



Monthly Receiving Waters Monitoring Report for the Point Loma Ocean Outfall

(Point Loma Metropolitan Wastewater Treatment Plant)

NPDES Permit No. CA0107409

January 2015



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



THE CITY OF SAN DIEGO

February 28, 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 January 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,

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

TDS:mln

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



Environmental Monitoring and Technical Services Division • Public Utilities

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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, chromomorphic dissolved organic matter (CDOM), and visual observations of weather and water conditions. Monitoring at sites within State waters also include the collection of discrete grab samples for ammonium analysis (see Table 4.2).

Seawater samples for ammonium and bacteriological analyses at the offshore stations are primarily collected using a CTD-integrated rosette sampler with Niskin bottles. Profiles of the various physical/chemical parameters (listed above) are taken using a Sea-Bird CTD. The CTD profile data are then presented in both graphical and tabular form. Additionally, data for depths closest to those at which bacteriological samples are collected are extracted from the CTD profiles and presented with the bacteriological data.

Bacteriological Reporting and Quality Assurance

Estimated values for bacteriological analyses are denoted by greater than (>), less than (<), or estimated (e) qualifiers and result from plates with colony counts above or below the permissible counting limits established in Bordner et al. (1978)^[1]. This document defines membrane filtration limits of 20–80 colonies per plate for total coliforms and 20–60 colonies per plate for fecal coliforms and *Enterococcus*. No Data (ND) is reported if plate counts from all dilutions have a total colony count of >200 per plate.

Results of the bacteriological analysis of seawater samples collected from each of the shore, kelp bed, and offshore stations located within State waters are assessed relative to the geometric mean and single sample maximum water-contact standards specified in the 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 January 2015, one 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 at station D11 on January 12.
- 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>).
- Nothing of sewage origin was observed at any of the shore stations.

Kelp Bed Stations

- The eight kelp bed water quality stations (A1, A6, A7, C4, C5, C6, C7, C8) were sampled five times during January (i.e. January 5, 10, 15, 20, 28).
- During January, 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 14.41 to 16.79°C during the month. The difference between surface and bottom waters ranged from 0.04 to 1.41°C, indicating that the water column was stratified at the kelp bed stations during the month.
- Chlorophyll *a* concentrations ranged from 0.37 to 3.16 µg/L during January, 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 January at the offshore stations. The next quarterly sampling is scheduled for February 2015.



TABLES AND FIGURES

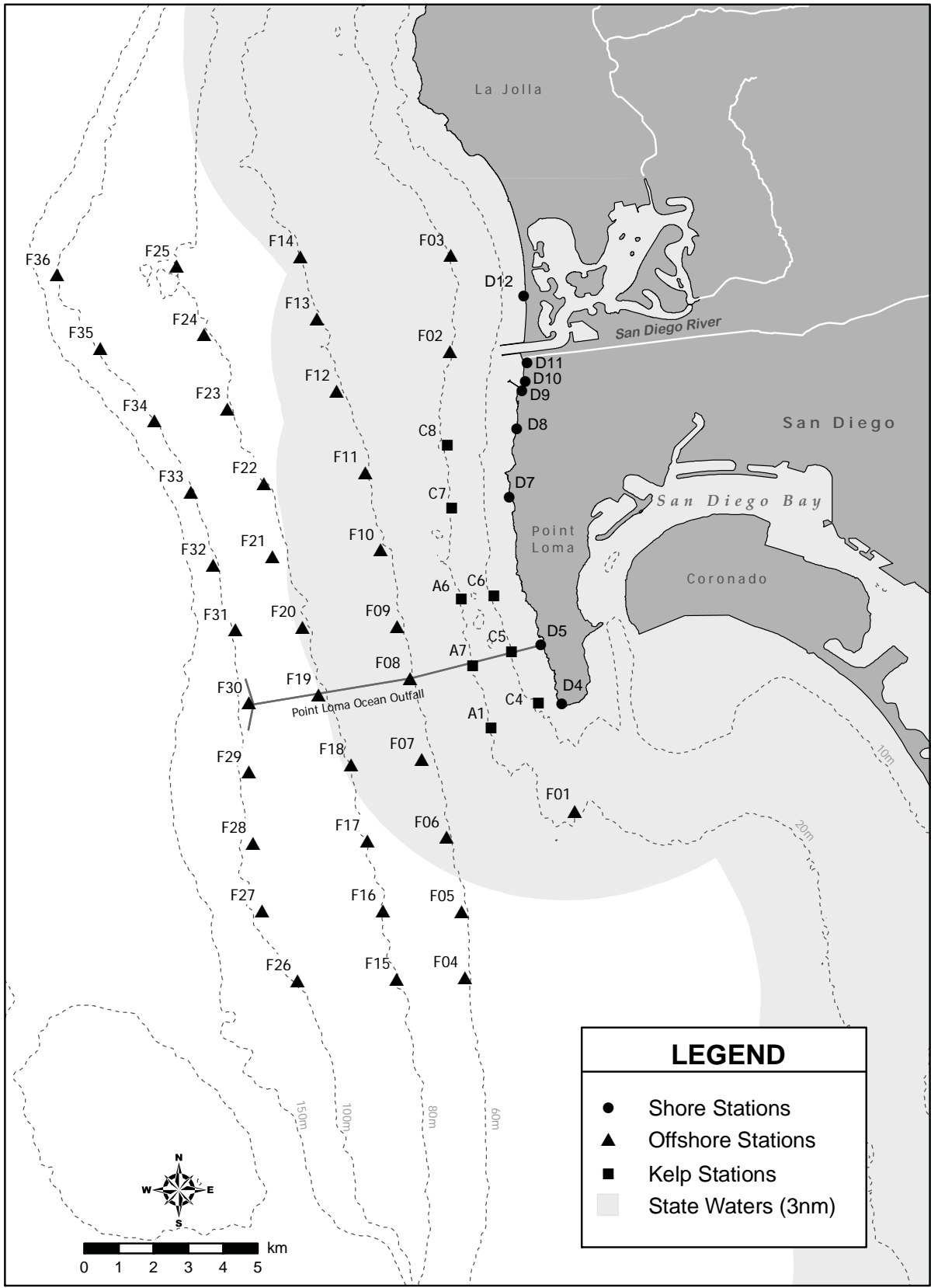


Figure 1.1 Station Map

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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 Jan 2015	8	34	21	91	37	38	152	29
02 Jan 2015	8	34	21	91	37	38	152	29
03 Jan 2015	8	34	21	91	37	38	152	29
04 Jan 2015	8	34	21	91	37	38	152	29
05 Jan 2015	8	34	21	91	37	38	152	29
06 Jan 2015	5	21	18	167	27	35	110	25
07 Jan 2015	5	21	18	167	27	35	110	25
08 Jan 2015	5	21	18	167	27	35	110	25
09 Jan 2015	5	21	18	167	27	35	110	25
10 Jan 2015	5	21	18	167	27	35	110	25
11 Jan 2015	5	21	18	167	27	35	110	25
12 Jan 2015	3	17	24	173	22	43	135	10
13 Jan 2015	3	17	24	173	22	43	135	10
14 Jan 2015	3	17	24	173	22	43	135	10
15 Jan 2015	3	17	24	173	22	43	135	10
16 Jan 2015	3	17	24	173	22	43	135	10
17 Jan 2015	4*	16*	26*	198*	15*	37*	123*	7*
18 Jan 2015	3	17	28	125	10	33	74	8
19 Jan 2015	3	17	28	125	10	33	74	8
20 Jan 2015	3	17	28	125	10	33	74	8
21 Jan 2015	3	17	28	125	10	33	74	8
22 Jan 2015	3	17	28	125	10	33	74	8
23 Jan 2015	3	17	28	125	10	33	74	8
24 Jan 2015	3	18	26	71	10	32	60	6
25 Jan 2015	3	17	32	91	8	30	49	6
26 Jan 2015	3	17	32	91	8	30	49	6
27 Jan 2015	3	17	32	91	8	30	49	6
28 Jan 2015	3	17	32	91	8	30	49	6
29 Jan 2015	3	17	32	91	8	30	49	6
30 Jan 2015	2	20	24	43	9	30	37	6
31 Jan 2015	2	20	24	43	9	30	37	6

* 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 Jan 2015	3	2	6	14	12	7	17	3
02 Jan 2015	3	2	6	14	12	7	17	3
03 Jan 2015	3	2	6	14	12	7	17	3
04 Jan 2015	3	2	6	14	12	7	17	3
05 Jan 2015	3	2	6	14	12	7	17	3
06 Jan 2015	4	2	4	13	7	7	15	2
07 Jan 2015	4	2	4	13	7	7	15	2
08 Jan 2015	4	2	4	13	7	7	15	2
09 Jan 2015	4	2	4	13	7	7	15	2
10 Jan 2015	4	2	4	13	7	7	15	2
11 Jan 2015	4	2	4	13	7	7	15	2
12 Jan 2015	3	2	3	18	5	6	20	2
13 Jan 2015	3	2	3	18	5	6	20	2
14 Jan 2015	3	2	3	18	5	6	20	2
15 Jan 2015	3	2	3	18	5	6	20	2
16 Jan 2015	3	2	3	18	5	6	20	2
17 Jan 2015	3*	2*	2*	16*	5*	7*	23*	2*
18 Jan 2015	3	2	2	12	4	6	14	2
19 Jan 2015	3	2	2	12	4	6	14	2
20 Jan 2015	3	2	2	12	4	6	14	2
21 Jan 2015	3	2	2	12	4	6	14	2
22 Jan 2015	3	2	2	12	4	6	14	2
23 Jan 2015	3	2	2	12	4	6	14	2
24 Jan 2015	3	2	3	9	4	6	10	2
25 Jan 2015	3	2	3	10	3	5	7	2
26 Jan 2015	3	2	3	10	3	5	7	2
27 Jan 2015	3	2	3	10	3	5	7	2
28 Jan 2015	3	2	3	10	3	5	7	2
29 Jan 2015	3	2	3	10	3	5	7	2
30 Jan 2015	2	3	3	8	2	5	6	2
31 Jan 2015	2	3	3	8	2	5	6	2

* 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 Jan 2015	2	2	2	18	10	11	29	6
02 Jan 2015	2	2	2	18	10	11	29	6
03 Jan 2015	2	2	2	18	10	11	29	6
04 Jan 2015	2	2	2	18	10	11	29	6
05 Jan 2015	2	2	2	18	10	11	29	6
06 Jan 2015	2	2	2	19	10	11	23	4
07 Jan 2015	2	2	2	19	10	11	23	4
08 Jan 2015	2	2	2	19	10	11	23	4
09 Jan 2015	2	2	2	19	10	11	23	4
10 Jan 2015	2	2	2	19	10	11	23	4
11 Jan 2015	2	2	2	19	10	11	23	4
12 Jan 2015	2	2	2	31	6	11	33	4
13 Jan 2015	2	2	2	31	6	11	33	4
14 Jan 2015	2	2	2	31	6	11	23	4
15 Jan 2015	2	2	2	31	6	11	23	4
16 Jan 2015	2	2	2	31	6	11	23	4
17 Jan 2015	2*	2*	2*	26*	5*	10*	18	3*
18 Jan 2015	2	2	2	15	4	11	15	4
19 Jan 2015	2	2	2	15	4	11	15	4
20 Jan 2015	2	2	2	15	4	11	15	4
21 Jan 2015	2	2	2	15	4	11	15	4
22 Jan 2015	2	2	2	15	4	11	15	4
23 Jan 2015	2	2	2	15	4	11	15	4
24 Jan 2015	2	2	2	12	4	11	15	3
25 Jan 2015	2	2	2	13	3	12	15	3
26 Jan 2015	2	2	2	13	3	12	15	3
27 Jan 2015	2	2	2	13	3	12	15	3
28 Jan 2015	2	2	2	13	3	12	15	3
29 Jan 2015	2	2	2	13	3	12	15	3
30 Jan 2015	2	3	2	10	2	12	14	3
31 Jan 2015	2	3	2	10	2	12	14	3

* 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
06 Jan 2015	IC	IC	IC	IC	IC	IC	IC	IC
12 Jan 2015	IC	IC	IC	IC	IC	IC	IC	IC
18 Jan 2015	IC	IC	IC	IC	IC	IC	IC	IC
24 Jan 2015	IC	IC	IC	IC	IC	IC	IC	IC
30 Jan 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
06 Jan 2015	IC	IC	IC	IC	IC	IC	IC	IC
12 Jan 2015	IC	IC	IC	IC	IC	IC	IC	IC
18 Jan 2015	IC	IC	IC	IC	IC	IC	IC	IC
24 Jan 2015	IC	IC	IC	IC	IC	IC	IC	IC
30 Jan 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
06 Jan 2015	IC	IC	IC	IC	IC	IC	IC	IC
12 Jan 2015	IC	IC	IC	IC	IC	IC	E	IC
14 Jan 2015	ns	ns	ns	ns	ns	ns	IC	ns
18 Jan 2015	IC	IC	IC	IC	IC	IC	IC	IC
24 Jan 2015	IC	IC	IC	IC	IC	IC	IC	IC
30 Jan 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
06 Jan 2015	IC	IC	IC	IC	IC	IC	IC	IC
12 Jan 2015	IC	IC	IC	IC	IC	IC	IC	IC
18 Jan 2015	IC	IC	IC	IC	IC	IC	IC	IC
24 Jan 2015	IC	IC	IC	IC	IC	IC	IC	IC
30 Jan 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* (Entero) 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	Entero	F:T
D4	06 Jan 2015	820	<2	4e	2e	2.00
D4	12 Jan 2015	1027	<2	<2	<2	1.00
D4	18 Jan 2015	1308	<2	<2	<2	1.00
D4	24 Jan 2015	831	<2	2e	2e	1.00
D4	30 Jan 2015	1029	2e	<2	<2	1.00
D5	06 Jan 2015	1058	<20	<2	<2	0.10
D5	12 Jan 2015	1102	<20	<2	<2	0.10
D5	18 Jan 2015	1241	<20	<2	2e	0.10
D5	24 Jan 2015	844	<20	2e	2e	0.10
D5	30 Jan 2015	1043	<20	8e	10e	0.40
D7	06 Jan 2015	1032	60e	4e	<2	0.07
D7	12 Jan 2015	950	90	<2	<2	0.02
D7	18 Jan 2015	1157	40e	2e	2e	0.05
D7	24 Jan 2015	755	20e	4e	<2	0.20
D7	30 Jan 2015	948	2e	<2	<2	1.00
D8	06 Jan 2015	1020	400e	14e	16e	0.04
D8	12 Jan 2015	934	240e	40e	86	0.17
D8	18 Jan 2015	1139	20e	4e	2e	0.20
D8	24 Jan 2015	743	4e	<2	4e	0.50
D8	30 Jan 2015	932	<20	6e	10e	0.30
D9	06 Jan 2015	1002	4e	<2	<2	0.50
D9	12 Jan 2015	912	40e	<2	<2	0.05
D9	18 Jan 2015	1123	2e	2e	2e	1.00
D9	24 Jan 2015	732	10e	<2	6e	0.20
D9	30 Jan 2015	917	20e	2e	<2	0.10
D10	06 Jan 2015	951	4e	<2	<2	0.50
D10	12 Jan 2015	900	600e	<20	52	0.03
D10	18 Jan 2015	1106	20e	<2	16e	0.10
D10	24 Jan 2015	724	26e	6e	16e	0.23
D10	30 Jan 2015	904	<20	6e	10e	0.30
D11	06 Jan 2015	940	8e	<2	<2	0.25
D11	12 Jan 2015	846	2200e	200e	600e	0.09
D11	14 Jan 2015	746	ns	ns	4e	ns
D11	18 Jan 2015	1053	10e	<2	6e	0.20
D11	24 Jan 2015	712	<20	2e	16e	0.10
D11	30 Jan 2015	851	20e	6e	20e	0.30
D12	06 Jan 2015	920	10e	4e	2e	0.40
D12	12 Jan 2015	824	2e	<2	2e	1.00
D12	18 Jan 2015	1032	10e	2e	14e	0.20
D12	24 Jan 2015	656	<2	<2	2e	1.00
D12	30 Jan 2015	831	<20	2e	2e	0.10

ns = not sampled

Comments

Station	Date	Depth	Parameter	Comments
D11	14 Jan 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	06 Jan 2015	Arrive Time	820
D4	06 Jan 2015	Weather	Sunny
D4	06 Jan 2015	Wind Speed (kts)	7.5
D4	06 Jan 2015	Wind Dir	SE
D4	06 Jan 2015	Animal Life	None
D4	06 Jan 2015	Floatables	None
D4	06 Jan 2015	Water Color	Green
D4	06 Jan 2015	Current Direction	SE
D4	06 Jan 2015	Wave Height Low (ft)	3
D4	06 Jan 2015	High Tide (ft)	5.7
D4	06 Jan 2015	High Tide Time	903
D4	06 Jan 2015	Low Tide (ft)	1.7
D4	06 Jan 2015	Low Tide Time	305
D4	06 Jan 2015	Comments	Kelp; Seagrass; Water clear
D4	06 Jan 2015		
D4	12 Jan 2015	Arrive Time	1027
D4	12 Jan 2015	Weather	Cloudy
D4	12 Jan 2015	Wind Speed (kts)	1.5
D4	12 Jan 2015	Wind Dir	NE
D4	12 Jan 2015	Animal Life	None
D4	12 Jan 2015	Floatables	None
D4	12 Jan 2015	Water Color	Green
D4	12 Jan 2015	Current Direction	NE
D4	12 Jan 2015	Wave Height Low (ft)	2
D4	12 Jan 2015	High Tide (ft)	3
D4	12 Jan 2015	High Tide Time	1326
D4	12 Jan 2015	Low Tide (ft)	2.1
D4	12 Jan 2015	Low Tide Time	827
D4	12 Jan 2015	Comments	Seagrass; Algae; Water clear
D4	12 Jan 2015		
D4	18 Jan 2015	Arrive Time	1308
D4	18 Jan 2015	Weather	Sunny
D4	18 Jan 2015	Wind Speed (kts)	4.6
D4	18 Jan 2015	Wind Dir	N
D4	18 Jan 2015	Animal Life	None
D4	18 Jan 2015	Floatables	None
D4	18 Jan 2015	Water Color	Green
D4	18 Jan 2015	Current Direction	N
D4	18 Jan 2015	Wave Height Low (ft)	2
D4	18 Jan 2015	High Tide (ft)	6.2
D4	18 Jan 2015	High Tide Time	651
D4	18 Jan 2015	Low Tide (ft)	-1.2

