



POINT LOMA OCEAN OUTFALL MONTHLY RECEIVING WATERS MONITORING REPORT

POINT LOMA WASTEWATER TREATMENT PLANT

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

DECEMBER 2021

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



The City of
SAN DIEGO
Public Utilities Department

Environmental Monitoring & Technical Services Division

January 31, 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 December 2021 Monthly Receiving Waters Monitoring Report for the Point Loma Ocean Outfall, Point Loma Wastewater Treatment Plant as required per Order No. R9-2017-0007, NPDES Permit No. CA0107409.

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

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Sincerely,



Peter S. Vroom, Ph.D.
Deputy 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 ≥ 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)¹. This document defines membrane filtration limits of 20–80 colonies per plate for total coliforms and 20–60 colonies per plate for fecal coliforms and *Enterococcus*. No Data (ND) is reported if plate counts from all dilutions have a total colony count of >200 per plate.

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

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

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

Single Sample Maximums:

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

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

Quality controls of bacteriological data include laboratory and field duplicate analyses. Laboratory duplicates are performed on approximately 10% of the water quality samples, while field duplicates are performed six times a month (see Appendix A). Laboratory duplicates represent two aliquots of the original sample that are split in the laboratory and analyzed by the same analyst using identical procedures within the same analytical run. The results of these analyses provide a measure of intra-analyst precision. In contrast, field duplicates represent two separate samples collected at the same time from the same site, which are handled under identical circumstances and treated the same throughout field and lab procedures. The results of these analyses provide a measure of precision associated with sample collection, preservation, storage, and lab procedures. The sign test (see Gilbert, 1987²) is used to statistically compare both the results from the laboratory duplicates, as well as the results from the field duplicates. These data will be further analyzed in the City's 2021 Quality Assurance Report, which will be completed in March 2022.

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 December 1, 8, 15, 22, and 29.
- During December, three of the eight shore stations were out of compliance with the various 2015 California Ocean Plan (Ocean Plan) water contact standards on one or more days as follows:
 - o The single sample maximum (SSM) for *Enterococcus* was exceeded at stations D8-B, D10, and D11.
- Nothing of sewage origin was observed at any of the shore stations.
- 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 December 8, 17, 21, and 27.

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

- During December, each of the kelp stations was in compliance with the various 2015 California Ocean Plan (Ocean Plan) water contact standards.
- Water column temperatures ranged from 12.73 to 16.84°C. The difference between surface and bottom waters ranged from 0.03 to 2.56°C.
- Chlorophyll *a* concentrations ranged from 0.37 to 2.71 µg/L.
- Nothing of sewage origin was observed at any of the kelp stations.

Offshore Stations

- Quarterly water quality sampling was not conducted during December 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 Dec 2021	13	8	9	401	22	31	19	8
02 Dec 2021	13	8	9	401	22	31	19	8
03 Dec 2021	6	6	8	477	23	19	19	3
04 Dec 2021	6	6	8	477	23	19	19	3
05 Dec 2021	6	6	8	477	23	19	19	3
06 Dec 2021	6	6	8	477	23	19	19	3
07 Dec 2021	6	6	8	477	23	19	19	3
08 Dec 2021	6	4	14	171	18	23	19	3
09 Dec 2021	6	4	14	171	18	23	19	3
10 Dec 2021	6	4	14	171	18	23	19	3
11 Dec 2021	6	4	14	171	18	23	19	3
12 Dec 2021	6	4	14	171	18	23	19	3
13 Dec 2021	6	4	14	171	18	23	19	3
14 Dec 2021	6	4	14	171	18	23	19	3
15 Dec 2021	8	6	24	207	37	58	54	6
16 Dec 2021	8	6	24	207	37	58	54	6
17 Dec 2021	6	8	21	159	43	90	64	6
18 Dec 2021	6	8	21	159	43	90	64	6
19 Dec 2021	6	8	21	159	43	90	64	6
20 Dec 2021	6	8	21	159	43	90	64	6
21 Dec 2021	6	8	21	159	43	90	64	6
22 Dec 2021	10	8	11	121	44	79	72	9
23 Dec 2021	10	8	11	121	44	79	72	9
24 Dec 2021	10	8	11	121	44	79	72	9
25 Dec 2021	10	8	11	121	44	79	72	9
26 Dec 2021	10	8	11	121	44	79	72	9
27 Dec 2021	10	8	11	121	44	79	72	9
28 Dec 2021	10	8	11	121	44	79	72	9
29 Dec 2021	7	10	13	133	38	75	64	17
30 Dec 2021	7	10	13	133	38	75	64	17
31 Dec 2021	10	8	20	137	44	104	88	30

* 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 Dec 2021	3	2	4	8	3	8	5	3
02 Dec 2021	3	2	4	8	3	8	5	3
03 Dec 2021	2	3	4	6	3	7	6	3
04 Dec 2021	2	3	4	6	3	7	6	3
05 Dec 2021	2	3	4	6	3	7	6	3
06 Dec 2021	2	3	4	6	3	7	6	3
07 Dec 2021	2	3	4	6	3	7	6	3
08 Dec 2021	2	3	4	4	4	5	8	2
09 Dec 2021	2	3	4	4	4	5	8	2
10 Dec 2021	2	3	4	4	4	5	8	2
11 Dec 2021	2	3	4	4	4	5	8	2
12 Dec 2021	2	3	4	4	4	5	8	2
13 Dec 2021	2	3	4	4	4	5	8	2
14 Dec 2021	2	3	4	4	4	5	8	2
15 Dec 2021	2	4	5	5	6	9	14	3
16 Dec 2021	2	4	5	5	6	9	14	3
17 Dec 2021	2	4	6	7	7	9	15	4
18 Dec 2021	2	4	6	7	7	9	15	4
19 Dec 2021	2	4	6	7	7	9	15	4
20 Dec 2021	2	4	6	7	7	9	15	4
21 Dec 2021	2	4	6	7	7	9	15	4
22 Dec 2021	3	3	3	10	5	11	19	4
23 Dec 2021	3	3	3	10	5	11	19	4
24 Dec 2021	3	3	3	10	5	11	19	4
25 Dec 2021	3	3	3	10	5	11	19	4
26 Dec 2021	3	3	3	10	5	11	19	4
27 Dec 2021	3	3	3	10	5	11	19	4
28 Dec 2021	3	3	3	10	5	11	19	4
29 Dec 2021	3	3	3	7	4	9	19	4
30 Dec 2021	3	3	3	7	4	9	19	4
31 Dec 2021	3	3	4	5	5	13	23	4

* 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 Dec 2021	3	2	2	16	2	5	7	5
02 Dec 2021	3	2	2	16	2	5	7	5
03 Dec 2021	2	2	2	12	2	6	9	4
04 Dec 2021	2	2	2	12	2	6	9	4
05 Dec 2021	2	2	2	12	2	6	9	4
06 Dec 2021	2	2	2	12	2	6	9	4
07 Dec 2021	2	2	2	12	2	6	9	4
08 Dec 2021	2	2	2	6	2	5	5	3
09 Dec 2021	2	2	2	6	2	5	5	3
10 Dec 2021	2	2	2	6	2	5	5	3
11 Dec 2021	2	2	2	6	2	5	5	3
12 Dec 2021	2	2	2	6	2	5	5	3
13 Dec 2021	2	2	2	6	2	5	5	3
14 Dec 2021	2	2	2	6	2	5	5	3
15 Dec 2021	2	2	4	12	4	11	14	4
16 Dec 2021	2	2	4	12	4	11	14	4
17 Dec 2021	2	3	4	13	5	19	19	4
18 Dec 2021	2	3	4	13	5	19	19	4
19 Dec 2021	2	3	4	13	5	19	19	4
20 Dec 2021	2	3	4	13	5	19	19	4
21 Dec 2021	2	3	4	13	5	19	19	4
22 Dec 2021	2	3	4	17	11	23	24	6
23 Dec 2021	2	3	4	17	11	23	24	6
24 Dec 2021	2	3	4	17	11	23	24	6
25 Dec 2021	2	3	4	17	11	23	24	6
26 Dec 2021	2	3	4	17	11	23	24	6
27 Dec 2021	2	3	4	17	11	23	24	6
28 Dec 2021	2	3	4	17	11	23	24	6
29 Dec 2021	2	2	5	16	9	15	16	6
30 Dec 2021	2	2	5	16	9	15	16	6
31 Dec 2021	2	3	6	14	13	20	14	6

* 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
01 Dec 2021	IC	IC	IC	IC	IC	IC	IC	IC
08 Dec 2021	IC	IC	IC	IC	IC	IC	IC	IC
15 Dec 2021	IC	IC	IC	IC	IC	IC	IC	IC
22 Dec 2021	IC	IC	IC	IC	IC	IC	IC	IC
29 Dec 2021	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
01 Dec 2021	IC	IC	IC	IC	IC	IC	IC	IC
08 Dec 2021	IC	IC	IC	IC	IC	IC	IC	IC
15 Dec 2021	IC	IC	IC	IC	IC	IC	IC	IC
22 Dec 2021	IC	IC	IC	IC	IC	IC	IC	IC
29 Dec 2021	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
01 Dec 2021	IC	IC	IC	IC	IC	IC	IC	IC
08 Dec 2021	IC	IC	IC	IC	IC	IC	IC	IC
15 Dec 2021	IC	IC	IC	E	IC	E	E	IC
17 Dec 2021	ns	ns	ns	IC	ns	IC	IC	ns
22 Dec 2021	IC	IC	IC	IC	IC	IC	IC	IC
29 Dec 2021	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
01 Dec 2021	IC	IC	IC	IC	IC	IC	IC	IC
08 Dec 2021	IC	IC	IC	IC	IC	IC	IC	IC
15 Dec 2021	IC	IC	IC	IC	IC	IC	IC	IC
22 Dec 2021	IC	IC	IC	IC	IC	IC	IC	IC
29 Dec 2021	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.

Station	Date	Time	Total	Fecal	Enter	F:T
D4	01 Dec 2021	900	<2	<2	2e	1.00
	08 Dec 2021	807	<20	<2	<2	0.10
	15 Dec 2021	1036	<20	<2	<2	0.10
	22 Dec 2021	817	12e	8e	<2	0.67
	29 Dec 2021	1049	<2	<2	2e	1.00
D5	01 Dec 2021	913	<20	2e	<2	0.10
	08 Dec 2021	825	<2	<2	<2	1.00
	15 Dec 2021	1024	60e	12e	6e	0.20
	22 Dec 2021	758	<2	<2	<2	1.00
	29 Dec 2021	1111	<20	<2	<2	0.10
D7	01 Dec 2021	947	<2	<2	2e	1.00
	08 Dec 2021	854	<20	<2	<2	0.10
	15 Dec 2021	954	200e	16e	40	0.08
	22 Dec 2021	846	2e	<2	<2	1.00
	29 Dec 2021	1017	20e	4e	6e	0.20
D8-B	01 Dec 2021	1011	120e	<20	34e	0.17
	08 Dec 2021	914	20e	<2	<2	0.10
	15 Dec 2021	940	440	28e	180e	0.06
	17 Dec 2021	814	ns	ns	14e	ns
	22 Dec 2021	908	<200	8e	8e	0.04
	29 Dec 2021	936	<200	2e	14e	0.01
D9	01 Dec 2021	1028	20e	2e	<2	0.10
	08 Dec 2021	930	14e	4e	<2	0.29
	15 Dec 2021	846	700	40e	60e	0.06
	22 Dec 2021	921	<20	<2	68	0.10
	29 Dec 2021	922	<20	<2	4e	0.10
D10	01 Dec 2021	1043	<20	2e	4e	0.10
	08 Dec 2021	945	40e	4e	4e	0.10
	15 Dec 2021	832	2400e	120e	340e	0.05
	17 Dec 2021	827	ns	ns	52	ns
	22 Dec 2021	952	<20	14e	22e	0.70
	29 Dec 2021	907	60e	4e	2e	0.07
D11	01 Dec 2021	1055	18e	10e	28e	0.56
	08 Dec 2021	1036	<20	14e	2e	0.70
	15 Dec 2021	815	3800e	160e	740	0.04
	17 Dec 2021	840	ns	ns	30e	ns
	22 Dec 2021	1006	<20	6e	6e	0.30
	29 Dec 2021	852	40e	<20	2e	0.50
D12	01 Dec 2021	1150	2e	4e	6e	2.00
	08 Dec 2021	1110	<2	<2	2e	1.00
	15 Dec 2021	750	160e	10e	16e	0.06
	22 Dec 2021	1049	12e	4e	8e	0.33
	29 Dec 2021	835	<200	4e	4e	0.02

ns = not sampled

ND = no data

Comments

Station	Date	Depth	Parameter	Comments
D8-B	17 Dec 2021			Resample
D10	17 Dec 2021			Resample
D11	17 Dec 2021			Resample

Table 2.9

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

Station	Date	Parameter	Value
D4	01 Dec 2021	Arrive Time	900
D4	01 Dec 2021	Weather	Foggy
D4	01 Dec 2021	Wind Speed (kts)	1.9
D4	01 Dec 2021	Wind Dir	W
D4	01 Dec 2021	Animal Life	Seagull-2
D4	01 Dec 2021	Floatables	None
D4	01 Dec 2021	Water Color	Green
D4	01 Dec 2021	Current Direction	S
D4	01 Dec 2021	Water Temp (C)	16.7
D4	01 Dec 2021	Wave Height Low (ft)	2
D4	01 Dec 2021	High Tide (ft)	5.98
D4	01 Dec 2021	High Tide Time	613
D4	01 Dec 2021	Low Tide (ft)	-0.21
D4	01 Dec 2021	Low Tide Time	1304
D4	01 Dec 2021	Comments	Water clear; Surfer/Paddle boarder-4; Boater/Kayaker-3; Trash-1; Kelp; Seagrass; Algae
D4	08 Dec 2021	Arrive Time	807
D4	08 Dec 2021	Weather	Cloudy
D4	08 Dec 2021	Wind Speed (kts)	5.4
D4	08 Dec 2021	Wind Dir	E
D4	08 Dec 2021	Animal Life	Bird-5; Pelican-4; Seal/Sea Lion-1
D4	08 Dec 2021	Floatables	None
D4	08 Dec 2021	Water Color	Blue
D4	08 Dec 2021	Current Direction	N
D4	08 Dec 2021	Water Temp (C)	16.2
D4	08 Dec 2021	Wave Height Low (ft)	2
D4	08 Dec 2021	High Tide (ft)	3.7
D4	08 Dec 2021	High Tide Time	49
D4	08 Dec 2021	Low Tide (ft)	2.6
D4	08 Dec 2021	Low Tide Time	520
D4	08 Dec 2021	Comments	none
D4	15 Dec 2021	Arrive Time	1036
D4	15 Dec 2021	Weather	Sunny
D4	15 Dec 2021	Wind Speed (kts)	2.4
D4	15 Dec 2021	Wind Dir	W
D4	15 Dec 2021	Animal Life	Pelican-2
D4	15 Dec 2021	Floatables	Foam
D4	15 Dec 2021	Water Color	Green
D4	15 Dec 2021	Current Direction	S
D4	15 Dec 2021	Water Temp (C)	16.7
D4	15 Dec 2021	Wave Height Low (ft)	2
D4	15 Dec 2021	High Tide (ft)	5.56
D4	15 Dec 2021	High Tide Time	622
D4	15 Dec 2021	Low Tide (ft)	1.54
D4	15 Dec 2021	Low Tide Time	4
D4	15 Dec 2021	Comments	none
D4	22 Dec 2021	Arrive Time	817
D4	22 Dec 2021	Weather	Partly cloudy
D4	22 Dec 2021	Wind Speed (kts)	0.8
D4	22 Dec 2021	Wind Dir	S
D4	22 Dec 2021	Animal Life	Bird-2; Pelican-1
D4	22 Dec 2021	Floatables	Foam
D4	22 Dec 2021	Water Color	Green

Station	Date	Parameter	Value
D4	22 Dec 2021	Current Direction	S
D4	22 Dec 2021	Water Temp (C)	15.4
D4	22 Dec 2021	Wave Height Low (ft)	2
D4	22 Dec 2021	High Tide (ft)	5.38
D4	22 Dec 2021	High Tide Time	952
D4	22 Dec 2021	Low Tide (ft)	2.52
D4	22 Dec 2021	Low Tide Time	344
D4	22 Dec 2021	Comments	Water clear; Boater/Kayaker-1; Trash-2; Kelp; Seagrass; Algae; Person/Walker/Jogger-2
D4	29 Dec 2021	Arrive Time	1049
D4	29 Dec 2021	Weather	Partly cloudy
D4	29 Dec 2021	Wind Speed (kts)	10.5
D4	29 Dec 2021	Wind Dir	S
D4	29 Dec 2021	Animal Life	Bird-1; Pelican-2
D4	29 Dec 2021	Floatables	None
D4	29 Dec 2021	Water Color	Green
D4	29 Dec 2021	Current Direction	N
D4	29 Dec 2021	Water Temp (C)	17.4
D4	29 Dec 2021	Wave Height Low (ft)	2
D4	29 Dec 2021	High Tide (ft)	5.47
D4	29 Dec 2021	High Tide Time	459
D4	29 Dec 2021	Low Tide (ft)	0.2
D4	29 Dec 2021	Low Tide Time	1208
D4	29 Dec 2021	Comments	none
D5	01 Dec 2021	Arrive Time	913
D5	01 Dec 2021	Weather	Foggy
D5	01 Dec 2021	Wind Speed (kts)	1.2
D5	01 Dec 2021	Wind Dir	W
D5	01 Dec 2021	Animal Life	Bird-60; Pelican-6; Seagull-18
D5	01 Dec 2021	Floatables	Foam
D5	01 Dec 2021	Water Color	Green
D5	01 Dec 2021	Current Direction	S
D5	01 Dec 2021	Water Temp (C)	17.1
D5	01 Dec 2021	Wave Height Low (ft)	2
D5	01 Dec 2021	High Tide (ft)	5.98
D5	01 Dec 2021	High Tide Time	613
D5	01 Dec 2021	Low Tide (ft)	-0.21
D5	01 Dec 2021	Low Tide Time	1304
D5	01 Dec 2021	Comments	none
D5	08 Dec 2021	Arrive Time	825
D5	08 Dec 2021	Weather	Partly cloudy
D5	08 Dec 2021	Wind Speed (kts)	1.5
D5	08 Dec 2021	Wind Dir	N
D5	08 Dec 2021	Animal Life	Bird-3; Seagull-3
D5	08 Dec 2021	Floatables	Foam
D5	08 Dec 2021	Water Color	Blue
D5	08 Dec 2021	Current Direction	N
D5	08 Dec 2021	Water Temp (C)	16.9
D5	08 Dec 2021	Wave Height Low (ft)	1
D5	08 Dec 2021	High Tide (ft)	3.7
D5	08 Dec 2021	High Tide Time	49
D5	08 Dec 2021	Low Tide (ft)	2.6
D5	08 Dec 2021	Low Tide Time	520
D5	08 Dec 2021	Comments	none
D5	15 Dec 2021	Arrive Time	1024
D5	15 Dec 2021	Weather	Sunny
D5	15 Dec 2021	Wind Speed (kts)	2

Station	Date	Parameter	Value
D5	15 Dec 2021	Wind Dir	S
D5	15 Dec 2021	Animal Life	Bird-2
D5	15 Dec 2021	Floatables	Foam; Film
D5	15 Dec 2021	Water Color	Brown
D5	15 Dec 2021	Current Direction	S
D5	15 Dec 2021	Water Temp (C)	15.7
D5	15 Dec 2021	Wave Height Low (ft)	2
D5	15 Dec 2021	High Tide (ft)	5.56
D5	15 Dec 2021	High Tide Time	622
D5	15 Dec 2021	Low Tide (ft)	1.54
D5	15 Dec 2021	Low Tide Time	4
D5	15 Dec 2021	Comments	none
D5	22 Dec 2021	Arrive Time	758
D5	22 Dec 2021	Weather	Partly cloudy
D5	22 Dec 2021	Wind Speed (kts)	1.1
D5	22 Dec 2021	Wind Dir	N
D5	22 Dec 2021	Animal Life	Bird-15; Seagull-1
D5	22 Dec 2021	Floatables	Foam
D5	22 Dec 2021	Water Color	Green
D5	22 Dec 2021	Current Direction	S
D5	22 Dec 2021	Water Temp (C)	15.5
D5	22 Dec 2021	Wave Height Low (ft)	3
D5	22 Dec 2021	High Tide (ft)	5.38
D5	22 Dec 2021	High Tide Time	952
D5	22 Dec 2021	Low Tide (ft)	2.52
D5	22 Dec 2021	Low Tide Time	344
D5	22 Dec 2021	Comments	Water turbid; Trash-1; Kelp; Algae; Person/Walker/Jogger-1
D5	29 Dec 2021	Arrive Time	1111
D5	29 Dec 2021	Weather	Overcast
D5	29 Dec 2021	Wind Speed (kts)	9.4
D5	29 Dec 2021	Wind Dir	S
D5	29 Dec 2021	Animal Life	Seagull-1
D5	29 Dec 2021	Floatables	None
D5	29 Dec 2021	Water Color	Green
D5	29 Dec 2021	Current Direction	N
D5	29 Dec 2021	Water Temp (C)	16.1
D5	29 Dec 2021	Wave Height Low (ft)	2
D5	29 Dec 2021	High Tide (ft)	5.47
D5	29 Dec 2021	High Tide Time	459
D5	29 Dec 2021	Low Tide (ft)	0.2
D5	29 Dec 2021	Low Tide Time	1208
D5	29 Dec 2021	Comments	none
D7	01 Dec 2021	Arrive Time	947
D7	01 Dec 2021	Weather	Foggy
D7	01 Dec 2021	Wind Speed (kts)	2.7
D7	01 Dec 2021	Wind Dir	NW
D7	01 Dec 2021	Animal Life	Pelican-3
D7	01 Dec 2021	Floatables	None
D7	01 Dec 2021	Water Color	Green
D7	01 Dec 2021	Current Direction	S
D7	01 Dec 2021	Water Temp (C)	17.2
D7	01 Dec 2021	Wave Height Low (ft)	3
D7	01 Dec 2021	High Tide (ft)	5.98
D7	01 Dec 2021	High Tide Time	613
D7	01 Dec 2021	Low Tide (ft)	-0.21
D7	01 Dec 2021	Low Tide Time	1304
D7	01 Dec 2021	Comments	Water clear; Surfer/Paddle boarder-12; Trash-1; Algae; Sea-grass; Person/Walker/Jogger-3

Station	Date	Parameter	Value
D7	08 Dec 2021	Arrive Time	854
D7	08 Dec 2021	Weather	Partly cloudy
D7	08 Dec 2021	Wind Speed (kts)	3.3
D7	08 Dec 2021	Wind Dir	NE
D7	08 Dec 2021	Animal Life	Pelican-1; Seagull-5
D7	08 Dec 2021	Floatables	Foam
D7	08 Dec 2021	Water Color	Green
D7	08 Dec 2021	Current Direction	N
D7	08 Dec 2021	Water Temp (C)	17.8
D7	08 Dec 2021	Wave Height Low (ft)	1
D7	08 Dec 2021	High Tide (ft)	3.7
D7	08 Dec 2021	High Tide Time	49
D7	08 Dec 2021	Low Tide (ft)	2.6
D7	08 Dec 2021	Low Tide Time	520
D7	08 Dec 2021	Comments	none
D7	15 Dec 2021	Arrive Time	954
D7	15 Dec 2021	Weather	Sunny
D7	15 Dec 2021	Wind Speed (kts)	0
D7	15 Dec 2021	Wind Dir	
D7	15 Dec 2021	Animal Life	Pelican-1
D7	15 Dec 2021	Floatables	Foam
D7	15 Dec 2021	Water Color	Green
D7	15 Dec 2021	Current Direction	S
D7	15 Dec 2021	Water Temp (C)	16.1
D7	15 Dec 2021	Wave Height Low (ft)	3
D7	15 Dec 2021	High Tide (ft)	5.56
D7	15 Dec 2021	High Tide Time	622
D7	15 Dec 2021	Low Tide (ft)	1.54
D7	15 Dec 2021	Low Tide Time	4
D7	15 Dec 2021	Comments	Water turbid; Surfer/Paddle boarder-2; Trash-1; Seagrass; Kelp; Algae
D7	22 Dec 2021	Arrive Time	846
D7	22 Dec 2021	Weather	Sunny
D7	22 Dec 2021	Wind Speed (kts)	0
D7	22 Dec 2021	Wind Dir	
D7	22 Dec 2021	Animal Life	Seagull-5
D7	22 Dec 2021	Floatables	Foam
D7	22 Dec 2021	Water Color	Green
D7	22 Dec 2021	Current Direction	N
D7	22 Dec 2021	Water Temp (C)	16.3
D7	22 Dec 2021	Wave Height Low (ft)	3
D7	22 Dec 2021	High Tide (ft)	5.38
D7	22 Dec 2021	High Tide Time	952
D7	22 Dec 2021	Low Tide (ft)	2.52
D7	22 Dec 2021	Low Tide Time	344
D7	22 Dec 2021	Comments	Water turbid; Trash-1; Kelp; Algae; Person/Walker/Jogger-1
D7	29 Dec 2021	Arrive Time	1017
D7	29 Dec 2021	Weather	Partly cloudy
D7	29 Dec 2021	Wind Speed (kts)	3.2
D7	29 Dec 2021	Wind Dir	S
D7	29 Dec 2021	Animal Life	Seagull-1
D7	29 Dec 2021	Floatables	None
D7	29 Dec 2021	Water Color	Green
D7	29 Dec 2021	Current Direction	N
D7	29 Dec 2021	Water Temp (C)	16
D7	29 Dec 2021	Wave Height Low (ft)	4
D7	29 Dec 2021	High Tide (ft)	5.47

Station	Date	Parameter	Value
D7	29 Dec 2021	High Tide Time	459
D7	29 Dec 2021	Low Tide (ft)	0.2
D7	29 Dec 2021	Low Tide Time	1208
D7	29 Dec 2021	Comments	Water clear; Surfer/Paddle boarder-2; Trash-1; Kelp; Algae; Person/Walker/Jogger-4
D8-B	01 Dec 2021	Arrive Time	1011
D8-B	01 Dec 2021	Weather	Foggy
D8-B	01 Dec 2021	Wind Speed (kts)	1.2
D8-B	01 Dec 2021	Wind Dir	W
D8-B	01 Dec 2021	Animal Life	Bird-1
D8-B	01 Dec 2021	Floatables	None
D8-B	01 Dec 2021	Water Color	Green
D8-B	01 Dec 2021	Current Direction	N
D8-B	01 Dec 2021	Water Temp (C)	17.6
D8-B	01 Dec 2021	Wave Height Low (ft)	4
D8-B	01 Dec 2021	High Tide (ft)	5.98
D8-B	01 Dec 2021	High Tide Time	613
D8-B	01 Dec 2021	Low Tide (ft)	-0.21
D8-B	01 Dec 2021	Low Tide Time	1304
D8-B	01 Dec 2021	Comments	none
D8-B	08 Dec 2021	Arrive Time	914
D8-B	08 Dec 2021	Weather	Sunny
D8-B	08 Dec 2021	Wind Speed (kts)	4.2
D8-B	08 Dec 2021	Wind Dir	NW
D8-B	08 Dec 2021	Animal Life	Seagull-3; Seal/Sea Lion-1
D8-B	08 Dec 2021	Floatables	Foam
D8-B	08 Dec 2021	Water Color	Green
D8-B	08 Dec 2021	Current Direction	N
D8-B	08 Dec 2021	Water Temp (C)	17.4
D8-B	08 Dec 2021	Wave Height Low (ft)	2
D8-B	08 Dec 2021	High Tide (ft)	3.7
D8-B	08 Dec 2021	High Tide Time	49
D8-B	08 Dec 2021	Low Tide (ft)	2.6
D8-B	08 Dec 2021	Low Tide Time	520
D8-B	08 Dec 2021	Comments	none
D8-B	15 Dec 2021	Arrive Time	940
D8-B	15 Dec 2021	Weather	Sunny
D8-B	15 Dec 2021	Wind Speed (kts)	3.9
D8-B	15 Dec 2021	Wind Dir	NW
D8-B	15 Dec 2021	Animal Life	
D8-B	15 Dec 2021	Floatables	Foam; Film
D8-B	15 Dec 2021	Water Color	Brown
D8-B	15 Dec 2021	Current Direction	S
D8-B	15 Dec 2021	Water Temp (C)	15.3
D8-B	15 Dec 2021	Wave Height Low (ft)	3
D8-B	15 Dec 2021	High Tide (ft)	5.56
D8-B	15 Dec 2021	High Tide Time	622
D8-B	15 Dec 2021	Low Tide (ft)	1.54
D8-B	15 Dec 2021	Low Tide Time	4
D8-B	15 Dec 2021	Comments	none
D8-B	17 Dec 2021	Arrive Time	814
D8-B	17 Dec 2021	Weather	Sunny
D8-B	17 Dec 2021	Wind Speed (kts)	0.4
D8-B	17 Dec 2021	Wind Dir	NE
D8-B	17 Dec 2021	Animal Life	
D8-B	17 Dec 2021	Floatables	Foam
D8-B	17 Dec 2021	Water Color	Brown

