



Monthly Receiving Waters Monitoring Report for the Point Loma Ocean Outfall

(Point Loma Metropolitan Wastewater Treatment Plant)

NPDES Permit No. CA0107409

March 2015



City of San Diego
Ocean Monitoring Program
Public Utilities Department
Environmental Monitoring and Technical Services Division



THE CITY OF SAN DIEGO

April 30, 2015

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 March 2015 Monthly Receiving Waters Monitoring Report for the Point Loma Ocean Outfall, Point Loma Wastewater Treatment Plant as required per Order No. R9-2009-0001, NPDES Permit No. CA0107409.

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

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

Sincerely,

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

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

TDS:mln

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). 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.

Van Dorn bottles are used to collect seawater samples from discrete depths at the kelp bed stations. The bottles are arrayed at the required depths and messenger-tripped in series. 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. However, it should be noted that the CTD measurements and bacteriological samples are taken from separate hydrocasts.

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 2009 COP compliance standards.

Monitoring at all offshore sites includes measurements of *Enterococcus* bacteria, water temperature, salinity, density, dissolved oxygen, pH, chlorophyll *a*, transmissivity, chromomimetic 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 2009 California Ocean Plan. The seven standards are defined as follows:

^[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.

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

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

Single Sample Maximums:

- (1) 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 2015 Quality Assurance Report, which will be completed in March 2016.

SUMMARY OF RESULTS

Shore Stations

- During March 2015, two of the eight shore stations was out of compliance with various water-contact standards specified in the Ocean Plan as follows:
 - o The single sample maximum (SSM) standard for *Enterococcus* was exceeded once each at stations D8 and D9 on March 1 and 18, respectively.
- Per 2009 Ocean Plan requirements, a resample was collected in response to this SSM exceedance (see Table 2.8 for details).
- 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 *Annual Receiving Waters Monitoring Report for the Point Loma Ocean Outfall* for details (<http://www.sandiego.gov/mwwd/environment/reports.shtml>).
- Notable visual observations for March included: a posted contaminated water sign at station D8 on March 24.

Kelp Bed Stations

- The eight kelp bed water quality stations (A1, A6, A7, C4, C5, C6, C7, C8) were sampled five times during March (i.e. March 7, 11, 17, 23, 26).
- During March, each of the kelp bed stations was in compliance with all of the water-contact standards specified in the Ocean Plan for total coliform, fecal coliform, and *Enterococcus* bacteria.
- Water column temperatures ranged from 11.99 to 18.47°C during the month. The difference between surface and bottom waters ranged from 0.39 to 5.05°C, indicating that the water column was stratified at the kelp bed stations during the month.
- Chlorophyll *a* concentrations ranged from 0.39 to 4.40 µg/L during March, suggesting the absence of phytoplankton blooms during the month.
- Nothing of sewage origin was observed at any of the kelp bed stations.

Offshore Stations

- Quarterly sampling was not conducted during March at the offshore stations. The next quarterly sampling is scheduled for May 2015.



TABLES AND FIGURES

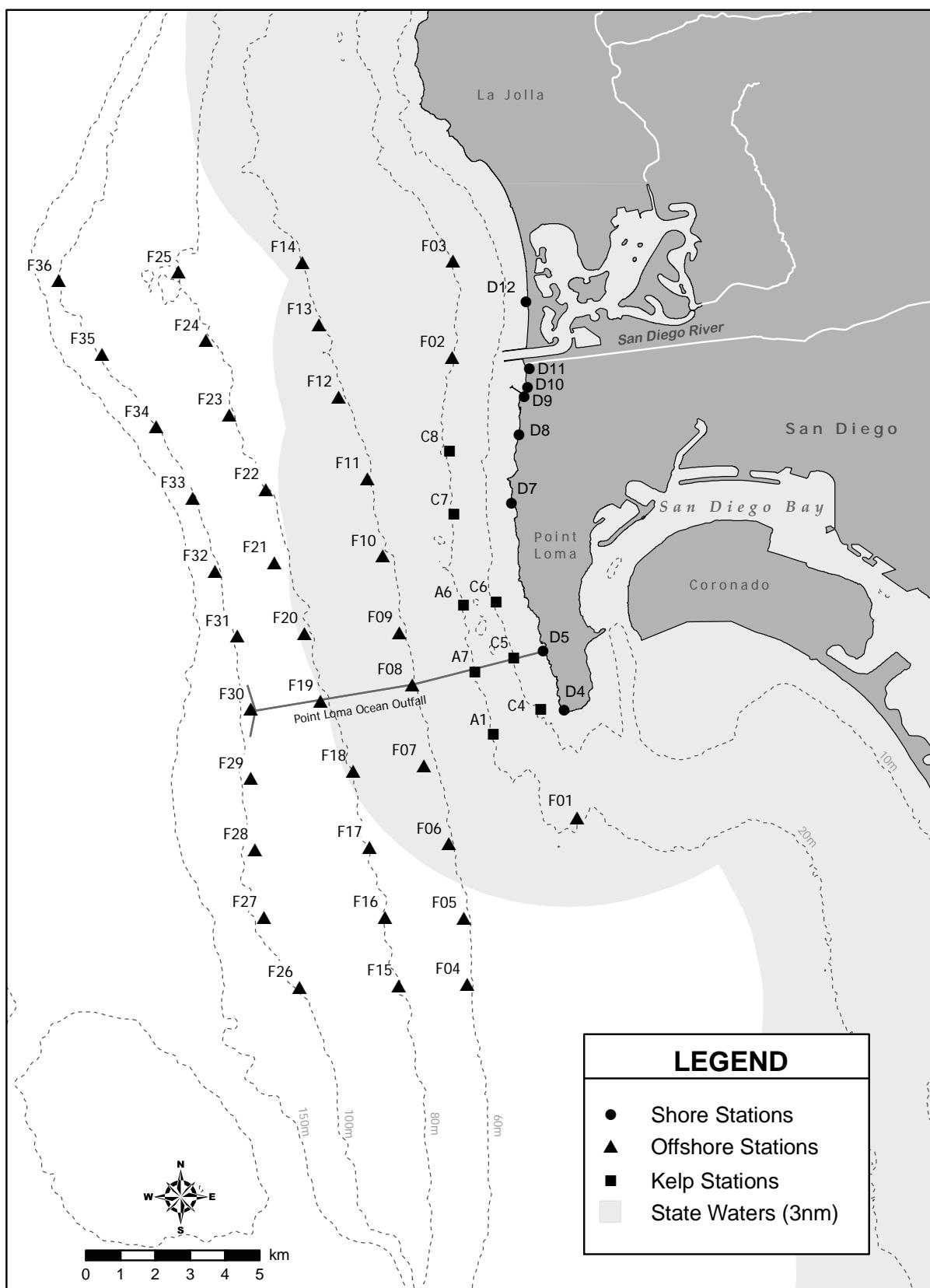


Figure 1.1 Station Map

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Shore Stations

Table 2.1

Summary of compliance with the 2009 Ocean Plan's 30-day Geometric Mean standard for total coliforms 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	D9	D10	D11	D12
01 Mar 2015	5	7	8	57	13	11	67	13
02 Mar 2015	5	7	8	57	13	11	67	13
03 Mar 2015	5	7	8	57	13	11	67	13
04 Mar 2015	5	7	8	57	13	11	67	13
05 Mar 2015	5	7	8	57	13	11	67	13
06 Mar 2015	5	7	8	57	13	11	67	13
07 Mar 2015	4	7	8	33	10	10	55	6
08 Mar 2015	4	7	8	33	10	10	55	6
09 Mar 2015	4	7	8	33	10	10	55	6
10 Mar 2015	4	7	8	33	10	10	55	6
11 Mar 2015	4	7	8	33	10	10	55	6
12 Mar 2015	4	7	8	33	10	10	55	6
13 Mar 2015	4	10	8	43	12	13	55	5
14 Mar 2015	4	10	8	43	12	13	55	5
15 Mar 2015	4	10	8	43	12	13	55	5
16 Mar 2015	4	10	8	43	12	13	55	5
17 Mar 2015	4	10	8	43	12	13	55	5
18 Mar 2015	4	11	11	47	18	15	58	8
19 Mar 2015	3	10	9	48	20	14	62	6
20 Mar 2015	3	10	9	48	20	14	62	6
21 Mar 2015	3	10	9	48	20	14	62	6
22 Mar 2015	3	10	9	48	20	14	62	6
23 Mar 2015	3	10	9	48	20	14	62	6
24 Mar 2015	4	11	12	42	20	15	53	7
25 Mar 2015	4	15	14	31	17	14	38	9
26 Mar 2015	4	15	14	31	17	14	38	9
27 Mar 2015	4	15	14	31	17	14	38	9
28 Mar 2015	5	23	20	34	18	18	43	13
29 Mar 2015	5	23	20	34	18	18	43	13
30 Mar 2015	4	18	19	31	21	15	38	10
31 Mar 2015	4	18	19	19	21	14	21	9

* Geometric mean calculated using an n<5

Table 2.2

Summary of compliance with the 2009 Ocean Plan's 30-day Geometric Mean standard for fecal coliform 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	D9	D10	D11	D12
01 Mar 2015	2	2	6	13	3	6	5	3
02 Mar 2015	2	2	6	13	3	6	5	3
03 Mar 2015	2	2	6	13	3	6	5	3
04 Mar 2015	2	2	6	13	3	6	5	3
05 Mar 2015	2	2	6	13	3	6	5	3
06 Mar 2015	2	2	6	13	3	6	5	3
07 Mar 2015	2	2	5	9	3	5	6	3
08 Mar 2015	2	2	5	9	3	5	6	3
09 Mar 2015	2	2	5	9	3	5	6	3
10 Mar 2015	2	2	5	9	3	5	6	3
11 Mar 2015	2	2	5	9	3	5	6	3
12 Mar 2015	2	2	5	9	3	5	6	3
13 Mar 2015	2	2	5	12	3	4	9	3
14 Mar 2015	2	2	5	12	3	4	9	3
15 Mar 2015	2	2	5	12	3	4	9	3
16 Mar 2015	2	2	5	12	3	4	9	3
17 Mar 2015	2	2	5	12	3	4	9	3
18 Mar 2015	2	2	6	13	5	5	11	4
19 Mar 2015	2	2	6	14	5	6	14	4
20 Mar 2015	2	2	6	14	5	6	14	4
21 Mar 2015	2	2	6	14	5	6	14	4
22 Mar 2015	2	2	6	14	5	6	14	4
23 Mar 2015	2	2	6	14	5	6	14	4
24 Mar 2015	2	2	5	10	5	5	14	5
25 Mar 2015	2	2	6	8	4	4	12	5
26 Mar 2015	2	2	6	8	4	4	12	5
27 Mar 2015	2	2	6	8	4	4	12	5
28 Mar 2015	2	2	8	9	5	5	18	7
29 Mar 2015	2	2	8	9	5	5	18	7
30 Mar 2015	2	2	7	9	4	5	14	5
31 Mar 2015	2	2	4	6	4	4	13	7

* Geometric mean calculated using an n<5

Table 2.3

Summary of compliance with the 2009 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	D9	D10	D11	D12
01 Mar 2015	3	2	4	14	4	5	10	4
02 Mar 2015	3	2	4	14	4	5	10	4
03 Mar 2015	3	2	4	18	4	5	10	4
04 Mar 2015	3	2	4	18	4	5	10	4
05 Mar 2015	3	2	4	18	4	5	10	4
06 Mar 2015	3	2	4	18	4	5	10	4
07 Mar 2015	3	2	4	12	4	5	8	4
08 Mar 2015	3	2	4	12	4	5	8	4
09 Mar 2015	3	2	4	12	4	5	8	4
10 Mar 2015	3	2	4	12	4	5	8	4
11 Mar 2015	3	2	4	12	4	5	8	4
12 Mar 2015	3	2	4	12	4	5	8	4
13 Mar 2015	3	2	4	12	4	5	10	4
14 Mar 2015	3	2	4	12	4	5	10	4
15 Mar 2015	3	2	4	12	4	5	10	4
16 Mar 2015	3	2	4	12	4	5	10	4
17 Mar 2015	3	2	4	12	4	5	10	4
18 Mar 2015	3	3	6	14	7	7	13	6
19 Mar 2015	2	3	6	16	8	7	18	4
20 Mar 2015	2	3	6	16	8	7	18	4
21 Mar 2015	2	3	6	16	8	7	18	4
22 Mar 2015	2	3	6	16	8	7	18	4
23 Mar 2015	2	3	6	16	8	7	18	4
24 Mar 2015	2	3	5	13	6	6	18	4
25 Mar 2015	2	3	6	11	6	6	15	4
26 Mar 2015	2	3	6	11	6	6	15	4
27 Mar 2015	2	3	6	11	6	6	15	4
28 Mar 2015	2	3	7	14	7	7	20	5
29 Mar 2015	2	3	7	14	7	7	20	5
30 Mar 2015	2	3	6	14	6	6	13	4
31 Mar 2015	2	2	4	9	7	4	9	5

* Geometric mean calculated using an n<5

Table 2.4

Summary of compliance at the PLOO shore stations with the 2009 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	D9	D10	D11	D12
01 Mar 2015	ns	IC	IC	IC	IC	IC	IC	IC
02 Mar 2015	IC	ns	ns	ns	ns	ns	ns	ns
07 Mar 2015	IC	IC	IC	IC	IC	IC	IC	IC
13 Mar 2015	IC	IC	IC	IC	IC	IC	IC	IC
18 Mar 2015	IC	IC	IC	IC	IC	IC	IC	IC
24 Mar 2015	IC	IC	IC	IC	IC	IC	IC	IC
30 Mar 2015	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 2009 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	D9	D10	D11	D12
01 Mar 2015	ns	IC	IC	IC	IC	IC	IC	IC
02 Mar 2015	IC	ns	ns	ns	ns	ns	ns	ns
07 Mar 2015	IC	IC	IC	IC	IC	IC	IC	IC
13 Mar 2015	IC	IC	IC	IC	IC	IC	IC	IC
18 Mar 2015	IC	IC	IC	IC	IC	IC	IC	IC
24 Mar 2015	IC	IC	IC	IC	IC	IC	IC	IC
30 Mar 2015	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 2009 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	D9	D10	D11	D12
01 Mar 2015	ns	IC	IC	E	IC	IC	IC	IC
02 Mar 2015	IC	ns	ns	ns	ns	ns	ns	ns
03 Mar 2015	ns	ns	ns	IC	ns	ns	ns	ns
07 Mar 2015	IC	IC	IC	IC	IC	IC	IC	IC
13 Mar 2015	IC	IC	IC	IC	IC	IC	IC	IC
18 Mar 2015	IC	IC	IC	IC	E	IC	IC	IC
20 Mar 2015	ns	ns	ns	ns	IC	ns	ns	ns
24 Mar 2015	IC	IC	IC	IC	IC	IC	IC	IC
30 Mar 2015	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 2009 Ocean Plan's Single Sample Maximum standard for total coliforms 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	D9	D10	D11	D12
01 Mar 2015	ns	IC	IC	IC	IC	IC	IC	IC
02 Mar 2015	IC	ns	ns	ns	ns	ns	ns	ns
07 Mar 2015	IC	IC	IC	IC	IC	IC	IC	IC
13 Mar 2015	IC	IC	IC	IC	IC	IC	IC	IC
18 Mar 2015	IC	IC	IC	IC	IC	IC	IC	IC
24 Mar 2015	IC	IC	IC	IC	IC	IC	IC	IC
30 Mar 2015	IC	IC	IC	IC	IC	IC	IC	IC

IC = In Compliance

E = Exceedance

ns = not sampled

Table 2.8

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

Station	Date	Time	Total	Fecal	Enter	F:T
D4	01 Mar 2015	1102	ns	ns	ns	ns
	02 Mar 2015	1026	4e	<2	2e	0.50
	07 Mar 2015	902	4e	<2	<2	0.50
	13 Mar 2015	1009	<2	<2	<2	1.00
	18 Mar 2015	1137	4e	2e	<2	0.50
	24 Mar 2015	943	<20	4e	<2	0.20
	30 Mar 2015	1033	<2	<2	<2	1.00
D5	01 Mar 2015	1125	<20	<2	4e	0.10
	07 Mar 2015	919	18e	<2	<2	0.11
	13 Mar 2015	1035	46	<2	<2	0.04
	18 Mar 2015	1200	<20	2e	6e	0.10
	24 Mar 2015	1026	<20	<2	2e	0.10
	30 Mar 2015	1102	6e	4e	<2	0.67
D7	01 Mar 2015	1148	20e	<200	44	10.00
	07 Mar 2015	840	14e	<2	4e	0.14
	13 Mar 2015	928	8e	<2	<2	0.25
	18 Mar 2015	1107	40e	20e	28e	0.50
	24 Mar 2015	916	40e	<2	<2	0.05
	30 Mar 2015	955	14e	4e	<2	0.29
D8	01 Mar 2015	1203	360e	60e	200e	0.17
	03 Mar 2015	959	ns	ns	82	ns
	07 Mar 2015	824	4e	<2	2e	0.50
	13 Mar 2015	905	20e	10e	2e	0.50
	18 Mar 2015	1037	80e	20e	58	0.25
	24 Mar 2015	1050	<20	<2	<2	0.10
	30 Mar 2015	937	20e	12e	14e	0.60
D9	01 Mar 2015	1224	<20	4e	2e	0.20
	07 Mar 2015	812	4e	<2	16e	0.50
	13 Mar 2015	844	6e	<2	<2	0.33
	18 Mar 2015	957	200e	100e	120	0.50
	20 Mar 2015	932	ns	ns	6e	ns
	24 Mar 2015	1111	20e	<2	<2	0.10
	30 Mar 2015	912	40e	2e	<2	0.05
D10	01 Mar 2015	1238	<20	20e	28e	1.00
	07 Mar 2015	804	4e	2e	<2	0.50
	13 Mar 2015	831	30e	<2	<2	0.07
	18 Mar 2015	940	38e	18e	38e	0.47
	24 Mar 2015	1123	<20	<2	4e	0.10
	30 Mar 2015	859	6e	6e	2e	1.00
D11	01 Mar 2015	1252	800e	20e	78	0.02
	07 Mar 2015	754	6e	4e	2e	0.67
	13 Mar 2015	816	<20	20e	16e	1.00
	18 Mar 2015	927	80e	56	74	0.70
	24 Mar 2015	858	20e	20e	16e	1.00

Station	Date	Time	Total	Fecal	Enter	F:T
D11	30 Mar 2015	841	<20	4e	<2	0.20
D12	01 Mar 2015	1313	<20	<2	<2	0.10
D12	07 Mar 2015	739	<2	<2	4e	1.00
D12	13 Mar 2015	756	4e	2e	<2	0.50
D12	18 Mar 2015	910	100	84	96	0.84
D12	24 Mar 2015	836	<20	20e	2e	1.00
D12	30 Mar 2015	821	4e	<2	2e	0.50

ns = not sampled

Comments

Station	Date	Depth	Parameter	Comments
D4	01 Mar 2015			Not sampled due to unsafe conditions; a sample was ran on 02 Mar 2015
D8	03 Mar 2015			Resample
D9	20 Mar 2015			Resample

Table 2.9

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

Station	Date	Parameter	Value
D4	01 Mar 2015	Arrive Time	1102
D4	01 Mar 2015	Weather	Cloudy
D4	01 Mar 2015	Wind Speed (kts)	5
D4	01 Mar 2015	Wind Dir	SE
D4	01 Mar 2015	Animal Life	None
D4	01 Mar 2015	Floatables	None
D4	01 Mar 2015	Water Color	Green
D4	01 Mar 2015	Current Direction	SE
D4	01 Mar 2015	Wave Height Low (ft)	3
D4	01 Mar 2015	High Tide (ft)	5
D4	01 Mar 2015	High Tide Time	619
D4	01 Mar 2015	Low Tide (ft)	-0.3
D4	01 Mar 2015	Low Tide Time	1323
D4	01 Mar 2015	Comments	1 Jogger; 1 Person; Water clear; Sample not collected due to unsafe access to water
D4	02 Mar 2015	Arrive Time	1026
D4	02 Mar 2015	Weather	Drizzle
D4	02 Mar 2015	Wind Speed (kts)	4.6
D4	02 Mar 2015	Wind Dir	W
D4	02 Mar 2015	Animal Life	None
D4	02 Mar 2015	Floatables	None
D4	02 Mar 2015	Water Color	Green
D4	02 Mar 2015	Current Direction	W
D4	02 Mar 2015	Wave Height Low (ft)	3
D4	02 Mar 2015	High Tide (ft)	5.1
D4	02 Mar 2015	High Tide Time	658
D4	02 Mar 2015	Low Tide (ft)	-0.4
D4	02 Mar 2015	Low Tide Time	1352
D4	02 Mar 2015	Comments	Water clear
D4	07 Mar 2015	Arrive Time	902
D4	07 Mar 2015	Weather	Sunny
D4	07 Mar 2015	Wind Speed (kts)	2.5
D4	07 Mar 2015	Wind Dir	S
D4	07 Mar 2015	Animal Life	None
D4	07 Mar 2015	Floatables	None
D4	07 Mar 2015	Water Color	Green
D4	07 Mar 2015	Current Direction	S
D4	07 Mar 2015	Wave Height Low (ft)	2
D4	07 Mar 2015	High Tide (ft)	4.6
D4	07 Mar 2015	High Tide Time	936
D4	07 Mar 2015	Low Tide (ft)	0.6
D4	07 Mar 2015	Low Tide Time	342

Station	Date	Parameter	Value
D4	07 Mar 2015	Comments	Water clear
D4	13 Mar 2015	Arrive Time	1009
D4	13 Mar 2015	Weather	Sunny
D4	13 Mar 2015	Wind Speed (kts)	5.2
D4	13 Mar 2015	Wind Dir	NW
D4	13 Mar 2015	Animal Life	None
D4	13 Mar 2015	Floatables	None
D4	13 Mar 2015	Water Color	Green
D4	13 Mar 2015	Current Direction	NW
D4	13 Mar 2015	Wave Height Low (ft)	1
D4	13 Mar 2015	High Tide (ft)	2.7
D4	13 Mar 2015	High Tide Time	1718
D4	13 Mar 2015	Low Tide (ft)	0.8
D4	13 Mar 2015	Low Tide Time	1035
D4	13 Mar 2015	Comments	Seagrass; Algae; Water clear
D4	18 Mar 2015	Arrive Time	1137
D4	18 Mar 2015	Weather	Partly Cloudy
D4	18 Mar 2015	Wind Speed (kts)	4
D4	18 Mar 2015	Wind Dir	SW
D4	18 Mar 2015	Animal Life	None
D4	18 Mar 2015	Floatables	None
D4	18 Mar 2015	Water Color	Green
D4	18 Mar 2015	Current Direction	SW
D4	18 Mar 2015	Wave Height Low (ft)	2
D4	18 Mar 2015	High Tide (ft)	5.8
D4	18 Mar 2015	High Tide Time	811
D4	18 Mar 2015	Low Tide (ft)	-1
D4	18 Mar 2015	Low Tide Time	1449
D4	18 Mar 2015	Comments	Kelp; Seagrass; Water clear; Decaying fish-like odor present
D4	24 Mar 2015	Arrive Time	943
D4	24 Mar 2015	Weather	Sunny
D4	24 Mar 2015	Wind Speed (kts)	3
D4	24 Mar 2015	Wind Dir	SW
D4	24 Mar 2015	Animal Life	None
D4	24 Mar 2015	Floatables	None
D4	24 Mar 2015	Water Color	Green
D4	24 Mar 2015	Current Direction	SW
D4	24 Mar 2015	Wave Height Low (ft)	2
D4	24 Mar 2015	High Tide (ft)	3.5
D4	24 Mar 2015	High Tide Time	1319
D4	24 Mar 2015	Low Tide (ft)	-0.1
D4	24 Mar 2015	Low Tide Time	709
D4	24 Mar 2015	Comments	Kelp; Seagrass; Water clear; Bleaching appearance rocks and algae

Station	Date	Parameter	Value
D4	30 Mar 2015	Arrive Time	1033
D4	30 Mar 2015	Weather	Partly Cloudy
D4	30 Mar 2015	Wind Speed (kts)	3.8
D4	30 Mar 2015	Wind Dir	NW
D4	30 Mar 2015	Animal Life	None
D4	30 Mar 2015	Floatables	None
D4	30 Mar 2015	Water Color	Green
D4	30 Mar 2015	Current Direction	NW
D4	30 Mar 2015	Wave Height Low (ft)	2
D4	30 Mar 2015	High Tide (ft)	4.4
D4	30 Mar 2015	High Tide Time	658
D4	30 Mar 2015	Low Tide (ft)	0.1
D4	30 Mar 2015	Low Tide Time	1345
D4	30 Mar 2015	Comments	Algae; Water clear
D5	01 Mar 2015	Arrive Time	1125
D5	01 Mar 2015	Weather	Drizzle
D5	01 Mar 2015	Wind Speed (kts)	4
D5	01 Mar 2015	Wind Dir	SE
D5	01 Mar 2015	Animal Life	7 Seagulls
D5	01 Mar 2015	Floatables	None
D5	01 Mar 2015	Water Color	Green
D5	01 Mar 2015	Current Direction	SE
D5	01 Mar 2015	Wave Height Low (ft)	2
D5	01 Mar 2015	High Tide (ft)	5
D5	01 Mar 2015	High Tide Time	619
D5	01 Mar 2015	Low Tide (ft)	-0.3
D5	01 Mar 2015	Low Tide Time	1323
D5	01 Mar 2015	Comments	Kelp; Seagrass; Water turbid
D5	07 Mar 2015	Arrive Time	919
D5	07 Mar 2015	Weather	Sunny
D5	07 Mar 2015	Wind Speed (kts)	4
D5	07 Mar 2015	Wind Dir	W
D5	07 Mar 2015	Animal Life	None
D5	07 Mar 2015	Floatables	None
D5	07 Mar 2015	Water Color	Green
D5	07 Mar 2015	Current Direction	W
D5	07 Mar 2015	Wave Height Low (ft)	3
D5	07 Mar 2015	High Tide (ft)	4.6
D5	07 Mar 2015	High Tide Time	936
D5	07 Mar 2015	Low Tide (ft)	0.6
D5	07 Mar 2015	Low Tide Time	342
D5	07 Mar 2015	Comments	Water clear
D5	13 Mar 2015	Arrive Time	1035
D5	13 Mar 2015	Weather	Sunny
D5	13 Mar 2015	Wind Speed (kts)	9.3
D5	13 Mar 2015	Wind Dir	N

Station	Date	Parameter	Value
D5	13 Mar 2015	Animal Life	None
D5	13 Mar 2015	Floatables	None
D5	13 Mar 2015	Water Color	Green
D5	13 Mar 2015	Current Direction	N
D5	13 Mar 2015	Wave Height Low (ft)	2
D5	13 Mar 2015	High Tide (ft)	2.7
D5	13 Mar 2015	High Tide Time	1718
D5	13 Mar 2015	Low Tide (ft)	0.8
D5	13 Mar 2015	Low Tide Time	1035
D5	13 Mar 2015	Comments	Kelp; Algae; Water clear
D5	18 Mar 2015	Arrive Time	1200
D5	18 Mar 2015	Weather	Partly Cloudy
D5	18 Mar 2015	Wind Speed (kts)	3
D5	18 Mar 2015	Wind Dir	SW
D5	18 Mar 2015	Animal Life	21 Cormorants
D5	18 Mar 2015	Floatables	None
D5	18 Mar 2015	Water Color	Green
D5	18 Mar 2015	Current Direction	SW
D5	18 Mar 2015	Wave Height Low (ft)	2
D5	18 Mar 2015	High Tide (ft)	5.8
D5	18 Mar 2015	High Tide Time	811
D5	18 Mar 2015	Low Tide (ft)	-1
D5	18 Mar 2015	Low Tide Time	1449
D5	18 Mar 2015	Comments	Kelp; Seagrass; Water turbid
D5	24 Mar 2015	Arrive Time	1026
D5	24 Mar 2015	Weather	Sunny
D5	24 Mar 2015	Wind Speed (kts)	3
D5	24 Mar 2015	Wind Dir	SW
D5	24 Mar 2015	Animal Life	None
D5	24 Mar 2015	Floatables	None
D5	24 Mar 2015	Water Color	Green
D5	24 Mar 2015	Current Direction	SW
D5	24 Mar 2015	Wave Height Low (ft)	3
D5	24 Mar 2015	High Tide (ft)	3.5
D5	24 Mar 2015	High Tide Time	1319
D5	24 Mar 2015	Low Tide (ft)	-0.1
D5	24 Mar 2015	Low Tide Time	709
D5	24 Mar 2015	Comments	Kelp; Seagrass; Water turbid
D5	30 Mar 2015	Arrive Time	1102
D5	30 Mar 2015	Weather	Sunny
D5	30 Mar 2015	Wind Speed (kts)	1.3
D5	30 Mar 2015	Wind Dir	NW
D5	30 Mar 2015	Animal Life	None
D5	30 Mar 2015	Floatables	None
D5	30 Mar 2015	Water Color	Green
D5	30 Mar 2015	Current Direction	NW

Station	Date	Parameter	Value
D5	30 Mar 2015	Wave Height Low (ft)	2
	30 Mar 2015	High Tide (ft)	4.4
	30 Mar 2015	High Tide Time	658
	30 Mar 2015	Low Tide (ft)	0.1
	30 Mar 2015	Low Tide Time	1345
	30 Mar 2015	Comments	Water clear
D7	01 Mar 2015	Arrive Time	1148
	01 Mar 2015	Weather	Drizzle
	01 Mar 2015	Wind Speed (kts)	3
	01 Mar 2015	Wind Dir	SE
	01 Mar 2015	Animal Life	None
	01 Mar 2015	Floatables	None
	01 Mar 2015	Water Color	Green
	01 Mar 2015	Current Direction	SE
	01 Mar 2015	Wave Height Low (ft)	1
	01 Mar 2015	High Tide (ft)	5
	01 Mar 2015	High Tide Time	619
	01 Mar 2015	Low Tide (ft)	-0.3
	01 Mar 2015	Low Tide Time	1323
	01 Mar 2015	Comments	Kelp; Seagrass; Water clear; Dead com-morant
D7	07 Mar 2015	Arrive Time	840
	07 Mar 2015	Weather	Sunny
	07 Mar 2015	Wind Speed (kts)	0.2
	07 Mar 2015	Wind Dir	E
	07 Mar 2015	Animal Life	None
	07 Mar 2015	Floatables	None
	07 Mar 2015	Water Color	Green
	07 Mar 2015	Current Direction	E
	07 Mar 2015	Wave Height Low (ft)	2
	07 Mar 2015	High Tide (ft)	4.6
	07 Mar 2015	High Tide Time	936
	07 Mar 2015	Low Tide (ft)	0.6
	07 Mar 2015	Low Tide Time	342
	07 Mar 2015	Comments	Kelp; Seagrass; Water clear; Abundant kelp
D7	13 Mar 2015	Arrive Time	928
	13 Mar 2015	Weather	Sunny
	13 Mar 2015	Wind Speed (kts)	0.1
	13 Mar 2015	Wind Dir	W
	13 Mar 2015	Animal Life	None
	13 Mar 2015	Floatables	None
	13 Mar 2015	Water Color	Green
	13 Mar 2015	Current Direction	W
	13 Mar 2015	Wave Height Low (ft)	1
	13 Mar 2015	High Tide (ft)	4.2

Station	Date	Parameter	Value
D7	13 Mar 2015	High Tide Time	232
D7	13 Mar 2015	Low Tide (ft)	0.8
D7	13 Mar 2015	Low Tide Time	1035
D7	13 Mar 2015	Comments	Kelp; Seagrass; Algae; 2 Persons; 5 Surfers; Water clear
D7	18 Mar 2015	Arrive Time	1107
D7	18 Mar 2015	Weather	Partly Cloudy
D7	18 Mar 2015	Wind Speed (kts)	6
D7	18 Mar 2015	Wind Dir	SW
D7	18 Mar 2015	Animal Life	None
D7	18 Mar 2015	Floatables	None
D7	18 Mar 2015	Water Color	Green
D7	18 Mar 2015	Current Direction	SW
D7	18 Mar 2015	Wave Height Low (ft)	3
D7	18 Mar 2015	High Tide (ft)	5.8
D7	18 Mar 2015	High Tide Time	811
D7	18 Mar 2015	Low Tide (ft)	-1
D7	18 Mar 2015	Low Tide Time	1449
D7	18 Mar 2015	Comments	Kelp; Seagrass; 1 Surfer; Water turbid
D7	24 Mar 2015	Arrive Time	916
D7	24 Mar 2015	Weather	Sunny
D7	24 Mar 2015	Wind Speed (kts)	3
D7	24 Mar 2015	Wind Dir	SW
D7	24 Mar 2015	Animal Life	None
D7	24 Mar 2015	Floatables	None
D7	24 Mar 2015	Water Color	Green
D7	24 Mar 2015	Current Direction	SW
D7	24 Mar 2015	Wave Height Low (ft)	2
D7	24 Mar 2015	High Tide (ft)	3.5
D7	24 Mar 2015	High Tide Time	1319
D7	24 Mar 2015	Low Tide (ft)	-0.1
D7	24 Mar 2015	Low Tide Time	709
D7	24 Mar 2015	Comments	Kelp; Seagrass; 20 Persons; 5 Surfers; Water clear
D7	30 Mar 2015	Arrive Time	955
D7	30 Mar 2015	Weather	Overcast
D7	30 Mar 2015	Wind Speed (kts)	1.3
D7	30 Mar 2015	Wind Dir	W
D7	30 Mar 2015	Animal Life	None
D7	30 Mar 2015	Floatables	None
D7	30 Mar 2015	Water Color	Green
D7	30 Mar 2015	Current Direction	W
D7	30 Mar 2015	Wave Height Low (ft)	3
D7	30 Mar 2015	High Tide (ft)	4.4
D7	30 Mar 2015	High Tide Time	658
D7	30 Mar 2015	Low Tide (ft)	0.1

