



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

JULY 2017

Environmental Monitoring and Technical Services
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**Public Utilities Department**

Environmental Monitoring & Technical Services Division

August 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 July 2017 Monthly Receiving Waters Monitoring Report for the South Bay Ocean Outfall, South Bay Water Reclamation Plant as required per Order No. R9-2013-0006, NPDES Permit No. CA0109045.

This report includes raw ocean monitoring data and summaries of water quality parameters and ocean conditions measured during the month for the South Bay outfall region. Also included are summaries of compliance with the bacterial water-contact standards specified in the California Ocean Plan. These data are also presented in the monthly report submitted by the International Boundary and Water Commission, U.S. Section for discharge from the South Bay International Wastewater Treatment Plant (Order No. R9-2014-0009, NPDES Permit No. CA0108928).

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

Sincerely,

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

TS/gfw

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 July, each of the eight shore stations was in compliance with all water-contact standards specified in the California Ocean Plan (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 (<https://www.sandiego.gov/mwwd/environment/oceanmonitor/reports>).
- 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 July (i.e. July 6, 12, 18, 25, 30).
- During July, 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 11.78 to 23.67°C during the month. The difference between surface and bottom waters ranged from 2.66 to 10.41°C, indicating that the water column was stratified at each of the kelp bed stations during the month.
- Chlorophyll *a* concentrations ranged from 0.39 to 12.81 µg/L during July, suggesting the presence of phytoplankton blooms during the month.

- There were no notable visual observations for July.

Offshore Stations

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



TABLES AND FIGURES

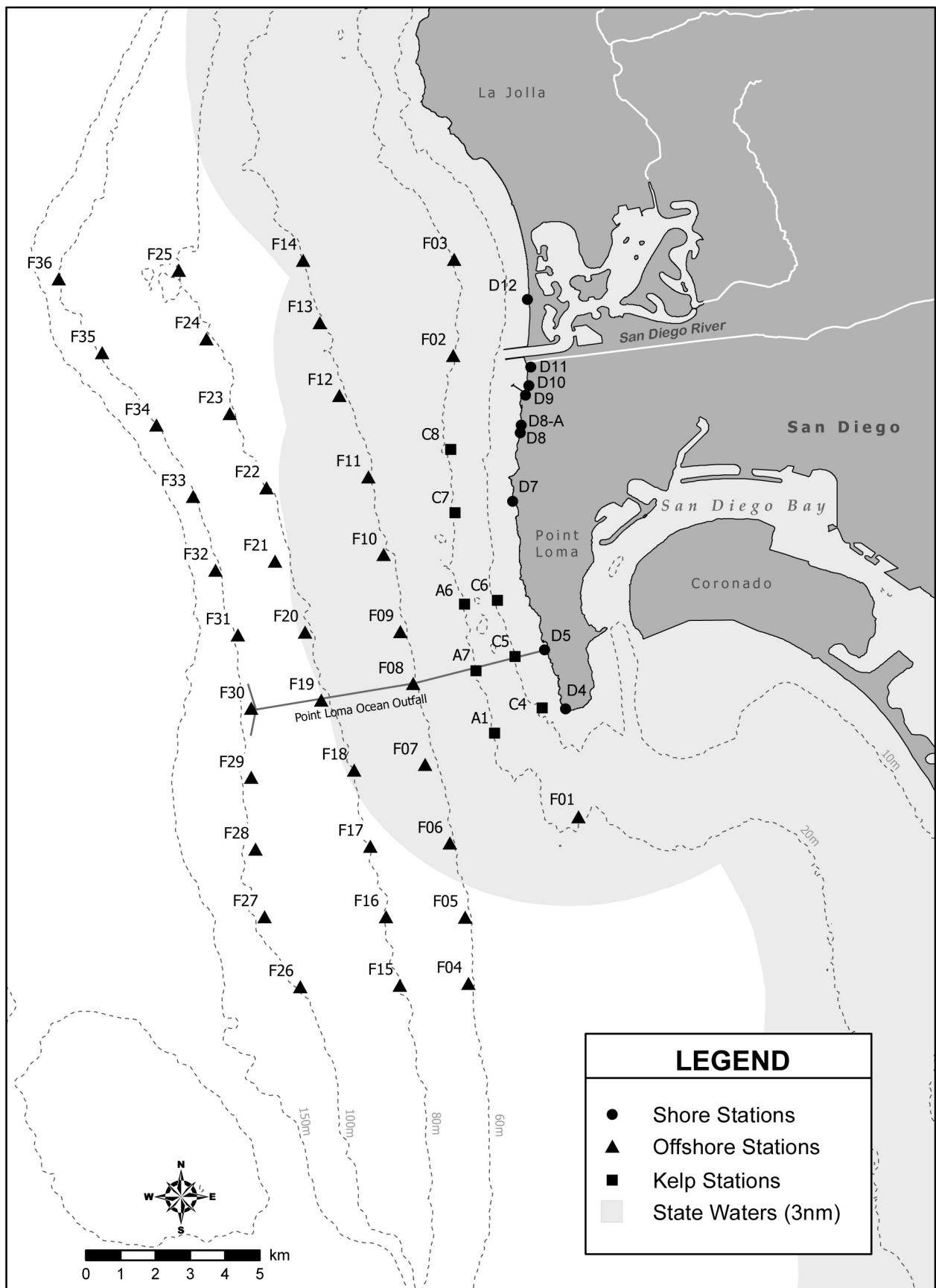


Figure 1.1 Station Map

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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 Jul 2017	13	24	32	32	42	36	25	13
02 Jul 2017	13	24	32	32	42	36	25	13
03 Jul 2017	13	24	32	32	42	36	25	13
04 Jul 2017	13	24	50	32	60	36	25	8
05 Jul 2017	13	24	50	32	60	36	25	8
06 Jul 2017	13	24	50	32	60	36	25	8
07 Jul 2017	13	24	50	32	60	36	25	8
08 Jul 2017	13	24	50	32	60	36	25	8
09 Jul 2017	13	24	50	32	60	36	25	8
10 Jul 2017	13	20	80	39	60	42	32	8
11 Jul 2017	13	20	80	39	60	42	32	8
12 Jul 2017	13	20	80	39	60	42	32	8
13 Jul 2017	13	20	80	39	60	42	32	8
14 Jul 2017	13	20	80	39	60	42	32	8
15 Jul 2017	13	20	80	39	60	42	32	8
16 Jul 2017	20	20	80	39	33	42	54	13
17 Jul 2017	20	20	80	39	33	42	54	13
18 Jul 2017	20	20	80	39	33	42	54	13
19 Jul 2017	20	20	80	39	33	42	54	13
20 Jul 2017	20	20	80	39	33	42	54	13
21 Jul 2017	20	20	80	39	33	42	54	13
22 Jul 2017	20	32	63	39	24	30	78	13
23 Jul 2017	20	32	63	39	24	30	78	13
24 Jul 2017	20	32	63	39	24	30	78	13
25 Jul 2017	20	32	63	39	24	30	78	13
26 Jul 2017	20	32	63	39	24	30	78	13
27 Jul 2017	20	32	63	39	24	30	78	13
28 Jul 2017	32	32	99	45	24	38	90	13
29 Jul 2017	32	32	99	45	24	38	90	13
30 Jul 2017	32	32	99	45	24	38	90	13
31 Jul 2017	32	32	99	45	24	38	90	13

* 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 Jul 2017	2	2	5	2	2	5	4	2
02 Jul 2017	2	2	5	2	2	5	4	2
03 Jul 2017	2	2	5	2	2	5	4	2
04 Jul 2017	2	3	8	2	2	5	6	2
05 Jul 2017	2	3	8	2	2	5	6	2
06 Jul 2017	2	3	8	2	2	5	6	2
07 Jul 2017	2	3	8	2	2	5	6	2
08 Jul 2017	2	3	8	2	2	5	6	2
09 Jul 2017	2	3	8	2	2	5	6	2
10 Jul 2017	2	3	7	2	2	5	5	2
11 Jul 2017	2	3	7	2	2	5	5	2
12 Jul 2017	2	3	7	2	2	5	5	2
13 Jul 2017	2	3	7	2	2	5	5	2
14 Jul 2017	2	3	7	2	2	5	5	2
15 Jul 2017	2	3	7	2	2	5	5	2
16 Jul 2017	2	3	7	2	2	4	8	2
17 Jul 2017	2	3	7	2	2	4	8	2
18 Jul 2017	2	3	7	2	2	4	8	2
19 Jul 2017	2	3	7	2	2	4	8	2
20 Jul 2017	2	3	7	2	2	4	8	2
21 Jul 2017	2	3	7	2	2	4	8	2
22 Jul 2017	2	3	6	2	2	6	11	2
23 Jul 2017	2	3	6	2	2	6	11	2
24 Jul 2017	2	3	6	2	2	6	11	2
25 Jul 2017	2	3	6	2	2	6	11	2
26 Jul 2017	2	3	6	2	2	6	11	2
27 Jul 2017	2	3	6	2	2	6	11	2
28 Jul 2017	2	3	6	2	2	8	7	2
29 Jul 2017	2	3	6	2	2	8	7	2
30 Jul 2017	2	3	6	2	2	8	7	2
31 Jul 2017	2	3	6	2	2	8	7	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 Jul 2017	3	2	3	2	3	5	5	2
02 Jul 2017	3	2	3	2	3	5	5	2
03 Jul 2017	3	2	3	2	3	5	5	2
04 Jul 2017	3	2	5	2	3	7	5	2
05 Jul 2017	3	2	5	2	3	7	5	2
06 Jul 2017	3	2	5	2	3	7	5	2
07 Jul 2017	3	2	5	2	3	7	5	2
08 Jul 2017	3	2	5	2	3	7	5	2
09 Jul 2017	3	2	5	2	3	7	5	2
10 Jul 2017	3	2	5	2	3	6	5	2
11 Jul 2017	3	2	5	2	3	6	5	2
12 Jul 2017	3	2	5	2	3	6	5	2
13 Jul 2017	3	2	5	2	3	6	5	2
14 Jul 2017	3	2	5	2	3	6	5	2
15 Jul 2017	3	2	5	2	3	6	5	2
16 Jul 2017	3	2	5	2	3	6	7	2
17 Jul 2017	3	2	5	2	3	6	7	2
18 Jul 2017	3	2	5	2	3	6	7	2
19 Jul 2017	3	2	5	2	3	6	7	2
20 Jul 2017	3	2	5	2	3	6	7	2
21 Jul 2017	3	2	5	2	3	6	7	2
22 Jul 2017	2	2	4	3	2	3	7	2
23 Jul 2017	2	2	4	3	2	3	7	2
24 Jul 2017	2	2	4	3	2	3	7	2
25 Jul 2017	2	2	4	3	2	3	7	2
26 Jul 2017	2	2	4	3	2	3	7	2
27 Jul 2017	2	2	4	3	2	3	7	2
28 Jul 2017	2	2	4	3	2	3	4	2
29 Jul 2017	2	2	4	3	2	3	5	2
30 Jul 2017	2	2	4	3	2	3	5	2
31 Jul 2017	2	2	4	3	2	3	5	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
04 Jul 2017	IC	IC	IC	IC	IC	IC	IC	IC
10 Jul 2017	IC	IC	IC	IC	IC	IC	IC	IC
16 Jul 2017	IC	IC	IC	IC	IC	IC	IC	IC
22 Jul 2017	IC	IC	IC	IC	IC	IC	IC	IC
28 Jul 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
04 Jul 2017	IC	IC	IC	IC	IC	IC	IC	IC
10 Jul 2017	IC	IC	IC	IC	IC	IC	IC	IC
16 Jul 2017	IC	IC	IC	IC	IC	IC	IC	IC
22 Jul 2017	IC	IC	IC	IC	IC	IC	IC	IC
28 Jul 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
04 Jul 2017	IC	IC	IC	IC	IC	IC	IC	IC
10 Jul 2017	IC	IC	IC	IC	IC	IC	IC	IC
16 Jul 2017	IC	IC	IC	IC	IC	IC	IC	IC
22 Jul 2017	IC	IC	IC	IC	IC	IC	IC	IC
28 Jul 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
04 Jul 2017	IC	IC	IC	IC	IC	IC	IC	IC
10 Jul 2017	IC	IC	IC	IC	IC	IC	IC	IC
16 Jul 2017	IC	IC	IC	IC	IC	IC	IC	IC
22 Jul 2017	IC	IC	IC	IC	IC	IC	IC	IC
28 Jul 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	04 Jul 2017	658	<20	<2	4e	0.10
	10 Jul 2017	907	<20	<2	2e	0.10
	16 Jul 2017	735	<20	<2	<2	0.10
	22 Jul 2017	1055	<200	<2	2e	0.01
	28 Jul 2017	1001	<20	<2	<2	0.10
D5	04 Jul 2017	646	<20	<20	6e	1.00
	10 Jul 2017	852	<20	2e	2e	0.10
	16 Jul 2017	718	<20	<2	2e	0.10
	22 Jul 2017	1115	<200	<2	<2	0.01
	28 Jul 2017	1029	<20	<2	<2	0.10
D7	04 Jul 2017	629	<200	<20	22e	0.10
	10 Jul 2017	942	<200	4e	<2	0.02
	16 Jul 2017	801	<20	<2	<2	0.10
	22 Jul 2017	1016	60e	26e	10e	0.43
	28 Jul 2017	924	<200	<2	<2	0.01
D8-A	04 Jul 2017	623	20e	<2	<2	0.10
	10 Jul 2017	955	60e	2e	<2	0.03
	16 Jul 2017	817	20e	<2	2e	0.10
	22 Jul 2017	832	<200	2e	10e	0.01
	28 Jul 2017	912	40e	<2	<2	0.05
D9	04 Jul 2017	614	120e	<2	<2	0.02
	10 Jul 2017	1015	20e	<2	2e	0.10
	16 Jul 2017	829	4e	<2	<2	0.50
	22 Jul 2017	955	40e	<2	2e	0.05
	28 Jul 2017	858	20e	<2	<2	0.10
D10	04 Jul 2017	606	40e	8e	8e	0.20
	10 Jul 2017	1028	40e	<20	2e	0.50
	16 Jul 2017	849	<20	<2	<2	0.10
	22 Jul 2017	943	40e	8e	2e	0.20
	28 Jul 2017	840	60e	10e	8e	0.17
D11	04 Jul 2017	600	<20	<20	2e	1.00
	10 Jul 2017	1040	<200	2e	2e	0.01
	16 Jul 2017	905	300e	20e	20e	0.07
	22 Jul 2017	930	120e	10e	6e	0.08
	28 Jul 2017	826	40e	2e	8e	0.05

Station	Date	Time	Total	Fecal	Enteric	F:T
D12	04 Jul 2017	541	<2	<2	2e	1.00
D12	10 Jul 2017	1105	<20	2e	<2	0.10
D12	16 Jul 2017	929	<20	<2	<2	0.10
D12	22 Jul 2017	907	20e	<2	<2	0.10
D12	28 Jul 2017	755	<20	<2	<2	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	04 Jul 2017	Arrive Time	658
D4	04 Jul 2017	Weather	Overcast
D4	04 Jul 2017	Wind Speed (kts)	1.1
D4	04 Jul 2017	Wind Dir	W
D4	04 Jul 2017	Animal Life	None
D4	04 Jul 2017	Floatables	None
D4	04 Jul 2017	Water Color	Green
D4	04 Jul 2017	Current Direction	N
D4	04 Jul 2017	Wave Height Low (ft)	2
D4	04 Jul 2017	High Tide (ft)	3.3
D4	04 Jul 2017	High Tide Time	741
D4	04 Jul 2017	Low Tide (ft)	0.6
D4	04 Jul 2017	Low Tide Time	143
D4	04 Jul 2017	Comments	Kelp; Seagrass; Water clear
D4	10 Jul 2017	Arrive Time	907
D4	10 Jul 2017	Weather	Cloudy
D4	10 Jul 2017	Wind Speed (kts)	4.2
D4	10 Jul 2017	Wind Dir	W
D4	10 Jul 2017	Animal Life	None
D4	10 Jul 2017	Floatables	None
D4	10 Jul 2017	Water Color	Green
D4	10 Jul 2017	Current Direction	N
D4	10 Jul 2017	Wave Height Low (ft)	2
D4	10 Jul 2017	High Tide (ft)	3.9
D4	10 Jul 2017	High Tide Time	1116
D4	10 Jul 2017	Low Tide (ft)	-0.5
D4	10 Jul 2017	Low Tide Time	459
D4	10 Jul 2017	Comments	Kelp; Seagrass; Algae; Water clear
D4	16 Jul 2017	Arrive Time	735
D4	16 Jul 2017	Weather	Cloudy
D4	16 Jul 2017	Wind Speed (kts)	4.4
D4	16 Jul 2017	Wind Dir	S
D4	16 Jul 2017	Animal Life	None
D4	16 Jul 2017	Floatables	None
D4	16 Jul 2017	Water Color	Green
D4	16 Jul 2017	Current Direction	S
D4	16 Jul 2017	Wave Height Low (ft)	1
D4	16 Jul 2017	High Tide (ft)	3.7
D4	16 Jul 2017	High Tide Time	226
D4	16 Jul 2017	Low Tide (ft)	1.1
D4	16 Jul 2017	Low Tide Time	858
D4	16 Jul 2017	Comments	Kelp; Seagrass; Algae; Water clear
D4	22 Jul 2017	Arrive Time	1055
D4	22 Jul 2017	Weather	Partly Cloudy
D4	22 Jul 2017	Wind Speed (kts)	4
D4	22 Jul 2017	Wind Dir	W
D4	22 Jul 2017	Animal Life	None
D4	22 Jul 2017	Floatables	None

Station	Date	Parameter	Value
D4	22 Jul 2017	Water Color	Colorless
D4	22 Jul 2017	Current Direction	W
D4	22 Jul 2017	Wave Height Low (ft)	3
D4	22 Jul 2017	High Tide (ft)	4.3
D4	22 Jul 2017	High Tide Time	937
D4	22 Jul 2017	Low Tide (ft)	1.4
D4	22 Jul 2017	Low Tide Time	1449
D4	22 Jul 2017	Comments	Kelp; Seagrass; Water clear
D4	28 Jul 2017	Arrive Time	1001
D4	28 Jul 2017	Weather	Overcast
D4	28 Jul 2017	Wind Speed (kts)	3.6
D4	28 Jul 2017	Wind Dir	N
D4	28 Jul 2017	Animal Life	2 Pelicans
D4	28 Jul 2017	Floatables	None
D4	28 Jul 2017	Water Color	Green
D4	28 Jul 2017	Current Direction	N
D4	28 Jul 2017	Wave Height Low (ft)	1
D4	28 Jul 2017	High Tide (ft)	4.5
D4	28 Jul 2017	High Tide Time	1408
D4	28 Jul 2017	Low Tide (ft)	0.6
D4	28 Jul 2017	Low Tide Time	733
D4	28 Jul 2017	Comments	Kelp; Seagrass; Algae; Water clear
D5	04 Jul 2017	Arrive Time	646
D5	04 Jul 2017	Weather	Overcast
D5	04 Jul 2017	Wind Speed (kts)	2
D5	04 Jul 2017	Wind Dir	W
D5	04 Jul 2017	Animal Life	None
D5	04 Jul 2017	Floatables	None
D5	04 Jul 2017	Water Color	Green
D5	04 Jul 2017	Current Direction	N
D5	04 Jul 2017	Wave Height Low (ft)	2
D5	04 Jul 2017	High Tide (ft)	3.3
D5	04 Jul 2017	High Tide Time	741
D5	04 Jul 2017	Low Tide (ft)	0.6
D5	04 Jul 2017	Low Tide Time	143
D5	04 Jul 2017	Comments	Kelp; Seagrass; Algae; Water clear
D5	10 Jul 2017	Arrive Time	852
D5	10 Jul 2017	Weather	Cloudy
D5	10 Jul 2017	Wind Speed (kts)	1.5
D5	10 Jul 2017	Wind Dir	W
D5	10 Jul 2017	Animal Life	None
D5	10 Jul 2017	Floatables	None
D5	10 Jul 2017	Water Color	Green
D5	10 Jul 2017	Current Direction	N
D5	10 Jul 2017	Wave Height Low (ft)	1
D5	10 Jul 2017	High Tide (ft)	3.9
D5	10 Jul 2017	High Tide Time	1116
D5	10 Jul 2017	Low Tide (ft)	-0.5
D5	10 Jul 2017	Low Tide Time	459
D5	10 Jul 2017	Comments	Kelp; Seagrass; Algae; Water clear
D5	16 Jul 2017	Arrive Time	718

Station	Date	Parameter	Value
D5	16 Jul 2017	Weather	Foggy
D5	16 Jul 2017	Wind Speed (kts)	1.6
D5	16 Jul 2017	Wind Dir	SW
D5	16 Jul 2017	Animal Life	None
D5	16 Jul 2017	Floatables	None
D5	16 Jul 2017	Water Color	Green
D5	16 Jul 2017	Current Direction	SW
D5	16 Jul 2017	Wave Height Low (ft)	1
D5	16 Jul 2017	High Tide (ft)	3.7
D5	16 Jul 2017	High Tide Time	226
D5	16 Jul 2017	Low Tide (ft)	1.1
D5	16 Jul 2017	Low Tide Time	858
D5	16 Jul 2017	Comments	Kelp; Seagrass; Water clear
D5	22 Jul 2017	Arrive Time	1115
D5	22 Jul 2017	Weather	Partly Cloudy
D5	22 Jul 2017	Wind Speed (kts)	4
D5	22 Jul 2017	Wind Dir	W
D5	22 Jul 2017	Animal Life	None
D5	22 Jul 2017	Floatables	None
D5	22 Jul 2017	Water Color	Brown
D5	22 Jul 2017	Current Direction	W
D5	22 Jul 2017	Wave Height Low (ft)	3
D5	22 Jul 2017	High Tide (ft)	4.3
D5	22 Jul 2017	High Tide Time	937
D5	22 Jul 2017	Low Tide (ft)	1.4
D5	22 Jul 2017	Low Tide Time	1449
D5	22 Jul 2017	Comments	Kelp; Seagrass; Water turbid
D5	28 Jul 2017	Arrive Time	1029
D5	28 Jul 2017	Weather	Overcast
D5	28 Jul 2017	Wind Speed (kts)	3.1
D5	28 Jul 2017	Wind Dir	N
D5	28 Jul 2017	Animal Life	None
D5	28 Jul 2017	Floatables	None
D5	28 Jul 2017	Water Color	Green
D5	28 Jul 2017	Current Direction	N
D5	28 Jul 2017	Wave Height Low (ft)	1
D5	28 Jul 2017	High Tide (ft)	4.5
D5	28 Jul 2017	High Tide Time	1408
D5	28 Jul 2017	Low Tide (ft)	0.6
D5	28 Jul 2017	Low Tide Time	733
D5	28 Jul 2017	Comments	Seagrass; Water clear
D7	04 Jul 2017	Arrive Time	629
D7	04 Jul 2017	Weather	Overcast
D7	04 Jul 2017	Wind Speed (kts)	3.1
D7	04 Jul 2017	Wind Dir	W
D7	04 Jul 2017	Animal Life	None
D7	04 Jul 2017	Floatables	None
D7	04 Jul 2017	Water Color	Green
D7	04 Jul 2017	Current Direction	N
D7	04 Jul 2017	Wave Height Low (ft)	3
D7	04 Jul 2017	High Tide (ft)	3.3
D7	04 Jul 2017	High Tide Time	741

Station	Date	Parameter	Value
D7	04 Jul 2017	Low Tide (ft)	0.6
D7	04 Jul 2017	Low Tide Time	143
D7	04 Jul 2017	Comments	Kelp; Seagrass; 4 Surfers; Water clear
D7	10 Jul 2017	Arrive Time	942
D7	10 Jul 2017	Weather	Cloudy
D7	10 Jul 2017	Wind Speed (kts)	2.2
D7	10 Jul 2017	Wind Dir	W
D7	10 Jul 2017	Animal Life	None
D7	10 Jul 2017	Floatables	None
D7	10 Jul 2017	Water Color	Green
D7	10 Jul 2017	Current Direction	N
D7	10 Jul 2017	Wave Height Low (ft)	4
D7	10 Jul 2017	High Tide (ft)	3.9
D7	10 Jul 2017	High Tide Time	1116
D7	10 Jul 2017	Low Tide (ft)	-0.5
D7	10 Jul 2017	Low Tide Time	459
D7	10 Jul 2017	Comments	Kelp; Seagrass; 8 Persons; 10 Surfers; Water clear
D7	16 Jul 2017	Arrive Time	801
D7	16 Jul 2017	Weather	Cloudy
D7	16 Jul 2017	Wind Speed (kts)	3.4
D7	16 Jul 2017	Wind Dir	S
D7	16 Jul 2017	Animal Life	1 Dog
D7	16 Jul 2017	Floatables	None
D7	16 Jul 2017	Water Color	Green
D7	16 Jul 2017	Current Direction	S
D7	16 Jul 2017	Wave Height Low (ft)	1
D7	16 Jul 2017	High Tide (ft)	3.7
D7	16 Jul 2017	High Tide Time	226
D7	16 Jul 2017	Low Tide (ft)	1.1
D7	16 Jul 2017	Low Tide Time	858
D7	16 Jul 2017	Comments	Kelp; Seagrass; 2 Persons; Water clear
D7	22 Jul 2017	Arrive Time	1016
D7	22 Jul 2017	Weather	Partly Cloudy
D7	22 Jul 2017	Wind Speed (kts)	4
D7	22 Jul 2017	Wind Dir	W
D7	22 Jul 2017	Animal Life	None
D7	22 Jul 2017	Floatables	None
D7	22 Jul 2017	Water Color	Green
D7	22 Jul 2017	Current Direction	W
D7	22 Jul 2017	Wave Height Low (ft)	4
D7	22 Jul 2017	High Tide (ft)	4.3
D7	22 Jul 2017	High Tide Time	937
D7	22 Jul 2017	Low Tide (ft)	1.4
D7	22 Jul 2017	Low Tide Time	1449
D7	22 Jul 2017	Comments	Kelp; Seagrass; 3 Surfers; Water turbid
D7	28 Jul 2017	Arrive Time	924
D7	28 Jul 2017	Weather	Overcast
D7	28 Jul 2017	Wind Speed (kts)	1.1
D7	28 Jul 2017	Wind Dir	W
D7	28 Jul 2017	Animal Life	None
D7	28 Jul 2017	Floatables	None

Station	Date	Parameter	Value
D7	28 Jul 2017	Water Color	Green
D7	28 Jul 2017	Current Direction	W
D7	28 Jul 2017	Wave Height Low (ft)	1
D7	28 Jul 2017	High Tide (ft)	4.5
D7	28 Jul 2017	High Tide Time	1408
D7	28 Jul 2017	Low Tide (ft)	0.6
D7	28 Jul 2017	Low Tide Time	733
D7	28 Jul 2017	Comments	Kelp; Seagrass; Algae; Water clear
D8-A	04 Jul 2017	Arrive Time	623
D8-A	04 Jul 2017	Weather	Overcast
D8-A	04 Jul 2017	Wind Speed (kts)	2.3
D8-A	04 Jul 2017	Wind Dir	W
D8-A	04 Jul 2017	Animal Life	None
D8-A	04 Jul 2017	Floatables	None
D8-A	04 Jul 2017	Water Color	Green
D8-A	04 Jul 2017	Current Direction	N
D8-A	04 Jul 2017	Wave Height Low (ft)	3
D8-A	04 Jul 2017	High Tide (ft)	3.3
D8-A	04 Jul 2017	High Tide Time	741
D8-A	04 Jul 2017	Low Tide (ft)	0.6
D8-A	04 Jul 2017	Low Tide Time	143
D8-A	04 Jul 2017	Comments	Kelp; Seagrass; Algae; Water clear
D8-A	10 Jul 2017	Arrive Time	955
D8-A	10 Jul 2017	Weather	Cloudy
D8-A	10 Jul 2017	Wind Speed (kts)	3.3
D8-A	10 Jul 2017	Wind Dir	W
D8-A	10 Jul 2017	Animal Life	None
D8-A	10 Jul 2017	Floatables	None
D8-A	10 Jul 2017	Water Color	Green
D8-A	10 Jul 2017	Current Direction	N
D8-A	10 Jul 2017	Wave Height Low (ft)	3
D8-A	10 Jul 2017	High Tide (ft)	3.9
D8-A	10 Jul 2017	High Tide Time	1116
D8-A	10 Jul 2017	Low Tide (ft)	-0.5
D8-A	10 Jul 2017	Low Tide Time	459
D8-A	10 Jul 2017	Comments	Kelp; Seagrass; Algae; 3 Surfers; Water clear
D8-A	16 Jul 2017	Arrive Time	817
D8-A	16 Jul 2017	Weather	Cloudy
D8-A	16 Jul 2017	Wind Speed (kts)	2.5
D8-A	16 Jul 2017	Wind Dir	S
D8-A	16 Jul 2017	Animal Life	None
D8-A	16 Jul 2017	Floatables	None
D8-A	16 Jul 2017	Water Color	Green
D8-A	16 Jul 2017	Current Direction	S
D8-A	16 Jul 2017	Wave Height Low (ft)	1
D8-A	16 Jul 2017	High Tide (ft)	3.7
D8-A	16 Jul 2017	High Tide Time	226
D8-A	16 Jul 2017	Low Tide (ft)	1.1
D8-A	16 Jul 2017	Low Tide Time	858
D8-A	16 Jul 2017	Comments	Kelp; Seagrass; Algae; Water clear; Lots of kelp in the water
D8-A	22 Jul 2017	Arrive Time	832

