



MONTHLY RECEIVING WATERS MONITORING REPORT FOR THE POINT LOMA OCEAN OUTFALL

**POINT LOMA METROPOLITAN WASTEWATER
TREATMENT PLANT**

NPDES PERMIT No. CA 0107409
SDRWQCB Order No. R9-2009-0001

OCTOBER 2016

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





Public Utilities Department

Environmental Monitoring & Technical Services Division

November 30, 2016

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 October 2016 Monthly Receiving Waters Monitoring Report for the Point Loma Ocean Outfall, Point Loma Wastewater Treatment Plant as required per Order No. R9-2009-0001, NPDES Permit No. CA0107409.

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

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

Sincerely,

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

TDS/asb

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

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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. R9-2009-0001, 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 monitored at eight shore stations (D4, D5, D7–D12). These stations range from the tip of the Point Loma Peninsula to west of Mission Bay (see station locations map). Due to site inaccessibility, station D8 has been temporarily abandoned and replaced with station D8-A. This new location will be sampled until access is restored at the original location. Seawater samples are collected from the surf zone at each station five times during the month. These samples are subsequently transported to the City's Marine Microbiology Laboratory and analyzed for the presence of several types of fecal indicator bacteria (FIBs), 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 five times during the month according to permit specifications in order 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 indicator bacteria (i.e., total coliforms, fecal coliforms, and *Enterococcus*). Additional samples for ammonium analysis are collected at these same sites and depths on a quarterly basis in order to correspond to sampling at the offshore stations located within State waters that is typically scheduled during the months of February, May, August and November. 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 primarily collected using a CTD-integrated rosette sampler with Niskin bottles. Aliquots for ammonium and bacteriological analyses are then drawn from these bottles into sterile sample bottles for processing at the City's Toxicology Laboratory (ammonium) and Marine Microbiology Laboratory (bacteria), respectively. 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 eight scans per second. These scans are then internally averaged to create water column profiles with data readings at a rate of one per meter. The CTD data are presented in both graphical and tabular form. Additionally, data for depths closest to those where bacteriological samples are collected are extracted from the CTD profiles and 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); 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. Monitoring at sites within State waters also include the collection of discrete grab samples for ammonium analysis (see Table 4.2).

Seawater samples for ammonium and bacteriological analyses at the offshore stations are primarily 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. The CTD profile data are then presented in both graphical and tabular form. Additionally, data for depths closest to those at which bacteriological samples are 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;

^[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.

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

Single Sample Maximums:

- (1) 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 exactly the same throughout field and lab procedures. The results of these analyses provide a measure of precision associated with sample collection, preservation, storage, and lab procedures. The sign test (see Gilbert, 1987) 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 2016 Quality Assurance Report, which will be completed in March 2017.

SUMMARY OF RESULTS

Shore Stations

- During October 2016, each of the eight shore stations was in compliance with various water-contact standards specified in the Ocean Plan.
- 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 surfgrass. See the City of San Diego's most recent *Point Loma Ocean Outfall Annual Receiving Waters Monitoring and Assessment Report* for details (<http://www.sandiego.gov/mwwd/environment/oceanmonitor/reports/index.shtml>).
- Nothing of sewage origin was observed at any of the shore stations.

Kelp Bed Stations

- The eight kelp bed water quality stations (A1, A6, A7, C4, C5, C6, C7, C8) were sampled five times during October (i.e. October 8, 14, 20, 26, 31).
- During October, each of the kelp bed stations was in compliance with various water-contact standards specified in the Ocean Plan.
- Water column temperatures ranged from 12.57 to 20.08°C during the month. The difference between surface and bottom waters ranged from 1.62 to 6.00°C, indicating that the water column was stratified at the kelp bed stations during the month.
- Chlorophyll *a* concentrations ranged from 0.36 to 4.96 µg/L during October, suggesting the absence of phytoplankton blooms during the month.

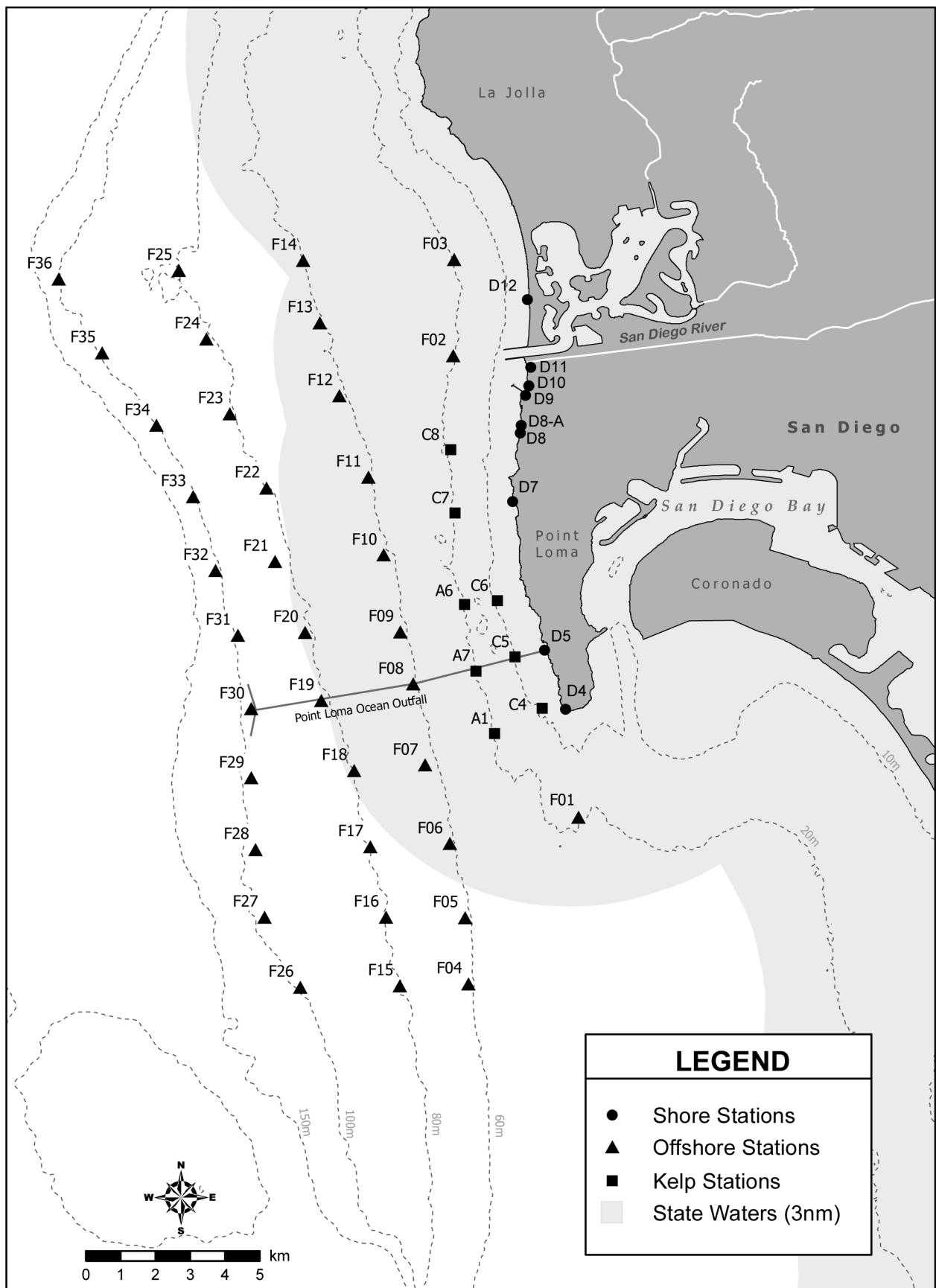
- There were no notable visual observations for October.

Offshore Stations

- Quarterly sampling was not conducted during October at the offshore stations. The next quarterly sampling is scheduled for November 2016.



TABLES AND FIGURES



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-A	D9	D10	D11	D12
01 Oct 2016	13	13	26	64	19	30	21	8
02 Oct 2016	13	13	26	64	19	30	21	8
03 Oct 2016	13	13	26	64	19	30	21	8
04 Oct 2016	13	13	26	64	19	30	21	8
05 Oct 2016	13	13	26	64	19	30	21	8
06 Oct 2016	13	13	26	64	19	30	21	8
07 Oct 2016	13	13	26	79	17	30	19	8
08 Oct 2016	13	13	26	79	17	30	19	8
09 Oct 2016	13	13	26	79	17	30	19	8
10 Oct 2016	13	13	26	79	17	30	19	8
11 Oct 2016	13	13	26	79	17	30	19	8
12 Oct 2016	13	13	26	79	17	30	19	8
13 Oct 2016	20	20	14	79	20	47	12	8
14 Oct 2016	20	20	14	79	20	47	12	8
15 Oct 2016	20	20	14	79	20	47	12	8
16 Oct 2016	20	20	14	79	20	47	12	8
17 Oct 2016	20	20	14	79	20	47	12	8
18 Oct 2016	20	20	14	79	20	47	12	8
19 Oct 2016	20	20	19	78	20	32	11	13
20 Oct 2016	20	20	19	78	20	32	11	13
21 Oct 2016	20	20	19	78	20	32	11	13
22 Oct 2016	20	20	19	78	20	32	11	13
23 Oct 2016	20	20	19	78	20	32	11	13
24 Oct 2016	20	20	19	78	20	32	11	13
25 Oct 2016	14	20	11	63	13	20	9	8
26 Oct 2016	14	20	11	63	13	20	9	8
27 Oct 2016	14	20	11	63	13	20	9	8
28 Oct 2016	14	20	11	63	13	20	9	8
29 Oct 2016	14	20	11	63	13	20	9	8
30 Oct 2016	14	20	11	63	13	20	9	8
31 Oct 2016	9	20	14	39	11	14	8	6

* Geometric mean calculated using n<5

ns = not sampled

Table 2.2

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

Date	D4	D5	D7	D8-A	D9	D10	D11	D12
01 Oct 2016	2	2	6	5	2	6	2	3
02 Oct 2016	2	2	6	5	2	6	2	3
03 Oct 2016	2	2	6	5	2	6	2	3
04 Oct 2016	2	2	6	5	2	6	2	3
05 Oct 2016	2	2	6	5	2	6	2	3
06 Oct 2016	2	2	6	5	2	6	2	3
07 Oct 2016	2	2	6	9	2	6	2	3
08 Oct 2016	2	2	6	9	2	6	2	3
09 Oct 2016	2	2	6	9	2	6	2	3
10 Oct 2016	2	2	6	9	2	6	2	3
11 Oct 2016	2	2	6	9	2	6	2	3
12 Oct 2016	2	2	6	9	2	6	2	3
13 Oct 2016	2	2	4	10	3	6	2	3
14 Oct 2016	2	2	4	10	3	6	2	3
15 Oct 2016	2	2	4	10	3	6	2	3
16 Oct 2016	2	2	4	10	3	6	2	3
17 Oct 2016	2	2	4	10	3	6	2	3
18 Oct 2016	2	2	4	10	3	6	2	3
19 Oct 2016	2	2	4	5	3	4	2	2
20 Oct 2016	2	2	4	5	3	4	2	2
21 Oct 2016	2	2	4	5	3	4	2	2
22 Oct 2016	2	2	4	5	3	4	2	2
23 Oct 2016	2	2	4	5	3	4	2	2
24 Oct 2016	2	2	4	5	3	4	2	2
25 Oct 2016	2	2	3	5	3	4	2	2
26 Oct 2016	2	2	3	5	3	4	2	2
27 Oct 2016	2	2	3	5	3	4	2	2
28 Oct 2016	2	2	3	5	3	4	2	2
29 Oct 2016	2	2	3	5	3	4	2	2
30 Oct 2016	2	2	3	5	3	4	2	2
31 Oct 2016	2	2	5	4	3	3	2	3

* Geometric mean calculated using n<5

ns = not sampled

Table 2.3

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

Date	D4	D5	D7	D8-A	D9	D10	D11	D12
01 Oct 2016	2	2	3	5	3	9	5	3
02 Oct 2016	2	2	3	5	3	9	5	3
03 Oct 2016	2	2	3	5	3	9	5	3
04 Oct 2016	2	2	3	5	3	9	5	3
05 Oct 2016	2	2	3	5	3	9	5	3
06 Oct 2016	2	2	3	5	3	9	5	3
07 Oct 2016	2	2	3	8	3	9	5	3
08 Oct 2016	2	2	3	8	3	9	5	3
09 Oct 2016	2	2	3	8	3	9	5	3
10 Oct 2016	2	2	3	8	3	9	5	3
11 Oct 2016	2	2	3	8	3	9	5	3
12 Oct 2016	2	2	3	8	3	9	5	3
13 Oct 2016	2	2	2	8	3	9	5	3
14 Oct 2016	2	2	2	8	3	9	5	3
15 Oct 2016	2	2	2	8	3	9	5	3
16 Oct 2016	2	2	2	8	3	9	5	3
17 Oct 2016	2	2	2	8	3	9	5	3
18 Oct 2016	2	2	2	8	3	9	5	3
19 Oct 2016	2	2	2	4	2	5	4	5
20 Oct 2016	2	2	2	4	2	5	4	5
21 Oct 2016	2	2	2	4	2	5	4	5
22 Oct 2016	2	2	2	4	2	5	4	5
23 Oct 2016	2	2	2	4	2	5	4	5
24 Oct 2016	2	2	2	4	2	5	4	5
25 Oct 2016	2	2	2	5	2	5	4	5
26 Oct 2016	2	2	2	5	2	5	4	5
27 Oct 2016	2	2	2	5	2	5	4	5
28 Oct 2016	2	2	2	5	2	5	4	5
29 Oct 2016	2	2	2	5	2	5	4	5
30 Oct 2016	2	2	2	5	2	5	4	5
31 Oct 2016	2	2	3	4	2	3	3	4

* 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-A	D9	D10	D11	D12
01 Oct 2016	IC	IC	IC	IC	IC	IC	IC	IC
07 Oct 2016	IC	IC	IC	IC	IC	IC	IC	IC
13 Oct 2016	IC	IC	IC	IC	IC	IC	IC	IC
19 Oct 2016	IC	IC	IC	IC	IC	IC	IC	IC
25 Oct 2016	IC	IC	IC	IC	IC	IC	IC	IC
31 Oct 2016	IC	IC	IC	IC	IC	IC	IC	IC

IC = In Compliance

E = Exceedance

ns = not sampled

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-A	D9	D10	D11	D12
01 Oct 2016	IC	IC	IC	IC	IC	IC	IC	IC
07 Oct 2016	IC	IC	IC	IC	IC	IC	IC	IC
13 Oct 2016	IC	IC	IC	IC	IC	IC	IC	IC
19 Oct 2016	IC	IC	IC	IC	IC	IC	IC	IC
25 Oct 2016	IC	IC	IC	IC	IC	IC	IC	IC
31 Oct 2016	IC	IC	IC	IC	IC	IC	IC	IC

IC = In Compliance

E = Exceedance

ns = not sampled

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-A	D9	D10	D11	D12
01 Oct 2016	IC	IC	IC	IC	IC	IC	IC	IC
07 Oct 2016	IC	IC	IC	IC	IC	IC	IC	IC
13 Oct 2016	IC	IC	IC	IC	IC	IC	IC	IC
19 Oct 2016	IC	IC	IC	IC	IC	IC	IC	IC
25 Oct 2016	IC	IC	IC	IC	IC	IC	IC	IC
31 Oct 2016	IC	IC	IC	IC	IC	IC	IC	IC

IC = In Compliance

E = Exceedance

ns = not sampled

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-A	D9	D10	D11	D12
01 Oct 2016	IC	IC	IC	IC	IC	IC	IC	IC
07 Oct 2016	IC	IC	IC	IC	IC	IC	IC	IC
13 Oct 2016	IC	IC	IC	IC	IC	IC	IC	IC
19 Oct 2016	IC	IC	IC	IC	IC	IC	IC	IC
25 Oct 2016	IC	IC	IC	IC	IC	IC	IC	IC
31 Oct 2016	IC	IC	IC	IC	IC	IC	IC	IC

IC = In Compliance

E = Exceedance

ns = not sampled

Table 2.8

Summary of water quality parameters at the PLOO shore stations for each sample date. Densities of total coliform (Total), fecal coliform (Fecal), and *Enterococcus* (Enter) are reported as CFU/100 mL. The fecal:total coliform ratio (F:T) is unitless. Comments follow the data summary.

Station	Date	Time	Total	Fecal	Enter	F:T
D4	01 Oct 2016	1107	<20	<2	<2	0.10
	07 Oct 2016	931	<20	<2	<2	0.10
	13 Oct 2016	936	<20	<2	<2	0.10
	19 Oct 2016	835	<20	2e	<2	0.10
	25 Oct 2016	1008	4e	<2	2e	0.50
	31 Oct 2016	1001	<2	<2	<2	1.00
D5	01 Oct 2016	1119	20e	2e	4e	0.10
	07 Oct 2016	920	<20	<2	<2	0.10
	13 Oct 2016	919	20e	<2	<2	0.10
	19 Oct 2016	903	<20	<2	<2	0.10
	25 Oct 2016	954	<20	<2	<2	0.10
	31 Oct 2016	945	<20	4e	<2	0.20
D7	01 Oct 2016	1043	<20	2e	<2	0.10
	07 Oct 2016	952	<20	2e	<2	0.10
	13 Oct 2016	1013	<2	2e	2e	1.00
	19 Oct 2016	925	80e	12e	<2	0.15
	25 Oct 2016	1027	<2	<2	<2	1.00
	31 Oct 2016	1020	84	46	10e	0.55
D8-A	01 Oct 2016	1011	<200	6e	8e	0.03
	07 Oct 2016	1003	60e	26e	18e	0.43
	13 Oct 2016	1041	<20	4e	<2	0.20
	19 Oct 2016	945	<200	2e	2e	0.01
	25 Oct 2016	1039	<20	<2	6e	0.10
	31 Oct 2016	1252	<20	<2	2e	0.10
D9	01 Oct 2016	955	<20	<2	<2	0.10
	07 Oct 2016	1017	20e	6e	2e	0.30
	13 Oct 2016	1108	20e	4e	<2	0.20
	19 Oct 2016	1007	20e	<2	<2	0.10
	25 Oct 2016	1050	<2	<2	<2	1.00
	31 Oct 2016	1048	12e	<2	<2	0.17
D10	01 Oct 2016	943	200e	20e	72	0.10
	07 Oct 2016	1031	<20	<2	<2	0.10
	13 Oct 2016	1134	<20	2e	2e	0.10
	19 Oct 2016	1021	20e	6e	8e	0.30
	25 Oct 2016	1059	2e	2e	<2	1.00
	31 Oct 2016	1121	40e	6e	2e	0.15

Station	Date	Time	Total	Fecal	Enterο	F:T
D11	01 Oct 2016	931	40e	4e	42	0.10
D11	07 Oct 2016	1042	4e	<2	2e	0.50
D11	13 Oct 2016	1148	2e	<2	<2	1.00
D11	19 Oct 2016	1035	<20	2e	<2	0.10
D11	25 Oct 2016	1112	10e	<2	2e	0.20
D11	31 Oct 2016	1129	<20	<2	8e	0.10
D12	01 Oct 2016	910	<20	2e	8e	0.10
D12	07 Oct 2016	1102	<2	<2	<2	1.00
D12	13 Oct 2016	1215	<2	<2	<2	1.00
D12	19 Oct 2016	1057	<200	4e	42	0.02
D12	25 Oct 2016	1137	<2	<2	<2	1.00
D12	31 Oct 2016	1147	6e	4e	2e	0.67

ns = not sampled

ND = no data

Table 2.9

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

Station	Date	Parameter	Value
D4	01 Oct 2016	Arrive Time	1107
D4	01 Oct 2016	Weather	Sunny
D4	01 Oct 2016	Wind Speed (kts)	2.1
D4	01 Oct 2016	Wind Dir	W
D4	01 Oct 2016	Animal Life	None
D4	01 Oct 2016	Floatables	None
D4	01 Oct 2016	Water Color	Green
D4	01 Oct 2016	Current Direction	N
D4	01 Oct 2016	Wave Height Low (ft)	3
D4	01 Oct 2016	High Tide (ft)	5.4
D4	01 Oct 2016	High Tide Time	948
D4	01 Oct 2016	Low Tide (ft)	0.5
D4	01 Oct 2016	Low Tide Time	1611
D4	01 Oct 2016	Comments	Water clear
D4	07 Oct 2016	Arrive Time	931
D4	07 Oct 2016	Weather	Partly Cloudy
D4	07 Oct 2016	Wind Speed (kts)	2.5
D4	07 Oct 2016	Wind Dir	W
D4	07 Oct 2016	Animal Life	1 Seal
D4	07 Oct 2016	Floatables	None
D4	07 Oct 2016	Water Color	Green
D4	07 Oct 2016	Current Direction	W
D4	07 Oct 2016	Wave Height Low (ft)	1
D4	07 Oct 2016	High Tide (ft)	4.4
D4	07 Oct 2016	High Tide Time	1253
D4	07 Oct 2016	Low Tide (ft)	2.8
D4	07 Oct 2016	Low Tide Time	612
D4	07 Oct 2016	Comments	Algae; Water clear
D4	13 Oct 2016	Arrive Time	936
D4	13 Oct 2016	Weather	Hazy
D4	13 Oct 2016	Wind Speed (kts)	1.7
D4	13 Oct 2016	Wind Dir	W
D4	13 Oct 2016	Animal Life	None
D4	13 Oct 2016	Floatables	None
D4	13 Oct 2016	Water Color	Green
D4	13 Oct 2016	Current Direction	N
D4	13 Oct 2016	Wave Height Low (ft)	5
D4	13 Oct 2016	High Tide (ft)	5.3
D4	13 Oct 2016	High Tide Time	747
D4	13 Oct 2016	Low Tide (ft)	0.8
D4	13 Oct 2016	Low Tide Time	1354
D4	13 Oct 2016	Comments	Water clear
D4	19 Oct 2016	Arrive Time	835
D4	19 Oct 2016	Weather	Sunny
D4	19 Oct 2016	Wind Speed (kts)	3
D4	19 Oct 2016	Wind Dir	E
D4	19 Oct 2016	Animal Life	None
D4	19 Oct 2016	Floatables	None

Station	Date	Parameter	Value
D4	19 Oct 2016	Water Color	Green
D4	19 Oct 2016	Current Direction	E
D4	19 Oct 2016	Wave Height Low (ft)	3
D4	19 Oct 2016	High Tide (ft)	6.1
D4	19 Oct 2016	High Tide Time	1134
D4	19 Oct 2016	Low Tide (ft)	1.6
D4	19 Oct 2016	Low Tide Time	526
D4	19 Oct 2016	Comments	Kelp; Seagrass; Water turbid
D4	25 Oct 2016	Arrive Time	1008
D4	25 Oct 2016	Weather	Sunny
D4	25 Oct 2016	Wind Speed (kts)	1.1
D4	25 Oct 2016	Wind Dir	W
D4	25 Oct 2016	Animal Life	None
D4	25 Oct 2016	Floatables	None
D4	25 Oct 2016	Water Color	Green
D4	25 Oct 2016	Current Direction	S
D4	25 Oct 2016	Wave Height Low (ft)	2
D4	25 Oct 2016	High Tide (ft)	4.9
D4	25 Oct 2016	High Tide Time	701
D4	25 Oct 2016	Low Tide (ft)	1.5
D4	25 Oct 2016	Low Tide Time	1304
D4	25 Oct 2016	Comments	Water clear
D4	31 Oct 2016	Arrive Time	1001
D4	31 Oct 2016	Weather	Sunny
D4	31 Oct 2016	Wind Speed (kts)	2.1
D4	31 Oct 2016	Wind Dir	SW
D4	31 Oct 2016	Animal Life	None
D4	31 Oct 2016	Floatables	None
D4	31 Oct 2016	Water Color	Green
D4	31 Oct 2016	Current Direction	N
D4	31 Oct 2016	Wave Height Low (ft)	3
D4	31 Oct 2016	High Tide (ft)	5.7
D4	31 Oct 2016	High Tide Time	936
D4	31 Oct 2016	Low Tide (ft)	0.1
D4	31 Oct 2016	Low Tide Time	1628
D4	31 Oct 2016	Comments	Kelp; Seagrass; Algae; Water clear
D5	01 Oct 2016	Arrive Time	1119
D5	01 Oct 2016	Weather	Sunny
D5	01 Oct 2016	Wind Speed (kts)	0.3
D5	01 Oct 2016	Wind Dir	W
D5	01 Oct 2016	Animal Life	None
D5	01 Oct 2016	Floatables	None
D5	01 Oct 2016	Water Color	Green
D5	01 Oct 2016	Current Direction	N
D5	01 Oct 2016	Wave Height Low (ft)	4
D5	01 Oct 2016	High Tide (ft)	5.4
D5	01 Oct 2016	High Tide Time	948
D5	01 Oct 2016	Low Tide (ft)	0.5
D5	01 Oct 2016	Low Tide Time	1611
D5	01 Oct 2016	Comments	Water clear
D5	07 Oct 2016	Arrive Time	920

Station	Date	Parameter	Value
D5	07 Oct 2016	Weather	Partly Cloudy
D5	07 Oct 2016	Wind Speed (kts)	5.4
D5	07 Oct 2016	Wind Dir	W
D5	07 Oct 2016	Animal Life	None
D5	07 Oct 2016	Floatables	None
D5	07 Oct 2016	Water Color	Green
D5	07 Oct 2016	Current Direction	W
D5	07 Oct 2016	Wave Height Low (ft)	2
D5	07 Oct 2016	High Tide (ft)	4.4
D5	07 Oct 2016	High Tide Time	1253
D5	07 Oct 2016	Low Tide (ft)	2.8
D5	07 Oct 2016	Low Tide Time	612
D5	07 Oct 2016	Comments	Kelp; Water clear
D5	13 Oct 2016	Arrive Time	919
D5	13 Oct 2016	Weather	Hazy
D5	13 Oct 2016	Wind Speed (kts)	5.4
D5	13 Oct 2016	Wind Dir	W
D5	13 Oct 2016	Animal Life	None
D5	13 Oct 2016	Floatables	None
D5	13 Oct 2016	Water Color	Green
D5	13 Oct 2016	Current Direction	N
D5	13 Oct 2016	Wave Height Low (ft)	6
D5	13 Oct 2016	High Tide (ft)	5.3
D5	13 Oct 2016	High Tide Time	747
D5	13 Oct 2016	Low Tide (ft)	0.8
D5	13 Oct 2016	Low Tide Time	1354
D5	13 Oct 2016	Comments	Water clear
D5	19 Oct 2016	Arrive Time	903
D5	19 Oct 2016	Weather	Sunny
D5	19 Oct 2016	Wind Speed (kts)	3
D5	19 Oct 2016	Wind Dir	E
D5	19 Oct 2016	Animal Life	None
D5	19 Oct 2016	Floatables	None
D5	19 Oct 2016	Water Color	Green
D5	19 Oct 2016	Current Direction	E
D5	19 Oct 2016	Wave Height Low (ft)	4
D5	19 Oct 2016	High Tide (ft)	6.1
D5	19 Oct 2016	High Tide Time	1134
D5	19 Oct 2016	Low Tide (ft)	1.6
D5	19 Oct 2016	Low Tide Time	526
D5	19 Oct 2016	Comments	Kelp; Seagrass; Water turbid
D5	25 Oct 2016	Arrive Time	954
D5	25 Oct 2016	Weather	Sunny
D5	25 Oct 2016	Wind Speed (kts)	0.3
D5	25 Oct 2016	Wind Dir	W
D5	25 Oct 2016	Animal Life	None
D5	25 Oct 2016	Floatables	None
D5	25 Oct 2016	Water Color	Green
D5	25 Oct 2016	Current Direction	S
D5	25 Oct 2016	Wave Height Low (ft)	3
D5	25 Oct 2016	High Tide (ft)	4.9
D5	25 Oct 2016	High Tide Time	701

Station	Date	Parameter	Value
D5	25 Oct 2016	Low Tide (ft)	1.5
D5	25 Oct 2016	Low Tide Time	1304
D5	25 Oct 2016	Comments	Water clear
D5	31 Oct 2016	Arrive Time	945
D5	31 Oct 2016	Weather	Sunny
D5	31 Oct 2016	Wind Speed (kts)	0
D5	31 Oct 2016	Wind Dir	
D5	31 Oct 2016	Animal Life	None
D5	31 Oct 2016	Floatables	None
D5	31 Oct 2016	Water Color	Green
D5	31 Oct 2016	Current Direction	N
D5	31 Oct 2016	Wave Height Low (ft)	3
D5	31 Oct 2016	High Tide (ft)	5.7
D5	31 Oct 2016	High Tide Time	936
D5	31 Oct 2016	Low Tide (ft)	1.5
D5	31 Oct 2016	Low Tide Time	331
D5	31 Oct 2016	Comments	Kelp; Seagrass; Algae; Water clear
D7	01 Oct 2016	Arrive Time	1043
D7	01 Oct 2016	Weather	Sunny
D7	01 Oct 2016	Wind Speed (kts)	1.4
D7	01 Oct 2016	Wind Dir	W
D7	01 Oct 2016	Animal Life	None
D7	01 Oct 2016	Floatables	None
D7	01 Oct 2016	Water Color	Green
D7	01 Oct 2016	Current Direction	N
D7	01 Oct 2016	Wave Height Low (ft)	3
D7	01 Oct 2016	High Tide (ft)	5.4
D7	01 Oct 2016	High Tide Time	948
D7	01 Oct 2016	Low Tide (ft)	0.5
D7	01 Oct 2016	Low Tide Time	1611
D7	01 Oct 2016	Comments	Water clear
D7	07 Oct 2016	Arrive Time	952
D7	07 Oct 2016	Weather	Partly Cloudy
D7	07 Oct 2016	Wind Speed (kts)	3.4
D7	07 Oct 2016	Wind Dir	NW
D7	07 Oct 2016	Animal Life	None
D7	07 Oct 2016	Floatables	None
D7	07 Oct 2016	Water Color	Green
D7	07 Oct 2016	Current Direction	NW
D7	07 Oct 2016	Wave Height Low (ft)	2
D7	07 Oct 2016	High Tide (ft)	4.4
D7	07 Oct 2016	High Tide Time	1253
D7	07 Oct 2016	Low Tide (ft)	2.8
D7	07 Oct 2016	Low Tide Time	612
D7	07 Oct 2016	Comments	1 Surfer; Water clear
D7	13 Oct 2016	Arrive Time	1013
D7	13 Oct 2016	Weather	Hazy
D7	13 Oct 2016	Wind Speed (kts)	1.5
D7	13 Oct 2016	Wind Dir	W
D7	13 Oct 2016	Animal Life	None
D7	13 Oct 2016	Floatables	None

Station	Date	Parameter	Value
D7	13 Oct 2016	Water Color	Green
D7	13 Oct 2016	Current Direction	N
D7	13 Oct 2016	Wave Height Low (ft)	4
D7	13 Oct 2016	High Tide (ft)	5.3
D7	13 Oct 2016	High Tide Time	747
D7	13 Oct 2016	Low Tide (ft)	0.8
D7	13 Oct 2016	Low Tide Time	1354
D7	13 Oct 2016	Comments	6 Surfers; Water clear
D7	19 Oct 2016	Arrive Time	925
D7	19 Oct 2016	Weather	Sunny
D7	19 Oct 2016	Wind Speed (kts)	3
D7	19 Oct 2016	Wind Dir	E
D7	19 Oct 2016	Animal Life	None
D7	19 Oct 2016	Floatables	None
D7	19 Oct 2016	Water Color	Green
D7	19 Oct 2016	Current Direction	E
D7	19 Oct 2016	Wave Height Low (ft)	4
D7	19 Oct 2016	High Tide (ft)	6.1
D7	19 Oct 2016	High Tide Time	1134
D7	19 Oct 2016	Low Tide (ft)	1.6
D7	19 Oct 2016	Low Tide Time	526
D7	19 Oct 2016	Comments	Kelp; Seagrass; Water turbid
D7	25 Oct 2016	Arrive Time	1027
D7	25 Oct 2016	Weather	Sunny
D7	25 Oct 2016	Wind Speed (kts)	0.7
D7	25 Oct 2016	Wind Dir	W
D7	25 Oct 2016	Animal Life	None
D7	25 Oct 2016	Floatables	None
D7	25 Oct 2016	Water Color	Green
D7	25 Oct 2016	Current Direction	S
D7	25 Oct 2016	Wave Height Low (ft)	4
D7	25 Oct 2016	High Tide (ft)	4.9
D7	25 Oct 2016	High Tide Time	701
D7	25 Oct 2016	Low Tide (ft)	1.5
D7	25 Oct 2016	Low Tide Time	1304
D7	25 Oct 2016	Comments	Water clear
D7	31 Oct 2016	Arrive Time	1020
D7	31 Oct 2016	Weather	Sunny
D7	31 Oct 2016	Wind Speed (kts)	1.3
D7	31 Oct 2016	Wind Dir	W
D7	31 Oct 2016	Animal Life	None
D7	31 Oct 2016	Floatables	None
D7	31 Oct 2016	Water Color	Green
D7	31 Oct 2016	Current Direction	N
D7	31 Oct 2016	Wave Height Low (ft)	3
D7	31 Oct 2016	High Tide (ft)	5.7
D7	31 Oct 2016	High Tide Time	936
D7	31 Oct 2016	Low Tide (ft)	0.1
D7	31 Oct 2016	Low Tide Time	1628
D7	31 Oct 2016	Comments	Kelp; Seagrass; 4 Persons; Water clear
D8-A	01 Oct 2016	Arrive Time	1011

