



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

**POINT LOMA  
WASTEWATER TREATMENT PLANT**

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

## **JANUARY 2022**

Environmental Monitoring and Technical Services  
2392 Kincaid Road • Mail Station 45A • San Diego, CA 92101  
Tel (619) 758-2300 Fax (619) 758-2309







**Public Utilities Department**

Environmental Monitoring & Technical Services Division

February 28, 2022

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

Attention: POTW Compliance Unit

Dear Mr. Gibson:

Enclosed is the January 2022 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,

A handwritten signature in blue ink, appearing to read "Peter S. Vroom".

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

PV/rk

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



## INTRODUCTION

Monthly reports of water quality and ocean conditions for the San Diego coastal region surrounding the Point Loma Ocean Outfall are submitted to the San Diego Regional Water Quality Control Board and U.S. EPA Region 9 in accordance with Order No. R9-2017-0007, NPDES Permit No. CA0107409 for the Point Loma Wastewater Treatment Plant (PLWTP), Point Loma Ocean Outfall (PLOO). This report includes receiving waters monitoring data collected from all shore, kelp and offshore stations specified in the above order. Data for influent and effluent monitoring activities for the PLWTP are presented in separate reports.

## MATERIALS AND METHODS

### ***Shore Stations***

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

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

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

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

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

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

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

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

### ***Offshore Stations***

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

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

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

Estimated values for bacteriological analyses are denoted by greater than (>), less than (<), or estimated (e) qualifiers and result from plates with colony counts above or below the permissible counting limits established in Bordner et al. (1978)<sup>1</sup>. This document defines membrane filtration limits of 20–80 colonies per plate for total coliforms and 20–60 colonies per plate for fecal coliforms and *Enterococcus*. No Data (ND) is reported if plate counts from all dilutions have a total colony count of >200 per plate.

Results of the bacteriological analysis of seawater samples collected from each of the shore, kelp bed, and offshore stations located within State waters are assessed relative to the geometric mean and single sample maximum water-contact standards specified in the California Ocean Plan. The seven standards are defined as follows:

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

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

### **Single Sample Maximums:**

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<sup>1</sup> Bordner, R., J. Winter, and P. Scarpino (eds.). (1978). Microbiological Methods for Monitoring the Environment: Water and Wastes, EPA Research and Development, EPA-600/8-78-017. 337 p.

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

Quality controls of bacteriological data include laboratory and field duplicate analyses. Laboratory duplicates are performed on approximately 10% of the water quality samples, while field duplicates are performed six times a month (see Appendix A). Laboratory duplicates represent two aliquots of the original sample that are split in the laboratory and analyzed by the same analyst using identical procedures within the same analytical run. The results of these analyses provide a measure of intra-analyst precision. In contrast, field duplicates represent two separate samples collected at the same time from the same site, which are handled under identical circumstances and treated the same throughout field and lab procedures. The results of these analyses provide a measure of precision associated with sample collection, preservation, storage, and lab procedures. The sign test (see Gilbert, 1987<sup>2</sup>) is used to statistically compare both the results from the laboratory duplicates, as well as the results from the field duplicates. These data will be further analyzed in the City's 2022 Quality Assurance Report, which will be completed in March 2023.

## SUMMARY OF RESULTS

As of October 2020, new 2019 Ocean Plan Water Quality Objectives are included for a six-week rolling geometric mean of *Enterococcus* density, which shall not exceed 30 cfu/100 ml, and a Statistical Threshold Value (STV) for *Enterococcus*, which shall not exceed 110 cfu/100 ml for more than 10% of samples per month (see Appendix B).

### ***Shore Stations***

- The eight shore stations (D4, D5, D7, D8-B, D9, D10, D11, D12) were sampled on January 5, 12, 19, and 26.
- During January, one of the eight shore stations was out of compliance with the various 2015 California Ocean Plan (Ocean Plan) water contact standards on one or more days as follows:
  - o The 30-day Geometric Mean standard for *Enterococcus* was exceeded at station D10.
- A sewage-like odor was observed at station D5 on one or more days in January.
- 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 January 4, 10, 18, 24, and 31.
- During January, each of the kelp stations was in compliance with the various 2015 California Ocean Plan (Ocean Plan) water contact standards.

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

- Water column temperatures ranged from 13.29 to 15.53°C. The difference between surface and bottom waters ranged from 0.03 to 1.52°C.
- Chlorophyll *a* concentrations ranged from 0.56 to 5.76 µg/L.
- A sewage-like odor was observed at station A7 on one or more days in January.

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

- Quarterly water quality sampling was not conducted during January at the offshore stations. The next quarterly sampling is scheduled for February 2022.



## 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 Jan 2022	10	8	20	137	44	104	88	30
02 Jan 2022	10	8	20	137	44	104	88	30
03 Jan 2022	10	8	20	137	44	104	88	30
04 Jan 2022	10	8	20	137	44	104	88	30
05 Jan 2022	11	11	13	93	38	75	66	27
06 Jan 2022	11	11	13	93	38	75	66	27
07 Jan 2022	10	18	11	137	49	87	88	53
08 Jan 2022	10	18	11	137	49	87	88	53
09 Jan 2022	10	18	11	137	49	87	88	53
10 Jan 2022	10	18	11	137	49	87	88	53
11 Jan 2022	10	18	11	137	49	87	88	53
12 Jan 2022	7	22	9	93	71	93	82	31
13 Jan 2022	7	22	9	93	71	93	82	31
14 Jan 2022	6	18	4	63	40	41	31	21
15 Jan 2022	6	18	4	63	40	41	31	21
16 Jan 2022	6	18	4	63	40	41	31	21
17 Jan 2022	6	18	4	63	40	41	31	21
18 Jan 2022	6	18	4	63	40	41	31	21
19 Jan 2022	5	11	7	58	35	36	22	17
20 Jan 2022	5	11	7	58	35	36	22	17
21 Jan 2022	4	18	10	42	40	41	23	19
22 Jan 2022	4	18	10	42	40	41	23	19
23 Jan 2022	4	18	10	42	40	41	23	19
24 Jan 2022	4	18	10	42	40	41	23	19
25 Jan 2022	4	18	10	42	40	41	23	19
26 Jan 2022	3	18	9	36	37	36	20	12
27 Jan 2022	3	18	9	36	37	36	20	12
28 Jan 2022	4	18	7	24	43	31	16	6
29 Jan 2022	4	18	7	24	43	31	16	6
30 Jan 2022	4	18	7	24	43	31	16	6
31 Jan 2022	4	18	7	24	43	31	16	6

\* Geometric mean calculated using n<5

ns = not sampled

**Table 2.2**

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

Date	D4	D5	D7	D8-B	D9	D10	D11	D12
01 Jan 2022	3	3	4	5	5	13	23	4
02 Jan 2022	3	3	4	5	5	13	23	4
03 Jan 2022	3	3	4	5	5	13	23	4
04 Jan 2022	3	3	4	5	5	13	23	4
05 Jan 2022	4	3	3	7	4	14	22	4
06 Jan 2022	4	3	3	7	4	14	22	4
07 Jan 2022	5	3	4	10	4	19	25	4
08 Jan 2022	5	3	4	10	4	19	25	4
09 Jan 2022	5	3	4	10	4	19	25	4
10 Jan 2022	5	3	4	10	4	19	25	4
11 Jan 2022	5	3	4	10	4	19	25	4
12 Jan 2022	4	3	3	11	7	21	27	4
13 Jan 2022	4	3	3	11	7	21	27	4
14 Jan 2022	5	2	2	9	5	13	17	3
15 Jan 2022	5	2	2	9	5	13	17	3
16 Jan 2022	5	2	2	9	5	13	17	3
17 Jan 2022	5	2	2	9	5	13	17	3
18 Jan 2022	5	2	2	9	5	13	17	3
19 Jan 2022	4	2	2	8	6	12	11	3
20 Jan 2022	4	2	2	8	6	12	11	3
21 Jan 2022	4	2	2	8	8	12	13	2
22 Jan 2022	4	2	2	8	8	12	13	2
23 Jan 2022	4	2	2	8	8	12	13	2
24 Jan 2022	4	2	2	8	8	12	13	2
25 Jan 2022	4	2	2	8	8	12	13	2
26 Jan 2022	3	3	3	8	8	8	14	2
27 Jan 2022	3	3	3	8	8	8	14	2
28 Jan 2022	4	4	3	11	11	10	13	2
29 Jan 2022	4	4	3	11	11	10	13	2
30 Jan 2022	4	4	3	11	11	10	13	2
31 Jan 2022	4	4	3	11	11	10	13	2

\* Geometric mean calculated using n<5

ns = not sampled

**Table 2.3**

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

Date	D4	D5	D7	D8-B	D9	D10	D11	D12
01 Jan 2022	2	3	6	14	13	20	14	6
02 Jan 2022	2	3	6	14	13	20	14	6
03 Jan 2022	2	3	6	14	13	20	14	6
04 Jan 2022	2	3	6	14	13	20	14	6
05 Jan 2022	2	2	5	12	9	22	16	5
06 Jan 2022	2	2	5	12	9	22	16	5
07 Jan 2022	2	3	6	18	13	31	24	6
08 Jan 2022	2	3	6	18	13	31	24	6
09 Jan 2022	2	3	6	18	13	31	24	6
10 Jan 2022	2	3	6	18	13	31	24	6
11 Jan 2022	2	3	6	18	13	31	24	6
12 Jan 2022	2	2	6	18	20	37	26	5
13 Jan 2022	2	2	6	18	20	37	26	5
14 Jan 2022	2	2	3	12	15	24	14	3
15 Jan 2022	2	2	3	12	15	24	14	3
16 Jan 2022	2	2	3	11	15	20	11	3
17 Jan 2022	2	2	3	11	15	20	11	3
18 Jan 2022	2	2	3	11	15	20	11	3
19 Jan 2022	2	2	3	8	10	19	10	3
20 Jan 2022	2	2	3	8	10	19	10	3
21 Jan 2022	2	2	3	8	6	18	12	2
22 Jan 2022	2	2	3	8	6	18	12	2
23 Jan 2022	2	2	3	8	6	18	12	2
24 Jan 2022	2	2	3	8	6	18	12	2
25 Jan 2022	2	2	3	8	6	18	12	2
26 Jan 2022	2	2	3	7	5	16	12	2
27 Jan 2022	2	2	3	7	5	16	12	2
28 Jan 2022	2	2	3	6	5	27	18	2
29 Jan 2022	2	2	3	6	5	27	18	2
30 Jan 2022	2	2	3	6	5	27	18	2
31 Jan 2022	2	2	3	6	5	27	18	2

\* Geometric mean calculated using n<5

ns = not sampled

**Table 2.4**

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

Date	D4	D5	D7	D8-B	D9	D10	D11	D12
05 Jan 2022	IC	IC	IC	IC	IC	IC	IC	IC
12 Jan 2022	IC	IC	IC	IC	IC	IC	IC	IC
19 Jan 2022	IC	IC	IC	IC	IC	IC	IC	IC
26 Jan 2022	IC	IC	IC	IC	IC	IC	IC	IC

IC = In Compliance

E = Exceedance

ns = not sampled

ND = no data

**Table 2.5**

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

Date	D4	D5	D7	D8-B	D9	D10	D11	D12
05 Jan 2022	IC	IC	IC	IC	IC	IC	IC	IC
12 Jan 2022	IC	IC	IC	IC	IC	IC	IC	IC
19 Jan 2022	IC	IC	IC	IC	IC	IC	IC	IC
26 Jan 2022	IC	IC	IC	IC	IC	IC	IC	IC

IC = In Compliance

E = Exceedance

ns = not sampled

ND = no data

**Table 2.6**

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

Date	D4	D5	D7	D8-B	D9	D10	D11	D12
05 Jan 2022	IC	IC	IC	IC	IC	IC	IC	IC
12 Jan 2022	IC	IC	IC	IC	IC	IC	IC	IC
19 Jan 2022	IC	IC	IC	IC	IC	IC	IC	IC
26 Jan 2022	IC	IC	IC	IC	IC	IC	IC	IC

IC = In Compliance

E = Exceedance

ns = not sampled

ND = no data

**Table 2.7**

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

Date	D4	D5	D7	D8-B	D9	D10	D11	D12
05 Jan 2022	IC	IC	IC	IC	IC	IC	IC	IC
12 Jan 2022	IC	IC	IC	IC	IC	IC	IC	IC
19 Jan 2022	IC	IC	IC	IC	IC	IC	IC	IC
26 Jan 2022	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* (Enter) are reported as CFU/100 mL. The fecal:total coliform ratio (F:T) is unitless. Comments follow the data summary.

<b>Station</b>	<b>Date</b>	<b>Time</b>	<b>Total</b>	<b>Fecal</b>	<b>Enter</b>	<b>F:T</b>
D4	05 Jan 2022	803	<20	<20	2e	1.00
D4	12 Jan 2022	1043	<2	<2	<2	1.00
D4	19 Jan 2022	847	2e	<2	<2	1.00
D4	26 Jan 2022	823	<2	<2	<2	1.00
D5	05 Jan 2022	822	40e	<2	<2	0.05
D5	12 Jan 2022	1023	60e	4e	<2	0.07
D5	19 Jan 2022	823	<2	<2	2e	1.00
D5	26 Jan 2022	846	20e	16e	<2	0.80
D7	05 Jan 2022	850	2e	<2	<2	1.00
D7	12 Jan 2022	959	4e	<2	6e	0.50
D7	19 Jan 2022	910	74	2e	<2	0.03
D7	26 Jan 2022	914	4e	6e	<2	1.50
D8-B	05 Jan 2022	912	20e	20e	6e	1.00
D8-B	12 Jan 2022	939	20e	20e	22e	1.00
D8-B	19 Jan 2022	925	40e	4e	<2	0.10
D8-B	26 Jan 2022	944	20e	8e	6e	0.40
D9	05 Jan 2022	935	<20	<2	2e	0.10
D9	12 Jan 2022	857	320e	72	98	0.22
D9	19 Jan 2022	936	20e	14e	2e	0.70
D9	26 Jan 2022	957	26e	8e	2e	0.31
D10	05 Jan 2022	950	<20	20e	36e	1.00
D10	12 Jan 2022	842	120e	28e	98	0.23
D10	19 Jan 2022	1016	20e	8e	16e	0.40
D10	26 Jan 2022	1013	20e	2e	10e	0.10
D11	05 Jan 2022	1027	20e	<20	28e	1.00
D11	12 Jan 2022	827	60e	36e	46	0.60
D11	19 Jan 2022	1029	6e	2e	8e	0.33
D11	26 Jan 2022	1025	10e	22e	10e	2.20
D12	05 Jan 2022	1058	<20	<2	<2	0.10
D12	12 Jan 2022	804	4e	2e	2e	0.50
D12	19 Jan 2022	1056	8e	<2	<2	0.25
D12	26 Jan 2022	1105	2e	<2	<2	1.00

ns = not sampled

ND = no data

**Table 2.9**

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

Station	Date	Parameter	Value
D4	05 Jan 2022	Arrive Time	803
D4	05 Jan 2022	Weather	Sunny
D4	05 Jan 2022	Wind Speed (kts)	0
D4	05 Jan 2022	Wind Dir	
D4	05 Jan 2022	Animal Life	Bird-3
D4	05 Jan 2022	Floatables	Foam
D4	05 Jan 2022	Water Color	Green
D4	05 Jan 2022	Current Direction	S
D4	05 Jan 2022	Water Temp (C)	14.7
D4	05 Jan 2022	Wave Height Low (ft)	3
D4	05 Jan 2022	High Tide (ft)	6.09
D4	05 Jan 2022	High Tide Time	1018
D4	05 Jan 2022	Low Tide (ft)	1.89
D4	05 Jan 2022	Low Tide Time	415
D4	05 Jan 2022	Comments	Water turbid; Surfer/Paddle boarder-7; Boater/Kayaker-4; Trash-2; Seagrass; Algae
D4	12 Jan 2022	Arrive Time	1043
D4	12 Jan 2022	Weather	Cloudy
D4	12 Jan 2022	Wind Speed (kts)	0
D4	12 Jan 2022	Wind Dir	
D4	12 Jan 2022	Animal Life	Pelican-1; Seagull-1
D4	12 Jan 2022	Floatables	None
D4	12 Jan 2022	Water Color	Green
D4	12 Jan 2022	Current Direction	N
D4	12 Jan 2022	Water Temp (C)	16.2
D4	12 Jan 2022	Wave Height Low (ft)	4
D4	12 Jan 2022	High Tide (ft)	5
D4	12 Jan 2022	High Tide Time	509
D4	12 Jan 2022	Low Tide (ft)	0.31
D4	12 Jan 2022	Low Tide Time	1248
D4	12 Jan 2022	Comments	Water clear; Surfer/Paddle boarder-2; Trash-1; Kelp; Seagrass; Algae
D4	19 Jan 2022	Arrive Time	847
D4	19 Jan 2022	Weather	Cloudy
D4	19 Jan 2022	Wind Speed (kts)	1.8
D4	19 Jan 2022	Wind Dir	W
D4	19 Jan 2022	Animal Life	
D4	19 Jan 2022	Floatables	Foam
D4	19 Jan 2022	Water Color	Green
D4	19 Jan 2022	Current Direction	S
D4	19 Jan 2022	Water Temp (C)	16.6
D4	19 Jan 2022	Wave Height Low (ft)	3
D4	19 Jan 2022	High Tide (ft)	5.76
D4	19 Jan 2022	High Tide Time	911
D4	19 Jan 2022	Low Tide (ft)	1.91
D4	19 Jan 2022	Low Tide Time	309
D4	19 Jan 2022	Comments	Water clear; Boater/Kayaker-4; Trash-2; Seagrass; Algae
D4	26 Jan 2022	Arrive Time	823
D4	26 Jan 2022	Weather	Sunny
D4	26 Jan 2022	Wind Speed (kts)	2.4
D4	26 Jan 2022	Wind Dir	N
D4	26 Jan 2022	Animal Life	Pelican-3
D4	26 Jan 2022	Floatables	Foam

Station	Date	Parameter	Value
D4	26 Jan 2022	Water Color	Green
D4	26 Jan 2022	Current Direction	N
D4	26 Jan 2022	Water Temp (C)	17
D4	26 Jan 2022	Wave Height Low (ft)	3
D4	26 Jan 2022	High Tide (ft)	4.86
D4	26 Jan 2022	High Tide Time	316
D4	26 Jan 2022	Low Tide (ft)	0.62
D4	26 Jan 2022	Low Tide Time	1056
D4	26 Jan 2022	Comments	Algae; Seagrass; Kelp
D5	05 Jan 2022	Arrive Time	822
D5	05 Jan 2022	Weather	Sunny
D5	05 Jan 2022	Wind Speed (kts)	2.5
D5	05 Jan 2022	Wind Dir	NE
D5	05 Jan 2022	Animal Life	Bird-2
D5	05 Jan 2022	Floatables	Foam
D5	05 Jan 2022	Water Color	Brown
D5	05 Jan 2022	Current Direction	S
D5	05 Jan 2022	Water Temp (C)	14.3
D5	05 Jan 2022	Wave Height Low (ft)	3
D5	05 Jan 2022	High Tide (ft)	6.09
D5	05 Jan 2022	High Tide Time	1018
D5	05 Jan 2022	Low Tide (ft)	1.89
D5	05 Jan 2022	Low Tide Time	415
D5	05 Jan 2022	Comments	Water turbid; Trash-1; Algae; Kelp; Person/Walker/Jogger-1
D5	12 Jan 2022	Arrive Time	1023
D5	12 Jan 2022	Weather	Hazy
D5	12 Jan 2022	Wind Speed (kts)	1.3
D5	12 Jan 2022	Wind Dir	N
D5	12 Jan 2022	Animal Life	Bird-1; Seagull-2
D5	12 Jan 2022	Floatables	Foam
D5	12 Jan 2022	Water Color	Brown
D5	12 Jan 2022	Current Direction	S
D5	12 Jan 2022	Water Temp (C)	16.8
D5	12 Jan 2022	Wave Height Low (ft)	2
D5	12 Jan 2022	High Tide (ft)	5
D5	12 Jan 2022	High Tide Time	509
D5	12 Jan 2022	Low Tide (ft)	0.31
D5	12 Jan 2022	Low Tide Time	1248
D5	12 Jan 2022	Comments	Water turbid; Trash-1; Algae; Kelp; Seagrass; Person/Walker/Jogger-1; Sewage-like odor
D5	19 Jan 2022	Arrive Time	823
D5	19 Jan 2022	Weather	Cloudy
D5	19 Jan 2022	Wind Speed (kts)	0.8
D5	19 Jan 2022	Wind Dir	NW
D5	19 Jan 2022	Animal Life	Bird-7
D5	19 Jan 2022	Floatables	Foam; Film
D5	19 Jan 2022	Water Color	Green
D5	19 Jan 2022	Current Direction	S
D5	19 Jan 2022	Water Temp (C)	16.4
D5	19 Jan 2022	Wave Height Low (ft)	3
D5	19 Jan 2022	High Tide (ft)	5.76
D5	19 Jan 2022	High Tide Time	911
D5	19 Jan 2022	Low Tide (ft)	1.91
D5	19 Jan 2022	Low Tide Time	309
D5	19 Jan 2022	Comments	Kelp; Seagrass
D5	26 Jan 2022	Arrive Time	846
D5	26 Jan 2022	Weather	Sunny

Station	Date	Parameter	Value
D5	26 Jan 2022	Wind Speed (kts)	3.9
D5	26 Jan 2022	Wind Dir	N
D5	26 Jan 2022	Animal Life	Bird-10
D5	26 Jan 2022	Floatables	Foam
D5	26 Jan 2022	Water Color	Green
D5	26 Jan 2022	Current Direction	N
D5	26 Jan 2022	Water Temp (C)	16.4
D5	26 Jan 2022	Wave Height Low (ft)	2
D5	26 Jan 2022	High Tide (ft)	4.86
D5	26 Jan 2022	High Tide Time	316
D5	26 Jan 2022	Low Tide (ft)	0.62
D5	26 Jan 2022	Low Tide Time	1056
D5	26 Jan 2022	Comments	Kelp; Seagrass; Algae
D7	05 Jan 2022	Arrive Time	850
D7	05 Jan 2022	Weather	Sunny
D7	05 Jan 2022	Wind Speed (kts)	1.7
D7	05 Jan 2022	Wind Dir	W
D7	05 Jan 2022	Animal Life	Seagull-3
D7	05 Jan 2022	Floatables	Foam
D7	05 Jan 2022	Water Color	Green
D7	05 Jan 2022	Current Direction	S
D7	05 Jan 2022	Water Temp (C)	15.5
D7	05 Jan 2022	Wave Height Low (ft)	4
D7	05 Jan 2022	High Tide (ft)	6.09
D7	05 Jan 2022	High Tide Time	1018
D7	05 Jan 2022	Low Tide (ft)	1.89
D7	05 Jan 2022	Low Tide Time	415
D7	05 Jan 2022	Comments	Water turbid; Surfer/Paddle boarder-10; Trash-1; Kelp; Algae; Person/Walker/Jogger-3
D7	12 Jan 2022	Arrive Time	959
D7	12 Jan 2022	Weather	Cloudy
D7	12 Jan 2022	Wind Speed (kts)	0.1
D7	12 Jan 2022	Wind Dir	E
D7	12 Jan 2022	Animal Life	
D7	12 Jan 2022	Floatables	Foam
D7	12 Jan 2022	Water Color	Green
D7	12 Jan 2022	Current Direction	S
D7	12 Jan 2022	Water Temp (C)	18.9
D7	12 Jan 2022	Wave Height Low (ft)	6
D7	12 Jan 2022	High Tide (ft)	5
D7	12 Jan 2022	High Tide Time	509
D7	12 Jan 2022	Low Tide (ft)	0.31
D7	12 Jan 2022	Low Tide Time	1248
D7	12 Jan 2022	Comments	Water turbid; Surfer/Paddle boarder-5; Trash-0; Algae
D7	19 Jan 2022	Arrive Time	910
D7	19 Jan 2022	Weather	Cloudy
D7	19 Jan 2022	Wind Speed (kts)	2.7
D7	19 Jan 2022	Wind Dir	NW
D7	19 Jan 2022	Animal Life	Dolphin-4; Pelican-15
D7	19 Jan 2022	Floatables	Foam; Film
D7	19 Jan 2022	Water Color	Green
D7	19 Jan 2022	Current Direction	S
D7	19 Jan 2022	Water Temp (C)	16.6
D7	19 Jan 2022	Wave Height Low (ft)	5
D7	19 Jan 2022	High Tide (ft)	5.76
D7	19 Jan 2022	High Tide Time	911
D7	19 Jan 2022	Low Tide (ft)	1.91
D7	19 Jan 2022	Low Tide Time	309

Station	Date	Parameter	Value
D7	19 Jan 2022	Comments	Water clear; Surfer/Paddle boarder-2; Trash-1; Kelp; Algae
D7	26 Jan 2022	Arrive Time	914
D7	26 Jan 2022	Weather	Sunny
D7	26 Jan 2022	Wind Speed (kts)	1.5
D7	26 Jan 2022	Wind Dir	W
D7	26 Jan 2022	Animal Life	Seagull-1
D7	26 Jan 2022	Floatables	Foam; None
D7	26 Jan 2022	Water Color	Green
D7	26 Jan 2022	Current Direction	N
D7	26 Jan 2022	Water Temp (C)	16.6
D7	26 Jan 2022	Wave Height Low (ft)	3
D7	26 Jan 2022	High Tide (ft)	4.86
D7	26 Jan 2022	High Tide Time	316
D7	26 Jan 2022	Low Tide (ft)	0.62
D7	26 Jan 2022	Low Tide Time	1056
D7	26 Jan 2022	Comments	Water clear; Surfer/Paddle boarder-17; Trash-1; Algae; Seagrass; Kelp
D8-B	05 Jan 2022	Arrive Time	912
D8-B	05 Jan 2022	Weather	Sunny
D8-B	05 Jan 2022	Wind Speed (kts)	1.3
D8-B	05 Jan 2022	Wind Dir	W
D8-B	05 Jan 2022	Animal Life	Dog-1; Seagull-50
D8-B	05 Jan 2022	Floatables	Foam
D8-B	05 Jan 2022	Water Color	Green
D8-B	05 Jan 2022	Current Direction	S
D8-B	05 Jan 2022	Water Temp (C)	14.8
D8-B	05 Jan 2022	Wave Height Low (ft)	4
D8-B	05 Jan 2022	High Tide (ft)	6.09
D8-B	05 Jan 2022	High Tide Time	1018
D8-B	05 Jan 2022	Low Tide (ft)	1.89
D8-B	05 Jan 2022	Low Tide Time	415
D8-B	05 Jan 2022	Comments	Water turbid; Surfer/Paddle boarder-1; Trash-1; Kelp; Algae; Person/Walker/Jogger-2
D8-B	12 Jan 2022	Arrive Time	939
D8-B	12 Jan 2022	Weather	Cloudy
D8-B	12 Jan 2022	Wind Speed (kts)	1.3
D8-B	12 Jan 2022	Wind Dir	NE
D8-B	12 Jan 2022	Animal Life	Bird-1
D8-B	12 Jan 2022	Floatables	Foam
D8-B	12 Jan 2022	Water Color	Green
D8-B	12 Jan 2022	Current Direction	S
D8-B	12 Jan 2022	Water Temp (C)	15.4
D8-B	12 Jan 2022	Wave Height Low (ft)	6
D8-B	12 Jan 2022	High Tide (ft)	5
D8-B	12 Jan 2022	High Tide Time	509
D8-B	12 Jan 2022	Low Tide (ft)	0.31
D8-B	12 Jan 2022	Low Tide Time	1248
D8-B	12 Jan 2022	Comments	Water clear; Surfer/Paddle boarder-2; Trash-1; Algae; Person/Walker/Jogger-2
D8-B	19 Jan 2022	Arrive Time	925
D8-B	19 Jan 2022	Weather	Cloudy
D8-B	19 Jan 2022	Wind Speed (kts)	3.3
D8-B	19 Jan 2022	Wind Dir	W
D8-B	19 Jan 2022	Animal Life	
D8-B	19 Jan 2022	Floatables	Foam
D8-B	19 Jan 2022	Water Color	Green
D8-B	19 Jan 2022	Current Direction	N

Station	Date	Parameter	Value
D8-B	19 Jan 2022	Water Temp (C)	17.2
D8-B	19 Jan 2022	Wave Height Low (ft)	3
D8-B	19 Jan 2022	High Tide (ft)	5.76
D8-B	19 Jan 2022	High Tide Time	911
D8-B	19 Jan 2022	Low Tide (ft)	1.91
D8-B	19 Jan 2022	Low Tide Time	309
D8-B	19 Jan 2022	Comments	Algae
D8-B	26 Jan 2022	Arrive Time	944
D8-B	26 Jan 2022	Weather	Hazy
D8-B	26 Jan 2022	Wind Speed (kts)	2
D8-B	26 Jan 2022	Wind Dir	S
D8-B	26 Jan 2022	Animal Life	Pelican-5
D8-B	26 Jan 2022	Floatables	None
D8-B	26 Jan 2022	Water Color	Green
D8-B	26 Jan 2022	Current Direction	N
D8-B	26 Jan 2022	Water Temp (C)	16.6
D8-B	26 Jan 2022	Wave Height Low (ft)	4
D8-B	26 Jan 2022	High Tide (ft)	4.86
D8-B	26 Jan 2022	High Tide Time	316
D8-B	26 Jan 2022	Low Tide (ft)	0.62
D8-B	26 Jan 2022	Low Tide Time	1056
D8-B	26 Jan 2022	Comments	Water clear; Surfer/Paddle boarder-7; Trash-1; Kelp; Algae; Seagrass
D9	05 Jan 2022	Arrive Time	935
D9	05 Jan 2022	Weather	Sunny
D9	05 Jan 2022	Wind Speed (kts)	1.7
D9	05 Jan 2022	Wind Dir	SW
D9	05 Jan 2022	Animal Life	Dog-1
D9	05 Jan 2022	Floatables	Foam
D9	05 Jan 2022	Water Color	Green
D9	05 Jan 2022	Current Direction	S
D9	05 Jan 2022	Water Temp (C)	14.9
D9	05 Jan 2022	Wave Height Low (ft)	3
D9	05 Jan 2022	High Tide (ft)	6.09
D9	05 Jan 2022	High Tide Time	1018
D9	05 Jan 2022	Low Tide (ft)	1.89
D9	05 Jan 2022	Low Tide Time	415
D9	05 Jan 2022	Comments	Water turbid; Trash-1; Algae; Person/Walker/Jogger-1
D9	12 Jan 2022	Arrive Time	857
D9	12 Jan 2022	Weather	Cloudy
D9	12 Jan 2022	Wind Speed (kts)	2.7
D9	12 Jan 2022	Wind Dir	E
D9	12 Jan 2022	Animal Life	Bird-2
D9	12 Jan 2022	Floatables	Foam
D9	12 Jan 2022	Water Color	Green
D9	12 Jan 2022	Current Direction	S
D9	12 Jan 2022	Water Temp (C)	14.5
D9	12 Jan 2022	Wave Height Low (ft)	6
D9	12 Jan 2022	High Tide (ft)	5
D9	12 Jan 2022	High Tide Time	509
D9	12 Jan 2022	Low Tide (ft)	0.31
D9	12 Jan 2022	Low Tide Time	1248
D9	12 Jan 2022	Comments	Water turbid; Trash-1; Person/Walker/Jogger-1
D9	19 Jan 2022	Arrive Time	936
D9	19 Jan 2022	Weather	Cloudy
D9	19 Jan 2022	Wind Speed (kts)	2.3
D9	19 Jan 2022	Wind Dir	W

