



# **POINT LOMA OCEAN OUTFALL MONTHLY RECEIVING WATERS MONITORING REPORT**

## **POINT LOMA WASTEWATER TREATMENT PLANT**

NPDES Permit No. CA0107409  
SDRWQCB Order No. R9-2017-0007

### **MARCH 2024**

Environmental Monitoring and Technical Services  
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April 30, 2024

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

Attention: POTW Compliance Unit

Dear Mr. Gibson:

Enclosed is the March 2024 Monthly Receiving Waters Monitoring Report for the Point Loma Ocean Outfall, Point Loma Wastewater Treatment Plant as required per Order No. R9-2017-0007, NPDES Permit No. CA0107409.

This report includes raw ocean monitoring data and summaries of water quality parameters and ocean conditions measured during the month for the Point Loma outfall region. Also included are summaries of compliance with the bacterial water-contact standards specified in the California Ocean Plan.

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 for the San Diego coastal region surrounding the Point Loma Ocean Outfall are submitted to the San Diego Regional Water Quality Control Board and U.S. EPA Region 9 in accordance with Order No. R9-2017-0007, NPDES Permit No. CA0107409 for the Point Loma Wastewater Treatment Plant (PLWTP), Point Loma Ocean Outfall (PLOO). 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 PLWTP are presented in separate reports.

## MATERIALS AND METHODS

### *Shore Stations*

Water quality conditions are required to be monitored at eight shoreline stations, including D4, D5, D7, D8, D9, D10, D11 and D12, which range from the tip of the Point Loma Peninsula to west of Mission Bay (see station locations map). Over the past several years, due to increasing instability in several cliffside areas of Point Loma, City staff have been unable to safely access and sample several stations at various times. This has resulted in the following modifications:

- Station D8 was replaced by alternate station D8-A during July 2016, which was subsequently replaced by station D8-B in March 2018, after which sampling at station D8-A resumed in December 2020. Due to recent access issues at D8-A, sampling resumed at D8-B during February 2021.

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

### *Kelp Bed Stations*

The eight kelp stations are sampled weekly according to permit specifications to monitor water quality conditions within the Point Loma kelp forest. These stations include three sites located along the inshore edge of the kelp bed paralleling the 9-m depth contour (i.e., stations C4, C5 and C6), and five sites located near the offshore edge of the kelp bed along the 18-m depth contour (i.e., stations A1, A6, A7, C7 and C8).

Routine weekly monitoring at each of the kelp bed sites consists primarily of collecting seawater samples at discrete depths to determine concentrations of fecal indicator bacteria (i.e., total coliforms, fecal coliforms, and *Enterococcus*). Water column profiles of various physical/chemical parameters are also generated during each sampling event, and visual observations of weather and water conditions are recorded at each station.

Seawater samples at the kelp bed stations are collected using a CTD-integrated rosette sampler with Niskin bottles. Aliquots for bacteriological analyses are drawn from these bottles into sterile sample bottles for processing at the City's Marine Microbiology Laboratory. Water column

profiles of temperature, transmissivity, dissolved oxygen, pH, salinity, density, chlorophyll *a* are generated using a Sea-Bird conductivity, temperature and depth instrument (CTD), which collects these data at a rate of  $\geq 4$  scans per second. These scans are then internally averaged to create water column profiles with data readings at a rate of one per meter. Additionally, CTD profile data for each water sample depth are presented with the bacteriological data.

### ***Offshore Stations***

Offshore water quality sampling is conducted quarterly typically during the months of February, May, August, and November. A total of 36 offshore stations (F01–F36) are sampled during each survey usually over a 3-day period. Three of the stations (F01–F03) are located along the 18 m depth contour, while 11 stations are located along each of the following contours: 60 m (stations F04–F14), 80 m (stations F15–F25), and 98 m (stations F26–F36). Of these 36 stations, 15 (F01–F03, F06–F14, F18–F20) are located within State jurisdictional waters (i.e., within 3 nautical miles of shore) and are subject to the California Ocean Plan’s compliance standards. Monitoring at all offshore sites includes measurements of *Enterococcus* bacteria, water temperature, salinity, density, dissolved oxygen, pH, chlorophyll *a*, transmissivity, chromomorphpic dissolved organic matter (CDOM), and visual observations of weather and water conditions.

Seawater samples for bacteriological analyses at the offshore stations are collected using a CTD-integrated rosette sampler with Niskin bottles. Profiles of the various physical/chemical parameters (listed above) are taken using a Sea-Bird CTD. Additionally, data for depths closest to those at which bacteriological samples were collected are extracted from the CTD profiles and 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 geometric mean and single sample maximum water-contact standards specified in the California Ocean Plan. The seven standards are defined as follows:

30-day Geometric Mean: The following standards are based on the geometric mean of the five most recent samples from each site.

- (1) Total coliform density shall not exceed 1000 CFU/100 mL;
- (2) Fecal coliform density shall not exceed 200 CFU/100 mL;
- (3) *Enterococcus* density shall not exceed 35 CFU/100 mL

Single Sample Maximums:

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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.

- (1) Total coliform density shall not exceed 10,000 CFU/100 mL;
- (2) Fecal coliform density shall not exceed 400 CFU/100 mL;
- (3) *Enterococcus* density shall not exceed 104 CFU/100 mL;
- (4) Total coliform density shall not exceed 1,000 CFU/100 mL when the fecal coliform/total coliform ratio exceeds 0.1.

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 the same throughout field and lab procedures. The results of these analyses provide a measure of precision associated with sample collection, preservation, storage, and lab procedures. The sign test (see Gilbert, 1987<sup>2</sup>) is used to statistically compare both the results from the laboratory duplicates, as well as the results from the field duplicates. These data will be further analyzed in the City's 2024 Quality Assurance Report, which will be completed in March 2025.

## SUMMARY OF RESULTS

As of October 2020, new 2019 Ocean Plan Water Quality Objectives are included for *Enterococcus* and total coliforms, see Appendix B.

### ***Shore Stations***

- The eight shore stations (D4, D5, D7, D8-B, D9, D10, D11, D12) were sampled on March 6, 13, 20, and 27.
- During the March reporting period, one of the eight shore stations was out of compliance with the various 2015 California Ocean Plan (Ocean Plan) water contact standards on one or more days as follows:
  - o The 6-week running geometric mean standard for *Enterococcus* was exceeded at station D11.
- A sewage-like odor was observed at station D5 on one or more days in March.
- Over the years, elevated bacteria levels at shore and kelp bed stations have tended to be associated with rainfall events, heavy recreational use, or the presence of seabirds or decaying kelp and surf grass. 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 Stations***

- The eight kelp bed water quality stations (A1, A6, A7, C4, C5, C6, C7, C8) were sampled on March 6, 12, 19, and 26.
- During the March reporting period, each of the eight kelp stations was in compliance with the various 2015 California Ocean Plan (Ocean Plan) water contact standards.

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

- Water column temperatures ranged from 11.27 to 16.11°C. The difference between surface and bottom waters ranged from 0.57 to 3.70°C.
- Chlorophyll *a* concentrations ranged from 0.15 to 8.69 µg/L.
- A sewage-like odor was observed at station C7 on one or more days in March.

#### ***Offshore Stations***

- Quarterly water quality sampling was not conducted during March at the offshore stations. The next quarterly sampling is scheduled for May 2024.





# TABLES AND FIGURES



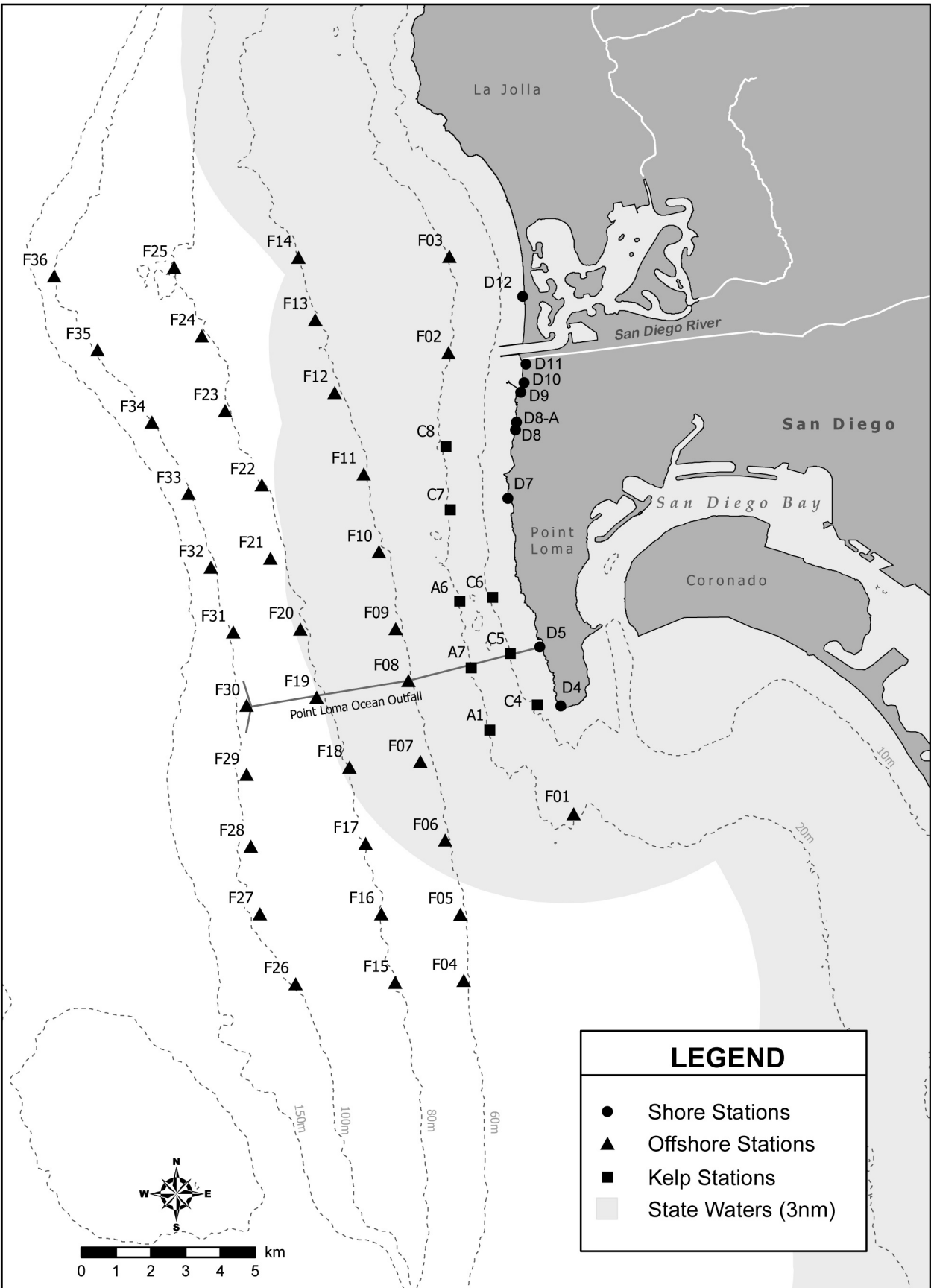


Figure 1.1 Station Map

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# Shore Stations



**Table 2.1**

Summary of compliance with the Ocean Plan's 30-day Geometric Mean standard for fecal coliform bacteria at the PLOO 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	D4	D5	D7	D8-B	D9	D10	D11	D12
01 Mar 2024	*4	*13	*2	*6	*7	*9	*28	*2
02 Mar 2024	*4	*13	*2	*6	*7	*9	*28	*2
03 Mar 2024	*4	*13	*2	*6	*7	*9	*28	*2
04 Mar 2024	*4	*13	*2	*6	*7	*9	*28	*2
05 Mar 2024	*4	*13	*2	*6	*7	*9	*28	*2
06 Mar 2024	3	9	2	8	5	9	17	2
07 Mar 2024	*2	*6	*2	*6	*4	*8	*9	*2
08 Mar 2024	*2	*6	*2	*6	*4	*8	*9	*2
09 Mar 2024	*2	*6	*2	*6	*4	*8	*9	*2
10 Mar 2024	*2	*6	*2	*6	*4	*8	*9	*2
11 Mar 2024	*2	*6	*2	*6	*4	*8	*9	*2
12 Mar 2024	*2	*6	*2	*6	*4	*8	*9	*2
13 Mar 2024	2	5	2	6	3	9	14	2
14 Mar 2024	2	5	2	6	3	9	14	2
15 Mar 2024	*2	*4	*2	*7	*4	*9	*9	*2
16 Mar 2024	*2	*4	*2	*7	*4	*9	*9	*2
17 Mar 2024	*2	*4	*2	*7	*4	*9	*9	*2
18 Mar 2024	*2	*4	*2	*7	*4	*9	*9	*2
19 Mar 2024	*2	*4	*2	*7	*4	*9	*9	*2
20 Mar 2024	3	3	2	7	3	7	7	2
21 Mar 2024	3	3	2	7	3	7	7	2
22 Mar 2024	*3	*2	*2	*6	*2	*5	*5	*3
23 Mar 2024	*3	*2	*2	*6	*2	*5	*5	*3
24 Mar 2024	*3	*2	*2	*6	*2	*5	*5	*3
25 Mar 2024	*3	*2	*2	*6	*2	*5	*5	*3
26 Mar 2024	*3	*2	*2	*6	*2	*5	*5	*3
27 Mar 2024	3	2	2	5	2	6	6	3
28 Mar 2024	3	2	2	5	2	6	6	3
29 Mar 2024	*3	*2	*2	*6	*2	*7	*8	*4
30 Mar 2024	*3	*2	*2	*6	*2	*7	*8	*4
31 Mar 2024	*3	*2	*2	*6	*2	*7	*8	*4

\* Geometric mean calculated using n<5

## Table 2.2

Summary of compliance at the PLOO 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	D4	D5	D7	D8-B	D9	D10	D11	D12
06 Mar 2024	IC	IC	IC	IC	IC	IC	IC	IC
13 Mar 2024	IC	IC	IC	IC	IC	IC	IC	IC
20 Mar 2024	IC	IC	IC	IC	IC	IC	IC	IC
27 Mar 2024	IC	IC	IC	IC	IC	IC	IC	IC

IC = In Compliance

E = Exceedance

ns = not sampled

ND = no data



**Table 2.3**

Summary of compliance with the Ocean Plan's 30-day Geometric Mean standard for *Enterococcus* at the PLOO 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 >35 CFU/100 mL exceed the standard.

Date	D4	D5	D7	D8-B	D9	D10	D11	D12
01 Mar 2024	*3	*5	*7	*12	*8	*19	*36	*3
02 Mar 2024	*3	*5	*7	*12	*8	*19	*36	*3
03 Mar 2024	*3	*5	*7	*12	*8	*19	*36	*3
04 Mar 2024	*3	*5	*7	*12	*8	*19	*36	*3
05 Mar 2024	*3	*5	*7	*12	*8	*19	*36	*3
06 Mar 2024	3	4	5	8	6	12	20	3
07 Mar 2024	*2	*3	*4	*5	*5	*8	*10	*3
08 Mar 2024	*2	*3	*4	*5	*5	*8	*10	*3
09 Mar 2024	*2	*3	*4	*5	*5	*8	*10	*3
10 Mar 2024	*2	*3	*4	*5	*5	*8	*10	*3
11 Mar 2024	*2	*3	*4	*5	*5	*8	*10	*3
12 Mar 2024	*2	*3	*4	*5	*5	*8	*10	*3
13 Mar 2024	2	3	4	5	5	10	14	3
14 Mar 2024	2	3	4	5	5	10	14	3
15 Mar 2024	*2	*3	*4	*6	*6	*8	*9	*3
16 Mar 2024	*2	*3	*4	*6	*6	*8	*9	*3
17 Mar 2024	*2	*3	*4	*6	*6	*8	*9	*3
18 Mar 2024	*2	*3	*4	*6	*6	*8	*9	*3
19 Mar 2024	*2	*3	*4	*6	*6	*8	*9	*3
20 Mar 2024	2	4	4	6	6	7	7	4
21 Mar 2024	2	4	4	6	6	7	7	4
22 Mar 2024	*2	*3	*2	*3	*3	*4	*4	*3
23 Mar 2024	*2	*3	*2	*3	*3	*4	*4	*3
24 Mar 2024	*2	*3	*2	*3	*3	*4	*4	*3
25 Mar 2024	*2	*3	*2	*3	*3	*4	*4	*3
26 Mar 2024	*2	*3	*2	*3	*3	*4	*4	*3
27 Mar 2024	2	2	2	3	3	4	4	4
28 Mar 2024	2	2	2	3	3	4	4	4
29 Mar 2024	*2	*3	*2	*3	*3	*4	*4	*4
30 Mar 2024	*2	*3	*2	*3	*3	*4	*4	*4
31 Mar 2024	*2	*3	*2	*3	*3	*4	*4	*4

\* Geometric mean calculated using n<5

## Table 2.4

Summary of compliance at the PLOO shore stations with the Ocean Plan's Single Sample Maximum standard for *Enterococcus* bacteria, which states that *Enterococcus* density shall not exceed 104 CFU/100 mL in more than 10% of samples per month.

Date	D4	D5	D7	D8-B	D9	D10	D11	D12
06 Mar 2024	IC	IC	IC	IC	IC	IC	IC	IC
13 Mar 2024	IC	IC	IC	IC	IC	IC	IC	IC
20 Mar 2024	IC	IC	IC	IC	IC	IC	IC	IC
27 Mar 2024	IC	IC	IC	IC	IC	IC	IC	IC

IC = In Compliance

E = Exceedance

ns = not sampled

ND = no data

**Table 2.5**

Summary of compliance with the Ocean Plan's 30-day Geometric Mean standard for total coliform bacteria at the PLOO 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 >1000 CFU/100 mL exceed the standard.

Date	D4	D5	D7	D8-B	D9	D10	D11	D12
01 Mar 2024	*20	*40	*6	*26	*36	*82	*153	*8
02 Mar 2024	*20	*40	*6	*26	*36	*82	*153	*8
03 Mar 2024	*20	*40	*6	*26	*36	*82	*153	*8
04 Mar 2024	*20	*40	*6	*26	*36	*82	*153	*8
05 Mar 2024	*20	*40	*6	*26	*36	*82	*153	*8
06 Mar 2024	13	22	6	25	20	52	80	6
07 Mar 2024	*6	*13	*4	*11	*15	*38	*41	*5
08 Mar 2024	*6	*13	*4	*11	*15	*38	*41	*5
09 Mar 2024	*6	*13	*4	*11	*15	*38	*41	*5
10 Mar 2024	*6	*13	*4	*11	*15	*38	*41	*5
11 Mar 2024	*6	*13	*4	*11	*15	*38	*41	*5
12 Mar 2024	*6	*13	*4	*11	*15	*38	*41	*5
13 Mar 2024	7	11	5	12	16	53	58	4
14 Mar 2024	7	11	5	12	16	53	58	4
15 Mar 2024	*10	*9	*6	*19	*20	*40	*41	*5
16 Mar 2024	*10	*9	*6	*19	*20	*40	*41	*5
17 Mar 2024	*10	*9	*6	*19	*20	*40	*41	*5
18 Mar 2024	*10	*9	*6	*19	*20	*40	*41	*5
19 Mar 2024	*10	*9	*6	*19	*20	*40	*41	*5
20 Mar 2024	11	11	5	22	17	35	22	6
21 Mar 2024	11	11	5	22	17	35	22	6
22 Mar 2024	*9	*4	*3	*13	*7	*22	*15	*4
23 Mar 2024	*9	*4	*3	*13	*7	*22	*15	*4
24 Mar 2024	*9	*4	*3	*13	*7	*22	*15	*4
25 Mar 2024	*9	*4	*3	*13	*7	*22	*15	*4
26 Mar 2024	*9	*4	*3	*13	*7	*22	*15	*4
27 Mar 2024	11	4	3	14	9	27	18	5
28 Mar 2024	11	4	3	14	9	27	18	5
29 Mar 2024	*9	*4	*3	*22	*9	*37	*18	*6
30 Mar 2024	*9	*4	*3	*22	*9	*37	*18	*6
31 Mar 2024	*9	*4	*3	*22	*9	*37	*18	*6

\* Median calculated using n<5

## Table 2.6

Summary of compliance at the PLOO shore stations with the Ocean Plan's Single Sample Maximum for total coliform bacteria, which states that total coliform density shall not exceed 10000 CFU/100 mL in more than 10% of samples per station, per month.

Date	D4	D5	D7	D8-B	D9	D10	D11	D12
06 Mar 2024	IC	IC	IC	IC	IC	IC	IC	IC
13 Mar 2024	IC	IC	IC	IC	IC	IC	IC	IC
20 Mar 2024	IC	IC	IC	IC	IC	IC	IC	IC
27 Mar 2024	IC	IC	IC	IC	IC	IC	IC	IC

IC = In Compliance

E = Exceedance

ns = not sampled

ND = no data

## Table 2.7

Summary of compliance at the PLOO shore stations with the Ocean Plan's Single Sample Maximum standard for total coliform bacteria and the fecal/total coliform ratio (F:T), which states that total coliform density shall not exceed 1,000 CFU/100 mL when F:T > 0.1.

Date	D4	D5	D7	D8-B	D9	D10	D11	D12
06 Mar 2024	IC	IC	IC	IC	IC	IC	IC	IC
13 Mar 2024	IC	IC	IC	IC	IC	IC	IC	IC
20 Mar 2024	IC	IC	IC	IC	IC	IC	IC	IC
27 Mar 2024	IC	IC	IC	IC	IC	IC	IC	IC

IC = In Compliance

E = Exceedance

ns = not sampled

ND = no data

**Table 2.8**

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

Station	Date	Time	Total	Fecal	Entero
D10	06 Mar 2024	830	8e	8e	<2
D10	13 Mar 2024	758	200e	<20	22e
D10	20 Mar 2024	827	<20	<2	4e
D10	27 Mar 2024	831	60e	8e	<2
D11	06 Mar 2024	820	6e	<2	2e
D11	13 Mar 2024	749	240e	80e	42
D11	20 Mar 2024	819	2e	2e	<2
D11	27 Mar 2024	822	40e	12e	<2
D12	06 Mar 2024	802	<2	<2	2e
D12	13 Mar 2024	733	<2	<2	<2
D12	20 Mar 2024	801	<20	6e	14e
D12	27 Mar 2024	805	16e	10e	6e
D4	06 Mar 2024	951	<2	<2	<2
D4	13 Mar 2024	900	12e	<2	<2
D4	20 Mar 2024	943	14e	14e	2e
D4	27 Mar 2024	940	<20	<2	<2
D5	06 Mar 2024	932	<2	<2	2e
D5	13 Mar 2024	848	4e	<2	<2
D5	20 Mar 2024	932	20e	<2	6e
D5	27 Mar 2024	925	<2	<2	<2
D7	06 Mar 2024	905	4e	<2	<2
D7	13 Mar 2024	825	6e	2e	<2
D7	20 Mar 2024	905	<2	<2	<2
D7	27 Mar 2024	901	2e	2e	<2
D8-B	06 Mar 2024	851	20e	20e	<2
D8-B	13 Mar 2024	815	16e	4e	4e
D8-B	20 Mar 2024	851	40e	6e	6e
D8-B	27 Mar 2024	849	<20	<2	<2
D9	06 Mar 2024	842	<2	<2	<2
D9	13 Mar 2024	806	16e	<2	4e
D9	20 Mar 2024	842	10e	<2	8e
D9	27 Mar 2024	841	<20	<2	<2

ns = not sampled

ND = no data

**Table 2.9**

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

Station	Date	Parameter	Value
D10	06 Mar 2024	Arrive Time	830
D10	06 Mar 2024	Weather	Sunny
D10	06 Mar 2024	Wind Speed (kts)	0.6
D10	06 Mar 2024	Wind Dir	NE
D10	06 Mar 2024	Animal Life	
D10	06 Mar 2024	Floatables	None
D10	06 Mar 2024	Water Color	Green
D10	06 Mar 2024	Current Direction	S
D10	06 Mar 2024	Water Temp (C)	13.7
D10	06 Mar 2024	Wave Height (ft)	4
D10	06 Mar 2024	High Tide (ft)	5.19
D10	06 Mar 2024	High Tide Time	528
D10	06 Mar 2024	Low Tide (ft)	-0.89
D10	06 Mar 2024	Low Tide Time	1259
D10	06 Mar 2024	Comments	Water clear; Surfer/Paddle boarder-10; Trash-2; Kelp;Sea-grass;Debris
D10	13 Mar 2024	Arrive Time	758
D10	13 Mar 2024	Weather	Partly cloudy
D10	13 Mar 2024	Wind Speed (kts)	0
D10	13 Mar 2024	Wind Dir	XX
D10	13 Mar 2024	Animal Life	
D10	13 Mar 2024	Floatables	None
D10	13 Mar 2024	Water Color	Green
D10	13 Mar 2024	Current Direction	S
D10	13 Mar 2024	Water Temp (C)	10.7
D10	13 Mar 2024	Wave Height (ft)	6
D10	13 Mar 2024	High Tide (ft)	3.97
D10	13 Mar 2024	High Tide Time	1206
D10	13 Mar 2024	Low Tide (ft)	-0.24
D10	13 Mar 2024	Low Tide Time	609
D10	13 Mar 2024	Comments	Water clear; Surfer/Paddle boarder-5; Trash-1; Kelp;Sea-grass;Debris
D10	20 Mar 2024	Arrive Time	827
D10	20 Mar 2024	Weather	Cloudy
D10	20 Mar 2024	Wind Speed (kts)	1
D10	20 Mar 2024	Wind Dir	NW
D10	20 Mar 2024	Animal Life	
D10	20 Mar 2024	Floatables	Foam
D10	20 Mar 2024	Water Color	Green
D10	20 Mar 2024	Current Direction	S
D10	20 Mar 2024	Water Temp (C)	11
D10	20 Mar 2024	Wave Height (ft)	3
D10	20 Mar 2024	High Tide (ft)	4.7
D10	20 Mar 2024	High Tide Time	705
D10	20 Mar 2024	Low Tide (ft)	2.03
D10	20 Mar 2024	Low Tide Time	124
D10	20 Mar 2024	Comments	Water clear; Trash-1; Kelp;Seagrass
D10	27 Mar 2024	Arrive Time	831
D10	27 Mar 2024	Weather	Sunny
D10	27 Mar 2024	Wind Speed (kts)	0.8
D10	27 Mar 2024	Wind Dir	E
D10	27 Mar 2024	Animal Life	Bird-1;
D10	27 Mar 2024	Floatables	None

Station	Date	Parameter	Value
D10	27 Mar 2024	Water Color	Green
D10	27 Mar 2024	Current Direction	S
D10	27 Mar 2024	Water Temp (C)	11.5
D10	27 Mar 2024	Wave Height (ft)	4
D10	27 Mar 2024	High Tide (ft)	3.82
D10	27 Mar 2024	High Tide Time	1056
D10	27 Mar 2024	Low Tide (ft)	0.18
D10	27 Mar 2024	Low Tide Time	504
D10	27 Mar 2024	Comments	Water clear; Trash-1; Seagrass;Kelp;Debris; Person/Walker/Jogger-5
D11	06 Mar 2024	Arrive Time	820
D11	06 Mar 2024	Weather	Sunny
D11	06 Mar 2024	Wind Speed (kts)	2.2
D11	06 Mar 2024	Wind Dir	NW
D11	06 Mar 2024	Animal Life	
D11	06 Mar 2024	Floatables	None
D11	06 Mar 2024	Water Color	Green
D11	06 Mar 2024	Current Direction	S
D11	06 Mar 2024	Water Temp (C)	10.8
D11	06 Mar 2024	Wave Height (ft)	3
D11	06 Mar 2024	High Tide (ft)	5.19
D11	06 Mar 2024	High Tide Time	528
D11	06 Mar 2024	Low Tide (ft)	-0.89
D11	06 Mar 2024	Low Tide Time	1259
D11	06 Mar 2024	Comments	Water clear; Surfer/Paddle boarder-2; Trash-2; Kelp;Sea-grass;Algae;Debris; Person/Walker/Jogger-3
D11	13 Mar 2024	Arrive Time	749
D11	13 Mar 2024	Weather	Partly cloudy
D11	13 Mar 2024	Wind Speed (kts)	0
D11	13 Mar 2024	Wind Dir	XX
D11	13 Mar 2024	Animal Life	
D11	13 Mar 2024	Floatables	None
D11	13 Mar 2024	Water Color	Green
D11	13 Mar 2024	Current Direction	S
D11	13 Mar 2024	Water Temp (C)	12.9
D11	13 Mar 2024	Wave Height (ft)	6
D11	13 Mar 2024	High Tide (ft)	3.97
D11	13 Mar 2024	High Tide Time	1206
D11	13 Mar 2024	Low Tide (ft)	-0.24
D11	13 Mar 2024	Low Tide Time	609
D11	13 Mar 2024	Comments	Water clear; Surfer/Paddle boarder-7; Trash-2; Kelp;Sea-grass;Algae;Debris; Person/Walker/Jogger-2
D11	20 Mar 2024	Arrive Time	819
D11	20 Mar 2024	Weather	Cloudy
D11	20 Mar 2024	Wind Speed (kts)	0.6
D11	20 Mar 2024	Wind Dir	NW
D11	20 Mar 2024	Animal Life	
D11	20 Mar 2024	Floatables	None
D11	20 Mar 2024	Water Color	Green
D11	20 Mar 2024	Current Direction	S
D11	20 Mar 2024	Water Temp (C)	12
D11	20 Mar 2024	Wave Height (ft)	3
D11	20 Mar 2024	High Tide (ft)	4.7
D11	20 Mar 2024	High Tide Time	705
D11	20 Mar 2024	Low Tide (ft)	2.03
D11	20 Mar 2024	Low Tide Time	124
D11	20 Mar 2024	Comments	Water clear; Trash-1; Kelp;Seagrass;Algae