Station	Date	Parameter	Value
D8-A	01 Oct 2016	Weather	Sunny
D8-A	01 Oct 2016	Wind Speed (kts)	0.2
D8-A	01 Oct 2016	Wind Dir	W
D8-A	01 Oct 2016	Animal Life	None
D8-A	01 Oct 2016	Floatables	None
D8-A	01 Oct 2016	Water Color	Green
D8-A	01 Oct 2016	Current Direction	N
D8-A	01 Oct 2016	Wave Height Low (ft)	5
D8-A	01 Oct 2016	High Tide (ft)	5.4
D8-A	01 Oct 2016	High Tide Time	948
D8-A	01 Oct 2016	Low Tide (ft)	0.5
D8-A	01 Oct 2016	Low Tide Time	1611
D8-A	01 Oct 2016	Comments	Water clear
D8-A	07 Oct 2016	Arrive Time	1003
D8-A	07 Oct 2016	Weather	Partly Cloudy
D8-A	07 Oct 2016	Wind Speed (kts)	4.8
D8-A	07 Oct 2016	Wind Dir	NW
D8-A	07 Oct 2016	Animal Life	None
D8-A	07 Oct 2016	Floatables	None
D8-A	07 Oct 2016	Water Color	Green
D8-A	07 Oct 2016	Current Direction	NW
D8-A	07 Oct 2016	Wave Height Low (ft)	2
D8-A	07 Oct 2016	High Tide (ft)	4.4
D8-A	07 Oct 2016	High Tide Time	1253
D8-A	07 Oct 2016	Low Tide (ft)	2.8
D8-A	07 Oct 2016	Low Tide Time	612
D8-A	07 Oct 2016	Comments	Kelp; Algae; Water clear; High amount of kelp in water
D8-A	13 Oct 2016	Arrive Time	1041
D8-A	13 Oct 2016	Weather	Sunny
D8-A	13 Oct 2016	Wind Speed (kts)	3.9
D8-A	13 Oct 2016	Wind Dir	W
D8-A	13 Oct 2016	Animal Life	None
D8-A	13 Oct 2016	Floatables	None
D8-A	13 Oct 2016	Water Color	Green
D8-A	13 Oct 2016	Current Direction	N
D8-A	13 Oct 2016	Wave Height Low (ft)	4
D8-A	13 Oct 2016	High Tide (ft)	5.3
D8-A	13 Oct 2016	High Tide Time	747
D8-A	13 Oct 2016	Low Tide (ft)	0.8
D8-A	13 Oct 2016	Low Tide Time	1354
D8-A	13 Oct 2016	Comments	2 Surfers; 1 Boat; Water clear
D8-A	19 Oct 2016	Arrive Time	945
D8-A	19 Oct 2016	Weather	Sunny
D8-A	19 Oct 2016	Wind Speed (kts)	3
D8-A	19 Oct 2016	Wind Dir	E
D8-A	19 Oct 2016	Animal Life	None
D8-A	19 Oct 2016	Floatables	None
D8-A	19 Oct 2016	Water Color	Green
D8-A	19 Oct 2016	Current Direction	E
D8-A	19 Oct 2016	Wave Height Low (ft)	5
D8-A	19 Oct 2016	High Tide (ft)	6.1
D8-A	19 Oct 2016	High Tide Time	1134

Station	Date	Parameter	Value
D8-A	19 Oct 2016	Low Tide (ft)	1.6
D8-A	19 Oct 2016	Low Tide Time	526
D8-A	19 Oct 2016	Comments	Kelp; Seagrass; Algae; Water turbid
D8-A	25 Oct 2016	Arrive Time	1039
D8-A	25 Oct 2016	Weather	Sunny
D8-A	25 Oct 2016	Wind Speed (kts)	1.7
D8-A	25 Oct 2016	Wind Dir	W
D8-A	25 Oct 2016	Animal Life	None
D8-A	25 Oct 2016	Floatables	None
D8-A	25 Oct 2016	Water Color	Green
D8-A	25 Oct 2016	Current Direction	S
D8-A	25 Oct 2016	Wave Height Low (ft)	4
D8-A	25 Oct 2016	High Tide (ft)	4.9
D8-A	25 Oct 2016	High Tide Time	701
D8-A	25 Oct 2016	Low Tide (ft)	1.5
D8-A	25 Oct 2016	Low Tide Time	1304
D8-A	25 Oct 2016	Comments	Kelp; Algae; Water clear
D8-A	31 Oct 2016	Arrive Time	1252
D8-A	31 Oct 2016	Weather	Partly Cloudy
D8-A	31 Oct 2016	Wind Speed (kts)	2.3
D8-A	31 Oct 2016	Wind Dir	W
D8-A	31 Oct 2016	Animal Life	None
D8-A	31 Oct 2016	Floatables	None
D8-A	31 Oct 2016	Water Color	Green
D8-A	31 Oct 2016	Current Direction	N
D8-A	31 Oct 2016	Wave Height Low (ft)	4
D8-A	31 Oct 2016	High Tide (ft)	5.7
D8-A	31 Oct 2016	High Tide Time	936
D8-A	31 Oct 2016	Low Tide (ft)	0.1
D8-A	31 Oct 2016	Low Tide Time	1628
D8-A	31 Oct 2016	Comments	Kelp; Seagrass; Algae; 2 Surfers; Water clear
D9	01 Oct 2016	Arrive Time	955
D9	01 Oct 2016	Weather	Sunny
D9	01 Oct 2016	Wind Speed (kts)	0.8
D9	01 Oct 2016	Wind Dir	W
D9	01 Oct 2016	Animal Life	None
D9	01 Oct 2016	Floatables	None
D9	01 Oct 2016	Water Color	Green
D9	01 Oct 2016	Current Direction	N
D9	01 Oct 2016	Wave Height Low (ft)	4
D9	01 Oct 2016	High Tide (ft)	5.4
D9	01 Oct 2016	High Tide Time	948
D9	01 Oct 2016	Low Tide (ft)	0.7
D9	01 Oct 2016	Low Tide Time	344
D9	01 Oct 2016	Comments	Water clear
D9	07 Oct 2016	Arrive Time	1017
D9	07 Oct 2016	Weather	Partly Cloudy
D9	07 Oct 2016	Wind Speed (kts)	2.7
D9	07 Oct 2016	Wind Dir	NW
D9	07 Oct 2016	Animal Life	None
D9	07 Oct 2016	Floatables	None

Station	Date	Parameter	Value
D9	07 Oct 2016	Water Color	Green
D9	07 Oct 2016	Current Direction	NW
D9	07 Oct 2016	Wave Height Low (ft)	1
D9	07 Oct 2016	High Tide (ft)	4.4
D9	07 Oct 2016	High Tide Time	1253
D9	07 Oct 2016	Low Tide (ft)	2.8
D9	07 Oct 2016	Low Tide Time	612
D9	07 Oct 2016	Comments	Kelp; Water clear
D9	13 Oct 2016	Arrive Time	1108
D9	13 Oct 2016	Weather	Sunny
D9	13 Oct 2016	Wind Speed (kts)	2.2
D9	13 Oct 2016	Wind Dir	W
D9	13 Oct 2016	Animal Life	None
D9	13 Oct 2016	Floatables	None
D9	13 Oct 2016	Water Color	Green
D9	13 Oct 2016	Current Direction	N
D9	13 Oct 2016	Wave Height Low (ft)	4
D9	13 Oct 2016	High Tide (ft)	5.3
D9	13 Oct 2016	High Tide Time	747
D9	13 Oct 2016	Low Tide (ft)	0.8
D9	13 Oct 2016	Low Tide Time	1354
D9	13 Oct 2016	Comments	5 Surfers
D9	19 Oct 2016	Arrive Time	1007
D9	19 Oct 2016	Weather	Sunny
D9	19 Oct 2016	Wind Speed (kts)	3
D9	19 Oct 2016	Wind Dir	E
D9	19 Oct 2016	Animal Life	None
D9	19 Oct 2016	Floatables	None
D9	19 Oct 2016	Water Color	Green
D9	19 Oct 2016	Current Direction	E
D9	19 Oct 2016	Wave Height Low (ft)	5
D9	19 Oct 2016	High Tide (ft)	6.1
D9	19 Oct 2016	High Tide Time	1134
D9	19 Oct 2016	Low Tide (ft)	1.6
D9	19 Oct 2016	Low Tide Time	526
D9	19 Oct 2016	Comments	Kelp; Seagrass; 5 Surfers; Water turbid
D9	25 Oct 2016	Arrive Time	1050
D9	25 Oct 2016	Weather	Sunny
D9	25 Oct 2016	Wind Speed (kts)	1.3
D9	25 Oct 2016	Wind Dir	W
D9	25 Oct 2016	Animal Life	None
D9	25 Oct 2016	Floatables	None
D9	25 Oct 2016	Water Color	Green
D9	25 Oct 2016	Current Direction	S
D9	25 Oct 2016	Wave Height Low (ft)	3
D9	25 Oct 2016	High Tide (ft)	4.9
D9	25 Oct 2016	High Tide Time	701
D9	25 Oct 2016	Low Tide (ft)	1.5
D9	25 Oct 2016	Low Tide Time	1304
D9	25 Oct 2016	Comments	Water clear
D9	31 Oct 2016	Arrive Time	1048

Station	Date	Parameter	Value
D9	31 Oct 2016	Weather	Partly Cloudy
D9	31 Oct 2016	Wind Speed (kts)	0.9
D9	31 Oct 2016	Wind Dir	W
D9	31 Oct 2016	Animal Life	None
D9	31 Oct 2016	Floatables	None
D9	31 Oct 2016	Water Color	Green
D9	31 Oct 2016	Current Direction	N
D9	31 Oct 2016	Wave Height Low (ft)	3
D9	31 Oct 2016	High Tide (ft)	5.7
D9	31 Oct 2016	High Tide Time	936
D9	31 Oct 2016	Low Tide (ft)	0.1
D9	31 Oct 2016	Low Tide Time	1628
D9	31 Oct 2016	Comments	Kelp; Seagrass; Water clear
D10	01 Oct 2016	Arrive Time	943
D10	01 Oct 2016	Weather	Sunny
D10	01 Oct 2016	Wind Speed (kts)	0.7
D10	01 Oct 2016	Wind Dir	W
D10	01 Oct 2016	Animal Life	None
D10	01 Oct 2016	Floatables	None
D10	01 Oct 2016	Water Color	Green
D10	01 Oct 2016	Current Direction	N
D10	01 Oct 2016	Wave Height Low (ft)	4
D10	01 Oct 2016	High Tide (ft)	5.4
D10	01 Oct 2016	High Tide Time	948
D10	01 Oct 2016	Low Tide (ft)	0.7
D10	01 Oct 2016	Low Tide Time	344
D10	01 Oct 2016	Comments	3 Surfers; Water clear
D10	07 Oct 2016	Arrive Time	1031
D10	07 Oct 2016	Weather	Partly Cloudy
D10	07 Oct 2016	Wind Speed (kts)	4.6
D10	07 Oct 2016	Wind Dir	NW
D10	07 Oct 2016	Animal Life	None
D10	07 Oct 2016	Floatables	None
D10	07 Oct 2016	Water Color	Green
D10	07 Oct 2016	Current Direction	NW
D10	07 Oct 2016	Wave Height Low (ft)	2
D10	07 Oct 2016	High Tide (ft)	4.4
D10	07 Oct 2016	High Tide Time	1253
D10	07 Oct 2016	Low Tide (ft)	2.8
D10	07 Oct 2016	Low Tide Time	612
D10	07 Oct 2016	Comments	6 Persons; 4 Surfers; Water clear
D10	13 Oct 2016	Arrive Time	1134
D10	13 Oct 2016	Weather	Sunny
D10	13 Oct 2016	Wind Speed (kts)	6
D10	13 Oct 2016	Wind Dir	W
D10	13 Oct 2016	Animal Life	None
D10	13 Oct 2016	Floatables	None
D10	13 Oct 2016	Water Color	Green
D10	13 Oct 2016	Current Direction	N
D10	13 Oct 2016	Wave Height Low (ft)	4
D10	13 Oct 2016	High Tide (ft)	5.3
D10	13 Oct 2016	High Tide Time	747

Station	Date	Parameter	Value
D10	13 Oct 2016	Low Tide (ft)	0.8
D10	13 Oct 2016	Low Tide Time	1354
D10	13 Oct 2016	Comments	10 Surfers; Water clear
D10	19 Oct 2016	Arrive Time	1021
D10	19 Oct 2016	Weather	Sunny
D10	19 Oct 2016	Wind Speed (kts)	3
D10	19 Oct 2016	Wind Dir	SW
D10	19 Oct 2016	Animal Life	None
D10	19 Oct 2016	Floatables	None
D10	19 Oct 2016	Water Color	Green
D10	19 Oct 2016	Current Direction	SW
D10	19 Oct 2016	Wave Height Low (ft)	3
D10	19 Oct 2016	High Tide (ft)	6.1
D10	19 Oct 2016	High Tide Time	1134
D10	19 Oct 2016	Low Tide (ft)	1.6
D10	19 Oct 2016	Low Tide Time	526
D10	19 Oct 2016	Comments	Kelp; Seagrass; 2 Surfers; Water turbid
D10	25 Oct 2016	Arrive Time	1059
D10	25 Oct 2016	Weather	Sunny
D10	25 Oct 2016	Wind Speed (kts)	1.3
D10	25 Oct 2016	Wind Dir	W
D10	25 Oct 2016	Animal Life	None
D10	25 Oct 2016	Floatables	None
D10	25 Oct 2016	Water Color	Green
D10	25 Oct 2016	Current Direction	S
D10	25 Oct 2016	Wave Height Low (ft)	3
D10	25 Oct 2016	High Tide (ft)	4.9
D10	25 Oct 2016	High Tide Time	701
D10	25 Oct 2016	Low Tide (ft)	1.5
D10	25 Oct 2016	Low Tide Time	1304
D10	25 Oct 2016	Comments	3 Surfers; Water clear
D10	31 Oct 2016	Arrive Time	1121
D10	31 Oct 2016	Weather	Partly Cloudy
D10	31 Oct 2016	Wind Speed (kts)	1.3
D10	31 Oct 2016	Wind Dir	W
D10	31 Oct 2016	Animal Life	None
D10	31 Oct 2016	Floatables	None
D10	31 Oct 2016	Water Color	Green
D10	31 Oct 2016	Current Direction	N
D10	31 Oct 2016	Wave Height Low (ft)	5
D10	31 Oct 2016	High Tide (ft)	5.7
D10	31 Oct 2016	High Tide Time	936
D10	31 Oct 2016	Low Tide (ft)	0.1
D10	31 Oct 2016	Low Tide Time	1628
D10	31 Oct 2016	Comments	Kelp; Seagrass; 7 Surfers; Water clear
D11	01 Oct 2016	Arrive Time	931
D11	01 Oct 2016	Weather	Sunny
D11	01 Oct 2016	Wind Speed (kts)	0.9
D11	01 Oct 2016	Wind Dir	W
D11	01 Oct 2016	Animal Life	None
D11	01 Oct 2016	Floatables	None

Station	Date	Parameter	Value
D11	01 Oct 2016	Water Color	Green
D11	01 Oct 2016	Current Direction	N
D11	01 Oct 2016	Wave Height Low (ft)	3
D11	01 Oct 2016	High Tide (ft)	5.4
D11	01 Oct 2016	High Tide Time	948
D11	01 Oct 2016	Low Tide (ft)	0.7
D11	01 Oct 2016	Low Tide Time	344
D11	01 Oct 2016	Comments	3 Persons; 1 Surfer; Water clear
D11	07 Oct 2016	Arrive Time	1042
D11	07 Oct 2016	Weather	Partly Cloudy
D11	07 Oct 2016	Wind Speed (kts)	6.6
D11	07 Oct 2016	Wind Dir	NW
D11	07 Oct 2016	Animal Life	None
D11	07 Oct 2016	Floatables	None
D11	07 Oct 2016	Water Color	Green
D11	07 Oct 2016	Current Direction	NW
D11	07 Oct 2016	Wave Height Low (ft)	2
D11	07 Oct 2016	High Tide (ft)	4.4
D11	07 Oct 2016	High Tide Time	1253
D11	07 Oct 2016	Low Tide (ft)	2.8
D11	07 Oct 2016	Low Tide Time	612
D11	07 Oct 2016	Comments	Seagrass; 12 Persons; 14 Surfers; Water clear
D11	13 Oct 2016	Arrive Time	1148
D11	13 Oct 2016	Weather	Sunny
D11	13 Oct 2016	Wind Speed (kts)	6
D11	13 Oct 2016	Wind Dir	W
D11	13 Oct 2016	Animal Life	None
D11	13 Oct 2016	Floatables	None
D11	13 Oct 2016	Water Color	Green
D11	13 Oct 2016	Current Direction	N
D11	13 Oct 2016	Wave Height Low (ft)	3
D11	13 Oct 2016	High Tide (ft)	5.3
D11	13 Oct 2016	High Tide Time	747
D11	13 Oct 2016	Low Tide (ft)	0.8
D11	13 Oct 2016	Low Tide Time	1354
D11	13 Oct 2016	Comments	Water clear
D11	19 Oct 2016	Arrive Time	1035
D11	19 Oct 2016	Weather	Sunny
D11	19 Oct 2016	Wind Speed (kts)	3
D11	19 Oct 2016	Wind Dir	SW
D11	19 Oct 2016	Animal Life	None
D11	19 Oct 2016	Floatables	None
D11	19 Oct 2016	Water Color	Green
D11	19 Oct 2016	Current Direction	SW
D11	19 Oct 2016	Wave Height Low (ft)	3
D11	19 Oct 2016	High Tide (ft)	6.1
D11	19 Oct 2016	High Tide Time	1134
D11	19 Oct 2016	Low Tide (ft)	1.6
D11	19 Oct 2016	Low Tide Time	526
D11	19 Oct 2016	Comments	Kelp; Seagrass; 1 Surfer; Water turbid
D11	25 Oct 2016	Arrive Time	1112

Station	Date	Parameter	Value
D11	25 Oct 2016	Weather	Sunny
D11	25 Oct 2016	Wind Speed (kts)	1.4
D11	25 Oct 2016	Wind Dir	W
D11	25 Oct 2016	Animal Life	None
D11	25 Oct 2016	Floatables	None
D11	25 Oct 2016	Water Color	Green
D11	25 Oct 2016	Current Direction	S
D11	25 Oct 2016	Wave Height Low (ft)	2
D11	25 Oct 2016	High Tide (ft)	4.9
D11	25 Oct 2016	High Tide Time	701
D11	25 Oct 2016	Low Tide (ft)	1.5
D11	25 Oct 2016	Low Tide Time	1304
D11	25 Oct 2016	Comments	1 Surfer; Water clear
D11	31 Oct 2016	Arrive Time	1129
D11	31 Oct 2016	Weather	Partly Cloudy
D11	31 Oct 2016	Wind Speed (kts)	2.3
D11	31 Oct 2016	Wind Dir	E
D11	31 Oct 2016	Animal Life	None
D11	31 Oct 2016	Floatables	None
D11	31 Oct 2016	Water Color	Green
D11	31 Oct 2016	Current Direction	N
D11	31 Oct 2016	Wave Height Low (ft)	3
D11	31 Oct 2016	High Tide (ft)	5.7
D11	31 Oct 2016	High Tide Time	936
D11	31 Oct 2016	Low Tide (ft)	0.1
D11	31 Oct 2016	Low Tide Time	1628
D11	31 Oct 2016	Comments	Kelp; Seagrass; 4 Persons; 17 Surfers; Water clear
D12	01 Oct 2016	Arrive Time	910
D12	01 Oct 2016	Weather	Sunny
D12	01 Oct 2016	Wind Speed (kts)	1.1
D12	01 Oct 2016	Wind Dir	W
D12	01 Oct 2016	Animal Life	None
D12	01 Oct 2016	Floatables	None
D12	01 Oct 2016	Water Color	Green
D12	01 Oct 2016	Current Direction	N
D12	01 Oct 2016	Wave Height Low (ft)	3
D12	01 Oct 2016	High Tide (ft)	5.4
D12	01 Oct 2016	High Tide Time	948
D12	01 Oct 2016	Low Tide (ft)	0.7
D12	01 Oct 2016	Low Tide Time	344
D12	01 Oct 2016	Comments	2 Surfers; Water clear
D12	07 Oct 2016	Arrive Time	1102
D12	07 Oct 2016	Weather	Partly Cloudy
D12	07 Oct 2016	Wind Speed (kts)	6.6
D12	07 Oct 2016	Wind Dir	NW
D12	07 Oct 2016	Animal Life	None
D12	07 Oct 2016	Floatables	None
D12	07 Oct 2016	Water Color	Green
D12	07 Oct 2016	Current Direction	NW
D12	07 Oct 2016	Wave Height Low (ft)	2
D12	07 Oct 2016	High Tide (ft)	4.4
D12	07 Oct 2016	High Tide Time	1253

Station	Date	Parameter	Value
D12	07 Oct 2016	Low Tide (ft)	2.8
D12	07 Oct 2016	Low Tide Time	612
D12	07 Oct 2016	Comments	Seagrass; 12 Surfers; Water clear
D12	13 Oct 2016	Arrive Time	1215
D12	13 Oct 2016	Weather	Sunny
D12	13 Oct 2016	Wind Speed (kts)	6.5
D12	13 Oct 2016	Wind Dir	W
D12	13 Oct 2016	Animal Life	None
D12	13 Oct 2016	Floatables	None
D12	13 Oct 2016	Water Color	Green
D12	13 Oct 2016	Current Direction	N
D12	13 Oct 2016	Wave Height Low (ft)	3
D12	13 Oct 2016	High Tide (ft)	5.3
D12	13 Oct 2016	High Tide Time	747
D12	13 Oct 2016	Low Tide (ft)	0.8
D12	13 Oct 2016	Low Tide Time	1354
D12	13 Oct 2016	Comments	6 Persons; Water clear
D12	19 Oct 2016	Arrive Time	1057
D12	19 Oct 2016	Weather	Sunny
D12	19 Oct 2016	Wind Speed (kts)	3
D12	19 Oct 2016	Wind Dir	SW
D12	19 Oct 2016	Animal Life	None
D12	19 Oct 2016	Floatables	None
D12	19 Oct 2016	Water Color	Green
D12	19 Oct 2016	Current Direction	SW
D12	19 Oct 2016	Wave Height Low (ft)	3
D12	19 Oct 2016	High Tide (ft)	6.1
D12	19 Oct 2016	High Tide Time	1134
D12	19 Oct 2016	Low Tide (ft)	1.6
D12	19 Oct 2016	Low Tide Time	526
D12	19 Oct 2016	Comments	None
D12	25 Oct 2016	Arrive Time	1137
D12	25 Oct 2016	Weather	Sunny
D12	25 Oct 2016	Wind Speed (kts)	1.1
D12	25 Oct 2016	Wind Dir	W
D12	25 Oct 2016	Animal Life	None
D12	25 Oct 2016	Floatables	None
D12	25 Oct 2016	Water Color	Green
D12	25 Oct 2016	Current Direction	S
D12	25 Oct 2016	Wave Height Low (ft)	2
D12	25 Oct 2016	High Tide (ft)	4.9
D12	25 Oct 2016	High Tide Time	701
D12	25 Oct 2016	Low Tide (ft)	1.5
D12	25 Oct 2016	Low Tide Time	1304
D12	25 Oct 2016	Comments	Water clear
D12	31 Oct 2016	Arrive Time	1147
D12	31 Oct 2016	Weather	Partly Cloudy
D12	31 Oct 2016	Wind Speed (kts)	2.3
D12	31 Oct 2016	Wind Dir	E
D12	31 Oct 2016	Animal Life	None
D12	31 Oct 2016	Floatables	None

Station	Date	Parameter	Value
D12	31 Oct 2016	Water Color	Green
D12	31 Oct 2016	Current Direction	N
D12	31 Oct 2016	Wave Height Low (ft)	3
D12	31 Oct 2016	High Tide (ft)	5.7
D12	31 Oct 2016	High Tide Time	936
D12	31 Oct 2016	Low Tide (ft)	0.1
D12	31 Oct 2016	Low Tide Time	1628
D12	31 Oct 2016	Comments	Kelp; Seagrass; 17 Persons; 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 Oct 2016	13*	7*	7*	3*	2*	2*	3*	2*
02 Oct 2016	13*	7*	7*	3*	2*	2*	3*	2*
03 Oct 2016	13*	7*	7*	3*	2*	2*	3*	2*
04 Oct 2016	13*	7*	7*	3*	2*	2*	3*	2*
05 Oct 2016	13*	7*	7*	3*	2*	2*	3*	2*
06 Oct 2016	14*	5*	5*	2*	2*	2*	4*	2*
07 Oct 2016	14*	5*	5*	2*	2*	2*	4*	2*
08 Oct 2016	12*	6*	6*	2*	2*	2*	4*	2*
09 Oct 2016	12*	6*	6*	2*	2*	2*	4*	2*
10 Oct 2016	12*	6*	6*	2*	2*	2*	4*	2*
11 Oct 2016	12*	6*	6*	2*	2*	2*	4*	2*
12 Oct 2016	12*	6*	6*	2*	2*	2*	4*	2*
13 Oct 2016	12*	6*	6*	2*	2*	2*	4*	2*
14 Oct 2016	12*	8*	20*	2*	2*	2*	4*	2*
15 Oct 2016	12*	8*	20*	2*	2*	2*	4*	2*
16 Oct 2016	12*	8*	20*	2*	2*	2*	4*	2*
17 Oct 2016	12*	8*	20*	2*	2*	2*	4*	2*
18 Oct 2016	12*	8*	20*	2*	2*	2*	4*	2*
19 Oct 2016	4*	8*	21*	2*	3*	2*	4*	2*
20 Oct 2016	5*	6*	13*	2*	4*	2*	4*	2*
21 Oct 2016	5*	6*	13*	2*	4*	2*	4*	2*
22 Oct 2016	5*	6*	13*	2*	4*	2*	4*	2*
23 Oct 2016	5*	6*	13*	2*	4*	2*	4*	2*
24 Oct 2016	5*	6*	13*	2*	4*	2*	4*	2*
25 Oct 2016	5*	8*	20*	2*	4*	2*	4*	2*
26 Oct 2016	4*	6*	11*	2*	3*	2*	4*	2*
27 Oct 2016	4*	6*	11*	2*	3*	2*	4*	2*
28 Oct 2016	4*	6*	11*	2*	3*	2*	4*	2*
29 Oct 2016	4*	6*	11*	2*	3*	2*	4*	2*
30 Oct 2016	4*	6*	11*	2*	3*	2*	4*	2*
31 Oct 2016	4	5	8	2	3	2	3	2

* Geometric mean calculated using n<5

Table 3.2

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

Date	A1	A6	A7	C4	C5	C6	C7	C8
01 Oct 2016	4*	2*	2*	2*	2*	2*	2*	2*
02 Oct 2016	4*	2*	2*	2*	2*	2*	2*	2*
03 Oct 2016	4*	2*	2*	2*	2*	2*	2*	2*
04 Oct 2016	4*	2*	2*	2*	2*	2*	2*	2*
05 Oct 2016	4*	2*	2*	2*	2*	2*	2*	2*
06 Oct 2016	5*	3*	2*	2*	2*	2*	2*	2*
07 Oct 2016	5*	3*	2*	2*	2*	2*	2*	2*
08 Oct 2016	4*	3*	2*	2*	2*	2*	2*	2*
09 Oct 2016	4*	3*	2*	2*	2*	2*	2*	2*
10 Oct 2016	4*	3*	2*	2*	2*	2*	2*	2*
11 Oct 2016	4*	3*	2*	2*	2*	2*	2*	2*
12 Oct 2016	4*	3*	2*	2*	2*	2*	2*	2*
13 Oct 2016	4*	3*	2*	2*	2*	2*	2*	2*
14 Oct 2016	4*	3*	4*	2*	2*	2*	2*	2*
15 Oct 2016	4*	3*	4*	2*	2*	2*	2*	2*
16 Oct 2016	4*	3*	4*	2*	2*	2*	2*	2*
17 Oct 2016	4*	3*	4*	2*	2*	2*	2*	2*
18 Oct 2016	4*	3*	4*	2*	2*	2*	2*	2*
19 Oct 2016	2*	3*	4*	2*	2*	2*	2*	2*
20 Oct 2016	2*	2*	4*	2*	2*	2*	2*	2*
21 Oct 2016	2*	2*	4*	2*	2*	2*	2*	2*
22 Oct 2016	2*	2*	4*	2*	2*	2*	2*	2*
23 Oct 2016	2*	2*	4*	2*	2*	2*	2*	2*
24 Oct 2016	2*	2*	4*	2*	2*	2*	2*	2*
25 Oct 2016	2*	3*	4*	2*	2*	2*	2*	2*
26 Oct 2016	2*	2*	4*	2*	2*	2*	2*	2*
27 Oct 2016	2*	2*	4*	2*	2*	2*	2*	2*
28 Oct 2016	2*	2*	4*	2*	2*	2*	2*	2*
29 Oct 2016	2*	2*	4*	2*	2*	2*	2*	2*
30 Oct 2016	2*	2*	4*	2*	2*	2*	2*	2*
31 Oct 2016	2	2	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 Oct 2016	3*	2*	2*	2*	2*	2*	2*	2*
02 Oct 2016	3*	2*	2*	2*	2*	2*	2*	2*
03 Oct 2016	3*	2*	2*	2*	2*	2*	2*	2*
04 Oct 2016	3*	2*	2*	2*	2*	2*	2*	2*
05 Oct 2016	3*	2*	2*	2*	2*	2*	2*	2*
06 Oct 2016	3*	2*	2*	2*	2*	2*	2*	2*
07 Oct 2016	3*	2*	2*	2*	2*	2*	2*	2*
08 Oct 2016	3*	2*	2*	2*	2*	2*	2*	2*
09 Oct 2016	3*	2*	2*	2*	2*	2*	2*	2*
10 Oct 2016	3*	2*	2*	2*	2*	2*	2*	2*
11 Oct 2016	3*	2*	2*	2*	2*	2*	2*	2*
12 Oct 2016	3*	2*	2*	2*	2*	2*	2*	2*
13 Oct 2016	3*	2*	2*	2*	2*	2*	2*	2*
14 Oct 2016	3*	2*	2*	2*	2*	2*	2*	2*
15 Oct 2016	3*	2*	2*	2*	2*	2*	2*	2*
16 Oct 2016	3*	2*	2*	2*	2*	2*	2*	2*
17 Oct 2016	3*	2*	2*	2*	2*	2*	2*	2*
18 Oct 2016	3*	2*	2*	2*	2*	2*	2*	2*
19 Oct 2016	2*	2*	2*	2*	2*	2*	2*	2*
20 Oct 2016	2*	2*	2*	2*	2*	2*	2*	2*
21 Oct 2016	2*	2*	2*	2*	2*	2*	2*	2*
22 Oct 2016	2*	2*	2*	2*	2*	2*	2*	2*
23 Oct 2016	2*	2*	2*	2*	2*	2*	2*	2*
24 Oct 2016	2*	2*	2*	2*	2*	2*	2*	2*
25 Oct 2016	2*	2*	2*	2*	2*	2*	2*	2*
26 Oct 2016	2*	2*	2*	2*	2*	2*	2*	2*
27 Oct 2016	2*	2*	2*	2*	2*	2*	2*	2*
28 Oct 2016	2*	2*	2*	2*	2*	2*	2*	2*
29 Oct 2016	2*	2*	2*	2*	2*	2*	2*	2*
30 Oct 2016	2*	2*	2*	2*	2*	2*	2*	2*
31 Oct 2016	2	2	2	2	3	2	2	2

* Geometric mean calculated using n<5

Table 3.4

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

Date	A1	A6	A7	C4	C5	C6	C7	C8
08 Oct 2016	IC							
14 Oct 2016	IC							
20 Oct 2016	IC							
26 Oct 2016	IC							
31 Oct 2016	IC							

IC = In Compliance

E = Exceedance

ns = not sampled

Table 3.5

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

Date	A1	A6	A7	C4	C5	C6	C7	C8
08 Oct 2016	IC							
14 Oct 2016	IC							
20 Oct 2016	IC							
26 Oct 2016	IC							
31 Oct 2016	IC							

IC = In Compliance

E = Exceedance

ns = not sampled

Table 3.6

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

Date	A1	A6	A7	C4	C5	C6	C7	C8
08 Oct 2016	IC							
14 Oct 2016	IC							
20 Oct 2016	IC							
26 Oct 2016	IC							
31 Oct 2016	IC							

IC = In Compliance

E = Exceedance

ns = not sampled

Table 3.7

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

Date	A1	A6	A7	C4	C5	C6	C7	C8
08 Oct 2016	IC							
14 Oct 2016	IC							
20 Oct 2016	IC							
26 Oct 2016	IC							
31 Oct 2016	IC							

IC = In Compliance

E = Exceedance

ns = not sampled

Table 3.8

Summary of water quality parameters at the PLOO kelp stations for each sample date. Densities of total coliform (Total), fecal coliform (Fecal) and *Enterococcus* (Entero) bacteria are reported as CFU/100 mL; the fecal:total coliform ratio (F:T) is unitless; ammonium (N-NH₃) values are reported as mg/L; values for temperature (Temp, °C), transmissivity (XMS, %), dissolved oxygen (DO, mg/L), salinity (Sal, ppt) and pH were extracted from CTD profile data for depths closest to those at which the bacteriological samples were collected. Comments follow the data summary.

