



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

APRIL 2017

Environmental Monitoring and Technical Services
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Public Utilities Department

Environmental Monitoring & Technical Services Division

May 31, 2017

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 April 2017 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,

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

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

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 2017 Quality Assurance Report, which will be completed in March 2018.

SUMMARY OF RESULTS

Shore Stations

- During April, each of the eight shore stations was in compliance with all 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 April (i.e. April 6, 10, 14, 19, 26).
- During April, each of the eight kelp bed stations was in compliance with all water-contact standards specified in the Ocean Plan.
- Water column temperatures ranged from 10.14 to 16.65°C during the month. The difference between surface and bottom waters ranged from 1.92 to 5.88°C, indicating that the water column was stratified at some of the kelp bed stations during the month.
- Chlorophyll *a* concentrations ranged from 0.38 to 24.68 µg/L during April, suggesting the presence of phytoplankton blooms during the month.

- There were no notable visual observations for April.

Offshore Stations

- Quarterly sampling was not conducted during April at the offshore stations. The next quarterly sampling is scheduled for May 2017.



TABLES AND FIGURES

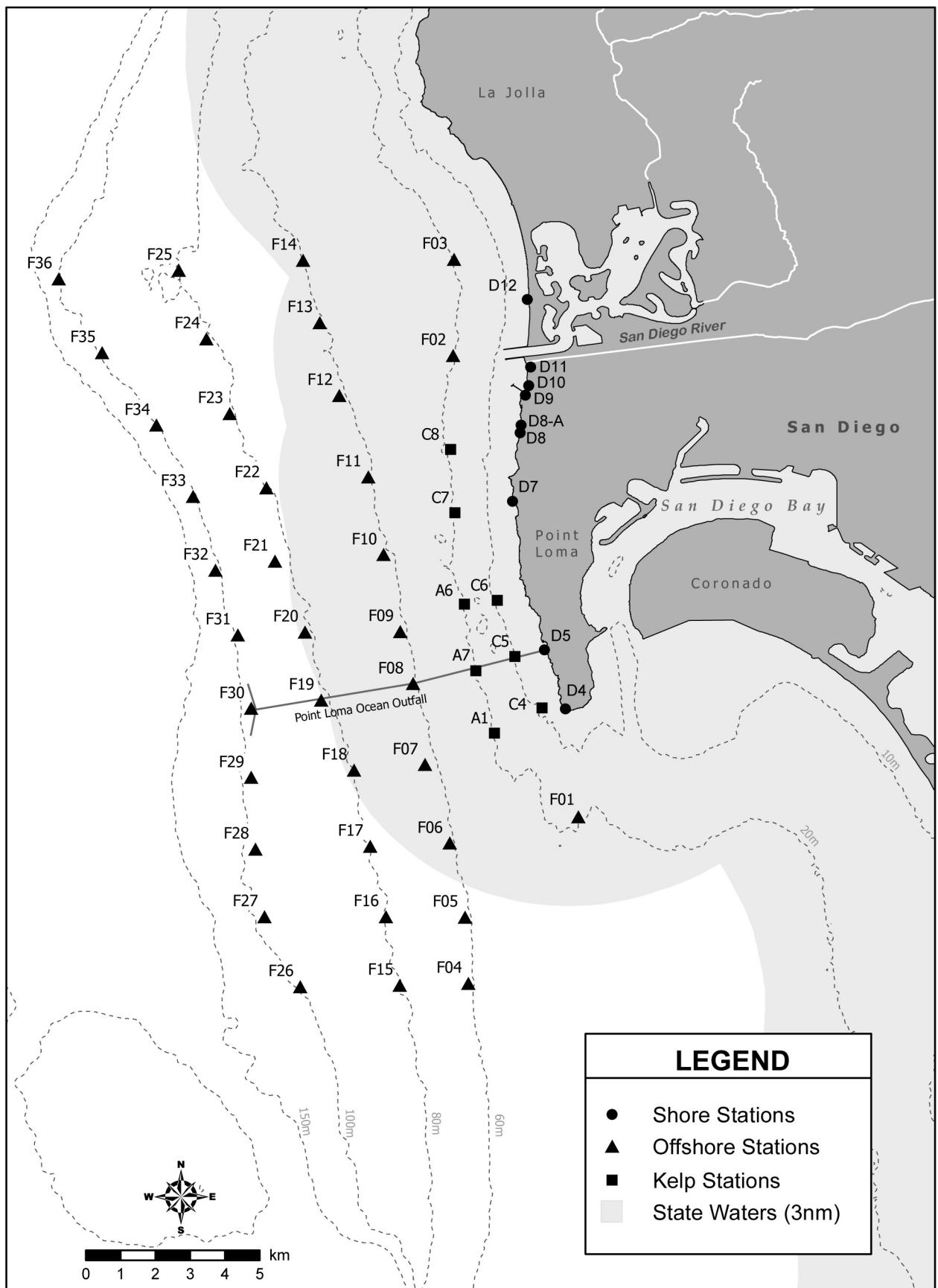


Figure 1.1 Station Map

Shore Stations

Table 2.1

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

Date	D4	D5	D7	D8-A	D9	D10	D11	D12
01 Apr 2017	8	32	23	36	53	57	81	17
02 Apr 2017	8	32	23	36	53	57	81	17
03 Apr 2017	8	32	23	36	53	57	81	17
04 Apr 2017	8	32	23	36	53	57	81	17
05 Apr 2017	5	32	20	26	34	29	32	17
06 Apr 2017	5	32	20	26	34	29	32	17
07 Apr 2017	5	32	20	26	34	29	32	17
08 Apr 2017	5	32	20	26	34	29	32	17
09 Apr 2017	5	32	20	26	34	29	32	17
10 Apr 2017	5	32	20	26	34	29	32	17
11 Apr 2017	5	39	20	42	25	29	37	11
12 Apr 2017	5	39	20	42	25	29	37	11
13 Apr 2017	5	39	20	42	25	29	37	11
14 Apr 2017	5	39	20	42	25	29	37	11
15 Apr 2017	5	39	20	42	25	29	37	11
16 Apr 2017	5	39	20	42	25	29	37	11
17 Apr 2017	3	25	13	30	16	18	23	7
18 Apr 2017	3	25	13	30	16	18	23	7
19 Apr 2017	3	25	13	30	16	18	23	7
20 Apr 2017	3	25	13	30	16	18	23	7
21 Apr 2017	3	25	13	30	16	18	23	7
22 Apr 2017	3	25	13	30	16	18	23	7
23 Apr 2017	5	25	13	30	16	16	20	5
24 Apr 2017	5	25	13	30	16	16	20	5
25 Apr 2017	5	25	13	30	16	16	20	5
26 Apr 2017	5	25	13	30	16	16	20	5
27 Apr 2017	5	25	13	30	16	16	20	5
28 Apr 2017	5	25	13	30	16	16	20	5
29 Apr 2017	8	16	13	23	13	14	13	5
30 Apr 2017	8	16	13	23	13	14	13	5

* 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 Apr 2017	2	2	2	2	3	8	6	5
02 Apr 2017	2	2	2	2	3	8	6	5
03 Apr 2017	2	2	2	2	3	8	6	5
04 Apr 2017	2	2	2	2	3	8	6	5
05 Apr 2017	2	2	2	2	2	5	4	5
06 Apr 2017	2	2	2	2	2	5	4	5
07 Apr 2017	2	2	2	2	2	5	4	5
08 Apr 2017	2	2	2	2	2	5	4	5
09 Apr 2017	2	2	2	2	2	5	4	5
10 Apr 2017	2	2	2	2	2	5	4	5
11 Apr 2017	2	2	3	2	2	3	4	4
12 Apr 2017	2	2	3	2	2	3	4	4
13 Apr 2017	2	2	3	2	2	3	4	4
14 Apr 2017	2	2	3	2	2	3	4	4
15 Apr 2017	2	2	3	2	2	3	4	4
16 Apr 2017	2	2	3	2	2	3	4	4
17 Apr 2017	2	2	3	2	2	3	4	4
18 Apr 2017	2	2	3	2	2	3	4	4
19 Apr 2017	2	2	3	2	2	3	4	4
20 Apr 2017	2	2	3	2	2	3	4	4
21 Apr 2017	2	2	3	2	2	3	4	4
22 Apr 2017	2	2	3	2	2	3	4	4
23 Apr 2017	2	2	3	2	2	3	2	2
24 Apr 2017	2	2	3	2	2	3	2	2
25 Apr 2017	2	2	3	2	2	3	2	2
26 Apr 2017	2	2	3	2	2	3	2	2
27 Apr 2017	2	2	3	2	2	3	2	2
28 Apr 2017	2	2	3	2	2	3	2	2
29 Apr 2017	2	2	3	2	2	2	3	2
30 Apr 2017	2	2	3	2	2	2	3	2

* Geometric mean calculated using n<5

ns = not sampled

Table 2.3

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

Date	D4	D5	D7	D8-A	D9	D10	D11	D12
01 Apr 2017	3	2	2	5	6	14	20	4
02 Apr 2017	3	2	2	3	6	14	20	4
03 Apr 2017	3	2	2	3	6	14	20	4
04 Apr 2017	3	2	2	3	6	14	20	4
05 Apr 2017	3	2	2	3	4	7	18	4
06 Apr 2017	3	2	2	3	4	7	18	4
07 Apr 2017	3	2	2	3	4	7	16	4
08 Apr 2017	3	2	2	3	4	7	16	4
09 Apr 2017	3	2	2	3	4	7	16	4
10 Apr 2017	3	2	2	3	4	7	16	4
11 Apr 2017	2	2	2	3	3	4	9	3
12 Apr 2017	2	2	2	3	3	4	9	3
13 Apr 2017	2	2	2	3	3	4	9	3
14 Apr 2017	2	2	2	3	3	4	9	3
15 Apr 2017	2	2	2	3	3	4	9	3
16 Apr 2017	2	2	2	3	3	4	9	3
17 Apr 2017	2	2	2	3	3	4	9	3
18 Apr 2017	2	2	2	3	3	4	9	3
19 Apr 2017	2	2	2	3	3	4	9	3
20 Apr 2017	2	2	2	3	3	4	9	3
21 Apr 2017	2	2	2	3	3	4	9	3
22 Apr 2017	2	2	2	3	3	4	9	3
23 Apr 2017	2	2	2	3	3	3	6	2
24 Apr 2017	2	2	2	3	3	3	6	2
25 Apr 2017	2	2	2	3	3	3	6	2
26 Apr 2017	2	2	2	3	3	3	6	2
27 Apr 2017	2	2	2	3	3	3	6	2
28 Apr 2017	2	2	2	3	3	3	6	2
29 Apr 2017	2	2	4	2	2	2	4	2
30 Apr 2017	2	2	4	2	2	2	4	2

* Geometric mean calculated using n<5

ns = not sampled

Table 2.4

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

Date	D4	D5	D7	D8-A	D9	D10	D11	D12
05 Apr 2017	IC	IC	IC	IC	IC	IC	IC	IC
11 Apr 2017	IC	IC	IC	IC	IC	IC	IC	IC
17 Apr 2017	IC	IC	IC	IC	IC	IC	IC	IC
23 Apr 2017	IC	IC	IC	IC	IC	IC	IC	IC
29 Apr 2017	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
05 Apr 2017	IC	IC	IC	IC	IC	IC	IC	IC
11 Apr 2017	IC	IC	IC	IC	IC	IC	IC	IC
17 Apr 2017	IC	IC	IC	IC	IC	IC	IC	IC
23 Apr 2017	IC	IC	IC	IC	IC	IC	IC	IC
29 Apr 2017	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
05 Apr 2017	IC	IC	IC	IC	IC	IC	IC	IC
11 Apr 2017	IC	IC	IC	IC	IC	IC	IC	IC
17 Apr 2017	IC	IC	IC	IC	IC	IC	IC	IC
23 Apr 2017	IC	IC	IC	IC	IC	IC	IC	IC
29 Apr 2017	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
05 Apr 2017	IC	IC	IC	IC	IC	IC	IC	IC
11 Apr 2017	IC	IC	IC	IC	IC	IC	IC	IC
17 Apr 2017	IC	IC	IC	IC	IC	IC	IC	IC
23 Apr 2017	IC	IC	IC	IC	IC	IC	IC	IC
29 Apr 2017	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	05 Apr 2017	846	<2	<2	<2	1.00
	11 Apr 2017	911	<20	<2	<2	0.10
	17 Apr 2017	956	<2	<2	<2	1.00
	23 Apr 2017	842	<20	<2	<2	0.10
	29 Apr 2017	840	<20	<2	<2	0.10
D5	05 Apr 2017	905	<20	<2	<2	0.10
	11 Apr 2017	934	60e	<2	<2	0.03
	17 Apr 2017	936	<2	<2	<2	1.00
	23 Apr 2017	829	<20	<2	<2	0.10
	29 Apr 2017	815	<20	<2	<2	0.10
D7	05 Apr 2017	939	<20	<2	<2	0.10
	11 Apr 2017	845	20e	18e	<2	0.90
	17 Apr 2017	1019	<2	<2	<2	1.00
	23 Apr 2017	907	<20	<2	2e	0.10
	29 Apr 2017	904	<20	<2	40	0.10
D8-A	05 Apr 2017	957	<20	<2	<2	0.10
	11 Apr 2017	702	<200	2e	4e	0.01
	17 Apr 2017	1032	4e	<2	<2	0.50
	23 Apr 2017	921	<20	<2	<2	0.10
	29 Apr 2017	920	<20	2e	<2	0.10
D9	05 Apr 2017	1020	<20	<2	<2	0.10
	11 Apr 2017	828	<20	<2	<2	0.10
	17 Apr 2017	1044	<2	<2	<2	1.00
	23 Apr 2017	934	<20	<2	<2	0.10
	29 Apr 2017	934	<20	<2	<2	0.10
D10	05 Apr 2017	1038	20e	<2	2e	0.10
	11 Apr 2017	815	<20	2e	<2	0.10
	17 Apr 2017	1059	<2	<2	<2	1.00
	23 Apr 2017	944	<20	4e	<2	0.20
	29 Apr 2017	948	40e	2e	2e	0.05
D11	05 Apr 2017	1102	<20	6e	64	0.30
	11 Apr 2017	800	<20	<2	2e	0.10
	17 Apr 2017	1119	<2	<2	<2	1.00
	23 Apr 2017	1004	<20	2e	2e	0.10
	29 Apr 2017	1007	<20	8e	<2	0.40

Station	Date	Time	Total	Fecal	Enterο	F:T
D12	05 Apr 2017	1130	<2	<2	<2	1.00
D12	11 Apr 2017	734	<2	<2	<2	1.00
D12	17 Apr 2017	1143	<2	<2	<2	1.00
D12	23 Apr 2017	1038	<20	<2	<2	0.10
D12	29 Apr 2017	1032	<20	<2	2e	0.10

ns = not sampled

ND = no data

Table 2.9

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

Station	Date	Parameter	Value
D4	05 Apr 2017	Arrive Time	846
D4	05 Apr 2017	Weather	Sunny
D4	05 Apr 2017	Wind Speed (kts)	1.5
D4	05 Apr 2017	Wind Dir	NW
D4	05 Apr 2017	Animal Life	None
D4	05 Apr 2017	Floatables	None
D4	05 Apr 2017	Water Color	Green
D4	05 Apr 2017	Current Direction	NW
D4	05 Apr 2017	Wave Height Low (ft)	2
D4	05 Apr 2017	High Tide (ft)	4.6
D4	05 Apr 2017	High Tide Time	527
D4	05 Apr 2017	Low Tide (ft)	-0.3
D4	05 Apr 2017	Low Tide Time	1240
D4	05 Apr 2017	Comments	Kelp; Seagrass; Algae; Water clear
D4	11 Apr 2017	Arrive Time	911
D4	11 Apr 2017	Weather	Sunny
D4	11 Apr 2017	Wind Speed (kts)	3
D4	11 Apr 2017	Wind Dir	W
D4	11 Apr 2017	Animal Life	None
D4	11 Apr 2017	Floatables	None
D4	11 Apr 2017	Water Color	Green
D4	11 Apr 2017	Current Direction	W
D4	11 Apr 2017	Wave Height Low (ft)	3
D4	11 Apr 2017	High Tide (ft)	4.5
D4	11 Apr 2017	High Tide Time	1003
D4	11 Apr 2017	Low Tide (ft)	-0.1
D4	11 Apr 2017	Low Tide Time	406
D4	11 Apr 2017	Comments	Kelp; Seagrass; Water turbid
D4	17 Apr 2017	Arrive Time	956
D4	17 Apr 2017	Weather	Sunny
D4	17 Apr 2017	Wind Speed (kts)	1.3
D4	17 Apr 2017	Wind Dir	W
D4	17 Apr 2017	Animal Life	None
D4	17 Apr 2017	Floatables	None
D4	17 Apr 2017	Water Color	Green
D4	17 Apr 2017	Current Direction	W
D4	17 Apr 2017	Wave Height Low (ft)	2
D4	17 Apr 2017	High Tide (ft)	2.8
D4	17 Apr 2017	High Tide Time	1540
D4	17 Apr 2017	Low Tide (ft)	0.8
D4	17 Apr 2017	Low Tide Time	833
D4	17 Apr 2017	Comments	Kelp; Seagrass; Algae; Water clear
D4	23 Apr 2017	Arrive Time	842
D4	23 Apr 2017	Weather	Cloudy
D4	23 Apr 2017	Wind Speed (kts)	2.8
D4	23 Apr 2017	Wind Dir	W
D4	23 Apr 2017	Animal Life	None
D4	23 Apr 2017	Floatables	None

Station	Date	Parameter	Value
D4	23 Apr 2017	Water Color	Green
D4	23 Apr 2017	Current Direction	W
D4	23 Apr 2017	Wave Height Low (ft)	3
D4	23 Apr 2017	High Tide (ft)	4.7
D4	23 Apr 2017	High Tide Time	734
D4	23 Apr 2017	Low Tide (ft)	-0.1
D4	23 Apr 2017	Low Tide Time	1355
D4	23 Apr 2017	Comments	Kelp; Seagrass; Water clear
D4	29 Apr 2017	Arrive Time	840
D4	29 Apr 2017	Weather	Sunny
D4	29 Apr 2017	Wind Speed (kts)	1.2
D4	29 Apr 2017	Wind Dir	SW
D4	29 Apr 2017	Animal Life	None
D4	29 Apr 2017	Floatables	None
D4	29 Apr 2017	Water Color	Green
D4	29 Apr 2017	Current Direction	SW
D4	29 Apr 2017	Wave Height Low (ft)	1
D4	29 Apr 2017	High Tide (ft)	3.8
D4	29 Apr 2017	High Tide Time	1240
D4	29 Apr 2017	Low Tide (ft)	-1
D4	29 Apr 2017	Low Tide Time	619
D4	29 Apr 2017	Comments	Kelp; Seagrass; Algae; Water clear
D5	05 Apr 2017	Arrive Time	905
D5	05 Apr 2017	Weather	Sunny
D5	05 Apr 2017	Wind Speed (kts)	3.1
D5	05 Apr 2017	Wind Dir	NW
D5	05 Apr 2017	Animal Life	None
D5	05 Apr 2017	Floatables	None
D5	05 Apr 2017	Water Color	Green
D5	05 Apr 2017	Current Direction	NW
D5	05 Apr 2017	Wave Height Low (ft)	2
D5	05 Apr 2017	High Tide (ft)	4.6
D5	05 Apr 2017	High Tide Time	527
D5	05 Apr 2017	Low Tide (ft)	-0.3
D5	05 Apr 2017	Low Tide Time	1240
D5	05 Apr 2017	Comments	Seagrass; Algae; Water clear
D5	11 Apr 2017	Arrive Time	934
D5	11 Apr 2017	Weather	Sunny
D5	11 Apr 2017	Wind Speed (kts)	3
D5	11 Apr 2017	Wind Dir	W
D5	11 Apr 2017	Animal Life	None
D5	11 Apr 2017	Floatables	None
D5	11 Apr 2017	Water Color	Green
D5	11 Apr 2017	Current Direction	W
D5	11 Apr 2017	Wave Height Low (ft)	4
D5	11 Apr 2017	High Tide (ft)	4.5
D5	11 Apr 2017	High Tide Time	1003
D5	11 Apr 2017	Low Tide (ft)	-0.1
D5	11 Apr 2017	Low Tide Time	406
D5	11 Apr 2017	Comments	Kelp; Seagrass; Algae; Water turbid
D5	17 Apr 2017	Arrive Time	936

Station	Date	Parameter	Value
D5	17 Apr 2017	Weather	Sunny
D5	17 Apr 2017	Wind Speed (kts)	1.5
D5	17 Apr 2017	Wind Dir	W
D5	17 Apr 2017	Animal Life	None
D5	17 Apr 2017	Floatables	None
D5	17 Apr 2017	Water Color	Green
D5	17 Apr 2017	Current Direction	W
D5	17 Apr 2017	Wave Height Low (ft)	2
D5	17 Apr 2017	High Tide (ft)	2.8
D5	17 Apr 2017	High Tide Time	1540
D5	17 Apr 2017	Low Tide (ft)	0.8
D5	17 Apr 2017	Low Tide Time	833
D5	17 Apr 2017	Comments	Kelp; Seagrass; Algae; Water clear
D5	23 Apr 2017	Arrive Time	829
D5	23 Apr 2017	Weather	Cloudy
D5	23 Apr 2017	Wind Speed (kts)	4
D5	23 Apr 2017	Wind Dir	W
D5	23 Apr 2017	Animal Life	None
D5	23 Apr 2017	Floatables	None
D5	23 Apr 2017	Water Color	Green
D5	23 Apr 2017	Current Direction	W
D5	23 Apr 2017	Wave Height Low (ft)	4
D5	23 Apr 2017	High Tide (ft)	4.7
D5	23 Apr 2017	High Tide Time	734
D5	23 Apr 2017	Low Tide (ft)	-0.1
D5	23 Apr 2017	Low Tide Time	1355
D5	23 Apr 2017	Comments	Kelp; Seagrass; Water clear
D5	29 Apr 2017	Arrive Time	815
D5	29 Apr 2017	Weather	Sunny
D5	29 Apr 2017	Wind Speed (kts)	0.9
D5	29 Apr 2017	Wind Dir	N
D5	29 Apr 2017	Animal Life	None
D5	29 Apr 2017	Floatables	None
D5	29 Apr 2017	Water Color	Green
D5	29 Apr 2017	Current Direction	N
D5	29 Apr 2017	Wave Height Low (ft)	2
D5	29 Apr 2017	High Tide (ft)	3.8
D5	29 Apr 2017	High Tide Time	1240
D5	29 Apr 2017	Low Tide (ft)	-1
D5	29 Apr 2017	Low Tide Time	619
D5	29 Apr 2017	Comments	Kelp; Seagrass; Algae; Water clear
D7	05 Apr 2017	Arrive Time	939
D7	05 Apr 2017	Weather	Sunny
D7	05 Apr 2017	Wind Speed (kts)	0.5
D7	05 Apr 2017	Wind Dir	W
D7	05 Apr 2017	Animal Life	None
D7	05 Apr 2017	Floatables	None
D7	05 Apr 2017	Water Color	Green
D7	05 Apr 2017	Current Direction	W
D7	05 Apr 2017	Wave Height Low (ft)	3
D7	05 Apr 2017	High Tide (ft)	4.6
D7	05 Apr 2017	High Tide Time	527

Station	Date	Parameter	Value
D7	05 Apr 2017	Low Tide (ft)	-0.3
D7	05 Apr 2017	Low Tide Time	1240
D7	05 Apr 2017	Comments	Seagrass; Algae; 2 Persons; 10 Surfers; Water clear
D7	11 Apr 2017	Arrive Time	845
D7	11 Apr 2017	Weather	Sunny
D7	11 Apr 2017	Wind Speed (kts)	2
D7	11 Apr 2017	Wind Dir	W
D7	11 Apr 2017	Animal Life	None
D7	11 Apr 2017	Floatables	None
D7	11 Apr 2017	Water Color	Green
D7	11 Apr 2017	Current Direction	W
D7	11 Apr 2017	Wave Height Low (ft)	4
D7	11 Apr 2017	High Tide (ft)	4.5
D7	11 Apr 2017	High Tide Time	1003
D7	11 Apr 2017	Low Tide (ft)	-0.1
D7	11 Apr 2017	Low Tide Time	406
D7	11 Apr 2017	Comments	Kelp; Seagrass; Algae; Water turbid
D7	17 Apr 2017	Arrive Time	1019
D7	17 Apr 2017	Weather	Sunny
D7	17 Apr 2017	Wind Speed (kts)	2.8
D7	17 Apr 2017	Wind Dir	W
D7	17 Apr 2017	Animal Life	16 Sea slug
D7	17 Apr 2017	Floatables	None
D7	17 Apr 2017	Water Color	Green
D7	17 Apr 2017	Current Direction	W
D7	17 Apr 2017	Wave Height Low (ft)	3
D7	17 Apr 2017	High Tide (ft)	2.8
D7	17 Apr 2017	High Tide Time	1540
D7	17 Apr 2017	Low Tide (ft)	0.8
D7	17 Apr 2017	Low Tide Time	833
D7	17 Apr 2017	Comments	Kelp; Seagrass; Algae; 13 Surfers; Water clear
D7	23 Apr 2017	Arrive Time	907
D7	23 Apr 2017	Weather	Cloudy
D7	23 Apr 2017	Wind Speed (kts)	2.5
D7	23 Apr 2017	Wind Dir	W
D7	23 Apr 2017	Animal Life	None
D7	23 Apr 2017	Floatables	None
D7	23 Apr 2017	Water Color	Green
D7	23 Apr 2017	Current Direction	W
D7	23 Apr 2017	Wave Height Low (ft)	3
D7	23 Apr 2017	High Tide (ft)	4.7
D7	23 Apr 2017	High Tide Time	734
D7	23 Apr 2017	Low Tide (ft)	-0.1
D7	23 Apr 2017	Low Tide Time	1355
D7	23 Apr 2017	Comments	Kelp; Seagrass; 3 Persons; 2 Surfers; Water clear
D7	29 Apr 2017	Arrive Time	904
D7	29 Apr 2017	Weather	Sunny
D7	29 Apr 2017	Wind Speed (kts)	1.1
D7	29 Apr 2017	Wind Dir	SW
D7	29 Apr 2017	Animal Life	None
D7	29 Apr 2017	Floatables	None

Station	Date	Parameter	Value
D7	29 Apr 2017	Water Color	Green
D7	29 Apr 2017	Current Direction	SW
D7	29 Apr 2017	Wave Height Low (ft)	2
D7	29 Apr 2017	High Tide (ft)	3.8
D7	29 Apr 2017	High Tide Time	1240
D7	29 Apr 2017	Low Tide (ft)	-1
D7	29 Apr 2017	Low Tide Time	619
D7	29 Apr 2017	Comments	Kelp; Seagrass; Algae; 1 Person; 9 Surfers; 2 Swimmers; Water clear
D8-A	05 Apr 2017	Arrive Time	957
D8-A	05 Apr 2017	Weather	Sunny
D8-A	05 Apr 2017	Wind Speed (kts)	1.7
D8-A	05 Apr 2017	Wind Dir	W
D8-A	05 Apr 2017	Animal Life	None
D8-A	05 Apr 2017	Floatables	None
D8-A	05 Apr 2017	Water Color	Green
D8-A	05 Apr 2017	Current Direction	W
D8-A	05 Apr 2017	Wave Height Low (ft)	2
D8-A	05 Apr 2017	High Tide (ft)	4.6
D8-A	05 Apr 2017	High Tide Time	527
D8-A	05 Apr 2017	Low Tide (ft)	-0.3
D8-A	05 Apr 2017	Low Tide Time	1240
D8-A	05 Apr 2017	Comments	Kelp; Seagrass; Algae; 2 Surfers; Water clear
D8-A	11 Apr 2017	Arrive Time	702
D8-A	11 Apr 2017	Weather	Sunny
D8-A	11 Apr 2017	Wind Speed (kts)	2
D8-A	11 Apr 2017	Wind Dir	W
D8-A	11 Apr 2017	Animal Life	None
D8-A	11 Apr 2017	Floatables	None
D8-A	11 Apr 2017	Water Color	Green
D8-A	11 Apr 2017	Current Direction	W
D8-A	11 Apr 2017	Wave Height Low (ft)	3
D8-A	11 Apr 2017	High Tide (ft)	4.5
D8-A	11 Apr 2017	High Tide Time	1003
D8-A	11 Apr 2017	Low Tide (ft)	-0.1
D8-A	11 Apr 2017	Low Tide Time	406
D8-A	11 Apr 2017	Comments	Kelp; Seagrass; Algae; Water turbid
D8-A	17 Apr 2017	Arrive Time	1032
D8-A	17 Apr 2017	Weather	Sunny
D8-A	17 Apr 2017	Wind Speed (kts)	4
D8-A	17 Apr 2017	Wind Dir	W
D8-A	17 Apr 2017	Animal Life	None
D8-A	17 Apr 2017	Floatables	None
D8-A	17 Apr 2017	Water Color	Green
D8-A	17 Apr 2017	Current Direction	W
D8-A	17 Apr 2017	Wave Height Low (ft)	3
D8-A	17 Apr 2017	High Tide (ft)	2.8
D8-A	17 Apr 2017	High Tide Time	1540
D8-A	17 Apr 2017	Low Tide (ft)	0.8
D8-A	17 Apr 2017	Low Tide Time	833
D8-A	17 Apr 2017	Comments	Kelp; Seagrass; 1 Surfer; Water clear

Station	Date	Parameter	Value
D8-A	23 Apr 2017	Arrive Time	921
D8-A	23 Apr 2017	Weather	Cloudy
D8-A	23 Apr 2017	Wind Speed (kts)	3
D8-A	23 Apr 2017	Wind Dir	W
D8-A	23 Apr 2017	Animal Life	None
D8-A	23 Apr 2017	Floatables	None
D8-A	23 Apr 2017	Water Color	Brown
D8-A	23 Apr 2017	Current Direction	W
D8-A	23 Apr 2017	Wave Height Low (ft)	3
D8-A	23 Apr 2017	High Tide (ft)	4.7
D8-A	23 Apr 2017	High Tide Time	734
D8-A	23 Apr 2017	Low Tide (ft)	-0.1
D8-A	23 Apr 2017	Low Tide Time	1355
D8-A	23 Apr 2017	Comments	Kelp; Seagrass; Algae; Water clear
D8-A	29 Apr 2017	Arrive Time	920
D8-A	29 Apr 2017	Weather	Sunny
D8-A	29 Apr 2017	Wind Speed (kts)	3.1
D8-A	29 Apr 2017	Wind Dir	NW
D8-A	29 Apr 2017	Animal Life	None
D8-A	29 Apr 2017	Floatables	None
D8-A	29 Apr 2017	Water Color	Green
D8-A	29 Apr 2017	Current Direction	NW
D8-A	29 Apr 2017	Wave Height Low (ft)	2
D8-A	29 Apr 2017	High Tide (ft)	3.8
D8-A	29 Apr 2017	High Tide Time	1240
D8-A	29 Apr 2017	Low Tide (ft)	-1
D8-A	29 Apr 2017	Low Tide Time	619
D8-A	29 Apr 2017	Comments	Algae; Water clear
D9	05 Apr 2017	Arrive Time	1020
D9	05 Apr 2017	Weather	Sunny
D9	05 Apr 2017	Wind Speed (kts)	3.3
D9	05 Apr 2017	Wind Dir	W
D9	05 Apr 2017	Animal Life	None
D9	05 Apr 2017	Floatables	None
D9	05 Apr 2017	Water Color	Green
D9	05 Apr 2017	Current Direction	W
D9	05 Apr 2017	Wave Height Low (ft)	2
D9	05 Apr 2017	High Tide (ft)	4.6
D9	05 Apr 2017	High Tide Time	527
D9	05 Apr 2017	Low Tide (ft)	-0.3
D9	05 Apr 2017	Low Tide Time	1240
D9	05 Apr 2017	Comments	Kelp; Seagrass; 2 Persons; Water clear
D9	11 Apr 2017	Arrive Time	828
D9	11 Apr 2017	Weather	Sunny
D9	11 Apr 2017	Wind Speed (kts)	2
D9	11 Apr 2017	Wind Dir	W
D9	11 Apr 2017	Animal Life	None
D9	11 Apr 2017	Floatables	None
D9	11 Apr 2017	Water Color	Green
D9	11 Apr 2017	Current Direction	W
D9	11 Apr 2017	Wave Height Low (ft)	4
D9	11 Apr 2017	High Tide (ft)	4.5