Station	Date	Parameter	Value
D7	30 Mar 2015	Low Tide Time	1345
D7	30 Mar 2015	Comments	Algae; 2 Surfers
D8	01 Mar 2015	Arrive Time	1203
D8	01 Mar 2015	Weather	Drizzle
D8	01 Mar 2015	Wind Speed (kts)	3
D8	01 Mar 2015	Wind Dir	SE
D8	01 Mar 2015	Animal Life	None
D8	01 Mar 2015	Floatables	None
D8	01 Mar 2015	Water Color	Green
D8	01 Mar 2015	Current Direction	SE
D8	01 Mar 2015	Wave Height Low (ft)	1
D8	01 Mar 2015	High Tide (ft)	5
D8	01 Mar 2015	High Tide Time	619
D8	01 Mar 2015	Low Tide (ft)	-0.3
D8	01 Mar 2015	Low Tide Time	1323
D8	01 Mar 2015	Comments	None
D8	03 Mar 2015	Arrive Time	959
D8	03 Mar 2015	Weather	Sunny
D8	03 Mar 2015	Wind Speed (kts)	0.4
D8	03 Mar 2015	Wind Dir	NW
D8	03 Mar 2015	Animal Life	5 Birds
D8	03 Mar 2015	Floatables	None
D8	03 Mar 2015	Water Color	Blue
D8	03 Mar 2015	Current Direction	NW
D8	03 Mar 2015	Wave Height Low (ft)	5
D8	03 Mar 2015	High Tide (ft)	5.2
D8	03 Mar 2015	High Tide Time	732
D8	03 Mar 2015	Low Tide (ft)	-0.4
D8	03 Mar 2015	Low Tide Time	1417
D8	03 Mar 2015	Comments	Kelp; Seagrass; Water clear
D8	07 Mar 2015	Arrive Time	824
D8	07 Mar 2015	Weather	Sunny
D8	07 Mar 2015	Wind Speed (kts)	0.4
D8	07 Mar 2015	Wind Dir	E
D8	07 Mar 2015	Animal Life	1 Dog
D8	07 Mar 2015	Floatables	None
D8	07 Mar 2015	Water Color	Green
D8	07 Mar 2015	Current Direction	E
D8	07 Mar 2015	Wave Height Low (ft)	3
D8	07 Mar 2015	High Tide (ft)	4.6
D8	07 Mar 2015	High Tide Time	936
D8	07 Mar 2015	Low Tide (ft)	0.6
D8	07 Mar 2015	Low Tide Time	342
D8	07 Mar 2015	Comments	Kelp; Seagrass; 1 Person; Water clear
D8	13 Mar 2015	Arrive Time	905

Station	Date	Parameter	Value
D8	13 Mar 2015	Weather	Sunny
D8	13 Mar 2015	Wind Speed (kts)	0.4
D8	13 Mar 2015	Wind Dir	NW
D8	13 Mar 2015	Animal Life	None
D8	13 Mar 2015	Floatables	None
D8	13 Mar 2015	Water Color	Green
D8	13 Mar 2015	Current Direction	NW
D8	13 Mar 2015	Wave Height Low (ft)	1
D8	13 Mar 2015	High Tide (ft)	4.2
D8	13 Mar 2015	High Tide Time	232
D8	13 Mar 2015	Low Tide (ft)	0.8
D8	13 Mar 2015	Low Tide Time	1035
D8	13 Mar 2015	Comments	Kelp; Seagrass; Algae; Water clear
D8	18 Mar 2015	Arrive Time	1037
D8	18 Mar 2015	Weather	Partly Cloudy
D8	18 Mar 2015	Wind Speed (kts)	5
D8	18 Mar 2015	Wind Dir	SW
D8	18 Mar 2015	Animal Life	1 Seal
D8	18 Mar 2015	Floatables	None
D8	18 Mar 2015	Water Color	Green
D8	18 Mar 2015	Current Direction	SW
D8	18 Mar 2015	Wave Height Low (ft)	3
D8	18 Mar 2015	High Tide (ft)	5.8
D8	18 Mar 2015	High Tide Time	811
D8	18 Mar 2015	Low Tide (ft)	-1
D8	18 Mar 2015	Low Tide Time	1449
D8	18 Mar 2015	Comments	1 Jogger; 1 Person
D8	24 Mar 2015	Arrive Time	1050
D8	24 Mar 2015	Weather	Sunny
D8	24 Mar 2015	Wind Speed (kts)	2
D8	24 Mar 2015	Wind Dir	SW
D8	24 Mar 2015	Animal Life	None
D8	24 Mar 2015	Floatables	None
D8	24 Mar 2015	Water Color	Green
D8	24 Mar 2015	Current Direction	SW
D8	24 Mar 2015	Wave Height Low (ft)	3
D8	24 Mar 2015	High Tide (ft)	3.5
D8	24 Mar 2015	High Tide Time	1319
D8	24 Mar 2015	Low Tide (ft)	-0.1
D8	24 Mar 2015	Low Tide Time	709
D8	24 Mar 2015	Comments	Kelp; Seagrass; One dead commorant; Contaminated water sign posted
D8	30 Mar 2015	Arrive Time	937
D8	30 Mar 2015	Weather	Overcast
D8	30 Mar 2015	Wind Speed (kts)	3.6
D8	30 Mar 2015	Wind Dir	W

Station	Date	Parameter	Value
D8	30 Mar 2015	Animal Life	None
D8	30 Mar 2015	Floatables	None
D8	30 Mar 2015	Water Color	Green
D8	30 Mar 2015	Current Direction	W
D8	30 Mar 2015	Wave Height Low (ft)	2
D8	30 Mar 2015	High Tide (ft)	4.4
D8	30 Mar 2015	High Tide Time	658
D8	30 Mar 2015	Low Tide (ft)	0.1
D8	30 Mar 2015	Low Tide Time	1345
D8	30 Mar 2015	Comments	Kelp; Seagrass; Water turbid
D9	01 Mar 2015	Arrive Time	1224
D9	01 Mar 2015	Weather	Drizzle
D9	01 Mar 2015	Wind Speed (kts)	4
D9	01 Mar 2015	Wind Dir	SE
D9	01 Mar 2015	Animal Life	None
D9	01 Mar 2015	Floatables	None
D9	01 Mar 2015	Water Color	Green
D9	01 Mar 2015	Current Direction	SE
D9	01 Mar 2015	Wave Height Low (ft)	1
D9	01 Mar 2015	High Tide (ft)	5
D9	01 Mar 2015	High Tide Time	619
D9	01 Mar 2015	Low Tide (ft)	-0.3
D9	01 Mar 2015	Low Tide Time	1323
D9	01 Mar 2015	Comments	Kelp; Seagrass; Water turbid
D9	07 Mar 2015	Arrive Time	812
D9	07 Mar 2015	Weather	Sunny
D9	07 Mar 2015	Wind Speed (kts)	0.9
D9	07 Mar 2015	Wind Dir	E
D9	07 Mar 2015	Animal Life	None
D9	07 Mar 2015	Floatables	None
D9	07 Mar 2015	Water Color	Green
D9	07 Mar 2015	Current Direction	E
D9	07 Mar 2015	Wave Height Low (ft)	3
D9	07 Mar 2015	High Tide (ft)	4.6
D9	07 Mar 2015	High Tide Time	936
D9	07 Mar 2015	Low Tide (ft)	0.6
D9	07 Mar 2015	Low Tide Time	342
D9	07 Mar 2015	Comments	Water clear
D9	13 Mar 2015	Arrive Time	844
D9	13 Mar 2015	Weather	Sunny
D9	13 Mar 2015	Wind Speed (kts)	0.7
D9	13 Mar 2015	Wind Dir	N
D9	13 Mar 2015	Animal Life	None
D9	13 Mar 2015	Floatables	None
D9	13 Mar 2015	Water Color	Green
D9	13 Mar 2015	Current Direction	N

Station	Date	Parameter	Value
D9	13 Mar 2015	Wave Height Low (ft)	2
D9	13 Mar 2015	High Tide (ft)	4.2
D9	13 Mar 2015	High Tide Time	232
D9	13 Mar 2015	Low Tide (ft)	0.8
D9	13 Mar 2015	Low Tide Time	1035
D9	13 Mar 2015	Comments	Seagrass; Algae; Water clear
D9	18 Mar 2015	Arrive Time	957
D9	18 Mar 2015	Weather	Partly Cloudy
D9	18 Mar 2015	Wind Speed (kts)	5
D9	18 Mar 2015	Wind Dir	SW
D9	18 Mar 2015	Animal Life	None
D9	18 Mar 2015	Floatables	None
D9	18 Mar 2015	Water Color	Green
D9	18 Mar 2015	Current Direction	SW
D9	18 Mar 2015	Wave Height Low (ft)	3
D9	18 Mar 2015	High Tide (ft)	5.8
D9	18 Mar 2015	High Tide Time	811
D9	18 Mar 2015	Low Tide (ft)	-1
D9	18 Mar 2015	Low Tide Time	1449
D9	18 Mar 2015	Comments	Kelp; Seagrass; Water turbid; Water draining from wall next to steps.
D9	20 Mar 2015	Arrive Time	932
D9	20 Mar 2015	Weather	Sunny
D9	20 Mar 2015	Wind Speed (kts)	0.2
D9	20 Mar 2015	Wind Dir	W
D9	20 Mar 2015	Animal Life	None
D9	20 Mar 2015	Floatables	None
D9	20 Mar 2015	Water Color	Green
D9	20 Mar 2015	Current Direction	W
D9	20 Mar 2015	Wave Height Low (ft)	4
D9	20 Mar 2015	High Tide (ft)	5.7
D9	20 Mar 2015	High Tide Time	944
D9	20 Mar 2015	Low Tide (ft)	-0.4
D9	20 Mar 2015	Low Tide Time	342
D9	20 Mar 2015	Comments	Water clear
D9	24 Mar 2015	Arrive Time	1111
D9	24 Mar 2015	Weather	Sunny
D9	24 Mar 2015	Wind Speed (kts)	2
D9	24 Mar 2015	Wind Dir	SW
D9	24 Mar 2015	Animal Life	None
D9	24 Mar 2015	Floatables	None
D9	24 Mar 2015	Water Color	Green
D9	24 Mar 2015	Current Direction	SW
D9	24 Mar 2015	Wave Height Low (ft)	3
D9	24 Mar 2015	High Tide (ft)	3.5
D9	24 Mar 2015	High Tide Time	1319

Station	Date	Parameter	Value
D9	24 Mar 2015	Low Tide (ft)	-0.1
D9	24 Mar 2015	Low Tide Time	709
D9	24 Mar 2015	Comments	Kelp; Seagrass; 2 Surfers; Water turbid
D9	30 Mar 2015	Arrive Time	912
D9	30 Mar 2015	Weather	Overcast
D9	30 Mar 2015	Wind Speed (kts)	1.5
D9	30 Mar 2015	Wind Dir	W
D9	30 Mar 2015	Animal Life	None
D9	30 Mar 2015	Floatables	None
D9	30 Mar 2015	Water Color	Green
D9	30 Mar 2015	Current Direction	W
D9	30 Mar 2015	Wave Height Low (ft)	3
D9	30 Mar 2015	High Tide (ft)	4.4
D9	30 Mar 2015	High Tide Time	658
D9	30 Mar 2015	Low Tide (ft)	0.1
D9	30 Mar 2015	Low Tide Time	1345
D9	30 Mar 2015	Comments	Algae; Water clear
D10	01 Mar 2015	Arrive Time	1238
D10	01 Mar 2015	Weather	Drizzle
D10	01 Mar 2015	Wind Speed (kts)	3
D10	01 Mar 2015	Wind Dir	SE
D10	01 Mar 2015	Animal Life	None
D10	01 Mar 2015	Floatables	None
D10	01 Mar 2015	Water Color	Green
D10	01 Mar 2015	Current Direction	SE
D10	01 Mar 2015	Wave Height Low (ft)	1
D10	01 Mar 2015	High Tide (ft)	5
D10	01 Mar 2015	High Tide Time	619
D10	01 Mar 2015	Low Tide (ft)	-0.3
D10	01 Mar 2015	Low Tide Time	1323
D10	01 Mar 2015	Comments	Kelp; Seagrass; Water turbid
D10	07 Mar 2015	Arrive Time	804
D10	07 Mar 2015	Weather	Sunny
D10	07 Mar 2015	Wind Speed (kts)	1.7
D10	07 Mar 2015	Wind Dir	E
D10	07 Mar 2015	Animal Life	None
D10	07 Mar 2015	Floatables	None
D10	07 Mar 2015	Water Color	Green
D10	07 Mar 2015	Current Direction	E
D10	07 Mar 2015	Wave Height Low (ft)	3
D10	07 Mar 2015	High Tide (ft)	4.6
D10	07 Mar 2015	High Tide Time	936
D10	07 Mar 2015	Low Tide (ft)	0.6
D10	07 Mar 2015	Low Tide Time	342
D10	07 Mar 2015	Comments	15 Surfers; Water clear

Station	Date	Parameter	Value
D10	13 Mar 2015	Arrive Time	831
D10	13 Mar 2015	Weather	Sunny
D10	13 Mar 2015	Wind Speed (kts)	0.2
D10	13 Mar 2015	Wind Dir	N
D10	13 Mar 2015	Animal Life	None
D10	13 Mar 2015	Floatables	None
D10	13 Mar 2015	Water Color	Green
D10	13 Mar 2015	Current Direction	N
D10	13 Mar 2015	Wave Height Low (ft)	2
D10	13 Mar 2015	High Tide (ft)	4.2
D10	13 Mar 2015	High Tide Time	232
D10	13 Mar 2015	Low Tide (ft)	0.8
D10	13 Mar 2015	Low Tide Time	1035
D10	13 Mar 2015	Comments	2 Persons; Water clear
D10	18 Mar 2015	Arrive Time	940
D10	18 Mar 2015	Weather	Partly Cloudy
D10	18 Mar 2015	Wind Speed (kts)	5
D10	18 Mar 2015	Wind Dir	SW
D10	18 Mar 2015	Animal Life	None
D10	18 Mar 2015	Floatables	None
D10	18 Mar 2015	Water Color	Green
D10	18 Mar 2015	Current Direction	SW
D10	18 Mar 2015	Wave Height Low (ft)	3
D10	18 Mar 2015	High Tide (ft)	5.8
D10	18 Mar 2015	High Tide Time	811
D10	18 Mar 2015	Low Tide (ft)	-1
D10	18 Mar 2015	Low Tide Time	1449
D10	18 Mar 2015	Comments	Kelp; Seagrass; 7 Surfers; 1 Swimmer; Water turbid
D10	24 Mar 2015	Arrive Time	1123
D10	24 Mar 2015	Weather	Sunny
D10	24 Mar 2015	Wind Speed (kts)	3
D10	24 Mar 2015	Wind Dir	SW
D10	24 Mar 2015	Animal Life	None
D10	24 Mar 2015	Floatables	None
D10	24 Mar 2015	Water Color	Green
D10	24 Mar 2015	Current Direction	SW
D10	24 Mar 2015	Wave Height Low (ft)	3
D10	24 Mar 2015	High Tide (ft)	3.5
D10	24 Mar 2015	High Tide Time	1319
D10	24 Mar 2015	Low Tide (ft)	-0.1
D10	24 Mar 2015	Low Tide Time	709
D10	24 Mar 2015	Comments	Kelp; Seagrass; 1 Surfer; Water turbid; Greater than 20 sun bathers
D10	30 Mar 2015	Arrive Time	859
D10	30 Mar 2015	Weather	Overcast

Station	Date	Parameter	Value
D10	30 Mar 2015	Wind Speed (kts)	1.9
D10	30 Mar 2015	Wind Dir	NW
D10	30 Mar 2015	Animal Life	None
D10	30 Mar 2015	Floatables	None
D10	30 Mar 2015	Water Color	Green
D10	30 Mar 2015	Current Direction	NW
D10	30 Mar 2015	Wave Height Low (ft)	3
D10	30 Mar 2015	High Tide (ft)	4.4
D10	30 Mar 2015	High Tide Time	658
D10	30 Mar 2015	Low Tide (ft)	0.1
D10	30 Mar 2015	Low Tide Time	1345
D10	30 Mar 2015	Comments	Kelp; 5 Surfers; Water clear
D11	01 Mar 2015	Arrive Time	1252
D11	01 Mar 2015	Weather	Drizzle
D11	01 Mar 2015	Wind Speed (kts)	3
D11	01 Mar 2015	Wind Dir	SE
D11	01 Mar 2015	Animal Life	None
D11	01 Mar 2015	Floatables	None
D11	01 Mar 2015	Water Color	Green
D11	01 Mar 2015	Current Direction	SE
D11	01 Mar 2015	Wave Height Low (ft)	1
D11	01 Mar 2015	High Tide (ft)	5
D11	01 Mar 2015	High Tide Time	619
D11	01 Mar 2015	Low Tide (ft)	-0.3
D11	01 Mar 2015	Low Tide Time	1323
D11	01 Mar 2015	Comments	Kelp; Water turbid
D11	07 Mar 2015	Arrive Time	754
D11	07 Mar 2015	Weather	Sunny
D11	07 Mar 2015	Wind Speed (kts)	2.9
D11	07 Mar 2015	Wind Dir	E
D11	07 Mar 2015	Animal Life	None
D11	07 Mar 2015	Floatables	None
D11	07 Mar 2015	Water Color	Green
D11	07 Mar 2015	Current Direction	E
D11	07 Mar 2015	Wave Height Low (ft)	3
D11	07 Mar 2015	High Tide (ft)	4.6
D11	07 Mar 2015	High Tide Time	936
D11	07 Mar 2015	Low Tide (ft)	0.6
D11	07 Mar 2015	Low Tide Time	342
D11	07 Mar 2015	Comments	3 Persons; 10 Surfers; Water turbid; Surf competition
D11	13 Mar 2015	Arrive Time	816
D11	13 Mar 2015	Weather	Sunny
D11	13 Mar 2015	Wind Speed (kts)	3.4
D11	13 Mar 2015	Wind Dir	NE
D11	13 Mar 2015	Animal Life	None

Station	Date	Parameter	Value
D11	13 Mar 2015	Floatables	None
D11	13 Mar 2015	Water Color	Green
D11	13 Mar 2015	Current Direction	NE
D11	13 Mar 2015	Wave Height Low (ft)	2
D11	13 Mar 2015	High Tide (ft)	4.2
D11	13 Mar 2015	High Tide Time	232
D11	13 Mar 2015	Low Tide (ft)	0.8
D11	13 Mar 2015	Low Tide Time	1035
D11	13 Mar 2015	Comments	Seagrass; 2 Persons; Water clear
D11	18 Mar 2015	Arrive Time	927
D11	18 Mar 2015	Weather	Cloudy
D11	18 Mar 2015	Wind Speed (kts)	5
D11	18 Mar 2015	Wind Dir	W
D11	18 Mar 2015	Animal Life	None
D11	18 Mar 2015	Floatables	None
D11	18 Mar 2015	Water Color	Grey
D11	18 Mar 2015	Current Direction	W
D11	18 Mar 2015	Wave Height Low (ft)	3
D11	18 Mar 2015	High Tide (ft)	5.8
D11	18 Mar 2015	High Tide Time	811
D11	18 Mar 2015	Low Tide (ft)	-1
D11	18 Mar 2015	Low Tide Time	1449
D11	18 Mar 2015	Comments	Kelp; Seagrass; 2 Persons; Water turbid
D11	24 Mar 2015	Arrive Time	858
D11	24 Mar 2015	Weather	Sunny
D11	24 Mar 2015	Wind Speed (kts)	2
D11	24 Mar 2015	Wind Dir	SW
D11	24 Mar 2015	Animal Life	None
D11	24 Mar 2015	Floatables	None
D11	24 Mar 2015	Water Color	Blue
D11	24 Mar 2015	Current Direction	SW
D11	24 Mar 2015	Wave Height Low (ft)	2
D11	24 Mar 2015	High Tide (ft)	3.5
D11	24 Mar 2015	High Tide Time	1319
D11	24 Mar 2015	Low Tide (ft)	-0.1
D11	24 Mar 2015	Low Tide Time	709
D11	24 Mar 2015	Comments	Kelp; Seagrass; Water clear
D11	30 Mar 2015	Arrive Time	841
D11	30 Mar 2015	Weather	Overcast
D11	30 Mar 2015	Wind Speed (kts)	1.7
D11	30 Mar 2015	Wind Dir	N
D11	30 Mar 2015	Animal Life	1 Bird
D11	30 Mar 2015	Floatables	None
D11	30 Mar 2015	Water Color	Green
D11	30 Mar 2015	Current Direction	N
D11	30 Mar 2015	Wave Height Low (ft)	2

Station	Date	Parameter	Value
D11	30 Mar 2015	High Tide (ft)	4.4
D11	30 Mar 2015	High Tide Time	658
D11	30 Mar 2015	Low Tide (ft)	0.1
D11	30 Mar 2015	Low Tide Time	1345
D11	30 Mar 2015	Comments	Seagrass; Water clear
D12	01 Mar 2015	Arrive Time	1313
D12	01 Mar 2015	Weather	Drizzle
D12	01 Mar 2015	Wind Speed (kts)	4
D12	01 Mar 2015	Wind Dir	SE
D12	01 Mar 2015	Animal Life	None
D12	01 Mar 2015	Floatables	None
D12	01 Mar 2015	Water Color	Green
D12	01 Mar 2015	Current Direction	SE
D12	01 Mar 2015	Wave Height Low (ft)	1
D12	01 Mar 2015	High Tide (ft)	3.9
D12	01 Mar 2015	High Tide Time	1940
D12	01 Mar 2015	Low Tide (ft)	-0.3
D12	01 Mar 2015	Low Tide Time	1323
D12	01 Mar 2015	Comments	Kelp; Seagrass; 4 Persons; Water turbid; 4 Children in the water
D12	07 Mar 2015	Arrive Time	739
D12	07 Mar 2015	Weather	Sunny
D12	07 Mar 2015	Wind Speed (kts)	0.9
D12	07 Mar 2015	Wind Dir	E
D12	07 Mar 2015	Animal Life	None
D12	07 Mar 2015	Floatables	None
D12	07 Mar 2015	Water Color	Green
D12	07 Mar 2015	Current Direction	E
D12	07 Mar 2015	Wave Height Low (ft)	2
D12	07 Mar 2015	High Tide (ft)	4.6
D12	07 Mar 2015	High Tide Time	936
D12	07 Mar 2015	Low Tide (ft)	0.6
D12	07 Mar 2015	Low Tide Time	342
D12	07 Mar 2015	Comments	2 Fishermen; Water clear
D12	13 Mar 2015	Arrive Time	756
D12	13 Mar 2015	Weather	Sunny
D12	13 Mar 2015	Wind Speed (kts)	1.1
D12	13 Mar 2015	Wind Dir	NW
D12	13 Mar 2015	Animal Life	None
D12	13 Mar 2015	Floatables	None
D12	13 Mar 2015	Water Color	Green
D12	13 Mar 2015	Current Direction	NW
D12	13 Mar 2015	Wave Height Low (ft)	2
D12	13 Mar 2015	High Tide (ft)	4.2
D12	13 Mar 2015	High Tide Time	232
D12	13 Mar 2015	Low Tide (ft)	0.8

Station	Date	Parameter	Value
D12	13 Mar 2015	Low Tide Time	1035
D12	13 Mar 2015	Comments	1 Fisherman; Water clear
D12	18 Mar 2015	Arrive Time	910
D12	18 Mar 2015	Weather	Cloudy
D12	18 Mar 2015	Wind Speed (kts)	5
D12	18 Mar 2015	Wind Dir	W
D12	18 Mar 2015	Animal Life	20 Seagulls
D12	18 Mar 2015	Floatables	None
D12	18 Mar 2015	Water Color	Blue
D12	18 Mar 2015	Current Direction	W
D12	18 Mar 2015	Wave Height Low (ft)	3
D12	18 Mar 2015	High Tide (ft)	5.8
D12	18 Mar 2015	High Tide Time	811
D12	18 Mar 2015	Low Tide (ft)	-1
D12	18 Mar 2015	Low Tide Time	1449
D12	18 Mar 2015	Comments	Kelp; Seagrass; Water clear
D12	24 Mar 2015	Arrive Time	836
D12	24 Mar 2015	Weather	Sunny
D12	24 Mar 2015	Wind Speed (kts)	3
D12	24 Mar 2015	Wind Dir	SW
D12	24 Mar 2015	Animal Life	None
D12	24 Mar 2015	Floatables	None
D12	24 Mar 2015	Water Color	Blue
D12	24 Mar 2015	Current Direction	SW
D12	24 Mar 2015	Wave Height Low (ft)	2
D12	24 Mar 2015	High Tide (ft)	3.5
D12	24 Mar 2015	High Tide Time	1319
D12	24 Mar 2015	Low Tide (ft)	-0.1
D12	24 Mar 2015	Low Tide Time	709
D12	24 Mar 2015	Comments	Kelp; Seagrass; Debris; Water clear; City of san diego woking on boardwalk
D12	30 Mar 2015	Arrive Time	821
D12	30 Mar 2015	Weather	Cloudy
D12	30 Mar 2015	Wind Speed (kts)	1.1
D12	30 Mar 2015	Wind Dir	W
D12	30 Mar 2015	Animal Life	None
D12	30 Mar 2015	Floatables	None
D12	30 Mar 2015	Water Color	Green
D12	30 Mar 2015	Current Direction	W
D12	30 Mar 2015	Wave Height Low (ft)	2
D12	30 Mar 2015	High Tide (ft)	4.4
D12	30 Mar 2015	High Tide Time	658
D12	30 Mar 2015	Low Tide (ft)	0.1
D12	30 Mar 2015	Low Tide Time	1345
D12	30 Mar 2015	Comments	Kelp; Water clear

Kelp Stations

Table 3.1

Summary of compliance with the 2009 Ocean Plan's 30-day Geometric Mean standard for total coliforms 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 Mar 2015	4	4	3	2	2	2	2	2
02 Mar 2015	4	4	3	2	2	2	2	2
03 Mar 2015	4	4	3	2	2	2	2	2
04 Mar 2015	3*	4*	2*	2*	2*	2*	2*	3*
05 Mar 2015	3*	4*	2*	2*	2*	2*	2*	3*
06 Mar 2015	3*	4*	2*	2*	2*	2*	2*	3*
07 Mar 2015	2	4	5	2	2	2	2	2
08 Mar 2015	2	4	5	2	2	2	2	2
09 Mar 2015	2	4	5	2	2	2	2	2
10 Mar 2015	2	4	5	2	2	2	2	2
11 Mar 2015	3	5	7	2	2	2	2	2
12 Mar 2015	3	5	7	2	2	2	2	2
13 Mar 2015	3	5	7	2	2	2	2	2
14 Mar 2015	3	5	9	2	2	2	2	2
15 Mar 2015	3	5	9	2	2	2	2	2
16 Mar 2015	3	5	9	2	2	2	2	2
17 Mar 2015	3	4	7	2	2	2	2	2
18 Mar 2015	3	4	7	2	2	2	2	2
19 Mar 2015	3	4	7	2	2	2	2	2
20 Mar 2015	3	4	9	2	2	2	2	2
21 Mar 2015	3	4	9	2	2	2	2	2
22 Mar 2015	3	4	9	2	2	2	2	2
23 Mar 2015	3	4	8	2	2	2	2	2
24 Mar 2015	4	4	10	2	2	2	2	2
25 Mar 2015	4	4	10	2	2	2	2	2
26 Mar 2015	5	4	10	2	2	2	2	2
27 Mar 2015	5	4	10	2	2	2	2	2
28 Mar 2015	5	4	10	2	2	2	2	2
29 Mar 2015	5	4	14	2	2	2	2	3
30 Mar 2015	5	4	14	2	2	2	2	3
31 Mar 2015	5	4	14	2	2	2	2	3

* Geometric mean calculated using an n<5

Table 3.2

Summary of compliance with the 2009 Ocean Plan's 30-day Geometric Mean standard for fecal coliform 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 Mar 2015	2	2	2	2	2	2	2	2
02 Mar 2015	2	2	2	2	2	2	2	2
03 Mar 2015	2	2	2	2	2	2	2	2
04 Mar 2015	2*	2*	2*	2*	2*	2*	2*	2*
05 Mar 2015	2*	2*	2*	2*	2*	2*	2*	2*
06 Mar 2015	2*	2*	2*	2*	2*	2*	2*	2*
07 Mar 2015	2	2	3	2	2	2	2	2
08 Mar 2015	2	2	3	2	2	2	2	2
09 Mar 2015	2	2	3	2	2	2	2	2
10 Mar 2015	2	2	3	2	2	2	2	2
11 Mar 2015	2	2	3	2	2	2	2	2
12 Mar 2015	2	2	3	2	2	2	2	2
13 Mar 2015	2	2	3	2	2	2	2	2
14 Mar 2015	2	2	3	2	2	2	2	2
15 Mar 2015	2	2	3	2	2	2	2	2
16 Mar 2015	2	2	3	2	2	2	2	2
17 Mar 2015	2	2	3	2	2	2	2	2
18 Mar 2015	2	2	3	2	2	2	2	2
19 Mar 2015	2	2	3	2	2	2	2	2
20 Mar 2015	2	2	3	2	2	2	2	2
21 Mar 2015	2	2	3	2	2	2	2	2
22 Mar 2015	2	2	3	2	2	2	2	2
23 Mar 2015	2	2	3	2	2	2	2	2
24 Mar 2015	2	2	3	2	2	2	2	2
25 Mar 2015	2	2	3	2	2	2	2	2
26 Mar 2015	2	2	3	2	2	2	2	2
27 Mar 2015	2	2	3	2	2	2	2	2
28 Mar 2015	2	2	3	2	2	2	2	2
29 Mar 2015	2	2	3	2	2	2	2	2
30 Mar 2015	2	2	3	2	2	2	2	2
31 Mar 2015	2	2	3	2	2	2	2	2

* Geometric mean calculated using an n<5

Table 3.3

Summary of compliance with the 2009 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 Mar 2015	2	2	2	2	2	2	2	2
02 Mar 2015	2	2	2	2	2	2	2	2
03 Mar 2015	2	2	2	2	2	2	2	2
04 Mar 2015	2*	2*	2*	2*	2*	2*	2*	2*
05 Mar 2015	2*	2*	2*	2*	2*	2*	2*	2*
06 Mar 2015	2*	2*	2*	2*	2*	2*	2*	2*
07 Mar 2015	2	2	2	2	2	2	2	2
08 Mar 2015	2	2	2	2	2	2	2	2
09 Mar 2015	2	2	2	2	2	2	2	2
10 Mar 2015	2	2	2	2	2	2	2	2
11 Mar 2015	2	2	2	2	2	2	2	2
12 Mar 2015	2	2	2	2	2	2	2	2
13 Mar 2015	2	2	2	2	2	2	2	2
14 Mar 2015	2	2	2	2	2	2	2	2
15 Mar 2015	2	2	2	2	2	2	2	2
16 Mar 2015	2	2	2	2	2	2	2	2
17 Mar 2015	2	2	2	2	2	2	2	2
18 Mar 2015	2	2	2	2	2	2	2	2
19 Mar 2015	2	2	2	2	2	2	2	2
20 Mar 2015	2	2	2	2	2	2	2	2
21 Mar 2015	2	2	2	2	2	2	2	2
22 Mar 2015	2	2	2	2	2	2	2	2
23 Mar 2015	2	2	2	2	2	2	2	2
24 Mar 2015	2	2	2	2	2	2	2	2
25 Mar 2015	2	2	2	2	2	2	2	2
26 Mar 2015	2	2	3	2	2	2	2	2
27 Mar 2015	2	2	3	2	2	2	2	2
28 Mar 2015	2	2	3	2	2	2	2	2
29 Mar 2015	2	2	3	2	2	2	2	2
30 Mar 2015	2	2	3	2	2	2	2	2
31 Mar 2015	2	2	3	2	2	2	2	2

* Geometric mean calculated using an n<5

Table 3.4

Summary of compliance at the PLOO kelp stations with the 2009 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
07 Mar 2015	IC							
11 Mar 2015	IC							
17 Mar 2015	IC							
23 Mar 2015	IC							
26 Mar 2015	IC							