Station	Date	Parameter	Value
D4	18 Jan 2015	Low Tide Time	1402
D4	18 Jan 2015	Comments	Kelp; Seagrass; Algae; Water clear
D4	18 Jan 2015		
D4	24 Jan 2015	Arrive Time	831
D4	24 Jan 2015	Weather	Sunny
D4	24 Jan 2015	Wind Speed (kts)	1.6
D4	24 Jan 2015	Wind Dir	W
D4	24 Jan 2015	Animal Life	None
D4	24 Jan 2015	Floatables	None
D4	24 Jan 2015	Water Color	Green
D4	24 Jan 2015	Current Direction	W
D4	24 Jan 2015	Wave Height Low (ft)	4
D4	24 Jan 2015	High Tide (ft)	4.8
D4	24 Jan 2015	High Tide Time	1130
D4	24 Jan 2015	Low Tide (ft)	1.1
D4	24 Jan 2015	Low Tide Time	540
D4	24 Jan 2015	Comments	Water clear
D4	24 Jan 2015		
D4	30 Jan 2015	Arrive Time	1029
D4	30 Jan 2015	Weather	Drizzle
D4	30 Jan 2015	Wind Speed (kts)	1.2
D4	30 Jan 2015	Wind Dir	W
D4	30 Jan 2015	Animal Life	None
D4	30 Jan 2015	Floatables	None
D4	30 Jan 2015	Water Color	Green
D4	30 Jan 2015	Current Direction	W
D4	30 Jan 2015	Wave Height Low (ft)	3
D4	30 Jan 2015	High Tide (ft)	5.4
D4	30 Jan 2015	High Tide Time	547
D4	30 Jan 2015	Low Tide (ft)	-0.4
D4	30 Jan 2015	Low Tide Time	1309
D4	30 Jan 2015	Comments	Water clear
D4	30 Jan 2015		
D5	06 Jan 2015	Arrive Time	1058
D5	06 Jan 2015	Weather	Sunny
D5	06 Jan 2015	Wind Speed (kts)	3
D5	06 Jan 2015	Wind Dir	W
D5	06 Jan 2015	Animal Life	None
D5	06 Jan 2015	Floatables	None
D5	06 Jan 2015	Water Color	Green
D5	06 Jan 2015	Current Direction	W
D5	06 Jan 2015	Wave Height Low (ft)	2
D5	06 Jan 2015	High Tide (ft)	5.7
D5	06 Jan 2015	High Tide Time	903
D5	06 Jan 2015	Low Tide (ft)	-0.6
D5	06 Jan 2015	Low Tide Time	1609

Station	Date	Parameter	Value
D5	06 Jan 2015	Comments	Kelp; Seagrass; Water turbid
D5	06 Jan 2015		
D5	12 Jan 2015	Arrive Time	1102
D5	12 Jan 2015	Weather	Cloudy
D5	12 Jan 2015	Wind Speed (kts)	2.7
D5	12 Jan 2015	Wind Dir	N
D5	12 Jan 2015	Animal Life	None
D5	12 Jan 2015	Floatables	None
D5	12 Jan 2015	Water Color	Green
D5	12 Jan 2015	Current Direction	N
D5	12 Jan 2015	Wave Height Low (ft)	3
D5	12 Jan 2015	High Tide (ft)	3
D5	12 Jan 2015	High Tide Time	1326
D5	12 Jan 2015	Low Tide (ft)	2.1
D5	12 Jan 2015	Low Tide Time	827
D5	12 Jan 2015	Comments	Seagrass; Algae; Water clear
D5	12 Jan 2015		
D5	18 Jan 2015	Arrive Time	1241
D5	18 Jan 2015	Weather	Sunny
D5	18 Jan 2015	Wind Speed (kts)	2.1
D5	18 Jan 2015	Wind Dir	N
D5	18 Jan 2015	Animal Life	None
D5	18 Jan 2015	Floatables	None
D5	18 Jan 2015	Water Color	Green
D5	18 Jan 2015	Current Direction	N
D5	18 Jan 2015	Wave Height Low (ft)	2
D5	18 Jan 2015	High Tide (ft)	6.2
D5	18 Jan 2015	High Tide Time	651
D5	18 Jan 2015	Low Tide (ft)	-1.2
D5	18 Jan 2015	Low Tide Time	1402
D5	18 Jan 2015	Comments	Seagrass; Algae; Water clear
D5	18 Jan 2015		
D5	24 Jan 2015	Arrive Time	844
D5	24 Jan 2015	Weather	Sunny
D5	24 Jan 2015	Wind Speed (kts)	0.8
D5	24 Jan 2015	Wind Dir	W
D5	24 Jan 2015	Animal Life	None
D5	24 Jan 2015	Floatables	None
D5	24 Jan 2015	Water Color	Green
D5	24 Jan 2015	Current Direction	W
D5	24 Jan 2015	Wave Height Low (ft)	5
D5	24 Jan 2015	High Tide (ft)	4.8
D5	24 Jan 2015	High Tide Time	1130
D5	24 Jan 2015	Low Tide (ft)	1.1
D5	24 Jan 2015	Low Tide Time	540
D5	24 Jan 2015	Comments	Water clear

Station	Date	Parameter	Value
D5	24 Jan 2015		
D5	30 Jan 2015	Arrive Time	1043
D5	30 Jan 2015	Weather	Drizzle
D5	30 Jan 2015	Wind Speed (kts)	0.9
D5	30 Jan 2015	Wind Dir	W
D5	30 Jan 2015	Animal Life	None
D5	30 Jan 2015	Floatables	None
D5	30 Jan 2015	Water Color	Green
D5	30 Jan 2015	Current Direction	W
D5	30 Jan 2015	Wave Height Low (ft)	3
D5	30 Jan 2015	High Tide (ft)	5.4
D5	30 Jan 2015	High Tide Time	547
D5	30 Jan 2015	Low Tide (ft)	-0.4
D5	30 Jan 2015	Low Tide Time	1309
D5	30 Jan 2015	Comments	Water clear
D5	30 Jan 2015		
D7	06 Jan 2015	Arrive Time	1032
D7	06 Jan 2015	Weather	Sunny
D7	06 Jan 2015	Wind Speed (kts)	3
D7	06 Jan 2015	Wind Dir	W
D7	06 Jan 2015	Animal Life	None
D7	06 Jan 2015	Floatables	None
D7	06 Jan 2015	Water Color	Green
D7	06 Jan 2015	Current Direction	W
D7	06 Jan 2015	Wave Height Low (ft)	4
D7	06 Jan 2015	High Tide (ft)	5.7
D7	06 Jan 2015	High Tide Time	903
D7	06 Jan 2015	Low Tide (ft)	-0.6
D7	06 Jan 2015	Low Tide Time	1609
D7	06 Jan 2015	Comments	Kelp; Seagrass; Water turbid
D7	06 Jan 2015		
D7	12 Jan 2015	Arrive Time	950
D7	12 Jan 2015	Weather	Cloudy
D7	12 Jan 2015	Wind Speed (kts)	0.2
D7	12 Jan 2015	Wind Dir	N
D7	12 Jan 2015	Animal Life	None
D7	12 Jan 2015	Floatables	None
D7	12 Jan 2015	Water Color	Green
D7	12 Jan 2015	Current Direction	N
D7	12 Jan 2015	Wave Height Low (ft)	2
D7	12 Jan 2015	High Tide (ft)	3
D7	12 Jan 2015	High Tide Time	1326
D7	12 Jan 2015	Low Tide (ft)	2.1
D7	12 Jan 2015	Low Tide Time	827
D7	12 Jan 2015	Comments	Seagrass; Algae; Water clear
D7	12 Jan 2015		

Station	Date	Parameter	Value
D7	18 Jan 2015	Arrive Time	1157
D7	18 Jan 2015	Weather	Sunny
D7	18 Jan 2015	Wind Speed (kts)	1.3
D7	18 Jan 2015	Wind Dir	N
D7	18 Jan 2015	Animal Life	None
D7	18 Jan 2015	Floatables	None
D7	18 Jan 2015	Water Color	Green
D7	18 Jan 2015	Current Direction	N
D7	18 Jan 2015	Wave Height Low (ft)	3
D7	18 Jan 2015	High Tide (ft)	6.2
D7	18 Jan 2015	High Tide Time	651
D7	18 Jan 2015	Low Tide (ft)	-1.2
D7	18 Jan 2015	Low Tide Time	1402
D7	18 Jan 2015	Comments	Kelp; Seagrass; Algae; Water clear
D7	18 Jan 2015		
D7	24 Jan 2015	Arrive Time	755
D7	24 Jan 2015	Weather	Sunny
D7	24 Jan 2015	Wind Speed (kts)	0.6
D7	24 Jan 2015	Wind Dir	W
D7	24 Jan 2015	Animal Life	None
D7	24 Jan 2015	Floatables	None
D7	24 Jan 2015	Water Color	Green
D7	24 Jan 2015	Current Direction	W
D7	24 Jan 2015	Wave Height Low (ft)	4
D7	24 Jan 2015	High Tide (ft)	4.8
D7	24 Jan 2015	High Tide Time	1130
D7	24 Jan 2015	Low Tide (ft)	1.1
D7	24 Jan 2015	Low Tide Time	540
D7	24 Jan 2015	Comments	1 Surfer; Water clear
D7	24 Jan 2015		
D7	30 Jan 2015	Arrive Time	948
D7	30 Jan 2015	Weather	Drizzle
D7	30 Jan 2015	Wind Speed (kts)	0.2
D7	30 Jan 2015	Wind Dir	W
D7	30 Jan 2015	Animal Life	None
D7	30 Jan 2015	Floatables	None
D7	30 Jan 2015	Water Color	Green
D7	30 Jan 2015	Current Direction	W
D7	30 Jan 2015	Wave Height Low (ft)	3
D7	30 Jan 2015	High Tide (ft)	5.4
D7	30 Jan 2015	High Tide Time	547
D7	30 Jan 2015	Low Tide (ft)	-0.4
D7	30 Jan 2015	Low Tide Time	1309
D7	30 Jan 2015	Comments	2 Persons; Water clear
D7	30 Jan 2015		

Station	Date	Parameter	Value
D8	06 Jan 2015	Arrive Time	1020
D8	06 Jan 2015	Weather	Sunny
D8	06 Jan 2015	Wind Speed (kts)	3
D8	06 Jan 2015	Wind Dir	W
D8	06 Jan 2015	Animal Life	None
D8	06 Jan 2015	Floatables	None
D8	06 Jan 2015	Water Color	Green
D8	06 Jan 2015	Current Direction	W
D8	06 Jan 2015	Wave Height Low (ft)	3
D8	06 Jan 2015	High Tide (ft)	5.7
D8	06 Jan 2015	High Tide Time	903
D8	06 Jan 2015	Low Tide (ft)	-0.6
D8	06 Jan 2015	Low Tide Time	1609
D8	06 Jan 2015	Comments	Kelp; Seagrass; Water turbid; Trash
D8	06 Jan 2015		
D8	12 Jan 2015	Arrive Time	934
D8	12 Jan 2015	Weather	Cloudy
D8	12 Jan 2015	Wind Speed (kts)	1.2
D8	12 Jan 2015	Wind Dir	NE
D8	12 Jan 2015	Animal Life	None
D8	12 Jan 2015	Floatables	None
D8	12 Jan 2015	Water Color	Green
D8	12 Jan 2015	Current Direction	NE
D8	12 Jan 2015	Wave Height Low (ft)	3
D8	12 Jan 2015	High Tide (ft)	3
D8	12 Jan 2015	High Tide Time	1326
D8	12 Jan 2015	Low Tide (ft)	2.1
D8	12 Jan 2015	Low Tide Time	827
D8	12 Jan 2015	Comments	Kelp; Seagrass; Algae; Water clear
D8	12 Jan 2015		
D8	18 Jan 2015	Arrive Time	1139
D8	18 Jan 2015	Weather	Sunny
D8	18 Jan 2015	Wind Speed (kts)	0.5
D8	18 Jan 2015	Wind Dir	N
D8	18 Jan 2015	Animal Life	None
D8	18 Jan 2015	Floatables	None
D8	18 Jan 2015	Water Color	Green
D8	18 Jan 2015	Current Direction	N
D8	18 Jan 2015	Wave Height Low (ft)	3
D8	18 Jan 2015	High Tide (ft)	6.2
D8	18 Jan 2015	High Tide Time	651
D8	18 Jan 2015	Low Tide (ft)	-1.2
D8	18 Jan 2015	Low Tide Time	1402
D8	18 Jan 2015	Comments	Kelp; Seagrass; Algae; Water clear
D8	18 Jan 2015		
D8	24 Jan 2015	Arrive Time	743

Station	Date	Parameter	Value
D8	24 Jan 2015	Weather	Sunny
D8	24 Jan 2015	Wind Speed (kts)	3.2
D8	24 Jan 2015	Wind Dir	W
D8	24 Jan 2015	Animal Life	None
D8	24 Jan 2015	Floatables	None
D8	24 Jan 2015	Water Color	Green
D8	24 Jan 2015	Current Direction	W
D8	24 Jan 2015	Wave Height Low (ft)	4
D8	24 Jan 2015	High Tide (ft)	4.8
D8	24 Jan 2015	High Tide Time	1130
D8	24 Jan 2015	Low Tide (ft)	1.1
D8	24 Jan 2015	Low Tide Time	540
D8	24 Jan 2015	Comments	Water clear
D8	24 Jan 2015		
D8	30 Jan 2015	Arrive Time	932
D8	30 Jan 2015	Weather	Cloudy
D8	30 Jan 2015	Wind Speed (kts)	0.2
D8	30 Jan 2015	Wind Dir	E
D8	30 Jan 2015	Animal Life	None
D8	30 Jan 2015	Floatables	None
D8	30 Jan 2015	Water Color	Green
D8	30 Jan 2015	Current Direction	E
D8	30 Jan 2015	Wave Height Low (ft)	3
D8	30 Jan 2015	High Tide (ft)	5.4
D8	30 Jan 2015	High Tide Time	547
D8	30 Jan 2015	Low Tide (ft)	-0.4
D8	30 Jan 2015	Low Tide Time	1309
D8	30 Jan 2015	Comments	Water clear
D8	30 Jan 2015		
D9	06 Jan 2015	Arrive Time	1002
D9	06 Jan 2015	Weather	Sunny
D9	06 Jan 2015	Wind Speed (kts)	2
D9	06 Jan 2015	Wind Dir	W
D9	06 Jan 2015	Animal Life	None
D9	06 Jan 2015	Floatables	None
D9	06 Jan 2015	Water Color	Green
D9	06 Jan 2015	Current Direction	W
D9	06 Jan 2015	Wave Height Low (ft)	3
D9	06 Jan 2015	High Tide (ft)	5.7
D9	06 Jan 2015	High Tide Time	903
D9	06 Jan 2015	Low Tide (ft)	-0.6
D9	06 Jan 2015	Low Tide Time	1609
D9	06 Jan 2015	Comments	Kelp; Seagrass; Water turbid
D9	06 Jan 2015		
D9	12 Jan 2015	Arrive Time	912
D9	12 Jan 2015	Weather	Cloudy

Station	Date	Parameter	Value
D9	12 Jan 2015	Wind Speed (kts)	0.2
D9	12 Jan 2015	Wind Dir	NE
D9	12 Jan 2015	Animal Life	None
D9	12 Jan 2015	Floatables	None
D9	12 Jan 2015	Water Color	Green
D9	12 Jan 2015	Current Direction	NE
D9	12 Jan 2015	Wave Height Low (ft)	3
D9	12 Jan 2015	High Tide (ft)	3
D9	12 Jan 2015	High Tide Time	1326
D9	12 Jan 2015	Low Tide (ft)	2.1
D9	12 Jan 2015	Low Tide Time	827
D9	12 Jan 2015	Comments	Kelp; Algae; Water clear
D9	12 Jan 2015		
D9	18 Jan 2015	Arrive Time	1123
D9	18 Jan 2015	Weather	Sunny
D9	18 Jan 2015	Wind Speed (kts)	0.3
D9	18 Jan 2015	Wind Dir	N
D9	18 Jan 2015	Animal Life	None
D9	18 Jan 2015	Floatables	None
D9	18 Jan 2015	Water Color	Green
D9	18 Jan 2015	Current Direction	N
D9	18 Jan 2015	Wave Height Low (ft)	3
D9	18 Jan 2015	High Tide (ft)	6.2
D9	18 Jan 2015	High Tide Time	651
D9	18 Jan 2015	Low Tide (ft)	-1.2
D9	18 Jan 2015	Low Tide Time	1402
D9	18 Jan 2015	Comments	Seagrass; Algae; Water clear
D9	18 Jan 2015		
D9	24 Jan 2015	Arrive Time	732
D9	24 Jan 2015	Weather	Sunny
D9	24 Jan 2015	Wind Speed (kts)	1.2
D9	24 Jan 2015	Wind Dir	E
D9	24 Jan 2015	Animal Life	None
D9	24 Jan 2015	Floatables	None
D9	24 Jan 2015	Water Color	Green
D9	24 Jan 2015	Current Direction	E
D9	24 Jan 2015	Wave Height Low (ft)	3
D9	24 Jan 2015	High Tide (ft)	4.8
D9	24 Jan 2015	High Tide Time	1130
D9	24 Jan 2015	Low Tide (ft)	1.1
D9	24 Jan 2015	Low Tide Time	540
D9	24 Jan 2015	Comments	Water clear
D9	24 Jan 2015		
D9	30 Jan 2015	Arrive Time	917
D9	30 Jan 2015	Weather	Cloudy
D9	30 Jan 2015	Wind Speed (kts)	0.6