Station	Date	Parameter	Value
D8-A	22 Jul 2017	Weather	Partly Cloudy
D8-A	22 Jul 2017	Wind Speed (kts)	2
D8-A	22 Jul 2017	Wind Dir	W
D8-A	22 Jul 2017	Animal Life	None
D8-A	22 Jul 2017	Floatables	None
D8-A	22 Jul 2017	Water Color	Green
D8-A	22 Jul 2017	Current Direction	W
D8-A	22 Jul 2017	Wave Height Low (ft)	3
D8-A	22 Jul 2017	High Tide (ft)	4.3
D8-A	22 Jul 2017	High Tide Time	937
D8-A	22 Jul 2017	Low Tide (ft)	-1.3
D8-A	22 Jul 2017	Low Tide Time	321
D8-A	22 Jul 2017	Comments	Kelp; Seagrass; Algae; Water turbid
D8-A	28 Jul 2017	Arrive Time	912
D8-A	28 Jul 2017	Weather	Overcast
D8-A	28 Jul 2017	Wind Speed (kts)	3.4
D8-A	28 Jul 2017	Wind Dir	NW
D8-A	28 Jul 2017	Animal Life	None
D8-A	28 Jul 2017	Floatables	None
D8-A	28 Jul 2017	Water Color	Green
D8-A	28 Jul 2017	Current Direction	NW
D8-A	28 Jul 2017	Wave Height Low (ft)	1
D8-A	28 Jul 2017	High Tide (ft)	4.5
D8-A	28 Jul 2017	High Tide Time	1408
D8-A	28 Jul 2017	Low Tide (ft)	0.6
D8-A	28 Jul 2017	Low Tide Time	733
D8-A	28 Jul 2017	Comments	Kelp; Seagrass; Algae; Water clear
D9	04 Jul 2017	Arrive Time	614
D9	04 Jul 2017	Weather	Overcast
D9	04 Jul 2017	Wind Speed (kts)	2.2
D9	04 Jul 2017	Wind Dir	W
D9	04 Jul 2017	Animal Life	None
D9	04 Jul 2017	Floatables	None
D9	04 Jul 2017	Water Color	Green
D9	04 Jul 2017	Current Direction	N
D9	04 Jul 2017	Wave Height Low (ft)	2
D9	04 Jul 2017	High Tide (ft)	3.3
D9	04 Jul 2017	High Tide Time	741
D9	04 Jul 2017	Low Tide (ft)	0.6
D9	04 Jul 2017	Low Tide Time	143
D9	04 Jul 2017	Comments	Kelp; Seagrass; Water clear
D9	10 Jul 2017	Arrive Time	1015
D9	10 Jul 2017	Weather	Cloudy
D9	10 Jul 2017	Wind Speed (kts)	2.1
D9	10 Jul 2017	Wind Dir	W
D9	10 Jul 2017	Animal Life	None
D9	10 Jul 2017	Floatables	None
D9	10 Jul 2017	Water Color	Green
D9	10 Jul 2017	Current Direction	N
D9	10 Jul 2017	Wave Height Low (ft)	2
D9	10 Jul 2017	High Tide (ft)	3.9
D9	10 Jul 2017	High Tide Time	1116

Station	Date	Parameter	Value
D9	10 Jul 2017	Low Tide (ft)	-0.5
D9	10 Jul 2017	Low Tide Time	459
D9	10 Jul 2017	Comments	Kelp; Seagrass; Algae; Water clear
D9	16 Jul 2017	Arrive Time	829
D9	16 Jul 2017	Weather	Cloudy
D9	16 Jul 2017	Wind Speed (kts)	1.4
D9	16 Jul 2017	Wind Dir	S
D9	16 Jul 2017	Animal Life	None
D9	16 Jul 2017	Floatables	None
D9	16 Jul 2017	Water Color	Green
D9	16 Jul 2017	Current Direction	S
D9	16 Jul 2017	Wave Height Low (ft)	1
D9	16 Jul 2017	High Tide (ft)	3.7
D9	16 Jul 2017	High Tide Time	226
D9	16 Jul 2017	Low Tide (ft)	1.1
D9	16 Jul 2017	Low Tide Time	858
D9	16 Jul 2017	Comments	Kelp; Seagrass; Algae; 3 Persons; Water clear
D9	22 Jul 2017	Arrive Time	955
D9	22 Jul 2017	Weather	Partly Cloudy
D9	22 Jul 2017	Wind Speed (kts)	4
D9	22 Jul 2017	Wind Dir	W
D9	22 Jul 2017	Animal Life	None
D9	22 Jul 2017	Floatables	None
D9	22 Jul 2017	Water Color	Green
D9	22 Jul 2017	Current Direction	W
D9	22 Jul 2017	Wave Height Low (ft)	3
D9	22 Jul 2017	High Tide (ft)	4.3
D9	22 Jul 2017	High Tide Time	937
D9	22 Jul 2017	Low Tide (ft)	1.4
D9	22 Jul 2017	Low Tide Time	1449
D9	22 Jul 2017	Comments	Kelp; Seagrass; Water turbid
D9	28 Jul 2017	Arrive Time	858
D9	28 Jul 2017	Weather	Overcast
D9	28 Jul 2017	Wind Speed (kts)	1.1
D9	28 Jul 2017	Wind Dir	W
D9	28 Jul 2017	Animal Life	None
D9	28 Jul 2017	Floatables	None
D9	28 Jul 2017	Water Color	Green
D9	28 Jul 2017	Current Direction	W
D9	28 Jul 2017	Wave Height Low (ft)	2
D9	28 Jul 2017	High Tide (ft)	4.5
D9	28 Jul 2017	High Tide Time	1408
D9	28 Jul 2017	Low Tide (ft)	0.6
D9	28 Jul 2017	Low Tide Time	733
D9	28 Jul 2017	Comments	Kelp; Seagrass; Algae; 4 Persons; Water clear
D10	04 Jul 2017	Arrive Time	606
D10	04 Jul 2017	Weather	Overcast
D10	04 Jul 2017	Wind Speed (kts)	2.5
D10	04 Jul 2017	Wind Dir	W
D10	04 Jul 2017	Animal Life	None
D10	04 Jul 2017	Floatables	None

Station	Date	Parameter	Value
D10	04 Jul 2017	Water Color	Green
D10	04 Jul 2017	Current Direction	N
D10	04 Jul 2017	Wave Height Low (ft)	3
D10	04 Jul 2017	High Tide (ft)	3.3
D10	04 Jul 2017	High Tide Time	741
D10	04 Jul 2017	Low Tide (ft)	0.6
D10	04 Jul 2017	Low Tide Time	143
D10	04 Jul 2017	Comments	Kelp; Seagrass; 8 Persons; 4 Surfers; Water clear
D10	10 Jul 2017	Arrive Time	1028
D10	10 Jul 2017	Weather	Cloudy
D10	10 Jul 2017	Wind Speed (kts)	3.5
D10	10 Jul 2017	Wind Dir	W
D10	10 Jul 2017	Animal Life	None
D10	10 Jul 2017	Floatables	None
D10	10 Jul 2017	Water Color	Green
D10	10 Jul 2017	Current Direction	N
D10	10 Jul 2017	Wave Height Low (ft)	3
D10	10 Jul 2017	High Tide (ft)	3.9
D10	10 Jul 2017	High Tide Time	1116
D10	10 Jul 2017	Low Tide (ft)	-0.5
D10	10 Jul 2017	Low Tide Time	459
D10	10 Jul 2017	Comments	Kelp; Seagrass; 300 Persons; 14 Surfers; 55 Swimmers; Water clear
D10	16 Jul 2017	Arrive Time	849
D10	16 Jul 2017	Weather	Cloudy
D10	16 Jul 2017	Wind Speed (kts)	4.3
D10	16 Jul 2017	Wind Dir	S
D10	16 Jul 2017	Animal Life	None
D10	16 Jul 2017	Floatables	None
D10	16 Jul 2017	Water Color	Green
D10	16 Jul 2017	Current Direction	S
D10	16 Jul 2017	Wave Height Low (ft)	2
D10	16 Jul 2017	High Tide (ft)	3.7
D10	16 Jul 2017	High Tide Time	226
D10	16 Jul 2017	Low Tide (ft)	1.1
D10	16 Jul 2017	Low Tide Time	858
D10	16 Jul 2017	Comments	Kelp; 16 Persons; 25 Surfers; 18 Swimmers; Water clear
D10	22 Jul 2017	Arrive Time	943
D10	22 Jul 2017	Weather	Partly Cloudy
D10	22 Jul 2017	Wind Speed (kts)	4
D10	22 Jul 2017	Wind Dir	W
D10	22 Jul 2017	Animal Life	None
D10	22 Jul 2017	Floatables	None
D10	22 Jul 2017	Water Color	Green
D10	22 Jul 2017	Current Direction	W
D10	22 Jul 2017	Wave Height Low (ft)	3
D10	22 Jul 2017	High Tide (ft)	4.3
D10	22 Jul 2017	High Tide Time	937
D10	22 Jul 2017	Low Tide (ft)	1.4
D10	22 Jul 2017	Low Tide Time	1449
D10	22 Jul 2017	Comments	Kelp; Seagrass; 20 Swimmers; Water turbid

Station	Date	Parameter	Value
D10	28 Jul 2017	Arrive Time	840
D10	28 Jul 2017	Weather	Overcast
D10	28 Jul 2017	Wind Speed (kts)	4.4
D10	28 Jul 2017	Wind Dir	NW
D10	28 Jul 2017	Animal Life	2 Birds
D10	28 Jul 2017	Floatables	None
D10	28 Jul 2017	Water Color	Green
D10	28 Jul 2017	Current Direction	NW
D10	28 Jul 2017	Wave Height Low (ft)	2
D10	28 Jul 2017	High Tide (ft)	4.5
D10	28 Jul 2017	High Tide Time	1408
D10	28 Jul 2017	Low Tide (ft)	0.6
D10	28 Jul 2017	Low Tide Time	733
D10	28 Jul 2017	Comments	Kelp; 4 Persons; 10 Surfers; Water clear
D11	04 Jul 2017	Arrive Time	600
D11	04 Jul 2017	Weather	Overcast
D11	04 Jul 2017	Wind Speed (kts)	2.6
D11	04 Jul 2017	Wind Dir	W
D11	04 Jul 2017	Animal Life	None
D11	04 Jul 2017	Floatables	None
D11	04 Jul 2017	Water Color	Green
D11	04 Jul 2017	Current Direction	N
D11	04 Jul 2017	Wave Height Low (ft)	3
D11	04 Jul 2017	High Tide (ft)	3.3
D11	04 Jul 2017	High Tide Time	741
D11	04 Jul 2017	Low Tide (ft)	0.6
D11	04 Jul 2017	Low Tide Time	143
D11	04 Jul 2017	Comments	Kelp; Seagrass; 14 Persons; Water clear
D11	10 Jul 2017	Arrive Time	1040
D11	10 Jul 2017	Weather	Cloudy
D11	10 Jul 2017	Wind Speed (kts)	1.7
D11	10 Jul 2017	Wind Dir	W
D11	10 Jul 2017	Animal Life	15 Dogs
D11	10 Jul 2017	Floatables	None
D11	10 Jul 2017	Water Color	Green
D11	10 Jul 2017	Current Direction	N
D11	10 Jul 2017	Wave Height Low (ft)	3
D11	10 Jul 2017	High Tide (ft)	3.9
D11	10 Jul 2017	High Tide Time	1116
D11	10 Jul 2017	Low Tide (ft)	-0.5
D11	10 Jul 2017	Low Tide Time	459
D11	10 Jul 2017	Comments	Kelp; Seagrass; 42 Persons; 7 Surfers; 2 Swimmers; Water clear
D11	16 Jul 2017	Arrive Time	905
D11	16 Jul 2017	Weather	Cloudy
D11	16 Jul 2017	Wind Speed (kts)	6.8
D11	16 Jul 2017	Wind Dir	S
D11	16 Jul 2017	Animal Life	None
D11	16 Jul 2017	Floatables	None
D11	16 Jul 2017	Water Color	Green
D11	16 Jul 2017	Current Direction	S
D11	16 Jul 2017	Wave Height Low (ft)	2
D11	16 Jul 2017	High Tide (ft)	3.7

Station	Date	Parameter	Value
D11	16 Jul 2017	High Tide Time	226
D11	16 Jul 2017	Low Tide (ft)	1.1
D11	16 Jul 2017	Low Tide Time	858
D11	16 Jul 2017	Comments	29 Persons; 11 Surfers; 2 Swimmers; Water clear
D11	22 Jul 2017	Arrive Time	930
D11	22 Jul 2017	Weather	Partly Cloudy
D11	22 Jul 2017	Wind Speed (kts)	4
D11	22 Jul 2017	Wind Dir	W
D11	22 Jul 2017	Animal Life	None
D11	22 Jul 2017	Floatables	None
D11	22 Jul 2017	Water Color	Green
D11	22 Jul 2017	Current Direction	W
D11	22 Jul 2017	Wave Height Low (ft)	3
D11	22 Jul 2017	High Tide (ft)	4.3
D11	22 Jul 2017	High Tide Time	937
D11	22 Jul 2017	Low Tide (ft)	1.4
D11	22 Jul 2017	Low Tide Time	1449
D11	22 Jul 2017	Comments	Kelp; Seagrass; 20 Swimmers; Water turbid
D11	28 Jul 2017	Arrive Time	826
D11	28 Jul 2017	Weather	Overcast
D11	28 Jul 2017	Wind Speed (kts)	2.3
D11	28 Jul 2017	Wind Dir	NW
D11	28 Jul 2017	Animal Life	4 Dogs
D11	28 Jul 2017	Floatables	None
D11	28 Jul 2017	Water Color	Green
D11	28 Jul 2017	Current Direction	NW
D11	28 Jul 2017	Wave Height Low (ft)	2
D11	28 Jul 2017	High Tide (ft)	4.5
D11	28 Jul 2017	High Tide Time	1408
D11	28 Jul 2017	Low Tide (ft)	0.6
D11	28 Jul 2017	Low Tide Time	733
D11	28 Jul 2017	Comments	Seagrass; 3 Joggers; 6 Surfers; Water clear
D12	04 Jul 2017	Arrive Time	541
D12	04 Jul 2017	Weather	Overcast
D12	04 Jul 2017	Wind Speed (kts)	2.1
D12	04 Jul 2017	Wind Dir	W
D12	04 Jul 2017	Animal Life	None
D12	04 Jul 2017	Floatables	None
D12	04 Jul 2017	Water Color	Green
D12	04 Jul 2017	Current Direction	N
D12	04 Jul 2017	Wave Height Low (ft)	2
D12	04 Jul 2017	High Tide (ft)	3.3
D12	04 Jul 2017	High Tide Time	741
D12	04 Jul 2017	Low Tide (ft)	0.6
D12	04 Jul 2017	Low Tide Time	143
D12	04 Jul 2017	Comments	Kelp; Seagrass; 3 Persons; Water clear
D12	10 Jul 2017	Arrive Time	1105
D12	10 Jul 2017	Weather	Cloudy
D12	10 Jul 2017	Wind Speed (kts)	3.6
D12	10 Jul 2017	Wind Dir	W
D12	10 Jul 2017	Animal Life	None

Station	Date	Parameter	Value
D12	10 Jul 2017	Floatables	None
D12	10 Jul 2017	Water Color	Blue
D12	10 Jul 2017	Current Direction	N
D12	10 Jul 2017	Wave Height Low (ft)	3
D12	10 Jul 2017	High Tide (ft)	3.9
D12	10 Jul 2017	High Tide Time	1116
D12	10 Jul 2017	Low Tide (ft)	2
D12	10 Jul 2017	Low Tide Time	1618
D12	10 Jul 2017	Comments	Kelp; Seagrass; 150 Persons; 36 Swimmers; Water clear
D12	16 Jul 2017	Arrive Time	929
D12	16 Jul 2017	Weather	Cloudy
D12	16 Jul 2017	Wind Speed (kts)	4.6
D12	16 Jul 2017	Wind Dir	S
D12	16 Jul 2017	Animal Life	None
D12	16 Jul 2017	Floatables	None
D12	16 Jul 2017	Water Color	Green
D12	16 Jul 2017	Current Direction	S
D12	16 Jul 2017	Wave Height Low (ft)	1
D12	16 Jul 2017	High Tide (ft)	4.7
D12	16 Jul 2017	High Tide Time	1547
D12	16 Jul 2017	Low Tide (ft)	1.1
D12	16 Jul 2017	Low Tide Time	858
D12	16 Jul 2017	Comments	40 Persons; 2 Surfers; 21 Swimmers; Water clear
D12	22 Jul 2017	Arrive Time	907
D12	22 Jul 2017	Weather	Partly Cloudy
D12	22 Jul 2017	Wind Speed (kts)	3
D12	22 Jul 2017	Wind Dir	W
D12	22 Jul 2017	Animal Life	None
D12	22 Jul 2017	Floatables	None
D12	22 Jul 2017	Water Color	Blue
D12	22 Jul 2017	Current Direction	W
D12	22 Jul 2017	Wave Height Low (ft)	3
D12	22 Jul 2017	High Tide (ft)	4.3
D12	22 Jul 2017	High Tide Time	937
D12	22 Jul 2017	Low Tide (ft)	1.4
D12	22 Jul 2017	Low Tide Time	1449
D12	22 Jul 2017	Comments	Kelp; Seagrass; 21 Swimmers; Water clear
D12	28 Jul 2017	Arrive Time	755
D12	28 Jul 2017	Weather	Overcast
D12	28 Jul 2017	Wind Speed (kts)	2.3
D12	28 Jul 2017	Wind Dir	W
D12	28 Jul 2017	Animal Life	None
D12	28 Jul 2017	Floatables	None
D12	28 Jul 2017	Water Color	Green
D12	28 Jul 2017	Current Direction	W
D12	28 Jul 2017	Wave Height Low (ft)	1
D12	28 Jul 2017	High Tide (ft)	4.5
D12	28 Jul 2017	High Tide Time	1408
D12	28 Jul 2017	Low Tide (ft)	0.6
D12	28 Jul 2017	Low Tide Time	733
D12	28 Jul 2017	Comments	Kelp; Seagrass; 2 Joggers; 9 Persons; 5 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 Jul 2017	3	3	4	5	4	3	3	4
02 Jul 2017	3	3	4	5	4	3	3	4
03 Jul 2017	3*	4*	5*	5*	4*	4*	3*	5*
04 Jul 2017	3*	4*	5*	5*	4*	4*	3*	5*
05 Jul 2017	3*	4*	5*	5*	4*	4*	3*	5*
06 Jul 2017	4	5	4	4	4	5	4	4
07 Jul 2017	5*	6*	4*	3*	3*	6*	4*	5*
08 Jul 2017	5*	6*	4*	3*	3*	6*	4*	5*
09 Jul 2017	5*	6*	4*	3*	3*	6*	4*	5*
10 Jul 2017	5*	6*	4*	3*	3*	6*	4*	5*
11 Jul 2017	5*	6*	4*	3*	3*	6*	4*	5*
12 Jul 2017	5	6	4	4	4	5	4	4
13 Jul 2017	4*	7*	3*	4*	3*	4*	5*	5*
14 Jul 2017	4*	7*	3*	4*	3*	4*	5*	5*
15 Jul 2017	4*	7*	3*	4*	3*	4*	5*	5*
16 Jul 2017	4*	7*	3*	4*	3*	4*	5*	5*
17 Jul 2017	4*	7*	3*	4*	3*	4*	5*	5*
18 Jul 2017	5*	7*	3*	6*	3*	3*	5*	3*
19 Jul 2017	5*	7*	3*	6*	3*	3*	5*	3*
20 Jul 2017	5*	7*	3*	6*	3*	3*	5*	3*
21 Jul 2017	5*	7*	3*	6*	3*	3*	5*	3*
22 Jul 2017	5*	7*	3*	6*	3*	3*	5*	3*
23 Jul 2017	5*	7*	3*	6*	3*	3*	5*	3*
24 Jul 2017	5*	7*	3*	6*	3*	3*	5*	3*
25 Jul 2017	9	7	5	8	4	3	4	3
26 Jul 2017	9	7	5	8	4	3	4	3
27 Jul 2017	9	7	5	8	4	3	4	3
28 Jul 2017	9	7	5	8	4	3	4	3
29 Jul 2017	14*	6*	4*	11*	5*	4*	4*	2*
30 Jul 2017	9	5	4	8	4	3	4	3
31 Jul 2017	9	5	4	8	4	3	4	3

* Geometric mean calculated using n<5

Table 3.2

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

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

* Geometric mean calculated using n<5

Table 3.4

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

Date	A1	A6	A7	C4	C5	C6	C7	C8
06 Jul 2017	IC							
12 Jul 2017	IC							
18 Jul 2017	IC							
25 Jul 2017	IC							
30 Jul 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 Jul 2017	IC							
12 Jul 2017	IC							
18 Jul 2017	IC							
25 Jul 2017	IC							
30 Jul 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 Jul 2017	IC							
12 Jul 2017	IC							
18 Jul 2017	IC							
25 Jul 2017	IC							
30 Jul 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 Jul 2017	IC							
12 Jul 2017	IC							
18 Jul 2017	IC							
25 Jul 2017	IC							
30 Jul 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* (Entero) bacteria are reported as CFU/100 mL; the fecal:total coliform ratio (F:T) is unitless; ammonium (N-NH₃) values are reported as mg/L; values for temperature (Temp, °C), transmissivity (XMS, %), dissolved oxygen (DO, mg/L), salinity (Sal, ppt) and pH were extracted from CTD profile data for depths closest to those at which the bacteriological samples were collected. Comments follow the data summary.

Station	Date	Time	Depth	Total	Fecal	Entero	F:T	N-NH ₃	Temp	XMS	DO	Sal	pH
A1	06 Jul 2017	741	1	<20	<2	<2	0.10	ns	18.4	79.14	10.1	33.50	8.2
A1	06 Jul 2017	741	12	<20	<2	<2	0.10	ns	13.7	67.35	4.9	33.46	8.0
A1	06 Jul 2017	741	18	2e	2e	<2	1.00	ns	12.0	84.05	4.5	33.43	7.8
A1	12 Jul 2017	804	1	<2	<2	<2	1.00	ns	21.2	79.09	9.8	33.53	8.3
A1	12 Jul 2017	804	12	8e	2e	2e	0.25	ns	13.5	82.24	7.0	33.49	8.0
A1	12 Jul 2017	804	18	10e	<2	2e	0.20	ns	12.8	86.47	5.6	33.48	7.9
A1	18 Jul 2017	751	1	<2	<2	<2	1.00	ns	21.4	81.05	9.3	33.52	8.3
A1	18 Jul 2017	751	12	<2	<2	<2	1.00	ns	20.6	78.51	8.7	33.55	8.3
A1	18 Jul 2017	751	18	6e	<2	<2	0.33	ns	14.4	78.16	7.8	33.39	8.0
A1	25 Jul 2017	828	1	<20	<2	<2	0.10	ns	22.6	85.37	8.5	33.52	8.2
A1	25 Jul 2017	828	12	6e	<2	<2	0.33	ns	13.2	91.29	6.0	33.31	7.9
A1	25 Jul 2017	828	18	320e	36e	2e	0.11	ns	12.3	91.16	5.7	33.36	7.9
A1	30 Jul 2017	749	1	<2	<2	<2	1.00	ns	23.5	81.27	9.0	33.61	8.3
A1	30 Jul 2017	749	12	<2	<2	<2	1.00	ns	15.5	76.97	7.2	33.34	8.1
A1	30 Jul 2017	749	18	2e	<2	<2	1.00	ns	13.6	84.87	6.2	33.36	8.0
C4	06 Jul 2017	920	1	<2	<2	<2	1.00	ns	18.1	78.19	9.9	33.50	8.3
C4	06 Jul 2017	920	3	<2	<2	<2	1.00	ns	17.0	76.12	9.1	33.52	8.2
C4	06 Jul 2017	920	9	<2	<2	<2	1.00	ns	13.8	81.92	4.5	33.46	7.9
C4	12 Jul 2017	949	1	20e	<2	<2	0.10	ns	22.0	80.33	9.2	33.53	8.3
C4	12 Jul 2017	949	3	20e	<2	<2	0.10	ns	20.4	79.35	8.7	33.60	8.3
C4	12 Jul 2017	949	9	<20	<2	<2	0.10	ns	14.7	81.71	7.0	33.45	8.0
C4	18 Jul 2017	943	1	<20	<2	<2	0.10	ns	21.6	81.06	8.5	33.54	8.3
C4	18 Jul 2017	943	3	20e	<2	<2	0.10	ns	21.5	80.94	8.5	33.55	8.3
C4	18 Jul 2017	943	9	<20	<2	2e	0.10	ns	20.5	78.97	7.5	33.67	8.3
C4	25 Jul 2017	1010	1	<20	<2	<2	0.10	ns	22.2	84.80	8.0	33.53	8.2
C4	25 Jul 2017	1010	3	<20	<2	<2	0.10	ns	21.3	84.72	6.9	33.55	8.2
C4	25 Jul 2017	1010	9	<20	2e	<2	0.10	ns	14.5	86.15	6.3	33.31	8.0
C4	30 Jul 2017	933	1	<2	<2	<2	1.00	ns	22.5	82.89	7.6	33.59	8.3
C4	30 Jul 2017	933	3	<2	<2	<2	1.00	ns	21.6	83.30	7.6	33.95	8.3
C4	30 Jul 2017	933	9	<2	<2	<2	1.00	ns	15.2	83.53	5.9	33.58	8.1
C5	06 Jul 2017	910	1	<2	<2	<2	1.00	ns	19.0	77.06	8.7	33.51	8.2
C5	06 Jul 2017	910	3	<2	<2	<2	1.00	ns	18.0	76.53	8.6	33.55	8.2
C5	06 Jul 2017	910	9	<2	<2	<2	1.00	ns	14.0	84.21	5.9	33.78	8.0
C5	12 Jul 2017	937	1	<20	<2	<2	0.10	ns	22.0	81.62	9.3	33.53	8.3
C5	12 Jul 2017	937	3	<20	<2	<2	0.10	ns	21.8	81.61	9.1	33.56	8.3

Station	Date	Time	Depth	Total	Fecal	Enteric	F:T	N-NH3	Temp	XMS	DO	Sal	pH
C5	12 Jul 2017	937	9	<2	<2	<2	1.00	ns	15.2	86.50	6.9	33.50	8.0
C5	18 Jul 2017	926	1	<2	<2	<2	1.00	ns	22.0	86.31	8.7	33.54	8.3
C5	18 Jul 2017	926	3	<2	<2	<2	1.00	ns	21.7	85.29	8.7	33.54	8.3
C5	18 Jul 2017	926	9	<2	<2	<2	1.00	ns	16.6	83.55	6.2	33.53	8.0
C5	25 Jul 2017	956	1	<2	<2	<2	1.00	ns	22.5	83.84	8.4	33.55	8.2
C5	25 Jul 2017	956	3	<20	<2	<2	0.10	ns	22.2	85.58	7.8	33.55	8.2
C5	25 Jul 2017	956	9	2e	<2	<2	1.00	ns	14.9	88.40	6.7	33.37	8.0
C5	30 Jul 2017	917	1	<2	<2	<2	1.00	ns	22.9	84.25	8.5	33.61	8.3
C5	30 Jul 2017	917	3	<2	<2	<2	1.00	ns	22.9	84.31	7.7	33.61	8.3
C5	30 Jul 2017	917	9	<2	<2	<2	1.00	ns	15.7	87.21	6.1	33.47	8.1
A6	06 Jul 2017	807	1	<20	<2	<2	0.10	ns	19.7	78.86	9.0	33.50	8.2
A6	06 Jul 2017	807	12	<2	<2	<2	1.00	ns	12.5	81.87	5.0	33.41	7.9
A6	06 Jul 2017	807	18	<20	<2	<2	0.10	ns	11.9	87.25	4.3	33.44	7.8
A6	12 Jul 2017	835	1	<20	<2	<2	0.10	ns	22.0	82.40	10.1	33.51	8.3
A6	12 Jul 2017	835	12	2e	<2	<2	1.00	ns	13.2	85.31	6.5	33.43	7.9
A6	12 Jul 2017	835	18	<2	<2	<2	1.00	ns	13.1	86.40	6.2	33.45	7.9
A6	18 Jul 2017	823	1	<2	<2	<2	1.00	ns	21.6	79.64	9.2	33.54	8.3
A6	18 Jul 2017	823	12	<2	<2	<2	1.00	ns	19.9	74.93	8.8	33.53	8.2
A6	18 Jul 2017	823	18	<2	<2	<2	1.00	ns	19.0	75.02	8.1	33.56	8.2
A6	25 Jul 2017	859	1	<2	<2	<2	1.00	ns	22.4	86.31	8.4	33.52	8.2
A6	25 Jul 2017	859	12	6e	2e	<2	0.33	ns	13.9	90.05	6.7	33.31	8.0
A6	25 Jul 2017	859	18	12e	6e	<2	0.50	ns	13.0	90.72	6.1	33.35	7.9
A6	30 Jul 2017	822	1	<2	<2	<2	1.00	ns	23.5	81.97	9.0	33.61	8.3
A6	30 Jul 2017	822	12	6e	<2	<2	0.33	ns	14.1	85.38	6.7	33.34	8.0
A6	30 Jul 2017	822	18	2e	<2	2e	1.00	ns	14.0	87.35	6.2	33.35	8.0
C6	06 Jul 2017	857	1	<2	<2	<2	1.00	ns	19.7	81.19	8.8	33.51	8.3
C6	06 Jul 2017	857	3	<20	<2	<2	0.10	ns	17.1	81.06	7.6	33.55	8.2
C6	06 Jul 2017	857	9	2e	<2	<2	1.00	ns	13.6	85.79	5.8	33.41	8.0
C6	12 Jul 2017	926	1	<2	<2	<2	1.00	ns	22.2	82.67	9.3	33.53	8.3
C6	12 Jul 2017	926	3	2e	<2	<2	1.00	ns	21.4	83.09	9.0	33.66	8.3
C6	12 Jul 2017	926	9	2e	<2	<2	1.00	ns	15.5	85.68	7.3	33.60	8.1
C6	18 Jul 2017	915	1	<2	<2	<2	1.00	ns	22.1	83.19	9.0	33.55	8.3
C6	18 Jul 2017	915	3	<2	<2	<2	1.00	ns	21.7	81.19	9.2	33.55	8.3
C6	18 Jul 2017	915	9	<2	<2	<2	1.00	ns	20.4	77.54	8.4	33.60	8.3
C6	25 Jul 2017	942	1	<2	<2	<2	1.00	ns	22.7	86.48	8.0	33.54	8.2
C6	25 Jul 2017	942	3	<20	2e	<2	0.10	ns	21.2	85.74	7.9	33.56	8.2
C6	25 Jul 2017	942	9	<2	<2	<2	1.00	ns	17.0	85.84	7.0	33.45	8.1
C6	30 Jul 2017	907	1	<2	<2	<2	1.00	ns	23.0	86.19	8.4	33.61	8.3
C6	30 Jul 2017	907	3	<2	<2	<2	1.00	ns	23.0	86.15	8.1	33.61	8.3
C6	30 Jul 2017	907	9	<2	<2	<2	1.00	ns	17.3	85.64	6.3	33.55	8.2
A7	06 Jul 2017	755	1	<2	<2	<2	1.00	ns	17.4	71.09	9.2	33.49	8.2

