



# POINT LOMA OCEAN OUTFALL MONTHLY RECEIVING WATERS MONITORING REPORT

## POINT LOMA WASTEWATER TREATMENT PLANT

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

# JUNE 2023

Environmental Monitoring and Technical Services  
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July 31, 2023

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

Attention: POTW Compliance Unit

Dear Mr. Gibson:

Enclosed is the June 2023 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 2023 Quality Assurance Report, which will be completed in March 2024.

## SUMMARY OF RESULTS

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

Due to vessel failure occurring on May 31, 2023, kelp bed water quality sampling was split between May 31 (PLOW region) and June 1 (SBOO region). In order to provide comparable data across the monitoring region, this report includes data collected on May 31.

### *Shore Stations*

- The eight shore stations (D4, D5, D7, D8-B, D9, D10, D11, D12) were sampled on May 31 and June 7, 14, 21, and 28.
- During the June reporting period, each of the eight shore stations was in compliance with the various 2015 California Ocean Plan (Ocean Plan) water contact standards.
- A sewage-like odor was reported at station D5 on one or more days in June.
- 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>).

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

### ***Kelp Bed Stations***

- The eight kelp bed water quality stations (A1, A6, A7, C4, C5, C6, C7, C8) were sampled on May 31 and June 6, 13, 20, and 26.
- During the June reporting period, each of the eight kelp stations was in compliance with the various 2015 California Ocean Plan (Ocean Plan) water contact standards.
- Water column temperatures ranged from 10.97 to 17.24°C. The difference between surface and bottom waters ranged from 2.07 to 5.11°C.
- Chlorophyll *a* concentrations ranged from 0.48 to 8.71µg/L.
- Nothing of sewage origin was observed at PLOO kelp stations in June.

### ***Offshore Stations***

- Quarterly water quality sampling was not conducted during June at the offshore stations. The next quarterly sampling is scheduled for August 2023.





# TABLES AND FIGURES



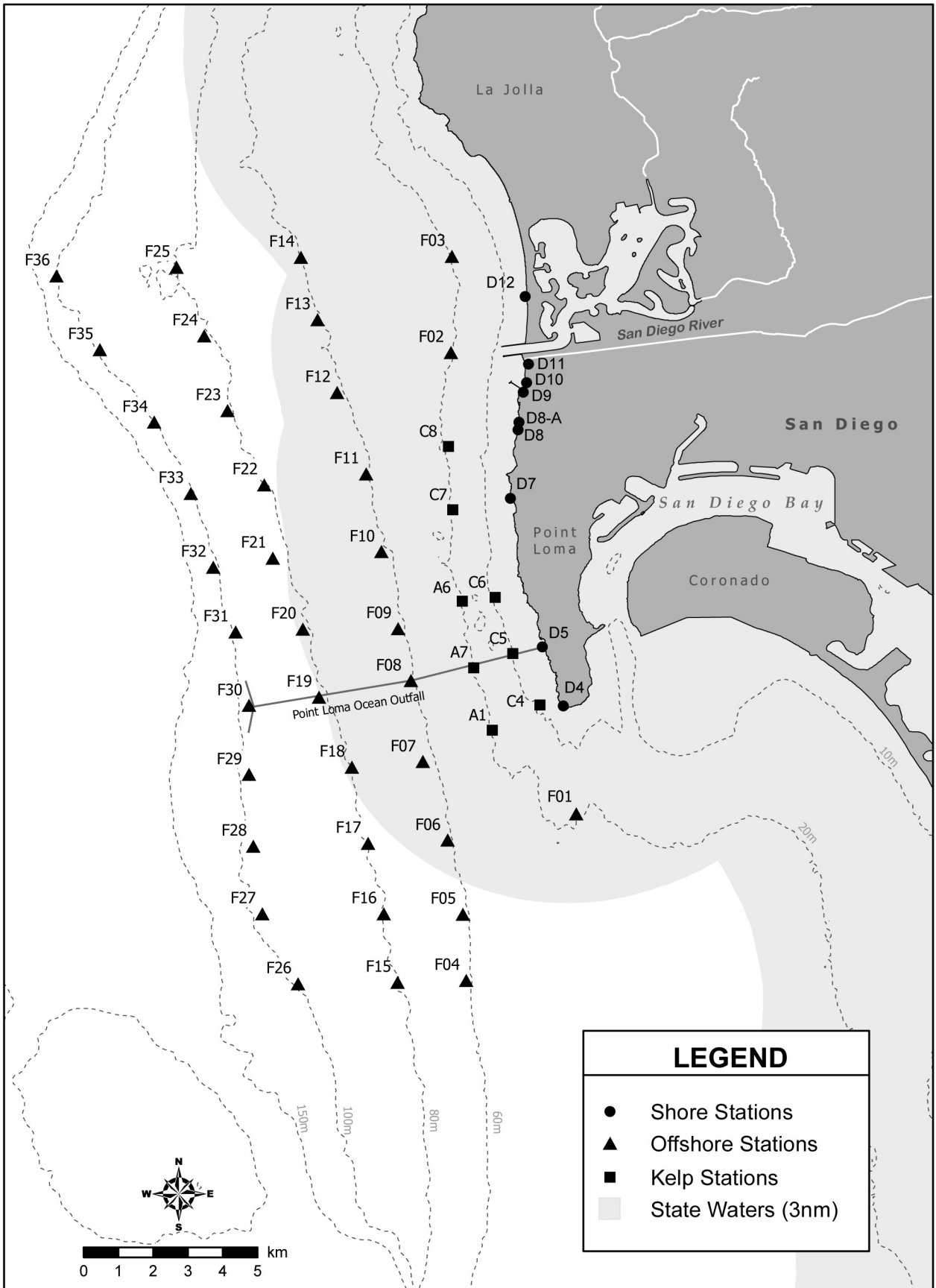


Figure 1.1 Station Map



# Shore Stations



**Table 2.1**

Summary of compliance with the Ocean Plan's 30-day Geometric Mean standard for total 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 >1,000 CFU/100 mL exceed the standard.

Date	D4	D5	D7	D8-B	D9	D10	D11	D12
31 May 2023	4	50	50	23	20	32	63	8
01 Jun 2023	4	50	50	23	20	32	63	8
02 Jun 2023	4	63	63	36	30	36	83	6
03 Jun 2023	4	63	63	36	30	36	83	6
04 Jun 2023	4	63	63	36	30	36	83	6
05 Jun 2023	4	63	63	36	30	36	83	6
06 Jun 2023	4	63	63	36	30	36	83	6
07 Jun 2023	4	32	50	32	28	32	63	5
08 Jun 2023	4	32	50	32	28	32	63	5
09 Jun 2023	4	36	36	36	20	20	47	2
10 Jun 2023	4	36	36	36	20	20	47	2
11 Jun 2023	4	36	36	36	20	20	47	2
12 Jun 2023	4	36	36	36	20	20	47	2
13 Jun 2023	4	36	36	36	20	20	47	2
14 Jun 2023	3	32	32	32	23	20	39	3
15 Jun 2023	3	32	32	32	23	20	39	3
16 Jun 2023	4	36	36	36	24	20	47	4
17 Jun 2023	4	36	36	36	24	20	47	4
18 Jun 2023	4	36	36	36	24	20	47	4
19 Jun 2023	4	36	36	36	24	20	47	4
20 Jun 2023	4	36	36	36	24	20	47	4
21 Jun 2023	3	20	32	23	32	23	49	3
22 Jun 2023	3	20	32	23	32	23	49	3
23 Jun 2023	4	11	36	24	36	24	26	4
24 Jun 2023	4	11	36	24	36	24	26	4
25 Jun 2023	4	11	36	24	36	24	26	4
26 Jun 2023	4	11	36	24	36	24	26	4
27 Jun 2023	4	11	36	24	36	24	26	4
28 Jun 2023	5	20	50	36	32	23	39	5
29 Jun 2023	5	20	50	36	32	23	39	5
30 Jun 2023	4	11	36	24	36	24	47	6

\* Geometric mean calculated using n<5  
 ns = not sampled

**Table 2.2**

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

\* Geometric mean calculated using n<5  
 ns = not sampled



**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 30 days unless otherwise noted (\*). Values >35 CFU/100 mL exceed the standard.

Date	D4	D5	D7	D8-B	D9	D10	D11	D12
31 May 2023	2	2	3	2	4	4	11	3
01 Jun 2023	2	2	3	2	4	4	11	3
02 Jun 2023	2	2	4	2	3	5	18	3
03 Jun 2023	2	2	4	2	3	5	18	3
04 Jun 2023	2	2	4	2	3	5	18	3
05 Jun 2023	2	2	4	2	3	5	18	3
06 Jun 2023	2	2	4	2	3	5	18	3
07 Jun 2023	2	2	5	2	4	4	11	2
08 Jun 2023	2	2	5	2	4	4	11	2
09 Jun 2023	2	2	6	2	4	3	10	2
10 Jun 2023	2	2	6	2	4	3	10	2
11 Jun 2023	2	2	6	2	4	3	10	2
12 Jun 2023	2	2	6	2	4	3	10	2
13 Jun 2023	2	2	6	2	4	3	10	2
14 Jun 2023	2	2	5	2	4	3	7	3
15 Jun 2023	2	2	5	2	4	3	7	3
16 Jun 2023	2	2	7	2	3	3	5	4
17 Jun 2023	2	2	7	2	3	3	5	4
18 Jun 2023	2	2	7	2	3	3	5	4
19 Jun 2023	2	2	7	2	3	3	5	4
20 Jun 2023	2	2	7	2	3	3	5	4
21 Jun 2023	2	2	7	2	3	4	6	3
22 Jun 2023	2	2	7	2	3	4	6	3
23 Jun 2023	2	2	8	2	4	4	3	4
24 Jun 2023	2	2	8	2	4	4	3	4
25 Jun 2023	2	2	8	2	4	4	3	4
26 Jun 2023	2	2	8	2	4	4	3	4
27 Jun 2023	2	2	8	2	4	4	3	4
28 Jun 2023	2	2	6	2	3	4	3	3
29 Jun 2023	2	2	6	2	3	4	3	3
30 Jun 2023	2	2	5	2	4	4	3	4

\* Geometric mean calculated using n<5  
 ns = not sampled

## Table 2.4

Summary of compliance at the PLOO shore stations with the Ocean Plan's Single Sample Maximum standard for total coliform bacteria, which states that total coliform density shall not exceed 10,000 CFU/100 mL.

Date	D4	D5	D7	D8-B	D9	D10	D11	D12
31 May 2023	IC	IC	IC	IC	IC	IC	IC	IC
07 Jun 2023	IC	IC	IC	IC	IC	IC	IC	IC
14 Jun 2023	IC	IC	IC	IC	IC	IC	IC	IC
21 Jun 2023	IC	IC	IC	IC	IC	IC	IC	IC
28 Jun 2023	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 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
31 May 2023	IC	IC	IC	IC	IC	IC	IC	IC
07 Jun 2023	IC	IC	IC	IC	IC	IC	IC	IC
14 Jun 2023	IC	IC	IC	IC	IC	IC	IC	IC
21 Jun 2023	IC	IC	IC	IC	IC	IC	IC	IC
28 Jun 2023	IC	IC	IC	IC	IC	IC	IC	IC

IC = In Compliance

E = Exceedance

ns = not sampled

ND = no data

## Table 2.6

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.

Date	D4	D5	D7	D8-B	D9	D10	D11	D12
31 May 2023	IC	IC	IC	IC	IC	IC	IC	IC
07 Jun 2023	IC	IC	IC	IC	IC	IC	IC	IC
14 Jun 2023	IC	IC	IC	IC	IC	IC	IC	IC
21 Jun 2023	IC	IC	IC	IC	IC	IC	IC	IC
28 Jun 2023	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
31 May 2023	IC	IC	IC	IC	IC	IC	IC	IC
07 Jun 2023	IC	IC	IC	IC	IC	IC	IC	IC
14 Jun 2023	IC	IC	IC	IC	IC	IC	IC	IC
21 Jun 2023	IC	IC	IC	IC	IC	IC	IC	IC
28 Jun 2023	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 total coliform (Total), fecal coliform (Fecal), and *Enterococcus* (Entero) are reported as CFU/100 mL. The fecal:total coliform ratio (F:T) is unitless. Comments follow the data summary.

Station	Date	Time	Total	Fecal	Entero	F:T
D4	07 Jun 2023	921	2e	<2	2e	1.00
D4	14 Jun 2023	927	2e	<2	<2	1.00
D4	21 Jun 2023	944	<2	<2	<2	1.00
D4	28 Jun 2023	923	<20	4e	<2	0.20
D5	07 Jun 2023	907	<2	2e	<2	1.00
D5	14 Jun 2023	916	<20	<2	<2	0.10
D5	21 Jun 2023	928	<2	<2	<2	1.00
D5	28 Jun 2023	912	200e	<2	<2	0.01
D7	07 Jun 2023	841	20e	<2	8e	0.10
D7	14 Jun 2023	840	<20	<2	4e	0.10
D7	21 Jun 2023	857	<20	<2	8e	0.10
D7	28 Jun 2023	847	<200	<2	<2	0.01
D8-B	07 Jun 2023	825	<20	2e	<2	0.10
D8-B	14 Jun 2023	828	20e	<2	<2	0.10
D8-B	21 Jun 2023	845	4e	<2	<2	0.50
D8-B	28 Jun 2023	838	<200	<2	4e	0.01
D9	07 Jun 2023	811	<20	8e	12e	0.40
D9	14 Jun 2023	820	40e	4e	<2	0.10
D9	21 Jun 2023	833	100e	<2	4e	0.02
D9	28 Jun 2023	830	<20	<2	2e	0.10
D10	07 Jun 2023	756	20e	10e	2e	0.50
D10	14 Jun 2023	812	20e	4e	4e	0.20
D10	21 Jun 2023	818	40e	20e	22e	0.50
D10	28 Jun 2023	820	<20	4e	<2	0.20
D11	07 Jun 2023	745	20e	10e	2e	0.50
D11	14 Jun 2023	803	<20	10e	2e	0.50
D11	21 Jun 2023	805	60e	28e	8e	0.47
D11	28 Jun 2023	812	<200	4e	<2	0.02
D12	07 Jun 2023	727	<2	2e	<2	1.00
D12	14 Jun 2023	747	<20	4e	32e	0.20
D12	21 Jun 2023	746	2e	2e	2e	1.00
D12	28 Jun 2023	747	<20	<2	<2	0.10

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
D4	07 Jun 2023	Arrive Time	921
D4	07 Jun 2023	Weather	Cloudy
D4	07 Jun 2023	Wind Speed (kts)	2.2
D4	07 Jun 2023	Wind Dir	W
D4	07 Jun 2023	Animal Life	
D4	07 Jun 2023	Floatables	None
D4	07 Jun 2023	Water Color	Green
D4	07 Jun 2023	Current Direction	S
D4	07 Jun 2023	Water Temp (C)	13.9
D4	07 Jun 2023	Wave Height Low (ft)	2
D4	07 Jun 2023	High Tide (ft)	3.47
D4	07 Jun 2023	High Tide Time	1335
D4	07 Jun 2023	Low Tide (ft)	-1.02
D4	07 Jun 2023	Low Tide Time	656
D4	07 Jun 2023	Comments	Water clear; Trash-1; Algae; Kelp; Seagrass
D4	14 Jun 2023	Arrive Time	927
D4	14 Jun 2023	Weather	Cloudy
D4	14 Jun 2023	Wind Speed (kts)	1.2
D4	14 Jun 2023	Wind Dir	W
D4	14 Jun 2023	Animal Life	
D4	14 Jun 2023	Floatables	None
D4	14 Jun 2023	Water Color	Green
D4	14 Jun 2023	Current Direction	S
D4	14 Jun 2023	Water Temp (C)	14
D4	14 Jun 2023	Wave Height Low (ft)	1
D4	14 Jun 2023	High Tide (ft)	3.46
D4	14 Jun 2023	High Tide Time	742
D4	14 Jun 2023	Low Tide (ft)	0.11
D4	14 Jun 2023	Low Tide Time	150
D4	14 Jun 2023	Comments	Water clear; Trash-1; Kelp; Seagrass; Algae
D4	21 Jun 2023	Arrive Time	944
D4	21 Jun 2023	Weather	Sunny
D4	21 Jun 2023	Wind Speed (kts)	2.1
D4	21 Jun 2023	Wind Dir	W
D4	21 Jun 2023	Animal Life	
D4	21 Jun 2023	Floatables	None
D4	21 Jun 2023	Water Color	Green
D4	21 Jun 2023	Current Direction	S
D4	21 Jun 2023	Water Temp (C)	16.1
D4	21 Jun 2023	Wave Height Low (ft)	3
D4	21 Jun 2023	High Tide (ft)	3.36
D4	21 Jun 2023	High Tide Time	1304
D4	21 Jun 2023	Low Tide (ft)	-0.24
D4	21 Jun 2023	Low Tide Time	624
D4	21 Jun 2023	Comments	Water clear; Trash-1; Kelp; Seagrass; Algae
D4	28 Jun 2023	Arrive Time	923
D4	28 Jun 2023	Weather	Cloudy
D4	28 Jun 2023	Wind Speed (kts)	1.8
D4	28 Jun 2023	Wind Dir	W
D4	28 Jun 2023	Animal Life	Bird-3;
D4	28 Jun 2023	Floatables	None
D4	28 Jun 2023	Water Color	Green
D4	28 Jun 2023	Current Direction	S

Station	Date	Parameter	Value
D4	28 Jun 2023	Water Temp (C)	13
D4	28 Jun 2023	Wave Height Low (ft)	1
D4	28 Jun 2023	High Tide (ft)	3
D4	28 Jun 2023	High Tide Time	605
D4	28 Jun 2023	Low Tide (ft)	1.28
D4	28 Jun 2023	Low Tide Time	33
D4	28 Jun 2023	Comments	Water clear; Trash-1; Kelp; Seagrass; Algae
D4	31 May 2023	Arrive Time	922
D4	31 May 2023	Weather	Partly cloudy
D4	31 May 2023	Wind Speed (kts)	2.3
D4	31 May 2023	Wind Dir	NW
D4	31 May 2023	Animal Life	
D4	31 May 2023	Floatables	None
D4	31 May 2023	Water Color	Green
D4	31 May 2023	Current Direction	S
D4	31 May 2023	Water Temp (C)	15.3
D4	31 May 2023	Wave Height Low (ft)	2
D4	31 May 2023	High Tide (ft)	3.5
D4	31 May 2023	High Tide Time	727
D4	31 May 2023	Low Tide (ft)	0.67
D4	31 May 2023	Low Tide Time	143
D4	31 May 2023	Comments	Water clear; Trash-1; Kelp; Seagrass; Algae
D5	07 Jun 2023	Arrive Time	907
D5	07 Jun 2023	Weather	Cloudy
D5	07 Jun 2023	Wind Speed (kts)	0.4
D5	07 Jun 2023	Wind Dir	W
D5	07 Jun 2023	Animal Life	
D5	07 Jun 2023	Floatables	None
D5	07 Jun 2023	Water Color	Green
D5	07 Jun 2023	Current Direction	S
D5	07 Jun 2023	Water Temp (C)	15.3
D5	07 Jun 2023	Wave Height Low (ft)	1
D5	07 Jun 2023	High Tide (ft)	3.47
D5	07 Jun 2023	High Tide Time	1335
D5	07 Jun 2023	Low Tide (ft)	-1.02
D5	07 Jun 2023	Low Tide Time	656
D5	07 Jun 2023	Comments	Water clear; Trash-1; Debris; Algae
D5	14 Jun 2023	Arrive Time	916
D5	14 Jun 2023	Weather	Cloudy
D5	14 Jun 2023	Wind Speed (kts)	0.6
D5	14 Jun 2023	Wind Dir	SW
D5	14 Jun 2023	Animal Life	
D5	14 Jun 2023	Floatables	None
D5	14 Jun 2023	Water Color	Green
D5	14 Jun 2023	Current Direction	S
D5	14 Jun 2023	Water Temp (C)	14
D5	14 Jun 2023	Wave Height Low (ft)	0
D5	14 Jun 2023	High Tide (ft)	3.46
D5	14 Jun 2023	High Tide Time	742
D5	14 Jun 2023	Low Tide (ft)	0.11
D5	14 Jun 2023	Low Tide Time	150
D5	14 Jun 2023	Comments	Water clear; Trash-1; Kelp; Seagrass; Algae
D5	21 Jun 2023	Arrive Time	928
D5	21 Jun 2023	Weather	Sunny
D5	21 Jun 2023	Wind Speed (kts)	1.2
D5	21 Jun 2023	Wind Dir	W
D5	21 Jun 2023	Animal Life	



Station	Date	Parameter	Value
D5	21 Jun 2023	Floatables	None
D5	21 Jun 2023	Water Color	Green
D5	21 Jun 2023	Current Direction	S
D5	21 Jun 2023	Water Temp (C)	15
D5	21 Jun 2023	Wave Height Low (ft)	2
D5	21 Jun 2023	High Tide (ft)	3.36
D5	21 Jun 2023	High Tide Time	1304
D5	21 Jun 2023	Low Tide (ft)	-0.24
D5	21 Jun 2023	Low Tide Time	624
D5	21 Jun 2023	Comments	Water clear; Trash-1; Kelp; Seagrass; Algae; Sewage-like odor
D5	28 Jun 2023	Arrive Time	912
D5	28 Jun 2023	Weather	Cloudy
D5	28 Jun 2023	Wind Speed (kts)	0.8
D5	28 Jun 2023	Wind Dir	W
D5	28 Jun 2023	Animal Life	Bird-2;
D5	28 Jun 2023	Floatables	None
D5	28 Jun 2023	Water Color	Green
D5	28 Jun 2023	Current Direction	S
D5	28 Jun 2023	Water Temp (C)	12.7
D5	28 Jun 2023	Wave Height Low (ft)	1
D5	28 Jun 2023	High Tide (ft)	3
D5	28 Jun 2023	High Tide Time	605
D5	28 Jun 2023	Low Tide (ft)	1.28
D5	28 Jun 2023	Low Tide Time	33
D5	28 Jun 2023	Comments	Water clear; Trash-1; Kelp; Seagrass; Algae
D5	31 May 2023	Arrive Time	911
D5	31 May 2023	Weather	Partly cloudy
D5	31 May 2023	Wind Speed (kts)	5.2
D5	31 May 2023	Wind Dir	NW
D5	31 May 2023	Animal Life	
D5	31 May 2023	Floatables	Foam
D5	31 May 2023	Water Color	Green
D5	31 May 2023	Current Direction	S
D5	31 May 2023	Water Temp (C)	15.6
D5	31 May 2023	Wave Height Low (ft)	1
D5	31 May 2023	High Tide (ft)	3.5
D5	31 May 2023	High Tide Time	727
D5	31 May 2023	Low Tide (ft)	0.67
D5	31 May 2023	Low Tide Time	143
D5	31 May 2023	Comments	Water clear; Trash-1; Kelp; Seagrass; Algae
D7	07 Jun 2023	Arrive Time	841
D7	07 Jun 2023	Weather	Cloudy
D7	07 Jun 2023	Wind Speed (kts)	1.4
D7	07 Jun 2023	Wind Dir	W
D7	07 Jun 2023	Animal Life	
D7	07 Jun 2023	Floatables	None
D7	07 Jun 2023	Water Color	Green
D7	07 Jun 2023	Current Direction	S
D7	07 Jun 2023	Water Temp (C)	14.3
D7	07 Jun 2023	Wave Height Low (ft)	3
D7	07 Jun 2023	High Tide (ft)	3.47
D7	07 Jun 2023	High Tide Time	1335
D7	07 Jun 2023	Low Tide (ft)	-1.02
D7	07 Jun 2023	Low Tide Time	656
D7	07 Jun 2023	Comments	Water clear; Surfer/Paddle boarder-5; Trash-1; Kelp; Seagrass; Debris

Station	Date	Parameter	Value
D7	14 Jun 2023	Arrive Time	840
D7	14 Jun 2023	Weather	Cloudy
D7	14 Jun 2023	Wind Speed (kts)	0
D7	14 Jun 2023	Wind Dir	W
D7	14 Jun 2023	Animal Life	
D7	14 Jun 2023	Floatables	None
D7	14 Jun 2023	Water Color	Green
D7	14 Jun 2023	Current Direction	S
D7	14 Jun 2023	Water Temp (C)	14
D7	14 Jun 2023	Wave Height Low (ft)	0
D7	14 Jun 2023	High Tide (ft)	3.46
D7	14 Jun 2023	High Tide Time	742
D7	14 Jun 2023	Low Tide (ft)	0.11
D7	14 Jun 2023	Low Tide Time	150
D7	14 Jun 2023	Comments	Water clear; Trash-1; Kelp; Seagrass; Algae; Person/Walker/Jogger-1
D7	21 Jun 2023	Arrive Time	857
D7	21 Jun 2023	Weather	Sunny
D7	21 Jun 2023	Wind Speed (kts)	0
D7	21 Jun 2023	Wind Dir	
D7	21 Jun 2023	Animal Life	
D7	21 Jun 2023	Floatables	None
D7	21 Jun 2023	Water Color	Green
D7	21 Jun 2023	Current Direction	S
D7	21 Jun 2023	Water Temp (C)	15.5
D7	21 Jun 2023	Wave Height Low (ft)	4
D7	21 Jun 2023	High Tide (ft)	3.36
D7	21 Jun 2023	High Tide Time	1304
D7	21 Jun 2023	Low Tide (ft)	-0.24
D7	21 Jun 2023	Low Tide Time	624
D7	21 Jun 2023	Comments	Water clear; Surfer/Paddle boarder-1; Trash-2; Kelp; Seagrass; Algae; Debris; Person/Walker/Jogger-1
D7	28 Jun 2023	Arrive Time	849
D7	28 Jun 2023	Weather	Cloudy
D7	28 Jun 2023	Wind Speed (kts)	0
D7	28 Jun 2023	Wind Dir	W
D7	28 Jun 2023	Animal Life	
D7	28 Jun 2023	Floatables	None
D7	28 Jun 2023	Water Color	Green
D7	28 Jun 2023	Current Direction	S
D7	28 Jun 2023	Water Temp (C)	13.5
D7	28 Jun 2023	Wave Height Low (ft)	1
D7	28 Jun 2023	High Tide (ft)	3
D7	28 Jun 2023	High Tide Time	605
D7	28 Jun 2023	Low Tide (ft)	1.28
D7	28 Jun 2023	Low Tide Time	33
D7	28 Jun 2023	Comments	Water clear; Trash-1; Kelp; Seagrass; Algae; Person/Walker/Jogger-4
D7	31 May 2023	Arrive Time	846
D7	31 May 2023	Weather	Partly cloudy
D7	31 May 2023	Wind Speed (kts)	0.4
D7	31 May 2023	Wind Dir	NW
D7	31 May 2023	Animal Life	
D7	31 May 2023	Floatables	None
D7	31 May 2023	Water Color	Green
D7	31 May 2023	Current Direction	S
D7	31 May 2023	Water Temp (C)	14.8
D7	31 May 2023	Wave Height Low (ft)	1

Station	Date	Parameter	Value
D7	31 May 2023	High Tide (ft)	3.5
D7	31 May 2023	High Tide Time	727
D7	31 May 2023	Low Tide (ft)	0.67
D7	31 May 2023	Low Tide Time	143
D7	31 May 2023	Comments	Water clear; Trash-1; Kelp; Seagrass; Algae; Person/Walker/Jogger-1
D8-B	07 Jun 2023	Arrive Time	825
D8-B	07 Jun 2023	Weather	Cloudy
D8-B	07 Jun 2023	Wind Speed (kts)	4.5
D8-B	07 Jun 2023	Wind Dir	SW
D8-B	07 Jun 2023	Animal Life	Dog-2;
D8-B	07 Jun 2023	Floatables	None
D8-B	07 Jun 2023	Water Color	Green
D8-B	07 Jun 2023	Current Direction	S
D8-B	07 Jun 2023	Water Temp (C)	14.8
D8-B	07 Jun 2023	Wave Height Low (ft)	2
D8-B	07 Jun 2023	High Tide (ft)	3.47
D8-B	07 Jun 2023	High Tide Time	1335
D8-B	07 Jun 2023	Low Tide (ft)	-1.02
D8-B	07 Jun 2023	Low Tide Time	656
D8-B	07 Jun 2023	Comments	Water clear; Surfer/Paddle boarder-1; Trash-1; Kelp; Seagrass; Algae; Debris; Person/Walker/Jogger-1
D8-B	14 Jun 2023	Arrive Time	828
D8-B	14 Jun 2023	Weather	Cloudy
D8-B	14 Jun 2023	Wind Speed (kts)	0.6
D8-B	14 Jun 2023	Wind Dir	W
D8-B	14 Jun 2023	Animal Life	
D8-B	14 Jun 2023	Floatables	None
D8-B	14 Jun 2023	Water Color	Green
D8-B	14 Jun 2023	Current Direction	S
D8-B	14 Jun 2023	Water Temp (C)	14
D8-B	14 Jun 2023	Wave Height Low (ft)	1
D8-B	14 Jun 2023	High Tide (ft)	3.46
D8-B	14 Jun 2023	High Tide Time	742
D8-B	14 Jun 2023	Low Tide (ft)	0.11
D8-B	14 Jun 2023	Low Tide Time	150
D8-B	14 Jun 2023	Comments	Water clear; Trash-1; Kelp; Seagrass; Algae
D8-B	21 Jun 2023	Arrive Time	845
D8-B	21 Jun 2023	Weather	Sunny
D8-B	21 Jun 2023	Wind Speed (kts)	3.1
D8-B	21 Jun 2023	Wind Dir	W
D8-B	21 Jun 2023	Animal Life	
D8-B	21 Jun 2023	Floatables	None
D8-B	21 Jun 2023	Water Color	Green
D8-B	21 Jun 2023	Current Direction	S
D8-B	21 Jun 2023	Water Temp (C)	13.3
D8-B	21 Jun 2023	Wave Height Low (ft)	4
D8-B	21 Jun 2023	High Tide (ft)	3.36
D8-B	21 Jun 2023	High Tide Time	1304
D8-B	21 Jun 2023	Low Tide (ft)	-0.24
D8-B	21 Jun 2023	Low Tide Time	624
D8-B	21 Jun 2023	Comments	Water clear; Surfer/Paddle boarder-1; Trash-2; Kelp; Seagrass; Algae; Debris; Person/Walker/Jogger-1
D8-B	28 Jun 2023	Arrive Time	838
D8-B	28 Jun 2023	Weather	Cloudy
D8-B	28 Jun 2023	Wind Speed (kts)	2.7
D8-B	28 Jun 2023	Wind Dir	W

Station	Date	Parameter	Value
D8-B	28 Jun 2023	Animal Life	
D8-B	28 Jun 2023	Floatables	None
D8-B	28 Jun 2023	Water Color	Green
D8-B	28 Jun 2023	Current Direction	S
D8-B	28 Jun 2023	Water Temp (C)	11.3
D8-B	28 Jun 2023	Wave Height Low (ft)	2
D8-B	28 Jun 2023	High Tide (ft)	3
D8-B	28 Jun 2023	High Tide Time	605
D8-B	28 Jun 2023	Low Tide (ft)	1.28
D8-B	28 Jun 2023	Low Tide Time	33
D8-B	28 Jun 2023	Comments	Water clear; Trash-1; Kelp; Seagrass; Algae; Person/Walker/Jogger-1
D8-B	31 May 2023	Arrive Time	833
D8-B	31 May 2023	Weather	Partly cloudy
D8-B	31 May 2023	Wind Speed (kts)	3.5
D8-B	31 May 2023	Wind Dir	NW
D8-B	31 May 2023	Animal Life	
D8-B	31 May 2023	Floatables	None
D8-B	31 May 2023	Water Color	Green
D8-B	31 May 2023	Current Direction	S
D8-B	31 May 2023	Water Temp (C)	15
D8-B	31 May 2023	Wave Height Low (ft)	2
D8-B	31 May 2023	High Tide (ft)	3.5
D8-B	31 May 2023	High Tide Time	727
D8-B	31 May 2023	Low Tide (ft)	0.67
D8-B	31 May 2023	Low Tide Time	143
D8-B	31 May 2023	Comments	Water clear; Trash-1; Kelp;Seagrass;Algae; Person/Walker/Jogger-1
D9	07 Jun 2023	Arrive Time	811
D9	07 Jun 2023	Weather	Cloudy
D9	07 Jun 2023	Wind Speed (kts)	5
D9	07 Jun 2023	Wind Dir	SW
D9	07 Jun 2023	Animal Life	
D9	07 Jun 2023	Floatables	None
D9	07 Jun 2023	Water Color	Green
D9	07 Jun 2023	Current Direction	S
D9	07 Jun 2023	Water Temp (C)	15.3
D9	07 Jun 2023	Wave Height Low (ft)	2
D9	07 Jun 2023	High Tide (ft)	3.47
D9	07 Jun 2023	High Tide Time	1335
D9	07 Jun 2023	Low Tide (ft)	-1.02
D9	07 Jun 2023	Low Tide Time	656
D9	07 Jun 2023	Comments	Water clear; Trash-1; Kelp; Seagrass; Algae; Person/Walker/Jogger-1
D9	14 Jun 2023	Arrive Time	820
D9	14 Jun 2023	Weather	Cloudy
D9	14 Jun 2023	Wind Speed (kts)	0
D9	14 Jun 2023	Wind Dir	S
D9	14 Jun 2023	Animal Life	
D9	14 Jun 2023	Floatables	None
D9	14 Jun 2023	Water Color	Green
D9	14 Jun 2023	Current Direction	S
D9	14 Jun 2023	Water Temp (C)	12.9
D9	14 Jun 2023	Wave Height Low (ft)	1
D9	14 Jun 2023	High Tide (ft)	3.46
D9	14 Jun 2023	High Tide Time	742
D9	14 Jun 2023	Low Tide (ft)	0.11
D9	14 Jun 2023	Low Tide Time	150