IC = In Compliance

E = Exceedance

ns = not sampled

Table 3.5

Summary of compliance at the PLOO kelp stations with the 2009 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
07 Mar 2015	IC							
11 Mar 2015	IC							
17 Mar 2015	IC							
23 Mar 2015	IC							
26 Mar 2015	IC							

IC = In Compliance

E = Exceedance

ns = not sampled

Table 3.6

Summary of compliance at the PLOO kelp stations with the 2009 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
07 Mar 2015	IC							
11 Mar 2015	IC							
17 Mar 2015	IC							
23 Mar 2015	IC							
26 Mar 2015	IC							

IC = In Compliance

E = Exceedance

ns = not sampled

Table 3.7

Summary of compliance at the PLOO kelp stations with the 2009 Ocean Plan's Single Sample Maximum standard for total coliforms 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
07 Mar 2015	IC							
11 Mar 2015	IC							
17 Mar 2015	IC							
23 Mar 2015	IC							
26 Mar 2015	IC							

IC = In Compliance

E = Exceedance

ns = not sampled

Table 3.8

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

Station	Date	Time	Depth	Total	Fecal	Enter	F:T	N-NH ₃	Temp	XMS	DO	Sal	pH
A1	07 Mar 2015	808	1	<2	<2	<2	1.00	ns	16.1	88.33	7.8	33.31	8.2
A1	07 Mar 2015	808	12	2e	<2	<2	1.00	ns	12.2	88.75	6.5	33.31	8.0
A1	07 Mar 2015	808	18	<2	<2	<2	1.00	ns	12.0	87.46	6.3	33.34	8.0
A1	11 Mar 2015	821	1	12e	<2	<2	0.17	ns	16.6	90.15	8.1	33.36	8.2
A1	11 Mar 2015	821	12	<2	<2	<2	1.00	ns	14.6	89.73	7.4	33.33	8.1
A1	11 Mar 2015	821	18	16e	<2	2e	0.12	ns	13.9	89.39	7.2	33.34	8.1
A1	17 Mar 2015	757	1	<2	<2	<2	1.00	ns	16.9	85.22	8.3	33.31	8.2
A1	17 Mar 2015	757	12	<2	<2	<2	1.00	ns	16.0	86.43	8.3	33.33	8.2
A1	17 Mar 2015	757	18	<2	<2	<2	1.00	ns	13.8	87.64	6.9	33.31	8.1
A1	23 Mar 2015	820	1	16e	<2	<2	0.12	ns	17.4	87.92	8.2	33.31	8.2
A1	23 Mar 2015	820	12	2e	2e	<2	1.00	ns	14.1	90.10	7.8	33.27	8.1
A1	23 Mar 2015	820	18	10e	<2	<2	0.20	ns	13.6	90.05	7.4	33.27	8.1
A1	26 Mar 2015	745	1	<2	2e	<2	1.00	ns	17.5	86.14	8.1	33.33	8.2
A1	26 Mar 2015	745	12	6e	<2	4e	0.33	ns	14.9	86.59	7.6	33.28	8.1
A1	26 Mar 2015	745	18	30e	2e	<2	0.07	ns	13.2	88.62	6.6	33.32	8.0
C4	07 Mar 2015	1013	1	<2	<2	<2	1.00	ns	16.5	84.83	7.7	33.33	8.2
C4	07 Mar 2015	1013	3	<2	<2	<2	1.00	ns	16.4	88.98	7.6	33.33	8.2
C4	07 Mar 2015	1013	9	2e	<2	<2	1.00	ns	16.3	87.89	7.5	33.32	8.2
C4	11 Mar 2015	1005	1	<2	<2	<2	1.00	ns	17.1	88.56	8.5	33.34	8.3
C4	11 Mar 2015	1005	3	<2	<2	<2	1.00	ns	17.0	88.94	8.5	33.34	8.3
C4	11 Mar 2015	1005	9	4e	<2	<2	0.50	ns	15.9	88.58	7.3	33.32	8.2
C4	17 Mar 2015	1012	1	<2	<2	<2	1.00	ns	16.6	87.54	7.9	33.35	8.2
C4	17 Mar 2015	1012	3	<2	<2	<2	1.00	ns	16.4	87.28	7.9	33.34	8.2
C4	17 Mar 2015	1012	9	<2	<2	<2	1.00	ns	15.5	84.49	7.2	33.32	8.1
C4	23 Mar 2015	1019	1	<2	<2	<2	1.00	ns	18.4	82.25	8.2	33.06	8.2
C4	23 Mar 2015	1019	3	<2	<2	<2	1.00	ns	18.4	84.87	8.0	33.35	8.2
C4	23 Mar 2015	1019	9	<2	<2	<2	1.00	ns	15.8	88.32	7.5	33.28	8.2
C4	26 Mar 2015	941	1	2e	<2	<2	1.00	ns	17.6	73.84	6.9	33.33	8.1
C4	26 Mar 2015	941	3	<2	<2	<2	1.00	ns	17.4	73.99	7.1	33.32	8.1
C4	26 Mar 2015	941	9	<2	<2	<2	1.00	ns	15.1	83.93	6.5	33.31	8.1
C5	07 Mar 2015	959	1	<2	<2	<2	1.00	ns	16.7	84.29	7.9	33.32	8.2
C5	07 Mar 2015	959	3	<2	<2	<2	1.00	ns	16.6	80.72	7.9	33.35	8.2
C5	07 Mar 2015	959	9	2e	<2	<2	1.00	ns	15.5	86.79	7.6	33.29	8.2
C5	11 Mar 2015	954	1	<2	<2	<2	1.00	ns	17.2	89.27	8.4	33.33	8.3
C5	11 Mar 2015	954	3	<2	<2	<2	1.00	ns	17.0	89.38	8.2	33.33	8.2
C5	11 Mar 2015	954	9	<2	<2	<2	1.00	ns	16.3	89.06	8.2	33.31	8.2

Station	Date	Time	Depth	Total	Fecal	Enter	F:T	N-NH3	Temp	XMS	DO	Sal	pH
C5	17 Mar 2015	959	1	2e	<2	<2	1.00	ns	16.9	86.00	8.2	33.35	8.2
C5	17 Mar 2015	959	3	<2	<2	<2	1.00	ns	16.8	85.89	8.3	33.34	8.2
C5	17 Mar 2015	959	9	<2	<2	<2	1.00	ns	16.1	86.74	8.1	33.32	8.2
C5	23 Mar 2015	1007	1	<2	<2	<2	1.00	ns	18.5	86.30	7.9	33.35	8.2
C5	23 Mar 2015	1007	3	<2	<2	<2	1.00	ns	18.3	86.32	7.9	33.34	8.2
C5	23 Mar 2015	1007	9	<2	<2	<2	1.00	ns	16.1	87.82	7.7	33.27	8.2
C5	26 Mar 2015	928	1	<2	<2	<2	1.00	ns	17.7	79.63	7.1	33.33	8.1
C5	26 Mar 2015	928	3	<2	<2	<2	1.00	ns	17.5	81.13	7.3	33.31	8.2
C5	26 Mar 2015	928	9	2e	<2	<2	1.00	ns	15.2	80.56	6.5	33.28	8.1
A6	07 Mar 2015	842	1	<2	<2	<2	1.00	ns	16.6	87.13	7.9	33.33	8.2
A6	07 Mar 2015	842	12	<2	<2	<2	1.00	ns	15.5	89.34	7.5	33.30	8.2
A6	07 Mar 2015	842	18	6e	<2	<2	0.33	ns	13.0	90.43	7.1	33.28	8.1
A6	11 Mar 2015	851	1	2e	<2	<2	1.00	ns	16.8	89.46	8.1	33.33	8.2
A6	11 Mar 2015	851	12	8e	4e	<2	0.50	ns	16.3	89.62	8.0	33.33	8.2
A6	11 Mar 2015	851	18	48	4e	<2	0.08	ns	14.1	90.05	7.2	33.33	8.1
A6	17 Mar 2015	846	1	<2	<2	<2	1.00	ns	16.9	88.85	8.2	33.33	8.2
A6	17 Mar 2015	846	12	<2	<2	<2	1.00	ns	15.9	88.53	7.7	33.32	8.2
A6	17 Mar 2015	846	18	<2	<2	<2	1.00	ns	14.5	90.80	6.9	33.31	8.1
A6	23 Mar 2015	854	1	<2	<2	<2	1.00	ns	18.0	83.40	7.0	33.37	8.2
A6	23 Mar 2015	854	12	<2	<2	<2	1.00	ns	15.5	89.06	8.0	33.30	8.2
A6	23 Mar 2015	854	18	4e	<2	<2	0.50	ns	13.9	90.51	7.3	33.29	8.1
A6	26 Mar 2015	820	1	<2	<2	<2	1.00	ns	17.8	87.42	8.0	33.32	8.2
A6	26 Mar 2015	820	12	2e	<2	<2	1.00	ns	16.0	85.93	7.6	33.49	8.2
A6	26 Mar 2015	820	18	8e	2e	2e	0.25	ns	13.0	88.85	6.5	33.33	8.1
C6	07 Mar 2015	949	1	<2	<2	<2	1.00	ns	16.8	87.59	7.6	33.33	8.2
C6	07 Mar 2015	949	3	<2	<2	<2	1.00	ns	16.6	87.33	7.7	33.33	8.2
C6	07 Mar 2015	949	9	<2	<2	<2	1.00	ns	16.2	86.99	7.8	33.31	8.2
C6	11 Mar 2015	941	1	<2	<2	<2	1.00	ns	17.0	88.22	8.2	33.31	8.2
C6	11 Mar 2015	941	3	4e	<2	<2	0.50	ns	17.0	88.40	8.2	33.31	8.2
C6	11 Mar 2015	941	9	<2	<2	<2	1.00	ns	16.0	89.48	7.9	33.31	8.2
C6	17 Mar 2015	943	1	<2	<2	<2	1.00	ns	17.0	85.10	8.1	33.35	8.2
C6	17 Mar 2015	943	3	<2	<2	<2	1.00	ns	17.0	84.99	8.1	33.35	8.2
C6	17 Mar 2015	943	9	<2	<2	<2	1.00	ns	15.8	87.04	7.7	33.31	8.2
C6	23 Mar 2015	953	1	<2	<2	<2	1.00	ns	18.3	78.58	7.9	33.34	8.2
C6	23 Mar 2015	953	3	2e	<2	<2	1.00	ns	18.2	86.59	7.8	33.34	8.2
C6	23 Mar 2015	953	9	<2	<2	<2	1.00	ns	15.8	89.87	7.9	33.27	8.2
C6	26 Mar 2015	915	1	<2	<2	2e	1.00	ns	17.7	82.37	7.6	33.32	8.2
C6	26 Mar 2015	915	3	<2	<2	6e	1.00	ns	17.5	82.94	7.7	33.31	8.2
C6	26 Mar 2015	915	9	<2	<2	2e	1.00	ns	15.5	81.83	6.9	33.31	8.1
A7	07 Mar 2015	826	1	<2	<2	<2	1.00	ns	16.6	86.92	7.9	33.34	8.2
A7	07 Mar 2015	826	12	70	10e	<2	0.14	ns	13.8	90.16	7.2	33.26	8.1
A7	07 Mar 2015	826	18	440	58	4e	0.13	ns	12.4	89.86	6.6	33.30	8.0
A7	11 Mar 2015	836	1	20e	<2	4e	0.10	ns	16.8	89.53	8.2	33.33	8.2

Station	Date	Time	Depth	Total	Fecal	Enter	F:T	N-NH3	Temp	XMS	DO	Sal	pH
A7	11 Mar 2015	836	12	12e	2e	<2	0.17	ns	14.7	90.11	7.4	33.33	8.1
A7	11 Mar 2015	836	18	46	2e	2e	0.04	ns	14.2	89.66	7.1	33.34	8.1
A7	17 Mar 2015	815	1	<2	<2	<2	1.00	ns	16.9	88.37	7.9	33.34	8.2
A7	17 Mar 2015	815	12	<2	<2	<2	1.00	ns	16.5	87.85	7.9	33.33	8.2
A7	17 Mar 2015	815	18	<2	<2	<2	1.00	ns	14.0	88.32	7.0	33.28	8.1
A7	23 Mar 2015	838	1	2e	<2	<2	1.00	ns	18.2	86.63	8.2	33.35	8.2
A7	23 Mar 2015	838	12	<2	<2	<2	1.00	ns	15.1	89.68	7.7	33.27	8.2
A7	23 Mar 2015	838	18	16e	2e	2e	0.12	ns	13.3	90.28	7.2	33.28	8.1
A7	26 Mar 2015	803	1	<2	<2	<2	1.00	ns	17.6	85.97	7.9	33.32	8.2
A7	26 Mar 2015	803	12	2e	<2	10e	1.00	ns	15.8	86.73	7.6	33.30	8.2
A7	26 Mar 2015	803	18	20e	<2	<2	0.10	ns	13.8	88.42	6.6	33.32	8.1
C7	07 Mar 2015	910	1	<2	<2	<2	1.00	ns	16.9	86.76	8.0	33.30	8.2
C7	07 Mar 2015	910	12	<2	<2	<2	1.00	ns	15.7	87.73	7.5	33.32	8.2
C7	07 Mar 2015	910	18	<2	<2	<2	1.00	ns	14.1	86.91	7.0	33.29	8.1
C7	11 Mar 2015	907	1	<2	<2	<2	1.00	ns	17.0	89.12	7.8	33.31	8.2
C7	11 Mar 2015	907	12	2e	<2	<2	1.00	ns	15.9	88.01	7.8	33.31	8.2
C7	11 Mar 2015	907	18	<2	<2	<2	1.00	ns	14.3	89.89	6.8	33.30	8.1
C7	17 Mar 2015	904	1	<2	<2	<2	1.00	ns	16.9	88.55	8.2	33.32	8.2
C7	17 Mar 2015	904	12	2e	<2	<2	1.00	ns	15.4	86.58	7.7	33.32	8.1
C7	17 Mar 2015	904	18	<2	<2	<2	1.00	ns	13.5	89.27	6.6	33.33	8.0
C7	23 Mar 2015	915	1	4e	2e	<2	0.50	ns	18.2	86.56	7.9	33.33	8.2
C7	23 Mar 2015	915	12	<2	<2	<2	1.00	ns	15.6	87.21	7.6	33.29	8.2
C7	23 Mar 2015	915	18	<2	<2	<2	1.00	ns	14.4	88.24	7.1	33.30	8.1
C7	26 Mar 2015	838	1	<2	<2	<2	1.00	ns	17.9	86.41	7.9	33.32	8.2
C7	26 Mar 2015	838	12	<2	<2	<2	1.00	ns	15.6	85.57	7.7	33.30	8.2
C7	26 Mar 2015	838	18	<2	<2	<2	1.00	ns	13.0	88.54	6.4	33.31	8.0
C8	07 Mar 2015	920	1	<2	<2	<2	1.00	ns	16.5	89.01	7.8	33.32	8.2
C8	07 Mar 2015	920	12	2e	<2	<2	1.00	ns	15.7	88.44	7.5	33.30	8.2
C8	07 Mar 2015	920	18	<2	2e	<2	1.00	ns	14.6	89.07	7.0	33.29	8.1
C8	11 Mar 2015	921	1	2e	<2	2e	1.00	ns	16.7	88.20	7.8	33.33	8.2
C8	11 Mar 2015	921	12	4e	<2	<2	0.50	ns	16.3	88.08	7.8	33.32	8.2
C8	11 Mar 2015	921	18	<2	<2	<2	1.00	ns	14.4	89.90	7.2	33.29	8.1
C8	17 Mar 2015	919	1	<2	<2	<2	1.00	ns	17.2	88.24	8.4	33.32	8.2
C8	17 Mar 2015	919	12	<2	<2	<2	1.00	ns	14.9	86.02	7.7	33.30	8.1
C8	17 Mar 2015	919	18	<2	<2	<2	1.00	ns	13.5	88.64	6.6	33.33	8.0
C8	23 Mar 2015	930	1	2e	<2	2e	1.00	ns	17.8	84.16	7.7	33.32	8.2
C8	23 Mar 2015	930	12	<2	<2	<2	1.00	ns	16.0	87.93	7.7	33.30	8.2
C8	23 Mar 2015	930	18	<2	2e	<2	1.00	ns	14.4	88.35	7.2	33.28	8.1
C8	26 Mar 2015	855	1	<2	<2	<2	1.00	ns	17.8	86.52	7.7	33.33	8.2
C8	26 Mar 2015	855	12	<2	<2	<2	1.00	ns	16.1	86.43	7.9	33.29	8.2
C8	26 Mar 2015	855	18	10e	<2	<2	0.20	ns	13.0	82.25	6.5	33.33	8.1

ns = not sampled

Table 3.9

Summary of visual observations made during the month at the PLOO kelp stations for each sample date.

Station	Date	Parameter	Value
A1	07 Mar 2015	Depth (m)	18
A1	07 Mar 2015	Arrive Time	808
A1	07 Mar 2015	Depart Time	820
A1	07 Mar 2015	Air Temp (C)	17
A1	07 Mar 2015	Weather	Partly Cloudy
A1	07 Mar 2015	Visibility (mi)	10
A1	07 Mar 2015	Wind Speed (kts)	6
A1	07 Mar 2015	Wind Dir	S
A1	07 Mar 2015	Water Color	Green
A1	07 Mar 2015	Wave Ht Low (ft)	3
A1	07 Mar 2015	Wave Period (sec)	9
A1	07 Mar 2015	Sea State	Calm
A1	07 Mar 2015	High Tide (ft)	4.63
A1	07 Mar 2015	High Tide Time	936
A1	07 Mar 2015	Low Tide (ft)	0.28
A1	07 Mar 2015	Low Tide Time	1553
A1	07 Mar 2015	Comments	Kelp
A1	11 Mar 2015	Depth (m)	16
A1	11 Mar 2015	Arrive Time	821
A1	11 Mar 2015	Depart Time	829
A1	11 Mar 2015	Air Temp (C)	17
A1	11 Mar 2015	Weather	Partly Cloudy
A1	11 Mar 2015	Visibility (mi)	7
A1	11 Mar 2015	Wind Speed (kts)	3
A1	11 Mar 2015	Wind Dir	N
A1	11 Mar 2015	Water Color	Bluish-Green
A1	11 Mar 2015	Wave Ht Low (ft)	2
A1	11 Mar 2015	Wave Period (sec)	13
A1	11 Mar 2015	Sea State	Wind ripples
A1	11 Mar 2015	High Tide (ft)	2.87
A1	11 Mar 2015	High Tide Time	1329
A1	11 Mar 2015	Low Tide (ft)	0.99
A1	11 Mar 2015	Low Tide Time	739
A1	11 Mar 2015	Comments	Kelp
A1	17 Mar 2015	Depth (m)	19
A1	17 Mar 2015	Arrive Time	757
A1	17 Mar 2015	Depart Time	806
A1	17 Mar 2015	Air Temp (C)	17
A1	17 Mar 2015	Weather	Cloudy
A1	17 Mar 2015	Visibility (mi)	8
A1	17 Mar 2015	Wind Speed (kts)	3
A1	17 Mar 2015	Wind Dir	S

Station	Date	Parameter	Value
A1	17 Mar 2015	Water Color	Greenish-Blue
A1	17 Mar 2015	Wave Ht Low (ft)	3
A1	17 Mar 2015	Wave Period (sec)	11
A1	17 Mar 2015	Sea State	Calm
A1	17 Mar 2015	High Tide (ft)	5.51
A1	17 Mar 2015	High Tide Time	722
A1	17 Mar 2015	Low Tide (ft)	-0.88
A1	17 Mar 2015	Low Tide Time	1410
A1	17 Mar 2015	Comments	Kelp
A1	23 Mar 2015	Depth (m)	19
A1	23 Mar 2015	Arrive Time	820
A1	23 Mar 2015	Depart Time	830
A1	23 Mar 2015	Air Temp (C)	16
A1	23 Mar 2015	Weather	Partly Cloudy
A1	23 Mar 2015	Visibility (mi)	6
A1	23 Mar 2015	Wind Speed (kts)	6
A1	23 Mar 2015	Wind Dir	S
A1	23 Mar 2015	Water Color	Green
A1	23 Mar 2015	Wave Ht Low (ft)	4
A1	23 Mar 2015	Wave Period (sec)	9
A1	23 Mar 2015	Sea State	Light chop
A1	23 Mar 2015	High Tide (ft)	4.11
A1	23 Mar 2015	High Tide Time	1215
A1	23 Mar 2015	Low Tide (ft)	-0.39
A1	23 Mar 2015	Low Tide Time	610
A1	23 Mar 2015	Comments	Kelp; Boats
A1	26 Mar 2015	Depth (m)	16
A1	26 Mar 2015	Arrive Time	745
A1	26 Mar 2015	Depart Time	756
A1	26 Mar 2015	Air Temp (C)	18
A1	26 Mar 2015	Weather	Clear
A1	26 Mar 2015	Visibility (mi)	10
A1	26 Mar 2015	Wind Speed (kts)	3
A1	26 Mar 2015	Wind Dir	E
A1	26 Mar 2015	Water Color	Bluish-Green
A1	26 Mar 2015	Wave Ht Low (ft)	3
A1	26 Mar 2015	Wave Period (sec)	11
A1	26 Mar 2015	Sea State	Wind ripples
A1	26 Mar 2015	High Tide (ft)	3.02
A1	26 Mar 2015	High Tide Time	1646
A1	26 Mar 2015	Low Tide (ft)	0.49
A1	26 Mar 2015	Low Tide Time	946
A1	26 Mar 2015	Comments	Kelp; First cast not deep enough.
C4	07 Mar 2015	Depth (m)	10
C4	07 Mar 2015	Arrive Time	1013
C4	07 Mar 2015	Depart Time	1022

Station	Date	Parameter	Value
C4	07 Mar 2015	Air Temp (C)	18
C4	07 Mar 2015	Weather	Partly Cloudy
C4	07 Mar 2015	Visibility (mi)	12
C4	07 Mar 2015	Wind Speed (kts)	5
C4	07 Mar 2015	Wind Dir	NE
C4	07 Mar 2015	Water Color	Green
C4	07 Mar 2015	Wave Ht Low (ft)	2
C4	07 Mar 2015	Wave Period (sec)	9
C4	07 Mar 2015	Sea State	Calm
C4	07 Mar 2015	High Tide (ft)	4.63
C4	07 Mar 2015	High Tide Time	936
C4	07 Mar 2015	Low Tide (ft)	0.28
C4	07 Mar 2015	Low Tide Time	1553
C4	07 Mar 2015	Comments	Kelp
C4	11 Mar 2015	Depth (m)	9
C4	11 Mar 2015	Arrive Time	1005
C4	11 Mar 2015	Depart Time	1011
C4	11 Mar 2015	Air Temp (C)	17
C4	11 Mar 2015	Weather	Partly Cloudy
C4	11 Mar 2015	Visibility (mi)	7
C4	11 Mar 2015	Wind Speed (kts)	6
C4	11 Mar 2015	Wind Dir	E
C4	11 Mar 2015	Water Color	Bluish-Green
C4	11 Mar 2015	Wave Ht Low (ft)	2
C4	11 Mar 2015	Wave Period (sec)	13
C4	11 Mar 2015	Sea State	Wind ripples
C4	11 Mar 2015	High Tide (ft)	2.87
C4	11 Mar 2015	High Tide Time	1329
C4	11 Mar 2015	Low Tide (ft)	0.99
C4	11 Mar 2015	Low Tide Time	739
C4	11 Mar 2015	Comments	Kelp
C4	17 Mar 2015	Depth (m)	10
C4	17 Mar 2015	Arrive Time	1012
C4	17 Mar 2015	Depart Time	1018
C4	17 Mar 2015	Air Temp (C)	19
C4	17 Mar 2015	Weather	Partly Cloudy
C4	17 Mar 2015	Visibility (mi)	10
C4	17 Mar 2015	Wind Speed (kts)	4
C4	17 Mar 2015	Wind Dir	S
C4	17 Mar 2015	Water Color	Greenish-Blue
C4	17 Mar 2015	Wave Ht Low (ft)	3
C4	17 Mar 2015	Wave Period (sec)	11
C4	17 Mar 2015	Sea State	Calm
C4	17 Mar 2015	High Tide (ft)	5.51
C4	17 Mar 2015	High Tide Time	722
C4	17 Mar 2015	Low Tide (ft)	-0.88
C4	17 Mar 2015	Low Tide Time	1410

Station	Date	Parameter	Value
C4	17 Mar 2015	Comments	
C4	23 Mar 2015	Depth (m)	9
C4	23 Mar 2015	Arrive Time	1019
C4	23 Mar 2015	Depart Time	1026
C4	23 Mar 2015	Air Temp (C)	17
C4	23 Mar 2015	Weather	Partly Cloudy
C4	23 Mar 2015	Visibility (mi)	14
C4	23 Mar 2015	Wind Speed (kts)	1
C4	23 Mar 2015	Wind Dir	E
C4	23 Mar 2015	Water Color	Green
C4	23 Mar 2015	Wave Ht Low (ft)	4
C4	23 Mar 2015	Wave Period (sec)	9
C4	23 Mar 2015	Sea State	Light chop
C4	23 Mar 2015	High Tide (ft)	4.11
C4	23 Mar 2015	High Tide Time	1215
C4	23 Mar 2015	Low Tide (ft)	-0.39
C4	23 Mar 2015	Low Tide Time	610
C4	23 Mar 2015	Comments	Boats; Freshwater lense on surface
C4	26 Mar 2015	Depth (m)	10
C4	26 Mar 2015	Arrive Time	941
C4	26 Mar 2015	Depart Time	947
C4	26 Mar 2015	Air Temp (C)	19
C4	26 Mar 2015	Weather	Clear
C4	26 Mar 2015	Visibility (mi)	10
C4	26 Mar 2015	Wind Speed (kts)	3
C4	26 Mar 2015	Wind Dir	SE
C4	26 Mar 2015	Water Color	Green
C4	26 Mar 2015	Wave Ht Low (ft)	3
C4	26 Mar 2015	Wave Period (sec)	11
C4	26 Mar 2015	Sea State	Wind ripples
C4	26 Mar 2015	High Tide (ft)	3.02
C4	26 Mar 2015	High Tide Time	1646
C4	26 Mar 2015	Low Tide (ft)	0.49
C4	26 Mar 2015	Low Tide Time	946
C4	26 Mar 2015	Comments	Seagrass
C5	07 Mar 2015	Depth (m)	10
C5	07 Mar 2015	Arrive Time	959
C5	07 Mar 2015	Depart Time	1008
C5	07 Mar 2015	Air Temp (C)	18
C5	07 Mar 2015	Weather	Partly Cloudy
C5	07 Mar 2015	Visibility (mi)	12
C5	07 Mar 2015	Wind Speed (kts)	4
C5	07 Mar 2015	Wind Dir	E
C5	07 Mar 2015	Water Color	Green
C5	07 Mar 2015	Wave Ht Low (ft)	2
C5	07 Mar 2015	Wave Period (sec)	9

Station	Date	Parameter	Value
C5	07 Mar 2015	Sea State	Calm
C5	07 Mar 2015	High Tide (ft)	4.63
C5	07 Mar 2015	High Tide Time	936
C5	07 Mar 2015	Low Tide (ft)	0.28
C5	07 Mar 2015	Low Tide Time	1553
C5	07 Mar 2015	Comments	Boats; Kelp
C5	11 Mar 2015	Depth (m)	10
C5	11 Mar 2015	Arrive Time	954
C5	11 Mar 2015	Depart Time	959
C5	11 Mar 2015	Air Temp (C)	17
C5	11 Mar 2015	Weather	Partly Cloudy
C5	11 Mar 2015	Visibility (mi)	7
C5	11 Mar 2015	Wind Speed (kts)	5
C5	11 Mar 2015	Wind Dir	E
C5	11 Mar 2015	Water Color	Bluish-Green
C5	11 Mar 2015	Wave Ht Low (ft)	2
C5	11 Mar 2015	Wave Period (sec)	13
C5	11 Mar 2015	Sea State	Wind ripples
C5	11 Mar 2015	High Tide (ft)	2.87
C5	11 Mar 2015	High Tide Time	1329
C5	11 Mar 2015	Low Tide (ft)	0.99
C5	11 Mar 2015	Low Tide Time	739
C5	11 Mar 2015	Comments	
C5	17 Mar 2015	Depth (m)	11
C5	17 Mar 2015	Arrive Time	959
C5	17 Mar 2015	Depart Time	1006
C5	17 Mar 2015	Air Temp (C)	19
C5	17 Mar 2015	Weather	Partly Cloudy
C5	17 Mar 2015	Visibility (mi)	10
C5	17 Mar 2015	Wind Speed (kts)	6
C5	17 Mar 2015	Wind Dir	SE
C5	17 Mar 2015	Water Color	Greenish-Blue
C5	17 Mar 2015	Wave Ht Low (ft)	3
C5	17 Mar 2015	Wave Period (sec)	11
C5	17 Mar 2015	Sea State	Calm
C5	17 Mar 2015	High Tide (ft)	5.51
C5	17 Mar 2015	High Tide Time	722
C5	17 Mar 2015	Low Tide (ft)	-0.88
C5	17 Mar 2015	Low Tide Time	1410
C5	17 Mar 2015	Comments	
C5	23 Mar 2015	Depth (m)	10
C5	23 Mar 2015	Arrive Time	1007
C5	23 Mar 2015	Depart Time	1013
C5	23 Mar 2015	Air Temp (C)	17
C5	23 Mar 2015	Weather	Partly Cloudy
C5	23 Mar 2015	Visibility (mi)	12

Station	Date	Parameter	Value
C5	23 Mar 2015	Wind Speed (kts)	1
C5	23 Mar 2015	Wind Dir	NW
C5	23 Mar 2015	Water Color	Green
C5	23 Mar 2015	Wave Ht Low (ft)	4
C5	23 Mar 2015	Wave Period (sec)	9
C5	23 Mar 2015	Sea State	Light chop
C5	23 Mar 2015	High Tide (ft)	4.11
C5	23 Mar 2015	High Tide Time	1215
C5	23 Mar 2015	Low Tide (ft)	-0.39
C5	23 Mar 2015	Low Tide Time	610
C5	23 Mar 2015	Comments	Kelp
C5	26 Mar 2015	Depth (m)	10
C5	26 Mar 2015	Arrive Time	928
C5	26 Mar 2015	Depart Time	934
C5	26 Mar 2015	Air Temp (C)	18
C5	26 Mar 2015	Weather	Clear
C5	26 Mar 2015	Visibility (mi)	10
C5	26 Mar 2015	Wind Speed (kts)	1
C5	26 Mar 2015	Wind Dir	NE
C5	26 Mar 2015	Water Color	Bluish-Green
C5	26 Mar 2015	Wave Ht Low (ft)	3
C5	26 Mar 2015	Wave Period (sec)	11
C5	26 Mar 2015	Sea State	Wind ripples
C5	26 Mar 2015	High Tide (ft)	3.02
C5	26 Mar 2015	High Tide Time	1646
C5	26 Mar 2015	Low Tide (ft)	0.49
C5	26 Mar 2015	Low Tide Time	946
C5	26 Mar 2015	Comments	Kelp debris
A6	07 Mar 2015	Depth (m)	18
A6	07 Mar 2015	Arrive Time	842
A6	07 Mar 2015	Depart Time	850
A6	07 Mar 2015	Air Temp (C)	19
A6	07 Mar 2015	Weather	Partly Cloudy
A6	07 Mar 2015	Visibility (mi)	10
A6	07 Mar 2015	Wind Speed (kts)	1
A6	07 Mar 2015	Wind Dir	SW
A6	07 Mar 2015	Water Color	Green
A6	07 Mar 2015	Wave Ht Low (ft)	2
A6	07 Mar 2015	Wave Period (sec)	9
A6	07 Mar 2015	Sea State	Calm
A6	07 Mar 2015	High Tide (ft)	4.63
A6	07 Mar 2015	High Tide Time	936
A6	07 Mar 2015	Low Tide (ft)	0.28
A6	07 Mar 2015	Low Tide Time	1553
A6	07 Mar 2015	Comments	Kelp; Lobster floats
A6	11 Mar 2015	Depth (m)	19