Station	Date	Parameter	Value
D11	27 Mar 2024	Arrive Time	822
D11	27 Mar 2024	Weather	Sunny
D11	27 Mar 2024	Wind Speed (kts)	4.2
D11	27 Mar 2024	Wind Dir	E
D11	27 Mar 2024	Animal Life	
D11	27 Mar 2024	Floatables	None
D11	27 Mar 2024	Water Color	Green
D11	27 Mar 2024	Current Direction	S
D11	27 Mar 2024	Water Temp (C)	11.9
D11	27 Mar 2024	Wave Height (ft)	5
D11	27 Mar 2024	High Tide (ft)	3.82
D11	27 Mar 2024	High Tide Time	1056
D11	27 Mar 2024	Low Tide (ft)	0.18
D11	27 Mar 2024	Low Tide Time	504
D11	27 Mar 2024	Comments	Water clear; Surfer/Paddle boarder-11; Trash-1; Algae;Debris;Kelp; Person/Walker/Jogger-2
D12	06 Mar 2024	Arrive Time	802
D12	06 Mar 2024	Weather	Sunny
D12	06 Mar 2024	Wind Speed (kts)	2.1
D12	06 Mar 2024	Wind Dir	E
D12	06 Mar 2024	Animal Life	Bird-1; Dog-1;
D12	06 Mar 2024	Floatables	None
D12	06 Mar 2024	Water Color	Green
D12	06 Mar 2024	Current Direction	S
D12	06 Mar 2024	Water Temp (C)	15.8
D12	06 Mar 2024	Wave Height (ft)	3
D12	06 Mar 2024	High Tide (ft)	5.19
D12	06 Mar 2024	High Tide Time	528
D12	06 Mar 2024	Low Tide (ft)	-0.89
D12	06 Mar 2024	Low Tide Time	1259
D12	06 Mar 2024	Comments	Water clear; Trash-2; Kelp;Seagrass;Debris; Person/Walker/Jogger-1
D12	13 Mar 2024	Arrive Time	733
D12	13 Mar 2024	Weather	Partly cloudy
D12	13 Mar 2024	Wind Speed (kts)	3.3
D12	13 Mar 2024	Wind Dir	S
D12	13 Mar 2024	Animal Life	
D12	13 Mar 2024	Floatables	None
D12	13 Mar 2024	Water Color	Green
D12	13 Mar 2024	Current Direction	S
D12	13 Mar 2024	Water Temp (C)	13.6
D12	13 Mar 2024	Wave Height (ft)	3
D12	13 Mar 2024	High Tide (ft)	3.97
D12	13 Mar 2024	High Tide Time	1206
D12	13 Mar 2024	Low Tide (ft)	-0.24
D12	13 Mar 2024	Low Tide Time	609
D12	13 Mar 2024	Comments	Water clear; Surfer/Paddle boarder-1; Trash-2; Kelp;Seagrass; Person/Walker/Jogger-1
D12	20 Mar 2024	Arrive Time	801
D12	20 Mar 2024	Weather	Cloudy
D12	20 Mar 2024	Wind Speed (kts)	0
D12	20 Mar 2024	Wind Dir	NW
D12	20 Mar 2024	Animal Life	
D12	20 Mar 2024	Floatables	Foam
D12	20 Mar 2024	Water Color	Green
D12	20 Mar 2024	Current Direction	S
D12	20 Mar 2024	Water Temp (C)	11
D12	20 Mar 2024	Wave Height (ft)	3

Station	Date	Parameter	Value
D12	20 Mar 2024	High Tide (ft)	4.7
D12	20 Mar 2024	High Tide Time	705
D12	20 Mar 2024	Low Tide (ft)	2.03
D12	20 Mar 2024	Low Tide Time	124
D12	20 Mar 2024	Comments	Water clear; Trash-1; Kelp;Seagrass; Person/Walker/Jogger-1
D12	27 Mar 2024	Arrive Time	805
D12	27 Mar 2024	Weather	Sunny
D12	27 Mar 2024	Wind Speed (kts)	0.6
D12	27 Mar 2024	Wind Dir	E
D12	27 Mar 2024	Animal Life	
D12	27 Mar 2024	Floatables	None
D12	27 Mar 2024	Water Color	Green
D12	27 Mar 2024	Current Direction	S
D12	27 Mar 2024	Water Temp (C)	12.7
D12	27 Mar 2024	Wave Height (ft)	4
D12	27 Mar 2024	High Tide (ft)	3.82
D12	27 Mar 2024	High Tide Time	1056
D12	27 Mar 2024	Low Tide (ft)	0.18
D12	27 Mar 2024	Low Tide Time	504
D12	27 Mar 2024	Comments	Water clear; Trash-2; Seagrass;Kelp;Debris; Person/Walker/Jogger-3
D4	06 Mar 2024	Arrive Time	951
D4	06 Mar 2024	Weather	Sunny
D4	06 Mar 2024	Wind Speed (kts)	1.7
D4	06 Mar 2024	Wind Dir	W
D4	06 Mar 2024	Animal Life	
D4	06 Mar 2024	Floatables	None
D4	06 Mar 2024	Water Color	Green
D4	06 Mar 2024	Current Direction	S
D4	06 Mar 2024	Water Temp (C)	15.3
D4	06 Mar 2024	Wave Height (ft)	3
D4	06 Mar 2024	High Tide (ft)	5.19
D4	06 Mar 2024	High Tide Time	528
D4	06 Mar 2024	Low Tide (ft)	-0.89
D4	06 Mar 2024	Low Tide Time	1259
D4	06 Mar 2024	Comments	Water clear; Trash-1; Kelp;Seagrass;Algae
D4	13 Mar 2024	Arrive Time	900
D4	13 Mar 2024	Weather	Partly cloudy
D4	13 Mar 2024	Wind Speed (kts)	2.3
D4	13 Mar 2024	Wind Dir	W
D4	13 Mar 2024	Animal Life	
D4	13 Mar 2024	Floatables	None
D4	13 Mar 2024	Water Color	Green
D4	13 Mar 2024	Current Direction	S
D4	13 Mar 2024	Water Temp (C)	9.8
D4	13 Mar 2024	Wave Height (ft)	3
D4	13 Mar 2024	High Tide (ft)	3.97
D4	13 Mar 2024	High Tide Time	1206
D4	13 Mar 2024	Low Tide (ft)	-0.24
D4	13 Mar 2024	Low Tide Time	609
D4	13 Mar 2024	Comments	Water clear; Trash-1; Algae;Seagrass
D4	20 Mar 2024	Arrive Time	943
D4	20 Mar 2024	Weather	Cloudy
D4	20 Mar 2024	Wind Speed (kts)	1.2
D4	20 Mar 2024	Wind Dir	NW
D4	20 Mar 2024	Animal Life	Bird-2;

Station	Date	Parameter	Value
D4	20 Mar 2024	Floatables	None
D4	20 Mar 2024	Water Color	Green
D4	20 Mar 2024	Current Direction	S
D4	20 Mar 2024	Water Temp (C)	13
D4	20 Mar 2024	Wave Height (ft)	2
D4	20 Mar 2024	High Tide (ft)	4.7
D4	20 Mar 2024	High Tide Time	705
D4	20 Mar 2024	Low Tide (ft)	2.03
D4	20 Mar 2024	Low Tide Time	124
D4	20 Mar 2024	Comments	Water clear; Trash-1; Kelp;Seagrass;Algae
D4	27 Mar 2024	Arrive Time	940
D4	27 Mar 2024	Weather	Sunny
D4	27 Mar 2024	Wind Speed (kts)	1.3
D4	27 Mar 2024	Wind Dir	S
D4	27 Mar 2024	Animal Life	
D4	27 Mar 2024	Floatables	None
D4	27 Mar 2024	Water Color	Green
D4	27 Mar 2024	Current Direction	S
D4	27 Mar 2024	Water Temp (C)	11.3
D4	27 Mar 2024	Wave Height (ft)	3
D4	27 Mar 2024	High Tide (ft)	3.82
D4	27 Mar 2024	High Tide Time	1056
D4	27 Mar 2024	Low Tide (ft)	0.18
D4	27 Mar 2024	Low Tide Time	504
D4	27 Mar 2024	Comments	Water clear; Trash-1; Algae
D5	06 Mar 2024	Arrive Time	932
D5	06 Mar 2024	Weather	Sunny
D5	06 Mar 2024	Wind Speed (kts)	1.7
D5	06 Mar 2024	Wind Dir	W
D5	06 Mar 2024	Animal Life	
D5	06 Mar 2024	Floatables	None
D5	06 Mar 2024	Water Color	Green
D5	06 Mar 2024	Current Direction	S
D5	06 Mar 2024	Water Temp (C)	12.6
D5	06 Mar 2024	Wave Height (ft)	3
D5	06 Mar 2024	High Tide (ft)	5.19
D5	06 Mar 2024	High Tide Time	528
D5	06 Mar 2024	Low Tide (ft)	-0.89
D5	06 Mar 2024	Low Tide Time	1259
D5	06 Mar 2024	Comments	Water clear; Trash-1; Kelp;Seagrass;Algae; Sewage-like odor
D5	13 Mar 2024	Arrive Time	848
D5	13 Mar 2024	Weather	Partly cloudy
D5	13 Mar 2024	Wind Speed (kts)	0.9
D5	13 Mar 2024	Wind Dir	E
D5	13 Mar 2024	Animal Life	
D5	13 Mar 2024	Floatables	None
D5	13 Mar 2024	Water Color	Green
D5	13 Mar 2024	Current Direction	S
D5	13 Mar 2024	Water Temp (C)	12.1
D5	13 Mar 2024	Wave Height (ft)	4
D5	13 Mar 2024	High Tide (ft)	3.97
D5	13 Mar 2024	High Tide Time	1206
D5	13 Mar 2024	Low Tide (ft)	-0.24
D5	13 Mar 2024	Low Tide Time	609
D5	13 Mar 2024	Comments	Water clear; Trash-1; Algae
D5	20 Mar 2024	Arrive Time	932
D5	20 Mar 2024	Weather	Cloudy

Station	Date	Parameter	Value
D5	20 Mar 2024	Wind Speed (kts)	1.2
D5	20 Mar 2024	Wind Dir	NW
D5	20 Mar 2024	Animal Life	
D5	20 Mar 2024	Floatables	None
D5	20 Mar 2024	Water Color	Green
D5	20 Mar 2024	Current Direction	S
D5	20 Mar 2024	Water Temp (C)	13
D5	20 Mar 2024	Wave Height (ft)	3
D5	20 Mar 2024	High Tide (ft)	4.7
D5	20 Mar 2024	High Tide Time	705
D5	20 Mar 2024	Low Tide (ft)	2.03
D5	20 Mar 2024	Low Tide Time	124
D5	20 Mar 2024	Comments	Water clear; Trash-1; Kelp;Seagrass;Algae
D5	27 Mar 2024	Arrive Time	925
D5	27 Mar 2024	Weather	Sunny
D5	27 Mar 2024	Wind Speed (kts)	0
D5	27 Mar 2024	Wind Dir	XX
D5	27 Mar 2024	Animal Life	Bird-5;
D5	27 Mar 2024	Floatables	None
D5	27 Mar 2024	Water Color	Green
D5	27 Mar 2024	Current Direction	S
D5	27 Mar 2024	Water Temp (C)	10
D5	27 Mar 2024	Wave Height (ft)	3
D5	27 Mar 2024	High Tide (ft)	3.82
D5	27 Mar 2024	High Tide Time	1056
D5	27 Mar 2024	Low Tide (ft)	0.18
D5	27 Mar 2024	Low Tide Time	504
D5	27 Mar 2024	Comments	Water clear; Trash-1; Algae
D7	06 Mar 2024	Arrive Time	905
D7	06 Mar 2024	Weather	Sunny
D7	06 Mar 2024	Wind Speed (kts)	2
D7	06 Mar 2024	Wind Dir	W
D7	06 Mar 2024	Animal Life	
D7	06 Mar 2024	Floatables	None
D7	06 Mar 2024	Water Color	Green
D7	06 Mar 2024	Current Direction	S
D7	06 Mar 2024	Water Temp (C)	9.6
D7	06 Mar 2024	Wave Height (ft)	4
D7	06 Mar 2024	High Tide (ft)	5.19
D7	06 Mar 2024	High Tide Time	528
D7	06 Mar 2024	Low Tide (ft)	-0.89
D7	06 Mar 2024	Low Tide Time	1259
D7	06 Mar 2024	Comments	Water clear; Trash-2; Kelp;Seagrass;Algae;Debris
D7	13 Mar 2024	Arrive Time	825
D7	13 Mar 2024	Weather	Partly cloudy
D7	13 Mar 2024	Wind Speed (kts)	1.5
D7	13 Mar 2024	Wind Dir	W
D7	13 Mar 2024	Animal Life	
D7	13 Mar 2024	Floatables	None
D7	13 Mar 2024	Water Color	Green
D7	13 Mar 2024	Current Direction	S
D7	13 Mar 2024	Water Temp (C)	12.1
D7	13 Mar 2024	Wave Height (ft)	3
D7	13 Mar 2024	High Tide (ft)	3.97
D7	13 Mar 2024	High Tide Time	1206
D7	13 Mar 2024	Low Tide (ft)	-0.24
D7	13 Mar 2024	Low Tide Time	609
D7	13 Mar 2024	Comments	Water clear; Surfer/Paddle boarder-2; Trash-1; Algae;Kelp

Station	Date	Parameter	Value
D7	20 Mar 2024	Arrive Time	905
D7	20 Mar 2024	Weather	Cloudy
D7	20 Mar 2024	Wind Speed (kts)	0.6
D7	20 Mar 2024	Wind Dir	NW
D7	20 Mar 2024	Animal Life	
D7	20 Mar 2024	Floatables	None
D7	20 Mar 2024	Water Color	Green
D7	20 Mar 2024	Current Direction	S
D7	20 Mar 2024	Water Temp (C)	11
D7	20 Mar 2024	Wave Height (ft)	3
D7	20 Mar 2024	High Tide (ft)	4.7
D7	20 Mar 2024	High Tide Time	705
D7	20 Mar 2024	Low Tide (ft)	2.03
D7	20 Mar 2024	Low Tide Time	124
D7	20 Mar 2024	Comments	Water clear; Trash-1; Kelp;Seagrass;Algae
D7	27 Mar 2024	Arrive Time	901
D7	27 Mar 2024	Weather	Sunny
D7	27 Mar 2024	Wind Speed (kts)	0.5
D7	27 Mar 2024	Wind Dir	S
D7	27 Mar 2024	Animal Life	
D7	27 Mar 2024	Floatables	None
D7	27 Mar 2024	Water Color	Green
D7	27 Mar 2024	Current Direction	S
D7	27 Mar 2024	Water Temp (C)	11.9
D7	27 Mar 2024	Wave Height (ft)	5
D7	27 Mar 2024	High Tide (ft)	3.82
D7	27 Mar 2024	High Tide Time	1056
D7	27 Mar 2024	Low Tide (ft)	0.18
D7	27 Mar 2024	Low Tide Time	504
D7	27 Mar 2024	Comments	Water clear; Surfer/Paddle boarder-2; Trash-1; Algae
D8-B	06 Mar 2024	Arrive Time	851
D8-B	06 Mar 2024	Weather	Sunny
D8-B	06 Mar 2024	Wind Speed (kts)	5
D8-B	06 Mar 2024	Wind Dir	W
D8-B	06 Mar 2024	Animal Life	
D8-B	06 Mar 2024	Floatables	None
D8-B	06 Mar 2024	Water Color	Green
D8-B	06 Mar 2024	Current Direction	SE
D8-B	06 Mar 2024	Water Temp (C)	9.8
D8-B	06 Mar 2024	Wave Height (ft)	3
D8-B	06 Mar 2024	High Tide (ft)	5.19
D8-B	06 Mar 2024	High Tide Time	528
D8-B	06 Mar 2024	Low Tide (ft)	-0.89
D8-B	06 Mar 2024	Low Tide Time	1259
D8-B	06 Mar 2024	Comments	Water clear; Trash-3; Kelp;Seagrass;Algae;Debris
D8-B	13 Mar 2024	Arrive Time	815
D8-B	13 Mar 2024	Weather	Partly cloudy
D8-B	13 Mar 2024	Wind Speed (kts)	0.7
D8-B	13 Mar 2024	Wind Dir	NE
D8-B	13 Mar 2024	Animal Life	
D8-B	13 Mar 2024	Floatables	None
D8-B	13 Mar 2024	Water Color	Green
D8-B	13 Mar 2024	Current Direction	S
D8-B	13 Mar 2024	Water Temp (C)	11.9
D8-B	13 Mar 2024	Wave Height (ft)	4
D8-B	13 Mar 2024	High Tide (ft)	3.97
D8-B	13 Mar 2024	High Tide Time	1206

Station	Date	Parameter	Value
D8-B	13 Mar 2024	Low Tide (ft)	-0.24
D8-B	13 Mar 2024	Low Tide Time	609
D8-B	13 Mar 2024	Comments	Water clear; Trash-1; Algae
D8-B	20 Mar 2024	Arrive Time	851
D8-B	20 Mar 2024	Weather	Cloudy
D8-B	20 Mar 2024	Wind Speed (kts)	1.1
D8-B	20 Mar 2024	Wind Dir	W
D8-B	20 Mar 2024	Animal Life	
D8-B	20 Mar 2024	Floatables	None
D8-B	20 Mar 2024	Water Color	Green
D8-B	20 Mar 2024	Current Direction	S
D8-B	20 Mar 2024	Water Temp (C)	11
D8-B	20 Mar 2024	Wave Height (ft)	3
D8-B	20 Mar 2024	High Tide (ft)	4.7
D8-B	20 Mar 2024	High Tide Time	705
D8-B	20 Mar 2024	Low Tide (ft)	2.03
D8-B	20 Mar 2024	Low Tide Time	124
D8-B	20 Mar 2024	Comments	Water clear; Trash-1; Kelp;Seagrass;Algae
D8-B	27 Mar 2024	Arrive Time	849
D8-B	27 Mar 2024	Weather	Sunny
D8-B	27 Mar 2024	Wind Speed (kts)	0.6
D8-B	27 Mar 2024	Wind Dir	N
D8-B	27 Mar 2024	Animal Life	
D8-B	27 Mar 2024	Floatables	None
D8-B	27 Mar 2024	Water Color	Green
D8-B	27 Mar 2024	Current Direction	S
D8-B	27 Mar 2024	Water Temp (C)	11.8
D8-B	27 Mar 2024	Wave Height (ft)	5
D8-B	27 Mar 2024	High Tide (ft)	3.82
D8-B	27 Mar 2024	High Tide Time	1056
D8-B	27 Mar 2024	Low Tide (ft)	0.18
D8-B	27 Mar 2024	Low Tide Time	504
D8-B	27 Mar 2024	Comments	Water clear; Surfer/Paddle boarder-3; Trash-1; Algae;Kelp;Debris
D9	06 Mar 2024	Arrive Time	842
D9	06 Mar 2024	Weather	Sunny
D9	06 Mar 2024	Wind Speed (kts)	0
D9	06 Mar 2024	Wind Dir	XX
D9	06 Mar 2024	Animal Life	
D9	06 Mar 2024	Floatables	Styrofoam
D9	06 Mar 2024	Water Color	Green
D9	06 Mar 2024	Current Direction	S
D9	06 Mar 2024	Water Temp (C)	14.4
D9	06 Mar 2024	Wave Height (ft)	3
D9	06 Mar 2024	High Tide (ft)	5.19
D9	06 Mar 2024	High Tide Time	528
D9	06 Mar 2024	Low Tide (ft)	-0.89
D9	06 Mar 2024	Low Tide Time	1259
D9	06 Mar 2024	Comments	Water clear; Trash-3; Kelp;Seagrass;Algae;Debris; Person/Walker/Jogger-1
D9	13 Mar 2024	Arrive Time	806
D9	13 Mar 2024	Weather	Partly cloudy
D9	13 Mar 2024	Wind Speed (kts)	1.7
D9	13 Mar 2024	Wind Dir	W
D9	13 Mar 2024	Animal Life	
D9	13 Mar 2024	Floatables	None
D9	13 Mar 2024	Water Color	Green

Station	Date	Parameter	Value
D9	13 Mar 2024	Current Direction	S
D9	13 Mar 2024	Water Temp (C)	12
D9	13 Mar 2024	Wave Height (ft)	4
D9	13 Mar 2024	High Tide (ft)	3.97
D9	13 Mar 2024	High Tide Time	1206
D9	13 Mar 2024	Low Tide (ft)	-0.24
D9	13 Mar 2024	Low Tide Time	609
D9	13 Mar 2024	Comments	Water clear; Trash-1; Algae
D9	20 Mar 2024	Arrive Time	842
D9	20 Mar 2024	Weather	Cloudy
D9	20 Mar 2024	Wind Speed (kts)	1.4
D9	20 Mar 2024	Wind Dir	NW
D9	20 Mar 2024	Animal Life	
D9	20 Mar 2024	Floatables	None
D9	20 Mar 2024	Water Color	Green
D9	20 Mar 2024	Current Direction	S
D9	20 Mar 2024	Water Temp (C)	11
D9	20 Mar 2024	Wave Height (ft)	3
D9	20 Mar 2024	High Tide (ft)	4.7
D9	20 Mar 2024	High Tide Time	705
D9	20 Mar 2024	Low Tide (ft)	2.03
D9	20 Mar 2024	Low Tide Time	124
D9	20 Mar 2024	Comments	Water clear; Trash-1; Kelp;Seagrass;Algae; Person/Walker/Jogger-1
D9	27 Mar 2024	Arrive Time	841
D9	27 Mar 2024	Weather	Sunny
D9	27 Mar 2024	Wind Speed (kts)	1.2
D9	27 Mar 2024	Wind Dir	NE
D9	27 Mar 2024	Animal Life	
D9	27 Mar 2024	Floatables	None
D9	27 Mar 2024	Water Color	Green
D9	27 Mar 2024	Current Direction	S
D9	27 Mar 2024	Water Temp (C)	11.3
D9	27 Mar 2024	Wave Height (ft)	3
D9	27 Mar 2024	High Tide (ft)	3.82
D9	27 Mar 2024	High Tide Time	1056
D9	27 Mar 2024	Low Tide (ft)	0.18
D9	27 Mar 2024	Low Tide Time	504
D9	27 Mar 2024	Comments	Water clear; Trash-1; Algae; Person/Walker/Jogger-2

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# Kelp Stations



**Table 3.1**

Summary of compliance with the Ocean Plan's 30-day Geometric Mean standard for fecal coliform bacteria at the PLOO 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	A1	A6	A7	C4	C5	C6	C7	C8
01 Mar 2024	*4	*4	*3	*2	*3	*3	*4	*4
02 Mar 2024	*4	*4	*3	*2	*3	*3	*4	*4
03 Mar 2024	*4	*4	*3	*2	*3	*3	*4	*4
04 Mar 2024	*4	*4	*3	*2	*3	*3	*4	*4
05 Mar 2024	*4	*4	*3	*2	*3	*3	*4	*4
06 Mar 2024	4	4	3	2	3	3	3	3
07 Mar 2024	4	4	3	2	3	3	3	3
08 Mar 2024	4	4	3	2	3	3	3	3
09 Mar 2024	4	4	3	2	3	3	3	3
10 Mar 2024	*3	*4	*3	*2	*2	*2	*3	*2
11 Mar 2024	*3	*4	*3	*2	*2	*2	*3	*2
12 Mar 2024	3	4	3	2	2	2	3	2
13 Mar 2024	*3	*2	*2	*2	*2	*2	*2	*2
14 Mar 2024	*3	*2	*2	*2	*2	*2	*2	*2
15 Mar 2024	*3	*2	*2	*2	*2	*2	*2	*2
16 Mar 2024	*3	*2	*2	*2	*2	*2	*2	*2
17 Mar 2024	*3	*2	*2	*2	*2	*2	*2	*2
18 Mar 2024	*3	*2	*2	*2	*2	*2	*2	*2
19 Mar 2024	3	3	2	2	2	2	2	2
20 Mar 2024	3	3	2	2	2	2	2	2
21 Mar 2024	3	3	2	2	2	2	2	2
22 Mar 2024	*3	*4	*2	*2	*2	*2	*2	*2
23 Mar 2024	*3	*4	*2	*2	*2	*2	*2	*2
24 Mar 2024	*3	*4	*2	*2	*2	*2	*2	*2
25 Mar 2024	*3	*4	*2	*2	*2	*2	*2	*2
26 Mar 2024	3	4	2	2	2	2	2	2
27 Mar 2024	3	4	2	2	2	2	2	2
28 Mar 2024	*3	*5	*2	*2	*2	*2	*3	*2
29 Mar 2024	*3	*5	*2	*2	*2	*2	*3	*2
30 Mar 2024	*3	*5	*2	*2	*2	*2	*3	*2
31 Mar 2024	*3	*5	*2	*2	*2	*2	*3	*2

\* Geometric mean calculated using n<5

### Table 3.2

Summary of compliance at the PLOO 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	A1	A6	A7	C4	C5	C6	C7	C8
06 Mar 2024	IC	IC	IC	IC	IC	IC	IC	IC
12 Mar 2024	IC	IC	IC	IC	IC	IC	IC	IC
19 Mar 2024	IC	IC	IC	IC	IC	IC	IC	IC
26 Mar 2024	IC	IC	IC	IC	IC	IC	IC	IC

IC = In Compliance

E = Exceedance

ns = not sampled

ND = no data

**Table 3.3**

Summary of compliance with the Ocean Plan's 30-day Geometric Mean standard for *Enterococcus* at the PLOO 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 >35 CFU/100 mL exceed the standard.

Date	A1	A6	A7	C4	C5	C6	C7	C8
01 Mar 2024	*4	*4	*4	*2	*3	*3	*3	*6
02 Mar 2024	*4	*4	*4	*2	*3	*3	*3	*6
03 Mar 2024	*4	*4	*4	*2	*3	*3	*3	*6
04 Mar 2024	*4	*4	*4	*2	*3	*3	*3	*6
05 Mar 2024	*4	*4	*4	*2	*3	*3	*3	*6
06 Mar 2024	3	3	3	2	3	3	3	5
07 Mar 2024	3	3	3	2	3	3	3	5
08 Mar 2024	3	3	3	2	3	3	3	5
09 Mar 2024	3	3	3	2	3	3	3	5
10 Mar 2024	*2	*3	*2	*2	*2	*2	*2	*3
11 Mar 2024	*2	*3	*2	*2	*2	*2	*2	*3
12 Mar 2024	2	2	2	2	2	2	2	3
13 Mar 2024	*2	*2	*2	*2	*2	*2	*2	*3
14 Mar 2024	*2	*2	*2	*2	*2	*2	*2	*3
15 Mar 2024	*2	*2	*2	*2	*2	*2	*2	*3
16 Mar 2024	*2	*2	*2	*2	*2	*2	*2	*3
17 Mar 2024	*2	*2	*2	*2	*2	*2	*2	*3
18 Mar 2024	*2	*2	*2	*2	*2	*2	*2	*3
19 Mar 2024	2	2	2	2	2	2	2	3
20 Mar 2024	2	2	2	2	2	2	2	3
21 Mar 2024	2	2	2	2	2	2	2	3
22 Mar 2024	*2	*2	*2	*2	*2	*2	*2	*2
23 Mar 2024	*2	*2	*2	*2	*2	*2	*2	*2
24 Mar 2024	*2	*2	*2	*2	*2	*2	*2	*2
25 Mar 2024	*2	*2	*2	*2	*2	*2	*2	*2
26 Mar 2024	2	2	2	2	2	2	2	2
27 Mar 2024	2	2	2	2	2	2	2	2
28 Mar 2024	*2	*2	*2	*2	*2	*2	*2	*2
29 Mar 2024	*2	*2	*2	*2	*2	*2	*2	*2
30 Mar 2024	*2	*2	*2	*2	*2	*2	*2	*2
31 Mar 2024	*2	*2	*2	*2	*2	*2	*2	*2

\* Geometric mean calculated using n<5

### Table 3.4

Summary of compliance at the PLOO kelp stations with the Ocean Plan's Single Sample Maximum standard for *Enterococcus* bacteria, which states that *Enterococcus* density shall not exceed 104 CFU/100 mL in more than 10% of samples per month.