Station	Date	Parameter	Value
D9	19 Jan 2022	Animal Life	
D9	19 Jan 2022	Floatables	Foam; Film
D9	19 Jan 2022	Water Color	Green
D9	19 Jan 2022	Current Direction	N
D9	19 Jan 2022	Water Temp (C)	17
D9	19 Jan 2022	Wave Height Low (ft)	4
D9	19 Jan 2022	High Tide (ft)	5.76
D9	19 Jan 2022	High Tide Time	911
D9	19 Jan 2022	Low Tide (ft)	1.91
D9	19 Jan 2022	Low Tide Time	309
D9	19 Jan 2022	Comments	Water clear; Surfer/Paddle boarder-2; Trash-1; Algae
D9	26 Jan 2022	Arrive Time	957
D9	26 Jan 2022	Weather	Foggy
D9	26 Jan 2022	Wind Speed (kts)	2.8
D9	26 Jan 2022	Wind Dir	W
D9	26 Jan 2022	Animal Life	Bird-1
D9	26 Jan 2022	Floatables	None
D9	26 Jan 2022	Water Color	Green
D9	26 Jan 2022	Current Direction	S
D9	26 Jan 2022	Water Temp (C)	16.7
D9	26 Jan 2022	Wave Height Low (ft)	4
D9	26 Jan 2022	High Tide (ft)	4.86
D9	26 Jan 2022	High Tide Time	316
D9	26 Jan 2022	Low Tide (ft)	0.62
D9	26 Jan 2022	Low Tide Time	1056
D9	26 Jan 2022	Comments	Water turbid; Surfer/Paddle boarder-2; Trash-1; Kelp; Seagrass; Algae; Person/Walker/Jogger-3
D10	05 Jan 2022	Arrive Time	950
D10	05 Jan 2022	Weather	Sunny
D10	05 Jan 2022	Wind Speed (kts)	1.7
D10	05 Jan 2022	Wind Dir	W
D10	05 Jan 2022	Animal Life	Seagull-10
D10	05 Jan 2022	Floatables	Foam
D10	05 Jan 2022	Water Color	Green
D10	05 Jan 2022	Current Direction	S
D10	05 Jan 2022	Water Temp (C)	15.1
D10	05 Jan 2022	Wave Height Low (ft)	3
D10	05 Jan 2022	High Tide (ft)	6.09
D10	05 Jan 2022	High Tide Time	1018
D10	05 Jan 2022	Low Tide (ft)	1.89
D10	05 Jan 2022	Low Tide Time	415
D10	05 Jan 2022	Comments	Water turbid; Surfer/Paddle boarder-19; Trash-1; Kelp; Seagrass; Algae; Person/Walker/Jogger-6
D10	12 Jan 2022	Arrive Time	842
D10	12 Jan 2022	Weather	Cloudy
D10	12 Jan 2022	Wind Speed (kts)	1.7
D10	12 Jan 2022	Wind Dir	E
D10	12 Jan 2022	Animal Life	Bird-1; Seagull-4
D10	12 Jan 2022	Floatables	Foam
D10	12 Jan 2022	Water Color	Green
D10	12 Jan 2022	Current Direction	S
D10	12 Jan 2022	Water Temp (C)	15.1
D10	12 Jan 2022	Wave Height Low (ft)	7
D10	12 Jan 2022	High Tide (ft)	5
D10	12 Jan 2022	High Tide Time	509
D10	12 Jan 2022	Low Tide (ft)	0.31
D10	12 Jan 2022	Low Tide Time	1248

Station	Date	Parameter	Value
D10	12 Jan 2022	Comments	Water turbid; Surfer/Paddle boarder-1; Trash-1; Kelp; Seagrass; Person/Walker/Jogger-1
D10	19 Jan 2022	Arrive Time	1016
D10	19 Jan 2022	Weather	Cloudy
D10	19 Jan 2022	Wind Speed (kts)	5.1
D10	19 Jan 2022	Wind Dir	W
D10	19 Jan 2022	Animal Life	
D10	19 Jan 2022	Floatables	Foam; Film
D10	19 Jan 2022	Water Color	Green
D10	19 Jan 2022	Current Direction	S
D10	19 Jan 2022	Water Temp (C)	16.9
D10	19 Jan 2022	Wave Height Low (ft)	4
D10	19 Jan 2022	High Tide (ft)	5.76
D10	19 Jan 2022	High Tide Time	911
D10	19 Jan 2022	Low Tide (ft)	1.91
D10	19 Jan 2022	Low Tide Time	309
D10	19 Jan 2022	Comments	Water turbid; Surfer/Paddle boarder-16; Trash-1; Kelp; Seagrass; Algae; Person/Walker/Jogger-5
D10	26 Jan 2022	Arrive Time	1013
D10	26 Jan 2022	Weather	Hazy
D10	26 Jan 2022	Wind Speed (kts)	2.5
D10	26 Jan 2022	Wind Dir	W
D10	26 Jan 2022	Animal Life	Seagull-4
D10	26 Jan 2022	Floatables	Foam
D10	26 Jan 2022	Water Color	Green
D10	26 Jan 2022	Current Direction	S
D10	26 Jan 2022	Water Temp (C)	17.4
D10	26 Jan 2022	Wave Height Low (ft)	3
D10	26 Jan 2022	High Tide (ft)	4.86
D10	26 Jan 2022	High Tide Time	316
D10	26 Jan 2022	Low Tide (ft)	0.62
D10	26 Jan 2022	Low Tide Time	1056
D10	26 Jan 2022	Comments	Water clear; Surfer/Paddle boarder-3; Trash-1; Seagrass; Kelp; Person/Walker/Jogger-3
D11	05 Jan 2022	Arrive Time	1027
D11	05 Jan 2022	Weather	Sunny
D11	05 Jan 2022	Wind Speed (kts)	2.7
D11	05 Jan 2022	Wind Dir	W
D11	05 Jan 2022	Animal Life	Dog-1
D11	05 Jan 2022	Floatables	Foam
D11	05 Jan 2022	Water Color	Green
D11	05 Jan 2022	Current Direction	S
D11	05 Jan 2022	Water Temp (C)	16.7
D11	05 Jan 2022	Wave Height Low (ft)	2
D11	05 Jan 2022	High Tide (ft)	6.09
D11	05 Jan 2022	High Tide Time	1018
D11	05 Jan 2022	Low Tide (ft)	1.89
D11	05 Jan 2022	Low Tide Time	415
D11	05 Jan 2022	Comments	Water turbid; Surfer/Paddle boarder-3; Trash-1; Kelp; Debris; Person/Walker/Jogger-7
D11	12 Jan 2022	Arrive Time	827
D11	12 Jan 2022	Weather	Cloudy
D11	12 Jan 2022	Wind Speed (kts)	3.5
D11	12 Jan 2022	Wind Dir	E
D11	12 Jan 2022	Animal Life	Dog-3
D11	12 Jan 2022	Floatables	None
D11	12 Jan 2022	Water Color	Green

Station	Date	Parameter	Value
D11	12 Jan 2022	Current Direction	S
D11	12 Jan 2022	Water Temp (C)	14.2
D11	12 Jan 2022	Wave Height Low (ft)	6
D11	12 Jan 2022	High Tide (ft)	5
D11	12 Jan 2022	High Tide Time	509
D11	12 Jan 2022	Low Tide (ft)	0.31
D11	12 Jan 2022	Low Tide Time	1248
D11	12 Jan 2022	Comments	Water turbid; Trash-1; Seagrass; Algae; Person/Walker/Jogger-4
D11	19 Jan 2022	Arrive Time	1029
D11	19 Jan 2022	Weather	Partly cloudy
D11	19 Jan 2022	Wind Speed (kts)	3
D11	19 Jan 2022	Wind Dir	W
D11	19 Jan 2022	Animal Life	
D11	19 Jan 2022	Floatables	None
D11	19 Jan 2022	Water Color	Green
D11	19 Jan 2022	Current Direction	S
D11	19 Jan 2022	Water Temp (C)	17.2
D11	19 Jan 2022	Wave Height Low (ft)	3
D11	19 Jan 2022	High Tide (ft)	5.76
D11	19 Jan 2022	High Tide Time	911
D11	19 Jan 2022	Low Tide (ft)	1.91
D11	19 Jan 2022	Low Tide Time	309
D11	19 Jan 2022	Comments	Water clear; Surfer/Paddle boarder-11; Trash-1; Kelp; Seagrass; Person/Walker/Jogger-11
D11	26 Jan 2022	Arrive Time	1025
D11	26 Jan 2022	Weather	Sunny
D11	26 Jan 2022	Wind Speed (kts)	3.5
D11	26 Jan 2022	Wind Dir	W
D11	26 Jan 2022	Animal Life	Dog-26
D11	26 Jan 2022	Floatables	Foam
D11	26 Jan 2022	Water Color	Green
D11	26 Jan 2022	Current Direction	S
D11	26 Jan 2022	Water Temp (C)	16.8
D11	26 Jan 2022	Wave Height Low (ft)	4
D11	26 Jan 2022	High Tide (ft)	4.86
D11	26 Jan 2022	High Tide Time	316
D11	26 Jan 2022	Low Tide (ft)	0.62
D11	26 Jan 2022	Low Tide Time	1056
D11	26 Jan 2022	Comments	Water turbid; Surfer/Paddle boarder-2; Trash-1; Kelp; Seagrass; Algae; Person/Walker/Jogger-6
D12	05 Jan 2022	Arrive Time	1058
D12	05 Jan 2022	Weather	Sunny
D12	05 Jan 2022	Wind Speed (kts)	5.1
D12	05 Jan 2022	Wind Dir	NW
D12	05 Jan 2022	Animal Life	Bird-1; Seagull-3
D12	05 Jan 2022	Floatables	Foam
D12	05 Jan 2022	Water Color	Green
D12	05 Jan 2022	Current Direction	S
D12	05 Jan 2022	Water Temp (C)	18.8
D12	05 Jan 2022	Wave Height Low (ft)	3
D12	05 Jan 2022	High Tide (ft)	6.09
D12	05 Jan 2022	High Tide Time	1018
D12	05 Jan 2022	Low Tide (ft)	1.89
D12	05 Jan 2022	Low Tide Time	415
D12	05 Jan 2022	Comments	Water clear; Surfer/Paddle boarder-3; Fisherperson-1; Trash-1; Kelp; Seagrass; Debris; Person/Walker/Jogger-13

Station	Date	Parameter	Value
D12	12 Jan 2022	Arrive Time	804
D12	12 Jan 2022	Weather	Cloudy
D12	12 Jan 2022	Wind Speed (kts)	3.4
D12	12 Jan 2022	Wind Dir	E
D12	12 Jan 2022	Animal Life	Pelican-1; Seagull-122
D12	12 Jan 2022	Floatables	Foam
D12	12 Jan 2022	Water Color	Blue
D12	12 Jan 2022	Current Direction	S
D12	12 Jan 2022	Water Temp (C)	15
D12	12 Jan 2022	Wave Height Low (ft)	6
D12	12 Jan 2022	High Tide (ft)	5
D12	12 Jan 2022	High Tide Time	509
D12	12 Jan 2022	Low Tide (ft)	0.31
D12	12 Jan 2022	Low Tide Time	1248
D12	12 Jan 2022	Comments	Water clear; Trash-1; Kelp; Seagrass; Person/Walker/Jogger-2
D12	19 Jan 2022	Arrive Time	1056
D12	19 Jan 2022	Weather	Overcast
D12	19 Jan 2022	Wind Speed (kts)	6.9
D12	19 Jan 2022	Wind Dir	NW
D12	19 Jan 2022	Animal Life	Seagull-10
D12	19 Jan 2022	Floatables	Foam
D12	19 Jan 2022	Water Color	Green
D12	19 Jan 2022	Current Direction	S
D12	19 Jan 2022	Water Temp (C)	18.8
D12	19 Jan 2022	Wave Height Low (ft)	4
D12	19 Jan 2022	High Tide (ft)	5.76
D12	19 Jan 2022	High Tide Time	911
D12	19 Jan 2022	Low Tide (ft)	1.91
D12	19 Jan 2022	Low Tide Time	309
D12	19 Jan 2022	Comments	Water clear; Trash-1; Kelp; Seagrass; Person/Walker/Jogger-6
D12	26 Jan 2022	Arrive Time	1105
D12	26 Jan 2022	Weather	Sunny
D12	26 Jan 2022	Wind Speed (kts)	4.8
D12	26 Jan 2022	Wind Dir	W
D12	26 Jan 2022	Animal Life	Seagull-1
D12	26 Jan 2022	Floatables	Foam
D12	26 Jan 2022	Water Color	Green
D12	26 Jan 2022	Current Direction	S
D12	26 Jan 2022	Water Temp (C)	18.9
D12	26 Jan 2022	Wave Height Low (ft)	2
D12	26 Jan 2022	High Tide (ft)	4.86
D12	26 Jan 2022	High Tide Time	316
D12	26 Jan 2022	Low Tide (ft)	0.62
D12	26 Jan 2022	Low Tide Time	1056
D12	26 Jan 2022	Comments	Water clear; Trash-1; Kelp; Seagrass; Person/Walker/Jogger-4



# 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 Jan 2022	9	11	11	3	2	3	3	7
02 Jan 2022	9	11	11	3	2	3	3	7
03 Jan 2022	9	11	11	3	2	3	3	7
04 Jan 2022	17	12	13	3	2	3	3	6
05 Jan 2022	17	12	13	3	2	3	3	6
06 Jan 2022	17	12	13	3	2	3	3	6
07 Jan 2022	19	12	15	3	2	3	3	8
08 Jan 2022	19	12	15	3	2	3	3	8
09 Jan 2022	19	12	15	3	2	3	3	8
10 Jan 2022	13	8	10	3	2	3	3	6
11 Jan 2022	13	8	10	3	2	3	3	6
12 Jan 2022	13	8	10	3	2	3	3	6
13 Jan 2022	13	8	10	3	2	3	3	6
14 Jan 2022	13	8	10	3	2	3	3	6
15 Jan 2022	13	8	10	3	2	3	3	6
16 Jan 2022	11	8	9	3	2	2	3	7
17 Jan 2022	11	8	9	3	2	2	3	7
18 Jan 2022	11	11	14	3	3	2	2	6
19 Jan 2022	11	11	14	3	3	2	2	6
20 Jan 2022	10	10	13	3	3	2	2	5
21 Jan 2022	10	10	13	3	3	2	2	5
22 Jan 2022	10	10	13	3	3	2	2	5
23 Jan 2022	10	10	13	3	3	2	2	5
24 Jan 2022	14	7	13	3	3	2	3	5
25 Jan 2022	14	7	13	3	3	2	3	5
26 Jan 2022	22	7	14	2	3	2	3	4
27 Jan 2022	22	7	14	2	3	2	3	4
28 Jan 2022	22	7	14	2	3	2	3	4
29 Jan 2022	22	7	14	2	3	2	3	4
30 Jan 2022	22	7	14	2	3	2	3	4
31 Jan 2022	15	7	11	2	3	2	3	3

\* Geometric mean calculated using n<5

**Table 3.2**

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

Date	A1	A6	A7	C4	C5	C6	C7	C8
01 Jan 2022	4	3	3	2	2	2	2	2
02 Jan 2022	4	3	3	2	2	2	2	2
03 Jan 2022	4	3	3	2	2	2	2	2
04 Jan 2022	5	3	3	2	2	2	2	2
05 Jan 2022	5	3	3	2	2	2	2	2
06 Jan 2022	5	3	3	2	2	2	2	2
07 Jan 2022	7	3	3	2	2	2	2	2
08 Jan 2022	7	3	3	2	2	2	2	2
09 Jan 2022	7	3	3	2	2	2	2	2
10 Jan 2022	5	3	3	2	2	2	2	2
11 Jan 2022	5	3	3	2	2	2	2	2
12 Jan 2022	5	3	3	2	2	2	2	2
13 Jan 2022	5	3	3	2	2	2	2	2
14 Jan 2022	5	3	3	2	2	2	2	2
15 Jan 2022	5	3	3	2	2	2	2	2
16 Jan 2022	5	2	3	2	2	2	2	2
17 Jan 2022	5	2	3	2	2	2	2	2
18 Jan 2022	6	3	4	2	2	2	2	2
19 Jan 2022	6	3	4	2	2	2	2	2
20 Jan 2022	6	3	4	2	2	2	2	2
21 Jan 2022	6	3	4	2	2	2	2	2
22 Jan 2022	6	3	4	2	2	2	2	2
23 Jan 2022	6	3	4	2	2	2	2	2
24 Jan 2022	6	3	4	2	2	2	2	2
25 Jan 2022	6	3	4	2	2	2	2	2
26 Jan 2022	7	3	4	2	2	2	2	2
27 Jan 2022	7	3	4	2	2	2	2	2
28 Jan 2022	7	3	4	2	2	2	2	2
29 Jan 2022	7	3	4	2	2	2	2	2
30 Jan 2022	7	3	4	2	2	2	2	2
31 Jan 2022	6	3	4	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 Jan 2022	3	2	4	2	2	2	2	2
02 Jan 2022	3	2	4	2	2	2	2	2
03 Jan 2022	3	2	4	2	2	2	2	2
04 Jan 2022	3	2	4	2	2	2	2	2
05 Jan 2022	3	2	4	2	2	2	2	2
06 Jan 2022	3	2	4	2	2	2	2	2
07 Jan 2022	3	2	4	2	2	2	2	2
08 Jan 2022	3	2	4	2	2	2	2	2
09 Jan 2022	3	2	4	2	2	2	2	2
10 Jan 2022	3	2	3	2	2	2	2	2
11 Jan 2022	3	2	3	2	2	2	2	2
12 Jan 2022	3	2	3	2	2	2	2	2
13 Jan 2022	3	2	3	2	2	2	2	2
14 Jan 2022	3	2	3	2	2	2	2	2
15 Jan 2022	3	2	3	2	2	2	2	2
16 Jan 2022	3	2	2	2	2	2	2	2
17 Jan 2022	3	2	2	2	2	2	2	2
18 Jan 2022	3	2	2	2	2	2	2	2
19 Jan 2022	3	2	2	2	2	2	2	2
20 Jan 2022	3	2	2	2	2	2	2	2
21 Jan 2022	3	2	2	2	2	2	2	2
22 Jan 2022	3	2	2	2	2	2	2	2
23 Jan 2022	3	2	2	2	2	2	2	2
24 Jan 2022	3	2	2	2	2	2	2	2
25 Jan 2022	3	2	2	2	2	2	2	2
26 Jan 2022	3	2	2	2	2	2	2	2
27 Jan 2022	3	2	2	2	2	2	2	2
28 Jan 2022	3	2	2	2	2	2	2	2
29 Jan 2022	3	2	2	2	2	2	2	2
30 Jan 2022	3	2	2	2	2	2	2	2
31 Jan 2022	3	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
04 Jan 2022	IC							
10 Jan 2022	IC							
18 Jan 2022	IC							
24 Jan 2022	IC							
31 Jan 2022	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
04 Jan 2022	IC							
10 Jan 2022	IC							
18 Jan 2022	IC							
24 Jan 2022	IC							
31 Jan 2022	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
04 Jan 2022	IC							
10 Jan 2022	IC							
18 Jan 2022	IC							
24 Jan 2022	IC							
31 Jan 2022	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
04 Jan 2022	IC							
10 Jan 2022	IC							
18 Jan 2022	IC							
24 Jan 2022	IC							
31 Jan 2022	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* (Enter) 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	Enter	F:T	Temp	XMS	DO	Sal	pH
A1	04 Jan 2022	810	1	14e	<2	2e	0.14	14.7	83.22	7.6	33.42	7.9
A1	04 Jan 2022	810	12	68	2e	<2	0.03	14.4	84.62	7.2	33.45	7.8
A1	04 Jan 2022	810	18	500	62	10e	0.12	13.6	84.87	6.4	33.46	7.8
A1	10 Jan 2022	749	1	4e	<2	<2	0.50	14.6	81.60	7.8	33.43	7.9
A1	10 Jan 2022	749	12	<2	<2	<2	1.00	14.4	82.47	7.3	33.46	7.9
A1	10 Jan 2022	749	18	2e	<2	<2	1.00	13.9	82.70	6.7	33.47	7.8
A1	18 Jan 2022	756	1	20e	32e	4e	1.60	15.0	76.64	7.6	33.43	7.9
A1	18 Jan 2022	756	12	<2	<2	<2	1.00	14.9	77.98	7.5	33.44	7.9
A1	18 Jan 2022	756	18	10e	4e	<2	0.40	14.6	79.76	7.4	33.46	7.9
A1	24 Jan 2022	925	1	2e	<2	<2	1.00	15.4	84.08	8.0	33.45	8.0
A1	24 Jan 2022	925	12	80e	4e	<2	0.05	14.3	83.71	7.3	33.48	7.9
A1	24 Jan 2022	925	18	40e	8e	2e	0.20	14.3	83.50	7.1	33.47	7.9
A1	31 Jan 2022	822	1	<2	<2	<2	1.00	15.2	83.17	7.7	33.44	8.1
A1	31 Jan 2022	822	12	<2	<2	2e	1.00	14.2	82.96	7.1	33.38	8.0
A1	31 Jan 2022	822	18	6e	<2	<2	0.33	13.9	82.80	6.8	33.38	8.0
A6	04 Jan 2022	839	1	4e	<2	<2	0.50	14.8	81.09	8.0	33.40	7.9
A6	04 Jan 2022	839	12	14e	<2	<2	0.14	14.7	83.72	7.4	33.41	7.9
A6	04 Jan 2022	839	18	34e	4e	2e	0.12	14.4	84.15	7.1	33.42	7.9
A6	10 Jan 2022	816	1	<2	<2	<2	1.00	14.8	83.53	7.9	33.46	7.9
A6	10 Jan 2022	816	12	<2	<2	<2	1.00	14.8	84.23	7.8	33.46	7.9
A6	10 Jan 2022	816	18	<2	<2	2e	1.00	14.5	84.52	7.3	33.47	7.9
A6	18 Jan 2022	826	1	<2	2e	<2	1.00	15.1	77.24	8.0	33.42	7.9
A6	18 Jan 2022	826	12	<2	2e	<2	1.00	14.9	80.27	7.6	33.45	7.9
A6	18 Jan 2022	826	18	120e	18e	<2	0.15	14.5	81.24	7.5	33.47	7.9
A6	24 Jan 2022	947	1	<2	<2	<2	1.00	15.2	78.21	8.4	33.45	8.0
A6	24 Jan 2022	947	12	<2	<2	<2	1.00	15.1	76.46	8.4	33.46	8.0
A6	24 Jan 2022	947	18	<2	<2	<2	1.00	14.9	81.56	7.8	33.46	7.9
A6	31 Jan 2022	844	1	4e	<2	<2	0.50	15.3	81.55	7.8	33.44	8.1
A6	31 Jan 2022	844	12	8e	<2	<2	0.25	15.0	82.09	7.4	33.43	8.1
A6	31 Jan 2022	844	18	10e	6e	<2	0.60	14.7	82.23	7.2	33.43	8.1
A7	04 Jan 2022	822	1	2e	<2	<2	1.00	14.8	82.12	7.8	33.40	7.9
A7	04 Jan 2022	822	12	6e	<2	<2	0.33	14.8	82.11	7.8	33.40	7.9
A7	04 Jan 2022	822	18	68	12e	4e	0.18	14.3	84.32	7.0	33.46	7.8
A7	10 Jan 2022	803	1	<2	<2	<2	1.00	14.8	83.17	8.0	33.45	7.9
A7	10 Jan 2022	803	12	<2	<2	<2	1.00	14.8	83.65	8.0	33.46	7.9
A7	10 Jan 2022	803	18	2e	<2	<2	1.00	14.4	83.80	7.1	33.46	7.8
A7	18 Jan 2022	810	1	<2	<2	<2	1.00	15.1	77.31	8.1	33.41	7.9
A7	18 Jan 2022	810	12	20e	4e	<2	0.20	14.7	80.46	7.6	33.45	7.9
A7	18 Jan 2022	810	18	200e	38e	<2	0.19	14.4	79.38	7.3	33.46	7.9

Station	Date	Time	Depth	Total	Fecal	Enteric	F:T	Temp	XMS	DO	Sal	pH
A7	24 Jan 2022	937	1	<2	<2	2e	1.00	15.2	82.96	8.1	33.46	8.0
A7	24 Jan 2022	937	12	12e	2e	<2	0.17	14.9	82.25	7.9	33.47	7.9
A7	24 Jan 2022	937	18	20e	<2	<2	0.10	14.4	82.73	7.3	33.47	7.9
A7	31 Jan 2022	832	1	<2	<2	<2	1.00	15.4	82.99	7.6	33.44	8.1
A7	31 Jan 2022	832	12	6e	2e	<2	0.33	15.2	82.70	7.4	33.43	8.1
A7	31 Jan 2022	832	18	<2	2e	<2	1.00	14.3	82.81	6.9	33.41	8.1
C4	04 Jan 2022	956	1	<2	<2	<2	1.00	14.8	83.28	7.6	33.42	7.9
C4	04 Jan 2022	956	3	<2	<2	<2	1.00	14.8	83.44	7.5	33.42	7.9
C4	04 Jan 2022	956	9	4e	<2	<2	0.50	14.6	82.06	7.8	33.43	7.9
C4	10 Jan 2022	920	1	<2	<2	<2	1.00	14.7	81.55	7.4	33.43	7.9
C4	10 Jan 2022	920	3	<2	<2	<2	1.00	14.6	81.22	7.5	33.43	7.9
C4	10 Jan 2022	920	9	<2	<2	<2	1.00	14.6	80.52	7.4	33.43	7.9
C4	18 Jan 2022	953	1	2e	<2	<2	1.00	15.0	79.80	7.3	33.44	7.9
C4	18 Jan 2022	953	3	<2	<2	<2	1.00	15.0	79.19	7.3	33.44	7.9
C4	18 Jan 2022	953	9	2e	<2	<2	1.00	15.0	79.02	7.4	33.44	7.9
C4	24 Jan 2022	1051	1	2e	<2	<2	1.00	15.1	77.72	8.4	33.46	8.0
C4	24 Jan 2022	1051	3	<2	<2	<2	1.00	15.1	76.93	8.4	33.46	8.0
C4	24 Jan 2022	1051	9	<2	<2	<2	1.00	15.0	77.68	8.2	33.46	8.0
C4	31 Jan 2022	950	1	<2	<2	<2	1.00	15.3	76.79	7.7	33.46	8.1
C4	31 Jan 2022	950	3	<2	<2	<2	1.00	15.2	76.64	7.7	33.46	8.1
C4	31 Jan 2022	950	9	<2	<2	<2	1.00	15.2	77.57	7.5	33.45	8.1
C5	04 Jan 2022	944	1	<2	2e	<2	1.00	14.8	82.23	7.8	33.41	7.9
C5	04 Jan 2022	944	3	2e	<2	<2	1.00	14.8	82.25	7.8	33.41	7.9
C5	04 Jan 2022	944	9	<2	<2	<2	1.00	14.8	82.98	7.6	33.42	7.9
C5	10 Jan 2022	913	1	<2	<2	<2	1.00	14.7	73.83	7.0	33.43	7.8
C5	10 Jan 2022	913	3	<2	<2	<2	1.00	14.7	70.23	7.0	33.43	7.8
C5	10 Jan 2022	913	9	<2	2e	<2	1.00	14.7	59.18	7.0	33.42	7.8
C5	18 Jan 2022	939	1	<20	<2	2e	0.10	15.5	46.63	7.5	33.45	7.8
C5	18 Jan 2022	939	3	2e	2e	<2	1.00	15.4	47.32	7.4	33.46	7.8
C5	18 Jan 2022	939	9	<2	<2	<2	1.00	15.1	46.45	6.8	33.47	7.8
C5	24 Jan 2022	1041	1	<2	<2	<2	1.00	15.1	79.00	8.4	33.46	8.0
C5	24 Jan 2022	1041	3	<2	<2	<2	1.00	15.0	78.98	8.4	33.46	8.0
C5	24 Jan 2022	1041	9	<2	<2	<2	1.00	14.6	80.01	6.8	33.47	7.9
C5	31 Jan 2022	941	1	<2	<2	<2	1.00	15.3	80.11	7.8	33.45	8.1
C5	31 Jan 2022	941	3	<2	<2	<2	1.00	15.3	80.20	7.8	33.45	8.1
C5	31 Jan 2022	941	9	2e	<2	<2	1.00	14.8	58.36	6.6	33.45	8.1
C6	04 Jan 2022	934	1	<2	<2	<2	1.00	14.7	81.29	8.0	33.38	7.9
C6	04 Jan 2022	934	3	<2	<2	<2	1.00	14.7	81.09	8.0	33.39	7.9
C6	04 Jan 2022	934	9	2e	<2	<2	1.00	14.7	80.79	8.0	33.39	7.9
C6	10 Jan 2022	903	1	<2	<2	<2	1.00	14.7	80.67	7.6	33.44	7.9
C6	10 Jan 2022	903	3	<2	<2	<2	1.00	14.7	81.60	7.5	33.44	7.9
C6	10 Jan 2022	903	9	<2	<2	2e	1.00	14.7	77.52	7.2	33.44	7.9
C6	18 Jan 2022	926	1	<2	<2	<2	1.00	15.2	78.34	7.9	33.41	7.9
C6	18 Jan 2022	926	3	<2	<2	2e	1.00	15.2	78.23	7.9	33.42	7.9
C6	18 Jan 2022	926	9	<2	<2	<2	1.00	14.9	76.85	6.9	33.47	7.8

