

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

## **SOUTH BAY WATER RECLAMATION PLANT**

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

# **JANUARY 2023**

Environmental Monitoring and Technical Services  
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February 28, 2023

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

Attention: POTW Compliance Unit

Dear Mr. Gibson:

Enclosed is the January 2023 Monthly Receiving Waters Monitoring Report for the South Bay Ocean Outfall, South Bay Water Reclamation Plant as required per Order No. R9-2021-0011, NPDES Permit No. CA0109045.

This report includes raw ocean monitoring data and summaries of water quality parameters and ocean conditions measured during the month for the South Bay outfall region. Also included are summaries of compliance with the bacterial water-contact standards specified in the California Ocean Plan. These data are also presented in the monthly report submitted by the International Boundary and Water Commission, U.S. Section for discharge from the South Bay International Wastewater Treatment Plant (Order No. R9-2021-0001, NPDES Permit No. CA0108928).

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

Sincerely,



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

PV/rk

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



## INTRODUCTION

Monthly reports of water quality and ocean conditions from Playa Blanco, Mexico to Coronado, USA are submitted to the San Diego Regional Water Quality Control Board and U.S. EPA Region 9 in accordance with Order No. R9-2021-0011, NPDES Permit No. CA0109045, for the South Bay Water Reclamation Plant (SBWRP), South Bay Ocean Outfall (SBOO). This report includes receiving waters monitoring data collected from all shore, kelp and offshore stations specified in the above order. Data for influent and effluent monitoring activities for the SBWRP are presented in separate reports.

## MATERIALS AND METHODS

### *Shore Stations*

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

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

### *Kelp Bed Stations*

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

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

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

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

### ***Offshore Stations***

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

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

### ***Bacteriological Reporting and Quality Assurance***

Estimated values for bacteriological analyses are denoted by greater than (>), less than (<), or estimated (e) qualifiers and result from plates with colony counts above or below the permissible counting limits established in Bordner et al. (1978)<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

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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.

## Shellfish Harvesting Standards

Total coliform:

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

Compliance with the seven Ocean Plan standards are summarized below for the stations located in USA waters. In contrast, no such compliance summaries are presented for the three shore stations located in Mexican waters south of the International Border (i.e., S0, S2, and S3) since this region is not subject to the Ocean Plan standards.

Quality controls of bacteriological data include laboratory and field duplicate analyses. Laboratory duplicates are performed on approximately 10% of the water quality samples, while field duplicates are performed six times a month (see Appendix A). Laboratory duplicates represent two aliquots of the original sample that are split in the laboratory and analyzed by the same analyst using identical procedures within the same analytical run. The results of these analyses provide a measure of intra-analyst precision. In contrast, field duplicates represent two separate samples collected at the same time from the same site, which are handled under identical circumstances and treated exactly the same throughout field and lab procedures. The results of these analyses provide a measure of precision associated with sample collection, preservation, storage, and lab procedures. The sign test (see Gilbert, 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 2023 Quality Assurance Report, which will be completed in March 2024.

## SUMMARY OF RESULTS

### ➤ Shoreline Water Quality Sampling

- Due to site access restrictions in Mexico, the South Bay shoreline sampling is typically carried out on the same day each week (i.e., Tuesday) to coordinate sampling between the Mexican and USA based stations. Seawater samples at the three shore stations located south of the USA/Mexico border (i.e., stations S0, S2 and S3) are presently collected by the Comisión Internacional de Límites y Aguas (CILA) and transported to the USIBWC for subsequent delivery to the City's Marine Microbiology Lab, while samples from the eight stations located in USA waters are sampled by City staff.
- During January, each of the eight shore stations located north of the border were out of compliance with 2019 California Ocean Plan (Ocean Plan) water contact standards on one or more days as follows:
  - The 30-day running geometric mean standard for fecal coliforms was exceeded at stations S4, S5, S6, S8, S10, S11, and S12.
  - The single sample maximum (SSM) standard for fecal coliforms was exceeded at stations S4, S5, S6, S8, S9, S10, S11, and S12.
  - The 6-week running geometric mean standard for *Enterococcus* was exceeded at stations S4, S5, S6, S8, S10, S11, and S12.
  - The statistical threshold value (STV) standard for *Enterococcus* was exceeded at stations S4, S5, S6, S8, S9, S10, S11, and S12.

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

- The 30-day running median standard for total coliform was exceeded at stations S4, S5, S6, S8, S9, S10, S11, and S12.
    - The STV standard for total coliform was exceeded at stations S4, S5, S6, S8, S9, S10, S11, and S12.
  - A sewage-like odor was reported at stations S4, S5, and S10 on one or more days in January.
  - Historical analyses of Ocean Plan compliance rates for the South Bay outfall shore and kelp monitoring stations, combined with the results of satellite imagery data, suggest that outflows from the Tijuana River and Los Buenos Creek, as well as surface runoff during or after rain events (storms), are likely to be the cause of impacted water quality along the shore and in near shore recreational waters in the South Bay region. See the City of San Diego’s most recent *Biennial Receiving Waters Monitoring and Assessment Report for the Point Loma and South Bay Ocean Outfalls* for details (<https://www.sandiego.gov/public-utilities/sustainability/ocean-monitoring/reports>).

➤ **Kelp Bed Water Quality Sampling**

- The seven kelp bed water quality stations (I19, I24, I25, I26, I32, I39, I40) were sampled on January 4, 12, 18, 24, and 31.
- During January, each of the seven kelp stations was out of compliance with 2019 Ocean Plan water contact standards on one or more days as follows:
  - The 30-day running geometric mean standard for fecal coliforms was exceeded at stations I19, I24, I25, I26, I32, and I40.
  - The SSM for fecal coliforms was exceeded at stations I19, I24, I25, I26, I32, I39, and I40.
  - The 6-week running geometric mean standard for *Enterococcus* was exceeded at stations I19, I24, I25, I26, I32, and I40.
  - The STV standard for *Enterococcus* was exceeded at stations I19, I24, I25, I26, I32, I39, and I40.
  - The 30-day running median standard for total coliform was exceeded at stations I19, I24, I25, I26, I32, I39, and I40.
  - The STV standard for total coliform was exceeded at stations I19, I24, I25, I26, I32, I39, and I40.
- Water column temperatures ranged from 12.82 to 15.22°C. The difference between surface and bottom waters ranged from 0.02 to 1.02°C.
- Concentrations of chlorophyll *a* ranged from 0.60 to 3.26 µg/L at the kelp bed stations.
- A sewage-like odor was reported at stations I24 and I40 on one or more days in January.

➤ **Offshore Water Quality Sampling**

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





# TABLES AND FIGURES



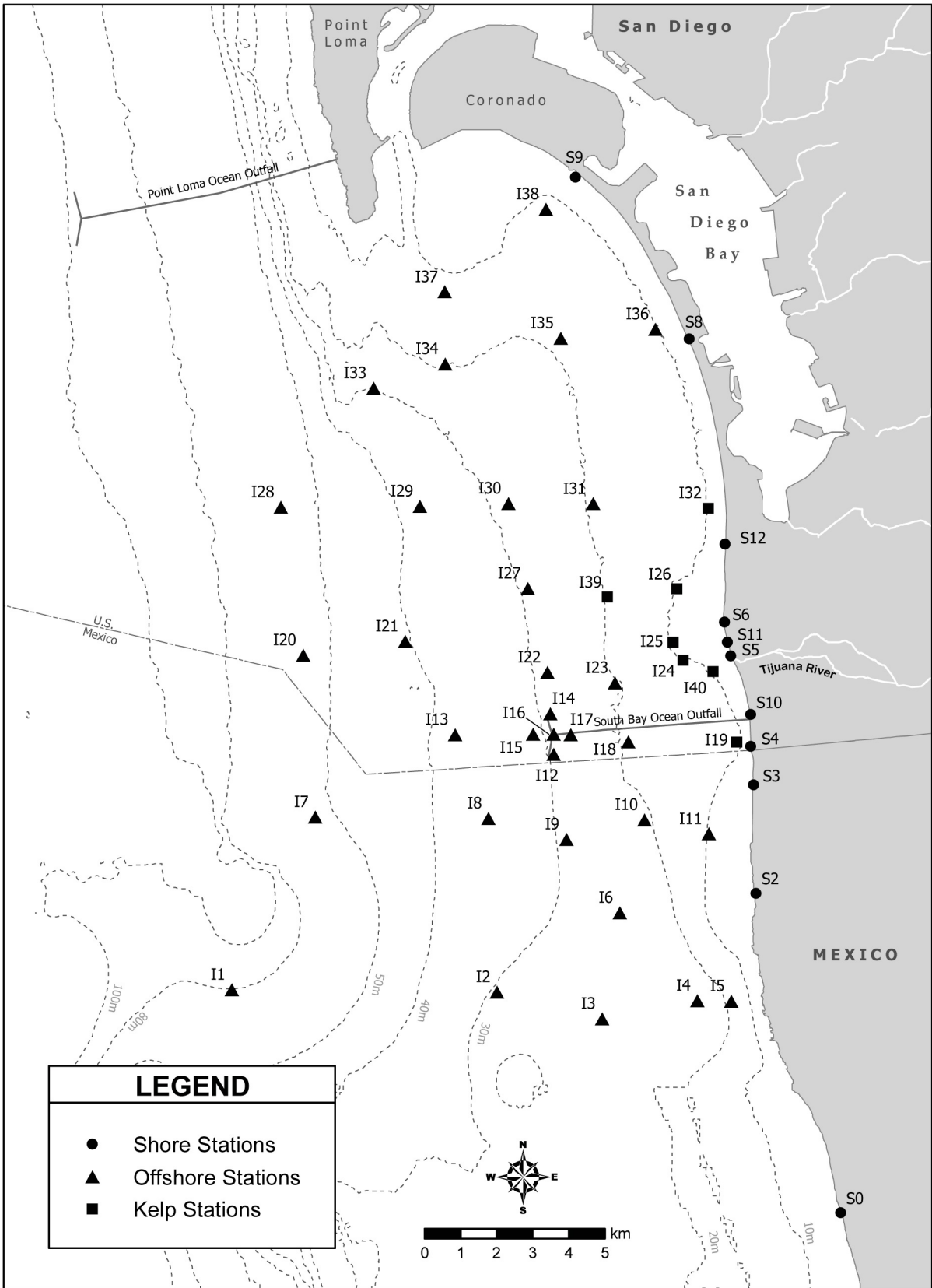


Figure 1.1 Station Map



# Shore Stations



**Table 2.1**

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

Date	S4	S5	S6	S8	S9	S10	S11	S12
01 Jan 2023	85	<b>204</b>	57	4	4	20	73	29
02 Jan 2023	85	<b>204</b>	57	4	4	20	73	29
03 Jan 2023	138	<b>461</b>	165	11	4	49	<b>203</b>	57
04 Jan 2023	138	<b>461</b>	165	11	4	49	<b>203</b>	57
05 Jan 2023	<b>399</b>	<b>1794</b>	<b>499</b>	17	5	109	<b>645</b>	132
06 Jan 2023	<b>399</b>	<b>1794</b>	<b>499</b>	17	5	109	<b>645</b>	132
07 Jan 2023	<b>399</b>	<b>1794</b>	<b>499</b>	17	5	109	<b>645</b>	132
08 Jan 2023	<b>399</b>	<b>1794</b>	<b>499</b>	17	5	109	<b>645</b>	132
09 Jan 2023	<b>399</b>	<b>1794</b>	<b>499</b>	17	5	109	<b>645</b>	132
10 Jan 2023	<b>403</b>	<b>2466</b>	<b>803</b>	45	7	199	<b>964</b>	<b>279</b>
11 Jan 2023	<b>403</b>	<b>2466</b>	<b>803</b>	45	7	199	<b>964</b>	<b>279</b>
12 Jan 2023	<b>233</b>	<b>1661</b>	<b>815</b>	99	9	109	<b>986</b>	<b>206</b>
13 Jan 2023	<b>233</b>	<b>1661</b>	<b>815</b>	99	9	109	<b>986</b>	<b>206</b>
14 Jan 2023	<b>233</b>	<b>1661</b>	<b>815</b>	99	9	109	<b>986</b>	<b>206</b>
15 Jan 2023	<b>233</b>	<b>1661</b>	<b>815</b>	99	9	109	<b>986</b>	<b>206</b>
16 Jan 2023	<b>233</b>	<b>1661</b>	<b>815</b>	99	9	109	<b>986</b>	<b>206</b>
17 Jan 2023	<b>513</b>	<b>2466</b>	<b>1109</b>	190	23	<b>279</b>	<b>1459</b>	<b>423</b>
18 Jan 2023	<b>513</b>	<b>2466</b>	<b>1109</b>	190	23	<b>279</b>	<b>1459</b>	<b>423</b>
19 Jan 2023	<b>1560</b>	<b>1661</b>	<b>1490</b>	<b>594</b>	43	<b>959</b>	<b>948</b>	<b>908</b>
20 Jan 2023	<b>1560</b>	<b>1661</b>	<b>1490</b>	<b>594</b>	43	<b>959</b>	<b>948</b>	<b>908</b>
21 Jan 2023	<b>1560</b>	<b>1661</b>	<b>1490</b>	<b>594</b>	43	<b>959</b>	<b>948</b>	<b>908</b>
22 Jan 2023	<b>1560</b>	<b>1661</b>	<b>1490</b>	<b>594</b>	43	<b>959</b>	<b>948</b>	<b>908</b>
23 Jan 2023	<b>1560</b>	<b>1661</b>	<b>1490</b>	<b>594</b>	43	<b>959</b>	<b>948</b>	<b>908</b>
24 Jan 2023	<b>2262</b>	<b>1500</b>	<b>723</b>	<b>288</b>	27	<b>1487</b>	<b>438</b>	<b>307</b>
25 Jan 2023	<b>2262</b>	<b>1500</b>	<b>723</b>	<b>288</b>	27	<b>1487</b>	<b>438</b>	<b>307</b>
26 Jan 2023	<b>2651</b>	<b>5966</b>	<b>1772</b>	<b>562</b>	29	<b>4366</b>	<b>1685</b>	<b>607</b>
27 Jan 2023	<b>2651</b>	<b>5966</b>	<b>1772</b>	<b>562</b>	29	<b>4366</b>	<b>1685</b>	<b>607</b>
28 Jan 2023	<b>2651</b>	<b>5966</b>	<b>1772</b>	<b>562</b>	29	<b>4366</b>	<b>1685</b>	<b>607</b>
29 Jan 2023	<b>2651</b>	<b>5966</b>	<b>1772</b>	<b>562</b>	29	<b>4366</b>	<b>1685</b>	<b>607</b>
30 Jan 2023	<b>2651</b>	<b>5966</b>	<b>1772</b>	<b>562</b>	29	<b>4366</b>	<b>1685</b>	<b>607</b>
31 Jan 2023	<b>1691</b>	<b>6861</b>	<b>2597</b>	<b>426</b>	17	<b>4290</b>	<b>2495</b>	<b>486</b>

\* 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 Jan 2023	E	E	E	E	IC	E	E	E
10 Jan 2023	E	E	E	E	IC	E	E	E
17 Jan 2023	E	E	E	E	E	E	E	E
24 Jan 2023	E	E	IC	IC	IC	E	IC	IC
31 Jan 2023	IC	E	E	IC	IC	E	E	IC

IC = In Compliance

E = Exceedance

ns = not sampled

ND = no data



**Table 2.3**

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

<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>
01 Jan 2023	42	246	36	2	3	30	98	17
02 Jan 2023	42	246	36	2	3	30	98	17
03 Jan 2023	86	451	79	7	4	53	191	39
04 Jan 2023	86	451	79	7	4	53	191	39
05 Jan 2023	86	451	79	7	4	53	191	39
06 Jan 2023	86	451	79	7	4	53	191	39
07 Jan 2023	86	451	79	7	4	53	191	39
08 Jan 2023	86	451	79	7	4	53	191	39
09 Jan 2023	86	451	79	7	4	53	191	39
10 Jan 2023	100	802	141	16	5	96	412	86
11 Jan 2023	100	802	141	16	5	96	412	86
12 Jan 2023	100	802	141	16	5	96	412	86
13 Jan 2023	100	802	141	16	5	96	412	86
14 Jan 2023	100	802	141	16	5	96	412	86
15 Jan 2023	100	802	141	16	5	96	412	86
16 Jan 2023	100	802	141	16	5	96	412	86
17 Jan 2023	427	3419	600	56	13	408	1565	357
18 Jan 2023	427	3419	600	56	13	408	1565	357
19 Jan 2023	427	3419	600	56	13	408	1565	357
20 Jan 2023	427	3419	600	56	13	408	1565	357
21 Jan 2023	427	3419	600	56	13	408	1565	357
22 Jan 2023	427	3419	600	56	13	408	1565	357
23 Jan 2023	427	3419	600	56	13	408	1565	357
24 Jan 2023	394	1781	360	63	27	368	910	233
25 Jan 2023	394	1781	360	63	27	368	910	233
26 Jan 2023	394	1781	360	63	27	368	910	233
27 Jan 2023	394	1781	360	63	27	368	910	233
28 Jan 2023	394	1781	360	63	27	368	910	233
29 Jan 2023	394	1781	360	63	27	368	910	233
30 Jan 2023	394	1781	360	63	27	368	910	233
31 Jan 2023	606	1781	814	121	27	881	1146	278

\* Geometric mean calculated using n<5

## Table 2.4

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

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

IC = In Compliance

E = Exceedance

ns = not sampled

ND = no data

**Table 2.5**

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

<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>
01 Jan 2023	1917	8010	2010	13	3	120	7506	220
02 Jan 2023	1917	8010	2010	13	3	120	7506	220
03 Jan 2023	3800	16000	4000	20	2	220	15000	400
04 Jan 2023	3800	16000	4000	20	2	220	15000	400
05 Jan 2023	8400	16000	5300	20	3	5610	15500	5200
06 Jan 2023	8400	16000	5300	20	3	5610	15500	5200
07 Jan 2023	8400	16000	5300	20	3	5610	15500	5200
08 Jan 2023	8400	16000	5300	20	3	5610	15500	5200
09 Jan 2023	8400	16000	5300	20	3	5610	15500	5200
10 Jan 2023	4800	16000	6600	20	4	11000	16000	10000
11 Jan 2023	4800	16000	6600	20	4	11000	16000	10000
12 Jan 2023	4300	16000	10000	8010	11	5610	16000	7700
13 Jan 2023	4300	16000	10000	8010	11	5610	16000	7700
14 Jan 2023	4300	16000	10000	8010	11	5610	16000	7700
15 Jan 2023	4300	16000	10000	8010	11	5610	16000	7700
16 Jan 2023	4300	16000	10000	8010	11	5610	16000	7700
17 Jan 2023	4800	16000	16000	16000	20	11000	16000	15000
18 Jan 2023	4800	16000	16000	16000	20	11000	16000	15000
19 Jan 2023	8900	16000	16000	16000	80	13500	16000	15500
20 Jan 2023	8900	16000	16000	16000	80	13500	16000	15500
21 Jan 2023	8900	16000	16000	16000	80	13500	16000	15500
22 Jan 2023	8900	16000	16000	16000	80	13500	16000	15500
23 Jan 2023	8900	16000	16000	16000	80	13500	16000	15500
24 Jan 2023	13000	16000	16000	16000	120	16000	16000	15000
25 Jan 2023	13000	16000	16000	16000	120	16000	16000	15000
26 Jan 2023	14500	16000	16000	16000	130	16000	16000	15500
27 Jan 2023	14500	16000	16000	16000	130	16000	16000	15500
28 Jan 2023	14500	16000	16000	16000	130	16000	16000	15500
29 Jan 2023	14500	16000	16000	16000	130	16000	16000	15500
30 Jan 2023	14500	16000	16000	16000	130	16000	16000	15500
31 Jan 2023	13000	16000	16000	16000	140	16000	16000	15000

\* Median calculated using n<5

## Table 2.6

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

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

IC = In Compliance

E = Exceedance

ns = not sampled

ND = no data

**Table 2.7**

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

Station	Date	Time	Total	Fecal	Entero
S0	03 Jan 2023	1010	2800e	380e	1000
S0	10 Jan 2023	950	10000	1200e	1600e
S0	17 Jan 2023	1105	13000	1000e	4800
S0	24 Jan 2023	920	560	60	160e
S0	31 Jan 2023	1030	2600e	120e	920
S2	03 Jan 2023	1055	6800	400	940
S2	10 Jan 2023	1045	10000	3200e	1800e
S2	17 Jan 2023	955	>16000	>12000	>12000
S2	24 Jan 2023	750	ns	ns	ns
S2	31 Jan 2023	950	10000	280e	2600e
S3	03 Jan 2023	1030	9200	1200	1000e
S3	10 Jan 2023	1020	6200	480	460
S3	17 Jan 2023	1035	>16000	>12000	>12000
S3	24 Jan 2023	830	13000	2200e	1400e
S3	31 Jan 2023	935	10000	300e	1800e
S4	03 Jan 2023	1108	13000	980	960
S4	10 Jan 2023	843	4800	420	60e
S4	17 Jan 2023	1039	>16000	>12000	>12000
S4	24 Jan 2023	842	>16000	10000	1600e
S4	31 Jan 2023	956	3800e	280e	320e
S5	03 Jan 2023	958	>16000	>12000	>12000
S5	10 Jan 2023	939	>16000	8800	1400e
S5	17 Jan 2023	925	>16000	>12000	>12000
S5	24 Jan 2023	952	14000	1000e	220e
S5	31 Jan 2023	901	>16000	>12000	>12000
S6	03 Jan 2023	1021	>16000	>12000	4200
S6	10 Jan 2023	1007	>16000	5400	1200
S6	17 Jan 2023	900	>16000	3800e	>12000
S6	24 Jan 2023	1020	240e	40e	40
S6	31 Jan 2023	915	>16000	>12000	>12000
S8	03 Jan 2023	910	>16000	1000e	2800e
S8	10 Jan 2023	1033	>16000	2400e	420
S8	17 Jan 2023	823	>16000	2600e	3400e
S8	24 Jan 2023	1048	180e	16e	4e
S8	31 Jan 2023	827	3200e	140e	98
S9	03 Jan 2023	853	2e	8e	16e
S9	10 Jan 2023	1049	140e	22e	10e
S9	17 Jan 2023	806	10000	980	2200e
S9	24 Jan 2023	1104	120e	<4	140
S9	31 Jan 2023	813	<200	<2	<2
S10	03 Jan 2023	1117	11000	1600e	580
S10	10 Jan 2023	827	>16000	2200e	800
S10	17 Jan 2023	1050	>16000	>12000	>12000
S10	24 Jan 2023	851	>16000	8600	1400e
S10	31 Jan 2023	944	>16000	4000	3000e

Station	Date	Time	Total	Fecal	Entero
S11	03 Jan 2023	1011	>16000	12000	5200
S11	10 Jan 2023	958	>16000	4800	2800e
S11	17 Jan 2023	943	>16000	7000	>12000
S11	24 Jan 2023	1011	180e	20e	54
S11	31 Jan 2023	908	>16000	>12000	>12000
S12	03 Jan 2023	935	15000	800e	1600e
S12	10 Jan 2023	1018	>16000	5600	1000
S12	17 Jan 2023	845	>16000	7600	10000
S12	24 Jan 2023	1033	100e	4e	36e
S12	31 Jan 2023	843	2000e	<200	40e

ns = not sampled

ND = no data

## Comments

Station	Date	Depth	Parameter	Comments
S2	24 Jan 2023			Sample was rejected to receive due to holding time by the sampler. (1/24 BS)
S9	24 Jan 2023			The sample volumes of S9 for mFC (Fecal) and mEI (Enterococcus) were 25mL due to not enough sample. (KA)

**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 Jan 2023	Arrive Time	1010
S0	03 Jan 2023	Weather	Drizzle
S0	03 Jan 2023	Wind Speed (kts)	6.3
S0	03 Jan 2023	Wind Dir	NE
S0	03 Jan 2023	Animal Life	Seagull-10
S0	03 Jan 2023	Floatables	None
S0	03 Jan 2023	Water Color	Green
S0	03 Jan 2023	Current Direction	N
S0	03 Jan 2023	Water Temp (C)	14
S0	03 Jan 2023	Wave Height Low (ft)	4
S0	03 Jan 2023	High Tide (ft)	5.63
S0	03 Jan 2023	High Tide Time	616
S0	03 Jan 2023	Low Tide (ft)	-0.43
S0	03 Jan 2023	Low Tide Time	1350
S0	03 Jan 2023	Comments	Water clear; Trash-0; Kelp;Algae; 0.5 L/sec of water flowing from storm drain
S0	10 Jan 2023	Arrive Time	950
S0	10 Jan 2023	Weather	Drizzle
S0	10 Jan 2023	Wind Speed (kts)	3.6
S0	10 Jan 2023	Wind Dir	NE
S0	10 Jan 2023	Animal Life	Seagull-20
S0	10 Jan 2023	Floatables	None
S0	10 Jan 2023	Water Color	Green
S0	10 Jan 2023	Current Direction	N
S0	10 Jan 2023	Water Temp (C)	14
S0	10 Jan 2023	Wave Height Low (ft)	4
S0	10 Jan 2023	High Tide (ft)	5.06
S0	10 Jan 2023	High Tide Time	1008
S0	10 Jan 2023	Low Tide (ft)	2.21
S0	10 Jan 2023	Low Tide Time	412
S0	10 Jan 2023	Comments	Water clear; Trash-0; Kelp;Algae; 0.5 L/sec of water flowing from storm drain
S0	17 Jan 2023	Arrive Time	1105
S0	17 Jan 2023	Weather	Sunny
S0	17 Jan 2023	Wind Speed (kts)	2
S0	17 Jan 2023	Wind Dir	W
S0	17 Jan 2023	Animal Life	
S0	17 Jan 2023	Floatables	None
S0	17 Jan 2023	Water Color	Brown
S0	17 Jan 2023	Current Direction	S
S0	17 Jan 2023	Water Temp (C)	13
S0	17 Jan 2023	Wave Height Low (ft)	5
S0	17 Jan 2023	High Tide (ft)	5.2
S0	17 Jan 2023	High Tide Time	442
S0	17 Jan 2023	Low Tide (ft)	-0.08
S0	17 Jan 2023	Low Tide Time	1226
S0	17 Jan 2023	Comments	Water turbid; Trash-0; Kelp;Algae; No water flowing from storm drain.
S0	24 Jan 2023	Arrive Time	920
S0	24 Jan 2023	Weather	Sunny
S0	24 Jan 2023	Wind Speed (kts)	2.7
S0	24 Jan 2023	Wind Dir	NW
S0	24 Jan 2023	Animal Life	Bird-15



Station	Date	Parameter	Value
S0	24 Jan 2023	Floatables	Unspecified
S0	24 Jan 2023	Water Color	Green
S0	24 Jan 2023	Current Direction	N
S0	24 Jan 2023	Water Temp (C)	12
S0	24 Jan 2023	Wave Height Low (ft)	3
S0	24 Jan 2023	High Tide (ft)	5.91
S0	24 Jan 2023	High Tide Time	1021
S0	24 Jan 2023	Low Tide (ft)	1.28
S0	24 Jan 2023	Low Tide Time	422
S0	24 Jan 2023	Comments	Water turbid; Trash-0; Kelp;Algae;Debris; 1 L/sec of water flowing from storm drain
S0	31 Jan 2023	Arrive Time	1030
S0	31 Jan 2023	Weather	Sunny
S0	31 Jan 2023	Wind Speed (kts)	3.3
S0	31 Jan 2023	Wind Dir	NW
S0	31 Jan 2023	Animal Life	
S0	31 Jan 2023	Floatables	None
S0	31 Jan 2023	Water Color	Green
S0	31 Jan 2023	Current Direction	S
S0	31 Jan 2023	Water Temp (C)	13
S0	31 Jan 2023	Wave Height Low (ft)	2
S0	31 Jan 2023	High Tide (ft)	4.92
S0	31 Jan 2023	High Tide Time	513
S0	31 Jan 2023	Low Tide (ft)	-0.14
S0	31 Jan 2023	Low Tide Time	1306
S0	31 Jan 2023	Comments	Water turbid; Trash-0; No flow from storm drain
S2	03 Jan 2023	Arrive Time	1055
S2	03 Jan 2023	Weather	Drizzle
S2	03 Jan 2023	Wind Speed (kts)	6.5
S2	03 Jan 2023	Wind Dir	NE
S2	03 Jan 2023	Animal Life	Dog-2; Seagull-10
S2	03 Jan 2023	Floatables	None
S2	03 Jan 2023	Water Color	Green
S2	03 Jan 2023	Current Direction	N
S2	03 Jan 2023	Water Temp (C)	14
S2	03 Jan 2023	Wave Height Low (ft)	4
S2	03 Jan 2023	High Tide (ft)	5.63
S2	03 Jan 2023	High Tide Time	616
S2	03 Jan 2023	Low Tide (ft)	-0.43
S2	03 Jan 2023	Low Tide Time	1350
S2	03 Jan 2023	Comments	Water clear; Trash-0; Kelp;Algae; Person/Walker/Jogger-4; No flow from storm drain
S2	10 Jan 2023	Arrive Time	1045
S2	10 Jan 2023	Weather	Drizzle
S2	10 Jan 2023	Wind Speed (kts)	4.9
S2	10 Jan 2023	Wind Dir	NE
S2	10 Jan 2023	Animal Life	Seagull-20
S2	10 Jan 2023	Floatables	None
S2	10 Jan 2023	Water Color	Green
S2	10 Jan 2023	Current Direction	N
S2	10 Jan 2023	Water Temp (C)	14
S2	10 Jan 2023	Wave Height Low (ft)	4
S2	10 Jan 2023	High Tide (ft)	5.06
S2	10 Jan 2023	High Tide Time	1008
S2	10 Jan 2023	Low Tide (ft)	2.21
S2	10 Jan 2023	Low Tide Time	412
S2	10 Jan 2023	Comments	Water clear; Trash-0; Kelp;Algae; Person/Walker/Jogger-6; no flow from storm drain

