



POINT LOMA OCEAN OUTFALL MONTHLY RECEIVING WATERS MONITORING REPORT

**POINT LOMA
WASTEWATER TREATMENT PLANT**

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

SEPTEMBER 2019
REVISED MARCH 2021

Environmental Monitoring and Technical Services
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Public Utilities Department

Environmental Monitoring & Technical Services Division

April 1, 2021

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 revised September 2019 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 revised report is being submitted to address data integrity issues identified to the Board in the letter dated October 22, 2020, subject: "San Diego NPDES Shoreline Sampling Program Report."

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

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

Sincerely,

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

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

PV/rk

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

INTRODUCTION

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

MATERIALS AND METHODS

Shore Stations

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

- Station D8 was replaced by alternate station D8-A during July 2016. However, due to increasing instability, City staff have been unable to safely access and sample station D8-A since February 7, 2018. During March 2018, the City identified an alternate location for stations D8/D8-A. This new station, designated D8-B, is located about 150 feet north of D8-A.

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;

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.

(3) *Enterococcus* density shall not exceed 35 CFU/100 mL

Single Sample Maximums:

- (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 2019 Quality Assurance Report, which will be completed in March 2020.

SUMMARY OF RESULTS

Shore Stations

- The eight shore stations (D4, D5, D7, D8-B, D9, D10, D11, D12) were sampled on September 4, 11, 18, and 25. Subsequent to initial reporting, the samples collected at stations D4 and D8-B on September 4, and stations D4 and D7 on September 18, were determined to be problematic. The results from these samples have been removed from this report.
- During September, one of the eight shore stations were out of compliance with various water-contact standards specified in the Ocean Plan as follows:
 - o The single sample maximum (SSM) standard for *Enterococcus* was exceeded on September 4 at D10.
 - o Per permit requirements, resamples were collected in response to these SSM exceedances (see Table 2.8 for details), and the resamples did not exceed water-contact standards.
- 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>).
- Notable observations for September included a sewage-like odor on September 11 at D5.

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

Kelp Bed Stations

- The eight kelp bed water quality stations (A1, A6, A7, C4, C5, C6, C7, C8) were sampled on September 3, 10, 17, 24, and 30.
- All eight of these stations complied with various water-contact standards specified in the Ocean Plan.
- Water column temperatures ranged from 13.46 to 23.26°C. The difference between surface and bottom waters ranged from 2.39 to 9.57°C.
- Chlorophyll *a* concentrations ranged from 0.47 to 5.41 µg/L, suggesting the presence of phytoplankton blooms during the month.
- Nothing of sewage origin was observed at any of the kelp stations.

Offshore Stations

- Quarterly offshore water quality sampling was not conducted during September. The next quarterly sampling is scheduled for November 2019.



TABLES AND FIGURES

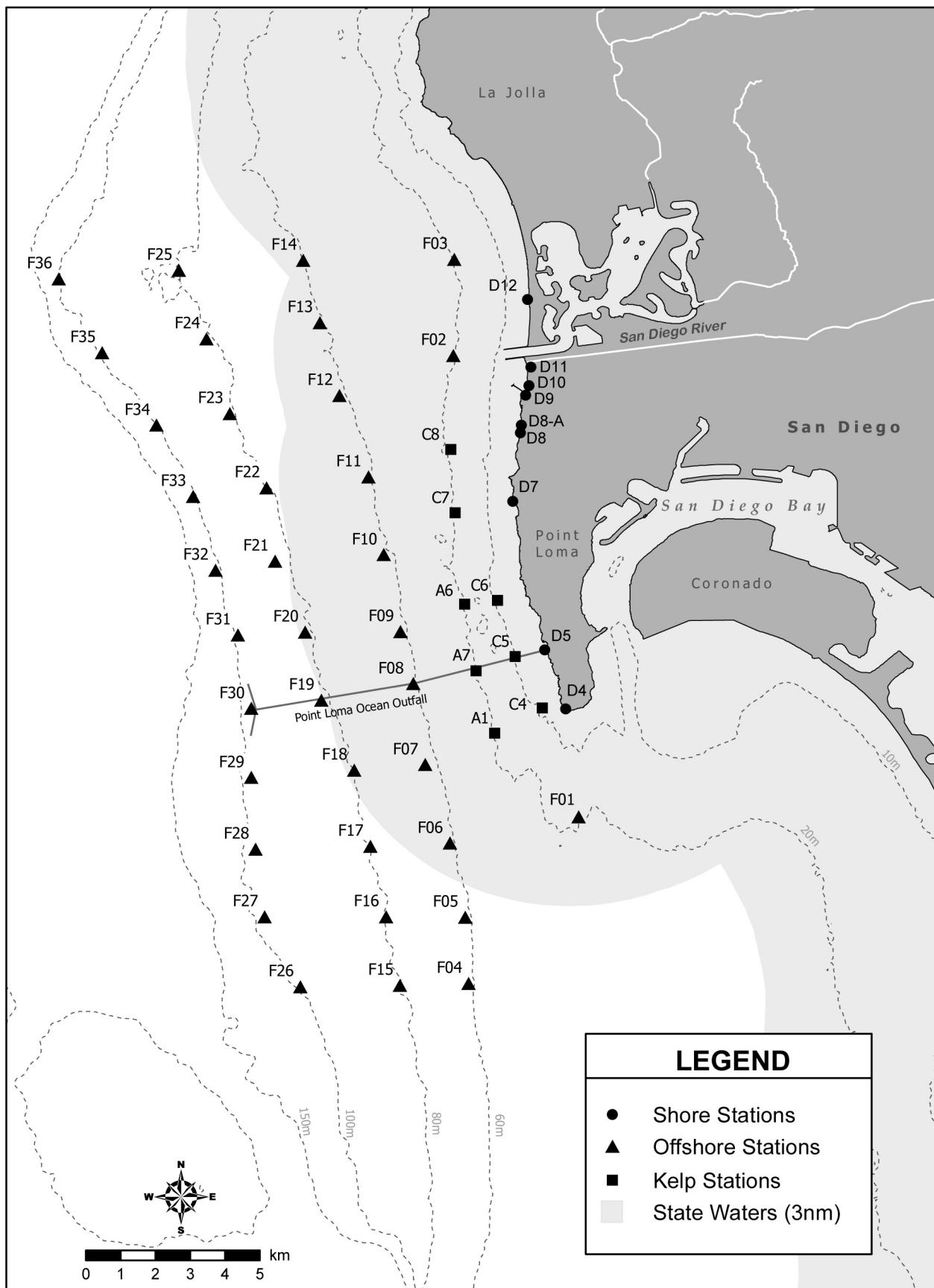


Figure 1.1 Station Map

Shore Stations

Table 2.1

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

Date	D4	D5	D7	D8-B	D9	D10	D11	D12
01 Sep 2019	11	19	29	62	47	34	47	36
02 Sep 2019	11	19	29	62	47	34	47	36
03 Sep 2019	11	19	29	62	47	34	47	36
04 Sep 2019	11	12	37	62	49	35	39	32
05 Sep 2019	11	12	37	62	49	35	39	32
06 Sep 2019	20	11	47	71	62	40	36	36
07 Sep 2019	20	11	47	71	62	40	36	36
08 Sep 2019	20	11	47	71	62	40	36	36
09 Sep 2019	20	11	47	71	62	40	36	36
10 Sep 2019	20	11	47	71	62	40	36	36
11 Sep 2019	20	16	39	52	78	35	36	20
12 Sep 2019	20	16	39	52	78	35	36	20
13 Sep 2019	20	15	39	20	99	28	24	20
14 Sep 2019	20	15	39	20	99	28	24	20
15 Sep 2019	20	15	39	20	99	28	24	20
16 Sep 2019	20	15	39	20	99	28	24	20
17 Sep 2019	20	15	39	20	99	28	24	20
18 Sep 2019	20	16	39	20	73	35	23	20
19 Sep 2019	20	16	39	20	73	35	23	20
20 Sep 2019	20	15	34	20	85	34	24	11
21 Sep 2019	20	15	34	20	85	34	24	11
22 Sep 2019	20	15	34	20	85	34	24	11
23 Sep 2019	20	15	34	20	85	34	24	11
24 Sep 2019	20	15	34	20	85	34	24	11
25 Sep 2019	29	16	50	36	64	35	23	10
26 Sep 2019	29	16	50	36	64	35	23	10
27 Sep 2019	35	15	68	43	48	40	24	8
28 Sep 2019	35	15	68	43	48	40	24	8
29 Sep 2019	35	15	68	43	48	40	24	8
30 Sep 2019	35	15	68	43	48	40	24	8

* Geometric mean calculated using n<5

ns = not sampled

Table 2.2

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

Date	D4	D5	D7	D8-B	D9	D10	D11	D12
01 Sep 2019	2	5	5	5	2	9	7	4
02 Sep 2019	2	5	5	5	2	9	7	4
03 Sep 2019	2	5	5	5	2	9	7	4
04 Sep 2019	2	4	4	5	2	10	6	3
05 Sep 2019	2	4	4	5	2	10	6	3
06 Sep 2019	2	4	5	4	2	8	4	4
07 Sep 2019	2	4	5	4	2	8	4	4
08 Sep 2019	2	4	5	4	2	8	4	4
09 Sep 2019	2	4	5	4	2	8	4	4
10 Sep 2019	2	4	5	4	2	8	4	4
11 Sep 2019	2	4	6	3	3	6	4	3
12 Sep 2019	2	4	6	3	3	6	4	3
13 Sep 2019	2	3	5	2	4	8	4	4
14 Sep 2019	2	3	5	2	4	8	4	4
15 Sep 2019	2	3	5	2	4	8	4	4
16 Sep 2019	2	3	5	2	4	8	4	4
17 Sep 2019	2	3	5	2	4	8	4	4
18 Sep 2019	2	3	5	2	3	7	5	3
19 Sep 2019	2	3	5	2	3	7	5	3
20 Sep 2019	2	3	4	2	4	6	6	2
21 Sep 2019	2	3	4	2	4	6	6	2
22 Sep 2019	2	3	4	2	4	6	6	2
23 Sep 2019	2	3	4	2	4	6	6	2
24 Sep 2019	2	3	4	2	4	6	6	2
25 Sep 2019	2	3	3	2	4	7	6	2
26 Sep 2019	2	3	3	2	4	7	6	2
27 Sep 2019	2	3	4	2	5	6	5	2
28 Sep 2019	2	3	4	2	5	6	5	2
29 Sep 2019	2	3	4	2	5	6	5	2
30 Sep 2019	2	3	4	2	5	6	5	2

* Geometric mean calculated using n<5

ns = not sampled

Table 2.3

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

Date	D4	D5	D7	D8-B	D9	D10	D11	D12
01 Sep 2019	3	7	2	3	2	11	7	2
02 Sep 2019	3	7	2	3	2	11	7	2
03 Sep 2019	3	7	2	3	2	11	7	2
04 Sep 2019	3	5	2	3	2	20	9	2
05 Sep 2019	3	5	2	3	2	20	9	2
06 Sep 2019	3	5	2	2	2	27	11	2
07 Sep 2019	3	5	2	2	2	27	11	2
08 Sep 2019	3	5	2	2	2	27	11	2
09 Sep 2019	3	5	2	2	2	27	11	2
10 Sep 2019	3	5	2	2	2	27	11	2
11 Sep 2019	3	4	2	2	2	16	9	2
12 Sep 2019	3	4	2	2	2	16	9	2
13 Sep 2019	3	2	2	2	2	14	10	2
14 Sep 2019	3	2	2	2	2	14	10	2
15 Sep 2019	3	2	2	2	2	14	10	2
16 Sep 2019	3	2	2	2	2	14	10	2
17 Sep 2019	3	2	2	2	2	14	10	2
18 Sep 2019	3	2	2	2	2	11	8	3
19 Sep 2019	3	2	2	2	2	11	8	3
20 Sep 2019	3	2	3	2	2	8	8	3
21 Sep 2019	3	2	3	2	2	8	8	3
22 Sep 2019	3	2	3	2	2	8	8	3
23 Sep 2019	3	2	3	2	2	8	8	3
24 Sep 2019	3	2	3	2	2	8	8	3
25 Sep 2019	4	2	2	2	2	6	6	3
26 Sep 2019	4	2	2	2	2	6	6	3
27 Sep 2019	3	2	3	2	3	8	6	3
28 Sep 2019	3	2	3	2	3	8	6	3
29 Sep 2019	3	2	3	2	3	8	6	3
30 Sep 2019	3	2	3	2	3	8	6	3

* 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
04 Sep 2019	ns	IC	IC	ns	IC	IC	IC	IC
11 Sep 2019	IC	IC	IC	IC	IC	IC	IC	IC
18 Sep 2019	ns	IC	ns	IC	IC	IC	IC	IC
25 Sep 2019	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
04 Sep 2019	ns	IC	IC	ns	IC	IC	IC	IC
11 Sep 2019	IC	IC	IC	IC	IC	IC	IC	IC
18 Sep 2019	ns	IC	ns	IC	IC	IC	IC	IC
25 Sep 2019	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
04 Sep 2019	ns	IC	IC	ns	IC	E	IC	IC
05 Sep 2019	IC	ns	ns	ns	ns	E	ns	ns
11 Sep 2019	IC	IC	IC	IC	IC	IC	IC	IC
18 Sep 2019	ns	IC	ns	IC	IC	IC	IC	IC
25 Sep 2019	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
04 Sep 2019	ns	IC	IC	ns	IC	IC	IC	IC
11 Sep 2019	IC	IC	IC	IC	IC	IC	IC	IC
18 Sep 2019	ns	IC	ns	IC	IC	IC	IC	IC
25 Sep 2019	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	05 Sep 2019	1318	ns	ns	6e	ns
D4	11 Sep 2019	1039	<20	<2	<2	0.10
D4	25 Sep 2019	756	60e	<2	6e	0.03
D5	04 Sep 2019	1007	2e	2e	<2	1.00
D5	11 Sep 2019	1024	60e	8e	2e	0.13
D5	18 Sep 2019	843	<20	<2	<2	0.10
D5	25 Sep 2019	747	20e	<2	<2	0.10
D7	04 Sep 2019	943	100e	<2	<2	0.02
D7	11 Sep 2019	1059	<20	14e	4e	0.70
D7	25 Sep 2019	822	160e	2e	<2	0.01
D8-B	11 Sep 2019	1113	<20	2e	<2	0.10
D8-B	18 Sep 2019	913	<20	<2	2e	0.10
D8-B	25 Sep 2019	844	200e	<2	<2	0.01
D9	04 Sep 2019	920	60e	<2	<2	0.03
D9	11 Sep 2019	905	200e	30e	<2	0.15
D9	18 Sep 2019	924	22e	2e	<2	0.09
D9	25 Sep 2019	901	<20	4e	6e	0.20
D10	04 Sep 2019	901	40e	16e	200e	0.40
D10	05 Sep 2019	1256	ns	ns	<2	ns
D10	11 Sep 2019	848	20e	<2	2e	0.10
D10	18 Sep 2019	937	80e	4e	4e	0.05
D10	25 Sep 2019	913	40e	10e	2e	0.25
D11	04 Sep 2019	849	<20	<2	22e	0.10
D11	11 Sep 2019	829	40e	8e	6e	0.20
D11	18 Sep 2019	945	20e	6e	4e	0.30
D11	25 Sep 2019	933	20e	6e	2e	0.30
D12	04 Sep 2019	827	<20	<2	<2	0.10
D12	11 Sep 2019	806	<2	2e	<2	1.00
D12	18 Sep 2019	1014	20e	<2	8e	0.10
D12	25 Sep 2019	1005	6e	2e	2e	0.33

ns = not sampled

ND = no data

Comments

Station	Date	Depth	Parameter	Comments
D4	05 Sep 2019			Resample
D10	05 Sep 2019			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	11 Sep 2019	Arrive Time	1039
D4	11 Sep 2019	Weather	Sunny
D4	11 Sep 2019	Wind Speed (kts)	4
D4	11 Sep 2019	Wind Dir	N
D4	11 Sep 2019	Animal Life	1 Cormorant
D4	11 Sep 2019	Floatables	Foam; Film
D4	11 Sep 2019	Water Color	Green
D4	11 Sep 2019	Current Direction	N
D4	11 Sep 2019	Water Temp (C)	22.9
D4	11 Sep 2019	Wave Height Low (ft)	2
D4	11 Sep 2019	High Tide (ft)	4.5
D4	11 Sep 2019	High Tide Time	858
D4	11 Sep 2019	Low Tide (ft)	1.7
D4	11 Sep 2019	Low Tide Time	1428
D4	11 Sep 2019	Comments	Kelp; Seagrass; Algae; 5 Surfers; 3 Boats; Water clear
D4	25 Sep 2019	Arrive Time	756
D4	25 Sep 2019	Weather	Overcast
D4	25 Sep 2019	Wind Speed (kts)	5.6
D4	25 Sep 2019	Wind Dir	N
D4	25 Sep 2019	Animal Life	3 Cormorants
D4	25 Sep 2019	Floatables	None
D4	25 Sep 2019	Water Color	Green
D4	25 Sep 2019	Current Direction	N
D4	25 Sep 2019	Water Temp (C)	21.4
D4	25 Sep 2019	Wave Height Low (ft)	3
D4	25 Sep 2019	High Tide (ft)	4.5
D4	25 Sep 2019	High Tide Time	749
D4	25 Sep 2019	Low Tide (ft)	1.7
D4	25 Sep 2019	Low Tide Time	1316
D4	25 Sep 2019	Comments	Kelp; Seagrass; Algae; Water clear
D5	04 Sep 2019	Arrive Time	1007
D5	04 Sep 2019	Weather	Sunny
D5	04 Sep 2019	Wind Speed (kts)	2.4
D5	04 Sep 2019	Wind Dir	S
D5	04 Sep 2019	Animal Life	None
D5	04 Sep 2019	Floatables	None
D5	04 Sep 2019	Water Color	Green
D5	04 Sep 2019	Current Direction	N
D5	04 Sep 2019	Water Temp (C)	23.1
D5	04 Sep 2019	Wave Height Low (ft)	3
D5	04 Sep 2019	High Tide (ft)	5.2
D5	04 Sep 2019	High Tide Time	1339
D5	04 Sep 2019	Low Tide (ft)	1.5
D5	04 Sep 2019	Low Tide Time	713
D5	04 Sep 2019	Comments	Kelp; Seagrass; Algae; Water clear
D5	11 Sep 2019	Arrive Time	1024
D5	11 Sep 2019	Weather	Sunny
D5	11 Sep 2019	Wind Speed (kts)	2.1
D5	11 Sep 2019	Wind Dir	E
D5	11 Sep 2019	Animal Life	None
D5	11 Sep 2019	Floatables	Foam; Film
D5	11 Sep 2019	Water Color	Green
D5	11 Sep 2019	Current Direction	N

Station	Date	Parameter	Value
D5	11 Sep 2019	Water Temp (C)	22
D5	11 Sep 2019	Wave Height Low (ft)	2
D5	11 Sep 2019	High Tide (ft)	4.5
D5	11 Sep 2019	High Tide Time	858
D5	11 Sep 2019	Low Tide (ft)	1.7
D5	11 Sep 2019	Low Tide Time	1428
D5	11 Sep 2019	Comments	Kelp; Seagrass; Algae; Sewage-like odor; 4 Boats; Water clear
D5	18 Sep 2019	Arrive Time	843
D5	18 Sep 2019	Weather	Sunny
D5	18 Sep 2019	Wind Speed (kts)	2.2
D5	18 Sep 2019	Wind Dir	SW
D5	18 Sep 2019	Animal Life	None
D5	18 Sep 2019	Floatables	None
D5	18 Sep 2019	Water Color	Green
D5	18 Sep 2019	Current Direction	N
D5	18 Sep 2019	Water Temp (C)	20.7
D5	18 Sep 2019	Wave Height Low (ft)	3
D5	18 Sep 2019	High Tide (ft)	4.9
D5	18 Sep 2019	High Tide Time	1144
D5	18 Sep 2019	Low Tide (ft)	1.5
D5	18 Sep 2019	Low Tide Time	532
D5	18 Sep 2019	Comments	Kelp; Seagrass; Algae; Water clear
D5	25 Sep 2019	Arrive Time	747
D5	25 Sep 2019	Weather	Overcast
D5	25 Sep 2019	Wind Speed (kts)	3.4
D5	25 Sep 2019	Wind Dir	N
D5	25 Sep 2019	Animal Life	1 Pelican
D5	25 Sep 2019	Floatables	Foam; Film
D5	25 Sep 2019	Water Color	Green
D5	25 Sep 2019	Current Direction	N
D5	25 Sep 2019	Water Temp (C)	22.1
D5	25 Sep 2019	Wave Height Low (ft)	2
D5	25 Sep 2019	High Tide (ft)	4.5
D5	25 Sep 2019	High Tide Time	749
D5	25 Sep 2019	Low Tide (ft)	1.7
D5	25 Sep 2019	Low Tide Time	1316
D5	25 Sep 2019	Comments	Kelp; Seagrass; Algae; Debris; 2 Boats; Water clear
D7	04 Sep 2019	Arrive Time	943
D7	04 Sep 2019	Weather	Sunny
D7	04 Sep 2019	Wind Speed (kts)	3.5
D7	04 Sep 2019	Wind Dir	W
D7	04 Sep 2019	Animal Life	None
D7	04 Sep 2019	Floatables	None
D7	04 Sep 2019	Water Color	Green
D7	04 Sep 2019	Current Direction	N
D7	04 Sep 2019	Water Temp (C)	23.2
D7	04 Sep 2019	Wave Height Low (ft)	4
D7	04 Sep 2019	High Tide (ft)	5.2
D7	04 Sep 2019	High Tide Time	1339
D7	04 Sep 2019	Low Tide (ft)	1.5
D7	04 Sep 2019	Low Tide Time	713
D7	04 Sep 2019	Comments	Kelp; Seagrass; Algae; 2 Persons; 4 Surfers; Water clear
D7	11 Sep 2019	Arrive Time	1059
D7	11 Sep 2019	Weather	Sunny
D7	11 Sep 2019	Wind Speed (kts)	44.7
D7	11 Sep 2019	Wind Dir	N

Station	Date	Parameter	Value
D7	11 Sep 2019	Animal Life	1 Seal
D7	11 Sep 2019	Floatables	Foam; Film
D7	11 Sep 2019	Water Color	Green
D7	11 Sep 2019	Current Direction	N
D7	11 Sep 2019	Water Temp (C)	22.7
D7	11 Sep 2019	Wave Height Low (ft)	4
D7	11 Sep 2019	High Tide (ft)	4.5
D7	11 Sep 2019	High Tide Time	858
D7	11 Sep 2019	Low Tide (ft)	1.7
D7	11 Sep 2019	Low Tide Time	1428
D7	11 Sep 2019	Comments	Kelp; Seagrass; Algae; 23 Surfers; 3 Boats; Water clear
D7	25 Sep 2019	Arrive Time	822
D7	25 Sep 2019	Weather	Overcast
D7	25 Sep 2019	Wind Speed (kts)	5.8
D7	25 Sep 2019	Wind Dir	NE
D7	25 Sep 2019	Animal Life	None
D7	25 Sep 2019	Floatables	Foam
D7	25 Sep 2019	Water Color	Green
D7	25 Sep 2019	Current Direction	N
D7	25 Sep 2019	Water Temp (C)	22
D7	25 Sep 2019	Wave Height Low (ft)	3
D7	25 Sep 2019	High Tide (ft)	4.5
D7	25 Sep 2019	High Tide Time	749
D7	25 Sep 2019	Low Tide (ft)	1.7
D7	25 Sep 2019	Low Tide Time	1316
D7	25 Sep 2019	Comments	Kelp; Seagrass; Algae; 1 Person; 2 Boats; Water clear
D8-B	11 Sep 2019	Arrive Time	1113
D8-B	11 Sep 2019	Weather	Sunny
D8-B	11 Sep 2019	Wind Speed (kts)	8.9
D8-B	11 Sep 2019	Wind Dir	NE
D8-B	11 Sep 2019	Animal Life	None
D8-B	11 Sep 2019	Floatables	Foam; Film
D8-B	11 Sep 2019	Water Color	Green
D8-B	11 Sep 2019	Current Direction	NE
D8-B	11 Sep 2019	Water Temp (C)	22.9
D8-B	11 Sep 2019	Wave Height Low (ft)	3
D8-B	11 Sep 2019	High Tide (ft)	4.5
D8-B	11 Sep 2019	High Tide Time	858
D8-B	11 Sep 2019	Low Tide (ft)	1.7
D8-B	11 Sep 2019	Low Tide Time	1428
D8-B	11 Sep 2019	Comments	Kelp; Seagrass; Algae; Water clear
D8-B	18 Sep 2019	Arrive Time	913
D8-B	18 Sep 2019	Weather	Partly Cloudy
D8-B	18 Sep 2019	Wind Speed (kts)	2.8
D8-B	18 Sep 2019	Wind Dir	W
D8-B	18 Sep 2019	Animal Life	None
D8-B	18 Sep 2019	Floatables	None
D8-B	18 Sep 2019	Water Color	Green
D8-B	18 Sep 2019	Current Direction	N
D8-B	18 Sep 2019	Water Temp (C)	20.1
D8-B	18 Sep 2019	Wave Height Low (ft)	3
D8-B	18 Sep 2019	High Tide (ft)	4.9
D8-B	18 Sep 2019	High Tide Time	1144
D8-B	18 Sep 2019	Low Tide (ft)	1.5
D8-B	18 Sep 2019	Low Tide Time	532
D8-B	18 Sep 2019	Comments	Kelp; Seagrass; Algae; 4 Persons; Water clear
D8-B	25 Sep 2019	Arrive Time	844

Station	Date	Parameter	Value
D8-B	25 Sep 2019	Weather	Overcast
D8-B	25 Sep 2019	Wind Speed (kts)	3.1
D8-B	25 Sep 2019	Wind Dir	NE
D8-B	25 Sep 2019	Animal Life	None
D8-B	25 Sep 2019	Floatables	Foam
D8-B	25 Sep 2019	Water Color	Green
D8-B	25 Sep 2019	Current Direction	N
D8-B	25 Sep 2019	Water Temp (C)	21.7
D8-B	25 Sep 2019	Wave Height Low (ft)	3
D8-B	25 Sep 2019	High Tide (ft)	4.5
D8-B	25 Sep 2019	High Tide Time	749
D8-B	25 Sep 2019	Low Tide (ft)	1.7
D8-B	25 Sep 2019	Low Tide Time	1316
D8-B	25 Sep 2019	Comments	Kelp; Seagrass; Algae; 1 Boat; Water clear
D9	04 Sep 2019	Arrive Time	920
D9	04 Sep 2019	Weather	Sunny
D9	04 Sep 2019	Wind Speed (kts)	2.6
D9	04 Sep 2019	Wind Dir	W
D9	04 Sep 2019	Animal Life	None
D9	04 Sep 2019	Floatables	None
D9	04 Sep 2019	Water Color	Green
D9	04 Sep 2019	Current Direction	N
D9	04 Sep 2019	Water Temp (C)	23
D9	04 Sep 2019	Wave Height Low (ft)	4
D9	04 Sep 2019	High Tide (ft)	5.2
D9	04 Sep 2019	High Tide Time	1339
D9	04 Sep 2019	Low Tide (ft)	1.5
D9	04 Sep 2019	Low Tide Time	713
D9	04 Sep 2019	Comments	Kelp; Seagrass; Algae; 1 Person; 1 Surfer; Water clear
D9	11 Sep 2019	Arrive Time	905
D9	11 Sep 2019	Weather	Partly Cloudy
D9	11 Sep 2019	Wind Speed (kts)	1.3
D9	11 Sep 2019	Wind Dir	E
D9	11 Sep 2019	Animal Life	None
D9	11 Sep 2019	Floatables	Foam; Film
D9	11 Sep 2019	Water Color	Green
D9	11 Sep 2019	Current Direction	N
D9	11 Sep 2019	Water Temp (C)	22.7
D9	11 Sep 2019	Wave Height Low (ft)	2
D9	11 Sep 2019	High Tide (ft)	4.5
D9	11 Sep 2019	High Tide Time	858
D9	11 Sep 2019	Low Tide (ft)	1.7
D9	11 Sep 2019	Low Tide Time	1428
D9	11 Sep 2019	Comments	Kelp; Seagrass; Algae; Debris; 2 Surfers; Water clear
D9	18 Sep 2019	Arrive Time	924
D9	18 Sep 2019	Weather	Partly Cloudy
D9	18 Sep 2019	Wind Speed (kts)	2.6
D9	18 Sep 2019	Wind Dir	W
D9	18 Sep 2019	Animal Life	None
D9	18 Sep 2019	Floatables	None
D9	18 Sep 2019	Water Color	Green
D9	18 Sep 2019	Current Direction	N
D9	18 Sep 2019	Water Temp (C)	20.9
D9	18 Sep 2019	Wave Height Low (ft)	3
D9	18 Sep 2019	High Tide (ft)	4.9
D9	18 Sep 2019	High Tide Time	1144
D9	18 Sep 2019	Low Tide (ft)	1.5
D9	18 Sep 2019	Low Tide Time	532