Station	Date	Parameter	Value
D9	14 Jun 2023	Comments	Water clear; Trash-1; Kelp; Seagrass; Algae
D9	21 Jun 2023	Arrive Time	833
D9	21 Jun 2023	Weather	Sunny
D9	21 Jun 2023	Wind Speed (kts)	1.3
D9	21 Jun 2023	Wind Dir	W
D9	21 Jun 2023	Animal Life	
D9	21 Jun 2023	Floatables	Foam
D9	21 Jun 2023	Water Color	Green
D9	21 Jun 2023	Current Direction	S
D9	21 Jun 2023	Water Temp (C)	11.5
D9	21 Jun 2023	Wave Height Low (ft)	4
D9	21 Jun 2023	High Tide (ft)	3.36
D9	21 Jun 2023	High Tide Time	1304
D9	21 Jun 2023	Low Tide (ft)	-0.24
D9	21 Jun 2023	Low Tide Time	624
D9	21 Jun 2023	Comments	Water clear; Trash-4; Kelp; Seagrass; Algae; Debris
D9	28 Jun 2023	Arrive Time	830
D9	28 Jun 2023	Weather	Cloudy
D9	28 Jun 2023	Wind Speed (kts)	2.2
D9	28 Jun 2023	Wind Dir	W
D9	28 Jun 2023	Animal Life	
D9	28 Jun 2023	Floatables	None
D9	28 Jun 2023	Water Color	Green
D9	28 Jun 2023	Current Direction	S
D9	28 Jun 2023	Water Temp (C)	12
D9	28 Jun 2023	Wave Height Low (ft)	2
D9	28 Jun 2023	High Tide (ft)	3
D9	28 Jun 2023	High Tide Time	605
D9	28 Jun 2023	Low Tide (ft)	1.28
D9	28 Jun 2023	Low Tide Time	33
D9	28 Jun 2023	Comments	Water clear; Trash-1; Kelp; Algae; Seagrass; Person/Walker/Jogger-1
D9	31 May 2023	Arrive Time	825
D9	31 May 2023	Weather	Partly cloudy
D9	31 May 2023	Wind Speed (kts)	0.8
D9	31 May 2023	Wind Dir	NW
D9	31 May 2023	Animal Life	Dog-2;
D9	31 May 2023	Floatables	None
D9	31 May 2023	Water Color	Green
D9	31 May 2023	Current Direction	S
D9	31 May 2023	Water Temp (C)	15.31
D9	31 May 2023	Wave Height Low (ft)	1
D9	31 May 2023	High Tide (ft)	3.5
D9	31 May 2023	High Tide Time	727
D9	31 May 2023	Low Tide (ft)	0.67
D9	31 May 2023	Low Tide Time	143
D9	31 May 2023	Comments	Water clear; Trash-1; Kelp; Seagrass; Algae; Person/Walker/Jogger-3
D10	07 Jun 2023	Arrive Time	756
D10	07 Jun 2023	Weather	Cloudy
D10	07 Jun 2023	Wind Speed (kts)	2.2
D10	07 Jun 2023	Wind Dir	W
D10	07 Jun 2023	Animal Life	Dog-1;
D10	07 Jun 2023	Floatables	None
D10	07 Jun 2023	Water Color	Green
D10	07 Jun 2023	Current Direction	S
D10	07 Jun 2023	Water Temp (C)	13

Station	Date	Parameter	Value
D10	07 Jun 2023	Wave Height Low (ft)	2
D10	07 Jun 2023	High Tide (ft)	3.47
D10	07 Jun 2023	High Tide Time	1335
D10	07 Jun 2023	Low Tide (ft)	-1.02
D10	07 Jun 2023	Low Tide Time	656
D10	07 Jun 2023	Comments	Water clear; Surfer/Paddle boarder-18; Trash-1; Kelp; Sea-grass; Debris; Person/Walker/Jogger-1
D10	14 Jun 2023	Arrive Time	812
D10	14 Jun 2023	Weather	Cloudy
D10	14 Jun 2023	Wind Speed (kts)	1.2
D10	14 Jun 2023	Wind Dir	W
D10	14 Jun 2023	Animal Life	
D10	14 Jun 2023	Floatables	None
D10	14 Jun 2023	Water Color	Green
D10	14 Jun 2023	Current Direction	S
D10	14 Jun 2023	Water Temp (C)	11.5
D10	14 Jun 2023	Wave Height Low (ft)	1
D10	14 Jun 2023	High Tide (ft)	3.46
D10	14 Jun 2023	High Tide Time	742
D10	14 Jun 2023	Low Tide (ft)	0.11
D10	14 Jun 2023	Low Tide Time	150
D10	14 Jun 2023	Comments	Water clear; Surfer/Paddle boarder-3; Trash-1; Kelp; Sea-grass
D10	21 Jun 2023	Arrive Time	818
D10	21 Jun 2023	Weather	Partly cloudy
D10	21 Jun 2023	Wind Speed (kts)	1.7
D10	21 Jun 2023	Wind Dir	NW
D10	21 Jun 2023	Animal Life	
D10	21 Jun 2023	Floatables	Foam
D10	21 Jun 2023	Water Color	Green
D10	21 Jun 2023	Current Direction	S
D10	21 Jun 2023	Water Temp (C)	14.9
D10	21 Jun 2023	Wave Height Low (ft)	4
D10	21 Jun 2023	High Tide (ft)	3.36
D10	21 Jun 2023	High Tide Time	1304
D10	21 Jun 2023	Low Tide (ft)	-0.24
D10	21 Jun 2023	Low Tide Time	624
D10	21 Jun 2023	Comments	Water clear; Surfer/Paddle boarder-8; Trash-2; Kelp; Sea-grass; Debris; Person/Walker/Jogger-2
D10	28 Jun 2023	Arrive Time	820
D10	28 Jun 2023	Weather	Cloudy
D10	28 Jun 2023	Wind Speed (kts)	4.3
D10	28 Jun 2023	Wind Dir	W
D10	28 Jun 2023	Animal Life	Bird-2;
D10	28 Jun 2023	Floatables	None
D10	28 Jun 2023	Water Color	Green
D10	28 Jun 2023	Current Direction	S
D10	28 Jun 2023	Water Temp (C)	11.8
D10	28 Jun 2023	Wave Height Low (ft)	2
D10	28 Jun 2023	High Tide (ft)	3
D10	28 Jun 2023	High Tide Time	605
D10	28 Jun 2023	Low Tide (ft)	1.28
D10	28 Jun 2023	Low Tide Time	33
D10	28 Jun 2023	Comments	Water clear; Surfer/Paddle boarder-7; Trash-1; Kelp; Sea-grass; Person/Walker/Jogger-1
D10	31 May 2023	Arrive Time	817
D10	31 May 2023	Weather	Partly cloudy

Station	Date	Parameter	Value
D10	31 May 2023	Wind Speed (kts)	4.6
D10	31 May 2023	Wind Dir	NW
D10	31 May 2023	Animal Life	Dog-2;
D10	31 May 2023	Floatables	None
D10	31 May 2023	Water Color	Green
D10	31 May 2023	Current Direction	S
D10	31 May 2023	Water Temp (C)	13.9
D10	31 May 2023	Wave Height Low (ft)	2
D10	31 May 2023	High Tide (ft)	3.5
D10	31 May 2023	High Tide Time	727
D10	31 May 2023	Low Tide (ft)	0.67
D10	31 May 2023	Low Tide Time	143
D10	31 May 2023	Comments	Water clear; Trash-1; Kelp; Seagrass; Person/Walker/Jogger-1
D11	07 Jun 2023	Arrive Time	745
D11	07 Jun 2023	Weather	Cloudy
D11	07 Jun 2023	Wind Speed (kts)	1.2
D11	07 Jun 2023	Wind Dir	W
D11	07 Jun 2023	Animal Life	Dog-4;
D11	07 Jun 2023	Floatables	None
D11	07 Jun 2023	Water Color	Green
D11	07 Jun 2023	Current Direction	S
D11	07 Jun 2023	Water Temp (C)	15.5
D11	07 Jun 2023	Wave Height Low (ft)	3
D11	07 Jun 2023	High Tide (ft)	3.47
D11	07 Jun 2023	High Tide Time	1335
D11	07 Jun 2023	Low Tide (ft)	-1.02
D11	07 Jun 2023	Low Tide Time	656
D11	07 Jun 2023	Comments	Water clear; Surfer/Paddle boarder-3; Trash-1; Kelp; Seagrass; Algae; Person/Walker/Jogger-6
D11	14 Jun 2023	Arrive Time	803
D11	14 Jun 2023	Weather	Cloudy
D11	14 Jun 2023	Wind Speed (kts)	0.7
D11	14 Jun 2023	Wind Dir	W
D11	14 Jun 2023	Animal Life	Dog-1;
D11	14 Jun 2023	Floatables	None
D11	14 Jun 2023	Water Color	Green
D11	14 Jun 2023	Current Direction	S
D11	14 Jun 2023	Water Temp (C)	11.6
D11	14 Jun 2023	Wave Height Low (ft)	1
D11	14 Jun 2023	High Tide (ft)	3.46
D11	14 Jun 2023	High Tide Time	742
D11	14 Jun 2023	Low Tide (ft)	0.11
D11	14 Jun 2023	Low Tide Time	150
D11	14 Jun 2023	Comments	Water clear; Boogie boarder/Swimmer-2; Trash-1; Kelp; Seagrass; Algae
D11	21 Jun 2023	Arrive Time	805
D11	21 Jun 2023	Weather	Partly cloudy
D11	21 Jun 2023	Wind Speed (kts)	1.6
D11	21 Jun 2023	Wind Dir	W
D11	21 Jun 2023	Animal Life	Dog-3;
D11	21 Jun 2023	Floatables	None
D11	21 Jun 2023	Water Color	Green
D11	21 Jun 2023	Current Direction	S
D11	21 Jun 2023	Water Temp (C)	14.4
D11	21 Jun 2023	Wave Height Low (ft)	3
D11	21 Jun 2023	High Tide (ft)	3.36
D11	21 Jun 2023	High Tide Time	1304

Station	Date	Parameter	Value
D11	21 Jun 2023	Low Tide (ft)	-0.24
D11	21 Jun 2023	Low Tide Time	624
D11	21 Jun 2023	Comments	Water clear; Trash-2; Kelp; Seagrass; Algae; Debris; Person/Walker/Jogger-3
D11	28 Jun 2023	Arrive Time	812
D11	28 Jun 2023	Weather	Cloudy
D11	28 Jun 2023	Wind Speed (kts)	5.111
D11	28 Jun 2023	Wind Dir	W
D11	28 Jun 2023	Animal Life	Dog-2;
D11	28 Jun 2023	Floatables	None
D11	28 Jun 2023	Water Color	Green
D11	28 Jun 2023	Current Direction	S
D11	28 Jun 2023	Water Temp (C)	11
D11	28 Jun 2023	Wave Height Low (ft)	2
D11	28 Jun 2023	High Tide (ft)	3
D11	28 Jun 2023	High Tide Time	605
D11	28 Jun 2023	Low Tide (ft)	1.28
D11	28 Jun 2023	Low Tide Time	33
D11	28 Jun 2023	Comments	Water clear; Trash-1; Kelp; Seagrass; Algae; Person/Walker/Jogger-2
D11	31 May 2023	Arrive Time	808
D11	31 May 2023	Weather	Partly cloudy
D11	31 May 2023	Wind Speed (kts)	3.6
D11	31 May 2023	Wind Dir	NW
D11	31 May 2023	Animal Life	Dog-1;
D11	31 May 2023	Floatables	None
D11	31 May 2023	Water Color	Green
D11	31 May 2023	Current Direction	S
D11	31 May 2023	Water Temp (C)	13.9
D11	31 May 2023	Wave Height Low (ft)	3
D11	31 May 2023	High Tide (ft)	3.5
D11	31 May 2023	High Tide Time	727
D11	31 May 2023	Low Tide (ft)	0.67
D11	31 May 2023	Low Tide Time	143
D11	31 May 2023	Comments	Water clear; Trash-1; Kelp; Seagrass; Algae; Person/Walker/Jogger-3
D12	07 Jun 2023	Arrive Time	727
D12	07 Jun 2023	Weather	Cloudy
D12	07 Jun 2023	Wind Speed (kts)	0
D12	07 Jun 2023	Wind Dir	
D12	07 Jun 2023	Animal Life	Bird-10;
D12	07 Jun 2023	Floatables	Foam
D12	07 Jun 2023	Water Color	Green
D12	07 Jun 2023	Current Direction	S
D12	07 Jun 2023	Water Temp (C)	15.1
D12	07 Jun 2023	Wave Height Low (ft)	2
D12	07 Jun 2023	High Tide (ft)	3.47
D12	07 Jun 2023	High Tide Time	1335
D12	07 Jun 2023	Low Tide (ft)	-1.02
D12	07 Jun 2023	Low Tide Time	656
D12	07 Jun 2023	Comments	Water clear; Trash-1; Kelp; Seagrass; Debris; Person/Walker/Jogger-1
D12	14 Jun 2023	Arrive Time	747
D12	14 Jun 2023	Weather	Cloudy
D12	14 Jun 2023	Wind Speed (kts)	0
D12	14 Jun 2023	Wind Dir	W
D12	14 Jun 2023	Animal Life	



Station	Date	Parameter	Value
D12	14 Jun 2023	Floatables	None
D12	14 Jun 2023	Water Color	Green
D12	14 Jun 2023	Current Direction	S
D12	14 Jun 2023	Water Temp (C)	12.5
D12	14 Jun 2023	Wave Height Low (ft)	1
D12	14 Jun 2023	High Tide (ft)	3.46
D12	14 Jun 2023	High Tide Time	742
D12	14 Jun 2023	Low Tide (ft)	0.11
D12	14 Jun 2023	Low Tide Time	150
D12	14 Jun 2023	Comments	Water clear; Trash-1; Kelp; Seagrass; Person/Walker/Jogger-3
D12	21 Jun 2023	Arrive Time	746
D12	21 Jun 2023	Weather	Partly cloudy
D12	21 Jun 2023	Wind Speed (kts)	2
D12	21 Jun 2023	Wind Dir	N
D12	21 Jun 2023	Animal Life	Bird-3;
D12	21 Jun 2023	Floatables	None
D12	21 Jun 2023	Water Color	Green
D12	21 Jun 2023	Current Direction	S
D12	21 Jun 2023	Water Temp (C)	11.5
D12	21 Jun 2023	Wave Height Low (ft)	3
D12	21 Jun 2023	High Tide (ft)	3.36
D12	21 Jun 2023	High Tide Time	1304
D12	21 Jun 2023	Low Tide (ft)	-0.24
D12	21 Jun 2023	Low Tide Time	624
D12	21 Jun 2023	Comments	Water clear; Trash-3; Kelp; Seagrass; Debris; Person/Walker/Jogger-1
D12	28 Jun 2023	Arrive Time	757
D12	28 Jun 2023	Weather	Cloudy
D12	28 Jun 2023	Wind Speed (kts)	2.8
D12	28 Jun 2023	Wind Dir	W
D12	28 Jun 2023	Animal Life	
D12	28 Jun 2023	Floatables	None
D12	28 Jun 2023	Water Color	Green
D12	28 Jun 2023	Current Direction	S
D12	28 Jun 2023	Water Temp (C)	12
D12	28 Jun 2023	Wave Height Low (ft)	4
D12	28 Jun 2023	High Tide (ft)	3
D12	28 Jun 2023	High Tide Time	605
D12	28 Jun 2023	Low Tide (ft)	1.28
D12	28 Jun 2023	Low Tide Time	33
D12	28 Jun 2023	Comments	Water clear; Trash-1; Kelp; Seagrass; Person/Walker/Jogger-2
D12	31 May 2023	Arrive Time	754
D12	31 May 2023	Weather	Sunny
D12	31 May 2023	Wind Speed (kts)	5.7
D12	31 May 2023	Wind Dir	NW
D12	31 May 2023	Animal Life	
D12	31 May 2023	Floatables	None
D12	31 May 2023	Water Color	Green
D12	31 May 2023	Current Direction	S
D12	31 May 2023	Water Temp (C)	14.3
D12	31 May 2023	Wave Height Low (ft)	4
D12	31 May 2023	High Tide (ft)	3.5
D12	31 May 2023	High Tide Time	727
D12	31 May 2023	Low Tide (ft)	0.67
D12	31 May 2023	Low Tide Time	143

<b>Station</b>	<b>Date</b>	<b>Parameter</b>	<b>Value</b>
D12	31 May 2023	Comments	Water clear; Trash-1; Kelp;Seagrass; Person/Walker/Jogger-2

# Kelp Stations



**Table 3.1**

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 geometric mean of the five most recent samples from each site over the previous 30 days unless otherwise noted (\*). Values >1,000 CFU/100 mL exceed the standard.

Date	A1	A6	A7	C4	C5	C6	C7	C8
31 May 2023	4	4	5	2	3	3	6	5
01 Jun 2023	5	5	6	3	2	2	5	6
02 Jun 2023	5	5	6	3	2	2	5	6
03 Jun 2023	5	5	6	3	2	2	5	6
04 Jun 2023	5	5	6	3	2	2	5	6
05 Jun 2023	5	5	6	3	2	2	5	6
06 Jun 2023	4	6	5	3	2	2	4	5
07 Jun 2023	4	6	5	3	2	2	4	5
08 Jun 2023	4	7	3	3	2	2	5	5
09 Jun 2023	4	7	3	3	2	2	5	5
10 Jun 2023	4	7	3	3	2	2	5	5
11 Jun 2023	4	7	3	3	2	2	5	5
12 Jun 2023	4	7	3	3	2	2	5	5
13 Jun 2023	4	10	3	3	2	2	6	5
14 Jun 2023	2	9	2	4	2	2	4	4
15 Jun 2023	2	9	2	4	2	2	4	4
16 Jun 2023	2	9	2	4	2	2	4	4
17 Jun 2023	2	9	2	4	2	2	4	4
18 Jun 2023	2	9	2	4	2	2	4	4
19 Jun 2023	2	9	2	4	2	2	4	4
20 Jun 2023	2	10	3	3	5	3	5	3
21 Jun 2023	2	11	3	4	6	3	6	4
22 Jun 2023	2	11	3	4	6	3	6	4
23 Jun 2023	2	11	3	4	6	3	6	4
24 Jun 2023	2	11	3	4	6	3	6	4
25 Jun 2023	2	11	3	4	6	3	6	4
26 Jun 2023	3	11	4	3	6	4	5	4
27 Jun 2023	3	11	4	3	6	4	5	4
28 Jun 2023	3	11	4	3	6	4	5	4
29 Jun 2023	3	11	4	3	6	4	5	4
30 Jun 2023	3	17	5	3	6	4	4	3

\* Geometric mean calculated using n<5

**Table 3.2**

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
31 May 2023	2	2	3	2	2	2	2	2
01 Jun 2023	2	2	3	2	2	2	2	2
02 Jun 2023	2	2	3	2	2	2	2	2
03 Jun 2023	2	2	3	2	2	2	2	2
04 Jun 2023	2	2	3	2	2	2	2	2
05 Jun 2023	2	2	3	2	2	2	2	2
06 Jun 2023	2	2	3	2	2	2	2	2
07 Jun 2023	2	2	3	2	2	2	2	2
08 Jun 2023	2	2	2	2	2	2	2	2
09 Jun 2023	2	2	2	2	2	2	2	2
10 Jun 2023	2	2	2	2	2	2	2	2
11 Jun 2023	2	2	2	2	2	2	2	2
12 Jun 2023	2	2	2	2	2	2	2	2
13 Jun 2023	2	3	2	2	2	2	2	2
14 Jun 2023	2	3	2	2	2	2	2	2
15 Jun 2023	2	3	2	2	2	2	2	2
16 Jun 2023	2	3	2	2	2	2	2	2
17 Jun 2023	2	3	2	2	2	2	2	2
18 Jun 2023	2	3	2	2	2	2	2	2
19 Jun 2023	2	3	2	2	2	2	2	2
20 Jun 2023	2	3	2	2	2	2	2	2
21 Jun 2023	2	3	2	2	2	2	2	2
22 Jun 2023	2	3	2	2	2	2	2	2
23 Jun 2023	2	3	2	2	2	2	2	2
24 Jun 2023	2	3	2	2	2	2	2	2
25 Jun 2023	2	3	2	2	2	2	2	2
26 Jun 2023	2	4	2	2	2	2	2	2
27 Jun 2023	2	4	2	2	2	2	2	2
28 Jun 2023	2	4	2	2	2	2	2	2
29 Jun 2023	2	4	2	2	2	2	2	2
30 Jun 2023	2	4	2	2	2	2	2	2

\* Geometric mean calculated using n<5

**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 30 days unless otherwise noted (\*). Values >35 CFU/100 mL exceed the standard.

Date	A1	A6	A7	C4	C5	C6	C7	C8
31 May 2023	2	2	2	2	2	2	2	2
01 Jun 2023	2	2	2	2	2	2	2	2
02 Jun 2023	2	2	2	2	2	2	2	2
03 Jun 2023	2	2	2	2	2	2	2	2
04 Jun 2023	2	2	2	2	2	2	2	2
05 Jun 2023	2	2	2	2	2	2	2	2
06 Jun 2023	2	2	2	2	2	2	2	2
07 Jun 2023	2	2	2	2	2	2	2	2
08 Jun 2023	2	2	2	2	2	2	2	2
09 Jun 2023	2	2	2	2	2	2	2	2
10 Jun 2023	2	2	2	2	2	2	2	2
11 Jun 2023	2	2	2	2	2	2	2	2
12 Jun 2023	2	2	2	2	2	2	2	2
13 Jun 2023	2	2	2	2	2	2	2	2
14 Jun 2023	2	2	2	2	2	2	2	2
15 Jun 2023	2	2	2	2	2	2	2	2
16 Jun 2023	2	2	2	2	2	2	2	2
17 Jun 2023	2	2	2	2	2	2	2	2
18 Jun 2023	2	2	2	2	2	2	2	2
19 Jun 2023	2	2	2	2	2	2	2	2
20 Jun 2023	2	2	2	2	2	2	2	2
21 Jun 2023	2	2	2	2	2	2	2	2
22 Jun 2023	2	2	2	2	2	2	2	2
23 Jun 2023	2	2	2	2	2	2	2	2
24 Jun 2023	2	2	2	2	2	2	2	2
25 Jun 2023	2	2	2	2	2	2	2	2
26 Jun 2023	2	2	2	2	2	2	2	2
27 Jun 2023	2	2	2	2	2	2	2	2
28 Jun 2023	2	2	2	2	2	2	2	2
29 Jun 2023	2	2	2	2	2	2	2	2
30 Jun 2023	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 total coliform bacteria, which states that total coliform density shall not exceed 10,000 CFU/100 mL.

Date	A1	A6	A7	C4	C5	C6	C7	C8
31 May 2023	IC	IC	IC	ns	ns	ns	IC	IC
01 Jun 2023	ns	ns	ns	IC	IC	IC	ns	ns
06 Jun 2023	IC	IC	IC	IC	IC	IC	IC	IC
13 Jun 2023	IC	IC	IC	IC	IC	IC	IC	IC
20 Jun 2023	IC	IC	IC	IC	IC	IC	IC	IC
26 Jun 2023	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 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
31 May 2023	IC	IC	IC	ns	ns	ns	IC	IC
01 Jun 2023	ns	ns	ns	IC	IC	IC	ns	ns
06 Jun 2023	IC	IC	IC	IC	IC	IC	IC	IC
13 Jun 2023	IC	IC	IC	IC	IC	IC	IC	IC
20 Jun 2023	IC	IC	IC	IC	IC	IC	IC	IC
26 Jun 2023	IC	IC	IC	IC	IC	IC	IC	IC

IC = In Compliance

E = Exceedance

ns = not sampled

ND = no data

### Table 3.6

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.

Date	A1	A6	A7	C4	C5	C6	C7	C8
31 May 2023	IC	IC	IC	ns	ns	ns	IC	IC
01 Jun 2023	ns	ns	ns	IC	IC	IC	ns	ns
06 Jun 2023	IC	IC	IC	IC	IC	IC	IC	IC
13 Jun 2023	IC	IC	IC	IC	IC	IC	IC	IC
20 Jun 2023	IC	IC	IC	IC	IC	IC	IC	IC
26 Jun 2023	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
31 May 2023	IC	IC	IC	ns	ns	ns	IC	IC
01 Jun 2023	ns	ns	ns	IC	IC	IC	ns	ns
06 Jun 2023	IC	IC	IC	IC	IC	IC	IC	IC
13 Jun 2023	IC	IC	IC	IC	IC	IC	IC	IC
20 Jun 2023	IC	IC	IC	IC	IC	IC	IC	IC
26 Jun 2023	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; the fecal:total coliform ratio (F:T) is unitless; 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	F:T	Temp	XMS	DO	Sal	pH
A1	06 Jun 2023	800	1	<2	<2	<2	1.00	16.9	85.14	8.5	33.49	8.1
A1	06 Jun 2023	800	12	<2	<2	<2	1.00	12.2	89.56	6.3	33.44	7.9
A1	06 Jun 2023	800	18	<2	<2	<2	1.00	12.0	90.23	6.0	33.46	7.9
A1	13 Jun 2023	818	1	<2	<2	<2	1.00	16.1	82.67	8.4	33.46	8.1
A1	13 Jun 2023	818	12	<2	<2	<2	1.00	13.3	85.39	6.9	33.44	8.0
A1	13 Jun 2023	818	18	<2	<2	<2	1.00	12.4	88.31	5.9	33.47	7.9
A1	20 Jun 2023	751	1	<2	<2	<2	1.00	14.3	82.27	8.3	33.43	8.1
A1	20 Jun 2023	751	12	4e	2e	<2	0.50	12.7	84.39	6.7	33.47	7.9
A1	20 Jun 2023	751	18	4e	2e	<2	0.50	12.3	88.02	6.2	33.48	7.9
A1	26 Jun 2023	805	1	<2	<2	<2	1.00	14.5	71.20	8.3	33.44	8.0
A1	26 Jun 2023	805	12	6e	<2	<2	0.33	11.6	86.58	6.0	33.45	7.8
A1	26 Jun 2023	805	18	4e	2e	<2	0.50	11.0	88.02	4.8	33.56	7.8
A6	06 Jun 2023	823	1	<2	<2	<2	1.00	17.1	84.51	8.6	33.50	8.2
A6	06 Jun 2023	823	12	6e	<2	2e	0.33	12.8	90.20	7.2	33.40	8.0
A6	06 Jun 2023	823	18	46	8e	2e	0.17	12.1	90.39	6.2	33.46	7.9
A6	13 Jun 2023	845	1	<2	<2	<2	1.00	17.0	85.87	8.6	33.46	8.1
A6	13 Jun 2023	845	12	20e	2e	<2	0.10	12.4	89.58	6.3	33.43	7.9
A6	13 Jun 2023	845	18	80	16e	2e	0.20	12.1	90.96	5.8	33.47	7.8
A6	20 Jun 2023	814	1	4e	<2	<2	0.50	15.3	79.87	8.9	33.44	8.1
A6	20 Jun 2023	814	12	2e	2e	<2	1.00	12.9	85.67	6.5	33.47	8.0
A6	20 Jun 2023	814	18	32e	<2	<2	0.06	11.9	90.99	5.7	33.49	7.8
A6	26 Jun 2023	831	1	2e	<2	<2	1.00	13.3	72.93	8.4	33.42	8.0
A6	26 Jun 2023	831	12	4e	4e	<2	1.00	11.3	91.89	5.4	33.48	7.8
A6	26 Jun 2023	831	18	30e	10e	<2	0.33	11.1	91.88	5.1	33.51	7.8
A7	06 Jun 2023	809	1	<2	<2	<2	1.00	16.9	84.72	8.6	33.49	8.2
A7	06 Jun 2023	809	12	4e	4e	<2	1.00	12.3	89.89	6.4	33.44	7.9
A7	06 Jun 2023	809	18	<2	2e	<2	1.00	12.1	90.10	6.0	33.46	7.9
A7	13 Jun 2023	832	1	<2	<2	<2	1.00	16.5	81.23	8.3	33.46	8.1
A7	13 Jun 2023	832	12	<2	<2	<2	1.00	13.2	88.35	6.7	33.44	7.9
A7	13 Jun 2023	832	18	4e	2e	<2	0.50	12.1	90.62	5.6	33.46	7.8
A7	20 Jun 2023	805	1	6e	<2	<2	0.33	15.4	81.65	8.6	33.42	8.1
A7	20 Jun 2023	805	12	<2	2e	<2	1.00	12.8	87.11	6.8	33.46	7.9
A7	20 Jun 2023	805	18	14e	4e	<2	0.29	12.1	90.22	5.9	33.48	7.9
A7	26 Jun 2023	817	1	2e	<2	<2	1.00	14.0	75.38	8.6	33.43	8.1
A7	26 Jun 2023	817	12	10e	2e	<2	0.20	11.3	91.95	5.5	33.47	7.8
A7	26 Jun 2023	817	18	12e	4e	<2	0.33	11.2	91.78	5.4	33.49	7.8
C4	01 Jun 2023	829	1	<20	<2	<2	0.10	16.4	83.94	8.6	33.47	8.2
C4	01 Jun 2023	829	3	<2	<2	<2	1.00	15.8	84.09	8.2	33.49	8.2
C4	01 Jun 2023	829	9	<2	<2	<2	1.00	13.7	82.88	6.9	33.43	8.0

Station	Date	Time	Depth	Total	Fecal	Entero	F:T	Temp	XMS	DO	Sal	pH
C4	06 Jun 2023	936	1	<2	<2	<2	1.00	16.6	85.04	8.1	33.48	8.1
C4	06 Jun 2023	936	3	<2	<2	<2	1.00	15.2	84.97	7.6	33.48	8.1
C4	06 Jun 2023	936	9	<2	<2	<2	1.00	12.7	80.95	6.0	33.45	7.9
C4	13 Jun 2023	952	1	<2	2e	<2	1.00	17.0	83.38	8.7	33.47	8.2
C4	13 Jun 2023	952	3	<20	<2	<2	0.10	16.6	82.95	8.3	33.48	8.2
C4	13 Jun 2023	952	9	<2	<2	<2	1.00	13.9	82.85	6.9	33.44	8.0
C4	20 Jun 2023	919	1	<2	<2	<2	1.00	15.1	82.98	8.5	33.45	8.1
C4	20 Jun 2023	919	3	<2	<2	<2	1.00	14.1	79.72	7.9	33.46	8.1
C4	20 Jun 2023	919	9	2e	<2	<2	1.00	12.9	84.53	6.5	33.46	7.9
C4	26 Jun 2023	942	1	<2	<2	<2	1.00	16.5	72.85	8.6	33.45	8.2
C4	26 Jun 2023	942	3	<2	<2	<2	1.00	15.1	71.97	8.4	33.47	8.1
C4	26 Jun 2023	942	9	<2	<2	<2	1.00	12.4	74.26	6.0	33.41	7.9
C5	01 Jun 2023	821	1	<2	<2	<2	1.00	16.8	83.17	8.5	33.46	8.2
C5	01 Jun 2023	821	3	<2	<2	<2	1.00	16.8	83.39	8.3	33.47	8.2
C5	01 Jun 2023	821	9	<2	<2	<2	1.00	14.0	87.08	6.8	33.45	8.0
C5	06 Jun 2023	926	1	<2	<2	<2	1.00	17.1	85.42	8.6	33.50	8.2
C5	06 Jun 2023	926	3	<2	<2	<2	1.00	16.6	85.36	8.3	33.50	8.2
C5	06 Jun 2023	926	9	2e	<2	<2	1.00	14.0	88.46	7.2	33.46	8.0
C5	13 Jun 2023	942	1	<2	<2	<2	1.00	17.2	83.67	8.8	33.47	8.2
C5	13 Jun 2023	942	3	<2	<2	<2	1.00	15.5	83.57	7.7	33.48	8.1
C5	13 Jun 2023	942	9	<2	<2	<2	1.00	12.9	89.90	6.5	33.43	7.9
C5	20 Jun 2023	907	1	<200	2e	<2	0.01	15.7	81.14	9.2	33.39	8.2
C5	20 Jun 2023	907	3	<200	<2	<2	0.01	15.6	81.26	8.9	33.43	8.2
C5	20 Jun 2023	907	9	2e	<2	<2	1.00	13.4	84.18	7.3	33.46	8.0
C5	26 Jun 2023	933	1	<2	<2	<2	1.00	15.1	71.03	9.0	33.45	8.1
C5	26 Jun 2023	933	3	<20	<2	<2	0.10	13.9	72.82	8.2	33.45	8.1
C5	26 Jun 2023	933	9	<2	<2	<2	1.00	12.2	84.59	6.4	33.44	7.9
C6	01 Jun 2023	808	1	<2	<2	<2	1.00	16.9	81.32	8.4	33.45	8.2
C6	01 Jun 2023	808	3	<2	<2	<2	1.00	16.5	83.62	8.3	33.46	8.2
C6	01 Jun 2023	808	9	<2	<2	<2	1.00	13.5	87.32	6.8	33.43	8.0
C6	06 Jun 2023	913	1	2e	<2	<2	1.00	17.0	84.79	8.7	33.49	8.2
C6	06 Jun 2023	913	3	<2	<2	<2	1.00	17.0	84.89	8.7	33.49	8.2
C6	06 Jun 2023	913	9	<2	<2	<2	1.00	13.2	87.12	6.6	33.45	8.0
C6	13 Jun 2023	932	1	<2	<2	<2	1.00	17.2	83.99	9.2	33.47	8.2
C6	13 Jun 2023	932	3	<2	<2	<2	1.00	17.2	83.90	8.6	33.47	8.2
C6	13 Jun 2023	932	9	2e	4e	<2	2.00	13.1	90.41	6.7	33.43	7.9
C6	20 Jun 2023	856	1	<20	<2	<2	0.10	15.4	80.14	9.1	33.44	8.1
C6	20 Jun 2023	856	3	2e	<2	<2	1.00	14.7	80.27	8.6	33.47	8.1
C6	20 Jun 2023	856	9	<2	<2	<2	1.00	12.9	81.79	6.7	33.48	8.0
C6	26 Jun 2023	920	1	<20	<2	<2	0.10	14.4	67.03	8.6	33.44	8.1
C6	26 Jun 2023	920	3	<20	<2	<2	0.10	13.7	69.46	8.1	33.44	8.0
C6	26 Jun 2023	920	9	2e	<2	<2	1.00	12.1	85.04	5.8	33.45	7.8
C7	06 Jun 2023	841	1	<2	<2	<2	1.00	16.9	81.93	8.7	33.48	8.2
C7	06 Jun 2023	841	12	<2	<2	<2	1.00	13.8	84.77	8.0	33.41	8.1
C7	06 Jun 2023	841	18	4e	2e	<2	0.50	12.8	89.76	6.8	33.43	8.0

