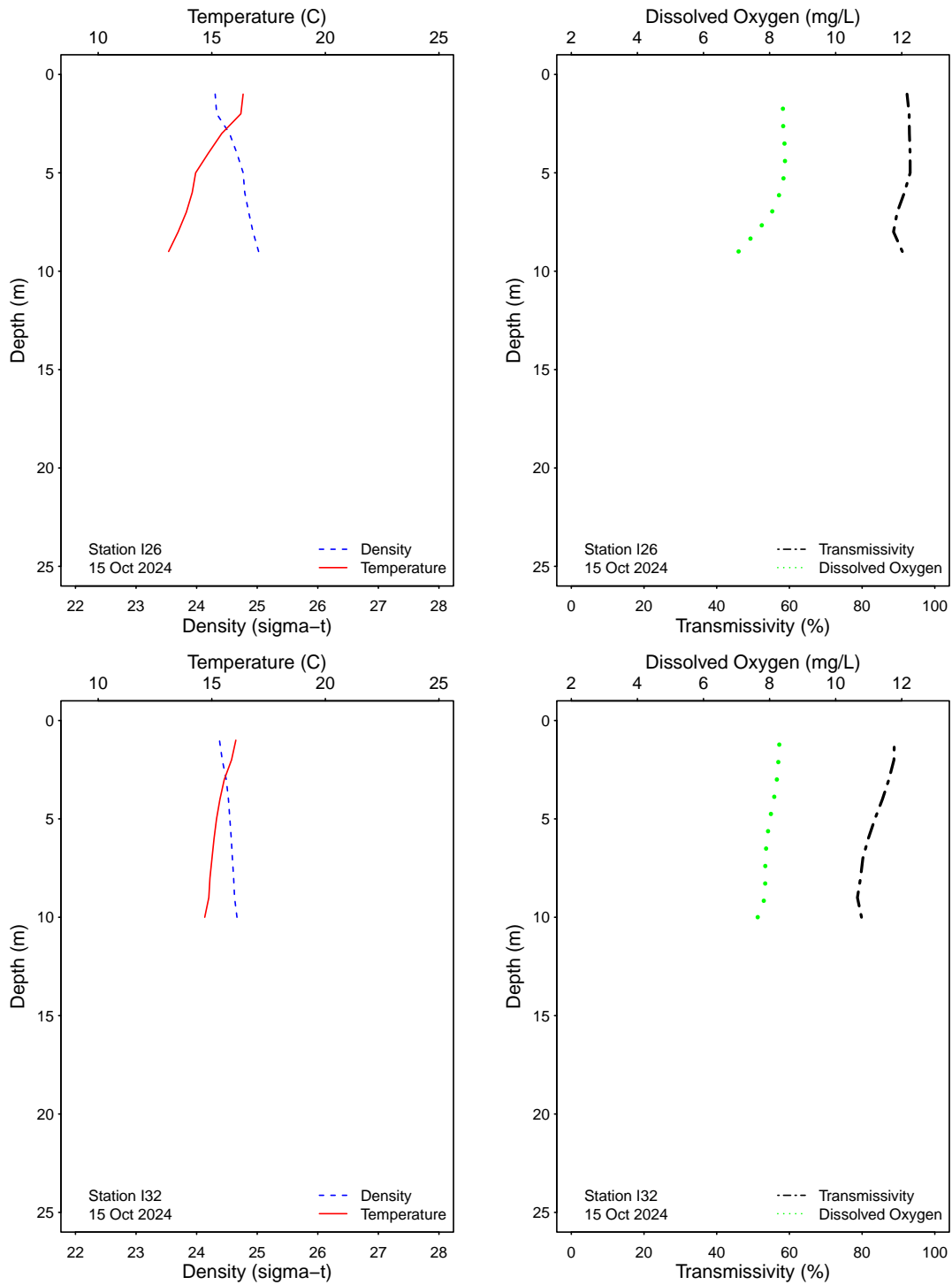


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

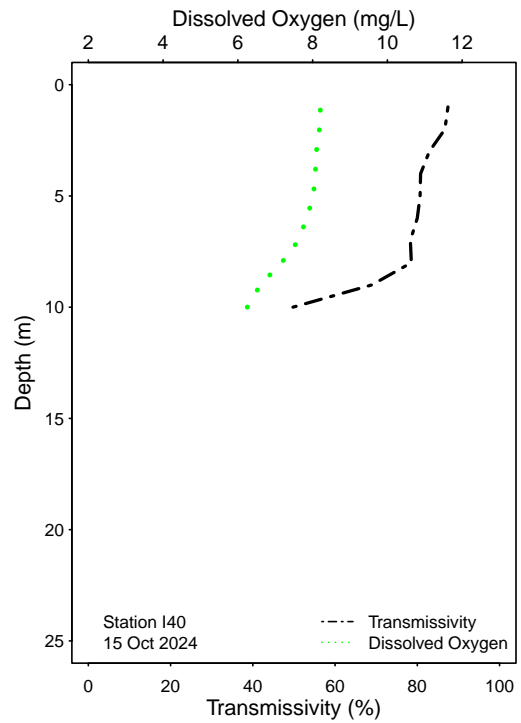
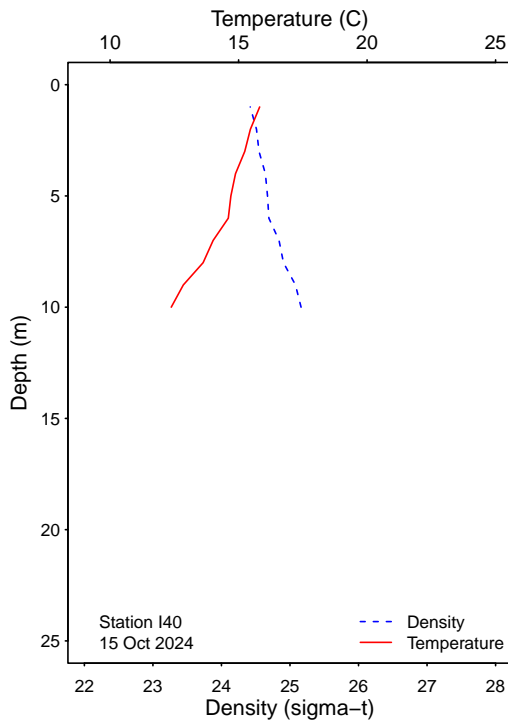