Station	Date	Parameter	Value
D8-B	17 Dec 2021	Current Direction	N
D8-B	17 Dec 2021	Water Temp (C)	15.2
D8-B	17 Dec 2021	Wave Height Low (ft)	3
D8-B	17 Dec 2021	High Tide (ft)	5.81
D8-B	17 Dec 2021	High Tide Time	718
D8-B	17 Dec 2021	Low Tide (ft)	1.93
D8-B	17 Dec 2021	Low Tide Time	108
D8-B	17 Dec 2021	Comments	Resample
D8-B	22 Dec 2021	Arrive Time	908
D8-B	22 Dec 2021	Weather	Sunny
D8-B	22 Dec 2021	Wind Speed (kts)	1
D8-B	22 Dec 2021	Wind Dir	W
D8-B	22 Dec 2021	Animal Life	
D8-B	22 Dec 2021	Floatables	Foam
D8-B	22 Dec 2021	Water Color	Green
D8-B	22 Dec 2021	Current Direction	N
D8-B	22 Dec 2021	Water Temp (C)	16.2
D8-B	22 Dec 2021	Wave Height Low (ft)	3
D8-B	22 Dec 2021	High Tide (ft)	5.38
D8-B	22 Dec 2021	High Tide Time	952
D8-B	22 Dec 2021	Low Tide (ft)	2.52
D8-B	22 Dec 2021	Low Tide Time	344
D8-B	22 Dec 2021	Comments	none
D8-B	29 Dec 2021	Arrive Time	936
D8-B	29 Dec 2021	Weather	Drizzle
D8-B	29 Dec 2021	Wind Speed (kts)	5.1
D8-B	29 Dec 2021	Wind Dir	E
D8-B	29 Dec 2021	Animal Life	Pelican-4; Seal/Sea Lion-1
D8-B	29 Dec 2021	Floatables	None
D8-B	29 Dec 2021	Water Color	Brown
D8-B	29 Dec 2021	Current Direction	NE
D8-B	29 Dec 2021	Water Temp (C)	15.1
D8-B	29 Dec 2021	Wave Height Low (ft)	3
D8-B	29 Dec 2021	High Tide (ft)	5.47
D8-B	29 Dec 2021	High Tide Time	459
D8-B	29 Dec 2021	Low Tide (ft)	0.2
D8-B	29 Dec 2021	Low Tide Time	1208
D8-B	29 Dec 2021	Comments	Water turbid; Boogie boarder/Swimmer-1; Trash-1; Kelp; Seagrass
D9	01 Dec 2021	Arrive Time	1028
D9	01 Dec 2021	Weather	Foggy
D9	01 Dec 2021	Wind Speed (kts)	1.1
D9	01 Dec 2021	Wind Dir	W
D9	01 Dec 2021	Animal Life	Bird-1
D9	01 Dec 2021	Floatables	None
D9	01 Dec 2021	Water Color	Green
D9	01 Dec 2021	Current Direction	S
D9	01 Dec 2021	Water Temp (C)	17.1
D9	01 Dec 2021	Wave Height Low (ft)	3
D9	01 Dec 2021	High Tide (ft)	5.98
D9	01 Dec 2021	High Tide Time	613
D9	01 Dec 2021	Low Tide (ft)	-0.21
D9	01 Dec 2021	Low Tide Time	1304
D9	01 Dec 2021	Comments	Water turbid; Surfer/Paddle boarder-6; Trash-1; Kelp; Algae; Person/Walker/Jogger-2
D9	08 Dec 2021	Arrive Time	930
D9	08 Dec 2021	Weather	Sunny

Station	Date	Parameter	Value
D9	08 Dec 2021	Wind Speed (kts)	0.3
D9	08 Dec 2021	Wind Dir	E
D9	08 Dec 2021	Animal Life	Seagull-1
D9	08 Dec 2021	Floatables	Foam
D9	08 Dec 2021	Water Color	Blue
D9	08 Dec 2021	Current Direction	S
D9	08 Dec 2021	Water Temp (C)	17.6
D9	08 Dec 2021	Wave Height Low (ft)	2
D9	08 Dec 2021	High Tide (ft)	3.7
D9	08 Dec 2021	High Tide Time	49
D9	08 Dec 2021	Low Tide (ft)	2.6
D9	08 Dec 2021	Low Tide Time	520
D9	08 Dec 2021	Comments	none
D9	15 Dec 2021	Arrive Time	846
D9	15 Dec 2021	Weather	Sunny
D9	15 Dec 2021	Wind Speed (kts)	1.85
D9	15 Dec 2021	Wind Dir	E
D9	15 Dec 2021	Animal Life	Dog-1
D9	15 Dec 2021	Floatables	Foam; Film
D9	15 Dec 2021	Water Color	Green
D9	15 Dec 2021	Current Direction	N
D9	15 Dec 2021	Water Temp (C)	15
D9	15 Dec 2021	Wave Height Low (ft)	5
D9	15 Dec 2021	High Tide (ft)	5.56
D9	15 Dec 2021	High Tide Time	622
D9	15 Dec 2021	Low Tide (ft)	1.54
D9	15 Dec 2021	Low Tide Time	4
D9	15 Dec 2021	Comments	Water turbid; Trash-1; Algae; Seagrass; Kelp; Person/Walker/Jogger-1
D9	22 Dec 2021	Arrive Time	921
D9	22 Dec 2021	Weather	Sunny
D9	22 Dec 2021	Wind Speed (kts)	1
D9	22 Dec 2021	Wind Dir	N
D9	22 Dec 2021	Animal Life	
D9	22 Dec 2021	Floatables	Foam
D9	22 Dec 2021	Water Color	Green
D9	22 Dec 2021	Current Direction	N
D9	22 Dec 2021	Water Temp (C)	16.2
D9	22 Dec 2021	Wave Height Low (ft)	3
D9	22 Dec 2021	High Tide (ft)	5.38
D9	22 Dec 2021	High Tide Time	952
D9	22 Dec 2021	Low Tide (ft)	2.52
D9	22 Dec 2021	Low Tide Time	344
D9	22 Dec 2021	Comments	Water turbid; Surfer/Paddle boarder-2; Trash-1; Seagrass; Algae; Kelp; Person/Walker/Jogger-1
D9	29 Dec 2021	Arrive Time	922
D9	29 Dec 2021	Weather	Moderate rain
D9	29 Dec 2021	Wind Speed (kts)	2.1
D9	29 Dec 2021	Wind Dir	NW
D9	29 Dec 2021	Animal Life	Seagull-1
D9	29 Dec 2021	Floatables	None
D9	29 Dec 2021	Water Color	Green
D9	29 Dec 2021	Current Direction	NW
D9	29 Dec 2021	Water Temp (C)	15.1
D9	29 Dec 2021	Wave Height Low (ft)	4
D9	29 Dec 2021	High Tide (ft)	5.47
D9	29 Dec 2021	High Tide Time	459
D9	29 Dec 2021	Low Tide (ft)	0.2

Station	Date	Parameter	Value
D9	29 Dec 2021	Low Tide Time	1208
D9	29 Dec 2021	Comments	none
D10	01 Dec 2021	Arrive Time	1043
D10	01 Dec 2021	Weather	Foggy
D10	01 Dec 2021	Wind Speed (kts)	4.2
D10	01 Dec 2021	Wind Dir	W
D10	01 Dec 2021	Animal Life	Bird-1
D10	01 Dec 2021	Floatables	None
D10	01 Dec 2021	Water Color	Green
D10	01 Dec 2021	Current Direction	S
D10	01 Dec 2021	Water Temp (C)	16.9
D10	01 Dec 2021	Wave Height Low (ft)	2
D10	01 Dec 2021	High Tide (ft)	5.98
D10	01 Dec 2021	High Tide Time	613
D10	01 Dec 2021	Low Tide (ft)	-0.21
D10	01 Dec 2021	Low Tide Time	1304
D10	01 Dec 2021	Comments	Water clear; Boogie boarder/Swimmer-1; Surfer/Paddle boarder-5; Trash-1; Seagrass; Person/Walker/Jogger-2
D10	08 Dec 2021	Arrive Time	945
D10	08 Dec 2021	Weather	Sunny
D10	08 Dec 2021	Wind Speed (kts)	1.5
D10	08 Dec 2021	Wind Dir	E
D10	08 Dec 2021	Animal Life	Seagull-5
D10	08 Dec 2021	Floatables	Foam
D10	08 Dec 2021	Water Color	Green
D10	08 Dec 2021	Current Direction	
D10	08 Dec 2021	Water Temp (C)	18.5
D10	08 Dec 2021	Wave Height Low (ft)	1
D10	08 Dec 2021	High Tide (ft)	3.7
D10	08 Dec 2021	High Tide Time	49
D10	08 Dec 2021	Low Tide (ft)	2.6
D10	08 Dec 2021	Low Tide Time	520
D10	08 Dec 2021	Comments	Water clear; Surfer/Paddle boarder-21; Trash-1; Seagrass; Kelp; Person/Walker/Jogger-10
D10	15 Dec 2021	Arrive Time	832
D10	15 Dec 2021	Weather	Sunny
D10	15 Dec 2021	Wind Speed (kts)	1.7
D10	15 Dec 2021	Wind Dir	N
D10	15 Dec 2021	Animal Life	Bird-1; Dog-1; Seagull-1
D10	15 Dec 2021	Floatables	Film; Foam
D10	15 Dec 2021	Water Color	Green
D10	15 Dec 2021	Current Direction	S
D10	15 Dec 2021	Water Temp (C)	14.9
D10	15 Dec 2021	Wave Height Low (ft)	5
D10	15 Dec 2021	High Tide (ft)	5.56
D10	15 Dec 2021	High Tide Time	622
D10	15 Dec 2021	Low Tide (ft)	1.54
D10	15 Dec 2021	Low Tide Time	4
D10	15 Dec 2021	Comments	Water turbid; Trash-1; Seagrass; Kelp; Person/Walker/Jogger-4
D10	17 Dec 2021	Arrive Time	827
D10	17 Dec 2021	Weather	Sunny
D10	17 Dec 2021	Wind Speed (kts)	3.5
D10	17 Dec 2021	Wind Dir	N
D10	17 Dec 2021	Animal Life	Bird-18; Dog-1; Seagull-7
D10	17 Dec 2021	Floatables	Foam
D10	17 Dec 2021	Water Color	Green

Station	Date	Parameter	Value
D10	17 Dec 2021	Current Direction	S
D10	17 Dec 2021	Water Temp (C)	15.7
D10	17 Dec 2021	Wave Height Low (ft)	4
D10	17 Dec 2021	High Tide (ft)	5.81
D10	17 Dec 2021	High Tide Time	718
D10	17 Dec 2021	Low Tide (ft)	1.93
D10	17 Dec 2021	Low Tide Time	108
D10	17 Dec 2021	Comments	Resample; Water turbid; Surfer/Paddle boarder-17; Trash-1; Kelp; Seagrass; Person/Walker/Jogger-6
D10	22 Dec 2021	Arrive Time	952
D10	22 Dec 2021	Weather	Sunny
D10	22 Dec 2021	Wind Speed (kts)	3.7
D10	22 Dec 2021	Wind Dir	W
D10	22 Dec 2021	Animal Life	Seagull-27
D10	22 Dec 2021	Floatables	Foam
D10	22 Dec 2021	Water Color	Green
D10	22 Dec 2021	Current Direction	N
D10	22 Dec 2021	Water Temp (C)	15.8
D10	22 Dec 2021	Wave Height Low (ft)	3
D10	22 Dec 2021	High Tide (ft)	5.38
D10	22 Dec 2021	High Tide Time	952
D10	22 Dec 2021	Low Tide (ft)	2.52
D10	22 Dec 2021	Low Tide Time	344
D10	22 Dec 2021	Comments	Water turbid; Surfer/Paddle boarder-32; Trash-1; Kelp; Seagrass; Debris; Person/Walker/Jogger-21
D10	29 Dec 2021	Arrive Time	907
D10	29 Dec 2021	Weather	Moderate rain
D10	29 Dec 2021	Wind Speed (kts)	3.1
D10	29 Dec 2021	Wind Dir	W
D10	29 Dec 2021	Animal Life	Seagull-1
D10	29 Dec 2021	Floatables	None
D10	29 Dec 2021	Water Color	Brown
D10	29 Dec 2021	Current Direction	SW
D10	29 Dec 2021	Water Temp (C)	15
D10	29 Dec 2021	Wave Height Low (ft)	3
D10	29 Dec 2021	High Tide (ft)	5.47
D10	29 Dec 2021	High Tide Time	459
D10	29 Dec 2021	Low Tide (ft)	0.2
D10	29 Dec 2021	Low Tide Time	1208
D10	29 Dec 2021	Comments	Water turbid; Surfer/Paddle boarder-6; Trash-1; Kelp; Seagrass; Person/Walker/Jogger-1
D11	01 Dec 2021	Arrive Time	1055
D11	01 Dec 2021	Weather	Foggy
D11	01 Dec 2021	Wind Speed (kts)	4
D11	01 Dec 2021	Wind Dir	W
D11	01 Dec 2021	Animal Life	Pelican-7
D11	01 Dec 2021	Floatables	None
D11	01 Dec 2021	Water Color	Green
D11	01 Dec 2021	Current Direction	S
D11	01 Dec 2021	Water Temp (C)	17.4
D11	01 Dec 2021	Wave Height Low (ft)	3
D11	01 Dec 2021	High Tide (ft)	5.98
D11	01 Dec 2021	High Tide Time	613
D11	01 Dec 2021	Low Tide (ft)	-0.21
D11	01 Dec 2021	Low Tide Time	1304
D11	01 Dec 2021	Comments	Water clear; Surfer/Paddle boarder-10; Trash-1; Seagrass; Algae; Person/Walker/Jogger-7

Station	Date	Parameter	Value
D11	08 Dec 2021	Arrive Time	1036
D11	08 Dec 2021	Weather	Sunny
D11	08 Dec 2021	Wind Speed (kts)	2.9
D11	08 Dec 2021	Wind Dir	S
D11	08 Dec 2021	Animal Life	Dog-111
D11	08 Dec 2021	Floatables	None
D11	08 Dec 2021	Water Color	Green
D11	08 Dec 2021	Current Direction	N
D11	08 Dec 2021	Water Temp (C)	18.2
D11	08 Dec 2021	Wave Height Low (ft)	3
D11	08 Dec 2021	High Tide (ft)	3.7
D11	08 Dec 2021	High Tide Time	49
D11	08 Dec 2021	Low Tide (ft)	2.6
D11	08 Dec 2021	Low Tide Time	520
D11	08 Dec 2021	Comments	Water clear; Surfer/Paddle boarder-18; Trash-1; Kelp; Seagrass; Algae; Person/Walker/Jogger-11
D11	15 Dec 2021	Arrive Time	815
D11	15 Dec 2021	Weather	Sunny
D11	15 Dec 2021	Wind Speed (kts)	3.8
D11	15 Dec 2021	Wind Dir	E
D11	15 Dec 2021	Animal Life	Dog-5
D11	15 Dec 2021	Floatables	Film; Foam
D11	15 Dec 2021	Water Color	Green
D11	15 Dec 2021	Current Direction	S
D11	15 Dec 2021	Water Temp (C)	14.5
D11	15 Dec 2021	Wave Height Low (ft)	5
D11	15 Dec 2021	High Tide (ft)	5.56
D11	15 Dec 2021	High Tide Time	622
D11	15 Dec 2021	Low Tide (ft)	1.54
D11	15 Dec 2021	Low Tide Time	4
D11	15 Dec 2021	Comments	Water turbid; Trash-1; Seagrass; Kelp; Algae; Person/Walker/Jogger-8
D11	17 Dec 2021	Arrive Time	840
D11	17 Dec 2021	Weather	Sunny
D11	17 Dec 2021	Wind Speed (kts)	2
D11	17 Dec 2021	Wind Dir	NE
D11	17 Dec 2021	Animal Life	Dog-1
D11	17 Dec 2021	Floatables	Foam
D11	17 Dec 2021	Water Color	Green
D11	17 Dec 2021	Current Direction	S
D11	17 Dec 2021	Water Temp (C)	15.6
D11	17 Dec 2021	Wave Height Low (ft)	2
D11	17 Dec 2021	High Tide (ft)	5.81
D11	17 Dec 2021	High Tide Time	718
D11	17 Dec 2021	Low Tide (ft)	1.93
D11	17 Dec 2021	Low Tide Time	108
D11	17 Dec 2021	Comments	Resample; Water turbid; Surfer/Paddle boarder-19; Trash-1; Kelp; Seagrass; Algae; Person/Walker/Jogger-9
D11	22 Dec 2021	Arrive Time	1006
D11	22 Dec 2021	Weather	Sunny
D11	22 Dec 2021	Wind Speed (kts)	1.8
D11	22 Dec 2021	Wind Dir	W
D11	22 Dec 2021	Animal Life	Dog-1
D11	22 Dec 2021	Floatables	Foam
D11	22 Dec 2021	Water Color	Green
D11	22 Dec 2021	Current Direction	S
D11	22 Dec 2021	Water Temp (C)	16.8
D11	22 Dec 2021	Wave Height Low (ft)	3

Station	Date	Parameter	Value
D11	22 Dec 2021	High Tide (ft)	5.38
D11	22 Dec 2021	High Tide Time	952
D11	22 Dec 2021	Low Tide (ft)	2.52
D11	22 Dec 2021	Low Tide Time	344
D11	22 Dec 2021	Comments	Water turbid; Surfer/Paddle boarder-26; Trash-1; Kelp; Seagrass; Algae; Person/Walker/Jogger-13
D11	29 Dec 2021	Arrive Time	852
D11	29 Dec 2021	Weather	Moderate rain
D11	29 Dec 2021	Wind Speed (kts)	4.1
D11	29 Dec 2021	Wind Dir	SW
D11	29 Dec 2021	Animal Life	Seagull-3
D11	29 Dec 2021	Floatables	None
D11	29 Dec 2021	Water Color	Brown
D11	29 Dec 2021	Current Direction	SW
D11	29 Dec 2021	Water Temp (C)	14.1
D11	29 Dec 2021	Wave Height Low (ft)	3
D11	29 Dec 2021	High Tide (ft)	5.47
D11	29 Dec 2021	High Tide Time	459
D11	29 Dec 2021	Low Tide (ft)	0.2
D11	29 Dec 2021	Low Tide Time	1208
D11	29 Dec 2021	Comments	Water turbid; Surfer/Paddle boarder-2; Trash-1; Kelp; Seagrass; Algae; Person/Walker/Jogger-3
D12	01 Dec 2021	Arrive Time	1150
D12	01 Dec 2021	Weather	Hazy
D12	01 Dec 2021	Wind Speed (kts)	7.5
D12	01 Dec 2021	Wind Dir	W
D12	01 Dec 2021	Animal Life	Seagull-4
D12	01 Dec 2021	Floatables	None
D12	01 Dec 2021	Water Color	Green
D12	01 Dec 2021	Current Direction	N
D12	01 Dec 2021	Water Temp (C)	20.5
D12	01 Dec 2021	Wave Height Low (ft)	3
D12	01 Dec 2021	High Tide (ft)	5.98
D12	01 Dec 2021	High Tide Time	613
D12	01 Dec 2021	Low Tide (ft)	-0.21
D12	01 Dec 2021	Low Tide Time	1304
D12	01 Dec 2021	Comments	Water clear; Surfer/Paddle boarder-1; Trash-1; Seagrass; Person/Walker/Jogger-9
D12	08 Dec 2021	Arrive Time	1110
D12	08 Dec 2021	Weather	Sunny
D12	08 Dec 2021	Wind Speed (kts)	3.8
D12	08 Dec 2021	Wind Dir	SW
D12	08 Dec 2021	Animal Life	Bird-31; Seagull-5
D12	08 Dec 2021	Floatables	None
D12	08 Dec 2021	Water Color	Green
D12	08 Dec 2021	Current Direction	N
D12	08 Dec 2021	Water Temp (C)	20.5
D12	08 Dec 2021	Wave Height Low (ft)	1
D12	08 Dec 2021	High Tide (ft)	3.7
D12	08 Dec 2021	High Tide Time	49
D12	08 Dec 2021	Low Tide (ft)	2.6
D12	08 Dec 2021	Low Tide Time	520
D12	08 Dec 2021	Comments	Water clear; Surfer/Paddle boarder-4; Trash-1; Seagrass; Kelp; Person/Walker/Jogger-16
D12	15 Dec 2021	Arrive Time	750
D12	15 Dec 2021	Weather	Sunny
D12	15 Dec 2021	Wind Speed (kts)	0

Station	Date	Parameter	Value
D12	15 Dec 2021	Wind Dir	
D12	15 Dec 2021	Animal Life	Bird-20; Pelican-3; Seagull-20
D12	15 Dec 2021	Floatables	None
D12	15 Dec 2021	Water Color	Green
D12	15 Dec 2021	Current Direction	S
D12	15 Dec 2021	Water Temp (C)	15.3
D12	15 Dec 2021	Wave Height Low (ft)	4
D12	15 Dec 2021	High Tide (ft)	5.56
D12	15 Dec 2021	High Tide Time	622
D12	15 Dec 2021	Low Tide (ft)	1.54
D12	15 Dec 2021	Low Tide Time	4
D12	15 Dec 2021	Comments	none
D12	22 Dec 2021	Arrive Time	1049
D12	22 Dec 2021	Weather	Sunny
D12	22 Dec 2021	Wind Speed (kts)	7.2
D12	22 Dec 2021	Wind Dir	W
D12	22 Dec 2021	Animal Life	Seagull-2
D12	22 Dec 2021	Floatables	None
D12	22 Dec 2021	Water Color	Green
D12	22 Dec 2021	Current Direction	S
D12	22 Dec 2021	Water Temp (C)	18.2
D12	22 Dec 2021	Wave Height Low (ft)	2
D12	22 Dec 2021	High Tide (ft)	5.38
D12	22 Dec 2021	High Tide Time	952
D12	22 Dec 2021	Low Tide (ft)	2.52
D12	22 Dec 2021	Low Tide Time	344
D12	22 Dec 2021	Comments	Water clear; Boogie boarder/Swimmer-5; Surfer/Paddle boarder-5; Trash-1; Kelp; Seagrass; Person/Walker/Jogger-17
D12	29 Dec 2021	Arrive Time	835
D12	29 Dec 2021	Weather	Drizzle
D12	29 Dec 2021	Wind Speed (kts)	2.4
D12	29 Dec 2021	Wind Dir	SW
D12	29 Dec 2021	Animal Life	Seagull-23
D12	29 Dec 2021	Floatables	None
D12	29 Dec 2021	Water Color	Green
D12	29 Dec 2021	Current Direction	SW
D12	29 Dec 2021	Water Temp (C)	15.6
D12	29 Dec 2021	Wave Height Low (ft)	2
D12	29 Dec 2021	High Tide (ft)	5.47
D12	29 Dec 2021	High Tide Time	459
D12	29 Dec 2021	Low Tide (ft)	0.2
D12	29 Dec 2021	Low Tide Time	1208
D12	29 Dec 2021	Comments	Water clear; Surfer/Paddle boarder-3; Trash-1; Kelp; Seagrass; Algae; Debris; Person/Walker/Jogger-7

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 Dec 2021	6	3	2	3	2	2	2	2
02 Dec 2021	7	3	2	3	2	2	2	2
03 Dec 2021	7	3	2	3	2	2	2	2
04 Dec 2021	7	3	2	3	2	2	2	2
05 Dec 2021	7	3	2	3	2	2	2	2
06 Dec 2021	7	3	2	3	2	2	2	2
07 Dec 2021	7	3	2	3	2	2	2	2
08 Dec 2021	8	5	3	3	2	2	3	2
09 Dec 2021	8	5	3	3	2	2	3	2
10 Dec 2021	8	5	3	3	2	2	3	2
11 Dec 2021	8	5	3	3	2	2	3	2
12 Dec 2021	8	5	3	3	2	2	3	2
13 Dec 2021	8	5	3	3	2	2	3	2
14 Dec 2021	8	5	3	3	2	2	3	2
15 Dec 2021	8	5	3	3	2	2	3	2
16 Dec 2021	12*	6*	3*	4*	2*	2*	3*	2*
17 Dec 2021	14	7	5	3	2	3	3	2
18 Dec 2021	14	7	5	3	2	3	3	2
19 Dec 2021	14	7	5	3	2	3	3	2
20 Dec 2021	14	7	5	3	2	3	3	2
21 Dec 2021	14	8	6	3	2	3	3	4
22 Dec 2021	15	7	8	3	2	3	3	4
23 Dec 2021	15	7	8	3	2	3	3	4
24 Dec 2021	15	7	8	3	2	3	3	4
25 Dec 2021	15	7	8	3	2	3	3	4
26 Dec 2021	15	7	8	3	2	3	3	4
27 Dec 2021	10	8	8	4	2	3	3	6
28 Dec 2021	10	8	8	4	2	3	3	6
29 Dec 2021	10	8	8	4	2	3	3	6
30 Dec 2021	9	11	11	3	2	3	3	7
31 Dec 2021	9	11	11	3	2	3	3	7