Station	Date	Parameter	Value
S2	17 Jan 2023	Arrive Time	955
S2	17 Jan 2023	Weather	Cloudy
S2	17 Jan 2023	Wind Speed (kts)	7
S2	17 Jan 2023	Wind Dir	W
S2	17 Jan 2023	Animal Life	
S2	17 Jan 2023	Floatables	None
S2	17 Jan 2023	Water Color	Brown
S2	17 Jan 2023	Current Direction	S
S2	17 Jan 2023	Water Temp (C)	14
S2	17 Jan 2023	Wave Height Low (ft)	4
S2	17 Jan 2023	High Tide (ft)	5.2
S2	17 Jan 2023	High Tide Time	442
S2	17 Jan 2023	Low Tide (ft)	-0.08
S2	17 Jan 2023	Low Tide Time	1226
S2	17 Jan 2023	Comments	Water turbid; Trash-0; Kelp;Algae; No water flowing from storm drain.
S2	24 Jan 2023	Arrive Time	750
S2	24 Jan 2023	Weather	Sunny
S2	24 Jan 2023	Wind Speed (kts)	3.8
S2	24 Jan 2023	Wind Dir	NW
S2	24 Jan 2023	Animal Life	Bird-15
S2	24 Jan 2023	Floatables	None
S2	24 Jan 2023	Water Color	Green
S2	24 Jan 2023	Current Direction	N
S2	24 Jan 2023	Water Temp (C)	12
S2	24 Jan 2023	Wave Height Low (ft)	3
S2	24 Jan 2023	High Tide (ft)	5.91
S2	24 Jan 2023	High Tide Time	1021
S2	24 Jan 2023	Low Tide (ft)	1.28
S2	24 Jan 2023	Low Tide Time	422
S2	24 Jan 2023	Comments	Water turbid; Trash-0; Kelp;Algae; No flow from storm drain; Holding time exceeded
S2	31 Jan 2023	Arrive Time	950
S2	31 Jan 2023	Weather	Sunny
S2	31 Jan 2023	Wind Speed (kts)	1.7
S2	31 Jan 2023	Wind Dir	NW
S2	31 Jan 2023	Animal Life	
S2	31 Jan 2023	Floatables	None
S2	31 Jan 2023	Water Color	Green
S2	31 Jan 2023	Current Direction	S
S2	31 Jan 2023	Water Temp (C)	13
S2	31 Jan 2023	Wave Height Low (ft)	3
S2	31 Jan 2023	High Tide (ft)	4.92
S2	31 Jan 2023	High Tide Time	513
S2	31 Jan 2023	Low Tide (ft)	-0.14
S2	31 Jan 2023	Low Tide Time	1306
S2	31 Jan 2023	Comments	Water turbid; Trash-0; 2 L/sec water flowing from storm drain
S3	03 Jan 2023	Arrive Time	1030
S3	03 Jan 2023	Weather	Drizzle
S3	03 Jan 2023	Wind Speed (kts)	6.1
S3	03 Jan 2023	Wind Dir	NE
S3	03 Jan 2023	Animal Life	Dog-2; Seagull-10
S3	03 Jan 2023	Floatables	None
S3	03 Jan 2023	Water Color	Green
S3	03 Jan 2023	Current Direction	N
S3	03 Jan 2023	Water Temp (C)	14
S3	03 Jan 2023	Wave Height Low (ft)	4

Station	Date	Parameter	Value
S3	03 Jan 2023	High Tide (ft)	5.63
S3	03 Jan 2023	High Tide Time	616
S3	03 Jan 2023	Low Tide (ft)	-0.43
S3	03 Jan 2023	Low Tide Time	1350
S3	03 Jan 2023	Comments	Water clear; Trash-0; Kelp;Algae; Person/Walker/Jogger-2; 0.5 L/sec of water flowing from storm drain
S3	10 Jan 2023	Arrive Time	1020
S3	10 Jan 2023	Weather	Drizzle
S3	10 Jan 2023	Wind Speed (kts)	4.6
S3	10 Jan 2023	Wind Dir	NE
S3	10 Jan 2023	Animal Life	Seagull-20
S3	10 Jan 2023	Floatables	None
S3	10 Jan 2023	Water Color	Green
S3	10 Jan 2023	Current Direction	N
S3	10 Jan 2023	Water Temp (C)	14
S3	10 Jan 2023	Wave Height Low (ft)	4
S3	10 Jan 2023	High Tide (ft)	5.06
S3	10 Jan 2023	High Tide Time	1008
S3	10 Jan 2023	Low Tide (ft)	2.21
S3	10 Jan 2023	Low Tide Time	412
S3	10 Jan 2023	Comments	Water clear; Trash-0; Kelp;Algae; Person/Walker/Jogger-1; 0.5 L/sec of water flow from storm drain
S3	17 Jan 2023	Arrive Time	1035
S3	17 Jan 2023	Weather	Cloudy
S3	17 Jan 2023	Wind Speed (kts)	4
S3	17 Jan 2023	Wind Dir	W
S3	17 Jan 2023	Animal Life	
S3	17 Jan 2023	Floatables	None
S3	17 Jan 2023	Water Color	Brown
S3	17 Jan 2023	Current Direction	S
S3	17 Jan 2023	Water Temp (C)	14
S3	17 Jan 2023	Wave Height Low (ft)	5
S3	17 Jan 2023	High Tide (ft)	5.2
S3	17 Jan 2023	High Tide Time	442
S3	17 Jan 2023	Low Tide (ft)	-0.08
S3	17 Jan 2023	Low Tide Time	1226
S3	17 Jan 2023	Comments	Water turbid; Trash-0; Kelp;Algae; Person/Walker/Jogger-3; No water flowing from storm drain.
S3	24 Jan 2023	Arrive Time	830
S3	24 Jan 2023	Weather	Sunny
S3	24 Jan 2023	Wind Speed (kts)	2.9
S3	24 Jan 2023	Wind Dir	NW
S3	24 Jan 2023	Animal Life	Bird-5
S3	24 Jan 2023	Floatables	None
S3	24 Jan 2023	Water Color	Green
S3	24 Jan 2023	Current Direction	N
S3	24 Jan 2023	Water Temp (C)	12
S3	24 Jan 2023	Wave Height Low (ft)	3
S3	24 Jan 2023	High Tide (ft)	5.91
S3	24 Jan 2023	High Tide Time	1021
S3	24 Jan 2023	Low Tide (ft)	1.28
S3	24 Jan 2023	Low Tide Time	422
S3	24 Jan 2023	Comments	Water turbid; Trash-0; Kelp;Algae;Debris; No flow from storm drain
S3	31 Jan 2023	Arrive Time	935
S3	31 Jan 2023	Weather	Sunny
S3	31 Jan 2023	Wind Speed (kts)	2

Station	Date	Parameter	Value
S3	31 Jan 2023	Wind Dir	NE
S3	31 Jan 2023	Animal Life	
S3	31 Jan 2023	Floatables	None
S3	31 Jan 2023	Water Color	Green
S3	31 Jan 2023	Current Direction	S
S3	31 Jan 2023	Water Temp (C)	13
S3	31 Jan 2023	Wave Height Low (ft)	3
S3	31 Jan 2023	High Tide (ft)	4.92
S3	31 Jan 2023	High Tide Time	513
S3	31 Jan 2023	Low Tide (ft)	-0.14
S3	31 Jan 2023	Low Tide Time	1306
S3	31 Jan 2023	Comments	Water turbid; Trash-0; No flow from stormdrain
S4	03 Jan 2023	Arrive Time	1108
S4	03 Jan 2023	Weather	Drizzle
S4	03 Jan 2023	Wind Speed (kts)	12.2
S4	03 Jan 2023	Wind Dir	S
S4	03 Jan 2023	Animal Life	
S4	03 Jan 2023	Floatables	Ballon and cigarette
S4	03 Jan 2023	Water Color	Green
S4	03 Jan 2023	Current Direction	S
S4	03 Jan 2023	Water Temp (C)	12
S4	03 Jan 2023	Wave Height Low (ft)	4
S4	03 Jan 2023	High Tide (ft)	5.63
S4	03 Jan 2023	High Tide Time	616
S4	03 Jan 2023	Low Tide (ft)	-0.43
S4	03 Jan 2023	Low Tide Time	1350
S4	03 Jan 2023	Comments	Water turbid; Trash-3; Kelp;Seagrass;Debris
S4	10 Jan 2023	Arrive Time	843
S4	10 Jan 2023	Weather	Partly cloudy
S4	10 Jan 2023	Wind Speed (kts)	10.1
S4	10 Jan 2023	Wind Dir	S
S4	10 Jan 2023	Animal Life	
S4	10 Jan 2023	Floatables	Foam
S4	10 Jan 2023	Water Color	Green
S4	10 Jan 2023	Current Direction	S
S4	10 Jan 2023	Water Temp (C)	14
S4	10 Jan 2023	Wave Height Low (ft)	6
S4	10 Jan 2023	High Tide (ft)	5.06
S4	10 Jan 2023	High Tide Time	1008
S4	10 Jan 2023	Low Tide (ft)	2.21
S4	10 Jan 2023	Low Tide Time	412
S4	10 Jan 2023	Comments	Water clear; Trash-3; Debris
S4	17 Jan 2023	Arrive Time	1039
S4	17 Jan 2023	Weather	Partly cloudy
S4	17 Jan 2023	Wind Speed (kts)	9.3
S4	17 Jan 2023	Wind Dir	NW
S4	17 Jan 2023	Animal Life	
S4	17 Jan 2023	Floatables	None
S4	17 Jan 2023	Water Color	Green
S4	17 Jan 2023	Current Direction	S
S4	17 Jan 2023	Water Temp (C)	16
S4	17 Jan 2023	Wave Height Low (ft)	6
S4	17 Jan 2023	High Tide (ft)	5.2
S4	17 Jan 2023	High Tide Time	442
S4	17 Jan 2023	Low Tide (ft)	-0.08
S4	17 Jan 2023	Low Tide Time	1226
S4	17 Jan 2023	Comments	Water turbid; Trash-1; Kelp;Seagrass; Sewage-like odor

Station	Date	Parameter	Value
S4	24 Jan 2023	Arrive Time	842
S4	24 Jan 2023	Weather	Sunny
S4	24 Jan 2023	Wind Speed (kts)	3.4
S4	24 Jan 2023	Wind Dir	SE
S4	24 Jan 2023	Animal Life	
S4	24 Jan 2023	Floatables	None
S4	24 Jan 2023	Water Color	Green
S4	24 Jan 2023	Current Direction	S
S4	24 Jan 2023	Water Temp (C)	11
S4	24 Jan 2023	Wave Height Low (ft)	3
S4	24 Jan 2023	High Tide (ft)	5.91
S4	24 Jan 2023	High Tide Time	1021
S4	24 Jan 2023	Low Tide (ft)	1.28
S4	24 Jan 2023	Low Tide Time	422
S4	24 Jan 2023	Comments	Water clear; Trash-1; Seagrass;Debris
S4	31 Jan 2023	Arrive Time	944
S4	31 Jan 2023	Weather	Sunny
S4	31 Jan 2023	Wind Speed (kts)	1.5
S4	31 Jan 2023	Wind Dir	SW
S4	31 Jan 2023	Animal Life	Bird-20
S4	31 Jan 2023	Floatables	None
S4	31 Jan 2023	Water Color	Green
S4	31 Jan 2023	Current Direction	S
S4	31 Jan 2023	Water Temp (C)	13
S4	31 Jan 2023	Wave Height Low (ft)	5
S4	31 Jan 2023	High Tide (ft)	4.92
S4	31 Jan 2023	High Tide Time	513
S4	31 Jan 2023	Low Tide (ft)	-0.14
S4	31 Jan 2023	Low Tide Time	1306
S4	31 Jan 2023	Comments	Water clear; Trash-3; Kelp;Debris
S5	03 Jan 2023	Arrive Time	958
S5	03 Jan 2023	Weather	Drizzle
S5	03 Jan 2023	Wind Speed (kts)	12.1
S5	03 Jan 2023	Wind Dir	S
S5	03 Jan 2023	Animal Life	
S5	03 Jan 2023	Floatables	Foam
S5	03 Jan 2023	Water Color	Brown
S5	03 Jan 2023	Current Direction	S
S5	03 Jan 2023	Water Temp (C)	11
S5	03 Jan 2023	Wave Height Low (ft)	3
S5	03 Jan 2023	High Tide (ft)	5.63
S5	03 Jan 2023	High Tide Time	616
S5	03 Jan 2023	Low Tide (ft)	-0.43
S5	03 Jan 2023	Low Tide Time	1350
S5	03 Jan 2023	Comments	Water turbid; Trash-2; Kelp;Debris;Seagrass
S5	17 Jan 2023	Arrive Time	925
S5	17 Jan 2023	Weather	Partly cloudy
S5	17 Jan 2023	Wind Speed (kts)	9.1
S5	17 Jan 2023	Wind Dir	NW
S5	17 Jan 2023	Animal Life	Bird-20
S5	17 Jan 2023	Floatables	None
S5	17 Jan 2023	Water Color	Brown
S5	17 Jan 2023	Current Direction	S
S5	17 Jan 2023	Water Temp (C)	9
S5	17 Jan 2023	Wave Height Low (ft)	6
S5	17 Jan 2023	High Tide (ft)	5.2
S5	17 Jan 2023	High Tide Time	442
S5	17 Jan 2023	Low Tide (ft)	-0.08

Station	Date	Parameter	Value
S5	17 Jan 2023	Low Tide Time	1226
S5	17 Jan 2023	Comments	Water turbid; Trash-2; Kelp;Seagrass; Sewage-like odor
S5	24 Jan 2023	Arrive Time	952
S5	24 Jan 2023	Weather	Sunny
S5	24 Jan 2023	Wind Speed (kts)	4.6
S5	24 Jan 2023	Wind Dir	SE
S5	24 Jan 2023	Animal Life	Bird-15
S5	24 Jan 2023	Floatables	None; Foam
S5	24 Jan 2023	Water Color	Green
S5	24 Jan 2023	Current Direction	S
S5	24 Jan 2023	Water Temp (C)	16
S5	24 Jan 2023	Wave Height Low (ft)	4
S5	24 Jan 2023	High Tide (ft)	5.91
S5	24 Jan 2023	High Tide Time	1021
S5	24 Jan 2023	Low Tide (ft)	1.28
S5	24 Jan 2023	Low Tide Time	422
S5	24 Jan 2023	Comments	Water clear; Trash-2; Kelp;Seagrass;Debris
S5	31 Jan 2023	Arrive Time	901
S5	31 Jan 2023	Weather	Sunny
S5	31 Jan 2023	Wind Speed (kts)	0
S5	31 Jan 2023	Wind Dir	
S5	31 Jan 2023	Animal Life	
S5	31 Jan 2023	Floatables	None
S5	31 Jan 2023	Water Color	Brown
S5	31 Jan 2023	Current Direction	S
S5	31 Jan 2023	Water Temp (C)	10
S5	31 Jan 2023	Wave Height Low (ft)	4
S5	31 Jan 2023	High Tide (ft)	4.92
S5	31 Jan 2023	High Tide Time	513
S5	31 Jan 2023	Low Tide (ft)	-0.14
S5	31 Jan 2023	Low Tide Time	1306
S5	31 Jan 2023	Comments	Water turbid; Trash-4; Kelp;Seagrass;Debris
S6	03 Jan 2023	Arrive Time	1021
S6	03 Jan 2023	Weather	Cloudy
S6	03 Jan 2023	Wind Speed (kts)	9.5
S6	03 Jan 2023	Wind Dir	S
S6	03 Jan 2023	Animal Life	Bird-30
S6	03 Jan 2023	Floatables	None
S6	03 Jan 2023	Water Color	Green
S6	03 Jan 2023	Current Direction	S
S6	03 Jan 2023	Water Temp (C)	11
S6	03 Jan 2023	Wave Height Low (ft)	5
S6	03 Jan 2023	High Tide (ft)	5.63
S6	03 Jan 2023	High Tide Time	616
S6	03 Jan 2023	Low Tide (ft)	-0.43
S6	03 Jan 2023	Low Tide Time	1350
S6	03 Jan 2023	Comments	Water clear; Trash-1; Kelp; Person/Walker/Jogger-1
S6	10 Jan 2023	Arrive Time	1007, 939
S6	10 Jan 2023	Weather	Moderate rain, Cloudy
S6	10 Jan 2023	Wind Speed (kts)	7.5, 7.6
S6	10 Jan 2023	Wind Dir	S
S6	10 Jan 2023	Animal Life	
S6	10 Jan 2023	Floatables	None
S6	10 Jan 2023	Water Color	Green
S6	10 Jan 2023	Current Direction	S
S6	10 Jan 2023	Water Temp (C)	13
S6	10 Jan 2023	Wave Height Low (ft)	5

Station	Date	Parameter	Value
S6	10 Jan 2023	High Tide (ft)	5.06
S6	10 Jan 2023	High Tide Time	1008
S6	10 Jan 2023	Low Tide (ft)	2.21
S6	10 Jan 2023	Low Tide Time	412
S6	10 Jan 2023	Comments	Water clear; Trash-2; Kelp;Debris, Water clear; Trash-3; Debris;Kelp;Seagrass
S6	17 Jan 2023	Arrive Time	900
S6	17 Jan 2023	Weather	Partly cloudy
S6	17 Jan 2023	Wind Speed (kts)	14.2
S6	17 Jan 2023	Wind Dir	W
S6	17 Jan 2023	Animal Life	
S6	17 Jan 2023	Floatables	None
S6	17 Jan 2023	Water Color	Green
S6	17 Jan 2023	Current Direction	S
S6	17 Jan 2023	Water Temp (C)	11
S6	17 Jan 2023	Wave Height Low (ft)	7
S6	17 Jan 2023	High Tide (ft)	5.2
S6	17 Jan 2023	High Tide Time	442
S6	17 Jan 2023	Low Tide (ft)	-0.08
S6	17 Jan 2023	Low Tide Time	1226
S6	17 Jan 2023	Comments	Water clear; Trash-1; Kelp;Seagrass; Person/Walker/Jogger-1
S6	24 Jan 2023	Arrive Time	1020
S6	24 Jan 2023	Weather	Sunny
S6	24 Jan 2023	Wind Speed (kts)	5.2
S6	24 Jan 2023	Wind Dir	E
S6	24 Jan 2023	Animal Life	
S6	24 Jan 2023	Floatables	None
S6	24 Jan 2023	Water Color	Green
S6	24 Jan 2023	Current Direction	S
S6	24 Jan 2023	Water Temp (C)	15
S6	24 Jan 2023	Wave Height Low (ft)	5
S6	24 Jan 2023	High Tide (ft)	5.91
S6	24 Jan 2023	High Tide Time	1021
S6	24 Jan 2023	Low Tide (ft)	1.28
S6	24 Jan 2023	Low Tide Time	422
S6	24 Jan 2023	Comments	Water clear; Surfer/Paddle boarder-2; Trash-2; Kelp;Seagrass;Debris; Person/Walker/Jogger-2
S6	31 Jan 2023	Arrive Time	915
S6	31 Jan 2023	Weather	Sunny
S6	31 Jan 2023	Wind Speed (kts)	0.7
S6	31 Jan 2023	Wind Dir	NW
S6	31 Jan 2023	Animal Life	
S6	31 Jan 2023	Floatables	None
S6	31 Jan 2023	Water Color	Green
S6	31 Jan 2023	Current Direction	S
S6	31 Jan 2023	Water Temp (C)	10
S6	31 Jan 2023	Wave Height Low (ft)	6
S6	31 Jan 2023	High Tide (ft)	4.92
S6	31 Jan 2023	High Tide Time	513
S6	31 Jan 2023	Low Tide (ft)	-0.14
S6	31 Jan 2023	Low Tide Time	1306
S6	31 Jan 2023	Comments	Water clear; Trash-2; Algae
S8	03 Jan 2023	Arrive Time	910
S8	03 Jan 2023	Weather	Drizzle
S8	03 Jan 2023	Wind Speed (kts)	6.7
S8	03 Jan 2023	Wind Dir	S

Station	Date	Parameter	Value
S8	03 Jan 2023	Animal Life	Bird-20
S8	03 Jan 2023	Floatables	None
S8	03 Jan 2023	Water Color	Green
S8	03 Jan 2023	Current Direction	S
S8	03 Jan 2023	Water Temp (C)	10
S8	03 Jan 2023	Wave Height Low (ft)	3
S8	03 Jan 2023	High Tide (ft)	5.63
S8	03 Jan 2023	High Tide Time	616
S8	03 Jan 2023	Low Tide (ft)	-0.43
S8	03 Jan 2023	Low Tide Time	1350
S8	03 Jan 2023	Comments	Water clear; Trash-2; Kelp;Seagrass;Debris
S8	10 Jan 2023	Arrive Time	1033
S8	10 Jan 2023	Weather	Cloudy
S8	10 Jan 2023	Wind Speed (kts)	11.8
S8	10 Jan 2023	Wind Dir	S
S8	10 Jan 2023	Animal Life	
S8	10 Jan 2023	Floatables	None
S8	10 Jan 2023	Water Color	Green
S8	10 Jan 2023	Current Direction	S
S8	10 Jan 2023	Water Temp (C)	13
S8	10 Jan 2023	Wave Height Low (ft)	5
S8	10 Jan 2023	High Tide (ft)	5.06
S8	10 Jan 2023	High Tide Time	1008
S8	10 Jan 2023	Low Tide (ft)	2.21
S8	10 Jan 2023	Low Tide Time	412
S8	10 Jan 2023	Comments	Water clear; Trash-3; Debris;Kelp;Seagrass
S8	17 Jan 2023	Arrive Time	823
S8	17 Jan 2023	Weather	Partly cloudy
S8	17 Jan 2023	Wind Speed (kts)	13.2
S8	17 Jan 2023	Wind Dir	N
S8	17 Jan 2023	Animal Life	Dog-2
S8	17 Jan 2023	Floatables	None
S8	17 Jan 2023	Water Color	Green
S8	17 Jan 2023	Current Direction	S
S8	17 Jan 2023	Water Temp (C)	12
S8	17 Jan 2023	Wave Height Low (ft)	5
S8	17 Jan 2023	High Tide (ft)	5.2
S8	17 Jan 2023	High Tide Time	442
S8	17 Jan 2023	Low Tide (ft)	-0.08
S8	17 Jan 2023	Low Tide Time	1226
S8	17 Jan 2023	Comments	Water clear; Trash-2; Kelp;Seagrass; Person/Walker/Jogger-1
S8	24 Jan 2023	Arrive Time	1048
S8	24 Jan 2023	Weather	Sunny
S8	24 Jan 2023	Wind Speed (kts)	1.5
S8	24 Jan 2023	Wind Dir	W
S8	24 Jan 2023	Animal Life	
S8	24 Jan 2023	Floatables	None
S8	24 Jan 2023	Water Color	Green
S8	24 Jan 2023	Current Direction	S
S8	24 Jan 2023	Water Temp (C)	13
S8	24 Jan 2023	Wave Height Low (ft)	4
S8	24 Jan 2023	High Tide (ft)	5.91
S8	24 Jan 2023	High Tide Time	1021
S8	24 Jan 2023	Low Tide (ft)	1.28
S8	24 Jan 2023	Low Tide Time	422
S8	24 Jan 2023	Comments	Water clear; Fisherperson-1; Trash-2; Kelp;Seagrass;Debris; Person/Walker/Jogger-1



Station	Date	Parameter	Value
S8	31 Jan 2023	Arrive Time	827
S8	31 Jan 2023	Weather	Sunny
S8	31 Jan 2023	Wind Speed (kts)	1.8
S8	31 Jan 2023	Wind Dir	N
S8	31 Jan 2023	Animal Life	
S8	31 Jan 2023	Floatables	None
S8	31 Jan 2023	Water Color	Green
S8	31 Jan 2023	Current Direction	S
S8	31 Jan 2023	Water Temp (C)	10
S8	31 Jan 2023	Wave Height Low (ft)	4
S8	31 Jan 2023	High Tide (ft)	4.92
S8	31 Jan 2023	High Tide Time	513
S8	31 Jan 2023	Low Tide (ft)	-0.14
S8	31 Jan 2023	Low Tide Time	1306
S8	31 Jan 2023	Comments	Water clear; Trash-3; Kelp;Seagrass; Person/Walker/Jogger-2
S9	03 Jan 2023	Arrive Time	853
S9	03 Jan 2023	Weather	Drizzle
S9	03 Jan 2023	Wind Speed (kts)	6.3
S9	03 Jan 2023	Wind Dir	S
S9	03 Jan 2023	Animal Life	
S9	03 Jan 2023	Floatables	None
S9	03 Jan 2023	Water Color	Green
S9	03 Jan 2023	Current Direction	S
S9	03 Jan 2023	Water Temp (C)	11
S9	03 Jan 2023	Wave Height Low (ft)	4
S9	03 Jan 2023	High Tide (ft)	5.63
S9	03 Jan 2023	High Tide Time	616
S9	03 Jan 2023	Low Tide (ft)	-0.43
S9	03 Jan 2023	Low Tide Time	1350
S9	03 Jan 2023	Comments	Water turbid; Trash-2; Kelp;Seagrass;Debris; Person/Walker/Jogger-1
S9	10 Jan 2023	Arrive Time	1049
S9	10 Jan 2023	Weather	Drizzle
S9	10 Jan 2023	Wind Speed (kts)	14.7
S9	10 Jan 2023	Wind Dir	S
S9	10 Jan 2023	Animal Life	
S9	10 Jan 2023	Floatables	None
S9	10 Jan 2023	Water Color	Green
S9	10 Jan 2023	Current Direction	S
S9	10 Jan 2023	Water Temp (C)	11
S9	10 Jan 2023	Wave Height Low (ft)	4
S9	10 Jan 2023	High Tide (ft)	5.06
S9	10 Jan 2023	High Tide Time	1008
S9	10 Jan 2023	Low Tide (ft)	2.21
S9	10 Jan 2023	Low Tide Time	412
S9	10 Jan 2023	Comments	Water clear; Trash-1; Seagrass;Kelp
S9	17 Jan 2023	Arrive Time	806
S9	17 Jan 2023	Weather	Partly cloudy
S9	17 Jan 2023	Wind Speed (kts)	7.6
S9	17 Jan 2023	Wind Dir	N
S9	17 Jan 2023	Animal Life	
S9	17 Jan 2023	Floatables	None
S9	17 Jan 2023	Water Color	Green
S9	17 Jan 2023	Current Direction	S
S9	17 Jan 2023	Water Temp (C)	11
S9	17 Jan 2023	Wave Height Low (ft)	7

Station	Date	Parameter	Value
S9	17 Jan 2023	High Tide (ft)	5.2
S9	17 Jan 2023	High Tide Time	442
S9	17 Jan 2023	Low Tide (ft)	-0.08
S9	17 Jan 2023	Low Tide Time	1226
S9	17 Jan 2023	Comments	Water clear; Trash-1; Kelp;Seagrass; Person/Walker/Jogger-2
S9	24 Jan 2023	Arrive Time	1104
S9	24 Jan 2023	Weather	Sunny
S9	24 Jan 2023	Wind Speed (kts)	2.5
S9	24 Jan 2023	Wind Dir	W
S9	24 Jan 2023	Animal Life	Bird-50
S9	24 Jan 2023	Floatables	None
S9	24 Jan 2023	Water Color	Green
S9	24 Jan 2023	Current Direction	S
S9	24 Jan 2023	Water Temp (C)	13
S9	24 Jan 2023	Wave Height Low (ft)	4
S9	24 Jan 2023	High Tide (ft)	5.91
S9	24 Jan 2023	High Tide Time	1021
S9	24 Jan 2023	Low Tide (ft)	1.28
S9	24 Jan 2023	Low Tide Time	422
S9	24 Jan 2023	Comments	Water clear; Trash-1; Kelp;Seagrass
S9	31 Jan 2023	Arrive Time	813
S9	31 Jan 2023	Weather	Sunny
S9	31 Jan 2023	Wind Speed (kts)	0.5
S9	31 Jan 2023	Wind Dir	S
S9	31 Jan 2023	Animal Life	Bird-30
S9	31 Jan 2023	Floatables	None
S9	31 Jan 2023	Water Color	Green
S9	31 Jan 2023	Current Direction	S
S9	31 Jan 2023	Water Temp (C)	10
S9	31 Jan 2023	Wave Height Low (ft)	4
S9	31 Jan 2023	High Tide (ft)	4.92
S9	31 Jan 2023	High Tide Time	513
S9	31 Jan 2023	Low Tide (ft)	-0.14
S9	31 Jan 2023	Low Tide Time	1306
S9	31 Jan 2023	Comments	Water clear; Trash-1; Algae
S10	03 Jan 2023	Arrive Time	1117
S10	03 Jan 2023	Weather	Cloudy
S10	03 Jan 2023	Wind Speed (kts)	5.8
S10	03 Jan 2023	Wind Dir	S
S10	03 Jan 2023	Animal Life	
S10	03 Jan 2023	Floatables	None
S10	03 Jan 2023	Water Color	Green
S10	03 Jan 2023	Current Direction	S
S10	03 Jan 2023	Water Temp (C)	11
S10	03 Jan 2023	Wave Height Low (ft)	3
S10	03 Jan 2023	High Tide (ft)	5.63
S10	03 Jan 2023	High Tide Time	616
S10	03 Jan 2023	Low Tide (ft)	-0.43
S10	03 Jan 2023	Low Tide Time	1350
S10	03 Jan 2023	Comments	Water turbid; Trash-3; Kelp;Debris
S10	10 Jan 2023	Arrive Time	827
S10	10 Jan 2023	Weather	Partly cloudy
S10	10 Jan 2023	Wind Speed (kts)	7.7
S10	10 Jan 2023	Wind Dir	S
S10	10 Jan 2023	Animal Life	
S10	10 Jan 2023	Floatables	None