Station	Date	Parameter	Value
D9	11 Apr 2017	High Tide Time	1003
D9	11 Apr 2017	Low Tide (ft)	-0.1
D9	11 Apr 2017	Low Tide Time	406
D9	11 Apr 2017	Comments	Kelp; Seagrass; Algae; Water turbid
D9	17 Apr 2017	Arrive Time	1044
D9	17 Apr 2017	Weather	Sunny
D9	17 Apr 2017	Wind Speed (kts)	6.9
D9	17 Apr 2017	Wind Dir	W
D9	17 Apr 2017	Animal Life	None
D9	17 Apr 2017	Floatables	None
D9	17 Apr 2017	Water Color	Green
D9	17 Apr 2017	Current Direction	W
D9	17 Apr 2017	Wave Height Low (ft)	3
D9	17 Apr 2017	High Tide (ft)	2.8
D9	17 Apr 2017	High Tide Time	1540
D9	17 Apr 2017	Low Tide (ft)	0.8
D9	17 Apr 2017	Low Tide Time	833
D9	17 Apr 2017	Comments	Kelp; Seagrass; 10 Persons; Water clear
D9	23 Apr 2017	Arrive Time	934
D9	23 Apr 2017	Weather	Cloudy
D9	23 Apr 2017	Wind Speed (kts)	2.4
D9	23 Apr 2017	Wind Dir	E
D9	23 Apr 2017	Animal Life	None
D9	23 Apr 2017	Floatables	None
D9	23 Apr 2017	Water Color	Green
D9	23 Apr 2017	Current Direction	E
D9	23 Apr 2017	Wave Height Low (ft)	2
D9	23 Apr 2017	High Tide (ft)	4.7
D9	23 Apr 2017	High Tide Time	734
D9	23 Apr 2017	Low Tide (ft)	-0.1
D9	23 Apr 2017	Low Tide Time	1355
D9	23 Apr 2017	Comments	Kelp; Seagrass; Algae; 2 Persons; Water clear
D9	29 Apr 2017	Arrive Time	934
D9	29 Apr 2017	Weather	Sunny
D9	29 Apr 2017	Wind Speed (kts)	2.1
D9	29 Apr 2017	Wind Dir	NW
D9	29 Apr 2017	Animal Life	None
D9	29 Apr 2017	Floatables	None
D9	29 Apr 2017	Water Color	Green
D9	29 Apr 2017	Current Direction	NW
D9	29 Apr 2017	Wave Height Low (ft)	2
D9	29 Apr 2017	High Tide (ft)	3.8
D9	29 Apr 2017	High Tide Time	1240
D9	29 Apr 2017	Low Tide (ft)	-1
D9	29 Apr 2017	Low Tide Time	619
D9	29 Apr 2017	Comments	Seagrass; Algae; 3 Persons; Water clear
D10	05 Apr 2017	Arrive Time	1038
D10	05 Apr 2017	Weather	Sunny
D10	05 Apr 2017	Wind Speed (kts)	5
D10	05 Apr 2017	Wind Dir	W
D10	05 Apr 2017	Animal Life	None

Station	Date	Parameter	Value
D10	05 Apr 2017	Floatables	None
D10	05 Apr 2017	Water Color	Green
D10	05 Apr 2017	Current Direction	W
D10	05 Apr 2017	Wave Height Low (ft)	3
D10	05 Apr 2017	High Tide (ft)	4.6
D10	05 Apr 2017	High Tide Time	527
D10	05 Apr 2017	Low Tide (ft)	-0.3
D10	05 Apr 2017	Low Tide Time	1240
D10	05 Apr 2017	Comments	Seagrass; 22 Persons; 2 Surfers; 2 Swimmers; Water clear
D10	11 Apr 2017	Arrive Time	815
D10	11 Apr 2017	Weather	Sunny
D10	11 Apr 2017	Wind Speed (kts)	3
D10	11 Apr 2017	Wind Dir	W
D10	11 Apr 2017	Animal Life	None
D10	11 Apr 2017	Floatables	None
D10	11 Apr 2017	Water Color	Green
D10	11 Apr 2017	Current Direction	W
D10	11 Apr 2017	Wave Height Low (ft)	4
D10	11 Apr 2017	High Tide (ft)	4.5
D10	11 Apr 2017	High Tide Time	1003
D10	11 Apr 2017	Low Tide (ft)	-0.1
D10	11 Apr 2017	Low Tide Time	406
D10	11 Apr 2017	Comments	Kelp; Seagrass; Water turbid
D10	17 Apr 2017	Arrive Time	1059
D10	17 Apr 2017	Weather	Sunny
D10	17 Apr 2017	Wind Speed (kts)	6
D10	17 Apr 2017	Wind Dir	W
D10	17 Apr 2017	Animal Life	None
D10	17 Apr 2017	Floatables	None
D10	17 Apr 2017	Water Color	Green
D10	17 Apr 2017	Current Direction	W
D10	17 Apr 2017	Wave Height Low (ft)	3
D10	17 Apr 2017	High Tide (ft)	2.8
D10	17 Apr 2017	High Tide Time	1540
D10	17 Apr 2017	Low Tide (ft)	0.8
D10	17 Apr 2017	Low Tide Time	833
D10	17 Apr 2017	Comments	Kelp; Seagrass; 3 Joggers; 20 Persons; Water clear
D10	23 Apr 2017	Arrive Time	944
D10	23 Apr 2017	Weather	Cloudy
D10	23 Apr 2017	Wind Speed (kts)	2.1
D10	23 Apr 2017	Wind Dir	SW
D10	23 Apr 2017	Animal Life	None
D10	23 Apr 2017	Floatables	None
D10	23 Apr 2017	Water Color	Green
D10	23 Apr 2017	Current Direction	SW
D10	23 Apr 2017	Wave Height Low (ft)	4
D10	23 Apr 2017	High Tide (ft)	4.7
D10	23 Apr 2017	High Tide Time	734
D10	23 Apr 2017	Low Tide (ft)	-0.1
D10	23 Apr 2017	Low Tide Time	1355
D10	23 Apr 2017	Comments	Kelp; Seagrass; 5 Persons; 4 Surfers; Water clear

Station	Date	Parameter	Value
D10	29 Apr 2017	Arrive Time	948
D10	29 Apr 2017	Weather	Sunny
D10	29 Apr 2017	Wind Speed (kts)	1.3
D10	29 Apr 2017	Wind Dir	NW
D10	29 Apr 2017	Animal Life	None
D10	29 Apr 2017	Floatables	None
D10	29 Apr 2017	Water Color	Green
D10	29 Apr 2017	Current Direction	NW
D10	29 Apr 2017	Wave Height Low (ft)	3
D10	29 Apr 2017	High Tide (ft)	3.8
D10	29 Apr 2017	High Tide Time	1240
D10	29 Apr 2017	Low Tide (ft)	-1
D10	29 Apr 2017	Low Tide Time	619
D10	29 Apr 2017	Comments	Seagrass; 21 Persons; 10 Surfers; Water clear
D11	05 Apr 2017	Arrive Time	1102
D11	05 Apr 2017	Weather	Sunny
D11	05 Apr 2017	Wind Speed (kts)	6.4
D11	05 Apr 2017	Wind Dir	NW
D11	05 Apr 2017	Animal Life	1 Dog
D11	05 Apr 2017	Floatables	None
D11	05 Apr 2017	Water Color	Green
D11	05 Apr 2017	Current Direction	NW
D11	05 Apr 2017	Wave Height Low (ft)	3
D11	05 Apr 2017	High Tide (ft)	4.6
D11	05 Apr 2017	High Tide Time	527
D11	05 Apr 2017	Low Tide (ft)	-0.3
D11	05 Apr 2017	Low Tide Time	1240
D11	05 Apr 2017	Comments	Seagrass; Algae; 16 Persons; 1 Surfer; 2 Swimmers; Water clear
D11	11 Apr 2017	Arrive Time	800
D11	11 Apr 2017	Weather	Sunny
D11	11 Apr 2017	Wind Speed (kts)	3
D11	11 Apr 2017	Wind Dir	E
D11	11 Apr 2017	Animal Life	None
D11	11 Apr 2017	Floatables	None
D11	11 Apr 2017	Water Color	Green
D11	11 Apr 2017	Current Direction	E
D11	11 Apr 2017	Wave Height Low (ft)	3
D11	11 Apr 2017	High Tide (ft)	4.5
D11	11 Apr 2017	High Tide Time	1003
D11	11 Apr 2017	Low Tide (ft)	-0.1
D11	11 Apr 2017	Low Tide Time	406
D11	11 Apr 2017	Comments	Kelp; Seagrass; Algae; 8 Swimmers; Water turbid
D11	17 Apr 2017	Arrive Time	1119
D11	17 Apr 2017	Weather	Sunny
D11	17 Apr 2017	Wind Speed (kts)	4.6
D11	17 Apr 2017	Wind Dir	W
D11	17 Apr 2017	Animal Life	None
D11	17 Apr 2017	Floatables	None
D11	17 Apr 2017	Water Color	Green
D11	17 Apr 2017	Current Direction	W
D11	17 Apr 2017	Wave Height Low (ft)	3
D11	17 Apr 2017	High Tide (ft)	2.8

Station	Date	Parameter	Value
D11	17 Apr 2017	High Tide Time	1540
D11	17 Apr 2017	Low Tide (ft)	0.8
D11	17 Apr 2017	Low Tide Time	833
D11	17 Apr 2017	Comments	Kelp; Seagrass; 1 Jogger; 6 Persons; Water clear
D11	23 Apr 2017	Arrive Time	1004
D11	23 Apr 2017	Weather	Partly Cloudy
D11	23 Apr 2017	Wind Speed (kts)	3.2
D11	23 Apr 2017	Wind Dir	SW
D11	23 Apr 2017	Animal Life	None
D11	23 Apr 2017	Floatables	None
D11	23 Apr 2017	Water Color	Green
D11	23 Apr 2017	Current Direction	SW
D11	23 Apr 2017	Wave Height Low (ft)	4
D11	23 Apr 2017	High Tide (ft)	4.7
D11	23 Apr 2017	High Tide Time	734
D11	23 Apr 2017	Low Tide (ft)	-0.1
D11	23 Apr 2017	Low Tide Time	1355
D11	23 Apr 2017	Comments	Kelp; Seagrass; 29 Persons; 3 Surfers; Water clear
D11	29 Apr 2017	Arrive Time	1007
D11	29 Apr 2017	Weather	Sunny
D11	29 Apr 2017	Wind Speed (kts)	3.1
D11	29 Apr 2017	Wind Dir	W
D11	29 Apr 2017	Animal Life	None
D11	29 Apr 2017	Floatables	None
D11	29 Apr 2017	Water Color	Green
D11	29 Apr 2017	Current Direction	W
D11	29 Apr 2017	Wave Height Low (ft)	3
D11	29 Apr 2017	High Tide (ft)	3.8
D11	29 Apr 2017	High Tide Time	1240
D11	29 Apr 2017	Low Tide (ft)	-1
D11	29 Apr 2017	Low Tide Time	619
D11	29 Apr 2017	Comments	Seagrass; Algae; 45 Persons; 15 Swimmers; Water clear
D12	05 Apr 2017	Arrive Time	1130
D12	05 Apr 2017	Weather	Sunny
D12	05 Apr 2017	Wind Speed (kts)	5.2
D12	05 Apr 2017	Wind Dir	W
D12	05 Apr 2017	Animal Life	None
D12	05 Apr 2017	Floatables	None
D12	05 Apr 2017	Water Color	Green
D12	05 Apr 2017	Current Direction	W
D12	05 Apr 2017	Wave Height Low (ft)	2
D12	05 Apr 2017	High Tide (ft)	4.6
D12	05 Apr 2017	High Tide Time	527
D12	05 Apr 2017	Low Tide (ft)	-0.3
D12	05 Apr 2017	Low Tide Time	1240
D12	05 Apr 2017	Comments	Seagrass; 17 Persons; 3 Swimmers; Water clear
D12	11 Apr 2017	Arrive Time	734
D12	11 Apr 2017	Weather	Sunny
D12	11 Apr 2017	Wind Speed (kts)	3
D12	11 Apr 2017	Wind Dir	E
D12	11 Apr 2017	Animal Life	20 Plovers; 5 Sand Pipers

Station	Date	Parameter	Value
D12	11 Apr 2017	Floatables	None
D12	11 Apr 2017	Water Color	Green
D12	11 Apr 2017	Current Direction	E
D12	11 Apr 2017	Wave Height Low (ft)	3
D12	11 Apr 2017	High Tide (ft)	4.5
D12	11 Apr 2017	High Tide Time	1003
D12	11 Apr 2017	Low Tide (ft)	-0.1
D12	11 Apr 2017	Low Tide Time	406
D12	11 Apr 2017	Comments	Kelp; Seagrass; Water turbid
D12	17 Apr 2017	Arrive Time	1143
D12	17 Apr 2017	Weather	Sunny
D12	17 Apr 2017	Wind Speed (kts)	7.3
D12	17 Apr 2017	Wind Dir	W
D12	17 Apr 2017	Animal Life	None
D12	17 Apr 2017	Floatables	None
D12	17 Apr 2017	Water Color	Green
D12	17 Apr 2017	Current Direction	W
D12	17 Apr 2017	Wave Height Low (ft)	3
D12	17 Apr 2017	High Tide (ft)	2.8
D12	17 Apr 2017	High Tide Time	1540
D12	17 Apr 2017	Low Tide (ft)	0.8
D12	17 Apr 2017	Low Tide Time	833
D12	17 Apr 2017	Comments	Seagrass; 2 Joggers; 18 Persons; 8 Swimmers; Water clear
D12	23 Apr 2017	Arrive Time	1038
D12	23 Apr 2017	Weather	Partly Cloudy
D12	23 Apr 2017	Wind Speed (kts)	3
D12	23 Apr 2017	Wind Dir	SW
D12	23 Apr 2017	Animal Life	None
D12	23 Apr 2017	Floatables	None
D12	23 Apr 2017	Water Color	Green
D12	23 Apr 2017	Current Direction	SW
D12	23 Apr 2017	Wave Height Low (ft)	3
D12	23 Apr 2017	High Tide (ft)	4.7
D12	23 Apr 2017	High Tide Time	734
D12	23 Apr 2017	Low Tide (ft)	-0.1
D12	23 Apr 2017	Low Tide Time	1355
D12	23 Apr 2017	Comments	Kelp; Seagrass; 40 Persons; Water clear
D12	29 Apr 2017	Arrive Time	1032
D12	29 Apr 2017	Weather	Sunny
D12	29 Apr 2017	Wind Speed (kts)	3.2
D12	29 Apr 2017	Wind Dir	W
D12	29 Apr 2017	Animal Life	None
D12	29 Apr 2017	Floatables	None
D12	29 Apr 2017	Water Color	Green
D12	29 Apr 2017	Current Direction	W
D12	29 Apr 2017	Wave Height Low (ft)	2
D12	29 Apr 2017	High Tide (ft)	3.8
D12	29 Apr 2017	High Tide Time	1240
D12	29 Apr 2017	Low Tide (ft)	-1
D12	29 Apr 2017	Low Tide Time	619
D12	29 Apr 2017	Comments	Seagrass; 1 Jogger; 60 Persons; 21 Swimmers; 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 Apr 2017	14	10	9	3	2	2	6	5
02 Apr 2017	15*	8*	8*	2*	2*	2*	5*	3*
03 Apr 2017	15*	8*	8*	2*	2*	2*	5*	3*
04 Apr 2017	15*	8*	8*	2*	2*	2*	5*	3*
05 Apr 2017	15*	8*	8*	2*	2*	2*	5*	3*
06 Apr 2017	11	9	6	2	2	2	6	4
07 Apr 2017	11	9	6	2	2	2	6	4
08 Apr 2017	7*	8*	5*	2*	2*	2*	5*	3*
09 Apr 2017	7*	8*	5*	2*	2*	2*	5*	3*
10 Apr 2017	6	13	4	2	2	2	6	4
11 Apr 2017	6	13	4	2	2	2	6	4
12 Apr 2017	6	13	4	2	2	2	6	4
13 Apr 2017	6	13	4	2	2	2	6	4
14 Apr 2017	8	9	5	2	2	3	6	4
15 Apr 2017	8	9	5	2	2	3	6	4
16 Apr 2017	8	9	5	2	2	3	6	4
17 Apr 2017	11	13	6	2	2	3	7	5
18 Apr 2017	11	13	6	2	2	3	7	5
19 Apr 2017	15	19	9	2	3	3	10	6
20 Apr 2017	15	19	9	2	3	3	10	6
21 Apr 2017	22	29	12	2	3	3	15	8
22 Apr 2017	22	29	12	2	3	3	15	8
23 Apr 2017	22	29	12	2	3	3	15	8
24 Apr 2017	22	29	12	2	3	3	15	8
25 Apr 2017	13*	23*	8*	2*	3*	3*	16*	12*
26 Apr 2017	11	20	8	4	3	3	10	8
27 Apr 2017	11	20	8	4	3	3	10	8
28 Apr 2017	11	20	8	4	3	3	10	8
29 Apr 2017	11	20	8	4	3	3	10	8
30 Apr 2017	11	20	8	4	3	3	10	8

* 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 Apr 2017	3	3	3	2	2	2	2	2
02 Apr 2017	4*	3*	3*	2*	2*	2*	2*	2*
03 Apr 2017	4*	3*	3*	2*	2*	2*	2*	2*
04 Apr 2017	4*	3*	3*	2*	2*	2*	2*	2*
05 Apr 2017	4*	3*	3*	2*	2*	2*	2*	2*
06 Apr 2017	3	2	3	2	2	2	2	2
07 Apr 2017	3	2	3	2	2	2	2	2
08 Apr 2017	3*	2*	3*	2*	2*	2*	2*	2*
09 Apr 2017	3*	2*	3*	2*	2*	2*	2*	2*
10 Apr 2017	3	3	3	2	2	2	2	2
11 Apr 2017	3	3	3	2	2	2	2	2
12 Apr 2017	3	3	3	2	2	2	2	2
13 Apr 2017	3	3	3	2	2	2	2	2
14 Apr 2017	3	3	2	2	2	2	2	2
15 Apr 2017	3	3	2	2	2	2	2	2
16 Apr 2017	3	3	2	2	2	2	2	2
17 Apr 2017	3	3	3	2	2	2	2	2
18 Apr 2017	3	3	3	2	2	2	2	2
19 Apr 2017	4	4	3	2	2	2	2	2
20 Apr 2017	4	4	3	2	2	2	2	2
21 Apr 2017	4	4	3	2	2	2	2	2
22 Apr 2017	4	4	3	2	2	2	2	2
23 Apr 2017	4	4	3	2	2	2	2	2
24 Apr 2017	4	4	3	2	2	2	2	2
25 Apr 2017	3*	4*	3*	2*	2*	2*	3*	2*
26 Apr 2017	3	4	2	2	2	2	2	2
27 Apr 2017	3	4	2	2	2	2	2	2
28 Apr 2017	3	4	2	2	2	2	2	2
29 Apr 2017	3	4	2	2	2	2	2	2
30 Apr 2017	3	4	2	2	2	2	2	2

* Geometric mean calculated using n<5

Table 3.3

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

Date	A1	A6	A7	C4	C5	C6	C7	C8
01 Apr 2017	4	4	4	2	2	2	2	3
02 Apr 2017	4*	4*	5*	2*	2*	2*	2*	2*
03 Apr 2017	4*	4*	5*	2*	2*	2*	2*	2*
04 Apr 2017	4*	4*	5*	2*	2*	2*	2*	2*
05 Apr 2017	4*	4*	5*	2*	2*	2*	2*	2*
06 Apr 2017	3	3	4	2	2	2	2	2
07 Apr 2017	3	3	4	2	2	2	2	2
08 Apr 2017	3*	3*	4*	2*	2*	2*	2*	2*
09 Apr 2017	3*	3*	4*	2*	2*	2*	2*	2*
10 Apr 2017	3	3	3	2	2	2	2	2
11 Apr 2017	3	3	3	2	2	2	2	2
12 Apr 2017	3	3	3	2	2	2	2	2
13 Apr 2017	3	3	3	2	2	2	2	2
14 Apr 2017	3	3	3	2	2	2	2	2
15 Apr 2017	3	3	3	2	2	2	2	2
16 Apr 2017	3	3	3	2	2	2	2	2
17 Apr 2017	3	3	3	2	2	2	2	2
18 Apr 2017	3	3	3	2	2	2	2	2
19 Apr 2017	3	3	4	2	2	2	2	2
20 Apr 2017	3	3	4	2	2	2	2	2
21 Apr 2017	3	3	3	2	2	2	2	2
22 Apr 2017	3	3	3	2	2	2	2	2
23 Apr 2017	3	3	3	2	2	2	2	2
24 Apr 2017	3	3	3	2	2	2	2	2
25 Apr 2017	3*	2*	3*	2*	2*	2*	2*	2*
26 Apr 2017	3	2	3	2	2	2	2	2
27 Apr 2017	3	2	3	2	2	2	2	2
28 Apr 2017	3	2	3	2	2	2	2	2
29 Apr 2017	3	2	3	2	2	2	2	2
30 Apr 2017	3	2	3	2	2	2	2	2

* Geometric mean calculated using n<5

Table 3.4

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

Date	A1	A6	A7	C4	C5	C6	C7	C8
06 Apr 2017	IC							
10 Apr 2017	IC							
14 Apr 2017	IC							
19 Apr 2017	IC							
26 Apr 2017	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
06 Apr 2017	IC							
10 Apr 2017	IC							
14 Apr 2017	IC							
19 Apr 2017	IC							
26 Apr 2017	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
06 Apr 2017	IC							
10 Apr 2017	IC							
14 Apr 2017	IC							
19 Apr 2017	IC							
26 Apr 2017	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
06 Apr 2017	IC							
10 Apr 2017	IC							
14 Apr 2017	IC							
19 Apr 2017	IC							
26 Apr 2017	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* (Enter) 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	Enter	F:T	N-NH ₃	Temp	XMS	DO	Sal	pH
A1	06 Apr 2017	751	1	<2	<2	<2	1.00	ns	15.3	70.28	7.2	33.31	8.0
A1	06 Apr 2017	751	12	2e	<2	<2	1.00	ns	11.3	81.87	4.4	33.50	7.8
A1	06 Apr 2017	751	18	6e	<2	2e	0.33	ns	11.0	68.26	4.5	33.52	7.8
A1	10 Apr 2017	804	1	<2	<2	<2	1.00	ns	12.7	80.89	5.4	33.43	7.9
A1	10 Apr 2017	804	12	<2	<2	<2	1.00	ns	10.8	91.11	4.7	33.51	7.8
A1	10 Apr 2017	804	18	<2	<2	<2	1.00	ns	10.8	85.60	4.6	33.53	7.8
A1	14 Apr 2017	759	1	2e	<2	<2	1.00	ns	13.8	75.51	6.4	33.45	8.1
A1	14 Apr 2017	759	12	48	2e	<2	0.04	ns	10.6	88.82	4.4	33.54	7.8
A1	14 Apr 2017	759	18	140e	14e	4e	0.10	ns	10.4	80.24	4.2	33.61	7.8
A1	19 Apr 2017	729	1	<2	<2	<2	1.00	ns	12.9	73.25	5.0	33.48	8.0
A1	19 Apr 2017	729	12	78	4e	4e	0.05	ns	10.3	89.07	4.1	33.63	7.8
A1	19 Apr 2017	729	18	100	8e	8e	0.08	ns	10.2	85.53	3.9	33.68	7.8
A1	26 Apr 2017	811	1	8e	<2	<2	0.25	ns	16.6	68.90	8.3	33.47	8.2
A1	26 Apr 2017	811	12	<2	<2	<2	1.00	ns	11.8	60.62	6.0	33.44	8.1
A1	26 Apr 2017	811	18	8e	2e	<2	0.25	ns	10.8	56.41	4.2	33.56	7.9
C4	06 Apr 2017	1003	1	<2	<2	<2	1.00	ns	16.3	67.74	7.4	33.39	8.2
C4	06 Apr 2017	1003	3	<2	<2	<2	1.00	ns	15.4	67.20	6.9	33.40	8.1
C4	06 Apr 2017	1003	9	<2	<2	<2	1.00	ns	13.3	78.43	4.5	33.45	8.0
C4	10 Apr 2017	1033	1	2e	<2	<2	1.00	ns	14.0	76.31	6.8	33.39	8.1
C4	10 Apr 2017	1033	3	<2	<2	<2	1.00	ns	13.6	76.85	5.9	33.45	8.1
C4	10 Apr 2017	1033	9	<2	<2	<2	1.00	ns	11.7	83.64	4.6	33.49	7.9
C4	14 Apr 2017	938	1	<2	2e	<2	1.00	ns	15.4	42.62	7.9	33.38	8.2
C4	14 Apr 2017	938	3	2e	<2	<2	1.00	ns	15.2	70.26	4.2	33.44	8.2
C4	14 Apr 2017	938	9	4e	<2	<2	0.50	ns	11.3	80.07	4.4	33.49	7.9
C4	19 Apr 2017	906	1	2e	<2	<2	1.00	ns	15.0	78.15	7.7	33.50	8.2
C4	19 Apr 2017	906	3	<2	<2	<2	1.00	ns	14.2	78.87	6.3	33.50	8.2
C4	19 Apr 2017	906	9	<2	<2	<2	1.00	ns	11.2	85.79	4.2	33.51	7.8
C4	26 Apr 2017	953	1	<20	<2	<2	0.10	ns	16.4	66.26	8.2	33.48	8.2
C4	26 Apr 2017	953	3	40e	2e	<2	0.05	ns	16.2	65.62	7.6	33.50	8.2
C4	26 Apr 2017	953	9	20e	<2	<2	0.10	ns	13.4	31.12	5.2	33.58	8.1
C5	06 Apr 2017	951	1	<2	<2	<2	1.00	ns	16.6	73.10	7.6	33.38	8.2
C5	06 Apr 2017	951	3	<2	<2	<2	1.00	ns	15.4	71.91	5.8	33.45	8.2
C5	06 Apr 2017	951	9	2e	<2	<2	1.00	ns	12.7	82.96	5.0	33.43	7.9
C5	10 Apr 2017	1020	1	<2	<2	<2	1.00	ns	14.1	80.07	6.9	33.43	8.1
C5	10 Apr 2017	1020	3	<2	<2	<2	1.00	ns	13.9	80.03	5.4	33.43	8.1

Station	Date	Time	Depth	Total	Fecal	Enteric	F:T	N-NH3	Temp	XMS	DO	Sal	pH
C5	10 Apr 2017	1020	9	4e	<2	<2	0.50	ns	11.8	82.58	5.0	33.47	7.9
C5	14 Apr 2017	926	1	<2	<2	<2	1.00	ns	15.4	60.83	7.1	33.33	8.2
C5	14 Apr 2017	926	3	<2	<2	<2	1.00	ns	13.8	73.73	4.8	33.44	8.1
C5	14 Apr 2017	926	9	6e	4e	<2	0.67	ns	11.4	75.24	4.5	33.49	7.9
C5	19 Apr 2017	858	1	<2	<2	<2	1.00	ns	14.1	79.06	7.5	33.51	8.2
C5	19 Apr 2017	858	3	<2	<2	<2	1.00	ns	13.6	78.64	5.8	33.51	8.1
C5	19 Apr 2017	858	9	4e	<2	<2	0.50	ns	11.2	84.35	5.1	33.52	7.9
C5	26 Apr 2017	941	1	<20	<2	<2	0.10	ns	16.0	57.15	8.0	33.50	8.2
C5	26 Apr 2017	941	3	<2	<2	<2	1.00	ns	15.9	61.33	7.9	33.51	8.2
C5	26 Apr 2017	941	9	2e	<2	2e	1.00	ns	13.8	64.26	5.6	33.51	8.1
A6	06 Apr 2017	848	1	<2	<2	<2	1.00	ns	15.7	76.65	8.5	33.34	8.2
A6	06 Apr 2017	848	12	<2	<2	<2	1.00	ns	15.5	74.67	7.8	33.37	8.2
A6	06 Apr 2017	848	18	36e	<2	<2	0.06	ns	11.8	77.41	4.1	33.61	7.9
A6	10 Apr 2017	831	1	<2	<2	<2	1.00	ns	13.9	76.23	7.0	33.42	8.1
A6	10 Apr 2017	831	12	62	6e	2e	0.10	ns	11.1	82.05	4.6	33.50	7.9
A6	10 Apr 2017	831	18	200e	18e	2e	0.09	ns	10.9	80.64	4.6	33.52	7.9
A6	14 Apr 2017	823	1	<2	<2	<2	1.00	ns	15.1	72.57	7.9	33.45	8.1
A6	14 Apr 2017	823	12	<2	<2	<2	1.00	ns	11.8	85.82	4.9	33.45	7.9
A6	14 Apr 2017	823	18	2e	<2	<2	1.00	ns	11.3	84.22	4.7	33.52	7.9
A6	19 Apr 2017	757	1	<2	<2	<2	1.00	ns	12.8	76.07	6.1	33.51	8.0
A6	19 Apr 2017	757	12	80e	18e	4e	0.22	ns	10.2	85.51	4.0	33.66	7.8
A6	19 Apr 2017	757	18	300e	4e	6e	0.01	ns	10.2	83.37	3.9	33.69	7.8
A6	26 Apr 2017	839	1	<2	<2	<2	1.00	ns	15.9	73.73	8.8	33.48	8.3
A6	26 Apr 2017	839	12	8e	<2	<2	0.25	ns	11.9	63.25	4.7	33.46	8.1
A6	26 Apr 2017	839	18	20e	<2	<2	0.10	ns	11.5	67.14	5.2	33.53	7.9
C6	06 Apr 2017	940	1	<2	<2	<2	1.00	ns	16.5	74.76	8.0	33.39	8.2
C6	06 Apr 2017	940	3	<2	<2	<2	1.00	ns	16.0	74.85	6.2	33.41	8.2
C6	06 Apr 2017	940	9	2e	<2	<2	1.00	ns	12.7	83.14	5.4	33.42	7.9
C6	10 Apr 2017	1009	1	<2	<2	<2	1.00	ns	14.3	77.24	7.2	33.43	8.1
C6	10 Apr 2017	1009	3	<2	<2	<2	1.00	ns	13.8	73.55	6.2	33.44	8.1
C6	10 Apr 2017	1009	9	2e	<2	<2	1.00	ns	11.8	76.41	5.2	33.47	7.9
C6	14 Apr 2017	913	1	<20	<2	<2	0.10	ns	15.1	61.35	7.6	33.39	8.1
C6	14 Apr 2017	913	3	<2	<2	<2	1.00	ns	14.6	67.37	5.8	33.44	8.1
C6	14 Apr 2017	913	9	2e	<2	<2	1.00	ns	11.4	80.95	4.5	33.47	7.9
C6	19 Apr 2017	846	1	<2	<2	<2	1.00	ns	13.8	78.85	7.0	33.50	8.1
C6	19 Apr 2017	846	3	<2	<2	<2	1.00	ns	13.2	78.94	5.3	33.51	8.1
C6	19 Apr 2017	846	9	<2	<2	<2	1.00	ns	11.1	87.54	4.8	33.54	7.9
C6	26 Apr 2017	926	1	<2	<2	<2	1.00	ns	15.8	72.17	8.2	33.49	8.3
C6	26 Apr 2017	926	3	2e	<2	<2	1.00	ns	15.2	73.67	7.3	33.49	8.2
C6	26 Apr 2017	926	9	<2	<2	<2	1.00	ns	13.1	72.94	6.0	33.49	8.1
A7	06 Apr 2017	804	1	<2	<2	<2	1.00	ns	15.6	78.36	8.2	33.32	8.1