* 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 Dec 2021	2	2	2	2	2	2	2	2
02 Dec 2021	3	2	2	2	2	2	2	2
03 Dec 2021	3	2	2	2	2	2	2	2
04 Dec 2021	3	2	2	2	2	2	2	2
05 Dec 2021	3	2	2	2	2	2	2	2
06 Dec 2021	3	2	2	2	2	2	2	2
07 Dec 2021	3	2	2	2	2	2	2	2
08 Dec 2021	2	2	2	2	2	2	2	2
09 Dec 2021	2	2	2	2	2	2	2	2
10 Dec 2021	2	2	2	2	2	2	2	2
11 Dec 2021	2	2	2	2	2	2	2	2
12 Dec 2021	2	2	2	2	2	2	2	2
13 Dec 2021	2	2	2	2	2	2	2	2
14 Dec 2021	2	2	2	2	2	2	2	2
15 Dec 2021	2	2	2	2	2	2	2	2
16 Dec 2021	2*	2*	3*	2*	2*	2*	2*	2*
17 Dec 2021	3	2	3	2	2	2	2	2
18 Dec 2021	3	2	3	2	2	2	2	2
19 Dec 2021	3	2	3	2	2	2	2	2
20 Dec 2021	3	2	3	2	2	2	2	2
21 Dec 2021	3	2	3	2	2	2	2	2
22 Dec 2021	4	3	3	2	2	2	2	2
23 Dec 2021	4	3	3	2	2	2	2	2
24 Dec 2021	4	3	3	2	2	2	2	2
25 Dec 2021	4	3	3	2	2	2	2	2
26 Dec 2021	4	3	3	2	2	2	2	2
27 Dec 2021	3	2	3	2	2	2	2	2
28 Dec 2021	3	2	3	2	2	2	2	2
29 Dec 2021	3	2	3	2	2	2	2	2
30 Dec 2021	4	3	3	2	2	2	2	2
31 Dec 2021	4	3	3	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 Dec 2021	2	2	2	2	2	2	2	2
02 Dec 2021	2	2	2	2	2	2	2	2
03 Dec 2021	2	2	2	2	2	2	2	2
04 Dec 2021	2	2	2	2	2	2	2	2
05 Dec 2021	2	2	2	2	2	2	2	2
06 Dec 2021	2	2	2	2	2	2	2	2
07 Dec 2021	2	2	2	2	2	2	2	2
08 Dec 2021	2	2	2	2	2	2	2	2
09 Dec 2021	2	2	2	2	2	2	2	2
10 Dec 2021	2	2	2	2	2	2	2	2
11 Dec 2021	2	2	2	2	2	2	2	2
12 Dec 2021	2	2	2	2	2	2	2	2
13 Dec 2021	2	2	2	2	2	2	2	2
14 Dec 2021	2	2	2	2	2	2	2	2
15 Dec 2021	2	2	2	2	2	2	2	2
16 Dec 2021	2*	2*	2*	2*	2*	2*	2*	2*
17 Dec 2021	3	2	4	2	2	2	2	2
18 Dec 2021	3	2	4	2	2	2	2	2
19 Dec 2021	3	2	4	2	2	2	2	2
20 Dec 2021	3	2	4	2	2	2	2	2
21 Dec 2021	3	2	3	2	2	2	2	2
22 Dec 2021	3	2	4	2	2	2	2	2
23 Dec 2021	3	2	4	2	2	2	2	2
24 Dec 2021	3	2	4	2	2	2	2	2
25 Dec 2021	3	2	4	2	2	2	2	2
26 Dec 2021	3	2	4	2	2	2	2	2
27 Dec 2021	3	2	3	2	2	2	2	2
28 Dec 2021	3	2	3	2	2	2	2	2
29 Dec 2021	3	2	3	2	2	2	2	2
30 Dec 2021	3	2	4	2	2	2	2	2
31 Dec 2021	3	2	4	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
08 Dec 2021	IC							
17 Dec 2021	IC							
21 Dec 2021	IC							
27 Dec 2021	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
08 Dec 2021	IC							
17 Dec 2021	IC							
21 Dec 2021	IC							
27 Dec 2021	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
08 Dec 2021	IC							
17 Dec 2021	IC							
21 Dec 2021	IC							
27 Dec 2021	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
08 Dec 2021	IC							
17 Dec 2021	IC							
21 Dec 2021	IC							
27 Dec 2021	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	08 Dec 2021	755	1	<2	<2	<2	1.00	16.8	85.63	7.7	33.52	7.9
A1	08 Dec 2021	755	12	<2	<2	<2	1.00	16.2	85.31	7.3	33.51	7.9
A1	08 Dec 2021	755	18	28e	2e	4e	0.07	14.4	85.86	6.5	33.52	7.8
A1	17 Dec 2021	806	1	8e	2e	2e	0.25	15.1	82.96	7.2	33.47	7.9
A1	17 Dec 2021	806	12	12e	6e	8e	0.50	14.7	83.21	6.8	33.48	7.9
A1	17 Dec 2021	806	18	44	10e	6e	0.23	13.9	83.50	6.2	33.48	7.8
A1	21 Dec 2021	756	1	2e	<2	<2	1.00	13.0	85.44	5.6	33.53	7.8
A1	21 Dec 2021	756	12	6e	8e	4e	1.33	14.6	83.81	7.3	33.56	7.9
A1	21 Dec 2021	756	18	40e	14e	<2	0.35	13.1	85.45	5.7	33.52	7.8
A1	27 Dec 2021	737	1	<2	<2	<2	1.00	15.4	84.76	7.8	33.45	8.0
A1	27 Dec 2021	737	12	<2	<2	<2	1.00	15.4	84.82	7.8	33.45	8.0
A1	27 Dec 2021	737	18	<2	<2	<2	1.00	15.3	84.61	7.7	33.45	8.0
A6	08 Dec 2021	819	1	<2	<2	<2	1.00	16.6	83.85	7.8	33.52	8.0
A6	08 Dec 2021	819	12	10e	<2	<2	0.20	16.5	84.57	7.5	33.53	8.0
A6	08 Dec 2021	819	18	<20	<2	<2	0.10	15.6	85.78	6.8	33.53	7.9
A6	17 Dec 2021	831	1	12e	4e	<2	0.33	15.2	77.81	7.4	33.40	7.9
A6	17 Dec 2021	831	12	8e	4e	2e	0.50	15.2	77.82	7.4	33.41	7.9
A6	17 Dec 2021	831	18	8e	<2	<2	0.25	15.0	78.87	6.8	33.48	7.9
A6	21 Dec 2021	820	1	<2	<2	<2	1.00	15.3	83.38	7.8	33.51	8.0
A6	21 Dec 2021	820	12	4e	2e	<2	0.50	14.5	84.29	6.9	33.49	7.9
A6	21 Dec 2021	820	18	40	6e	4e	0.15	12.7	85.46	5.4	33.51	7.8
A6	27 Dec 2021	801	1	<2	<2	4e	1.00	15.2	83.46	7.8	33.44	8.0
A6	27 Dec 2021	801	12	<20	<2	<2	0.10	15.3	83.74	7.8	33.45	8.0
A6	27 Dec 2021	801	18	2e	<2	<2	1.00	15.2	84.14	7.6	33.45	8.0
A7	08 Dec 2021	808	1	<2	<2	<2	1.00	16.8	85.05	7.8	33.52	8.0
A7	08 Dec 2021	808	12	2e	<2	<2	1.00	16.2	85.46	7.3	33.53	7.9
A7	08 Dec 2021	808	18	20e	8e	4e	0.40	14.7	85.80	6.6	33.52	7.8
A7	17 Dec 2021	849	1	2e	<2	48	1.00	15.1	80.39	7.3	33.45	7.9
A7	17 Dec 2021	849	12	10e	<2	<2	0.20	14.5	82.17	6.5	33.47	7.9
A7	17 Dec 2021	849	18	36e	4e	6e	0.11	14.1	81.72	6.2	33.48	7.8
A7	21 Dec 2021	838	1	<2	<2	<2	1.00	15.3	83.66	7.9	33.50	8.0
A7	21 Dec 2021	838	12	8e	<2	2e	0.25	14.4	84.28	6.9	33.51	7.9
A7	21 Dec 2021	838	18	36e	4e	2e	0.11	12.9	85.68	5.6	33.51	7.8
A7	27 Dec 2021	749	1	<2	<2	<2	1.00	15.4	84.29	7.8	33.45	8.0
A7	27 Dec 2021	749	12	2e	<2	<2	1.00	15.3	84.47	7.7	33.45	8.0
A7	27 Dec 2021	749	18	<20	<2	<2	0.10	15.2	83.78	7.7	33.45	8.0
C4	08 Dec 2021	926	1	<2	<2	<2	1.00	16.4	81.00	8.0	33.52	8.0
C4	08 Dec 2021	926	3	<2	<2	<2	1.00	16.4	80.87	8.0	33.52	8.0
C4	08 Dec 2021	926	9	<2	<2	<2	1.00	16.1	84.26	7.5	33.53	8.0

Station	Date	Time	Depth	Total	Fecal	Enteric	F:T	Temp	XMS	DO	Sal	pH
C4	17 Dec 2021	1013	1	<2	<2	2e	1.00	15.1	77.37	7.2	33.47	7.9
C4	17 Dec 2021	1013	3	<2	<2	<2	1.00	15.1	77.33	7.2	33.47	7.9
C4	17 Dec 2021	1013	9	<2	<2	<2	1.00	15.0	67.66	7.2	33.49	7.9
C4	21 Dec 2021	931	1	<2	<2	<2	1.00	15.1	83.14	7.3	33.47	8.0
C4	21 Dec 2021	931	3	<2	<2	<2	1.00	15.1	82.96	7.2	33.47	8.0
C4	21 Dec 2021	931	9	2e	<2	<2	1.00	14.9	83.79	6.7	33.49	7.9
C4	27 Dec 2021	904	1	<20	<2	<2	0.10	14.9	77.41	7.6	33.44	7.9
C4	27 Dec 2021	904	3	<2	<2	<2	1.00	14.9	77.01	7.6	33.44	8.0
C4	27 Dec 2021	904	9	<2	2e	<2	1.00	14.9	76.32	7.5	33.44	8.0
C5	08 Dec 2021	916	1	2e	<2	<2	1.00	16.7	83.59	7.8	33.52	8.0
C5	08 Dec 2021	916	3	<2	<2	<2	1.00	16.6	83.63	7.8	33.52	8.0
C5	08 Dec 2021	916	9	<2	<2	<2	1.00	16.4	83.78	7.6	33.54	8.0
C5	17 Dec 2021	1003	1	2e	<2	<2	1.00	15.1	78.28	7.1	33.46	7.9
C5	17 Dec 2021	1003	3	<2	<2	<2	1.00	15.0	76.99	7.2	33.47	7.9
C5	17 Dec 2021	1003	9	<2	<2	<2	1.00	14.9	61.74	7.2	33.47	7.9
C5	21 Dec 2021	921	1	<2	<2	<2	1.00	15.1	83.20	7.5	33.47	8.0
C5	21 Dec 2021	921	3	<2	<2	<2	1.00	15.1	82.95	7.4	33.47	8.0
C5	21 Dec 2021	921	9	<2	<2	<2	1.00	15.1	83.00	7.4	33.47	8.0
C5	27 Dec 2021	852	1	<2	<2	<2	1.00	15.1	79.52	7.6	33.45	8.0
C5	27 Dec 2021	852	3	<2	<2	<2	1.00	15.1	79.15	7.6	33.45	8.0
C5	27 Dec 2021	852	9	<2	<2	<2	1.00	15.0	78.13	7.6	33.45	8.0
C6	08 Dec 2021	906	1	<2	<2	<2	1.00	16.6	84.31	7.8	33.52	8.0
C6	08 Dec 2021	906	3	<2	<2	<2	1.00	16.6	84.37	7.8	33.52	8.0
C6	08 Dec 2021	906	9	<2	<2	<2	1.00	16.4	82.73	7.4	33.52	8.0
C6	17 Dec 2021	952	1	6e	2e	<2	0.33	15.1	71.42	7.1	33.39	7.9
C6	17 Dec 2021	952	3	8e	2e	<2	0.25	15.1	71.32	7.1	33.39	7.9
C6	17 Dec 2021	952	9	<2	2e	<2	1.00	15.0	61.23	6.3	33.45	7.8
C6	21 Dec 2021	910	1	<2	<2	<2	1.00	15.1	82.28	7.7	33.46	8.0
C6	21 Dec 2021	910	3	4e	2e	<2	0.50	15.1	82.28	7.6	33.46	8.0
C6	21 Dec 2021	910	9	<2	<2	<2	1.00	15.0	83.15	7.2	33.47	8.0
C6	27 Dec 2021	843	1	<2	<2	<2	1.00	15.0	80.99	7.8	33.45	8.0
C6	27 Dec 2021	843	3	<2	<2	<2	1.00	15.0	81.27	7.8	33.46	8.0
C6	27 Dec 2021	843	9	<2	<2	<2	1.00	15.0	80.78	7.7	33.46	8.0
C7	08 Dec 2021	834	1	<2	<2	<2	1.00	16.8	85.19	7.7	33.54	8.0
C7	08 Dec 2021	834	12	<2	<2	<2	1.00	16.8	85.01	7.7	33.55	8.0
C7	08 Dec 2021	834	18	16e	2e	<2	0.12	15.3	85.09	6.6	33.53	7.9
C7	17 Dec 2021	914	1	2e	<2	<2	1.00	15.5	81.06	7.6	33.46	8.0
C7	17 Dec 2021	914	12	2e	2e	<2	1.00	15.4	81.80	7.4	33.48	8.0
C7	17 Dec 2021	914	18	4e	2e	<2	0.50	14.9	80.30	6.8	33.50	7.9
C7	21 Dec 2021	838	1	<2	<2	<2	1.00	15.1	81.54	8.0	33.47	8.0
C7	21 Dec 2021	838	12	<2	<2	<2	1.00	15.1	81.67	7.7	33.47	8.0
C7	21 Dec 2021	838	18	4e	<2	<2	0.50	14.3	82.53	6.5	33.49	7.9
C7	27 Dec 2021	813	1	<2	<2	<2	1.00	15.2	82.12	7.8	33.43	8.0
C7	27 Dec 2021	813	12	<2	<2	<2	1.00	15.2	83.09	7.7	33.44	8.0
C7	27 Dec 2021	813	18	2e	<2	2e	1.00	14.9	79.10	7.2	33.45	7.9

Station	Date	Time	Depth	Total	Fecal	Enteric	F:T	Temp	XMS	DO	Sal	pH
C8	08 Dec 2021	845	1	<2	<2	<2	1.00	16.6	83.78	7.8	33.53	8.0
C8	08 Dec 2021	845	12	<2	<2	<2	1.00	16.4	84.55	7.5	33.53	8.0
C8	08 Dec 2021	845	18	2e	<2	<2	1.00	15.8	84.00	7.2	33.54	7.9
C8	17 Dec 2021	931	1	4e	<2	<2	0.50	15.5	83.69	7.7	33.43	8.0
C8	17 Dec 2021	931	12	<2	<2	<2	1.00	15.6	85.83	7.7	33.47	8.0
C8	17 Dec 2021	931	18	<2	<2	2e	1.00	15.3	85.38	7.3	33.47	8.0
C8	21 Dec 2021	850	1	<2	<2	<2	1.00	15.1	81.78	7.8	33.48	8.0
C8	21 Dec 2021	850	12	<2	<2	<2	1.00	14.9	82.95	7.4	33.49	8.0
C8	21 Dec 2021	850	18	60e	6e	2e	0.10	13.3	84.80	5.7	33.55	7.8
C8	27 Dec 2021	824	1	10e	<2	4e	0.20	15.2	81.70	7.9	33.41	8.0
C8	27 Dec 2021	824	12	40e	<2	<2	0.05	15.1	81.18	7.9	33.41	8.0
C8	27 Dec 2021	824	18	4e	<2	<2	0.50	15.0	83.80	7.5	33.47	8.0

ns = not sampled

ND = no data

Table 3.9

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

Station	Date	Parameter	Value
A1	08 Dec 2021	Depth (m)	18
A1	08 Dec 2021	Arrive Time	755
A1	08 Dec 2021	Depart Time	757
A1	08 Dec 2021	Air Temp (C)	14.6
A1	08 Dec 2021	Weather	Partly Cloudy
A1	08 Dec 2021	Visibility (mi)	9
A1	08 Dec 2021	Wind Speed (kts)	4.4
A1	08 Dec 2021	Wind Dir	E
A1	08 Dec 2021	Water Color	Blue
A1	08 Dec 2021	Wave Ht Low (ft)	2
A1	08 Dec 2021	Wave Period (sec)	6
A1	08 Dec 2021	Sea State	Calm
A1	08 Dec 2021	High Tide (ft)	5.58
A1	08 Dec 2021	High Tide Time	1906
A1	08 Dec 2021	Low Tide (ft)	-0.59
A1	08 Dec 2021	Low Tide Time	248
A1	08 Dec 2021	Comments	Kelp; Lobster Floats
A1	17 Dec 2021	Depth (m)	19
A1	17 Dec 2021	Arrive Time	806
A1	17 Dec 2021	Depart Time	808
A1	17 Dec 2021	Air Temp (C)	13.1
A1	17 Dec 2021	Weather	Clear
A1	17 Dec 2021	Visibility (mi)	10
A1	17 Dec 2021	Wind Speed (kts)	5
A1	17 Dec 2021	Wind Dir	E
A1	17 Dec 2021	Water Color	Blueish-Green
A1	17 Dec 2021	Wave Ht Low (ft)	4.6
A1	17 Dec 2021	Wave Period (sec)	13
A1	17 Dec 2021	Sea State	Calm
A1	17 Dec 2021	High Tide (ft)	5.77
A1	17 Dec 2021	High Tide Time	1506
A1	17 Dec 2021	Low Tide (ft)	-0.46
A1	17 Dec 2021	Low Tide Time	2224
A1	17 Dec 2021	Comments	Kelp; Lobster Floats
A1	21 Dec 2021	Depth (m)	19
A1	21 Dec 2021	Arrive Time	756
A1	21 Dec 2021	Depart Time	802
A1	21 Dec 2021	Air Temp (C)	14.6
A1	21 Dec 2021	Weather	Overcast
A1	21 Dec 2021	Visibility (mi)	10
A1	21 Dec 2021	Wind Speed (kts)	2.8
A1	21 Dec 2021	Wind Dir	NE
A1	21 Dec 2021	Water Color	Blue
A1	21 Dec 2021	Wave Ht Low (ft)	2.3
A1	21 Dec 2021	Wave Period (sec)	15
A1	21 Dec 2021	Sea State	Calm
A1	21 Dec 2021	High Tide (ft)	5.68
A1	21 Dec 2021	High Tide Time	1712
A1	21 Dec 2021	Low Tide (ft)	-0.46
A1	21 Dec 2021	Low Tide Time	48
A1	21 Dec 2021	Comments	Missed 1m bin, downcast starts 1.7m; Kelp Debris
A1	27 Dec 2021	Depth (m)	17
A1	27 Dec 2021	Arrive Time	736

Station	Date	Parameter	Value
A1	27 Dec 2021	Depart Time	741
A1	27 Dec 2021	Air Temp (C)	10.8
A1	27 Dec 2021	Weather	Overcast
A1	27 Dec 2021	Visibility (mi)	10
A1	27 Dec 2021	Wind Speed (kts)	8.9
A1	27 Dec 2021	Wind Dir	E
A1	27 Dec 2021	Water Color	Blue
A1	27 Dec 2021	Wave Ht Low (ft)	4.6
A1	27 Dec 2021	Wave Period (sec)	12
A1	27 Dec 2021	Sea State	Light Chop
A1	27 Dec 2021	High Tide (ft)	4.36
A1	27 Dec 2021	High Tide Time	1130
A1	27 Dec 2021	Low Tide (ft)	1.12
A1	27 Dec 2021	Low Tide Time	506
A1	27 Dec 2021	Comments	Kelp; Lobster Floats
A6	08 Dec 2021	Depth (m)	20
A6	08 Dec 2021	Arrive Time	819
A6	08 Dec 2021	Depart Time	822
A6	08 Dec 2021	Air Temp (C)	14.9
A6	08 Dec 2021	Weather	Partly Cloudy
A6	08 Dec 2021	Visibility (mi)	9
A6	08 Dec 2021	Wind Speed (kts)	7.4
A6	08 Dec 2021	Wind Dir	E
A6	08 Dec 2021	Water Color	Blue
A6	08 Dec 2021	Wave Ht Low (ft)	2
A6	08 Dec 2021	Wave Period (sec)	6
A6	08 Dec 2021	Sea State	Calm
A6	08 Dec 2021	High Tide (ft)	5.58
A6	08 Dec 2021	High Tide Time	1906
A6	08 Dec 2021	Low Tide (ft)	-0.59
A6	08 Dec 2021	Low Tide Time	248
A6	08 Dec 2021	Comments	Kelp; Lobster Floats
A6	17 Dec 2021	Depth (m)	16
A6	17 Dec 2021	Arrive Time	831
A6	17 Dec 2021	Depart Time	844
A6	17 Dec 2021	Air Temp (C)	13.5
A6	17 Dec 2021	Weather	Clear
A6	17 Dec 2021	Visibility (mi)	10
A6	17 Dec 2021	Wind Speed (kts)	0.8
A6	17 Dec 2021	Wind Dir	NE
A6	17 Dec 2021	Water Color	Blueish-Green
A6	17 Dec 2021	Wave Ht Low (ft)	4.6
A6	17 Dec 2021	Wave Period (sec)	13
A6	17 Dec 2021	Sea State	Light Chop
A6	17 Dec 2021	High Tide (ft)	5.77
A6	17 Dec 2021	High Tide Time	1506
A6	17 Dec 2021	Low Tide (ft)	-0.46
A6	17 Dec 2021	Low Tide Time	2224
A6	17 Dec 2021	Comments	Kelp; Lobster Floats
A6	21 Dec 2021	Depth (m)	19
A6	21 Dec 2021	Arrive Time	820
A6	21 Dec 2021	Depart Time	828
A6	21 Dec 2021	Air Temp (C)	14.5
A6	21 Dec 2021	Weather	Overcast
A6	21 Dec 2021	Visibility (mi)	10
A6	21 Dec 2021	Wind Speed (kts)	3.2
A6	21 Dec 2021	Wind Dir	E
A6	21 Dec 2021	Water Color	Blue

Station	Date	Parameter	Value
A6	21 Dec 2021	Wave Ht Low (ft)	2.3
A6	21 Dec 2021	Wave Period (sec)	15
A6	21 Dec 2021	Sea State	Calm
A6	21 Dec 2021	High Tide (ft)	5.68
A6	21 Dec 2021	High Tide Time	1712
A6	21 Dec 2021	Low Tide (ft)	-0.46
A6	21 Dec 2021	Low Tide Time	48
A6	21 Dec 2021	Comments	none
A6	27 Dec 2021	Depth (m)	1
A6	27 Dec 2021	Arrive Time	801
A6	27 Dec 2021	Depart Time	803
A6	27 Dec 2021	Air Temp (C)	10.5
A6	27 Dec 2021	Weather	Overcast
A6	27 Dec 2021	Visibility (mi)	10
A6	27 Dec 2021	Wind Speed (kts)	6.2
A6	27 Dec 2021	Wind Dir	SE
A6	27 Dec 2021	Water Color	Blue
A6	27 Dec 2021	Wave Ht Low (ft)	4.6
A6	27 Dec 2021	Wave Period (sec)	12
A6	27 Dec 2021	Sea State	Light Chop
A6	27 Dec 2021	High Tide (ft)	4.36
A6	27 Dec 2021	High Tide Time	1130
A6	27 Dec 2021	Low Tide (ft)	1.12
A6	27 Dec 2021	Low Tide Time	506
A6	27 Dec 2021	Comments	Kelp; Lobster Floats
A7	08 Dec 2021	Depth (m)	18
A7	08 Dec 2021	Arrive Time	808
A7	08 Dec 2021	Depart Time	811
A7	08 Dec 2021	Air Temp (C)	14.9
A7	08 Dec 2021	Weather	Partly Cloudy
A7	08 Dec 2021	Visibility (mi)	9
A7	08 Dec 2021	Wind Speed (kts)	6.6
A7	08 Dec 2021	Wind Dir	NE
A7	08 Dec 2021	Water Color	Blue
A7	08 Dec 2021	Wave Ht Low (ft)	2
A7	08 Dec 2021	Wave Period (sec)	6
A7	08 Dec 2021	Sea State	Calm
A7	08 Dec 2021	High Tide (ft)	5.58
A7	08 Dec 2021	High Tide Time	1906
A7	08 Dec 2021	Low Tide (ft)	-0.59
A7	08 Dec 2021	Low Tide Time	248
A7	08 Dec 2021	Comments	Kelp; Lobster Floats
A7	17 Dec 2021	Depth (m)	19
A7	17 Dec 2021	Arrive Time	849
A7	17 Dec 2021	Depart Time	854
A7	17 Dec 2021	Air Temp (C)	13.9
A7	17 Dec 2021	Weather	Clear
A7	17 Dec 2021	Visibility (mi)	10
A7	17 Dec 2021	Wind Speed (kts)	7.7
A7	17 Dec 2021	Wind Dir	NW
A7	17 Dec 2021	Water Color	Blueish-Green
A7	17 Dec 2021	Wave Ht Low (ft)	4.6
A7	17 Dec 2021	Wave Period (sec)	13
A7	17 Dec 2021	Sea State	Calm
A7	17 Dec 2021	High Tide (ft)	5.77
A7	17 Dec 2021	High Tide Time	1506
A7	17 Dec 2021	Low Tide (ft)	-0.46
A7	17 Dec 2021	Low Tide Time	2224

Station	Date	Parameter	Value
A7	17 Dec 2021	Comments	Bacti Sample Collected; Kelp; Lobster Floats
A7	21 Dec 2021	Depth (m)	20
A7	21 Dec 2021	Arrive Time	808
A7	21 Dec 2021	Depart Time	812
A7	21 Dec 2021	Air Temp (C)	15
A7	21 Dec 2021	Weather	Overcast
A7	21 Dec 2021	Visibility (mi)	10
A7	21 Dec 2021	Wind Speed (kts)	1.4
A7	21 Dec 2021	Wind Dir	N
A7	21 Dec 2021	Water Color	Blue
A7	21 Dec 2021	Wave Ht Low (ft)	2.3
A7	21 Dec 2021	Wave Period (sec)	15
A7	21 Dec 2021	Sea State	Calm
A7	21 Dec 2021	High Tide (ft)	5.68
A7	21 Dec 2021	High Tide Time	1712
A7	21 Dec 2021	Low Tide (ft)	-0.46
A7	21 Dec 2021	Low Tide Time	48
A7	21 Dec 2021	Comments	Kelp
A7	27 Dec 2021	Depth (m)	19
A7	27 Dec 2021	Arrive Time	749
A7	27 Dec 2021	Depart Time	751
A7	27 Dec 2021	Air Temp (C)	10.4
A7	27 Dec 2021	Weather	Overcast
A7	27 Dec 2021	Visibility (mi)	10
A7	27 Dec 2021	Wind Speed (kts)	7.4
A7	27 Dec 2021	Wind Dir	SE
A7	27 Dec 2021	Water Color	Blue
A7	27 Dec 2021	Wave Ht Low (ft)	4.6
A7	27 Dec 2021	Wave Period (sec)	12
A7	27 Dec 2021	Sea State	Light Chop
A7	27 Dec 2021	High Tide (ft)	4.36
A7	27 Dec 2021	High Tide Time	1130
A7	27 Dec 2021	Low Tide (ft)	1.12
A7	27 Dec 2021	Low Tide Time	506
A7	27 Dec 2021	Comments	Kelp; Lobster Floats
C4	08 Dec 2021	Depth (m)	10
C4	08 Dec 2021	Arrive Time	926
C4	08 Dec 2021	Depart Time	928
C4	08 Dec 2021	Air Temp (C)	14.6
C4	08 Dec 2021	Weather	Partly Cloudy
C4	08 Dec 2021	Visibility (mi)	9
C4	08 Dec 2021	Wind Speed (kts)	5.5
C4	08 Dec 2021	Wind Dir	SE
C4	08 Dec 2021	Water Color	Greenish-Blue
C4	08 Dec 2021	Wave Ht Low (ft)	2
C4	08 Dec 2021	Wave Period (sec)	6
C4	08 Dec 2021	Sea State	Calm
C4	08 Dec 2021	High Tide (ft)	5.58
C4	08 Dec 2021	High Tide Time	1906
C4	08 Dec 2021	Low Tide (ft)	-0.59
C4	08 Dec 2021	Low Tide Time	248
C4	08 Dec 2021	Comments	none
C4	17 Dec 2021	Depth (m)	11
C4	17 Dec 2021	Arrive Time	1013
C4	17 Dec 2021	Depart Time	1018
C4	17 Dec 2021	Air Temp (C)	14.2
C4	17 Dec 2021	Weather	Clear