Date	A1	A6	A7	C4	C5	C6	C7	C8
06 Mar 2024	IC	IC	IC	IC	IC	IC	IC	IC
12 Mar 2024	IC	IC	IC	IC	IC	IC	IC	IC
19 Mar 2024	IC	IC	IC	IC	IC	IC	IC	IC
26 Mar 2024	IC	IC	IC	IC	IC	IC	IC	IC

IC = In Compliance

E = Exceedance

ns = not sampled

ND = no data

**Table 3.5**

Summary of compliance with the Ocean Plan's 30-day Geometric Mean standard for total coliform bacteria at the PLOO kelp stations. Data are based on the median of the five most recent samples from each site over the previous 30 days unless otherwise noted (\*). Values >1000 CFU/100 mL exceed the standard.

Date	A1	A6	A7	C4	C5	C6	C7	C8
01 Mar 2024	*12	*19	*15	*4	*8	*7	*14	*12
02 Mar 2024	*12	*19	*15	*4	*8	*7	*14	*12
03 Mar 2024	*12	*19	*15	*4	*8	*7	*14	*12
04 Mar 2024	*12	*19	*15	*4	*8	*7	*14	*12
05 Mar 2024	*12	*19	*15	*4	*8	*7	*14	*12
06 Mar 2024	12	12	10	4	6	5	10	8
07 Mar 2024	12	12	10	4	6	5	10	8
08 Mar 2024	12	12	10	4	6	5	10	8
09 Mar 2024	12	12	10	4	6	5	10	8
10 Mar 2024	*7	*7	*6	*3	*3	*3	*5	*4
11 Mar 2024	*7	*7	*6	*3	*3	*3	*5	*4
12 Mar 2024	8	9	6	3	3	3	7	4
13 Mar 2024	*8	*5	*4	*3	*3	*4	*4	*3
14 Mar 2024	*8	*5	*4	*3	*3	*4	*4	*3
15 Mar 2024	*8	*5	*4	*3	*3	*4	*4	*3
16 Mar 2024	*8	*5	*4	*3	*3	*4	*4	*3
17 Mar 2024	*8	*5	*4	*3	*3	*4	*4	*3
18 Mar 2024	*8	*5	*4	*3	*3	*4	*4	*3
19 Mar 2024	7	7	4	3	4	4	5	3
20 Mar 2024	7	7	4	3	4	4	5	3
21 Mar 2024	7	7	4	3	4	4	5	3
22 Mar 2024	*9	*7	*5	*2	*3	*3	*6	*3
23 Mar 2024	*9	*7	*5	*2	*3	*3	*6	*3
24 Mar 2024	*9	*7	*5	*2	*3	*3	*6	*3
25 Mar 2024	*9	*7	*5	*2	*3	*3	*6	*3
26 Mar 2024	11	10	6	3	3	3	8	4
27 Mar 2024	11	10	6	3	3	3	8	4
28 Mar 2024	*10	*14	*5	*3	*4	*3	*10	*4
29 Mar 2024	*10	*14	*5	*3	*4	*3	*10	*4
30 Mar 2024	*10	*14	*5	*3	*4	*3	*10	*4
31 Mar 2024	*10	*14	*5	*3	*4	*3	*10	*4

- Median calculated using n<5

### Table 3.6

Summary of compliance at the PLOO kelp stations with the Ocean Plan's Single Sample Maximum for total coliform bacteria, which states that total coliform density shall not exceed 400 CFU/100 mL in more than 10% of samples per station, per month.

Date	A1	A6	A7	C4	C5	C6	C7	C8
06 Mar 2024	IC	IC	IC	IC	IC	IC	IC	IC
12 Mar 2024	IC	IC	IC	IC	IC	IC	IC	IC
19 Mar 2024	IC	IC	IC	IC	IC	IC	IC	IC
26 Mar 2024	IC	IC	IC	IC	IC	IC	IC	IC

IC = In Compliance

E = Exceedance

ns = not sampled

ND = no data



### Table 3.7

Summary of compliance at the PLOO kelp stations with the Ocean Plan's Single Sample Maximum standard for total coliform bacteria and the fecal/total coliform ratio (F:T), which states that total coliform density shall not exceed 1,000 CFU/100 mL when F:T > 0.1.

Date	A1	A6	A7	C4	C5	C6	C7	C8
06 Mar 2024	IC	IC	IC	IC	IC	IC	IC	IC
12 Mar 2024	IC	IC	IC	IC	IC	IC	IC	IC
19 Mar 2024	IC	IC	IC	IC	IC	IC	IC	IC
26 Mar 2024	IC	IC	IC	IC	IC	IC	IC	IC

IC = In Compliance

E = Exceedance

ns = not sampled

ND = no data

**Table 3.8**

Summary of water quality parameters at the PLOO 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
A1	06 Mar 2024	738	1	<2	<2	<2
A1	06 Mar 2024	738	12	<2	<2	<2
A1	06 Mar 2024	738	18	32e	8e	2e
A1	12 Mar 2024	757	1	<2	<2	<2
A1	12 Mar 2024	757	12	2e	<2	<2
A1	12 Mar 2024	757	18	30e	2e	2e
A1	19 Mar 2024	758	1	<2	4e	<2
A1	19 Mar 2024	758	12	<2	<2	<2
A1	19 Mar 2024	758	18	6e	2e	<2
A1	26 Mar 2024	822	1	4e	2e	<2
A1	26 Mar 2024	822	12	6e	4e	<2
A1	26 Mar 2024	822	18	50	14e	<2
A6	06 Mar 2024	804	1	<2	<2	<2
A6	06 Mar 2024	804	12	<2	<2	<2
A6	06 Mar 2024	804	18	<2	<2	<2
A6	12 Mar 2024	824	1	<20	2e	<2
A6	12 Mar 2024	824	12	2e	<2	<2
A6	12 Mar 2024	824	18	34e	10e	2e
A6	19 Mar 2024	820	1	2e	4e	<2
A6	19 Mar 2024	820	12	12e	6e	<2
A6	19 Mar 2024	820	18	80	26e	<2
A6	26 Mar 2024	852	1	<2	2e	<2
A6	26 Mar 2024	852	12	50	6e	<2
A6	26 Mar 2024	852	18	60	14e	<2
A7	06 Mar 2024	751	1	<2	<2	<2
A7	06 Mar 2024	751	12	<2	<2	<2
A7	06 Mar 2024	751	18	<2	<2	<2
A7	12 Mar 2024	809	1	2e	<2	<2
A7	12 Mar 2024	809	12	<2	<2	<2
A7	12 Mar 2024	809	18	16e	4e	<2
A7	19 Mar 2024	810	1	<2	2e	2e
A7	19 Mar 2024	810	12	6e	<2	<2
A7	19 Mar 2024	810	18	2e	<2	<2
A7	26 Mar 2024	837	1	<2	<2	<2
A7	26 Mar 2024	837	12	6e	<2	<2
A7	26 Mar 2024	837	18	38e	4e	<2
C4	06 Mar 2024	918	1	<2	2e	<2
C4	06 Mar 2024	918	3	2e	<2	<2
C4	06 Mar 2024	918	9	4e	<2	<2

Station	Date	Time	Depth	Total	Fecal	Entero
C4	12 Mar 2024	944	1	2e	2e	<2
C4	12 Mar 2024	944	3	<2	<2	<2
C4	12 Mar 2024	944	9	6e	4e	<2
C4	19 Mar 2024	921	1	<2	<2	<2
C4	19 Mar 2024	921	3	<2	<2	<2
C4	19 Mar 2024	921	9	<2	<2	<2
C4	26 Mar 2024	954	1	<2	<2	<2
C4	26 Mar 2024	954	3	2e	<2	<2
C4	26 Mar 2024	954	9	6e	2e	<2
C5	06 Mar 2024	908	1	2e	<2	<2
C5	06 Mar 2024	908	3	<2	<2	<2
C5	06 Mar 2024	908	9	<2	<2	<2
C5	12 Mar 2024	936	1	2e	<2	<2
C5	12 Mar 2024	936	3	2e	<2	<2
C5	12 Mar 2024	936	9	<2	<2	<2
C5	19 Mar 2024	911	1	10e	<2	<2
C5	19 Mar 2024	911	3	6e	<2	<2
C5	19 Mar 2024	911	9	4e	<2	<2
C5	26 Mar 2024	944	1	<2	<2	<2
C5	26 Mar 2024	944	3	<2	<2	<2
C5	26 Mar 2024	944	9	<20	6e	<2
C6	06 Mar 2024	857	1	2e	<2	<2
C6	06 Mar 2024	857	3	<2	<2	<2
C6	06 Mar 2024	857	9	<2	<2	<2
C6	12 Mar 2024	924	1	<2	<2	<2
C6	12 Mar 2024	924	3	<20	<2	<2
C6	12 Mar 2024	924	9	<2	<2	<2
C6	19 Mar 2024	902	1	<2	<2	<2
C6	19 Mar 2024	902	3	4e	<2	<2
C6	19 Mar 2024	902	9	4e	4e	<2
C6	26 Mar 2024	933	1	<2	<2	<2
C6	26 Mar 2024	933	3	<2	<2	<2
C6	26 Mar 2024	933	9	<2	6e	<2
C7	06 Mar 2024	827	1	<2	<2	<2
C7	06 Mar 2024	827	12	<2	<2	<2
C7	06 Mar 2024	827	18	2e	2e	<2
C7	12 Mar 2024	835	1	<20	<2	<2
C7	12 Mar 2024	835	12	4e	<2	2e
C7	12 Mar 2024	835	18	30e	2e	<2
C7	19 Mar 2024	834	1	<2	<2	<2
C7	19 Mar 2024	834	12	4e	<2	<2
C7	19 Mar 2024	834	18	22e	8e	2e
C7	26 Mar 2024	904	1	2e	<2	<2
C7	26 Mar 2024	904	12	40	2e	<2
C7	26 Mar 2024	904	18	32e	4e	<2

Station	Date	Time	Depth	Total	Fecal	Entero
C8	06 Mar 2024	839	1	2e	<2	<2
C8	06 Mar 2024	839	12	<2	<2	<2
C8	06 Mar 2024	839	18	<2	<2	2e
C8	12 Mar 2024	845	1	<2	<2	<2
C8	12 Mar 2024	845	12	4e	<2	<2
C8	12 Mar 2024	845	18	6e	2e	2e
C8	19 Mar 2024	843	1	<2	<2	<2
C8	19 Mar 2024	843	12	4e	<2	<2
C8	19 Mar 2024	843	18	6e	<2	8e
C8	26 Mar 2024	914	1	6e	<2	<2
C8	26 Mar 2024	914	12	12e	2e	2e
C8	26 Mar 2024	914	18	18e	10e	<2

ns = not sampled  
ND = no data

**Table 3.9**

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

Station	Date	Parameter	Value
A1	06 Mar 2024	Depth (m)	19
A1	06 Mar 2024	Arrive Time	738
A1	06 Mar 2024	Depart Time	744
A1	06 Mar 2024	Air Temp (C)	13.5
A1	06 Mar 2024	Weather	Partly Cloudy
A1	06 Mar 2024	Visibility (mi)	10
A1	06 Mar 2024	Wind Speed (kts)	9.1
A1	06 Mar 2024	Wind Dir	E
A1	06 Mar 2024	Water Color	Blue
A1	06 Mar 2024	Wave Height Low (ft)	3
A1	06 Mar 2024	Wave Period (sec)	14
A1	06 Mar 2024	Sea State	Light Chop
A1	06 Mar 2024	High Tide (ft)	5.29
A1	06 Mar 2024	High Tide Time	530
A1	06 Mar 2024	Low Tide (ft)	-0.96
A1	06 Mar 2024	Low Tide Time	1248
A1	06 Mar 2024	Comments	
A1	12 Mar 2024	Depth (m)	17
A1	12 Mar 2024	Arrive Time	757
A1	12 Mar 2024	Depart Time	803
A1	12 Mar 2024	Air Temp (C)	13.4
A1	12 Mar 2024	Weather	Drizzle
A1	12 Mar 2024	Visibility (mi)	3
A1	12 Mar 2024	Wind Speed (kts)	2.0
A1	12 Mar 2024	Wind Dir	SW
A1	12 Mar 2024	Water Color	Green
A1	12 Mar 2024	Wave Height Low (ft)	4
A1	12 Mar 2024	Wave Period (sec)	12
A1	12 Mar 2024	Sea State	Confused Swell
A1	12 Mar 2024	High Tide (ft)	5.54
A1	12 Mar 2024	High Tide Time	2324
A1	12 Mar 2024	Low Tide (ft)	-0.34
A1	12 Mar 2024	Low Tide Time	512
A1	12 Mar 2024	Comments	
A1	19 Mar 2024	Depth (m)	18
A1	19 Mar 2024	Arrive Time	758
A1	19 Mar 2024	Depart Time	805
A1	19 Mar 2024	Air Temp (C)	13.7
A1	19 Mar 2024	Weather	Partly Cloudy
A1	19 Mar 2024	Visibility (mi)	10
A1	19 Mar 2024	Wind Speed (kts)	3.2
A1	19 Mar 2024	Wind Dir	E
A1	19 Mar 2024	Water Color	Green
A1	19 Mar 2024	Wave Height Low (ft)	2
A1	19 Mar 2024	Wave Period (sec)	11
A1	19 Mar 2024	Sea State	Light Chop
A1	19 Mar 2024	High Tide (ft)	4.49
A1	19 Mar 2024	High Tide Time	606
A1	19 Mar 2024	Low Tide (ft)	-0.38
A1	19 Mar 2024	Low Tide Time	1336
A1	19 Mar 2024	Comments	
A1	26 Mar 2024	Depth (m)	21
A1	26 Mar 2024	Arrive Time	822

Station	Date	Parameter	Value
A1	26 Mar 2024	Depart Time	830
A1	26 Mar 2024	Air Temp (C)	13.8
A1	26 Mar 2024	Weather	Overcast
A1	26 Mar 2024	Visibility (mi)	4
A1	26 Mar 2024	Wind Speed (kts)	5.6
A1	26 Mar 2024	Wind Dir	SW
A1	26 Mar 2024	Water Color	Green
A1	26 Mar 2024	Wave Height Low (ft)	6
A1	26 Mar 2024	Wave Period (sec)	10
A1	26 Mar 2024	Sea State	Confused Swell
A1	26 Mar 2024	High Tide (ft)	4.91
A1	26 Mar 2024	High Tide Time	2224
A1	26 Mar 2024	Low Tide (ft)	0.2
A1	26 Mar 2024	Low Tide Time	424
A1	26 Mar 2024	Comments	
A6	06 Mar 2024	Depth (m)	18
A6	06 Mar 2024	Arrive Time	804
A6	06 Mar 2024	Depart Time	816
A6	06 Mar 2024	Air Temp (C)	13.7
A6	06 Mar 2024	Weather	Partly Cloudy
A6	06 Mar 2024	Visibility (mi)	10
A6	06 Mar 2024	Wind Speed (kts)	0.0
A6	06 Mar 2024	Wind Dir	NE
A6	06 Mar 2024	Water Color	Blue
A6	06 Mar 2024	Wave Height Low (ft)	3
A6	06 Mar 2024	Wave Period (sec)	14
A6	06 Mar 2024	Sea State	Light Chop
A6	06 Mar 2024	High Tide (ft)	5.29
A6	06 Mar 2024	High Tide Time	530
A6	06 Mar 2024	Low Tide (ft)	-0.96
A6	06 Mar 2024	Low Tide Time	1248
A6	06 Mar 2024	Comments	
A6	12 Mar 2024	Depth (m)	18
A6	12 Mar 2024	Arrive Time	824
A6	12 Mar 2024	Depart Time	826
A6	12 Mar 2024	Air Temp (C)	13.8
A6	12 Mar 2024	Weather	Drizzle
A6	12 Mar 2024	Visibility (mi)	3
A6	12 Mar 2024	Wind Speed (kts)	4.3
A6	12 Mar 2024	Wind Dir	S
A6	12 Mar 2024	Water Color	Green
A6	12 Mar 2024	Wave Height Low (ft)	4
A6	12 Mar 2024	Wave Period (sec)	12
A6	12 Mar 2024	Sea State	Confused Swell
A6	12 Mar 2024	High Tide (ft)	5.54
A6	12 Mar 2024	High Tide Time	2324
A6	12 Mar 2024	Low Tide (ft)	-0.34
A6	12 Mar 2024	Low Tide Time	512
A6	12 Mar 2024	Comments	
A6	19 Mar 2024	Depth (m)	18
A6	19 Mar 2024	Arrive Time	820
A6	19 Mar 2024	Depart Time	826
A6	19 Mar 2024	Air Temp (C)	14.4
A6	19 Mar 2024	Weather	Partly Cloudy
A6	19 Mar 2024	Visibility (mi)	10
A6	19 Mar 2024	Wind Speed (kts)	11.1
A6	19 Mar 2024	Wind Dir	E
A6	19 Mar 2024	Water Color	Green

Station	Date	Parameter	Value
A6	19 Mar 2024	Wave Height Low (ft)	2
A6	19 Mar 2024	Wave Period (sec)	11
A6	19 Mar 2024	Sea State	Light Chop
A6	19 Mar 2024	High Tide (ft)	4.49
A6	19 Mar 2024	High Tide Time	606
A6	19 Mar 2024	Low Tide (ft)	-0.38
A6	19 Mar 2024	Low Tide Time	1336
A6	19 Mar 2024	Comments	
A6	26 Mar 2024	Depth (m)	21
A6	26 Mar 2024	Arrive Time	852
A6	26 Mar 2024	Depart Time	854
A6	26 Mar 2024	Air Temp (C)	14.0
A6	26 Mar 2024	Weather	Overcast
A6	26 Mar 2024	Visibility (mi)	4
A6	26 Mar 2024	Wind Speed (kts)	4.6
A6	26 Mar 2024	Wind Dir	SW
A6	26 Mar 2024	Water Color	Green
A6	26 Mar 2024	Wave Height Low (ft)	6
A6	26 Mar 2024	Wave Period (sec)	10
A6	26 Mar 2024	Sea State	Confused Swell
A6	26 Mar 2024	High Tide (ft)	4.91
A6	26 Mar 2024	High Tide Time	2224
A6	26 Mar 2024	Low Tide (ft)	0.2
A6	26 Mar 2024	Low Tide Time	424
A6	26 Mar 2024	Comments	
A7	06 Mar 2024	Depth (m)	18
A7	06 Mar 2024	Arrive Time	751
A7	06 Mar 2024	Depart Time	756
A7	06 Mar 2024	Air Temp (C)	13.4
A7	06 Mar 2024	Weather	Partly Cloudy
A7	06 Mar 2024	Visibility (mi)	10
A7	06 Mar 2024	Wind Speed (kts)	3.2
A7	06 Mar 2024	Wind Dir	SE
A7	06 Mar 2024	Water Color	Blue
A7	06 Mar 2024	Wave Height Low (ft)	3
A7	06 Mar 2024	Wave Period (sec)	14
A7	06 Mar 2024	Sea State	Light Chop
A7	06 Mar 2024	High Tide (ft)	5.29
A7	06 Mar 2024	High Tide Time	530
A7	06 Mar 2024	Low Tide (ft)	-0.96
A7	06 Mar 2024	Low Tide Time	1248
A7	06 Mar 2024	Comments	
A7	12 Mar 2024	Depth (m)	12
A7	12 Mar 2024	Arrive Time	809
A7	12 Mar 2024	Depart Time	816
A7	12 Mar 2024	Air Temp (C)	13.6
A7	12 Mar 2024	Weather	Drizzle
A7	12 Mar 2024	Visibility (mi)	3
A7	12 Mar 2024	Wind Speed (kts)	4.2
A7	12 Mar 2024	Wind Dir	NE
A7	12 Mar 2024	Water Color	Green
A7	12 Mar 2024	Wave Height Low (ft)	4
A7	12 Mar 2024	Wave Period (sec)	12
A7	12 Mar 2024	Sea State	Confused Swell
A7	12 Mar 2024	High Tide (ft)	5.54
A7	12 Mar 2024	High Tide Time	2324
A7	12 Mar 2024	Low Tide (ft)	-0.34
A7	12 Mar 2024	Low Tide Time	512

Station	Date	Parameter	Value
A7	12 Mar 2024	Comments	
A7	19 Mar 2024	Depth (m)	18
A7	19 Mar 2024	Arrive Time	810
A7	19 Mar 2024	Depart Time	814
A7	19 Mar 2024	Air Temp (C)	14.1
A7	19 Mar 2024	Weather	Partly Cloudy
A7	19 Mar 2024	Visibility (mi)	10
A7	19 Mar 2024	Wind Speed (kts)	6.4
A7	19 Mar 2024	Wind Dir	NE
A7	19 Mar 2024	Water Color	Green
A7	19 Mar 2024	Wave Height Low (ft)	2
A7	19 Mar 2024	Wave Period (sec)	11
A7	19 Mar 2024	Sea State	Light Chop
A7	19 Mar 2024	High Tide (ft)	4.49
A7	19 Mar 2024	High Tide Time	606
A7	19 Mar 2024	Low Tide (ft)	-0.38
A7	19 Mar 2024	Low Tide Time	1336
A7	19 Mar 2024	Comments	
A7	26 Mar 2024	Depth (m)	17
A7	26 Mar 2024	Arrive Time	837
A7	26 Mar 2024	Depart Time	842
A7	26 Mar 2024	Air Temp (C)	14.0
A7	26 Mar 2024	Weather	Overcast
A7	26 Mar 2024	Visibility (mi)	4
A7	26 Mar 2024	Wind Speed (kts)	6.4
A7	26 Mar 2024	Wind Dir	SW
A7	26 Mar 2024	Water Color	Green
A7	26 Mar 2024	Wave Height Low (ft)	6
A7	26 Mar 2024	Wave Period (sec)	10
A7	26 Mar 2024	Sea State	Confused Swell
A7	26 Mar 2024	High Tide (ft)	4.91
A7	26 Mar 2024	High Tide Time	2224
A7	26 Mar 2024	Low Tide (ft)	0.2
A7	26 Mar 2024	Low Tide Time	424
A7	26 Mar 2024	Comments	
C4	06 Mar 2024	Depth (m)	9
C4	06 Mar 2024	Arrive Time	918
C4	06 Mar 2024	Depart Time	922
C4	06 Mar 2024	Air Temp (C)	14.2
C4	06 Mar 2024	Weather	Partly Cloudy
C4	06 Mar 2024	Visibility (mi)	10
C4	06 Mar 2024	Wind Speed (kts)	15.5
C4	06 Mar 2024	Wind Dir	SE
C4	06 Mar 2024	Water Color	Blue
C4	06 Mar 2024	Wave Height Low (ft)	3
C4	06 Mar 2024	Wave Period (sec)	14
C4	06 Mar 2024	Sea State	Light Chop
C4	06 Mar 2024	High Tide (ft)	5.29
C4	06 Mar 2024	High Tide Time	530
C4	06 Mar 2024	Low Tide (ft)	-0.96
C4	06 Mar 2024	Low Tide Time	1248
C4	06 Mar 2024	Comments	
C4	12 Mar 2024	Depth (m)	11
C4	12 Mar 2024	Arrive Time	944
C4	12 Mar 2024	Depart Time	957
C4	12 Mar 2024	Air Temp (C)	14.6
C4	12 Mar 2024	Weather	Overcast



Station	Date	Parameter	Value
C4	12 Mar 2024	Visibility (mi)	3
C4	12 Mar 2024	Wind Speed (kts)	7.4
C4	12 Mar 2024	Wind Dir	W
C4	12 Mar 2024	Water Color	Green
C4	12 Mar 2024	Wave Height Low (ft)	4
C4	12 Mar 2024	Wave Period (sec)	12
C4	12 Mar 2024	Sea State	Confused Swell
C4	12 Mar 2024	High Tide (ft)	5.54
C4	12 Mar 2024	High Tide Time	2324
C4	12 Mar 2024	Low Tide (ft)	-0.34
C4	12 Mar 2024	Low Tide Time	512
C4	12 Mar 2024	Comments	
C4	19 Mar 2024	Depth (m)	11
C4	19 Mar 2024	Arrive Time	921
C4	19 Mar 2024	Depart Time	924
C4	19 Mar 2024	Air Temp (C)	14.7
C4	19 Mar 2024	Weather	Partly Cloudy
C4	19 Mar 2024	Visibility (mi)	10
C4	19 Mar 2024	Wind Speed (kts)	12.1
C4	19 Mar 2024	Wind Dir	SE
C4	19 Mar 2024	Water Color	Green
C4	19 Mar 2024	Wave Height Low (ft)	2
C4	19 Mar 2024	Wave Period (sec)	11
C4	19 Mar 2024	Sea State	Light Chop
C4	19 Mar 2024	High Tide (ft)	4.49
C4	19 Mar 2024	High Tide Time	606
C4	19 Mar 2024	Low Tide (ft)	-0.38
C4	19 Mar 2024	Low Tide Time	1336
C4	19 Mar 2024	Comments	
C4	26 Mar 2024	Depth (m)	12
C4	26 Mar 2024	Arrive Time	954
C4	26 Mar 2024	Depart Time	959
C4	26 Mar 2024	Air Temp (C)	14.2
C4	26 Mar 2024	Weather	Overcast
C4	26 Mar 2024	Visibility (mi)	4
C4	26 Mar 2024	Wind Speed (kts)	7.9
C4	26 Mar 2024	Wind Dir	W
C4	26 Mar 2024	Water Color	Green
C4	26 Mar 2024	Wave Height Low (ft)	6
C4	26 Mar 2024	Wave Period (sec)	10
C4	26 Mar 2024	Sea State	Confused Swell
C4	26 Mar 2024	High Tide (ft)	4.91
C4	26 Mar 2024	High Tide Time	2224
C4	26 Mar 2024	Low Tide (ft)	0.2
C4	26 Mar 2024	Low Tide Time	424
C4	26 Mar 2024	Comments	
C5	06 Mar 2024	Depth (m)	9
C5	06 Mar 2024	Arrive Time	908
C5	06 Mar 2024	Depart Time	912
C5	06 Mar 2024	Air Temp (C)	14.3
C5	06 Mar 2024	Weather	Partly Cloudy
C5	06 Mar 2024	Visibility (mi)	10
C5	06 Mar 2024	Wind Speed (kts)	10.3
C5	06 Mar 2024	Wind Dir	SE
C5	06 Mar 2024	Water Color	Blue
C5	06 Mar 2024	Wave Height Low (ft)	3
C5	06 Mar 2024	Wave Period (sec)	14
C5	06 Mar 2024	Sea State	Light Chop

Station	Date	Parameter	Value
C5	06 Mar 2024	High Tide (ft)	5.29
C5	06 Mar 2024	High Tide Time	530
C5	06 Mar 2024	Low Tide (ft)	-0.96
C5	06 Mar 2024	Low Tide Time	1248
C5	06 Mar 2024	Comments	
C5	12 Mar 2024	Depth (m)	10
C5	12 Mar 2024	Arrive Time	936
C5	12 Mar 2024	Depart Time	939
C5	12 Mar 2024	Air Temp (C)	14.5
C5	12 Mar 2024	Weather	Overcast
C5	12 Mar 2024	Visibility (mi)	3
C5	12 Mar 2024	Wind Speed (kts)	6.7
C5	12 Mar 2024	Wind Dir	NW
C5	12 Mar 2024	Water Color	Green
C5	12 Mar 2024	Wave Height Low (ft)	4
C5	12 Mar 2024	Wave Period (sec)	12
C5	12 Mar 2024	Sea State	Confused Swell
C5	12 Mar 2024	High Tide (ft)	5.54
C5	12 Mar 2024	High Tide Time	2324
C5	12 Mar 2024	Low Tide (ft)	-0.34
C5	12 Mar 2024	Low Tide Time	512
C5	12 Mar 2024	Comments	
C5	19 Mar 2024	Depth (m)	10
C5	19 Mar 2024	Arrive Time	911
C5	19 Mar 2024	Depart Time	915
C5	19 Mar 2024	Air Temp (C)	15.3
C5	19 Mar 2024	Weather	Partly Cloudy
C5	19 Mar 2024	Visibility (mi)	10
C5	19 Mar 2024	Wind Speed (kts)	6.0
C5	19 Mar 2024	Wind Dir	SE
C5	19 Mar 2024	Water Color	Green
C5	19 Mar 2024	Wave Height Low (ft)	2
C5	19 Mar 2024	Wave Period (sec)	11
C5	19 Mar 2024	Sea State	Light Chop
C5	19 Mar 2024	High Tide (ft)	4.49
C5	19 Mar 2024	High Tide Time	606
C5	19 Mar 2024	Low Tide (ft)	-0.38
C5	19 Mar 2024	Low Tide Time	1336
C5	19 Mar 2024	Comments	
C5	26 Mar 2024	Depth (m)	12
C5	26 Mar 2024	Arrive Time	944
C5	26 Mar 2024	Depart Time	947
C5	26 Mar 2024	Air Temp (C)	14.2
C5	26 Mar 2024	Weather	Overcast
C5	26 Mar 2024	Visibility (mi)	4
C5	26 Mar 2024	Wind Speed (kts)	7.6
C5	26 Mar 2024	Wind Dir	W
C5	26 Mar 2024	Water Color	Green
C5	26 Mar 2024	Wave Height Low (ft)	6
C5	26 Mar 2024	Wave Period (sec)	10
C5	26 Mar 2024	Sea State	Confused Swell
C5	26 Mar 2024	High Tide (ft)	4.91
C5	26 Mar 2024	High Tide Time	2224
C5	26 Mar 2024	Low Tide (ft)	0.2
C5	26 Mar 2024	Low Tide Time	424
C5	26 Mar 2024	Comments	
C6	06 Mar 2024	Depth (m)	9