Station	Date	Time	Depth	Total	Fecal	Enterococci	F:T	Temp	XMS	DO	Sal	pH
C7	13 Jun 2023	859	1	<2	<2	<2	1.00	17.1	83.80	8.6	33.46	8.1
C7	13 Jun 2023	859	12	10e	<2	<2	0.20	13.1	89.72	6.7	33.43	7.9
C7	13 Jun 2023	859	18	26e	2e	<2	0.08	12.1	91.59	5.6	33.46	7.8
C7	20 Jun 2023	827	1	<2	<2	2e	1.00	15.8	78.24	9.2	33.44	8.1
C7	20 Jun 2023	827	12	2e	<2	<2	1.00	13.0	87.61	6.8	33.46	8.0
C7	20 Jun 2023	827	18	12e	<2	<2	0.17	11.8	90.91	5.4	33.51	7.8
C7	26 Jun 2023	843	1	<2	<2	<2	1.00	15.2	74.41	9.0	33.44	8.1
C7	26 Jun 2023	843	12	<2	<2	<2	1.00	11.5	90.85	5.4	33.46	7.8
C7	26 Jun 2023	843	18	2e	<2	<2	1.00	11.3	90.19	5.1	33.50	7.8
C8	06 Jun 2023	853	1	<2	<2	<2	1.00	17.1	83.18	8.5	33.49	8.2
C8	06 Jun 2023	853	12	<2	<2	<2	1.00	14.4	83.22	8.1	33.44	8.1
C8	06 Jun 2023	853	18	4e	2e	<2	0.50	12.5	88.25	6.5	33.43	7.9
C8	13 Jun 2023	910	1	<2	<2	<2	1.00	17.1	83.15	8.7	33.47	8.2
C8	13 Jun 2023	910	12	2e	<2	<2	1.00	13.1	88.93	7.0	33.43	8.0
C8	13 Jun 2023	910	18	6e	4e	<2	0.67	12.2	91.28	6.0	33.45	7.9
C8	20 Jun 2023	837	1	<2	<2	<2	1.00	15.6	80.19	9.0	33.43	8.1
C8	20 Jun 2023	837	12	<2	<2	<2	1.00	12.0	89.94	5.6	33.47	7.9
C8	20 Jun 2023	837	18	4e	<2	<2	0.50	11.8	90.10	5.2	33.49	7.8
C8	26 Jun 2023	900	1	<2	<2	<2	1.00	16.4	78.61	8.4	33.44	8.1
C8	26 Jun 2023	900	12	<2	<2	<2	1.00	11.5	90.88	5.4	33.48	7.8
C8	26 Jun 2023	900	18	4e	<2	<2	0.50	11.3	90.78	5.1	33.51	7.8

ns = not sampled

ND = no data

**Table 3.9**

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

Station	Date	Parameter	Value
A1	06 Jun 2023	Depth (m)	18
A1	06 Jun 2023	Arrive Time	800
A1	06 Jun 2023	Depart Time	802
A1	06 Jun 2023	Air Temp (C)	16.3
A1	06 Jun 2023	Weather	Overcast
A1	06 Jun 2023	Visibility (mi)	9
A1	06 Jun 2023	Wind Speed (kts)	6.9
A1	06 Jun 2023	Wind Dir	SE
A1	06 Jun 2023	Water Color	Blue
A1	06 Jun 2023	Wave Ht Low (ft)	3
A1	06 Jun 2023	Wave Period (sec)	12
A1	06 Jun 2023	Sea State	Light Chop
A1	06 Jun 2023	High Tide (ft)	6.16
A1	06 Jun 2023	High Tide Time	2306
A1	06 Jun 2023	Low Tide (ft)	-1.36
A1	06 Jun 2023	Low Tide Time	554
A1	06 Jun 2023	Comments	none
A1	13 Jun 2023	Depth (m)	19
A1	13 Jun 2023	Arrive Time	818
A1	13 Jun 2023	Depart Time	829
A1	13 Jun 2023	Air Temp (C)	16.6
A1	13 Jun 2023	Weather	Overcast
A1	13 Jun 2023	Visibility (mi)	8
A1	13 Jun 2023	Wind Speed (kts)	5.7
A1	13 Jun 2023	Wind Dir	N
A1	13 Jun 2023	Water Color	Blueish-Green
A1	13 Jun 2023	Wave Ht Low (ft)	3
A1	13 Jun 2023	Wave Period (sec)	15
A1	13 Jun 2023	Sea State	Light Chop
A1	13 Jun 2023	High Tide (ft)	5.72
A1	13 Jun 2023	High Tide Time	1842
A1	13 Jun 2023	Low Tide (ft)	0.67
A1	13 Jun 2023	Low Tide Time	54
A1	13 Jun 2023	Comments	2nd btl did not close upon fire; Mid depth bacti sample collected in separate cast; 1st cast used for IGODS and other bacti samples.
A1	20 Jun 2023	Depth (m)	17
A1	20 Jun 2023	Arrive Time	751
A1	20 Jun 2023	Depart Time	756
A1	20 Jun 2023	Air Temp (C)	16.5
A1	20 Jun 2023	Weather	Continuous Layer of Clouds
A1	20 Jun 2023	Visibility (mi)	10
A1	20 Jun 2023	Wind Speed (kts)	2
A1	20 Jun 2023	Wind Dir	NW
A1	20 Jun 2023	Water Color	Green
A1	20 Jun 2023	Wave Ht Low (ft)	3
A1	20 Jun 2023	Wave Period (sec)	8
A1	20 Jun 2023	Sea State	Calm
A1	20 Jun 2023	High Tide (ft)	5.54
A1	20 Jun 2023	High Tide Time	2242
A1	20 Jun 2023	Low Tide (ft)	-0.56
A1	20 Jun 2023	Low Tide Time	536
A1	20 Jun 2023	Comments	Low tide

Station	Date	Parameter	Value
A1	26 Jun 2023	Depth (m)	18
A1	26 Jun 2023	Arrive Time	805
A1	26 Jun 2023	Depart Time	812
A1	26 Jun 2023	Air Temp (C)	16.4
A1	26 Jun 2023	Weather	Overcast
A1	26 Jun 2023	Visibility (mi)	8
A1	26 Jun 2023	Wind Speed (kts)	5.3
A1	26 Jun 2023	Wind Dir	NW
A1	26 Jun 2023	Water Color	Green
A1	26 Jun 2023	Wave Ht Low (ft)	5
A1	26 Jun 2023	Wave Period (sec)	7
A1	26 Jun 2023	Sea State	Confused Swell
A1	26 Jun 2023	High Tide (ft)	4.39
A1	26 Jun 2023	High Tide Time	1648
A1	26 Jun 2023	Low Tide (ft)	1.31
A1	26 Jun 2023	Low Tide Time	930
A1	26 Jun 2023	Comments	Kelp; Kelp Debris
A1	31 May 2023	Depth (m)	18
A1	31 May 2023	Arrive Time	814
A1	31 May 2023	Depart Time	818
A1	31 May 2023	Air Temp (C)	16
A1	31 May 2023	Weather	Partly Cloudy
A1	31 May 2023	Visibility (mi)	11
A1	31 May 2023	Wind Speed (kts)	4
A1	31 May 2023	Wind Dir	NW
A1	31 May 2023	Water Color	Blue
A1	31 May 2023	Wave Ht Low (ft)	3.3
A1	31 May 2023	Wave Period (sec)	13
A1	31 May 2023	Sea State	Calm
A1	31 May 2023	High Tide (ft)	5.4
A1	31 May 2023	High Tide Time	1924
A1	31 May 2023	Low Tide (ft)	0.63
A1	31 May 2023	Low Tide Time	136
A1	31 May 2023	Comments	1m bottle didnt fire; Second cast to sample
A6	06 Jun 2023	Depth (m)	1
A6	06 Jun 2023	Arrive Time	823
A6	06 Jun 2023	Depart Time	831
A6	06 Jun 2023	Air Temp (C)	16.2
A6	06 Jun 2023	Weather	Overcast
A6	06 Jun 2023	Visibility (mi)	9
A6	06 Jun 2023	Wind Speed (kts)	4.7
A6	06 Jun 2023	Wind Dir	SE
A6	06 Jun 2023	Water Color	Blue
A6	06 Jun 2023	Wave Ht Low (ft)	3
A6	06 Jun 2023	Wave Period (sec)	12
A6	06 Jun 2023	Sea State	Light Chop
A6	06 Jun 2023	High Tide (ft)	6.16
A6	06 Jun 2023	High Tide Time	2306
A6	06 Jun 2023	Low Tide (ft)	-1.36
A6	06 Jun 2023	Low Tide Time	554
A6	06 Jun 2023	Comments	2 casts attempted to achieve depth
A6	13 Jun 2023	Depth (m)	20
A6	13 Jun 2023	Arrive Time	845
A6	13 Jun 2023	Depart Time	848
A6	13 Jun 2023	Air Temp (C)	16.8
A6	13 Jun 2023	Weather	Overcast
A6	13 Jun 2023	Visibility (mi)	8
A6	13 Jun 2023	Wind Speed (kts)	5.6



Station	Date	Parameter	Value
A6	13 Jun 2023	Wind Dir	N
A6	13 Jun 2023	Water Color	Blueish-Green
A6	13 Jun 2023	Wave Ht Low (ft)	3
A6	13 Jun 2023	Wave Period (sec)	15
A6	13 Jun 2023	Sea State	Light Chop
A6	13 Jun 2023	High Tide (ft)	5.72
A6	13 Jun 2023	High Tide Time	1842
A6	13 Jun 2023	Low Tide (ft)	0.67
A6	13 Jun 2023	Low Tide Time	54
A6	13 Jun 2023	Comments	none
A6	20 Jun 2023	Depth (m)	18
A6	20 Jun 2023	Arrive Time	814
A6	20 Jun 2023	Depart Time	816
A6	20 Jun 2023	Air Temp (C)	16.8
A6	20 Jun 2023	Weather	Continuous Layer of Clouds
A6	20 Jun 2023	Visibility (mi)	10
A6	20 Jun 2023	Wind Speed (kts)	1.4
A6	20 Jun 2023	Wind Dir	N
A6	20 Jun 2023	Water Color	Green
A6	20 Jun 2023	Wave Ht Low (ft)	3
A6	20 Jun 2023	Wave Period (sec)	8
A6	20 Jun 2023	Sea State	Calm
A6	20 Jun 2023	High Tide (ft)	5.54
A6	20 Jun 2023	High Tide Time	2242
A6	20 Jun 2023	Low Tide (ft)	-0.56
A6	20 Jun 2023	Low Tide Time	536
A6	20 Jun 2023	Comments	none
A6	26 Jun 2023	Depth (m)	18
A6	26 Jun 2023	Arrive Time	831
A6	26 Jun 2023	Depart Time	834
A6	26 Jun 2023	Air Temp (C)	16.4
A6	26 Jun 2023	Weather	Overcast
A6	26 Jun 2023	Visibility (mi)	8
A6	26 Jun 2023	Wind Speed (kts)	3.9
A6	26 Jun 2023	Wind Dir	NW
A6	26 Jun 2023	Water Color	Green
A6	26 Jun 2023	Wave Ht Low (ft)	5
A6	26 Jun 2023	Wave Period (sec)	7
A6	26 Jun 2023	Sea State	Confused Swell
A6	26 Jun 2023	High Tide (ft)	4.39
A6	26 Jun 2023	High Tide Time	1648
A6	26 Jun 2023	Low Tide (ft)	1.31
A6	26 Jun 2023	Low Tide Time	930
A6	26 Jun 2023	Comments	none
A6	31 May 2023	Depth (m)	20
A6	31 May 2023	Arrive Time	841
A6	31 May 2023	Depart Time	844
A6	31 May 2023	Air Temp (C)	15.8
A6	31 May 2023	Weather	Partly Cloudy
A6	31 May 2023	Visibility (mi)	11
A6	31 May 2023	Wind Speed (kts)	3.8
A6	31 May 2023	Wind Dir	NW
A6	31 May 2023	Water Color	Blue
A6	31 May 2023	Wave Ht Low (ft)	3.3
A6	31 May 2023	Wave Period (sec)	13
A6	31 May 2023	Sea State	Calm
A6	31 May 2023	High Tide (ft)	5.4
A6	31 May 2023	High Tide Time	1924

Station	Date	Parameter	Value
A6	31 May 2023	Low Tide (ft)	0.63
A6	31 May 2023	Low Tide Time	136
A6	31 May 2023	Comments	none
A7	06 Jun 2023	Depth (m)	19
A7	06 Jun 2023	Arrive Time	809
A7	06 Jun 2023	Depart Time	823
A7	06 Jun 2023	Air Temp (C)	16.2
A7	06 Jun 2023	Weather	Overcast
A7	06 Jun 2023	Visibility (mi)	9
A7	06 Jun 2023	Wind Speed (kts)	0
A7	06 Jun 2023	Wind Dir	E
A7	06 Jun 2023	Water Color	Blue
A7	06 Jun 2023	Wave Ht Low (ft)	3
A7	06 Jun 2023	Wave Period (sec)	12
A7	06 Jun 2023	Sea State	Light Chop
A7	06 Jun 2023	High Tide (ft)	6.16
A7	06 Jun 2023	High Tide Time	2306
A7	06 Jun 2023	Low Tide (ft)	-1.36
A7	06 Jun 2023	Low Tide Time	554
A7	06 Jun 2023	Comments	none
A7	13 Jun 2023	Depth (m)	19
A7	13 Jun 2023	Arrive Time	832
A7	13 Jun 2023	Depart Time	837
A7	13 Jun 2023	Air Temp (C)	16.8
A7	13 Jun 2023	Weather	Overcast
A7	13 Jun 2023	Visibility (mi)	8
A7	13 Jun 2023	Wind Speed (kts)	5.6
A7	13 Jun 2023	Wind Dir	NW
A7	13 Jun 2023	Water Color	Blueish-Green
A7	13 Jun 2023	Wave Ht Low (ft)	3
A7	13 Jun 2023	Wave Period (sec)	15
A7	13 Jun 2023	Sea State	Light Chop
A7	13 Jun 2023	High Tide (ft)	5.72
A7	13 Jun 2023	High Tide Time	1842
A7	13 Jun 2023	Low Tide (ft)	0.67
A7	13 Jun 2023	Low Tide Time	54
A7	13 Jun 2023	Comments	none
A7	20 Jun 2023	Depth (m)	18
A7	20 Jun 2023	Arrive Time	805
A7	20 Jun 2023	Depart Time	806
A7	20 Jun 2023	Air Temp (C)	16.6
A7	20 Jun 2023	Weather	Continuous Layer of Clouds
A7	20 Jun 2023	Visibility (mi)	10
A7	20 Jun 2023	Wind Speed (kts)	2.2
A7	20 Jun 2023	Wind Dir	N
A7	20 Jun 2023	Water Color	Green
A7	20 Jun 2023	Wave Ht Low (ft)	3
A7	20 Jun 2023	Wave Period (sec)	8
A7	20 Jun 2023	Sea State	Calm
A7	20 Jun 2023	High Tide (ft)	5.54
A7	20 Jun 2023	High Tide Time	2242
A7	20 Jun 2023	Low Tide (ft)	-0.56
A7	20 Jun 2023	Low Tide Time	536
A7	20 Jun 2023	Comments	none
A7	26 Jun 2023	Depth (m)	18
A7	26 Jun 2023	Arrive Time	817
A7	26 Jun 2023	Depart Time	830

Station	Date	Parameter	Value
A7	26 Jun 2023	Air Temp (C)	16.3
A7	26 Jun 2023	Weather	Overcast
A7	26 Jun 2023	Visibility (mi)	8
A7	26 Jun 2023	Wind Speed (kts)	6.1
A7	26 Jun 2023	Wind Dir	N
A7	26 Jun 2023	Water Color	Green
A7	26 Jun 2023	Wave Ht Low (ft)	5
A7	26 Jun 2023	Wave Period (sec)	7
A7	26 Jun 2023	Sea State	Confused Swell
A7	26 Jun 2023	High Tide (ft)	4.39
A7	26 Jun 2023	High Tide Time	1648
A7	26 Jun 2023	Low Tide (ft)	1.31
A7	26 Jun 2023	Low Tide Time	930
A7	26 Jun 2023	Comments	none
A7	31 May 2023	Depth (m)	1
A7	31 May 2023	Arrive Time	829
A7	31 May 2023	Depart Time	832
A7	31 May 2023	Air Temp (C)	15.7
A7	31 May 2023	Weather	Partly Cloudy
A7	31 May 2023	Visibility (mi)	11
A7	31 May 2023	Wind Speed (kts)	6.7
A7	31 May 2023	Wind Dir	NW
A7	31 May 2023	Water Color	Blue
A7	31 May 2023	Wave Ht Low (ft)	3.3
A7	31 May 2023	Wave Period (sec)	13
A7	31 May 2023	Sea State	Calm
A7	31 May 2023	High Tide (ft)	5.4
A7	31 May 2023	High Tide Time	1924
A7	31 May 2023	Low Tide (ft)	0.63
A7	31 May 2023	Low Tide Time	136
A7	31 May 2023	Comments	none
C4	01 Jun 2023	Depth (m)	12
C4	01 Jun 2023	Arrive Time	829
C4	01 Jun 2023	Depart Time	833
C4	01 Jun 2023	Air Temp (C)	15.8
C4	01 Jun 2023	Weather	Overcast
C4	01 Jun 2023	Visibility (mi)	10
C4	01 Jun 2023	Wind Speed (kts)	4.2
C4	01 Jun 2023	Wind Dir	NW
C4	01 Jun 2023	Water Color	Green
C4	01 Jun 2023	Wave Ht Low (ft)	3
C4	01 Jun 2023	Wave Period (sec)	12
C4	01 Jun 2023	Sea State	Light Chop
C4	01 Jun 2023	High Tide (ft)	5.81
C4	01 Jun 2023	High Tide Time	1948
C4	01 Jun 2023	Low Tide (ft)	-0.01
C4	01 Jun 2023	Low Tide Time	218
C4	01 Jun 2023	Comments	none
C4	06 Jun 2023	Depth (m)	10
C4	06 Jun 2023	Arrive Time	936
C4	06 Jun 2023	Depart Time	938
C4	06 Jun 2023	Air Temp (C)	16.2
C4	06 Jun 2023	Weather	Overcast
C4	06 Jun 2023	Visibility (mi)	9
C4	06 Jun 2023	Wind Speed (kts)	2.8
C4	06 Jun 2023	Wind Dir	SE
C4	06 Jun 2023	Water Color	Greenish-Blue
C4	06 Jun 2023	Wave Ht Low (ft)	3

Station	Date	Parameter	Value
C4	06 Jun 2023	Wave Period (sec)	12
C4	06 Jun 2023	Sea State	Light Chop
C4	06 Jun 2023	High Tide (ft)	6.16
C4	06 Jun 2023	High Tide Time	2306
C4	06 Jun 2023	Low Tide (ft)	-1.36
C4	06 Jun 2023	Low Tide Time	554
C4	06 Jun 2023	Comments	none
C4	13 Jun 2023	Depth (m)	11
C4	13 Jun 2023	Arrive Time	952
C4	13 Jun 2023	Depart Time	957
C4	13 Jun 2023	Air Temp (C)	17.1
C4	13 Jun 2023	Weather	Overcast
C4	13 Jun 2023	Visibility (mi)	8
C4	13 Jun 2023	Wind Speed (kts)	5.9
C4	13 Jun 2023	Wind Dir	N
C4	13 Jun 2023	Water Color	Blueish-Green
C4	13 Jun 2023	Wave Ht Low (ft)	3
C4	13 Jun 2023	Wave Period (sec)	15
C4	13 Jun 2023	Sea State	Light Chop
C4	13 Jun 2023	High Tide (ft)	5.72
C4	13 Jun 2023	High Tide Time	1842
C4	13 Jun 2023	Low Tide (ft)	0.67
C4	13 Jun 2023	Low Tide Time	54
C4	13 Jun 2023	Comments	none
C4	20 Jun 2023	Depth (m)	9
C4	20 Jun 2023	Arrive Time	919
C4	20 Jun 2023	Depart Time	920
C4	20 Jun 2023	Air Temp (C)	16.8
C4	20 Jun 2023	Weather	Continuous Layer of Clouds
C4	20 Jun 2023	Visibility (mi)	10
C4	20 Jun 2023	Wind Speed (kts)	1.5
C4	20 Jun 2023	Wind Dir	W
C4	20 Jun 2023	Water Color	Green
C4	20 Jun 2023	Wave Ht Low (ft)	3
C4	20 Jun 2023	Wave Period (sec)	8
C4	20 Jun 2023	Sea State	Calm
C4	20 Jun 2023	High Tide (ft)	5.54
C4	20 Jun 2023	High Tide Time	2242
C4	20 Jun 2023	Low Tide (ft)	-0.56
C4	20 Jun 2023	Low Tide Time	536
C4	20 Jun 2023	Comments	none
C4	26 Jun 2023	Depth (m)	9
C4	26 Jun 2023	Arrive Time	942
C4	26 Jun 2023	Depart Time	946
C4	26 Jun 2023	Air Temp (C)	17.6
C4	26 Jun 2023	Weather	Overcast
C4	26 Jun 2023	Visibility (mi)	8
C4	26 Jun 2023	Wind Speed (kts)	4.3
C4	26 Jun 2023	Wind Dir	N
C4	26 Jun 2023	Water Color	Green
C4	26 Jun 2023	Wave Ht Low (ft)	5
C4	26 Jun 2023	Wave Period (sec)	7
C4	26 Jun 2023	Sea State	Confused Swell
C4	26 Jun 2023	High Tide (ft)	4.39
C4	26 Jun 2023	High Tide Time	1648
C4	26 Jun 2023	Low Tide (ft)	1.31
C4	26 Jun 2023	Low Tide Time	930
C4	26 Jun 2023	Comments	Kelp

Station	Date	Parameter	Value
C5	01 Jun 2023	Depth (m)	9
C5	01 Jun 2023	Arrive Time	821
C5	01 Jun 2023	Depart Time	825
C5	01 Jun 2023	Air Temp (C)	15.9
C5	01 Jun 2023	Weather	Overcast
C5	01 Jun 2023	Visibility (mi)	10
C5	01 Jun 2023	Wind Speed (kts)	9.7
C5	01 Jun 2023	Wind Dir	S
C5	01 Jun 2023	Water Color	Green
C5	01 Jun 2023	Wave Ht Low (ft)	3
C5	01 Jun 2023	Wave Period (sec)	12
C5	01 Jun 2023	Sea State	Light Chop
C5	01 Jun 2023	High Tide (ft)	5.81
C5	01 Jun 2023	High Tide Time	1948
C5	01 Jun 2023	Low Tide (ft)	-0.01
C5	01 Jun 2023	Low Tide Time	218
C5	01 Jun 2023	Comments	none
C5	06 Jun 2023	Depth (m)	11
C5	06 Jun 2023	Arrive Time	926
C5	06 Jun 2023	Depart Time	928
C5	06 Jun 2023	Air Temp (C)	16.2
C5	06 Jun 2023	Weather	Overcast
C5	06 Jun 2023	Visibility (mi)	9
C5	06 Jun 2023	Wind Speed (kts)	4.2
C5	06 Jun 2023	Wind Dir	S
C5	06 Jun 2023	Water Color	Greenish-Blue
C5	06 Jun 2023	Wave Ht Low (ft)	3
C5	06 Jun 2023	Wave Period (sec)	12
C5	06 Jun 2023	Sea State	Light Chop
C5	06 Jun 2023	High Tide (ft)	6.16
C5	06 Jun 2023	High Tide Time	2306
C5	06 Jun 2023	Low Tide (ft)	-1.36
C5	06 Jun 2023	Low Tide Time	554
C5	06 Jun 2023	Comments	none
C5	13 Jun 2023	Depth (m)	11
C5	13 Jun 2023	Arrive Time	942
C5	13 Jun 2023	Depart Time	947
C5	13 Jun 2023	Air Temp (C)	17
C5	13 Jun 2023	Weather	Overcast
C5	13 Jun 2023	Visibility (mi)	8
C5	13 Jun 2023	Wind Speed (kts)	8.6
C5	13 Jun 2023	Wind Dir	N
C5	13 Jun 2023	Water Color	Blueish-Green
C5	13 Jun 2023	Wave Ht Low (ft)	3
C5	13 Jun 2023	Wave Period (sec)	15
C5	13 Jun 2023	Sea State	Light Chop
C5	13 Jun 2023	High Tide (ft)	5.72
C5	13 Jun 2023	High Tide Time	1842
C5	13 Jun 2023	Low Tide (ft)	0.67
C5	13 Jun 2023	Low Tide Time	54
C5	13 Jun 2023	Comments	Kelp
C5	20 Jun 2023	Depth (m)	9
C5	20 Jun 2023	Arrive Time	907
C5	20 Jun 2023	Depart Time	909
C5	20 Jun 2023	Air Temp (C)	16.5
C5	20 Jun 2023	Weather	Continuous Layer of Clouds
C5	20 Jun 2023	Visibility (mi)	10

Station	Date	Parameter	Value
C5	20 Jun 2023	Wind Speed (kts)	2.9
C5	20 Jun 2023	Wind Dir	W
C5	20 Jun 2023	Water Color	Green
C5	20 Jun 2023	Wave Ht Low (ft)	3
C5	20 Jun 2023	Wave Period (sec)	8
C5	20 Jun 2023	Sea State	Calm
C5	20 Jun 2023	High Tide (ft)	5.54
C5	20 Jun 2023	High Tide Time	2242
C5	20 Jun 2023	Low Tide (ft)	-0.56
C5	20 Jun 2023	Low Tide Time	536
C5	20 Jun 2023	Comments	none
C5	26 Jun 2023	Depth (m)	10
C5	26 Jun 2023	Arrive Time	933
C5	26 Jun 2023	Depart Time	937
C5	26 Jun 2023	Air Temp (C)	16.6
C5	26 Jun 2023	Weather	Overcast
C5	26 Jun 2023	Visibility (mi)	8
C5	26 Jun 2023	Wind Speed (kts)	4.4
C5	26 Jun 2023	Wind Dir	N
C5	26 Jun 2023	Water Color	Green
C5	26 Jun 2023	Wave Ht Low (ft)	5
C5	26 Jun 2023	Wave Period (sec)	7
C5	26 Jun 2023	Sea State	Confused Swell
C5	26 Jun 2023	High Tide (ft)	4.39
C5	26 Jun 2023	High Tide Time	1648
C5	26 Jun 2023	Low Tide (ft)	1.31
C5	26 Jun 2023	Low Tide Time	930
C5	26 Jun 2023	Comments	none
C6	01 Jun 2023	Depth (m)	9
C6	01 Jun 2023	Arrive Time	808
C6	01 Jun 2023	Depart Time	814
C6	01 Jun 2023	Air Temp (C)	15.7
C6	01 Jun 2023	Weather	Overcast
C6	01 Jun 2023	Visibility (mi)	10
C6	01 Jun 2023	Wind Speed (kts)	5
C6	01 Jun 2023	Wind Dir	W
C6	01 Jun 2023	Water Color	Green
C6	01 Jun 2023	Wave Ht Low (ft)	3
C6	01 Jun 2023	Wave Period (sec)	12
C6	01 Jun 2023	Sea State	Light Chop
C6	01 Jun 2023	High Tide (ft)	5.81
C6	01 Jun 2023	High Tide Time	1948
C6	01 Jun 2023	Low Tide (ft)	-0.01
C6	01 Jun 2023	Low Tide Time	218
C6	01 Jun 2023	Comments	none
C6	06 Jun 2023	Depth (m)	7
C6	06 Jun 2023	Arrive Time	913
C6	06 Jun 2023	Depart Time	918
C6	06 Jun 2023	Air Temp (C)	16.1
C6	06 Jun 2023	Weather	Overcast
C6	06 Jun 2023	Visibility (mi)	9
C6	06 Jun 2023	Wind Speed (kts)	15.2
C6	06 Jun 2023	Wind Dir	S
C6	06 Jun 2023	Water Color	Blue
C6	06 Jun 2023	Wave Ht Low (ft)	3
C6	06 Jun 2023	Wave Period (sec)	12
C6	06 Jun 2023	Sea State	Light Chop
C6	06 Jun 2023	High Tide (ft)	6.16

Station	Date	Parameter	Value
C6	06 Jun 2023	High Tide Time	2306
C6	06 Jun 2023	Low Tide (ft)	-1.36
C6	06 Jun 2023	Low Tide Time	554
C6	06 Jun 2023	Comments	none
C6	13 Jun 2023	Depth (m)	9
C6	13 Jun 2023	Arrive Time	932
C6	13 Jun 2023	Depart Time	937
C6	13 Jun 2023	Air Temp (C)	16.9
C6	13 Jun 2023	Weather	Overcast
C6	13 Jun 2023	Visibility (mi)	8
C6	13 Jun 2023	Wind Speed (kts)	6.9
C6	13 Jun 2023	Wind Dir	NW
C6	13 Jun 2023	Water Color	Blueish-Green
C6	13 Jun 2023	Wave Ht Low (ft)	3
C6	13 Jun 2023	Wave Period (sec)	15
C6	13 Jun 2023	Sea State	Light Chop
C6	13 Jun 2023	High Tide (ft)	5.72
C6	13 Jun 2023	High Tide Time	1842
C6	13 Jun 2023	Low Tide (ft)	0.67
C6	13 Jun 2023	Low Tide Time	54
C6	13 Jun 2023	Comments	none
C6	20 Jun 2023	Depth (m)	8
C6	20 Jun 2023	Arrive Time	856
C6	20 Jun 2023	Depart Time	859
C6	20 Jun 2023	Air Temp (C)	16.7
C6	20 Jun 2023	Weather	Continuous Layer of Clouds
C6	20 Jun 2023	Visibility (mi)	10
C6	20 Jun 2023	Wind Speed (kts)	2.1
C6	20 Jun 2023	Wind Dir	SW
C6	20 Jun 2023	Water Color	Green
C6	20 Jun 2023	Wave Ht Low (ft)	3
C6	20 Jun 2023	Wave Period (sec)	8
C6	20 Jun 2023	Sea State	Calm
C6	20 Jun 2023	High Tide (ft)	5.54
C6	20 Jun 2023	High Tide Time	2242
C6	20 Jun 2023	Low Tide (ft)	-0.56
C6	20 Jun 2023	Low Tide Time	536
C6	20 Jun 2023	Comments	none
C6	26 Jun 2023	Depth (m)	9
C6	26 Jun 2023	Arrive Time	920
C6	26 Jun 2023	Depart Time	925
C6	26 Jun 2023	Air Temp (C)	16.5
C6	26 Jun 2023	Weather	Overcast
C6	26 Jun 2023	Visibility (mi)	8
C6	26 Jun 2023	Wind Speed (kts)	4.1
C6	26 Jun 2023	Wind Dir	NW
C6	26 Jun 2023	Water Color	Green
C6	26 Jun 2023	Wave Ht Low (ft)	5
C6	26 Jun 2023	Wave Period (sec)	7
C6	26 Jun 2023	Sea State	Confused Swell
C6	26 Jun 2023	High Tide (ft)	4.39
C6	26 Jun 2023	High Tide Time	1648
C6	26 Jun 2023	Low Tide (ft)	1.31
C6	26 Jun 2023	Low Tide Time	930
C6	26 Jun 2023	Comments	Kelp; Kelp Debris
C7	06 Jun 2023	Depth (m)	17
C7	06 Jun 2023	Arrive Time	841

Station	Date	Parameter	Value
C7	06 Jun 2023	Depart Time	845
C7	06 Jun 2023	Air Temp (C)	16.2
C7	06 Jun 2023	Weather	Overcast
C7	06 Jun 2023	Visibility (mi)	9
C7	06 Jun 2023	Wind Speed (kts)	1.2
C7	06 Jun 2023	Wind Dir	N
C7	06 Jun 2023	Water Color	Blue
C7	06 Jun 2023	Wave Ht Low (ft)	3
C7	06 Jun 2023	Wave Period (sec)	12
C7	06 Jun 2023	Sea State	Light Chop
C7	06 Jun 2023	High Tide (ft)	6.16
C7	06 Jun 2023	High Tide Time	2306
C7	06 Jun 2023	Low Tide (ft)	-1.36
C7	06 Jun 2023	Low Tide Time	554
C7	06 Jun 2023	Comments	none
C7	13 Jun 2023	Depth (m)	18
C7	13 Jun 2023	Arrive Time	859
C7	13 Jun 2023	Depart Time	904
C7	13 Jun 2023	Air Temp (C)	16.9
C7	13 Jun 2023	Weather	Overcast
C7	13 Jun 2023	Visibility (mi)	8
C7	13 Jun 2023	Wind Speed (kts)	5.9
C7	13 Jun 2023	Wind Dir	NW
C7	13 Jun 2023	Water Color	Blueish-Green
C7	13 Jun 2023	Wave Ht Low (ft)	3
C7	13 Jun 2023	Wave Period (sec)	15
C7	13 Jun 2023	Sea State	Light Chop
C7	13 Jun 2023	High Tide (ft)	5.72
C7	13 Jun 2023	High Tide Time	1842
C7	13 Jun 2023	Low Tide (ft)	0.67
C7	13 Jun 2023	Low Tide Time	54
C7	13 Jun 2023	Comments	none
C7	20 Jun 2023	Depth (m)	18
C7	20 Jun 2023	Arrive Time	827
C7	20 Jun 2023	Depart Time	829
C7	20 Jun 2023	Air Temp (C)	16.7
C7	20 Jun 2023	Weather	Continuous Layer of Clouds
C7	20 Jun 2023	Visibility (mi)	10
C7	20 Jun 2023	Wind Speed (kts)	1.9
C7	20 Jun 2023	Wind Dir	N
C7	20 Jun 2023	Water Color	Green
C7	20 Jun 2023	Wave Ht Low (ft)	3
C7	20 Jun 2023	Wave Period (sec)	8
C7	20 Jun 2023	Sea State	Calm
C7	20 Jun 2023	High Tide (ft)	5.54
C7	20 Jun 2023	High Tide Time	2242
C7	20 Jun 2023	Low Tide (ft)	-0.56
C7	20 Jun 2023	Low Tide Time	536
C7	20 Jun 2023	Comments	none
C7	26 Jun 2023	Depth (m)	18
C7	26 Jun 2023	Arrive Time	843
C7	26 Jun 2023	Depart Time	854
C7	26 Jun 2023	Air Temp (C)	16.4
C7	26 Jun 2023	Weather	Overcast
C7	26 Jun 2023	Visibility (mi)	8
C7	26 Jun 2023	Wind Speed (kts)	1.4
C7	26 Jun 2023	Wind Dir	W
C7	26 Jun 2023	Water Color	Green