Station	Date	Parameter	Value
C4	17 Dec 2021	Visibility (mi)	10
C4	17 Dec 2021	Wind Speed (kts)	5.1
C4	17 Dec 2021	Wind Dir	N
C4	17 Dec 2021	Water Color	Blueish-Green
C4	17 Dec 2021	Wave Ht Low (ft)	4.6
C4	17 Dec 2021	Wave Period (sec)	13
C4	17 Dec 2021	Sea State	Calm
C4	17 Dec 2021	High Tide (ft)	5.77
C4	17 Dec 2021	High Tide Time	1506
C4	17 Dec 2021	Low Tide (ft)	-0.46
C4	17 Dec 2021	Low Tide Time	2224
C4	17 Dec 2021	Comments	Kelp; Kelp Debris; Lobster Floats
C4	21 Dec 2021	Depth (m)	11
C4	21 Dec 2021	Arrive Time	931
C4	21 Dec 2021	Depart Time	936
C4	21 Dec 2021	Air Temp (C)	14.7
C4	21 Dec 2021	Weather	Overcast
C4	21 Dec 2021	Visibility (mi)	10
C4	21 Dec 2021	Wind Speed (kts)	2.8
C4	21 Dec 2021	Wind Dir	N
C4	21 Dec 2021	Water Color	Blue
C4	21 Dec 2021	Wave Ht Low (ft)	2.3
C4	21 Dec 2021	Wave Period (sec)	15
C4	21 Dec 2021	Sea State	Calm
C4	21 Dec 2021	High Tide (ft)	5.68
C4	21 Dec 2021	High Tide Time	1712
C4	21 Dec 2021	Low Tide (ft)	-0.46
C4	21 Dec 2021	Low Tide Time	48
C4	21 Dec 2021	Comments	none
C4	27 Dec 2021	Depth (m)	11
C4	27 Dec 2021	Arrive Time	904
C4	27 Dec 2021	Depart Time	904
C4	27 Dec 2021	Air Temp (C)	10.9
C4	27 Dec 2021	Weather	Overcast
C4	27 Dec 2021	Visibility (mi)	10
C4	27 Dec 2021	Wind Speed (kts)	9.9
C4	27 Dec 2021	Wind Dir	E
C4	27 Dec 2021	Water Color	Blue
C4	27 Dec 2021	Wave Ht Low (ft)	4.6
C4	27 Dec 2021	Wave Period (sec)	12
C4	27 Dec 2021	Sea State	Light Chop
C4	27 Dec 2021	High Tide (ft)	4.36
C4	27 Dec 2021	High Tide Time	1130
C4	27 Dec 2021	Low Tide (ft)	1.12
C4	27 Dec 2021	Low Tide Time	506
C4	27 Dec 2021	Comments	Kelp; Lobster Floats
C5	08 Dec 2021	Depth (m)	10
C5	08 Dec 2021	Arrive Time	916
C5	08 Dec 2021	Depart Time	917
C5	08 Dec 2021	Air Temp (C)	16.3
C5	08 Dec 2021	Weather	Partly Cloudy
C5	08 Dec 2021	Visibility (mi)	9
C5	08 Dec 2021	Wind Speed (kts)	6.3
C5	08 Dec 2021	Wind Dir	E
C5	08 Dec 2021	Water Color	Greenish-Blue
C5	08 Dec 2021	Wave Ht Low (ft)	2
C5	08 Dec 2021	Wave Period (sec)	6
C5	08 Dec 2021	Sea State	Calm

Station	Date	Parameter	Value
C5	08 Dec 2021	High Tide (ft)	5.58
C5	08 Dec 2021	High Tide Time	1906
C5	08 Dec 2021	Low Tide (ft)	-0.59
C5	08 Dec 2021	Low Tide Time	248
C5	08 Dec 2021	Comments	none
C5	17 Dec 2021	Depth (m)	10
C5	17 Dec 2021	Arrive Time	1003
C5	17 Dec 2021	Depart Time	1008
C5	17 Dec 2021	Air Temp (C)	14.1
C5	17 Dec 2021	Weather	Clear
C5	17 Dec 2021	Visibility (mi)	10
C5	17 Dec 2021	Wind Speed (kts)	1.9
C5	17 Dec 2021	Wind Dir	NW
C5	17 Dec 2021	Water Color	Green
C5	17 Dec 2021	Wave Ht Low (ft)	4.6
C5	17 Dec 2021	Wave Period (sec)	13
C5	17 Dec 2021	Sea State	Calm
C5	17 Dec 2021	High Tide (ft)	5.77
C5	17 Dec 2021	High Tide Time	1506
C5	17 Dec 2021	Low Tide (ft)	-0.46
C5	17 Dec 2021	Low Tide Time	2224
C5	17 Dec 2021	Comments	Kelp Debris in Water Column; Kelp; Kelp Debris; Lobster Floats
C5	21 Dec 2021	Depth (m)	10
C5	21 Dec 2021	Arrive Time	921
C5	21 Dec 2021	Depart Time	924
C5	21 Dec 2021	Air Temp (C)	14.5
C5	21 Dec 2021	Weather	Overcast
C5	21 Dec 2021	Visibility (mi)	10
C5	21 Dec 2021	Wind Speed (kts)	5.5
C5	21 Dec 2021	Wind Dir	NW
C5	21 Dec 2021	Water Color	Blue
C5	21 Dec 2021	Wave Ht Low (ft)	2.3
C5	21 Dec 2021	Wave Period (sec)	15
C5	21 Dec 2021	Sea State	Calm
C5	21 Dec 2021	High Tide (ft)	5.68
C5	21 Dec 2021	High Tide Time	1712
C5	21 Dec 2021	Low Tide (ft)	-0.46
C5	21 Dec 2021	Low Tide Time	48
C5	21 Dec 2021	Comments	Kelp
C5	27 Dec 2021	Depth (m)	11
C5	27 Dec 2021	Arrive Time	852
C5	27 Dec 2021	Depart Time	855
C5	27 Dec 2021	Air Temp (C)	10.7
C5	27 Dec 2021	Weather	Overcast
C5	27 Dec 2021	Visibility (mi)	10
C5	27 Dec 2021	Wind Speed (kts)	7.1
C5	27 Dec 2021	Wind Dir	E
C5	27 Dec 2021	Water Color	Blue
C5	27 Dec 2021	Wave Ht Low (ft)	4.6
C5	27 Dec 2021	Wave Period (sec)	12
C5	27 Dec 2021	Sea State	Light Chop
C5	27 Dec 2021	High Tide (ft)	4.36
C5	27 Dec 2021	High Tide Time	1130
C5	27 Dec 2021	Low Tide (ft)	1.12
C5	27 Dec 2021	Low Tide Time	506
C5	27 Dec 2021	Comments	Kelp; Lobster Floats

Station	Date	Parameter	Value
C6	08 Dec 2021	Depth (m)	8
C6	08 Dec 2021	Arrive Time	906
C6	08 Dec 2021	Depart Time	907
C6	08 Dec 2021	Air Temp (C)	16.1
C6	08 Dec 2021	Weather	Partly Cloudy
C6	08 Dec 2021	Visibility (mi)	9
C6	08 Dec 2021	Wind Speed (kts)	4.9
C6	08 Dec 2021	Wind Dir	E
C6	08 Dec 2021	Water Color	Greenish-Blue
C6	08 Dec 2021	Wave Ht Low (ft)	2
C6	08 Dec 2021	Wave Period (sec)	6
C6	08 Dec 2021	Sea State	Calm
C6	08 Dec 2021	High Tide (ft)	5.58
C6	08 Dec 2021	High Tide Time	1906
C6	08 Dec 2021	Low Tide (ft)	-0.59
C6	08 Dec 2021	Low Tide Time	248
C6	08 Dec 2021	Comments	none
C6	17 Dec 2021	Depth (m)	1
C6	17 Dec 2021	Arrive Time	952
C6	17 Dec 2021	Depart Time	957
C6	17 Dec 2021	Air Temp (C)	13.7
C6	17 Dec 2021	Weather	Clear
C6	17 Dec 2021	Visibility (mi)	10
C6	17 Dec 2021	Wind Speed (kts)	5.3
C6	17 Dec 2021	Wind Dir	N
C6	17 Dec 2021	Water Color	Green
C6	17 Dec 2021	Wave Ht Low (ft)	4.6
C6	17 Dec 2021	Wave Period (sec)	13
C6	17 Dec 2021	Sea State	Calm
C6	17 Dec 2021	High Tide (ft)	5.77
C6	17 Dec 2021	High Tide Time	1506
C6	17 Dec 2021	Low Tide (ft)	-0.46
C6	17 Dec 2021	Low Tide Time	2224
C6	17 Dec 2021	Comments	Kelp; Kelp Debris
C6	21 Dec 2021	Depth (m)	10
C6	21 Dec 2021	Arrive Time	910
C6	21 Dec 2021	Depart Time	914
C6	21 Dec 2021	Air Temp (C)	14.5
C6	21 Dec 2021	Weather	Overcast
C6	21 Dec 2021	Visibility (mi)	10
C6	21 Dec 2021	Wind Speed (kts)	1.6
C6	21 Dec 2021	Wind Dir	N
C6	21 Dec 2021	Water Color	Blue
C6	21 Dec 2021	Wave Ht Low (ft)	2.3
C6	21 Dec 2021	Wave Period (sec)	15
C6	21 Dec 2021	Sea State	Calm
C6	21 Dec 2021	High Tide (ft)	5.68
C6	21 Dec 2021	High Tide Time	1712
C6	21 Dec 2021	Low Tide (ft)	-0.46
C6	21 Dec 2021	Low Tide Time	48
C6	21 Dec 2021	Comments	Kelp Debris
C6	27 Dec 2021	Depth (m)	9
C6	27 Dec 2021	Arrive Time	843
C6	27 Dec 2021	Depart Time	845
C6	27 Dec 2021	Air Temp (C)	10.9
C6	27 Dec 2021	Weather	Overcast
C6	27 Dec 2021	Visibility (mi)	10
C6	27 Dec 2021	Wind Speed (kts)	8.6

Station	Date	Parameter	Value
C6	27 Dec 2021	Wind Dir	E
C6	27 Dec 2021	Water Color	Blue
C6	27 Dec 2021	Wave Ht Low (ft)	4.6
C6	27 Dec 2021	Wave Period (sec)	12
C6	27 Dec 2021	Sea State	Light Chop
C6	27 Dec 2021	High Tide (ft)	4.36
C6	27 Dec 2021	High Tide Time	1130
C6	27 Dec 2021	Low Tide (ft)	1.12
C6	27 Dec 2021	Low Tide Time	506
C6	27 Dec 2021	Comments	Kelp; Lobster Floats
C7	08 Dec 2021	Depth (m)	18
C7	08 Dec 2021	Arrive Time	834
C7	08 Dec 2021	Depart Time	836
C7	08 Dec 2021	Air Temp (C)	15.2
C7	08 Dec 2021	Weather	Partly Cloudy
C7	08 Dec 2021	Visibility (mi)	9
C7	08 Dec 2021	Wind Speed (kts)	5.7
C7	08 Dec 2021	Wind Dir	E
C7	08 Dec 2021	Water Color	Blue
C7	08 Dec 2021	Wave Ht Low (ft)	2
C7	08 Dec 2021	Wave Period (sec)	6
C7	08 Dec 2021	Sea State	Calm
C7	08 Dec 2021	High Tide (ft)	5.58
C7	08 Dec 2021	High Tide Time	1906
C7	08 Dec 2021	Low Tide (ft)	-0.59
C7	08 Dec 2021	Low Tide Time	248
C7	08 Dec 2021	Comments	Kelp; Lobster Floats
C7	17 Dec 2021	Depth (m)	19
C7	17 Dec 2021	Arrive Time	914
C7	17 Dec 2021	Depart Time	915
C7	17 Dec 2021	Air Temp (C)	13.2
C7	17 Dec 2021	Weather	Clear
C7	17 Dec 2021	Visibility (mi)	10
C7	17 Dec 2021	Wind Speed (kts)	3.2
C7	17 Dec 2021	Wind Dir	NE
C7	17 Dec 2021	Water Color	Blueish-Green
C7	17 Dec 2021	Wave Ht Low (ft)	4.6
C7	17 Dec 2021	Wave Period (sec)	13
C7	17 Dec 2021	Sea State	Calm
C7	17 Dec 2021	High Tide (ft)	5.77
C7	17 Dec 2021	High Tide Time	1506
C7	17 Dec 2021	Low Tide (ft)	-0.46
C7	17 Dec 2021	Low Tide Time	2224
C7	17 Dec 2021	Comments	none
C7	21 Dec 2021	Depth (m)	19
C7	21 Dec 2021	Arrive Time	838
C7	21 Dec 2021	Depart Time	842
C7	21 Dec 2021	Air Temp (C)	14.5
C7	21 Dec 2021	Weather	Overcast
C7	21 Dec 2021	Visibility (mi)	10
C7	21 Dec 2021	Wind Speed (kts)	2.4
C7	21 Dec 2021	Wind Dir	N
C7	21 Dec 2021	Water Color	Blue
C7	21 Dec 2021	Wave Ht Low (ft)	2.3
C7	21 Dec 2021	Wave Period (sec)	15
C7	21 Dec 2021	Sea State	Calm
C7	21 Dec 2021	High Tide (ft)	5.68
C7	21 Dec 2021	High Tide Time	1712

Station	Date	Parameter	Value
C7	21 Dec 2021	Low Tide (ft)	-0.46
C7	21 Dec 2021	Low Tide Time	48
C7	21 Dec 2021	Comments	Kelp Debris
C7	27 Dec 2021	Depth (m)	18
C7	27 Dec 2021	Arrive Time	813
C7	27 Dec 2021	Depart Time	815
C7	27 Dec 2021	Air Temp (C)	10.7
C7	27 Dec 2021	Weather	Overcast
C7	27 Dec 2021	Visibility (mi)	10
C7	27 Dec 2021	Wind Speed (kts)	5.3
C7	27 Dec 2021	Wind Dir	SE
C7	27 Dec 2021	Water Color	Blue
C7	27 Dec 2021	Wave Ht Low (ft)	4.6
C7	27 Dec 2021	Wave Period (sec)	12
C7	27 Dec 2021	Sea State	Light Chop
C7	27 Dec 2021	High Tide (ft)	4.36
C7	27 Dec 2021	High Tide Time	1130
C7	27 Dec 2021	Low Tide (ft)	1.12
C7	27 Dec 2021	Low Tide Time	506
C7	27 Dec 2021	Comments	Kelp; Lobster Floats
C8	08 Dec 2021	Depth (m)	20
C8	08 Dec 2021	Arrive Time	845
C8	08 Dec 2021	Depart Time	848
C8	08 Dec 2021	Air Temp (C)	15.6
C8	08 Dec 2021	Weather	Partly Cloudy
C8	08 Dec 2021	Visibility (mi)	9
C8	08 Dec 2021	Wind Speed (kts)	4.3
C8	08 Dec 2021	Wind Dir	E
C8	08 Dec 2021	Water Color	Greenish-Blue
C8	08 Dec 2021	Wave Ht Low (ft)	2
C8	08 Dec 2021	Wave Period (sec)	6
C8	08 Dec 2021	Sea State	Calm
C8	08 Dec 2021	High Tide (ft)	5.58
C8	08 Dec 2021	High Tide Time	1906
C8	08 Dec 2021	Low Tide (ft)	-0.59
C8	08 Dec 2021	Low Tide Time	248
C8	08 Dec 2021	Comments	Kelp
C8	17 Dec 2021	Depth (m)	20
C8	17 Dec 2021	Arrive Time	931
C8	17 Dec 2021	Depart Time	941
C8	17 Dec 2021	Air Temp (C)	13
C8	17 Dec 2021	Weather	Clear
C8	17 Dec 2021	Visibility (mi)	10
C8	17 Dec 2021	Wind Speed (kts)	6.1
C8	17 Dec 2021	Wind Dir	NE
C8	17 Dec 2021	Water Color	Blueish-Green
C8	17 Dec 2021	Wave Ht Low (ft)	4.6
C8	17 Dec 2021	Wave Period (sec)	13
C8	17 Dec 2021	Sea State	Calm
C8	17 Dec 2021	High Tide (ft)	5.77
C8	17 Dec 2021	High Tide Time	1506
C8	17 Dec 2021	Low Tide (ft)	-0.46
C8	17 Dec 2021	Low Tide Time	2224
C8	17 Dec 2021	Comments	none
C8	21 Dec 2021	Depth (m)	20
C8	21 Dec 2021	Arrive Time	850
C8	21 Dec 2021	Depart Time	854

Station	Date	Parameter	Value
C8	21 Dec 2021	Air Temp (C)	14
C8	21 Dec 2021	Weather	Overcast
C8	21 Dec 2021	Visibility (mi)	10
C8	21 Dec 2021	Wind Speed (kts)	3.2
C8	21 Dec 2021	Wind Dir	N
C8	21 Dec 2021	Water Color	Blue
C8	21 Dec 2021	Wave Ht Low (ft)	2.3
C8	21 Dec 2021	Wave Period (sec)	15
C8	21 Dec 2021	Sea State	Calm
C8	21 Dec 2021	High Tide (ft)	5.68
C8	21 Dec 2021	High Tide Time	1712
C8	21 Dec 2021	Low Tide (ft)	-0.46
C8	21 Dec 2021	Low Tide Time	48
C8	21 Dec 2021	Comments	none
C8	27 Dec 2021	Depth (m)	19
C8	27 Dec 2021	Arrive Time	824
C8	27 Dec 2021	Depart Time	826
C8	27 Dec 2021	Air Temp (C)	10.9
C8	27 Dec 2021	Weather	Overcast
C8	27 Dec 2021	Visibility (mi)	10
C8	27 Dec 2021	Wind Speed (kts)	6.7
C8	27 Dec 2021	Wind Dir	SE
C8	27 Dec 2021	Water Color	Blue
C8	27 Dec 2021	Wave Ht Low (ft)	4.6
C8	27 Dec 2021	Wave Period (sec)	12
C8	27 Dec 2021	Sea State	Light Chop
C8	27 Dec 2021	High Tide (ft)	4.36
C8	27 Dec 2021	High Tide Time	1130
C8	27 Dec 2021	Low Tide (ft)	1.12
C8	27 Dec 2021	Low Tide Time	506
C8	27 Dec 2021	Comments	Bird patch; Kelp; Lobster Floats

Table 3.10

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

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens ($\sigma\text{-t}$)	Chlor ($\mu\text{g/L}$)
A1	08 Dec 2021	1	16.75	85.63	7.7	33.52	7.9	24.4	0.85
A1	08 Dec 2021	2	16.76	84.70	7.7	33.52	7.9	24.4	0.86
A1	08 Dec 2021	3	16.76	85.69	7.7	33.52	7.9	24.4	0.87
A1	08 Dec 2021	4	16.76	85.71	7.7	33.52	7.9	24.4	0.90
A1	08 Dec 2021	5	16.76	85.68	7.7	33.52	7.9	24.4	0.86
A1	08 Dec 2021	6	16.76	85.63	7.7	33.52	7.9	24.4	0.92
A1	08 Dec 2021	7	16.76	85.68	7.7	33.53	7.9	24.4	0.95
A1	08 Dec 2021	8	16.70	85.69	7.6	33.54	7.9	24.5	0.95
A1	08 Dec 2021	9	16.46	85.48	7.6	33.54	7.9	24.5	0.91
A1	08 Dec 2021	10	16.34	85.25	7.5	33.53	7.9	24.5	0.91
A1	08 Dec 2021	11	16.28	85.32	7.4	33.52	7.9	24.5	0.83
A1	08 Dec 2021	12	16.25	85.31	7.3	33.51	7.9	24.5	0.76
A1	08 Dec 2021	13	16.09	85.32	7.3	33.53	7.9	24.6	0.76
A1	08 Dec 2021	14	15.96	85.39	7.1	33.52	7.9	24.6	0.70
A1	08 Dec 2021	15	15.80	85.54	7.0	33.52	7.9	24.7	0.66
A1	08 Dec 2021	16	15.51	85.68	6.9	33.53	7.9	24.7	0.60
A1	08 Dec 2021	17	14.91	85.78	6.7	33.58	7.8	24.9	0.55
A1	08 Dec 2021	18	14.43	85.86	6.5	33.52	7.8	24.9	0.55
A1	17 Dec 2021	1	15.05	82.96	7.2	33.47	7.9	24.8	0.53
A1	17 Dec 2021	2	15.05	83.21	7.2	33.47	7.9	24.8	0.55
A1	17 Dec 2021	3	15.06	82.59	7.2	33.47	7.9	24.8	0.68
A1	17 Dec 2021	4	15.06	82.68	7.2	33.47	7.9	24.8	0.56
A1	17 Dec 2021	5	15.06	83.22	7.2	33.47	7.9	24.8	0.58
A1	17 Dec 2021	6	15.06	83.28	7.2	33.47	7.9	24.8	0.58
A1	17 Dec 2021	7	15.00	83.24	7.1	33.48	7.9	24.8	0.61
A1	17 Dec 2021	8	14.96	83.26	7.1	33.47	7.9	24.8	0.59
A1	17 Dec 2021	9	14.89	82.94	7.0	33.48	7.9	24.8	0.59
A1	17 Dec 2021	10	14.79	82.96	6.9	33.48	7.9	24.8	0.56
A1	17 Dec 2021	11	14.81	83.14	6.9	33.46	7.9	24.8	0.51
A1	17 Dec 2021	12	14.74	83.21	6.8	33.48	7.9	24.9	0.48
A1	17 Dec 2021	13	14.68	83.17	6.8	33.47	7.8	24.9	0.48
A1	17 Dec 2021	14	14.58	83.61	6.7	33.48	7.8	24.9	0.48
A1	17 Dec 2021	15	14.48	84.22	6.6	33.49	7.8	24.9	0.45
A1	17 Dec 2021	16	14.09	84.52	6.4	33.50	7.8	25.0	0.46
A1	17 Dec 2021	17	14.00	84.27	6.3	33.48	7.8	25.0	0.41
A1	17 Dec 2021	18	13.93	83.50	6.2	33.48	7.8	25.0	0.41
A1	17 Dec 2021	19	13.92	82.76	6.2	33.48	7.8	25.0	0.37
A1	21 Dec 2021	2	15.30	79.67	7.8	33.51	8.0	24.8	1.57
A1	21 Dec 2021	3	15.30	83.44	7.9	33.50	8.0	24.8	1.45
A1	21 Dec 2021	4	15.30	83.77	7.8	33.50	8.0	24.8	1.54
A1	21 Dec 2021	5	15.29	83.74	7.8	33.51	8.0	24.8	1.55
A1	21 Dec 2021	6	15.28	83.50	7.8	33.50	8.0	24.8	1.62
A1	21 Dec 2021	7	15.28	83.53	7.8	33.50	8.0	24.8	1.64
A1	21 Dec 2021	8	15.28	83.66	7.8	33.50	8.0	24.8	1.54
A1	21 Dec 2021	9	15.28	83.70	7.8	33.50	8.0	24.8	1.61
A1	21 Dec 2021	10	15.28	83.69	7.8	33.50	8.0	24.8	1.60
A1	21 Dec 2021	11	15.21	83.66	7.6	33.52	8.0	24.8	1.62
A1	21 Dec 2021	12	14.64	83.81	7.3	33.56	7.9	24.9	1.57
A1	21 Dec 2021	13	14.22	84.23	6.8	33.53	7.9	25.0	1.41
A1	21 Dec 2021	14	13.86	84.81	6.4	33.52	7.8	25.1	1.23
A1	21 Dec 2021	15	13.62	85.23	6.1	33.52	7.8	25.1	1.03
A1	21 Dec 2021	16	13.41	85.42	5.9	33.51	7.8	25.2	0.90
A1	21 Dec 2021	17	13.32	85.39	5.8	33.51	7.8	25.2	0.78

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens ($\sigma\text{-t}$)	Chlor ($\mu\text{g/L}$)
A1	21 Dec 2021	18	13.13	85.45	5.7	33.52	7.8	25.2	0.65
A1	21 Dec 2021	19	12.97	85.44	5.6	33.53	7.8	25.3	0.59
A1	27 Dec 2021	1	15.39	84.76	7.8	33.45	8.0	24.7	1.38
A1	27 Dec 2021	2	15.41	84.73	7.8	33.45	8.0	24.7	1.37
A1	27 Dec 2021	3	15.41	84.70	7.8	33.45	8.0	24.7	1.37
A1	27 Dec 2021	4	15.41	84.78	7.8	33.45	8.0	24.7	1.39
A1	27 Dec 2021	5	15.41	84.80	7.8	33.45	8.0	24.7	1.32
A1	27 Dec 2021	6	15.41	84.90	7.8	33.45	8.0	24.7	1.34
A1	27 Dec 2021	7	15.41	84.81	7.8	33.45	8.0	24.7	1.35
A1	27 Dec 2021	8	15.41	84.49	7.8	33.45	8.0	24.7	1.41
A1	27 Dec 2021	9	15.41	84.76	7.8	33.45	8.0	24.7	1.50
A1	27 Dec 2021	10	15.41	84.79	7.8	33.45	8.0	24.7	1.49
A1	27 Dec 2021	11	15.40	84.76	7.8	33.45	8.0	24.7	1.43
A1	27 Dec 2021	12	15.40	84.82	7.8	33.45	8.0	24.7	1.48
A1	27 Dec 2021	13	15.40	84.77	7.8	33.45	8.0	24.7	1.44
A1	27 Dec 2021	14	15.40	84.70	7.8	33.45	8.0	24.7	1.37
A1	27 Dec 2021	15	15.40	84.78	7.8	33.45	8.0	24.7	1.41
A1	27 Dec 2021	16	15.35	84.68	7.8	33.46	8.0	24.7	1.55
A1	27 Dec 2021	17	15.33	84.54	7.8	33.45	8.0	24.7	1.34
A1	27 Dec 2021	18	15.33	84.61	7.7	33.45	8.0	24.7	1.33
A6	08 Dec 2021	1	16.59	83.85	7.8	33.52	8.0	24.5	1.38
A6	08 Dec 2021	2	16.58	82.72	7.8	33.52	8.0	24.5	1.42
A6	08 Dec 2021	3	16.58	83.96	7.7	33.52	8.0	24.5	1.40
A6	08 Dec 2021	4	16.58	83.94	7.8	33.52	8.0	24.5	1.46
A6	08 Dec 2021	5	16.58	83.92	7.7	33.52	8.0	24.5	1.48
A6	08 Dec 2021	6	16.58	83.94	7.7	33.52	8.0	24.5	1.58
A6	08 Dec 2021	7	16.57	83.90	7.7	33.52	8.0	24.5	1.69
A6	08 Dec 2021	8	16.56	83.97	7.7	33.52	8.0	24.5	1.72
A6	08 Dec 2021	9	16.56	84.06	7.7	33.52	8.0	24.5	1.68
A6	08 Dec 2021	10	16.55	84.11	7.6	33.52	8.0	24.5	1.58
A6	08 Dec 2021	11	16.54	84.38	7.6	33.52	8.0	24.5	1.44
A6	08 Dec 2021	12	16.52	84.57	7.5	33.53	8.0	24.5	1.38
A6	08 Dec 2021	13	16.26	85.27	7.3	33.55	7.9	24.6	1.27
A6	08 Dec 2021	14	16.14	85.65	7.0	33.52	7.9	24.6	0.98
A6	08 Dec 2021	15	16.10	85.87	6.9	33.52	7.9	24.6	0.72
A6	08 Dec 2021	16	15.91	85.89	6.9	33.53	7.9	24.6	0.62
A6	08 Dec 2021	17	15.80	85.82	6.8	33.52	7.9	24.7	0.56
A6	08 Dec 2021	18	15.62	85.78	6.8	33.53	7.9	24.7	0.54
A6	08 Dec 2021	19	15.42	85.76	6.7	33.54	7.9	24.8	0.50
A6	08 Dec 2021	20	15.00	85.83	6.7	33.60	7.8	24.9	0.47
A6	17 Dec 2021	1	15.21	77.81	7.4	33.40	7.9	24.7	0.63
A6	17 Dec 2021	2	15.22	77.82	7.4	33.40	7.9	24.7	0.65
A6	17 Dec 2021	3	15.21	77.76	7.4	33.40	7.9	24.7	0.64
A6	17 Dec 2021	4	15.21	77.80	7.4	33.40	7.9	24.7	0.71
A6	17 Dec 2021	5	15.21	77.73	7.4	33.40	7.9	24.7	0.71
A6	17 Dec 2021	6	15.21	77.59	7.4	33.40	7.9	24.7	0.78
A6	17 Dec 2021	7	15.22	77.72	7.4	33.41	7.9	24.7	0.77
A6	17 Dec 2021	8	15.22	77.86	7.4	33.41	7.9	24.7	0.76
A6	17 Dec 2021	9	15.22	77.80	7.4	33.41	7.9	24.7	0.77
A6	17 Dec 2021	10	15.22	77.78	7.4	33.41	7.9	24.7	0.74
A6	17 Dec 2021	11	15.21	77.78	7.4	33.40	7.9	24.7	0.80
A6	17 Dec 2021	12	15.21	77.82	7.4	33.41	7.9	24.7	0.78
A6	17 Dec 2021	13	15.24	77.86	7.3	33.41	7.9	24.7	0.76
A6	17 Dec 2021	14	15.25	78.50	7.2	33.43	7.9	24.7	0.78
A6	17 Dec 2021	15	15.25	78.86	7.1	33.44	7.9	24.7	0.81
A6	17 Dec 2021	16	15.25	79.00	7.1	33.44	7.9	24.7	0.69
A6	17 Dec 2021	17	15.22	79.20	7.0	33.45	7.9	24.7	0.67
A6	17 Dec 2021	18	15.02	78.87	6.8	33.48	7.9	24.8	0.67