Station	Date	Time	Depth	Total	Fecal	Enteric	F:T	N-NH3	Temp	XMS	DO	Sal	pH
A7	06 Jul 2017	755	12	<2	<2	<2	1.00	ns	12.0	84.67	4.8	33.43	7.8
A7	06 Jul 2017	755	18	<2	<2	<2	1.00	ns	11.8	87.68	4.8	33.45	7.8
A7	12 Jul 2017	820	1	<2	<2	<2	1.00	ns	21.0	80.83	9.4	33.53	8.3
A7	12 Jul 2017	820	12	<2	<2	<2	1.00	ns	13.5	82.65	7.0	33.48	8.0
A7	12 Jul 2017	820	18	2e	<2	<2	1.00	ns	13.1	87.12	5.9	33.47	7.9
A7	18 Jul 2017	809	1	<2	<2	<2	1.00	ns	21.6	80.59	9.1	33.54	8.3
A7	18 Jul 2017	809	12	<2	<2	<2	1.00	ns	19.4	74.71	8.4	33.51	8.2
A7	18 Jul 2017	809	18	<2	<2	<2	1.00	ns	15.1	81.26	6.1	33.47	8.0
A7	25 Jul 2017	846	1	<2	<2	<2	1.00	ns	22.4	85.83	8.4	33.52	8.2
A7	25 Jul 2017	846	12	2e	<2	<2	1.00	ns	13.6	90.69	6.7	33.30	8.0
A7	25 Jul 2017	846	18	100e	4e	<2	0.04	ns	12.6	90.90	5.8	33.35	7.9
A7	30 Jul 2017	807	1	<2	<2	<2	1.00	ns	23.5	81.23	9.2	33.61	8.3
A7	30 Jul 2017	807	12	2e	<2	<2	1.00	ns	14.5	80.24	7.1	33.34	8.0
A7	30 Jul 2017	807	18	<2	<2	<2	1.00	ns	14.3	80.00	6.5	33.35	8.0
C7	06 Jul 2017	823	1	<2	<2	<2	1.00	ns	20.0	82.96	9.2	33.51	8.2
C7	06 Jul 2017	823	12	<2	<2	<2	1.00	ns	12.8	80.18	5.4	33.39	8.0
C7	06 Jul 2017	823	18	40	<2	2e	0.05	ns	12.0	86.60	5.0	33.43	7.8
C7	12 Jul 2017	852	1	<2	<2	<2	1.00	ns	22.3	82.42	9.6	33.54	8.3
C7	12 Jul 2017	852	12	6e	<2	<2	0.33	ns	14.1	76.13	6.9	33.51	8.0
C7	12 Jul 2017	852	18	6e	<2	2e	0.33	ns	13.2	85.46	6.1	33.47	7.9
C7	18 Jul 2017	841	1	<2	<2	<2	1.00	ns	22.3	81.57	9.1	33.55	8.3
C7	18 Jul 2017	841	12	<2	<2	<2	1.00	ns	20.3	79.43	8.9	33.52	8.3
C7	18 Jul 2017	841	18	<2	<2	<2	1.00	ns	14.0	85.47	5.5	33.45	7.9
C7	25 Jul 2017	913	1	<2	<2	<2	1.00	ns	22.6	85.76	8.5	33.53	8.2
C7	25 Jul 2017	913	12	<2	<2	<2	1.00	ns	15.0	87.40	7.2	33.33	8.1
C7	25 Jul 2017	913	18	<2	<2	<2	1.00	ns	14.0	90.40	6.9	33.33	8.0
C7	30 Jul 2017	838	1	<2	<2	<2	1.00	ns	23.7	82.81	8.8	33.62	8.3
C7	30 Jul 2017	838	12	6e	<2	<2	0.33	ns	14.2	84.23	6.5	33.37	8.0
C7	30 Jul 2017	838	18	2e	<2	<2	1.00	ns	13.3	90.21	6.0	33.35	8.0
C8	06 Jul 2017	836	1	<2	<2	<2	1.00	ns	20.4	81.56	10.0	33.50	8.3
C8	06 Jul 2017	836	12	<2	<2	<2	1.00	ns	13.2	76.96	6.3	33.39	8.0
C8	06 Jul 2017	836	18	2e	<2	<2	1.00	ns	12.1	87.37	5.0	33.42	7.8
C8	12 Jul 2017	905	1	<2	<2	2e	1.00	ns	21.8	74.02	10.7	33.53	8.3
C8	12 Jul 2017	905	12	<2	<2	<2	1.00	ns	15.8	69.80	9.9	33.50	8.2
C8	12 Jul 2017	905	18	<2	<2	<2	1.00	ns	13.8	85.55	6.3	33.48	7.9
C8	18 Jul 2017	852	1	<2	<2	<2	1.00	ns	23.3	82.34	9.6	33.57	8.4
C8	18 Jul 2017	852	12	<2	<2	<2	1.00	ns	19.4	75.24	9.2	33.51	8.3
C8	18 Jul 2017	852	18	<2	<2	<2	1.00	ns	13.4	86.93	5.5	33.45	7.9
C8	25 Jul 2017	925	1	<2	<2	<2	1.00	ns	23.1	85.03	8.6	33.55	8.2
C8	25 Jul 2017	925	12	<2	<2	<2	1.00	ns	16.8	80.50	8.8	33.39	8.2
C8	25 Jul 2017	925	18	<2	<2	<2	1.00	ns	15.0	84.65	7.7	33.36	8.1

Station	Date	Time	Depth	Total	Fecal	Enter	F:T	N-NH3	Temp	XMS	DO	Sal	pH
C8	30 Jul 2017	849	1	<2	<2	<2	1.00	ns	23.1	80.42	8.7	33.60	8.3
C8	30 Jul 2017	849	12	2e	<2	<2	1.00	ns	14.1	85.57	6.2	33.38	8.0
C8	30 Jul 2017	849	18	16e	<2	2e	0.12	ns	12.8	90.74	5.7	33.35	8.0

ns = not sampled

ND = no data

Table 3.9

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

Station	Date	Parameter	Value
A1	06 Jul 2017	Depth (m)	19
A1	06 Jul 2017	Arrive Time	741
A1	06 Jul 2017	Depart Time	745
A1	06 Jul 2017	Air Temp (C)	18
A1	06 Jul 2017	Weather	Haze
A1	06 Jul 2017	Visibility (mi)	4
A1	06 Jul 2017	Wind Speed (kts)	2
A1	06 Jul 2017	Wind Dir	SW
A1	06 Jul 2017	Water Color	Brownish-Green
A1	06 Jul 2017	Wave Ht Low (ft)	2
A1	06 Jul 2017	Wave Period (sec)	13
A1	06 Jul 2017	Sea State	Calm
A1	06 Jul 2017	High Tide (ft)	3.6
A1	06 Jul 2017	High Tide Time	904
A1	06 Jul 2017	Low Tide (ft)	2
A1	06 Jul 2017	Low Tide Time	1400
A1	06 Jul 2017	Comments	
A1	12 Jul 2017	Depth (m)	18
A1	12 Jul 2017	Arrive Time	804
A1	12 Jul 2017	Depart Time	810
A1	12 Jul 2017	Air Temp (C)	21
A1	12 Jul 2017	Weather	Overcast
A1	12 Jul 2017	Visibility (mi)	8
A1	12 Jul 2017	Wind Speed (kts)	3
A1	12 Jul 2017	Wind Dir	E
A1	12 Jul 2017	Water Color	Green
A1	12 Jul 2017	Wave Ht Low (ft)	5
A1	12 Jul 2017	Wave Period (sec)	13
A1	12 Jul 2017	Sea State	Wind ripples
A1	12 Jul 2017	High Tide (ft)	4
A1	12 Jul 2017	High Tide Time	1231
A1	12 Jul 2017	Low Tide (ft)	-0.2
A1	12 Jul 2017	Low Tide Time	607
A1	12 Jul 2017	Comments	
A1	18 Jul 2017	Depth (m)	18
A1	18 Jul 2017	Arrive Time	751
A1	18 Jul 2017	Depart Time	800
A1	18 Jul 2017	Air Temp (C)	21
A1	18 Jul 2017	Weather	Continuous layer of clouds
A1	18 Jul 2017	Visibility (mi)	6
A1	18 Jul 2017	Wind Speed (kts)	5
A1	18 Jul 2017	Wind Dir	S
A1	18 Jul 2017	Water Color	Greenish-Blue
A1	18 Jul 2017	Wave Ht Low (ft)	3
A1	18 Jul 2017	Wave Period (sec)	11
A1	18 Jul 2017	Sea State	Calm
A1	18 Jul 2017	High Tide (ft)	3.3
A1	18 Jul 2017	High Tide Time	541
A1	18 Jul 2017	Low Tide (ft)	1.6

Station	Date	Parameter	Value
A1	18 Jul 2017	Low Tide Time	1104
A1	18 Jul 2017	Comments	Kelp
A1	25 Jul 2017	Depth (m)	18
A1	25 Jul 2017	Arrive Time	828
A1	25 Jul 2017	Depart Time	836
A1	25 Jul 2017	Air Temp (C)	20
A1	25 Jul 2017	Weather	Overcast
A1	25 Jul 2017	Visibility (mi)	5
A1	25 Jul 2017	Wind Speed (kts)	4
A1	25 Jul 2017	Wind Dir	N
A1	25 Jul 2017	Water Color	Green
A1	25 Jul 2017	Wave Ht Low (ft)	2
A1	25 Jul 2017	Wave Period (sec)	11
A1	25 Jul 2017	Sea State	Calm
A1	25 Jul 2017	High Tide (ft)	4.6
A1	25 Jul 2017	High Tide Time	1147
A1	25 Jul 2017	Low Tide (ft)	-1
A1	25 Jul 2017	Low Tide Time	529
A1	25 Jul 2017	Comments	
A1	30 Jul 2017	Depth (m)	18
A1	30 Jul 2017	Arrive Time	749
A1	30 Jul 2017	Depart Time	800
A1	30 Jul 2017	Air Temp (C)	20
A1	30 Jul 2017	Weather	Overcast
A1	30 Jul 2017	Visibility (mi)	5
A1	30 Jul 2017	Wind Speed (kts)	10
A1	30 Jul 2017	Wind Dir	S
A1	30 Jul 2017	Water Color	Green
A1	30 Jul 2017	Wave Ht Low (ft)	3
A1	30 Jul 2017	Wave Period (sec)	11
A1	30 Jul 2017	Sea State	Calm
A1	30 Jul 2017	High Tide (ft)	4.6
A1	30 Jul 2017	High Tide Time	1602
A1	30 Jul 2017	Low Tide (ft)	1.7
A1	30 Jul 2017	Low Tide Time	911
A1	30 Jul 2017	Comments	Kelp
C4	06 Jul 2017	Depth (m)	10
C4	06 Jul 2017	Arrive Time	920
C4	06 Jul 2017	Depart Time	924
C4	06 Jul 2017	Air Temp (C)	18
C4	06 Jul 2017	Weather	Haze
C4	06 Jul 2017	Visibility (mi)	4
C4	06 Jul 2017	Wind Speed (kts)	4
C4	06 Jul 2017	Wind Dir	E
C4	06 Jul 2017	Water Color	Greenish-Brown
C4	06 Jul 2017	Wave Ht Low (ft)	2
C4	06 Jul 2017	Wave Period (sec)	13
C4	06 Jul 2017	Sea State	Calm
C4	06 Jul 2017	High Tide (ft)	3.6
C4	06 Jul 2017	High Tide Time	904
C4	06 Jul 2017	Low Tide (ft)	2
C4	06 Jul 2017	Low Tide Time	1400

Station	Date	Parameter	Value
C4	06 Jul 2017	Comments	Kelp
C4	12 Jul 2017	Depth (m)	9
C4	12 Jul 2017	Arrive Time	949
C4	12 Jul 2017	Depart Time	953
C4	12 Jul 2017	Air Temp (C)	21
C4	12 Jul 2017	Weather	Clear
C4	12 Jul 2017	Visibility (mi)	10
C4	12 Jul 2017	Wind Speed (kts)	6
C4	12 Jul 2017	Wind Dir	S
C4	12 Jul 2017	Water Color	Green
C4	12 Jul 2017	Wave Ht Low (ft)	5
C4	12 Jul 2017	Wave Period (sec)	13
C4	12 Jul 2017	Sea State	Wind ripples
C4	12 Jul 2017	High Tide (ft)	4
C4	12 Jul 2017	High Tide Time	1231
C4	12 Jul 2017	Low Tide (ft)	-0.2
C4	12 Jul 2017	Low Tide Time	607
C4	12 Jul 2017	Comments	Kelp
C4	18 Jul 2017	Depth (m)	10
C4	18 Jul 2017	Arrive Time	943
C4	18 Jul 2017	Depart Time	947
C4	18 Jul 2017	Air Temp (C)	21
C4	18 Jul 2017	Weather	Continuous layer of clouds
C4	18 Jul 2017	Visibility (mi)	6
C4	18 Jul 2017	Wind Speed (kts)	6
C4	18 Jul 2017	Wind Dir	NE
C4	18 Jul 2017	Water Color	Greenish-Blue
C4	18 Jul 2017	Wave Ht Low (ft)	3
C4	18 Jul 2017	Wave Period (sec)	11
C4	18 Jul 2017	Sea State	Calm
C4	18 Jul 2017	High Tide (ft)	3.3
C4	18 Jul 2017	High Tide Time	541
C4	18 Jul 2017	Low Tide (ft)	1.6
C4	18 Jul 2017	Low Tide Time	1104
C4	18 Jul 2017	Comments	
C4	25 Jul 2017	Depth (m)	11
C4	25 Jul 2017	Arrive Time	1010
C4	25 Jul 2017	Depart Time	1014
C4	25 Jul 2017	Air Temp (C)	20
C4	25 Jul 2017	Weather	Overcast
C4	25 Jul 2017	Visibility (mi)	5
C4	25 Jul 2017	Wind Speed (kts)	5
C4	25 Jul 2017	Wind Dir	SW
C4	25 Jul 2017	Water Color	Green
C4	25 Jul 2017	Wave Ht Low (ft)	2
C4	25 Jul 2017	Wave Period (sec)	11
C4	25 Jul 2017	Sea State	Light chop
C4	25 Jul 2017	High Tide (ft)	4.6
C4	25 Jul 2017	High Tide Time	1147
C4	25 Jul 2017	Low Tide (ft)	-1
C4	25 Jul 2017	Low Tide Time	529
C4	25 Jul 2017	Comments	Kelp

Station	Date	Parameter	Value
C4	30 Jul 2017	Depth (m)	11
C4	30 Jul 2017	Arrive Time	933
C4	30 Jul 2017	Depart Time	935
C4	30 Jul 2017	Air Temp (C)	20
C4	30 Jul 2017	Weather	Overcast
C4	30 Jul 2017	Visibility (mi)	5
C4	30 Jul 2017	Wind Speed (kts)	5
C4	30 Jul 2017	Wind Dir	E
C4	30 Jul 2017	Water Color	Green
C4	30 Jul 2017	Wave Ht Low (ft)	3
C4	30 Jul 2017	Wave Period (sec)	11
C4	30 Jul 2017	Sea State	Calm
C4	30 Jul 2017	High Tide (ft)	4.6
C4	30 Jul 2017	High Tide Time	1602
C4	30 Jul 2017	Low Tide (ft)	1.7
C4	30 Jul 2017	Low Tide Time	911
C4	30 Jul 2017	Comments	Kelp; Boats
C5	06 Jul 2017	Depth (m)	9
C5	06 Jul 2017	Arrive Time	910
C5	06 Jul 2017	Depart Time	912
C5	06 Jul 2017	Air Temp (C)	18
C5	06 Jul 2017	Weather	Haze
C5	06 Jul 2017	Visibility (mi)	4
C5	06 Jul 2017	Wind Speed (kts)	3
C5	06 Jul 2017	Wind Dir	E
C5	06 Jul 2017	Water Color	Brownish-Green
C5	06 Jul 2017	Wave Ht Low (ft)	2
C5	06 Jul 2017	Wave Period (sec)	13
C5	06 Jul 2017	Sea State	Calm
C5	06 Jul 2017	High Tide (ft)	3.6
C5	06 Jul 2017	High Tide Time	904
C5	06 Jul 2017	Low Tide (ft)	2
C5	06 Jul 2017	Low Tide Time	1400
C5	06 Jul 2017	Comments	Divers
C5	12 Jul 2017	Depth (m)	9
C5	12 Jul 2017	Arrive Time	937
C5	12 Jul 2017	Depart Time	943
C5	12 Jul 2017	Air Temp (C)	21
C5	12 Jul 2017	Weather	Clear
C5	12 Jul 2017	Visibility (mi)	10
C5	12 Jul 2017	Wind Speed (kts)	7
C5	12 Jul 2017	Wind Dir	W
C5	12 Jul 2017	Water Color	Green
C5	12 Jul 2017	Wave Ht Low (ft)	5
C5	12 Jul 2017	Wave Period (sec)	13
C5	12 Jul 2017	Sea State	Wind ripples
C5	12 Jul 2017	High Tide (ft)	4
C5	12 Jul 2017	High Tide Time	1231
C5	12 Jul 2017	Low Tide (ft)	-0.2
C5	12 Jul 2017	Low Tide Time	607
C5	12 Jul 2017	Comments	Kelp

Station	Date	Parameter	Value
C5	18 Jul 2017	Depth (m)	9
C5	18 Jul 2017	Arrive Time	926
C5	18 Jul 2017	Depart Time	931
C5	18 Jul 2017	Air Temp (C)	21
C5	18 Jul 2017	Weather	Continuous layer of clouds
C5	18 Jul 2017	Visibility (mi)	6
C5	18 Jul 2017	Wind Speed (kts)	4
C5	18 Jul 2017	Wind Dir	SE
C5	18 Jul 2017	Water Color	Greenish-Blue
C5	18 Jul 2017	Wave Ht Low (ft)	3
C5	18 Jul 2017	Wave Period (sec)	11
C5	18 Jul 2017	Sea State	Calm
C5	18 Jul 2017	High Tide (ft)	3.3
C5	18 Jul 2017	High Tide Time	541
C5	18 Jul 2017	Low Tide (ft)	1.6
C5	18 Jul 2017	Low Tide Time	1104
C5	18 Jul 2017	Comments	Kelp
C5	25 Jul 2017	Depth (m)	10
C5	25 Jul 2017	Arrive Time	956
C5	25 Jul 2017	Depart Time	959
C5	25 Jul 2017	Air Temp (C)	20
C5	25 Jul 2017	Weather	Overcast
C5	25 Jul 2017	Visibility (mi)	5
C5	25 Jul 2017	Wind Speed (kts)	5
C5	25 Jul 2017	Wind Dir	NE
C5	25 Jul 2017	Water Color	Green
C5	25 Jul 2017	Wave Ht Low (ft)	2
C5	25 Jul 2017	Wave Period (sec)	11
C5	25 Jul 2017	Sea State	Light chop
C5	25 Jul 2017	High Tide (ft)	4.6
C5	25 Jul 2017	High Tide Time	1147
C5	25 Jul 2017	Low Tide (ft)	-1
C5	25 Jul 2017	Low Tide Time	529
C5	25 Jul 2017	Comments	Kelp
C5	30 Jul 2017	Depth (m)	11
C5	30 Jul 2017	Arrive Time	917
C5	30 Jul 2017	Depart Time	921
C5	30 Jul 2017	Air Temp (C)	20
C5	30 Jul 2017	Weather	Overcast
C5	30 Jul 2017	Visibility (mi)	5
C5	30 Jul 2017	Wind Speed (kts)	8
C5	30 Jul 2017	Wind Dir	NW
C5	30 Jul 2017	Water Color	Green
C5	30 Jul 2017	Wave Ht Low (ft)	3
C5	30 Jul 2017	Wave Period (sec)	11
C5	30 Jul 2017	Sea State	Calm
C5	30 Jul 2017	High Tide (ft)	4.6
C5	30 Jul 2017	High Tide Time	1602
C5	30 Jul 2017	Low Tide (ft)	1.7
C5	30 Jul 2017	Low Tide Time	911
C5	30 Jul 2017	Comments	Kelp
A6	06 Jul 2017	Depth (m)	18

Station	Date	Parameter	Value
A6	06 Jul 2017	Arrive Time	807
A6	06 Jul 2017	Depart Time	812
A6	06 Jul 2017	Air Temp (C)	18
A6	06 Jul 2017	Weather	Haze
A6	06 Jul 2017	Visibility (mi)	4
A6	06 Jul 2017	Wind Speed (kts)	1
A6	06 Jul 2017	Wind Dir	NE
A6	06 Jul 2017	Water Color	Brownish-Green
A6	06 Jul 2017	Wave Ht Low (ft)	2
A6	06 Jul 2017	Wave Period (sec)	13
A6	06 Jul 2017	Sea State	Calm
A6	06 Jul 2017	High Tide (ft)	3.6
A6	06 Jul 2017	High Tide Time	904
A6	06 Jul 2017	Low Tide (ft)	2
A6	06 Jul 2017	Low Tide Time	1400
A6	06 Jul 2017	Comments	Kelp
A6	12 Jul 2017	Depth (m)	18
A6	12 Jul 2017	Arrive Time	835
A6	12 Jul 2017	Depart Time	840
A6	12 Jul 2017	Air Temp (C)	21
A6	12 Jul 2017	Weather	Overcast
A6	12 Jul 2017	Visibility (mi)	8
A6	12 Jul 2017	Wind Speed (kts)	5
A6	12 Jul 2017	Wind Dir	E
A6	12 Jul 2017	Water Color	Green
A6	12 Jul 2017	Wave Ht Low (ft)	5
A6	12 Jul 2017	Wave Period (sec)	13
A6	12 Jul 2017	Sea State	Wind ripples
A6	12 Jul 2017	High Tide (ft)	4
A6	12 Jul 2017	High Tide Time	1231
A6	12 Jul 2017	Low Tide (ft)	-0.2
A6	12 Jul 2017	Low Tide Time	607
A6	12 Jul 2017	Comments	
A6	18 Jul 2017	Depth (m)	19
A6	18 Jul 2017	Arrive Time	823
A6	18 Jul 2017	Depart Time	829
A6	18 Jul 2017	Air Temp (C)	21
A6	18 Jul 2017	Weather	Continuous layer of clouds
A6	18 Jul 2017	Visibility (mi)	6
A6	18 Jul 2017	Wind Speed (kts)	5
A6	18 Jul 2017	Wind Dir	N
A6	18 Jul 2017	Water Color	Greenish-Blue
A6	18 Jul 2017	Wave Ht Low (ft)	3
A6	18 Jul 2017	Wave Period (sec)	11
A6	18 Jul 2017	Sea State	Calm
A6	18 Jul 2017	High Tide (ft)	3.3
A6	18 Jul 2017	High Tide Time	541
A6	18 Jul 2017	Low Tide (ft)	1.6
A6	18 Jul 2017	Low Tide Time	1104
A6	18 Jul 2017	Comments	
A6	25 Jul 2017	Depth (m)	18
A6	25 Jul 2017	Arrive Time	859

Station	Date	Parameter	Value
A6	25 Jul 2017	Depart Time	902
A6	25 Jul 2017	Air Temp (C)	20
A6	25 Jul 2017	Weather	Overcast
A6	25 Jul 2017	Visibility (mi)	5
A6	25 Jul 2017	Wind Speed (kts)	7
A6	25 Jul 2017	Wind Dir	SW
A6	25 Jul 2017	Water Color	Green
A6	25 Jul 2017	Wave Ht Low (ft)	2
A6	25 Jul 2017	Wave Period (sec)	11
A6	25 Jul 2017	Sea State	Light chop
A6	25 Jul 2017	High Tide (ft)	4.6
A6	25 Jul 2017	High Tide Time	1147
A6	25 Jul 2017	Low Tide (ft)	-1
A6	25 Jul 2017	Low Tide Time	529
A6	25 Jul 2017	Comments	
A6	30 Jul 2017	Depth (m)	19
A6	30 Jul 2017	Arrive Time	822
A6	30 Jul 2017	Depart Time	825
A6	30 Jul 2017	Air Temp (C)	20
A6	30 Jul 2017	Weather	Overcast
A6	30 Jul 2017	Visibility (mi)	5
A6	30 Jul 2017	Wind Speed (kts)	5
A6	30 Jul 2017	Wind Dir	N
A6	30 Jul 2017	Water Color	Green
A6	30 Jul 2017	Wave Ht Low (ft)	3
A6	30 Jul 2017	Wave Period (sec)	11
A6	30 Jul 2017	Sea State	Calm
A6	30 Jul 2017	High Tide (ft)	4.6
A6	30 Jul 2017	High Tide Time	1602
A6	30 Jul 2017	Low Tide (ft)	1.7
A6	30 Jul 2017	Low Tide Time	911
A6	30 Jul 2017	Comments	Kelp; Boats
C6	06 Jul 2017	Depth (m)	9
C6	06 Jul 2017	Arrive Time	857
C6	06 Jul 2017	Depart Time	901
C6	06 Jul 2017	Air Temp (C)	18
C6	06 Jul 2017	Weather	Haze
C6	06 Jul 2017	Visibility (mi)	4
C6	06 Jul 2017	Wind Speed (kts)	3
C6	06 Jul 2017	Wind Dir	E
C6	06 Jul 2017	Water Color	Brownish-Green
C6	06 Jul 2017	Wave Ht Low (ft)	2
C6	06 Jul 2017	Wave Period (sec)	13
C6	06 Jul 2017	Sea State	Calm
C6	06 Jul 2017	High Tide (ft)	3.6
C6	06 Jul 2017	High Tide Time	904
C6	06 Jul 2017	Low Tide (ft)	2
C6	06 Jul 2017	Low Tide Time	1400
C6	06 Jul 2017	Comments	Kelp
C6	12 Jul 2017	Depth (m)	9
C6	12 Jul 2017	Arrive Time	926
C6	12 Jul 2017	Depart Time	930

Station	Date	Parameter	Value
C6	12 Jul 2017	Air Temp (C)	21
C6	12 Jul 2017	Weather	Clear
C6	12 Jul 2017	Visibility (mi)	10
C6	12 Jul 2017	Wind Speed (kts)	6
C6	12 Jul 2017	Wind Dir	NW
C6	12 Jul 2017	Water Color	Green
C6	12 Jul 2017	Wave Ht Low (ft)	5
C6	12 Jul 2017	Wave Period (sec)	13
C6	12 Jul 2017	Sea State	Wind ripples
C6	12 Jul 2017	High Tide (ft)	4
C6	12 Jul 2017	High Tide Time	1231
C6	12 Jul 2017	Low Tide (ft)	-0.2
C6	12 Jul 2017	Low Tide Time	607
C6	12 Jul 2017	Comments	Kelp
C6	18 Jul 2017	Depth (m)	9
C6	18 Jul 2017	Arrive Time	915
C6	18 Jul 2017	Depart Time	918
C6	18 Jul 2017	Air Temp (C)	21
C6	18 Jul 2017	Weather	Continuous layer of clouds
C6	18 Jul 2017	Visibility (mi)	6
C6	18 Jul 2017	Wind Speed (kts)	3
C6	18 Jul 2017	Wind Dir	NW
C6	18 Jul 2017	Water Color	Greenish-Blue
C6	18 Jul 2017	Wave Ht Low (ft)	3
C6	18 Jul 2017	Wave Period (sec)	11
C6	18 Jul 2017	Sea State	Calm
C6	18 Jul 2017	High Tide (ft)	3.3
C6	18 Jul 2017	High Tide Time	541
C6	18 Jul 2017	Low Tide (ft)	1.6
C6	18 Jul 2017	Low Tide Time	1104
C6	18 Jul 2017	Comments	
C6	25 Jul 2017	Depth (m)	9
C6	25 Jul 2017	Arrive Time	942
C6	25 Jul 2017	Depart Time	949
C6	25 Jul 2017	Air Temp (C)	20
C6	25 Jul 2017	Weather	Overcast
C6	25 Jul 2017	Visibility (mi)	5
C6	25 Jul 2017	Wind Speed (kts)	7
C6	25 Jul 2017	Wind Dir	S
C6	25 Jul 2017	Water Color	Green
C6	25 Jul 2017	Wave Ht Low (ft)	2
C6	25 Jul 2017	Wave Period (sec)	11
C6	25 Jul 2017	Sea State	Light chop
C6	25 Jul 2017	High Tide (ft)	4.6
C6	25 Jul 2017	High Tide Time	1147
C6	25 Jul 2017	Low Tide (ft)	-1
C6	25 Jul 2017	Low Tide Time	529
C6	25 Jul 2017	Comments	Boats
C6	30 Jul 2017	Depth (m)	9
C6	30 Jul 2017	Arrive Time	907
C6	30 Jul 2017	Depart Time	911
C6	30 Jul 2017	Air Temp (C)	20

Station	Date	Parameter	Value
C6	30 Jul 2017	Weather	Overcast
C6	30 Jul 2017	Visibility (mi)	5
C6	30 Jul 2017	Wind Speed (kts)	8
C6	30 Jul 2017	Wind Dir	SW
C6	30 Jul 2017	Water Color	Green
C6	30 Jul 2017	Wave Ht Low (ft)	3
C6	30 Jul 2017	Wave Period (sec)	11
C6	30 Jul 2017	Sea State	Calm
C6	30 Jul 2017	High Tide (ft)	4.6
C6	30 Jul 2017	High Tide Time	1602
C6	30 Jul 2017	Low Tide (ft)	1.7
C6	30 Jul 2017	Low Tide Time	911
C6	30 Jul 2017	Comments	Kelp; Boats
A7	06 Jul 2017	Depth (m)	18
A7	06 Jul 2017	Arrive Time	755
A7	06 Jul 2017	Depart Time	758
A7	06 Jul 2017	Air Temp (C)	18
A7	06 Jul 2017	Weather	Haze
A7	06 Jul 2017	Visibility (mi)	4
A7	06 Jul 2017	Wind Speed (kts)	2
A7	06 Jul 2017	Wind Dir	E
A7	06 Jul 2017	Water Color	Brownish-Green
A7	06 Jul 2017	Wave Ht Low (ft)	2
A7	06 Jul 2017	Wave Period (sec)	13
A7	06 Jul 2017	Sea State	Calm
A7	06 Jul 2017	High Tide (ft)	3.6
A7	06 Jul 2017	High Tide Time	904
A7	06 Jul 2017	Low Tide (ft)	2
A7	06 Jul 2017	Low Tide Time	1400
A7	06 Jul 2017	Comments	Kelp
A7	12 Jul 2017	Depth (m)	18
A7	12 Jul 2017	Arrive Time	820
A7	12 Jul 2017	Depart Time	826
A7	12 Jul 2017	Air Temp (C)	21
A7	12 Jul 2017	Weather	Overcast
A7	12 Jul 2017	Visibility (mi)	8
A7	12 Jul 2017	Wind Speed (kts)	4
A7	12 Jul 2017	Wind Dir	NW
A7	12 Jul 2017	Water Color	Green
A7	12 Jul 2017	Wave Ht Low (ft)	5
A7	12 Jul 2017	Wave Period (sec)	13
A7	12 Jul 2017	Sea State	Wind ripples
A7	12 Jul 2017	High Tide (ft)	4
A7	12 Jul 2017	High Tide Time	1231
A7	12 Jul 2017	Low Tide (ft)	-0.2
A7	12 Jul 2017	Low Tide Time	607
A7	12 Jul 2017	Comments	
A7	18 Jul 2017	Depth (m)	18
A7	18 Jul 2017	Arrive Time	809
A7	18 Jul 2017	Depart Time	813
A7	18 Jul 2017	Air Temp (C)	21
A7	18 Jul 2017	Weather	Continuous layer of clouds