Station	Date	Time	Depth	Total	Fecal	Enteric	F:T	Temp	XMS	DO	Sal	pH
C6	24 Jan 2022	1030	1	<2	<2	<2	1.00	15.1	77.45	8.4	33.47	8.0
C6	24 Jan 2022	1030	3	2e	<2	<2	1.00	15.1	77.58	8.4	33.48	8.0
C6	24 Jan 2022	1030	9	2e	<2	<2	1.00	14.8	75.75	7.3	33.47	7.9
C6	31 Jan 2022	931	1	2e	<2	<2	1.00	15.2	80.78	7.8	33.45	8.1
C6	31 Jan 2022	931	3	<2	<2	<2	1.00	15.2	80.68	7.7	33.45	8.1
C6	31 Jan 2022	931	9	2e	<2	<2	1.00	15.1	78.08	7.1	33.45	8.1
C7	04 Jan 2022	855	1	2e	<2	<2	1.00	14.9	81.28	7.8	33.41	7.9
C7	04 Jan 2022	855	12	4e	<2	<2	0.50	14.8	83.34	7.5	33.42	7.9
C7	04 Jan 2022	855	18	6e	<2	<2	0.33	14.6	83.64	7.2	33.42	7.9
C7	10 Jan 2022	831	1	<2	<2	<2	1.00	14.9	83.90	7.9	33.46	7.9
C7	10 Jan 2022	831	12	<2	<2	<2	1.00	14.9	84.03	7.9	33.46	7.9
C7	10 Jan 2022	831	18	2e	<2	<2	1.00	14.3	83.62	7.1	33.48	7.9
C7	18 Jan 2022	845	1	<2	<2	<2	1.00	15.2	79.27	7.8	33.43	7.9
C7	18 Jan 2022	845	12	<2	2e	<2	1.00	14.7	81.59	7.7	33.45	7.9
C7	18 Jan 2022	845	18	<2	<2	<2	1.00	14.7	82.25	7.6	33.45	7.9
C7	24 Jan 2022	1000	1	<2	<2	<2	1.00	15.1	77.92	8.5	33.45	8.0
C7	24 Jan 2022	1000	12	8e	<2	<2	0.25	14.8	79.72	8.2	33.46	8.0
C7	24 Jan 2022	1000	18	2e	<2	<2	1.00	14.4	81.29	7.2	33.48	7.9
C7	31 Jan 2022	858	1	<2	2e	<2	1.00	15.4	77.85	7.8	33.44	8.1
C7	31 Jan 2022	858	12	6e	<2	<2	0.33	15.1	81.85	7.4	33.43	8.1
C7	31 Jan 2022	858	18	6e	6e	2e	1.00	14.8	81.94	7.2	33.43	8.1
C8	04 Jan 2022	914	1	2e	<2	<2	1.00	14.8	80.69	7.8	33.40	7.9
C8	04 Jan 2022	914	12	6e	<2	<2	0.33	14.8	80.71	7.8	33.39	7.9
C8	04 Jan 2022	914	18	<2	<2	4e	1.00	14.8	82.58	7.7	33.43	7.9
C8	10 Jan 2022	843	1	<2	<2	<2	1.00	14.8	82.67	8.1	33.45	7.9
C8	10 Jan 2022	843	12	<2	<2	<2	1.00	14.7	83.87	7.8	33.45	7.9
C8	10 Jan 2022	843	18	2e	2e	<2	1.00	14.1	83.96	6.9	33.46	7.8
C8	18 Jan 2022	900	1	<2	<2	<2	1.00	15.1	78.60	8.1	33.41	7.9
C8	18 Jan 2022	900	12	<2	<2	2e	1.00	14.7	81.43	7.8	33.45	7.9
C8	18 Jan 2022	900	18	8e	<2	<2	0.25	14.7	81.92	7.6	33.45	7.9
C8	24 Jan 2022	1011	1	<2	<2	<2	1.00	14.9	77.92	8.2	33.45	8.0
C8	24 Jan 2022	1011	12	<20	<2	<2	0.10	14.7	77.61	8.3	33.45	8.0
C8	24 Jan 2022	1011	18	2e	<2	<2	1.00	14.6	81.48	7.6	33.46	7.9
C8	31 Jan 2022	910	1	<2	<2	<2	1.00	15.3	81.89	7.8	33.44	8.1
C8	31 Jan 2022	910	12	<2	<2	<2	1.00	15.3	81.87	7.8	33.44	8.1
C8	31 Jan 2022	910	18	2e	<2	<2	1.00	14.9	81.80	7.3	33.44	8.1

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	04 Jan 2022	Depth (m)	19
A1	04 Jan 2022	Arrive Time	810
A1	04 Jan 2022	Depart Time	819
A1	04 Jan 2022	Air Temp (C)	10
A1	04 Jan 2022	Weather	Clear
A1	04 Jan 2022	Visibility (mi)	10
A1	04 Jan 2022	Wind Speed (kts)	6.6
A1	04 Jan 2022	Wind Dir	E
A1	04 Jan 2022	Water Color	Blueish-Green
A1	04 Jan 2022	Wave Ht Low (ft)	3.3
A1	04 Jan 2022	Wave Period (sec)	15
A1	04 Jan 2022	Sea State	Calm
A1	04 Jan 2022	High Tide (ft)	6.67
A1	04 Jan 2022	High Tide Time	1730
A1	04 Jan 2022	Low Tide (ft)	-1.58
A1	04 Jan 2022	Low Tide Time	48
A1	04 Jan 2022	Comments	none
A1	10 Jan 2022	Depth (m)	18
A1	10 Jan 2022	Arrive Time	749
A1	10 Jan 2022	Depart Time	756
A1	10 Jan 2022	Air Temp (C)	15.5
A1	10 Jan 2022	Weather	Partly Cloudy
A1	10 Jan 2022	Visibility (mi)	10
A1	10 Jan 2022	Wind Speed (kts)	4.1
A1	10 Jan 2022	Wind Dir	NE
A1	10 Jan 2022	Water Color	Green
A1	10 Jan 2022	Wave Ht Low (ft)	3
A1	10 Jan 2022	Wave Period (sec)	14
A1	10 Jan 2022	Sea State	Wind Ripples
A1	10 Jan 2022	High Tide (ft)	4.58
A1	10 Jan 2022	High Tide Time	1148
A1	10 Jan 2022	Low Tide (ft)	1.41
A1	10 Jan 2022	Low Tide Time	1854
A1	10 Jan 2022	Comments	Kelp; Lobster Floats
A1	18 Jan 2022	Depth (m)	19
A1	18 Jan 2022	Arrive Time	756
A1	18 Jan 2022	Depart Time	801
A1	18 Jan 2022	Air Temp (C)	14.3
A1	18 Jan 2022	Weather	Continuous Layer of Clouds
A1	18 Jan 2022	Visibility (mi)	7
A1	18 Jan 2022	Wind Speed (kts)	1.3
A1	18 Jan 2022	Wind Dir	SW
A1	18 Jan 2022	Water Color	Blueish-Green
A1	18 Jan 2022	Wave Ht Low (ft)	3
A1	18 Jan 2022	Wave Period (sec)	13
A1	18 Jan 2022	Sea State	Calm
A1	18 Jan 2022	High Tide (ft)	5.9
A1	18 Jan 2022	High Tide Time	1642
A1	18 Jan 2022	Low Tide (ft)	-0.82
A1	18 Jan 2022	Low Tide Time	2354
A1	18 Jan 2022	Comments	Kelp; Lobster Floats
A1	24 Jan 2022	Depth (m)	18
A1	24 Jan 2022	Arrive Time	921

Station	Date	Parameter	Value
A1	24 Jan 2022	Depart Time	927
A1	24 Jan 2022	Air Temp (C)	14.1
A1	24 Jan 2022	Weather	Clear
A1	24 Jan 2022	Visibility (mi)	10
A1	24 Jan 2022	Wind Speed (kts)	7.7
A1	24 Jan 2022	Wind Dir	E
A1	24 Jan 2022	Water Color	Blueish-Green
A1	24 Jan 2022	Wave Ht Low (ft)	3
A1	24 Jan 2022	Wave Period (sec)	18
A1	24 Jan 2022	Sea State	Calm
A1	24 Jan 2022	High Tide (ft)	4.23
A1	24 Jan 2022	High Tide Time	924
A1	24 Jan 2022	Low Tide (ft)	1.19
A1	24 Jan 2022	Low Tide Time	306
A1	24 Jan 2022	Comments	Kelp Debris
A1	31 Jan 2022	Depth (m)	19
A1	31 Jan 2022	Arrive Time	822
A1	31 Jan 2022	Depart Time	827
A1	31 Jan 2022	Air Temp (C)	12.6
A1	31 Jan 2022	Weather	Partly Cloudy
A1	31 Jan 2022	Visibility (mi)	10
A1	31 Jan 2022	Wind Speed (kts)	5.2
A1	31 Jan 2022	Wind Dir	E
A1	31 Jan 2022	Water Color	Blueish-Green
A1	31 Jan 2022	Wave Ht Low (ft)	2
A1	31 Jan 2022	Wave Period (sec)	12
A1	31 Jan 2022	Sea State	Light Chop
A1	31 Jan 2022	High Tide (ft)	6.74
A1	31 Jan 2022	High Tide Time	1554
A1	31 Jan 2022	Low Tide (ft)	-1.86
A1	31 Jan 2022	Low Tide Time	2306
A1	31 Jan 2022	Comments	none
A6	04 Jan 2022	Depth (m)	21
A6	04 Jan 2022	Arrive Time	839
A6	04 Jan 2022	Depart Time	844
A6	04 Jan 2022	Air Temp (C)	12.4
A6	04 Jan 2022	Weather	Clear
A6	04 Jan 2022	Visibility (mi)	10
A6	04 Jan 2022	Wind Speed (kts)	1.9
A6	04 Jan 2022	Wind Dir	SE
A6	04 Jan 2022	Water Color	Blueish-Green
A6	04 Jan 2022	Wave Ht Low (ft)	3.3
A6	04 Jan 2022	Wave Period (sec)	15
A6	04 Jan 2022	Sea State	Calm
A6	04 Jan 2022	High Tide (ft)	6.67
A6	04 Jan 2022	High Tide Time	1730
A6	04 Jan 2022	Low Tide (ft)	-1.58
A6	04 Jan 2022	Low Tide Time	48
A6	04 Jan 2022	Comments	none
A6	10 Jan 2022	Depth (m)	20
A6	10 Jan 2022	Arrive Time	816
A6	10 Jan 2022	Depart Time	820
A6	10 Jan 2022	Air Temp (C)	14.6
A6	10 Jan 2022	Weather	Partly Cloudy
A6	10 Jan 2022	Visibility (mi)	10
A6	10 Jan 2022	Wind Speed (kts)	3.2
A6	10 Jan 2022	Wind Dir	N
A6	10 Jan 2022	Water Color	Green

Station	Date	Parameter	Value
A6	10 Jan 2022	Wave Ht Low (ft)	3
A6	10 Jan 2022	Wave Period (sec)	14
A6	10 Jan 2022	Sea State	Wind Ripples
A6	10 Jan 2022	High Tide (ft)	4.58
A6	10 Jan 2022	High Tide Time	1148
A6	10 Jan 2022	Low Tide (ft)	1.41
A6	10 Jan 2022	Low Tide Time	1854
A6	10 Jan 2022	Comments	Lobster Floats
A6	18 Jan 2022	Depth (m)	20
A6	18 Jan 2022	Arrive Time	826
A6	18 Jan 2022	Depart Time	830
A6	18 Jan 2022	Air Temp (C)	14.3
A6	18 Jan 2022	Weather	Continuous Layer of Clouds
A6	18 Jan 2022	Visibility (mi)	7
A6	18 Jan 2022	Wind Speed (kts)	3.4
A6	18 Jan 2022	Wind Dir	NW
A6	18 Jan 2022	Water Color	Blueish-Green
A6	18 Jan 2022	Wave Ht Low (ft)	3
A6	18 Jan 2022	Wave Period (sec)	13
A6	18 Jan 2022	Sea State	Calm
A6	18 Jan 2022	High Tide (ft)	5.9
A6	18 Jan 2022	High Tide Time	1642
A6	18 Jan 2022	Low Tide (ft)	-0.82
A6	18 Jan 2022	Low Tide Time	2354
A6	18 Jan 2022	Comments	Kelp; Lobster Floats
A6	24 Jan 2022	Depth (m)	18
A6	24 Jan 2022	Arrive Time	943
A6	24 Jan 2022	Depart Time	947
A6	24 Jan 2022	Air Temp (C)	15.4
A6	24 Jan 2022	Weather	Clear
A6	24 Jan 2022	Visibility (mi)	10
A6	24 Jan 2022	Wind Speed (kts)	4.6
A6	24 Jan 2022	Wind Dir	E
A6	24 Jan 2022	Water Color	Brownish-Green
A6	24 Jan 2022	Wave Ht Low (ft)	3
A6	24 Jan 2022	Wave Period (sec)	18
A6	24 Jan 2022	Sea State	Calm
A6	24 Jan 2022	High Tide (ft)	4.23
A6	24 Jan 2022	High Tide Time	924
A6	24 Jan 2022	Low Tide (ft)	1.19
A6	24 Jan 2022	Low Tide Time	306
A6	24 Jan 2022	Comments	Kelp; Kelp Debris; Seagrass
A6	31 Jan 2022	Depth (m)	19
A6	31 Jan 2022	Arrive Time	844
A6	31 Jan 2022	Depart Time	851
A6	31 Jan 2022	Air Temp (C)	13.1
A6	31 Jan 2022	Weather	Partly Cloudy
A6	31 Jan 2022	Visibility (mi)	10
A6	31 Jan 2022	Wind Speed (kts)	3.9
A6	31 Jan 2022	Wind Dir	N
A6	31 Jan 2022	Water Color	Blueish-Green
A6	31 Jan 2022	Wave Ht Low (ft)	2
A6	31 Jan 2022	Wave Period (sec)	12
A6	31 Jan 2022	Sea State	Light Chop
A6	31 Jan 2022	High Tide (ft)	6.74
A6	31 Jan 2022	High Tide Time	1554
A6	31 Jan 2022	Low Tide (ft)	-1.86
A6	31 Jan 2022	Low Tide Time	2306

Station	Date	Parameter	Value
A6	31 Jan 2022	Comments	none
A7	04 Jan 2022	Depth (m)	19
A7	04 Jan 2022	Arrive Time	822
A7	04 Jan 2022	Depart Time	828
A7	04 Jan 2022	Air Temp (C)	11.4
A7	04 Jan 2022	Weather	Clear
A7	04 Jan 2022	Visibility (mi)	10
A7	04 Jan 2022	Wind Speed (kts)	5.1
A7	04 Jan 2022	Wind Dir	SE
A7	04 Jan 2022	Water Color	Blueish-Green
A7	04 Jan 2022	Wave Ht Low (ft)	3.3
A7	04 Jan 2022	Wave Period (sec)	15
A7	04 Jan 2022	Sea State	Calm
A7	04 Jan 2022	High Tide (ft)	6.67
A7	04 Jan 2022	High Tide Time	1730
A7	04 Jan 2022	Low Tide (ft)	-1.58
A7	04 Jan 2022	Low Tide Time	48
A7	04 Jan 2022	Comments	Kelp Debris
A7	10 Jan 2022	Depth (m)	18
A7	10 Jan 2022	Arrive Time	803
A7	10 Jan 2022	Depart Time	809
A7	10 Jan 2022	Air Temp (C)	14.8
A7	10 Jan 2022	Weather	Partly Cloudy
A7	10 Jan 2022	Visibility (mi)	10
A7	10 Jan 2022	Wind Speed (kts)	3.9
A7	10 Jan 2022	Wind Dir	NW
A7	10 Jan 2022	Water Color	Green
A7	10 Jan 2022	Wave Ht Low (ft)	3
A7	10 Jan 2022	Wave Period (sec)	14
A7	10 Jan 2022	Sea State	Wind Ripples
A7	10 Jan 2022	High Tide (ft)	4.58
A7	10 Jan 2022	High Tide Time	1148
A7	10 Jan 2022	Low Tide (ft)	1.41
A7	10 Jan 2022	Low Tide Time	1854
A7	10 Jan 2022	Comments	none
A7	18 Jan 2022	Depth (m)	20
A7	18 Jan 2022	Arrive Time	810
A7	18 Jan 2022	Depart Time	816
A7	18 Jan 2022	Air Temp (C)	14.3
A7	18 Jan 2022	Weather	Continuous Layer of Clouds
A7	18 Jan 2022	Visibility (mi)	7
A7	18 Jan 2022	Wind Speed (kts)	2.1
A7	18 Jan 2022	Wind Dir	NW
A7	18 Jan 2022	Water Color	Blueish-Green
A7	18 Jan 2022	Wave Ht Low (ft)	3
A7	18 Jan 2022	Wave Period (sec)	13
A7	18 Jan 2022	Sea State	Calm
A7	18 Jan 2022	High Tide (ft)	5.9
A7	18 Jan 2022	High Tide Time	1642
A7	18 Jan 2022	Low Tide (ft)	-0.82
A7	18 Jan 2022	Low Tide Time	2354
A7	18 Jan 2022	Comments	Kelp; Lobster Floats
A7	24 Jan 2022	Depth (m)	19
A7	24 Jan 2022	Arrive Time	933
A7	24 Jan 2022	Depart Time	938
A7	24 Jan 2022	Air Temp (C)	14.7
A7	24 Jan 2022	Weather	Clear

Station	Date	Parameter	Value
A7	24 Jan 2022	Visibility (mi)	10
A7	24 Jan 2022	Wind Speed (kts)	7.8
A7	24 Jan 2022	Wind Dir	SE
A7	24 Jan 2022	Water Color	Blueish-Green
A7	24 Jan 2022	Wave Ht Low (ft)	3
A7	24 Jan 2022	Wave Period (sec)	18
A7	24 Jan 2022	Sea State	Calm
A7	24 Jan 2022	High Tide (ft)	4.23
A7	24 Jan 2022	High Tide Time	924
A7	24 Jan 2022	Low Tide (ft)	1.19
A7	24 Jan 2022	Low Tide Time	306
A7	24 Jan 2022	Comments	btl 4 for mid depth.; Kelp; Kelp Debris; Sewage-like odor
A7	31 Jan 2022	Depth (m)	19
A7	31 Jan 2022	Arrive Time	832
A7	31 Jan 2022	Depart Time	837
A7	31 Jan 2022	Air Temp (C)	13.1
A7	31 Jan 2022	Weather	Partly Cloudy
A7	31 Jan 2022	Visibility (mi)	10
A7	31 Jan 2022	Wind Speed (kts)	4
A7	31 Jan 2022	Wind Dir	NE
A7	31 Jan 2022	Water Color	Blueish-Green
A7	31 Jan 2022	Wave Ht Low (ft)	2
A7	31 Jan 2022	Wave Period (sec)	12
A7	31 Jan 2022	Sea State	Light Chop
A7	31 Jan 2022	High Tide (ft)	6.74
A7	31 Jan 2022	High Tide Time	1554
A7	31 Jan 2022	Low Tide (ft)	-1.86
A7	31 Jan 2022	Low Tide Time	2306
A7	31 Jan 2022	Comments	none
C4	04 Jan 2022	Depth (m)	10
C4	04 Jan 2022	Arrive Time	956
C4	04 Jan 2022	Depart Time	959
C4	04 Jan 2022	Air Temp (C)	11.7
C4	04 Jan 2022	Weather	Clear
C4	04 Jan 2022	Visibility (mi)	10
C4	04 Jan 2022	Wind Speed (kts)	7.4
C4	04 Jan 2022	Wind Dir	SE
C4	04 Jan 2022	Water Color	Blueish-Green
C4	04 Jan 2022	Wave Ht Low (ft)	3.3
C4	04 Jan 2022	Wave Period (sec)	15
C4	04 Jan 2022	Sea State	Calm
C4	04 Jan 2022	High Tide (ft)	6.67
C4	04 Jan 2022	High Tide Time	1730
C4	04 Jan 2022	Low Tide (ft)	-1.58
C4	04 Jan 2022	Low Tide Time	48
C4	04 Jan 2022	Comments	Kelp; Kelp Debris; Lobster Floats
C4	10 Jan 2022	Depth (m)	10
C4	10 Jan 2022	Arrive Time	920
C4	10 Jan 2022	Depart Time	926
C4	10 Jan 2022	Air Temp (C)	15.7
C4	10 Jan 2022	Weather	Partly Cloudy
C4	10 Jan 2022	Visibility (mi)	10
C4	10 Jan 2022	Wind Speed (kts)	4.4
C4	10 Jan 2022	Wind Dir	NE
C4	10 Jan 2022	Water Color	Green
C4	10 Jan 2022	Wave Ht Low (ft)	3
C4	10 Jan 2022	Wave Period (sec)	14
C4	10 Jan 2022	Sea State	Wind Ripples

Station	Date	Parameter	Value
C4	10 Jan 2022	High Tide (ft)	4.58
C4	10 Jan 2022	High Tide Time	1148
C4	10 Jan 2022	Low Tide (ft)	1.41
C4	10 Jan 2022	Low Tide Time	1854
C4	10 Jan 2022	Comments	Kelp; Lobster Floats
C4	18 Jan 2022	Depth (m)	11
C4	18 Jan 2022	Arrive Time	953
C4	18 Jan 2022	Depart Time	1000
C4	18 Jan 2022	Air Temp (C)	14.6
C4	18 Jan 2022	Weather	Partly Cloudy
C4	18 Jan 2022	Visibility (mi)	9
C4	18 Jan 2022	Wind Speed (kts)	2.8
C4	18 Jan 2022	Wind Dir	W
C4	18 Jan 2022	Water Color	Green
C4	18 Jan 2022	Wave Ht Low (ft)	3
C4	18 Jan 2022	Wave Period (sec)	13
C4	18 Jan 2022	Sea State	Calm
C4	18 Jan 2022	High Tide (ft)	5.9
C4	18 Jan 2022	High Tide Time	1642
C4	18 Jan 2022	Low Tide (ft)	-0.82
C4	18 Jan 2022	Low Tide Time	2354
C4	18 Jan 2022	Comments	Kelp; Lobster Floats
C4	24 Jan 2022	Depth (m)	10
C4	24 Jan 2022	Arrive Time	1048
C4	24 Jan 2022	Depart Time	1051
C4	24 Jan 2022	Air Temp (C)	15.5
C4	24 Jan 2022	Weather	Clear
C4	24 Jan 2022	Visibility (mi)	10
C4	24 Jan 2022	Wind Speed (kts)	4.1
C4	24 Jan 2022	Wind Dir	SE
C4	24 Jan 2022	Water Color	Green
C4	24 Jan 2022	Wave Ht Low (ft)	3
C4	24 Jan 2022	Wave Period (sec)	18
C4	24 Jan 2022	Sea State	Calm
C4	24 Jan 2022	High Tide (ft)	4.23
C4	24 Jan 2022	High Tide Time	924
C4	24 Jan 2022	Low Tide (ft)	1.19
C4	24 Jan 2022	Low Tide Time	306
C4	24 Jan 2022	Comments	Kelp; Kelp Debris
C4	31 Jan 2022	Depth (m)	11
C4	31 Jan 2022	Arrive Time	950
C4	31 Jan 2022	Depart Time	1001
C4	31 Jan 2022	Air Temp (C)	13.4
C4	31 Jan 2022	Weather	Partly Cloudy
C4	31 Jan 2022	Visibility (mi)	10
C4	31 Jan 2022	Wind Speed (kts)	7.6
C4	31 Jan 2022	Wind Dir	SE
C4	31 Jan 2022	Water Color	Blueish-Green
C4	31 Jan 2022	Wave Ht Low (ft)	2
C4	31 Jan 2022	Wave Period (sec)	12
C4	31 Jan 2022	Sea State	Light Chop
C4	31 Jan 2022	High Tide (ft)	6.74
C4	31 Jan 2022	High Tide Time	1554
C4	31 Jan 2022	Low Tide (ft)	-1.86
C4	31 Jan 2022	Low Tide Time	2306
C4	31 Jan 2022	Comments	none
C5	04 Jan 2022	Depth (m)	12

Station	Date	Parameter	Value
C5	04 Jan 2022	Arrive Time	944
C5	04 Jan 2022	Depart Time	948
C5	04 Jan 2022	Air Temp (C)	12.6
C5	04 Jan 2022	Weather	Clear
C5	04 Jan 2022	Visibility (mi)	10
C5	04 Jan 2022	Wind Speed (kts)	2.3
C5	04 Jan 2022	Wind Dir	NW
C5	04 Jan 2022	Water Color	Blueish-Green
C5	04 Jan 2022	Wave Ht Low (ft)	3.3
C5	04 Jan 2022	Wave Period (sec)	15
C5	04 Jan 2022	Sea State	Calm
C5	04 Jan 2022	High Tide (ft)	6.67
C5	04 Jan 2022	High Tide Time	1730
C5	04 Jan 2022	Low Tide (ft)	-1.58
C5	04 Jan 2022	Low Tide Time	48
C5	04 Jan 2022	Comments	Kelp Debris
C5	10 Jan 2022	Depth (m)	9
C5	10 Jan 2022	Arrive Time	913
C5	10 Jan 2022	Depart Time	917
C5	10 Jan 2022	Air Temp (C)	15.7
C5	10 Jan 2022	Weather	Partly Cloudy
C5	10 Jan 2022	Visibility (mi)	10
C5	10 Jan 2022	Wind Speed (kts)	5
C5	10 Jan 2022	Wind Dir	N
C5	10 Jan 2022	Water Color	Green
C5	10 Jan 2022	Wave Ht Low (ft)	3
C5	10 Jan 2022	Wave Period (sec)	14
C5	10 Jan 2022	Sea State	Wind Ripples
C5	10 Jan 2022	High Tide (ft)	4.58
C5	10 Jan 2022	High Tide Time	1148
C5	10 Jan 2022	Low Tide (ft)	1.41
C5	10 Jan 2022	Low Tide Time	1854
C5	10 Jan 2022	Comments	Kelp Debris; Lobster Floats
C5	18 Jan 2022	Depth (m)	10
C5	18 Jan 2022	Arrive Time	939
C5	18 Jan 2022	Depart Time	944
C5	18 Jan 2022	Air Temp (C)	14.7
C5	18 Jan 2022	Weather	Partly Cloudy
C5	18 Jan 2022	Visibility (mi)	9
C5	18 Jan 2022	Wind Speed (kts)	0
C5	18 Jan 2022	Wind Dir	W
C5	18 Jan 2022	Water Color	Green
C5	18 Jan 2022	Wave Ht Low (ft)	3
C5	18 Jan 2022	Wave Period (sec)	13
C5	18 Jan 2022	Sea State	Calm
C5	18 Jan 2022	High Tide (ft)	5.9
C5	18 Jan 2022	High Tide Time	1642
C5	18 Jan 2022	Low Tide (ft)	-0.82
C5	18 Jan 2022	Low Tide Time	2354
C5	18 Jan 2022	Comments	Kelp; Lobster Floats
C5	24 Jan 2022	Depth (m)	10
C5	24 Jan 2022	Arrive Time	1038
C5	24 Jan 2022	Depart Time	1042
C5	24 Jan 2022	Air Temp (C)	15.8
C5	24 Jan 2022	Weather	Clear
C5	24 Jan 2022	Visibility (mi)	10
C5	24 Jan 2022	Wind Speed (kts)	8.4
C5	24 Jan 2022	Wind Dir	S

Station	Date	Parameter	Value
C5	24 Jan 2022	Water Color	Green
C5	24 Jan 2022	Wave Ht Low (ft)	3
C5	24 Jan 2022	Wave Period (sec)	18
C5	24 Jan 2022	Sea State	Calm
C5	24 Jan 2022	High Tide (ft)	4.23
C5	24 Jan 2022	High Tide Time	924
C5	24 Jan 2022	Low Tide (ft)	1.19
C5	24 Jan 2022	Low Tide Time	306
C5	24 Jan 2022	Comments	Kelp; Kelp Debris
C5	31 Jan 2022	Depth (m)	11
C5	31 Jan 2022	Arrive Time	941
C5	31 Jan 2022	Depart Time	945
C5	31 Jan 2022	Air Temp (C)	13.4
C5	31 Jan 2022	Weather	Partly Cloudy
C5	31 Jan 2022	Visibility (mi)	10
C5	31 Jan 2022	Wind Speed (kts)	5.7
C5	31 Jan 2022	Wind Dir	E
C5	31 Jan 2022	Water Color	Blueish-Green
C5	31 Jan 2022	Wave Ht Low (ft)	2
C5	31 Jan 2022	Wave Period (sec)	12
C5	31 Jan 2022	Sea State	Light Chop
C5	31 Jan 2022	High Tide (ft)	6.74
C5	31 Jan 2022	High Tide Time	1554
C5	31 Jan 2022	Low Tide (ft)	-1.86
C5	31 Jan 2022	Low Tide Time	2306
C5	31 Jan 2022	Comments	none
C6	04 Jan 2022	Depth (m)	10
C6	04 Jan 2022	Arrive Time	934
C6	04 Jan 2022	Depart Time	938
C6	04 Jan 2022	Air Temp (C)	12.6
C6	04 Jan 2022	Weather	Clear
C6	04 Jan 2022	Visibility (mi)	10
C6	04 Jan 2022	Wind Speed (kts)	1.4
C6	04 Jan 2022	Wind Dir	N
C6	04 Jan 2022	Water Color	Blueish-Green
C6	04 Jan 2022	Wave Ht Low (ft)	3.3
C6	04 Jan 2022	Wave Period (sec)	15
C6	04 Jan 2022	Sea State	Calm
C6	04 Jan 2022	High Tide (ft)	6.67
C6	04 Jan 2022	High Tide Time	1730
C6	04 Jan 2022	Low Tide (ft)	-1.58
C6	04 Jan 2022	Low Tide Time	48
C6	04 Jan 2022	Comments	none
C6	10 Jan 2022	Depth (m)	9
C6	10 Jan 2022	Arrive Time	903
C6	10 Jan 2022	Depart Time	907
C6	10 Jan 2022	Air Temp (C)	15.8
C6	10 Jan 2022	Weather	Partly Cloudy
C6	10 Jan 2022	Visibility (mi)	10
C6	10 Jan 2022	Wind Speed (kts)	5.3
C6	10 Jan 2022	Wind Dir	N
C6	10 Jan 2022	Water Color	Green
C6	10 Jan 2022	Wave Ht Low (ft)	3
C6	10 Jan 2022	Wave Period (sec)	14
C6	10 Jan 2022	Sea State	Wind Ripples
C6	10 Jan 2022	High Tide (ft)	4.58
C6	10 Jan 2022	High Tide Time	1148
C6	10 Jan 2022	Low Tide (ft)	1.41

Station	Date	Parameter	Value
C6	10 Jan 2022	Low Tide Time	1854
C6	10 Jan 2022	Comments	Kelp; Lobster Floats; Seagrass
C6	18 Jan 2022	Depth (m)	10
C6	18 Jan 2022	Arrive Time	926
C6	18 Jan 2022	Depart Time	931
C6	18 Jan 2022	Air Temp (C)	14.5
C6	18 Jan 2022	Weather	Partly Cloudy
C6	18 Jan 2022	Visibility (mi)	7
C6	18 Jan 2022	Wind Speed (kts)	0
C6	18 Jan 2022	Wind Dir	N
C6	18 Jan 2022	Water Color	Blueish-Green
C6	18 Jan 2022	Wave Ht Low (ft)	3
C6	18 Jan 2022	Wave Period (sec)	13
C6	18 Jan 2022	Sea State	Calm
C6	18 Jan 2022	High Tide (ft)	5.9
C6	18 Jan 2022	High Tide Time	1642
C6	18 Jan 2022	Low Tide (ft)	-0.82
C6	18 Jan 2022	Low Tide Time	2354
C6	18 Jan 2022	Comments	Kelp; Lobster Floats
C6	24 Jan 2022	Depth (m)	9
C6	24 Jan 2022	Arrive Time	1028
C6	24 Jan 2022	Depart Time	1032
C6	24 Jan 2022	Air Temp (C)	16.3
C6	24 Jan 2022	Weather	Clear
C6	24 Jan 2022	Visibility (mi)	10
C6	24 Jan 2022	Wind Speed (kts)	7.9
C6	24 Jan 2022	Wind Dir	S
C6	24 Jan 2022	Water Color	Green
C6	24 Jan 2022	Wave Ht Low (ft)	3
C6	24 Jan 2022	Wave Period (sec)	18
C6	24 Jan 2022	Sea State	Calm
C6	24 Jan 2022	High Tide (ft)	4.23
C6	24 Jan 2022	High Tide Time	924
C6	24 Jan 2022	Low Tide (ft)	1.19
C6	24 Jan 2022	Low Tide Time	306
C6	24 Jan 2022	Comments	Kelp; Kelp Debris
C6	31 Jan 2022	Depth (m)	10
C6	31 Jan 2022	Arrive Time	931
C6	31 Jan 2022	Depart Time	935
C6	31 Jan 2022	Air Temp (C)	13.4
C6	31 Jan 2022	Weather	Partly Cloudy
C6	31 Jan 2022	Visibility (mi)	10
C6	31 Jan 2022	Wind Speed (kts)	1.6
C6	31 Jan 2022	Wind Dir	SE
C6	31 Jan 2022	Water Color	Blueish-Green
C6	31 Jan 2022	Wave Ht Low (ft)	2
C6	31 Jan 2022	Wave Period (sec)	12
C6	31 Jan 2022	Sea State	Light Chop
C6	31 Jan 2022	High Tide (ft)	6.74
C6	31 Jan 2022	High Tide Time	1554
C6	31 Jan 2022	Low Tide (ft)	-1.86
C6	31 Jan 2022	Low Tide Time	2306
C6	31 Jan 2022	Comments	none
C7	04 Jan 2022	Depth (m)	19
C7	04 Jan 2022	Arrive Time	855
C7	04 Jan 2022	Depart Time	906
C7	04 Jan 2022	Air Temp (C)	12

