



POINT LOMA OCEAN OUTFALL MONTHLY RECEIVING WATERS MONITORING REPORT

POINT LOMA WASTEWATER TREATMENT PLANT

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

SEPTEMBER 2023

Environmental Monitoring and Technical Services
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October 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 September 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 ≥ 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)¹. 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:

¹ 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, 1987²) 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 September 6, 13, 20, and 27.
- During the September reporting period, each of the eight shore stations was in compliance with the various 2015 California Ocean Plan (Ocean Plan) water contact standards.
- A sewage like odor was observed at station D5 on one or more days in September.
- 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 September 5, 11, 18, and 25.
- During the September reporting period, each of the eight kelp stations was in compliance with the various 2015 California Ocean Plan (Ocean Plan) water contact standards.
- Water column temperatures ranged from 14.57 to 21.08°C. The difference between surface and bottom waters ranged from 1.56 to 5.70°C.
- Chlorophyll *a* concentrations ranged from 0.33 to 7.69 µg/L.

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

- Nothing of sewage origin was observed at PLOO kelp stations in September.

Offshore Stations

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



TABLES AND FIGURES

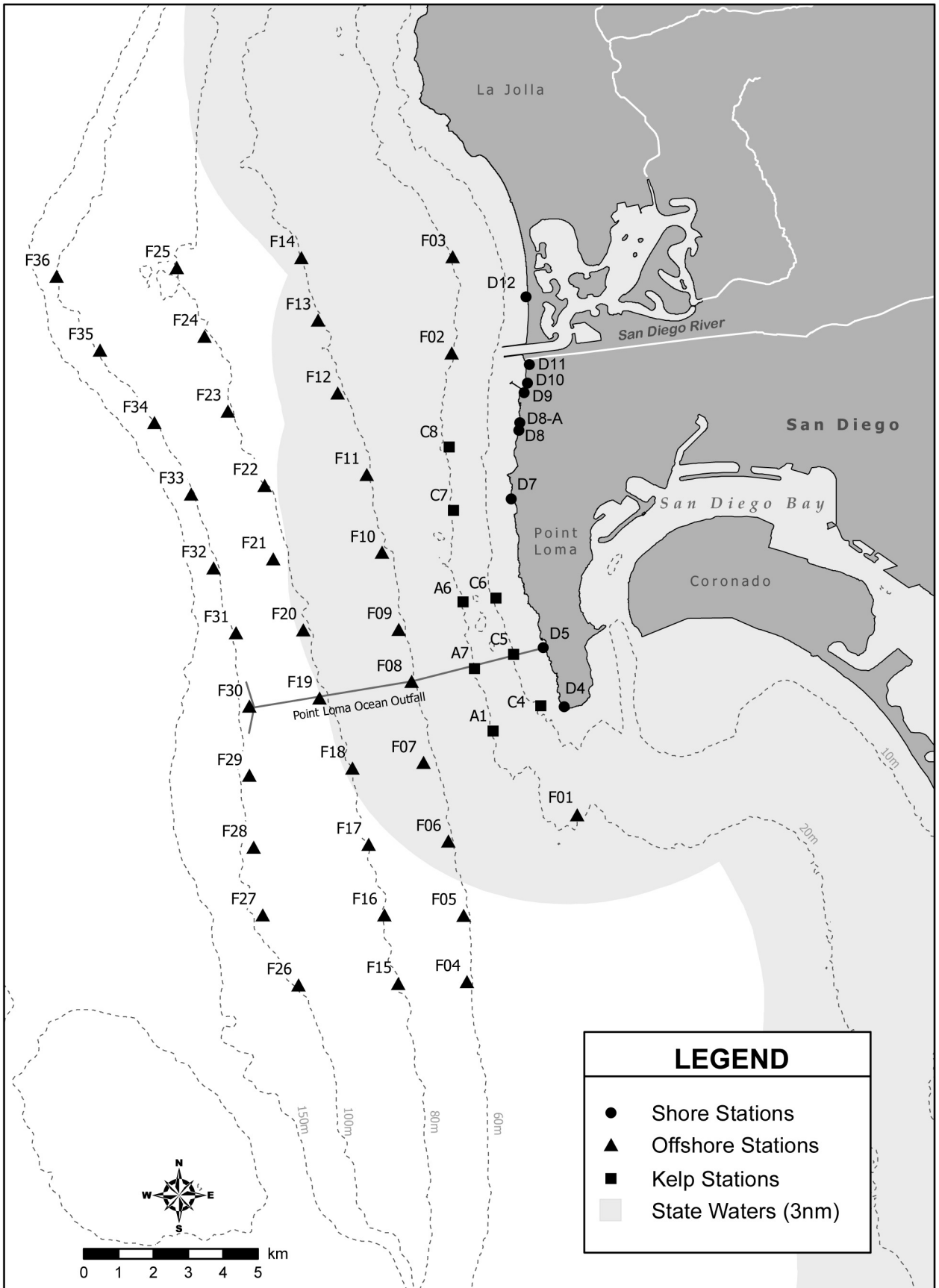


Figure 1.1 Station Map

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 Sep 2023	36	75	423	89	118	130	364	36
02 Sep 2023	36	75	423	89	118	130	364	36
03 Sep 2023	36	75	423	89	118	130	364	36
04 Sep 2023	36	75	423	89	118	130	364	36
05 Sep 2023	36	75	423	89	118	130	364	36
06 Sep 2023	32	91	364	105	131	118	234	32
07 Sep 2023	32	91	364	105	131	118	234	32
08 Sep 2023	36	75	423	159	159	140	244	36
09 Sep 2023	36	75	423	159	159	140	244	36
10 Sep 2023	36	75	423	159	159	140	244	36
11 Sep 2023	36	75	423	159	159	140	244	36
12 Sep 2023	36	75	423	159	159	140	244	36
13 Sep 2023	32	58	230	121	131	118	204	50
14 Sep 2023	32	58	230	121	131	118	204	50
15 Sep 2023	36	75	112	134	118	155	205	63
16 Sep 2023	36	75	112	134	118	155	205	63
17 Sep 2023	36	75	112	134	118	155	205	63
18 Sep 2023	36	75	112	134	118	155	205	63
19 Sep 2023	36	75	112	134	118	155	205	63
20 Sep 2023	32	66	80	114	95	103	129	50
21 Sep 2023	32	66	80	114	95	103	129	50
22 Sep 2023	20	50	63	99	79	87	63	36
23 Sep 2023	20	50	63	99	79	87	63	36
24 Sep 2023	20	50	63	99	79	87	63	36
25 Sep 2023	20	50	63	99	79	87	63	36
26 Sep 2023	20	50	63	99	79	87	63	36
27 Sep 2023	25	66	58	142	97	86	50	32
28 Sep 2023	25	66	58	142	97	86	50	32
29 Sep 2023	26	75	42	130	101	53	36	36
30 Sep 2023	26	75	42	130	101	53	36	36

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

* 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 Sep 2023	2	2	25	6	4	7	32	3
02 Sep 2023	2	2	25	6	4	7	32	3
03 Sep 2023	2	2	25	6	4	7	32	3
04 Sep 2023	2	2	25	6	4	7	32	3
05 Sep 2023	2	2	25	6	4	7	32	3
06 Sep 2023	3	2	16	6	3	6	18	3
07 Sep 2023	3	2	16	6	3	6	18	3
08 Sep 2023	3	2	25	8	4	7	13	3
09 Sep 2023	3	2	25	8	4	7	13	3
10 Sep 2023	3	2	25	8	4	7	13	3
11 Sep 2023	3	2	25	8	4	7	13	3
12 Sep 2023	3	2	25	8	4	7	13	3
13 Sep 2023	3	2	18	9	4	8	9	5
14 Sep 2023	3	2	18	9	4	8	9	5
15 Sep 2023	3	2	10	10	5	7	10	7
16 Sep 2023	3	2	7	10	5	7	10	7
17 Sep 2023	3	2	7	10	5	7	10	7
18 Sep 2023	3	2	7	10	5	7	10	7
19 Sep 2023	3	2	7	10	5	7	10	7
20 Sep 2023	3	2	6	11	4	7	7	5
21 Sep 2023	3	2	6	11	4	7	7	5
22 Sep 2023	3	2	5	12	5	9	5	7
23 Sep 2023	3	2	5	12	5	9	5	7
24 Sep 2023	3	2	5	12	5	9	5	7
25 Sep 2023	3	2	5	12	5	9	5	7
26 Sep 2023	3	2	5	12	5	9	5	7
27 Sep 2023	4	5	6	17	10	13	7	7
28 Sep 2023	4	5	6	17	10	13	7	7
29 Sep 2023	5	6	4	15	8	9	4	7
30 Sep 2023	5	6	4	15	8	9	4	7

* 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
06 Sep 2023	IC	IC	IC	IC	IC	IC	IC	IC
13 Sep 2023	IC	IC	IC	IC	IC	IC	IC	IC
20 Sep 2023	IC	IC	IC	IC	IC	IC	IC	IC
27 Sep 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
06 Sep 2023	IC	IC	IC	IC	IC	IC	IC	IC
13 Sep 2023	IC	IC	IC	IC	IC	IC	IC	IC
20 Sep 2023	IC	IC	IC	IC	IC	IC	IC	IC
27 Sep 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
06 Sep 2023	IC	IC	IC	IC	IC	IC	IC	IC
13 Sep 2023	IC	IC	IC	IC	IC	IC	IC	IC
20 Sep 2023	IC	IC	IC	IC	IC	IC	IC	IC
27 Sep 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
06 Sep 2023	IC	IC	IC	IC	IC	IC	IC	IC
13 Sep 2023	IC	IC	IC	IC	IC	IC	IC	IC
20 Sep 2023	IC	IC	IC	IC	IC	IC	IC	IC
27 Sep 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	06 Sep 2023	913	<20	<2	4e	0.10
D4	13 Sep 2023	949	<20	<2	2e	0.10
D4	20 Sep 2023	932	20e	<2	4e	0.10
D4	27 Sep 2023	915	60e	2e	14e	0.03
D5	06 Sep 2023	903	200e	<2	<2	0.01
D5	13 Sep 2023	927	<20	<2	<2	0.10
D5	20 Sep 2023	909	40e	4e	4e	0.10
D5	27 Sep 2023	905	<200	240e	100	1.20
D7	06 Sep 2023	839	<200	2e	<2	0.01
D7	13 Sep 2023	902	<20	6e	4e	0.30
D7	20 Sep 2023	847	20e	<2	4e	0.10
D7	27 Sep 2023	842	40e	6e	8e	0.15
D8-B	06 Sep 2023	828	<200	4e	6e	0.02
D8-B	13 Sep 2023	849	40e	24e	10e	0.60
D8-B	20 Sep 2023	834	60e	6e	12e	0.10
D8-B	27 Sep 2023	832	600e	66	66	0.11
D9	06 Sep 2023	820	200e	8e	<2	0.04
D9	13 Sep 2023	839	60e	6e	10e	0.10
D9	20 Sep 2023	825	40e	6e	2e	0.15
D9	27 Sep 2023	825	220e	56	96	0.25
D10	06 Sep 2023	812	80e	<20	2e	0.25
D10	13 Sep 2023	831	60e	6e	10e	0.10
D10	20 Sep 2023	815	<20	2e	6e	0.10
D10	27 Sep 2023	816	80e	34e	52	0.42
D11	06 Sep 2023	802	40e	<2	2e	0.05
D11	13 Sep 2023	821	100e	2e	2e	0.02
D11	20 Sep 2023	806	20e	2e	2e	0.10
D11	27 Sep 2023	808	20e	16e	28e	0.80
D12	06 Sep 2023	748	<20	<20	<2	1.00
D12	13 Sep 2023	803	200e	2e	60	0.01
D12	20 Sep 2023	750	<20	<2	<2	0.10
D12	27 Sep 2023	752	<20	6e	12e	0.30

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	06 Sep 2023	Arrive Time	913
D4	06 Sep 2023	Weather	Cloudy
D4	06 Sep 2023	Wind Speed (kts)	1.8
D4	06 Sep 2023	Wind Dir	W
D4	06 Sep 2023	Animal Life	
D4	06 Sep 2023	Floatables	None
D4	06 Sep 2023	Water Color	Green
D4	06 Sep 2023	Current Direction	S
D4	06 Sep 2023	Water Temp (C)	20
D4	06 Sep 2023	Wave Height Low (ft)	1
D4	06 Sep 2023	High Tide (ft)	3.04
D4	06 Sep 2023	High Tide Time	338
D4	06 Sep 2023	Low Tide (ft)	2.69
D4	06 Sep 2023	Low Tide Time	736
D4	06 Sep 2023	Comments	Water clear; Trash-1; Kelp;Seagrass;Algae
D4	13 Sep 2023	Arrive Time	949
D4	13 Sep 2023	Weather	Cloudy
D4	13 Sep 2023	Wind Speed (kts)	1.2
D4	13 Sep 2023	Wind Dir	S
D4	13 Sep 2023	Animal Life	
D4	13 Sep 2023	Floatables	None
D4	13 Sep 2023	Water Color	Green
D4	13 Sep 2023	Current Direction	S
D4	13 Sep 2023	Water Temp (C)	15
D4	13 Sep 2023	Wave Height Low (ft)	4
D4	13 Sep 2023	High Tide (ft)	4.55
D4	13 Sep 2023	High Tide Time	921
D4	13 Sep 2023	Low Tide (ft)	0.09
D4	13 Sep 2023	Low Tide Time	316
D4	13 Sep 2023	Comments	Water clear; Trash-2; Kelp;Seagrass;Algae
D4	20 Sep 2023	Arrive Time	932
D4	20 Sep 2023	Weather	Partly cloudy
D4	20 Sep 2023	Wind Speed (kts)	0
D4	20 Sep 2023	Wind Dir	
D4	20 Sep 2023	Animal Life	
D4	20 Sep 2023	Floatables	; NoneKelp
D4	20 Sep 2023	Water Color	Green
D4	20 Sep 2023	Current Direction	S
D4	20 Sep 2023	Water Temp (C)	16.5
D4	20 Sep 2023	Wave Height Low (ft)	2
D4	20 Sep 2023	High Tide (ft)	3.31
D4	20 Sep 2023	High Tide Time	40
D4	20 Sep 2023	Low Tide (ft)	2.19
D4	20 Sep 2023	Low Tide Time	523
D4	20 Sep 2023	Comments	Water clear; Trash-1; Algae;Seagrass
D4	27 Sep 2023	Arrive Time	915
D4	27 Sep 2023	Weather	Cloudy
D4	27 Sep 2023	Wind Speed (kts)	1.5
D4	27 Sep 2023	Wind Dir	NW
D4	27 Sep 2023	Animal Life	
D4	27 Sep 2023	Floatables	None
D4	27 Sep 2023	Water Color	Green
D4	27 Sep 2023	Current Direction	S

Station	Date	Parameter	Value
D4	27 Sep 2023	Water Temp (C)	15
D4	27 Sep 2023	Wave Height Low (ft)	2
D4	27 Sep 2023	High Tide (ft)	5.13
D4	27 Sep 2023	High Tide Time	831
D4	27 Sep 2023	Low Tide (ft)	-0.61
D4	27 Sep 2023	Low Tide Time	223
D4	27 Sep 2023	Comments	Water clear; Trash-1; Kelp;Seagrass;Algae
D5	06 Sep 2023	Arrive Time	903
D5	06 Sep 2023	Weather	Cloudy
D5	06 Sep 2023	Wind Speed (kts)	4.5
D5	06 Sep 2023	Wind Dir	W
D5	06 Sep 2023	Animal Life	
D5	06 Sep 2023	Floatables	Foam
D5	06 Sep 2023	Water Color	Green
D5	06 Sep 2023	Current Direction	S
D5	06 Sep 2023	Water Temp (C)	20
D5	06 Sep 2023	Wave Height Low (ft)	1
D5	06 Sep 2023	High Tide (ft)	3.04
D5	06 Sep 2023	High Tide Time	338
D5	06 Sep 2023	Low Tide (ft)	2.69
D5	06 Sep 2023	Low Tide Time	736
D5	06 Sep 2023	Comments	Water clear; Trash-1; Kelp;Seagrass;Algae
D5	13 Sep 2023	Arrive Time	927
D5	13 Sep 2023	Weather	Cloudy
D5	13 Sep 2023	Wind Speed (kts)	0
D5	13 Sep 2023	Wind Dir	
D5	13 Sep 2023	Animal Life	
D5	13 Sep 2023	Floatables	None
D5	13 Sep 2023	Water Color	Green
D5	13 Sep 2023	Current Direction	S
D5	13 Sep 2023	Water Temp (C)	17
D5	13 Sep 2023	Wave Height Low (ft)	3
D5	13 Sep 2023	High Tide (ft)	4.55
D5	13 Sep 2023	High Tide Time	921
D5	13 Sep 2023	Low Tide (ft)	0.09
D5	13 Sep 2023	Low Tide Time	316
D5	13 Sep 2023	Comments	Water clear; Trash-2; Kelp;Seagrass;Algae
D5	20 Sep 2023	Arrive Time	909
D5	20 Sep 2023	Weather	Partly cloudy
D5	20 Sep 2023	Wind Speed (kts)	0.6
D5	20 Sep 2023	Wind Dir	NW
D5	20 Sep 2023	Animal Life	
D5	20 Sep 2023	Floatables	Foam
D5	20 Sep 2023	Water Color	Green
D5	20 Sep 2023	Current Direction	S
D5	20 Sep 2023	Water Temp (C)	18.5
D5	20 Sep 2023	Wave Height Low (ft)	1
D5	20 Sep 2023	High Tide (ft)	3.31
D5	20 Sep 2023	High Tide Time	40
D5	20 Sep 2023	Low Tide (ft)	2.19
D5	20 Sep 2023	Low Tide Time	523
D5	20 Sep 2023	Comments	Water clear; Trash-1; Algae
D5	27 Sep 2023	Arrive Time	905
D5	27 Sep 2023	Weather	Cloudy
D5	27 Sep 2023	Wind Speed (kts)	0
D5	27 Sep 2023	Wind Dir	NW
D5	27 Sep 2023	Animal Life	

Station	Date	Parameter	Value
D5	27 Sep 2023	Floatables	None
D5	27 Sep 2023	Water Color	Brown
D5	27 Sep 2023	Current Direction	S
D5	27 Sep 2023	Water Temp (C)	16
D5	27 Sep 2023	Wave Height Low (ft)	2
D5	27 Sep 2023	High Tide (ft)	5.13
D5	27 Sep 2023	High Tide Time	831
D5	27 Sep 2023	Low Tide (ft)	-0.61
D5	27 Sep 2023	Low Tide Time	223
D5	27 Sep 2023	Comments	Water turbid; Trash-1; Kelp;Seagrass;Algae; Sewage-like odor
D7	06 Sep 2023	Arrive Time	839
D7	06 Sep 2023	Weather	Cloudy
D7	06 Sep 2023	Wind Speed (kts)	0.8
D7	06 Sep 2023	Wind Dir	SW
D7	06 Sep 2023	Animal Life	
D7	06 Sep 2023	Floatables	None
D7	06 Sep 2023	Water Color	Green
D7	06 Sep 2023	Current Direction	S
D7	06 Sep 2023	Water Temp (C)	20
D7	06 Sep 2023	Wave Height Low (ft)	2
D7	06 Sep 2023	High Tide (ft)	3.04
D7	06 Sep 2023	High Tide Time	338
D7	06 Sep 2023	Low Tide (ft)	2.69
D7	06 Sep 2023	Low Tide Time	736
D7	06 Sep 2023	Comments	Water clear; Trash-1; Kelp;Seagrass;Algae; Person/Walker/Jogger-2
D7	13 Sep 2023	Arrive Time	902
D7	13 Sep 2023	Weather	Cloudy
D7	13 Sep 2023	Wind Speed (kts)	0
D7	13 Sep 2023	Wind Dir	
D7	13 Sep 2023	Animal Life	
D7	13 Sep 2023	Floatables	None
D7	13 Sep 2023	Water Color	Green
D7	13 Sep 2023	Current Direction	S
D7	13 Sep 2023	Water Temp (C)	17
D7	13 Sep 2023	Wave Height Low (ft)	4
D7	13 Sep 2023	High Tide (ft)	4.55
D7	13 Sep 2023	High Tide Time	921
D7	13 Sep 2023	Low Tide (ft)	0.09
D7	13 Sep 2023	Low Tide Time	316
D7	13 Sep 2023	Comments	Water clear; Surfer/Paddle boarder-1; Trash-3; Kelp;Seagrass;Algae;Debris; Person/Walker/Jogger-1
D7	20 Sep 2023	Arrive Time	847
D7	20 Sep 2023	Weather	Partly cloudy
D7	20 Sep 2023	Wind Speed (kts)	4
D7	20 Sep 2023	Wind Dir	NW
D7	20 Sep 2023	Animal Life	
D7	20 Sep 2023	Floatables	None
D7	20 Sep 2023	Water Color	Green
D7	20 Sep 2023	Current Direction	S
D7	20 Sep 2023	Water Temp (C)	17.5
D7	20 Sep 2023	Wave Height Low (ft)	2
D7	20 Sep 2023	High Tide (ft)	3.31
D7	20 Sep 2023	High Tide Time	40
D7	20 Sep 2023	Low Tide (ft)	2.19
D7	20 Sep 2023	Low Tide Time	523
D7	20 Sep 2023	Comments	Water clear; Surfer/Paddle boarder-1; Trash-1; Algae

Station	Date	Parameter	Value
D7	27 Sep 2023	Arrive Time	842
D7	27 Sep 2023	Weather	Cloudy
D7	27 Sep 2023	Wind Speed (kts)	0
D7	27 Sep 2023	Wind Dir	NW
D7	27 Sep 2023	Animal Life	
D7	27 Sep 2023	Floatables	None
D7	27 Sep 2023	Water Color	Green
D7	27 Sep 2023	Current Direction	S
D7	27 Sep 2023	Water Temp (C)	15
D7	27 Sep 2023	Wave Height Low (ft)	5
D7	27 Sep 2023	High Tide (ft)	5.13
D7	27 Sep 2023	High Tide Time	831
D7	27 Sep 2023	Low Tide (ft)	-0.61
D7	27 Sep 2023	Low Tide Time	223
D7	27 Sep 2023	Comments	Water clear; Surfer/Paddle boarder-1; Trash-1; Kelp;Seagrass;Algae
D8-B	06 Sep 2023	Arrive Time	828
D8-B	06 Sep 2023	Weather	Cloudy
D8-B	06 Sep 2023	Wind Speed (kts)	1.8
D8-B	06 Sep 2023	Wind Dir	NW
D8-B	06 Sep 2023	Animal Life	
D8-B	06 Sep 2023	Floatables	None
D8-B	06 Sep 2023	Water Color	Colorless
D8-B	06 Sep 2023	Current Direction	S
D8-B	06 Sep 2023	Water Temp (C)	20
D8-B	06 Sep 2023	Wave Height Low (ft)	1
D8-B	06 Sep 2023	High Tide (ft)	3.04
D8-B	06 Sep 2023	High Tide Time	338
D8-B	06 Sep 2023	Low Tide (ft)	2.69
D8-B	06 Sep 2023	Low Tide Time	736
D8-B	06 Sep 2023	Comments	Water clear; Trash-1; Kelp;Seagrass;Algae; Person/Walker/Jogger-1
D8-B	13 Sep 2023	Arrive Time	849
D8-B	13 Sep 2023	Weather	Cloudy
D8-B	13 Sep 2023	Wind Speed (kts)	3
D8-B	13 Sep 2023	Wind Dir	SW
D8-B	13 Sep 2023	Animal Life	
D8-B	13 Sep 2023	Floatables	None
D8-B	13 Sep 2023	Water Color	Green
D8-B	13 Sep 2023	Current Direction	S
D8-B	13 Sep 2023	Water Temp (C)	17
D8-B	13 Sep 2023	Wave Height Low (ft)	5
D8-B	13 Sep 2023	High Tide (ft)	4.55
D8-B	13 Sep 2023	High Tide Time	921
D8-B	13 Sep 2023	Low Tide (ft)	0.09
D8-B	13 Sep 2023	Low Tide Time	316
D8-B	13 Sep 2023	Comments	Water clear; Trash-4; Kelp;Seagrass;Algae;Debris
D8-B	20 Sep 2023	Arrive Time	834
D8-B	20 Sep 2023	Weather	Partly cloudy
D8-B	20 Sep 2023	Wind Speed (kts)	4.3
D8-B	20 Sep 2023	Wind Dir	W
D8-B	20 Sep 2023	Animal Life	
D8-B	20 Sep 2023	Floatables	None
D8-B	20 Sep 2023	Water Color	Green
D8-B	20 Sep 2023	Current Direction	S
D8-B	20 Sep 2023	Water Temp (C)	17.5
D8-B	20 Sep 2023	Wave Height Low (ft)	3