Station	Date	Parameter	Value
D9	30 Jan 2015	Wind Dir	E
D9	30 Jan 2015	Animal Life	None
D9	30 Jan 2015	Floatables	None
D9	30 Jan 2015	Water Color	Green
D9	30 Jan 2015	Current Direction	E
D9	30 Jan 2015	Wave Height Low (ft)	4
D9	30 Jan 2015	High Tide (ft)	5.4
D9	30 Jan 2015	High Tide Time	547
D9	30 Jan 2015	Low Tide (ft)	-0.4
D9	30 Jan 2015	Low Tide Time	1309
D9	30 Jan 2015	Comments	1 Person; Water clear; Human fecal matter in close proximity
D9	30 Jan 2015		
D10	06 Jan 2015	Arrive Time	951
D10	06 Jan 2015	Weather	Sunny
D10	06 Jan 2015	Wind Speed (kts)	2
D10	06 Jan 2015	Wind Dir	W
D10	06 Jan 2015	Animal Life	None
D10	06 Jan 2015	Floatables	None
D10	06 Jan 2015	Water Color	Green
D10	06 Jan 2015	Current Direction	W
D10	06 Jan 2015	Wave Height Low (ft)	2
D10	06 Jan 2015	High Tide (ft)	5.7
D10	06 Jan 2015	High Tide Time	903
D10	06 Jan 2015	Low Tide (ft)	-0.6
D10	06 Jan 2015	Low Tide Time	1609
D10	06 Jan 2015	Comments	Kelp; Seagrass; 10 Surfers; Water clear
D10	06 Jan 2015		
D10	12 Jan 2015	Arrive Time	900
D10	12 Jan 2015	Weather	Cloudy
D10	12 Jan 2015	Wind Speed (kts)	0.2
D10	12 Jan 2015	Wind Dir	NE
D10	12 Jan 2015	Animal Life	None
D10	12 Jan 2015	Floatables	None
D10	12 Jan 2015	Water Color	Green
D10	12 Jan 2015	Current Direction	NE
D10	12 Jan 2015	Wave Height Low (ft)	3
D10	12 Jan 2015	High Tide (ft)	3
D10	12 Jan 2015	High Tide Time	1326
D10	12 Jan 2015	Low Tide (ft)	2.1
D10	12 Jan 2015	Low Tide Time	827
D10	12 Jan 2015	Comments	Kelp; Water clear
D10	12 Jan 2015		
D10	18 Jan 2015	Arrive Time	1106
D10	18 Jan 2015	Weather	Sunny
D10	18 Jan 2015	Wind Speed (kts)	4.4

Station	Date	Parameter	Value
D10	18 Jan 2015	Wind Dir	N
D10	18 Jan 2015	Animal Life	None
D10	18 Jan 2015	Floatables	None
D10	18 Jan 2015	Water Color	Green
D10	18 Jan 2015	Current Direction	N
D10	18 Jan 2015	Wave Height Low (ft)	3
D10	18 Jan 2015	High Tide (ft)	6.2
D10	18 Jan 2015	High Tide Time	651
D10	18 Jan 2015	Low Tide (ft)	-1.2
D10	18 Jan 2015	Low Tide Time	1402
D10	18 Jan 2015	Comments	Seagrass; 2 Persons; 1 Surfer; Water clear
D10	18 Jan 2015		
D10	24 Jan 2015	Arrive Time	724
D10	24 Jan 2015	Weather	Sunny
D10	24 Jan 2015	Wind Speed (kts)	1.6
D10	24 Jan 2015	Wind Dir	E
D10	24 Jan 2015	Animal Life	None
D10	24 Jan 2015	Floatables	None
D10	24 Jan 2015	Water Color	Green
D10	24 Jan 2015	Current Direction	E
D10	24 Jan 2015	Wave Height Low (ft)	4
D10	24 Jan 2015	High Tide (ft)	4.8
D10	24 Jan 2015	High Tide Time	1130
D10	24 Jan 2015	Low Tide (ft)	1.1
D10	24 Jan 2015	Low Tide Time	540
D10	24 Jan 2015	Comments	Water clear
D10	24 Jan 2015		
D10	30 Jan 2015	Arrive Time	904
D10	30 Jan 2015	Weather	Drizzle
D10	30 Jan 2015	Wind Speed (kts)	2.1
D10	30 Jan 2015	Wind Dir	E
D10	30 Jan 2015	Animal Life	2 Seagulls
D10	30 Jan 2015	Floatables	None
D10	30 Jan 2015	Water Color	Green
D10	30 Jan 2015	Current Direction	E
D10	30 Jan 2015	Wave Height Low (ft)	4
D10	30 Jan 2015	High Tide (ft)	5.4
D10	30 Jan 2015	High Tide Time	547
D10	30 Jan 2015	Low Tide (ft)	-0.4
D10	30 Jan 2015	Low Tide Time	1309
D10	30 Jan 2015	Comments	4 Persons; Water clear
D10	30 Jan 2015		
D11	06 Jan 2015	Arrive Time	940
D11	06 Jan 2015	Weather	Sunny
D11	06 Jan 2015	Wind Speed (kts)	2
D11	06 Jan 2015	Wind Dir	W

Station	Date	Parameter	Value
D11	06 Jan 2015	Animal Life	1 Dog
D11	06 Jan 2015	Floatables	None
D11	06 Jan 2015	Water Color	Green
D11	06 Jan 2015	Current Direction	W
D11	06 Jan 2015	Wave Height Low (ft)	2
D11	06 Jan 2015	High Tide (ft)	5.7
D11	06 Jan 2015	High Tide Time	903
D11	06 Jan 2015	Low Tide (ft)	1.7
D11	06 Jan 2015	Low Tide Time	305
D11	06 Jan 2015	Comments	Kelp; Seagrass; Water clear
D11	06 Jan 2015		
D11	12 Jan 2015	Arrive Time	846
D11	12 Jan 2015	Weather	Drizzle
D11	12 Jan 2015	Wind Speed (kts)	0.2
D11	12 Jan 2015	Wind Dir	E
D11	12 Jan 2015	Animal Life	None
D11	12 Jan 2015	Floatables	None
D11	12 Jan 2015	Water Color	Green
D11	12 Jan 2015	Current Direction	E
D11	12 Jan 2015	Wave Height Low (ft)	2
D11	12 Jan 2015	High Tide (ft)	3
D11	12 Jan 2015	High Tide Time	1326
D11	12 Jan 2015	Low Tide (ft)	2.1
D11	12 Jan 2015	Low Tide Time	827
D11	12 Jan 2015	Comments	Seagrass; Water clear
D11	12 Jan 2015		
D11	14 Jan 2015	Arrive Time	746
D11	14 Jan 2015	Weather	Sunny
D11	14 Jan 2015	Wind Speed (kts)	3.4
D11	14 Jan 2015	Wind Dir	NE
D11	14 Jan 2015	Animal Life	None
D11	14 Jan 2015	Floatables	None
D11	14 Jan 2015	Water Color	Green
D11	14 Jan 2015	Current Direction	NE
D11	14 Jan 2015	Wave Height Low (ft)	4
D11	14 Jan 2015	High Tide (ft)	4.4
D11	14 Jan 2015	High Tide Time	348
D11	14 Jan 2015	Low Tide (ft)	1.2
D11	14 Jan 2015	Low Tide Time	1112
D11	14 Jan 2015	Comments	Water clear
D11	14 Jan 2015		14.6
D11	18 Jan 2015	Arrive Time	1053
D11	18 Jan 2015	Weather	Sunny
D11	18 Jan 2015	Wind Speed (kts)	0.1
D11	18 Jan 2015	Wind Dir	N
D11	18 Jan 2015	Animal Life	None

Station	Date	Parameter	Value
D11	18 Jan 2015	Floatables	None
D11	18 Jan 2015	Water Color	Green
D11	18 Jan 2015	Current Direction	N
D11	18 Jan 2015	Wave Height Low (ft)	3
D11	18 Jan 2015	High Tide (ft)	6.2
D11	18 Jan 2015	High Tide Time	651
D11	18 Jan 2015	Low Tide (ft)	-1.2
D11	18 Jan 2015	Low Tide Time	1402
D11	18 Jan 2015	Comments	Algae; Water clear
D11	18 Jan 2015		
D11	24 Jan 2015	Arrive Time	712
D11	24 Jan 2015	Weather	Sunny
D11	24 Jan 2015	Wind Speed (kts)	1.7
D11	24 Jan 2015	Wind Dir	E
D11	24 Jan 2015	Animal Life	None
D11	24 Jan 2015	Floatables	None
D11	24 Jan 2015	Water Color	Green
D11	24 Jan 2015	Current Direction	E
D11	24 Jan 2015	Wave Height Low (ft)	4
D11	24 Jan 2015	High Tide (ft)	4.8
D11	24 Jan 2015	High Tide Time	1130
D11	24 Jan 2015	Low Tide (ft)	1.1
D11	24 Jan 2015	Low Tide Time	540
D11	24 Jan 2015	Comments	2 Persons; Water clear
D11	24 Jan 2015		
D11	30 Jan 2015	Arrive Time	851
D11	30 Jan 2015	Weather	Drizzle
D11	30 Jan 2015	Wind Speed (kts)	1.6
D11	30 Jan 2015	Wind Dir	SE
D11	30 Jan 2015	Animal Life	2 Dogs
D11	30 Jan 2015	Floatables	None
D11	30 Jan 2015	Water Color	Green
D11	30 Jan 2015	Current Direction	SE
D11	30 Jan 2015	Wave Height Low (ft)	4
D11	30 Jan 2015	High Tide (ft)	5.4
D11	30 Jan 2015	High Tide Time	547
D11	30 Jan 2015	Low Tide (ft)	-0.4
D11	30 Jan 2015	Low Tide Time	1309
D11	30 Jan 2015	Comments	1 Person; Water clear
D11	30 Jan 2015		
D12	06 Jan 2015	Arrive Time	920
D12	06 Jan 2015	Weather	Sunny
D12	06 Jan 2015	Wind Speed (kts)	3
D12	06 Jan 2015	Wind Dir	W
D12	06 Jan 2015	Animal Life	None
D12	06 Jan 2015	Floatables	None

Station	Date	Parameter	Value
D12	06 Jan 2015	Water Color	Green
D12	06 Jan 2015	Current Direction	W
D12	06 Jan 2015	Wave Height Low (ft)	2
D12	06 Jan 2015	High Tide (ft)	5.7
D12	06 Jan 2015	High Tide Time	903
D12	06 Jan 2015	Low Tide (ft)	1.7
D12	06 Jan 2015	Low Tide Time	305
D12	06 Jan 2015	Comments	Kelp; Seagrass; Water clear
D12	06 Jan 2015		
D12	12 Jan 2015	Arrive Time	824
D12	12 Jan 2015	Weather	Cloudy
D12	12 Jan 2015	Wind Speed (kts)	0.5
D12	12 Jan 2015	Wind Dir	E
D12	12 Jan 2015	Animal Life	None
D12	12 Jan 2015	Floatables	None
D12	12 Jan 2015	Water Color	Green
D12	12 Jan 2015	Current Direction	E
D12	12 Jan 2015	Wave Height Low (ft)	2
D12	12 Jan 2015	High Tide (ft)	3
D12	12 Jan 2015	High Tide Time	1326
D12	12 Jan 2015	Low Tide (ft)	2.1
D12	12 Jan 2015	Low Tide Time	827
D12	12 Jan 2015	Comments	Kelp; Water clear
D12	12 Jan 2015		
D12	18 Jan 2015	Arrive Time	1032
D12	18 Jan 2015	Weather	Sunny
D12	18 Jan 2015	Wind Speed (kts)	2.9
D12	18 Jan 2015	Wind Dir	N
D12	18 Jan 2015	Animal Life	None
D12	18 Jan 2015	Floatables	None
D12	18 Jan 2015	Water Color	Green
D12	18 Jan 2015	Current Direction	N
D12	18 Jan 2015	Wave Height Low (ft)	3
D12	18 Jan 2015	High Tide (ft)	6.2
D12	18 Jan 2015	High Tide Time	651
D12	18 Jan 2015	Low Tide (ft)	-1.2
D12	18 Jan 2015	Low Tide Time	1402
D12	18 Jan 2015	Comments	Kelp; 2 Persons; Water clear
D12	18 Jan 2015		
D12	24 Jan 2015	Arrive Time	656
D12	24 Jan 2015	Weather	Sunny
D12	24 Jan 2015	Wind Speed (kts)	2.1
D12	24 Jan 2015	Wind Dir	E
D12	24 Jan 2015	Animal Life	None
D12	24 Jan 2015	Floatables	None
D12	24 Jan 2015	Water Color	Green

Station	Date	Parameter	Value
D12	24 Jan 2015	Current Direction	E
D12	24 Jan 2015	Wave Height Low (ft)	3
D12	24 Jan 2015	High Tide (ft)	4.8
D12	24 Jan 2015	High Tide Time	1130
D12	24 Jan 2015	Low Tide (ft)	1.1
D12	24 Jan 2015	Low Tide Time	540
D12	24 Jan 2015	Comments	3 Surfers; Water clear
D12	24 Jan 2015		
D12	30 Jan 2015	Arrive Time	831
D12	30 Jan 2015	Weather	Drizzle
D12	30 Jan 2015	Wind Speed (kts)	1.3
D12	30 Jan 2015	Wind Dir	SE
D12	30 Jan 2015	Animal Life	3 Shorebirds
D12	30 Jan 2015	Floatables	None
D12	30 Jan 2015	Water Color	Green
D12	30 Jan 2015	Current Direction	SE
D12	30 Jan 2015	Wave Height Low (ft)	4
D12	30 Jan 2015	High Tide (ft)	5.4
D12	30 Jan 2015	High Tide Time	547
D12	30 Jan 2015	Low Tide (ft)	-0.4
D12	30 Jan 2015	Low Tide Time	1309
D12	30 Jan 2015	Comments	4 Persons; 1 Fisherman; Water clear
D12	30 Jan 2015		

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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 Jan 2015	15	10	14	3	6	4	6	7
02 Jan 2015	16*	13	23*	3*	6*	4*	6*	8*
03 Jan 2015	16*	13	23*	3*	6*	4*	6*	8*
04 Jan 2015	16*	13	23*	3*	6*	4*	6*	8*
05 Jan 2015	13	12	14	3	5	3	5	6
06 Jan 2015	13	12	14	3	5	3	5	6
07 Jan 2015	5*	5	5*	2*	4*	4*	2*	5*
08 Jan 2015	5*	5	5*	2*	4*	4*	2*	5*
09 Jan 2015	5*	6*	5*	2*	4*	4*	2*	5*
10 Jan 2015	4	7	4	2	4	3	2	4
11 Jan 2015	4	7	4	2	4	3	2	4
12 Jan 2015	4	7	4	2	4	3	2	4
13 Jan 2015	4	7	4	2	4	3	2	4
14 Jan 2015	4	7	4	2	4	3	2	4
15 Jan 2015	4	7	6	2	3	3	3	3
16 Jan 2015	4	7	6	2	3	3	3	3
17 Jan 2015	4	7	6	2	3	3	3	3
18 Jan 2015	4*	9*	7*	2*	2*	3*	3*	3*
19 Jan 2015	4*	9*	7*	2*	2*	3*	3*	3*
20 Jan 2015	3*	5*	3*	2*	2*	2*	2*	2*
21 Jan 2015	3*	5*	3*	2*	2*	2*	2*	2*
22 Jan 2015	3*	5*	3*	2*	2*	2*	2*	2*
23 Jan 2015	3*	5*	3*	2*	2*	2*	2*	2*
24 Jan 2015	3*	5*	3*	2*	2*	2*	2*	2*
25 Jan 2015	3*	5*	3*	2*	2*	2*	2*	2*
26 Jan 2015	3*	5*	3*	2*	2*	2*	2*	2*
27 Jan 2015	3*	5*	3*	2*	2*	2*	2*	2*
28 Jan 2015	3	4	3	2	3	2	2	3
29 Jan 2015	3	4	3	2	3	2	2	3
30 Jan 2015	3	4	3	2	3	2	2	3
31 Jan 2015	3	4	3	2	3	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 Jan 2015	4	4	6	2	2	2	3	2
02 Jan 2015	4*	5	8*	2*	2*	2*	3*	2*
03 Jan 2015	4*	5	8*	2*	2*	2*	3*	2*
04 Jan 2015	4*	5	8*	2*	2*	2*	3*	2*
05 Jan 2015	4	4	6	2	2	2	3	2
06 Jan 2015	4	4	6	2	2	2	3	2
07 Jan 2015	2*	2	3*	2*	2*	2*	2*	2*
08 Jan 2015	2*	2	3*	2*	2*	2*	2*	2*
09 Jan 2015	2*	2*	3*	2*	2*	2*	2*	2*
10 Jan 2015	2	3	3	3	2	2	2	2
11 Jan 2015	2	3	3	3	2	2	2	2
12 Jan 2015	2	3	3	3	2	2	2	2
13 Jan 2015	2	3	3	3	2	2	2	2
14 Jan 2015	2	3	3	3	2	2	2	2
15 Jan 2015	2	3	3	3	2	2	2	2
16 Jan 2015	2	3	3	3	2	2	2	2
17 Jan 2015	2	3	3	3	2	2	2	2
18 Jan 2015	2*	3*	3*	3*	2*	2*	2*	2*
19 Jan 2015	2*	3*	3*	3*	2*	2*	2*	2*
20 Jan 2015	2*	3*	2*	3*	2*	2*	2*	2*
21 Jan 2015	2*	3*	2*	3*	2*	2*	2*	2*
22 Jan 2015	2*	3*	2*	3*	2*	2*	2*	2*
23 Jan 2015	2*	3*	2*	3*	2*	2*	2*	2*
24 Jan 2015	2*	3*	2*	3*	2*	2*	2*	2*
25 Jan 2015	2*	3*	2*	3*	2*	2*	2*	2*
26 Jan 2015	2*	3*	2*	3*	2*	2*	2*	2*
27 Jan 2015	2*	3*	2*	3*	2*	2*	2*	2*
28 Jan 2015	2	3	2	3	2	2	2	2
29 Jan 2015	2	3	2	3	2	2	2	2
30 Jan 2015	2	3	2	3	2	2	2	2
31 Jan 2015	2	3	2	3	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 Jan 2015	3	3	4	2	2	2	3	3
02 Jan 2015	3*	4	4*	2*	2*	2*	4*	3*
03 Jan 2015	3*	4	4*	2*	2*	2*	4*	3*
04 Jan 2015	3*	4	4*	2*	2*	2*	4*	3*
05 Jan 2015	3	3	4	2	2	2	3	3
06 Jan 2015	3	3	4	2	2	2	3	3
07 Jan 2015	2*	2	2*	2*	2*	2*	3*	3*
08 Jan 2015	2*	2	2*	2*	2*	2*	3*	3*
09 Jan 2015	2*	2*	2*	2*	2*	2*	3*	3*
10 Jan 2015	2	2	2	2	2	2	3	3
11 Jan 2015	2	2	2	2	2	2	3	3
12 Jan 2015	2	2	2	2	2	2	3	3
13 Jan 2015	2	2	2	2	2	2	3	3
14 Jan 2015	2	2	2	2	2	2	3	3
15 Jan 2015	2	2	2	2	2	2	2	3
16 Jan 2015	2	2	2	2	2	2	2	3
17 Jan 2015	2	2	2	2	2	2	2	3
18 Jan 2015	2*	2*	2*	2*	2*	2*	2*	3*
19 Jan 2015	2*	2*	2*	2*	2*	2*	2*	3*
20 Jan 2015	2*	2*	2*	2*	2*	2*	2*	2*
21 Jan 2015	2*	2*	2*	2*	2*	2*	2*	2*
22 Jan 2015	2*	2*	2*	2*	2*	2*	2*	2*
23 Jan 2015	2*	2*	2*	2*	2*	2*	2*	2*
24 Jan 2015	2*	2*	2*	2*	2*	2*	2*	2*
25 Jan 2015	2*	2*	2*	2*	2*	2*	2*	2*
26 Jan 2015	2*	2*	2*	2*	2*	2*	2*	2*
27 Jan 2015	2*	2*	2*	2*	2*	2*	2*	2*
28 Jan 2015	2	2	2	2	2	2	2	2
29 Jan 2015	2	2	2	2	2	2	2	2
30 Jan 2015	2	2	2	2	2	2	2	2
31 Jan 2015	2	2	2	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
05 Jan 2015	IC	IC	IC	IC	IC	IC	IC	IC
10 Jan 2015	IC	IC	IC	IC	IC	IC	IC	IC
15 Jan 2015	IC	IC	IC	IC	IC	IC	IC	IC
20 Jan 2015	IC	IC	IC	IC	IC	IC	IC	IC
28 Jan 2015	IC	IC	IC	IC	IC	IC	IC	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
05 Jan 2015	IC	IC	IC	IC	IC	IC	IC	IC
10 Jan 2015	IC	IC	IC	IC	IC	IC	IC	IC
15 Jan 2015	IC	IC	IC	IC	IC	IC	IC	IC
20 Jan 2015	IC	IC	IC	IC	IC	IC	IC	IC
28 Jan 2015	IC	IC	IC	IC	IC	IC	IC	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
05 Jan 2015	IC	IC	IC	IC	IC	IC	IC	IC
10 Jan 2015	IC	IC	IC	IC	IC	IC	IC	IC
15 Jan 2015	IC	IC	IC	IC	IC	IC	IC	IC
20 Jan 2015	IC	IC	IC	IC	IC	IC	IC	IC
28 Jan 2015	IC	IC	IC	IC	IC	IC	IC	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
05 Jan 2015	IC	IC	IC	IC	IC	IC	IC	IC
10 Jan 2015	IC	IC	IC	IC	IC	IC	IC	IC
15 Jan 2015	IC	IC	IC	IC	IC	IC	IC	IC
20 Jan 2015	IC	IC	IC	IC	IC	IC	IC	IC
28 Jan 2015	IC	IC	IC	IC	IC	IC	IC	IC