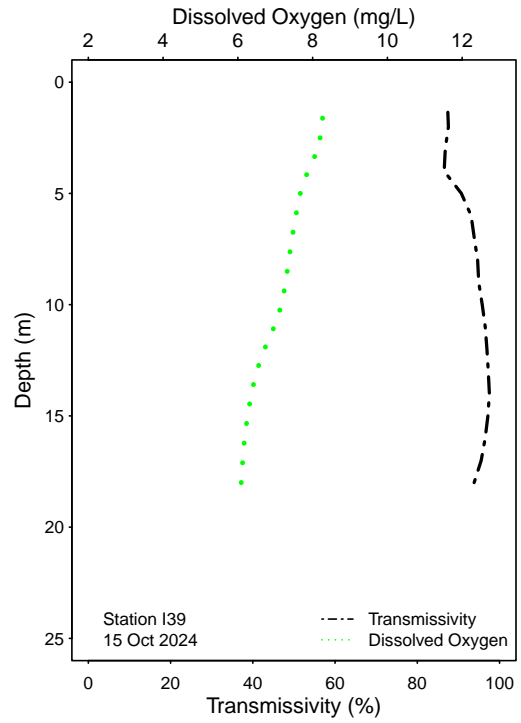
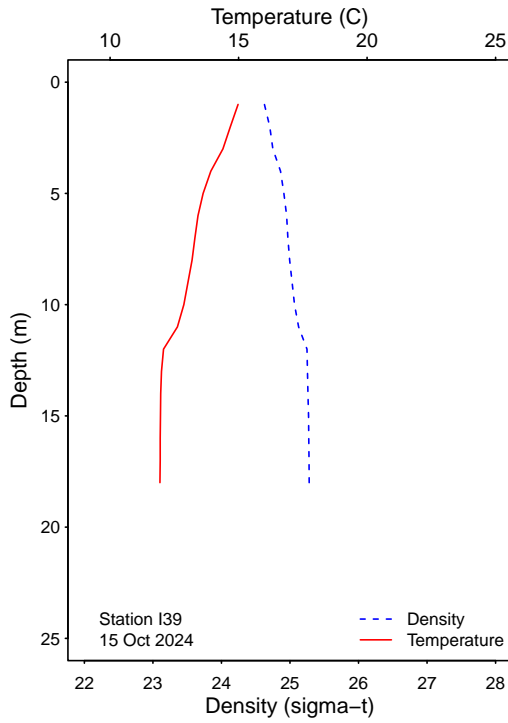


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.