Station	Date	Parameter	Value
D9	18 Sep 2019	Comments	Kelp; Seagrass; Algae; 2 Persons; Water clear
D9	25 Sep 2019	Arrive Time	901
D9	25 Sep 2019	Weather	Overcast
D9	25 Sep 2019	Wind Speed (kts)	2.1
D9	25 Sep 2019	Wind Dir	NE
D9	25 Sep 2019	Animal Life	None
D9	25 Sep 2019	Floatables	Foam; Film
D9	25 Sep 2019	Water Color	Green
D9	25 Sep 2019	Current Direction	N
D9	25 Sep 2019	Water Temp (C)	21.9
D9	25 Sep 2019	Wave Height Low (ft)	3
D9	25 Sep 2019	High Tide (ft)	4.5
D9	25 Sep 2019	High Tide Time	749
D9	25 Sep 2019	Low Tide (ft)	1.7
D9	25 Sep 2019	Low Tide Time	1316
D9	25 Sep 2019	Comments	Kelp; Seagrass; Algae; Water clear
D10	04 Sep 2019	Arrive Time	901
D10	04 Sep 2019	Weather	Sunny
D10	04 Sep 2019	Wind Speed (kts)	0.8
D10	04 Sep 2019	Wind Dir	W
D10	04 Sep 2019	Animal Life	None
D10	04 Sep 2019	Floatables	None
D10	04 Sep 2019	Water Color	Green
D10	04 Sep 2019	Current Direction	N
D10	04 Sep 2019	Water Temp (C)	23.6
D10	04 Sep 2019	Wave Height Low (ft)	4
D10	04 Sep 2019	High Tide (ft)	5.2
D10	04 Sep 2019	High Tide Time	1339
D10	04 Sep 2019	Low Tide (ft)	1.5
D10	04 Sep 2019	Low Tide Time	713
D10	04 Sep 2019	Comments	Kelp; Seagrass; 3 Persons; 8 Surfers; 1 Swimmer; Water clear
D10	11 Sep 2019	Arrive Time	848
D10	11 Sep 2019	Weather	Overcast
D10	11 Sep 2019	Wind Speed (kts)	1.3
D10	11 Sep 2019	Wind Dir	N
D10	11 Sep 2019	Animal Life	28 Seagulls
D10	11 Sep 2019	Floatables	None
D10	11 Sep 2019	Water Color	Green
D10	11 Sep 2019	Current Direction	N
D10	11 Sep 2019	Water Temp (C)	22.8
D10	11 Sep 2019	Wave Height Low (ft)	2
D10	11 Sep 2019	High Tide (ft)	4.5
D10	11 Sep 2019	High Tide Time	858
D10	11 Sep 2019	Low Tide (ft)	1.7
D10	11 Sep 2019	Low Tide Time	1428
D10	11 Sep 2019	Comments	Kelp; Seagrass; 1 Person; 24 Surfers; Water clear
D10	18 Sep 2019	Arrive Time	937
D10	18 Sep 2019	Weather	Partly Cloudy
D10	18 Sep 2019	Wind Speed (kts)	3.3
D10	18 Sep 2019	Wind Dir	W
D10	18 Sep 2019	Animal Life	None
D10	18 Sep 2019	Floatables	None
D10	18 Sep 2019	Water Color	Green
D10	18 Sep 2019	Current Direction	N
D10	18 Sep 2019	Water Temp (C)	20.5
D10	18 Sep 2019	Wave Height Low (ft)	3

Station	Date	Parameter	Value
D10	18 Sep 2019	High Tide (ft)	4.9
D10	18 Sep 2019	High Tide Time	1144
D10	18 Sep 2019	Low Tide (ft)	1.5
D10	18 Sep 2019	Low Tide Time	532
D10	18 Sep 2019	Comments	Kelp; Seagrass; 2 Joggers; 14 Persons; 1 Swimmer; Water clear
D10	25 Sep 2019	Arrive Time	913
D10	25 Sep 2019	Weather	Overcast
D10	25 Sep 2019	Wind Speed (kts)	6.9
D10	25 Sep 2019	Wind Dir	NE
D10	25 Sep 2019	Animal Life	33 Seagulls
D10	25 Sep 2019	Floatables	Foam; Film
D10	25 Sep 2019	Water Color	Green
D10	25 Sep 2019	Current Direction	N
D10	25 Sep 2019	Water Temp (C)	21.6
D10	25 Sep 2019	Wave Height Low (ft)	4
D10	25 Sep 2019	High Tide (ft)	4.5
D10	25 Sep 2019	High Tide Time	749
D10	25 Sep 2019	Low Tide (ft)	1.7
D10	25 Sep 2019	Low Tide Time	1316
D10	25 Sep 2019	Comments	Kelp; Seagrass; 19 Persons; 16 Surfers; 1 Boat; Water clear
D11	04 Sep 2019	Arrive Time	849
D11	04 Sep 2019	Weather	Sunny
D11	04 Sep 2019	Wind Speed (kts)	0.4
D11	04 Sep 2019	Wind Dir	W
D11	04 Sep 2019	Animal Life	None
D11	04 Sep 2019	Floatables	None
D11	04 Sep 2019	Water Color	Green
D11	04 Sep 2019	Current Direction	N
D11	04 Sep 2019	Water Temp (C)	23.1
D11	04 Sep 2019	Wave Height Low (ft)	3
D11	04 Sep 2019	High Tide (ft)	5.2
D11	04 Sep 2019	High Tide Time	1339
D11	04 Sep 2019	Low Tide (ft)	1.5
D11	04 Sep 2019	Low Tide Time	713
D11	04 Sep 2019	Comments	Kelp; Seagrass; 4 Persons; 4 Surfers; 2 Swimmers; Water clear
D11	11 Sep 2019	Arrive Time	829
D11	11 Sep 2019	Weather	Overcast
D11	11 Sep 2019	Wind Speed (kts)	2.9
D11	11 Sep 2019	Wind Dir	E
D11	11 Sep 2019	Animal Life	7 Godwits
D11	11 Sep 2019	Floatables	None
D11	11 Sep 2019	Water Color	Green
D11	11 Sep 2019	Current Direction	N
D11	11 Sep 2019	Water Temp (C)	22.5
D11	11 Sep 2019	Wave Height Low (ft)	3
D11	11 Sep 2019	High Tide (ft)	4.5
D11	11 Sep 2019	High Tide Time	858
D11	11 Sep 2019	Low Tide (ft)	-0.1
D11	11 Sep 2019	Low Tide Time	244
D11	11 Sep 2019	Comments	Kelp; Seagrass; 4 Persons; 30 Surfers; Water clear
D11	18 Sep 2019	Arrive Time	945
D11	18 Sep 2019	Weather	Partly Cloudy
D11	18 Sep 2019	Wind Speed (kts)	2.1
D11	18 Sep 2019	Wind Dir	W
D11	18 Sep 2019	Animal Life	None

Station	Date	Parameter	Value
D11	18 Sep 2019	Floatables	None
D11	18 Sep 2019	Water Color	Green
D11	18 Sep 2019	Current Direction	N
D11	18 Sep 2019	Water Temp (C)	21.1
D11	18 Sep 2019	Wave Height Low (ft)	4
D11	18 Sep 2019	High Tide (ft)	4.9
D11	18 Sep 2019	High Tide Time	1144
D11	18 Sep 2019	Low Tide (ft)	1.5
D11	18 Sep 2019	Low Tide Time	532
D11	18 Sep 2019	Comments	Kelp; Seagrass; 2 Joggers; 2 Persons; 11 Surfers; Water clear
D11	25 Sep 2019	Arrive Time	933
D11	25 Sep 2019	Weather	Overcast
D11	25 Sep 2019	Wind Speed (kts)	6.5
D11	25 Sep 2019	Wind Dir	NE
D11	25 Sep 2019	Animal Life	3 Dogs; 17 Seagulls
D11	25 Sep 2019	Floatables	Foam
D11	25 Sep 2019	Water Color	Green
D11	25 Sep 2019	Current Direction	N
D11	25 Sep 2019	Water Temp (C)	22.6
D11	25 Sep 2019	Wave Height Low (ft)	3
D11	25 Sep 2019	High Tide (ft)	4.5
D11	25 Sep 2019	High Tide Time	749
D11	25 Sep 2019	Low Tide (ft)	1.7
D11	25 Sep 2019	Low Tide Time	1316
D11	25 Sep 2019	Comments	Kelp; Seagrass; 31 Persons; 21 Surfers; 2 Boats; Water clear
D12	04 Sep 2019	Arrive Time	827
D12	04 Sep 2019	Weather	Sunny
D12	04 Sep 2019	Wind Speed (kts)	1.2
D12	04 Sep 2019	Wind Dir	W
D12	04 Sep 2019	Animal Life	None
D12	04 Sep 2019	Floatables	None
D12	04 Sep 2019	Water Color	Green
D12	04 Sep 2019	Current Direction	N
D12	04 Sep 2019	Water Temp (C)	23.4
D12	04 Sep 2019	Wave Height Low (ft)	2
D12	04 Sep 2019	High Tide (ft)	5.2
D12	04 Sep 2019	High Tide Time	1339
D12	04 Sep 2019	Low Tide (ft)	1.5
D12	04 Sep 2019	Low Tide Time	713
D12	04 Sep 2019	Comments	Kelp; Seagrass; 3 Joggers; 4 Persons; 3 Swimmers; Water clear
D12	11 Sep 2019	Arrive Time	806
D12	11 Sep 2019	Weather	Overcast
D12	11 Sep 2019	Wind Speed (kts)	2.3
D12	11 Sep 2019	Wind Dir	N
D12	11 Sep 2019	Animal Life	3 Pelicans; 8 Seagulls
D12	11 Sep 2019	Floatables	None
D12	11 Sep 2019	Water Color	Green
D12	11 Sep 2019	Current Direction	N
D12	11 Sep 2019	Water Temp (C)	22.4
D12	11 Sep 2019	Wave Height Low (ft)	2
D12	11 Sep 2019	High Tide (ft)	4.5
D12	11 Sep 2019	High Tide Time	858
D12	11 Sep 2019	Low Tide (ft)	-0.1
D12	11 Sep 2019	Low Tide Time	244
D12	11 Sep 2019	Comments	Kelp; Seagrass; 10 Persons; 12 Surfers; 1 Swimmer; Water clear

Station	Date	Parameter	Value
D12	18 Sep 2019	Arrive Time	1014
D12	18 Sep 2019	Weather	Sunny
D12	18 Sep 2019	Wind Speed (kts)	2.8
D12	18 Sep 2019	Wind Dir	W
D12	18 Sep 2019	Animal Life	None
D12	18 Sep 2019	Floatables	None
D12	18 Sep 2019	Water Color	Green
D12	18 Sep 2019	Current Direction	N
D12	18 Sep 2019	Water Temp (C)	21
D12	18 Sep 2019	Wave Height Low (ft)	3
D12	18 Sep 2019	High Tide (ft)	4.9
D12	18 Sep 2019	High Tide Time	1144
D12	18 Sep 2019	Low Tide (ft)	1.5
D12	18 Sep 2019	Low Tide Time	532
D12	18 Sep 2019	Comments	Kelp; Seagrass; 4 Persons; Water clear
D12	25 Sep 2019	Arrive Time	1005
D12	25 Sep 2019	Weather	Overcast
D12	25 Sep 2019	Wind Speed (kts)	6.9
D12	25 Sep 2019	Wind Dir	NE
D12	25 Sep 2019	Animal Life	2 Godwits; 1 Pelican; 15 Seagulls
D12	25 Sep 2019	Floatables	None
D12	25 Sep 2019	Water Color	Green
D12	25 Sep 2019	Current Direction	N
D12	25 Sep 2019	Water Temp (C)	21.9
D12	25 Sep 2019	Wave Height Low (ft)	2
D12	25 Sep 2019	High Tide (ft)	4.5
D12	25 Sep 2019	High Tide Time	749
D12	25 Sep 2019	Low Tide (ft)	1.7
D12	25 Sep 2019	Low Tide Time	1316
D12	25 Sep 2019	Comments	Kelp; Seagrass; 7 Persons; 2 Surfers; Water clear

Kelp Stations

Table 3.1

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

Date	A1	A6	A7	C4	C5	C6	C7	C8
01 Sep 2019	6	5	6	9	5	7	4	7
02 Sep 2019	6	5	6	9	5	7	4	7
03 Sep 2019	7	6	7	10	6	9	6	8
04 Sep 2019	9	7	10	9	8	8	6	11
05 Sep 2019	9	7	10	9	8	8	6	11
06 Sep 2019	9	7	10	9	8	8	6	11
07 Sep 2019	9	7	10	9	8	8	6	11
08 Sep 2019	9	7	10	9	8	8	6	11
09 Sep 2019	9	7	10	9	8	8	6	11
10 Sep 2019	9	7	8	11	10	9	5	10
11 Sep 2019	9	7	8	11	10	9	5	10
12 Sep 2019	9	7	8	11	10	9	5	10
13 Sep 2019	9	7	8	11	10	9	5	10
14 Sep 2019	11	7	6	10	10	9	5	11
15 Sep 2019	11	7	6	10	10	9	5	11
16 Sep 2019	11	7	6	10	10	9	5	11
17 Sep 2019	10	8	7	7	7	9	5	9
18 Sep 2019	9	11	10	10	10	13	6	9
19 Sep 2019	9	11	10	10	10	13	6	9
20 Sep 2019	9	11	10	10	10	13	6	9
21 Sep 2019	9	11	10	10	10	13	6	9
22 Sep 2019	9	11	10	10	10	13	6	9
23 Sep 2019	9	11	10	10	10	13	6	9
24 Sep 2019	7	8	7	12	8	9	5	7
25 Sep 2019	7	8	7	12	8	9	5	7
26 Sep 2019	7	8	7	12	8	9	5	7
27 Sep 2019	7	8	6	11	7	8	4	6
28 Sep 2019	7	8	6	11	7	8	4	6
29 Sep 2019	7	8	6	11	7	8	4	6
30 Sep 2019	18	13	11	13	8	9	5	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 Sep 2019	2	2	2	2	2	2	2	2
02 Sep 2019	2	2	2	2	2	2	2	2
03 Sep 2019	2	2	2	2	2	2	2	2
04 Sep 2019	2	2	2	2	2	2	2	2
05 Sep 2019	2	2	2	2	2	2	2	2
06 Sep 2019	2	2	2	2	2	2	2	2
07 Sep 2019	2	2	2	2	2	2	2	2
08 Sep 2019	2	2	2	2	2	2	2	2
09 Sep 2019	2	2	2	2	2	2	2	2
10 Sep 2019	2	2	2	2	2	2	2	2
11 Sep 2019	2	2	2	2	2	2	2	2
12 Sep 2019	2	2	2	2	2	2	2	2
13 Sep 2019	2	2	2	2	2	2	2	2
14 Sep 2019	2	2	2	2	2	2	2	2
15 Sep 2019	2	2	2	2	2	2	2	2
16 Sep 2019	2	2	2	2	2	2	2	2
17 Sep 2019	2	2	2	2	2	2	2	2
18 Sep 2019	2	2	2	2	2	2	2	2
19 Sep 2019	2	2	2	2	2	2	2	2
20 Sep 2019	2	2	2	2	2	2	2	2
21 Sep 2019	2	2	2	2	2	2	2	2
22 Sep 2019	2	2	2	2	2	2	2	2
23 Sep 2019	2	2	2	2	2	2	2	2
24 Sep 2019	2	2	2	2	2	2	2	2
25 Sep 2019	2	2	2	2	2	2	2	2
26 Sep 2019	2	2	2	2	2	2	2	2
27 Sep 2019	2	2	2	2	2	2	2	2
28 Sep 2019	2	2	2	2	2	2	2	2
29 Sep 2019	2	2	2	2	2	2	2	2
30 Sep 2019	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 Sep 2019	2	2	2	2	2	2	2	2
02 Sep 2019	2	2	2	2	2	2	2	2
03 Sep 2019	2	2	3	2	2	2	2	2
04 Sep 2019	2	2	4	2	2	2	2	2
05 Sep 2019	2	2	4	2	2	2	2	2
06 Sep 2019	2	2	4	2	2	2	2	2
07 Sep 2019	2	2	4	2	2	2	2	2
08 Sep 2019	2	2	4	2	2	2	2	2
09 Sep 2019	2	2	4	2	2	2	2	2
10 Sep 2019	2	2	3	2	2	2	2	2
11 Sep 2019	2	2	3	2	2	2	2	2
12 Sep 2019	2	2	3	2	2	2	2	2
13 Sep 2019	2	2	3	2	2	2	2	2
14 Sep 2019	2	2	4	2	2	2	2	2
15 Sep 2019	2	2	4	2	2	2	2	2
16 Sep 2019	2	2	4	2	2	2	2	2
17 Sep 2019	2	2	3	2	2	2	2	2
18 Sep 2019	2	2	4	2	2	2	2	2
19 Sep 2019	2	2	4	2	2	2	2	2
20 Sep 2019	2	2	4	2	2	2	2	2
21 Sep 2019	2	2	4	2	2	2	2	2
22 Sep 2019	2	2	4	2	2	2	2	2
23 Sep 2019	2	2	4	2	2	2	2	2
24 Sep 2019	2	2	3	2	2	2	2	2
25 Sep 2019	2	2	3	2	2	2	2	2
26 Sep 2019	2	2	3	2	2	2	2	2
27 Sep 2019	2	2	4	2	2	2	2	2
28 Sep 2019	2	2	4	2	2	2	2	2
29 Sep 2019	2	2	4	2	2	2	2	2
30 Sep 2019	2	2	3	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
03 Sep 2019	IC							
10 Sep 2019	IC							
17 Sep 2019	IC							
24 Sep 2019	IC							
30 Sep 2019	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
03 Sep 2019	IC							
10 Sep 2019	IC							
17 Sep 2019	IC							
24 Sep 2019	IC							
30 Sep 2019	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
03 Sep 2019	IC							
10 Sep 2019	IC							
17 Sep 2019	IC							
24 Sep 2019	IC							
30 Sep 2019	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
03 Sep 2019	IC							
10 Sep 2019	IC							
17 Sep 2019	IC							
24 Sep 2019	IC							
30 Sep 2019	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	03 Sep 2019	802	1	<2	<2	<2	1.00	21.4	76.52	7.6	33.65	8.1
A1	03 Sep 2019	802	12	<20	<2	<2	0.10	15.1	79.82	7.0	33.53	8.0
A1	03 Sep 2019	802	18	<20	<2	<2	0.10	14.1	84.62	6.8	33.54	8.0
A1	10 Sep 2019	804	1	<20	<2	<2	0.10	20.0	68.89	7.6	33.54	8.1
A1	10 Sep 2019	804	12	<2	<2	<2	1.00	16.4	79.14	5.9	33.53	7.9
A1	10 Sep 2019	804	18	<2	<2	<2	1.00	14.4	83.09	6.0	33.54	7.9
A1	17 Sep 2019	747	1	2e	<2	<2	1.00	19.2	78.64	7.9	33.59	8.1
A1	17 Sep 2019	747	12	2e	<2	<2	1.00	15.1	81.46	6.2	33.55	8.0
A1	17 Sep 2019	747	18	18e	<2	<2	0.11	14.0	85.00	5.7	33.59	7.9
A1	24 Sep 2019	753	1	<2	<2	<2	1.00	20.7	78.36	8.2	33.65	8.1
A1	24 Sep 2019	753	12	<2	<2	<2	1.00	16.7	78.35	7.8	33.52	8.1
A1	24 Sep 2019	753	18	6e	<2	<2	0.33	14.5	82.22	6.8	33.54	8.0
A1	30 Sep 2019	823	1	<2	<2	<2	1.00	19.4	73.82	7.2	33.63	8.1
A1	30 Sep 2019	823	12	1400e	140e	12e	0.10	13.6	85.33	6.0	33.53	7.9
A1	30 Sep 2019	823	18	800e	66	2e	0.08	13.6	84.73	5.9	33.55	7.9
A6	03 Sep 2019	843	1	<20	<2	<2	0.10	22.8	78.82	8.3	33.69	8.2
A6	03 Sep 2019	843	12	<20	<2	<2	0.10	15.0	84.26	6.7	33.52	8.0
A6	03 Sep 2019	843	18	2e	<2	<2	1.00	13.7	85.54	6.9	33.51	8.0
A6	10 Sep 2019	902	1	2e	<2	<2	1.00	20.1	79.58	7.9	33.61	8.2
A6	10 Sep 2019	902	12	<2	<2	<2	1.00	19.4	78.89	7.7	33.60	8.1
A6	10 Sep 2019	902	18	<20	<2	<2	0.10	16.1	80.10	6.7	33.54	8.0
A6	17 Sep 2019	818	1	<2	<2	<2	1.00	20.4	74.32	8.2	33.59	8.1
A6	17 Sep 2019	818	12	10e	2e	<2	0.20	15.3	81.47	6.3	33.55	8.0
A6	17 Sep 2019	818	18	34e	4e	<2	0.12	14.4	84.14	5.9	33.57	8.0
A6	24 Sep 2019	831	1	<2	<2	<2	1.00	20.5	75.20	8.4	33.63	8.2
A6	24 Sep 2019	831	12	4e	<2	<2	0.50	16.0	77.89	6.4	33.58	8.0
A6	24 Sep 2019	831	18	<2	<2	<2	1.00	15.0	81.50	5.8	33.55	7.9
A6	30 Sep 2019	855	1	<2	<2	<2	1.00	20.3	73.69	7.1	33.69	8.1
A6	30 Sep 2019	855	12	74	8e	2e	0.11	13.9	84.70	6.4	33.52	8.0
A6	30 Sep 2019	855	18	140	8e	4e	0.06	13.5	84.17	6.0	33.55	7.9
A7	03 Sep 2019	829	1	<20	2e	82	0.10	22.7	79.71	8.1	33.68	8.2
A7	03 Sep 2019	829	12	<20	<2	<2	0.10	14.6	84.09	6.4	33.52	8.0
A7	03 Sep 2019	829	18	<2	<2	<2	1.00	13.8	85.16	6.7	33.51	8.0
A7	10 Sep 2019	804	1	<2	<2	<2	1.00	19.6	75.70	7.7	33.60	8.1
A7	10 Sep 2019	804	12	<2	<2	<2	1.00	15.0	82.42	6.3	33.52	8.0
A7	10 Sep 2019	804	18	6e	<2	<2	0.33	14.5	83.32	6.0	33.54	7.9
A7	17 Sep 2019	802	1	<2	<2	<2	1.00	19.6	72.66	8.0	33.59	8.1
A7	17 Sep 2019	802	12	<20	<2	<2	0.10	14.9	82.98	6.0	33.54	8.0
A7	17 Sep 2019	802	18	20e	<2	<2	0.10	14.1	84.48	5.7	33.57	7.9

Station	Date	Time	Depth	Total	Fecal	Enteric	F:T	Temp	XMS	DO	Sal	pH
A7	24 Sep 2019	815	1	<2	<2	<2	1.00	20.3	77.16	8.1	33.63	8.1
A7	24 Sep 2019	815	12	<2	<2	<2	1.00	17.0	75.24	7.3	33.56	8.0
A7	24 Sep 2019	815	18	<2	<2	<2	1.00	15.4	76.77	6.2	33.61	8.0
A7	30 Sep 2019	841	1	<2	<2	<2	1.00	19.9	76.31	7.2	33.67	8.1
A7	30 Sep 2019	841	12	160e	10e	<2	0.06	13.5	84.74	6.0	33.55	7.9
A7	30 Sep 2019	841	18	240e	34e	<2	0.14	13.6	83.63	5.9	33.56	7.9
C4	03 Sep 2019	956	1	<20	<2	<2	0.10	22.8	78.03	7.8	33.67	8.2
C4	03 Sep 2019	956	3	<20	<2	<2	0.10	22.6	78.26	7.6	33.68	8.2
C4	03 Sep 2019	956	9	<20	<2	<2	0.10	15.2	76.59	4.6	33.54	7.9
C4	10 Sep 2019	1012	1	<20	<2	<2	0.10	20.7	72.32	7.7	33.59	8.1
C4	10 Sep 2019	1012	3	<20	<2	<2	0.10	20.7	72.41	7.6	33.59	8.1
C4	10 Sep 2019	1012	9	<20	<2	<2	0.10	19.0	64.75	4.9	33.60	8.0
C4	17 Sep 2019	938	1	<2	<2	<2	1.00	20.3	70.85	7.1	33.60	8.1
C4	17 Sep 2019	938	3	<2	<2	<2	1.00	19.9	71.23	6.6	33.60	8.1
C4	17 Sep 2019	938	9	<2	<2	<2	1.00	15.8	78.20	3.4	33.57	7.8
C4	24 Sep 2019	943	1	<20	2e	<2	0.10	20.7	66.73	7.0	33.62	8.0
C4	24 Sep 2019	943	3	<20	6e	<2	0.30	20.7	65.27	7.0	33.62	8.0
C4	24 Sep 2019	943	9	<20	<2	<2	0.10	16.1	73.60	3.2	33.62	7.8
C4	30 Sep 2019	1027	1	<20	<2	<2	0.10	19.8	68.25	7.2	33.64	8.1
C4	30 Sep 2019	1027	3	<20	<2	<2	0.10	19.7	68.55	7.1	33.64	8.1
C4	30 Sep 2019	1027	9	<20	2e	<2	0.10	17.5	67.07	5.1	33.54	7.9
C5	03 Sep 2019	945	1	<20	<2	<2	0.10	22.9	79.29	8.1	33.69	8.2
C5	03 Sep 2019	945	3	<20	<2	<2	0.10	22.3	78.82	7.8	33.70	8.2
C5	03 Sep 2019	945	9	<20	<2	<2	0.10	15.9	82.33	6.1	33.56	8.0
C5	10 Sep 2019	959	1	<20	<2	<2	0.10	19.7	59.56	6.3	33.59	8.0
C5	10 Sep 2019	959	3	<20	<2	<2	0.10	19.7	60.83	6.3	33.61	8.0
C5	10 Sep 2019	959	9	<20	<2	<2	0.10	15.9	70.21	6.0	33.55	8.0
C5	17 Sep 2019	926	1	<2	<2	<2	1.00	21.1	74.16	7.9	33.61	8.1
C5	17 Sep 2019	926	3	<2	<2	<2	1.00	19.3	75.28	7.7	33.62	8.1
C5	17 Sep 2019	926	9	<2	<2	<2	1.00	16.4	83.03	6.1	33.56	8.0
C5	24 Sep 2019	930	1	4e	<2	<2	0.50	20.6	70.22	7.9	33.62	8.1
C5	24 Sep 2019	930	3	<2	<2	<2	1.00	20.1	71.23	7.8	33.63	8.1
C5	24 Sep 2019	930	9	2e	<2	<2	1.00	16.0	80.57	5.5	33.57	7.9
C5	30 Sep 2019	957	1	20e	<2	<2	0.10	20.4	57.65	6.1	33.69	8.0
C5	30 Sep 2019	957	3	<20	<2	<2	0.10	20.1	57.61	5.9	33.69	8.0
C5	30 Sep 2019	957	9	<20	<2	<2	0.10	16.8	70.13	5.6	33.55	8.0
C6	03 Sep 2019	933	1	<20	<2	<2	0.10	23.1	79.53	8.1	33.69	8.2
C6	03 Sep 2019	933	3	<20	<2	<2	0.10	22.4	78.43	7.9	33.69	8.2
C6	03 Sep 2019	933	9	<20	<2	<2	0.10	15.8	77.72	5.4	33.53	7.9
C6	10 Sep 2019	947	1	<20	<2	<2	0.10	20.0	77.89	7.6	33.62	8.1
C6	10 Sep 2019	947	3	<2	<2	<2	1.00	20.0	77.99	7.5	33.62	8.1
C6	10 Sep 2019	947	9	<20	<2	<2	0.10	16.6	66.14	5.6	33.60	8.0
C6	17 Sep 2019	915	1	<20	<2	<2	0.10	20.9	62.42	8.3	33.59	8.2
C6	17 Sep 2019	915	3	<2	<2	<2	1.00	20.8	67.78	7.8	33.59	8.2
C6	17 Sep 2019	915	9	2e	<2	<2	1.00	16.0	81.44	5.0	33.59	7.9
C6	24 Sep 2019	919	1	<2	<2	<2	1.00	20.8	72.03	7.7	33.63	8.1