IC = In Compliance

E = Exceedance

ns = not sampled

Table 3.8

Summary of water quality parameters at the PLOO kelp stations for each sample date. Densities of total coliform (Total), fecal coliform (Fecal) and *Enterococcus* (Entero) bacteria are reported as CFU/100 mL; the fecal:total coliform ratio (F:T) is unitless; ammonium (N-NH₃) values are reported as 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	Entero	F:T	N-NH ₃	Temp	XMS	DO	Sal	pH
A1	05 Jan 2015	1113	1	<2	<2	<2	1.0	ns	ns	ns	ns	ns	ns
A1	05 Jan 2015	1113	12	2e	<2	<2	1.0	ns	ns	ns	ns	ns	ns
A1	05 Jan 2015	1113	18	14e	<2	4e	0.1	ns	ns	ns	ns	ns	ns
A1	10 Jan 2015	824	1	<2	<2	<2	1.0	ns	16.0	91.27	7.8	33.43	8.2
A1	10 Jan 2015	824	12	2e	<2	<2	1.0	ns	15.9	90.55	7.7	33.44	8.2
A1	10 Jan 2015	824	18	<2	<2	<2	1.0	ns	15.7	87.81	7.6	33.45	8.2
A1	15 Jan 2015	816	1	2e	<2	<2	1.0	ns	16.1	86.75	8.1	33.43	8.2
A1	15 Jan 2015	816	12	2e	<2	<2	1.0	ns	16.0	88.36	7.8	33.43	8.2
A1	15 Jan 2015	816	18	6e	<2	2e	0.3	ns	15.7	88.27	7.2	33.41	8.2
A1	20 Jan 2015	810	1	<2	<2	2e	1.0	ns	16.4	84.59	7.7	33.40	8.2
A1	20 Jan 2015	810	12	2e	2e	<2	1.0	ns	15.8	84.36	7.4	33.40	8.2
A1	20 Jan 2015	810	18	4e	2e	2e	0.5	ns	15.4	84.06	7.2	33.39	8.2
A1	28 Jan 2015	755	1	<2	2e	<2	1.0	ns	16.3	88.39	8.0	33.40	8.2
A1	28 Jan 2015	755	12	<2	<2	2e	1.0	ns	16.1	88.51	7.7	33.39	8.2
A1	28 Jan 2015	755	18	<2	<2	2e	1.0	ns	15.4	85.35	7.1	33.37	8.1
C4	05 Jan 2015	1100	1	<2	<2	<2	1.0	ns	15.7	90.58	8.0	33.47	8.2
C4	05 Jan 2015	1100	3	<2	<2	<2	1.0	ns	15.7	90.17	8.0	33.47	8.2
C4	05 Jan 2015	1100	9	<2	<2	<2	1.0	ns	15.6	90.39	8.0	33.47	8.2
C4	10 Jan 2015	1051	1	<2	24e	<2	12.0	ns	15.8	86.88	7.9	33.44	8.2
C4	10 Jan 2015	1051	3	<2	<2	<2	1.0	ns	15.8	86.14	8.0	33.45	8.2
C4	10 Jan 2015	1051	9	<2	<2	2e	1.0	ns	15.6	83.18	7.9	33.45	8.2
C4	15 Jan 2015	1021	1	<2	<2	<2	1.0	ns	16.3	86.28	7.3	33.43	8.2
C4	15 Jan 2015	1021	3	<2	<2	<2	1.0	ns	16.2	85.61	7.5	33.43	8.2
C4	15 Jan 2015	1021	9	<2	2e	<2	1.0	ns	16.1	83.74	7.7	33.43	8.2
C4	20 Jan 2015	1015	1	<2	<2	<2	1.0	ns	16.6	64.57	7.2	33.40	8.1
C4	20 Jan 2015	1015	3	2e	<2	<2	1.0	ns	16.5	64.37	7.3	33.40	8.2
C4	20 Jan 2015	1015	9	2e	<2	<2	1.0	ns	16.2	82.25	6.9	33.42	8.2
C4	28 Jan 2015	1018	1	<2	<2	<2	1.0	ns	16.7	72.88	7.3	33.43	8.2
C4	28 Jan 2015	1018	3	<2	<2	<2	1.0	ns	16.5	70.98	7.2	33.42	8.2
C4	28 Jan 2015	1018	9	<2	<2	<2	1.0	ns	16.4	70.02	6.8	33.41	8.2
C5	05 Jan 2015	1034	1	<2	<2	<2	1.0	ns	15.9	90.34	8.0	33.46	8.2
C5	05 Jan 2015	1034	3	<2	<2	<2	1.0	ns	15.8	90.23	8.1	33.46	8.2
C5	05 Jan 2015	1034	9	<2	<2	<2	1.0	ns	15.6	90.08	8.2	33.46	8.2
C5	10 Jan 2015	1037	1	<2	<2	<2	1.0	ns	15.8	82.87	7.8	33.44	8.2
C5	10 Jan 2015	1037	3	<2	<2	<2	1.0	ns	15.7	81.59	7.8	33.44	8.2
C5	10 Jan 2015	1037	9	2e	<2	<2	1.0	ns	15.7	76.38	7.8	33.44	8.2

Station	Date	Time	Depth	Total	Fecal	Entero	F:T	N-NH3	Temp	XMS	DO	Sal	pH
C5	15 Jan 2015	1007	1	<2	<2	<2	1.0	ns	16.4	77.78	7.5	33.44	8.2
C5	15 Jan 2015	1007	3	<2	<2	<2	1.0	ns	16.3	77.76	7.6	33.44	8.2
C5	15 Jan 2015	1007	9	2e	<2	<2	1.0	ns	16.2	68.57	7.5	33.44	8.2
C5	20 Jan 2015	1000	1	<2	<2	<2	1.0	ns	16.7	61.31	7.6	33.38	8.2
C5	20 Jan 2015	1000	3	2e	<2	<2	1.0	ns	16.6	61.18	7.6	33.38	8.2
C5	20 Jan 2015	1000	9	2e	<2	<2	1.0	ns	16.4	44.63	6.6	33.39	8.1
C5	28 Jan 2015	1004	1	<2	<2	<2	1.0	ns	16.6	57.16	7.4	33.43	8.2
C5	28 Jan 2015	1004	3	<2	<2	<2	1.0	ns	16.5	57.21	7.2	33.43	8.2
C5	28 Jan 2015	1004	9	<20	<2	<2	0.1	ns	16.4	38.02	6.9	33.42	8.1
A6	05 Jan 2015	1010	1	<2	<2	<2	1.0	ns	15.8	89.71	8.0	33.44	8.1
A6	05 Jan 2015	1010	12	12e	<2	<2	0.2	ns	15.7	89.63	7.6	33.44	8.1
A6	05 Jan 2015	1010	18	6e	<2	2e	0.3	ns	15.0	90.78	7.0	33.39	8.1
A6	10 Jan 2015	910	1	<2	<2	<2	1.0	ns	16.2	90.86	7.6	33.43	8.2
A6	10 Jan 2015	910	12	<2	<2	<2	1.0	ns	15.8	88.39	7.6	33.42	8.2
A6	10 Jan 2015	910	18	44	16e	2e	0.4	ns	15.4	88.49	7.5	33.41	8.2
A6	15 Jan 2015	849	1	<2	<2	<2	1.0	ns	16.2	76.58	8.0	33.39	8.2
A6	15 Jan 2015	849	12	<2	<2	<2	1.0	ns	16.1	85.74	7.6	33.40	8.2
A6	15 Jan 2015	849	18	<2	<2	<2	1.0	ns	15.6	87.68	7.0	33.41	8.2
A6	20 Jan 2015	850	1	<2	<2	<2	1.0	ns	16.5	86.87	7.8	33.39	8.2
A6	20 Jan 2015	850	12	2e	<2	2e	1.0	ns	15.8	86.53	7.4	33.41	8.2
A6	20 Jan 2015	850	18	2e	<2	2e	1.0	ns	15.4	85.52	7.1	33.40	8.2
A6	28 Jan 2015	834	1	<2	<2	<2	1.0	ns	16.4	86.81	7.5	33.41	8.2
A6	28 Jan 2015	834	12	<2	2e	2e	1.0	ns	16.3	87.04	7.5	33.40	8.2
A6	28 Jan 2015	834	18	2e	<2	2e	1.0	ns	16.1	87.00	7.2	33.38	8.2
C6	05 Jan 2015	1021	1	<2	<2	<2	1.0	ns	15.8	89.84	8.2	33.47	8.2
C6	05 Jan 2015	1021	3	<2	<2	<2	1.0	ns	15.8	89.63	8.2	33.46	8.2
C6	05 Jan 2015	1021	9	<2	<2	<2	1.0	ns	15.7	91.13	8.2	33.47	8.2
C6	10 Jan 2015	1021	1	<2	<2	<2	1.0	ns	16.1	84.66	8.0	33.44	8.2
C6	10 Jan 2015	1021	3	<2	<2	<2	1.0	ns	16.1	84.60	8.0	33.44	8.2
C6	10 Jan 2015	1021	9	<2	<2	<2	1.0	ns	16.0	82.32	7.9	33.44	8.2
C6	15 Jan 2015	952	1	<2	<2	<2	1.0	ns	16.2	84.09	7.3	33.37	8.2
C6	15 Jan 2015	952	3	<2	<2	<2	1.0	ns	16.2	84.18	7.3	33.37	8.2
C6	15 Jan 2015	952	9	<2	<2	<2	1.0	ns	16.2	82.98	7.1	33.40	8.2
C6	20 Jan 2015	947	1	<2	<2	<2	1.0	ns	16.6	79.36	7.5	33.38	8.2
C6	20 Jan 2015	947	3	<2	<2	<2	1.0	ns	16.6	79.64	7.5	33.38	8.2
C6	20 Jan 2015	947	9	<2	<2	<2	1.0	ns	16.5	80.36	7.3	33.38	8.2
C6	28 Jan 2015	949	1	<2	<2	<2	1.0	ns	16.6	77.40	7.5	33.42	8.2
C6	28 Jan 2015	949	3	2e	<2	<2	1.0	ns	16.5	76.77	7.4	33.41	8.2
C6	28 Jan 2015	949	9	<2	<2	<2	1.0	ns	16.5	67.18	7.3	33.42	8.2
A7	05 Jan 2015	1045	1	<2	<2	<2	1.0	ns	15.9	89.23	8.0	33.44	8.2
A7	05 Jan 2015	1045	12	<2	<2	<2	1.0	ns	15.7	88.98	7.7	33.44	8.1
A7	05 Jan 2015	1045	18	<2	<2	<2	1.0	ns	15.5	89.47	7.3	33.43	8.1
A7	10 Jan 2015	847	1	<2	<2	<2	1.0	ns	16.1	89.84	8.0	33.43	8.2

Station	Date	Time	Depth	Total	Fecal	Entero	F:T	N-NH3	Temp	XMS	DO	Sal	pH
A7	10 Jan 2015	847	12	4e	<2	<2	0.5	ns	16.0	90.83	8.1	33.44	8.2
A7	10 Jan 2015	847	18	<2	<2	<2	1.0	ns	15.8	85.98	7.9	33.45	8.2
A7	15 Jan 2015	830	1	2e	<2	<2	1.0	ns	16.2	85.71	7.8	33.43	8.2
A7	15 Jan 2015	830	12	8e	2e	2e	0.2	ns	16.1	86.64	7.6	33.42	8.2
A7	15 Jan 2015	830	18	18e	2e	<2	0.1	ns	15.4	88.27	6.9	33.40	8.1
A7	20 Jan 2015	834	1	<2	<2	<2	1.0	ns	16.6	83.01	7.7	33.39	8.2
A7	20 Jan 2015	834	12	4e	<2	<2	0.5	ns	15.8	84.87	7.2	33.39	8.2
A7	20 Jan 2015	834	18	<2	<2	<2	1.0	ns	15.2	83.80	7.1	33.40	8.2
A7	28 Jan 2015	815	1	<2	<2	<2	1.0	ns	16.4	85.18	7.2	33.41	8.2
A7	28 Jan 2015	815	12	<2	<2	<2	1.0	ns	16.4	85.70	7.3	33.40	8.2
A7	28 Jan 2015	815	18	4e	<2	<2	0.5	ns	15.8	87.88	7.1	33.38	8.2
C7	05 Jan 2015	949	1	<2	<2	<2	1.0	ns	15.8	89.83	8.3	33.45	8.2
C7	05 Jan 2015	949	12	<2	<2	<2	1.0	ns	15.7	89.18	7.8	33.46	8.1
C7	05 Jan 2015	949	18	2e	<2	<2	1.0	ns	15.5	89.71	7.4	33.46	8.1
C7	10 Jan 2015	933	1	<2	<2	<2	1.0	ns	16.2	89.95	8.6	33.44	8.3
C7	10 Jan 2015	933	12	2e	<2	<2	1.0	ns	16.1	90.23	8.1	33.44	8.2
C7	10 Jan 2015	933	18	2e	2e	2e	1.0	ns	15.9	78.71	7.3	33.44	8.2
C7	15 Jan 2015	907	1	2e	2e	<2	1.0	ns	16.2	82.03	8.3	33.30	8.2
C7	15 Jan 2015	907	12	6e	<2	<2	0.3	ns	16.1	86.85	7.5	33.40	8.2
C7	15 Jan 2015	907	18	4e	<2	2e	0.5	ns	15.4	86.23	6.7	33.41	8.1
C7	20 Jan 2015	907	1	2e	<2	<2	1.0	ns	16.7	86.81	8.2	33.39	8.2
C7	20 Jan 2015	907	12	2e	2e	4e	1.0	ns	16.6	85.81	7.6	33.39	8.2
C7	20 Jan 2015	907	18	2e	2e	<2	1.0	ns	15.9	85.88	7.1	33.39	8.2
C7	28 Jan 2015	903	1	<2	<2	<2	1.0	ns	16.5	81.85	8.6	33.41	8.3
C7	28 Jan 2015	903	12	<2	<2	<2	1.0	ns	16.3	84.76	7.7	33.40	8.2
C7	28 Jan 2015	903	18	<2	<2	<2	1.0	ns	15.6	NA	7.0	33.38	8.2
C8	05 Jan 2015	933	1	<2	<2	<2	1.0	ns	15.7	89.05	7.8	33.44	8.1
C8	05 Jan 2015	933	12	<2	<2	<2	1.0	ns	15.4	88.62	7.4	33.44	8.1
C8	05 Jan 2015	933	18	<2	<2	2e	1.0	ns	15.4	87.87	7.2	33.44	8.1
C8	10 Jan 2015	958	1	<2	<2	<2	1.0	ns	16.2	91.20	7.9	33.43	8.2
C8	10 Jan 2015	958	12	2e	<2	<2	1.0	ns	16.1	91.10	8.0	33.42	8.2
C8	10 Jan 2015	958	18	<2	<2	<2	1.0	ns	15.7	85.20	7.2	33.42	8.2
C8	15 Jan 2015	925	1	<2	<2	<2	1.0	ns	16.1	85.79	8.0	33.38	8.2
C8	15 Jan 2015	925	12	<2	<2	<2	1.0	ns	16.1	85.84	8.0	33.40	8.2
C8	15 Jan 2015	925	18	<2	<2	<2	1.0	ns	15.6	83.44	7.3	33.41	8.2
C8	20 Jan 2015	924	1	<2	<2	<2	1.0	ns	16.8	89.62	7.8	33.39	8.2
C8	20 Jan 2015	924	12	<2	<2	<2	1.0	ns	16.7	89.73	7.8	33.38	8.2
C8	20 Jan 2015	924	18	<2	<2	<2	1.0	ns	16.0	82.75	7.2	33.38	8.2
C8	28 Jan 2015	926	1	<2	<2	<2	1.0	ns	16.5	89.55	7.7	33.41	8.2
C8	28 Jan 2015	926	12	2e	<2	<2	1.0	ns	16.3	88.86	7.7	33.40	8.2
C8	28 Jan 2015	926	18	<20	2e	<2	0.1	ns	15.7	77.34	7.1	33.38	8.2