Station	Date	Parameter	Value
A6	11 Mar 2015	Arrive Time	851
A6	11 Mar 2015	Depart Time	858
A6	11 Mar 2015	Air Temp (C)	16
A6	11 Mar 2015	Weather	Partly Cloudy
A6	11 Mar 2015	Visibility (mi)	7
A6	11 Mar 2015	Wind Speed (kts)	2
A6	11 Mar 2015	Wind Dir	W
A6	11 Mar 2015	Water Color	Bluish-Green
A6	11 Mar 2015	Wave Ht Low (ft)	2
A6	11 Mar 2015	Wave Period (sec)	13
A6	11 Mar 2015	Sea State	Wind ripples
A6	11 Mar 2015	High Tide (ft)	2.87
A6	11 Mar 2015	High Tide Time	1329
A6	11 Mar 2015	Low Tide (ft)	0.99
A6	11 Mar 2015	Low Tide Time	739
A6	11 Mar 2015	Comments	Kelp
A6	17 Mar 2015	Depth (m)	18
A6	17 Mar 2015	Arrive Time	846
A6	17 Mar 2015	Depart Time	854
A6	17 Mar 2015	Air Temp (C)	18
A6	17 Mar 2015	Weather	Cloudy
A6	17 Mar 2015	Visibility (mi)	8
A6	17 Mar 2015	Wind Speed (kts)	4
A6	17 Mar 2015	Wind Dir	NE
A6	17 Mar 2015	Water Color	Greenish-Blue
A6	17 Mar 2015	Wave Ht Low (ft)	3
A6	17 Mar 2015	Wave Period (sec)	11
A6	17 Mar 2015	Sea State	Calm
A6	17 Mar 2015	High Tide (ft)	5.51
A6	17 Mar 2015	High Tide Time	722
A6	17 Mar 2015	Low Tide (ft)	-0.88
A6	17 Mar 2015	Low Tide Time	1410
A6	17 Mar 2015	Comments	Kelp
A6	23 Mar 2015	Depth (m)	18
A6	23 Mar 2015	Arrive Time	854
A6	23 Mar 2015	Depart Time	906
A6	23 Mar 2015	Air Temp (C)	17
A6	23 Mar 2015	Weather	Partly Cloudy
A6	23 Mar 2015	Visibility (mi)	6
A6	23 Mar 2015	Wind Speed (kts)	2
A6	23 Mar 2015	Wind Dir	E
A6	23 Mar 2015	Water Color	Green
A6	23 Mar 2015	Wave Ht Low (ft)	4
A6	23 Mar 2015	Wave Period (sec)	9
A6	23 Mar 2015	Sea State	Light chop
A6	23 Mar 2015	High Tide (ft)	4.11
A6	23 Mar 2015	High Tide Time	1215

Station	Date	Parameter	Value
A6	23 Mar 2015	Low Tide (ft)	-0.39
A6	23 Mar 2015	Low Tide Time	610
A6	23 Mar 2015	Comments	Kelp; Seagrass
A6	26 Mar 2015	Depth (m)	18
A6	26 Mar 2015	Arrive Time	820
A6	26 Mar 2015	Depart Time	828
A6	26 Mar 2015	Air Temp (C)	18
A6	26 Mar 2015	Weather	Clear
A6	26 Mar 2015	Visibility (mi)	10
A6	26 Mar 2015	Wind Speed (kts)	0
A6	26 Mar 2015	Wind Dir	
A6	26 Mar 2015	Water Color	Bluish-Green
A6	26 Mar 2015	Wave Ht Low (ft)	3
A6	26 Mar 2015	Wave Period (sec)	11
A6	26 Mar 2015	Sea State	Wind ripples
A6	26 Mar 2015	High Tide (ft)	3.02
A6	26 Mar 2015	High Tide Time	1646
A6	26 Mar 2015	Low Tide (ft)	0.49
A6	26 Mar 2015	Low Tide Time	946
A6	26 Mar 2015	Comments	Kelp
C6	07 Mar 2015	Depth (m)	9
C6	07 Mar 2015	Arrive Time	949
C6	07 Mar 2015	Depart Time	958
C6	07 Mar 2015	Air Temp (C)	18
C6	07 Mar 2015	Weather	Partly Cloudy
C6	07 Mar 2015	Visibility (mi)	12
C6	07 Mar 2015	Wind Speed (kts)	5
C6	07 Mar 2015	Wind Dir	NE
C6	07 Mar 2015	Water Color	Green
C6	07 Mar 2015	Wave Ht Low (ft)	2
C6	07 Mar 2015	Wave Period (sec)	9
C6	07 Mar 2015	Sea State	Calm
C6	07 Mar 2015	High Tide (ft)	4.63
C6	07 Mar 2015	High Tide Time	936
C6	07 Mar 2015	Low Tide (ft)	0.28
C6	07 Mar 2015	Low Tide Time	1553
C6	07 Mar 2015	Comments	Boats; Kelp
C6	11 Mar 2015	Depth (m)	10
C6	11 Mar 2015	Arrive Time	941
C6	11 Mar 2015	Depart Time	948
C6	11 Mar 2015	Air Temp (C)	17
C6	11 Mar 2015	Weather	Partly Cloudy
C6	11 Mar 2015	Visibility (mi)	7
C6	11 Mar 2015	Wind Speed (kts)	2
C6	11 Mar 2015	Wind Dir	SE
C6	11 Mar 2015	Water Color	Bluish-Green

Station	Date	Parameter	Value
C6	11 Mar 2015	Wave Ht Low (ft)	2
C6	11 Mar 2015	Wave Period (sec)	13
C6	11 Mar 2015	Sea State	Wind ripples
C6	11 Mar 2015	High Tide (ft)	2.87
C6	11 Mar 2015	High Tide Time	1329
C6	11 Mar 2015	Low Tide (ft)	0.99
C6	11 Mar 2015	Low Tide Time	739
C6	11 Mar 2015	Comments	Kelp
C6	17 Mar 2015	Depth (m)	10
C6	17 Mar 2015	Arrive Time	943
C6	17 Mar 2015	Depart Time	952
C6	17 Mar 2015	Air Temp (C)	20
C6	17 Mar 2015	Weather	Partly Cloudy
C6	17 Mar 2015	Visibility (mi)	10
C6	17 Mar 2015	Wind Speed (kts)	5
C6	17 Mar 2015	Wind Dir	N
C6	17 Mar 2015	Water Color	Greenish-Blue
C6	17 Mar 2015	Wave Ht Low (ft)	3
C6	17 Mar 2015	Wave Period (sec)	11
C6	17 Mar 2015	Sea State	Calm
C6	17 Mar 2015	High Tide (ft)	5.51
C6	17 Mar 2015	High Tide Time	722
C6	17 Mar 2015	Low Tide (ft)	-0.88
C6	17 Mar 2015	Low Tide Time	1410
C6	17 Mar 2015	Comments	Kelp debris
C6	23 Mar 2015	Depth (m)	10
C6	23 Mar 2015	Arrive Time	953
C6	23 Mar 2015	Depart Time	959
C6	23 Mar 2015	Air Temp (C)	16
C6	23 Mar 2015	Weather	Partly Cloudy
C6	23 Mar 2015	Visibility (mi)	10
C6	23 Mar 2015	Wind Speed (kts)	2
C6	23 Mar 2015	Wind Dir	W
C6	23 Mar 2015	Water Color	Green
C6	23 Mar 2015	Wave Ht Low (ft)	4
C6	23 Mar 2015	Wave Period (sec)	9
C6	23 Mar 2015	Sea State	Light chop
C6	23 Mar 2015	High Tide (ft)	4.11
C6	23 Mar 2015	High Tide Time	1215
C6	23 Mar 2015	Low Tide (ft)	-0.39
C6	23 Mar 2015	Low Tide Time	610
C6	23 Mar 2015	Comments	
C6	26 Mar 2015	Depth (m)	9
C6	26 Mar 2015	Arrive Time	915
C6	26 Mar 2015	Depart Time	921
C6	26 Mar 2015	Air Temp (C)	18

Station	Date	Parameter	Value
C6	26 Mar 2015	Weather	Clear
C6	26 Mar 2015	Visibility (mi)	10
C6	26 Mar 2015	Wind Speed (kts)	3
C6	26 Mar 2015	Wind Dir	NW
C6	26 Mar 2015	Water Color	Bluish-Green
C6	26 Mar 2015	Wave Ht Low (ft)	3
C6	26 Mar 2015	Wave Period (sec)	11
C6	26 Mar 2015	Sea State	Wind ripples
C6	26 Mar 2015	High Tide (ft)	3.02
C6	26 Mar 2015	High Tide Time	1646
C6	26 Mar 2015	Low Tide (ft)	0.49
C6	26 Mar 2015	Low Tide Time	946
C6	26 Mar 2015	Comments	Kelp
A7	07 Mar 2015	Depth (m)	18
A7	07 Mar 2015	Arrive Time	826
A7	07 Mar 2015	Depart Time	835
A7	07 Mar 2015	Air Temp (C)	19
A7	07 Mar 2015	Weather	Partly Cloudy
A7	07 Mar 2015	Visibility (mi)	10
A7	07 Mar 2015	Wind Speed (kts)	2
A7	07 Mar 2015	Wind Dir	S
A7	07 Mar 2015	Water Color	Green
A7	07 Mar 2015	Wave Ht Low (ft)	2
A7	07 Mar 2015	Wave Period (sec)	9
A7	07 Mar 2015	Sea State	Calm
A7	07 Mar 2015	High Tide (ft)	4.63
A7	07 Mar 2015	High Tide Time	936
A7	07 Mar 2015	Low Tide (ft)	0.28
A7	07 Mar 2015	Low Tide Time	1553
A7	07 Mar 2015	Comments	Kelp; Boats
A7	11 Mar 2015	Depth (m)	19
A7	11 Mar 2015	Arrive Time	836
A7	11 Mar 2015	Depart Time	843
A7	11 Mar 2015	Air Temp (C)	16
A7	11 Mar 2015	Weather	Partly Cloudy
A7	11 Mar 2015	Visibility (mi)	7
A7	11 Mar 2015	Wind Speed (kts)	1
A7	11 Mar 2015	Wind Dir	S
A7	11 Mar 2015	Water Color	Bluish-Green
A7	11 Mar 2015	Wave Ht Low (ft)	2
A7	11 Mar 2015	Wave Period (sec)	13
A7	11 Mar 2015	Sea State	Wind ripples
A7	11 Mar 2015	High Tide (ft)	2.87
A7	11 Mar 2015	High Tide Time	1329
A7	11 Mar 2015	Low Tide (ft)	0.99
A7	11 Mar 2015	Low Tide Time	739
A7	11 Mar 2015	Comments	Kelp

Station	Date	Parameter	Value
A7	17 Mar 2015	Depth (m)	19
A7	17 Mar 2015	Arrive Time	815
A7	17 Mar 2015	Depart Time	830
A7	17 Mar 2015	Air Temp (C)	18
A7	17 Mar 2015	Weather	Cloudy
A7	17 Mar 2015	Visibility (mi)	8
A7	17 Mar 2015	Wind Speed (kts)	4
A7	17 Mar 2015	Wind Dir	SW
A7	17 Mar 2015	Water Color	Greenish-Blue
A7	17 Mar 2015	Wave Ht Low (ft)	3
A7	17 Mar 2015	Wave Period (sec)	11
A7	17 Mar 2015	Sea State	Calm
A7	17 Mar 2015	High Tide (ft)	5.51
A7	17 Mar 2015	High Tide Time	722
A7	17 Mar 2015	Low Tide (ft)	-0.88
A7	17 Mar 2015	Low Tide Time	1410
A7	17 Mar 2015	Comments	
A7	23 Mar 2015	Depth (m)	18
A7	23 Mar 2015	Arrive Time	838
A7	23 Mar 2015	Depart Time	846
A7	23 Mar 2015	Air Temp (C)	16
A7	23 Mar 2015	Weather	Partly Cloudy
A7	23 Mar 2015	Visibility (mi)	6
A7	23 Mar 2015	Wind Speed (kts)	6
A7	23 Mar 2015	Wind Dir	S
A7	23 Mar 2015	Water Color	Green
A7	23 Mar 2015	Wave Ht Low (ft)	4
A7	23 Mar 2015	Wave Period (sec)	9
A7	23 Mar 2015	Sea State	Light chop
A7	23 Mar 2015	High Tide (ft)	4.11
A7	23 Mar 2015	High Tide Time	1215
A7	23 Mar 2015	Low Tide (ft)	-0.39
A7	23 Mar 2015	Low Tide Time	610
A7	23 Mar 2015	Comments	Kelp; Boats
A7	26 Mar 2015	Depth (m)	19
A7	26 Mar 2015	Arrive Time	803
A7	26 Mar 2015	Depart Time	810
A7	26 Mar 2015	Air Temp (C)	18
A7	26 Mar 2015	Weather	Clear
A7	26 Mar 2015	Visibility (mi)	10
A7	26 Mar 2015	Wind Speed (kts)	0
A7	26 Mar 2015	Wind Dir	
A7	26 Mar 2015	Water Color	Bluish-Green
A7	26 Mar 2015	Wave Ht Low (ft)	3
A7	26 Mar 2015	Wave Period (sec)	11
A7	26 Mar 2015	Sea State	Wind ripples

Station	Date	Parameter	Value
A7	26 Mar 2015	High Tide (ft)	3.02
A7	26 Mar 2015	High Tide Time	1646
A7	26 Mar 2015	Low Tide (ft)	0.49
A7	26 Mar 2015	Low Tide Time	946
A7	26 Mar 2015	Comments	Kelp
C7	07 Mar 2015	Depth (m)	19
C7	07 Mar 2015	Arrive Time	910
C7	07 Mar 2015	Depart Time	916
C7	07 Mar 2015	Air Temp (C)	17
C7	07 Mar 2015	Weather	Partly Cloudy
C7	07 Mar 2015	Visibility (mi)	10
C7	07 Mar 2015	Wind Speed (kts)	3
C7	07 Mar 2015	Wind Dir	SW
C7	07 Mar 2015	Water Color	Green
C7	07 Mar 2015	Wave Ht Low (ft)	2
C7	07 Mar 2015	Wave Period (sec)	9
C7	07 Mar 2015	Sea State	Calm
C7	07 Mar 2015	High Tide (ft)	4.63
C7	07 Mar 2015	High Tide Time	936
C7	07 Mar 2015	Low Tide (ft)	0.28
C7	07 Mar 2015	Low Tide Time	1553
C7	07 Mar 2015	Comments	Boats
C7	11 Mar 2015	Depth (m)	18
C7	11 Mar 2015	Arrive Time	907
C7	11 Mar 2015	Depart Time	914
C7	11 Mar 2015	Air Temp (C)	16
C7	11 Mar 2015	Weather	Partly Cloudy
C7	11 Mar 2015	Visibility (mi)	7
C7	11 Mar 2015	Wind Speed (kts)	4
C7	11 Mar 2015	Wind Dir	SW
C7	11 Mar 2015	Water Color	Bluish-Green
C7	11 Mar 2015	Wave Ht Low (ft)	2
C7	11 Mar 2015	Wave Period (sec)	13
C7	11 Mar 2015	Sea State	Wind ripples
C7	11 Mar 2015	High Tide (ft)	2.87
C7	11 Mar 2015	High Tide Time	1329
C7	11 Mar 2015	Low Tide (ft)	0.99
C7	11 Mar 2015	Low Tide Time	739
C7	11 Mar 2015	Comments	Kelp; Kelp debris
C7	17 Mar 2015	Depth (m)	18
C7	17 Mar 2015	Arrive Time	904
C7	17 Mar 2015	Depart Time	912
C7	17 Mar 2015	Air Temp (C)	19
C7	17 Mar 2015	Weather	Partly Cloudy
C7	17 Mar 2015	Visibility (mi)	10
C7	17 Mar 2015	Wind Speed (kts)	5

Station	Date	Parameter	Value
C7	17 Mar 2015	Wind Dir	S
C7	17 Mar 2015	Water Color	Greenish-Blue
C7	17 Mar 2015	Wave Ht Low (ft)	3
C7	17 Mar 2015	Wave Period (sec)	11
C7	17 Mar 2015	Sea State	Calm
C7	17 Mar 2015	High Tide (ft)	5.51
C7	17 Mar 2015	High Tide Time	722
C7	17 Mar 2015	Low Tide (ft)	-0.88
C7	17 Mar 2015	Low Tide Time	1410
C7	17 Mar 2015	Comments	Kelp debris
C7	23 Mar 2015	Depth (m)	18
C7	23 Mar 2015	Arrive Time	915
C7	23 Mar 2015	Depart Time	922
C7	23 Mar 2015	Air Temp (C)	17
C7	23 Mar 2015	Weather	Partly Cloudy
C7	23 Mar 2015	Visibility (mi)	6
C7	23 Mar 2015	Wind Speed (kts)	3
C7	23 Mar 2015	Wind Dir	NE
C7	23 Mar 2015	Water Color	Green
C7	23 Mar 2015	Wave Ht Low (ft)	4
C7	23 Mar 2015	Wave Period (sec)	9
C7	23 Mar 2015	Sea State	Light chop
C7	23 Mar 2015	High Tide (ft)	4.11
C7	23 Mar 2015	High Tide Time	1215
C7	23 Mar 2015	Low Tide (ft)	-0.39
C7	23 Mar 2015	Low Tide Time	610
C7	23 Mar 2015	Comments	Kelp; Seagrass
C7	26 Mar 2015	Depth (m)	17
C7	26 Mar 2015	Arrive Time	838
C7	26 Mar 2015	Depart Time	847
C7	26 Mar 2015	Air Temp (C)	18
C7	26 Mar 2015	Weather	Clear
C7	26 Mar 2015	Visibility (mi)	10
C7	26 Mar 2015	Wind Speed (kts)	3
C7	26 Mar 2015	Wind Dir	E
C7	26 Mar 2015	Water Color	Bluish-Green
C7	26 Mar 2015	Wave Ht Low (ft)	3
C7	26 Mar 2015	Wave Period (sec)	11
C7	26 Mar 2015	Sea State	Wind ripples
C7	26 Mar 2015	High Tide (ft)	3.02
C7	26 Mar 2015	High Tide Time	1646
C7	26 Mar 2015	Low Tide (ft)	0.49
C7	26 Mar 2015	Low Tide Time	946
C7	26 Mar 2015	Comments	Kelp
C8	07 Mar 2015	Depth (m)	19
C8	07 Mar 2015	Arrive Time	920

Station	Date	Parameter	Value
C8	07 Mar 2015	Depart Time	926
C8	07 Mar 2015	Air Temp (C)	17
C8	07 Mar 2015	Weather	Partly Cloudy
C8	07 Mar 2015	Visibility (mi)	10
C8	07 Mar 2015	Wind Speed (kts)	3
C8	07 Mar 2015	Wind Dir	NW
C8	07 Mar 2015	Water Color	Green
C8	07 Mar 2015	Wave Ht Low (ft)	2
C8	07 Mar 2015	Wave Period (sec)	9
C8	07 Mar 2015	Sea State	Calm
C8	07 Mar 2015	High Tide (ft)	4.63
C8	07 Mar 2015	High Tide Time	936
C8	07 Mar 2015	Low Tide (ft)	0.28
C8	07 Mar 2015	Low Tide Time	1553
C8	07 Mar 2015	Comments	Boats
C8	11 Mar 2015	Depth (m)	18
C8	11 Mar 2015	Arrive Time	921
C8	11 Mar 2015	Depart Time	928
C8	11 Mar 2015	Air Temp (C)	17
C8	11 Mar 2015	Weather	Partly Cloudy
C8	11 Mar 2015	Visibility (mi)	7
C8	11 Mar 2015	Wind Speed (kts)	1
C8	11 Mar 2015	Wind Dir	E
C8	11 Mar 2015	Water Color	Bluish-Green
C8	11 Mar 2015	Wave Ht Low (ft)	2
C8	11 Mar 2015	Wave Period (sec)	13
C8	11 Mar 2015	Sea State	Wind ripples
C8	11 Mar 2015	High Tide (ft)	2.87
C8	11 Mar 2015	High Tide Time	1329
C8	11 Mar 2015	Low Tide (ft)	0.99
C8	11 Mar 2015	Low Tide Time	739
C8	11 Mar 2015	Comments	
C8	17 Mar 2015	Depth (m)	20
C8	17 Mar 2015	Arrive Time	919
C8	17 Mar 2015	Depart Time	927
C8	17 Mar 2015	Air Temp (C)	20
C8	17 Mar 2015	Weather	Partly Cloudy
C8	17 Mar 2015	Visibility (mi)	10
C8	17 Mar 2015	Wind Speed (kts)	7
C8	17 Mar 2015	Wind Dir	E
C8	17 Mar 2015	Water Color	Greenish-Blue
C8	17 Mar 2015	Wave Ht Low (ft)	3
C8	17 Mar 2015	Wave Period (sec)	11
C8	17 Mar 2015	Sea State	Calm
C8	17 Mar 2015	High Tide (ft)	5.51
C8	17 Mar 2015	High Tide Time	722
C8	17 Mar 2015	Low Tide (ft)	-0.88

Station	Date	Parameter	Value
C8	17 Mar 2015	Low Tide Time	1410
C8	17 Mar 2015	Comments	
C8	23 Mar 2015	Depth (m)	19
C8	23 Mar 2015	Arrive Time	930
C8	23 Mar 2015	Depart Time	940
C8	23 Mar 2015	Air Temp (C)	17
C8	23 Mar 2015	Weather	Partly Cloudy
C8	23 Mar 2015	Visibility (mi)	6
C8	23 Mar 2015	Wind Speed (kts)	2
C8	23 Mar 2015	Wind Dir	E
C8	23 Mar 2015	Water Color	Green
C8	23 Mar 2015	Wave Ht Low (ft)	4
C8	23 Mar 2015	Wave Period (sec)	9
C8	23 Mar 2015	Sea State	Light chop
C8	23 Mar 2015	High Tide (ft)	4.11
C8	23 Mar 2015	High Tide Time	1215
C8	23 Mar 2015	Low Tide (ft)	-0.39
C8	23 Mar 2015	Low Tide Time	610
C8	23 Mar 2015	Comments	Boats
C8	26 Mar 2015	Depth (m)	18
C8	26 Mar 2015	Arrive Time	855
C8	26 Mar 2015	Depart Time	901
C8	26 Mar 2015	Air Temp (C)	18
C8	26 Mar 2015	Weather	Clear
C8	26 Mar 2015	Visibility (mi)	10
C8	26 Mar 2015	Wind Speed (kts)	2
C8	26 Mar 2015	Wind Dir	S
C8	26 Mar 2015	Water Color	Bluish-Green
C8	26 Mar 2015	Wave Ht Low (ft)	3
C8	26 Mar 2015	Wave Period (sec)	11
C8	26 Mar 2015	Sea State	Wind ripples
C8	26 Mar 2015	High Tide (ft)	3.02
C8	26 Mar 2015	High Tide Time	1646
C8	26 Mar 2015	Low Tide (ft)	0.49
C8	26 Mar 2015	Low Tide Time	946
C8	26 Mar 2015	Comments	Kelp debris

Table 3.10

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

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (µg/L)
A1	07 Mar 2015	1	16.11	88.33	7.8	33.31	8.2	24.4	0.68
A1	07 Mar 2015	2	15.90	88.18	7.6	33.29	8.2	24.5	0.75
A1	07 Mar 2015	3	15.13	88.22	7.3	33.24	8.2	24.6	0.80
A1	07 Mar 2015	4	13.36	88.64	7.2	33.26	8.1	25.0	0.92
A1	07 Mar 2015	5	12.78	89.25	7.0	33.28	8.1	25.1	1.04
A1	07 Mar 2015	6	12.66	89.50	6.8	33.27	8.0	25.1	1.08
A1	07 Mar 2015	7	12.53	89.49	6.7	33.28	8.0	25.2	1.11
A1	07 Mar 2015	8	12.40	89.36	6.6	33.29	8.0	25.2	1.14
A1	07 Mar 2015	9	12.34	89.17	6.6	33.30	8.0	25.2	1.14
A1	07 Mar 2015	10	12.34	88.80	6.5	33.31	8.0	25.2	1.17
A1	07 Mar 2015	11	12.26	88.79	6.5	33.31	8.0	25.2	1.17
A1	07 Mar 2015	12	12.20	88.75	6.5	33.31	8.0	25.2	1.14
A1	07 Mar 2015	13	12.06	88.33	6.3	33.33	8.0	25.3	1.09
A1	07 Mar 2015	14	12.02	88.00	6.3	33.33	8.0	25.3	1.08
A1	07 Mar 2015	15	12.00	87.83	6.3	33.34	8.0	25.3	1.07
A1	07 Mar 2015	16	11.99	87.78	6.3	33.34	8.0	25.3	1.03
A1	07 Mar 2015	17	11.99	87.77	6.3	33.34	8.0	25.3	1.05
A1	07 Mar 2015	18	11.99	87.46	6.3	33.34	8.0	25.3	1.06
A1	07 Mar 2015	19	11.99	87.44	6.3	33.34	8.0	25.3	1.07
A1	07 Mar 2015	20	11.99	87.53	6.3	33.34	8.0	25.3	1.11
A1	11 Mar 2015	1	16.59	90.15	8.1	33.36	8.2	24.4	0.69
A1	11 Mar 2015	2	16.58	88.41	8.0	33.36	8.2	24.4	0.71
A1	11 Mar 2015	3	16.57	89.64	8.0	33.36	8.2	24.4	0.76
A1	11 Mar 2015	4	16.51	90.45	8.0	33.36	8.2	24.4	0.82
A1	11 Mar 2015	5	16.35	90.43	7.8	33.35	8.2	24.4	0.92
A1	11 Mar 2015	6	16.00	90.40	7.8	33.35	8.2	24.5	1.03
A1	11 Mar 2015	7	15.76	90.36	7.7	33.34	8.2	24.5	1.17
A1	11 Mar 2015	8	15.33	90.36	7.7	33.34	8.2	24.6	1.41
A1	11 Mar 2015	9	15.11	90.19	7.7	33.33	8.1	24.7	1.55
A1	11 Mar 2015	10	14.90	90.05	7.6	33.33	8.1	24.7	1.64
A1	11 Mar 2015	11	14.69	89.86	7.5	33.33	8.1	24.8	1.69
A1	11 Mar 2015	12	14.57	89.73	7.4	33.33	8.1	24.8	1.73
A1	11 Mar 2015	13	14.35	89.62	7.4	33.33	8.1	24.8	1.76
A1	11 Mar 2015	14	14.16	89.53	7.3	33.33	8.1	24.9	1.74
A1	11 Mar 2015	15	14.08	89.32	7.2	33.33	8.1	24.9	1.77
A1	11 Mar 2015	16	14.00	89.28	7.2	33.34	8.1	24.9	1.74
A1	11 Mar 2015	17	13.94	89.38	7.2	33.34	8.1	24.9	1.68
A1	11 Mar 2015	18	13.92	89.39	7.2	33.34	8.1	24.9	1.68
A1	11 Mar 2015	19	13.93	89.46	7.1	33.34	8.1	24.9	1.62
A1	17 Mar 2015	1	16.87	85.22	8.3	33.31	8.2	24.2	1.63
A1	17 Mar 2015	2	16.85	85.52	8.3	33.33	8.2	24.3	1.50
A1	17 Mar 2015	3	16.84	85.92	8.3	33.33	8.2	24.3	1.40
A1	17 Mar 2015	4	16.81	86.64	8.4	33.33	8.2	24.3	1.40
A1	17 Mar 2015	5	16.78	86.88	8.4	33.33	8.2	24.3	1.44
A1	17 Mar 2015	6	16.70	86.82	8.4	33.33	8.2	24.3	1.47
A1	17 Mar 2015	7	16.63	86.77	8.4	33.33	8.2	24.3	1.56
A1	17 Mar 2015	8	16.54	86.79	8.4	33.33	8.2	24.3	1.62
A1	17 Mar 2015	9	16.38	86.70	8.4	33.33	8.2	24.4	1.69
A1	17 Mar 2015	10	16.26	86.60	8.3	33.33	8.2	24.4	1.77
A1	17 Mar 2015	11	16.12	86.58	8.3	33.33	8.2	24.4	1.89
A1	17 Mar 2015	12	15.98	86.43	8.3	33.33	8.2	24.5	1.99

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (µg/L)
A1	17 Mar 2015	13	15.79	85.81	8.2	33.32	8.2	24.5	2.07
A1	17 Mar 2015	14	15.51	85.82	8.1	33.32	8.2	24.6	2.12
A1	17 Mar 2015	15	15.13	86.19	7.8	33.32	8.1	24.7	2.02
A1	17 Mar 2015	16	14.77	86.48	7.5	33.32	8.1	24.7	1.80
A1	17 Mar 2015	17	14.32	87.21	7.2	33.33	8.1	24.8	1.47
A1	17 Mar 2015	18	13.85	87.64	6.9	33.31	8.1	24.9	1.28
A1	17 Mar 2015	19	13.26	88.61	6.8	33.33	8.0	25.0	1.15
A1	23 Mar 2015	1	17.35	87.92	8.2	33.31	8.2	24.1	1.08
A1	23 Mar 2015	2	17.03	87.02	8.1	33.28	8.2	24.2	1.13
A1	23 Mar 2015	3	16.44	87.36	8.1	33.28	8.2	24.3	1.22
A1	23 Mar 2015	4	15.92	88.76	8.0	33.28	8.2	24.4	1.27
A1	23 Mar 2015	5	15.62	89.15	7.9	33.26	8.2	24.5	1.27
A1	23 Mar 2015	6	15.01	89.47	7.9	33.27	8.2	24.6	1.28
A1	23 Mar 2015	7	14.71	89.54	7.9	33.27	8.1	24.7	1.36
A1	23 Mar 2015	8	14.63	89.52	8.0	33.27	8.1	24.7	1.45
A1	23 Mar 2015	9	14.95	89.13	7.8	33.23	8.1	24.6	1.44
A1	23 Mar 2015	10	14.43	89.63	7.8	33.26	8.1	24.8	1.51
A1	23 Mar 2015	11	14.17	89.90	7.9	33.27	8.1	24.8	1.51
A1	23 Mar 2015	12	14.11	90.10	7.8	33.27	8.1	24.8	1.49
A1	23 Mar 2015	13	14.06	89.90	7.7	33.27	8.1	24.8	1.49
A1	23 Mar 2015	14	13.98	90.14	7.8	33.27	8.1	24.9	1.49
A1	23 Mar 2015	15	13.94	90.70	7.7	33.27	8.1	24.9	1.47
A1	23 Mar 2015	16	13.88	90.67	7.6	33.27	8.1	24.9	1.50
A1	23 Mar 2015	17	13.73	90.30	7.5	33.27	8.1	24.9	1.32
A1	23 Mar 2015	18	13.56	90.05	7.4	33.27	8.1	24.9	1.19
A1	26 Mar 2015	1	17.48	86.14	8.1	33.33	8.2	24.1	1.51
A1	26 Mar 2015	2	17.47	86.00	8.1	33.33	8.2	24.1	1.57
A1	26 Mar 2015	3	17.44	86.15	8.0	33.33	8.2	24.1	1.60
A1	26 Mar 2015	4	17.33	86.17	8.0	33.32	8.2	24.1	1.68
A1	26 Mar 2015	5	17.17	84.76	8.0	33.32	8.2	24.2	1.71
A1	26 Mar 2015	6	17.02	85.34	8.0	33.31	8.2	24.2	1.76
A1	26 Mar 2015	7	16.84	84.97	7.9	33.31	8.2	24.3	1.85
A1	26 Mar 2015	8	16.47	85.32	7.8	33.29	8.2	24.3	1.88
A1	26 Mar 2015	9	16.03	86.07	7.8	33.30	8.2	24.4	1.87
A1	26 Mar 2015	10	15.59	86.19	7.8	33.28	8.2	24.5	1.88
A1	26 Mar 2015	11	15.20	86.22	7.7	33.28	8.2	24.6	1.87
A1	26 Mar 2015	12	14.95	86.59	7.6	33.28	8.1	24.7	1.86
A1	26 Mar 2015	13	14.63	86.91	7.5	33.28	8.1	24.7	1.78
A1	26 Mar 2015	14	14.37	87.24	7.2	33.29	8.1	24.8	1.64
A1	26 Mar 2015	15	13.76	87.48	7.0	33.29	8.1	24.9	1.35
A1	26 Mar 2015	16	13.37	87.89	6.8	33.30	8.1	25.0	1.09
A1	26 Mar 2015	17	13.19	88.33	6.6	33.32	8.0	25.1	0.93
A1	26 Mar 2015	18	13.18	88.62	6.6	33.32	8.0	25.1	0.88
C4	07 Mar 2015	1	16.53	84.83	7.7	33.33	8.2	24.3	0.44
C4	07 Mar 2015	2	16.43	88.28	7.7	33.33	8.2	24.4	0.50
C4	07 Mar 2015	3	16.40	88.98	7.6	33.33	8.2	24.4	0.55
C4	07 Mar 2015	4	16.39	88.92	7.6	33.33	8.2	24.4	0.62
C4	07 Mar 2015	5	16.39	88.60	7.5	33.33	8.2	24.4	0.68
C4	07 Mar 2015	6	16.38	88.37	7.5	33.33	8.2	24.4	0.80
C4	07 Mar 2015	7	16.37	88.17	7.6	33.33	8.2	24.4	0.84
C4	07 Mar 2015	8	16.34	88.04	7.6	33.33	8.2	24.4	0.91
C4	07 Mar 2015	9	16.30	87.89	7.5	33.32	8.2	24.4	0.96
C4	07 Mar 2015	10	16.21	87.86	7.3	33.31	8.2	24.4	0.90
C4	07 Mar 2015	11	16.15	87.89	7.2	33.31	8.2	24.4	0.74

