



# POINT LOMA OCEAN OUTFALL MONTHLY RECEIVING WATERS MONITORING REPORT

## POINT LOMA WASTEWATER TREATMENT PLANT

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

### APRIL 2023

Environmental Monitoring and Technical Services  
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May 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 April 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.

### ***Shore Stations***

- The eight shore stations (D4, D5, D7, D8-B, D9, D10, D11, D12) were sampled on April 5, 12, 19, and 26.
- During April, two of the eight shore stations were out of compliance with the various 2015 California Ocean Plan (Ocean Plan) water contact standards on one or more days as follows:
  - o The 30-day running geometric mean standard for *Enterococcus* was exceeded at stations D10 and D11.
- Nothing of sewage origin was observed at PLOO shore stations in April.
- Over the years, elevated bacteria levels at shore and kelp bed stations have tended to be associated with rainfall events, heavy recreational use, or the presence of seabirds or decaying kelp and surf grass. See the City of San Diego's most recent *Biennial Receiving Waters Monitoring and Assessment Report for the Point Loma and South Bay Ocean Outfalls* for details (<https://www.sandiego.gov/public-utilities/sustainability/ocean-monitoring/reports>).

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

- The eight kelp bed water quality stations (A1, A6, A7, C4, C5, C6, C7, C8) were sampled on April 5, 10, 18, and 26.

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

- During April, five of the eight kelp stations were out of compliance with the various 2015 California Ocean Plan (Ocean Plan) water contact standards on one or more days as follows:
  - o The Single Sample Maximum (SSM) standard for fecal coliform was exceeded at stations A1, A7, C7, and C8.
  - o The SSM standard for *Enterococcus* was exceeded at station A7.
  - o The SSM standard for fecal:total ratio was exceeded at stations A1, A6, A7, C7, and C8.
- Water column temperatures ranged from 10.15 to 16.37°C. The difference between surface and bottom waters ranged from 0.51 to 4.12°C.
- Chlorophyll *a* concentrations ranged from 0.19 to 26.20 µg/L.
- Nothing of sewage origin was observed at PLOO kelp stations in April.

### ***Offshore Stations***

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





# TABLES AND FIGURES



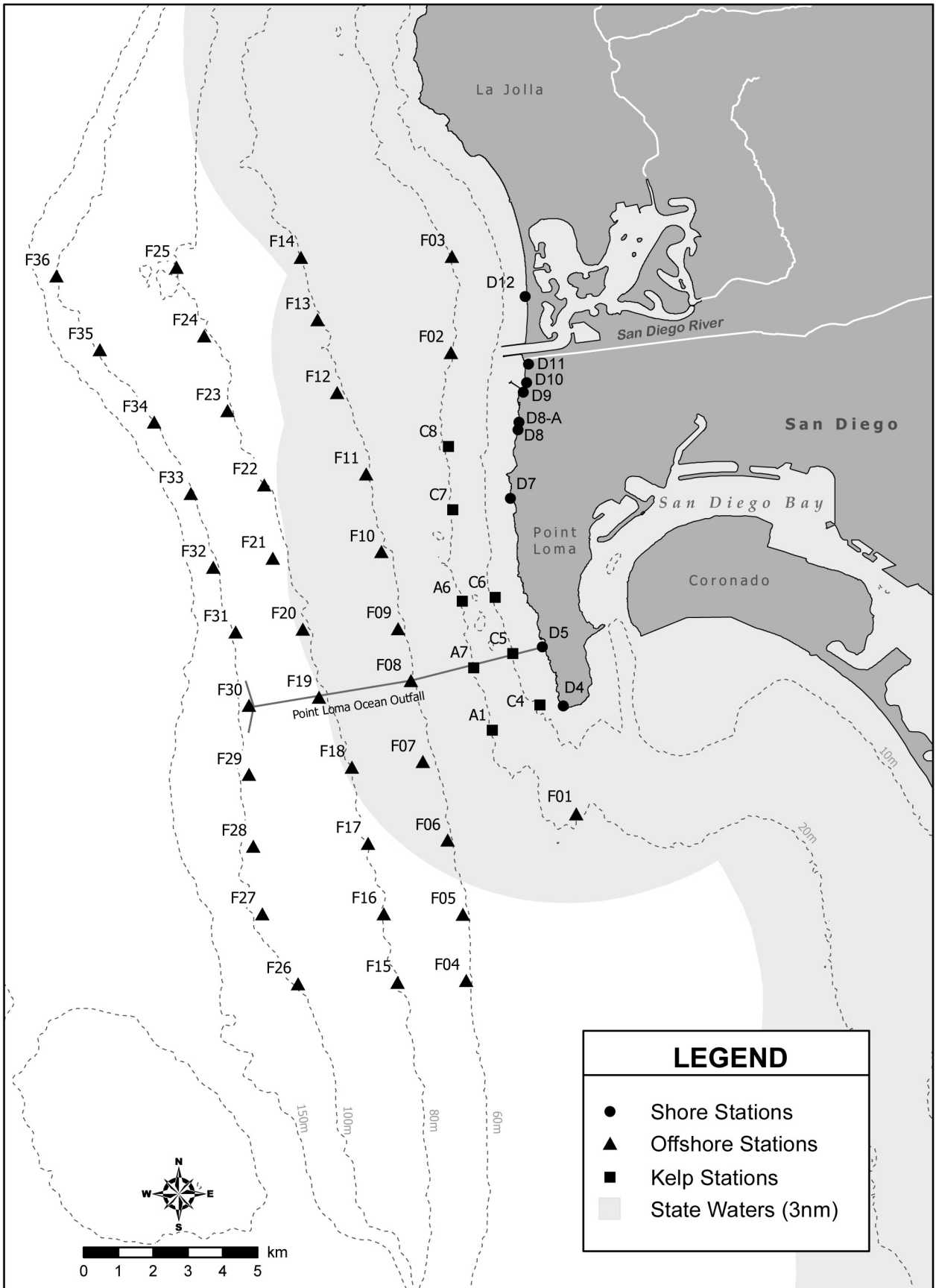


Figure 1.1 Station Map



# 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
01 Apr 2023	7	11	36	36	33	92	448	40
02 Apr 2023	7	11	36	36	33	92	448	40
03 Apr 2023	7	11	36	36	33	92	448	40
04 Apr 2023	7	11	36	36	33	92	448	40
05 Apr 2023	9	12	32	39	47	93	317	22
06 Apr 2023	9	12	32	39	47	93	317	22
07 Apr 2023	13	19	36	47	58	115	503	22
08 Apr 2023	13	19	36	47	58	115	503	22
09 Apr 2023	13	19	36	47	58	115	503	22
10 Apr 2023	13	19	36	47	58	115	503	22
11 Apr 2023	13	19	36	47	58	115	503	22
12 Apr 2023	9	19	20	39	47	123	603	14
13 Apr 2023	9	19	20	39	47	123	603	14
14 Apr 2023	7	11	9	21	39	137	546	13
15 Apr 2023	7	11	9	21	39	137	305	13
16 Apr 2023	7	11	9	21	39	137	339	13
17 Apr 2023	7	11	9	21	39	137	339	13
18 Apr 2023	7	11	9	21	39	137	339	13
19 Apr 2023	9	13	11	21	34	148	193	14
20 Apr 2023	9	13	11	21	34	148	193	14
21 Apr 2023	6	11	6	15	20	75	73	4
22 Apr 2023	6	11	6	15	20	75	73	4
23 Apr 2023	6	11	6	15	20	75	73	4
24 Apr 2023	6	11	6	15	20	75	73	4
25 Apr 2023	6	11	6	15	20	75	73	4
26 Apr 2023	5	13	13	16	20	91	90	8
27 Apr 2023	5	13	13	16	20	91	90	8
28 Apr 2023	6	20	20	26	36	159	130	11
29 Apr 2023	6	20	20	26	36	159	130	11
30 Apr 2023	6	20	20	26	36	159	130	11

\* 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
01 Apr 2023	3	6	11	11	9	10	53	6
02 Apr 2023	3	6	11	11	9	10	53	6
03 Apr 2023	3	6	11	11	9	10	53	6
04 Apr 2023	3	6	11	11	9	10	53	6
05 Apr 2023	3	8	8	12	11	10	40	5
06 Apr 2023	3	8	8	12	11	10	40	5
07 Apr 2023	3	11	9	19	16	15	66	6
08 Apr 2023	3	11	9	19	16	15	66	6
09 Apr 2023	3	11	9	19	16	15	66	6
10 Apr 2023	3	11	9	19	16	15	66	6
11 Apr 2023	3	11	9	19	16	15	66	6
12 Apr 2023	3	9	7	12	14	19	70	7
13 Apr 2023	3	9	7	12	14	19	70	7
14 Apr 2023	3	8	5	6	13	18	62	9
15 Apr 2023	3	8	5	6	13	18	34	9
16 Apr 2023	3	8	5	6	13	18	33	9
17 Apr 2023	3	8	5	6	13	18	33	9
18 Apr 2023	3	8	5	6	13	18	33	9
19 Apr 2023	3	6	4	7	11	17	30	7
20 Apr 2023	3	6	4	7	11	17	30	7
21 Apr 2023	2	4	2	5	7	11	19	3
22 Apr 2023	2	4	2	5	7	11	19	3
23 Apr 2023	2	4	2	5	7	11	19	3
24 Apr 2023	2	4	2	5	7	11	19	3
25 Apr 2023	2	4	2	5	7	11	19	3
26 Apr 2023	2	4	2	4	5	12	22	3
27 Apr 2023	2	4	2	4	5	12	22	3
28 Apr 2023	2	4	2	5	7	18	28	3
29 Apr 2023	2	4	2	5	7	18	28	3
30 Apr 2023	2	4	2	5	7	18	28	3

\* 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
01 Apr 2023	3	5	8	8	15	46	116	10
02 Apr 2023	3	5	8	8	15	46	116	10
03 Apr 2023	3	5	8	8	15	46	116	10
04 Apr 2023	3	5	8	8	15	46	116	10
05 Apr 2023	3	4	9	11	11	37	80	8
06 Apr 2023	3	4	9	11	11	37	80	8
07 Apr 2023	3	5	11	16	15	56	111	10
08 Apr 2023	3	5	11	16	15	56	111	10
09 Apr 2023	3	5	11	16	15	56	111	10
10 Apr 2023	3	5	11	16	15	56	111	10
11 Apr 2023	3	5	11	16	15	56	111	10
12 Apr 2023	3	4	9	11	11	49	102	8
13 Apr 2023	3	4	9	11	11	49	102	8
14 Apr 2023	3	3	5	6	7	26	89	10
15 Apr 2023	3	3	6	8	5	16	53	10
16 Apr 2023	3	3	6	8	5	22	76	10
17 Apr 2023	3	3	6	8	5	22	76	10
18 Apr 2023	3	3	6	8	5	22	76	10
19 Apr 2023	3	3	5	6	5	15	45	8
20 Apr 2023	3	3	5	6	5	15	45	8
21 Apr 2023	2	2	4	5	2	8	22	3
22 Apr 2023	2	2	4	5	2	8	22	3
23 Apr 2023	2	2	4	5	2	5	13	2
24 Apr 2023	2	2	4	5	2	5	13	2
25 Apr 2023	2	2	4	5	2	5	10	2
26 Apr 2023	2	2	6	5	2	6	11	2
27 Apr 2023	2	2	6	5	2	6	11	2
28 Apr 2023	2	2	8	6	2	7	9	2
29 Apr 2023	2	2	8	6	2	7	9	2
30 Apr 2023	2	2	8	6	2	7	9	2

\* 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
05 Apr 2023	IC	IC	IC	IC	IC	IC	IC	IC
12 Apr 2023	IC	IC	IC	IC	IC	IC	IC	IC
19 Apr 2023	IC	IC	IC	IC	IC	IC	IC	IC
26 Apr 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
05 Apr 2023	IC	IC	IC	IC	IC	IC	IC	IC
12 Apr 2023	IC	IC	IC	IC	IC	IC	IC	IC
19 Apr 2023	IC	IC	IC	IC	IC	IC	IC	IC
26 Apr 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
05 Apr 2023	IC	IC	IC	IC	IC	IC	IC	IC
12 Apr 2023	IC	IC	IC	IC	IC	IC	IC	IC
19 Apr 2023	IC	IC	IC	IC	IC	IC	IC	IC
26 Apr 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
05 Apr 2023	IC	IC	IC	IC	IC	IC	IC	IC
12 Apr 2023	IC	IC	IC	IC	IC	IC	IC	IC
19 Apr 2023	IC	IC	IC	IC	IC	IC	IC	IC
26 Apr 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	05 Apr 2023	922	<20	2e	<2	0.10
D4	12 Apr 2023	940	<2	<2	<2	1.00
D4	19 Apr 2023	1013	<20	<2	<2	0.10
D4	26 Apr 2023	940	<2	<2	<2	1.00
D5	05 Apr 2023	913	20e	<20	2e	1.00
D5	12 Apr 2023	921	<20	4e	2e	0.20
D5	19 Apr 2023	1001	<20	<2	<2	0.10
D5	26 Apr 2023	927	<20	2e	<2	0.10
D7	05 Apr 2023	850	<20	<2	12e	0.10
D7	12 Apr 2023	858	2e	2e	<2	1.00
D7	19 Apr 2023	920	<20	<2	4e	0.10
D7	26 Apr 2023	902	<200	<2	36e	0.01
D8-B	05 Apr 2023	837	60e	<20	60e	0.33
D8-B	12 Apr 2023	842	<20	<2	<2	0.10
D8-B	19 Apr 2023	917	<20	8e	2e	0.40
D8-B	26 Apr 2023	847	<20	<2	4e	0.10
D9	05 Apr 2023	830	<200	<20	<2	0.10
D9	12 Apr 2023	832	<20	8e	<2	0.40
D9	19 Apr 2023	859	<20	6e	4e	0.30
D9	26 Apr 2023	837	<20	<2	<2	0.10
D10	05 Apr 2023	822	100e	12e	8e	0.12
D10	12 Apr 2023	823	160e	40e	<20	0.25
D10	19 Apr 2023	843	<200	14e	2e	0.07
D10	26 Apr 2023	826	200e	16e	8e	0.08
D11	05 Apr 2023	815	40e	8e	4e	0.20
D11	12 Apr 2023	815	1800e	92	54	0.05
D11	19 Apr 2023	831	<20	20e	2e	1.00
D11	26 Apr 2023	817	<200	40	16e	0.20
D12	05 Apr 2023	800	<2	<2	<2	1.00
D12	12 Apr 2023	757	2e	8e	<2	4.00
D12	19 Apr 2023	812	<20	<2	<2	0.10
D12	26 Apr 2023	802	<200	<2	<2	0.01

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	05 Apr 2023	Arrive Time	922
D4	05 Apr 2023	Weather	Sunny
D4	05 Apr 2023	Wind Speed (kts)	0.9
D4	05 Apr 2023	Wind Dir	W
D4	05 Apr 2023	Animal Life	
D4	05 Apr 2023	Floatables	None
D4	05 Apr 2023	Water Color	Green
D4	05 Apr 2023	Current Direction	S
D4	05 Apr 2023	Water Temp (C)	10
D4	05 Apr 2023	Wave Height Low (ft)	4
D4	05 Apr 2023	High Tide (ft)	4.64
D4	05 Apr 2023	High Tide Time	922
D4	05 Apr 2023	Low Tide (ft)	0.32
D4	05 Apr 2023	Low Tide Time	330
D4	05 Apr 2023	Comments	Water clear; Trash-1; Kelp;Seagrass;Algae
D4	12 Apr 2023	Arrive Time	940
D4	12 Apr 2023	Weather	Cloudy
D4	12 Apr 2023	Wind Speed (kts)	8.7
D4	12 Apr 2023	Wind Dir	S
D4	12 Apr 2023	Animal Life	
D4	12 Apr 2023	Floatables	None
D4	12 Apr 2023	Water Color	Green
D4	12 Apr 2023	Current Direction	S
D4	12 Apr 2023	Water Temp (C)	8
D4	12 Apr 2023	Wave Height Low (ft)	2
D4	12 Apr 2023	High Tide (ft)	4.71
D4	12 Apr 2023	High Tide Time	109
D4	12 Apr 2023	Low Tide (ft)	0.07
D4	12 Apr 2023	Low Tide Time	956
D4	12 Apr 2023	Comments	Water clear; Trash-1; Algae
D4	19 Apr 2023	Arrive Time	1013
D4	19 Apr 2023	Weather	Sunny
D4	19 Apr 2023	Wind Speed (kts)	2.3
D4	19 Apr 2023	Wind Dir	SW
D4	19 Apr 2023	Animal Life	
D4	19 Apr 2023	Floatables	None
D4	19 Apr 2023	Water Color	Green
D4	19 Apr 2023	Current Direction	S
D4	19 Apr 2023	Water Temp (C)	11
D4	19 Apr 2023	Wave Height Low (ft)	4
D4	19 Apr 2023	High Tide (ft)	4.73
D4	19 Apr 2023	High Tide Time	920
D4	19 Apr 2023	Low Tide (ft)	-0.43
D4	19 Apr 2023	Low Tide Time	325
D4	19 Apr 2023	Comments	Water clear; Trash-1; Algae
D4	26 Apr 2023	Arrive Time	940
D4	26 Apr 2023	Weather	Cloudy
D4	26 Apr 2023	Wind Speed (kts)	5.8
D4	26 Apr 2023	Wind Dir	NW
D4	26 Apr 2023	Animal Life	
D4	26 Apr 2023	Floatables	None
D4	26 Apr 2023	Water Color	Green
D4	26 Apr 2023	Current Direction	S

Station	Date	Parameter	Value
D4	26 Apr 2023	Water Temp (C)	13
D4	26 Apr 2023	Wave Height Low (ft)	1
D4	26 Apr 2023	High Tide (ft)	4.15
D4	26 Apr 2023	High Tide Time	55
D4	26 Apr 2023	Low Tide (ft)	0.56
D4	26 Apr 2023	Low Tide Time	941
D4	26 Apr 2023	Comments	Water clear; Trash-2; Algae;Seagrass;Kelp
D5	05 Apr 2023	Arrive Time	913
D5	05 Apr 2023	Weather	Sunny
D5	05 Apr 2023	Wind Speed (kts)	0.8
D5	05 Apr 2023	Wind Dir	NW
D5	05 Apr 2023	Animal Life	Bird-3;
D5	05 Apr 2023	Floatables	None
D5	05 Apr 2023	Water Color	Green
D5	05 Apr 2023	Current Direction	S
D5	05 Apr 2023	Water Temp (C)	10
D5	05 Apr 2023	Wave Height Low (ft)	3
D5	05 Apr 2023	High Tide (ft)	4.64
D5	05 Apr 2023	High Tide Time	922
D5	05 Apr 2023	Low Tide (ft)	0.32
D5	05 Apr 2023	Low Tide Time	330
D5	05 Apr 2023	Comments	Water clear; Trash-1; Algae;Kelp;Seagrass
D5	12 Apr 2023	Arrive Time	921
D5	12 Apr 2023	Weather	Foggy
D5	12 Apr 2023	Wind Speed (kts)	3.3
D5	12 Apr 2023	Wind Dir	S
D5	12 Apr 2023	Animal Life	Bird-1;
D5	12 Apr 2023	Floatables	None
D5	12 Apr 2023	Water Color	Green
D5	12 Apr 2023	Current Direction	S
D5	12 Apr 2023	Water Temp (C)	9
D5	12 Apr 2023	Wave Height Low (ft)	2
D5	12 Apr 2023	High Tide (ft)	4.71
D5	12 Apr 2023	High Tide Time	109
D5	12 Apr 2023	Low Tide (ft)	0.07
D5	12 Apr 2023	Low Tide Time	956
D5	12 Apr 2023	Comments	Water clear; Trash-1; Algae
D5	19 Apr 2023	Arrive Time	1001
D5	19 Apr 2023	Weather	Sunny
D5	19 Apr 2023	Wind Speed (kts)	3.8
D5	19 Apr 2023	Wind Dir	SW
D5	19 Apr 2023	Animal Life	
D5	19 Apr 2023	Floatables	None
D5	19 Apr 2023	Water Color	Green
D5	19 Apr 2023	Current Direction	S
D5	19 Apr 2023	Water Temp (C)	14
D5	19 Apr 2023	Wave Height Low (ft)	4
D5	19 Apr 2023	High Tide (ft)	4.73
D5	19 Apr 2023	High Tide Time	920
D5	19 Apr 2023	Low Tide (ft)	-0.43
D5	19 Apr 2023	Low Tide Time	325
D5	19 Apr 2023	Comments	Water clear; Trash-1; Kelp;Seagrass;Algae
D5	26 Apr 2023	Arrive Time	927
D5	26 Apr 2023	Weather	Cloudy
D5	26 Apr 2023	Wind Speed (kts)	5.7
D5	26 Apr 2023	Wind Dir	NW
D5	26 Apr 2023	Animal Life	



Station	Date	Parameter	Value
D5	26 Apr 2023	Floatables	None
D5	26 Apr 2023	Water Color	Green
D5	26 Apr 2023	Current Direction	S
D5	26 Apr 2023	Water Temp (C)	13
D5	26 Apr 2023	Wave Height Low (ft)	3
D5	26 Apr 2023	High Tide (ft)	4.15
D5	26 Apr 2023	High Tide Time	55
D5	26 Apr 2023	Low Tide (ft)	0.56
D5	26 Apr 2023	Low Tide Time	941
D5	26 Apr 2023	Comments	Water clear; Trash-2; Kelp;Seagrass;Algae
D7	05 Apr 2023	Arrive Time	850
D7	05 Apr 2023	Weather	Sunny
D7	05 Apr 2023	Wind Speed (kts)	1.3
D7	05 Apr 2023	Wind Dir	NW
D7	05 Apr 2023	Animal Life	
D7	05 Apr 2023	Floatables	None
D7	05 Apr 2023	Water Color	Green
D7	05 Apr 2023	Current Direction	S
D7	05 Apr 2023	Water Temp (C)	9
D7	05 Apr 2023	Wave Height Low (ft)	3
D7	05 Apr 2023	High Tide (ft)	4.64
D7	05 Apr 2023	High Tide Time	922
D7	05 Apr 2023	Low Tide (ft)	0.32
D7	05 Apr 2023	Low Tide Time	330
D7	05 Apr 2023	Comments	Water clear; Trash-1; Algae
D7	12 Apr 2023	Arrive Time	858
D7	12 Apr 2023	Weather	Cloudy
D7	12 Apr 2023	Wind Speed (kts)	5.2
D7	12 Apr 2023	Wind Dir	E
D7	12 Apr 2023	Animal Life	
D7	12 Apr 2023	Floatables	None
D7	12 Apr 2023	Water Color	Green
D7	12 Apr 2023	Current Direction	S
D7	12 Apr 2023	Water Temp (C)	8
D7	12 Apr 2023	Wave Height Low (ft)	4
D7	12 Apr 2023	High Tide (ft)	4.71
D7	12 Apr 2023	High Tide Time	109
D7	12 Apr 2023	Low Tide (ft)	0.07
D7	12 Apr 2023	Low Tide Time	956
D7	12 Apr 2023	Comments	Water clear; Surfer/Paddle boarder-1; Trash-1; Algae;Seagrass
D7	19 Apr 2023	Arrive Time	928
D7	19 Apr 2023	Weather	Partly cloudy
D7	19 Apr 2023	Wind Speed (kts)	2
D7	19 Apr 2023	Wind Dir	SW
D7	19 Apr 2023	Animal Life	
D7	19 Apr 2023	Floatables	None
D7	19 Apr 2023	Water Color	Green
D7	19 Apr 2023	Current Direction	S
D7	19 Apr 2023	Water Temp (C)	11
D7	19 Apr 2023	Wave Height Low (ft)	11
D7	19 Apr 2023	High Tide (ft)	4.73
D7	19 Apr 2023	High Tide Time	920
D7	19 Apr 2023	Low Tide (ft)	-0.43
D7	19 Apr 2023	Low Tide Time	325
D7	19 Apr 2023	Comments	Water clear; Trash-1; Kelp;Seagrass;Algae; Person/Walker/Jogger-1

Station	Date	Parameter	Value
D7	26 Apr 2023	Arrive Time	902
D7	26 Apr 2023	Weather	Cloudy
D7	26 Apr 2023	Wind Speed (kts)	2
D7	26 Apr 2023	Wind Dir	NW
D7	26 Apr 2023	Animal Life	
D7	26 Apr 2023	Floatables	None
D7	26 Apr 2023	Water Color	Green
D7	26 Apr 2023	Current Direction	S
D7	26 Apr 2023	Water Temp (C)	12
D7	26 Apr 2023	Wave Height Low (ft)	2
D7	26 Apr 2023	High Tide (ft)	4.15
D7	26 Apr 2023	High Tide Time	55
D7	26 Apr 2023	Low Tide (ft)	0.56
D7	26 Apr 2023	Low Tide Time	941
D7	26 Apr 2023	Comments	Water clear; Surfer/Paddle boarder-2; Trash-1; Algae
D8-B	05 Apr 2023	Arrive Time	837
D8-B	05 Apr 2023	Weather	Sunny
D8-B	05 Apr 2023	Wind Speed (kts)	2.5
D8-B	05 Apr 2023	Wind Dir	W
D8-B	05 Apr 2023	Animal Life	
D8-B	05 Apr 2023	Floatables	None
D8-B	05 Apr 2023	Water Color	Green
D8-B	05 Apr 2023	Current Direction	S
D8-B	05 Apr 2023	Water Temp (C)	9
D8-B	05 Apr 2023	Wave Height Low (ft)	4
D8-B	05 Apr 2023	High Tide (ft)	4.64
D8-B	05 Apr 2023	High Tide Time	922
D8-B	05 Apr 2023	Low Tide (ft)	0.32
D8-B	05 Apr 2023	Low Tide Time	330
D8-B	05 Apr 2023	Comments	Water clear; Trash-2; Seagrass;Algae
D8-B	12 Apr 2023	Arrive Time	842
D8-B	12 Apr 2023	Weather	Cloudy
D8-B	12 Apr 2023	Wind Speed (kts)	4.83
D8-B	12 Apr 2023	Wind Dir	E
D8-B	12 Apr 2023	Animal Life	
D8-B	12 Apr 2023	Floatables	None
D8-B	12 Apr 2023	Water Color	Green
D8-B	12 Apr 2023	Current Direction	S
D8-B	12 Apr 2023	Water Temp (C)	8
D8-B	12 Apr 2023	Wave Height Low (ft)	3
D8-B	12 Apr 2023	High Tide (ft)	4.71
D8-B	12 Apr 2023	High Tide Time	109
D8-B	12 Apr 2023	Low Tide (ft)	0.07
D8-B	12 Apr 2023	Low Tide Time	956
D8-B	12 Apr 2023	Comments	Water clear; Surfer/Paddle boarder-1; Trash-2; Algae;Debris; Had to go beyond sampling site due to low tide
D8-B	19 Apr 2023	Arrive Time	917
D8-B	19 Apr 2023	Weather	Partly cloudy
D8-B	19 Apr 2023	Wind Speed (kts)	3.6
D8-B	19 Apr 2023	Wind Dir	W
D8-B	19 Apr 2023	Animal Life	
D8-B	19 Apr 2023	Floatables	None
D8-B	19 Apr 2023	Water Color	Green
D8-B	19 Apr 2023	Current Direction	S
D8-B	19 Apr 2023	Water Temp (C)	12
D8-B	19 Apr 2023	Wave Height Low (ft)	4
D8-B	19 Apr 2023	High Tide (ft)	4.73
D8-B	19 Apr 2023	High Tide Time	920