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	05 Jan 2015	Depth (m)	18
A1	05 Jan 2015	Arrive Time	1113
A1	05 Jan 2015	Depart Time	1121
A1	05 Jan 2015	Air Temp (C)	16
A1	05 Jan 2015	Weather	Partly Cloudy
A1	05 Jan 2015	Visibility (mi)	9
A1	05 Jan 2015	Wind Speed (kts)	9
A1	05 Jan 2015	Wind Dir	NE
A1	05 Jan 2015	Water Color	Greenish-Blue
A1	05 Jan 2015	Wave Ht Low (ft)	2
A1	05 Jan 2015	Wave Period (sec)	9
A1	05 Jan 2015	Sea State	Calm
A1	05 Jan 2015	High Tide (ft)	5.92
A1	05 Jan 2015	High Tide Time	830
A1	05 Jan 2015	Low Tide (ft)	-0.79
A1	05 Jan 2015	Low Tide Time	1537
A1	05 Jan 2015	Comments	
A1	10 Jan 2015	Depth (m)	19
A1	10 Jan 2015	Arrive Time	824
A1	10 Jan 2015	Depart Time	840
A1	10 Jan 2015	Air Temp (C)	14
A1	10 Jan 2015	Weather	Partly Cloudy
A1	10 Jan 2015	Visibility (mi)	6
A1	10 Jan 2015	Wind Speed (kts)	7
A1	10 Jan 2015	Wind Dir	S
A1	10 Jan 2015	Water Color	Green
A1	10 Jan 2015	Wave Ht Low (ft)	2
A1	10 Jan 2015	Wave Period (sec)	9
A1	10 Jan 2015	Sea State	Calm
A1	10 Jan 2015	High Tide (ft)	4.05
A1	10 Jan 2015	High Tide Time	1121
A1	10 Jan 2015	Low Tide (ft)	2.16
A1	10 Jan 2015	Low Tide Time	551
A1	10 Jan 2015	Comments	Lobster buoys; Birds; Kelp
A1	15 Jan 2015	Depth (m)	18
A1	15 Jan 2015	Arrive Time	816
A1	15 Jan 2015	Depart Time	823
A1	15 Jan 2015	Air Temp (C)	16
A1	15 Jan 2015	Weather	Partly Cloudy
A1	15 Jan 2015	Visibility (mi)	5
A1	15 Jan 2015	Wind Speed (kts)	1
A1	15 Jan 2015	Wind Dir	E

Station	Date	Parameter	Value
A1	15 Jan 2015	Water Color	Green
A1	15 Jan 2015	Wave Ht Low (ft)	3
A1	15 Jan 2015	Wave Period (sec)	9
A1	15 Jan 2015	Sea State	Calm
A1	15 Jan 2015	High Tide (ft)	4.83
A1	15 Jan 2015	High Tide Time	439
A1	15 Jan 2015	Low Tide (ft)	0.56
A1	15 Jan 2015	Low Tide Time	1203
A1	15 Jan 2015	Comments	Kelp
A1	20 Jan 2015	Depth (m)	19
A1	20 Jan 2015	Arrive Time	810
A1	20 Jan 2015	Depart Time	827
A1	20 Jan 2015	Air Temp (C)	14
A1	20 Jan 2015	Weather	Cloudy
A1	20 Jan 2015	Visibility (mi)	5
A1	20 Jan 2015	Wind Speed (kts)	3
A1	20 Jan 2015	Wind Dir	N
A1	20 Jan 2015	Water Color	Greenish-Blue
A1	20 Jan 2015	Wave Ht Low (ft)	3
A1	20 Jan 2015	Wave Period (sec)	9
A1	20 Jan 2015	Sea State	Calm
A1	20 Jan 2015	High Tide (ft)	6.59
A1	20 Jan 2015	High Tide Time	817
A1	20 Jan 2015	Low Tide (ft)	-1.58
A1	20 Jan 2015	Low Tide Time	1520
A1	20 Jan 2015	Comments	Kelp; Kelp debris
A1	28 Jan 2015	Depth (m)	18
A1	28 Jan 2015	Arrive Time	755
A1	28 Jan 2015	Depart Time	804
A1	28 Jan 2015	Air Temp (C)	15
A1	28 Jan 2015	Weather	Partly Cloudy
A1	28 Jan 2015	Visibility (mi)	11
A1	28 Jan 2015	Wind Speed (kts)	0
A1	28 Jan 2015	Wind Dir	
A1	28 Jan 2015	Water Color	Bluish-Green
A1	28 Jan 2015	Wave Ht Low (ft)	4
A1	28 Jan 2015	Wave Period (sec)	13
A1	28 Jan 2015	Sea State	Calm
A1	28 Jan 2015	High Tide (ft)	4.97
A1	28 Jan 2015	High Tide Time	351
A1	28 Jan 2015	Low Tide (ft)	0.45
A1	28 Jan 2015	Low Tide Time	1124
A1	28 Jan 2015	Comments	Lobster floats; Kelp
C4	05 Jan 2015	Depth (m)	11
C4	05 Jan 2015	Arrive Time	1100
C4	05 Jan 2015	Depart Time	1105

Station	Date	Parameter	Value
C4	05 Jan 2015	Air Temp (C)	16
C4	05 Jan 2015	Weather	Partly Cloudy
C4	05 Jan 2015	Visibility (mi)	9
C4	05 Jan 2015	Wind Speed (kts)	7
C4	05 Jan 2015	Wind Dir	NE
C4	05 Jan 2015	Water Color	Greenish-Blue
C4	05 Jan 2015	Wave Ht Low (ft)	2
C4	05 Jan 2015	Wave Period (sec)	9
C4	05 Jan 2015	Sea State	Calm
C4	05 Jan 2015	High Tide (ft)	5.92
C4	05 Jan 2015	High Tide Time	830
C4	05 Jan 2015	Low Tide (ft)	-0.79
C4	05 Jan 2015	Low Tide Time	1537
C4	05 Jan 2015	Comments	
C4	10 Jan 2015	Depth (m)	12
C4	10 Jan 2015	Arrive Time	1051
C4	10 Jan 2015	Depart Time	1101
C4	10 Jan 2015	Air Temp (C)	16
C4	10 Jan 2015	Weather	Partly Cloudy
C4	10 Jan 2015	Visibility (mi)	5
C4	10 Jan 2015	Wind Speed (kts)	3
C4	10 Jan 2015	Wind Dir	N
C4	10 Jan 2015	Water Color	Green
C4	10 Jan 2015	Wave Ht Low (ft)	5
C4	10 Jan 2015	Wave Period (sec)	9
C4	10 Jan 2015	Sea State	Calm
C4	10 Jan 2015	High Tide (ft)	4.05
C4	10 Jan 2015	High Tide Time	1121
C4	10 Jan 2015	Low Tide (ft)	2.16
C4	10 Jan 2015	Low Tide Time	551
C4	10 Jan 2015	Comments	Lobster floats; Kelp debris
C4	15 Jan 2015	Depth (m)	10
C4	15 Jan 2015	Arrive Time	1021
C4	15 Jan 2015	Depart Time	1029
C4	15 Jan 2015	Air Temp (C)	17
C4	15 Jan 2015	Weather	Clear
C4	15 Jan 2015	Visibility (mi)	12
C4	15 Jan 2015	Wind Speed (kts)	5
C4	15 Jan 2015	Wind Dir	E
C4	15 Jan 2015	Water Color	Green
C4	15 Jan 2015	Wave Ht Low (ft)	3
C4	15 Jan 2015	Wave Period (sec)	9
C4	15 Jan 2015	Sea State	Calm
C4	15 Jan 2015	High Tide (ft)	4.83
C4	15 Jan 2015	High Tide Time	439
C4	15 Jan 2015	Low Tide (ft)	0.56
C4	15 Jan 2015	Low Tide Time	1203

Station	Date	Parameter	Value
C4	15 Jan 2015	Comments	Kelp; lobster floats; Boats
C4	20 Jan 2015	Depth (m)	9
C4	20 Jan 2015	Arrive Time	1015
C4	20 Jan 2015	Depart Time	1020
C4	20 Jan 2015	Air Temp (C)	13
C4	20 Jan 2015	Weather	Cloudy
C4	20 Jan 2015	Visibility (mi)	8
C4	20 Jan 2015	Wind Speed (kts)	2
C4	20 Jan 2015	Wind Dir	S
C4	20 Jan 2015	Water Color	Green
C4	20 Jan 2015	Wave Ht Low (ft)	2
C4	20 Jan 2015	Wave Period (sec)	9
C4	20 Jan 2015	Sea State	Calm
C4	20 Jan 2015	High Tide (ft)	6.59
C4	20 Jan 2015	High Tide Time	817
C4	20 Jan 2015	Low Tide (ft)	-1.58
C4	20 Jan 2015	Low Tide Time	1520
C4	20 Jan 2015	Comments	
C4	28 Jan 2015	Depth (m)	9
C4	28 Jan 2015	Arrive Time	1018
C4	28 Jan 2015	Depart Time	1024
C4	28 Jan 2015	Air Temp (C)	16
C4	28 Jan 2015	Weather	Partly Cloudy
C4	28 Jan 2015	Visibility (mi)	11
C4	28 Jan 2015	Wind Speed (kts)	3
C4	28 Jan 2015	Wind Dir	SW
C4	28 Jan 2015	Water Color	Bluish-Green
C4	28 Jan 2015	Wave Ht Low (ft)	4
C4	28 Jan 2015	Wave Period (sec)	13
C4	28 Jan 2015	Sea State	Wind ripples
C4	28 Jan 2015	High Tide (ft)	4.97
C4	28 Jan 2015	High Tide Time	351
C4	28 Jan 2015	Low Tide (ft)	0.45
C4	28 Jan 2015	Low Tide Time	1124
C4	28 Jan 2015	Comments	Kelp
C5	05 Jan 2015	Depth (m)	11
C5	05 Jan 2015	Arrive Time	1034
C5	05 Jan 2015	Depart Time	1038
C5	05 Jan 2015	Air Temp (C)	16
C5	05 Jan 2015	Weather	Partly Cloudy
C5	05 Jan 2015	Visibility (mi)	9
C5	05 Jan 2015	Wind Speed (kts)	7
C5	05 Jan 2015	Wind Dir	S
C5	05 Jan 2015	Water Color	Greenish-Blue
C5	05 Jan 2015	Wave Ht Low (ft)	2
C5	05 Jan 2015	Wave Period (sec)	9

Station	Date	Parameter	Value
C5	05 Jan 2015	Sea State	Calm
C5	05 Jan 2015	High Tide (ft)	5.92
C5	05 Jan 2015	High Tide Time	830
C5	05 Jan 2015	Low Tide (ft)	-0.79
C5	05 Jan 2015	Low Tide Time	1537
C5	05 Jan 2015	Comments	
C5	10 Jan 2015	Depth (m)	13
C5	10 Jan 2015	Arrive Time	1037
C5	10 Jan 2015	Depart Time	1044
C5	10 Jan 2015	Air Temp (C)	16
C5	10 Jan 2015	Weather	Partly Cloudy
C5	10 Jan 2015	Visibility (mi)	5
C5	10 Jan 2015	Wind Speed (kts)	1
C5	10 Jan 2015	Wind Dir	S
C5	10 Jan 2015	Water Color	Green
C5	10 Jan 2015	Wave Ht Low (ft)	3
C5	10 Jan 2015	Wave Period (sec)	9
C5	10 Jan 2015	Sea State	Calm
C5	10 Jan 2015	High Tide (ft)	4.05
C5	10 Jan 2015	High Tide Time	1121
C5	10 Jan 2015	Low Tide (ft)	2.16
C5	10 Jan 2015	Low Tide Time	551
C5	10 Jan 2015	Comments	
C5	15 Jan 2015	Depth (m)	12
C5	15 Jan 2015	Arrive Time	1007
C5	15 Jan 2015	Depart Time	1017
C5	15 Jan 2015	Air Temp (C)	17
C5	15 Jan 2015	Weather	Clear
C5	15 Jan 2015	Visibility (mi)	12
C5	15 Jan 2015	Wind Speed (kts)	2
C5	15 Jan 2015	Wind Dir	NE
C5	15 Jan 2015	Water Color	Green
C5	15 Jan 2015	Wave Ht Low (ft)	3
C5	15 Jan 2015	Wave Period (sec)	9
C5	15 Jan 2015	Sea State	Calm
C5	15 Jan 2015	High Tide (ft)	4.83
C5	15 Jan 2015	High Tide Time	439
C5	15 Jan 2015	Low Tide (ft)	0.56
C5	15 Jan 2015	Low Tide Time	1203
C5	15 Jan 2015	Comments	Kelp
C5	20 Jan 2015	Depth (m)	9
C5	20 Jan 2015	Arrive Time	1000
C5	20 Jan 2015	Depart Time	1007
C5	20 Jan 2015	Air Temp (C)	14
C5	20 Jan 2015	Weather	Cloudy
C5	20 Jan 2015	Visibility (mi)	8

Station	Date	Parameter	Value
C5	20 Jan 2015	Wind Speed (kts)	1
C5	20 Jan 2015	Wind Dir	W
C5	20 Jan 2015	Water Color	Green
C5	20 Jan 2015	Wave Ht Low (ft)	2
C5	20 Jan 2015	Wave Period (sec)	9
C5	20 Jan 2015	Sea State	Calm
C5	20 Jan 2015	High Tide (ft)	6.59
C5	20 Jan 2015	High Tide Time	817
C5	20 Jan 2015	Low Tide (ft)	-1.58
C5	20 Jan 2015	Low Tide Time	1520
C5	20 Jan 2015	Comments	Kelp
C5	28 Jan 2015	Depth (m)	9
C5	28 Jan 2015	Arrive Time	1004
C5	28 Jan 2015	Depart Time	1010
C5	28 Jan 2015	Air Temp (C)	16
C5	28 Jan 2015	Weather	Partly Cloudy
C5	28 Jan 2015	Visibility (mi)	11
C5	28 Jan 2015	Wind Speed (kts)	0
C5	28 Jan 2015	Wind Dir	
C5	28 Jan 2015	Water Color	Bluish-Green
C5	28 Jan 2015	Wave Ht Low (ft)	4
C5	28 Jan 2015	Wave Period (sec)	13
C5	28 Jan 2015	Sea State	Wind ripples
C5	28 Jan 2015	High Tide (ft)	4.97
C5	28 Jan 2015	High Tide Time	351
C5	28 Jan 2015	Low Tide (ft)	0.45
C5	28 Jan 2015	Low Tide Time	1124
C5	28 Jan 2015	Comments	
A6	05 Jan 2015	Depth (m)	19
A6	05 Jan 2015	Arrive Time	1010
A6	05 Jan 2015	Depart Time	1017
A6	05 Jan 2015	Air Temp (C)	15
A6	05 Jan 2015	Weather	Partly Cloudy
A6	05 Jan 2015	Visibility (mi)	9
A6	05 Jan 2015	Wind Speed (kts)	4
A6	05 Jan 2015	Wind Dir	NE
A6	05 Jan 2015	Water Color	Greenish-Blue
A6	05 Jan 2015	Wave Ht Low (ft)	2
A6	05 Jan 2015	Wave Period (sec)	9
A6	05 Jan 2015	Sea State	Calm
A6	05 Jan 2015	High Tide (ft)	5.92
A6	05 Jan 2015	High Tide Time	830
A6	05 Jan 2015	Low Tide (ft)	-0.79
A6	05 Jan 2015	Low Tide Time	1537
A6	05 Jan 2015	Comments	Kelp
A6	10 Jan 2015	Depth (m)	17