Station	Date	Parameter	Value
A7	18 Jul 2017	Visibility (mi)	6
A7	18 Jul 2017	Wind Speed (kts)	3
A7	18 Jul 2017	Wind Dir	E
A7	18 Jul 2017	Water Color	Greenish-Blue
A7	18 Jul 2017	Wave Ht Low (ft)	3
A7	18 Jul 2017	Wave Period (sec)	11
A7	18 Jul 2017	Sea State	Calm
A7	18 Jul 2017	High Tide (ft)	3.3
A7	18 Jul 2017	High Tide Time	541
A7	18 Jul 2017	Low Tide (ft)	1.6
A7	18 Jul 2017	Low Tide Time	1104
A7	18 Jul 2017	Comments	Kelp
A7	25 Jul 2017	Depth (m)	18
A7	25 Jul 2017	Arrive Time	846
A7	25 Jul 2017	Depart Time	851
A7	25 Jul 2017	Air Temp (C)	20
A7	25 Jul 2017	Weather	Overcast
A7	25 Jul 2017	Visibility (mi)	5
A7	25 Jul 2017	Wind Speed (kts)	5
A7	25 Jul 2017	Wind Dir	NE
A7	25 Jul 2017	Water Color	Green
A7	25 Jul 2017	Wave Ht Low (ft)	2
A7	25 Jul 2017	Wave Period (sec)	11
A7	25 Jul 2017	Sea State	Calm
A7	25 Jul 2017	High Tide (ft)	4.6
A7	25 Jul 2017	High Tide Time	1147
A7	25 Jul 2017	Low Tide (ft)	-1
A7	25 Jul 2017	Low Tide Time	529
A7	25 Jul 2017	Comments	
A7	30 Jul 2017	Depth (m)	20
A7	30 Jul 2017	Arrive Time	807
A7	30 Jul 2017	Depart Time	812
A7	30 Jul 2017	Air Temp (C)	20
A7	30 Jul 2017	Weather	Overcast
A7	30 Jul 2017	Visibility (mi)	4
A7	30 Jul 2017	Wind Speed (kts)	5
A7	30 Jul 2017	Wind Dir	S
A7	30 Jul 2017	Water Color	Green
A7	30 Jul 2017	Wave Ht Low (ft)	3
A7	30 Jul 2017	Wave Period (sec)	11
A7	30 Jul 2017	Sea State	Calm
A7	30 Jul 2017	High Tide (ft)	4.6
A7	30 Jul 2017	High Tide Time	1602
A7	30 Jul 2017	Low Tide (ft)	1.7
A7	30 Jul 2017	Low Tide Time	911
A7	30 Jul 2017	Comments	Kelp
C7	06 Jul 2017	Depth (m)	18
C7	06 Jul 2017	Arrive Time	823
C7	06 Jul 2017	Depart Time	829
C7	06 Jul 2017	Air Temp (C)	18
C7	06 Jul 2017	Weather	Haze
C7	06 Jul 2017	Visibility (mi)	4

Station	Date	Parameter	Value
C7	06 Jul 2017	Wind Speed (kts)	3
C7	06 Jul 2017	Wind Dir	E
C7	06 Jul 2017	Water Color	Brownish-Green
C7	06 Jul 2017	Wave Ht Low (ft)	2
C7	06 Jul 2017	Wave Period (sec)	13
C7	06 Jul 2017	Sea State	Calm
C7	06 Jul 2017	High Tide (ft)	3.6
C7	06 Jul 2017	High Tide Time	904
C7	06 Jul 2017	Low Tide (ft)	2
C7	06 Jul 2017	Low Tide Time	1400
C7	06 Jul 2017	Comments	Kelp
C7	12 Jul 2017	Depth (m)	17
C7	12 Jul 2017	Arrive Time	852
C7	12 Jul 2017	Depart Time	857
C7	12 Jul 2017	Air Temp (C)	21
C7	12 Jul 2017	Weather	Overcast
C7	12 Jul 2017	Visibility (mi)	8
C7	12 Jul 2017	Wind Speed (kts)	6
C7	12 Jul 2017	Wind Dir	W
C7	12 Jul 2017	Water Color	Green
C7	12 Jul 2017	Wave Ht Low (ft)	5
C7	12 Jul 2017	Wave Period (sec)	13
C7	12 Jul 2017	Sea State	Wind ripples
C7	12 Jul 2017	High Tide (ft)	4
C7	12 Jul 2017	High Tide Time	1231
C7	12 Jul 2017	Low Tide (ft)	-0.2
C7	12 Jul 2017	Low Tide Time	607
C7	12 Jul 2017	Comments	Seagrass
C7	18 Jul 2017	Depth (m)	18
C7	18 Jul 2017	Arrive Time	841
C7	18 Jul 2017	Depart Time	845
C7	18 Jul 2017	Air Temp (C)	21
C7	18 Jul 2017	Weather	Continuous layer of clouds
C7	18 Jul 2017	Visibility (mi)	6
C7	18 Jul 2017	Wind Speed (kts)	4
C7	18 Jul 2017	Wind Dir	NE
C7	18 Jul 2017	Water Color	Greenish-Blue
C7	18 Jul 2017	Wave Ht Low (ft)	3
C7	18 Jul 2017	Wave Period (sec)	11
C7	18 Jul 2017	Sea State	Calm
C7	18 Jul 2017	High Tide (ft)	3.3
C7	18 Jul 2017	High Tide Time	541
C7	18 Jul 2017	Low Tide (ft)	1.6
C7	18 Jul 2017	Low Tide Time	1104
C7	18 Jul 2017	Comments	
C7	25 Jul 2017	Depth (m)	18
C7	25 Jul 2017	Arrive Time	913
C7	25 Jul 2017	Depart Time	917
C7	25 Jul 2017	Air Temp (C)	20
C7	25 Jul 2017	Weather	Overcast
C7	25 Jul 2017	Visibility (mi)	5
C7	25 Jul 2017	Wind Speed (kts)	6

Station	Date	Parameter	Value
C7	25 Jul 2017	Wind Dir	SW
C7	25 Jul 2017	Water Color	Green
C7	25 Jul 2017	Wave Ht Low (ft)	2
C7	25 Jul 2017	Wave Period (sec)	11
C7	25 Jul 2017	Sea State	Light chop
C7	25 Jul 2017	High Tide (ft)	4.6
C7	25 Jul 2017	High Tide Time	1147
C7	25 Jul 2017	Low Tide (ft)	-1
C7	25 Jul 2017	Low Tide Time	529
C7	25 Jul 2017	Comments	
C7	30 Jul 2017	Depth (m)	19
C7	30 Jul 2017	Arrive Time	838
C7	30 Jul 2017	Depart Time	848
C7	30 Jul 2017	Air Temp (C)	20
C7	30 Jul 2017	Weather	Overcast
C7	30 Jul 2017	Visibility (mi)	5
C7	30 Jul 2017	Wind Speed (kts)	4
C7	30 Jul 2017	Wind Dir	NE
C7	30 Jul 2017	Water Color	Green
C7	30 Jul 2017	Wave Ht Low (ft)	3
C7	30 Jul 2017	Wave Period (sec)	11
C7	30 Jul 2017	Sea State	Calm
C7	30 Jul 2017	High Tide (ft)	4.6
C7	30 Jul 2017	High Tide Time	1602
C7	30 Jul 2017	Low Tide (ft)	1.7
C7	30 Jul 2017	Low Tide Time	911
C7	30 Jul 2017	Comments	Kelp
C8	06 Jul 2017	Depth (m)	19
C8	06 Jul 2017	Arrive Time	836
C8	06 Jul 2017	Depart Time	840
C8	06 Jul 2017	Air Temp (C)	19
C8	06 Jul 2017	Weather	Haze
C8	06 Jul 2017	Visibility (mi)	4
C8	06 Jul 2017	Wind Speed (kts)	2
C8	06 Jul 2017	Wind Dir	SE
C8	06 Jul 2017	Water Color	Brownish-Green
C8	06 Jul 2017	Wave Ht Low (ft)	2
C8	06 Jul 2017	Wave Period (sec)	13
C8	06 Jul 2017	Sea State	Calm
C8	06 Jul 2017	High Tide (ft)	3.6
C8	06 Jul 2017	High Tide Time	904
C8	06 Jul 2017	Low Tide (ft)	2
C8	06 Jul 2017	Low Tide Time	1400
C8	06 Jul 2017	Comments	Boats
C8	12 Jul 2017	Depth (m)	18
C8	12 Jul 2017	Arrive Time	905
C8	12 Jul 2017	Depart Time	909
C8	12 Jul 2017	Air Temp (C)	21
C8	12 Jul 2017	Weather	Partly Cloudy
C8	12 Jul 2017	Visibility (mi)	10
C8	12 Jul 2017	Wind Speed (kts)	5
C8	12 Jul 2017	Wind Dir	W

Station	Date	Parameter	Value
C8	12 Jul 2017	Water Color	Green
C8	12 Jul 2017	Wave Ht Low (ft)	5
C8	12 Jul 2017	Wave Period (sec)	13
C8	12 Jul 2017	Sea State	Wind ripples
C8	12 Jul 2017	High Tide (ft)	4
C8	12 Jul 2017	High Tide Time	1231
C8	12 Jul 2017	Low Tide (ft)	-0.2
C8	12 Jul 2017	Low Tide Time	607
C8	12 Jul 2017	Comments	
C8	18 Jul 2017	Depth (m)	18
C8	18 Jul 2017	Arrive Time	852
C8	18 Jul 2017	Depart Time	856
C8	18 Jul 2017	Air Temp (C)	21
C8	18 Jul 2017	Weather	Continuous layer of clouds
C8	18 Jul 2017	Visibility (mi)	6
C8	18 Jul 2017	Wind Speed (kts)	3
C8	18 Jul 2017	Wind Dir	SW
C8	18 Jul 2017	Water Color	Greenish-Blue
C8	18 Jul 2017	Wave Ht Low (ft)	3
C8	18 Jul 2017	Wave Period (sec)	11
C8	18 Jul 2017	Sea State	Calm
C8	18 Jul 2017	High Tide (ft)	3.3
C8	18 Jul 2017	High Tide Time	541
C8	18 Jul 2017	Low Tide (ft)	1.6
C8	18 Jul 2017	Low Tide Time	1104
C8	18 Jul 2017	Comments	
C8	25 Jul 2017	Depth (m)	19
C8	25 Jul 2017	Arrive Time	925
C8	25 Jul 2017	Depart Time	928
C8	25 Jul 2017	Air Temp (C)	20
C8	25 Jul 2017	Weather	Overcast
C8	25 Jul 2017	Visibility (mi)	5
C8	25 Jul 2017	Wind Speed (kts)	6
C8	25 Jul 2017	Wind Dir	N
C8	25 Jul 2017	Water Color	Green
C8	25 Jul 2017	Wave Ht Low (ft)	2
C8	25 Jul 2017	Wave Period (sec)	11
C8	25 Jul 2017	Sea State	Light chop
C8	25 Jul 2017	High Tide (ft)	4.6
C8	25 Jul 2017	High Tide Time	1147
C8	25 Jul 2017	Low Tide (ft)	-1
C8	25 Jul 2017	Low Tide Time	529
C8	25 Jul 2017	Comments	
C8	30 Jul 2017	Depth (m)	19
C8	30 Jul 2017	Arrive Time	849
C8	30 Jul 2017	Depart Time	854
C8	30 Jul 2017	Air Temp (C)	20
C8	30 Jul 2017	Weather	Overcast
C8	30 Jul 2017	Visibility (mi)	5
C8	30 Jul 2017	Wind Speed (kts)	4
C8	30 Jul 2017	Wind Dir	E
C8	30 Jul 2017	Water Color	Green

Station	Date	Parameter	Value
C8	30 Jul 2017	Wave Ht Low (ft)	3
C8	30 Jul 2017	Wave Period (sec)	11
C8	30 Jul 2017	Sea State	Calm
C8	30 Jul 2017	High Tide (ft)	4.6
C8	30 Jul 2017	High Tide Time	1602
C8	30 Jul 2017	Low Tide (ft)	1.7
C8	30 Jul 2017	Low Tide Time	911
C8	30 Jul 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 (σ -t)	Chlor ($\mu\text{g/L}$)
A1	06 Jul 2017	1	18.38	79.14	10.1	33.50	8.2	24.0	2.17
A1	06 Jul 2017	2	18.33	78.82	10.3	33.51	8.2	24.0	3.31
A1	06 Jul 2017	3	18.12	78.90	10.3	33.51	8.2	24.1	4.51
A1	06 Jul 2017	4	17.85	78.35	10.1	33.51	8.2	24.2	5.49
A1	06 Jul 2017	5	17.58	76.96	9.6	33.51	8.2	24.2	6.90
A1	06 Jul 2017	6	17.11	75.43	8.9	33.52	8.2	24.4	9.28
A1	06 Jul 2017	7	16.14	72.86	8.3	33.51	8.2	24.6	10.62
A1	06 Jul 2017	8	15.11	70.13	7.7	33.51	8.2	24.8	11.18
A1	06 Jul 2017	9	14.75	64.02	7.1	33.49	8.1	24.9	11.02
A1	06 Jul 2017	10	14.58	63.23	6.2	33.46	8.1	24.9	10.51
A1	06 Jul 2017	11	14.09	65.30	5.6	33.46	8.0	25.0	8.61
A1	06 Jul 2017	12	13.71	67.35	4.9	33.46	8.0	25.1	6.65
A1	06 Jul 2017	13	12.92	71.69	4.5	33.47	7.9	25.2	5.31
A1	06 Jul 2017	14	12.19	78.16	4.5	33.45	7.8	25.4	4.81
A1	06 Jul 2017	15	12.17	81.82	4.5	33.43	7.8	25.3	4.49
A1	06 Jul 2017	16	12.11	83.11	4.4	33.42	7.8	25.3	4.15
A1	06 Jul 2017	17	12.02	83.38	4.5	33.44	7.8	25.4	3.64
A1	06 Jul 2017	18	12.04	84.05	4.5	33.43	7.8	25.4	3.08
A1	06 Jul 2017	19	11.88	84.67	4.5	33.45	7.8	25.4	3.05
A1	12 Jul 2017	1	21.21	79.09	9.8	33.53	8.3	23.3	2.46
A1	12 Jul 2017	2	21.10	78.79	9.8	33.54	8.3	23.4	2.52
A1	12 Jul 2017	3	20.82	78.54	9.8	33.55	8.3	23.4	2.71
A1	12 Jul 2017	4	19.96	77.67	9.8	33.62	8.3	23.7	2.97
A1	12 Jul 2017	5	17.79	72.45	9.9	33.76	8.2	24.4	4.04
A1	12 Jul 2017	6	14.98	65.75	9.2	33.68	8.1	25.0	6.75
A1	12 Jul 2017	7	14.58	72.10	8.7	33.52	8.1	24.9	8.40
A1	12 Jul 2017	8	14.30	75.00	8.4	33.48	8.1	25.0	8.03
A1	12 Jul 2017	9	14.30	74.94	8.2	33.52	8.1	25.0	7.15
A1	12 Jul 2017	10	13.74	79.17	7.5	33.48	8.0	25.1	6.85
A1	12 Jul 2017	11	13.72	80.54	7.2	33.48	8.0	25.1	6.19
A1	12 Jul 2017	12	13.46	82.24	7.0	33.49	8.0	25.1	5.47
A1	12 Jul 2017	13	13.32	83.51	6.8	33.49	8.0	25.2	4.74
A1	12 Jul 2017	14	13.10	85.20	6.4	33.48	7.9	25.2	4.06
A1	12 Jul 2017	15	13.01	85.76	6.1	33.49	7.9	25.2	3.40
A1	12 Jul 2017	16	12.91	85.88	5.9	33.49	7.9	25.2	2.87
A1	12 Jul 2017	17	12.81	86.24	5.7	33.49	7.9	25.3	2.69
A1	12 Jul 2017	18	12.80	86.47	5.6	33.48	7.9	25.3	2.24
A1	12 Jul 2017	19	12.82	86.67	5.5	33.47	7.8	25.2	1.94
A1	18 Jul 2017	1	21.38	81.05	9.3	33.52	8.3	23.3	1.76
A1	18 Jul 2017	2	21.33	80.99	9.3	33.53	8.3	23.3	1.74
A1	18 Jul 2017	3	21.30	80.85	9.3	33.52	8.3	23.3	1.76
A1	18 Jul 2017	4	21.30	80.76	9.3	33.52	8.3	23.3	1.82
A1	18 Jul 2017	5	21.26	80.68	9.2	33.53	8.3	23.3	1.92
A1	18 Jul 2017	6	21.21	80.55	9.2	33.53	8.3	23.3	2.02
A1	18 Jul 2017	7	21.04	79.46	9.1	33.54	8.3	23.4	2.11
A1	18 Jul 2017	8	21.02	78.74	9.0	33.53	8.3	23.4	2.30
A1	18 Jul 2017	9	21.02	78.60	8.9	33.53	8.3	23.4	2.38
A1	18 Jul 2017	10	21.01	78.67	8.9	33.53	8.3	23.4	2.40

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens ($\sigma\text{-t}$)	Chlor ($\mu\text{g/L}$)
A1	18 Jul 2017	11	20.87	78.83	8.9	33.55	8.3	23.4	2.40
A1	18 Jul 2017	12	20.63	78.51	8.7	33.55	8.3	23.5	2.48
A1	18 Jul 2017	13	19.67	77.62	8.1	33.65	8.2	23.8	2.68
A1	18 Jul 2017	14	16.89	77.38	7.0	33.68	8.1	24.5	3.45
A1	18 Jul 2017	15	15.06	74.81	7.3	33.59	8.0	24.9	5.11
A1	18 Jul 2017	16	14.62	75.20	7.9	33.42	8.0	24.8	6.50
A1	18 Jul 2017	17	14.41	78.15	7.9	33.42	8.0	24.9	6.56
A1	18 Jul 2017	18	14.37	78.16	7.8	33.39	8.0	24.9	6.45
A1	18 Jul 2017	19	14.34	78.36	7.6	33.40	8.0	24.9	6.10
A1	18 Jul 2017	20	14.31	79.58	7.5	33.41	8.0	24.9	5.75
A1	25 Jul 2017	1	22.58	85.37	8.5	33.52	8.2	22.9	1.48
A1	25 Jul 2017	2	22.59	85.28	8.8	33.52	8.2	22.9	1.65
A1	25 Jul 2017	3	21.24	85.05	9.8	33.54	8.2	23.3	2.26
A1	25 Jul 2017	4	19.57	83.93	9.3	33.47	8.2	23.7	2.97
A1	25 Jul 2017	5	17.95	81.86	7.8	33.45	8.2	24.1	2.84
A1	25 Jul 2017	6	16.14	83.21	6.8	33.45	8.1	24.5	2.03
A1	25 Jul 2017	7	14.35	88.76	7.0	33.36	8.0	24.8	1.54
A1	25 Jul 2017	8	14.05	89.98	6.8	33.32	8.0	24.9	1.26
A1	25 Jul 2017	9	13.78	90.26	6.7	33.30	8.0	24.9	1.05
A1	25 Jul 2017	10	13.54	90.79	6.6	33.30	8.0	25.0	0.92
A1	25 Jul 2017	11	13.37	91.39	6.4	33.31	8.0	25.0	0.83
A1	25 Jul 2017	12	13.23	91.29	6.0	33.31	7.9	25.0	0.83
A1	25 Jul 2017	13	12.72	91.39	6.0	33.34	7.9	25.2	0.76
A1	25 Jul 2017	14	12.74	91.69	5.8	33.33	7.9	25.1	0.68
A1	25 Jul 2017	15	12.43	91.49	5.7	33.35	7.9	25.2	0.67
A1	25 Jul 2017	16	12.39	91.35	5.7	33.35	7.9	25.2	0.62
A1	25 Jul 2017	17	12.35	91.29	5.7	33.36	7.9	25.2	0.58
A1	25 Jul 2017	18	12.32	91.16	5.7	33.36	7.9	25.3	0.55
A1	25 Jul 2017	19	12.33	91.12	5.7	33.37	7.9	25.3	0.54
A1	30 Jul 2017	1	23.50	81.27	9.0	33.61	8.3	22.7	2.06
A1	30 Jul 2017	2	23.47	81.17	8.8	33.61	8.3	22.7	2.14
A1	30 Jul 2017	3	23.33	81.17	8.6	33.62	8.3	22.8	2.73
A1	30 Jul 2017	4	22.13	81.14	8.6	33.67	8.3	23.2	4.04
A1	30 Jul 2017	5	19.52	81.31	8.0	33.60	8.3	23.8	4.88
A1	30 Jul 2017	6	17.46	79.59	7.4	33.55	8.2	24.3	4.93
A1	30 Jul 2017	7	16.07	77.93	7.0	33.46	8.1	24.5	4.66
A1	30 Jul 2017	8	15.67	77.59	7.0	33.39	8.1	24.6	4.57
A1	30 Jul 2017	9	15.53	77.27	7.2	33.37	8.1	24.6	4.41
A1	30 Jul 2017	10	15.50	77.02	7.3	33.36	8.1	24.6	4.44
A1	30 Jul 2017	11	15.48	77.11	7.3	33.35	8.1	24.6	4.43
A1	30 Jul 2017	12	15.48	76.97	7.2	33.34	8.1	24.6	4.29
A1	30 Jul 2017	13	15.46	77.16	7.0	33.35	8.1	24.6	4.07
A1	30 Jul 2017	14	15.21	77.36	6.8	33.37	8.1	24.7	3.81
A1	30 Jul 2017	15	14.95	78.60	6.4	33.37	8.0	24.7	3.01
A1	30 Jul 2017	16	14.43	79.36	6.1	33.39	8.0	24.9	2.08
A1	30 Jul 2017	17	13.69	82.41	6.1	33.37	8.0	25.0	1.50
A1	30 Jul 2017	18	13.60	84.87	6.2	33.36	8.0	25.0	1.37
C4	06 Jul 2017	1	18.09	78.19	9.9	33.50	8.3	24.1	2.01
C4	06 Jul 2017	2	18.05	77.69	9.3	33.50	8.3	24.1	6.63
C4	06 Jul 2017	3	16.97	76.12	9.1	33.52	8.2	24.4	10.60
C4	06 Jul 2017	4	16.16	69.16	8.7	33.50	8.2	24.6	12.07
C4	06 Jul 2017	5	15.80	61.99	7.3	33.48	8.2	24.6	11.56

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens ($\sigma\text{-t}$)	Chlor ($\mu\text{g/L}$)
C4	06 Jul 2017	6	15.06	61.63	5.8	33.48	8.2	24.8	9.84
C4	06 Jul 2017	7	14.33	64.62	4.6	33.47	8.0	24.9	4.55
C4	06 Jul 2017	8	13.98	71.44	4.2	33.46	7.9	25.0	1.98
C4	06 Jul 2017	9	13.78	81.92	4.5	33.46	7.9	25.0	1.23
C4	06 Jul 2017	10	13.75	84.97	4.9	33.46	7.9	25.0	1.49
C4	12 Jul 2017	1	21.96	80.33	9.2	33.53	8.3	23.1	1.16
C4	12 Jul 2017	2	21.32	80.22	9.1	33.57	8.3	23.3	1.20
C4	12 Jul 2017	3	20.40	79.35	8.7	33.60	8.3	23.6	1.30
C4	12 Jul 2017	4	18.12	74.52	8.6	33.59	8.2	24.2	1.84
C4	12 Jul 2017	5	16.98	72.13	8.4	33.56	8.2	24.4	2.70
C4	12 Jul 2017	6	15.91	74.47	8.0	33.52	8.1	24.6	3.55
C4	12 Jul 2017	7	15.37	77.90	7.6	33.49	8.1	24.7	3.43
C4	12 Jul 2017	8	14.95	81.30	7.2	33.46	8.0	24.8	2.86
C4	12 Jul 2017	9	14.70	81.71	7.0	33.45	8.0	24.8	2.17
C4	12 Jul 2017	10	14.66	81.37	6.9	33.44	8.0	24.8	1.65
C4	18 Jul 2017	1	21.61	81.06	8.5	33.54	8.3	23.2	1.05
C4	18 Jul 2017	2	21.59	80.94	8.5	33.55	8.3	23.2	1.11
C4	18 Jul 2017	3	21.49	80.94	8.5	33.55	8.3	23.3	1.18
C4	18 Jul 2017	4	21.43	81.05	8.4	33.54	8.3	23.3	1.24
C4	18 Jul 2017	5	21.42	77.45	8.4	33.54	8.3	23.3	1.50
C4	18 Jul 2017	6	21.41	80.89	8.4	33.54	8.3	23.3	1.54
C4	18 Jul 2017	7	21.41	80.05	8.4	33.54	8.3	23.3	1.41
C4	18 Jul 2017	8	21.39	79.02	8.2	33.54	8.3	23.3	1.36
C4	18 Jul 2017	9	20.47	78.97	7.5	33.67	8.3	23.6	1.47
C4	18 Jul 2017	10	17.29	78.72	6.6	33.74	8.2	24.5	1.46
C4	18 Jul 2017	11	16.35	77.24	6.4	33.49	8.0	24.5	1.14
C4	25 Jul 2017	1	22.23	84.80	8.0	33.53	8.2	23.0	1.04
C4	25 Jul 2017	2	22.19	84.77	7.5	33.54	8.2	23.1	1.00
C4	25 Jul 2017	3	21.27	84.72	6.9	33.55	8.2	23.3	1.04
C4	25 Jul 2017	4	18.93	84.22	6.8	33.52	8.2	23.9	0.94
C4	25 Jul 2017	5	16.81	84.28	6.6	33.46	8.1	24.4	0.75
C4	25 Jul 2017	6	15.47	84.58	6.2	33.41	8.1	24.6	0.59
C4	25 Jul 2017	7	14.90	85.68	6.1	33.36	8.0	24.7	0.50
C4	25 Jul 2017	8	14.54	87.05	6.2	33.33	8.0	24.8	0.45
C4	25 Jul 2017	9	14.47	86.15	6.3	33.31	8.0	24.8	0.41
C4	25 Jul 2017	10	14.47	82.46	6.4	33.31	8.0	24.8	0.39
C4	25 Jul 2017	11	14.48	80.90	6.4	33.31	8.0	24.8	0.39
C4	30 Jul 2017	1	22.52	82.89	7.6	33.59	8.3	23.0	1.50
C4	30 Jul 2017	2	22.46	82.99	7.8	33.62	8.3	23.0	1.46
C4	30 Jul 2017	3	21.62	83.30	7.6	33.95	8.3	23.5	1.44
C4	30 Jul 2017	4	20.43	83.67	7.1	33.97	8.2	23.9	1.43
C4	30 Jul 2017	5	18.81	77.52	6.9	33.94	8.2	24.3	1.57
C4	30 Jul 2017	6	17.76	81.65	6.6	33.81	8.2	24.4	1.62
C4	30 Jul 2017	7	16.24	82.15	6.5	33.81	8.1	24.8	1.16
C4	30 Jul 2017	8	15.51	82.64	6.3	33.66	8.1	24.8	1.37
C4	30 Jul 2017	9	15.18	83.53	5.9	33.58	8.1	24.8	1.12
C4	30 Jul 2017	10	14.26	82.94	5.8	33.53	8.0	25.0	0.85
C5	06 Jul 2017	1	18.99	77.06	8.7	33.51	8.2	23.9	1.63
C5	06 Jul 2017	2	18.85	76.96	8.4	33.52	8.2	23.9	1.68
C5	06 Jul 2017	3	18.02	76.53	8.6	33.55	8.2	24.2	1.81

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens ($\sigma\text{-t}$)	Chlor ($\mu\text{g/L}$)
C5	06 Jul 2017	4	17.01	70.22	8.6	33.78	8.2	24.6	1.85
C5	06 Jul 2017	5	15.85	68.89	8.1	33.95	8.2	25.0	2.08
C5	06 Jul 2017	6	15.16	78.07	7.5	33.85	8.1	25.1	2.69
C5	06 Jul 2017	7	14.70	82.99	6.8	33.84	8.0	25.1	4.16
C5	06 Jul 2017	8	14.23	84.22	6.3	33.83	8.0	25.2	3.32
C5	06 Jul 2017	9	13.96	84.21	5.9	33.78	8.0	25.3	2.03
C5	06 Jul 2017	10	13.76	84.83	5.6	33.69	7.9	25.2	1.40
C5	12 Jul 2017	1	22.00	81.62	9.3	33.53	8.3	23.1	1.12
C5	12 Jul 2017	2	22.01	81.51	9.3	33.54	8.3	23.1	1.19
C5	12 Jul 2017	3	21.79	81.61	9.1	33.56	8.3	23.2	1.24
C5	12 Jul 2017	4	20.42	82.52	8.5	33.68	8.3	23.6	1.27
C5	12 Jul 2017	5	18.17	82.15	7.8	33.60	8.2	24.2	1.48
C5	12 Jul 2017	6	17.15	83.22	7.4	33.53	8.1	24.4	1.46
C5	12 Jul 2017	7	16.40	85.05	7.2	33.51	8.1	24.5	1.23
C5	12 Jul 2017	8	15.88	86.08	7.1	33.50	8.1	24.6	0.97
C5	12 Jul 2017	9	15.22	86.50	6.9	33.50	8.0	24.8	0.84
C5	12 Jul 2017	10	14.85	86.84	6.6	33.46	8.0	24.8	0.58
C5	18 Jul 2017	1	22.03	86.31	8.7	33.54	8.3	23.1	0.93
C5	18 Jul 2017	2	21.93	86.21	8.7	33.54	8.3	23.1	0.93
C5	18 Jul 2017	3	21.70	85.29	8.7	33.54	8.3	23.2	1.12
C5	18 Jul 2017	4	21.66	84.37	8.7	33.54	8.3	23.2	1.31
C5	18 Jul 2017	5	21.51	80.89	8.5	33.55	8.3	23.3	1.35
C5	18 Jul 2017	6	21.00	78.63	8.2	33.57	8.3	23.4	1.41
C5	18 Jul 2017	7	20.06	80.50	7.5	33.59	8.2	23.7	1.48
C5	18 Jul 2017	8	18.03	82.95	6.7	33.60	8.1	24.2	1.77
C5	18 Jul 2017	9	16.63	83.55	6.2	33.53	8.0	24.5	1.97
C5	18 Jul 2017	10	15.95	84.35	5.9	33.49	8.0	24.6	1.46
C5	18 Jul 2017	11	15.62	84.38	5.9	33.47	8.0	24.7	1.23
C5	25 Jul 2017	1	22.46	83.84	8.4	33.55	8.2	23.0	1.28
C5	25 Jul 2017	2	22.49	84.93	8.2	33.55	8.2	23.0	1.25
C5	25 Jul 2017	3	22.23	85.58	7.8	33.55	8.2	23.1	1.24
C5	25 Jul 2017	4	21.30	85.57	7.3	33.55	8.2	23.3	1.20
C5	25 Jul 2017	5	19.59	86.22	6.8	33.52	8.2	23.7	0.98
C5	25 Jul 2017	6	17.33	85.84	6.7	33.47	8.1	24.3	0.90
C5	25 Jul 2017	7	15.96	86.12	6.7	33.42	8.1	24.5	0.75
C5	25 Jul 2017	8	15.38	87.82	6.6	33.37	8.0	24.6	0.65
C5	25 Jul 2017	9	14.95	88.40	6.7	33.37	8.0	24.7	0.61
C5	25 Jul 2017	10	14.85	NA	6.9	33.34	8.0	24.7	0.61
C5	30 Jul 2017	1	22.92	84.25	8.5	33.61	8.3	22.9	1.59
C5	30 Jul 2017	2	22.93	84.22	8.3	33.61	8.3	22.9	1.65
C5	30 Jul 2017	3	22.94	84.31	7.7	33.61	8.3	22.9	1.81
C5	30 Jul 2017	4	22.74	84.17	7.1	33.61	8.3	23.0	1.81
C5	30 Jul 2017	5	20.35	84.62	6.8	33.71	8.3	23.7	1.83
C5	30 Jul 2017	6	18.24	84.80	6.7	33.61	8.2	24.1	1.61
C5	30 Jul 2017	7	17.34	85.26	6.6	33.54	8.2	24.3	1.30
C5	30 Jul 2017	8	16.55	86.23	6.3	33.49	8.1	24.5	1.12
C5	30 Jul 2017	9	15.66	87.21	6.1	33.47	8.1	24.6	0.88
C5	30 Jul 2017	10	15.11	87.25	6.1	33.46	8.1	24.8	1.15
C5	30 Jul 2017	11	14.97	82.82	6.3	33.38	8.0	24.7	0.81
A6	06 Jul 2017	1	19.72	78.86	9.0	33.50	8.2	23.7	2.75