Station	Date	Time	Depth	Total	Fecal	Enteric	F:T	Temp	XMS	DO	Sal	pH
C6	24 Sep 2019	919	3	<2	<2	<2	1.00	20.6	72.62	8.0	33.63	8.1
C6	24 Sep 2019	919	9	<2	<2	<2	1.00	16.5	76.64	5.4	33.63	7.9
C6	30 Sep 2019	946	1	<20	<2	<2	0.10	20.4	63.47	6.1	33.51	8.0
C6	30 Sep 2019	946	3	2e	<2	<2	1.00	20.4	63.40	6.0	33.70	8.0
C6	30 Sep 2019	946	9	<20	<2	<2	0.10	17.4	49.86	6.0	NA	7.9
C7	03 Sep 2019	857	1	<20	<2	<2	0.10	23.2	78.41	8.1	33.70	8.2
C7	03 Sep 2019	857	12	<20	<2	<2	0.10	16.9	82.47	8.0	33.52	8.1
C7	03 Sep 2019	857	18	<20	<2	<2	0.10	13.7	84.76	7.0	33.52	8.0
C7	10 Sep 2019	915	1	2e	<2	<2	1.00	20.1	77.22	7.6	33.62	8.1
C7	10 Sep 2019	915	12	<2	<2	<2	1.00	16.9	78.22	7.0	33.58	8.1
C7	10 Sep 2019	915	18	<2	<2	<2	1.00	15.3	80.14	6.0	33.51	8.0
C7	17 Sep 2019	842	1	<2	<2	<2	1.00	19.6	74.45	7.9	33.58	8.1
C7	17 Sep 2019	842	12	4e	<2	<2	0.50	14.9	82.54	6.2	33.54	8.0
C7	17 Sep 2019	842	18	2e	<2	<2	1.00	14.6	84.54	5.8	33.55	7.9
C7	24 Sep 2019	844	1	<2	<2	<2	1.00	20.6	76.66	8.0	33.63	8.1
C7	24 Sep 2019	844	12	<2	<2	<2	1.00	17.4	74.08	7.6	33.54	8.1
C7	24 Sep 2019	844	18	<2	<2	<2	1.00	14.3	81.58	5.4	33.56	7.9
C7	30 Sep 2019	911	1	2e	2e	<2	1.00	20.5	76.90	7.4	33.69	8.1
C7	30 Sep 2019	911	12	14e	2e	<2	0.14	14.8	80.74	6.6	33.51	8.0
C7	30 Sep 2019	911	18	38e	2e	<2	0.05	14.2	81.54	6.4	33.59	8.0
C8	03 Sep 2019	910	1	<20	<2	<2	0.10	23.1	76.97	8.4	33.69	8.2
C8	03 Sep 2019	910	12	<20	<2	<2	0.10	17.1	80.71	8.1	33.54	8.1
C8	03 Sep 2019	910	18	<2	<2	<2	1.00	14.1	84.46	7.4	33.52	8.1
C8	10 Sep 2019	926	1	<20	<2	<2	0.10	20.3	72.45	7.2	33.63	8.1
C8	10 Sep 2019	926	12	<2	<2	<2	1.00	16.5	80.73	7.3	33.52	8.1
C8	10 Sep 2019	926	18	2e	<2	<2	1.00	14.9	80.85	6.2	33.52	8.0
C8	17 Sep 2019	856	1	<2	<2	<2	1.00	19.6	70.47	8.1	33.58	8.1
C8	17 Sep 2019	856	12	2e	<2	<2	1.00	15.4	79.76	6.8	33.54	8.0
C8	17 Sep 2019	856	18	8e	<2	<2	0.25	14.7	83.85	5.8	33.56	8.0
C8	24 Sep 2019	859	1	<2	<2	<2	1.00	20.9	73.70	8.0	33.64	8.1
C8	24 Sep 2019	859	12	6e	<2	<2	0.33	16.2	71.12	6.6	33.57	8.0
C8	24 Sep 2019	859	18	<2	2e	<2	1.00	14.1	83.05	5.4	33.54	7.9
C8	30 Sep 2019	925	1	<2	<2	2e	1.00	20.5	77.21	7.5	33.69	8.1
C8	30 Sep 2019	925	12	<20	<2	<2	0.10	16.0	80.93	6.8	33.53	8.0
C8	30 Sep 2019	925	18	20e	<2	2e	0.10	15.0	80.09	6.5	33.53	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	03 Sep 2019	Depth (m)	20
A1	03 Sep 2019	Arrive Time	802
A1	03 Sep 2019	Depart Time	816
A1	03 Sep 2019	Air Temp (C)	22
A1	03 Sep 2019	Weather	Partly Cloudy
A1	03 Sep 2019	Visibility (mi)	5
A1	03 Sep 2019	Wind Speed (kts)	7
A1	03 Sep 2019	Wind Dir	NW
A1	03 Sep 2019	Water Color	Brownish-Green
A1	03 Sep 2019	Wave Ht Low (ft)	3
A1	03 Sep 2019	Wave Period (sec)	9
A1	03 Sep 2019	Sea State	Calm
A1	03 Sep 2019	High Tide (ft)	5.36
A1	03 Sep 2019	High Tide Time	1246
A1	03 Sep 2019	Low Tide (ft)	0.82
A1	03 Sep 2019	Low Tide Time	628
A1	03 Sep 2019	Comments	none
A1	10 Sep 2019	Depth (m)	20
A1	10 Sep 2019	Arrive Time	751
A1	10 Sep 2019	Depart Time	804
A1	10 Sep 2019	Air Temp (C)	20
A1	10 Sep 2019	Weather	Overcast
A1	10 Sep 2019	Visibility (mi)	5
A1	10 Sep 2019	Wind Speed (kts)	9
A1	10 Sep 2019	Wind Dir	SE
A1	10 Sep 2019	Water Color	Bluish-Green
A1	10 Sep 2019	Wave Ht Low (ft)	5
A1	10 Sep 2019	Wave Period (sec)	13
A1	10 Sep 2019	Sea State	Confused swell
A1	10 Sep 2019	High Tide (ft)	4.29
A1	10 Sep 2019	High Tide Time	836
A1	10 Sep 2019	Low Tide (ft)	1.98
A1	10 Sep 2019	Low Tide Time	1355
A1	10 Sep 2019	Comments	none
A1	17 Sep 2019	Depth (m)	18
A1	17 Sep 2019	Arrive Time	747
A1	17 Sep 2019	Depart Time	753
A1	17 Sep 2019	Air Temp (C)	20
A1	17 Sep 2019	Weather	Partly Cloudy
A1	17 Sep 2019	Visibility (mi)	5
A1	17 Sep 2019	Wind Speed (kts)	2
A1	17 Sep 2019	Wind Dir	W
A1	17 Sep 2019	Water Color	Brownish-Green
A1	17 Sep 2019	Wave Ht Low (ft)	3
A1	17 Sep 2019	Wave Period (sec)	9
A1	17 Sep 2019	Sea State	Calm
A1	17 Sep 2019	High Tide (ft)	4.95
A1	17 Sep 2019	High Tide Time	1116
A1	17 Sep 2019	Low Tide (ft)	1.12
A1	17 Sep 2019	Low Tide Time	510
A1	17 Sep 2019	Comments	none
A1	24 Sep 2019	Depth (m)	20
A1	24 Sep 2019	Arrive Time	753

Station	Date	Parameter	Value
A1	24 Sep 2019	Depart Time	807
A1	24 Sep 2019	Air Temp (C)	18
A1	24 Sep 2019	Weather	Haze
A1	24 Sep 2019	Visibility (mi)	5
A1	24 Sep 2019	Wind Speed (kts)	4
A1	24 Sep 2019	Wind Dir	NE
A1	24 Sep 2019	Water Color	Brownish-Green
A1	24 Sep 2019	Wave Ht Low (ft)	3
A1	24 Sep 2019	Wave Period (sec)	11
A1	24 Sep 2019	Sea State	Calm
A1	24 Sep 2019	High Tide (ft)	4.07
A1	24 Sep 2019	High Tide Time	718
A1	24 Sep 2019	Low Tide (ft)	2.34
A1	24 Sep 2019	Low Tide Time	1224
A1	24 Sep 2019	Comments	Kelp
A1	30 Sep 2019	Depth (m)	18
A1	30 Sep 2019	Arrive Time	823
A1	30 Sep 2019	Depart Time	834
A1	30 Sep 2019	Air Temp (C)	16
A1	30 Sep 2019	Weather	Clear
A1	30 Sep 2019	Visibility (mi)	12
A1	30 Sep 2019	Wind Speed (kts)	9
A1	30 Sep 2019	Wind Dir	NE
A1	30 Sep 2019	Water Color	Green
A1	30 Sep 2019	Wave Ht Low (ft)	3
A1	30 Sep 2019	Wave Period (sec)	9
A1	30 Sep 2019	Sea State	Calm
A1	30 Sep 2019	High Tide (ft)	6.05
A1	30 Sep 2019	High Tide Time	1039
A1	30 Sep 2019	Low Tide (ft)	0.27
A1	30 Sep 2019	Low Tide Time	433
A1	30 Sep 2019	Comments	Lobster floats
A6	03 Sep 2019	Depth (m)	19
A6	03 Sep 2019	Arrive Time	843
A6	03 Sep 2019	Depart Time	845
A6	03 Sep 2019	Air Temp (C)	22
A6	03 Sep 2019	Weather	Partly Cloudy
A6	03 Sep 2019	Visibility (mi)	5
A6	03 Sep 2019	Wind Speed (kts)	6
A6	03 Sep 2019	Wind Dir	NW
A6	03 Sep 2019	Water Color	Brownish-Green
A6	03 Sep 2019	Wave Ht Low (ft)	3
A6	03 Sep 2019	Wave Period (sec)	9
A6	03 Sep 2019	Sea State	Calm
A6	03 Sep 2019	High Tide (ft)	5.36
A6	03 Sep 2019	High Tide Time	1246
A6	03 Sep 2019	Low Tide (ft)	0.82
A6	03 Sep 2019	Low Tide Time	628
A6	03 Sep 2019	Comments	Kelp
A6	10 Sep 2019	Depth (m)	18
A6	10 Sep 2019	Arrive Time	902
A6	10 Sep 2019	Depart Time	906
A6	10 Sep 2019	Air Temp (C)	20
A6	10 Sep 2019	Weather	Overcast
A6	10 Sep 2019	Visibility (mi)	5
A6	10 Sep 2019	Wind Speed (kts)	11
A6	10 Sep 2019	Wind Dir	SE
A6	10 Sep 2019	Water Color	Bluish-Green

Station	Date	Parameter	Value
A6	10 Sep 2019	Wave Ht Low (ft)	5
A6	10 Sep 2019	Wave Period (sec)	13
A6	10 Sep 2019	Sea State	Confused swell
A6	10 Sep 2019	High Tide (ft)	4.29
A6	10 Sep 2019	High Tide Time	836
A6	10 Sep 2019	Low Tide (ft)	1.98
A6	10 Sep 2019	Low Tide Time	1355
A6	10 Sep 2019	Comments	none
A6	17 Sep 2019	Depth (m)	19
A6	17 Sep 2019	Arrive Time	818
A6	17 Sep 2019	Depart Time	820
A6	17 Sep 2019	Air Temp (C)	20
A6	17 Sep 2019	Weather	Partly Cloudy
A6	17 Sep 2019	Visibility (mi)	5
A6	17 Sep 2019	Wind Speed (kts)	2
A6	17 Sep 2019	Wind Dir	W
A6	17 Sep 2019	Water Color	Brownish-Green
A6	17 Sep 2019	Wave Ht Low (ft)	3
A6	17 Sep 2019	Wave Period (sec)	11
A6	17 Sep 2019	Sea State	Calm
A6	17 Sep 2019	High Tide (ft)	4.95
A6	17 Sep 2019	High Tide Time	1116
A6	17 Sep 2019	Low Tide (ft)	1.12
A6	17 Sep 2019	Low Tide Time	510
A6	17 Sep 2019	Comments	Kelp
A6	24 Sep 2019	Depth (m)	19
A6	24 Sep 2019	Arrive Time	831
A6	24 Sep 2019	Depart Time	833
A6	24 Sep 2019	Air Temp (C)	19
A6	24 Sep 2019	Weather	Haze
A6	24 Sep 2019	Visibility (mi)	5
A6	24 Sep 2019	Wind Speed (kts)	7
A6	24 Sep 2019	Wind Dir	N
A6	24 Sep 2019	Water Color	Brownish-Green
A6	24 Sep 2019	Wave Ht Low (ft)	3
A6	24 Sep 2019	Wave Period (sec)	11
A6	24 Sep 2019	Sea State	Calm
A6	24 Sep 2019	High Tide (ft)	4.07
A6	24 Sep 2019	High Tide Time	718
A6	24 Sep 2019	Low Tide (ft)	2.34
A6	24 Sep 2019	Low Tide Time	1224
A6	24 Sep 2019	Comments	Kelp
A6	30 Sep 2019	Depth (m)	20
A6	30 Sep 2019	Arrive Time	855
A6	30 Sep 2019	Depart Time	900
A6	30 Sep 2019	Air Temp (C)	17
A6	30 Sep 2019	Weather	Clear
A6	30 Sep 2019	Visibility (mi)	12
A6	30 Sep 2019	Wind Speed (kts)	7
A6	30 Sep 2019	Wind Dir	E
A6	30 Sep 2019	Water Color	Green
A6	30 Sep 2019	Wave Ht Low (ft)	5
A6	30 Sep 2019	Wave Period (sec)	13
A6	30 Sep 2019	Sea State	Light chop
A6	30 Sep 2019	High Tide (ft)	6.05
A6	30 Sep 2019	High Tide Time	1039
A6	30 Sep 2019	Low Tide (ft)	0.27
A6	30 Sep 2019	Low Tide Time	433

Station	Date	Parameter	Value
A6	30 Sep 2019	Comments	Lobster floats; Kelp
A7	03 Sep 2019	Depth (m)	19
A7	03 Sep 2019	Arrive Time	829
A7	03 Sep 2019	Depart Time	831
A7	03 Sep 2019	Air Temp (C)	22
A7	03 Sep 2019	Weather	Partly Cloudy
A7	03 Sep 2019	Visibility (mi)	5
A7	03 Sep 2019	Wind Speed (kts)	7
A7	03 Sep 2019	Wind Dir	NW
A7	03 Sep 2019	Water Color	Brownish-Green
A7	03 Sep 2019	Wave Ht Low (ft)	3
A7	03 Sep 2019	Wave Period (sec)	9
A7	03 Sep 2019	Sea State	Calm
A7	03 Sep 2019	High Tide (ft)	5.36
A7	03 Sep 2019	High Tide Time	1246
A7	03 Sep 2019	Low Tide (ft)	0.82
A7	03 Sep 2019	Low Tide Time	628
A7	03 Sep 2019	Comments	none
A7	10 Sep 2019	Depth (m)	17
A7	10 Sep 2019	Arrive Time	804
A7	10 Sep 2019	Depart Time	808
A7	10 Sep 2019	Air Temp (C)	20
A7	10 Sep 2019	Weather	Overcast
A7	10 Sep 2019	Visibility (mi)	5
A7	10 Sep 2019	Wind Speed (kts)	14
A7	10 Sep 2019	Wind Dir	SE
A7	10 Sep 2019	Water Color	Bluish-Green
A7	10 Sep 2019	Wave Ht Low (ft)	5
A7	10 Sep 2019	Wave Period (sec)	13
A7	10 Sep 2019	Sea State	Confused swell
A7	10 Sep 2019	High Tide (ft)	4.29
A7	10 Sep 2019	High Tide Time	836
A7	10 Sep 2019	Low Tide (ft)	1.98
A7	10 Sep 2019	Low Tide Time	1355
A7	10 Sep 2019	Comments	none
A7	17 Sep 2019	Depth (m)	19
A7	17 Sep 2019	Arrive Time	802
A7	17 Sep 2019	Depart Time	807
A7	17 Sep 2019	Air Temp (C)	20
A7	17 Sep 2019	Weather	Partly Cloudy
A7	17 Sep 2019	Visibility (mi)	5
A7	17 Sep 2019	Wind Speed (kts)	0
A7	17 Sep 2019	Wind Dir	
A7	17 Sep 2019	Water Color	Brownish-Green
A7	17 Sep 2019	Wave Ht Low (ft)	3
A7	17 Sep 2019	Wave Period (sec)	11
A7	17 Sep 2019	Sea State	Calm
A7	17 Sep 2019	High Tide (ft)	4.95
A7	17 Sep 2019	High Tide Time	1116
A7	17 Sep 2019	Low Tide (ft)	1.12
A7	17 Sep 2019	Low Tide Time	510
A7	17 Sep 2019	Comments	Kelp
A7	24 Sep 2019	Depth (m)	18
A7	24 Sep 2019	Arrive Time	815
A7	24 Sep 2019	Depart Time	822
A7	24 Sep 2019	Air Temp (C)	18
A7	24 Sep 2019	Weather	Haze

Station	Date	Parameter	Value
A7	24 Sep 2019	Visibility (mi)	5
A7	24 Sep 2019	Wind Speed (kts)	4
A7	24 Sep 2019	Wind Dir	N
A7	24 Sep 2019	Water Color	Brownish-Green
A7	24 Sep 2019	Wave Ht Low (ft)	3
A7	24 Sep 2019	Wave Period (sec)	11
A7	24 Sep 2019	Sea State	Calm
A7	24 Sep 2019	High Tide (ft)	4.07
A7	24 Sep 2019	High Tide Time	718
A7	24 Sep 2019	Low Tide (ft)	2.34
A7	24 Sep 2019	Low Tide Time	1224
A7	24 Sep 2019	Comments	Kelp
A7	30 Sep 2019	Depth (m)	17
A7	30 Sep 2019	Arrive Time	841
A7	30 Sep 2019	Depart Time	845
A7	30 Sep 2019	Air Temp (C)	16
A7	30 Sep 2019	Weather	Clear
A7	30 Sep 2019	Visibility (mi)	12
A7	30 Sep 2019	Wind Speed (kts)	7
A7	30 Sep 2019	Wind Dir	E
A7	30 Sep 2019	Water Color	Green
A7	30 Sep 2019	Wave Ht Low (ft)	5
A7	30 Sep 2019	Wave Period (sec)	13
A7	30 Sep 2019	Sea State	Light chop
A7	30 Sep 2019	High Tide (ft)	6.05
A7	30 Sep 2019	High Tide Time	1039
A7	30 Sep 2019	Low Tide (ft)	0.27
A7	30 Sep 2019	Low Tide Time	433
A7	30 Sep 2019	Comments	Lobster floats; Kelp debris
C4	03 Sep 2019	Depth (m)	11
C4	03 Sep 2019	Arrive Time	956
C4	03 Sep 2019	Depart Time	1012
C4	03 Sep 2019	Air Temp (C)	22
C4	03 Sep 2019	Weather	Partly Cloudy
C4	03 Sep 2019	Visibility (mi)	5
C4	03 Sep 2019	Wind Speed (kts)	8
C4	03 Sep 2019	Wind Dir	NW
C4	03 Sep 2019	Water Color	Brownish-Green
C4	03 Sep 2019	Wave Ht Low (ft)	3
C4	03 Sep 2019	Wave Period (sec)	9
C4	03 Sep 2019	Sea State	Calm
C4	03 Sep 2019	High Tide (ft)	5.36
C4	03 Sep 2019	High Tide Time	1246
C4	03 Sep 2019	Low Tide (ft)	0.82
C4	03 Sep 2019	Low Tide Time	628
C4	03 Sep 2019	Comments	Kelp
C4	10 Sep 2019	Depth (m)	12
C4	10 Sep 2019	Arrive Time	1012
C4	10 Sep 2019	Depart Time	1016
C4	10 Sep 2019	Air Temp (C)	20
C4	10 Sep 2019	Weather	Partly Cloudy
C4	10 Sep 2019	Visibility (mi)	7
C4	10 Sep 2019	Wind Speed (kts)	9
C4	10 Sep 2019	Wind Dir	S
C4	10 Sep 2019	Water Color	Green
C4	10 Sep 2019	Wave Ht Low (ft)	3
C4	10 Sep 2019	Wave Period (sec)	13
C4	10 Sep 2019	Sea State	Light chop

Station	Date	Parameter	Value
C4	10 Sep 2019	High Tide (ft)	4.29
C4	10 Sep 2019	High Tide Time	836
C4	10 Sep 2019	Low Tide (ft)	1.98
C4	10 Sep 2019	Low Tide Time	1355
C4	10 Sep 2019	Comments	none
C4	17 Sep 2019	Depth (m)	12
C4	17 Sep 2019	Arrive Time	938
C4	17 Sep 2019	Depart Time	944
C4	17 Sep 2019	Air Temp (C)	20
C4	17 Sep 2019	Weather	Partly Cloudy
C4	17 Sep 2019	Visibility (mi)	5
C4	17 Sep 2019	Wind Speed (kts)	2
C4	17 Sep 2019	Wind Dir	W
C4	17 Sep 2019	Water Color	Brownish-Green
C4	17 Sep 2019	Wave Ht Low (ft)	3
C4	17 Sep 2019	Wave Period (sec)	11
C4	17 Sep 2019	Sea State	Calm
C4	17 Sep 2019	High Tide (ft)	4.95
C4	17 Sep 2019	High Tide Time	1116
C4	17 Sep 2019	Low Tide (ft)	1.12
C4	17 Sep 2019	Low Tide Time	510
C4	17 Sep 2019	Comments	Kelp
C4	24 Sep 2019	Depth (m)	11
C4	24 Sep 2019	Arrive Time	943
C4	24 Sep 2019	Depart Time	947
C4	24 Sep 2019	Air Temp (C)	19
C4	24 Sep 2019	Weather	Haze
C4	24 Sep 2019	Visibility (mi)	5
C4	24 Sep 2019	Wind Speed (kts)	10
C4	24 Sep 2019	Wind Dir	NW
C4	24 Sep 2019	Water Color	Brownish-Green
C4	24 Sep 2019	Wave Ht Low (ft)	3
C4	24 Sep 2019	Wave Period (sec)	11
C4	24 Sep 2019	Sea State	Calm
C4	24 Sep 2019	High Tide (ft)	4.07
C4	24 Sep 2019	High Tide Time	718
C4	24 Sep 2019	Low Tide (ft)	2.34
C4	24 Sep 2019	Low Tide Time	1224
C4	24 Sep 2019	Comments	none
C4	30 Sep 2019	Depth (m)	12
C4	30 Sep 2019	Arrive Time	1027
C4	30 Sep 2019	Depart Time	1031
C4	30 Sep 2019	Air Temp (C)	17
C4	30 Sep 2019	Weather	Clear
C4	30 Sep 2019	Visibility (mi)	12
C4	30 Sep 2019	Wind Speed (kts)	2
C4	30 Sep 2019	Wind Dir	S
C4	30 Sep 2019	Water Color	Green
C4	30 Sep 2019	Wave Ht Low (ft)	5
C4	30 Sep 2019	Wave Period (sec)	13
C4	30 Sep 2019	Sea State	Light chop
C4	30 Sep 2019	High Tide (ft)	6.05
C4	30 Sep 2019	High Tide Time	1039
C4	30 Sep 2019	Low Tide (ft)	0.27
C4	30 Sep 2019	Low Tide Time	433
C4	30 Sep 2019	Comments	Lobster floats
C5	03 Sep 2019	Depth (m)	12

Station	Date	Parameter	Value
C5	03 Sep 2019	Arrive Time	945
C5	03 Sep 2019	Depart Time	950
C5	03 Sep 2019	Air Temp (C)	22
C5	03 Sep 2019	Weather	Partly Cloudy
C5	03 Sep 2019	Visibility (mi)	5
C5	03 Sep 2019	Wind Speed (kts)	5
C5	03 Sep 2019	Wind Dir	NW
C5	03 Sep 2019	Water Color	Brownish-Green
C5	03 Sep 2019	Wave Ht Low (ft)	3
C5	03 Sep 2019	Wave Period (sec)	9
C5	03 Sep 2019	Sea State	Calm
C5	03 Sep 2019	High Tide (ft)	5.36
C5	03 Sep 2019	High Tide Time	1246
C5	03 Sep 2019	Low Tide (ft)	0.82
C5	03 Sep 2019	Low Tide Time	628
C5	03 Sep 2019	Comments	none
C5	10 Sep 2019	Depth (m)	10
C5	10 Sep 2019	Arrive Time	959
C5	10 Sep 2019	Depart Time	1004
C5	10 Sep 2019	Air Temp (C)	20
C5	10 Sep 2019	Weather	Partly Cloudy
C5	10 Sep 2019	Visibility (mi)	5
C5	10 Sep 2019	Wind Speed (kts)	12
C5	10 Sep 2019	Wind Dir	S
C5	10 Sep 2019	Water Color	Green
C5	10 Sep 2019	Wave Ht Low (ft)	3
C5	10 Sep 2019	Wave Period (sec)	13
C5	10 Sep 2019	Sea State	Light chop
C5	10 Sep 2019	High Tide (ft)	4.29
C5	10 Sep 2019	High Tide Time	836
C5	10 Sep 2019	Low Tide (ft)	1.98
C5	10 Sep 2019	Low Tide Time	1355
C5	10 Sep 2019	Comments	none
C5	17 Sep 2019	Depth (m)	12
C5	17 Sep 2019	Arrive Time	926
C5	17 Sep 2019	Depart Time	932
C5	17 Sep 2019	Air Temp (C)	20
C5	17 Sep 2019	Weather	Partly Cloudy
C5	17 Sep 2019	Visibility (mi)	5
C5	17 Sep 2019	Wind Speed (kts)	3
C5	17 Sep 2019	Wind Dir	NW
C5	17 Sep 2019	Water Color	Brownish-Green
C5	17 Sep 2019	Wave Ht Low (ft)	3
C5	17 Sep 2019	Wave Period (sec)	11
C5	17 Sep 2019	Sea State	Calm
C5	17 Sep 2019	High Tide (ft)	4.95
C5	17 Sep 2019	High Tide Time	1116
C5	17 Sep 2019	Low Tide (ft)	1.12
C5	17 Sep 2019	Low Tide Time	510
C5	17 Sep 2019	Comments	none
C5	24 Sep 2019	Depth (m)	12
C5	24 Sep 2019	Arrive Time	930
C5	24 Sep 2019	Depart Time	933
C5	24 Sep 2019	Air Temp (C)	19
C5	24 Sep 2019	Weather	Haze
C5	24 Sep 2019	Visibility (mi)	5
C5	24 Sep 2019	Wind Speed (kts)	8
C5	24 Sep 2019	Wind Dir	N

Station	Date	Parameter	Value
C5	24 Sep 2019	Water Color	Brownish-Green
C5	24 Sep 2019	Wave Ht Low (ft)	3
C5	24 Sep 2019	Wave Period (sec)	11
C5	24 Sep 2019	Sea State	Calm
C5	24 Sep 2019	High Tide (ft)	4.07
C5	24 Sep 2019	High Tide Time	718
C5	24 Sep 2019	Low Tide (ft)	2.34
C5	24 Sep 2019	Low Tide Time	1224
C5	24 Sep 2019	Comments	Kelp
C5	30 Sep 2019	Depth (m)	11
C5	30 Sep 2019	Arrive Time	957
C5	30 Sep 2019	Depart Time	1020
C5	30 Sep 2019	Air Temp (C)	18
C5	30 Sep 2019	Weather	Clear
C5	30 Sep 2019	Visibility (mi)	12
C5	30 Sep 2019	Wind Speed (kts)	1
C5	30 Sep 2019	Wind Dir	N
C5	30 Sep 2019	Water Color	Green
C5	30 Sep 2019	Wave Ht Low (ft)	5
C5	30 Sep 2019	Wave Period (sec)	13
C5	30 Sep 2019	Sea State	Light chop
C5	30 Sep 2019	High Tide (ft)	6.05
C5	30 Sep 2019	High Tide Time	1039
C5	30 Sep 2019	Low Tide (ft)	0.27
C5	30 Sep 2019	Low Tide Time	433
C5	30 Sep 2019	Comments	Lobster floats; Bleeder valve on CTD was plugged; Second cast taken
C6	03 Sep 2019	Depth (m)	10
C6	03 Sep 2019	Arrive Time	933
C6	03 Sep 2019	Depart Time	945
C6	03 Sep 2019	Air Temp (C)	22
C6	03 Sep 2019	Weather	Partly Cloudy
C6	03 Sep 2019	Visibility (mi)	5
C6	03 Sep 2019	Wind Speed (kts)	5
C6	03 Sep 2019	Wind Dir	NW
C6	03 Sep 2019	Water Color	Brownish-Green
C6	03 Sep 2019	Wave Ht Low (ft)	3
C6	03 Sep 2019	Wave Period (sec)	9
C6	03 Sep 2019	Sea State	Calm
C6	03 Sep 2019	High Tide (ft)	5.36
C6	03 Sep 2019	High Tide Time	1246
C6	03 Sep 2019	Low Tide (ft)	0.82
C6	03 Sep 2019	Low Tide Time	628
C6	03 Sep 2019	Comments	none
C6	10 Sep 2019	Depth (m)	10
C6	10 Sep 2019	Arrive Time	947
C6	10 Sep 2019	Depart Time	952
C6	10 Sep 2019	Air Temp (C)	20
C6	10 Sep 2019	Weather	Overcast
C6	10 Sep 2019	Visibility (mi)	5
C6	10 Sep 2019	Wind Speed (kts)	14
C6	10 Sep 2019	Wind Dir	SE
C6	10 Sep 2019	Water Color	Bluish-Green
C6	10 Sep 2019	Wave Ht Low (ft)	5
C6	10 Sep 2019	Wave Period (sec)	13
C6	10 Sep 2019	Sea State	Light chop
C6	10 Sep 2019	High Tide (ft)	4.29
C6	10 Sep 2019	High Tide Time	836

Station	Date	Parameter	Value
C6	10 Sep 2019	Low Tide (ft)	1.98
C6	10 Sep 2019	Low Tide Time	1355
C6	10 Sep 2019	Comments	none
C6	17 Sep 2019	Depth (m)	10
C6	17 Sep 2019	Arrive Time	915
C6	17 Sep 2019	Depart Time	920
C6	17 Sep 2019	Air Temp (C)	20
C6	17 Sep 2019	Weather	Partly Cloudy
C6	17 Sep 2019	Visibility (mi)	5
C6	17 Sep 2019	Wind Speed (kts)	4
C6	17 Sep 2019	Wind Dir	NW
C6	17 Sep 2019	Water Color	Brownish-Green
C6	17 Sep 2019	Wave Ht Low (ft)	3
C6	17 Sep 2019	Wave Period (sec)	11
C6	17 Sep 2019	Sea State	Calm
C6	17 Sep 2019	High Tide (ft)	4.95
C6	17 Sep 2019	High Tide Time	1116
C6	17 Sep 2019	Low Tide (ft)	1.12
C6	17 Sep 2019	Low Tide Time	510
C6	17 Sep 2019	Comments	none
C6	24 Sep 2019	Depth (m)	10
C6	24 Sep 2019	Arrive Time	919
C6	24 Sep 2019	Depart Time	923
C6	24 Sep 2019	Air Temp (C)	19
C6	24 Sep 2019	Weather	Haze
C6	24 Sep 2019	Visibility (mi)	5
C6	24 Sep 2019	Wind Speed (kts)	9
C6	24 Sep 2019	Wind Dir	N
C6	24 Sep 2019	Water Color	Brownish-Green
C6	24 Sep 2019	Wave Ht Low (ft)	3
C6	24 Sep 2019	Wave Period (sec)	11
C6	24 Sep 2019	Sea State	Calm
C6	24 Sep 2019	High Tide (ft)	4.07
C6	24 Sep 2019	High Tide Time	718
C6	24 Sep 2019	Low Tide (ft)	2.34
C6	24 Sep 2019	Low Tide Time	1224
C6	24 Sep 2019	Comments	none
C6	30 Sep 2019	Depth (m)	9
C6	30 Sep 2019	Arrive Time	946
C6	30 Sep 2019	Depart Time	951
C6	30 Sep 2019	Air Temp (C)	18
C6	30 Sep 2019	Weather	Clear
C6	30 Sep 2019	Visibility (mi)	12
C6	30 Sep 2019	Wind Speed (kts)	1
C6	30 Sep 2019	Wind Dir	E
C6	30 Sep 2019	Water Color	Green
C6	30 Sep 2019	Wave Ht Low (ft)	5
C6	30 Sep 2019	Wave Period (sec)	13
C6	30 Sep 2019	Sea State	Light chop
C6	30 Sep 2019	High Tide (ft)	6.05
C6	30 Sep 2019	High Tide Time	1039
C6	30 Sep 2019	Low Tide (ft)	0.27
C6	30 Sep 2019	Low Tide Time	433
C6	30 Sep 2019	Comments	Lobster floats
C7	03 Sep 2019	Depth (m)	18
C7	03 Sep 2019	Arrive Time	857
C7	03 Sep 2019	Depart Time	902