Station	Date	Parameter	Value
A6	10 Jan 2015	Arrive Time	910
A6	10 Jan 2015	Depart Time	922
A6	10 Jan 2015	Air Temp (C)	16
A6	10 Jan 2015	Weather	Partly Cloudy
A6	10 Jan 2015	Visibility (mi)	5
A6	10 Jan 2015	Wind Speed (kts)	2
A6	10 Jan 2015	Wind Dir	E
A6	10 Jan 2015	Water Color	Green
A6	10 Jan 2015	Wave Ht Low (ft)	2
A6	10 Jan 2015	Wave Period (sec)	9
A6	10 Jan 2015	Sea State	Calm
A6	10 Jan 2015	High Tide (ft)	4.05
A6	10 Jan 2015	High Tide Time	1121
A6	10 Jan 2015	Low Tide (ft)	2.16
A6	10 Jan 2015	Low Tide Time	551
A6	10 Jan 2015	Comments	Kelp
A6	15 Jan 2015	Depth (m)	18
A6	15 Jan 2015	Arrive Time	849
A6	15 Jan 2015	Depart Time	858
A6	15 Jan 2015	Air Temp (C)	17
A6	15 Jan 2015	Weather	Clear
A6	15 Jan 2015	Visibility (mi)	12
A6	15 Jan 2015	Wind Speed (kts)	1
A6	15 Jan 2015	Wind Dir	W
A6	15 Jan 2015	Water Color	Green
A6	15 Jan 2015	Wave Ht Low (ft)	3
A6	15 Jan 2015	Wave Period (sec)	9
A6	15 Jan 2015	Sea State	Calm
A6	15 Jan 2015	High Tide (ft)	4.83
A6	15 Jan 2015	High Tide Time	439
A6	15 Jan 2015	Low Tide (ft)	0.56
A6	15 Jan 2015	Low Tide Time	1203
A6	15 Jan 2015	Comments	Kelp; Lobster floats
A6	20 Jan 2015	Depth (m)	19
A6	20 Jan 2015	Arrive Time	850
A6	20 Jan 2015	Depart Time	856
A6	20 Jan 2015	Air Temp (C)	13
A6	20 Jan 2015	Weather	Cloudy
A6	20 Jan 2015	Visibility (mi)	5
A6	20 Jan 2015	Wind Speed (kts)	4
A6	20 Jan 2015	Wind Dir	N
A6	20 Jan 2015	Water Color	Greenish-Blue
A6	20 Jan 2015	Wave Ht Low (ft)	2
A6	20 Jan 2015	Wave Period (sec)	9
A6	20 Jan 2015	Sea State	Calm
A6	20 Jan 2015	High Tide (ft)	6.59
A6	20 Jan 2015	High Tide Time	817

Station	Date	Parameter	Value
A6	20 Jan 2015	Low Tide (ft)	-1.58
A6	20 Jan 2015	Low Tide Time	1520
A6	20 Jan 2015	Comments	Kelp; Kelp debris
A6	28 Jan 2015	Depth (m)	16
A6	28 Jan 2015	Arrive Time	834
A6	28 Jan 2015	Depart Time	847
A6	28 Jan 2015	Air Temp (C)	16
A6	28 Jan 2015	Weather	Partly Cloudy
A6	28 Jan 2015	Visibility (mi)	11
A6	28 Jan 2015	Wind Speed (kts)	1
A6	28 Jan 2015	Wind Dir	NE
A6	28 Jan 2015	Water Color	Bluish-Green
A6	28 Jan 2015	Wave Ht Low (ft)	4
A6	28 Jan 2015	Wave Period (sec)	13
A6	28 Jan 2015	Sea State	Calm
A6	28 Jan 2015	High Tide (ft)	4.97
A6	28 Jan 2015	High Tide Time	351
A6	28 Jan 2015	Low Tide (ft)	0.45
A6	28 Jan 2015	Low Tide Time	1124
A6	28 Jan 2015	Comments	Lobster floats; Kelp
C6	05 Jan 2015	Depth (m)	9
C6	05 Jan 2015	Arrive Time	1021
C6	05 Jan 2015	Depart Time	1029
C6	05 Jan 2015	Air Temp (C)	15
C6	05 Jan 2015	Weather	Partly Cloudy
C6	05 Jan 2015	Visibility (mi)	9
C6	05 Jan 2015	Wind Speed (kts)	5
C6	05 Jan 2015	Wind Dir	SW
C6	05 Jan 2015	Water Color	Greenish-Blue
C6	05 Jan 2015	Wave Ht Low (ft)	2
C6	05 Jan 2015	Wave Period (sec)	9
C6	05 Jan 2015	Sea State	Calm
C6	05 Jan 2015	High Tide (ft)	5.92
C6	05 Jan 2015	High Tide Time	830
C6	05 Jan 2015	Low Tide (ft)	-0.79
C6	05 Jan 2015	Low Tide Time	1537
C6	05 Jan 2015	Comments	
C6	10 Jan 2015	Depth (m)	10
C6	10 Jan 2015	Arrive Time	1021
C6	10 Jan 2015	Depart Time	1030
C6	10 Jan 2015	Air Temp (C)	16
C6	10 Jan 2015	Weather	Partly Cloudy
C6	10 Jan 2015	Visibility (mi)	5
C6	10 Jan 2015	Wind Speed (kts)	4
C6	10 Jan 2015	Wind Dir	N
C6	10 Jan 2015	Water Color	Green

Station	Date	Parameter	Value
C6	10 Jan 2015	Wave Ht Low (ft)	2
C6	10 Jan 2015	Wave Period (sec)	9
C6	10 Jan 2015	Sea State	Calm
C6	10 Jan 2015	High Tide (ft)	4.05
C6	10 Jan 2015	High Tide Time	1121
C6	10 Jan 2015	Low Tide (ft)	2.16
C6	10 Jan 2015	Low Tide Time	551
C6	10 Jan 2015	Comments	Kelp
C6	15 Jan 2015	Depth (m)	10
C6	15 Jan 2015	Arrive Time	952
C6	15 Jan 2015	Depart Time	1001
C6	15 Jan 2015	Air Temp (C)	17
C6	15 Jan 2015	Weather	Clear
C6	15 Jan 2015	Visibility (mi)	12
C6	15 Jan 2015	Wind Speed (kts)	3
C6	15 Jan 2015	Wind Dir	S
C6	15 Jan 2015	Water Color	Green
C6	15 Jan 2015	Wave Ht Low (ft)	3
C6	15 Jan 2015	Wave Period (sec)	9
C6	15 Jan 2015	Sea State	Calm
C6	15 Jan 2015	High Tide (ft)	4.83
C6	15 Jan 2015	High Tide Time	439
C6	15 Jan 2015	Low Tide (ft)	0.56
C6	15 Jan 2015	Low Tide Time	1203
C6	15 Jan 2015	Comments	Kelp; Lobster floats
C6	20 Jan 2015	Depth (m)	9
C6	20 Jan 2015	Arrive Time	947
C6	20 Jan 2015	Depart Time	954
C6	20 Jan 2015	Air Temp (C)	14
C6	20 Jan 2015	Weather	Cloudy
C6	20 Jan 2015	Visibility (mi)	8
C6	20 Jan 2015	Wind Speed (kts)	0
C6	20 Jan 2015	Wind Dir	
C6	20 Jan 2015	Water Color	Greenish-Blue
C6	20 Jan 2015	Wave Ht Low (ft)	2
C6	20 Jan 2015	Wave Period (sec)	9
C6	20 Jan 2015	Sea State	Calm
C6	20 Jan 2015	High Tide (ft)	6.59
C6	20 Jan 2015	High Tide Time	817
C6	20 Jan 2015	Low Tide (ft)	-1.58
C6	20 Jan 2015	Low Tide Time	1520
C6	20 Jan 2015	Comments	
C6	28 Jan 2015	Depth (m)	8
C6	28 Jan 2015	Arrive Time	949
C6	28 Jan 2015	Depart Time	956
C6	28 Jan 2015	Air Temp (C)	16

Station	Date	Parameter	Value
C6	28 Jan 2015	Weather	Partly Cloudy
C6	28 Jan 2015	Visibility (mi)	11
C6	28 Jan 2015	Wind Speed (kts)	2
C6	28 Jan 2015	Wind Dir	E
C6	28 Jan 2015	Water Color	Bluish-Green
C6	28 Jan 2015	Wave Ht Low (ft)	4
C6	28 Jan 2015	Wave Period (sec)	13
C6	28 Jan 2015	Sea State	Wind ripples
C6	28 Jan 2015	High Tide (ft)	4.97
C6	28 Jan 2015	High Tide Time	351
C6	28 Jan 2015	Low Tide (ft)	0.45
C6	28 Jan 2015	Low Tide Time	1124
C6	28 Jan 2015	Comments	Lobster floats; Kelp
A7	05 Jan 2015	Depth (m)	19
A7	05 Jan 2015	Arrive Time	1045
A7	05 Jan 2015	Depart Time	1053
A7	05 Jan 2015	Air Temp (C)	16
A7	05 Jan 2015	Weather	Partly Cloudy
A7	05 Jan 2015	Visibility (mi)	9
A7	05 Jan 2015	Wind Speed (kts)	5
A7	05 Jan 2015	Wind Dir	SW
A7	05 Jan 2015	Water Color	Greenish-Blue
A7	05 Jan 2015	Wave Ht Low (ft)	2
A7	05 Jan 2015	Wave Period (sec)	9
A7	05 Jan 2015	Sea State	Calm
A7	05 Jan 2015	High Tide (ft)	5.92
A7	05 Jan 2015	High Tide Time	830
A7	05 Jan 2015	Low Tide (ft)	-0.79
A7	05 Jan 2015	Low Tide Time	1537
A7	05 Jan 2015	Comments	
A7	10 Jan 2015	Depth (m)	18
A7	10 Jan 2015	Arrive Time	847
A7	10 Jan 2015	Depart Time	901
A7	10 Jan 2015	Air Temp (C)	15
A7	10 Jan 2015	Weather	Partly Cloudy
A7	10 Jan 2015	Visibility (mi)	5
A7	10 Jan 2015	Wind Speed (kts)	2
A7	10 Jan 2015	Wind Dir	E
A7	10 Jan 2015	Water Color	Green
A7	10 Jan 2015	Wave Ht Low (ft)	2
A7	10 Jan 2015	Wave Period (sec)	9
A7	10 Jan 2015	Sea State	Calm
A7	10 Jan 2015	High Tide (ft)	4.05
A7	10 Jan 2015	High Tide Time	1121
A7	10 Jan 2015	Low Tide (ft)	2.16
A7	10 Jan 2015	Low Tide Time	551
A7	10 Jan 2015	Comments	Lobster float; Kelp

Station	Date	Parameter	Value
A7	15 Jan 2015	Depth (m)	20
A7	15 Jan 2015	Arrive Time	830
A7	15 Jan 2015	Depart Time	840
A7	15 Jan 2015	Air Temp (C)	16
A7	15 Jan 2015	Weather	Clear
A7	15 Jan 2015	Visibility (mi)	12
A7	15 Jan 2015	Wind Speed (kts)	1
A7	15 Jan 2015	Wind Dir	SE
A7	15 Jan 2015	Water Color	Green
A7	15 Jan 2015	Wave Ht Low (ft)	3
A7	15 Jan 2015	Wave Period (sec)	9
A7	15 Jan 2015	Sea State	Calm
A7	15 Jan 2015	High Tide (ft)	4.83
A7	15 Jan 2015	High Tide Time	439
A7	15 Jan 2015	Low Tide (ft)	0.56
A7	15 Jan 2015	Low Tide Time	1203
A7	15 Jan 2015	Comments	Kelp; Lobster floats
A7	20 Jan 2015	Depth (m)	20
A7	20 Jan 2015	Arrive Time	834
A7	20 Jan 2015	Depart Time	842
A7	20 Jan 2015	Air Temp (C)	13
A7	20 Jan 2015	Weather	Cloudy
A7	20 Jan 2015	Visibility (mi)	5
A7	20 Jan 2015	Wind Speed (kts)	3
A7	20 Jan 2015	Wind Dir	SW
A7	20 Jan 2015	Water Color	Greenish-Blue
A7	20 Jan 2015	Wave Ht Low (ft)	3
A7	20 Jan 2015	Wave Period (sec)	9
A7	20 Jan 2015	Sea State	Calm
A7	20 Jan 2015	High Tide (ft)	6.59
A7	20 Jan 2015	High Tide Time	817
A7	20 Jan 2015	Low Tide (ft)	-1.58
A7	20 Jan 2015	Low Tide Time	1520
A7	20 Jan 2015	Comments	Kelp; Kelp debris
A7	28 Jan 2015	Depth (m)	19
A7	28 Jan 2015	Arrive Time	815
A7	28 Jan 2015	Depart Time	822
A7	28 Jan 2015	Air Temp (C)	16
A7	28 Jan 2015	Weather	Partly Cloudy
A7	28 Jan 2015	Visibility (mi)	11
A7	28 Jan 2015	Wind Speed (kts)	3
A7	28 Jan 2015	Wind Dir	N
A7	28 Jan 2015	Water Color	Bluish-Green
A7	28 Jan 2015	Wave Ht Low (ft)	4
A7	28 Jan 2015	Wave Period (sec)	13
A7	28 Jan 2015	Sea State	Calm

Station	Date	Parameter	Value
A7	28 Jan 2015	High Tide (ft)	4.97
A7	28 Jan 2015	High Tide Time	351
A7	28 Jan 2015	Low Tide (ft)	0.45
A7	28 Jan 2015	Low Tide Time	1124
A7	28 Jan 2015	Comments	Lobster floats; Kelp
C7	05 Jan 2015	Depth (m)	18
C7	05 Jan 2015	Arrive Time	949
C7	05 Jan 2015	Depart Time	959
C7	05 Jan 2015	Air Temp (C)	15
C7	05 Jan 2015	Weather	Partly Cloudy
C7	05 Jan 2015	Visibility (mi)	9
C7	05 Jan 2015	Wind Speed (kts)	2
C7	05 Jan 2015	Wind Dir	SE
C7	05 Jan 2015	Water Color	Greenish-Blue
C7	05 Jan 2015	Wave Ht Low (ft)	2
C7	05 Jan 2015	Wave Period (sec)	9
C7	05 Jan 2015	Sea State	Calm
C7	05 Jan 2015	High Tide (ft)	5.92
C7	05 Jan 2015	High Tide Time	830
C7	05 Jan 2015	Low Tide (ft)	-0.79
C7	05 Jan 2015	Low Tide Time	1537
C7	05 Jan 2015	Comments	
C7	10 Jan 2015	Depth (m)	18
C7	10 Jan 2015	Arrive Time	933
C7	10 Jan 2015	Depart Time	947
C7	10 Jan 2015	Air Temp (C)	16
C7	10 Jan 2015	Weather	Partly Cloudy
C7	10 Jan 2015	Visibility (mi)	5
C7	10 Jan 2015	Wind Speed (kts)	2
C7	10 Jan 2015	Wind Dir	W
C7	10 Jan 2015	Water Color	Green
C7	10 Jan 2015	Wave Ht Low (ft)	2
C7	10 Jan 2015	Wave Period (sec)	9
C7	10 Jan 2015	Sea State	Calm
C7	10 Jan 2015	High Tide (ft)	4.05
C7	10 Jan 2015	High Tide Time	1121
C7	10 Jan 2015	Low Tide (ft)	2.16
C7	10 Jan 2015	Low Tide Time	551
C7	10 Jan 2015	Comments	Lobster float; Birds; Kelp
C7	15 Jan 2015	Depth (m)	18
C7	15 Jan 2015	Arrive Time	907
C7	15 Jan 2015	Depart Time	916
C7	15 Jan 2015	Air Temp (C)	16
C7	15 Jan 2015	Weather	Clear
C7	15 Jan 2015	Visibility (mi)	12
C7	15 Jan 2015	Wind Speed (kts)	5

Station	Date	Parameter	Value
C7	15 Jan 2015	Wind Dir	SE
C7	15 Jan 2015	Water Color	Green
C7	15 Jan 2015	Wave Ht Low (ft)	3
C7	15 Jan 2015	Wave Period (sec)	9
C7	15 Jan 2015	Sea State	Calm
C7	15 Jan 2015	High Tide (ft)	4.83
C7	15 Jan 2015	High Tide Time	439
C7	15 Jan 2015	Low Tide (ft)	0.56
C7	15 Jan 2015	Low Tide Time	1203
C7	15 Jan 2015	Comments	Kelp; Freshwater lens
C7	20 Jan 2015	Depth (m)	19
C7	20 Jan 2015	Arrive Time	907
C7	20 Jan 2015	Depart Time	916
C7	20 Jan 2015	Air Temp (C)	13
C7	20 Jan 2015	Weather	Cloudy
C7	20 Jan 2015	Visibility (mi)	5
C7	20 Jan 2015	Wind Speed (kts)	0
C7	20 Jan 2015	Wind Dir	
C7	20 Jan 2015	Water Color	Greenish-Blue
C7	20 Jan 2015	Wave Ht Low (ft)	2
C7	20 Jan 2015	Wave Period (sec)	9
C7	20 Jan 2015	Sea State	Calm
C7	20 Jan 2015	High Tide (ft)	6.59
C7	20 Jan 2015	High Tide Time	817
C7	20 Jan 2015	Low Tide (ft)	-1.58
C7	20 Jan 2015	Low Tide Time	1520
C7	20 Jan 2015	Comments	Kelp
C7	28 Jan 2015	Depth (m)	17
C7	28 Jan 2015	Arrive Time	903
C7	28 Jan 2015	Depart Time	915
C7	28 Jan 2015	Air Temp (C)	15
C7	28 Jan 2015	Weather	Partly Cloudy
C7	28 Jan 2015	Visibility (mi)	11
C7	28 Jan 2015	Wind Speed (kts)	6
C7	28 Jan 2015	Wind Dir	SE
C7	28 Jan 2015	Water Color	Bluish-Green
C7	28 Jan 2015	Wave Ht Low (ft)	4
C7	28 Jan 2015	Wave Period (sec)	13
C7	28 Jan 2015	Sea State	Calm
C7	28 Jan 2015	High Tide (ft)	4.97
C7	28 Jan 2015	High Tide Time	351
C7	28 Jan 2015	Low Tide (ft)	0.45
C7	28 Jan 2015	Low Tide Time	1124
C7	28 Jan 2015	Comments	Lobster floats; A few bins from XMS were removed due to kelp being caught in probe.; Kelp