Station	Date	Time	Depth	Total	Fecal	Entero	F:T	N-NH ₃	Temp	XMS	DO	Sal	pH
A1	08 Oct 2016	755	1	<2	<2	<2	1.00	ns	19.8	83.44	8.4	33.40	8.2
A1	08 Oct 2016	755	12	6e	2e	<2	0.33	ns	15.1	83.22	7.3	33.26	8.1
A1	08 Oct 2016	755	18	14e	2e	<2	0.14	ns	14.0	84.08	6.8	33.24	8.0
A1	14 Oct 2016	808	1	<2	<2	<2	1.00	ns	17.3	82.52	8.5	33.33	8.2
A1	14 Oct 2016	808	12	<2	<2	<2	1.00	ns	17.1	82.23	7.8	33.33	8.2
A1	14 Oct 2016	808	18	2e	<2	<2	1.00	ns	12.6	85.51	6.3	33.29	8.0
A1	20 Oct 2016	840	1	2e	<2	<2	1.00	ns	15.8	76.44	8.0	33.32	8.1
A1	20 Oct 2016	840	12	8e	<2	<2	0.25	ns	14.0	83.57	6.7	33.28	8.1
A1	20 Oct 2016	840	18	24e	4e	<2	0.17	ns	13.2	83.83	6.6	33.28	8.0
A1	26 Oct 2016	811	1	<2	<2	<2	1.00	ns	17.8	85.66	8.4	33.34	8.2
A1	26 Oct 2016	811	12	<2	<2	<2	1.00	ns	17.0	81.58	8.7	33.30	8.2
A1	26 Oct 2016	811	18	<2	<2	<2	1.00	ns	15.8	79.39	7.7	33.26	8.2
A1	31 Oct 2016	816	1	<2	<2	<2	1.00	ns	16.7	79.41	7.9	33.31	8.1
A1	31 Oct 2016	816	12	<2	<2	<2	1.00	ns	14.8	85.12	6.7	33.27	8.1
A1	31 Oct 2016	816	18	6e	<2	<2	0.33	ns	13.9	86.39	6.9	33.25	8.0
C4	08 Oct 2016	952	1	<2	<2	<2	1.00	ns	19.8	82.59	8.4	33.40	8.2
C4	08 Oct 2016	952	3	<2	<2	<2	1.00	ns	19.7	82.66	8.3	33.40	8.2
C4	08 Oct 2016	952	9	<2	<2	<2	1.00	ns	16.2	83.28	6.7	33.27	8.1
C4	14 Oct 2016	943	1	<2	<2	<2	1.00	ns	16.7	81.18	6.8	33.32	8.1
C4	14 Oct 2016	943	3	<2	<2	<2	1.00	ns	15.1	82.62	7.2	33.29	8.1
C4	14 Oct 2016	943	9	<2	<2	<2	1.00	ns	14.4	70.34	6.6	33.27	8.0
C4	20 Oct 2016	1021	1	<2	<2	<2	1.00	ns	16.4	69.26	8.3	33.32	8.1
C4	20 Oct 2016	1021	3	<2	<2	<2	1.00	ns	16.0	66.21	8.2	33.32	8.1
C4	20 Oct 2016	1021	9	2e	<2	<2	1.00	ns	14.2	81.01	6.2	33.30	8.1
C4	26 Oct 2016	946	1	2e	2e	<2	1.00	ns	17.4	58.39	7.8	33.32	8.1
C4	26 Oct 2016	946	3	2e	<2	<2	1.00	ns	17.2	54.08	7.8	33.32	8.1
C4	26 Oct 2016	946	9	6e	6e	<2	1.00	ns	16.4	60.03	6.3	33.30	8.1
C4	31 Oct 2016	959	1	<2	<2	2e	1.00	ns	17.0	77.78	7.9	33.21	8.1
C4	31 Oct 2016	959	3	<2	<2	<2	1.00	ns	16.8	75.76	8.2	33.34	8.1
C4	31 Oct 2016	959	9	<2	<2	4e	1.00	ns	16.1	79.68	7.0	33.28	8.1
C5	08 Oct 2016	943	1	2e	<2	<2	1.00	ns	19.7	81.38	8.5	33.40	8.2
C5	08 Oct 2016	943	3	4e	<2	<2	0.50	ns	19.6	81.74	8.2	33.40	8.2
C5	08 Oct 2016	943	9	2e	<2	<2	1.00	ns	15.8	84.07	8.0	33.28	8.1
C5	14 Oct 2016	929	1	<2	<2	<2	1.00	ns	17.2	78.23	7.6	33.33	8.2
C5	14 Oct 2016	929	3	<2	<2	<2	1.00	ns	16.6	78.39	6.5	33.30	8.1

Station	Date	Time	Depth	Total	Fecal	Enteric	F:T	N-NH3	Temp	XMS	DO	Sal	pH
C5	14 Oct 2016	929	9	4e	<2	<2	0.50	ns	14.0	84.10	6.8	33.25	8.0
C5	20 Oct 2016	1007	1	<20	<2	<2	0.10	ns	16.1	62.52	7.0	33.31	8.0
C5	20 Oct 2016	1007	3	2e	<2	<2	1.00	ns	15.8	65.22	6.6	33.30	8.0
C5	20 Oct 2016	1007	9	2e	2e	<2	1.00	ns	14.3	75.93	6.1	33.29	8.0
C5	26 Oct 2016	935	1	<2	<2	<2	1.00	ns	17.4	80.73	8.9	33.31	8.2
C5	26 Oct 2016	935	3	<2	<2	<2	1.00	ns	17.3	79.05	8.8	33.31	8.2
C5	26 Oct 2016	935	9	2e	<2	<2	1.00	ns	16.2	78.60	7.0	33.29	8.2
C5	31 Oct 2016	948	1	<2	<2	20e	1.00	ns	17.4	64.48	6.9	33.30	8.0
C5	31 Oct 2016	948	3	4e	<2	<2	0.50	ns	17.1	64.65	6.0	33.30	8.0
C5	31 Oct 2016	948	9	2e	<2	<2	1.00	ns	15.1	78.39	6.3	33.27	8.0
A6	08 Oct 2016	844	1	<2	<2	<2	1.00	ns	20.1	82.65	8.4	33.41	8.2
A6	08 Oct 2016	844	12	4e	<2	<2	0.50	ns	15.3	83.77	7.6	33.24	8.1
A6	08 Oct 2016	844	18	32e	6e	<2	0.19	ns	14.3	85.04	7.4	33.26	8.1
A6	14 Oct 2016	831	1	<2	<2	<2	1.00	ns	17.4	82.85	8.3	33.34	8.2
A6	14 Oct 2016	831	12	28e	2e	<2	0.07	ns	14.5	84.17	6.5	33.24	8.1
A6	14 Oct 2016	831	18	24e	4e	2e	0.17	ns	13.1	86.17	6.0	33.27	8.0
A6	20 Oct 2016	908	1	2e	<2	<2	1.00	ns	15.9	76.74	8.0	33.31	8.1
A6	20 Oct 2016	908	12	4e	<2	<2	0.50	ns	13.8	84.28	6.9	33.27	8.1
A6	20 Oct 2016	908	18	2e	<2	<2	1.00	ns	13.5	84.47	6.9	33.28	8.0
A6	26 Oct 2016	838	1	<2	<2	<2	1.00	ns	17.7	84.61	8.5	33.33	8.2
A6	26 Oct 2016	838	12	<2	<2	<2	1.00	ns	17.0	81.85	8.6	33.29	8.2
A6	26 Oct 2016	838	18	<2	<2	<2	1.00	ns	15.2	80.94	7.6	33.27	8.1
A6	31 Oct 2016	843	1	<2	<2	<2	1.00	ns	17.3	81.40	8.0	33.32	8.1
A6	31 Oct 2016	843	12	<2	<2	<2	1.00	ns	15.0	84.61	6.8	33.27	8.1
A6	31 Oct 2016	843	18	4e	<2	<2	0.50	ns	13.7	86.67	6.7	33.26	8.0
C6	08 Oct 2016	933	1	<2	<2	<2	1.00	ns	19.8	82.90	8.5	33.40	8.2
C6	08 Oct 2016	933	3	<2	<2	<2	1.00	ns	19.8	82.94	8.3	33.40	8.2
C6	08 Oct 2016	933	9	2e	<2	<2	1.00	ns	16.3	85.35	7.7	33.29	8.1
C6	14 Oct 2016	919	1	<2	<2	<2	1.00	ns	17.5	70.16	7.5	33.34	8.1
C6	14 Oct 2016	919	3	2e	<2	<2	1.00	ns	16.8	77.62	7.4	33.30	8.1
C6	14 Oct 2016	919	9	<2	<2	<2	1.00	ns	14.9	75.54	6.9	33.27	8.1
C6	20 Oct 2016	956	1	<2	<2	<2	1.00	ns	16.1	71.29	7.8	33.31	8.1
C6	20 Oct 2016	956	3	4e	<2	<2	0.50	ns	16.0	71.21	7.4	33.30	8.1
C6	20 Oct 2016	956	9	<2	<2	<2	1.00	ns	14.3	76.61	6.2	33.30	8.0
C6	26 Oct 2016	923	1	<2	<2	<2	1.00	ns	17.4	83.64	9.0	33.30	8.3
C6	26 Oct 2016	923	3	<2	<2	<2	1.00	ns	17.3	82.90	8.7	33.30	8.3
C6	26 Oct 2016	923	9	<2	<2	<2	1.00	ns	15.4	82.26	6.5	33.26	8.1
C6	31 Oct 2016	936	1	<2	<2	2e	1.00	ns	17.5	74.44	7.5	33.31	8.1
C6	31 Oct 2016	936	3	<2	2e	<2	1.00	ns	17.5	74.94	7.3	33.31	8.1
C6	31 Oct 2016	936	9	<2	<2	<2	1.00	ns	15.2	79.30	6.2	33.27	8.0
A7	08 Oct 2016	830	1	<2	<2	<2	1.00	ns	19.9	83.12	8.5	33.40	8.2

Station	Date	Time	Depth	Total	Fecal	Enteric	F:T	N-NH3	Temp	XMS	DO	Sal	pH
A7	08 Oct 2016	830	12	2e	<2	<2	1.00	ns	15.3	82.64	7.7	33.25	8.1
A7	08 Oct 2016	830	18	26e	2e	<2	0.08	ns	14.0	85.90	6.7	33.26	8.0
A7	14 Oct 2016	819	1	<2	<2	<2	1.00	ns	17.2	82.88	8.5	33.33	8.2
A7	14 Oct 2016	819	12	14e	<2	2e	0.14	ns	14.8	83.69	5.9	33.26	8.1
A7	14 Oct 2016	819	18	820	56	6e	0.07	ns	12.6	84.08	6.1	33.28	8.0
A7	20 Oct 2016	854	1	4e	<2	<2	0.50	ns	15.3	78.14	7.8	33.00	8.1
A7	20 Oct 2016	854	12	<2	<2	<2	1.00	ns	13.8	83.51	6.4	33.28	8.0
A7	20 Oct 2016	854	18	2e	2e	2e	1.00	ns	13.4	84.14	6.6	33.29	8.0
A7	26 Oct 2016	824	1	<2	<2	<2	1.00	ns	17.8	85.51	8.4	33.34	8.2
A7	26 Oct 2016	824	12	<2	<2	<2	1.00	ns	16.9	81.41	8.2	33.29	8.2
A7	26 Oct 2016	824	18	<2	<2	<2	1.00	ns	15.5	82.20	7.8	33.26	8.2
A7	31 Oct 2016	830	1	<2	<2	<2	1.00	ns	16.8	79.15	8.0	33.30	8.1
A7	31 Oct 2016	830	12	<2	<2	<2	1.00	ns	15.8	79.83	7.2	33.26	8.1
A7	31 Oct 2016	830	18	2e	<2	<2	1.00	ns	13.7	86.87	6.8	33.26	8.0
C7	08 Oct 2016	900	1	<2	<2	<2	1.00	ns	20.0	82.21	8.5	33.40	8.2
C7	08 Oct 2016	900	12	<2	<2	<2	1.00	ns	15.7	81.06	8.3	33.25	8.1
C7	08 Oct 2016	900	18	10e	6e	<2	0.60	ns	14.4	84.93	7.4	33.26	8.1
C7	14 Oct 2016	849	1	<2	<2	<2	1.00	ns	16.7	77.43	8.1	33.31	8.2
C7	14 Oct 2016	849	12	2e	2e	<2	1.00	ns	13.5	85.55	6.6	33.26	8.0
C7	14 Oct 2016	849	18	22e	2e	<2	0.09	ns	13.2	85.82	6.6	33.28	8.0
C7	20 Oct 2016	924	1	<2	<2	<2	1.00	ns	16.2	77.61	8.1	33.31	8.2
C7	20 Oct 2016	924	12	2e	<2	<2	1.00	ns	14.2	82.45	7.0	33.28	8.1
C7	20 Oct 2016	924	18	<2	<2	<2	1.00	ns	13.6	82.93	6.1	33.29	8.0
C7	26 Oct 2016	852	1	<2	<2	<2	1.00	ns	17.2	82.11	9.0	33.29	8.2
C7	26 Oct 2016	852	12	<2	<2	<2	1.00	ns	16.9	82.76	8.6	33.29	8.2
C7	26 Oct 2016	852	18	<2	<2	2e	1.00	ns	14.3	84.00	6.8	33.26	8.1
C7	31 Oct 2016	858	1	<2	<2	<2	1.00	ns	17.7	83.46	8.1	33.35	8.2
C7	31 Oct 2016	858	12	2e	<2	<2	1.00	ns	14.7	85.65	7.2	33.25	8.1
C7	31 Oct 2016	858	18	4e	<2	<2	0.50	ns	14.0	85.85	6.8	33.26	8.0
C8	08 Oct 2016	912	1	<2	<2	<2	1.00	ns	19.9	82.58	8.5	33.41	8.2
C8	08 Oct 2016	912	12	<2	<2	<2	1.00	ns	15.0	80.78	7.9	33.23	8.1
C8	08 Oct 2016	912	18	4e	2e	<2	0.50	ns	14.5	82.62	6.7	33.24	8.1
C8	14 Oct 2016	901	1	<2	<2	2e	1.00	ns	16.4	79.50	8.5	33.31	8.2
C8	14 Oct 2016	901	12	<2	<2	<2	1.00	ns	14.0	84.42	6.9	33.27	8.0
C8	14 Oct 2016	901	18	<2	<2	<2	1.00	ns	13.9	82.74	6.8	33.28	8.0
C8	20 Oct 2016	936	1	<2	<2	2e	1.00	ns	16.6	74.71	8.4	33.32	8.2
C8	20 Oct 2016	936	12	<2	<2	<2	1.00	ns	14.8	77.72	6.9	33.27	8.1
C8	20 Oct 2016	936	18	4e	<2	<2	0.50	ns	13.5	83.83	6.0	33.27	8.0
C8	26 Oct 2016	903	1	<2	<2	<2	1.00	ns	17.1	81.77	9.0	33.30	8.2
C8	26 Oct 2016	903	12	<2	<2	<2	1.00	ns	16.3	81.52	8.3	33.28	8.2
C8	26 Oct 2016	903	18	4e	<2	<2	0.50	ns	14.9	82.92	6.5	33.23	8.2

Station	Date	Time	Depth	Total	Fecal	Enter	F:T	N-NH3	Temp	XMS	DO	Sal	pH
C8	31 Oct 2016	915	1	<2	<2	4e	1.00	ns	17.8	83.93	7.8	33.33	8.2
C8	31 Oct 2016	915	12	<2	<2	<2	1.00	ns	15.1	84.40	6.9	33.27	8.1
C8	31 Oct 2016	915	18	2e	<2	<2	1.00	ns	14.2	85.56	6.7	33.27	8.0

ns = not sampled

ND = no data

Table 3.9

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

Station	Date	Parameter	Value
A1	08 Oct 2016	Depth (m)	19
A1	08 Oct 2016	Arrive Time	755
A1	08 Oct 2016	Depart Time	823
A1	08 Oct 2016	Air Temp (C)	20
A1	08 Oct 2016	Weather	Clear
A1	08 Oct 2016	Visibility (mi)	10
A1	08 Oct 2016	Wind Speed (kts)	0
A1	08 Oct 2016	Wind Dir	
A1	08 Oct 2016	Water Color	Bluish-Green
A1	08 Oct 2016	Wave Ht Low (ft)	4
A1	08 Oct 2016	Wave Period (sec)	16
A1	08 Oct 2016	Sea State	Calm
A1	08 Oct 2016	High Tide (ft)	4.18
A1	08 Oct 2016	High Tide Time	1420
A1	08 Oct 2016	Low Tide (ft)	3.1
A1	08 Oct 2016	Low Tide Time	750
A1	08 Oct 2016	Comments	Lobster floats; Kelp
A1	14 Oct 2016	Depth (m)	18
A1	14 Oct 2016	Arrive Time	808
A1	14 Oct 2016	Depart Time	819
A1	14 Oct 2016	Air Temp (C)	18
A1	14 Oct 2016	Weather	Overcast
A1	14 Oct 2016	Visibility (mi)	5
A1	14 Oct 2016	Wind Speed (kts)	3
A1	14 Oct 2016	Wind Dir	SE
A1	14 Oct 2016	Water Color	Greenish-Blue
A1	14 Oct 2016	Wave Ht Low (ft)	4
A1	14 Oct 2016	Wave Period (sec)	11
A1	14 Oct 2016	Sea State	Light chop
A1	14 Oct 2016	High Tide (ft)	5.73
A1	14 Oct 2016	High Tide Time	819
A1	14 Oct 2016	Low Tide (ft)	0.18
A1	14 Oct 2016	Low Tide Time	1437
A1	14 Oct 2016	Comments	Lobster floats
A1	20 Oct 2016	Depth (m)	18
A1	20 Oct 2016	Arrive Time	840
A1	20 Oct 2016	Depart Time	847
A1	20 Oct 2016	Air Temp (C)	17
A1	20 Oct 2016	Weather	Clear
A1	20 Oct 2016	Visibility (mi)	9
A1	20 Oct 2016	Wind Speed (kts)	3
A1	20 Oct 2016	Wind Dir	E
A1	20 Oct 2016	Water Color	Greenish-Blue
A1	20 Oct 2016	Wave Ht Low (ft)	4
A1	20 Oct 2016	Wave Period (sec)	11
A1	20 Oct 2016	Sea State	Calm
A1	20 Oct 2016	High Tide (ft)	5.62
A1	20 Oct 2016	High Tide Time	1228
A1	20 Oct 2016	Low Tide (ft)	2.16

Station	Date	Parameter	Value
A1	20 Oct 2016	Low Tide Time	619
A1	20 Oct 2016	Comments	
A1	26 Oct 2016	Depth (m)	18
A1	26 Oct 2016	Arrive Time	811
A1	26 Oct 2016	Depart Time	816
A1	26 Oct 2016	Air Temp (C)	17
A1	26 Oct 2016	Weather	Partly Cloudy
A1	26 Oct 2016	Visibility (mi)	6
A1	26 Oct 2016	Wind Speed (kts)	3
A1	26 Oct 2016	Wind Dir	SW
A1	26 Oct 2016	Water Color	Brownish-Green
A1	26 Oct 2016	Wave Ht Low (ft)	3
A1	26 Oct 2016	Wave Period (sec)	9
A1	26 Oct 2016	Sea State	Calm
A1	26 Oct 2016	High Tide (ft)	5.15
A1	26 Oct 2016	High Tide Time	732
A1	26 Oct 2016	Low Tide (ft)	1.05
A1	26 Oct 2016	Low Tide Time	1346
A1	26 Oct 2016	Comments	Kelp; Lobster floats
A1	31 Oct 2016	Depth (m)	19
A1	31 Oct 2016	Arrive Time	816
A1	31 Oct 2016	Depart Time	823
A1	31 Oct 2016	Air Temp (C)	17
A1	31 Oct 2016	Weather	Partly Cloudy
A1	31 Oct 2016	Visibility (mi)	9
A1	31 Oct 2016	Wind Speed (kts)	2
A1	31 Oct 2016	Wind Dir	W
A1	31 Oct 2016	Water Color	Bluish-Green
A1	31 Oct 2016	Wave Ht Low (ft)	5
A1	31 Oct 2016	Wave Period (sec)	13
A1	31 Oct 2016	Sea State	Light chop
A1	31 Oct 2016	High Tide (ft)	5.65
A1	31 Oct 2016	High Tide Time	936
A1	31 Oct 2016	Low Tide (ft)	0.05
A1	31 Oct 2016	Low Tide Time	1628
A1	31 Oct 2016	Comments	Lobster floats; Kelp
C4	08 Oct 2016	Depth (m)	11
C4	08 Oct 2016	Arrive Time	952
C4	08 Oct 2016	Depart Time	957
C4	08 Oct 2016	Air Temp (C)	20
C4	08 Oct 2016	Weather	Clear
C4	08 Oct 2016	Visibility (mi)	10
C4	08 Oct 2016	Wind Speed (kts)	5
C4	08 Oct 2016	Wind Dir	SW
C4	08 Oct 2016	Water Color	Green
C4	08 Oct 2016	Wave Ht Low (ft)	4
C4	08 Oct 2016	Wave Period (sec)	16
C4	08 Oct 2016	Sea State	Wind ripples
C4	08 Oct 2016	High Tide (ft)	4.18
C4	08 Oct 2016	High Tide Time	1420
C4	08 Oct 2016	Low Tide (ft)	3.1
C4	08 Oct 2016	Low Tide Time	750

Station	Date	Parameter	Value
C4	08 Oct 2016	Comments	Lobster floats; Kelp
C4	14 Oct 2016	Depth (m)	9
C4	14 Oct 2016	Arrive Time	943
C4	14 Oct 2016	Depart Time	946
C4	14 Oct 2016	Air Temp (C)	18
C4	14 Oct 2016	Weather	Partly Cloudy
C4	14 Oct 2016	Visibility (mi)	5
C4	14 Oct 2016	Wind Speed (kts)	3
C4	14 Oct 2016	Wind Dir	S
C4	14 Oct 2016	Water Color	Green
C4	14 Oct 2016	Wave Ht Low (ft)	4
C4	14 Oct 2016	Wave Period (sec)	11
C4	14 Oct 2016	Sea State	Light chop
C4	14 Oct 2016	High Tide (ft)	5.73
C4	14 Oct 2016	High Tide Time	819
C4	14 Oct 2016	Low Tide (ft)	0.18
C4	14 Oct 2016	Low Tide Time	1437
C4	14 Oct 2016	Comments	
C4	20 Oct 2016	Depth (m)	10
C4	20 Oct 2016	Arrive Time	1021
C4	20 Oct 2016	Depart Time	1024
C4	20 Oct 2016	Air Temp (C)	18
C4	20 Oct 2016	Weather	Clear
C4	20 Oct 2016	Visibility (mi)	9
C4	20 Oct 2016	Wind Speed (kts)	4
C4	20 Oct 2016	Wind Dir	S
C4	20 Oct 2016	Water Color	Green
C4	20 Oct 2016	Wave Ht Low (ft)	4
C4	20 Oct 2016	Wave Period (sec)	11
C4	20 Oct 2016	Sea State	Calm
C4	20 Oct 2016	High Tide (ft)	5.62
C4	20 Oct 2016	High Tide Time	1228
C4	20 Oct 2016	Low Tide (ft)	2.16
C4	20 Oct 2016	Low Tide Time	619
C4	20 Oct 2016	Comments	
C4	26 Oct 2016	Depth (m)	10
C4	26 Oct 2016	Arrive Time	946
C4	26 Oct 2016	Depart Time	947
C4	26 Oct 2016	Air Temp (C)	18
C4	26 Oct 2016	Weather	Continuous layer of clouds
C4	26 Oct 2016	Visibility (mi)	6
C4	26 Oct 2016	Wind Speed (kts)	3
C4	26 Oct 2016	Wind Dir	S
C4	26 Oct 2016	Water Color	Brownish-Green
C4	26 Oct 2016	Wave Ht Low (ft)	3
C4	26 Oct 2016	Wave Period (sec)	9
C4	26 Oct 2016	Sea State	Calm
C4	26 Oct 2016	High Tide (ft)	5.15
C4	26 Oct 2016	High Tide Time	732
C4	26 Oct 2016	Low Tide (ft)	1.05
C4	26 Oct 2016	Low Tide Time	1346
C4	26 Oct 2016	Comments	Kelp; Lobster floats

Station	Date	Parameter	Value
C4	31 Oct 2016	Depth (m)	9
C4	31 Oct 2016	Arrive Time	959
C4	31 Oct 2016	Depart Time	1009
C4	31 Oct 2016	Air Temp (C)	18
C4	31 Oct 2016	Weather	Partly Cloudy
C4	31 Oct 2016	Visibility (mi)	11
C4	31 Oct 2016	Wind Speed (kts)	1
C4	31 Oct 2016	Wind Dir	W
C4	31 Oct 2016	Water Color	Bluish-Green
C4	31 Oct 2016	Wave Ht Low (ft)	5
C4	31 Oct 2016	Wave Period (sec)	13
C4	31 Oct 2016	Sea State	Light chop
C4	31 Oct 2016	High Tide (ft)	5.65
C4	31 Oct 2016	High Tide Time	936
C4	31 Oct 2016	Low Tide (ft)	0.05
C4	31 Oct 2016	Low Tide Time	1628
C4	31 Oct 2016	Comments	Lobster floats; Bay/Rain effects in a lot of parameters - two casts same data on both casts
C5	08 Oct 2016	Depth (m)	9
C5	08 Oct 2016	Arrive Time	943
C5	08 Oct 2016	Depart Time	947
C5	08 Oct 2016	Air Temp (C)	20
C5	08 Oct 2016	Weather	Clear
C5	08 Oct 2016	Visibility (mi)	10
C5	08 Oct 2016	Wind Speed (kts)	5
C5	08 Oct 2016	Wind Dir	NW
C5	08 Oct 2016	Water Color	Bluish-Green
C5	08 Oct 2016	Wave Ht Low (ft)	4
C5	08 Oct 2016	Wave Period (sec)	16
C5	08 Oct 2016	Sea State	Wind ripples
C5	08 Oct 2016	High Tide (ft)	4.18
C5	08 Oct 2016	High Tide Time	1420
C5	08 Oct 2016	Low Tide (ft)	3.1
C5	08 Oct 2016	Low Tide Time	750
C5	08 Oct 2016	Comments	Lobster floats; Kelp
C5	14 Oct 2016	Depth (m)	11
C5	14 Oct 2016	Arrive Time	929
C5	14 Oct 2016	Depart Time	934
C5	14 Oct 2016	Air Temp (C)	18
C5	14 Oct 2016	Weather	Partly Cloudy
C5	14 Oct 2016	Visibility (mi)	5
C5	14 Oct 2016	Wind Speed (kts)	3
C5	14 Oct 2016	Wind Dir	E
C5	14 Oct 2016	Water Color	Green
C5	14 Oct 2016	Wave Ht Low (ft)	4
C5	14 Oct 2016	Wave Period (sec)	11
C5	14 Oct 2016	Sea State	Light chop
C5	14 Oct 2016	High Tide (ft)	5.73
C5	14 Oct 2016	High Tide Time	819
C5	14 Oct 2016	Low Tide (ft)	0.18
C5	14 Oct 2016	Low Tide Time	1437
C5	14 Oct 2016	Comments	

Station	Date	Parameter	Value
C5	20 Oct 2016	Depth (m)	10
C5	20 Oct 2016	Arrive Time	1007
C5	20 Oct 2016	Depart Time	1012
C5	20 Oct 2016	Air Temp (C)	19
C5	20 Oct 2016	Weather	Clear
C5	20 Oct 2016	Visibility (mi)	9
C5	20 Oct 2016	Wind Speed (kts)	1
C5	20 Oct 2016	Wind Dir	NE
C5	20 Oct 2016	Water Color	Green
C5	20 Oct 2016	Wave Ht Low (ft)	4
C5	20 Oct 2016	Wave Period (sec)	11
C5	20 Oct 2016	Sea State	Calm
C5	20 Oct 2016	High Tide (ft)	5.62
C5	20 Oct 2016	High Tide Time	1228
C5	20 Oct 2016	Low Tide (ft)	2.16
C5	20 Oct 2016	Low Tide Time	619
C5	20 Oct 2016	Comments	
C5	26 Oct 2016	Depth (m)	11
C5	26 Oct 2016	Arrive Time	935
C5	26 Oct 2016	Depart Time	937
C5	26 Oct 2016	Air Temp (C)	18
C5	26 Oct 2016	Weather	Continuous layer of clouds
C5	26 Oct 2016	Visibility (mi)	6
C5	26 Oct 2016	Wind Speed (kts)	3
C5	26 Oct 2016	Wind Dir	NE
C5	26 Oct 2016	Water Color	Brownish-Green
C5	26 Oct 2016	Wave Ht Low (ft)	3
C5	26 Oct 2016	Wave Period (sec)	9
C5	26 Oct 2016	Sea State	Calm
C5	26 Oct 2016	High Tide (ft)	5.15
C5	26 Oct 2016	High Tide Time	732
C5	26 Oct 2016	Low Tide (ft)	1.05
C5	26 Oct 2016	Low Tide Time	1346
C5	26 Oct 2016	Comments	Lobster floats; Kelp
C5	31 Oct 2016	Depth (m)	11
C5	31 Oct 2016	Arrive Time	948
C5	31 Oct 2016	Depart Time	954
C5	31 Oct 2016	Air Temp (C)	18
C5	31 Oct 2016	Weather	Partly Cloudy
C5	31 Oct 2016	Visibility (mi)	9
C5	31 Oct 2016	Wind Speed (kts)	1
C5	31 Oct 2016	Wind Dir	NW
C5	31 Oct 2016	Water Color	Green
C5	31 Oct 2016	Wave Ht Low (ft)	5
C5	31 Oct 2016	Wave Period (sec)	13
C5	31 Oct 2016	Sea State	Light chop
C5	31 Oct 2016	High Tide (ft)	5.65
C5	31 Oct 2016	High Tide Time	936
C5	31 Oct 2016	Low Tide (ft)	0.05
C5	31 Oct 2016	Low Tide Time	1628
C5	31 Oct 2016	Comments	Lobster floats

Station	Date	Parameter	Value
A6	08 Oct 2016	Depth (m)	19
A6	08 Oct 2016	Arrive Time	844
A6	08 Oct 2016	Depart Time	849
A6	08 Oct 2016	Air Temp (C)	20
A6	08 Oct 2016	Weather	Clear
A6	08 Oct 2016	Visibility (mi)	10
A6	08 Oct 2016	Wind Speed (kts)	4
A6	08 Oct 2016	Wind Dir	SE
A6	08 Oct 2016	Water Color	Bluish-Green
A6	08 Oct 2016	Wave Ht Low (ft)	4
A6	08 Oct 2016	Wave Period (sec)	16
A6	08 Oct 2016	Sea State	Calm
A6	08 Oct 2016	High Tide (ft)	4.18
A6	08 Oct 2016	High Tide Time	1420
A6	08 Oct 2016	Low Tide (ft)	3.1
A6	08 Oct 2016	Low Tide Time	750
A6	08 Oct 2016	Comments	Lobster floats; Kelp
A6	14 Oct 2016	Depth (m)	18
A6	14 Oct 2016	Arrive Time	831
A6	14 Oct 2016	Depart Time	837
A6	14 Oct 2016	Air Temp (C)	18
A6	14 Oct 2016	Weather	Partly Cloudy
A6	14 Oct 2016	Visibility (mi)	5
A6	14 Oct 2016	Wind Speed (kts)	7
A6	14 Oct 2016	Wind Dir	W
A6	14 Oct 2016	Water Color	Greenish-Blue
A6	14 Oct 2016	Wave Ht Low (ft)	4
A6	14 Oct 2016	Wave Period (sec)	11
A6	14 Oct 2016	Sea State	Light chop
A6	14 Oct 2016	High Tide (ft)	5.73
A6	14 Oct 2016	High Tide Time	819
A6	14 Oct 2016	Low Tide (ft)	0.18
A6	14 Oct 2016	Low Tide Time	1437
A6	14 Oct 2016	Comments	
A6	20 Oct 2016	Depth (m)	18
A6	20 Oct 2016	Arrive Time	908
A6	20 Oct 2016	Depart Time	913
A6	20 Oct 2016	Air Temp (C)	17
A6	20 Oct 2016	Weather	Clear
A6	20 Oct 2016	Visibility (mi)	9
A6	20 Oct 2016	Wind Speed (kts)	0
A6	20 Oct 2016	Wind Dir	
A6	20 Oct 2016	Water Color	Greenish-Blue
A6	20 Oct 2016	Wave Ht Low (ft)	4
A6	20 Oct 2016	Wave Period (sec)	11
A6	20 Oct 2016	Sea State	Calm
A6	20 Oct 2016	High Tide (ft)	5.62
A6	20 Oct 2016	High Tide Time	1228
A6	20 Oct 2016	Low Tide (ft)	2.16
A6	20 Oct 2016	Low Tide Time	619
A6	20 Oct 2016	Comments	
A6	26 Oct 2016	Depth (m)	18