Station	Date	Time	Depth	Total	Fecal	Enterο	F:T	N-NH3	Temp	XMS	DO	Sal	pH
A7	06 Apr 2017	804	12	<2	<2	<2	1.00	ns	15.2	76.45	7.7	33.34	8.1
A7	06 Apr 2017	804	18	<2	<2	<2	1.00	ns	12.7	80.15	4.5	33.54	7.9
A7	10 Apr 2017	818	1	<2	<2	<2	1.00	ns	13.5	78.97	5.7	33.43	8.0
A7	10 Apr 2017	818	12	<2	<2	<2	1.00	ns	11.2	82.34	4.9	33.49	7.9
A7	10 Apr 2017	818	18	2e	<2	<2	1.00	ns	10.8	88.34	4.8	33.51	7.9
A7	14 Apr 2017	809	1	<2	<2	<2	1.00	ns	14.8	74.41	7.3	33.44	8.1
A7	14 Apr 2017	809	12	<20	<2	<2	0.10	ns	11.5	83.98	4.6	33.46	7.9
A7	14 Apr 2017	809	18	12e	<2	<2	0.17	ns	11.0	86.04	4.6	33.50	7.9
A7	19 Apr 2017	747	1	<2	<2	<2	1.00	ns	11.9	81.61	5.7	33.53	8.0
A7	19 Apr 2017	747	12	66	2e	4e	0.03	ns	10.2	87.74	3.9	33.67	7.8
A7	19 Apr 2017	747	18	170e	12e	14e	0.07	ns	10.1	85.22	3.8	33.71	7.8
A7	26 Apr 2017	824	1	<2	<2	<2	1.00	ns	15.9	67.81	8.5	33.50	8.2
A7	26 Apr 2017	824	12	2e	<2	<2	1.00	ns	12.1	65.82	5.1	33.45	8.1
A7	26 Apr 2017	824	18	20e	<2	<2	0.10	ns	11.2	65.72	4.7	33.51	7.9
C7	06 Apr 2017	905	1	<2	<2	<2	1.00	ns	16.1	66.32	8.8	33.37	8.2
C7	06 Apr 2017	905	12	<2	<2	<2	1.00	ns	11.9	83.76	4.2	33.53	7.9
C7	06 Apr 2017	905	18	40e	<2	<2	0.05	ns	11.1	83.97	4.6	33.50	7.8
C7	10 Apr 2017	850	1	<2	<2	<2	1.00	ns	14.4	71.32	6.6	33.42	8.1
C7	10 Apr 2017	850	12	4e	<2	<2	0.50	ns	11.8	85.52	5.1	33.44	7.9
C7	10 Apr 2017	850	18	28e	2e	<2	0.07	ns	11.3	84.67	4.9	33.48	7.9
C7	14 Apr 2017	838	1	<2	<2	<2	1.00	ns	15.3	71.39	7.9	33.42	8.2
C7	14 Apr 2017	838	12	<2	<2	<2	1.00	ns	12.8	78.50	4.5	33.40	8.0
C7	14 Apr 2017	838	18	8e	<2	<2	0.25	ns	10.5	81.13	4.3	33.57	7.8
C7	19 Apr 2017	814	1	12e	<2	2e	0.17	ns	14.0	72.71	7.1	33.47	8.1
C7	19 Apr 2017	814	12	90	8e	4e	0.09	ns	10.4	87.38	4.1	33.60	7.8
C7	19 Apr 2017	814	18	160e	6e	6e	0.04	ns	10.2	86.18	4.0	33.67	7.8
C7	26 Apr 2017	855	1	<2	<2	<2	1.00	ns	16.4	70.57	9.4	33.48	8.3
C7	26 Apr 2017	855	12	<2	<2	<2	1.00	ns	11.8	71.40	5.2	33.51	8.0
C7	26 Apr 2017	855	18	<2	<2	<2	1.00	ns	11.3	73.47	5.0	33.53	7.9
C8	06 Apr 2017	918	1	<2	<2	<2	1.00	ns	15.6	58.07	8.1	33.34	8.2
C8	06 Apr 2017	918	12	8e	<2	<2	0.25	ns	12.0	84.25	4.4	33.47	7.9
C8	06 Apr 2017	918	18	34e	2e	<2	0.06	ns	11.1	83.02	4.4	33.50	7.8
C8	10 Apr 2017	903	1	2e	<2	<2	1.00	ns	13.9	67.95	6.6	33.40	8.0
C8	10 Apr 2017	903	12	2e	<2	<2	1.00	ns	12.4	80.14	5.2	33.43	8.0
C8	10 Apr 2017	903	18	10e	<2	<2	0.20	ns	11.6	74.90	5.0	33.46	7.9
C8	14 Apr 2017	851	1	<2	<2	<2	1.00	ns	15.0	71.92	7.5	33.35	8.2
C8	14 Apr 2017	851	12	2e	<2	<2	1.00	ns	12.8	79.02	4.7	33.44	8.0
C8	14 Apr 2017	851	18	<20	<2	<2	0.10	ns	11.0	69.54	4.5	33.50	7.9
C8	19 Apr 2017	828	1	<2	<2	<2	1.00	ns	13.7	70.56	6.3	33.48	8.1
C8	19 Apr 2017	828	12	52	<2	<2	0.04	ns	10.5	87.07	4.2	33.60	7.8
C8	19 Apr 2017	828	18	46	4e	2e	0.09	ns	10.5	86.06	4.2	33.62	7.8

Station	Date	Time	Depth	Total	Fecal	Enter	F:T	N-NH3	Temp	XMS	DO	Sal	pH
C8	26 Apr 2017	907	1	<2	<2	<2	1.00	ns	16.3	74.15	9.7	33.48	8.3
C8	26 Apr 2017	907	12	<2	<2	<2	1.00	ns	11.8	67.40	5.7	33.47	8.0
C8	26 Apr 2017	907	18	<2	<2	<2	1.00	ns	11.4	65.19	5.2	33.52	7.9

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	06 Apr 2017	Depth (m)	19
A1	06 Apr 2017	Arrive Time	751
A1	06 Apr 2017	Depart Time	755
A1	06 Apr 2017	Air Temp (C)	15
A1	06 Apr 2017	Weather	Fog
A1	06 Apr 2017	Visibility (mi)	4
A1	06 Apr 2017	Wind Speed (kts)	4
A1	06 Apr 2017	Wind Dir	SW
A1	06 Apr 2017	Water Color	Green
A1	06 Apr 2017	Wave Ht Low (ft)	4
A1	06 Apr 2017	Wave Period (sec)	13
A1	06 Apr 2017	Sea State	Wind ripples
A1	06 Apr 2017	High Tide (ft)	4.8
A1	06 Apr 2017	High Tide Time	634
A1	06 Apr 2017	Low Tide (ft)	-0.4
A1	06 Apr 2017	Low Tide Time	1326
A1	06 Apr 2017	Comments	
A1	10 Apr 2017	Depth (m)	18
A1	10 Apr 2017	Arrive Time	804
A1	10 Apr 2017	Depart Time	808
A1	10 Apr 2017	Air Temp (C)	13
A1	10 Apr 2017	Weather	Haze
A1	10 Apr 2017	Visibility (mi)	10
A1	10 Apr 2017	Wind Speed (kts)	4
A1	10 Apr 2017	Wind Dir	SW
A1	10 Apr 2017	Water Color	Greenish-Blue
A1	10 Apr 2017	Wave Ht Low (ft)	3
A1	10 Apr 2017	Wave Period (sec)	13
A1	10 Apr 2017	Sea State	Confused swell
A1	10 Apr 2017	High Tide (ft)	4.7
A1	10 Apr 2017	High Tide Time	928
A1	10 Apr 2017	Low Tide (ft)	0.2
A1	10 Apr 2017	Low Tide Time	1535
A1	10 Apr 2017	Comments	
A1	14 Apr 2017	Depth (m)	19
A1	14 Apr 2017	Arrive Time	759
A1	14 Apr 2017	Depart Time	801
A1	14 Apr 2017	Air Temp (C)	14
A1	14 Apr 2017	Weather	Partly Cloudy
A1	14 Apr 2017	Visibility (mi)	4
A1	14 Apr 2017	Wind Speed (kts)	2
A1	14 Apr 2017	Wind Dir	N
A1	14 Apr 2017	Water Color	Green
A1	14 Apr 2017	Wave Ht Low (ft)	7
A1	14 Apr 2017	Wave Period (sec)	7
A1	14 Apr 2017	Sea State	Confused swell
A1	14 Apr 2017	High Tide (ft)	3.5
A1	14 Apr 2017	High Tide Time	1157
A1	14 Apr 2017	Low Tide (ft)	0.1

Station	Date	Parameter	Value
A1	14 Apr 2017	Low Tide Time	552
A1	14 Apr 2017	Comments	Kelp
A1	19 Apr 2017	Depth (m)	19
A1	19 Apr 2017	Arrive Time	729
A1	19 Apr 2017	Depart Time	737
A1	19 Apr 2017	Air Temp (C)	14
A1	19 Apr 2017	Weather	Cloudy
A1	19 Apr 2017	Visibility (mi)	12
A1	19 Apr 2017	Wind Speed (kts)	5
A1	19 Apr 2017	Wind Dir	E
A1	19 Apr 2017	Water Color	Brownish-Green
A1	19 Apr 2017	Wave Ht Low (ft)	3
A1	19 Apr 2017	Wave Period (sec)	9
A1	19 Apr 2017	Sea State	Calm
A1	19 Apr 2017	High Tide (ft)	3.7
A1	19 Apr 2017	High Tide Time	313
A1	19 Apr 2017	Low Tide (ft)	0.6
A1	19 Apr 2017	Low Tide Time	1105
A1	19 Apr 2017	Comments	
A1	26 Apr 2017	Depth (m)	18
A1	26 Apr 2017	Arrive Time	811
A1	26 Apr 2017	Depart Time	816
A1	26 Apr 2017	Air Temp (C)	16
A1	26 Apr 2017	Weather	Haze
A1	26 Apr 2017	Visibility (mi)	10
A1	26 Apr 2017	Wind Speed (kts)	2
A1	26 Apr 2017	Wind Dir	E
A1	26 Apr 2017	Water Color	Brownish-Green
A1	26 Apr 2017	Wave Ht Low (ft)	6
A1	26 Apr 2017	Wave Period (sec)	7
A1	26 Apr 2017	Sea State	Confused swell
A1	26 Apr 2017	High Tide (ft)	4.7
A1	26 Apr 2017	High Tide Time	953
A1	26 Apr 2017	Low Tide (ft)	0.4
A1	26 Apr 2017	Low Tide Time	1542
A1	26 Apr 2017	Comments	
C4	06 Apr 2017	Depth (m)	11
C4	06 Apr 2017	Arrive Time	1003
C4	06 Apr 2017	Depart Time	1008
C4	06 Apr 2017	Air Temp (C)	16
C4	06 Apr 2017	Weather	Overcast
C4	06 Apr 2017	Visibility (mi)	7
C4	06 Apr 2017	Wind Speed (kts)	1
C4	06 Apr 2017	Wind Dir	E
C4	06 Apr 2017	Water Color	Green
C4	06 Apr 2017	Wave Ht Low (ft)	4
C4	06 Apr 2017	Wave Period (sec)	13
C4	06 Apr 2017	Sea State	Wind ripples
C4	06 Apr 2017	High Tide (ft)	4.8
C4	06 Apr 2017	High Tide Time	634
C4	06 Apr 2017	Low Tide (ft)	-0.4
C4	06 Apr 2017	Low Tide Time	1326

Station	Date	Parameter	Value
C4	06 Apr 2017	Comments	
C4	10 Apr 2017	Depth (m)	9
C4	10 Apr 2017	Arrive Time	1033
C4	10 Apr 2017	Depart Time	1036
C4	10 Apr 2017	Air Temp (C)	15
C4	10 Apr 2017	Weather	Clear
C4	10 Apr 2017	Visibility (mi)	12
C4	10 Apr 2017	Wind Speed (kts)	0
C4	10 Apr 2017	Wind Dir	
C4	10 Apr 2017	Water Color	Greenish-Brown
C4	10 Apr 2017	Wave Ht Low (ft)	3
C4	10 Apr 2017	Wave Period (sec)	13
C4	10 Apr 2017	Sea State	Confused swell
C4	10 Apr 2017	High Tide (ft)	4.7
C4	10 Apr 2017	High Tide Time	928
C4	10 Apr 2017	Low Tide (ft)	0.2
C4	10 Apr 2017	Low Tide Time	1535
C4	10 Apr 2017	Comments	
C4	14 Apr 2017	Depth (m)	11
C4	14 Apr 2017	Arrive Time	938
C4	14 Apr 2017	Depart Time	943
C4	14 Apr 2017	Air Temp (C)	14
C4	14 Apr 2017	Weather	Partly Cloudy
C4	14 Apr 2017	Visibility (mi)	7
C4	14 Apr 2017	Wind Speed (kts)	4
C4	14 Apr 2017	Wind Dir	S
C4	14 Apr 2017	Water Color	Green
C4	14 Apr 2017	Wave Ht Low (ft)	7
C4	14 Apr 2017	Wave Period (sec)	7
C4	14 Apr 2017	Sea State	Confused swell
C4	14 Apr 2017	High Tide (ft)	3.5
C4	14 Apr 2017	High Tide Time	1157
C4	14 Apr 2017	Low Tide (ft)	0.1
C4	14 Apr 2017	Low Tide Time	552
C4	14 Apr 2017	Comments	Kelp; Kelp debris
C4	19 Apr 2017	Depth (m)	10
C4	19 Apr 2017	Arrive Time	906
C4	19 Apr 2017	Depart Time	910
C4	19 Apr 2017	Air Temp (C)	16
C4	19 Apr 2017	Weather	Cloudy
C4	19 Apr 2017	Visibility (mi)	12
C4	19 Apr 2017	Wind Speed (kts)	7
C4	19 Apr 2017	Wind Dir	SE
C4	19 Apr 2017	Water Color	Brownish-Green
C4	19 Apr 2017	Wave Ht Low (ft)	3
C4	19 Apr 2017	Wave Period (sec)	9
C4	19 Apr 2017	Sea State	Calm
C4	19 Apr 2017	High Tide (ft)	3.7
C4	19 Apr 2017	High Tide Time	313
C4	19 Apr 2017	Low Tide (ft)	0.6
C4	19 Apr 2017	Low Tide Time	1105
C4	19 Apr 2017	Comments	Kelp

Station	Date	Parameter	Value
C4	26 Apr 2017	Depth (m)	9
C4	26 Apr 2017	Arrive Time	953
C4	26 Apr 2017	Depart Time	957
C4	26 Apr 2017	Air Temp (C)	16
C4	26 Apr 2017	Weather	Haze
C4	26 Apr 2017	Visibility (mi)	12
C4	26 Apr 2017	Wind Speed (kts)	4
C4	26 Apr 2017	Wind Dir	S
C4	26 Apr 2017	Water Color	Brown
C4	26 Apr 2017	Wave Ht Low (ft)	6
C4	26 Apr 2017	Wave Period (sec)	7
C4	26 Apr 2017	Sea State	Confused swell
C4	26 Apr 2017	High Tide (ft)	4.7
C4	26 Apr 2017	High Tide Time	953
C4	26 Apr 2017	Low Tide (ft)	0.4
C4	26 Apr 2017	Low Tide Time	1542
C4	26 Apr 2017	Comments	
C5	06 Apr 2017	Depth (m)	12
C5	06 Apr 2017	Arrive Time	951
C5	06 Apr 2017	Depart Time	955
C5	06 Apr 2017	Air Temp (C)	16
C5	06 Apr 2017	Weather	Overcast
C5	06 Apr 2017	Visibility (mi)	7
C5	06 Apr 2017	Wind Speed (kts)	2
C5	06 Apr 2017	Wind Dir	N
C5	06 Apr 2017	Water Color	Green
C5	06 Apr 2017	Wave Ht Low (ft)	4
C5	06 Apr 2017	Wave Period (sec)	13
C5	06 Apr 2017	Sea State	Wind ripples
C5	06 Apr 2017	High Tide (ft)	4.8
C5	06 Apr 2017	High Tide Time	634
C5	06 Apr 2017	Low Tide (ft)	-0.4
C5	06 Apr 2017	Low Tide Time	1326
C5	06 Apr 2017	Comments	
C5	10 Apr 2017	Depth (m)	9
C5	10 Apr 2017	Arrive Time	1020
C5	10 Apr 2017	Depart Time	1024
C5	10 Apr 2017	Air Temp (C)	14
C5	10 Apr 2017	Weather	Clear
C5	10 Apr 2017	Visibility (mi)	12
C5	10 Apr 2017	Wind Speed (kts)	0
C5	10 Apr 2017	Wind Dir	
C5	10 Apr 2017	Water Color	Greenish-Brown
C5	10 Apr 2017	Wave Ht Low (ft)	3
C5	10 Apr 2017	Wave Period (sec)	13
C5	10 Apr 2017	Sea State	Confused swell
C5	10 Apr 2017	High Tide (ft)	4.7
C5	10 Apr 2017	High Tide Time	928
C5	10 Apr 2017	Low Tide (ft)	0.2
C5	10 Apr 2017	Low Tide Time	1535
C5	10 Apr 2017	Comments	

Station	Date	Parameter	Value
C5	14 Apr 2017	Depth (m)	9
C5	14 Apr 2017	Arrive Time	926
C5	14 Apr 2017	Depart Time	929
C5	14 Apr 2017	Air Temp (C)	14
C5	14 Apr 2017	Weather	Partly Cloudy
C5	14 Apr 2017	Visibility (mi)	7
C5	14 Apr 2017	Wind Speed (kts)	2
C5	14 Apr 2017	Wind Dir	SE
C5	14 Apr 2017	Water Color	Green
C5	14 Apr 2017	Wave Ht Low (ft)	7
C5	14 Apr 2017	Wave Period (sec)	7
C5	14 Apr 2017	Sea State	Confused swell
C5	14 Apr 2017	High Tide (ft)	3.5
C5	14 Apr 2017	High Tide Time	1157
C5	14 Apr 2017	Low Tide (ft)	0.1
C5	14 Apr 2017	Low Tide Time	552
C5	14 Apr 2017	Comments	Kelp
C5	19 Apr 2017	Depth (m)	9
C5	19 Apr 2017	Arrive Time	858
C5	19 Apr 2017	Depart Time	900
C5	19 Apr 2017	Air Temp (C)	16
C5	19 Apr 2017	Weather	Cloudy
C5	19 Apr 2017	Visibility (mi)	12
C5	19 Apr 2017	Wind Speed (kts)	10
C5	19 Apr 2017	Wind Dir	SE
C5	19 Apr 2017	Water Color	Brownish-Green
C5	19 Apr 2017	Wave Ht Low (ft)	3
C5	19 Apr 2017	Wave Period (sec)	9
C5	19 Apr 2017	Sea State	Calm
C5	19 Apr 2017	High Tide (ft)	3.7
C5	19 Apr 2017	High Tide Time	313
C5	19 Apr 2017	Low Tide (ft)	0.6
C5	19 Apr 2017	Low Tide Time	1105
C5	19 Apr 2017	Comments	Kelp
C5	26 Apr 2017	Depth (m)	10
C5	26 Apr 2017	Arrive Time	941
C5	26 Apr 2017	Depart Time	944
C5	26 Apr 2017	Air Temp (C)	16
C5	26 Apr 2017	Weather	Haze
C5	26 Apr 2017	Visibility (mi)	12
C5	26 Apr 2017	Wind Speed (kts)	5
C5	26 Apr 2017	Wind Dir	SW
C5	26 Apr 2017	Water Color	Brown
C5	26 Apr 2017	Wave Ht Low (ft)	6
C5	26 Apr 2017	Wave Period (sec)	7
C5	26 Apr 2017	Sea State	Confused swell
C5	26 Apr 2017	High Tide (ft)	4.7
C5	26 Apr 2017	High Tide Time	953
C5	26 Apr 2017	Low Tide (ft)	0.4
C5	26 Apr 2017	Low Tide Time	1542
C5	26 Apr 2017	Comments	Foam ; Kelp debris
A6	06 Apr 2017	Depth (m)	18

Station	Date	Parameter	Value
A6	06 Apr 2017	Arrive Time	848
A6	06 Apr 2017	Depart Time	855
A6	06 Apr 2017	Air Temp (C)	15
A6	06 Apr 2017	Weather	Fog
A6	06 Apr 2017	Visibility (mi)	4
A6	06 Apr 2017	Wind Speed (kts)	1
A6	06 Apr 2017	Wind Dir	E
A6	06 Apr 2017	Water Color	Green
A6	06 Apr 2017	Wave Ht Low (ft)	4
A6	06 Apr 2017	Wave Period (sec)	13
A6	06 Apr 2017	Sea State	Wind ripples
A6	06 Apr 2017	High Tide (ft)	4.8
A6	06 Apr 2017	High Tide Time	634
A6	06 Apr 2017	Low Tide (ft)	-0.4
A6	06 Apr 2017	Low Tide Time	1326
A6	06 Apr 2017	Comments	Prior to sampling we went out to see if 100m ADCP buoy had surfaced; It has not
A6	10 Apr 2017	Depth (m)	18
A6	10 Apr 2017	Arrive Time	831
A6	10 Apr 2017	Depart Time	838
A6	10 Apr 2017	Air Temp (C)	15
A6	10 Apr 2017	Weather	Haze
A6	10 Apr 2017	Visibility (mi)	10
A6	10 Apr 2017	Wind Speed (kts)	1
A6	10 Apr 2017	Wind Dir	N
A6	10 Apr 2017	Water Color	Greenish-Blue
A6	10 Apr 2017	Wave Ht Low (ft)	3
A6	10 Apr 2017	Wave Period (sec)	13
A6	10 Apr 2017	Sea State	Confused swell
A6	10 Apr 2017	High Tide (ft)	4.7
A6	10 Apr 2017	High Tide Time	928
A6	10 Apr 2017	Low Tide (ft)	0.2
A6	10 Apr 2017	Low Tide Time	1535
A6	10 Apr 2017	Comments	
A6	14 Apr 2017	Depth (m)	18
A6	14 Apr 2017	Arrive Time	823
A6	14 Apr 2017	Depart Time	827
A6	14 Apr 2017	Air Temp (C)	15
A6	14 Apr 2017	Weather	Partly Cloudy
A6	14 Apr 2017	Visibility (mi)	4
A6	14 Apr 2017	Wind Speed (kts)	2
A6	14 Apr 2017	Wind Dir	S
A6	14 Apr 2017	Water Color	Green
A6	14 Apr 2017	Wave Ht Low (ft)	7
A6	14 Apr 2017	Wave Period (sec)	7
A6	14 Apr 2017	Sea State	Confused swell
A6	14 Apr 2017	High Tide (ft)	3.5
A6	14 Apr 2017	High Tide Time	1157
A6	14 Apr 2017	Low Tide (ft)	0.1
A6	14 Apr 2017	Low Tide Time	552
A6	14 Apr 2017	Comments	Kelp; Boats
A6	19 Apr 2017	Depth (m)	18

Station	Date	Parameter	Value
A6	19 Apr 2017	Arrive Time	757
A6	19 Apr 2017	Depart Time	802
A6	19 Apr 2017	Air Temp (C)	15
A6	19 Apr 2017	Weather	Cloudy
A6	19 Apr 2017	Visibility (mi)	12
A6	19 Apr 2017	Wind Speed (kts)	5
A6	19 Apr 2017	Wind Dir	SE
A6	19 Apr 2017	Water Color	Brownish-Green
A6	19 Apr 2017	Wave Ht Low (ft)	3
A6	19 Apr 2017	Wave Period (sec)	9
A6	19 Apr 2017	Sea State	Calm
A6	19 Apr 2017	High Tide (ft)	3.7
A6	19 Apr 2017	High Tide Time	313
A6	19 Apr 2017	Low Tide (ft)	0.6
A6	19 Apr 2017	Low Tide Time	1105
A6	19 Apr 2017	Comments	Kelp
A6	26 Apr 2017	Depth (m)	18
A6	26 Apr 2017	Arrive Time	839
A6	26 Apr 2017	Depart Time	843
A6	26 Apr 2017	Air Temp (C)	16
A6	26 Apr 2017	Weather	Haze
A6	26 Apr 2017	Visibility (mi)	10
A6	26 Apr 2017	Wind Speed (kts)	1
A6	26 Apr 2017	Wind Dir	NE
A6	26 Apr 2017	Water Color	Brownish-Green
A6	26 Apr 2017	Wave Ht Low (ft)	6
A6	26 Apr 2017	Wave Period (sec)	7
A6	26 Apr 2017	Sea State	Confused swell
A6	26 Apr 2017	High Tide (ft)	4.7
A6	26 Apr 2017	High Tide Time	953
A6	26 Apr 2017	Low Tide (ft)	0.4
A6	26 Apr 2017	Low Tide Time	1542
A6	26 Apr 2017	Comments	
C6	06 Apr 2017	Depth (m)	9
C6	06 Apr 2017	Arrive Time	940
C6	06 Apr 2017	Depart Time	945
C6	06 Apr 2017	Air Temp (C)	16
C6	06 Apr 2017	Weather	Fog
C6	06 Apr 2017	Visibility (mi)	6
C6	06 Apr 2017	Wind Speed (kts)	1
C6	06 Apr 2017	Wind Dir	W
C6	06 Apr 2017	Water Color	Green
C6	06 Apr 2017	Wave Ht Low (ft)	4
C6	06 Apr 2017	Wave Period (sec)	13
C6	06 Apr 2017	Sea State	Wind ripples
C6	06 Apr 2017	High Tide (ft)	4.8
C6	06 Apr 2017	High Tide Time	634
C6	06 Apr 2017	Low Tide (ft)	-0.4
C6	06 Apr 2017	Low Tide Time	1326
C6	06 Apr 2017	Comments	
C6	10 Apr 2017	Depth (m)	9
C6	10 Apr 2017	Arrive Time	1009

Station	Date	Parameter	Value
C6	10 Apr 2017	Depart Time	1012
C6	10 Apr 2017	Air Temp (C)	14
C6	10 Apr 2017	Weather	Clear
C6	10 Apr 2017	Visibility (mi)	12
C6	10 Apr 2017	Wind Speed (kts)	0
C6	10 Apr 2017	Wind Dir	
C6	10 Apr 2017	Water Color	Greenish-Brown
C6	10 Apr 2017	Wave Ht Low (ft)	3
C6	10 Apr 2017	Wave Period (sec)	13
C6	10 Apr 2017	Sea State	Confused swell
C6	10 Apr 2017	High Tide (ft)	4.7
C6	10 Apr 2017	High Tide Time	928
C6	10 Apr 2017	Low Tide (ft)	0.2
C6	10 Apr 2017	Low Tide Time	1535
C6	10 Apr 2017	Comments	
C6	14 Apr 2017	Depth (m)	10
C6	14 Apr 2017	Arrive Time	913
C6	14 Apr 2017	Depart Time	916
C6	14 Apr 2017	Air Temp (C)	15
C6	14 Apr 2017	Weather	Partly Cloudy
C6	14 Apr 2017	Visibility (mi)	7
C6	14 Apr 2017	Wind Speed (kts)	3
C6	14 Apr 2017	Wind Dir	W
C6	14 Apr 2017	Water Color	Green
C6	14 Apr 2017	Wave Ht Low (ft)	7
C6	14 Apr 2017	Wave Period (sec)	7
C6	14 Apr 2017	Sea State	Confused swell
C6	14 Apr 2017	High Tide (ft)	3.5
C6	14 Apr 2017	High Tide Time	1157
C6	14 Apr 2017	Low Tide (ft)	0.1
C6	14 Apr 2017	Low Tide Time	552
C6	14 Apr 2017	Comments	Kelp; Boats
C6	19 Apr 2017	Depth (m)	9
C6	19 Apr 2017	Arrive Time	846
C6	19 Apr 2017	Depart Time	850
C6	19 Apr 2017	Air Temp (C)	16
C6	19 Apr 2017	Weather	Cloudy
C6	19 Apr 2017	Visibility (mi)	12
C6	19 Apr 2017	Wind Speed (kts)	3
C6	19 Apr 2017	Wind Dir	SW
C6	19 Apr 2017	Water Color	Brownish-Green
C6	19 Apr 2017	Wave Ht Low (ft)	3
C6	19 Apr 2017	Wave Period (sec)	9
C6	19 Apr 2017	Sea State	Calm
C6	19 Apr 2017	High Tide (ft)	3.7
C6	19 Apr 2017	High Tide Time	313
C6	19 Apr 2017	Low Tide (ft)	0.6
C6	19 Apr 2017	Low Tide Time	1105
C6	19 Apr 2017	Comments	Kelp
C6	26 Apr 2017	Depth (m)	9
C6	26 Apr 2017	Arrive Time	926
C6	26 Apr 2017	Depart Time	932