Station	Date	Parameter	Value
C8	05 Jan 2015	Depth (m)	19
C8	05 Jan 2015	Arrive Time	933
C8	05 Jan 2015	Depart Time	940
C8	05 Jan 2015	Air Temp (C)	15
C8	05 Jan 2015	Weather	Partly Cloudy
C8	05 Jan 2015	Visibility (mi)	9
C8	05 Jan 2015	Wind Speed (kts)	1
C8	05 Jan 2015	Wind Dir	SW
C8	05 Jan 2015	Water Color	Greenish-Blue
C8	05 Jan 2015	Wave Ht Low (ft)	2
C8	05 Jan 2015	Wave Period (sec)	9
C8	05 Jan 2015	Sea State	Calm
C8	05 Jan 2015	High Tide (ft)	5.92
C8	05 Jan 2015	High Tide Time	830
C8	05 Jan 2015	Low Tide (ft)	-0.79
C8	05 Jan 2015	Low Tide Time	1537
C8	05 Jan 2015	Comments	Kelp
C8	10 Jan 2015	Depth (m)	20
C8	10 Jan 2015	Arrive Time	958
C8	10 Jan 2015	Depart Time	1007
C8	10 Jan 2015	Air Temp (C)	16
C8	10 Jan 2015	Weather	Partly Cloudy
C8	10 Jan 2015	Visibility (mi)	5
C8	10 Jan 2015	Wind Speed (kts)	5
C8	10 Jan 2015	Wind Dir	NW
C8	10 Jan 2015	Water Color	Green
C8	10 Jan 2015	Wave Ht Low (ft)	2
C8	10 Jan 2015	Wave Period (sec)	9
C8	10 Jan 2015	Sea State	Calm
C8	10 Jan 2015	High Tide (ft)	4.05
C8	10 Jan 2015	High Tide Time	1121
C8	10 Jan 2015	Low Tide (ft)	2.16
C8	10 Jan 2015	Low Tide Time	551
C8	10 Jan 2015	Comments	Boats
C8	15 Jan 2015	Depth (m)	19
C8	15 Jan 2015	Arrive Time	925
C8	15 Jan 2015	Depart Time	934
C8	15 Jan 2015	Air Temp (C)	16
C8	15 Jan 2015	Weather	Clear
C8	15 Jan 2015	Visibility (mi)	12
C8	15 Jan 2015	Wind Speed (kts)	3
C8	15 Jan 2015	Wind Dir	E
C8	15 Jan 2015	Water Color	Green
C8	15 Jan 2015	Wave Ht Low (ft)	3
C8	15 Jan 2015	Wave Period (sec)	9
C8	15 Jan 2015	Sea State	Calm
C8	15 Jan 2015	High Tide (ft)	4.83

Station	Date	Parameter	Value
C8	15 Jan 2015	High Tide Time	439
C8	15 Jan 2015	Low Tide (ft)	0.56
C8	15 Jan 2015	Low Tide Time	1203
C8	15 Jan 2015	Comments	Boats
C8	20 Jan 2015	Depth (m)	20
C8	20 Jan 2015	Arrive Time	924
C8	20 Jan 2015	Depart Time	932
C8	20 Jan 2015	Air Temp (C)	14
C8	20 Jan 2015	Weather	Cloudy
C8	20 Jan 2015	Visibility (mi)	8
C8	20 Jan 2015	Wind Speed (kts)	1
C8	20 Jan 2015	Wind Dir	SE
C8	20 Jan 2015	Water Color	Greenish-Blue
C8	20 Jan 2015	Wave Ht Low (ft)	2
C8	20 Jan 2015	Wave Period (sec)	9
C8	20 Jan 2015	Sea State	Calm
C8	20 Jan 2015	High Tide (ft)	6.59
C8	20 Jan 2015	High Tide Time	817
C8	20 Jan 2015	Low Tide (ft)	-1.58
C8	20 Jan 2015	Low Tide Time	1520
C8	20 Jan 2015	Comments	
C8	28 Jan 2015	Depth (m)	19
C8	28 Jan 2015	Arrive Time	926
C8	28 Jan 2015	Depart Time	932
C8	28 Jan 2015	Air Temp (C)	16
C8	28 Jan 2015	Weather	Partly Cloudy
C8	28 Jan 2015	Visibility (mi)	11
C8	28 Jan 2015	Wind Speed (kts)	5
C8	28 Jan 2015	Wind Dir	E
C8	28 Jan 2015	Water Color	Bluish-Green
C8	28 Jan 2015	Wave Ht Low (ft)	4
C8	28 Jan 2015	Wave Period (sec)	13
C8	28 Jan 2015	Sea State	Calm
C8	28 Jan 2015	High Tide (ft)	4.97
C8	28 Jan 2015	High Tide Time	351
C8	28 Jan 2015	Low Tide (ft)	0.45
C8	28 Jan 2015	Low Tide Time	1124
C8	28 Jan 2015	Comments	

Table 3.10

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

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ -t)	Chlor (μ g/L)
A1	10 Jan 2015	1	15.99	91.27	7.8	33.43	8.2	24.5	0.63
A1	10 Jan 2015	2	15.99	90.91	7.8	33.43	8.2	24.5	0.67
A1	10 Jan 2015	3	15.99	91.14	7.8	33.43	8.2	24.5	0.70
A1	10 Jan 2015	4	15.98	91.20	7.8	33.43	8.2	24.5	0.73
A1	10 Jan 2015	5	15.98	91.21	7.8	33.43	8.2	24.5	0.76
A1	10 Jan 2015	6	15.98	91.19	7.8	33.43	8.2	24.5	0.77
A1	10 Jan 2015	7	15.97	91.10	7.8	33.43	8.2	24.5	0.78
A1	10 Jan 2015	8	15.97	91.09	7.7	33.43	8.2	24.5	0.80
A1	10 Jan 2015	9	15.96	90.97	7.7	33.43	8.2	24.6	0.81
A1	10 Jan 2015	10	15.94	90.96	7.7	33.43	8.2	24.6	0.82
A1	10 Jan 2015	11	15.92	90.76	7.7	33.43	8.2	24.6	0.79
A1	10 Jan 2015	12	15.90	90.55	7.7	33.44	8.2	24.6	0.84
A1	10 Jan 2015	13	15.87	90.35	7.7	33.44	8.2	24.6	0.81
A1	10 Jan 2015	14	15.83	89.97	7.7	33.44	8.2	24.6	0.82
A1	10 Jan 2015	15	15.78	89.32	7.6	33.44	8.2	24.6	0.80
A1	10 Jan 2015	16	15.75	88.65	7.6	33.44	8.2	24.6	0.78
A1	10 Jan 2015	17	15.73	88.15	7.6	33.44	8.2	24.6	0.82
A1	10 Jan 2015	18	15.71	87.81	7.6	33.45	8.2	24.6	0.83
A1	10 Jan 2015	19	15.70	87.29	7.6	33.45	8.2	24.6	0.80
A1	10 Jan 2015	20	15.70	87.04	7.5	33.45	8.2	24.6	0.87
A1	15 Jan 2015	1	16.09	86.75	8.1	33.43	8.2	24.5	1.37
A1	15 Jan 2015	2	16.09	87.31	8.1	33.43	8.2	24.5	1.82
A1	15 Jan 2015	3	16.09	87.77	8.0	33.43	8.2	24.5	1.57
A1	15 Jan 2015	4	16.09	87.89	8.0	33.43	8.2	24.5	1.46
A1	15 Jan 2015	5	16.09	88.02	8.0	33.43	8.2	24.5	1.44
A1	15 Jan 2015	6	16.09	88.02	8.0	33.43	8.2	24.5	1.46
A1	15 Jan 2015	7	16.09	87.98	8.0	33.43	8.2	24.5	1.49
A1	15 Jan 2015	8	16.09	88.15	8.0	33.43	8.2	24.5	1.46
A1	15 Jan 2015	9	16.09	88.24	7.9	33.43	8.2	24.5	1.42
A1	15 Jan 2015	10	16.04	88.28	7.9	33.42	8.2	24.5	1.45
A1	15 Jan 2015	11	16.01	88.29	7.8	33.43	8.2	24.5	1.46
A1	15 Jan 2015	12	16.00	88.36	7.8	33.43	8.2	24.5	1.48
A1	15 Jan 2015	13	15.99	88.33	7.8	33.42	8.2	24.5	1.46
A1	15 Jan 2015	14	15.96	88.30	7.8	33.42	8.2	24.5	1.44
A1	15 Jan 2015	15	15.94	88.35	7.7	33.42	8.2	24.5	1.41
A1	15 Jan 2015	16	15.85	88.42	7.6	33.42	8.2	24.6	1.34
A1	15 Jan 2015	17	15.80	88.35	7.5	33.42	8.2	24.6	1.27
A1	15 Jan 2015	18	15.71	88.27	7.2	33.41	8.2	24.6	1.17
A1	15 Jan 2015	19	15.24	88.12	7.0	33.40	8.1	24.7	0.92
A1	15 Jan 2015	20	15.11	85.55	6.9	33.40	8.1	24.7	0.81
A1	20 Jan 2015	1	16.40	84.59	7.7	33.40	8.2	24.4	1.27
A1	20 Jan 2015	2	16.36	84.63	7.7	33.40	8.2	24.4	1.30
A1	20 Jan 2015	3	16.30	84.64	7.7	33.40	8.2	24.5	1.32
A1	20 Jan 2015	4	16.28	84.37	7.7	33.40	8.2	24.5	1.31
A1	20 Jan 2015	5	16.23	84.49	7.6	33.40	8.2	24.5	1.29
A1	20 Jan 2015	6	16.17	84.46	7.6	33.41	8.2	24.5	1.27
A1	20 Jan 2015	7	16.11	84.44	7.5	33.40	8.2	24.5	1.25
A1	20 Jan 2015	8	16.01	84.55	7.5	33.40	8.2	24.5	1.22
A1	20 Jan 2015	9	15.94	84.91	7.5	33.41	8.2	24.5	1.20
A1	20 Jan 2015	10	15.92	84.60	7.4	33.40	8.2	24.5	1.20
A1	20 Jan 2015	11	15.86	84.45	7.4	33.41	8.2	24.6	1.18

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ -t)	Chlor (μ g/L)
A1	20 Jan 2015	12	15.85	84.36	7.4	33.40	8.2	24.6	1.20
A1	20 Jan 2015	13	15.83	83.98	7.4	33.41	8.2	24.6	1.19
A1	20 Jan 2015	14	15.81	83.75	7.4	33.41	8.2	24.6	1.20
A1	20 Jan 2015	15	15.76	84.32	7.4	33.40	8.2	24.6	1.20
A1	20 Jan 2015	16	15.70	84.30	7.3	33.40	8.2	24.6	1.17
A1	20 Jan 2015	17	15.58	84.20	7.3	33.39	8.2	24.6	1.17
A1	20 Jan 2015	18	15.41	84.06	7.2	33.39	8.2	24.6	1.15
A1	20 Jan 2015	19	15.20	83.94	7.0	33.39	8.2	24.7	1.09
A1	20 Jan 2015	20	15.05	83.45	7.0	33.39	8.1	24.7	1.03
A1	28 Jan 2015	1	16.32	88.39	8.0	33.40	8.2	24.4	1.08
A1	28 Jan 2015	2	16.32	88.31	8.0	33.40	8.2	24.4	1.09
A1	28 Jan 2015	3	16.32	88.28	8.0	33.40	8.2	24.4	1.14
A1	28 Jan 2015	4	16.32	88.40	8.0	33.40	8.2	24.4	1.18
A1	28 Jan 2015	5	16.32	88.42	8.0	33.40	8.2	24.4	1.23
A1	28 Jan 2015	6	16.31	88.42	8.0	33.40	8.2	24.4	1.22
A1	28 Jan 2015	7	16.31	88.15	8.0	33.40	8.2	24.4	1.22
A1	28 Jan 2015	8	16.31	86.75	8.0	33.40	8.2	24.4	1.23
A1	28 Jan 2015	9	16.30	87.85	8.0	33.40	8.2	24.4	1.20
A1	28 Jan 2015	10	16.28	88.19	7.9	33.40	8.2	24.5	1.19
A1	28 Jan 2015	11	16.23	88.47	7.8	33.40	8.2	24.5	1.16
A1	28 Jan 2015	12	16.08	88.51	7.7	33.39	8.2	24.5	1.10
A1	28 Jan 2015	13	15.98	88.67	7.6	33.39	8.2	24.5	1.06
A1	28 Jan 2015	14	15.83	88.23	7.5	33.38	8.2	24.5	1.01
A1	28 Jan 2015	15	15.71	88.07	7.3	33.38	8.2	24.6	0.96
A1	28 Jan 2015	16	15.60	87.90	7.2	33.37	8.2	24.6	0.91
A1	28 Jan 2015	17	15.46	86.93	7.1	33.37	8.1	24.6	0.88
A1	28 Jan 2015	18	15.41	85.35	7.1	33.37	8.1	24.6	0.86
C4	05 Jan 2015	1	15.74	90.58	8.0	33.47	8.2	24.6	0.47
C4	05 Jan 2015	2	15.72	90.58	7.9	33.47	8.2	24.6	0.50
C4	05 Jan 2015	3	15.68	90.17	8.0	33.47	8.2	24.6	0.55
C4	05 Jan 2015	4	15.66	90.54	8.0	33.47	8.2	24.6	0.59
C4	05 Jan 2015	5	15.65	90.35	8.0	33.47	8.2	24.6	0.64
C4	05 Jan 2015	6	15.65	90.38	8.0	33.47	8.2	24.6	0.67
C4	05 Jan 2015	7	15.65	90.38	8.0	33.47	8.2	24.6	0.73
C4	05 Jan 2015	8	15.65	90.41	8.0	33.47	8.2	24.6	0.76
C4	05 Jan 2015	9	15.65	90.39	8.0	33.47	8.2	24.6	0.79
C4	05 Jan 2015	10	15.65	90.45	7.9	33.47	8.2	24.6	0.79
C4	05 Jan 2015	11	15.65	90.57	8.1	33.47	8.2	24.6	0.76
C4	10 Jan 2015	1	15.79	86.88	7.9	33.44	8.2	24.6	0.48
C4	10 Jan 2015	2	15.76	86.58	7.9	33.45	8.2	24.6	0.52
C4	10 Jan 2015	3	15.75	86.14	8.0	33.45	8.2	24.6	0.58
C4	10 Jan 2015	4	15.73	85.77	7.9	33.45	8.2	24.6	0.67
C4	10 Jan 2015	5	15.72	85.47	8.0	33.45	8.2	24.6	0.73
C4	10 Jan 2015	6	15.69	85.25	7.9	33.45	8.2	24.6	0.80
C4	10 Jan 2015	7	15.68	84.49	7.9	33.45	8.2	24.6	0.94
C4	10 Jan 2015	8	15.66	84.23	7.9	33.45	8.2	24.6	0.98
C4	10 Jan 2015	9	15.65	83.18	7.9	33.45	8.2	24.6	1.03
C4	10 Jan 2015	10	15.66	82.72	7.9	33.45	8.2	24.6	1.02
C4	10 Jan 2015	11	15.65	83.54	7.9	33.45	8.2	24.6	1.05
C4	10 Jan 2015	12	15.65	82.62	7.9	33.45	8.2	24.6	1.03
C4	10 Jan 2015	13	15.65	81.92	7.8	33.45	8.2	24.6	0.98
C4	15 Jan 2015	1	16.33	86.28	7.3	33.43	8.2	24.5	0.42
C4	15 Jan 2015	2	16.27	86.14	7.4	33.43	8.2	24.5	0.45

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ -t)	Chlor (μ g/L)
C4	15 Jan 2015	3	16.23	85.61	7.5	33.43	8.2	24.5	0.54
C4	15 Jan 2015	4	16.19	85.26	7.5	33.43	8.2	24.5	0.73
C4	15 Jan 2015	5	16.16	85.07	7.6	33.43	8.2	24.5	0.87
C4	15 Jan 2015	6	16.12	84.70	7.7	33.43	8.2	24.5	0.99
C4	15 Jan 2015	7	16.11	84.15	7.7	33.43	8.2	24.5	1.01
C4	15 Jan 2015	8	16.11	83.68	7.7	33.43	8.2	24.5	1.01
C4	15 Jan 2015	9	16.11	83.74	7.7	33.43	8.2	24.5	0.97
C4	15 Jan 2015	10	16.11	82.66	7.7	33.43	8.2	24.5	0.92
C4	20 Jan 2015	1	16.65	64.57	7.2	33.40	8.1	24.4	0.68
C4	20 Jan 2015	2	16.63	63.80	7.2	33.40	8.2	24.4	0.86
C4	20 Jan 2015	3	16.54	64.37	7.3	33.40	8.2	24.4	1.07
C4	20 Jan 2015	4	16.49	65.55	7.2	33.40	8.2	24.4	1.04
C4	20 Jan 2015	5	16.45	69.50	7.0	33.40	8.2	24.4	0.90
C4	20 Jan 2015	6	16.42	74.25	6.7	33.40	8.2	24.4	0.76
C4	20 Jan 2015	7	16.35	76.88	6.8	33.41	8.1	24.4	0.68
C4	20 Jan 2015	8	16.32	79.36	7.0	33.42	8.1	24.5	0.60
C4	20 Jan 2015	9	16.25	82.25	6.9	33.42	8.2	24.5	0.55
C4	20 Jan 2015	10	16.20	83.38	6.8	33.42	8.2	24.5	0.51
C4	20 Jan 2015	11	16.19	82.06	6.8	33.42	8.2	24.5	0.49
C4	28 Jan 2015	1	16.66	72.88	7.3	33.43	8.2	24.4	0.64
C4	28 Jan 2015	2	16.58	72.22	7.3	33.42	8.2	24.4	0.73
C4	28 Jan 2015	3	16.53	70.98	7.2	33.42	8.2	24.4	0.81
C4	28 Jan 2015	4	16.52	69.00	7.1	33.42	8.2	24.4	0.80
C4	28 Jan 2015	5	16.50	68.27	7.0	33.42	8.2	24.4	0.77
C4	28 Jan 2015	6	16.48	68.49	7.0	33.42	8.2	24.4	0.72
C4	28 Jan 2015	7	16.48	69.07	7.0	33.42	8.2	24.4	0.68
C4	28 Jan 2015	8	16.45	69.56	6.8	33.41	8.2	24.4	0.60
C4	28 Jan 2015	9	16.44	70.02	6.8	33.41	8.2	24.4	0.60
C4	28 Jan 2015	10	16.44	66.83	6.7	33.41	8.2	24.4	0.61
C5	05 Jan 2015	1	15.88	90.34	8.0	33.46	8.2	24.6	0.70
C5	05 Jan 2015	2	15.86	90.35	8.0	33.45	8.2	24.6	0.69
C5	05 Jan 2015	3	15.81	90.23	8.1	33.46	8.2	24.6	0.74
C5	05 Jan 2015	4	15.78	89.96	8.1	33.46	8.2	24.6	0.80
C5	05 Jan 2015	5	15.72	89.84	8.1	33.46	8.2	24.6	0.85
C5	05 Jan 2015	6	15.67	89.78	8.2	33.46	8.2	24.6	0.88
C5	05 Jan 2015	7	15.66	89.94	8.1	33.46	8.2	24.6	0.88
C5	05 Jan 2015	8	15.66	90.02	8.2	33.46	8.2	24.6	0.91
C5	05 Jan 2015	9	15.64	90.08	8.2	33.46	8.2	24.6	0.92
C5	05 Jan 2015	10	15.61	90.16	8.3	33.47	8.2	24.7	0.89
C5	05 Jan 2015	11	15.59	90.13	8.4	33.47	8.2	24.7	0.85
C5	10 Jan 2015	1	15.76	82.87	7.8	33.44	8.2	24.6	0.47
C5	10 Jan 2015	2	15.73	82.54	7.8	33.44	8.2	24.6	0.51
C5	10 Jan 2015	3	15.72	81.59	7.8	33.44	8.2	24.6	0.61
C5	10 Jan 2015	4	15.70	80.76	7.8	33.44	8.2	24.6	0.67
C5	10 Jan 2015	5	15.69	79.78	7.8	33.44	8.2	24.6	0.71
C5	10 Jan 2015	6	15.68	78.73	7.8	33.44	8.2	24.6	0.80
C5	10 Jan 2015	7	15.67	78.09	7.8	33.44	8.2	24.6	0.82
C5	10 Jan 2015	8	15.66	77.05	7.8	33.44	8.2	24.6	0.79
C5	10 Jan 2015	9	15.66	76.38	7.8	33.44	8.2	24.6	0.76
C5	10 Jan 2015	10	15.63	76.26	7.7	33.44	8.2	24.6	0.77
C5	10 Jan 2015	11	15.62	74.30	7.7	33.45	8.2	24.6	0.76
C5	15 Jan 2015	1	16.40	77.78	7.5	33.44	8.2	24.5	0.49