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens ($\sigma\text{-t}$)	Chlor ($\mu\text{g/L}$)
A6	17 Dec 2021	19	14.71	79.18	6.5	33.49	7.9	24.9	0.59
A6	17 Dec 2021	20	14.67	79.10	6.4	33.47	7.8	24.9	0.55
A6	21 Dec 2021	1	15.29	83.38	7.8	33.51	8.0	24.8	1.27
A6	21 Dec 2021	2	15.29	83.50	7.8	33.51	8.0	24.8	1.30
A6	21 Dec 2021	3	15.29	83.51	7.8	33.51	8.0	24.8	1.33
A6	21 Dec 2021	4	15.29	83.57	7.8	33.51	8.0	24.8	1.36
A6	21 Dec 2021	5	15.28	83.60	7.8	33.51	8.0	24.8	1.38
A6	21 Dec 2021	6	15.27	83.65	7.8	33.51	8.0	24.8	1.46
A6	21 Dec 2021	7	15.27	83.62	7.8	33.50	8.0	24.8	1.52
A6	21 Dec 2021	8	15.23	83.60	7.7	33.50	8.0	24.8	1.46
A6	21 Dec 2021	9	15.15	83.72	7.6	33.50	8.0	24.8	1.43
A6	21 Dec 2021	10	14.97	83.90	7.4	33.50	8.0	24.8	1.46
A6	21 Dec 2021	11	14.75	84.23	7.2	33.50	8.0	24.9	1.31
A6	21 Dec 2021	12	14.54	84.29	6.9	33.49	7.9	24.9	1.19
A6	21 Dec 2021	13	14.24	84.58	6.6	33.51	7.9	25.0	1.00
A6	21 Dec 2021	14	13.78	84.61	6.2	33.52	7.9	25.1	0.87
A6	21 Dec 2021	15	13.27	85.09	5.9	33.55	7.8	25.2	0.71
A6	21 Dec 2021	16	12.76	85.35	5.5	33.52	7.8	25.3	0.59
A6	21 Dec 2021	17	12.74	85.43	5.5	33.51	7.8	25.3	0.52
A6	21 Dec 2021	18	12.73	85.46	5.4	33.51	7.8	25.3	0.50
A6	21 Dec 2021	19	12.73	85.48	5.4	33.51	7.8	25.3	0.47
A6	27 Dec 2021	1	15.24	83.46	7.8	33.44	8.0	24.7	1.43
A6	27 Dec 2021	2	15.24	83.56	7.8	33.45	8.0	24.7	1.44
A6	27 Dec 2021	3	15.24	83.35	7.8	33.44	8.0	24.7	1.33
A6	27 Dec 2021	4	15.26	83.76	7.8	33.44	8.0	24.7	1.40
A6	27 Dec 2021	5	15.26	83.75	7.8	33.44	8.0	24.7	1.40
A6	27 Dec 2021	6	15.26	83.81	7.8	33.44	8.0	24.7	1.47
A6	27 Dec 2021	7	15.26	83.83	7.8	33.44	8.0	24.7	1.39
A6	27 Dec 2021	8	15.26	83.85	7.8	33.44	8.0	24.7	1.46
A6	27 Dec 2021	9	15.26	83.80	7.8	33.45	8.0	24.7	1.41
A6	27 Dec 2021	10	15.26	83.74	7.8	33.45	8.0	24.7	1.41
A6	27 Dec 2021	11	15.26	83.78	7.8	33.45	8.0	24.7	1.46
A6	27 Dec 2021	12	15.26	83.74	7.8	33.45	8.0	24.7	1.47
A6	27 Dec 2021	13	15.24	83.75	7.8	33.45	8.0	24.7	1.53
A6	27 Dec 2021	14	15.20	83.83	7.8	33.45	8.0	24.7	1.47
A6	27 Dec 2021	15	15.18	83.78	7.7	33.45	8.0	24.7	1.52
A6	27 Dec 2021	16	15.17	84.00	7.6	33.45	8.0	24.7	1.49
A6	27 Dec 2021	17	15.17	84.17	7.6	33.45	8.0	24.7	1.41
A6	27 Dec 2021	18	15.16	84.14	7.6	33.45	8.0	24.7	1.24
A6	27 Dec 2021	19	15.16	84.12	7.6	33.45	8.0	24.7	1.14
A7	08 Dec 2021	1	16.83	85.05	7.8	33.52	8.0	24.4	1.24
A7	08 Dec 2021	2	16.83	85.00	7.8	33.52	8.0	24.4	1.21
A7	08 Dec 2021	3	16.83	85.06	7.8	33.52	8.0	24.4	1.18
A7	08 Dec 2021	4	16.83	85.07	7.8	33.52	8.0	24.4	1.25
A7	08 Dec 2021	5	16.84	85.10	7.8	33.52	8.0	24.4	1.29
A7	08 Dec 2021	6	16.83	85.12	7.8	33.52	8.0	24.4	1.38
A7	08 Dec 2021	7	16.82	85.10	7.8	33.52	8.0	24.4	1.40
A7	08 Dec 2021	8	16.62	85.20	7.7	33.55	8.0	24.5	1.36
A7	08 Dec 2021	9	16.50	85.37	7.6	33.53	7.9	24.5	1.26
A7	08 Dec 2021	10	16.40	85.38	7.5	33.52	7.9	24.5	1.09
A7	08 Dec 2021	11	16.35	85.41	7.5	33.52	7.9	24.5	0.94
A7	08 Dec 2021	12	16.20	85.46	7.3	33.53	7.9	24.6	0.85
A7	08 Dec 2021	13	15.92	85.69	7.1	33.54	7.9	24.6	0.77
A7	08 Dec 2021	14	15.61	85.93	7.0	33.54	7.9	24.7	0.66
A7	08 Dec 2021	15	15.41	86.04	6.8	33.52	7.9	24.7	0.58
A7	08 Dec 2021	16	15.28	86.06	6.8	33.52	7.9	24.8	0.55
A7	08 Dec 2021	17	15.04	85.95	6.7	33.53	7.8	24.8	0.52
A7	08 Dec 2021	18	14.68	85.80	6.6	33.52	7.8	24.9	0.51

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (μg/L)
A7	08 Dec 2021	19	14.47	85.80	6.5	33.52	7.8	24.9	0.49
A7	17 Dec 2021	1	15.12	80.39	7.3	33.45	7.9	24.7	0.54
A7	17 Dec 2021	2	15.11	80.24	7.3	33.45	7.9	24.8	0.54
A7	17 Dec 2021	3	15.11	80.44	7.3	33.45	7.9	24.8	0.55
A7	17 Dec 2021	4	15.08	80.36	7.3	33.45	7.9	24.8	0.58
A7	17 Dec 2021	5	15.08	80.26	7.2	33.45	7.9	24.8	0.58
A7	17 Dec 2021	6	15.08	80.16	7.2	33.45	7.9	24.8	0.70
A7	17 Dec 2021	7	15.07	80.29	7.2	33.45	7.9	24.8	0.63
A7	17 Dec 2021	8	15.04	80.24	7.2	33.46	7.9	24.8	0.64
A7	17 Dec 2021	9	14.92	80.43	7.0	33.47	7.9	24.8	0.67
A7	17 Dec 2021	10	14.70	80.90	6.8	33.49	7.9	24.9	0.63
A7	17 Dec 2021	11	14.55	81.66	6.6	33.48	7.9	24.9	0.58
A7	17 Dec 2021	12	14.51	82.17	6.5	33.47	7.9	24.9	0.48
A7	17 Dec 2021	13	14.45	82.18	6.5	33.48	7.8	24.9	0.45
A7	17 Dec 2021	14	14.36	82.38	6.4	33.48	7.8	24.9	0.42
A7	17 Dec 2021	15	14.27	82.44	6.4	33.48	7.8	25.0	0.42
A7	17 Dec 2021	16	14.21	82.29	6.3	33.48	7.8	25.0	0.39
A7	17 Dec 2021	17	14.13	82.23	6.2	33.48	7.8	25.0	0.38
A7	17 Dec 2021	18	14.10	81.72	6.2	33.48	7.8	25.0	0.38
A7	17 Dec 2021	19	14.07	81.55	6.2	33.48	7.8	25.0	0.38
A7	17 Dec 2021	20	13.94	81.36	6.2	33.49	7.8	25.0	0.39
A7	21 Dec 2021	1	15.33	83.66	7.9	33.50	8.0	24.7	1.49
A7	21 Dec 2021	2	15.33	83.53	7.8	33.50	8.0	24.7	1.48
A7	21 Dec 2021	3	15.33	83.62	7.8	33.50	8.0	24.7	1.42
A7	21 Dec 2021	4	15.33	83.67	7.8	33.50	8.0	24.7	1.47
A7	21 Dec 2021	5	15.32	83.70	7.8	33.50	8.0	24.7	1.55
A7	21 Dec 2021	6	15.32	83.60	7.8	33.50	8.0	24.7	1.60
A7	21 Dec 2021	7	15.30	83.78	7.8	33.50	8.0	24.8	1.49
A7	21 Dec 2021	8	15.27	83.71	7.7	33.51	8.0	24.8	1.52
A7	21 Dec 2021	9	15.06	84.04	7.5	33.50	8.0	24.8	1.50
A7	21 Dec 2021	10	14.99	84.16	7.4	33.49	8.0	24.8	1.36
A7	21 Dec 2021	11	14.79	84.17	7.2	33.50	7.9	24.9	1.36
A7	21 Dec 2021	12	14.45	84.28	6.9	33.51	7.9	24.9	1.29
A7	21 Dec 2021	13	14.23	84.61	6.7	33.51	7.9	25.0	1.19
A7	21 Dec 2021	14	13.78	84.92	6.4	33.51	7.8	25.1	0.99
A7	21 Dec 2021	15	13.49	85.39	6.2	33.52	7.8	25.1	0.86
A7	21 Dec 2021	16	13.27	85.67	5.9	33.52	7.8	25.2	0.76
A7	21 Dec 2021	17	12.97	85.75	5.7	33.52	7.8	25.3	0.64
A7	21 Dec 2021	18	12.93	85.68	5.6	33.51	7.8	25.2	0.57
A7	21 Dec 2021	19	12.93	85.58	5.6	33.51	7.8	25.2	0.53
A7	21 Dec 2021	20	12.92	85.46	5.5	33.51	7.8	25.3	0.50
A7	27 Dec 2021	1	15.41	84.29	7.8	33.45	8.0	24.7	1.37
A7	27 Dec 2021	2	15.41	84.68	7.8	33.45	8.0	24.7	1.37
A7	27 Dec 2021	3	15.41	84.64	7.8	33.45	8.0	24.7	1.39
A7	27 Dec 2021	4	15.40	84.58	7.8	33.45	8.0	24.7	1.39
A7	27 Dec 2021	5	15.40	84.67	7.8	33.45	8.0	24.7	1.41
A7	27 Dec 2021	6	15.41	84.59	7.8	33.45	8.0	24.7	1.35
A7	27 Dec 2021	7	15.41	84.66	7.8	33.45	8.0	24.7	1.38
A7	27 Dec 2021	8	15.40	84.70	7.8	33.45	8.0	24.7	1.44
A7	27 Dec 2021	9	15.40	84.64	7.8	33.45	8.0	24.7	1.39
A7	27 Dec 2021	10	15.38	84.74	7.8	33.46	8.0	24.7	1.36
A7	27 Dec 2021	11	15.35	84.55	7.7	33.45	8.0	24.7	1.41
A7	27 Dec 2021	12	15.34	84.47	7.7	33.45	8.0	24.7	1.44
A7	27 Dec 2021	13	15.34	84.44	7.8	33.45	8.0	24.7	1.38
A7	27 Dec 2021	14	15.33	84.32	7.7	33.45	8.0	24.7	1.29
A7	27 Dec 2021	15	15.35	84.34	7.7	33.45	8.0	24.7	1.32
A7	27 Dec 2021	16	15.31	84.42	7.8	33.46	8.0	24.7	1.34
A7	27 Dec 2021	17	15.26	84.06	7.7	33.46	8.0	24.7	1.35

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (μg/L)
A7	27 Dec 2021	18	15.24	83.78	7.7	33.45	8.0	24.7	1.36
A7	27 Dec 2021	19	15.24	83.59	7.7	33.45	8.0	24.7	1.27
C4	08 Dec 2021	1	16.44	81.00	8.0	33.52	8.0	24.5	2.03
C4	08 Dec 2021	2	16.44	80.91	8.0	33.52	8.0	24.5	1.98
C4	08 Dec 2021	3	16.43	80.87	8.0	33.52	8.0	24.5	1.96
C4	08 Dec 2021	4	16.42	80.68	8.0	33.52	8.0	24.5	2.13
C4	08 Dec 2021	5	16.39	80.94	7.9	33.53	8.0	24.5	2.47
C4	08 Dec 2021	6	16.35	81.65	7.8	33.53	8.0	24.5	2.35
C4	08 Dec 2021	7	16.28	82.38	7.7	33.53	8.0	24.6	2.04
C4	08 Dec 2021	8	16.18	83.28	7.5	33.53	8.0	24.6	1.76
C4	08 Dec 2021	9	16.13	84.26	7.5	33.53	8.0	24.6	1.34
C4	08 Dec 2021	10	16.07	84.31	7.4	33.52	7.9	24.6	1.02
C4	08 Dec 2021	11	16.06	83.51	7.3	33.52	7.9	24.6	0.78
C4	17 Dec 2021	1	15.14	77.37	7.2	33.47	7.9	24.8	0.37
C4	17 Dec 2021	2	15.13	77.28	7.2	33.47	7.9	24.8	0.38
C4	17 Dec 2021	3	15.12	77.33	7.2	33.47	7.9	24.8	0.37
C4	17 Dec 2021	4	15.11	77.34	7.2	33.47	7.9	24.8	0.39
C4	17 Dec 2021	5	15.07	77.08	7.2	33.48	7.9	24.8	0.43
C4	17 Dec 2021	6	15.05	75.33	7.1	33.48	7.9	24.8	0.46
C4	17 Dec 2021	7	15.04	72.52	7.1	33.48	7.9	24.8	0.49
C4	17 Dec 2021	8	15.02	69.98	7.1	33.48	7.9	24.8	0.49
C4	17 Dec 2021	9	14.97	67.66	7.2	33.49	7.9	24.8	0.52
C4	17 Dec 2021	10	14.92	60.30	7.2	33.49	7.9	24.8	0.51
C4	21 Dec 2021	1	15.14	83.14	7.3	33.47	8.0	24.8	0.80
C4	21 Dec 2021	2	15.14	83.14	7.3	33.47	8.0	24.8	0.82
C4	21 Dec 2021	3	15.13	82.96	7.2	33.47	8.0	24.8	0.84
C4	21 Dec 2021	4	15.12	82.91	7.2	33.47	8.0	24.8	0.89
C4	21 Dec 2021	5	15.10	83.00	7.2	33.47	8.0	24.8	0.93
C4	21 Dec 2021	6	15.07	83.13	7.2	33.47	8.0	24.8	0.97
C4	21 Dec 2021	7	15.03	83.36	7.1	33.48	8.0	24.8	0.95
C4	21 Dec 2021	8	14.97	83.58	7.0	33.48	7.9	24.8	0.96
C4	21 Dec 2021	9	14.86	83.79	6.7	33.49	7.9	24.8	0.93
C4	21 Dec 2021	10	14.69	83.47	6.3	33.49	7.9	24.9	0.86
C4	21 Dec 2021	11	14.63	82.05	6.0	33.48	7.8	24.9	0.83
C4	27 Dec 2021	1	14.92	77.41	7.6	33.44	7.9	24.8	0.76
C4	27 Dec 2021	2	14.89	77.29	7.6	33.44	8.0	24.8	0.78
C4	27 Dec 2021	3	14.89	77.01	7.6	33.44	8.0	24.8	0.78
C4	27 Dec 2021	4	14.89	77.05	7.6	33.43	8.0	24.8	0.81
C4	27 Dec 2021	5	14.90	76.85	7.5	33.43	8.0	24.8	0.84
C4	27 Dec 2021	6	14.90	76.69	7.5	33.43	8.0	24.8	0.80
C4	27 Dec 2021	7	14.90	76.73	7.5	33.43	8.0	24.8	0.87
C4	27 Dec 2021	8	14.90	76.56	7.5	33.43	8.0	24.8	0.90
C4	27 Dec 2021	9	14.90	76.32	7.5	33.44	8.0	24.8	0.85
C4	27 Dec 2021	10	14.90	76.41	7.5	33.44	8.0	24.8	0.85
C5	08 Dec 2021	1	16.68	83.59	7.8	33.52	8.0	24.5	1.24
C5	08 Dec 2021	2	16.67	83.54	7.8	33.52	8.0	24.5	1.21
C5	08 Dec 2021	3	16.65	83.63	7.8	33.52	8.0	24.5	1.20
C5	08 Dec 2021	4	16.64	83.43	7.8	33.52	8.0	24.5	1.25
C5	08 Dec 2021	5	16.64	83.39	7.8	33.52	8.0	24.5	1.56
C5	08 Dec 2021	6	16.62	83.13	7.8	33.52	8.0	24.5	1.64
C5	08 Dec 2021	7	16.61	82.99	7.8	33.53	8.0	24.5	1.91
C5	08 Dec 2021	8	16.54	83.12	7.7	33.53	8.0	24.5	2.09
C5	08 Dec 2021	9	16.40	83.78	7.6	33.54	8.0	24.5	2.02
C5	08 Dec 2021	10	16.37	83.73	7.5	33.53	8.0	24.5	1.63
C5	17 Dec 2021	1	15.11	78.28	7.1	33.46	7.9	24.8	0.41

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (μg/L)
C5	17 Dec 2021	2	15.09	78.14	7.1	33.47	7.9	24.8	0.40
C5	17 Dec 2021	3	15.04	76.99	7.2	33.47	7.9	24.8	0.40
C5	17 Dec 2021	4	14.97	75.35	7.2	33.48	7.9	24.8	0.43
C5	17 Dec 2021	5	14.94	72.97	7.3	33.47	7.9	24.8	0.44
C5	17 Dec 2021	6	14.91	69.01	7.2	33.47	7.9	24.8	0.46
C5	17 Dec 2021	7	14.90	65.98	7.2	33.47	7.9	24.8	0.50
C5	17 Dec 2021	8	14.90	64.34	7.2	33.47	7.9	24.8	0.52
C5	17 Dec 2021	9	14.90	61.74	7.2	33.47	7.9	24.8	0.51
C5	17 Dec 2021	10	14.91	59.82	7.1	33.47	7.9	24.8	0.49
C5	21 Dec 2021	1	15.13	83.20	7.5	33.47	8.0	24.8	0.94
C5	21 Dec 2021	2	15.13	83.07	7.5	33.47	8.0	24.8	0.91
C5	21 Dec 2021	3	15.12	82.95	7.4	33.47	8.0	24.8	1.00
C5	21 Dec 2021	4	15.12	83.01	7.4	33.47	8.0	24.8	1.01
C5	21 Dec 2021	5	15.12	83.03	7.4	33.47	8.0	24.8	1.05
C5	21 Dec 2021	6	15.12	83.06	7.4	33.47	8.0	24.8	1.03
C5	21 Dec 2021	7	15.12	82.98	7.4	33.47	8.0	24.8	0.98
C5	21 Dec 2021	8	15.11	83.01	7.4	33.47	8.0	24.8	1.04
C5	21 Dec 2021	9	15.11	83.00	7.4	33.47	8.0	24.8	1.09
C5	21 Dec 2021	10	15.09	82.85	7.3	33.47	8.0	24.8	1.04
C5	21 Dec 2021	11	15.09	82.59	7.3	33.47	8.0	24.8	1.11
C5	27 Dec 2021	1	15.06	79.52	7.6	33.45	8.0	24.8	0.80
C5	27 Dec 2021	2	15.07	79.43	7.6	33.45	8.0	24.8	0.83
C5	27 Dec 2021	3	15.07	79.15	7.6	33.45	8.0	24.8	0.86
C5	27 Dec 2021	4	15.07	78.87	7.6	33.45	8.0	24.8	0.87
C5	27 Dec 2021	5	15.06	78.86	7.6	33.45	8.0	24.8	0.92
C5	27 Dec 2021	6	15.05	78.95	7.6	33.45	8.0	24.8	0.89
C5	27 Dec 2021	7	15.04	78.85	7.6	33.45	8.0	24.8	0.94
C5	27 Dec 2021	8	15.04	78.64	7.6	33.45	8.0	24.8	0.92
C5	27 Dec 2021	9	15.02	78.13	7.6	33.45	8.0	24.8	0.93
C5	27 Dec 2021	10	14.99	72.26	7.5	33.45	8.0	24.8	0.96
C5	27 Dec 2021	11	14.95	53.14	7.4	33.45	8.0	24.8	0.95
C6	08 Dec 2021	1	16.60	84.31	7.8	33.52	8.0	24.5	0.93
C6	08 Dec 2021	2	16.60	84.36	7.8	33.52	8.0	24.5	0.89
C6	08 Dec 2021	3	16.59	84.37	7.8	33.52	8.0	24.5	0.90
C6	08 Dec 2021	4	16.57	84.41	7.8	33.53	8.0	24.5	0.94
C6	08 Dec 2021	5	16.56	84.32	7.7	33.52	8.0	24.5	1.15
C6	08 Dec 2021	6	16.52	84.04	7.6	33.53	8.0	24.5	1.14
C6	08 Dec 2021	7	16.46	83.64	7.5	33.53	8.0	24.5	1.35
C6	08 Dec 2021	8	16.44	84.18	7.4	33.53	8.0	24.5	1.31
C6	08 Dec 2021	9	16.44	82.73	7.4	33.52	8.0	24.5	1.33
C6	17 Dec 2021	1	15.13	71.42	7.1	33.39	7.9	24.7	0.41
C6	17 Dec 2021	2	15.13	71.39	7.1	33.39	7.9	24.7	0.42
C6	17 Dec 2021	3	15.13	71.32	7.1	33.39	7.9	24.7	0.43
C6	17 Dec 2021	4	15.10	71.04	7.1	33.39	7.9	24.7	0.43
C6	17 Dec 2021	5	15.08	70.86	7.0	33.39	7.9	24.7	0.45
C6	17 Dec 2021	6	15.07	70.98	7.0	33.39	7.9	24.7	0.49
C6	17 Dec 2021	7	15.04	70.65	6.8	33.40	7.9	24.7	0.51
C6	17 Dec 2021	8	14.99	67.95	6.5	33.44	7.8	24.8	0.51
C6	17 Dec 2021	9	14.98	61.23	6.3	33.45	7.8	24.8	0.51
C6	17 Dec 2021	10	15.02	62.10	6.5	33.42	7.8	24.8	0.52
C6	21 Dec 2021	1	15.07	82.28	7.7	33.46	8.0	24.8	1.25
C6	21 Dec 2021	2	15.07	82.13	7.7	33.46	8.0	24.8	1.24
C6	21 Dec 2021	3	15.06	82.28	7.6	33.46	8.0	24.8	1.34
C6	21 Dec 2021	4	15.06	82.36	7.6	33.46	8.0	24.8	1.43
C6	21 Dec 2021	5	15.06	82.37	7.6	33.46	8.0	24.8	1.53
C6	21 Dec 2021	6	15.06	82.41	7.5	33.47	8.0	24.8	1.48