Station	Date	Parameter	Value
D8-B	20 Sep 2023	High Tide (ft)	3.31
D8-B	20 Sep 2023	High Tide Time	40
D8-B	20 Sep 2023	Low Tide (ft)	2.19
D8-B	20 Sep 2023	Low Tide Time	523
D8-B	20 Sep 2023	Comments	Water clear; Trash-2; Kelp;Debris;Seagrass;Algae
D8-B	27 Sep 2023	Arrive Time	832
D8-B	27 Sep 2023	Weather	Cloudy
D8-B	27 Sep 2023	Wind Speed (kts)	2.2
D8-B	27 Sep 2023	Wind Dir	NW
D8-B	27 Sep 2023	Animal Life	
D8-B	27 Sep 2023	Floatables	None
D8-B	27 Sep 2023	Water Color	Green
D8-B	27 Sep 2023	Current Direction	S
D8-B	27 Sep 2023	Water Temp (C)	16
D8-B	27 Sep 2023	Wave Height Low (ft)	5
D8-B	27 Sep 2023	High Tide (ft)	5.13
D8-B	27 Sep 2023	High Tide Time	831
D8-B	27 Sep 2023	Low Tide (ft)	-0.61
D8-B	27 Sep 2023	Low Tide Time	223
D8-B	27 Sep 2023	Comments	Water clear; Surfer/Paddle boarder-3; Trash-1; Kelp;Seagrass;Algae
D9	06 Sep 2023	Arrive Time	820
D9	06 Sep 2023	Weather	Cloudy
D9	06 Sep 2023	Wind Speed (kts)	0.8
D9	06 Sep 2023	Wind Dir	NW
D9	06 Sep 2023	Animal Life	
D9	06 Sep 2023	Floatables	None
D9	06 Sep 2023	Water Color	Green
D9	06 Sep 2023	Current Direction	S
D9	06 Sep 2023	Water Temp (C)	20
D9	06 Sep 2023	Wave Height Low (ft)	1
D9	06 Sep 2023	High Tide (ft)	3.04
D9	06 Sep 2023	High Tide Time	338
D9	06 Sep 2023	Low Tide (ft)	2.69
D9	06 Sep 2023	Low Tide Time	736
D9	06 Sep 2023	Comments	Water clear; Trash-1; Kelp;Algae;Seagrass
D9	13 Sep 2023	Arrive Time	839
D9	13 Sep 2023	Weather	Cloudy
D9	13 Sep 2023	Wind Speed (kts)	2.9
D9	13 Sep 2023	Wind Dir	S
D9	13 Sep 2023	Animal Life	
D9	13 Sep 2023	Floatables	None
D9	13 Sep 2023	Water Color	Green
D9	13 Sep 2023	Current Direction	S
D9	13 Sep 2023	Water Temp (C)	17
D9	13 Sep 2023	Wave Height Low (ft)	5
D9	13 Sep 2023	High Tide (ft)	4.55
D9	13 Sep 2023	High Tide Time	921
D9	13 Sep 2023	Low Tide (ft)	0.09
D9	13 Sep 2023	Low Tide Time	316
D9	13 Sep 2023	Comments	Water clear; Trash-4; Kelp;Seagrass;Algae;Debris
D9	20 Sep 2023	Arrive Time	825
D9	20 Sep 2023	Weather	Partly cloudy
D9	20 Sep 2023	Wind Speed (kts)	3.2
D9	20 Sep 2023	Wind Dir	SW
D9	20 Sep 2023	Animal Life	Dog-1;
D9	20 Sep 2023	Floatables	None

Station	Date	Parameter	Value
D9	20 Sep 2023	Water Color	Green
D9	20 Sep 2023	Current Direction	S
D9	20 Sep 2023	Water Temp (C)	18.5
D9	20 Sep 2023	Wave Height Low (ft)	1
D9	20 Sep 2023	High Tide (ft)	3.31
D9	20 Sep 2023	High Tide Time	40
D9	20 Sep 2023	Low Tide (ft)	2.19
D9	20 Sep 2023	Low Tide Time	523
D9	20 Sep 2023	Comments	Water clear; Trash-1; Algae;Debris; Person/Walker/Jogger-2
D9	27 Sep 2023	Arrive Time	823
D9	27 Sep 2023	Weather	Cloudy
D9	27 Sep 2023	Wind Speed (kts)	1
D9	27 Sep 2023	Wind Dir	NW
D9	27 Sep 2023	Animal Life	
D9	27 Sep 2023	Floatables	None
D9	27 Sep 2023	Water Color	Green
D9	27 Sep 2023	Current Direction	S
D9	27 Sep 2023	Water Temp (C)	16
D9	27 Sep 2023	Wave Height Low (ft)	4
D9	27 Sep 2023	High Tide (ft)	5.13
D9	27 Sep 2023	High Tide Time	831
D9	27 Sep 2023	Low Tide (ft)	-0.61
D9	27 Sep 2023	Low Tide Time	223
D9	27 Sep 2023	Comments	Water clear; Trash-1; Kelp;Seagrass;Algae; Person/Walker/Jogger-1
D10	06 Sep 2023	Arrive Time	812
D10	06 Sep 2023	Weather	Cloudy
D10	06 Sep 2023	Wind Speed (kts)	4.3
D10	06 Sep 2023	Wind Dir	NW
D10	06 Sep 2023	Animal Life	Dog-1;
D10	06 Sep 2023	Floatables	None
D10	06 Sep 2023	Water Color	Green
D10	06 Sep 2023	Current Direction	S
D10	06 Sep 2023	Water Temp (C)	20
D10	06 Sep 2023	Wave Height Low (ft)	2
D10	06 Sep 2023	High Tide (ft)	3.04
D10	06 Sep 2023	High Tide Time	338
D10	06 Sep 2023	Low Tide (ft)	2.69
D10	06 Sep 2023	Low Tide Time	736
D10	06 Sep 2023	Comments	Water clear; Trash-1; Kelp;Seagrass; Person/Walker/Jogger-3
D10	13 Sep 2023	Arrive Time	831
D10	13 Sep 2023	Weather	Cloudy
D10	13 Sep 2023	Wind Speed (kts)	2.5
D10	13 Sep 2023	Wind Dir	SW
D10	13 Sep 2023	Animal Life	
D10	13 Sep 2023	Floatables	None
D10	13 Sep 2023	Water Color	Green
D10	13 Sep 2023	Current Direction	S
D10	13 Sep 2023	Water Temp (C)	16
D10	13 Sep 2023	Wave Height Low (ft)	4
D10	13 Sep 2023	High Tide (ft)	4.55
D10	13 Sep 2023	High Tide Time	921
D10	13 Sep 2023	Low Tide (ft)	0.09
D10	13 Sep 2023	Low Tide Time	316
D10	13 Sep 2023	Comments	Water clear; Boogie boarder/Swimmer-2; Surfer/Paddle boarder-4; Trash-2; Kelp;Seagrass;Debris

Station	Date	Parameter	Value
D10	20 Sep 2023	Arrive Time	815
D10	20 Sep 2023	Weather	Partly cloudy
D10	20 Sep 2023	Wind Speed (kts)	4.3
D10	20 Sep 2023	Wind Dir	SW
D10	20 Sep 2023	Animal Life	
D10	20 Sep 2023	Floatables	None
D10	20 Sep 2023	Water Color	Green
D10	20 Sep 2023	Current Direction	S
D10	20 Sep 2023	Water Temp (C)	17.5
D10	20 Sep 2023	Wave Height Low (ft)	4
D10	20 Sep 2023	High Tide (ft)	3.31
D10	20 Sep 2023	High Tide Time	40
D10	20 Sep 2023	Low Tide (ft)	2.19
D10	20 Sep 2023	Low Tide Time	523
D10	20 Sep 2023	Comments	Water clear; Boogie boarder/Swimmer-1; Surfer/Paddle boarder-10; Trash-2; Kelp;Seagrass;Debris; Person/Walker/Jogger-2
D10	27 Sep 2023	Arrive Time	816
D10	27 Sep 2023	Weather	Cloudy
D10	27 Sep 2023	Wind Speed (kts)	2
D10	27 Sep 2023	Wind Dir	NW
D10	27 Sep 2023	Animal Life	Dog-2;
D10	27 Sep 2023	Floatables	None
D10	27 Sep 2023	Water Color	Green
D10	27 Sep 2023	Current Direction	S
D10	27 Sep 2023	Water Temp (C)	16
D10	27 Sep 2023	Wave Height Low (ft)	5
D10	27 Sep 2023	High Tide (ft)	5.13
D10	27 Sep 2023	High Tide Time	831
D10	27 Sep 2023	Low Tide (ft)	-0.61
D10	27 Sep 2023	Low Tide Time	223
D10	27 Sep 2023	Comments	Water clear; Trash-1; Person/Walker/Jogger-2
D11	06 Sep 2023	Arrive Time	802
D11	06 Sep 2023	Weather	Cloudy
D11	06 Sep 2023	Wind Speed (kts)	1
D11	06 Sep 2023	Wind Dir	NW
D11	06 Sep 2023	Animal Life	
D11	06 Sep 2023	Floatables	None
D11	06 Sep 2023	Water Color	Green
D11	06 Sep 2023	Current Direction	S
D11	06 Sep 2023	Water Temp (C)	20
D11	06 Sep 2023	Wave Height Low (ft)	1
D11	06 Sep 2023	High Tide (ft)	3.04
D11	06 Sep 2023	High Tide Time	338
D11	06 Sep 2023	Low Tide (ft)	2.69
D11	06 Sep 2023	Low Tide Time	736
D11	06 Sep 2023	Comments	Water clear; Boogie boarder/Swimmer-1; Trash-1; Kelp;Seagrass;Algae
D11	13 Sep 2023	Arrive Time	821
D11	13 Sep 2023	Weather	Cloudy
D11	13 Sep 2023	Wind Speed (kts)	2.6
D11	13 Sep 2023	Wind Dir	SW
D11	13 Sep 2023	Animal Life	
D11	13 Sep 2023	Floatables	None
D11	13 Sep 2023	Water Color	Green
D11	13 Sep 2023	Current Direction	S
D11	13 Sep 2023	Water Temp (C)	17
D11	13 Sep 2023	Wave Height Low (ft)	5

Station	Date	Parameter	Value
D11	13 Sep 2023	High Tide (ft)	4.55
D11	13 Sep 2023	High Tide Time	921
D11	13 Sep 2023	Low Tide (ft)	0.09
D11	13 Sep 2023	Low Tide Time	316
D11	13 Sep 2023	Comments	Water clear; Surfer/Paddle boarder-15; Trash-3; Kelp;Seagrass;Algae;Debris
D11	20 Sep 2023	Arrive Time	806
D11	20 Sep 2023	Weather	Partly cloudy
D11	20 Sep 2023	Wind Speed (kts)	4.6
D11	20 Sep 2023	Wind Dir	SW
D11	20 Sep 2023	Animal Life	
D11	20 Sep 2023	Floatables	None
D11	20 Sep 2023	Water Color	Green
D11	20 Sep 2023	Current Direction	S
D11	20 Sep 2023	Water Temp (C)	16.5
D11	20 Sep 2023	Wave Height Low (ft)	4
D11	20 Sep 2023	High Tide (ft)	3.31
D11	20 Sep 2023	High Tide Time	40
D11	20 Sep 2023	Low Tide (ft)	2.19
D11	20 Sep 2023	Low Tide Time	523
D11	20 Sep 2023	Comments	Water clear; Surfer/Paddle boarder-12; Trash-1; Seagrass;Algae;Kelp;Debris
D11	27 Sep 2023	Arrive Time	808
D11	27 Sep 2023	Weather	Cloudy
D11	27 Sep 2023	Wind Speed (kts)	0.9
D11	27 Sep 2023	Wind Dir	W
D11	27 Sep 2023	Animal Life	Dog-1;
D11	27 Sep 2023	Floatables	None
D11	27 Sep 2023	Water Color	Green
D11	27 Sep 2023	Current Direction	S
D11	27 Sep 2023	Water Temp (C)	15
D11	27 Sep 2023	Wave Height Low (ft)	3
D11	27 Sep 2023	High Tide (ft)	5.13
D11	27 Sep 2023	High Tide Time	831
D11	27 Sep 2023	Low Tide (ft)	-0.61
D11	27 Sep 2023	Low Tide Time	223
D11	27 Sep 2023	Comments	Water clear; Trash-1; Kelp;Seagrass;Algae; Person/Walker/Jogger-2
D12	06 Sep 2023	Arrive Time	748
D12	06 Sep 2023	Weather	Cloudy
D12	06 Sep 2023	Wind Speed (kts)	3.3
D12	06 Sep 2023	Wind Dir	S
D12	06 Sep 2023	Animal Life	
D12	06 Sep 2023	Floatables	None
D12	06 Sep 2023	Water Color	Green
D12	06 Sep 2023	Current Direction	S
D12	06 Sep 2023	Water Temp (C)	20
D12	06 Sep 2023	Wave Height Low (ft)	1
D12	06 Sep 2023	High Tide (ft)	3.04
D12	06 Sep 2023	High Tide Time	338
D12	06 Sep 2023	Low Tide (ft)	2.69
D12	06 Sep 2023	Low Tide Time	736
D12	06 Sep 2023	Comments	Water clear; Trash-1; Seagrass;Kelp; Person/Walker/Jogger-1
D12	13 Sep 2023	Arrive Time	803
D12	13 Sep 2023	Weather	Cloudy
D12	13 Sep 2023	Wind Speed (kts)	1.9

Station	Date	Parameter	Value
D12	13 Sep 2023	Wind Dir	SW
D12	13 Sep 2023	Animal Life	
D12	13 Sep 2023	Floatables	None
D12	13 Sep 2023	Water Color	Green
D12	13 Sep 2023	Current Direction	S
D12	13 Sep 2023	Water Temp (C)	18
D12	13 Sep 2023	Wave Height Low (ft)	4
D12	13 Sep 2023	High Tide (ft)	4.55
D12	13 Sep 2023	High Tide Time	921
D12	13 Sep 2023	Low Tide (ft)	0.09
D12	13 Sep 2023	Low Tide Time	316
D12	13 Sep 2023	Comments	Water clear; Surfer/Paddle boarder-4; Trash-3; Kelp;Seagrass;Debris
D12	20 Sep 2023	Arrive Time	750
D12	20 Sep 2023	Weather	Partly cloudy
D12	20 Sep 2023	Wind Speed (kts)	5.2
D12	20 Sep 2023	Wind Dir	SW
D12	20 Sep 2023	Animal Life	
D12	20 Sep 2023	Floatables	None
D12	20 Sep 2023	Water Color	Green
D12	20 Sep 2023	Current Direction	S
D12	20 Sep 2023	Water Temp (C)	17.5
D12	20 Sep 2023	Wave Height Low (ft)	2
D12	20 Sep 2023	High Tide (ft)	3.31
D12	20 Sep 2023	High Tide Time	40
D12	20 Sep 2023	Low Tide (ft)	2.19
D12	20 Sep 2023	Low Tide Time	523
D12	20 Sep 2023	Comments	Water clear; Trash-2; Kelp;Seagrass;Debris
D12	27 Sep 2023	Arrive Time	752
D12	27 Sep 2023	Weather	Cloudy
D12	27 Sep 2023	Wind Speed (kts)	0
D12	27 Sep 2023	Wind Dir	W
D12	27 Sep 2023	Animal Life	Dog-1;
D12	27 Sep 2023	Floatables	Foam
D12	27 Sep 2023	Water Color	Green
D12	27 Sep 2023	Current Direction	S
D12	27 Sep 2023	Water Temp (C)	14
D12	27 Sep 2023	Wave Height Low (ft)	4
D12	27 Sep 2023	High Tide (ft)	5.13
D12	27 Sep 2023	High Tide Time	831
D12	27 Sep 2023	Low Tide (ft)	-0.61
D12	27 Sep 2023	Low Tide Time	223
D12	27 Sep 2023	Comments	Water clear; Trash-1; Kelp;Seagrass; Person/Walker/Jogger-2

Kelp Stations

Table 3.1

Summary of compliance with the Ocean Plan's 30-day Geometric Mean standard for total coliform bacteria at the PLOO kelp stations. Data are based on the geometric mean of the five most recent samples from each site over the previous 30 days unless otherwise noted (*). Values >1,000 CFU/100 mL exceed the standard.

Date	A1	A6	A7	C4	C5	C6	C7	C8
01 Sep 2023	21	34	32	22	14	18	13	14
02 Sep 2023	21	34	32	22	14	18	13	14
03 Sep 2023	23	21	25	23	13	13	15	14
04 Sep 2023	23	21	25	23	13	13	15	14
05 Sep 2023	15	14	22	22	12	12	10	10
06 Sep 2023	21	14	24	25	12	10	9	12
07 Sep 2023	21	14	24	25	12	10	9	12
08 Sep 2023	21	14	24	25	12	10	9	12
09 Sep 2023	21	14	24	25	12	10	9	12
10 Sep 2023	21	14	24	25	12	10	9	12
11 Sep 2023	18	9	15	20	8	7	7	8
12 Sep 2023	18	9	15	20	8	7	7	8
13 Sep 2023	16	6	11	20	8	7	6	10
14 Sep 2023	16	6	11	20	8	7	6	10
15 Sep 2023	16	6	11	20	8	7	6	10
16 Sep 2023	16	6	11	20	8	7	6	10
17 Sep 2023	16	6	11	20	8	7	6	10
18 Sep 2023	15	6	10	20	9	5	5	7
19 Sep 2023	15	6	10	20	9	5	5	7
20 Sep 2023	15	6	10	20	9	5	5	7
21 Sep 2023	15	6	10	20	9	5	5	7
22 Sep 2023	7	4	5	13	5	3	3	3
23 Sep 2023	7	4	5	13	5	3	3	3
24 Sep 2023	7	4	5	13	5	3	3	3
25 Sep 2023	5	3	4	9	4	4	2	3
26 Sep 2023	5	3	4	9	4	4	2	3
27 Sep 2023	5	3	5	9	5	4	2	2
28 Sep 2023	5	3	5	9	5	4	2	2
29 Sep 2023	5	3	5	9	5	4	2	2
30 Sep 2023	5	3	5	9	5	4	2	2

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

* Geometric mean calculated using n<5

Table 3.3

Summary of compliance with the Ocean Plan's 30-day Geometric Mean standard for *Enterococcus* at the PLOO kelp stations. Data are based on the geometric mean of the five most recent samples from each site over the previous 30 days unless otherwise noted (*). Values >35 CFU/100 mL exceed the standard.

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

* Geometric mean calculated using n<5

Table 3.4

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

Date	A1	A6	A7	C4	C5	C6	C7	C8
05 Sep 2023	IC	IC	IC	IC	IC	IC	IC	IC
11 Sep 2023	IC	IC	IC	IC	IC	IC	IC	IC
18 Sep 2023	IC	IC	IC	IC	IC	IC	IC	IC
25 Sep 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 Sep 2023	IC	IC	IC	IC	IC	IC	IC	IC
11 Sep 2023	IC	IC	IC	IC	IC	IC	IC	IC
18 Sep 2023	IC	IC	IC	IC	IC	IC	IC	IC
25 Sep 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 Sep 2023	IC	IC	IC	IC	IC	IC	IC	IC
11 Sep 2023	IC	IC	IC	IC	IC	IC	IC	IC
18 Sep 2023	IC	IC	IC	IC	IC	IC	IC	IC
25 Sep 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 Sep 2023	IC	IC	IC	IC	IC	IC	IC	IC
11 Sep 2023	IC	IC	IC	IC	IC	IC	IC	IC
18 Sep 2023	IC	IC	IC	IC	IC	IC	IC	IC
25 Sep 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 Sep 2023	810	1	2e	2e	4e	1.0	19.7	80.78	10.5	33.18	8.4
A1	05 Sep 2023	810	12	4e	<2	<2	0.5	18.8	78.08	9.4	33.18	8.3
A1	05 Sep 2023	810	18	2e	<2	<2	1.0	16.6	81.35	8.2	33.51	8.2
A1	11 Sep 2023	758	1	<2	2e	<2	1.0	20.3	82.96	9.1	33.22	8.3
A1	11 Sep 2023	758	12	<20	2e	<2	0.1	19.7	79.28	8.8	33.20	8.2
A1	11 Sep 2023	758	18	<2	<2	<2	1.0	16.5	82.05	7.4	33.18	8.2
A1	18 Sep 2023	821	1	<2	<2	<2	1.0	19.7	76.71	7.4	33.25	8.2
A1	18 Sep 2023	821	12	<20	<2	<2	0.1	15.9	89.55	6.8	33.27	8.0
A1	18 Sep 2023	821	18	<20	4e	<2	0.2	14.8	88.75	6.7	33.26	8.0
A1	25 Sep 2023	822	1	<2	<2	<2	1.0	18.7	87.22	8.1	33.24	8.1
A1	25 Sep 2023	822	12	<2	<2	<2	1.0	18.1	87.50	7.9	33.20	8.1
A1	25 Sep 2023	822	18	<2	<2	<2	1.0	14.8	88.61	7.6	33.17	8.0
A6	05 Sep 2023	834	1	<2	<2	<2	1.0	20.3	75.20	9.8	33.13	8.4
A6	05 Sep 2023	834	12	<2	<2	<2	1.0	18.3	77.96	9.0	33.16	8.3
A6	05 Sep 2023	834	18	4e	<2	<2	0.5	15.3	84.07	8.1	33.16	8.2
A6	11 Sep 2023	823	1	<2	<2	2e	1.0	20.5	82.19	9.0	33.22	8.3
A6	11 Sep 2023	823	12	<2	<2	<2	1.0	19.0	83.70	8.9	33.21	8.3
A6	11 Sep 2023	823	18	<2	<2	<2	1.0	17.9	84.21	8.4	33.19	8.2
A6	18 Sep 2023	853	1	<2	<2	<2	1.0	20.6	85.58	7.9	33.31	8.3
A6	18 Sep 2023	853	12	<20	<2	<2	0.1	17.2	89.39	7.1	33.29	8.1
A6	18 Sep 2023	853	18	4e	2e	<2	0.5	15.0	89.98	6.8	33.24	8.0
A6	25 Sep 2023	854	1	<2	<2	<2	1.0	18.5	87.84	8.1	33.24	8.1
A6	25 Sep 2023	854	12	<2	<2	<2	1.0	15.4	88.38	7.3	33.18	8.0
A6	25 Sep 2023	854	18	2e	<2	<2	1.0	15.0	89.63	7.6	33.17	8.0
A7	05 Sep 2023	822	1	<20	<2	2e	0.1	19.6	77.98	10.3	33.18	8.4
A7	05 Sep 2023	822	12	<2	<2	2e	1.0	18.6	75.85	8.7	33.18	8.3
A7	05 Sep 2023	822	18	<20	<2	<2	0.1	17.2	83.65	7.8	33.17	8.2
A7	11 Sep 2023	811	1	<2	<2	<2	1.0	20.4	83.53	9.0	33.22	8.3
A7	11 Sep 2023	811	12	<2	<2	<2	1.0	18.9	81.83	8.8	33.20	8.2
A7	11 Sep 2023	811	18	<2	<2	<2	1.0	17.4	82.70	7.8	33.15	8.2
A7	18 Sep 2023	838	1	<2	<2	<2	1.0	20.4	85.65	7.9	33.31	8.2
A7	18 Sep 2023	838	12	<20	<2	<2	0.1	17.4	89.61	7.2	33.24	8.1
A7	18 Sep 2023	838	18	<2	<2	<2	1.0	15.5	89.38	6.6	33.24	8.0
A7	25 Sep 2023	840	1	<2	<2	<2	1.0	18.7	87.54	8.1	33.24	8.1
A7	25 Sep 2023	840	12	<2	<2	<2	1.0	16.6	87.65	7.9	33.17	8.1
A7	25 Sep 2023	840	18	<2	<2	<2	1.0	14.9	89.76	8.0	33.15	8.1
C4	05 Sep 2023	951	1	<20	<2	<2	0.1	19.9	78.02	10.0	33.18	8.4
C4	05 Sep 2023	951	3	<20	2e	<2	0.1	19.6	77.22	9.4	33.18	8.3
C4	05 Sep 2023	951	9	<20	2e	<2	0.1	18.1	67.20	7.9	33.17	8.2

Station	Date	Time	Depth	Total	Fecal	Entero	F:T	Temp	XMS	DO	Sal	pH
C4	11 Sep 2023	929	1	<2	<2	<2	1.0	19.4	77.28	8.7	33.20	8.3
C4	11 Sep 2023	929	3	<2	<2	<2	1.0	18.7	78.55	8.4	33.20	8.2
C4	11 Sep 2023	929	9	<20	<2	<2	0.1	17.5	81.00	7.0	33.18	8.1
C4	18 Sep 2023	1002	1	<20	<2	<2	0.1	19.6	83.06	7.2	33.26	8.2
C4	18 Sep 2023	1002	3	<20	<2	<2	0.1	19.6	83.21	7.0	33.25	8.2
C4	18 Sep 2023	1002	9	<20	<2	<2	0.1	16.5	81.49	5.4	33.21	8.0
C4	25 Sep 2023	1006	1	<2	<2	<2	1.0	18.4	81.11	7.8	33.24	8.1
C4	25 Sep 2023	1006	3	<2	<2	<2	1.0	18.1	80.94	8.0	33.24	8.1
C4	25 Sep 2023	1006	9	<2	<2	<2	1.0	15.6	81.13	7.0	33.20	8.0
C5	05 Sep 2023	938	1	<2	<2	<2	1.0	20.2	75.61	7.7	33.19	8.2
C5	05 Sep 2023	938	3	<20	<2	<2	0.1	20.1	75.28	7.7	33.19	8.2
C5	05 Sep 2023	938	9	<2	<2	<2	1.0	18.8	81.63	7.5	33.17	8.2
C5	11 Sep 2023	919	1	<2	<2	<2	1.0	20.4	81.08	8.4	33.20	8.2
C5	11 Sep 2023	919	3	<2	<2	<2	1.0	20.3	81.54	8.3	33.20	8.2
C5	11 Sep 2023	919	9	<2	2e	<2	1.0	18.2	81.52	6.5	33.19	8.1
C5	18 Sep 2023	951	1	<2	<2	<2	1.0	19.9	83.38	7.4	33.27	8.2
C5	18 Sep 2023	951	3	<20	<2	<2	0.1	19.7	83.46	7.3	33.26	8.2
C5	18 Sep 2023	951	9	<20	<2	<2	0.1	17.4	86.99	6.4	33.23	8.1
C5	25 Sep 2023	953	1	<2	<2	<2	1.0	18.3	82.95	8.0	33.24	8.1
C5	25 Sep 2023	953	3	<2	<2	<2	1.0	18.2	83.08	8.1	33.23	8.1
C5	25 Sep 2023	953	9	<2	<2	<2	1.0	16.6	83.27	7.3	33.21	8.1
C6	05 Sep 2023	919	1	<2	<2	<2	1.0	20.4	75.87	9.1	33.19	8.3
C6	05 Sep 2023	919	3	<20	<2	<2	0.1	20.3	75.16	8.9	33.18	8.3
C6	05 Sep 2023	919	9	<2	<2	<2	1.0	17.7	81.49	7.5	33.18	8.2
C6	11 Sep 2023	909	1	<2	<2	<2	1.0	20.4	82.34	8.7	33.20	8.3
C6	11 Sep 2023	909	3	<2	<2	<2	1.0	20.0	77.90	8.8	33.21	8.3
C6	11 Sep 2023	909	9	<2	2e	<2	1.0	18.8	80.85	8.0	33.18	8.2
C6	18 Sep 2023	940	1	2e	<2	<2	1.0	19.7	76.73	7.6	33.28	8.2
C6	18 Sep 2023	940	3	2e	<2	<2	1.0	19.7	85.86	7.6	33.29	8.2
C6	18 Sep 2023	940	9	2e	<2	<2	1.0	18.5	86.85	7.1	33.26	8.1
C6	25 Sep 2023	941	1	4e	<2	<2	0.5	18.5	81.14	8.2	33.24	8.1
C6	25 Sep 2023	941	3	<20	<2	<2	0.1	18.0	78.12	8.1	33.23	8.1
C6	25 Sep 2023	941	9	<2	<2	2e	1.0	16.7	83.36	7.1	33.20	8.1
C7	05 Sep 2023	850	1	<2	<2	<2	1.0	20.0	73.24	9.9	33.18	8.4
C7	05 Sep 2023	850	12	<2	<2	<2	1.0	16.4	83.69	8.0	33.18	8.2
C7	05 Sep 2023	850	18	<2	<2	<2	1.0	15.7	86.77	7.5	33.18	8.1
C7	11 Sep 2023	837	1	<2	<2	<2	1.0	20.1	81.79	9.1	33.22	8.3
C7	11 Sep 2023	837	12	<2	<2	<2	1.0	19.1	82.38	8.9	33.21	8.3
C7	11 Sep 2023	837	18	<2	<2	<2	1.0	16.0	87.18	7.2	33.17	8.1
C7	18 Sep 2023	908	1	2e	<2	<2	1.0	20.9	86.61	8.0	33.33	8.3
C7	18 Sep 2023	908	12	<2	<2	<2	1.0	18.1	90.37	8.0	33.24	8.2
C7	18 Sep 2023	908	18	<2	<2	<2	1.0	16.5	89.81	7.3	33.22	8.1
C7	25 Sep 2023	915	1	<2	<2	<2	1.0	18.5	87.38	8.2	33.23	8.1
C7	25 Sep 2023	915	12	<2	<2	<2	1.0	16.3	81.58	7.6	33.20	8.1
C7	25 Sep 2023	915	18	<2	<2	<2	1.0	14.9	89.48	6.9	33.19	8.0