Station	Date	Parameter	Value
C6	06 Mar 2024	Arrive Time	857
C6	06 Mar 2024	Depart Time	901
C6	06 Mar 2024	Air Temp (C)	14.2
C6	06 Mar 2024	Weather	Partly Cloudy
C6	06 Mar 2024	Visibility (mi)	10
C6	06 Mar 2024	Wind Speed (kts)	7.8
C6	06 Mar 2024	Wind Dir	SE
C6	06 Mar 2024	Water Color	Blue
C6	06 Mar 2024	Wave Height Low (ft)	3
C6	06 Mar 2024	Wave Period (sec)	14
C6	06 Mar 2024	Sea State	Light Chop
C6	06 Mar 2024	High Tide (ft)	5.29
C6	06 Mar 2024	High Tide Time	530
C6	06 Mar 2024	Low Tide (ft)	-0.96
C6	06 Mar 2024	Low Tide Time	1248
C6	06 Mar 2024	Comments	
C6	12 Mar 2024	Depth (m)	9
C6	12 Mar 2024	Arrive Time	924
C6	12 Mar 2024	Depart Time	928
C6	12 Mar 2024	Air Temp (C)	14.5
C6	12 Mar 2024	Weather	drizzle
C6	12 Mar 2024	Visibility (mi)	3
C6	12 Mar 2024	Wind Speed (kts)	6.6
C6	12 Mar 2024	Wind Dir	W
C6	12 Mar 2024	Water Color	Green
C6	12 Mar 2024	Wave Height Low (ft)	4
C6	12 Mar 2024	Wave Period (sec)	12
C6	12 Mar 2024	Sea State	Confused Swell
C6	12 Mar 2024	High Tide (ft)	5.54
C6	12 Mar 2024	High Tide Time	2324
C6	12 Mar 2024	Low Tide (ft)	-0.34
C6	12 Mar 2024	Low Tide Time	512
C6	12 Mar 2024	Comments	
C6	19 Mar 2024	Depth (m)	8
C6	19 Mar 2024	Arrive Time	902
C6	19 Mar 2024	Depart Time	905
C6	19 Mar 2024	Air Temp (C)	15.1
C6	19 Mar 2024	Weather	Partly Cloudy
C6	19 Mar 2024	Visibility (mi)	10
C6	19 Mar 2024	Wind Speed (kts)	11.9
C6	19 Mar 2024	Wind Dir	SE
C6	19 Mar 2024	Water Color	Green
C6	19 Mar 2024	Wave Height Low (ft)	2
C6	19 Mar 2024	Wave Period (sec)	11
C6	19 Mar 2024	Sea State	Light Chop
C6	19 Mar 2024	High Tide (ft)	4.49
C6	19 Mar 2024	High Tide Time	606
C6	19 Mar 2024	Low Tide (ft)	-0.38
C6	19 Mar 2024	Low Tide Time	1336
C6	19 Mar 2024	Comments	
C6	26 Mar 2024	Depth (m)	9
C6	26 Mar 2024	Arrive Time	933
C6	26 Mar 2024	Depart Time	937
C6	26 Mar 2024	Air Temp (C)	14.1
C6	26 Mar 2024	Weather	Overcast
C6	26 Mar 2024	Visibility (mi)	4
C6	26 Mar 2024	Wind Speed (kts)	9.0
C6	26 Mar 2024	Wind Dir	SW

Station	Date	Parameter	Value
C6	26 Mar 2024	Water Color	Green
C6	26 Mar 2024	Wave Height Low (ft)	6
C6	26 Mar 2024	Wave Period (sec)	10
C6	26 Mar 2024	Sea State	Confused Swell
C6	26 Mar 2024	High Tide (ft)	4.91
C6	26 Mar 2024	High Tide Time	2224
C6	26 Mar 2024	Low Tide (ft)	0.2
C6	26 Mar 2024	Low Tide Time	424
C6	26 Mar 2024	Comments	
C7	06 Mar 2024	Depth (m)	18
C7	06 Mar 2024	Arrive Time	827
C7	06 Mar 2024	Depart Time	832
C7	06 Mar 2024	Air Temp (C)	14.2
C7	06 Mar 2024	Weather	Partly Cloudy
C7	06 Mar 2024	Visibility (mi)	10
C7	06 Mar 2024	Wind Speed (kts)	3.3
C7	06 Mar 2024	Wind Dir	E
C7	06 Mar 2024	Water Color	Blue
C7	06 Mar 2024	Wave Height Low (ft)	3
C7	06 Mar 2024	Wave Period (sec)	14
C7	06 Mar 2024	Sea State	Light Chop
C7	06 Mar 2024	High Tide (ft)	5.29
C7	06 Mar 2024	High Tide Time	530
C7	06 Mar 2024	Low Tide (ft)	-0.96
C7	06 Mar 2024	Low Tide Time	1248
C7	06 Mar 2024	Comments	
C7	12 Mar 2024	Depth (m)	17
C7	12 Mar 2024	Arrive Time	835
C7	12 Mar 2024	Depart Time	839
C7	12 Mar 2024	Air Temp (C)	13.8
C7	12 Mar 2024	Weather	Drizzle
C7	12 Mar 2024	Visibility (mi)	3
C7	12 Mar 2024	Wind Speed (kts)	2.9
C7	12 Mar 2024	Wind Dir	SE
C7	12 Mar 2024	Water Color	Brown
C7	12 Mar 2024	Wave Height Low (ft)	4
C7	12 Mar 2024	Wave Period (sec)	12
C7	12 Mar 2024	Sea State	Confused Swell
C7	12 Mar 2024	High Tide (ft)	5.54
C7	12 Mar 2024	High Tide Time	2324
C7	12 Mar 2024	Low Tide (ft)	-0.34
C7	12 Mar 2024	Low Tide Time	512
C7	12 Mar 2024	Comments	funny smell
C7	19 Mar 2024	Depth (m)	18
C7	19 Mar 2024	Arrive Time	834
C7	19 Mar 2024	Depart Time	837
C7	19 Mar 2024	Air Temp (C)	14.9
C7	19 Mar 2024	Weather	Partly Cloudy
C7	19 Mar 2024	Visibility (mi)	10
C7	19 Mar 2024	Wind Speed (kts)	7.2
C7	19 Mar 2024	Wind Dir	NE
C7	19 Mar 2024	Water Color	Green
C7	19 Mar 2024	Wave Height Low (ft)	2
C7	19 Mar 2024	Wave Period (sec)	11
C7	19 Mar 2024	Sea State	Light Chop
C7	19 Mar 2024	High Tide (ft)	4.49
C7	19 Mar 2024	High Tide Time	606
C7	19 Mar 2024	Low Tide (ft)	-0.38

Station	Date	Parameter	Value
C7	19 Mar 2024	Low Tide Time	1336
C7	19 Mar 2024	Comments	
C7	26 Mar 2024	Depth (m)	19
C7	26 Mar 2024	Arrive Time	904
C7	26 Mar 2024	Depart Time	907
C7	26 Mar 2024	Air Temp (C)	14.0
C7	26 Mar 2024	Weather	Overcast
C7	26 Mar 2024	Visibility (mi)	4
C7	26 Mar 2024	Wind Speed (kts)	5.1
C7	26 Mar 2024	Wind Dir	SW
C7	26 Mar 2024	Water Color	Green
C7	26 Mar 2024	Wave Height Low (ft)	6
C7	26 Mar 2024	Wave Period (sec)	10
C7	26 Mar 2024	Sea State	Confused Swell
C7	26 Mar 2024	High Tide (ft)	4.91
C7	26 Mar 2024	High Tide Time	2224
C7	26 Mar 2024	Low Tide (ft)	0.2
C7	26 Mar 2024	Low Tide Time	424
C7	26 Mar 2024	Comments	
C8	06 Mar 2024	Depth (m)	19
C8	06 Mar 2024	Arrive Time	839
C8	06 Mar 2024	Depart Time	843
C8	06 Mar 2024	Air Temp (C)	14.3
C8	06 Mar 2024	Weather	Partly Cloudy
C8	06 Mar 2024	Visibility (mi)	10
C8	06 Mar 2024	Wind Speed (kts)	6.1
C8	06 Mar 2024	Wind Dir	N
C8	06 Mar 2024	Water Color	Blue
C8	06 Mar 2024	Wave Height Low (ft)	3
C8	06 Mar 2024	Wave Period (sec)	14
C8	06 Mar 2024	Sea State	Light Chop
C8	06 Mar 2024	High Tide (ft)	5.29
C8	06 Mar 2024	High Tide Time	530
C8	06 Mar 2024	Low Tide (ft)	-0.96
C8	06 Mar 2024	Low Tide Time	1248
C8	06 Mar 2024	Comments	
C8	12 Mar 2024	Depth (m)	20
C8	12 Mar 2024	Arrive Time	845
C8	12 Mar 2024	Depart Time	907
C8	12 Mar 2024	Air Temp (C)	14.0
C8	12 Mar 2024	Weather	Drizzle
C8	12 Mar 2024	Visibility (mi)	3
C8	12 Mar 2024	Wind Speed (kts)	3.7
C8	12 Mar 2024	Wind Dir	W
C8	12 Mar 2024	Water Color	Brownish-Green
C8	12 Mar 2024	Wave Height Low (ft)	4
C8	12 Mar 2024	Wave Period (sec)	12
C8	12 Mar 2024	Sea State	Confused Swell
C8	12 Mar 2024	High Tide (ft)	5.54
C8	12 Mar 2024	High Tide Time	2324
C8	12 Mar 2024	Low Tide (ft)	-0.34
C8	12 Mar 2024	Low Tide Time	512
C8	12 Mar 2024	Comments	hydraulic issues
C8	19 Mar 2024	Depth (m)	19
C8	19 Mar 2024	Arrive Time	843
C8	19 Mar 2024	Depart Time	847
C8	19 Mar 2024	Air Temp (C)	15.2

Station	Date	Parameter	Value
C8	19 Mar 2024	Weather	Partly Cloudy
C8	19 Mar 2024	Visibility (mi)	10
C8	19 Mar 2024	Wind Speed (kts)	8.1
C8	19 Mar 2024	Wind Dir	E
C8	19 Mar 2024	Water Color	Green
C8	19 Mar 2024	Wave Height Low (ft)	2
C8	19 Mar 2024	Wave Period (sec)	11
C8	19 Mar 2024	Sea State	Light Chop
C8	19 Mar 2024	High Tide (ft)	4.49
C8	19 Mar 2024	High Tide Time	606
C8	19 Mar 2024	Low Tide (ft)	-0.38
C8	19 Mar 2024	Low Tide Time	1336
C8	19 Mar 2024	Comments	
C8	26 Mar 2024	Depth (m)	19
C8	26 Mar 2024	Arrive Time	914
C8	26 Mar 2024	Depart Time	918
C8	26 Mar 2024	Air Temp (C)	14.1
C8	26 Mar 2024	Weather	Overcast
C8	26 Mar 2024	Visibility (mi)	4
C8	26 Mar 2024	Wind Speed (kts)	4.9
C8	26 Mar 2024	Wind Dir	SW
C8	26 Mar 2024	Water Color	Green
C8	26 Mar 2024	Wave Height Low (ft)	6
C8	26 Mar 2024	Wave Period (sec)	10
C8	26 Mar 2024	Sea State	Confused Swell
C8	26 Mar 2024	High Tide (ft)	4.91
C8	26 Mar 2024	High Tide Time	2224
C8	26 Mar 2024	Low Tide (ft)	0.2
C8	26 Mar 2024	Low Tide Time	424
C8	26 Mar 2024	Comments	

**Table 3.10**

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

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/l)	Sal (ppt)	pH	Dens (s-t)	Chlor (µg/L)
A1	06 Mar 2024	1	15.87	94.55	8.2	32.93	8.2	24.2	0.47
A1	06 Mar 2024	2	15.87	94.40	8.2	32.93	8.2	24.2	0.50
A1	06 Mar 2024	3	15.87	94.33	8.2	32.93	8.2	24.2	0.54
A1	06 Mar 2024	4	15.85	94.26	8.2	32.94	8.2	24.2	0.61
A1	06 Mar 2024	5	15.57	94.08	8.2	33.02	8.2	24.3	0.74
A1	06 Mar 2024	6	15.31	95.07	8.2	33.04	8.1	24.4	0.66
A1	06 Mar 2024	7	15.17	96.94	8.2	33.08	8.1	24.5	0.61
A1	06 Mar 2024	8	14.99	97.29	8.2	33.09	8.1	24.5	0.57
A1	06 Mar 2024	9	14.90	97.07	8.1	33.10	8.1	24.5	0.66
A1	06 Mar 2024	10	14.73	96.23	8.1	33.10	8.1	24.6	0.86
A1	06 Mar 2024	11	14.72	96.22	8.1	33.10	8.1	24.6	0.96
A1	06 Mar 2024	12	14.48	95.69	7.9	33.13	8.1	24.6	1.13
A1	06 Mar 2024	13	14.16	94.97	7.8	33.15	8.1	24.7	1.54
A1	06 Mar 2024	14	14.18	94.59	7.6	33.13	8.1	24.7	1.67
A1	06 Mar 2024	15	13.69	94.42	7.3	33.19	8.1	24.9	1.60
A1	06 Mar 2024	16	13.37	94.56	7.2	33.21	8.0	24.9	1.38
A1	06 Mar 2024	17	13.17	94.77	6.8	33.23	8.0	25.0	1.13
A1	06 Mar 2024	18	12.87	94.88	6.4	33.27	8.0	25.1	0.94
A1	12 Mar 2024	1	14.70	76.38	7.6	32.99	8.1	24.5	2.14
A1	12 Mar 2024	2	14.67	67.42	7.6	33.03	8.1	24.5	2.09
A1	12 Mar 2024	3	14.60	70.71	7.5	33.07	8.1	24.6	2.12
A1	12 Mar 2024	4	14.60	87.73	7.5	33.07	8.1	24.6	2.14
A1	12 Mar 2024	5	14.57	91.14	7.5	33.07	8.1	24.6	2.18
A1	12 Mar 2024	6	14.52	91.55	7.4	33.08	8.1	24.6	2.22
A1	12 Mar 2024	7	14.47	91.68	7.4	33.08	8.1	24.6	2.26
A1	12 Mar 2024	8	14.36	91.60	7.3	33.09	8.1	24.6	2.33
A1	12 Mar 2024	9	14.28	91.12	7.2	33.10	8.1	24.7	2.47
A1	12 Mar 2024	10	14.19	90.73	7.0	33.11	8.1	24.7	2.45
A1	12 Mar 2024	11	13.71	91.15	6.8	33.16	8.0	24.8	2.14
A1	12 Mar 2024	12	13.22	92.44	6.8	33.22	8.0	25.0	1.72
A1	12 Mar 2024	13	13.38	93.37	6.7	33.18	8.0	24.9	1.22
A1	12 Mar 2024	14	12.87	93.11	6.4	33.26	8.0	25.1	0.96
A1	12 Mar 2024	15	12.60	92.06	6.3	33.28	8.0	25.1	0.79
A1	12 Mar 2024	16	12.54	89.79	6.3	33.29	8.0	25.2	0.70
A1	12 Mar 2024	17	12.55	89.53	6.3	33.28	8.0	25.2	0.67
A1	12 Mar 2024	18	12.53	89.79	6.2	33.29	8.0	25.2	0.63
A1	19 Mar 2024	1	15.29	85.19	8.4	33.12	8.3	24.5	2.47
A1	19 Mar 2024	2	15.25	85.33	8.4	33.13	8.2	24.5	2.97
A1	19 Mar 2024	3	15.22	85.35	8.4	33.13	8.2	24.5	3.76
A1	19 Mar 2024	4	15.06	84.97	8.1	33.15	8.2	24.5	4.53
A1	19 Mar 2024	5	14.58	84.52	7.7	33.21	8.2	24.7	4.83
A1	19 Mar 2024	6	14.30	84.44	7.3	33.22	8.1	24.7	4.36
A1	19 Mar 2024	7	14.01	86.62	7.0	33.25	8.1	24.8	3.81
A1	19 Mar 2024	8	13.75	87.83	6.8	33.27	8.1	24.9	3.46
A1	19 Mar 2024	9	13.57	89.29	6.7	33.27	8.1	24.9	3.15
A1	19 Mar 2024	10	13.41	89.91	6.6	33.28	8.0	25.0	2.94
A1	19 Mar 2024	11	13.23	90.40	6.4	33.29	8.0	25.0	2.91
A1	19 Mar 2024	12	13.07	90.19	6.3	33.30	8.0	25.1	3.13
A1	19 Mar 2024	13	12.90	90.38	6.2	33.33	8.0	25.1	2.82
A1	19 Mar 2024	14	12.74	90.78	6.0	33.35	8.0	25.2	2.89
A1	19 Mar 2024	15	12.55	92.31	5.7	33.39	8.0	25.2	2.22
A1	19 Mar 2024	16	12.29	93.86	5.7	33.43	7.9	25.3	1.63
A1	19 Mar 2024	17	12.07	94.32	5.6	33.47	7.9	25.4	1.31

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/l)	Sal (ppt)	pH	Dens (s-t)	Chlor (µg/L)
A1	19 Mar 2024	18	11.77	94.87	5.0	33.52	7.9	25.5	1.14
A1	26 Mar 2024	1	14.00	83.67	6.9	33.31	7.7	24.9	1.61
A1	26 Mar 2024	2	13.72	80.64	6.7	33.37	7.7	25.0	1.60
A1	26 Mar 2024	3	13.33	84.21	6.6	33.40	7.6	25.1	1.70
A1	26 Mar 2024	4	13.30	84.31	6.5	33.38	7.6	25.1	1.97
A1	26 Mar 2024	5	13.19	84.84	6.4	33.39	7.6	25.1	1.90
A1	26 Mar 2024	6	13.16	85.12	6.4	33.40	7.6	25.1	1.89
A1	26 Mar 2024	7	13.11	85.30	6.3	33.40	7.6	25.1	1.82
A1	26 Mar 2024	8	13.08	85.29	6.3	33.41	7.6	25.1	1.85
A1	26 Mar 2024	9	13.04	85.46	6.3	33.41	7.6	25.2	1.73
A1	26 Mar 2024	10	12.98	85.99	6.3	33.42	7.6	25.2	1.74
A1	26 Mar 2024	11	12.92	86.23	6.2	33.42	7.6	25.2	1.73
A1	26 Mar 2024	12	12.70	86.26	6.0	33.45	7.6	25.3	1.69
A1	26 Mar 2024	13	12.55	86.37	5.8	33.47	7.5	25.3	1.49
A1	26 Mar 2024	14	12.23	86.01	5.5	33.51	7.5	25.4	1.16
A1	26 Mar 2024	15	12.00	86.25	5.4	33.53	7.5	25.4	1.00
A1	26 Mar 2024	16	11.78	86.68	5.3	33.57	7.5	25.5	0.79
A1	26 Mar 2024	17	11.64	87.29	5.0	33.58	7.4	25.6	0.70
A1	26 Mar 2024	18	11.66	87.97	5.0	33.57	7.4	25.5	0.66
A6	06 Mar 2024	1	15.87	94.26	8.3	32.94	8.2	24.2	0.36
A6	06 Mar 2024	2	15.87	92.72	8.3	32.94	8.2	24.2	0.38
A6	06 Mar 2024	3	15.85	94.19	8.3	32.95	8.2	24.2	0.47
A6	06 Mar 2024	4	15.85	94.19	8.3	32.95	8.2	24.2	0.59
A6	06 Mar 2024	5	15.79	94.11	8.2	32.96	8.2	24.2	0.77
A6	06 Mar 2024	6	15.24	94.04	8.2	33.06	8.2	24.4	0.91
A6	06 Mar 2024	7	14.96	94.61	8.1	33.08	8.2	24.5	0.84
A6	06 Mar 2024	8	14.88	95.64	8.1	33.09	8.2	24.5	0.83
A6	06 Mar 2024	9	14.86	95.91	8.1	33.09	8.2	24.5	0.79
A6	06 Mar 2024	10	14.79	95.91	8.0	33.09	8.1	24.5	0.87
A6	06 Mar 2024	11	14.75	95.86	7.9	33.10	8.1	24.6	0.84
A6	06 Mar 2024	12	14.60	95.92	7.8	33.12	8.1	24.6	0.82
A6	06 Mar 2024	13	14.53	95.90	7.7	33.12	8.1	24.6	0.79
A6	06 Mar 2024	14	14.49	95.92	7.7	33.12	8.1	24.6	0.73
A6	06 Mar 2024	15	14.42	95.93	7.6	33.13	8.1	24.7	0.69
A6	06 Mar 2024	16	14.32	95.88	7.5	33.14	8.1	24.7	0.68
A6	06 Mar 2024	17	14.04	95.78	7.8	33.17	8.1	24.8	0.66
A6	06 Mar 2024	18	14.00	95.48	7.1	33.17	8.1	24.8	0.63
A6	06 Mar 2024	19	13.81	95.23	7.1	33.19	8.1	24.8	0.64
A6	12 Mar 2024	1	14.73	83.36	7.7	33.09	8.1	24.6	1.05
A6	12 Mar 2024	2	14.73	84.67	7.6	33.09	8.1	24.6	1.05
A6	12 Mar 2024	3	14.57	85.64	7.6	33.11	8.1	24.6	1.38
A6	12 Mar 2024	4	14.50	86.78	7.5	33.11	8.1	24.6	1.64
A6	12 Mar 2024	5	14.32	87.12	7.3	33.12	8.1	24.7	1.67
A6	12 Mar 2024	6	14.12	88.16	7.2	33.15	8.1	24.7	1.74
A6	12 Mar 2024	7	13.92	89.38	7.0	33.17	8.1	24.8	1.70
A6	12 Mar 2024	8	13.48	92.33	6.9	33.20	8.0	24.9	1.46
A6	12 Mar 2024	9	13.44	94.01	6.8	33.19	8.0	24.9	1.25
A6	12 Mar 2024	10	13.42	93.96	6.8	33.19	8.0	24.9	1.22
A6	12 Mar 2024	11	13.41	94.14	6.8	33.19	8.0	24.9	1.09
A6	12 Mar 2024	12	13.17	94.17	6.7	33.22	8.0	25.0	0.97
A6	12 Mar 2024	13	13.26	94.78	6.6	33.21	8.0	25.0	0.81
A6	12 Mar 2024	14	13.08	95.04	6.6	33.24	8.0	25.0	0.83
A6	12 Mar 2024	15	12.67	94.91	6.4	33.29	8.0	25.1	0.77
A6	12 Mar 2024	16	12.63	93.99	6.2	33.28	8.0	25.1	0.69
A6	12 Mar 2024	17	12.30	93.17	6.1	33.32	8.0	25.2	0.75
A6	12 Mar 2024	18	12.25	92.31	6.1	33.33	8.0	25.2	0.67
A6	12 Mar 2024	19	12.26	92.23	6.0	33.33	8.0	25.2	0.67
A6	12 Mar 2024	20	12.18	92.16	6.0	33.34	8.0	25.3	0.67



Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/l)	Sal (ppt)	pH	Dens (s-t)	Chlor (µg/L)
A6	12 Mar 2024	21	12.18	91.58	5.9	33.34	8.0	25.3	0.64
A6	19 Mar 2024	1	15.54	83.64	8.8	33.10	8.3	24.4	2.31
A6	19 Mar 2024	2	15.40	83.00	8.5	33.12	8.3	24.4	2.40
A6	19 Mar 2024	3	15.00	82.35	8.3	33.13	8.2	24.5	2.84
A6	19 Mar 2024	4	14.73	85.31	7.8	33.18	8.2	24.6	2.97
A6	19 Mar 2024	5	14.16	87.75	7.4	33.23	8.1	24.8	2.71
A6	19 Mar 2024	6	14.08	89.62	7.1	33.22	8.1	24.8	2.45
A6	19 Mar 2024	7	13.87	90.95	7.0	33.24	8.1	24.9	2.11
A6	19 Mar 2024	8	13.75	91.73	6.8	33.25	8.0	24.9	2.04
A6	19 Mar 2024	9	13.62	92.01	6.8	33.26	8.0	24.9	2.11
A6	19 Mar 2024	10	13.52	91.99	6.7	33.27	8.0	24.9	2.12
A6	19 Mar 2024	11	13.57	92.04	6.7	33.25	8.0	24.9	2.01
A6	19 Mar 2024	12	13.55	92.19	6.7	33.26	8.0	24.9	2.04
A6	19 Mar 2024	13	13.55	92.08	6.7	33.27	8.0	24.9	2.04
A6	19 Mar 2024	14	13.42	91.76	6.6	33.29	8.0	25.0	1.74
A6	19 Mar 2024	15	13.35	92.73	6.4	33.30	8.0	25.0	1.68
A6	19 Mar 2024	16	12.95	93.28	6.1	33.37	8.0	25.1	1.52
A6	19 Mar 2024	17	12.74	93.83	6.0	33.39	7.9	25.2	1.34
A6	19 Mar 2024	18	12.44	94.05	5.7	33.43	7.9	25.3	1.18
A6	19 Mar 2024	19	12.01	95.00	5.2	33.51	7.9	25.4	0.94
A6	19 Mar 2024	20	11.95	95.31	5.2	33.50	7.8	25.4	0.85
A6	26 Mar 2024	1	14.48	86.31	7.5	33.25	7.8	24.7	1.50
A6	26 Mar 2024	2	14.50	86.55	7.4	33.25	7.8	24.7	1.56
A6	26 Mar 2024	3	14.38	87.14	7.3	33.28	7.8	24.8	1.75
A6	26 Mar 2024	4	14.18	86.83	6.9	33.30	7.8	24.8	1.94
A6	26 Mar 2024	5	13.31	86.66	6.3	33.44	7.7	25.1	1.84
A6	26 Mar 2024	6	12.55	86.55	5.7	33.51	7.6	25.3	1.59
A6	26 Mar 2024	7	11.99	86.88	5.4	33.54	7.5	25.5	1.28
A6	26 Mar 2024	8	11.83	86.96	5.2	33.54	7.5	25.5	1.16
A6	26 Mar 2024	9	11.70	86.60	5.1	33.56	7.5	25.5	1.04
A6	26 Mar 2024	10	11.60	86.48	5.0	33.56	7.5	25.5	0.96
A6	26 Mar 2024	11	11.61	86.30	5.0	33.56	7.5	25.5	0.95
A6	26 Mar 2024	12	11.43	85.93	4.9	33.59	7.5	25.6	0.83
A6	26 Mar 2024	13	11.38	85.78	4.8	33.59	7.4	25.6	0.77
A6	26 Mar 2024	14	11.38	86.10	4.8	33.60	7.4	25.6	0.82
A6	26 Mar 2024	15	11.37	86.48	4.8	33.60	7.4	25.6	0.70
A6	26 Mar 2024	16	11.37	86.91	4.8	33.60	7.4	25.6	0.71
A6	26 Mar 2024	17	11.36	87.03	4.8	33.61	7.4	25.6	0.74
A6	26 Mar 2024	18	11.36	87.29	4.9	33.61	7.4	25.6	0.70
A6	26 Mar 2024	19	11.35	87.26	4.7	33.61	7.4	25.6	0.67
A6	26 Mar 2024	20	11.36	87.83	4.6	33.61	7.4	25.6	0.72
A6	26 Mar 2024	21	11.36	77.62	4.7	33.61	7.4	25.6	0.66
A7	06 Mar 2024	1	15.90	94.26	8.3	32.92	8.2	24.2	0.49
A7	06 Mar 2024	2	15.90	93.90	8.3	32.92	8.2	24.2	0.50
A7	06 Mar 2024	3	15.90	94.13	8.3	32.92	8.2	24.2	0.56
A7	06 Mar 2024	4	15.90	94.23	8.2	32.93	8.2	24.2	0.63
A7	06 Mar 2024	5	15.64	94.46	8.2	33.00	8.2	24.3	0.73
A7	06 Mar 2024	6	15.42	94.48	8.3	33.03	8.2	24.4	0.64
A7	06 Mar 2024	7	15.22	95.40	8.2	33.07	8.2	24.4	0.53
A7	06 Mar 2024	8	15.08	96.56	8.2	33.08	8.2	24.5	0.52
A7	06 Mar 2024	9	14.96	97.00	8.2	33.09	8.2	24.5	0.56
A7	06 Mar 2024	10	14.89	97.14	8.2	33.09	8.2	24.5	0.63
A7	06 Mar 2024	11	14.82	96.44	8.2	33.09	8.2	24.5	0.71
A7	06 Mar 2024	12	14.66	96.78	8.0	33.11	8.1	24.6	0.88
A7	06 Mar 2024	13	14.48	96.31	8.0	33.12	8.1	24.6	1.13
A7	06 Mar 2024	14	14.42	95.51	7.9	33.12	8.1	24.6	1.27
A7	06 Mar 2024	15	14.26	95.20	7.8	33.13	8.1	24.7	1.37
A7	06 Mar 2024	16	14.18	94.90	7.7	33.14	8.1	24.7	1.40