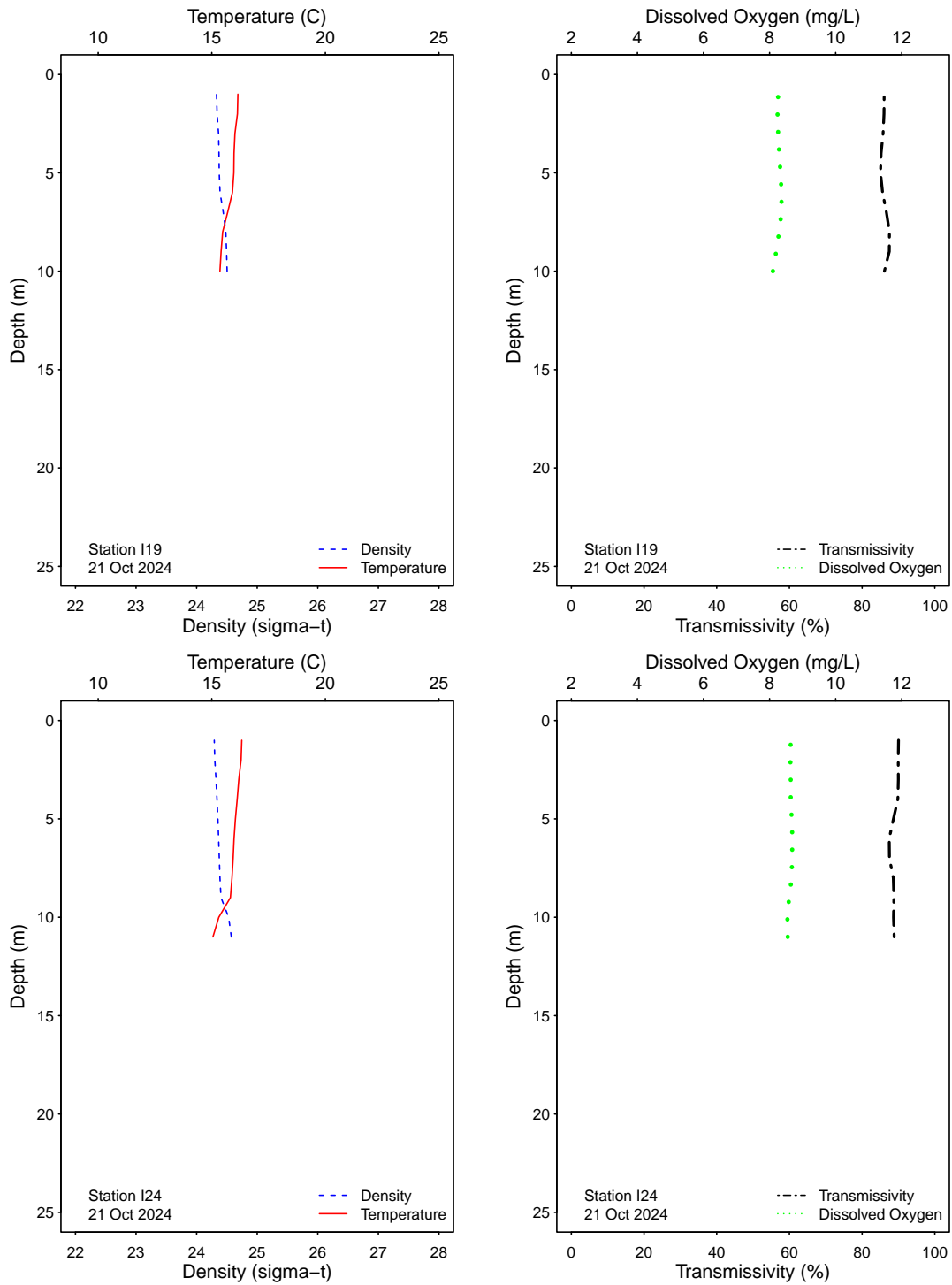


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

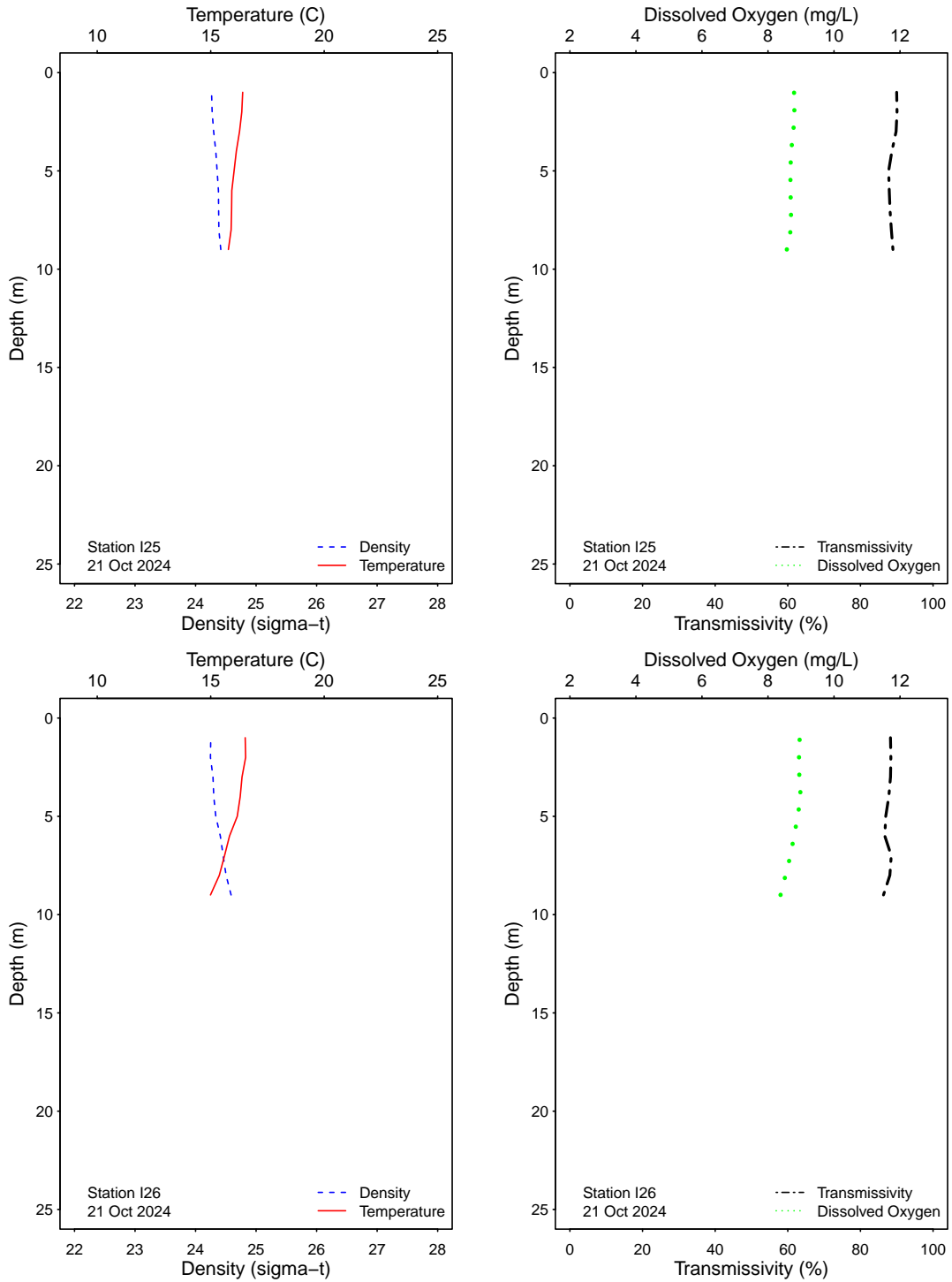


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

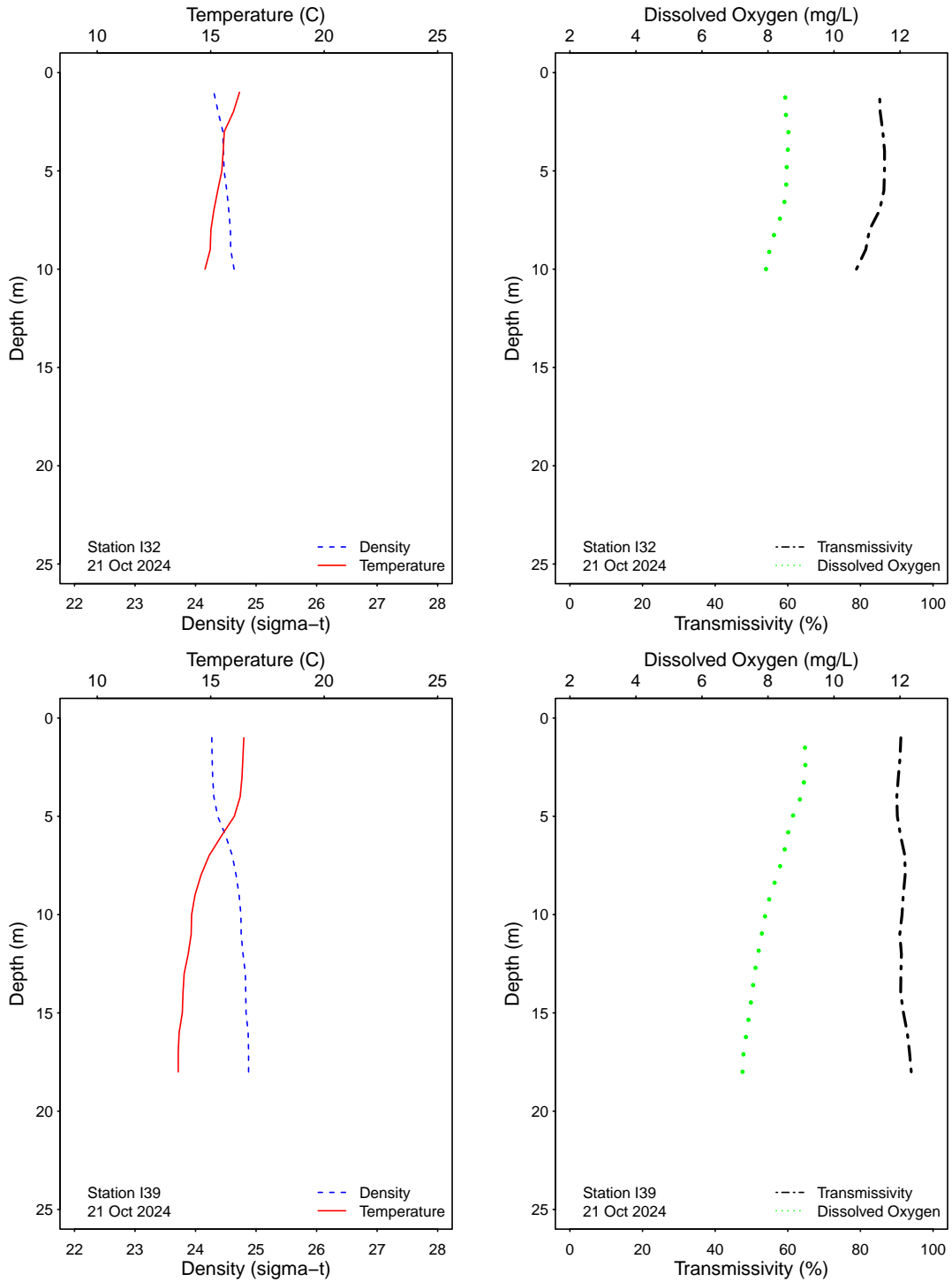


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