Station	Date	Parameter	Value
C7	04 Jan 2022	Weather	Clear
C7	04 Jan 2022	Visibility (mi)	10
C7	04 Jan 2022	Wind Speed (kts)	2.3
C7	04 Jan 2022	Wind Dir	NW
C7	04 Jan 2022	Water Color	Blueish-Green
C7	04 Jan 2022	Wave Ht Low (ft)	3.3
C7	04 Jan 2022	Wave Period (sec)	15
C7	04 Jan 2022	Sea State	Calm
C7	04 Jan 2022	High Tide (ft)	6.67
C7	04 Jan 2022	High Tide Time	1730
C7	04 Jan 2022	Low Tide (ft)	-1.58
C7	04 Jan 2022	Low Tide Time	48
C7	04 Jan 2022	Comments	CTD recast for 1m bin
C7	10 Jan 2022	Depth (m)	18
C7	10 Jan 2022	Arrive Time	831
C7	10 Jan 2022	Depart Time	835
C7	10 Jan 2022	Air Temp (C)	13.9
C7	10 Jan 2022	Weather	Partly Cloudy
C7	10 Jan 2022	Visibility (mi)	10
C7	10 Jan 2022	Wind Speed (kts)	6.1
C7	10 Jan 2022	Wind Dir	N
C7	10 Jan 2022	Water Color	Green
C7	10 Jan 2022	Wave Ht Low (ft)	3
C7	10 Jan 2022	Wave Period (sec)	14
C7	10 Jan 2022	Sea State	Wind Ripples
C7	10 Jan 2022	High Tide (ft)	4.58
C7	10 Jan 2022	High Tide Time	1148
C7	10 Jan 2022	Low Tide (ft)	1.41
C7	10 Jan 2022	Low Tide Time	1854
C7	10 Jan 2022	Comments	none
C7	18 Jan 2022	Depth (m)	19
C7	18 Jan 2022	Arrive Time	845
C7	18 Jan 2022	Depart Time	850
C7	18 Jan 2022	Air Temp (C)	14.4
C7	18 Jan 2022	Weather	Continuous Layer of Clouds
C7	18 Jan 2022	Visibility (mi)	7
C7	18 Jan 2022	Wind Speed (kts)	1
C7	18 Jan 2022	Wind Dir	NW
C7	18 Jan 2022	Water Color	Blueish-Green
C7	18 Jan 2022	Wave Ht Low (ft)	3
C7	18 Jan 2022	Wave Period (sec)	13
C7	18 Jan 2022	Sea State	Calm
C7	18 Jan 2022	High Tide (ft)	5.9
C7	18 Jan 2022	High Tide Time	1642
C7	18 Jan 2022	Low Tide (ft)	-0.82
C7	18 Jan 2022	Low Tide Time	2354
C7	18 Jan 2022	Comments	Kelp; Lobster Floats
C7	24 Jan 2022	Depth (m)	18
C7	24 Jan 2022	Arrive Time	956
C7	24 Jan 2022	Depart Time	1002
C7	24 Jan 2022	Air Temp (C)	15.7
C7	24 Jan 2022	Weather	Clear
C7	24 Jan 2022	Visibility (mi)	10
C7	24 Jan 2022	Wind Speed (kts)	2.1
C7	24 Jan 2022	Wind Dir	SE
C7	24 Jan 2022	Water Color	Green
C7	24 Jan 2022	Wave Ht Low (ft)	3
C7	24 Jan 2022	Wave Period (sec)	18

Station	Date	Parameter	Value
C7	24 Jan 2022	Sea State	Calm
C7	24 Jan 2022	High Tide (ft)	4.23
C7	24 Jan 2022	High Tide Time	924
C7	24 Jan 2022	Low Tide (ft)	1.19
C7	24 Jan 2022	Low Tide Time	306
C7	24 Jan 2022	Comments	Kelp; Kelp Debris; Seagrass
C7	31 Jan 2022	Depth (m)	19
C7	31 Jan 2022	Arrive Time	858
C7	31 Jan 2022	Depart Time	903
C7	31 Jan 2022	Air Temp (C)	13.3
C7	31 Jan 2022	Weather	Partly Cloudy
C7	31 Jan 2022	Visibility (mi)	10
C7	31 Jan 2022	Wind Speed (kts)	1.8
C7	31 Jan 2022	Wind Dir	N
C7	31 Jan 2022	Water Color	Blueish-Green
C7	31 Jan 2022	Wave Ht Low (ft)	2
C7	31 Jan 2022	Wave Period (sec)	12
C7	31 Jan 2022	Sea State	Light Chop
C7	31 Jan 2022	High Tide (ft)	6.74
C7	31 Jan 2022	High Tide Time	1554
C7	31 Jan 2022	Low Tide (ft)	-1.86
C7	31 Jan 2022	Low Tide Time	2306
C7	31 Jan 2022	Comments	none
C8	04 Jan 2022	Depth (m)	20
C8	04 Jan 2022	Arrive Time	914
C8	04 Jan 2022	Depart Time	918
C8	04 Jan 2022	Air Temp (C)	12.2
C8	04 Jan 2022	Weather	Clear
C8	04 Jan 2022	Visibility (mi)	10
C8	04 Jan 2022	Wind Speed (kts)	3.3
C8	04 Jan 2022	Wind Dir	NE
C8	04 Jan 2022	Water Color	Blueish-Green
C8	04 Jan 2022	Wave Ht Low (ft)	3.3
C8	04 Jan 2022	Wave Period (sec)	15
C8	04 Jan 2022	Sea State	Calm
C8	04 Jan 2022	High Tide (ft)	6.67
C8	04 Jan 2022	High Tide Time	1730
C8	04 Jan 2022	Low Tide (ft)	-1.58
C8	04 Jan 2022	Low Tide Time	48
C8	04 Jan 2022	Comments	none
C8	10 Jan 2022	Depth (m)	19
C8	10 Jan 2022	Arrive Time	843
C8	10 Jan 2022	Depart Time	848
C8	10 Jan 2022	Air Temp (C)	14.7
C8	10 Jan 2022	Weather	Partly Cloudy
C8	10 Jan 2022	Visibility (mi)	10
C8	10 Jan 2022	Wind Speed (kts)	3
C8	10 Jan 2022	Wind Dir	NE
C8	10 Jan 2022	Water Color	Green
C8	10 Jan 2022	Wave Ht Low (ft)	3
C8	10 Jan 2022	Wave Period (sec)	14
C8	10 Jan 2022	Sea State	Wind Ripples
C8	10 Jan 2022	High Tide (ft)	4.58
C8	10 Jan 2022	High Tide Time	1148
C8	10 Jan 2022	Low Tide (ft)	1.41
C8	10 Jan 2022	Low Tide Time	1854
C8	10 Jan 2022	Comments	Lobster Floats

Station	Date	Parameter	Value
C8	18 Jan 2022	Depth (m)	20
C8	18 Jan 2022	Arrive Time	900
C8	18 Jan 2022	Depart Time	909
C8	18 Jan 2022	Air Temp (C)	14.5
C8	18 Jan 2022	Weather	Partly Cloudy
C8	18 Jan 2022	Visibility (mi)	7
C8	18 Jan 2022	Wind Speed (kts)	0
C8	18 Jan 2022	Wind Dir	W
C8	18 Jan 2022	Water Color	Blueish-Green
C8	18 Jan 2022	Wave Ht Low (ft)	3
C8	18 Jan 2022	Wave Period (sec)	13
C8	18 Jan 2022	Sea State	Calm
C8	18 Jan 2022	High Tide (ft)	5.9
C8	18 Jan 2022	High Tide Time	1642
C8	18 Jan 2022	Low Tide (ft)	-0.82
C8	18 Jan 2022	Low Tide Time	2354
C8	18 Jan 2022	Comments	Kelp Debris; Lobster Floats
C8	24 Jan 2022	Depth (m)	19
C8	24 Jan 2022	Arrive Time	1008
C8	24 Jan 2022	Depart Time	1012
C8	24 Jan 2022	Air Temp (C)	16.2
C8	24 Jan 2022	Weather	Clear
C8	24 Jan 2022	Visibility (mi)	10
C8	24 Jan 2022	Wind Speed (kts)	6
C8	24 Jan 2022	Wind Dir	SE
C8	24 Jan 2022	Water Color	Green
C8	24 Jan 2022	Wave Ht Low (ft)	3
C8	24 Jan 2022	Wave Period (sec)	18
C8	24 Jan 2022	Sea State	Calm
C8	24 Jan 2022	High Tide (ft)	4.23
C8	24 Jan 2022	High Tide Time	924
C8	24 Jan 2022	Low Tide (ft)	1.19
C8	24 Jan 2022	Low Tide Time	306
C8	24 Jan 2022	Comments	Kelp Debris; Seagrass
C8	31 Jan 2022	Depth (m)	20
C8	31 Jan 2022	Arrive Time	910
C8	31 Jan 2022	Depart Time	915
C8	31 Jan 2022	Air Temp (C)	12.8
C8	31 Jan 2022	Weather	Partly Cloudy
C8	31 Jan 2022	Visibility (mi)	10
C8	31 Jan 2022	Wind Speed (kts)	4
C8	31 Jan 2022	Wind Dir	N
C8	31 Jan 2022	Water Color	Blueish-Green
C8	31 Jan 2022	Wave Ht Low (ft)	2
C8	31 Jan 2022	Wave Period (sec)	12
C8	31 Jan 2022	Sea State	Light Chop
C8	31 Jan 2022	High Tide (ft)	6.74
C8	31 Jan 2022	High Tide Time	1554
C8	31 Jan 2022	Low Tide (ft)	-1.86
C8	31 Jan 2022	Low Tide Time	2306
C8	31 Jan 2022	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 (μg/L)
A1	04 Jan 2022	1	14.72	83.22	7.6	33.42	7.9	24.8	1.17
A1	04 Jan 2022	2	14.74	83.06	7.7	33.42	7.9	24.8	1.28
A1	04 Jan 2022	3	14.76	83.41	7.6	33.42	7.9	24.8	1.24
A1	04 Jan 2022	4	14.77	83.43	7.6	33.42	7.9	24.8	1.23
A1	04 Jan 2022	5	14.77	83.49	7.6	33.42	7.9	24.8	1.30
A1	04 Jan 2022	6	14.76	83.59	7.6	33.42	7.9	24.8	1.34
A1	04 Jan 2022	7	14.74	83.67	7.5	33.42	7.9	24.8	1.40
A1	04 Jan 2022	8	14.69	84.15	7.5	33.43	7.9	24.8	1.29
A1	04 Jan 2022	9	14.63	84.14	7.4	33.42	7.9	24.8	1.32
A1	04 Jan 2022	10	14.62	84.33	7.3	33.42	7.9	24.8	1.21
A1	04 Jan 2022	11	14.57	84.55	7.3	33.43	7.9	24.9	1.15
A1	04 Jan 2022	12	14.40	84.62	7.2	33.45	7.8	24.9	1.10
A1	04 Jan 2022	13	14.37	85.04	7.1	33.44	7.8	24.9	1.05
A1	04 Jan 2022	14	14.24	84.99	7.0	33.45	7.8	24.9	1.02
A1	04 Jan 2022	15	14.10	85.02	6.9	33.45	7.8	25.0	0.95
A1	04 Jan 2022	16	13.99	84.98	6.8	33.46	7.8	25.0	0.83
A1	04 Jan 2022	17	13.72	84.92	6.6	33.46	7.8	25.1	0.82
A1	04 Jan 2022	18	13.59	84.87	6.4	33.46	7.8	25.1	0.80
A1	04 Jan 2022	19	13.29	84.45	6.2	33.51	7.8	25.2	0.76
A1	10 Jan 2022	1	14.64	81.60	7.8	33.43	7.9	24.8	1.18
A1	10 Jan 2022	2	14.64	81.39	7.8	33.43	7.9	24.8	1.19
A1	10 Jan 2022	3	14.64	81.64	7.7	33.43	7.9	24.8	1.23
A1	10 Jan 2022	4	14.64	81.67	7.7	33.43	7.9	24.8	1.16
A1	10 Jan 2022	5	14.64	81.71	7.7	33.43	7.9	24.8	1.16
A1	10 Jan 2022	6	14.64	81.73	7.7	33.43	7.9	24.8	1.21
A1	10 Jan 2022	7	14.63	81.61	7.7	33.43	7.9	24.8	1.20
A1	10 Jan 2022	8	14.63	81.62	7.7	33.43	7.9	24.8	1.18
A1	10 Jan 2022	9	14.63	81.47	7.7	33.43	7.9	24.8	1.19
A1	10 Jan 2022	10	14.62	81.75	7.7	33.43	7.9	24.8	1.21
A1	10 Jan 2022	11	14.59	82.09	7.6	33.44	7.9	24.9	1.08
A1	10 Jan 2022	12	14.45	82.47	7.3	33.46	7.9	24.9	0.95
A1	10 Jan 2022	13	14.14	82.75	7.0	33.48	7.8	25.0	0.85
A1	10 Jan 2022	14	13.96	82.95	6.8	33.47	7.8	25.0	0.77
A1	10 Jan 2022	15	13.91	82.81	6.7	33.47	7.8	25.0	0.75
A1	10 Jan 2022	16	13.93	82.78	6.7	33.46	7.8	25.0	0.73
A1	10 Jan 2022	17	13.93	82.81	6.7	33.46	7.8	25.0	0.74
A1	10 Jan 2022	18	13.93	82.70	6.7	33.47	7.8	25.0	0.71
A1	10 Jan 2022	19	13.90	82.67	6.7	33.47	7.8	25.0	0.75
A1	18 Jan 2022	1	14.97	76.64	7.6	33.43	7.9	24.8	1.21
A1	18 Jan 2022	2	14.97	76.44	7.6	33.43	7.9	24.8	1.27
A1	18 Jan 2022	3	14.97	77.19	7.6	33.43	7.9	24.8	1.26
A1	18 Jan 2022	4	14.97	77.41	7.6	33.43	7.9	24.8	1.26
A1	18 Jan 2022	5	14.96	77.58	7.6	33.43	7.9	24.8	1.32
A1	18 Jan 2022	6	14.96	77.65	7.5	33.44	7.9	24.8	1.29
A1	18 Jan 2022	7	14.95	77.61	7.5	33.44	7.9	24.8	1.32
A1	18 Jan 2022	8	14.94	77.69	7.5	33.44	7.9	24.8	1.35
A1	18 Jan 2022	9	14.93	77.90	7.5	33.44	7.9	24.8	1.22
A1	18 Jan 2022	10	14.93	78.01	7.5	33.44	7.9	24.8	1.16
A1	18 Jan 2022	11	14.92	78.13	7.5	33.44	7.9	24.8	1.11
A1	18 Jan 2022	12	14.93	77.98	7.5	33.44	7.9	24.8	1.14
A1	18 Jan 2022	13	14.91	78.21	7.5	33.44	7.9	24.8	1.11
A1	18 Jan 2022	14	14.85	78.23	7.4	33.45	7.9	24.8	1.07
A1	18 Jan 2022	15	14.76	78.61	7.4	33.46	7.9	24.8	1.05

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (μg/L)
A1	18 Jan 2022	16	14.70	79.17	7.5	33.46	7.9	24.8	0.98
A1	18 Jan 2022	17	14.67	79.67	7.5	33.45	7.9	24.9	0.90
A1	18 Jan 2022	18	14.60	79.76	7.4	33.46	7.9	24.9	0.90
A1	18 Jan 2022	19	14.59	79.15	7.4	33.45	7.9	24.9	0.89
A1	24 Jan 2022	1	15.36	84.08	8.0	33.45	8.0	24.7	0.63
A1	24 Jan 2022	2	15.35	84.25	8.0	33.45	8.0	24.7	0.58
A1	24 Jan 2022	3	15.31	84.12	8.0	33.45	8.0	24.7	0.63
A1	24 Jan 2022	4	15.27	83.81	8.0	33.46	8.0	24.7	0.68
A1	24 Jan 2022	5	15.18	83.39	8.0	33.46	8.0	24.7	0.79
A1	24 Jan 2022	6	15.11	82.30	8.1	33.46	8.0	24.8	0.96
A1	24 Jan 2022	7	15.04	81.23	8.1	33.46	8.0	24.8	1.39
A1	24 Jan 2022	8	14.85	81.01	8.0	33.48	7.9	24.8	1.95
A1	24 Jan 2022	9	14.78	82.24	7.8	33.47	7.9	24.8	2.05
A1	24 Jan 2022	10	14.56	83.31	7.6	33.49	7.9	24.9	1.75
A1	24 Jan 2022	11	14.35	83.64	7.4	33.48	7.9	24.9	1.47
A1	24 Jan 2022	12	14.32	83.71	7.3	33.48	7.9	24.9	1.10
A1	24 Jan 2022	13	14.31	83.71	7.3	33.47	7.9	24.9	1.05
A1	24 Jan 2022	14	14.30	83.72	7.3	33.47	7.9	24.9	0.96
A1	24 Jan 2022	15	14.29	83.63	7.2	33.47	7.9	24.9	0.96
A1	24 Jan 2022	16	14.29	83.72	7.2	33.47	7.9	24.9	0.93
A1	24 Jan 2022	17	14.29	83.70	7.2	33.47	7.9	24.9	0.95
A1	24 Jan 2022	18	14.30	83.50	7.1	33.47	7.9	24.9	0.87
A1	31 Jan 2022	1	15.22	83.17	7.7	33.44	8.1	24.7	1.13
A1	31 Jan 2022	2	15.22	83.17	7.6	33.44	8.1	24.7	1.14
A1	31 Jan 2022	3	15.08	83.17	7.4	33.44	8.1	24.7	1.19
A1	31 Jan 2022	4	14.79	83.12	7.2	33.43	8.1	24.8	1.28
A1	31 Jan 2022	5	14.49	82.83	7.1	33.41	8.1	24.9	1.35
A1	31 Jan 2022	6	14.27	82.81	7.1	33.39	8.1	24.9	1.41
A1	31 Jan 2022	7	14.26	82.88	7.1	33.38	8.0	24.9	1.46
A1	31 Jan 2022	8	14.26	82.92	7.2	33.38	8.0	24.9	1.49
A1	31 Jan 2022	9	14.25	82.96	7.2	33.38	8.0	24.9	1.54
A1	31 Jan 2022	10	14.25	82.93	7.1	33.38	8.0	24.9	1.62
A1	31 Jan 2022	11	14.25	82.99	7.1	33.38	8.0	24.9	1.60
A1	31 Jan 2022	12	14.25	82.96	7.1	33.38	8.0	24.9	1.60
A1	31 Jan 2022	13	14.25	82.91	7.1	33.38	8.0	24.9	1.65
A1	31 Jan 2022	14	14.25	82.97	7.1	33.39	8.0	24.9	1.65
A1	31 Jan 2022	15	14.22	83.02	7.1	33.39	8.0	24.9	1.65
A1	31 Jan 2022	16	14.18	83.01	7.0	33.38	8.0	24.9	1.65
A1	31 Jan 2022	17	14.11	82.97	6.9	33.38	8.0	24.9	1.65
A1	31 Jan 2022	18	13.93	82.80	6.8	33.38	8.0	24.9	1.60
A1	31 Jan 2022	19	13.75	82.62	6.7	33.38	8.0	25.0	1.51
A1	31 Jan 2022	20	13.70	82.27	6.6	33.37	8.0	25.0	1.43
A6	04 Jan 2022	1	14.82	81.09	8.0	33.40	7.9	24.8	1.34
A6	04 Jan 2022	2	14.82	81.10	8.0	33.40	7.9	24.8	1.37
A6	04 Jan 2022	3	14.82	81.08	8.0	33.40	7.9	24.8	1.52
A6	04 Jan 2022	4	14.82	81.20	8.0	33.40	7.9	24.8	1.60
A6	04 Jan 2022	5	14.82	81.38	7.9	33.40	7.9	24.8	1.73
A6	04 Jan 2022	6	14.82	81.60	7.9	33.40	7.9	24.8	1.66
A6	04 Jan 2022	7	14.81	81.59	7.8	33.40	7.9	24.8	1.62
A6	04 Jan 2022	8	14.79	81.82	7.7	33.41	7.9	24.8	1.54
A6	04 Jan 2022	9	14.77	82.66	7.6	33.41	7.9	24.8	1.55
A6	04 Jan 2022	10	14.71	83.46	7.4	33.41	7.9	24.8	1.52
A6	04 Jan 2022	11	14.68	83.58	7.4	33.41	7.9	24.8	1.21
A6	04 Jan 2022	12	14.68	83.72	7.4	33.41	7.9	24.8	1.12
A6	04 Jan 2022	13	14.68	83.62	7.4	33.41	7.9	24.8	1.09
A6	04 Jan 2022	14	14.68	83.68	7.4	33.41	7.9	24.8	1.16
A6	04 Jan 2022	15	14.62	83.75	7.4	33.42	7.9	24.8	1.07
A6	04 Jan 2022	16	14.57	83.89	7.3	33.41	7.9	24.8	0.99

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (μg/L)
A6	04 Jan 2022	17	14.49	84.08	7.2	33.42	7.9	24.9	0.98
A6	04 Jan 2022	18	14.37	84.15	7.1	33.42	7.9	24.9	0.94
A6	04 Jan 2022	19	14.31	84.45	7.0	33.43	7.8	24.9	0.86
A6	04 Jan 2022	20	14.20	84.71	6.9	33.43	7.8	24.9	0.84
A6	04 Jan 2022	21	14.07	84.75	6.8	33.44	7.8	25.0	0.78
A6	10 Jan 2022	1	14.85	83.53	7.9	33.46	7.9	24.8	1.27
A6	10 Jan 2022	2	14.85	83.44	7.9	33.46	7.9	24.8	1.30
A6	10 Jan 2022	3	14.85	83.57	7.9	33.46	7.9	24.8	1.29
A6	10 Jan 2022	4	14.85	83.54	7.9	33.46	7.9	24.8	1.31
A6	10 Jan 2022	5	14.85	83.57	7.9	33.46	7.9	24.8	1.37
A6	10 Jan 2022	6	14.85	83.67	7.9	33.46	7.9	24.8	1.44
A6	10 Jan 2022	7	14.85	83.67	7.9	33.46	7.9	24.8	1.46
A6	10 Jan 2022	8	14.85	83.82	7.9	33.46	7.9	24.8	1.47
A6	10 Jan 2022	9	14.84	83.91	7.9	33.46	7.9	24.8	1.46
A6	10 Jan 2022	10	14.83	84.00	7.8	33.46	7.9	24.8	1.27
A6	10 Jan 2022	11	14.82	84.15	7.8	33.46	7.9	24.8	1.25
A6	10 Jan 2022	12	14.82	84.23	7.8	33.46	7.9	24.8	1.18
A6	10 Jan 2022	13	14.80	84.23	7.7	33.46	7.9	24.8	1.12
A6	10 Jan 2022	14	14.77	84.33	7.6	33.46	7.9	24.8	1.05
A6	10 Jan 2022	15	14.71	84.46	7.5	33.47	7.9	24.9	0.92
A6	10 Jan 2022	16	14.63	84.54	7.4	33.47	7.9	24.9	0.84
A6	10 Jan 2022	17	14.59	84.55	7.4	33.46	7.9	24.9	0.87
A6	10 Jan 2022	18	14.52	84.52	7.3	33.47	7.9	24.9	0.80
A6	10 Jan 2022	19	14.42	84.55	7.2	33.48	7.9	24.9	0.80
A6	10 Jan 2022	20	14.26	84.43	7.0	33.48	7.8	25.0	0.73
A6	10 Jan 2022	21	14.18	84.24	6.9	33.48	7.8	25.0	0.69
A6	18 Jan 2022	1	15.09	77.24	8.0	33.42	7.9	24.7	2.52
A6	18 Jan 2022	2	15.08	76.82	8.0	33.43	7.9	24.7	2.62
A6	18 Jan 2022	3	15.04	76.74	8.1	33.44	7.9	24.8	2.63
A6	18 Jan 2022	4	15.02	77.27	8.1	33.44	7.9	24.8	2.70
A6	18 Jan 2022	5	15.02	77.75	8.1	33.44	7.9	24.8	2.50
A6	18 Jan 2022	6	15.00	78.05	8.0	33.44	7.9	24.8	2.17
A6	18 Jan 2022	7	14.95	78.58	7.9	33.45	7.9	24.8	1.97
A6	18 Jan 2022	8	14.92	79.15	7.8	33.45	7.9	24.8	1.74
A6	18 Jan 2022	9	14.91	79.49	7.7	33.45	7.9	24.8	1.58
A6	18 Jan 2022	10	14.89	79.71	7.7	33.45	7.9	24.8	1.46
A6	18 Jan 2022	11	14.88	80.18	7.7	33.45	7.9	24.8	1.55
A6	18 Jan 2022	12	14.87	80.27	7.6	33.45	7.9	24.8	1.43
A6	18 Jan 2022	13	14.85	80.31	7.6	33.45	7.9	24.8	1.24
A6	18 Jan 2022	14	14.84	80.64	7.6	33.45	7.9	24.8	1.16
A6	18 Jan 2022	15	14.82	80.73	7.6	33.45	7.9	24.8	1.11
A6	18 Jan 2022	16	14.75	80.91	7.5	33.46	7.9	24.8	1.09
A6	18 Jan 2022	17	14.62	81.13	7.5	33.46	7.9	24.9	1.02
A6	18 Jan 2022	18	14.54	81.24	7.5	33.47	7.9	24.9	0.95
A6	18 Jan 2022	19	14.47	81.12	7.5	33.46	7.9	24.9	0.94
A6	18 Jan 2022	20	14.43	80.64	7.5	33.46	7.9	24.9	0.97
A6	18 Jan 2022	21	14.35	80.22	7.4	33.47	7.9	24.9	0.97
A6	24 Jan 2022	1	15.19	78.21	8.4	33.45	8.0	24.7	2.16
A6	24 Jan 2022	2	15.19	78.12	8.4	33.45	8.0	24.7	2.20
A6	24 Jan 2022	3	15.18	78.06	8.4	33.45	8.0	24.7	2.25
A6	24 Jan 2022	4	15.17	77.82	8.4	33.45	8.0	24.7	2.44
A6	24 Jan 2022	5	15.17	77.96	8.4	33.45	8.0	24.7	2.80
A6	24 Jan 2022	6	15.17	77.93	8.4	33.45	8.0	24.7	2.94
A6	24 Jan 2022	7	15.17	78.04	8.4	33.45	8.0	24.7	3.54
A6	24 Jan 2022	8	15.17	78.13	8.4	33.45	8.0	24.7	3.70
A6	24 Jan 2022	9	15.16	77.93	8.4	33.45	8.0	24.7	3.89
A6	24 Jan 2022	10	15.14	77.14	8.4	33.46	8.0	24.8	4.08
A6	24 Jan 2022	11	15.11	76.97	8.4	33.46	8.0	24.8	4.17

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (µg/L)
A6	24 Jan 2022	12	15.07	76.46	8.4	33.46	8.0	24.8	4.51
A6	24 Jan 2022	13	15.06	75.52	8.6	33.46	8.0	24.8	4.88
A6	24 Jan 2022	14	15.05	74.43	9.0	33.46	8.0	24.8	5.22
A6	24 Jan 2022	15	15.01	75.28	8.9	33.46	8.0	24.8	5.75
A6	24 Jan 2022	16	14.90	78.40	8.4	33.47	8.0	24.8	5.76
A6	24 Jan 2022	17	14.87	80.78	7.9	33.46	7.9	24.8	4.51
A6	24 Jan 2022	18	14.87	81.56	7.8	33.46	7.9	24.8	3.07
A6	31 Jan 2022	1	15.33	81.55	7.8	33.44	8.1	24.7	1.32
A6	31 Jan 2022	2	15.34	81.49	7.8	33.44	8.1	24.7	1.35
A6	31 Jan 2022	3	15.33	81.59	7.8	33.44	8.1	24.7	1.42
A6	31 Jan 2022	4	15.32	81.42	7.8	33.44	8.1	24.7	1.52
A6	31 Jan 2022	5	15.31	81.25	7.8	33.45	8.1	24.7	1.60
A6	31 Jan 2022	6	15.27	80.96	7.8	33.45	8.1	24.7	1.59
A6	31 Jan 2022	7	15.25	81.01	7.7	33.44	8.1	24.7	1.53
A6	31 Jan 2022	8	15.22	81.48	7.6	33.44	8.1	24.7	1.49
A6	31 Jan 2022	9	15.21	81.48	7.6	33.44	8.1	24.7	1.45
A6	31 Jan 2022	10	15.16	81.85	7.5	33.44	8.1	24.7	1.40
A6	31 Jan 2022	11	15.07	82.03	7.4	33.44	8.1	24.8	1.39
A6	31 Jan 2022	12	15.00	82.09	7.4	33.43	8.1	24.8	1.35
A6	31 Jan 2022	13	14.95	82.15	7.4	33.43	8.1	24.8	1.38
A6	31 Jan 2022	14	14.93	82.13	7.4	33.43	8.1	24.8	1.40
A6	31 Jan 2022	15	14.90	82.12	7.4	33.43	8.1	24.8	1.41
A6	31 Jan 2022	16	14.84	82.16	7.3	33.43	8.1	24.8	1.38
A6	31 Jan 2022	17	14.84	82.10	7.3	33.43	8.1	24.8	1.35
A6	31 Jan 2022	18	14.73	82.23	7.2	33.43	8.1	24.8	1.29
A7	04 Jan 2022	1	14.82	82.12	7.8	33.40	7.9	24.8	1.39
A7	04 Jan 2022	2	14.81	82.04	7.8	33.40	7.9	24.8	1.33
A7	04 Jan 2022	3	14.83	81.98	7.8	33.40	7.9	24.8	1.34
A7	04 Jan 2022	4	14.82	82.01	7.8	33.40	7.9	24.8	1.44
A7	04 Jan 2022	5	14.82	82.05	7.8	33.40	7.9	24.8	1.53
A7	04 Jan 2022	6	14.82	81.98	7.8	33.40	7.9	24.8	1.65
A7	04 Jan 2022	7	14.82	81.93	7.8	33.40	7.9	24.8	1.73
A7	04 Jan 2022	8	14.82	82.00	7.8	33.40	7.9	24.8	1.85
A7	04 Jan 2022	9	14.81	82.18	7.8	33.40	7.9	24.8	1.77
A7	04 Jan 2022	10	14.81	82.10	7.8	33.40	7.9	24.8	1.79
A7	04 Jan 2022	11	14.81	81.99	7.8	33.40	7.9	24.8	1.78
A7	04 Jan 2022	12	14.80	82.11	7.8	33.40	7.9	24.8	1.87
A7	04 Jan 2022	13	14.78	82.41	7.7	33.41	7.9	24.8	1.91
A7	04 Jan 2022	14	14.75	82.90	7.6	33.41	7.9	24.8	1.84
A7	04 Jan 2022	15	14.68	83.42	7.5	33.43	7.9	24.8	1.51
A7	04 Jan 2022	16	14.54	83.88	7.2	33.43	7.9	24.9	1.40
A7	04 Jan 2022	17	14.44	84.20	7.1	33.43	7.9	24.9	1.10
A7	04 Jan 2022	18	14.26	84.32	7.0	33.46	7.8	24.9	0.94
A7	04 Jan 2022	19	14.03	84.44	6.8	33.47	7.8	25.0	0.83
A7	10 Jan 2022	1	14.82	83.17	8.0	33.45	7.9	24.8	1.56
A7	10 Jan 2022	2	14.82	83.04	8.0	33.45	7.9	24.8	1.52
A7	10 Jan 2022	3	14.82	83.09	8.0	33.45	7.9	24.8	1.56
A7	10 Jan 2022	4	14.82	83.17	8.0	33.45	7.9	24.8	1.59
A7	10 Jan 2022	5	14.82	83.25	8.0	33.45	7.9	24.8	1.60
A7	10 Jan 2022	6	14.82	83.29	8.0	33.45	7.9	24.8	1.54
A7	10 Jan 2022	7	14.82	82.98	8.0	33.45	7.9	24.8	1.63
A7	10 Jan 2022	8	14.82	83.28	8.0	33.45	7.9	24.8	1.54
A7	10 Jan 2022	9	14.81	83.45	8.0	33.46	7.9	24.8	1.59
A7	10 Jan 2022	10	14.80	83.50	8.0	33.45	7.9	24.8	1.63
A7	10 Jan 2022	11	14.79	83.55	8.0	33.46	7.9	24.8	1.53
A7	10 Jan 2022	12	14.75	83.65	8.0	33.46	7.9	24.8	1.56
A7	10 Jan 2022	13	14.74	83.69	7.9	33.45	7.9	24.8	1.52
A7	10 Jan 2022	14	14.74	83.64	7.9	33.46	7.9	24.8	1.42