Station	Date	Parameter	Value
S10	10 Jan 2023	Water Color	Green
S10	10 Jan 2023	Current Direction	S
S10	10 Jan 2023	Water Temp (C)	14
S10	10 Jan 2023	Wave Height Low (ft)	6
S10	10 Jan 2023	High Tide (ft)	5.06
S10	10 Jan 2023	High Tide Time	1008
S10	10 Jan 2023	Low Tide (ft)	2.21
S10	10 Jan 2023	Low Tide Time	412
S10	10 Jan 2023	Comments	Water clear; Trash-1; Debris;Kelp;Seagrass; Dead cat; Sewage-like odor
S10	17 Jan 2023	Arrive Time	1050
S10	17 Jan 2023	Weather	Partly cloudy
S10	17 Jan 2023	Wind Speed (kts)	12
S10	17 Jan 2023	Wind Dir	NW
S10	17 Jan 2023	Animal Life	
S10	17 Jan 2023	Floatables	None
S10	17 Jan 2023	Water Color	Brown
S10	17 Jan 2023	Current Direction	S
S10	17 Jan 2023	Water Temp (C)	13
S10	17 Jan 2023	Wave Height Low (ft)	6
S10	17 Jan 2023	High Tide (ft)	5.2
S10	17 Jan 2023	High Tide Time	442
S10	17 Jan 2023	Low Tide (ft)	-0.08
S10	17 Jan 2023	Low Tide Time	1226
S10	17 Jan 2023	Comments	Water turbid; Trash-1; Seagrass;Kelp; Sewage-like odor
S10	24 Jan 2023	Arrive Time	851
S10	24 Jan 2023	Weather	Sunny
S10	24 Jan 2023	Wind Speed (kts)	6.7
S10	24 Jan 2023	Wind Dir	W
S10	24 Jan 2023	Animal Life	
S10	24 Jan 2023	Floatables	None
S10	24 Jan 2023	Water Color	Green
S10	24 Jan 2023	Current Direction	S
S10	24 Jan 2023	Water Temp (C)	13
S10	24 Jan 2023	Wave Height Low (ft)	4
S10	24 Jan 2023	High Tide (ft)	5.91
S10	24 Jan 2023	High Tide Time	1021
S10	24 Jan 2023	Low Tide (ft)	1.28
S10	24 Jan 2023	Low Tide Time	422
S10	24 Jan 2023	Comments	Water clear; Trash-1; Debris
S10	31 Jan 2023	Arrive Time	956
S10	31 Jan 2023	Weather	Sunny
S10	31 Jan 2023	Wind Speed (kts)	2.5
S10	31 Jan 2023	Wind Dir	NW
S10	31 Jan 2023	Animal Life	
S10	31 Jan 2023	Floatables	None
S10	31 Jan 2023	Water Color	Green
S10	31 Jan 2023	Current Direction	S
S10	31 Jan 2023	Water Temp (C)	12
S10	31 Jan 2023	Wave Height Low (ft)	6
S10	31 Jan 2023	High Tide (ft)	4.92
S10	31 Jan 2023	High Tide Time	513
S10	31 Jan 2023	Low Tide (ft)	-0.14
S10	31 Jan 2023	Low Tide Time	1306
S10	31 Jan 2023	Comments	Water clear; Trash-3; Kelp;Seagrass;Debris
S11	03 Jan 2023	Arrive Time	1011
S11	03 Jan 2023	Weather	Cloudy

Station	Date	Parameter	Value
S11	03 Jan 2023	Wind Speed (kts)	11.7
S11	03 Jan 2023	Wind Dir	S
S11	03 Jan 2023	Animal Life	Dog-1
S11	03 Jan 2023	Floatables	None
S11	03 Jan 2023	Water Color	Green
S11	03 Jan 2023	Current Direction	S
S11	03 Jan 2023	Water Temp (C)	11
S11	03 Jan 2023	Wave Height Low (ft)	5
S11	03 Jan 2023	High Tide (ft)	5.63
S11	03 Jan 2023	High Tide Time	616
S11	03 Jan 2023	Low Tide (ft)	-0.43
S11	03 Jan 2023	Low Tide Time	1350
S11	03 Jan 2023	Comments	Water turbid; Trash-1; Kelp;Seagrass; Person/Walker/Jogger-1
S11	10 Jan 2023	Arrive Time	958
S11	10 Jan 2023	Weather	Cloudy
S11	10 Jan 2023	Wind Speed (kts)	11.4
S11	10 Jan 2023	Wind Dir	S
S11	10 Jan 2023	Animal Life	
S11	10 Jan 2023	Floatables	None
S11	10 Jan 2023	Water Color	Green
S11	10 Jan 2023	Current Direction	S
S11	10 Jan 2023	Water Temp (C)	14
S11	10 Jan 2023	Wave Height Low (ft)	6
S11	10 Jan 2023	High Tide (ft)	5.06
S11	10 Jan 2023	High Tide Time	1008
S11	10 Jan 2023	Low Tide (ft)	2.21
S11	10 Jan 2023	Low Tide Time	412
S11	10 Jan 2023	Comments	Water clear; Trash-2; Debris;Kelp
S11	17 Jan 2023	Arrive Time	943
S11	17 Jan 2023	Weather	Partly cloudy
S11	17 Jan 2023	Wind Speed (kts)	9.8
S11	17 Jan 2023	Wind Dir	W
S11	17 Jan 2023	Animal Life	
S11	17 Jan 2023	Floatables	None
S11	17 Jan 2023	Water Color	Green
S11	17 Jan 2023	Current Direction	S
S11	17 Jan 2023	Water Temp (C)	13
S11	17 Jan 2023	Wave Height Low (ft)	6
S11	17 Jan 2023	High Tide (ft)	5.2
S11	17 Jan 2023	High Tide Time	442
S11	17 Jan 2023	Low Tide (ft)	-0.08
S11	17 Jan 2023	Low Tide Time	1226
S11	17 Jan 2023	Comments	Water clear; Trash-1; Kelp;Seagrass
S11	24 Jan 2023	Arrive Time	1011
S11	24 Jan 2023	Weather	Sunny
S11	24 Jan 2023	Wind Speed (kts)	7.5
S11	24 Jan 2023	Wind Dir	E
S11	24 Jan 2023	Animal Life	
S11	24 Jan 2023	Floatables	None
S11	24 Jan 2023	Water Color	Green
S11	24 Jan 2023	Current Direction	S
S11	24 Jan 2023	Water Temp (C)	13
S11	24 Jan 2023	Wave Height Low (ft)	7
S11	24 Jan 2023	High Tide (ft)	5.91
S11	24 Jan 2023	High Tide Time	1021
S11	24 Jan 2023	Low Tide (ft)	1.28
S11	24 Jan 2023	Low Tide Time	422

Station	Date	Parameter	Value
S11	24 Jan 2023	Comments	Water clear; Trash-2; Kelp;Seagrass;Debris; Person/Walker/Jogger-2
S11	31 Jan 2023	Arrive Time	908
S11	31 Jan 2023	Weather	Sunny
S11	31 Jan 2023	Wind Speed (kts)	0.8
S11	31 Jan 2023	Wind Dir	SW
S11	31 Jan 2023	Animal Life	Bird-5
S11	31 Jan 2023	Floatables	None
S11	31 Jan 2023	Water Color	Brown
S11	31 Jan 2023	Current Direction	S
S11	31 Jan 2023	Water Temp (C)	13
S11	31 Jan 2023	Wave Height Low (ft)	6
S11	31 Jan 2023	High Tide (ft)	4.92
S11	31 Jan 2023	High Tide Time	513
S11	31 Jan 2023	Low Tide (ft)	-0.14
S11	31 Jan 2023	Low Tide Time	1306
S11	31 Jan 2023	Comments	Water clear; Trash-3; Kelp;Debris;Seagrass
S12	03 Jan 2023	Arrive Time	935
S12	03 Jan 2023	Weather	Cloudy
S12	03 Jan 2023	Wind Speed (kts)	1.4
S12	03 Jan 2023	Wind Dir	S
S12	03 Jan 2023	Animal Life	Bird-2
S12	03 Jan 2023	Floatables	None
S12	03 Jan 2023	Water Color	Green
S12	03 Jan 2023	Current Direction	S
S12	03 Jan 2023	Water Temp (C)	11
S12	03 Jan 2023	Wave Height Low (ft)	4
S12	03 Jan 2023	High Tide (ft)	5.63
S12	03 Jan 2023	High Tide Time	616
S12	03 Jan 2023	Low Tide (ft)	-0.43
S12	03 Jan 2023	Low Tide Time	1350
S12	03 Jan 2023	Comments	Water turbid; Trash-1; Kelp;Seagrass
S12	10 Jan 2023	Arrive Time	1018
S12	10 Jan 2023	Weather	Cloudy
S12	10 Jan 2023	Wind Speed (kts)	7.6
S12	10 Jan 2023	Wind Dir	S
S12	10 Jan 2023	Animal Life	
S12	10 Jan 2023	Floatables	None
S12	10 Jan 2023	Water Color	Green
S12	10 Jan 2023	Current Direction	S
S12	10 Jan 2023	Water Temp (C)	13
S12	10 Jan 2023	Wave Height Low (ft)	6
S12	10 Jan 2023	High Tide (ft)	5.06
S12	10 Jan 2023	High Tide Time	1008
S12	10 Jan 2023	Low Tide (ft)	2.21
S12	10 Jan 2023	Low Tide Time	412
S12	10 Jan 2023	Comments	Water clear; Trash-2; Debris;Kelp;Seagrass
S12	17 Jan 2023	Arrive Time	845
S12	17 Jan 2023	Weather	Partly cloudy
S12	17 Jan 2023	Wind Speed (kts)	8.4
S12	17 Jan 2023	Wind Dir	NW
S12	17 Jan 2023	Animal Life	
S12	17 Jan 2023	Floatables	None
S12	17 Jan 2023	Water Color	Green
S12	17 Jan 2023	Current Direction	S
S12	17 Jan 2023	Water Temp (C)	12
S12	17 Jan 2023	Wave Height Low (ft)	6

Station	Date	Parameter	Value
S12	17 Jan 2023	High Tide (ft)	5.2
S12	17 Jan 2023	High Tide Time	442
S12	17 Jan 2023	Low Tide (ft)	-0.08
S12	17 Jan 2023	Low Tide Time	1226
S12	17 Jan 2023	Comments	Water clear; Trash-2; Kelp;Seagrass
S12	24 Jan 2023	Arrive Time	1033
S12	24 Jan 2023	Weather	Sunny
S12	24 Jan 2023	Wind Speed (kts)	0
S12	24 Jan 2023	Wind Dir	
S12	24 Jan 2023	Animal Life	
S12	24 Jan 2023	Floatables	None
S12	24 Jan 2023	Water Color	Green
S12	24 Jan 2023	Current Direction	S
S12	24 Jan 2023	Water Temp (C)	13
S12	24 Jan 2023	Wave Height Low (ft)	3
S12	24 Jan 2023	High Tide (ft)	5.91
S12	24 Jan 2023	High Tide Time	1021
S12	24 Jan 2023	Low Tide (ft)	1.28
S12	24 Jan 2023	Low Tide Time	422
S12	24 Jan 2023	Comments	Water clear; Fisherperson-2; Trash-2; Kelp;Seagrass;Debris; Person/Walker/Jogger-2
S12	31 Jan 2023	Arrive Time	843
S12	31 Jan 2023	Weather	Sunny
S12	31 Jan 2023	Wind Speed (kts)	1.3
S12	31 Jan 2023	Wind Dir	N
S12	31 Jan 2023	Animal Life	Bird-10
S12	31 Jan 2023	Floatables	None
S12	31 Jan 2023	Water Color	Green
S12	31 Jan 2023	Current Direction	S
S12	31 Jan 2023	Water Temp (C)	11
S12	31 Jan 2023	Wave Height Low (ft)	6
S12	31 Jan 2023	High Tide (ft)	4.92
S12	31 Jan 2023	High Tide Time	513
S12	31 Jan 2023	Low Tide (ft)	-0.14
S12	31 Jan 2023	Low Tide Time	1306
S12	31 Jan 2023	Comments	Water clear; Trash-2; Seagrass;Kelp; Person/Walker/Jogger-1

# Kelp Stations





**Table 3.1**

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

Date	I19	I24	I25	I26	I32	I39	I40
01 Jan 2023	78	42	27	15	7	12	47
02 Jan 2023	78	42	27	15	7	12	47
03 Jan 2023	78	42	27	15	7	12	47
04 Jan 2023	<b>371</b>	123	70	88	42	17	<b>324</b>
05 Jan 2023	<b>371</b>	123	70	88	42	17	<b>324</b>
06 Jan 2023	<b>371</b>	123	70	88	42	17	<b>324</b>
07 Jan 2023	<b>371</b>	123	70	88	42	17	<b>324</b>
08 Jan 2023	<b>371</b>	123	70	88	42	17	<b>324</b>
09 Jan 2023	<b>371</b>	123	70	88	42	17	<b>324</b>
10 Jan 2023	<b>371</b>	123	70	88	42	17	<b>324</b>
11 Jan 2023	<b>371</b>	123	70	88	42	17	<b>324</b>
12 Jan 2023	<b>803</b>	71	51	33	35	10	186
13 Jan 2023	<b>803</b>	71	51	33	35	10	186
14 Jan 2023	<b>803</b>	71	51	33	35	10	186
15 Jan 2023	<b>803</b>	71	51	33	35	10	186
16 Jan 2023	<b>803</b>	71	51	33	35	10	186
17 Jan 2023	<b>803</b>	71	51	33	35	10	186
18 Jan 2023	<b>1010</b>	137	88	55	54	25	<b>342</b>
19 Jan 2023	<b>1010</b>	137	88	55	54	25	<b>342</b>
20 Jan 2023	<b>3151</b>	187	105	127	122	30	<b>445</b>
21 Jan 2023	<b>3151</b>	187	105	127	122	30	<b>445</b>
22 Jan 2023	<b>3151</b>	187	105	127	122	30	<b>445</b>
23 Jan 2023	<b>3151</b>	187	105	127	122	30	<b>445</b>
24 Jan 2023	<b>2648</b>	<b>276</b>	169	81	90	20	<b>418</b>
25 Jan 2023	<b>2648</b>	<b>276</b>	169	81	90	20	<b>418</b>
26 Jan 2023	<b>2189</b>	<b>557</b>	<b>362</b>	172	<b>232</b>	35	<b>990</b>
27 Jan 2023	<b>2189</b>	<b>557</b>	<b>362</b>	172	<b>232</b>	35	<b>990</b>
28 Jan 2023	<b>2189</b>	<b>557</b>	<b>362</b>	172	<b>232</b>	35	<b>990</b>
29 Jan 2023	<b>2189</b>	<b>557</b>	<b>362</b>	172	<b>232</b>	35	<b>990</b>
30 Jan 2023	<b>2189</b>	<b>557</b>	<b>362</b>	172	<b>232</b>	35	<b>990</b>
31 Jan 2023	<b>1399</b>	<b>697</b>	<b>522</b>	<b>267</b>	<b>222</b>	37	<b>1443</b>

\* Geometric mean calculated using n<5

### Table 3.2

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

Date	I19	I24	I25	I26	I32	I39	I40
04 Jan 2023	E	IC	IC	E	E	IC	E
12 Jan 2023	E	IC	IC	IC	IC	IC	IC
18 Jan 2023	E	E	E	E	IC	E	E
24 Jan 2023	E	E	E	IC	IC	IC	E
31 Jan 2023	IC	E	E	E	IC	IC	E

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.

<b>Date</b>	<b>I19</b>	<b>I24</b>	<b>I25</b>	<b>I26</b>	<b>I32</b>	<b>I39</b>	<b>I40</b>
01 Jan 2023	24	20	14	10	10	5	30
02 Jan 2023	<b>34</b>	22	14	14	14	7	<b>32</b>
03 Jan 2023	<b>34</b>	22	14	14	14	7	<b>32</b>
04 Jan 2023	<b>57</b>	<b>33</b>	22	28	26	7	<b>66</b>
05 Jan 2023	<b>57</b>	<b>33</b>	22	28	26	7	<b>66</b>
06 Jan 2023	<b>57</b>	<b>33</b>	22	28	26	7	<b>66</b>
07 Jan 2023	<b>57</b>	<b>33</b>	22	28	26	7	<b>66</b>
08 Jan 2023	<b>57</b>	<b>33</b>	22	28	26	7	<b>66</b>
09 Jan 2023	<b>57</b>	<b>33</b>	22	28	26	7	<b>66</b>
10 Jan 2023	<b>57</b>	<b>33</b>	22	28	26	7	<b>66</b>
11 Jan 2023	<b>57</b>	<b>33</b>	22	28	26	7	<b>66</b>
12 Jan 2023	<b>151</b>	<b>66</b>	<b>44</b>	<b>46</b>	26	10	<b>111</b>
13 Jan 2023	<b>151</b>	<b>66</b>	<b>44</b>	<b>46</b>	26	10	<b>111</b>
14 Jan 2023	<b>151</b>	<b>66</b>	<b>44</b>	<b>46</b>	26	10	<b>111</b>
15 Jan 2023	<b>151</b>	<b>66</b>	<b>44</b>	<b>46</b>	26	10	<b>111</b>
16 Jan 2023	<b>339</b>	<b>133</b>	<b>82</b>	<b>85</b>	<b>43</b>	13	<b>200</b>
17 Jan 2023	<b>339</b>	<b>133</b>	<b>82</b>	<b>85</b>	<b>43</b>	13	<b>200</b>
18 Jan 2023	<b>470</b>	<b>213</b>	<b>141</b>	<b>130</b>	<b>67</b>	29	<b>342</b>
19 Jan 2023	<b>470</b>	<b>213</b>	<b>141</b>	<b>130</b>	<b>67</b>	29	<b>342</b>
20 Jan 2023	<b>470</b>	<b>213</b>	<b>141</b>	<b>130</b>	<b>67</b>	29	<b>342</b>
21 Jan 2023	<b>470</b>	<b>213</b>	<b>141</b>	<b>130</b>	<b>67</b>	29	<b>342</b>
22 Jan 2023	<b>470</b>	<b>213</b>	<b>141</b>	<b>130</b>	<b>67</b>	29	<b>342</b>
23 Jan 2023	<b>470</b>	<b>213</b>	<b>141</b>	<b>130</b>	<b>67</b>	29	<b>342</b>
24 Jan 2023	<b>537</b>	<b>164</b>	<b>120</b>	<b>54</b>	<b>59</b>	20	<b>309</b>
25 Jan 2023	<b>537</b>	<b>164</b>	<b>120</b>	<b>54</b>	<b>59</b>	20	<b>309</b>
26 Jan 2023	<b>537</b>	<b>164</b>	<b>120</b>	<b>54</b>	<b>59</b>	20	<b>309</b>
27 Jan 2023	<b>537</b>	<b>164</b>	<b>120</b>	<b>54</b>	<b>59</b>	20	<b>309</b>
28 Jan 2023	<b>537</b>	<b>164</b>	<b>120</b>	<b>54</b>	<b>59</b>	20	<b>309</b>
29 Jan 2023	<b>537</b>	<b>164</b>	<b>120</b>	<b>54</b>	<b>59</b>	20	<b>309</b>
30 Jan 2023	<b>537</b>	<b>164</b>	<b>120</b>	<b>54</b>	<b>59</b>	20	<b>309</b>
31 Jan 2023	<b>504</b>	<b>211</b>	<b>171</b>	<b>86</b>	<b>57</b>	22	<b>505</b>

\* Geometric mean calculated using n<5

### Table 3.4

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

Date	I19	I24	I25	I26	I32	I39	I40
January	E	E	E	E	E	E	E

IC = In Compliance

E = Exceedance

ns = not sampled

ND = no data

**Table 3.5**

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

Date	I19			I24			I25			I26			I32			I39			I40		
	2m	6m	11m	2m	6m	11m	2m	6m	9m	2m	6m	9m	2m	6m	9m	2m	12m	18m	2m	6m	9m
01 Jan 2023	702	1707	831	56	316	500	161	115	200	11	11	23	2	2	11	11	2	12	923	1620	620
02 Jan 2023	702	1707	831	56	316	500	161	115	200	11	11	23	2	2	11	11	2	12	923	1620	620
03 Jan 2023	702	1707	831	56	316	500	161	115	200	11	11	23	2	2	11	11	2	12	923	1620	620
04 Jan 2023	1700	7200	6300	555	720	1050	380	550	780	910	3410	5520	1601	1601	1707	27	29	43	8400	3200	6000
05 Jan 2023	1700	7200	6300	555	720	1050	380	550	780	910	3410	5520	1601	1601	1707	27	29	43	8400	3200	6000
06 Jan 2023	1700	7200	6300	555	720	1050	380	550	780	910	3410	5520	1601	1601	1707	27	29	43	8400	3200	6000
07 Jan 2023	1700	7200	6300	555	720	1050	380	550	780	910	3410	5520	1601	1601	1707	27	29	43	8400	3200	6000
08 Jan 2023	1700	7200	6300	555	720	1050	380	550	780	910	3410	5520	1601	1601	1707	27	29	43	8400	3200	6000
09 Jan 2023	1700	7200	6300	555	720	1050	380	550	780	910	3410	5520	1601	1601	1707	27	29	43	8400	3200	6000
10 Jan 2023	1700	7200	6300	555	720	1050	380	550	780	910	3410	5520	1601	1601	1707	27	29	43	8400	3200	6000
11 Jan 2023	1700	7200	6300	555	720	1050	380	550	780	910	3410	5520	1601	1601	1707	27	29	43	8400	3200	6000
12 Jan 2023	9000	13500	13500	555	950	1050	380	550	780	300	560	620	391	1101	907	60	64	69	1300	2300	1100
13 Jan 2023	9000	13500	13500	555	950	1050	380	550	780	300	560	620	391	1101	907	60	64	69	1300	2300	1100
14 Jan 2023	9000	13500	13500	555	950	1050	380	550	780	300	560	620	391	1101	907	60	64	69	1300	2300	1100
15 Jan 2023	9000	13500	13500	555	950	1050	380	550	780	300	560	620	391	1101	907	60	64	69	1300	2300	1100
16 Jan 2023	9000	13500	13500	555	950	1050	380	550	780	300	560	620	391	1101	907	60	64	69	1300	2300	1100
17 Jan 2023	9000	13500	13500	555	950	1050	380	550	780	300	560	620	391	1101	907	60	64	69	1300	2300	1100
18 Jan 2023	16000	11000	16000	1000	1300	1300	440	880	1200	580	1100	1200	780	2200	1800	86	72	72	1800	3400	1200
19 Jan 2023	16000	11000	16000	1000	1300	1300	440	880	1200	580	1100	1200	780	2200	1800	86	72	72	1800	3400	1200
20 Jan 2023	16000	13500	16000	1200	2150	1950	720	990	2600	2790	2350	5200	1890	2800	4500	187	266	193	8400	4100	6100
21 Jan 2023	16000	13500	16000	1200	2150	1950	720	990	2600	2790	2350	5200	1890	2800	4500	187	266	193	8400	4100	6100
22 Jan 2023	16000	13500	16000	1200	2150	1950	720	990	2600	2790	2350	5200	1890	2800	4500	187	266	193	8400	4100	6100
23 Jan 2023	16000	13500	16000	1200	2150	1950	720	990	2600	2790	2350	5200	1890	2800	4500	187	266	193	8400	4100	6100
24 Jan 2023	16000	11000	16000	1400	3000	1600	1000	1100	4000	580	1100	1200	780	2200	1800	200	120	66	4800	3400	1200
25 Jan 2023	16000	11000	16000	1400	3000	1600	1000	1100	4000	580	1100	1200	780	2200	1800	200	120	66	4800	3400	1200
26 Jan 2023	16000	10500	13500	8700	4800	2100	4000	3550	4100	2790	2350	5200	1890	2800	4500	270	290	193	10400	5200	6100
27 Jan 2023	16000	10500	13500	8700	4800	2100	4000	3550	4100	2790	2350	5200	1890	2800	4500	270	290	193	10400	5200	6100
28 Jan 2023	16000	10500	13500	8700	4800	2100	4000	3550	4100	2790	2350	5200	1890	2800	4500	270	290	193	10400	5200	6100
29 Jan 2023	16000	10500	13500	8700	4800	2100	4000	3550	4100	2790	2350	5200	1890	2800	4500	270	290	193	10400	5200	6100
30 Jan 2023	16000	10500	13500	8700	4800	2100	4000	3550	4100	2790	2350	5200	1890	2800	4500	270	290	193	10400	5200	6100
31 Jan 2023	16000	10000	11000	16000	3000	2600	7000	6000	4200	5000	3600	9200	780	2200	1800	340	460	320	16000	7000	11000

\* Median calculated using n<5

### Table 3.6

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

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

IC = In Compliance

E = Exceedance

ns = not sampled

ND = no data

**Table 3.7**

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

Station	Date	Time	Depth	Total	Fecal	Entero	Temp	XMS	DO	Sal	pH
I19	04 Jan 2023	1035	2	2000e	860	540	15.0	30.90	8.2	33.24	8.1
I19	04 Jan 2023	1035	6	11000	1000e	920	14.9	33.90	8.1	33.25	8.1
I19	04 Jan 2023	1035	11	11000	1200	840	14.9	36.42	8.0	33.25	8.1
I19	12 Jan 2023	1041	2	>16000	9000	1600e	15.0	16.28	8.4	33.31	8.1
I19	12 Jan 2023	1041	6	>16000	6000	880	15.0	12.70	8.2	33.31	8.1
I19	12 Jan 2023	1041	11	>16000	5200	940	15.0	8.50	8.1	33.32	8.1
I19	18 Jan 2023	1031	2	>16000	4400	3600e	14.8	12.02	7.8	32.83	8.1
I19	18 Jan 2023	1031	6	10000	1000	1000	15.0	30.54	7.5	33.21	8.1
I19	18 Jan 2023	1031	11	>16000	2200e	2600e	14.9	10.48	7.2	33.30	8.1
I19	24 Jan 2023	1100	2	>16000	3800e	960	13.8	24.58	7.8	33.12	8.0
I19	24 Jan 2023	1100	6	980	120	360e	13.6	43.05	6.4	33.34	8.0
I19	24 Jan 2023	1100	11	2600e	40e	640	13.4	15.19	5.9	33.38	8.0
I19	31 Jan 2023	1103	2	3400e	120e	480	14.0	57.11	8.5	33.12	8.1
I19	31 Jan 2023	1103	6	7200	300e	360e	13.9	59.73	8.4	33.21	8.1
I19	31 Jan 2023	1103	11	4200	280e	200e	14.0	64.98	8.2	33.26	8.1
I24	04 Jan 2023	1054	2	1000	62	100e	15.0	44.13	7.9	33.26	8.1
I24	04 Jan 2023	1054	6	1300	280e	320e	14.9	37.13	7.8	33.26	8.1
I24	04 Jan 2023	1054	11	1300	100e	360e	14.9	13.92	7.7	33.26	8.1
I24	12 Jan 2023	1051	2	1400e	400e	74	15.0	25.59	8.3	33.34	8.1
I24	12 Jan 2023	1051	6	3000e	160e	120e	15.0	20.66	8.1	33.34	8.1
I24	12 Jan 2023	1051	11	2600e	220e	180e	15.0	9.27	8.2	33.34	8.1
I24	18 Jan 2023	1052	2	>16000	3400e	1600e	14.6	19.79	8.1	32.55	8.1
I24	18 Jan 2023	1052	6	8400	1100	2200e	14.7	17.07	8.1	32.97	8.1
I24	18 Jan 2023	1052	11	8000	1200	2800e	14.7	1.43	7.9	33.01	8.1
I24	24 Jan 2023	1121	2	16000	2800e	720	13.9	44.55	7.7	33.15	8.0
I24	24 Jan 2023	1121	6	6600	960	460	13.6	41.18	6.6	33.31	8.0
I24	24 Jan 2023	1121	11	1600	200e	360e	13.4	9.66	5.7	33.38	8.0
I24	31 Jan 2023	1124	2	>16000	4200	1400e	13.9	71.84	8.5	33.24	8.2
I24	31 Jan 2023	1124	6	1400e	440	360e	13.9	76.99	8.3	33.27	8.1
I24	31 Jan 2023	1124	11	6600	480	1200	13.9	67.21	8.2	33.29	8.1
I25	04 Jan 2023	1059	2	440	58	86	15.0	42.72	7.9	33.26	8.1
I25	04 Jan 2023	1059	6	880	90	160e	14.9	40.04	7.8	33.26	8.1
I25	04 Jan 2023	1059	9	1200	110	300e	14.9	19.48	7.7	33.27	8.1
I25	12 Jan 2023	1059	2	1000	140e	72	15.1	31.69	8.1	33.34	8.1
I25	12 Jan 2023	1059	6	1100	300e	100	15.0	27.19	7.8	33.35	8.1
I25	12 Jan 2023	1059	9	4000	260e	240e	15.0	12.81	7.8	33.35	8.1
I25	18 Jan 2023	1057	2	7000	560	920	14.7	16.54	8.2	32.95	8.1
I25	18 Jan 2023	1057	6	6000	800	1400e	14.6	6.81	7.9	32.98	8.1
I25	18 Jan 2023	1057	9	10000	880	3800e	14.8	0.45	7.5	33.02	8.1