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (µg/L)
C4	07 Mar 2015	12	16.14	88.17	7.2	33.30	8.2	24.4	0.67
C4	11 Mar 2015	1	17.11	88.56	8.5	33.34	8.3	24.2	0.62
C4	11 Mar 2015	2	17.09	88.99	8.5	33.34	8.3	24.2	0.65
C4	11 Mar 2015	3	17.04	88.94	8.5	33.34	8.3	24.2	0.72
C4	11 Mar 2015	4	16.98	89.06	8.4	33.34	8.3	24.2	0.75
C4	11 Mar 2015	5	16.94	89.06	8.3	33.34	8.2	24.3	0.78
C4	11 Mar 2015	6	16.90	89.14	8.2	33.33	8.2	24.3	0.85
C4	11 Mar 2015	7	16.64	89.26	8.0	33.33	8.2	24.3	1.04
C4	11 Mar 2015	8	16.27	89.02	7.6	33.32	8.2	24.4	1.22
C4	11 Mar 2015	9	15.92	88.58	7.3	33.32	8.2	24.5	1.18
C4	11 Mar 2015	10	15.77	88.26	7.2	33.32	8.1	24.5	0.70
C4	11 Mar 2015	11	15.76	89.95	7.2	33.32	8.1	24.5	0.51
C4	17 Mar 2015	1	16.65	87.54	7.9	33.35	8.2	24.3	0.42
C4	17 Mar 2015	2	16.55	87.51	8.0	33.34	8.2	24.3	0.50
C4	17 Mar 2015	3	16.35	87.28	7.9	33.34	8.2	24.4	0.61
C4	17 Mar 2015	4	16.26	86.75	7.7	33.34	8.2	24.4	0.75
C4	17 Mar 2015	5	16.20	86.00	7.8	33.34	8.2	24.4	0.97
C4	17 Mar 2015	6	16.16	85.53	7.7	33.34	8.2	24.4	1.19
C4	17 Mar 2015	7	16.12	84.39	7.6	33.33	8.2	24.4	1.24
C4	17 Mar 2015	8	15.87	83.60	7.4	33.32	8.2	24.5	1.01
C4	17 Mar 2015	9	15.53	84.49	7.2	33.32	8.1	24.6	0.69
C4	17 Mar 2015	10	15.43	87.15	7.2	33.33	8.1	24.6	0.52
C4	17 Mar 2015	11	15.42	87.80	7.2	33.33	8.1	24.6	0.50
C4	23 Mar 2015	1	18.35	82.25	8.2	33.06	8.2	23.7	0.54
C4	23 Mar 2015	2	18.38	76.40	8.1	33.35	8.2	23.9	0.54
C4	23 Mar 2015	3	18.37	84.87	8.0	33.35	8.2	23.9	0.57
C4	23 Mar 2015	4	18.28	86.07	8.1	33.33	8.3	23.9	0.68
C4	23 Mar 2015	5	17.69	86.43	8.3	33.31	8.3	24.1	0.82
C4	23 Mar 2015	6	17.25	86.89	8.1	33.30	8.3	24.1	0.90
C4	23 Mar 2015	7	16.58	87.45	7.8	33.27	8.2	24.3	0.91
C4	23 Mar 2015	8	15.94	87.89	7.6	33.28	8.2	24.4	0.80
C4	23 Mar 2015	9	15.76	88.32	7.5	33.28	8.2	24.5	0.56
C4	23 Mar 2015	10	15.75	88.45	7.5	33.28	8.2	24.5	0.49
C4	23 Mar 2015	11	15.74	88.39	7.5	33.29	8.2	24.5	0.47
C4	26 Mar 2015	1	17.59	73.84	6.9	33.33	8.1	24.1	0.46
C4	26 Mar 2015	2	17.54	73.93	7.0	33.33	8.1	24.1	0.52
C4	26 Mar 2015	3	17.43	73.99	7.1	33.32	8.1	24.1	0.71
C4	26 Mar 2015	4	17.12	74.36	7.4	33.31	8.2	24.2	1.18
C4	26 Mar 2015	5	16.94	78.61	7.3	33.31	8.2	24.2	1.27
C4	26 Mar 2015	6	16.37	81.10	7.0	33.29	8.2	24.3	1.00
C4	26 Mar 2015	7	15.64	81.73	6.7	33.30	8.1	24.5	0.79
C4	26 Mar 2015	8	15.14	82.45	6.5	33.30	8.1	24.6	0.66
C4	26 Mar 2015	9	15.10	83.93	6.5	33.31	8.1	24.6	0.60
C4	26 Mar 2015	10	15.10	83.04	6.5	33.31	8.1	24.6	0.59
C5	07 Mar 2015	1	16.73	84.29	7.9	33.32	8.2	24.3	0.45
C5	07 Mar 2015	2	16.62	81.55	8.0	33.35	8.2	24.3	0.50
C5	07 Mar 2015	3	16.57	80.72	7.9	33.35	8.2	24.3	0.55
C5	07 Mar 2015	4	16.51	83.94	7.9	33.34	8.2	24.4	0.62
C5	07 Mar 2015	5	16.41	84.38	7.7	33.33	8.2	24.4	0.67
C5	07 Mar 2015	6	16.34	85.00	7.7	33.32	8.2	24.4	0.70
C5	07 Mar 2015	7	16.14	85.74	7.8	33.31	8.2	24.4	0.95
C5	07 Mar 2015	8	16.05	86.22	7.7	33.30	8.2	24.4	1.05

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (µg/L)
C5	07 Mar 2015	9	15.52	86.79	7.6	33.29	8.2	24.5	0.85
C5	07 Mar 2015	10	15.48	89.53	7.6	33.30	8.2	24.6	0.76
C5	07 Mar 2015	11	15.49	90.14	7.7	33.30	8.2	24.6	0.72
C5	11 Mar 2015	1	17.19	89.27	8.4	33.33	8.3	24.2	0.57
C5	11 Mar 2015	2	17.10	89.34	8.3	33.33	8.3	24.2	0.63
C5	11 Mar 2015	3	17.02	89.38	8.2	33.33	8.2	24.2	0.68
C5	11 Mar 2015	4	17.00	89.58	8.2	33.33	8.2	24.2	0.75
C5	11 Mar 2015	5	16.92	89.66	8.1	33.33	8.2	24.3	0.82
C5	11 Mar 2015	6	16.66	89.64	8.0	33.34	8.2	24.3	1.01
C5	11 Mar 2015	7	16.49	89.45	8.1	33.34	8.2	24.4	1.15
C5	11 Mar 2015	8	16.46	89.14	8.2	33.34	8.2	24.4	1.14
C5	11 Mar 2015	9	16.31	89.06	8.2	33.31	8.2	24.4	1.04
C5	11 Mar 2015	10	15.94	89.00	8.2	33.32	8.2	24.5	0.78
C5	17 Mar 2015	1	16.91	86.00	8.2	33.35	8.2	24.3	0.57
C5	17 Mar 2015	2	16.88	85.99	8.2	33.34	8.2	24.3	0.62
C5	17 Mar 2015	3	16.84	85.89	8.3	33.34	8.2	24.3	0.70
C5	17 Mar 2015	4	16.82	85.57	8.2	33.34	8.2	24.3	0.79
C5	17 Mar 2015	5	16.77	85.40	8.2	33.34	8.2	24.3	0.96
C5	17 Mar 2015	6	16.65	85.28	8.2	33.32	8.2	24.3	1.15
C5	17 Mar 2015	7	16.37	85.55	8.1	33.31	8.2	24.4	1.35
C5	17 Mar 2015	8	16.16	86.55	8.1	33.32	8.2	24.4	1.51
C5	17 Mar 2015	9	16.05	86.74	8.1	33.32	8.2	24.4	1.51
C5	17 Mar 2015	10	15.72	87.07	7.9	33.30	8.2	24.5	1.17
C5	17 Mar 2015	11	15.31	87.14	8.0	33.32	8.2	24.6	0.85
C5	23 Mar 2015	1	18.47	86.30	7.9	33.35	8.2	23.9	0.45
C5	23 Mar 2015	2	18.45	86.00	7.9	33.35	8.2	23.9	0.49
C5	23 Mar 2015	3	18.31	86.32	7.9	33.34	8.2	23.9	0.60
C5	23 Mar 2015	4	17.70	86.94	7.9	33.32	8.2	24.1	0.63
C5	23 Mar 2015	5	17.39	87.81	8.0	33.31	8.2	24.1	0.73
C5	23 Mar 2015	6	17.05	88.17	8.2	33.31	8.2	24.2	0.93
C5	23 Mar 2015	7	16.73	88.30	8.0	33.30	8.2	24.3	0.95
C5	23 Mar 2015	8	16.47	88.23	7.9	33.30	8.2	24.3	0.94
C5	23 Mar 2015	9	16.06	87.82	7.7	33.27	8.2	24.4	0.87
C5	23 Mar 2015	10	15.31	86.46	7.9	33.28	8.2	24.6	0.68
C5	23 Mar 2015	11	15.27	84.81	7.9	33.28	8.2	24.6	0.65
C5	26 Mar 2015	1	17.66	79.63	7.1	33.33	8.1	24.1	0.41
C5	26 Mar 2015	2	17.64	80.65	7.1	33.32	8.1	24.1	0.46
C5	26 Mar 2015	3	17.49	81.13	7.3	33.31	8.2	24.1	0.61
C5	26 Mar 2015	4	17.33	81.32	7.3	33.31	8.2	24.1	0.83
C5	26 Mar 2015	5	17.06	81.27	7.5	33.31	8.2	24.2	1.13
C5	26 Mar 2015	6	16.86	81.89	7.3	33.30	8.2	24.2	1.33
C5	26 Mar 2015	7	16.19	82.32	6.9	33.29	8.2	24.4	1.15
C5	26 Mar 2015	8	15.55	82.13	6.7	33.30	8.1	24.5	0.93
C5	26 Mar 2015	9	15.16	80.56	6.5	33.28	8.1	24.6	0.81
C5	26 Mar 2015	10	14.66	74.51	6.5	33.30	8.1	24.7	0.87
C5	26 Mar 2015	11	14.63	68.04	6.5	33.30	8.1	24.7	0.90
A6	07 Mar 2015	1	16.65	87.13	7.9	33.33	8.2	24.3	0.61
A6	07 Mar 2015	2	16.65	87.20	7.9	33.33	8.2	24.3	0.68
A6	07 Mar 2015	3	16.61	87.17	7.9	33.33	8.2	24.3	0.83
A6	07 Mar 2015	4	16.51	87.11	7.8	33.32	8.2	24.3	1.00
A6	07 Mar 2015	5	16.27	87.05	7.9	33.32	8.2	24.4	1.15
A6	07 Mar 2015	6	16.27	87.50	7.8	33.31	8.2	24.4	1.22

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (µg/L)
A6	07 Mar 2015	7	16.02	87.78	7.7	33.31	8.2	24.4	1.34
A6	07 Mar 2015	8	15.89	88.14	7.7	33.31	8.2	24.5	1.40
A6	07 Mar 2015	9	15.74	88.56	7.6	33.30	8.2	24.5	1.42
A6	07 Mar 2015	10	15.63	88.88	7.6	33.30	8.2	24.5	1.42
A6	07 Mar 2015	11	15.57	89.09	7.6	33.30	8.2	24.5	1.42
A6	07 Mar 2015	12	15.46	89.34	7.5	33.30	8.2	24.6	1.37
A6	07 Mar 2015	13	15.38	89.40	7.5	33.30	8.2	24.6	1.33
A6	07 Mar 2015	14	15.26	89.52	7.3	33.29	8.2	24.6	1.25
A6	07 Mar 2015	15	14.57	89.68	7.1	33.25	8.1	24.7	1.23
A6	07 Mar 2015	16	13.62	89.85	7.1	33.27	8.1	24.9	1.34
A6	07 Mar 2015	17	13.20	90.33	7.1	33.27	8.1	25.0	1.38
A6	07 Mar 2015	18	13.02	90.43	7.1	33.28	8.1	25.1	1.41
A6	11 Mar 2015	1	16.80	89.46	8.1	33.33	8.2	24.3	0.76
A6	11 Mar 2015	2	16.72	89.43	8.1	33.32	8.2	24.3	0.85
A6	11 Mar 2015	3	16.64	89.59	8.1	33.33	8.2	24.3	0.91
A6	11 Mar 2015	4	16.60	89.66	8.1	33.32	8.2	24.3	0.97
A6	11 Mar 2015	5	16.59	89.57	8.1	33.33	8.2	24.3	1.00
A6	11 Mar 2015	6	16.57	88.64	8.1	33.33	8.2	24.3	1.03
A6	11 Mar 2015	7	16.50	88.34	8.1	33.32	8.2	24.3	1.03
A6	11 Mar 2015	8	16.45	88.34	8.1	33.33	8.2	24.4	1.05
A6	11 Mar 2015	9	16.42	88.53	8.1	33.33	8.2	24.4	1.08
A6	11 Mar 2015	10	16.37	88.86	8.0	33.33	8.2	24.4	1.13
A6	11 Mar 2015	11	16.30	89.28	8.0	33.33	8.2	24.4	1.17
A6	11 Mar 2015	12	16.26	89.62	8.0	33.33	8.2	24.4	1.20
A6	11 Mar 2015	13	16.19	89.69	7.9	33.34	8.2	24.4	1.24
A6	11 Mar 2015	14	15.97	89.74	7.7	33.32	8.2	24.5	1.29
A6	11 Mar 2015	15	15.43	89.53	7.5	33.32	8.2	24.6	1.27
A6	11 Mar 2015	16	14.81	89.64	7.3	33.32	8.1	24.7	1.32
A6	11 Mar 2015	17	14.43	89.99	7.2	33.32	8.1	24.8	1.42
A6	11 Mar 2015	18	14.10	90.05	7.2	33.33	8.1	24.9	1.52
A6	11 Mar 2015	19	13.98	89.95	7.1	33.33	8.1	24.9	1.59
A6	11 Mar 2015	20	13.88	89.76	7.1	33.33	8.1	24.9	1.64
A6	17 Mar 2015	1	16.88	88.85	8.2	33.33	8.2	24.3	0.94
A6	17 Mar 2015	2	16.88	88.81	8.2	33.33	8.2	24.3	0.96
A6	17 Mar 2015	3	16.88	88.85	8.1	33.33	8.2	24.3	1.00
A6	17 Mar 2015	4	16.83	88.88	8.1	33.32	8.2	24.3	1.08
A6	17 Mar 2015	5	16.73	88.88	8.1	33.32	8.2	24.3	1.17
A6	17 Mar 2015	6	16.64	88.90	8.1	33.32	8.2	24.3	1.34
A6	17 Mar 2015	7	16.52	88.74	8.0	33.32	8.2	24.3	1.35
A6	17 Mar 2015	8	16.43	88.66	8.0	33.32	8.2	24.4	1.41
A6	17 Mar 2015	9	16.34	88.64	8.0	33.32	8.2	24.4	1.43
A6	17 Mar 2015	10	16.25	88.53	7.9	33.32	8.2	24.4	1.44
A6	17 Mar 2015	11	16.05	88.49	7.8	33.32	8.2	24.4	1.38
A6	17 Mar 2015	12	15.88	88.53	7.7	33.32	8.2	24.5	1.24
A6	17 Mar 2015	13	15.74	88.97	7.6	33.32	8.2	24.5	1.20
A6	17 Mar 2015	14	15.66	89.47	7.6	33.32	8.1	24.5	1.16
A6	17 Mar 2015	15	15.52	89.56	7.4	33.31	8.1	24.6	1.03
A6	17 Mar 2015	16	15.10	89.85	7.2	33.32	8.1	24.7	0.92
A6	17 Mar 2015	17	14.74	90.50	7.1	33.32	8.1	24.7	0.86
A6	17 Mar 2015	18	14.49	90.80	6.9	33.31	8.1	24.8	0.83
A6	17 Mar 2015	19	14.17	90.89	6.8	33.32	8.1	24.9	0.80
A6	23 Mar 2015	1	18.02	83.40	7.0	33.37	8.2	24.0	0.70
A6	23 Mar 2015	2	17.98	85.80	7.7	33.38	8.2	24.0	0.75
A6	23 Mar 2015	3	17.75	87.32	8.0	33.45	8.2	24.1	0.80

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (µg/L)
A6	23 Mar 2015	4	17.63	87.61	8.0	33.39	8.2	24.1	0.84
A6	23 Mar 2015	5	17.19	87.80	8.1	33.40	8.2	24.2	0.93
A6	23 Mar 2015	6	17.06	87.95	8.2	33.38	8.2	24.3	1.14
A6	23 Mar 2015	7	16.79	87.96	8.1	33.38	8.2	24.3	1.47
A6	23 Mar 2015	8	16.26	88.29	8.2	33.34	8.2	24.4	1.79
A6	23 Mar 2015	9	16.18	88.54	8.1	33.31	8.2	24.4	1.87
A6	23 Mar 2015	10	16.06	88.72	8.1	33.30	8.2	24.4	1.89
A6	23 Mar 2015	11	15.79	88.87	8.1	33.30	8.2	24.5	1.81
A6	23 Mar 2015	12	15.49	89.06	8.0	33.30	8.2	24.6	1.68
A6	23 Mar 2015	13	15.09	89.68	7.9	33.30	8.2	24.6	1.46
A6	23 Mar 2015	14	14.86	90.15	7.7	33.30	8.2	24.7	1.31
A6	23 Mar 2015	15	14.55	90.45	7.6	33.29	8.1	24.8	1.24
A6	23 Mar 2015	16	14.31	90.41	7.5	33.30	8.1	24.8	1.22
A6	23 Mar 2015	17	14.22	90.51	7.4	33.29	8.1	24.8	1.17
A6	23 Mar 2015	18	13.95	90.51	7.3	33.29	8.1	24.9	1.11
A6	23 Mar 2015	19	13.79	90.67	7.2	33.30	8.1	24.9	1.07
A6	26 Mar 2015	1	17.77	87.42	8.0	33.32	8.2	24.0	0.83
A6	26 Mar 2015	2	17.77	87.37	8.1	33.32	8.2	24.0	0.88
A6	26 Mar 2015	3	17.77	87.35	8.0	33.32	8.2	24.0	0.95
A6	26 Mar 2015	4	17.77	87.29	8.1	33.32	8.2	24.0	1.01
A6	26 Mar 2015	5	17.73	87.24	8.1	33.31	8.2	24.0	1.17
A6	26 Mar 2015	6	17.71	87.28	8.0	33.32	8.2	24.1	1.25
A6	26 Mar 2015	7	17.61	87.19	8.1	33.31	8.2	24.1	1.47
A6	26 Mar 2015	8	17.56	86.98	8.1	33.31	8.2	24.1	1.55
A6	26 Mar 2015	9	17.39	86.53	7.9	33.31	8.2	24.1	2.01
A6	26 Mar 2015	10	16.10	86.12	7.6	33.30	8.2	24.4	2.23
A6	26 Mar 2015	11	16.02	85.63	7.2	33.30	8.2	24.4	1.75
A6	26 Mar 2015	12	16.00	85.93	7.6	33.49	8.2	24.6	1.77
A6	26 Mar 2015	13	15.28	86.71	7.5	33.37	8.1	24.7	1.56
A6	26 Mar 2015	14	14.53	87.35	7.2	33.29	8.1	24.8	1.27
A6	26 Mar 2015	15	14.07	88.11	7.0	33.30	8.1	24.9	1.14
A6	26 Mar 2015	16	13.75	88.38	6.8	33.31	8.1	24.9	1.04
A6	26 Mar 2015	17	13.38	88.53	6.6	33.31	8.1	25.0	0.93
A6	26 Mar 2015	18	13.01	88.85	6.5	33.33	8.1	25.1	0.84
A6	26 Mar 2015	19	12.84	88.81	6.4	33.34	8.0	25.1	0.81
C6	07 Mar 2015	1	16.84	87.59	7.6	33.33	8.2	24.3	0.39
C6	07 Mar 2015	2	16.68	87.77	7.6	33.33	8.2	24.3	0.43
C6	07 Mar 2015	3	16.62	87.33	7.7	33.33	8.2	24.3	0.49
C6	07 Mar 2015	4	16.58	87.23	7.7	33.33	8.2	24.3	0.57
C6	07 Mar 2015	5	16.56	87.30	7.8	33.33	8.2	24.3	0.67
C6	07 Mar 2015	6	16.49	87.12	7.8	33.32	8.2	24.3	0.86
C6	07 Mar 2015	7	16.44	87.01	7.8	33.32	8.2	24.4	1.07
C6	07 Mar 2015	8	16.28	87.02	7.8	33.31	8.2	24.4	1.39
C6	07 Mar 2015	9	16.17	86.99	7.8	33.31	8.2	24.4	1.41
C6	07 Mar 2015	10	16.04	86.92	7.8	33.31	8.2	24.4	1.17
C6	11 Mar 2015	1	17.04	88.22	8.2	33.31	8.2	24.2	0.69
C6	11 Mar 2015	2	17.01	88.37	8.3	33.31	8.2	24.2	0.71
C6	11 Mar 2015	3	16.99	88.40	8.2	33.31	8.2	24.2	0.75
C6	11 Mar 2015	4	16.97	88.49	8.2	33.31	8.2	24.2	0.77
C6	11 Mar 2015	5	16.89	88.54	8.2	33.30	8.2	24.2	0.85
C6	11 Mar 2015	6	16.59	88.68	8.2	33.32	8.2	24.3	0.94
C6	11 Mar 2015	7	16.45	88.96	8.3	33.32	8.2	24.4	1.02
C6	11 Mar 2015	8	16.26	89.32	8.1	33.32	8.2	24.4	1.05
C6	11 Mar 2015	9	16.01	89.48	7.9	33.31	8.2	24.4	0.72

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (µg/L)
C6	17 Mar 2015	1	17.01	85.10	8.1	33.35	8.2	24.2	0.57
	17 Mar 2015	2	17.00	85.03	8.1	33.35	8.2	24.2	0.62
	17 Mar 2015	3	16.99	84.99	8.1	33.35	8.2	24.3	0.68
	17 Mar 2015	4	16.93	84.98	8.2	33.35	8.2	24.3	0.78
	17 Mar 2015	5	16.78	85.24	8.2	33.33	8.2	24.3	0.91
	17 Mar 2015	6	16.60	85.53	8.3	33.33	8.2	24.3	1.03
	17 Mar 2015	7	16.34	86.09	8.1	33.32	8.2	24.4	1.10
	17 Mar 2015	8	15.98	86.52	7.9	33.32	8.2	24.5	1.02
	17 Mar 2015	9	15.77	87.04	7.7	33.31	8.2	24.5	0.98
	17 Mar 2015	10	15.40	87.49	7.6	33.32	8.1	24.6	0.69
	17 Mar 2015	11	15.37	87.73	7.5	33.32	8.1	24.6	0.60
C6	23 Mar 2015	1	18.29	78.58	7.9	33.34	8.2	23.9	0.48
	23 Mar 2015	2	18.25	83.41	7.9	33.34	8.2	23.9	0.54
	23 Mar 2015	3	18.19	86.59	7.8	33.34	8.2	24.0	0.58
	23 Mar 2015	4	17.95	86.17	7.8	33.33	8.2	24.0	0.68
	23 Mar 2015	5	17.29	85.70	8.0	33.30	8.2	24.1	0.98
	23 Mar 2015	6	16.70	86.98	8.0	33.30	8.2	24.3	1.04
	23 Mar 2015	7	16.45	88.31	8.0	33.30	8.2	24.3	0.95
	23 Mar 2015	8	16.24	89.47	8.1	33.29	8.2	24.4	0.88
	23 Mar 2015	9	15.82	89.87	7.9	33.27	8.2	24.5	0.75
	23 Mar 2015	10	15.50	89.55	7.8	33.29	8.2	24.5	0.57
	26 Mar 2015	1	17.68	82.37	7.6	33.32	8.2	24.1	0.56
C6	26 Mar 2015	2	17.65	82.71	7.5	33.32	8.2	24.1	0.57
	26 Mar 2015	3	17.50	82.94	7.7	33.31	8.2	24.1	0.71
	26 Mar 2015	4	17.46	82.82	7.7	33.31	8.2	24.1	0.80
	26 Mar 2015	5	17.30	82.90	7.9	33.31	8.2	24.1	1.03
	26 Mar 2015	6	17.15	83.40	7.8	33.30	8.2	24.2	1.21
	26 Mar 2015	7	16.89	83.55	7.6	33.30	8.2	24.2	1.43
	26 Mar 2015	8	15.96	82.47	7.1	33.28	8.1	24.4	1.06
	26 Mar 2015	9	15.53	81.83	6.9	33.31	8.1	24.6	0.80
	26 Mar 2015	10	15.53	81.83	6.9	33.31	8.1	24.6	0.80
	26 Mar 2015	11	15.53	81.83	6.9	33.31	8.1	24.6	0.80
	26 Mar 2015	12	15.53	81.83	6.9	33.31	8.1	24.6	0.80
A7	07 Mar 2015	1	16.59	86.92	7.9	33.34	8.2	24.3	0.63
	07 Mar 2015	2	16.56	87.87	7.8	33.34	8.2	24.3	0.69
	07 Mar 2015	3	16.52	87.76	7.9	33.34	8.2	24.4	0.82
	07 Mar 2015	4	16.43	88.01	7.9	33.32	8.2	24.4	0.90
	07 Mar 2015	5	16.28	88.14	7.8	33.32	8.2	24.4	1.01
	07 Mar 2015	6	16.17	88.48	7.8	33.31	8.2	24.4	1.04
	07 Mar 2015	7	15.98	89.27	7.8	33.30	8.2	24.4	1.07
	07 Mar 2015	8	15.82	89.65	7.8	33.30	8.2	24.5	1.10
	07 Mar 2015	9	15.62	90.01	7.7	33.30	8.2	24.5	1.10
	07 Mar 2015	10	15.50	90.12	7.6	33.29	8.2	24.5	1.12
	07 Mar 2015	11	15.01	90.08	7.3	33.25	8.2	24.6	1.25
	07 Mar 2015	12	13.82	90.16	7.2	33.26	8.1	24.9	1.38
	07 Mar 2015	13	13.09	85.84	7.1	33.27	8.1	25.0	1.28
	07 Mar 2015	14	12.87	83.10	7.0	33.28	8.1	25.1	1.28
	07 Mar 2015	15	12.70	86.79	6.8	33.28	8.0	25.1	1.29
	07 Mar 2015	16	12.58	88.74	6.8	33.29	8.0	25.1	1.34
	07 Mar 2015	17	12.47	89.46	6.6	33.29	8.0	25.2	1.28
	07 Mar 2015	18	12.39	89.86	6.6	33.30	8.0	25.2	1.27
	07 Mar 2015	19	12.38	89.84	6.6	33.31	8.0	25.2	1.56
A7	11 Mar 2015	1	16.76	89.53	8.2	33.33	8.2	24.3	0.86
	11 Mar 2015	2	16.75	89.19	8.1	33.34	8.2	24.3	0.89
	11 Mar 2015	3	16.73	88.64	8.1	33.34	8.2	24.3	0.92

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (µg/L)
A7	11 Mar 2015	4	16.68	89.58	8.1	33.34	8.2	24.3	0.94
A7	11 Mar 2015	5	16.66	89.72	8.1	33.34	8.2	24.3	0.96
A7	11 Mar 2015	6	16.57	89.84	8.0	33.34	8.2	24.3	1.02
A7	11 Mar 2015	7	16.37	89.78	7.9	33.34	8.2	24.4	1.12
A7	11 Mar 2015	8	16.01	89.91	7.8	33.33	8.2	24.5	1.12
A7	11 Mar 2015	9	15.41	90.05	7.5	33.33	8.2	24.6	1.15
A7	11 Mar 2015	10	15.09	90.34	7.5	33.33	8.1	24.7	1.28
A7	11 Mar 2015	11	14.90	90.28	7.4	33.34	8.1	24.7	1.35
A7	11 Mar 2015	12	14.72	90.11	7.4	33.33	8.1	24.7	1.41
A7	11 Mar 2015	13	14.54	89.97	7.3	33.34	8.1	24.8	1.43
A7	11 Mar 2015	14	14.48	89.88	7.2	33.34	8.1	24.8	1.45
A7	11 Mar 2015	15	14.38	89.79	7.2	33.34	8.1	24.8	1.48
A7	11 Mar 2015	16	14.30	89.76	7.2	33.34	8.1	24.8	1.49
A7	11 Mar 2015	17	14.21	89.69	7.1	33.34	8.1	24.9	1.50
A7	11 Mar 2015	18	14.15	89.66	7.1	33.34	8.1	24.9	1.45
A7	11 Mar 2015	19	14.11	89.66	7.1	33.35	8.1	24.9	1.37
A7	17 Mar 2015	1	16.91	88.37	7.9	33.34	8.2	24.3	1.18
A7	17 Mar 2015	2	16.90	87.51	8.0	33.34	8.2	24.3	1.15
A7	17 Mar 2015	3	16.88	88.52	8.0	33.34	8.2	24.3	1.18
A7	17 Mar 2015	4	16.88	88.43	8.0	33.34	8.2	24.3	1.20
A7	17 Mar 2015	5	16.88	88.10	8.0	33.34	8.2	24.3	1.23
A7	17 Mar 2015	6	16.81	86.78	8.1	33.34	8.2	24.3	1.35
A7	17 Mar 2015	7	16.77	86.78	8.0	33.34	8.2	24.3	1.37
A7	17 Mar 2015	8	16.75	86.61	8.1	33.34	8.2	24.3	1.39
A7	17 Mar 2015	9	16.74	86.71	8.0	33.34	8.2	24.3	1.42
A7	17 Mar 2015	10	16.73	87.80	8.0	33.34	8.2	24.3	1.41
A7	17 Mar 2015	11	16.64	87.96	8.0	33.33	8.2	24.3	1.42
A7	17 Mar 2015	12	16.53	87.85	7.9	33.33	8.2	24.3	1.50
A7	17 Mar 2015	13	16.34	87.83	7.8	33.32	8.2	24.4	1.62
A7	17 Mar 2015	14	15.88	87.66	7.8	33.31	8.2	24.5	1.73
A7	17 Mar 2015	15	15.53	87.30	7.8	33.32	8.1	24.6	1.60
A7	17 Mar 2015	16	15.15	87.61	7.5	33.31	8.1	24.6	1.32
A7	17 Mar 2015	17	14.88	88.01	7.2	33.30	8.1	24.7	1.14
A7	17 Mar 2015	18	14.01	88.32	7.0	33.28	8.1	24.9	1.05
A7	17 Mar 2015	19	13.55	88.86	6.9	33.32	8.0	25.0	1.02
A7	23 Mar 2015	1	18.16	86.63	8.2	33.35	8.2	24.0	1.13
A7	23 Mar 2015	2	18.17	86.82	8.2	33.35	8.2	24.0	1.13
A7	23 Mar 2015	3	18.11	87.19	8.3	33.33	8.2	24.0	1.22
A7	23 Mar 2015	4	17.57	87.22	8.3	33.30	8.2	24.1	1.31
A7	23 Mar 2015	5	17.21	87.34	8.3	33.30	8.2	24.2	1.38
A7	23 Mar 2015	6	16.94	87.77	8.3	33.31	8.2	24.2	1.35
A7	23 Mar 2015	7	16.83	88.12	8.4	33.31	8.2	24.3	1.42
A7	23 Mar 2015	8	16.70	88.48	8.2	33.30	8.2	24.3	1.42
A7	23 Mar 2015	9	16.37	88.82	8.0	33.28	8.2	24.3	1.37
A7	23 Mar 2015	10	15.83	89.15	8.0	33.28	8.2	24.5	1.31
A7	23 Mar 2015	11	15.32	89.50	7.9	33.28	8.2	24.6	1.24
A7	23 Mar 2015	12	15.10	89.68	7.7	33.27	8.2	24.6	1.23
A7	23 Mar 2015	13	14.68	89.86	7.7	33.25	8.2	24.7	1.19
A7	23 Mar 2015	14	14.32	90.14	7.6	33.28	8.1	24.8	1.14
A7	23 Mar 2015	15	14.04	90.26	7.5	33.27	8.1	24.8	1.12
A7	23 Mar 2015	16	13.80	90.30	7.4	33.27	8.1	24.9	1.10
A7	23 Mar 2015	17	13.53	90.34	7.3	33.27	8.1	24.9	1.08
A7	23 Mar 2015	18	13.29	90.28	7.2	33.28	8.1	25.0	1.04
A7	26 Mar 2015	1	17.62	85.97	7.9	33.32	8.2	24.1	1.07