Station	Date	Parameter	Value
C7	03 Sep 2019	Air Temp (C)	22
C7	03 Sep 2019	Weather	Partly Cloudy
C7	03 Sep 2019	Visibility (mi)	5
C7	03 Sep 2019	Wind Speed (kts)	5
C7	03 Sep 2019	Wind Dir	NW
C7	03 Sep 2019	Water Color	Brownish-Green
C7	03 Sep 2019	Wave Ht Low (ft)	3
C7	03 Sep 2019	Wave Period (sec)	9
C7	03 Sep 2019	Sea State	Calm
C7	03 Sep 2019	High Tide (ft)	5.36
C7	03 Sep 2019	High Tide Time	1246
C7	03 Sep 2019	Low Tide (ft)	0.82
C7	03 Sep 2019	Low Tide Time	628
C7	03 Sep 2019	Comments	Kelp; Sea lion
C7	10 Sep 2019	Depth (m)	19
C7	10 Sep 2019	Arrive Time	915
C7	10 Sep 2019	Depart Time	919
C7	10 Sep 2019	Air Temp (C)	20
C7	10 Sep 2019	Weather	Overcast
C7	10 Sep 2019	Visibility (mi)	5
C7	10 Sep 2019	Wind Speed (kts)	5
C7	10 Sep 2019	Wind Dir	E
C7	10 Sep 2019	Water Color	Bluish-Green
C7	10 Sep 2019	Wave Ht Low (ft)	5
C7	10 Sep 2019	Wave Period (sec)	13
C7	10 Sep 2019	Sea State	Confused swell
C7	10 Sep 2019	High Tide (ft)	4.29
C7	10 Sep 2019	High Tide Time	836
C7	10 Sep 2019	Low Tide (ft)	1.98
C7	10 Sep 2019	Low Tide Time	1355
C7	10 Sep 2019	Comments	none
C7	17 Sep 2019	Depth (m)	19
C7	17 Sep 2019	Arrive Time	842
C7	17 Sep 2019	Depart Time	850
C7	17 Sep 2019	Air Temp (C)	20
C7	17 Sep 2019	Weather	Partly Cloudy
C7	17 Sep 2019	Visibility (mi)	5
C7	17 Sep 2019	Wind Speed (kts)	4
C7	17 Sep 2019	Wind Dir	W
C7	17 Sep 2019	Water Color	Brownish-Green
C7	17 Sep 2019	Wave Ht Low (ft)	3
C7	17 Sep 2019	Wave Period (sec)	11
C7	17 Sep 2019	Sea State	Calm
C7	17 Sep 2019	High Tide (ft)	4.95
C7	17 Sep 2019	High Tide Time	1116
C7	17 Sep 2019	Low Tide (ft)	1.12
C7	17 Sep 2019	Low Tide Time	510
C7	17 Sep 2019	Comments	none
C7	24 Sep 2019	Depth (m)	20
C7	24 Sep 2019	Arrive Time	844
C7	24 Sep 2019	Depart Time	851
C7	24 Sep 2019	Air Temp (C)	19
C7	24 Sep 2019	Weather	Haze
C7	24 Sep 2019	Visibility (mi)	5
C7	24 Sep 2019	Wind Speed (kts)	7
C7	24 Sep 2019	Wind Dir	N
C7	24 Sep 2019	Water Color	Brownish-Green
C7	24 Sep 2019	Wave Ht Low (ft)	3

Station	Date	Parameter	Value
C7	24 Sep 2019	Wave Period (sec)	11
C7	24 Sep 2019	Sea State	Calm
C7	24 Sep 2019	High Tide (ft)	4.07
C7	24 Sep 2019	High Tide Time	718
C7	24 Sep 2019	Low Tide (ft)	2.34
C7	24 Sep 2019	Low Tide Time	1224
C7	24 Sep 2019	Comments	none
C7	30 Sep 2019	Depth (m)	19
C7	30 Sep 2019	Arrive Time	911
C7	30 Sep 2019	Depart Time	917
C7	30 Sep 2019	Air Temp (C)	17
C7	30 Sep 2019	Weather	Clear
C7	30 Sep 2019	Visibility (mi)	12
C7	30 Sep 2019	Wind Speed (kts)	6
C7	30 Sep 2019	Wind Dir	SE
C7	30 Sep 2019	Water Color	Green
C7	30 Sep 2019	Wave Ht Low (ft)	5
C7	30 Sep 2019	Wave Period (sec)	13
C7	30 Sep 2019	Sea State	Light chop
C7	30 Sep 2019	High Tide (ft)	6.05
C7	30 Sep 2019	High Tide Time	1039
C7	30 Sep 2019	Low Tide (ft)	0.27
C7	30 Sep 2019	Low Tide Time	433
C7	30 Sep 2019	Comments	Lobster floats
C8	03 Sep 2019	Depth (m)	19
C8	03 Sep 2019	Arrive Time	910
C8	03 Sep 2019	Depart Time	914
C8	03 Sep 2019	Air Temp (C)	22
C8	03 Sep 2019	Weather	Partly Cloudy
C8	03 Sep 2019	Visibility (mi)	5
C8	03 Sep 2019	Wind Speed (kts)	8
C8	03 Sep 2019	Wind Dir	NW
C8	03 Sep 2019	Water Color	Brownish-Green
C8	03 Sep 2019	Wave Ht Low (ft)	3
C8	03 Sep 2019	Wave Period (sec)	9
C8	03 Sep 2019	Sea State	Calm
C8	03 Sep 2019	High Tide (ft)	5.36
C8	03 Sep 2019	High Tide Time	1246
C8	03 Sep 2019	Low Tide (ft)	0.82
C8	03 Sep 2019	Low Tide Time	628
C8	03 Sep 2019	Comments	none
C8	10 Sep 2019	Depth (m)	20
C8	10 Sep 2019	Arrive Time	926
C8	10 Sep 2019	Depart Time	931
C8	10 Sep 2019	Air Temp (C)	20
C8	10 Sep 2019	Weather	Overcast
C8	10 Sep 2019	Visibility (mi)	5
C8	10 Sep 2019	Wind Speed (kts)	10
C8	10 Sep 2019	Wind Dir	S
C8	10 Sep 2019	Water Color	Bluish-Green
C8	10 Sep 2019	Wave Ht Low (ft)	5
C8	10 Sep 2019	Wave Period (sec)	13
C8	10 Sep 2019	Sea State	Confused swell
C8	10 Sep 2019	High Tide (ft)	4.29
C8	10 Sep 2019	High Tide Time	836
C8	10 Sep 2019	Low Tide (ft)	1.98
C8	10 Sep 2019	Low Tide Time	1355
C8	10 Sep 2019	Comments	none

Station	Date	Parameter	Value
C8	17 Sep 2019	Depth (m)	20
C8	17 Sep 2019	Arrive Time	856
C8	17 Sep 2019	Depart Time	858
C8	17 Sep 2019	Air Temp (C)	20
C8	17 Sep 2019	Weather	Partly Cloudy
C8	17 Sep 2019	Visibility (mi)	5
C8	17 Sep 2019	Wind Speed (kts)	2
C8	17 Sep 2019	Wind Dir	W
C8	17 Sep 2019	Water Color	Brownish-Green
C8	17 Sep 2019	Wave Ht Low (ft)	3
C8	17 Sep 2019	Wave Period (sec)	11
C8	17 Sep 2019	Sea State	Calm
C8	17 Sep 2019	High Tide (ft)	4.95
C8	17 Sep 2019	High Tide Time	1116
C8	17 Sep 2019	Low Tide (ft)	1.12
C8	17 Sep 2019	Low Tide Time	510
C8	17 Sep 2019	Comments	none
C8	24 Sep 2019	Depth (m)	20
C8	24 Sep 2019	Arrive Time	859
C8	24 Sep 2019	Depart Time	901
C8	24 Sep 2019	Air Temp (C)	19
C8	24 Sep 2019	Weather	Haze
C8	24 Sep 2019	Visibility (mi)	5
C8	24 Sep 2019	Wind Speed (kts)	6
C8	24 Sep 2019	Wind Dir	NE
C8	24 Sep 2019	Water Color	Brownish-Green
C8	24 Sep 2019	Wave Ht Low (ft)	3
C8	24 Sep 2019	Wave Period (sec)	11
C8	24 Sep 2019	Sea State	Calm
C8	24 Sep 2019	High Tide (ft)	4.07
C8	24 Sep 2019	High Tide Time	718
C8	24 Sep 2019	Low Tide (ft)	2.34
C8	24 Sep 2019	Low Tide Time	1224
C8	24 Sep 2019	Comments	none
C8	30 Sep 2019	Depth (m)	18
C8	30 Sep 2019	Arrive Time	925
C8	30 Sep 2019	Depart Time	931
C8	30 Sep 2019	Air Temp (C)	18
C8	30 Sep 2019	Weather	Clear
C8	30 Sep 2019	Visibility (mi)	12
C8	30 Sep 2019	Wind Speed (kts)	2
C8	30 Sep 2019	Wind Dir	E
C8	30 Sep 2019	Water Color	Green
C8	30 Sep 2019	Wave Ht Low (ft)	5
C8	30 Sep 2019	Wave Period (sec)	13
C8	30 Sep 2019	Sea State	Light chop
C8	30 Sep 2019	High Tide (ft)	6.05
C8	30 Sep 2019	High Tide Time	1039
C8	30 Sep 2019	Low Tide (ft)	0.27
C8	30 Sep 2019	Low Tide Time	433
C8	30 Sep 2019	Comments	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	03 Sep 2019	1	21.45	76.52	7.6	33.65	8.1	23.3	1.70
A1	03 Sep 2019	2	20.81	78.19	7.3	33.67	8.1	23.5	1.91
A1	03 Sep 2019	3	18.55	77.75	7.4	33.67	8.1	24.1	2.32
A1	03 Sep 2019	4	18.06	77.05	7.3	33.61	8.1	24.2	2.59
A1	03 Sep 2019	5	16.90	76.67	7.2	33.56	8.0	24.4	3.04
A1	03 Sep 2019	6	16.13	76.24	7.1	33.58	8.0	24.6	3.56
A1	03 Sep 2019	7	15.77	76.58	7.0	33.55	8.0	24.7	3.92
A1	03 Sep 2019	8	15.38	77.76	7.0	33.54	8.0	24.8	3.64
A1	03 Sep 2019	9	15.29	78.83	7.0	33.52	8.0	24.8	3.33
A1	03 Sep 2019	10	15.27	78.85	7.0	33.53	8.0	24.8	3.31
A1	03 Sep 2019	11	15.23	78.98	7.0	33.53	8.0	24.8	3.20
A1	03 Sep 2019	12	15.14	79.82	7.0	33.53	8.0	24.8	2.84
A1	03 Sep 2019	13	15.13	80.06	7.0	33.54	8.0	24.8	2.71
A1	03 Sep 2019	14	15.04	80.42	6.9	33.55	8.0	24.8	2.46
A1	03 Sep 2019	15	14.69	82.76	6.8	33.55	8.0	24.9	1.95
A1	03 Sep 2019	16	14.32	83.73	6.8	33.55	8.0	25.0	1.51
A1	03 Sep 2019	17	14.21	84.10	6.8	33.53	8.0	25.0	1.33
A1	03 Sep 2019	18	14.08	84.62	6.8	33.54	8.0	25.0	1.13
A1	03 Sep 2019	19	13.89	84.85	6.7	33.53	8.0	25.1	0.91
A1	10 Sep 2019	1	19.98	68.89	7.6	33.54	8.1	23.7	1.35
A1	10 Sep 2019	2	19.98	75.11	7.6	33.60	8.1	23.7	1.46
A1	10 Sep 2019	3	19.97	75.59	7.6	33.60	8.1	23.7	1.51
A1	10 Sep 2019	4	19.93	77.19	7.6	33.59	8.1	23.7	1.55
A1	10 Sep 2019	5	19.94	77.07	7.6	33.59	8.1	23.7	1.55
A1	10 Sep 2019	6	19.89	77.10	7.5	33.59	8.1	23.7	1.56
A1	10 Sep 2019	7	19.69	76.76	7.4	33.60	8.1	23.8	1.57
A1	10 Sep 2019	8	19.26	76.32	6.8	33.62	8.1	23.9	1.53
A1	10 Sep 2019	9	17.51	76.80	6.1	33.65	8.0	24.4	1.48
A1	10 Sep 2019	10	16.85	77.81	6.0	33.56	8.0	24.4	1.36
A1	10 Sep 2019	11	16.51	78.99	6.0	33.56	8.0	24.5	1.32
A1	10 Sep 2019	12	16.37	79.14	5.9	33.53	7.9	24.5	1.20
A1	10 Sep 2019	13	15.85	79.74	5.9	33.58	7.9	24.7	1.21
A1	10 Sep 2019	14	15.25	81.04	6.1	33.54	7.9	24.8	1.33
A1	10 Sep 2019	15	14.80	82.11	6.2	33.55	7.9	24.9	1.43
A1	10 Sep 2019	16	14.60	82.89	6.1	33.54	7.9	24.9	1.33
A1	10 Sep 2019	17	14.45	83.19	6.1	33.53	7.9	25.0	1.18
A1	10 Sep 2019	18	14.38	83.09	6.0	33.54	7.9	25.0	1.02
A1	10 Sep 2019	19	14.42	82.35	6.0	33.52	7.9	25.0	0.96
A1	17 Sep 2019	1	19.25	78.64	7.9	33.59	8.1	23.9	1.68
A1	17 Sep 2019	2	19.17	78.54	7.9	33.60	8.1	23.9	1.84
A1	17 Sep 2019	3	18.96	78.53	7.9	33.59	8.1	24.0	1.90
A1	17 Sep 2019	4	18.79	78.64	7.9	33.59	8.1	24.0	1.95
A1	17 Sep 2019	5	18.49	79.11	7.8	33.59	8.1	24.1	2.05
A1	17 Sep 2019	6	17.96	79.06	7.5	33.58	8.1	24.2	2.26
A1	17 Sep 2019	7	17.25	78.76	7.0	33.62	8.1	24.4	2.42
A1	17 Sep 2019	8	16.28	78.89	6.8	33.58	8.0	24.6	2.55
A1	17 Sep 2019	9	15.88	79.37	6.7	33.54	8.0	24.7	2.49
A1	17 Sep 2019	10	15.89	80.53	6.5	33.57	8.0	24.7	2.36
A1	17 Sep 2019	11	15.30	81.30	6.3	33.55	8.0	24.8	1.96
A1	17 Sep 2019	12	15.14	81.46	6.2	33.55	8.0	24.8	1.78
A1	17 Sep 2019	13	14.88	81.92	5.9	33.56	8.0	24.9	1.63
A1	17 Sep 2019	14	14.65	82.73	6.0	33.55	8.0	24.9	1.45
A1	17 Sep 2019	15	14.65	82.99	6.0	33.55	8.0	24.9	1.34
A1	17 Sep 2019	16	14.44	83.51	5.8	33.56	7.9	25.0	1.17

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (μg/L)
A1	17 Sep 2019	17	14.20	83.01	5.8	33.56	7.9	25.0	0.90
A1	17 Sep 2019	18	14.02	85.00	5.7	33.59	7.9	25.1	0.72
A1	24 Sep 2019	1	20.66	78.36	8.2	33.65	8.1	23.6	1.29
A1	24 Sep 2019	2	20.65	78.15	8.2	33.65	8.1	23.6	1.33
A1	24 Sep 2019	3	20.61	78.47	8.2	33.65	8.1	23.6	1.38
A1	24 Sep 2019	4	20.29	78.77	8.2	33.65	8.1	23.7	1.65
A1	24 Sep 2019	5	19.85	78.00	8.1	33.63	8.1	23.8	1.99
A1	24 Sep 2019	6	19.50	76.70	8.1	33.62	8.1	23.8	2.13
A1	24 Sep 2019	7	19.01	76.65	8.1	33.59	8.1	23.9	2.28
A1	24 Sep 2019	8	18.46	76.74	7.9	33.63	8.1	24.1	2.36
A1	24 Sep 2019	9	17.54	77.07	7.9	33.58	8.1	24.3	2.52
A1	24 Sep 2019	10	17.26	77.11	7.8	33.57	8.1	24.4	2.65
A1	24 Sep 2019	11	16.76	77.93	7.9	33.54	8.1	24.5	2.59
A1	24 Sep 2019	12	16.73	78.35	7.8	33.52	8.1	24.4	2.56
A1	24 Sep 2019	13	16.15	78.87	7.7	33.56	8.1	24.6	2.59
A1	24 Sep 2019	14	15.94	79.30	7.6	33.52	8.0	24.6	2.61
A1	24 Sep 2019	15	15.41	79.15	7.3	33.55	8.0	24.8	2.62
A1	24 Sep 2019	16	15.27	80.06	7.1	33.52	8.0	24.8	2.64
A1	24 Sep 2019	17	14.74	81.55	6.9	33.55	8.0	24.9	2.27
A1	24 Sep 2019	18	14.51	82.22	6.8	33.54	8.0	25.0	1.98
A1	30 Sep 2019	1	19.43	73.82	7.2	33.63	8.1	23.9	2.04
A1	30 Sep 2019	2	19.34	74.07	7.2	33.64	8.1	23.9	2.32
A1	30 Sep 2019	3	19.27	74.59	7.2	33.62	8.1	23.9	2.71
A1	30 Sep 2019	4	18.87	75.55	7.2	33.63	8.1	24.0	3.18
A1	30 Sep 2019	5	18.22	78.38	6.8	33.63	8.1	24.2	3.13
A1	30 Sep 2019	6	16.29	82.08	6.7	33.59	8.0	24.6	1.90
A1	30 Sep 2019	7	15.60	83.25	6.7	33.54	8.0	24.7	1.25
A1	30 Sep 2019	8	14.83	84.12	6.5	33.54	8.0	24.9	1.02
A1	30 Sep 2019	9	14.00	84.37	6.2	33.54	8.0	25.1	0.80
A1	30 Sep 2019	10	13.76	84.68	6.1	33.52	7.9	25.1	0.68
A1	30 Sep 2019	11	13.68	85.24	6.0	33.53	7.9	25.1	0.64
A1	30 Sep 2019	12	13.65	85.33	6.0	33.53	7.9	25.1	0.64
A1	30 Sep 2019	13	13.57	85.20	6.0	33.54	7.9	25.1	0.63
A1	30 Sep 2019	14	13.57	85.10	6.0	33.54	7.9	25.1	0.61
A1	30 Sep 2019	15	13.57	84.93	6.0	33.54	7.9	25.1	0.61
A1	30 Sep 2019	16	13.57	84.93	6.0	33.55	7.9	25.2	0.61
A1	30 Sep 2019	17	13.57	84.95	6.0	33.55	7.9	25.2	0.63
A1	30 Sep 2019	18	13.57	84.73	5.9	33.55	7.9	25.2	0.61
A6	03 Sep 2019	1	22.82	78.82	8.3	33.69	8.2	23.0	1.36
A6	03 Sep 2019	2	22.24	76.99	8.2	33.72	8.2	23.2	1.51
A6	03 Sep 2019	3	21.03	78.80	8.1	33.69	8.2	23.5	1.81
A6	03 Sep 2019	4	19.77	79.62	7.9	33.65	8.2	23.8	2.20
A6	03 Sep 2019	5	18.50	79.73	7.5	33.64	8.2	24.1	2.27
A6	03 Sep 2019	6	17.31	80.33	7.1	33.60	8.1	24.4	2.02
A6	03 Sep 2019	7	16.39	81.79	7.0	33.56	8.1	24.6	1.69
A6	03 Sep 2019	8	15.96	82.66	6.9	33.53	8.0	24.6	1.44
A6	03 Sep 2019	9	15.78	83.14	6.8	33.52	8.0	24.7	1.26
A6	03 Sep 2019	10	15.42	83.42	6.7	33.53	8.0	24.7	1.14
A6	03 Sep 2019	11	15.20	84.03	6.7	33.52	8.0	24.8	1.03
A6	03 Sep 2019	12	14.98	84.26	6.7	33.52	8.0	24.8	1.01
A6	03 Sep 2019	13	14.57	84.37	6.6	33.54	8.0	24.9	0.92
A6	03 Sep 2019	14	14.10	84.90	6.7	33.53	8.0	25.0	0.84
A6	03 Sep 2019	15	13.87	85.41	6.8	33.52	8.0	25.1	0.83
A6	03 Sep 2019	16	13.75	85.66	6.9	33.52	8.0	25.1	0.88
A6	03 Sep 2019	17	13.70	85.66	6.9	33.51	8.0	25.1	0.83
A6	03 Sep 2019	18	13.69	85.54	6.9	33.51	8.0	25.1	0.80
A6	10 Sep 2019	1	20.15	79.58	7.9	33.61	8.2	23.7	1.21

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (μg/L)
A6	10 Sep 2019	2	20.12	79.44	7.9	33.61	8.2	23.7	1.31
A6	10 Sep 2019	3	20.02	79.41	7.9	33.61	8.2	23.7	1.45
A6	10 Sep 2019	4	19.99	79.45	7.9	33.61	8.2	23.7	1.49
A6	10 Sep 2019	5	20.00	79.36	7.8	33.61	8.2	23.7	1.53
A6	10 Sep 2019	6	19.93	79.38	7.8	33.61	8.2	23.7	1.54
A6	10 Sep 2019	7	19.93	79.46	7.9	33.60	8.2	23.7	1.57
A6	10 Sep 2019	8	19.99	79.47	7.8	33.61	8.2	23.7	1.59
A6	10 Sep 2019	9	20.02	79.33	7.8	33.61	8.2	23.7	1.62
A6	10 Sep 2019	10	19.93	79.46	7.8	33.62	8.2	23.7	1.63
A6	10 Sep 2019	11	19.75	79.41	7.7	33.62	8.2	23.8	1.67
A6	10 Sep 2019	12	19.45	78.89	7.7	33.60	8.1	23.8	1.76
A6	10 Sep 2019	13	19.59	78.64	7.7	33.59	8.1	23.8	1.79
A6	10 Sep 2019	14	19.36	78.74	7.4	33.63	8.1	23.9	1.80
A6	10 Sep 2019	15	18.33	78.47	7.2	33.60	8.1	24.1	1.89
A6	10 Sep 2019	16	17.16	78.86	6.9	33.65	8.1	24.4	1.74
A6	10 Sep 2019	17	16.40	79.69	6.8	33.58	8.1	24.6	1.62
A6	10 Sep 2019	18	16.05	80.10	6.7	33.54	8.0	24.6	1.46
A6	17 Sep 2019	1	20.36	74.32	8.2	33.59	8.1	23.6	2.06
A6	17 Sep 2019	2	19.79	74.29	8.0	33.63	8.1	23.8	2.24
A6	17 Sep 2019	3	19.00	75.48	8.0	33.59	8.1	23.9	2.35
A6	17 Sep 2019	4	18.55	77.58	8.0	33.58	8.1	24.0	2.27
A6	17 Sep 2019	5	18.36	77.88	8.0	33.57	8.1	24.1	2.29
A6	17 Sep 2019	6	18.25	71.18	8.0	33.55	8.1	24.1	2.24
A6	17 Sep 2019	7	18.09	77.54	7.7	33.59	8.1	24.2	2.35
A6	17 Sep 2019	8	17.30	77.73	7.3	33.58	8.1	24.4	2.66
A6	17 Sep 2019	9	16.50	79.46	6.8	33.62	8.1	24.6	2.53
A6	17 Sep 2019	10	15.87	80.55	6.5	33.58	8.0	24.7	2.34
A6	17 Sep 2019	11	15.50	80.72	6.4	33.56	8.0	24.8	1.99
A6	17 Sep 2019	12	15.26	81.47	6.3	33.55	8.0	24.8	1.77
A6	17 Sep 2019	13	15.14	81.75	6.2	33.55	8.0	24.8	1.60
A6	17 Sep 2019	14	14.96	82.67	6.1	33.55	8.0	24.9	1.33
A6	17 Sep 2019	15	14.88	82.48	6.0	33.55	8.0	24.9	1.16
A6	17 Sep 2019	16	14.70	83.21	6.0	33.56	8.0	24.9	1.06
A6	17 Sep 2019	17	14.62	83.29	5.9	33.55	8.0	24.9	1.02
A6	17 Sep 2019	18	14.36	84.14	5.9	33.57	8.0	25.0	0.91
A6	24 Sep 2019	1	20.50	75.20	8.4	33.63	8.2	23.6	2.11
A6	24 Sep 2019	2	20.31	74.83	8.3	33.63	8.1	23.6	2.44
A6	24 Sep 2019	3	19.96	74.49	8.1	33.63	8.1	23.7	2.81
A6	24 Sep 2019	4	19.26	73.95	8.0	33.63	8.1	23.9	3.21
A6	24 Sep 2019	5	18.84	73.75	8.0	33.60	8.1	24.0	3.39
A6	24 Sep 2019	6	18.63	73.84	7.9	33.60	8.1	24.0	3.50
A6	24 Sep 2019	7	18.23	73.61	7.7	33.60	8.1	24.1	3.73
A6	24 Sep 2019	8	17.67	73.33	7.4	33.59	8.1	24.3	4.02
A6	24 Sep 2019	9	17.03	73.85	7.1	33.59	8.0	24.4	4.01
A6	24 Sep 2019	10	16.85	75.62	6.9	33.56	8.0	24.4	3.68
A6	24 Sep 2019	11	16.42	77.31	6.6	33.56	8.0	24.5	3.20
A6	24 Sep 2019	12	16.04	77.89	6.4	33.58	8.0	24.6	2.99
A6	24 Sep 2019	13	15.74	78.13	6.3	33.57	8.0	24.7	2.88
A6	24 Sep 2019	14	15.42	78.95	6.2	33.56	7.9	24.8	2.60
A6	24 Sep 2019	15	15.33	79.16	6.0	33.55	7.9	24.8	2.33
A6	24 Sep 2019	16	15.20	80.46	5.9	33.56	7.9	24.8	2.07
A6	24 Sep 2019	17	15.07	81.06	5.9	33.56	7.9	24.8	1.85
A6	24 Sep 2019	18	14.99	81.50	5.8	33.55	7.9	24.9	1.64
A6	30 Sep 2019	1	20.30	73.69	7.1	33.69	8.1	23.7	1.24
A6	30 Sep 2019	2	20.30	73.60	7.1	33.69	8.1	23.7	1.35
A6	30 Sep 2019	3	20.30	74.89	7.2	33.69	8.1	23.7	1.52
A6	30 Sep 2019	4	20.19	76.52	7.1	33.69	8.1	23.7	1.80
A6	30 Sep 2019	5	19.52	77.88	6.8	33.72	8.1	23.9	2.05

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (μg/L)
A6	30 Sep 2019	6	18.06	80.19	6.5	33.65	8.1	24.2	1.92
A6	30 Sep 2019	7	16.18	82.12	6.3	33.64	8.0	24.7	1.35
A6	30 Sep 2019	8	15.41	82.70	6.3	33.56	8.0	24.8	1.07
A6	30 Sep 2019	9	14.61	83.26	6.5	33.53	8.0	24.9	0.92
A6	30 Sep 2019	10	14.51	83.99	6.5	33.51	8.0	24.9	0.83
A6	30 Sep 2019	11	14.09	84.32	6.4	33.51	8.0	25.0	0.78
A6	30 Sep 2019	12	13.93	84.70	6.4	33.52	8.0	25.1	0.74
A6	30 Sep 2019	13	13.95	84.66	6.3	33.50	8.0	25.0	0.68
A6	30 Sep 2019	14	13.74	85.17	6.2	33.56	8.0	25.1	0.70
A6	30 Sep 2019	15	13.48	84.94	6.1	33.55	7.9	25.2	0.63
A6	30 Sep 2019	16	13.48	84.36	6.1	33.55	7.9	25.2	0.62
A6	30 Sep 2019	17	13.46	83.94	6.1	33.55	7.9	25.2	0.59
A6	30 Sep 2019	18	13.47	84.17	6.0	33.55	7.9	25.2	0.60
A7	03 Sep 2019	1	22.67	79.71	8.1	33.68	8.2	23.0	1.27
A7	03 Sep 2019	2	22.64	79.56	7.8	33.68	8.2	23.0	1.35
A7	03 Sep 2019	3	21.25	79.16	7.3	33.78	8.2	23.5	2.02
A7	03 Sep 2019	4	18.79	77.51	7.4	33.65	8.1	24.0	3.20
A7	03 Sep 2019	5	18.23	76.43	7.3	33.61	8.1	24.1	3.79
A7	03 Sep 2019	6	17.52	76.65	7.4	33.57	8.1	24.3	3.68
A7	03 Sep 2019	7	17.46	77.03	7.3	33.55	8.1	24.3	3.51
A7	03 Sep 2019	8	17.22	77.02	7.0	33.56	8.1	24.4	3.35
A7	03 Sep 2019	9	16.10	77.52	6.8	33.60	8.1	24.6	3.05
A7	03 Sep 2019	10	15.49	79.06	6.7	33.55	8.0	24.7	2.48
A7	03 Sep 2019	11	14.86	82.02	6.5	33.54	8.0	24.9	1.44
A7	03 Sep 2019	12	14.62	84.09	6.4	33.52	8.0	24.9	0.88
A7	03 Sep 2019	13	14.42	84.38	6.4	33.52	8.0	25.0	0.71
A7	03 Sep 2019	14	14.21	84.53	6.5	33.53	8.0	25.0	0.71
A7	03 Sep 2019	15	14.01	84.49	6.7	33.51	8.0	25.0	0.77
A7	03 Sep 2019	16	13.88	84.94	6.7	33.51	8.0	25.1	0.79
A7	03 Sep 2019	17	13.82	85.12	6.8	33.51	8.0	25.1	0.79
A7	03 Sep 2019	18	13.82	85.16	6.7	33.51	8.0	25.1	0.73
A7	03 Sep 2019	19	13.83	85.18	6.7	33.52	8.0	25.1	0.67
A7	10 Sep 2019	1	19.64	75.70	7.7	33.60	8.1	23.8	1.57
A7	10 Sep 2019	2	19.63	78.22	7.7	33.60	8.1	23.8	1.71
A7	10 Sep 2019	3	19.63	76.90	7.7	33.61	8.1	23.8	1.74
A7	10 Sep 2019	4	19.53	77.27	7.6	33.61	8.1	23.8	1.99
A7	10 Sep 2019	5	19.43	76.63	7.5	33.60	8.1	23.8	2.20
A7	10 Sep 2019	6	18.78	76.30	7.3	33.62	8.1	24.0	2.44
A7	10 Sep 2019	7	17.88	77.62	6.8	33.64	8.1	24.3	2.29
A7	10 Sep 2019	8	16.46	78.78	6.6	33.60	8.0	24.6	2.00
A7	10 Sep 2019	9	15.96	79.68	6.5	33.53	8.0	24.6	1.72
A7	10 Sep 2019	10	15.72	80.69	6.4	33.55	8.0	24.7	1.57
A7	10 Sep 2019	11	15.15	81.94	6.4	33.53	8.0	24.8	1.45
A7	10 Sep 2019	12	14.96	82.42	6.3	33.52	8.0	24.8	1.26
A7	10 Sep 2019	13	14.89	82.72	6.3	33.53	8.0	24.9	1.17
A7	10 Sep 2019	14	14.82	82.79	6.2	33.52	8.0	24.9	1.14
A7	10 Sep 2019	15	14.81	82.80	6.2	33.53	8.0	24.9	1.08
A7	10 Sep 2019	16	14.76	82.91	6.2	33.53	7.9	24.9	1.03
A7	10 Sep 2019	17	14.61	83.15	6.0	33.54	7.9	24.9	0.94
A7	10 Sep 2019	18	14.50	83.32	6.0	33.54	7.9	25.0	0.77
A7	10 Sep 2019	19	14.37	82.98	6.0	33.54	7.9	25.0	0.70
A7	10 Sep 2019	20	14.42	82.68	6.0	33.53	7.9	25.0	0.70
A7	17 Sep 2019	1	19.55	72.66	8.0	33.59	8.1	23.8	2.07
A7	17 Sep 2019	2	19.37	75.48	7.8	33.60	8.1	23.9	2.16
A7	17 Sep 2019	3	18.63	76.80	7.7	33.63	8.1	24.1	2.16
A7	17 Sep 2019	4	17.94	78.25	7.6	33.59	8.1	24.2	2.16
A7	17 Sep 2019	5	17.32	79.14	7.3	33.58	8.1	24.3	2.45
A7	17 Sep 2019	6	16.79	78.81	6.9	33.58	8.1	24.5	2.47