Station	Date	Time	Depth	Total	Fecal	Entero	Temp	XMS	DO	Sal	pH
I25	24 Jan 2023	1128	2	>16000	2400e	110	14.0	41.57	7.6	33.19	8.0
I25	24 Jan 2023	1128	6	>16000	800e	660	13.7	38.37	7.3	33.24	8.0
I25	24 Jan 2023	1128	9	4200	240e	94	13.5	40.70	6.1	33.37	8.0
I25	31 Jan 2023	1132	2	>16000	5400	3200e	13.9	45.38	8.5	33.05	8.1
I25	31 Jan 2023	1132	6	7200	900	460	14.0	72.60	8.3	33.28	8.1
I25	31 Jan 2023	1132	9	11000	460	640	14.0	69.21	8.1	33.29	8.1
I26	04 Jan 2023	1110	2	>16000	2600e	960	15.0	39.50	7.9	33.19	8.1
I26	04 Jan 2023	1110	6	6800	4000	900	15.0	40.60	7.8	33.19	8.1
I26	04 Jan 2023	1110	9	11000	600e	900	15.0	21.90	7.4	33.23	8.1
I26	12 Jan 2023	1108	2	580	62	18e	15.1	26.91	8.3	33.32	8.1
I26	12 Jan 2023	1108	6	1100	80e	96	14.9	33.51	7.7	33.34	8.1
I26	12 Jan 2023	1108	9	1200	40e	82	15.0	22.50	7.2	33.36	8.1
I26	18 Jan 2023	1112	2	5000	320e	1100	14.8	37.39	8.0	33.06	8.1
I26	18 Jan 2023	1112	6	3600e	260e	760	14.9	3.03	7.4	33.21	8.1
I26	18 Jan 2023	1112	9	9200	760	1400e	14.9	0.14	7.4	33.19	8.1
I26	24 Jan 2023	1138	2	6e	<20	<2	14.1	54.98	7.5	33.30	8.0
I26	24 Jan 2023	1138	6	80e	6e	6e	13.8	57.63	7.4	33.30	8.0
I26	24 Jan 2023	1138	9	140e	14e	40	13.7	59.00	7.1	33.30	8.0
I26	31 Jan 2023	1143	2	>16000	2200e	1100	14.1	61.78	8.5	33.20	8.1
I26	31 Jan 2023	1143	6	>16000	1400e	1000	13.9	59.73	8.3	33.27	8.1
I26	31 Jan 2023	1143	9	>16000	1100	2000e	13.9	63.80	8.1	33.28	8.1
I32	04 Jan 2023	1123	2	14000	2200e	400	15.0	49.49	8.1	33.06	8.1
I32	04 Jan 2023	1123	6	13000	2400e	440	14.9	29.41	8.0	33.09	8.1
I32	04 Jan 2023	1123	9	15000	2000e	680	14.8	8.90	7.5	33.16	8.1
I32	12 Jan 2023	1119	2	780	160e	44	15.0	22.65	8.1	33.31	8.1
I32	12 Jan 2023	1119	6	2200e	140e	66	14.9	27.47	7.9	33.30	8.1
I32	12 Jan 2023	1119	9	1800e	240e	76	14.8	22.55	8.1	33.30	8.1
I32	18 Jan 2023	1123	2	3000e	220e	520	14.7	8.59	8.3	33.10	8.1
I32	18 Jan 2023	1123	6	3400e	240e	500	14.6	10.83	8.1	33.11	8.1
I32	18 Jan 2023	1123	9	7200	380e	780	14.7	2.12	7.8	33.16	8.1
I32	24 Jan 2023	1151	2	34e	6e	8e	13.9	46.75	8.1	33.30	8.1
I32	24 Jan 2023	1151	6	120e	4e	62	13.6	40.85	7.5	33.33	8.1
I32	24 Jan 2023	1151	9	400e	68	340e	13.4	31.59	5.9	33.38	8.0
I32	31 Jan 2023	1154	2	520	44	10e	14.0	64.21	8.5	33.15	8.1
I32	31 Jan 2023	1154	6	1200	220e	72	14.0	60.31	8.4	33.18	8.1
I32	31 Jan 2023	1154	9	940	300e	56	14.0	59.92	8.2	33.22	8.1
I39	04 Jan 2023	1013	2	34e	<2	2e	14.9	74.62	7.9	33.33	8.1
I39	04 Jan 2023	1013	12	72	14e	10e	14.9	74.67	7.8	33.34	8.1
I39	04 Jan 2023	1013	18	66	8e	10e	14.9	68.67	7.8	33.35	8.1
I39	12 Jan 2023	1008	2	340e	80e	10e	15.0	54.02	7.8	33.35	8.1
I39	12 Jan 2023	1008	12	460	70	30e	14.9	56.80	7.7	33.36	8.1
I39	12 Jan 2023	1008	18	320e	20e	14e	14.9	41.99	7.5	33.37	8.1
I39	18 Jan 2023	1007	2	12000	2200e	2400e	14.4	25.78	8.1	32.70	8.1
I39	18 Jan 2023	1007	12	4000	120	560	14.8	45.80	7.7	33.14	8.1
I39	18 Jan 2023	1007	18	3000e	220e	1100	14.8	6.78	7.6	33.26	8.1



Station	Date	Time	Depth	Total	Fecal	Entero	Temp	XMS	DO	Sal	pH
I39	24 Jan 2023	1038	2	200e	2e	4e	13.8	67.98	7.5	33.29	8.1
I39	24 Jan 2023	1038	12	120	6e	28e	13.7	71.44	7.1	33.32	8.0
I39	24 Jan 2023	1038	18	60e	4e	72	12.8	70.57	5.4	33.45	7.9
I39	31 Jan 2023	1040	2	660	76	72	13.9	79.74	8.6	33.19	8.2
I39	31 Jan 2023	1040	12	480	20e	16e	13.9	80.46	8.4	33.30	8.1
I39	31 Jan 2023	1040	18	820	44	32e	13.9	80.00	8.3	33.30	8.1
I40	04 Jan 2023	1047	2	>16000	>12000	6000	15.1	23.37	8.2	33.03	8.1
I40	04 Jan 2023	1047	6	15000	1000e	700	14.9	25.42	7.9	33.25	8.1
I40	04 Jan 2023	1047	9	11000	880	720	14.9	25.61	7.9	33.24	8.1
I40	12 Jan 2023	1043	2	800e	100e	50	15.1	38.05	7.7	33.36	8.1
I40	12 Jan 2023	1043	6	1200e	140e	82	15.0	33.33	7.6	33.35	8.1
I40	12 Jan 2023	1043	9	1200e	240e	100	14.9	37.75	7.6	33.35	8.1
I40	18 Jan 2023	1043	2	>16000	10000	7400	14.6	2.03	8.0	32.62	8.1
I40	18 Jan 2023	1043	6	7000	1100	3200e	14.8	3.32	8.0	33.02	8.1
I40	18 Jan 2023	1043	9	>16000	800e	4400	15.1	0.75	7.0	33.22	8.1
I40	24 Jan 2023	1112	2	4800	540	140e	13.8	28.63	7.4	33.27	8.0
I40	24 Jan 2023	1112	6	3400e	320e	3200	13.7	16.81	6.1	33.35	8.0
I40	24 Jan 2023	1112	9	1000	120e	380e	13.5	11.94	5.8	33.38	8.0
I40	31 Jan 2023	1115	2	>16000	>12000	>12000	13.9	10.96	8.3	32.79	8.1
I40	31 Jan 2023	1115	6	>16000	3600	6600	13.9	39.50	8.3	33.24	8.1
I40	31 Jan 2023	1115	9	>16000	4000	10000	14.0	36.83	8.0	33.28	8.1

ns = not sampled

ND = no data

## Comments

Station	Date	Depth	Parameter	Comments
I26	24 Jan 2023	2		LA: The membrane filter for mFC with 50mL sample volume was dropped onto the plate lid, not on the media.(01/25/23 KA)

**Table 3.8**

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

Station	Date	Parameter	Value
I19	04 Jan 2023	Depth (m)	11
I19	04 Jan 2023	Arrive Time	1035
I19	04 Jan 2023	Depart Time	1039
I19	04 Jan 2023	Air Temp (C)	15.5
I19	04 Jan 2023	Weather	Drizzle
I19	04 Jan 2023	Visibility (mi)	7
I19	04 Jan 2023	Wind Speed (kts)	7.9
I19	04 Jan 2023	Wind Dir	S
I19	04 Jan 2023	Water Color	Green
I19	04 Jan 2023	Wave Ht Low (ft)	7
I19	04 Jan 2023	Wave Period (sec)	16
I19	04 Jan 2023	Sea State	Confused Swell
I19	04 Jan 2023	High Tide (ft)	20.51
I19	04 Jan 2023	High Tide Time	730
I19	04 Jan 2023	Low Tide (ft)	-2.2
I19	04 Jan 2023	Low Tide Time	1424
I19	04 Jan 2023	Comments	none
I19	12 Jan 2023	Depth (m)	11
I19	12 Jan 2023	Arrive Time	1041
I19	12 Jan 2023	Depart Time	1042
I19	12 Jan 2023	Air Temp (C)	17.8
I19	12 Jan 2023	Weather	Clear
I19	12 Jan 2023	Visibility (mi)	11
I19	12 Jan 2023	Wind Speed (kts)	21.2
I19	12 Jan 2023	Wind Dir	NW
I19	12 Jan 2023	Water Color	Brown
I19	12 Jan 2023	Wave Ht Low (ft)	6
I19	12 Jan 2023	Wave Period (sec)	13
I19	12 Jan 2023	Sea State	Regular Swell
I19	12 Jan 2023	High Tide (ft)	14.63
I19	12 Jan 2023	High Tide Time	1130
I19	12 Jan 2023	Low Tide (ft)	2.23
I19	12 Jan 2023	Low Tide Time	1830
I19	12 Jan 2023	Comments	Forgot to press
I19	18 Jan 2023	Depth (m)	9
I19	18 Jan 2023	Arrive Time	1031
I19	18 Jan 2023	Depart Time	1037
I19	18 Jan 2023	Air Temp (C)	13.5
I19	18 Jan 2023	Weather	Partly Cloudy
I19	18 Jan 2023	Visibility (mi)	10
I19	18 Jan 2023	Wind Speed (kts)	5.2
I19	18 Jan 2023	Wind Dir	S
I19	18 Jan 2023	Water Color	Brown
I19	18 Jan 2023	Wave Ht Low (ft)	3
I19	18 Jan 2023	Wave Period (sec)	12
I19	18 Jan 2023	Sea State	Confused Swell
I19	18 Jan 2023	High Tide (ft)	22.05
I19	18 Jan 2023	High Tide Time	630
I19	18 Jan 2023	Low Tide (ft)	-2.85
I19	18 Jan 2023	Low Tide Time	1312
I19	18 Jan 2023	Comments	Water color Brown opaque at surface
I19	24 Jan 2023	Depth (m)	10
I19	24 Jan 2023	Arrive Time	1100

Station	Date	Parameter	Value
I19	24 Jan 2023	Depart Time	1103
I19	24 Jan 2023	Air Temp (C)	15.5
I19	24 Jan 2023	Weather	Clear
I19	24 Jan 2023	Visibility (mi)	12
I19	24 Jan 2023	Wind Speed (kts)	5.8
I19	24 Jan 2023	Wind Dir	S
I19	24 Jan 2023	Water Color	Green
I19	24 Jan 2023	Wave Ht Low (ft)	3
I19	24 Jan 2023	Wave Period (sec)	16
I19	24 Jan 2023	Sea State	Light Chop
I19	24 Jan 2023	High Tide (ft)	6.01
I19	24 Jan 2023	High Tide Time	1024
I19	24 Jan 2023	Low Tide (ft)	-1.01
I19	24 Jan 2023	Low Tide Time	1712
I19	24 Jan 2023	Comments	GPS data error, nominal lat and lon recorded
I19	31 Jan 2023	Depth (m)	10
I19	31 Jan 2023	Arrive Time	1103
I19	31 Jan 2023	Depart Time	1108
I19	31 Jan 2023	Air Temp (C)	12.1
I19	31 Jan 2023	Weather	Clear
I19	31 Jan 2023	Visibility (mi)	10
I19	31 Jan 2023	Wind Speed (kts)	3
I19	31 Jan 2023	Wind Dir	SW
I19	31 Jan 2023	Water Color	Greenish-Blue
I19	31 Jan 2023	Wave Ht Low (ft)	3
I19	31 Jan 2023	Wave Period (sec)	11
I19	31 Jan 2023	Sea State	Calm
I19	31 Jan 2023	High Tide (ft)	5.02
I19	31 Jan 2023	High Tide Time	512
I19	31 Jan 2023	Low Tide (ft)	-0.23
I19	31 Jan 2023	Low Tide Time	1300
I19	31 Jan 2023	Comments	none
I24	04 Jan 2023	Depth (m)	10
I24	04 Jan 2023	Arrive Time	1054
I24	04 Jan 2023	Depart Time	1059
I24	04 Jan 2023	Air Temp (C)	15.5
I24	04 Jan 2023	Weather	Drizzle
I24	04 Jan 2023	Visibility (mi)	7
I24	04 Jan 2023	Wind Speed (kts)	7.6
I24	04 Jan 2023	Wind Dir	S
I24	04 Jan 2023	Water Color	Green
I24	04 Jan 2023	Wave Ht Low (ft)	7
I24	04 Jan 2023	Wave Period (sec)	16
I24	04 Jan 2023	Sea State	Confused Swell
I24	04 Jan 2023	High Tide (ft)	20.51
I24	04 Jan 2023	High Tide Time	730
I24	04 Jan 2023	Low Tide (ft)	-2.2
I24	04 Jan 2023	Low Tide Time	1424
I24	04 Jan 2023	Comments	Sewage odor
I24	12 Jan 2023	Depth (m)	11
I24	12 Jan 2023	Arrive Time	1051
I24	12 Jan 2023	Depart Time	1054
I24	12 Jan 2023	Air Temp (C)	16.8
I24	12 Jan 2023	Weather	Clear
I24	12 Jan 2023	Visibility (mi)	11
I24	12 Jan 2023	Wind Speed (kts)	12.5
I24	12 Jan 2023	Wind Dir	NW
I24	12 Jan 2023	Water Color	Brownish-Green

Station	Date	Parameter	Value
I24	12 Jan 2023	Wave Ht Low (ft)	6
I24	12 Jan 2023	Wave Period (sec)	13
I24	12 Jan 2023	Sea State	Regular Swell
I24	12 Jan 2023	High Tide (ft)	14.63
I24	12 Jan 2023	High Tide Time	1130
I24	12 Jan 2023	Low Tide (ft)	2.23
I24	12 Jan 2023	Low Tide Time	1830
I24	12 Jan 2023	Comments	none
I24	18 Jan 2023	Depth (m)	10
I24	18 Jan 2023	Arrive Time	1052
I24	18 Jan 2023	Depart Time	1056
I24	18 Jan 2023	Air Temp (C)	13.7
I24	18 Jan 2023	Weather	Partly Cloudy
I24	18 Jan 2023	Visibility (mi)	10
I24	18 Jan 2023	Wind Speed (kts)	1.1
I24	18 Jan 2023	Wind Dir	NE
I24	18 Jan 2023	Water Color	Brown
I24	18 Jan 2023	Wave Ht Low (ft)	3
I24	18 Jan 2023	Wave Period (sec)	12
I24	18 Jan 2023	Sea State	Confused Swell
I24	18 Jan 2023	High Tide (ft)	22.05
I24	18 Jan 2023	High Tide Time	630
I24	18 Jan 2023	Low Tide (ft)	-2.85
I24	18 Jan 2023	Low Tide Time	1312
I24	18 Jan 2023	Comments	none
I24	24 Jan 2023	Depth (m)	9
I24	24 Jan 2023	Arrive Time	1121
I24	24 Jan 2023	Depart Time	1125
I24	24 Jan 2023	Air Temp (C)	14.5
I24	24 Jan 2023	Weather	Clear
I24	24 Jan 2023	Visibility (mi)	12
I24	24 Jan 2023	Wind Speed (kts)	11.8
I24	24 Jan 2023	Wind Dir	NW
I24	24 Jan 2023	Water Color	Green
I24	24 Jan 2023	Wave Ht Low (ft)	3
I24	24 Jan 2023	Wave Period (sec)	16
I24	24 Jan 2023	Sea State	Light Chop
I24	24 Jan 2023	High Tide (ft)	6.01
I24	24 Jan 2023	High Tide Time	1024
I24	24 Jan 2023	Low Tide (ft)	-1.01
I24	24 Jan 2023	Low Tide Time	1712
I24	24 Jan 2023	Comments	GPS data error, nominal lat and lon recorded
I24	31 Jan 2023	Depth (m)	9
I24	31 Jan 2023	Arrive Time	1124
I24	31 Jan 2023	Depart Time	1131
I24	31 Jan 2023	Air Temp (C)	12.2
I24	31 Jan 2023	Weather	Clear
I24	31 Jan 2023	Visibility (mi)	10
I24	31 Jan 2023	Wind Speed (kts)	5.9
I24	31 Jan 2023	Wind Dir	SW
I24	31 Jan 2023	Water Color	Brown
I24	31 Jan 2023	Wave Ht Low (ft)	3
I24	31 Jan 2023	Wave Period (sec)	11
I24	31 Jan 2023	Sea State	Calm
I24	31 Jan 2023	High Tide (ft)	5.02
I24	31 Jan 2023	High Tide Time	512
I24	31 Jan 2023	Low Tide (ft)	-0.23
I24	31 Jan 2023	Low Tide Time	1300

Station	Date	Parameter	Value
I24	31 Jan 2023	Comments	Foul smell on station
I25	04 Jan 2023	Depth (m)	8
I25	04 Jan 2023	Arrive Time	1059
I25	04 Jan 2023	Depart Time	1105
I25	04 Jan 2023	Air Temp (C)	15.6
I25	04 Jan 2023	Weather	Drizzle
I25	04 Jan 2023	Visibility (mi)	7
I25	04 Jan 2023	Wind Speed (kts)	8
I25	04 Jan 2023	Wind Dir	SW
I25	04 Jan 2023	Water Color	Green
I25	04 Jan 2023	Wave Ht Low (ft)	7
I25	04 Jan 2023	Wave Period (sec)	16
I25	04 Jan 2023	Sea State	Confused Swell
I25	04 Jan 2023	High Tide (ft)	20.51
I25	04 Jan 2023	High Tide Time	730
I25	04 Jan 2023	Low Tide (ft)	-2.2
I25	04 Jan 2023	Low Tide Time	1424
I25	04 Jan 2023	Comments	none
I25	12 Jan 2023	Depth (m)	10
I25	12 Jan 2023	Arrive Time	1059
I25	12 Jan 2023	Depart Time	1101
I25	12 Jan 2023	Air Temp (C)	16.7
I25	12 Jan 2023	Weather	Clear
I25	12 Jan 2023	Visibility (mi)	11
I25	12 Jan 2023	Wind Speed (kts)	7
I25	12 Jan 2023	Wind Dir	N
I25	12 Jan 2023	Water Color	Brownish-Green
I25	12 Jan 2023	Wave Ht Low (ft)	6
I25	12 Jan 2023	Wave Period (sec)	13
I25	12 Jan 2023	Sea State	Regular Swell
I25	12 Jan 2023	High Tide (ft)	14.63
I25	12 Jan 2023	High Tide Time	1130
I25	12 Jan 2023	Low Tide (ft)	2.23
I25	12 Jan 2023	Low Tide Time	1830
I25	12 Jan 2023	Comments	none
I25	18 Jan 2023	Depth (m)	9
I25	18 Jan 2023	Arrive Time	1057
I25	18 Jan 2023	Depart Time	1105
I25	18 Jan 2023	Air Temp (C)	13.4
I25	18 Jan 2023	Weather	Partly Cloudy
I25	18 Jan 2023	Visibility (mi)	10
I25	18 Jan 2023	Wind Speed (kts)	4.5
I25	18 Jan 2023	Wind Dir	NW
I25	18 Jan 2023	Water Color	Brown
I25	18 Jan 2023	Wave Ht Low (ft)	3
I25	18 Jan 2023	Wave Period (sec)	12
I25	18 Jan 2023	Sea State	Confused Swell
I25	18 Jan 2023	High Tide (ft)	22.05
I25	18 Jan 2023	High Tide Time	630
I25	18 Jan 2023	Low Tide (ft)	-2.85
I25	18 Jan 2023	Low Tide Time	1312
I25	18 Jan 2023	Comments	none
I25	24 Jan 2023	Depth (m)	9
I25	24 Jan 2023	Arrive Time	1128
I25	24 Jan 2023	Depart Time	1132
I25	24 Jan 2023	Air Temp (C)	14.1
I25	24 Jan 2023	Weather	Clear

Station	Date	Parameter	Value
I25	24 Jan 2023	Visibility (mi)	12
I25	24 Jan 2023	Wind Speed (kts)	4.8
I25	24 Jan 2023	Wind Dir	NW
I25	24 Jan 2023	Water Color	Green
I25	24 Jan 2023	Wave Ht Low (ft)	3
I25	24 Jan 2023	Wave Period (sec)	16
I25	24 Jan 2023	Sea State	Light Chop
I25	24 Jan 2023	High Tide (ft)	6.01
I25	24 Jan 2023	High Tide Time	1024
I25	24 Jan 2023	Low Tide (ft)	-1.01
I25	24 Jan 2023	Low Tide Time	1712
I25	24 Jan 2023	Comments	GPS data error, nominal lat and lon recorded
I25	31 Jan 2023	Depth (m)	8
I25	31 Jan 2023	Arrive Time	1132
I25	31 Jan 2023	Depart Time	1137
I25	31 Jan 2023	Air Temp (C)	12.4
I25	31 Jan 2023	Weather	Clear
I25	31 Jan 2023	Visibility (mi)	10
I25	31 Jan 2023	Wind Speed (kts)	3.2
I25	31 Jan 2023	Wind Dir	W
I25	31 Jan 2023	Water Color	Brown
I25	31 Jan 2023	Wave Ht Low (ft)	3
I25	31 Jan 2023	Wave Period (sec)	11
I25	31 Jan 2023	Sea State	Calm
I25	31 Jan 2023	High Tide (ft)	5.02
I25	31 Jan 2023	High Tide Time	512
I25	31 Jan 2023	Low Tide (ft)	-0.23
I25	31 Jan 2023	Low Tide Time	1300
I25	31 Jan 2023	Comments	nasty
I26	04 Jan 2023	Depth (m)	8
I26	04 Jan 2023	Arrive Time	1110
I26	04 Jan 2023	Depart Time	1116
I26	04 Jan 2023	Air Temp (C)	15.5
I26	04 Jan 2023	Weather	Drizzle
I26	04 Jan 2023	Visibility (mi)	7
I26	04 Jan 2023	Wind Speed (kts)	7.8
I26	04 Jan 2023	Wind Dir	S
I26	04 Jan 2023	Water Color	Green
I26	04 Jan 2023	Wave Ht Low (ft)	7
I26	04 Jan 2023	Wave Period (sec)	16
I26	04 Jan 2023	Sea State	Confused Swell
I26	04 Jan 2023	High Tide (ft)	20.51
I26	04 Jan 2023	High Tide Time	730
I26	04 Jan 2023	Low Tide (ft)	-2.2
I26	04 Jan 2023	Low Tide Time	1424
I26	04 Jan 2023	Comments	none
I26	12 Jan 2023	Depth (m)	9
I26	12 Jan 2023	Arrive Time	1108
I26	12 Jan 2023	Depart Time	1111
I26	12 Jan 2023	Air Temp (C)	16.6
I26	12 Jan 2023	Weather	Clear
I26	12 Jan 2023	Visibility (mi)	11
I26	12 Jan 2023	Wind Speed (kts)	6.2
I26	12 Jan 2023	Wind Dir	N
I26	12 Jan 2023	Water Color	Brownish-Green
I26	12 Jan 2023	Wave Ht Low (ft)	6
I26	12 Jan 2023	Wave Period (sec)	13
I26	12 Jan 2023	Sea State	Regular Swell

Station	Date	Parameter	Value
I26	12 Jan 2023	High Tide (ft)	14.63
I26	12 Jan 2023	High Tide Time	1130
I26	12 Jan 2023	Low Tide (ft)	2.23
I26	12 Jan 2023	Low Tide Time	1830
I26	12 Jan 2023	Comments	none
I26	18 Jan 2023	Depth (m)	9
I26	18 Jan 2023	Arrive Time	1112
I26	18 Jan 2023	Depart Time	1114
I26	18 Jan 2023	Air Temp (C)	13.5
I26	18 Jan 2023	Weather	Partly Cloudy
I26	18 Jan 2023	Visibility (mi)	10
I26	18 Jan 2023	Wind Speed (kts)	0.1
I26	18 Jan 2023	Wind Dir	W
I26	18 Jan 2023	Water Color	Brown
I26	18 Jan 2023	Wave Ht Low (ft)	3
I26	18 Jan 2023	Wave Period (sec)	12
I26	18 Jan 2023	Sea State	Confused Swell
I26	18 Jan 2023	High Tide (ft)	22.05
I26	18 Jan 2023	High Tide Time	630
I26	18 Jan 2023	Low Tide (ft)	-2.85
I26	18 Jan 2023	Low Tide Time	1312
I26	18 Jan 2023	Comments	none
I26	24 Jan 2023	Depth (m)	9
I26	24 Jan 2023	Arrive Time	1138
I26	24 Jan 2023	Depart Time	1141
I26	24 Jan 2023	Air Temp (C)	14
I26	24 Jan 2023	Weather	Clear
I26	24 Jan 2023	Visibility (mi)	12
I26	24 Jan 2023	Wind Speed (kts)	5.1
I26	24 Jan 2023	Wind Dir	NW
I26	24 Jan 2023	Water Color	Green
I26	24 Jan 2023	Wave Ht Low (ft)	3
I26	24 Jan 2023	Wave Period (sec)	16
I26	24 Jan 2023	Sea State	Light Chop
I26	24 Jan 2023	High Tide (ft)	6.01
I26	24 Jan 2023	High Tide Time	1024
I26	24 Jan 2023	Low Tide (ft)	-1.01
I26	24 Jan 2023	Low Tide Time	1712
I26	24 Jan 2023	Comments	GPS data error, nominal lat and lon recorded
I26	31 Jan 2023	Depth (m)	8
I26	31 Jan 2023	Arrive Time	1143
I26	31 Jan 2023	Depart Time	1147
I26	31 Jan 2023	Air Temp (C)	12.5
I26	31 Jan 2023	Weather	Clear
I26	31 Jan 2023	Visibility (mi)	10
I26	31 Jan 2023	Wind Speed (kts)	6.7
I26	31 Jan 2023	Wind Dir	W
I26	31 Jan 2023	Water Color	Brownish-Green
I26	31 Jan 2023	Wave Ht Low (ft)	3
I26	31 Jan 2023	Wave Period (sec)	11
I26	31 Jan 2023	Sea State	Calm
I26	31 Jan 2023	High Tide (ft)	5.02
I26	31 Jan 2023	High Tide Time	512
I26	31 Jan 2023	Low Tide (ft)	-0.23
I26	31 Jan 2023	Low Tide Time	1300
I26	31 Jan 2023	Comments	less nasty
I32	04 Jan 2023	Depth (m)	10



Station	Date	Parameter	Value
I32	04 Jan 2023	Arrive Time	1123
I32	04 Jan 2023	Depart Time	1130
I32	04 Jan 2023	Air Temp (C)	15.5
I32	04 Jan 2023	Weather	Drizzle
I32	04 Jan 2023	Visibility (mi)	7
I32	04 Jan 2023	Wind Speed (kts)	11.6
I32	04 Jan 2023	Wind Dir	SW
I32	04 Jan 2023	Water Color	Green
I32	04 Jan 2023	Wave Ht Low (ft)	7
I32	04 Jan 2023	Wave Period (sec)	16
I32	04 Jan 2023	Sea State	Confused Swell
I32	04 Jan 2023	High Tide (ft)	20.51
I32	04 Jan 2023	High Tide Time	730
I32	04 Jan 2023	Low Tide (ft)	-2.2
I32	04 Jan 2023	Low Tide Time	1424
I32	04 Jan 2023	Comments	none
I32	12 Jan 2023	Depth (m)	10
I32	12 Jan 2023	Arrive Time	1119
I32	12 Jan 2023	Depart Time	1122
I32	12 Jan 2023	Air Temp (C)	16.9
I32	12 Jan 2023	Weather	Clear
I32	12 Jan 2023	Visibility (mi)	10
I32	12 Jan 2023	Wind Speed (kts)	10.2
I32	12 Jan 2023	Wind Dir	N
I32	12 Jan 2023	Water Color	Brownish-Green
I32	12 Jan 2023	Wave Ht Low (ft)	6
I32	12 Jan 2023	Wave Period (sec)	13
I32	12 Jan 2023	Sea State	Regular Swell
I32	12 Jan 2023	High Tide (ft)	14.63
I32	12 Jan 2023	High Tide Time	1130
I32	12 Jan 2023	Low Tide (ft)	2.23
I32	12 Jan 2023	Low Tide Time	1830
I32	12 Jan 2023	Comments	none
I32	18 Jan 2023	Depth (m)	9
I32	18 Jan 2023	Arrive Time	1123
I32	18 Jan 2023	Depart Time	1127
I32	18 Jan 2023	Air Temp (C)	13.6
I32	18 Jan 2023	Weather	Partly Cloudy
I32	18 Jan 2023	Visibility (mi)	10
I32	18 Jan 2023	Wind Speed (kts)	4.5
I32	18 Jan 2023	Wind Dir	NW
I32	18 Jan 2023	Water Color	Brown
I32	18 Jan 2023	Wave Ht Low (ft)	3
I32	18 Jan 2023	Wave Period (sec)	12
I32	18 Jan 2023	Sea State	Confused Swell
I32	18 Jan 2023	High Tide (ft)	22.05
I32	18 Jan 2023	High Tide Time	630
I32	18 Jan 2023	Low Tide (ft)	-2.85
I32	18 Jan 2023	Low Tide Time	1312
I32	18 Jan 2023	Comments	none
I32	24 Jan 2023	Depth (m)	10
I32	24 Jan 2023	Arrive Time	1151
I32	24 Jan 2023	Depart Time	1155
I32	24 Jan 2023	Air Temp (C)	14
I32	24 Jan 2023	Weather	Clear
I32	24 Jan 2023	Visibility (mi)	12
I32	24 Jan 2023	Wind Speed (kts)	4.8
I32	24 Jan 2023	Wind Dir	W