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/l)	Sal (ppt)	pH	Dens (s-t)	Chlor (µg/L)
A7	06 Mar 2024	17	14.11	94.78	7.8	33.14	8.1	24.7	1.45
A7	06 Mar 2024	18	14.16	94.71	7.9	33.13	8.1	24.7	1.47
A7	06 Mar 2024	19	14.15	94.75	7.5	33.14	8.1	24.7	1.49
A7	06 Mar 2024	20	14.09	94.79	7.7	33.15	8.1	24.7	1.44
A7	12 Mar 2024	1	14.46	87.58	7.6	33.09	8.1	24.6	2.31
A7	12 Mar 2024	2	14.47	88.84	7.6	33.09	8.1	24.6	2.46
A7	12 Mar 2024	3	14.43	89.35	7.5	33.09	8.1	24.6	2.46
A7	12 Mar 2024	4	14.12	90.24	7.3	33.13	8.1	24.7	2.42
A7	12 Mar 2024	5	14.00	91.12	7.2	33.14	8.1	24.7	2.09
A7	12 Mar 2024	6	13.97	92.19	7.2	33.14	8.1	24.8	1.99
A7	12 Mar 2024	7	13.97	92.64	7.2	33.14	8.1	24.8	1.89
A7	12 Mar 2024	8	13.92	92.75	7.1	33.15	8.1	24.8	1.79
A7	12 Mar 2024	9	13.86	92.19	7.1	33.15	8.1	24.8	1.77
A7	12 Mar 2024	10	13.88	92.73	7.1	33.15	8.1	24.8	1.60
A7	12 Mar 2024	11	13.84	92.99	7.0	33.16	8.1	24.8	1.55
A7	12 Mar 2024	12	13.73	93.15	7.0	33.17	8.1	24.8	1.41
A7	12 Mar 2024	13	13.66	93.71	6.9	33.17	8.0	24.8	1.19
A7	12 Mar 2024	14	13.25	94.66	6.6	33.23	8.0	25.0	1.18
A7	12 Mar 2024	15	12.76	94.60	6.5	33.27	8.0	25.1	0.83
A7	12 Mar 2024	16	12.88	94.53	6.4	33.24	8.0	25.1	0.75
A7	12 Mar 2024	17	12.61	94.33	6.7	33.28	8.0	25.1	0.65
A7	12 Mar 2024	18	12.48	93.87	6.0	33.30	8.0	25.2	0.61
A7	12 Mar 2024	19	12.44	93.17	6.1	33.30	8.0	25.2	0.58
A7	19 Mar 2024	1	15.62	85.80	8.4	33.11	8.3	24.4	2.06
A7	19 Mar 2024	2	15.54	85.53	8.4	33.13	8.3	24.4	2.22
A7	19 Mar 2024	3	15.16	85.39	8.2	33.16	8.3	24.5	2.90
A7	19 Mar 2024	4	14.78	85.43	8.0	33.19	8.2	24.6	3.73
A7	19 Mar 2024	5	14.49	85.94	7.8	33.19	8.2	24.7	4.09
A7	19 Mar 2024	6	14.45	86.96	7.7	33.18	8.2	24.7	4.12
A7	19 Mar 2024	7	14.36	87.53	7.5	33.19	8.2	24.7	4.22
A7	19 Mar 2024	8	14.19	87.52	7.3	33.21	8.1	24.8	3.98
A7	19 Mar 2024	9	13.88	87.80	7.0	33.25	8.1	24.9	3.74
A7	19 Mar 2024	10	13.75	88.77	6.9	33.25	8.1	24.9	3.22
A7	19 Mar 2024	11	13.57	90.33	6.7	33.27	8.1	24.9	2.85
A7	19 Mar 2024	12	13.35	90.41	6.6	33.29	8.0	25.0	3.01
A7	19 Mar 2024	13	13.22	90.95	6.6	33.28	8.0	25.0	2.95
A7	19 Mar 2024	14	13.07	91.77	6.6	33.28	8.0	25.0	3.01
A7	19 Mar 2024	15	12.95	90.87	6.4	33.31	8.0	25.1	3.05
A7	19 Mar 2024	16	12.79	91.22	6.2	33.34	8.0	25.1	2.79
A7	19 Mar 2024	17	12.61	91.71	6.2	33.37	8.0	25.2	2.64
A7	19 Mar 2024	18	12.56	92.71	6.0	33.38	8.0	25.2	2.36
A7	19 Mar 2024	19	12.40	93.50	5.6	33.41	7.9	25.3	1.92
A7	19 Mar 2024	20	12.48	93.91	5.7	33.37	7.9	25.2	1.78
A7	26 Mar 2024	1	14.20	86.02	7.2	33.30	7.7	24.8	1.60
A7	26 Mar 2024	2	14.19	85.84	7.2	33.30	7.7	24.8	1.64
A7	26 Mar 2024	3	14.11	85.39	7.0	33.32	7.7	24.9	1.75
A7	26 Mar 2024	4	13.79	85.78	6.8	33.38	7.7	25.0	1.74
A7	26 Mar 2024	5	13.51	85.84	6.5	33.41	7.6	25.1	1.59
A7	26 Mar 2024	6	13.39	86.36	6.3	33.41	7.6	25.1	1.41
A7	26 Mar 2024	7	13.12	86.96	6.2	33.44	7.6	25.2	1.41
A7	26 Mar 2024	8	13.04	86.98	6.1	33.44	7.6	25.2	1.30
A7	26 Mar 2024	9	12.93	86.79	6.1	33.44	7.6	25.2	1.35
A7	26 Mar 2024	10	12.81	86.55	6.0	33.45	7.6	25.2	1.47
A7	26 Mar 2024	11	12.56	86.32	5.9	33.48	7.5	25.3	1.34
A7	26 Mar 2024	12	12.51	86.65	5.8	33.48	7.5	25.3	1.19
A7	26 Mar 2024	13	12.31	86.82	5.7	33.51	7.5	25.4	1.17
A7	26 Mar 2024	14	12.19	86.86	5.6	33.52	7.5	25.4	1.12
A7	26 Mar 2024	15	12.15	87.15	5.8	33.52	7.5	25.4	1.23

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/l)	Sal (ppt)	pH	Dens (s-t)	Chlor (µg/L)
A7	26 Mar 2024	16	12.04	87.22	5.5	33.54	7.5	25.4	0.99
A7	26 Mar 2024	17	11.79	87.21	5.0	33.57	7.5	25.5	0.96
C4	06 Mar 2024	1	15.95	85.61	8.0	32.99	8.2	24.2	0.15
C4	06 Mar 2024	2	15.95	84.72	8.0	32.99	8.2	24.2	0.15
C4	06 Mar 2024	3	15.85	85.50	8.0	32.99	8.2	24.2	0.22
C4	06 Mar 2024	4	15.74	86.46	7.9	32.99	8.2	24.3	0.32
C4	06 Mar 2024	5	15.45	88.15	7.7	33.02	8.2	24.3	0.35
C4	06 Mar 2024	6	14.92	91.66	7.5	33.08	8.1	24.5	0.28
C4	06 Mar 2024	7	14.51	94.40	7.3	33.12	8.1	24.6	0.24
C4	06 Mar 2024	8	14.39	95.45	7.3	33.12	8.1	24.7	0.24
C4	06 Mar 2024	9	14.36	95.36	7.4	33.12	8.1	24.7	0.23
C4	06 Mar 2024	10	14.37	94.54	6.9	33.12	8.1	24.7	0.37
C4	12 Mar 2024	1	15.00	88.58	8.0	33.04	8.2	24.5	0.69
C4	12 Mar 2024	2	15.00	88.54	8.0	33.04	8.2	24.5	0.71
C4	12 Mar 2024	3	15.00	88.38	8.0	33.04	8.2	24.5	0.80
C4	12 Mar 2024	4	14.92	87.58	7.9	33.06	8.2	24.5	1.03
C4	12 Mar 2024	5	14.78	82.43	7.8	33.09	8.1	24.5	1.19
C4	12 Mar 2024	6	14.59	77.82	7.8	33.11	8.1	24.6	1.06
C4	12 Mar 2024	7	14.51	73.81	7.7	33.11	8.1	24.6	0.84
C4	12 Mar 2024	8	14.41	70.79	7.5	33.12	8.1	24.7	0.75
C4	12 Mar 2024	9	13.90	67.85	7.6	33.18	8.1	24.8	0.64
C4	12 Mar 2024	10	13.29	70.35	6.5	33.23	8.0	25.0	0.50
C4	12 Mar 2024	11	13.06	74.67	6.3	33.24	8.0	25.0	0.45
C4	19 Mar 2024	1	15.13	89.47	7.2	33.13	7.9	24.5	0.46
C4	19 Mar 2024	2	15.09	89.44	7.1	33.14	7.9	24.5	0.47
C4	19 Mar 2024	3	14.94	89.40	7.0	33.16	7.9	24.6	0.50
C4	19 Mar 2024	4	14.57	90.31	6.9	33.19	7.9	24.7	0.65
C4	19 Mar 2024	5	14.41	91.33	6.9	33.20	7.9	24.7	0.95
C4	19 Mar 2024	6	14.32	91.19	7.0	33.20	7.9	24.7	1.39
C4	19 Mar 2024	7	14.23	90.82	6.9	33.21	7.9	24.8	1.82
C4	19 Mar 2024	8	14.10	91.67	6.8	33.23	7.9	24.8	1.56
C4	19 Mar 2024	9	13.68	92.67	6.4	33.29	7.8	24.9	1.15
C4	19 Mar 2024	10	13.64	94.13	6.4	33.28	7.8	24.9	0.75
C4	26 Mar 2024	1	14.10	85.19	7.1	33.34	7.8	24.9	0.56
C4	26 Mar 2024	2	13.69	86.02	6.9	33.41	7.8	25.0	0.63
C4	26 Mar 2024	3	13.41	83.56	6.6	33.42	7.7	25.1	0.76
C4	26 Mar 2024	4	12.99	81.85	6.2	33.45	7.7	25.2	1.00
C4	26 Mar 2024	5	12.75	83.90	6.0	33.45	7.7	25.2	1.17
C4	26 Mar 2024	6	12.77	85.42	5.8	33.44	7.6	25.2	1.02
C4	26 Mar 2024	7	12.37	85.97	5.6	33.49	7.6	25.3	0.97
C4	26 Mar 2024	8	12.23	86.23	5.4	33.50	7.6	25.4	0.82
C4	26 Mar 2024	9	12.22	86.53	5.3	33.49	7.6	25.4	0.77
C4	26 Mar 2024	10	12.06	86.96	5.3	33.52	7.6	25.4	0.74
C4	26 Mar 2024	11	12.04	87.50	5.0	33.53	7.6	25.4	0.62
C4	26 Mar 2024	12	12.04	87.50	5.0	33.53	7.6	25.4	0.55
C5	06 Mar 2024	1	15.31	92.59	7.8	33.03	8.2	24.4	0.42
C5	06 Mar 2024	2	15.11	92.60	7.8	33.06	8.1	24.5	0.40
C5	06 Mar 2024	3	15.02	93.46	7.7	33.07	8.1	24.5	0.33
C5	06 Mar 2024	4	14.97	94.76	7.7	33.07	8.1	24.5	0.32
C5	06 Mar 2024	5	14.96	95.00	7.7	33.07	8.1	24.5	0.33
C5	06 Mar 2024	6	14.92	95.12	7.7	33.08	8.1	24.5	0.34
C5	06 Mar 2024	7	14.86	95.13	7.8	33.08	8.1	24.5	0.37
C5	06 Mar 2024	8	14.80	95.08	7.9	33.09	8.1	24.5	0.42
C5	06 Mar 2024	9	14.75	94.90	7.7	33.10	8.1	24.6	0.47
C5	06 Mar 2024	10	14.74	94.70	7.7	33.10	8.1	24.6	0.44

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/l)	Sal (ppt)	pH	Dens (s-t)	Chlor (µg/L)
C5	12 Mar 2024	1	14.66	80.09	7.6	33.10	8.1	24.6	0.45
C5	12 Mar 2024	2	14.45	80.02	7.3	33.14	8.1	24.7	0.52
C5	12 Mar 2024	3	13.88	81.40	7.0	33.18	8.1	24.8	0.56
C5	12 Mar 2024	4	13.68	87.59	6.8	33.19	8.1	24.9	0.50
C5	12 Mar 2024	5	13.54	90.86	6.7	33.20	8.0	24.9	0.41
C5	12 Mar 2024	6	13.31	90.36	6.5	33.22	8.0	25.0	0.38
C5	12 Mar 2024	7	13.14	87.36	6.4	33.23	8.0	25.0	0.41
C5	12 Mar 2024	8	13.09	86.50	6.3	33.24	8.0	25.0	0.42
C5	12 Mar 2024	9	12.92	85.59	6.2	33.25	8.0	25.1	0.44
C5	12 Mar 2024	10	12.90	80.01	6.1	33.25	8.0	25.1	0.43
C5	12 Mar 2024	11	12.90	76.64	6.1	33.25	8.0	25.1	0.44
C5	19 Mar 2024	1	15.62	87.69	7.9	33.13	8.0	24.4	0.49
C5	19 Mar 2024	2	15.60	87.58	7.9	33.14	8.0	24.4	0.50
C5	19 Mar 2024	3	15.37	87.36	7.9	33.15	8.0	24.5	0.68
C5	19 Mar 2024	4	15.25	87.27	7.7	33.15	8.0	24.5	1.01
C5	19 Mar 2024	5	14.35	87.84	7.2	33.25	8.0	24.8	1.21
C5	19 Mar 2024	6	13.93	90.28	6.7	33.26	7.9	24.9	1.14
C5	19 Mar 2024	7	13.80	91.91	6.4	33.26	7.8	24.9	0.85
C5	19 Mar 2024	8	13.57	93.14	6.5	33.29	7.8	25.0	0.72
C5	19 Mar 2024	9	13.42	93.00	6.4	33.31	7.8	25.0	0.66
C5	19 Mar 2024	10	13.42	92.49	6.3	33.30	7.8	25.0	0.63
C5	26 Mar 2024	1	14.31	78.73	7.3	33.30	7.8	24.8	0.79
C5	26 Mar 2024	2	14.29	71.39	7.3	33.31	7.8	24.8	0.83
C5	26 Mar 2024	3	14.27	83.89	7.2	33.31	7.8	24.8	0.91
C5	26 Mar 2024	4	13.92	87.08	6.9	33.37	7.8	24.9	0.95
C5	26 Mar 2024	5	13.79	86.48	6.9	33.38	7.7	25.0	0.87
C5	26 Mar 2024	6	13.74	86.77	6.7	33.38	7.7	25.0	0.88
C5	26 Mar 2024	7	13.21	87.35	6.3	33.45	7.7	25.1	0.77
C5	26 Mar 2024	8	12.75	87.92	5.8	33.49	7.6	25.3	0.63
C5	26 Mar 2024	9	12.58	88.68	5.6	33.49	7.6	25.3	0.56
C5	26 Mar 2024	10	12.44	88.73	5.5	33.51	7.6	25.4	0.52
C5	26 Mar 2024	11	12.13	85.90	5.1	33.54	7.5	25.4	0.58
C6	06 Mar 2024	1	15.80	90.80	7.9	32.96	8.2	24.2	0.38
C6	06 Mar 2024	2	15.72	90.55	7.8	32.97	8.2	24.3	0.41
C6	06 Mar 2024	3	15.08	90.34	7.8	33.07	8.1	24.5	0.54
C6	06 Mar 2024	4	14.89	91.65	7.7	33.08	8.1	24.5	0.46
C6	06 Mar 2024	5	14.72	93.25	7.8	33.09	8.1	24.6	0.46
C6	06 Mar 2024	6	14.70	94.95	7.9	33.09	8.1	24.6	0.51
C6	06 Mar 2024	7	14.69	95.16	7.9	33.10	8.1	24.6	0.55
C6	06 Mar 2024	8	14.69	95.31	8.0	33.10	8.1	24.6	0.59
C6	06 Mar 2024	9	14.70	95.44	8.0	33.10	8.1	24.6	0.67
C6	12 Mar 2024	1	14.60	81.12	7.4	33.11	8.1	24.6	0.48
C6	12 Mar 2024	2	14.09	81.20	7.2	33.16	8.1	24.7	0.51
C6	12 Mar 2024	3	13.84	81.64	6.9	33.20	8.1	24.8	0.52
C6	12 Mar 2024	4	13.32	88.07	6.8	33.21	8.0	24.9	0.58
C6	12 Mar 2024	5	13.37	93.32	6.6	33.20	8.0	24.9	0.55
C6	12 Mar 2024	6	13.13	91.51	6.6	33.24	8.0	25.0	0.47
C6	12 Mar 2024	7	13.06	87.82	6.2	33.24	8.0	25.0	0.38
C6	12 Mar 2024	8	12.98	85.85	6.1	33.25	8.0	25.0	0.35
C6	12 Mar 2024	9	13.02	81.42	6.1	33.25	8.0	25.0	0.41
C6	19 Mar 2024	1	15.67	89.51	7.7	33.12	8.0	24.4	0.53
C6	19 Mar 2024	2	15.61	89.40	7.8	33.13	8.0	24.4	0.51
C6	19 Mar 2024	3	15.54	89.18	7.8	33.13	8.0	24.4	0.67
C6	19 Mar 2024	4	15.08	88.43	7.7	33.18	8.0	24.6	1.16
C6	19 Mar 2024	5	14.51	87.96	7.4	33.19	7.9	24.7	1.87
C6	19 Mar 2024	6	14.29	89.82	7.0	33.21	7.9	24.7	2.05

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/l)	Sal (ppt)	pH	Dens (s-t)	Chlor (µg/L)
C6	19 Mar 2024	7	14.16	92.63	6.7	33.21	7.8	24.8	1.38
C6	19 Mar 2024	8	13.76	95.04	6.6	33.27	7.8	24.9	0.92
C6	19 Mar 2024	9	13.55	94.59	6.6	33.27	7.8	24.9	0.84
C6	26 Mar 2024	1	14.44	86.01	7.6	33.29	7.8	24.8	1.00
C6	26 Mar 2024	2	14.44	85.90	7.5	33.29	7.8	24.8	1.05
C6	26 Mar 2024	3	14.41	85.89	7.4	33.30	7.8	24.8	1.12
C6	26 Mar 2024	4	14.29	86.00	7.2	33.32	7.8	24.8	1.06
C6	26 Mar 2024	5	13.77	85.81	6.8	33.40	7.7	25.0	0.95
C6	26 Mar 2024	6	13.44	85.56	6.4	33.42	7.7	25.1	0.76
C6	26 Mar 2024	7	13.08	86.36	6.1	33.45	7.7	25.2	0.75
C6	26 Mar 2024	8	12.70	87.38	6.0	33.49	7.6	25.3	0.67
C6	26 Mar 2024	9	12.39	88.15	5.3	33.52	7.6	25.4	0.54
C6	26 Mar 2024	10	12.25	88.77	5.2	33.52	7.5	25.4	0.52
C6	26 Mar 2024	11	12.30	88.53	5.2	33.51	7.5	25.4	0.52
C7	06 Mar 2024	1	16.02	91.75	8.5	32.93	8.2	24.1	0.50
C7	06 Mar 2024	2	16.01	91.69	8.5	32.93	8.2	24.2	0.57
C7	06 Mar 2024	3	15.99	91.54	8.5	32.92	8.2	24.2	0.78
C7	06 Mar 2024	4	15.96	91.16	8.5	32.93	8.2	24.2	1.09
C7	06 Mar 2024	5	15.87	90.57	8.5	32.96	8.2	24.2	1.23
C7	06 Mar 2024	6	15.71	91.06	8.4	32.99	8.2	24.3	1.01
C7	06 Mar 2024	7	15.32	92.60	8.2	33.04	8.2	24.4	0.90
C7	06 Mar 2024	8	15.09	93.68	8.2	33.06	8.2	24.5	0.91
C7	06 Mar 2024	9	14.93	94.66	8.1	33.08	8.2	24.5	0.94
C7	06 Mar 2024	10	14.78	95.26	8.1	33.09	8.2	24.5	1.02
C7	06 Mar 2024	11	14.74	95.32	8.0	33.09	8.2	24.6	1.13
C7	06 Mar 2024	12	14.65	95.30	8.0	33.10	8.1	24.6	1.09
C7	06 Mar 2024	13	14.62	95.04	7.9	33.10	8.1	24.6	1.13
C7	06 Mar 2024	14	14.57	95.17	7.8	33.11	8.1	24.6	1.06
C7	06 Mar 2024	15	14.37	95.02	7.7	33.13	8.1	24.7	1.00
C7	06 Mar 2024	16	14.21	95.12	7.6	33.15	8.1	24.7	0.89
C7	06 Mar 2024	17	14.00	94.98	7.2	33.16	8.1	24.8	0.81
C7	12 Mar 2024	1	14.80	80.52	7.6	33.08	8.1	24.5	5.04
C7	12 Mar 2024	2	14.58	80.39	7.3	33.11	8.1	24.6	5.67
C7	12 Mar 2024	3	14.11	81.47	7.1	33.15	8.1	24.7	4.46
C7	12 Mar 2024	4	13.77	88.57	6.9	33.18	8.1	24.8	3.05
C7	12 Mar 2024	5	13.50	92.71	6.8	33.19	8.0	24.9	2.15
C7	12 Mar 2024	6	13.32	94.81	6.8	33.21	8.0	24.9	1.39
C7	12 Mar 2024	7	13.10	95.51	6.7	33.23	8.0	25.0	1.11
C7	12 Mar 2024	8	13.09	96.03	6.6	33.22	8.0	25.0	0.86
C7	12 Mar 2024	9	12.82	95.68	6.5	33.26	8.0	25.1	0.75
C7	12 Mar 2024	10	12.73	95.39	6.4	33.26	8.0	25.1	0.64
C7	12 Mar 2024	11	12.67	95.31	6.3	33.27	8.0	25.1	0.68
C7	12 Mar 2024	12	12.58	94.93	6.2	33.29	8.0	25.1	0.55
C7	12 Mar 2024	13	12.42	93.32	6.1	33.31	8.0	25.2	0.54
C7	12 Mar 2024	14	12.31	92.07	6.0	33.32	8.0	25.2	0.56
C7	12 Mar 2024	15	12.30	90.30	6.2	33.32	8.0	25.2	0.56
C7	12 Mar 2024	16	12.30	88.81	5.9	33.32	8.0	25.2	0.55
C7	12 Mar 2024	17	12.34	88.46	6.1	33.32	8.0	25.2	0.56
C7	12 Mar 2024	18	12.36	88.56	6.0	33.32	8.0	25.2	0.57
C7	19 Mar 2024	1	15.50	81.43	8.5	33.11	8.2	24.4	3.87
C7	19 Mar 2024	2	15.58	81.60	8.5	33.10	8.2	24.4	3.77
C7	19 Mar 2024	3	15.59	81.83	8.4	33.11	8.2	24.4	4.07
C7	19 Mar 2024	4	15.01	82.18	8.1	33.16	8.2	24.6	5.73
C7	19 Mar 2024	5	14.67	80.96	7.8	33.16	8.1	24.6	6.87
C7	19 Mar 2024	6	14.53	82.57	7.6	33.16	8.1	24.7	6.96
C7	19 Mar 2024	7	14.38	83.69	7.3	33.18	8.1	24.7	6.20
C7	19 Mar 2024	8	13.91	86.48	7.0	33.22	8.0	24.8	4.62

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/l)	Sal (ppt)	pH	Dens (s-t)	Chlor (µg/L)
C7	19 Mar 2024	9	13.84	88.98	6.7	33.22	8.0	24.8	3.37
C7	19 Mar 2024	10	13.52	91.72	6.5	33.27	8.0	24.9	2.29
C7	19 Mar 2024	11	13.40	93.89	6.4	33.27	8.0	25.0	1.63
C7	19 Mar 2024	12	13.31	94.06	6.3	33.27	7.9	25.0	1.57
C7	19 Mar 2024	13	13.10	93.73	6.2	33.30	7.9	25.1	1.77
C7	19 Mar 2024	14	12.90	93.82	5.9	33.33	7.9	25.1	1.47
C7	19 Mar 2024	15	12.31	94.76	5.5	33.42	7.9	25.3	0.96
C7	19 Mar 2024	16	12.11	96.15	5.4	33.43	7.8	25.3	0.56
C7	19 Mar 2024	17	11.96	96.69	5.2	33.45	7.8	25.4	0.38
C7	19 Mar 2024	18	11.91	96.49	5.1	33.45	7.8	25.4	0.40
C7	26 Mar 2024	1	14.54	75.88	7.5	33.02	7.8	24.5	2.30
C7	26 Mar 2024	2	14.54	80.69	7.4	33.25	7.8	24.7	2.24
C7	26 Mar 2024	3	14.11	84.17	7.0	33.37	7.8	24.9	2.46
C7	26 Mar 2024	4	13.34	84.44	6.5	33.45	7.7	25.1	2.15
C7	26 Mar 2024	5	12.92	85.33	6.1	33.46	7.6	25.2	1.73
C7	26 Mar 2024	6	12.67	86.43	5.9	33.48	7.6	25.3	1.48
C7	26 Mar 2024	7	12.43	86.30	5.7	33.49	7.6	25.3	1.45
C7	26 Mar 2024	8	12.21	86.40	5.6	33.52	7.6	25.4	1.35
C7	26 Mar 2024	9	12.00	87.14	5.4	33.53	7.6	25.5	1.27
C7	26 Mar 2024	10	11.84	86.68	5.2	33.55	7.5	25.5	1.15
C7	26 Mar 2024	11	11.79	86.98	5.1	33.56	7.5	25.5	0.99
C7	26 Mar 2024	12	11.75	88.50	5.1	33.56	7.5	25.5	0.83
C7	26 Mar 2024	13	11.65	89.22	5.0	33.59	7.5	25.6	0.77
C7	26 Mar 2024	14	11.59	89.75	4.9	33.59	7.5	25.6	0.58
C7	26 Mar 2024	15	11.47	90.64	4.9	33.62	7.5	25.6	0.61
C7	26 Mar 2024	16	11.33	91.35	4.9	33.63	7.5	25.6	0.51
C7	26 Mar 2024	17	11.28	91.69	4.6	33.63	7.5	25.7	0.53
C7	26 Mar 2024	18	11.27	91.31	4.7	33.63	7.5	25.7	0.48
C8	06 Mar 2024	1	16.11	92.54	8.5	32.93	8.2	24.1	0.37
C8	06 Mar 2024	2	16.08	92.48	8.5	32.93	8.2	24.1	0.45
C8	06 Mar 2024	3	16.06	92.21	8.5	32.93	8.2	24.1	0.70
C8	06 Mar 2024	4	16.04	91.45	8.5	32.93	8.2	24.1	1.16
C8	06 Mar 2024	5	15.99	90.34	8.4	32.94	8.2	24.2	1.46
C8	06 Mar 2024	6	15.72	90.37	8.3	32.98	8.2	24.3	1.27
C8	06 Mar 2024	7	15.46	91.29	8.3	33.02	8.2	24.3	1.04
C8	06 Mar 2024	8	15.25	93.79	8.2	33.05	8.2	24.4	0.92
C8	06 Mar 2024	9	15.06	94.12	8.0	33.06	8.2	24.5	0.89
C8	06 Mar 2024	10	14.90	94.57	7.9	33.07	8.1	24.5	1.27
C8	06 Mar 2024	11	14.84	94.87	7.9	33.08	8.1	24.5	1.64
C8	06 Mar 2024	12	14.77	94.33	7.8	33.08	8.1	24.5	1.51
C8	06 Mar 2024	13	14.71	94.62	7.8	33.09	8.1	24.6	1.35
C8	06 Mar 2024	14	14.59	94.85	7.8	33.11	8.1	24.6	1.43
C8	06 Mar 2024	15	14.51	94.47	8.0	33.11	8.1	24.6	1.46
C8	06 Mar 2024	16	14.25	93.85	8.6	33.14	8.1	24.7	1.45
C8	06 Mar 2024	17	14.16	93.51	7.0	33.14	8.1	24.7	1.34
C8	06 Mar 2024	18	14.12	93.82	7.3	33.14	8.1	24.7	1.25
C8	12 Mar 2024	1	15.22	75.76	8.0	33.03	8.2	24.4	4.72
C8	12 Mar 2024	2	15.21	78.76	7.9	33.03	8.2	24.4	5.17
C8	12 Mar 2024	3	15.17	79.86	7.9	33.04	8.2	24.4	6.35
C8	12 Mar 2024	4	15.02	79.76	7.7	33.06	8.2	24.5	7.68
C8	12 Mar 2024	5	14.68	76.32	7.7	33.09	8.1	24.6	8.54
C8	12 Mar 2024	6	14.70	75.70	7.6	33.08	8.1	24.6	8.69
C8	12 Mar 2024	7	14.17	77.94	7.4	33.15	8.1	24.7	6.91
C8	12 Mar 2024	8	14.02	83.59	7.2	33.14	8.1	24.7	4.59
C8	12 Mar 2024	9	13.87	89.45	7.0	33.15	8.1	24.8	3.24
C8	12 Mar 2024	10	13.67	91.38	6.9	33.18	8.1	24.8	2.46
C8	12 Mar 2024	11	13.26	92.18	6.7	33.21	8.0	25.0	1.72
C8	12 Mar 2024	12	13.00	94.09	6.5	33.23	8.0	25.0	1.24