Station	Date	Time	Depth	Total	Fecal	Entero	F:T	Temp	XMS	DO	Sal	pH
C8	05 Sep 2023	901	1	<2	<2	<2	1.0	21.1	83.40	9.8	33.20	8.4
C8	05 Sep 2023	901	12	2e	<2	<2	1.0	16.4	82.52	8.3	33.16	8.2
C8	05 Sep 2023	901	18	2e	<2	<2	1.0	15.6	86.22	7.7	33.17	8.1
C8	11 Sep 2023	847	1	<2	<2	<2	1.0	20.6	57.85	9.0	33.19	8.3
C8	11 Sep 2023	847	12	<2	<2	<2	1.0	18.2	82.77	8.2	33.19	8.2
C8	11 Sep 2023	847	18	<2	<2	<2	1.0	16.5	86.30	7.2	33.17	8.1
C8	18 Sep 2023	921	1	<2	<2	<2	1.0	21.1	85.46	7.8	33.33	8.3
C8	18 Sep 2023	921	12	<2	<2	<2	1.0	18.8	90.13	7.9	33.26	8.2
C8	18 Sep 2023	921	18	<2	<2	<2	1.0	18.0	90.11	7.7	33.25	8.2
C8	25 Sep 2023	922	1	<2	<2	<2	1.0	18.3	87.36	8.1	33.23	8.1
C8	25 Sep 2023	922	12	<2	<2	<2	1.0	15.9	84.54	7.8	33.19	8.1
C8	25 Sep 2023	922	18	2e	<2	<2	1.0	14.7	89.52	7.3	33.17	8.0

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 Sep 2023	Depth (m)	18
A1	05 Sep 2023	Arrive Time	810
A1	05 Sep 2023	Depart Time	815
A1	05 Sep 2023	Air Temp (C)	19.6
A1	05 Sep 2023	Weather	Overcast
A1	05 Sep 2023	Visibility (mi)	8
A1	05 Sep 2023	Wind Speed (kts)	8.3
A1	05 Sep 2023	Wind Dir	S
A1	05 Sep 2023	Water Color	Green
A1	05 Sep 2023	Wave Ht Low (ft)	3
A1	05 Sep 2023	Wave Period (sec)	15
A1	05 Sep 2023	Sea State	Calm
A1	05 Sep 2023	High Tide (ft)	5.3
A1	05 Sep 2023	High Tide Time	1330
A1	05 Sep 2023	Low Tide (ft)	0.99
A1	05 Sep 2023	Low Tide Time	2118
A1	05 Sep 2023	Comments	none
A1	11 Sep 2023	Depth (m)	18
A1	11 Sep 2023	Arrive Time	758
A1	11 Sep 2023	Depart Time	804
A1	11 Sep 2023	Air Temp (C)	21.1
A1	11 Sep 2023	Weather	Partly Cloudy
A1	11 Sep 2023	Visibility (mi)	6
A1	11 Sep 2023	Wind Speed (kts)	4.3
A1	11 Sep 2023	Wind Dir	NW
A1	11 Sep 2023	Water Color	Green
A1	11 Sep 2023	Wave Ht Low (ft)	4
A1	11 Sep 2023	Wave Period (sec)	10
A1	11 Sep 2023	Sea State	Light Chop
A1	11 Sep 2023	High Tide (ft)	5.57
A1	11 Sep 2023	High Tide Time	1948
A1	11 Sep 2023	Low Tide (ft)	0.02
A1	11 Sep 2023	Low Tide Time	224
A1	11 Sep 2023	Comments	none
A1	18 Sep 2023	Depth (m)	18
A1	18 Sep 2023	Arrive Time	821
A1	18 Sep 2023	Depart Time	827
A1	18 Sep 2023	Air Temp (C)	20.1
A1	18 Sep 2023	Weather	Drizzle
A1	18 Sep 2023	Visibility (mi)	8
A1	18 Sep 2023	Wind Speed (kts)	13.7
A1	18 Sep 2023	Wind Dir	W
A1	18 Sep 2023	Water Color	Greenish-Blue
A1	18 Sep 2023	Wave Ht Low (ft)	3
A1	18 Sep 2023	Wave Period (sec)	13
A1	18 Sep 2023	Sea State	Heavy Chop
A1	18 Sep 2023	High Tide (ft)	5.25
A1	18 Sep 2023	High Tide Time	1112
A1	18 Sep 2023	Low Tide (ft)	1.01
A1	18 Sep 2023	Low Tide Time	1748
A1	18 Sep 2023	Comments	none
A1	25 Sep 2023	Depth (m)	1
A1	25 Sep 2023	Arrive Time	822

Station	Date	Parameter	Value
A1	25 Sep 2023	Depart Time	830
A1	25 Sep 2023	Air Temp (C)	18.9
A1	25 Sep 2023	Weather	Overcast
A1	25 Sep 2023	Visibility (mi)	4
A1	25 Sep 2023	Wind Speed (kts)	6.8
A1	25 Sep 2023	Wind Dir	NW
A1	25 Sep 2023	Water Color	Green
A1	25 Sep 2023	Wave Ht Low (ft)	2
A1	25 Sep 2023	Wave Period (sec)	6
A1	25 Sep 2023	Sea State	Light Chop
A1	25 Sep 2023	High Tide (ft)	5.88
A1	25 Sep 2023	High Tide Time	1842
A1	25 Sep 2023	Low Tide (ft)	-0.29
A1	25 Sep 2023	Low Tide Time	100
A1	25 Sep 2023	Comments	none
A6	05 Sep 2023	Depth (m)	17
A6	05 Sep 2023	Arrive Time	834
A6	05 Sep 2023	Depart Time	841
A6	05 Sep 2023	Air Temp (C)	19.9
A6	05 Sep 2023	Weather	Overcast
A6	05 Sep 2023	Visibility (mi)	8
A6	05 Sep 2023	Wind Speed (kts)	4.8
A6	05 Sep 2023	Wind Dir	S
A6	05 Sep 2023	Water Color	Green
A6	05 Sep 2023	Wave Ht Low (ft)	3
A6	05 Sep 2023	Wave Period (sec)	15
A6	05 Sep 2023	Sea State	Calm
A6	05 Sep 2023	High Tide (ft)	5.3
A6	05 Sep 2023	High Tide Time	1330
A6	05 Sep 2023	Low Tide (ft)	0.99
A6	05 Sep 2023	Low Tide Time	2118
A6	05 Sep 2023	Comments	none
A6	11 Sep 2023	Depth (m)	19
A6	11 Sep 2023	Arrive Time	823
A6	11 Sep 2023	Depart Time	828
A6	11 Sep 2023	Air Temp (C)	21.1
A6	11 Sep 2023	Weather	Partly Cloudy
A6	11 Sep 2023	Visibility (mi)	6
A6	11 Sep 2023	Wind Speed (kts)	2.6
A6	11 Sep 2023	Wind Dir	NW
A6	11 Sep 2023	Water Color	Green
A6	11 Sep 2023	Wave Ht Low (ft)	4
A6	11 Sep 2023	Wave Period (sec)	10
A6	11 Sep 2023	Sea State	Light Chop
A6	11 Sep 2023	High Tide (ft)	5.57
A6	11 Sep 2023	High Tide Time	1948
A6	11 Sep 2023	Low Tide (ft)	0.02
A6	11 Sep 2023	Low Tide Time	224
A6	11 Sep 2023	Comments	none
A6	18 Sep 2023	Depth (m)	20
A6	18 Sep 2023	Arrive Time	853
A6	18 Sep 2023	Depart Time	856
A6	18 Sep 2023	Air Temp (C)	20.4
A6	18 Sep 2023	Weather	Drizzle
A6	18 Sep 2023	Visibility (mi)	10
A6	18 Sep 2023	Wind Speed (kts)	7.1
A6	18 Sep 2023	Wind Dir	NW
A6	18 Sep 2023	Water Color	Greenish-Blue

Station	Date	Parameter	Value
A6	18 Sep 2023	Wave Ht Low (ft)	3
A6	18 Sep 2023	Wave Period (sec)	13
A6	18 Sep 2023	Sea State	Heavy Chop
A6	18 Sep 2023	High Tide (ft)	5.25
A6	18 Sep 2023	High Tide Time	1112
A6	18 Sep 2023	Low Tide (ft)	1.01
A6	18 Sep 2023	Low Tide Time	1748
A6	18 Sep 2023	Comments	none
A6	25 Sep 2023	Depth (m)	20
A6	25 Sep 2023	Arrive Time	854
A6	25 Sep 2023	Depart Time	902
A6	25 Sep 2023	Air Temp (C)	19
A6	25 Sep 2023	Weather	Overcast
A6	25 Sep 2023	Visibility (mi)	4
A6	25 Sep 2023	Wind Speed (kts)	5.1
A6	25 Sep 2023	Wind Dir	NW
A6	25 Sep 2023	Water Color	Green
A6	25 Sep 2023	Wave Ht Low (ft)	2
A6	25 Sep 2023	Wave Period (sec)	6
A6	25 Sep 2023	Sea State	Light Chop
A6	25 Sep 2023	High Tide (ft)	5.88
A6	25 Sep 2023	High Tide Time	1842
A6	25 Sep 2023	Low Tide (ft)	-0.29
A6	25 Sep 2023	Low Tide Time	100
A6	25 Sep 2023	Comments	none
A7	05 Sep 2023	Depth (m)	17
A7	05 Sep 2023	Arrive Time	822
A7	05 Sep 2023	Depart Time	829
A7	05 Sep 2023	Air Temp (C)	19.7
A7	05 Sep 2023	Weather	Overcast
A7	05 Sep 2023	Visibility (mi)	8
A7	05 Sep 2023	Wind Speed (kts)	1.3
A7	05 Sep 2023	Wind Dir	E
A7	05 Sep 2023	Water Color	Green
A7	05 Sep 2023	Wave Ht Low (ft)	3
A7	05 Sep 2023	Wave Period (sec)	15
A7	05 Sep 2023	Sea State	Calm
A7	05 Sep 2023	High Tide (ft)	5.3
A7	05 Sep 2023	High Tide Time	1330
A7	05 Sep 2023	Low Tide (ft)	0.99
A7	05 Sep 2023	Low Tide Time	2118
A7	05 Sep 2023	Comments	Missing last meter due to low tide
A7	11 Sep 2023	Depth (m)	17
A7	11 Sep 2023	Arrive Time	811
A7	11 Sep 2023	Depart Time	816
A7	11 Sep 2023	Air Temp (C)	21
A7	11 Sep 2023	Weather	Partly Cloudy
A7	11 Sep 2023	Visibility (mi)	6
A7	11 Sep 2023	Wind Speed (kts)	3.4
A7	11 Sep 2023	Wind Dir	N
A7	11 Sep 2023	Water Color	Green
A7	11 Sep 2023	Wave Ht Low (ft)	4
A7	11 Sep 2023	Wave Period (sec)	10
A7	11 Sep 2023	Sea State	Light Chop
A7	11 Sep 2023	High Tide (ft)	5.57
A7	11 Sep 2023	High Tide Time	1948
A7	11 Sep 2023	Low Tide (ft)	0.02
A7	11 Sep 2023	Low Tide Time	224

Station	Date	Parameter	Value
A7	11 Sep 2023	Comments	none
A7	18 Sep 2023	Depth (m)	18
A7	18 Sep 2023	Arrive Time	838
A7	18 Sep 2023	Depart Time	841
A7	18 Sep 2023	Air Temp (C)	20.1
A7	18 Sep 2023	Weather	Drizzle
A7	18 Sep 2023	Visibility (mi)	10
A7	18 Sep 2023	Wind Speed (kts)	8.7
A7	18 Sep 2023	Wind Dir	NW
A7	18 Sep 2023	Water Color	Greenish-Blue
A7	18 Sep 2023	Wave Ht Low (ft)	3
A7	18 Sep 2023	Wave Period (sec)	13
A7	18 Sep 2023	Sea State	Heavy Chop
A7	18 Sep 2023	High Tide (ft)	5.25
A7	18 Sep 2023	High Tide Time	1112
A7	18 Sep 2023	Low Tide (ft)	1.01
A7	18 Sep 2023	Low Tide Time	1748
A7	18 Sep 2023	Comments	none
A7	25 Sep 2023	Depth (m)	17
A7	25 Sep 2023	Arrive Time	840
A7	25 Sep 2023	Depart Time	846
A7	25 Sep 2023	Air Temp (C)	18.9
A7	25 Sep 2023	Weather	Overcast
A7	25 Sep 2023	Visibility (mi)	4
A7	25 Sep 2023	Wind Speed (kts)	9.4
A7	25 Sep 2023	Wind Dir	W
A7	25 Sep 2023	Water Color	Green
A7	25 Sep 2023	Wave Ht Low (ft)	2
A7	25 Sep 2023	Wave Period (sec)	6
A7	25 Sep 2023	Sea State	Light Chop
A7	25 Sep 2023	High Tide (ft)	5.88
A7	25 Sep 2023	High Tide Time	1842
A7	25 Sep 2023	Low Tide (ft)	-0.29
A7	25 Sep 2023	Low Tide Time	100
A7	25 Sep 2023	Comments	none
C4	05 Sep 2023	Depth (m)	11
C4	05 Sep 2023	Arrive Time	951
C4	05 Sep 2023	Depart Time	956
C4	05 Sep 2023	Air Temp (C)	19.7
C4	05 Sep 2023	Weather	Overcast
C4	05 Sep 2023	Visibility (mi)	8
C4	05 Sep 2023	Wind Speed (kts)	3.2
C4	05 Sep 2023	Wind Dir	S
C4	05 Sep 2023	Water Color	Green
C4	05 Sep 2023	Wave Ht Low (ft)	3
C4	05 Sep 2023	Wave Period (sec)	15
C4	05 Sep 2023	Sea State	Calm
C4	05 Sep 2023	High Tide (ft)	5.3
C4	05 Sep 2023	High Tide Time	1330
C4	05 Sep 2023	Low Tide (ft)	0.99
C4	05 Sep 2023	Low Tide Time	2118
C4	05 Sep 2023	Comments	none
C4	11 Sep 2023	Depth (m)	10
C4	11 Sep 2023	Arrive Time	929
C4	11 Sep 2023	Depart Time	935
C4	11 Sep 2023	Air Temp (C)	21.4
C4	11 Sep 2023	Weather	Partly Cloudy

Station	Date	Parameter	Value
C4	11 Sep 2023	Visibility (mi)	6
C4	11 Sep 2023	Wind Speed (kts)	13.3
C4	11 Sep 2023	Wind Dir	NW
C4	11 Sep 2023	Water Color	Green
C4	11 Sep 2023	Wave Ht Low (ft)	4
C4	11 Sep 2023	Wave Period (sec)	10
C4	11 Sep 2023	Sea State	Light Chop
C4	11 Sep 2023	High Tide (ft)	5.57
C4	11 Sep 2023	High Tide Time	1948
C4	11 Sep 2023	Low Tide (ft)	0.02
C4	11 Sep 2023	Low Tide Time	224
C4	11 Sep 2023	Comments	none
C4	18 Sep 2023	Depth (m)	12
C4	18 Sep 2023	Arrive Time	1002
C4	18 Sep 2023	Depart Time	1004
C4	18 Sep 2023	Air Temp (C)	20.2
C4	18 Sep 2023	Weather	Drizzle
C4	18 Sep 2023	Visibility (mi)	10
C4	18 Sep 2023	Wind Speed (kts)	8.1
C4	18 Sep 2023	Wind Dir	NW
C4	18 Sep 2023	Water Color	Greenish-Blue
C4	18 Sep 2023	Wave Ht Low (ft)	3
C4	18 Sep 2023	Wave Period (sec)	13
C4	18 Sep 2023	Sea State	Heavy Chop
C4	18 Sep 2023	High Tide (ft)	5.25
C4	18 Sep 2023	High Tide Time	1112
C4	18 Sep 2023	Low Tide (ft)	1.01
C4	18 Sep 2023	Low Tide Time	1748
C4	18 Sep 2023	Comments	none
C4	25 Sep 2023	Depth (m)	11
C4	25 Sep 2023	Arrive Time	1006
C4	25 Sep 2023	Depart Time	1013
C4	25 Sep 2023	Air Temp (C)	18.7
C4	25 Sep 2023	Weather	Overcast
C4	25 Sep 2023	Visibility (mi)	4
C4	25 Sep 2023	Wind Speed (kts)	9.8
C4	25 Sep 2023	Wind Dir	W
C4	25 Sep 2023	Water Color	Green
C4	25 Sep 2023	Wave Ht Low (ft)	2
C4	25 Sep 2023	Wave Period (sec)	6
C4	25 Sep 2023	Sea State	Light Chop
C4	25 Sep 2023	High Tide (ft)	5.88
C4	25 Sep 2023	High Tide Time	1842
C4	25 Sep 2023	Low Tide (ft)	-0.29
C4	25 Sep 2023	Low Tide Time	100
C4	25 Sep 2023	Comments	none
C5	05 Sep 2023	Depth (m)	9
C5	05 Sep 2023	Arrive Time	938
C5	05 Sep 2023	Depart Time	945
C5	05 Sep 2023	Air Temp (C)	19.7
C5	05 Sep 2023	Weather	Overcast
C5	05 Sep 2023	Visibility (mi)	8
C5	05 Sep 2023	Wind Speed (kts)	6.9
C5	05 Sep 2023	Wind Dir	S
C5	05 Sep 2023	Water Color	Green
C5	05 Sep 2023	Wave Ht Low (ft)	3
C5	05 Sep 2023	Wave Period (sec)	15
C5	05 Sep 2023	Sea State	Calm

Station	Date	Parameter	Value
C5	05 Sep 2023	High Tide (ft)	5.3
C5	05 Sep 2023	High Tide Time	1330
C5	05 Sep 2023	Low Tide (ft)	0.99
C5	05 Sep 2023	Low Tide Time	2118
C5	05 Sep 2023	Comments	none
C5	11 Sep 2023	Depth (m)	7
C5	11 Sep 2023	Arrive Time	919
C5	11 Sep 2023	Depart Time	924
C5	11 Sep 2023	Air Temp (C)	21.4
C5	11 Sep 2023	Weather	Partly Cloudy
C5	11 Sep 2023	Visibility (mi)	6
C5	11 Sep 2023	Wind Speed (kts)	7.1
C5	11 Sep 2023	Wind Dir	W
C5	11 Sep 2023	Water Color	Green
C5	11 Sep 2023	Wave Ht Low (ft)	4
C5	11 Sep 2023	Wave Period (sec)	10
C5	11 Sep 2023	Sea State	Light Chop
C5	11 Sep 2023	High Tide (ft)	5.57
C5	11 Sep 2023	High Tide Time	1948
C5	11 Sep 2023	Low Tide (ft)	0.02
C5	11 Sep 2023	Low Tide Time	224
C5	11 Sep 2023	Comments	missing 9m bin
C5	18 Sep 2023	Depth (m)	12
C5	18 Sep 2023	Arrive Time	951
C5	18 Sep 2023	Depart Time	954
C5	18 Sep 2023	Air Temp (C)	20.3
C5	18 Sep 2023	Weather	Drizzle
C5	18 Sep 2023	Visibility (mi)	10
C5	18 Sep 2023	Wind Speed (kts)	7.8
C5	18 Sep 2023	Wind Dir	NW
C5	18 Sep 2023	Water Color	Greenish-Blue
C5	18 Sep 2023	Wave Ht Low (ft)	3
C5	18 Sep 2023	Wave Period (sec)	13
C5	18 Sep 2023	Sea State	Heavy Chop
C5	18 Sep 2023	High Tide (ft)	5.25
C5	18 Sep 2023	High Tide Time	1112
C5	18 Sep 2023	Low Tide (ft)	1.01
C5	18 Sep 2023	Low Tide Time	1748
C5	18 Sep 2023	Comments	none
C5	25 Sep 2023	Depth (m)	10
C5	25 Sep 2023	Arrive Time	953
C5	25 Sep 2023	Depart Time	1002
C5	25 Sep 2023	Air Temp (C)	18.8
C5	25 Sep 2023	Weather	Overcast
C5	25 Sep 2023	Visibility (mi)	4
C5	25 Sep 2023	Wind Speed (kts)	8.6
C5	25 Sep 2023	Wind Dir	NW
C5	25 Sep 2023	Water Color	Green
C5	25 Sep 2023	Wave Ht Low (ft)	2
C5	25 Sep 2023	Wave Period (sec)	6
C5	25 Sep 2023	Sea State	Light Chop
C5	25 Sep 2023	High Tide (ft)	5.88
C5	25 Sep 2023	High Tide Time	1842
C5	25 Sep 2023	Low Tide (ft)	-0.29
C5	25 Sep 2023	Low Tide Time	100
C5	25 Sep 2023	Comments	none
C6	05 Sep 2023	Depth (m)	9

Station	Date	Parameter	Value
C6	05 Sep 2023	Arrive Time	919
C6	05 Sep 2023	Depart Time	932
C6	05 Sep 2023	Air Temp (C)	19.8
C6	05 Sep 2023	Weather	Overcast
C6	05 Sep 2023	Visibility (mi)	8
C6	05 Sep 2023	Wind Speed (kts)	12.1
C6	05 Sep 2023	Wind Dir	S
C6	05 Sep 2023	Water Color	Green
C6	05 Sep 2023	Wave Ht Low (ft)	3
C6	05 Sep 2023	Wave Period (sec)	15
C6	05 Sep 2023	Sea State	Calm
C6	05 Sep 2023	High Tide (ft)	5.3
C6	05 Sep 2023	High Tide Time	1330
C6	05 Sep 2023	Low Tide (ft)	0.99
C6	05 Sep 2023	Low Tide Time	2118
C6	05 Sep 2023	Comments	Floting mats of seagrass
C6	11 Sep 2023	Depth (m)	10
C6	11 Sep 2023	Arrive Time	909
C6	11 Sep 2023	Depart Time	914
C6	11 Sep 2023	Air Temp (C)	21.3
C6	11 Sep 2023	Weather	Partly Cloudy
C6	11 Sep 2023	Visibility (mi)	6
C6	11 Sep 2023	Wind Speed (kts)	5.3
C6	11 Sep 2023	Wind Dir	W
C6	11 Sep 2023	Water Color	Green
C6	11 Sep 2023	Wave Ht Low (ft)	4
C6	11 Sep 2023	Wave Period (sec)	10
C6	11 Sep 2023	Sea State	Light Chop
C6	11 Sep 2023	High Tide (ft)	5.57
C6	11 Sep 2023	High Tide Time	1948
C6	11 Sep 2023	Low Tide (ft)	0.02
C6	11 Sep 2023	Low Tide Time	224
C6	11 Sep 2023	Comments	none
C6	18 Sep 2023	Depth (m)	10
C6	18 Sep 2023	Arrive Time	940
C6	18 Sep 2023	Depart Time	945
C6	18 Sep 2023	Air Temp (C)	20.3
C6	18 Sep 2023	Weather	Drizzle
C6	18 Sep 2023	Visibility (mi)	10
C6	18 Sep 2023	Wind Speed (kts)	5.9
C6	18 Sep 2023	Wind Dir	W
C6	18 Sep 2023	Water Color	Greenish-Blue
C6	18 Sep 2023	Wave Ht Low (ft)	3
C6	18 Sep 2023	Wave Period (sec)	13
C6	18 Sep 2023	Sea State	Heavy Chop
C6	18 Sep 2023	High Tide (ft)	5.25
C6	18 Sep 2023	High Tide Time	1112
C6	18 Sep 2023	Low Tide (ft)	1.01
C6	18 Sep 2023	Low Tide Time	1748
C6	18 Sep 2023	Comments	none
C6	25 Sep 2023	Depth (m)	9
C6	25 Sep 2023	Arrive Time	941
C6	25 Sep 2023	Depart Time	945
C6	25 Sep 2023	Air Temp (C)	18.7
C6	25 Sep 2023	Weather	Overcast
C6	25 Sep 2023	Visibility (mi)	4
C6	25 Sep 2023	Wind Speed (kts)	11
C6	25 Sep 2023	Wind Dir	NW