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (μg/L)
A7	17 Sep 2019	7	15.96	79.14	6.6	33.57	8.0	24.7	2.03
A7	17 Sep 2019	8	15.68	80.67	6.4	33.55	8.0	24.7	1.61
A7	17 Sep 2019	9	15.44	82.02	6.3	33.55	8.0	24.8	1.33
A7	17 Sep 2019	10	15.47	81.40	6.1	33.53	8.0	24.7	1.24
A7	17 Sep 2019	11	14.97	82.83	6.0	33.56	8.0	24.9	1.04
A7	17 Sep 2019	12	14.87	82.98	6.0	33.54	8.0	24.9	1.00
A7	17 Sep 2019	13	14.65	83.57	6.0	33.56	8.0	24.9	1.05
A7	17 Sep 2019	14	14.54	83.74	5.9	33.55	8.0	25.0	1.01
A7	17 Sep 2019	15	14.38	84.02	5.9	33.56	8.0	25.0	1.00
A7	17 Sep 2019	16	14.18	84.16	5.8	33.56	7.9	25.0	0.92
A7	17 Sep 2019	17	14.21	84.07	5.8	33.55	7.9	25.0	0.87
A7	17 Sep 2019	18	14.05	84.48	5.7	33.57	7.9	25.1	0.82
A7	17 Sep 2019	19	14.01	84.79	5.7	33.56	7.9	25.1	0.70
A7	17 Sep 2019	20	14.13	84.67	5.7	33.54	7.9	25.0	0.65
A7	24 Sep 2019	1	20.27	77.16	8.1	33.63	8.1	23.6	1.54
A7	24 Sep 2019	2	20.27	77.09	8.1	33.63	8.1	23.6	1.57
A7	24 Sep 2019	3	20.25	77.08	8.1	33.63	8.1	23.6	1.65
A7	24 Sep 2019	4	20.17	77.13	8.1	33.62	8.1	23.7	2.02
A7	24 Sep 2019	5	20.06	76.13	8.1	33.62	8.1	23.7	2.35
A7	24 Sep 2019	6	19.68	75.52	8.0	33.63	8.1	23.8	2.65
A7	24 Sep 2019	7	19.41	75.26	7.8	33.61	8.1	23.9	3.13
A7	24 Sep 2019	8	18.92	73.93	7.7	33.61	8.1	24.0	3.34
A7	24 Sep 2019	9	18.67	73.95	7.6	33.59	8.1	24.0	3.46
A7	24 Sep 2019	10	18.09	74.45	7.6	33.60	8.1	24.2	3.34
A7	24 Sep 2019	11	17.49	75.02	7.5	33.59	8.1	24.3	3.37
A7	24 Sep 2019	12	17.03	75.24	7.3	33.56	8.0	24.4	3.53
A7	24 Sep 2019	13	17.00	75.40	7.2	33.55	8.0	24.4	3.56
A7	24 Sep 2019	14	16.88	75.44	7.1	33.56	8.0	24.4	3.58
A7	24 Sep 2019	15	16.79	75.68	7.0	33.56	8.0	24.5	3.48
A7	24 Sep 2019	16	16.57	76.18	6.9	33.56	8.0	24.5	3.37
A7	24 Sep 2019	17	16.38	76.47	6.6	33.56	8.0	24.6	3.38
A7	24 Sep 2019	18	15.45	76.77	6.2	33.61	8.0	24.8	3.10
A7	24 Sep 2019	19	14.76	79.80	6.1	33.54	7.9	24.9	2.47
A7	30 Sep 2019	1	19.87	76.31	7.2	33.67	8.1	23.8	1.41
A7	30 Sep 2019	2	19.85	77.30	7.0	33.67	8.1	23.8	1.45
A7	30 Sep 2019	3	19.28	77.75	6.7	33.64	8.1	23.9	1.64
A7	30 Sep 2019	4	17.47	79.40	6.4	33.70	8.1	24.4	1.49
A7	30 Sep 2019	5	16.17	80.94	6.4	33.60	8.0	24.6	1.30
A7	30 Sep 2019	6	15.37	82.31	6.3	33.56	8.0	24.8	1.00
A7	30 Sep 2019	7	14.57	83.95	6.4	33.48	8.0	24.9	0.80
A7	30 Sep 2019	8	14.46	84.19	6.2	33.56	8.0	25.0	0.75
A7	30 Sep 2019	9	14.04	84.07	6.2	33.52	8.0	25.0	0.68
A7	30 Sep 2019	10	13.80	83.99	6.1	33.54	7.9	25.1	0.65
A7	30 Sep 2019	11	13.71	84.51	6.1	33.53	7.9	25.1	0.63
A7	30 Sep 2019	12	13.54	84.74	6.0	33.55	7.9	25.2	0.60
A7	30 Sep 2019	13	13.54	84.35	6.0	33.54	7.9	25.2	0.59
A7	30 Sep 2019	14	13.53	84.19	6.0	33.55	7.9	25.2	0.57
A7	30 Sep 2019	15	13.53	83.78	6.0	33.55	7.9	25.2	0.57
A7	30 Sep 2019	16	13.54	83.92	6.0	33.55	7.9	25.2	0.56
A7	30 Sep 2019	17	13.55	83.65	6.0	33.56	7.9	25.2	0.57
A7	30 Sep 2019	18	13.55	83.63	5.9	33.56	7.9	25.2	0.55
C4	03 Sep 2019	1	22.77	78.03	7.8	33.67	8.2	23.0	0.82
C4	03 Sep 2019	2	22.69	78.16	7.7	33.68	8.2	23.0	0.88
C4	03 Sep 2019	3	22.60	78.26	7.6	33.68	8.2	23.0	0.95
C4	03 Sep 2019	4	21.54	78.61	6.7	33.77	8.2	23.4	0.96
C4	03 Sep 2019	5	18.02	78.47	5.8	33.71	8.0	24.3	1.00
C4	03 Sep 2019	6	16.76	78.04	5.7	33.60	8.0	24.5	1.13
C4	03 Sep 2019	7	16.13	78.20	5.5	33.57	8.0	24.6	1.14

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (μg/L)
C4	03 Sep 2019	8	15.67	78.32	5.2	33.55	7.9	24.7	0.98
C4	03 Sep 2019	9	15.21	76.59	4.6	33.54	7.9	24.8	0.75
C4	03 Sep 2019	10	15.12	74.70	4.4	33.54	7.8	24.8	0.60
C4	03 Sep 2019	11	15.07	69.48	4.3	33.54	7.8	24.8	0.50
C4	03 Sep 2019	12	15.06	66.82	4.2	33.54	7.8	24.8	0.47
C4	10 Sep 2019	1	20.71	72.32	7.7	33.59	8.1	23.5	1.11
C4	10 Sep 2019	2	20.71	71.82	7.7	33.59	8.1	23.5	1.10
C4	10 Sep 2019	3	20.71	72.41	7.6	33.59	8.1	23.5	1.22
C4	10 Sep 2019	4	20.67	72.07	7.6	33.59	8.1	23.5	1.53
C4	10 Sep 2019	5	20.67	71.74	7.4	33.59	8.1	23.5	1.74
C4	10 Sep 2019	6	20.34	71.28	6.8	33.62	8.1	23.6	1.66
C4	10 Sep 2019	7	19.65	68.26	6.2	33.62	8.1	23.8	1.37
C4	10 Sep 2019	8	19.33	68.47	5.8	33.59	8.0	23.9	1.15
C4	10 Sep 2019	9	18.98	64.75	4.9	33.60	8.0	24.0	1.00
C4	10 Sep 2019	10	18.32	49.69	4.2	33.59	7.9	24.1	0.81
C4	10 Sep 2019	11	18.71	54.77	4.9	33.61	7.9	24.0	0.90
C4	17 Sep 2019	1	20.33	70.85	7.1	33.60	8.1	23.6	2.01
C4	17 Sep 2019	2	20.21	70.97	7.0	33.60	8.1	23.6	2.17
C4	17 Sep 2019	3	19.91	71.23	6.6	33.60	8.1	23.7	2.45
C4	17 Sep 2019	4	19.08	71.37	6.2	33.65	8.0	24.0	2.87
C4	17 Sep 2019	5	18.06	71.54	5.8	33.61	8.0	24.2	3.07
C4	17 Sep 2019	6	17.42	73.71	5.4	33.59	8.0	24.3	2.53
C4	17 Sep 2019	7	17.00	75.74	4.8	33.57	7.9	24.4	1.96
C4	17 Sep 2019	8	16.33	77.44	3.9	33.59	7.9	24.6	1.32
C4	17 Sep 2019	9	15.83	78.20	3.4	33.57	7.8	24.7	0.87
C4	17 Sep 2019	10	15.65	77.31	3.2	33.56	7.8	24.7	0.60
C4	17 Sep 2019	11	15.53	69.13	3.2	33.55	7.8	24.7	0.50
C4	17 Sep 2019	12	15.52	64.42	3.2	33.55	7.8	24.7	0.53
C4	24 Sep 2019	1	20.68	66.73	7.0	33.62	8.0	23.5	1.04
C4	24 Sep 2019	2	20.67	65.46	7.0	33.62	8.0	23.5	1.30
C4	24 Sep 2019	3	20.66	65.27	7.0	33.62	8.0	23.5	1.19
C4	24 Sep 2019	4	20.53	64.73	7.2	33.63	8.0	23.6	1.38
C4	24 Sep 2019	5	20.32	62.04	7.1	33.63	8.0	23.6	1.84
C4	24 Sep 2019	6	19.96	60.49	7.0	33.64	8.0	23.7	2.52
C4	24 Sep 2019	7	19.28	68.11	6.2	33.62	8.0	23.9	3.20
C4	24 Sep 2019	8	17.48	73.54	4.5	33.70	8.0	24.4	2.60
C4	24 Sep 2019	9	16.14	73.60	3.2	33.62	7.8	24.7	1.56
C4	24 Sep 2019	10	15.66	69.27	2.6	33.56	7.7	24.7	0.87
C4	24 Sep 2019	11	15.53	64.45	2.7	33.54	7.7	24.7	0.63
C4	30 Sep 2019	1	19.80	68.25	7.2	33.64	8.1	23.8	1.67
C4	30 Sep 2019	2	19.78	68.57	7.2	33.64	8.1	23.8	1.84
C4	30 Sep 2019	3	19.69	68.55	7.1	33.64	8.1	23.8	2.40
C4	30 Sep 2019	4	19.55	68.32	6.9	33.64	8.1	23.8	2.48
C4	30 Sep 2019	5	19.34	68.31	6.4	33.65	8.1	23.9	2.17
C4	30 Sep 2019	6	18.75	68.51	5.8	33.63	8.0	24.0	1.42
C4	30 Sep 2019	7	18.22	67.99	5.2	33.64	8.0	24.2	1.03
C4	30 Sep 2019	8	17.27	66.73	5.0	33.58	7.9	24.4	0.69
C4	30 Sep 2019	9	17.50	67.07	5.1	33.54	7.9	24.3	0.64
C4	30 Sep 2019	10	17.17	62.06	5.0	33.59	7.9	24.4	0.66
C4	30 Sep 2019	11	16.99	48.24	4.9	33.55	7.9	24.4	0.60
C5	03 Sep 2019	1	22.94	79.29	8.1	33.69	8.2	23.0	1.10
C5	03 Sep 2019	2	22.81	79.11	8.0	33.69	8.2	23.0	1.20
C5	03 Sep 2019	3	22.32	78.82	7.8	33.70	8.2	23.1	1.30
C5	03 Sep 2019	4	21.91	78.80	7.3	33.67	8.2	23.2	1.16
C5	03 Sep 2019	5	20.77	79.64	6.5	33.71	8.1	23.6	0.88
C5	03 Sep 2019	6	18.38	80.84	6.0	33.69	8.1	24.2	0.68

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (μg/L)
C5	03 Sep 2019	7	17.11	81.91	6.0	33.60	8.0	24.4	0.61
C5	03 Sep 2019	8	16.58	82.39	6.0	33.57	8.0	24.5	0.61
C5	03 Sep 2019	9	15.95	82.33	6.1	33.56	8.0	24.7	0.62
C5	03 Sep 2019	10	15.37	79.78	6.1	33.53	8.0	24.8	0.57
C5	10 Sep 2019	1	19.72	59.56	6.3	33.59	8.0	23.8	0.81
C5	10 Sep 2019	2	19.72	61.25	6.3	33.61	8.0	23.8	0.88
C5	10 Sep 2019	3	19.71	60.83	6.3	33.61	8.0	23.8	1.01
C5	10 Sep 2019	4	19.69	60.56	6.2	33.61	8.0	23.8	1.08
C5	10 Sep 2019	5	19.15	60.69	6.0	33.65	8.0	24.0	1.05
C5	10 Sep 2019	6	17.49	67.93	6.0	33.65	8.0	24.4	0.87
C5	10 Sep 2019	7	16.78	73.19	6.0	33.56	8.0	24.5	0.77
C5	10 Sep 2019	8	16.37	73.84	5.9	33.56	8.0	24.6	0.77
C5	10 Sep 2019	9	15.92	70.21	6.0	33.55	8.0	24.6	0.82
C5	10 Sep 2019	10	15.96	60.08	6.0	33.52	8.0	24.6	0.86
C5	17 Sep 2019	1	21.06	74.16	7.9	33.61	8.1	23.4	1.39
C5	17 Sep 2019	2	20.74	75.33	7.7	33.63	8.1	23.5	1.55
C5	17 Sep 2019	3	19.29	75.28	7.7	33.62	8.1	23.9	2.28
C5	17 Sep 2019	4	19.08	73.45	7.2	33.61	8.1	23.9	2.56
C5	17 Sep 2019	5	17.73	76.51	6.9	33.58	8.1	24.3	2.39
C5	17 Sep 2019	6	17.41	80.29	6.7	33.57	8.1	24.3	1.74
C5	17 Sep 2019	7	17.31	82.00	6.6	33.55	8.1	24.3	1.38
C5	17 Sep 2019	8	16.87	82.79	6.3	33.58	8.0	24.5	1.14
C5	17 Sep 2019	9	16.43	83.03	6.1	33.56	8.0	24.5	0.87
C5	17 Sep 2019	10	16.17	81.37	5.7	33.58	8.0	24.6	0.77
C5	17 Sep 2019	11	14.93	80.09	5.5	33.58	8.0	24.9	0.61
C5	24 Sep 2019	1	20.62	70.22	7.9	33.62	8.1	23.5	1.47
C5	24 Sep 2019	2	20.50	70.52	7.9	33.63	8.1	23.6	1.69
C5	24 Sep 2019	3	20.12	71.23	7.8	33.63	8.1	23.7	2.43
C5	24 Sep 2019	4	19.80	72.21	7.9	33.62	8.1	23.8	2.93
C5	24 Sep 2019	5	19.51	73.46	7.8	33.61	8.1	23.8	3.22
C5	24 Sep 2019	6	19.09	74.11	7.3	33.62	8.1	23.9	3.44
C5	24 Sep 2019	7	17.77	74.25	6.4	33.66	8.1	24.3	3.24
C5	24 Sep 2019	8	16.61	79.12	5.8	33.60	8.0	24.5	1.85
C5	24 Sep 2019	9	16.03	80.57	5.5	33.57	7.9	24.6	1.15
C5	24 Sep 2019	10	15.61	80.07	5.4	33.55	7.9	24.7	0.90
C5	24 Sep 2019	11	15.27	79.78	5.6	33.54	7.9	24.8	0.89
C5	30 Sep 2019	1	20.40	57.65	6.1	33.69	8.0	23.7	0.89
C5	30 Sep 2019	2	20.31	57.62	6.0	33.69	8.0	23.7	1.03
C5	30 Sep 2019	3	20.12	57.61	5.9	33.69	8.0	23.7	1.17
C5	30 Sep 2019	4	19.75	59.83	5.8	33.68	8.0	23.8	1.14
C5	30 Sep 2019	5	19.74	62.06	5.6	33.65	8.0	23.8	1.04
C5	30 Sep 2019	6	18.10	64.48	5.4	33.66	8.0	24.2	0.77
C5	30 Sep 2019	7	17.71	67.06	5.4	33.59	8.0	24.3	0.57
C5	30 Sep 2019	8	17.25	68.79	5.5	33.59	8.0	24.4	0.55
C5	30 Sep 2019	9	16.78	70.13	5.6	33.55	8.0	24.5	0.52
C5	30 Sep 2019	10	16.67	67.99	5.6	33.55	8.0	24.5	0.53
C6	03 Sep 2019	1	23.09	79.53	8.1	33.69	8.2	22.9	1.20
C6	03 Sep 2019	2	22.96	79.30	8.1	33.70	8.2	23.0	1.34
C6	03 Sep 2019	3	22.43	78.43	7.9	33.69	8.2	23.1	1.57
C6	03 Sep 2019	4	21.90	78.34	7.5	33.69	8.2	23.3	1.48
C6	03 Sep 2019	5	20.03	80.34	7.0	33.70	8.2	23.8	1.22
C6	03 Sep 2019	6	18.27	81.14	6.4	33.65	8.1	24.2	0.98
C6	03 Sep 2019	7	16.92	82.02	5.9	33.61	8.0	24.5	0.72
C6	03 Sep 2019	8	16.07	81.46	5.5	33.56	8.0	24.6	0.53
C6	03 Sep 2019	9	15.79	77.72	5.4	33.53	7.9	24.7	0.47

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (μg/L)
C6	10 Sep 2019	1	20.03	77.89	7.6	33.62	8.1	23.7	1.11
C6	10 Sep 2019	2	20.04	77.99	7.5	33.62	8.1	23.7	1.18
C6	10 Sep 2019	3	20.00	77.99	7.5	33.62	8.1	23.7	1.31
C6	10 Sep 2019	4	19.85	77.21	7.3	33.62	8.1	23.7	1.60
C6	10 Sep 2019	5	19.80	76.43	7.0	33.61	8.1	23.8	1.84
C6	10 Sep 2019	6	19.05	75.03	6.4	33.67	8.1	24.0	1.86
C6	10 Sep 2019	7	17.82	73.60	5.8	33.63	8.0	24.3	1.38
C6	10 Sep 2019	8	16.64	66.14	5.6	33.60	8.0	24.5	0.89
C6	17 Sep 2019	1	20.95	62.42	8.3	33.59	8.2	23.4	1.79
C6	17 Sep 2019	2	20.89	69.34	8.3	33.56	8.2	23.4	1.88
C6	17 Sep 2019	3	20.83	67.78	7.8	33.59	8.2	23.5	1.99
C6	17 Sep 2019	4	18.35	72.47	7.0	33.71	8.1	24.2	2.77
C6	17 Sep 2019	5	17.75	74.27	6.9	33.56	8.1	24.2	3.17
C6	17 Sep 2019	6	17.33	76.83	6.7	33.59	8.1	24.4	2.93
C6	17 Sep 2019	7	16.83	80.00	6.4	33.56	8.0	24.4	1.94
C6	17 Sep 2019	8	16.64	81.26	5.8	33.56	8.0	24.5	1.47
C6	17 Sep 2019	9	15.98	81.44	5.0	33.59	7.9	24.7	0.95
C6	17 Sep 2019	10	15.41	76.41	4.8	33.57	7.9	24.8	0.62
C6	24 Sep 2019	1	20.78	72.03	7.7	33.63	8.1	23.5	1.23
C6	24 Sep 2019	2	20.73	71.94	7.8	33.63	8.1	23.5	1.39
C6	24 Sep 2019	3	20.62	72.62	8.0	33.63	8.1	23.6	1.75
C6	24 Sep 2019	4	20.22	71.63	7.9	33.64	8.1	23.7	2.28
C6	24 Sep 2019	5	19.89	70.09	7.5	33.63	8.1	23.7	2.59
C6	24 Sep 2019	6	19.15	72.36	7.0	33.64	8.1	23.9	2.78
C6	24 Sep 2019	7	18.47	73.03	6.6	33.61	8.0	24.1	2.37
C6	24 Sep 2019	8	18.20	76.34	6.1	33.62	8.0	24.2	1.93
C6	24 Sep 2019	9	16.53	76.64	5.4	33.63	7.9	24.6	1.21
C6	24 Sep 2019	10	16.73	75.34	5.7	33.45	7.8	24.4	0.89
C6	30 Sep 2019	1	20.43	63.47	6.1	33.51	8.0	23.5	0.70
C6	30 Sep 2019	2	20.39	63.75	6.0	33.66	8.0	23.6	0.70
C6	30 Sep 2019	3	20.35	63.40	6.0	33.70	8.0	23.7	0.70
C6	30 Sep 2019	4	20.29	63.36	5.8	33.72	8.0	23.7	0.70
C6	30 Sep 2019	5	19.93	65.93	5.8	33.75	8.0	23.7	0.70
C6	30 Sep 2019	6	18.49	73.40	5.7	NA	8.0	NA	0.70
C6	30 Sep 2019	7	17.80	71.74	5.6	NA	8.0	NA	0.70
C6	30 Sep 2019	8	18.19	63.97	6.0	33.53	8.0	23.8	0.70
C6	30 Sep 2019	9	17.42	49.86	6.0	NA	7.9	NA	0.70
C7	03 Sep 2019	1	23.25	78.41	8.1	33.70	8.2	22.9	1.32
C7	03 Sep 2019	2	23.26	78.31	8.0	33.70	8.2	22.9	1.37
C7	03 Sep 2019	3	22.34	78.21	7.9	33.84	8.2	23.2	1.54
C7	03 Sep 2019	4	20.22	78.66	8.2	33.78	8.2	23.8	1.86
C7	03 Sep 2019	5	19.25	79.51	8.4	33.67	8.2	23.9	2.21
C7	03 Sep 2019	6	18.95	80.04	8.4	33.60	8.2	24.0	2.37
C7	03 Sep 2019	7	18.68	80.13	8.4	33.59	8.2	24.0	2.50
C7	03 Sep 2019	8	18.16	80.55	8.3	33.59	8.2	24.2	2.57
C7	03 Sep 2019	9	17.50	80.97	8.2	33.58	8.2	24.3	2.41
C7	03 Sep 2019	10	17.16	81.56	8.2	33.54	8.1	24.4	2.18
C7	03 Sep 2019	11	17.00	82.29	8.1	33.52	8.1	24.4	1.87
C7	03 Sep 2019	12	16.95	82.47	8.0	33.52	8.1	24.4	1.69
C7	03 Sep 2019	13	16.67	82.64	7.6	33.55	8.1	24.5	1.54
C7	03 Sep 2019	14	15.64	83.74	7.5	33.55	8.1	24.7	1.20
C7	03 Sep 2019	15	15.11	84.41	7.5	33.52	8.1	24.8	0.97
C7	03 Sep 2019	16	14.77	84.71	7.3	33.51	8.1	24.9	0.89
C7	03 Sep 2019	17	14.09	85.13	7.1	33.55	8.0	25.0	0.87
C7	03 Sep 2019	18	13.69	84.76	7.0	33.52	8.0	25.1	0.77
C7	10 Sep 2019	1	20.11	77.22	7.6	33.62	8.1	23.7	1.76

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (μg/L)
C7	10 Sep 2019	2	20.18	77.20	7.5	33.62	8.1	23.7	1.84
C7	10 Sep 2019	3	20.05	77.31	7.4	33.63	8.1	23.7	1.95
C7	10 Sep 2019	4	19.35	77.60	7.4	33.64	8.1	23.9	2.22
C7	10 Sep 2019	5	19.19	77.04	7.4	33.59	8.1	23.9	2.47
C7	10 Sep 2019	6	19.02	77.04	7.5	33.60	8.1	23.9	2.57
C7	10 Sep 2019	7	18.85	76.98	7.6	33.58	8.1	24.0	2.51
C7	10 Sep 2019	8	18.78	76.93	7.7	33.57	8.1	24.0	2.45
C7	10 Sep 2019	9	18.69	76.60	7.7	33.57	8.1	24.0	2.44
C7	10 Sep 2019	10	18.46	76.37	7.5	33.58	8.1	24.1	2.48
C7	10 Sep 2019	11	17.76	76.74	7.1	33.59	8.1	24.2	2.50
C7	10 Sep 2019	12	16.91	78.22	7.0	33.58	8.1	24.4	2.37
C7	10 Sep 2019	13	16.48	79.82	7.0	33.54	8.0	24.5	2.07
C7	10 Sep 2019	14	16.37	80.31	7.0	33.53	8.0	24.5	1.89
C7	10 Sep 2019	15	16.10	80.75	7.0	33.54	8.0	24.6	1.69
C7	10 Sep 2019	16	15.91	81.60	6.8	33.53	8.0	24.6	1.49
C7	10 Sep 2019	17	15.56	81.79	6.3	33.55	8.0	24.7	1.17
C7	10 Sep 2019	18	15.34	80.14	6.0	33.51	8.0	24.8	0.79
C7	10 Sep 2019	19	15.58	80.18	6.2	33.52	8.0	24.7	0.79
C7	17 Sep 2019	1	19.64	74.45	7.9	33.58	8.1	23.8	2.39
C7	17 Sep 2019	2	18.81	74.39	7.8	33.63	8.1	24.0	2.71
C7	17 Sep 2019	3	18.25	74.71	7.6	33.57	8.1	24.1	3.16
C7	17 Sep 2019	4	17.61	75.02	7.4	33.59	8.1	24.3	3.31
C7	17 Sep 2019	5	17.11	76.78	7.2	33.58	8.1	24.4	3.31
C7	17 Sep 2019	6	16.69	77.46	6.9	33.56	8.1	24.5	3.18
C7	17 Sep 2019	7	16.19	78.43	6.6	33.56	8.0	24.6	2.66
C7	17 Sep 2019	8	16.05	79.18	6.4	33.55	8.0	24.6	2.29
C7	17 Sep 2019	9	15.54	80.74	6.3	33.56	8.0	24.7	2.00
C7	17 Sep 2019	10	15.28	81.32	6.2	33.55	8.0	24.8	1.71
C7	17 Sep 2019	11	15.09	82.26	6.2	33.54	8.0	24.8	1.56
C7	17 Sep 2019	12	14.91	82.54	6.2	33.54	8.0	24.9	1.51
C7	17 Sep 2019	13	14.80	82.94	6.2	33.54	8.0	24.9	1.46
C7	17 Sep 2019	14	14.75	83.09	6.2	33.54	8.0	24.9	1.39
C7	17 Sep 2019	15	14.66	83.33	6.0	33.55	8.0	24.9	1.16
C7	17 Sep 2019	16	14.61	83.91	5.9	33.55	8.0	24.9	0.98
C7	17 Sep 2019	17	14.60	83.94	5.9	33.55	8.0	24.9	0.86
C7	17 Sep 2019	18	14.59	84.54	5.8	33.55	7.9	24.9	0.78
C7	24 Sep 2019	1	20.62	76.66	8.0	33.63	8.1	23.6	1.55
C7	24 Sep 2019	2	20.62	76.53	8.0	33.63	8.1	23.6	1.59
C7	24 Sep 2019	3	20.60	76.07	8.1	33.64	8.1	23.6	1.76
C7	24 Sep 2019	4	20.45	75.48	8.2	33.63	8.1	23.6	2.21
C7	24 Sep 2019	5	20.35	75.03	8.2	33.63	8.1	23.6	2.39
C7	24 Sep 2019	6	20.13	74.96	8.2	33.64	8.1	23.7	2.35
C7	24 Sep 2019	7	19.42	75.26	8.2	33.62	8.1	23.9	2.35
C7	24 Sep 2019	8	19.24	75.64	8.0	33.61	8.1	23.9	2.43
C7	24 Sep 2019	9	18.50	75.49	7.8	33.63	8.1	24.1	2.62
C7	24 Sep 2019	10	17.84	74.81	7.7	33.59	8.1	24.2	2.90
C7	24 Sep 2019	11	17.34	74.45	7.6	33.57	8.1	24.3	3.25
C7	24 Sep 2019	12	17.43	74.08	7.6	33.54	8.1	24.3	3.41
C7	24 Sep 2019	13	17.05	74.02	7.4	33.57	8.1	24.4	3.60
C7	24 Sep 2019	14	16.90	73.97	7.1	33.56	8.0	24.4	3.82
C7	24 Sep 2019	15	16.62	73.76	6.8	33.57	8.0	24.5	4.14
C7	24 Sep 2019	16	16.23	73.34	6.4	33.57	8.0	24.6	4.47
C7	24 Sep 2019	17	15.01	76.55	5.7	33.60	7.9	24.9	3.48
C7	24 Sep 2019	18	14.35	81.58	5.4	33.56	7.9	25.0	1.86
C7	24 Sep 2019	19	14.32	82.00	5.4	33.54	7.9	25.0	1.14
C7	30 Sep 2019	1	20.50	76.90	7.4	33.69	8.1	23.6	1.36
C7	30 Sep 2019	2	20.38	76.98	7.4	33.69	8.1	23.7	1.45
C7	30 Sep 2019	3	20.34	76.95	7.2	33.68	8.1	23.7	1.69