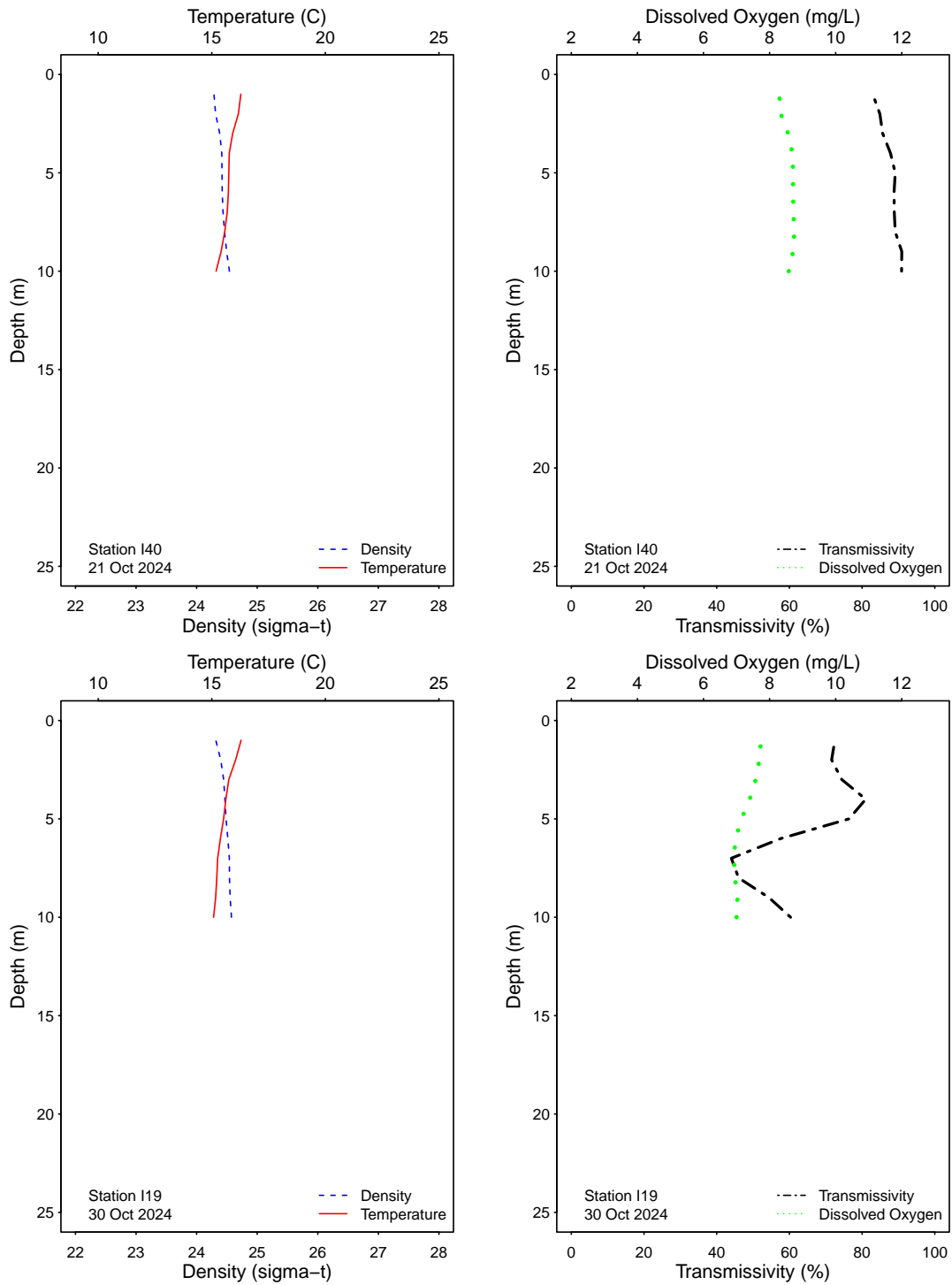


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

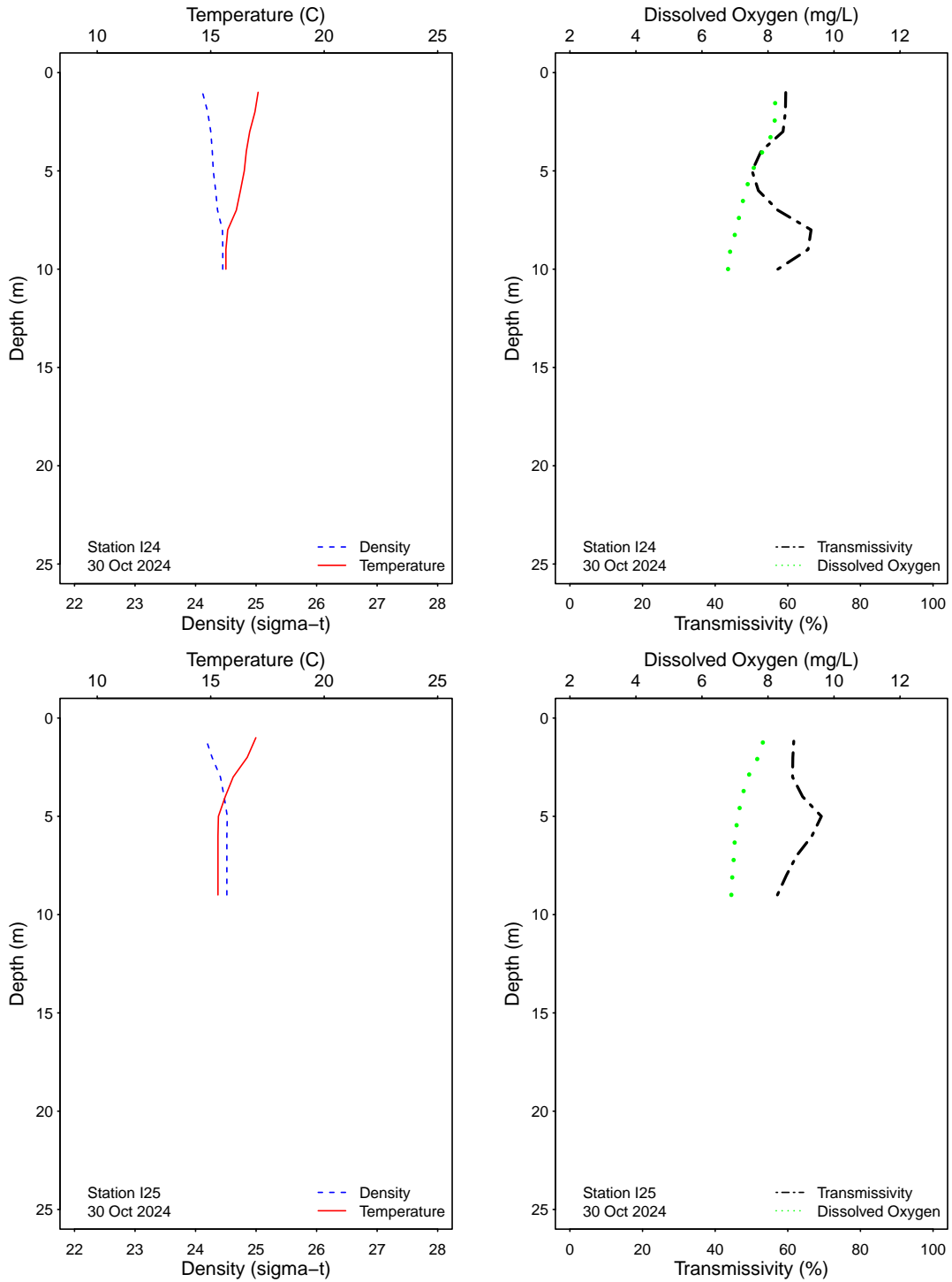


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

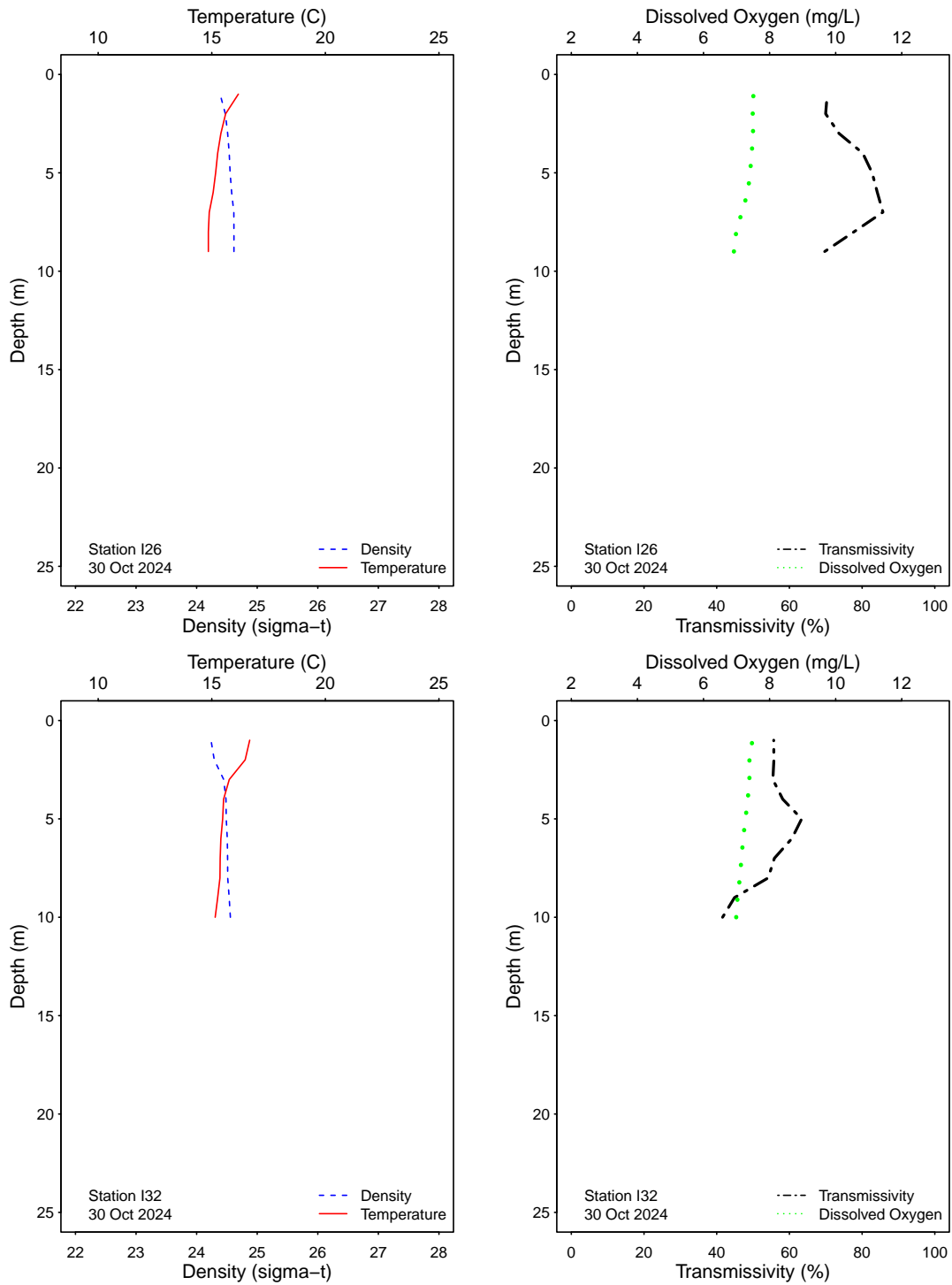