Station	Date	Parameter	Value
A6	26 Oct 2016	Arrive Time	838
A6	26 Oct 2016	Depart Time	841
A6	26 Oct 2016	Air Temp (C)	17
A6	26 Oct 2016	Weather	Partly Cloudy
A6	26 Oct 2016	Visibility (mi)	6
A6	26 Oct 2016	Wind Speed (kts)	0
A6	26 Oct 2016	Wind Dir	
A6	26 Oct 2016	Water Color	Brownish-Green
A6	26 Oct 2016	Wave Ht Low (ft)	3
A6	26 Oct 2016	Wave Period (sec)	9
A6	26 Oct 2016	Sea State	Calm
A6	26 Oct 2016	High Tide (ft)	5.15
A6	26 Oct 2016	High Tide Time	732
A6	26 Oct 2016	Low Tide (ft)	1.05
A6	26 Oct 2016	Low Tide Time	1346
A6	26 Oct 2016	Comments	Lobster floats; Kelp
A6	31 Oct 2016	Depth (m)	18
A6	31 Oct 2016	Arrive Time	843
A6	31 Oct 2016	Depart Time	848
A6	31 Oct 2016	Air Temp (C)	18
A6	31 Oct 2016	Weather	Partly Cloudy
A6	31 Oct 2016	Visibility (mi)	9
A6	31 Oct 2016	Wind Speed (kts)	3
A6	31 Oct 2016	Wind Dir	NE
A6	31 Oct 2016	Water Color	Bluish-Green
A6	31 Oct 2016	Wave Ht Low (ft)	5
A6	31 Oct 2016	Wave Period (sec)	13
A6	31 Oct 2016	Sea State	Light chop
A6	31 Oct 2016	High Tide (ft)	5.65
A6	31 Oct 2016	High Tide Time	936
A6	31 Oct 2016	Low Tide (ft)	0.05
A6	31 Oct 2016	Low Tide Time	1628
A6	31 Oct 2016	Comments	Lobster floats; Kelp
C6	08 Oct 2016	Depth (m)	9
C6	08 Oct 2016	Arrive Time	933
C6	08 Oct 2016	Depart Time	937
C6	08 Oct 2016	Air Temp (C)	20
C6	08 Oct 2016	Weather	Clear
C6	08 Oct 2016	Visibility (mi)	10
C6	08 Oct 2016	Wind Speed (kts)	5
C6	08 Oct 2016	Wind Dir	SE
C6	08 Oct 2016	Water Color	Bluish-Green
C6	08 Oct 2016	Wave Ht Low (ft)	4
C6	08 Oct 2016	Wave Period (sec)	16
C6	08 Oct 2016	Sea State	Wind ripples
C6	08 Oct 2016	High Tide (ft)	4.18
C6	08 Oct 2016	High Tide Time	1420
C6	08 Oct 2016	Low Tide (ft)	3.1
C6	08 Oct 2016	Low Tide Time	750
C6	08 Oct 2016	Comments	Lobster floats; Kelp
C6	14 Oct 2016	Depth (m)	9
C6	14 Oct 2016	Arrive Time	919

Station	Date	Parameter	Value
C6	14 Oct 2016	Depart Time	924
C6	14 Oct 2016	Air Temp (C)	18
C6	14 Oct 2016	Weather	Partly Cloudy
C6	14 Oct 2016	Visibility (mi)	5
C6	14 Oct 2016	Wind Speed (kts)	3
C6	14 Oct 2016	Wind Dir	NW
C6	14 Oct 2016	Water Color	Green
C6	14 Oct 2016	Wave Ht Low (ft)	4
C6	14 Oct 2016	Wave Period (sec)	11
C6	14 Oct 2016	Sea State	Light chop
C6	14 Oct 2016	High Tide (ft)	5.73
C6	14 Oct 2016	High Tide Time	819
C6	14 Oct 2016	Low Tide (ft)	0.18
C6	14 Oct 2016	Low Tide Time	1437
C6	14 Oct 2016	Comments	
C6	20 Oct 2016	Depth (m)	9
C6	20 Oct 2016	Arrive Time	956
C6	20 Oct 2016	Depart Time	959
C6	20 Oct 2016	Air Temp (C)	18
C6	20 Oct 2016	Weather	Clear
C6	20 Oct 2016	Visibility (mi)	9
C6	20 Oct 2016	Wind Speed (kts)	1
C6	20 Oct 2016	Wind Dir	E
C6	20 Oct 2016	Water Color	Green
C6	20 Oct 2016	Wave Ht Low (ft)	4
C6	20 Oct 2016	Wave Period (sec)	11
C6	20 Oct 2016	Sea State	Calm
C6	20 Oct 2016	High Tide (ft)	5.62
C6	20 Oct 2016	High Tide Time	1228
C6	20 Oct 2016	Low Tide (ft)	2.16
C6	20 Oct 2016	Low Tide Time	619
C6	20 Oct 2016	Comments	
C6	26 Oct 2016	Depth (m)	9
C6	26 Oct 2016	Arrive Time	923
C6	26 Oct 2016	Depart Time	927
C6	26 Oct 2016	Air Temp (C)	18
C6	26 Oct 2016	Weather	Continuous layer of clouds
C6	26 Oct 2016	Visibility (mi)	6
C6	26 Oct 2016	Wind Speed (kts)	0
C6	26 Oct 2016	Wind Dir	
C6	26 Oct 2016	Water Color	Brownish-Green
C6	26 Oct 2016	Wave Ht Low (ft)	3
C6	26 Oct 2016	Wave Period (sec)	9
C6	26 Oct 2016	Sea State	Calm
C6	26 Oct 2016	High Tide (ft)	5.15
C6	26 Oct 2016	High Tide Time	732
C6	26 Oct 2016	Low Tide (ft)	1.05
C6	26 Oct 2016	Low Tide Time	1346
C6	26 Oct 2016	Comments	Lobster floats; Kelp
C6	31 Oct 2016	Depth (m)	11
C6	31 Oct 2016	Arrive Time	936
C6	31 Oct 2016	Depart Time	943

Station	Date	Parameter	Value
C6	31 Oct 2016	Air Temp (C)	18
C6	31 Oct 2016	Weather	Partly Cloudy
C6	31 Oct 2016	Visibility (mi)	9
C6	31 Oct 2016	Wind Speed (kts)	1
C6	31 Oct 2016	Wind Dir	N
C6	31 Oct 2016	Water Color	Green
C6	31 Oct 2016	Wave Ht Low (ft)	5
C6	31 Oct 2016	Wave Period (sec)	13
C6	31 Oct 2016	Sea State	Light chop
C6	31 Oct 2016	High Tide (ft)	5.65
C6	31 Oct 2016	High Tide Time	936
C6	31 Oct 2016	Low Tide (ft)	0.05
C6	31 Oct 2016	Low Tide Time	1628
C6	31 Oct 2016	Comments	Lobster floats
A7	08 Oct 2016	Depth (m)	18
A7	08 Oct 2016	Arrive Time	830
A7	08 Oct 2016	Depart Time	836
A7	08 Oct 2016	Air Temp (C)	21
A7	08 Oct 2016	Weather	Clear
A7	08 Oct 2016	Visibility (mi)	10
A7	08 Oct 2016	Wind Speed (kts)	2
A7	08 Oct 2016	Wind Dir	E
A7	08 Oct 2016	Water Color	Bluish-Green
A7	08 Oct 2016	Wave Ht Low (ft)	4
A7	08 Oct 2016	Wave Period (sec)	16
A7	08 Oct 2016	Sea State	Calm
A7	08 Oct 2016	High Tide (ft)	4.18
A7	08 Oct 2016	High Tide Time	1420
A7	08 Oct 2016	Low Tide (ft)	3.1
A7	08 Oct 2016	Low Tide Time	750
A7	08 Oct 2016	Comments	Lobster floats; Kelp debris
A7	14 Oct 2016	Depth (m)	18
A7	14 Oct 2016	Arrive Time	819
A7	14 Oct 2016	Depart Time	823
A7	14 Oct 2016	Air Temp (C)	18
A7	14 Oct 2016	Weather	Overcast
A7	14 Oct 2016	Visibility (mi)	5
A7	14 Oct 2016	Wind Speed (kts)	2
A7	14 Oct 2016	Wind Dir	NW
A7	14 Oct 2016	Water Color	Greenish-Blue
A7	14 Oct 2016	Wave Ht Low (ft)	4
A7	14 Oct 2016	Wave Period (sec)	11
A7	14 Oct 2016	Sea State	Light chop
A7	14 Oct 2016	High Tide (ft)	5.73
A7	14 Oct 2016	High Tide Time	819
A7	14 Oct 2016	Low Tide (ft)	0.18
A7	14 Oct 2016	Low Tide Time	1437
A7	14 Oct 2016	Comments	
A7	20 Oct 2016	Depth (m)	18
A7	20 Oct 2016	Arrive Time	854
A7	20 Oct 2016	Depart Time	859
A7	20 Oct 2016	Air Temp (C)	17

Station	Date	Parameter	Value
A7	20 Oct 2016	Weather	Clear
A7	20 Oct 2016	Visibility (mi)	9
A7	20 Oct 2016	Wind Speed (kts)	2
A7	20 Oct 2016	Wind Dir	SE
A7	20 Oct 2016	Water Color	Greenish-Blue
A7	20 Oct 2016	Wave Ht Low (ft)	4
A7	20 Oct 2016	Wave Period (sec)	11
A7	20 Oct 2016	Sea State	Calm
A7	20 Oct 2016	High Tide (ft)	5.62
A7	20 Oct 2016	High Tide Time	1228
A7	20 Oct 2016	Low Tide (ft)	2.16
A7	20 Oct 2016	Low Tide Time	619
A7	20 Oct 2016	Comments	
A7	26 Oct 2016	Depth (m)	18
A7	26 Oct 2016	Arrive Time	824
A7	26 Oct 2016	Depart Time	829
A7	26 Oct 2016	Air Temp (C)	17
A7	26 Oct 2016	Weather	Partly Cloudy
A7	26 Oct 2016	Visibility (mi)	6
A7	26 Oct 2016	Wind Speed (kts)	0
A7	26 Oct 2016	Wind Dir	
A7	26 Oct 2016	Water Color	Brownish-Green
A7	26 Oct 2016	Wave Ht Low (ft)	3
A7	26 Oct 2016	Wave Period (sec)	9
A7	26 Oct 2016	Sea State	Calm
A7	26 Oct 2016	High Tide (ft)	5.15
A7	26 Oct 2016	High Tide Time	732
A7	26 Oct 2016	Low Tide (ft)	1.05
A7	26 Oct 2016	Low Tide Time	1346
A7	26 Oct 2016	Comments	Lobster floats; Kelp
A7	31 Oct 2016	Depth (m)	18
A7	31 Oct 2016	Arrive Time	830
A7	31 Oct 2016	Depart Time	834
A7	31 Oct 2016	Air Temp (C)	18
A7	31 Oct 2016	Weather	Partly Cloudy
A7	31 Oct 2016	Visibility (mi)	9
A7	31 Oct 2016	Wind Speed (kts)	0
A7	31 Oct 2016	Wind Dir	
A7	31 Oct 2016	Water Color	Bluish-Green
A7	31 Oct 2016	Wave Ht Low (ft)	5
A7	31 Oct 2016	Wave Period (sec)	13
A7	31 Oct 2016	Sea State	Light chop
A7	31 Oct 2016	High Tide (ft)	5.65
A7	31 Oct 2016	High Tide Time	936
A7	31 Oct 2016	Low Tide (ft)	0.05
A7	31 Oct 2016	Low Tide Time	1628
A7	31 Oct 2016	Comments	Lobster floats; Kelp debris
C7	08 Oct 2016	Depth (m)	18
C7	08 Oct 2016	Arrive Time	900
C7	08 Oct 2016	Depart Time	905
C7	08 Oct 2016	Air Temp (C)	20
C7	08 Oct 2016	Weather	Clear

Station	Date	Parameter	Value
C7	08 Oct 2016	Visibility (mi)	10
C7	08 Oct 2016	Wind Speed (kts)	3
C7	08 Oct 2016	Wind Dir	N
C7	08 Oct 2016	Water Color	Bluish-Green
C7	08 Oct 2016	Wave Ht Low (ft)	4
C7	08 Oct 2016	Wave Period (sec)	16
C7	08 Oct 2016	Sea State	Calm
C7	08 Oct 2016	High Tide (ft)	4.18
C7	08 Oct 2016	High Tide Time	1420
C7	08 Oct 2016	Low Tide (ft)	3.1
C7	08 Oct 2016	Low Tide Time	750
C7	08 Oct 2016	Comments	Lobster floats; Kelp debris
C7	14 Oct 2016	Depth (m)	18
C7	14 Oct 2016	Arrive Time	849
C7	14 Oct 2016	Depart Time	854
C7	14 Oct 2016	Air Temp (C)	18
C7	14 Oct 2016	Weather	Partly Cloudy
C7	14 Oct 2016	Visibility (mi)	5
C7	14 Oct 2016	Wind Speed (kts)	3
C7	14 Oct 2016	Wind Dir	S
C7	14 Oct 2016	Water Color	Greenish-Blue
C7	14 Oct 2016	Wave Ht Low (ft)	4
C7	14 Oct 2016	Wave Period (sec)	11
C7	14 Oct 2016	Sea State	Light chop
C7	14 Oct 2016	High Tide (ft)	5.73
C7	14 Oct 2016	High Tide Time	819
C7	14 Oct 2016	Low Tide (ft)	0.18
C7	14 Oct 2016	Low Tide Time	1437
C7	14 Oct 2016	Comments	
C7	20 Oct 2016	Depth (m)	18
C7	20 Oct 2016	Arrive Time	924
C7	20 Oct 2016	Depart Time	928
C7	20 Oct 2016	Air Temp (C)	18
C7	20 Oct 2016	Weather	Clear
C7	20 Oct 2016	Visibility (mi)	9
C7	20 Oct 2016	Wind Speed (kts)	1
C7	20 Oct 2016	Wind Dir	N
C7	20 Oct 2016	Water Color	Greenish-Blue
C7	20 Oct 2016	Wave Ht Low (ft)	4
C7	20 Oct 2016	Wave Period (sec)	11
C7	20 Oct 2016	Sea State	Calm
C7	20 Oct 2016	High Tide (ft)	5.62
C7	20 Oct 2016	High Tide Time	1228
C7	20 Oct 2016	Low Tide (ft)	2.16
C7	20 Oct 2016	Low Tide Time	619
C7	20 Oct 2016	Comments	
C7	26 Oct 2016	Depth (m)	18
C7	26 Oct 2016	Arrive Time	852
C7	26 Oct 2016	Depart Time	855
C7	26 Oct 2016	Air Temp (C)	17
C7	26 Oct 2016	Weather	Partly Cloudy
C7	26 Oct 2016	Visibility (mi)	6

Station	Date	Parameter	Value
C7	26 Oct 2016	Wind Speed (kts)	0
C7	26 Oct 2016	Wind Dir	
C7	26 Oct 2016	Water Color	Brownish-Green
C7	26 Oct 2016	Wave Ht Low (ft)	3
C7	26 Oct 2016	Wave Period (sec)	9
C7	26 Oct 2016	Sea State	Calm
C7	26 Oct 2016	High Tide (ft)	5.15
C7	26 Oct 2016	High Tide Time	732
C7	26 Oct 2016	Low Tide (ft)	1.05
C7	26 Oct 2016	Low Tide Time	1346
C7	26 Oct 2016	Comments	Lobster floats; Kelp
C7	31 Oct 2016	Depth (m)	19
C7	31 Oct 2016	Arrive Time	858
C7	31 Oct 2016	Depart Time	906
C7	31 Oct 2016	Air Temp (C)	18
C7	31 Oct 2016	Weather	Partly Cloudy
C7	31 Oct 2016	Visibility (mi)	9
C7	31 Oct 2016	Wind Speed (kts)	0
C7	31 Oct 2016	Wind Dir	
C7	31 Oct 2016	Water Color	Bluish-Green
C7	31 Oct 2016	Wave Ht Low (ft)	5
C7	31 Oct 2016	Wave Period (sec)	13
C7	31 Oct 2016	Sea State	Light chop
C7	31 Oct 2016	High Tide (ft)	5.65
C7	31 Oct 2016	High Tide Time	936
C7	31 Oct 2016	Low Tide (ft)	0.05
C7	31 Oct 2016	Low Tide Time	1628
C7	31 Oct 2016	Comments	Lobster floats; High CDOM on first cast - recast had none - likely bubbles; Kelp debris
C8	08 Oct 2016	Depth (m)	18
C8	08 Oct 2016	Arrive Time	912
C8	08 Oct 2016	Depart Time	918
C8	08 Oct 2016	Air Temp (C)	20
C8	08 Oct 2016	Weather	Clear
C8	08 Oct 2016	Visibility (mi)	10
C8	08 Oct 2016	Wind Speed (kts)	1
C8	08 Oct 2016	Wind Dir	S
C8	08 Oct 2016	Water Color	Bluish-Green
C8	08 Oct 2016	Wave Ht Low (ft)	4
C8	08 Oct 2016	Wave Period (sec)	16
C8	08 Oct 2016	Sea State	Wind ripples
C8	08 Oct 2016	High Tide (ft)	4.18
C8	08 Oct 2016	High Tide Time	1420
C8	08 Oct 2016	Low Tide (ft)	3.1
C8	08 Oct 2016	Low Tide Time	750
C8	08 Oct 2016	Comments	Lobster floats
C8	14 Oct 2016	Depth (m)	19
C8	14 Oct 2016	Arrive Time	901
C8	14 Oct 2016	Depart Time	907
C8	14 Oct 2016	Air Temp (C)	18
C8	14 Oct 2016	Weather	Partly Cloudy
C8	14 Oct 2016	Visibility (mi)	5

Station	Date	Parameter	Value
C8	14 Oct 2016	Wind Speed (kts)	1
C8	14 Oct 2016	Wind Dir	SW
C8	14 Oct 2016	Water Color	Greenish-Blue
C8	14 Oct 2016	Wave Ht Low (ft)	4
C8	14 Oct 2016	Wave Period (sec)	11
C8	14 Oct 2016	Sea State	Light chop
C8	14 Oct 2016	High Tide (ft)	5.73
C8	14 Oct 2016	High Tide Time	819
C8	14 Oct 2016	Low Tide (ft)	0.18
C8	14 Oct 2016	Low Tide Time	1437
C8	14 Oct 2016	Comments	
C8	20 Oct 2016	Depth (m)	19
C8	20 Oct 2016	Arrive Time	936
C8	20 Oct 2016	Depart Time	939
C8	20 Oct 2016	Air Temp (C)	18
C8	20 Oct 2016	Weather	Clear
C8	20 Oct 2016	Visibility (mi)	9
C8	20 Oct 2016	Wind Speed (kts)	2
C8	20 Oct 2016	Wind Dir	NE
C8	20 Oct 2016	Water Color	Greenish-Blue
C8	20 Oct 2016	Wave Ht Low (ft)	4
C8	20 Oct 2016	Wave Period (sec)	11
C8	20 Oct 2016	Sea State	Calm
C8	20 Oct 2016	High Tide (ft)	5.62
C8	20 Oct 2016	High Tide Time	1228
C8	20 Oct 2016	Low Tide (ft)	2.16
C8	20 Oct 2016	Low Tide Time	619
C8	20 Oct 2016	Comments	
C8	26 Oct 2016	Depth (m)	18
C8	26 Oct 2016	Arrive Time	903
C8	26 Oct 2016	Depart Time	906
C8	26 Oct 2016	Air Temp (C)	17
C8	26 Oct 2016	Weather	Continuous layer of clouds
C8	26 Oct 2016	Visibility (mi)	6
C8	26 Oct 2016	Wind Speed (kts)	3
C8	26 Oct 2016	Wind Dir	W
C8	26 Oct 2016	Water Color	Brownish-Green
C8	26 Oct 2016	Wave Ht Low (ft)	3
C8	26 Oct 2016	Wave Period (sec)	9
C8	26 Oct 2016	Sea State	Calm
C8	26 Oct 2016	High Tide (ft)	5.15
C8	26 Oct 2016	High Tide Time	732
C8	26 Oct 2016	Low Tide (ft)	1.05
C8	26 Oct 2016	Low Tide Time	1346
C8	26 Oct 2016	Comments	Lobster floats; Kelp
C8	31 Oct 2016	Depth (m)	19
C8	31 Oct 2016	Arrive Time	915
C8	31 Oct 2016	Depart Time	922
C8	31 Oct 2016	Air Temp (C)	18
C8	31 Oct 2016	Weather	Partly Cloudy
C8	31 Oct 2016	Visibility (mi)	9
C8	31 Oct 2016	Wind Speed (kts)	2

Station	Date	Parameter	Value
C8	31 Oct 2016	Wind Dir	W
C8	31 Oct 2016	Water Color	Bluish-Green
C8	31 Oct 2016	Wave Ht Low (ft)	5
C8	31 Oct 2016	Wave Period (sec)	13
C8	31 Oct 2016	Sea State	Light chop
C8	31 Oct 2016	High Tide (ft)	5.65
C8	31 Oct 2016	High Tide Time	936
C8	31 Oct 2016	Low Tide (ft)	0.05
C8	31 Oct 2016	Low Tide Time	1628
C8	31 Oct 2016	Comments	Lobster floats; Kelp debris

Table 3.10

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

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens ($\sigma\text{-t}$)	Chlor ($\mu\text{g/L}$)
A1	08 Oct 2016	1	19.81	83.44	8.4	33.40	8.2	23.6	1.48
A1	08 Oct 2016	2	19.81	83.35	8.1	33.40	8.2	23.6	1.87
A1	08 Oct 2016	3	19.67	83.22	7.8	33.39	8.2	23.6	2.11
A1	08 Oct 2016	4	19.28	82.94	7.8	33.34	8.2	23.7	2.33
A1	08 Oct 2016	5	18.11	82.76	7.9	33.29	8.2	23.9	2.37
A1	08 Oct 2016	6	17.29	82.96	7.9	33.32	8.2	24.2	2.29
A1	08 Oct 2016	7	16.91	83.24	7.8	33.28	8.2	24.2	2.31
A1	08 Oct 2016	8	16.40	83.01	7.7	33.25	8.1	24.3	2.27
A1	08 Oct 2016	9	15.68	83.14	7.7	33.24	8.1	24.5	2.33
A1	08 Oct 2016	10	15.36	82.66	7.6	33.26	8.1	24.6	2.30
A1	08 Oct 2016	11	15.22	82.86	7.4	33.26	8.1	24.6	2.21
A1	08 Oct 2016	12	15.11	83.22	7.3	33.26	8.1	24.6	2.22
A1	08 Oct 2016	13	14.96	83.94	7.2	33.24	8.1	24.6	2.15
A1	08 Oct 2016	14	14.74	84.06	7.2	33.25	8.1	24.7	1.89
A1	08 Oct 2016	15	14.62	83.88	7.0	33.25	8.1	24.7	1.37
A1	08 Oct 2016	16	14.53	84.19	6.8	33.24	8.1	24.7	1.22
A1	08 Oct 2016	17	14.37	84.52	6.7	33.24	8.1	24.8	1.28
A1	08 Oct 2016	18	14.01	84.08	6.8	33.24	8.0	24.8	1.32
A1	08 Oct 2016	19	13.82	84.70	7.1	33.27	8.0	24.9	1.44
A1	14 Oct 2016	1	17.30	82.52	8.5	33.33	8.2	24.2	1.85
A1	14 Oct 2016	2	17.31	81.92	8.4	33.33	8.2	24.2	2.02
A1	14 Oct 2016	3	17.31	82.31	8.3	33.33	8.2	24.2	2.05
A1	14 Oct 2016	4	17.23	82.62	8.3	33.33	8.2	24.2	2.08
A1	14 Oct 2016	5	17.19	82.24	8.3	33.33	8.2	24.2	2.11
A1	14 Oct 2016	6	17.19	82.20	8.3	33.33	8.2	24.2	2.10
A1	14 Oct 2016	7	17.17	82.25	8.3	33.33	8.2	24.2	2.12
A1	14 Oct 2016	8	17.14	82.11	8.3	33.33	8.2	24.2	2.10
A1	14 Oct 2016	9	17.10	82.17	8.3	33.33	8.2	24.2	2.17
A1	14 Oct 2016	10	17.07	82.27	8.3	33.33	8.2	24.2	2.11
A1	14 Oct 2016	11	17.08	82.27	8.1	33.33	8.2	24.2	2.23
A1	14 Oct 2016	12	17.09	82.23	7.8	33.33	8.2	24.2	2.44
A1	14 Oct 2016	13	16.84	82.09	7.3	33.31	8.2	24.3	2.51
A1	14 Oct 2016	14	16.53	82.38	6.8	33.31	8.1	24.3	1.99
A1	14 Oct 2016	15	15.73	82.23	6.2	33.27	8.1	24.5	1.23
A1	14 Oct 2016	16	14.77	82.57	5.8	33.24	8.1	24.7	0.83
A1	14 Oct 2016	17	13.52	83.89	5.8	33.23	8.1	24.9	0.77
A1	14 Oct 2016	18	12.62	85.51	6.3	33.29	8.0	25.1	0.91
A1	20 Oct 2016	1	15.75	76.44	8.0	33.32	8.1	24.5	2.76
A1	20 Oct 2016	2	15.72	76.69	7.8	33.31	8.1	24.5	3.00
A1	20 Oct 2016	3	15.41	77.59	7.8	33.30	8.1	24.6	3.08
A1	20 Oct 2016	4	15.26	77.99	7.7	33.29	8.1	24.6	3.06
A1	20 Oct 2016	5	15.04	79.88	7.7	33.27	8.1	24.6	2.96
A1	20 Oct 2016	6	14.71	81.73	7.7	33.27	8.1	24.7	2.76
A1	20 Oct 2016	7	14.64	82.23	7.5	33.28	8.1	24.7	2.46
A1	20 Oct 2016	8	14.60	82.48	7.2	33.27	8.1	24.7	2.12
A1	20 Oct 2016	9	14.48	82.83	7.0	33.27	8.1	24.7	2.01
A1	20 Oct 2016	10	14.27	83.01	7.0	33.26	8.1	24.8	1.94
A1	20 Oct 2016	11	14.01	83.51	6.9	33.28	8.1	24.9	1.81

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens ($\sigma\text{-t}$)	Chlor ($\mu\text{g/L}$)
A1	20 Oct 2016	12	13.96	83.57	6.7	33.28	8.1	24.9	1.72
A1	20 Oct 2016	13	13.86	83.58	6.5	33.28	8.1	24.9	1.90
A1	20 Oct 2016	14	13.68	83.48	6.5	33.26	8.0	24.9	1.65
A1	20 Oct 2016	15	13.31	83.53	6.6	33.28	8.0	25.0	1.49
A1	20 Oct 2016	16	13.24	83.79	6.6	33.28	8.0	25.0	1.42
A1	20 Oct 2016	17	13.19	83.75	6.6	33.28	8.0	25.0	1.36
A1	20 Oct 2016	18	13.18	83.83	6.6	33.28	8.0	25.0	1.34
A1	20 Oct 2016	19	13.20	83.40	6.6	33.28	8.0	25.0	1.35
A1	26 Oct 2016	1	17.84	85.66	8.4	33.34	8.2	24.0	0.99
A1	26 Oct 2016	2	17.76	85.44	8.6	33.33	8.2	24.1	1.43
A1	26 Oct 2016	3	17.43	84.61	8.8	33.31	8.2	24.1	1.70
A1	26 Oct 2016	4	17.27	83.66	8.8	33.30	8.2	24.1	1.82
A1	26 Oct 2016	5	17.23	83.02	8.8	33.30	8.2	24.2	1.92
A1	26 Oct 2016	6	17.22	82.80	8.8	33.30	8.2	24.2	2.05
A1	26 Oct 2016	7	17.20	82.63	8.8	33.30	8.2	24.2	2.15
A1	26 Oct 2016	8	17.17	82.34	8.8	33.30	8.2	24.2	2.18
A1	26 Oct 2016	9	17.09	82.02	8.7	33.30	8.2	24.2	2.32
A1	26 Oct 2016	10	17.07	81.83	8.7	33.30	8.2	24.2	2.38
A1	26 Oct 2016	11	17.04	81.77	8.7	33.30	8.2	24.2	2.52
A1	26 Oct 2016	12	17.01	81.58	8.7	33.30	8.2	24.2	2.77
A1	26 Oct 2016	13	16.99	81.13	8.7	33.30	8.2	24.2	2.92
A1	26 Oct 2016	14	16.87	80.53	8.6	33.30	8.2	24.2	2.99
A1	26 Oct 2016	15	16.79	79.88	8.3	33.29	8.2	24.3	2.79
A1	26 Oct 2016	16	16.52	79.37	8.1	33.27	8.2	24.3	2.38
A1	26 Oct 2016	17	16.19	79.19	7.8	33.27	8.2	24.4	2.05
A1	26 Oct 2016	18	15.81	79.39	7.7	33.26	8.2	24.5	2.15
A1	26 Oct 2016	19	15.58	79.16	8.1	33.27	8.2	24.5	2.26
A1	31 Oct 2016	1	16.70	79.41	7.9	33.31	8.1	24.3	2.61
A1	31 Oct 2016	2	16.69	79.36	7.9	33.31	8.1	24.3	3.01
A1	31 Oct 2016	3	16.59	78.84	7.9	33.32	8.1	24.3	3.12
A1	31 Oct 2016	4	16.55	79.03	7.8	33.31	8.1	24.3	3.12
A1	31 Oct 2016	5	16.56	78.97	7.8	33.31	8.1	24.3	2.93
A1	31 Oct 2016	6	16.41	79.36	7.8	33.31	8.1	24.4	2.91
A1	31 Oct 2016	7	16.25	80.19	7.8	33.31	8.1	24.4	2.92
A1	31 Oct 2016	8	16.18	80.53	7.7	33.30	8.1	24.4	2.62
A1	31 Oct 2016	9	16.07	80.59	7.3	33.30	8.1	24.4	1.94
A1	31 Oct 2016	10	15.95	81.38	6.9	33.28	8.1	24.4	1.47
A1	31 Oct 2016	11	15.22	83.49	6.8	33.27	8.1	24.6	1.09
A1	31 Oct 2016	12	14.81	85.12	6.7	33.27	8.1	24.7	0.81
A1	31 Oct 2016	13	14.62	85.46	6.7	33.25	8.0	24.7	0.76
A1	31 Oct 2016	14	14.34	85.70	6.8	33.26	8.0	24.8	0.80
A1	31 Oct 2016	15	14.24	86.01	6.9	33.25	8.0	24.8	0.79
A1	31 Oct 2016	16	14.02	86.34	6.9	33.25	8.0	24.8	0.76
A1	31 Oct 2016	17	13.96	86.53	6.9	33.25	8.0	24.8	0.74
A1	31 Oct 2016	18	13.90	86.39	6.9	33.25	8.0	24.9	0.76
A1	31 Oct 2016	19	13.91	85.90	6.9	33.26	8.0	24.9	0.77
C4	08 Oct 2016	1	19.76	82.59	8.4	33.40	8.2	23.6	0.92
C4	08 Oct 2016	2	19.77	82.56	8.5	33.40	8.2	23.6	1.04
C4	08 Oct 2016	3	19.73	82.66	8.3	33.40	8.2	23.6	1.10
C4	08 Oct 2016	4	19.60	82.71	7.9	33.38	8.2	23.6	1.03
C4	08 Oct 2016	5	19.18	82.90	7.4	33.37	8.2	23.7	0.84
C4	08 Oct 2016	6	18.61	83.15	7.0	33.34	8.2	23.9	0.70