Station	Date	Parameter	Value
I32	24 Jan 2023	Water Color	Green
I32	24 Jan 2023	Wave Ht Low (ft)	3
I32	24 Jan 2023	Wave Period (sec)	16
I32	24 Jan 2023	Sea State	Light Chop
I32	24 Jan 2023	High Tide (ft)	6.01
I32	24 Jan 2023	High Tide Time	1024
I32	24 Jan 2023	Low Tide (ft)	-1.01
I32	24 Jan 2023	Low Tide Time	1712
I32	24 Jan 2023	Comments	GPS data error, nominal lat and lon recorded
I32	31 Jan 2023	Depth (m)	9
I32	31 Jan 2023	Arrive Time	1154
I32	31 Jan 2023	Depart Time	1158
I32	31 Jan 2023	Air Temp (C)	12.5
I32	31 Jan 2023	Weather	Clear
I32	31 Jan 2023	Visibility (mi)	10
I32	31 Jan 2023	Wind Speed (kts)	6.7
I32	31 Jan 2023	Wind Dir	W
I32	31 Jan 2023	Water Color	Blueish-Green
I32	31 Jan 2023	Wave Ht Low (ft)	3
I32	31 Jan 2023	Wave Period (sec)	11
I32	31 Jan 2023	Sea State	Calm
I32	31 Jan 2023	High Tide (ft)	5.02
I32	31 Jan 2023	High Tide Time	512
I32	31 Jan 2023	Low Tide (ft)	-0.23
I32	31 Jan 2023	Low Tide Time	1300
I32	31 Jan 2023	Comments	none
I39	04 Jan 2023	Depth (m)	19
I39	04 Jan 2023	Arrive Time	1013
I39	04 Jan 2023	Depart Time	1017
I39	04 Jan 2023	Air Temp (C)	15.4
I39	04 Jan 2023	Weather	Drizzle
I39	04 Jan 2023	Visibility (mi)	7
I39	04 Jan 2023	Wind Speed (kts)	7.9
I39	04 Jan 2023	Wind Dir	S
I39	04 Jan 2023	Water Color	Green
I39	04 Jan 2023	Wave Ht Low (ft)	7
I39	04 Jan 2023	Wave Period (sec)	16
I39	04 Jan 2023	Sea State	Confused Swell
I39	04 Jan 2023	High Tide (ft)	20.51
I39	04 Jan 2023	High Tide Time	730
I39	04 Jan 2023	Low Tide (ft)	-2.2
I39	04 Jan 2023	Low Tide Time	1424
I39	04 Jan 2023	Comments	none
I39	12 Jan 2023	Depth (m)	21
I39	12 Jan 2023	Arrive Time	1008
I39	12 Jan 2023	Depart Time	1010
I39	12 Jan 2023	Air Temp (C)	15.6
I39	12 Jan 2023	Weather	Clear
I39	12 Jan 2023	Visibility (mi)	11
I39	12 Jan 2023	Wind Speed (kts)	4.9
I39	12 Jan 2023	Wind Dir	N
I39	12 Jan 2023	Water Color	Green
I39	12 Jan 2023	Wave Ht Low (ft)	6
I39	12 Jan 2023	Wave Period (sec)	13
I39	12 Jan 2023	Sea State	Regular Swell
I39	12 Jan 2023	High Tide (ft)	14.63
I39	12 Jan 2023	High Tide Time	1130
I39	12 Jan 2023	Low Tide (ft)	2.23

Station	Date	Parameter	Value
I39	12 Jan 2023	Low Tide Time	1830
I39	12 Jan 2023	Comments	none
I39	18 Jan 2023	Depth (m)	18
I39	18 Jan 2023	Arrive Time	1007
I39	18 Jan 2023	Depart Time	1011
I39	18 Jan 2023	Air Temp (C)	12.8
I39	18 Jan 2023	Weather	Partly Cloudy
I39	18 Jan 2023	Visibility (mi)	10
I39	18 Jan 2023	Wind Speed (kts)	6.5
I39	18 Jan 2023	Wind Dir	SE
I39	18 Jan 2023	Water Color	Brownish-Green
I39	18 Jan 2023	Wave Ht Low (ft)	3
I39	18 Jan 2023	Wave Period (sec)	12
I39	18 Jan 2023	Sea State	Confused Swell
I39	18 Jan 2023	High Tide (ft)	22.05
I39	18 Jan 2023	High Tide Time	630
I39	18 Jan 2023	Low Tide (ft)	-2.85
I39	18 Jan 2023	Low Tide Time	1312
I39	18 Jan 2023	Comments	none
I39	24 Jan 2023	Depth (m)	18
I39	24 Jan 2023	Arrive Time	1038
I39	24 Jan 2023	Depart Time	1042
I39	24 Jan 2023	Air Temp (C)	14.4
I39	24 Jan 2023	Weather	Clear
I39	24 Jan 2023	Visibility (mi)	12
I39	24 Jan 2023	Wind Speed (kts)	4.4
I39	24 Jan 2023	Wind Dir	NE
I39	24 Jan 2023	Water Color	Greenish-Blue
I39	24 Jan 2023	Wave Ht Low (ft)	3
I39	24 Jan 2023	Wave Period (sec)	16
I39	24 Jan 2023	Sea State	Light Chop
I39	24 Jan 2023	High Tide (ft)	6.01
I39	24 Jan 2023	High Tide Time	1024
I39	24 Jan 2023	Low Tide (ft)	-1.01
I39	24 Jan 2023	Low Tide Time	1712
I39	24 Jan 2023	Comments	GPS data error, nominal lat and lon recorded
I39	31 Jan 2023	Depth (m)	19
I39	31 Jan 2023	Arrive Time	1040
I39	31 Jan 2023	Depart Time	1044
I39	31 Jan 2023	Air Temp (C)	11.7
I39	31 Jan 2023	Weather	Clear
I39	31 Jan 2023	Visibility (mi)	10
I39	31 Jan 2023	Wind Speed (kts)	4.6
I39	31 Jan 2023	Wind Dir	SE
I39	31 Jan 2023	Water Color	Greenish-Blue
I39	31 Jan 2023	Wave Ht Low (ft)	3
I39	31 Jan 2023	Wave Period (sec)	11
I39	31 Jan 2023	Sea State	Calm
I39	31 Jan 2023	High Tide (ft)	5.02
I39	31 Jan 2023	High Tide Time	512
I39	31 Jan 2023	Low Tide (ft)	-0.23
I39	31 Jan 2023	Low Tide Time	1300
I39	31 Jan 2023	Comments	none
I40	04 Jan 2023	Depth (m)	10
I40	04 Jan 2023	Arrive Time	1047
I40	04 Jan 2023	Depart Time	1052
I40	04 Jan 2023	Air Temp (C)	15.4

Station	Date	Parameter	Value
I40	04 Jan 2023	Weather	Drizzle
I40	04 Jan 2023	Visibility (mi)	7
I40	04 Jan 2023	Wind Speed (kts)	7.1
I40	04 Jan 2023	Wind Dir	S
I40	04 Jan 2023	Water Color	Other (see comment)
I40	04 Jan 2023	Wave Ht Low (ft)	7
I40	04 Jan 2023	Wave Period (sec)	16
I40	04 Jan 2023	Sea State	Confused Swell
I40	04 Jan 2023	High Tide (ft)	20.51
I40	04 Jan 2023	High Tide Time	730
I40	04 Jan 2023	Low Tide (ft)	-2.2
I40	04 Jan 2023	Low Tide Time	1424
I40	04 Jan 2023	Comments	Opaque Green water; sewage odor; Possible Freshwater Lens
I40	12 Jan 2023	Depth (m)	10
I40	12 Jan 2023	Arrive Time	1043
I40	12 Jan 2023	Depart Time	1046
I40	12 Jan 2023	Air Temp (C)	17.7
I40	12 Jan 2023	Weather	Clear
I40	12 Jan 2023	Visibility (mi)	11
I40	12 Jan 2023	Wind Speed (kts)	15.3
I40	12 Jan 2023	Wind Dir	NW
I40	12 Jan 2023	Water Color	Brown
I40	12 Jan 2023	Wave Ht Low (ft)	6
I40	12 Jan 2023	Wave Period (sec)	13
I40	12 Jan 2023	Sea State	Regular Swell
I40	12 Jan 2023	High Tide (ft)	14.63
I40	12 Jan 2023	High Tide Time	1130
I40	12 Jan 2023	Low Tide (ft)	2.23
I40	12 Jan 2023	Low Tide Time	1830
I40	12 Jan 2023	Comments	none
I40	18 Jan 2023	Depth (m)	9
I40	18 Jan 2023	Arrive Time	1043
I40	18 Jan 2023	Depart Time	1049
I40	18 Jan 2023	Air Temp (C)	13.5
I40	18 Jan 2023	Weather	Partly Cloudy
I40	18 Jan 2023	Visibility (mi)	10
I40	18 Jan 2023	Wind Speed (kts)	1.8
I40	18 Jan 2023	Wind Dir	NE
I40	18 Jan 2023	Water Color	Brown
I40	18 Jan 2023	Wave Ht Low (ft)	3
I40	18 Jan 2023	Wave Period (sec)	12
I40	18 Jan 2023	Sea State	Confused Swell
I40	18 Jan 2023	High Tide (ft)	22.05
I40	18 Jan 2023	High Tide Time	630
I40	18 Jan 2023	Low Tide (ft)	-2.85
I40	18 Jan 2023	Low Tide Time	1312
I40	18 Jan 2023	Comments	Fresh water lens at surface. Surface wat color brown opaque.
I40	24 Jan 2023	Depth (m)	10
I40	24 Jan 2023	Arrive Time	1112
I40	24 Jan 2023	Depart Time	1119
I40	24 Jan 2023	Air Temp (C)	15.8
I40	24 Jan 2023	Weather	Clear
I40	24 Jan 2023	Visibility (mi)	12
I40	24 Jan 2023	Wind Speed (kts)	0
I40	24 Jan 2023	Wind Dir	N
I40	24 Jan 2023	Water Color	Green
I40	24 Jan 2023	Wave Ht Low (ft)	3

Station	Date	Parameter	Value
I40	24 Jan 2023	Wave Period (sec)	16
I40	24 Jan 2023	Sea State	Light Chop
I40	24 Jan 2023	High Tide (ft)	6.01
I40	24 Jan 2023	High Tide Time	1024
I40	24 Jan 2023	Low Tide (ft)	-1.01
I40	24 Jan 2023	Low Tide Time	1712
I40	24 Jan 2023	Comments	GPS data error, nominal lat and lon recorded
I40	31 Jan 2023	Depth (m)	9
I40	31 Jan 2023	Arrive Time	1115
I40	31 Jan 2023	Depart Time	1120
I40	31 Jan 2023	Air Temp (C)	12.1
I40	31 Jan 2023	Weather	Clear
I40	31 Jan 2023	Visibility (mi)	10
I40	31 Jan 2023	Wind Speed (kts)	5.1
I40	31 Jan 2023	Wind Dir	W
I40	31 Jan 2023	Water Color	Brown
I40	31 Jan 2023	Wave Ht Low (ft)	3
I40	31 Jan 2023	Wave Period (sec)	11
I40	31 Jan 2023	Sea State	Calm
I40	31 Jan 2023	High Tide (ft)	5.02
I40	31 Jan 2023	High Tide Time	512
I40	31 Jan 2023	Low Tide (ft)	-0.23
I40	31 Jan 2023	Low Tide Time	1300
I40	31 Jan 2023	Comments	Foul smell on station

**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 ( $\sigma$ -t)	Chlor ( $\mu$ g/L)
I19	04 Jan 2023	1	15.05	31.06	8.2	33.24	8.1	24.6	1.44
I19	04 Jan 2023	2	15.03	30.90	8.2	33.24	8.1	24.6	1.64
I19	04 Jan 2023	3	14.97	31.36	8.1	33.25	8.1	24.6	1.72
I19	04 Jan 2023	4	14.98	33.05	8.1	33.24	8.1	24.6	1.75
I19	04 Jan 2023	5	14.97	33.54	8.1	33.24	8.1	24.6	1.67
I19	04 Jan 2023	6	14.95	33.90	8.1	33.25	8.1	24.6	1.64
I19	04 Jan 2023	7	14.94	35.10	8.0	33.25	8.1	24.6	1.55
I19	04 Jan 2023	8	14.94	36.36	8.0	33.25	8.1	24.6	1.52
I19	04 Jan 2023	9	14.94	35.96	8.0	33.24	8.1	24.6	1.45
I19	04 Jan 2023	10	14.93	36.42	8.0	33.25	8.1	24.6	1.41
I19	12 Jan 2023	1	15.01	16.88	8.4	33.30	8.1	24.7	1.40
I19	12 Jan 2023	2	15.00	16.28	8.4	33.31	8.1	24.7	1.53
I19	12 Jan 2023	3	15.00	16.06	8.3	33.31	8.1	24.7	1.59
I19	12 Jan 2023	4	14.99	16.41	8.2	33.31	8.1	24.7	1.61
I19	12 Jan 2023	5	14.99	15.52	8.2	33.31	8.1	24.7	1.59
I19	12 Jan 2023	6	14.99	12.70	8.2	33.31	8.1	24.7	1.60
I19	12 Jan 2023	7	14.98	13.59	8.1	33.32	8.1	24.7	1.71
I19	12 Jan 2023	8	14.98	10.27	8.1	33.32	8.1	24.7	1.75
I19	12 Jan 2023	9	14.98	7.62	8.1	33.32	8.1	24.7	1.77
I19	12 Jan 2023	10	14.98	8.50	8.1	33.32	8.1	24.7	1.78
I19	18 Jan 2023	1	14.86	11.51	7.9	32.76	8.1	24.3	1.05
I19	18 Jan 2023	2	14.84	12.02	7.8	32.83	8.1	24.3	1.09
I19	18 Jan 2023	3	14.82	14.88	7.8	32.93	8.1	24.4	1.09
I19	18 Jan 2023	4	14.84	19.01	7.7	33.02	8.1	24.5	1.03
I19	18 Jan 2023	5	14.98	21.46	7.5	33.17	8.1	24.6	0.94
I19	18 Jan 2023	6	15.00	30.54	7.5	33.21	8.1	24.6	0.92
I19	18 Jan 2023	7	14.96	32.89	7.5	33.29	8.1	24.7	0.94
I19	18 Jan 2023	8	14.93	37.19	7.5	33.30	8.1	24.7	1.00
I19	18 Jan 2023	9	14.93	32.11	7.4	33.31	8.1	24.7	1.04
I19	18 Jan 2023	10	14.93	10.48	7.2	33.30	8.1	24.7	1.06
I19	24 Jan 2023	1	13.98	24.64	8.1	33.05	8.0	24.7	0.84
I19	24 Jan 2023	2	13.84	24.58	7.8	33.12	8.0	24.8	1.06
I19	24 Jan 2023	3	13.71	23.81	7.2	33.24	8.0	24.9	1.31
I19	24 Jan 2023	4	13.76	22.71	6.9	33.29	8.0	24.9	1.27
I19	24 Jan 2023	5	13.72	34.25	6.7	33.32	8.0	24.9	1.19
I19	24 Jan 2023	6	13.64	43.05	6.4	33.34	8.0	25.0	1.07
I19	24 Jan 2023	7	13.46	44.91	6.2	33.37	8.0	25.0	1.02
I19	24 Jan 2023	8	13.38	36.40	6.0	33.38	8.0	25.1	0.95
I19	24 Jan 2023	9	13.37	24.79	5.9	33.38	8.0	25.1	0.96
I19	24 Jan 2023	10	13.38	15.19	5.9	33.38	8.0	25.1	0.99
I19	31 Jan 2023	1	14.04	56.96	8.5	33.09	8.1	24.7	1.32
I19	31 Jan 2023	2	14.01	57.11	8.5	33.12	8.1	24.7	1.10
I19	31 Jan 2023	3	13.97	56.76	8.5	33.15	8.1	24.8	1.52
I19	31 Jan 2023	4	13.94	55.06	8.5	33.18	8.1	24.8	2.05
I19	31 Jan 2023	5	13.90	56.14	8.4	33.20	8.1	24.8	2.39
I19	31 Jan 2023	6	13.89	59.73	8.4	33.21	8.1	24.8	2.50
I19	31 Jan 2023	7	13.90	61.64	8.4	33.22	8.1	24.8	2.43
I19	31 Jan 2023	8	13.93	62.08	8.4	33.25	8.1	24.8	2.15
I19	31 Jan 2023	9	13.96	62.77	8.3	33.27	8.1	24.9	2.32
I19	31 Jan 2023	10	13.96	64.98	8.2	33.26	8.1	24.9	2.29

Station	Date	Depth (m)	Temp (°C)	XMS (‰)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (µg/L)
I24	04 Jan 2023	1	15.03	44.84	7.9	33.26	8.1	24.6	1.01
I24	04 Jan 2023	2	15.02	44.13	7.9	33.26	8.1	24.6	1.12
I24	04 Jan 2023	3	15.00	44.39	7.9	33.26	8.1	24.6	1.39
I24	04 Jan 2023	4	14.94	42.67	7.9	33.26	8.1	24.6	1.47
I24	04 Jan 2023	5	14.94	40.11	7.8	33.26	8.1	24.6	1.37
I24	04 Jan 2023	6	14.94	37.13	7.8	33.26	8.1	24.6	1.37
I24	04 Jan 2023	7	14.93	35.27	7.8	33.26	8.1	24.6	1.32
I24	04 Jan 2023	8	14.93	28.14	7.7	33.26	8.1	24.6	1.26
I24	04 Jan 2023	9	14.94	18.29	7.8	33.26	8.1	24.6	1.34
I24	04 Jan 2023	10	14.93	13.92	7.7	33.26	8.1	24.6	1.30
I24	12 Jan 2023	1	15.15	25.97	8.3	33.34	8.1	24.7	1.34
I24	12 Jan 2023	2	15.04	25.59	8.3	33.34	8.1	24.7	1.64
I24	12 Jan 2023	3	14.98	24.44	8.2	33.34	8.1	24.7	1.63
I24	12 Jan 2023	4	14.98	22.57	8.2	33.34	8.1	24.7	1.59
I24	12 Jan 2023	5	14.97	21.18	8.2	33.34	8.1	24.7	1.57
I24	12 Jan 2023	6	14.98	20.66	8.1	33.34	8.1	24.7	1.53
I24	12 Jan 2023	7	14.98	19.24	8.2	33.34	8.1	24.7	1.50
I24	12 Jan 2023	8	14.98	18.53	8.2	33.34	8.1	24.7	1.53
I24	12 Jan 2023	9	14.98	17.10	8.2	33.34	8.1	24.7	1.58
I24	12 Jan 2023	10	14.97	13.84	8.1	33.34	8.1	24.7	1.64
I24	12 Jan 2023	11	14.97	9.27	8.2	33.34	8.1	24.7	1.79
I24	18 Jan 2023	1	14.61	20.95	8.1	32.49	8.1	24.1	1.62
I24	18 Jan 2023	2	14.59	19.79	8.1	32.55	8.1	24.2	1.70
I24	18 Jan 2023	3	14.55	18.97	8.1	32.65	8.1	24.3	1.71
I24	18 Jan 2023	4	14.58	20.74	8.0	32.77	8.1	24.3	1.56
I24	18 Jan 2023	5	14.63	20.29	8.0	32.87	8.1	24.4	1.45
I24	18 Jan 2023	6	14.66	17.07	8.1	32.97	8.1	24.5	1.48
I24	18 Jan 2023	7	14.68	6.98	8.1	33.00	8.1	24.5	1.51
I24	18 Jan 2023	8	14.69	2.56	8.0	33.00	8.1	24.5	1.52
I24	18 Jan 2023	9	14.72	1.43	7.9	33.01	8.1	24.5	1.53
I24	24 Jan 2023	1	13.95	45.66	7.7	33.13	8.0	24.8	1.14
I24	24 Jan 2023	2	13.91	44.55	7.7	33.15	8.0	24.8	1.43
I24	24 Jan 2023	3	13.85	42.04	7.6	33.16	8.0	24.8	1.85
I24	24 Jan 2023	4	13.82	44.56	7.4	33.19	8.0	24.8	1.76
I24	24 Jan 2023	5	13.74	43.80	7.0	33.26	8.0	24.9	1.59
I24	24 Jan 2023	6	13.65	41.18	6.6	33.31	8.0	25.0	1.32
I24	24 Jan 2023	7	13.54	36.21	6.2	33.34	8.0	25.0	1.19
I24	24 Jan 2023	8	13.46	29.99	5.9	33.37	8.0	25.0	1.10
I24	24 Jan 2023	9	13.42	21.82	5.8	33.38	8.0	25.1	1.10
I24	24 Jan 2023	10	13.40	9.66	5.7	33.38	8.0	25.1	1.11
I24	31 Jan 2023	1	13.95	71.98	8.4	33.03	8.1	24.7	1.94
I24	31 Jan 2023	2	13.95	71.84	8.5	33.24	8.2	24.8	2.17
I24	31 Jan 2023	3	13.95	74.49	8.4	33.26	8.2	24.9	2.31
I24	31 Jan 2023	4	13.94	76.00	8.4	33.26	8.1	24.9	2.52
I24	31 Jan 2023	5	13.93	77.78	8.4	33.26	8.1	24.9	2.64
I24	31 Jan 2023	6	13.93	76.99	8.3	33.27	8.1	24.9	2.58
I24	31 Jan 2023	7	13.94	74.92	8.2	33.28	8.1	24.9	2.67
I24	31 Jan 2023	8	13.95	73.24	8.2	33.28	8.1	24.9	2.30
I24	31 Jan 2023	9	13.95	67.21	8.2	33.29	8.1	24.9	2.25
I25	04 Jan 2023	1	15.06	43.56	7.9	33.26	8.1	24.6	1.00
I25	04 Jan 2023	2	15.04	42.72	7.9	33.26	8.1	24.6	1.29
I25	04 Jan 2023	3	15.03	41.54	7.9	33.26	8.1	24.6	1.62
I25	04 Jan 2023	4	15.00	41.47	7.9	33.26	8.1	24.6	1.62
I25	04 Jan 2023	5	14.96	40.47	7.8	33.26	8.1	24.6	1.51
I25	04 Jan 2023	6	14.95	40.04	7.8	33.26	8.1	24.6	1.39
I25	04 Jan 2023	7	14.93	36.03	7.7	33.27	8.1	24.6	1.34

Station	Date	Depth (m)	Temp (°C)	XMS (‰)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (µg/L)
I25	04 Jan 2023	8	14.94	24.14	7.7	33.27	8.1	24.6	1.33
I25	04 Jan 2023	9	14.93	19.48	7.7	33.27	8.1	24.6	1.29
I25	12 Jan 2023	1	15.10	32.48	8.1	33.34	8.1	24.7	1.25
I25	12 Jan 2023	2	15.06	31.69	8.1	33.34	8.1	24.7	1.40
I25	12 Jan 2023	3	15.01	32.65	8.0	33.34	8.1	24.7	1.58
I25	12 Jan 2023	4	14.98	32.42	7.9	33.35	8.1	24.7	1.48
I25	12 Jan 2023	5	14.97	30.73	7.8	33.35	8.1	24.7	1.35
I25	12 Jan 2023	6	14.97	27.19	7.8	33.35	8.1	24.7	1.30
I25	12 Jan 2023	7	14.97	22.45	7.7	33.35	8.1	24.7	1.33
I25	12 Jan 2023	8	14.97	17.17	7.8	33.35	8.1	24.7	1.37
I25	12 Jan 2023	9	14.97	12.81	7.8	33.35	8.1	24.7	1.55
I25	18 Jan 2023	1	14.71	16.57	8.2	32.94	8.1	24.4	1.14
I25	18 Jan 2023	2	14.70	16.54	8.2	32.95	8.1	24.5	1.28
I25	18 Jan 2023	3	14.70	15.79	8.1	32.95	8.1	24.5	1.36
I25	18 Jan 2023	4	14.66	15.10	8.1	32.96	8.1	24.5	1.41
I25	18 Jan 2023	5	14.63	14.01	8.1	32.97	8.1	24.5	1.48
I25	18 Jan 2023	6	14.64	6.81	7.9	32.98	8.1	24.5	1.48
I25	18 Jan 2023	7	14.69	5.66	7.7	33.00	8.1	24.5	1.62
I25	18 Jan 2023	8	14.73	0.98	7.5	33.01	8.1	24.5	1.80
I25	18 Jan 2023	9	14.76	0.45	7.5	33.02	8.1	24.5	1.91
I25	24 Jan 2023	1	14.01	41.72	7.7	33.20	8.0	24.8	0.88
I25	24 Jan 2023	2	13.96	41.57	7.6	33.19	8.0	24.8	1.01
I25	24 Jan 2023	3	13.90	40.25	7.6	33.19	8.0	24.8	1.27
I25	24 Jan 2023	4	13.80	38.38	7.5	33.19	8.0	24.8	1.53
I25	24 Jan 2023	5	13.74	37.95	7.4	33.20	8.0	24.8	1.65
I25	24 Jan 2023	6	13.73	38.37	7.3	33.24	8.0	24.9	1.70
I25	24 Jan 2023	7	13.73	39.46	7.2	33.25	8.0	24.9	1.60
I25	24 Jan 2023	8	13.66	40.25	6.7	33.32	8.0	25.0	1.38
I25	24 Jan 2023	9	13.54	40.70	6.1	33.37	8.0	25.0	1.09
I25	31 Jan 2023	1	14.02	44.18	8.5	32.77	8.1	24.5	1.37
I25	31 Jan 2023	2	13.94	45.38	8.5	33.05	8.1	24.7	1.61
I25	31 Jan 2023	3	13.90	52.64	8.5	33.23	8.1	24.8	2.43
I25	31 Jan 2023	4	13.94	61.58	8.4	33.26	8.1	24.9	2.27
I25	31 Jan 2023	5	13.94	72.40	8.4	33.27	8.1	24.9	2.63
I25	31 Jan 2023	6	13.96	72.60	8.3	33.28	8.1	24.9	2.77
I25	31 Jan 2023	7	13.96	70.86	8.2	33.29	8.1	24.9	2.51
I25	31 Jan 2023	8	13.96	69.21	8.1	33.29	8.1	24.9	2.21
I26	04 Jan 2023	1	15.04	39.64	7.9	33.19	8.1	24.6	0.81
I26	04 Jan 2023	2	15.04	39.50	7.9	33.19	8.1	24.6	0.89
I26	04 Jan 2023	3	15.04	38.71	7.9	33.19	8.1	24.6	1.09
I26	04 Jan 2023	4	14.99	38.46	7.9	33.19	8.1	24.6	1.16
I26	04 Jan 2023	5	14.97	39.97	7.8	33.19	8.1	24.6	1.14
I26	04 Jan 2023	6	14.96	40.60	7.8	33.19	8.1	24.6	1.11
I26	04 Jan 2023	7	14.96	41.77	7.7	33.19	8.1	24.6	1.03
I26	04 Jan 2023	8	14.98	37.73	7.6	33.22	8.1	24.6	1.12
I26	04 Jan 2023	9	14.98	21.90	7.4	33.23	8.1	24.6	1.25
I26	12 Jan 2023	1	15.22	28.36	8.3	33.32	8.1	24.6	1.41
I26	12 Jan 2023	2	15.11	26.91	8.3	33.32	8.1	24.7	1.99
I26	12 Jan 2023	3	15.01	26.96	8.2	33.32	8.1	24.7	2.08
I26	12 Jan 2023	4	14.95	25.34	8.1	33.32	8.1	24.7	1.73
I26	12 Jan 2023	5	14.96	26.88	8.0	33.32	8.1	24.7	1.50
I26	12 Jan 2023	6	14.95	33.51	7.7	33.34	8.1	24.7	1.31
I26	12 Jan 2023	7	14.94	36.78	7.4	33.36	8.1	24.7	1.17
I26	12 Jan 2023	8	14.95	32.87	7.3	33.36	8.1	24.7	1.13
I26	12 Jan 2023	9	14.96	22.50	7.2	33.36	8.1	24.7	1.33



Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens ( $\sigma$ -t)	Chlor ( $\mu$ g/L)
I26	18 Jan 2023	1	14.85	36.84	8.0	33.06	8.1	24.5	0.94
I26	18 Jan 2023	2	14.84	37.39	8.0	33.06	8.1	24.5	1.02
I26	18 Jan 2023	3	14.71	39.87	7.9	33.06	8.1	24.5	1.43
I26	18 Jan 2023	4	14.76	41.85	7.8	33.12	8.1	24.6	1.41
I26	18 Jan 2023	5	14.88	27.26	7.5	33.20	8.1	24.6	1.28
I26	18 Jan 2023	6	14.90	3.03	7.4	33.21	8.1	24.6	1.37
I26	18 Jan 2023	7	14.89	1.38	7.4	33.20	8.1	24.6	1.59
I26	18 Jan 2023	8	14.89	0.30	7.4	33.20	8.1	24.6	1.67
I26	18 Jan 2023	9	14.88	0.14	7.4	33.19	8.1	24.6	1.72
I26	24 Jan 2023	1	14.06	57.72	7.5	33.30	8.0	24.9	0.66
I26	24 Jan 2023	2	14.06	54.98	7.5	33.30	8.0	24.9	0.73
I26	24 Jan 2023	3	14.05	55.47	7.4	33.30	8.0	24.9	0.84
I26	24 Jan 2023	4	13.98	57.10	7.4	33.30	8.0	24.9	1.02
I26	24 Jan 2023	5	13.98	57.59	7.4	33.30	8.0	24.9	1.16
I26	24 Jan 2023	6	13.81	57.63	7.4	33.30	8.0	24.9	1.50
I26	24 Jan 2023	7	13.76	57.95	7.3	33.30	8.1	24.9	1.69
I26	24 Jan 2023	8	13.72	59.16	7.3	33.30	8.0	24.9	1.60
I26	24 Jan 2023	9	13.71	59.00	7.1	33.30	8.0	24.9	1.51
I26	31 Jan 2023	1	14.26	61.30	8.5	33.12	8.1	24.7	1.27
I26	31 Jan 2023	2	14.13	61.78	8.5	33.20	8.1	24.8	1.64
I26	31 Jan 2023	3	14.09	48.62	8.5	33.23	8.1	24.8	2.73
I26	31 Jan 2023	4	14.02	52.74	8.5	33.25	8.1	24.8	3.26
I26	31 Jan 2023	5	13.97	57.26	8.4	33.26	8.1	24.9	3.24
I26	31 Jan 2023	6	13.95	59.73	8.3	33.27	8.1	24.9	2.95
I26	31 Jan 2023	7	13.95	67.82	8.3	33.27	8.1	24.9	2.68
I26	31 Jan 2023	8	13.95	66.83	8.2	33.28	8.1	24.9	2.25
I26	31 Jan 2023	9	13.95	63.80	8.1	33.28	8.1	24.9	2.19
I32	04 Jan 2023	1	15.04	49.67	8.1	33.06	8.1	24.5	1.36
I32	04 Jan 2023	2	15.04	49.49	8.1	33.06	8.1	24.5	1.52
I32	04 Jan 2023	3	15.03	49.59	8.1	33.06	8.1	24.5	1.84
I32	04 Jan 2023	4	14.98	49.18	8.1	33.07	8.1	24.5	1.81
I32	04 Jan 2023	5	14.91	41.50	8.0	33.09	8.1	24.5	1.44
I32	04 Jan 2023	6	14.91	29.41	8.0	33.09	8.1	24.5	1.30
I32	04 Jan 2023	7	14.91	24.95	7.8	33.12	8.1	24.5	1.25
I32	04 Jan 2023	8	14.90	18.21	7.7	33.12	8.1	24.5	1.34
I32	04 Jan 2023	9	14.84	8.90	7.5	33.16	8.1	24.6	1.38
I32	12 Jan 2023	1	15.07	22.79	8.2	33.31	8.1	24.7	1.47
I32	12 Jan 2023	2	14.99	22.65	8.1	33.31	8.1	24.7	1.89
I32	12 Jan 2023	3	14.93	22.38	8.0	33.31	8.1	24.7	2.22
I32	12 Jan 2023	4	14.92	23.05	8.0	33.30	8.1	24.7	2.35
I32	12 Jan 2023	5	14.90	25.03	7.9	33.30	8.1	24.7	2.20
I32	12 Jan 2023	6	14.88	27.47	7.9	33.30	8.1	24.7	2.06
I32	12 Jan 2023	7	14.87	29.43	8.0	33.30	8.1	24.7	1.85
I32	12 Jan 2023	8	14.85	28.42	8.0	33.30	8.1	24.7	1.81
I32	12 Jan 2023	9	14.85	22.55	8.1	33.30	8.1	24.7	1.69
I32	12 Jan 2023	10	14.85	19.51	8.1	33.30	8.1	24.7	1.71
I32	18 Jan 2023	1	14.71	8.72	8.3	33.10	8.1	24.6	1.57
I32	18 Jan 2023	2	14.69	8.59	8.3	33.10	8.1	24.6	1.59
I32	18 Jan 2023	3	14.69	8.52	8.3	33.10	8.1	24.6	1.62
I32	18 Jan 2023	4	14.71	8.55	8.3	33.10	8.1	24.6	1.59
I32	18 Jan 2023	5	14.68	9.31	8.2	33.10	8.1	24.6	1.65
I32	18 Jan 2023	6	14.64	10.83	8.1	33.11	8.1	24.6	1.66
I32	18 Jan 2023	7	14.74	9.26	7.8	33.16	8.1	24.6	1.62
I32	18 Jan 2023	8	14.70	5.00	8.0	33.14	8.1	24.6	1.65
I32	18 Jan 2023	9	14.73	2.12	7.8	33.16	8.1	24.6	1.78

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (µg/L)
I32	24 Jan 2023	1	13.93	47.55	8.1	33.31	8.1	24.9	1.21
I32	24 Jan 2023	2	13.95	46.75	8.1	33.30	8.1	24.9	1.35
I32	24 Jan 2023	3	13.84	46.30	8.1	33.31	8.1	24.9	1.85
I32	24 Jan 2023	4	13.78	45.77	8.2	33.31	8.1	24.9	2.04
I32	24 Jan 2023	5	13.72	42.48	8.0	33.31	8.1	24.9	2.04
I32	24 Jan 2023	6	13.59	40.85	7.5	33.33	8.1	25.0	1.81
I32	24 Jan 2023	7	13.60	38.71	6.7	33.35	8.0	25.0	1.59
I32	24 Jan 2023	8	13.56	32.72	6.2	33.37	8.0	25.0	1.29
I32	24 Jan 2023	9	13.45	31.59	5.9	33.38	8.0	25.1	1.19
I32	24 Jan 2023	10	13.34	31.75	5.7	33.40	8.0	25.1	1.18
I32	31 Jan 2023	1	14.08	65.34	8.5	33.15	8.1	24.7	1.17
I32	31 Jan 2023	2	14.03	64.21	8.5	33.15	8.1	24.8	1.45
I32	31 Jan 2023	3	14.00	63.56	8.5	33.15	8.1	24.8	2.00
I32	31 Jan 2023	4	13.99	61.82	8.4	33.16	8.1	24.8	2.48
I32	31 Jan 2023	5	13.99	59.91	8.4	33.17	8.1	24.8	2.71
I32	31 Jan 2023	6	13.99	60.31	8.4	33.18	8.1	24.8	2.92
I32	31 Jan 2023	7	14.00	66.51	8.3	33.20	8.1	24.8	2.83
I32	31 Jan 2023	8	14.00	64.98	8.2	33.22	8.1	24.8	3.00
I32	31 Jan 2023	9	13.99	59.92	8.2	33.22	8.1	24.8	2.86
I39	04 Jan 2023	1	14.96	75.09	7.9	33.33	8.1	24.7	0.90
I39	04 Jan 2023	2	14.95	74.62	7.9	33.33	8.1	24.7	1.06
I39	04 Jan 2023	3	14.95	75.00	7.9	33.33	8.1	24.7	1.13
I39	04 Jan 2023	4	14.95	74.76	7.9	33.33	8.1	24.7	1.35
I39	04 Jan 2023	5	14.94	75.02	7.9	33.33	8.1	24.7	1.36
I39	04 Jan 2023	6	14.92	74.57	7.9	33.33	8.1	24.7	1.43
I39	04 Jan 2023	7	14.91	74.68	7.9	33.33	8.1	24.7	1.49
I39	04 Jan 2023	8	14.90	74.81	7.8	33.34	8.1	24.7	1.47
I39	04 Jan 2023	9	14.90	73.95	7.9	33.34	8.1	24.7	1.41
I39	04 Jan 2023	10	14.90	74.41	7.9	33.34	8.1	24.7	1.38
I39	04 Jan 2023	11	14.89	73.86	7.8	33.34	8.1	24.7	1.38
I39	04 Jan 2023	12	14.89	74.67	7.8	33.34	8.1	24.7	1.29
I39	04 Jan 2023	13	14.89	74.53	7.8	33.34	8.1	24.7	1.28
I39	04 Jan 2023	14	14.89	74.10	7.8	33.34	8.1	24.7	1.25
I39	04 Jan 2023	15	14.89	74.45	7.8	33.34	8.1	24.7	1.22
I39	04 Jan 2023	16	14.89	74.88	7.8	33.34	8.1	24.7	1.17
I39	04 Jan 2023	17	14.89	73.51	7.8	33.35	8.1	24.7	1.08
I39	04 Jan 2023	18	14.90	68.67	7.8	33.35	8.1	24.7	1.06
I39	12 Jan 2023	1	15.00	55.51	7.9	33.35	8.1	24.7	1.33
I39	12 Jan 2023	2	15.00	54.02	7.8	33.35	8.1	24.7	1.29
I39	12 Jan 2023	3	14.97	55.17	7.8	33.35	8.1	24.7	1.49
I39	12 Jan 2023	4	14.94	55.74	7.8	33.35	8.1	24.7	1.82
I39	12 Jan 2023	5	14.93	55.61	7.8	33.35	8.1	24.7	1.88
I39	12 Jan 2023	6	14.92	55.77	7.8	33.35	8.1	24.7	1.79
I39	12 Jan 2023	7	14.92	56.59	7.7	33.35	8.1	24.7	1.61
I39	12 Jan 2023	8	14.92	57.43	7.8	33.35	8.1	24.7	1.60
I39	12 Jan 2023	9	14.92	57.67	7.7	33.35	8.1	24.7	1.54
I39	12 Jan 2023	10	14.92	57.25	7.7	33.35	8.1	24.7	1.49
I39	12 Jan 2023	11	14.92	57.25	7.7	33.36	8.1	24.7	1.40
I39	12 Jan 2023	12	14.92	56.80	7.7	33.36	8.1	24.7	1.32
I39	12 Jan 2023	13	14.93	51.93	7.6	33.36	8.1	24.7	1.25
I39	12 Jan 2023	14	14.93	49.11	7.6	33.36	8.1	24.7	1.21
I39	12 Jan 2023	15	14.93	47.23	7.5	33.36	8.1	24.7	1.18
I39	12 Jan 2023	16	14.93	45.38	7.5	33.37	8.1	24.7	1.17
I39	12 Jan 2023	17	14.93	45.39	7.5	33.37	8.1	24.7	1.19
I39	12 Jan 2023	18	14.93	41.99	7.5	33.37	8.1	24.7	1.22
I39	18 Jan 2023	1	14.41	25.79	8.1	32.70	8.1	24.3	1.52

Station	Date	Depth (m)	Temp (°C)	XMS (‰)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (µg/L)
I39	18 Jan 2023	2	14.41	25.78	8.1	32.70	8.1	24.3	1.67
I39	18 Jan 2023	3	14.38	25.53	8.0	32.70	8.1	24.3	1.80
I39	18 Jan 2023	4	14.37	24.89	8.0	32.69	8.1	24.3	1.88
I39	18 Jan 2023	5	14.37	25.25	8.0	32.71	8.1	24.3	1.85
I39	18 Jan 2023	6	14.38	23.92	8.0	32.73	8.1	24.4	1.68
I39	18 Jan 2023	7	14.38	24.31	8.0	32.73	8.1	24.4	1.65
I39	18 Jan 2023	8	14.46	25.90	8.0	32.82	8.1	24.4	1.50
I39	18 Jan 2023	9	14.59	27.17	7.9	32.96	8.1	24.5	1.38
I39	18 Jan 2023	10	14.69	27.80	7.8	33.05	8.1	24.5	1.27
I39	18 Jan 2023	11	14.73	31.70	7.8	33.09	8.1	24.6	1.23
I39	18 Jan 2023	12	14.80	45.80	7.7	33.14	8.1	24.6	1.14
I39	18 Jan 2023	13	14.77	54.11	7.7	33.21	8.1	24.6	1.08
I39	18 Jan 2023	14	14.76	39.00	7.6	33.26	8.1	24.7	1.12
I39	18 Jan 2023	15	14.76	10.91	7.6	33.26	8.1	24.7	1.14
I39	18 Jan 2023	16	14.76	9.99	7.7	33.25	8.1	24.7	1.15
I39	18 Jan 2023	17	14.78	8.29	7.6	33.26	8.1	24.7	1.18
I39	18 Jan 2023	18	14.78	6.78	7.6	33.26	8.1	24.7	1.19
I39	24 Jan 2023	1	13.84	70.31	7.5	33.29	8.1	24.9	0.78
I39	24 Jan 2023	2	13.82	67.98	7.5	33.29	8.1	24.9	0.87
I39	24 Jan 2023	3	13.81	68.35	7.5	33.29	8.1	24.9	1.03
I39	24 Jan 2023	4	13.79	68.75	7.5	33.29	8.1	24.9	1.19
I39	24 Jan 2023	5	13.78	68.37	7.4	33.29	8.1	24.9	1.31
I39	24 Jan 2023	6	13.77	67.71	7.4	33.30	8.1	24.9	1.36
I39	24 Jan 2023	7	13.76	67.47	7.3	33.30	8.1	24.9	1.36
I39	24 Jan 2023	8	13.75	68.73	7.3	33.31	8.1	24.9	1.41
I39	24 Jan 2023	9	13.74	70.26	7.3	33.31	8.1	24.9	1.34
I39	24 Jan 2023	10	13.75	71.76	7.2	33.30	8.1	24.9	1.31
I39	24 Jan 2023	11	13.73	71.40	7.2	33.31	8.1	24.9	1.34
I39	24 Jan 2023	12	13.72	71.44	7.1	33.32	8.0	24.9	1.24
I39	24 Jan 2023	13	13.69	74.86	6.9	33.33	8.0	25.0	1.18
I39	24 Jan 2023	14	13.64	79.32	6.7	33.34	8.0	25.0	1.08
I39	24 Jan 2023	15	13.38	81.69	6.2	33.38	8.0	25.1	0.94
I39	24 Jan 2023	16	13.10	80.79	5.8	33.42	8.0	25.1	0.78
I39	24 Jan 2023	17	12.88	72.66	5.5	33.45	8.0	25.2	0.65
I39	24 Jan 2023	18	12.82	70.57	5.4	33.45	7.9	25.2	0.60
I39	31 Jan 2023	1	13.93	79.89	8.6	33.22	8.2	24.8	1.29
I39	31 Jan 2023	2	13.90	79.74	8.6	33.19	8.2	24.8	1.20
I39	31 Jan 2023	3	13.91	79.66	8.6	33.23	8.2	24.8	1.13
I39	31 Jan 2023	4	13.95	80.31	8.6	33.26	8.2	24.9	1.53
I39	31 Jan 2023	5	13.95	80.92	8.5	33.30	8.1	24.9	2.39
I39	31 Jan 2023	6	13.95	80.84	8.5	33.30	8.1	24.9	2.48
I39	31 Jan 2023	7	13.95	80.80	8.5	33.30	8.1	24.9	2.59
I39	31 Jan 2023	8	13.95	80.70	8.4	33.30	8.1	24.9	2.68
I39	31 Jan 2023	9	13.94	80.74	8.4	33.30	8.1	24.9	2.53
I39	31 Jan 2023	10	13.94	80.58	8.4	33.30	8.1	24.9	2.52
I39	31 Jan 2023	11	13.94	80.32	8.4	33.30	8.1	24.9	2.64
I39	31 Jan 2023	12	13.94	80.46	8.4	33.30	8.1	24.9	2.64
I39	31 Jan 2023	13	13.94	80.53	8.3	33.30	8.1	24.9	2.55
I39	31 Jan 2023	14	13.94	80.36	8.4	33.30	8.1	24.9	2.36
I39	31 Jan 2023	15	13.94	80.43	8.3	33.30	8.1	24.9	2.26
I39	31 Jan 2023	16	13.94	80.20	8.3	33.30	8.1	24.9	2.44
I39	31 Jan 2023	17	13.94	80.20	8.3	33.30	8.1	24.9	2.42
I39	31 Jan 2023	18	13.94	80.00	8.3	33.30	8.1	24.9	2.43
I40	04 Jan 2023	1	15.05	23.52	8.3	33.05	8.1	24.5	1.70
I40	04 Jan 2023	2	15.06	23.37	8.2	33.03	8.1	24.4	1.73
I40	04 Jan 2023	3	14.97	23.66	8.1	33.19	8.1	24.6	1.70
I40	04 Jan 2023	4	14.96	29.84	8.0	33.22	8.1	24.6	1.67
I40	04 Jan 2023	5	14.94	27.72	7.9	33.24	8.1	24.6	1.52

Station	Date	Depth (m)	Temp (°C)	XMS (‰)	DO (mg/L)	Sal (ppt)	pH	Dens ( $\sigma$ -t)	Chlor ( $\mu$ g/L)
I40	04 Jan 2023	6	14.94	25.42	7.9	33.25	8.1	24.6	1.48
I40	04 Jan 2023	7	14.93	25.19	7.9	33.25	8.1	24.6	1.41
I40	04 Jan 2023	8	14.93	26.02	7.9	33.25	8.1	24.6	1.40
I40	04 Jan 2023	9	14.93	25.61	7.9	33.24	8.1	24.6	1.41
I40	04 Jan 2023	10	14.93	25.14	7.9	33.24	8.1	24.6	1.38
I40	12 Jan 2023	1	15.12	38.53	7.7	33.36	8.1	24.7	1.18
I40	12 Jan 2023	2	15.07	38.05	7.7	33.36	8.1	24.7	1.51
I40	12 Jan 2023	3	15.00	37.49	7.6	33.36	8.1	24.7	1.60
I40	12 Jan 2023	4	14.98	36.26	7.6	33.36	8.1	24.7	1.46
I40	12 Jan 2023	5	14.97	36.08	7.6	33.36	8.1	24.7	1.31
I40	12 Jan 2023	6	14.97	33.33	7.6	33.35	8.1	24.7	1.24
I40	12 Jan 2023	7	14.96	31.91	7.6	33.35	8.1	24.7	1.23
I40	12 Jan 2023	8	14.95	34.25	7.6	33.35	8.1	24.7	1.21
I40	12 Jan 2023	9	14.95	37.75	7.6	33.35	8.1	24.7	1.19
I40	12 Jan 2023	10	14.94	37.62	7.5	33.35	8.1	24.7	1.23
I40	18 Jan 2023	1	14.62	2.47	8.1	31.55	8.1	23.4	1.58
I40	18 Jan 2023	2	14.61	2.03	8.0	32.62	8.1	24.2	1.50
I40	18 Jan 2023	3	14.64	3.45	7.9	32.88	8.1	24.4	1.37
I40	18 Jan 2023	4	14.69	6.96	7.9	32.93	8.1	24.4	1.26
I40	18 Jan 2023	5	14.71	5.51	8.0	32.94	8.1	24.4	1.22
I40	18 Jan 2023	6	14.77	3.32	8.0	33.02	8.1	24.5	1.32
I40	18 Jan 2023	7	14.80	1.20	7.8	33.04	8.1	24.5	1.32
I40	18 Jan 2023	8	14.86	0.68	7.5	33.08	8.1	24.5	1.26
I40	18 Jan 2023	9	15.06	0.75	7.0	33.22	8.1	24.6	1.22
I40	24 Jan 2023	1	13.95	30.23	7.4	33.26	8.0	24.9	0.85
I40	24 Jan 2023	2	13.85	28.63	7.4	33.27	8.0	24.9	1.14
I40	24 Jan 2023	3	13.81	22.96	7.1	33.28	8.0	24.9	1.42
I40	24 Jan 2023	4	13.80	18.55	6.7	33.30	8.0	24.9	1.31
I40	24 Jan 2023	5	13.73	17.21	6.4	33.33	8.0	25.0	1.19
I40	24 Jan 2023	6	13.69	16.81	6.1	33.35	8.0	25.0	1.06
I40	24 Jan 2023	7	13.65	14.98	6.0	33.35	8.0	25.0	0.97
I40	24 Jan 2023	8	13.58	13.85	5.9	33.36	8.0	25.0	0.88
I40	24 Jan 2023	9	13.47	11.94	5.8	33.38	8.0	25.0	0.86
I40	24 Jan 2023	10	13.41	11.37	5.7	33.38	8.0	25.1	0.85
I40	31 Jan 2023	1	13.96	11.26	8.1	31.37	8.1	23.4	2.14
I40	31 Jan 2023	2	13.91	10.96	8.3	32.79	8.1	24.5	2.34
I40	31 Jan 2023	3	13.90	11.75	8.3	33.20	8.1	24.8	2.44
I40	31 Jan 2023	4	13.91	17.59	8.3	33.22	8.1	24.8	2.24
I40	31 Jan 2023	5	13.91	31.41	8.3	33.24	8.1	24.8	2.24
I40	31 Jan 2023	6	13.91	39.50	8.3	33.24	8.1	24.8	2.21
I40	31 Jan 2023	7	13.95	43.03	8.2	33.26	8.1	24.9	2.16
I40	31 Jan 2023	8	13.96	42.20	8.1	33.27	8.1	24.9	2.16
I40	31 Jan 2023	9	13.97	36.83	8.0	33.28	8.1	24.9	2.42