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

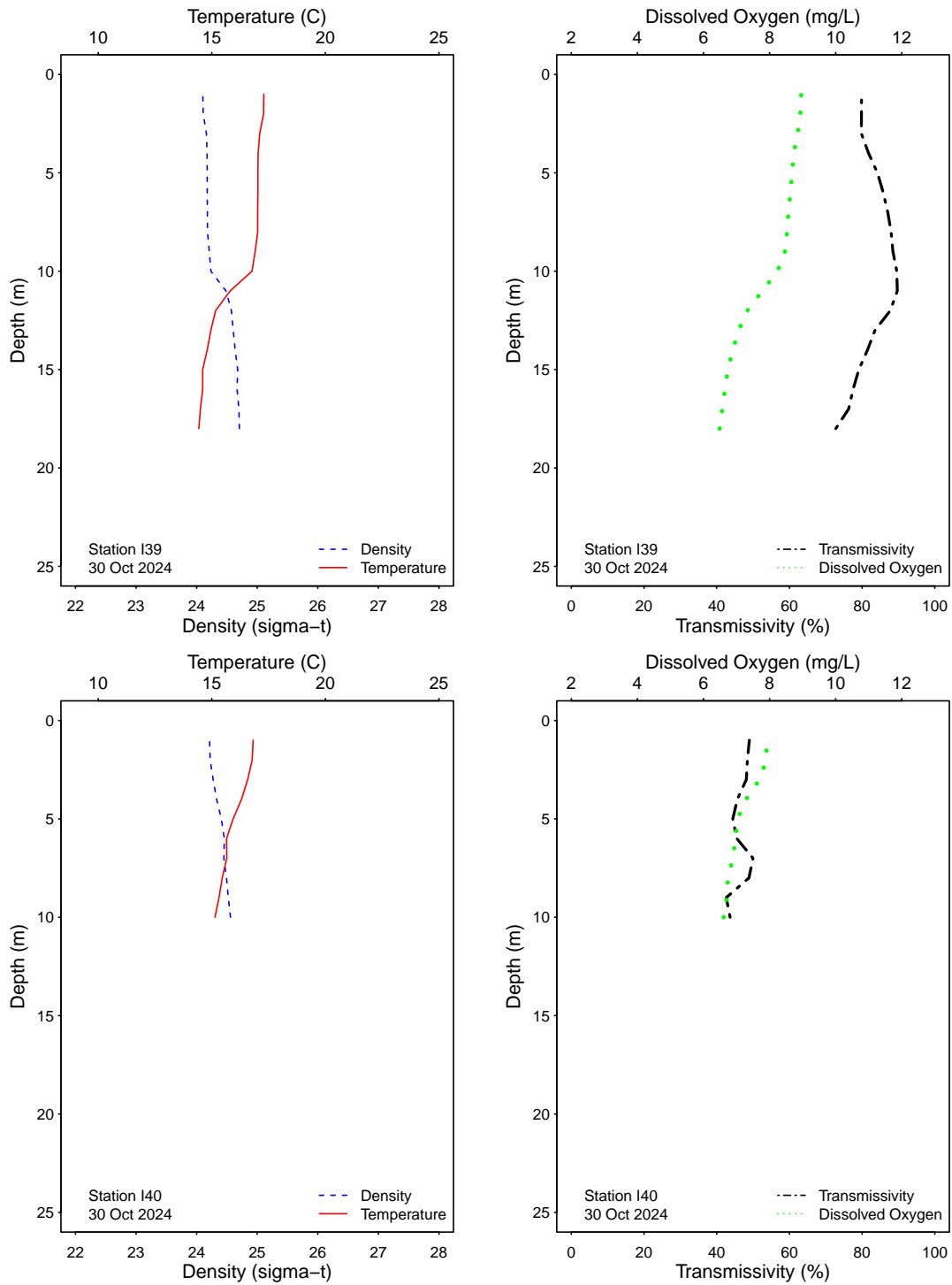


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

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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	08 Oct 2024	6	KT	LAB DUPLICATE	2	2	2