Station	Date	Parameter	Value
D8-B	19 Apr 2023	Low Tide (ft)	-0.43
D8-B	19 Apr 2023	Low Tide Time	325
D8-B	19 Apr 2023	Comments	Water clear; Trash-1; Algae
D8-B	26 Apr 2023	Arrive Time	847
D8-B	26 Apr 2023	Weather	Cloudy
D8-B	26 Apr 2023	Wind Speed (kts)	2.3
D8-B	26 Apr 2023	Wind Dir	NW
D8-B	26 Apr 2023	Animal Life	
D8-B	26 Apr 2023	Floatables	None
D8-B	26 Apr 2023	Water Color	Green
D8-B	26 Apr 2023	Current Direction	S
D8-B	26 Apr 2023	Water Temp (C)	12
D8-B	26 Apr 2023	Wave Height Low (ft)	2
D8-B	26 Apr 2023	High Tide (ft)	4.15
D8-B	26 Apr 2023	High Tide Time	55
D8-B	26 Apr 2023	Low Tide (ft)	0.56
D8-B	26 Apr 2023	Low Tide Time	941
D8-B	26 Apr 2023	Comments	Water clear; Surfer/Paddle boarder-2; Trash-2; Kelp;Seagrass;Algae
D9	05 Apr 2023	Arrive Time	830
D9	05 Apr 2023	Weather	Sunny
D9	05 Apr 2023	Wind Speed (kts)	0.9
D9	05 Apr 2023	Wind Dir	W
D9	05 Apr 2023	Animal Life	
D9	05 Apr 2023	Floatables	None
D9	05 Apr 2023	Water Color	Green
D9	05 Apr 2023	Current Direction	S
D9	05 Apr 2023	Water Temp (C)	8
D9	05 Apr 2023	Wave Height Low (ft)	4
D9	05 Apr 2023	High Tide (ft)	4.64
D9	05 Apr 2023	High Tide Time	922
D9	05 Apr 2023	Low Tide (ft)	0.32
D9	05 Apr 2023	Low Tide Time	330
D9	05 Apr 2023	Comments	Water clear; Surfer/Paddle boarder-1; Trash-1; Algae; Person/Walker/Jogger-1
D9	12 Apr 2023	Arrive Time	832
D9	12 Apr 2023	Weather	Foggy
D9	12 Apr 2023	Wind Speed (kts)	0
D9	12 Apr 2023	Wind Dir	
D9	12 Apr 2023	Animal Life	Bird-39;
D9	12 Apr 2023	Floatables	Foam
D9	12 Apr 2023	Water Color	Green
D9	12 Apr 2023	Current Direction	S
D9	12 Apr 2023	Water Temp (C)	9
D9	12 Apr 2023	Wave Height Low (ft)	3
D9	12 Apr 2023	High Tide (ft)	4.71
D9	12 Apr 2023	High Tide Time	109
D9	12 Apr 2023	Low Tide (ft)	0.07
D9	12 Apr 2023	Low Tide Time	956
D9	12 Apr 2023	Comments	Water clear; Trash-1; Algae; Person/Walker/Jogger-1; Sampled further than sample site due to low tide
D9	19 Apr 2023	Arrive Time	859
D9	19 Apr 2023	Weather	Partly cloudy
D9	19 Apr 2023	Wind Speed (kts)	2
D9	19 Apr 2023	Wind Dir	W
D9	19 Apr 2023	Animal Life	
D9	19 Apr 2023	Floatables	None

Station	Date	Parameter	Value
D9	19 Apr 2023	Water Color	Green
D9	19 Apr 2023	Current Direction	S
D9	19 Apr 2023	Water Temp (C)	12
D9	19 Apr 2023	Wave Height Low (ft)	4
D9	19 Apr 2023	High Tide (ft)	4.73
D9	19 Apr 2023	High Tide Time	920
D9	19 Apr 2023	Low Tide (ft)	-0.43
D9	19 Apr 2023	Low Tide Time	325
D9	19 Apr 2023	Comments	Water clear; Trash-1; Algae
D9	26 Apr 2023	Arrive Time	837
D9	26 Apr 2023	Weather	Cloudy
D9	26 Apr 2023	Wind Speed (kts)	4.3
D9	26 Apr 2023	Wind Dir	NW
D9	26 Apr 2023	Animal Life	
D9	26 Apr 2023	Floatables	Foam
D9	26 Apr 2023	Water Color	Green
D9	26 Apr 2023	Current Direction	S
D9	26 Apr 2023	Water Temp (C)	12
D9	26 Apr 2023	Wave Height Low (ft)	2
D9	26 Apr 2023	High Tide (ft)	4.15
D9	26 Apr 2023	High Tide Time	55
D9	26 Apr 2023	Low Tide (ft)	0.56
D9	26 Apr 2023	Low Tide Time	941
D9	26 Apr 2023	Comments	Water clear; Trash-1; Algae;Seagrass;Kelp; Person/Walker/Jogger-3
D10	05 Apr 2023	Arrive Time	822
D10	05 Apr 2023	Weather	Sunny
D10	05 Apr 2023	Wind Speed (kts)	2
D10	05 Apr 2023	Wind Dir	E
D10	05 Apr 2023	Animal Life	
D10	05 Apr 2023	Floatables	None
D10	05 Apr 2023	Water Color	Green
D10	05 Apr 2023	Current Direction	S
D10	05 Apr 2023	Water Temp (C)	10
D10	05 Apr 2023	Wave Height Low (ft)	6
D10	05 Apr 2023	High Tide (ft)	4.64
D10	05 Apr 2023	High Tide Time	922
D10	05 Apr 2023	Low Tide (ft)	0.32
D10	05 Apr 2023	Low Tide Time	330
D10	05 Apr 2023	Comments	Water clear; Surfer/Paddle boarder-5; Trash-1; Kelp;Seagrass;Debris
D10	12 Apr 2023	Arrive Time	823
D10	12 Apr 2023	Weather	Foggy
D10	12 Apr 2023	Wind Speed (kts)	3
D10	12 Apr 2023	Wind Dir	SE
D10	12 Apr 2023	Animal Life	
D10	12 Apr 2023	Floatables	None
D10	12 Apr 2023	Water Color	Green
D10	12 Apr 2023	Current Direction	S
D10	12 Apr 2023	Water Temp (C)	8
D10	12 Apr 2023	Wave Height Low (ft)	3
D10	12 Apr 2023	High Tide (ft)	4.71
D10	12 Apr 2023	High Tide Time	109
D10	12 Apr 2023	Low Tide (ft)	0.07
D10	12 Apr 2023	Low Tide Time	956
D10	12 Apr 2023	Comments	Water clear; Surfer/Paddle boarder-3; Trash-2; Kelp;Seagrass;Debris

Station	Date	Parameter	Value
D10	19 Apr 2023	Arrive Time	843
D10	19 Apr 2023	Weather	Partly cloudy
D10	19 Apr 2023	Wind Speed (kts)	2.7
D10	19 Apr 2023	Wind Dir	SW
D10	19 Apr 2023	Animal Life	
D10	19 Apr 2023	Floatables	None
D10	19 Apr 2023	Water Color	Green
D10	19 Apr 2023	Current Direction	S
D10	19 Apr 2023	Water Temp (C)	14
D10	19 Apr 2023	Wave Height Low (ft)	9
D10	19 Apr 2023	High Tide (ft)	4.73
D10	19 Apr 2023	High Tide Time	920
D10	19 Apr 2023	Low Tide (ft)	-0.43
D10	19 Apr 2023	Low Tide Time	325
D10	19 Apr 2023	Comments	Water clear; Surfer/Paddle boarder-3; Trash-2; Kelp;Seagrass;Debris; Person/Walker/Jogger-3; Dead bird on shore
D10	26 Apr 2023	Arrive Time	826
D10	26 Apr 2023	Weather	Cloudy
D10	26 Apr 2023	Wind Speed (kts)	5.8
D10	26 Apr 2023	Wind Dir	NW
D10	26 Apr 2023	Animal Life	
D10	26 Apr 2023	Floatables	Foam
D10	26 Apr 2023	Water Color	Green
D10	26 Apr 2023	Current Direction	S
D10	26 Apr 2023	Water Temp (C)	13
D10	26 Apr 2023	Wave Height Low (ft)	5
D10	26 Apr 2023	High Tide (ft)	4.15
D10	26 Apr 2023	High Tide Time	55
D10	26 Apr 2023	Low Tide (ft)	0.56
D10	26 Apr 2023	Low Tide Time	941
D10	26 Apr 2023	Comments	Water clear; Surfer/Paddle boarder-5; Trash-2; Kelp;Seagrass;Debris; Person/Walker/Jogger-4
D11	05 Apr 2023	Arrive Time	815
D11	05 Apr 2023	Weather	Sunny
D11	05 Apr 2023	Wind Speed (kts)	0.9
D11	05 Apr 2023	Wind Dir	E
D11	05 Apr 2023	Animal Life	Dog-1;
D11	05 Apr 2023	Floatables	None
D11	05 Apr 2023	Water Color	Green
D11	05 Apr 2023	Current Direction	S
D11	05 Apr 2023	Water Temp (C)	9
D11	05 Apr 2023	Wave Height Low (ft)	5
D11	05 Apr 2023	High Tide (ft)	4.64
D11	05 Apr 2023	High Tide Time	922
D11	05 Apr 2023	Low Tide (ft)	0.32
D11	05 Apr 2023	Low Tide Time	330
D11	05 Apr 2023	Comments	Water clear; Surfer/Paddle boarder-7; Trash-1; Kelp;Seagrass;Debris; Person/Walker/Jogger-5
D11	12 Apr 2023	Arrive Time	815
D11	12 Apr 2023	Weather	Drizzle
D11	12 Apr 2023	Wind Speed (kts)	5.1
D11	12 Apr 2023	Wind Dir	S
D11	12 Apr 2023	Animal Life	
D11	12 Apr 2023	Floatables	None
D11	12 Apr 2023	Water Color	Colorless
D11	12 Apr 2023	Current Direction	S
D11	12 Apr 2023	Water Temp (C)	9

Station	Date	Parameter	Value
D11	12 Apr 2023	Wave Height Low (ft)	3
D11	12 Apr 2023	High Tide (ft)	4.71
D11	12 Apr 2023	High Tide Time	109
D11	12 Apr 2023	Low Tide (ft)	0.07
D11	12 Apr 2023	Low Tide Time	956
D11	12 Apr 2023	Comments	Water clear; Surfer/Paddle boarder-3; Trash-1; Kelp;Seagrass;Algae;Debris
D11	19 Apr 2023	Arrive Time	831
D11	19 Apr 2023	Weather	Partly cloudy
D11	19 Apr 2023	Wind Speed (kts)	3.2
D11	19 Apr 2023	Wind Dir	W
D11	19 Apr 2023	Animal Life	Dog-1;
D11	19 Apr 2023	Floatables	None
D11	19 Apr 2023	Water Color	Green
D11	19 Apr 2023	Current Direction	S
D11	19 Apr 2023	Water Temp (C)	10
D11	19 Apr 2023	Wave Height Low (ft)	5
D11	19 Apr 2023	High Tide (ft)	4.73
D11	19 Apr 2023	High Tide Time	920
D11	19 Apr 2023	Low Tide (ft)	-0.43
D11	19 Apr 2023	Low Tide Time	325
D11	19 Apr 2023	Comments	Water clear; Surfer/Paddle boarder-7; Trash-1; Kelp;Seagrass;Algae;Debris; Person/Walker/Jogger-1
D11	26 Apr 2023	Arrive Time	817
D11	26 Apr 2023	Weather	Cloudy
D11	26 Apr 2023	Wind Speed (kts)	0
D11	26 Apr 2023	Wind Dir	
D11	26 Apr 2023	Animal Life	
D11	26 Apr 2023	Floatables	None
D11	26 Apr 2023	Water Color	Green
D11	26 Apr 2023	Current Direction	S
D11	26 Apr 2023	Water Temp (C)	14
D11	26 Apr 2023	Wave Height Low (ft)	5
D11	26 Apr 2023	High Tide (ft)	4.15
D11	26 Apr 2023	High Tide Time	55
D11	26 Apr 2023	Low Tide (ft)	0.56
D11	26 Apr 2023	Low Tide Time	941
D11	26 Apr 2023	Comments	Water clear; Surfer/Paddle boarder-4; Trash-1; Kelp;Seagrass;Algae;Debris; Person/Walker/Jogger-1
D12	05 Apr 2023	Arrive Time	800
D12	05 Apr 2023	Weather	Sunny
D12	05 Apr 2023	Wind Speed (kts)	1
D12	05 Apr 2023	Wind Dir	W
D12	05 Apr 2023	Animal Life	Bird-1;
D12	05 Apr 2023	Floatables	None
D12	05 Apr 2023	Water Color	Green
D12	05 Apr 2023	Current Direction	S
D12	05 Apr 2023	Water Temp (C)	6
D12	05 Apr 2023	Wave Height Low (ft)	5
D12	05 Apr 2023	High Tide (ft)	4.64
D12	05 Apr 2023	High Tide Time	922
D12	05 Apr 2023	Low Tide (ft)	0.32
D12	05 Apr 2023	Low Tide Time	330
D12	05 Apr 2023	Comments	Water clear; Trash-1; Kelp;Seagrass;Debris; Person/Walker/Jogger-2
D12	12 Apr 2023	Arrive Time	757
D12	12 Apr 2023	Weather	Foggy

Station	Date	Parameter	Value
D12	12 Apr 2023	Wind Speed (kts)	0
D12	12 Apr 2023	Wind Dir	
D12	12 Apr 2023	Animal Life	Bird-2;
D12	12 Apr 2023	Floatables	Foam
D12	12 Apr 2023	Water Color	Green
D12	12 Apr 2023	Current Direction	S
D12	12 Apr 2023	Water Temp (C)	8
D12	12 Apr 2023	Wave Height Low (ft)	2
D12	12 Apr 2023	High Tide (ft)	4.71
D12	12 Apr 2023	High Tide Time	109
D12	12 Apr 2023	Low Tide (ft)	0.07
D12	12 Apr 2023	Low Tide Time	956
D12	12 Apr 2023	Comments	Water clear; Surfer/Paddle boarder-2; Trash-2; Kelp;Seagrass;Debris; Person/Walker/Jogger-2
D12	19 Apr 2023	Arrive Time	812
D12	19 Apr 2023	Weather	Partly cloudy
D12	19 Apr 2023	Wind Speed (kts)	4.3
D12	19 Apr 2023	Wind Dir	W
D12	19 Apr 2023	Animal Life	
D12	19 Apr 2023	Floatables	None
D12	19 Apr 2023	Water Color	Green
D12	19 Apr 2023	Current Direction	S
D12	19 Apr 2023	Water Temp (C)	9
D12	19 Apr 2023	Wave Height Low (ft)	5
D12	19 Apr 2023	High Tide (ft)	4.73
D12	19 Apr 2023	High Tide Time	920
D12	19 Apr 2023	Low Tide (ft)	-0.43
D12	19 Apr 2023	Low Tide Time	325
D12	19 Apr 2023	Comments	Water clear; Surfer/Paddle boarder-1; Trash-1; Kelp;Seagrass
D12	26 Apr 2023	Arrive Time	802
D12	26 Apr 2023	Weather	Cloudy
D12	26 Apr 2023	Wind Speed (kts)	2.6
D12	26 Apr 2023	Wind Dir	NW
D12	26 Apr 2023	Animal Life	Bird-3;
D12	26 Apr 2023	Floatables	Foam
D12	26 Apr 2023	Water Color	Green
D12	26 Apr 2023	Current Direction	S
D12	26 Apr 2023	Water Temp (C)	12
D12	26 Apr 2023	Wave Height Low (ft)	4
D12	26 Apr 2023	High Tide (ft)	4.15
D12	26 Apr 2023	High Tide Time	55
D12	26 Apr 2023	Low Tide (ft)	0.56
D12	26 Apr 2023	Low Tide Time	941
D12	26 Apr 2023	Comments	Water clear; Surfer/Paddle boarder-1; Trash-2; Kelp;Seagrass; Person/Walker/Jogger-3





# 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
01 Apr 2023	117	33	57	4	6	7	24	16
02 Apr 2023	117	33	57	4	6	7	24	16
03 Apr 2023	117	33	57	4	6	7	24	16
04 Apr 2023	117	33	57	4	6	7	24	16
05 Apr 2023	218	60	121	7	11	13	50	36
06 Apr 2023	246	80	153	6	15	13	66	44
07 Apr 2023	246	80	153	6	15	13	66	44
08 Apr 2023	246	80	153	6	15	13	66	44
09 Apr 2023	246	80	153	6	15	13	66	44
10 Apr 2023	104	51	87	7	10	14	47	42
11 Apr 2023	104	51	87	7	10	14	47	42
12 Apr 2023	104	51	87	7	10	14	47	42
13 Apr 2023	104	44	80	7	11	19	44	41
14 Apr 2023	104	44	80	7	11	19	44	41
15 Apr 2023	104	44	80	7	11	19	44	41
16 Apr 2023	104	44	80	7	11	19	44	41
17 Apr 2023	104	44	80	7	11	19	44	41
18 Apr 2023	52	28	51	5	8	12	24	30
19 Apr 2023	52	28	51	5	8	12	24	30
20 Apr 2023	52	28	51	5	8	12	24	30
21 Apr 2023	52	28	51	5	8	12	24	30
22 Apr 2023	52	28	51	5	8	12	24	30
23 Apr 2023	44	25	44	6	7	10	20	28
24 Apr 2023	44	25	44	6	7	10	20	28
25 Apr 2023	44	25	44	6	7	10	20	28
26 Apr 2023	28	20	28	5	7	7	17	18
27 Apr 2023	19	21	30	6	9	10	20	30
28 Apr 2023	19	21	30	6	9	10	20	30
29 Apr 2023	19	21	30	6	9	10	20	30
30 Apr 2023	19	21	30	6	9	10	20	30

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

\* 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
01 Apr 2023	4	3	3	2	2	2	2	2
02 Apr 2023	4	3	3	2	2	2	2	2
03 Apr 2023	4	3	3	2	2	2	2	2
04 Apr 2023	4	3	3	2	2	2	2	2
05 Apr 2023	7	5	5	2	2	2	4	4
06 Apr 2023	6	6	6	2	2	2	4	4
07 Apr 2023	6	6	6	2	2	2	4	4
08 Apr 2023	6	6	6	2	2	2	4	4
09 Apr 2023	6	6	6	2	2	2	4	4
10 Apr 2023	5	5	5	2	2	2	4	4
11 Apr 2023	5	5	5	2	2	2	4	4
12 Apr 2023	5	5	5	2	2	2	4	4
13 Apr 2023	5	4	5	2	2	2	4	5
14 Apr 2023	5	4	5	2	2	2	4	5
15 Apr 2023	5	4	5	2	2	2	4	5
16 Apr 2023	5	4	5	2	2	2	4	5
17 Apr 2023	5	4	5	2	2	2	4	5
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	5	4	5	2	2	2	4	5
24 Apr 2023	5	4	5	2	2	2	4	5
25 Apr 2023	5	4	5	2	2	2	4	5
26 Apr 2023	4	4	4	2	2	2	3	4
27 Apr 2023	5	4	5	2	2	2	4	5
28 Apr 2023	5	4	5	2	2	2	4	5
29 Apr 2023	5	4	5	2	2	2	4	5
30 Apr 2023	5	4	5	2	2	2	4	5

\* 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
05 Apr 2023	IC	IC	IC	IC	IC	IC	IC	IC
10 Apr 2023	IC	IC	IC	IC	IC	IC	IC	IC
18 Apr 2023	IC	IC	IC	IC	IC	IC	IC	IC
26 Apr 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
05 Apr 2023	E	IC	E	IC	IC	IC	E	E
10 Apr 2023	IC	IC	IC	IC	IC	IC	IC	IC
18 Apr 2023	IC	IC	IC	IC	IC	IC	IC	IC
26 Apr 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
05 Apr 2023	IC	IC	E	IC	IC	IC	IC	IC
10 Apr 2023	IC	IC	IC	IC	IC	IC	IC	IC
18 Apr 2023	IC	IC	IC	IC	IC	IC	IC	IC
26 Apr 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
05 Apr 2023	E	E	E	IC	IC	IC	E	E
10 Apr 2023	IC	IC	IC	IC	IC	IC	IC	IC
18 Apr 2023	IC	IC	IC	IC	IC	IC	IC	IC
26 Apr 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	05 Apr 2023	755	1	110	10e	2e	0.09	11.8	84.66	5.1	33.63	7.9
A1	05 Apr 2023	755	12	2200e	600	60e	0.27	10.3	91.15	2.8	33.91	7.7
A1	05 Apr 2023	755	18	5400	680	100e	0.13	10.2	88.89	2.4	33.98	7.7
A1	10 Apr 2023	813	1	<2	<2	<2	1.00	12.4	85.22	6.6	33.69	7.8
A1	10 Apr 2023	813	12	2e	<2	<2	1.00	11.3	85.49	4.6	33.85	7.7
A1	10 Apr 2023	813	18	6e	<2	<2	0.33	10.6	90.48	2.8	33.95	7.6
A1	18 Apr 2023	744	1	2e	<2	<2	1.00	13.7	67.93	9.0	33.52	8.1
A1	18 Apr 2023	744	12	6e	<2	<2	0.33	11.4	87.72	4.2	33.77	7.8
A1	18 Apr 2023	744	18	<2	<2	<2	1.00	11.3	89.03	3.7	33.80	7.7
A1	26 Apr 2023	759	1	4e	<2	<2	0.50	15.7	69.15	10.3	33.63	8.2
A1	26 Apr 2023	759	12	4e	2e	<2	0.50	14.6	80.38	8.6	33.66	8.1
A1	26 Apr 2023	759	18	6e	2e	<2	0.33	12.6	85.05	5.1	33.76	7.9
A6	05 Apr 2023	812	1	20e	<2	2e	0.10	12.2	78.31	5.9	33.54	7.8
A6	05 Apr 2023	812	12	1800e	320e	92	0.18	10.5	89.94	3.0	33.88	7.7
A6	05 Apr 2023	812	18	140	28e	14e	0.20	10.3	90.09	2.7	33.92	7.6
A6	10 Apr 2023	839	1	<2	<2	<2	1.00	12.1	79.81	6.2	33.74	7.9
A6	10 Apr 2023	839	12	2e	<2	<2	1.00	11.6	82.82	4.9	33.79	7.8
A6	10 Apr 2023	839	18	22e	2e	<2	0.09	11.0	83.83	4.0	33.87	7.7
A6	18 Apr 2023	821	1	4e	<2	<2	0.50	13.7	78.21	8.1	33.50	8.1
A6	18 Apr 2023	821	12	2e	<2	<2	1.00	12.5	83.76	6.8	33.86	8.0
A6	18 Apr 2023	821	18	8e	<2	<2	0.25	11.5	89.05	5.4	34.13	7.7
A6	26 Apr 2023	829	1	<20	<2	<2	0.10	16.2	53.31	11.5	33.63	8.4
A6	26 Apr 2023	829	12	<2	<2	<2	1.00	15.5	73.04	10.0	33.64	8.2
A6	26 Apr 2023	829	18	2e	<2	<2	1.00	14.5	78.56	8.1	33.68	8.1
A7	05 Apr 2023	804	1	38e	6e	2e	0.16	12.1	83.17	5.8	33.57	7.8
A7	05 Apr 2023	804	12	2200e	360e	94	0.16	10.9	89.85	3.4	33.81	7.7
A7	05 Apr 2023	804	18	4800	980	110	0.20	10.2	89.12	2.4	34.00	7.6
A7	10 Apr 2023	826	1	<2	<2	<2	1.00	11.8	86.48	5.7	33.80	7.8
A7	10 Apr 2023	826	12	4e	<2	<2	0.50	10.9	85.46	3.5	33.88	7.7
A7	10 Apr 2023	826	18	22e	10e	4e	0.45	10.3	91.52	2.6	33.99	7.6
A7	18 Apr 2023	807	1	2e	<2	<2	1.00	13.7	77.24	8.3	33.51	8.1
A7	18 Apr 2023	807	12	8e	2e	<2	0.25	11.6	86.48	4.6	33.92	7.8
A7	18 Apr 2023	807	18	14e	<2	<2	0.14	11.4	88.06	4.1	33.92	7.7
A7	26 Apr 2023	813	1	8e	<2	<2	0.25	16.1	71.05	9.1	33.64	8.2
A7	26 Apr 2023	813	12	2e	<2	<2	1.00	14.5	83.30	8.3	33.68	8.1
A7	26 Apr 2023	813	18	4e	<2	<2	0.50	13.0	85.67	5.7	33.75	8.0
C4	05 Apr 2023	926	1	2e	<2	<2	1.00	12.1	82.84	5.7	33.62	7.8
C4	05 Apr 2023	926	3	22e	2e	<2	0.09	11.9	81.54	5.7	33.64	7.8
C4	05 Apr 2023	926	9	100	18e	4e	0.18	10.6	86.91	2.5	33.92	7.7