Station	Date	Parameter	Value
C6	25 Sep 2023	Water Color	Green
C6	25 Sep 2023	Wave Ht Low (ft)	2
C6	25 Sep 2023	Wave Period (sec)	6
C6	25 Sep 2023	Sea State	Light Chop
C6	25 Sep 2023	High Tide (ft)	5.88
C6	25 Sep 2023	High Tide Time	1842
C6	25 Sep 2023	Low Tide (ft)	-0.29
C6	25 Sep 2023	Low Tide Time	100
C6	25 Sep 2023	Comments	none
C7	05 Sep 2023	Depth (m)	18
C7	05 Sep 2023	Arrive Time	850
C7	05 Sep 2023	Depart Time	855
C7	05 Sep 2023	Air Temp (C)	20.1
C7	05 Sep 2023	Weather	Overcast
C7	05 Sep 2023	Visibility (mi)	8
C7	05 Sep 2023	Wind Speed (kts)	1.5
C7	05 Sep 2023	Wind Dir	S
C7	05 Sep 2023	Water Color	Green
C7	05 Sep 2023	Wave Ht Low (ft)	3
C7	05 Sep 2023	Wave Period (sec)	15
C7	05 Sep 2023	Sea State	Calm
C7	05 Sep 2023	High Tide (ft)	5.3
C7	05 Sep 2023	High Tide Time	1330
C7	05 Sep 2023	Low Tide (ft)	0.99
C7	05 Sep 2023	Low Tide Time	2118
C7	05 Sep 2023	Comments	none
C7	11 Sep 2023	Depth (m)	18
C7	11 Sep 2023	Arrive Time	837
C7	11 Sep 2023	Depart Time	842
C7	11 Sep 2023	Air Temp (C)	21.3
C7	11 Sep 2023	Weather	Partly Cloudy
C7	11 Sep 2023	Visibility (mi)	6
C7	11 Sep 2023	Wind Speed (kts)	2.3
C7	11 Sep 2023	Wind Dir	NW
C7	11 Sep 2023	Water Color	Green
C7	11 Sep 2023	Wave Ht Low (ft)	4
C7	11 Sep 2023	Wave Period (sec)	10
C7	11 Sep 2023	Sea State	Light Chop
C7	11 Sep 2023	High Tide (ft)	5.57
C7	11 Sep 2023	High Tide Time	1948
C7	11 Sep 2023	Low Tide (ft)	0.02
C7	11 Sep 2023	Low Tide Time	224
C7	11 Sep 2023	Comments	none
C7	18 Sep 2023	Depth (m)	18
C7	18 Sep 2023	Arrive Time	908
C7	18 Sep 2023	Depart Time	913
C7	18 Sep 2023	Air Temp (C)	20.2
C7	18 Sep 2023	Weather	Drizzle
C7	18 Sep 2023	Visibility (mi)	10
C7	18 Sep 2023	Wind Speed (kts)	13.5
C7	18 Sep 2023	Wind Dir	NW
C7	18 Sep 2023	Water Color	Greenish-Blue
C7	18 Sep 2023	Wave Ht Low (ft)	3
C7	18 Sep 2023	Wave Period (sec)	13
C7	18 Sep 2023	Sea State	Heavy Chop
C7	18 Sep 2023	High Tide (ft)	5.25
C7	18 Sep 2023	High Tide Time	1112
C7	18 Sep 2023	Low Tide (ft)	1.01

Station	Date	Parameter	Value
C7	18 Sep 2023	Low Tide Time	1748
C7	18 Sep 2023	Comments	none
C7	25 Sep 2023	Depth (m)	18
C7	25 Sep 2023	Arrive Time	915
C7	25 Sep 2023	Depart Time	915
C7	25 Sep 2023	Air Temp (C)	18.7
C7	25 Sep 2023	Weather	Overcast
C7	25 Sep 2023	Visibility (mi)	4
C7	25 Sep 2023	Wind Speed (kts)	14.5
C7	25 Sep 2023	Wind Dir	N
C7	25 Sep 2023	Water Color	Green
C7	25 Sep 2023	Wave Ht Low (ft)	2
C7	25 Sep 2023	Wave Period (sec)	6
C7	25 Sep 2023	Sea State	Light Chop
C7	25 Sep 2023	High Tide (ft)	5.88
C7	25 Sep 2023	High Tide Time	1842
C7	25 Sep 2023	Low Tide (ft)	-0.29
C7	25 Sep 2023	Low Tide Time	100
C7	25 Sep 2023	Comments	none
C8	05 Sep 2023	Depth (m)	19
C8	05 Sep 2023	Arrive Time	901
C8	05 Sep 2023	Depart Time	905
C8	05 Sep 2023	Air Temp (C)	20
C8	05 Sep 2023	Weather	Overcast
C8	05 Sep 2023	Visibility (mi)	8
C8	05 Sep 2023	Wind Speed (kts)	4.6
C8	05 Sep 2023	Wind Dir	SW
C8	05 Sep 2023	Water Color	Green
C8	05 Sep 2023	Wave Ht Low (ft)	3
C8	05 Sep 2023	Wave Period (sec)	15
C8	05 Sep 2023	Sea State	Calm
C8	05 Sep 2023	High Tide (ft)	5.3
C8	05 Sep 2023	High Tide Time	1330
C8	05 Sep 2023	Low Tide (ft)	0.99
C8	05 Sep 2023	Low Tide Time	2118
C8	05 Sep 2023	Comments	none
C8	11 Sep 2023	Depth (m)	19
C8	11 Sep 2023	Arrive Time	847
C8	11 Sep 2023	Depart Time	853
C8	11 Sep 2023	Air Temp (C)	21.3
C8	11 Sep 2023	Weather	Partly Cloudy
C8	11 Sep 2023	Visibility (mi)	6
C8	11 Sep 2023	Wind Speed (kts)	1.7
C8	11 Sep 2023	Wind Dir	NE
C8	11 Sep 2023	Water Color	Green
C8	11 Sep 2023	Wave Ht Low (ft)	4
C8	11 Sep 2023	Wave Period (sec)	10
C8	11 Sep 2023	Sea State	Light Chop
C8	11 Sep 2023	High Tide (ft)	5.57
C8	11 Sep 2023	High Tide Time	1948
C8	11 Sep 2023	Low Tide (ft)	0.02
C8	11 Sep 2023	Low Tide Time	224
C8	11 Sep 2023	Comments	none
C8	18 Sep 2023	Depth (m)	20
C8	18 Sep 2023	Arrive Time	921
C8	18 Sep 2023	Depart Time	927
C8	18 Sep 2023	Air Temp (C)	20.3

Station	Date	Parameter	Value
C8	18 Sep 2023	Weather	Drizzle
C8	18 Sep 2023	Visibility (mi)	10
C8	18 Sep 2023	Wind Speed (kts)	14.8
C8	18 Sep 2023	Wind Dir	NW
C8	18 Sep 2023	Water Color	Greenish-Blue
C8	18 Sep 2023	Wave Ht Low (ft)	3
C8	18 Sep 2023	Wave Period (sec)	13
C8	18 Sep 2023	Sea State	Heavy Chop
C8	18 Sep 2023	High Tide (ft)	5.25
C8	18 Sep 2023	High Tide Time	1112
C8	18 Sep 2023	Low Tide (ft)	1.01
C8	18 Sep 2023	Low Tide Time	1748
C8	18 Sep 2023	Comments	none
C8	25 Sep 2023	Depth (m)	19
C8	25 Sep 2023	Arrive Time	922
C8	25 Sep 2023	Depart Time	926
C8	25 Sep 2023	Air Temp (C)	18.7
C8	25 Sep 2023	Weather	Overcast
C8	25 Sep 2023	Visibility (mi)	4
C8	25 Sep 2023	Wind Speed (kts)	8.1
C8	25 Sep 2023	Wind Dir	NW
C8	25 Sep 2023	Water Color	Green
C8	25 Sep 2023	Wave Ht Low (ft)	2
C8	25 Sep 2023	Wave Period (sec)	6
C8	25 Sep 2023	Sea State	Light Chop
C8	25 Sep 2023	High Tide (ft)	5.88
C8	25 Sep 2023	High Tide Time	1842
C8	25 Sep 2023	Low Tide (ft)	-0.29
C8	25 Sep 2023	Low Tide Time	100
C8	25 Sep 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 (σ -t)	Chlor (μ g/L)
A1	05 Sep 2023	1	19.70	80.78	10.5	33.18	8.4	23.5	2.55
A1	05 Sep 2023	2	19.69	80.75	10.5	33.18	8.4	23.5	2.70
A1	05 Sep 2023	3	19.66	80.62	10.5	33.18	8.4	23.5	2.83
A1	05 Sep 2023	4	19.64	80.51	10.4	33.18	8.4	23.5	2.92
A1	05 Sep 2023	5	19.64	80.42	10.4	33.18	8.4	23.5	2.96
A1	05 Sep 2023	6	19.65	80.33	10.5	33.18	8.4	23.5	3.00
A1	05 Sep 2023	7	19.64	80.64	10.4	33.18	8.4	23.5	3.09
A1	05 Sep 2023	8	19.56	80.31	10.3	33.19	8.4	23.5	3.07
A1	05 Sep 2023	9	19.46	79.58	10.2	33.19	8.4	23.5	3.28
A1	05 Sep 2023	10	19.34	79.28	10.1	33.18	8.3	23.5	3.47
A1	05 Sep 2023	11	19.06	78.76	9.8	33.19	8.3	23.6	3.79
A1	05 Sep 2023	12	18.80	78.08	9.4	33.18	8.3	23.7	4.79
A1	05 Sep 2023	13	18.24	77.89	9.1	33.21	8.3	23.8	5.34
A1	05 Sep 2023	14	17.82	78.80	8.5	33.18	8.2	23.9	5.09
A1	05 Sep 2023	15	17.66	80.06	8.0	33.37	8.2	24.1	5.30
A1	05 Sep 2023	16	17.23	80.65	8.0	33.59	8.2	24.4	4.20
A1	05 Sep 2023	17	17.04	81.18	8.2	33.47	8.2	24.3	3.86
A1	05 Sep 2023	18	16.62	81.35	8.2	33.51	8.2	24.5	3.14
A1	11 Sep 2023	1	20.30	82.96	9.1	33.22	8.3	23.3	1.60
A1	11 Sep 2023	2	20.26	82.89	9.1	33.22	8.3	23.3	1.92
A1	11 Sep 2023	3	20.20	82.63	9.0	33.22	8.3	23.3	2.01
A1	11 Sep 2023	4	20.13	82.43	9.0	33.21	8.3	23.4	2.31
A1	11 Sep 2023	5	20.04	81.61	9.0	33.21	8.3	23.4	2.50
A1	11 Sep 2023	6	20.01	81.01	8.9	33.21	8.3	23.4	2.64
A1	11 Sep 2023	7	19.96	80.33	8.9	33.21	8.3	23.4	2.80
A1	11 Sep 2023	8	19.98	80.46	8.9	33.21	8.3	23.4	2.96
A1	11 Sep 2023	9	19.96	80.51	8.9	33.21	8.3	23.4	2.99
A1	11 Sep 2023	10	19.91	80.37	8.9	33.21	8.3	23.4	3.07
A1	11 Sep 2023	11	19.83	79.80	8.9	33.21	8.2	23.4	3.49
A1	11 Sep 2023	12	19.67	79.28	8.8	33.20	8.2	23.5	3.49
A1	11 Sep 2023	13	19.59	79.03	8.8	33.20	8.2	23.5	3.31
A1	11 Sep 2023	14	19.48	79.10	8.8	33.20	8.2	23.5	3.33
A1	11 Sep 2023	15	19.24	79.36	8.6	33.19	8.2	23.6	3.15
A1	11 Sep 2023	16	18.11	79.86	8.5	33.19	8.2	23.9	2.89
A1	11 Sep 2023	17	17.88	81.40	8.2	33.17	8.2	23.9	2.62
A1	11 Sep 2023	18	16.54	82.05	7.4	33.18	8.2	24.2	1.80
A1	11 Sep 2023	19	16.30	82.34	7.2	33.18	8.1	24.3	1.27
A1	18 Sep 2023	1	19.73	76.71	7.4	33.25	8.2	23.5	1.38
A1	18 Sep 2023	2	19.71	79.69	7.5	33.28	8.2	23.5	1.31
A1	18 Sep 2023	3	19.28	85.96	7.5	33.30	8.2	23.7	1.42
A1	18 Sep 2023	4	19.26	86.29	7.5	33.28	8.2	23.6	1.41
A1	18 Sep 2023	5	19.21	86.40	7.4	33.28	8.2	23.7	1.44
A1	18 Sep 2023	6	19.25	86.45	7.5	33.28	8.2	23.6	1.49
A1	18 Sep 2023	7	19.26	86.43	7.5	33.28	8.2	23.6	1.42
A1	18 Sep 2023	8	19.30	86.26	7.5	33.27	8.2	23.6	1.45
A1	18 Sep 2023	9	19.25	86.44	7.4	33.28	8.2	23.6	1.45
A1	18 Sep 2023	10	18.18	86.71	7.1	33.35	8.2	24.0	1.53
A1	18 Sep 2023	11	16.73	88.48	6.8	33.32	8.1	24.3	1.34
A1	18 Sep 2023	12	15.92	89.55	6.8	33.27	8.0	24.4	0.95
A1	18 Sep 2023	13	15.89	89.91	6.8	33.24	8.0	24.4	0.61
A1	18 Sep 2023	14	15.59	90.10	6.9	33.25	8.0	24.5	0.50
A1	18 Sep 2023	15	15.41	90.15	6.9	33.24	8.0	24.5	0.43
A1	18 Sep 2023	16	14.98	90.21	6.9	33.26	8.0	24.6	0.44

Station	Date	Depth (m)	Temp (°C)	XMS (‰)	DO (mg/L)	Sal (ppt)	pH	Dens (σ -t)	Chlor (μ g/L)
A1	18 Sep 2023	17	14.90	89.85	6.9	33.25	8.0	24.6	0.43
A1	18 Sep 2023	18	14.75	88.75	6.7	33.26	8.0	24.7	0.37
A1	25 Sep 2023	1	18.72	87.22	8.1	33.24	8.1	23.7	0.91
A1	25 Sep 2023	2	18.73	87.20	8.1	33.24	8.1	23.7	0.94
A1	25 Sep 2023	3	18.72	87.20	8.1	33.24	8.1	23.7	0.96
A1	25 Sep 2023	4	18.72	87.26	8.1	33.24	8.1	23.7	0.99
A1	25 Sep 2023	5	18.72	87.28	8.1	33.24	8.1	23.7	0.99
A1	25 Sep 2023	6	18.70	87.25	8.1	33.24	8.1	23.8	0.97
A1	25 Sep 2023	7	18.66	87.31	8.1	33.24	8.1	23.8	0.99
A1	25 Sep 2023	8	18.66	87.45	8.1	33.24	8.1	23.8	1.00
A1	25 Sep 2023	9	18.68	87.45	8.1	33.24	8.1	23.8	0.99
A1	25 Sep 2023	10	18.69	87.49	8.1	33.24	8.1	23.8	1.00
A1	25 Sep 2023	11	18.67	87.45	8.0	33.23	8.1	23.8	1.04
A1	25 Sep 2023	12	18.14	87.50	7.9	33.20	8.1	23.9	1.00
A1	25 Sep 2023	13	16.85	88.24	8.0	33.20	8.1	24.2	0.93
A1	25 Sep 2023	14	16.16	88.95	8.0	33.19	8.1	24.3	0.92
A1	25 Sep 2023	15	15.61	89.06	8.1	33.16	8.1	24.4	0.96
A1	25 Sep 2023	16	15.30	89.26	8.1	33.15	8.1	24.5	1.04
A1	25 Sep 2023	17	15.04	89.21	7.9	33.15	8.1	24.5	1.01
A1	25 Sep 2023	18	14.85	88.61	7.6	33.17	8.0	24.6	0.91
A6	05 Sep 2023	1	20.30	75.20	9.8	33.13	8.4	23.3	4.03
A6	05 Sep 2023	2	20.29	76.66	9.7	33.17	8.4	23.3	4.42
A6	05 Sep 2023	3	19.90	77.20	9.8	33.17	8.4	23.4	6.97
A6	05 Sep 2023	4	19.57	76.29	9.7	33.18	8.3	23.5	7.69
A6	05 Sep 2023	5	19.34	75.52	9.7	33.17	8.3	23.5	5.92
A6	05 Sep 2023	6	19.26	76.88	9.5	33.17	8.3	23.6	5.26
A6	05 Sep 2023	7	19.11	76.97	9.2	33.17	8.3	23.6	4.63
A6	05 Sep 2023	8	19.02	77.44	9.1	33.17	8.3	23.6	4.08
A6	05 Sep 2023	9	18.75	77.70	9.1	33.16	8.3	23.7	3.86
A6	05 Sep 2023	10	18.54	78.20	9.1	33.17	8.3	23.7	4.13
A6	05 Sep 2023	11	18.50	78.18	9.1	33.17	8.3	23.7	4.07
A6	05 Sep 2023	12	18.27	77.96	9.0	33.16	8.3	23.8	4.06
A6	05 Sep 2023	13	18.02	78.57	8.9	33.17	8.2	23.9	3.65
A6	05 Sep 2023	14	17.97	79.58	8.7	33.16	8.2	23.9	3.37
A6	05 Sep 2023	15	17.28	80.91	8.1	33.14	8.2	24.0	2.77
A6	05 Sep 2023	16	15.97	82.55	8.0	33.16	8.2	24.3	1.87
A6	05 Sep 2023	17	15.32	84.07	8.1	33.16	8.2	24.5	1.38
A6	11 Sep 2023	1	20.53	82.19	9.0	33.22	8.3	23.3	2.16
A6	11 Sep 2023	2	20.48	82.19	9.1	33.22	8.3	23.3	2.20
A6	11 Sep 2023	3	20.39	82.73	9.1	33.22	8.3	23.3	1.97
A6	11 Sep 2023	4	20.37	83.71	9.1	33.22	8.3	23.3	1.77
A6	11 Sep 2023	5	20.36	84.67	9.2	33.22	8.3	23.3	1.77
A6	11 Sep 2023	6	20.33	85.00	9.2	33.22	8.3	23.3	2.01
A6	11 Sep 2023	7	20.26	84.92	9.3	33.23	8.3	23.3	2.25
A6	11 Sep 2023	8	20.24	84.39	9.3	33.22	8.3	23.3	2.25
A6	11 Sep 2023	9	20.13	84.18	9.3	33.23	8.3	23.4	2.38
A6	11 Sep 2023	10	20.04	84.30	9.1	33.22	8.3	23.4	2.38
A6	11 Sep 2023	11	19.49	84.04	8.9	33.20	8.3	23.5	2.25
A6	11 Sep 2023	12	19.04	83.70	8.9	33.21	8.3	23.6	2.20
A6	11 Sep 2023	13	18.82	83.50	8.8	33.20	8.2	23.7	2.14
A6	11 Sep 2023	14	18.57	83.40	8.6	33.20	8.2	23.8	2.01
A6	11 Sep 2023	15	18.19	83.71	8.5	33.19	8.2	23.8	1.79
A6	11 Sep 2023	16	17.98	83.69	8.4	33.19	8.2	23.9	1.63
A6	11 Sep 2023	17	17.99	84.04	8.5	33.20	8.2	23.9	1.59
A6	11 Sep 2023	18	17.86	84.21	8.4	33.19	8.2	23.9	1.54
A6	18 Sep 2023	1	20.61	85.58	7.9	33.31	8.3	23.3	1.13
A6	18 Sep 2023	2	20.49	85.78	7.9	33.31	8.2	23.3	1.16

Station	Date	Depth (m)	Temp (°C)	XMS (‰)	DO (mg/L)	Sal (ppt)	pH	Dens (σ -t)	Chlor (μ g/L)
A6	18 Sep 2023	3	20.07	85.75	7.8	33.32	8.2	23.5	1.16
A6	18 Sep 2023	4	19.98	85.93	7.7	33.30	8.2	23.5	1.21
A6	18 Sep 2023	5	19.65	86.14	7.6	33.31	8.2	23.6	1.22
A6	18 Sep 2023	6	19.38	86.69	7.6	33.29	8.2	23.6	1.24
A6	18 Sep 2023	7	19.25	87.03	7.6	33.28	8.2	23.6	1.26
A6	18 Sep 2023	8	18.86	87.56	7.6	33.28	8.2	23.7	1.24
A6	18 Sep 2023	9	18.86	87.88	7.6	33.27	8.2	23.7	1.12
A6	18 Sep 2023	10	18.49	88.69	7.6	33.27	8.2	23.8	1.07
A6	18 Sep 2023	11	18.34	89.13	7.4	33.27	8.2	23.9	0.99
A6	18 Sep 2023	12	17.19	89.39	7.1	33.29	8.1	24.2	0.86
A6	18 Sep 2023	13	16.85	89.41	7.0	33.25	8.1	24.2	0.69
A6	18 Sep 2023	14	16.15	89.65	6.9	33.27	8.1	24.4	0.57
A6	18 Sep 2023	15	15.71	89.92	6.8	33.25	8.1	24.5	0.50
A6	18 Sep 2023	16	15.33	90.08	6.7	33.25	8.1	24.6	0.44
A6	18 Sep 2023	17	15.17	90.00	6.8	33.24	8.0	24.6	0.43
A6	18 Sep 2023	18	15.01	89.98	6.8	33.24	8.0	24.6	0.33
A6	18 Sep 2023	19	14.91	89.93	6.8	33.25	8.0	24.6	0.34
A6	25 Sep 2023	1	18.53	87.84	8.1	33.24	8.1	23.8	0.73
A6	25 Sep 2023	2	18.53	87.17	8.2	33.24	8.1	23.8	0.80
A6	25 Sep 2023	3	18.50	87.84	8.1	33.23	8.1	23.8	0.87
A6	25 Sep 2023	4	18.40	87.79	8.1	33.23	8.1	23.8	0.93
A6	25 Sep 2023	5	18.24	87.64	8.1	33.23	8.1	23.9	1.07
A6	25 Sep 2023	6	17.89	87.23	8.0	33.21	8.1	23.9	1.30
A6	25 Sep 2023	7	17.42	86.24	7.8	33.22	8.1	24.0	1.86
A6	25 Sep 2023	8	17.08	84.73	7.6	33.20	8.1	24.1	2.26
A6	25 Sep 2023	9	16.31	83.88	7.4	33.19	8.1	24.3	1.95
A6	25 Sep 2023	10	15.90	85.70	7.3	33.19	8.0	24.4	1.45
A6	25 Sep 2023	11	15.58	87.53	7.3	33.19	8.0	24.4	1.14
A6	25 Sep 2023	12	15.39	88.38	7.3	33.18	8.0	24.5	0.95
A6	25 Sep 2023	13	15.15	88.68	7.4	33.18	8.0	24.5	0.90
A6	25 Sep 2023	14	15.00	88.86	7.5	33.17	8.0	24.6	0.87
A6	25 Sep 2023	15	14.91	89.01	7.5	33.17	8.0	24.6	0.92
A6	25 Sep 2023	16	14.91	89.42	7.6	33.17	8.0	24.6	0.82
A6	25 Sep 2023	17	14.97	89.63	7.6	33.17	8.0	24.6	0.75
A7	05 Sep 2023	1	19.59	77.98	10.3	33.18	8.4	23.5	3.70
A7	05 Sep 2023	2	19.58	78.00	10.3	33.18	8.4	23.5	3.74
A7	05 Sep 2023	3	19.54	78.05	10.2	33.18	8.4	23.5	4.03
A7	05 Sep 2023	4	19.54	78.22	10.2	33.18	8.4	23.5	4.03
A7	05 Sep 2023	5	19.47	78.20	10.1	33.18	8.4	23.5	4.24
A7	05 Sep 2023	6	19.44	78.32	10.0	33.18	8.3	23.5	4.27
A7	05 Sep 2023	7	19.42	78.34	9.8	33.18	8.3	23.5	4.30
A7	05 Sep 2023	8	19.40	77.88	9.7	33.18	8.3	23.5	4.51
A7	05 Sep 2023	9	19.35	77.42	9.4	33.18	8.3	23.5	4.85
A7	05 Sep 2023	10	19.18	76.59	9.1	33.18	8.3	23.6	5.18
A7	05 Sep 2023	11	18.88	75.62	8.8	33.18	8.3	23.7	4.97
A7	05 Sep 2023	12	18.63	75.85	8.7	33.18	8.3	23.7	4.53
A7	05 Sep 2023	13	18.47	76.89	8.5	33.17	8.2	23.8	3.68
A7	05 Sep 2023	14	17.94	78.57	8.1	33.17	8.2	23.9	2.59
A7	05 Sep 2023	15	17.65	81.84	7.9	33.17	8.2	24.0	1.78
A7	05 Sep 2023	16	17.42	83.21	7.8	33.17	8.2	24.0	1.29
A7	05 Sep 2023	17	17.24	83.65	7.8	33.17	8.2	24.1	1.01
A7	11 Sep 2023	1	20.36	83.53	9.0	33.22	8.3	23.3	1.21
A7	11 Sep 2023	2	20.32	83.59	9.1	33.22	8.3	23.3	1.29
A7	11 Sep 2023	3	20.32	83.71	9.1	33.22	8.3	23.3	1.33
A7	11 Sep 2023	4	20.32	84.13	9.1	33.22	8.3	23.3	1.46
A7	11 Sep 2023	5	20.31	84.12	9.1	33.22	8.3	23.3	1.50
A7	11 Sep 2023	6	20.30	84.37	9.1	33.22	8.3	23.3	1.57
A7	11 Sep 2023	7	20.28	84.17	9.2	33.22	8.3	23.3	1.96