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/l)	Sal (ppt)	pH	Dens (s-t)	Chlor (µg/L)
C8	12 Mar 2024	13	12.81	95.06	6.4	33.25	8.0	25.1	1.01
C8	12 Mar 2024	14	12.66	94.95	6.3	33.27	8.0	25.1	0.81
C8	12 Mar 2024	15	12.76	94.05	6.3	33.25	8.0	25.1	0.74
C8	12 Mar 2024	16	12.51	92.28	6.2	33.29	8.0	25.2	0.68
C8	12 Mar 2024	17	12.45	90.89	6.1	33.30	8.0	25.2	0.69
C8	12 Mar 2024	18	12.44	86.24	6.1	33.30	8.0	25.2	0.74
C8	12 Mar 2024	19	12.45	84.77	6.0	33.30	8.0	25.2	0.76
C8	12 Mar 2024	20	12.43	83.95	6.0	33.30	8.0	25.2	0.77
C8	19 Mar 2024	1	15.67	80.81	8.5	33.08	8.2	24.3	3.91
C8	19 Mar 2024	2	15.47	80.70	8.4	33.11	8.2	24.4	4.39
C8	19 Mar 2024	3	15.02	80.46	8.1	33.14	8.1	24.5	5.95
C8	19 Mar 2024	4	14.63	80.83	7.8	33.16	8.1	24.6	6.59
C8	19 Mar 2024	5	14.52	82.56	7.5	33.16	8.1	24.7	6.46
C8	19 Mar 2024	6	14.40	85.27	7.2	33.17	8.0	24.7	5.86
C8	19 Mar 2024	7	14.12	87.14	7.0	33.20	8.0	24.8	5.00
C8	19 Mar 2024	8	13.94	88.30	6.8	33.21	8.0	24.8	4.63
C8	19 Mar 2024	9	13.76	88.71	6.7	33.22	7.9	24.9	4.19
C8	19 Mar 2024	10	13.62	89.35	6.6	33.23	7.9	24.9	3.64
C8	19 Mar 2024	11	13.56	90.57	6.5	33.24	7.9	24.9	3.47
C8	19 Mar 2024	12	13.49	90.84	6.3	33.25	7.9	24.9	2.76
C8	19 Mar 2024	13	13.20	91.69	6.1	33.30	7.9	25.0	2.13
C8	19 Mar 2024	14	12.78	93.36	6.0	33.33	7.9	25.1	1.89
C8	19 Mar 2024	15	12.62	93.93	5.8	33.35	7.8	25.2	1.64
C8	19 Mar 2024	16	12.38	94.72	5.6	33.39	7.8	25.3	1.09
C8	19 Mar 2024	17	12.10	95.45	5.3	33.44	7.8	25.4	0.77
C8	19 Mar 2024	18	11.98	95.63	5.1	33.45	7.8	25.4	0.47
C8	19 Mar 2024	19	11.97	95.37	5.1	33.45	7.7	25.4	0.45
C8	26 Mar 2024	1	14.68	80.21	7.4	33.16	7.8	24.6	2.06
C8	26 Mar 2024	2	14.68	80.73	7.4	33.20	7.8	24.7	2.07
C8	26 Mar 2024	3	14.68	80.99	7.4	33.20	7.8	24.7	2.27
C8	26 Mar 2024	4	14.62	81.59	7.3	33.22	7.8	24.7	2.69
C8	26 Mar 2024	5	14.40	81.09	7.1	33.27	7.8	24.8	2.90
C8	26 Mar 2024	6	13.87	81.11	6.9	33.34	7.8	24.9	2.84
C8	26 Mar 2024	7	13.50	83.32	6.7	33.37	7.7	25.0	2.52
C8	26 Mar 2024	8	13.24	84.21	6.5	33.40	7.7	25.1	2.11
C8	26 Mar 2024	9	13.06	84.09	6.3	33.42	7.6	25.2	1.67
C8	26 Mar 2024	10	12.84	85.15	6.1	33.45	7.6	25.2	1.33
C8	26 Mar 2024	11	12.46	85.98	5.9	33.49	7.6	25.3	1.09
C8	26 Mar 2024	12	12.50	87.02	5.7	33.46	7.6	25.3	1.04
C8	26 Mar 2024	13	11.98	88.09	5.4	33.55	7.6	25.5	0.95
C8	26 Mar 2024	14	11.78	89.24	5.2	33.56	7.5	25.5	0.88
C8	26 Mar 2024	15	11.69	90.84	5.1	33.56	7.5	25.5	0.80
C8	26 Mar 2024	16	11.54	92.07	5.1	33.58	7.5	25.6	0.75
C8	26 Mar 2024	17	11.55	92.71	5.0	33.57	7.5	25.6	0.75
C8	26 Mar 2024	18	11.45	92.86	4.9	33.59	7.5	25.6	0.91
C8	26 Mar 2024	19	11.43	91.71	4.8	33.59	7.5	25.6	0.78
C8	26 Mar 2024	20	11.43	90.95	4.8	33.60	7.5	25.6	0.60

NA = not available

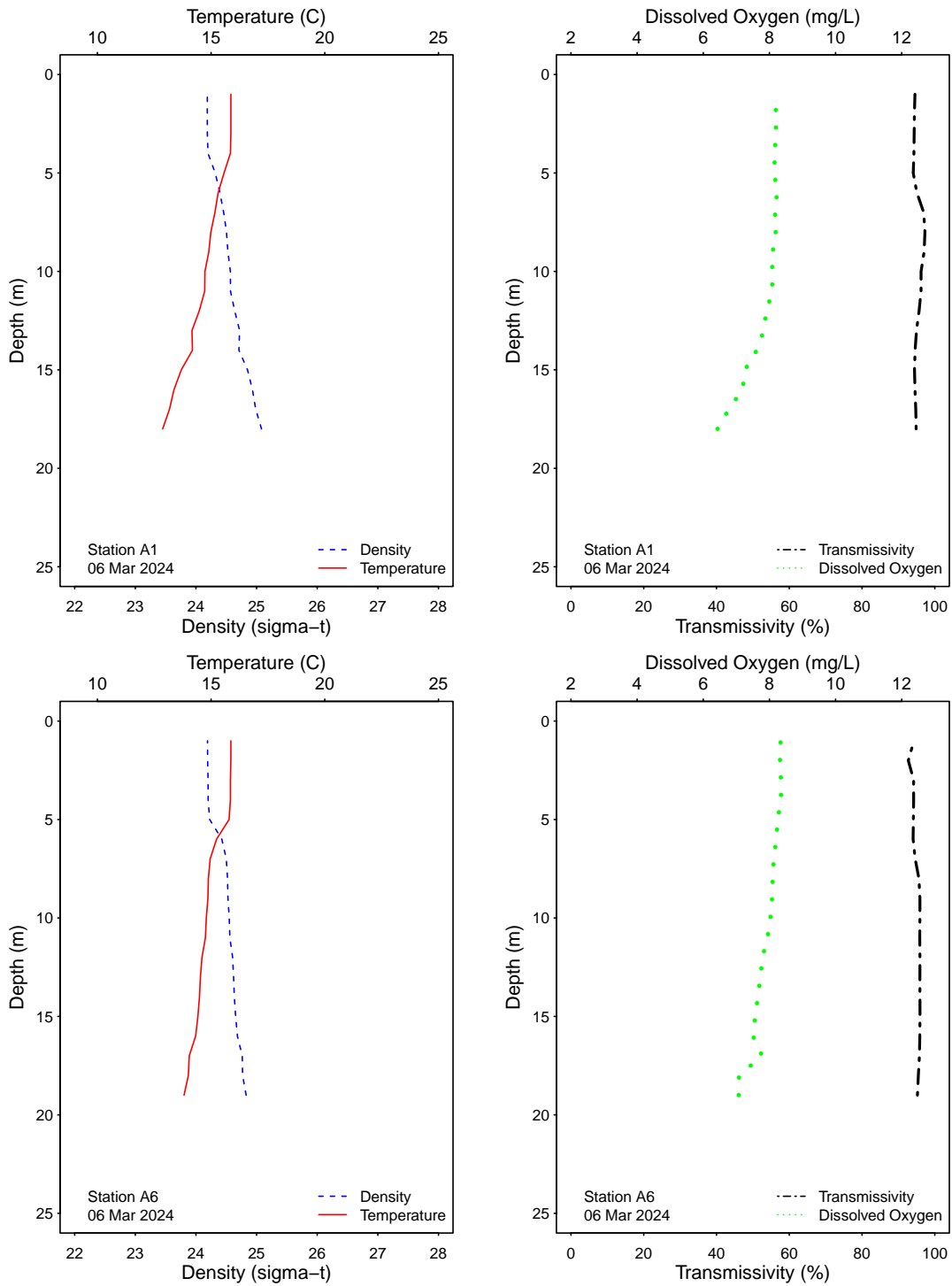


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.