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens ($\sigma\text{-t}$)	Chlor ($\mu\text{g/L}$)
A6	06 Jul 2017	2	19.63	78.57	8.4	33.50	8.2	23.7	4.75
A6	06 Jul 2017	3	18.08	78.16	7.9	33.54	8.2	24.1	8.56
A6	06 Jul 2017	4	15.57	74.75	8.0	33.54	8.2	24.7	10.23
A6	06 Jul 2017	5	14.40	70.63	7.9	33.47	8.1	24.9	10.21
A6	06 Jul 2017	6	14.23	65.84	7.2	33.42	8.1	24.9	9.20
A6	06 Jul 2017	7	13.69	67.22	6.8	33.42	8.1	25.0	8.43
A6	06 Jul 2017	8	13.52	70.58	6.4	33.40	8.0	25.0	7.47
A6	06 Jul 2017	9	13.47	73.38	5.6	33.40	8.0	25.1	5.64
A6	06 Jul 2017	10	13.16	74.86	5.0	33.42	8.0	25.1	4.15
A6	06 Jul 2017	11	12.61	76.76	4.9	33.43	7.9	25.3	3.23
A6	06 Jul 2017	12	12.46	81.87	5.0	33.41	7.9	25.3	2.89
A6	06 Jul 2017	13	12.36	84.95	5.1	33.41	7.8	25.3	2.76
A6	06 Jul 2017	14	12.31	85.59	5.1	33.41	7.8	25.3	2.45
A6	06 Jul 2017	15	12.25	85.57	4.9	33.41	7.8	25.3	1.87
A6	06 Jul 2017	16	12.18	86.00	4.5	33.42	7.8	25.3	1.49
A6	06 Jul 2017	17	11.95	86.49	4.4	33.44	7.8	25.4	1.26
A6	06 Jul 2017	18	11.89	87.25	4.3	33.44	7.8	25.4	1.20
A6	06 Jul 2017	19	11.81	87.60	4.3	33.45	7.8	25.4	1.12
A6	06 Jul 2017	20	11.78	87.58	4.4	33.45	7.8	25.4	1.08
A6	12 Jul 2017	1	22.04	82.40	10.1	33.51	8.3	23.1	1.36
A6	12 Jul 2017	2	22.07	82.35	10.0	33.52	8.3	23.1	1.35
A6	12 Jul 2017	3	21.49	82.51	9.7	33.58	8.3	23.3	1.51
A6	12 Jul 2017	4	19.86	81.98	10.1	33.66	8.3	23.8	2.11
A6	12 Jul 2017	5	18.08	77.90	10.3	33.61	8.2	24.2	3.59
A6	12 Jul 2017	6	17.65	73.33	9.5	33.59	8.2	24.3	5.65
A6	12 Jul 2017	7	15.38	72.95	8.2	33.59	8.1	24.9	6.36
A6	12 Jul 2017	8	14.15	77.34	7.1	33.54	8.0	25.0	6.10
A6	12 Jul 2017	9	13.86	80.30	6.7	33.48	8.0	25.0	5.20
A6	12 Jul 2017	10	13.48	84.12	6.6	33.47	7.9	25.1	4.36
A6	12 Jul 2017	11	13.26	84.55	6.5	33.45	7.9	25.1	3.63
A6	12 Jul 2017	12	13.16	85.31	6.5	33.43	7.9	25.1	3.20
A6	12 Jul 2017	13	13.13	85.66	6.5	33.43	7.9	25.2	2.91
A6	12 Jul 2017	14	13.10	86.15	6.5	33.44	7.9	25.2	2.76
A6	12 Jul 2017	15	13.10	86.56	6.5	33.44	7.9	25.2	2.50
A6	12 Jul 2017	16	13.10	86.51	6.3	33.44	7.9	25.2	2.51
A6	12 Jul 2017	17	13.10	86.43	6.2	33.45	7.9	25.2	2.45
A6	12 Jul 2017	18	13.10	86.40	6.2	33.45	7.9	25.2	2.40
A6	12 Jul 2017	19	13.11	86.55	6.1	33.46	7.9	25.2	2.38
A6	18 Jul 2017	1	21.65	79.64	9.2	33.54	8.3	23.2	2.25
A6	18 Jul 2017	2	21.51	79.42	9.3	33.55	8.3	23.3	2.41
A6	18 Jul 2017	3	21.06	79.07	9.3	33.56	8.3	23.4	2.84
A6	18 Jul 2017	4	20.55	77.45	9.2	33.55	8.3	23.5	3.54
A6	18 Jul 2017	5	20.50	75.52	9.1	33.53	8.3	23.5	4.02
A6	18 Jul 2017	6	20.16	74.59	9.1	33.54	8.3	23.6	4.29
A6	18 Jul 2017	7	20.01	74.37	9.0	33.52	8.3	23.6	4.46
A6	18 Jul 2017	8	19.99	74.60	8.9	33.52	8.2	23.6	4.64
A6	18 Jul 2017	9	20.02	74.83	8.9	33.52	8.2	23.6	4.52
A6	18 Jul 2017	10	20.02	74.69	8.8	33.52	8.2	23.6	4.53
A6	18 Jul 2017	11	19.99	74.82	8.8	33.52	8.2	23.6	4.45
A6	18 Jul 2017	12	19.90	74.93	8.8	33.53	8.2	23.7	4.38
A6	18 Jul 2017	13	19.79	75.30	8.8	33.52	8.2	23.7	4.38
A6	18 Jul 2017	14	19.74	75.31	8.7	33.52	8.2	23.7	4.40
A6	18 Jul 2017	15	19.66	75.40	8.7	33.52	8.2	23.7	4.47

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens ($\sigma\text{-t}$)	Chlor ($\mu\text{g/L}$)
A6	18 Jul 2017	16	19.61	75.29	8.7	33.52	8.2	23.7	4.50
A6	18 Jul 2017	17	19.47	75.15	8.5	33.53	8.2	23.8	4.53
A6	18 Jul 2017	18	18.99	75.02	8.1	33.56	8.2	23.9	4.40
A6	25 Jul 2017	1	22.39	86.31	8.4	33.52	8.2	23.0	1.17
A6	25 Jul 2017	2	22.33	86.60	8.6	33.52	8.2	23.0	1.37
A6	25 Jul 2017	3	21.44	86.78	9.0	33.52	8.2	23.2	1.49
A6	25 Jul 2017	4	20.90	85.96	9.1	33.48	8.2	23.4	2.01
A6	25 Jul 2017	5	20.45	85.74	9.1	33.47	8.2	23.5	3.03
A6	25 Jul 2017	6	18.66	85.10	8.8	33.46	8.2	23.9	3.03
A6	25 Jul 2017	7	17.29	81.91	7.5	33.41	8.2	24.2	2.10
A6	25 Jul 2017	8	16.14	81.96	6.5	33.38	8.1	24.5	1.35
A6	25 Jul 2017	9	15.09	85.99	6.4	33.37	8.1	24.7	1.01
A6	25 Jul 2017	10	14.40	87.83	6.7	33.34	8.0	24.8	0.87
A6	25 Jul 2017	11	14.16	89.61	6.6	33.31	8.0	24.9	0.81
A6	25 Jul 2017	12	13.88	90.05	6.7	33.31	8.0	24.9	0.83
A6	25 Jul 2017	13	13.81	90.21	6.7	33.31	8.0	24.9	0.81
A6	25 Jul 2017	14	13.70	90.36	6.6	33.32	8.0	24.9	0.85
A6	25 Jul 2017	15	13.66	90.35	6.5	33.32	8.0	25.0	0.75
A6	25 Jul 2017	16	13.53	90.44	6.3	33.33	8.0	25.0	0.62
A6	25 Jul 2017	17	13.34	90.66	6.0	33.33	7.9	25.0	0.58
A6	25 Jul 2017	18	12.99	90.72	6.1	33.35	7.9	25.1	0.58
A6	30 Jul 2017	1	23.51	81.97	9.0	33.61	8.3	22.7	2.04
A6	30 Jul 2017	2	23.53	81.87	9.0	33.61	8.3	22.7	2.12
A6	30 Jul 2017	3	23.40	81.81	9.0	33.62	8.3	22.8	2.30
A6	30 Jul 2017	4	23.13	81.73	8.8	33.61	8.3	22.8	2.71
A6	30 Jul 2017	5	22.00	81.54	8.3	33.63	8.3	23.2	3.00
A6	30 Jul 2017	6	20.55	81.46	7.0	33.59	8.3	23.5	2.59
A6	30 Jul 2017	7	17.78	80.83	5.9	33.66	8.2	24.3	2.14
A6	30 Jul 2017	8	15.97	83.16	5.9	33.55	8.1	24.6	2.48
A6	30 Jul 2017	9	14.53	86.51	6.4	33.47	8.0	24.9	2.82
A6	30 Jul 2017	10	14.16	86.49	6.5	33.38	8.0	24.9	2.92
A6	30 Jul 2017	11	14.10	85.45	6.6	33.35	8.0	24.9	2.87
A6	30 Jul 2017	12	14.06	85.38	6.7	33.34	8.0	24.9	2.84
A6	30 Jul 2017	13	14.06	85.60	6.7	33.34	8.0	24.9	2.74
A6	30 Jul 2017	14	14.04	85.89	6.7	33.34	8.0	24.9	2.75
A6	30 Jul 2017	15	14.03	86.01	6.6	33.34	8.0	24.9	2.64
A6	30 Jul 2017	16	13.98	86.07	6.6	33.34	8.0	24.9	2.28
A6	30 Jul 2017	17	13.98	86.65	6.3	33.34	8.0	24.9	1.84
A6	30 Jul 2017	18	13.96	87.35	6.2	33.35	8.0	24.9	1.52
A6	30 Jul 2017	19	13.92	88.46	6.1	33.36	8.0	24.9	1.17
A6	30 Jul 2017	20	13.81	89.14	6.1	33.37	8.0	25.0	0.99
A6	30 Jul 2017	21	13.71	89.55	6.1	33.37	8.0	25.0	0.85
C6	06 Jul 2017	1	19.72	81.19	8.8	33.51	8.3	23.7	1.35
C6	06 Jul 2017	2	19.37	81.22	8.1	33.51	8.3	23.8	2.88
C6	06 Jul 2017	3	17.12	81.06	7.6	33.55	8.2	24.4	4.40
C6	06 Jul 2017	4	15.44	79.18	7.1	33.50	8.2	24.7	5.11
C6	06 Jul 2017	5	14.83	76.56	6.5	33.46	8.1	24.8	4.37
C6	06 Jul 2017	6	14.33	76.82	6.1	33.45	8.1	24.9	2.66
C6	06 Jul 2017	7	13.95	78.19	5.8	33.42	8.0	25.0	1.62
C6	06 Jul 2017	8	13.76	81.85	5.7	33.42	8.0	25.0	0.79
C6	06 Jul 2017	9	13.62	85.79	5.8	33.41	8.0	25.0	0.50
C6	06 Jul 2017	10	13.59	88.56	6.2	33.42	7.9	25.0	0.99

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens ($\sigma\text{-t}$)	Chlor ($\mu\text{g/L}$)
C6	12 Jul 2017	1	22.16	82.67	9.3	33.53	8.3	23.1	1.12
	12 Jul 2017	2	22.10	82.89	9.3	33.55	8.3	23.1	1.17
	12 Jul 2017	3	21.36	83.09	9.0	33.66	8.3	23.4	1.18
	12 Jul 2017	4	19.62	83.11	8.8	33.67	8.2	23.8	1.18
	12 Jul 2017	5	19.38	82.39	8.7	33.57	8.2	23.8	1.22
	12 Jul 2017	6	18.15	81.75	8.4	33.67	8.2	24.2	1.36
	12 Jul 2017	7	17.37	83.19	8.1	33.55	8.1	24.3	1.69
	12 Jul 2017	8	16.36	84.53	7.8	33.68	8.1	24.7	1.75
	12 Jul 2017	9	15.51	85.68	7.3	33.60	8.1	24.8	1.67
	18 Jul 2017	1	22.13	83.19	9.0	33.55	8.3	23.1	1.50
C6	18 Jul 2017	2	21.88	82.92	9.1	33.57	8.3	23.2	1.52
	18 Jul 2017	3	21.69	81.19	9.2	33.55	8.3	23.2	1.80
	18 Jul 2017	4	21.44	79.91	9.2	33.57	8.3	23.3	2.18
	18 Jul 2017	5	21.17	78.87	9.2	33.56	8.3	23.3	2.54
	18 Jul 2017	6	21.09	77.61	9.2	33.54	8.3	23.4	2.85
	18 Jul 2017	7	20.95	76.96	9.1	33.55	8.3	23.4	3.14
	18 Jul 2017	8	20.76	76.36	9.0	33.54	8.3	23.4	3.35
	18 Jul 2017	9	20.38	77.54	8.4	33.60	8.3	23.6	3.36
	18 Jul 2017	10	18.51	77.86	7.6	33.86	8.2	24.3	3.29
	25 Jul 2017	1	22.70	86.48	8.0	33.54	8.2	22.9	1.26
C6	25 Jul 2017	2	22.17	86.53	7.8	33.58	8.2	23.1	1.46
	25 Jul 2017	3	21.16	85.74	7.9	33.56	8.2	23.4	1.57
	25 Jul 2017	4	20.25	85.13	7.9	33.54	8.2	23.6	1.71
	25 Jul 2017	5	19.32	85.25	7.7	33.52	8.2	23.8	1.70
	25 Jul 2017	6	18.81	85.18	7.5	33.49	8.2	23.9	1.66
	25 Jul 2017	7	18.03	85.42	7.3	33.48	8.1	24.1	1.55
	25 Jul 2017	8	17.66	85.77	7.0	33.45	8.1	24.2	1.29
	25 Jul 2017	9	16.96	85.84	7.0	33.45	8.1	24.3	1.07
	25 Jul 2017	10	16.77	86.66	7.3	33.40	8.1	24.3	0.98
	30 Jul 2017	1	23.04	86.19	8.4	33.61	8.3	22.9	1.17
C6	30 Jul 2017	2	23.04	86.20	8.3	33.61	8.3	22.9	1.24
	30 Jul 2017	3	23.03	86.15	8.1	33.61	8.3	22.9	1.30
	30 Jul 2017	4	22.99	86.10	7.8	33.61	8.3	22.9	1.87
	30 Jul 2017	5	22.51	85.75	7.6	33.67	8.3	23.1	2.93
	30 Jul 2017	6	21.42	81.46	7.5	33.84	8.3	23.5	2.80
	30 Jul 2017	7	20.00	80.77	7.2	33.71	8.3	23.8	2.63
	30 Jul 2017	8	18.44	83.30	6.7	33.69	8.2	24.2	1.51
	30 Jul 2017	9	17.27	85.64	6.3	33.55	8.2	24.3	1.51
	30 Jul 2017	10	15.76	85.35	6.5	33.59	8.1	24.7	1.08
	A7	06 Jul 2017	1	17.40	71.09	9.2	33.49	8.2	24.3
A7	06 Jul 2017	2	17.18	70.44	8.1	33.49	8.2	24.3	9.13
	06 Jul 2017	3	16.63	70.04	6.7	33.49	8.2	24.4	9.94
	06 Jul 2017	4	14.60	69.26	6.0	33.54	8.1	24.9	9.09
	06 Jul 2017	5	13.94	68.53	5.6	33.48	8.0	25.0	7.70
	06 Jul 2017	6	13.62	68.84	5.5	33.47	8.0	25.1	6.95
	06 Jul 2017	7	13.23	71.24	5.8	33.45	7.9	25.1	6.49
	06 Jul 2017	8	12.81	74.89	5.7	33.41	7.9	25.2	5.39
	06 Jul 2017	9	12.64	77.15	5.0	33.42	7.9	25.2	3.79
	06 Jul 2017	10	12.33	76.31	4.5	33.42	7.9	25.3	2.86
	06 Jul 2017	11	12.03	80.34	4.6	33.43	7.8	25.4	2.42

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens ($\sigma\text{-t}$)	Chlor ($\mu\text{g/L}$)
A7	06 Jul 2017	12	11.99	84.67	4.8	33.43	7.8	25.4	2.19
A7	06 Jul 2017	13	11.95	85.86	5.0	33.42	7.8	25.4	2.02
A7	06 Jul 2017	14	11.88	86.89	4.9	33.43	7.8	25.4	1.85
A7	06 Jul 2017	15	11.83	87.18	4.7	33.43	7.8	25.4	1.70
A7	06 Jul 2017	16	11.79	87.60	4.7	33.44	7.8	25.4	1.69
A7	06 Jul 2017	17	11.78	87.83	4.7	33.45	7.8	25.4	1.54
A7	06 Jul 2017	18	11.78	87.68	4.8	33.45	7.8	25.4	1.55
A7	06 Jul 2017	19	11.78	87.92	4.8	33.45	7.8	25.4	1.53
A7	12 Jul 2017	1	21.00	80.83	9.4	33.53	8.3	23.4	2.23
A7	12 Jul 2017	2	20.83	80.93	9.2	33.54	8.3	23.4	2.27
A7	12 Jul 2017	3	20.26	81.03	9.1	33.58	8.2	23.6	2.41
A7	12 Jul 2017	4	18.84	80.39	9.7	33.70	8.3	24.1	2.58
A7	12 Jul 2017	5	17.49	73.30	9.9	33.64	8.2	24.4	4.01
A7	12 Jul 2017	6	16.66	69.86	9.5	33.57	8.2	24.5	6.23
A7	12 Jul 2017	7	15.74	67.70	8.9	33.59	8.1	24.7	7.66
A7	12 Jul 2017	8	15.31	70.02	8.0	33.53	8.1	24.8	8.73
A7	12 Jul 2017	9	14.43	75.58	7.6	33.56	8.0	25.0	8.62
A7	12 Jul 2017	10	14.03	80.07	7.6	33.49	8.0	25.0	6.97
A7	12 Jul 2017	11	13.74	81.13	7.3	33.50	8.0	25.1	6.01
A7	12 Jul 2017	12	13.50	82.65	7.0	33.48	8.0	25.1	5.08
A7	12 Jul 2017	13	13.38	83.51	6.8	33.47	8.0	25.1	4.44
A7	12 Jul 2017	14	13.25	84.64	6.6	33.48	7.9	25.2	3.84
A7	12 Jul 2017	15	13.22	85.98	6.4	33.47	7.9	25.2	3.02
A7	12 Jul 2017	16	13.08	86.16	6.2	33.48	7.9	25.2	2.62
A7	12 Jul 2017	17	13.06	87.00	6.0	33.47	7.9	25.2	2.14
A7	12 Jul 2017	18	13.07	87.12	5.9	33.47	7.9	25.2	1.69
A7	18 Jul 2017	1	21.59	80.59	9.1	33.54	8.3	23.2	2.07
A7	18 Jul 2017	2	21.55	80.64	9.2	33.54	8.3	23.2	2.07
A7	18 Jul 2017	3	21.43	80.34	9.2	33.54	8.3	23.3	2.23
A7	18 Jul 2017	4	21.14	79.80	9.2	33.55	8.3	23.4	2.57
A7	18 Jul 2017	5	20.99	77.93	9.1	33.55	8.3	23.4	2.94
A7	18 Jul 2017	6	20.81	76.27	9.1	33.54	8.3	23.4	3.44
A7	18 Jul 2017	7	20.52	74.90	8.9	33.55	8.3	23.5	3.84
A7	18 Jul 2017	8	20.17	73.96	8.8	33.55	8.2	23.6	4.23
A7	18 Jul 2017	9	19.98	73.53	8.7	33.54	8.2	23.6	4.56
A7	18 Jul 2017	10	19.77	73.21	8.6	33.54	8.2	23.7	4.68
A7	18 Jul 2017	11	19.41	73.59	8.5	33.53	8.2	23.8	4.70
A7	18 Jul 2017	12	19.36	74.71	8.4	33.51	8.2	23.8	4.66
A7	18 Jul 2017	13	19.25	75.58	8.1	33.52	8.2	23.8	4.60
A7	18 Jul 2017	14	16.86	76.04	7.3	33.67	8.2	24.5	4.42
A7	18 Jul 2017	15	15.82	77.84	6.6	33.51	8.1	24.6	4.05
A7	18 Jul 2017	16	15.53	79.57	6.4	33.49	8.0	24.7	3.83
A7	18 Jul 2017	17	15.31	80.46	6.2	33.47	8.0	24.7	3.65
A7	18 Jul 2017	18	15.12	81.26	6.1	33.47	8.0	24.8	3.50
A7	18 Jul 2017	19	14.81	81.79	5.9	33.48	8.0	24.8	3.49
A7	25 Jul 2017	1	22.36	85.83	8.4	33.52	8.2	23.0	1.24
A7	25 Jul 2017	2	22.53	85.86	8.7	33.52	8.2	22.9	1.69
A7	25 Jul 2017	3	21.18	86.46	9.7	33.53	8.2	23.3	2.84
A7	25 Jul 2017	4	18.95	85.22	9.6	33.46	8.2	23.9	2.94
A7	25 Jul 2017	5	17.99	81.93	8.6	33.40	8.2	24.0	2.44
A7	25 Jul 2017	6	17.43	82.57	7.5	33.38	8.1	24.2	2.04
A7	25 Jul 2017	7	16.51	84.56	6.7	33.37	8.1	24.4	1.60

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens ($\sigma\text{-t}$)	Chlor ($\mu\text{g/L}$)
A7	25 Jul 2017	8	14.57	86.10	6.7	33.36	8.0	24.8	1.41
A7	25 Jul 2017	9	13.99	88.01	7.0	33.31	8.0	24.9	1.38
A7	25 Jul 2017	10	13.77	89.91	7.0	33.29	8.0	24.9	1.29
A7	25 Jul 2017	11	13.67	90.46	6.9	33.29	8.0	24.9	1.19
A7	25 Jul 2017	12	13.57	90.69	6.7	33.30	8.0	25.0	0.99
A7	25 Jul 2017	13	13.47	90.81	6.6	33.30	8.0	25.0	0.85
A7	25 Jul 2017	14	13.36	91.07	6.3	33.31	7.9	25.0	0.78
A7	25 Jul 2017	15	13.18	91.11	6.0	33.33	7.9	25.1	0.62
A7	25 Jul 2017	16	12.85	91.13	5.8	33.34	7.9	25.1	0.57
A7	25 Jul 2017	17	12.67	90.97	5.8	33.35	7.9	25.2	0.56
A7	25 Jul 2017	18	12.60	90.90	5.8	33.35	7.9	25.2	0.52
A7	25 Jul 2017	19	12.59	90.72	5.9	33.35	7.9	25.2	0.50
A7	30 Jul 2017	1	23.54	81.23	9.2	33.61	8.3	22.7	2.16
A7	30 Jul 2017	2	23.54	81.13	9.1	33.61	8.3	22.7	2.22
A7	30 Jul 2017	3	23.53	81.09	8.9	33.61	8.3	22.7	2.33
A7	30 Jul 2017	4	23.39	81.34	8.6	33.62	8.3	22.8	2.35
A7	30 Jul 2017	5	23.10	80.90	8.2	33.62	8.3	22.9	2.67
A7	30 Jul 2017	6	21.80	81.41	7.3	33.65	8.3	23.2	3.32
A7	30 Jul 2017	7	18.81	81.90	6.7	33.69	8.2	24.1	4.64
A7	30 Jul 2017	8	15.58	82.06	6.7	33.55	8.1	24.7	4.56
A7	30 Jul 2017	9	14.94	79.82	6.6	33.43	8.1	24.8	4.06
A7	30 Jul 2017	10	14.69	80.94	6.9	33.38	8.0	24.8	4.37
A7	30 Jul 2017	11	14.59	81.47	7.1	33.35	8.0	24.8	4.82
A7	30 Jul 2017	12	14.50	80.24	7.1	33.34	8.0	24.8	4.90
A7	30 Jul 2017	13	14.45	79.50	7.1	33.34	8.0	24.8	4.94
A7	30 Jul 2017	14	14.41	79.17	7.1	33.34	8.0	24.8	4.79
A7	30 Jul 2017	15	14.40	79.70	7.0	33.34	8.0	24.8	4.84
A7	30 Jul 2017	16	14.37	79.88	6.9	33.34	8.0	24.8	4.73
A7	30 Jul 2017	17	14.35	79.74	6.8	33.35	8.0	24.8	4.37
A7	30 Jul 2017	18	14.31	80.00	6.5	33.35	8.0	24.9	3.57
A7	30 Jul 2017	19	14.25	82.52	6.5	33.36	8.0	24.9	3.09
C7	06 Jul 2017	1	20.04	82.96	9.2	33.51	8.2	23.6	1.52
C7	06 Jul 2017	2	20.01	83.33	9.7	33.51	8.2	23.6	3.63
C7	06 Jul 2017	3	19.37	82.88	9.9	33.52	8.2	23.8	6.69
C7	06 Jul 2017	4	17.33	78.98	8.3	33.59	8.3	24.3	7.40
C7	06 Jul 2017	5	15.18	74.90	6.7	33.54	8.2	24.8	7.00
C7	06 Jul 2017	6	14.03	68.31	6.5	33.50	8.1	25.0	6.64
C7	06 Jul 2017	7	13.79	72.00	6.7	33.42	8.1	25.0	6.26
C7	06 Jul 2017	8	13.47	75.65	7.0	33.41	8.0	25.1	5.99
C7	06 Jul 2017	9	13.32	76.69	7.0	33.39	8.0	25.1	5.40
C7	06 Jul 2017	10	13.14	76.77	6.6	33.37	8.0	25.1	4.78
C7	06 Jul 2017	11	12.96	78.65	6.1	33.39	8.0	25.2	4.77
C7	06 Jul 2017	12	12.85	80.18	5.4	33.39	8.0	25.2	4.90
C7	06 Jul 2017	13	12.68	81.08	5.0	33.40	8.0	25.2	4.75
C7	06 Jul 2017	14	12.51	82.39	4.9	33.41	7.9	25.3	3.58
C7	06 Jul 2017	15	12.41	82.60	4.8	33.41	7.9	25.3	2.64
C7	06 Jul 2017	16	12.11	83.02	4.8	33.42	7.9	25.3	2.00
C7	06 Jul 2017	17	12.03	86.04	4.9	33.43	7.8	25.4	1.56
C7	06 Jul 2017	18	12.02	86.60	5.0	33.43	7.8	25.4	1.52
C7	12 Jul 2017	1	22.28	82.42	9.6	33.54	8.3	23.0	1.06
C7	12 Jul 2017	2	22.22	82.06	9.6	33.54	8.3	23.1	1.06
C7	12 Jul 2017	3	21.81	82.55	10.0	33.55	8.3	23.2	1.11