Station	Date	Parameter	Value
C6	26 Apr 2017	Air Temp (C)	16
C6	26 Apr 2017	Weather	Haze
C6	26 Apr 2017	Visibility (mi)	12
C6	26 Apr 2017	Wind Speed (kts)	2
C6	26 Apr 2017	Wind Dir	SW
C6	26 Apr 2017	Water Color	Brownish-Green
C6	26 Apr 2017	Wave Ht Low (ft)	6
C6	26 Apr 2017	Wave Period (sec)	7
C6	26 Apr 2017	Sea State	Confused swell
C6	26 Apr 2017	High Tide (ft)	4.7
C6	26 Apr 2017	High Tide Time	953
C6	26 Apr 2017	Low Tide (ft)	0.4
C6	26 Apr 2017	Low Tide Time	1542
C6	26 Apr 2017	Comments	
A7	06 Apr 2017	Depth (m)	18
A7	06 Apr 2017	Arrive Time	804
A7	06 Apr 2017	Depart Time	818
A7	06 Apr 2017	Air Temp (C)	15
A7	06 Apr 2017	Weather	Fog
A7	06 Apr 2017	Visibility (mi)	4
A7	06 Apr 2017	Wind Speed (kts)	2
A7	06 Apr 2017	Wind Dir	SE
A7	06 Apr 2017	Water Color	Green
A7	06 Apr 2017	Wave Ht Low (ft)	4
A7	06 Apr 2017	Wave Period (sec)	13
A7	06 Apr 2017	Sea State	Wind ripples
A7	06 Apr 2017	High Tide (ft)	4.8
A7	06 Apr 2017	High Tide Time	634
A7	06 Apr 2017	Low Tide (ft)	-0.4
A7	06 Apr 2017	Low Tide Time	1326
A7	06 Apr 2017	Comments	Recast needed because of depth
A7	10 Apr 2017	Depth (m)	18
A7	10 Apr 2017	Arrive Time	818
A7	10 Apr 2017	Depart Time	821
A7	10 Apr 2017	Air Temp (C)	13
A7	10 Apr 2017	Weather	Haze
A7	10 Apr 2017	Visibility (mi)	10
A7	10 Apr 2017	Wind Speed (kts)	4
A7	10 Apr 2017	Wind Dir	S
A7	10 Apr 2017	Water Color	Greenish-Blue
A7	10 Apr 2017	Wave Ht Low (ft)	3
A7	10 Apr 2017	Wave Period (sec)	13
A7	10 Apr 2017	Sea State	Confused swell
A7	10 Apr 2017	High Tide (ft)	4.7
A7	10 Apr 2017	High Tide Time	928
A7	10 Apr 2017	Low Tide (ft)	0.2
A7	10 Apr 2017	Low Tide Time	1535
A7	10 Apr 2017	Comments	
A7	14 Apr 2017	Depth (m)	19
A7	14 Apr 2017	Arrive Time	809
A7	14 Apr 2017	Depart Time	813
A7	14 Apr 2017	Air Temp (C)	14

Station	Date	Parameter	Value
A7	14 Apr 2017	Weather	Partly Cloudy
A7	14 Apr 2017	Visibility (mi)	4
A7	14 Apr 2017	Wind Speed (kts)	3
A7	14 Apr 2017	Wind Dir	NW
A7	14 Apr 2017	Water Color	Green
A7	14 Apr 2017	Wave Ht Low (ft)	7
A7	14 Apr 2017	Wave Period (sec)	7
A7	14 Apr 2017	Sea State	Confused swell
A7	14 Apr 2017	High Tide (ft)	3.5
A7	14 Apr 2017	High Tide Time	1157
A7	14 Apr 2017	Low Tide (ft)	0.1
A7	14 Apr 2017	Low Tide Time	552
A7	14 Apr 2017	Comments	Kelp
A7	19 Apr 2017	Depth (m)	19
A7	19 Apr 2017	Arrive Time	747
A7	19 Apr 2017	Depart Time	750
A7	19 Apr 2017	Air Temp (C)	15
A7	19 Apr 2017	Weather	Cloudy
A7	19 Apr 2017	Visibility (mi)	12
A7	19 Apr 2017	Wind Speed (kts)	2
A7	19 Apr 2017	Wind Dir	SE
A7	19 Apr 2017	Water Color	Brownish-Green
A7	19 Apr 2017	Wave Ht Low (ft)	3
A7	19 Apr 2017	Wave Period (sec)	9
A7	19 Apr 2017	Sea State	Calm
A7	19 Apr 2017	High Tide (ft)	3.7
A7	19 Apr 2017	High Tide Time	313
A7	19 Apr 2017	Low Tide (ft)	0.6
A7	19 Apr 2017	Low Tide Time	1105
A7	19 Apr 2017	Comments	
A7	26 Apr 2017	Depth (m)	18
A7	26 Apr 2017	Arrive Time	824
A7	26 Apr 2017	Depart Time	829
A7	26 Apr 2017	Air Temp (C)	16
A7	26 Apr 2017	Weather	Haze
A7	26 Apr 2017	Visibility (mi)	10
A7	26 Apr 2017	Wind Speed (kts)	3
A7	26 Apr 2017	Wind Dir	N
A7	26 Apr 2017	Water Color	Brownish-Green
A7	26 Apr 2017	Wave Ht Low (ft)	6
A7	26 Apr 2017	Wave Period (sec)	7
A7	26 Apr 2017	Sea State	Confused swell
A7	26 Apr 2017	High Tide (ft)	4.7
A7	26 Apr 2017	High Tide Time	953
A7	26 Apr 2017	Low Tide (ft)	0.4
A7	26 Apr 2017	Low Tide Time	1542
A7	26 Apr 2017	Comments	
C7	06 Apr 2017	Depth (m)	19
C7	06 Apr 2017	Arrive Time	905
C7	06 Apr 2017	Depart Time	910
C7	06 Apr 2017	Air Temp (C)	16
C7	06 Apr 2017	Weather	Fog

Station	Date	Parameter	Value
C7	06 Apr 2017	Visibility (mi)	5
C7	06 Apr 2017	Wind Speed (kts)	1
C7	06 Apr 2017	Wind Dir	E
C7	06 Apr 2017	Water Color	Brownish-Green
C7	06 Apr 2017	Wave Ht Low (ft)	4
C7	06 Apr 2017	Wave Period (sec)	13
C7	06 Apr 2017	Sea State	Wind ripples
C7	06 Apr 2017	High Tide (ft)	4.8
C7	06 Apr 2017	High Tide Time	634
C7	06 Apr 2017	Low Tide (ft)	-0.4
C7	06 Apr 2017	Low Tide Time	1326
C7	06 Apr 2017	Comments	Kelp debris
C7	10 Apr 2017	Depth (m)	19
C7	10 Apr 2017	Arrive Time	850
C7	10 Apr 2017	Depart Time	853
C7	10 Apr 2017	Air Temp (C)	15
C7	10 Apr 2017	Weather	Clear
C7	10 Apr 2017	Visibility (mi)	12
C7	10 Apr 2017	Wind Speed (kts)	1
C7	10 Apr 2017	Wind Dir	S
C7	10 Apr 2017	Water Color	Green
C7	10 Apr 2017	Wave Ht Low (ft)	3
C7	10 Apr 2017	Wave Period (sec)	13
C7	10 Apr 2017	Sea State	Confused swell
C7	10 Apr 2017	High Tide (ft)	4.7
C7	10 Apr 2017	High Tide Time	928
C7	10 Apr 2017	Low Tide (ft)	0.2
C7	10 Apr 2017	Low Tide Time	1535
C7	10 Apr 2017	Comments	
C7	14 Apr 2017	Depth (m)	18
C7	14 Apr 2017	Arrive Time	838
C7	14 Apr 2017	Depart Time	851
C7	14 Apr 2017	Air Temp (C)	15
C7	14 Apr 2017	Weather	Partly Cloudy
C7	14 Apr 2017	Visibility (mi)	4
C7	14 Apr 2017	Wind Speed (kts)	3
C7	14 Apr 2017	Wind Dir	SE
C7	14 Apr 2017	Water Color	Green
C7	14 Apr 2017	Wave Ht Low (ft)	7
C7	14 Apr 2017	Wave Period (sec)	7
C7	14 Apr 2017	Sea State	Confused swell
C7	14 Apr 2017	High Tide (ft)	3.5
C7	14 Apr 2017	High Tide Time	1157
C7	14 Apr 2017	Low Tide (ft)	0.1
C7	14 Apr 2017	Low Tide Time	552
C7	14 Apr 2017	Comments	Kelp
C7	19 Apr 2017	Depth (m)	18
C7	19 Apr 2017	Arrive Time	814
C7	19 Apr 2017	Depart Time	822
C7	19 Apr 2017	Air Temp (C)	15
C7	19 Apr 2017	Weather	Cloudy
C7	19 Apr 2017	Visibility (mi)	12

Station	Date	Parameter	Value
C7	19 Apr 2017	Wind Speed (kts)	2
C7	19 Apr 2017	Wind Dir	NE
C7	19 Apr 2017	Water Color	Brownish-Green
C7	19 Apr 2017	Wave Ht Low (ft)	3
C7	19 Apr 2017	Wave Period (sec)	9
C7	19 Apr 2017	Sea State	Calm
C7	19 Apr 2017	High Tide (ft)	3.7
C7	19 Apr 2017	High Tide Time	313
C7	19 Apr 2017	Low Tide (ft)	0.6
C7	19 Apr 2017	Low Tide Time	1105
C7	19 Apr 2017	Comments	
C7	26 Apr 2017	Depth (m)	18
C7	26 Apr 2017	Arrive Time	855
C7	26 Apr 2017	Depart Time	858
C7	26 Apr 2017	Air Temp (C)	16
C7	26 Apr 2017	Weather	Haze
C7	26 Apr 2017	Visibility (mi)	10
C7	26 Apr 2017	Wind Speed (kts)	2
C7	26 Apr 2017	Wind Dir	E
C7	26 Apr 2017	Water Color	Brownish-Green
C7	26 Apr 2017	Wave Ht Low (ft)	6
C7	26 Apr 2017	Wave Period (sec)	7
C7	26 Apr 2017	Sea State	Confused swell
C7	26 Apr 2017	High Tide (ft)	4.7
C7	26 Apr 2017	High Tide Time	953
C7	26 Apr 2017	Low Tide (ft)	0.4
C7	26 Apr 2017	Low Tide Time	1542
C7	26 Apr 2017	Comments	
C8	06 Apr 2017	Depth (m)	20
C8	06 Apr 2017	Arrive Time	918
C8	06 Apr 2017	Depart Time	923
C8	06 Apr 2017	Air Temp (C)	16
C8	06 Apr 2017	Weather	Fog
C8	06 Apr 2017	Visibility (mi)	5
C8	06 Apr 2017	Wind Speed (kts)	1
C8	06 Apr 2017	Wind Dir	N
C8	06 Apr 2017	Water Color	Brownish-Green
C8	06 Apr 2017	Wave Ht Low (ft)	4
C8	06 Apr 2017	Wave Period (sec)	13
C8	06 Apr 2017	Sea State	Wind ripples
C8	06 Apr 2017	High Tide (ft)	4.8
C8	06 Apr 2017	High Tide Time	634
C8	06 Apr 2017	Low Tide (ft)	-0.4
C8	06 Apr 2017	Low Tide Time	1326
C8	06 Apr 2017	Comments	
C8	10 Apr 2017	Depth (m)	18
C8	10 Apr 2017	Arrive Time	903
C8	10 Apr 2017	Depart Time	907
C8	10 Apr 2017	Air Temp (C)	14
C8	10 Apr 2017	Weather	Clear
C8	10 Apr 2017	Visibility (mi)	12
C8	10 Apr 2017	Wind Speed (kts)	1

Station	Date	Parameter	Value
C8	10 Apr 2017	Wind Dir	N
C8	10 Apr 2017	Water Color	Brownish-Green
C8	10 Apr 2017	Wave Ht Low (ft)	3
C8	10 Apr 2017	Wave Period (sec)	13
C8	10 Apr 2017	Sea State	Confused swell
C8	10 Apr 2017	High Tide (ft)	4.7
C8	10 Apr 2017	High Tide Time	928
C8	10 Apr 2017	Low Tide (ft)	0.2
C8	10 Apr 2017	Low Tide Time	1535
C8	10 Apr 2017	Comments	
C8	14 Apr 2017	Depth (m)	19
C8	14 Apr 2017	Arrive Time	851
C8	14 Apr 2017	Depart Time	855
C8	14 Apr 2017	Air Temp (C)	14
C8	14 Apr 2017	Weather	Partly Cloudy
C8	14 Apr 2017	Visibility (mi)	4
C8	14 Apr 2017	Wind Speed (kts)	4
C8	14 Apr 2017	Wind Dir	S
C8	14 Apr 2017	Water Color	Green
C8	14 Apr 2017	Wave Ht Low (ft)	7
C8	14 Apr 2017	Wave Period (sec)	7
C8	14 Apr 2017	Sea State	Confused swell
C8	14 Apr 2017	High Tide (ft)	3.5
C8	14 Apr 2017	High Tide Time	1157
C8	14 Apr 2017	Low Tide (ft)	0.1
C8	14 Apr 2017	Low Tide Time	552
C8	14 Apr 2017	Comments	Boats
C8	19 Apr 2017	Depth (m)	19
C8	19 Apr 2017	Arrive Time	828
C8	19 Apr 2017	Depart Time	833
C8	19 Apr 2017	Air Temp (C)	16
C8	19 Apr 2017	Weather	Cloudy
C8	19 Apr 2017	Visibility (mi)	12
C8	19 Apr 2017	Wind Speed (kts)	2
C8	19 Apr 2017	Wind Dir	SW
C8	19 Apr 2017	Water Color	Brownish-Green
C8	19 Apr 2017	Wave Ht Low (ft)	3
C8	19 Apr 2017	Wave Period (sec)	9
C8	19 Apr 2017	Sea State	Calm
C8	19 Apr 2017	High Tide (ft)	3.7
C8	19 Apr 2017	High Tide Time	313
C8	19 Apr 2017	Low Tide (ft)	0.6
C8	19 Apr 2017	Low Tide Time	1105
C8	19 Apr 2017	Comments	
C8	26 Apr 2017	Depth (m)	18
C8	26 Apr 2017	Arrive Time	907
C8	26 Apr 2017	Depart Time	911
C8	26 Apr 2017	Air Temp (C)	16
C8	26 Apr 2017	Weather	Haze
C8	26 Apr 2017	Visibility (mi)	10
C8	26 Apr 2017	Wind Speed (kts)	4
C8	26 Apr 2017	Wind Dir	NE

Station	Date	Parameter	Value
C8	26 Apr 2017	Water Color	Brownish-Green
C8	26 Apr 2017	Wave Ht Low (ft)	6
C8	26 Apr 2017	Wave Period (sec)	7
C8	26 Apr 2017	Sea State	Confused swell
C8	26 Apr 2017	High Tide (ft)	4.7
C8	26 Apr 2017	High Tide Time	953
C8	26 Apr 2017	Low Tide (ft)	0.4
C8	26 Apr 2017	Low Tide Time	1542
C8	26 Apr 2017	Comments	

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	06 Apr 2017	1	15.26	70.28	7.2	33.31	8.0	24.6	6.37
A1	06 Apr 2017	2	15.22	70.63	7.0	33.31	8.0	24.6	5.81
A1	06 Apr 2017	3	15.11	70.92	6.8	33.32	8.0	24.7	5.73
A1	06 Apr 2017	4	14.75	71.04	6.4	33.34	8.0	24.8	5.45
A1	06 Apr 2017	5	14.48	71.65	5.9	33.36	8.0	24.8	4.80
A1	06 Apr 2017	6	13.72	72.72	5.3	33.41	8.0	25.0	4.14
A1	06 Apr 2017	7	12.64	75.57	5.0	33.43	8.0	25.2	3.44
A1	06 Apr 2017	8	12.34	79.81	4.8	33.42	7.9	25.3	2.69
A1	06 Apr 2017	9	12.22	82.42	4.5	33.41	7.9	25.3	2.13
A1	06 Apr 2017	10	11.92	83.51	4.3	33.44	7.9	25.4	1.60
A1	06 Apr 2017	11	11.64	83.85	4.3	33.47	7.9	25.5	1.41
A1	06 Apr 2017	12	11.34	81.87	4.4	33.50	7.8	25.5	1.29
A1	06 Apr 2017	13	11.30	75.44	4.4	33.50	7.8	25.6	1.18
A1	06 Apr 2017	14	11.26	73.23	4.5	33.49	7.8	25.6	1.08
A1	06 Apr 2017	15	11.22	72.84	4.5	33.49	7.8	25.6	1.05
A1	06 Apr 2017	16	11.12	71.31	4.4	33.51	7.8	25.6	1.08
A1	06 Apr 2017	17	11.00	70.74	4.4	33.52	7.8	25.6	1.05
A1	06 Apr 2017	18	10.98	68.26	4.5	33.52	7.8	25.6	1.00
A1	06 Apr 2017	19	10.97	66.79	4.5	33.53	7.8	25.6	1.00
A1	10 Apr 2017	1	12.69	80.89	5.4	33.43	7.9	25.2	1.35
A1	10 Apr 2017	2	12.38	82.35	5.1	33.43	7.9	25.3	1.16
A1	10 Apr 2017	3	12.00	85.52	5.0	33.44	7.9	25.4	0.94
A1	10 Apr 2017	4	11.76	86.06	5.0	33.45	7.9	25.4	0.82
A1	10 Apr 2017	5	11.49	86.22	4.9	33.46	7.9	25.5	0.61
A1	10 Apr 2017	6	11.40	87.83	4.8	33.45	7.9	25.5	0.57
A1	10 Apr 2017	7	10.97	90.55	4.9	33.48	7.9	25.6	0.51
A1	10 Apr 2017	8	11.06	91.88	4.8	33.46	7.9	25.6	0.50
A1	10 Apr 2017	9	10.87	91.90	4.8	33.49	7.9	25.6	0.51
A1	10 Apr 2017	10	10.83	91.22	4.8	33.49	7.8	25.6	0.55
A1	10 Apr 2017	11	10.90	91.15	4.7	33.48	7.8	25.6	0.51
A1	10 Apr 2017	12	10.78	91.11	4.7	33.51	7.8	25.7	0.52
A1	10 Apr 2017	13	10.78	90.00	4.7	33.51	7.8	25.7	0.50
A1	10 Apr 2017	14	10.78	88.51	4.7	33.52	7.8	25.7	0.54
A1	10 Apr 2017	15	10.78	88.02	4.6	33.52	7.8	25.7	0.55
A1	10 Apr 2017	16	10.78	87.52	4.6	33.53	7.8	25.7	0.58
A1	10 Apr 2017	17	10.77	86.60	4.6	33.53	7.8	25.7	0.56
A1	10 Apr 2017	18	10.77	85.60	4.6	33.53	7.8	25.7	0.58
A1	10 Apr 2017	19	10.77	85.23	4.7	33.53	7.8	25.7	0.56
A1	14 Apr 2017	1	13.81	75.51	6.4	33.45	8.1	25.0	4.20
A1	14 Apr 2017	2	13.52	75.33	6.0	33.45	8.0	25.1	3.93
A1	14 Apr 2017	3	13.12	76.34	5.3	33.44	8.0	25.2	3.23
A1	14 Apr 2017	4	12.44	78.65	4.9	33.44	8.0	25.3	2.58
A1	14 Apr 2017	5	11.86	80.97	4.8	33.44	7.9	25.4	2.39
A1	14 Apr 2017	6	11.53	84.48	5.0	33.45	7.9	25.5	2.19
A1	14 Apr 2017	7	11.49	84.73	5.0	33.44	7.9	25.5	1.78
A1	14 Apr 2017	8	11.38	87.16	4.8	33.45	7.9	25.5	1.14
A1	14 Apr 2017	9	11.14	87.14	4.6	33.45	7.9	25.5	0.85
A1	14 Apr 2017	10	10.81	89.13	4.4	33.49	7.9	25.6	0.68

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens ($\sigma\text{-t}$)	Chlor ($\mu\text{g/L}$)
A1	14 Apr 2017	11	10.78	90.36	4.3	33.50	7.9	25.6	0.61
A1	14 Apr 2017	12	10.60	88.82	4.4	33.54	7.8	25.7	0.59
A1	14 Apr 2017	13	10.58	87.07	4.3	33.55	7.8	25.7	0.49
A1	14 Apr 2017	14	10.57	87.62	4.1	33.55	7.8	25.7	0.41
A1	14 Apr 2017	15	10.42	85.63	4.1	33.60	7.8	25.8	0.39
A1	14 Apr 2017	16	10.41	81.49	4.1	33.60	7.8	25.8	0.38
A1	14 Apr 2017	17	10.41	80.24	4.2	33.61	7.8	25.8	0.39
A1	19 Apr 2017	1	12.86	73.25	5.0	33.48	8.0	25.2	4.12
A1	19 Apr 2017	2	11.86	77.40	4.7	33.52	8.0	25.5	3.27
A1	19 Apr 2017	3	11.42	81.34	4.5	33.53	7.9	25.6	2.45
A1	19 Apr 2017	4	11.06	83.50	4.3	33.54	7.9	25.6	1.76
A1	19 Apr 2017	5	10.90	84.51	4.2	33.55	7.8	25.7	1.06
A1	19 Apr 2017	6	10.60	86.18	4.2	33.57	7.8	25.7	0.74
A1	19 Apr 2017	7	10.34	88.38	4.2	33.60	7.8	25.8	0.65
A1	19 Apr 2017	8	10.31	90.50	4.2	33.61	7.8	25.8	0.62
A1	19 Apr 2017	9	10.30	90.69	4.2	33.61	7.8	25.8	0.61
A1	19 Apr 2017	10	10.30	89.89	4.2	33.62	7.8	25.8	0.61
A1	19 Apr 2017	11	10.30	89.67	4.1	33.62	7.8	25.8	0.60
A1	19 Apr 2017	12	10.29	89.07	4.1	33.63	7.8	25.8	0.59
A1	19 Apr 2017	13	10.28	88.23	4.1	33.64	7.8	25.8	0.53
A1	19 Apr 2017	14	10.28	87.89	4.0	33.64	7.8	25.8	0.48
A1	19 Apr 2017	15	10.25	87.26	3.9	33.66	7.8	25.9	0.43
A1	19 Apr 2017	16	10.21	86.08	3.9	33.67	7.8	25.9	0.45
A1	19 Apr 2017	17	10.20	85.53	3.9	33.68	7.8	25.9	0.48
A1	26 Apr 2017	1	16.65	68.90	8.3	33.47	8.2	24.4	2.48
A1	26 Apr 2017	2	16.63	65.84	8.2	33.47	8.2	24.4	4.65
A1	26 Apr 2017	3	16.51	68.24	8.2	33.47	8.2	24.5	7.82
A1	26 Apr 2017	4	15.85	68.33	8.5	33.48	8.2	24.6	12.30
A1	26 Apr 2017	5	15.02	69.42	8.7	33.46	8.2	24.8	14.16
A1	26 Apr 2017	6	13.41	67.85	8.8	33.43	8.2	25.1	14.17
A1	26 Apr 2017	7	12.61	65.38	8.5	33.44	8.2	25.3	15.76
A1	26 Apr 2017	8	12.63	65.29	7.8	33.42	8.2	25.2	16.49
A1	26 Apr 2017	9	12.23	64.97	7.2	33.42	8.2	25.3	18.90
A1	26 Apr 2017	10	12.08	63.98	6.8	33.44	8.1	25.4	19.92
A1	26 Apr 2017	11	11.92	63.15	6.4	33.43	8.1	25.4	18.18
A1	26 Apr 2017	12	11.81	60.62	6.0	33.44	8.1	25.4	15.73
A1	26 Apr 2017	13	11.71	59.17	5.3	33.45	8.0	25.4	12.95
A1	26 Apr 2017	14	11.61	57.43	4.9	33.45	8.0	25.5	13.60
A1	26 Apr 2017	15	11.28	56.85	4.8	33.49	8.0	25.5	9.43
A1	26 Apr 2017	16	11.31	58.45	4.2	33.49	7.9	25.5	6.36
A1	26 Apr 2017	17	11.05	57.69	3.7	33.52	7.9	25.6	6.03
A1	26 Apr 2017	18	10.77	56.41	4.2	33.56	7.9	25.7	8.96
A1	26 Apr 2017	19	10.79	54.83	5.0	33.56	7.8	25.7	9.55
C4	06 Apr 2017	1	16.32	67.74	7.4	33.39	8.2	24.4	1.81
C4	06 Apr 2017	2	16.04	67.49	7.2	33.41	8.1	24.5	3.55
C4	06 Apr 2017	3	15.45	67.20	6.9	33.40	8.1	24.6	5.27
C4	06 Apr 2017	4	15.13	70.02	6.4	33.38	8.1	24.7	5.42
C4	06 Apr 2017	5	14.94	70.45	5.8	33.38	8.1	24.7	4.29
C4	06 Apr 2017	6	14.48	72.28	5.2	33.43	8.1	24.9	3.34
C4	06 Apr 2017	7	13.93	76.38	4.8	33.45	8.0	25.0	2.65
C4	06 Apr 2017	8	13.68	78.62	4.5	33.42	8.0	25.0	1.82
C4	06 Apr 2017	9	13.26	78.43	4.5	33.45	8.0	25.1	1.53

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens ($\sigma\text{-t}$)	Chlor ($\mu\text{g/L}$)
C4	06 Apr 2017	10	12.90	75.54	4.8	33.42	7.9	25.2	1.23
C4	10 Apr 2017	1	13.98	76.31	6.8	33.39	8.1	24.9	0.88
C4	10 Apr 2017	2	13.96	76.89	6.3	33.41	8.1	25.0	0.98
C4	10 Apr 2017	3	13.59	76.85	5.9	33.45	8.1	25.1	1.08
C4	10 Apr 2017	4	13.23	78.87	5.6	33.46	8.0	25.2	1.08
C4	10 Apr 2017	5	12.91	81.55	5.1	33.48	8.0	25.2	0.95
C4	10 Apr 2017	6	12.39	82.73	4.8	33.50	8.0	25.3	0.80
C4	10 Apr 2017	7	11.93	84.10	4.8	33.48	7.9	25.4	0.73
C4	10 Apr 2017	8	12.06	84.83	4.7	33.44	7.9	25.4	0.65
C4	10 Apr 2017	9	11.72	83.64	4.6	33.49	7.9	25.5	0.58
C4	10 Apr 2017	10	11.58	79.16	4.7	33.48	7.9	25.5	0.58
C4	14 Apr 2017	1	15.42	42.62	7.9	33.38	8.2	24.6	1.66
C4	14 Apr 2017	2	15.43	69.88	6.6	33.46	8.2	24.7	1.47
C4	14 Apr 2017	3	15.23	70.26	4.2	33.44	8.2	24.7	0.80
C4	14 Apr 2017	4	13.67	70.20	3.4	33.38	8.1	25.0	0.75
C4	14 Apr 2017	5	11.85	76.92	3.7	33.49	8.0	25.4	0.69
C4	14 Apr 2017	6	11.76	82.14	4.1	33.48	7.9	25.5	0.63
C4	14 Apr 2017	7	11.73	78.38	4.2	33.45	7.9	25.4	0.62
C4	14 Apr 2017	8	11.31	82.31	4.3	33.48	7.9	25.5	0.64
C4	14 Apr 2017	9	11.28	80.07	4.4	33.49	7.9	25.5	0.64
C4	14 Apr 2017	10	11.27	78.46	4.4	33.48	7.9	25.5	0.65
C4	14 Apr 2017	11	11.28	72.52	4.5	33.49	7.9	25.5	0.63
C4	19 Apr 2017	1	14.97	78.15	7.7	33.50	8.2	24.8	1.15
C4	19 Apr 2017	2	14.67	78.33	7.2	33.49	8.2	24.9	1.65
C4	19 Apr 2017	3	14.16	78.87	6.3	33.50	8.2	25.0	1.69
C4	19 Apr 2017	4	13.48	79.56	4.9	33.51	8.1	25.1	1.03
C4	19 Apr 2017	5	12.58	81.13	3.8	33.49	8.0	25.3	0.74
C4	19 Apr 2017	6	11.70	84.60	3.8	33.52	7.9	25.5	0.56
C4	19 Apr 2017	7	11.45	85.97	3.8	33.51	7.9	25.5	0.54
C4	19 Apr 2017	8	11.23	85.92	4.0	33.51	7.9	25.6	0.54
C4	19 Apr 2017	9	11.18	85.79	4.2	33.51	7.8	25.6	0.52
C4	19 Apr 2017	10	11.15	84.74	4.3	33.52	7.8	25.6	0.52
C4	26 Apr 2017	1	16.40	66.26	8.2	33.48	8.2	24.5	2.54
C4	26 Apr 2017	2	16.37	66.31	8.0	33.49	8.2	24.5	3.21
C4	26 Apr 2017	3	16.20	65.62	7.6	33.50	8.2	24.5	3.13
C4	26 Apr 2017	4	15.91	63.55	7.3	33.51	8.2	24.6	3.03
C4	26 Apr 2017	5	15.65	59.50	6.7	33.52	8.2	24.7	2.71
C4	26 Apr 2017	6	15.55	56.17	5.8	33.51	8.2	24.7	2.15
C4	26 Apr 2017	7	14.84	54.98	5.2	33.51	8.2	24.9	1.97
C4	26 Apr 2017	8	13.91	40.09	5.1	33.55	8.1	25.1	1.95
C4	26 Apr 2017	9	13.37	31.12	5.2	33.58	8.1	25.2	1.94
C4	26 Apr 2017	10	13.22	39.09	5.4	33.52	8.0	25.2	1.91
C4	26 Apr 2017	11	13.12	35.51	5.6	33.53	8.0	25.2	1.82
C5	06 Apr 2017	1	16.65	73.10	7.6	33.38	8.2	24.4	2.14
C5	06 Apr 2017	2	16.41	72.83	6.8	33.41	8.2	24.4	2.48
C5	06 Apr 2017	3	15.39	71.91	5.8	33.45	8.2	24.7	2.23
C5	06 Apr 2017	4	14.00	71.91	5.3	33.45	8.1	25.0	1.74
C5	06 Apr 2017	5	13.64	76.46	5.0	33.42	8.0	25.0	1.43
C5	06 Apr 2017	6	13.36	80.40	5.0	33.42	8.0	25.1	1.26
C5	06 Apr 2017	7	13.22	82.21	5.0	33.42	8.0	25.1	1.19