I19	15 Oct 2024	6	KT	LAB DUPLICATE	20	2	2
I19	21 Oct 2024	6	JF	LAB DUPLICATE	2	2	2
I19	30 Oct 2024	6	ND	LAB DUPLICATE	20	16	4
I40	08 Oct 2024	6	KT	LAB DUPLICATE	2	2	2
I40	15 Oct 2024	6	KT	LAB DUPLICATE	40	4	8
I40	21 Oct 2024	6	JF	LAB DUPLICATE	12	2	2
I40	30 Oct 2024	6	ND	LAB DUPLICATE	20	2	2
S12	01 Oct 2024		ADG	LAB DUPLICATE	20	2	56
S12	01 Oct 2024		ADG	FIELD DUPLICATE	20	2	4
S12	08 Oct 2024		KA	LAB DUPLICATE	200	62	42
S12	08 Oct 2024		KA	FIELD DUPLICATE	200	46	22
S12	15 Oct 2024		ADG	FIELD DUPLICATE	60	2	14
S12	15 Oct 2024		ADG	LAB DUPLICATE	40	2	20
S12	22 Oct 2024		KT	FIELD DUPLICATE	1800	600	180
S12	22 Oct 2024		KT	LAB DUPLICATE	1800	300	220
S12	29 Oct 2024		KT	LAB DUPLICATE	200	2	2
S12	29 Oct 2024		KT	FIELD DUPLICATE	200	2	6

ns = not sampled

ND = no data

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