Station	Date	Time	Depth	Total	Fecal	Entero	F:T	Temp	XMS	DO	Sal	pH
C4	10 Apr 2023	954	1	<2	<2	<2	1.00	12.2	80.46	5.7	33.74	7.8
C4	10 Apr 2023	954	3	<2	2e	<2	1.00	12.0	76.14	5.6	33.77	7.8
C4	10 Apr 2023	954	9	<20	<2	<2	0.10	11.3	84.47	4.3	33.86	7.8
C4	18 Apr 2023	1010	1	<2	<2	<2	1.00	13.8	76.68	9.0	33.62	8.1
C4	18 Apr 2023	1010	3	2e	<2	<2	1.00	13.6	73.06	9.1	33.63	8.1
C4	18 Apr 2023	1010	9	2e	<2	<2	1.00	13.2	78.71	8.7	33.65	8.1
C4	26 Apr 2023	933	1	<2	2e	<2	1.00	16.1	66.78	10.9	33.64	8.3
C4	26 Apr 2023	933	3	<2	<2	<2	1.00	15.9	65.79	10.2	33.65	8.3
C4	26 Apr 2023	933	9	<2	<2	<2	1.00	15.2	82.15	9.1	33.65	8.2
C5	05 Apr 2023	914	1	6e	<2	<2	0.33	12.0	83.19	5.6	33.61	7.8
C5	05 Apr 2023	914	3	380e	46	4e	0.12	11.8	82.83	4.9	33.66	7.8
C5	05 Apr 2023	914	9	140	34e	6e	0.24	10.9	88.44	3.3	33.84	7.7
C5	10 Apr 2023	940	1	<2	<2	<2	1.00	12.0	86.28	5.6	33.82	7.8
C5	10 Apr 2023	940	3	<2	<2	<2	1.00	11.0	85.49	3.8	33.90	7.7
C5	10 Apr 2023	940	9	2e	<2	<2	1.00	10.7	91.13	3.3	33.91	7.7
C5	18 Apr 2023	958	1	<2	<2	<2	1.00	13.6	68.48	8.8	33.68	8.1
C5	18 Apr 2023	958	3	<2	<2	<2	1.00	13.5	67.63	8.8	33.66	8.1
C5	18 Apr 2023	958	9	2e	<2	<2	1.00	12.9	76.95	6.3	33.71	8.0
C5	26 Apr 2023	923	1	<20	<2	<2	0.10	16.4	70.58	8.4	33.64	8.2
C5	26 Apr 2023	923	3	<2	<2	<2	1.00	16.0	70.08	9.6	33.63	8.2
C5	26 Apr 2023	923	9	<2	2e	<2	1.00	14.5	80.26	7.1	33.65	8.1
C6	05 Apr 2023	905	1	6e	<2	<2	0.33	12.1	80.11	5.9	33.59	7.8
C6	05 Apr 2023	905	3	32e	<2	<2	0.06	12.0	79.99	5.4	33.63	7.8
C6	05 Apr 2023	905	9	460	64	6e	0.14	10.8	87.82	3.1	33.85	7.7
C6	10 Apr 2023	932	1	<20	<2	<2	0.10	11.9	67.48	6.2	33.79	7.9
C6	10 Apr 2023	932	3	6e	<2	2e	0.33	11.6	66.90	5.4	33.80	7.8
C6	10 Apr 2023	932	9	<20	<2	<2	0.10	10.6	91.30	3.2	33.92	7.7
C6	18 Apr 2023	947	1	<2	<2	<2	1.00	13.9	47.49	9.5	33.63	8.2
C6	18 Apr 2023	947	3	2e	<2	<2	1.00	13.7	50.70	8.6	33.64	8.2
C6	18 Apr 2023	947	9	<2	<2	<2	1.00	11.8	81.96	3.9	33.78	7.8
C6	26 Apr 2023	915	1	<2	<2	<2	1.00	16.2	68.49	10.1	33.63	8.3
C6	26 Apr 2023	915	3	<2	<2	<2	1.00	16.2	69.36	9.8	33.63	8.3
C6	26 Apr 2023	915	9	<2	<2	<2	1.00	14.6	85.70	7.0	33.66	8.1
C7	05 Apr 2023	833	1	16e	2e	<2	0.12	12.0	83.36	5.5	33.58	7.8
C7	05 Apr 2023	833	12	360e	68	18e	0.19	10.8	89.06	3.3	33.84	7.7
C7	05 Apr 2023	833	18	2200e	500	64	0.23	10.4	88.82	2.7	33.92	7.6
C7	10 Apr 2023	855	1	2e	<2	<2	1.00	12.1	72.74	5.9	33.76	7.9
C7	10 Apr 2023	855	12	<20	<2	<2	0.10	11.3	74.82	4.3	33.83	7.7
C7	10 Apr 2023	855	18	16e	6e	<2	0.38	10.4	91.31	2.7	33.94	7.6
C7	18 Apr 2023	914	1	<2	<2	<2	1.00	13.7	83.73	9.1	33.52	8.1
C7	18 Apr 2023	914	12	<2	<2	<2	1.00	12.8	83.00	7.4	33.61	8.0
C7	18 Apr 2023	914	18	<2	<2	<2	1.00	11.2	88.83	3.8	33.80	7.7
C7	26 Apr 2023	843	1	<20	<2	<2	0.10	16.0	58.69	11.5	33.61	8.3
C7	26 Apr 2023	843	12	<2	<2	2e	1.00	14.2	79.80	7.8	33.69	8.1
C7	26 Apr 2023	843	18	<2	<2	<2	1.00	12.5	85.69	5.3	33.76	7.9

Station	Date	Time	Depth	Total	Fecal	Entero	F:T	Temp	XMS	DO	Sal	pH
C8	05 Apr 2023	842	1	4e	2e	<2	0.50	12.2	74.14	6.0	33.54	7.8
C8	05 Apr 2023	842	12	1400	400	66	0.29	10.5	91.80	3.0	33.89	7.7
C8	05 Apr 2023	842	18	1000	480	78	0.48	10.4	90.83	2.9	33.90	7.7
C8	10 Apr 2023	909	1	2e	<2	<2	1.00	12.2	67.29	6.7	33.75	7.9
C8	10 Apr 2023	909	12	8e	<2	<2	0.25	10.9	87.40	3.3	33.87	7.7
C8	10 Apr 2023	909	18	98	10e	4e	0.10	10.3	91.68	2.6	33.96	7.6
C8	18 Apr 2023	929	1	2e	<2	2e	1.00	13.8	81.04	9.1	33.44	8.2
C8	18 Apr 2023	929	12	2e	2e	<2	1.00	12.7	83.70	7.3	33.63	8.1
C8	18 Apr 2023	929	18	20e	4e	<2	0.20	11.7	84.32	5.0	33.75	7.8
C8	26 Apr 2023	854	1	<2	<2	<2	1.00	15.9	73.19	10.6	33.60	8.3
C8	26 Apr 2023	854	12	<2	<2	<2	1.00	14.1	83.78	7.5	33.70	8.1
C8	26 Apr 2023	854	18	6e	2e	<2	0.33	12.1	87.57	4.7	33.74	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	05 Apr 2023	Depth (m)	18
A1	05 Apr 2023	Arrive Time	755
A1	05 Apr 2023	Depart Time	755
A1	05 Apr 2023	Air Temp (C)	10.5
A1	05 Apr 2023	Weather	Haze
A1	05 Apr 2023	Visibility (mi)	11
A1	05 Apr 2023	Wind Speed (kts)	4.6
A1	05 Apr 2023	Wind Dir	N
A1	05 Apr 2023	Water Color	Blue
A1	05 Apr 2023	Wave Ht Low (ft)	6
A1	05 Apr 2023	Wave Period (sec)	8
A1	05 Apr 2023	Sea State	Confused Swell
A1	05 Apr 2023	High Tide (ft)	4.96
A1	05 Apr 2023	High Tide Time	2136
A1	05 Apr 2023	Low Tide (ft)	0.23
A1	05 Apr 2023	Low Tide Time	1530
A1	05 Apr 2023	Comments	none
A1	10 Apr 2023	Depth (m)	19
A1	10 Apr 2023	Arrive Time	813
A1	10 Apr 2023	Depart Time	819
A1	10 Apr 2023	Air Temp (C)	11.2
A1	10 Apr 2023	Weather	Fog
A1	10 Apr 2023	Visibility (mi)	2
A1	10 Apr 2023	Wind Speed (kts)	1.9
A1	10 Apr 2023	Wind Dir	NE
A1	10 Apr 2023	Water Color	Blueish-Green
A1	10 Apr 2023	Wave Ht Low (ft)	3
A1	10 Apr 2023	Wave Period (sec)	17
A1	10 Apr 2023	Sea State	Calm
A1	10 Apr 2023	High Tide (ft)	5.19
A1	10 Apr 2023	High Tide Time	6
A1	10 Apr 2023	Low Tide (ft)	-0.17
A1	10 Apr 2023	Low Tide Time	700
A1	10 Apr 2023	Comments	Kelp
A1	18 Apr 2023	Depth (m)	19
A1	18 Apr 2023	Arrive Time	744
A1	18 Apr 2023	Depart Time	757
A1	18 Apr 2023	Air Temp (C)	12.9
A1	18 Apr 2023	Weather	Continuous Layer of Clouds
A1	18 Apr 2023	Visibility (mi)	10
A1	18 Apr 2023	Wind Speed (kts)	3.9
A1	18 Apr 2023	Wind Dir	S
A1	18 Apr 2023	Water Color	Green
A1	18 Apr 2023	Wave Ht Low (ft)	5
A1	18 Apr 2023	Wave Period (sec)	8
A1	18 Apr 2023	Sea State	Confused Swell
A1	18 Apr 2023	High Tide (ft)	5.55
A1	18 Apr 2023	High Tide Time	2054
A1	18 Apr 2023	Low Tide (ft)	-0.18
A1	18 Apr 2023	Low Tide Time	1442
A1	18 Apr 2023	Comments	none
A1	26 Apr 2023	Depth (m)	17
A1	26 Apr 2023	Arrive Time	759

Station	Date	Parameter	Value
A1	26 Apr 2023	Depart Time	805
A1	26 Apr 2023	Air Temp (C)	15.3
A1	26 Apr 2023	Weather	Overcast
A1	26 Apr 2023	Visibility (mi)	10
A1	26 Apr 2023	Wind Speed (kts)	7.9
A1	26 Apr 2023	Wind Dir	NW
A1	26 Apr 2023	Water Color	Brown
A1	26 Apr 2023	Wave Ht Low (ft)	3.9
A1	26 Apr 2023	Wave Period (sec)	8
A1	26 Apr 2023	Sea State	Light Chop
A1	26 Apr 2023	High Tide (ft)	4.17
A1	26 Apr 2023	High Tide Time	42
A1	26 Apr 2023	Low Tide (ft)	0.38
A1	26 Apr 2023	Low Tide Time	942
A1	26 Apr 2023	Comments	none
A6	05 Apr 2023	Depth (m)	16
A6	05 Apr 2023	Arrive Time	812
A6	05 Apr 2023	Depart Time	821
A6	05 Apr 2023	Air Temp (C)	10.4
A6	05 Apr 2023	Weather	Clear
A6	05 Apr 2023	Visibility (mi)	11
A6	05 Apr 2023	Wind Speed (kts)	6
A6	05 Apr 2023	Wind Dir	NW
A6	05 Apr 2023	Water Color	Greenish-Blue
A6	05 Apr 2023	Wave Ht Low (ft)	6
A6	05 Apr 2023	Wave Period (sec)	8
A6	05 Apr 2023	Sea State	Confused Swell
A6	05 Apr 2023	High Tide (ft)	4.96
A6	05 Apr 2023	High Tide Time	2136
A6	05 Apr 2023	Low Tide (ft)	0.23
A6	05 Apr 2023	Low Tide Time	1530
A6	05 Apr 2023	Comments	>17.5m collected
A6	10 Apr 2023	Depth (m)	20
A6	10 Apr 2023	Arrive Time	839
A6	10 Apr 2023	Depart Time	843
A6	10 Apr 2023	Air Temp (C)	11.1
A6	10 Apr 2023	Weather	Fog
A6	10 Apr 2023	Visibility (mi)	2
A6	10 Apr 2023	Wind Speed (kts)	2
A6	10 Apr 2023	Wind Dir	NE
A6	10 Apr 2023	Water Color	Blueish-Green
A6	10 Apr 2023	Wave Ht Low (ft)	3
A6	10 Apr 2023	Wave Period (sec)	17
A6	10 Apr 2023	Sea State	Calm
A6	10 Apr 2023	High Tide (ft)	5.19
A6	10 Apr 2023	High Tide Time	6
A6	10 Apr 2023	Low Tide (ft)	-0.17
A6	10 Apr 2023	Low Tide Time	700
A6	10 Apr 2023	Comments	none
A6	18 Apr 2023	Depth (m)	19
A6	18 Apr 2023	Arrive Time	821
A6	18 Apr 2023	Depart Time	823
A6	18 Apr 2023	Air Temp (C)	13.1
A6	18 Apr 2023	Weather	Continuous Layer of Clouds
A6	18 Apr 2023	Visibility (mi)	10
A6	18 Apr 2023	Wind Speed (kts)	2.8
A6	18 Apr 2023	Wind Dir	S
A6	18 Apr 2023	Water Color	Green

Station	Date	Parameter	Value
A6	18 Apr 2023	Wave Ht Low (ft)	5
A6	18 Apr 2023	Wave Period (sec)	8
A6	18 Apr 2023	Sea State	Confused Swell
A6	18 Apr 2023	High Tide (ft)	5.55
A6	18 Apr 2023	High Tide Time	2054
A6	18 Apr 2023	Low Tide (ft)	-0.18
A6	18 Apr 2023	Low Tide Time	1442
A6	18 Apr 2023	Comments	none
A6	26 Apr 2023	Depth (m)	1
A6	26 Apr 2023	Arrive Time	829
A6	26 Apr 2023	Depart Time	843
A6	26 Apr 2023	Air Temp (C)	15.3
A6	26 Apr 2023	Weather	Overcast
A6	26 Apr 2023	Visibility (mi)	10
A6	26 Apr 2023	Wind Speed (kts)	3.4
A6	26 Apr 2023	Wind Dir	NE
A6	26 Apr 2023	Water Color	Brown
A6	26 Apr 2023	Wave Ht Low (ft)	3.9
A6	26 Apr 2023	Wave Period (sec)	8
A6	26 Apr 2023	Sea State	Light Chop
A6	26 Apr 2023	High Tide (ft)	4.17
A6	26 Apr 2023	High Tide Time	42
A6	26 Apr 2023	Low Tide (ft)	0.38
A6	26 Apr 2023	Low Tide Time	942
A6	26 Apr 2023	Comments	none
A7	05 Apr 2023	Depth (m)	20
A7	05 Apr 2023	Arrive Time	804
A7	05 Apr 2023	Depart Time	805
A7	05 Apr 2023	Air Temp (C)	11
A7	05 Apr 2023	Weather	Clear
A7	05 Apr 2023	Visibility (mi)	11
A7	05 Apr 2023	Wind Speed (kts)	2.8
A7	05 Apr 2023	Wind Dir	NW
A7	05 Apr 2023	Water Color	Greenish-Blue
A7	05 Apr 2023	Wave Ht Low (ft)	6
A7	05 Apr 2023	Wave Period (sec)	8
A7	05 Apr 2023	Sea State	Confused Swell
A7	05 Apr 2023	High Tide (ft)	4.96
A7	05 Apr 2023	High Tide Time	2136
A7	05 Apr 2023	Low Tide (ft)	0.23
A7	05 Apr 2023	Low Tide Time	1530
A7	05 Apr 2023	Comments	none
A7	10 Apr 2023	Depth (m)	18
A7	10 Apr 2023	Arrive Time	826
A7	10 Apr 2023	Depart Time	829
A7	10 Apr 2023	Air Temp (C)	11.1
A7	10 Apr 2023	Weather	Fog
A7	10 Apr 2023	Visibility (mi)	2
A7	10 Apr 2023	Wind Speed (kts)	3.4
A7	10 Apr 2023	Wind Dir	N
A7	10 Apr 2023	Water Color	Blueish-Green
A7	10 Apr 2023	Wave Ht Low (ft)	3
A7	10 Apr 2023	Wave Period (sec)	17
A7	10 Apr 2023	Sea State	Calm
A7	10 Apr 2023	High Tide (ft)	5.19
A7	10 Apr 2023	High Tide Time	6
A7	10 Apr 2023	Low Tide (ft)	-0.17
A7	10 Apr 2023	Low Tide Time	700

Station	Date	Parameter	Value
A7	10 Apr 2023	Comments	Kelp; Kelp Debris
A7	18 Apr 2023	Depth (m)	20
A7	18 Apr 2023	Arrive Time	807
A7	18 Apr 2023	Depart Time	810
A7	18 Apr 2023	Air Temp (C)	13.1
A7	18 Apr 2023	Weather	Continuous Layer of Clouds
A7	18 Apr 2023	Visibility (mi)	10
A7	18 Apr 2023	Wind Speed (kts)	2.5
A7	18 Apr 2023	Wind Dir	S
A7	18 Apr 2023	Water Color	Green
A7	18 Apr 2023	Wave Ht Low (ft)	5
A7	18 Apr 2023	Wave Period (sec)	8
A7	18 Apr 2023	Sea State	Confused Swell
A7	18 Apr 2023	High Tide (ft)	5.55
A7	18 Apr 2023	High Tide Time	2054
A7	18 Apr 2023	Low Tide (ft)	-0.18
A7	18 Apr 2023	Low Tide Time	1442
A7	18 Apr 2023	Comments	none
A7	26 Apr 2023	Depth (m)	16
A7	26 Apr 2023	Arrive Time	813
A7	26 Apr 2023	Depart Time	817
A7	26 Apr 2023	Air Temp (C)	15.2
A7	26 Apr 2023	Weather	Overcast
A7	26 Apr 2023	Visibility (mi)	10
A7	26 Apr 2023	Wind Speed (kts)	13.3
A7	26 Apr 2023	Wind Dir	NW
A7	26 Apr 2023	Water Color	Brown
A7	26 Apr 2023	Wave Ht Low (ft)	3.9
A7	26 Apr 2023	Wave Period (sec)	8
A7	26 Apr 2023	Sea State	Light Chop
A7	26 Apr 2023	High Tide (ft)	4.17
A7	26 Apr 2023	High Tide Time	42
A7	26 Apr 2023	Low Tide (ft)	0.38
A7	26 Apr 2023	Low Tide Time	942
A7	26 Apr 2023	Comments	none
C4	05 Apr 2023	Depth (m)	12
C4	05 Apr 2023	Arrive Time	926
C4	05 Apr 2023	Depart Time	928
C4	05 Apr 2023	Air Temp (C)	11.2
C4	05 Apr 2023	Weather	Clear
C4	05 Apr 2023	Visibility (mi)	11
C4	05 Apr 2023	Wind Speed (kts)	0
C4	05 Apr 2023	Wind Dir	N
C4	05 Apr 2023	Water Color	Green
C4	05 Apr 2023	Wave Ht Low (ft)	6
C4	05 Apr 2023	Wave Period (sec)	8
C4	05 Apr 2023	Sea State	Confused Swell
C4	05 Apr 2023	High Tide (ft)	4.96
C4	05 Apr 2023	High Tide Time	2136
C4	05 Apr 2023	Low Tide (ft)	0.23
C4	05 Apr 2023	Low Tide Time	1530
C4	05 Apr 2023	Comments	none
C4	10 Apr 2023	Depth (m)	10
C4	10 Apr 2023	Arrive Time	954
C4	10 Apr 2023	Depart Time	957
C4	10 Apr 2023	Air Temp (C)	11.2
C4	10 Apr 2023	Weather	Fog



Station	Date	Parameter	Value
C4	10 Apr 2023	Visibility (mi)	2
C4	10 Apr 2023	Wind Speed (kts)	4.9
C4	10 Apr 2023	Wind Dir	NW
C4	10 Apr 2023	Water Color	Brownish-Green
C4	10 Apr 2023	Wave Ht Low (ft)	3
C4	10 Apr 2023	Wave Period (sec)	17
C4	10 Apr 2023	Sea State	Calm
C4	10 Apr 2023	High Tide (ft)	5.19
C4	10 Apr 2023	High Tide Time	6
C4	10 Apr 2023	Low Tide (ft)	-0.17
C4	10 Apr 2023	Low Tide Time	700
C4	10 Apr 2023	Comments	Kelp
C4	18 Apr 2023	Depth (m)	10
C4	18 Apr 2023	Arrive Time	1010
C4	18 Apr 2023	Depart Time	1011
C4	18 Apr 2023	Air Temp (C)	13.4
C4	18 Apr 2023	Weather	Partly Cloudy
C4	18 Apr 2023	Visibility (mi)	10
C4	18 Apr 2023	Wind Speed (kts)	6.9
C4	18 Apr 2023	Wind Dir	S
C4	18 Apr 2023	Water Color	Green
C4	18 Apr 2023	Wave Ht Low (ft)	4
C4	18 Apr 2023	Wave Period (sec)	9
C4	18 Apr 2023	Sea State	Confused Swell
C4	18 Apr 2023	High Tide (ft)	5.55
C4	18 Apr 2023	High Tide Time	2054
C4	18 Apr 2023	Low Tide (ft)	-0.18
C4	18 Apr 2023	Low Tide Time	1442
C4	18 Apr 2023	Comments	none
C4	26 Apr 2023	Depth (m)	10
C4	26 Apr 2023	Arrive Time	933
C4	26 Apr 2023	Depart Time	936
C4	26 Apr 2023	Air Temp (C)	15.4
C4	26 Apr 2023	Weather	Overcast
C4	26 Apr 2023	Visibility (mi)	10
C4	26 Apr 2023	Wind Speed (kts)	7.9
C4	26 Apr 2023	Wind Dir	N
C4	26 Apr 2023	Water Color	Green
C4	26 Apr 2023	Wave Ht Low (ft)	3.9
C4	26 Apr 2023	Wave Period (sec)	8
C4	26 Apr 2023	Sea State	Light Chop
C4	26 Apr 2023	High Tide (ft)	4.17
C4	26 Apr 2023	High Tide Time	42
C4	26 Apr 2023	Low Tide (ft)	0.38
C4	26 Apr 2023	Low Tide Time	942
C4	26 Apr 2023	Comments	none
C5	05 Apr 2023	Depth (m)	10
C5	05 Apr 2023	Arrive Time	914
C5	05 Apr 2023	Depart Time	919
C5	05 Apr 2023	Air Temp (C)	11.4
C5	05 Apr 2023	Weather	Clear
C5	05 Apr 2023	Visibility (mi)	11
C5	05 Apr 2023	Wind Speed (kts)	7.3
C5	05 Apr 2023	Wind Dir	W
C5	05 Apr 2023	Water Color	Green
C5	05 Apr 2023	Wave Ht Low (ft)	6
C5	05 Apr 2023	Wave Period (sec)	8
C5	05 Apr 2023	Sea State	Confused Swell

Station	Date	Parameter	Value
C5	05 Apr 2023	High Tide (ft)	4.96
C5	05 Apr 2023	High Tide Time	2136
C5	05 Apr 2023	Low Tide (ft)	0.23
C5	05 Apr 2023	Low Tide Time	1530
C5	05 Apr 2023	Comments	none
C5	10 Apr 2023	Depth (m)	9
C5	10 Apr 2023	Arrive Time	940
C5	10 Apr 2023	Depart Time	946
C5	10 Apr 2023	Air Temp (C)	11.2
C5	10 Apr 2023	Weather	Fog
C5	10 Apr 2023	Visibility (mi)	2
C5	10 Apr 2023	Wind Speed (kts)	1.1
C5	10 Apr 2023	Wind Dir	NE
C5	10 Apr 2023	Water Color	Brownish-Green
C5	10 Apr 2023	Wave Ht Low (ft)	3
C5	10 Apr 2023	Wave Period (sec)	17
C5	10 Apr 2023	Sea State	Calm
C5	10 Apr 2023	High Tide (ft)	5.19
C5	10 Apr 2023	High Tide Time	6
C5	10 Apr 2023	Low Tide (ft)	-0.17
C5	10 Apr 2023	Low Tide Time	700
C5	10 Apr 2023	Comments	Kelp
C5	18 Apr 2023	Depth (m)	10
C5	18 Apr 2023	Arrive Time	958
C5	18 Apr 2023	Depart Time	1000
C5	18 Apr 2023	Air Temp (C)	13.3
C5	18 Apr 2023	Weather	Partly Cloudy
C5	18 Apr 2023	Visibility (mi)	10
C5	18 Apr 2023	Wind Speed (kts)	6.5
C5	18 Apr 2023	Wind Dir	S
C5	18 Apr 2023	Water Color	Green
C5	18 Apr 2023	Wave Ht Low (ft)	4
C5	18 Apr 2023	Wave Period (sec)	9
C5	18 Apr 2023	Sea State	Confused Swell
C5	18 Apr 2023	High Tide (ft)	5.55
C5	18 Apr 2023	High Tide Time	2054
C5	18 Apr 2023	Low Tide (ft)	-0.18
C5	18 Apr 2023	Low Tide Time	1442
C5	18 Apr 2023	Comments	none
C5	26 Apr 2023	Depth (m)	9
C5	26 Apr 2023	Arrive Time	923
C5	26 Apr 2023	Depart Time	926
C5	26 Apr 2023	Air Temp (C)	15.5
C5	26 Apr 2023	Weather	Overcast
C5	26 Apr 2023	Visibility (mi)	10
C5	26 Apr 2023	Wind Speed (kts)	1.7
C5	26 Apr 2023	Wind Dir	SW
C5	26 Apr 2023	Water Color	Green
C5	26 Apr 2023	Wave Ht Low (ft)	3.9
C5	26 Apr 2023	Wave Period (sec)	8
C5	26 Apr 2023	Sea State	Light Chop
C5	26 Apr 2023	High Tide (ft)	4.17
C5	26 Apr 2023	High Tide Time	42
C5	26 Apr 2023	Low Tide (ft)	0.38
C5	26 Apr 2023	Low Tide Time	942
C5	26 Apr 2023	Comments	none
C6	05 Apr 2023	Depth (m)	11

Station	Date	Parameter	Value
C6	05 Apr 2023	Arrive Time	905
C6	05 Apr 2023	Depart Time	909
C6	05 Apr 2023	Air Temp (C)	11.5
C6	05 Apr 2023	Weather	Clear
C6	05 Apr 2023	Visibility (mi)	11
C6	05 Apr 2023	Wind Speed (kts)	4.1
C6	05 Apr 2023	Wind Dir	N
C6	05 Apr 2023	Water Color	Green
C6	05 Apr 2023	Wave Ht Low (ft)	6
C6	05 Apr 2023	Wave Period (sec)	8
C6	05 Apr 2023	Sea State	Confused Swell
C6	05 Apr 2023	High Tide (ft)	4.96
C6	05 Apr 2023	High Tide Time	2136
C6	05 Apr 2023	Low Tide (ft)	0.23
C6	05 Apr 2023	Low Tide Time	1530
C6	05 Apr 2023	Comments	none
C6	10 Apr 2023	Depth (m)	9
C6	10 Apr 2023	Arrive Time	932
C6	10 Apr 2023	Depart Time	935
C6	10 Apr 2023	Air Temp (C)	11.2
C6	10 Apr 2023	Weather	Fog
C6	10 Apr 2023	Visibility (mi)	2
C6	10 Apr 2023	Wind Speed (kts)	1.5
C6	10 Apr 2023	Wind Dir	NE
C6	10 Apr 2023	Water Color	Brownish-Green
C6	10 Apr 2023	Wave Ht Low (ft)	3
C6	10 Apr 2023	Wave Period (sec)	17
C6	10 Apr 2023	Sea State	Calm
C6	10 Apr 2023	High Tide (ft)	5.19
C6	10 Apr 2023	High Tide Time	6
C6	10 Apr 2023	Low Tide (ft)	-0.17
C6	10 Apr 2023	Low Tide Time	700
C6	10 Apr 2023	Comments	Kelp
C6	18 Apr 2023	Depth (m)	9
C6	18 Apr 2023	Arrive Time	947
C6	18 Apr 2023	Depart Time	950
C6	18 Apr 2023	Air Temp (C)	13.4
C6	18 Apr 2023	Weather	Partly Cloudy
C6	18 Apr 2023	Visibility (mi)	10
C6	18 Apr 2023	Wind Speed (kts)	6.3
C6	18 Apr 2023	Wind Dir	S
C6	18 Apr 2023	Water Color	Green
C6	18 Apr 2023	Wave Ht Low (ft)	4
C6	18 Apr 2023	Wave Period (sec)	9
C6	18 Apr 2023	Sea State	Confused Swell
C6	18 Apr 2023	High Tide (ft)	5.55
C6	18 Apr 2023	High Tide Time	2054
C6	18 Apr 2023	Low Tide (ft)	-0.18
C6	18 Apr 2023	Low Tide Time	1442
C6	18 Apr 2023	Comments	none
C6	26 Apr 2023	Depth (m)	9
C6	26 Apr 2023	Arrive Time	915
C6	26 Apr 2023	Depart Time	917
C6	26 Apr 2023	Air Temp (C)	15.4
C6	26 Apr 2023	Weather	Overcast
C6	26 Apr 2023	Visibility (mi)	10
C6	26 Apr 2023	Wind Speed (kts)	6.5
C6	26 Apr 2023	Wind Dir	N