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (μg/L)
C7	30 Sep 2019	4	19.64	76.85	6.8	33.69	8.1	23.9	1.69
C7	30 Sep 2019	5	18.40	76.92	6.7	33.63	8.1	24.1	1.47
C7	30 Sep 2019	6	18.08	77.49	6.5	33.60	8.1	24.2	1.26
C7	30 Sep 2019	7	17.06	78.63	6.4	33.61	8.0	24.4	1.12
C7	30 Sep 2019	8	16.41	79.23	6.4	33.56	8.0	24.5	0.99
C7	30 Sep 2019	9	16.04	80.67	6.3	33.56	8.0	24.6	1.02
C7	30 Sep 2019	10	15.06	81.89	6.5	33.55	8.0	24.8	1.03
C7	30 Sep 2019	11	14.82	81.65	6.6	33.51	8.0	24.9	1.04
C7	30 Sep 2019	12	14.76	80.74	6.6	33.51	8.0	24.9	1.13
C7	30 Sep 2019	13	14.52	80.11	6.6	33.52	8.0	24.9	1.10
C7	30 Sep 2019	14	14.41	81.05	6.4	33.52	8.0	25.0	1.02
C7	30 Sep 2019	15	14.38	80.02	6.3	33.61	8.0	25.0	0.98
C7	30 Sep 2019	16	14.25	78.17	6.4	33.63	8.0	25.1	0.90
C7	30 Sep 2019	17	14.22	80.84	6.3	33.59	8.0	25.1	0.93
C7	30 Sep 2019	18	14.21	81.54	6.4	33.59	8.0	25.1	0.79
C8	03 Sep 2019	1	23.06	76.97	8.4	33.69	8.2	22.9	1.48
C8	03 Sep 2019	2	22.94	76.80	8.4	33.70	8.2	23.0	1.64
C8	03 Sep 2019	3	22.71	77.06	8.4	33.69	8.2	23.0	1.91
C8	03 Sep 2019	4	21.32	77.95	8.6	33.74	8.2	23.4	2.02
C8	03 Sep 2019	5	20.31	78.87	8.5	33.62	8.2	23.6	2.25
C8	03 Sep 2019	6	19.48	78.55	8.3	33.63	8.2	23.9	2.44
C8	03 Sep 2019	7	18.58	79.16	8.4	33.59	8.2	24.0	2.64
C8	03 Sep 2019	8	18.26	80.23	8.5	33.55	8.2	24.1	2.63
C8	03 Sep 2019	9	18.08	81.04	8.4	33.54	8.2	24.1	2.67
C8	03 Sep 2019	10	17.87	81.01	8.3	33.54	8.2	24.2	2.67
C8	03 Sep 2019	11	17.52	80.94	8.2	33.54	8.2	24.3	2.65
C8	03 Sep 2019	12	17.13	80.71	8.1	33.54	8.1	24.4	2.54
C8	03 Sep 2019	13	16.65	81.20	8.0	33.54	8.1	24.5	2.37
C8	03 Sep 2019	14	16.35	81.64	7.9	33.51	8.1	24.5	1.99
C8	03 Sep 2019	15	15.78	82.77	7.8	33.54	8.1	24.7	1.62
C8	03 Sep 2019	16	15.08	83.61	7.7	33.51	8.1	24.8	1.32
C8	03 Sep 2019	17	14.68	84.08	7.6	33.50	8.1	24.9	1.07
C8	03 Sep 2019	18	14.06	84.46	7.4	33.52	8.1	25.0	0.90
C8	03 Sep 2019	19	13.92	83.31	7.4	33.49	8.0	25.0	0.79
C8	10 Sep 2019	1	20.32	72.45	7.2	33.63	8.1	23.6	1.76
C8	10 Sep 2019	2	20.31	72.41	7.2	33.63	8.1	23.6	1.95
C8	10 Sep 2019	3	20.27	72.48	7.2	33.63	8.1	23.6	2.23
C8	10 Sep 2019	4	20.06	72.39	7.3	33.64	8.1	23.7	2.66
C8	10 Sep 2019	5	19.80	70.95	7.4	33.62	8.1	23.8	3.20
C8	10 Sep 2019	6	19.53	71.42	7.4	33.61	8.1	23.8	3.20
C8	10 Sep 2019	7	19.11	74.00	7.4	33.61	8.1	23.9	2.94
C8	10 Sep 2019	8	18.24	77.02	7.4	33.62	8.1	24.2	2.52
C8	10 Sep 2019	9	18.07	78.00	7.2	33.54	8.1	24.1	2.34
C8	10 Sep 2019	10	16.81	79.84	7.4	33.58	8.1	24.5	2.23
C8	10 Sep 2019	11	16.55	80.39	7.4	33.54	8.1	24.5	2.04
C8	10 Sep 2019	12	16.51	80.73	7.3	33.52	8.1	24.5	1.99
C8	10 Sep 2019	13	15.99	81.18	7.1	33.55	8.1	24.6	1.84
C8	10 Sep 2019	14	15.61	81.27	6.9	33.54	8.0	24.7	1.72
C8	10 Sep 2019	15	15.29	81.50	6.5	33.53	8.0	24.8	1.39
C8	10 Sep 2019	16	15.15	81.72	6.3	33.52	8.0	24.8	1.16
C8	10 Sep 2019	17	14.94	81.61	6.2	33.53	8.0	24.9	1.06
C8	10 Sep 2019	18	14.88	80.85	6.2	33.52	8.0	24.9	1.00
C8	10 Sep 2019	19	14.90	80.70	6.2	33.52	8.0	24.9	0.91
C8	17 Sep 2019	1	19.57	70.47	8.1	33.58	8.1	23.8	2.77
C8	17 Sep 2019	2	19.42	70.50	7.9	33.60	8.1	23.8	2.80
C8	17 Sep 2019	3	18.58	72.68	8.0	33.59	8.1	24.0	2.84
C8	17 Sep 2019	4	18.26	74.57	8.0	33.57	8.1	24.1	2.92
C8	17 Sep 2019	5	17.68	76.17	7.9	33.58	8.1	24.3	2.85

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (μg/L)
C8	17 Sep 2019	6	17.30	77.09	7.8	33.56	8.1	24.3	2.82
C8	17 Sep 2019	7	16.87	77.48	7.8	33.55	8.1	24.4	2.77
C8	17 Sep 2019	8	16.69	78.04	7.6	33.54	8.1	24.5	2.74
C8	17 Sep 2019	9	16.11	78.49	7.4	33.56	8.1	24.6	2.74
C8	17 Sep 2019	10	16.03	78.96	7.2	33.52	8.1	24.6	2.73
C8	17 Sep 2019	11	15.73	79.41	7.0	33.57	8.1	24.7	2.76
C8	17 Sep 2019	12	15.41	79.76	6.8	33.54	8.0	24.8	2.67
C8	17 Sep 2019	13	15.33	80.18	6.6	33.53	8.0	24.8	2.62
C8	17 Sep 2019	14	15.14	80.82	6.5	33.54	8.0	24.8	2.35
C8	17 Sep 2019	15	14.99	81.95	6.3	33.55	8.0	24.9	1.85
C8	17 Sep 2019	16	14.84	82.85	6.1	33.55	8.0	24.9	1.47
C8	17 Sep 2019	17	14.88	83.41	6.0	33.54	8.0	24.9	1.24
C8	17 Sep 2019	18	14.72	83.85	5.8	33.56	8.0	24.9	1.05
C8	17 Sep 2019	19	14.68	83.76	5.6	33.55	7.9	24.9	0.75
C8	17 Sep 2019	20	14.68	83.56	5.6	33.55	7.9	24.9	0.70
C8	24 Sep 2019	1	20.95	73.70	8.0	33.64	8.1	23.5	1.75
C8	24 Sep 2019	2	20.93	73.71	8.0	33.65	8.1	23.5	1.91
C8	24 Sep 2019	3	20.72	73.59	8.1	33.66	8.1	23.5	2.33
C8	24 Sep 2019	4	20.11	74.31	8.0	33.66	8.1	23.7	2.47
C8	24 Sep 2019	5	18.66	75.21	8.1	33.65	8.1	24.1	2.50
C8	24 Sep 2019	6	18.14	74.88	8.0	33.58	8.1	24.2	2.82
C8	24 Sep 2019	7	17.63	74.02	7.9	33.58	8.1	24.3	3.25
C8	24 Sep 2019	8	17.39	73.39	7.9	33.55	8.1	24.3	3.74
C8	24 Sep 2019	9	17.27	72.89	7.7	33.56	8.1	24.3	4.07
C8	24 Sep 2019	10	17.05	72.53	7.4	33.55	8.1	24.4	4.43
C8	24 Sep 2019	11	16.74	71.97	7.0	33.57	8.0	24.5	4.79
C8	24 Sep 2019	12	16.24	71.12	6.6	33.57	8.0	24.6	5.26
C8	24 Sep 2019	13	16.06	71.25	6.3	33.55	8.0	24.6	5.41
C8	24 Sep 2019	14	15.57	73.53	6.0	33.57	7.9	24.7	5.00
C8	24 Sep 2019	15	15.25	74.69	5.8	33.55	7.9	24.8	4.44
C8	24 Sep 2019	16	14.90	75.75	5.5	33.56	7.9	24.9	3.32
C8	24 Sep 2019	17	14.18	80.86	5.4	33.57	7.9	25.0	1.68
C8	24 Sep 2019	18	14.05	83.05	5.4	33.54	7.9	25.1	0.90
C8	24 Sep 2019	19	14.00	83.46	5.4	33.55	7.9	25.1	0.68
C8	30 Sep 2019	1	20.52	77.21	7.5	33.69	8.1	23.6	1.06
C8	30 Sep 2019	2	20.50	77.02	7.4	33.69	8.1	23.6	1.15
C8	30 Sep 2019	3	20.21	75.67	7.2	33.69	8.1	23.7	1.70
C8	30 Sep 2019	4	19.55	74.08	7.1	33.67	8.1	23.9	1.90
C8	30 Sep 2019	5	18.91	74.80	7.2	33.62	8.1	24.0	1.99
C8	30 Sep 2019	6	18.58	77.99	7.3	33.59	8.1	24.0	2.14
C8	30 Sep 2019	7	18.12	78.68	7.1	33.59	8.1	24.2	2.10
C8	30 Sep 2019	8	17.48	79.50	7.1	33.58	8.1	24.3	2.07
C8	30 Sep 2019	9	16.86	80.31	7.0	33.57	8.1	24.4	1.69
C8	30 Sep 2019	10	16.33	80.68	7.1	33.54	8.1	24.6	1.50
C8	30 Sep 2019	11	16.22	80.86	7.0	33.52	8.0	24.6	1.39
C8	30 Sep 2019	12	16.01	80.93	6.8	33.53	8.0	24.6	1.21
C8	30 Sep 2019	13	15.85	81.03	6.7	33.53	8.0	24.7	1.06
C8	30 Sep 2019	14	15.49	81.13	6.6	33.55	8.0	24.7	0.98
C8	30 Sep 2019	15	15.19	81.34	6.6	33.53	8.0	24.8	0.91
C8	30 Sep 2019	16	15.16	81.18	6.6	33.53	8.0	24.8	0.86
C8	30 Sep 2019	17	15.04	80.42	6.5	33.53	8.0	24.8	0.79
C8	30 Sep 2019	18	15.02	80.09	6.5	33.53	8.0	24.8	0.78
C8	30 Sep 2019	19	15.02	79.94	6.5	33.53	8.0	24.8	0.77