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens ($\sigma\text{-t}$)	Chlor ($\mu\text{g/L}$)
C7	12 Jul 2017	4	19.57	79.77	12.0	33.56	8.4	23.8	2.05
C7	12 Jul 2017	5	18.78	72.92	11.8	33.55	8.3	24.0	4.37
C7	12 Jul 2017	6	18.03	69.76	10.7	33.53	8.3	24.1	6.01
C7	12 Jul 2017	7	17.66	70.48	9.7	33.51	8.2	24.2	6.77
C7	12 Jul 2017	8	17.21	73.30	9.0	33.51	8.2	24.3	6.78
C7	12 Jul 2017	9	16.98	73.66	8.9	33.50	8.2	24.4	7.05
C7	12 Jul 2017	10	16.09	73.60	8.6	33.54	8.2	24.6	7.43
C7	12 Jul 2017	11	15.46	74.19	7.9	33.50	8.1	24.7	7.48
C7	12 Jul 2017	12	14.13	76.13	6.9	33.51	8.0	25.0	6.59
C7	12 Jul 2017	13	13.91	79.19	6.5	33.48	8.0	25.0	5.34
C7	12 Jul 2017	14	13.76	81.19	6.5	33.48	8.0	25.1	4.74
C7	12 Jul 2017	15	13.50	82.69	6.3	33.48	8.0	25.1	4.01
C7	12 Jul 2017	16	13.31	83.83	6.2	33.48	7.9	25.2	3.36
C7	12 Jul 2017	17	13.24	84.98	6.1	33.47	7.9	25.2	2.81
C7	12 Jul 2017	18	13.23	85.46	6.1	33.47	7.9	25.2	2.57
C7	18 Jul 2017	1	22.27	81.57	9.1	33.55	8.3	23.0	2.14
C7	18 Jul 2017	2	22.01	81.60	9.3	33.56	8.3	23.1	2.27
C7	18 Jul 2017	3	21.72	81.32	9.4	33.55	8.3	23.2	2.55
C7	18 Jul 2017	4	21.42	80.43	9.5	33.54	8.3	23.3	2.81
C7	18 Jul 2017	5	21.05	79.85	9.4	33.55	8.3	23.4	3.01
C7	18 Jul 2017	6	20.60	79.46	9.3	33.54	8.3	23.5	3.41
C7	18 Jul 2017	7	20.37	79.33	9.3	33.52	8.3	23.5	3.47
C7	18 Jul 2017	8	20.29	79.36	9.2	33.51	8.3	23.6	3.59
C7	18 Jul 2017	9	20.26	79.43	9.2	33.51	8.3	23.6	3.69
C7	18 Jul 2017	10	20.22	79.37	9.2	33.52	8.3	23.6	3.80
C7	18 Jul 2017	11	20.24	78.96	9.2	33.51	8.3	23.6	3.76
C7	18 Jul 2017	12	20.26	79.43	8.9	33.52	8.3	23.6	3.70
C7	18 Jul 2017	13	19.86	80.82	8.6	33.55	8.2	23.7	3.28
C7	18 Jul 2017	14	19.18	81.46	8.1	33.56	8.2	23.9	3.07
C7	18 Jul 2017	15	17.04	81.69	7.1	33.64	8.1	24.5	3.31
C7	18 Jul 2017	16	15.44	81.81	6.3	33.54	8.0	24.8	3.29
C7	18 Jul 2017	17	14.19	83.30	5.8	33.50	8.0	25.0	2.80
C7	18 Jul 2017	18	13.96	85.47	5.5	33.45	7.9	25.0	2.21
C7	25 Jul 2017	1	22.62	85.76	8.5	33.53	8.2	22.9	1.35
C7	25 Jul 2017	2	22.60	85.72	8.6	33.53	8.2	22.9	1.39
C7	25 Jul 2017	3	22.42	85.54	8.9	33.52	8.2	23.0	1.56
C7	25 Jul 2017	4	21.98	85.01	9.2	33.51	8.2	23.1	2.08
C7	25 Jul 2017	5	21.27	83.90	9.7	33.50	8.2	23.3	2.73
C7	25 Jul 2017	6	19.59	81.79	9.7	33.47	8.2	23.7	3.68
C7	25 Jul 2017	7	18.39	80.88	8.7	33.43	8.2	24.0	4.01
C7	25 Jul 2017	8	16.64	80.93	8.4	33.39	8.2	24.4	3.59
C7	25 Jul 2017	9	16.15	82.72	8.3	33.36	8.1	24.5	3.24
C7	25 Jul 2017	10	15.94	83.81	7.9	33.34	8.1	24.5	2.84
C7	25 Jul 2017	11	15.34	85.31	7.5	33.34	8.1	24.6	2.35
C7	25 Jul 2017	12	14.96	87.40	7.2	33.33	8.1	24.7	1.83
C7	25 Jul 2017	13	14.37	88.41	7.1	33.32	8.0	24.8	1.49
C7	25 Jul 2017	14	14.17	89.37	7.0	33.31	8.0	24.8	1.26
C7	25 Jul 2017	15	14.05	89.88	7.0	33.31	8.0	24.9	1.08
C7	25 Jul 2017	16	13.99	90.14	6.9	33.32	8.0	24.9	0.96
C7	25 Jul 2017	17	13.97	90.35	6.9	33.32	8.0	24.9	0.91
C7	25 Jul 2017	18	13.99	90.40	6.9	33.33	8.0	24.9	0.89
C7	30 Jul 2017	1	23.66	82.81	8.8	33.62	8.3	22.7	2.00

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens ($\sigma\text{-t}$)	Chlor ($\mu\text{g/L}$)
C7	30 Jul 2017	2	23.67	82.76	8.9	33.62	8.3	22.7	2.20
C7	30 Jul 2017	3	23.64	82.72	8.9	33.62	8.3	22.7	2.55
C7	30 Jul 2017	4	23.22	82.61	9.2	33.62	8.3	22.8	2.78
C7	30 Jul 2017	5	22.69	81.64	9.4	33.60	8.3	23.0	3.00
C7	30 Jul 2017	6	22.56	81.56	9.4	33.58	8.3	23.0	3.31
C7	30 Jul 2017	7	22.25	81.34	8.8	33.59	8.3	23.1	3.53
C7	30 Jul 2017	8	20.88	81.11	7.1	33.59	8.3	23.4	3.15
C7	30 Jul 2017	9	17.87	80.36	6.0	33.62	8.2	24.2	3.31
C7	30 Jul 2017	10	15.82	80.80	6.1	33.51	8.1	24.6	3.15
C7	30 Jul 2017	11	14.58	84.04	6.3	33.43	8.1	24.9	3.06
C7	30 Jul 2017	12	14.24	84.23	6.5	33.37	8.0	24.9	2.54
C7	30 Jul 2017	13	14.09	86.29	6.6	33.35	8.0	24.9	2.04
C7	30 Jul 2017	14	13.95	87.46	6.5	33.34	8.0	24.9	1.71
C7	30 Jul 2017	15	13.84	88.96	6.2	33.34	8.0	24.9	1.39
C7	30 Jul 2017	16	13.59	89.48	5.9	33.35	8.0	25.0	1.05
C7	30 Jul 2017	17	13.29	89.80	5.8	33.36	8.0	25.1	0.82
C7	30 Jul 2017	18	13.26	90.21	6.0	33.35	8.0	25.1	0.75
C8	06 Jul 2017	1	20.40	81.56	10.0	33.50	8.3	23.5	2.24
C8	06 Jul 2017	2	20.33	80.82	10.2	33.50	8.3	23.5	3.49
C8	06 Jul 2017	3	19.92	77.38	10.4	33.50	8.3	23.6	7.22
C8	06 Jul 2017	4	19.36	76.71	10.5	33.50	8.3	23.8	9.93
C8	06 Jul 2017	5	17.66	74.97	10.5	33.53	8.3	24.2	11.28
C8	06 Jul 2017	6	16.49	70.76	9.4	33.48	8.3	24.5	10.49
C8	06 Jul 2017	7	15.39	66.61	8.0	33.45	8.3	24.7	9.98
C8	06 Jul 2017	8	14.50	66.76	7.3	33.44	8.2	24.9	9.20
C8	06 Jul 2017	9	14.27	70.33	7.2	33.42	8.1	24.9	8.08
C8	06 Jul 2017	10	14.09	71.44	7.0	33.41	8.1	24.9	6.69
C8	06 Jul 2017	11	13.65	73.54	6.7	33.40	8.1	25.0	5.53
C8	06 Jul 2017	12	13.15	76.96	6.3	33.39	8.0	25.1	5.69
C8	06 Jul 2017	13	12.88	80.26	5.4	33.38	8.0	25.2	5.51
C8	06 Jul 2017	14	12.66	82.17	4.6	33.39	8.0	25.2	4.00
C8	06 Jul 2017	15	12.35	80.99	4.4	33.41	7.9	25.3	2.94
C8	06 Jul 2017	16	12.20	84.33	4.7	33.41	7.8	25.3	2.37
C8	06 Jul 2017	17	12.13	86.81	4.9	33.41	7.8	25.3	2.22
C8	06 Jul 2017	18	12.13	87.37	5.0	33.42	7.8	25.3	2.16
C8	12 Jul 2017	1	21.84	74.02	10.7	33.53	8.3	23.1	2.10
C8	12 Jul 2017	2	21.85	74.07	10.7	33.54	8.3	23.1	2.10
C8	12 Jul 2017	3	21.16	74.01	11.4	33.60	8.3	23.4	2.18
C8	12 Jul 2017	4	20.09	72.43	12.8	33.58	8.4	23.7	2.88
C8	12 Jul 2017	5	19.38	67.90	13.8	33.53	8.4	23.8	4.80
C8	12 Jul 2017	6	19.11	63.44	14.0	33.48	8.4	23.8	8.04
C8	12 Jul 2017	7	18.65	61.18	13.3	33.53	8.4	24.0	10.72
C8	12 Jul 2017	8	17.98	61.14	12.5	33.51	8.4	24.1	12.19
C8	12 Jul 2017	9	17.12	61.26	11.8	33.53	8.3	24.4	12.81
C8	12 Jul 2017	10	16.53	63.40	11.5	33.50	8.3	24.5	12.77
C8	12 Jul 2017	11	16.28	65.81	10.9	33.48	8.2	24.5	11.61
C8	12 Jul 2017	12	15.83	69.80	9.9	33.50	8.2	24.6	10.13
C8	12 Jul 2017	13	15.46	71.68	9.0	33.51	8.1	24.7	9.00
C8	12 Jul 2017	14	14.88	75.18	8.0	33.51	8.1	24.8	7.63
C8	12 Jul 2017	15	14.43	78.55	7.2	33.49	8.0	24.9	6.08
C8	12 Jul 2017	16	14.32	82.32	6.7	33.47	8.0	24.9	4.03
C8	12 Jul 2017	17	14.03	84.96	6.5	33.49	8.0	25.0	2.66
C8	12 Jul 2017	18	13.82	85.55	6.3	33.48	7.9	25.0	1.86

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens ($\sigma\text{-t}$)	Chlor ($\mu\text{g/L}$)
C8	18 Jul 2017	1	23.29	82.34	9.6	33.57	8.4	22.8	1.42
C8	18 Jul 2017	2	23.29	82.39	9.5	33.57	8.4	22.8	1.40
C8	18 Jul 2017	3	23.20	82.50	9.4	33.58	8.4	22.8	1.63
C8	18 Jul 2017	4	22.90	82.17	9.2	33.57	8.3	22.9	2.16
C8	18 Jul 2017	5	22.00	81.30	9.1	33.60	8.3	23.2	2.88
C8	18 Jul 2017	6	21.18	81.14	9.5	33.55	8.3	23.3	3.20
C8	18 Jul 2017	7	20.71	80.00	10.1	33.54	8.3	23.5	3.63
C8	18 Jul 2017	8	20.34	78.06	10.3	33.52	8.3	23.5	3.89
C8	18 Jul 2017	9	20.03	77.33	10.4	33.51	8.3	23.6	4.34
C8	18 Jul 2017	10	19.83	75.74	10.2	33.50	8.3	23.7	4.95
C8	18 Jul 2017	11	19.67	74.84	9.6	33.51	8.3	23.7	5.23
C8	18 Jul 2017	12	19.42	75.24	9.2	33.51	8.3	23.8	5.44
C8	18 Jul 2017	13	19.14	75.46	8.8	33.52	8.2	23.9	5.46
C8	18 Jul 2017	14	17.91	75.69	8.1	33.57	8.2	24.2	5.82
C8	18 Jul 2017	15	16.68	76.06	7.0	33.56	8.1	24.5	5.55
C8	18 Jul 2017	16	14.61	79.54	6.1	33.57	8.0	25.0	3.85
C8	18 Jul 2017	17	13.64	84.73	5.5	33.43	7.9	25.0	2.04
C8	18 Jul 2017	18	13.41	86.93	5.5	33.45	7.9	25.1	1.34
C8	25 Jul 2017	1	23.08	85.03	8.6	33.55	8.2	22.8	1.47
C8	25 Jul 2017	2	23.10	85.06	8.6	33.55	8.2	22.8	1.55
C8	25 Jul 2017	3	23.06	84.95	8.4	33.56	8.2	22.8	1.74
C8	25 Jul 2017	4	22.87	83.82	8.8	33.57	8.2	22.9	1.96
C8	25 Jul 2017	5	22.24	81.35	9.6	33.57	8.2	23.1	2.03
C8	25 Jul 2017	6	21.67	79.84	10.6	33.55	8.2	23.2	2.40
C8	25 Jul 2017	7	20.88	80.67	11.3	33.52	8.2	23.4	3.65
C8	25 Jul 2017	8	19.47	82.62	11.0	33.51	8.3	23.8	4.73
C8	25 Jul 2017	9	18.80	79.69	9.9	33.45	8.3	23.9	5.02
C8	25 Jul 2017	10	17.99	77.53	9.0	33.46	8.2	24.1	4.89
C8	25 Jul 2017	11	16.99	78.57	8.8	33.44	8.2	24.3	4.61
C8	25 Jul 2017	12	16.75	80.50	8.8	33.39	8.2	24.3	4.54
C8	25 Jul 2017	13	16.52	80.92	8.8	33.38	8.2	24.4	4.30
C8	25 Jul 2017	14	16.41	81.92	8.7	33.37	8.2	24.4	4.06
C8	25 Jul 2017	15	16.33	82.41	8.2	33.36	8.2	24.4	3.64
C8	25 Jul 2017	16	16.18	82.85	7.7	33.37	8.1	24.5	2.97
C8	25 Jul 2017	17	15.34	83.75	7.6	33.42	8.1	24.7	2.36
C8	25 Jul 2017	18	15.04	84.65	7.7	33.36	8.1	24.7	2.10
C8	25 Jul 2017	19	15.02	87.29	8.0	33.35	8.1	24.7	2.09
C8	30 Jul 2017	1	23.08	80.42	8.7	33.60	8.3	22.9	2.24
C8	30 Jul 2017	2	23.08	80.69	8.7	33.61	8.3	22.9	2.32
C8	30 Jul 2017	3	23.03	80.46	8.7	33.60	8.3	22.9	2.47
C8	30 Jul 2017	4	23.00	80.80	8.8	33.60	8.3	22.9	2.76
C8	30 Jul 2017	5	22.64	80.68	9.2	33.61	8.3	23.0	3.33
C8	30 Jul 2017	6	22.01	80.71	9.6	33.60	8.3	23.1	3.97
C8	30 Jul 2017	7	21.12	81.10	8.8	33.60	8.3	23.4	4.30
C8	30 Jul 2017	8	19.36	80.21	6.8	33.56	8.3	23.8	4.01
C8	30 Jul 2017	9	16.88	79.08	6.0	33.60	8.2	24.5	3.78
C8	30 Jul 2017	10	15.04	80.78	6.0	33.48	8.1	24.8	3.31
C8	30 Jul 2017	11	14.42	83.79	6.2	33.40	8.1	24.9	2.59
C8	30 Jul 2017	12	14.09	85.57	6.2	33.38	8.0	24.9	1.94
C8	30 Jul 2017	13	13.80	87.14	6.1	33.36	8.0	25.0	1.53
C8	30 Jul 2017	14	13.56	88.93	6.0	33.35	8.0	25.0	1.29
C8	30 Jul 2017	15	13.29	89.94	6.0	33.35	8.0	25.1	1.05

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ -t)	Chlor ($\mu\text{g}/\text{L}$)
C8	30 Jul 2017	16	13.12	90.53	5.9	33.34	8.0	25.1	0.87
C8	30 Jul 2017	17	13.01	90.98	5.7	33.35	8.0	25.1	0.82
C8	30 Jul 2017	18	12.81	90.74	5.7	33.35	8.0	25.2	0.68
C8	30 Jul 2017	19	12.78	90.63	5.9	33.35	7.9	25.2	0.67