Station	Date	Parameter	Value
C7	26 Jun 2023	Wave Ht Low (ft)	5
C7	26 Jun 2023	Wave Period (sec)	7
C7	26 Jun 2023	Sea State	Confused Swell
C7	26 Jun 2023	High Tide (ft)	4.39
C7	26 Jun 2023	High Tide Time	1648
C7	26 Jun 2023	Low Tide (ft)	1.31
C7	26 Jun 2023	Low Tide Time	930
C7	26 Jun 2023	Comments	1m bin missing from 1st cast; Bottles from cast 1; Data from cast 2
C7	31 May 2023	Depth (m)	1
C7	31 May 2023	Arrive Time	855
C7	31 May 2023	Depart Time	859
C7	31 May 2023	Air Temp (C)	15.7
C7	31 May 2023	Weather	Partly Cloudy
C7	31 May 2023	Visibility (mi)	11
C7	31 May 2023	Wind Speed (kts)	3.9
C7	31 May 2023	Wind Dir	NW
C7	31 May 2023	Water Color	Blue
C7	31 May 2023	Wave Ht Low (ft)	3.3
C7	31 May 2023	Wave Period (sec)	13
C7	31 May 2023	Sea State	Calm
C7	31 May 2023	High Tide (ft)	5.4
C7	31 May 2023	High Tide Time	1924
C7	31 May 2023	Low Tide (ft)	0.63
C7	31 May 2023	Low Tide Time	136
C7	31 May 2023	Comments	none
C8	06 Jun 2023	Depth (m)	18
C8	06 Jun 2023	Arrive Time	853
C8	06 Jun 2023	Depart Time	904
C8	06 Jun 2023	Air Temp (C)	16.2
C8	06 Jun 2023	Weather	Overcast
C8	06 Jun 2023	Visibility (mi)	9
C8	06 Jun 2023	Wind Speed (kts)	1.3
C8	06 Jun 2023	Wind Dir	NW
C8	06 Jun 2023	Water Color	Blue
C8	06 Jun 2023	Wave Ht Low (ft)	3
C8	06 Jun 2023	Wave Period (sec)	12
C8	06 Jun 2023	Sea State	Light Chop
C8	06 Jun 2023	High Tide (ft)	6.16
C8	06 Jun 2023	High Tide Time	2306
C8	06 Jun 2023	Low Tide (ft)	-1.36
C8	06 Jun 2023	Low Tide Time	554
C8	06 Jun 2023	Comments	none
C8	13 Jun 2023	Depth (m)	19
C8	13 Jun 2023	Arrive Time	910
C8	13 Jun 2023	Depart Time	918
C8	13 Jun 2023	Air Temp (C)	16.9
C8	13 Jun 2023	Weather	Overcast
C8	13 Jun 2023	Visibility (mi)	8
C8	13 Jun 2023	Wind Speed (kts)	5.7
C8	13 Jun 2023	Wind Dir	NW
C8	13 Jun 2023	Water Color	Blueish-Green
C8	13 Jun 2023	Wave Ht Low (ft)	3
C8	13 Jun 2023	Wave Period (sec)	15
C8	13 Jun 2023	Sea State	Light Chop
C8	13 Jun 2023	High Tide (ft)	5.72
C8	13 Jun 2023	High Tide Time	1842
C8	13 Jun 2023	Low Tide (ft)	0.67

Station	Date	Parameter	Value
C8	13 Jun 2023	Low Tide Time	54
C8	13 Jun 2023	Comments	Btl 3 fired manually at bottom
C8	20 Jun 2023	Depth (m)	19
C8	20 Jun 2023	Arrive Time	837
C8	20 Jun 2023	Depart Time	856
C8	20 Jun 2023	Air Temp (C)	16.7
C8	20 Jun 2023	Weather	Continuous Layer of Clouds
C8	20 Jun 2023	Visibility (mi)	10
C8	20 Jun 2023	Wind Speed (kts)	3.5
C8	20 Jun 2023	Wind Dir	NW
C8	20 Jun 2023	Water Color	Green
C8	20 Jun 2023	Wave Ht Low (ft)	3
C8	20 Jun 2023	Wave Period (sec)	8
C8	20 Jun 2023	Sea State	Calm
C8	20 Jun 2023	High Tide (ft)	5.54
C8	20 Jun 2023	High Tide Time	2242
C8	20 Jun 2023	Low Tide (ft)	-0.56
C8	20 Jun 2023	Low Tide Time	536
C8	20 Jun 2023	Comments	none
C8	26 Jun 2023	Depth (m)	19
C8	26 Jun 2023	Arrive Time	900
C8	26 Jun 2023	Depart Time	904
C8	26 Jun 2023	Air Temp (C)	16.5
C8	26 Jun 2023	Weather	Overcast
C8	26 Jun 2023	Visibility (mi)	8
C8	26 Jun 2023	Wind Speed (kts)	1.8
C8	26 Jun 2023	Wind Dir	N
C8	26 Jun 2023	Water Color	Green
C8	26 Jun 2023	Wave Ht Low (ft)	5
C8	26 Jun 2023	Wave Period (sec)	7
C8	26 Jun 2023	Sea State	Confused Swell
C8	26 Jun 2023	High Tide (ft)	4.39
C8	26 Jun 2023	High Tide Time	1648
C8	26 Jun 2023	Low Tide (ft)	1.31
C8	26 Jun 2023	Low Tide Time	930
C8	26 Jun 2023	Comments	none
C8	31 May 2023	Depth (m)	20
C8	31 May 2023	Arrive Time	909
C8	31 May 2023	Depart Time	952
C8	31 May 2023	Air Temp (C)	16.1
C8	31 May 2023	Weather	Partly Cloudy
C8	31 May 2023	Visibility (mi)	11
C8	31 May 2023	Wind Speed (kts)	3.7
C8	31 May 2023	Wind Dir	W
C8	31 May 2023	Water Color	Blue
C8	31 May 2023	Wave Ht Low (ft)	3.3
C8	31 May 2023	Wave Period (sec)	13
C8	31 May 2023	Sea State	Calm
C8	31 May 2023	High Tide (ft)	5.4
C8	31 May 2023	High Tide Time	1924
C8	31 May 2023	Low Tide (ft)	0.63
C8	31 May 2023	Low Tide Time	136
C8	31 May 2023	Comments	Hydraulics hose failure; Lost use of hydraulics and had to discontinue sampling

**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 ( $\sigma$ -t)	Chlor ( $\mu$ g/L)
A1	06 Jun 2023	1	16.87	85.14	8.5	33.49	8.1	24.4	1.66
A1	06 Jun 2023	2	16.84	85.00	8.2	33.48	8.1	24.4	1.74
A1	06 Jun 2023	3	14.71	84.98	8.2	33.46	8.1	24.8	2.42
A1	06 Jun 2023	4	13.27	85.12	7.5	33.41	8.0	25.1	1.86
A1	06 Jun 2023	5	13.01	87.69	7.1	33.40	8.0	25.1	1.60
A1	06 Jun 2023	6	13.01	88.48	7.0	33.40	8.0	25.2	1.62
A1	06 Jun 2023	7	12.98	88.02	6.9	33.41	8.0	25.2	1.71
A1	06 Jun 2023	8	12.77	87.56	6.6	33.42	7.9	25.2	1.66
A1	06 Jun 2023	9	12.40	86.75	6.6	33.42	7.9	25.3	1.44
A1	06 Jun 2023	10	12.30	88.62	6.5	33.42	7.9	25.3	1.27
A1	06 Jun 2023	11	12.26	89.29	6.4	33.43	7.9	25.3	1.20
A1	06 Jun 2023	12	12.16	89.56	6.3	33.44	7.9	25.3	1.16
A1	06 Jun 2023	13	12.04	89.59	6.1	33.44	7.9	25.4	1.15
A1	06 Jun 2023	14	12.02	88.97	6.1	33.45	7.9	25.4	0.97
A1	06 Jun 2023	15	11.99	89.56	6.1	33.45	7.9	25.4	0.97
A1	06 Jun 2023	16	11.98	90.03	6.1	33.45	7.9	25.4	0.96
A1	06 Jun 2023	17	11.96	90.07	6.0	33.46	7.9	25.4	0.93
A1	06 Jun 2023	18	11.97	90.23	6.0	33.46	7.9	25.4	1.06
A1	13 Jun 2023	1	16.05	82.67	8.4	33.46	8.1	24.6	2.94
A1	13 Jun 2023	2	16.05	82.56	8.3	33.46	8.1	24.6	3.06
A1	13 Jun 2023	3	15.99	82.23	8.1	33.45	8.1	24.6	3.55
A1	13 Jun 2023	4	15.28	82.11	8.0	33.46	8.1	24.7	4.02
A1	13 Jun 2023	5	14.44	81.16	8.1	33.45	8.1	24.9	3.53
A1	13 Jun 2023	6	14.12	81.77	8.1	33.43	8.0	24.9	2.99
A1	13 Jun 2023	7	14.02	84.84	8.1	33.42	8.0	25.0	2.87
A1	13 Jun 2023	8	14.03	85.56	7.9	33.42	8.0	25.0	2.82
A1	13 Jun 2023	9	14.01	85.52	7.7	33.42	8.0	25.0	2.75
A1	13 Jun 2023	10	13.94	85.06	7.4	33.43	8.0	25.0	2.70
A1	13 Jun 2023	11	13.62	84.86	7.1	33.44	8.0	25.1	2.61
A1	13 Jun 2023	12	13.34	85.39	6.9	33.44	8.0	25.1	1.99
A1	13 Jun 2023	13	13.22	86.77	6.7	33.44	7.9	25.1	1.81
A1	13 Jun 2023	14	13.08	88.21	6.6	33.44	7.9	25.2	1.51
A1	13 Jun 2023	15	13.03	88.69	6.4	33.44	7.9	25.2	1.34
A1	13 Jun 2023	16	12.75	88.82	6.2	33.45	7.9	25.2	1.09
A1	13 Jun 2023	17	12.69	87.82	6.1	33.45	7.9	25.3	0.95
A1	13 Jun 2023	18	12.42	88.31	5.9	33.47	7.9	25.3	0.84
A1	13 Jun 2023	19	12.09	87.88	5.7	33.47	7.8	25.4	0.78
A1	20 Jun 2023	1	14.35	82.27	8.3	33.43	8.1	24.9	2.10
A1	20 Jun 2023	2	14.42	81.95	8.3	33.42	8.1	24.9	2.15
A1	20 Jun 2023	3	14.29	81.75	8.0	33.44	8.0	24.9	2.15
A1	20 Jun 2023	4	13.55	82.26	7.6	33.46	8.0	25.1	2.54
A1	20 Jun 2023	5	13.31	83.56	7.4	33.45	8.0	25.1	2.68
A1	20 Jun 2023	6	13.20	84.31	7.2	33.44	8.0	25.1	2.86
A1	20 Jun 2023	7	13.02	84.86	7.1	33.45	8.0	25.2	3.11
A1	20 Jun 2023	8	12.90	85.56	7.0	33.45	7.9	25.2	3.05
A1	20 Jun 2023	9	12.89	85.97	6.9	33.45	7.9	25.2	2.93
A1	20 Jun 2023	10	12.81	86.39	6.8	33.45	7.9	25.2	2.93
A1	20 Jun 2023	11	12.78	85.75	6.8	33.45	7.9	25.2	2.84
A1	20 Jun 2023	12	12.66	84.39	6.7	33.47	7.9	25.3	2.83
A1	20 Jun 2023	13	12.57	86.24	6.5	33.47	7.9	25.3	2.63
A1	20 Jun 2023	14	12.50	87.76	6.5	33.47	7.9	25.3	2.38
A1	20 Jun 2023	15	12.43	87.80	6.4	33.47	7.9	25.3	2.25
A1	20 Jun 2023	16	12.38	87.95	6.3	33.47	7.9	25.3	2.09

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens ( $\sigma$ -t)	Chlor ( $\mu$ g/L)
A1	20 Jun 2023	17	12.35	88.02	6.2	33.48	7.9	25.3	1.93
A1	26 Jun 2023	1	14.52	71.20	8.3	33.44	8.0	24.9	5.14
A1	26 Jun 2023	2	14.85	72.80	8.0	33.44	8.0	24.8	5.41
A1	26 Jun 2023	3	14.72	72.56	7.8	33.44	8.0	24.8	5.42
A1	26 Jun 2023	4	13.51	73.16	8.1	33.47	8.0	25.1	6.72
A1	26 Jun 2023	5	13.42	74.82	7.8	33.44	8.0	25.1	7.50
A1	26 Jun 2023	6	12.40	76.93	7.6	33.43	8.0	25.3	8.60
A1	26 Jun 2023	7	12.16	78.86	7.1	33.43	7.9	25.3	8.06
A1	26 Jun 2023	8	11.83	79.30	6.5	33.44	7.9	25.4	6.95
A1	26 Jun 2023	9	11.75	83.15	6.3	33.43	7.9	25.4	5.86
A1	26 Jun 2023	10	11.75	85.12	6.2	33.43	7.9	25.4	5.45
A1	26 Jun 2023	11	11.68	85.44	6.2	33.44	7.9	25.4	5.34
A1	26 Jun 2023	12	11.58	86.58	6.0	33.45	7.8	25.5	4.50
A1	26 Jun 2023	13	11.55	86.70	5.9	33.45	7.8	25.5	3.67
A1	26 Jun 2023	14	11.29	87.17	5.6	33.49	7.8	25.5	2.65
A1	26 Jun 2023	15	11.25	86.12	5.3	33.49	7.8	25.6	1.93
A1	26 Jun 2023	16	11.19	86.44	5.1	33.50	7.8	25.6	1.55
A1	26 Jun 2023	17	11.08	88.21	4.9	33.53	7.8	25.6	1.28
A1	26 Jun 2023	18	10.97	88.02	4.8	33.56	7.8	25.7	1.01
A1	31 May 2023	1	16.31	87.52	8.0	33.49	8.1	24.5	0.84
A1	31 May 2023	2	16.19	87.37	8.0	33.50	8.1	24.5	0.87
A1	31 May 2023	3	16.10	87.35	8.0	33.50	8.1	24.6	0.90
A1	31 May 2023	4	16.10	87.42	8.0	33.49	8.1	24.6	1.00
A1	31 May 2023	5	16.09	87.52	8.0	33.49	8.1	24.6	1.13
A1	31 May 2023	6	16.07	87.44	8.0	33.49	8.1	24.6	1.24
A1	31 May 2023	7	15.96	87.26	7.9	33.49	8.1	24.6	1.33
A1	31 May 2023	8	15.83	87.34	7.8	33.49	8.1	24.6	1.41
A1	31 May 2023	9	15.09	87.04	7.7	33.47	8.1	24.8	1.75
A1	31 May 2023	10	14.93	87.01	7.3	33.45	8.1	24.8	1.81
A1	31 May 2023	11	13.36	86.77	7.3	33.46	8.0	25.1	2.03
A1	31 May 2023	12	13.61	87.82	7.2	33.43	8.0	25.1	2.23
A1	31 May 2023	13	13.11	88.33	7.1	33.44	8.0	25.2	1.78
A1	31 May 2023	14	12.94	89.15	6.9	33.43	8.0	25.2	1.20
A1	31 May 2023	15	12.99	90.11	6.8	33.42	8.0	25.2	1.08
A1	31 May 2023	16	12.83	90.53	6.6	33.43	8.0	25.2	1.02
A1	31 May 2023	17	12.70	90.62	6.5	33.44	8.0	25.2	0.79
A1	31 May 2023	18	12.58	90.56	6.2	33.45	7.9	25.3	0.65
A1	31 May 2023	19	12.37	90.41	6.1	33.47	7.9	25.3	0.56
A6	06 Jun 2023	1	17.10	84.51	8.6	33.50	8.2	24.3	1.71
A6	06 Jun 2023	2	17.10	84.41	8.6	33.50	8.2	24.3	1.73
A6	06 Jun 2023	3	17.10	84.59	8.4	33.50	8.2	24.3	1.76
A6	06 Jun 2023	4	16.46	84.71	8.3	33.50	8.2	24.5	2.34
A6	06 Jun 2023	5	15.31	83.48	8.4	33.46	8.1	24.7	3.16
A6	06 Jun 2023	6	14.14	82.87	8.5	33.43	8.1	24.9	3.31
A6	06 Jun 2023	7	13.76	84.77	8.2	33.40	8.1	25.0	2.59
A6	06 Jun 2023	8	13.28	87.65	7.6	33.41	8.0	25.1	1.82
A6	06 Jun 2023	9	13.02	88.59	7.5	33.39	8.0	25.1	1.61
A6	06 Jun 2023	10	12.91	89.65	7.4	33.39	8.0	25.2	1.50
A6	06 Jun 2023	11	12.85	90.14	7.3	33.39	8.0	25.2	1.49
A6	06 Jun 2023	12	12.81	90.20	7.2	33.40	8.0	25.2	1.34
A6	06 Jun 2023	13	12.75	90.28	7.1	33.41	8.0	25.2	1.28
A6	06 Jun 2023	14	12.69	90.22	6.9	33.42	8.0	25.2	1.19
A6	06 Jun 2023	15	12.55	90.00	6.7	33.43	8.0	25.3	1.07
A6	06 Jun 2023	16	12.43	90.25	6.5	33.44	7.9	25.3	0.98
A6	06 Jun 2023	17	12.31	90.37	6.3	33.44	7.9	25.3	0.95
A6	06 Jun 2023	18	12.11	90.39	6.2	33.46	7.9	25.4	0.92
A6	06 Jun 2023	19	12.01	90.35	6.1	33.46	7.9	25.4	0.84
A6	06 Jun 2023	20	11.99	90.54	6.0	33.46	7.9	25.4	0.80

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens ( $\sigma$ -t)	Chlor ( $\mu$ g/L)
A6	13 Jun 2023	1	16.97	85.87	8.6	33.46	8.1	24.3	1.35
A6	13 Jun 2023	2	16.97	85.91	8.5	33.46	8.1	24.3	1.40
A6	13 Jun 2023	3	16.72	85.81	7.9	33.45	8.1	24.4	1.60
A6	13 Jun 2023	4	14.67	85.43	7.4	33.50	8.1	24.9	1.68
A6	13 Jun 2023	5	13.27	86.47	7.0	33.45	8.0	25.1	1.83
A6	13 Jun 2023	6	12.87	88.32	6.8	33.42	7.9	25.2	2.10
A6	13 Jun 2023	7	12.74	88.62	6.6	33.41	7.9	25.2	1.94
A6	13 Jun 2023	8	12.61	89.07	6.6	33.42	7.9	25.2	1.83
A6	13 Jun 2023	9	12.57	89.57	6.5	33.42	7.9	25.3	1.75
A6	13 Jun 2023	10	12.53	89.81	6.6	33.42	7.9	25.3	1.75
A6	13 Jun 2023	11	12.46	89.85	6.5	33.42	7.9	25.3	1.86
A6	13 Jun 2023	12	12.39	89.58	6.3	33.43	7.9	25.3	1.64
A6	13 Jun 2023	13	12.38	90.16	6.3	33.44	7.9	25.3	1.41
A6	13 Jun 2023	14	12.34	90.45	6.2	33.44	7.9	25.3	1.26
A6	13 Jun 2023	15	12.25	90.92	6.1	33.45	7.9	25.3	1.13
A6	13 Jun 2023	16	12.20	90.97	6.0	33.45	7.9	25.3	1.13
A6	13 Jun 2023	17	12.16	91.02	5.9	33.46	7.9	25.4	1.09
A6	13 Jun 2023	18	12.06	90.96	5.8	33.47	7.8	25.4	1.01
A6	13 Jun 2023	19	12.05	90.96	5.8	33.47	7.8	25.4	1.07
A6	20 Jun 2023	1	15.28	79.87	8.9	33.44	8.1	24.7	3.36
A6	20 Jun 2023	2	15.27	79.80	8.9	33.44	8.1	24.7	3.63
A6	20 Jun 2023	3	15.18	79.55	8.7	33.44	8.1	24.7	3.78
A6	20 Jun 2023	4	14.51	79.48	8.3	33.46	8.1	24.9	4.72
A6	20 Jun 2023	5	14.22	79.40	8.1	33.45	8.1	24.9	5.12
A6	20 Jun 2023	6	14.04	80.02	7.8	33.45	8.0	25.0	5.47
A6	20 Jun 2023	7	13.74	80.40	7.6	33.45	8.0	25.0	5.29
A6	20 Jun 2023	8	13.52	80.90	7.4	33.45	8.0	25.1	4.54
A6	20 Jun 2023	9	13.40	82.34	7.2	33.45	8.0	25.1	3.78
A6	20 Jun 2023	10	13.41	84.07	7.1	33.45	8.0	25.1	3.38
A6	20 Jun 2023	11	13.34	85.22	6.9	33.45	8.0	25.1	2.91
A6	20 Jun 2023	12	12.94	85.67	6.5	33.47	8.0	25.2	1.95
A6	20 Jun 2023	13	12.50	87.20	6.2	33.49	7.9	25.3	1.49
A6	20 Jun 2023	14	12.25	89.09	6.0	33.49	7.9	25.4	1.23
A6	20 Jun 2023	15	12.08	89.78	5.8	33.49	7.9	25.4	1.21
A6	20 Jun 2023	16	11.94	90.42	5.8	33.49	7.9	25.4	1.12
A6	20 Jun 2023	17	11.91	90.93	5.7	33.49	7.9	25.4	0.84
A6	20 Jun 2023	18	11.91	90.99	5.7	33.49	7.8	25.4	0.74
A6	26 Jun 2023	1	13.34	72.93	8.4	33.42	8.0	25.1	5.96
A6	26 Jun 2023	2	12.68	72.41	8.2	33.46	8.0	25.3	7.11
A6	26 Jun 2023	3	12.40	73.82	7.4	33.44	8.0	25.3	7.54
A6	26 Jun 2023	4	12.22	78.65	6.6	33.45	7.9	25.3	5.64
A6	26 Jun 2023	5	11.90	81.98	6.1	33.46	7.9	25.4	3.93
A6	26 Jun 2023	6	11.66	86.12	5.8	33.47	7.8	25.5	2.97
A6	26 Jun 2023	7	11.60	88.61	5.6	33.46	7.8	25.5	2.15
A6	26 Jun 2023	8	11.47	89.99	5.5	33.47	7.8	25.5	1.46
A6	26 Jun 2023	9	11.42	91.37	5.5	33.47	7.8	25.5	0.99
A6	26 Jun 2023	10	11.34	91.88	5.4	33.48	7.8	25.5	0.87
A6	26 Jun 2023	11	11.32	92.04	5.4	33.48	7.8	25.5	0.81
A6	26 Jun 2023	12	11.30	91.89	5.4	33.48	7.8	25.5	0.69
A6	26 Jun 2023	13	11.30	92.07	5.4	33.48	7.8	25.5	0.68
A6	26 Jun 2023	14	11.30	92.19	5.4	33.48	7.8	25.5	0.76
A6	26 Jun 2023	15	11.28	92.01	5.3	33.49	7.8	25.5	0.77
A6	26 Jun 2023	16	11.27	92.04	5.3	33.49	7.8	25.6	0.90
A6	26 Jun 2023	17	11.20	92.02	5.2	33.50	7.8	25.6	0.73
A6	26 Jun 2023	18	11.14	91.88	5.1	33.51	7.8	25.6	0.61
A6	26 Jun 2023	19	11.08	91.65	5.0	33.52	7.8	25.6	0.59
A6	31 May 2023	1	16.98	84.34	8.4	33.44	8.2	24.3	1.58

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens ( $\sigma$ -t)	Chlor ( $\mu$ g/L)
A6	31 May 2023	2	16.99	84.15	8.4	33.44	8.2	24.3	1.67
A6	31 May 2023	3	16.88	84.59	8.3	33.45	8.2	24.4	1.74
A6	31 May 2023	4	16.67	84.90	8.1	33.46	8.2	24.4	1.85
A6	31 May 2023	5	15.96	84.96	7.8	33.49	8.1	24.6	2.16
A6	31 May 2023	6	14.93	84.17	7.4	33.48	8.1	24.8	2.71
A6	31 May 2023	7	14.27	83.22	7.3	33.47	8.1	24.9	3.05
A6	31 May 2023	8	13.86	84.12	7.1	33.45	8.0	25.0	2.82
A6	31 May 2023	9	13.56	86.24	7.0	33.44	8.0	25.1	2.56
A6	31 May 2023	10	13.30	87.73	6.9	33.44	8.0	25.1	1.91
A6	31 May 2023	11	13.10	88.76	6.8	33.43	8.0	25.2	1.65
A6	31 May 2023	12	12.96	89.37	6.8	33.43	8.0	25.2	1.35
A6	31 May 2023	13	12.83	90.09	6.7	33.43	8.0	25.2	1.20
A6	31 May 2023	14	12.73	90.94	6.7	33.43	8.0	25.2	0.95
A6	31 May 2023	15	12.62	91.27	6.6	33.44	8.0	25.3	0.88
A6	31 May 2023	16	12.59	91.44	6.6	33.44	8.0	25.3	0.81
A6	31 May 2023	17	12.61	91.43	6.5	33.44	8.0	25.3	0.91
A6	31 May 2023	18	12.55	91.37	6.5	33.44	8.0	25.3	0.69
A6	31 May 2023	19	12.56	91.45	6.5	33.45	8.0	25.3	0.79
A6	31 May 2023	20	12.44	91.66	6.3	33.46	7.9	25.3	0.66
A7	06 Jun 2023	1	16.95	84.72	8.6	33.49	8.2	24.4	1.79
A7	06 Jun 2023	2	16.94	84.55	8.6	33.49	8.2	24.4	1.90
A7	06 Jun 2023	3	16.85	84.55	8.5	33.49	8.2	24.4	2.06
A7	06 Jun 2023	4	16.62	84.14	8.4	33.49	8.2	24.4	2.24
A7	06 Jun 2023	5	16.05	84.15	8.2	33.48	8.1	24.6	2.38
A7	06 Jun 2023	6	14.83	84.29	8.4	33.46	8.1	24.8	2.53
A7	06 Jun 2023	7	14.37	85.01	8.3	33.42	8.1	24.9	2.49
A7	06 Jun 2023	8	13.70	86.83	8.1	33.41	8.1	25.0	2.18
A7	06 Jun 2023	9	13.31	88.43	7.5	33.42	8.0	25.1	1.71
A7	06 Jun 2023	10	13.00	89.13	7.0	33.41	8.0	25.2	1.32
A7	06 Jun 2023	11	12.54	89.75	6.6	33.43	8.0	25.3	1.10
A7	06 Jun 2023	12	12.33	89.89	6.4	33.44	7.9	25.3	0.98
A7	06 Jun 2023	13	12.23	89.95	6.2	33.44	7.9	25.3	1.06
A7	06 Jun 2023	14	12.14	90.09	6.1	33.45	7.9	25.4	1.01
A7	06 Jun 2023	15	12.12	90.09	6.0	33.46	7.9	25.4	0.96
A7	06 Jun 2023	16	12.11	89.99	6.0	33.46	7.9	25.4	0.94
A7	06 Jun 2023	17	12.11	90.07	6.0	33.46	7.9	25.4	0.83
A7	06 Jun 2023	18	12.11	90.10	6.0	33.46	7.9	25.4	0.82
A7	13 Jun 2023	1	16.52	81.23	8.3	33.46	8.1	24.4	1.67
A7	13 Jun 2023	2	16.54	83.44	8.2	33.46	8.1	24.4	1.70
A7	13 Jun 2023	3	15.72	82.58	7.9	33.51	8.1	24.7	2.09
A7	13 Jun 2023	4	14.45	83.12	8.0	33.48	8.0	24.9	2.90
A7	13 Jun 2023	5	14.81	83.95	7.7	33.43	8.0	24.8	3.21
A7	13 Jun 2023	6	13.89	84.91	7.5	33.46	8.0	25.0	3.05
A7	13 Jun 2023	7	13.82	85.94	7.4	33.44	8.0	25.0	2.69
A7	13 Jun 2023	8	13.71	86.78	7.3	33.44	8.0	25.0	2.51
A7	13 Jun 2023	9	13.52	87.28	7.1	33.44	8.0	25.1	2.36
A7	13 Jun 2023	10	13.36	87.45	6.9	33.44	8.0	25.1	2.16
A7	13 Jun 2023	11	13.23	87.84	6.8	33.44	7.9	25.1	2.14
A7	13 Jun 2023	12	13.15	88.35	6.7	33.44	7.9	25.2	1.97
A7	13 Jun 2023	13	13.04	88.45	6.5	33.44	7.9	25.2	1.88
A7	13 Jun 2023	14	12.87	88.79	6.2	33.45	7.9	25.2	1.62
A7	13 Jun 2023	15	12.48	89.83	5.8	33.45	7.9	25.3	1.32
A7	13 Jun 2023	16	12.25	90.22	5.6	33.46	7.8	25.3	1.09
A7	13 Jun 2023	17	12.16	90.51	5.5	33.46	7.8	25.4	1.04
A7	13 Jun 2023	18	12.12	90.62	5.6	33.46	7.8	25.4	0.93
A7	13 Jun 2023	19	12.09	90.75	5.5	33.46	7.8	25.4	0.90
A7	13 Jun 2023	20	11.95	90.79	5.5	33.48	7.8	25.4	0.90
A7	20 Jun 2023	1	15.39	81.65	8.6	33.42	8.1	24.7	2.16

Station	Date	Depth (m)	Temp (°C)	XMS (‰)	DO (mg/L)	Sal (ppt)	pH	Dens ( $\sigma$ -t)	Chlor ( $\mu$ g/L)
A7	20 Jun 2023	2	14.46	81.32	8.2	33.47	8.1	24.9	2.95
A7	20 Jun 2023	3	13.79	81.41	7.7	33.46	8.1	25.0	3.67
A7	20 Jun 2023	4	13.52	81.70	7.3	33.45	8.0	25.1	3.39
A7	20 Jun 2023	5	13.16	83.56	7.0	33.47	8.0	25.2	3.03
A7	20 Jun 2023	6	13.04	84.89	6.9	33.45	8.0	25.2	2.61
A7	20 Jun 2023	7	13.01	86.46	6.9	33.45	8.0	25.2	2.55
A7	20 Jun 2023	8	13.00	86.84	6.9	33.45	8.0	25.2	2.44
A7	20 Jun 2023	9	12.98	87.02	6.9	33.45	8.0	25.2	2.45
A7	20 Jun 2023	10	12.94	86.84	6.9	33.45	8.0	25.2	2.53
A7	20 Jun 2023	11	12.87	87.00	6.8	33.45	7.9	25.2	2.65
A7	20 Jun 2023	12	12.84	87.11	6.8	33.46	7.9	25.2	2.63
A7	20 Jun 2023	13	12.82	87.18	6.7	33.46	7.9	25.2	2.54
A7	20 Jun 2023	14	12.72	87.36	6.6	33.46	7.9	25.3	2.32
A7	20 Jun 2023	15	12.65	87.84	6.4	33.46	7.9	25.3	2.19
A7	20 Jun 2023	16	12.57	88.24	6.2	33.46	7.9	25.3	1.87
A7	20 Jun 2023	17	12.18	89.06	6.0	33.49	7.9	25.4	1.55
A7	20 Jun 2023	18	12.11	90.22	5.9	33.48	7.9	25.4	1.23
A7	26 Jun 2023	1	14.00	75.38	8.6	33.43	8.1	25.0	5.64
A7	26 Jun 2023	2	13.94	75.89	8.6	33.43	8.1	25.0	5.83
A7	26 Jun 2023	3	13.64	74.26	8.5	33.44	8.1	25.1	6.11
A7	26 Jun 2023	4	13.61	75.68	8.2	33.43	8.0	25.1	6.47
A7	26 Jun 2023	5	13.17	75.41	7.9	33.43	8.0	25.1	6.85
A7	26 Jun 2023	6	12.82	76.36	7.7	33.43	8.0	25.2	6.46
A7	26 Jun 2023	7	12.74	76.70	7.3	33.45	8.0	25.2	6.57
A7	26 Jun 2023	8	12.08	80.52	6.4	33.45	7.9	25.4	5.01
A7	26 Jun 2023	9	11.48	85.14	5.7	33.47	7.8	25.5	2.67
A7	26 Jun 2023	10	11.40	89.65	5.5	33.46	7.8	25.5	1.77
A7	26 Jun 2023	11	11.35	91.60	5.5	33.46	7.8	25.5	1.48
A7	26 Jun 2023	12	11.32	91.95	5.5	33.47	7.8	25.5	1.37
A7	26 Jun 2023	13	11.32	91.93	5.5	33.47	7.8	25.5	1.26
A7	26 Jun 2023	14	11.32	91.71	5.5	33.47	7.8	25.5	1.33
A7	26 Jun 2023	15	11.28	91.70	5.4	33.48	7.8	25.5	1.15
A7	26 Jun 2023	16	11.26	91.65	5.4	33.48	7.8	25.5	1.01
A7	26 Jun 2023	17	11.26	91.67	5.4	33.48	7.8	25.5	1.15
A7	26 Jun 2023	18	11.24	91.78	5.4	33.49	7.8	25.6	1.09
A7	31 May 2023	1	16.85	85.93	8.4	33.47	8.2	24.4	1.22
A7	31 May 2023	2	16.85	85.78	8.4	33.47	8.2	24.4	1.28
A7	31 May 2023	3	16.83	85.70	8.4	33.47	8.2	24.4	1.39
A7	31 May 2023	4	16.79	85.82	8.3	33.47	8.2	24.4	1.50
A7	31 May 2023	5	16.38	85.97	8.1	33.49	8.1	24.5	1.58
A7	31 May 2023	6	15.80	86.02	7.6	33.50	8.1	24.6	1.88
A7	31 May 2023	7	14.38	85.40	7.4	33.48	8.1	24.9	2.72
A7	31 May 2023	8	13.96	84.57	7.3	33.45	8.0	25.0	3.59
A7	31 May 2023	9	13.55	85.08	7.3	33.45	8.0	25.1	3.54
A7	31 May 2023	10	13.15	85.96	7.5	33.42	8.0	25.1	3.22
A7	31 May 2023	11	13.11	87.73	7.4	33.41	8.0	25.1	2.64
A7	31 May 2023	12	12.93	88.52	7.3	33.41	8.0	25.2	2.00
A7	31 May 2023	13	12.96	89.70	7.2	33.41	8.0	25.2	1.71
A7	31 May 2023	14	12.85	90.21	7.0	33.43	8.0	25.2	1.37
A7	31 May 2023	15	12.75	90.17	6.8	33.43	8.0	25.2	1.21
A7	31 May 2023	16	12.59	90.65	6.5	33.45	8.0	25.3	1.08
A7	31 May 2023	17	12.47	91.31	6.3	33.45	7.9	25.3	0.76
A7	31 May 2023	18	12.39	91.41	6.2	33.46	7.9	25.3	0.64
A7	31 May 2023	19	12.37	91.41	6.1	33.46	7.9	25.3	0.58
C4	01 Jun 2023	1	16.41	83.94	8.6	33.47	8.2	24.5	1.85
C4	01 Jun 2023	2	16.48	84.04	8.4	33.46	8.2	24.5	1.81
C4	01 Jun 2023	3	15.77	84.09	8.2	33.49	8.2	24.6	2.11
C4	01 Jun 2023	4	14.99	83.87	8.0	33.44	8.1	24.8	3.37