NA = not available

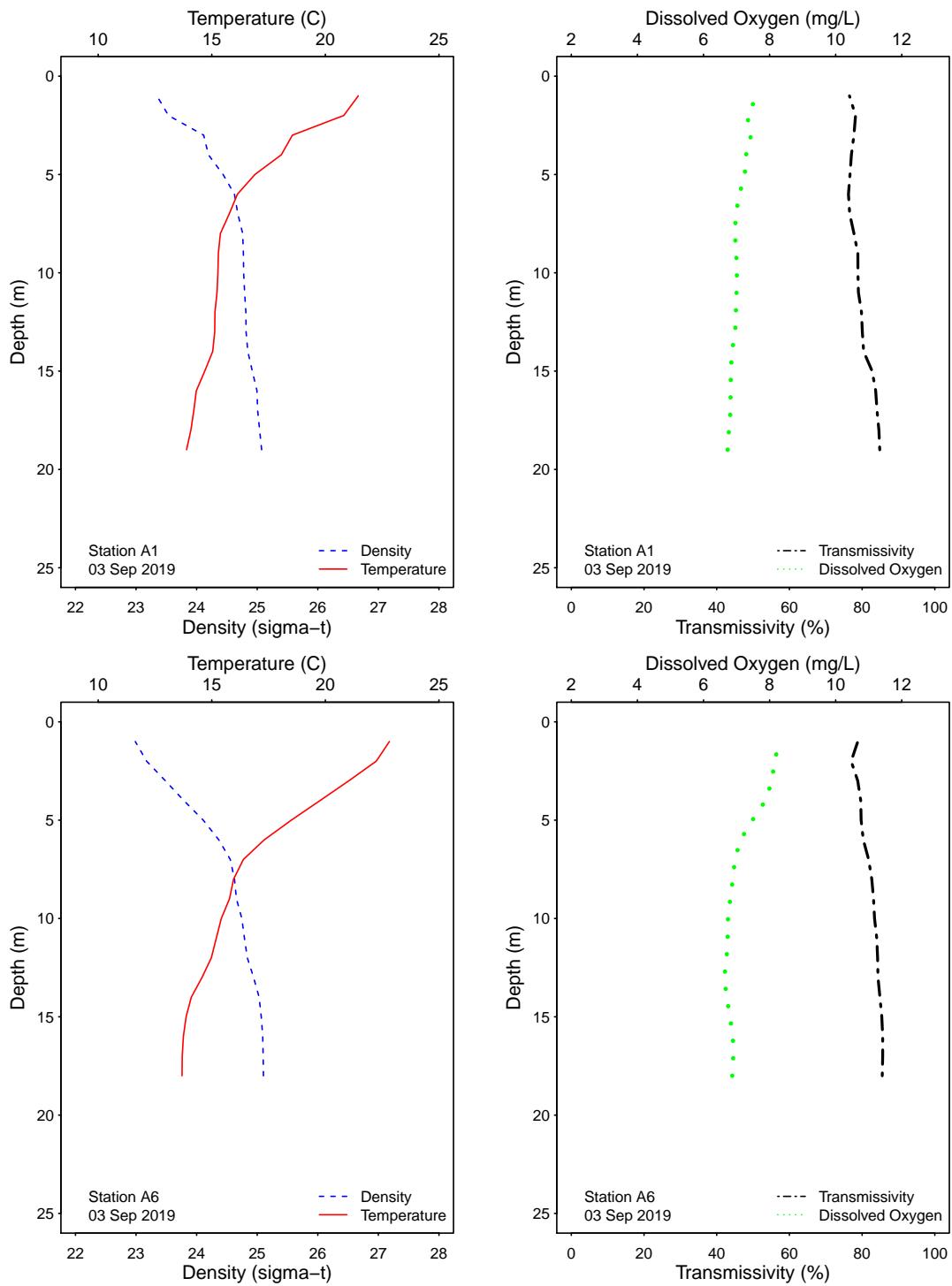


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

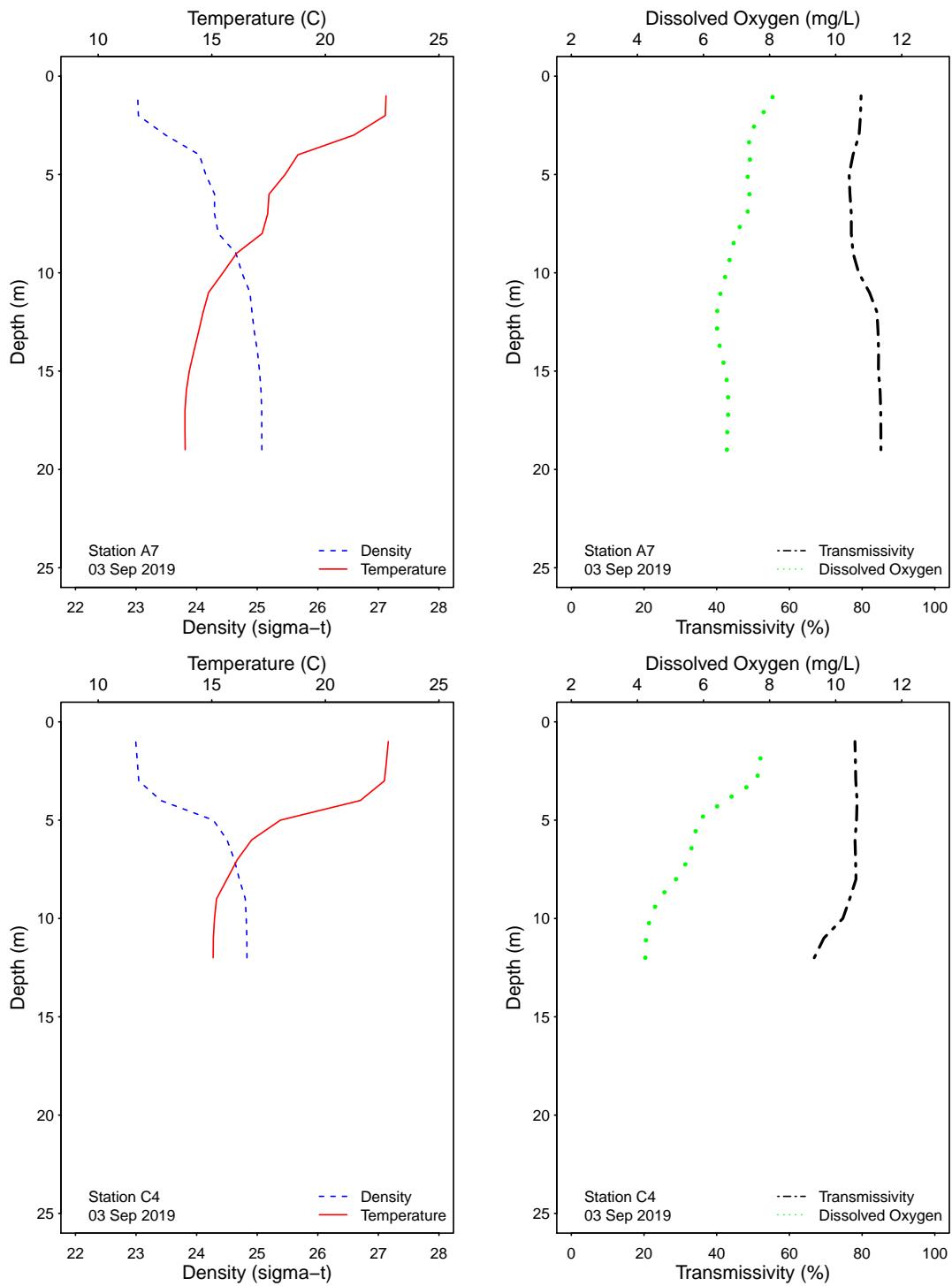


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

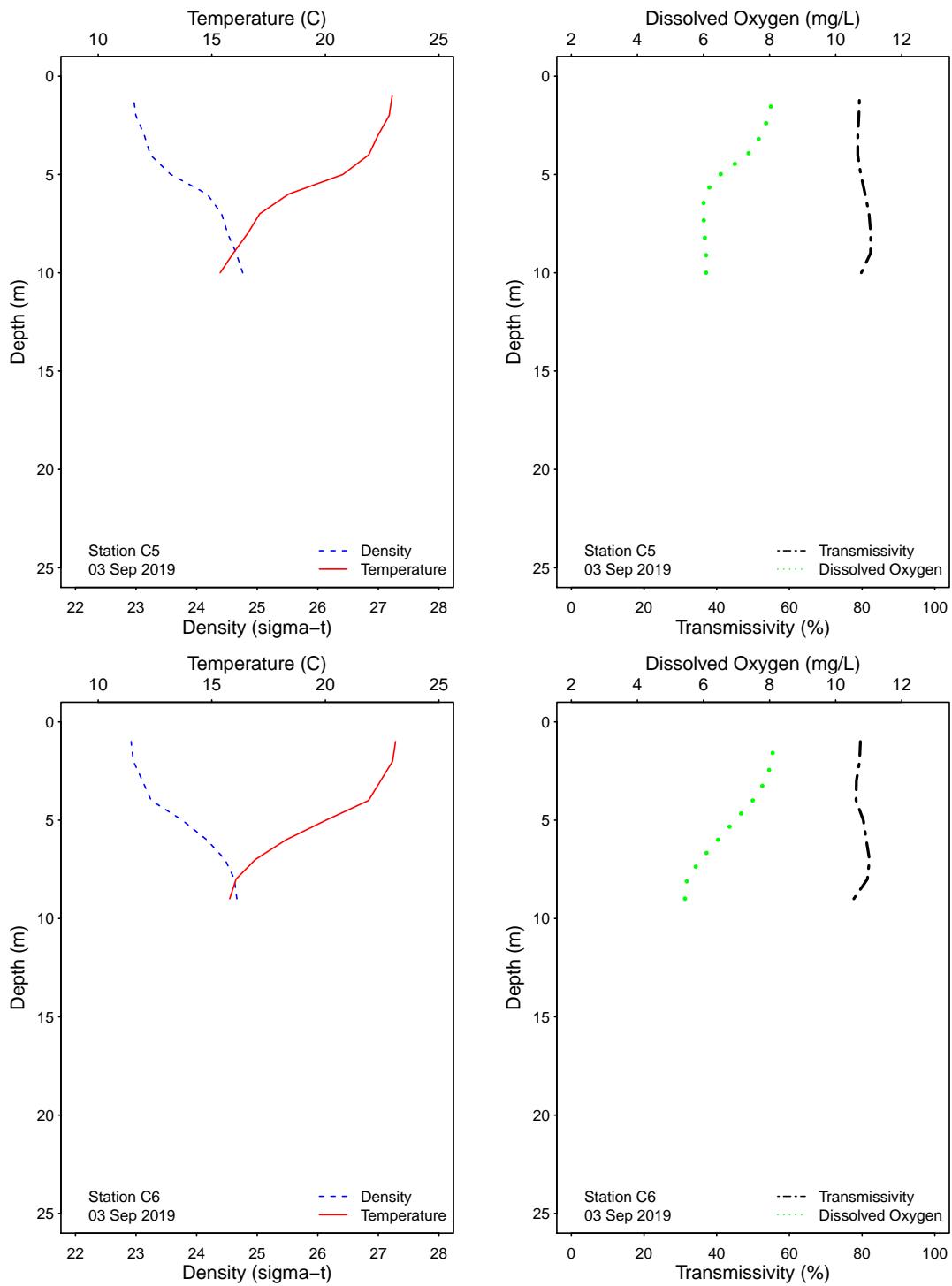


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

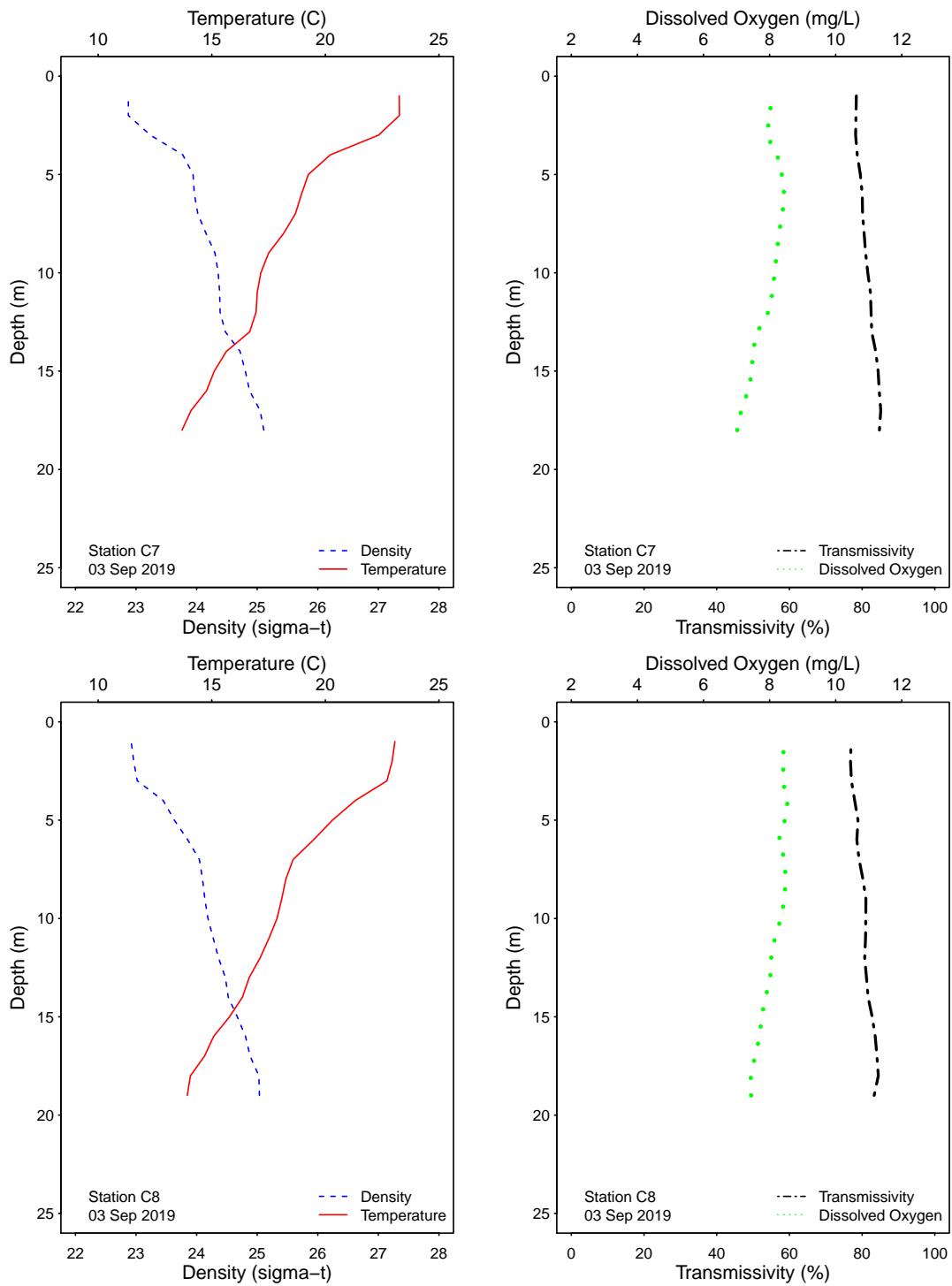


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

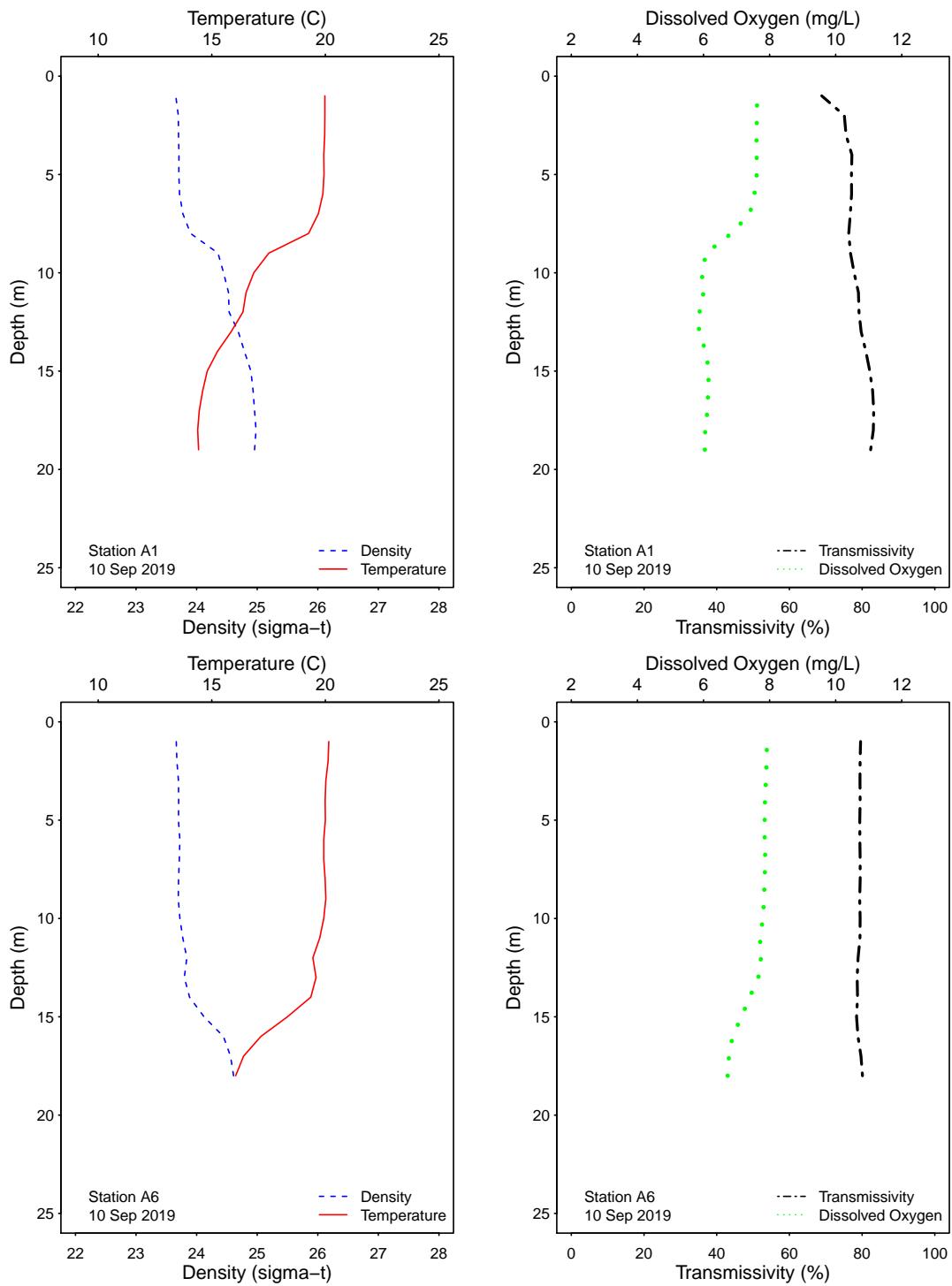


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

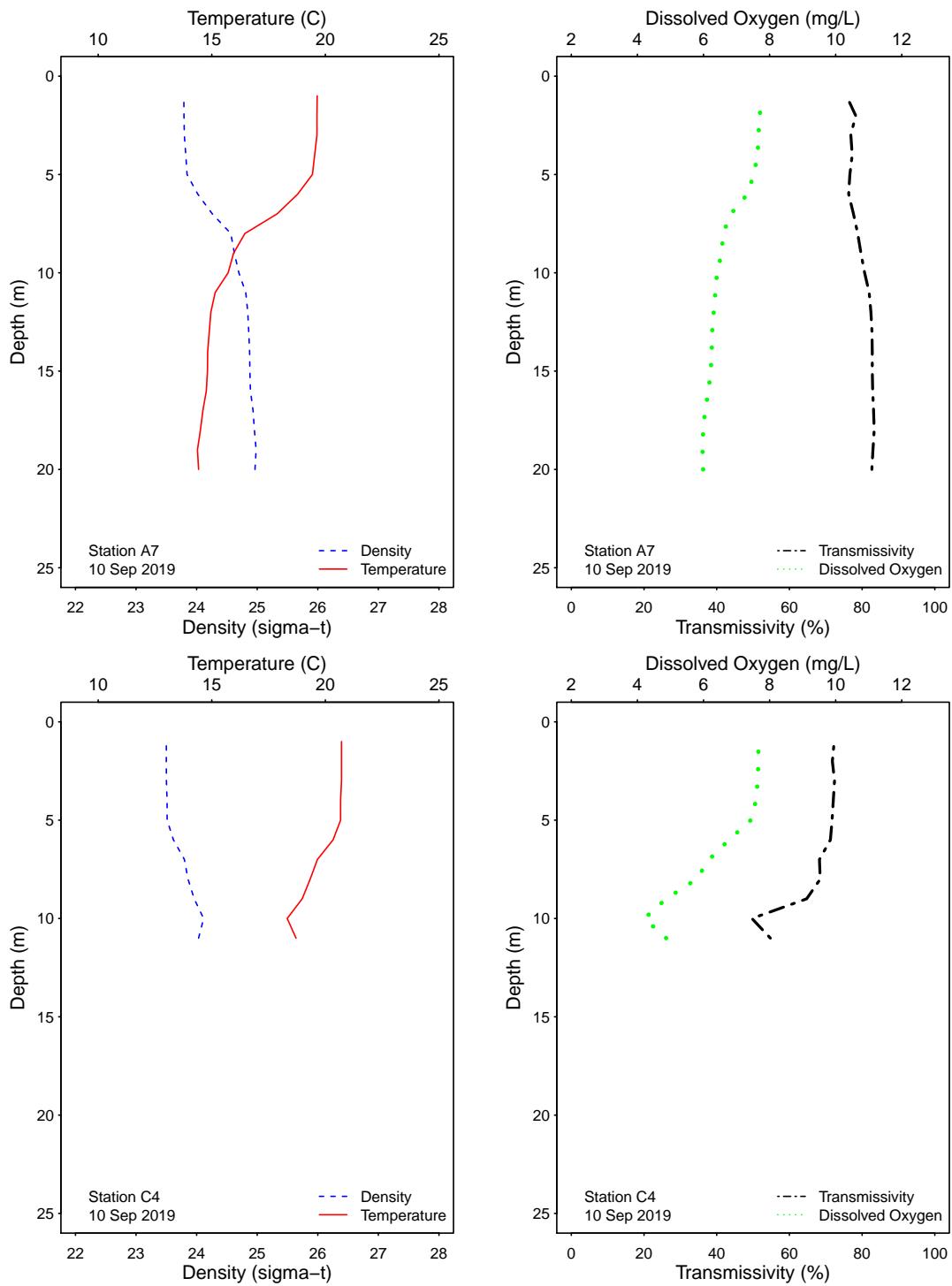


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

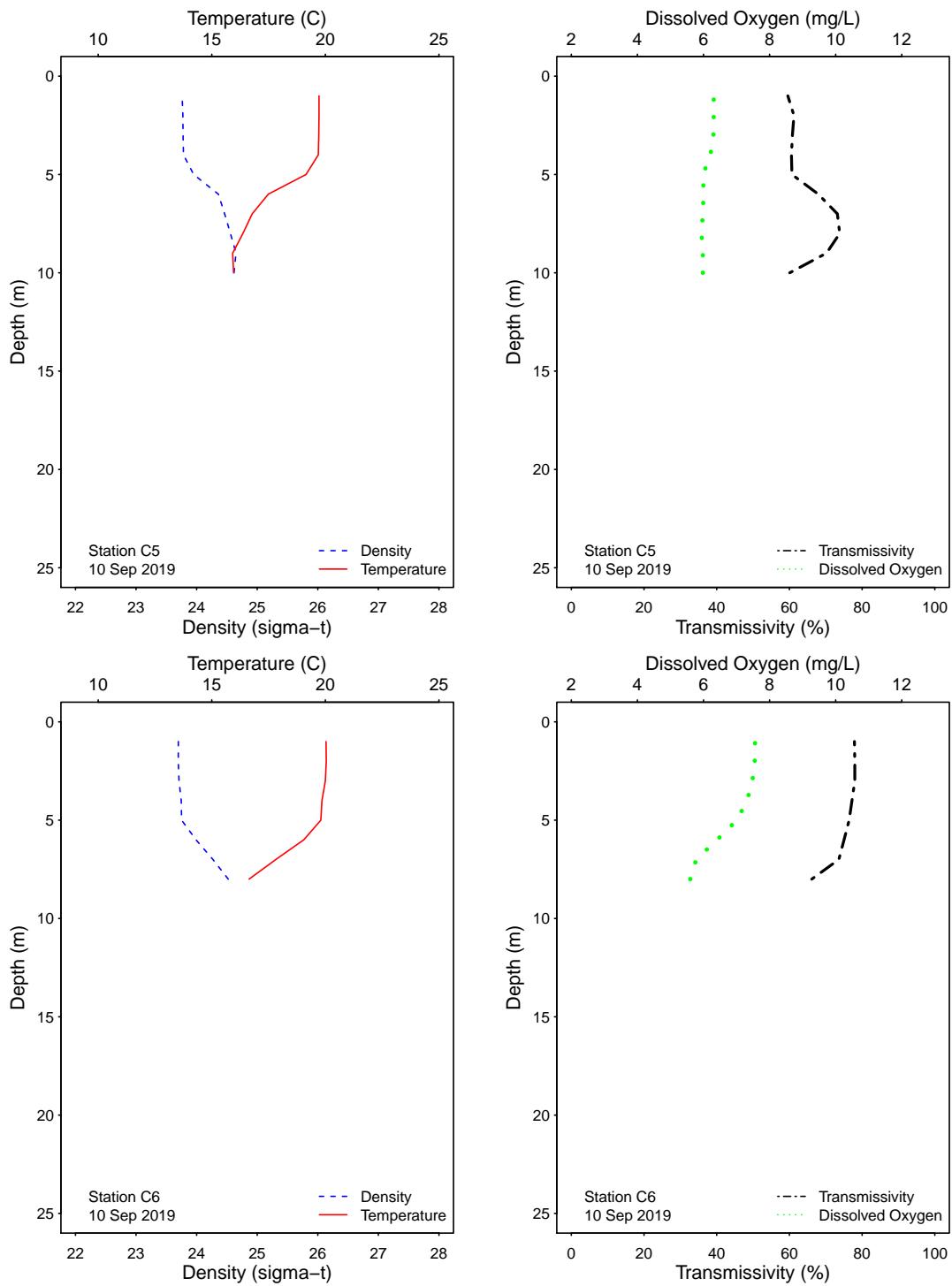


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

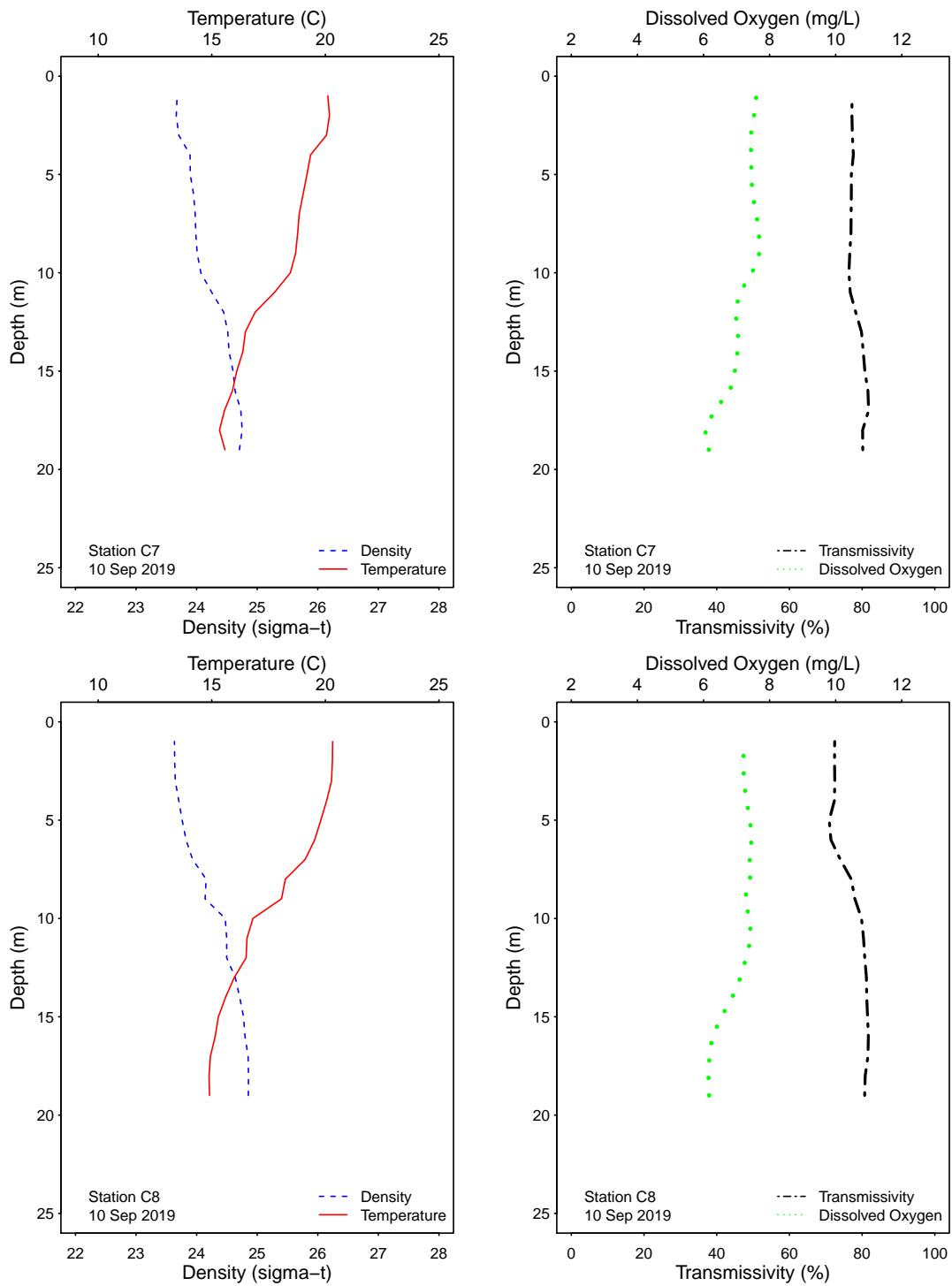


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

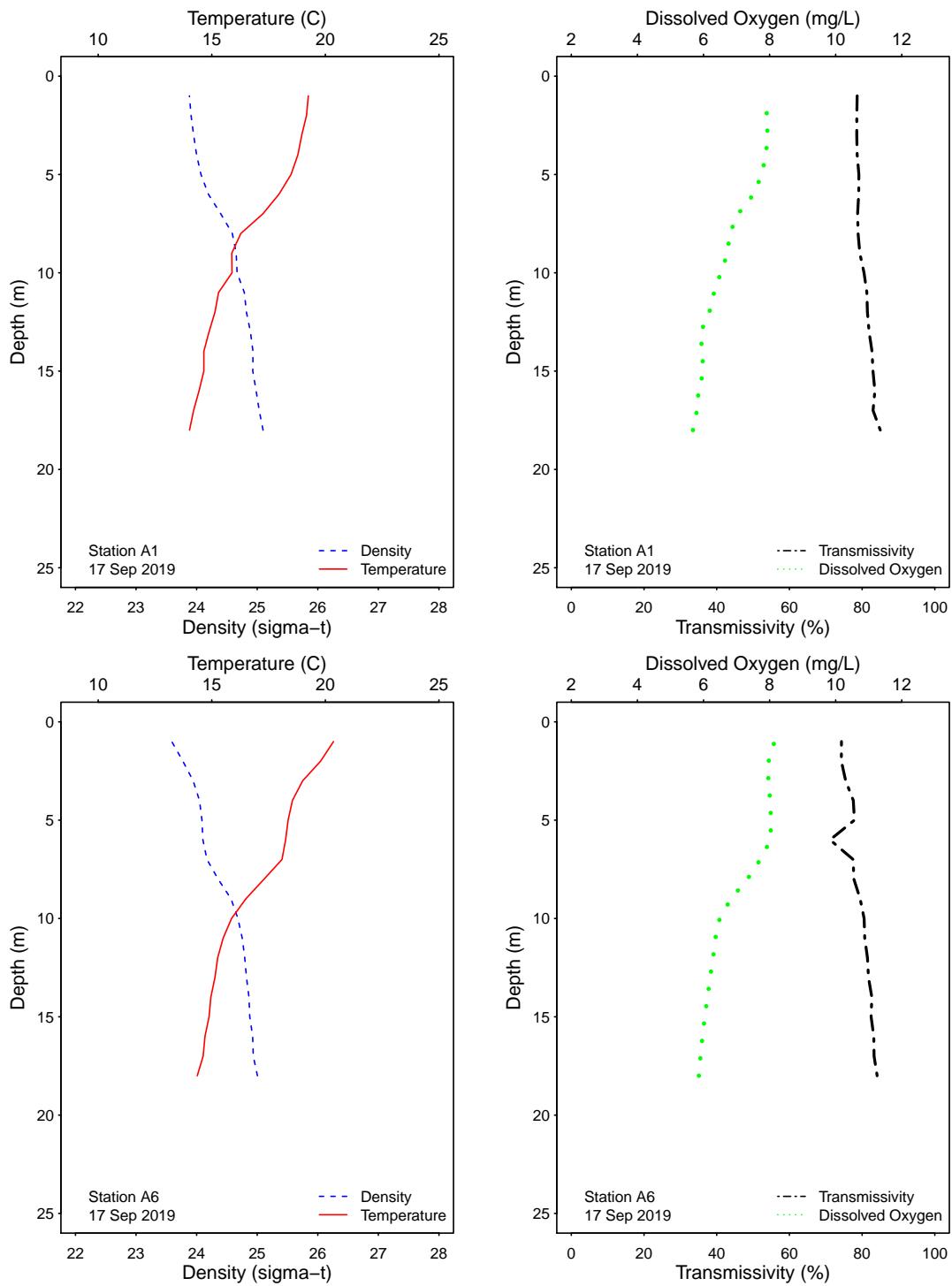


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

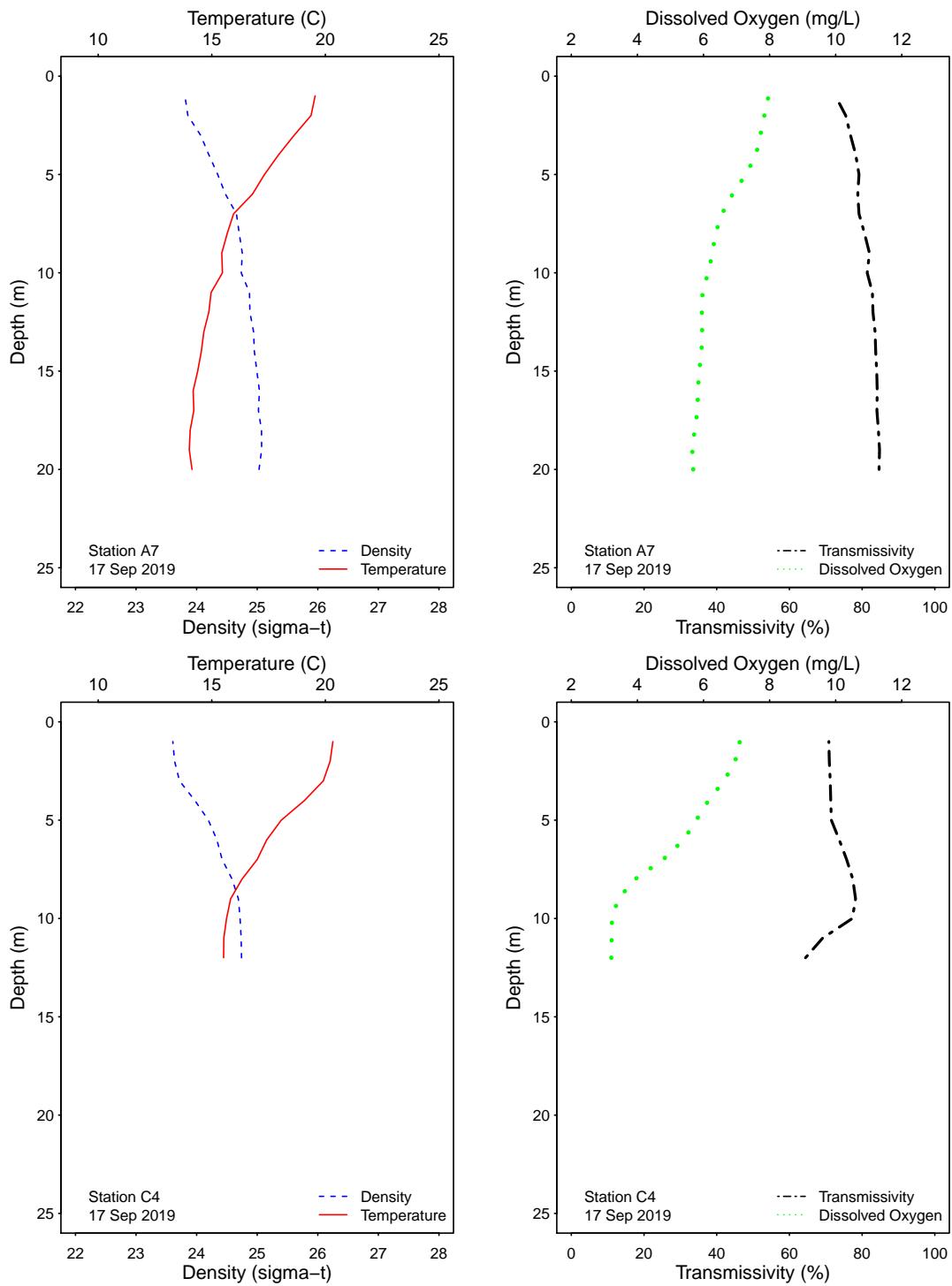


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

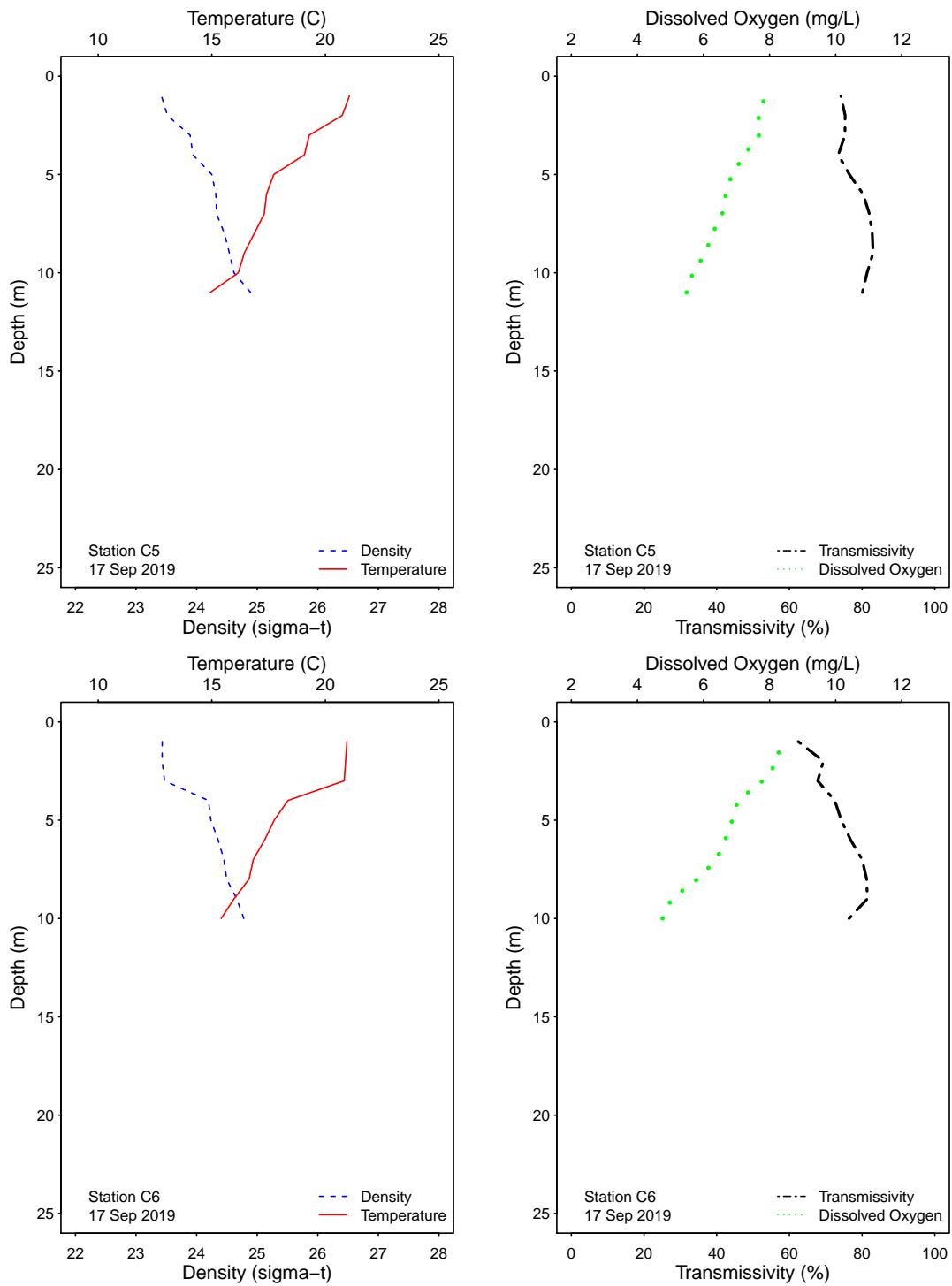


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

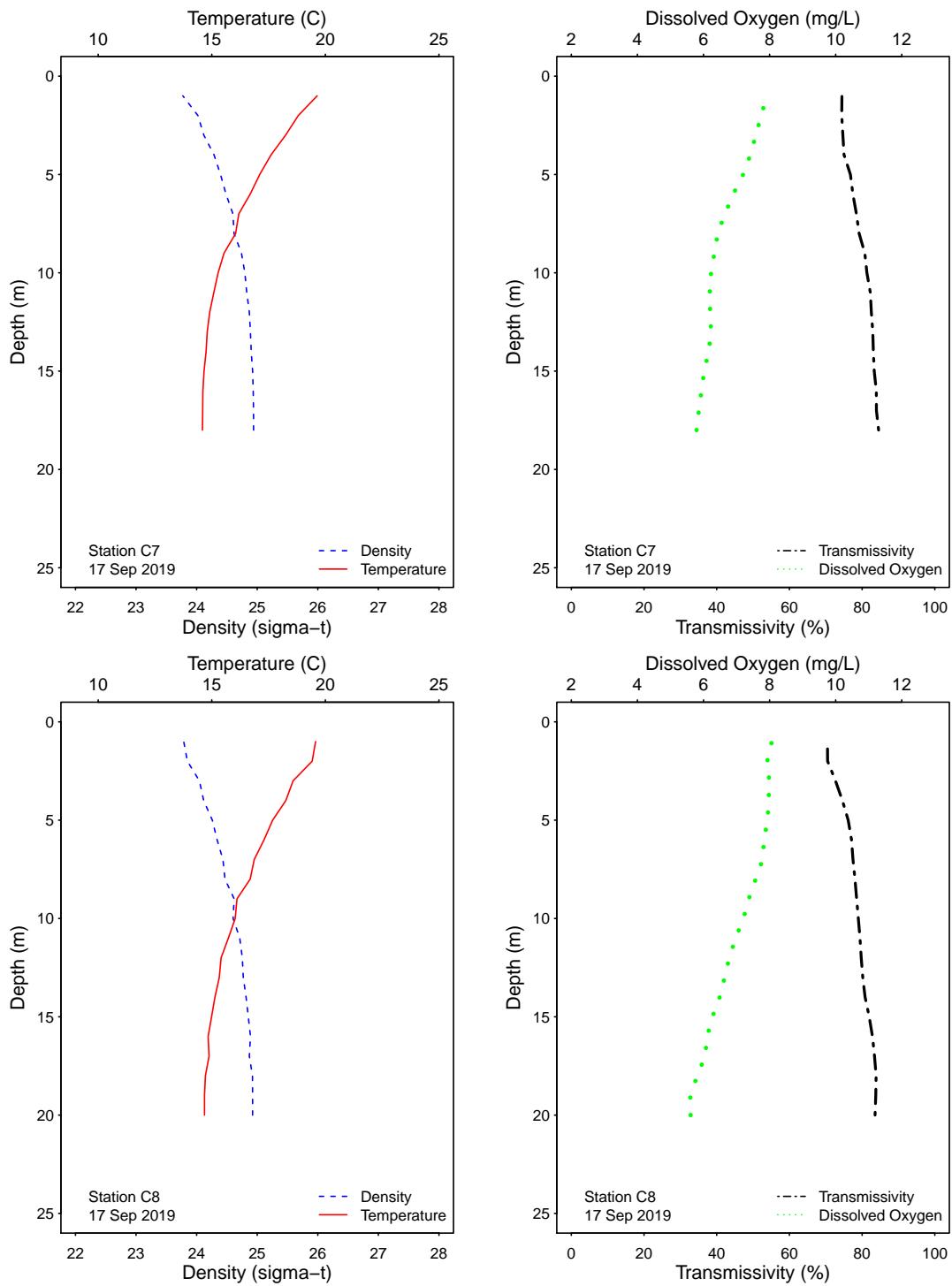


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

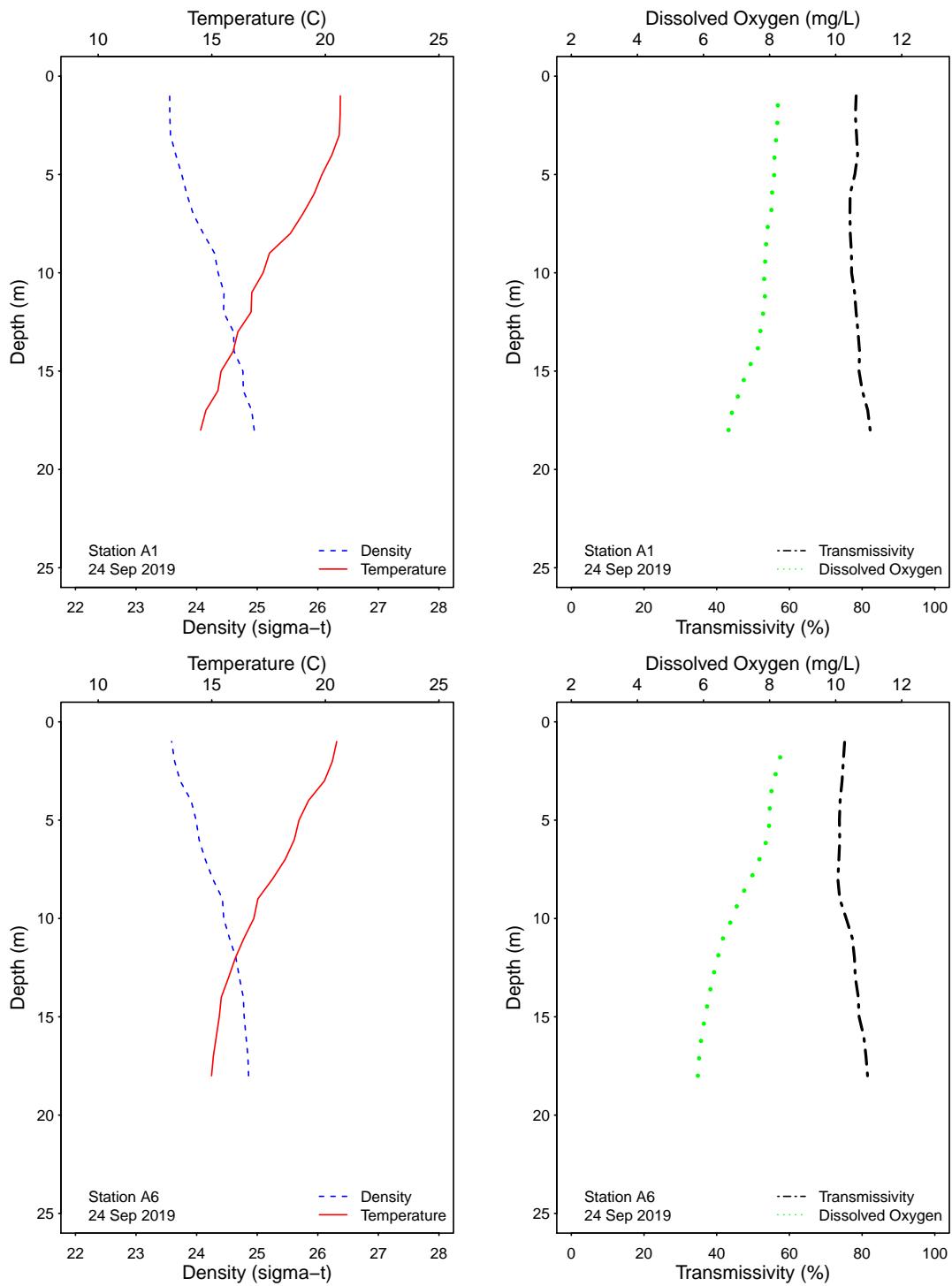


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

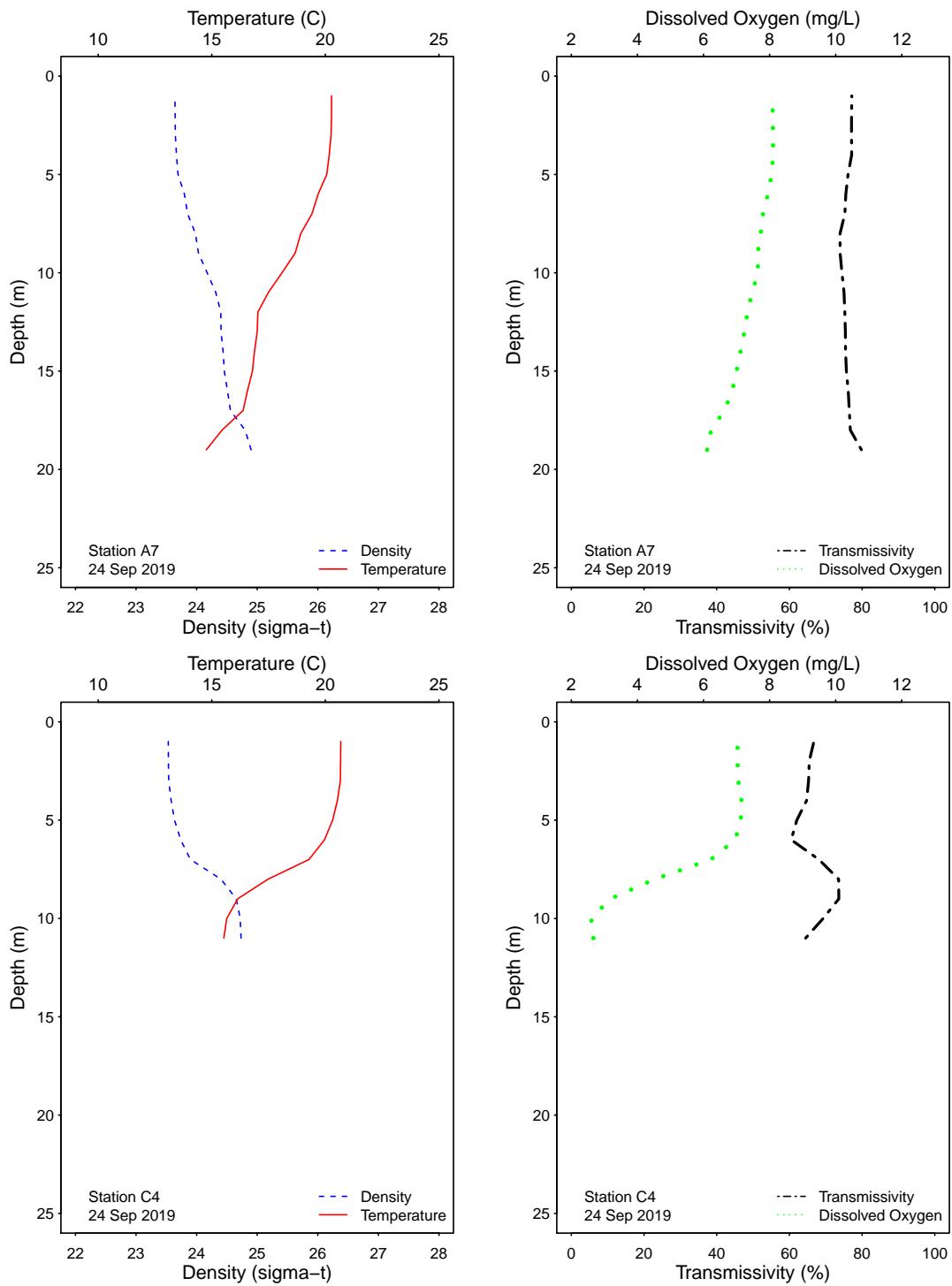


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

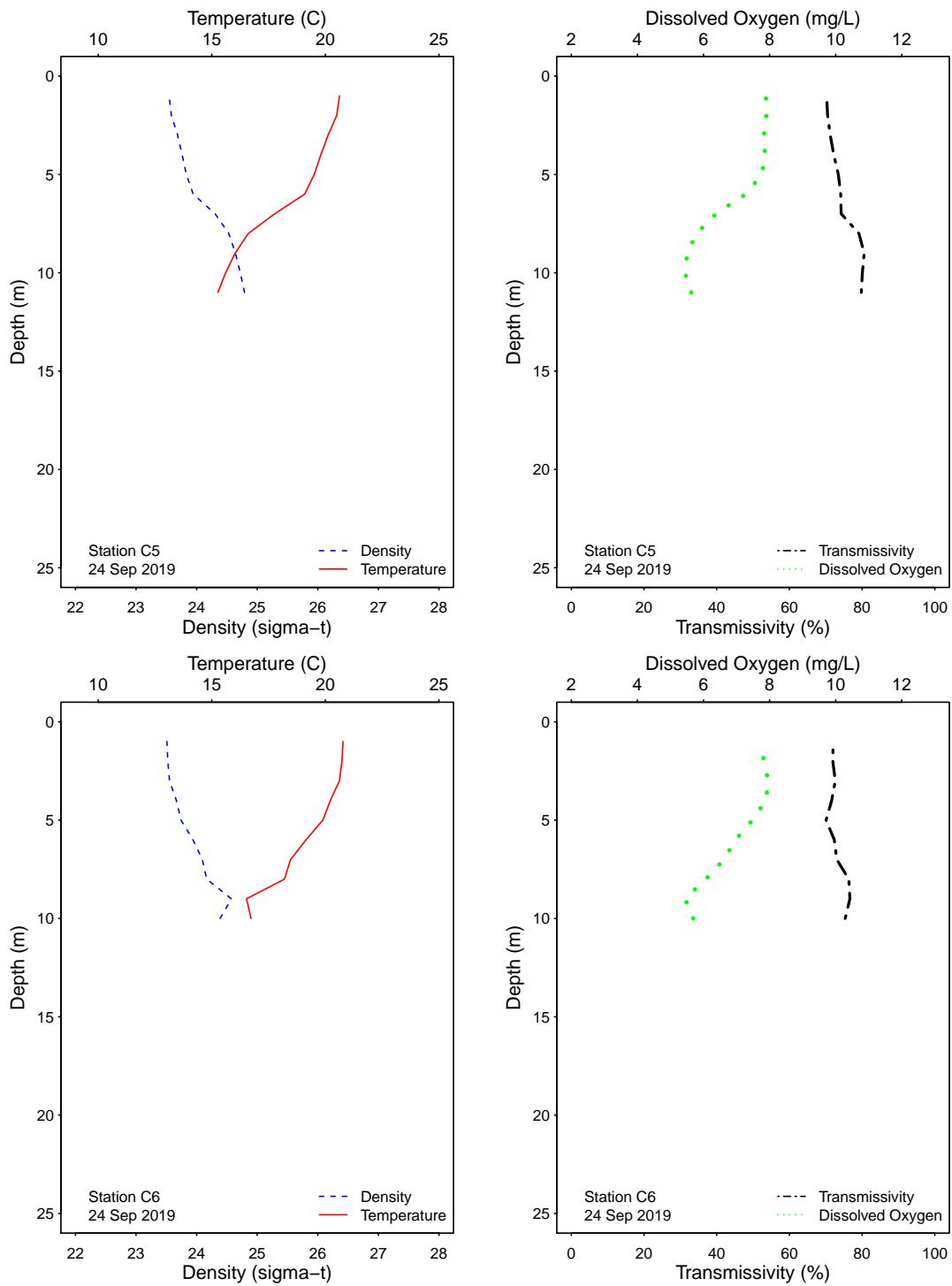


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

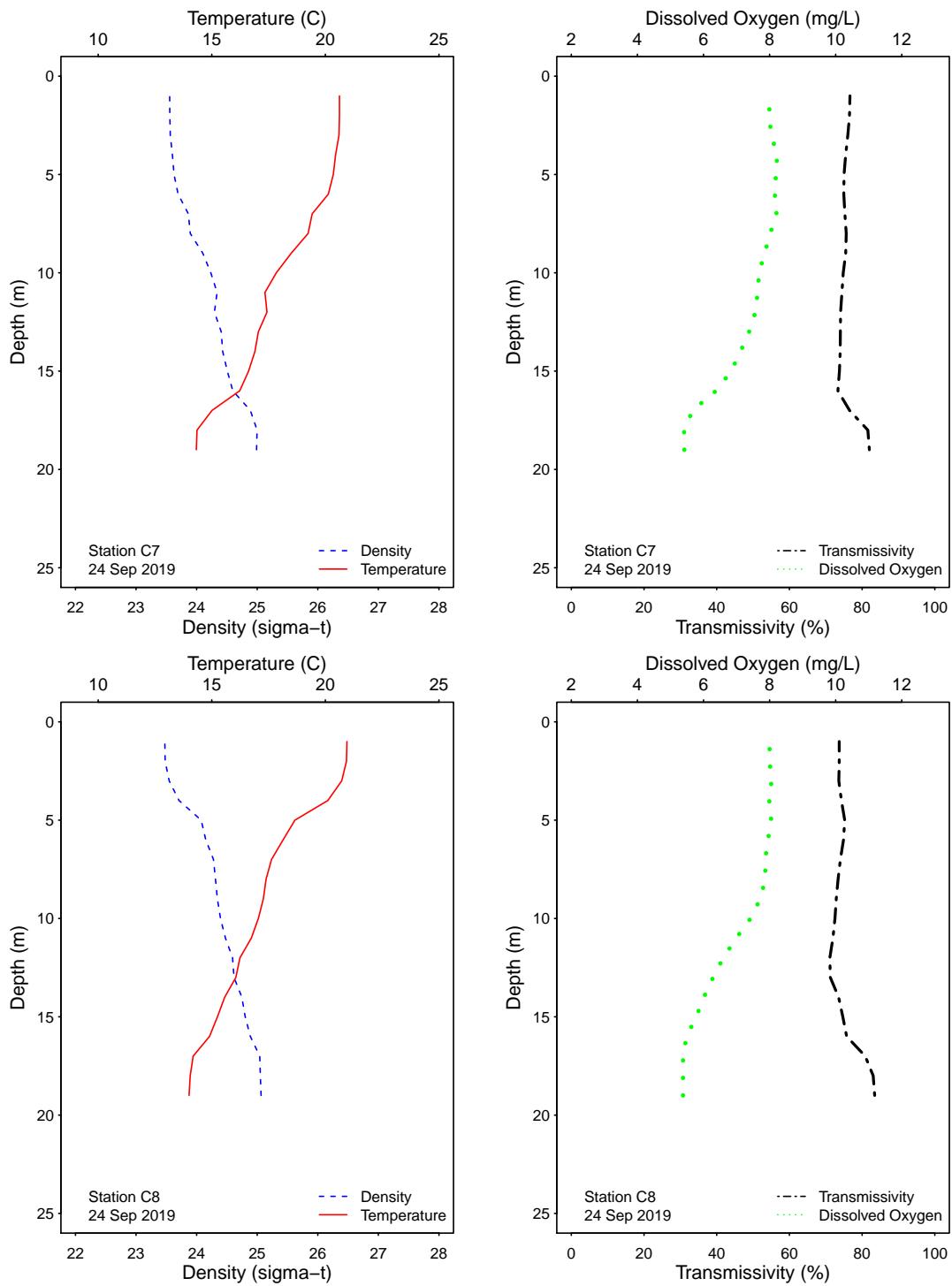


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