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (μg/L)
A7	10 Jan 2022	15	14.71	83.69	7.8	33.46	7.9	24.8	1.40
A7	10 Jan 2022	16	14.66	83.81	7.6	33.46	7.9	24.9	1.34
A7	10 Jan 2022	17	14.41	83.87	7.2	33.47	7.9	24.9	1.13
A7	10 Jan 2022	18	14.41	83.80	7.1	33.46	7.8	24.9	0.88
A7	18 Jan 2022	1	15.14	77.31	8.1	33.41	7.9	24.7	1.76
A7	18 Jan 2022	2	15.16	77.28	8.1	33.43	7.9	24.7	1.88
A7	18 Jan 2022	3	15.04	77.86	7.8	33.46	7.9	24.8	1.66
A7	18 Jan 2022	4	14.92	79.28	7.6	33.46	7.9	24.8	1.42
A7	18 Jan 2022	5	14.90	79.85	7.6	33.45	7.9	24.8	1.24
A7	18 Jan 2022	6	14.85	79.85	7.6	33.45	7.9	24.8	1.21
A7	18 Jan 2022	7	14.78	79.83	7.7	33.46	7.9	24.8	1.31
A7	18 Jan 2022	8	14.73	79.86	7.7	33.45	7.9	24.8	1.28
A7	18 Jan 2022	9	14.73	80.21	7.7	33.45	7.9	24.8	1.23
A7	18 Jan 2022	10	14.73	80.33	7.7	33.45	7.9	24.8	1.22
A7	18 Jan 2022	11	14.72	80.46	7.7	33.45	7.9	24.8	1.22
A7	18 Jan 2022	12	14.70	80.46	7.6	33.45	7.9	24.8	1.15
A7	18 Jan 2022	13	14.65	80.42	7.6	33.46	7.9	24.9	1.24
A7	18 Jan 2022	14	14.64	80.30	7.6	33.45	7.9	24.9	1.21
A7	18 Jan 2022	15	14.55	80.30	7.5	33.47	7.9	24.9	1.09
A7	18 Jan 2022	16	14.45	79.75	7.4	33.46	7.9	24.9	1.04
A7	18 Jan 2022	17	14.40	79.50	7.4	33.47	7.9	24.9	0.96
A7	18 Jan 2022	18	14.38	79.38	7.3	33.46	7.9	24.9	0.97
A7	18 Jan 2022	19	14.36	79.24	7.3	33.46	7.9	24.9	0.92
A7	18 Jan 2022	20	14.36	79.23	7.3	33.46	7.9	24.9	0.90
A7	18 Jan 2022	21	14.37	79.18	7.3	33.46	7.9	24.9	0.86
A7	24 Jan 2022	1	15.22	82.96	8.1	33.46	8.0	24.7	0.62
A7	24 Jan 2022	2	15.21	79.31	8.1	33.46	8.0	24.7	0.63
A7	24 Jan 2022	3	15.20	83.06	8.1	33.46	8.0	24.7	0.67
A7	24 Jan 2022	4	15.19	83.08	8.1	33.46	8.0	24.7	0.67
A7	24 Jan 2022	5	15.19	83.05	8.1	33.46	8.0	24.7	0.71
A7	24 Jan 2022	6	15.18	82.95	8.1	33.46	8.0	24.7	0.76
A7	24 Jan 2022	7	15.15	82.91	8.1	33.46	8.0	24.8	0.87
A7	24 Jan 2022	8	15.14	82.73	8.1	33.46	8.0	24.8	0.92
A7	24 Jan 2022	9	15.11	82.54	8.1	33.46	8.0	24.8	1.06
A7	24 Jan 2022	10	15.07	82.46	8.0	33.46	8.0	24.8	1.11
A7	24 Jan 2022	11	15.01	82.27	7.9	33.47	8.0	24.8	1.18
A7	24 Jan 2022	12	14.92	82.25	7.9	33.47	7.9	24.8	1.32
A7	24 Jan 2022	13	14.84	82.16	7.8	33.47	7.9	24.8	1.25
A7	24 Jan 2022	14	14.76	82.16	7.8	33.47	7.9	24.8	1.33
A7	24 Jan 2022	15	14.62	82.21	7.6	33.48	7.9	24.9	1.41
A7	24 Jan 2022	16	14.55	82.48	7.5	33.47	7.9	24.9	1.25
A7	24 Jan 2022	17	14.47	82.78	7.4	33.48	7.9	24.9	1.27
A7	24 Jan 2022	18	14.42	82.73	7.3	33.47	7.9	24.9	1.24
A7	24 Jan 2022	19	14.38	82.87	7.3	33.47	7.9	24.9	1.09
A7	31 Jan 2022	1	15.36	82.99	7.6	33.44	8.1	24.7	0.93
A7	31 Jan 2022	2	15.36	82.97	7.6	33.44	8.1	24.7	0.98
A7	31 Jan 2022	3	15.36	83.06	7.6	33.44	8.1	24.7	1.00
A7	31 Jan 2022	4	15.36	83.08	7.6	33.44	8.1	24.7	1.03
A7	31 Jan 2022	5	15.36	83.06	7.6	33.44	8.1	24.7	1.11
A7	31 Jan 2022	6	15.36	83.02	7.6	33.44	8.1	24.7	1.14
A7	31 Jan 2022	7	15.36	83.01	7.5	33.44	8.1	24.7	1.16
A7	31 Jan 2022	8	15.35	82.99	7.6	33.44	8.1	24.7	1.21
A7	31 Jan 2022	9	15.35	82.99	7.6	33.44	8.1	24.7	1.22
A7	31 Jan 2022	10	15.34	82.97	7.6	33.44	8.1	24.7	1.22
A7	31 Jan 2022	11	15.23	82.89	7.5	33.44	8.1	24.7	1.24
A7	31 Jan 2022	12	15.16	82.70	7.4	33.43	8.1	24.7	1.27
A7	31 Jan 2022	13	15.03	82.58	7.3	33.44	8.1	24.8	1.30
A7	31 Jan 2022	14	14.87	82.54	7.3	33.43	8.1	24.8	1.33

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (μg/L)
A7	31 Jan 2022	15	14.79	82.51	7.2	33.42	8.1	24.8	1.35
A7	31 Jan 2022	16	14.74	82.52	7.1	33.42	8.1	24.8	1.36
A7	31 Jan 2022	17	14.49	82.68	7.0	33.41	8.1	24.9	1.31
A7	31 Jan 2022	18	14.35	82.81	6.9	33.41	8.1	24.9	1.29
A7	31 Jan 2022	19	14.11	82.86	6.9	33.40	8.1	24.9	1.27
A7	31 Jan 2022	20	14.06	82.73	6.8	33.39	8.0	24.9	1.22
C4	04 Jan 2022	1	14.79	83.28	7.6	33.42	7.9	24.8	0.56
C4	04 Jan 2022	2	14.79	83.25	7.6	33.42	7.9	24.8	0.60
C4	04 Jan 2022	3	14.77	83.44	7.5	33.42	7.9	24.8	0.57
C4	04 Jan 2022	4	14.74	83.18	7.6	33.42	7.9	24.8	0.61
C4	04 Jan 2022	5	14.72	83.37	7.6	33.42	7.9	24.8	0.70
C4	04 Jan 2022	6	14.68	83.25	7.6	33.42	7.9	24.8	0.71
C4	04 Jan 2022	7	14.65	83.30	7.6	33.42	7.9	24.8	0.70
C4	04 Jan 2022	8	14.65	83.02	7.7	33.42	7.9	24.8	0.68
C4	04 Jan 2022	9	14.60	82.06	7.8	33.43	7.9	24.8	0.69
C4	04 Jan 2022	10	14.61	81.80	7.8	33.42	7.9	24.8	0.66
C4	04 Jan 2022	11	14.59	80.39	7.8	33.42	7.9	24.8	0.69
C4	04 Jan 2022	12	14.59	80.10	7.8	33.42	7.9	24.8	0.66
C4	10 Jan 2022	1	14.67	81.55	7.4	33.43	7.9	24.8	0.56
C4	10 Jan 2022	2	14.66	81.42	7.4	33.43	7.9	24.8	0.58
C4	10 Jan 2022	3	14.65	81.22	7.5	33.43	7.9	24.8	0.60
C4	10 Jan 2022	4	14.65	77.91	7.5	33.43	7.9	24.8	0.67
C4	10 Jan 2022	5	14.64	64.27	7.5	33.43	7.9	24.8	0.69
C4	10 Jan 2022	6	14.64	79.78	7.4	33.43	7.9	24.8	0.72
C4	10 Jan 2022	7	14.64	80.77	7.4	33.43	7.9	24.8	0.71
C4	10 Jan 2022	8	14.64	80.63	7.4	33.43	7.9	24.8	0.68
C4	10 Jan 2022	9	14.64	80.52	7.4	33.43	7.9	24.8	0.72
C4	10 Jan 2022	10	14.64	80.35	7.4	33.43	7.9	24.8	0.68
C4	10 Jan 2022	11	14.64	80.52	7.4	33.43	7.9	24.8	0.67
C4	18 Jan 2022	1	15.02	79.80	7.3	33.44	7.9	24.8	0.88
C4	18 Jan 2022	2	15.00	79.42	7.3	33.45	7.9	24.8	0.86
C4	18 Jan 2022	3	14.98	79.19	7.3	33.44	7.9	24.8	0.86
C4	18 Jan 2022	4	14.98	79.09	7.3	33.44	7.9	24.8	0.96
C4	18 Jan 2022	5	14.97	79.08	7.3	33.44	7.9	24.8	0.92
C4	18 Jan 2022	6	14.97	79.25	7.3	33.44	7.9	24.8	1.04
C4	18 Jan 2022	7	14.96	79.22	7.4	33.44	7.9	24.8	1.08
C4	18 Jan 2022	8	14.96	79.20	7.4	33.44	7.9	24.8	1.07
C4	18 Jan 2022	9	14.96	79.02	7.4	33.44	7.9	24.8	1.06
C4	18 Jan 2022	10	14.94	78.48	7.4	33.44	7.9	24.8	1.03
C4	18 Jan 2022	11	14.94	78.22	7.4	33.44	7.9	24.8	0.97
C4	24 Jan 2022	1	15.11	77.72	8.4	33.46	8.0	24.8	1.17
C4	24 Jan 2022	2	15.07	77.16	8.5	33.47	8.0	24.8	1.22
C4	24 Jan 2022	3	15.05	76.93	8.4	33.46	8.0	24.8	1.26
C4	24 Jan 2022	4	15.04	76.80	8.4	33.46	8.0	24.8	1.44
C4	24 Jan 2022	5	15.02	76.76	8.3	33.46	8.0	24.8	1.67
C4	24 Jan 2022	6	15.00	77.08	8.2	33.46	8.0	24.8	2.04
C4	24 Jan 2022	7	15.00	77.06	8.2	33.46	8.0	24.8	2.41
C4	24 Jan 2022	8	15.00	77.49	8.2	33.46	8.0	24.8	2.52
C4	24 Jan 2022	9	15.00	77.68	8.2	33.46	8.0	24.8	2.33
C4	24 Jan 2022	10	14.99	77.86	8.1	33.46	8.0	24.8	2.19
C4	31 Jan 2022	1	15.26	76.79	7.7	33.46	8.1	24.7	1.18
C4	31 Jan 2022	2	15.26	76.62	7.7	33.46	8.1	24.7	1.20
C4	31 Jan 2022	3	15.25	76.64	7.7	33.46	8.1	24.7	1.29
C4	31 Jan 2022	4	15.23	76.49	7.7	33.45	8.1	24.7	1.38
C4	31 Jan 2022	5	15.23	76.68	7.6	33.45	8.1	24.7	1.44
C4	31 Jan 2022	6	15.23	77.10	7.7	33.45	8.1	24.7	1.46

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (μg/L)
C4	31 Jan 2022	7	15.22	77.41	7.6	33.45	8.1	24.7	1.54
C4	31 Jan 2022	8	15.21	77.53	7.7	33.45	8.1	24.7	1.51
C4	31 Jan 2022	9	15.20	77.57	7.5	33.45	8.1	24.7	1.50
C4	31 Jan 2022	10	15.10	78.08	6.8	33.45	8.1	24.8	1.35
C4	31 Jan 2022	11	14.86	77.80	6.0	33.44	8.1	24.8	0.99
C4	31 Jan 2022	12	14.81	76.02	6.0	33.43	8.0	24.8	0.86
C5	04 Jan 2022	1	14.80	82.23	7.8	33.41	7.9	24.8	0.89
C5	04 Jan 2022	2	14.80	82.30	7.8	33.41	7.9	24.8	0.88
C5	04 Jan 2022	3	14.79	82.25	7.8	33.41	7.9	24.8	0.88
C5	04 Jan 2022	4	14.78	82.05	7.8	33.41	7.9	24.8	0.92
C5	04 Jan 2022	5	14.78	82.03	7.8	33.41	7.9	24.8	1.07
C5	04 Jan 2022	6	14.77	82.15	7.8	33.41	7.9	24.8	1.16
C5	04 Jan 2022	7	14.77	82.27	7.8	33.41	7.9	24.8	1.32
C5	04 Jan 2022	8	14.76	82.41	7.7	33.41	7.9	24.8	1.28
C5	04 Jan 2022	9	14.75	82.98	7.6	33.42	7.9	24.8	1.18
C5	04 Jan 2022	10	14.74	83.31	7.6	33.42	7.9	24.8	0.93
C5	04 Jan 2022	11	14.67	82.03	7.6	33.43	7.9	24.8	0.84
C5	10 Jan 2022	1	14.74	73.83	7.0	33.43	7.8	24.8	0.66
C5	10 Jan 2022	2	14.73	72.92	7.0	33.43	7.8	24.8	0.67
C5	10 Jan 2022	3	14.72	70.23	7.0	33.43	7.8	24.8	0.73
C5	10 Jan 2022	4	14.71	66.91	7.0	33.43	7.8	24.8	0.79
C5	10 Jan 2022	5	14.71	63.34	6.9	33.43	7.8	24.8	0.85
C5	10 Jan 2022	6	14.70	61.21	6.9	33.43	7.8	24.8	0.89
C5	10 Jan 2022	7	14.70	60.73	6.9	33.43	7.8	24.8	0.87
C5	10 Jan 2022	8	14.70	61.10	7.0	33.43	7.8	24.8	0.87
C5	10 Jan 2022	9	14.69	59.18	7.0	33.42	7.8	24.8	0.85
C5	10 Jan 2022	10	14.69	57.92	6.9	33.42	7.8	24.8	0.80
C5	18 Jan 2022	1	15.52	46.63	7.5	33.45	7.8	24.7	0.63
C5	18 Jan 2022	2	15.53	46.20	7.5	33.45	7.8	24.7	0.63
C5	18 Jan 2022	3	15.43	47.32	7.4	33.46	7.8	24.7	0.61
C5	18 Jan 2022	4	15.37	46.65	7.2	33.46	7.8	24.7	0.62
C5	18 Jan 2022	5	15.35	46.63	7.1	33.46	7.8	24.7	0.64
C5	18 Jan 2022	6	15.33	46.26	7.1	33.46	7.8	24.7	0.65
C5	18 Jan 2022	7	15.31	46.09	7.1	33.46	7.8	24.7	0.67
C5	18 Jan 2022	8	15.27	46.26	7.0	33.46	7.8	24.7	0.67
C5	18 Jan 2022	9	15.14	46.45	6.8	33.47	7.8	24.8	0.69
C5	18 Jan 2022	10	15.09	44.49	6.7	33.47	7.8	24.8	0.65
C5	18 Jan 2022	11	15.06	38.55	6.5	33.46	7.8	24.8	0.66
C5	24 Jan 2022	1	15.05	79.00	8.4	33.46	8.0	24.8	1.30
C5	24 Jan 2022	2	15.03	79.13	8.4	33.46	8.0	24.8	1.29
C5	24 Jan 2022	3	15.01	78.98	8.4	33.46	8.0	24.8	1.32
C5	24 Jan 2022	4	15.01	78.79	8.4	33.46	8.0	24.8	1.47
C5	24 Jan 2022	5	14.98	78.40	8.3	33.46	8.0	24.8	1.75
C5	24 Jan 2022	6	14.90	77.71	8.1	33.47	8.0	24.8	2.29
C5	24 Jan 2022	7	14.83	79.01	7.8	33.47	7.9	24.8	2.69
C5	24 Jan 2022	8	14.63	81.02	7.3	33.48	7.9	24.9	2.67
C5	24 Jan 2022	9	14.56	80.01	6.8	33.47	7.9	24.9	2.01
C5	24 Jan 2022	10	14.53	57.01	6.6	33.47	7.8	24.9	1.46
C5	31 Jan 2022	1	15.27	80.11	7.8	33.45	8.1	24.7	1.45
C5	31 Jan 2022	2	15.28	80.24	7.8	33.45	8.1	24.7	1.48
C5	31 Jan 2022	3	15.27	80.20	7.8	33.45	8.1	24.7	1.57
C5	31 Jan 2022	4	15.25	79.26	7.7	33.46	8.1	24.7	1.73
C5	31 Jan 2022	5	15.24	78.33	7.7	33.46	8.1	24.7	1.77
C5	31 Jan 2022	6	15.20	76.00	7.4	33.46	8.1	24.7	1.64
C5	31 Jan 2022	7	15.13	73.60	7.0	33.46	8.1	24.8	1.44
C5	31 Jan 2022	8	14.92	64.71	6.6	33.46	8.1	24.8	1.38

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (μg/L)
C5	31 Jan 2022	9	14.82	58.36	6.6	33.45	8.1	24.8	1.24
C5	31 Jan 2022	10	14.66	61.02	6.8	33.44	8.1	24.8	1.13
C5	31 Jan 2022	11	14.63	63.62	6.8	33.43	8.1	24.8	1.10
C6	04 Jan 2022	1	14.73	81.29	8.0	33.38	7.9	24.8	0.68
C6	04 Jan 2022	2	14.71	81.19	8.0	33.39	7.9	24.8	0.70
C6	04 Jan 2022	3	14.70	81.09	8.0	33.39	7.9	24.8	0.73
C6	04 Jan 2022	4	14.70	81.05	8.0	33.39	7.9	24.8	0.83
C6	04 Jan 2022	5	14.70	80.93	8.0	33.39	7.9	24.8	0.86
C6	04 Jan 2022	6	14.69	80.89	8.0	33.39	7.9	24.8	0.98
C6	04 Jan 2022	7	14.69	80.82	8.0	33.39	7.9	24.8	1.02
C6	04 Jan 2022	8	14.69	80.69	8.0	33.39	7.9	24.8	1.02
C6	04 Jan 2022	9	14.69	80.79	8.0	33.39	7.9	24.8	1.03
C6	04 Jan 2022	10	14.70	81.68	7.8	33.40	7.9	24.8	1.07
C6	10 Jan 2022	1	14.74	80.67	7.6	33.44	7.9	24.8	0.72
C6	10 Jan 2022	2	14.73	81.59	7.6	33.44	7.9	24.8	0.74
C6	10 Jan 2022	3	14.72	81.60	7.5	33.44	7.9	24.8	0.75
C6	10 Jan 2022	4	14.71	80.91	7.5	33.44	7.9	24.8	0.84
C6	10 Jan 2022	5	14.69	80.39	7.4	33.44	7.9	24.8	0.82
C6	10 Jan 2022	6	14.69	80.10	7.3	33.44	7.9	24.8	0.80
C6	10 Jan 2022	7	14.68	79.45	7.3	33.44	7.9	24.8	0.74
C6	10 Jan 2022	8	14.67	78.23	7.2	33.44	7.9	24.8	0.65
C6	10 Jan 2022	9	14.67	77.52	7.2	33.44	7.9	24.8	0.60
C6	18 Jan 2022	1	15.19	78.34	7.9	33.41	7.9	24.7	1.77
C6	18 Jan 2022	2	15.19	78.22	8.0	33.41	7.9	24.7	1.84
C6	18 Jan 2022	3	15.18	78.23	7.9	33.42	7.9	24.7	2.07
C6	18 Jan 2022	4	15.17	78.30	7.9	33.42	7.9	24.7	1.97
C6	18 Jan 2022	5	15.15	78.78	7.8	33.43	7.9	24.7	1.83
C6	18 Jan 2022	6	15.13	79.29	7.8	33.44	7.9	24.7	1.62
C6	18 Jan 2022	7	15.14	79.64	7.5	33.45	7.9	24.7	1.43
C6	18 Jan 2022	8	15.09	79.01	7.2	33.45	7.9	24.8	1.13
C6	18 Jan 2022	9	14.92	76.85	6.9	33.47	7.8	24.8	0.89
C6	18 Jan 2022	10	14.91	74.45	6.9	33.46	7.8	24.8	0.83
C6	24 Jan 2022	1	15.13	77.45	8.4	33.47	8.0	24.8	0.70
C6	24 Jan 2022	2	15.14	76.26	8.4	33.47	8.0	24.8	0.85
C6	24 Jan 2022	3	15.13	77.58	8.4	33.48	8.0	24.8	0.85
C6	24 Jan 2022	4	15.07	77.74	8.3	33.48	8.0	24.8	0.82
C6	24 Jan 2022	5	15.04	77.37	8.1	33.48	8.0	24.8	0.85
C6	24 Jan 2022	6	15.04	77.30	8.0	33.48	8.0	24.8	0.88
C6	24 Jan 2022	7	15.00	77.05	7.9	33.48	8.0	24.8	0.90
C6	24 Jan 2022	8	14.81	76.53	7.6	33.49	7.9	24.9	0.88
C6	24 Jan 2022	9	14.76	75.75	7.3	33.47	7.9	24.8	0.83
C6	31 Jan 2022	1	15.24	80.78	7.8	33.45	8.1	24.7	1.44
C6	31 Jan 2022	2	15.23	80.82	7.8	33.45	8.1	24.7	1.50
C6	31 Jan 2022	3	15.23	80.68	7.7	33.45	8.1	24.7	1.61
C6	31 Jan 2022	4	15.22	80.56	7.7	33.45	8.1	24.7	1.69
C6	31 Jan 2022	5	15.22	80.29	7.7	33.45	8.1	24.7	1.72
C6	31 Jan 2022	6	15.23	79.78	7.6	33.45	8.1	24.7	1.75
C6	31 Jan 2022	7	15.22	79.23	7.6	33.45	8.1	24.7	1.78
C6	31 Jan 2022	8	15.18	79.10	7.3	33.45	8.1	24.7	1.61
C6	31 Jan 2022	9	15.12	78.08	7.1	33.45	8.1	24.8	1.39
C6	31 Jan 2022	10	15.07	75.20	7.1	33.45	8.1	24.8	1.28
C7	04 Jan 2022	1	14.93	81.28	7.8	33.41	7.9	24.8	1.35
C7	04 Jan 2022	2	14.93	81.22	7.9	33.41	7.9	24.8	1.40
C7	04 Jan 2022	3	14.93	81.71	7.9	33.41	7.9	24.8	1.37
C7	04 Jan 2022	4	14.93	80.36	7.8	33.41	7.9	24.8	1.45

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (μg/L)
C7	04 Jan 2022	5	14.92	81.63	7.8	33.41	7.9	24.8	1.42
C7	04 Jan 2022	6	14.92	82.16	7.8	33.41	7.9	24.8	1.51
C7	04 Jan 2022	7	14.91	82.39	7.8	33.42	7.9	24.8	1.54
C7	04 Jan 2022	8	14.88	82.73	7.7	33.42	7.9	24.8	1.52
C7	04 Jan 2022	9	14.87	82.74	7.7	33.42	7.9	24.8	1.53
C7	04 Jan 2022	10	14.86	82.89	7.6	33.42	7.9	24.8	1.51
C7	04 Jan 2022	11	14.80	83.05	7.5	33.43	7.9	24.8	1.57
C7	04 Jan 2022	12	14.76	83.34	7.5	33.42	7.9	24.8	1.50
C7	04 Jan 2022	13	14.76	83.42	7.4	33.42	7.9	24.8	1.37
C7	04 Jan 2022	14	14.75	83.42	7.4	33.43	7.9	24.8	1.26
C7	04 Jan 2022	15	14.63	83.55	7.3	33.43	7.9	24.8	1.31
C7	04 Jan 2022	16	14.61	83.59	7.3	33.43	7.9	24.8	1.22
C7	04 Jan 2022	17	14.59	83.58	7.2	33.42	7.9	24.8	1.19
C7	04 Jan 2022	18	14.60	83.64	7.2	33.42	7.9	24.8	1.16
C7	04 Jan 2022	19	14.59	83.58	7.2	33.43	7.9	24.8	1.10
C7	10 Jan 2022	1	14.89	83.90	7.9	33.46	7.9	24.8	1.02
C7	10 Jan 2022	2	14.89	83.93	7.9	33.46	7.9	24.8	1.03
C7	10 Jan 2022	3	14.89	83.91	7.9	33.46	7.9	24.8	1.06
C7	10 Jan 2022	4	14.89	83.97	7.9	33.46	7.9	24.8	1.11
C7	10 Jan 2022	5	14.89	83.99	7.9	33.46	7.9	24.8	1.25
C7	10 Jan 2022	6	14.89	83.93	7.9	33.46	7.9	24.8	1.23
C7	10 Jan 2022	7	14.89	83.97	7.9	33.46	7.9	24.8	1.23
C7	10 Jan 2022	8	14.89	84.00	7.9	33.46	7.9	24.8	1.31
C7	10 Jan 2022	9	14.89	83.98	7.9	33.46	7.9	24.8	1.28
C7	10 Jan 2022	10	14.89	83.87	7.9	33.46	7.9	24.8	1.30
C7	10 Jan 2022	11	14.89	83.88	7.9	33.46	7.9	24.8	1.36
C7	10 Jan 2022	12	14.89	84.03	7.9	33.46	7.9	24.8	1.31
C7	10 Jan 2022	13	14.89	84.04	7.9	33.46	7.9	24.8	1.29
C7	10 Jan 2022	14	14.88	84.10	7.9	33.46	7.9	24.8	1.32
C7	10 Jan 2022	15	14.87	84.12	7.9	33.46	7.9	24.8	1.30
C7	10 Jan 2022	16	14.79	84.30	7.7	33.46	7.9	24.8	1.13
C7	10 Jan 2022	17	14.60	83.68	7.4	33.49	7.9	24.9	0.98
C7	10 Jan 2022	18	14.32	83.62	7.1	33.48	7.9	24.9	0.80
C7	18 Jan 2022	1	15.23	79.27	7.8	33.43	7.9	24.7	1.41
C7	18 Jan 2022	2	15.23	79.11	7.8	33.44	7.9	24.7	1.49
C7	18 Jan 2022	3	15.17	78.76	7.7	33.46	7.9	24.7	1.54
C7	18 Jan 2022	4	15.07	78.00	7.6	33.46	7.9	24.8	1.29
C7	18 Jan 2022	5	15.04	78.10	7.5	33.46	7.9	24.8	1.16
C7	18 Jan 2022	6	14.96	78.50	7.5	33.46	7.9	24.8	1.08
C7	18 Jan 2022	7	14.89	79.65	7.6	33.46	7.9	24.8	1.09
C7	18 Jan 2022	8	14.83	80.48	7.6	33.46	7.9	24.8	1.09
C7	18 Jan 2022	9	14.78	81.00	7.7	33.45	7.9	24.8	1.19
C7	18 Jan 2022	10	14.74	81.21	7.8	33.45	7.9	24.8	1.26
C7	18 Jan 2022	11	14.70	81.39	7.8	33.45	7.9	24.8	1.31
C7	18 Jan 2022	12	14.68	81.59	7.7	33.45	7.9	24.8	1.33
C7	18 Jan 2022	13	14.68	81.79	7.7	33.45	7.9	24.8	1.25
C7	18 Jan 2022	14	14.68	81.98	7.7	33.45	7.9	24.8	1.22
C7	18 Jan 2022	15	14.67	82.01	7.7	33.45	7.9	24.8	1.15
C7	18 Jan 2022	16	14.68	81.94	7.7	33.45	7.9	24.8	1.16
C7	18 Jan 2022	17	14.68	82.03	7.7	33.45	7.9	24.8	1.14
C7	18 Jan 2022	18	14.69	82.25	7.6	33.45	7.9	24.8	1.13
C7	18 Jan 2022	19	14.69	81.93	7.5	33.45	7.9	24.8	1.06
C7	24 Jan 2022	1	15.07	77.92	8.5	33.45	8.0	24.8	1.17
C7	24 Jan 2022	2	15.03	77.20	8.5	33.46	8.0	24.8	1.12
C7	24 Jan 2022	3	14.97	77.64	8.5	33.46	8.0	24.8	1.16
C7	24 Jan 2022	4	14.94	77.83	8.5	33.45	8.0	24.8	1.26
C7	24 Jan 2022	5	14.93	78.23	8.5	33.45	8.0	24.8	1.37
C7	24 Jan 2022	6	14.92	78.34	8.5	33.45	8.0	24.8	1.62