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens ($\sigma\text{-t}$)	Chlor ($\mu\text{g/L}$)
C6	21 Dec 2021	7	15.04	82.87	7.3	33.47	8.0	24.8	1.40
C6	21 Dec 2021	8	15.03	83.10	7.2	33.47	8.0	24.8	1.28
C6	21 Dec 2021	9	15.02	83.15	7.2	33.47	8.0	24.8	1.04
C6	21 Dec 2021	10	15.01	82.98	7.2	33.47	8.0	24.8	0.93
C6	27 Dec 2021	1	15.04	80.99	7.8	33.45	8.0	24.8	0.65
C6	27 Dec 2021	2	15.03	81.05	7.8	33.45	8.0	24.8	0.63
C6	27 Dec 2021	3	15.02	81.27	7.8	33.46	8.0	24.8	0.65
C6	27 Dec 2021	4	15.02	81.20	7.8	33.45	8.0	24.8	0.66
C6	27 Dec 2021	5	15.02	81.12	7.8	33.46	8.0	24.8	0.69
C6	27 Dec 2021	6	15.02	80.87	7.8	33.46	8.0	24.8	0.64
C6	27 Dec 2021	7	15.02	80.82	7.8	33.46	8.0	24.8	0.63
C6	27 Dec 2021	8	15.01	80.80	7.8	33.46	8.0	24.8	0.62
C6	27 Dec 2021	9	14.99	80.78	7.7	33.46	8.0	24.8	0.65
C7	08 Dec 2021	1	16.83	85.19	7.7	33.54	8.0	24.4	0.91
C7	08 Dec 2021	2	16.83	85.22	7.7	33.54	8.0	24.4	0.94
C7	08 Dec 2021	3	16.83	85.16	7.8	33.54	8.0	24.4	0.91
C7	08 Dec 2021	4	16.83	85.05	7.7	33.54	8.0	24.4	0.86
C7	08 Dec 2021	5	16.83	85.07	7.7	33.54	8.0	24.4	0.93
C7	08 Dec 2021	6	16.82	85.05	7.8	33.54	8.0	24.4	1.02
C7	08 Dec 2021	7	16.82	85.05	7.7	33.54	8.0	24.4	1.05
C7	08 Dec 2021	8	16.82	84.95	7.7	33.54	8.0	24.4	1.08
C7	08 Dec 2021	9	16.82	84.97	7.7	33.54	8.0	24.4	1.20
C7	08 Dec 2021	10	16.82	84.99	7.7	33.54	8.0	24.4	1.17
C7	08 Dec 2021	11	16.82	84.99	7.7	33.54	8.0	24.4	1.14
C7	08 Dec 2021	12	16.80	85.01	7.7	33.55	8.0	24.4	1.15
C7	08 Dec 2021	13	16.67	85.15	7.5	33.55	8.0	24.5	1.08
C7	08 Dec 2021	14	16.54	85.29	7.4	33.54	8.0	24.5	1.05
C7	08 Dec 2021	15	16.43	85.21	7.2	33.54	7.9	24.5	0.89
C7	08 Dec 2021	16	16.06	84.87	7.0	33.55	7.9	24.6	0.77
C7	08 Dec 2021	17	15.63	84.76	6.7	33.55	7.9	24.7	0.65
C7	08 Dec 2021	18	15.29	85.09	6.6	33.53	7.9	24.8	0.55
C7	17 Dec 2021	1	15.50	81.06	7.6	33.46	8.0	24.7	0.55
C7	17 Dec 2021	2	15.51	81.12	7.6	33.46	8.0	24.7	0.54
C7	17 Dec 2021	3	15.51	81.10	7.5	33.47	8.0	24.7	0.50
C7	17 Dec 2021	4	15.51	81.39	7.5	33.48	8.0	24.7	0.55
C7	17 Dec 2021	5	15.51	81.51	7.5	33.48	8.0	24.7	0.60
C7	17 Dec 2021	6	15.51	81.73	7.5	33.48	8.0	24.7	0.70
C7	17 Dec 2021	7	15.50	81.62	7.5	33.48	8.0	24.7	0.82
C7	17 Dec 2021	8	15.47	81.51	7.5	33.48	8.0	24.7	0.82
C7	17 Dec 2021	9	15.45	81.30	7.5	33.48	8.0	24.7	0.82
C7	17 Dec 2021	10	15.44	81.65	7.4	33.48	8.0	24.7	0.80
C7	17 Dec 2021	11	15.43	81.78	7.4	33.48	8.0	24.7	0.81
C7	17 Dec 2021	12	15.43	81.80	7.4	33.48	8.0	24.7	0.76
C7	17 Dec 2021	13	15.43	81.98	7.4	33.48	8.0	24.7	0.73
C7	17 Dec 2021	14	15.43	82.01	7.4	33.48	8.0	24.7	0.79
C7	17 Dec 2021	15	15.42	82.00	7.4	33.48	8.0	24.7	0.83
C7	17 Dec 2021	16	15.37	82.12	7.3	33.48	8.0	24.7	0.75
C7	17 Dec 2021	17	15.17	81.88	7.1	33.50	8.0	24.8	0.77
C7	17 Dec 2021	18	14.93	80.30	6.8	33.50	7.9	24.8	0.65
C7	17 Dec 2021	19	14.88	77.58	6.7	33.50	7.9	24.8	0.60
C7	21 Dec 2021	1	15.14	81.54	8.0	33.47	8.0	24.8	2.23
C7	21 Dec 2021	2	15.13	81.51	8.0	33.47	8.0	24.8	2.18
C7	21 Dec 2021	3	15.12	81.38	7.9	33.47	8.0	24.8	2.20
C7	21 Dec 2021	4	15.12	81.10	7.8	33.47	8.0	24.8	2.38
C7	21 Dec 2021	5	15.12	80.98	7.8	33.47	8.0	24.8	2.57
C7	21 Dec 2021	6	15.12	81.00	7.8	33.47	8.0	24.8	2.51
C7	21 Dec 2021	7	15.12	80.93	7.8	33.47	8.0	24.8	2.64

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens ($\sigma\text{-t}$)	Chlor ($\mu\text{g/L}$)
C7	21 Dec 2021	8	15.13	81.01	7.8	33.47	8.0	24.8	2.71
C7	21 Dec 2021	9	15.12	81.00	7.8	33.47	8.0	24.8	2.56
C7	21 Dec 2021	10	15.12	81.10	7.8	33.47	8.0	24.8	2.52
C7	21 Dec 2021	11	15.11	81.29	7.8	33.47	8.0	24.8	2.43
C7	21 Dec 2021	12	15.09	81.67	7.7	33.47	8.0	24.8	2.41
C7	21 Dec 2021	13	15.08	82.21	7.6	33.47	8.0	24.8	2.13
C7	21 Dec 2021	14	15.04	81.33	7.5	33.47	8.0	24.8	2.00
C7	21 Dec 2021	15	14.84	79.47	7.3	33.49	8.0	24.8	2.03
C7	21 Dec 2021	16	14.63	79.86	7.0	33.50	8.0	24.9	1.87
C7	21 Dec 2021	17	14.36	81.27	6.7	33.50	7.9	25.0	1.62
C7	21 Dec 2021	18	14.28	82.53	6.5	33.49	7.9	25.0	1.34
C7	21 Dec 2021	19	14.16	83.11	6.4	33.50	7.9	25.0	1.17
C7	27 Dec 2021	1	15.16	82.12	7.8	33.43	8.0	24.7	1.33
C7	27 Dec 2021	2	15.16	82.24	7.8	33.43	8.0	24.7	1.35
C7	27 Dec 2021	3	15.17	82.31	7.8	33.43	8.0	24.7	1.39
C7	27 Dec 2021	4	15.17	82.44	7.8	33.43	8.0	24.7	1.42
C7	27 Dec 2021	5	15.20	82.68	7.8	33.43	8.0	24.7	1.44
C7	27 Dec 2021	6	15.21	82.79	7.8	33.44	8.0	24.7	1.67
C7	27 Dec 2021	7	15.22	83.09	7.8	33.44	8.0	24.7	1.64
C7	27 Dec 2021	8	15.22	83.15	7.8	33.44	8.0	24.7	1.55
C7	27 Dec 2021	9	15.21	83.31	7.8	33.44	8.0	24.7	1.45
C7	27 Dec 2021	10	15.20	83.22	7.8	33.44	8.0	24.7	1.41
C7	27 Dec 2021	11	15.20	83.11	7.8	33.44	8.0	24.7	1.41
C7	27 Dec 2021	12	15.19	83.09	7.7	33.44	8.0	24.7	1.48
C7	27 Dec 2021	13	15.19	83.09	7.8	33.43	8.0	24.7	1.37
C7	27 Dec 2021	14	15.18	83.20	7.8	33.43	8.0	24.7	1.25
C7	27 Dec 2021	15	15.17	82.99	7.7	33.43	8.0	24.7	1.32
C7	27 Dec 2021	16	15.15	82.86	7.7	33.43	8.0	24.7	1.27
C7	27 Dec 2021	17	15.04	81.94	7.5	33.45	7.9	24.8	1.26
C7	27 Dec 2021	18	14.91	79.10	7.2	33.45	7.9	24.8	1.14
C8	08 Dec 2021	1	16.63	83.78	7.8	33.53	8.0	24.5	0.72
C8	08 Dec 2021	2	16.63	83.07	7.8	33.53	8.0	24.5	0.74
C8	08 Dec 2021	3	16.63	84.31	7.8	33.53	8.0	24.5	0.76
C8	08 Dec 2021	4	16.63	84.58	7.8	33.53	8.0	24.5	0.77
C8	08 Dec 2021	5	16.62	84.55	7.8	33.53	8.0	24.5	0.81
C8	08 Dec 2021	6	16.62	84.39	7.7	33.53	8.0	24.5	0.91
C8	08 Dec 2021	7	16.60	84.45	7.7	33.53	8.0	24.5	0.96
C8	08 Dec 2021	8	16.58	84.48	7.7	33.53	8.0	24.5	1.02
C8	08 Dec 2021	9	16.56	84.51	7.7	33.53	8.0	24.5	1.08
C8	08 Dec 2021	10	16.54	84.68	7.7	33.53	8.0	24.5	1.05
C8	08 Dec 2021	11	16.52	84.69	7.6	33.52	8.0	24.5	0.92
C8	08 Dec 2021	12	16.44	84.55	7.5	33.53	8.0	24.5	0.92
C8	08 Dec 2021	13	16.39	84.36	7.5	33.52	7.9	24.5	0.88
C8	08 Dec 2021	14	16.34	84.22	7.4	33.52	7.9	24.5	0.86
C8	08 Dec 2021	15	16.27	84.30	7.4	33.52	7.9	24.5	0.80
C8	08 Dec 2021	16	16.21	84.35	7.3	33.52	7.9	24.6	0.76
C8	08 Dec 2021	17	16.08	84.33	7.2	33.52	7.9	24.6	0.71
C8	08 Dec 2021	18	15.79	84.00	7.2	33.54	7.9	24.7	0.64
C8	08 Dec 2021	19	15.49	84.13	7.1	33.53	7.9	24.7	0.65
C8	17 Dec 2021	1	15.54	83.69	7.7	33.43	8.0	24.6	0.46
C8	17 Dec 2021	2	15.54	83.17	7.7	33.43	8.0	24.6	0.44
C8	17 Dec 2021	3	15.54	81.63	7.7	33.43	8.0	24.6	0.43
C8	17 Dec 2021	4	15.54	83.75	7.7	33.43	8.0	24.6	0.46
C8	17 Dec 2021	5	15.56	84.01	7.7	33.44	8.0	24.6	0.48
C8	17 Dec 2021	6	15.57	84.35	7.7	33.44	8.0	24.6	0.50
C8	17 Dec 2021	7	15.62	84.64	7.7	33.46	8.0	24.6	0.51
C8	17 Dec 2021	8	15.64	85.25	7.7	33.46	8.0	24.6	0.62
C8	17 Dec 2021	9	15.64	85.55	7.7	33.47	8.0	24.6	0.59

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens ($\sigma-t$)	Chlor ($\mu\text{g/L}$)
C8	17 Dec 2021	10	15.64	85.81	7.7	33.47	8.0	24.7	0.59
C8	17 Dec 2021	11	15.64	85.90	7.7	33.47	8.0	24.7	0.70
C8	17 Dec 2021	12	15.63	85.83	7.7	33.47	8.0	24.7	0.65
C8	17 Dec 2021	13	15.57	85.70	7.6	33.48	8.0	24.7	0.68
C8	17 Dec 2021	14	15.47	85.79	7.5	33.47	8.0	24.7	0.69
C8	17 Dec 2021	15	15.41	85.76	7.5	33.47	8.0	24.7	0.65
C8	17 Dec 2021	16	15.36	85.59	7.4	33.47	8.0	24.7	0.69
C8	17 Dec 2021	17	15.33	85.45	7.4	33.47	8.0	24.7	0.65
C8	17 Dec 2021	18	15.30	85.38	7.3	33.47	8.0	24.7	0.63
C8	17 Dec 2021	19	15.26	84.99	7.3	33.47	8.0	24.7	0.59
C8	17 Dec 2021	20	15.25	84.28	7.2	33.47	8.0	24.7	0.59
C8	21 Dec 2021	1	15.12	81.78	7.8	33.48	8.0	24.8	1.89
C8	21 Dec 2021	2	15.12	81.62	7.8	33.48	8.0	24.8	1.95
C8	21 Dec 2021	3	15.12	81.64	7.8	33.48	8.0	24.8	1.95
C8	21 Dec 2021	4	15.12	81.63	7.8	33.48	8.0	24.8	2.06
C8	21 Dec 2021	5	15.12	81.69	7.8	33.48	8.0	24.8	2.18
C8	21 Dec 2021	6	15.12	81.70	7.8	33.48	8.0	24.8	2.18
C8	21 Dec 2021	7	15.12	81.84	7.8	33.48	8.0	24.8	2.24
C8	21 Dec 2021	8	15.10	81.80	7.8	33.48	8.0	24.8	2.39
C8	21 Dec 2021	9	15.06	82.14	7.7	33.48	8.0	24.8	2.22
C8	21 Dec 2021	10	15.04	82.63	7.6	33.47	8.0	24.8	2.05
C8	21 Dec 2021	11	15.03	82.78	7.6	33.47	8.0	24.8	1.90
C8	21 Dec 2021	12	14.88	82.95	7.4	33.49	8.0	24.8	1.95
C8	21 Dec 2021	13	14.54	83.49	6.9	33.49	7.9	24.9	1.79
C8	21 Dec 2021	14	14.27	84.16	6.6	33.50	7.9	25.0	1.39
C8	21 Dec 2021	15	14.09	84.44	6.4	33.49	7.9	25.0	1.16
C8	21 Dec 2021	16	13.89	84.67	6.2	33.51	7.9	25.1	1.00
C8	21 Dec 2021	17	13.63	84.85	6.0	33.52	7.8	25.1	0.87
C8	21 Dec 2021	18	13.28	84.80	5.7	33.55	7.8	25.2	0.83
C8	21 Dec 2021	19	13.13	84.59	5.5	33.53	7.8	25.2	0.73
C8	21 Dec 2021	20	13.15	84.44	5.5	33.52	7.8	25.2	0.70
C8	27 Dec 2021	1	15.15	81.70	7.9	33.41	8.0	24.7	1.46
C8	27 Dec 2021	2	15.15	81.45	7.9	33.41	8.0	24.7	1.48
C8	27 Dec 2021	3	15.16	81.44	7.9	33.41	8.0	24.7	1.44
C8	27 Dec 2021	4	15.16	81.55	7.8	33.41	8.0	24.7	1.65
C8	27 Dec 2021	5	15.15	81.34	7.9	33.41	8.0	24.7	1.64
C8	27 Dec 2021	6	15.15	81.40	7.9	33.41	8.0	24.7	1.84
C8	27 Dec 2021	7	15.15	81.42	7.9	33.41	8.0	24.7	1.76
C8	27 Dec 2021	8	15.14	81.35	7.9	33.41	8.0	24.7	1.78
C8	27 Dec 2021	9	15.14	81.14	7.9	33.41	8.0	24.7	1.88
C8	27 Dec 2021	10	15.14	81.16	7.9	33.41	8.0	24.7	1.86
C8	27 Dec 2021	11	15.14	81.11	7.9	33.41	8.0	24.7	1.78
C8	27 Dec 2021	12	15.14	81.18	7.9	33.41	8.0	24.7	1.83
C8	27 Dec 2021	13	15.13	81.17	7.8	33.41	8.0	24.7	2.07
C8	27 Dec 2021	14	15.15	81.81	7.8	33.41	8.0	24.7	1.86
C8	27 Dec 2021	15	15.15	82.84	7.8	33.44	8.0	24.7	1.66
C8	27 Dec 2021	16	15.14	83.59	7.7	33.45	8.0	24.8	1.59
C8	27 Dec 2021	17	15.11	83.99	7.6	33.45	8.0	24.8	1.38
C8	27 Dec 2021	18	15.03	83.80	7.5	33.47	8.0	24.8	1.30
C8	27 Dec 2021	19	14.94	82.15	7.3	33.47	8.0	24.8	1.09