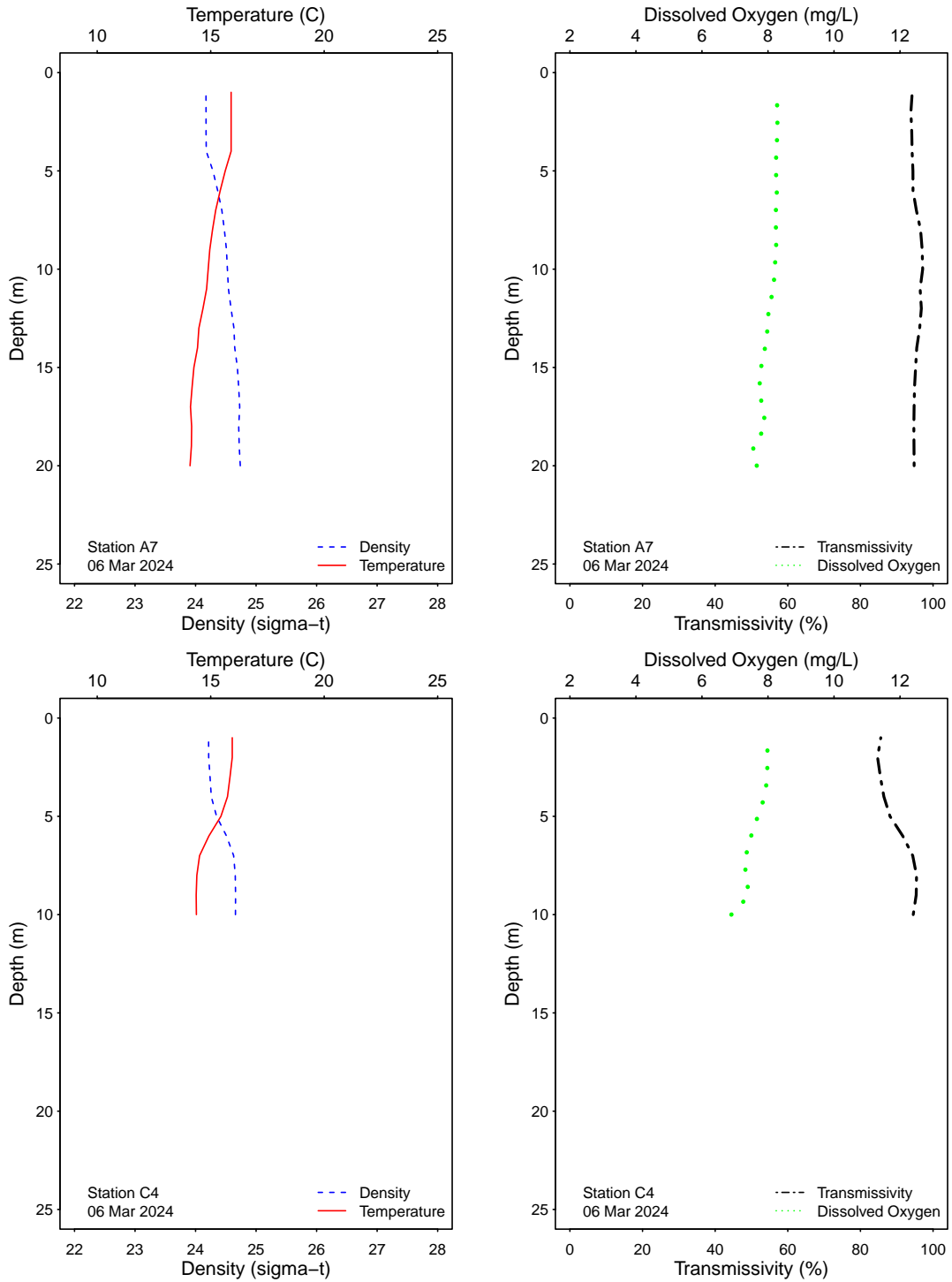


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

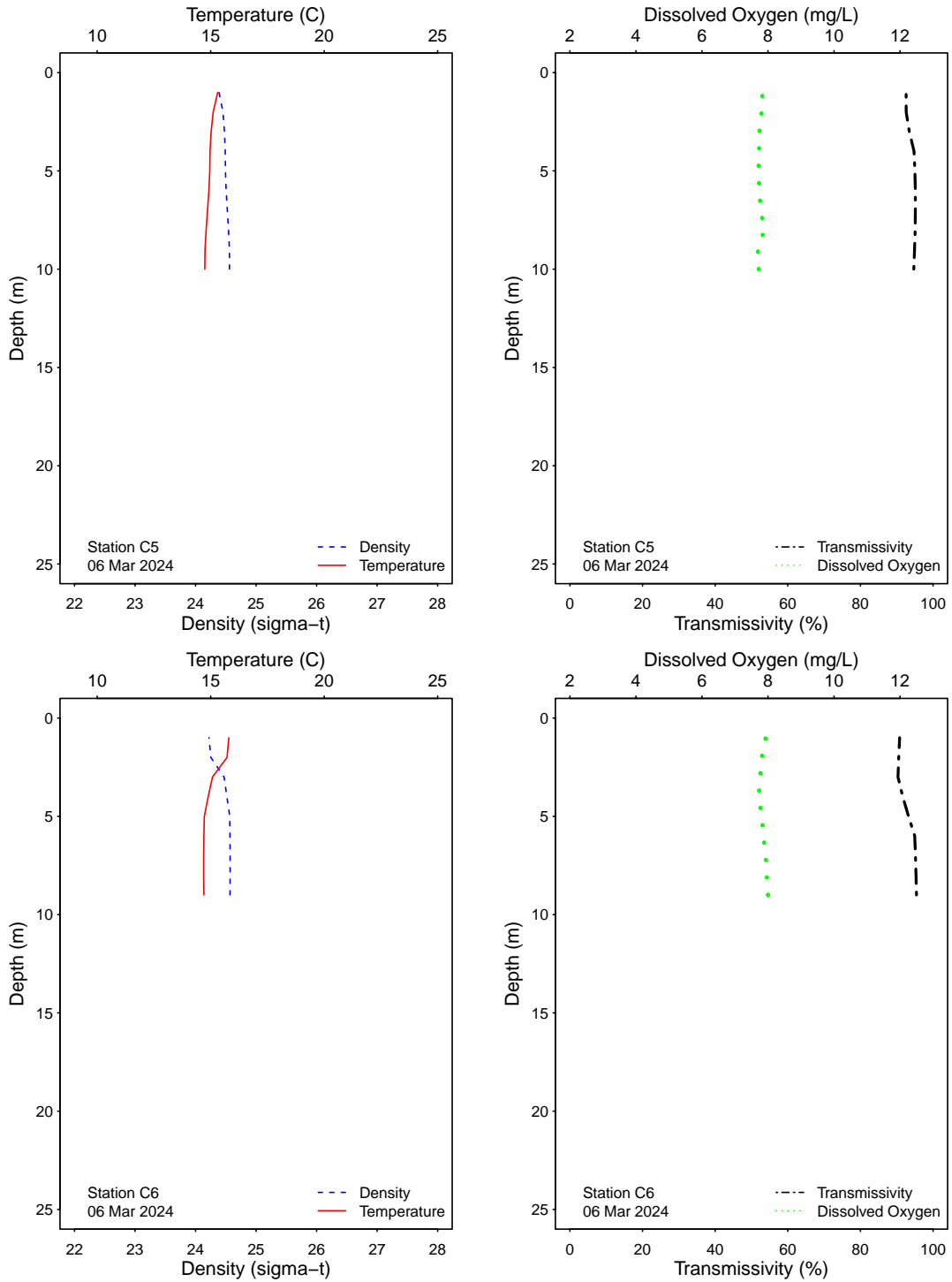


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

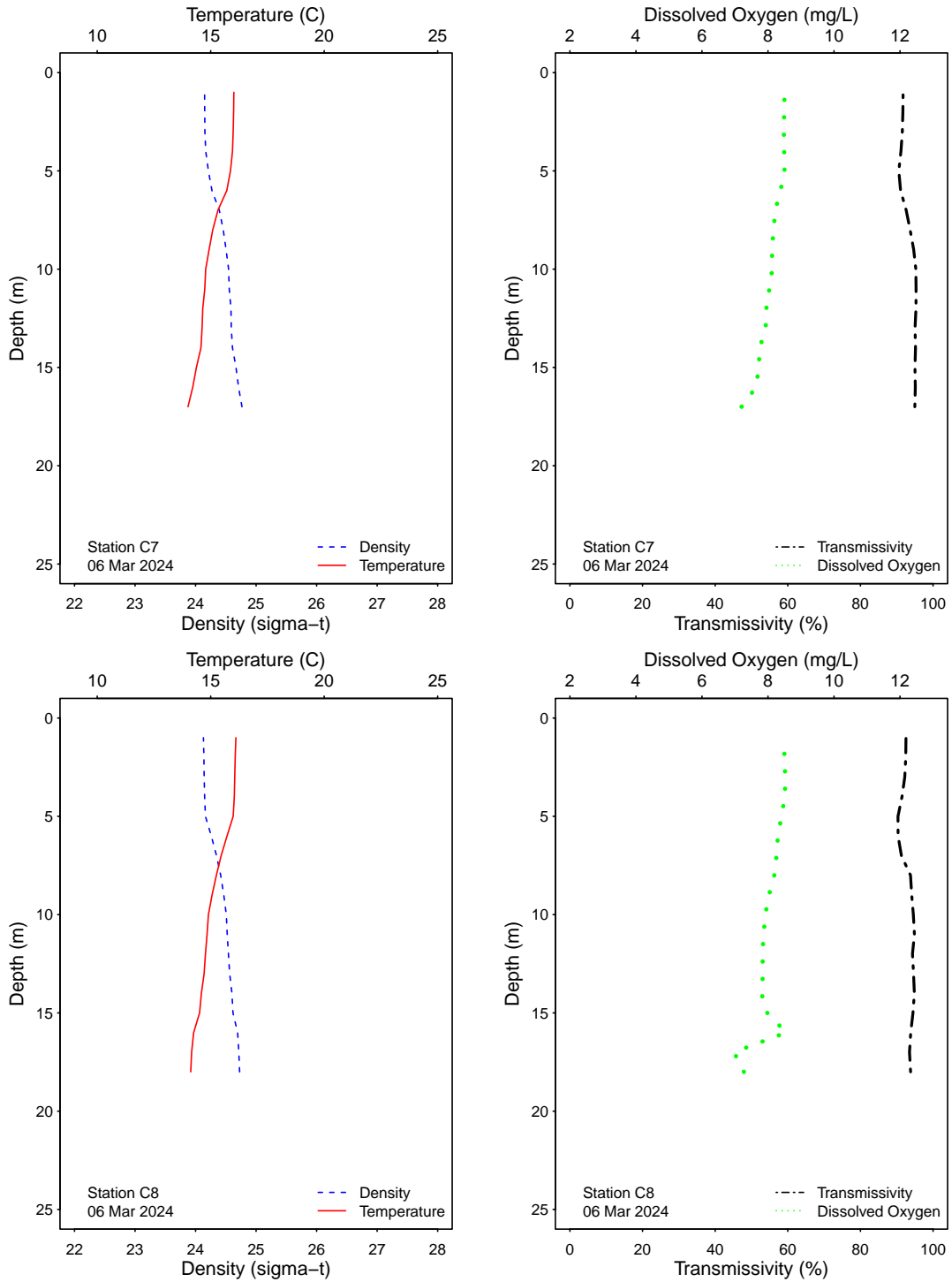


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

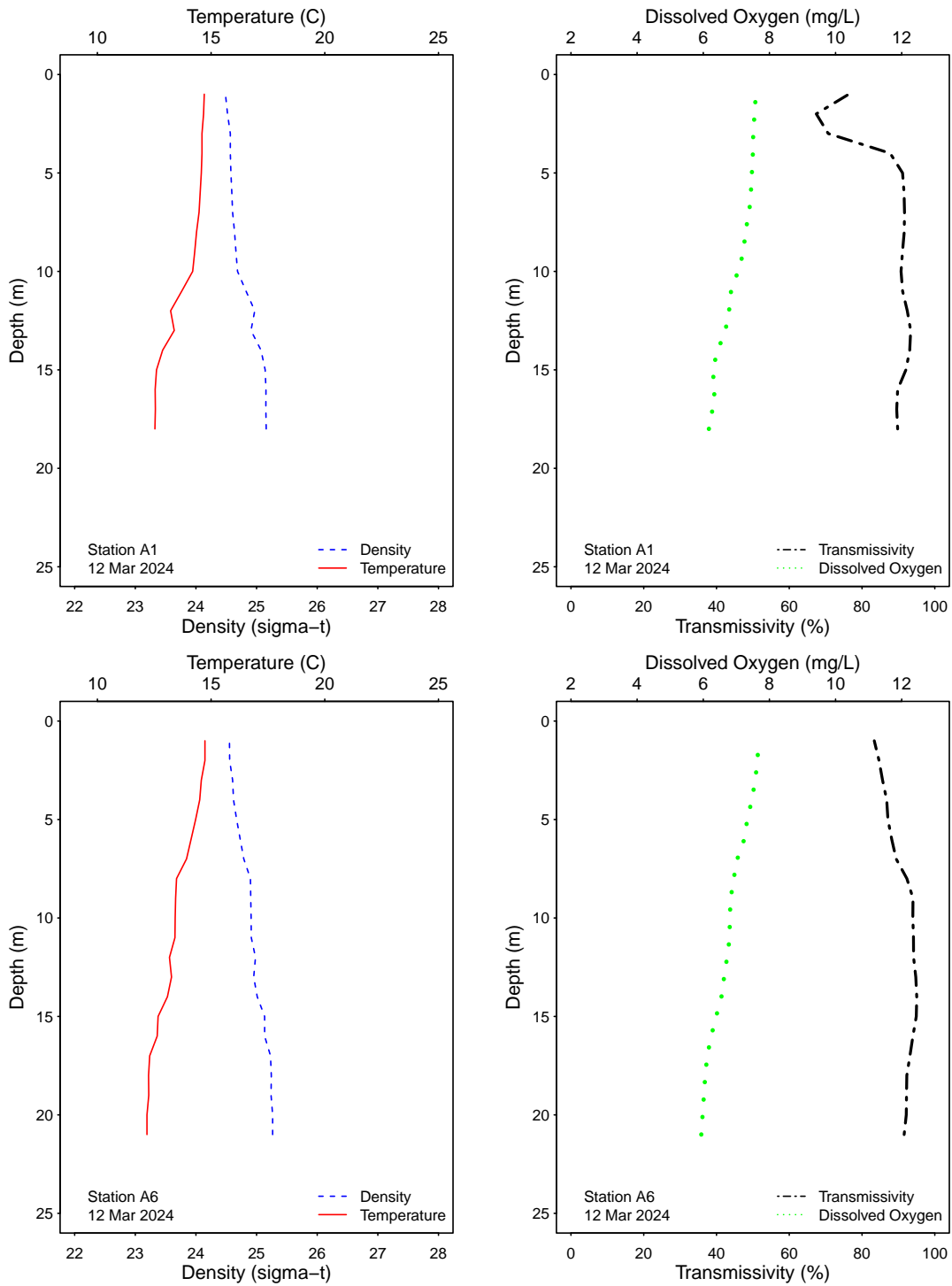


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

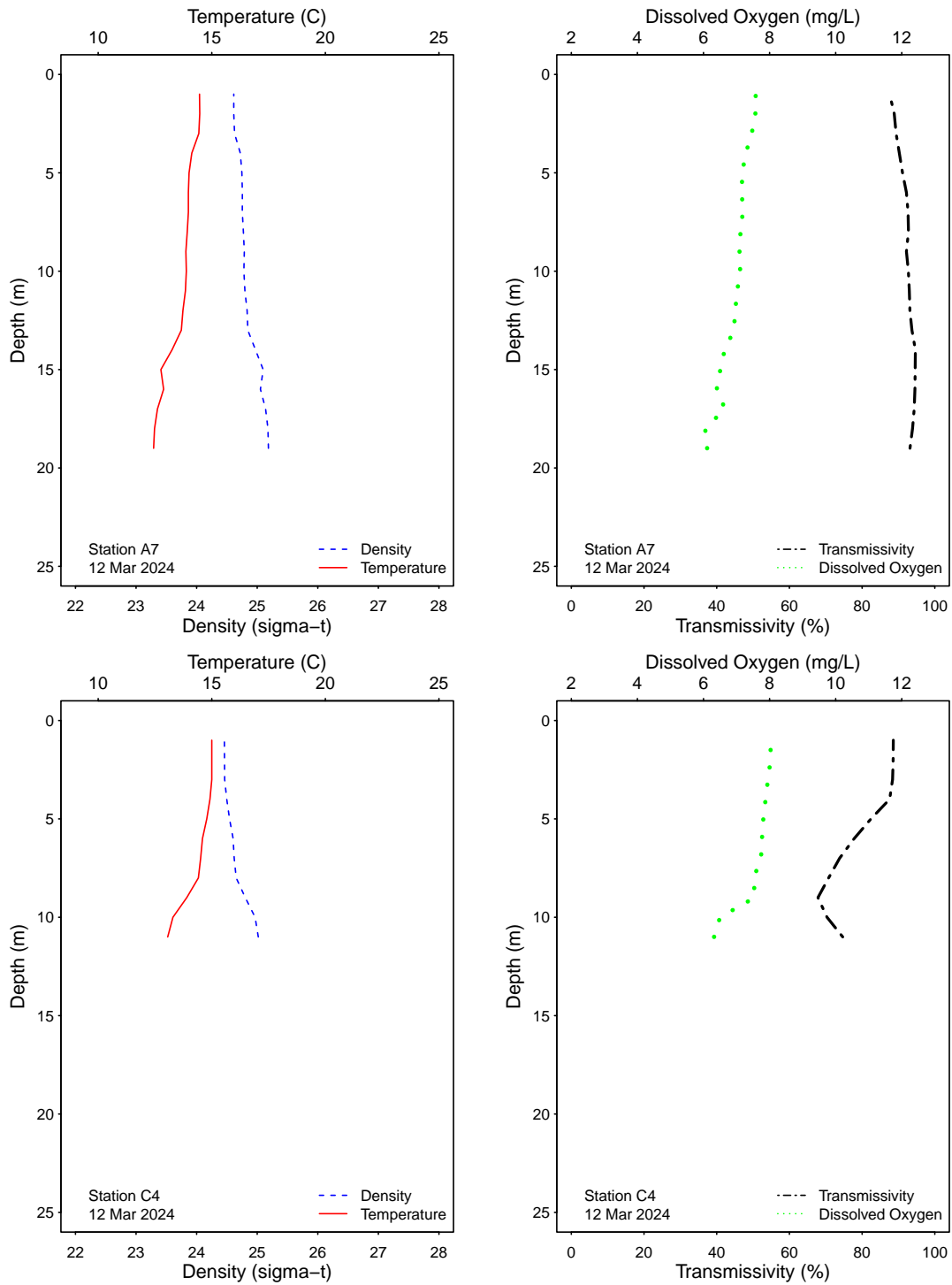


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

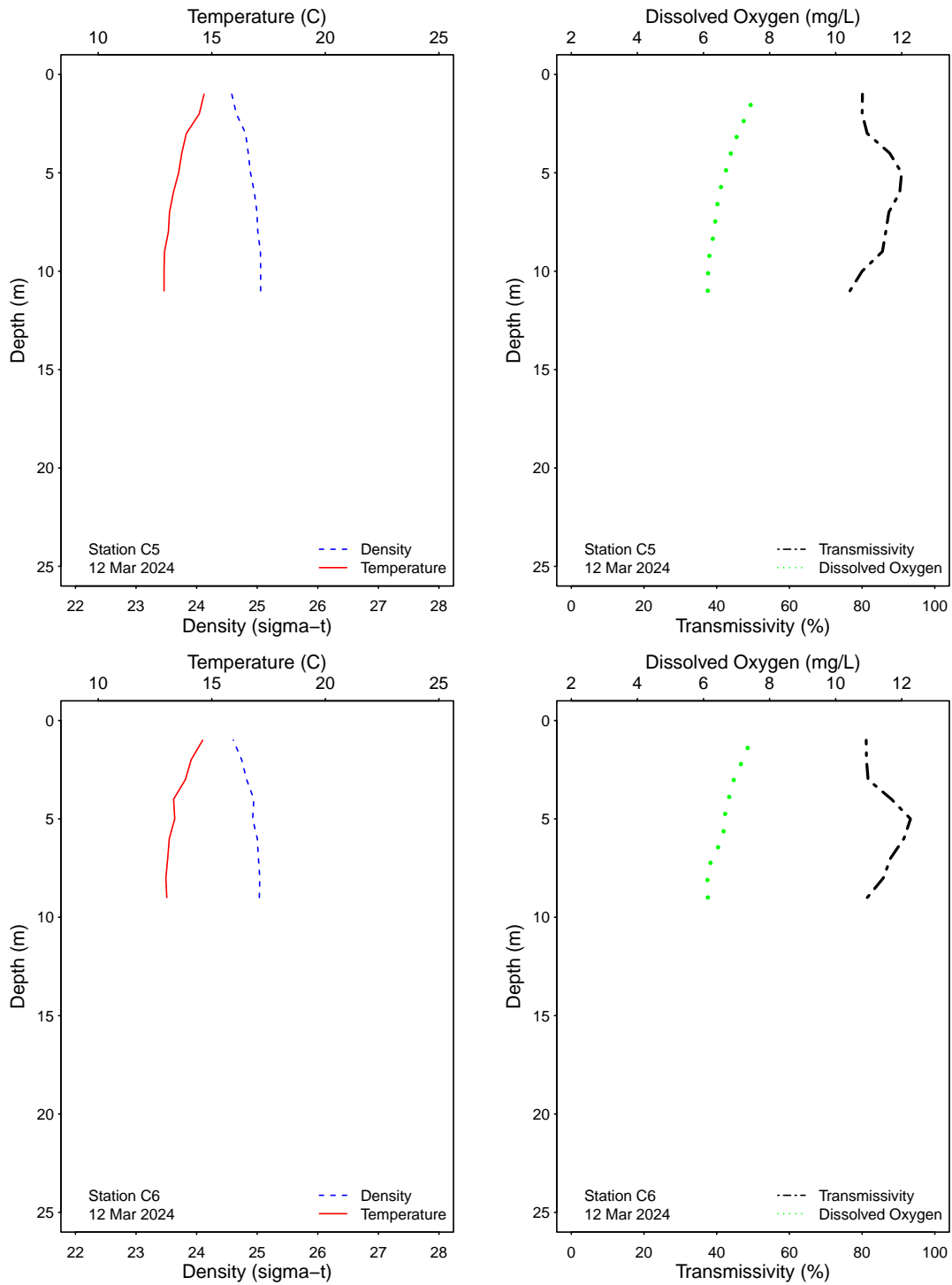


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

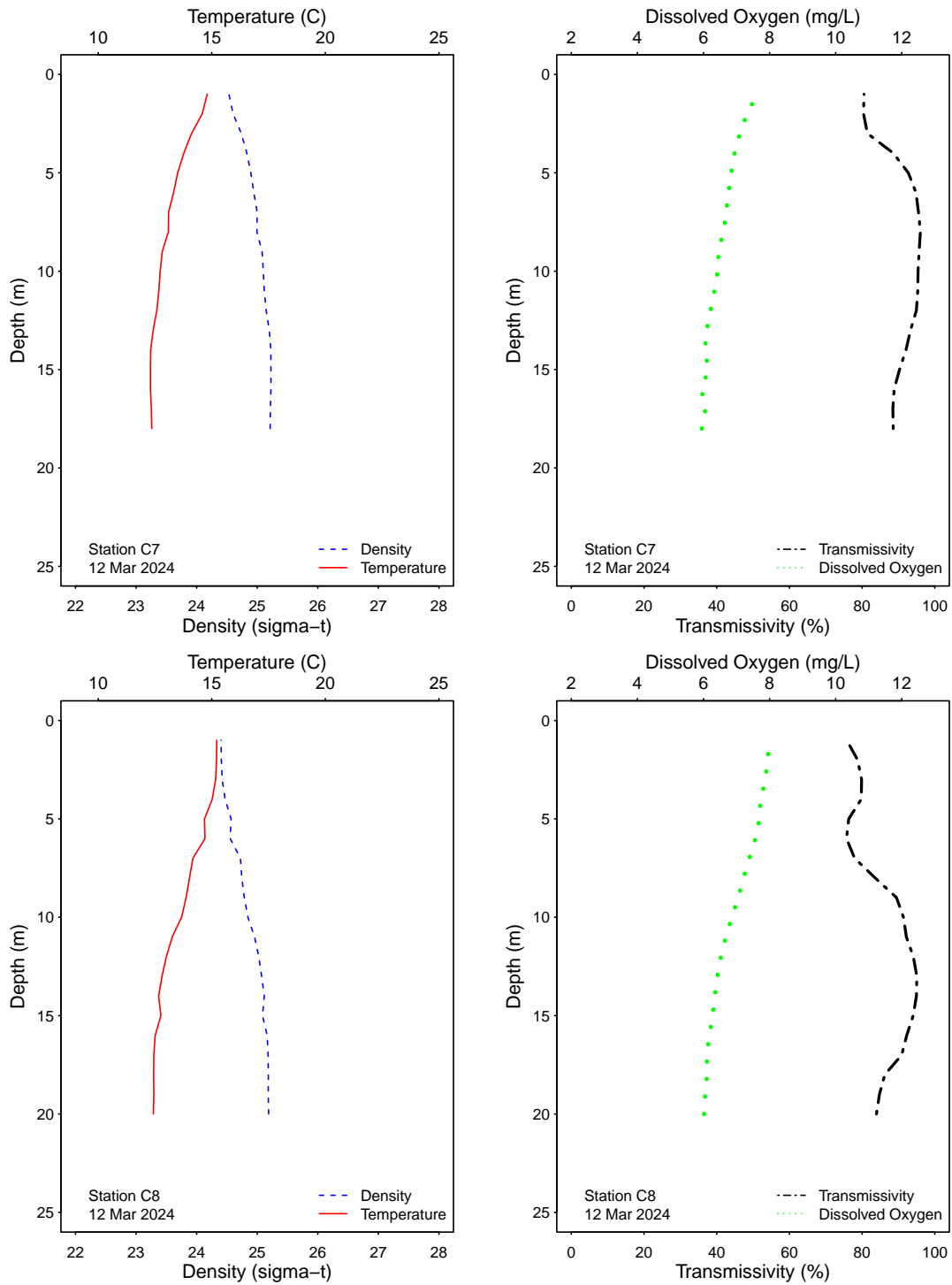


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

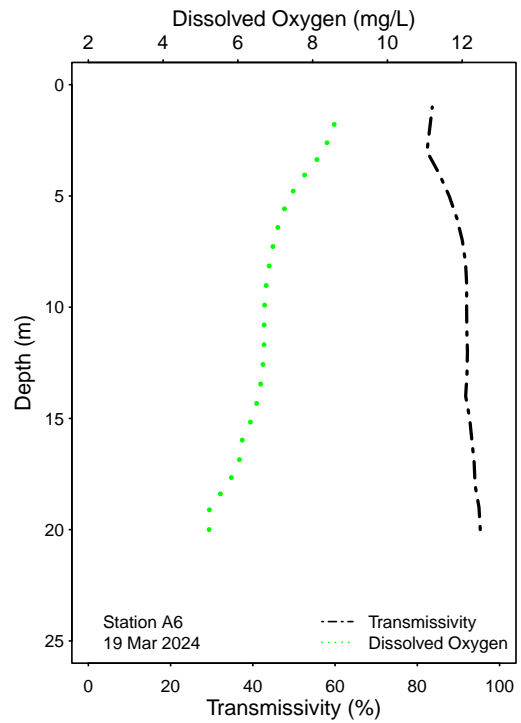
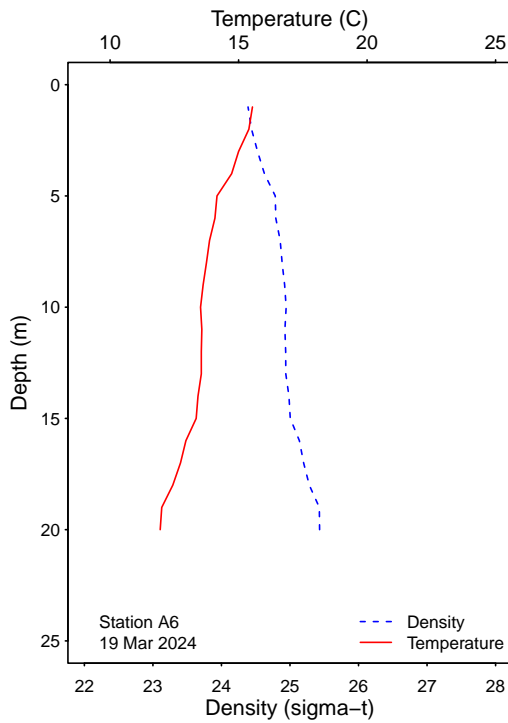
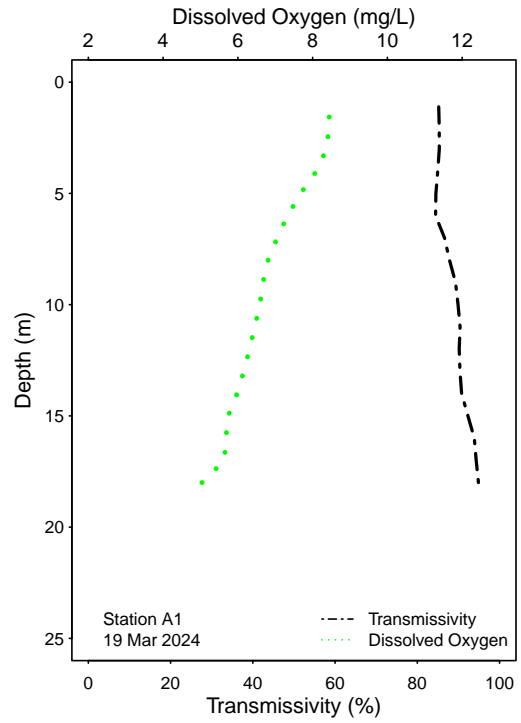
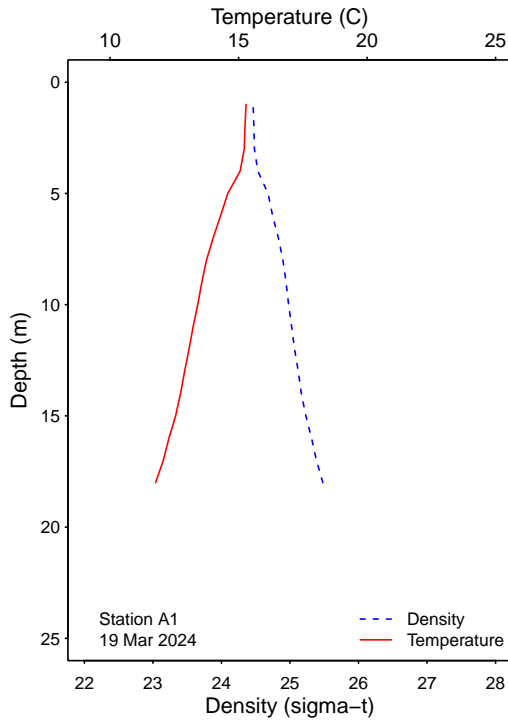


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.



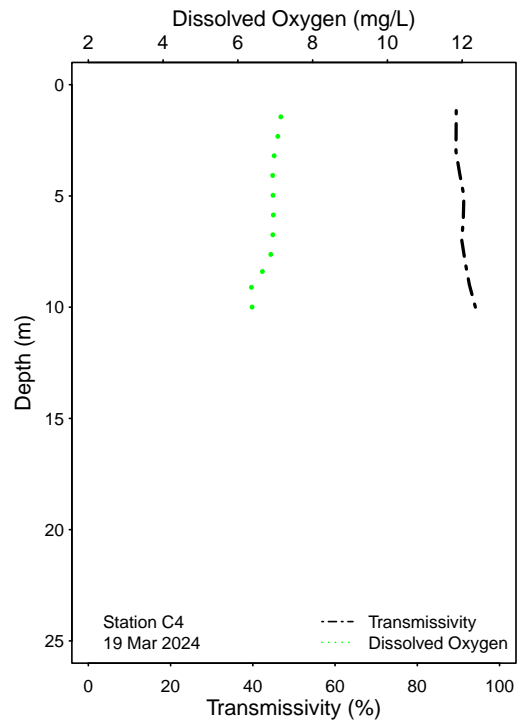
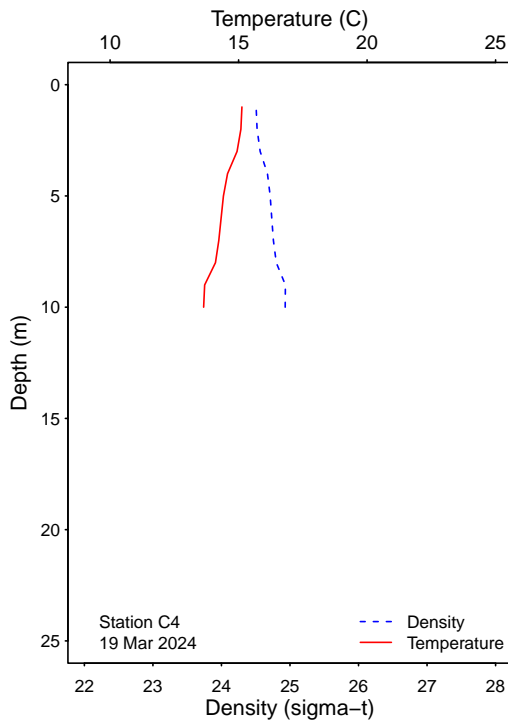
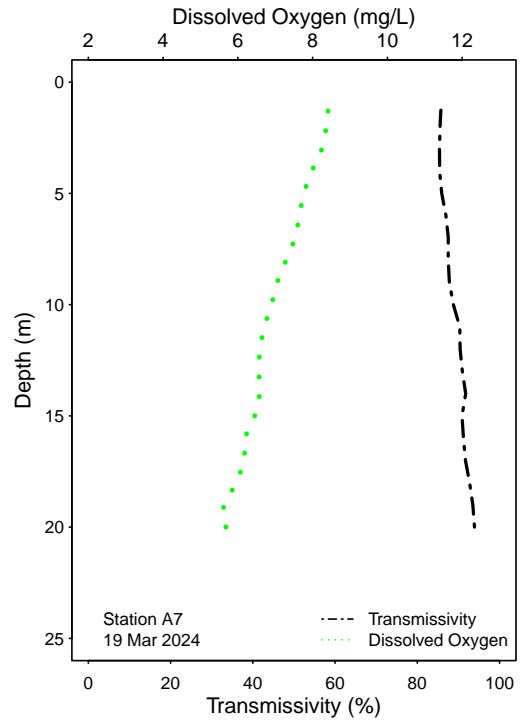
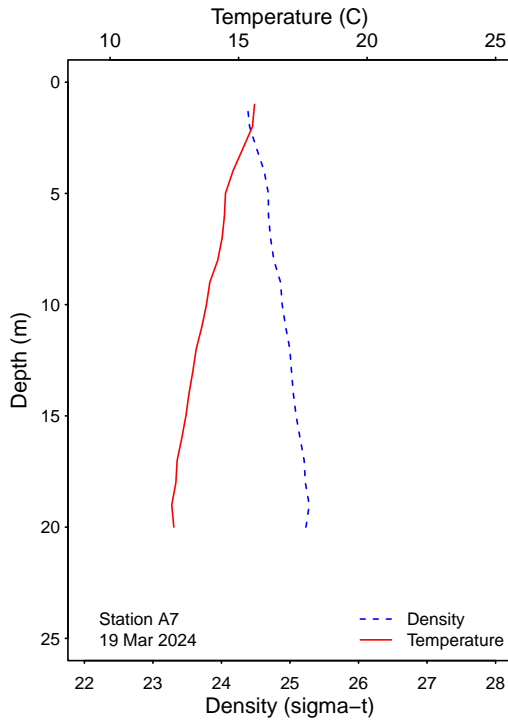


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

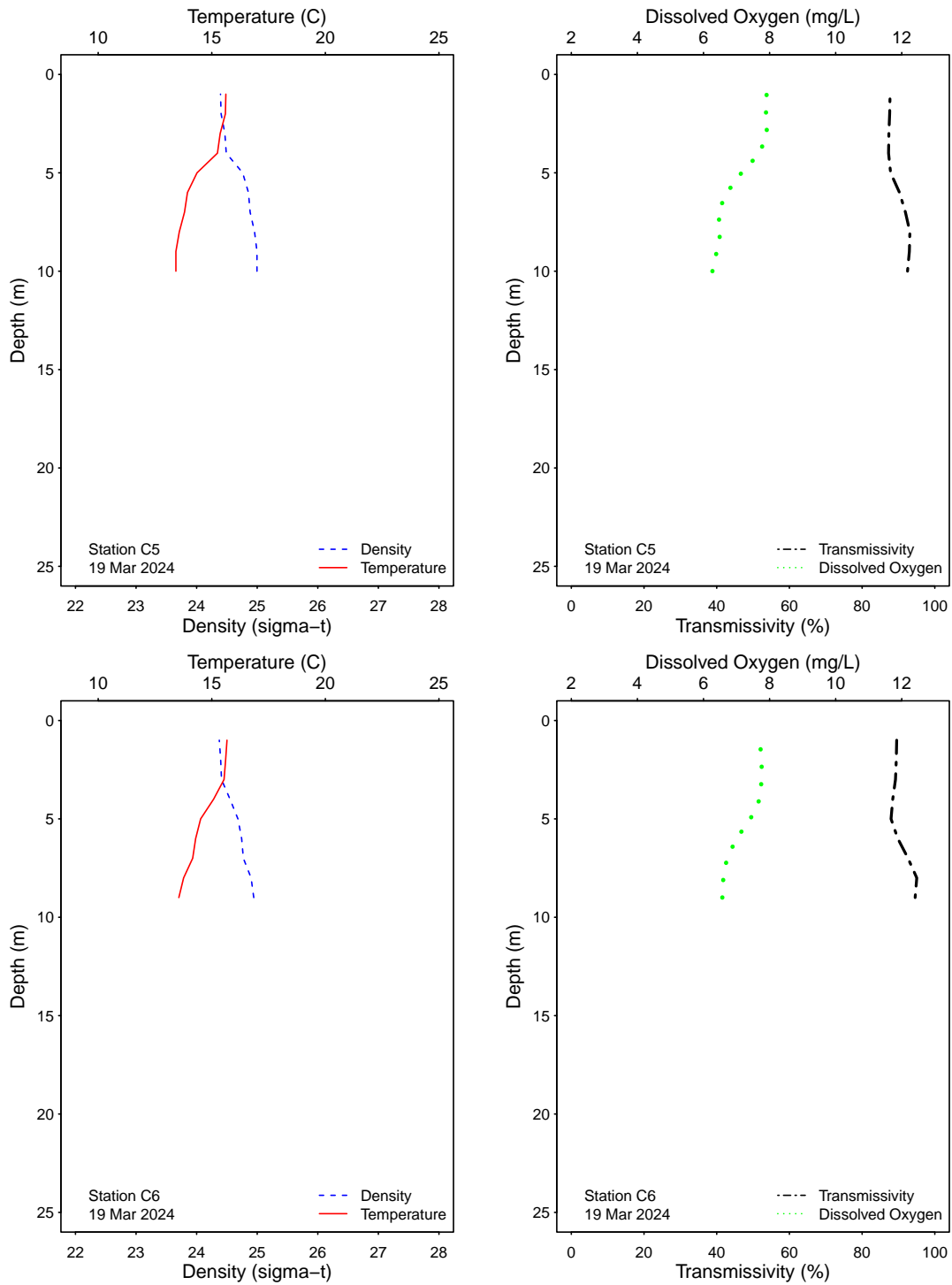


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

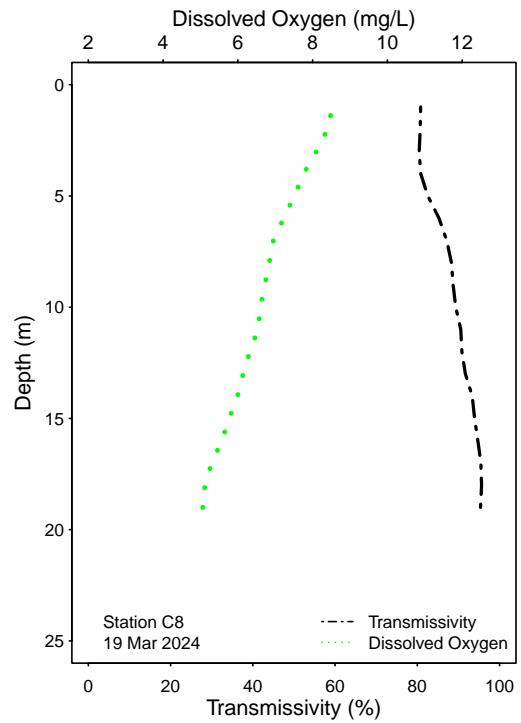
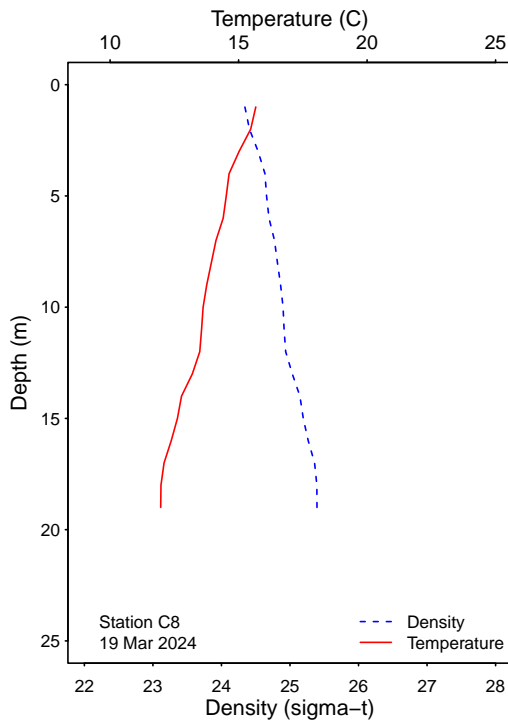
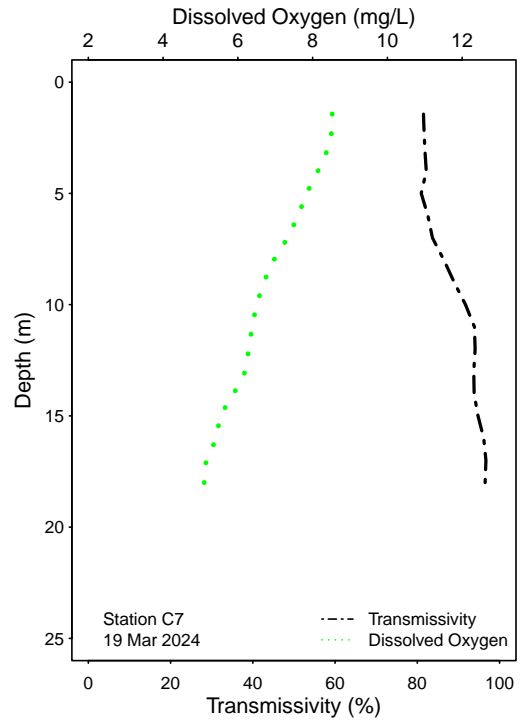
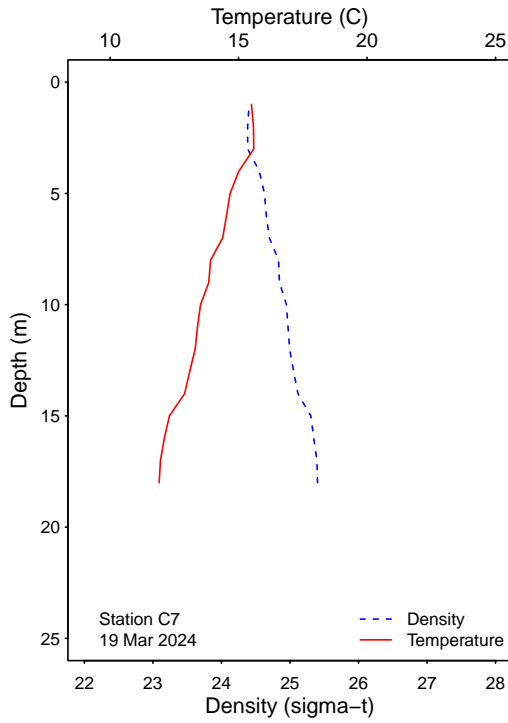