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens ($\sigma\text{-t}$)	Chlor ($\mu\text{g/L}$)
C4	08 Oct 2016	7	17.48	83.56	6.8	33.29	8.2	24.1	0.69
C4	08 Oct 2016	8	16.58	83.82	6.7	33.29	8.1	24.3	0.81
C4	08 Oct 2016	9	16.18	83.28	6.7	33.27	8.1	24.4	0.85
C4	08 Oct 2016	10	15.63	77.77	7.2	33.26	8.1	24.5	0.83
C4	08 Oct 2016	11	15.54	66.87	7.5	33.27	8.0	24.5	0.80
C4	14 Oct 2016	1	16.73	81.18	6.8	33.32	8.1	24.3	1.10
C4	14 Oct 2016	2	15.92	81.37	7.1	33.27	8.1	24.4	1.16
C4	14 Oct 2016	3	15.13	82.62	7.2	33.29	8.1	24.6	1.01
C4	14 Oct 2016	4	15.04	83.21	7.0	33.29	8.1	24.6	0.94
C4	14 Oct 2016	5	14.90	83.83	6.9	33.28	8.1	24.7	0.93
C4	14 Oct 2016	6	14.73	84.35	6.8	33.28	8.1	24.7	0.94
C4	14 Oct 2016	7	14.61	84.31	6.8	33.27	8.1	24.7	0.86
C4	14 Oct 2016	8	14.50	83.70	6.6	33.27	8.1	24.7	0.81
C4	14 Oct 2016	9	14.37	70.34	6.6	33.27	8.0	24.8	0.82
C4	14 Oct 2016	10	14.33	67.25	6.7	33.27	8.0	24.8	0.85
C4	14 Oct 2016	11	14.33	73.00	6.7	33.27	8.0	24.8	0.83
C4	14 Oct 2016	12	14.34	71.85	6.8	33.28	8.0	24.8	0.85
C4	20 Oct 2016	1	16.35	69.26	8.3	33.32	8.1	24.4	2.77
C4	20 Oct 2016	2	16.24	68.03	8.3	33.32	8.1	24.4	3.61
C4	20 Oct 2016	3	15.99	66.21	8.2	33.32	8.1	24.5	3.92
C4	20 Oct 2016	4	15.93	66.26	7.7	33.31	8.1	24.5	3.33
C4	20 Oct 2016	5	15.52	68.23	7.2	33.29	8.1	24.5	2.67
C4	20 Oct 2016	6	15.10	72.54	7.0	33.30	8.1	24.6	2.00
C4	20 Oct 2016	7	14.75	78.41	6.5	33.29	8.1	24.7	1.69
C4	20 Oct 2016	8	14.32	80.80	6.5	33.28	8.1	24.8	1.39
C4	20 Oct 2016	9	14.21	81.01	6.2	33.30	8.1	24.8	1.05
C4	20 Oct 2016	10	13.99	79.58	6.0	33.29	8.0	24.9	0.88
C4	20 Oct 2016	11	13.87	76.62	6.0	33.29	8.0	24.9	0.85
C4	20 Oct 2016	12	13.85	73.80	6.1	33.29	8.0	24.9	0.89
C4	26 Oct 2016	1	17.35	58.39	7.8	33.32	8.1	24.1	1.92
C4	26 Oct 2016	2	17.30	58.79	7.9	33.32	8.1	24.2	2.17
C4	26 Oct 2016	3	17.21	54.08	7.8	33.32	8.1	24.2	2.53
C4	26 Oct 2016	4	17.20	56.37	7.8	33.32	8.2	24.2	2.09
C4	26 Oct 2016	5	17.21	55.96	7.7	33.32	8.2	24.2	1.51
C4	26 Oct 2016	6	17.14	59.10	7.3	33.32	8.2	24.2	1.18
C4	26 Oct 2016	7	17.04	61.88	6.8	33.31	8.2	24.2	0.97
C4	26 Oct 2016	8	16.83	64.00	6.4	33.31	8.1	24.3	0.96
C4	26 Oct 2016	9	16.43	60.03	6.3	33.30	8.1	24.3	0.86
C4	26 Oct 2016	10	16.12	66.48	6.2	33.30	8.1	24.4	0.72
C4	26 Oct 2016	11	15.69	66.52	6.5	33.28	8.1	24.5	0.78
C4	26 Oct 2016	12	15.60	62.48	6.7	33.29	8.1	24.5	0.82
C4	31 Oct 2016	1	16.99	77.78	7.9	33.21	8.1	24.1	0.37
C4	31 Oct 2016	2	16.92	77.66	8.3	33.32	8.1	24.2	0.36
C4	31 Oct 2016	3	16.75	75.76	8.2	33.34	8.1	24.3	0.40
C4	31 Oct 2016	4	16.68	71.56	8.2	33.32	8.1	24.3	1.40
C4	31 Oct 2016	5	16.65	75.67	8.0	33.32	8.1	24.3	1.54
C4	31 Oct 2016	6	16.49	78.82	7.8	33.35	8.1	24.4	1.80
C4	31 Oct 2016	7	16.39	80.18	7.3	33.33	8.1	24.4	1.97
C4	31 Oct 2016	8	16.09	80.68	7.0	33.34	8.1	24.5	2.11
C4	31 Oct 2016	9	16.13	79.68	7.0	33.28	8.1	24.4	2.44
C4	31 Oct 2016	10	15.72	77.67	7.1	33.63	8.1	24.8	2.57

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens ($\sigma\text{-t}$)	Chlor ($\mu\text{g/L}$)
C4	31 Oct 2016	11	15.37	71.97	7.0	33.69	8.1	24.9	2.40
C5	08 Oct 2016	1	19.66	81.38	8.5	33.40	8.2	23.6	1.36
C5	08 Oct 2016	2	19.65	82.02	8.4	33.40	8.2	23.6	1.74
C5	08 Oct 2016	3	19.61	81.74	8.2	33.40	8.2	23.6	1.92
C5	08 Oct 2016	4	19.56	82.70	7.8	33.39	8.2	23.7	1.42
C5	08 Oct 2016	5	19.37	83.02	7.4	33.36	8.2	23.7	1.21
C5	08 Oct 2016	6	18.48	83.31	7.3	33.29	8.2	23.8	0.92
C5	08 Oct 2016	7	17.37	83.30	7.2	33.27	8.2	24.1	0.82
C5	08 Oct 2016	8	16.46	83.16	7.4	33.28	8.2	24.3	0.91
C5	08 Oct 2016	9	15.83	84.07	8.0	33.28	8.1	24.5	1.13
C5	08 Oct 2016	10	15.76	82.67	8.4	33.30	8.1	24.5	1.21
C5	14 Oct 2016	1	17.25	78.23	7.6	33.33	8.2	24.2	0.89
C5	14 Oct 2016	2	17.11	78.04	7.0	33.31	8.2	24.2	0.74
C5	14 Oct 2016	3	16.64	78.39	6.5	33.30	8.1	24.3	0.74
C5	14 Oct 2016	4	15.53	80.80	6.6	33.26	8.1	24.5	0.92
C5	14 Oct 2016	5	14.92	82.79	6.7	33.28	8.1	24.7	1.12
C5	14 Oct 2016	6	14.88	82.91	6.8	33.25	8.1	24.6	1.14
C5	14 Oct 2016	7	14.25	83.23	6.8	33.26	8.1	24.8	1.15
C5	14 Oct 2016	8	14.32	84.00	6.8	33.26	8.0	24.8	1.14
C5	14 Oct 2016	9	14.03	84.10	6.8	33.25	8.0	24.8	1.15
C5	14 Oct 2016	10	13.91	84.20	6.7	33.27	8.0	24.9	1.13
C5	14 Oct 2016	11	13.85	82.97	6.7	33.26	8.0	24.9	1.11
C5	20 Oct 2016	1	16.07	62.52	7.0	33.31	8.0	24.4	1.53
C5	20 Oct 2016	2	16.02	62.66	6.8	33.30	8.0	24.4	1.34
C5	20 Oct 2016	3	15.76	65.22	6.6	33.30	8.0	24.5	1.08
C5	20 Oct 2016	4	15.62	67.45	6.3	33.30	8.0	24.5	1.00
C5	20 Oct 2016	5	15.39	69.47	6.2	33.29	8.0	24.6	0.93
C5	20 Oct 2016	6	15.07	71.31	6.0	33.30	8.0	24.6	0.92
C5	20 Oct 2016	7	14.93	73.83	5.9	33.29	8.0	24.7	0.93
C5	20 Oct 2016	8	14.60	75.35	5.9	33.28	8.0	24.7	1.04
C5	20 Oct 2016	9	14.31	75.93	6.1	33.29	8.0	24.8	1.11
C5	20 Oct 2016	10	13.99	73.13	6.3	33.26	8.0	24.8	1.13
C5	20 Oct 2016	11	13.94	65.45	6.3	33.29	8.0	24.9	1.21
C5	26 Oct 2016	1	17.36	80.73	8.9	33.31	8.2	24.1	1.65
C5	26 Oct 2016	2	17.33	80.65	8.9	33.31	8.2	24.1	2.28
C5	26 Oct 2016	3	17.31	79.05	8.8	33.31	8.2	24.1	2.25
C5	26 Oct 2016	4	17.29	78.35	8.7	33.31	8.2	24.1	2.25
C5	26 Oct 2016	5	17.27	77.75	8.3	33.31	8.2	24.2	1.88
C5	26 Oct 2016	6	17.20	75.90	7.7	33.31	8.2	24.2	1.78
C5	26 Oct 2016	7	17.01	75.27	7.2	33.31	8.2	24.2	1.89
C5	26 Oct 2016	8	16.71	76.42	7.0	33.30	8.2	24.3	1.81
C5	26 Oct 2016	9	16.18	78.60	7.0	33.29	8.2	24.4	1.57
C5	26 Oct 2016	10	15.76	72.90	6.8	33.29	8.1	24.5	1.96
C5	26 Oct 2016	11	15.61	53.67	6.5	33.29	8.1	24.5	1.96
C5	31 Oct 2016	1	17.40	64.48	6.9	33.30	8.0	24.1	0.90
C5	31 Oct 2016	2	17.36	65.03	6.5	33.30	8.0	24.1	0.81
C5	31 Oct 2016	3	17.05	64.65	6.0	33.30	8.0	24.2	0.69
C5	31 Oct 2016	4	16.40	68.37	6.0	33.30	8.0	24.3	0.65
C5	31 Oct 2016	5	15.99	73.29	6.1	33.29	8.0	24.4	0.65
C5	31 Oct 2016	6	15.77	74.02	6.3	33.28	8.0	24.5	0.63

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens ($\sigma\text{-t}$)	Chlor ($\mu\text{g/L}$)
C5	31 Oct 2016	7	15.63	75.20	6.5	33.27	8.0	24.5	0.61
C5	31 Oct 2016	8	15.36	76.17	6.5	33.26	8.0	24.6	0.67
C5	31 Oct 2016	9	15.12	78.39	6.3	33.27	8.0	24.6	1.18
C5	31 Oct 2016	10	15.03	78.16	5.8	33.26	8.0	24.6	2.01
C5	31 Oct 2016	11	14.96	60.98	5.6	33.26	8.0	24.6	2.20
A6	08 Oct 2016	1	20.08	82.65	8.4	33.41	8.2	23.5	0.96
A6	08 Oct 2016	2	20.08	82.56	8.4	33.41	8.2	23.5	1.04
A6	08 Oct 2016	3	20.06	82.52	8.4	33.41	8.2	23.5	1.16
A6	08 Oct 2016	4	20.03	82.72	8.4	33.41	8.2	23.5	1.27
A6	08 Oct 2016	5	20.00	82.75	8.5	33.40	8.2	23.5	1.38
A6	08 Oct 2016	6	19.81	82.79	8.5	33.38	8.2	23.6	1.75
A6	08 Oct 2016	7	18.99	83.00	8.2	33.33	8.2	23.7	2.02
A6	08 Oct 2016	8	18.22	82.78	7.8	33.30	8.2	23.9	2.19
A6	08 Oct 2016	9	16.73	83.63	7.7	33.26	8.2	24.2	2.38
A6	08 Oct 2016	10	15.87	83.51	7.8	33.26	8.2	24.4	2.51
A6	08 Oct 2016	11	15.53	83.77	7.8	33.26	8.1	24.5	2.25
A6	08 Oct 2016	12	15.34	83.77	7.6	33.24	8.1	24.5	2.03
A6	08 Oct 2016	13	15.08	83.45	7.4	33.23	8.1	24.6	2.06
A6	08 Oct 2016	14	14.90	83.45	7.3	33.24	8.1	24.6	1.93
A6	08 Oct 2016	15	14.69	84.09	7.3	33.24	8.1	24.7	1.55
A6	08 Oct 2016	16	14.56	84.67	7.2	33.24	8.1	24.7	1.49
A6	08 Oct 2016	17	14.43	84.87	7.2	33.24	8.1	24.7	1.62
A6	08 Oct 2016	18	14.31	85.04	7.4	33.26	8.1	24.8	1.80
A6	14 Oct 2016	1	17.38	82.85	8.3	33.34	8.2	24.1	1.46
A6	14 Oct 2016	2	17.38	82.79	8.2	33.34	8.2	24.1	1.82
A6	14 Oct 2016	3	17.36	82.47	8.0	33.34	8.2	24.2	2.64
A6	14 Oct 2016	4	17.13	81.93	7.9	33.31	8.2	24.2	2.93
A6	14 Oct 2016	5	16.57	81.20	7.8	33.31	8.2	24.3	2.99
A6	14 Oct 2016	6	16.32	80.60	7.8	33.30	8.1	24.4	2.88
A6	14 Oct 2016	7	16.14	81.15	7.7	33.30	8.1	24.4	2.81
A6	14 Oct 2016	8	16.12	81.41	7.7	33.28	8.1	24.4	2.69
A6	14 Oct 2016	9	15.82	81.95	7.4	33.29	8.1	24.5	2.17
A6	14 Oct 2016	10	15.69	82.19	7.0	33.26	8.1	24.5	1.74
A6	14 Oct 2016	11	15.05	83.36	6.6	33.27	8.1	24.6	1.46
A6	14 Oct 2016	12	14.53	84.17	6.5	33.24	8.1	24.7	1.28
A6	14 Oct 2016	13	13.80	85.33	6.6	33.25	8.1	24.9	1.20
A6	14 Oct 2016	14	13.42	86.84	6.7	33.25	8.0	25.0	1.14
A6	14 Oct 2016	15	13.38	87.09	6.6	33.25	8.0	25.0	1.09
A6	14 Oct 2016	16	13.27	87.14	6.5	33.26	8.0	25.0	0.99
A6	14 Oct 2016	17	13.21	86.80	6.2	33.26	8.0	25.0	0.85
A6	14 Oct 2016	18	13.06	86.17	6.0	33.27	8.0	25.0	0.76
A6	14 Oct 2016	19	12.78	84.82	6.1	33.28	8.0	25.1	0.83
A6	20 Oct 2016	1	15.94	76.74	8.0	33.31	8.1	24.5	2.43
A6	20 Oct 2016	2	15.90	77.12	7.5	33.31	8.1	24.5	1.91
A6	20 Oct 2016	3	15.81	77.23	6.9	33.29	8.1	24.5	1.93
A6	20 Oct 2016	4	15.00	79.33	7.0	33.30	8.1	24.7	2.08
A6	20 Oct 2016	5	14.71	81.86	7.2	33.28	8.1	24.7	2.12
A6	20 Oct 2016	6	14.45	82.48	7.3	33.28	8.1	24.8	2.11
A6	20 Oct 2016	7	14.37	83.11	7.2	33.28	8.1	24.8	2.12
A6	20 Oct 2016	8	14.29	83.28	7.1	33.28	8.1	24.8	2.11
A6	20 Oct 2016	9	14.21	83.56	7.0	33.27	8.1	24.8	2.11
A6	20 Oct 2016	10	13.89	83.84	7.1	33.27	8.1	24.9	2.04

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens ($\sigma\text{-t}$)	Chlor ($\mu\text{g/L}$)
A6	20 Oct 2016	11	13.86	84.18	6.9	33.28	8.1	24.9	1.99
A6	20 Oct 2016	12	13.79	84.28	6.9	33.27	8.1	24.9	2.00
A6	20 Oct 2016	13	13.70	84.38	7.0	33.27	8.1	24.9	2.02
A6	20 Oct 2016	14	13.67	84.54	7.0	33.28	8.1	24.9	1.94
A6	20 Oct 2016	15	13.67	84.58	6.9	33.28	8.1	24.9	1.91
A6	20 Oct 2016	16	13.62	84.57	6.8	33.27	8.1	24.9	1.87
A6	20 Oct 2016	17	13.54	84.46	6.9	33.28	8.1	25.0	1.93
A6	20 Oct 2016	18	13.53	84.47	6.9	33.28	8.0	25.0	1.95
A6	26 Oct 2016	1	17.68	84.61	8.5	33.33	8.2	24.1	0.98
A6	26 Oct 2016	2	17.61	84.79	8.6	33.33	8.2	24.1	1.26
A6	26 Oct 2016	3	17.46	85.14	8.7	33.32	8.2	24.1	1.50
A6	26 Oct 2016	4	17.40	84.30	8.7	33.31	8.2	24.1	1.70
A6	26 Oct 2016	5	17.34	84.07	8.8	33.31	8.2	24.1	1.86
A6	26 Oct 2016	6	17.29	84.13	8.8	33.30	8.2	24.1	1.95
A6	26 Oct 2016	7	17.21	83.46	8.9	33.30	8.2	24.2	2.10
A6	26 Oct 2016	8	17.20	83.25	8.8	33.30	8.2	24.2	2.23
A6	26 Oct 2016	9	17.17	83.18	8.8	33.30	8.2	24.2	2.36
A6	26 Oct 2016	10	17.15	82.71	8.8	33.30	8.2	24.2	2.34
A6	26 Oct 2016	11	17.10	82.37	8.7	33.29	8.2	24.2	2.34
A6	26 Oct 2016	12	17.02	81.85	8.6	33.29	8.2	24.2	2.29
A6	26 Oct 2016	13	16.96	81.68	8.3	33.29	8.2	24.2	2.24
A6	26 Oct 2016	14	16.82	81.46	8.0	33.29	8.2	24.2	1.91
A6	26 Oct 2016	15	16.66	81.35	7.4	33.29	8.2	24.3	1.69
A6	26 Oct 2016	16	16.35	81.27	7.1	33.26	8.2	24.3	1.68
A6	26 Oct 2016	17	15.48	81.12	7.3	33.27	8.2	24.5	1.72
A6	26 Oct 2016	18	15.23	80.94	7.6	33.27	8.1	24.6	1.73
A6	26 Oct 2016	19	15.13	80.80	7.7	33.27	8.1	24.6	1.74
A6	31 Oct 2016	1	17.29	81.40	8.0	33.32	8.1	24.2	2.08
A6	31 Oct 2016	2	17.32	81.83	7.8	33.32	8.1	24.1	2.40
A6	31 Oct 2016	3	17.22	82.07	7.6	33.32	8.1	24.2	2.62
A6	31 Oct 2016	4	16.60	82.00	7.6	33.32	8.1	24.3	2.84
A6	31 Oct 2016	5	16.43	81.97	7.6	33.30	8.1	24.3	2.84
A6	31 Oct 2016	6	16.12	82.11	7.6	33.30	8.1	24.4	2.84
A6	31 Oct 2016	7	16.05	82.14	7.6	33.29	8.1	24.4	2.97
A6	31 Oct 2016	8	15.89	82.28	7.6	33.29	8.1	24.5	2.89
A6	31 Oct 2016	9	15.81	82.37	7.5	33.28	8.1	24.5	2.71
A6	31 Oct 2016	10	15.57	82.86	7.3	33.28	8.1	24.5	2.05
A6	31 Oct 2016	11	15.40	83.37	7.0	33.27	8.1	24.6	1.52
A6	31 Oct 2016	12	14.98	84.61	6.8	33.27	8.1	24.6	1.14
A6	31 Oct 2016	13	14.68	85.97	6.8	33.27	8.1	24.7	1.07
A6	31 Oct 2016	14	14.06	86.92	6.8	33.26	8.0	24.8	1.01
A6	31 Oct 2016	15	14.06	86.85	6.7	33.26	8.0	24.8	1.00
A6	31 Oct 2016	16	13.81	86.62	6.8	33.25	8.0	24.9	0.99
A6	31 Oct 2016	17	13.71	86.61	6.8	33.26	8.0	24.9	0.96
A6	31 Oct 2016	18	13.67	86.67	6.7	33.26	8.0	24.9	0.95
A6	31 Oct 2016	19	13.61	86.57	6.8	33.26	8.0	24.9	0.93
C6	08 Oct 2016	1	19.82	82.90	8.5	33.40	8.2	23.6	1.02
C6	08 Oct 2016	2	19.80	82.83	8.4	33.40	8.2	23.6	1.25
C6	08 Oct 2016	3	19.79	82.94	8.3	33.40	8.2	23.6	1.49
C6	08 Oct 2016	4	19.67	83.03	8.0	33.39	8.2	23.6	1.41
C6	08 Oct 2016	5	19.34	83.01	7.7	33.36	8.2	23.7	1.06
C6	08 Oct 2016	6	18.41	83.54	7.4	33.33	8.2	23.9	0.76

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens ($\sigma\text{-t}$)	Chlor ($\mu\text{g/L}$)
C6	08 Oct 2016	7	17.44	84.06	7.4	33.31	8.2	24.1	0.64
C6	08 Oct 2016	8	16.86	84.61	7.4	33.30	8.1	24.2	0.61
C6	08 Oct 2016	9	16.31	85.35	7.7	33.29	8.1	24.4	0.65
C6	08 Oct 2016	10	16.02	85.37	7.9	33.30	8.1	24.4	0.67
C6	14 Oct 2016	1	17.54	70.16	7.5	33.34	8.1	24.1	1.05
C6	14 Oct 2016	2	17.34	75.97	7.4	33.32	8.1	24.1	1.41
C6	14 Oct 2016	3	16.84	77.62	7.4	33.30	8.1	24.2	1.43
C6	14 Oct 2016	4	16.24	79.75	7.1	33.29	8.1	24.4	1.23
C6	14 Oct 2016	5	15.69	81.39	6.9	33.28	8.1	24.5	1.02
C6	14 Oct 2016	6	15.28	81.34	6.8	33.27	8.1	24.6	0.91
C6	14 Oct 2016	7	15.09	80.38	6.8	33.27	8.1	24.6	0.86
C6	14 Oct 2016	8	15.01	77.49	6.8	33.27	8.1	24.6	0.87
C6	14 Oct 2016	9	14.93	75.54	6.9	33.27	8.1	24.7	0.85
C6	14 Oct 2016	10	14.93	75.05	6.9	33.27	8.1	24.7	0.82
C6	20 Oct 2016	1	16.05	71.29	7.8	33.31	8.1	24.4	3.50
C6	20 Oct 2016	2	16.05	71.11	7.7	33.31	8.1	24.4	3.43
C6	20 Oct 2016	3	16.00	71.21	7.4	33.30	8.1	24.4	2.24
C6	20 Oct 2016	4	15.82	70.67	7.1	33.30	8.1	24.5	1.48
C6	20 Oct 2016	5	15.66	72.18	6.8	33.30	8.1	24.5	1.05
C6	20 Oct 2016	6	15.51	73.80	6.3	33.30	8.1	24.5	0.88
C6	20 Oct 2016	7	15.13	75.50	6.0	33.29	8.0	24.6	0.86
C6	20 Oct 2016	8	14.74	76.57	6.0	33.30	8.0	24.7	0.86
C6	20 Oct 2016	9	14.33	76.61	6.2	33.30	8.0	24.8	0.78
C6	20 Oct 2016	10	14.38	76.70	6.2	33.29	8.0	24.8	0.81
C6	26 Oct 2016	1	17.39	83.64	9.0	33.30	8.3	24.1	1.81
C6	26 Oct 2016	2	17.37	83.61	8.9	33.30	8.3	24.1	2.39
C6	26 Oct 2016	3	17.27	82.90	8.7	33.30	8.3	24.1	2.68
C6	26 Oct 2016	4	17.17	82.19	8.4	33.30	8.2	24.2	2.62
C6	26 Oct 2016	5	17.04	81.73	8.1	33.30	8.2	24.2	2.14
C6	26 Oct 2016	6	16.87	81.43	7.5	33.30	8.2	24.2	1.34
C6	26 Oct 2016	7	16.64	81.59	6.7	33.29	8.2	24.3	0.90
C6	26 Oct 2016	8	16.31	81.94	6.1	33.28	8.2	24.4	0.76
C6	26 Oct 2016	9	15.43	82.26	6.5	33.26	8.1	24.5	0.95
C6	26 Oct 2016	10	15.03	80.16	7.4	33.29	8.1	24.6	1.33
C6	31 Oct 2016	1	17.47	74.44	7.5	33.31	8.1	24.1	1.03
C6	31 Oct 2016	2	17.49	74.73	7.6	33.31	8.1	24.1	1.24
C6	31 Oct 2016	3	17.46	74.94	7.3	33.31	8.1	24.1	1.07
C6	31 Oct 2016	4	17.29	76.42	6.7	33.32	8.1	24.2	0.73
C6	31 Oct 2016	5	16.96	79.02	6.1	33.30	8.1	24.2	0.54
C6	31 Oct 2016	6	16.23	80.16	6.0	33.29	8.1	24.4	0.50
C6	31 Oct 2016	7	15.67	80.66	6.1	33.29	8.0	24.5	0.49
C6	31 Oct 2016	8	15.53	80.65	6.1	33.27	8.0	24.5	0.51
C6	31 Oct 2016	9	15.17	79.30	6.2	33.27	8.0	24.6	0.51
C6	31 Oct 2016	10	15.07	76.48	6.2	33.27	8.0	24.6	0.51
A7	08 Oct 2016	1	19.88	83.12	8.5	33.40	8.2	23.6	1.14
A7	08 Oct 2016	2	19.88	83.16	8.5	33.40	8.2	23.6	1.31
A7	08 Oct 2016	3	19.86	82.99	8.5	33.40	8.2	23.6	1.47
A7	08 Oct 2016	4	19.70	83.09	8.4	33.39	8.2	23.6	1.71
A7	08 Oct 2016	5	19.63	83.12	8.3	33.40	8.2	23.6	1.95
A7	08 Oct 2016	6	19.11	83.16	8.4	33.32	8.2	23.7	2.24

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens ($\sigma\text{-t}$)	Chlor ($\mu\text{g/L}$)
A7	08 Oct 2016	7	17.95	83.29	8.4	33.29	8.2	24.0	2.55
A7	08 Oct 2016	8	17.10	83.38	8.4	33.29	8.2	24.2	2.66
A7	08 Oct 2016	9	16.64	83.22	8.2	33.27	8.2	24.3	2.47
A7	08 Oct 2016	10	16.09	82.82	8.0	33.25	8.2	24.4	2.36
A7	08 Oct 2016	11	15.75	82.38	7.8	33.24	8.1	24.5	2.21
A7	08 Oct 2016	12	15.34	82.64	7.7	33.25	8.1	24.5	1.98
A7	08 Oct 2016	13	15.24	83.16	7.4	33.25	8.1	24.6	1.57
A7	08 Oct 2016	14	15.11	83.82	7.0	33.24	8.1	24.6	1.34
A7	08 Oct 2016	15	14.95	84.06	6.8	33.24	8.1	24.6	1.25
A7	08 Oct 2016	16	14.61	84.36	6.7	33.23	8.1	24.7	1.17
A7	08 Oct 2016	17	14.09	85.04	6.8	33.26	8.1	24.8	1.16
A7	08 Oct 2016	18	13.99	85.90	6.7	33.26	8.0	24.8	1.09
A7	08 Oct 2016	19	13.88	86.04	6.8	33.26	8.0	24.9	1.03
A7	08 Oct 2016	20	13.90	86.48	6.9	33.26	8.0	24.9	NA
A7	14 Oct 2016	1	17.22	82.88	8.5	33.33	8.2	24.2	1.59
A7	14 Oct 2016	2	17.22	82.73	8.4	33.33	8.2	24.2	1.76
A7	14 Oct 2016	3	17.21	83.05	8.4	33.33	8.2	24.2	2.04
A7	14 Oct 2016	4	17.21	83.10	8.3	33.33	8.2	24.2	2.39
A7	14 Oct 2016	5	17.19	83.12	8.2	33.33	8.2	24.2	2.53
A7	14 Oct 2016	6	17.09	82.85	8.0	33.33	8.2	24.2	2.64
A7	14 Oct 2016	7	16.96	82.32	7.9	33.31	8.2	24.2	2.65
A7	14 Oct 2016	8	16.69	81.83	7.7	33.31	8.2	24.3	2.40
A7	14 Oct 2016	9	16.47	81.87	7.3	33.30	8.1	24.3	2.03
A7	14 Oct 2016	10	16.33	82.01	6.8	33.30	8.1	24.4	1.72
A7	14 Oct 2016	11	15.71	82.46	6.4	33.25	8.1	24.5	1.16
A7	14 Oct 2016	12	14.84	83.69	5.9	33.26	8.1	24.7	0.85
A7	14 Oct 2016	13	14.49	84.45	5.6	33.23	8.1	24.7	0.76
A7	14 Oct 2016	14	13.22	85.32	5.8	33.22	8.0	25.0	0.69
A7	14 Oct 2016	15	12.73	85.11	6.0	33.28	8.0	25.1	0.66
A7	14 Oct 2016	16	12.71	84.91	6.0	33.27	8.0	25.1	0.65
A7	14 Oct 2016	17	12.62	84.86	6.1	33.27	8.0	25.1	0.68
A7	14 Oct 2016	18	12.57	84.08	6.1	33.28	8.0	25.1	0.66
A7	14 Oct 2016	19	12.63	83.06	6.1	33.28	8.0	25.1	0.66
A7	20 Oct 2016	1	15.34	78.14	7.8	33.00	8.1	24.4	2.12
A7	20 Oct 2016	2	15.24	79.85	7.7	33.28	8.1	24.6	2.35
A7	20 Oct 2016	3	15.09	80.54	7.6	33.29	8.1	24.6	2.55
A7	20 Oct 2016	4	14.86	80.99	7.6	33.29	8.1	24.7	2.57
A7	20 Oct 2016	5	14.73	81.73	7.5	33.29	8.1	24.7	2.48
A7	20 Oct 2016	6	14.66	82.04	7.2	33.28	8.1	24.7	2.14
A7	20 Oct 2016	7	14.55	82.17	6.9	33.28	8.1	24.7	1.76
A7	20 Oct 2016	8	14.47	82.39	6.7	33.28	8.1	24.8	1.52
A7	20 Oct 2016	9	14.26	82.82	6.5	33.27	8.1	24.8	1.55
A7	20 Oct 2016	10	13.89	83.70	6.5	33.29	8.1	24.9	1.32
A7	20 Oct 2016	11	13.82	83.66	6.5	33.29	8.0	24.9	1.23
A7	20 Oct 2016	12	13.79	83.51	6.4	33.28	8.0	24.9	1.25
A7	20 Oct 2016	13	13.58	83.75	6.6	33.29	8.0	24.9	1.26
A7	20 Oct 2016	14	13.52	84.03	6.6	33.29	8.0	25.0	1.30
A7	20 Oct 2016	15	13.52	84.13	6.6	33.29	8.0	25.0	1.38
A7	20 Oct 2016	16	13.50	83.92	6.7	33.29	8.0	25.0	1.38
A7	20 Oct 2016	17	13.43	83.55	6.7	33.29	8.0	25.0	1.33
A7	20 Oct 2016	18	13.45	84.14	6.6	33.29	8.0	25.0	1.32
A7	20 Oct 2016	19	13.45	84.33	6.6	33.29	8.0	25.0	1.34