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens ($\sigma\text{-t}$)	Chlor ($\mu\text{g/L}$)
C5	06 Apr 2017	8	12.96	82.62	5.1	33.42	8.0	25.2	1.16
C5	06 Apr 2017	9	12.70	82.96	5.0	33.43	7.9	25.2	1.18
C5	06 Apr 2017	10	12.58	83.16	4.9	33.43	7.9	25.3	1.19
C5	06 Apr 2017	11	12.47	79.12	5.1	33.43	7.9	25.3	1.15
C5	10 Apr 2017	1	14.12	80.07	6.9	33.43	8.1	24.9	0.85
C5	10 Apr 2017	2	14.14	80.16	6.3	33.42	8.1	24.9	0.88
C5	10 Apr 2017	3	13.86	80.03	5.4	33.43	8.1	25.0	0.80
C5	10 Apr 2017	4	13.23	79.90	5.1	33.43	8.0	25.1	0.82
C5	10 Apr 2017	5	12.56	80.59	5.1	33.45	8.0	25.3	0.81
C5	10 Apr 2017	6	12.54	83.17	5.0	33.42	8.0	25.3	0.81
C5	10 Apr 2017	7	12.06	84.09	5.0	33.46	8.0	25.4	0.78
C5	10 Apr 2017	8	12.06	84.09	5.0	33.45	8.0	25.4	0.78
C5	10 Apr 2017	9	11.81	82.58	5.0	33.47	7.9	25.4	0.78
C5	10 Apr 2017	10	11.88	79.69	4.9	33.46	7.9	25.4	0.75
C5	10 Apr 2017	11	11.69	75.88	5.0	33.47	7.9	25.5	0.80
C5	14 Apr 2017	1	15.41	60.83	7.1	33.33	8.2	24.6	1.68
C5	14 Apr 2017	2	15.34	70.05	5.4	33.43	8.2	24.7	1.35
C5	14 Apr 2017	3	13.79	73.73	4.8	33.44	8.1	25.0	1.33
C5	14 Apr 2017	4	12.53	78.15	4.8	33.47	8.0	25.3	1.09
C5	14 Apr 2017	5	12.33	82.14	4.6	33.47	8.0	25.3	0.85
C5	14 Apr 2017	6	12.13	84.72	4.3	33.46	8.0	25.4	0.85
C5	14 Apr 2017	7	11.93	81.64	4.3	33.46	7.9	25.4	0.87
C5	14 Apr 2017	8	11.59	75.49	4.4	33.48	7.9	25.5	1.12
C5	14 Apr 2017	9	11.42	75.24	4.5	33.49	7.9	25.5	1.18
C5	14 Apr 2017	10	11.34	74.84	4.6	33.49	7.9	25.5	1.01
C5	14 Apr 2017	11	11.28	71.24	4.6	33.50	7.9	25.6	0.93
C5	19 Apr 2017	1	14.08	79.06	7.5	33.51	8.2	25.0	1.52
C5	19 Apr 2017	2	13.98	79.02	6.9	33.51	8.2	25.0	1.92
C5	19 Apr 2017	3	13.57	78.64	5.8	33.51	8.1	25.1	1.53
C5	19 Apr 2017	4	12.53	78.30	5.0	33.52	8.1	25.3	1.14
C5	19 Apr 2017	5	11.79	80.93	4.8	33.52	8.0	25.5	0.83
C5	19 Apr 2017	6	11.48	84.33	4.7	33.52	8.0	25.5	0.66
C5	19 Apr 2017	7	11.28	85.70	4.9	33.52	7.9	25.6	0.62
C5	19 Apr 2017	8	11.19	85.91	5.0	33.52	7.9	25.6	0.62
C5	19 Apr 2017	9	11.18	84.35	5.1	33.52	7.9	25.6	0.68
C5	26 Apr 2017	1	16.01	57.15	8.0	33.50	8.2	24.6	1.66
C5	26 Apr 2017	2	16.02	61.19	8.0	33.51	8.2	24.6	2.33
C5	26 Apr 2017	3	15.92	61.33	7.9	33.51	8.2	24.6	3.10
C5	26 Apr 2017	4	15.89	62.15	7.5	33.51	8.2	24.6	3.31
C5	26 Apr 2017	5	15.45	62.68	6.9	33.51	8.2	24.7	3.18
C5	26 Apr 2017	6	15.09	66.00	6.6	33.50	8.2	24.8	2.90
C5	26 Apr 2017	7	14.51	67.81	6.4	33.52	8.2	24.9	2.96
C5	26 Apr 2017	8	14.16	67.80	6.0	33.52	8.1	25.0	3.12
C5	26 Apr 2017	9	13.83	64.26	5.6	33.51	8.1	25.1	2.99
C5	26 Apr 2017	10	13.10	57.49	5.8	33.52	8.1	25.2	2.85
C5	26 Apr 2017	11	12.77	46.13	6.3	33.53	8.0	25.3	2.83
A6	06 Apr 2017	1	15.73	76.65	8.5	33.34	8.2	24.5	4.92
A6	06 Apr 2017	2	15.73	76.66	8.5	33.34	8.2	24.5	4.95
A6	06 Apr 2017	3	15.71	76.62	8.4	33.34	8.2	24.5	4.93
A6	06 Apr 2017	4	15.70	77.26	8.4	33.34	8.2	24.5	5.17

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens ($\sigma\text{-t}$)	Chlor ($\mu\text{g/L}$)
A6	06 Apr 2017	5	15.69	77.18	8.4	33.34	8.2	24.5	5.50
A6	06 Apr 2017	6	15.69	76.84	8.4	33.34	8.2	24.5	5.49
A6	06 Apr 2017	7	15.68	76.63	8.4	33.34	8.2	24.5	5.55
A6	06 Apr 2017	8	15.70	76.41	8.4	33.34	8.2	24.5	5.53
A6	06 Apr 2017	9	15.72	76.75	8.3	33.34	8.2	24.5	6.13
A6	06 Apr 2017	10	15.67	77.13	8.1	33.35	8.2	24.6	7.01
A6	06 Apr 2017	11	15.54	76.67	8.0	33.37	8.2	24.6	8.02
A6	06 Apr 2017	12	15.49	74.67	7.8	33.37	8.2	24.6	9.04
A6	06 Apr 2017	13	15.32	72.71	7.4	33.39	8.2	24.7	9.19
A6	06 Apr 2017	14	15.12	71.67	6.9	33.39	8.2	24.7	9.59
A6	06 Apr 2017	15	14.90	71.86	6.0	33.41	8.1	24.8	8.74
A6	06 Apr 2017	16	14.35	72.55	5.0	33.44	8.1	24.9	7.69
A6	06 Apr 2017	17	13.36	75.18	4.2	33.56	8.1	25.2	5.43
A6	06 Apr 2017	18	11.85	77.41	4.1	33.61	7.9	25.5	3.88
A6	06 Apr 2017	19	11.60	78.34	4.4	33.55	7.9	25.5	2.52
A6	06 Apr 2017	20	11.41	78.04	4.6	33.54	7.9	25.6	1.89
A6	10 Apr 2017	1	13.88	76.23	7.0	33.42	8.1	25.0	1.84
A6	10 Apr 2017	2	13.92	77.13	6.1	33.42	8.1	25.0	1.68
A6	10 Apr 2017	3	13.36	78.07	5.0	33.43	8.0	25.1	1.35
A6	10 Apr 2017	4	12.56	79.20	4.7	33.43	8.0	25.3	1.22
A6	10 Apr 2017	5	11.92	83.84	4.8	33.45	7.9	25.4	1.15
A6	10 Apr 2017	6	11.75	84.68	4.9	33.45	7.9	25.4	1.10
A6	10 Apr 2017	7	11.66	85.46	4.9	33.45	7.9	25.4	0.99
A6	10 Apr 2017	8	11.61	85.40	4.9	33.45	7.9	25.5	0.93
A6	10 Apr 2017	9	11.51	85.20	4.8	33.46	7.9	25.5	0.84
A6	10 Apr 2017	10	11.33	84.66	4.7	33.47	7.9	25.5	0.79
A6	10 Apr 2017	11	11.18	83.65	4.6	33.49	7.9	25.6	0.75
A6	10 Apr 2017	12	11.07	82.05	4.6	33.50	7.9	25.6	0.73
A6	10 Apr 2017	13	11.01	80.97	4.6	33.51	7.9	25.6	0.74
A6	10 Apr 2017	14	10.93	80.03	4.6	33.51	7.9	25.6	0.76
A6	10 Apr 2017	15	10.89	79.18	4.7	33.52	7.9	25.6	0.73
A6	10 Apr 2017	16	10.90	79.51	4.7	33.52	7.9	25.6	0.72
A6	10 Apr 2017	17	10.86	80.04	4.6	33.52	7.9	25.6	0.70
A6	10 Apr 2017	18	10.87	80.64	4.6	33.52	7.9	25.6	0.69
A6	10 Apr 2017	19	10.85	80.87	4.6	33.52	7.9	25.7	0.72
A6	10 Apr 2017	20	10.86	80.37	4.6	33.53	7.9	25.7	0.72
A6	10 Apr 2017	21	10.86	80.58	4.6	33.53	7.9	25.7	0.72
A6	14 Apr 2017	1	15.11	72.57	7.9	33.45	8.1	24.8	3.45
A6	14 Apr 2017	2	15.08	71.51	7.1	33.44	8.1	24.8	4.42
A6	14 Apr 2017	3	14.93	73.48	6.0	33.45	8.1	24.8	4.39
A6	14 Apr 2017	4	14.24	73.36	5.8	33.40	8.1	24.9	4.37
A6	14 Apr 2017	5	13.22	74.61	5.9	33.46	8.0	25.2	3.55
A6	14 Apr 2017	6	13.67	74.96	5.2	33.43	8.0	25.0	2.80
A6	14 Apr 2017	7	12.98	75.24	4.6	33.42	8.0	25.2	2.27
A6	14 Apr 2017	8	12.10	79.50	4.7	33.45	8.0	25.4	2.05
A6	14 Apr 2017	9	11.96	81.68	4.8	33.45	7.9	25.4	2.05
A6	14 Apr 2017	10	11.89	84.43	5.0	33.45	7.9	25.4	1.81
A6	14 Apr 2017	11	11.91	85.43	4.9	33.45	7.9	25.4	1.67
A6	14 Apr 2017	12	11.85	85.82	4.9	33.45	7.9	25.4	1.59
A6	14 Apr 2017	13	11.72	85.90	4.9	33.46	7.9	25.4	1.52
A6	14 Apr 2017	14	11.64	85.62	4.8	33.47	7.9	25.5	1.39
A6	14 Apr 2017	15	11.62	85.35	4.7	33.47	7.9	25.5	1.15
A6	14 Apr 2017	16	11.55	85.42	4.6	33.47	7.9	25.5	1.12

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens ($\sigma\text{-t}$)	Chlor ($\mu\text{g/L}$)
A6	14 Apr 2017	17	11.30	84.63	4.7	33.50	7.9	25.6	1.16
A6	14 Apr 2017	18	11.29	84.22	4.7	33.52	7.9	25.6	1.10
A6	19 Apr 2017	1	12.76	76.07	6.1	33.51	8.0	25.3	4.82
A6	19 Apr 2017	2	12.41	77.00	5.5	33.52	8.0	25.4	4.36
A6	19 Apr 2017	3	12.02	78.75	5.3	33.53	8.0	25.4	3.85
A6	19 Apr 2017	4	11.85	80.91	4.7	33.53	8.0	25.5	2.42
A6	19 Apr 2017	5	11.18	82.28	4.2	33.57	7.9	25.6	1.69
A6	19 Apr 2017	6	10.92	83.56	3.9	33.56	7.9	25.7	1.04
A6	19 Apr 2017	7	10.47	84.79	3.9	33.61	7.8	25.8	0.75
A6	19 Apr 2017	8	10.34	86.29	4.0	33.63	7.8	25.8	0.60
A6	19 Apr 2017	9	10.27	86.03	4.0	33.65	7.8	25.9	0.56
A6	19 Apr 2017	10	10.26	85.67	4.0	33.65	7.8	25.9	0.53
A6	19 Apr 2017	11	10.25	85.59	4.0	33.65	7.8	25.9	0.53
A6	19 Apr 2017	12	10.24	85.51	4.0	33.66	7.8	25.9	0.53
A6	19 Apr 2017	13	10.24	85.27	4.0	33.66	7.8	25.9	0.51
A6	19 Apr 2017	14	10.23	85.24	4.0	33.67	7.8	25.9	0.52
A6	19 Apr 2017	15	10.21	84.77	4.0	33.67	7.8	25.9	0.60
A6	19 Apr 2017	16	10.20	84.43	3.9	33.68	7.8	25.9	0.61
A6	19 Apr 2017	17	10.19	83.70	3.9	33.68	7.8	25.9	0.50
A6	19 Apr 2017	18	10.18	83.37	3.9	33.69	7.8	25.9	0.47
A6	19 Apr 2017	19	10.18	83.15	3.9	33.69	7.8	25.9	0.48
A6	26 Apr 2017	1	15.89	73.73	8.8	33.48	8.3	24.6	3.42
A6	26 Apr 2017	2	15.77	73.69	8.8	33.48	8.3	24.6	4.63
A6	26 Apr 2017	3	15.53	73.82	9.3	33.48	8.2	24.7	6.88
A6	26 Apr 2017	4	14.76	72.66	10.2	33.48	8.2	24.9	8.01
A6	26 Apr 2017	5	14.33	70.86	10.3	33.44	8.2	24.9	9.70
A6	26 Apr 2017	6	13.89	70.34	9.2	33.45	8.3	25.0	11.49
A6	26 Apr 2017	7	13.55	70.20	7.9	33.40	8.3	25.0	13.96
A6	26 Apr 2017	8	12.86	68.38	7.1	33.45	8.2	25.2	18.14
A6	26 Apr 2017	9	12.61	67.31	6.9	33.43	8.2	25.3	18.27
A6	26 Apr 2017	10	12.00	67.20	6.6	33.43	8.1	25.4	16.46
A6	26 Apr 2017	11	11.92	62.65	5.3	33.43	8.1	25.4	18.79
A6	26 Apr 2017	12	11.87	63.25	4.7	33.46	8.1	25.4	21.94
A6	26 Apr 2017	13	11.63	64.28	5.1	33.48	8.0	25.5	21.36
A6	26 Apr 2017	14	11.53	65.70	5.2	33.47	8.0	25.5	16.00
A6	26 Apr 2017	15	11.48	61.67	5.2	33.48	8.0	25.5	12.95
A6	26 Apr 2017	16	11.53	59.25	5.2	33.51	8.0	25.5	10.06
A6	26 Apr 2017	17	11.53	63.38	5.2	33.52	7.9	25.5	8.13
A6	26 Apr 2017	18	11.53	67.14	5.2	33.53	7.9	25.5	7.88
A6	26 Apr 2017	19	11.53	70.01	5.3	33.53	7.9	25.5	7.35
C6	06 Apr 2017	1	16.47	74.76	8.0	33.39	8.2	24.4	2.77
C6	06 Apr 2017	2	16.36	74.48	7.3	33.41	8.2	24.4	2.80
C6	06 Apr 2017	3	15.99	74.85	6.2	33.41	8.2	24.5	2.96
C6	06 Apr 2017	4	14.37	76.45	5.7	33.48	8.2	24.9	2.90
C6	06 Apr 2017	5	13.67	78.13	5.3	33.45	8.1	25.1	2.65
C6	06 Apr 2017	6	13.35	79.99	4.9	33.43	8.0	25.1	2.12
C6	06 Apr 2017	7	13.00	81.47	4.8	33.43	8.0	25.2	1.47
C6	06 Apr 2017	8	12.74	82.79	5.0	33.43	8.0	25.2	1.16
C6	06 Apr 2017	9	12.73	83.14	5.4	33.42	7.9	25.2	1.12
C6	10 Apr 2017	1	14.30	77.24	7.2	33.43	8.1	24.9	0.84
C6	10 Apr 2017	2	14.18	77.27	6.8	33.43	8.1	24.9	0.86

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens ($\sigma\text{-t}$)	Chlor ($\mu\text{g/L}$)
C6	10 Apr 2017	3	13.79	73.55	6.2	33.44	8.1	25.0	0.83
C6	10 Apr 2017	4	13.48	74.80	5.9	33.43	8.0	25.1	0.83
C6	10 Apr 2017	5	12.99	77.12	5.8	33.44	8.0	25.2	0.86
C6	10 Apr 2017	6	12.98	80.49	5.4	33.42	8.0	25.2	0.77
C6	10 Apr 2017	7	12.50	81.74	5.0	33.43	8.0	25.3	0.68
C6	10 Apr 2017	8	11.84	76.41	5.2	33.47	7.9	25.4	0.68
C6	14 Apr 2017	1	15.14	61.35	7.6	33.39	8.1	24.7	3.09
C6	14 Apr 2017	2	15.11	64.27	6.7	33.40	8.1	24.7	2.04
C6	14 Apr 2017	3	14.64	67.37	5.8	33.44	8.1	24.8	1.67
C6	14 Apr 2017	4	13.52	73.22	5.6	33.46	8.1	25.1	1.23
C6	14 Apr 2017	5	13.61	78.27	4.5	33.42	8.0	25.0	0.79
C6	14 Apr 2017	6	12.45	79.75	3.8	33.46	8.0	25.3	0.74
C6	14 Apr 2017	7	11.69	82.82	4.0	33.46	7.9	25.5	0.72
C6	14 Apr 2017	8	11.24	81.44	4.4	33.49	7.9	25.6	0.75
C6	14 Apr 2017	9	11.44	80.95	4.5	33.47	7.9	25.5	0.77
C6	14 Apr 2017	10	11.40	80.40	4.6	33.48	7.9	25.5	0.74
C6	19 Apr 2017	1	13.84	78.85	7.0	33.50	8.1	25.1	2.16
C6	19 Apr 2017	2	13.78	78.76	6.2	33.50	8.1	25.1	3.02
C6	19 Apr 2017	3	13.16	78.94	5.3	33.51	8.1	25.2	2.33
C6	19 Apr 2017	4	12.12	78.80	4.6	33.54	8.0	25.4	1.25
C6	19 Apr 2017	5	12.00	82.16	4.0	33.51	8.0	25.4	0.77
C6	19 Apr 2017	6	11.34	84.74	4.1	33.54	7.9	25.6	0.66
C6	19 Apr 2017	7	11.15	87.38	4.4	33.54	7.9	25.6	0.59
C6	19 Apr 2017	8	11.13	87.77	4.6	33.54	7.9	25.6	0.62
C6	19 Apr 2017	9	11.13	87.54	4.8	33.54	7.9	25.6	0.66
C6	26 Apr 2017	1	15.79	72.17	8.2	33.49	8.3	24.6	4.45
C6	26 Apr 2017	2	15.65	72.80	7.7	33.49	8.2	24.7	4.87
C6	26 Apr 2017	3	15.21	73.67	7.3	33.49	8.2	24.8	5.37
C6	26 Apr 2017	4	14.76	70.99	7.2	33.51	8.2	24.9	6.06
C6	26 Apr 2017	5	14.47	71.39	7.0	33.49	8.2	24.9	5.39
C6	26 Apr 2017	6	13.99	73.09	6.9	33.49	8.2	25.0	4.96
C6	26 Apr 2017	7	13.66	73.10	6.5	33.49	8.2	25.1	3.80
C6	26 Apr 2017	8	13.60	72.77	6.0	33.50	8.1	25.1	3.94
C6	26 Apr 2017	9	13.06	72.94	6.0	33.49	8.1	25.2	4.07
C6	26 Apr 2017	10	12.66	72.91	6.3	33.52	8.0	25.3	3.97
A7	06 Apr 2017	1	15.60	78.36	8.2	33.32	8.1	24.5	2.94
A7	06 Apr 2017	2	15.60	78.26	8.1	33.32	8.2	24.5	3.30
A7	06 Apr 2017	3	15.51	78.16	8.1	33.33	8.1	24.6	3.64
A7	06 Apr 2017	4	15.49	77.80	8.1	33.33	8.1	24.6	3.68
A7	06 Apr 2017	5	15.46	77.77	8.0	33.33	8.1	24.6	3.81
A7	06 Apr 2017	6	15.44	77.66	7.9	33.33	8.1	24.6	4.17
A7	06 Apr 2017	7	15.39	77.40	7.9	33.34	8.1	24.6	4.49
A7	06 Apr 2017	8	15.22	77.38	7.9	33.35	8.1	24.7	4.93
A7	06 Apr 2017	9	15.19	76.97	7.9	33.34	8.1	24.7	4.98
A7	06 Apr 2017	10	15.19	76.61	7.9	33.34	8.1	24.7	5.05
A7	06 Apr 2017	11	15.18	76.52	7.8	33.34	8.1	24.7	4.93
A7	06 Apr 2017	12	15.17	76.45	7.7	33.34	8.1	24.7	5.12
A7	06 Apr 2017	13	15.15	76.43	7.4	33.34	8.1	24.7	4.97
A7	06 Apr 2017	14	15.01	76.49	6.8	33.37	8.1	24.7	4.89
A7	06 Apr 2017	15	14.76	76.89	5.8	33.38	8.1	24.8	4.37
A7	06 Apr 2017	16	14.19	77.47	5.1	33.44	8.1	24.9	3.63

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens ($\sigma\text{-t}$)	Chlor ($\mu\text{g/L}$)
A7	06 Apr 2017	17	13.07	78.28	4.8	33.52	8.0	25.2	2.89
A7	06 Apr 2017	18	12.69	80.15	4.5	33.54	7.9	25.3	2.42
A7	06 Apr 2017	19	12.06	80.49	4.2	33.55	7.9	25.5	1.83
A7	06 Apr 2017	20	11.42	80.27	4.5	33.56	7.9	25.6	1.47
A7	06 Apr 2017	21	11.42	79.07	4.8	33.51	7.8	25.5	1.39
A7	10 Apr 2017	1	13.53	78.97	5.7	33.43	8.0	25.1	1.54
A7	10 Apr 2017	2	13.07	78.93	5.2	33.42	8.0	25.2	1.45
A7	10 Apr 2017	3	12.44	81.67	5.1	33.43	8.0	25.3	1.45
A7	10 Apr 2017	4	12.13	83.34	5.1	33.43	7.9	25.3	1.49
A7	10 Apr 2017	5	11.94	84.70	5.2	33.44	7.9	25.4	1.36
A7	10 Apr 2017	6	11.91	84.90	5.1	33.43	7.9	25.4	1.20
A7	10 Apr 2017	7	11.76	85.24	5.0	33.45	7.9	25.4	1.13
A7	10 Apr 2017	8	11.57	84.33	5.0	33.46	7.9	25.5	1.08
A7	10 Apr 2017	9	11.52	83.81	5.0	33.47	7.9	25.5	1.00
A7	10 Apr 2017	10	11.47	83.75	4.9	33.47	7.9	25.5	0.95
A7	10 Apr 2017	11	11.37	83.20	4.8	33.48	7.9	25.5	1.03
A7	10 Apr 2017	12	11.21	82.34	4.9	33.49	7.9	25.6	0.94
A7	10 Apr 2017	13	11.24	83.39	4.8	33.49	7.9	25.6	0.84
A7	10 Apr 2017	14	11.11	84.14	4.8	33.50	7.9	25.6	0.71
A7	10 Apr 2017	15	11.05	85.11	4.8	33.50	7.9	25.6	0.71
A7	10 Apr 2017	16	10.88	86.24	4.8	33.51	7.9	25.6	0.70
A7	10 Apr 2017	17	10.89	87.99	4.8	33.50	7.9	25.6	0.66
A7	10 Apr 2017	18	10.85	88.34	4.8	33.51	7.9	25.6	0.66
A7	10 Apr 2017	19	10.87	88.38	4.8	33.51	7.9	25.6	0.65
A7	14 Apr 2017	1	14.75	74.41	7.3	33.44	8.1	24.8	4.26
A7	14 Apr 2017	2	14.46	74.55	6.6	33.44	8.1	24.9	4.87
A7	14 Apr 2017	3	14.31	74.83	6.2	33.43	8.1	24.9	5.07
A7	14 Apr 2017	4	13.66	75.33	5.9	33.45	8.1	25.1	5.20
A7	14 Apr 2017	5	13.57	75.60	5.7	33.44	8.0	25.1	4.85
A7	14 Apr 2017	6	13.02	76.07	5.5	33.44	8.0	25.2	4.00
A7	14 Apr 2017	7	12.92	76.75	5.3	33.43	8.0	25.2	3.80
A7	14 Apr 2017	8	12.50	77.77	5.4	33.44	8.0	25.3	3.56
A7	14 Apr 2017	9	12.36	81.06	5.4	33.45	8.0	25.3	2.93
A7	14 Apr 2017	10	12.43	81.94	5.0	33.44	8.0	25.3	2.27
A7	14 Apr 2017	11	12.11	82.44	4.6	33.44	8.0	25.4	1.83
A7	14 Apr 2017	12	11.51	83.98	4.6	33.46	7.9	25.5	1.46
A7	14 Apr 2017	13	11.52	85.65	4.5	33.47	7.9	25.5	1.27
A7	14 Apr 2017	14	11.17	86.18	4.5	33.49	7.9	25.6	1.18
A7	14 Apr 2017	15	11.02	86.24	4.5	33.49	7.9	25.6	1.17
A7	14 Apr 2017	16	11.01	86.00	4.6	33.49	7.9	25.6	1.18
A7	14 Apr 2017	17	11.01	86.06	4.6	33.49	7.9	25.6	1.14
A7	14 Apr 2017	18	11.00	86.04	4.6	33.50	7.9	25.6	1.16
A7	14 Apr 2017	19	11.00	86.07	4.7	33.50	7.9	25.6	1.12
A7	19 Apr 2017	1	11.93	81.61	5.7	33.53	8.0	25.5	2.88
A7	19 Apr 2017	2	12.20	82.93	5.4	33.53	7.9	25.4	1.94
A7	19 Apr 2017	3	11.75	81.09	4.0	33.53	7.9	25.5	1.29
A7	19 Apr 2017	4	10.73	85.24	4.0	33.59	7.9	25.7	1.23
A7	19 Apr 2017	5	10.62	86.44	4.2	33.59	7.8	25.7	1.20
A7	19 Apr 2017	6	10.57	86.65	4.2	33.59	7.8	25.8	0.80
A7	19 Apr 2017	7	10.45	86.81	4.1	33.61	7.8	25.8	0.68
A7	19 Apr 2017	8	10.34	86.85	4.1	33.63	7.8	25.8	0.61
A7	19 Apr 2017	9	10.31	87.46	4.1	33.63	7.8	25.8	0.57

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens ($\sigma\text{-t}$)	Chlor ($\mu\text{g/L}$)
A7	19 Apr 2017	10	10.27	87.72	4.0	33.64	7.8	25.8	0.51
A7	19 Apr 2017	11	10.24	87.86	4.0	33.66	7.8	25.9	0.46
A7	19 Apr 2017	12	10.22	87.74	3.9	33.67	7.8	25.9	0.44
A7	19 Apr 2017	13	10.18	87.26	3.9	33.68	7.8	25.9	0.41
A7	19 Apr 2017	14	10.18	86.26	3.9	33.69	7.8	25.9	0.39
A7	19 Apr 2017	15	10.16	85.91	3.9	33.69	7.8	25.9	0.39
A7	19 Apr 2017	16	10.16	85.52	3.9	33.70	7.8	25.9	0.38
A7	19 Apr 2017	17	10.15	85.26	3.8	33.70	7.8	25.9	0.38
A7	19 Apr 2017	18	10.14	85.22	3.8	33.71	7.8	25.9	0.38
A7	19 Apr 2017	19	10.14	84.92	3.9	33.71	7.8	25.9	0.41
A7	26 Apr 2017	1	15.95	67.81	8.5	33.50	8.2	24.6	3.97
A7	26 Apr 2017	2	15.92	63.62	8.8	33.51	8.2	24.6	6.92
A7	26 Apr 2017	3	15.51	67.07	9.2	33.49	8.2	24.7	8.22
A7	26 Apr 2017	4	14.81	67.48	9.2	33.47	8.2	24.8	9.73
A7	26 Apr 2017	5	14.37	68.68	8.9	33.45	8.2	24.9	11.22
A7	26 Apr 2017	6	13.95	69.09	8.0	33.42	8.2	25.0	12.21
A7	26 Apr 2017	7	13.00	69.04	7.5	33.44	8.2	25.2	12.84
A7	26 Apr 2017	8	12.75	66.93	7.3	33.45	8.2	25.2	12.98
A7	26 Apr 2017	9	12.59	66.20	7.1	33.44	8.1	25.3	13.28
A7	26 Apr 2017	10	12.40	66.09	7.0	33.45	8.1	25.3	13.85
A7	26 Apr 2017	11	12.24	66.25	6.2	33.45	8.1	25.3	14.56
A7	26 Apr 2017	12	12.10	65.82	5.1	33.45	8.1	25.4	13.70
A7	26 Apr 2017	13	11.70	64.49	4.6	33.47	8.0	25.5	14.18
A7	26 Apr 2017	14	11.49	64.05	4.3	33.48	8.0	25.5	13.93
A7	26 Apr 2017	15	11.33	64.57	4.3	33.48	7.9	25.5	13.13
A7	26 Apr 2017	16	11.19	65.30	4.7	33.49	7.9	25.6	11.85
A7	26 Apr 2017	17	11.26	65.38	4.7	33.49	7.9	25.6	11.94
A7	26 Apr 2017	18	11.18	65.72	4.7	33.51	7.9	25.6	12.54
C7	06 Apr 2017	1	16.09	66.32	8.8	33.37	8.2	24.5	8.47
C7	06 Apr 2017	2	16.09	66.53	8.6	33.37	8.2	24.5	9.01
C7	06 Apr 2017	3	16.05	66.53	8.0	33.37	8.2	24.5	10.18
C7	06 Apr 2017	4	15.97	66.49	7.2	33.39	8.2	24.5	9.97
C7	06 Apr 2017	5	15.16	66.12	6.5	33.44	8.2	24.7	9.32
C7	06 Apr 2017	6	14.42	67.90	6.1	33.43	8.1	24.9	8.71
C7	06 Apr 2017	7	14.12	72.21	5.7	33.41	8.1	24.9	7.75
C7	06 Apr 2017	8	13.88	74.39	5.2	33.40	8.0	25.0	5.72
C7	06 Apr 2017	9	13.38	76.03	4.7	33.43	8.0	25.1	4.12
C7	06 Apr 2017	10	12.97	78.32	4.4	33.45	8.0	25.2	2.71
C7	06 Apr 2017	11	12.57	81.75	4.2	33.48	7.9	25.3	1.64
C7	06 Apr 2017	12	11.90	83.76	4.2	33.53	7.9	25.5	1.24
C7	06 Apr 2017	13	11.49	84.79	4.3	33.53	7.9	25.5	1.06
C7	06 Apr 2017	14	11.29	84.83	4.5	33.52	7.9	25.6	0.94
C7	06 Apr 2017	15	11.13	84.45	4.6	33.52	7.8	25.6	0.97
C7	06 Apr 2017	16	11.09	83.98	4.6	33.50	7.8	25.6	0.90
C7	06 Apr 2017	17	11.08	83.96	4.6	33.49	7.8	25.6	0.86
C7	06 Apr 2017	18	11.08	83.97	4.6	33.50	7.8	25.6	0.87
C7	10 Apr 2017	1	14.37	71.32	6.6	33.42	8.1	24.9	4.79
C7	10 Apr 2017	2	14.21	71.13	5.8	33.42	8.1	24.9	4.67
C7	10 Apr 2017	3	13.29	73.67	5.2	33.43	8.0	25.1	3.64
C7	10 Apr 2017	4	12.64	78.02	5.1	33.42	8.0	25.2	2.97
C7	10 Apr 2017	5	12.35	79.93	5.2	33.42	8.0	25.3	2.69
C7	10 Apr 2017	6	12.19	82.56	5.3	33.42	8.0	25.3	2.34