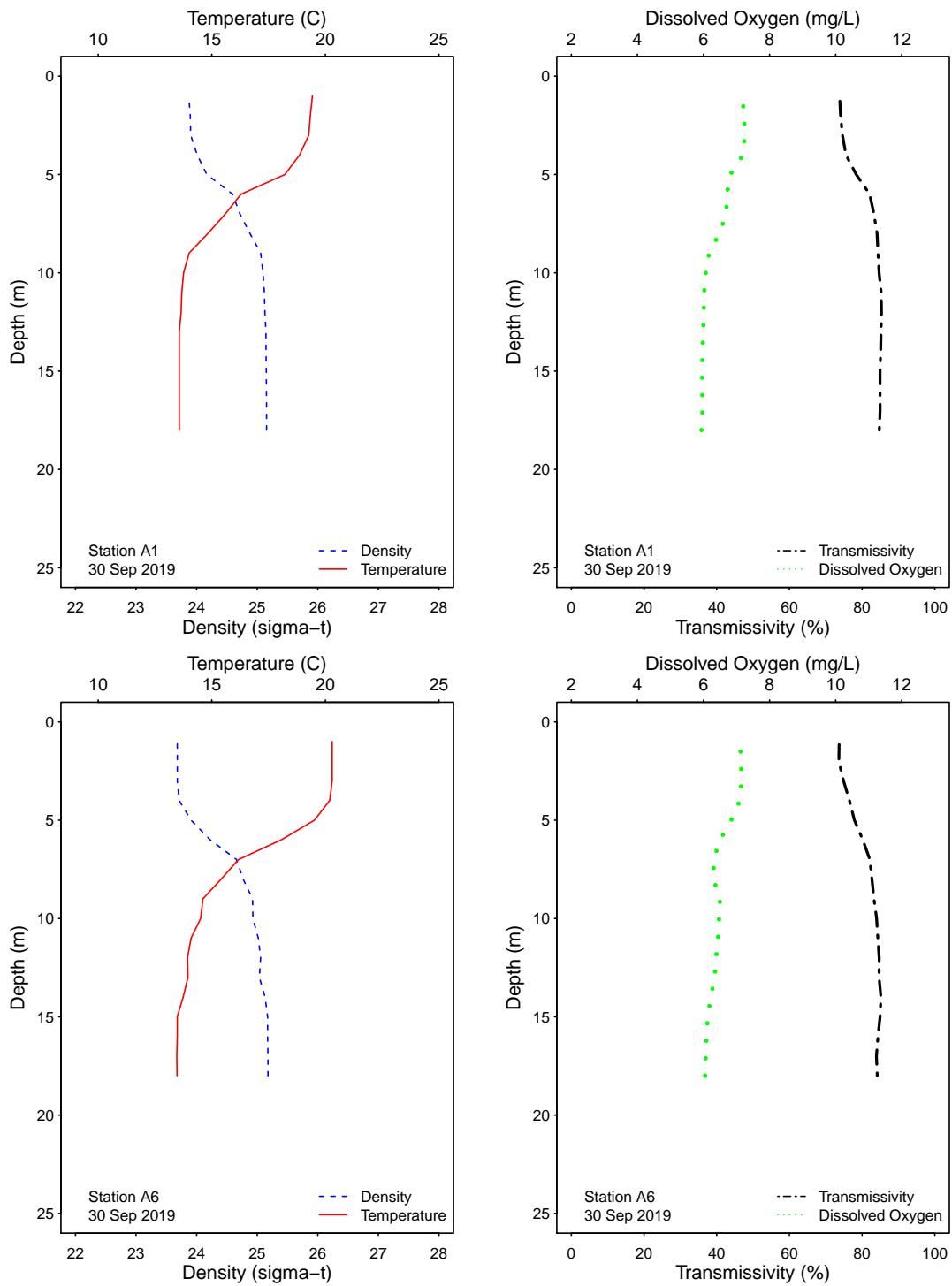


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

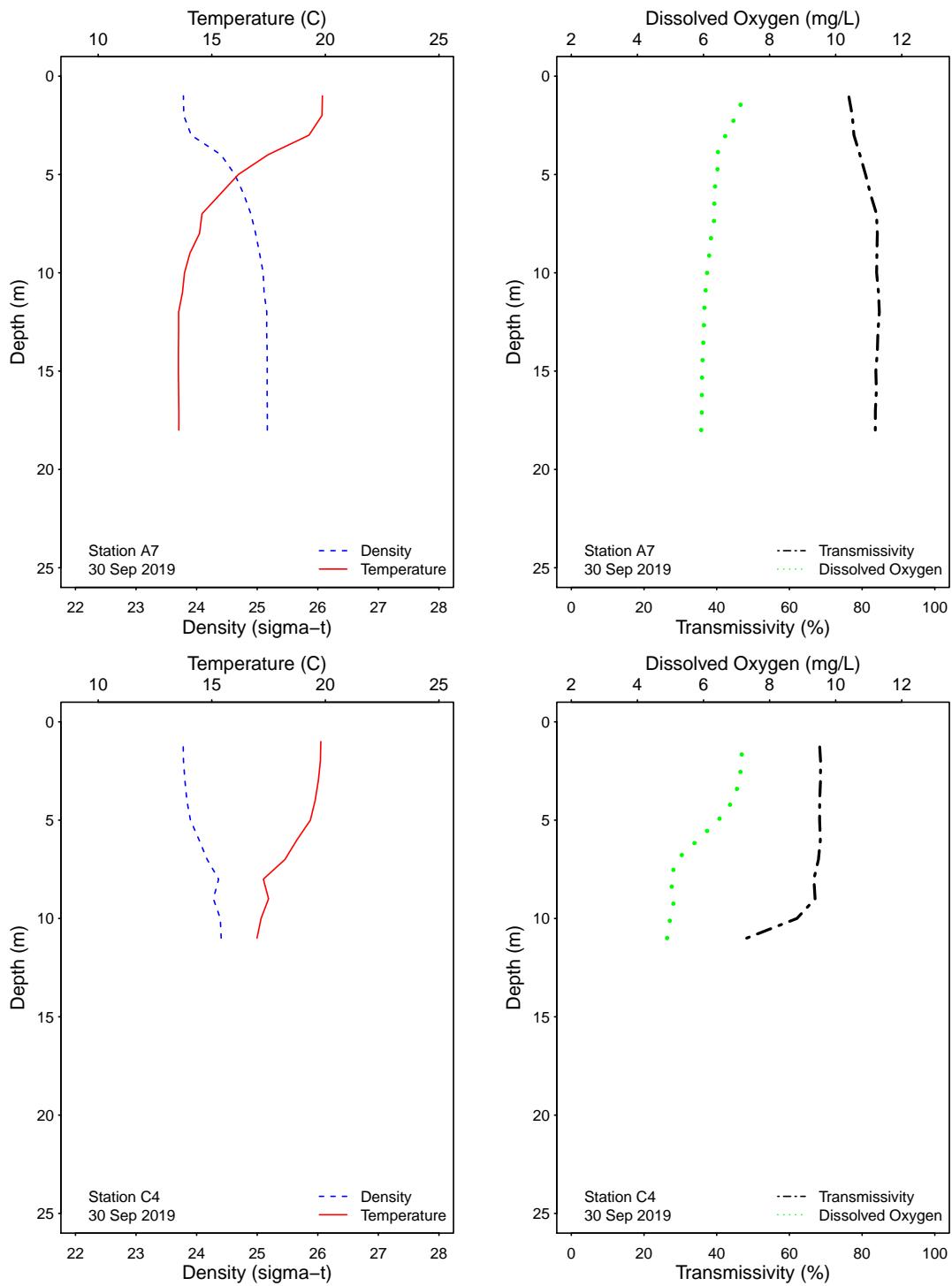


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

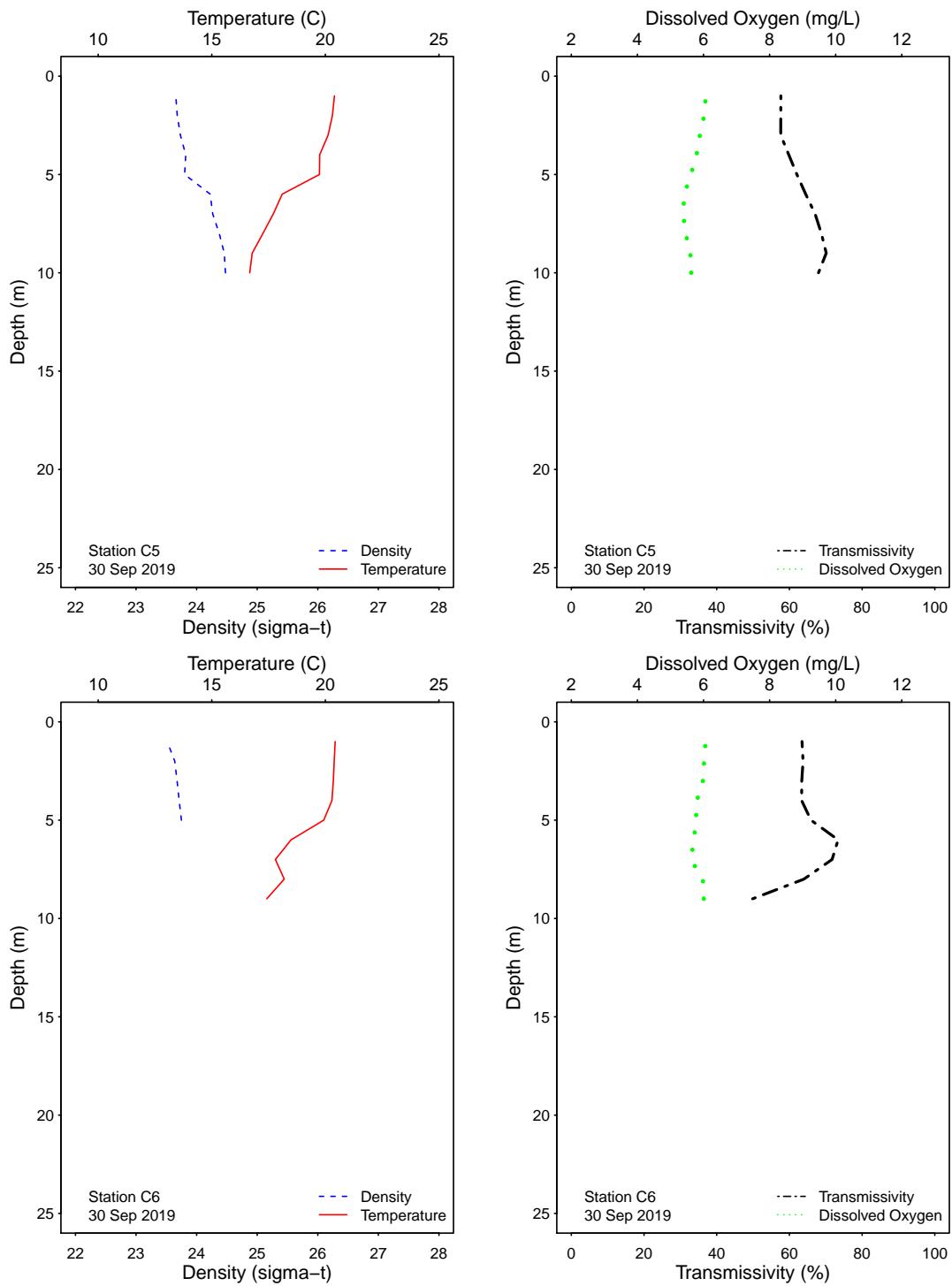


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

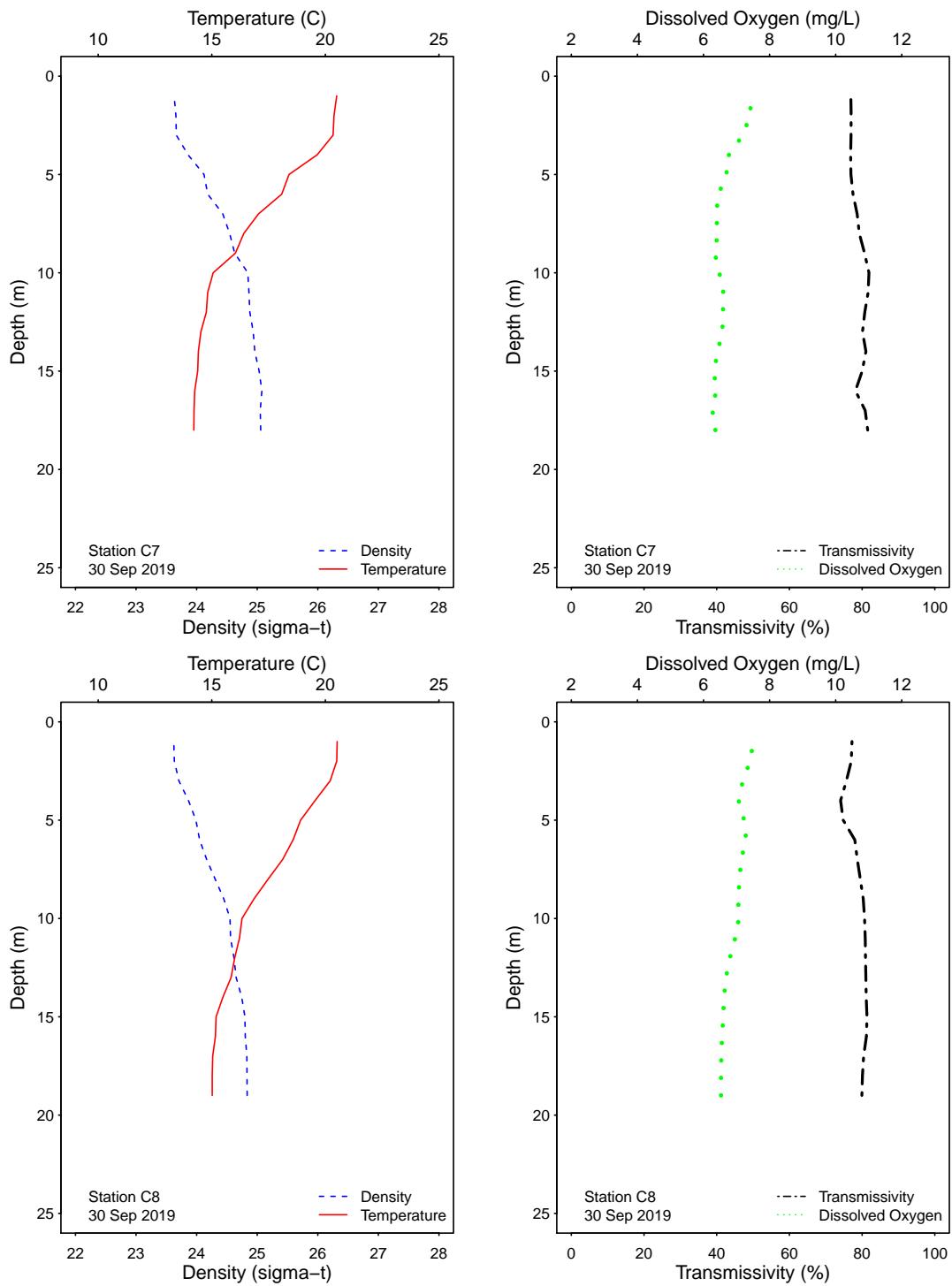


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

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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	03 Sep 2019	18	AR	LAB DUPLICATE	<2	<2	<2
A7	10 Sep 2019	18	JF	LAB DUPLICATE	4e	<2	<2
A7	17 Sep 2019	18	JT	LAB DUPLICATE	<200	6e	<2
A7	24 Sep 2019	18	AE	LAB DUPLICATE	<2	<2	<2
A7	30 Sep 2019	18	JF	LAB DUPLICATE	260e	6e	6e
C7	03 Sep 2019	18	AR	LAB DUPLICATE	<2	<2	<2
C7	10 Sep 2019	18	AE	LAB DUPLICATE	<2	<2	<2
C7	17 Sep 2019	18	JT	LAB DUPLICATE	6e	<2	<2
C7	24 Sep 2019	18	AE	LAB DUPLICATE	2e	<2	<2
C7	30 Sep 2019	18	AE	LAB DUPLICATE	18e	<2	4e
C8	03 Sep 2019	12	JF	LAB DUPLICATE	<20	<2	<2
C8	10 Sep 2019	12	BS	LAB DUPLICATE	2e	<2	<2
C8	17 Sep 2019	12	JF	LAB DUPLICATE	2e	<2	<2
C8	24 Sep 2019	12	AR	LAB DUPLICATE	<2	<2	<2
C8	30 Sep 2019	12	JT	LAB DUPLICATE	<20	<2	2e
D12	04 Sep 2019		AE	FIELD DUPLICATE	2e	2e	<2
D12	04 Sep 2019		AE	LAB DUPLICATE	2e	<2	<2
D12	11 Sep 2019		JF	FIELD DUPLICATE	<2	2e	<2
D12	11 Sep 2019		JF	LAB DUPLICATE	<20	2e	4e
D12	18 Sep 2019		JF	FIELD DUPLICATE	40e	6e	20e
D12	18 Sep 2019		JF	LAB DUPLICATE	20e	2e	6e
D12	25 Sep 2019		JF	FIELD DUPLICATE	4e	<2	<2
D12	25 Sep 2019		JF	LAB DUPLICATE	2e	2e	<2

ns = not sampled

ND = no data