NA = not available

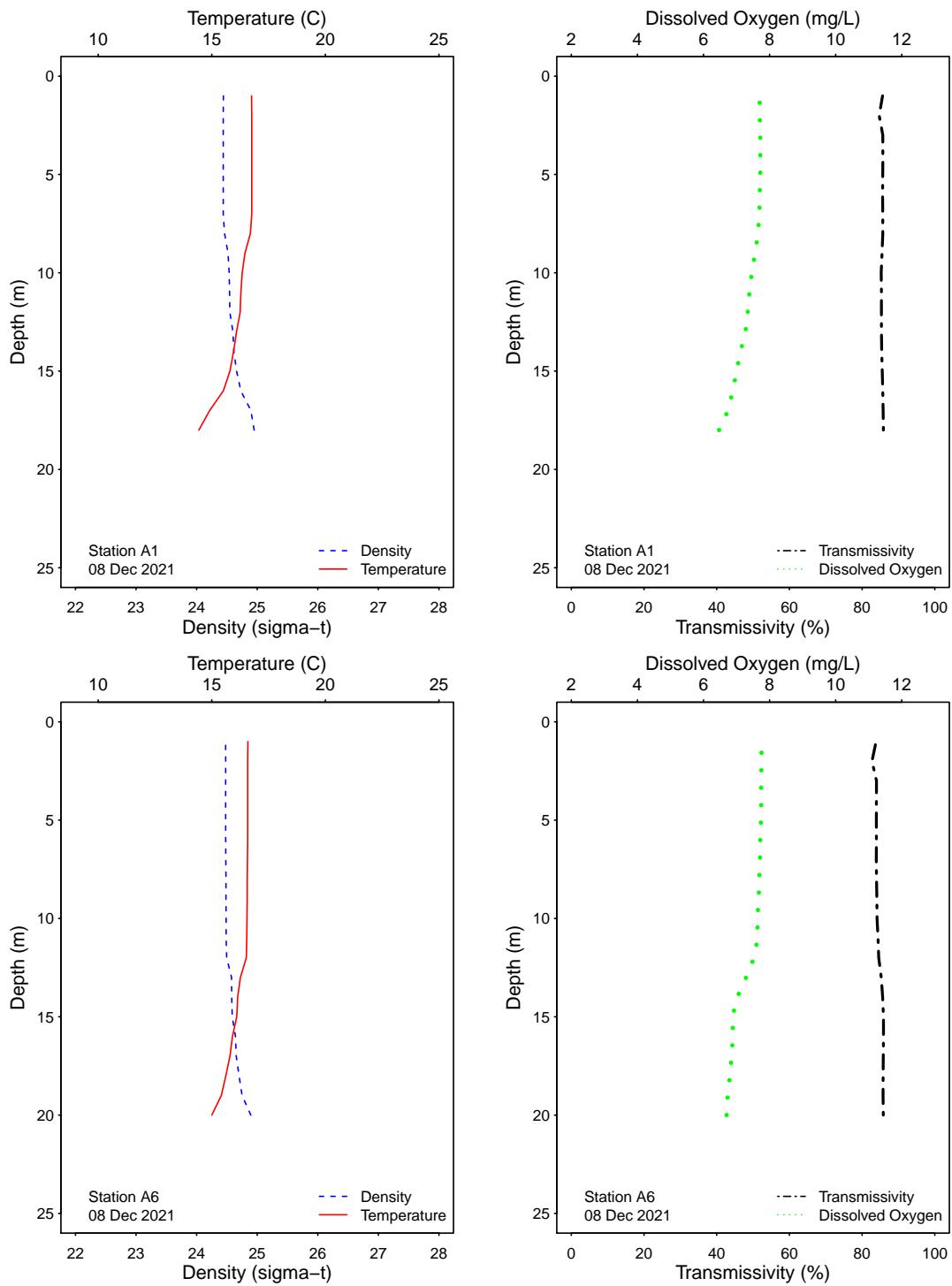


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

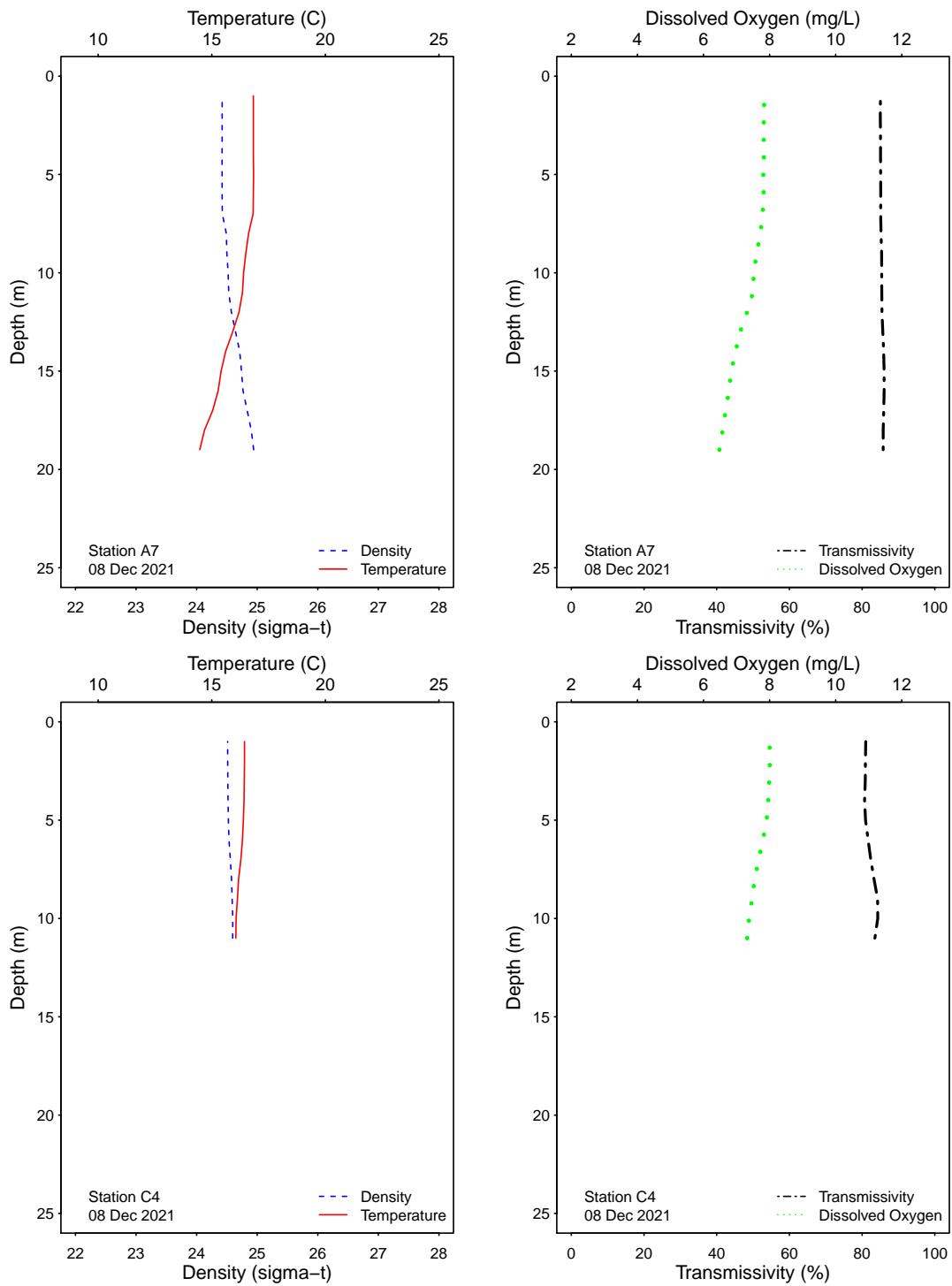


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

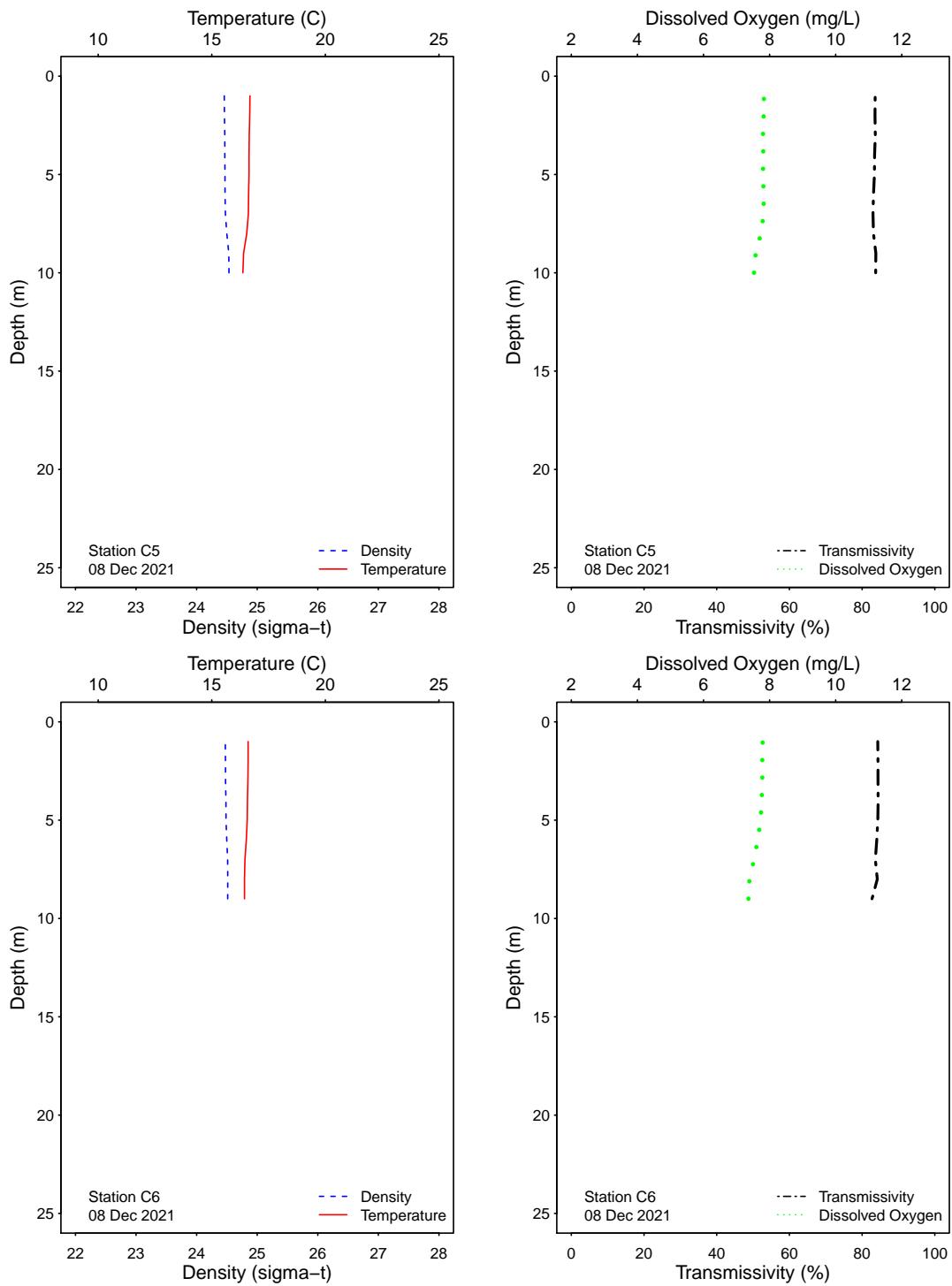


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

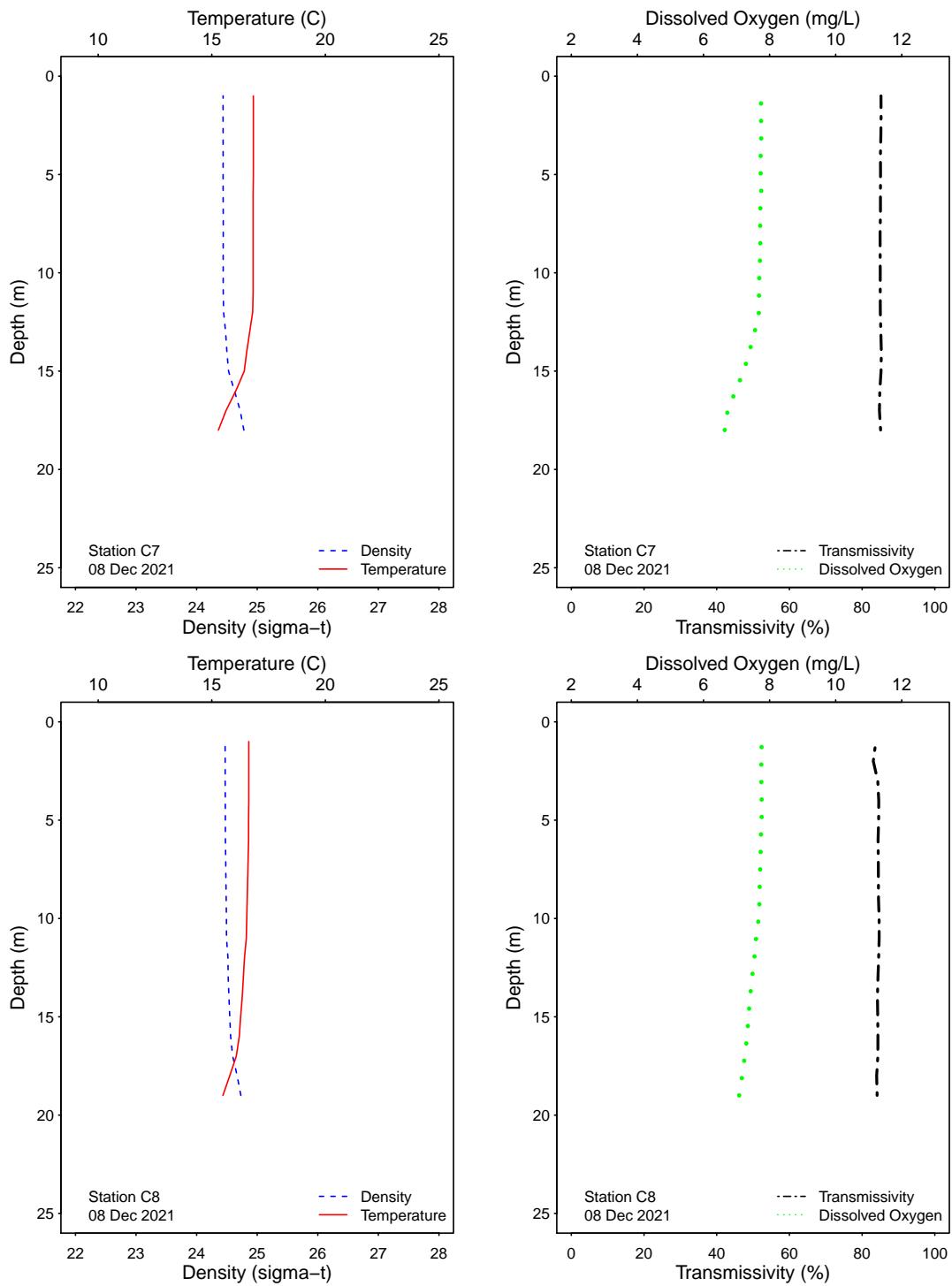


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

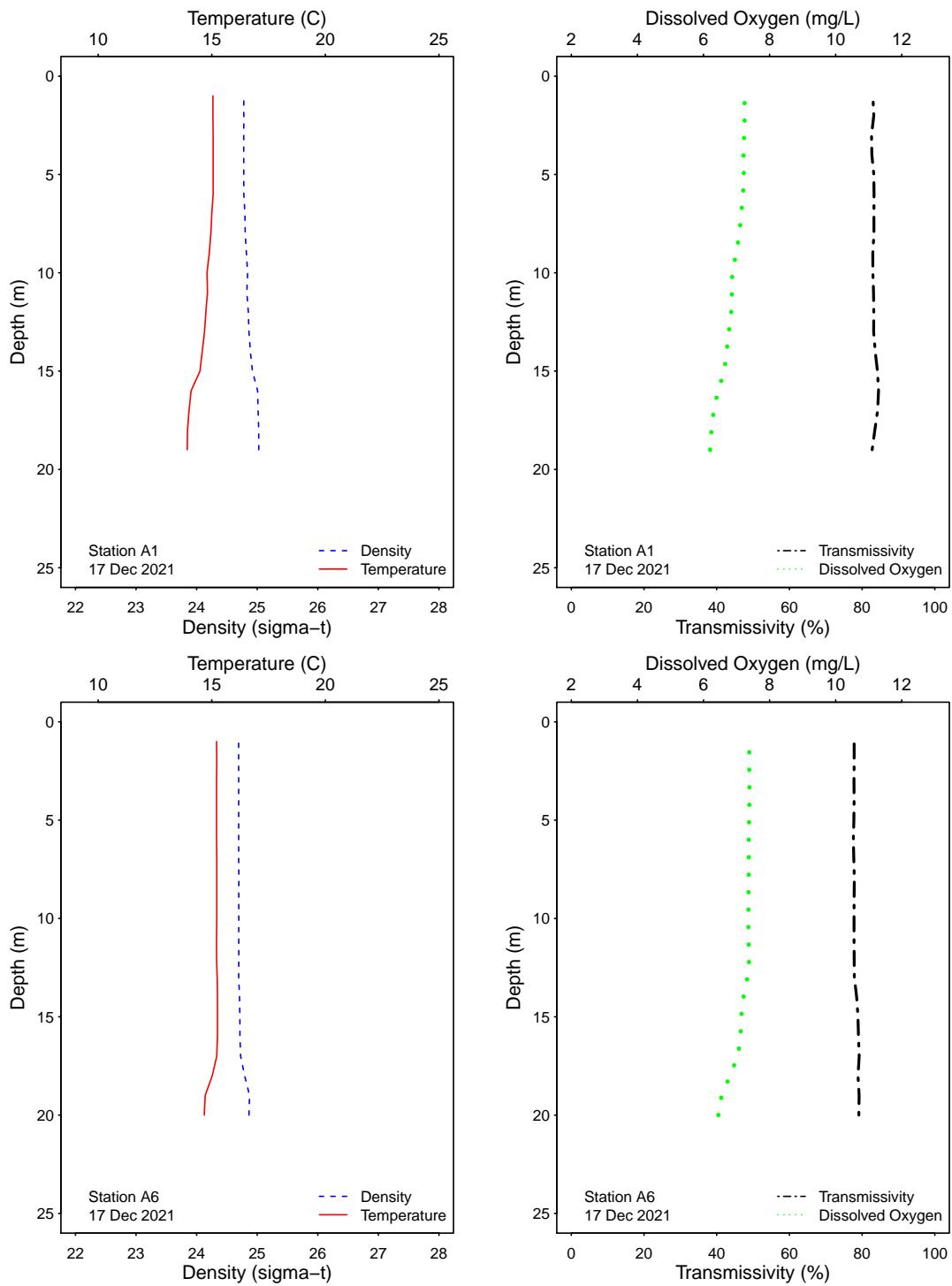


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

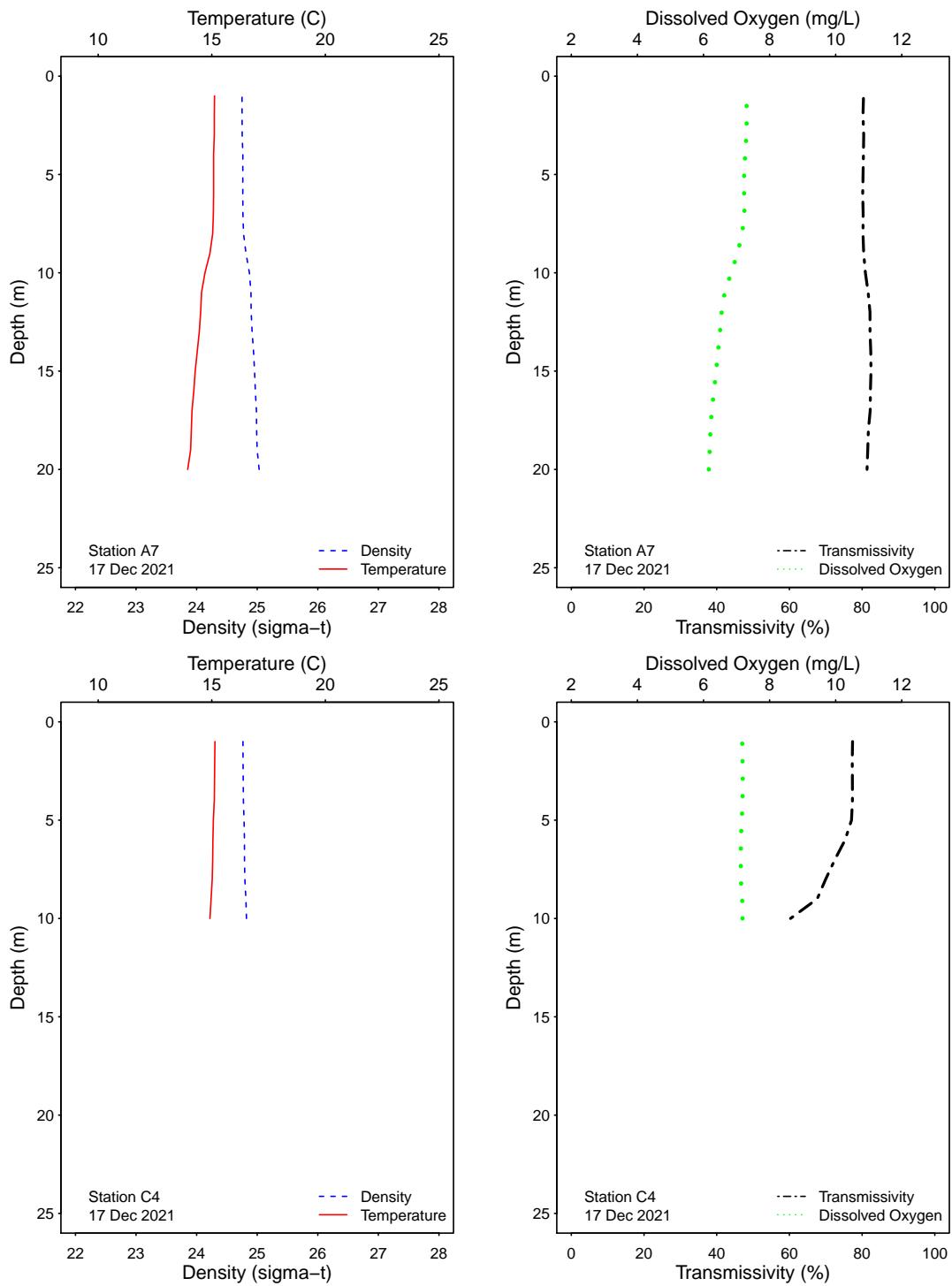


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

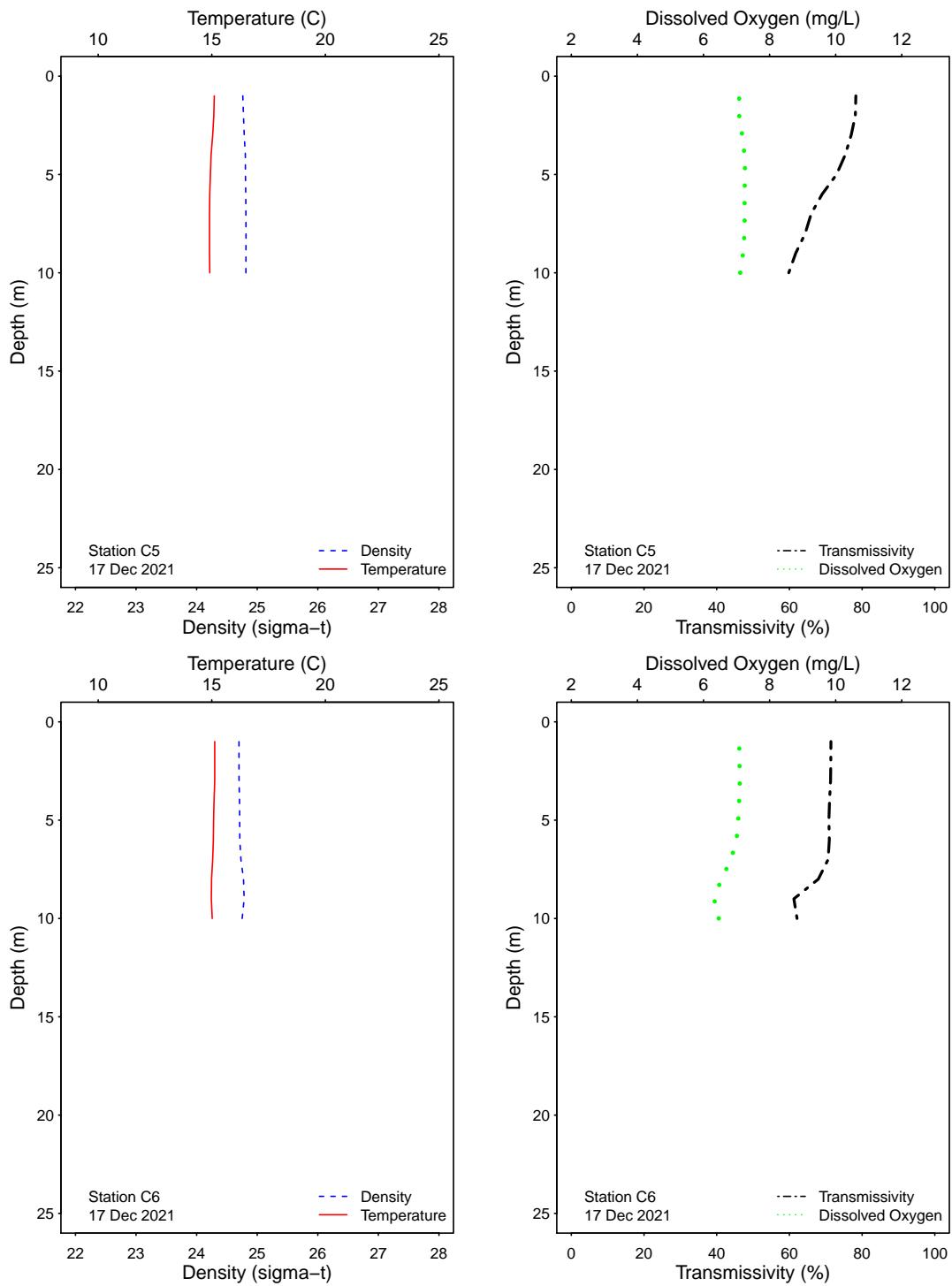


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

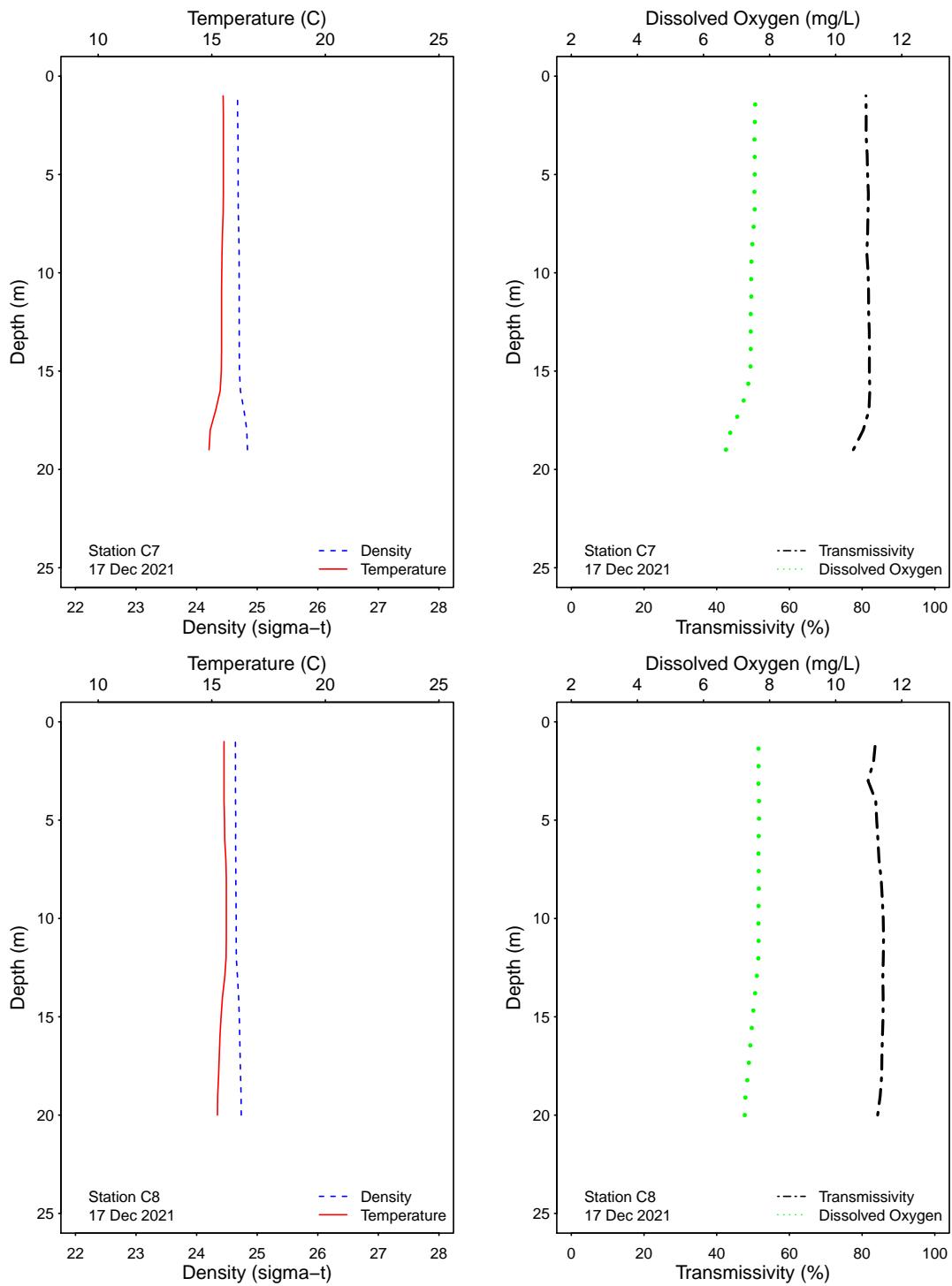


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

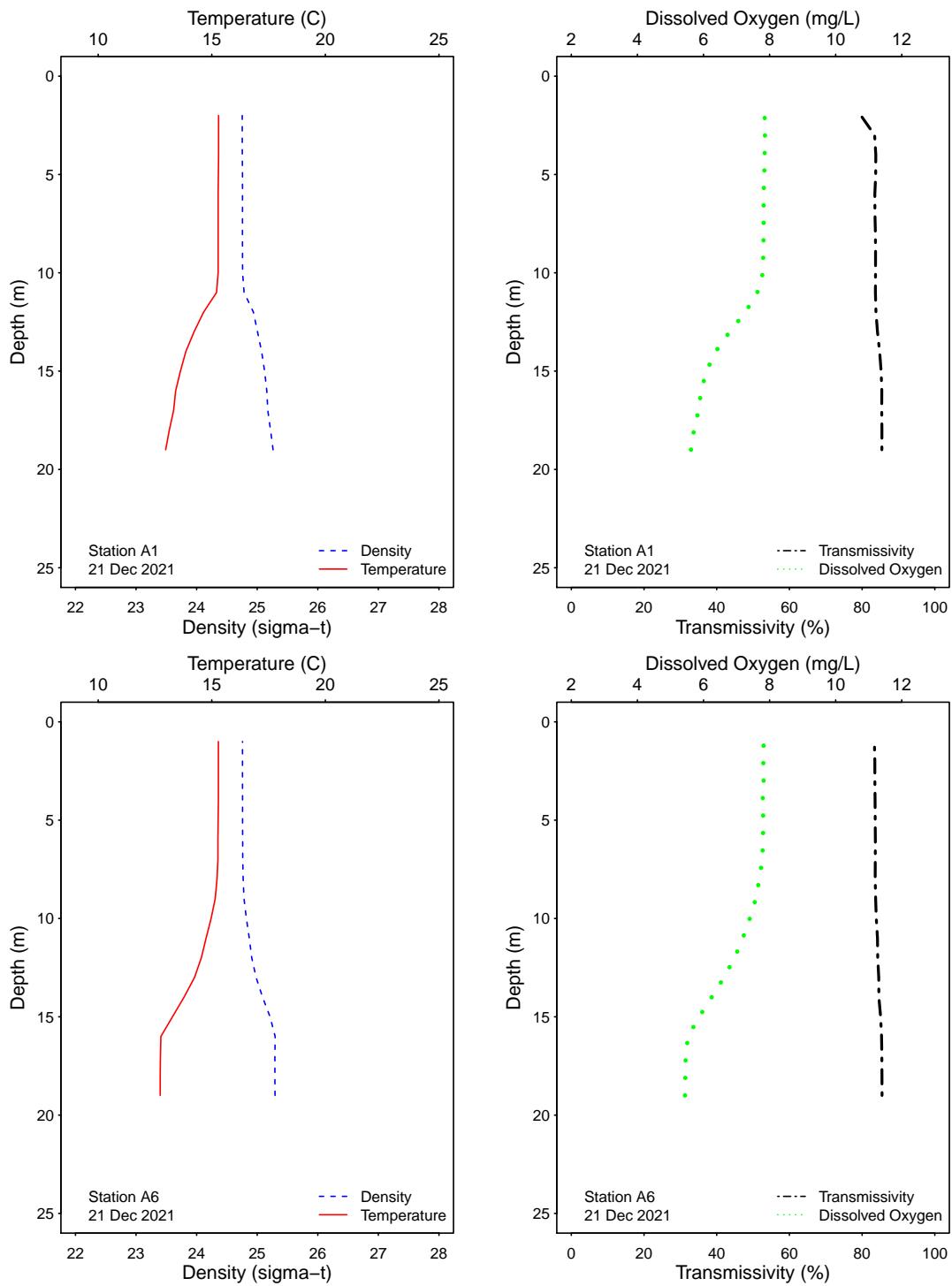


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

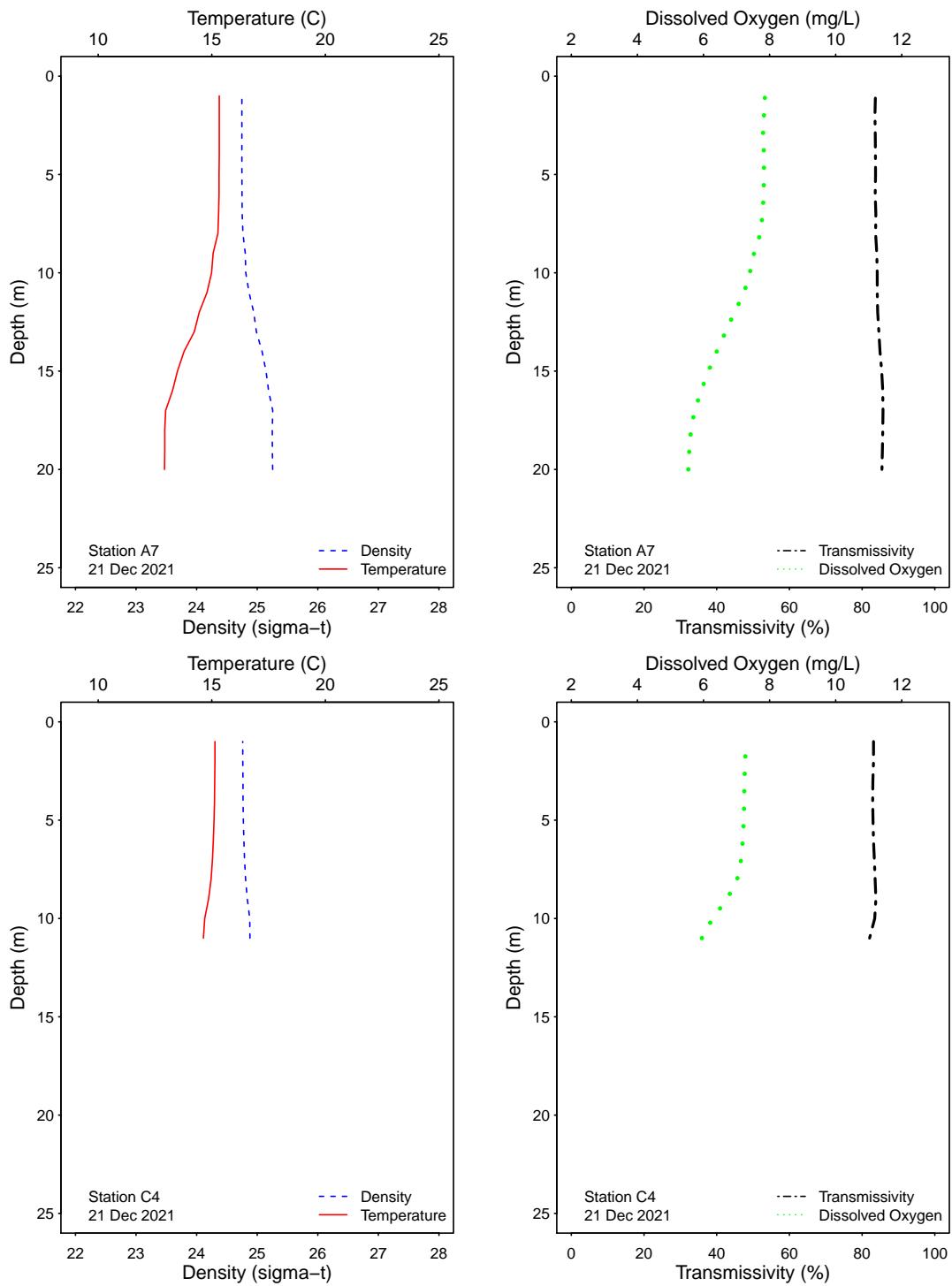


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

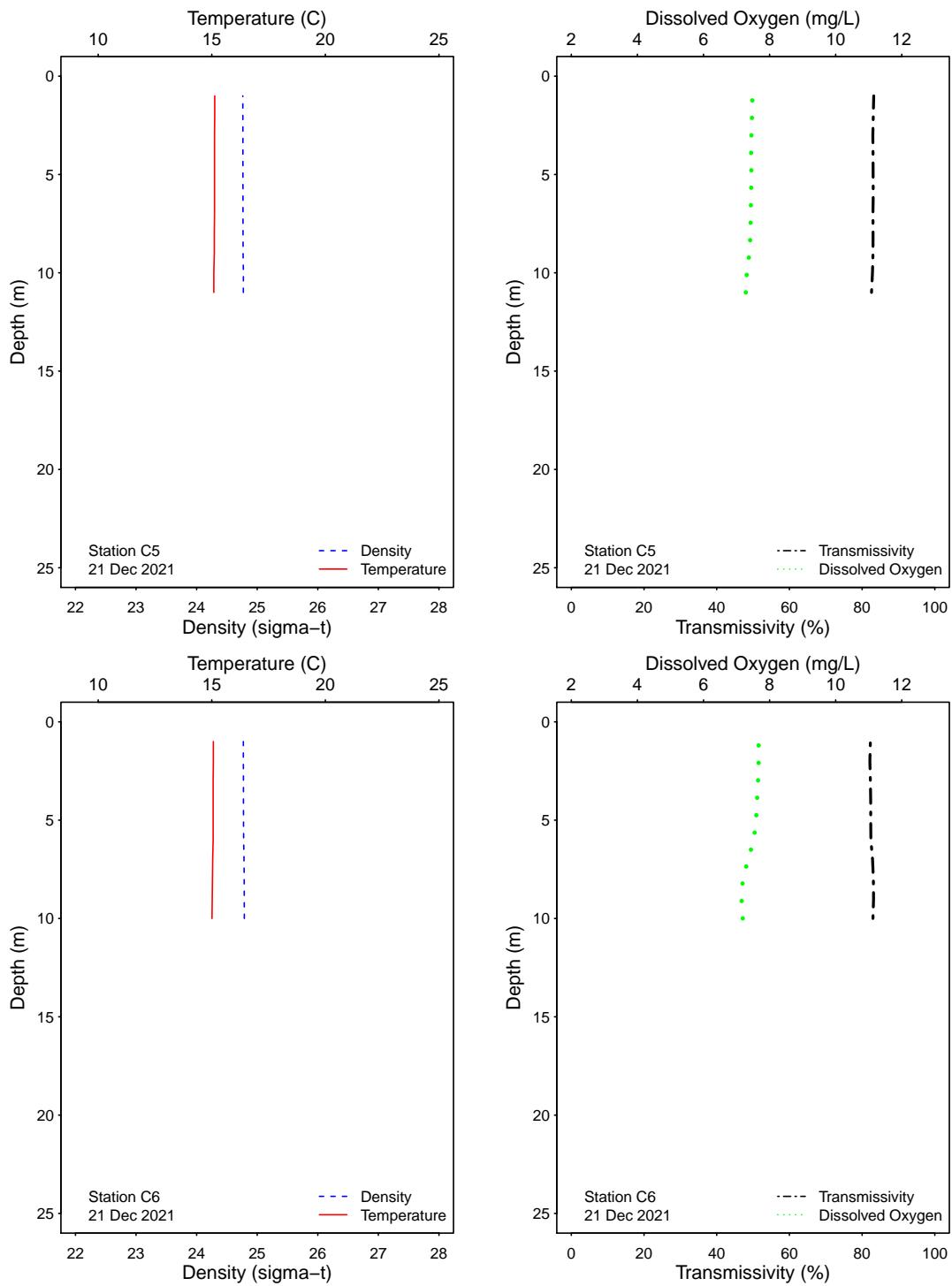


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

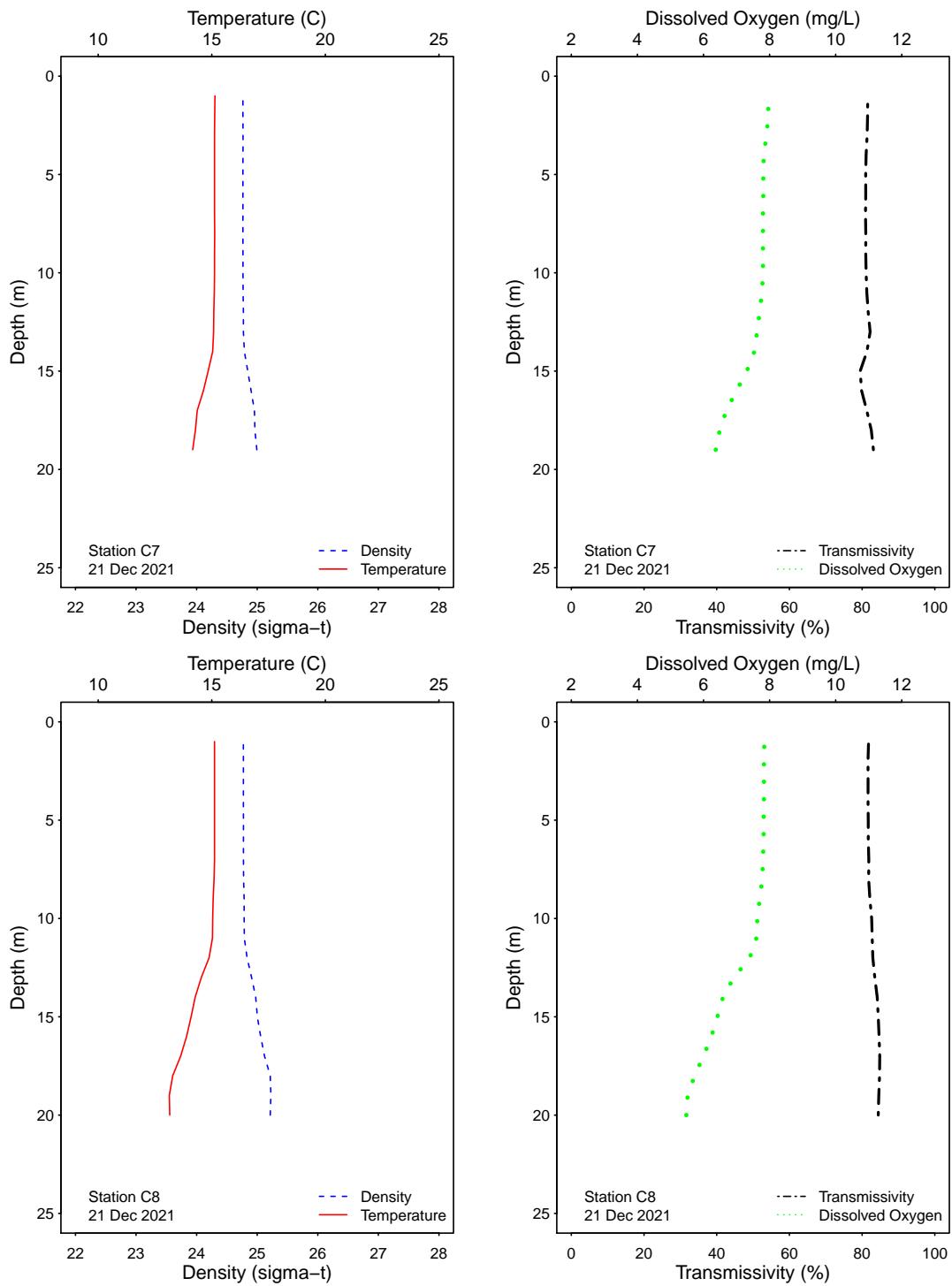


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

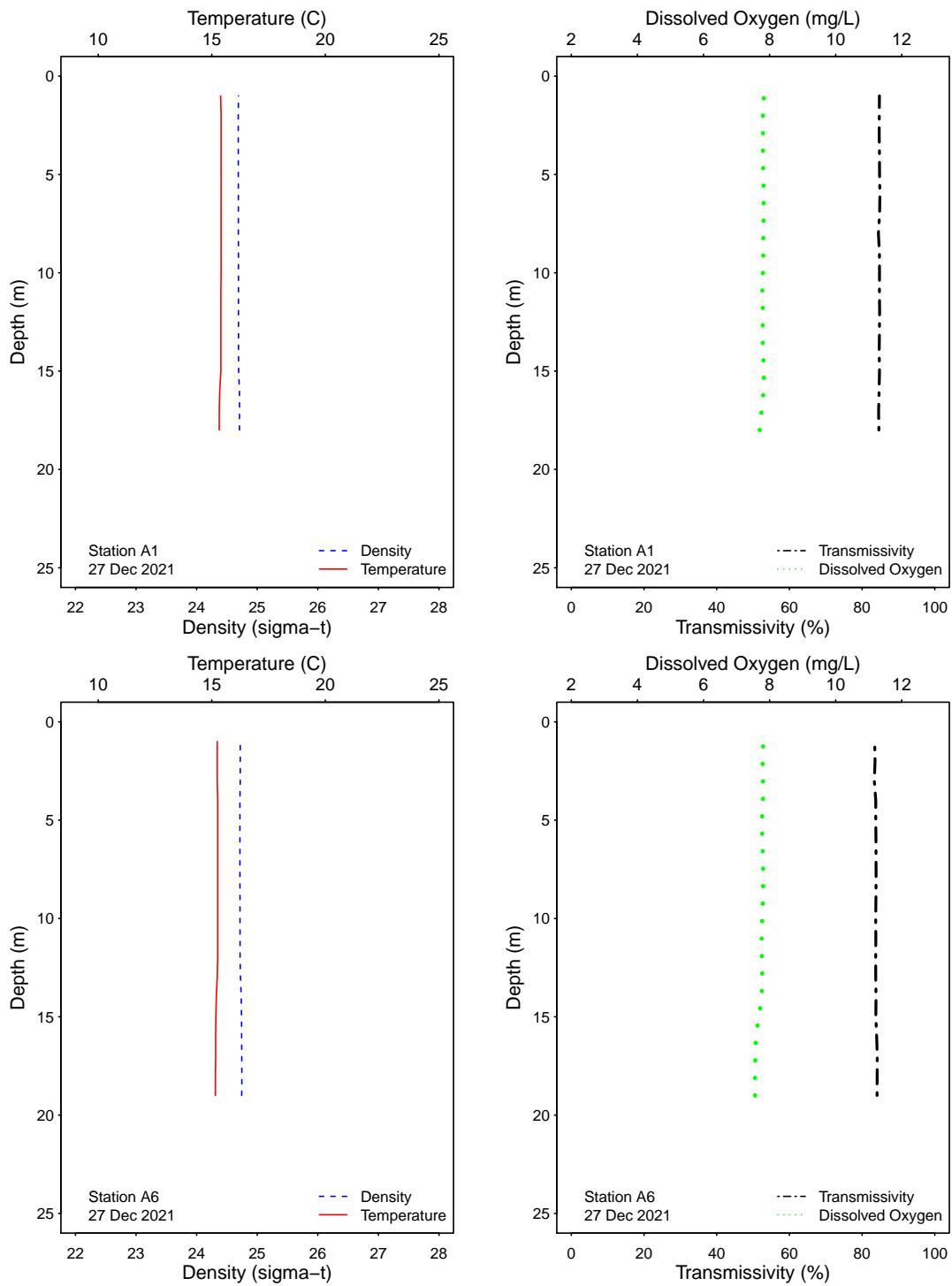


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

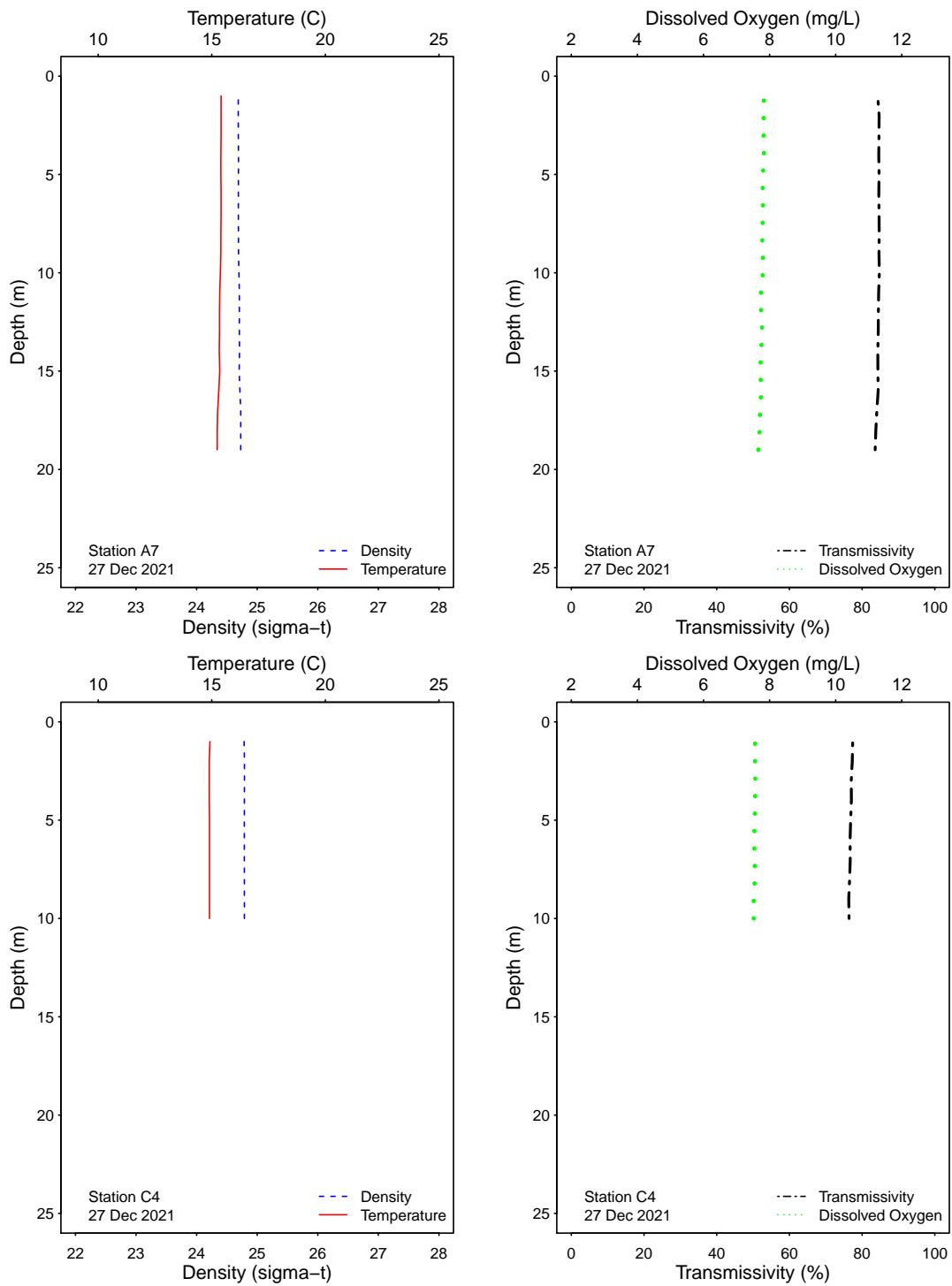


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

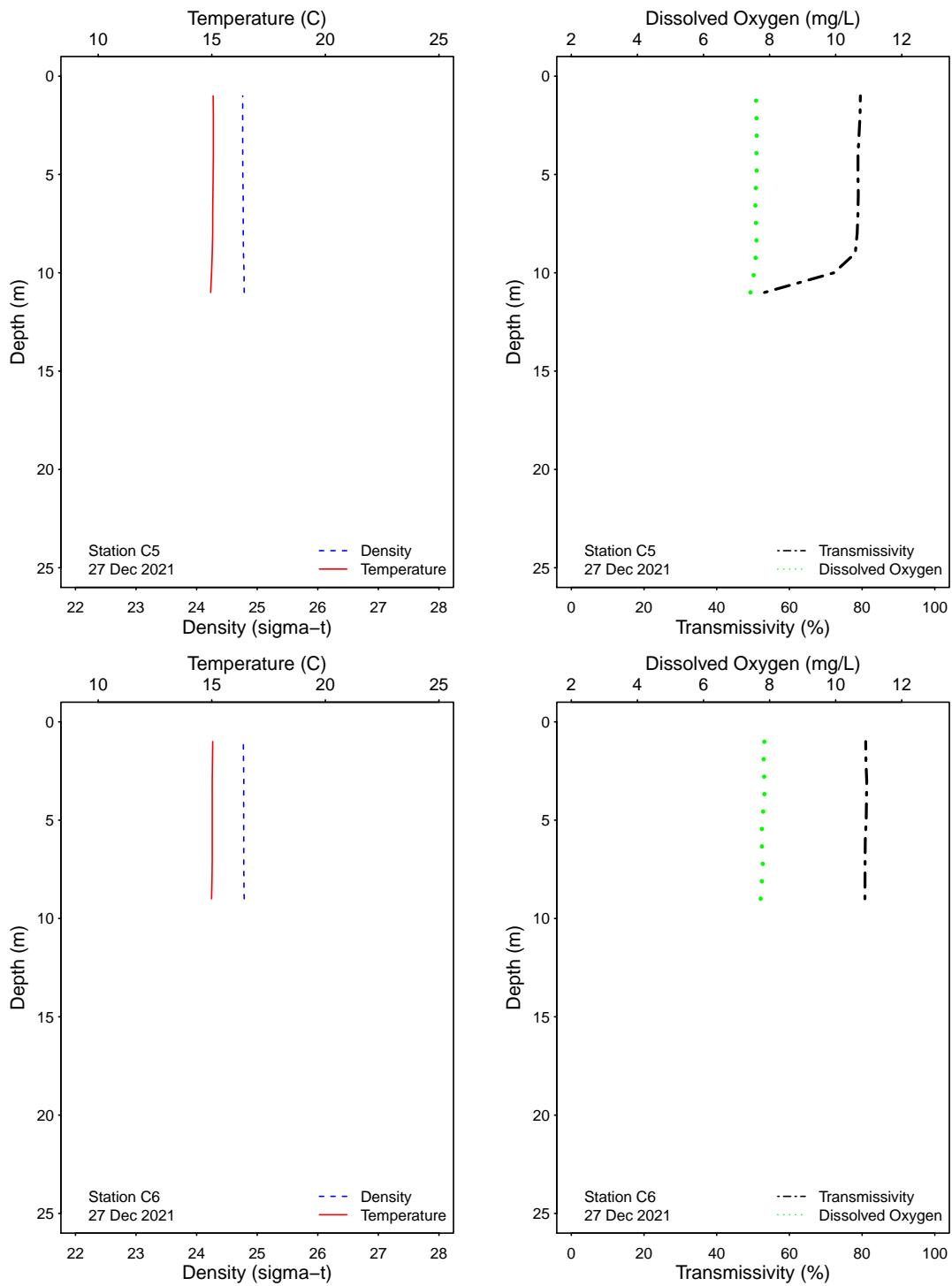


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

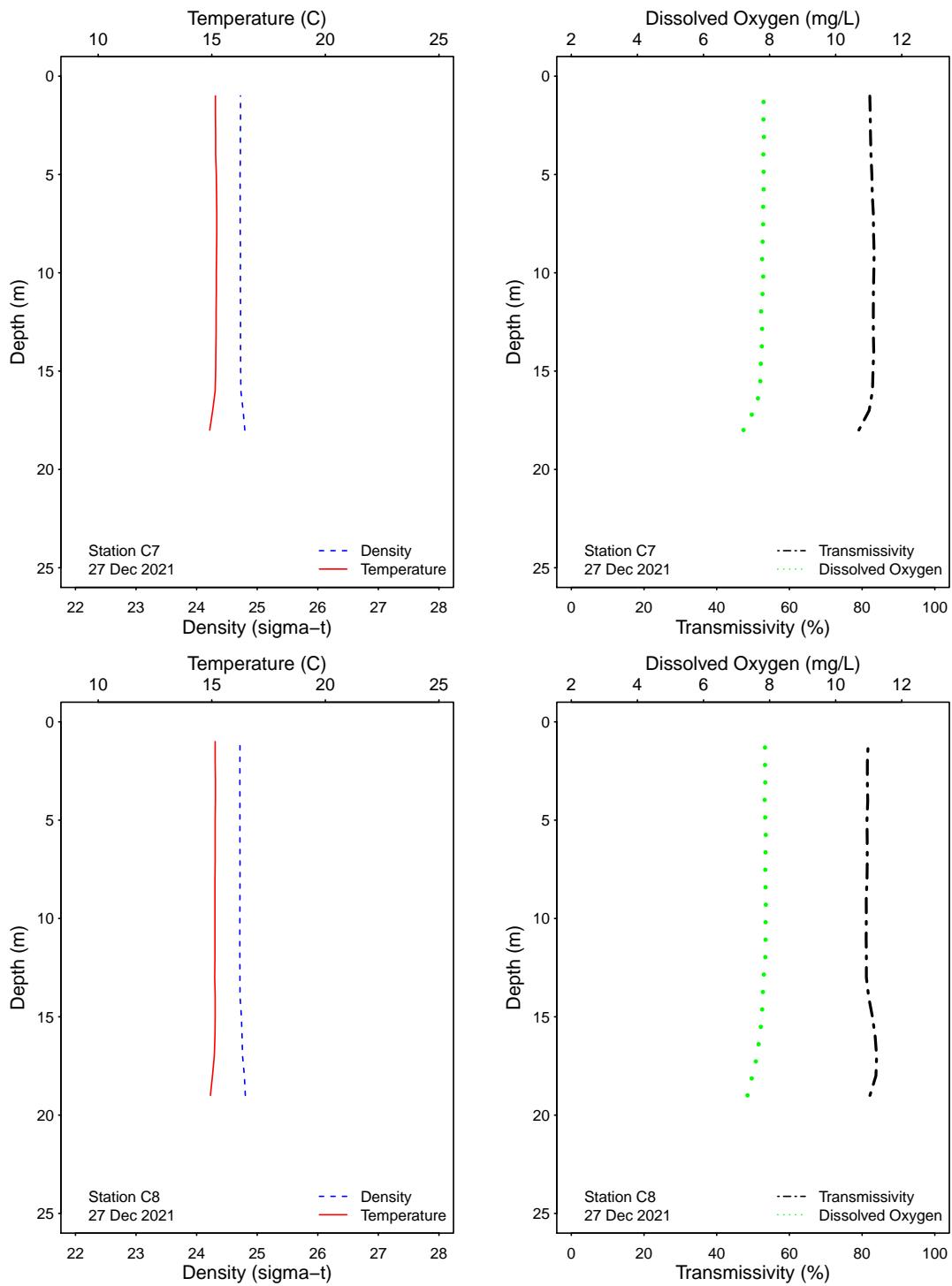


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

APPENDIX A

Quality Assurance

Table A.1

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

Station	Date	Depth	Analyst	Procedure	Total	Fecal	Enter
A7	08 Dec 2021	18	HF	LAB DUPLICATE	18e	4e	<2
A7	17 Dec 2021	18	LMA	LAB DUPLICATE	46	4e	2e
A7	21 Dec 2021	18	HF	LAB DUPLICATE	32e	<2	4e
A7	27 Dec 2021	18	CRE	LAB DUPLICATE	2e	<2	2e
C7	08 Dec 2021	18	HF	LAB DUPLICATE	14e	2e	2e
C7	17 Dec 2021	18	AR	LAB DUPLICATE	24e	<2	<2
C7	21 Dec 2021	18	HF	LAB DUPLICATE	6e	<2	<2
C7	27 Dec 2021	18	CRE	LAB DUPLICATE	6e	2e	2e
C8	08 Dec 2021	12	HF	LAB DUPLICATE	2e	<2	<2
C8	17 Dec 2021	12	AR	LAB DUPLICATE	<2	<2	<2
C8	21 Dec 2021	12	HF	LAB DUPLICATE	<2	<2	<2
C8	27 Dec 2021	12	CRE	LAB DUPLICATE	<20	<2	4e
D12	01 Dec 2021		BS	FIELD DUPLICATE	6e	6e	<2
D12	01 Dec 2021		BS	LAB DUPLICATE	6e	<2	2e
D12	08 Dec 2021		HF	FIELD DUPLICATE	<2	2e	6e