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens ($\sigma\text{-t}$)	Chlor ($\mu\text{g/L}$)
A7	26 Oct 2016	1	17.81	85.51	8.4	33.34	8.2	24.0	1.00
A7	26 Oct 2016	2	17.74	85.53	8.5	33.33	8.2	24.1	1.09
A7	26 Oct 2016	3	17.67	85.40	8.5	33.33	8.2	24.1	1.44
A7	26 Oct 2016	4	17.55	85.18	8.6	33.32	8.2	24.1	1.50
A7	26 Oct 2016	5	17.45	84.90	8.7	33.31	8.2	24.1	1.73
A7	26 Oct 2016	6	17.39	84.42	8.8	33.31	8.2	24.1	1.87
A7	26 Oct 2016	7	17.30	84.42	8.8	33.30	8.2	24.1	2.01
A7	26 Oct 2016	8	17.22	84.09	8.9	33.30	8.2	24.2	2.16
A7	26 Oct 2016	9	17.17	83.55	8.9	33.30	8.2	24.2	2.27
A7	26 Oct 2016	10	17.11	82.69	8.8	33.30	8.2	24.2	2.19
A7	26 Oct 2016	11	17.06	82.37	8.5	33.29	8.2	24.2	2.18
A7	26 Oct 2016	12	16.94	81.41	8.2	33.29	8.2	24.2	2.20
A7	26 Oct 2016	13	16.79	81.17	7.9	33.29	8.2	24.2	2.08
A7	26 Oct 2016	14	16.50	81.62	7.8	33.27	8.2	24.3	1.85
A7	26 Oct 2016	15	16.02	81.61	7.8	33.28	8.2	24.4	1.73
A7	26 Oct 2016	16	15.96	81.52	7.7	33.27	8.2	24.4	1.51
A7	26 Oct 2016	17	15.76	82.08	7.6	33.27	8.2	24.5	1.54
A7	26 Oct 2016	18	15.54	82.20	7.8	33.26	8.2	24.5	1.59
A7	31 Oct 2016	1	16.80	79.15	8.0	33.30	8.1	24.3	2.21
A7	31 Oct 2016	2	16.79	79.33	8.1	33.30	8.1	24.3	2.73
A7	31 Oct 2016	3	16.76	79.39	8.1	33.30	8.1	24.3	2.85
A7	31 Oct 2016	4	16.68	79.65	8.1	33.30	8.1	24.3	2.93
A7	31 Oct 2016	5	16.66	79.81	8.1	33.30	8.1	24.3	3.00
A7	31 Oct 2016	6	16.62	79.86	8.1	33.30	8.1	24.3	3.07
A7	31 Oct 2016	7	16.61	79.97	8.1	33.30	8.1	24.3	3.09
A7	31 Oct 2016	8	16.58	79.99	8.1	33.30	8.1	24.3	3.19
A7	31 Oct 2016	9	16.57	80.04	8.0	33.30	8.1	24.3	2.92
A7	31 Oct 2016	10	16.55	79.97	7.5	33.30	8.1	24.3	2.43
A7	31 Oct 2016	11	16.48	79.84	7.2	33.29	8.1	24.3	2.23
A7	31 Oct 2016	12	15.84	79.83	7.2	33.26	8.1	24.4	1.68
A7	31 Oct 2016	13	15.49	81.65	6.9	33.29	8.1	24.5	1.16
A7	31 Oct 2016	14	15.45	82.36	6.8	33.28	8.1	24.5	1.30
A7	31 Oct 2016	15	14.63	83.28	7.0	33.25	8.1	24.7	1.09
A7	31 Oct 2016	16	14.22	85.44	6.8	33.27	8.0	24.8	0.94
A7	31 Oct 2016	17	14.59	86.54	6.6	33.27	8.0	24.7	0.85
A7	31 Oct 2016	18	13.70	86.87	6.8	33.26	8.0	24.9	0.82
A7	31 Oct 2016	19	13.58	86.84	6.8	33.25	8.0	24.9	0.81
A7	31 Oct 2016	20	13.54	86.73	6.8	33.25	8.0	24.9	0.84
C7	08 Oct 2016	1	19.96	82.21	8.5	33.40	8.2	23.6	1.23
C7	08 Oct 2016	2	19.96	82.20	8.5	33.40	8.2	23.6	1.33
C7	08 Oct 2016	3	19.96	82.22	8.6	33.40	8.2	23.6	1.45
C7	08 Oct 2016	4	19.95	82.23	8.5	33.40	8.2	23.6	1.53
C7	08 Oct 2016	5	19.92	82.07	8.5	33.39	8.2	23.6	1.55
C7	08 Oct 2016	6	19.34	82.18	8.5	33.33	8.2	23.7	1.93
C7	08 Oct 2016	7	18.55	82.76	8.3	33.31	8.2	23.8	2.42
C7	08 Oct 2016	8	17.08	83.68	8.4	33.25	8.2	24.1	3.17
C7	08 Oct 2016	9	16.41	82.62	8.3	33.27	8.2	24.3	3.68
C7	08 Oct 2016	10	16.01	81.76	8.3	33.24	8.1	24.4	3.87
C7	08 Oct 2016	11	15.74	81.09	8.3	33.25	8.1	24.5	3.89
C7	08 Oct 2016	12	15.71	81.06	8.3	33.25	8.1	24.5	3.95
C7	08 Oct 2016	13	15.59	81.08	8.3	33.24	8.1	24.5	4.13
C7	08 Oct 2016	14	15.43	80.58	8.1	33.24	8.1	24.5	4.10
C7	08 Oct 2016	15	15.31	79.13	7.6	33.23	8.1	24.5	2.56

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens ($\sigma\text{-t}$)	Chlor ($\mu\text{g/L}$)
C7	08 Oct 2016	16	14.92	79.51	7.0	33.24	8.1	24.6	1.49
C7	08 Oct 2016	17	14.62	82.11	6.8	33.24	8.1	24.7	1.74
C7	08 Oct 2016	18	14.36	84.93	7.4	33.26	8.1	24.8	2.17
C7	14 Oct 2016	1	16.67	77.43	8.1	33.31	8.2	24.3	3.14
C7	14 Oct 2016	2	16.52	77.74	7.7	33.31	8.2	24.3	3.33
C7	14 Oct 2016	3	16.27	79.68	7.3	33.28	8.2	24.4	3.05
C7	14 Oct 2016	4	15.53	79.44	7.1	33.28	8.1	24.5	2.34
C7	14 Oct 2016	5	15.10	80.29	6.9	33.27	8.1	24.6	1.73
C7	14 Oct 2016	6	14.73	81.92	6.9	33.26	8.1	24.7	1.33
C7	14 Oct 2016	7	14.47	83.42	6.8	33.27	8.1	24.8	1.14
C7	14 Oct 2016	8	14.24	84.29	6.8	33.26	8.1	24.8	1.11
C7	14 Oct 2016	9	14.06	84.24	6.8	33.26	8.0	24.8	1.10
C7	14 Oct 2016	10	13.91	84.26	6.7	33.26	8.0	24.9	1.11
C7	14 Oct 2016	11	13.76	84.76	6.7	33.25	8.0	24.9	0.97
C7	14 Oct 2016	12	13.52	85.55	6.6	33.26	8.0	24.9	0.93
C7	14 Oct 2016	13	13.33	86.23	6.6	33.26	8.0	25.0	0.92
C7	14 Oct 2016	14	13.29	85.95	6.6	33.27	8.0	25.0	0.91
C7	14 Oct 2016	15	13.27	85.81	6.6	33.27	8.0	25.0	0.92
C7	14 Oct 2016	16	13.26	85.92	6.6	33.27	8.0	25.0	0.94
C7	14 Oct 2016	17	13.26	85.79	6.6	33.27	8.0	25.0	0.89
C7	14 Oct 2016	18	13.24	85.82	6.6	33.28	8.0	25.0	0.91
C7	14 Oct 2016	19	13.26	86.00	6.6	33.28	8.0	25.0	0.92
C7	20 Oct 2016	1	16.17	77.61	8.1	33.31	8.2	24.4	3.16
C7	20 Oct 2016	2	16.09	77.44	7.8	33.31	8.2	24.4	4.14
C7	20 Oct 2016	3	15.96	76.91	7.5	33.29	8.2	24.4	4.17
C7	20 Oct 2016	4	15.41	76.51	7.5	33.28	8.1	24.6	3.86
C7	20 Oct 2016	5	15.08	77.22	7.5	33.28	8.1	24.6	3.56
C7	20 Oct 2016	6	14.89	77.98	7.4	33.28	8.1	24.7	3.39
C7	20 Oct 2016	7	14.72	79.23	7.3	33.27	8.1	24.7	3.18
C7	20 Oct 2016	8	14.49	80.28	7.3	33.28	8.1	24.8	2.82
C7	20 Oct 2016	9	14.42	81.07	7.2	33.28	8.1	24.8	2.50
C7	20 Oct 2016	10	14.32	81.39	7.1	33.28	8.1	24.8	2.32
C7	20 Oct 2016	11	14.26	82.10	7.1	33.28	8.1	24.8	2.19
C7	20 Oct 2016	12	14.22	82.45	7.0	33.28	8.1	24.8	2.01
C7	20 Oct 2016	13	14.21	82.64	6.9	33.28	8.1	24.8	1.70
C7	20 Oct 2016	14	14.22	82.82	6.8	33.28	8.1	24.8	1.48
C7	20 Oct 2016	15	14.16	82.90	6.6	33.28	8.1	24.8	1.10
C7	20 Oct 2016	16	14.04	83.18	6.1	33.29	8.1	24.9	0.84
C7	20 Oct 2016	17	13.94	83.40	5.8	33.28	8.0	24.9	0.85
C7	20 Oct 2016	18	13.64	82.93	6.1	33.29	8.0	24.9	1.01
C7	26 Oct 2016	1	17.25	82.11	9.0	33.29	8.2	24.1	1.43
C7	26 Oct 2016	2	17.25	82.29	8.8	33.29	8.2	24.1	1.51
C7	26 Oct 2016	3	17.15	82.48	8.6	33.29	8.2	24.2	1.53
C7	26 Oct 2016	4	17.11	83.43	8.6	33.30	8.2	24.2	1.62
C7	26 Oct 2016	5	17.11	83.92	8.6	33.30	8.2	24.2	1.68
C7	26 Oct 2016	6	17.09	84.32	8.6	33.30	8.2	24.2	1.79
C7	26 Oct 2016	7	17.05	84.55	8.6	33.31	8.2	24.2	2.08
C7	26 Oct 2016	8	17.04	84.42	8.7	33.30	8.2	24.2	2.29
C7	26 Oct 2016	9	17.01	84.62	8.7	33.30	8.2	24.2	2.54
C7	26 Oct 2016	10	16.96	84.08	8.7	33.30	8.2	24.2	2.71
C7	26 Oct 2016	11	16.90	82.83	8.6	33.30	8.2	24.2	2.97
C7	26 Oct 2016	12	16.86	82.76	8.6	33.29	8.2	24.2	3.03

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens ($\sigma\text{-t}$)	Chlor ($\mu\text{g/L}$)
C7	26 Oct 2016	13	16.77	82.09	8.4	33.29	8.2	24.3	2.69
C7	26 Oct 2016	14	16.72	81.45	7.8	33.29	8.2	24.3	1.93
C7	26 Oct 2016	15	16.53	80.99	6.8	33.28	8.2	24.3	1.29
C7	26 Oct 2016	16	16.02	81.43	6.2	33.26	8.2	24.4	0.97
C7	26 Oct 2016	17	14.99	83.39	6.4	33.26	8.1	24.6	0.94
C7	26 Oct 2016	18	14.30	84.00	6.8	33.26	8.1	24.8	1.01
C7	26 Oct 2016	19	14.19	83.38	7.1	33.27	8.1	24.8	1.07
C7	31 Oct 2016	1	17.72	83.46	8.1	33.35	8.2	24.1	2.15
C7	31 Oct 2016	2	17.71	83.33	8.0	33.35	8.2	24.1	2.76
C7	31 Oct 2016	3	17.65	83.45	7.8	33.34	8.2	24.1	2.90
C7	31 Oct 2016	4	17.45	83.18	7.5	33.34	8.2	24.1	2.73
C7	31 Oct 2016	5	17.10	82.16	7.3	33.31	8.2	24.2	2.36
C7	31 Oct 2016	6	16.29	81.99	7.3	33.29	8.1	24.4	2.03
C7	31 Oct 2016	7	15.74	82.50	7.2	33.27	8.1	24.5	1.93
C7	31 Oct 2016	8	15.32	83.54	7.2	33.27	8.1	24.6	2.06
C7	31 Oct 2016	9	15.14	84.59	7.3	33.26	8.1	24.6	2.01
C7	31 Oct 2016	10	14.94	84.91	7.4	33.25	8.1	24.6	2.00
C7	31 Oct 2016	11	14.72	85.23	7.3	33.25	8.1	24.7	1.61
C7	31 Oct 2016	12	14.67	85.65	7.2	33.25	8.1	24.7	1.36
C7	31 Oct 2016	13	14.62	85.76	7.1	33.25	8.1	24.7	1.33
C7	31 Oct 2016	14	14.61	86.14	7.0	33.26	8.1	24.7	1.16
C7	31 Oct 2016	15	14.52	86.20	6.8	33.25	8.1	24.7	1.02
C7	31 Oct 2016	16	14.30	86.49	6.7	33.24	8.1	24.8	0.92
C7	31 Oct 2016	17	14.01	86.75	6.8	33.26	8.0	24.8	0.86
C7	31 Oct 2016	18	13.98	85.85	6.8	33.26	8.0	24.8	0.87
C8	08 Oct 2016	1	19.88	82.58	8.5	33.41	8.2	23.6	1.01
C8	08 Oct 2016	2	19.88	82.48	8.5	33.41	8.2	23.6	1.11
C8	08 Oct 2016	3	19.86	82.61	8.4	33.41	8.2	23.6	1.29
C8	08 Oct 2016	4	19.84	82.58	8.4	33.40	8.2	23.6	1.44
C8	08 Oct 2016	5	19.66	82.13	8.5	33.36	8.2	23.6	1.65
C8	08 Oct 2016	6	18.52	82.32	8.5	33.32	8.2	23.9	1.97
C8	08 Oct 2016	7	17.99	82.57	8.3	33.30	8.2	24.0	2.93
C8	08 Oct 2016	8	17.10	83.14	8.1	33.26	8.2	24.2	3.72
C8	08 Oct 2016	9	16.32	83.03	7.9	33.24	8.2	24.3	4.13
C8	08 Oct 2016	10	15.73	82.28	7.8	33.24	8.1	24.5	4.21
C8	08 Oct 2016	11	15.41	81.23	7.8	33.23	8.1	24.5	4.28
C8	08 Oct 2016	12	15.03	80.78	7.9	33.23	8.1	24.6	4.33
C8	08 Oct 2016	13	14.82	81.07	7.9	33.23	8.1	24.6	4.37
C8	08 Oct 2016	14	14.72	81.52	7.9	33.23	8.1	24.7	4.35
C8	08 Oct 2016	15	14.68	81.44	7.8	33.23	8.1	24.7	3.33
C8	08 Oct 2016	16	14.66	81.63	7.5	33.23	8.1	24.7	2.07
C8	08 Oct 2016	17	14.65	81.51	6.9	33.23	8.1	24.7	1.26
C8	08 Oct 2016	18	14.47	82.62	6.7	33.24	8.1	24.7	1.40
C8	08 Oct 2016	19	14.14	85.57	7.1	33.25	8.0	24.8	1.52
C8	14 Oct 2016	1	16.36	79.50	8.5	33.31	8.2	24.4	2.42
C8	14 Oct 2016	2	16.32	78.77	8.4	33.31	8.2	24.4	3.19
C8	14 Oct 2016	3	16.30	79.47	8.1	33.30	8.2	24.4	3.77
C8	14 Oct 2016	4	15.98	78.81	8.0	33.27	8.2	24.4	3.87
C8	14 Oct 2016	5	15.58	78.22	8.0	33.29	8.1	24.5	3.92
C8	14 Oct 2016	6	15.58	78.74	7.7	33.28	8.1	24.5	3.30
C8	14 Oct 2016	7	15.38	79.31	7.1	33.28	8.1	24.6	2.00
C8	14 Oct 2016	8	15.14	80.63	6.6	33.26	8.1	24.6	1.42

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens ($\sigma\text{-t}$)	Chlor ($\mu\text{g/L}$)
C8	14 Oct 2016	9	14.26	83.51	6.7	33.27	8.1	24.8	1.26
C8	14 Oct 2016	10	14.06	84.50	6.8	33.27	8.1	24.8	1.26
C8	14 Oct 2016	11	14.01	84.54	6.9	33.27	8.0	24.8	1.26
C8	14 Oct 2016	12	13.96	84.42	6.9	33.27	8.0	24.9	1.27
C8	14 Oct 2016	13	13.96	84.52	6.9	33.27	8.0	24.9	1.29
C8	14 Oct 2016	14	13.95	84.46	6.9	33.27	8.0	24.9	1.23
C8	14 Oct 2016	15	13.94	84.37	6.9	33.27	8.0	24.9	1.22
C8	14 Oct 2016	16	13.93	84.17	6.9	33.27	8.0	24.9	1.21
C8	14 Oct 2016	17	13.93	83.09	6.9	33.28	8.0	24.9	1.19
C8	14 Oct 2016	18	13.93	82.74	6.8	33.28	8.0	24.9	1.20
C8	14 Oct 2016	19	13.93	82.37	6.9	33.28	8.0	24.9	1.20
C8	14 Oct 2016	20	13.94	81.97	6.9	33.28	8.0	24.9	1.24
C8	20 Oct 2016	1	16.55	74.71	8.4	33.32	8.2	24.3	2.52
C8	20 Oct 2016	2	16.54	75.65	8.4	33.32	8.2	24.3	2.46
C8	20 Oct 2016	3	16.53	75.61	8.4	33.32	8.2	24.3	3.52
C8	20 Oct 2016	4	16.47	75.26	8.4	33.31	8.2	24.3	4.29
C8	20 Oct 2016	5	16.33	75.28	8.3	33.30	8.2	24.4	4.56
C8	20 Oct 2016	6	16.15	75.06	8.3	33.31	8.2	24.4	4.82
C8	20 Oct 2016	7	16.05	75.02	8.2	33.30	8.2	24.4	4.84
C8	20 Oct 2016	8	15.97	75.37	8.1	33.30	8.2	24.4	4.96
C8	20 Oct 2016	9	15.90	75.40	7.9	33.30	8.1	24.5	4.81
C8	20 Oct 2016	10	15.71	75.92	7.5	33.29	8.1	24.5	4.00
C8	20 Oct 2016	11	15.22	76.49	7.0	33.27	8.1	24.6	3.59
C8	20 Oct 2016	12	14.80	77.72	6.9	33.27	8.1	24.7	3.39
C8	20 Oct 2016	13	14.42	79.90	7.0	33.27	8.1	24.8	3.16
C8	20 Oct 2016	14	14.22	80.87	7.0	33.28	8.1	24.8	2.75
C8	20 Oct 2016	15	14.16	81.68	6.8	33.27	8.1	24.8	2.04
C8	20 Oct 2016	16	14.00	82.31	6.4	33.27	8.1	24.8	1.31
C8	20 Oct 2016	17	13.82	83.12	6.0	33.27	8.1	24.9	1.02
C8	20 Oct 2016	18	13.48	83.83	6.0	33.27	8.0	25.0	1.12
C8	20 Oct 2016	19	13.26	83.74	6.3	33.29	8.0	25.0	1.37
C8	26 Oct 2016	1	17.07	81.77	9.0	33.30	8.2	24.2	2.06
C8	26 Oct 2016	2	17.08	81.78	9.0	33.30	8.2	24.2	2.16
C8	26 Oct 2016	3	17.09	81.82	8.7	33.30	8.2	24.2	2.49
C8	26 Oct 2016	4	17.08	81.68	8.5	33.30	8.2	24.2	2.56
C8	26 Oct 2016	5	16.77	81.66	8.6	33.29	8.2	24.3	2.72
C8	26 Oct 2016	6	16.69	81.79	8.6	33.30	8.2	24.3	2.82
C8	26 Oct 2016	7	16.66	82.00	8.6	33.28	8.2	24.3	2.96
C8	26 Oct 2016	8	16.55	81.95	8.5	33.29	8.2	24.3	2.94
C8	26 Oct 2016	9	16.53	81.88	8.5	33.28	8.2	24.3	2.96
C8	26 Oct 2016	10	16.46	81.83	8.5	33.29	8.2	24.3	3.19
C8	26 Oct 2016	11	16.45	81.79	8.3	33.28	8.2	24.3	3.40
C8	26 Oct 2016	12	16.32	81.52	8.3	33.28	8.2	24.4	3.43
C8	26 Oct 2016	13	16.23	81.60	8.2	33.28	8.2	24.4	3.38
C8	26 Oct 2016	14	16.13	81.27	8.2	33.28	8.2	24.4	3.10
C8	26 Oct 2016	15	16.09	80.93	8.0	33.28	8.2	24.4	2.54
C8	26 Oct 2016	16	16.09	81.04	7.4	33.28	8.2	24.4	1.65
C8	26 Oct 2016	17	16.04	81.29	6.4	33.28	8.2	24.4	1.25
C8	26 Oct 2016	18	14.90	82.92	6.5	33.23	8.2	24.6	1.45
C8	26 Oct 2016	19	13.99	82.38	7.6	33.27	8.1	24.9	1.92
C8	31 Oct 2016	1	17.84	83.93	7.8	33.33	8.2	24.0	1.31
C8	31 Oct 2016	2	17.84	84.01	8.1	33.33	8.2	24.0	1.34

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens ($\sigma\text{-t}$)	Chlor ($\mu\text{g/L}$)
C8	31 Oct 2016	3	17.84	84.42	8.1	33.33	8.2	24.0	1.68
C8	31 Oct 2016	4	17.79	84.27	7.9	33.35	8.2	24.1	2.52
C8	31 Oct 2016	5	17.25	83.72	7.7	33.41	8.2	24.2	2.89
C8	31 Oct 2016	6	16.74	81.91	7.4	33.38	8.2	24.3	2.80
C8	31 Oct 2016	7	16.32	81.68	7.4	33.35	8.1	24.4	2.75
C8	31 Oct 2016	8	15.68	82.76	7.5	33.33	8.1	24.5	2.51
C8	31 Oct 2016	9	15.38	83.46	7.5	33.30	8.1	24.6	2.35
C8	31 Oct 2016	10	15.27	83.76	7.4	33.28	8.1	24.6	2.13
C8	31 Oct 2016	11	15.19	84.04	7.2	33.28	8.1	24.6	1.71
C8	31 Oct 2016	12	15.13	84.40	6.9	33.27	8.1	24.6	1.35
C8	31 Oct 2016	13	14.84	84.87	6.8	33.27	8.1	24.7	1.07
C8	31 Oct 2016	14	14.59	85.48	6.7	33.27	8.1	24.7	0.96
C8	31 Oct 2016	15	14.24	86.17	6.7	33.27	8.1	24.8	0.88
C8	31 Oct 2016	16	14.19	85.80	6.7	33.27	8.0	24.8	0.85
C8	31 Oct 2016	17	14.17	85.68	6.7	33.27	8.0	24.8	0.78
C8	31 Oct 2016	18	14.16	85.56	6.7	33.27	8.0	24.8	0.77
C8	31 Oct 2016	19	14.17	85.39	6.7	33.27	8.0	24.8	0.77
C8	31 Oct 2016	20	14.20	84.92	6.7	33.27	8.0	24.8	0.79