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (μg/L)
C7	24 Jan 2022	7	14.92	78.39	8.5	33.45	8.0	24.8	1.85
C7	24 Jan 2022	8	14.91	78.36	8.5	33.45	8.0	24.8	2.08
C7	24 Jan 2022	9	14.91	78.43	8.5	33.45	8.0	24.8	2.25
C7	24 Jan 2022	10	14.88	78.77	8.4	33.45	8.0	24.8	2.33
C7	24 Jan 2022	11	14.87	79.22	8.3	33.45	8.0	24.8	2.23
C7	24 Jan 2022	12	14.84	79.72	8.2	33.46	8.0	24.8	2.24
C7	24 Jan 2022	13	14.76	80.43	8.1	33.47	8.0	24.8	2.10
C7	24 Jan 2022	14	14.66	81.34	7.8	33.47	7.9	24.9	1.90
C7	24 Jan 2022	15	14.63	82.11	7.6	33.46	7.9	24.9	1.53
C7	24 Jan 2022	16	14.61	82.54	7.5	33.46	7.9	24.9	1.38
C7	24 Jan 2022	17	14.54	82.67	7.4	33.47	7.9	24.9	1.20
C7	24 Jan 2022	18	14.41	81.29	7.2	33.48	7.9	24.9	1.07
C7	31 Jan 2022	1	15.42	77.85	7.8	33.44	8.1	24.7	1.05
C7	31 Jan 2022	2	15.42	82.48	7.8	33.44	8.1	24.7	1.04
C7	31 Jan 2022	3	15.41	82.55	7.8	33.44	8.1	24.7	1.09
C7	31 Jan 2022	4	15.41	82.55	7.8	33.44	8.1	24.7	1.13
C7	31 Jan 2022	5	15.40	82.56	7.8	33.44	8.1	24.7	1.23
C7	31 Jan 2022	6	15.40	82.57	7.8	33.44	8.1	24.7	1.25
C7	31 Jan 2022	7	15.31	82.57	7.7	33.44	8.1	24.7	1.25
C7	31 Jan 2022	8	15.25	82.30	7.6	33.44	8.1	24.7	1.29
C7	31 Jan 2022	9	15.22	82.00	7.5	33.44	8.1	24.7	1.26
C7	31 Jan 2022	10	15.18	81.89	7.5	33.44	8.1	24.7	1.27
C7	31 Jan 2022	11	15.08	81.78	7.4	33.44	8.1	24.8	1.24
C7	31 Jan 2022	12	15.07	81.85	7.4	33.43	8.1	24.8	1.29
C7	31 Jan 2022	13	15.01	81.97	7.4	33.44	8.1	24.8	1.26
C7	31 Jan 2022	14	14.96	81.93	7.4	33.44	8.1	24.8	1.26
C7	31 Jan 2022	15	14.91	82.02	7.3	33.43	8.1	24.8	1.31
C7	31 Jan 2022	16	14.86	82.08	7.2	33.44	8.1	24.8	1.29
C7	31 Jan 2022	17	14.81	81.93	7.2	33.44	8.1	24.8	1.32
C7	31 Jan 2022	18	14.77	81.94	7.2	33.43	8.1	24.8	1.28
C7	31 Jan 2022	19	14.70	82.01	7.1	33.45	8.1	24.8	1.27
C8	04 Jan 2022	1	14.85	80.69	7.8	33.40	7.9	24.8	1.29
C8	04 Jan 2022	2	14.84	77.46	7.8	33.39	7.9	24.8	1.26
C8	04 Jan 2022	3	14.84	80.46	7.8	33.39	7.9	24.8	1.34
C8	04 Jan 2022	4	14.84	80.28	7.8	33.39	7.9	24.8	1.52
C8	04 Jan 2022	5	14.84	80.24	7.8	33.39	7.9	24.8	1.71
C8	04 Jan 2022	6	14.83	80.27	7.8	33.39	7.9	24.8	1.88
C8	04 Jan 2022	7	14.83	80.48	7.8	33.39	7.9	24.8	1.96
C8	04 Jan 2022	8	14.83	80.43	7.8	33.39	7.9	24.8	2.01
C8	04 Jan 2022	9	14.83	80.40	7.8	33.39	7.9	24.8	2.04
C8	04 Jan 2022	10	14.82	80.37	7.8	33.39	7.9	24.8	2.04
C8	04 Jan 2022	11	14.82	80.49	7.8	33.39	7.9	24.8	2.20
C8	04 Jan 2022	12	14.82	80.71	7.8	33.39	7.9	24.8	2.21
C8	04 Jan 2022	13	14.83	80.73	7.8	33.40	7.9	24.8	2.07
C8	04 Jan 2022	14	14.82	80.88	7.8	33.40	7.9	24.8	1.90
C8	04 Jan 2022	15	14.83	81.21	7.8	33.40	7.9	24.8	1.91
C8	04 Jan 2022	16	14.87	81.77	7.7	33.41	7.9	24.8	1.89
C8	04 Jan 2022	17	14.86	82.13	7.7	33.42	7.9	24.8	2.01
C8	04 Jan 2022	18	14.83	82.58	7.7	33.43	7.9	24.8	1.93
C8	04 Jan 2022	19	14.79	82.72	7.6	33.43	7.9	24.8	1.90
C8	04 Jan 2022	20	14.61	82.86	7.4	33.44	7.9	24.9	1.78
C8	10 Jan 2022	1	14.80	82.67	8.1	33.45	7.9	24.8	1.78
C8	10 Jan 2022	2	14.79	82.49	8.1	33.45	7.9	24.8	1.75
C8	10 Jan 2022	3	14.79	82.67	8.1	33.45	7.9	24.8	1.80
C8	10 Jan 2022	4	14.79	82.59	8.1	33.45	7.9	24.8	1.94
C8	10 Jan 2022	5	14.79	82.58	8.1	33.45	7.9	24.8	2.05
C8	10 Jan 2022	6	14.79	82.66	8.1	33.45	7.9	24.8	2.17
C8	10 Jan 2022	7	14.78	82.69	8.1	33.45	7.9	24.8	2.15

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (μg/L)
C8	10 Jan 2022	8	14.78	82.87	8.1	33.45	7.9	24.8	2.18
C8	10 Jan 2022	9	14.78	82.95	8.0	33.45	7.9	24.8	2.04
C8	10 Jan 2022	10	14.77	83.00	8.1	33.45	7.9	24.8	1.97
C8	10 Jan 2022	11	14.76	83.17	8.0	33.45	7.9	24.8	1.89
C8	10 Jan 2022	12	14.69	83.87	7.8	33.45	7.9	24.8	1.66
C8	10 Jan 2022	13	14.45	84.00	7.6	33.48	7.9	24.9	1.23
C8	10 Jan 2022	14	14.31	84.08	7.2	33.46	7.9	24.9	1.18
C8	10 Jan 2022	15	14.25	84.23	7.1	33.46	7.9	24.9	1.07
C8	10 Jan 2022	16	14.19	84.18	7.1	33.47	7.8	25.0	1.12
C8	10 Jan 2022	17	14.10	84.20	7.0	33.47	7.8	25.0	1.00
C8	10 Jan 2022	18	14.08	83.96	6.9	33.46	7.8	25.0	0.96
C8	10 Jan 2022	19	14.07	83.62	6.9	33.47	7.8	25.0	0.97
C8	18 Jan 2022	1	15.05	78.60	8.1	33.41	7.9	24.7	2.03
C8	18 Jan 2022	2	15.06	78.54	8.1	33.41	7.9	24.7	2.02
C8	18 Jan 2022	3	15.09	78.17	8.0	33.43	7.9	24.7	2.47
C8	18 Jan 2022	4	15.08	78.10	8.0	33.44	7.9	24.8	2.37
C8	18 Jan 2022	5	15.02	78.75	7.9	33.45	7.9	24.8	2.20
C8	18 Jan 2022	6	14.91	79.60	7.8	33.46	7.9	24.8	1.85
C8	18 Jan 2022	7	14.83	80.17	7.8	33.45	7.9	24.8	1.69
C8	18 Jan 2022	8	14.81	80.19	7.8	33.45	7.9	24.8	1.61
C8	18 Jan 2022	9	14.78	80.61	7.8	33.45	7.9	24.8	1.56
C8	18 Jan 2022	10	14.75	80.68	7.8	33.45	7.9	24.8	1.50
C8	18 Jan 2022	11	14.72	81.05	7.8	33.45	7.9	24.8	1.50
C8	18 Jan 2022	12	14.71	81.43	7.8	33.45	7.9	24.8	1.39
C8	18 Jan 2022	13	14.71	81.52	7.7	33.45	7.9	24.8	1.35
C8	18 Jan 2022	14	14.71	81.66	7.7	33.45	7.9	24.8	1.37
C8	18 Jan 2022	15	14.70	81.80	7.7	33.45	7.9	24.8	1.31
C8	18 Jan 2022	16	14.70	81.88	7.6	33.45	7.9	24.8	1.28
C8	18 Jan 2022	17	14.70	81.88	7.6	33.45	7.9	24.8	1.22
C8	18 Jan 2022	18	14.69	81.92	7.6	33.45	7.9	24.8	1.18
C8	18 Jan 2022	19	14.69	81.99	7.6	33.45	7.9	24.8	1.09
C8	18 Jan 2022	20	14.68	82.01	7.5	33.45	7.9	24.8	1.03
C8	24 Jan 2022	1	14.91	77.92	8.2	33.45	8.0	24.8	0.82
C8	24 Jan 2022	2	14.91	77.28	8.2	33.45	8.0	24.8	0.82
C8	24 Jan 2022	3	14.82	78.52	8.3	33.45	8.0	24.8	0.84
C8	24 Jan 2022	4	14.81	78.82	8.4	33.45	8.0	24.8	0.88
C8	24 Jan 2022	5	14.81	78.76	8.4	33.45	8.0	24.8	1.04
C8	24 Jan 2022	6	14.80	78.68	8.4	33.45	8.0	24.8	1.25
C8	24 Jan 2022	7	14.80	78.64	8.4	33.45	8.0	24.8	1.50
C8	24 Jan 2022	8	14.79	78.38	8.4	33.45	8.0	24.8	1.73
C8	24 Jan 2022	9	14.79	78.26	8.4	33.45	8.0	24.8	1.91
C8	24 Jan 2022	10	14.78	78.03	8.4	33.45	8.0	24.8	2.16
C8	24 Jan 2022	11	14.77	77.84	8.4	33.45	8.0	24.8	2.14
C8	24 Jan 2022	12	14.74	77.61	8.3	33.45	8.0	24.8	2.42
C8	24 Jan 2022	13	14.73	77.81	8.1	33.45	8.0	24.8	2.48
C8	24 Jan 2022	14	14.71	77.92	8.0	33.46	8.0	24.8	2.27
C8	24 Jan 2022	15	14.64	79.29	7.8	33.47	8.0	24.9	2.08
C8	24 Jan 2022	16	14.57	80.50	7.7	33.46	7.9	24.9	1.71
C8	24 Jan 2022	17	14.55	81.63	7.6	33.46	7.9	24.9	1.44
C8	24 Jan 2022	18	14.55	81.48	7.6	33.46	7.9	24.9	1.26
C8	24 Jan 2022	19	14.54	80.93	7.5	33.46	7.9	24.9	1.10
C8	31 Jan 2022	1	15.32	81.89	7.8	33.44	8.1	24.7	1.14
C8	31 Jan 2022	2	15.31	80.32	7.9	33.44	8.1	24.7	1.17
C8	31 Jan 2022	3	15.31	81.77	7.8	33.44	8.1	24.7	1.21
C8	31 Jan 2022	4	15.31	81.79	7.8	33.44	8.1	24.7	1.25
C8	31 Jan 2022	5	15.31	81.84	7.8	33.44	8.1	24.7	1.29
C8	31 Jan 2022	6	15.31	81.90	7.8	33.44	8.1	24.7	1.35
C8	31 Jan 2022	7	15.31	81.88	7.8	33.44	8.1	24.7	1.36

<b>Station</b>	<b>Date</b>	<b>Depth (m)</b>	<b>Temp (°C)</b>	<b>XMS (%)</b>	<b>DO (mg/L)</b>	<b>Sal (ppt)</b>	<b>pH</b>	<b>Dens (σ-t)</b>	<b>Chlor (μg/L)</b>
C8	31 Jan 2022	8	15.30	81.80	7.8	33.44	8.1	24.7	1.42
C8	31 Jan 2022	9	15.30	81.89	7.8	33.44	8.1	24.7	1.49
C8	31 Jan 2022	10	15.30	81.88	7.8	33.44	8.1	24.7	1.49
C8	31 Jan 2022	11	15.30	81.91	7.8	33.44	8.1	24.7	1.50
C8	31 Jan 2022	12	15.30	81.87	7.8	33.44	8.1	24.7	1.51
C8	31 Jan 2022	13	15.30	81.87	7.8	33.44	8.1	24.7	1.49
C8	31 Jan 2022	14	15.30	81.95	7.8	33.44	8.1	24.7	1.43
C8	31 Jan 2022	15	15.29	81.99	7.8	33.44	8.1	24.7	1.41
C8	31 Jan 2022	16	15.22	82.06	7.6	33.44	8.1	24.7	1.38
C8	31 Jan 2022	17	15.09	81.84	7.5	33.44	8.1	24.7	1.33
C8	31 Jan 2022	18	14.94	81.80	7.3	33.44	8.1	24.8	1.24
C8	31 Jan 2022	19	14.89	81.55	7.2	33.44	8.1	24.8	1.24
C8	31 Jan 2022	20	14.75	80.78	7.1	33.43	8.1	24.8	1.20