Station	Date	Parameter	Value
C6	26 Apr 2023	Water Color	Brownish-Green
C6	26 Apr 2023	Wave Ht Low (ft)	3.9
C6	26 Apr 2023	Wave Period (sec)	8
C6	26 Apr 2023	Sea State	Light Chop
C6	26 Apr 2023	High Tide (ft)	4.17
C6	26 Apr 2023	High Tide Time	42
C6	26 Apr 2023	Low Tide (ft)	0.38
C6	26 Apr 2023	Low Tide Time	942
C6	26 Apr 2023	Comments	none
C7	05 Apr 2023	Depth (m)	18
C7	05 Apr 2023	Arrive Time	833
C7	05 Apr 2023	Depart Time	841
C7	05 Apr 2023	Air Temp (C)	11
C7	05 Apr 2023	Weather	Clear
C7	05 Apr 2023	Visibility (mi)	11
C7	05 Apr 2023	Wind Speed (kts)	3.1
C7	05 Apr 2023	Wind Dir	NE
C7	05 Apr 2023	Water Color	Greenish-Blue
C7	05 Apr 2023	Wave Ht Low (ft)	6
C7	05 Apr 2023	Wave Period (sec)	8
C7	05 Apr 2023	Sea State	Confused Swell
C7	05 Apr 2023	High Tide (ft)	4.96
C7	05 Apr 2023	High Tide Time	2136
C7	05 Apr 2023	Low Tide (ft)	0.23
C7	05 Apr 2023	Low Tide Time	1530
C7	05 Apr 2023	Comments	none
C7	10 Apr 2023	Depth (m)	17
C7	10 Apr 2023	Arrive Time	855
C7	10 Apr 2023	Depart Time	902
C7	10 Apr 2023	Air Temp (C)	11.1
C7	10 Apr 2023	Weather	Fog
C7	10 Apr 2023	Visibility (mi)	2
C7	10 Apr 2023	Wind Speed (kts)	3.1
C7	10 Apr 2023	Wind Dir	NE
C7	10 Apr 2023	Water Color	Brownish-Green
C7	10 Apr 2023	Wave Ht Low (ft)	3
C7	10 Apr 2023	Wave Period (sec)	17
C7	10 Apr 2023	Sea State	Calm
C7	10 Apr 2023	High Tide (ft)	5.19
C7	10 Apr 2023	High Tide Time	6
C7	10 Apr 2023	Low Tide (ft)	-0.17
C7	10 Apr 2023	Low Tide Time	700
C7	10 Apr 2023	Comments	Low tide. Could not find 18m depth. May be some data from greater than 17.5m in file.; Kelp
C7	18 Apr 2023	Depth (m)	19
C7	18 Apr 2023	Arrive Time	914
C7	18 Apr 2023	Depart Time	918
C7	18 Apr 2023	Air Temp (C)	13.5
C7	18 Apr 2023	Weather	Continuous Layer of Clouds
C7	18 Apr 2023	Visibility (mi)	10
C7	18 Apr 2023	Wind Speed (kts)	5.5
C7	18 Apr 2023	Wind Dir	S
C7	18 Apr 2023	Water Color	Green
C7	18 Apr 2023	Wave Ht Low (ft)	5
C7	18 Apr 2023	Wave Period (sec)	8
C7	18 Apr 2023	Sea State	Confused Swell
C7	18 Apr 2023	High Tide (ft)	5.55
C7	18 Apr 2023	High Tide Time	2054

Station	Date	Parameter	Value
C7	18 Apr 2023	Low Tide (ft)	-0.18
C7	18 Apr 2023	Low Tide Time	1442
C7	18 Apr 2023	Comments	none
C7	26 Apr 2023	Depth (m)	17
C7	26 Apr 2023	Arrive Time	843
C7	26 Apr 2023	Depart Time	849
C7	26 Apr 2023	Air Temp (C)	15.4
C7	26 Apr 2023	Weather	Overcast
C7	26 Apr 2023	Visibility (mi)	10
C7	26 Apr 2023	Wind Speed (kts)	10.1
C7	26 Apr 2023	Wind Dir	NW
C7	26 Apr 2023	Water Color	Brown
C7	26 Apr 2023	Wave Ht Low (ft)	3.9
C7	26 Apr 2023	Wave Period (sec)	8
C7	26 Apr 2023	Sea State	Light Chop
C7	26 Apr 2023	High Tide (ft)	4.17
C7	26 Apr 2023	High Tide Time	42
C7	26 Apr 2023	Low Tide (ft)	0.38
C7	26 Apr 2023	Low Tide Time	942
C7	26 Apr 2023	Comments	none
C8	05 Apr 2023	Depth (m)	20
C8	05 Apr 2023	Arrive Time	842
C8	05 Apr 2023	Depart Time	846
C8	05 Apr 2023	Air Temp (C)	10.6
C8	05 Apr 2023	Weather	Clear
C8	05 Apr 2023	Visibility (mi)	11
C8	05 Apr 2023	Wind Speed (kts)	8.8
C8	05 Apr 2023	Wind Dir	N
C8	05 Apr 2023	Water Color	Green
C8	05 Apr 2023	Wave Ht Low (ft)	6
C8	05 Apr 2023	Wave Period (sec)	8
C8	05 Apr 2023	Sea State	Confused Swell
C8	05 Apr 2023	High Tide (ft)	4.96
C8	05 Apr 2023	High Tide Time	2136
C8	05 Apr 2023	Low Tide (ft)	0.23
C8	05 Apr 2023	Low Tide Time	1530
C8	05 Apr 2023	Comments	none
C8	10 Apr 2023	Depth (m)	18
C8	10 Apr 2023	Arrive Time	909
C8	10 Apr 2023	Depart Time	914
C8	10 Apr 2023	Air Temp (C)	11
C8	10 Apr 2023	Weather	Fog
C8	10 Apr 2023	Visibility (mi)	2
C8	10 Apr 2023	Wind Speed (kts)	2.4
C8	10 Apr 2023	Wind Dir	N
C8	10 Apr 2023	Water Color	Brownish-Green
C8	10 Apr 2023	Wave Ht Low (ft)	3
C8	10 Apr 2023	Wave Period (sec)	17
C8	10 Apr 2023	Sea State	Calm
C8	10 Apr 2023	High Tide (ft)	5.19
C8	10 Apr 2023	High Tide Time	6
C8	10 Apr 2023	Low Tide (ft)	-0.17
C8	10 Apr 2023	Low Tide Time	700
C8	10 Apr 2023	Comments	none
C8	18 Apr 2023	Depth (m)	19
C8	18 Apr 2023	Arrive Time	929
C8	18 Apr 2023	Depart Time	929

Station	Date	Parameter	Value
C8	18 Apr 2023	Air Temp (C)	13.7
C8	18 Apr 2023	Weather	Partly Cloudy
C8	18 Apr 2023	Visibility (mi)	10
C8	18 Apr 2023	Wind Speed (kts)	7
C8	18 Apr 2023	Wind Dir	SW
C8	18 Apr 2023	Water Color	Green
C8	18 Apr 2023	Wave Ht Low (ft)	4
C8	18 Apr 2023	Wave Period (sec)	9
C8	18 Apr 2023	Sea State	Confused Swell
C8	18 Apr 2023	High Tide (ft)	5.55
C8	18 Apr 2023	High Tide Time	2054
C8	18 Apr 2023	Low Tide (ft)	-0.18
C8	18 Apr 2023	Low Tide Time	1442
C8	18 Apr 2023	Comments	none
C8	26 Apr 2023	Depth (m)	18
C8	26 Apr 2023	Arrive Time	854
C8	26 Apr 2023	Depart Time	915
C8	26 Apr 2023	Air Temp (C)	15.4
C8	26 Apr 2023	Weather	Overcast
C8	26 Apr 2023	Visibility (mi)	10
C8	26 Apr 2023	Wind Speed (kts)	12.4
C8	26 Apr 2023	Wind Dir	N
C8	26 Apr 2023	Water Color	Brown
C8	26 Apr 2023	Wave Ht Low (ft)	3.9
C8	26 Apr 2023	Wave Period (sec)	8
C8	26 Apr 2023	Sea State	Light Chop
C8	26 Apr 2023	High Tide (ft)	4.17
C8	26 Apr 2023	High Tide Time	42
C8	26 Apr 2023	Low Tide (ft)	0.38
C8	26 Apr 2023	Low Tide Time	942
C8	26 Apr 2023	Comments	none

**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	05 Apr 2023	1	11.82	84.66	5.1	33.63	7.9	25.6	0.63
A1	05 Apr 2023	2	11.79	84.71	5.0	33.64	7.9	25.6	0.65
A1	05 Apr 2023	3	11.73	85.37	4.8	33.65	7.9	25.6	0.78
A1	05 Apr 2023	4	11.41	87.19	4.2	33.73	7.8	25.7	0.84
A1	05 Apr 2023	5	11.09	89.40	3.6	33.78	7.8	25.8	0.59
A1	05 Apr 2023	6	10.59	89.52	3.3	33.87	7.8	26.0	0.43
A1	05 Apr 2023	7	10.46	90.42	3.0	33.88	7.7	26.0	0.32
A1	05 Apr 2023	8	10.47	90.71	3.0	33.88	7.7	26.0	0.26
A1	05 Apr 2023	9	10.44	90.68	3.0	33.89	7.7	26.0	0.24
A1	05 Apr 2023	10	10.40	90.85	2.9	33.90	7.7	26.0	0.22
A1	05 Apr 2023	11	10.35	91.04	2.8	33.91	7.7	26.0	0.22
A1	05 Apr 2023	12	10.35	91.15	2.8	33.91	7.7	26.0	0.21
A1	05 Apr 2023	13	10.27	90.99	2.6	33.94	7.7	26.1	0.23
A1	05 Apr 2023	14	10.26	90.78	2.6	33.94	7.7	26.1	0.20
A1	05 Apr 2023	15	10.20	90.12	2.5	33.97	7.7	26.1	0.19
A1	05 Apr 2023	16	10.19	89.46	2.4	33.98	7.7	26.1	0.23
A1	05 Apr 2023	17	10.20	89.30	2.4	33.98	7.7	26.1	0.22
A1	05 Apr 2023	18	10.20	88.89	2.4	33.98	7.7	26.1	0.21
A1	10 Apr 2023	1	12.44	85.22	6.6	33.69	7.8	25.5	1.63
A1	10 Apr 2023	2	12.20	85.35	6.3	33.73	7.8	25.6	1.78
A1	10 Apr 2023	3	11.89	86.30	5.9	33.78	7.8	25.7	1.61
A1	10 Apr 2023	4	11.76	87.73	5.7	33.79	7.8	25.7	1.62
A1	10 Apr 2023	5	11.71	88.02	5.7	33.79	7.8	25.7	1.75
A1	10 Apr 2023	6	11.67	88.22	5.6	33.80	7.8	25.7	1.76
A1	10 Apr 2023	7	11.58	87.87	5.3	33.81	7.8	25.7	2.22
A1	10 Apr 2023	8	11.54	87.12	5.2	33.81	7.8	25.8	2.66
A1	10 Apr 2023	9	11.55	86.51	5.2	33.81	7.8	25.8	2.86
A1	10 Apr 2023	10	11.54	86.49	5.2	33.82	7.8	25.8	3.13
A1	10 Apr 2023	11	11.41	86.47	4.9	33.84	7.8	25.8	3.36
A1	10 Apr 2023	12	11.33	85.49	4.6	33.85	7.7	25.8	3.58
A1	10 Apr 2023	13	11.26	85.56	4.4	33.86	7.7	25.8	3.74
A1	10 Apr 2023	14	11.19	85.21	4.2	33.87	7.7	25.9	3.74
A1	10 Apr 2023	15	10.99	85.30	3.8	33.90	7.7	25.9	3.12
A1	10 Apr 2023	16	10.77	86.58	3.4	33.92	7.7	26.0	1.91
A1	10 Apr 2023	17	10.63	88.46	3.1	33.94	7.6	26.0	1.26
A1	10 Apr 2023	18	10.55	90.48	2.8	33.95	7.6	26.0	0.70
A1	18 Apr 2023	1	13.66	67.93	9.0	33.52	8.1	25.1	12.51
A1	18 Apr 2023	2	13.56	66.92	8.9	33.57	8.1	25.2	15.20
A1	18 Apr 2023	3	13.48	65.96	8.4	33.58	8.1	25.2	17.08
A1	18 Apr 2023	4	12.94	66.45	7.4	33.66	8.1	25.4	16.99
A1	18 Apr 2023	5	12.49	72.55	6.7	33.71	8.0	25.5	12.07
A1	18 Apr 2023	6	12.42	81.12	6.2	33.70	7.9	25.5	9.54
A1	18 Apr 2023	7	11.73	83.89	5.0	33.76	7.9	25.7	6.74
A1	18 Apr 2023	8	11.66	85.79	4.7	33.76	7.8	25.7	4.36
A1	18 Apr 2023	9	11.57	86.41	4.5	33.76	7.8	25.7	3.63
A1	18 Apr 2023	10	11.45	87.17	4.3	33.76	7.8	25.7	3.09
A1	18 Apr 2023	11	11.44	87.70	4.3	33.76	7.8	25.7	2.66
A1	18 Apr 2023	12	11.37	87.72	4.2	33.77	7.8	25.8	2.56
A1	18 Apr 2023	13	11.32	88.08	4.0	33.77	7.7	25.8	2.33
A1	18 Apr 2023	14	11.31	88.57	4.0	33.77	7.7	25.8	2.15
A1	18 Apr 2023	15	11.27	88.53	3.9	33.78	7.7	25.8	2.01
A1	18 Apr 2023	16	11.27	88.39	3.9	33.78	7.7	25.8	1.93
A1	18 Apr 2023	17	11.27	88.57	3.8	33.79	7.7	25.8	2.22

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens ( $\sigma$ -t)	Chlor ( $\mu$ g/L)
A1	18 Apr 2023	18	11.27	89.03	3.7	33.80	7.7	25.8	2.15
A1	18 Apr 2023	19	11.26	88.98	3.6	33.80	7.7	25.8	1.76
A1	26 Apr 2023	1	15.69	69.15	10.3	33.63	8.2	24.8	10.46
A1	26 Apr 2023	2	15.51	69.15	10.2	33.64	8.2	24.8	8.81
A1	26 Apr 2023	3	15.46	71.76	10.2	33.64	8.2	24.8	7.60
A1	26 Apr 2023	4	15.45	73.43	10.2	33.64	8.2	24.8	7.07
A1	26 Apr 2023	5	15.45	74.90	10.2	33.64	8.2	24.8	6.85
A1	26 Apr 2023	6	15.45	75.85	10.2	33.64	8.2	24.8	6.95
A1	26 Apr 2023	7	15.42	75.99	10.1	33.64	8.2	24.8	6.77
A1	26 Apr 2023	8	15.37	76.05	9.9	33.64	8.2	24.8	6.69
A1	26 Apr 2023	9	15.16	76.43	9.6	33.65	8.2	24.9	5.90
A1	26 Apr 2023	10	14.91	76.86	9.2	33.66	8.2	25.0	4.90
A1	26 Apr 2023	11	14.73	78.78	8.9	33.66	8.2	25.0	4.21
A1	26 Apr 2023	12	14.58	80.38	8.6	33.66	8.1	25.0	3.61
A1	26 Apr 2023	13	14.25	81.63	8.1	33.68	8.1	25.1	2.99
A1	26 Apr 2023	14	14.09	82.42	7.8	33.68	8.1	25.1	2.62
A1	26 Apr 2023	15	13.96	83.42	7.5	33.68	8.1	25.2	2.40
A1	26 Apr 2023	16	13.59	83.72	7.0	33.71	8.0	25.3	1.94
A1	26 Apr 2023	17	13.31	84.18	6.2	33.71	8.0	25.3	1.55
A1	26 Apr 2023	18	12.58	85.05	5.1	33.76	7.9	25.5	1.25
A1	26 Apr 2023	19	12.12	86.41	4.4	33.78	7.8	25.6	1.07
A1	26 Apr 2023	20	12.09	87.31	4.2	33.78	7.8	25.6	0.89
A6	05 Apr 2023	1	12.19	78.31	5.9	33.54	7.8	25.4	0.59
A6	05 Apr 2023	2	12.17	76.68	5.6	33.55	7.8	25.4	0.61
A6	05 Apr 2023	3	11.60	81.17	4.5	33.71	7.8	25.7	0.84
A6	05 Apr 2023	4	11.36	84.10	3.9	33.73	7.8	25.7	0.73
A6	05 Apr 2023	5	10.99	86.36	3.6	33.80	7.7	25.8	0.53
A6	05 Apr 2023	6	10.89	89.11	3.4	33.81	7.7	25.9	0.45
A6	05 Apr 2023	7	10.84	90.58	3.4	33.82	7.7	25.9	0.40
A6	05 Apr 2023	8	10.73	90.92	3.3	33.84	7.7	25.9	0.36
A6	05 Apr 2023	9	10.54	90.79	3.1	33.88	7.7	26.0	0.35
A6	05 Apr 2023	10	10.45	90.30	3.0	33.90	7.7	26.0	0.30
A6	05 Apr 2023	11	10.45	89.99	2.9	33.90	7.7	26.0	0.31
A6	05 Apr 2023	12	10.50	89.94	3.0	33.88	7.7	26.0	0.31
A6	05 Apr 2023	13	10.41	89.88	2.9	33.90	7.7	26.0	0.31
A6	05 Apr 2023	14	10.40	89.63	2.9	33.91	7.6	26.0	0.28
A6	05 Apr 2023	15	10.42	89.78	2.9	33.90	7.6	26.0	0.29
A6	05 Apr 2023	16	10.39	90.10	2.8	33.91	7.6	26.0	0.29
A6	05 Apr 2023	17	10.35	90.09	2.7	33.92	7.6	26.0	0.28
A6	10 Apr 2023	1	12.10	79.81	6.2	33.74	7.9	25.6	5.53
A6	10 Apr 2023	2	12.08	79.97	6.1	33.74	7.8	25.6	5.62
A6	10 Apr 2023	3	11.99	79.99	5.9	33.75	7.8	25.6	6.02
A6	10 Apr 2023	4	11.88	80.26	5.6	33.76	7.8	25.7	5.87
A6	10 Apr 2023	5	11.69	81.45	5.2	33.78	7.8	25.7	5.45
A6	10 Apr 2023	6	11.65	82.24	5.0	33.78	7.8	25.7	5.00
A6	10 Apr 2023	7	11.60	82.60	4.9	33.79	7.8	25.7	4.79
A6	10 Apr 2023	8	11.53	83.01	4.8	33.80	7.8	25.7	5.07
A6	10 Apr 2023	9	11.55	83.37	4.9	33.79	7.8	25.7	4.90
A6	10 Apr 2023	10	11.62	83.38	5.0	33.78	7.8	25.7	5.03
A6	10 Apr 2023	11	11.61	82.95	5.0	33.79	7.8	25.7	5.04
A6	10 Apr 2023	12	11.55	82.82	4.9	33.79	7.8	25.7	5.13
A6	10 Apr 2023	13	11.54	83.05	4.9	33.79	7.8	25.7	4.85
A6	10 Apr 2023	14	11.49	82.89	4.8	33.80	7.8	25.8	5.07
A6	10 Apr 2023	15	11.43	82.89	4.7	33.81	7.8	25.8	5.39
A6	10 Apr 2023	16	11.35	82.91	4.5	33.82	7.8	25.8	5.80
A6	10 Apr 2023	17	11.31	83.18	4.4	33.82	7.8	25.8	5.29
A6	10 Apr 2023	18	11.04	83.83	4.0	33.87	7.7	25.9	4.63



Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens ( $\sigma$ -t)	Chlor ( $\mu$ g/L)
A6	18 Apr 2023	1	13.70	78.21	8.1	33.50	8.1	25.1	5.07
A6	18 Apr 2023	2	13.69	78.19	8.4	33.53	8.1	25.1	11.76
A6	18 Apr 2023	3	13.70	77.47	8.1	33.52	8.1	25.1	9.88
A6	18 Apr 2023	4	13.56	68.35	8.3	33.62	8.1	25.2	10.99
A6	18 Apr 2023	5	13.33	70.63	8.2	33.72	8.1	25.3	9.45
A6	18 Apr 2023	6	12.98	77.43	7.8	33.88	8.1	25.5	4.88
A6	18 Apr 2023	7	13.04	80.94	7.8	33.88	8.0	25.5	4.27
A6	18 Apr 2023	8	12.81	81.64	7.8	33.76	8.0	25.5	4.33
A6	18 Apr 2023	9	12.64	82.10	7.4	33.74	8.0	25.5	4.28
A6	18 Apr 2023	10	12.65	82.33	7.2	33.81	8.0	25.5	4.66
A6	18 Apr 2023	11	12.53	82.68	7.0	33.78	8.0	25.5	3.47
A6	18 Apr 2023	12	12.52	83.76	6.8	33.86	8.0	25.6	3.14
A6	18 Apr 2023	13	12.39	84.73	6.8	33.79	8.0	25.6	2.74
A6	18 Apr 2023	14	12.06	85.09	6.3	33.92	7.9	25.7	1.81
A6	18 Apr 2023	15	11.83	86.46	5.9	34.08	7.8	25.9	1.53
A6	18 Apr 2023	16	11.63	87.88	5.6	34.00	7.8	25.9	1.99
A6	18 Apr 2023	17	11.25	88.29	5.2	34.05	7.7	26.0	2.03
A6	18 Apr 2023	18	11.49	89.05	5.4	34.13	7.7	26.0	1.47
A6	18 Apr 2023	19	11.18	89.09	5.6	34.15	7.7	26.1	1.27
A6	26 Apr 2023	1	16.18	53.31	11.5	33.63	8.4	24.7	25.93
A6	26 Apr 2023	2	16.16	53.41	11.5	33.63	8.4	24.7	26.20
A6	26 Apr 2023	3	16.01	54.07	11.5	33.63	8.3	24.7	20.17
A6	26 Apr 2023	4	15.93	62.03	11.2	33.63	8.3	24.7	16.49
A6	26 Apr 2023	5	15.89	64.83	11.0	33.63	8.3	24.7	15.36
A6	26 Apr 2023	6	15.86	66.86	10.9	33.63	8.3	24.7	14.42
A6	26 Apr 2023	7	15.77	67.55	10.7	33.63	8.3	24.7	12.53
A6	26 Apr 2023	8	15.64	70.05	10.4	33.64	8.3	24.8	11.03
A6	26 Apr 2023	9	15.57	71.86	10.3	33.64	8.2	24.8	10.93
A6	26 Apr 2023	10	15.54	72.41	10.3	33.64	8.2	24.8	10.91
A6	26 Apr 2023	11	15.51	72.34	10.2	33.64	8.2	24.8	10.48
A6	26 Apr 2023	12	15.47	73.04	10.0	33.64	8.2	24.8	9.46
A6	26 Apr 2023	13	15.37	73.87	9.8	33.65	8.2	24.8	8.82
A6	26 Apr 2023	14	15.24	74.67	9.5	33.65	8.2	24.9	8.99
A6	26 Apr 2023	15	15.21	75.01	9.3	33.65	8.2	24.9	8.68
A6	26 Apr 2023	16	15.05	75.21	9.0	33.65	8.2	24.9	7.68
A6	26 Apr 2023	17	14.62	76.32	8.5	33.68	8.2	25.0	6.25
A6	26 Apr 2023	18	14.46	78.56	8.1	33.68	8.1	25.1	5.42
A6	26 Apr 2023	19	14.08	80.04	7.5	33.70	8.1	25.2	4.72
A6	26 Apr 2023	20	13.65	81.75	6.7	33.72	8.0	25.3	3.88
A6	26 Apr 2023	21	12.96	82.76	5.9	33.77	8.0	25.4	3.22
A7	05 Apr 2023	1	12.08	83.17	5.8	33.57	7.8	25.5	0.53
A7	05 Apr 2023	2	12.09	83.05	5.8	33.57	7.8	25.5	0.56
A7	05 Apr 2023	3	12.08	83.01	5.7	33.58	7.8	25.5	0.59
A7	05 Apr 2023	4	12.03	83.01	5.5	33.59	7.8	25.5	0.65
A7	05 Apr 2023	5	12.00	82.93	5.4	33.60	7.8	25.5	0.74
A7	05 Apr 2023	6	11.82	83.44	5.1	33.63	7.8	25.6	0.87
A7	05 Apr 2023	7	11.65	84.27	4.6	33.67	7.8	25.6	0.98
A7	05 Apr 2023	8	11.36	85.13	4.1	33.72	7.8	25.7	1.04
A7	05 Apr 2023	9	11.13	86.64	3.8	33.78	7.7	25.8	0.93
A7	05 Apr 2023	10	11.08	88.58	3.7	33.78	7.7	25.8	0.71
A7	05 Apr 2023	11	11.02	89.12	3.6	33.79	7.7	25.8	0.52
A7	05 Apr 2023	12	10.89	89.85	3.4	33.81	7.7	25.9	0.45
A7	05 Apr 2023	13	10.61	89.69	3.1	33.87	7.7	26.0	0.38
A7	05 Apr 2023	14	10.22	89.46	2.7	33.96	7.7	26.1	0.32
A7	05 Apr 2023	15	10.18	89.81	2.5	33.98	7.6	26.1	0.25
A7	05 Apr 2023	16	10.17	89.62	2.4	33.99	7.6	26.1	0.23
A7	05 Apr 2023	17	10.16	89.44	2.4	33.99	7.6	26.1	0.21
A7	05 Apr 2023	18	10.16	89.12	2.4	34.00	7.6	26.1	0.22
A7	05 Apr 2023	19	10.15	88.96	2.4	34.00	7.6	26.1	0.24