Station	Date	Depth (m)	Temp (°C)	XMS (‰)	DO (mg/L)	Sal (ppt)	pH	Dens (σ -t)	Chlor (μ g/L)
A7	11 Sep 2023	8	20.28	83.69	9.3	33.22	8.3	23.3	2.19
A7	11 Sep 2023	9	20.15	83.66	9.4	33.22	8.3	23.4	2.40
A7	11 Sep 2023	10	19.91	83.33	9.2	33.21	8.3	23.4	2.56
A7	11 Sep 2023	11	19.02	82.73	8.9	33.21	8.3	23.6	2.41
A7	11 Sep 2023	12	18.94	81.83	8.8	33.20	8.2	23.7	2.37
A7	11 Sep 2023	13	18.74	81.95	8.8	33.20	8.2	23.7	2.30
A7	11 Sep 2023	14	18.56	81.73	8.6	33.19	8.2	23.7	2.24
A7	11 Sep 2023	15	18.18	81.59	8.4	33.19	8.2	23.8	2.12
A7	11 Sep 2023	16	18.04	81.86	8.4	33.19	8.2	23.9	1.94
A7	11 Sep 2023	17	18.11	82.67	8.2	33.18	8.2	23.9	1.88
A7	11 Sep 2023	18	17.38	82.70	7.8	33.15	8.2	24.0	1.63
A7	11 Sep 2023	19	17.11	82.80	7.9	33.19	8.2	24.1	1.35
A7	18 Sep 2023	1	20.41	85.65	7.9	33.31	8.2	23.4	1.66
A7	18 Sep 2023	2	20.39	85.80	7.9	33.30	8.2	23.4	1.75
A7	18 Sep 2023	3	20.23	85.77	7.8	33.30	8.2	23.4	1.76
A7	18 Sep 2023	4	20.08	85.82	7.8	33.30	8.2	23.4	1.80
A7	18 Sep 2023	5	19.89	86.18	7.7	33.30	8.2	23.5	1.82
A7	18 Sep 2023	6	19.55	86.76	7.7	33.30	8.2	23.6	1.69
A7	18 Sep 2023	7	19.42	87.15	7.6	33.29	8.2	23.6	1.59
A7	18 Sep 2023	8	18.76	87.71	7.6	33.30	8.2	23.8	1.41
A7	18 Sep 2023	9	18.35	89.21	7.5	33.26	8.2	23.9	1.14
A7	18 Sep 2023	10	17.58	89.82	7.3	33.26	8.1	24.0	0.91
A7	18 Sep 2023	11	17.51	89.76	7.3	33.24	8.1	24.0	0.76
A7	18 Sep 2023	12	17.44	89.61	7.2	33.24	8.1	24.1	0.68
A7	18 Sep 2023	13	17.00	89.56	7.0	33.24	8.1	24.2	0.70
A7	18 Sep 2023	14	16.43	89.24	6.8	33.25	8.1	24.3	0.58
A7	18 Sep 2023	15	16.29	89.13	6.7	33.23	8.1	24.3	0.51
A7	18 Sep 2023	16	15.87	88.99	6.6	33.24	8.0	24.4	0.51
A7	18 Sep 2023	17	15.70	89.25	6.6	33.24	8.0	24.5	0.38
A7	18 Sep 2023	18	15.50	89.38	6.6	33.24	8.0	24.5	0.34
A7	25 Sep 2023	1	18.68	87.54	8.1	33.24	8.1	23.8	0.86
A7	25 Sep 2023	2	18.68	87.51	8.1	33.24	8.1	23.8	0.89
A7	25 Sep 2023	3	18.66	87.49	8.1	33.24	8.1	23.8	0.92
A7	25 Sep 2023	4	18.65	87.35	8.1	33.24	8.1	23.8	0.98
A7	25 Sep 2023	5	18.59	87.64	8.1	33.23	8.1	23.8	0.94
A7	25 Sep 2023	6	18.50	87.72	8.2	33.23	8.1	23.8	0.93
A7	25 Sep 2023	7	18.36	87.76	8.1	33.23	8.1	23.8	0.94
A7	25 Sep 2023	8	17.97	87.98	8.1	33.20	8.1	23.9	0.99
A7	25 Sep 2023	9	17.45	88.20	8.2	33.21	8.1	24.0	1.00
A7	25 Sep 2023	10	17.32	87.95	8.2	33.20	8.1	24.1	1.09
A7	25 Sep 2023	11	17.18	87.80	8.1	33.19	8.1	24.1	1.08
A7	25 Sep 2023	12	16.57	87.65	7.9	33.17	8.1	24.2	1.14
A7	25 Sep 2023	13	15.63	87.73	7.9	33.16	8.1	24.4	1.07
A7	25 Sep 2023	14	15.40	88.38	8.0	33.16	8.1	24.5	0.98
A7	25 Sep 2023	15	15.29	89.11	8.0	33.15	8.1	24.5	0.92
A7	25 Sep 2023	16	15.16	89.32	8.1	33.15	8.1	24.5	0.96
A7	25 Sep 2023	17	15.03	89.54	8.1	33.15	8.1	24.5	0.85
A7	25 Sep 2023	18	14.92	89.76	8.0	33.15	8.1	24.6	0.74
C4	05 Sep 2023	1	19.88	78.02	10.0	33.18	8.4	23.4	1.91
C4	05 Sep 2023	2	19.79	79.02	9.8	33.19	8.4	23.4	2.32
C4	05 Sep 2023	3	19.65	77.22	9.4	33.18	8.3	23.5	3.13
C4	05 Sep 2023	4	19.52	76.01	9.2	33.19	8.3	23.5	3.92
C4	05 Sep 2023	5	19.46	74.58	8.9	33.18	8.3	23.5	4.27
C4	05 Sep 2023	6	19.09	72.80	8.5	33.19	8.3	23.6	4.46
C4	05 Sep 2023	7	19.03	72.27	8.4	33.18	8.2	23.6	4.70
C4	05 Sep 2023	8	18.75	72.14	8.1	33.16	8.2	23.7	4.45
C4	05 Sep 2023	9	18.06	67.20	7.9	33.17	8.2	23.9	2.95

Station	Date	Depth (m)	Temp (°C)	XMS (‰)	DO (mg/L)	Sal (ppt)	pH	Dens (σ -t)	Chlor (μ g/L)
C4	11 Sep 2023	1	19.45	77.28	8.7	33.20	8.3	23.5	2.88
C4	11 Sep 2023	2	19.09	77.89	8.5	33.21	8.2	23.6	2.59
C4	11 Sep 2023	3	18.71	78.55	8.4	33.20	8.2	23.7	2.12
C4	11 Sep 2023	4	18.48	78.88	8.4	33.20	8.2	23.8	1.83
C4	11 Sep 2023	5	18.26	79.75	8.3	33.20	8.2	23.8	1.80
C4	11 Sep 2023	6	18.11	80.54	8.2	33.19	8.2	23.9	1.70
C4	11 Sep 2023	7	17.89	80.57	8.0	33.19	8.2	23.9	1.57
C4	11 Sep 2023	8	17.74	81.05	7.6	33.19	8.2	23.9	1.45
C4	11 Sep 2023	9	17.53	81.00	7.0	33.18	8.1	24.0	1.29
C4	11 Sep 2023	10	17.24	76.63	6.5	33.19	8.1	24.1	0.86
C4	11 Sep 2023	11	17.22	63.62	6.3	33.19	8.0	24.1	0.64
C4	18 Sep 2023	1	19.63	83.06	7.2	33.26	8.2	23.5	0.93
C4	18 Sep 2023	2	19.61	83.35	7.1	33.25	8.2	23.5	0.92
C4	18 Sep 2023	3	19.56	83.21	7.0	33.25	8.2	23.5	1.03
C4	18 Sep 2023	4	19.00	82.77	6.6	33.24	8.2	23.7	1.24
C4	18 Sep 2023	5	17.82	81.25	6.3	33.23	8.1	24.0	1.67
C4	18 Sep 2023	6	17.23	81.48	6.0	33.22	8.0	24.1	1.81
C4	18 Sep 2023	7	17.15	82.45	5.9	33.21	8.0	24.1	1.32
C4	18 Sep 2023	8	16.71	83.33	5.6	33.21	8.0	24.2	1.01
C4	18 Sep 2023	9	16.52	81.49	5.4	33.21	8.0	24.3	0.59
C4	18 Sep 2023	10	16.28	77.54	5.4	33.22	8.0	24.3	0.50
C4	18 Sep 2023	11	16.18	72.48	5.4	33.22	7.9	24.3	0.43
C4	18 Sep 2023	12	16.18	65.91	5.4	33.22	7.9	24.3	0.38
C4	25 Sep 2023	1	18.44	81.11	7.8	33.24	8.1	23.8	1.07
C4	25 Sep 2023	2	18.42	81.06	7.8	33.24	8.1	23.8	1.16
C4	25 Sep 2023	3	18.14	80.94	8.0	33.24	8.1	23.9	1.54
C4	25 Sep 2023	4	17.69	80.98	8.1	33.23	8.1	24.0	2.48
C4	25 Sep 2023	5	17.20	81.27	7.9	33.22	8.1	24.1	2.89
C4	25 Sep 2023	6	16.57	82.10	7.8	33.22	8.1	24.2	2.67
C4	25 Sep 2023	7	16.29	82.56	7.7	33.22	8.1	24.3	2.86
C4	25 Sep 2023	8	15.97	82.16	7.3	33.19	8.1	24.4	2.49
C4	25 Sep 2023	9	15.65	81.13	7.0	33.20	8.0	24.4	1.51
C4	25 Sep 2023	10	15.61	77.31	6.9	33.20	8.0	24.5	0.96
C5	05 Sep 2023	1	20.16	75.61	7.7	33.19	8.2	23.3	1.28
C5	05 Sep 2023	2	20.15	75.66	7.7	33.19	8.2	23.3	1.31
C5	05 Sep 2023	3	20.06	75.28	7.7	33.19	8.2	23.4	1.46
C5	05 Sep 2023	4	20.01	74.39	7.7	33.19	8.2	23.4	1.55
C5	05 Sep 2023	5	19.79	74.34	7.7	33.19	8.2	23.4	1.42
C5	05 Sep 2023	6	19.69	75.68	7.7	33.19	8.2	23.5	1.44
C5	05 Sep 2023	7	19.00	77.32	7.9	33.19	8.2	23.6	1.27
C5	05 Sep 2023	8	18.88	80.12	7.9	33.19	8.2	23.7	1.14
C5	05 Sep 2023	9	18.82	81.63	7.5	33.17	8.2	23.7	0.94
C5	05 Sep 2023	10	18.55	79.71	7.2	33.19	8.2	23.7	0.69
C5	05 Sep 2023	11	18.11	79.48	6.7	33.13	8.2	23.8	0.58
C5	11 Sep 2023	1	20.43	81.08	8.4	33.20	8.2	23.3	1.35
C5	11 Sep 2023	2	20.46	78.89	8.4	33.20	8.2	23.3	1.35
C5	11 Sep 2023	3	20.28	81.54	8.3	33.20	8.2	23.3	1.57
C5	11 Sep 2023	4	20.13	80.75	7.9	33.20	8.2	23.4	1.70
C5	11 Sep 2023	5	19.60	79.38	7.6	33.20	8.2	23.5	1.97
C5	11 Sep 2023	6	19.16	78.91	7.3	33.19	8.2	23.6	2.50
C5	11 Sep 2023	7	18.56	79.56	6.8	33.19	8.2	23.7	2.02
C5	11 Sep 2023	8	18.16	81.52	6.5	33.19	8.1	23.9	1.21
C5	18 Sep 2023	1	19.89	83.38	7.4	33.27	8.2	23.5	1.19
C5	18 Sep 2023	2	19.89	83.55	7.4	33.27	8.2	23.5	1.24
C5	18 Sep 2023	3	19.68	83.46	7.3	33.26	8.2	23.5	1.38
C5	18 Sep 2023	4	19.42	82.63	7.3	33.25	8.2	23.6	1.77

Station	Date	Depth (m)	Temp (°C)	XMS (‰)	DO (mg/L)	Sal (ppt)	pH	Dens (σ -t)	Chlor (μ g/L)
C5	18 Sep 2023	5	19.06	83.27	7.2	33.26	8.2	23.7	1.82
C5	18 Sep 2023	6	18.64	83.90	7.2	33.25	8.2	23.8	1.80
C5	18 Sep 2023	7	18.50	86.19	6.7	33.24	8.1	23.8	1.64
C5	18 Sep 2023	8	17.63	88.08	6.5	33.24	8.1	24.0	1.17
C5	18 Sep 2023	9	17.38	86.99	6.4	33.23	8.1	24.1	0.80
C5	18 Sep 2023	10	16.76	85.31	6.1	33.22	8.0	24.2	0.65
C5	18 Sep 2023	11	16.32	83.46	6.0	33.22	8.0	24.3	0.53
C5	25 Sep 2023	1	18.34	82.95	8.0	33.24	8.1	23.8	1.09
C5	25 Sep 2023	2	18.22	82.84	8.0	33.23	8.1	23.9	1.27
C5	25 Sep 2023	3	18.16	83.08	8.1	33.23	8.1	23.9	1.59
C5	25 Sep 2023	4	18.11	83.27	8.1	33.23	8.1	23.9	1.84
C5	25 Sep 2023	5	17.97	83.16	8.1	33.22	8.1	23.9	1.92
C5	25 Sep 2023	6	17.90	83.91	8.1	33.22	8.1	23.9	1.98
C5	25 Sep 2023	7	17.84	84.39	7.9	33.21	8.1	23.9	2.04
C5	25 Sep 2023	8	17.46	83.93	7.6	33.20	8.1	24.0	2.39
C5	25 Sep 2023	9	16.58	83.27	7.3	33.21	8.1	24.2	2.09
C5	25 Sep 2023	10	16.35	83.83	7.4	33.23	8.0	24.3	1.47
C6	05 Sep 2023	1	20.43	75.87	9.1	33.19	8.3	23.3	2.68
C6	05 Sep 2023	2	20.42	75.46	9.0	33.19	8.3	23.3	3.06
C6	05 Sep 2023	3	20.26	75.16	8.9	33.18	8.3	23.3	3.81
C6	05 Sep 2023	4	19.56	74.57	9.1	33.17	8.3	23.5	4.78
C6	05 Sep 2023	5	18.93	74.04	9.1	33.16	8.3	23.6	3.66
C6	05 Sep 2023	6	18.66	77.60	9.1	33.17	8.3	23.7	2.84
C6	05 Sep 2023	7	18.50	79.80	8.8	33.16	8.3	23.7	1.95
C6	05 Sep 2023	8	18.07	81.08	8.0	33.16	8.2	23.8	1.29
C6	05 Sep 2023	9	17.66	81.49	7.5	33.18	8.2	24.0	0.84
C6	11 Sep 2023	1	20.38	82.34	8.7	33.20	8.3	23.3	1.74
C6	11 Sep 2023	2	20.13	80.04	8.8	33.21	8.3	23.4	2.98
C6	11 Sep 2023	3	20.01	77.90	8.8	33.21	8.3	23.4	3.69
C6	11 Sep 2023	4	19.85	77.79	8.8	33.20	8.3	23.4	4.27
C6	11 Sep 2023	5	19.54	78.63	8.8	33.20	8.3	23.5	3.95
C6	11 Sep 2023	6	19.39	79.14	8.7	33.20	8.2	23.5	3.72
C6	11 Sep 2023	7	19.24	79.29	8.5	33.20	8.2	23.6	3.53
C6	11 Sep 2023	8	18.92	79.36	8.3	33.20	8.2	23.7	3.29
C6	11 Sep 2023	9	18.82	80.85	8.0	33.18	8.2	23.7	2.77
C6	18 Sep 2023	1	19.74	76.73	7.6	33.28	8.2	23.5	0.97
C6	18 Sep 2023	2	19.73	84.16	7.6	33.29	8.2	23.5	1.08
C6	18 Sep 2023	3	19.72	85.86	7.6	33.29	8.2	23.5	1.14
C6	18 Sep 2023	4	19.70	84.97	7.6	33.29	8.2	23.5	1.30
C6	18 Sep 2023	5	19.67	85.91	7.6	33.29	8.2	23.5	1.42
C6	18 Sep 2023	6	19.58	85.87	7.6	33.29	8.2	23.6	1.50
C6	18 Sep 2023	7	19.55	85.96	7.5	33.28	8.2	23.6	1.55
C6	18 Sep 2023	8	19.26	86.16	7.3	33.27	8.2	23.6	1.56
C6	18 Sep 2023	9	18.52	86.85	7.1	33.26	8.1	23.8	1.37
C6	18 Sep 2023	10	18.06	86.83	6.8	33.28	8.1	23.9	1.08
C6	25 Sep 2023	1	18.46	81.14	8.2	33.24	8.1	23.8	1.29
C6	25 Sep 2023	2	18.28	78.31	8.2	33.24	8.1	23.9	2.12
C6	25 Sep 2023	3	18.03	78.12	8.1	33.23	8.1	23.9	3.38
C6	25 Sep 2023	4	17.70	77.99	8.1	33.23	8.1	24.0	3.65
C6	25 Sep 2023	5	17.57	79.30	8.1	33.22	8.1	24.0	3.94
C6	25 Sep 2023	6	17.53	80.12	8.1	33.22	8.1	24.0	4.17
C6	25 Sep 2023	7	17.42	80.11	8.1	33.22	8.1	24.0	4.06
C6	25 Sep 2023	8	17.22	81.19	7.8	33.22	8.1	24.1	3.07
C6	25 Sep 2023	9	16.74	83.36	7.1	33.20	8.1	24.2	2.00
C7	05 Sep 2023	1	19.99	73.24	9.9	33.18	8.4	23.4	6.60

Station	Date	Depth (m)	Temp (°C)	XMS (‰)	DO (mg/L)	Sal (ppt)	pH	Dens (σ -t)	Chlor (μ g/L)
C7	05 Sep 2023	2	19.57	74.83	9.9	33.19	8.3	23.5	6.07
C7	05 Sep 2023	3	19.41	75.76	9.8	33.17	8.3	23.5	5.10
C7	05 Sep 2023	4	19.29	78.47	9.7	33.17	8.3	23.6	4.55
C7	05 Sep 2023	5	19.20	79.34	9.6	33.17	8.3	23.6	4.22
C7	05 Sep 2023	6	19.12	79.99	9.5	33.17	8.3	23.6	3.89
C7	05 Sep 2023	7	18.61	80.93	9.2	33.18	8.3	23.7	3.58
C7	05 Sep 2023	8	18.21	81.20	9.2	33.17	8.3	23.8	3.34
C7	05 Sep 2023	9	18.11	81.91	9.1	33.16	8.3	23.8	3.06
C7	05 Sep 2023	10	17.55	82.86	8.5	33.17	8.2	24.0	2.75
C7	05 Sep 2023	11	16.83	83.33	8.2	33.18	8.2	24.2	2.85
C7	05 Sep 2023	12	16.36	83.69	8.0	33.18	8.2	24.3	2.46
C7	05 Sep 2023	13	16.03	85.74	7.8	33.18	8.2	24.3	1.76
C7	05 Sep 2023	14	15.77	86.27	7.6	33.17	8.1	24.4	1.28
C7	05 Sep 2023	15	15.67	86.79	7.5	33.18	8.1	24.4	0.90
C7	05 Sep 2023	16	15.68	87.04	7.5	33.18	8.1	24.4	0.81
C7	05 Sep 2023	17	15.66	86.80	7.5	33.18	8.1	24.4	0.71
C7	05 Sep 2023	18	15.66	86.77	7.5	33.18	8.1	24.4	0.67
C7	11 Sep 2023	1	20.11	81.79	9.1	33.22	8.3	23.4	1.44
C7	11 Sep 2023	2	20.07	82.19	9.1	33.22	8.3	23.4	1.53
C7	11 Sep 2023	3	19.73	82.62	9.1	33.21	8.3	23.5	1.70
C7	11 Sep 2023	4	19.53	83.15	9.1	33.22	8.3	23.5	2.08
C7	11 Sep 2023	5	19.48	83.14	9.1	33.22	8.3	23.5	2.12
C7	11 Sep 2023	6	19.40	83.19	9.1	33.22	8.3	23.6	2.29
C7	11 Sep 2023	7	19.38	83.07	9.1	33.22	8.3	23.6	2.49
C7	11 Sep 2023	8	19.37	83.09	9.1	33.22	8.3	23.6	2.42
C7	11 Sep 2023	9	19.31	82.89	9.1	33.22	8.3	23.6	2.59
C7	11 Sep 2023	10	19.29	82.95	9.1	33.21	8.3	23.6	2.69
C7	11 Sep 2023	11	19.15	82.82	8.9	33.21	8.3	23.6	2.74
C7	11 Sep 2023	12	19.14	82.38	8.9	33.21	8.3	23.6	2.89
C7	11 Sep 2023	13	19.03	82.09	8.8	33.21	8.2	23.6	2.89
C7	11 Sep 2023	14	18.96	82.24	8.7	33.21	8.2	23.7	2.95
C7	11 Sep 2023	15	18.48	82.77	7.8	33.16	8.2	23.7	2.57
C7	11 Sep 2023	16	16.49	85.27	7.1	33.19	8.1	24.2	1.36
C7	11 Sep 2023	17	16.18	86.82	7.1	33.17	8.1	24.3	0.63
C7	11 Sep 2023	18	16.03	87.18	7.2	33.17	8.1	24.3	0.48
C7	18 Sep 2023	1	20.92	86.61	8.0	33.33	8.3	23.2	0.99
C7	18 Sep 2023	2	20.92	86.36	8.0	33.33	8.3	23.2	0.98
C7	18 Sep 2023	3	20.91	86.59	8.0	33.33	8.3	23.2	1.04
C7	18 Sep 2023	4	20.87	86.75	8.0	33.32	8.3	23.3	1.07
C7	18 Sep 2023	5	20.34	86.41	7.7	33.31	8.3	23.4	1.16
C7	18 Sep 2023	6	19.43	87.08	7.7	33.30	8.2	23.6	1.09
C7	18 Sep 2023	7	19.22	89.08	7.7	33.28	8.2	23.7	0.97
C7	18 Sep 2023	8	18.75	89.50	7.8	33.27	8.2	23.8	0.86
C7	18 Sep 2023	9	18.67	89.88	7.9	33.26	8.2	23.8	0.80
C7	18 Sep 2023	10	18.52	90.12	7.9	33.25	8.2	23.8	0.76
C7	18 Sep 2023	11	18.29	90.21	7.9	33.24	8.2	23.9	0.74
C7	18 Sep 2023	12	18.14	90.37	8.0	33.24	8.2	23.9	0.74
C7	18 Sep 2023	13	18.06	90.62	8.0	33.23	8.2	23.9	0.71
C7	18 Sep 2023	14	17.99	90.73	7.9	33.23	8.2	23.9	0.71
C7	18 Sep 2023	15	17.50	90.73	7.7	33.22	8.2	24.0	0.70
C7	18 Sep 2023	16	17.06	90.58	7.6	33.22	8.1	24.1	0.67
C7	18 Sep 2023	17	16.64	90.02	7.3	33.23	8.1	24.2	0.56
C7	18 Sep 2023	18	16.48	89.81	7.3	33.22	8.1	24.3	0.45
C7	25 Sep 2023	1	18.47	87.38	8.2	33.23	8.1	23.8	0.76
C7	25 Sep 2023	2	18.45	87.14	8.1	33.23	8.1	23.8	0.79
C7	25 Sep 2023	3	17.97	87.11	8.1	33.22	8.1	23.9	1.06
C7	25 Sep 2023	4	17.56	87.13	8.1	33.20	8.1	24.0	1.64
C7	25 Sep 2023	5	17.14	85.68	8.1	33.21	8.1	24.1	2.15

Station	Date	Depth (m)	Temp (°C)	XMS (‰)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (µg/L)
C7	25 Sep 2023	6	17.03	84.13	8.1	33.20	8.1	24.1	2.74
C7	25 Sep 2023	7	16.96	83.60	8.1	33.20	8.1	24.1	3.06
C7	25 Sep 2023	8	16.87	83.04	8.0	33.20	8.1	24.2	3.64
C7	25 Sep 2023	9	16.68	82.49	7.9	33.19	8.1	24.2	4.20
C7	25 Sep 2023	10	16.51	81.66	8.0	33.20	8.1	24.2	4.83
C7	25 Sep 2023	11	16.43	81.27	7.8	33.20	8.1	24.3	4.60
C7	25 Sep 2023	12	16.33	81.58	7.6	33.20	8.1	24.3	4.25
C7	25 Sep 2023	13	16.13	82.68	7.3	33.20	8.1	24.3	3.29
C7	25 Sep 2023	14	15.70	84.58	7.0	33.21	8.0	24.4	2.30
C7	25 Sep 2023	15	15.18	85.90	6.8	33.20	8.0	24.5	1.63
C7	25 Sep 2023	16	14.99	88.67	6.8	33.19	8.0	24.6	1.18
C7	25 Sep 2023	17	14.91	89.11	6.9	33.19	8.0	24.6	0.71
C7	25 Sep 2023	18	14.88	89.48	6.9	33.19	8.0	24.6	0.51
C8	05 Sep 2023	1	21.07	83.40	9.8	33.20	8.4	23.1	1.41
C8	05 Sep 2023	2	20.99	83.03	9.7	33.18	8.4	23.1	1.89
C8	05 Sep 2023	3	19.60	78.43	9.8	33.18	8.4	23.5	4.60
C8	05 Sep 2023	4	19.26	74.98	9.7	33.17	8.3	23.6	5.06
C8	05 Sep 2023	5	18.97	76.44	9.4	33.16	8.3	23.6	4.32
C8	05 Sep 2023	6	18.31	79.80	9.1	33.17	8.3	23.8	3.39
C8	05 Sep 2023	7	18.27	82.35	9.0	33.16	8.3	23.8	2.80
C8	05 Sep 2023	8	17.65	83.09	8.7	33.17	8.2	24.0	2.52
C8	05 Sep 2023	9	17.55	83.28	8.5	33.17	8.2	24.0	2.28
C8	05 Sep 2023	10	17.31	83.58	8.3	33.16	8.2	24.0	2.42
C8	05 Sep 2023	11	16.70	83.12	8.3	33.17	8.2	24.2	3.12
C8	05 Sep 2023	12	16.37	82.52	8.3	33.16	8.2	24.2	3.41
C8	05 Sep 2023	13	16.06	83.35	8.3	33.16	8.2	24.3	2.93
C8	05 Sep 2023	14	15.90	84.31	8.3	33.16	8.2	24.4	2.57
C8	05 Sep 2023	15	15.88	84.61	8.2	33.16	8.2	24.4	2.33
C8	05 Sep 2023	16	15.64	85.15	8.0	33.17	8.2	24.4	1.86
C8	05 Sep 2023	17	15.62	86.05	7.8	33.17	8.1	24.4	1.42
C8	05 Sep 2023	18	15.57	86.22	7.7	33.17	8.1	24.4	1.07
C8	11 Sep 2023	1	20.62	57.85	9.0	33.19	8.3	23.2	2.05
C8	11 Sep 2023	2	20.46	77.76	8.9	33.21	8.3	23.3	2.16
C8	11 Sep 2023	3	20.05	79.39	8.8	33.20	8.3	23.4	2.83
C8	11 Sep 2023	4	19.62	77.37	8.8	33.21	8.3	23.5	3.69
C8	11 Sep 2023	5	19.58	77.90	8.7	33.19	8.3	23.5	3.96
C8	11 Sep 2023	6	19.16	79.74	8.7	33.20	8.2	23.6	3.50
C8	11 Sep 2023	7	19.10	81.04	8.7	33.19	8.2	23.6	3.17
C8	11 Sep 2023	8	18.69	81.71	8.7	33.20	8.2	23.7	2.76
C8	11 Sep 2023	9	18.68	82.34	8.6	33.19	8.2	23.7	2.57
C8	11 Sep 2023	10	18.40	82.28	8.4	33.19	8.2	23.8	2.56
C8	11 Sep 2023	11	18.28	82.76	8.3	33.19	8.2	23.8	2.69
C8	11 Sep 2023	12	18.18	82.77	8.2	33.19	8.2	23.8	2.78
C8	11 Sep 2023	13	17.96	82.44	8.1	33.19	8.2	23.9	3.19
C8	11 Sep 2023	14	17.85	82.06	7.9	33.19	8.2	23.9	3.48
C8	11 Sep 2023	15	17.52	81.67	7.7	33.19	8.2	24.0	3.54
C8	11 Sep 2023	16	17.41	82.65	7.5	33.18	8.2	24.0	3.25
C8	11 Sep 2023	17	16.67	84.53	7.4	33.19	8.1	24.2	2.32
C8	11 Sep 2023	18	16.49	86.30	7.2	33.17	8.1	24.2	1.83
C8	11 Sep 2023	19	15.89	86.96	7.3	33.18	8.1	24.4	1.35
C8	18 Sep 2023	1	21.08	85.46	7.8	33.33	8.3	23.2	0.73
C8	18 Sep 2023	2	21.07	76.79	7.8	33.33	8.3	23.2	0.74
C8	18 Sep 2023	3	21.06	88.57	7.8	33.33	8.3	23.2	0.75
C8	18 Sep 2023	4	21.03	88.62	7.8	33.33	8.3	23.2	0.79
C8	18 Sep 2023	5	20.94	88.48	7.8	33.33	8.3	23.2	0.85
C8	18 Sep 2023	6	20.67	88.13	7.8	33.33	8.3	23.3	0.94
C8	18 Sep 2023	7	19.82	88.39	7.9	33.32	8.2	23.5	0.95
C8	18 Sep 2023	8	19.53	89.49	8.0	33.29	8.2	23.6	0.95