NA = not available

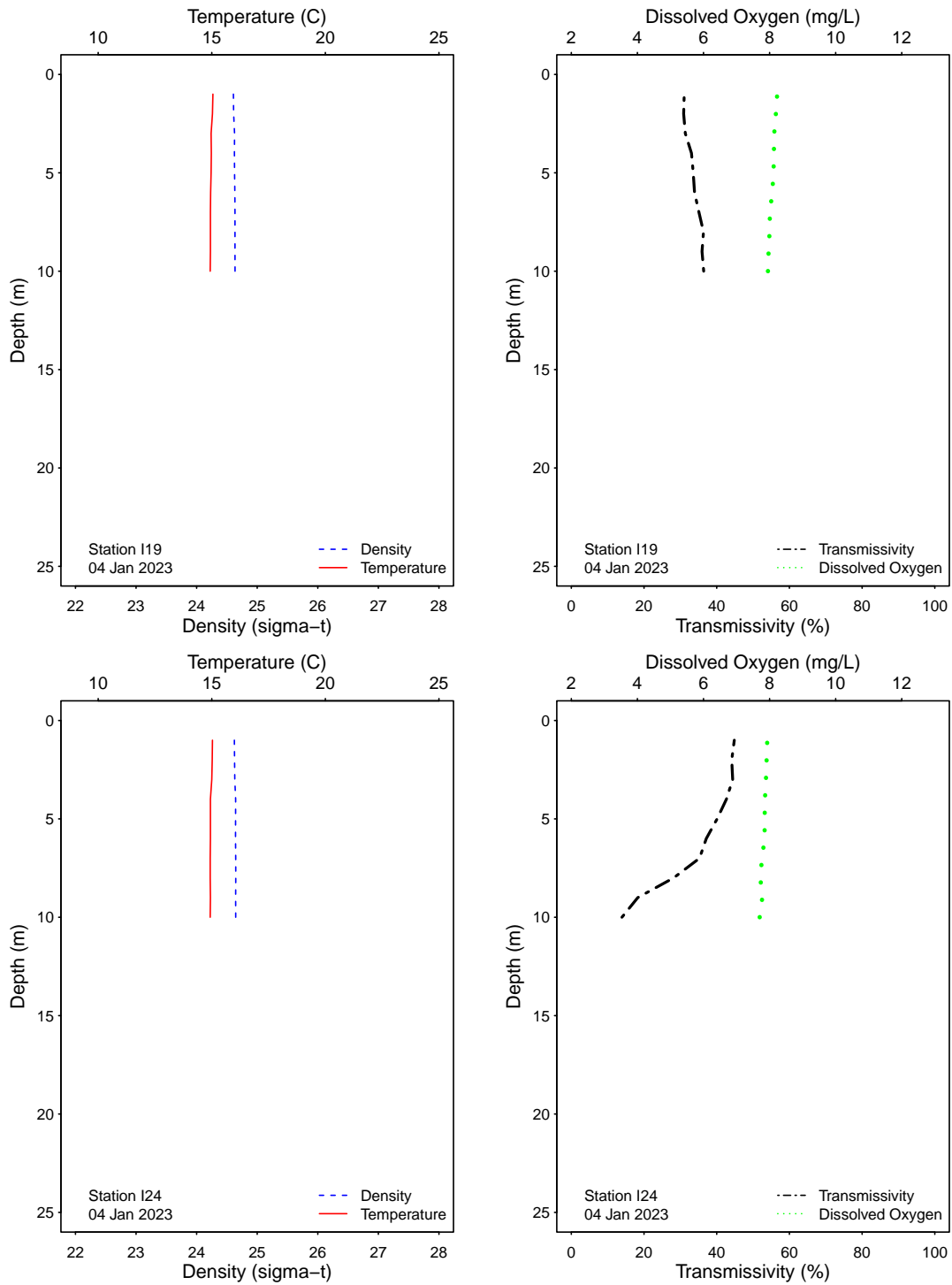


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

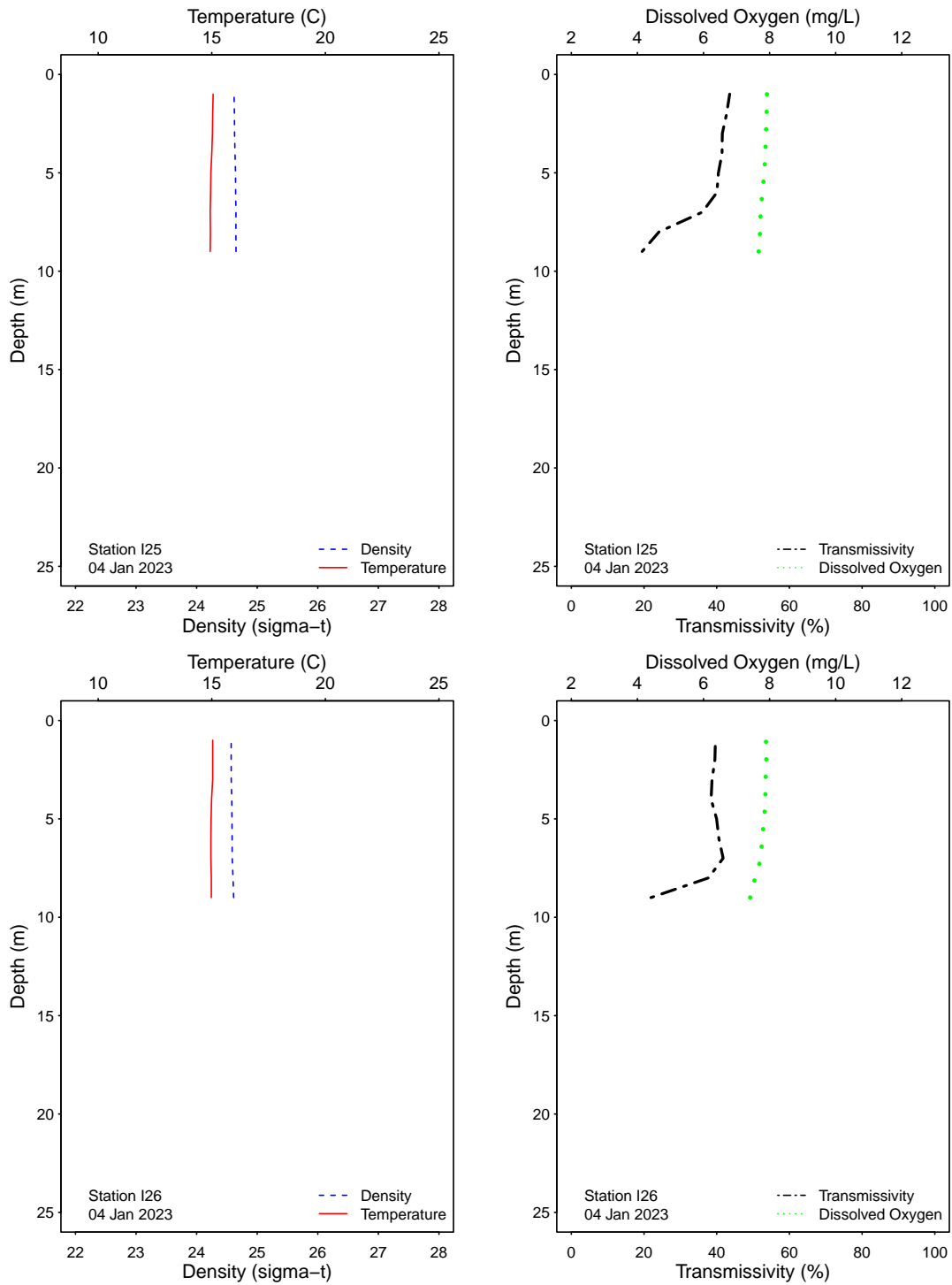


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

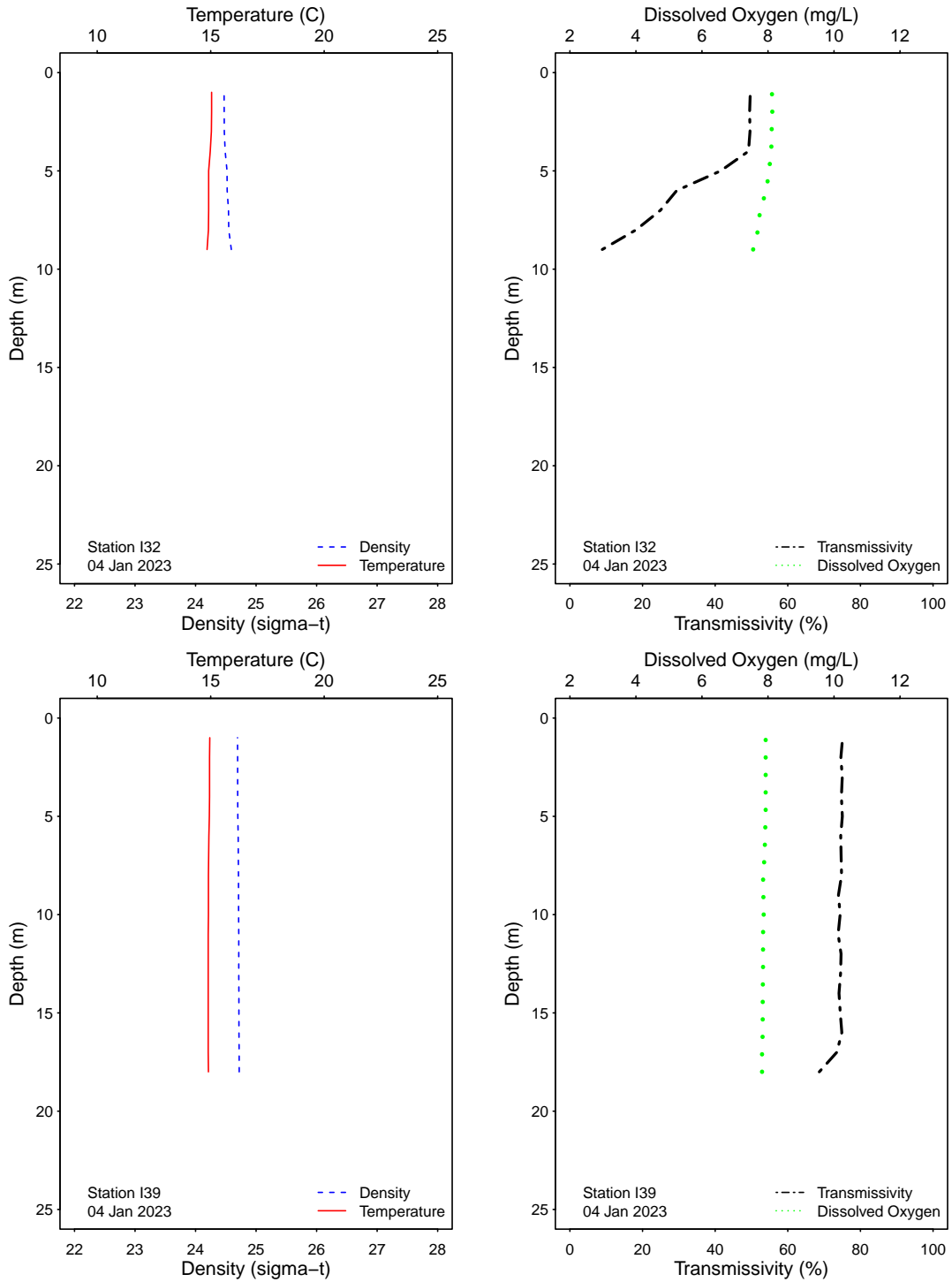


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

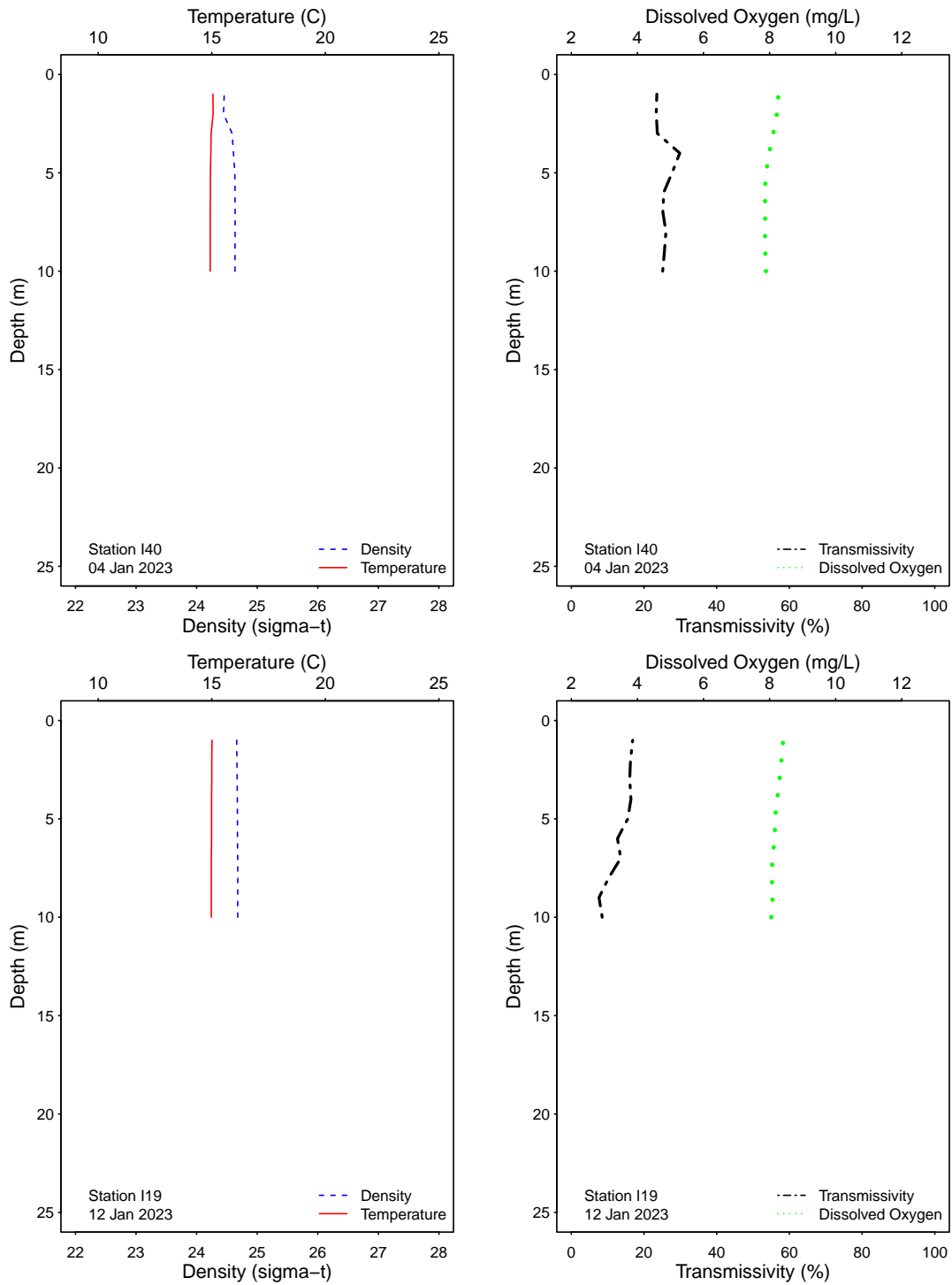


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.