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens ( $\sigma$ -t)	Chlor ( $\mu$ g/L)
A7	10 Apr 2023	1	11.82	86.48	5.7	33.80	7.8	25.7	2.12
A7	10 Apr 2023	2	11.84	86.44	5.7	33.80	7.8	25.7	1.99
A7	10 Apr 2023	3	11.81	86.53	5.7	33.81	7.8	25.7	2.30
A7	10 Apr 2023	4	11.80	86.10	5.6	33.81	7.8	25.7	2.58
A7	10 Apr 2023	5	11.76	85.55	5.4	33.80	7.8	25.7	3.14
A7	10 Apr 2023	6	11.49	84.20	4.9	33.82	7.8	25.8	4.29
A7	10 Apr 2023	7	11.14	82.73	4.3	33.86	7.8	25.9	5.21
A7	10 Apr 2023	8	10.99	82.32	3.8	33.87	7.7	25.9	4.72
A7	10 Apr 2023	9	10.96	83.61	3.7	33.87	7.7	25.9	4.34
A7	10 Apr 2023	10	10.95	85.23	3.7	33.87	7.7	25.9	4.29
A7	10 Apr 2023	11	10.94	85.54	3.7	33.88	7.7	25.9	3.84
A7	10 Apr 2023	12	10.91	85.46	3.5	33.88	7.7	25.9	3.57
A7	10 Apr 2023	13	10.65	86.29	3.2	33.93	7.7	26.0	2.50
A7	10 Apr 2023	14	10.52	89.29	2.8	33.95	7.6	26.0	1.32
A7	10 Apr 2023	15	10.47	90.94	2.7	33.95	7.6	26.1	0.84
A7	10 Apr 2023	16	10.37	91.80	2.7	33.98	7.6	26.1	0.62
A7	10 Apr 2023	17	10.32	91.72	2.6	33.99	7.6	26.1	0.40
A7	10 Apr 2023	18	10.31	91.52	2.6	33.99	7.6	26.1	0.36
A7	18 Apr 2023	1	13.72	77.24	8.3	33.51	8.1	25.1	0.96
A7	18 Apr 2023	2	13.65	77.62	8.5	33.58	8.1	25.2	1.01
A7	18 Apr 2023	3	12.91	77.27	8.2	34.09	8.0	25.7	1.05
A7	18 Apr 2023	4	12.65	79.53	8.0	34.08	8.0	25.7	3.95
A7	18 Apr 2023	5	12.44	79.75	7.7	33.87	8.0	25.6	7.34
A7	18 Apr 2023	6	12.36	81.27	7.3	34.01	7.9	25.8	7.80
A7	18 Apr 2023	7	11.97	81.79	6.6	33.97	7.9	25.8	8.13
A7	18 Apr 2023	8	11.67	82.92	6.0	34.00	7.8	25.9	8.50
A7	18 Apr 2023	9	11.62	84.70	5.8	34.02	7.8	25.9	6.52
A7	18 Apr 2023	10	11.60	86.02	5.8	34.18	7.8	26.0	3.28
A7	18 Apr 2023	11	11.58	86.21	5.3	33.98	7.8	25.9	2.57
A7	18 Apr 2023	12	11.56	86.48	4.6	33.92	7.8	25.8	3.26
A7	18 Apr 2023	13	11.59	86.41	4.6	34.01	7.8	25.9	2.81
A7	18 Apr 2023	14	11.54	86.87	4.5	33.87	7.8	25.8	2.30
A7	18 Apr 2023	15	11.56	86.91	4.4	33.93	7.8	25.8	2.02
A7	18 Apr 2023	16	11.49	87.18	4.4	33.87	7.8	25.8	2.31
A7	18 Apr 2023	17	11.43	87.41	4.1	33.88	7.7	25.8	1.74
A7	18 Apr 2023	18	11.41	88.06	4.1	33.92	7.7	25.9	1.50
A7	26 Apr 2023	1	16.14	71.05	9.1	33.64	8.2	24.7	7.66
A7	26 Apr 2023	2	16.07	70.84	9.3	33.63	8.2	24.7	9.41
A7	26 Apr 2023	3	15.76	68.77	9.9	33.64	8.2	24.8	9.46
A7	26 Apr 2023	4	15.68	69.25	10.1	33.64	8.2	24.8	7.13
A7	26 Apr 2023	5	15.62	74.07	10.0	33.64	8.2	24.8	6.23
A7	26 Apr 2023	6	15.57	76.92	10.0	33.64	8.2	24.8	5.76
A7	26 Apr 2023	7	15.52	77.93	9.9	33.64	8.2	24.8	5.26
A7	26 Apr 2023	8	15.39	78.80	9.7	33.65	8.2	24.8	4.67
A7	26 Apr 2023	9	15.25	80.80	9.3	33.65	8.2	24.9	3.63
A7	26 Apr 2023	10	15.02	82.12	9.0	33.66	8.2	24.9	3.42
A7	26 Apr 2023	11	14.74	83.16	8.6	33.68	8.2	25.0	3.61
A7	26 Apr 2023	12	14.50	83.30	8.3	33.68	8.1	25.1	3.38
A7	26 Apr 2023	13	14.22	83.80	7.9	33.69	8.1	25.1	3.39
A7	26 Apr 2023	14	13.96	83.94	7.5	33.70	8.1	25.2	2.98
A7	26 Apr 2023	15	13.79	84.55	7.2	33.71	8.1	25.2	3.19
A7	26 Apr 2023	16	13.59	84.89	6.7	33.72	8.0	25.3	2.55
A7	26 Apr 2023	17	13.00	85.67	5.7	33.75	8.0	25.4	1.72
C4	05 Apr 2023	1	12.07	82.84	5.7	33.62	7.8	25.5	0.40
C4	05 Apr 2023	2	12.06	82.52	5.6	33.62	7.8	25.5	0.37
C4	05 Apr 2023	3	11.93	81.54	5.7	33.64	7.8	25.6	0.52
C4	05 Apr 2023	4	11.84	79.82	5.8	33.68	7.8	25.6	0.71

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens ( $\sigma$ -t)	Chlor ( $\mu$ g/L)
C4	05 Apr 2023	5	11.77	78.36	5.7	33.69	7.8	25.6	0.76
C4	05 Apr 2023	6	11.42	77.53	4.7	33.77	7.8	25.7	0.59
C4	05 Apr 2023	7	10.87	78.93	3.4	33.87	7.7	25.9	0.45
C4	05 Apr 2023	8	10.68	83.86	2.7	33.90	7.7	26.0	0.34
C4	05 Apr 2023	9	10.58	86.91	2.5	33.92	7.7	26.0	0.30
C4	05 Apr 2023	10	10.58	86.89	2.5	33.92	7.6	26.0	0.29
C4	05 Apr 2023	11	10.58	86.24	2.6	33.92	7.6	26.0	0.31
C4	05 Apr 2023	12	10.59	86.60	2.6	33.92	7.6	26.0	0.27
C4	10 Apr 2023	1	12.17	80.46	5.7	33.74	7.8	25.6	3.38
C4	10 Apr 2023	2	12.05	79.98	5.6	33.75	7.8	25.6	5.14
C4	10 Apr 2023	3	12.00	76.14	5.6	33.77	7.8	25.6	8.61
C4	10 Apr 2023	4	11.99	73.94	5.6	33.77	7.8	25.6	10.68
C4	10 Apr 2023	5	11.94	73.88	5.6	33.78	7.8	25.7	10.93
C4	10 Apr 2023	6	11.90	72.12	5.5	33.79	7.8	25.7	12.64
C4	10 Apr 2023	7	11.74	71.92	5.2	33.82	7.8	25.7	11.64
C4	10 Apr 2023	8	11.41	76.93	4.8	33.87	7.8	25.8	6.92
C4	10 Apr 2023	9	11.35	84.47	4.3	33.86	7.8	25.8	4.58
C4	10 Apr 2023	10	10.70	88.24	3.5	33.95	7.7	26.0	2.90
C4	18 Apr 2023	1	13.76	76.68	9.0	33.62	8.1	25.2	3.13
C4	18 Apr 2023	2	13.76	76.04	9.0	33.62	8.1	25.2	3.81
C4	18 Apr 2023	3	13.61	73.06	9.1	33.63	8.1	25.2	6.61
C4	18 Apr 2023	4	13.56	71.87	9.2	33.63	8.2	25.2	8.57
C4	18 Apr 2023	5	13.54	73.57	9.2	33.63	8.2	25.2	8.70
C4	18 Apr 2023	6	13.53	75.17	9.2	33.63	8.2	25.2	8.43
C4	18 Apr 2023	7	13.51	76.59	9.3	33.63	8.2	25.2	8.22
C4	18 Apr 2023	8	13.48	76.81	9.1	33.63	8.2	25.2	7.65
C4	18 Apr 2023	9	13.25	78.71	8.7	33.65	8.1	25.3	5.76
C4	26 Apr 2023	1	16.15	66.78	10.9	33.64	8.3	24.7	13.50
C4	26 Apr 2023	2	16.08	65.53	10.6	33.64	8.3	24.7	14.50
C4	26 Apr 2023	3	15.89	65.79	10.2	33.65	8.3	24.7	11.74
C4	26 Apr 2023	4	15.85	70.63	9.9	33.64	8.3	24.7	8.37
C4	26 Apr 2023	5	15.77	74.34	9.6	33.64	8.3	24.8	6.05
C4	26 Apr 2023	6	15.69	77.22	9.2	33.64	8.2	24.8	4.23
C4	26 Apr 2023	7	15.43	79.34	9.1	33.65	8.2	24.8	3.01
C4	26 Apr 2023	8	15.28	80.85	9.1	33.65	8.2	24.9	1.93
C4	26 Apr 2023	9	15.18	82.15	9.1	33.65	8.2	24.9	1.27
C4	26 Apr 2023	10	15.09	83.71	9.1	33.65	8.2	24.9	0.87
C5	05 Apr 2023	1	12.02	83.19	5.6	33.61	7.8	25.5	0.31
C5	05 Apr 2023	2	11.93	83.14	5.5	33.63	7.8	25.5	0.34
C5	05 Apr 2023	3	11.80	82.83	4.9	33.66	7.8	25.6	0.42
C5	05 Apr 2023	4	11.43	82.74	4.1	33.74	7.8	25.7	0.43
C5	05 Apr 2023	5	11.25	84.83	3.7	33.77	7.7	25.8	0.36
C5	05 Apr 2023	6	11.14	86.74	3.6	33.79	7.7	25.8	0.34
C5	05 Apr 2023	7	10.98	87.64	3.4	33.82	7.7	25.9	0.31
C5	05 Apr 2023	8	10.92	88.35	3.4	33.83	7.7	25.9	0.30
C5	05 Apr 2023	9	10.86	88.44	3.3	33.84	7.7	25.9	0.29
C5	05 Apr 2023	10	10.75	88.08	3.3	33.87	7.7	25.9	0.28
C5	05 Apr 2023	11	10.62	87.93	3.1	33.90	7.7	26.0	0.29
C5	10 Apr 2023	1	11.96	86.28	5.6	33.82	7.8	25.7	1.73
C5	10 Apr 2023	2	11.58	86.21	4.9	33.85	7.8	25.8	2.38
C5	10 Apr 2023	3	10.96	85.49	3.8	33.90	7.7	25.9	1.93
C5	10 Apr 2023	4	10.85	86.44	3.3	33.90	7.7	25.9	1.09
C5	10 Apr 2023	5	10.77	89.32	3.2	33.91	7.7	26.0	0.67
C5	10 Apr 2023	6	10.76	90.87	3.2	33.91	7.7	26.0	0.46
C5	10 Apr 2023	7	10.76	91.18	3.2	33.91	7.7	26.0	0.43
C5	10 Apr 2023	8	10.73	91.21	3.3	33.91	7.7	26.0	0.77

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens ( $\sigma$ -t)	Chlor ( $\mu$ g/L)
C5	10 Apr 2023	9	10.73	91.13	3.3	33.91	7.7	26.0	0.56
C5	10 Apr 2023	10	10.73	91.09	3.3	33.92	7.7	26.0	0.46
C5	18 Apr 2023	1	13.57	68.48	8.8	33.68	8.1	25.3	5.10
C5	18 Apr 2023	2	13.57	65.99	8.8	33.58	8.1	25.2	5.72
C5	18 Apr 2023	3	13.54	67.63	8.8	33.66	8.1	25.2	7.25
C5	18 Apr 2023	4	13.52	70.12	8.7	33.69	8.1	25.3	8.61
C5	18 Apr 2023	5	13.48	70.14	8.7	33.68	8.1	25.3	9.36
C5	18 Apr 2023	6	13.48	70.40	8.6	33.68	8.1	25.3	9.43
C5	18 Apr 2023	7	13.25	71.16	7.8	33.70	8.1	25.3	8.31
C5	18 Apr 2023	8	13.03	76.47	7.0	33.71	8.0	25.4	5.72
C5	18 Apr 2023	9	12.90	76.95	6.3	33.71	8.0	25.4	4.48
C5	18 Apr 2023	10	12.32	76.76	5.5	33.76	7.9	25.6	2.80
C5	26 Apr 2023	1	16.37	70.58	8.4	33.64	8.2	24.6	2.78
C5	26 Apr 2023	2	16.36	70.59	8.7	33.63	8.2	24.6	3.43
C5	26 Apr 2023	3	16.00	70.08	9.6	33.63	8.2	24.7	4.96
C5	26 Apr 2023	4	15.65	71.80	10.1	33.64	8.2	24.8	5.19
C5	26 Apr 2023	5	15.53	75.70	9.6	33.63	8.2	24.8	5.89
C5	26 Apr 2023	6	15.31	77.62	8.9	33.64	8.2	24.9	7.45
C5	26 Apr 2023	7	15.16	77.16	8.4	33.64	8.2	24.9	7.76
C5	26 Apr 2023	8	14.76	76.57	7.7	33.66	8.1	25.0	5.52
C5	26 Apr 2023	9	14.52	80.26	7.1	33.65	8.1	25.0	3.62
C5	26 Apr 2023	10	14.27	83.90	6.7	33.66	8.0	25.1	2.07
C5	26 Apr 2023	11	14.15	85.79	6.5	33.66	8.0	25.1	1.06
C6	05 Apr 2023	1	12.12	80.11	5.9	33.59	7.8	25.5	0.35
C6	05 Apr 2023	2	12.09	78.04	5.8	33.59	7.8	25.5	0.37
C6	05 Apr 2023	3	12.01	79.99	5.4	33.63	7.8	25.5	0.44
C6	05 Apr 2023	4	11.89	80.07	5.0	33.66	7.8	25.6	0.54
C6	05 Apr 2023	5	11.72	80.55	4.6	33.69	7.8	25.6	0.57
C6	05 Apr 2023	6	11.36	81.76	4.0	33.76	7.8	25.7	0.54
C6	05 Apr 2023	7	11.07	83.80	3.5	33.80	7.7	25.8	0.45
C6	05 Apr 2023	8	11.03	86.47	3.4	33.80	7.7	25.8	0.41
C6	05 Apr 2023	9	10.80	87.82	3.1	33.85	7.7	25.9	0.35
C6	05 Apr 2023	10	10.74	87.28	3.0	33.87	7.7	25.9	0.33
C6	10 Apr 2023	1	11.91	67.48	6.2	33.79	7.9	25.7	11.42
C6	10 Apr 2023	2	11.82	67.40	5.9	33.79	7.9	25.7	13.44
C6	10 Apr 2023	3	11.63	66.90	5.4	33.80	7.8	25.7	15.55
C6	10 Apr 2023	4	11.52	67.22	5.0	33.81	7.8	25.8	14.34
C6	10 Apr 2023	5	11.34	71.22	4.5	33.84	7.8	25.8	7.79
C6	10 Apr 2023	6	11.02	78.04	3.8	33.88	7.8	25.9	3.25
C6	10 Apr 2023	7	10.73	84.69	3.3	33.91	7.7	26.0	2.20
C6	10 Apr 2023	8	10.62	89.83	3.1	33.92	7.7	26.0	1.21
C6	10 Apr 2023	9	10.61	91.30	3.2	33.92	7.7	26.0	0.71
C6	18 Apr 2023	1	13.93	47.49	9.5	33.63	8.2	25.1	21.38
C6	18 Apr 2023	2	13.79	49.71	9.0	33.64	8.2	25.2	25.37
C6	18 Apr 2023	3	13.69	50.70	8.6	33.64	8.2	25.2	22.57
C6	18 Apr 2023	4	13.66	56.88	8.6	33.64	8.2	25.2	22.03
C6	18 Apr 2023	5	13.64	57.26	8.5	33.64	8.1	25.2	22.44
C6	18 Apr 2023	6	13.48	57.71	8.1	33.66	8.1	25.3	19.93
C6	18 Apr 2023	7	13.28	64.98	7.2	33.67	8.1	25.3	15.11
C6	18 Apr 2023	8	12.19	78.69	5.0	33.79	7.9	25.6	8.40
C6	18 Apr 2023	9	11.75	81.96	3.9	33.78	7.8	25.7	3.98
C6	26 Apr 2023	1	16.23	68.49	10.1	33.63	8.3	24.6	11.31
C6	26 Apr 2023	2	16.20	68.58	10.0	33.63	8.3	24.6	10.67
C6	26 Apr 2023	3	16.18	69.36	9.8	33.63	8.3	24.7	9.73
C6	26 Apr 2023	4	16.02	70.64	9.5	33.63	8.3	24.7	8.65

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens ( $\sigma$ -t)	Chlor ( $\mu$ g/L)
C6	26 Apr 2023	5	15.87	73.14	9.1	33.63	8.3	24.7	7.05
C6	26 Apr 2023	6	15.65	75.19	8.6	33.63	8.2	24.8	4.70
C6	26 Apr 2023	7	15.29	78.44	8.0	33.64	8.2	24.9	2.83
C6	26 Apr 2023	8	14.83	83.00	7.4	33.66	8.1	25.0	1.57
C6	26 Apr 2023	9	14.59	85.70	7.0	33.66	8.1	25.0	1.03
C7	05 Apr 2023	1	12.04	83.36	5.5	33.58	7.8	25.5	0.68
C7	05 Apr 2023	2	12.02	83.28	5.4	33.59	7.8	25.5	0.73
C7	05 Apr 2023	3	11.82	83.23	5.0	33.64	7.8	25.6	0.96
C7	05 Apr 2023	4	11.68	83.18	4.6	33.67	7.8	25.6	1.26
C7	05 Apr 2023	5	11.52	83.39	4.3	33.70	7.8	25.7	1.39
C7	05 Apr 2023	6	11.34	84.61	4.0	33.73	7.8	25.7	1.11
C7	05 Apr 2023	7	11.27	86.22	3.9	33.74	7.7	25.7	0.81
C7	05 Apr 2023	8	11.21	87.51	3.9	33.75	7.7	25.8	0.77
C7	05 Apr 2023	9	11.19	87.75	3.8	33.76	7.7	25.8	0.86
C7	05 Apr 2023	10	11.13	87.14	3.7	33.77	7.7	25.8	0.68
C7	05 Apr 2023	11	10.83	88.36	3.4	33.84	7.7	25.9	0.59
C7	05 Apr 2023	12	10.78	89.06	3.3	33.84	7.7	25.9	0.48
C7	05 Apr 2023	13	10.68	89.54	3.2	33.86	7.7	25.9	0.48
C7	05 Apr 2023	14	10.60	89.61	3.1	33.87	7.7	26.0	0.43
C7	05 Apr 2023	15	10.53	89.46	3.0	33.89	7.7	26.0	0.39
C7	05 Apr 2023	16	10.49	89.25	2.9	33.89	7.7	26.0	0.35
C7	05 Apr 2023	17	10.37	88.93	2.7	33.92	7.6	26.0	0.32
C7	05 Apr 2023	18	10.36	88.82	2.7	33.92	7.6	26.0	0.28
C7	10 Apr 2023	1	12.06	72.74	5.9	33.76	7.9	25.6	9.60
C7	10 Apr 2023	2	11.82	73.72	5.5	33.78	7.8	25.7	9.36
C7	10 Apr 2023	3	11.70	76.04	5.2	33.79	7.8	25.7	9.22
C7	10 Apr 2023	4	11.65	77.35	5.0	33.80	7.8	25.7	8.55
C7	10 Apr 2023	5	11.56	78.09	4.9	33.80	7.8	25.7	8.14
C7	10 Apr 2023	6	11.50	78.48	4.7	33.81	7.8	25.8	7.74
C7	10 Apr 2023	7	11.48	78.86	4.7	33.81	7.8	25.8	8.11
C7	10 Apr 2023	8	11.47	78.77	4.6	33.81	7.8	25.8	8.63
C7	10 Apr 2023	9	11.46	78.27	4.6	33.81	7.8	25.8	9.05
C7	10 Apr 2023	10	11.43	77.61	4.5	33.82	7.8	25.8	9.94
C7	10 Apr 2023	11	11.36	75.59	4.4	33.83	7.7	25.8	10.48
C7	10 Apr 2023	12	11.32	74.82	4.3	33.83	7.7	25.8	9.99
C7	10 Apr 2023	13	11.15	75.52	3.9	33.84	7.7	25.8	8.73
C7	10 Apr 2023	14	10.72	81.94	3.3	33.90	7.7	26.0	4.34
C7	10 Apr 2023	15	10.63	83.08	3.0	33.90	7.6	26.0	2.14
C7	10 Apr 2023	16	10.50	90.42	2.8	33.92	7.6	26.0	1.60
C7	10 Apr 2023	17	10.44	91.31	2.7	33.94	7.6	26.0	0.96
C7	18 Apr 2023	1	13.67	83.73	9.1	33.52	8.1	25.1	1.54
C7	18 Apr 2023	2	13.60	83.43	9.1	33.53	8.1	25.1	1.70
C7	18 Apr 2023	3	13.55	82.82	9.0	33.52	8.1	25.1	2.00
C7	18 Apr 2023	4	13.32	83.08	8.7	33.52	8.1	25.2	1.91
C7	18 Apr 2023	5	13.10	84.22	8.5	33.55	8.1	25.2	2.20
C7	18 Apr 2023	6	13.04	84.18	8.4	33.56	8.1	25.3	2.71
C7	18 Apr 2023	7	13.00	84.04	8.3	33.56	8.1	25.3	3.45
C7	18 Apr 2023	8	12.98	83.42	8.3	33.57	8.1	25.3	4.43
C7	18 Apr 2023	9	12.93	82.88	8.1	33.58	8.1	25.3	4.39
C7	18 Apr 2023	10	12.86	83.64	7.9	33.60	8.1	25.3	4.26
C7	18 Apr 2023	11	12.82	82.99	7.7	33.62	8.1	25.4	4.54
C7	18 Apr 2023	12	12.83	83.00	7.4	33.61	8.0	25.4	4.78
C7	18 Apr 2023	13	12.11	83.00	5.6	33.73	8.0	25.6	3.53
C7	18 Apr 2023	14	11.64	85.85	4.6	33.77	7.8	25.7	2.90
C7	18 Apr 2023	15	11.50	87.19	4.2	33.77	7.8	25.7	2.41
C7	18 Apr 2023	16	11.29	87.35	3.8	33.79	7.8	25.8	1.80
C7	18 Apr 2023	17	11.36	88.29	3.9	33.78	7.7	25.8	1.71
C7	18 Apr 2023	18	11.25	88.83	3.8	33.80	7.7	25.8	1.71

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens ( $\sigma$ -t)	Chlor ( $\mu$ g/L)
C7	26 Apr 2023	1	16.01	58.69	11.5	33.61	8.3	24.7	24.06
C7	26 Apr 2023	2	16.00	58.44	11.4	33.61	8.3	24.7	22.55
C7	26 Apr 2023	3	15.91	59.39	11.3	33.61	8.3	24.7	16.94
C7	26 Apr 2023	4	15.83	65.21	11.0	33.62	8.3	24.7	12.99
C7	26 Apr 2023	5	15.74	71.63	10.8	33.62	8.3	24.7	11.63
C7	26 Apr 2023	6	15.64	73.38	10.5	33.62	8.3	24.8	10.43
C7	26 Apr 2023	7	15.57	75.01	10.3	33.62	8.3	24.8	8.81
C7	26 Apr 2023	8	15.51	76.43	10.1	33.62	8.2	24.8	7.07
C7	26 Apr 2023	9	15.26	78.63	9.4	33.63	8.2	24.9	6.10
C7	26 Apr 2023	10	14.74	80.47	8.7	33.67	8.2	25.0	5.77
C7	26 Apr 2023	11	14.51	80.17	8.1	33.67	8.1	25.1	6.00
C7	26 Apr 2023	12	14.21	79.80	7.8	33.69	8.1	25.1	5.98
C7	26 Apr 2023	13	14.01	79.96	7.6	33.69	8.1	25.2	6.03
C7	26 Apr 2023	14	13.97	80.14	7.5	33.69	8.1	25.2	5.96
C7	26 Apr 2023	15	13.93	80.38	7.4	33.69	8.0	25.2	6.67
C7	26 Apr 2023	16	13.70	80.15	6.7	33.70	8.0	25.2	6.74
C7	26 Apr 2023	17	12.51	79.20	5.3	33.76	7.9	25.5	4.20
C7	26 Apr 2023	18	12.47	85.69	5.3	33.76	7.9	25.5	1.66
C8	05 Apr 2023	1	12.23	74.14	6.0	33.54	7.8	25.4	0.67
C8	05 Apr 2023	2	11.93	74.80	5.0	33.63	7.8	25.5	1.02
C8	05 Apr 2023	3	11.43	76.08	4.1	33.71	7.8	25.7	0.90
C8	05 Apr 2023	4	11.16	85.76	3.8	33.76	7.8	25.8	0.51
C8	05 Apr 2023	5	10.73	87.36	3.5	33.84	7.7	25.9	0.33
C8	05 Apr 2023	6	10.62	89.62	3.3	33.85	7.7	25.9	0.30
C8	05 Apr 2023	7	10.61	91.22	3.3	33.85	7.7	25.9	0.29
C8	05 Apr 2023	8	10.61	91.76	3.3	33.85	7.7	26.0	0.28
C8	05 Apr 2023	9	10.60	91.84	3.3	33.86	7.7	26.0	0.33
C8	05 Apr 2023	10	10.58	91.90	3.3	33.87	7.7	26.0	0.34
C8	05 Apr 2023	11	10.53	91.90	3.2	33.88	7.7	26.0	0.33
C8	05 Apr 2023	12	10.47	91.80	3.0	33.89	7.7	26.0	0.30
C8	05 Apr 2023	13	10.44	91.48	2.9	33.90	7.7	26.0	0.27
C8	05 Apr 2023	14	10.43	91.16	2.9	33.90	7.7	26.0	0.26
C8	05 Apr 2023	15	10.43	91.00	2.9	33.90	7.7	26.0	0.26
C8	05 Apr 2023	16	10.43	90.95	2.9	33.90	7.7	26.0	0.25
C8	05 Apr 2023	17	10.43	90.80	2.9	33.90	7.7	26.0	0.26
C8	05 Apr 2023	18	10.43	90.83	2.9	33.90	7.7	26.0	0.26
C8	05 Apr 2023	19	10.43	90.85	2.9	33.90	7.7	26.0	0.27
C8	05 Apr 2023	20	10.43	90.81	2.9	33.90	7.7	26.0	0.26
C8	10 Apr 2023	1	12.22	67.29	6.7	33.75	7.9	25.6	14.26
C8	10 Apr 2023	2	12.17	67.08	6.3	33.76	7.9	25.6	14.80
C8	10 Apr 2023	3	11.85	67.94	5.6	33.79	7.8	25.7	12.53
C8	10 Apr 2023	4	11.70	71.69	5.1	33.80	7.8	25.7	10.49
C8	10 Apr 2023	5	11.65	76.45	5.0	33.80	7.8	25.7	9.69
C8	10 Apr 2023	6	11.62	76.94	5.0	33.80	7.8	25.7	9.12
C8	10 Apr 2023	7	11.56	77.24	4.8	33.81	7.8	25.7	8.77
C8	10 Apr 2023	8	11.48	77.59	4.6	33.82	7.8	25.8	8.24
C8	10 Apr 2023	9	11.31	77.86	4.3	33.83	7.8	25.8	7.16
C8	10 Apr 2023	10	11.02	80.43	3.8	33.86	7.7	25.9	4.51
C8	10 Apr 2023	11	10.92	83.48	3.5	33.86	7.7	25.9	2.46
C8	10 Apr 2023	12	10.86	87.40	3.3	33.87	7.7	25.9	1.44
C8	10 Apr 2023	13	10.74	89.19	3.1	33.89	7.7	26.0	1.01
C8	10 Apr 2023	14	10.63	89.53	2.9	33.91	7.6	26.0	0.84
C8	10 Apr 2023	15	10.44	90.22	2.7	33.94	7.6	26.1	0.66
C8	10 Apr 2023	16	10.35	91.02	2.6	33.95	7.6	26.1	0.57
C8	10 Apr 2023	17	10.35	91.51	2.5	33.96	7.6	26.1	0.53
C8	10 Apr 2023	18	10.34	91.68	2.6	33.96	7.6	26.1	0.58
C8	10 Apr 2023	19	10.34	91.62	2.6	33.96	7.6	26.1	1.00