NA = not available

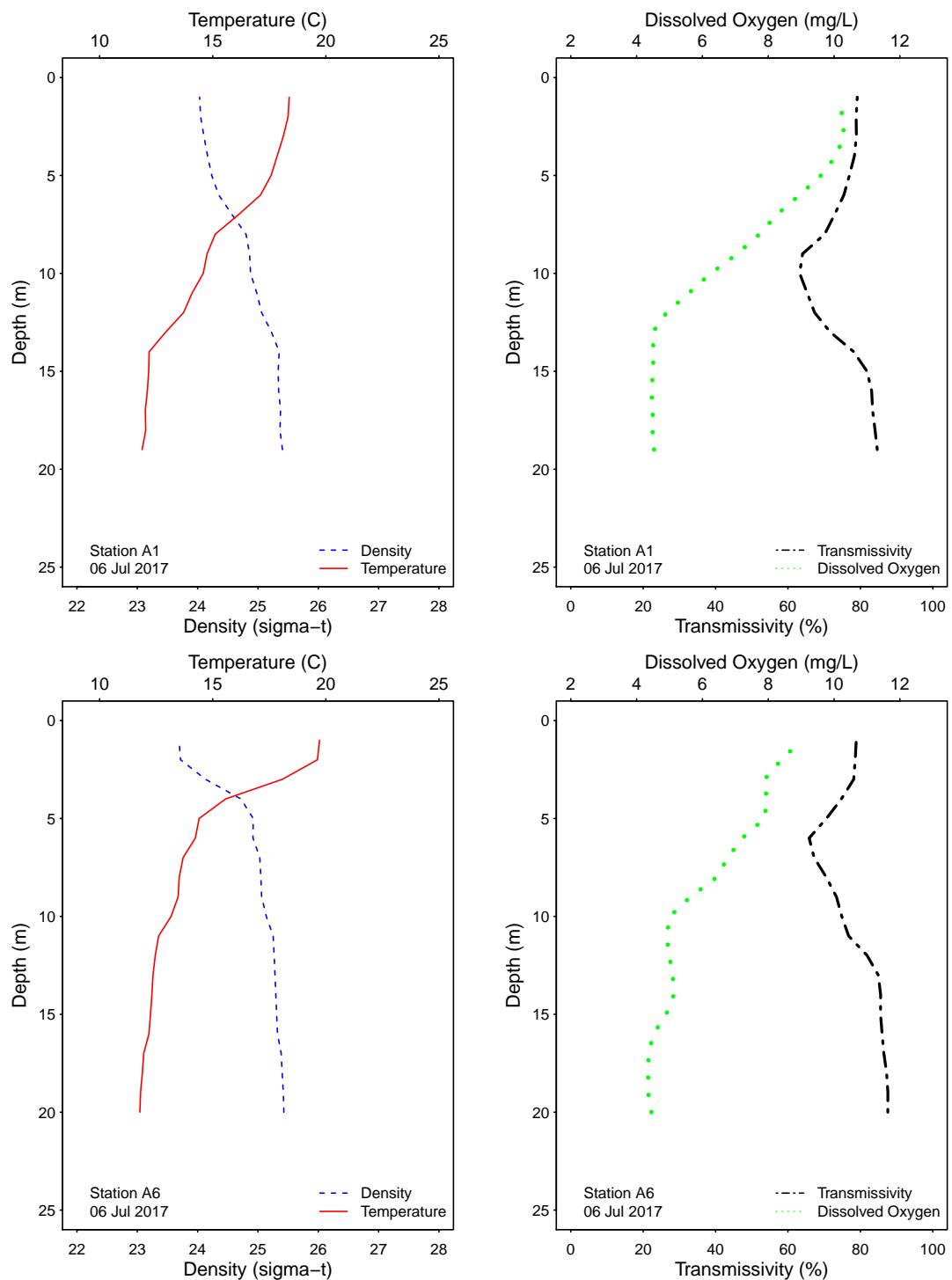


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

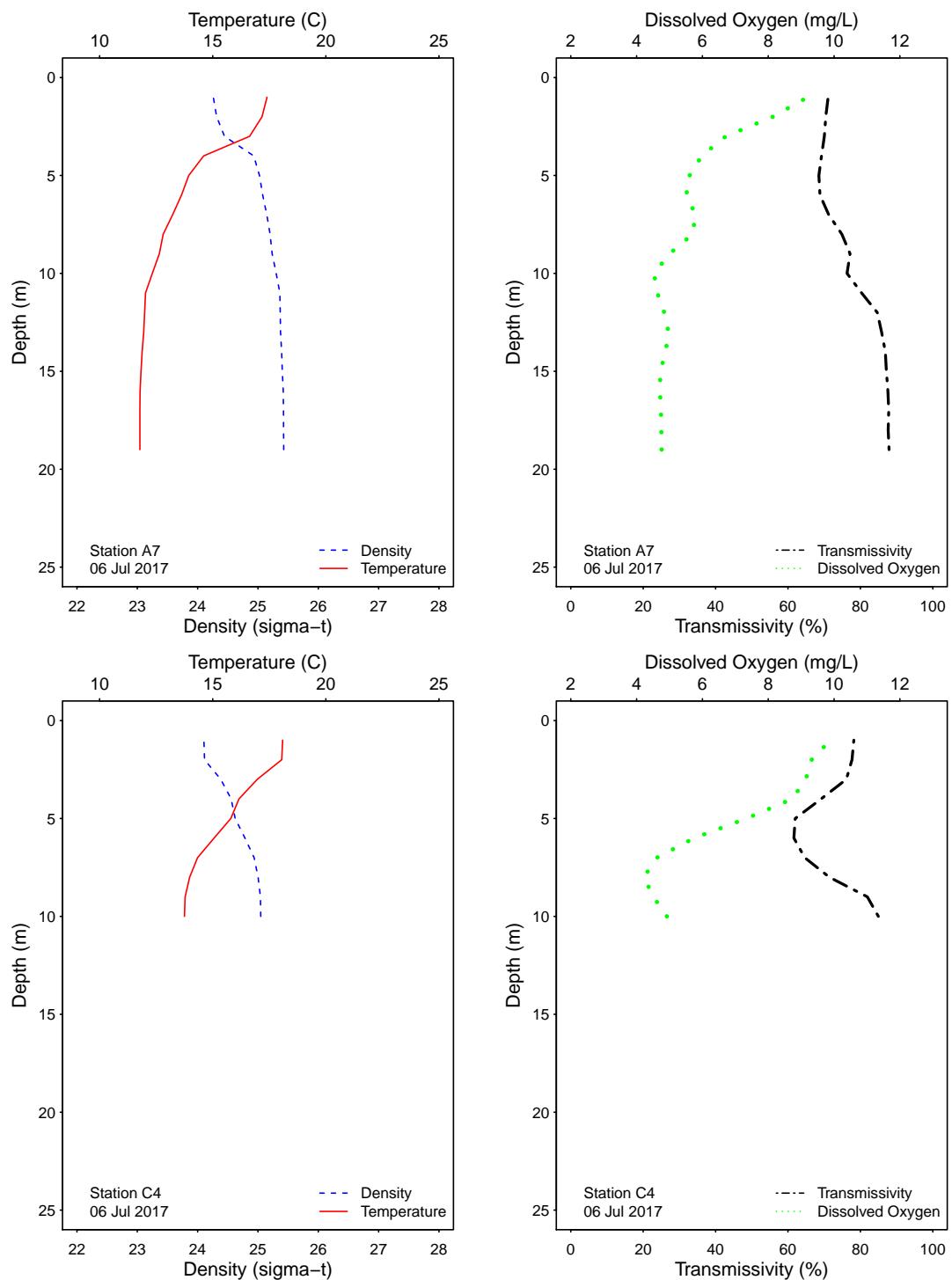


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

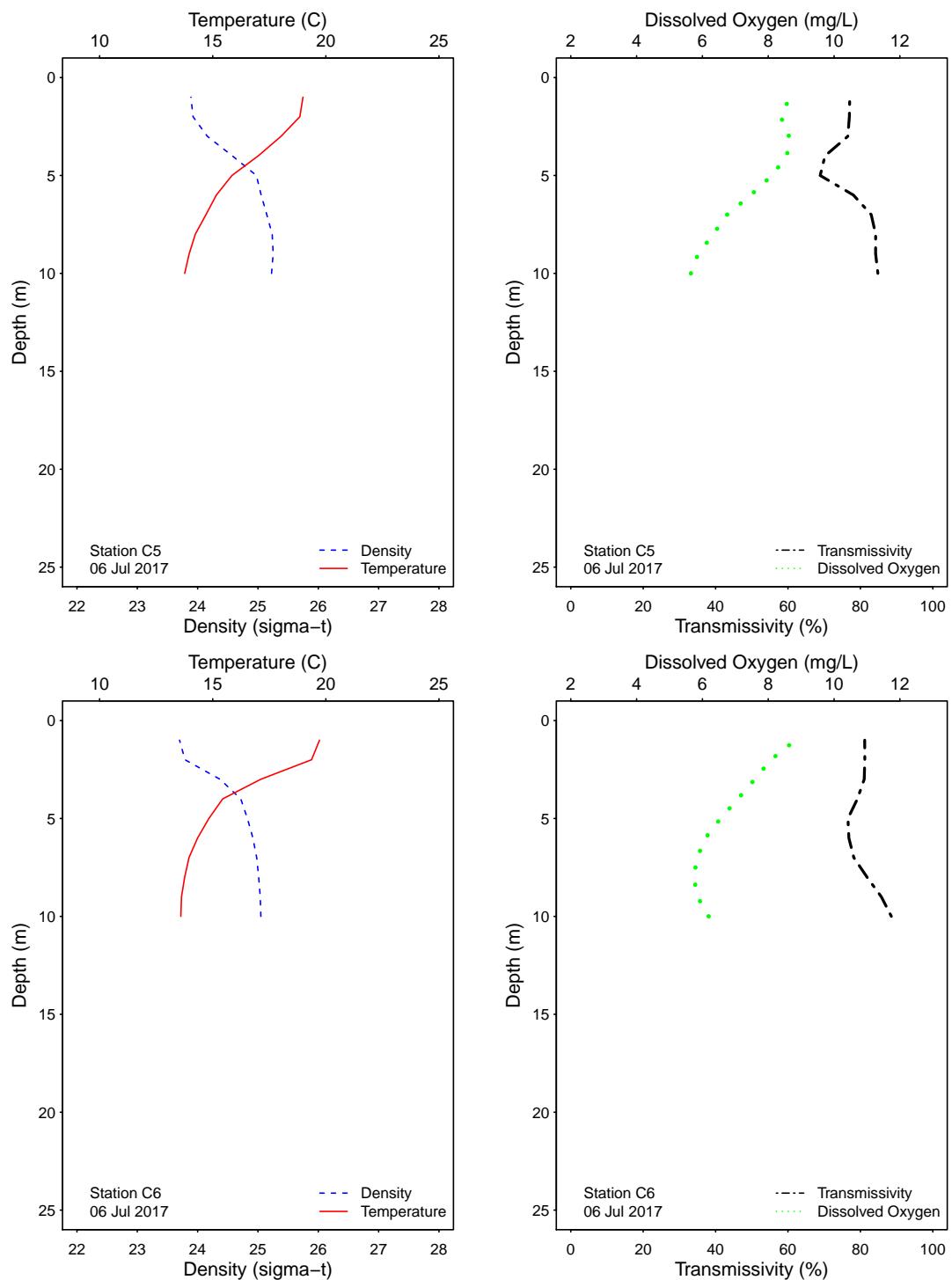


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

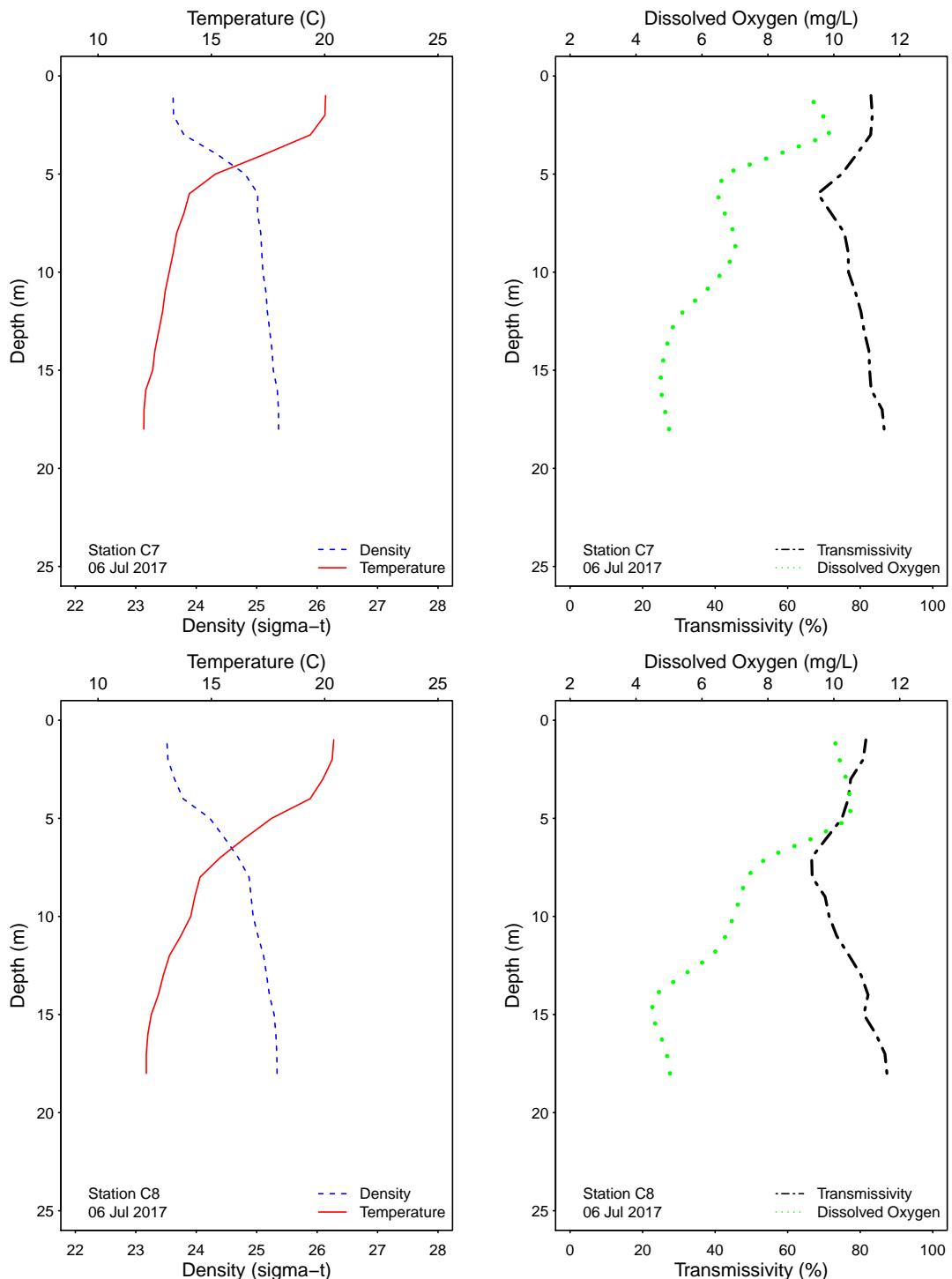


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

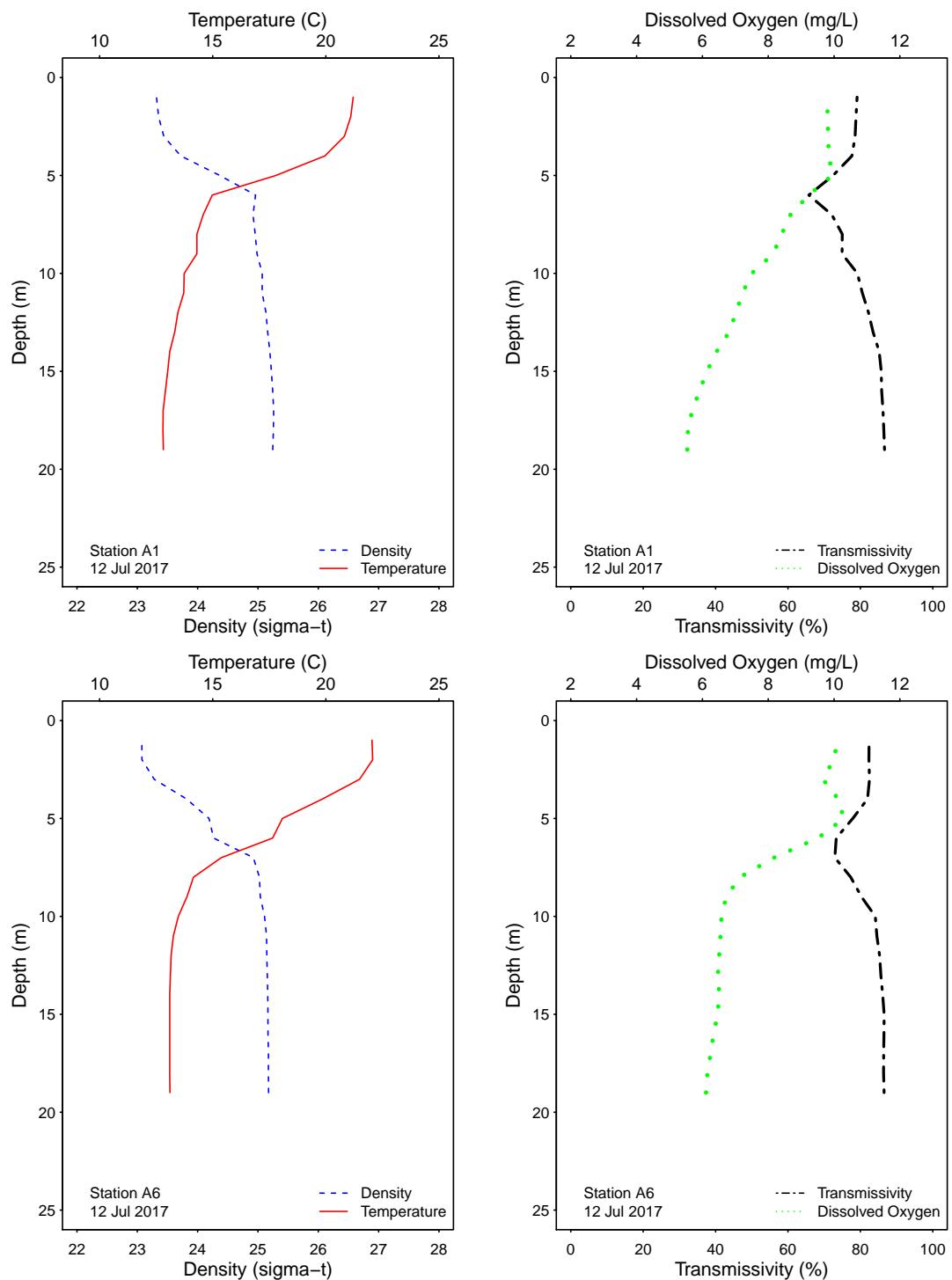


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

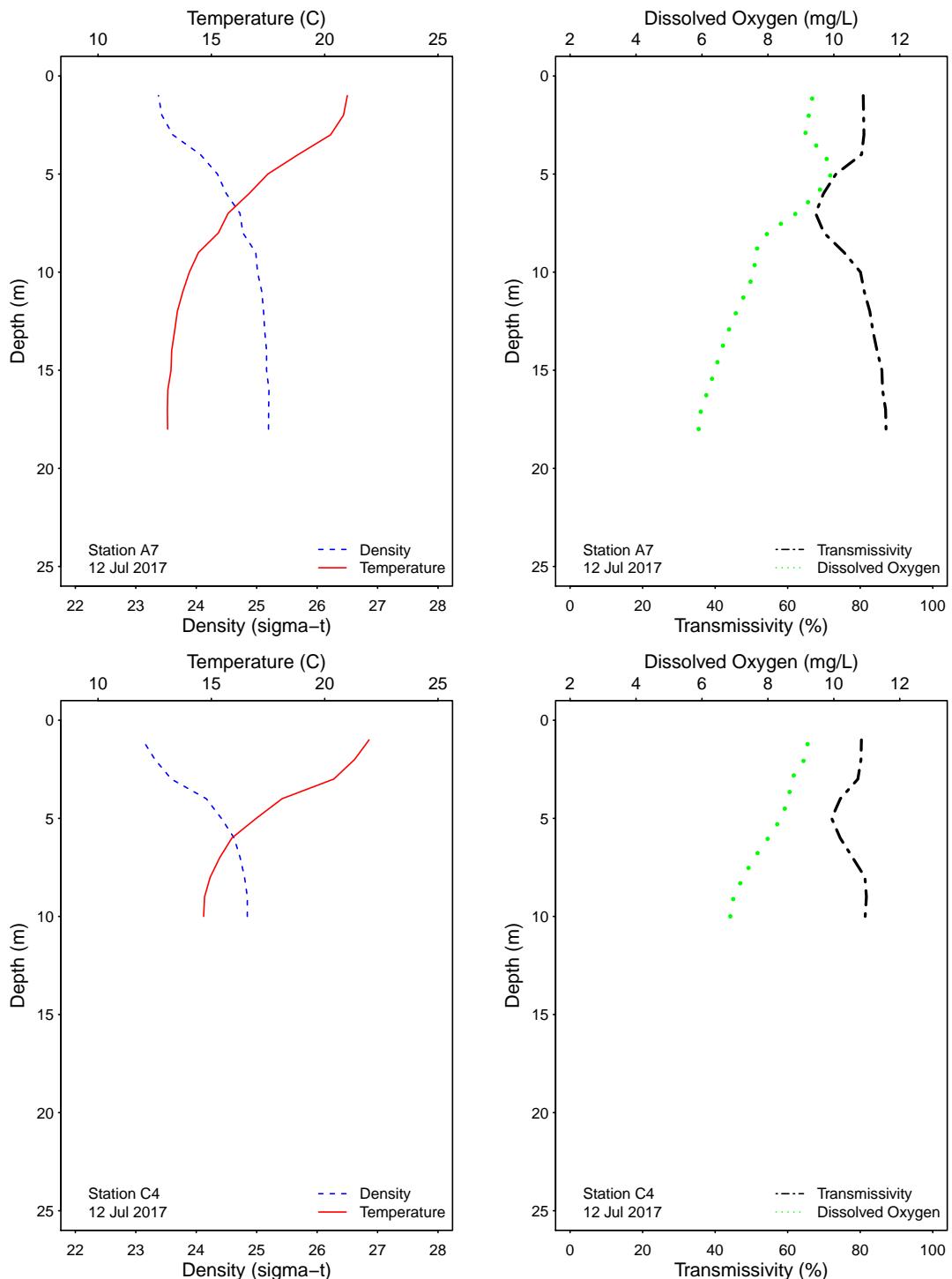


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

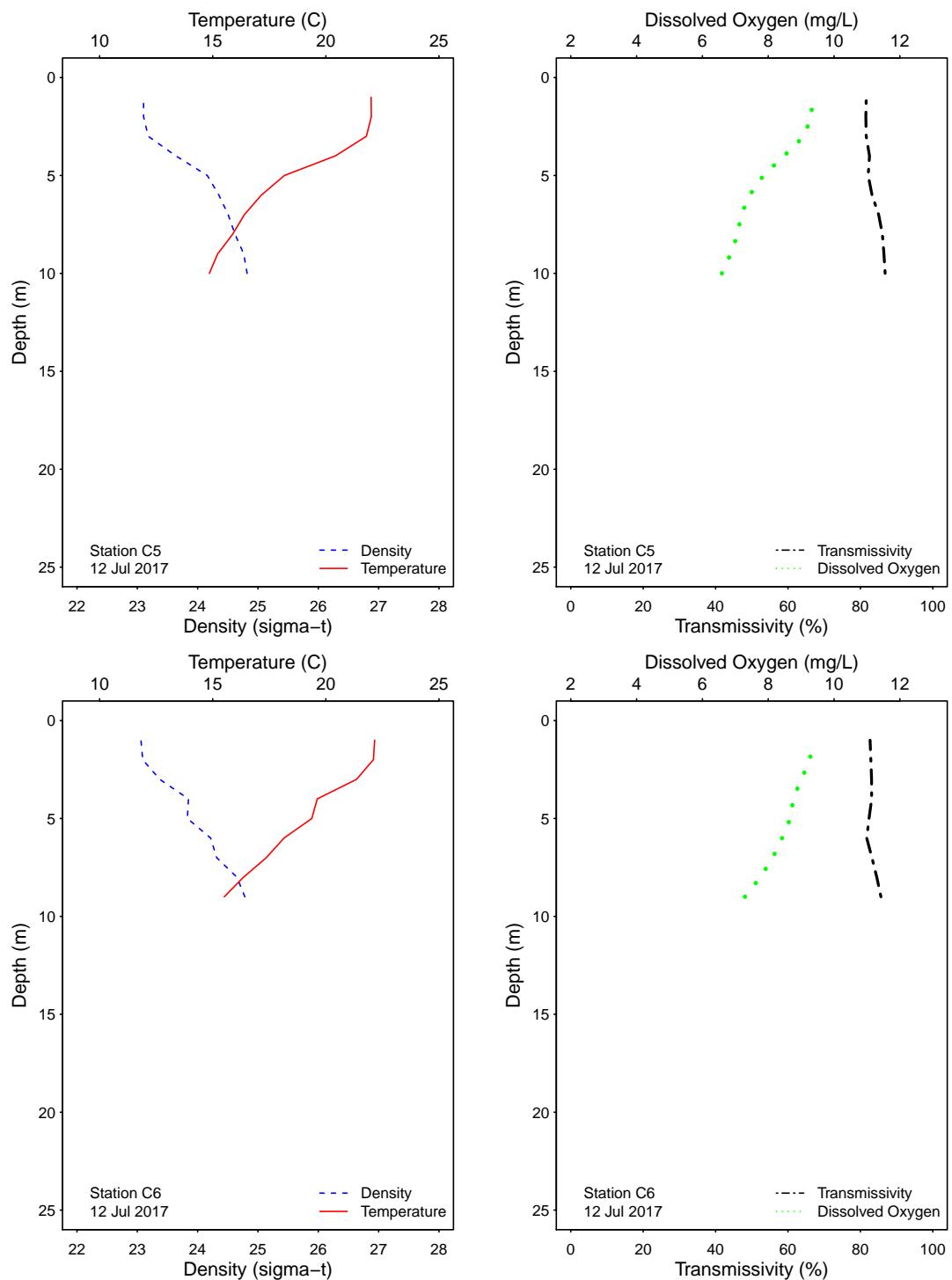


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

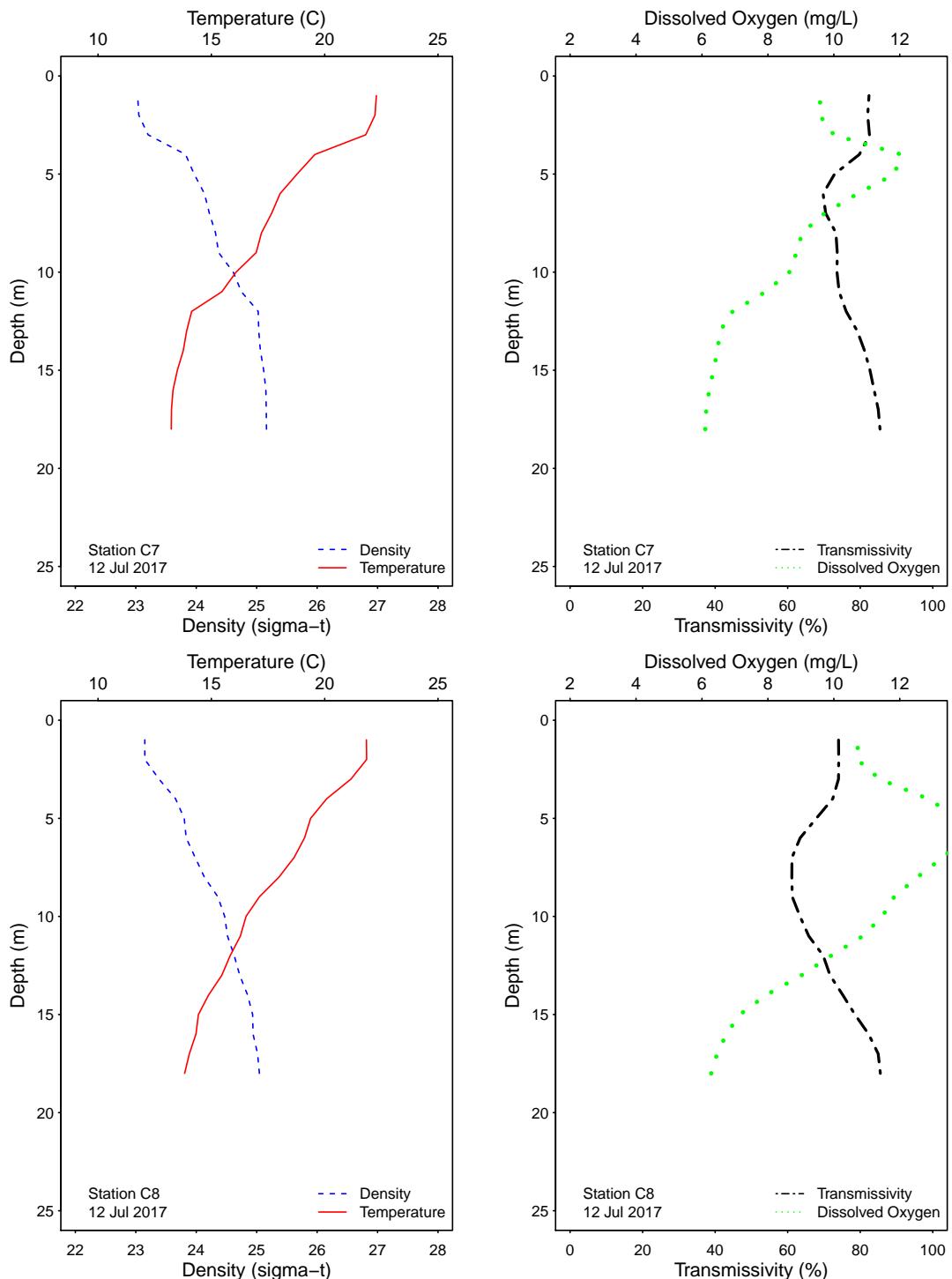


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

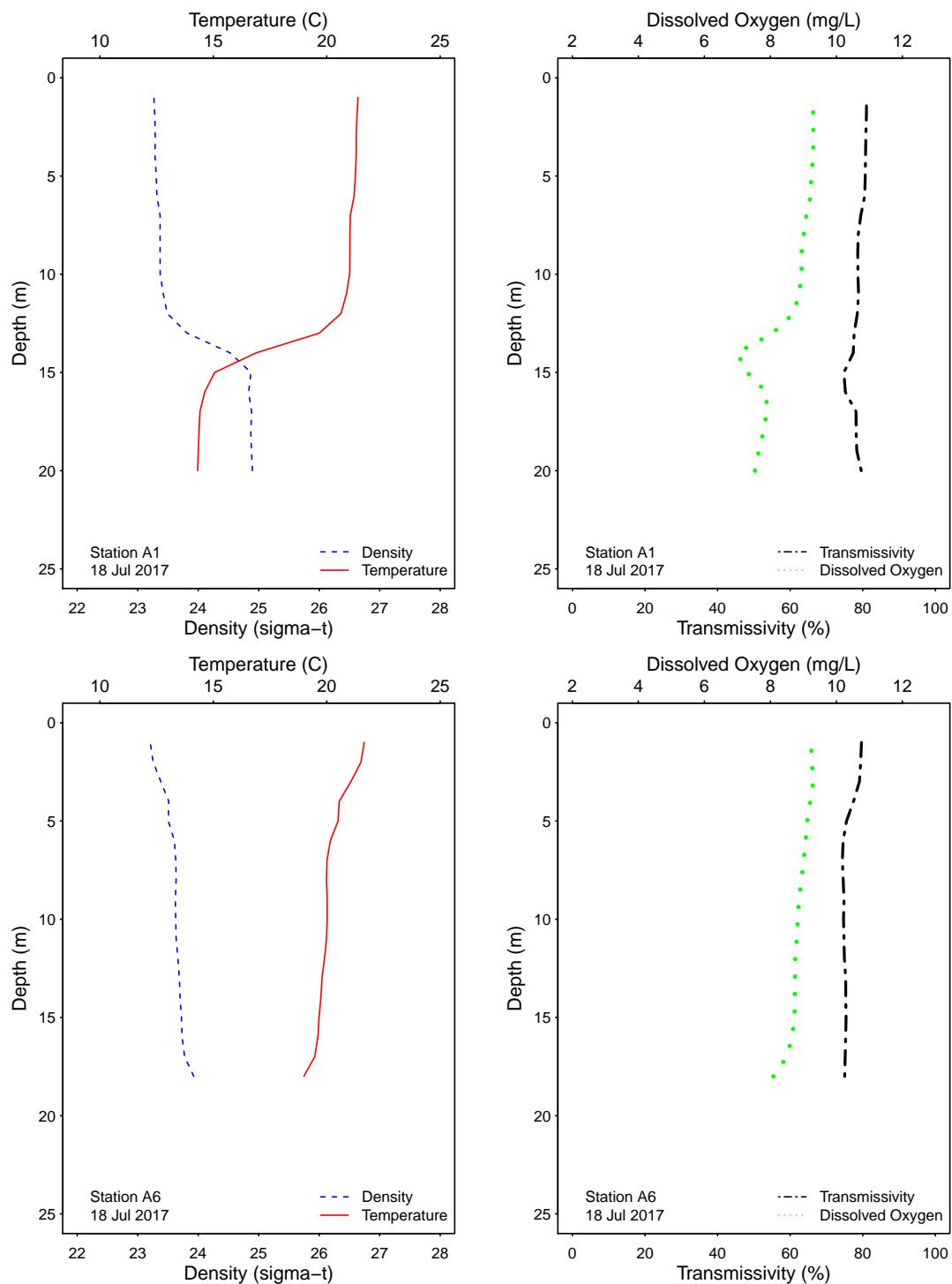


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

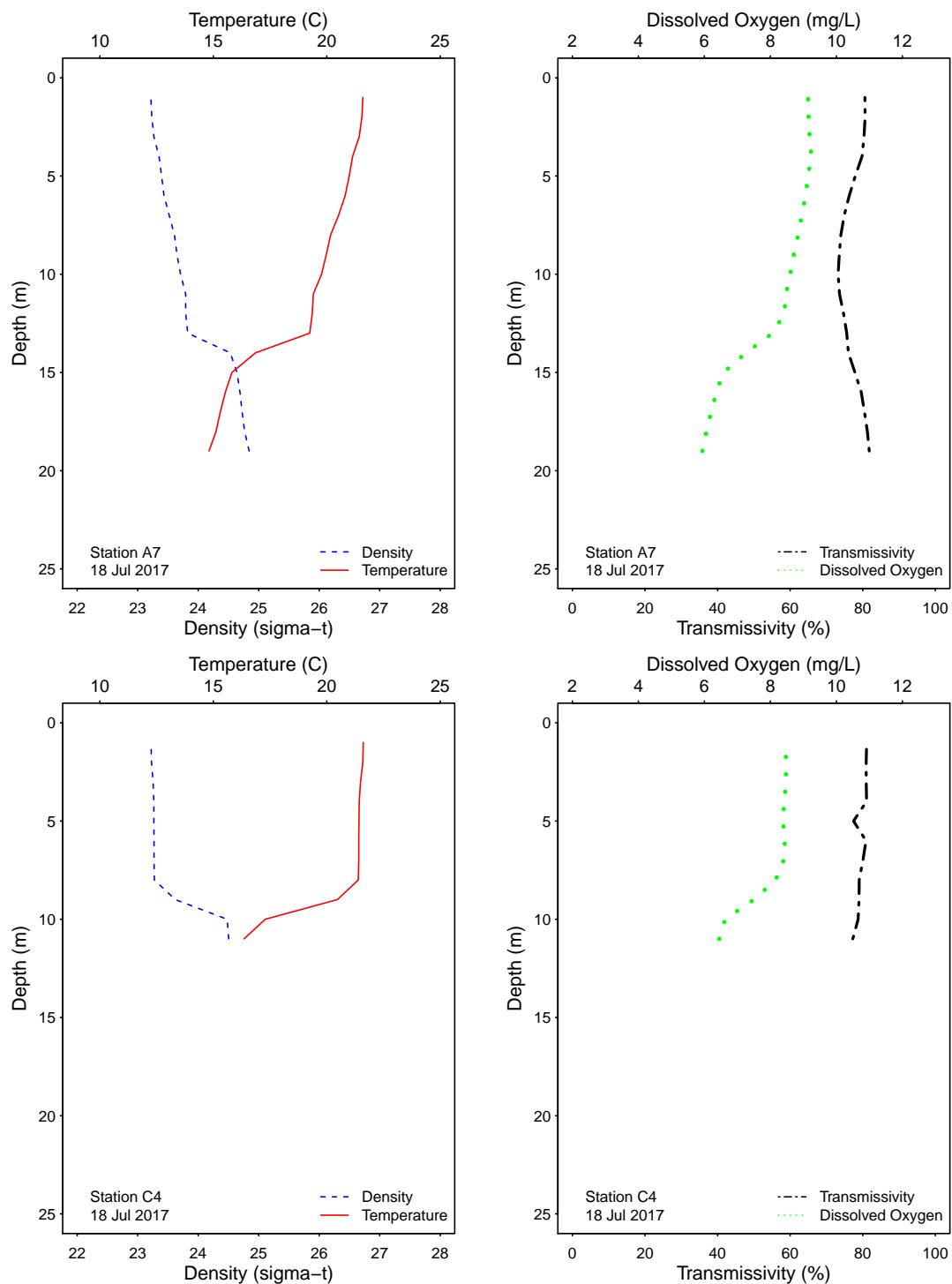


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

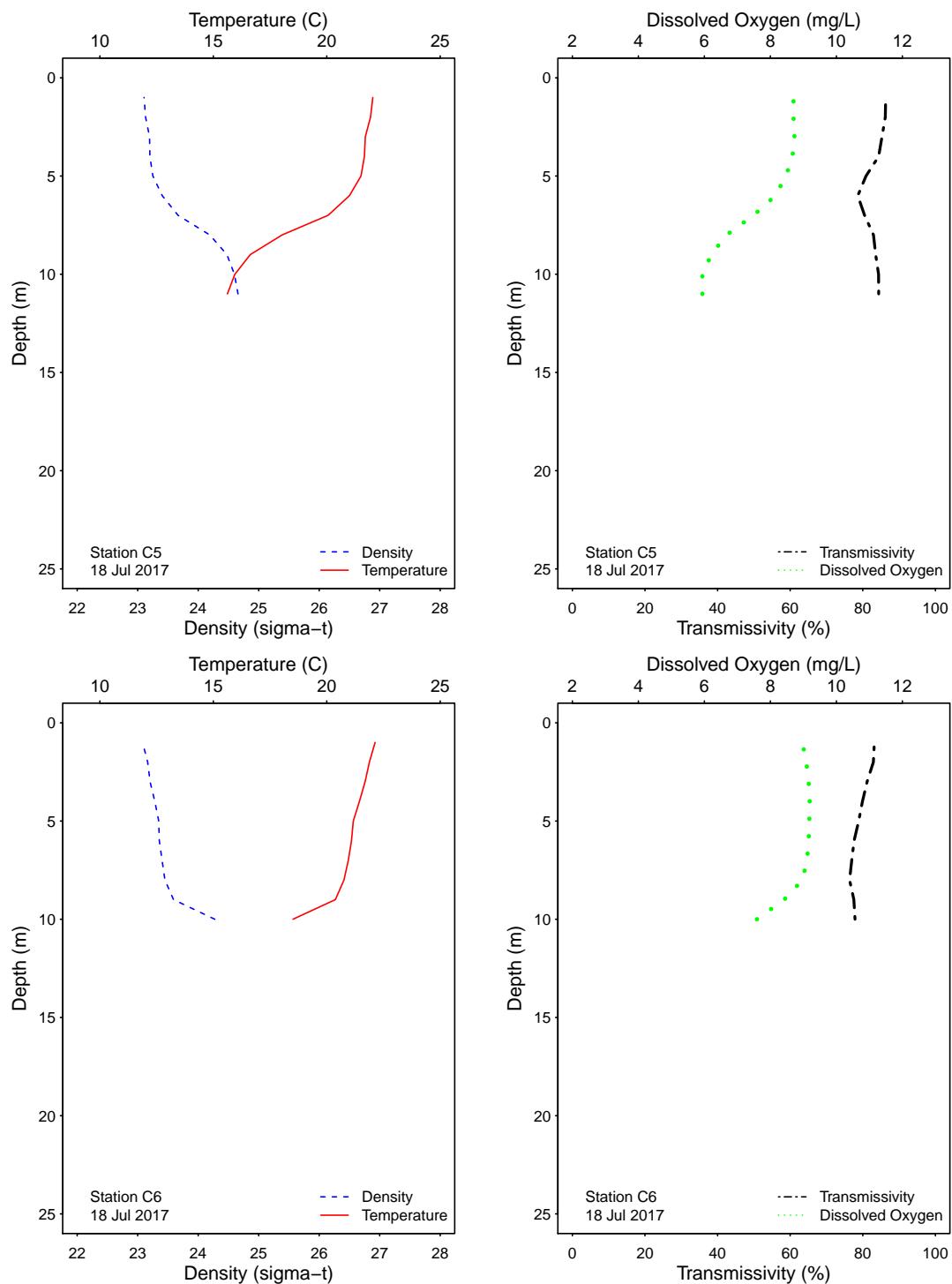


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

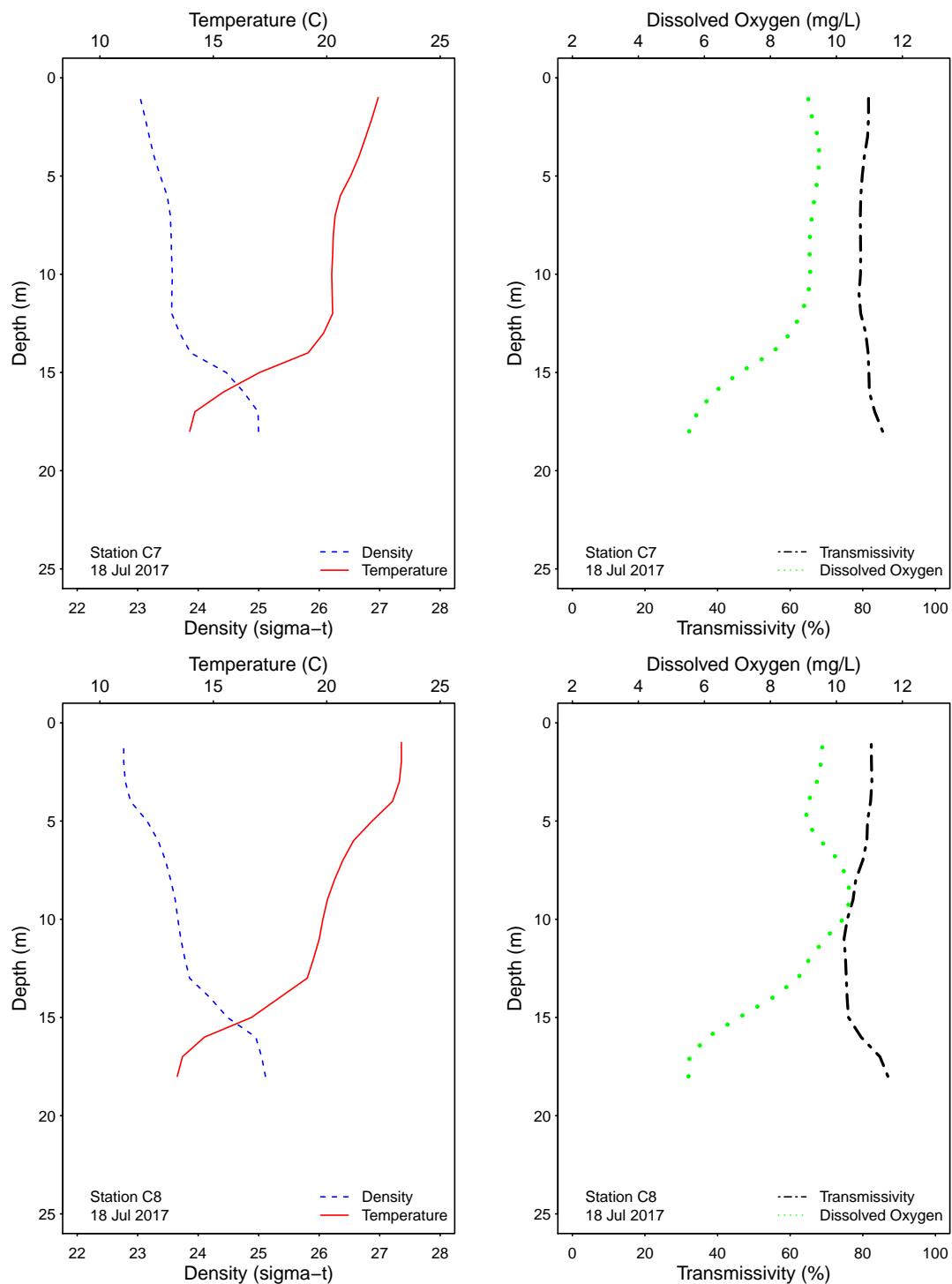


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

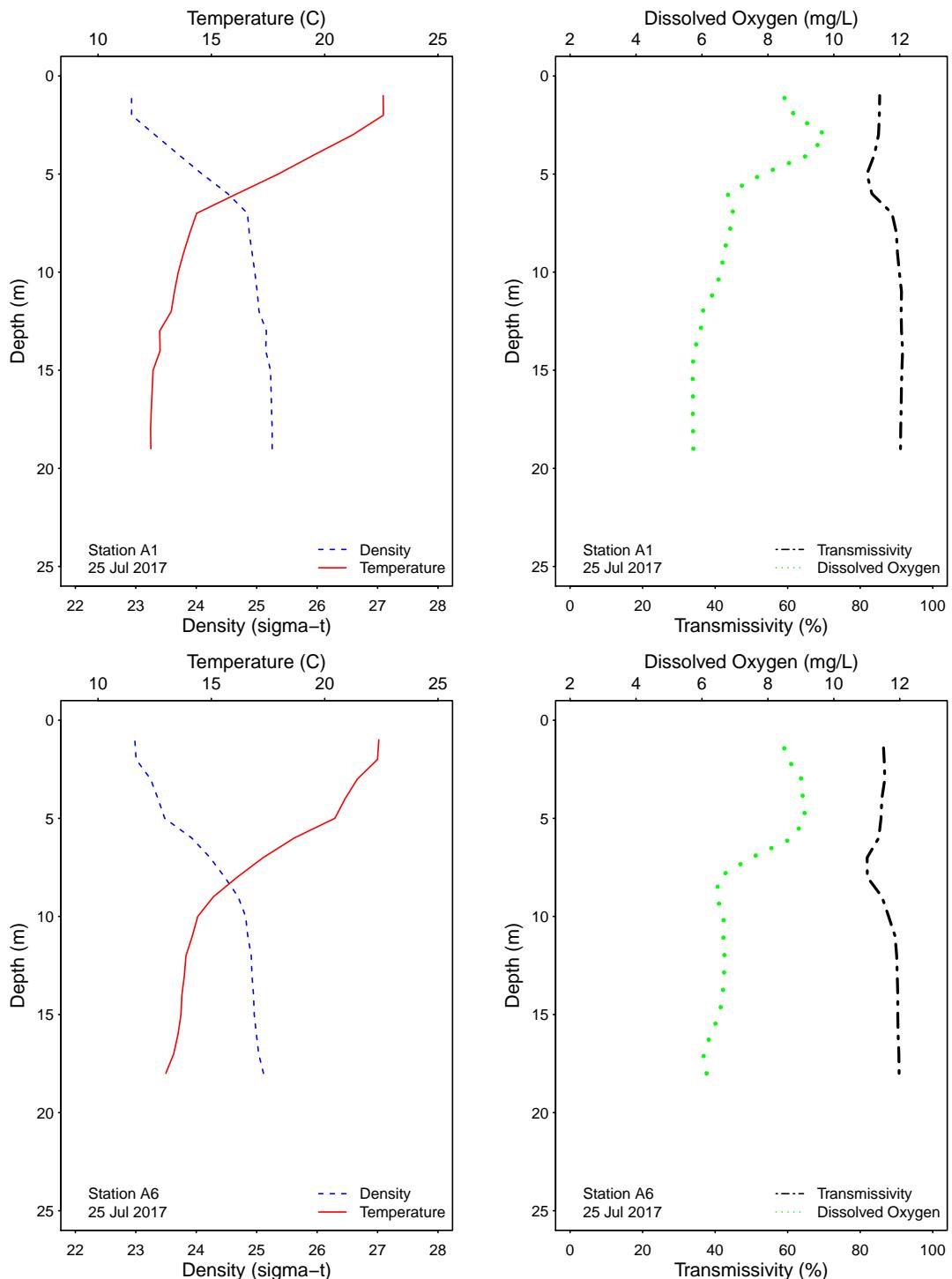


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

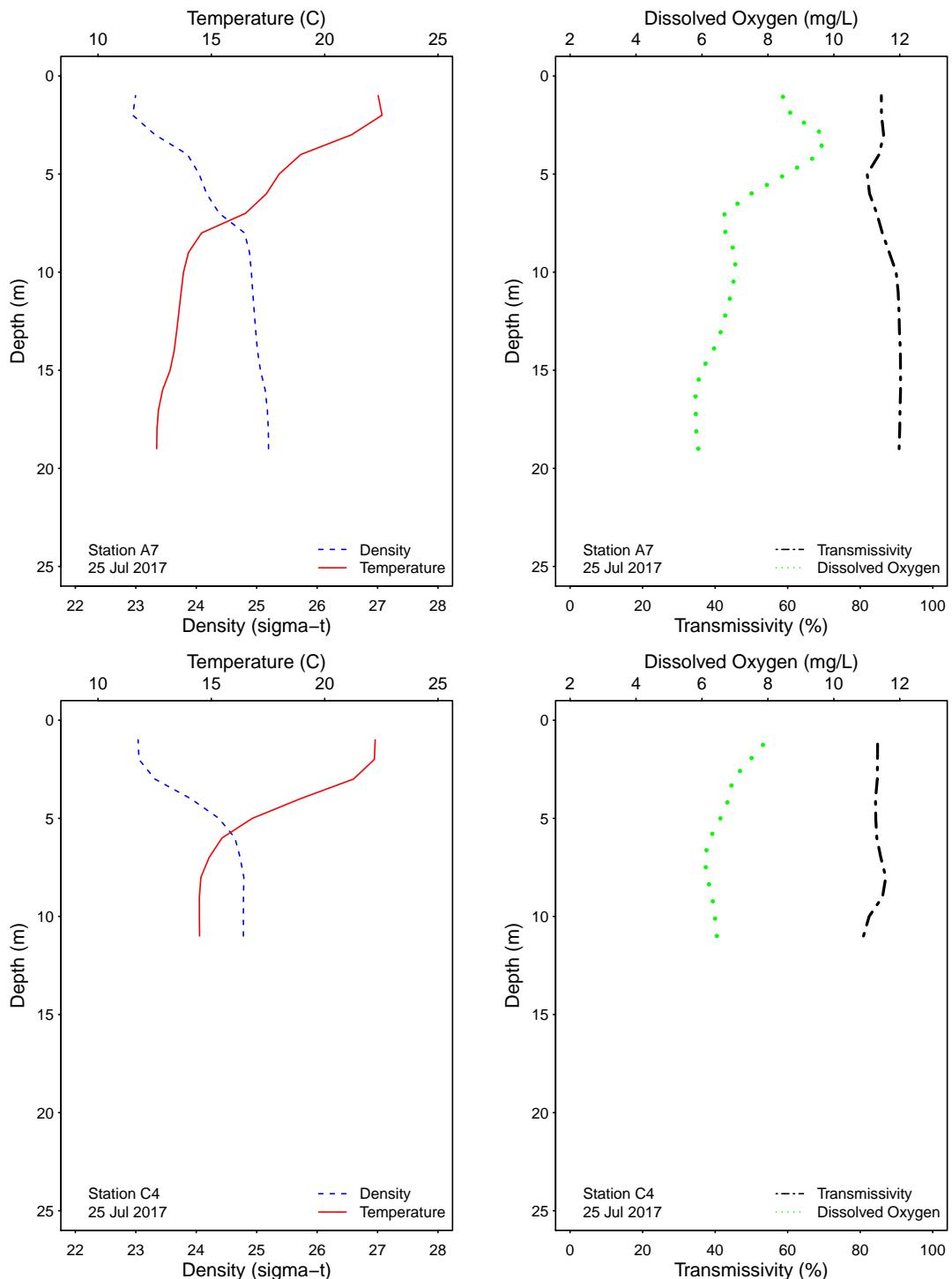


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

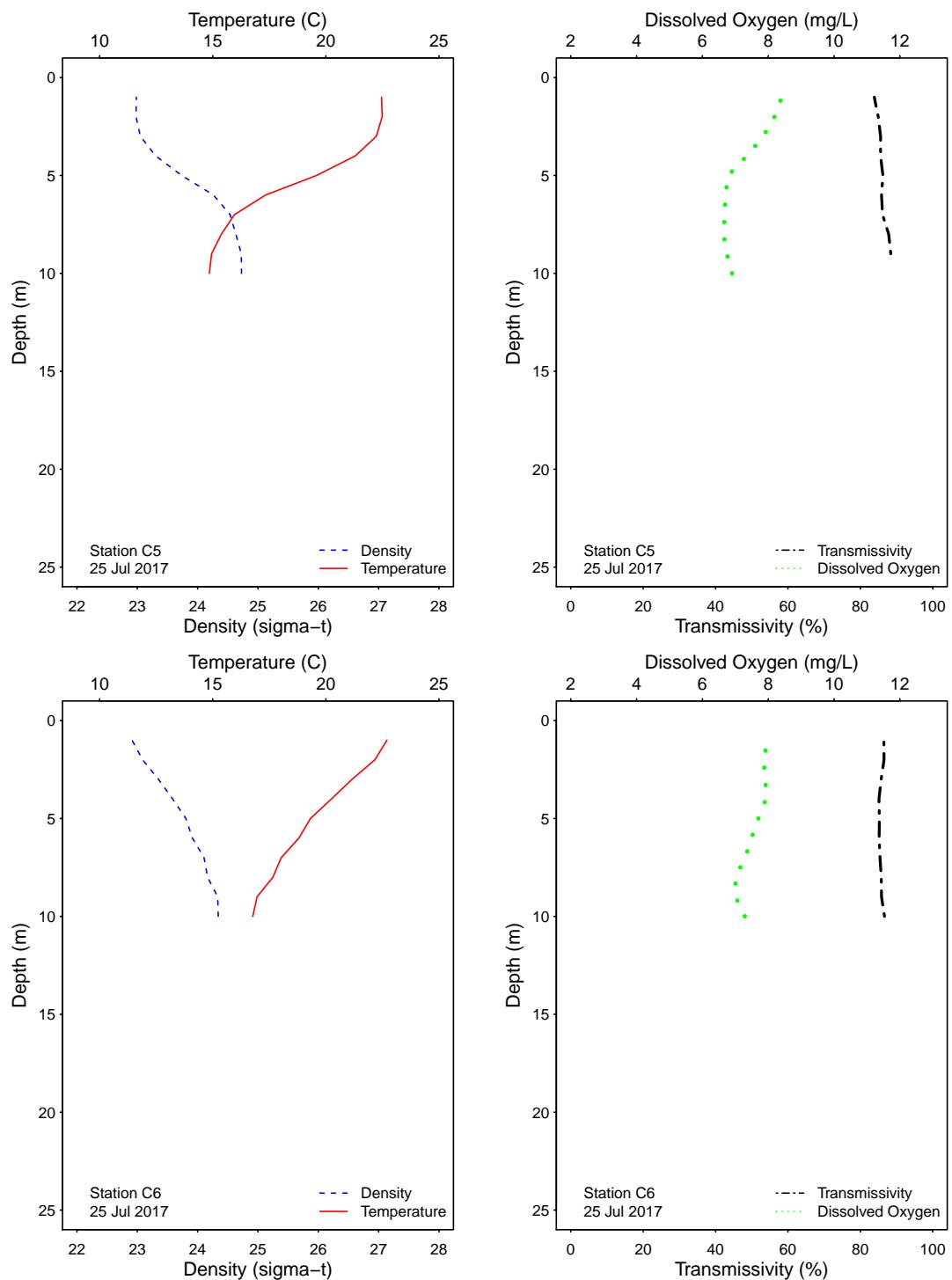


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

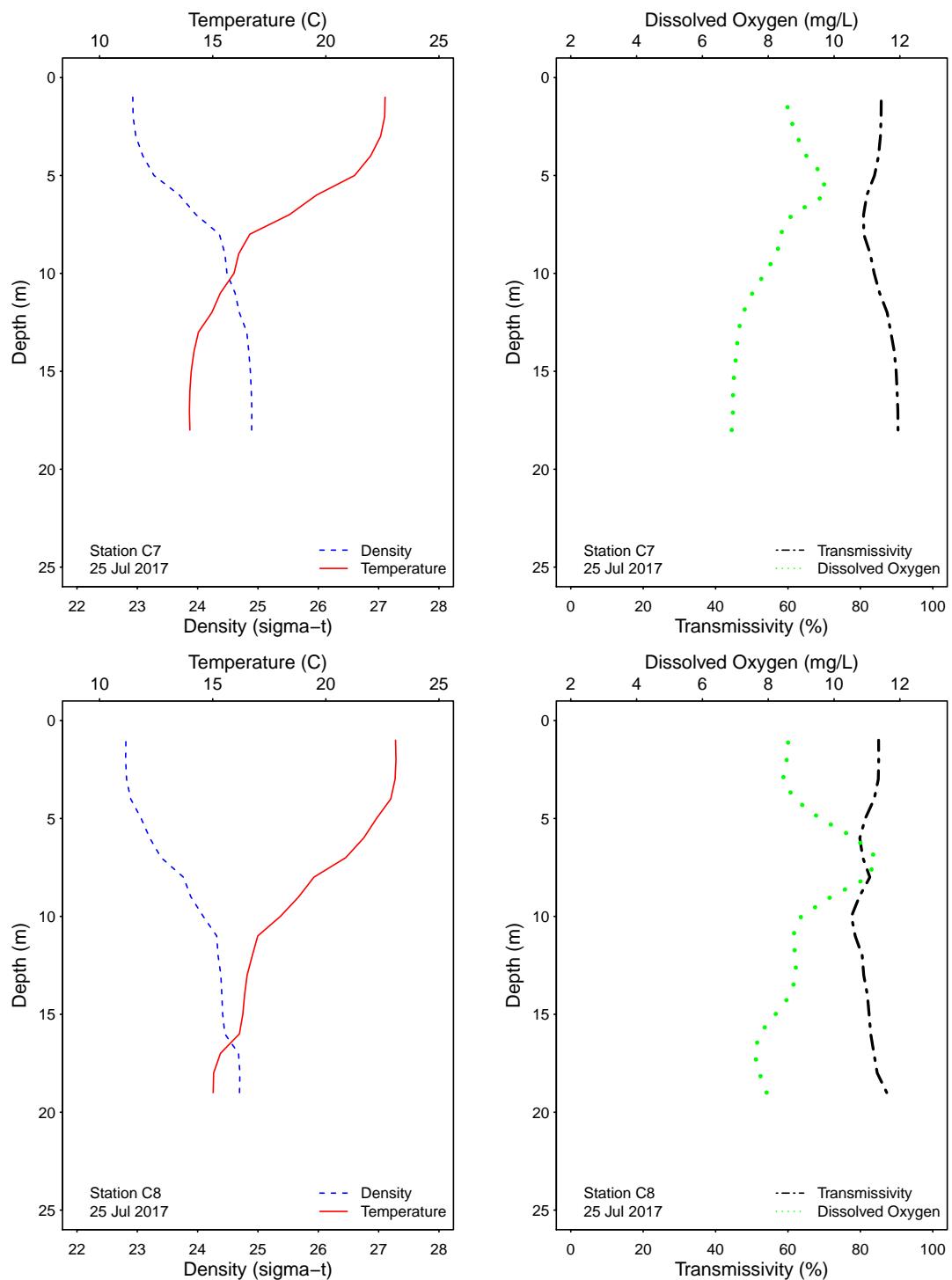


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

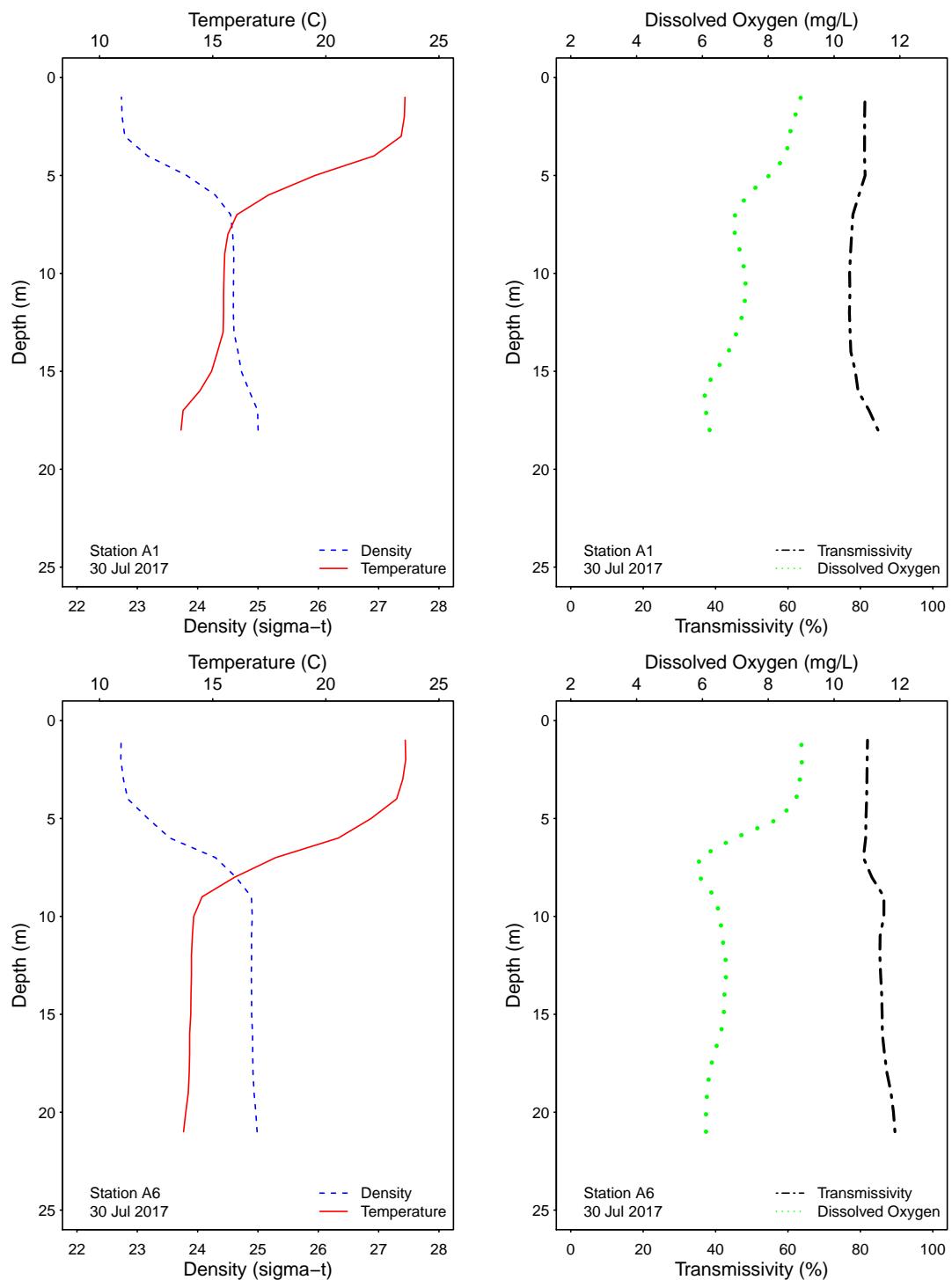