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens ($\sigma\text{-t}$)	Chlor ($\mu\text{g/L}$)
C7	10 Apr 2017	7	12.09	83.69	5.3	33.42	8.0	25.3	2.07
C7	10 Apr 2017	8	11.95	84.53	5.3	33.42	7.9	25.4	1.80
C7	10 Apr 2017	9	11.88	84.76	5.2	33.43	7.9	25.4	1.57
C7	10 Apr 2017	10	11.82	84.97	5.2	33.43	7.9	25.4	1.58
C7	10 Apr 2017	11	11.72	85.45	5.2	33.44	7.9	25.4	1.52
C7	10 Apr 2017	12	11.78	85.52	5.1	33.44	7.9	25.4	1.30
C7	10 Apr 2017	13	11.62	85.34	5.1	33.45	7.9	25.5	1.29
C7	10 Apr 2017	14	11.52	85.12	5.1	33.46	7.9	25.5	1.20
C7	10 Apr 2017	15	11.56	85.30	5.0	33.46	7.9	25.5	1.14
C7	10 Apr 2017	16	11.46	85.28	4.9	33.47	7.9	25.5	0.96
C7	10 Apr 2017	17	11.42	85.00	4.8	33.47	7.9	25.5	0.90
C7	10 Apr 2017	18	11.34	84.67	4.9	33.48	7.9	25.5	0.87
C7	14 Apr 2017	1	15.30	71.39	7.9	33.42	8.2	24.7	3.43
C7	14 Apr 2017	2	15.29	74.95	7.9	33.42	8.2	24.7	4.35
C7	14 Apr 2017	3	15.27	75.98	7.9	33.42	8.2	24.7	5.07
C7	14 Apr 2017	4	15.26	75.85	7.7	33.42	8.2	24.7	5.55
C7	14 Apr 2017	5	15.25	75.76	7.4	33.42	8.2	24.7	5.80
C7	14 Apr 2017	6	15.16	75.30	7.0	33.42	8.2	24.7	5.14
C7	14 Apr 2017	7	15.02	74.73	6.4	33.42	8.2	24.8	4.79
C7	14 Apr 2017	8	14.75	74.60	5.9	33.41	8.1	24.8	4.57
C7	14 Apr 2017	9	14.14	74.76	5.8	33.41	8.1	24.9	4.10
C7	14 Apr 2017	10	13.59	75.70	5.5	33.44	8.1	25.1	3.20
C7	14 Apr 2017	11	13.63	77.54	4.9	33.43	8.0	25.0	2.44
C7	14 Apr 2017	12	12.82	78.50	4.5	33.40	8.0	25.2	2.09
C7	14 Apr 2017	13	11.98	80.93	4.5	33.46	8.0	25.4	1.66
C7	14 Apr 2017	14	12.00	84.13	4.4	33.45	7.9	25.4	1.20
C7	14 Apr 2017	15	11.67	85.09	4.1	33.46	7.9	25.5	0.86
C7	14 Apr 2017	16	11.29	86.82	3.9	33.47	7.9	25.5	0.70
C7	14 Apr 2017	17	10.52	83.86	4.2	33.56	7.9	25.7	0.65
C7	14 Apr 2017	18	10.52	81.13	4.3	33.57	7.8	25.7	0.63
C7	19 Apr 2017	1	13.98	72.71	7.1	33.47	8.1	25.0	4.44
C7	19 Apr 2017	2	13.79	64.22	5.1	33.47	8.1	25.0	3.32
C7	19 Apr 2017	3	11.72	76.44	3.9	33.53	8.0	25.5	2.33
C7	19 Apr 2017	4	11.10	84.14	4.0	33.53	7.9	25.6	1.65
C7	19 Apr 2017	5	10.76	86.11	4.1	33.55	7.9	25.7	1.21
C7	19 Apr 2017	6	10.55	87.06	4.1	33.57	7.8	25.7	1.03
C7	19 Apr 2017	7	10.46	87.11	4.2	33.58	7.8	25.8	0.97
C7	19 Apr 2017	8	10.45	87.14	4.2	33.59	7.8	25.8	0.90
C7	19 Apr 2017	9	10.45	87.30	4.2	33.59	7.8	25.8	0.88
C7	19 Apr 2017	10	10.44	87.30	4.2	33.59	7.8	25.8	0.83
C7	19 Apr 2017	11	10.43	87.33	4.2	33.60	7.8	25.8	0.88
C7	19 Apr 2017	12	10.43	87.38	4.1	33.60	7.8	25.8	0.68
C7	19 Apr 2017	13	10.42	87.44	4.0	33.61	7.8	25.8	0.56
C7	19 Apr 2017	14	10.30	87.34	3.9	33.64	7.8	25.8	0.54
C7	19 Apr 2017	15	10.24	86.59	4.0	33.66	7.8	25.9	0.52
C7	19 Apr 2017	16	10.25	86.27	4.0	33.66	7.8	25.9	0.49
C7	19 Apr 2017	17	10.24	86.21	4.0	33.66	7.8	25.9	0.49
C7	19 Apr 2017	18	10.24	86.18	4.0	33.67	7.8	25.9	0.49
C7	26 Apr 2017	1	16.37	70.57	9.4	33.48	8.3	24.5	4.21
C7	26 Apr 2017	2	16.31	72.36	8.4	33.48	8.3	24.5	8.11
C7	26 Apr 2017	3	15.59	71.68	7.5	33.49	8.3	24.7	10.56
C7	26 Apr 2017	4	15.04	68.45	7.2	33.50	8.2	24.8	10.48

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens ($\sigma\text{-t}$)	Chlor ($\mu\text{g/L}$)
C7	26 Apr 2017	5	14.46	67.31	7.1	33.51	8.2	24.9	11.20
C7	26 Apr 2017	6	13.81	67.30	7.2	33.50	8.2	25.1	11.20
C7	26 Apr 2017	7	13.47	69.66	7.2	33.50	8.1	25.1	9.67
C7	26 Apr 2017	8	13.70	70.28	6.6	33.47	8.1	25.1	9.77
C7	26 Apr 2017	9	13.16	70.24	6.2	33.51	8.1	25.2	10.28
C7	26 Apr 2017	10	12.68	71.65	5.9	33.51	8.1	25.3	10.10
C7	26 Apr 2017	11	12.18	71.33	5.4	33.52	8.1	25.4	10.16
C7	26 Apr 2017	12	11.80	71.40	5.2	33.51	8.0	25.5	11.18
C7	26 Apr 2017	13	11.53	71.82	5.3	33.51	8.0	25.5	12.90
C7	26 Apr 2017	14	11.49	72.10	5.5	33.51	8.0	25.5	11.99
C7	26 Apr 2017	15	11.46	72.35	5.6	33.51	8.0	25.5	11.18
C7	26 Apr 2017	16	11.54	72.41	5.3	33.51	8.0	25.5	8.51
C7	26 Apr 2017	17	11.42	72.66	5.0	33.52	8.0	25.5	8.41
C7	26 Apr 2017	18	11.27	73.47	5.0	33.53	7.9	25.6	8.48
C8	06 Apr 2017	1	15.64	58.07	8.1	33.34	8.2	24.6	14.65
C8	06 Apr 2017	2	15.61	58.25	7.9	33.35	8.2	24.6	18.14
C8	06 Apr 2017	3	15.46	58.01	7.3	33.36	8.2	24.6	19.89
C8	06 Apr 2017	4	15.29	55.74	6.8	33.37	8.1	24.7	15.61
C8	06 Apr 2017	5	15.03	57.01	6.5	33.39	8.1	24.7	10.96
C8	06 Apr 2017	6	14.76	63.78	6.0	33.40	8.1	24.8	7.86
C8	06 Apr 2017	7	14.48	66.98	5.3	33.40	8.1	24.8	5.58
C8	06 Apr 2017	8	13.71	72.23	4.8	33.45	8.0	25.1	3.91
C8	06 Apr 2017	9	13.10	77.21	4.5	33.45	8.0	25.2	2.66
C8	06 Apr 2017	10	12.61	79.74	4.5	33.46	7.9	25.3	2.00
C8	06 Apr 2017	11	12.16	82.86	4.5	33.48	7.9	25.4	1.60
C8	06 Apr 2017	12	12.03	84.25	4.4	33.47	7.9	25.4	1.24
C8	06 Apr 2017	13	11.68	84.54	4.4	33.49	7.9	25.5	1.11
C8	06 Apr 2017	14	11.41	84.50	4.4	33.50	7.9	25.5	0.92
C8	06 Apr 2017	15	11.28	84.35	4.4	33.49	7.9	25.6	0.90
C8	06 Apr 2017	16	11.19	84.22	4.4	33.49	7.8	25.6	0.82
C8	06 Apr 2017	17	11.15	83.40	4.4	33.50	7.8	25.6	0.79
C8	06 Apr 2017	18	11.13	83.02	4.4	33.50	7.8	25.6	0.74
C8	06 Apr 2017	19	11.13	81.70	4.5	33.50	7.8	25.6	0.77
C8	06 Apr 2017	20	11.14	80.73	4.5	33.51	7.8	25.6	0.73
C8	10 Apr 2017	1	13.87	67.95	6.6	33.40	8.0	25.0	5.55
C8	10 Apr 2017	2	13.82	68.48	6.4	33.40	8.0	25.0	6.86
C8	10 Apr 2017	3	13.84	68.18	5.7	33.40	8.0	25.0	6.86
C8	10 Apr 2017	4	13.46	68.22	5.4	33.40	8.0	25.1	6.71
C8	10 Apr 2017	5	12.84	72.88	5.4	33.42	8.0	25.2	6.36
C8	10 Apr 2017	6	12.75	78.13	5.5	33.42	8.0	25.2	6.18
C8	10 Apr 2017	7	12.63	78.70	5.5	33.42	8.0	25.2	6.15
C8	10 Apr 2017	8	12.62	78.74	5.5	33.42	8.0	25.2	5.71
C8	10 Apr 2017	9	12.52	78.77	5.5	33.42	8.0	25.3	5.64
C8	10 Apr 2017	10	12.45	79.32	5.5	33.43	8.0	25.3	5.52
C8	10 Apr 2017	11	12.47	79.45	5.5	33.43	8.0	25.3	4.33
C8	10 Apr 2017	12	12.42	80.14	5.2	33.43	8.0	25.3	2.69
C8	10 Apr 2017	13	12.15	80.57	5.2	33.43	7.9	25.3	2.21
C8	10 Apr 2017	14	12.00	81.87	5.1	33.45	7.9	25.4	1.43
C8	10 Apr 2017	15	11.86	81.36	4.9	33.44	7.9	25.4	1.19
C8	10 Apr 2017	16	11.67	80.36	4.9	33.45	7.9	25.5	1.16
C8	10 Apr 2017	17	11.59	78.60	4.9	33.46	7.9	25.5	1.16
C8	10 Apr 2017	18	11.56	74.90	5.0	33.46	7.9	25.5	1.17
C8	10 Apr 2017	19	11.59	72.69	5.0	33.46	7.9	25.5	1.17

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens ($\sigma\text{-t}$)	Chlor ($\mu\text{g/L}$)
C8	10 Apr 2017	20	11.57	70.62	5.0	33.46	7.9	25.5	1.14
C8	14 Apr 2017	1	14.99	71.92	7.5	33.35	8.2	24.7	2.56
C8	14 Apr 2017	2	14.83	75.92	6.6	33.43	8.1	24.8	3.35
C8	14 Apr 2017	3	14.59	74.68	6.2	33.44	8.1	24.9	3.69
C8	14 Apr 2017	4	14.03	74.85	6.2	33.44	8.1	25.0	3.86
C8	14 Apr 2017	5	14.00	75.57	6.2	33.43	8.0	25.0	4.07
C8	14 Apr 2017	6	13.71	75.54	6.2	33.44	8.0	25.0	4.09
C8	14 Apr 2017	7	13.70	75.52	6.1	33.44	8.0	25.0	3.79
C8	14 Apr 2017	8	13.62	75.57	5.8	33.43	8.0	25.1	3.74
C8	14 Apr 2017	9	13.13	76.60	5.8	33.44	8.0	25.2	3.65
C8	14 Apr 2017	10	13.06	78.53	5.7	33.44	8.0	25.2	3.52
C8	14 Apr 2017	11	13.00	78.62	5.4	33.44	8.0	25.2	2.82
C8	14 Apr 2017	12	12.79	79.02	4.7	33.44	8.0	25.2	1.91
C8	14 Apr 2017	13	12.33	82.34	4.2	33.43	8.0	25.3	1.53
C8	14 Apr 2017	14	11.36	83.49	4.2	33.49	7.9	25.5	1.29
C8	14 Apr 2017	15	11.30	82.74	4.3	33.48	7.9	25.5	1.28
C8	14 Apr 2017	16	11.06	78.89	4.4	33.49	7.9	25.6	1.26
C8	14 Apr 2017	17	10.98	74.80	4.5	33.50	7.9	25.6	1.23
C8	14 Apr 2017	18	10.98	69.54	4.5	33.50	7.9	25.6	1.24
C8	14 Apr 2017	19	11.04	68.01	4.5	33.50	7.9	25.6	1.29
C8	19 Apr 2017	1	13.69	70.56	6.3	33.48	8.1	25.1	5.10
C8	19 Apr 2017	2	12.87	71.54	5.3	33.48	8.0	25.2	4.33
C8	19 Apr 2017	3	12.21	75.85	4.7	33.48	8.0	25.4	3.90
C8	19 Apr 2017	4	11.46	79.98	4.6	33.51	7.9	25.5	3.09
C8	19 Apr 2017	5	11.21	82.97	4.5	33.52	7.9	25.6	2.57
C8	19 Apr 2017	6	11.07	84.07	4.3	33.52	7.9	25.6	1.91
C8	19 Apr 2017	7	10.74	84.87	4.2	33.55	7.9	25.7	1.54
C8	19 Apr 2017	8	10.64	85.71	4.2	33.57	7.8	25.7	1.30
C8	19 Apr 2017	9	10.58	86.07	4.2	33.58	7.8	25.7	1.12
C8	19 Apr 2017	10	10.57	86.36	4.2	33.58	7.8	25.7	0.96
C8	19 Apr 2017	11	10.54	87.02	4.1	33.59	7.8	25.8	0.87
C8	19 Apr 2017	12	10.50	87.07	4.2	33.60	7.8	25.8	0.80
C8	19 Apr 2017	13	10.48	86.73	4.2	33.60	7.8	25.8	0.78
C8	19 Apr 2017	14	10.48	86.44	4.2	33.61	7.8	25.8	0.80
C8	19 Apr 2017	15	10.48	86.41	4.2	33.61	7.8	25.8	0.81
C8	19 Apr 2017	16	10.48	86.42	4.2	33.61	7.8	25.8	0.78
C8	19 Apr 2017	17	10.48	86.33	4.2	33.61	7.8	25.8	0.82
C8	19 Apr 2017	18	10.48	86.06	4.2	33.62	7.8	25.8	0.83
C8	19 Apr 2017	19	10.49	86.34	4.2	33.62	7.8	25.8	0.83
C8	26 Apr 2017	1	16.33	74.15	9.7	33.48	8.3	24.5	3.75
C8	26 Apr 2017	2	16.32	74.31	9.5	33.48	8.3	24.5	6.04
C8	26 Apr 2017	3	16.18	73.35	8.8	33.48	8.3	24.5	9.21
C8	26 Apr 2017	4	15.83	71.52	8.2	33.48	8.3	24.6	15.89
C8	26 Apr 2017	5	15.40	68.55	7.6	33.49	8.3	24.7	19.20
C8	26 Apr 2017	6	14.48	66.64	7.2	33.48	8.2	24.9	18.59
C8	26 Apr 2017	7	13.49	64.77	6.4	33.50	8.2	25.1	16.97
C8	26 Apr 2017	8	12.91	64.38	5.6	33.47	8.2	25.2	18.59
C8	26 Apr 2017	9	12.13	65.06	5.6	33.49	8.1	25.4	17.45
C8	26 Apr 2017	10	11.86	67.73	5.9	33.49	8.0	25.4	18.10
C8	26 Apr 2017	11	11.90	67.59	5.9	33.48	8.0	25.4	18.79
C8	26 Apr 2017	12	11.82	67.40	5.7	33.47	8.0	25.4	21.51
C8	26 Apr 2017	13	11.68	66.67	5.7	33.48	8.0	25.5	24.68

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens ($\sigma\text{-t}$)	Chlor ($\mu\text{g/L}$)
C8	26 Apr 2017	14	11.61	66.06	5.7	33.49	8.0	25.5	23.24
C8	26 Apr 2017	15	11.52	66.10	5.6	33.48	8.0	25.5	16.86
C8	26 Apr 2017	16	11.46	62.78	5.3	33.48	8.0	25.5	12.30
C8	26 Apr 2017	17	11.41	61.57	5.1	33.51	8.0	25.5	11.07
C8	26 Apr 2017	18	11.38	65.19	5.2	33.52	7.9	25.6	11.34
C8	26 Apr 2017	19	11.39	64.39	5.3	33.53	7.9	25.6	11.06