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens ( $\sigma$ -t)	Chlor ( $\mu$ g/L)
C8	18 Apr 2023	1	13.76	81.04	9.1	33.44	8.2	25.0	1.43
C8	18 Apr 2023	2	13.68	81.03	9.2	33.47	8.2	25.1	1.41
C8	18 Apr 2023	3	13.60	83.45	9.2	33.50	8.2	25.1	1.54
C8	18 Apr 2023	4	13.37	85.09	8.8	33.52	8.1	25.2	1.83
C8	18 Apr 2023	5	13.16	84.66	8.5	33.53	8.1	25.2	2.24
C8	18 Apr 2023	6	12.98	83.94	8.3	33.56	8.1	25.3	2.69
C8	18 Apr 2023	7	12.95	83.77	8.2	33.55	8.1	25.3	2.97
C8	18 Apr 2023	8	12.96	83.84	8.2	33.55	8.1	25.3	3.35
C8	18 Apr 2023	9	12.98	84.03	8.2	33.56	8.1	25.3	3.79
C8	18 Apr 2023	10	12.95	83.53	8.1	33.58	8.1	25.3	4.14
C8	18 Apr 2023	11	12.94	84.11	7.9	33.58	8.1	25.3	4.47
C8	18 Apr 2023	12	12.74	83.70	7.3	33.63	8.1	25.4	4.47
C8	18 Apr 2023	13	12.53	83.91	6.7	33.66	8.0	25.4	4.44
C8	18 Apr 2023	14	12.25	83.90	6.1	33.70	8.0	25.5	3.84
C8	18 Apr 2023	15	12.08	83.86	5.8	33.71	7.9	25.6	3.70
C8	18 Apr 2023	16	12.07	84.15	5.7	33.71	7.9	25.6	4.19
C8	18 Apr 2023	17	11.88	84.22	5.4	33.73	7.9	25.6	4.03
C8	18 Apr 2023	18	11.71	84.32	5.0	33.75	7.8	25.7	3.79
C8	18 Apr 2023	19	11.70	84.05	5.0	33.75	7.8	25.7	3.69
C8	26 Apr 2023	1	15.91	73.19	10.6	33.60	8.3	24.7	12.22
C8	26 Apr 2023	2	15.90	72.27	10.7	33.60	8.3	24.7	12.02
C8	26 Apr 2023	3	15.82	73.69	10.7	33.61	8.3	24.7	8.85
C8	26 Apr 2023	4	15.75	78.14	10.6	33.61	8.3	24.7	8.30
C8	26 Apr 2023	5	15.69	79.42	10.4	33.61	8.3	24.8	7.57
C8	26 Apr 2023	6	15.60	79.88	10.3	33.62	8.3	24.8	6.81
C8	26 Apr 2023	7	15.52	80.23	10.2	33.62	8.2	24.8	7.00
C8	26 Apr 2023	8	15.38	80.42	10.2	33.63	8.2	24.8	6.31
C8	26 Apr 2023	9	15.24	81.20	10.1	33.63	8.2	24.9	4.93
C8	26 Apr 2023	10	15.13	82.89	9.8	33.64	8.2	24.9	4.07
C8	26 Apr 2023	11	14.85	84.03	9.0	33.66	8.2	25.0	3.64
C8	26 Apr 2023	12	14.06	83.78	7.5	33.70	8.1	25.2	2.70
C8	26 Apr 2023	13	13.38	82.93	6.3	33.71	8.0	25.3	1.81
C8	26 Apr 2023	14	12.68	84.09	5.5	33.74	7.9	25.5	1.67
C8	26 Apr 2023	15	12.20	84.87	4.8	33.75	7.8	25.6	1.56
C8	26 Apr 2023	16	12.12	86.58	4.6	33.74	7.8	25.6	1.64
C8	26 Apr 2023	17	12.11	87.87	4.7	33.74	7.8	25.6	1.65
C8	26 Apr 2023	18	12.09	87.57	4.7	33.74	7.8	25.6	1.41
C8	26 Apr 2023	19	12.08	87.03	4.7	33.74	7.8	25.6	1.31

NA = not available

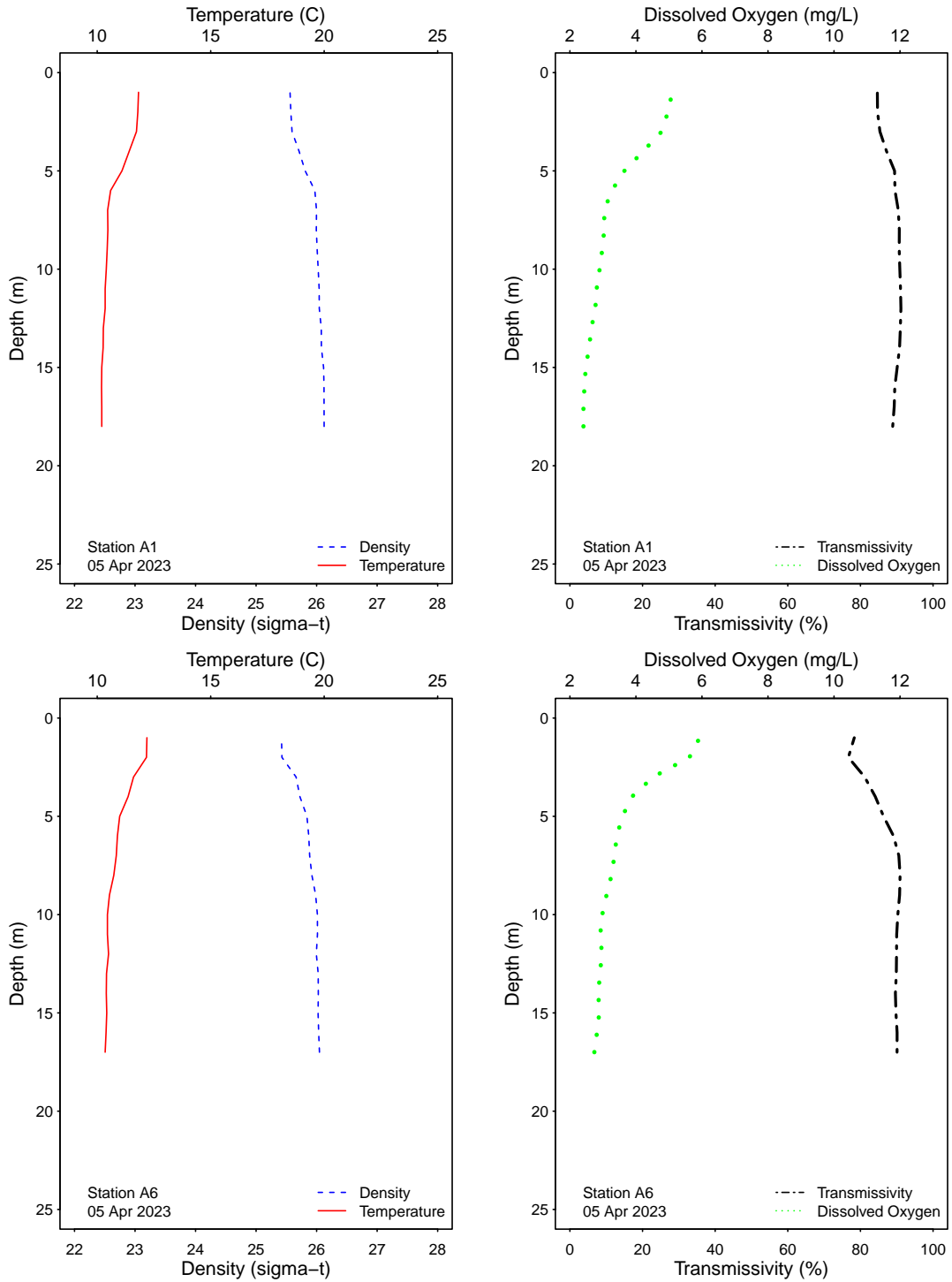


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.