D12	08 Dec 2021		HF	LAB DUPLICATE	<20	<2	<2
D12	15 Dec 2021		KA	FIELD DUPLICATE	140e	28e	38e
D12	15 Dec 2021		KA	LAB DUPLICATE	200e	16e	36e
D12	22 Dec 2021		KA	FIELD DUPLICATE	12e	4e	<2
D12	22 Dec 2021		KA	LAB DUPLICATE	6e	<2	8e
D12	29 Dec 2021		CRE	FIELD DUPLICATE	<200	8e	6e
D12	29 Dec 2021		CRE	LAB DUPLICATE	<200	8e	6e

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 Dec 2021	3	2	2	12	2	4	7	4
02 Dec 2021	3	2	2	12	2	4	7	4
03 Dec 2021	3	2	2	12	2	4	7	4
04 Dec 2021	3	2	2	12	2	4	7	4
05 Dec 2021	3	2	2	12	2	4	7	4
06 Dec 2021	3	2	2	12	2	4	7	4
07 Dec 2021	3	2	2	12	2	4	7	4
08 Dec 2021	3	2	2	12	2	4	6	4
09 Dec 2021	3	2	2	12	2	4	6	4
10 Dec 2021	3	2	2	12	2	4	6	4
11 Dec 2021	3	2	2	12	2	4	6	4
12 Dec 2021	3	2	2	12	2	4	6	4
13 Dec 2021	3	2	2	12	2	4	6	4
14 Dec 2021	3	2	2	12	2	4	6	4
15 Dec 2021	2	2	3	14	4	11	15	5
16 Dec 2021	2	2	3	14	4	11	15	5
17 Dec 2021	2	2	3	14	4	13	16	5
18 Dec 2021	2	2	3	14	4	13	16	5
19 Dec 2021	2	2	3	14	4	13	16	5
20 Dec 2021	2	2	4	13	4	14	16	4
21 Dec 2021	2	2	4	13	4	14	16	4
22 Dec 2021	2	2	3	12	6	15	14	4
23 Dec 2021	2	2	3	12	6	15	14	4
24 Dec 2021	2	2	3	12	6	15	14	4
25 Dec 2021	2	2	3	12	6	15	14	4
26 Dec 2021	2	2	3	12	6	15	14	4
27 Dec 2021	2	2	3	12	6	15	14	4
28 Dec 2021	2	2	3	12	6	15	14	4
29 Dec 2021	2	2	4	12	7	14	12	5
30 Dec 2021	2	2	4	12	7	14	12	5
31 Dec 2021	2	2	4	12	7	14	12	5

* 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
December	IC	IC	IC	E	IC	E	E	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 Dec 2021	3	2	2	2	2	2	2	2
02 Dec 2021	3	2	2	2	2	2	2	2
03 Dec 2021	3	2	2	2	2	2	2	2
04 Dec 2021	3	2	2	2	2	2	2	2
05 Dec 2021	3	2	2	2	2	2	2	2
06 Dec 2021	3	2	2	2	2	2	2	2
07 Dec 2021	3	2	2	2	2	2	2	2
08 Dec 2021	2	2	2	2	2	2	2	2
09 Dec 2021	2	2	2	2	2	2	2	2
10 Dec 2021	2	2	2	2	2	2	2	2
11 Dec 2021	2	2	2	2	2	2	2	2
12 Dec 2021	2	2	2	2	2	2	2	2
13 Dec 2021	2	2	2	2	2	2	2	2
14 Dec 2021	2	2	2	2	2	2	2	2
15 Dec 2021	2	2	2	2	2	2	2	2
16 Dec 2021	2	2	2	2	2	2	2	2
17 Dec 2021	3	2	3	2	2	2	2	2
18 Dec 2021	3	2	3	2	2	2	2	2
19 Dec 2021	3	2	3	2	2	2	2	2
20 Dec 2021	3	2	3	2	2	2	2	2
21 Dec 2021	3	2	3	2	2	2	2	2
22 Dec 2021	3	2	3	2	2	2	2	2
23 Dec 2021	3	2	3	2	2	2	2	2
24 Dec 2021	3	2	3	2	2	2	2	2
25 Dec 2021	3	2	3	2	2	2	2	2
26 Dec 2021	3	2	3	2	2	2	2	2
27 Dec 2021	2	2	3	2	2	2	2	2
28 Dec 2021	3	2	3	2	2	2	2	2
29 Dec 2021	3	2	3	2	2	2	2	2
30 Dec 2021	3	2	3	2	2	2	2	2
31 Dec 2021	3	2	3	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
December	IC							

IC = In Compliance

E = Exceedance

ns = not sampled

ND = no data