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens ( $\sigma$ -t)	Chlor ( $\mu$ g/L)
C4	01 Jun 2023	5	14.39	81.38	7.5	33.47	8.1	24.9	4.08
C4	01 Jun 2023	6	13.97	79.76	7.2	33.45	8.0	25.0	4.13
C4	01 Jun 2023	7	13.82	80.58	7.0	33.43	8.0	25.0	3.48
C4	01 Jun 2023	8	13.76	81.52	7.0	33.43	8.0	25.0	3.04
C4	01 Jun 2023	9	13.70	82.88	6.9	33.43	8.0	25.0	2.53
C4	01 Jun 2023	10	13.60	84.92	6.7	33.43	8.0	25.1	2.17
C4	01 Jun 2023	11	13.36	85.99	6.5	33.43	8.0	25.1	1.36
C4	01 Jun 2023	12	13.36	85.33	6.4	33.43	7.9	25.1	0.94
C4	06 Jun 2023	1	16.59	85.04	8.1	33.48	8.1	24.4	1.26
C4	06 Jun 2023	2	15.79	84.83	7.9	33.49	8.1	24.6	1.51
C4	06 Jun 2023	3	15.23	84.97	7.6	33.48	8.1	24.8	1.50
C4	06 Jun 2023	4	14.64	85.65	7.2	33.47	8.1	24.9	1.20
C4	06 Jun 2023	5	14.08	86.59	6.9	33.47	8.0	25.0	0.94
C4	06 Jun 2023	6	13.46	87.03	6.6	33.46	8.0	25.1	0.83
C4	06 Jun 2023	7	13.21	86.15	6.3	33.45	8.0	25.2	0.70
C4	06 Jun 2023	8	12.84	83.27	6.1	33.46	7.9	25.2	0.58
C4	06 Jun 2023	9	12.67	80.95	6.0	33.45	7.9	25.3	0.49
C4	06 Jun 2023	10	12.66	79.37	6.0	33.45	7.9	25.3	0.50
C4	13 Jun 2023	1	17.02	83.38	8.7	33.47	8.2	24.3	0.97
C4	13 Jun 2023	2	16.95	83.26	8.6	33.48	8.2	24.4	1.04
C4	13 Jun 2023	3	16.55	82.95	8.3	33.48	8.2	24.5	1.27
C4	13 Jun 2023	4	15.69	82.84	7.8	33.49	8.1	24.7	2.52
C4	13 Jun 2023	5	14.73	80.09	7.4	33.49	8.0	24.9	4.03
C4	13 Jun 2023	6	14.39	78.81	7.4	33.45	8.0	24.9	3.60
C4	13 Jun 2023	7	14.24	81.18	7.3	33.44	8.0	24.9	3.61
C4	13 Jun 2023	8	14.07	82.06	7.2	33.44	8.0	25.0	3.39
C4	13 Jun 2023	9	13.88	82.85	6.9	33.44	8.0	25.0	2.63
C4	13 Jun 2023	10	13.71	85.72	6.6	33.44	8.0	25.0	1.37
C4	13 Jun 2023	11	13.70	86.90	6.6	33.44	7.9	25.0	0.81
C4	20 Jun 2023	1	15.10	82.98	8.5	33.45	8.1	24.8	1.80
C4	20 Jun 2023	2	14.41	82.24	8.2	33.46	8.1	24.9	3.17
C4	20 Jun 2023	3	14.08	79.72	7.9	33.46	8.1	25.0	4.35
C4	20 Jun 2023	4	13.93	79.71	7.7	33.45	8.1	25.0	3.98
C4	20 Jun 2023	5	13.74	81.33	7.5	33.45	8.0	25.0	2.91
C4	20 Jun 2023	6	13.59	82.90	7.2	33.45	8.0	25.1	2.03
C4	20 Jun 2023	7	13.43	85.46	7.1	33.45	8.0	25.1	1.76
C4	20 Jun 2023	8	13.31	86.56	6.8	33.45	8.0	25.1	1.47
C4	20 Jun 2023	9	12.89	84.53	6.5	33.46	7.9	25.2	0.87
C4	26 Jun 2023	1	16.52	72.85	8.6	33.45	8.2	24.4	0.68
C4	26 Jun 2023	2	16.19	72.63	8.5	33.45	8.2	24.5	0.99
C4	26 Jun 2023	3	15.08	71.97	8.4	33.47	8.1	24.8	1.94
C4	26 Jun 2023	4	14.58	73.32	8.1	33.43	8.1	24.9	2.84
C4	26 Jun 2023	5	13.54	74.95	7.7	33.45	8.0	25.1	2.80
C4	26 Jun 2023	6	13.59	76.15	7.5	33.42	8.0	25.1	2.98
C4	26 Jun 2023	7	12.99	77.84	7.0	33.43	8.0	25.2	3.19
C4	26 Jun 2023	8	12.20	78.80	6.0	33.46	7.9	25.4	2.11
C4	26 Jun 2023	9	12.40	74.26	6.0	33.41	7.9	25.3	1.32
C4	26 Jun 2023	10	12.22	65.18	6.2	33.46	7.9	25.4	1.46
C5	01 Jun 2023	1	16.84	83.17	8.5	33.46	8.2	24.4	1.82
C5	01 Jun 2023	2	16.84	83.18	8.4	33.46	8.2	24.4	1.84
C5	01 Jun 2023	3	16.80	83.39	8.3	33.47	8.2	24.4	2.01
C5	01 Jun 2023	4	16.47	83.48	8.1	33.48	8.2	24.5	2.52
C5	01 Jun 2023	5	15.66	83.41	7.7	33.50	8.1	24.7	4.16
C5	01 Jun 2023	6	15.07	82.60	7.3	33.48	8.1	24.8	4.13
C5	01 Jun 2023	7	14.43	83.56	7.1	33.48	8.1	24.9	2.85
C5	01 Jun 2023	8	14.10	86.23	7.0	33.47	8.0	25.0	1.81



Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens ( $\sigma$ -t)	Chlor ( $\mu$ g/L)
C5	01 Jun 2023	9	14.03	87.08	6.8	33.45	8.0	25.0	1.33
C5	01 Jun 2023	10	13.51	87.72	6.6	33.45	8.0	25.1	0.90
C5	01 Jun 2023	11	13.23	88.51	6.5	33.45	8.0	25.1	0.58
C5	06 Jun 2023	1	17.07	85.42	8.6	33.50	8.2	24.3	1.40
C5	06 Jun 2023	2	17.07	85.41	8.5	33.50	8.2	24.3	1.45
C5	06 Jun 2023	3	16.56	85.36	8.3	33.50	8.2	24.5	1.53
C5	06 Jun 2023	4	15.37	85.06	8.0	33.49	8.1	24.7	1.51
C5	06 Jun 2023	5	14.98	85.84	7.6	33.47	8.1	24.8	1.00
C5	06 Jun 2023	6	14.67	88.00	7.7	33.46	8.1	24.9	1.05
C5	06 Jun 2023	7	14.38	88.46	7.6	33.46	8.1	24.9	1.12
C5	06 Jun 2023	8	14.18	88.25	7.5	33.45	8.1	25.0	1.03
C5	06 Jun 2023	9	14.01	88.46	7.2	33.46	8.0	25.0	0.95
C5	06 Jun 2023	10	13.21	88.65	6.6	33.47	8.0	25.2	0.73
C5	06 Jun 2023	11	12.87	88.24	6.4	33.46	8.0	25.2	0.60
C5	13 Jun 2023	1	17.23	83.67	8.8	33.47	8.2	24.3	1.05
C5	13 Jun 2023	2	17.24	83.68	8.4	33.47	8.2	24.3	1.10
C5	13 Jun 2023	3	15.52	83.57	7.7	33.48	8.1	24.7	1.05
C5	13 Jun 2023	4	13.86	85.08	7.3	33.46	8.0	25.0	0.82
C5	13 Jun 2023	5	13.42	87.47	6.9	33.44	8.0	25.1	0.71
C5	13 Jun 2023	6	13.11	88.99	6.6	33.43	8.0	25.2	0.73
C5	13 Jun 2023	7	13.01	89.64	6.5	33.43	7.9	25.2	0.81
C5	13 Jun 2023	8	12.94	89.91	6.5	33.43	7.9	25.2	0.83
C5	13 Jun 2023	9	12.91	89.90	6.5	33.43	7.9	25.2	0.78
C5	13 Jun 2023	10	12.90	89.56	6.5	33.43	7.9	25.2	0.75
C5	20 Jun 2023	1	15.71	81.14	9.2	33.39	8.2	24.6	1.29
C5	20 Jun 2023	2	15.67	80.84	9.2	33.44	8.2	24.6	1.45
C5	20 Jun 2023	3	15.64	81.26	8.9	33.43	8.2	24.6	1.65
C5	20 Jun 2023	4	14.80	80.81	8.6	33.46	8.1	24.8	3.61
C5	20 Jun 2023	5	14.68	79.69	8.4	33.44	8.1	24.8	4.47
C5	20 Jun 2023	6	14.20	80.15	8.1	33.45	8.1	25.0	3.00
C5	20 Jun 2023	7	13.99	83.30	7.8	33.45	8.1	25.0	2.16
C5	20 Jun 2023	8	13.76	84.68	7.6	33.45	8.0	25.0	1.61
C5	20 Jun 2023	9	13.39	84.18	7.3	33.46	8.0	25.1	1.07
C5	20 Jun 2023	10	13.34	83.07	7.3	33.45	8.0	25.1	0.74
C5	26 Jun 2023	1	15.12	71.03	9.0	33.45	8.1	24.7	1.21
C5	26 Jun 2023	2	14.90	70.99	8.8	33.46	8.1	24.8	1.37
C5	26 Jun 2023	3	13.92	72.82	8.2	33.45	8.1	25.0	2.40
C5	26 Jun 2023	4	12.84	75.11	8.2	33.47	8.0	25.2	4.72
C5	26 Jun 2023	5	12.83	77.34	7.9	33.41	8.0	25.2	5.93
C5	26 Jun 2023	6	12.36	81.81	7.0	33.46	8.0	25.3	4.54
C5	26 Jun 2023	7	12.26	84.90	6.6	33.44	7.9	25.3	2.66
C5	26 Jun 2023	8	12.19	85.76	6.5	33.44	7.9	25.3	1.91
C5	26 Jun 2023	9	12.15	84.59	6.4	33.44	7.9	25.4	1.48
C6	01 Jun 2023	1	16.85	81.32	8.4	33.45	8.2	24.4	1.79
C6	01 Jun 2023	2	16.86	83.22	8.3	33.45	8.2	24.4	1.89
C6	01 Jun 2023	3	16.50	83.62	8.3	33.46	8.2	24.4	2.21
C6	01 Jun 2023	4	15.89	83.30	8.2	33.47	8.1	24.6	3.34
C6	01 Jun 2023	5	15.30	81.66	8.0	33.47	8.1	24.7	4.42
C6	01 Jun 2023	6	14.88	80.50	7.6	33.45	8.1	24.8	3.85
C6	01 Jun 2023	7	14.37	81.56	7.1	33.46	8.1	24.9	2.57
C6	01 Jun 2023	8	13.50	85.48	6.8	33.46	8.0	25.1	1.13
C6	01 Jun 2023	9	13.52	87.32	6.8	33.43	8.0	25.1	0.58
C6	01 Jun 2023	10	13.51	86.78	6.9	33.43	8.0	25.1	0.48
C6	06 Jun 2023	1	17.02	84.79	8.7	33.49	8.2	24.4	1.44
C6	06 Jun 2023	2	17.02	84.91	8.7	33.49	8.2	24.4	1.51

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens ( $\sigma$ -t)	Chlor ( $\mu$ g/L)
C6	06 Jun 2023	3	17.02	84.89	8.7	33.49	8.2	24.4	1.56
C6	06 Jun 2023	4	16.99	84.83	8.6	33.49	8.2	24.4	1.62
C6	06 Jun 2023	5	16.64	84.80	8.2	33.49	8.2	24.4	1.51
C6	06 Jun 2023	6	15.90	84.90	7.7	33.49	8.1	24.6	1.08
C6	06 Jun 2023	7	15.00	85.28	7.3	33.48	8.1	24.8	0.95
C6	06 Jun 2023	8	13.55	86.51	6.8	33.47	8.0	25.1	0.74
C6	06 Jun 2023	9	13.22	87.12	6.6	33.45	8.0	25.1	0.55
C6	13 Jun 2023	1	17.22	83.99	9.2	33.47	8.2	24.3	1.25
C6	13 Jun 2023	2	17.23	83.95	9.1	33.47	8.2	24.3	1.31
C6	13 Jun 2023	3	17.16	83.90	8.6	33.47	8.2	24.3	1.36
C6	13 Jun 2023	4	16.20	83.95	7.8	33.49	8.2	24.5	1.21
C6	13 Jun 2023	5	13.80	85.64	7.3	33.50	8.0	25.1	0.84
C6	13 Jun 2023	6	13.44	88.71	7.0	33.45	8.0	25.1	0.75
C6	13 Jun 2023	7	13.32	89.44	6.8	33.43	8.0	25.1	0.80
C6	13 Jun 2023	8	13.06	90.37	6.7	33.43	7.9	25.2	0.73
C6	13 Jun 2023	9	13.06	90.41	6.7	33.43	7.9	25.2	0.69
C6	20 Jun 2023	1	15.37	80.14	9.1	33.44	8.1	24.7	2.44
C6	20 Jun 2023	2	15.27	80.52	8.9	33.46	8.1	24.7	2.45
C6	20 Jun 2023	3	14.66	80.27	8.6	33.47	8.1	24.9	3.83
C6	20 Jun 2023	4	14.46	78.49	8.3	33.46	8.1	24.9	5.57
C6	20 Jun 2023	5	14.29	78.01	8.1	33.45	8.1	24.9	6.87
C6	20 Jun 2023	6	14.03	77.75	7.8	33.46	8.1	25.0	7.40
C6	20 Jun 2023	7	13.48	78.11	7.2	33.48	8.0	25.1	5.09
C6	20 Jun 2023	8	12.88	81.79	6.7	33.48	8.0	25.2	2.01
C6	26 Jun 2023	1	14.38	67.03	8.6	33.44	8.1	24.9	4.11
C6	26 Jun 2023	2	14.23	69.52	8.4	33.45	8.1	24.9	4.59
C6	26 Jun 2023	3	13.66	69.46	8.1	33.44	8.0	25.1	6.18
C6	26 Jun 2023	4	13.02	73.51	7.5	33.46	8.0	25.2	5.48
C6	26 Jun 2023	5	12.85	78.83	7.1	33.44	8.0	25.2	3.83
C6	26 Jun 2023	6	12.71	81.03	6.7	33.44	8.0	25.2	2.69
C6	26 Jun 2023	7	12.32	82.70	6.1	33.45	7.9	25.3	1.70
C6	26 Jun 2023	8	12.10	84.42	5.8	33.45	7.9	25.4	0.95
C6	26 Jun 2023	9	12.06	85.04	5.8	33.45	7.8	25.4	0.73
C7	06 Jun 2023	1	16.89	81.93	8.7	33.48	8.2	24.4	2.53
C7	06 Jun 2023	2	16.89	81.44	8.6	33.49	8.2	24.4	2.69
C7	06 Jun 2023	3	16.88	81.97	8.6	33.49	8.2	24.4	2.79
C7	06 Jun 2023	4	16.86	81.84	8.6	33.49	8.2	24.4	2.96
C7	06 Jun 2023	5	16.86	81.75	8.6	33.48	8.2	24.4	3.05
C7	06 Jun 2023	6	16.85	81.99	8.7	33.48	8.2	24.4	3.12
C7	06 Jun 2023	7	16.84	81.97	8.6	33.49	8.2	24.4	3.06
C7	06 Jun 2023	8	16.76	82.07	8.5	33.48	8.2	24.4	3.24
C7	06 Jun 2023	9	15.92	81.95	8.4	33.48	8.1	24.6	3.35
C7	06 Jun 2023	10	15.00	82.22	8.3	33.46	8.1	24.8	3.66
C7	06 Jun 2023	11	13.97	82.94	8.3	33.44	8.1	25.0	3.40
C7	06 Jun 2023	12	13.77	84.77	8.0	33.41	8.1	25.0	3.05
C7	06 Jun 2023	13	13.48	86.68	7.4	33.42	8.0	25.1	2.33
C7	06 Jun 2023	14	12.81	88.20	6.8	33.44	8.0	25.2	1.35
C7	06 Jun 2023	15	12.68	89.10	6.6	33.42	8.0	25.2	1.02
C7	06 Jun 2023	16	12.73	89.63	6.8	33.42	8.0	25.2	0.84
C7	06 Jun 2023	17	12.82	89.66	6.8	33.41	8.0	25.2	0.87
C7	06 Jun 2023	18	12.75	89.76	6.8	33.43	8.0	25.2	0.85
C7	13 Jun 2023	1	17.15	83.80	8.6	33.46	8.1	24.3	1.72
C7	13 Jun 2023	2	17.09	82.35	8.4	33.47	8.2	24.3	1.85
C7	13 Jun 2023	3	15.86	83.22	8.1	33.49	8.1	24.6	2.72
C7	13 Jun 2023	4	14.24	82.40	7.9	33.46	8.1	24.9	3.04
C7	13 Jun 2023	5	14.05	85.38	7.7	33.43	8.0	25.0	2.75

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens ( $\sigma$ -t)	Chlor ( $\mu$ g/L)
C7	13 Jun 2023	6	13.57	87.14	7.6	33.42	8.0	25.1	2.50
C7	13 Jun 2023	7	13.43	87.15	7.5	33.42	8.0	25.1	2.42
C7	13 Jun 2023	8	13.28	88.10	7.2	33.42	8.0	25.1	2.18
C7	13 Jun 2023	9	13.22	88.76	7.2	33.42	8.0	25.1	2.02
C7	13 Jun 2023	10	13.20	88.82	7.1	33.42	8.0	25.1	1.91
C7	13 Jun 2023	11	13.11	89.04	6.9	33.43	8.0	25.2	1.65
C7	13 Jun 2023	12	13.06	89.72	6.7	33.43	7.9	25.2	1.43
C7	13 Jun 2023	13	12.86	90.30	6.5	33.44	7.9	25.2	1.28
C7	13 Jun 2023	14	12.77	90.69	6.3	33.44	7.9	25.2	1.15
C7	13 Jun 2023	15	12.46	90.93	6.0	33.45	7.9	25.3	1.04
C7	13 Jun 2023	16	12.10	91.31	5.7	33.47	7.9	25.4	0.84
C7	13 Jun 2023	17	12.08	91.65	5.6	33.46	7.8	25.4	0.71
C7	13 Jun 2023	18	12.08	91.59	5.6	33.46	7.8	25.4	0.58
C7	20 Jun 2023	1	15.83	78.24	9.2	33.44	8.1	24.6	3.20
C7	20 Jun 2023	2	15.76	78.17	9.1	33.44	8.1	24.6	3.48
C7	20 Jun 2023	3	15.68	75.65	9.1	33.44	8.1	24.6	5.22
C7	20 Jun 2023	4	15.52	73.60	8.9	33.44	8.1	24.7	6.55
C7	20 Jun 2023	5	14.81	74.47	8.5	33.46	8.1	24.8	6.17
C7	20 Jun 2023	6	13.93	77.50	7.9	33.47	8.1	25.0	6.63
C7	20 Jun 2023	7	13.63	79.17	7.5	33.46	8.0	25.1	5.64
C7	20 Jun 2023	8	13.44	81.59	7.3	33.45	8.0	25.1	4.34
C7	20 Jun 2023	9	13.34	84.29	7.2	33.45	8.0	25.1	3.51
C7	20 Jun 2023	10	13.18	85.90	7.0	33.45	8.0	25.2	2.93
C7	20 Jun 2023	11	13.07	86.65	6.9	33.45	8.0	25.2	1.95
C7	20 Jun 2023	12	12.98	87.61	6.8	33.46	8.0	25.2	1.56
C7	20 Jun 2023	13	12.72	88.66	6.5	33.47	7.9	25.3	1.26
C7	20 Jun 2023	14	12.40	89.36	6.1	33.48	7.9	25.3	0.97
C7	20 Jun 2023	15	12.07	89.92	5.7	33.50	7.9	25.4	0.79
C7	20 Jun 2023	16	11.87	90.38	5.6	33.50	7.8	25.4	0.74
C7	20 Jun 2023	17	11.75	90.91	5.4	33.51	7.8	25.5	0.60
C7	26 Jun 2023	1	15.23	74.41	9.0	33.44	8.1	24.7	4.41
C7	26 Jun 2023	2	14.52	71.20	8.7	33.45	8.1	24.9	6.17
C7	26 Jun 2023	3	13.30	71.21	8.6	33.46	8.1	25.1	7.72
C7	26 Jun 2023	4	13.01	71.55	8.4	33.44	8.1	25.2	8.50
C7	26 Jun 2023	5	12.61	72.46	8.0	33.42	8.0	25.2	8.71
C7	26 Jun 2023	6	12.29	76.19	7.5	33.42	8.0	25.3	7.56
C7	26 Jun 2023	7	12.41	80.65	7.3	33.41	8.0	25.3	6.74
C7	26 Jun 2023	8	12.00	82.53	6.5	33.44	8.0	25.4	5.06
C7	26 Jun 2023	9	11.81	85.36	6.0	33.44	7.9	25.4	3.65
C7	26 Jun 2023	10	11.65	87.66	5.6	33.45	7.9	25.5	2.50
C7	26 Jun 2023	11	11.36	89.49	5.4	33.48	7.8	25.5	1.60
C7	26 Jun 2023	12	11.52	90.85	5.4	33.46	7.8	25.5	1.46
C7	26 Jun 2023	13	11.30	90.89	5.3	33.49	7.8	25.5	0.96
C7	26 Jun 2023	14	11.29	90.50	5.2	33.49	7.8	25.5	0.72
C7	26 Jun 2023	15	11.28	90.31	5.2	33.49	7.8	25.5	0.76
C7	26 Jun 2023	16	11.28	90.25	5.2	33.49	7.8	25.6	0.73
C7	26 Jun 2023	17	11.28	90.32	5.2	33.49	7.8	25.6	0.68
C7	26 Jun 2023	18	11.28	90.19	5.1	33.50	7.8	25.6	0.65
C7	31 May 2023	1	17.11	83.54	8.3	33.39	8.2	24.3	1.55
C7	31 May 2023	2	17.05	83.67	8.3	33.41	8.2	24.3	1.66
C7	31 May 2023	3	16.80	84.48	8.3	33.47	8.2	24.4	1.84
C7	31 May 2023	4	16.65	84.52	8.3	33.46	8.2	24.4	2.08
C7	31 May 2023	5	16.53	84.41	8.0	33.45	8.1	24.4	2.31
C7	31 May 2023	6	15.34	84.14	8.0	33.48	8.1	24.7	3.28
C7	31 May 2023	7	15.10	83.01	7.9	33.45	8.1	24.8	4.45
C7	31 May 2023	8	14.48	83.68	7.4	33.48	8.1	24.9	3.93
C7	31 May 2023	9	14.26	85.99	6.9	33.47	8.0	24.9	3.52
C7	31 May 2023	10	14.01	86.44	6.7	33.46	8.0	25.0	3.75

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens ( $\sigma$ -t)	Chlor ( $\mu$ g/L)
C7	31 May 2023	11	13.66	87.26	6.6	33.46	8.0	25.1	3.07
C7	31 May 2023	12	13.21	88.88	6.6	33.45	8.0	25.1	1.90
C7	31 May 2023	13	13.33	89.93	6.5	33.44	8.0	25.1	1.52
C7	31 May 2023	14	13.07	90.61	6.5	33.45	8.0	25.2	1.16
C7	31 May 2023	15	13.01	90.78	6.5	33.45	8.0	25.2	0.97
C7	31 May 2023	16	12.77	91.04	6.4	33.45	8.0	25.2	0.77
C7	31 May 2023	17	12.63	91.50	6.2	33.45	7.9	25.3	0.57
C7	31 May 2023	18	12.62	91.62	6.2	33.45	7.9	25.3	0.64
C8	06 Jun 2023	1	17.10	83.18	8.5	33.49	8.2	24.3	1.52
C8	06 Jun 2023	2	17.10	83.15	8.5	33.50	8.2	24.3	1.60
C8	06 Jun 2023	3	17.09	83.32	8.5	33.50	8.2	24.3	1.68
C8	06 Jun 2023	4	17.09	83.21	8.5	33.49	8.2	24.3	1.70
C8	06 Jun 2023	5	17.06	83.09	8.5	33.49	8.2	24.3	1.79
C8	06 Jun 2023	6	16.96	82.82	8.5	33.49	8.2	24.4	2.06
C8	06 Jun 2023	7	16.81	82.42	8.6	33.49	8.2	24.4	2.67
C8	06 Jun 2023	8	16.77	81.99	8.6	33.48	8.2	24.4	2.96
C8	06 Jun 2023	9	16.61	81.83	8.5	33.48	8.2	24.4	3.10
C8	06 Jun 2023	10	15.97	82.09	8.4	33.48	8.1	24.6	3.34
C8	06 Jun 2023	11	15.07	82.62	8.2	33.45	8.1	24.8	3.30
C8	06 Jun 2023	12	14.43	83.22	8.1	33.44	8.1	24.9	2.86
C8	06 Jun 2023	13	14.11	84.91	8.0	33.43	8.1	24.9	2.14
C8	06 Jun 2023	14	14.03	86.62	7.8	33.42	8.1	25.0	1.87
C8	06 Jun 2023	15	13.58	87.16	7.3	33.43	8.0	25.1	1.43
C8	06 Jun 2023	16	12.89	87.71	6.8	33.44	8.0	25.2	0.93
C8	06 Jun 2023	17	12.70	88.27	6.6	33.43	8.0	25.2	0.82
C8	06 Jun 2023	18	12.52	88.25	6.5	33.43	7.9	25.3	0.69
C8	06 Jun 2023	19	12.40	88.32	6.4	33.43	7.9	25.3	0.71
C8	13 Jun 2023	1	17.13	83.15	8.7	33.47	8.2	24.3	1.91
C8	13 Jun 2023	2	17.13	83.15	8.7	33.47	8.2	24.3	2.18
C8	13 Jun 2023	3	17.11	83.07	8.6	33.47	8.2	24.3	2.28
C8	13 Jun 2023	4	16.89	82.84	8.4	33.46	8.2	24.4	2.75
C8	13 Jun 2023	5	15.58	81.62	8.3	33.52	8.1	24.7	3.62
C8	13 Jun 2023	6	14.91	81.93	8.0	33.47	8.1	24.8	3.38
C8	13 Jun 2023	7	14.12	84.47	8.0	33.47	8.1	25.0	2.99
C8	13 Jun 2023	8	13.93	85.63	8.0	33.42	8.1	25.0	2.79
C8	13 Jun 2023	9	13.82	86.27	7.6	33.42	8.0	25.0	2.56
C8	13 Jun 2023	10	13.31	87.31	7.2	33.43	8.0	25.1	2.26
C8	13 Jun 2023	11	13.16	88.57	7.2	33.43	8.0	25.1	2.00
C8	13 Jun 2023	12	13.12	88.93	7.0	33.43	8.0	25.2	1.87
C8	13 Jun 2023	13	12.92	89.53	6.5	33.44	8.0	25.2	1.42
C8	13 Jun 2023	14	12.80	90.17	6.3	33.44	7.9	25.2	0.96
C8	13 Jun 2023	15	12.81	89.72	6.2	33.44	7.9	25.2	0.83
C8	13 Jun 2023	16	12.58	89.65	6.1	33.44	7.9	25.3	0.97
C8	13 Jun 2023	17	12.28	90.33	6.0	33.45	7.9	25.3	0.99
C8	13 Jun 2023	18	12.24	91.28	6.0	33.45	7.9	25.3	0.95
C8	13 Jun 2023	19	12.22	91.15	6.0	33.45	7.9	25.3	0.90
C8	20 Jun 2023	1	15.64	80.19	9.0	33.43	8.1	24.6	1.69
C8	20 Jun 2023	2	15.62	77.76	8.8	33.43	8.1	24.6	1.76
C8	20 Jun 2023	3	15.04	79.82	8.6	33.46	8.1	24.8	2.71
C8	20 Jun 2023	4	14.58	79.07	8.2	33.45	8.1	24.9	4.74
C8	20 Jun 2023	5	13.93	77.94	7.7	33.45	8.1	25.0	5.84
C8	20 Jun 2023	6	13.10	78.62	7.1	33.47	8.0	25.2	4.61
C8	20 Jun 2023	7	12.80	81.77	6.7	33.46	8.0	25.2	3.59
C8	20 Jun 2023	8	12.54	85.85	6.4	33.46	7.9	25.3	2.79
C8	20 Jun 2023	9	12.39	86.80	6.2	33.46	7.9	25.3	2.23
C8	20 Jun 2023	10	12.26	88.43	6.1	33.46	7.9	25.3	1.80
C8	20 Jun 2023	11	12.16	89.42	5.9	33.47	7.9	25.4	1.60
C8	20 Jun 2023	12	12.01	89.94	5.6	33.47	7.9	25.4	1.08