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (µg/L)
A7	26 Mar 2015	2	17.61	86.20	7.9	33.32	8.2	24.1	1.16
A7	26 Mar 2015	3	17.61	86.56	7.9	33.32	8.2	24.1	1.21
A7	26 Mar 2015	4	17.60	86.72	7.8	33.32	8.2	24.1	1.28
A7	26 Mar 2015	5	17.59	86.74	7.9	33.32	8.2	24.1	1.31
A7	26 Mar 2015	6	17.58	86.80	7.8	33.32	8.2	24.1	1.35
A7	26 Mar 2015	7	17.49	86.71	7.8	33.31	8.2	24.1	1.47
A7	26 Mar 2015	8	17.35	86.77	7.8	33.32	8.2	24.1	1.59
A7	26 Mar 2015	9	17.08	86.83	7.8	33.30	8.2	24.2	1.77
A7	26 Mar 2015	10	16.52	86.84	7.8	33.31	8.2	24.3	1.81
A7	26 Mar 2015	11	16.29	86.81	7.7	33.30	8.2	24.4	1.79
A7	26 Mar 2015	12	15.78	86.73	7.6	33.30	8.2	24.5	1.63
A7	26 Mar 2015	13	15.41	86.94	7.4	33.30	8.2	24.6	1.47
A7	26 Mar 2015	14	15.17	87.55	7.2	33.30	8.1	24.6	1.33
A7	26 Mar 2015	15	14.70	87.90	7.1	33.30	8.1	24.7	1.20
A7	26 Mar 2015	16	14.41	88.01	6.9	33.29	8.1	24.8	1.06
A7	26 Mar 2015	17	14.03	88.16	6.7	33.31	8.1	24.9	0.92
A7	26 Mar 2015	18	13.82	88.42	6.6	33.32	8.1	24.9	0.88
A7	26 Mar 2015	19	13.66	88.59	6.5	33.31	8.1	25.0	0.83
C7	07 Mar 2015	1	16.87	86.76	8.0	33.30	8.2	24.2	0.48
C7	07 Mar 2015	2	16.86	85.94	7.9	33.30	8.2	24.2	0.52
C7	07 Mar 2015	3	16.78	86.81	8.0	33.30	8.2	24.3	0.69
C7	07 Mar 2015	4	16.59	86.92	8.1	33.30	8.2	24.3	1.01
C7	07 Mar 2015	5	16.37	87.07	8.1	33.31	8.2	24.4	1.36
C7	07 Mar 2015	6	16.26	87.15	8.0	33.30	8.2	24.4	1.53
C7	07 Mar 2015	7	16.16	87.37	8.0	33.31	8.2	24.4	1.63
C7	07 Mar 2015	8	16.06	87.57	7.8	33.30	8.2	24.4	1.65
C7	07 Mar 2015	9	15.98	87.91	7.8	33.30	8.2	24.4	1.80
C7	07 Mar 2015	10	15.90	88.21	7.5	33.30	8.2	24.5	1.71
C7	07 Mar 2015	11	15.82	88.32	7.5	33.30	8.2	24.5	1.82
C7	07 Mar 2015	12	15.69	87.73	7.5	33.32	8.2	24.5	2.31
C7	07 Mar 2015	13	15.63	86.26	7.4	33.29	8.2	24.5	1.94
C7	07 Mar 2015	14	15.27	86.36	7.2	33.30	8.2	24.6	1.34
C7	07 Mar 2015	15	15.04	86.90	7.1	33.29	8.1	24.6	1.12
C7	07 Mar 2015	16	14.61	87.20	7.1	33.28	8.1	24.7	1.03
C7	07 Mar 2015	17	14.35	87.15	7.0	33.28	8.1	24.8	1.03
C7	07 Mar 2015	18	14.05	86.91	7.0	33.29	8.1	24.9	0.99
C7	07 Mar 2015	19	14.01	86.97	7.0	33.29	8.1	24.9	0.97
C7	11 Mar 2015	1	16.96	89.12	7.8	33.31	8.2	24.2	0.73
C7	11 Mar 2015	2	16.95	89.21	7.9	33.31	8.2	24.2	0.80
C7	11 Mar 2015	3	16.93	89.27	7.9	33.31	8.2	24.2	0.84
C7	11 Mar 2015	4	16.93	89.28	7.9	33.31	8.2	24.2	0.83
C7	11 Mar 2015	5	16.89	89.42	7.9	33.30	8.2	24.2	0.89
C7	11 Mar 2015	6	16.82	89.47	8.0	33.30	8.2	24.2	1.05
C7	11 Mar 2015	7	16.44	89.31	8.1	33.30	8.2	24.3	1.39
C7	11 Mar 2015	8	16.26	89.16	8.1	33.31	8.2	24.4	1.64
C7	11 Mar 2015	9	16.14	88.50	8.0	33.31	8.2	24.4	1.77
C7	11 Mar 2015	10	16.08	88.17	7.9	33.31	8.2	24.4	1.85
C7	11 Mar 2015	11	16.00	87.87	7.8	33.31	8.2	24.4	1.85
C7	11 Mar 2015	12	15.92	88.01	7.8	33.31	8.2	24.5	1.87
C7	11 Mar 2015	13	15.77	88.06	7.8	33.31	8.2	24.5	1.81
C7	11 Mar 2015	14	15.66	88.17	7.6	33.30	8.2	24.5	1.78
C7	11 Mar 2015	15	15.45	88.36	7.4	33.31	8.2	24.6	1.67
C7	11 Mar 2015	16	15.19	88.45	7.3	33.30	8.1	24.6	1.35
C7	11 Mar 2015	17	14.87	88.91	7.0	33.30	8.1	24.7	1.05
C7	11 Mar 2015	18	14.32	89.89	6.8	33.30	8.1	24.8	0.80

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (µg/L)
C7	17 Mar 2015	1	16.94	88.55	8.2	33.32	8.2	24.2	0.70
C7	17 Mar 2015	2	16.94	88.58	8.3	33.32	8.2	24.2	0.74
C7	17 Mar 2015	3	16.87	88.65	8.3	33.31	8.2	24.3	0.91
C7	17 Mar 2015	4	16.67	88.67	8.2	33.31	8.2	24.3	1.32
C7	17 Mar 2015	5	16.54	88.52	8.2	33.31	8.2	24.3	1.77
C7	17 Mar 2015	6	16.39	87.58	8.2	33.31	8.2	24.4	2.08
C7	17 Mar 2015	7	16.28	86.17	8.1	33.31	8.2	24.4	2.20
C7	17 Mar 2015	8	16.02	86.57	8.1	33.33	8.2	24.5	2.36
C7	17 Mar 2015	9	16.04	86.52	8.0	33.31	8.2	24.4	2.32
C7	17 Mar 2015	10	15.76	86.70	8.0	33.31	8.2	24.5	2.22
C7	17 Mar 2015	11	15.54	86.48	7.9	33.31	8.2	24.6	2.34
C7	17 Mar 2015	12	15.40	86.58	7.7	33.32	8.1	24.6	2.30
C7	17 Mar 2015	13	15.22	86.83	7.5	33.31	8.1	24.6	2.16
C7	17 Mar 2015	14	14.99	86.78	7.4	33.31	8.1	24.7	1.94
C7	17 Mar 2015	15	14.51	87.14	7.2	33.31	8.1	24.8	1.71
C7	17 Mar 2015	16	14.07	87.77	6.9	33.32	8.1	24.9	1.46
C7	17 Mar 2015	17	13.63	88.56	6.8	33.33	8.1	25.0	1.21
C7	17 Mar 2015	18	13.49	89.27	6.6	33.33	8.0	25.0	0.98
C7	17 Mar 2015	19	13.46	89.69	6.5	33.33	8.0	25.0	0.88
C7	23 Mar 2015	1	18.17	86.56	7.9	33.33	8.2	24.0	0.99
C7	23 Mar 2015	2	18.19	86.43	7.9	33.33	8.2	23.9	1.01
C7	23 Mar 2015	3	18.19	86.86	8.0	33.33	8.2	23.9	1.03
C7	23 Mar 2015	4	18.15	87.06	7.9	33.33	8.2	24.0	1.10
C7	23 Mar 2015	5	18.00	87.03	7.8	33.28	8.2	24.0	1.40
C7	23 Mar 2015	6	16.97	86.78	7.8	33.30	8.2	24.2	1.97
C7	23 Mar 2015	7	16.49	86.83	7.8	33.28	8.2	24.3	2.08
C7	23 Mar 2015	8	16.13	86.65	7.9	33.28	8.2	24.4	1.98
C7	23 Mar 2015	9	15.96	87.05	7.8	33.29	8.2	24.4	1.83
C7	23 Mar 2015	10	15.81	87.26	7.8	33.29	8.2	24.5	1.88
C7	23 Mar 2015	11	15.68	86.84	7.8	33.29	8.2	24.5	1.78
C7	23 Mar 2015	12	15.55	87.21	7.6	33.29	8.2	24.5	1.62
C7	23 Mar 2015	13	15.35	88.40	7.5	33.29	8.2	24.6	1.44
C7	23 Mar 2015	14	15.12	88.44	7.4	33.29	8.2	24.6	1.25
C7	23 Mar 2015	15	14.62	88.73	7.2	33.28	8.1	24.7	1.04
C7	23 Mar 2015	16	14.42	89.71	7.2	33.29	8.1	24.8	0.92
C7	23 Mar 2015	17	14.32	89.22	7.2	33.29	8.1	24.8	0.83
C7	23 Mar 2015	18	14.37	88.24	7.1	33.30	8.1	24.8	0.83
C7	26 Mar 2015	1	17.89	86.41	7.9	33.32	8.2	24.0	0.61
C7	26 Mar 2015	2	17.89	86.48	7.9	33.32	8.2	24.0	0.65
C7	26 Mar 2015	3	17.88	86.35	8.0	33.32	8.2	24.0	0.71
C7	26 Mar 2015	4	17.86	86.57	7.9	33.32	8.2	24.0	0.75
C7	26 Mar 2015	5	17.85	86.85	7.9	33.32	8.2	24.0	0.86
C7	26 Mar 2015	6	17.83	86.94	7.9	33.32	8.2	24.0	0.97
C7	26 Mar 2015	7	17.65	87.08	8.0	33.30	8.2	24.1	1.45
C7	26 Mar 2015	8	17.43	86.97	8.1	33.30	8.2	24.1	1.92
C7	26 Mar 2015	9	17.13	86.25	8.1	33.27	8.2	24.2	2.16
C7	26 Mar 2015	10	16.68	85.95	8.1	33.29	8.2	24.3	2.36
C7	26 Mar 2015	11	16.18	85.83	7.8	33.27	8.2	24.4	2.32
C7	26 Mar 2015	12	15.55	85.57	7.7	33.30	8.2	24.5	2.03
C7	26 Mar 2015	13	15.10	85.61	7.3	33.28	8.2	24.6	1.74
C7	26 Mar 2015	14	14.53	86.16	7.1	33.30	8.1	24.8	1.35
C7	26 Mar 2015	15	14.25	86.80	6.8	33.29	8.1	24.8	1.05
C7	26 Mar 2015	16	13.38	87.58	6.6	33.29	8.1	25.0	0.79
C7	26 Mar 2015	17	13.13	88.28	6.4	33.31	8.0	25.1	0.65

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens ($\sigma\text{-t}$)	Chlor ($\mu\text{g/L}$)
C7	26 Mar 2015	18	13.03	88.54	6.4	33.31	8.0	25.1	0.61
C8	07 Mar 2015	1	16.54	89.01	7.8	33.32	8.2	24.3	0.55
C8	07 Mar 2015	2	16.51	89.05	7.8	33.31	8.2	24.3	0.59
C8	07 Mar 2015	3	16.44	89.02	7.8	33.31	8.2	24.3	0.66
C8	07 Mar 2015	4	16.27	89.03	7.8	33.30	8.2	24.4	0.82
C8	07 Mar 2015	5	16.11	88.87	7.8	33.30	8.2	24.4	1.02
C8	07 Mar 2015	6	16.03	88.56	7.8	33.30	8.2	24.4	1.17
C8	07 Mar 2015	7	15.91	88.17	7.8	33.30	8.2	24.5	1.29
C8	07 Mar 2015	8	15.83	88.15	7.8	33.30	8.2	24.5	1.36
C8	07 Mar 2015	9	15.80	88.30	7.7	33.30	8.2	24.5	1.41
C8	07 Mar 2015	10	15.75	88.42	7.6	33.30	8.2	24.5	1.39
C8	07 Mar 2015	11	15.68	88.55	7.6	33.30	8.2	24.5	1.43
C8	07 Mar 2015	12	15.66	88.44	7.5	33.30	8.2	24.5	1.41
C8	07 Mar 2015	13	15.31	88.42	7.4	33.25	8.2	24.6	1.38
C8	07 Mar 2015	14	14.92	88.31	7.4	33.29	8.2	24.7	1.34
C8	07 Mar 2015	15	14.89	88.34	7.4	33.29	8.1	24.7	1.38
C8	07 Mar 2015	16	14.81	88.75	7.3	33.28	8.1	24.7	1.30
C8	07 Mar 2015	17	14.67	88.96	7.1	33.29	8.1	24.7	1.09
C8	07 Mar 2015	18	14.60	89.07	7.0	33.29	8.1	24.7	0.98
C8	07 Mar 2015	19	14.51	89.15	7.0	33.28	8.1	24.8	0.90
C8	07 Mar 2015	20	14.41	89.21	7.0	33.29	8.1	24.8	1.02
C8	11 Mar 2015	1	16.69	88.20	7.8	33.33	8.2	24.3	0.68
C8	11 Mar 2015	2	16.67	88.35	7.9	33.33	8.2	24.3	0.72
C8	11 Mar 2015	3	16.65	88.39	7.9	33.33	8.2	24.3	0.75
C8	11 Mar 2015	4	16.64	88.82	8.0	33.33	8.2	24.3	0.79
C8	11 Mar 2015	5	16.64	88.94	7.8	33.33	8.2	24.3	0.80
C8	11 Mar 2015	6	16.64	89.00	7.9	33.33	8.2	24.3	0.81
C8	11 Mar 2015	7	16.61	89.01	7.9	33.32	8.2	24.3	0.85
C8	11 Mar 2015	8	16.56	89.09	7.8	33.32	8.2	24.3	0.94
C8	11 Mar 2015	9	16.44	88.78	7.8	33.32	8.2	24.4	1.03
C8	11 Mar 2015	10	16.38	88.22	7.8	33.32	8.2	24.4	1.11
C8	11 Mar 2015	11	16.34	87.99	7.8	33.32	8.2	24.4	1.16
C8	11 Mar 2015	12	16.29	88.08	7.8	33.32	8.2	24.4	1.12
C8	11 Mar 2015	13	16.25	88.47	7.8	33.32	8.2	24.4	1.13
C8	11 Mar 2015	14	16.19	88.82	7.8	33.32	8.2	24.4	1.14
C8	11 Mar 2015	15	16.06	89.20	7.7	33.31	8.2	24.4	1.17
C8	11 Mar 2015	16	15.74	89.48	7.5	33.29	8.2	24.5	1.16
C8	11 Mar 2015	17	14.84	89.73	7.2	33.28	8.1	24.7	1.15
C8	11 Mar 2015	18	14.36	89.90	7.2	33.29	8.1	24.8	1.17
C8	11 Mar 2015	19	14.28	89.93	7.1	33.30	8.1	24.8	1.17
C8	17 Mar 2015	1	17.19	88.24	8.4	33.32	8.2	24.2	0.53
C8	17 Mar 2015	2	17.17	88.34	8.4	33.32	8.2	24.2	0.54
C8	17 Mar 2015	3	17.12	88.53	8.3	33.31	8.2	24.2	0.59
C8	17 Mar 2015	4	17.04	88.51	8.3	33.31	8.2	24.2	0.65
C8	17 Mar 2015	5	16.92	88.72	8.2	33.31	8.2	24.2	0.75
C8	17 Mar 2015	6	16.58	88.80	8.2	33.30	8.2	24.3	1.14
C8	17 Mar 2015	7	16.38	88.43	8.0	33.31	8.2	24.4	1.52
C8	17 Mar 2015	8	16.01	87.87	7.9	33.28	8.2	24.4	1.86
C8	17 Mar 2015	9	15.48	87.14	7.9	33.31	8.2	24.6	2.09
C8	17 Mar 2015	10	15.33	86.25	7.8	33.31	8.2	24.6	2.25
C8	17 Mar 2015	11	15.17	86.00	7.7	33.30	8.1	24.6	2.24
C8	17 Mar 2015	12	14.90	86.02	7.7	33.30	8.1	24.7	2.16
C8	17 Mar 2015	13	14.73	86.60	7.6	33.31	8.1	24.7	2.12
C8	17 Mar 2015	14	14.57	87.25	7.3	33.30	8.1	24.8	1.92

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (µg/L)
C8	17 Mar 2015	15	14.25	87.63	7.1	33.32	8.1	24.8	1.72
	17 Mar 2015	16	14.07	87.75	7.0	33.31	8.1	24.9	1.64
	17 Mar 2015	17	13.64	87.98	6.7	33.32	8.1	25.0	1.33
	17 Mar 2015	18	13.48	88.64	6.6	33.33	8.0	25.0	1.18
	17 Mar 2015	19	13.34	88.84	6.6	33.33	8.0	25.0	1.15
	17 Mar 2015	20	13.19	88.94	6.5	33.33	8.0	25.1	1.21
C8	23 Mar 2015	1	17.79	84.16	7.7	33.32	8.2	24.0	0.74
	23 Mar 2015	2	17.77	84.76	7.7	33.32	8.2	24.0	0.80
	23 Mar 2015	3	17.69	85.11	7.8	33.30	8.2	24.0	0.93
	23 Mar 2015	4	17.47	85.57	7.8	33.32	8.2	24.1	1.06
	23 Mar 2015	5	17.41	86.42	7.7	33.30	8.2	24.1	1.22
	23 Mar 2015	6	17.02	86.29	7.6	33.29	8.2	24.2	1.27
	23 Mar 2015	7	16.61	87.52	7.7	33.29	8.2	24.3	1.33
	23 Mar 2015	8	16.33	88.17	7.7	33.30	8.2	24.4	1.35
	23 Mar 2015	9	16.23	88.16	7.6	33.30	8.2	24.4	1.45
	23 Mar 2015	10	16.11	87.92	7.7	33.30	8.2	24.4	1.51
	23 Mar 2015	11	16.06	87.83	7.6	33.30	8.2	24.4	1.53
	23 Mar 2015	12	16.04	87.93	7.7	33.30	8.2	24.4	1.46
	23 Mar 2015	13	15.96	87.89	7.6	33.30	8.2	24.5	1.41
	23 Mar 2015	14	15.94	88.06	7.6	33.31	8.2	24.5	1.39
	23 Mar 2015	15	15.95	88.07	7.6	33.31	8.2	24.5	1.37
	23 Mar 2015	16	15.89	88.04	7.5	33.29	8.2	24.5	1.28
	23 Mar 2015	17	15.30	88.16	7.2	33.28	8.2	24.6	1.06
	23 Mar 2015	18	14.43	88.35	7.2	33.28	8.1	24.8	1.04
	23 Mar 2015	19	14.30	88.42	7.2	33.30	8.1	24.8	0.94
C8	26 Mar 2015	1	17.80	86.52	7.7	33.33	8.2	24.0	0.59
	26 Mar 2015	2	17.79	86.01	7.8	33.33	8.2	24.0	0.59
	26 Mar 2015	3	17.74	86.76	7.8	33.33	8.2	24.1	0.61
	26 Mar 2015	4	17.73	87.00	7.6	33.32	8.2	24.1	0.67
	26 Mar 2015	5	17.72	87.04	7.7	33.32	8.2	24.1	0.76
	26 Mar 2015	6	17.72	87.08	7.7	33.32	8.2	24.1	0.82
	26 Mar 2015	7	17.73	87.02	7.8	33.32	8.2	24.1	0.86
	26 Mar 2015	8	17.70	86.91	7.7	33.32	8.2	24.1	0.89
	26 Mar 2015	9	17.61	87.02	7.8	33.31	8.2	24.1	0.95
	26 Mar 2015	10	16.65	86.98	7.8	33.31	8.2	24.3	1.24
	26 Mar 2015	11	16.44	87.13	7.8	33.30	8.2	24.3	1.56
	26 Mar 2015	12	16.05	86.43	7.9	33.29	8.2	24.4	1.79
	26 Mar 2015	13	15.76	85.33	7.8	33.30	8.2	24.5	1.93
	26 Mar 2015	14	15.42	85.12	7.7	33.28	8.2	24.6	2.18
	26 Mar 2015	15	14.60	84.75	7.6	33.30	8.2	24.8	4.40
	26 Mar 2015	16	14.17	84.70	7.2	33.30	8.1	24.8	2.62
	26 Mar 2015	17	13.38	81.78	6.8	33.31	8.1	25.0	1.41
	26 Mar 2015	18	13.00	82.25	6.5	33.33	8.1	25.1	1.13
	26 Mar 2015	19	12.75	82.35	6.5	33.34	8.1	25.2	1.09