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

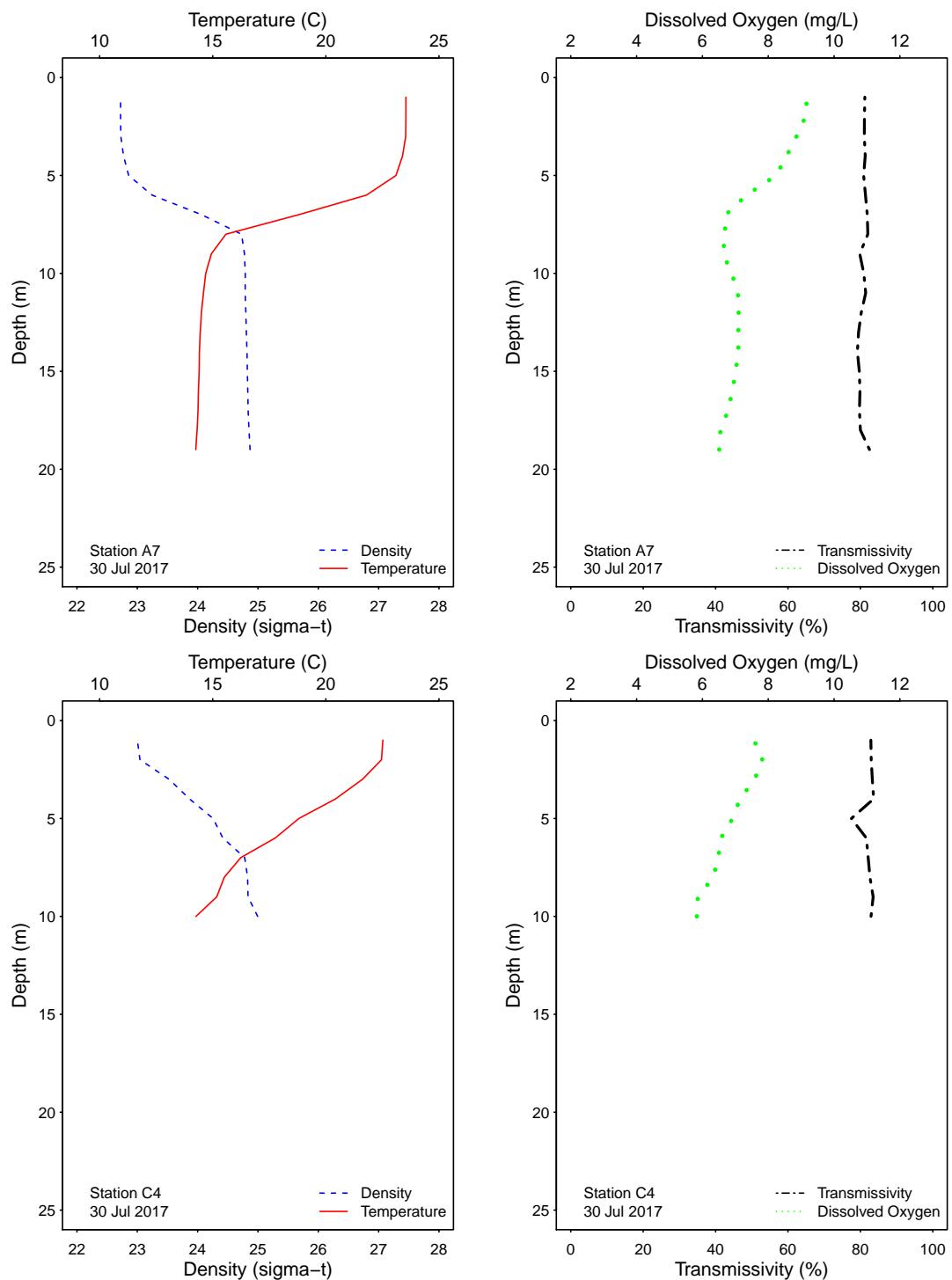


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

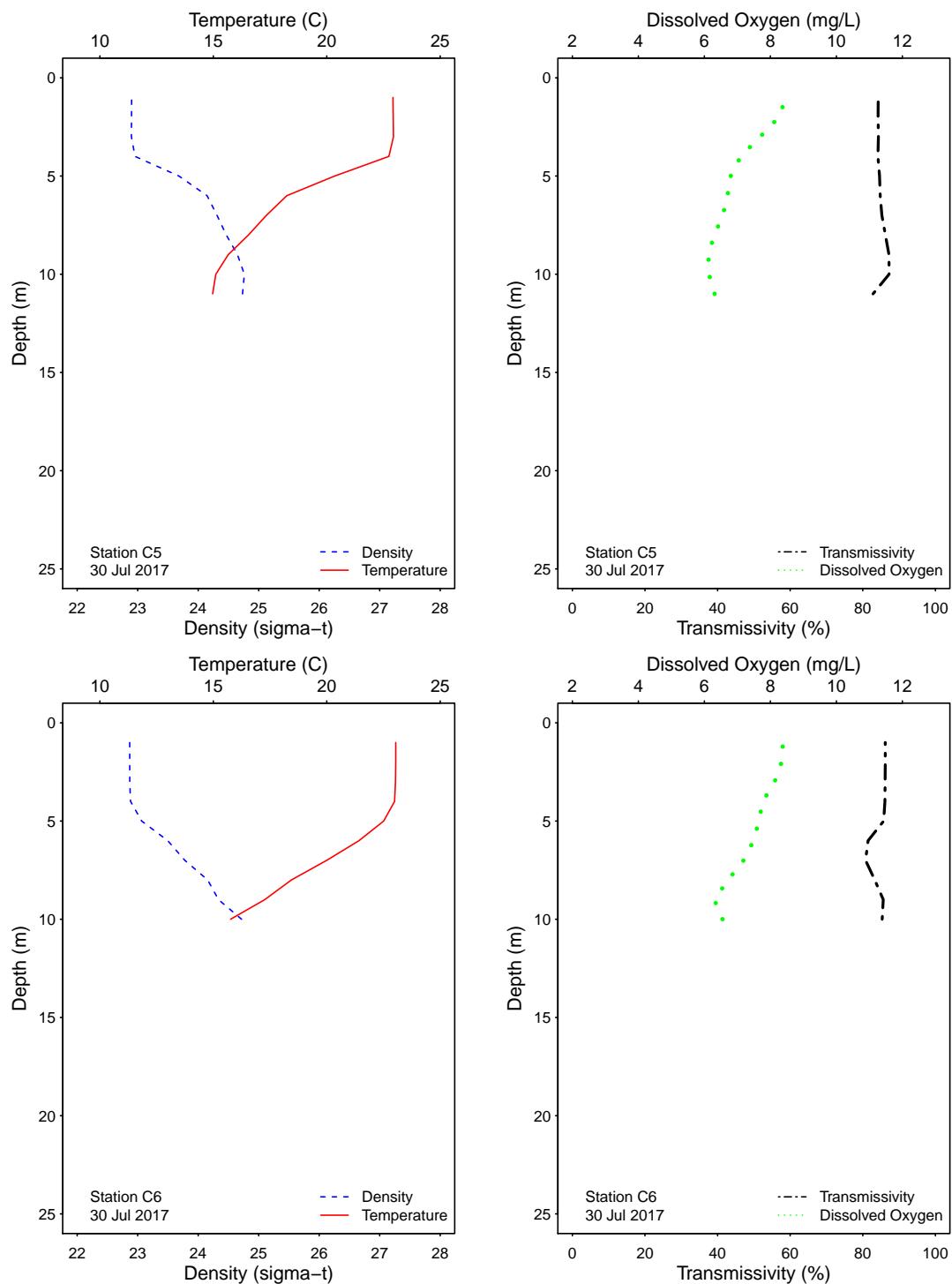


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

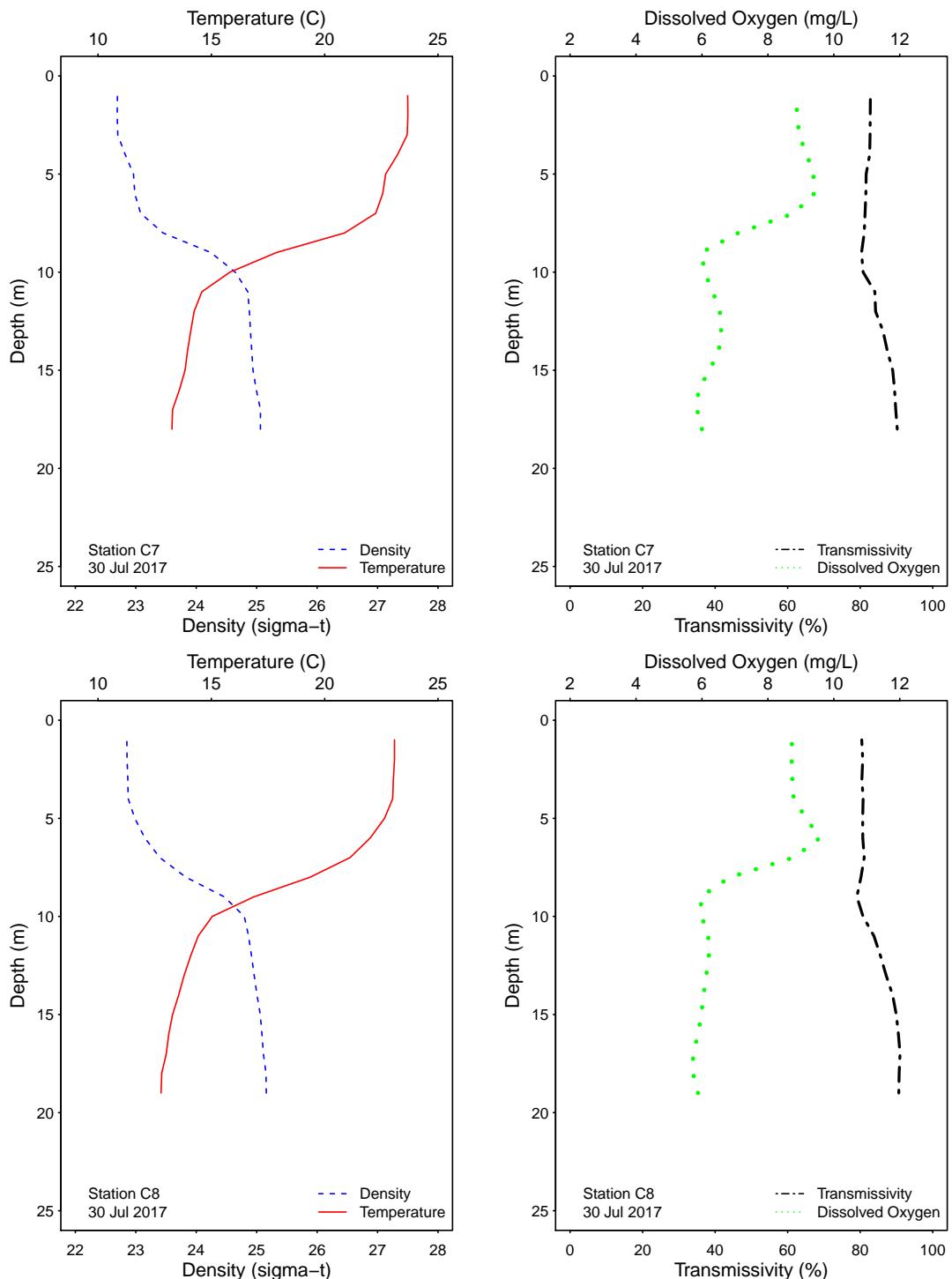


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

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 Jul 2017	18	LMA	LAB DUPLICATE	<2	<2	<2
A7	12 Jul 2017	18	AR	LAB DUPLICATE	4e	<2	<2
A7	18 Jul 2017	18	ZV	LAB DUPLICATE	<2	<2	<2
A7	25 Jul 2017	18	ZV	LAB DUPLICATE	36e	2e	<2
A7	30 Jul 2017	18	LMA	LAB DUPLICATE	2e	<2	<2
C7	06 Jul 2017	18	ZV	LAB DUPLICATE	20e	6e	<2
C7	12 Jul 2017	18	AR	LAB DUPLICATE	10e	<2	<2
C7	18 Jul 2017	18	ZV	LAB DUPLICATE	6e	<2	<2
C7	25 Jul 2017	18	ZV	LAB DUPLICATE	8e	<2	<2
C7	30 Jul 2017	18	LMA	LAB DUPLICATE	4e	<2	<2
C8	06 Jul 2017	12	ZV	LAB DUPLICATE	<2	<2	<2
C8	12 Jul 2017	12	AR	LAB DUPLICATE	<2	<2	<2
C8	18 Jul 2017	12	ZV	LAB DUPLICATE	<2	<2	<2
C8	25 Jul 2017	12	ZV	LAB DUPLICATE	<2	<2	<2
C8	30 Jul 2017	12	LMA	LAB DUPLICATE	4e	<2	<2
D12	04 Jul 2017		AE	FIELD DUPLICATE	<20	<2	2e
D12	04 Jul 2017		AE	LAB DUPLICATE	4e	<2	2e
D12	10 Jul 2017		JT	FIELD DUPLICATE	<20	4e	<2
D12	10 Jul 2017		JT	LAB DUPLICATE	<20	<2	2e
D12	16 Jul 2017		LMA	FIELD DUPLICATE	<20	<2	<2
D12	16 Jul 2017		LMA	LAB DUPLICATE	<20	<2	<2
D12	22 Jul 2017		LMA	FIELD DUPLICATE	<20	<2	<2
D12	22 Jul 2017		LMA	LAB DUPLICATE	<20	2e	2e
D12	28 Jul 2017		JT	FIELD DUPLICATE	20e	<2	<2
D12	28 Jul 2017		JT	LAB DUPLICATE	<20	2e	<2

ns = not sampled

ND = no data

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