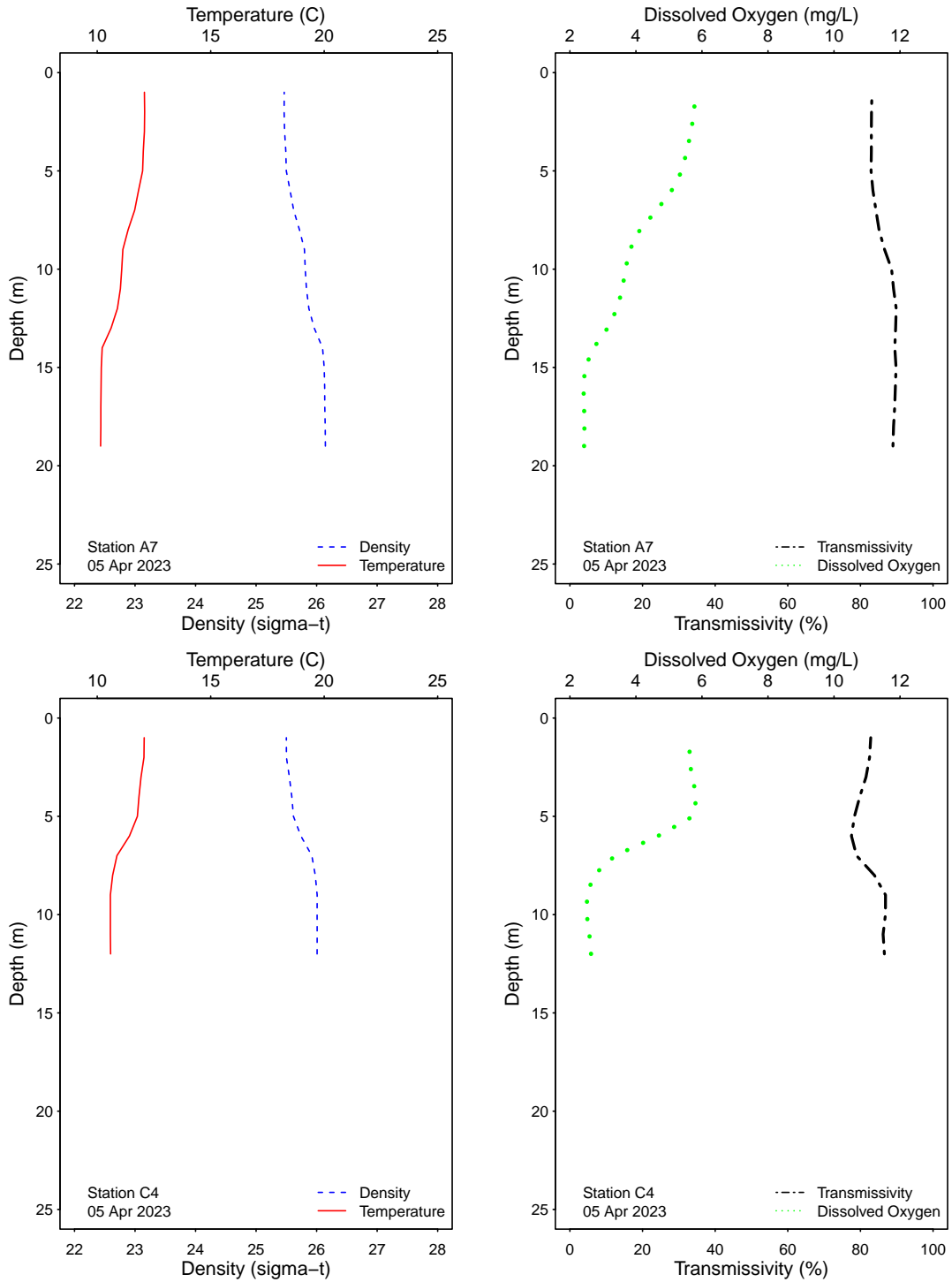


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

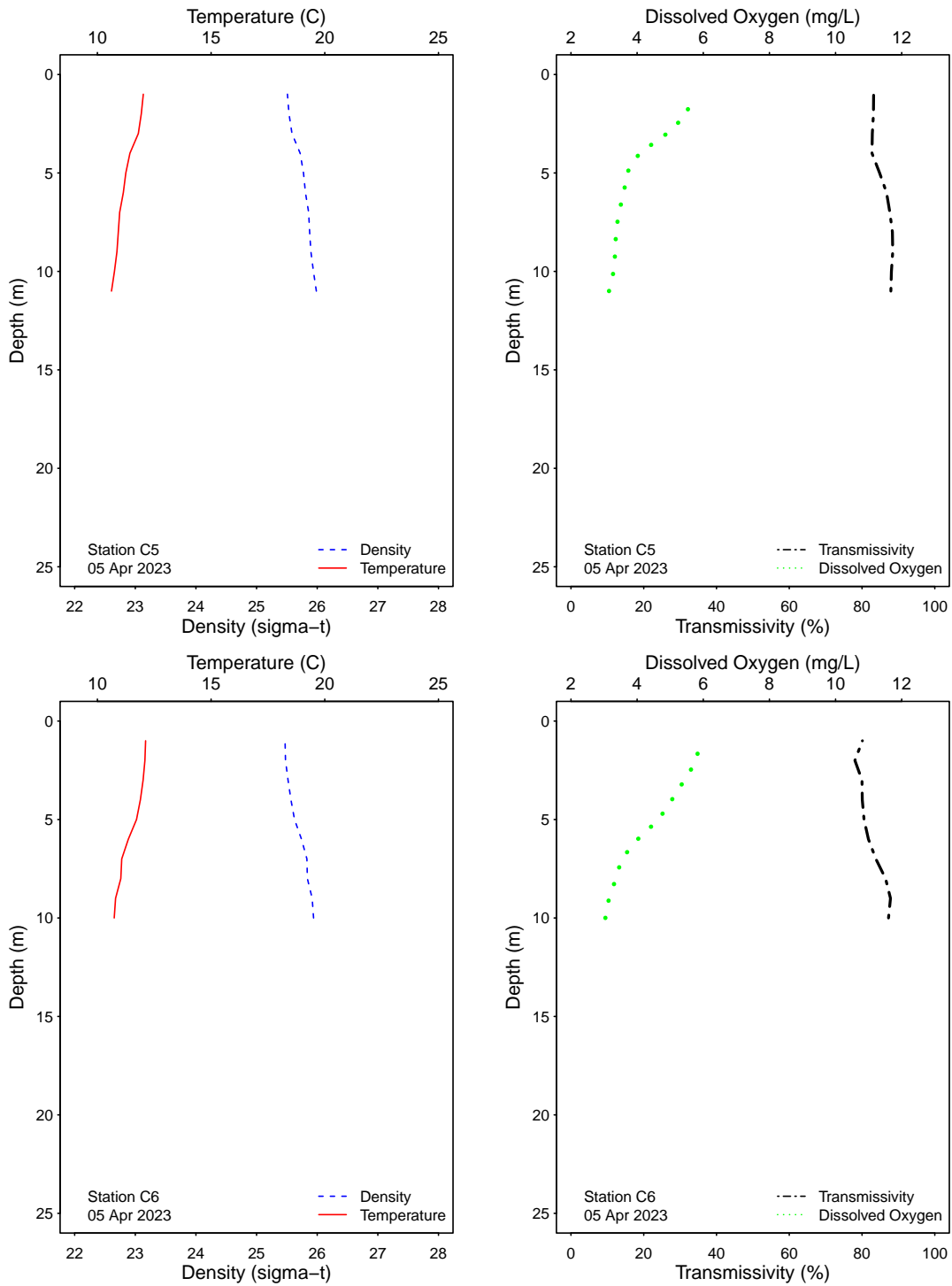


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

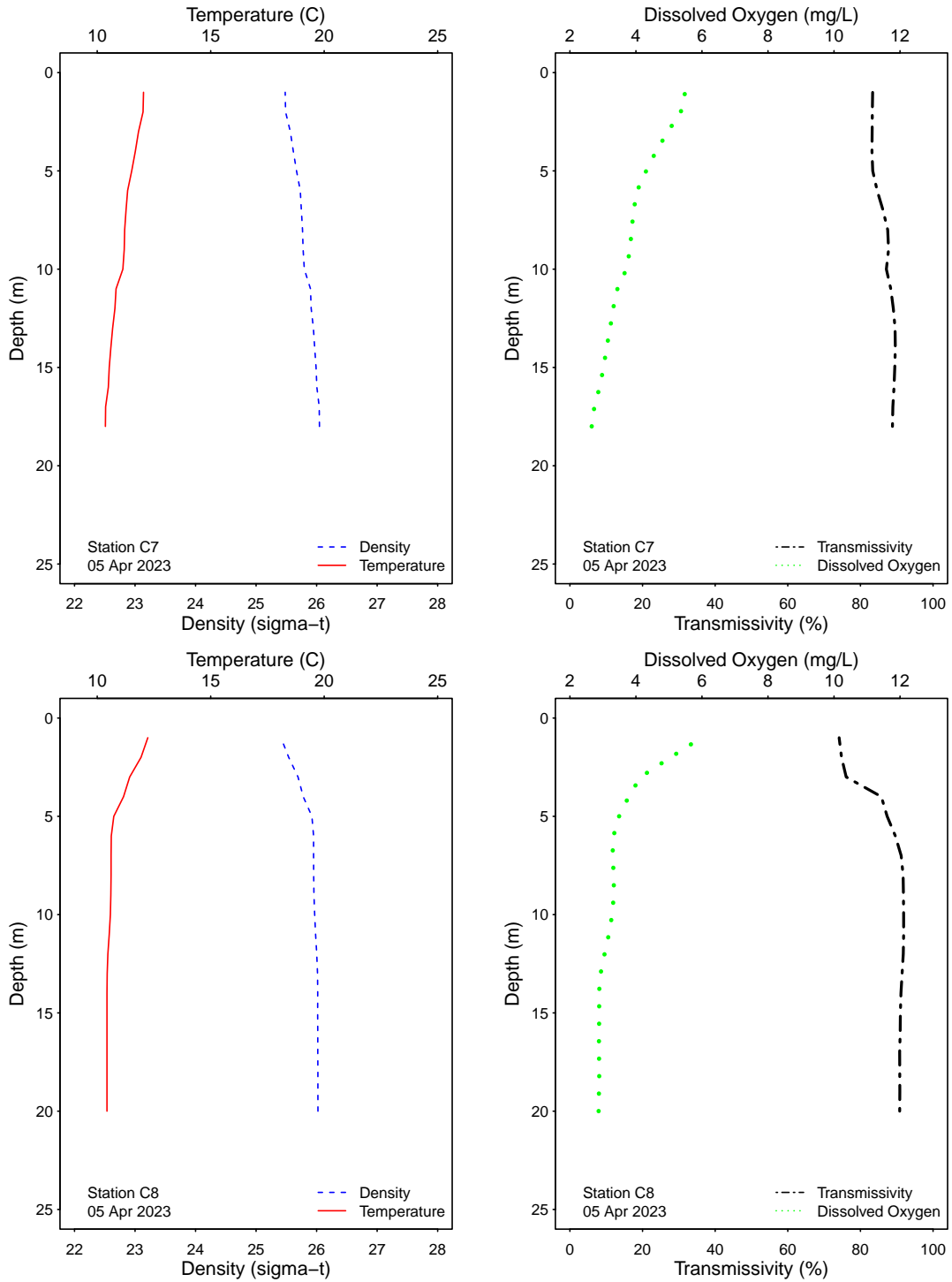


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

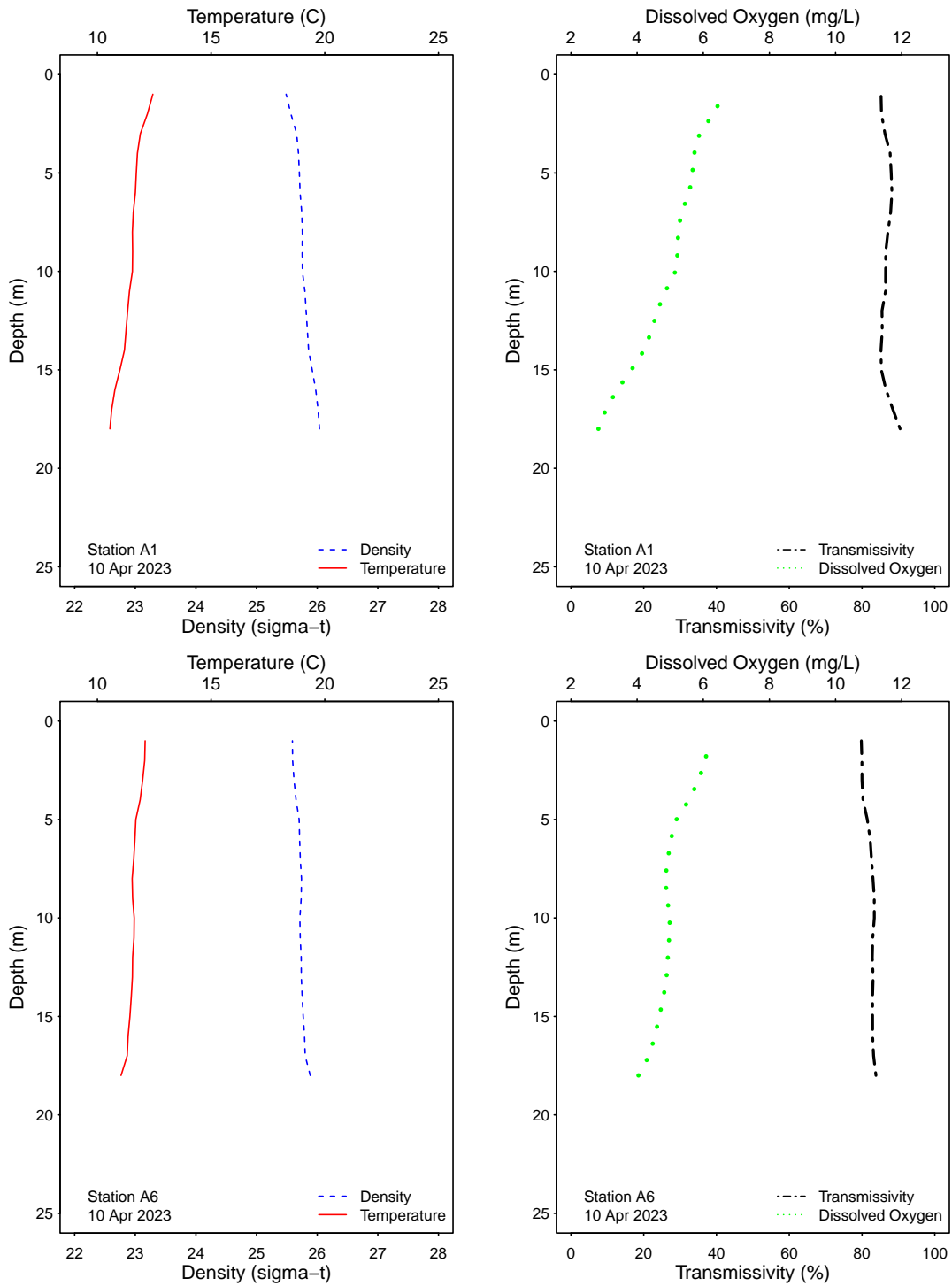


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

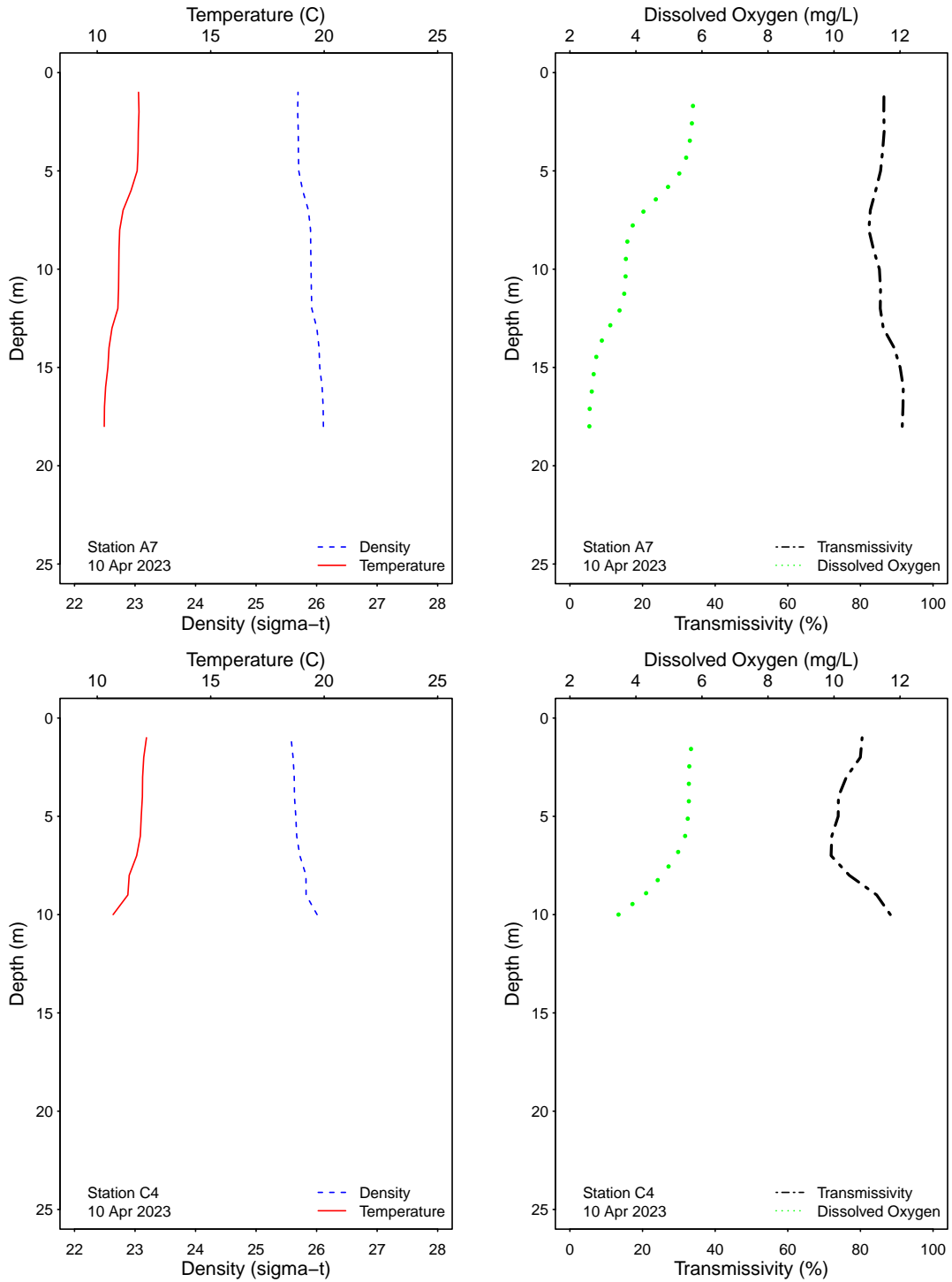


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

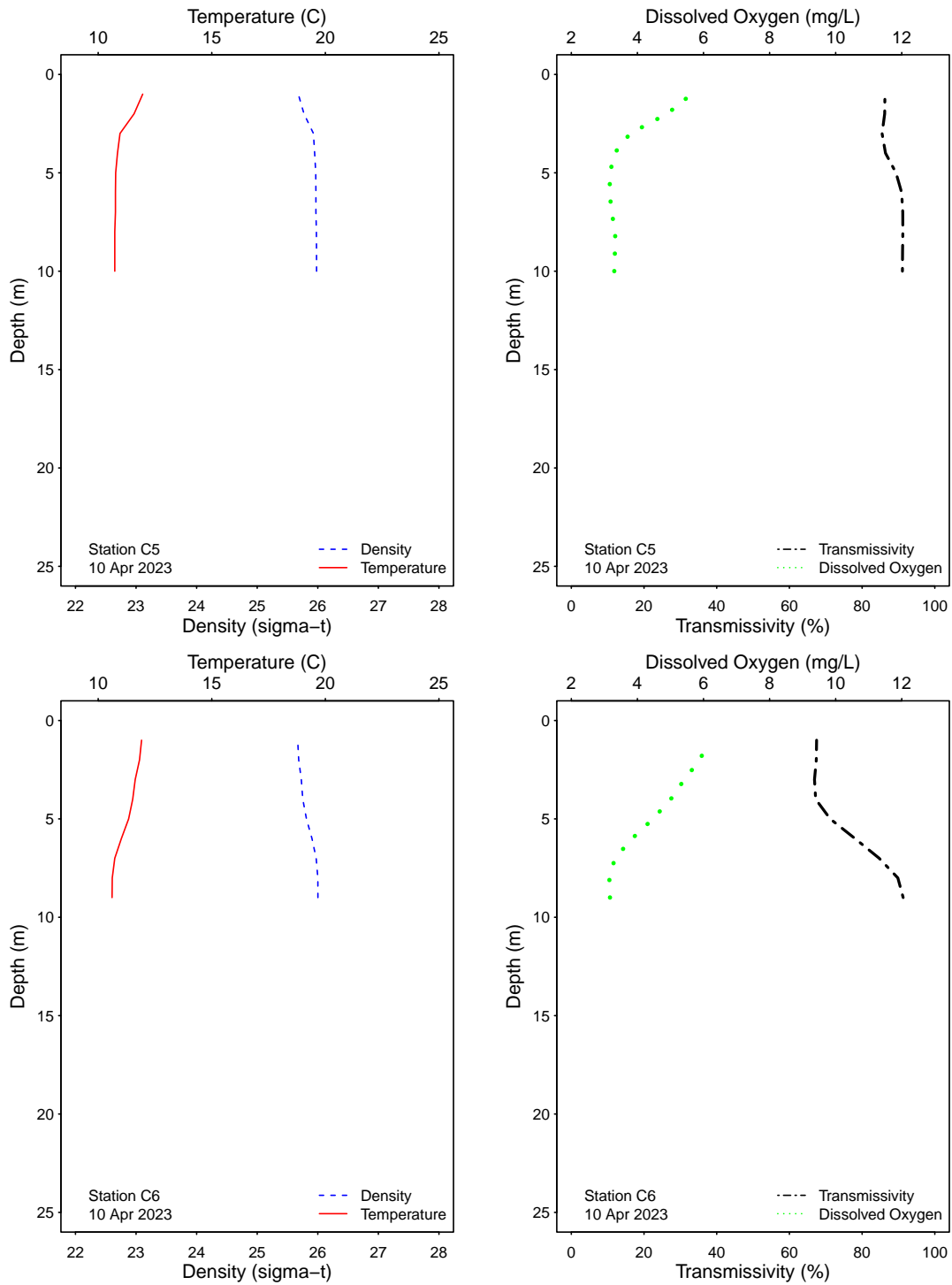


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

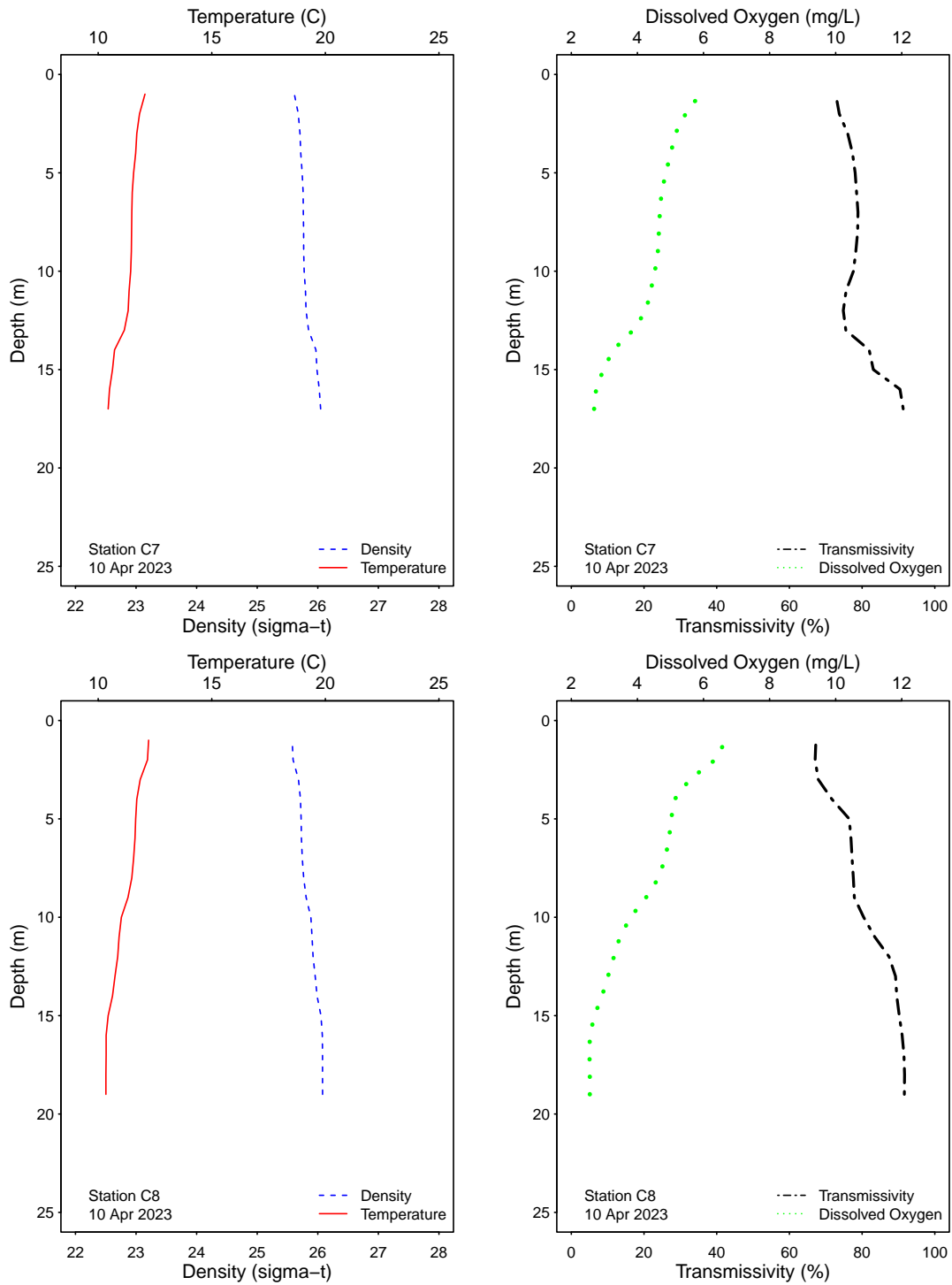


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

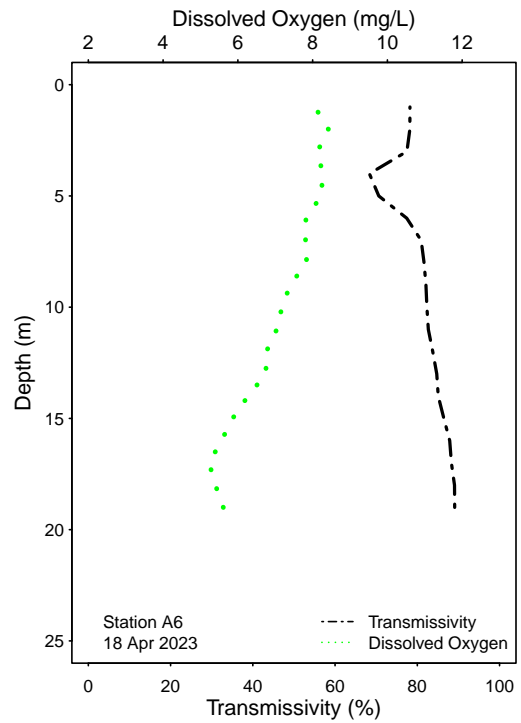
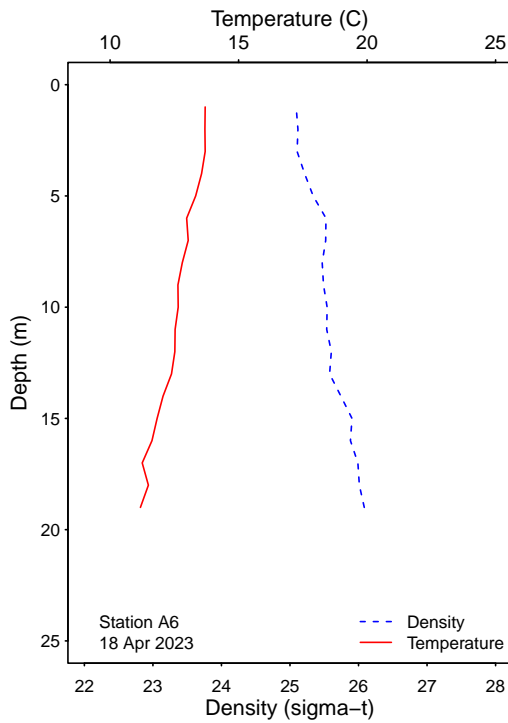
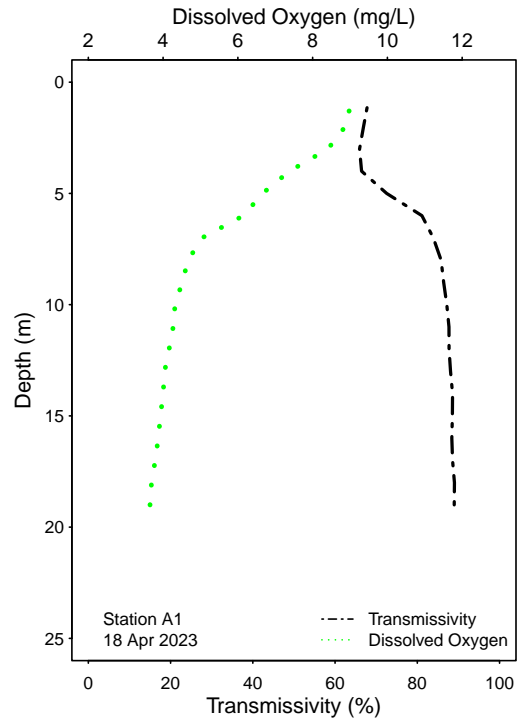
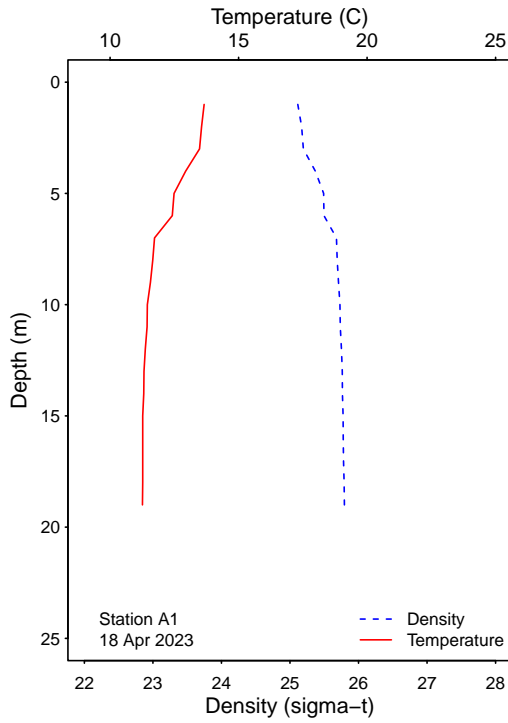


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.



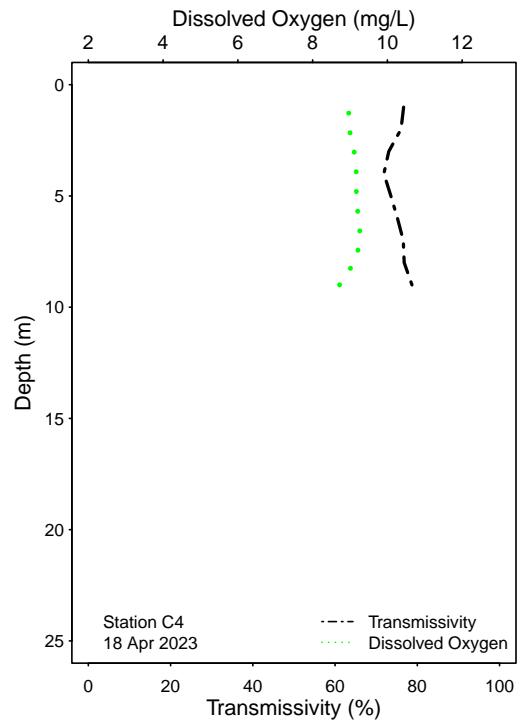
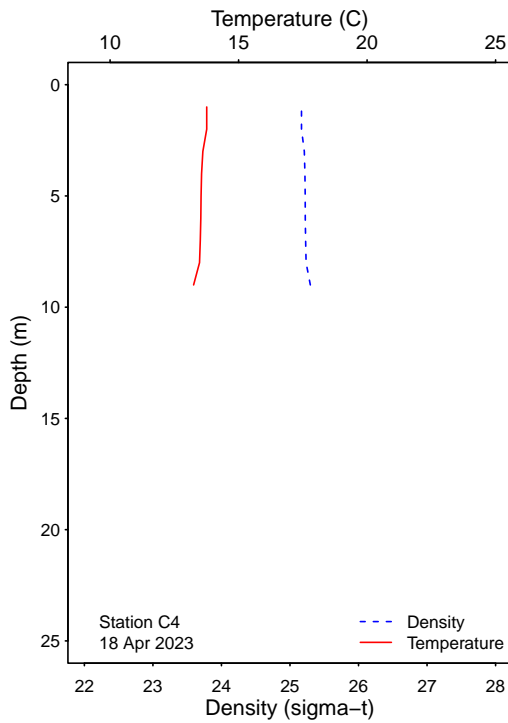
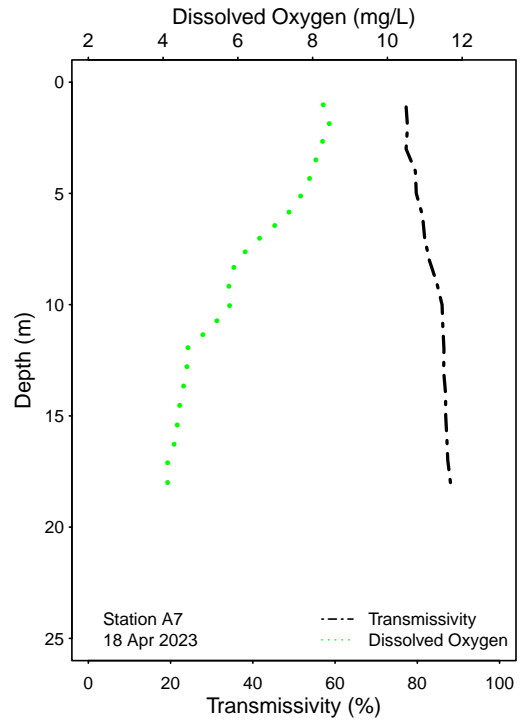
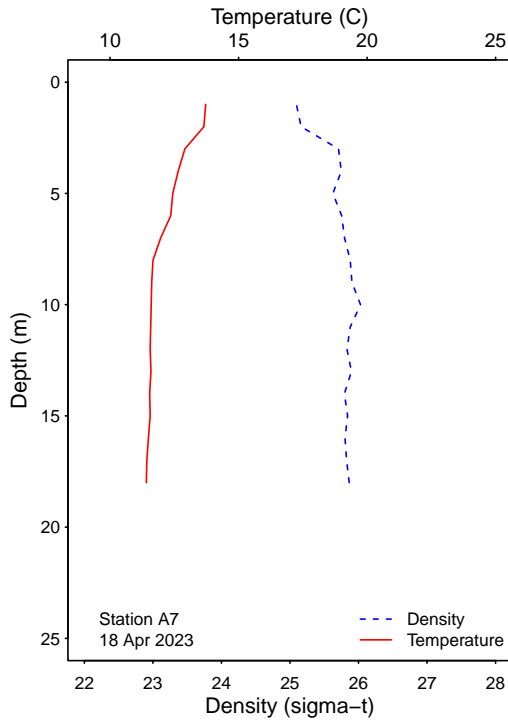


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

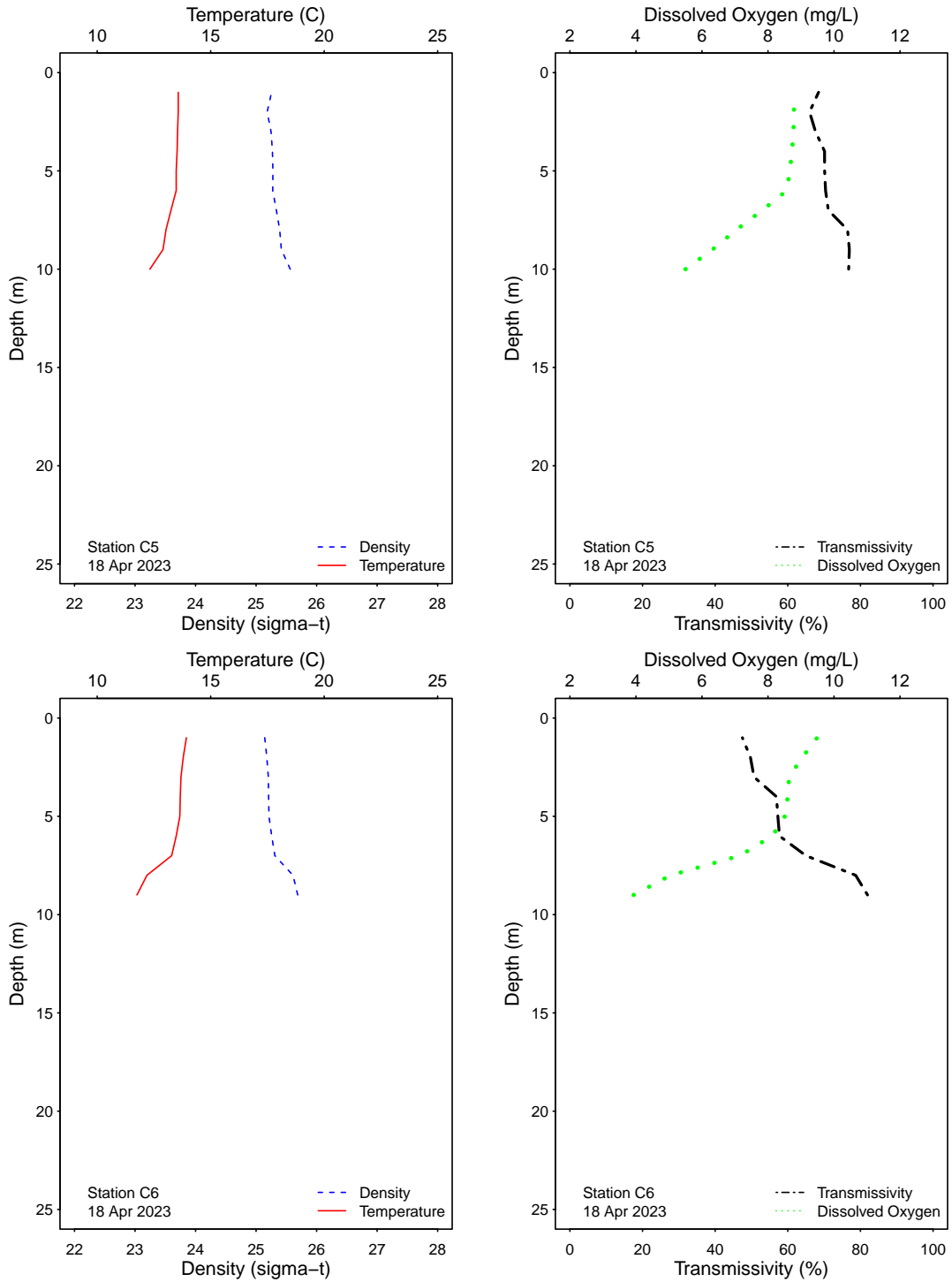


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

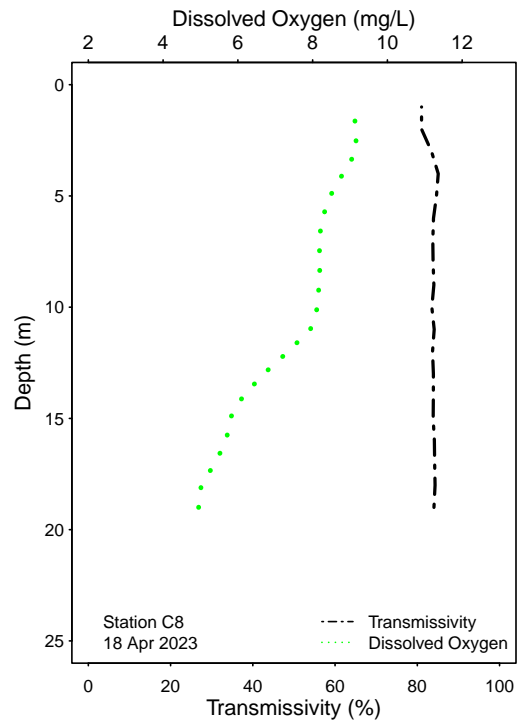
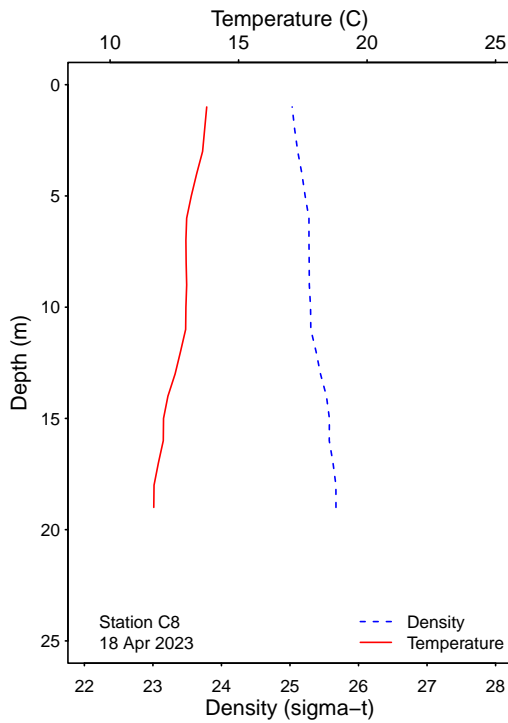
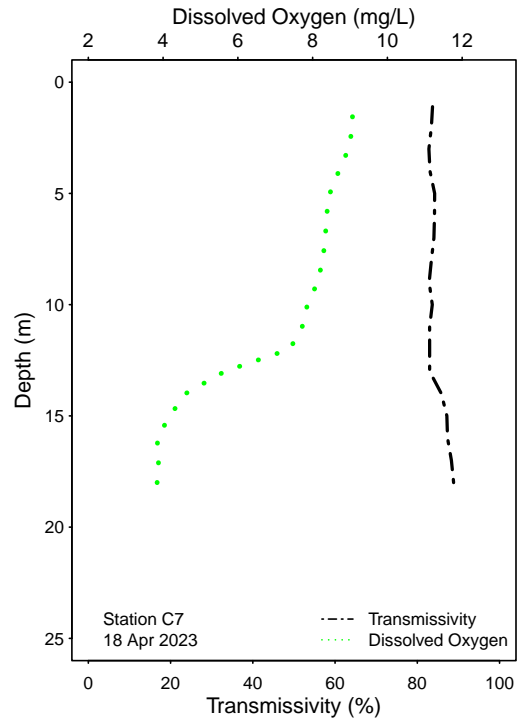
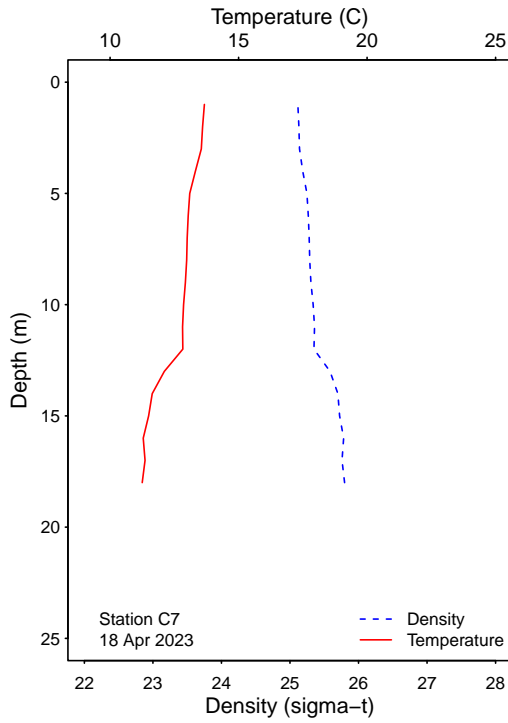