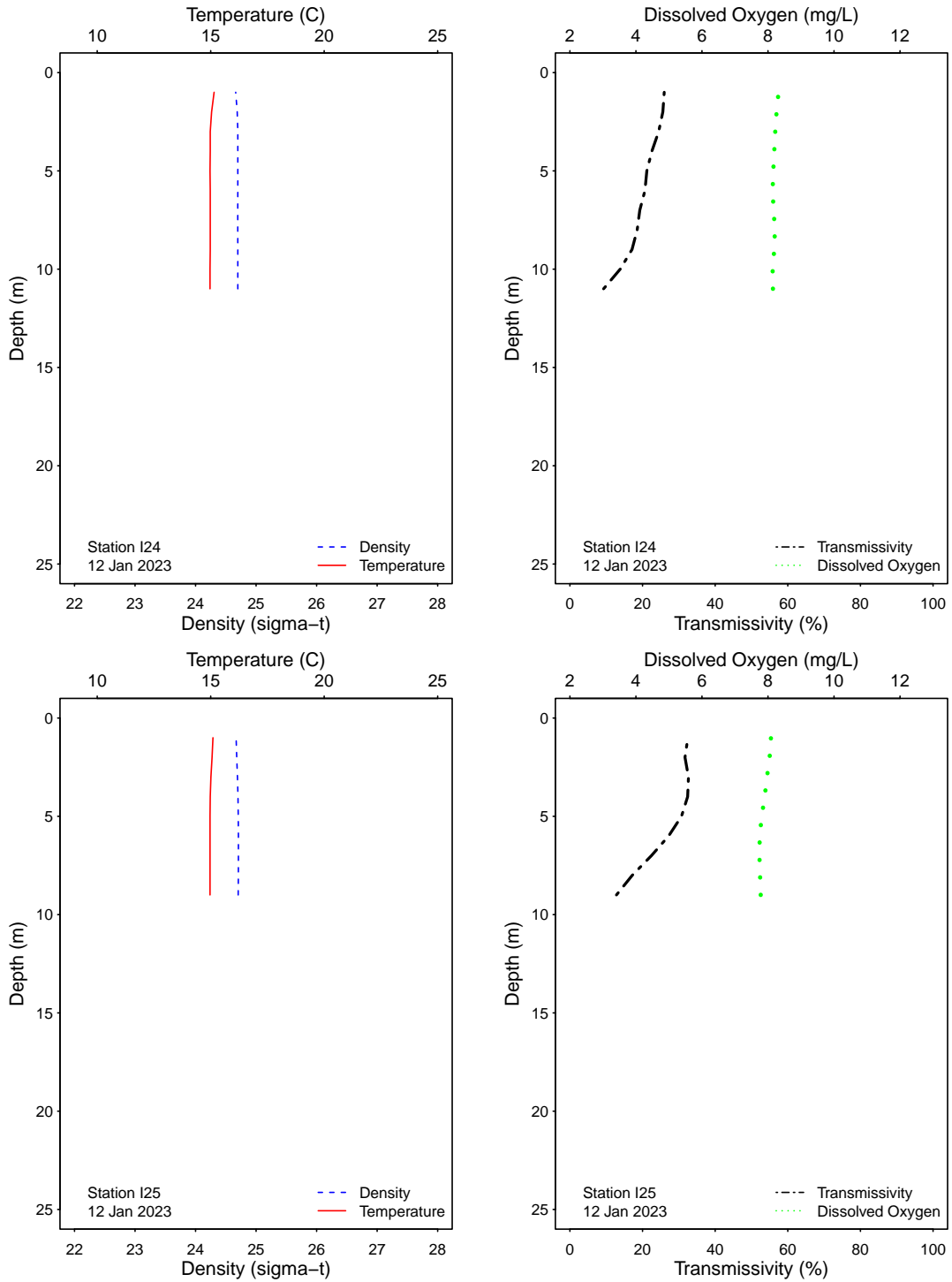


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

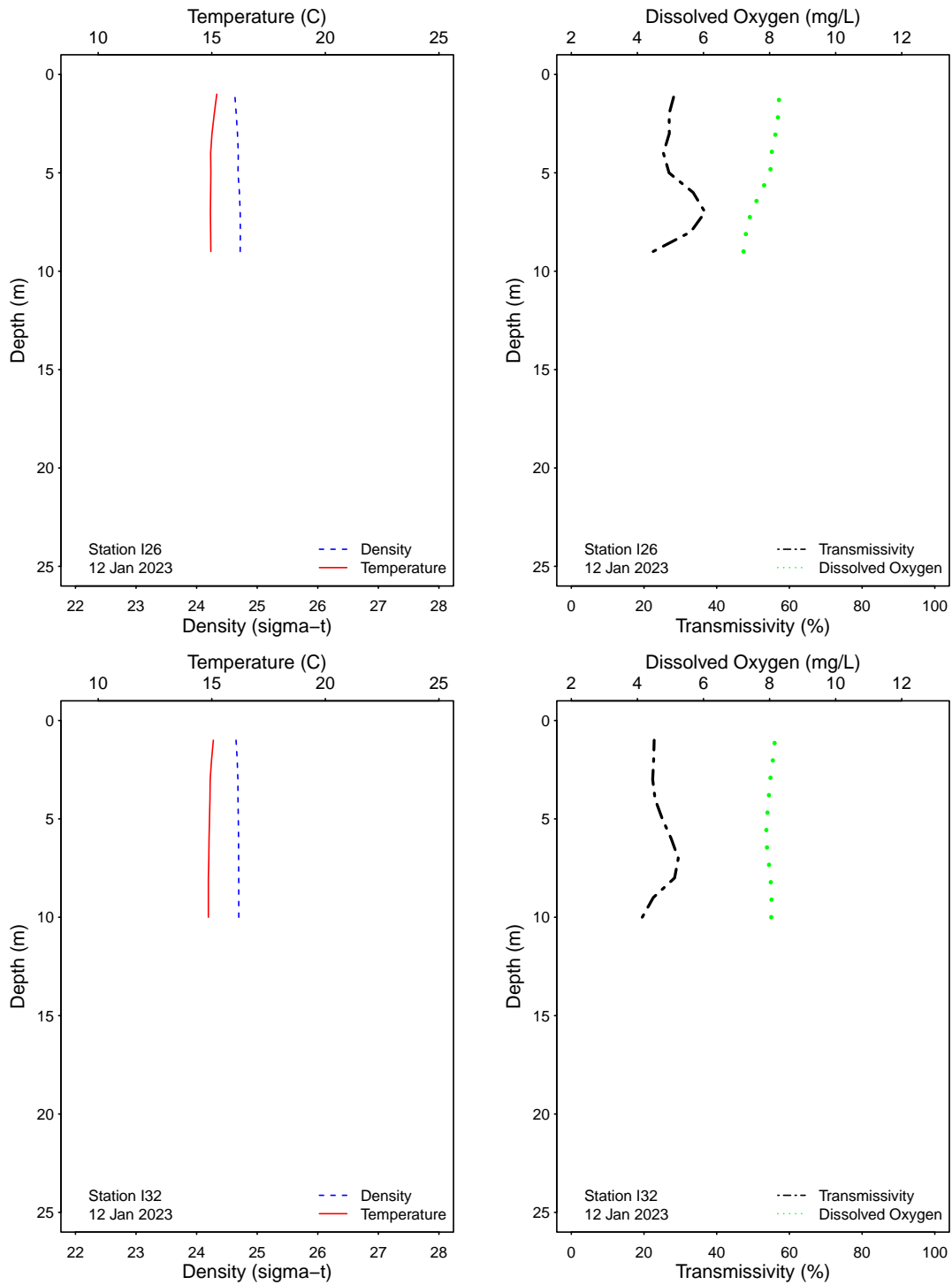


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

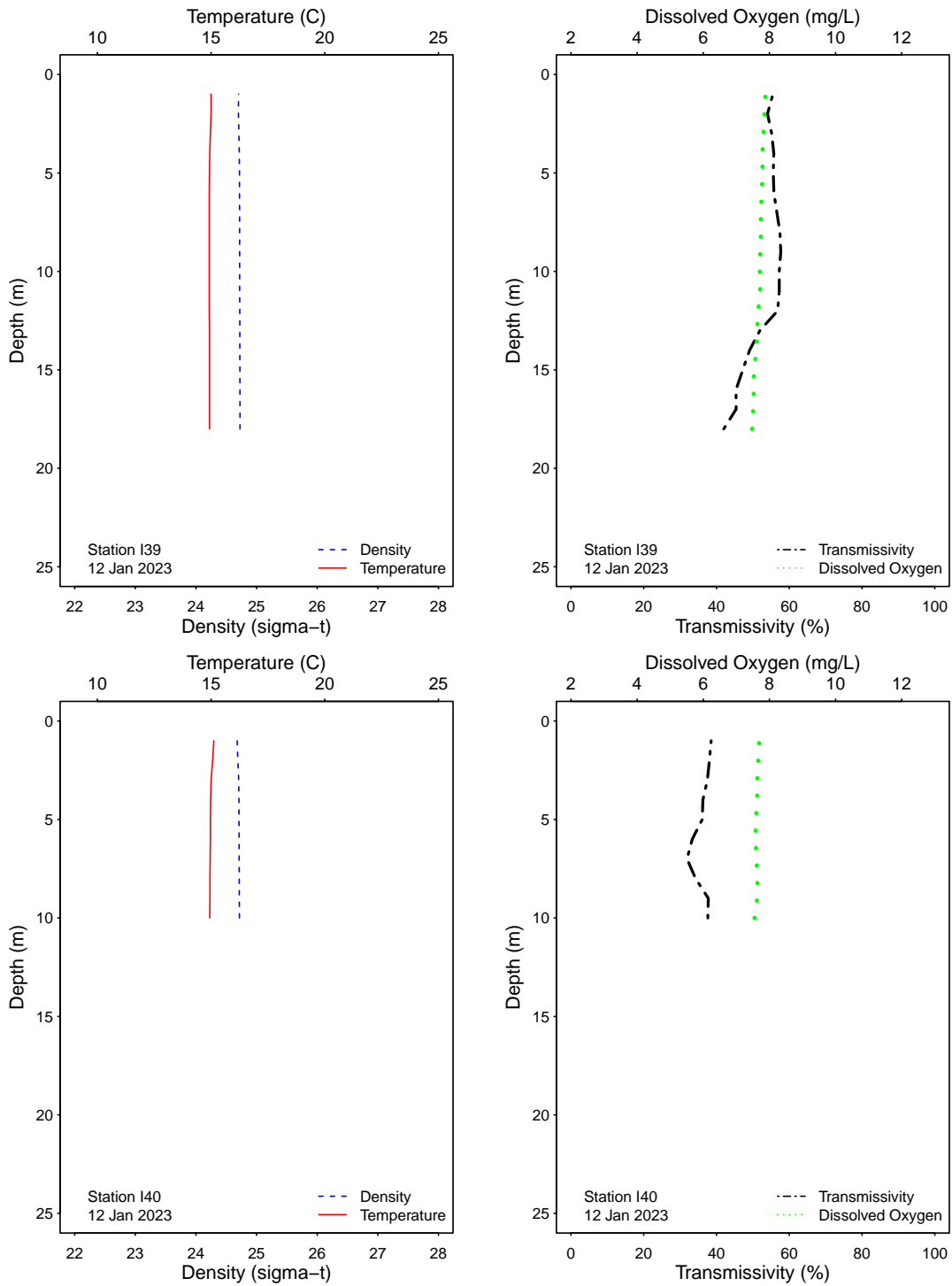


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

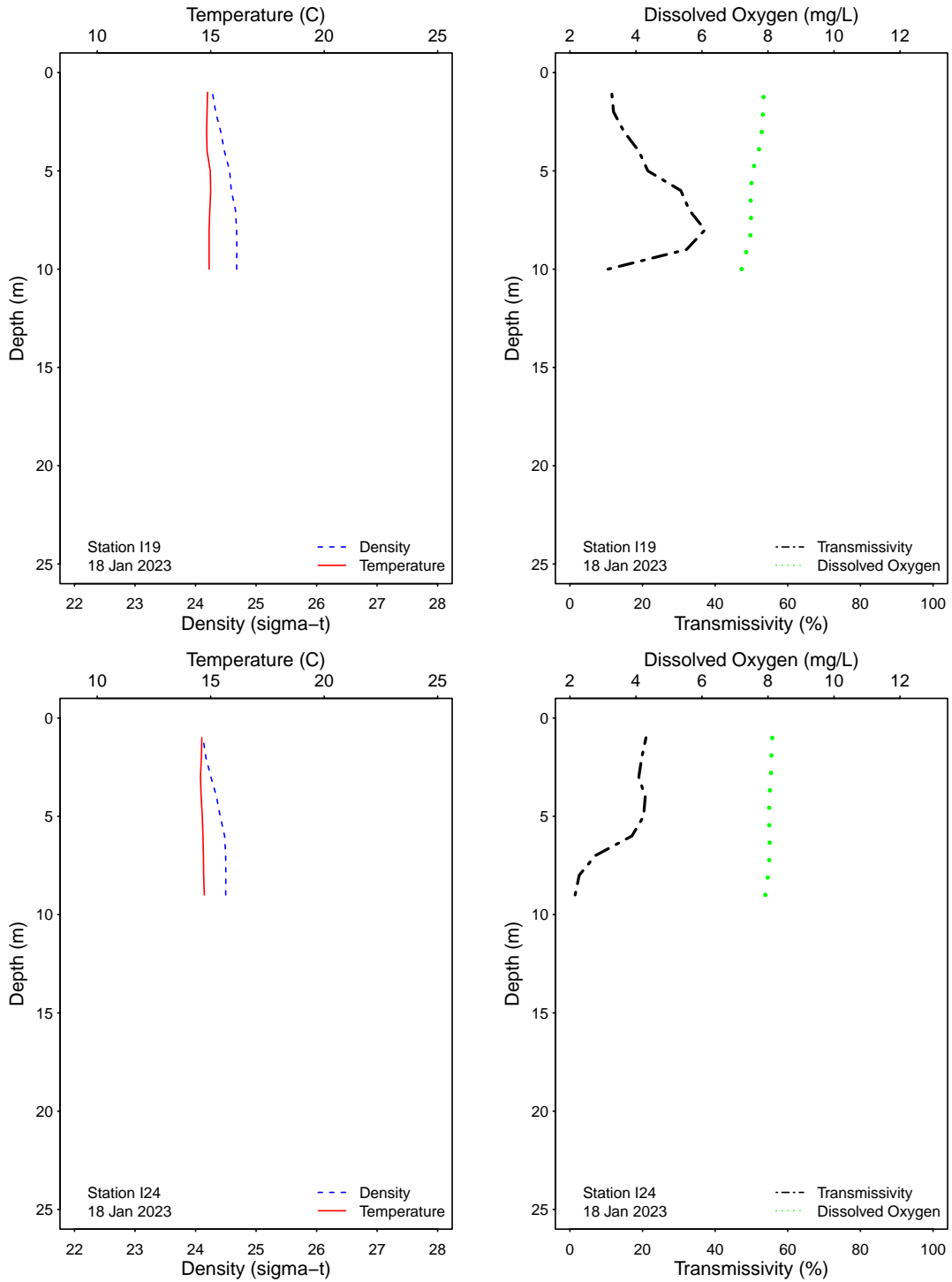


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

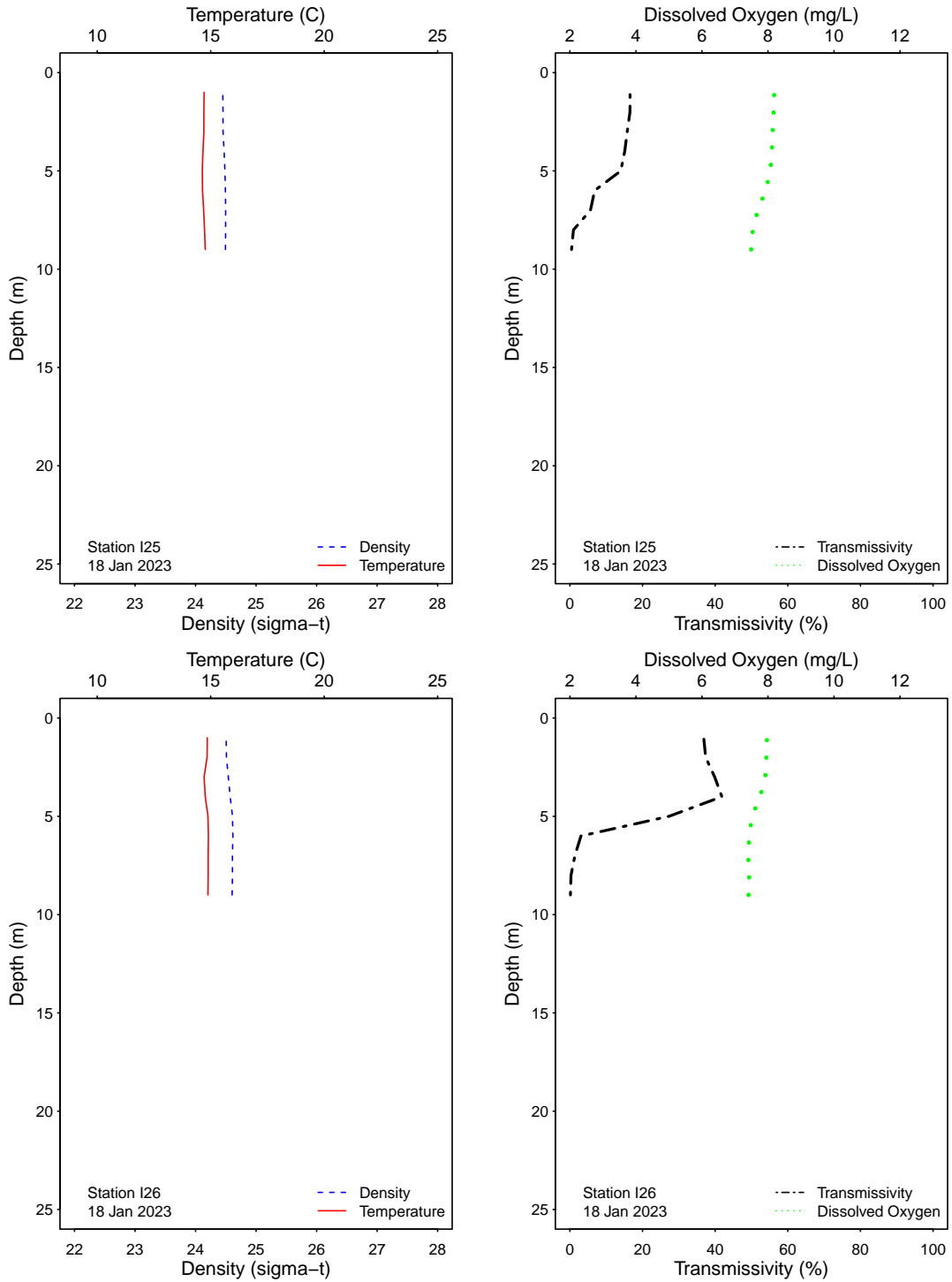


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

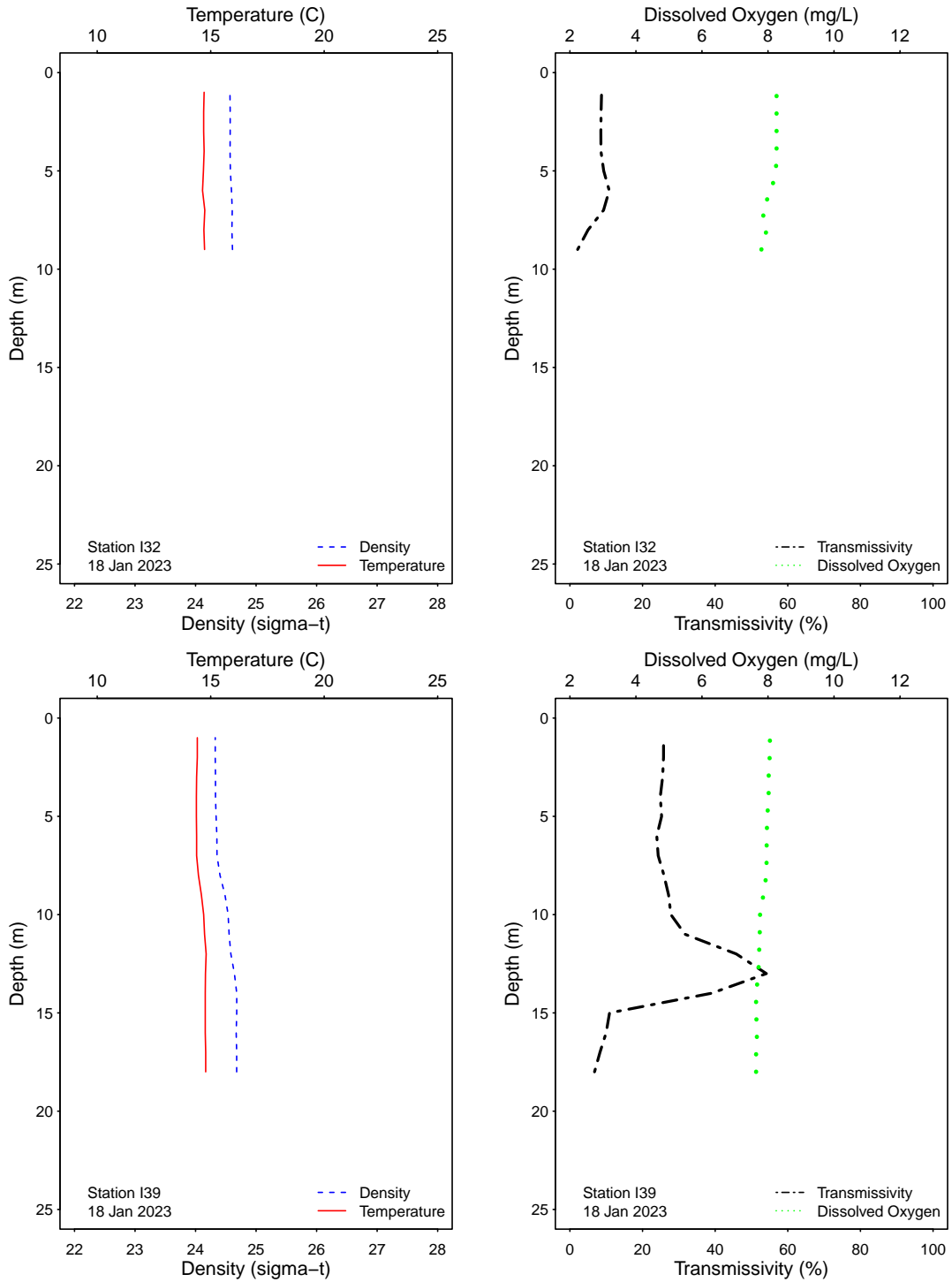


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

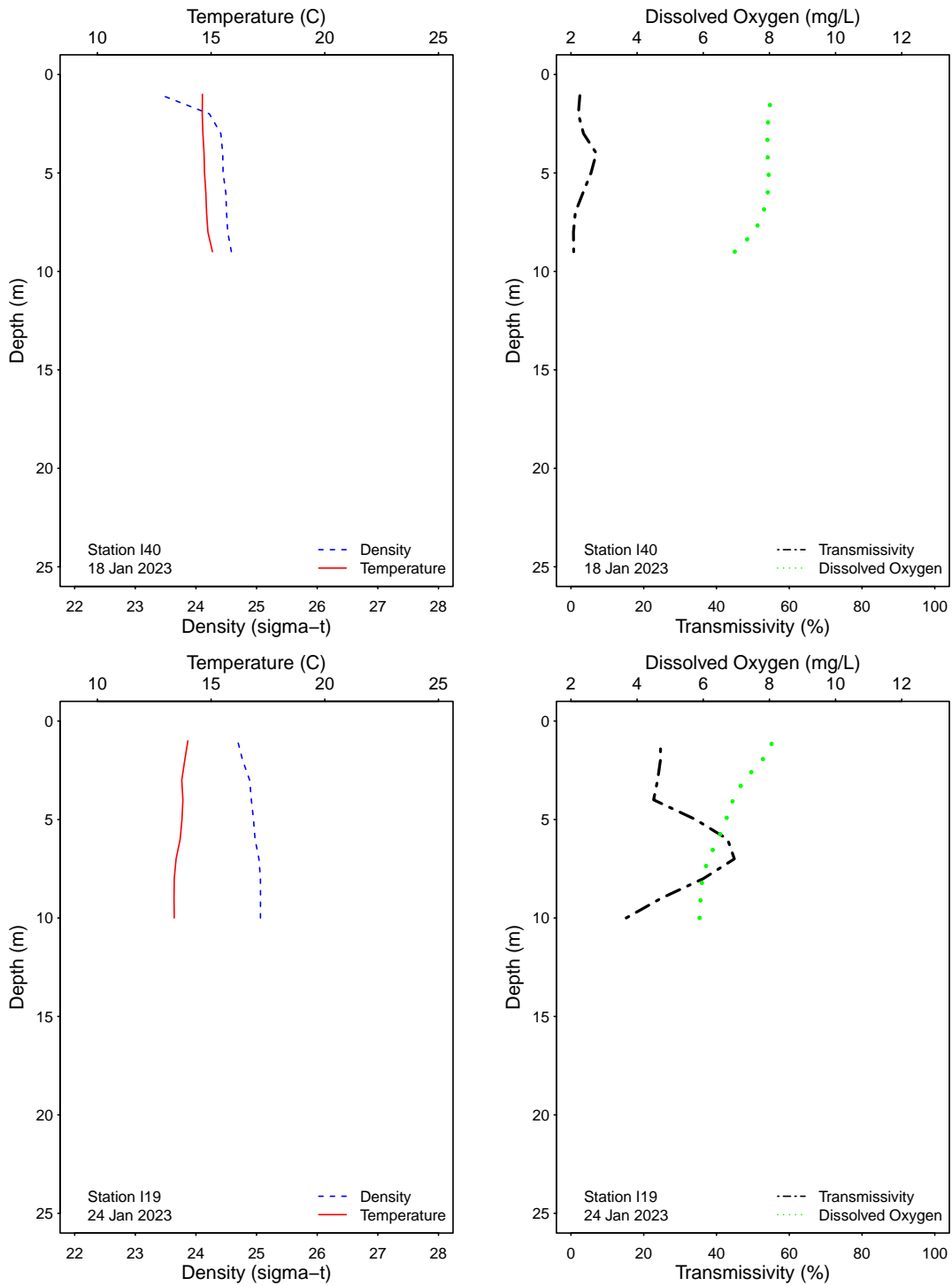


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

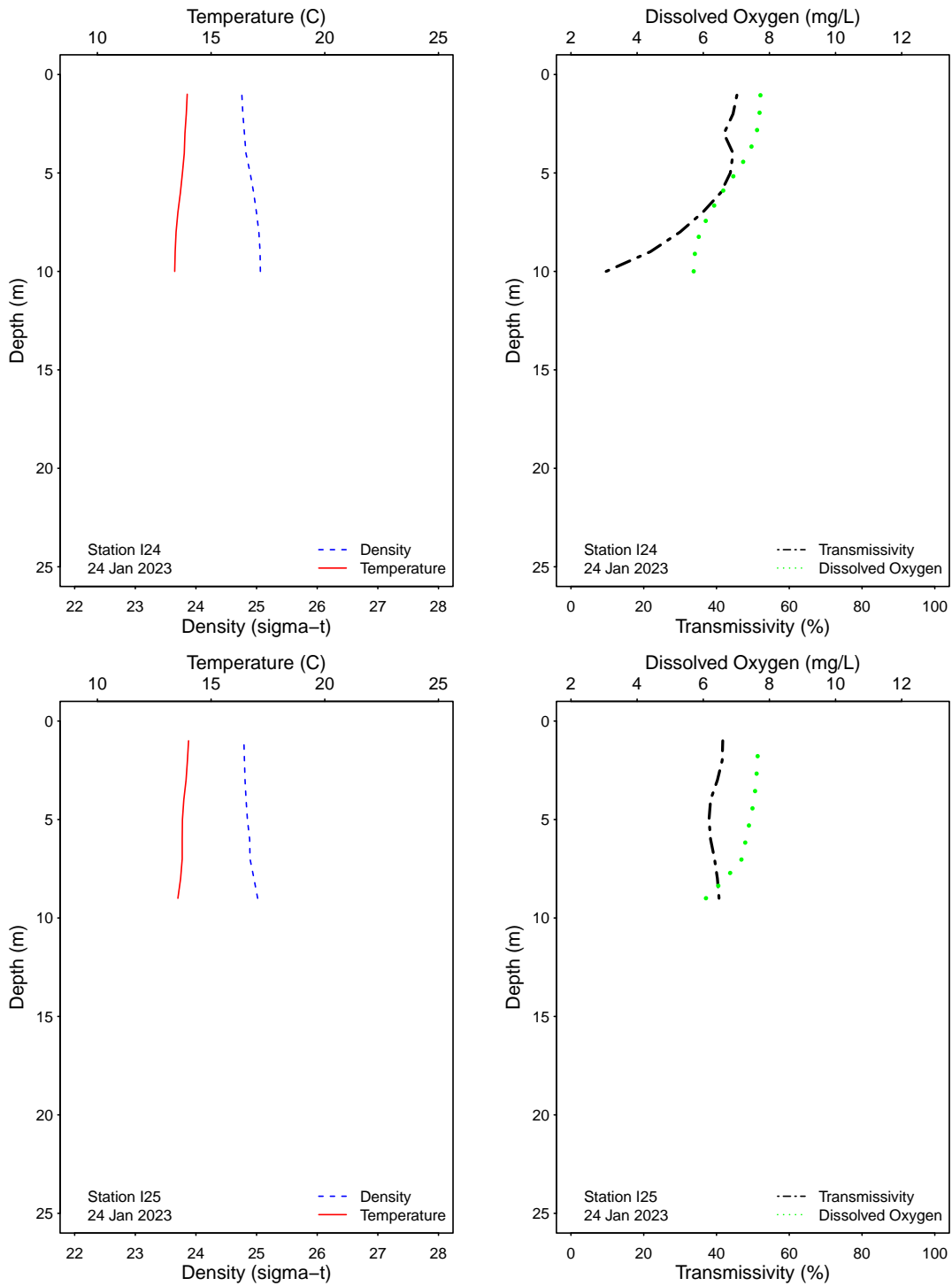


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.



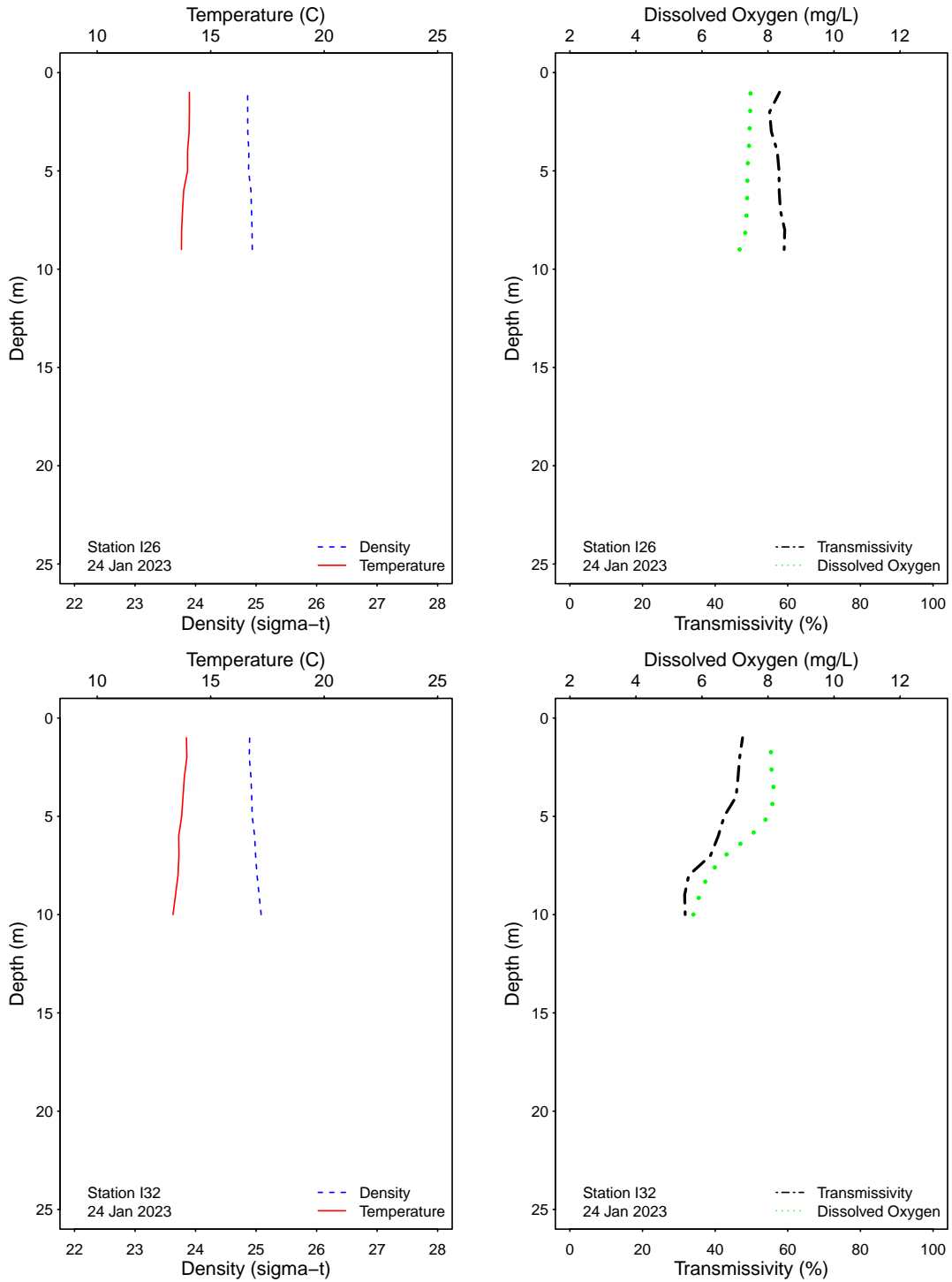


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

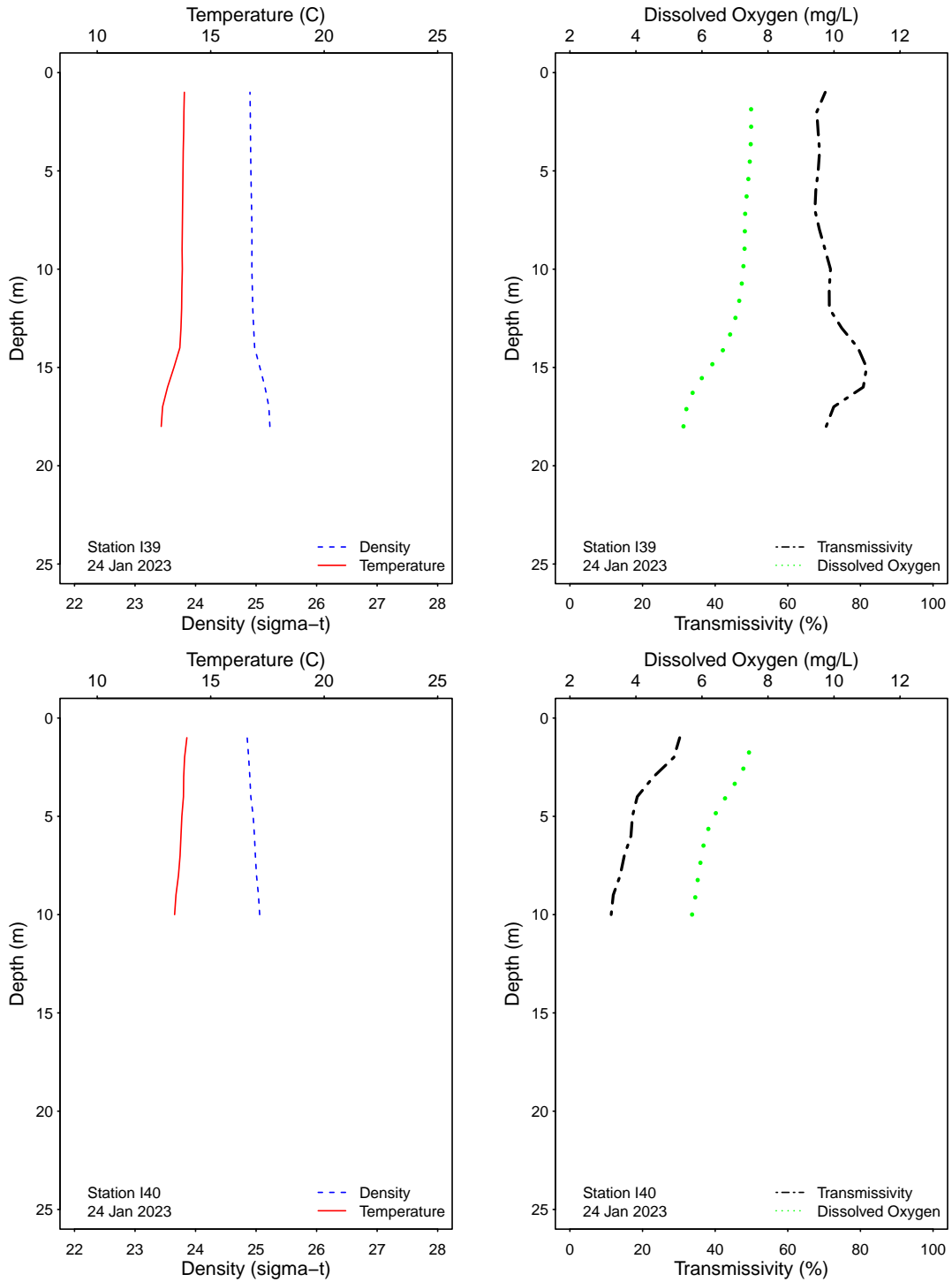


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

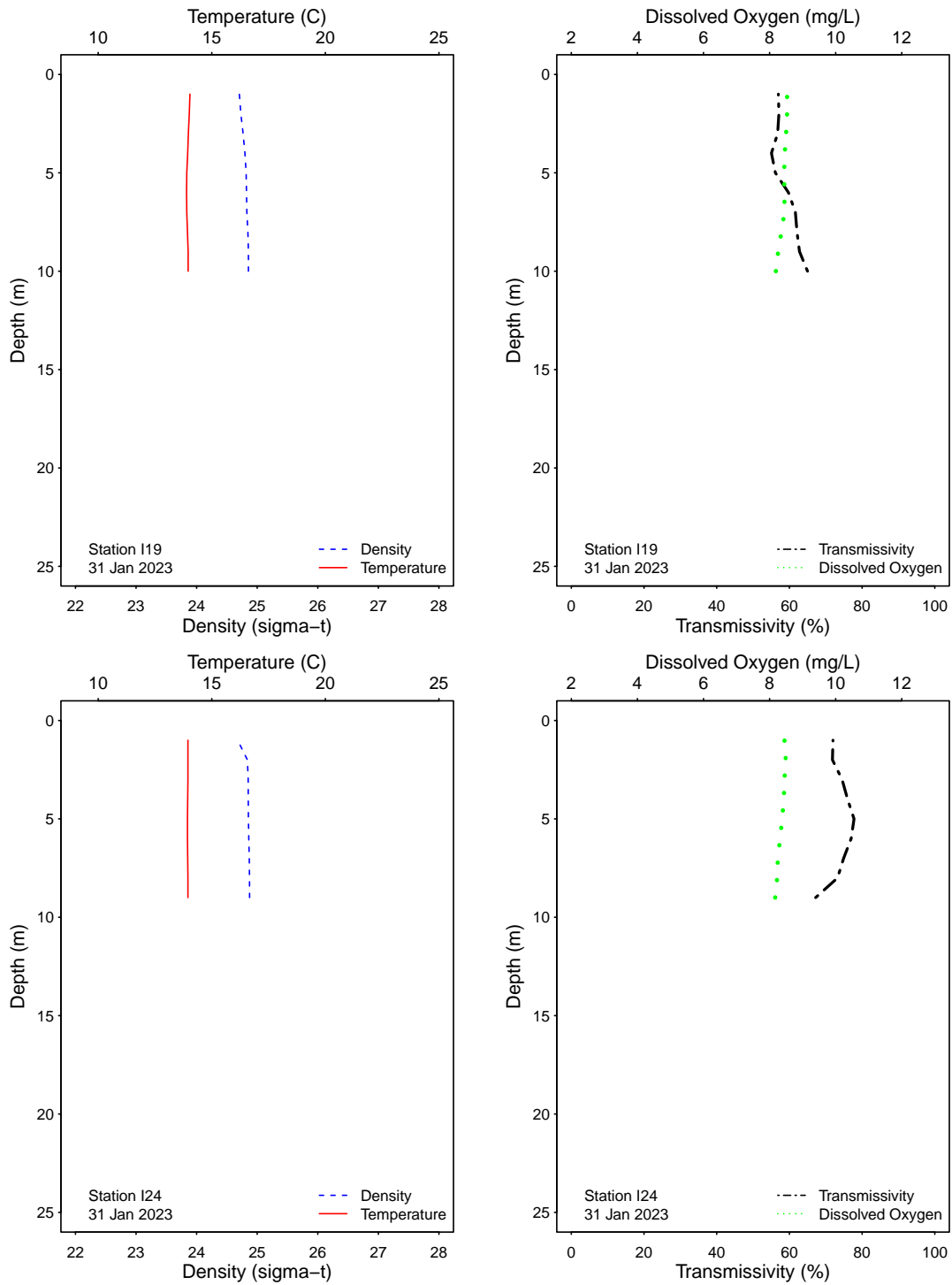


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

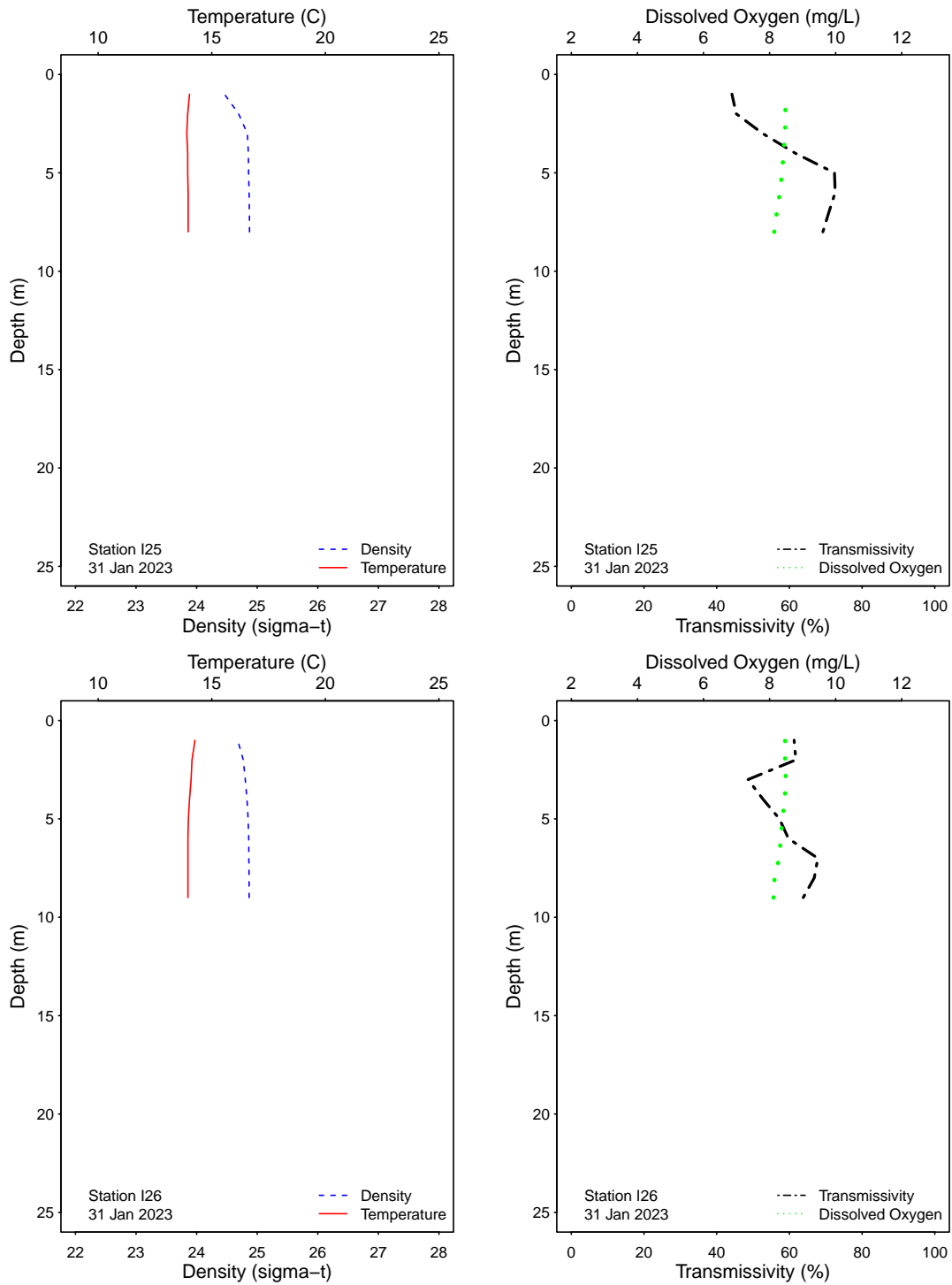


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

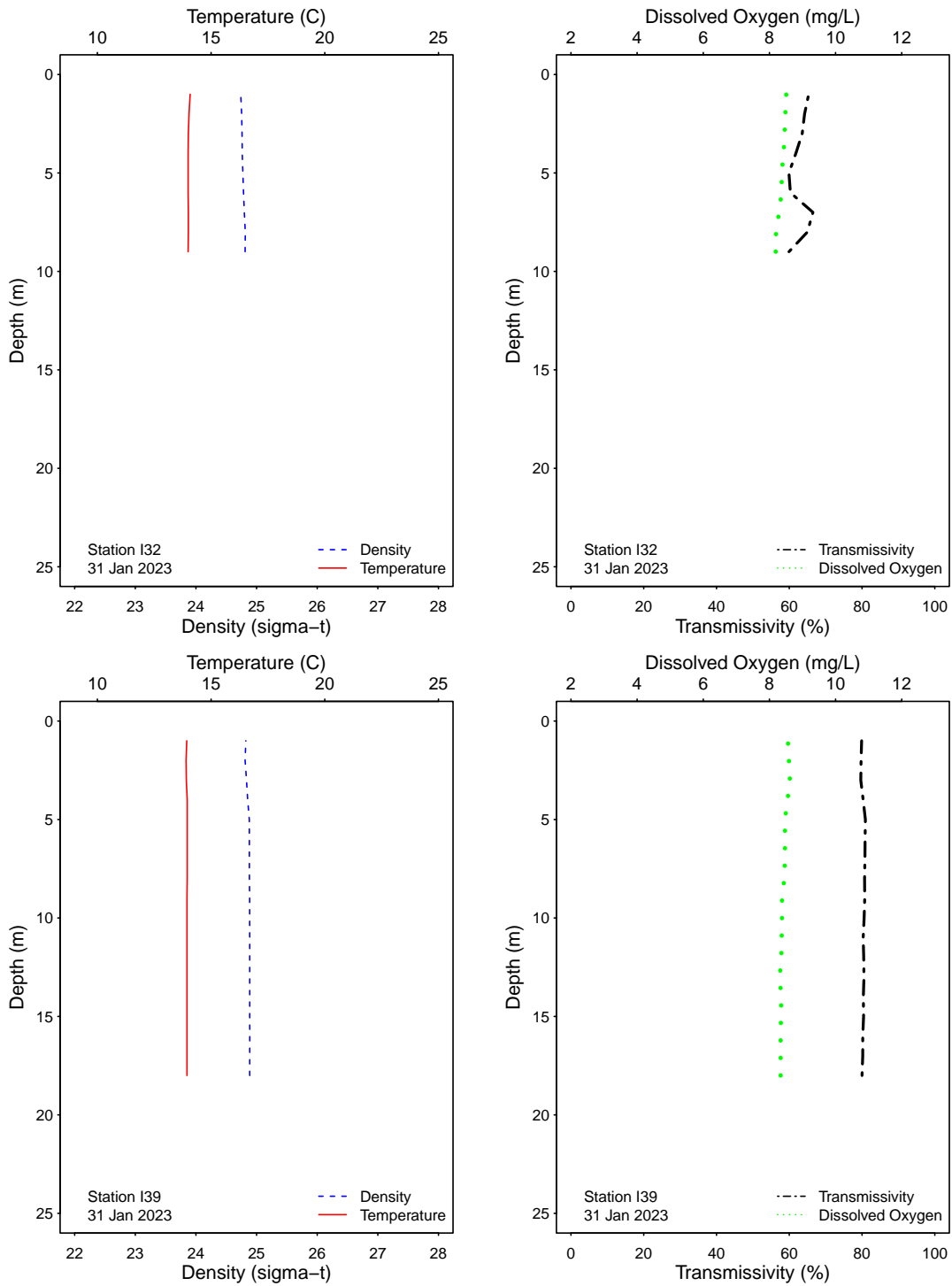


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

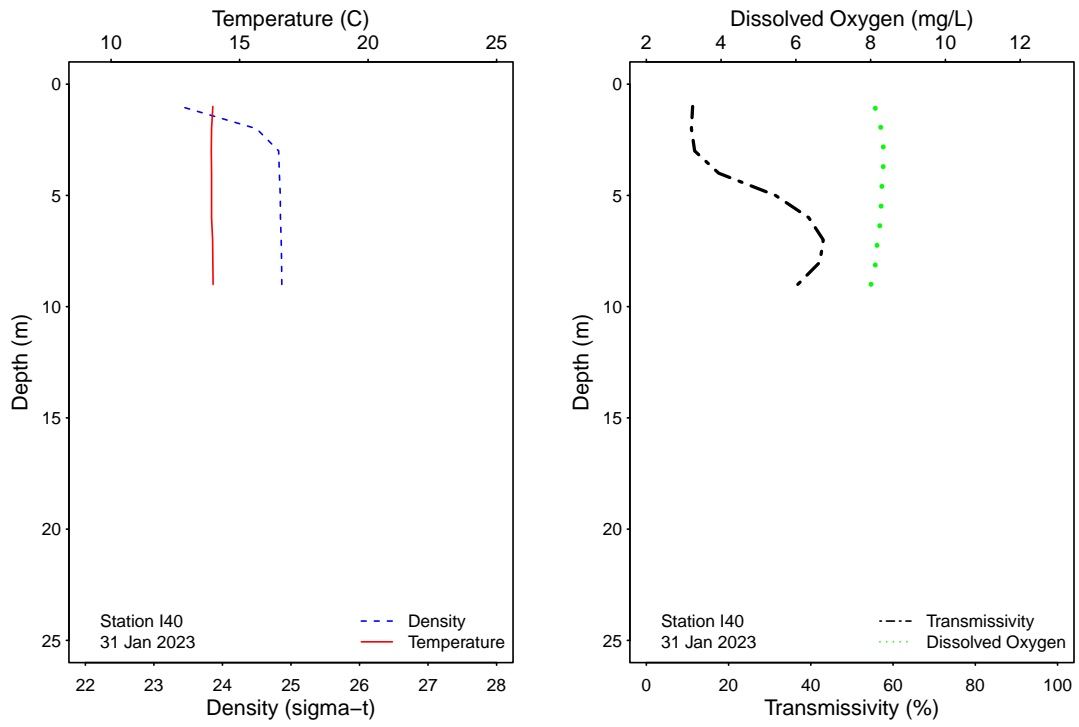


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

**APPENDIX A**

**Quality Assurance**





**Table A.1**

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

Station	Date	Depth	Analyst	Procedure	Total	Fecal	Entero
I19	04 Jan 2023	6	JF	LAB DUPLICATE	7600	1200	720
I19	12 Jan 2023	6	KA	LAB DUPLICATE	>16000	5400	2000e
I19	18 Jan 2023	6	CRE	LAB DUPLICATE	4000	920	960
I19	24 Jan 2023	6	CRE	LAB DUPLICATE	920	82	200e
I19	31 Jan 2023	6	KT	LAB DUPLICATE	6400	220e	540
I40	04 Jan 2023	6	JF	LAB DUPLICATE	14000	1800e	620
I40	12 Jan 2023	6	KA	LAB DUPLICATE	2400e	140e	120e
I40	18 Jan 2023	6	CRE	LAB DUPLICATE	8400	1100	4200
I40	24 Jan 2023	6	CRE	LAB DUPLICATE	7000	640	480
I40	31 Jan 2023	6	KT	LAB DUPLICATE	>16000	4000	3800e
S12	03 Jan 2023		JF	FIELD DUPLICATE	>16000	1200e	600e
S12	03 Jan 2023		JF	LAB DUPLICATE	13000	1000e	1800e
S12	10 Jan 2023		KT	FIELD DUPLICATE	>16000	4400	2400e
S12	10 Jan 2023		KT	LAB DUPLICATE	>16000	3800e	1100
S12	17 Jan 2023		CRE	FIELD DUPLICATE	>16000	8200	9200
S12	17 Jan 2023		CRE	LAB DUPLICATE	>16000	8200	11000
S12	24 Jan 2023		KA	FIELD DUPLICATE	120e	6e	20e
S12	24 Jan 2023		KA	LAB DUPLICATE	100e	2e	16e
S12	31 Jan 2023		CRE	FIELD DUPLICATE	2400e	180e	88
S12	31 Jan 2023		CRE	LAB DUPLICATE	2000e	220e	72

ns = not sampled

ND = no data