NA = not available

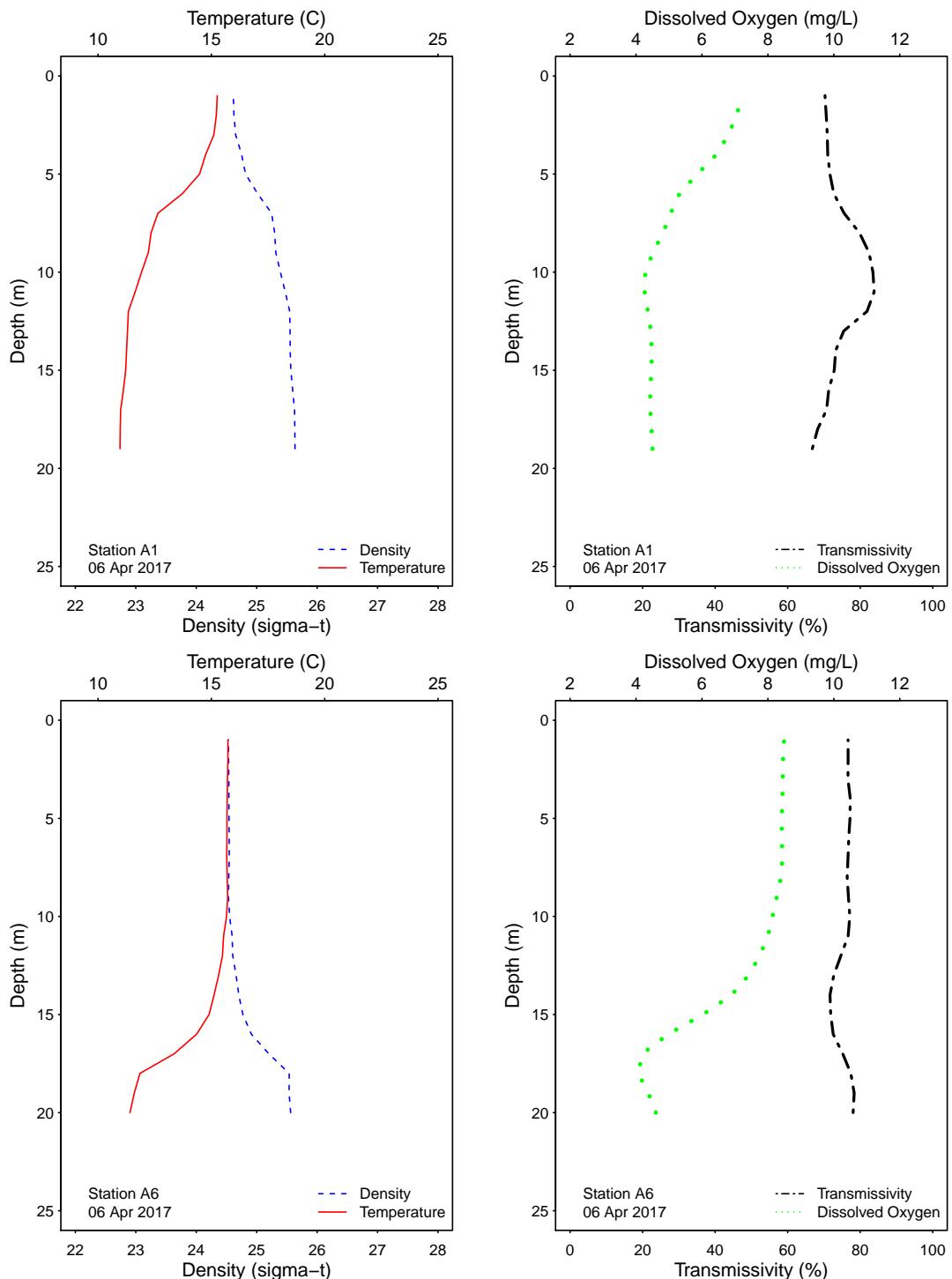


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

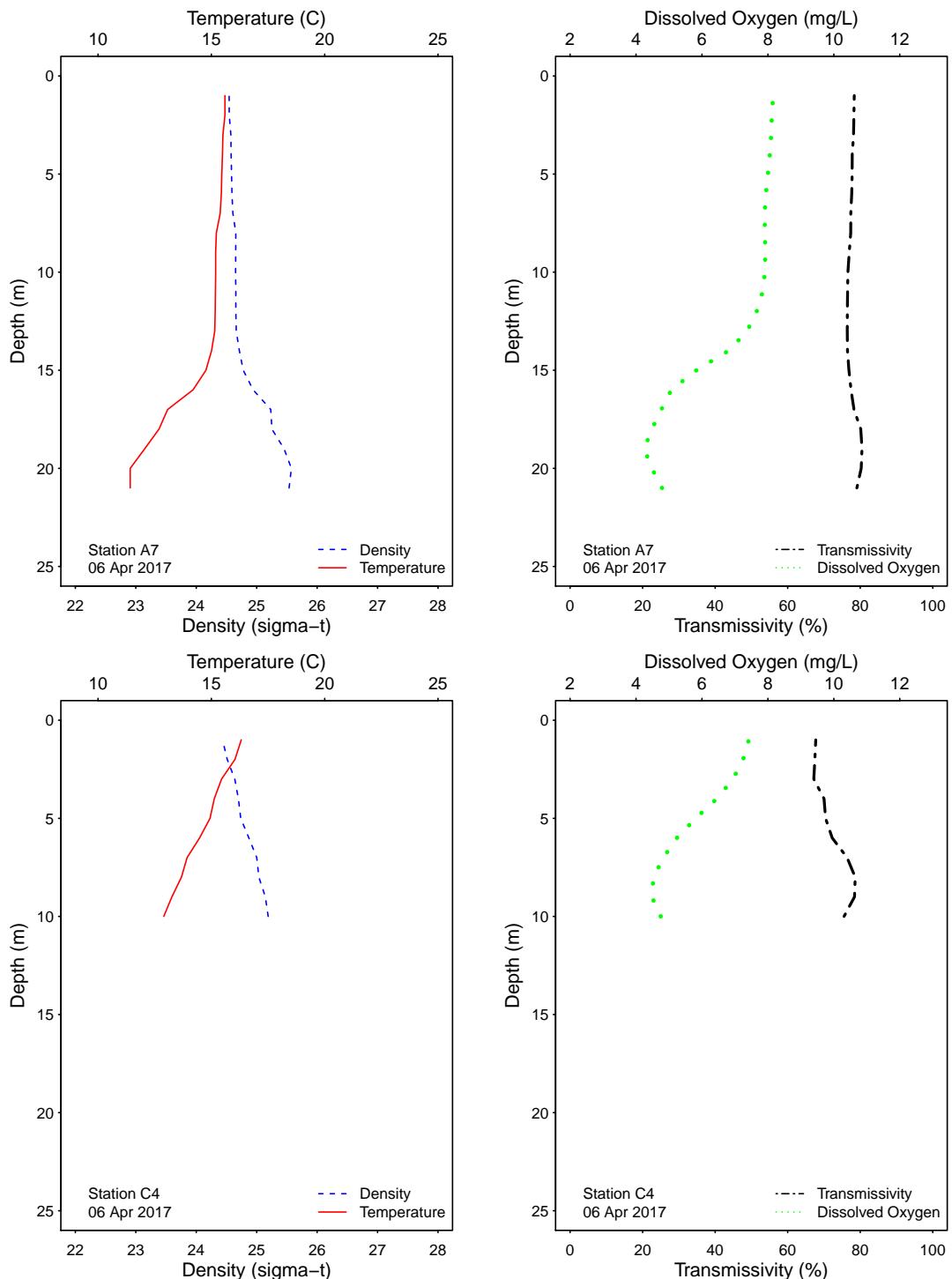


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

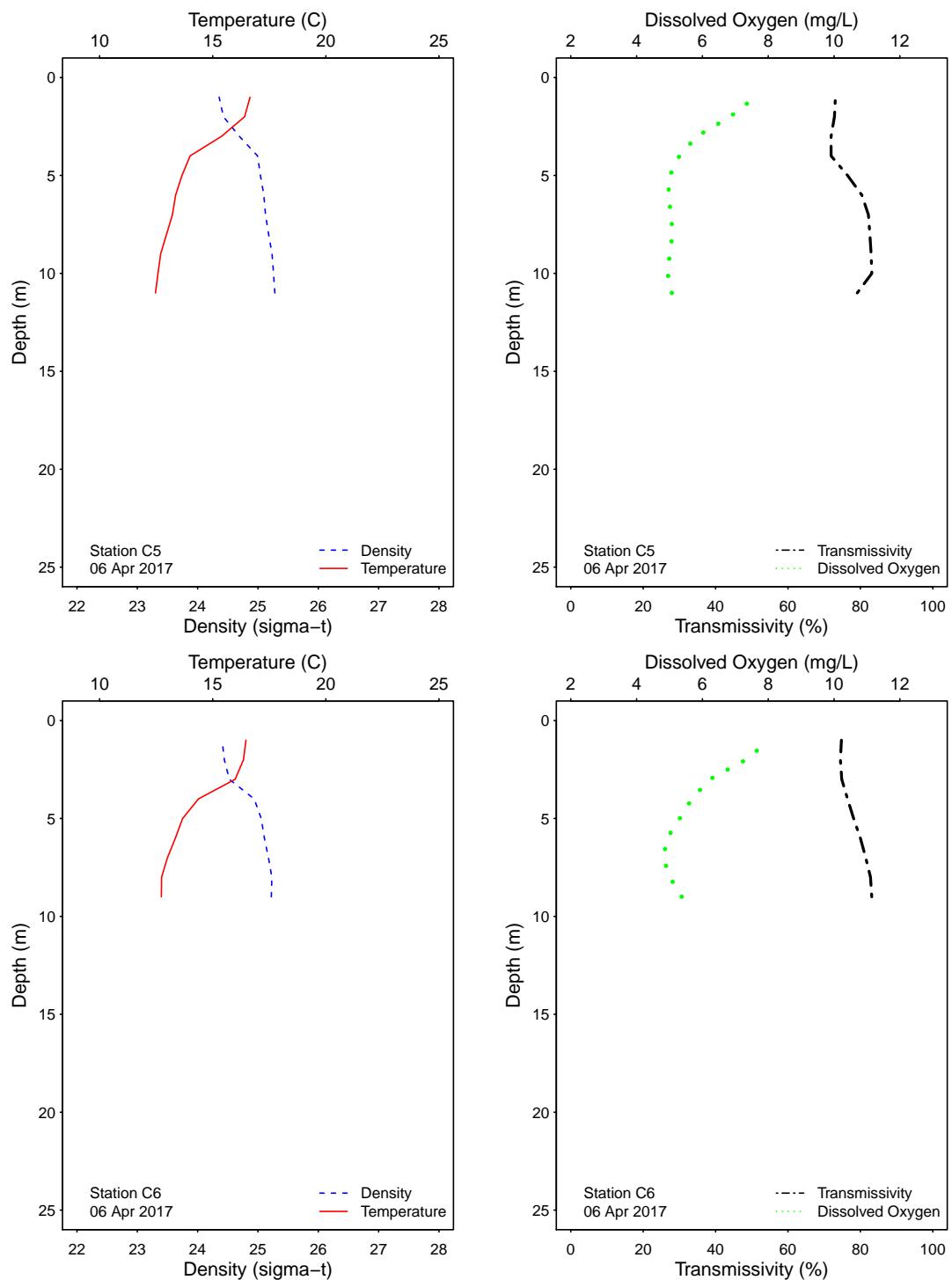


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

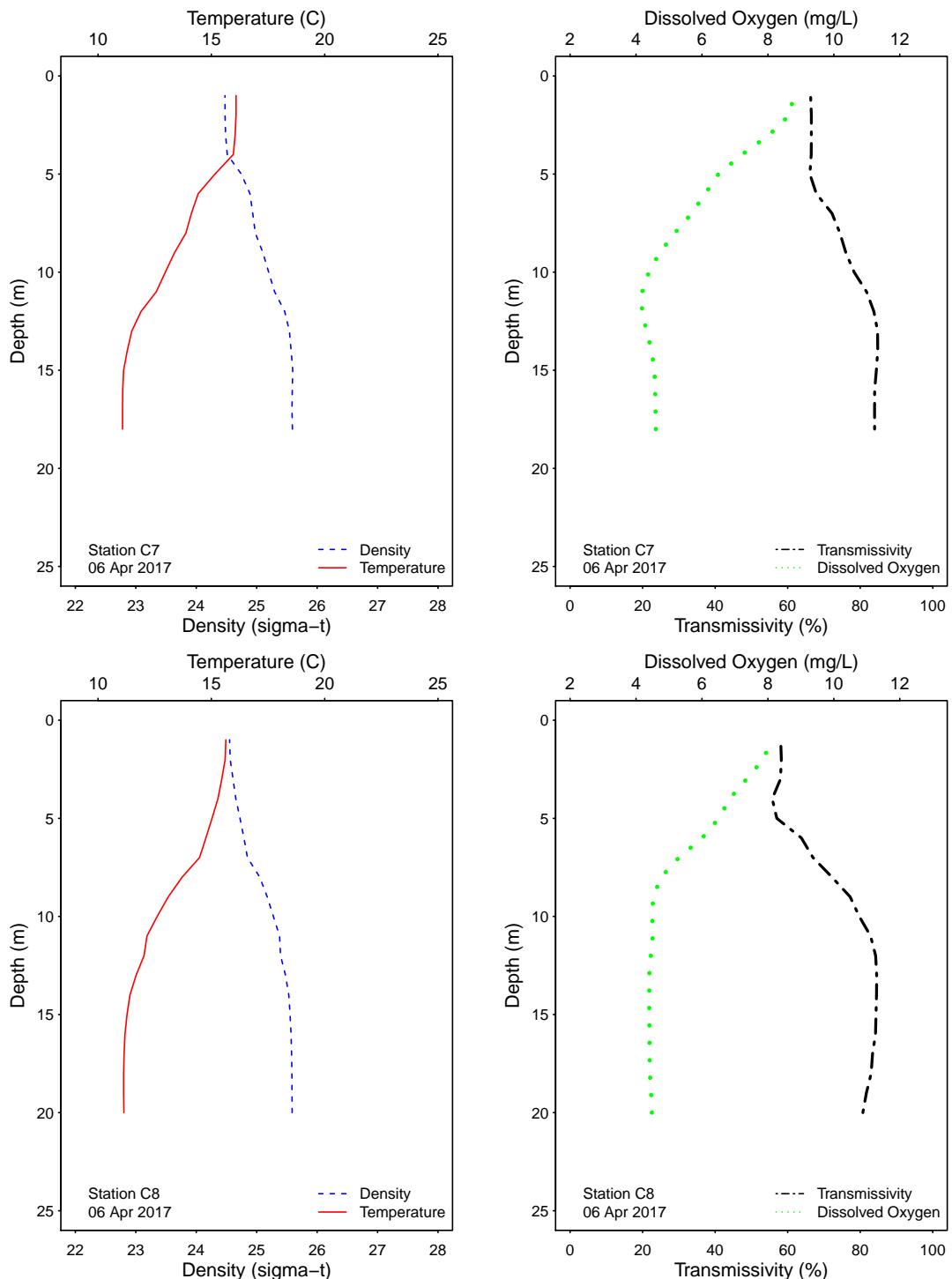


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

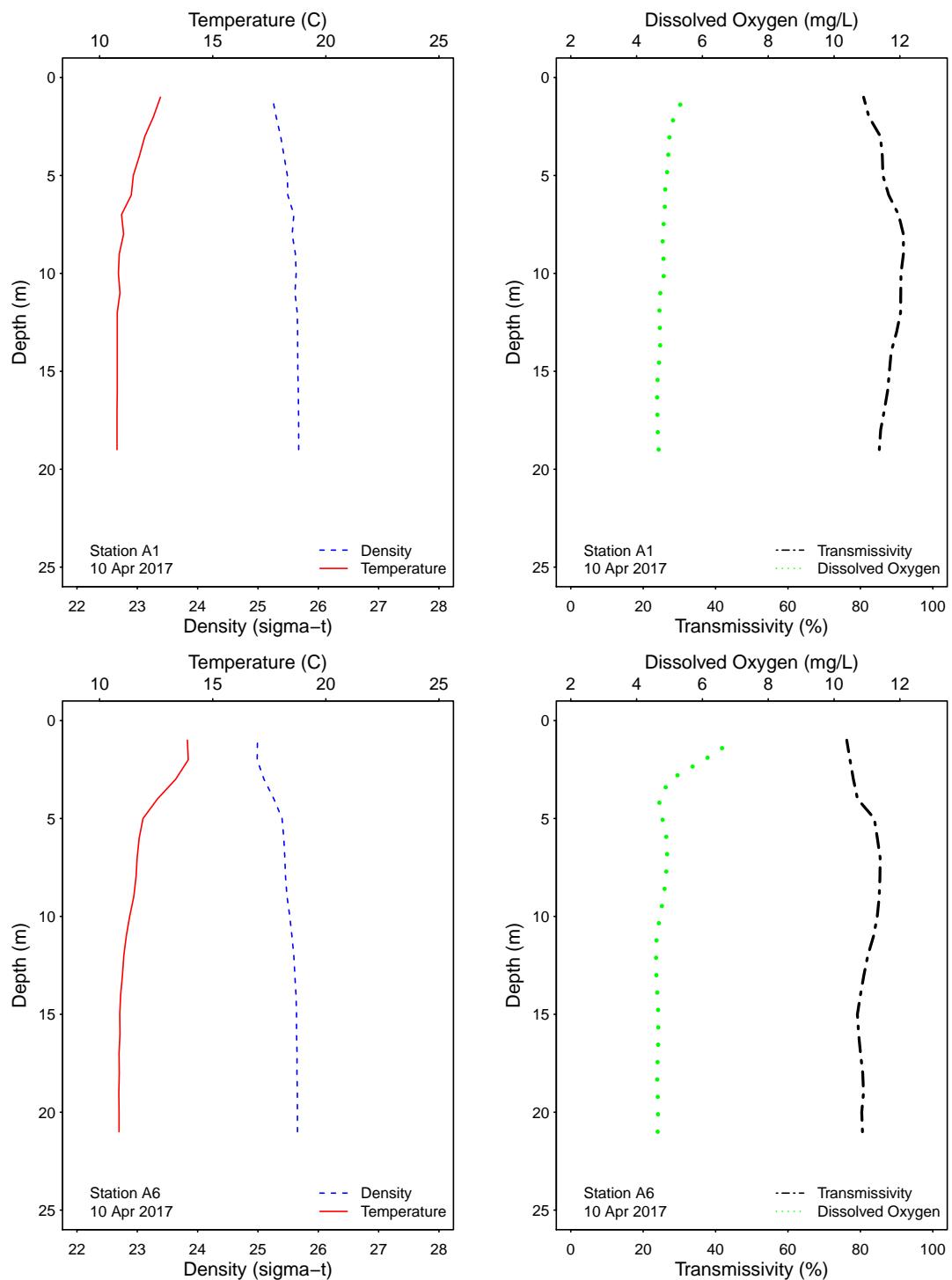


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

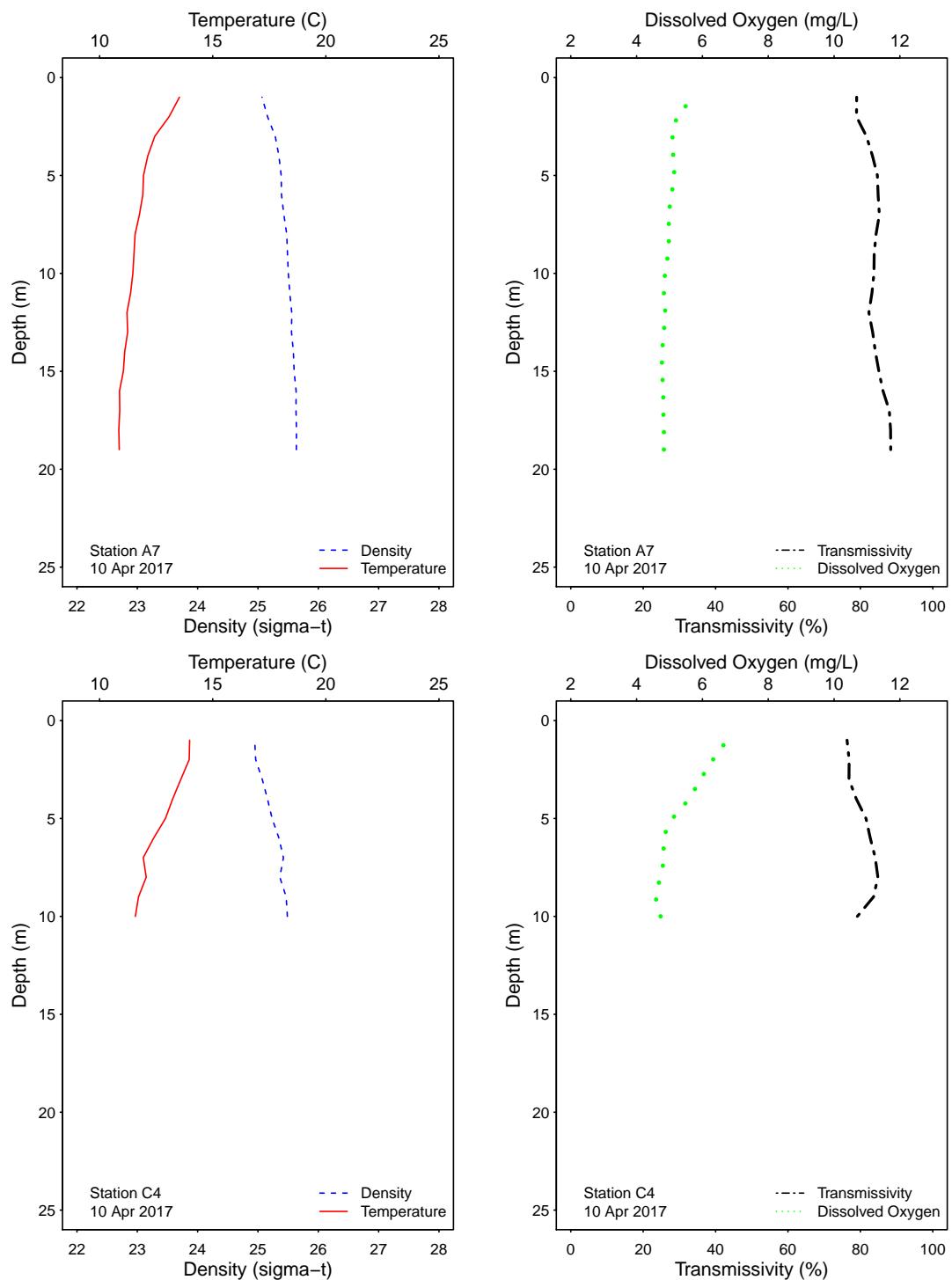


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

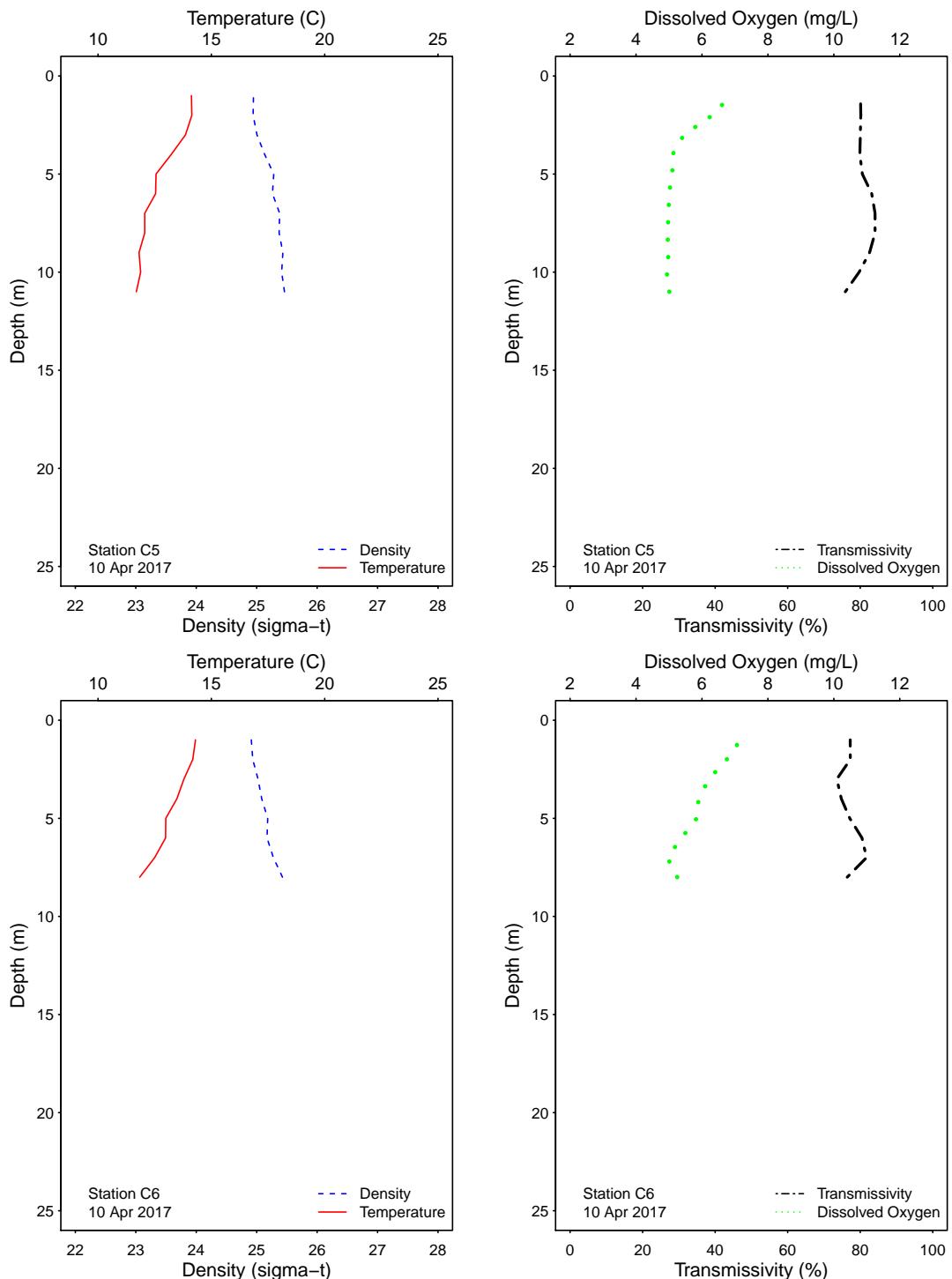


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

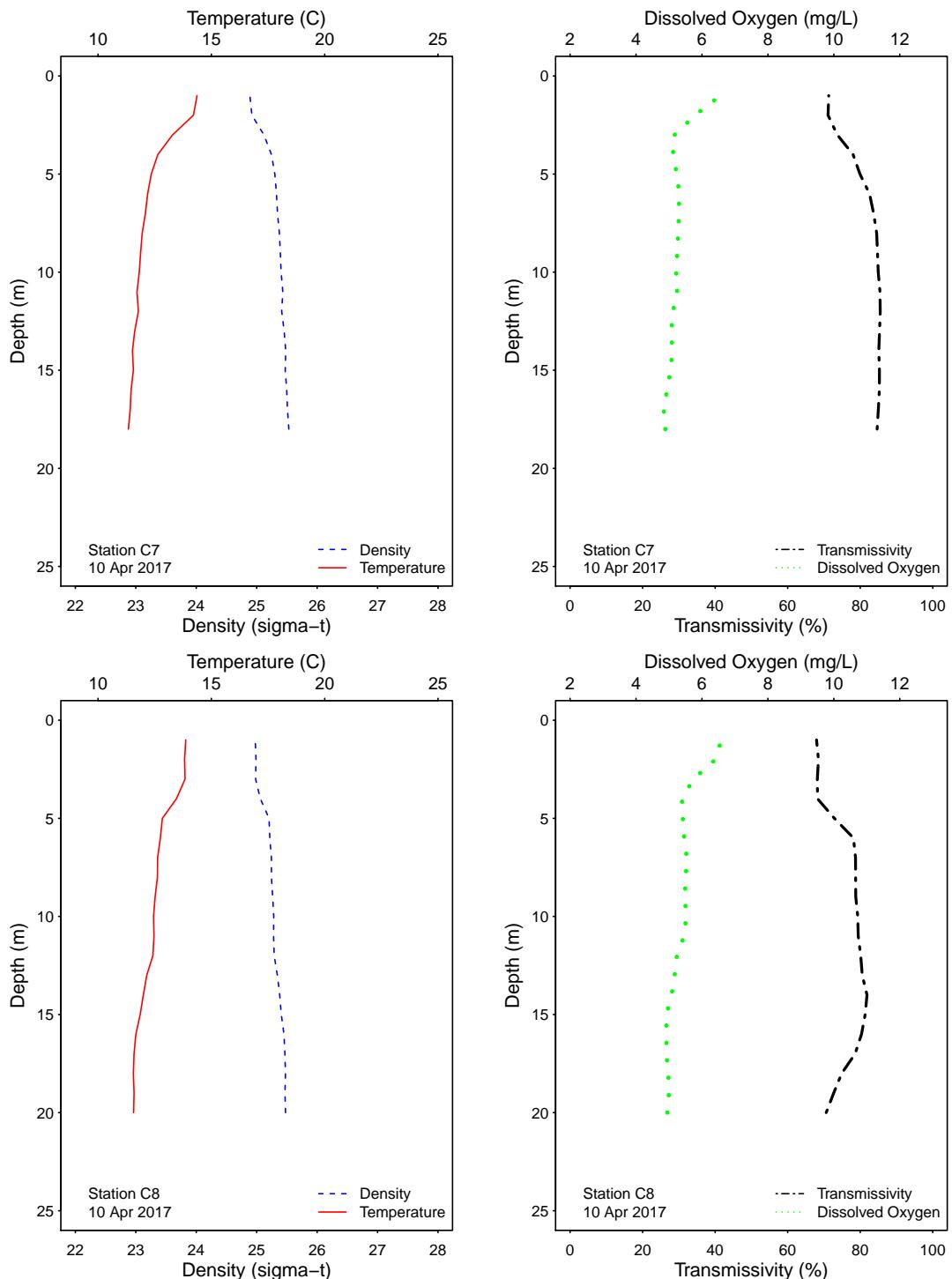


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

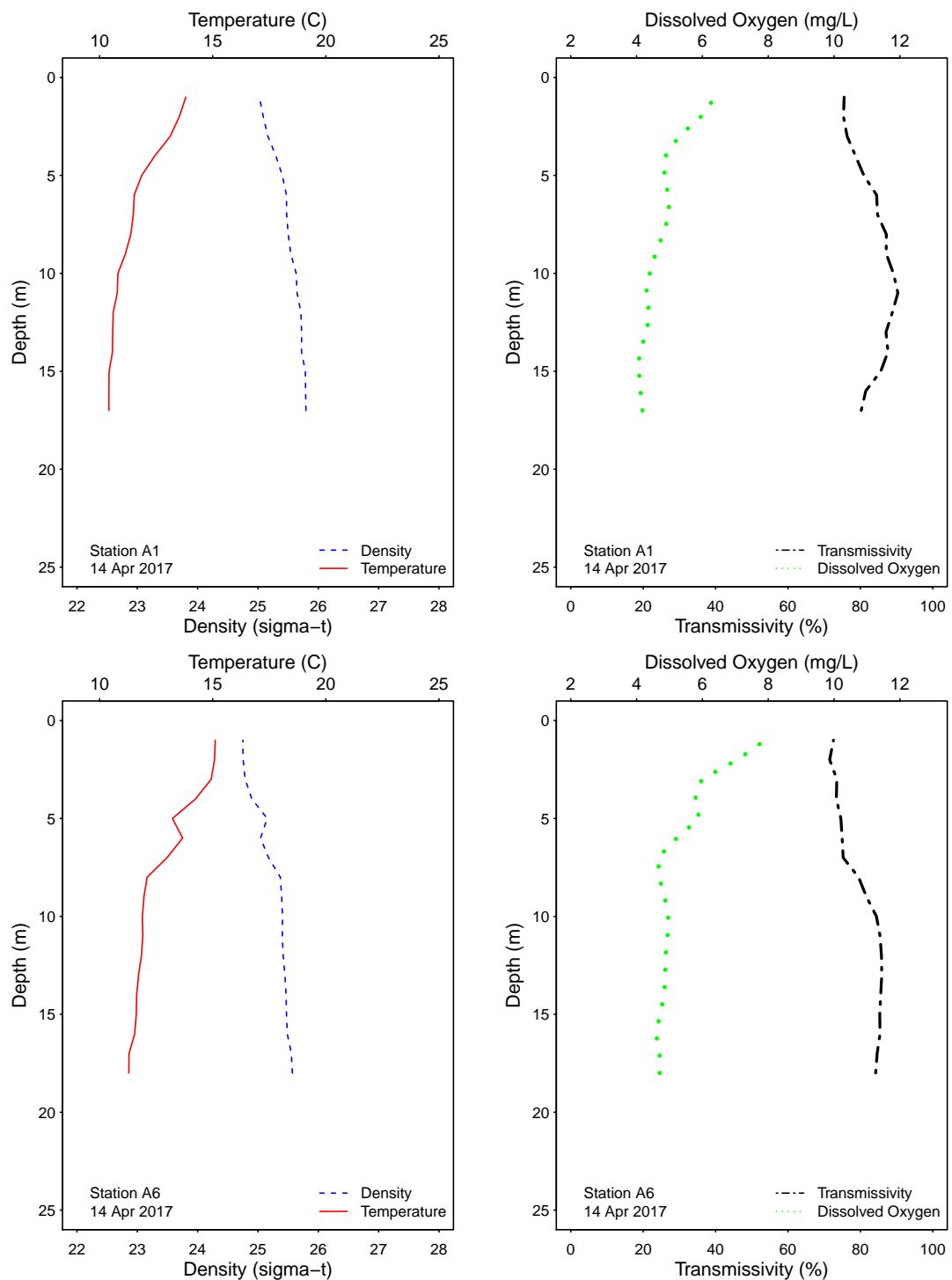


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

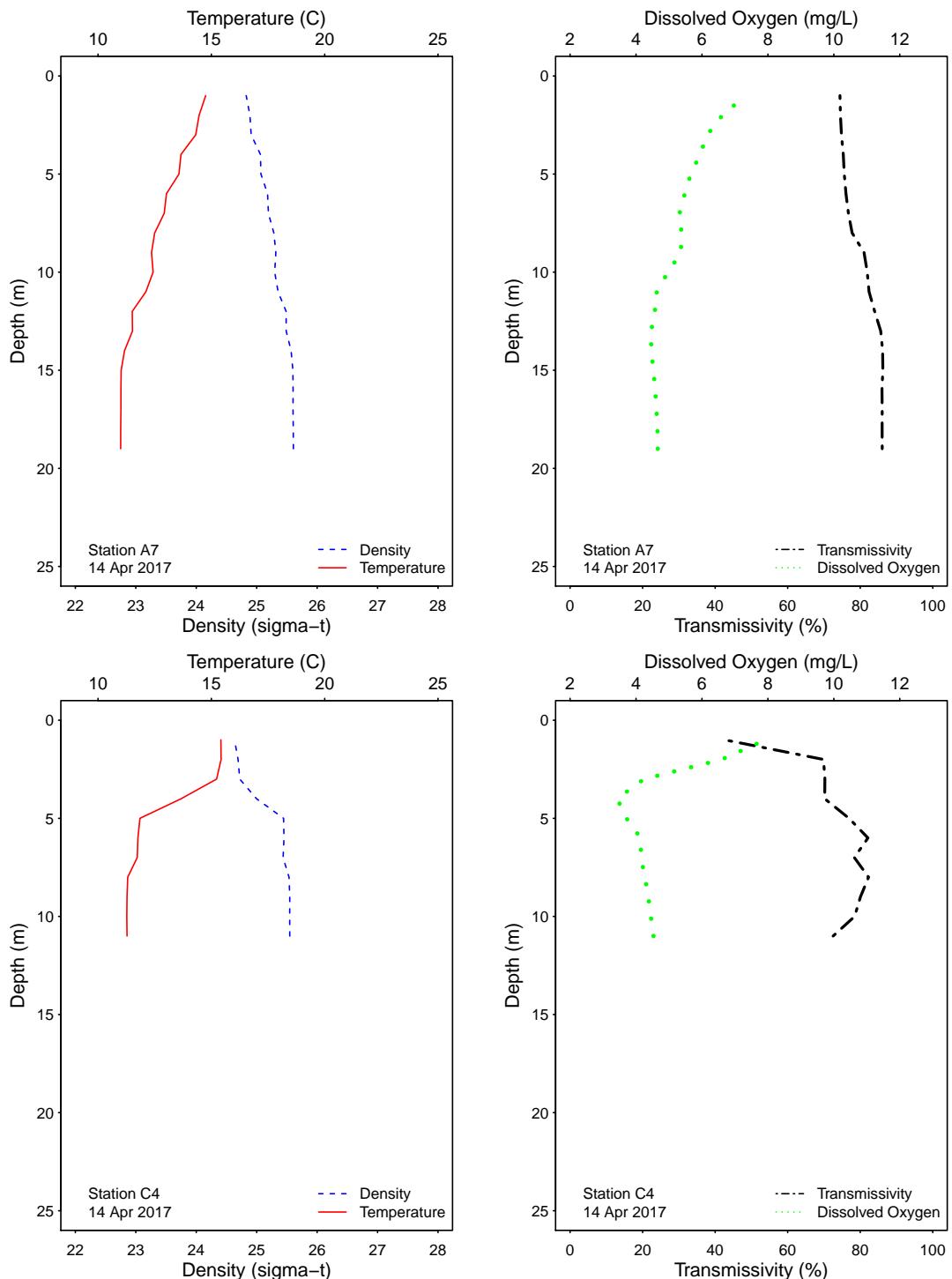


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

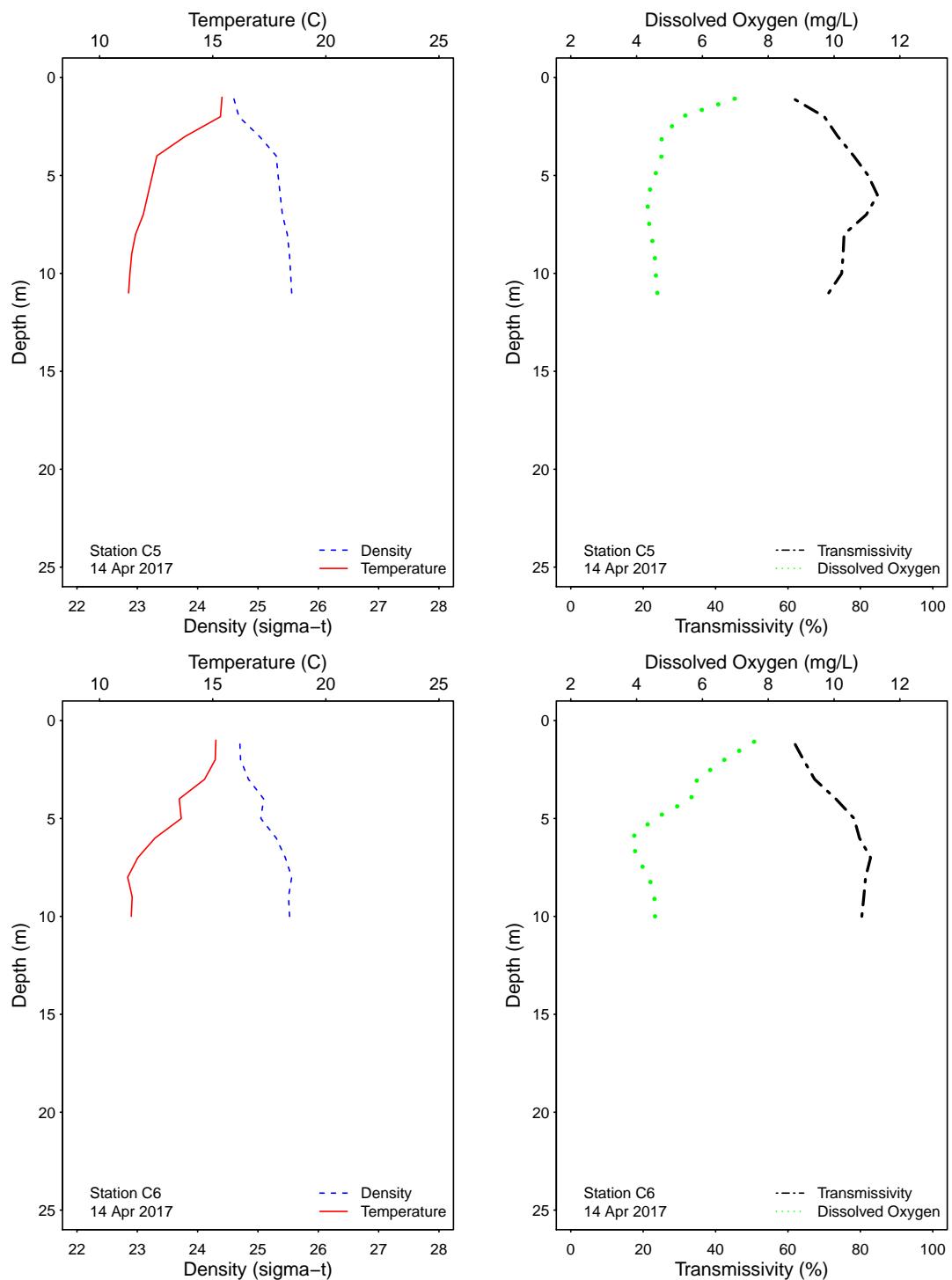


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

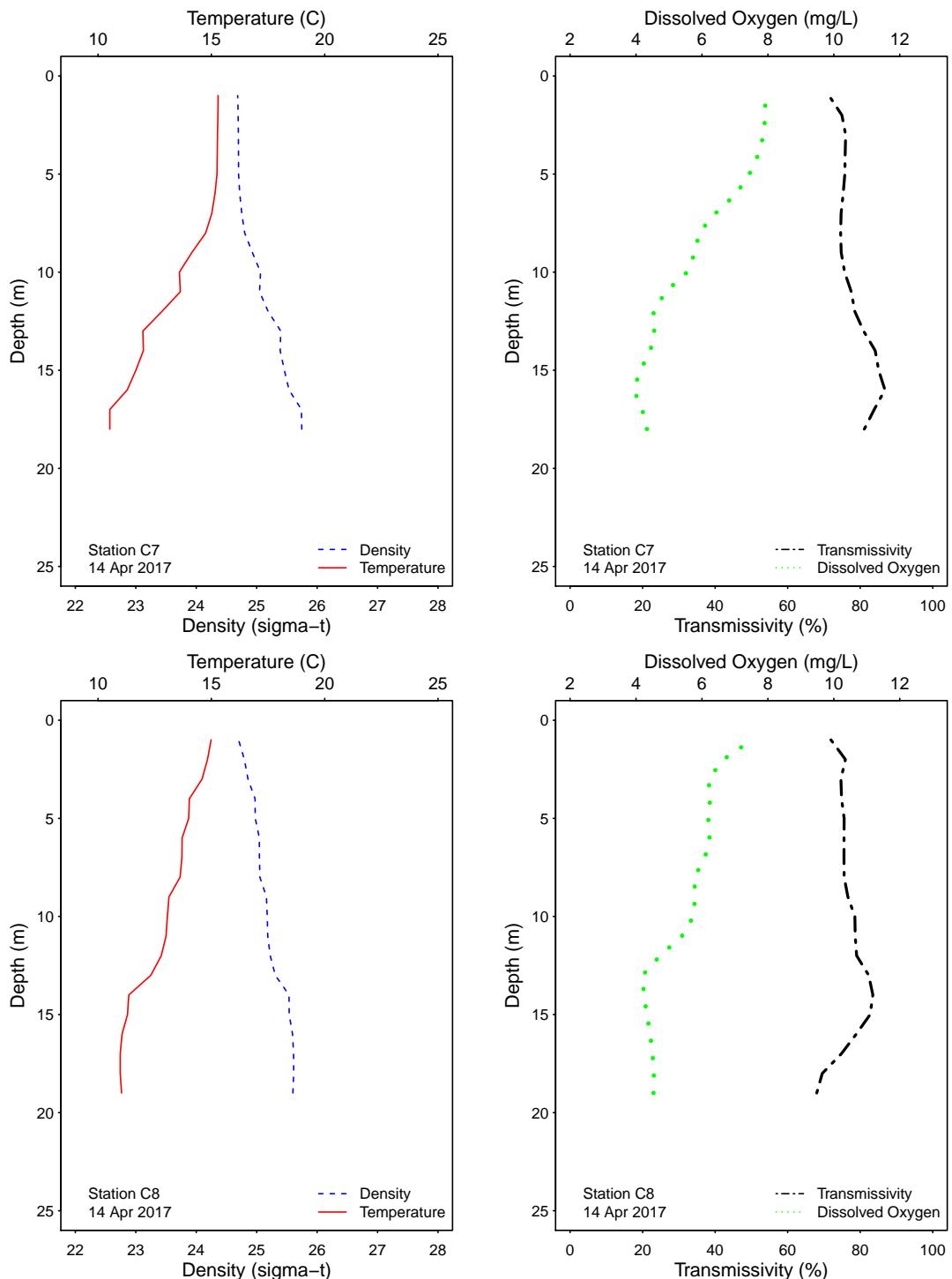


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

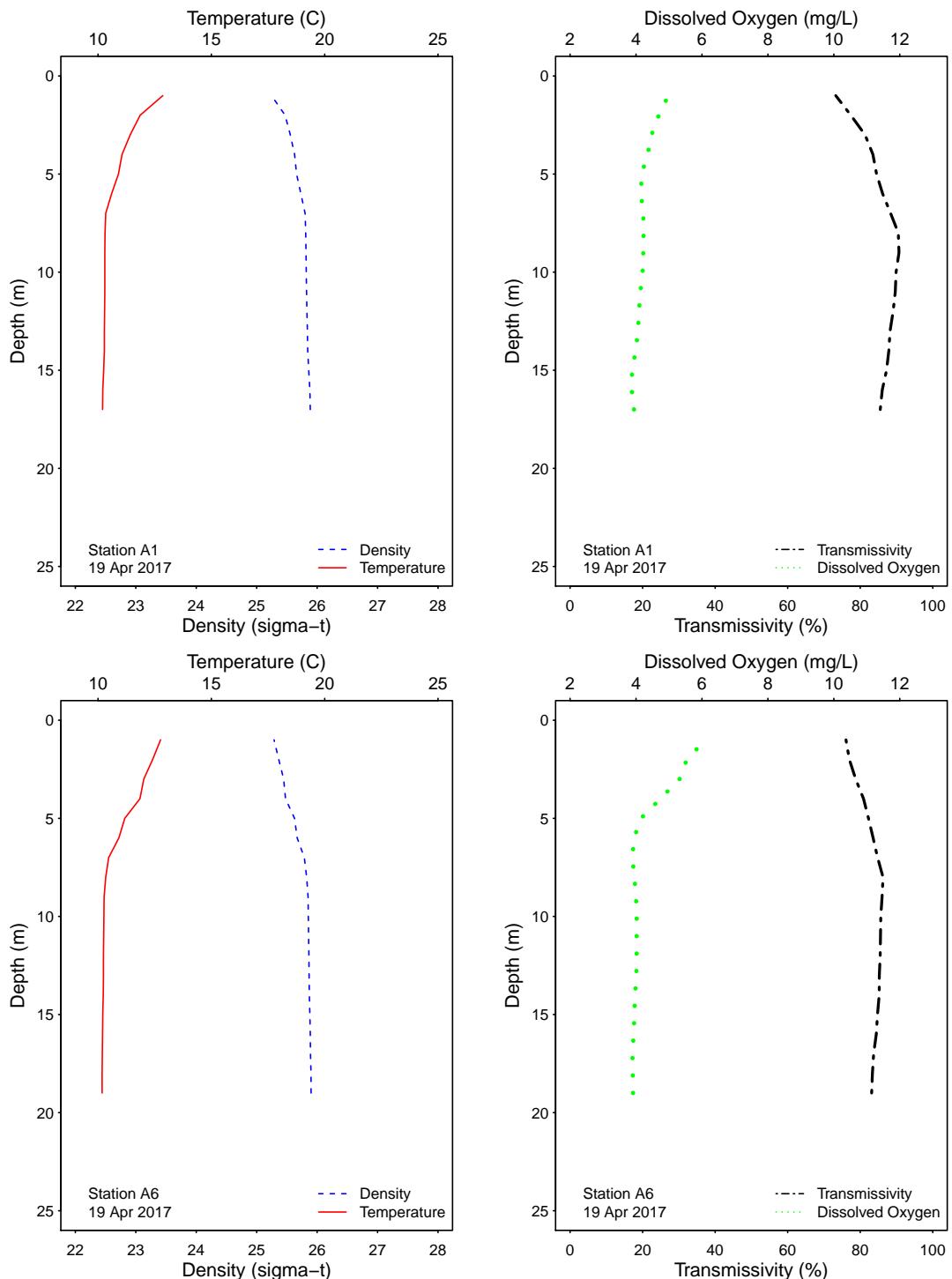


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

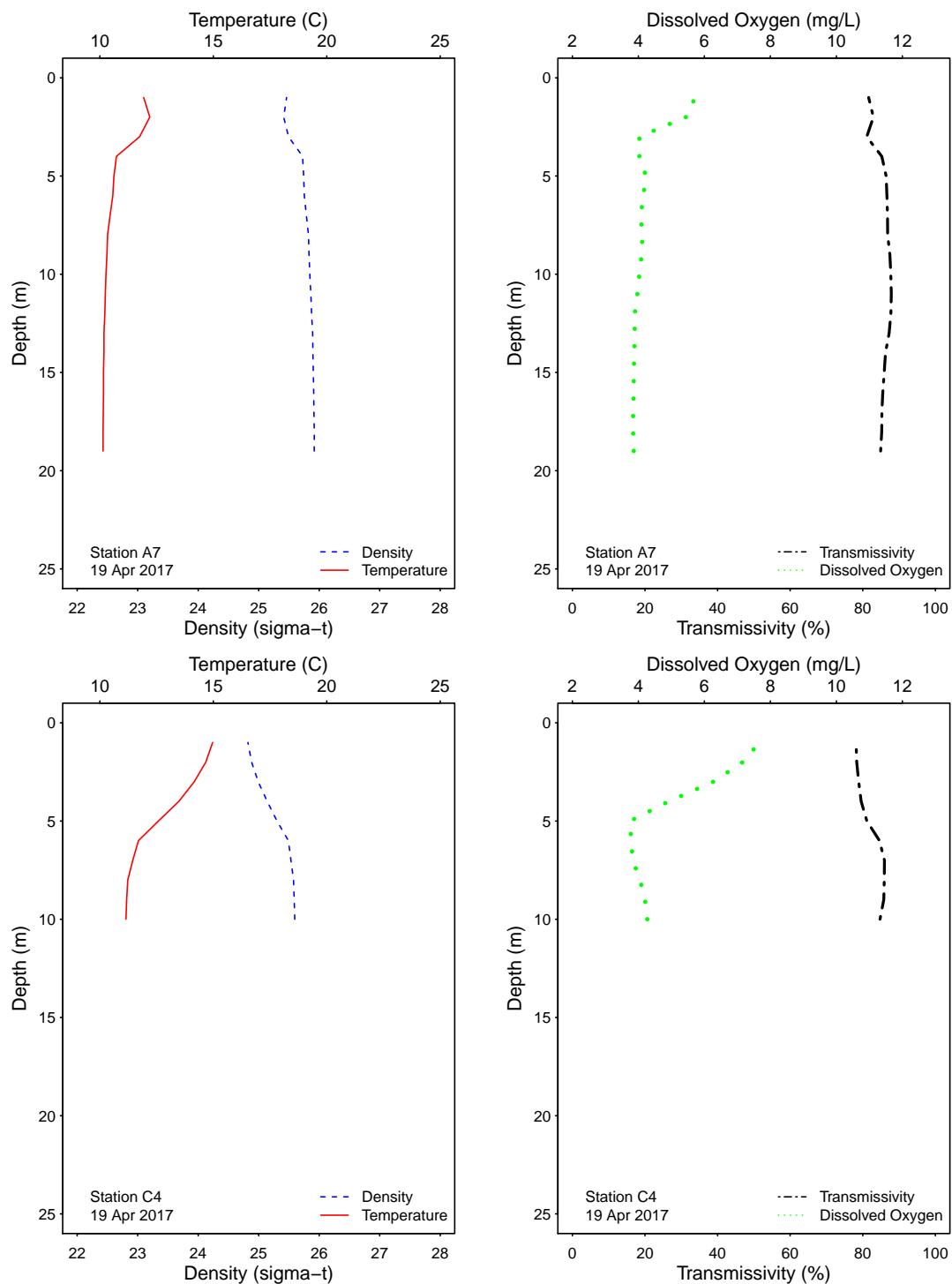


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

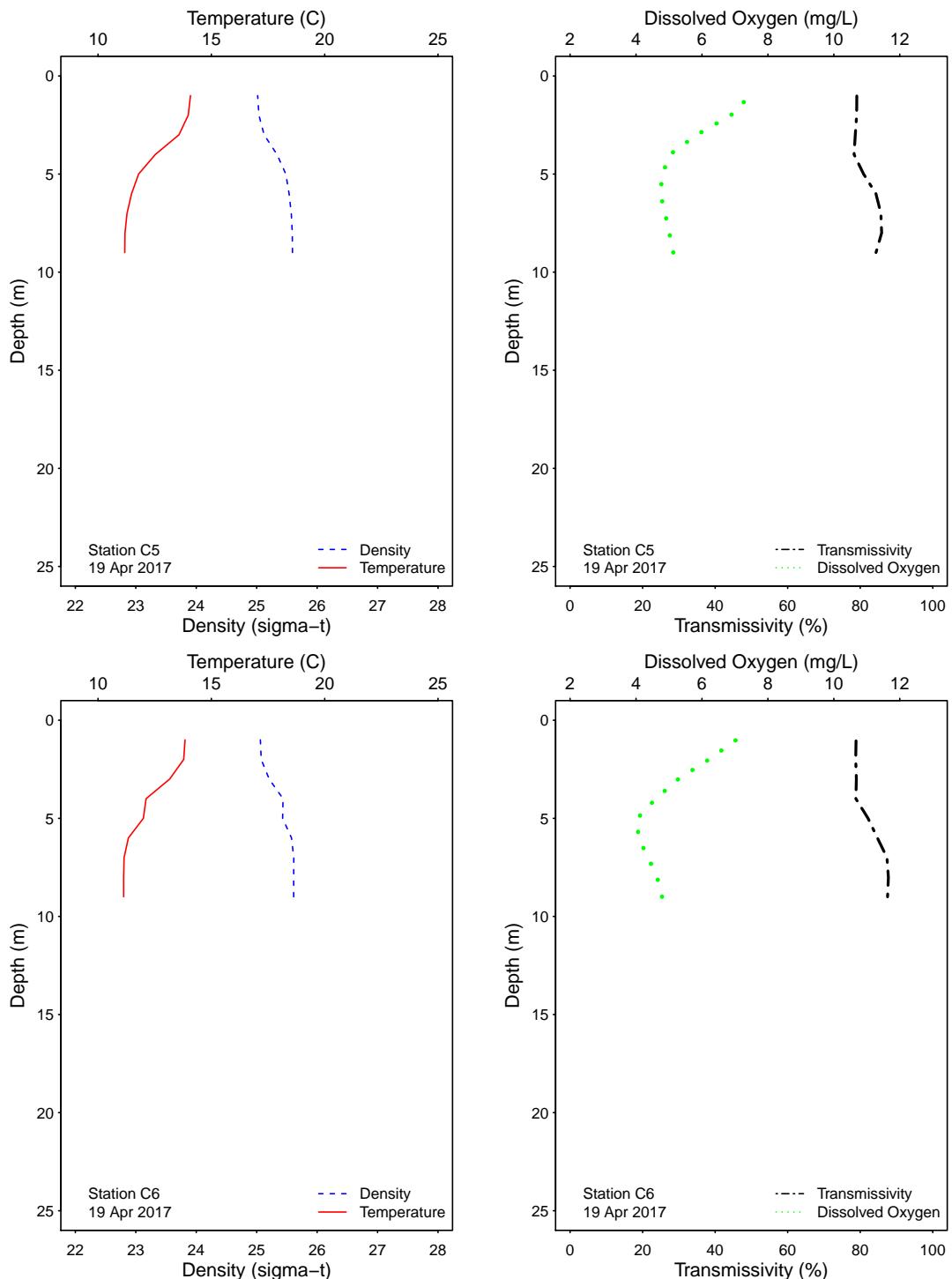


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

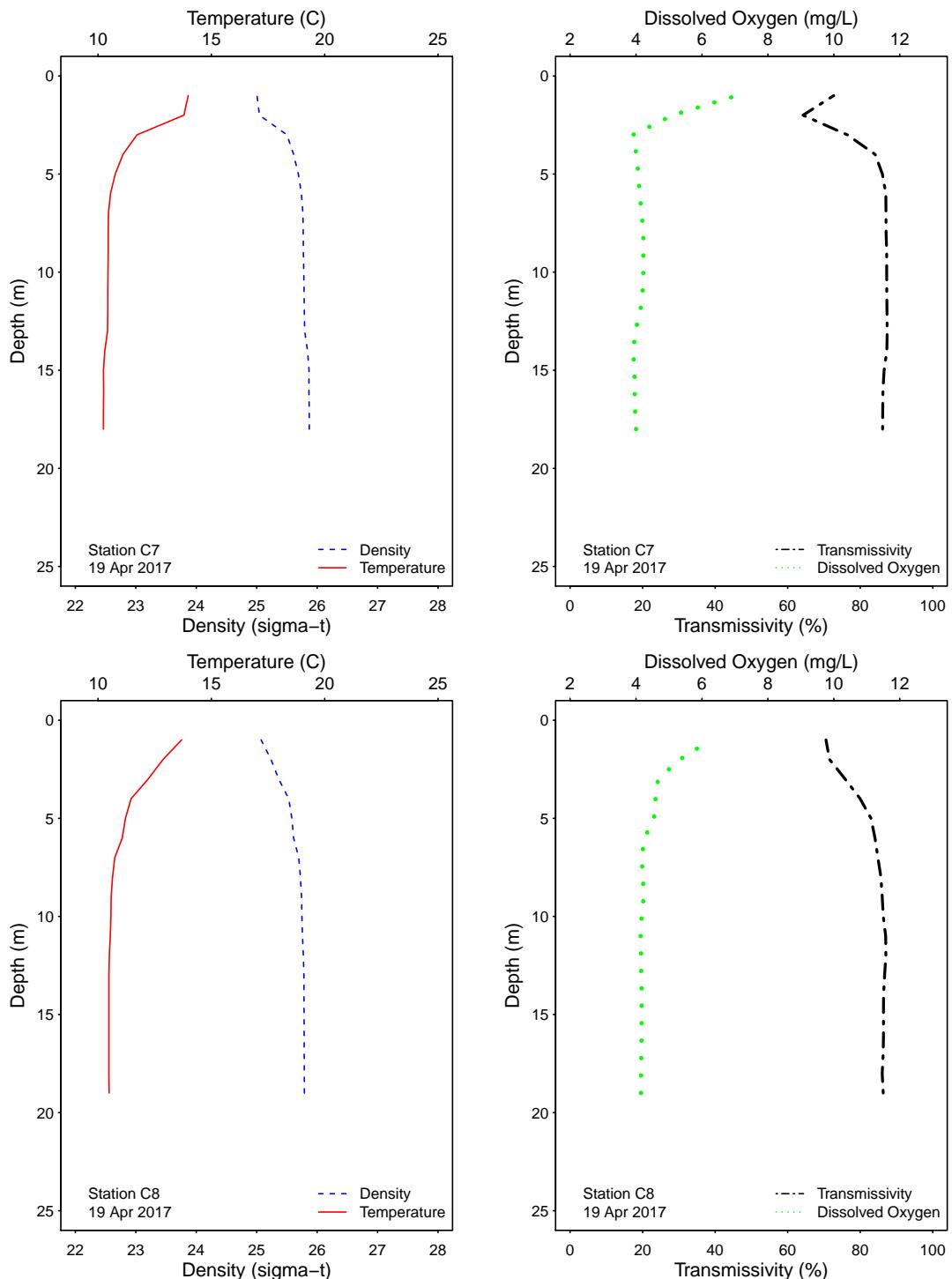


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

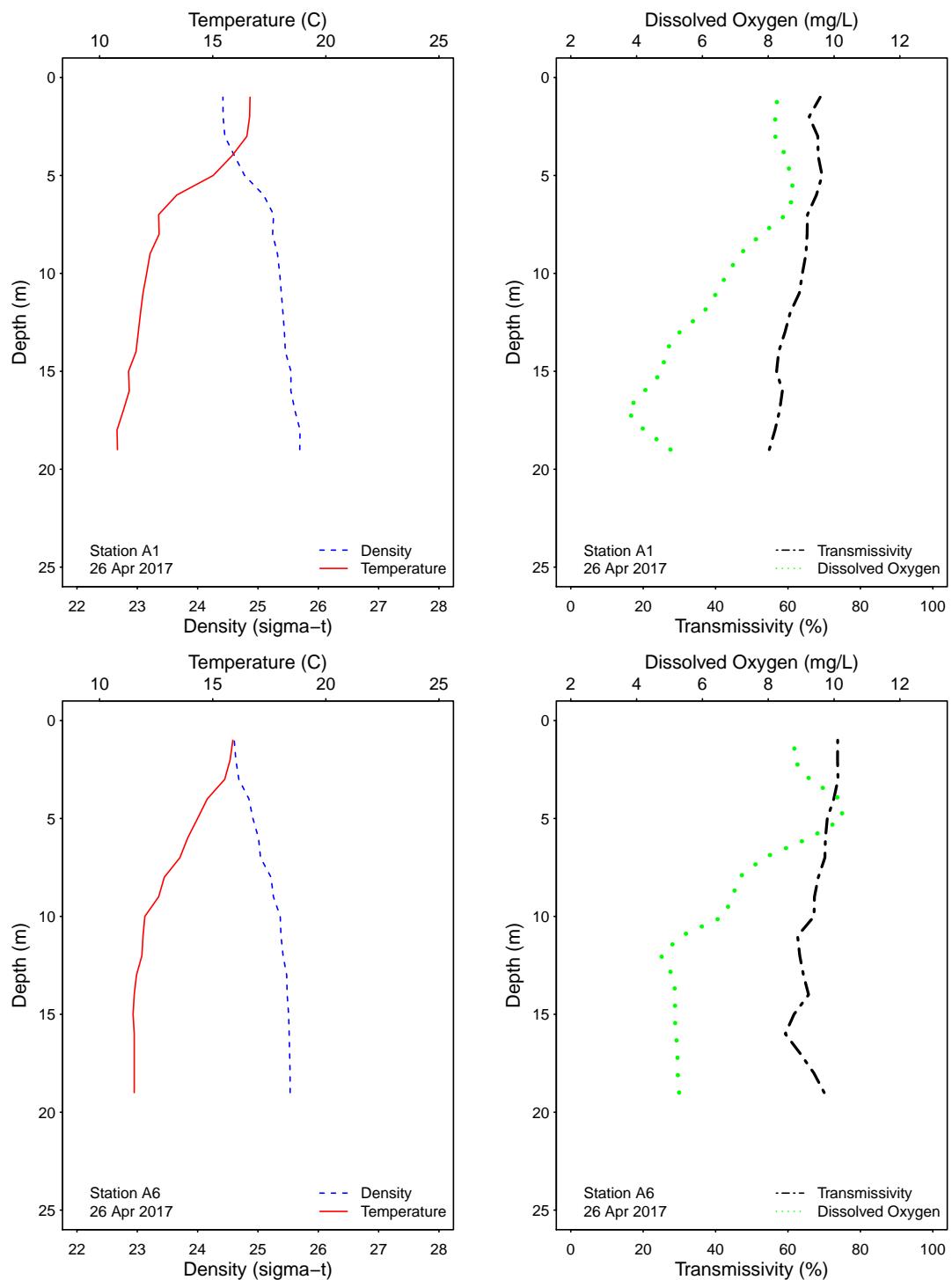