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens ( $\sigma$ -t)	Chlor ( $\mu$ g/L)
C8	20 Jun 2023	13	11.86	90.55	5.4	33.48	7.8	25.4	0.78
C8	20 Jun 2023	14	11.83	90.64	5.3	33.49	7.8	25.4	0.75
C8	20 Jun 2023	15	11.81	90.53	5.3	33.49	7.8	25.4	0.65
C8	20 Jun 2023	16	11.79	90.49	5.3	33.49	7.8	25.5	0.69
C8	20 Jun 2023	17	11.78	90.19	5.3	33.49	7.8	25.5	0.61
C8	20 Jun 2023	18	11.78	90.10	5.2	33.49	7.8	25.5	0.59
C8	26 Jun 2023	1	16.37	78.61	8.4	33.44	8.1	24.5	2.74
C8	26 Jun 2023	2	16.35	78.42	8.3	33.43	8.1	24.5	2.90
C8	26 Jun 2023	3	14.68	77.77	8.5	33.47	8.1	24.9	5.11
C8	26 Jun 2023	4	13.21	74.46	8.5	33.44	8.1	25.1	7.87
C8	26 Jun 2023	5	12.58	73.54	7.4	33.45	8.0	25.3	8.61
C8	26 Jun 2023	6	12.50	76.34	6.8	33.42	7.9	25.3	7.26
C8	26 Jun 2023	7	12.14	77.88	6.6	33.45	7.9	25.4	5.87
C8	26 Jun 2023	8	11.99	84.70	6.3	33.43	7.9	25.4	4.24
C8	26 Jun 2023	9	12.01	87.44	6.2	33.43	7.9	25.4	3.57
C8	26 Jun 2023	10	11.67	89.69	5.7	33.47	7.9	25.5	2.32
C8	26 Jun 2023	11	11.57	90.67	5.5	33.47	7.8	25.5	1.48
C8	26 Jun 2023	12	11.50	90.88	5.4	33.48	7.8	25.5	1.20
C8	26 Jun 2023	13	11.48	91.27	5.4	33.48	7.8	25.5	0.99
C8	26 Jun 2023	14	11.40	91.64	5.2	33.49	7.8	25.5	0.95
C8	26 Jun 2023	15	11.26	91.53	5.1	33.50	7.8	25.6	0.75
C8	26 Jun 2023	16	11.27	91.13	5.1	33.50	7.8	25.6	0.68
C8	26 Jun 2023	17	11.28	91.05	5.1	33.50	7.8	25.6	0.67
C8	26 Jun 2023	18	11.27	90.78	5.1	33.51	7.8	25.6	0.57
C8	26 Jun 2023	19	11.27	90.22	5.1	33.51	7.8	25.6	0.58
C8	31 May 2023	1	17.20	86.74	8.5	33.49	8.2	24.3	0.60
C8	31 May 2023	2	17.20	86.67	8.5	33.49	8.2	24.3	0.61
C8	31 May 2023	3	17.20	86.57	8.5	33.49	8.2	24.3	0.63
C8	31 May 2023	4	17.15	86.53	8.4	33.49	8.2	24.3	0.69
C8	31 May 2023	5	16.81	86.71	8.3	33.48	8.2	24.4	0.93
C8	31 May 2023	6	16.60	86.43	8.2	33.47	8.2	24.4	1.18
C8	31 May 2023	7	16.25	85.68	8.0	33.47	8.1	24.5	1.38
C8	31 May 2023	8	15.39	86.27	7.7	33.47	8.1	24.7	1.48
C8	31 May 2023	9	14.37	86.65	7.3	33.48	8.1	24.9	2.12
C8	31 May 2023	10	13.94	87.26	6.9	33.46	8.0	25.0	1.58
C8	31 May 2023	11	13.59	88.99	6.5	33.45	8.0	25.1	1.23
C8	31 May 2023	12	13.29	89.63	6.4	33.45	8.0	25.1	0.83
C8	31 May 2023	13	13.42	89.49	6.4	33.44	8.0	25.1	0.85
C8	31 May 2023	14	12.62	90.07	6.4	33.46	8.0	25.3	0.73
C8	31 May 2023	15	12.64	91.08	6.4	33.43	8.0	25.2	0.64
C8	31 May 2023	16	12.55	91.44	6.4	33.45	8.0	25.3	0.69
C8	31 May 2023	17	12.44	91.44	6.4	33.44	8.0	25.3	0.76
C8	31 May 2023	18	12.42	91.59	6.4	33.44	8.0	25.3	0.67
C8	31 May 2023	19	12.47	91.60	6.4	33.44	8.0	25.3	0.72

NA = not available

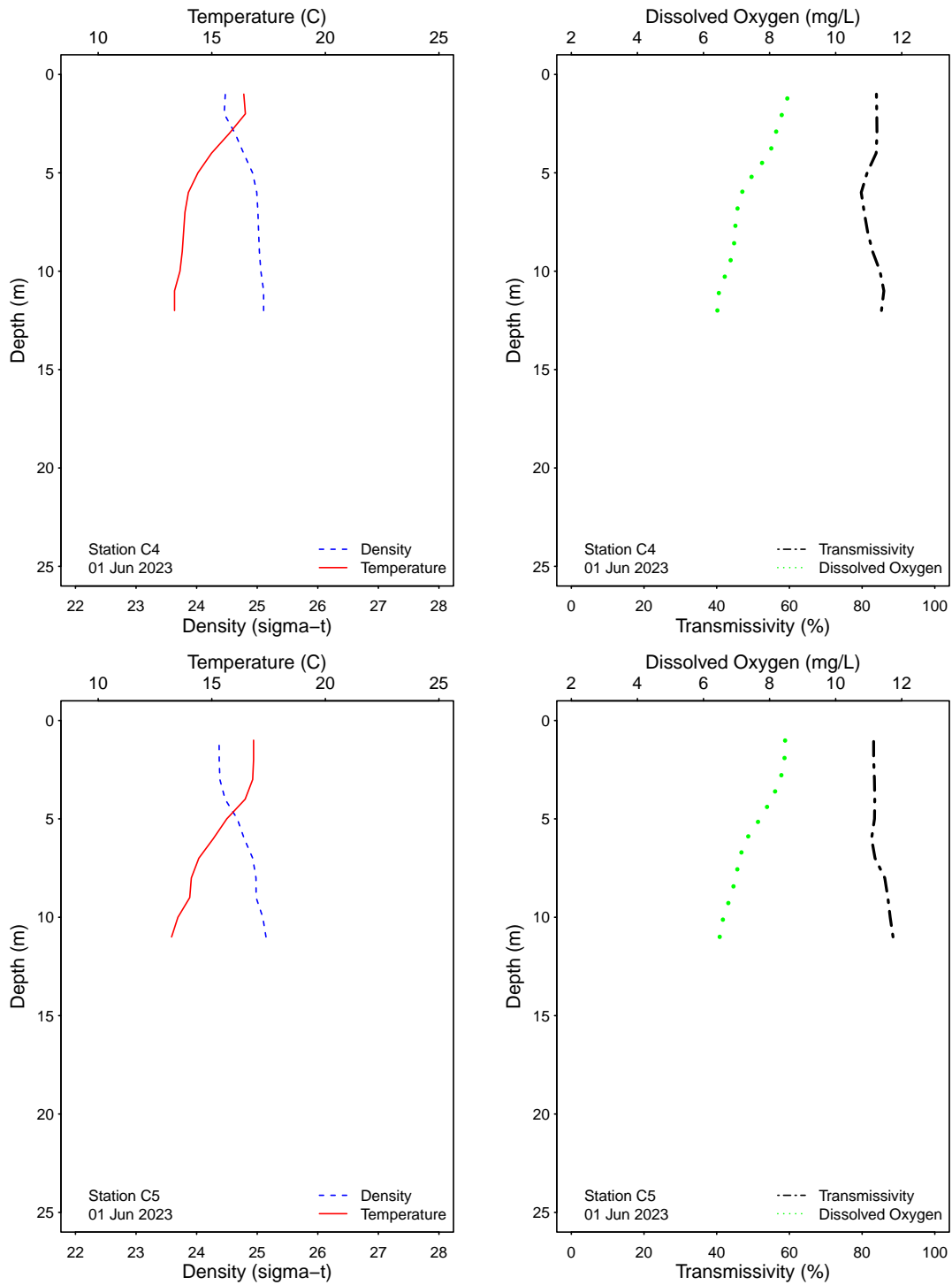


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

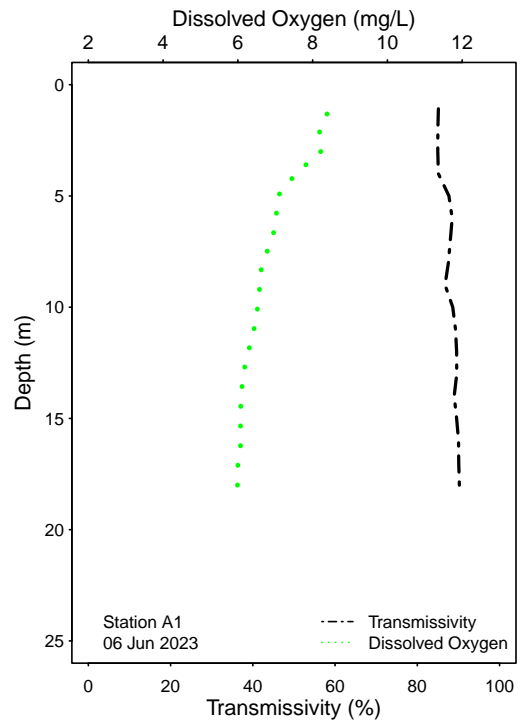
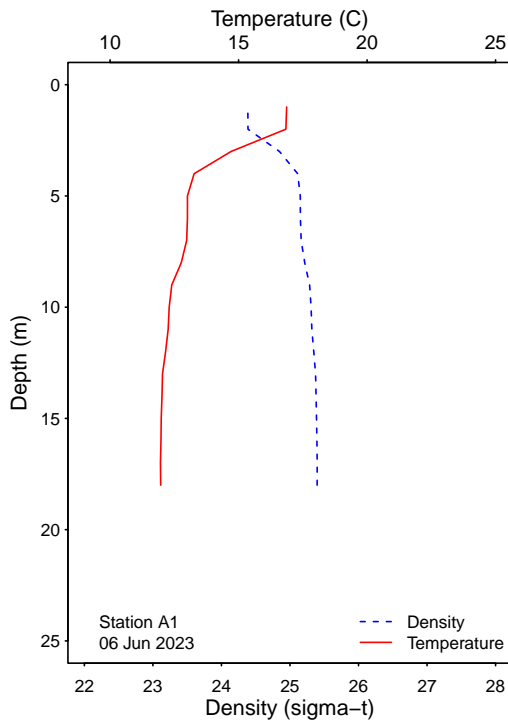
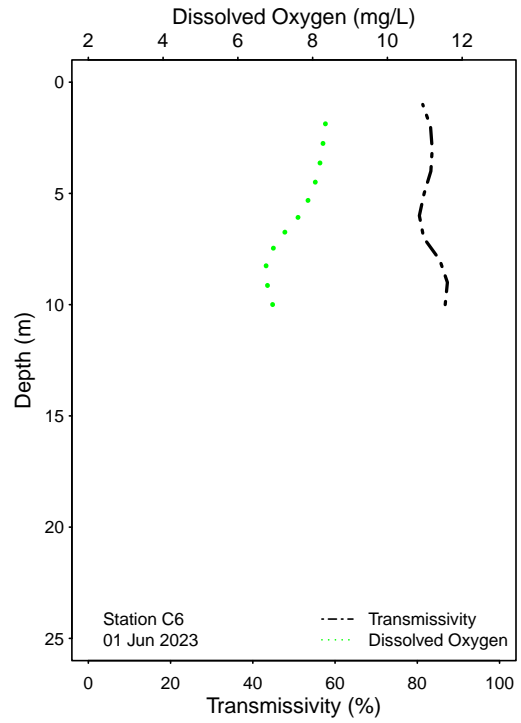
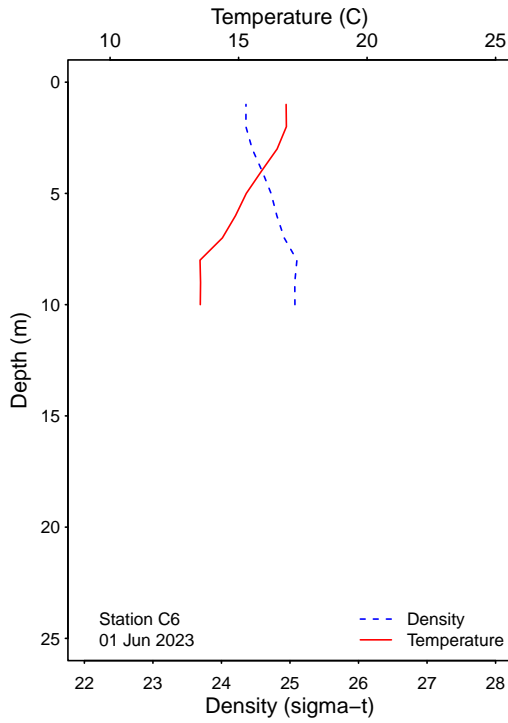


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

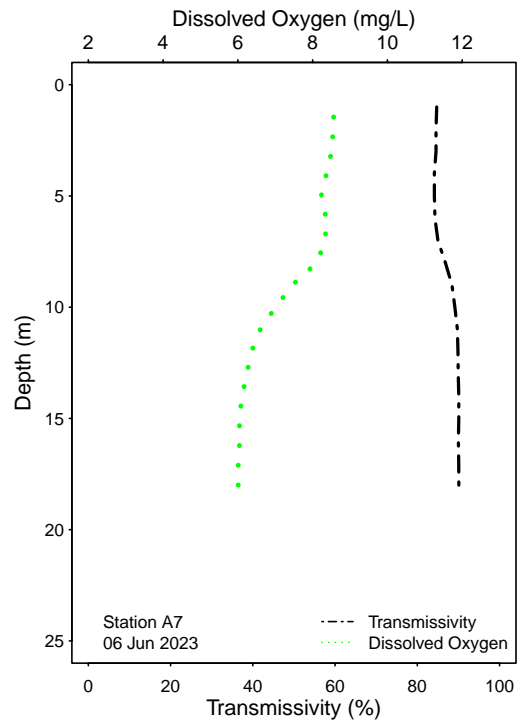
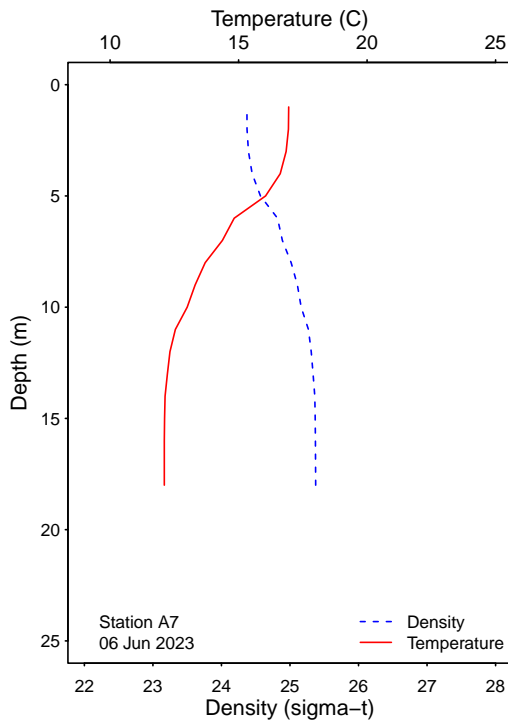
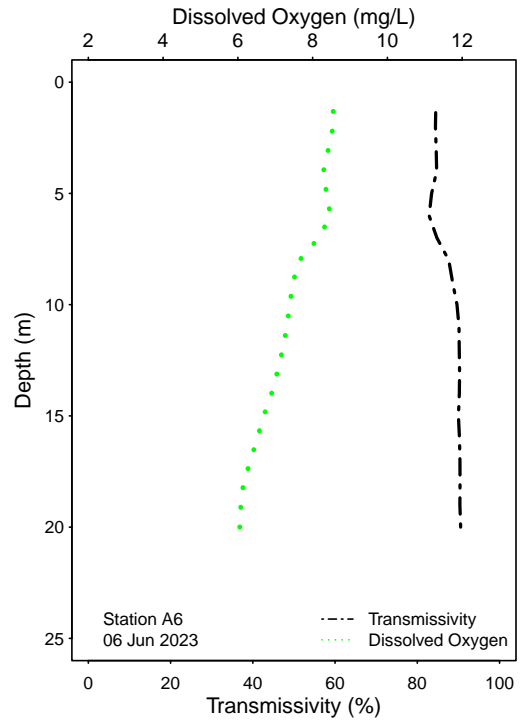
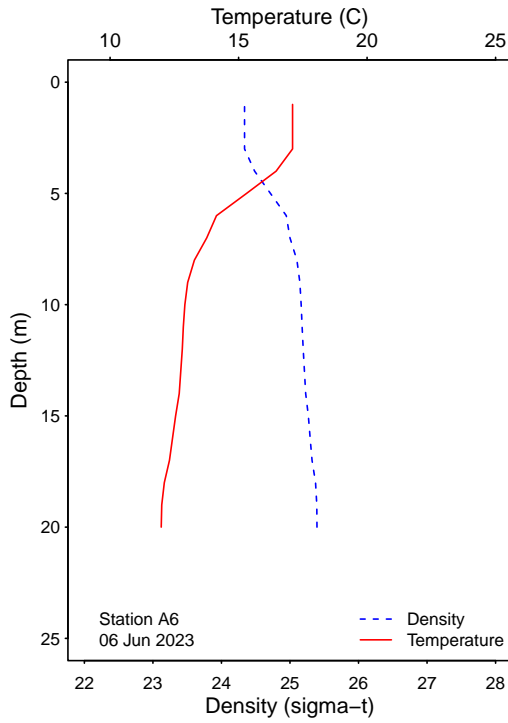


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.



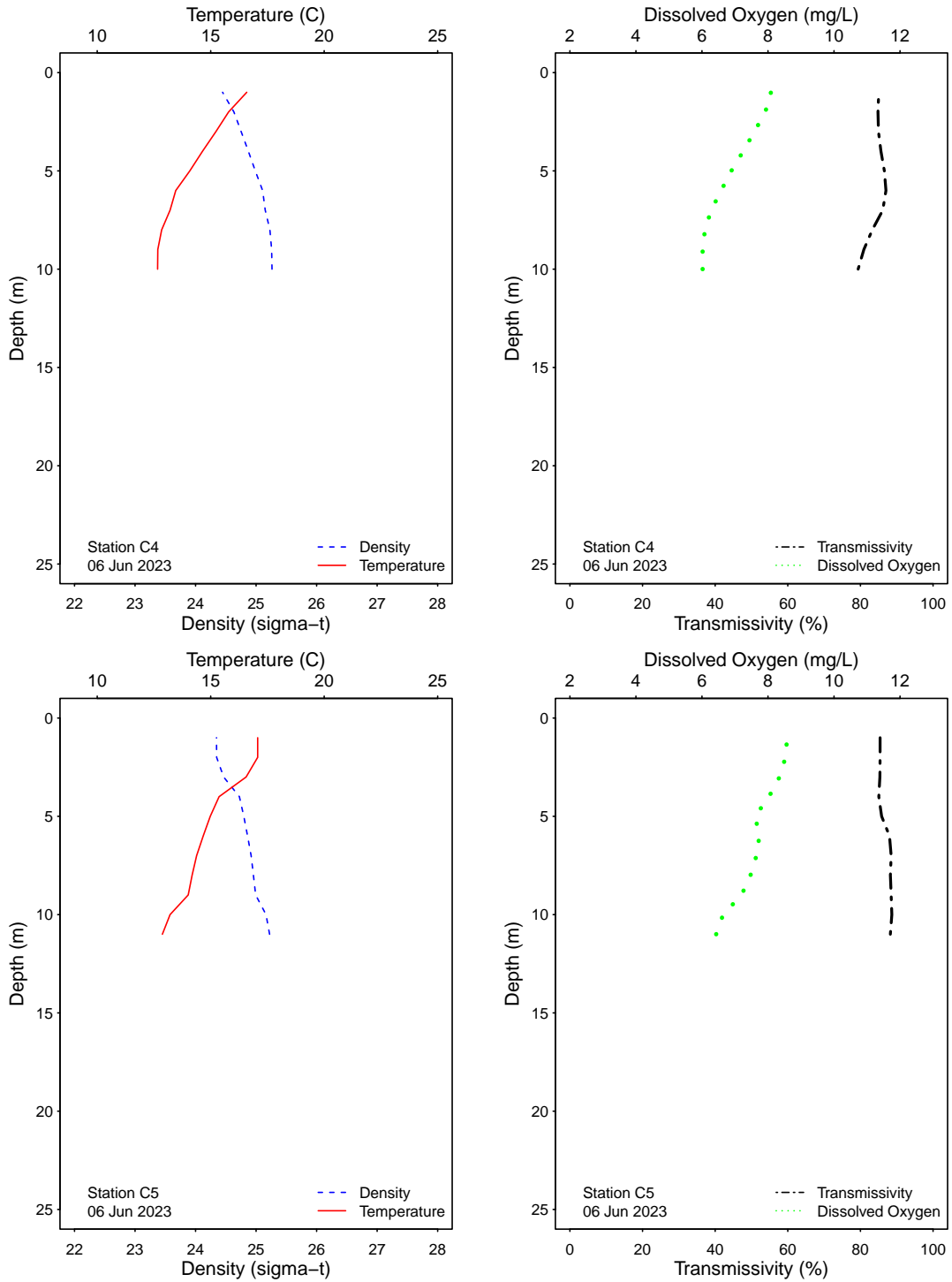


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

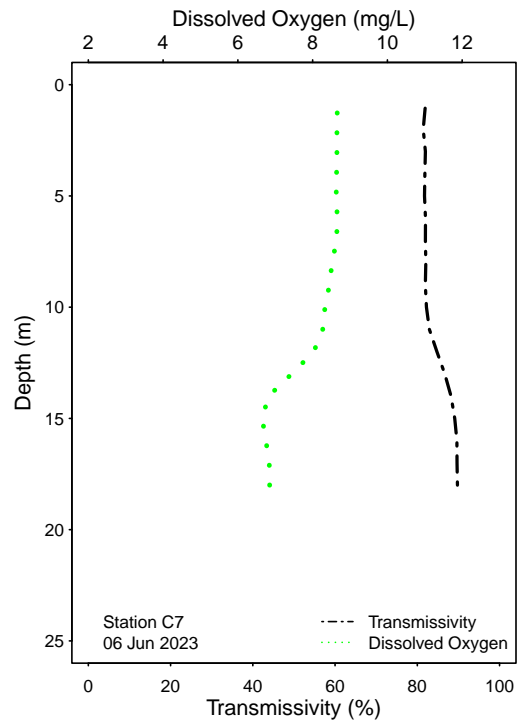
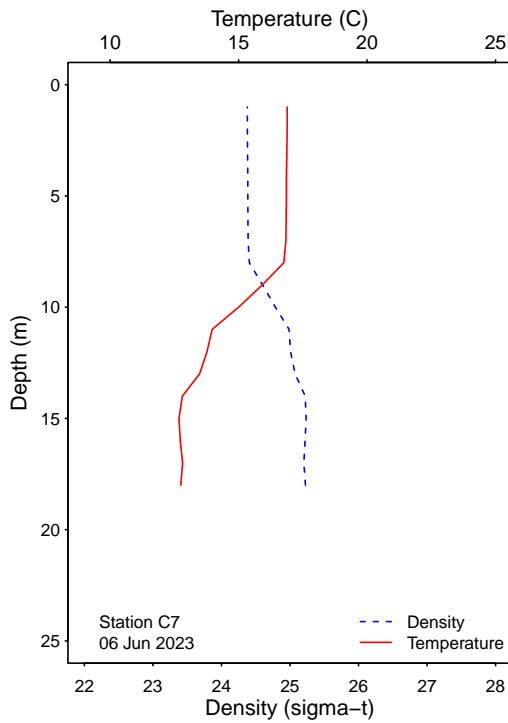
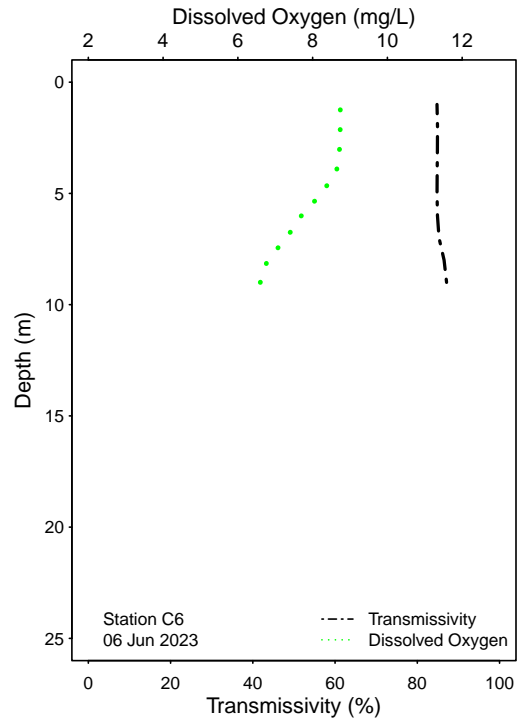
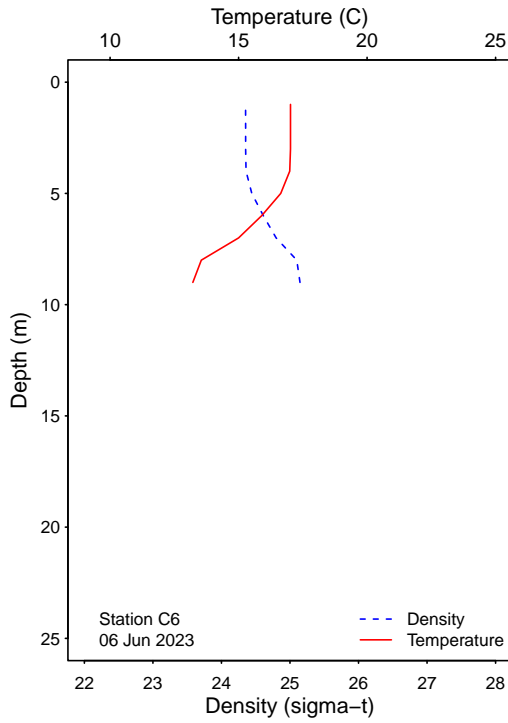


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

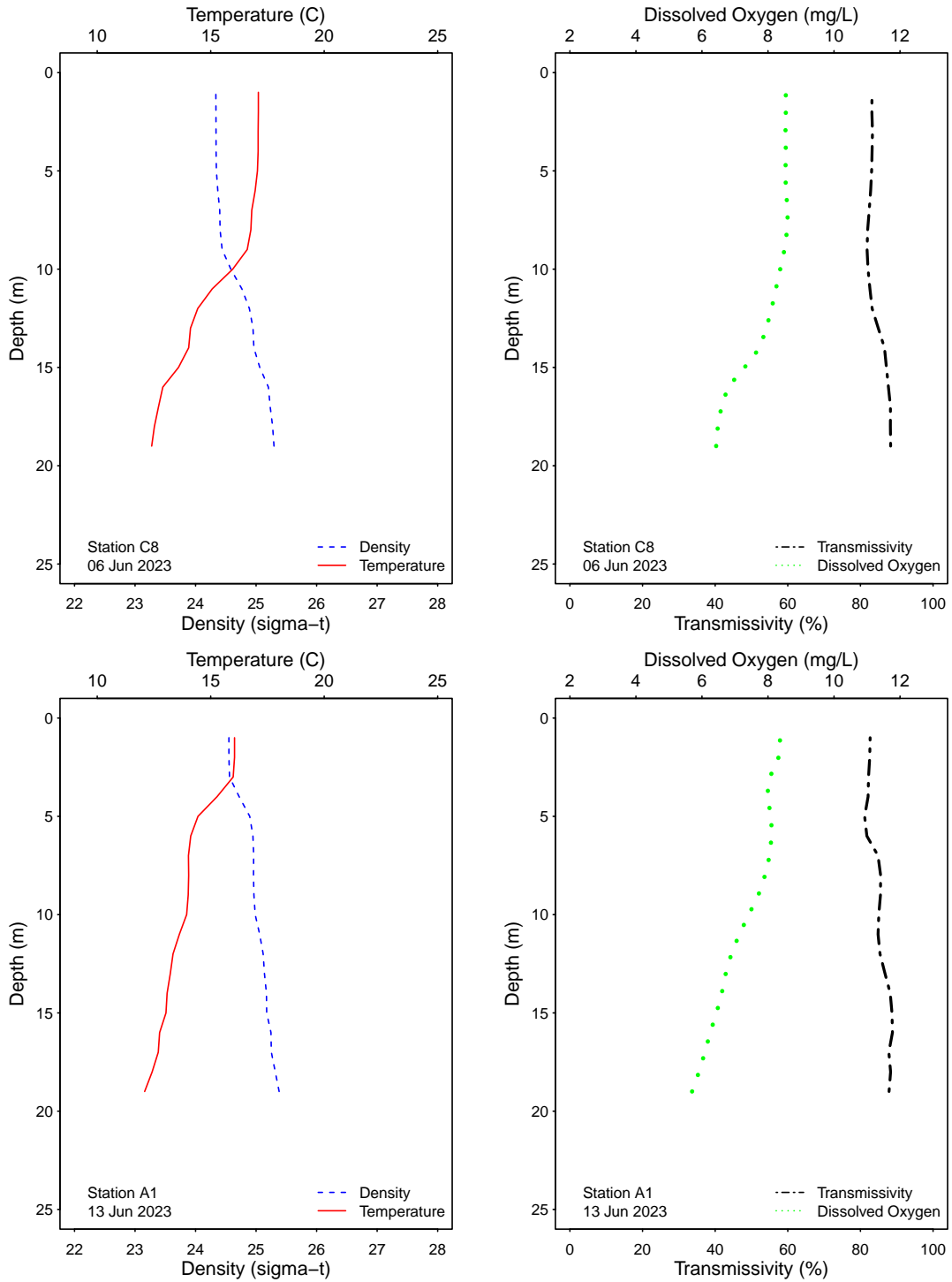


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

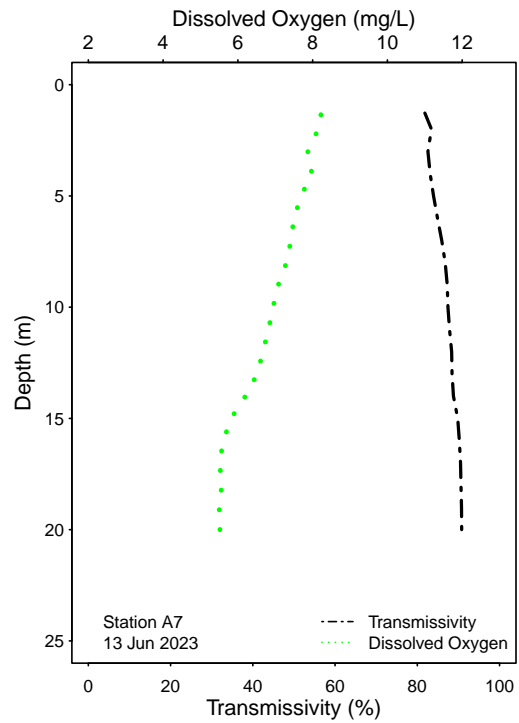
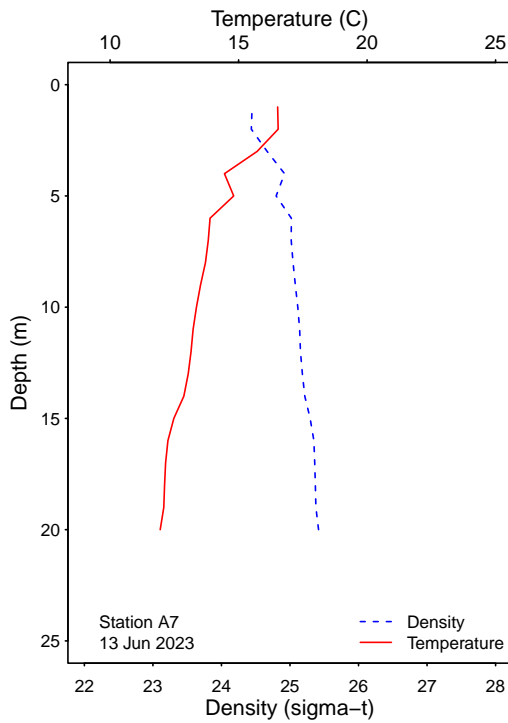
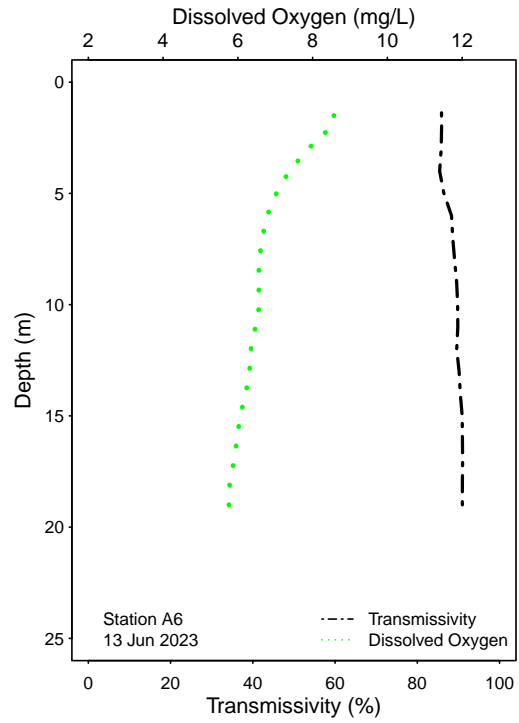
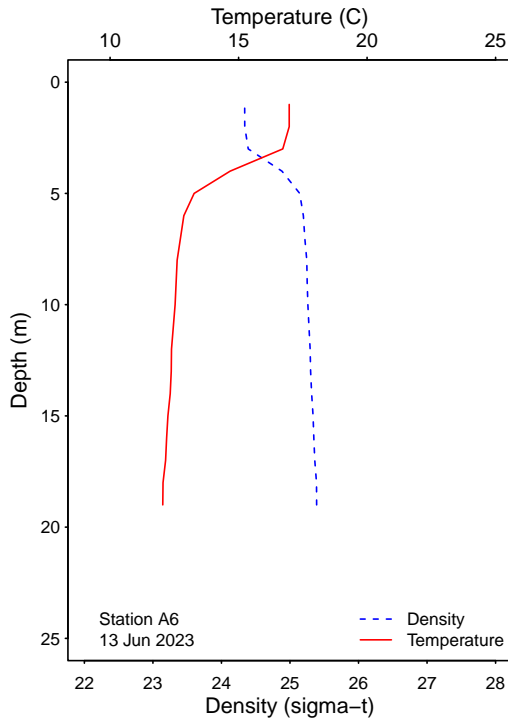