Station	Date	Depth (m)	Temp (°C)	XMS (‰)	DO (mg/L)	Sal (ppt)	pH	Dens (σ -t)	Chlor (μ g/L)
C8	18 Sep 2023	9	19.24	89.91	8.1	33.27	8.2	23.6	0.96
C8	18 Sep 2023	10	19.01	89.96	8.0	33.27	8.2	23.7	0.88
C8	18 Sep 2023	11	18.88	90.06	8.0	33.27	8.2	23.7	0.90
C8	18 Sep 2023	12	18.79	90.13	7.9	33.26	8.2	23.7	0.85
C8	18 Sep 2023	13	18.62	90.21	8.0	33.27	8.2	23.8	0.88
C8	18 Sep 2023	14	18.66	90.22	7.9	33.26	8.2	23.8	0.90
C8	18 Sep 2023	15	18.41	90.28	7.8	33.27	8.2	23.8	0.90
C8	18 Sep 2023	16	18.33	90.16	7.8	33.26	8.2	23.9	0.83
C8	18 Sep 2023	17	18.17	90.00	7.7	33.26	8.2	23.9	0.87
C8	18 Sep 2023	18	18.00	90.11	7.7	33.25	8.2	23.9	0.87
C8	18 Sep 2023	19	17.67	90.08	7.7	33.25	8.2	24.0	0.80
C8	18 Sep 2023	20	17.58	90.17	7.6	33.25	8.2	24.0	0.77
C8	25 Sep 2023	1	18.31	87.36	8.1	33.23	8.1	23.8	0.70
C8	25 Sep 2023	2	18.31	86.85	8.0	33.23	8.1	23.8	0.74
C8	25 Sep 2023	3	17.79	87.30	8.0	33.21	8.1	23.9	0.88
C8	25 Sep 2023	4	17.06	87.11	8.1	33.21	8.1	24.1	1.06
C8	25 Sep 2023	5	16.92	86.63	8.2	33.19	8.1	24.1	1.25
C8	25 Sep 2023	6	16.72	86.45	8.2	33.19	8.1	24.2	1.36
C8	25 Sep 2023	7	16.56	86.17	8.2	33.18	8.1	24.2	1.63
C8	25 Sep 2023	8	16.40	86.00	8.1	33.18	8.1	24.3	1.90
C8	25 Sep 2023	9	16.28	85.72	8.0	33.18	8.1	24.3	2.20
C8	25 Sep 2023	10	16.17	84.97	7.9	33.19	8.1	24.3	2.45
C8	25 Sep 2023	11	16.05	84.47	7.8	33.19	8.1	24.3	2.52
C8	25 Sep 2023	12	15.93	84.54	7.8	33.19	8.1	24.4	2.65
C8	25 Sep 2023	13	15.92	84.71	7.8	33.19	8.1	24.4	2.65
C8	25 Sep 2023	14	15.93	84.78	7.8	33.19	8.1	24.4	2.78
C8	25 Sep 2023	15	15.79	84.79	7.5	33.17	8.1	24.4	2.72
C8	25 Sep 2023	16	15.10	85.77	7.4	33.19	8.0	24.6	2.11
C8	25 Sep 2023	17	15.07	88.56	7.3	33.16	8.0	24.5	1.59
C8	25 Sep 2023	18	14.67	89.52	7.3	33.17	8.0	24.6	1.13
C8	25 Sep 2023	19	14.57	89.83	7.3	33.17	8.0	24.7	0.89