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

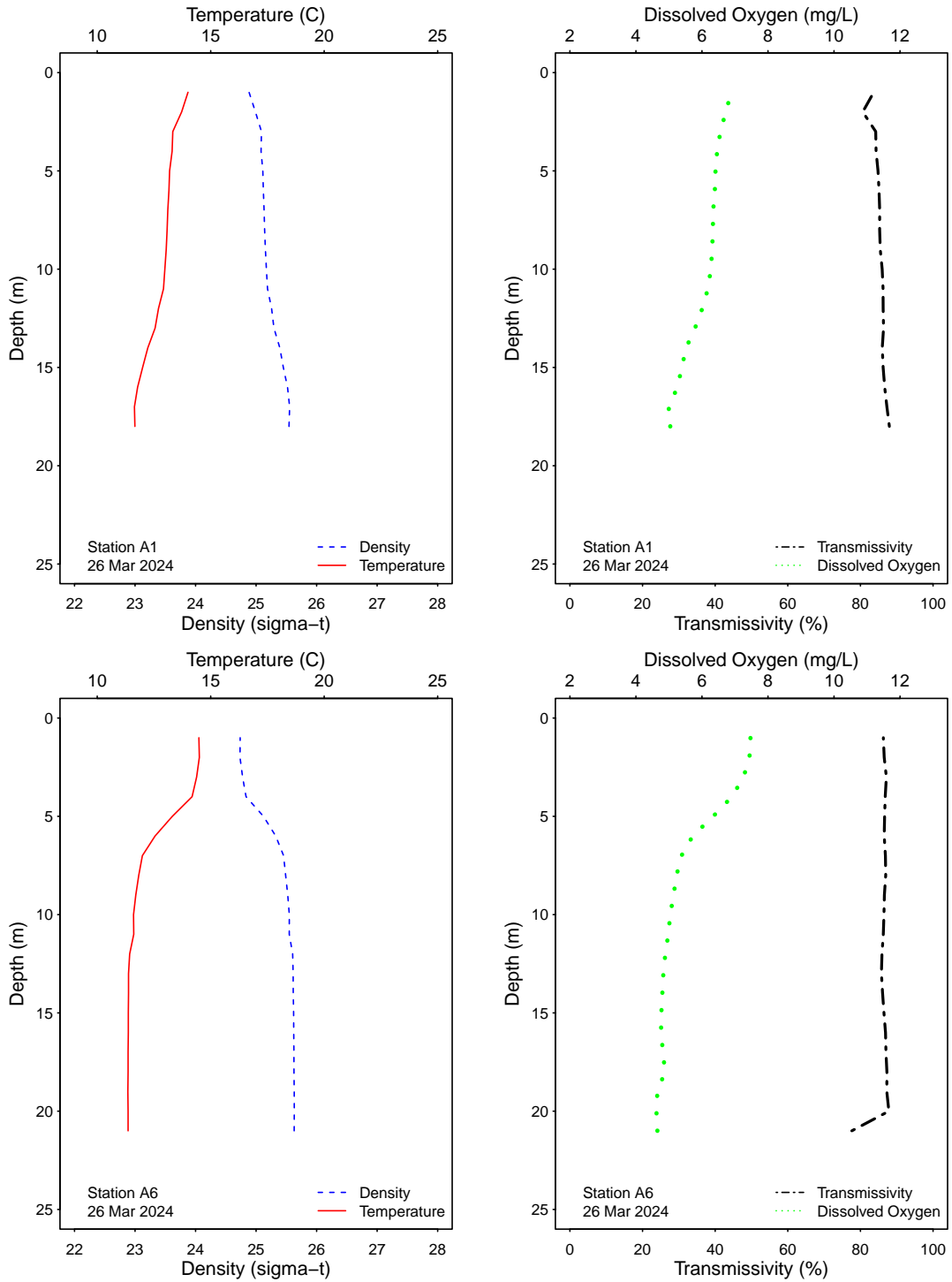


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

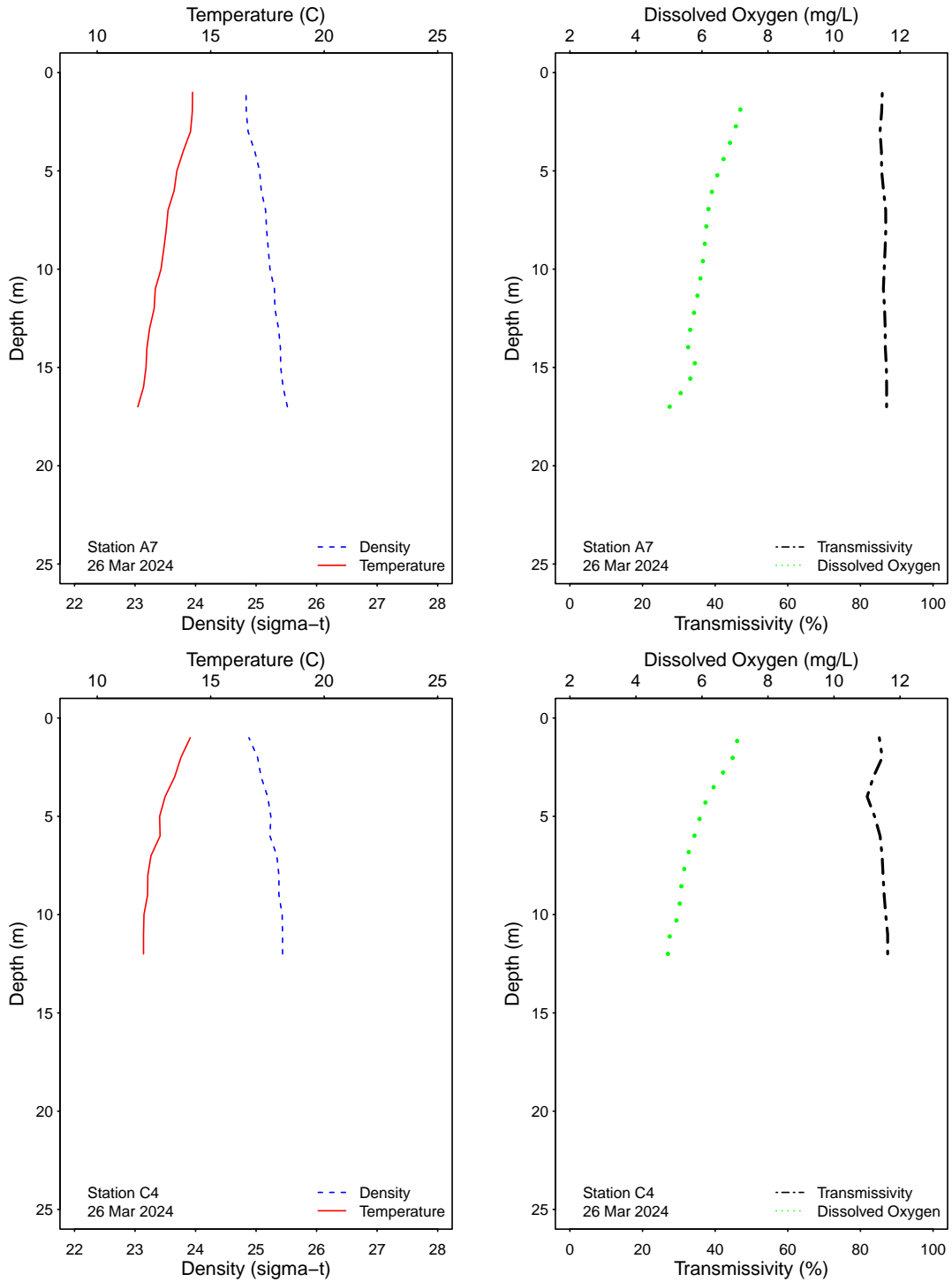


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

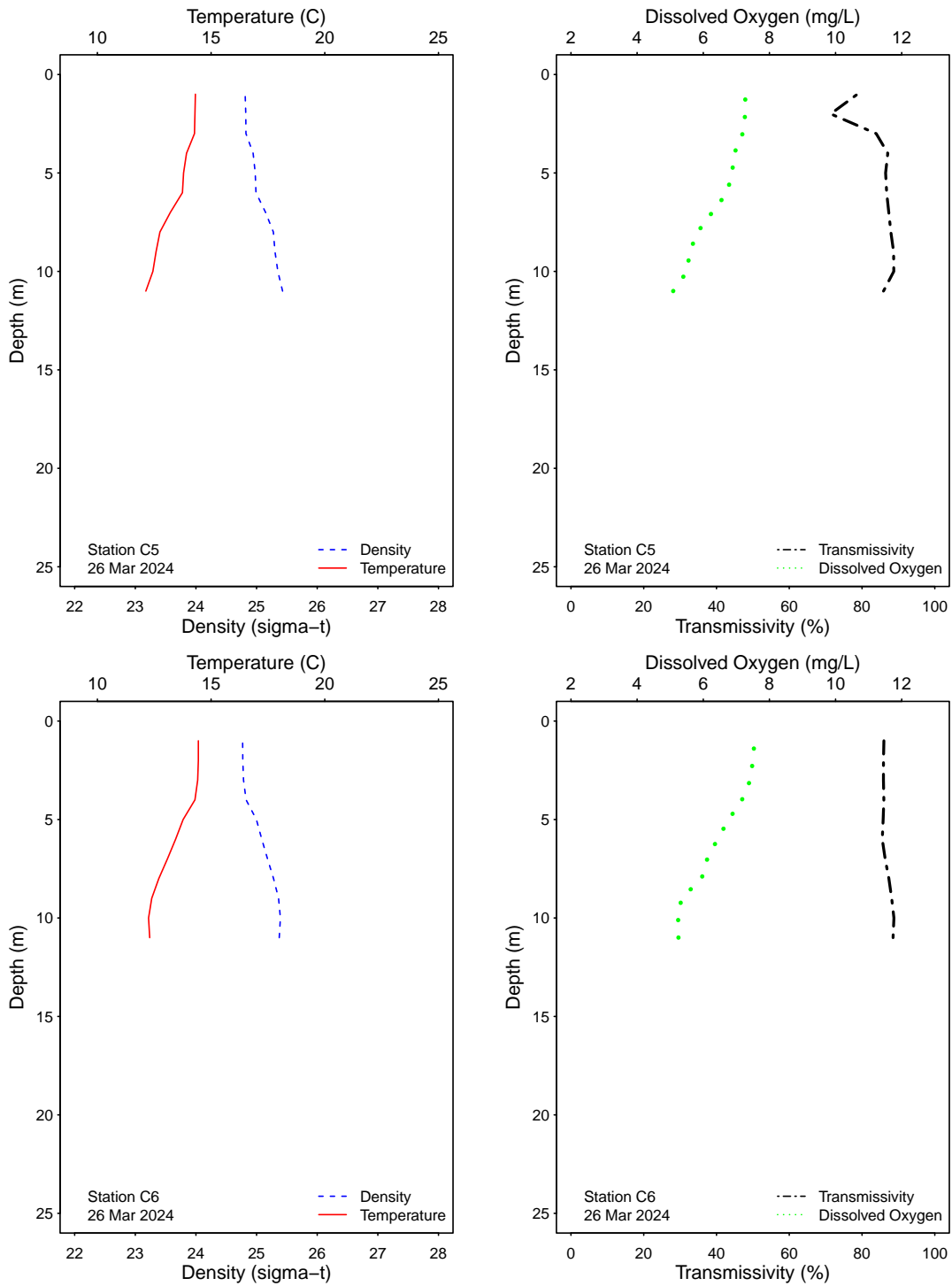


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

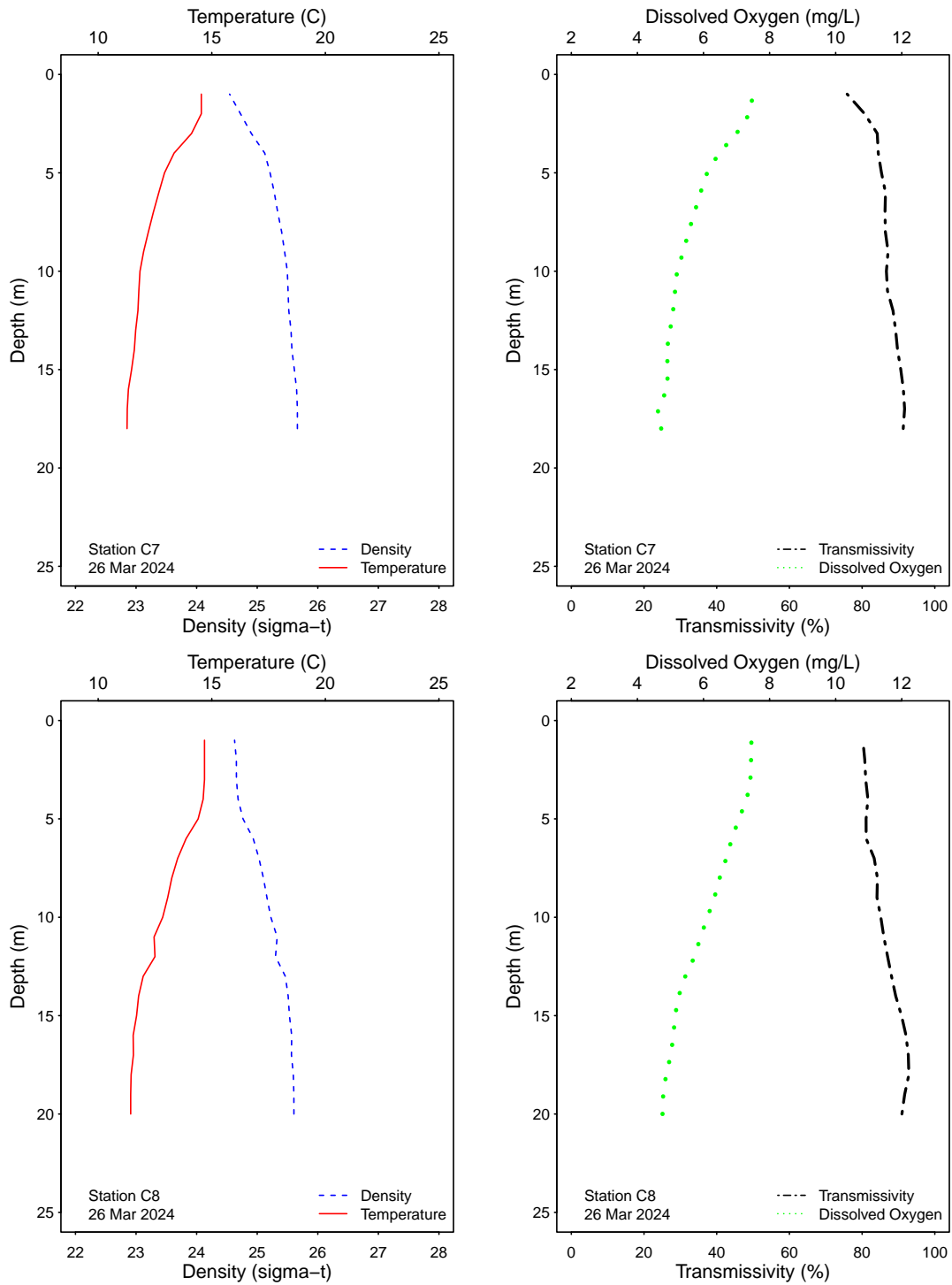


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

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# APPENDIX A

## Quality Assurance



**Table A.1**

Summary of bacteriological quality assurance field and lab duplicate sample analyses at selected PLOO 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
A7	06 Mar 2024	18	KA,JF,KT,BS/	LAB DUPLICATE	2	2	2
A7	12 Mar 2024	18	KA,JF,KT,BS/	LAB DUPLICATE	20	2	2
A7	19 Mar 2024	18	KA,JF,KT,ADG	LAB DUPLICATE	4	2	2
A7	26 Mar 2024	18	KA,JF,ADG,BS	LAB DUPLICATE	46	14	4
C7	06 Mar 2024	18	KA,JF,KT,BS/	LAB DUPLICATE	2	2	2
C7	12 Mar 2024	18	KA,JF,KT,BS/	LAB DUPLICATE	22	2	2
C7	19 Mar 2024	18	KA,JF,KT,ADG	LAB DUPLICATE	40	6	2
C7	26 Mar 2024	18	KA,JF,ADG,BS	LAB DUPLICATE	40	6	2
C8	06 Mar 2024	12	KA,JF,KT,BS/	LAB DUPLICATE	2	2	2
C8	12 Mar 2024	12	KA,JF,KT,BS/	LAB DUPLICATE	6	2	2
C8	19 Mar 2024	12	KA,JF,KT,ADG	LAB DUPLICATE	2	2	2
C8	26 Mar 2024	12	KA,JF,ADG,BS	LAB DUPLICATE	6	2	2
D12	06 Mar 2024		KA,JF/KA	LAB DUPLICATE	2	2	2
D12	13 Mar 2024		KT,JF/KT	LAB DUPLICATE	4	4	2
D12	20 Mar 2024		JF,KT/KT	LAB DUPLICATE	20	2	2
D12	27 Mar 2024		JF,KA/JF	LAB DUPLICATE	20	8	4

ns = not sampled

ND = no data

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# APPENDIX B

## New 2019 Ocean Plan Water Quality Objectives



# Shore Stations





### Table B.1

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

Date	D4	D5	D7	D8-B	D9	D10	D11	D12
01 Mar 2024	3	7	7	16	11	30	<b>65</b>	6
02 Mar 2024	3	7	7	16	11	30	<b>65</b>	6
03 Mar 2024	3	7	7	16	11	30	<b>65</b>	6
04 Mar 2024	3	7	7	16	11	30	<b>65</b>	6
05 Mar 2024	3	7	7	16	11	30	<b>65</b>	6
06 Mar 2024	3	4	5	6	5	12	18	3
07 Mar 2024	3	4	5	6	5	12	18	3
08 Mar 2024	3	4	5	6	5	12	18	3
09 Mar 2024	3	4	5	6	5	12	18	3
10 Mar 2024	3	4	5	6	5	12	18	3
11 Mar 2024	3	4	5	6	5	12	18	3
12 Mar 2024	3	4	5	6	5	12	18	3
13 Mar 2024	3	4	5	7	6	13	23	3
14 Mar 2024	3	4	5	7	6	13	23	3
15 Mar 2024	3	4	5	7	6	13	23	3
16 Mar 2024	3	4	5	7	6	13	23	3
17 Mar 2024	3	4	5	7	6	13	23	3
18 Mar 2024	3	4	5	7	6	13	23	3
19 Mar 2024	2	3	4	5	5	10	14	3
20 Mar 2024	2	3	3	5	5	9	10	4
21 Mar 2024	2	3	3	5	5	9	10	4
22 Mar 2024	2	3	3	5	5	9	10	4
23 Mar 2024	2	3	3	5	5	9	10	4
24 Mar 2024	2	3	3	5	5	9	10	4
25 Mar 2024	2	3	3	5	5	9	10	4
26 Mar 2024	2	3	3	5	5	9	10	4
27 Mar 2024	2	3	3	5	5	6	6	5
28 Mar 2024	2	3	3	5	5	6	6	5
29 Mar 2024	2	3	3	5	5	6	6	5
30 Mar 2024	2	3	3	5	5	6	6	5
31 Mar 2024	2	3	3	5	5	6	6	5

\* Geometric mean calculated using n<5

## Table B.2

Summary of compliance at the PLOO 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	D4	D5	D7	D8-B	D9	D10	D11	D12
March	IC	IC	IC	IC	IC	IC	IC	IC

IC = In Compliance

E = Exceedance

ns = not sampled

ND = no data

**Table B.3**

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

Date	D4	D5	D7	D8-B	D9	D10	D11	D12
01 Mar 2024	*21	<b>*90</b>	*11	<b>*101</b>	*34	<b>*170</b>	<b>*180</b>	*11
02 Mar 2024	*21	<b>*90</b>	*11	<b>*101</b>	*34	<b>*170</b>	<b>*180</b>	*11
03 Mar 2024	*21	<b>*90</b>	*11	<b>*101</b>	*34	<b>*170</b>	<b>*180</b>	*11
04 Mar 2024	*21	<b>*90</b>	*11	<b>*101</b>	*34	<b>*170</b>	<b>*180</b>	*11
05 Mar 2024	*21	<b>*90</b>	*11	<b>*101</b>	*34	<b>*170</b>	<b>*180</b>	*11
06 Mar 2024	20	20	4	20	8	<b>160</b>	<b>120</b>	2
07 Mar 2024	*11	*11	*3	*11	*7	<b>*84</b>	*68	*2
08 Mar 2024	*11	*11	*3	*11	*7	<b>*84</b>	*68	*2
09 Mar 2024	*11	*11	*3	*11	*7	<b>*84</b>	*68	*2
10 Mar 2024	*11	*11	*3	*11	*7	<b>*84</b>	*68	*2
11 Mar 2024	*11	*11	*3	*11	*7	<b>*84</b>	*68	*2
12 Mar 2024	*11	*11	*3	*11	*7	<b>*84</b>	*68	*2
13 Mar 2024	12	4	4	16	8	<b>160</b>	<b>120</b>	2
14 Mar 2024	12	4	4	16	8	<b>160</b>	<b>120</b>	2
15 Mar 2024	*16	*3	*5	*18	*12	<b>*104</b>	*68	*2
16 Mar 2024	*16	*3	*5	*18	*12	<b>*104</b>	*68	*2
17 Mar 2024	*16	*3	*5	*18	*12	<b>*104</b>	*68	*2
18 Mar 2024	*16	*3	*5	*18	*12	<b>*104</b>	*68	*2
19 Mar 2024	*16	*3	*5	*18	*12	<b>*104</b>	*68	*2
20 Mar 2024	14	4	4	20	10	20	16	2
21 Mar 2024	14	4	4	20	10	20	16	2
22 Mar 2024	*13	*3	*3	*18	*9	*14	*11	*2
23 Mar 2024	*13	*3	*3	*18	*9	*14	*11	*2
24 Mar 2024	*13	*3	*3	*18	*9	*14	*11	*2
25 Mar 2024	*13	*3	*3	*18	*9	*14	*11	*2
26 Mar 2024	*13	*3	*3	*18	*9	*14	*11	*2
27 Mar 2024	14	2	2	20	10	20	16	2
28 Mar 2024	14	2	2	20	10	20	16	2
29 Mar 2024	*13	*3	*3	*20	*13	*40	*23	*9
30 Mar 2024	*13	*3	*3	*20	*13	*40	*23	*9
31 Mar 2024	*13	*3	*3	*20	*13	*40	*23	*9

\* Median calculated using n<5

### Table B.4

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

Date	D4	D5	D7	D8-B	D9	D10	D11	D12
March	IC	IC	IC	IC	IC	IC	E	IC

IC = In Compliance

E = Exceedance

ns = not sampled

ND = no data

# Kelp Stations



**Table B.5**

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

Date	A1	A6	A7	C4	C5	C6	C7	C8
01 Mar 2024	4	5	3	3	3	3	3	5
02 Mar 2024	4	5	3	3	3	3	3	5
03 Mar 2024	4	5	3	3	3	3	3	5
04 Mar 2024	4	5	3	3	3	3	3	5
05 Mar 2024	4	5	3	3	3	3	3	5
06 Mar 2024	3	3	3	2	2	3	2	4
07 Mar 2024	3	3	3	2	2	3	2	4
08 Mar 2024	3	3	3	2	2	3	2	4
09 Mar 2024	3	3	3	2	2	3	2	4
10 Mar 2024	3	3	3	2	2	3	2	4
11 Mar 2024	3	3	3	2	2	3	2	4
12 Mar 2024	3	3	3	2	2	3	2	4
13 Mar 2024	3	3	3	2	2	3	2	4
14 Mar 2024	3	3	3	2	2	3	2	4
15 Mar 2024	3	3	3	2	2	3	2	4
16 Mar 2024	3	3	3	2	2	3	2	4
17 Mar 2024	3	3	3	2	2	3	2	4
18 Mar 2024	3	3	3	2	2	3	2	4
19 Mar 2024	3	3	3	2	2	3	2	4
20 Mar 2024	3	3	3	2	2	3	2	4
21 Mar 2024	3	3	3	2	2	3	2	4
22 Mar 2024	2	2	2	2	2	2	2	3
23 Mar 2024	2	2	2	2	2	2	2	3
24 Mar 2024	2	2	2	2	2	2	2	3
25 Mar 2024	2	2	2	2	2	2	2	3
26 Mar 2024	2	2	2	2	2	2	2	3
27 Mar 2024	2	2	2	2	2	2	2	3
28 Mar 2024	2	2	2	2	2	2	2	3
29 Mar 2024	2	2	2	2	2	2	2	3
30 Mar 2024	2	2	2	2	2	2	2	3
31 Mar 2024	2	2	2	2	2	2	2	3

\* Geometric mean calculated using n<5

## Table B.6

Summary of compliance at the PLOO 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	A1	A6	A7	C4	C5	C6	C7	C8
March	IC	IC	IC	IC	IC	IC	IC	IC

IC = In Compliance

E = Exceedance

ns = not sampled

ND = no data



**Table B.7**

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

Date	A1			A6			A7			C4			C5			C6			C7			C8		
	1m	12m	18m	1m	12m	18m	1m	12m	18m	1m	3m	9m	1m	3m	9m	1m	3m	9m	1m	12m	18m	1m	12m	18m
01 Mar 2024	*3	*2	*17	*2	*17	*25	*2	*24	*18	*2	*2	*7	*2	*4	*5	*4	*4	*5	*2	*4	*12	*2	*8	*6
02 Mar 2024	*3	*2	*17	*2	*17	*25	*2	*24	*18	*2	*2	*7	*2	*4	*5	*4	*4	*5	*2	*4	*12	*2	*8	*6
03 Mar 2024	*3	*2	*17	*2	*17	*25	*2	*24	*18	*2	*2	*7	*2	*4	*5	*4	*4	*5	*2	*4	*12	*2	*8	*6
04 Mar 2024	*3	*2	*17	*2	*17	*25	*2	*24	*18	*2	*2	*7	*2	*4	*5	*4	*4	*5	*2	*4	*12	*2	*8	*6
05 Mar 2024	*3	*2	*17	*2	*17	*25	*2	*24	*18	*2	*2	*7	*2	*4	*5	*4	*4	*5	*2	*4	*12	*2	*8	*6
06 Mar 2024	2	2	18	2	10	10	2	24	14	2	2	4	2	2	2	2	2	2	2	4	6	2	4	4
07 Mar 2024	2	2	18	2	10	10	2	24	14	2	2	4	2	2	2	2	2	2	2	4	6	2	4	4
08 Mar 2024	2	2	18	2	10	10	2	24	14	2	2	4	2	2	2	2	2	2	2	4	6	2	4	4
09 Mar 2024	2	2	18	2	10	10	2	24	14	2	2	4	2	2	2	2	2	2	2	4	6	2	4	4
10 Mar 2024	*2	*2	*24	*2	*6	*6	*2	*13	*8	*2	*2	*3	*2	*2	*2	*2	*2	*2	*2	*3	*4	*2	*7	*3
11 Mar 2024	*2	*2	*24	*2	*6	*6	*2	*13	*8	*2	*2	*3	*2	*2	*2	*2	*2	*2	*2	*3	*4	*2	*7	*3
12 Mar 2024	2	2	30	2	2	10	2	2	14	2	2	4	2	2	2	2	2	2	2	4	6	2	4	4
13 Mar 2024	*2	*2	*31	*2	*2	*6	*2	*2	*8	*2	*2	*5	*2	*2	*2	*2	*4	*2	*2	*3	*4	*2	*3	*3
14 Mar 2024	*2	*2	*31	*2	*2	*6	*2	*2	*8	*2	*2	*5	*2	*2	*2	*2	*4	*2	*2	*3	*4	*2	*3	*3
15 Mar 2024	*2	*2	*31	*2	*2	*6	*2	*2	*8	*2	*2	*5	*2	*2	*2	*2	*4	*2	*2	*3	*4	*2	*3	*3
16 Mar 2024	*2	*2	*31	*2	*2	*6	*2	*2	*8	*2	*2	*5	*2	*2	*2	*2	*4	*2	*2	*3	*4	*2	*3	*3
17 Mar 2024	*2	*2	*31	*2	*2	*6	*2	*2	*8	*2	*2	*5	*2	*2	*2	*2	*4	*2	*2	*3	*4	*2	*3	*3
18 Mar 2024	*2	*2	*31	*2	*2	*6	*2	*2	*8	*2	*2	*5	*2	*2	*2	*2	*4	*2	*2	*3	*4	*2	*3	*3
19 Mar 2024	2	2	30	2	2	10	2	2	14	2	2	4	2	2	2	2	2	2	2	4	6	2	4	4
20 Mar 2024	2	2	30	2	2	10	2	2	14	2	2	4	2	2	2	2	2	2	2	4	6	2	4	4
21 Mar 2024	2	2	30	2	2	10	2	2	14	2	2	4	2	2	2	2	2	2	2	4	6	2	4	4
22 Mar 2024	*2	*2	*31	*2	*2	*18	*2	*4	*8	*2	*2	*3	*2	*2	*2	*2	*3	*2	*2	*3	*14	*2	*3	*4
23 Mar 2024	*2	*2	*31	*2	*2	*18	*2	*4	*8	*2	*2	*3	*2	*2	*2	*2	*3	*2	*2	*3	*14	*2	*3	*4
24 Mar 2024	*2	*2	*31	*2	*2	*18	*2	*4	*8	*2	*2	*3	*2	*2	*2	*2	*3	*2	*2	*3	*14	*2	*3	*4
25 Mar 2024	*2	*2	*31	*2	*2	*18	*2	*4	*8	*2	*2	*3	*2	*2	*2	*2	*3	*2	*2	*3	*14	*2	*3	*4
26 Mar 2024	2	2	32	2	2	34	2	6	14	2	2	4	2	2	2	2	2	2	2	4	22	2	4	6
27 Mar 2024	2	2	32	2	2	34	2	6	14	2	2	4	2	2	2	2	2	2	2	4	22	2	4	6
28 Mar 2024	*2	*2	*31	*2	*7	*47	*2	*4	*9	*2	*2	*5	*2	*2	*2	*2	*3	*2	*2	*4	*26	*2	*4	*6
29 Mar 2024	*2	*2	*31	*2	*7	*47	*2	*4	*9	*2	*2	*5	*2	*2	*2	*2	*3	*2	*2	*4	*26	*2	*4	*6
30 Mar 2024	*2	*2	*31	*2	*7	*47	*2	*4	*9	*2	*2	*5	*2	*2	*2	*2	*3	*2	*2	*4	*26	*2	*4	*6
31 Mar 2024	*2	*2	*31	*2	*7	*47	*2	*4	*9	*2	*2	*5	*2	*2	*2	*2	*3	*2	*2	*4	*26	*2	*4	*6

\* Median calculated using n<5

**Table B.8**

Summary of compliance at the PLOO kelp stations with the Ocean Plan's Statistical Threshold Value for total coliform bacteria, which states that total coliform density shall not exceed 230 CFU/100 mL in more than 10

Date	A1			A6			A7			C4			C5			C6			C7			C8		
	1m	12m	18m	1m	12m	18m	1m	12m	18m	1m	3m	9m	1m	3m	9m	1m	3m	9m	1m	12m	18m	1m	12m	18m
March	IC	IC	IC	IC	IC	IC	IC	IC	IC	IC	IC	IC	IC	IC	IC	IC	IC	IC	IC	IC	IC	IC	IC	IC

IC = In Compliance  
 E = Exceedance  
 ns = not sampled  
 ND = no data