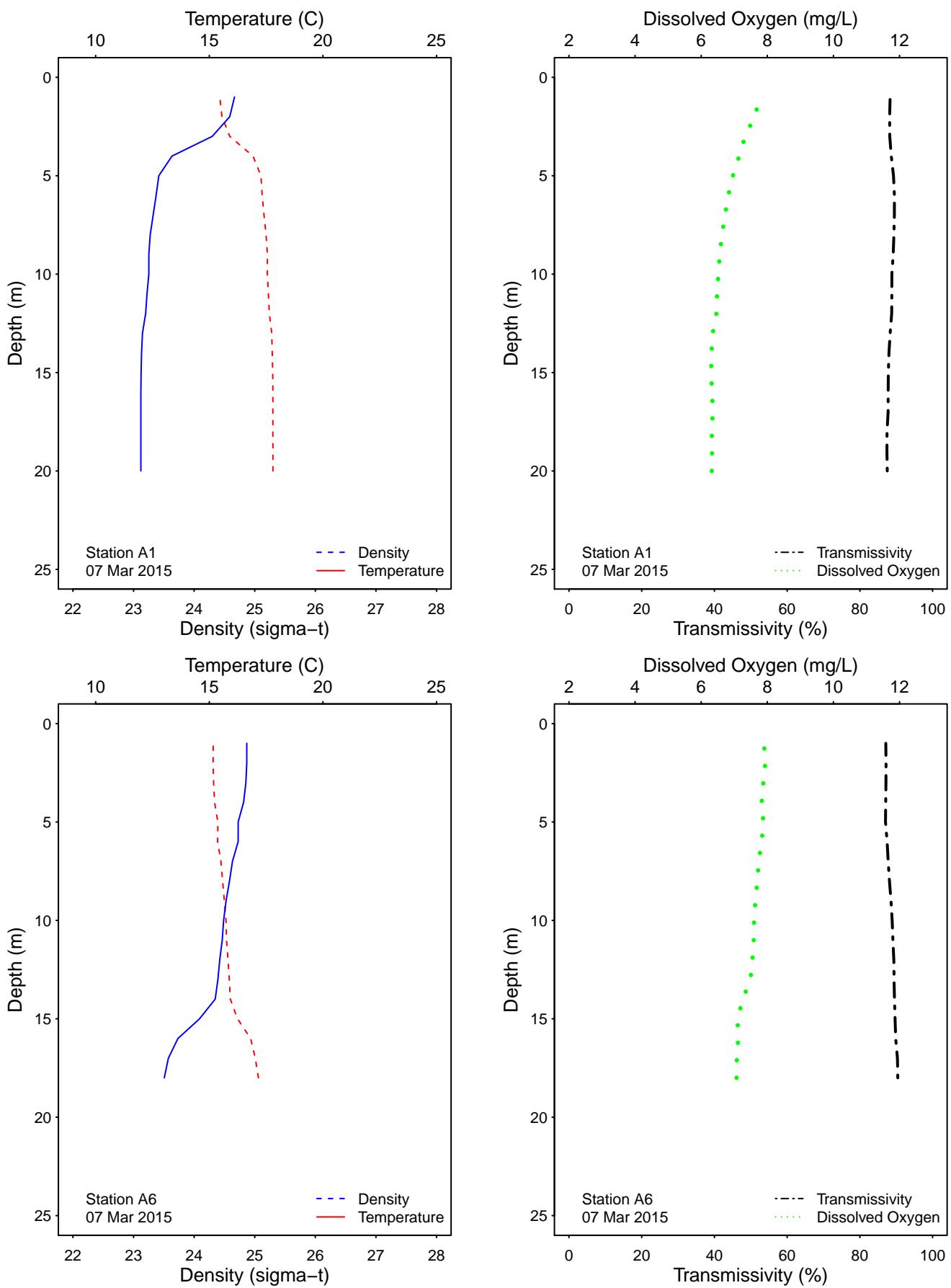


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

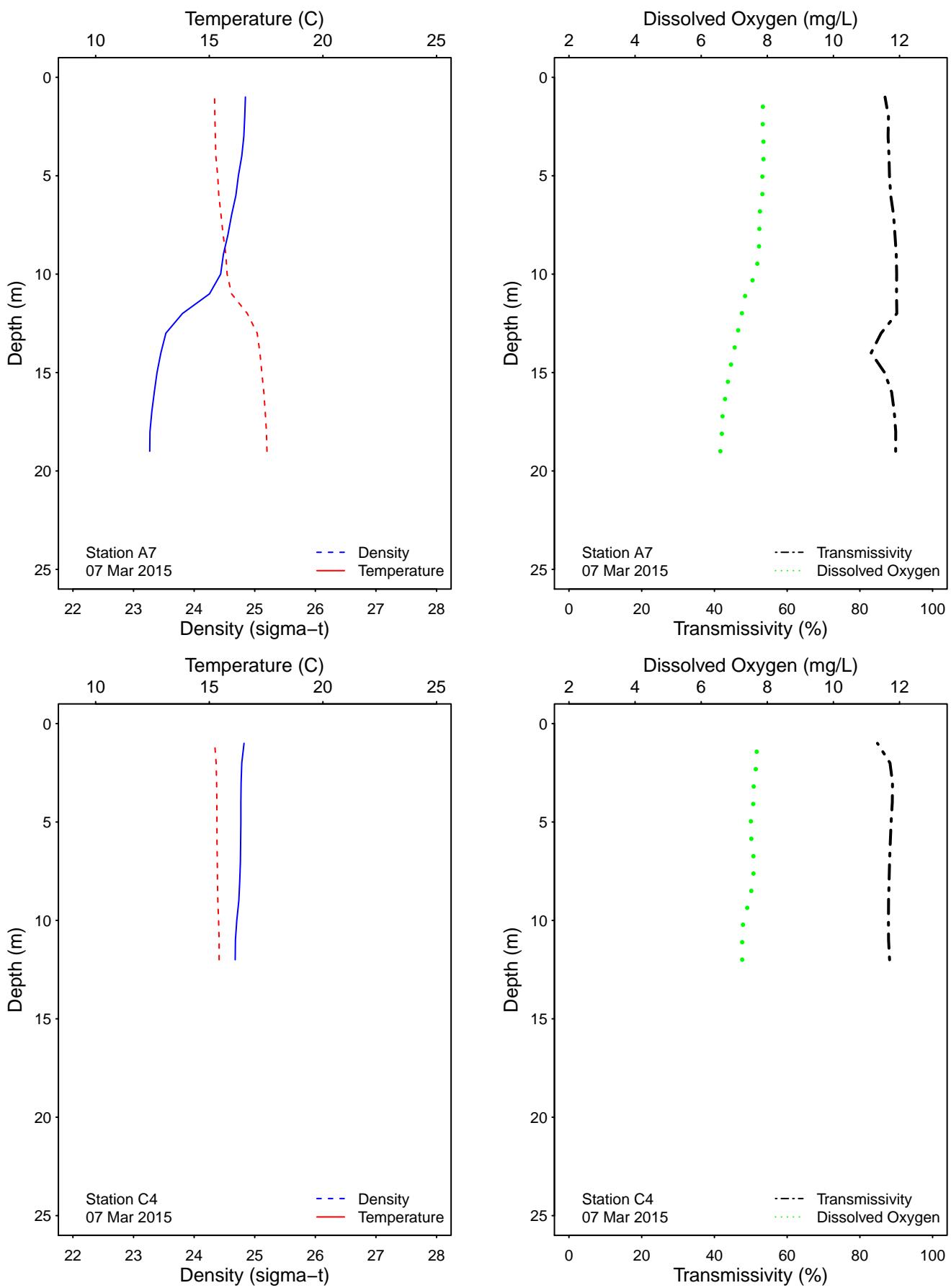


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

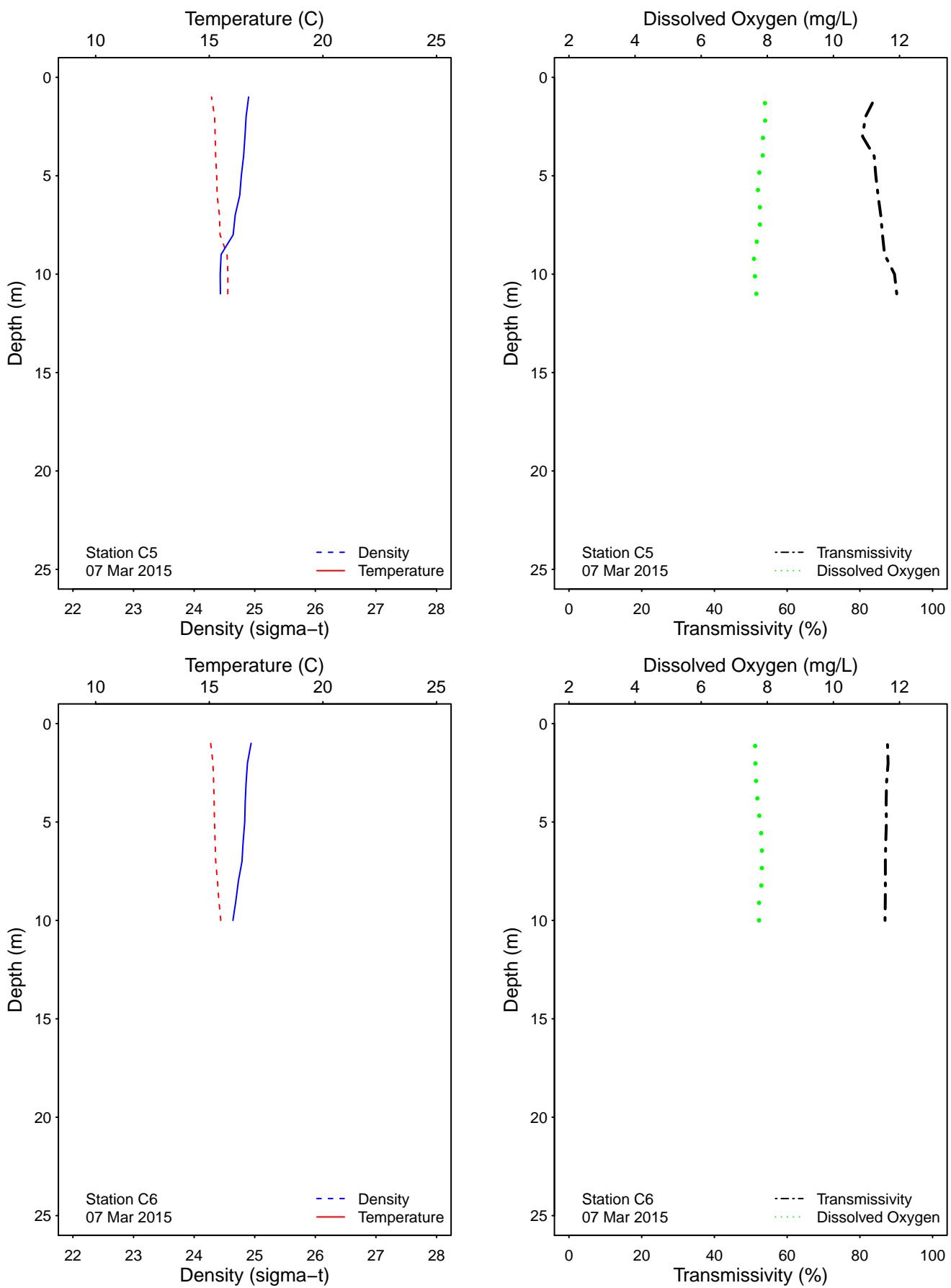


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

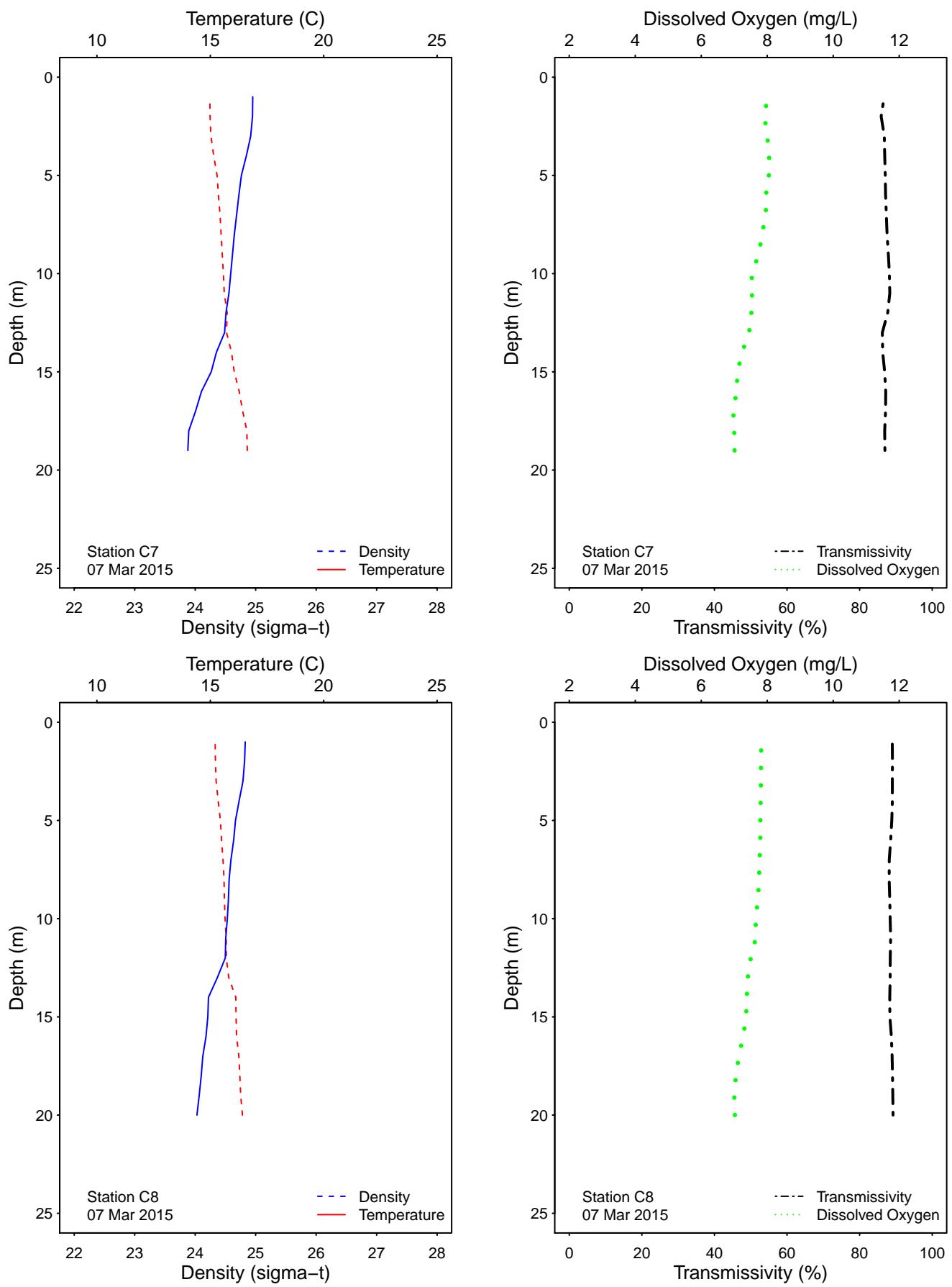


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

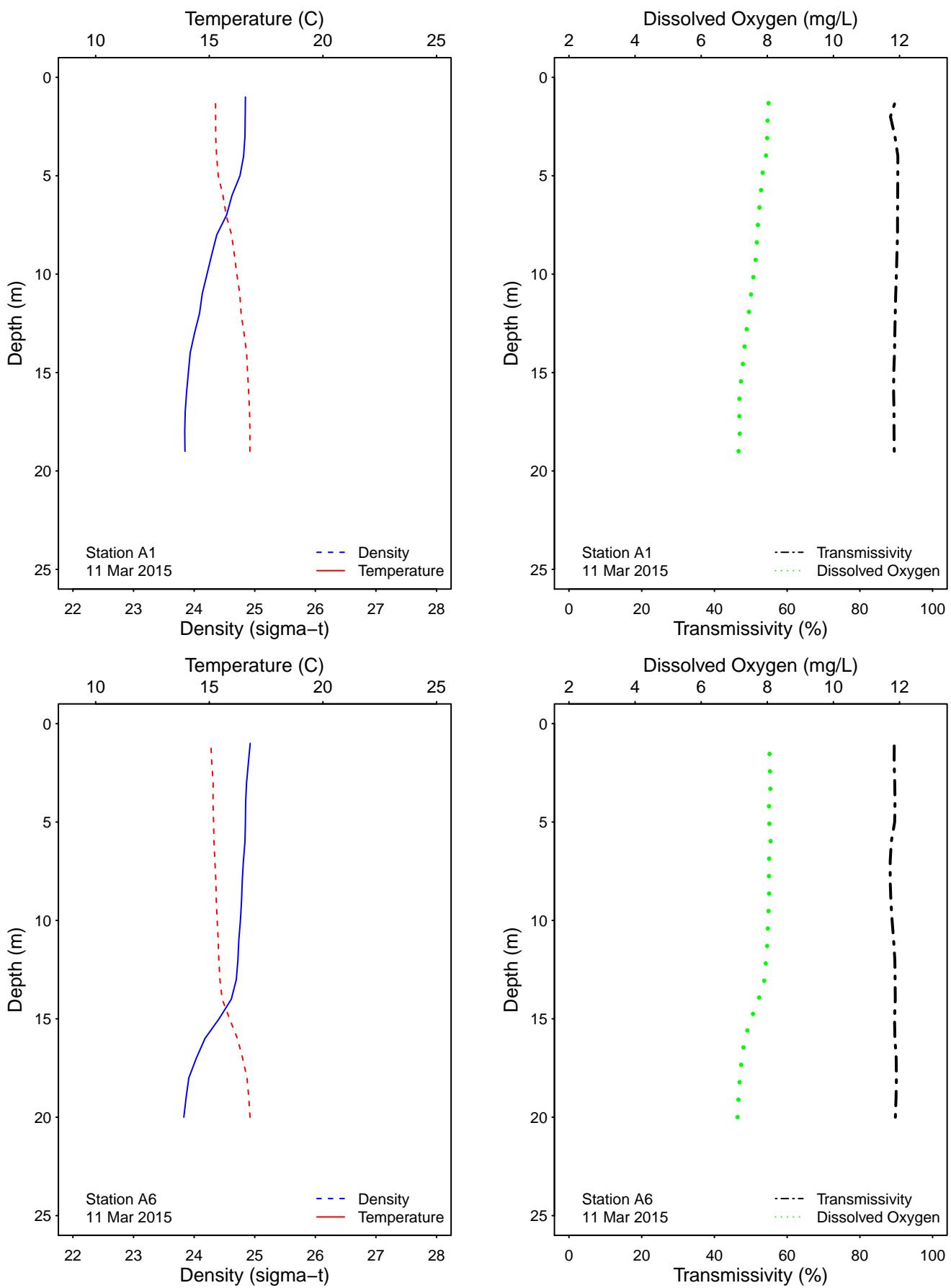


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

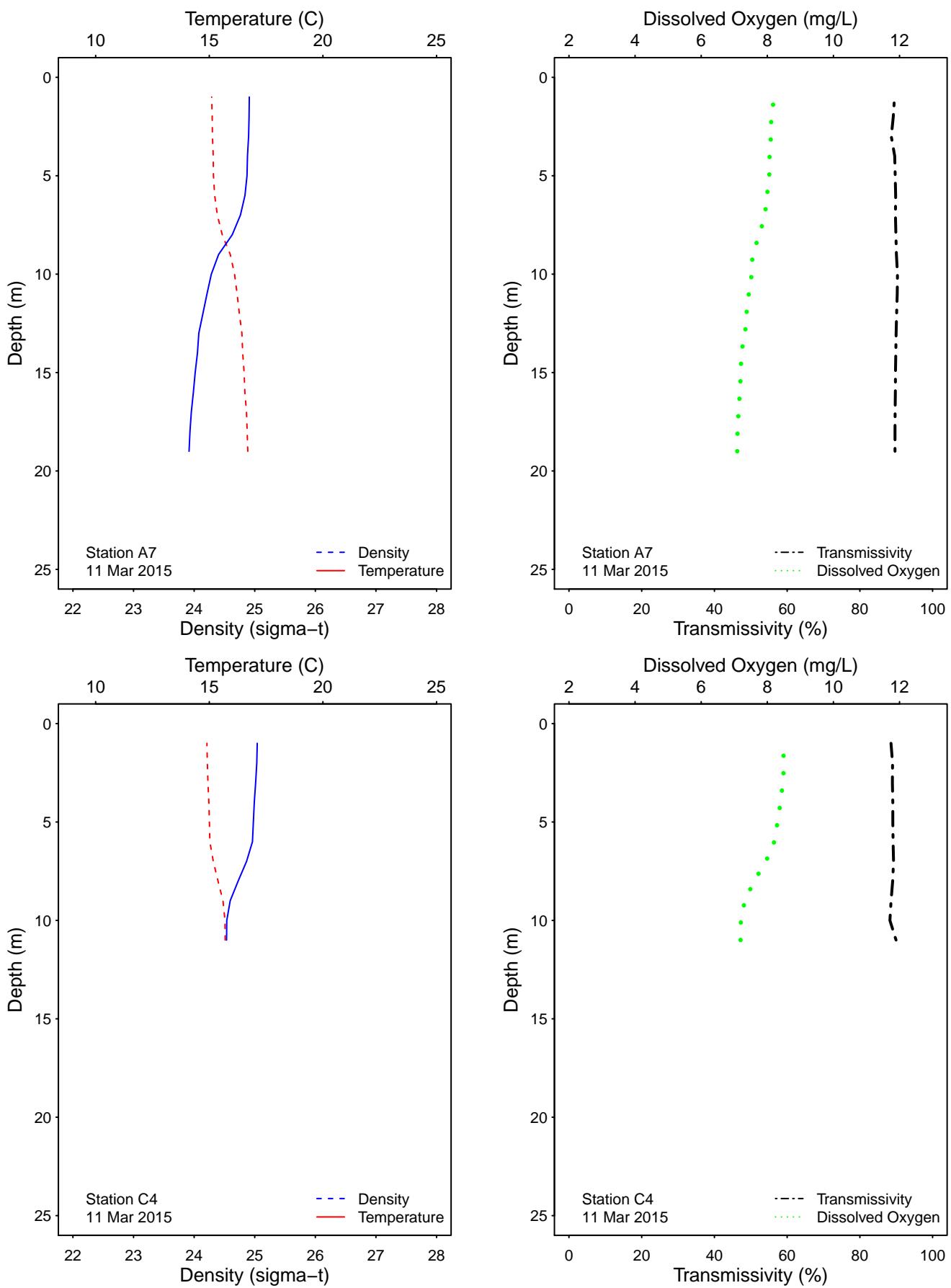


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

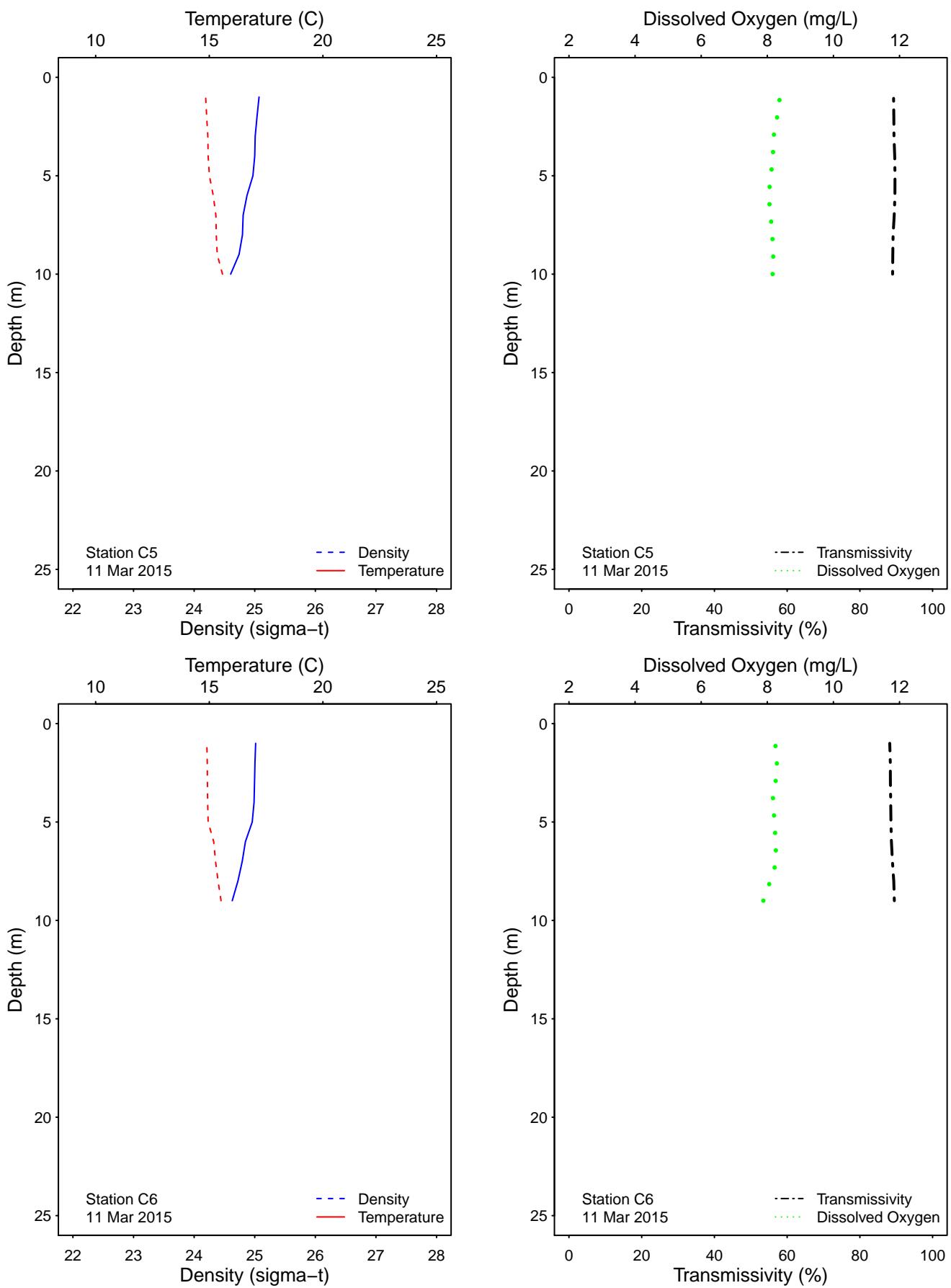


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

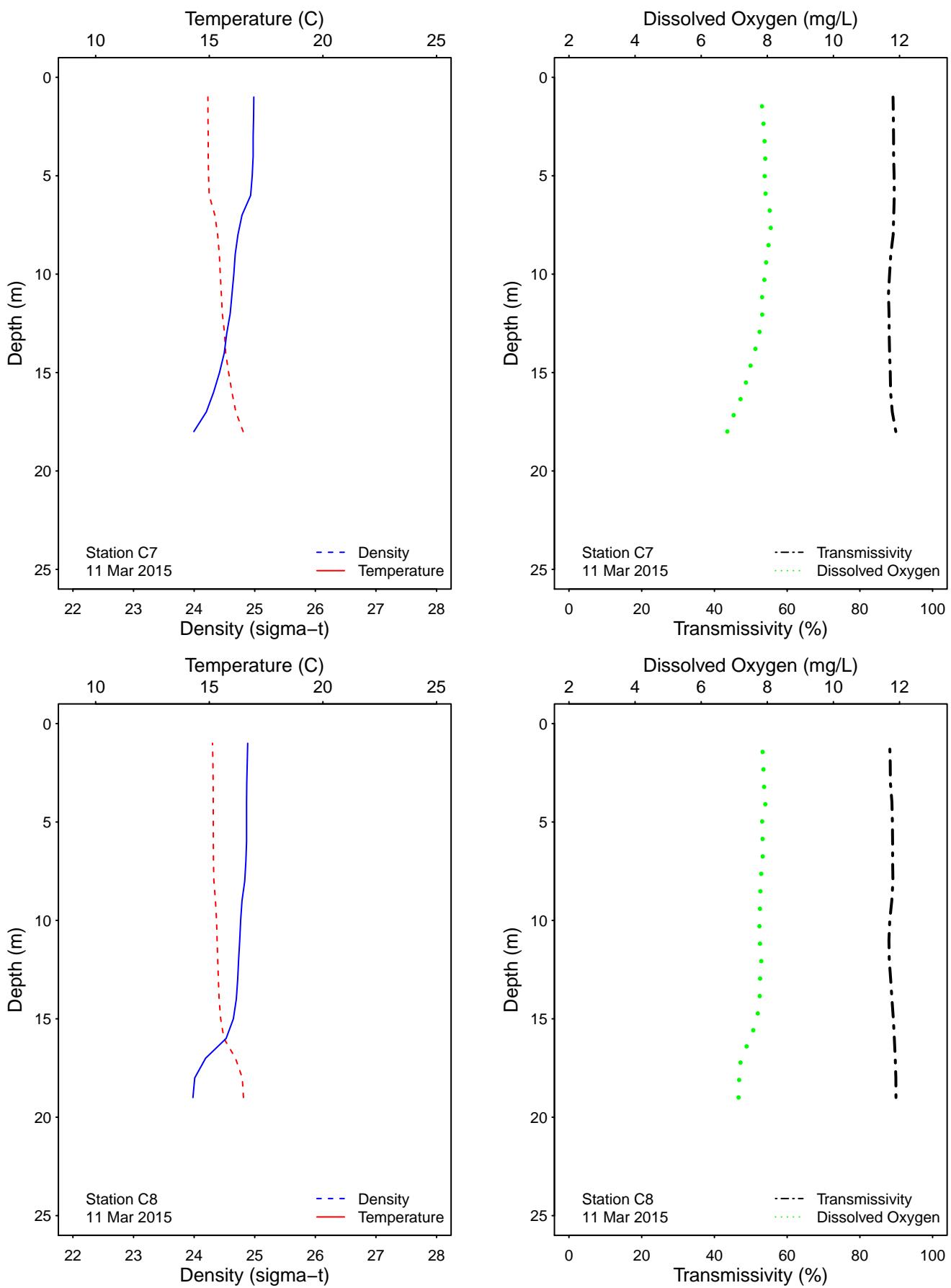


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

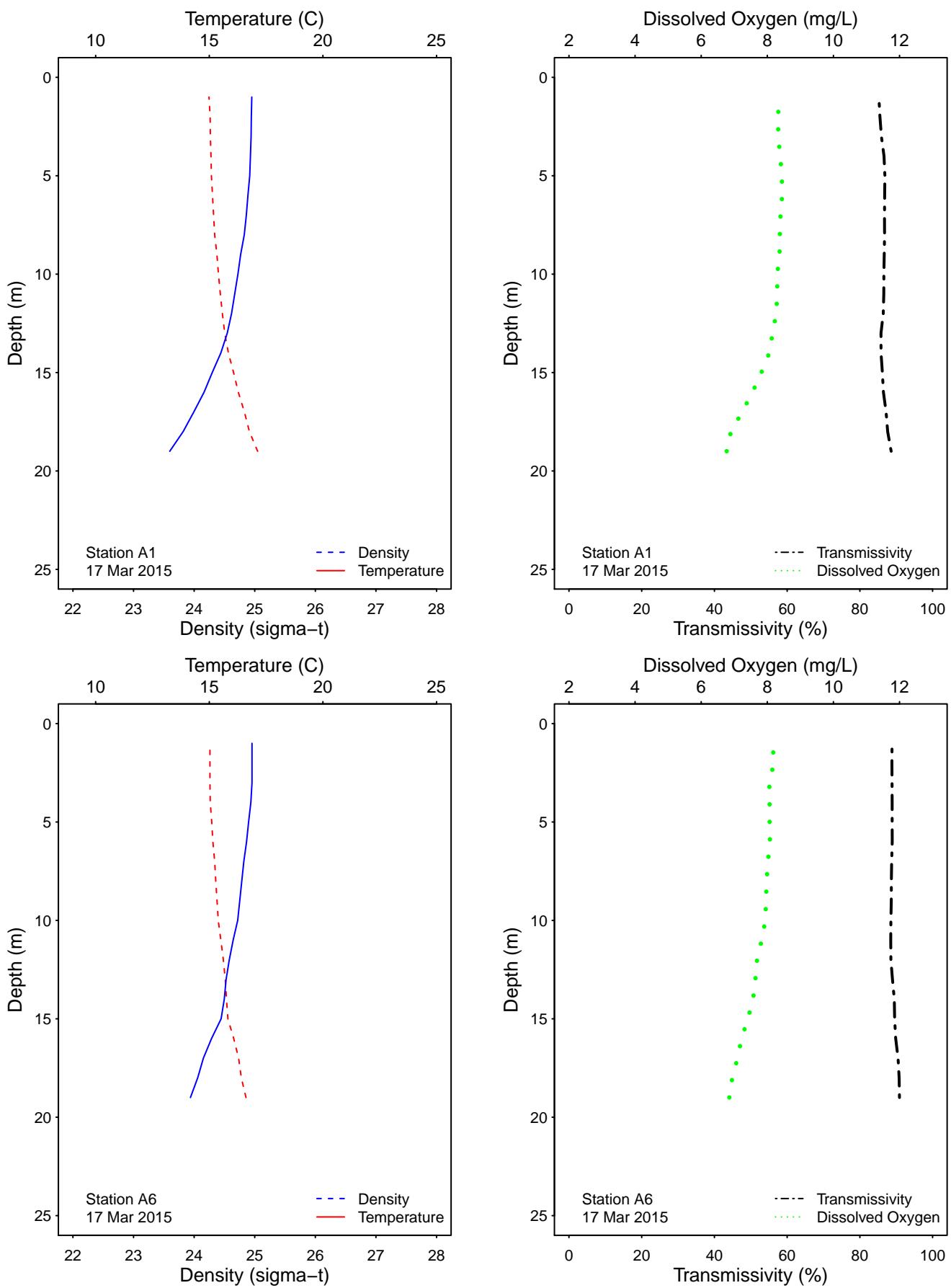


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

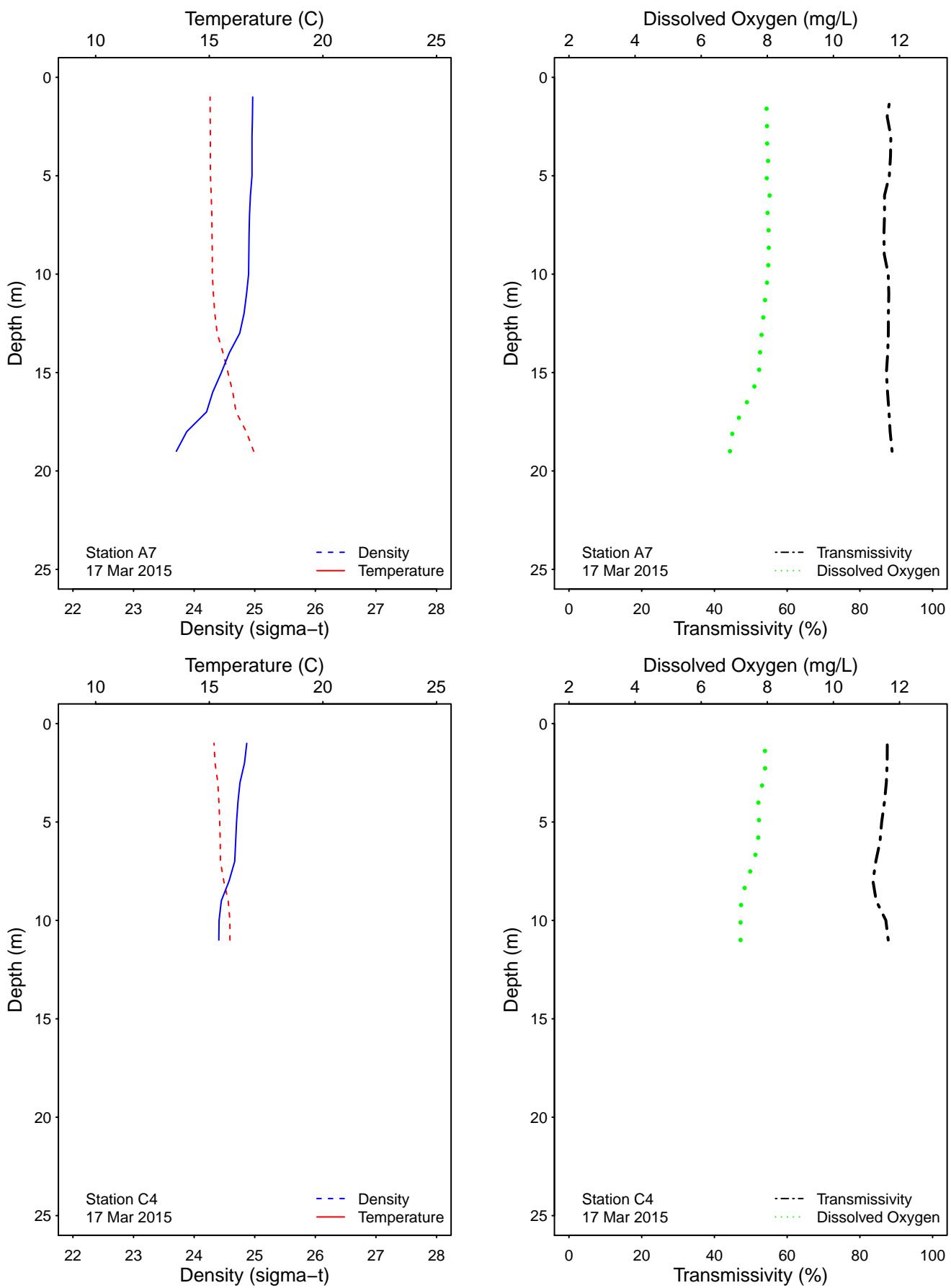


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

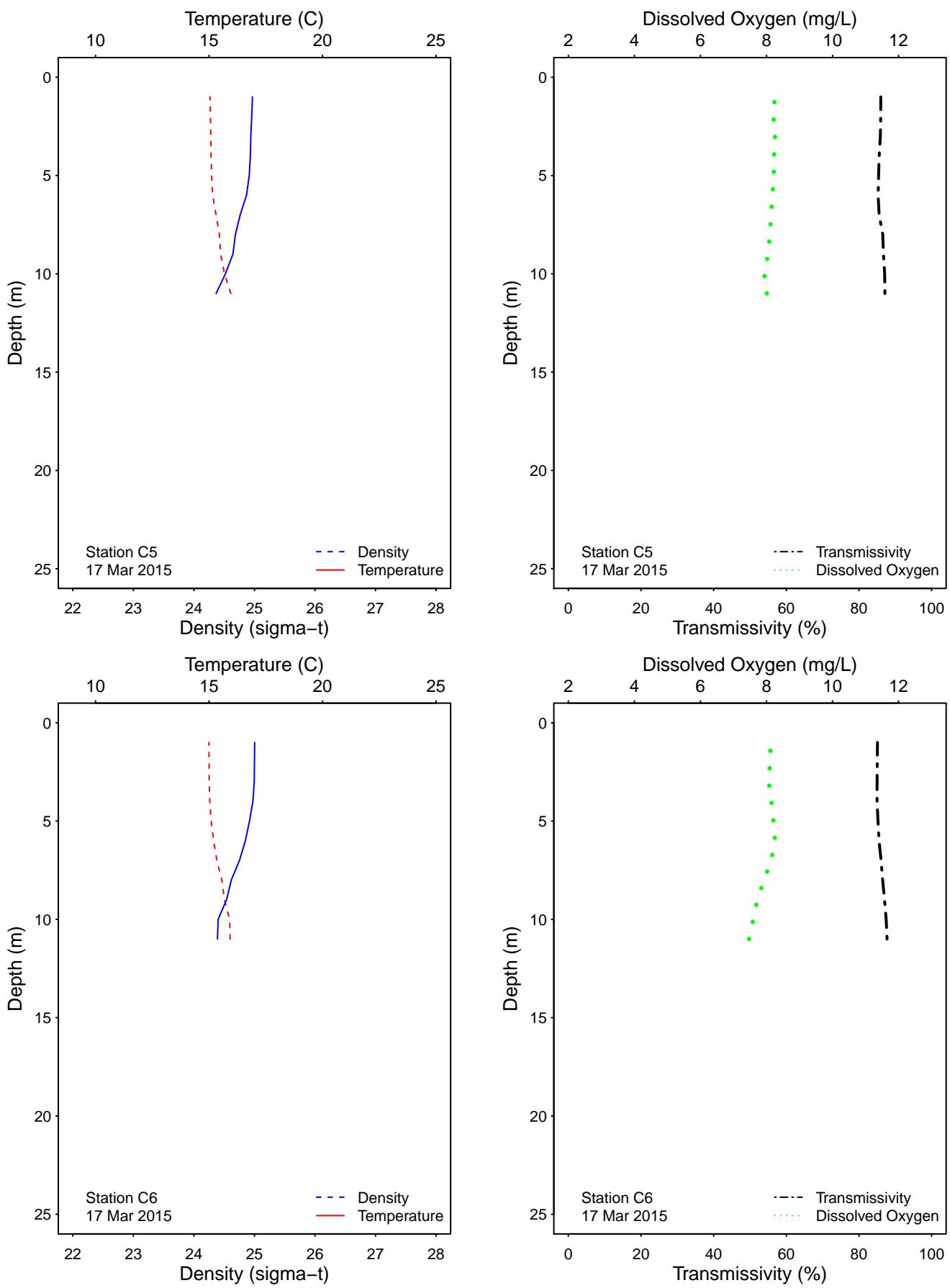


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

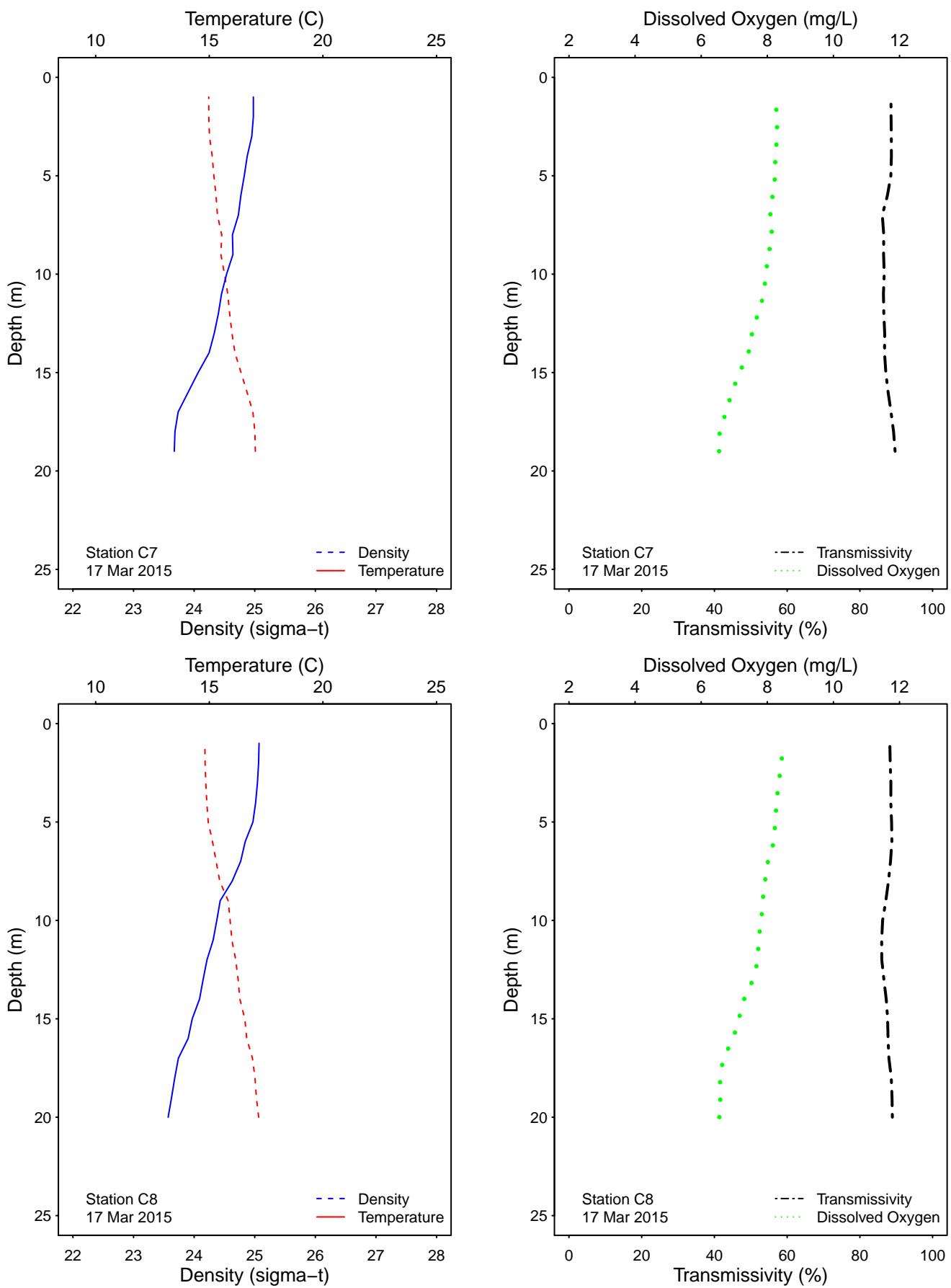


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

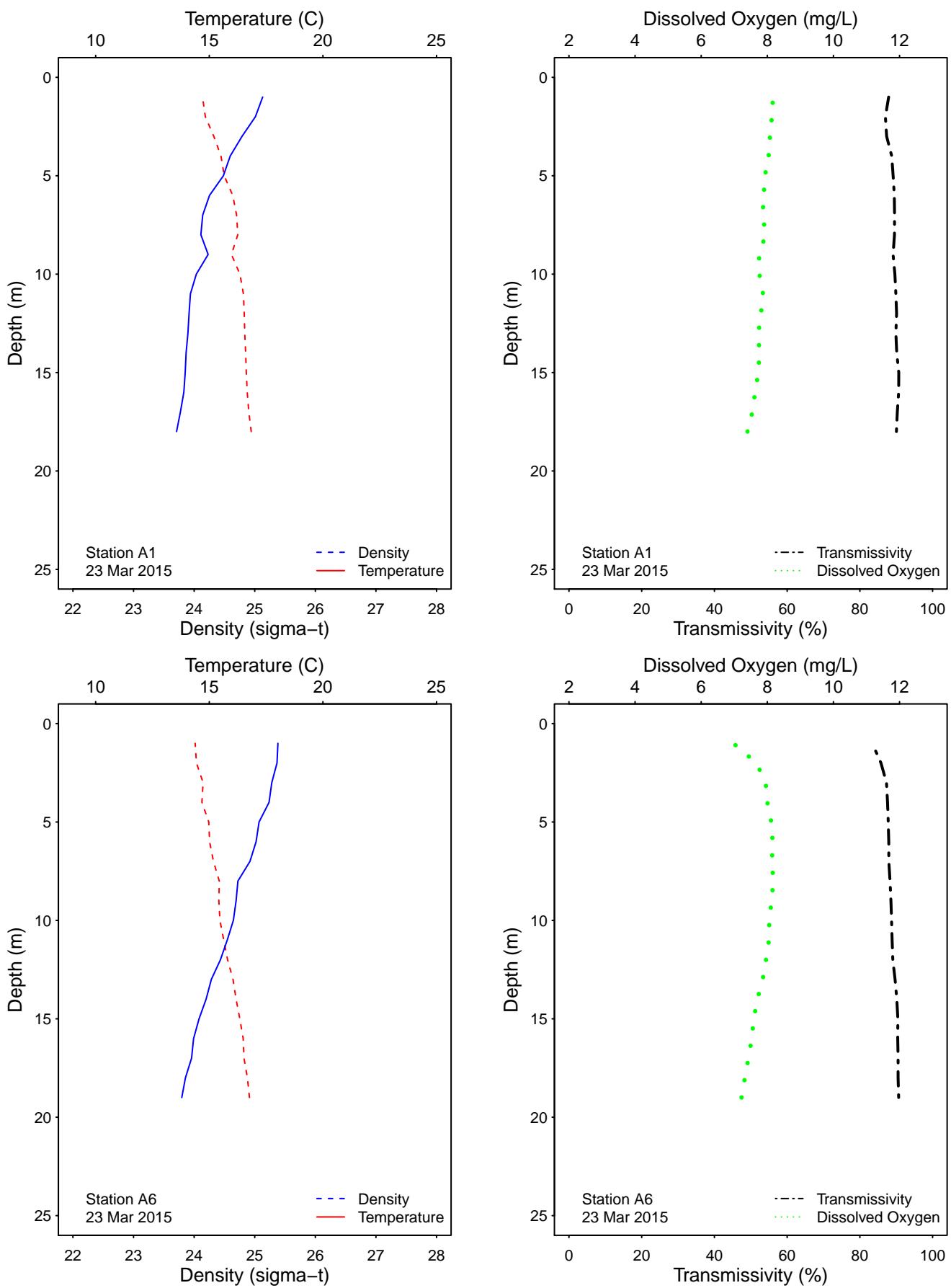


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

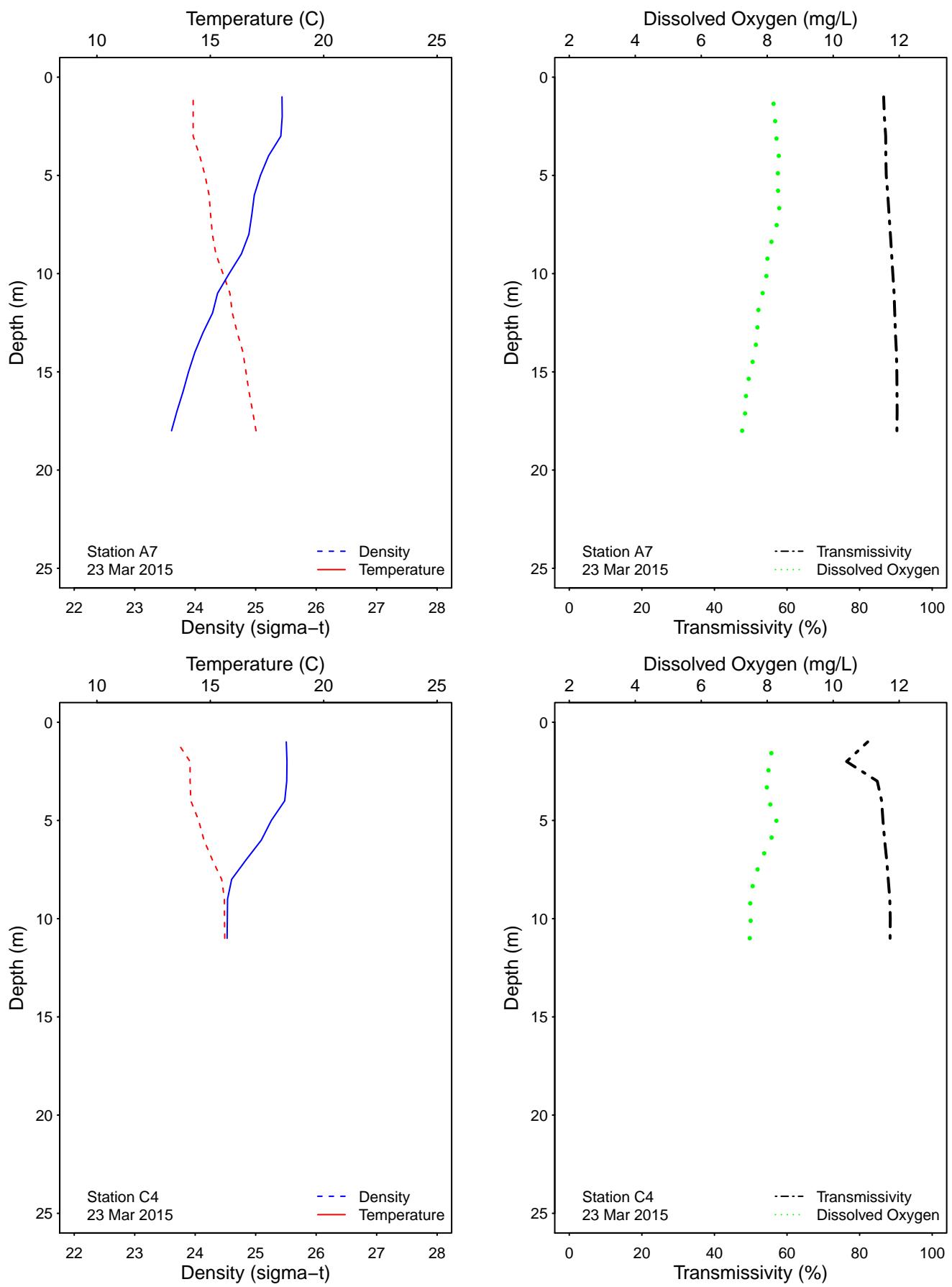


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

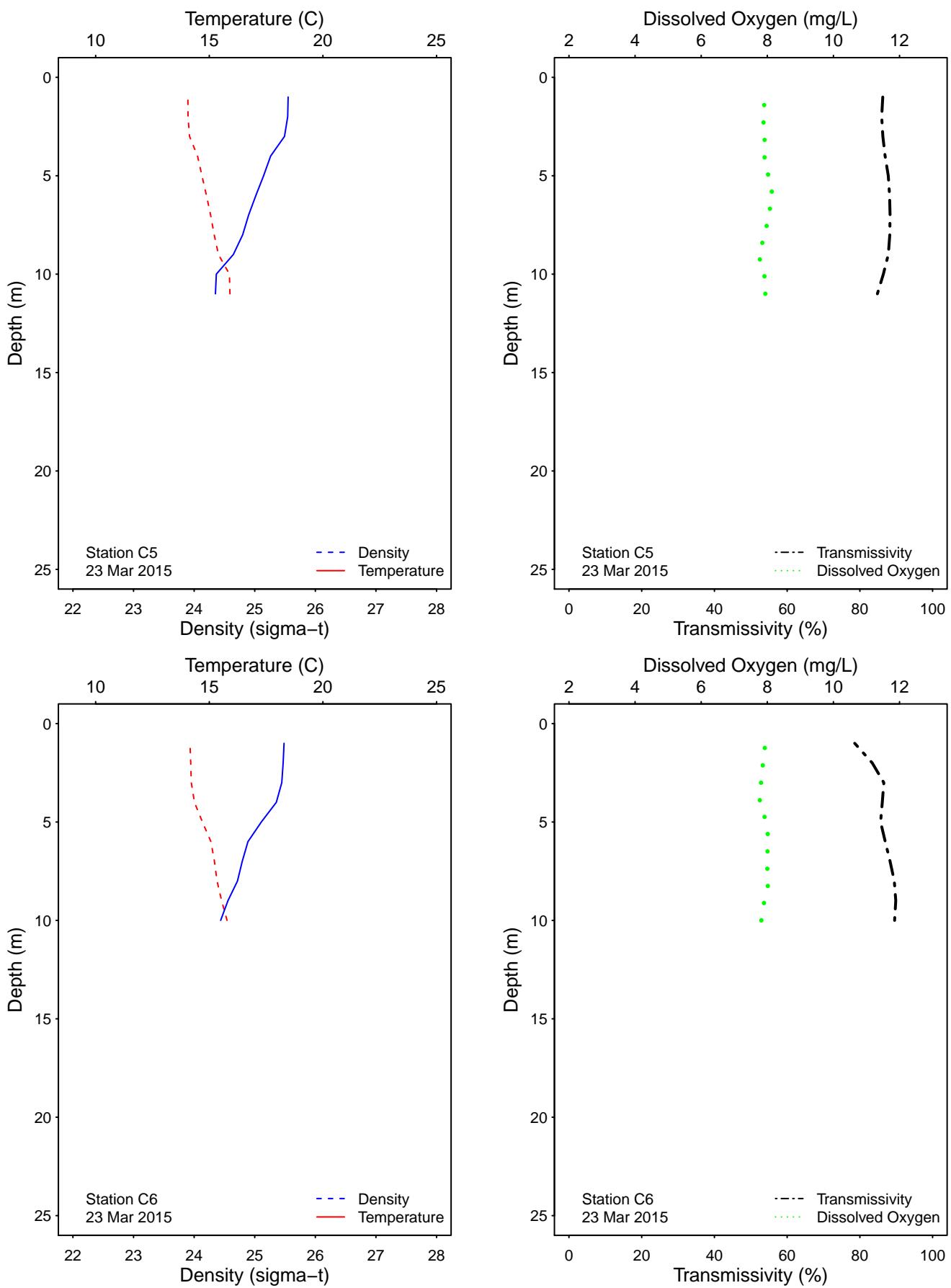


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

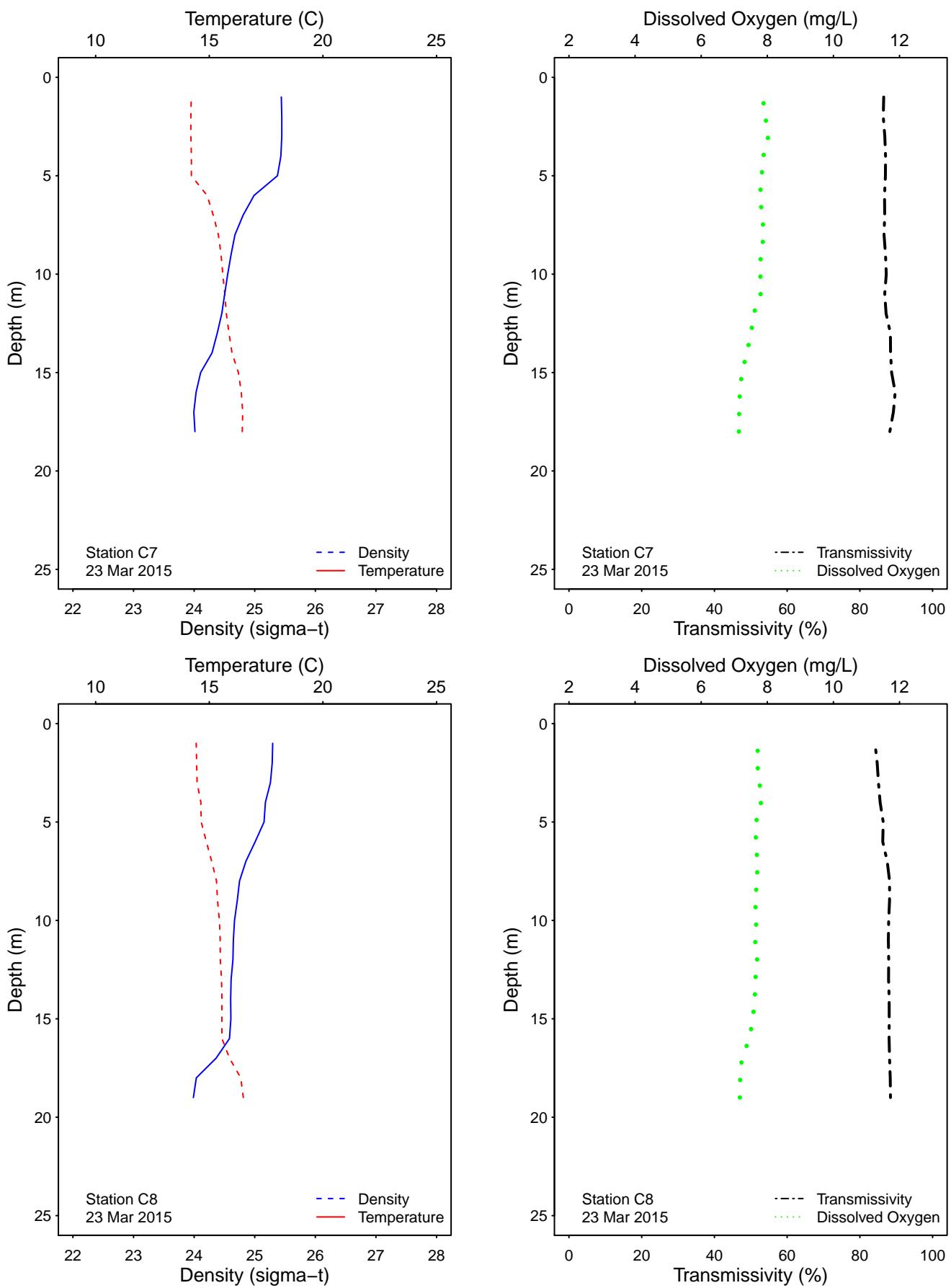


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

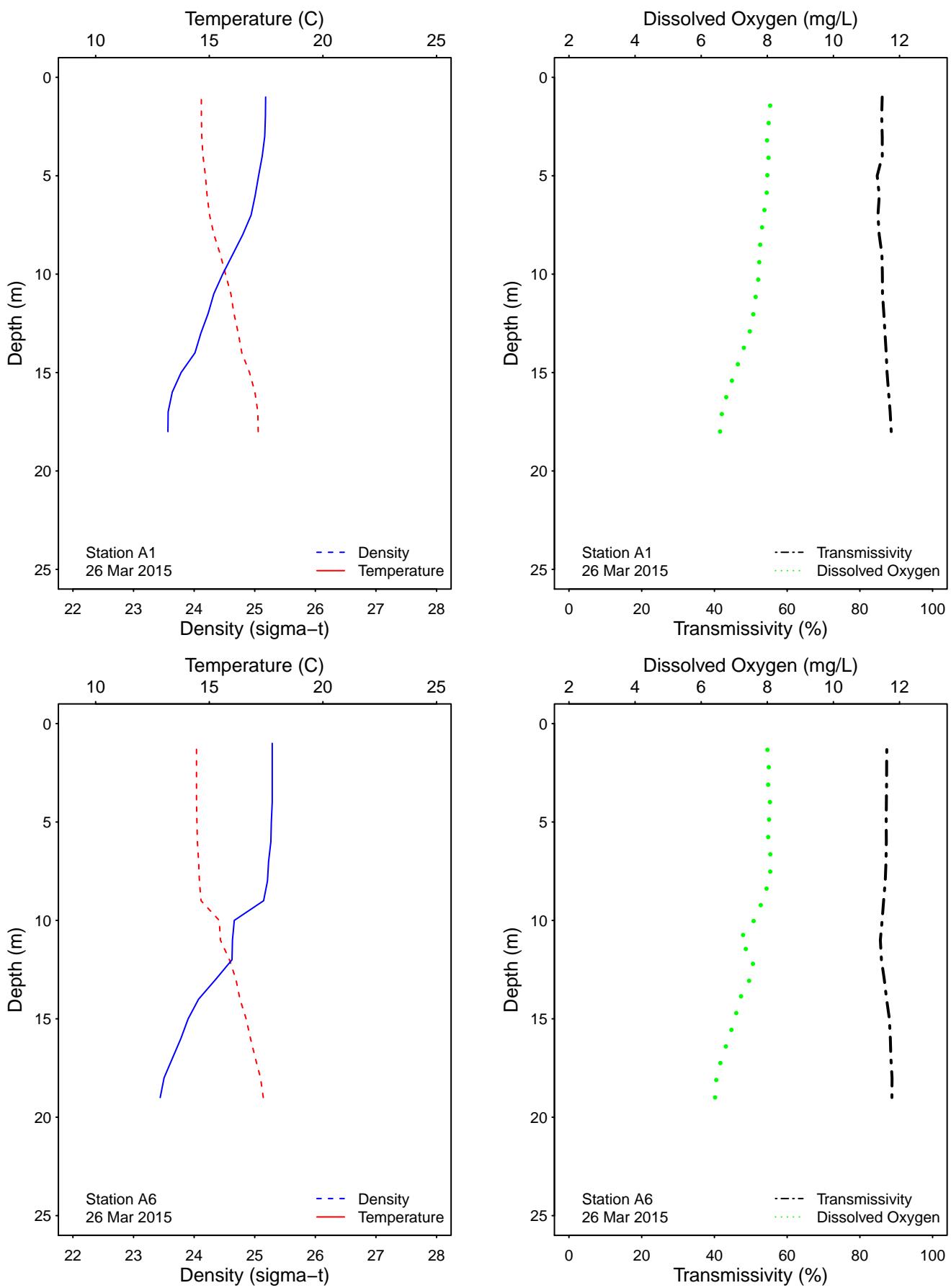


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

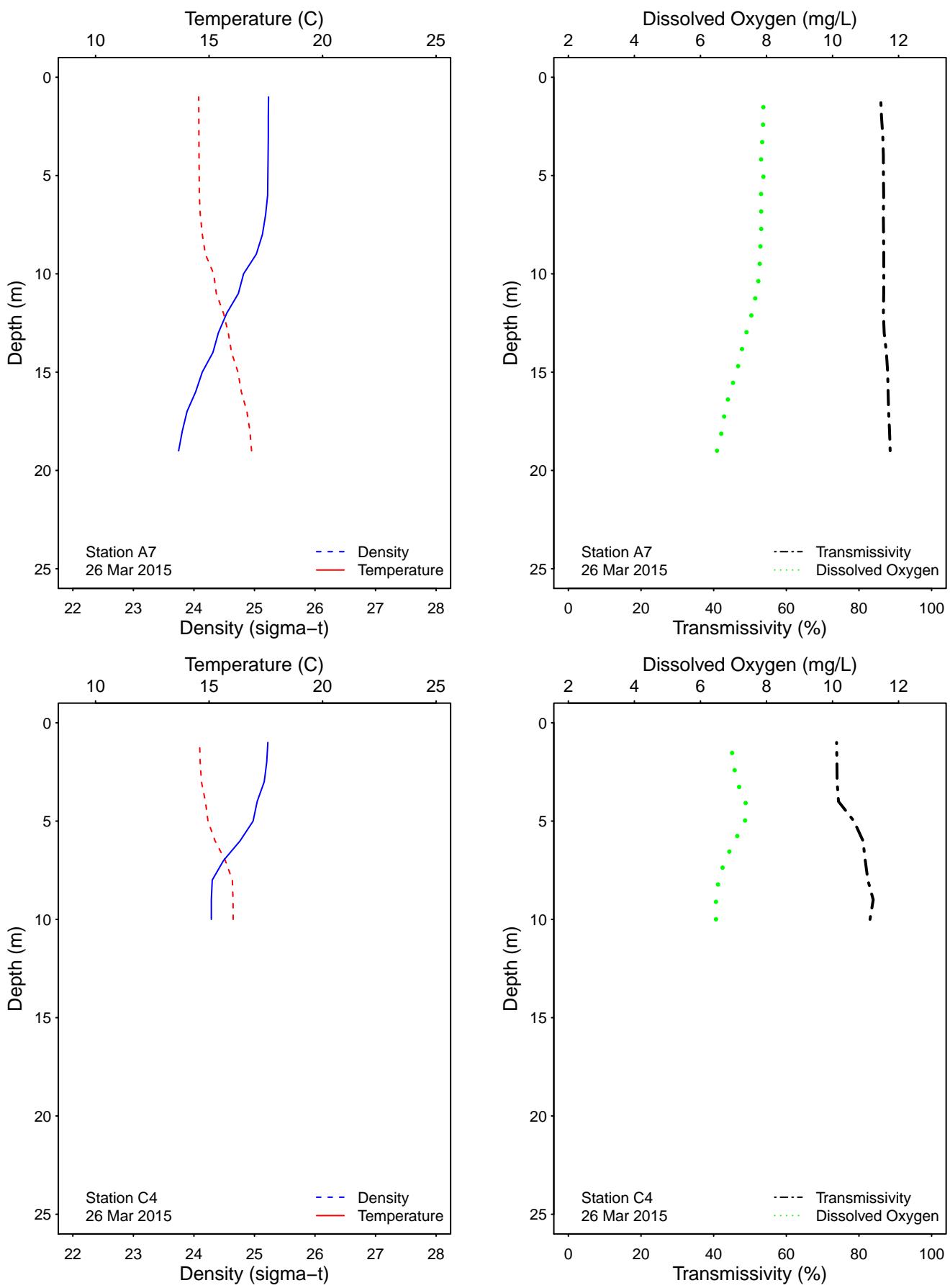


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

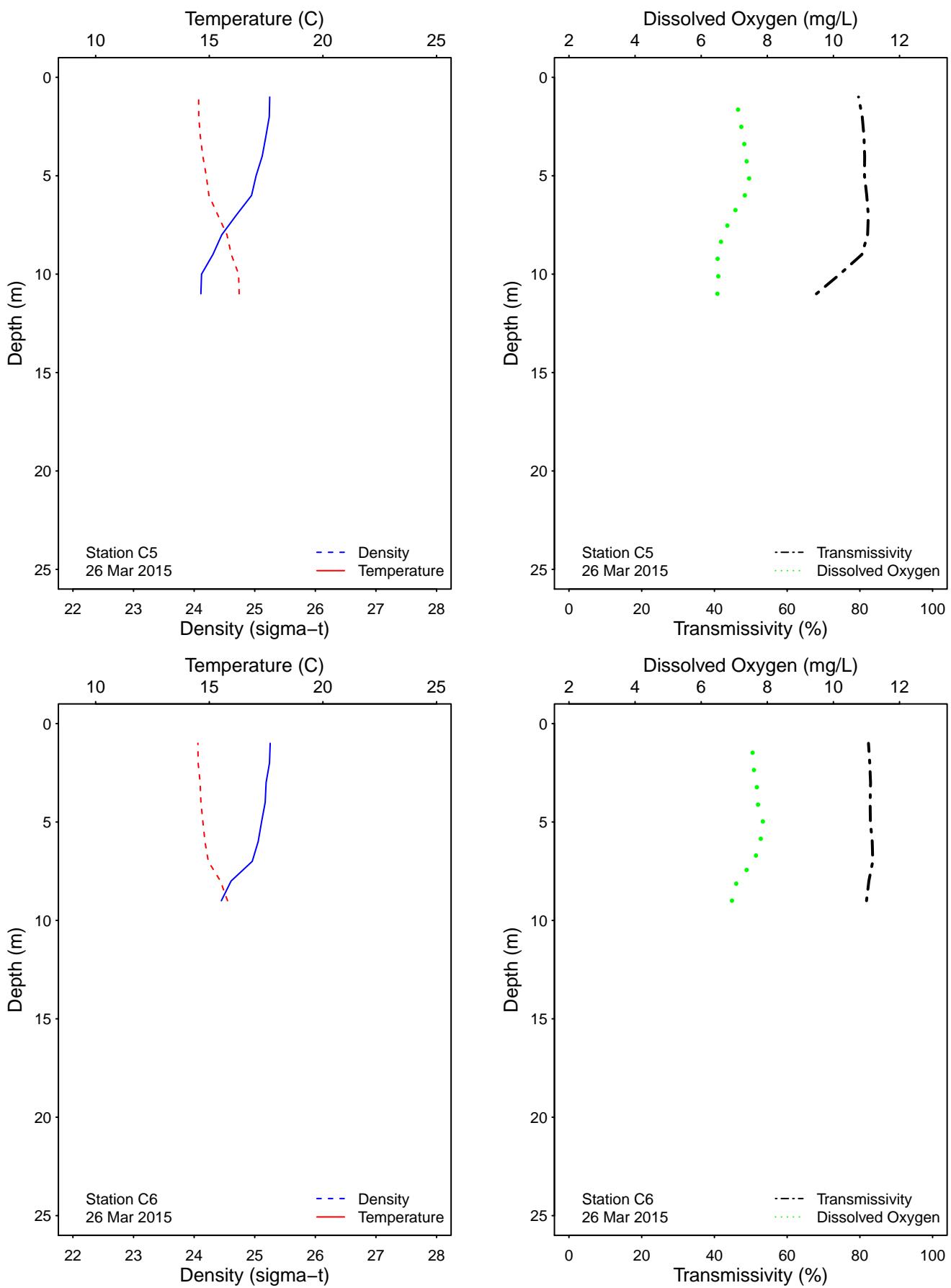


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