NA = not available

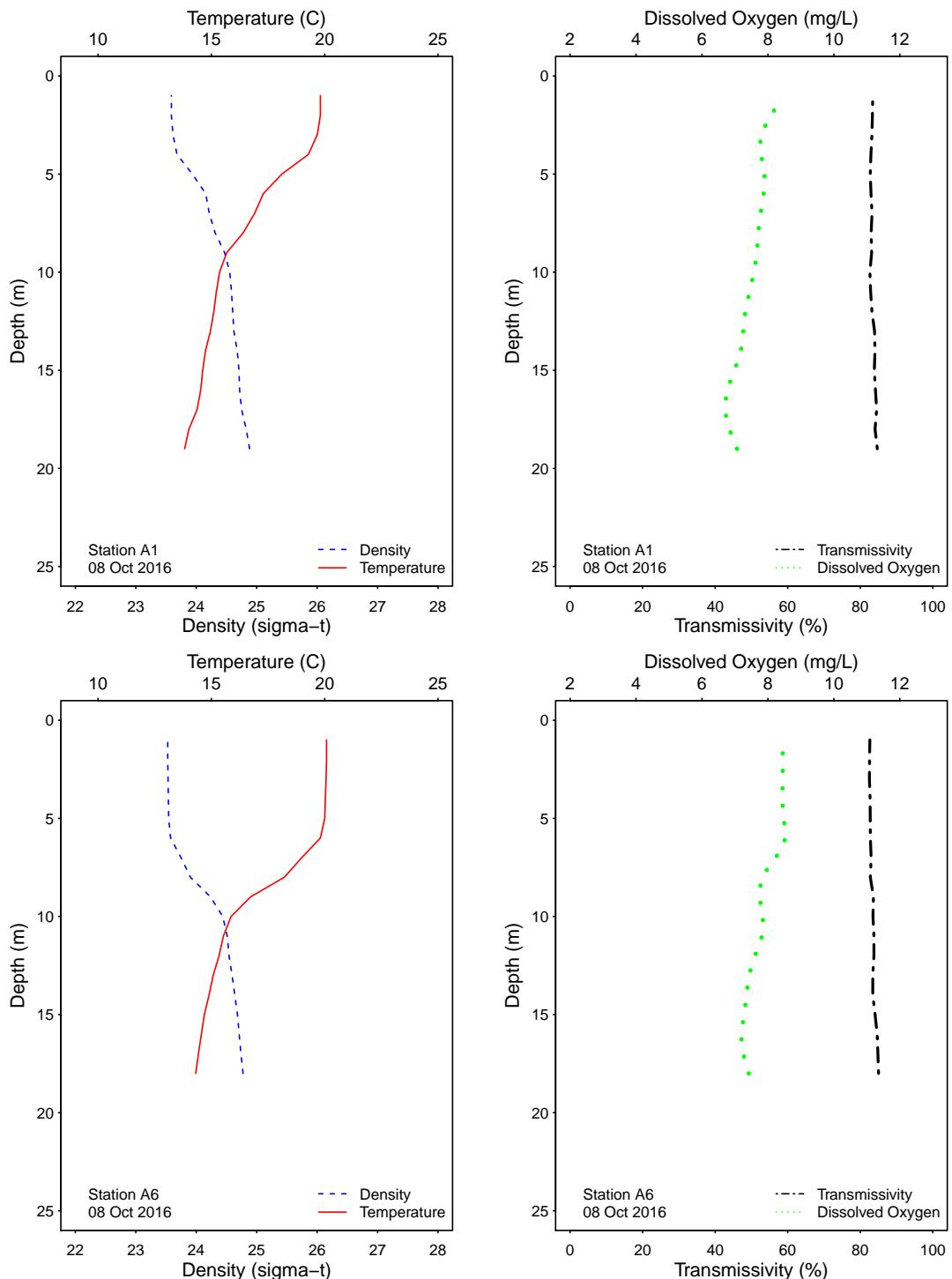


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

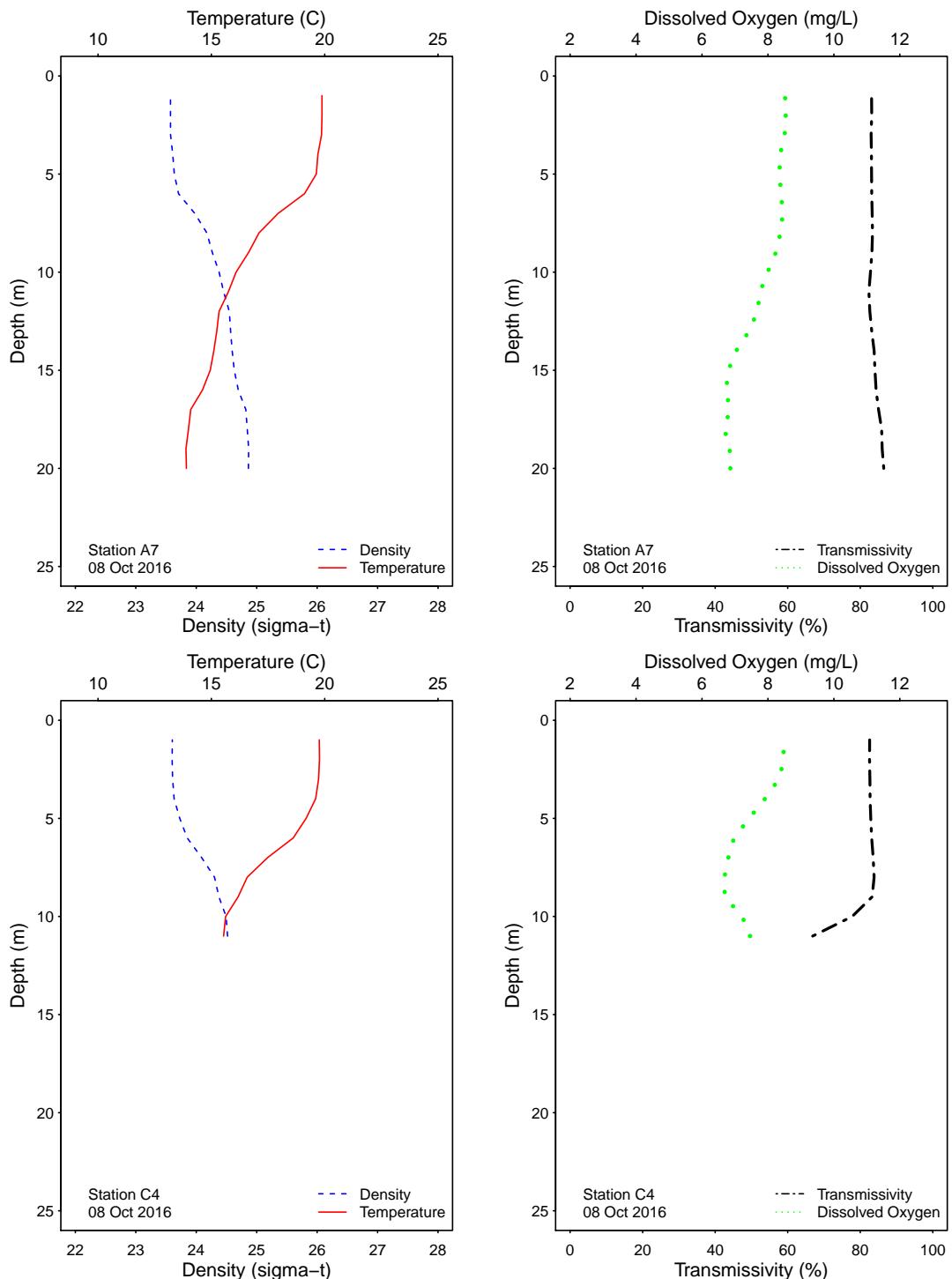


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

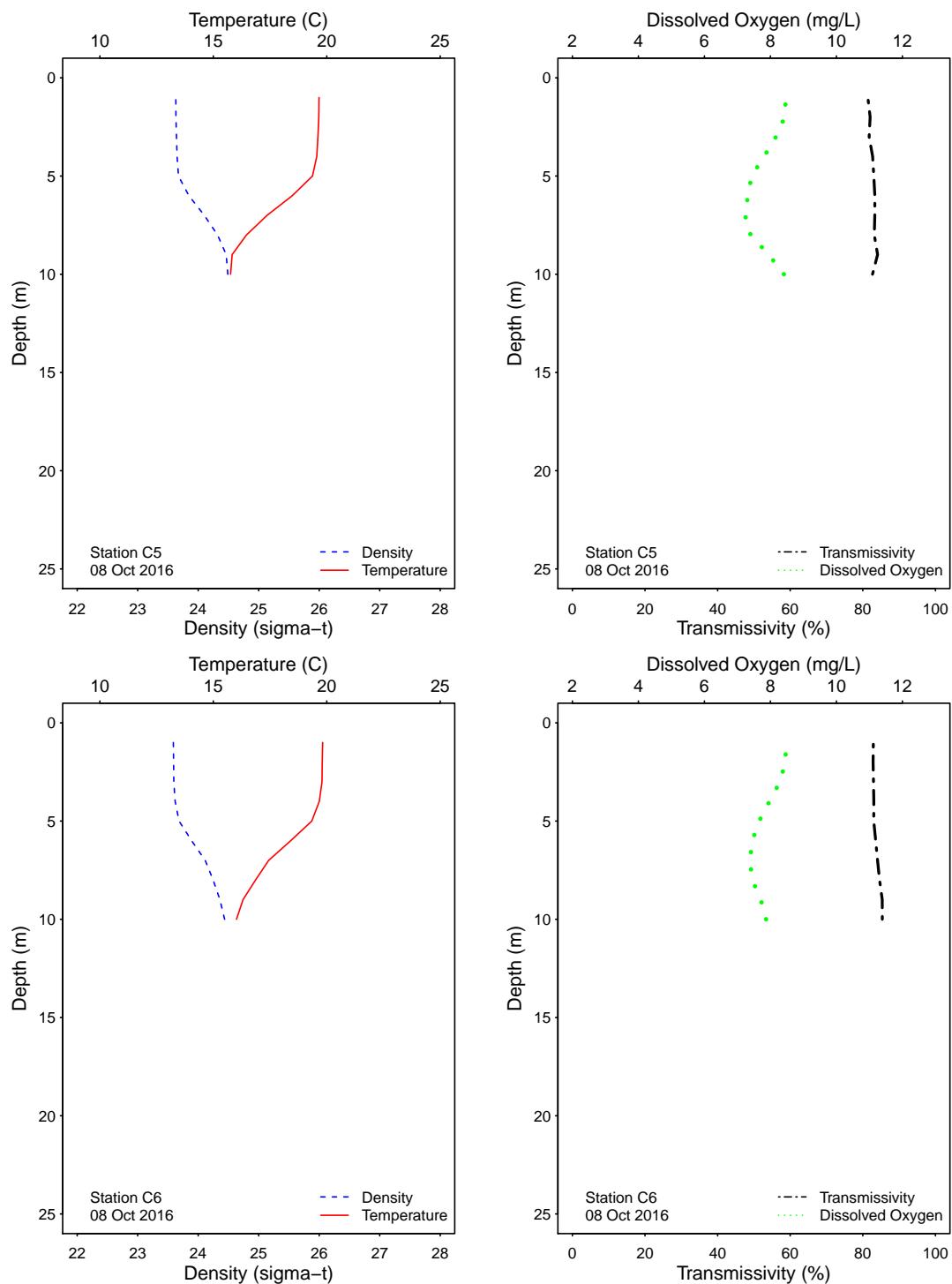


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

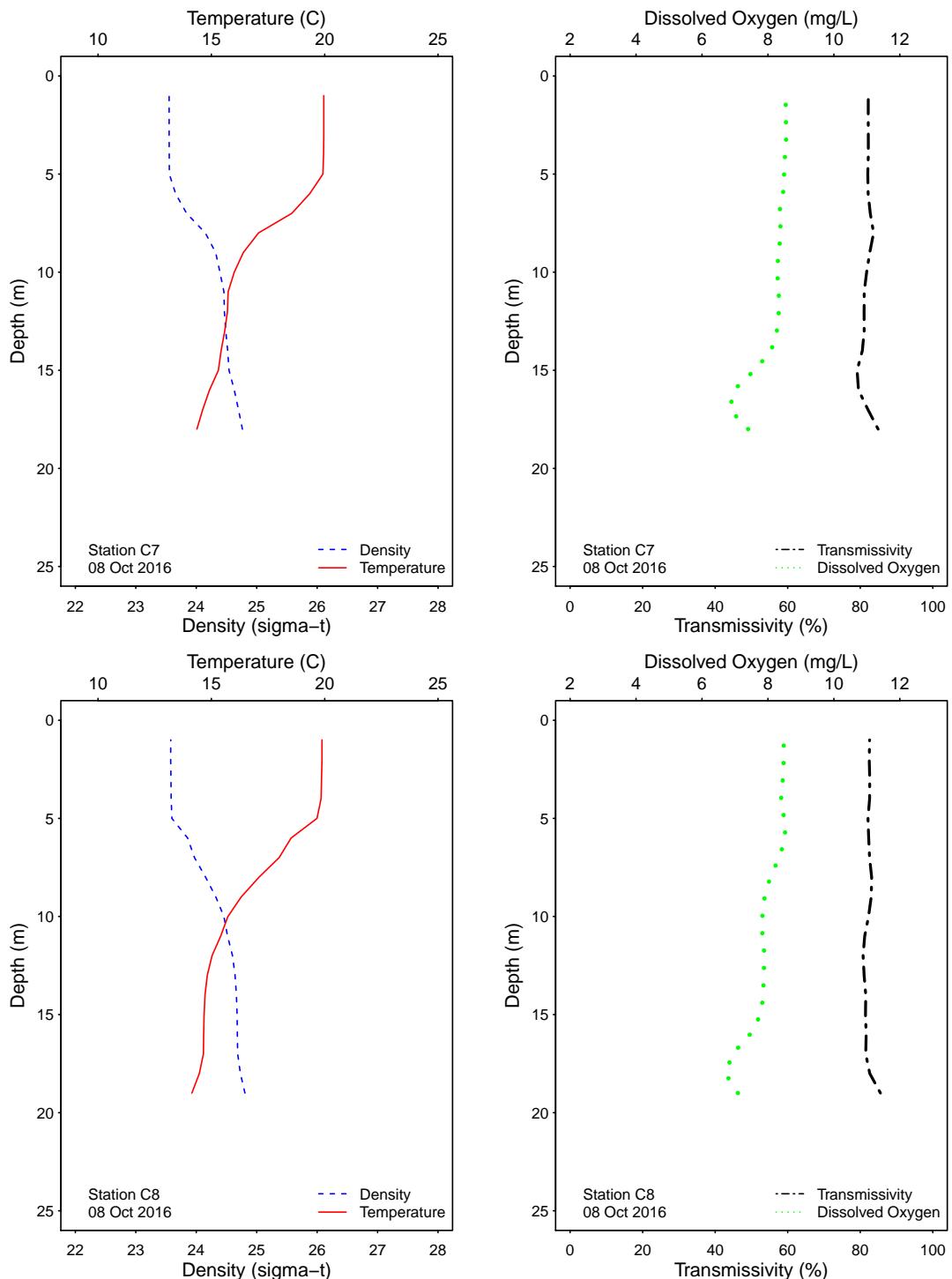


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

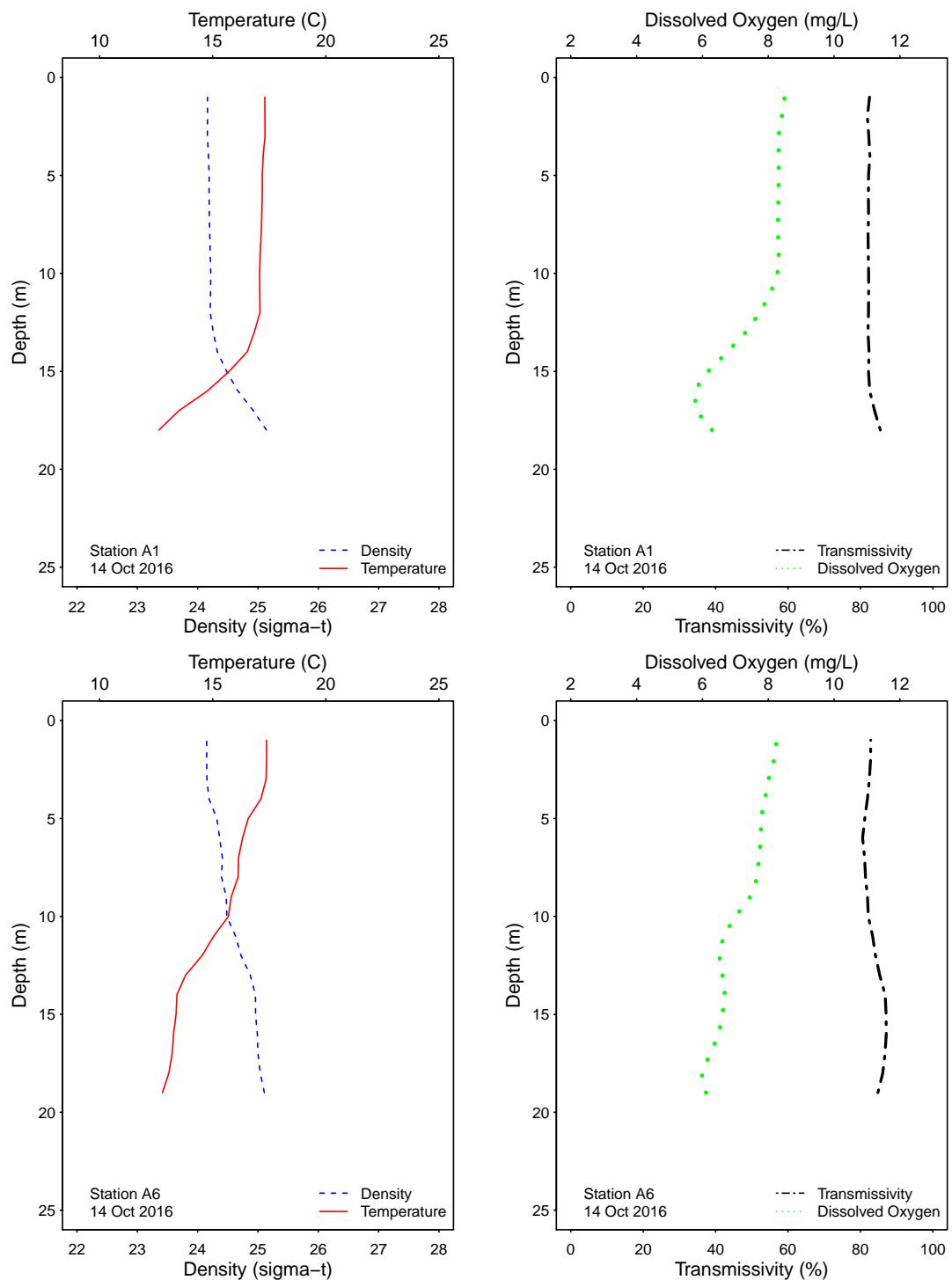


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

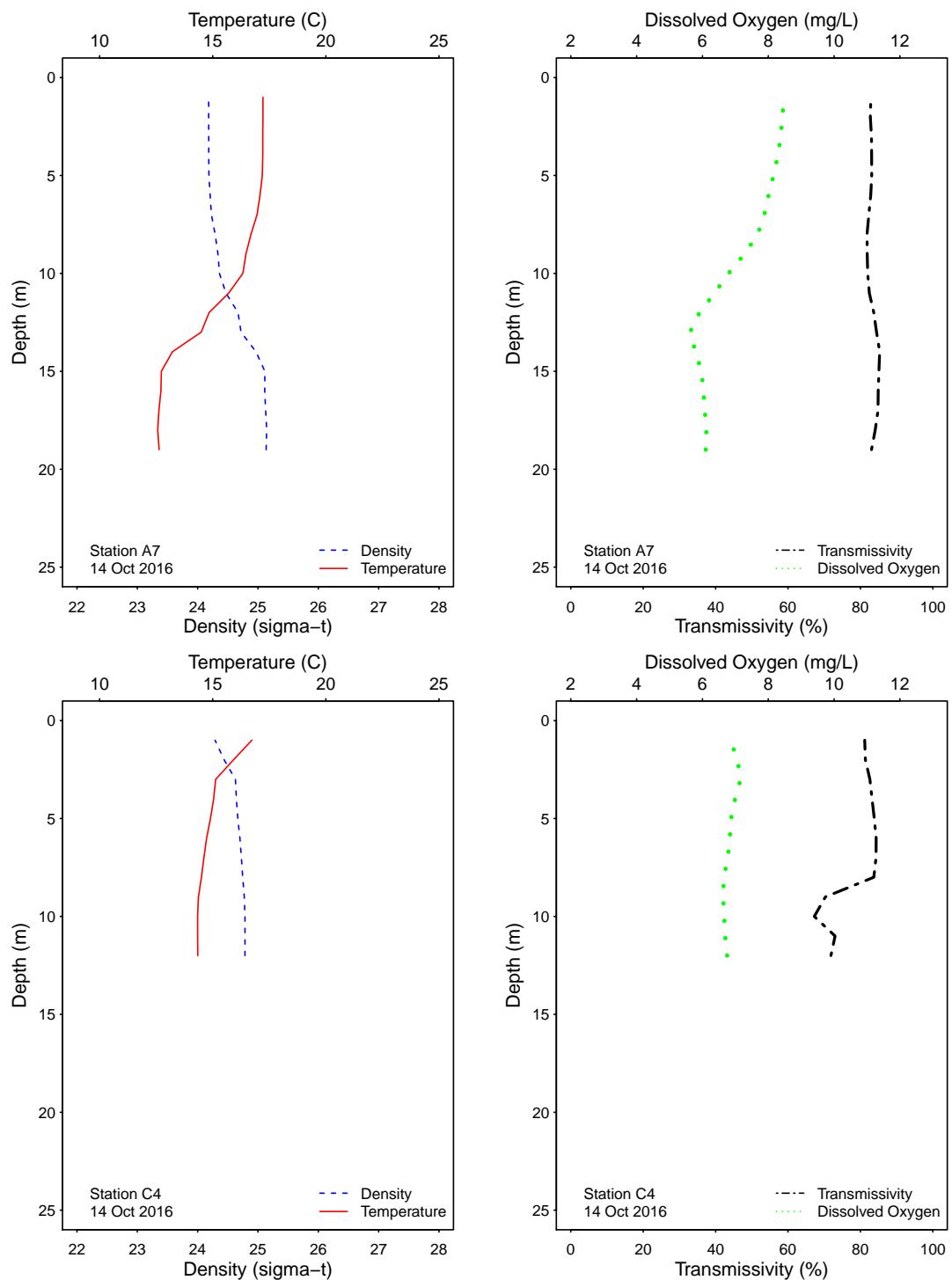


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

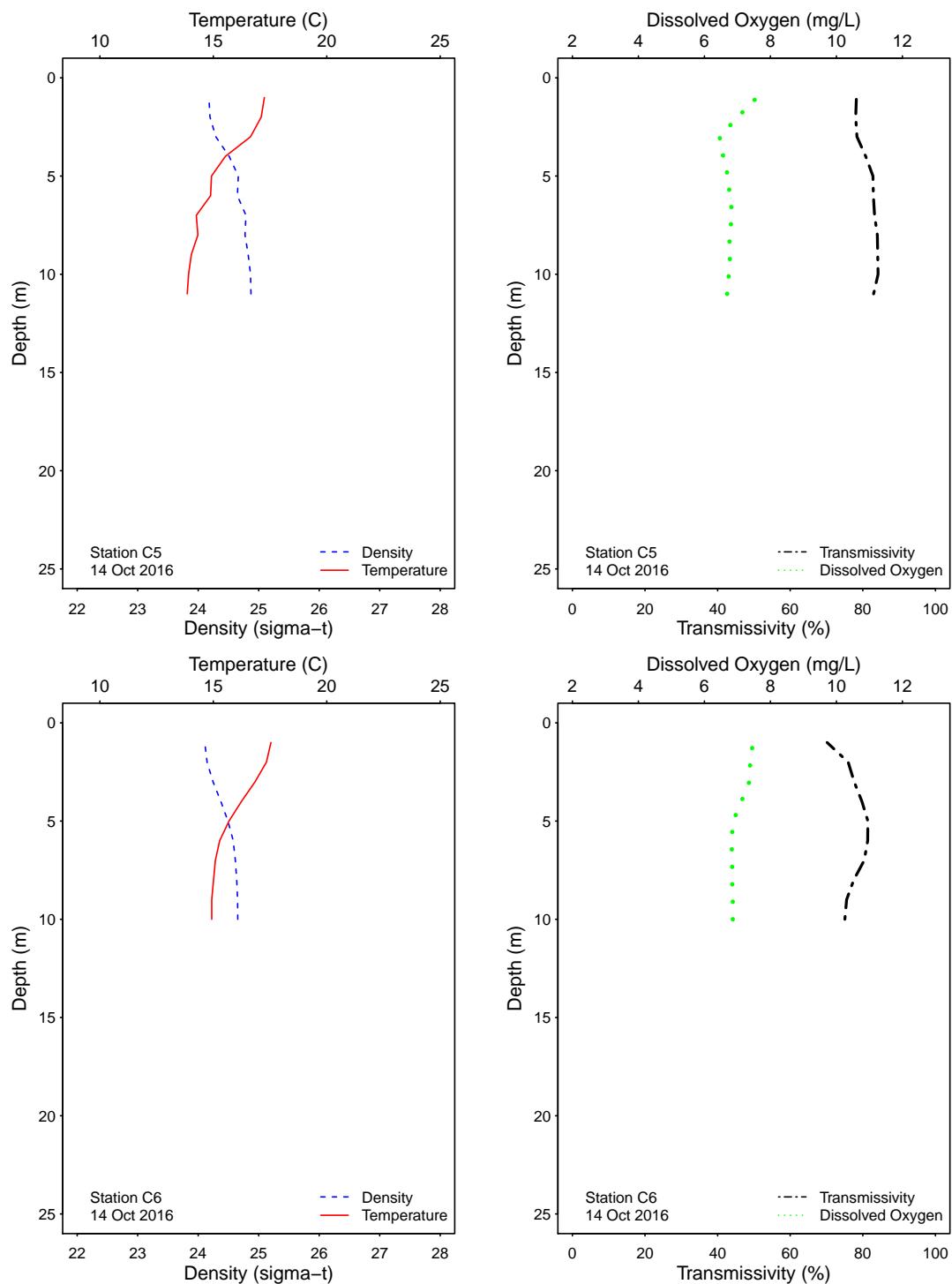


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

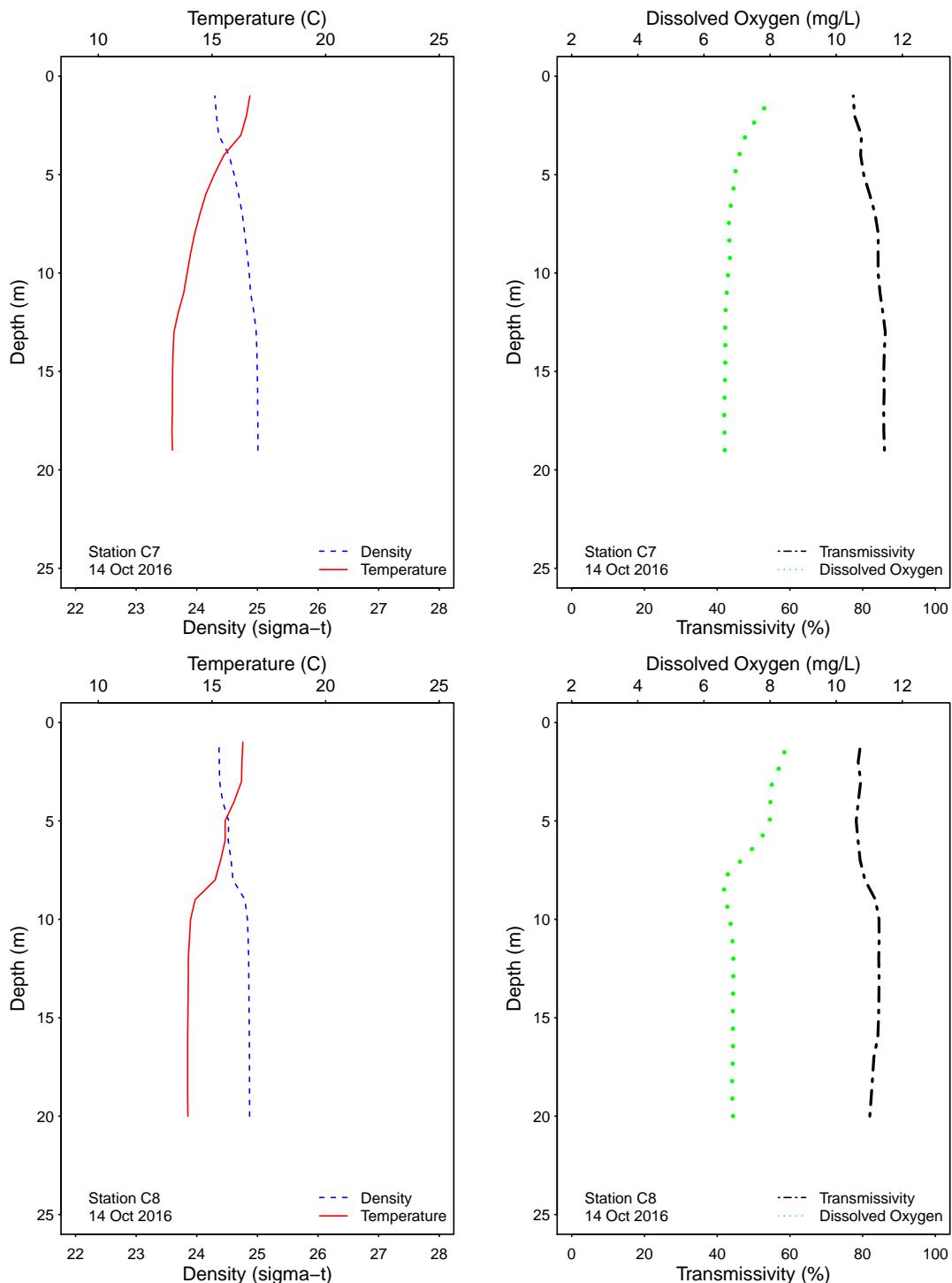


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

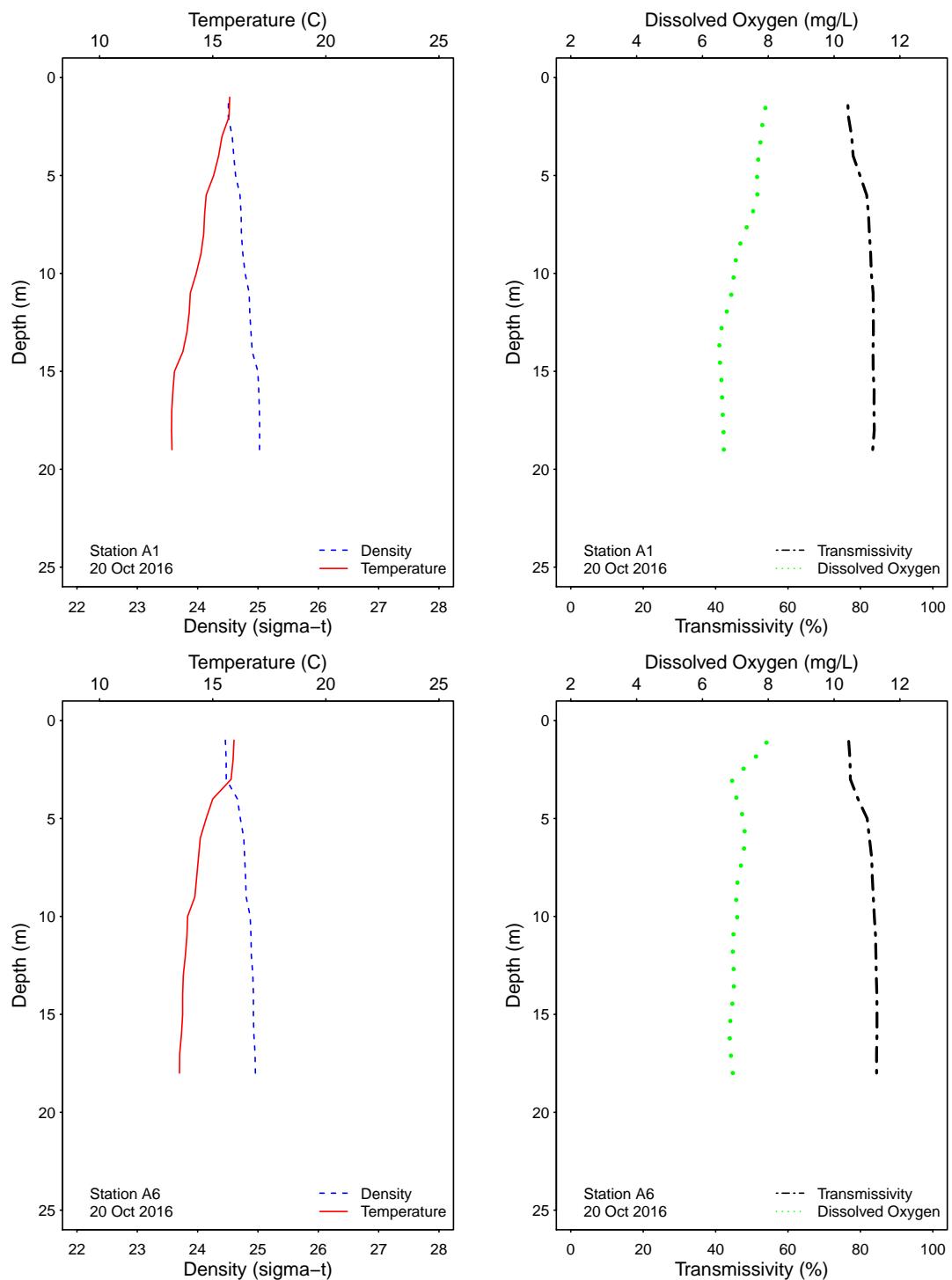


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

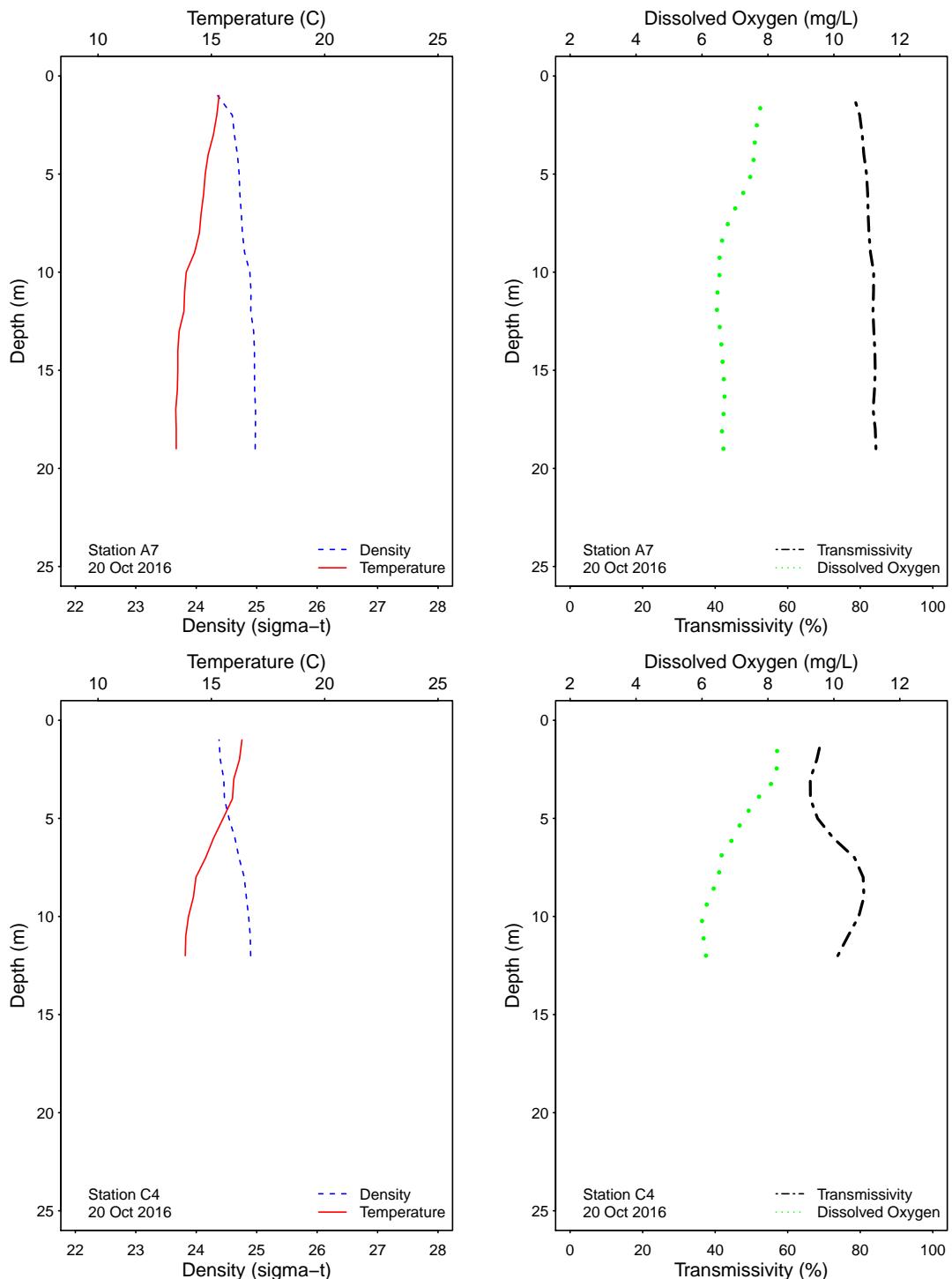


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

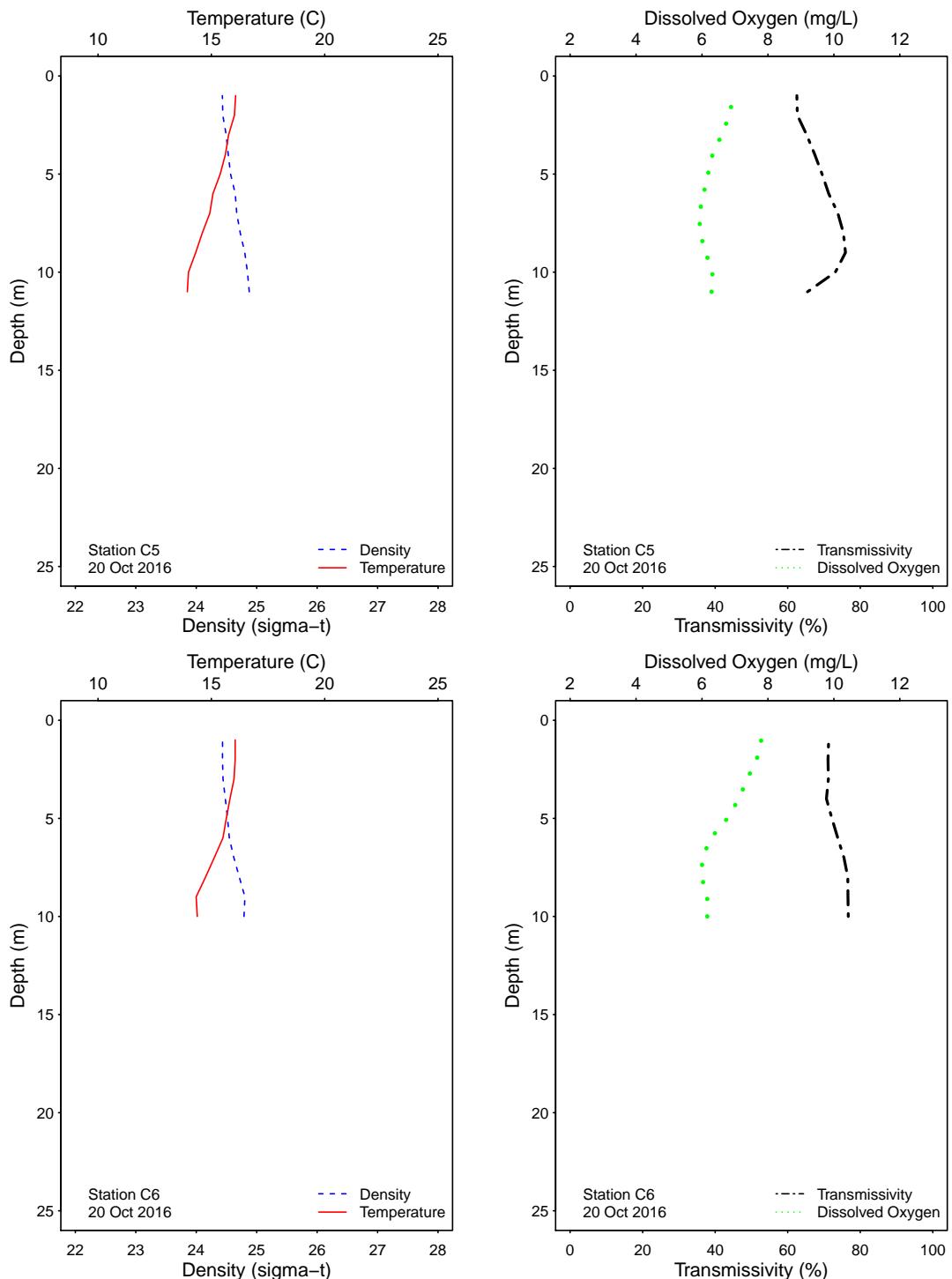


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

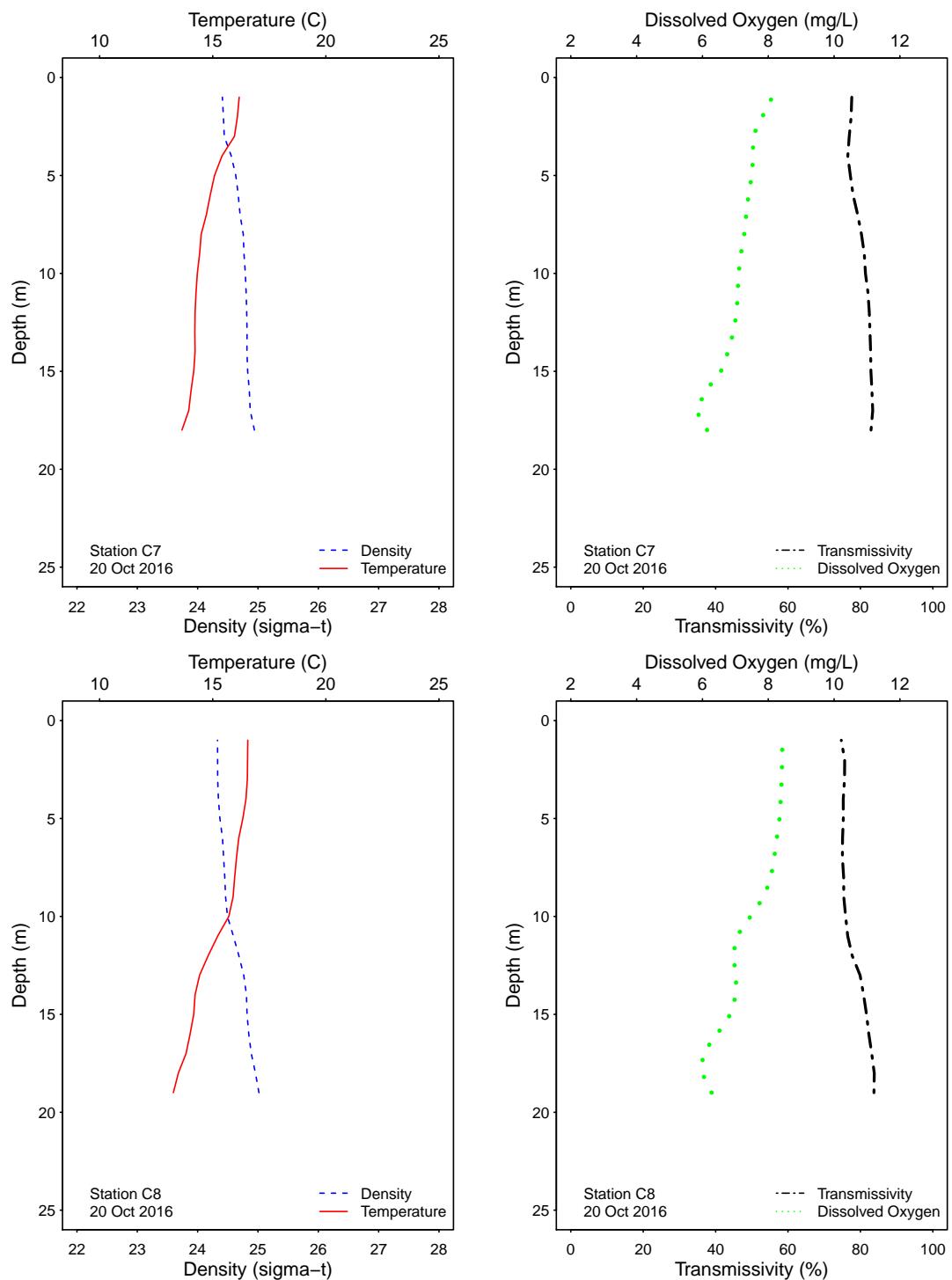


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

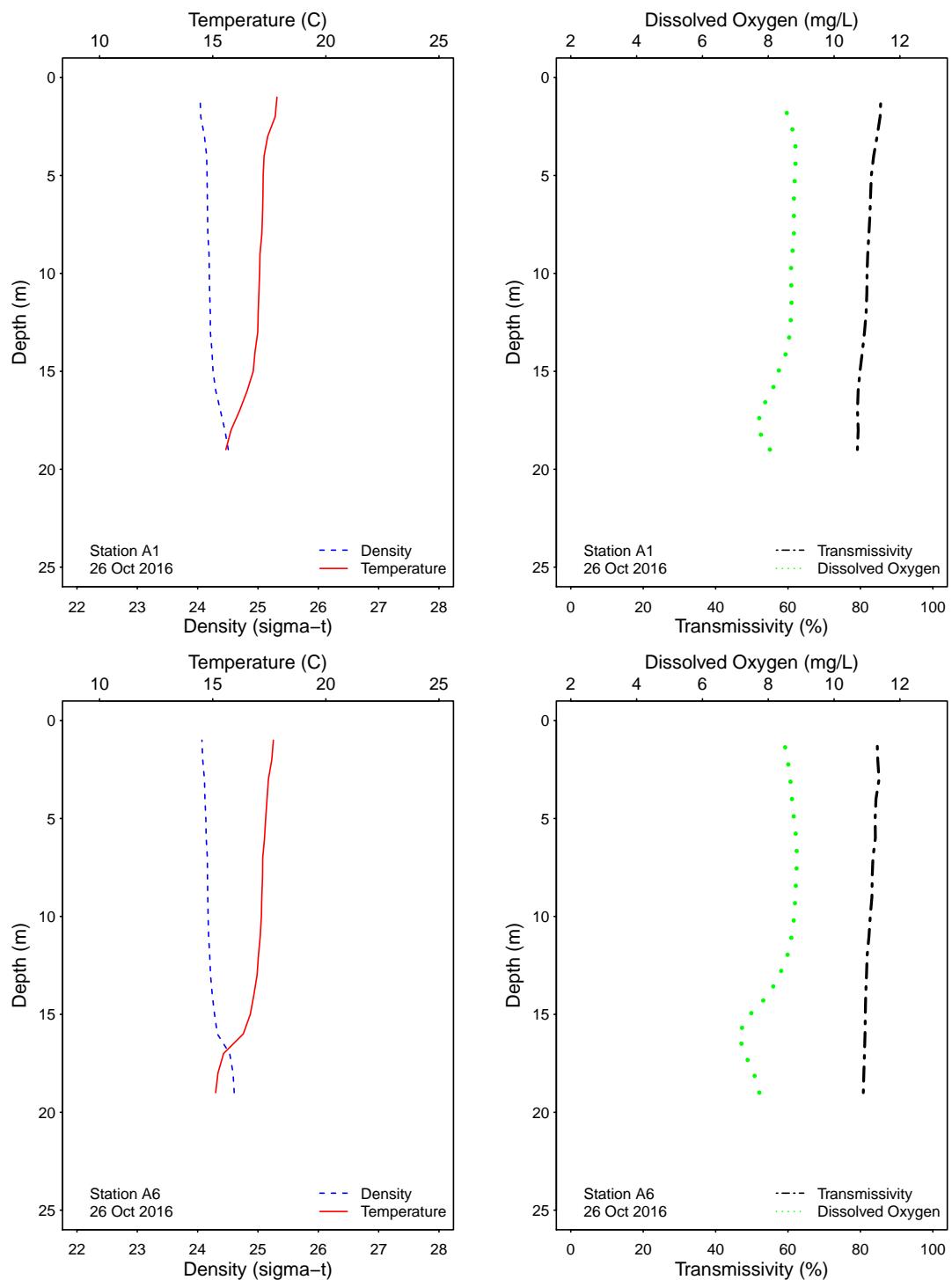


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

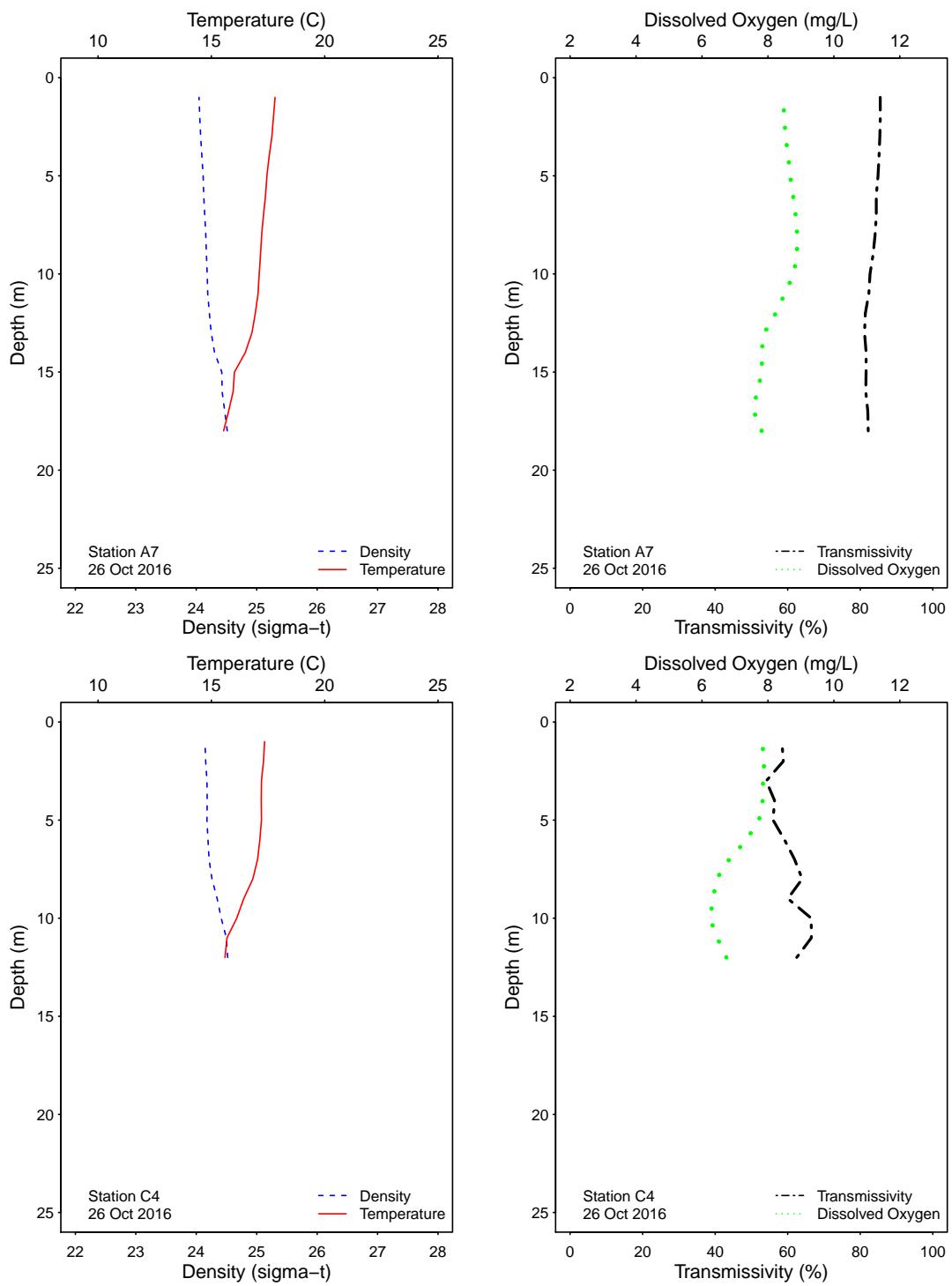


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

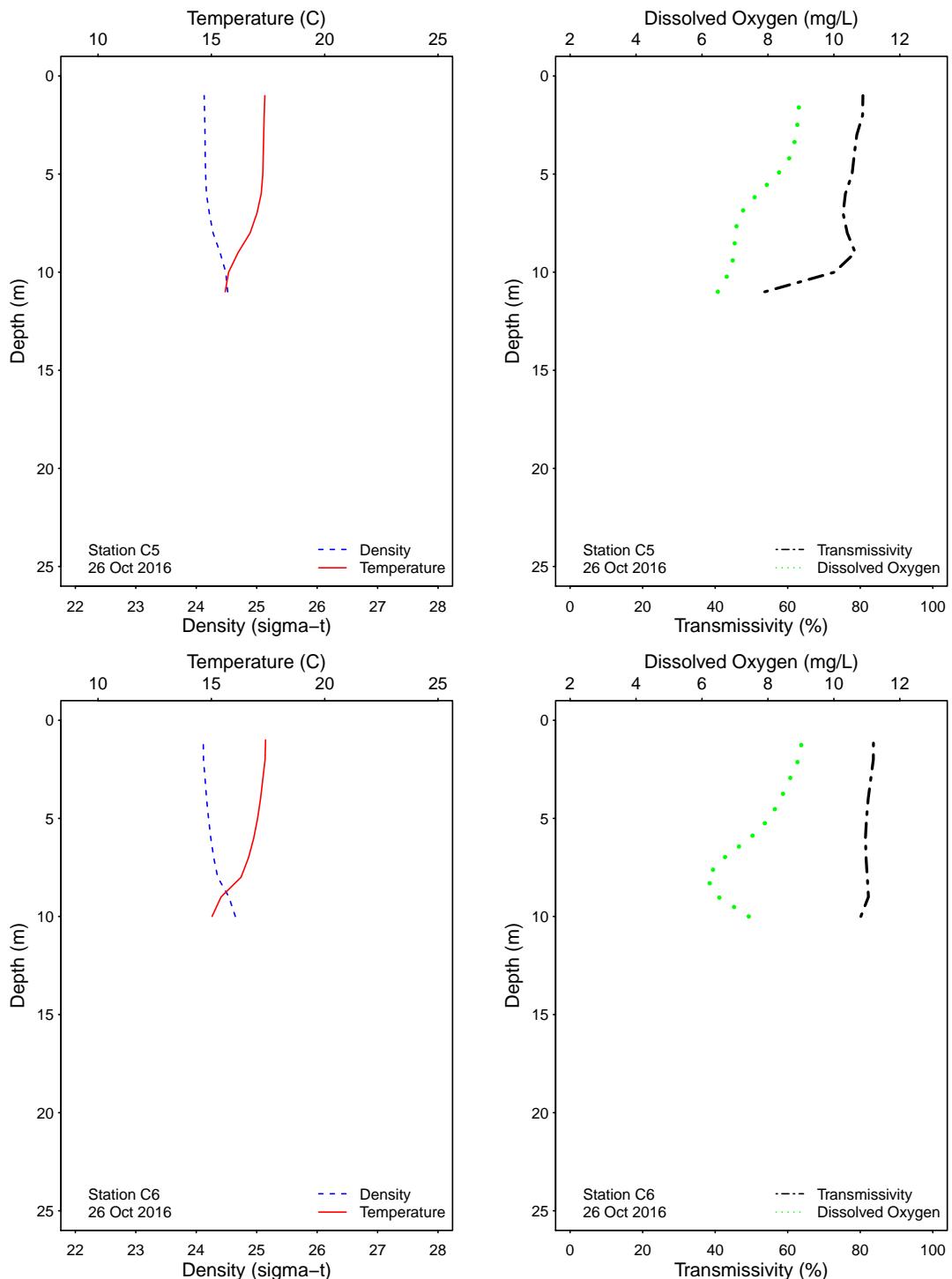


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

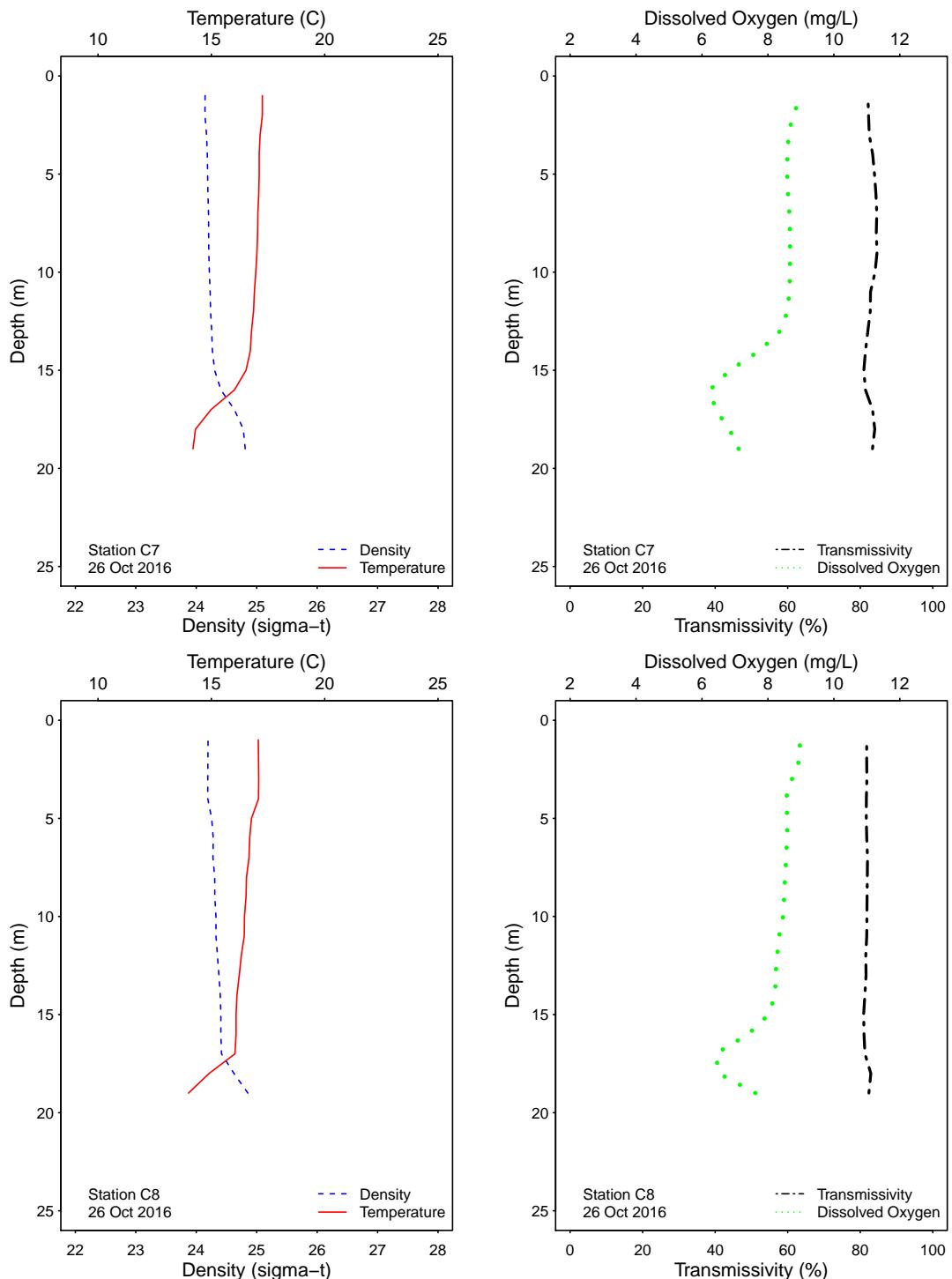


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

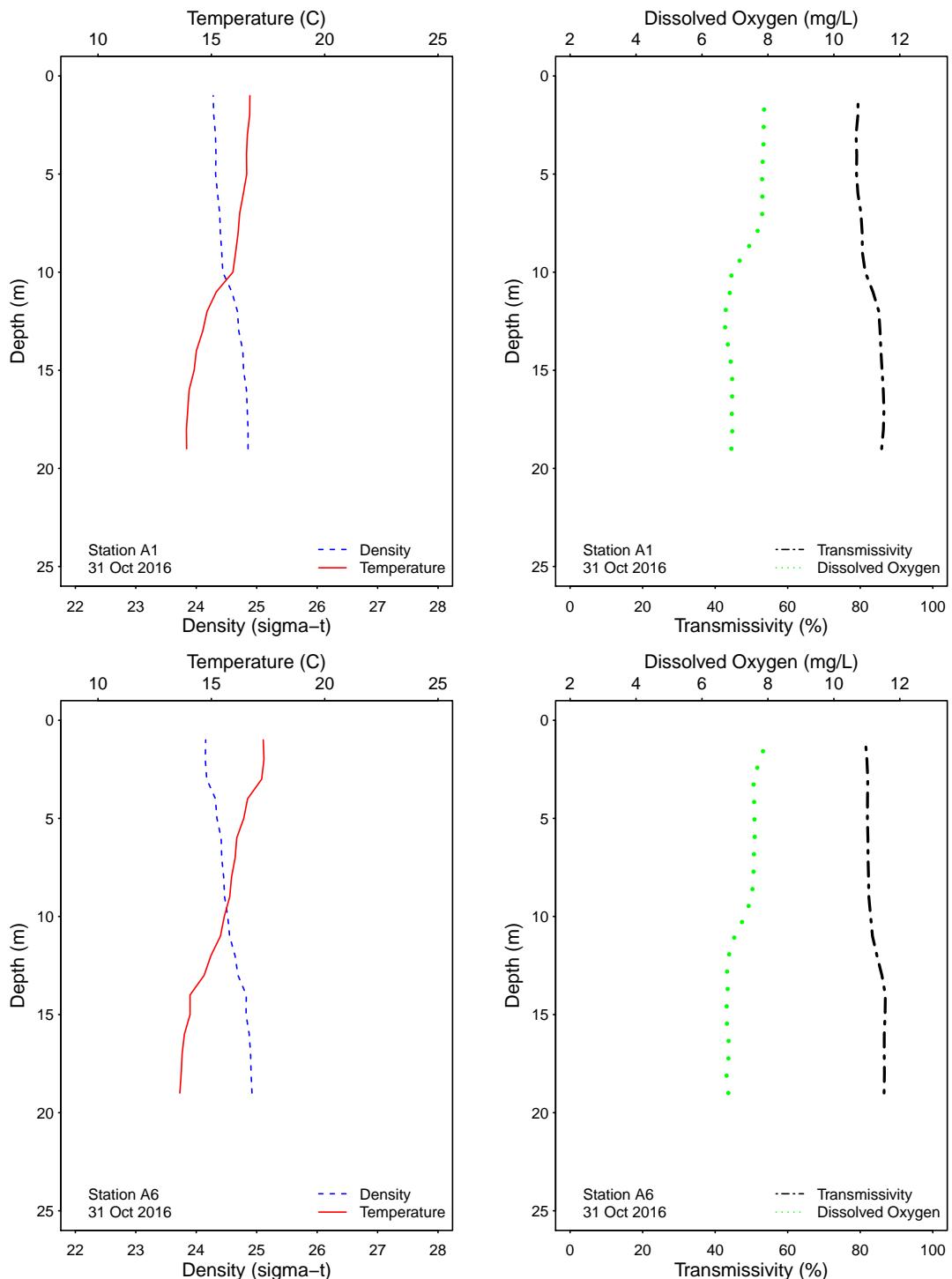


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