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

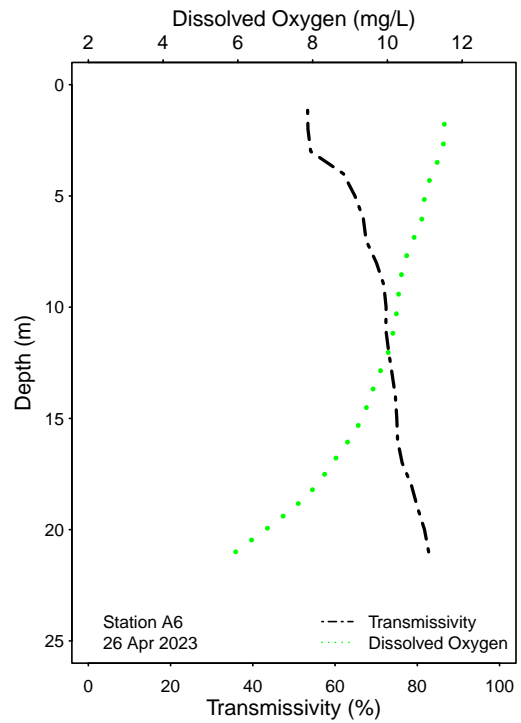
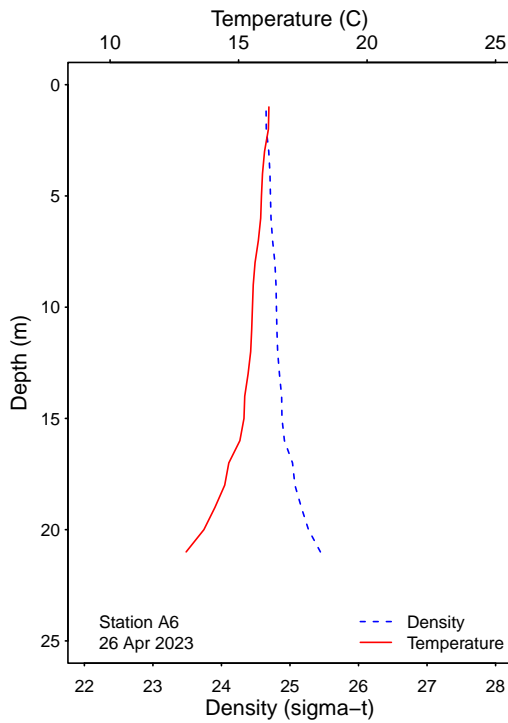
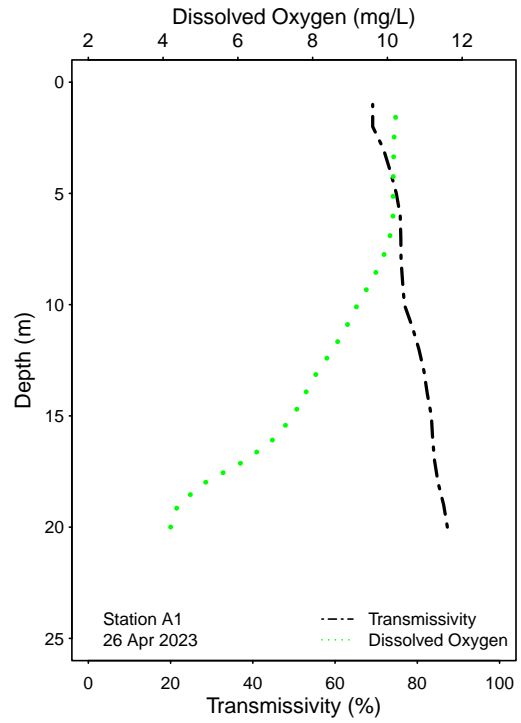
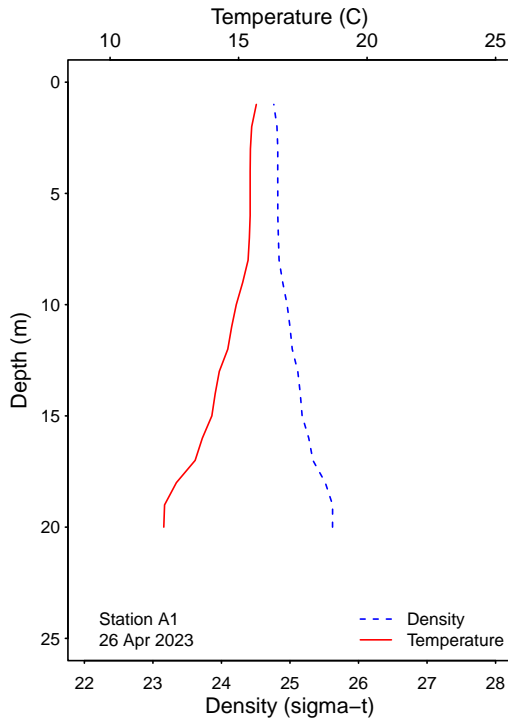


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

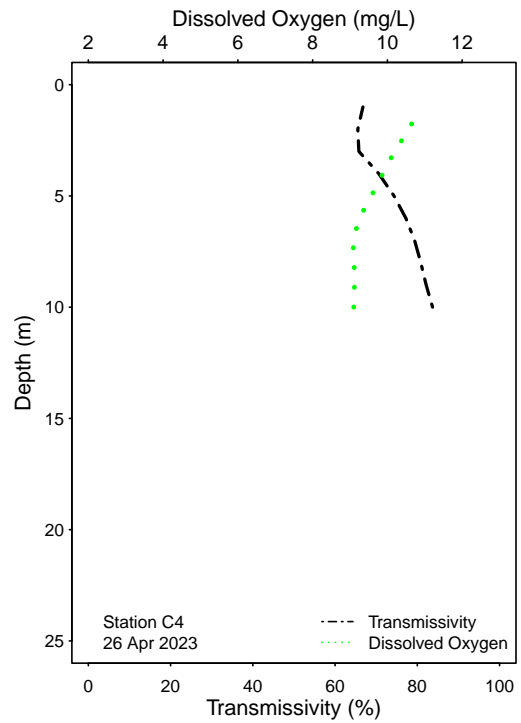
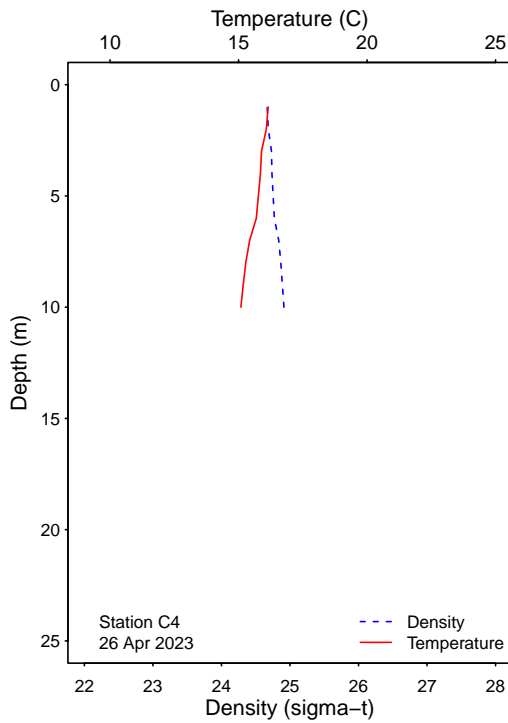
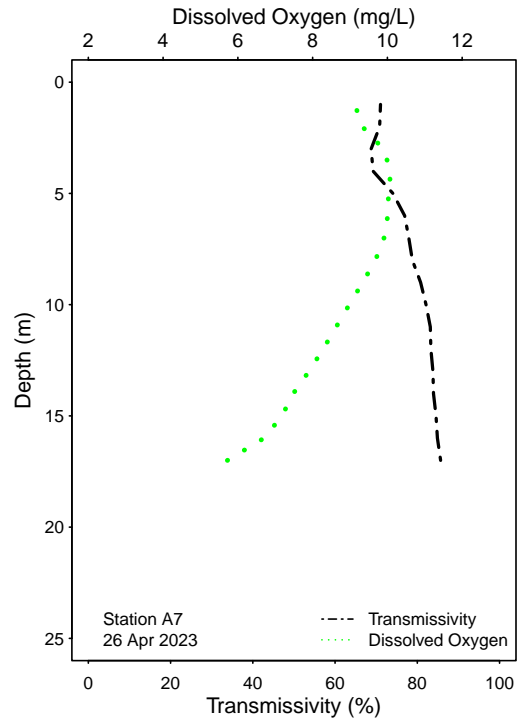
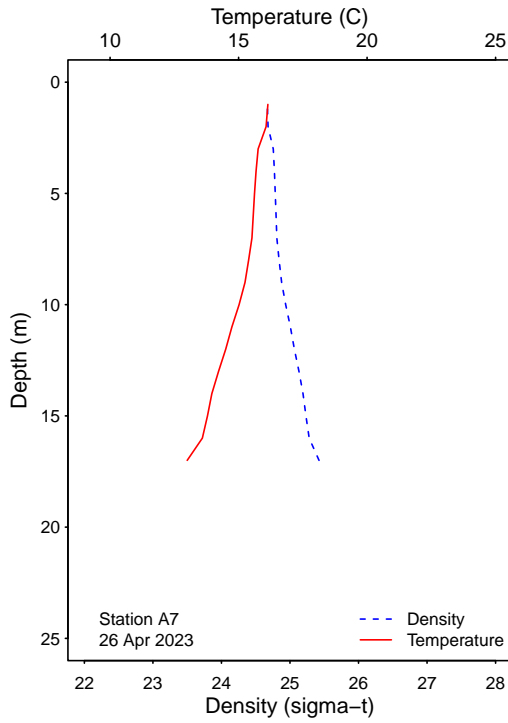


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

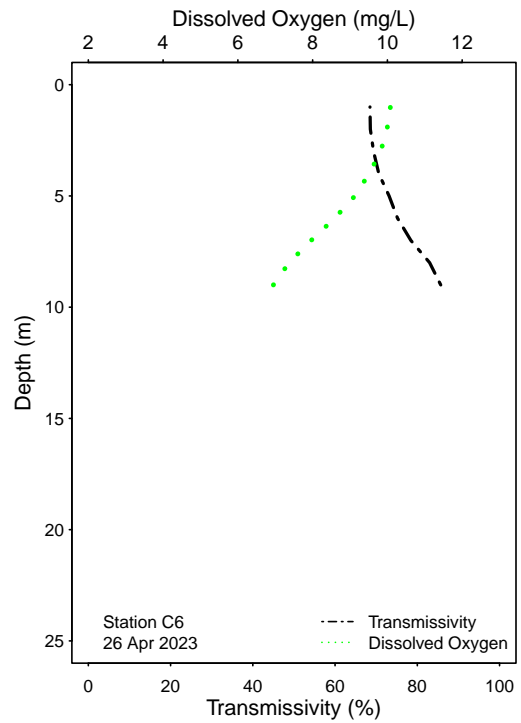
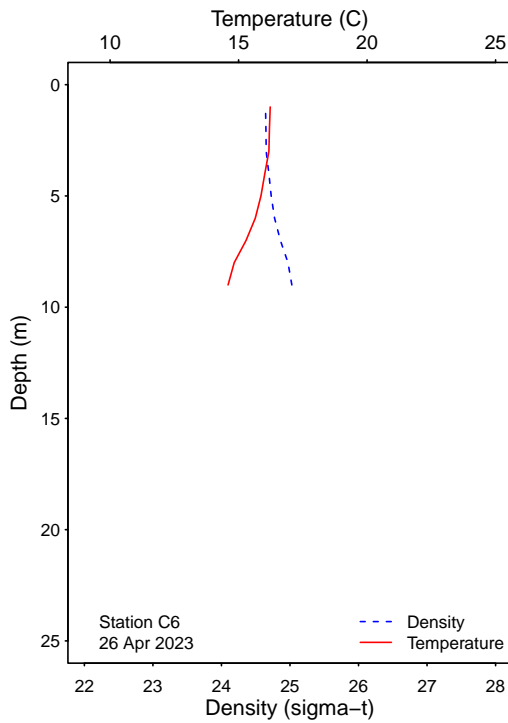
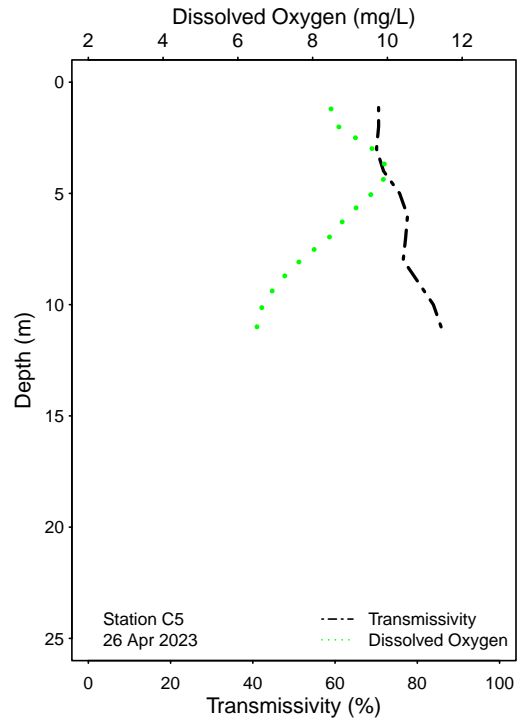
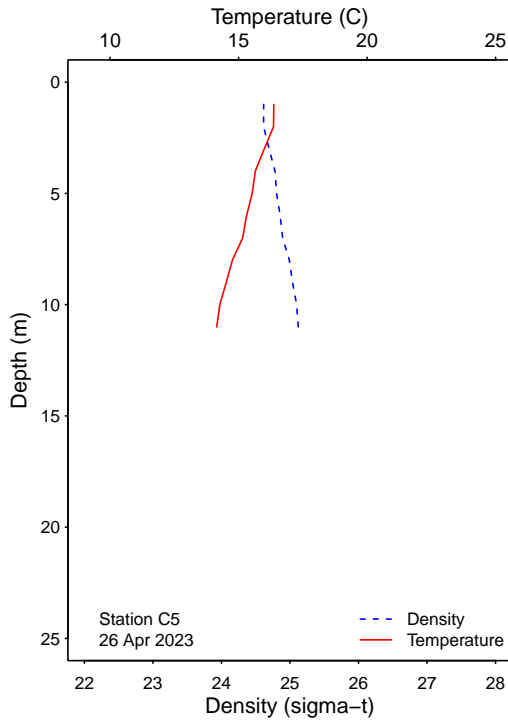


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

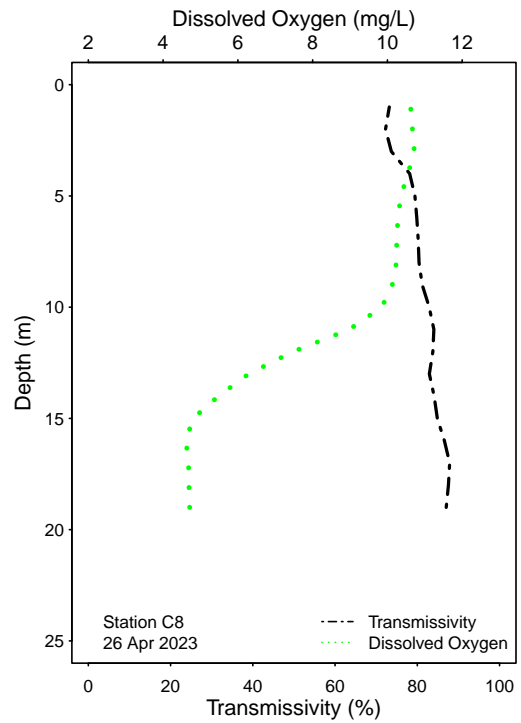
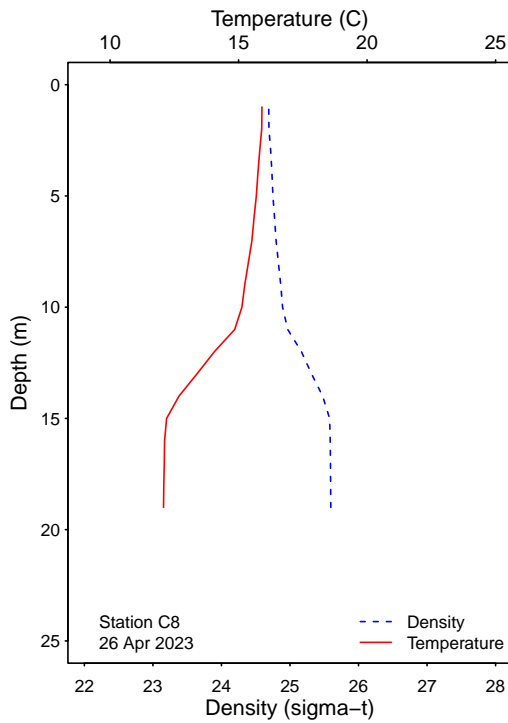
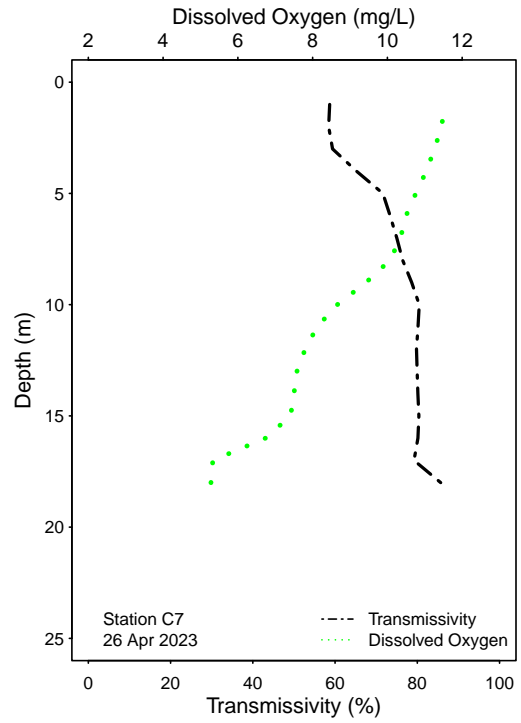
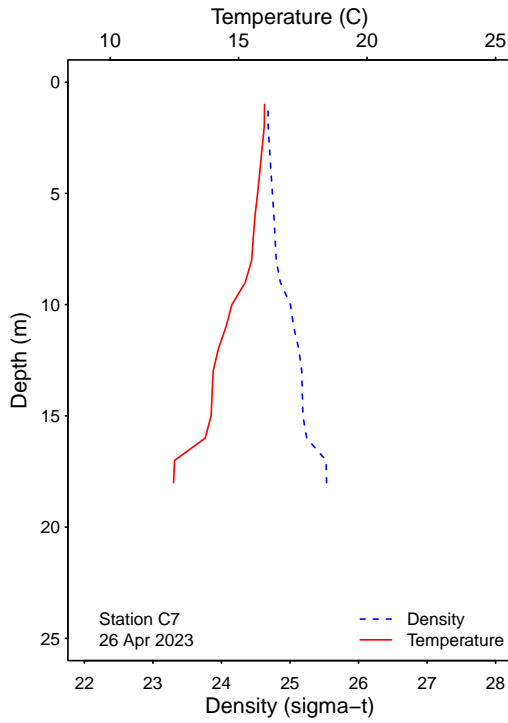


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.





**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	05 Apr 2023	18	KT	LAB DUPLICATE	5000	900	100e
A7	10 Apr 2023	18	CRE	LAB DUPLICATE	20e	10e	<2
A7	18 Apr 2023	18	KT	LAB DUPLICATE	4e	2e	<2
A7	26 Apr 2023	18	CRE	LAB DUPLICATE	<2	<2	<2
C7	05 Apr 2023	18	KT	LAB DUPLICATE	1200	340e	64
C7	10 Apr 2023	18	CRE	LAB DUPLICATE	32e	4e	2e
C7	18 Apr 2023	18	KT	LAB DUPLICATE	2e	<2	<2
C7	26 Apr 2023	18	CRE	LAB DUPLICATE	2e	<2	<2
C8	05 Apr 2023	12	KT	LAB DUPLICATE	1100	280e	62
C8	10 Apr 2023	12	CRE	LAB DUPLICATE	6e	<2	2e
C8	18 Apr 2023	12	KT	LAB DUPLICATE	<2	<2	<2
C8	26 Apr 2023	12	CRE	LAB DUPLICATE	<2	<2	<2
D12	05 Apr 2023		JF	FIELD DUPLICATE	<20	<2	<2
D12	05 Apr 2023		JF	LAB DUPLICATE	<2	<2	2e
D12	12 Apr 2023		KT	FIELD DUPLICATE	4e	2e	2e
D12	12 Apr 2023		KT	LAB DUPLICATE	4e	4e	<2
D12	19 Apr 2023		JF	FIELD DUPLICATE	<20	<2	<2
D12	19 Apr 2023		JF	LAB DUPLICATE	<20	<2	<2
D12	26 Apr 2023		KT	FIELD DUPLICATE	<200	26e	6e
D12	26 Apr 2023		KT	LAB DUPLICATE	<20	2e	<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	12m	18m	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	7	2	2	7	2	2	3	6	4	2	11	4	4	11	5	7	31	
02 Apr 2023	2	78	260	2	21	61	2	7	2	2	7	2	2	3	6	4	2	11	4	4	11	5	7	31	
03 Apr 2023	2	78	260	2	21	61	2	7	2	2	7	2	2	3	6	4	2	11	4	4	11	5	7	31	
04 Apr 2023	2	78	260	2	21	61	2	7	2	2	7	2	2	3	6	4	2	11	4	4	11	5	7	31	
05 Apr 2023	2	80	280	2	30	80	2	12	2	2	12	2	2	4	8	6	2	20	6	6	18	80	4	10	42
06 Apr 2023	14	78	280	11	80	110	6	7	4	12	9	6	6	11	11	9	11	11	9	55	90	5	33	50	
07 Apr 2023	14	78	280	11	80	110	6	7	4	12	9	6	6	11	11	9	11	11	9	55	90	5	33	50	
08 Apr 2023	14	78	280	11	80	110	6	7	4	12	9	6	6	11	11	9	11	11	9	55	90	5	33	50	
09 Apr 2023	14	78	280	11	80	110	6	7	4	12	9	6	6	11	11	9	11	11	9	55	90	5	33	50	
10 Apr 2023	2	76	240	2	30	80	2	12	2	2	12	2	2	4	4	6	6	20	2	20	80	4	10	80	
11 Apr 2023	2	76	240	2	30	80	2	12	2	2	12	2	2	4	4	6	6	20	2	20	80	4	10	80	
12 Apr 2023	2	76	240	2	30	80	2	12	2	2	12	2	2	4	4	6	6	20	2	20	80	4	10	80	
13 Apr 2023	14	78	260	11	20	57	6	11	4	11	4	13	13	13	20	9	20	9	19	49	3	9	59		
14 Apr 2023	14	78	260	11	20	57	6	11	4	11	4	13	13	13	20	9	20	9	19	49	3	9	59		
15 Apr 2023	14	78	260	11	20	57	6	11	4	11	4	13	13	13	20	9	20	9	19	49	3	9	59		
16 Apr 2023	14	78	260	11	20	57	6	11	4	11	4	13	13	13	20	9	20	9	19	49	3	9	59		
17 Apr 2023	14	78	260	11	20	57	6	11	4	11	4	13	13	13	20	9	20	9	19	49	3	9	59		
18 Apr 2023	2	76	200	4	10	34	2	2	2	2	2	2	2	2	4	6	6	20	2	18	18	2	8	20	
19 Apr 2023	2	76	200	4	10	34	2	2	2	2	2	2	2	2	4	6	6	20	2	18	18	2	8	20	
20 Apr 2023	2	76	200	4	10	34	2	2	2	2	2	2	2	2	4	6	6	20	2	18	18	2	8	20	
21 Apr 2023	2	76	200	4	10	34	2	2	2	2	2	2	2	2	4	6	6	20	2	18	18	2	8	20	
22 Apr 2023	2	76	200	4	10	34	2	2	2	2	2	2	2	2	4	6	6	20	2	18	18	2	8	20	
23 Apr 2023	2	41	163	3	6	28	2	11	2	2	11	2	2	2	3	4	4	11	2	12	17	2	6	59	
24 Apr 2023	2	41	163	3	6	28	2	11	2	2	11	2	2	2	3	4	4	11	2	12	17	2	6	59	
25 Apr 2023	2	41	163	3	6	28	2	11	2	2	11	2	2	2	3	4	4	11	2	12	17	2	6	59	
26 Apr 2023	2	6	6	4	2	22	2	2	2	2	2	2	2	2	2	2	2	2	2	2	4	16	2	20	
27 Apr 2023	3	5	6	12	2	15	5	6	18	2	11	4	2	2	2	4	4	11	9	11	9	2	5	59	
28 Apr 2023	3	5	6	12	2	15	5	6	18	2	11	4	2	2	2	4	4	11	9	11	9	2	5	59	
29 Apr 2023	3	5	6	12	2	15	5	6	18	2	11	4	2	2	2	4	4	11	9	11	9	2	5	59	
30 Apr 2023	3	5	6	12	2	15	5	6	18	2	11	4	2	2	2	4	4	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	18m	1m	18m	1m	12m	1m	3m	9m	3m	1m	3m	9m	1m	12m	18m	1m	18m
April	IC	E	IC	IC	IC	E	IC	IC	IC	IC	IC	IC	E	IC	E	E	IC	E