NA = not available

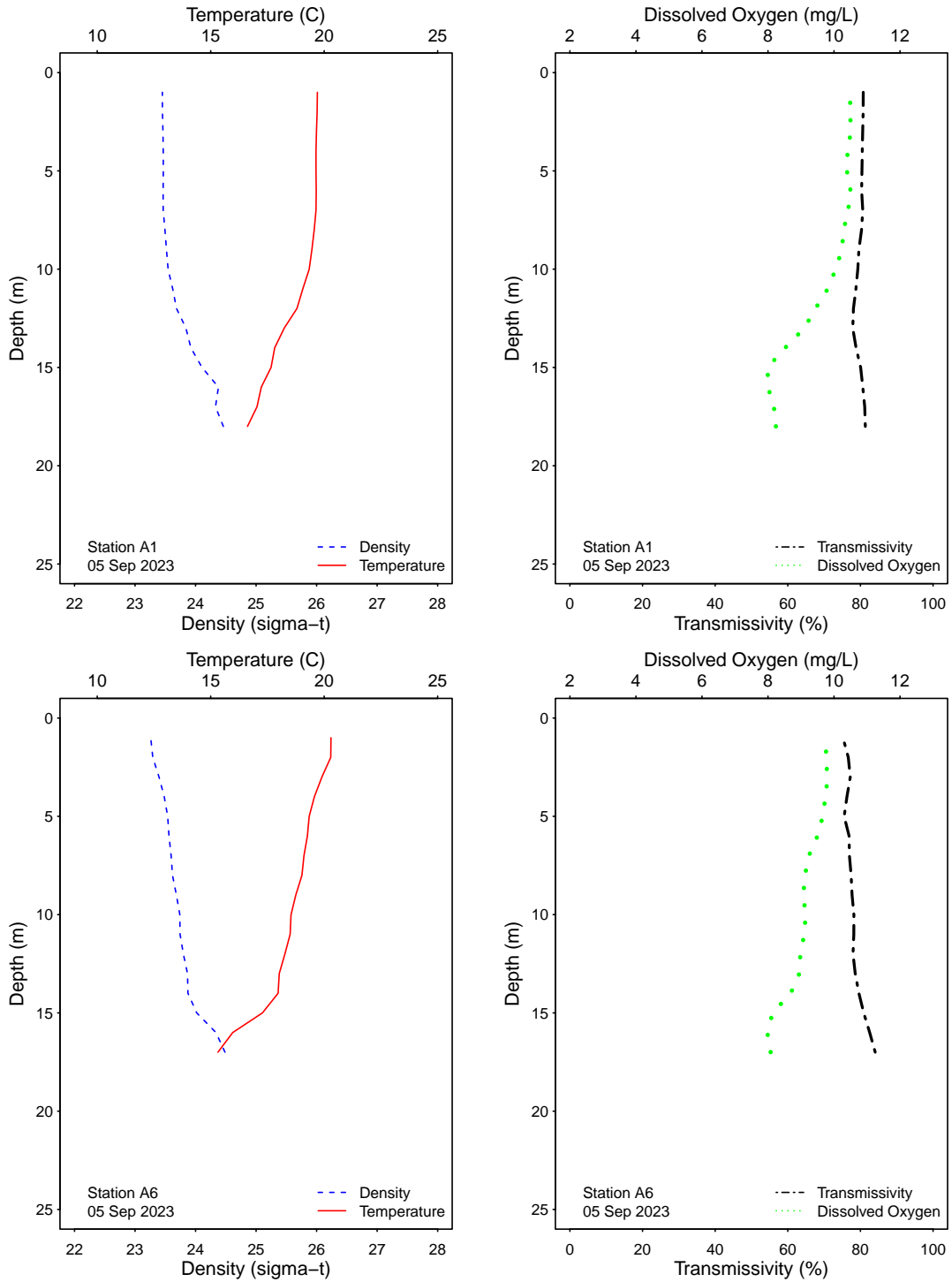


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

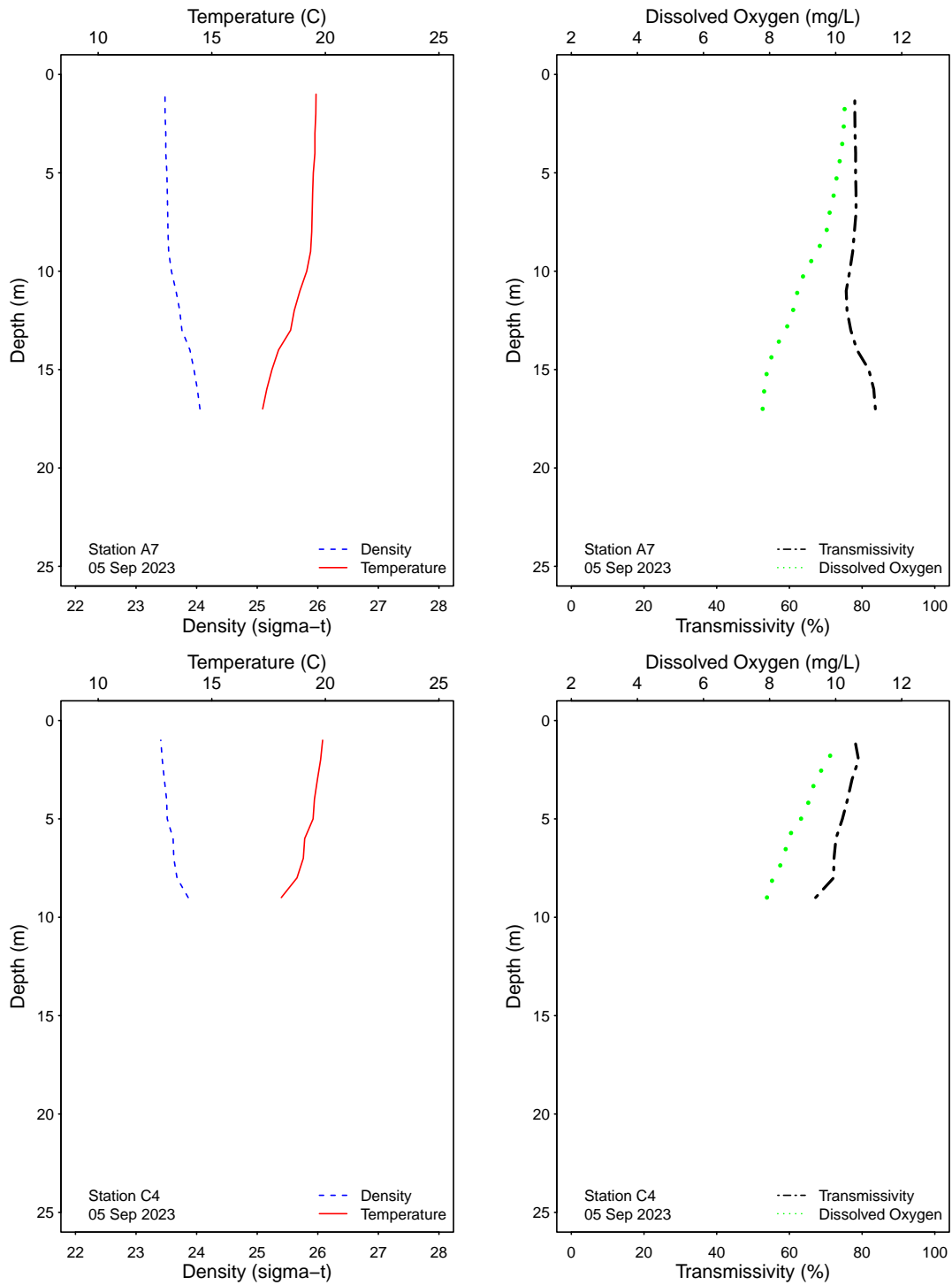


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

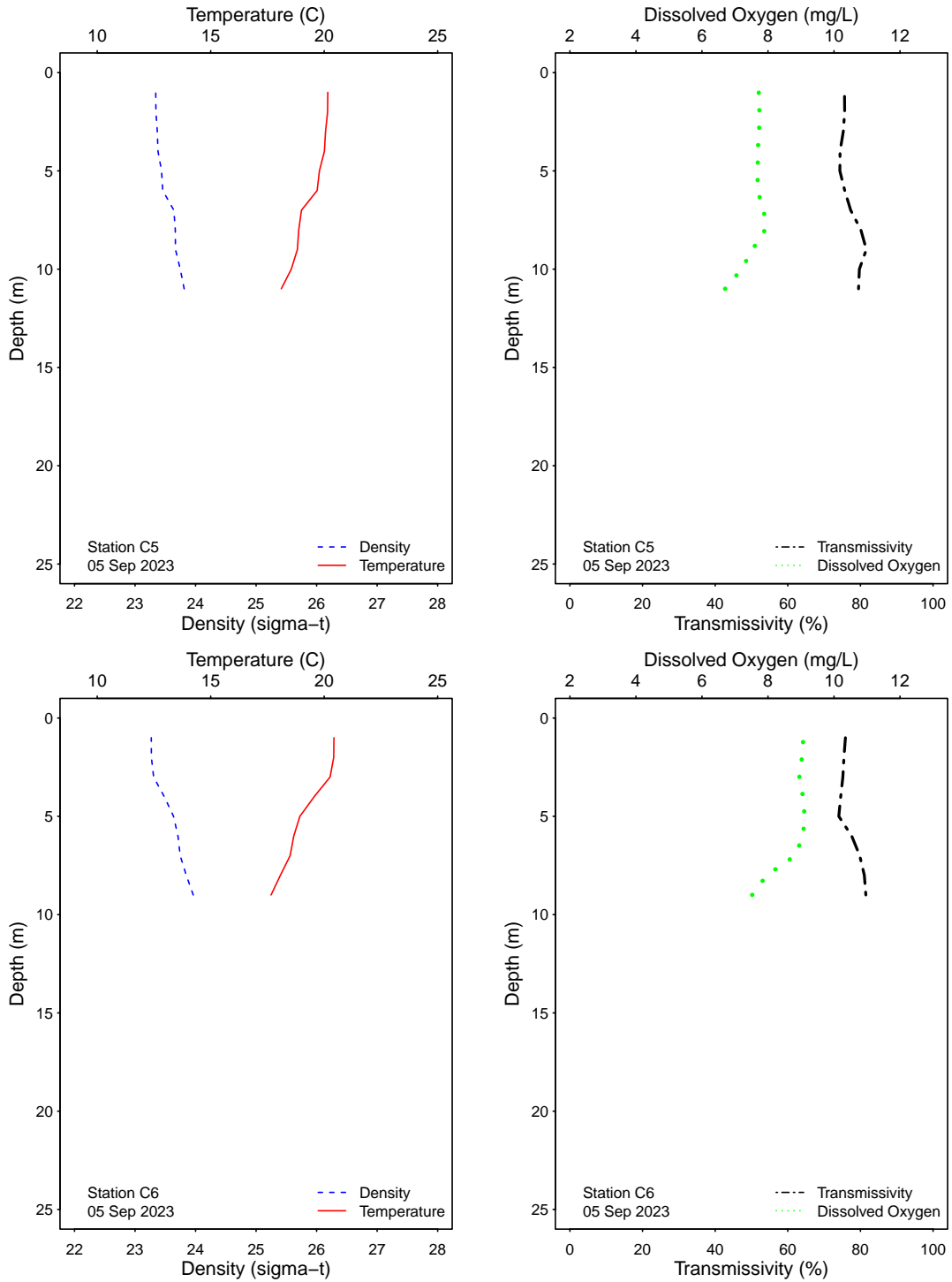


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

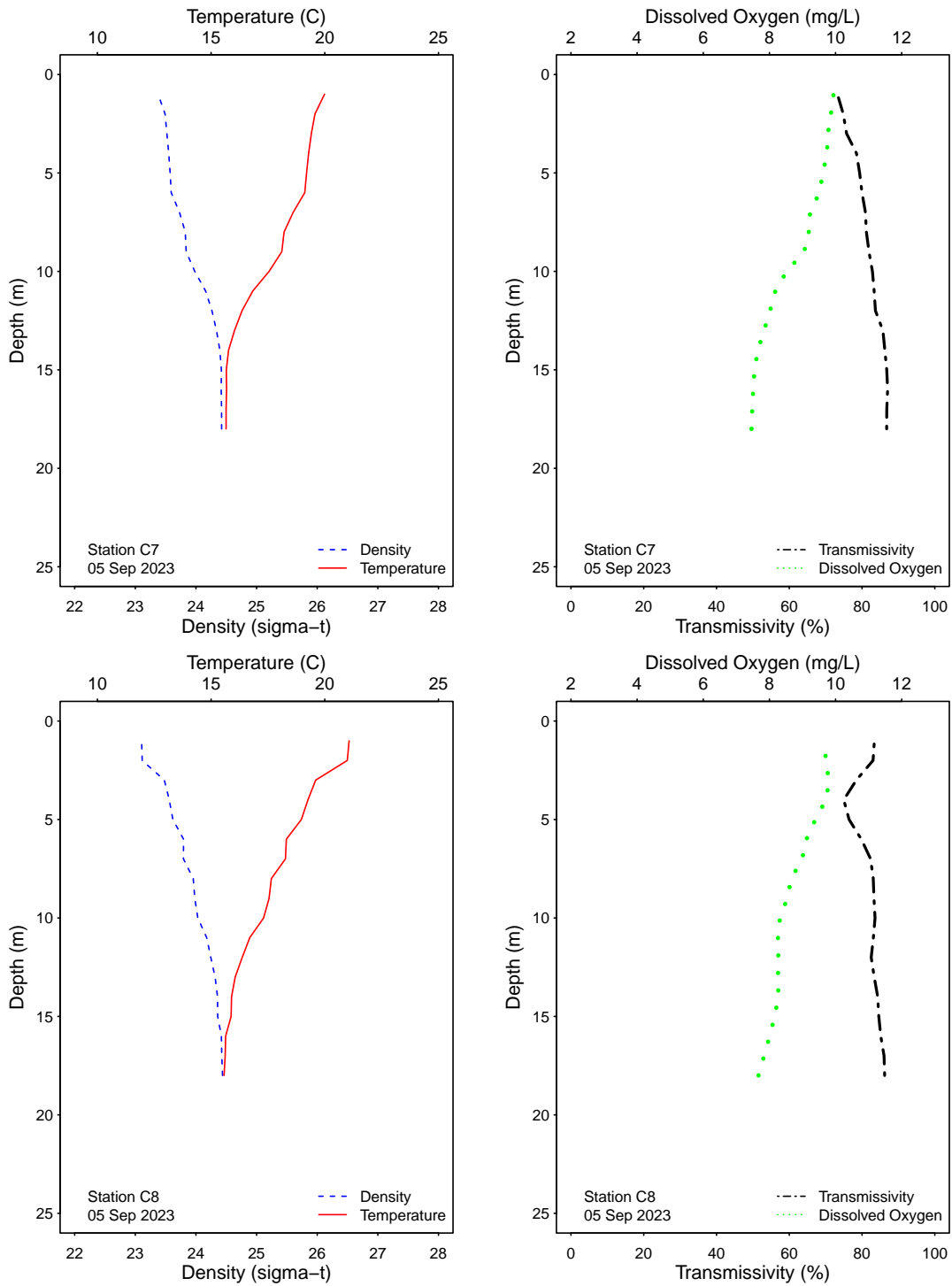


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

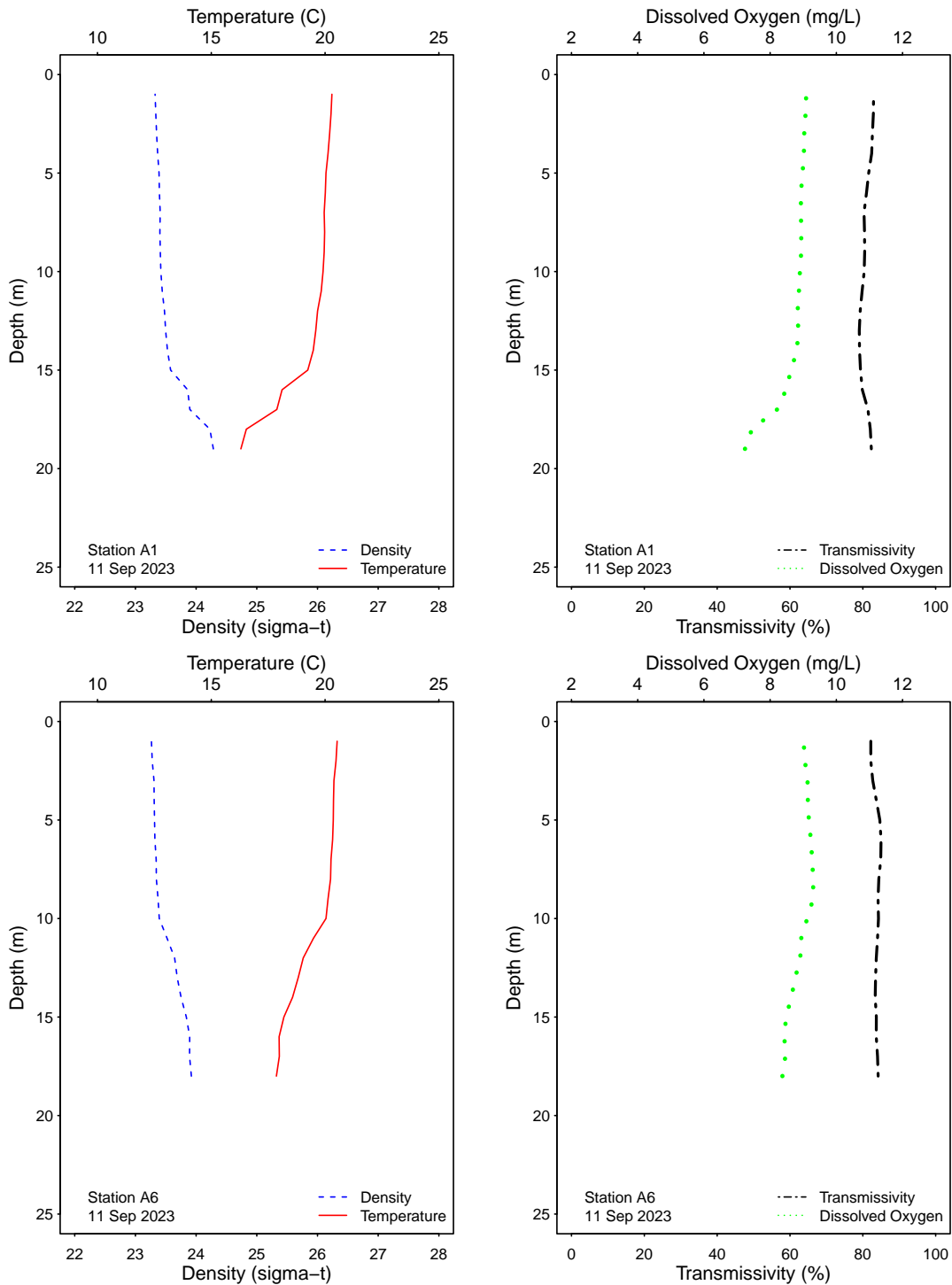


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

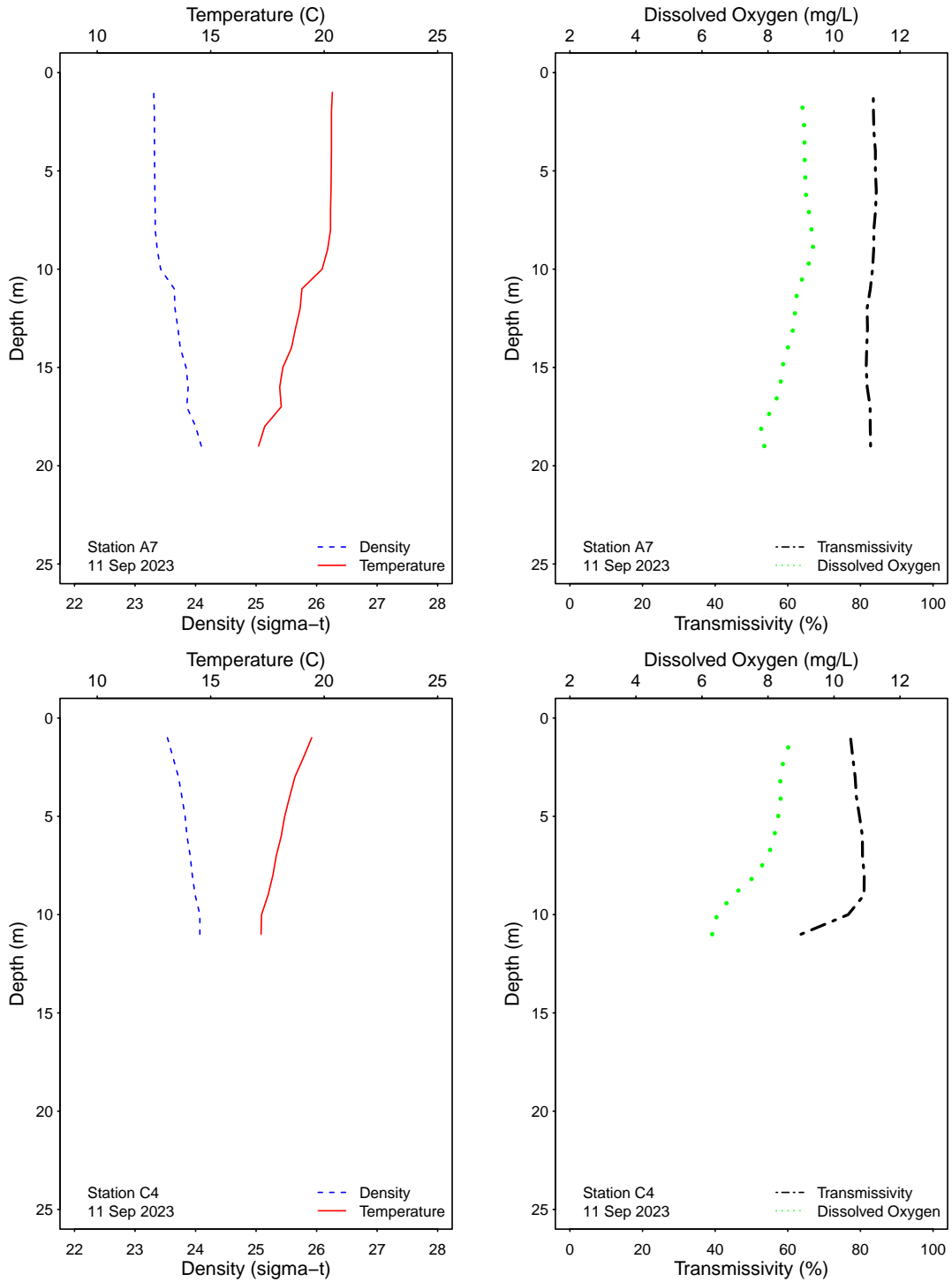


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

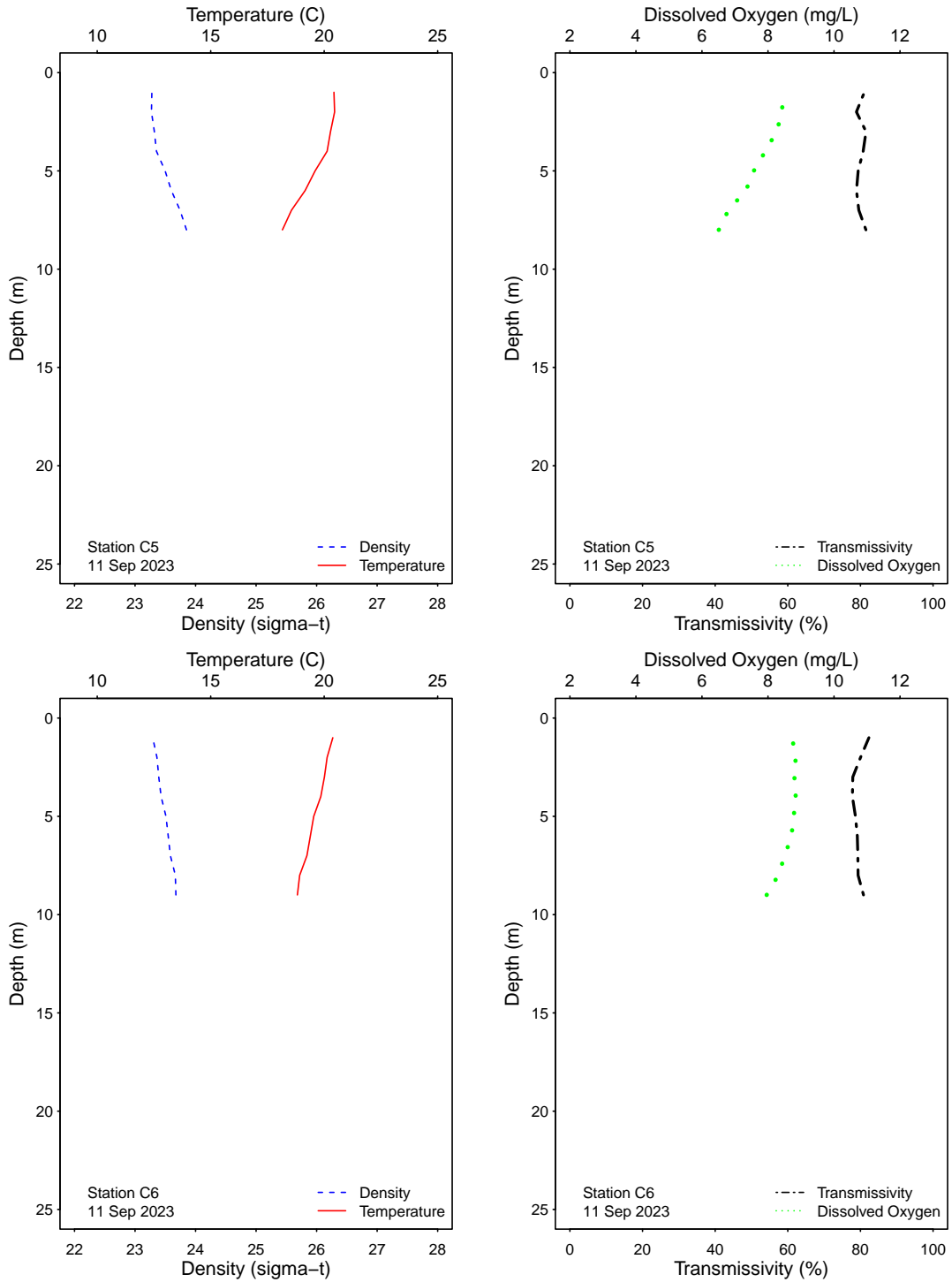


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

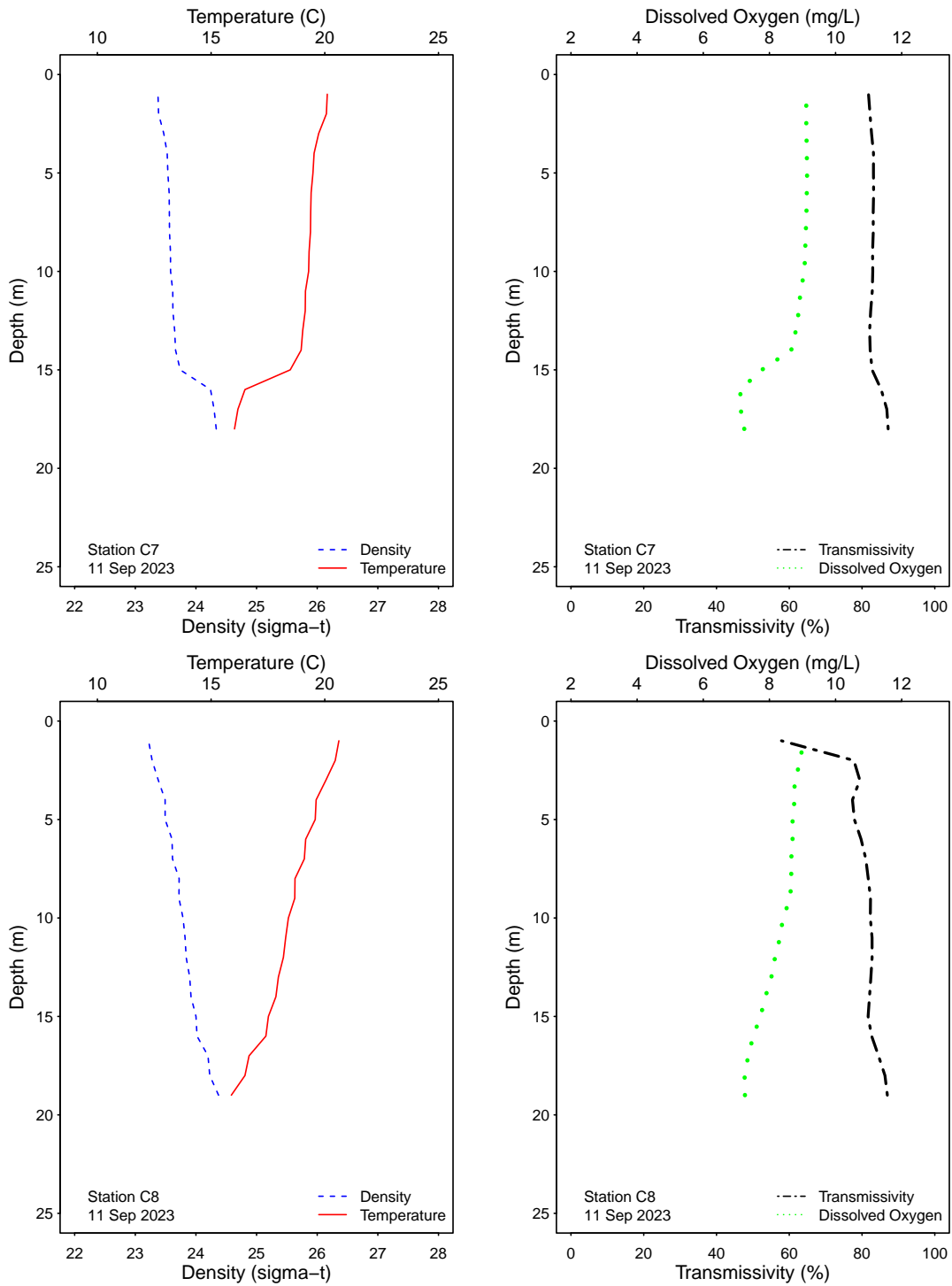


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

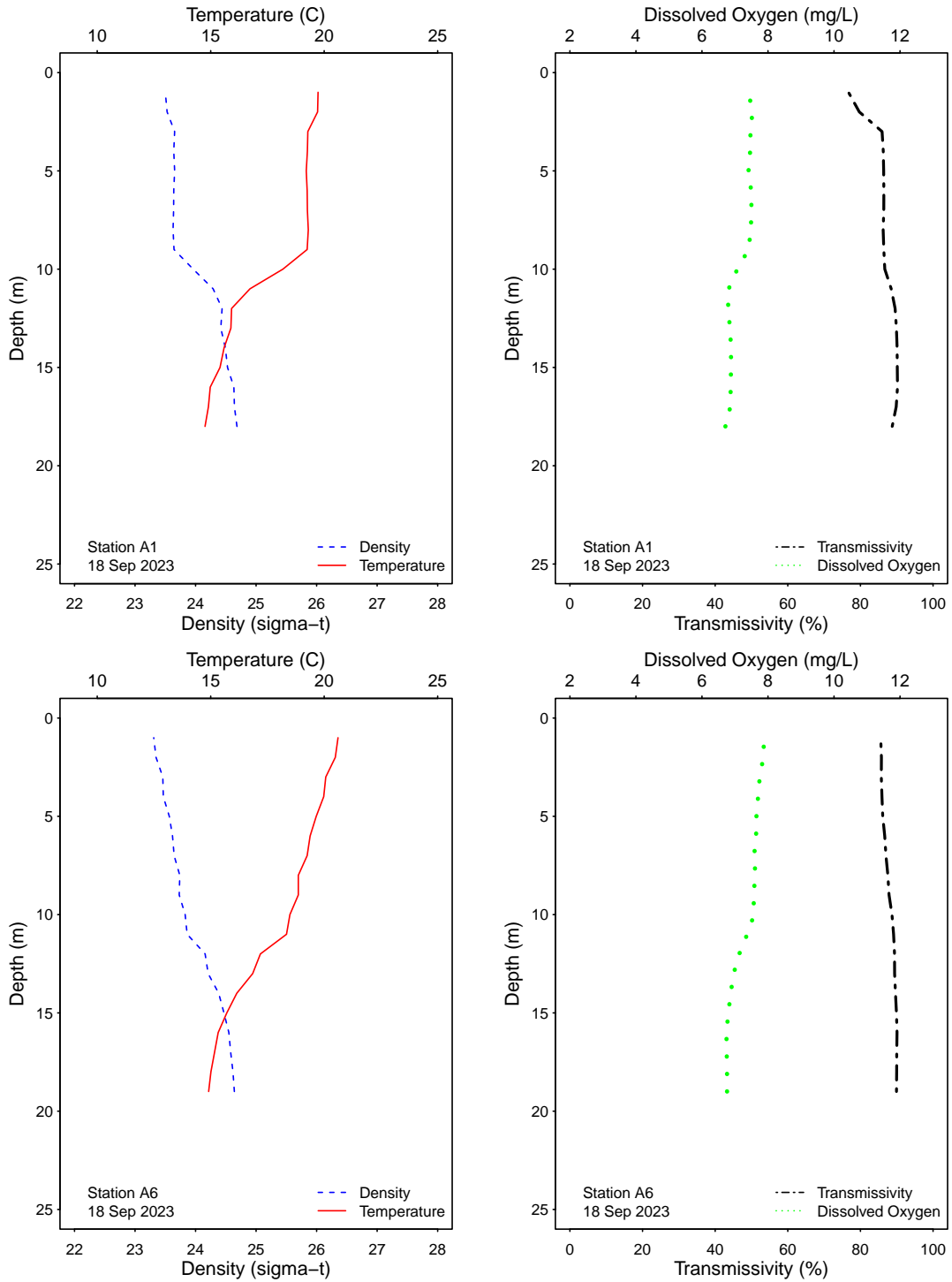


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

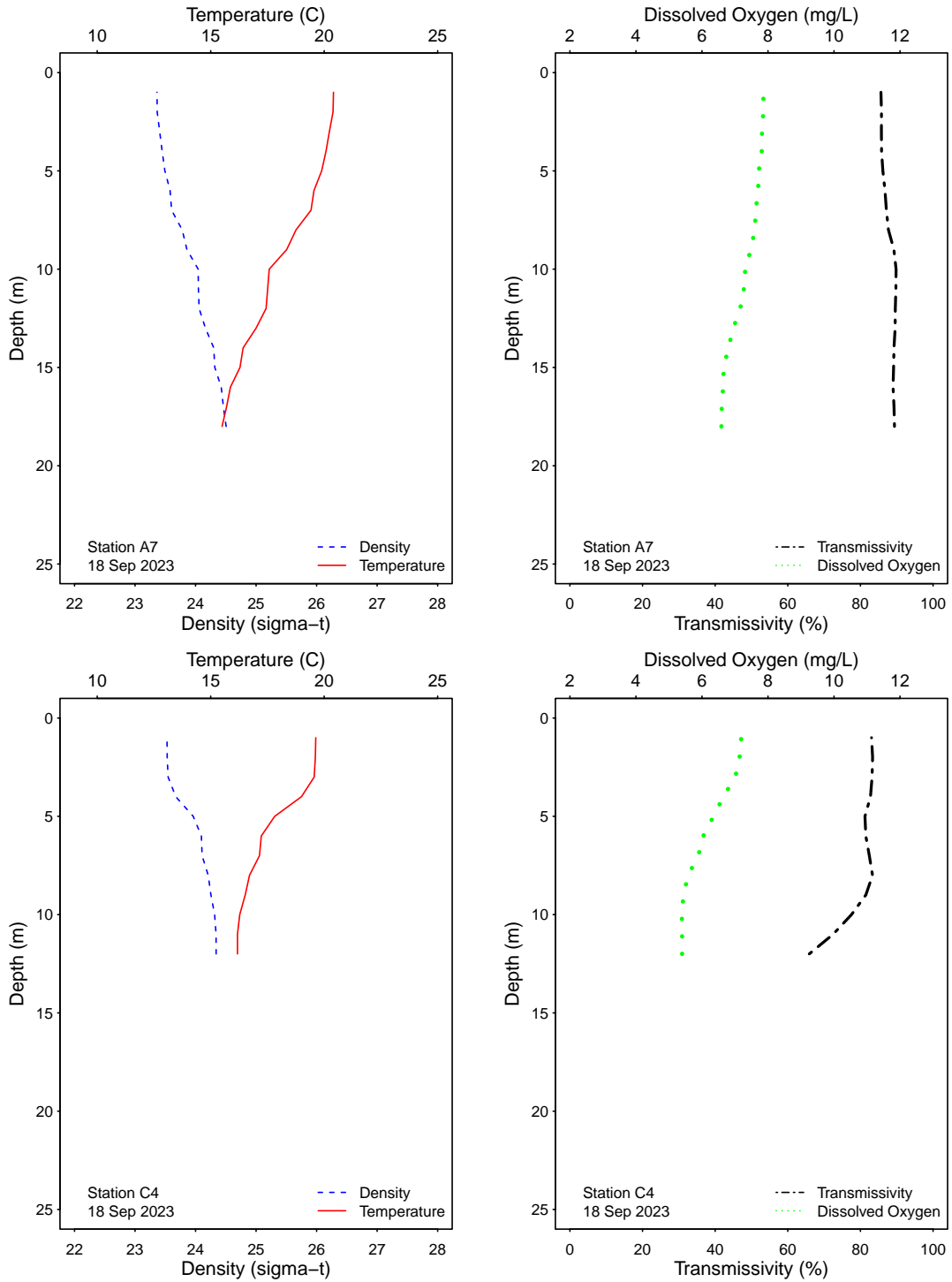


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

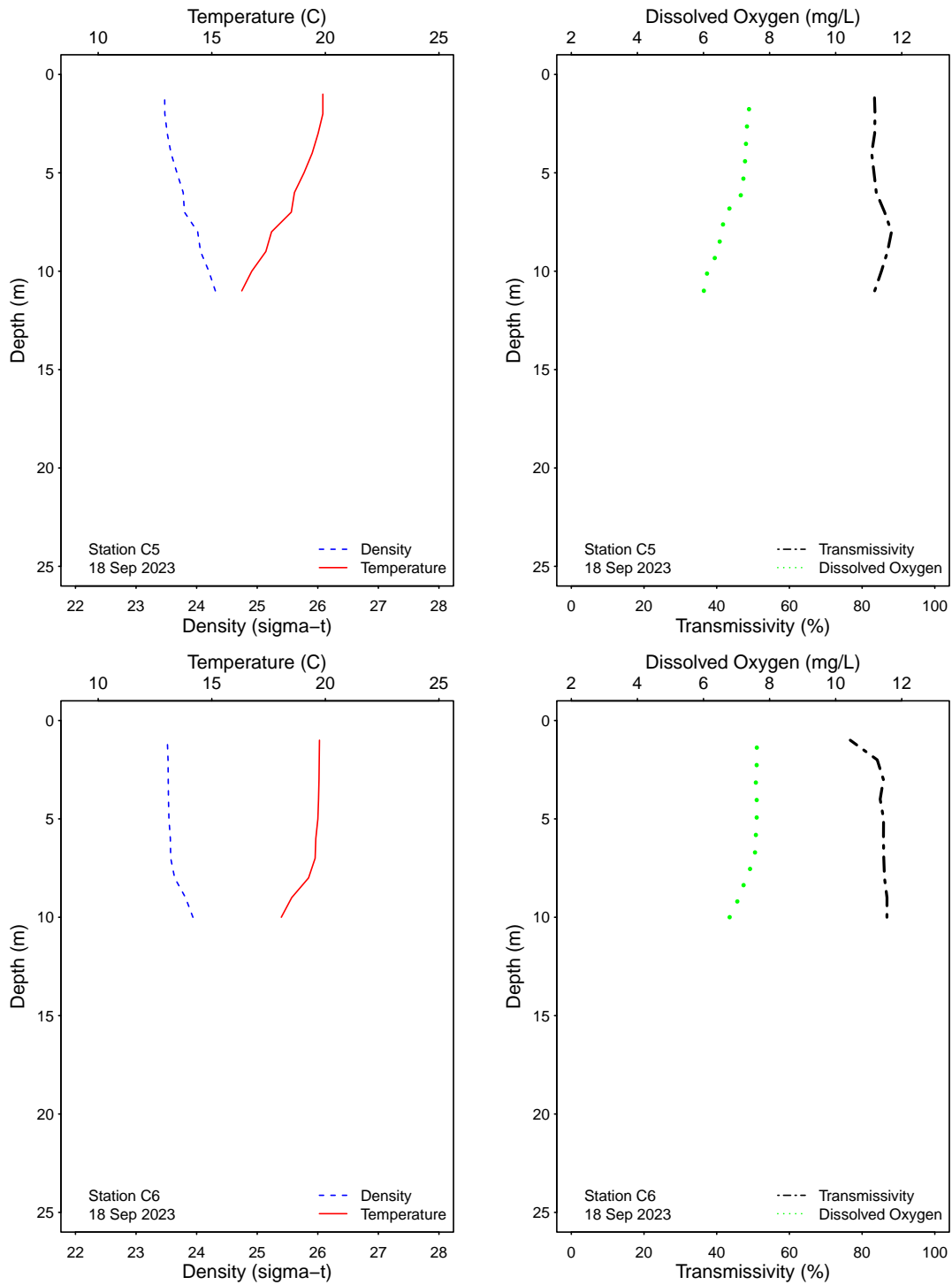


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

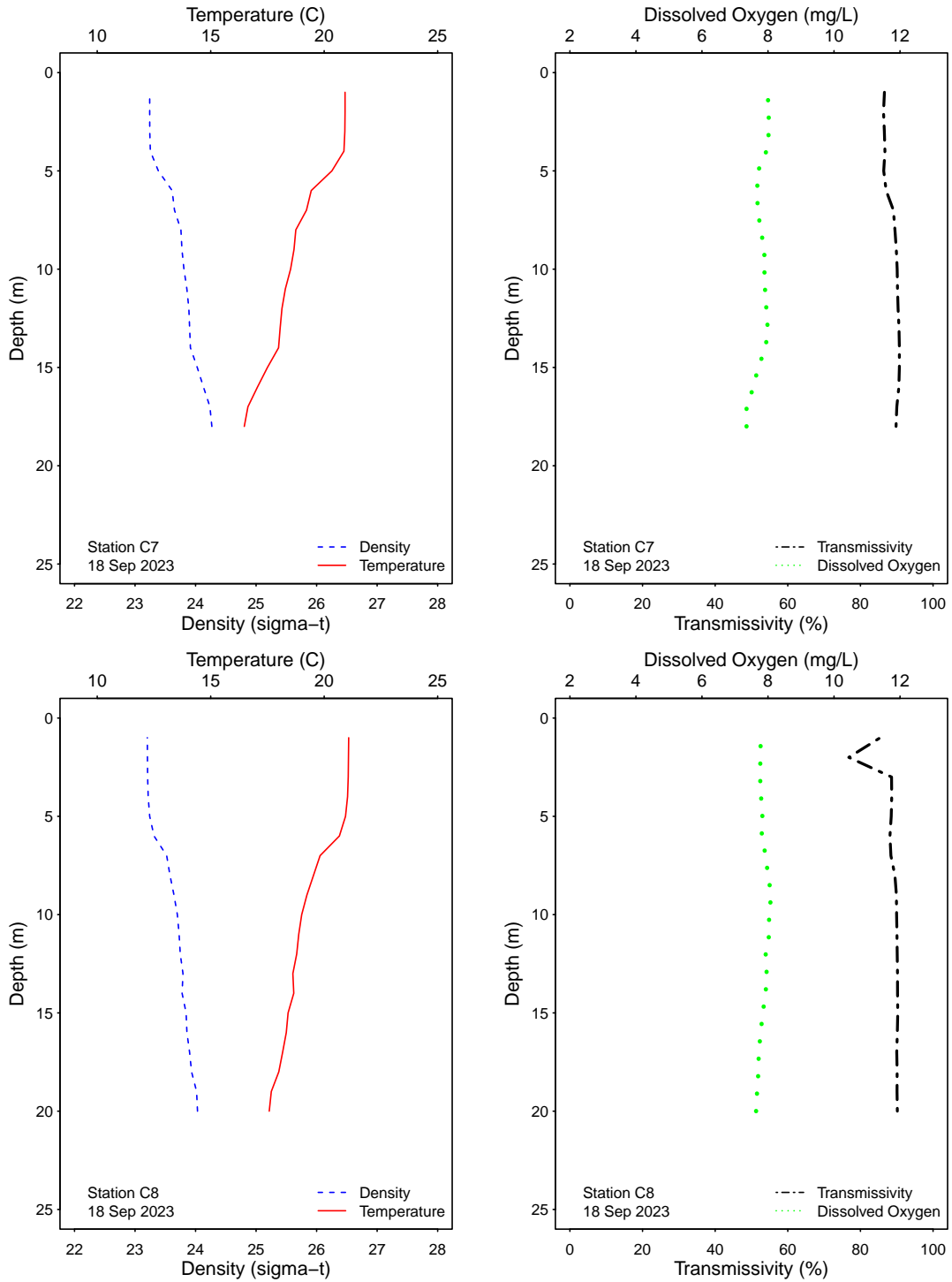


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

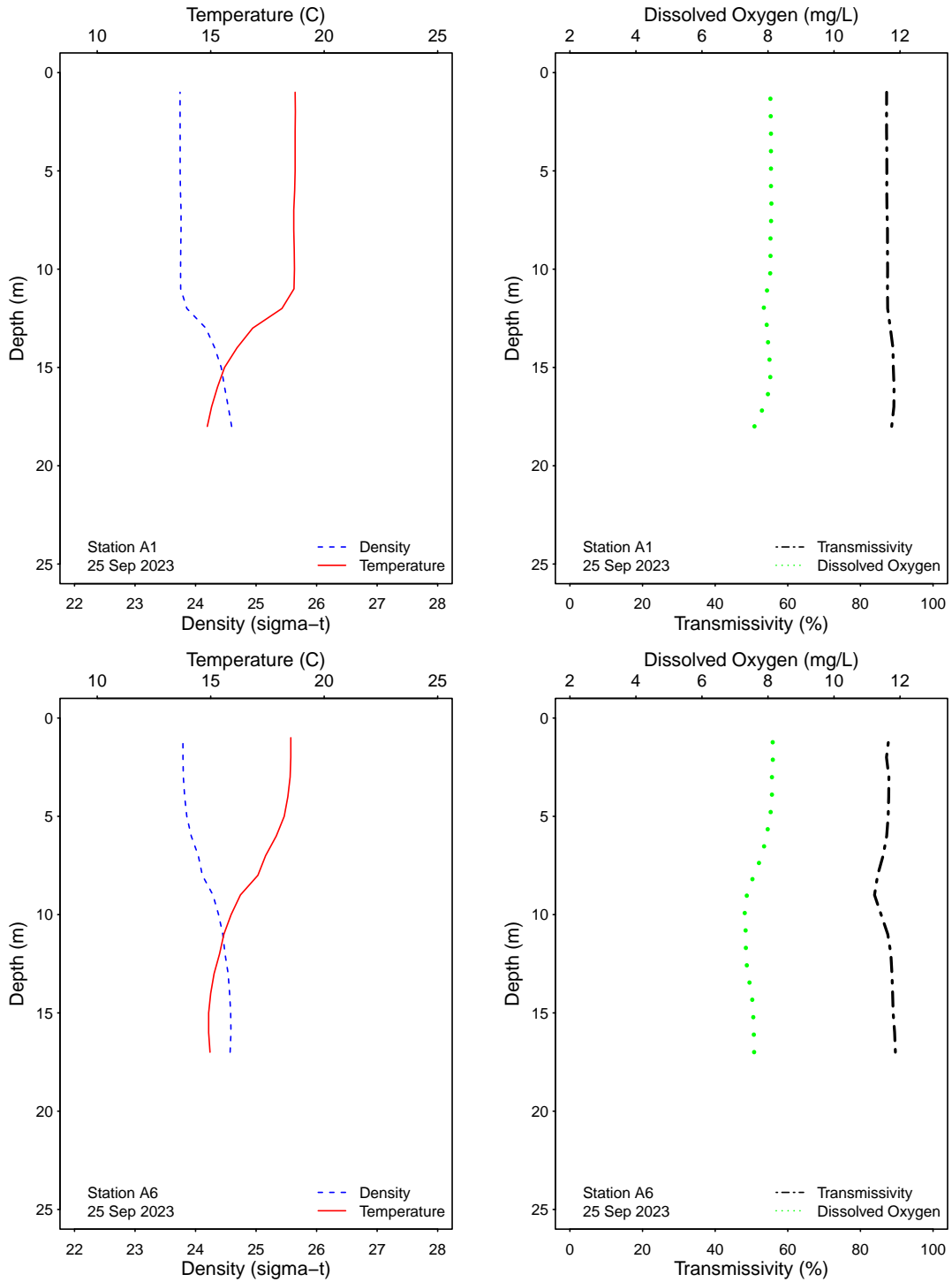


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

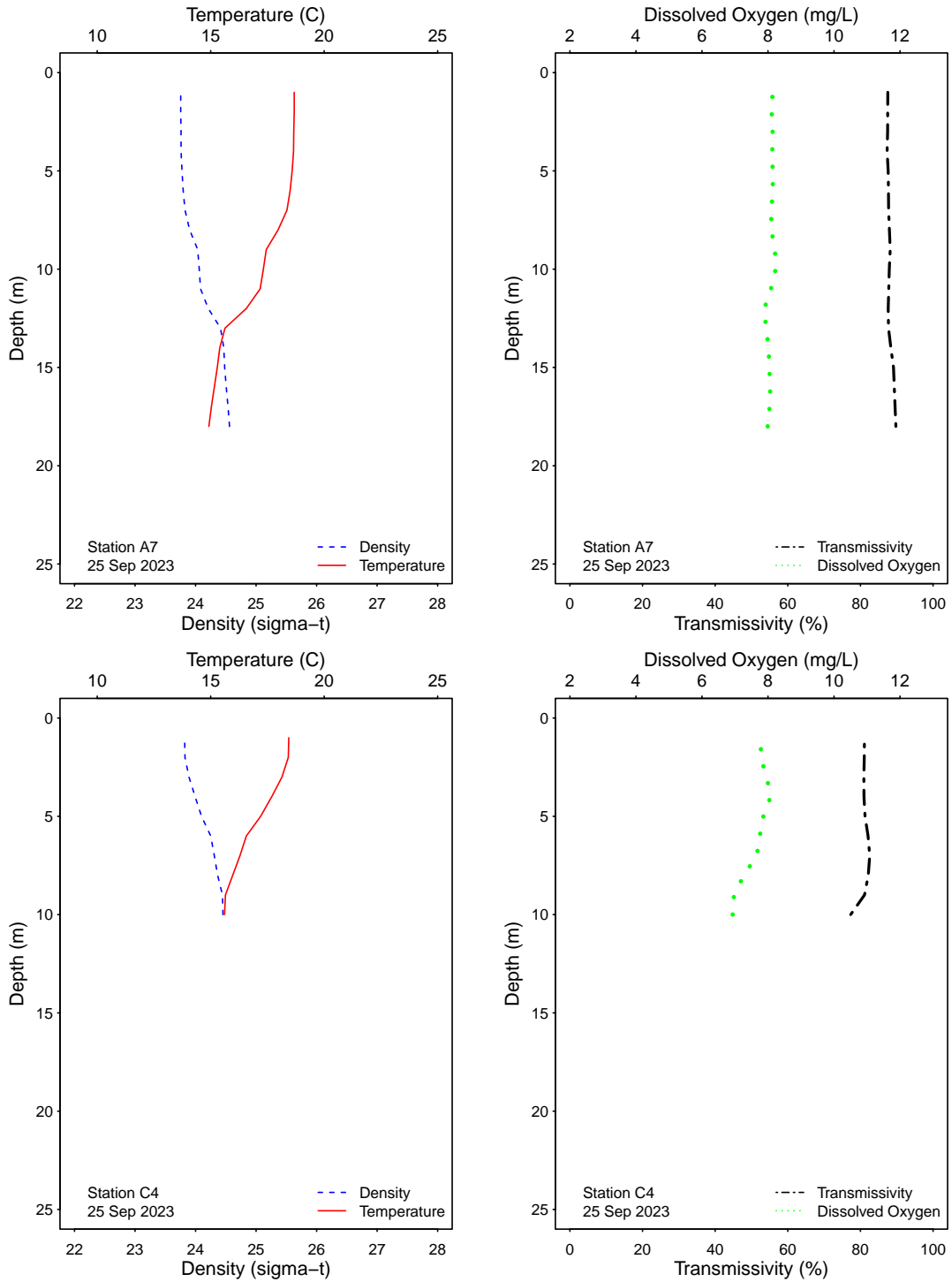


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

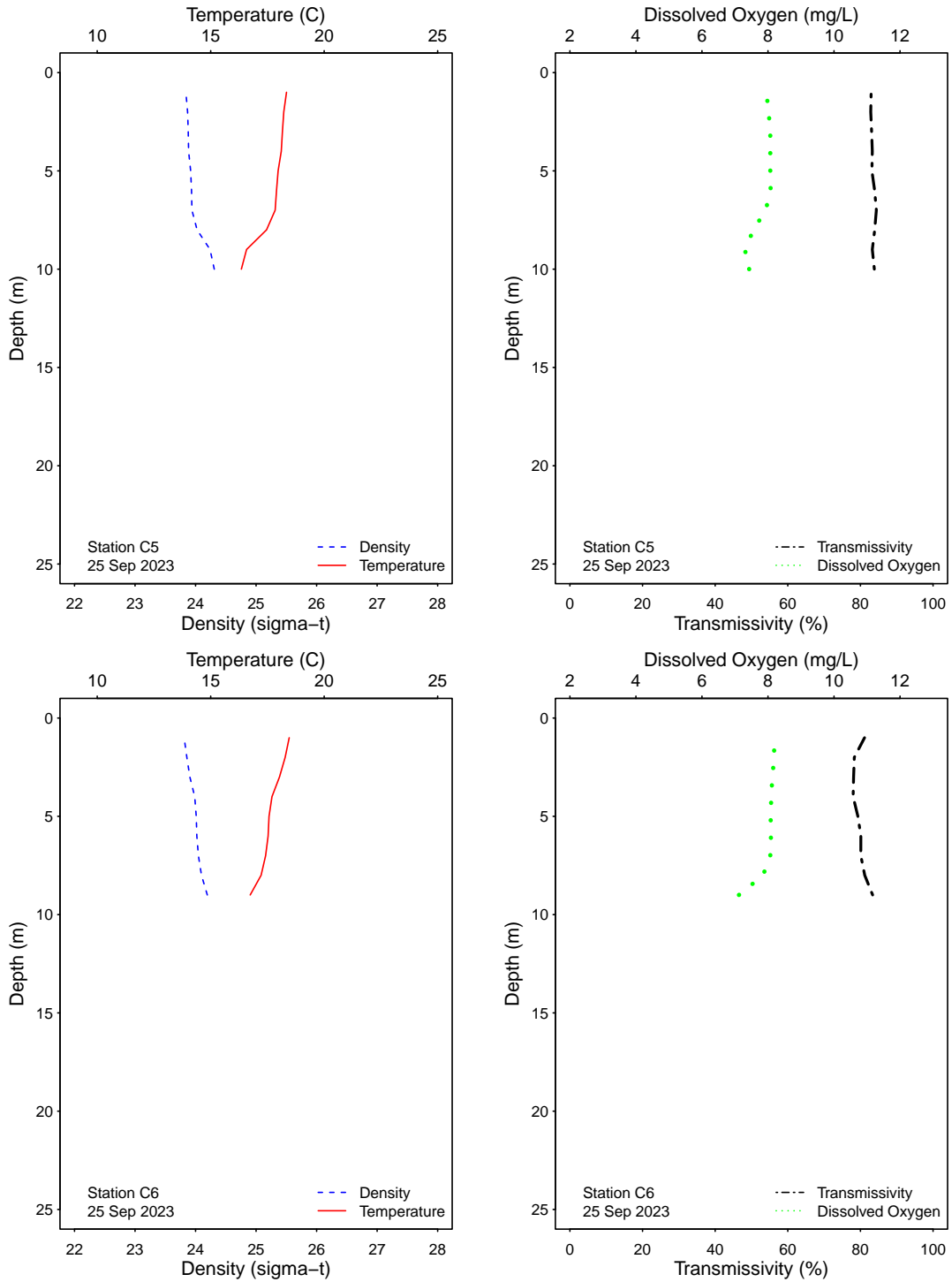


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

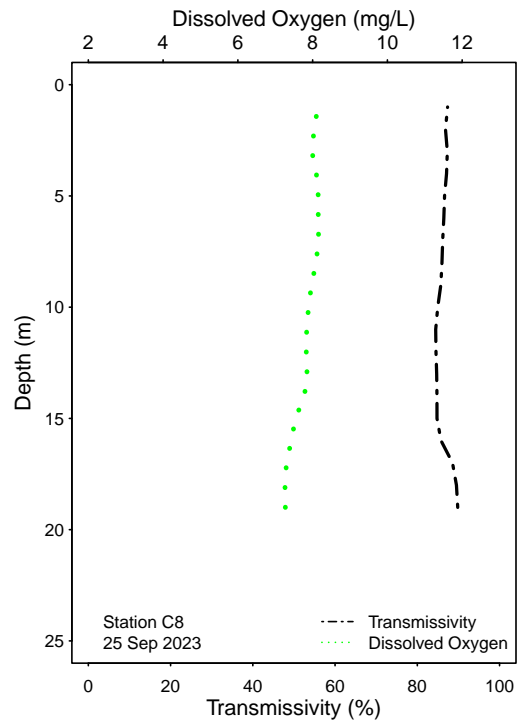
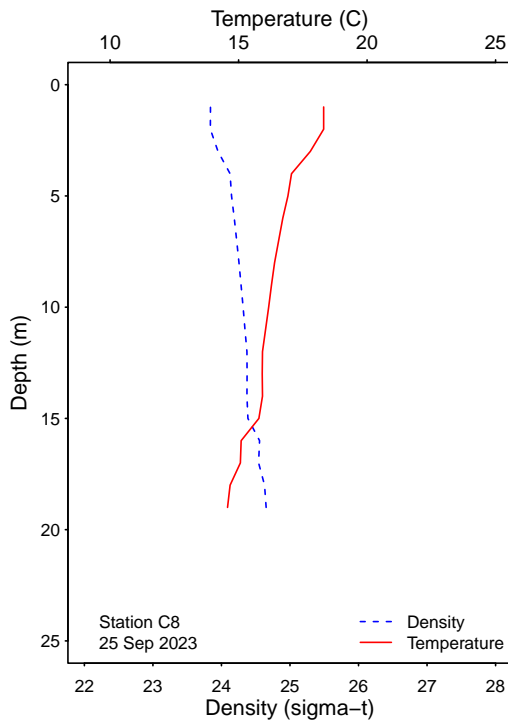
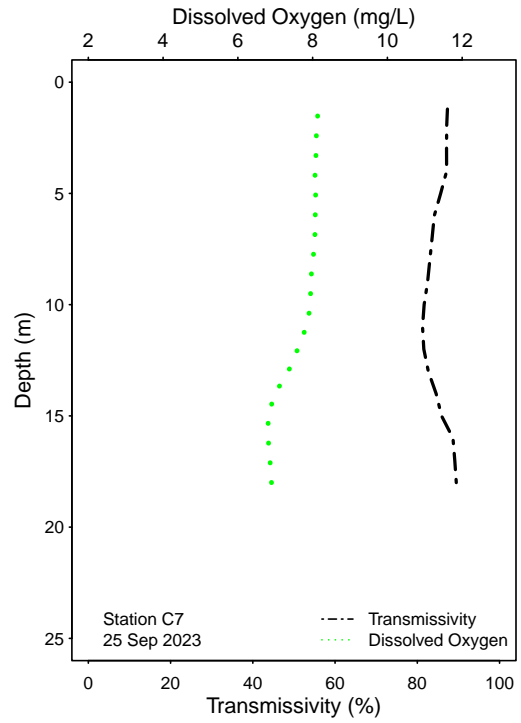
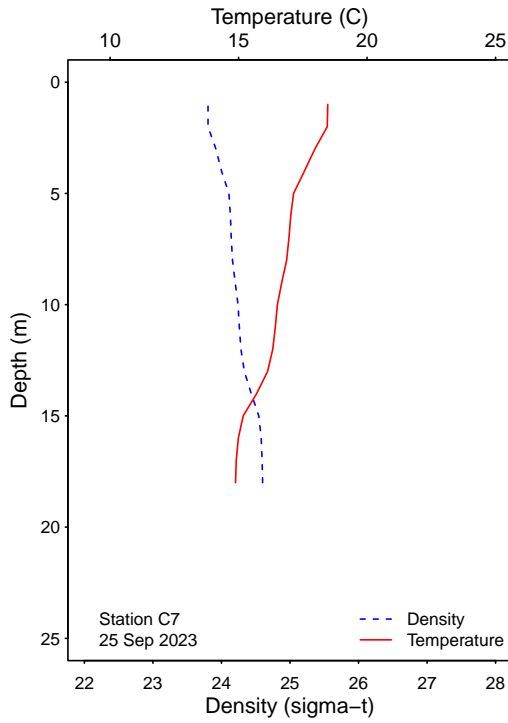


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

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 Sep 2023	18	BS	LAB DUPLICATE	4e	<2	<2
A7	11 Sep 2023	18	BS	LAB DUPLICATE	<2	<2	<2
A7	18 Sep 2023	18	CRE	LAB DUPLICATE	2e	<2	<2
A7	25 Sep 2023	18	BS	LAB DUPLICATE	<2	2e	<2
C7	05 Sep 2023	18	BS	LAB DUPLICATE	<2	<2	<2
C7	11 Sep 2023	18	BS	LAB DUPLICATE	<2	<2	<2
C7	18 Sep 2023	18	CRE	LAB DUPLICATE	<2	<2	<2
C7	25 Sep 2023	18	BS	LAB DUPLICATE	<2	<2	<2
C8	05 Sep 2023	12	BS	LAB DUPLICATE	<2	<2	<2
C8	11 Sep 2023	12	BS	LAB DUPLICATE	<2	<2	<2
C8	18 Sep 2023	12	CRE	LAB DUPLICATE	<2	<2	<2
C8	25 Sep 2023	12	BS	LAB DUPLICATE	<2	<2	<2
D12	06 Sep 2023		KT	FIELD DUPLICATE	<20	<20	<2
D12	06 Sep 2023		KT	LAB DUPLICATE	<20	6e	2e
D12	13 Sep 2023		KT	FIELD DUPLICATE	60e	6e	34e
D12	13 Sep 2023		KT	LAB DUPLICATE	20e	8e	22e
D12	20 Sep 2023		WT	FIELD DUPLICATE	20e	<2	<2
D12	20 Sep 2023		CRE	LAB DUPLICATE	<20	<2	<2
D12	27 Sep 2023		JF	FIELD DUPLICATE	<20	8e	14e
D12	27 Sep 2023		JF	LAB DUPLICATE	<20	4e	18e

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 Sep 2023	2	2	12	5	3	16	21	4
02 Sep 2023	2	2	12	5	3	16	21	4
03 Sep 2023	2	2	12	5	3	16	21	4
04 Sep 2023	2	2	12	5	3	16	21	4
05 Sep 2023	2	2	12	5	3	16	21	4
06 Sep 2023	3	2	12	6	3	7	21	4
07 Sep 2023	3	2	12	6	3	8	21	4
08 Sep 2023	3	2	12	6	3	8	21	4
09 Sep 2023	3	2	12	6	3	8	21	4
10 Sep 2023	3	2	12	6	3	8	21	4
11 Sep 2023	3	2	12	6	3	8	21	4
12 Sep 2023	3	2	12	6	3	8	21	4
13 Sep 2023	3	2	13	7	4	6	13	4
14 Sep 2023	3	2	13	7	4	6	13	4
15 Sep 2023	3	2	13	7	4	6	13	4
16 Sep 2023	3	2	13	7	4	6	13	4
17 Sep 2023	3	2	13	7	4	6	13	4
18 Sep 2023	3	2	13	7	4	6	13	4
19 Sep 2023	3	2	13	7	4	6	13	4
20 Sep 2023	3	2	15	9	4	7	7	4
21 Sep 2023	3	2	15	9	4	7	7	4
22 Sep 2023	3	2	15	9	4	7	7	4
23 Sep 2023	3	2	15	9	4	7	7	4
24 Sep 2023	3	2	15	9	4	7	7	4
25 Sep 2023	3	2	15	9	4	7	7	4
26 Sep 2023	3	2	15	9	4	7	7	4
27 Sep 2023	4	4	9	14	7	10	9	6
28 Sep 2023	4	4	6	14	7	10	9	6
29 Sep 2023	4	4	6	14	7	10	9	6
30 Sep 2023	4	4	6	14	7	10	9	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
September	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 Sep 2023	20	120	200	140	140	130	200	20
02 Sep 2023	20	120	200	140	140	130	200	20
03 Sep 2023	20	120	200	140	140	130	200	20
04 Sep 2023	20	120	200	140	140	130	200	20
05 Sep 2023	20	120	200	140	140	130	200	20
06 Sep 2023	20	200	200	200	200	80	200	20
07 Sep 2023	20	200	200	200	200	80	200	20
08 Sep 2023	20	120	200	200	200	140	200	20