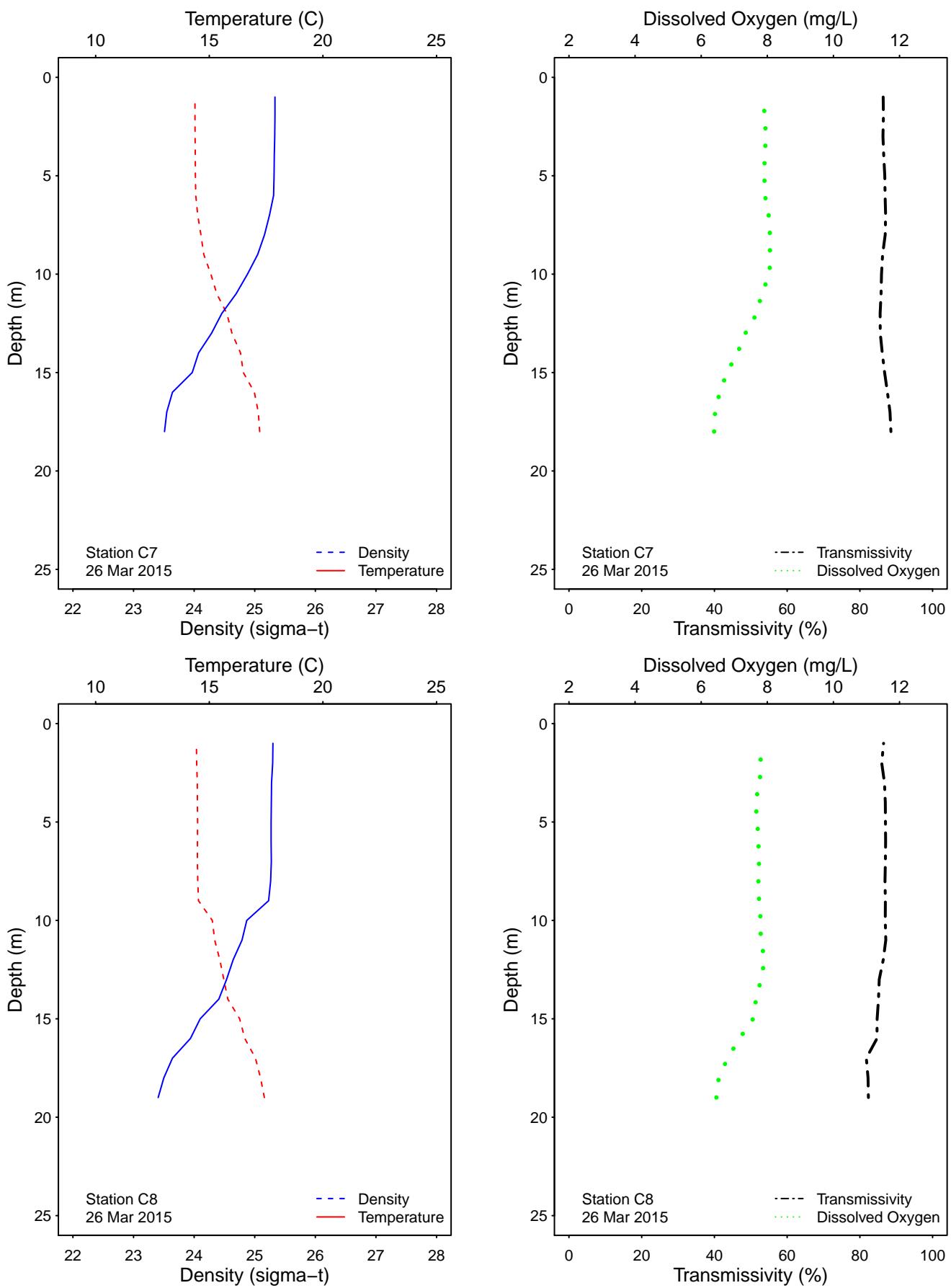


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

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APPENDIX A

Quality Assurance

Table A.1

Summary of bacteriological quality assurance field and laboratory 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	07 Mar 2015	18	ZV	LAB DUPLICATE	400	50	<2
A7	11 Mar 2015	18	SR	LAB DUPLICATE	56	2e	<2
A7	17 Mar 2015	18	AR	LAB DUPLICATE	ns	ns	2e
A7	17 Mar 2015	18	JT	LAB DUPLICATE	<2	<2	ns
A7	23 Mar 2015	18	AR	LAB DUPLICATE	18e	4e	<2
A7	26 Mar 2015	18	AR	LAB DUPLICATE	4e	<2	ns
A7	26 Mar 2015	18	LMA	LAB DUPLICATE	ns	ns	<2
C7	07 Mar 2015	18	ZV	LAB DUPLICATE	8e	2e	<2
C7	11 Mar 2015	18	JT	LAB DUPLICATE	ns	<2	ns
C7	11 Mar 2015	18	SR	LAB DUPLICATE	<2	ns	<2
C7	17 Mar 2015	18	AR	LAB DUPLICATE	ns	ns	<2
C7	17 Mar 2015	18	JT	LAB DUPLICATE	<2	<2	ns
C7	23 Mar 2015	18	AR	LAB DUPLICATE	<2	<2	<2
C7	26 Mar 2015	18	AR	LAB DUPLICATE	2e	<2	ns
C7	26 Mar 2015	18	LMA	LAB DUPLICATE	ns	ns	<2
C8	07 Mar 2015	12	ZV	LAB DUPLICATE	<2	<2	<2
C8	11 Mar 2015	12	SR	LAB DUPLICATE	2e	<2	<2
C8	17 Mar 2015	12	AR	LAB DUPLICATE	ns	ns	<2
C8	17 Mar 2015	12	JT	LAB DUPLICATE	<2	<2	ns
C8	23 Mar 2015	12	AR	LAB DUPLICATE	<2	<2	<2
C8	26 Mar 2015	12	AR	LAB DUPLICATE	<2	<2	ns
C8	26 Mar 2015	12	LMA	LAB DUPLICATE	ns	ns	<2
D8	01 Mar 2015		SR	FIELD DUPLICATE	1000e	240e	200e
D8	01 Mar 2015		SR	LAB DUPLICATE	360e	180e	200e
D8	07 Mar 2015		LMA	FIELD DUPLICATE	6e	6e	4e
D8	07 Mar 2015		LMA	LAB DUPLICATE	4e	2e	6e
D8	13 Mar 2015		ZV	FIELD DUPLICATE	<20	6e	8e
D8	13 Mar 2015		ZV	LAB DUPLICATE	20e	10e	2e
D8	18 Mar 2015		JT	FIELD DUPLICATE	120e	18e	64
D8	18 Mar 2015		JT	LAB DUPLICATE	60e	16e	60
D8	24 Mar 2015		LMA	FIELD DUPLICATE	<20	<2	<2
D8	24 Mar 2015		LMA	LAB DUPLICATE	<20	<2	<2
D8	30 Mar 2015		AR	FIELD DUPLICATE	40e	20e	24e
D8	30 Mar 2015		AR	LAB DUPLICATE	<20	<20	10e

ns = not sampled

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