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

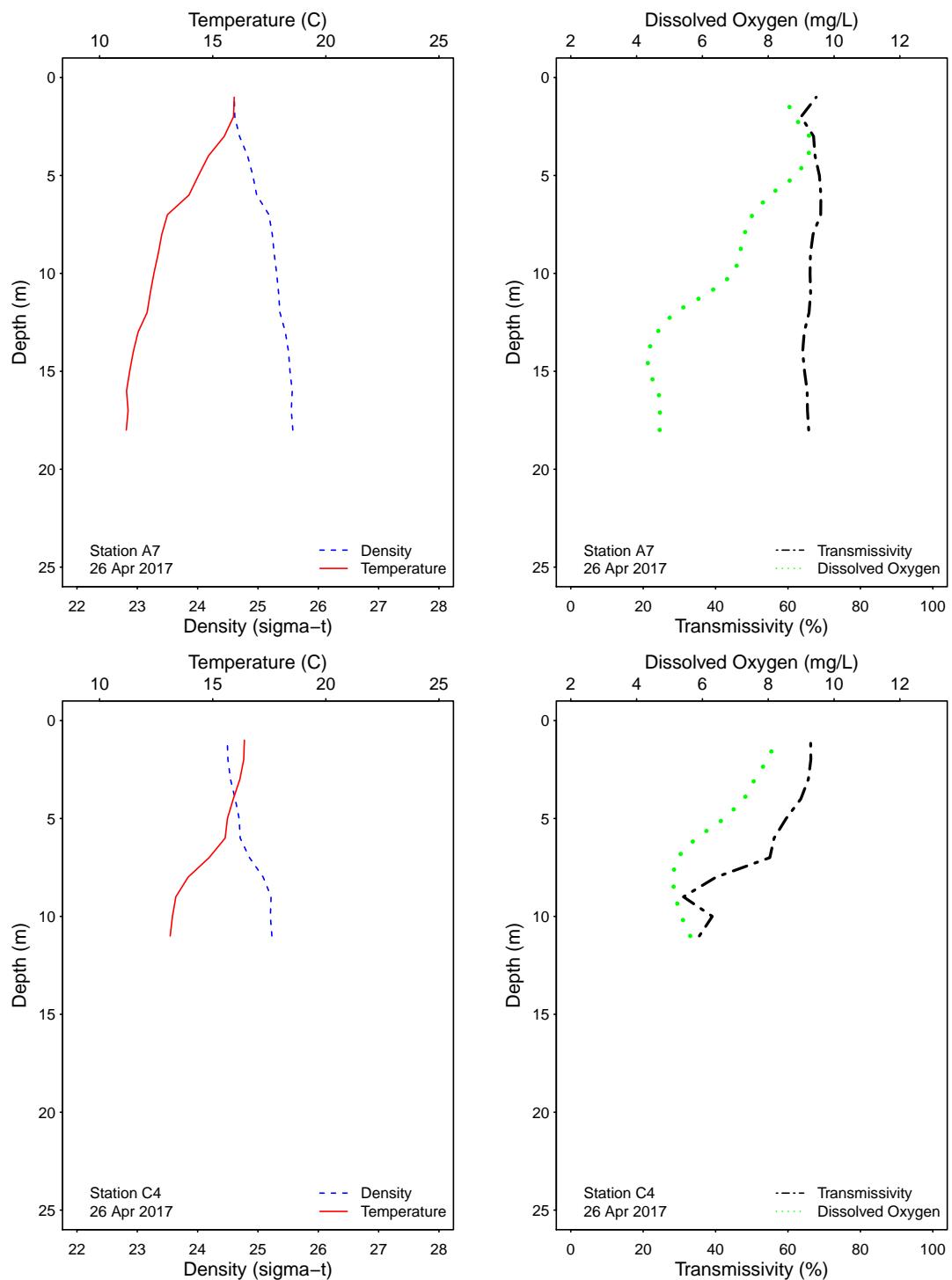


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

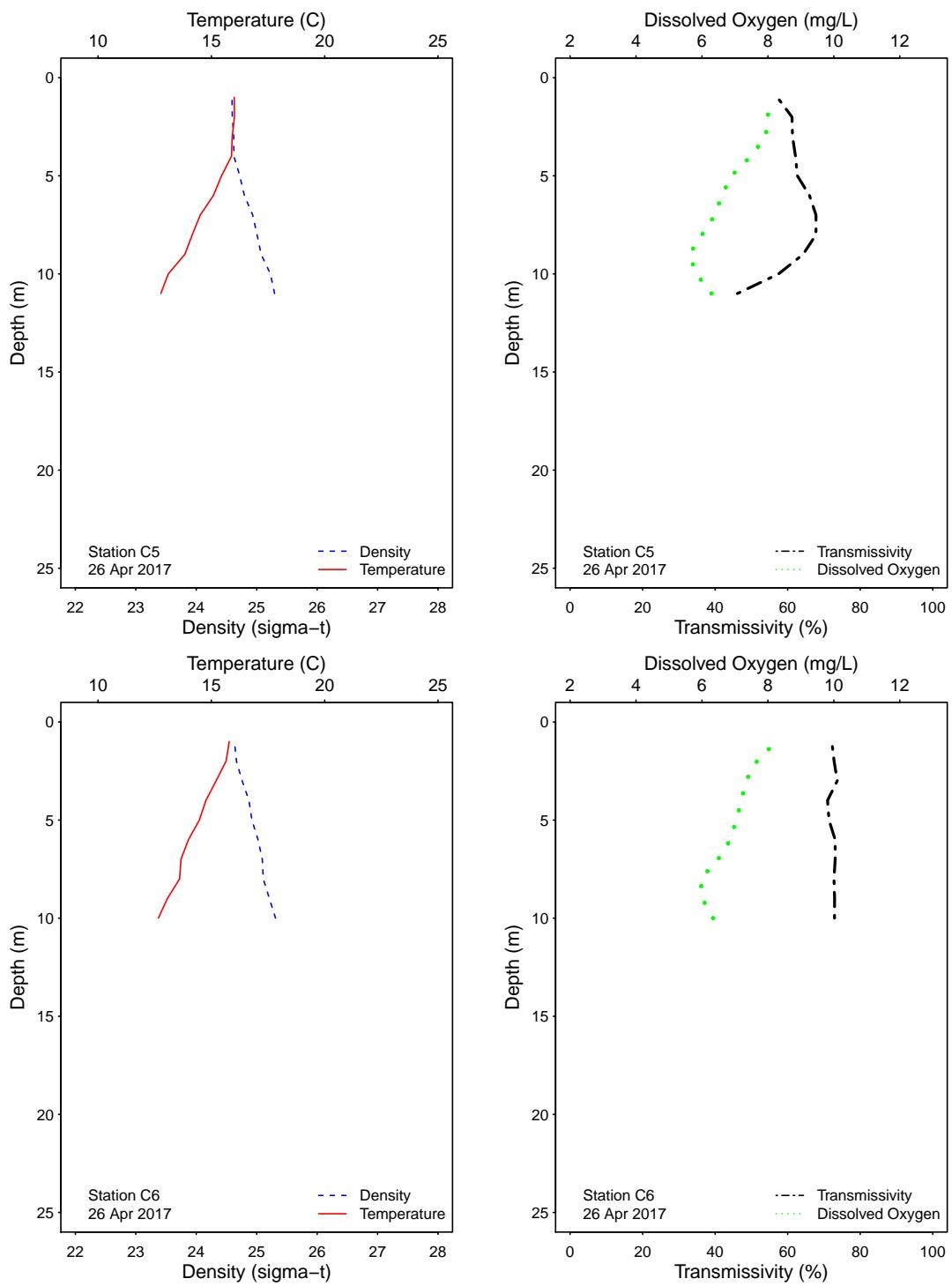


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

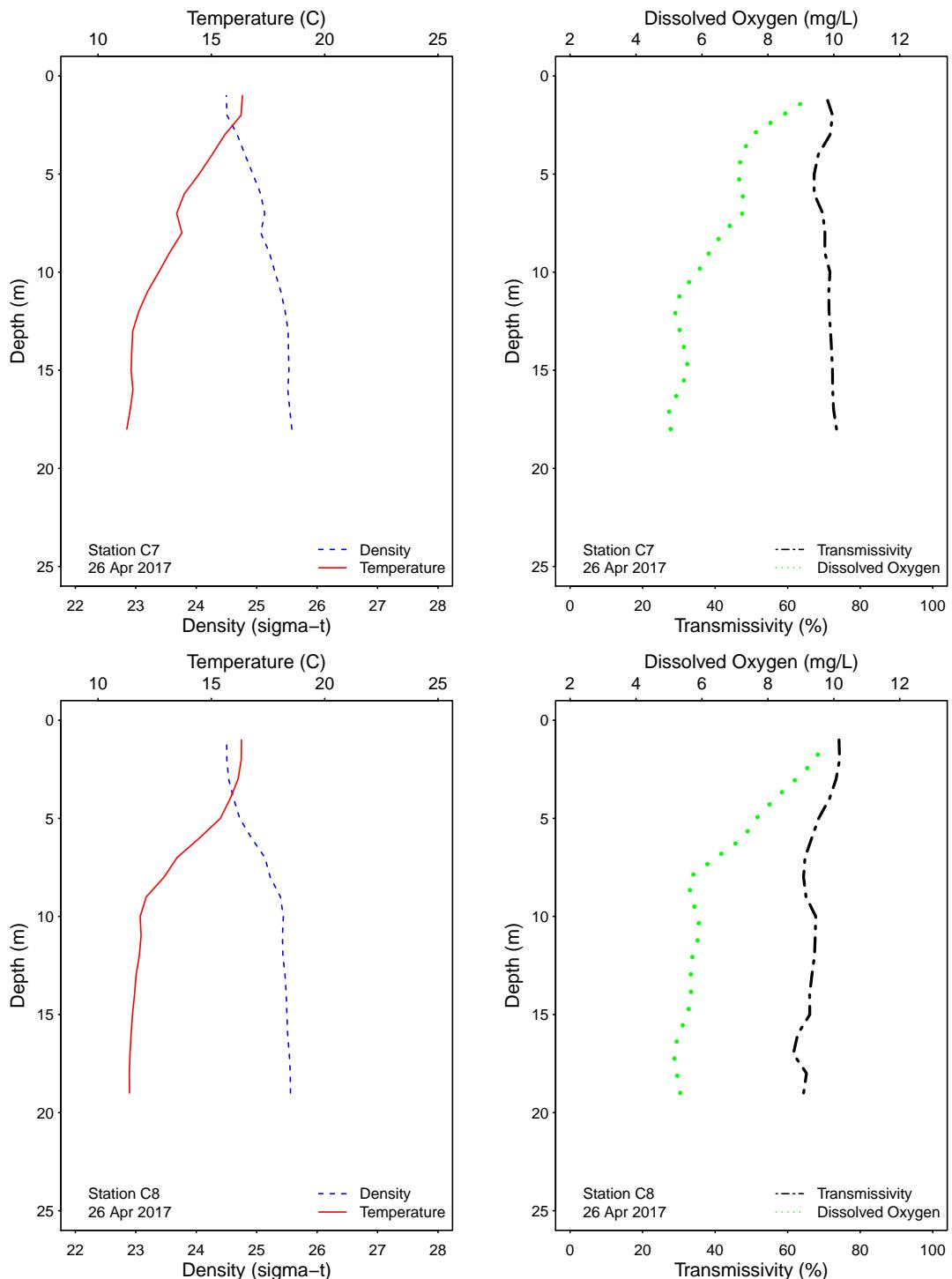


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

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	06 Apr 2017	18	LMA	LAB DUPLICATE	<2	<2	<2
A7	10 Apr 2017	18	JT	LAB DUPLICATE	<2	ns	<2
A7	10 Apr 2017	18	ZV	LAB DUPLICATE	ns	<2	ns
A7	14 Apr 2017	18	LMA	LAB DUPLICATE	6e	<2	<2
A7	19 Apr 2017	18	ZV	LAB DUPLICATE	180e	12e	14e
A7	26 Apr 2017	18	AR	LAB DUPLICATE	6e	<2	<2
C7	06 Apr 2017	18	AR	LAB DUPLICATE	12e	<2	<2
C7	10 Apr 2017	18	JT	LAB DUPLICATE	60	ns	2e
C7	10 Apr 2017	18	ZV	LAB DUPLICATE	ns	<2	ns
C7	14 Apr 2017	18	LMA	LAB DUPLICATE	8e	<2	<2
C7	19 Apr 2017	18	ZV	LAB DUPLICATE	130	2e	4e
C7	26 Apr 2017	18	AR	LAB DUPLICATE	<2	<2	<2
C8	06 Apr 2017	12	AR	LAB DUPLICATE	4e	2e	<2
C8	10 Apr 2017	12	JT	LAB DUPLICATE	<2	ns	<2
C8	10 Apr 2017	12	ZV	LAB DUPLICATE	ns	<2	ns
C8	14 Apr 2017	12	LMA	LAB DUPLICATE	<2	<2	<2
C8	19 Apr 2017	12	ZV	LAB DUPLICATE	68	4e	2e
C8	26 Apr 2017	12	AR	LAB DUPLICATE	<2	<2	<2
D12	05 Apr 2017		LMA	FIELD DUPLICATE	2e	<2	<2
D12	05 Apr 2017		LMA	LAB DUPLICATE	<20	<2	<2
D12	11 Apr 2017		ZV	FIELD DUPLICATE	<2	<2	<2
D12	11 Apr 2017		ZV	LAB DUPLICATE	<2	<2	<2
D12	17 Apr 2017		JT	FIELD DUPLICATE	<2	<2	<2
D12	17 Apr 2017		JT	LAB DUPLICATE	<2	<2	<2
D12	23 Apr 2017		JT	FIELD DUPLICATE	<20	<2	<2
D12	23 Apr 2017		JT	LAB DUPLICATE	<20	<2	<2
D12	29 Apr 2017		ZV	FIELD DUPLICATE	<20	<2	<2
D12	29 Apr 2017		ZV	LAB DUPLICATE	<20	<2	<2

ns = not sampled

ND = no data