09 Sep 2023	20	120	200	200	200	140	200	20
10 Sep 2023	20	120	200	200	200	140	200	20
11 Sep 2023	20	120	200	200	200	140	200	20
12 Sep 2023	20	120	200	200	200	140	200	20
13 Sep 2023	20	40	200	200	200	80	200	20
14 Sep 2023	20	40	200	200	200	80	200	20
15 Sep 2023	20	120	200	200	140	140	150	110
16 Sep 2023	20	120	200	200	140	140	150	110
17 Sep 2023	20	120	200	200	140	140	150	110
18 Sep 2023	20	120	200	200	140	140	150	110
19 Sep 2023	20	120	200	200	140	140	150	110
20 Sep 2023	20	40	200	200	80	80	100	20
21 Sep 2023	20	40	200	200	80	80	100	20
22 Sep 2023	20	40	110	130	70	70	70	20
23 Sep 2023	20	40	110	130	70	70	70	20
24 Sep 2023	20	40	110	130	70	70	70	20
25 Sep 2023	20	40	110	130	70	70	70	20
26 Sep 2023	20	40	110	130	70	70	70	20
27 Sep 2023	20	40	40	200	80	80	40	20
28 Sep 2023	20	40	40	200	80	80	40	20
29 Sep 2023	20	120	30	130	130	70	30	20
30 Sep 2023	20	120	30	130	130	70	30	20

* 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
September	IC	IC	IC	E	IC	IC	IC	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 Sep 2023	3	3	3	3	3	2	3	3
02 Sep 2023	3	3	3	3	3	2	3	3
03 Sep 2023	3	3	3	3	3	2	3	3
04 Sep 2023	3	3	3	3	3	2	3	3
05 Sep 2023	3	2	3	3	2	2	2	3
06 Sep 2023	3	2	3	3	2	2	2	3
07 Sep 2023	3	3	3	3	3	2	3	3
08 Sep 2023	3	3	3	3	3	2	3	3
09 Sep 2023	3	3	3	3	3	2	3	3
10 Sep 2023	3	3	3	3	3	2	3	3
11 Sep 2023	3	2	3	3	2	2	2	3
12 Sep 2023	3	2	3	3	2	2	2	3
13 Sep 2023	3	2	3	3	2	2	2	3
14 Sep 2023	3	2	3	3	2	2	2	3
15 Sep 2023	3	2	3	3	3	2	3	3
16 Sep 2023	3	2	3	3	3	2	3	3
17 Sep 2023	3	2	3	3	3	2	3	3
18 Sep 2023	3	2	3	3	3	2	3	3
19 Sep 2023	3	2	3	3	3	2	3	3
20 Sep 2023	3	2	3	3	3	2	3	3
21 Sep 2023	3	2	3	3	3	2	3	3
22 Sep 2023	3	2	3	3	3	2	3	3
23 Sep 2023	3	2	3	3	3	2	3	3
24 Sep 2023	3	2	3	3	3	2	3	3
25 Sep 2023	3	2	3	3	3	2	3	3
26 Sep 2023	3	2	3	3	3	2	3	3
27 Sep 2023	3	2	3	3	3	2	3	3
28 Sep 2023	3	2	3	3	3	2	3	3
29 Sep 2023	3	2	3	3	3	2	3	3
30 Sep 2023	3	2	3	3	3	2	3	3

* 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
September	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 Sep 2023	4	22	12	20	20	40	2	14	40	20	20	20	6	20	20	20	20	20	20	4	12	2	2	20
02 Sep 2023	4	22	12	20	20	40	2	14	40	20	20	20	6	20	20	20	20	20	20	4	12	2	2	20
03 Sep 2023	5	12	36	17	11	25	2	10	85	11	20	11	4	20	11	13	11	12	10	11	10	5	2	13
04 Sep 2023	5	12	36	17	11	25	2	10	85	11	20	11	4	20	11	13	11	12	10	11	10	5	2	13
05 Sep 2023	4	4	10	14	2	10	2	6	40	20	20	2	2	20	2	6	20	4	20	2	8	2	2	6
06 Sep 2023	4	13	36	8	2	24	11	8	75	20	20	20	4	20	2	4	11	3	11	2	10	2	2	13
07 Sep 2023	4	13	36	8	2	24	11	8	75	20	20	20	4	20	2	4	11	3	11	2	10	2	2	13
08 Sep 2023	4	13	36	8	2	24	11	8	75	20	20	20	4	20	2	4	11	3	11	2	10	2	2	13
09 Sep 2023	4	13	36	8	2	24	11	8	75	20	20	20	4	20	2	4	11	3	11	2	10	2	2	13
10 Sep 2023	4	13	36	8	2	24	11	8	75	20	20	20	4	20	2	4	11	3	11	2	10	2	2	13
11 Sep 2023	2	20	10	2	2	8	2	2	20	20	20	2	2	20	2	2	2	2	2	2	2	2	2	6
12 Sep 2023	2	20	10	2	2	8	2	2	20	20	20	2	2	20	2	2	2	2	2	2	2	2	2	6
13 Sep 2023	4	12	6	2	2	6	11	2	11	11	20	20	2	2	2	2	2	2	2	2	2	2	2	6
14 Sep 2023	4	12	6	2	2	6	11	2	11	11	20	20	2	2	2	2	2	2	2	2	2	2	2	11
15 Sep 2023	4	12	6	2	2	6	11	2	11	11	20	20	2	2	2	2	2	2	2	2	2	2	2	11
16 Sep 2023	4	12	6	2	2	6	11	2	11	11	20	20	2	2	2	2	2	2	2	2	2	2	2	11
17 Sep 2023	4	12	6	2	2	6	11	2	11	11	20	20	2	2	2	2	2	2	2	2	2	2	2	11
18 Sep 2023	2	20	10	2	2	4	2	2	2	20	20	20	2	20	2	2	2	2	2	2	2	2	2	2
19 Sep 2023	2	20	10	2	2	4	2	2	2	20	20	20	2	20	2	2	2	2	2	2	2	2	2	2
20 Sep 2023	2	20	10	2	2	4	2	2	2	20	20	20	2	20	2	2	2	2	2	2	2	2	2	2
21 Sep 2023	2	20	10	2	2	4	2	2	2	20	20	20	2	20	2	2	2	2	2	2	2	2	2	2
22 Sep 2023	2	12	6	2	2	4	2	2	2	20	20	20	2	20	2	2	2	2	2	2	2	2	2	2
23 Sep 2023	2	12	6	2	2	4	2	2	2	20	20	20	2	20	2	2	2	2	2	2	2	2	2	2
24 Sep 2023	2	12	6	2	2	4	2	2	2	20	20	20	2	20	2	2	2	2	2	2	2	2	2	2
25 Sep 2023	2	4	2	2	2	4	2	2	2	2	20	20	2	2	2	2	2	2	2	2	2	2	2	2
26 Sep 2023	2	4	2	2	2	4	2	2	2	2	20	20	2	2	2	2	2	2	2	2	2	2	2	2
27 Sep 2023	2	12	2	2	2	3	2	2	2	11	11	20	2	2	11	2	11	2	2	2	2	2	2	2
28 Sep 2023	2	12	2	2	2	3	2	2	2	11	11	20	2	2	11	2	11	2	2	2	2	2	2	2
29 Sep 2023	2	12	2	2	2	3	2	2	2	11	11	20	2	2	11	2	11	2	2	2	2	2	2	2
30 Sep 2023	2	12	2	2	2	3	2	2	2	11	11	20	2	2	11	2	11	2	2	2	2	2	2	2