NA = not available

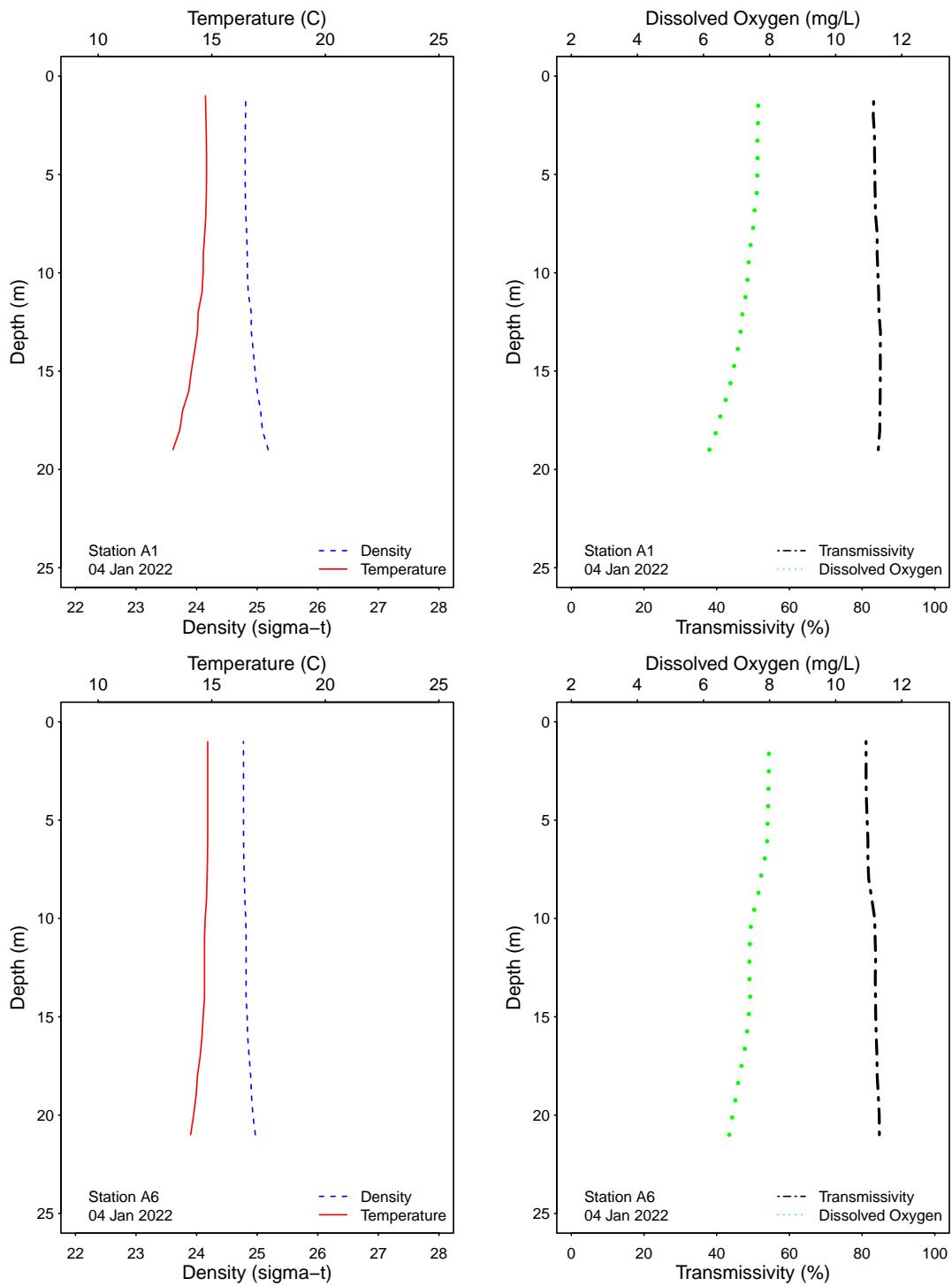


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

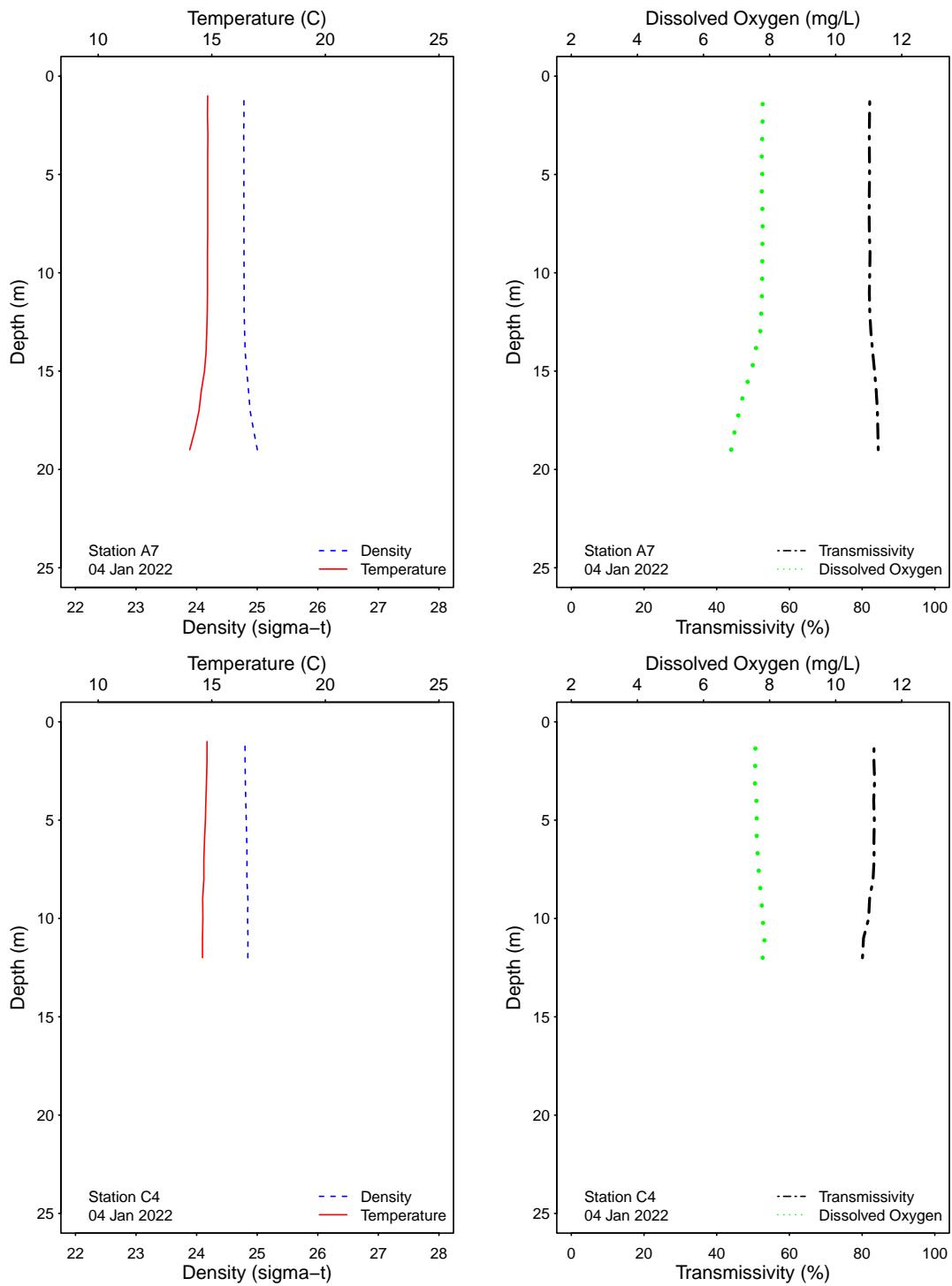


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

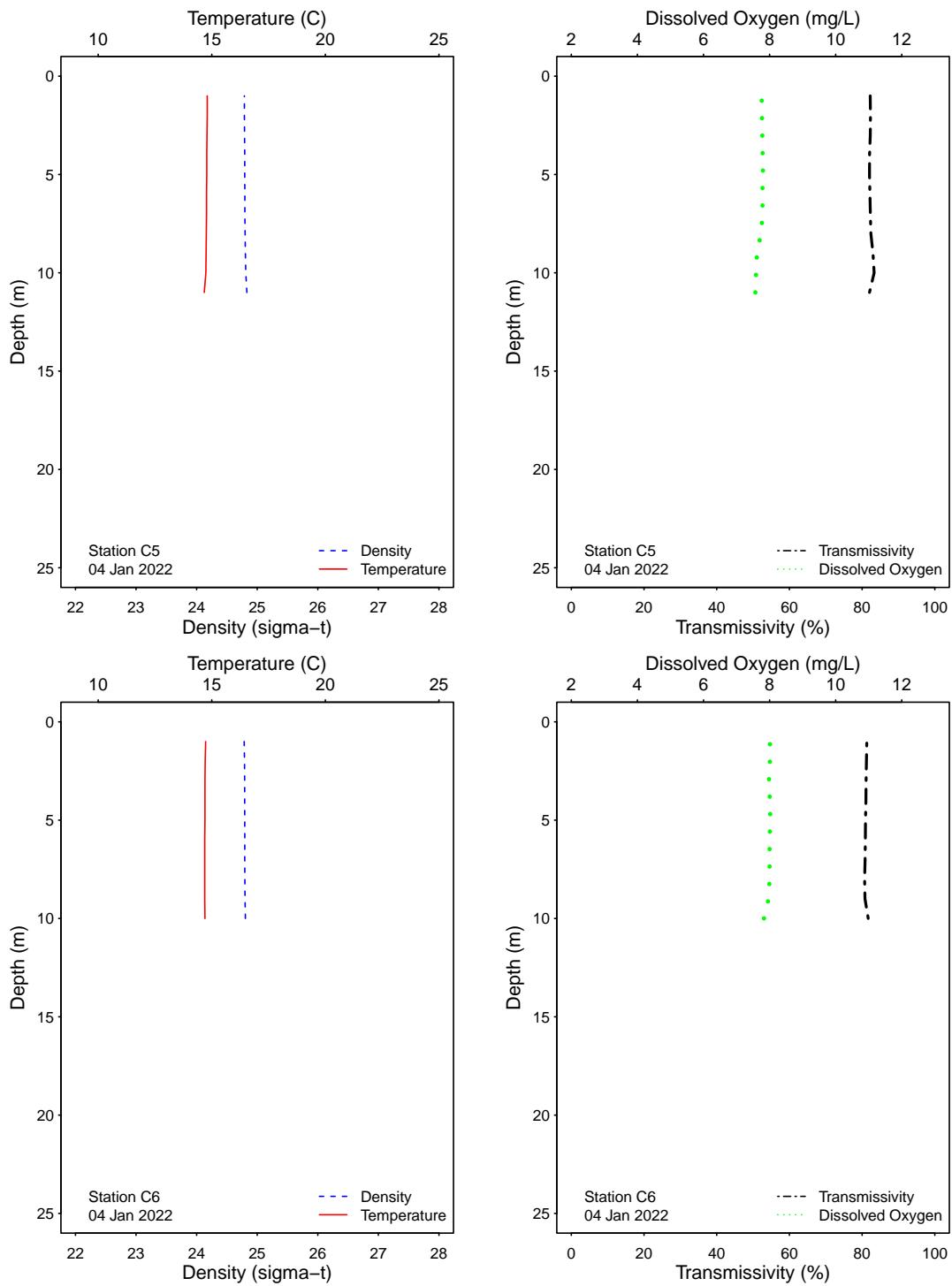


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

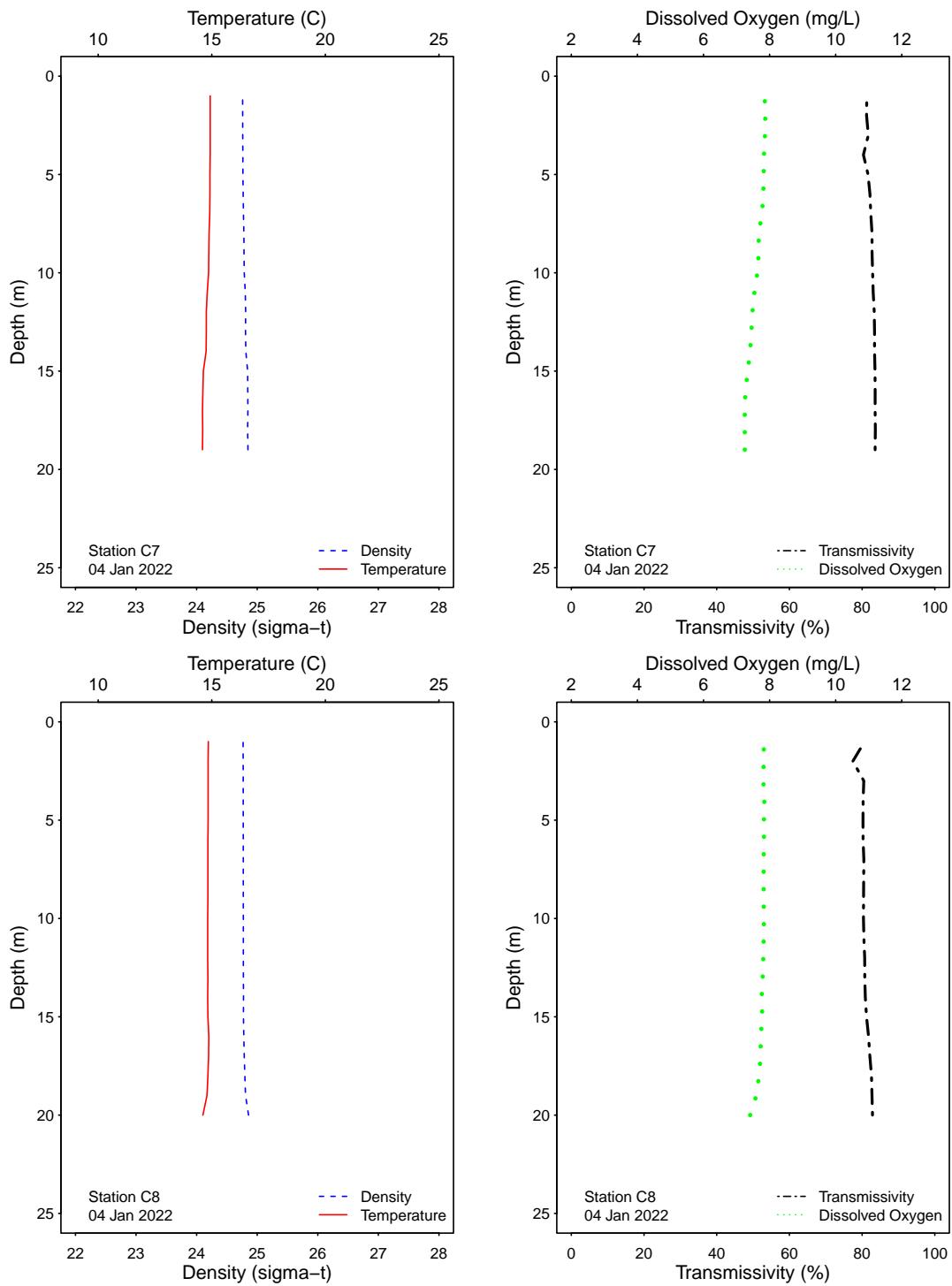


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

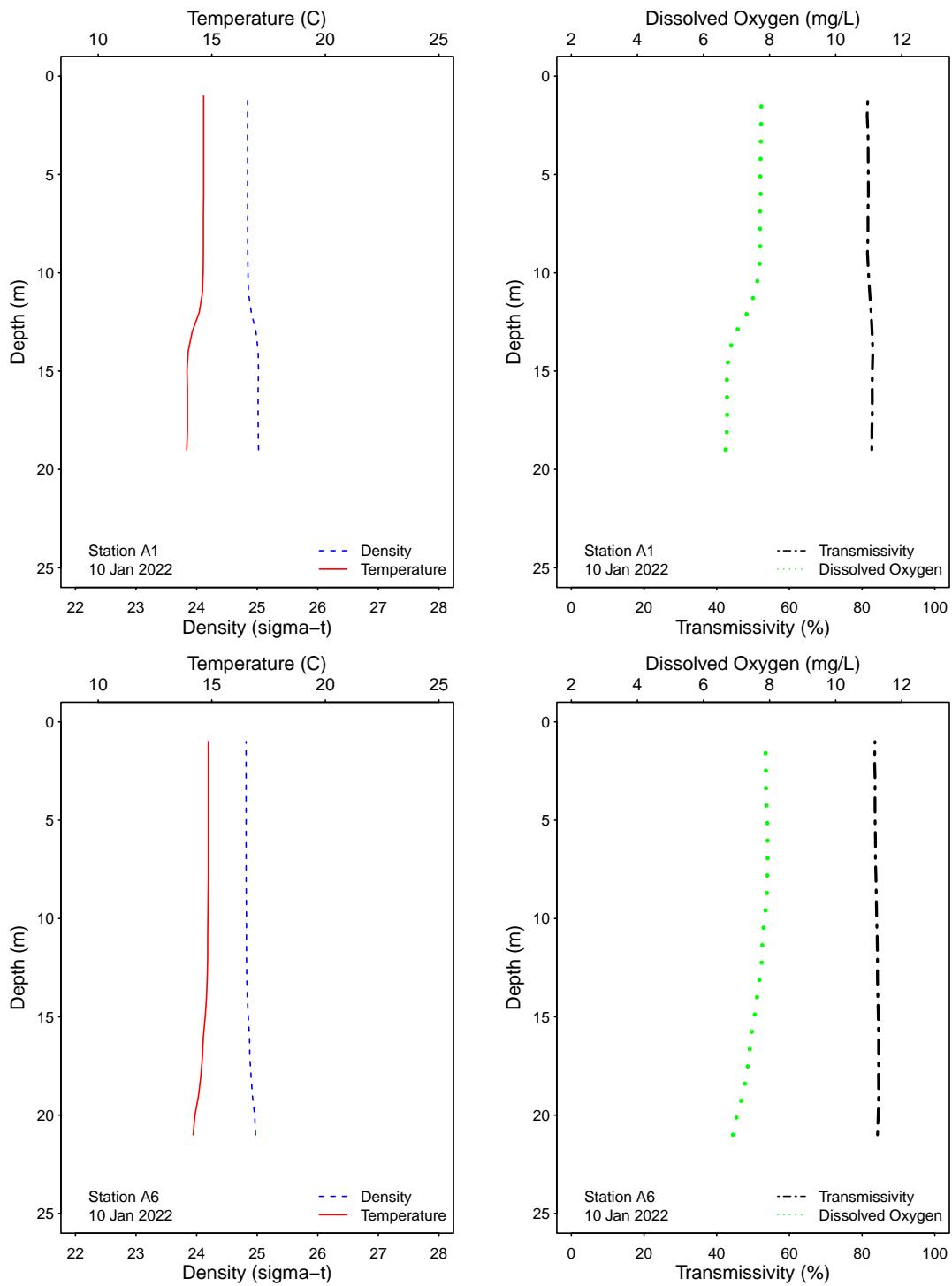


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

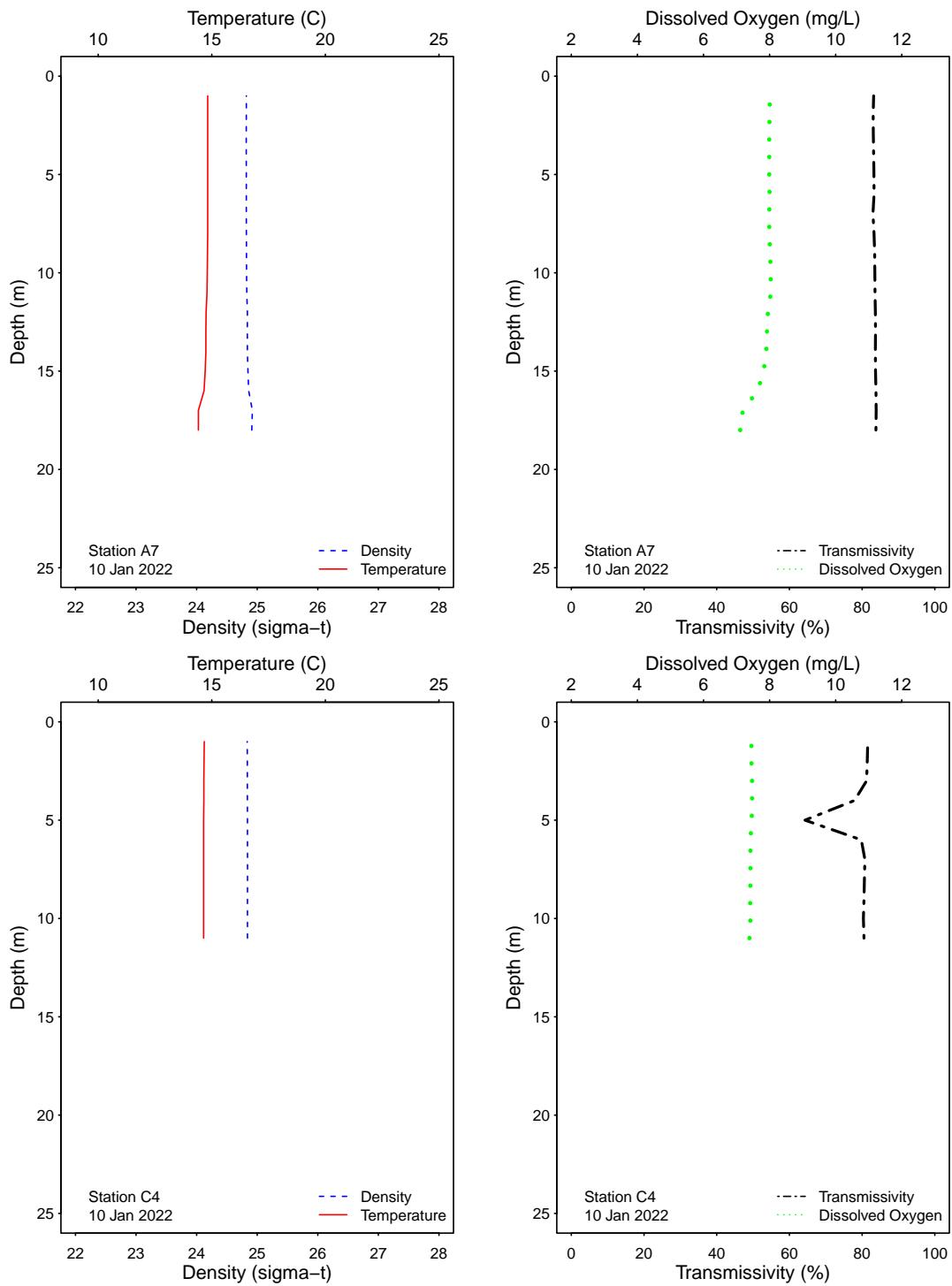


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

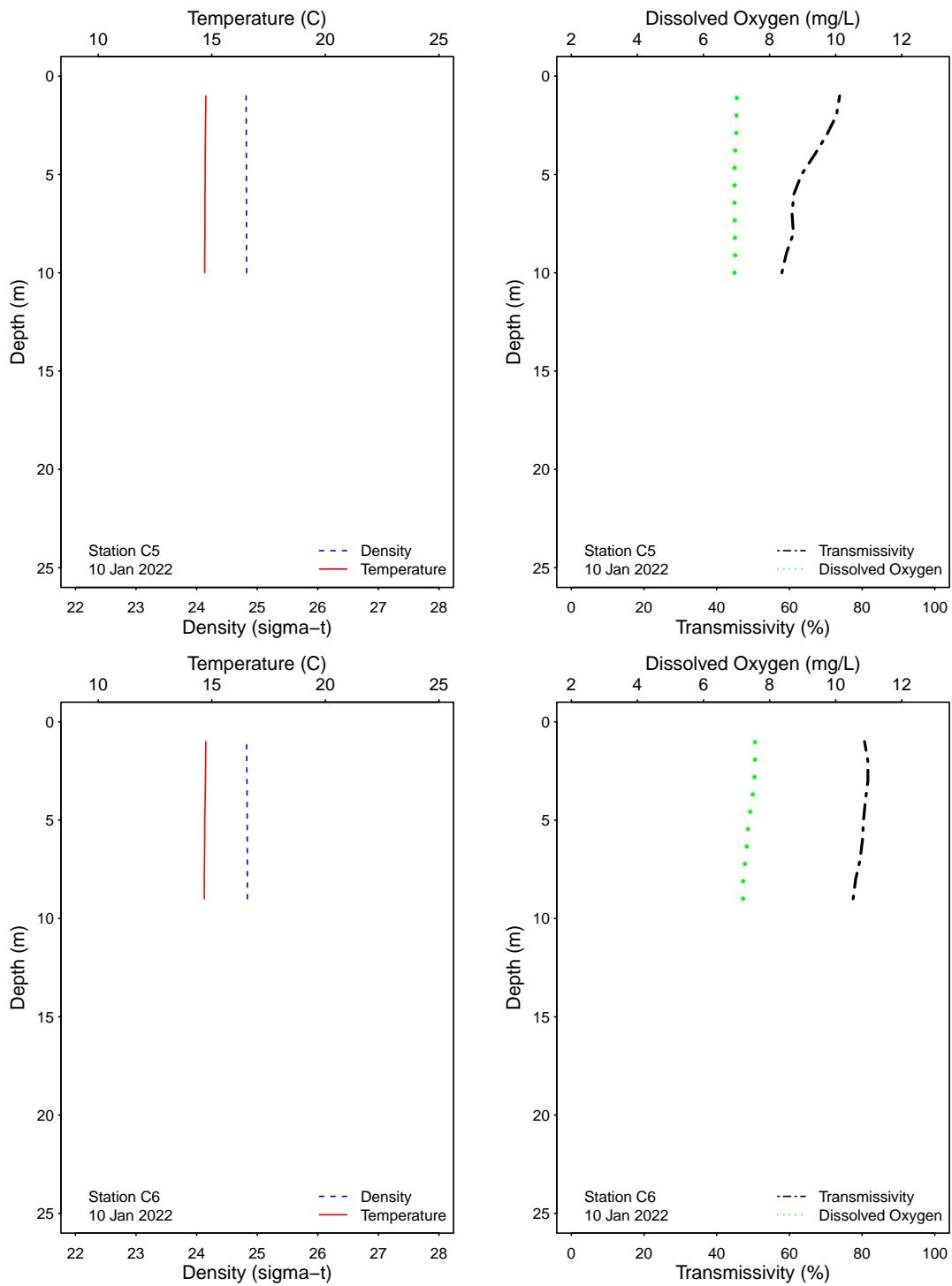


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

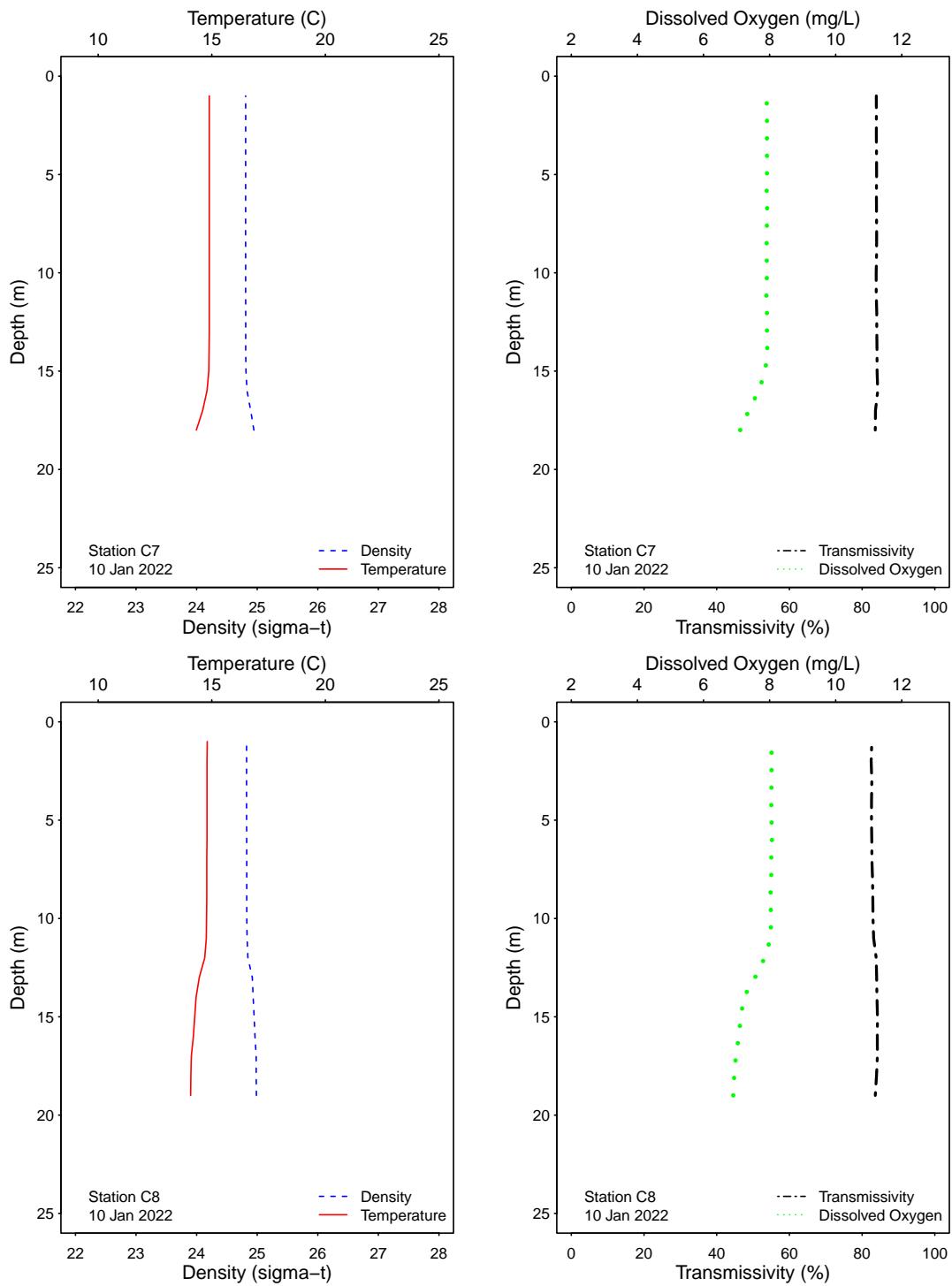


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

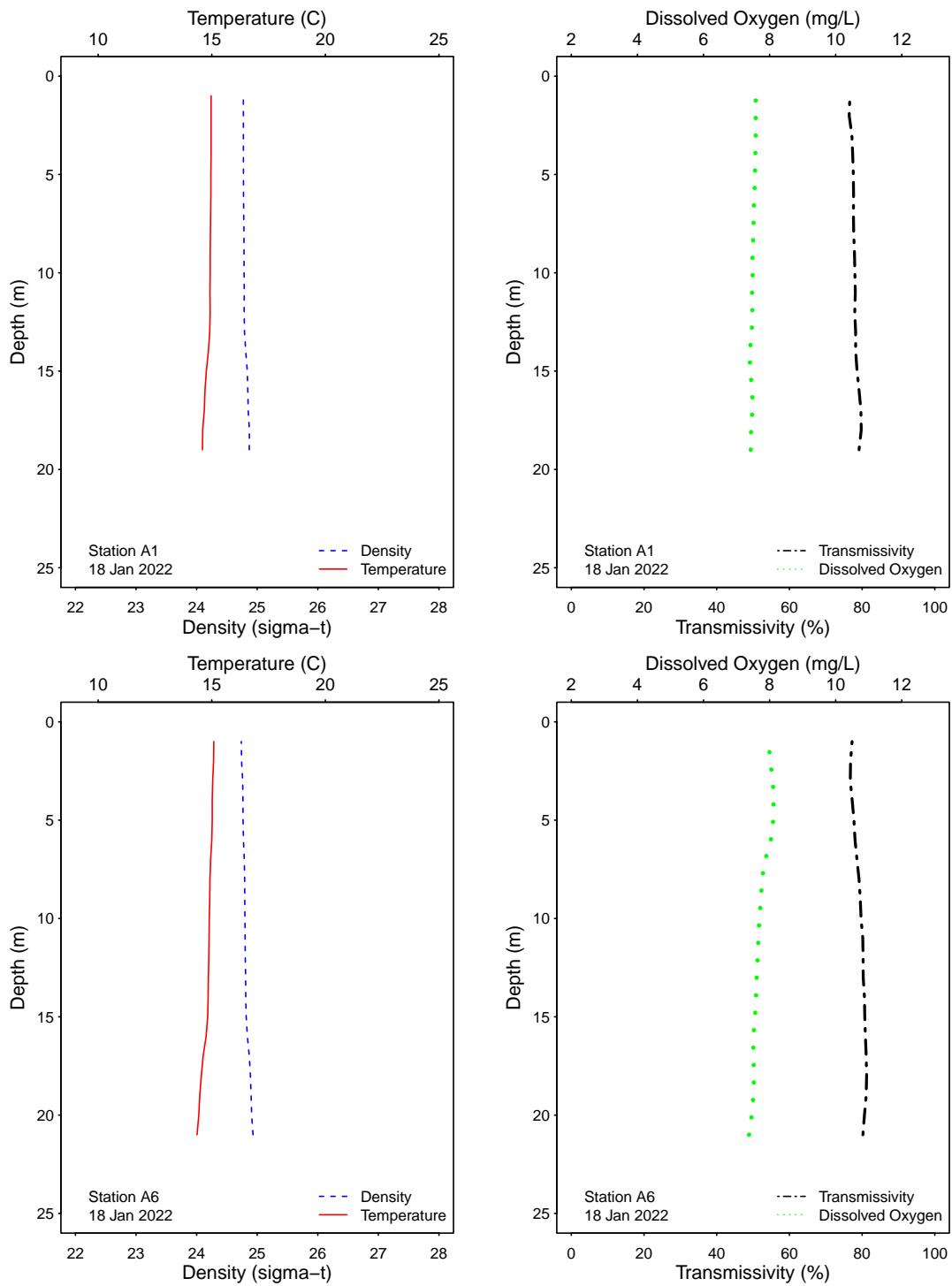


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

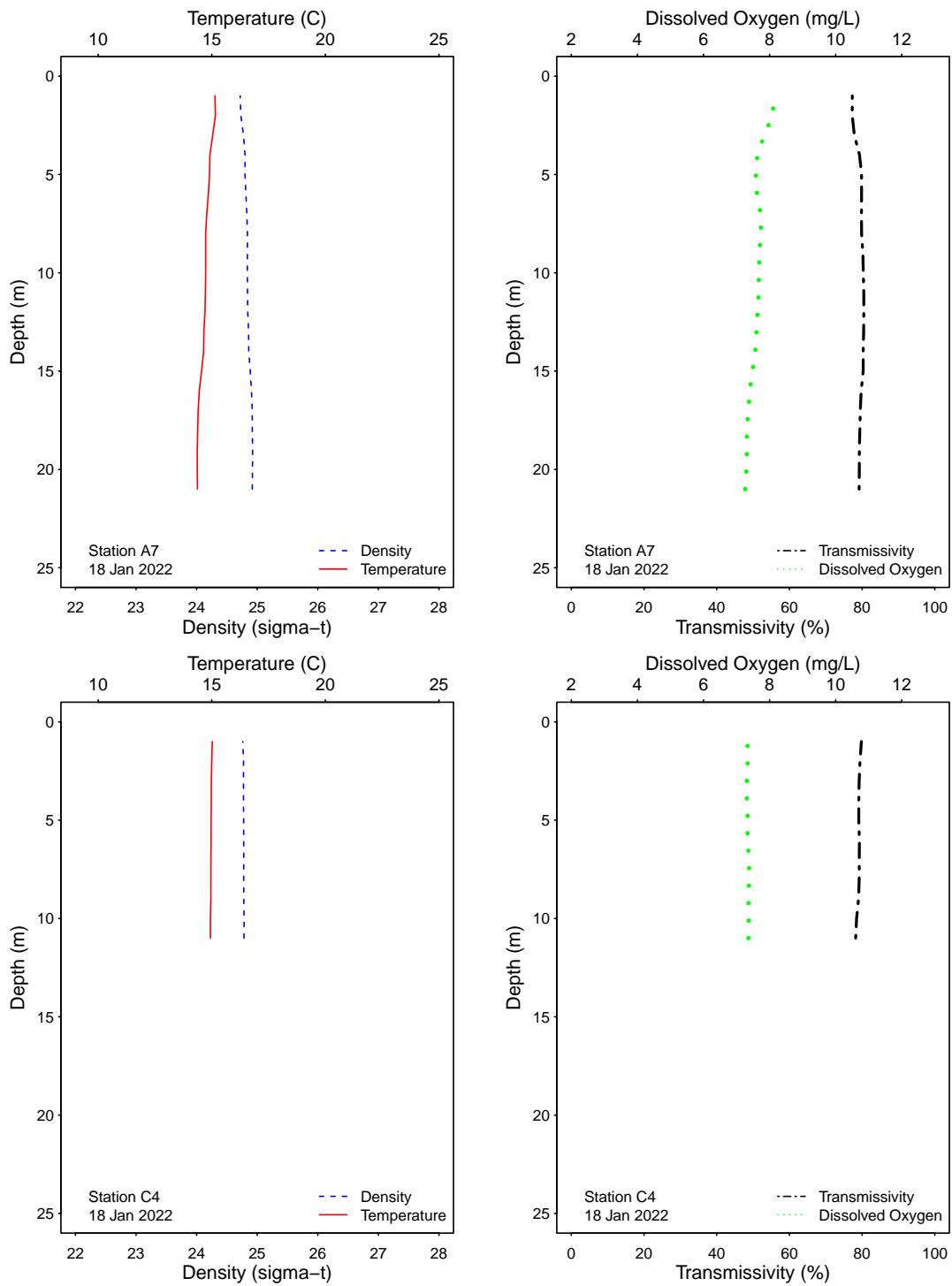


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

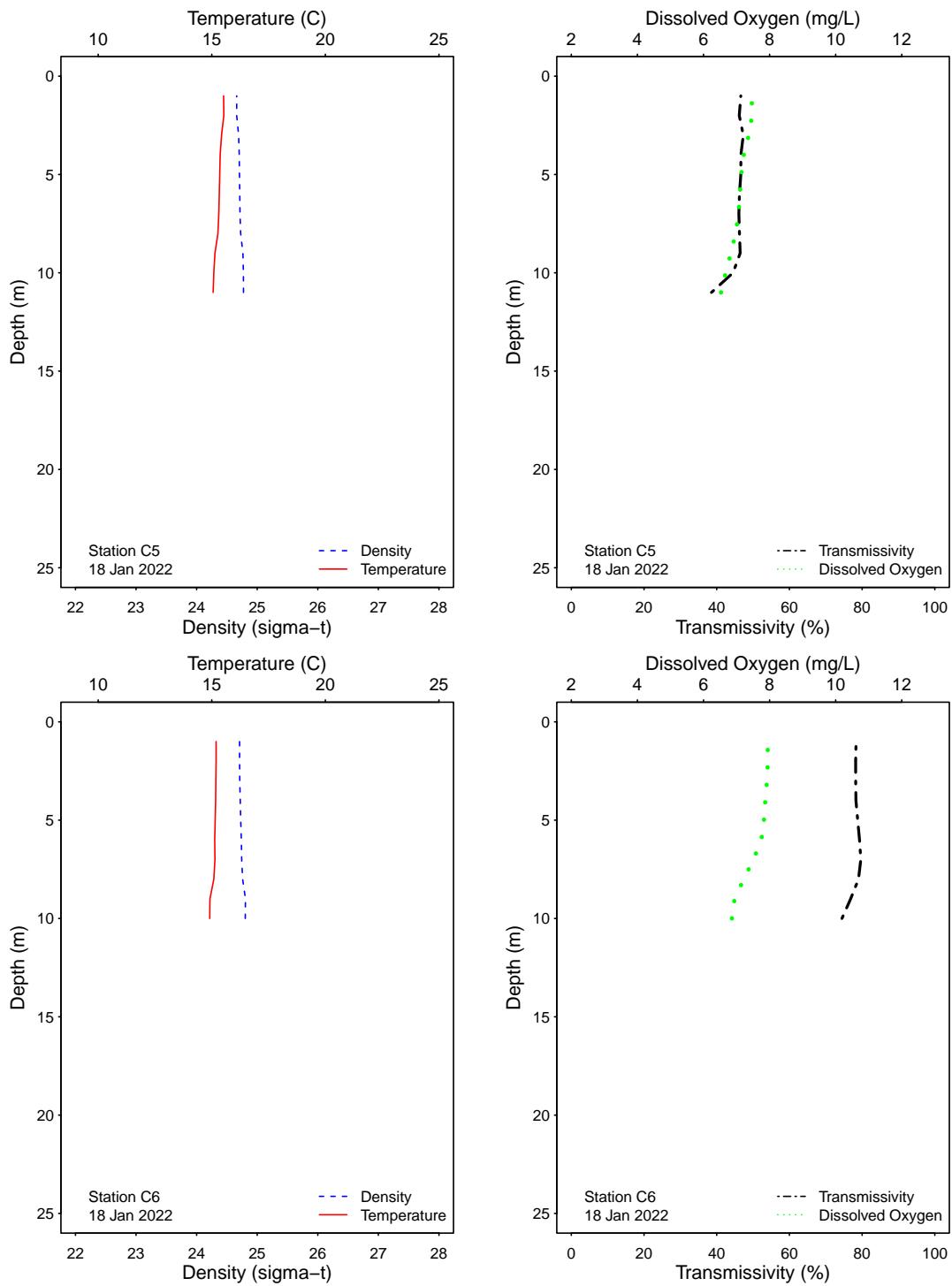


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

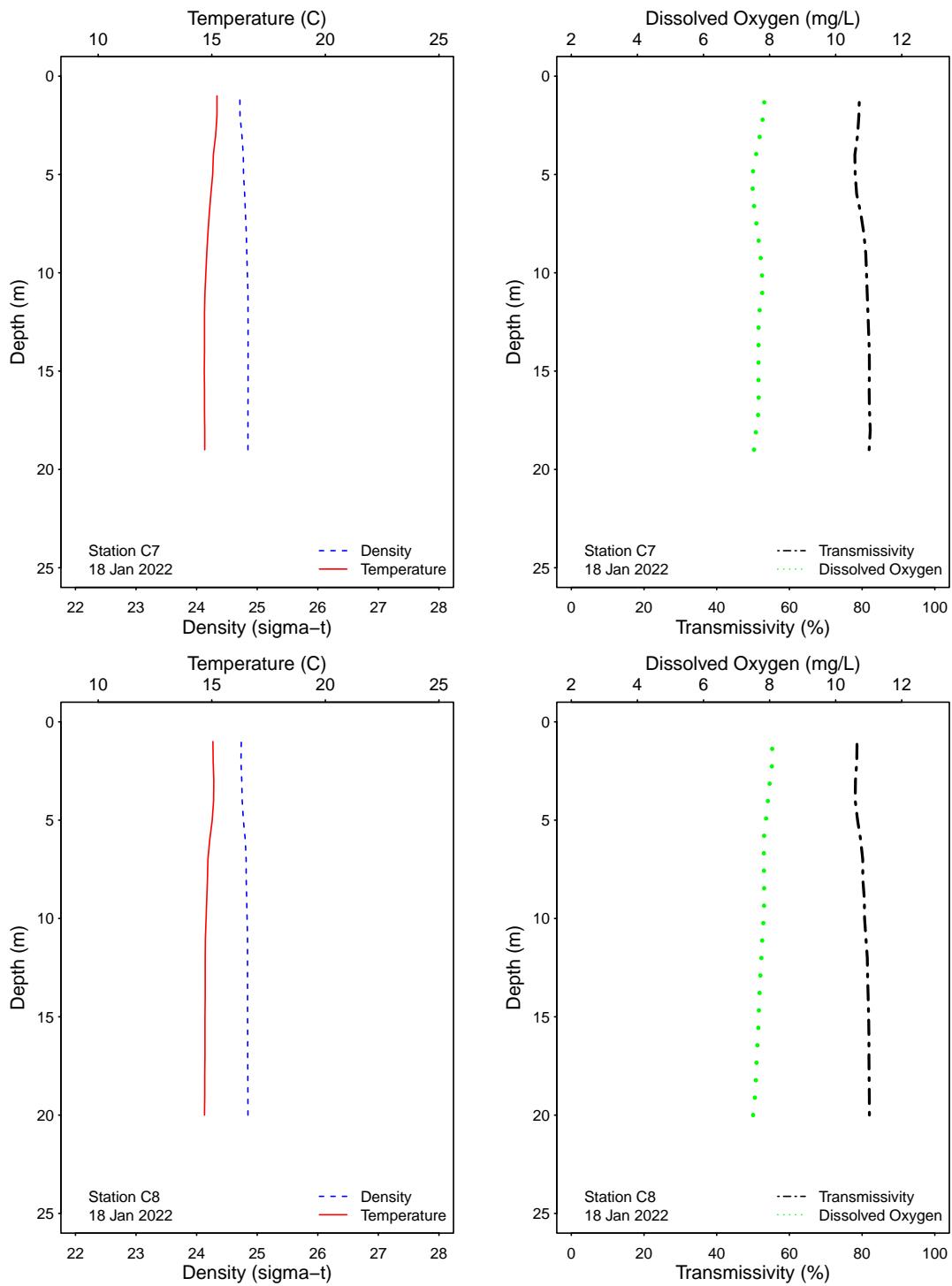


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

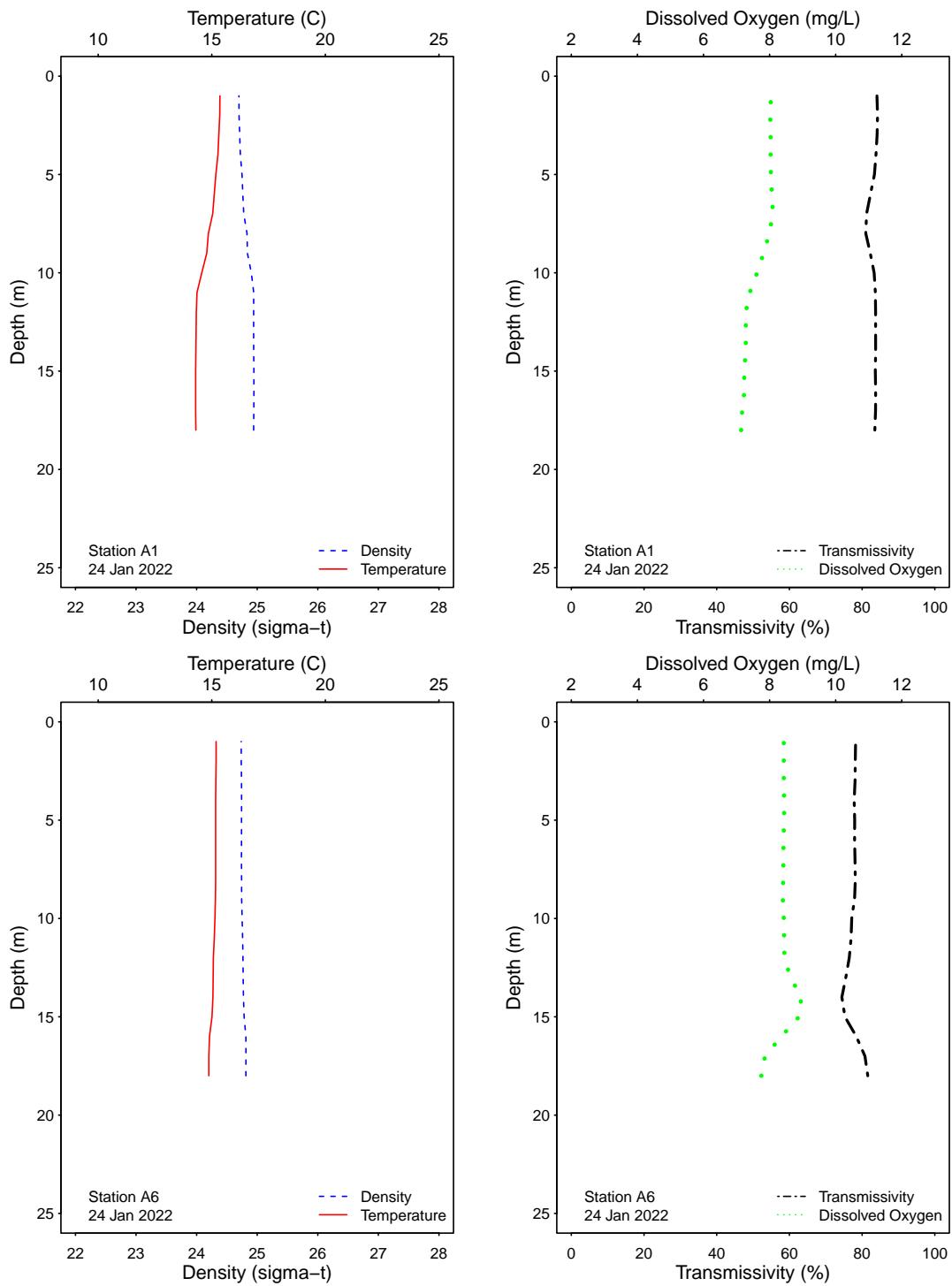


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

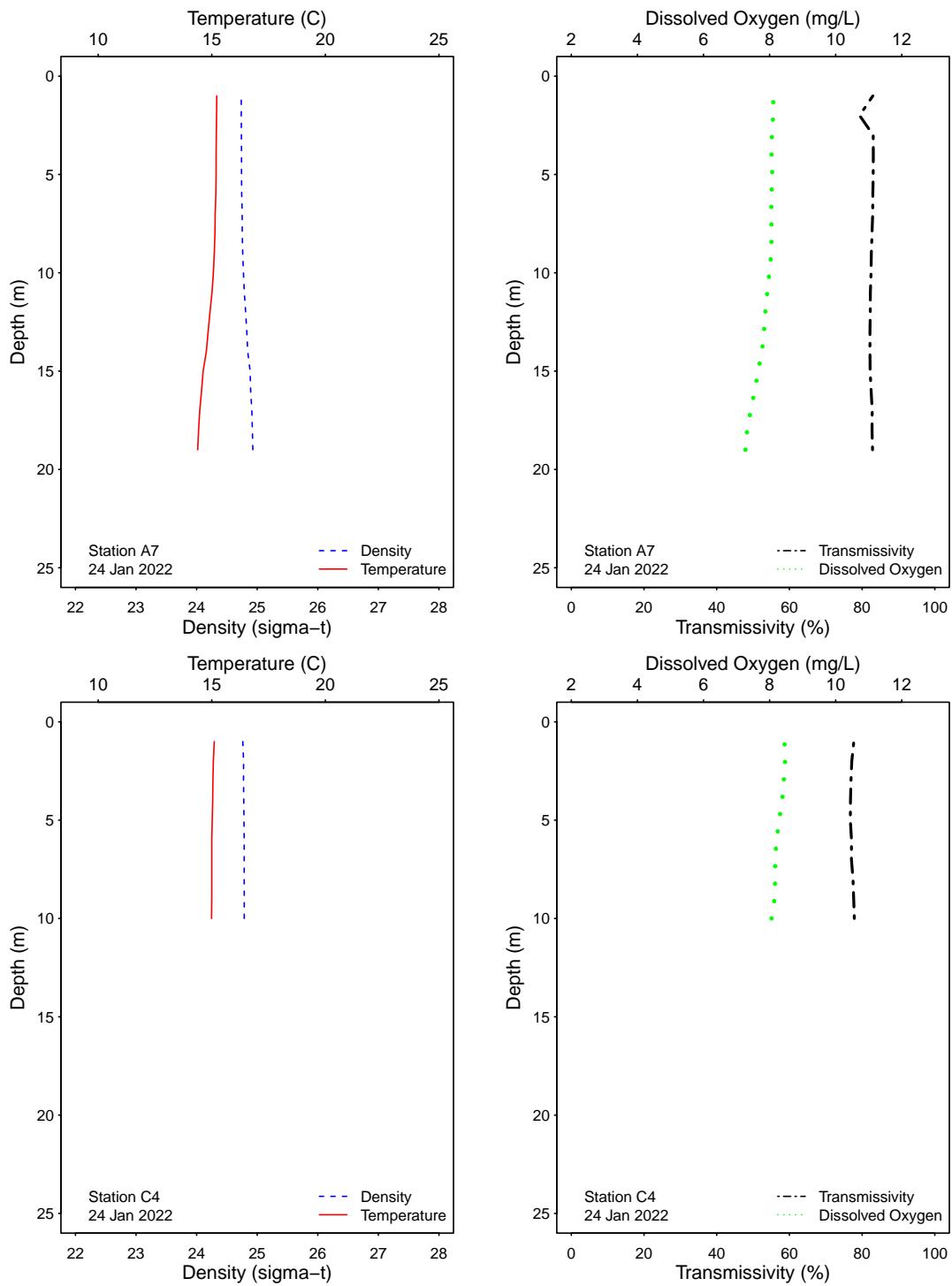


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

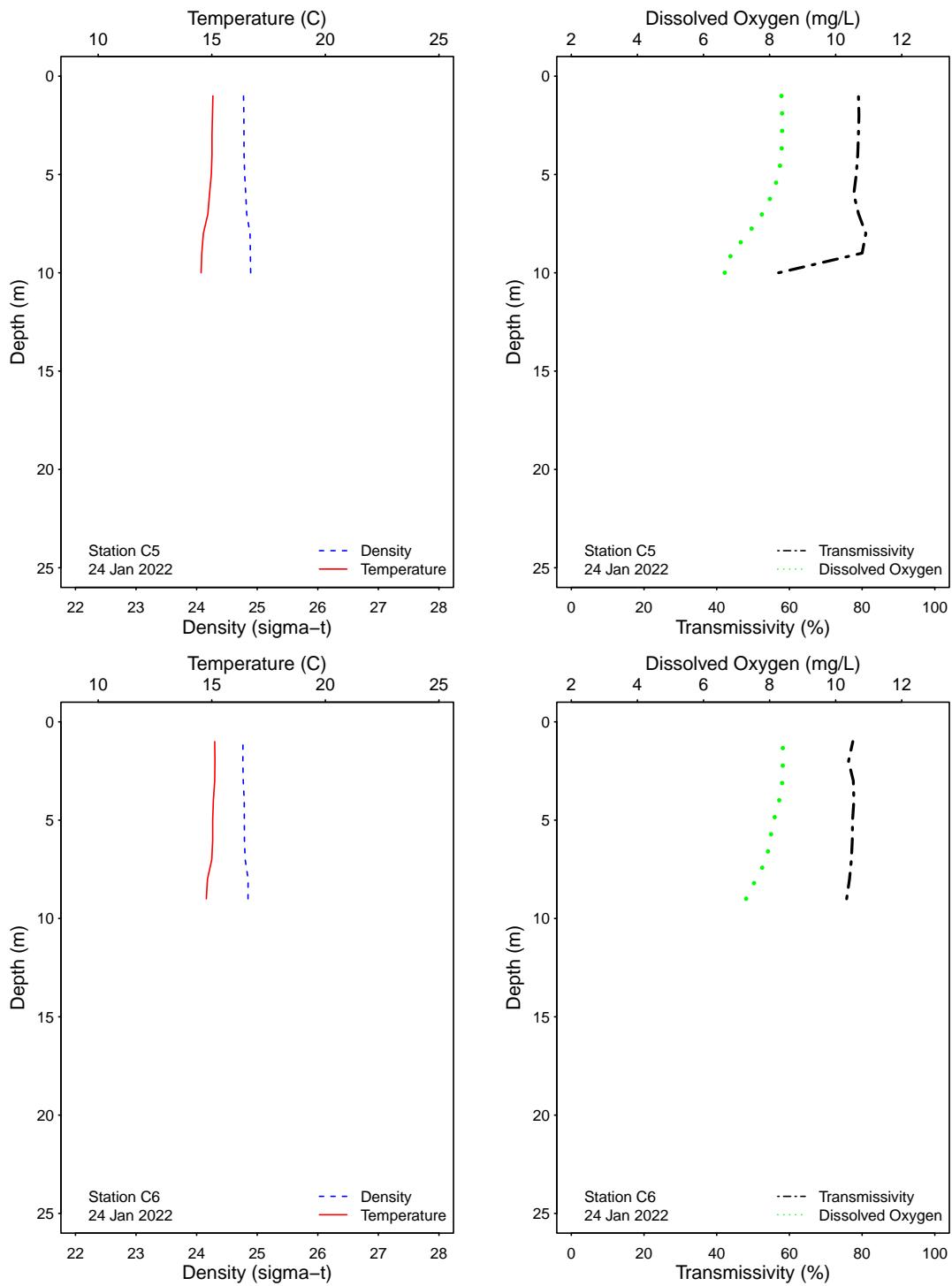


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

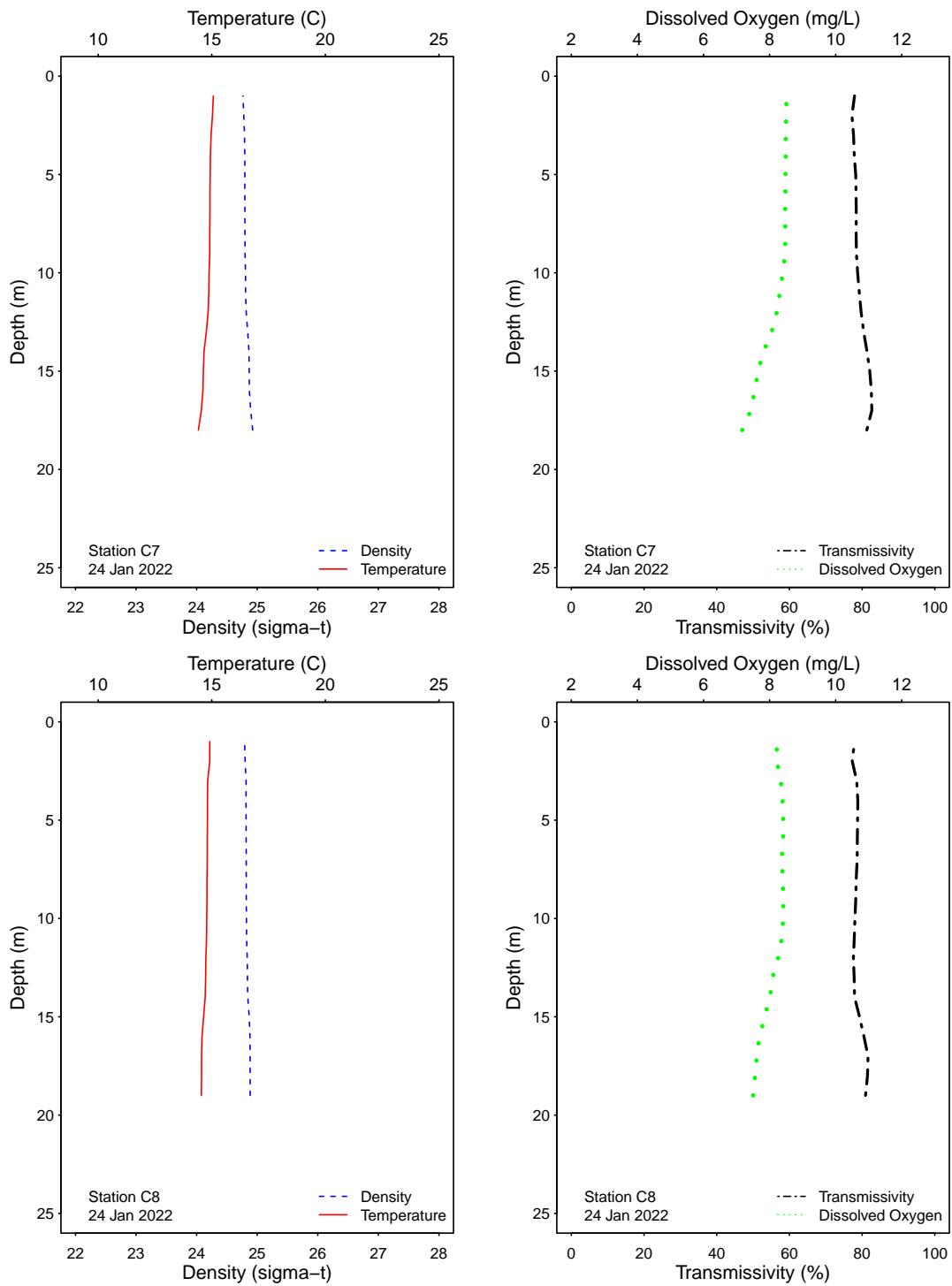


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

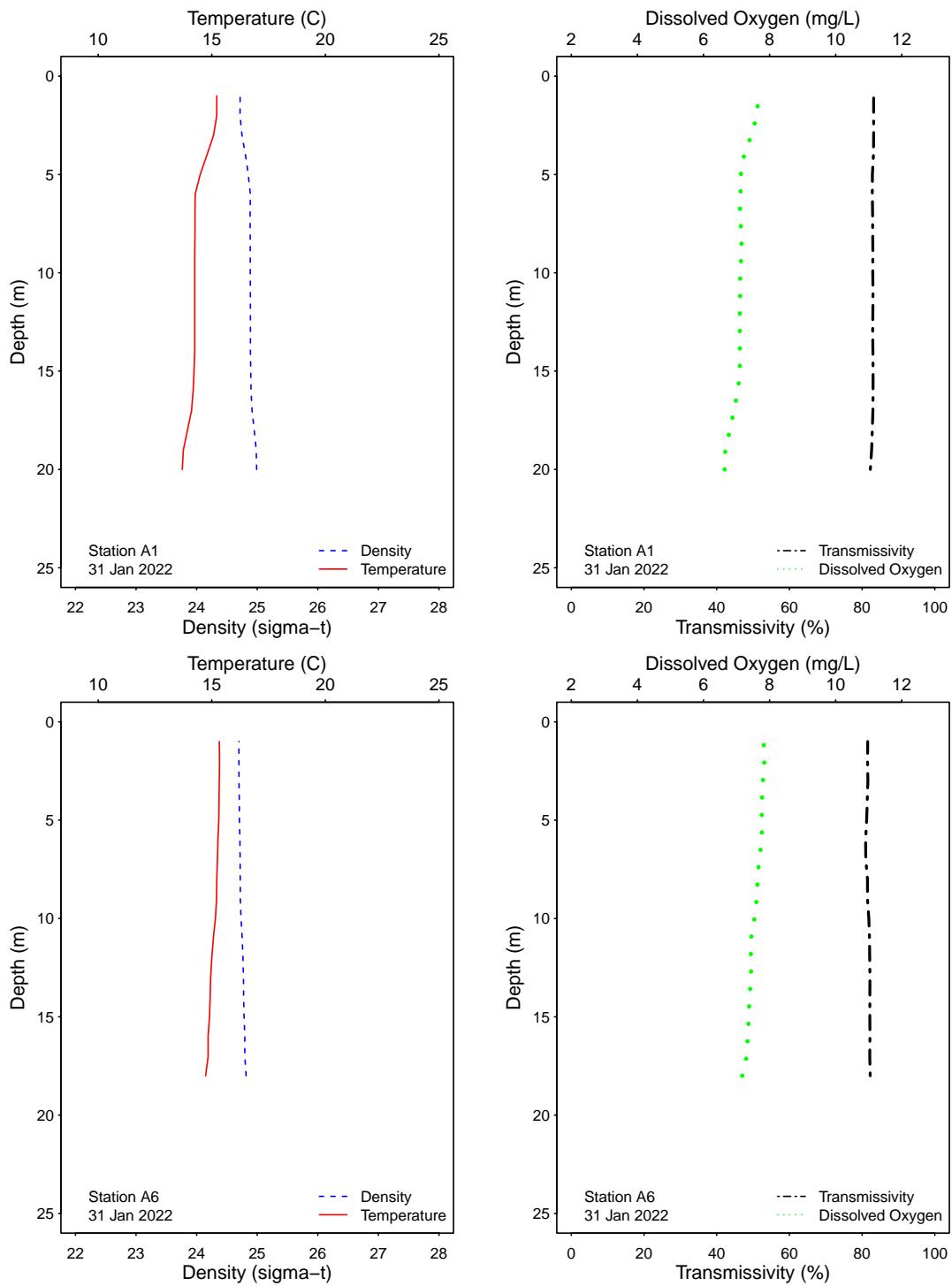


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

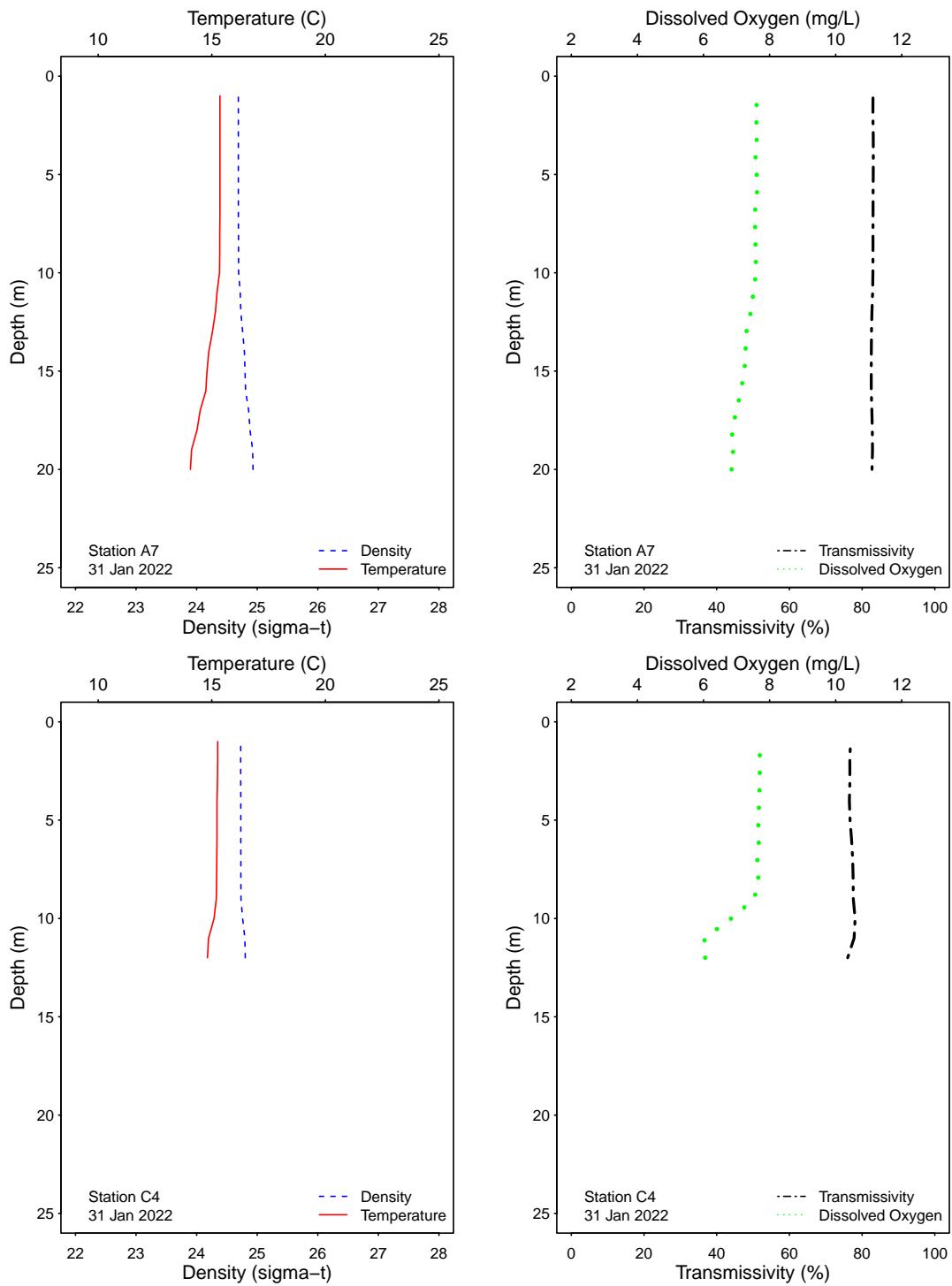


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

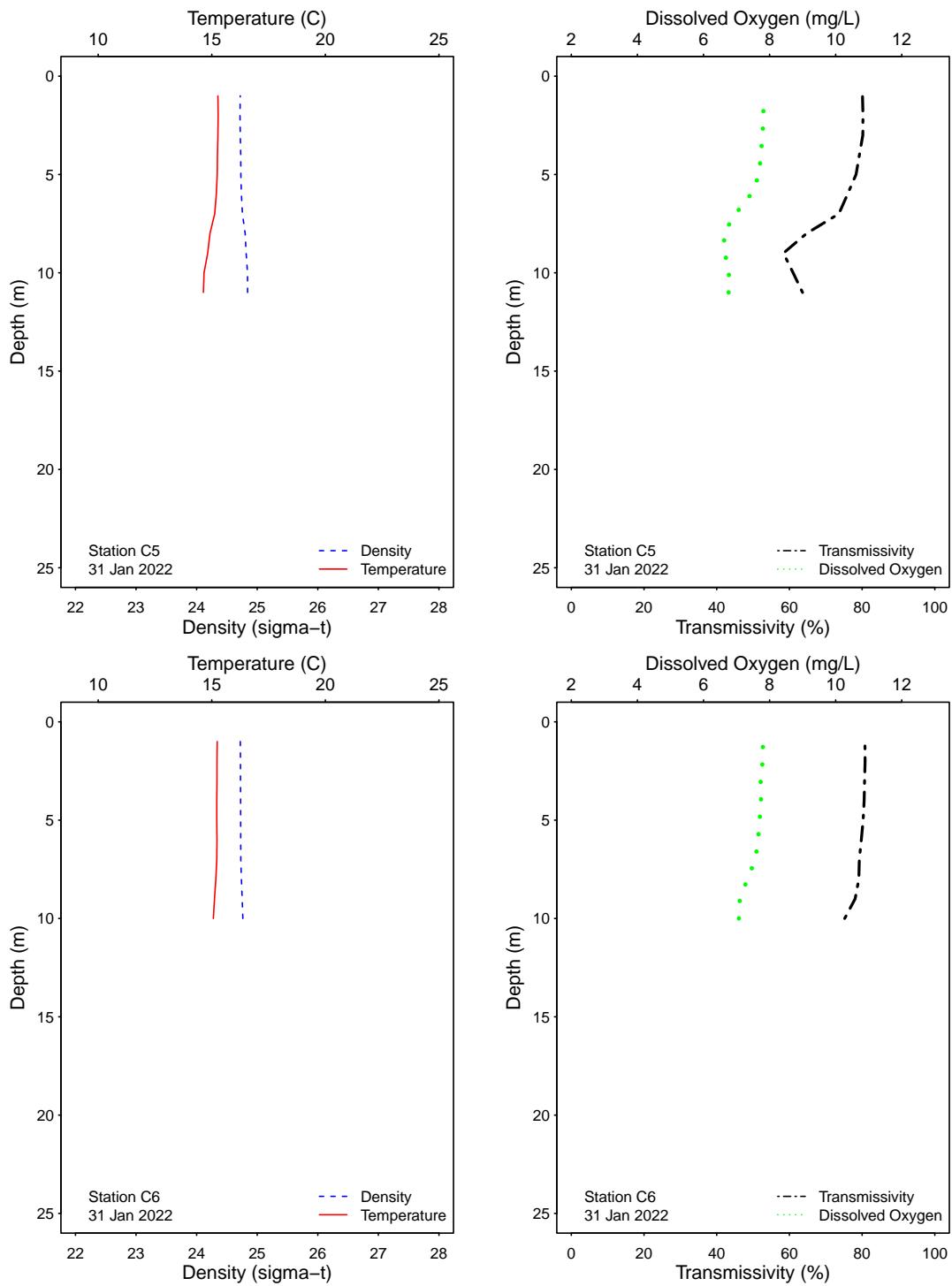


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

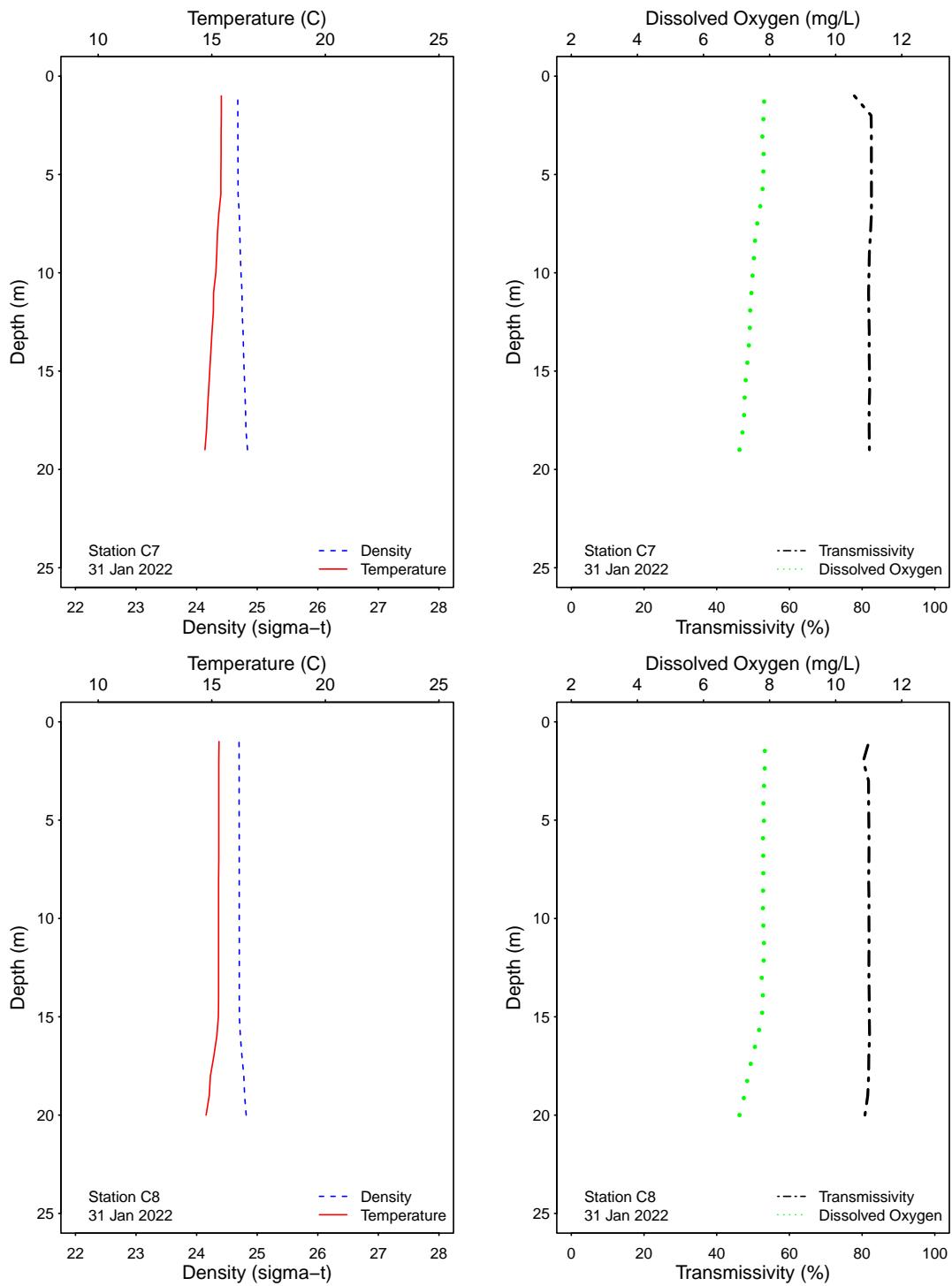


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

## APPENDIX A

### Quality Assurance



**Table A.1**

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

<b>Station</b>	<b>Date</b>	<b>Depth</b>	<b>Analyst</b>	<b>Procedure</b>	<b>Total</b>	<b>Fecal</b>	<b>Enter</b>
A7	04 Jan 2022	18	KA	LAB DUPLICATE	48	8e	2e
A7	10 Jan 2022	18	BS	LAB DUPLICATE	<2	<2	<2
A7	18 Jan 2022	18	BS	LAB DUPLICATE	240e	44	2e
A7	24 Jan 2022	18	CRE	LAB DUPLICATE	32e	6e	2e
A7	31 Jan 2022	18	JF	LAB DUPLICATE	2e	<2	<2
C7	04 Jan 2022	18	KA	LAB DUPLICATE	4e	<2	2e
C7	10 Jan 2022	18	BS	LAB DUPLICATE	<2	<2	<2
C7	18 Jan 2022	18	BS	LAB DUPLICATE	<2	<2	<2
C7	24 Jan 2022	18	CRE	LAB DUPLICATE	2e	<2	<2
C7	31 Jan 2022	18	JF	LAB DUPLICATE	12e	4e	<2
C8	04 Jan 2022	12	KA	LAB DUPLICATE	2e	<2	<2
C8	10 Jan 2022	12	BS	LAB DUPLICATE	<2	<2	<2
C8	18 Jan 2022	12	BS	LAB DUPLICATE	<2	<2	2e
C8	24 Jan 2022	12	CRE	LAB DUPLICATE	6e	<2	<2
C8	31 Jan 2022	12	JF	LAB DUPLICATE	<2	<2	<2