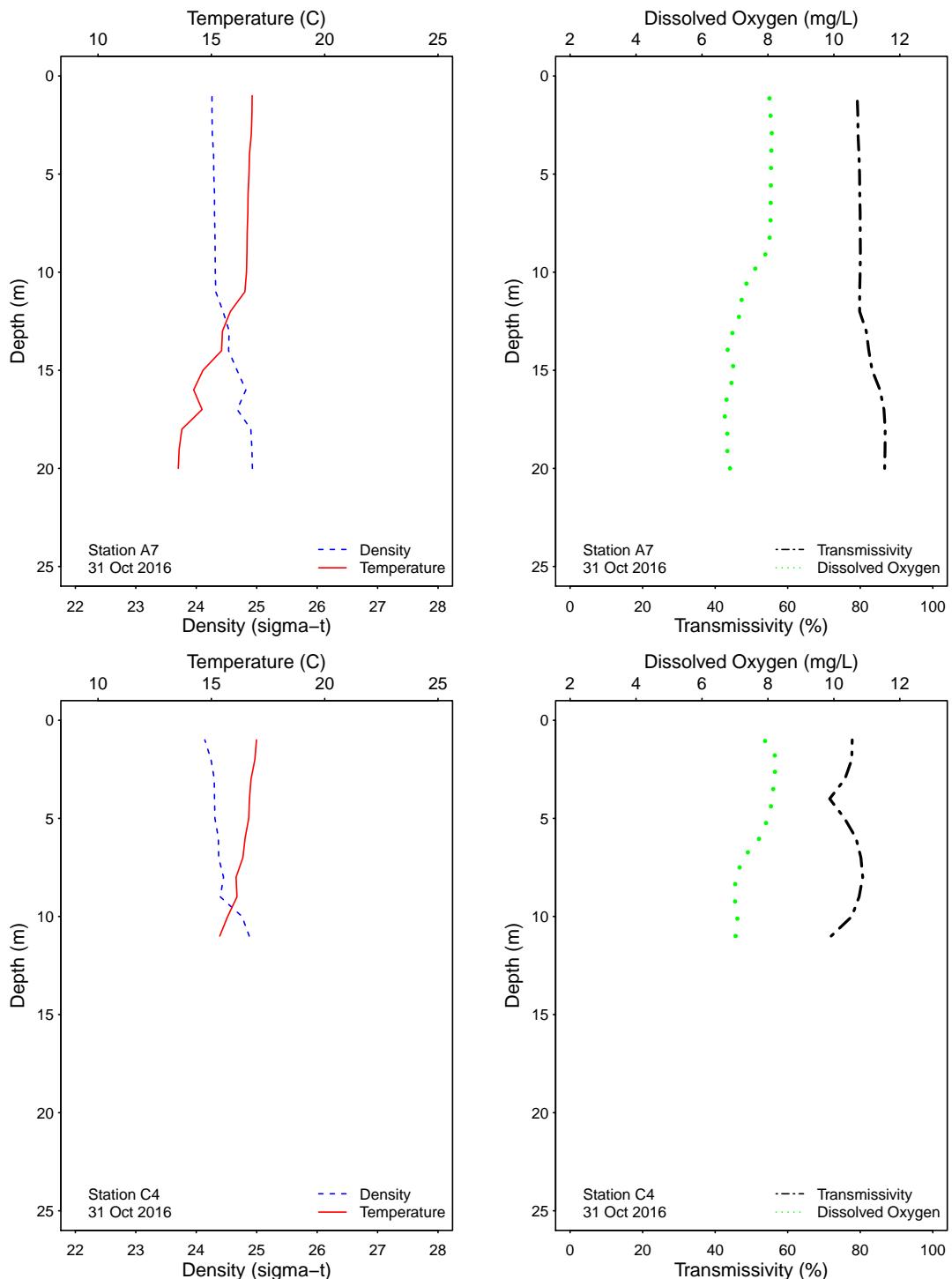


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

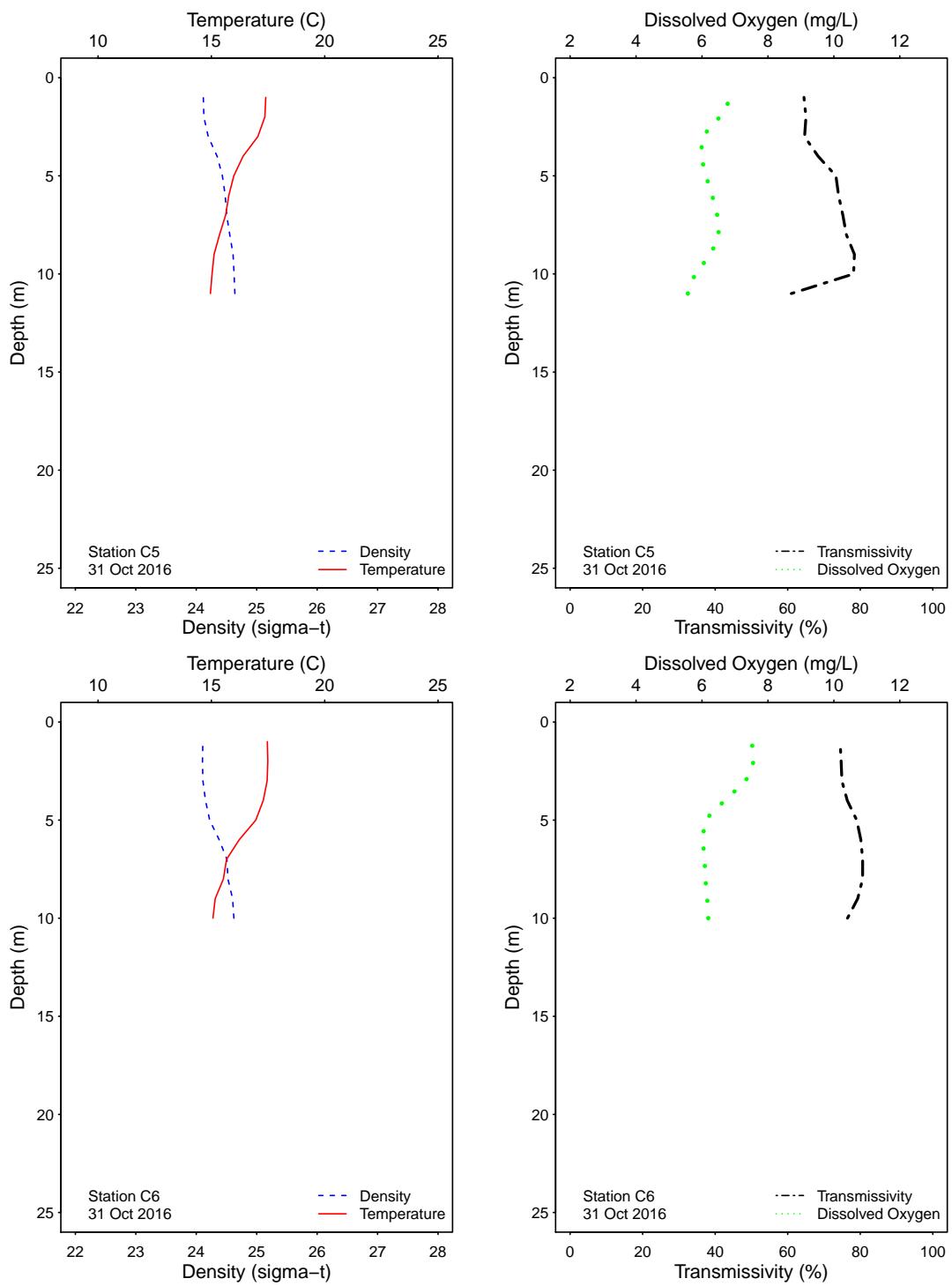


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

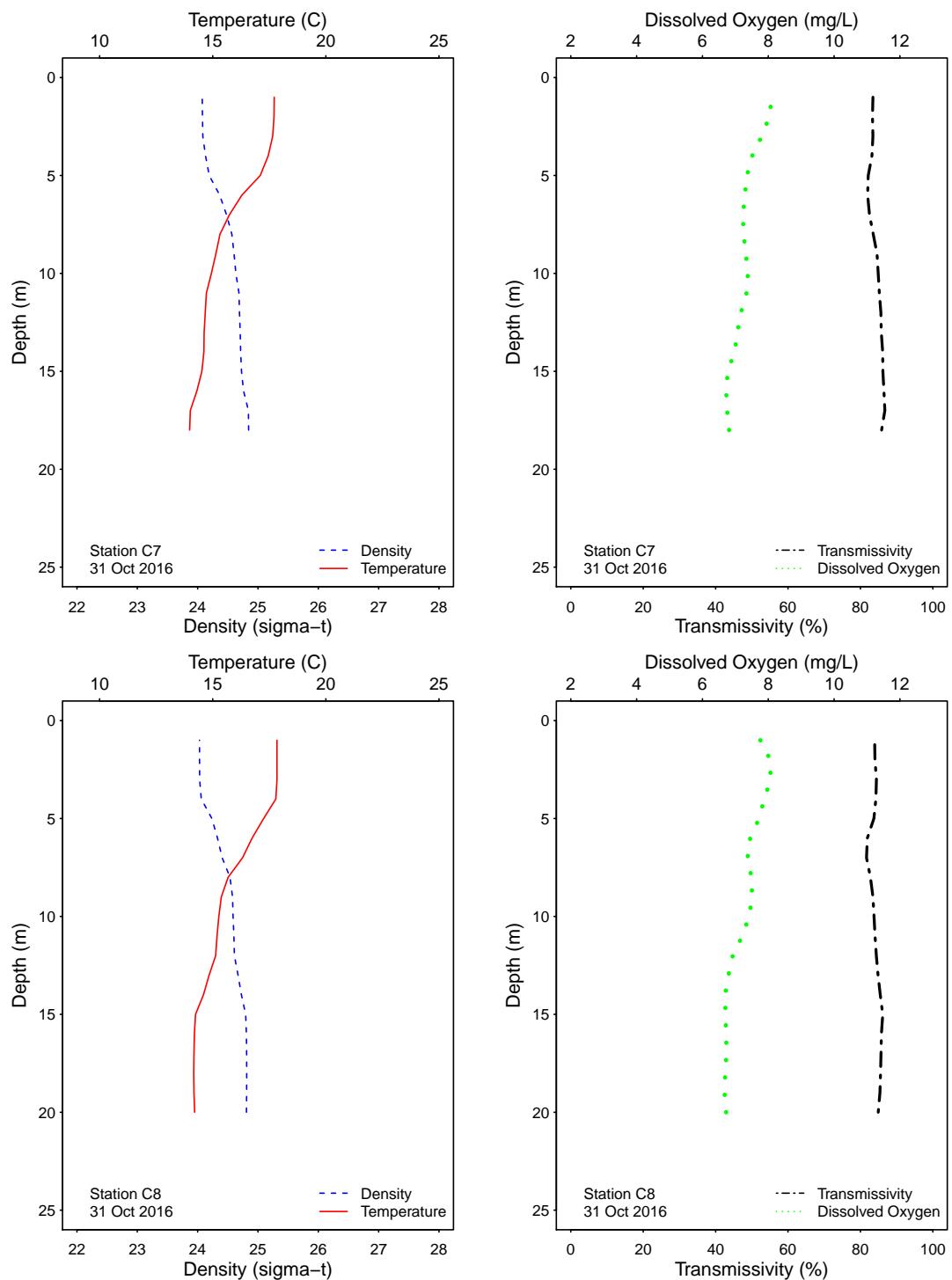


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

APPENDIX A

Quality Assurance

Table A.1

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

Station	Date	Depth	Analyst	Procedure	Total	Fecal	Enter
A7	08 Oct 2016	18	LMA	LAB DUPLICATE	24e	<2	<2
A7	14 Oct 2016	18	JT	LAB DUPLICATE	520	92	10e
A7	20 Oct 2016	18	AR	LAB DUPLICATE	4e	<2	<2
A7	26 Oct 2016	18	LMA	LAB DUPLICATE	2e	<2	<2
A7	31 Oct 2016	18	JT	LAB DUPLICATE	6e	<2	<2
C7	08 Oct 2016	18	LMA	LAB DUPLICATE	10e	4e	<2
C7	14 Oct 2016	18	ZV	LAB DUPLICATE	20e	<2	<2
C7	20 Oct 2016	18	AR	LAB DUPLICATE	<2	<2	<2
C7	26 Oct 2016	18	LMA	LAB DUPLICATE	<2	<2	<2
C7	31 Oct 2016	18	JT	LAB DUPLICATE	<2	<2	<2
C8	08 Oct 2016	12	LMA	LAB DUPLICATE	<2	<2	<2
C8	14 Oct 2016	12	AR	LAB DUPLICATE	<2	<2	<2
C8	20 Oct 2016	12	AR	LAB DUPLICATE	<2	<2	<2
C8	26 Oct 2016	12	JT	LAB DUPLICATE	2e	<2	<2
C8	31 Oct 2016	12	AR	LAB DUPLICATE	<2	<2	<2
D12	01 Oct 2016		AR	FIELD DUPLICATE	<20	<2	4e
D12	01 Oct 2016		AR	LAB DUPLICATE	<20	2e	<2
D12	07 Oct 2016		ZV	FIELD DUPLICATE	<2	<2	<2
D12	07 Oct 2016		ZV	LAB DUPLICATE	20e	<2	<2
D12	13 Oct 2016		JT	FIELD DUPLICATE	<2	<2	<2
D12	13 Oct 2016		JT	LAB DUPLICATE	<2	<2	<2
D12	19 Oct 2016		ZV	FIELD DUPLICATE	<20	2e	28e
D12	19 Oct 2016		ZV	LAB DUPLICATE	<20	2e	42
D12	25 Oct 2016		LMA	FIELD DUPLICATE	<2	<2	<2
D12	25 Oct 2016		LMA	LAB DUPLICATE	<2	<2	<2
D12	31 Oct 2016		LMA	FIELD DUPLICATE	2e	<2	<2
D12	31 Oct 2016		LMA	LAB DUPLICATE	2e	2e	<2

ns = not sampled

ND = no data