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

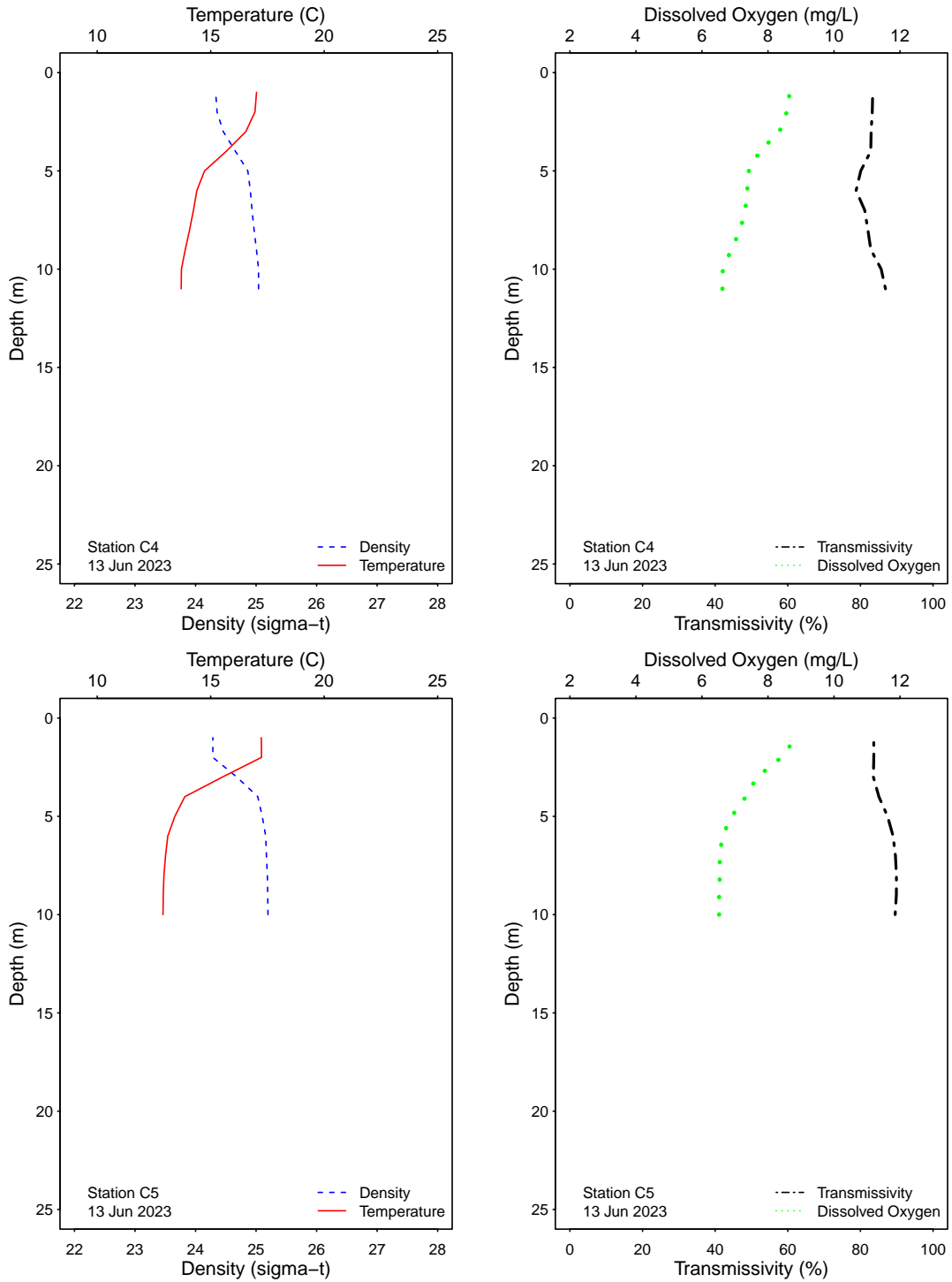


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

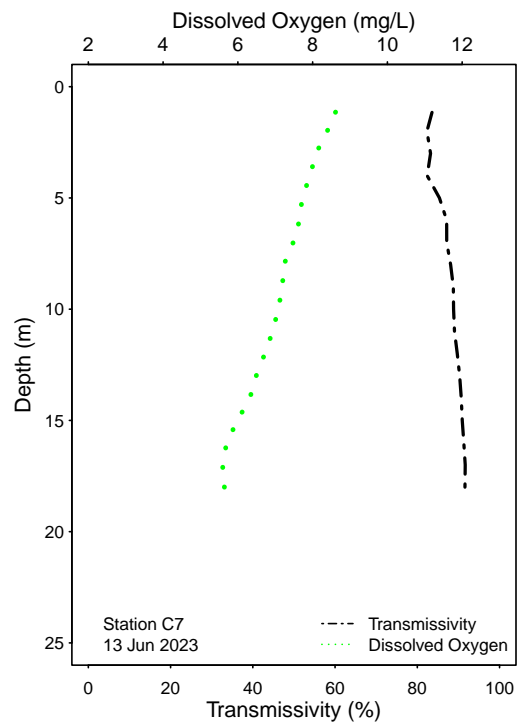
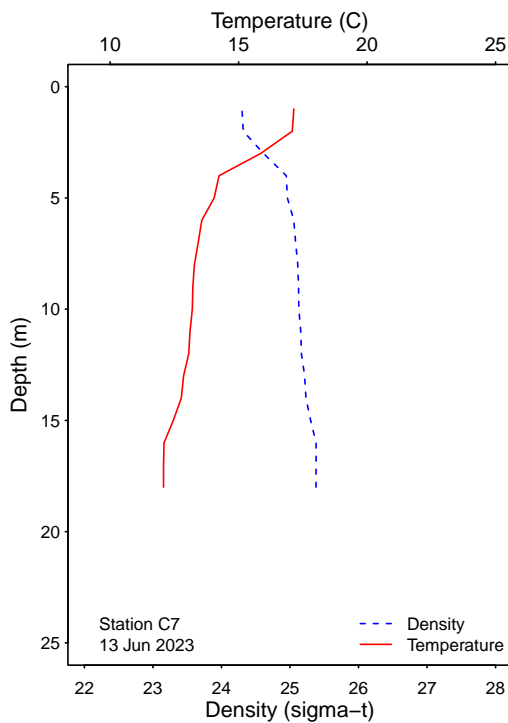
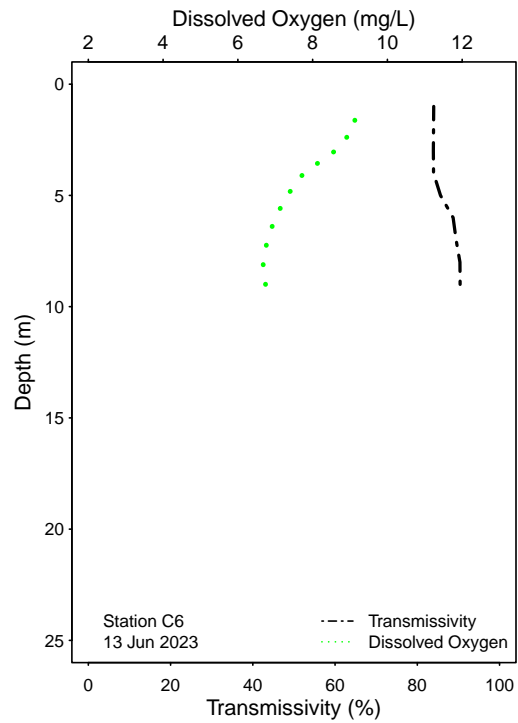
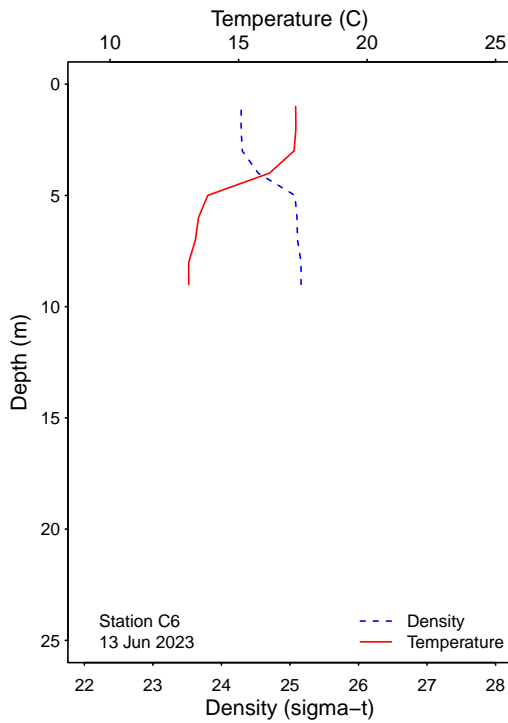


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

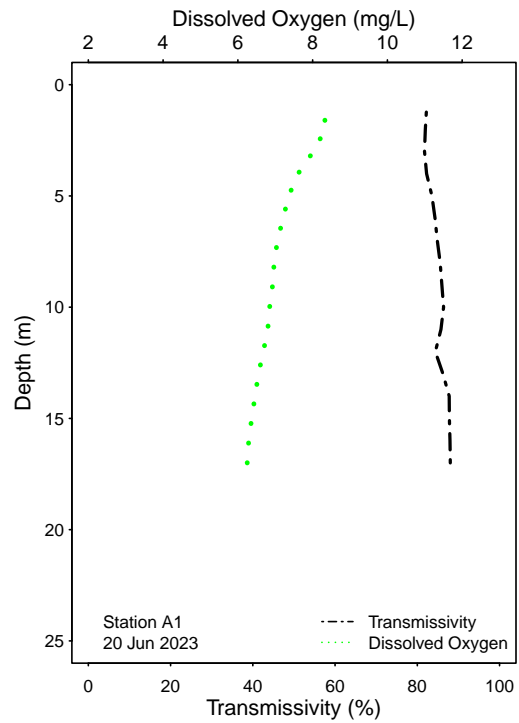
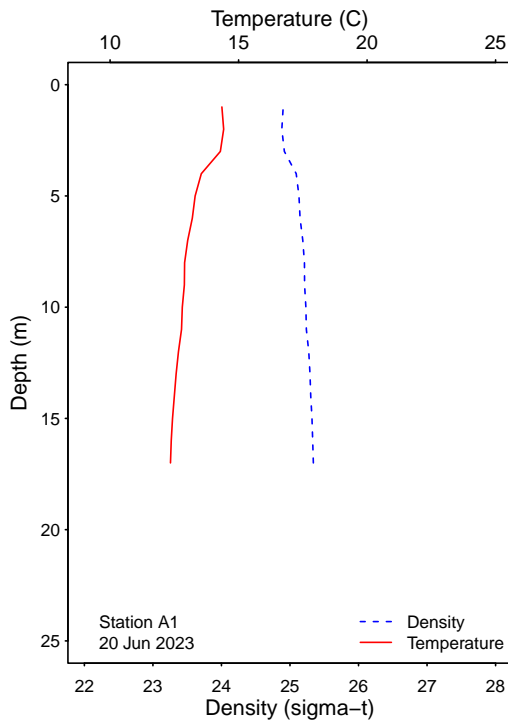
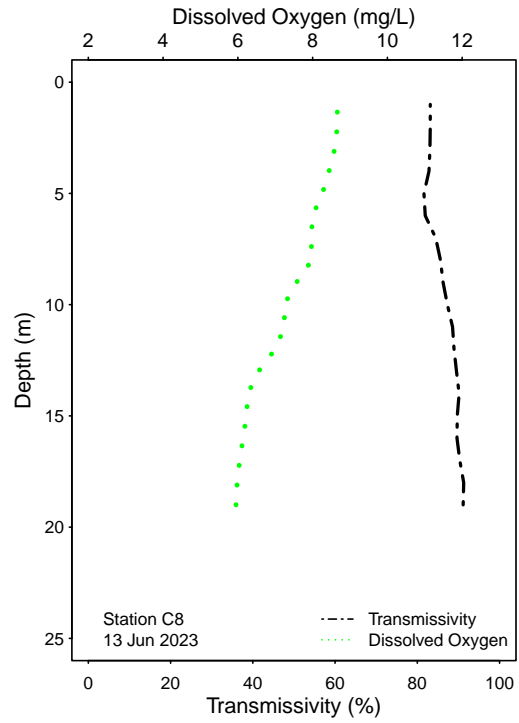
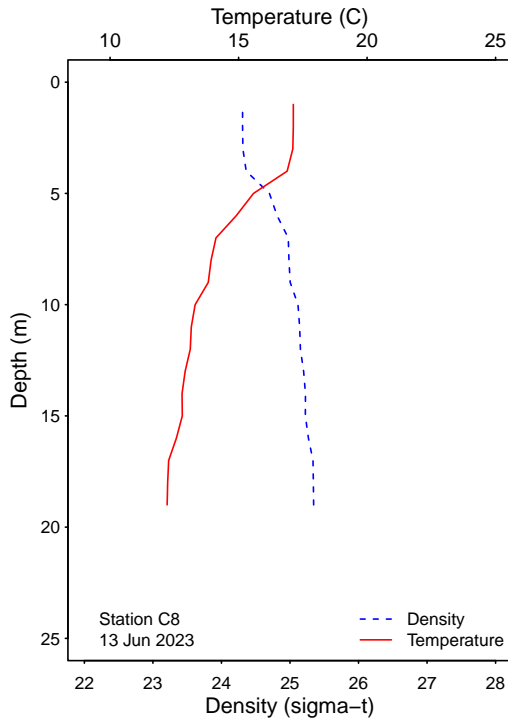


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

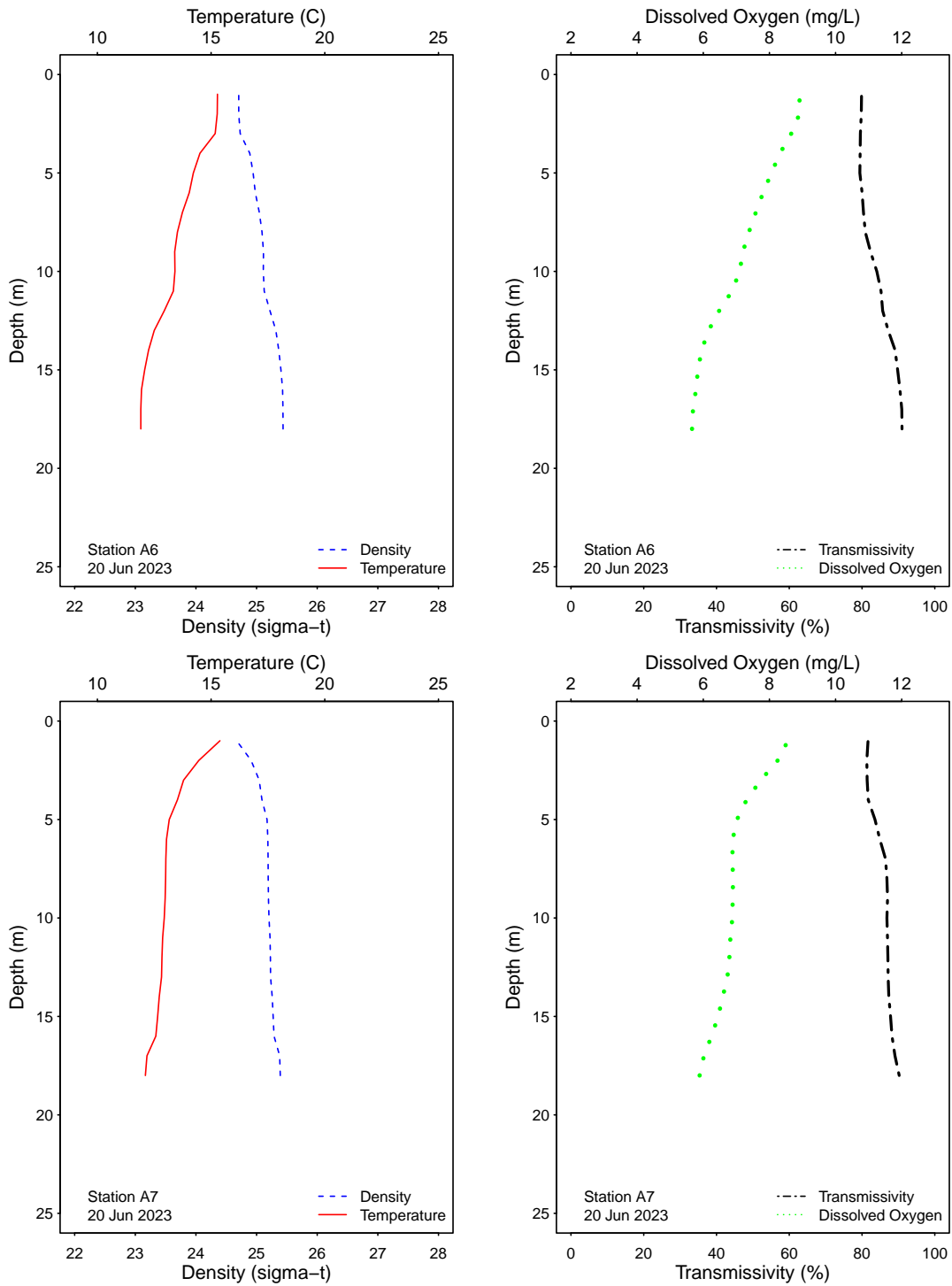


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.



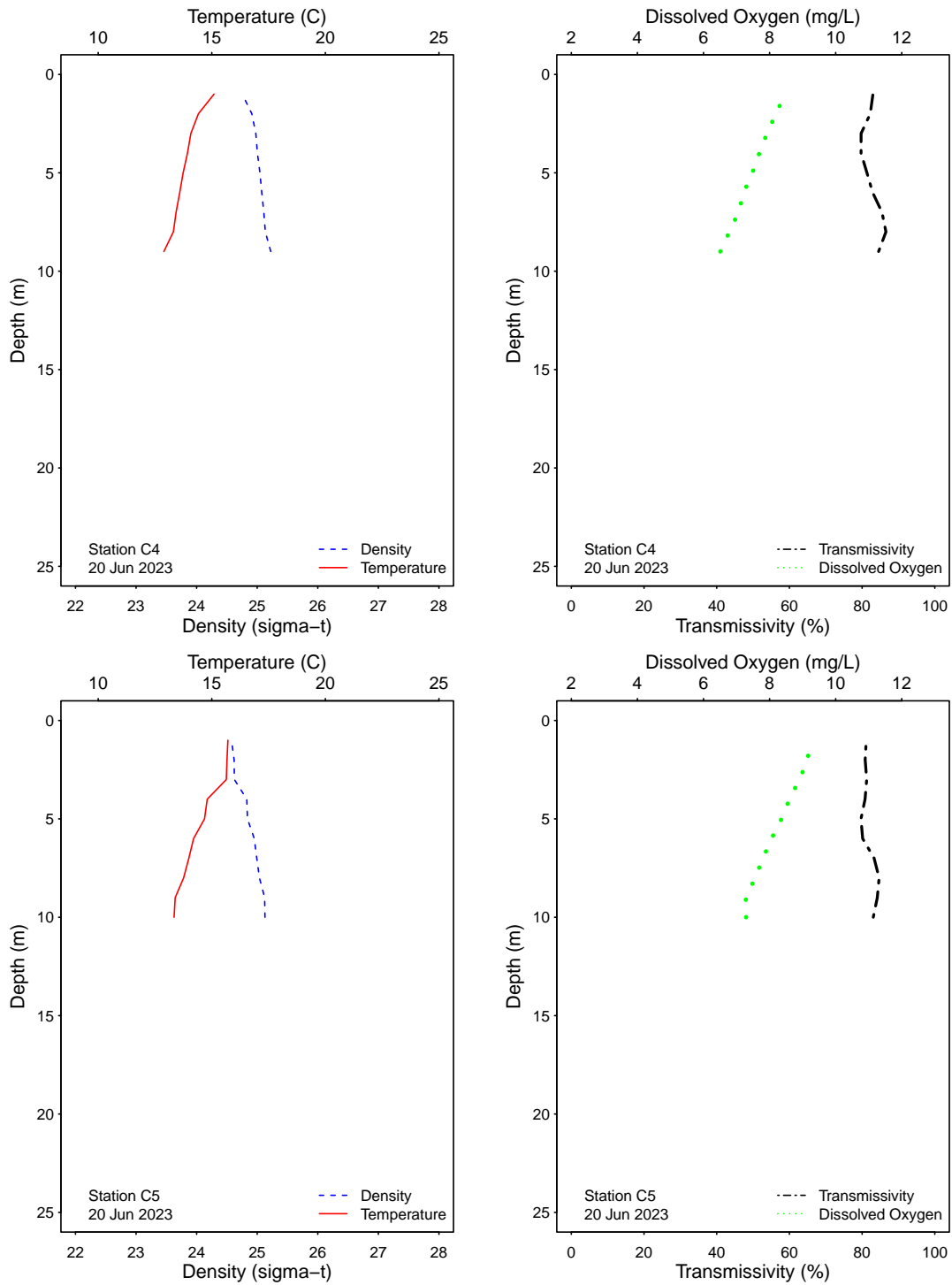


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

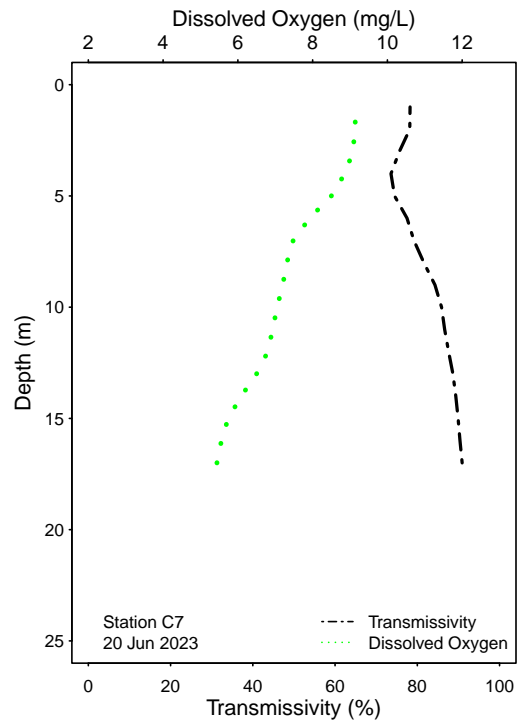
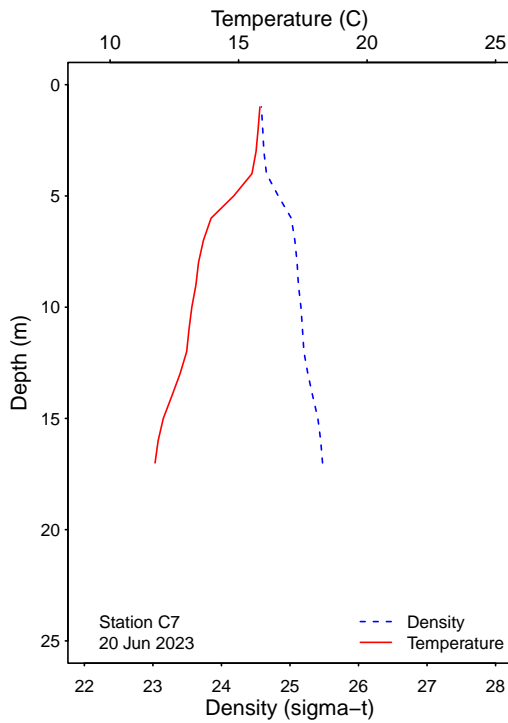
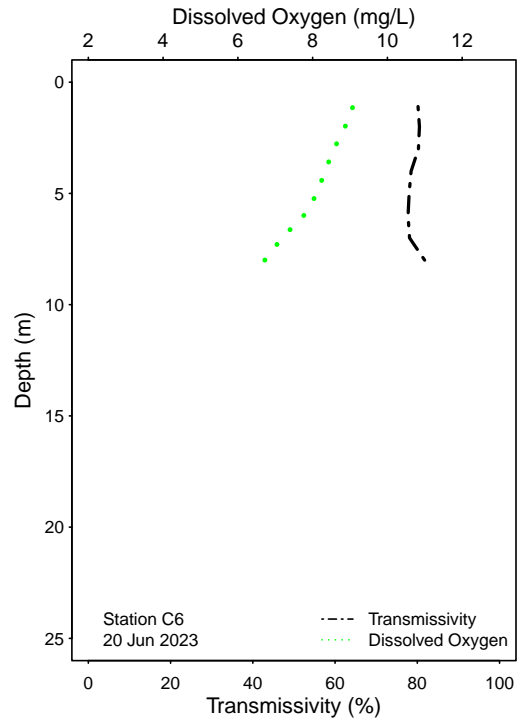
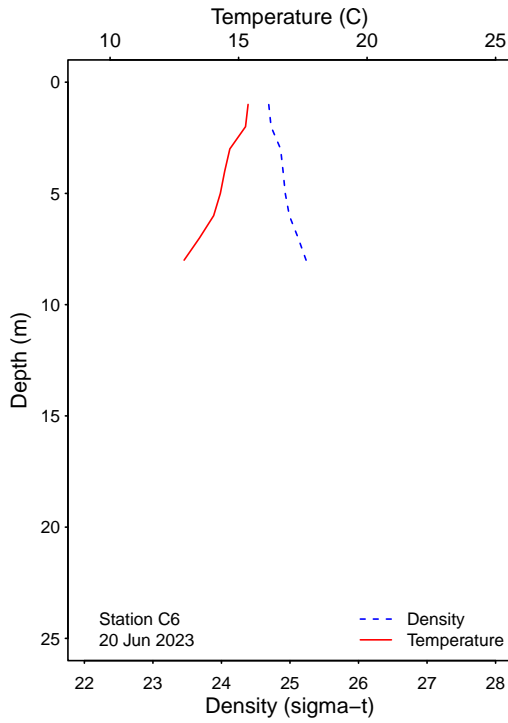


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

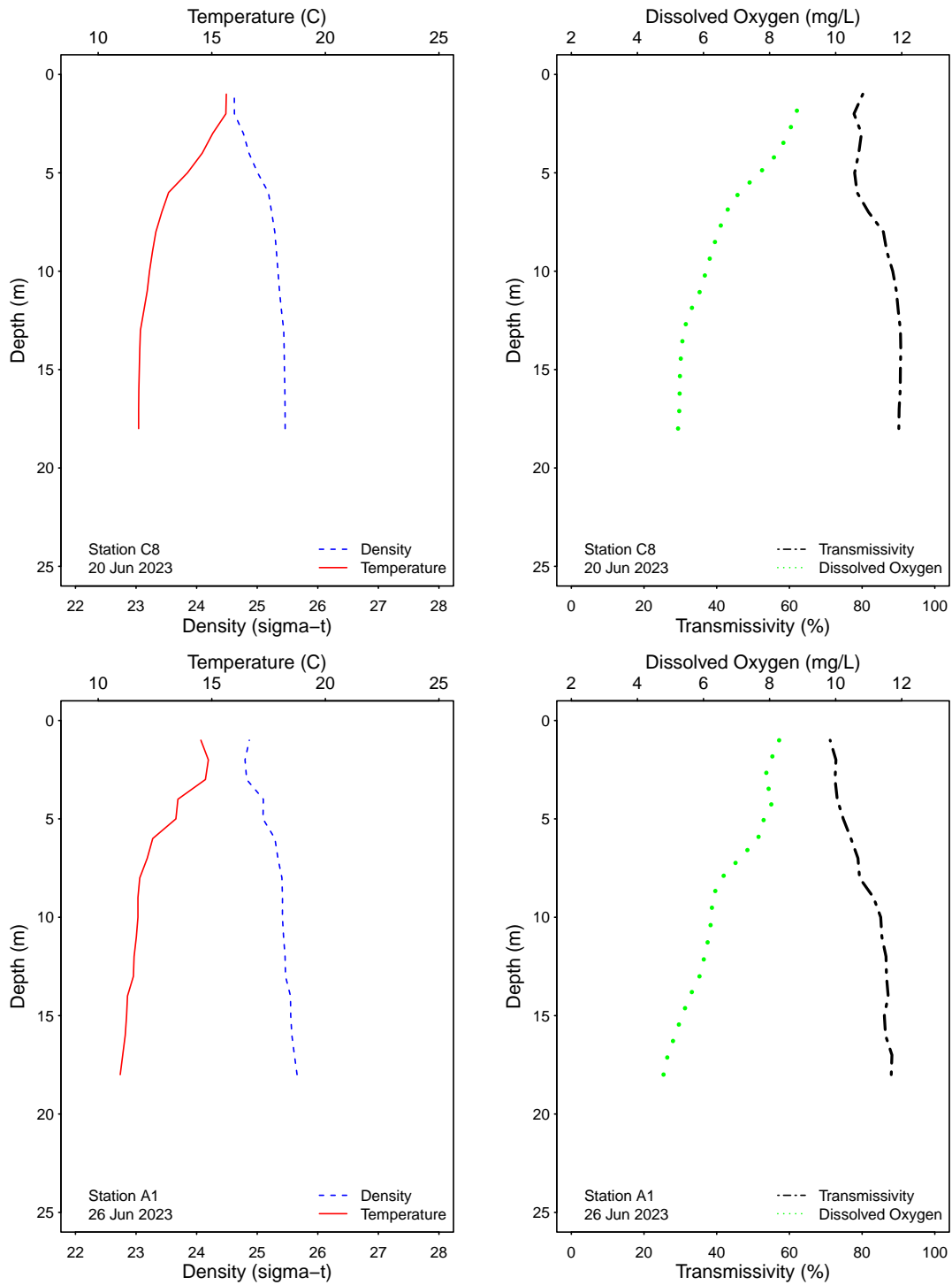


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

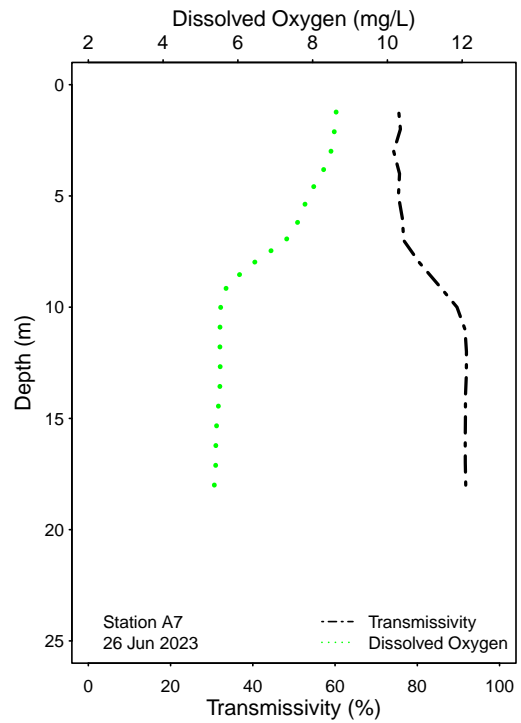
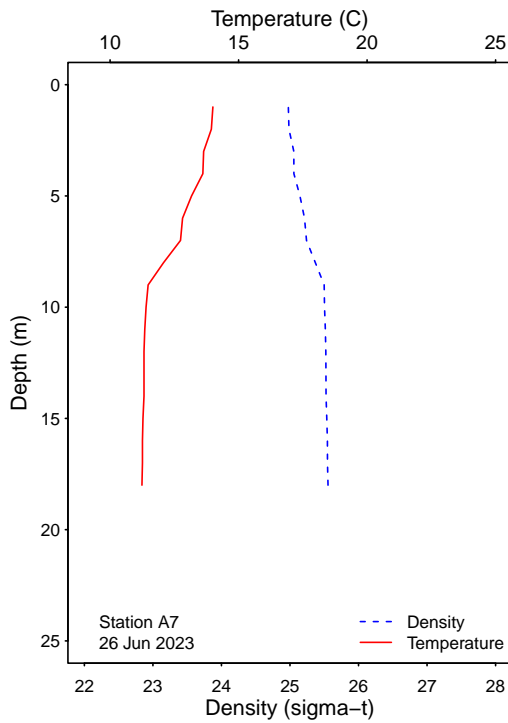
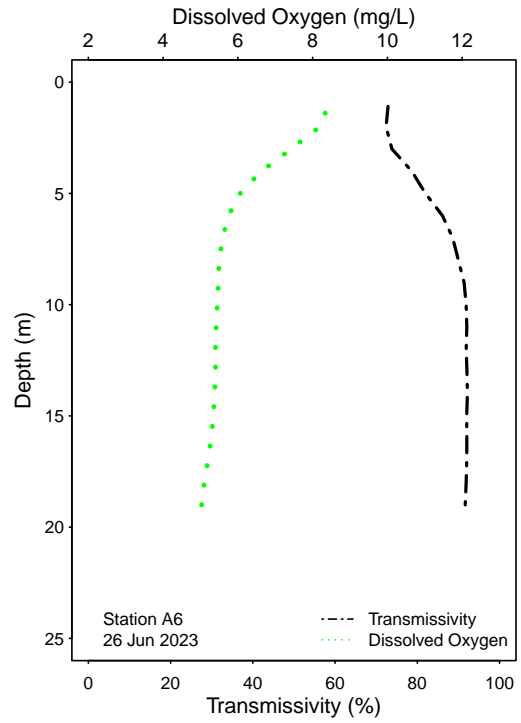
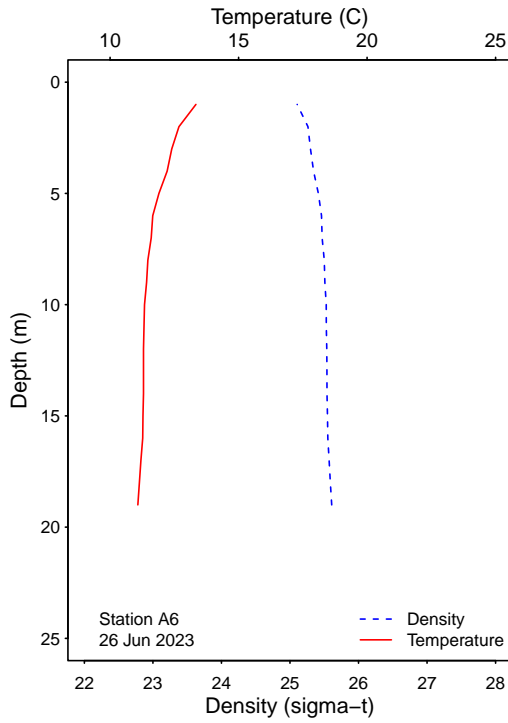