D12	05 Jan 2022		JF	FIELD DUPLICATE	<20	4e	2e
D12	05 Jan 2022		JF	LAB DUPLICATE	<20	<20	8e
D12	12 Jan 2022		HF	FIELD DUPLICATE	2e	<2	2e
D12	12 Jan 2022		HF	LAB DUPLICATE	12e	2e	6e
D12	19 Jan 2022		JF	FIELD DUPLICATE	2e	4e	2e
D12	19 Jan 2022		JF	LAB DUPLICATE	4e	10e	6e
D12	26 Jan 2022		CRE	FIELD DUPLICATE	<20	2e	<2
D12	26 Jan 2022		CRE	LAB DUPLICATE	<2	<2	<2

ns = not sampled

ND = no data



## **APPENDIX B**

### **New 2019 Ocean Plan Water Quality Objectives**



# Shore Stations



**Table B.1**

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

Date	D4	D5	D7	D8-B	D9	D10	D11	D12
01 Jan 2022	2	2	4	12	7	14	12	5
02 Jan 2022	2	2	4	12	7	14	12	5
03 Jan 2022	2	2	5	16	9	15	16	6
04 Jan 2022	2	2	5	16	9	15	16	6
05 Jan 2022	2	2	4	14	7	17	17	5
06 Jan 2022	2	2	4	14	7	17	17	5
07 Jan 2022	2	2	4	14	7	17	17	5
08 Jan 2022	2	2	4	14	7	17	17	5
09 Jan 2022	2	2	4	14	7	17	17	5
10 Jan 2022	2	2	4	14	7	17	17	5
11 Jan 2022	2	2	4	14	7	17	17	5
12 Jan 2022	2	2	5	13	14	27	18	4
13 Jan 2022	2	2	5	13	14	27	18	4
14 Jan 2022	2	2	5	13	14	27	18	4
15 Jan 2022	2	2	5	13	14	27	18	4
16 Jan 2022	2	2	5	13	14	27	18	4
17 Jan 2022	2	2	5	13	14	27	18	4
18 Jan 2022	2	2	5	13	14	27	18	4
19 Jan 2022	2	2	5	13	14	33	22	4
20 Jan 2022	2	2	5	13	14	33	22	4
21 Jan 2022	2	2	5	13	14	33	22	4
22 Jan 2022	2	2	5	13	14	33	22	4
23 Jan 2022	2	2	5	13	14	33	22	4
24 Jan 2022	2	2	5	13	14	33	22	4
25 Jan 2022	2	2	5	13	14	33	22	4
26 Jan 2022	2	2	3	8	8	20	12	3
27 Jan 2022	2	2	3	8	8	20	12	3
28 Jan 2022	2	2	3	7	8	17	10	3
29 Jan 2022	2	2	3	7	8	17	10	3
30 Jan 2022	2	2	3	7	8	17	10	3
31 Jan 2022	2	2	3	7	8	17	10	3

\* 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
January	IC	IC	IC	IC	IC	IC	IC	IC

IC = In Compliance

E = Exceedance

ns = not sampled

ND = no data

# Kelp Stations



**Table B.3**

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 Jan 2022	3	2	3	2	2	2	2	2
02 Jan 2022	3	2	3	2	2	2	2	2
03 Jan 2022	3	2	3	2	2	2	2	2
04 Jan 2022	3	2	3	2	2	2	2	2
05 Jan 2022	3	2	3	2	2	2	2	2
06 Jan 2022	3	2	3	2	2	2	2	2
07 Jan 2022	3	2	3	2	2	2	2	2
08 Jan 2022	3	2	3	2	2	2	2	2
09 Jan 2022	3	2	3	2	2	2	2	2
10 Jan 2022	3	2	3	2	2	2	2	2
11 Jan 2022	3	2	3	2	2	2	2	2
12 Jan 2022	3	2	3	2	2	2	2	2
13 Jan 2022	3	2	3	2	2	2	2	2
14 Jan 2022	3	2	3	2	2	2	2	2
15 Jan 2022	3	2	3	2	2	2	2	2
16 Jan 2022	3	2	3	2	2	2	2	2
17 Jan 2022	3	2	3	2	2	2	2	2
18 Jan 2022	3	2	3	2	2	2	2	2
19 Jan 2022	3	2	3	2	2	2	2	2
20 Jan 2022	3	2	3	2	2	2	2	2
21 Jan 2022	3	2	3	2	2	2	2	2
22 Jan 2022	3	2	3	2	2	2	2	2
23 Jan 2022	3	2	3	2	2	2	2	2
24 Jan 2022	3	2	3	2	2	2	2	2
25 Jan 2022	3	2	3	2	2	2	2	2
26 Jan 2022	3	2	3	2	2	2	2	2
27 Jan 2022	3	2	3	2	2	2	2	2
28 Jan 2022	3	2	2	2	2	2	2	2
29 Jan 2022	3	2	2	2	2	2	2	2
30 Jan 2022	3	2	2	2	2	2	2	2
31 Jan 2022	2	2	2	2	2	2	2	2

\* Geometric mean calculated using n<5

**Table B.4**

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
January	IC							

IC = In Compliance

E = Exceedance

ns = not sampled

ND = no data