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

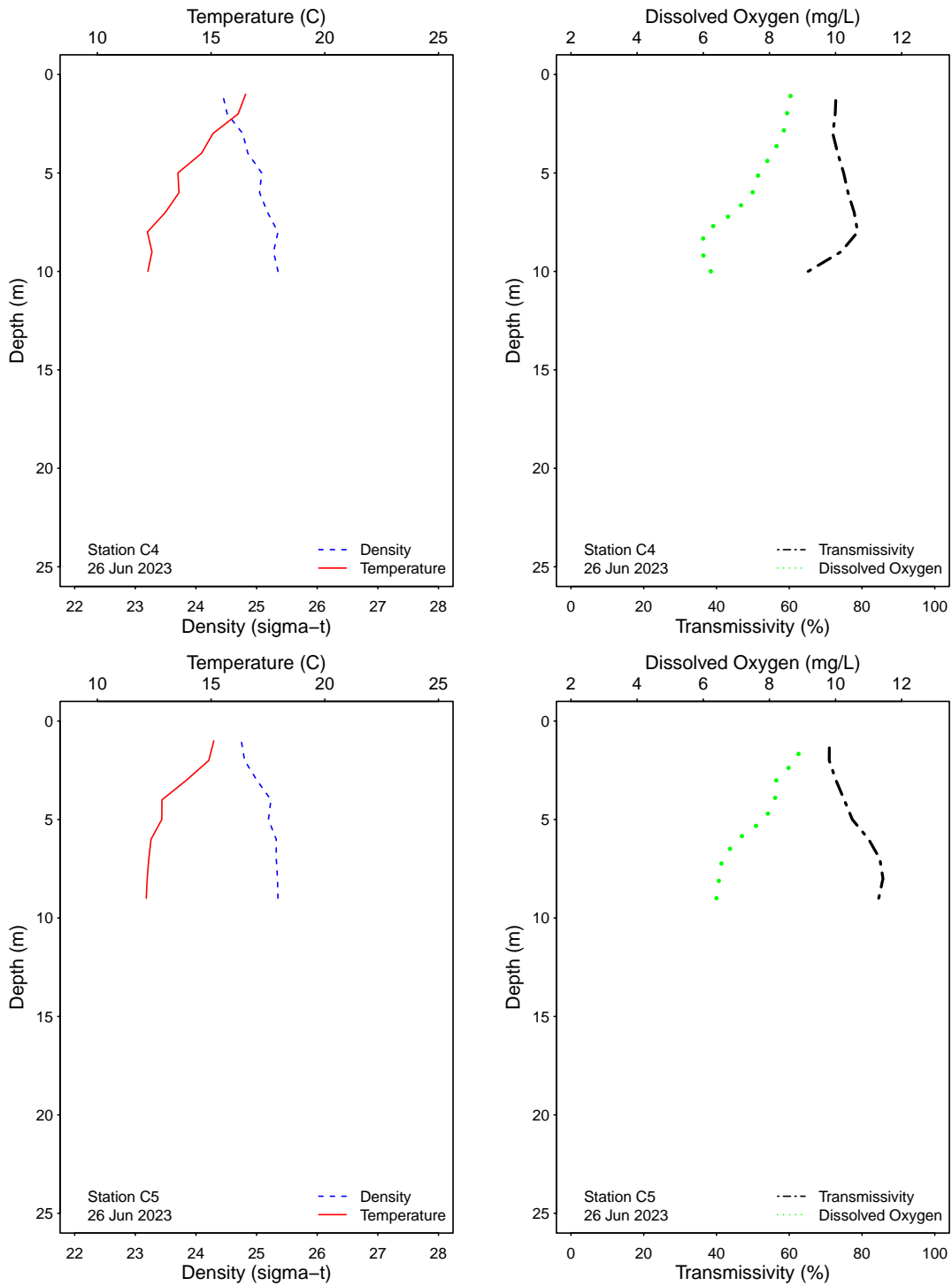


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

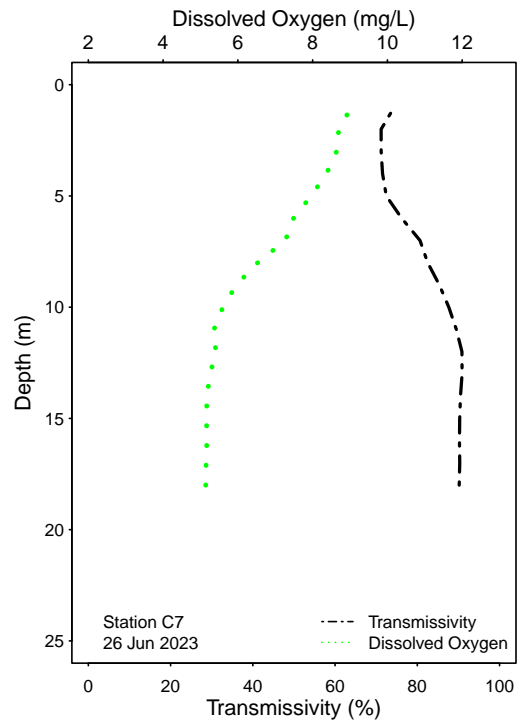
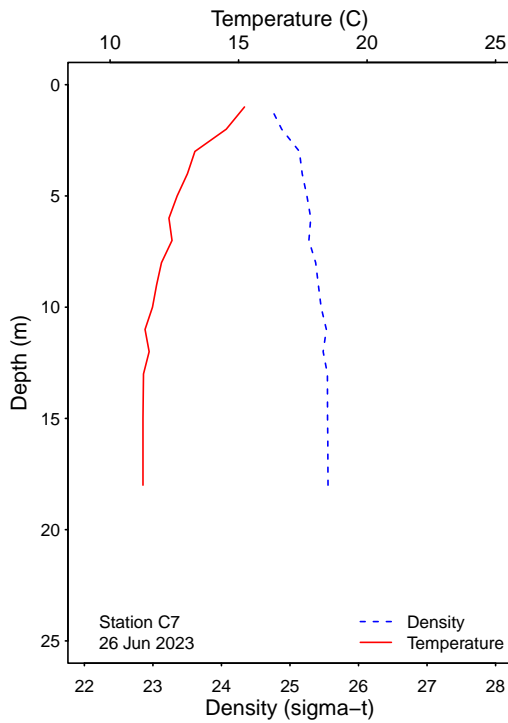
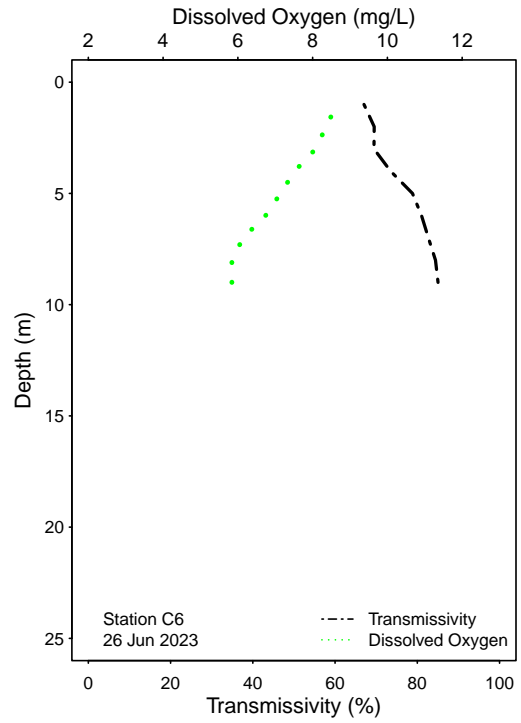
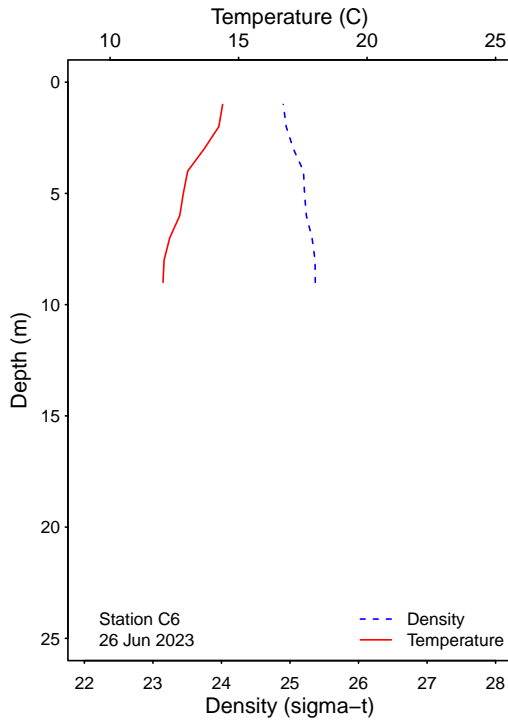


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

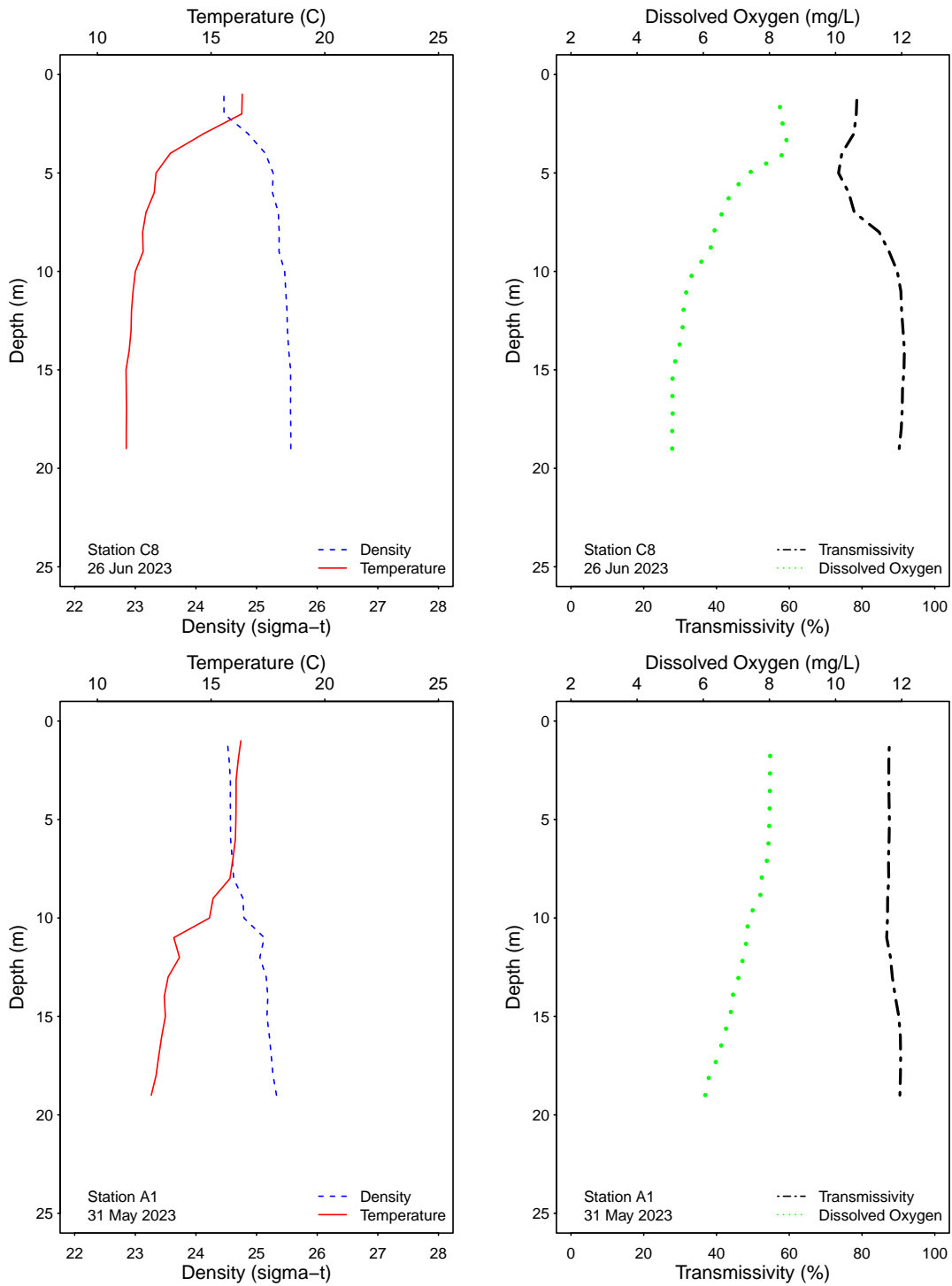


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

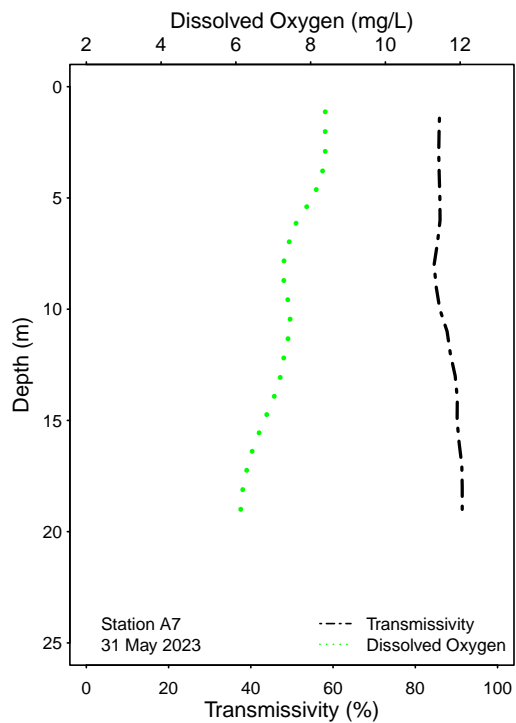
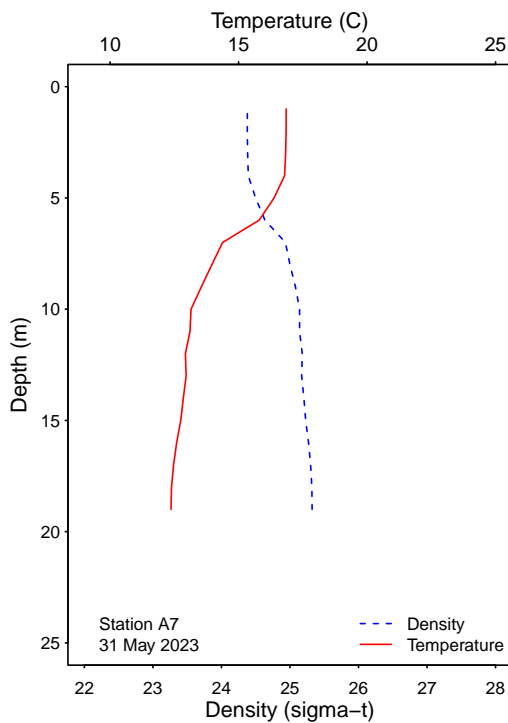
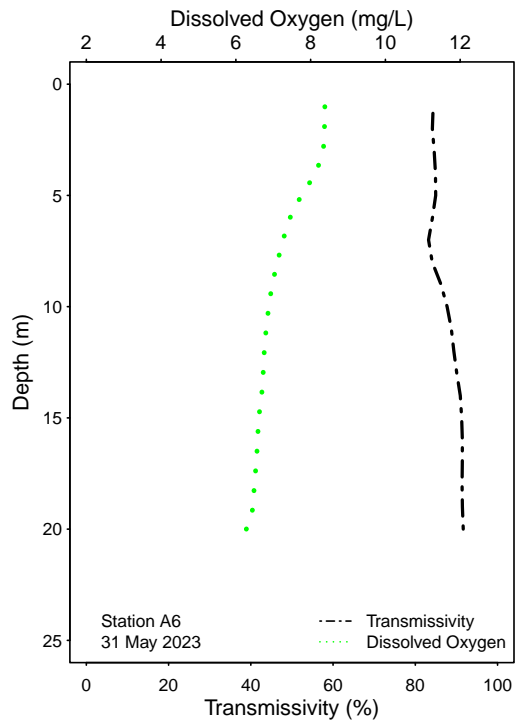
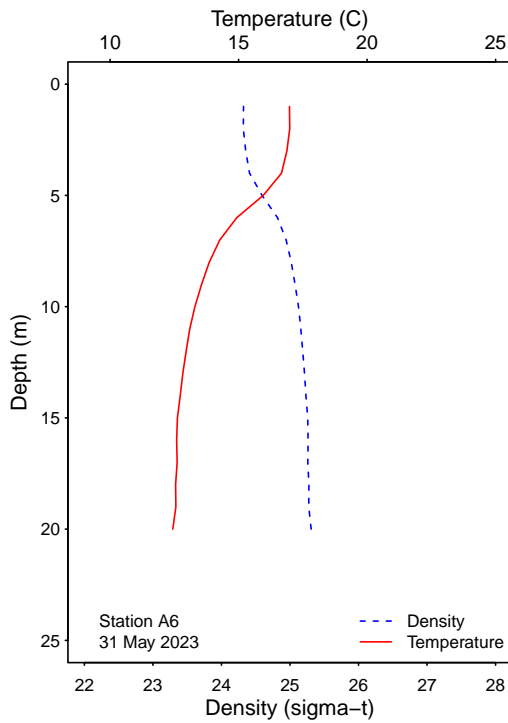


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.



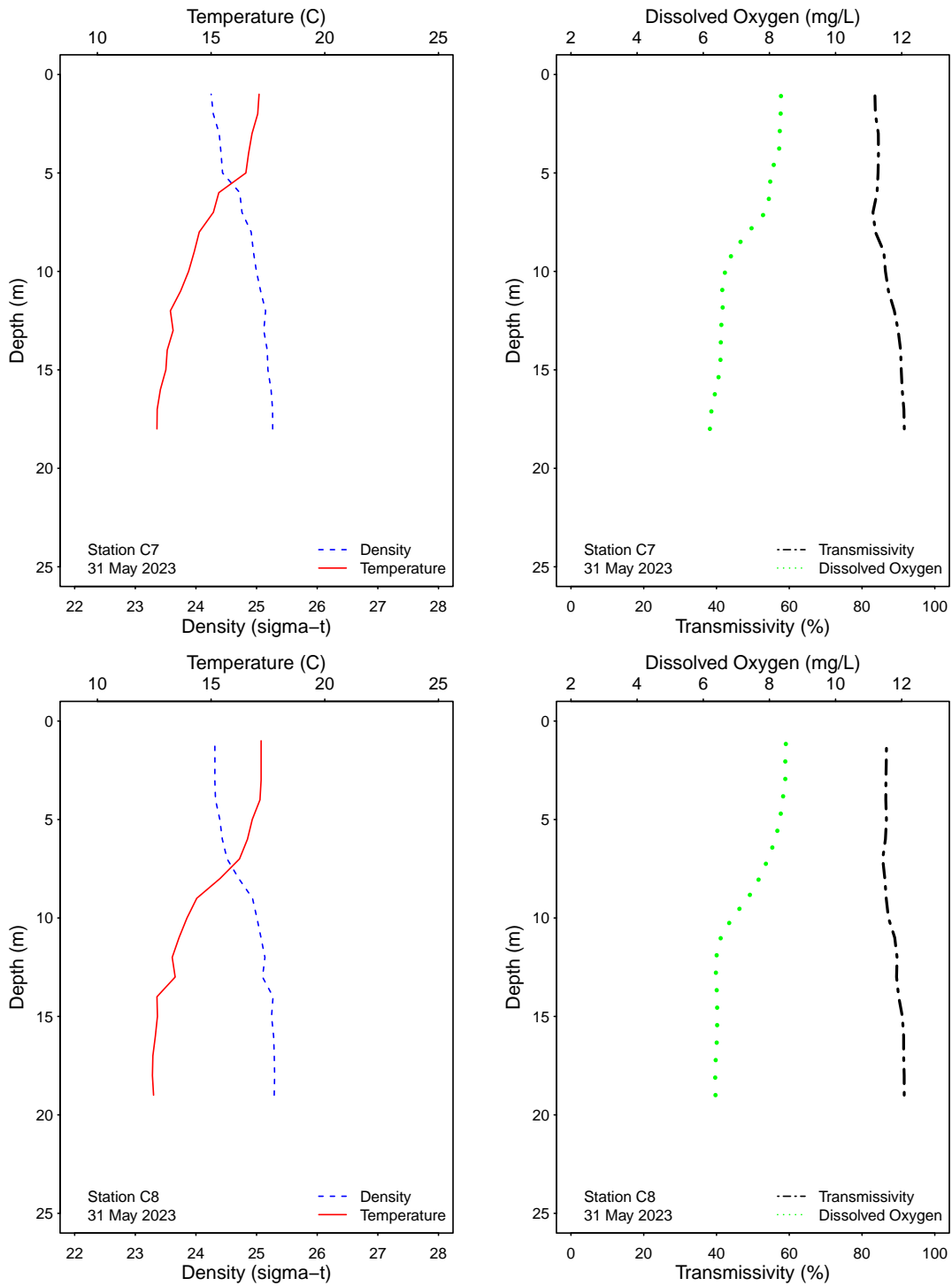


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.



**APPENDIX A**

**Quality Assurance**



**Table A.1**

Summary of bacteriological quality assurance field and lab duplicate sample analyses at selected 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 Jun 2023	18	CRE	LAB DUPLICATE	2e	2e	<2
A7	13 Jun 2023	18	WT	LAB DUPLICATE	4e	<2	<2
A7	20 Jun 2023	18	WT	LAB DUPLICATE	8e	2e	<2
A7	26 Jun 2023	18	KA	LAB DUPLICATE	26e	2e	<2
C7	06 Jun 2023	18	CRE	LAB DUPLICATE	2e	<2	<2
C7	13 Jun 2023	18	WT	LAB DUPLICATE	16e	10e	<2
C7	20 Jun 2023	18	WT	LAB DUPLICATE	12e	<2	<2
C7	26 Jun 2023	18	KA	LAB DUPLICATE	2e	<2	<2
C8	06 Jun 2023	12	CRE	LAB DUPLICATE	<2	<2	<2
C8	13 Jun 2023	12	WT	LAB DUPLICATE	<2	<2	<2
C8	20 Jun 2023	12	WT	LAB DUPLICATE	<2	<2	<2
C8	26 Jun 2023	12	KA	LAB DUPLICATE	2e	<2	<2
D12	07 Jun 2023		CRE	FIELD DUPLICATE	<2	2e	<2
D12	07 Jun 2023		CRE	LAB DUPLICATE	2e	2e	<2
D12	14 Jun 2023		CRE	FIELD DUPLICATE	60e	<2	62
D12	14 Jun 2023		CRE	LAB DUPLICATE	<20	<2	38e
D12	21 Jun 2023		CRE	FIELD DUPLICATE	<20	<2	<2
D12	21 Jun 2023		CRE	LAB DUPLICATE	2e	<2	<2
D12	28 Jun 2023		KA	FIELD DUPLICATE	<20	2e	<2
D12	28 Jun 2023		KA	LAB DUPLICATE	<20	<2	<2

ns = not sampled

ND = no data



# 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 Apr 2023	3	7	10	12	11	34	79	6
02 Apr 2023	3	7	10	12	11	34	79	6
03 Apr 2023	3	7	10	12	11	34	79	6
04 Apr 2023	3	7	10	12	11	34	79	6
05 Apr 2023	3	4	8	13	11	32	72	6
06 Apr 2023	3	4	8	13	11	32	72	6
07 Apr 2023	3	4	8	13	11	32	72	6
08 Apr 2023	3	4	8	13	11	32	72	6
09 Apr 2023	3	4	8	13	11	32	72	6
10 Apr 2023	3	4	8	13	11	32	72	6
11 Apr 2023	3	4	8	13	11	32	72	6
12 Apr 2023	3	4	7	9	9	34	77	6
13 Apr 2023	3	4	7	9	9	34	77	6
14 Apr 2023	3	4	7	9	9	34	77	6
15 Apr 2023	3	4	7	9	9	34	77	6
16 Apr 2023	3	4	7	9	9	34	77	6
17 Apr 2023	3	4	7	9	9	34	77	6
18 Apr 2023	3	4	7	9	9	34	77	6
19 Apr 2023	3	4	8	9	9	34	69	6
20 Apr 2023	3	4	8	9	9	34	69	6
21 Apr 2023	3	4	8	9	9	34	69	6
22 Apr 2023	3	4	8	9	9	34	69	6
23 Apr 2023	3	4	8	9	9	34	69	6
24 Apr 2023	3	4	8	9	9	34	69	6
25 Apr 2023	3	4	8	9	9	34	69	6
26 Apr 2023	3	3	6	5	5	17	51	6
27 Apr 2023	3	3	7	5	4	12	32	6
28 Apr 2023	3	3	7	5	4	13	40	6
29 Apr 2023	3	3	7	5	4	13	40	6
30 Apr 2023	3	3	7	5	4	13	40	6

\* Geometric mean calculated using n<5  
 ns = not sampled

## 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
April	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 Apr 2023	11	11	60	50	60	60	<b>650</b>	20
02 Apr 2023	11	11	60	50	60	60	<b>650</b>	20
03 Apr 2023	11	11	60	50	60	60	<b>650</b>	20
04 Apr 2023	11	11	60	50	60	60	<b>650</b>	20
05 Apr 2023	20	20	20	60	<b>100</b>	<b>80</b>	<b>200</b>	20
06 Apr 2023	20	20	20	60	<b>100</b>	<b>80</b>	<b>200</b>	20
07 Apr 2023	20	20	60	70	<b>150</b>	<b>90</b>	<b>650</b>	11
08 Apr 2023	20	20	60	70	<b>150</b>	<b>90</b>	<b>650</b>	11
09 Apr 2023	20	20	60	70	<b>150</b>	<b>90</b>	<b>650</b>	11
10 Apr 2023	20	20	60	70	<b>150</b>	<b>90</b>	<b>650</b>	11
11 Apr 2023	20	20	60	70	<b>150</b>	<b>90</b>	<b>650</b>	11
12 Apr 2023	20	20	20	60	<b>100</b>	<b>100</b>	<b>1100</b>	2
13 Apr 2023	20	20	20	60	<b>100</b>	<b>100</b>	<b>1100</b>	2
14 Apr 2023	11	20	11	40	<b>110</b>	<b>130</b>	<b>1000</b>	2
15 Apr 2023	11	20	11	40	<b>110</b>	<b>130</b>	<b>200</b>	2
16 Apr 2023	11	20	11	40	<b>110</b>	<b>130</b>	<b>920</b>	2
17 Apr 2023	11	20	11	40	<b>110</b>	<b>130</b>	<b>920</b>	2
18 Apr 2023	11	20	11	40	<b>110</b>	<b>130</b>	<b>920</b>	2
19 Apr 2023	20	20	20	20	20	<b>160</b>	40	2
20 Apr 2023	20	20	20	20	20	<b>160</b>	40	2
21 Apr 2023	11	20	11	20	20	<b>130</b>	30	2
22 Apr 2023	11	20	11	20	20	<b>130</b>	30	2
23 Apr 2023	11	20	11	20	20	<b>130</b>	30	2
24 Apr 2023	11	20	11	20	20	<b>130</b>	30	2
25 Apr 2023	11	20	11	20	20	<b>130</b>	30	2
26 Apr 2023	2	20	20	20	20	<b>160</b>	40	2
27 Apr 2023	2	20	20	20	20	<b>160</b>	40	2
28 Apr 2023	11	20	20	20	20	<b>180</b>	<b>120</b>	11
29 Apr 2023	11	20	20	20	20	<b>180</b>	<b>120</b>	11
30 Apr 2023	11	20	20	20	20	<b>180</b>	<b>120</b>	11

\* 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
April	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 kelp stations. Data are based on the geometric mean of the five most recent samples from each site over the previous 6 weeks unless otherwise noted (\*). Values >30 CFU/100 mL exceed the standard.

Date	A1	A6	A7	C4	C5	C6	C7	C8
01 Apr 2023	3	3	2	2	2	2	2	2
02 Apr 2023	3	3	2	2	2	2	2	2
03 Apr 2023	3	3	2	2	2	2	2	2
04 Apr 2023	3	3	3	2	2	2	2	2
05 Apr 2023	5	4	4	2	2	2	3	3
06 Apr 2023	5	4	4	2	2	2	3	3
07 Apr 2023	5	4	4	2	2	2	3	3
08 Apr 2023	5	4	4	2	2	2	3	3
09 Apr 2023	5	4	4	2	2	2	3	3
10 Apr 2023	5	4	5	2	2	2	3	4
11 Apr 2023	5	4	5	2	2	2	3	4
12 Apr 2023	5	4	5	2	2	2	3	4
13 Apr 2023	5	4	5	2	2	2	3	4
14 Apr 2023	5	4	5	2	2	2	3	4
15 Apr 2023	5	4	5	2	2	2	3	4
16 Apr 2023	5	4	5	2	2	2	3	4
17 Apr 2023	5	4	5	2	2	2	3	4
18 Apr 2023	4	4	4	2	2	2	3	4
19 Apr 2023	4	4	4	2	2	2	3	4
20 Apr 2023	4	4	4	2	2	2	3	4
21 Apr 2023	4	4	4	2	2	2	3	4
22 Apr 2023	4	4	4	2	2	2	3	4
23 Apr 2023	4	4	4	2	2	2	3	4
24 Apr 2023	4	4	4	2	2	2	3	4
25 Apr 2023	4	4	4	2	2	2	3	4
26 Apr 2023	4	3	4	2	2	2	3	4
27 Apr 2023	4	3	4	2	2	2	3	4
28 Apr 2023	4	3	4	2	2	2	3	4
29 Apr 2023	4	3	4	2	2	2	3	4
30 Apr 2023	4	3	4	2	2	2	3	4

\* Geometric mean calculated using n<5

## Table B.6

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

Date	A1	A6	A7	C4	C5	C6	C7	C8
April	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 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 and depth over the previous 30 days unless otherwise noted (\*). Values >70 CFU/100 mL exceed the standard. Median calculated using n<5

Date	A1			A6			A7			C4			C5			C6			C7			C8			
	1m	12m	18m	1m	12m	18m	1m	3m	9m	1m	3m	9m	1m	3m	9m	1m	3m	9m	1m	12m	18m	1m	12m	18m	
01 Apr 2023	2	78	260	2	21	61	2	2	7	2	2	3	6	4	2	4	2	11	4	4	11	5	7	31	
02 Apr 2023	2	78	260	2	21	61	2	2	7	2	2	3	6	4	2	4	2	11	4	4	11	5	7	31	
03 Apr 2023	2	78	260	2	21	61	2	2	7	2	2	3	6	4	2	4	2	11	4	4	11	5	7	31	
04 Apr 2023	2	78	260	2	21	61	2	2	7	2	2	3	6	4	2	4	2	11	4	4	11	5	7	31	
05 Apr 2023	2	80	280	2	30	80	2	2	12	2	2	4	8	6	2	6	2	20	6	6	18	80	4	10	42
06 Apr 2023	14	78	280	11	80	110	6	50	260	2	2	4	12	9	6	11	11	9	9	55	90	5	33	50	
07 Apr 2023	14	78	280	11	80	110	6	50	260	2	2	4	12	9	6	11	11	9	9	55	90	5	33	50	
08 Apr 2023	14	78	280	11	80	110	6	50	260	2	2	4	12	9	6	11	11	9	9	55	90	5	33	50	
09 Apr 2023	14	78	280	11	80	110	6	50	260	2	2	4	12	9	6	11	11	9	9	55	90	5	33	50	
10 Apr 2023	2	76	240	2	30	80	2	44	200	2	2	4	4	6	6	6	20	2	20	20	80	4	10	80	
11 Apr 2023	2	76	240	2	30	80	2	44	200	2	2	4	4	6	6	6	20	2	20	20	80	4	10	80	
12 Apr 2023	2	76	240	2	30	80	2	44	200	2	2	4	4	6	6	6	20	2	20	20	80	4	10	80	
13 Apr 2023	14	78	260	11	20	57	6	30	130	2	2	4	4	13	13	20	9	19	49	3	9	59	59		
14 Apr 2023	14	78	260	11	20	57	6	30	130	2	2	4	4	13	13	20	9	19	49	3	9	59	59		
15 Apr 2023	14	78	260	11	20	57	6	30	130	2	2	4	4	13	13	20	9	19	49	3	9	59	59		
16 Apr 2023	14	78	260	11	20	57	6	30	130	2	2	4	4	13	13	20	9	19	49	3	9	59	59		
17 Apr 2023	14	78	260	11	20	57	6	30	130	2	2	4	4	13	13	20	9	19	49	3	9	59	59		
18 Apr 2023	2	76	200	4	10	34	2	8	60	2	2	2	4	6	6	20	2	18	18	2	8	20	20		
19 Apr 2023	2	76	200	4	10	34	2	8	60	2	2	2	4	6	6	20	2	18	18	2	8	20	20		
20 Apr 2023	2	76	200	4	10	34	2	8	60	2	2	2	4	6	6	20	2	18	18	2	8	20	20		
21 Apr 2023	2	76	200	4	10	34	2	8	60	2	2	2	4	6	6	20	2	18	18	2	8	20	20		
22 Apr 2023	2	76	200	4	10	34	2	8	60	2	2	2	4	6	6	20	2	18	18	2	8	20	20		
23 Apr 2023	2	41	163	3	6	28	2	6	41	2	2	2	3	4	4	11	2	12	17	2	6	59	59		
24 Apr 2023	2	41	163	3	6	28	2	6	41	2	2	2	3	4	4	11	2	12	17	2	6	59	59		
25 Apr 2023	2	41	163	3	6	28	2	6	41	2	2	2	3	4	4	11	2	12	17	2	6	59	59		
26 Apr 2023	2	6	6	4	2	22	2	4	22	2	2	2	2	2	2	2	2	2	4	16	2	4	20		
27 Apr 2023	3	5	6	12	2	15	5	6	18	2	2	2	2	4	4	11	9	11	9	11	9	2	5	59	
28 Apr 2023	3	5	6	12	2	15	5	6	18	2	2	2	2	4	4	11	9	11	9	11	9	2	5	59	
29 Apr 2023	3	5	6	12	2	15	5	6	18	2	2	2	2	4	4	11	9	11	9	11	9	2	5	59	
30 Apr 2023	3	5	6	12	2	15	5	6	18	2	2	2	2	4	4	11	9	11	9	11	9	2	5	59	

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

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