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ -t)	Chlor (μ g/L)
C5	15 Jan 2015	2	16.36	77.49	7.5	33.43	8.2	24.5	0.51
C5	15 Jan 2015	3	16.30	77.76	7.6	33.44	8.2	24.5	0.57
C5	15 Jan 2015	4	16.27	77.01	7.5	33.44	8.2	24.5	0.64
C5	15 Jan 2015	5	16.24	75.13	7.5	33.44	8.2	24.5	0.67
C5	15 Jan 2015	6	16.24	73.19	7.5	33.44	8.2	24.5	0.68
C5	15 Jan 2015	7	16.23	71.14	7.5	33.44	8.2	24.5	0.68
C5	15 Jan 2015	8	16.22	69.44	7.5	33.44	8.2	24.5	0.72
C5	15 Jan 2015	9	16.21	68.57	7.5	33.44	8.2	24.5	0.74
C5	15 Jan 2015	10	16.21	64.27	7.5	33.44	8.2	24.5	0.81
C5	15 Jan 2015	11	16.19	58.61	7.2	33.43	8.2	24.5	1.16
C5	20 Jan 2015	1	16.70	61.31	7.6	33.38	8.2	24.3	0.71
C5	20 Jan 2015	2	16.61	59.86	7.6	33.38	8.2	24.4	0.83
C5	20 Jan 2015	3	16.56	61.18	7.6	33.38	8.2	24.4	0.87
C5	20 Jan 2015	4	16.55	67.05	7.6	33.38	8.2	24.4	0.82
C5	20 Jan 2015	5	16.52	71.85	7.4	33.38	8.2	24.4	0.73
C5	20 Jan 2015	6	16.48	73.84	7.2	33.38	8.2	24.4	0.71
C5	20 Jan 2015	7	16.41	74.92	6.8	33.38	8.2	24.4	0.77
C5	20 Jan 2015	8	16.35	70.29	6.7	33.39	8.1	24.4	0.90
C5	20 Jan 2015	9	16.35	44.63	6.6	33.39	8.1	24.4	1.69
C5	20 Jan 2015	10	16.36	21.93	6.5	33.38	8.1	24.4	3.16
C5	28 Jan 2015	1	16.63	57.16	7.4	33.43	8.2	24.4	0.64
C5	28 Jan 2015	2	16.58	57.09	7.2	33.42	8.2	24.4	0.71
C5	28 Jan 2015	3	16.53	57.21	7.2	33.43	8.2	24.4	0.71
C5	28 Jan 2015	4	16.58	54.79	7.3	33.43	8.2	24.4	0.69
C5	28 Jan 2015	5	16.57	54.49	7.2	33.42	8.2	24.4	0.70
C5	28 Jan 2015	6	16.50	54.15	7.1	33.42	8.1	24.4	0.74
C5	28 Jan 2015	7	16.49	49.45	7.0	33.42	8.1	24.4	0.80
C5	28 Jan 2015	8	16.47	42.39	6.9	33.42	8.1	24.4	0.88
C5	28 Jan 2015	9	16.45	38.02	6.9	33.42	8.1	24.4	1.10
C5	28 Jan 2015	10	16.44	36.14	6.9	33.42	8.1	24.4	1.15
A6	05 Jan 2015	1	15.82	89.71	8.0	33.44	8.1	24.6	0.97
A6	05 Jan 2015	2	15.80	89.70	7.9	33.44	8.1	24.6	1.01
A6	05 Jan 2015	3	15.76	89.60	7.8	33.44	8.1	24.6	1.14
A6	05 Jan 2015	4	15.74	89.46	7.8	33.44	8.1	24.6	1.34
A6	05 Jan 2015	5	15.73	89.51	7.8	33.44	8.1	24.6	1.51
A6	05 Jan 2015	6	15.72	89.49	7.7	33.44	8.1	24.6	1.56
A6	05 Jan 2015	7	15.71	89.55	7.7	33.44	8.1	24.6	1.64
A6	05 Jan 2015	8	15.71	89.53	7.7	33.44	8.1	24.6	1.68
A6	05 Jan 2015	9	15.69	89.61	7.7	33.44	8.1	24.6	1.72
A6	05 Jan 2015	10	15.68	89.62	7.6	33.44	8.1	24.6	1.68
A6	05 Jan 2015	11	15.67	89.64	7.6	33.44	8.1	24.6	1.70
A6	05 Jan 2015	12	15.66	89.63	7.6	33.44	8.1	24.6	1.68
A6	05 Jan 2015	13	15.64	89.70	7.5	33.44	8.1	24.6	1.64
A6	05 Jan 2015	14	15.59	89.77	7.5	33.43	8.1	24.6	1.55
A6	05 Jan 2015	15	15.56	89.98	7.5	33.43	8.1	24.6	1.45
A6	05 Jan 2015	16	15.50	90.23	7.3	33.43	8.1	24.6	1.38
A6	05 Jan 2015	17	15.34	90.27	7.1	33.40	8.1	24.7	1.21
A6	05 Jan 2015	18	14.96	90.78	7.0	33.39	8.1	24.7	1.01
A6	05 Jan 2015	19	14.74	90.83	6.8	33.39	8.1	24.8	0.85
A6	05 Jan 2015	20	14.49	90.71	6.7	33.37	8.0	24.8	0.73
A6	05 Jan 2015	21	14.41	90.34	6.9	33.38	8.0	24.8	0.68
A6	10 Jan 2015	1	16.17	90.86	7.6	33.43	8.2	24.5	0.60
A6	10 Jan 2015	2	16.17	90.89	7.8	33.43	8.2	24.5	0.61

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (µg/L)
A6	10 Jan 2015	3	16.18	91.18	7.8	33.43	8.2	24.5	0.61
A6	10 Jan 2015	4	16.16	91.22	7.9	33.43	8.2	24.5	0.63
A6	10 Jan 2015	5	16.16	91.08	7.8	33.43	8.2	24.5	0.62
A6	10 Jan 2015	6	16.16	90.86	7.8	33.43	8.2	24.5	0.61
A6	10 Jan 2015	7	16.15	90.47	7.7	33.43	8.2	24.5	0.63
A6	10 Jan 2015	8	16.12	90.00	7.8	33.43	8.2	24.5	0.64
A6	10 Jan 2015	9	16.03	89.13	7.7	33.43	8.2	24.5	0.69
A6	10 Jan 2015	10	15.97	88.38	7.7	33.42	8.2	24.5	0.82
A6	10 Jan 2015	11	15.89	88.31	7.6	33.42	8.2	24.6	0.80
A6	10 Jan 2015	12	15.85	88.39	7.6	33.42	8.2	24.6	0.84
A6	10 Jan 2015	13	15.81	88.62	7.6	33.42	8.2	24.6	0.91
A6	10 Jan 2015	14	15.70	88.70	7.6	33.42	8.2	24.6	1.05
A6	10 Jan 2015	15	15.64	88.81	7.6	33.42	8.2	24.6	1.03
A6	10 Jan 2015	16	15.52	88.68	7.6	33.42	8.2	24.6	1.03
A6	10 Jan 2015	17	15.46	88.57	7.5	33.41	8.2	24.6	1.09
A6	10 Jan 2015	18	15.44	88.49	7.5	33.41	8.2	24.7	0.95
A6	15 Jan 2015	1	16.19	76.58	8.0	33.39	8.2	24.5	1.01
A6	15 Jan 2015	2	16.19	82.87	7.9	33.39	8.2	24.5	1.06
A6	15 Jan 2015	3	16.18	84.37	7.9	33.39	8.2	24.5	1.22
A6	15 Jan 2015	4	16.18	84.58	7.8	33.39	8.2	24.5	1.30
A6	15 Jan 2015	5	16.18	84.50	7.8	33.39	8.2	24.5	1.35
A6	15 Jan 2015	6	16.17	84.57	7.8	33.39	8.2	24.5	1.34
A6	15 Jan 2015	7	16.16	84.17	7.7	33.39	8.2	24.5	1.30
A6	15 Jan 2015	8	16.14	84.45	7.7	33.39	8.2	24.5	1.26
A6	15 Jan 2015	9	16.12	84.75	7.6	33.39	8.2	24.5	1.22
A6	15 Jan 2015	10	16.09	85.07	7.6	33.40	8.2	24.5	1.23
A6	15 Jan 2015	11	16.07	85.45	7.6	33.40	8.2	24.5	1.23
A6	15 Jan 2015	12	16.06	85.74	7.6	33.40	8.2	24.5	1.22
A6	15 Jan 2015	13	16.04	86.01	7.5	33.41	8.2	24.5	1.20
A6	15 Jan 2015	14	15.99	86.43	7.5	33.41	8.2	24.5	1.14
A6	15 Jan 2015	15	15.91	86.68	7.4	33.41	8.2	24.5	1.04
A6	15 Jan 2015	16	15.82	87.01	7.2	33.40	8.2	24.6	0.93
A6	15 Jan 2015	17	15.68	87.40	7.1	33.41	8.2	24.6	0.84
A6	15 Jan 2015	18	15.59	87.68	7.0	33.41	8.2	24.6	0.80
A6	15 Jan 2015	19	15.48	87.57	6.9	33.41	8.2	24.6	0.74
A6	20 Jan 2015	1	16.52	86.87	7.8	33.39	8.2	24.4	1.09
A6	20 Jan 2015	2	16.52	87.13	7.8	33.39	8.2	24.4	1.13
A6	20 Jan 2015	3	16.51	87.17	7.8	33.39	8.2	24.4	1.19
A6	20 Jan 2015	4	16.50	87.25	7.8	33.39	8.2	24.4	1.17
A6	20 Jan 2015	5	16.47	87.32	7.8	33.39	8.2	24.4	1.12
A6	20 Jan 2015	6	16.40	87.53	7.7	33.39	8.2	24.4	1.04
A6	20 Jan 2015	7	16.32	87.59	7.6	33.39	8.2	24.4	0.97
A6	20 Jan 2015	8	16.18	87.62	7.5	33.39	8.2	24.5	0.96
A6	20 Jan 2015	9	16.06	87.54	7.4	33.40	8.2	24.5	0.98
A6	20 Jan 2015	10	15.96	87.33	7.4	33.40	8.2	24.5	1.02
A6	20 Jan 2015	11	15.87	86.81	7.4	33.40	8.2	24.5	1.04
A6	20 Jan 2015	12	15.80	86.53	7.4	33.41	8.2	24.6	1.07
A6	20 Jan 2015	13	15.77	86.26	7.4	33.41	8.2	24.6	1.07
A6	20 Jan 2015	14	15.75	86.15	7.4	33.41	8.2	24.6	1.06
A6	20 Jan 2015	15	15.69	86.17	7.3	33.40	8.2	24.6	1.04
A6	20 Jan 2015	16	15.61	86.13	7.3	33.40	8.2	24.6	1.03
A6	20 Jan 2015	17	15.48	85.92	7.2	33.40	8.2	24.6	0.97
A6	20 Jan 2015	18	15.45	85.52	7.1	33.40	8.2	24.6	0.96
A6	20 Jan 2015	19	15.42	84.56	7.0	33.40	8.2	24.6	0.98

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ -t)	Chlor (μ g/L)
A6	28 Jan 2015	1	16.37	86.81	7.5	33.41	8.2	24.4	0.84
A6	28 Jan 2015	2	16.37	86.79	7.6	33.41	8.2	24.4	0.87
A6	28 Jan 2015	3	16.37	86.69	7.6	33.41	8.2	24.4	0.92
A6	28 Jan 2015	4	16.37	86.67	7.6	33.41	8.2	24.4	0.94
A6	28 Jan 2015	5	16.37	86.76	7.6	33.41	8.2	24.4	0.97
A6	28 Jan 2015	6	16.36	86.52	7.6	33.40	8.2	24.4	0.97
A6	28 Jan 2015	7	16.36	86.69	7.5	33.40	8.2	24.4	1.00
A6	28 Jan 2015	8	16.35	86.69	7.5	33.40	8.2	24.4	1.02
A6	28 Jan 2015	9	16.35	86.75	7.5	33.40	8.2	24.4	1.04
A6	28 Jan 2015	10	16.35	86.75	7.6	33.40	8.2	24.4	1.05
A6	28 Jan 2015	11	16.35	86.87	7.6	33.40	8.2	24.4	1.04
A6	28 Jan 2015	12	16.34	87.04	7.5	33.40	8.2	24.4	1.04
A6	28 Jan 2015	13	16.34	87.10	7.5	33.40	8.2	24.4	1.04
A6	28 Jan 2015	14	16.34	87.05	7.5	33.40	8.2	24.4	1.02
A6	28 Jan 2015	15	16.34	87.16	7.5	33.40	8.2	24.4	1.01
A6	28 Jan 2015	16	16.33	87.10	7.5	33.40	8.2	24.4	0.98
A6	28 Jan 2015	17	16.28	87.06	7.4	33.40	8.2	24.5	0.92
A6	28 Jan 2015	18	16.09	87.00	7.2	33.38	8.2	24.5	0.83
A6	28 Jan 2015	19	15.86	86.34	7.1	33.38	8.2	24.5	0.77
C6	05 Jan 2015	1	15.85	89.84	8.2	33.47	8.2	24.6	0.71
C6	05 Jan 2015	2	15.81	89.85	8.2	33.46	8.2	24.6	0.82
C6	05 Jan 2015	3	15.75	89.63	8.2	33.46	8.2	24.6	0.85
C6	05 Jan 2015	4	15.72	89.66	8.2	33.47	8.2	24.6	0.80
C6	05 Jan 2015	5	15.70	89.98	8.2	33.47	8.2	24.6	0.77
C6	05 Jan 2015	6	15.69	90.56	8.1	33.47	8.2	24.6	0.77
C6	05 Jan 2015	7	15.68	90.64	8.2	33.47	8.2	24.6	0.79
C6	05 Jan 2015	8	15.68	90.71	8.1	33.47	8.2	24.6	0.77
C6	05 Jan 2015	9	15.68	91.13	8.2	33.47	8.2	24.6	0.75
C6	05 Jan 2015	10	15.68	91.24	8.2	33.47	8.2	24.6	0.77
C6	10 Jan 2015	1	16.15	84.66	8.0	33.44	8.2	24.5	0.50
C6	10 Jan 2015	2	16.14	84.54	8.0	33.45	8.2	24.5	0.53
C6	10 Jan 2015	3	16.11	84.60	8.0	33.44	8.2	24.5	0.60
C6	10 Jan 2015	4	16.07	84.68	8.0	33.44	8.2	24.5	0.69
C6	10 Jan 2015	5	16.06	84.63	8.0	33.44	8.2	24.5	0.73
C6	10 Jan 2015	6	16.05	84.23	7.9	33.44	8.2	24.5	0.73
C6	10 Jan 2015	7	16.04	83.95	7.9	33.44	8.2	24.5	0.72
C6	10 Jan 2015	8	16.04	83.26	7.9	33.44	8.2	24.5	0.70
C6	10 Jan 2015	9	16.04	82.32	7.9	33.44	8.2	24.5	0.69
C6	10 Jan 2015	10	16.04	81.87	8.0	33.44	8.2	24.5	0.68
C6	10 Jan 2015	11	16.04	81.50	7.9	33.44	8.2	24.5	0.68
C6	15 Jan 2015	1	16.25	84.09	7.3	33.37	8.2	24.4	0.62
C6	15 Jan 2015	2	16.25	84.29	7.3	33.37	8.2	24.4	0.64
C6	15 Jan 2015	3	16.25	84.18	7.3	33.37	8.2	24.4	0.67
C6	15 Jan 2015	4	16.24	84.14	7.4	33.37	8.2	24.4	0.73
C6	15 Jan 2015	5	16.24	84.14	7.3	33.37	8.2	24.4	0.78
C6	15 Jan 2015	6	16.21	84.16	7.2	33.38	8.2	24.5	0.76
C6	15 Jan 2015	7	16.21	83.77	7.0	33.40	8.2	24.5	0.67
C6	15 Jan 2015	8	16.21	83.28	7.0	33.40	8.2	24.5	0.63
C6	15 Jan 2015	9	16.21	82.98	7.1	33.40	8.2	24.5	0.60
C6	20 Jan 2015	1	16.62	79.36	7.5	33.38	8.2	24.4	0.57
C6	20 Jan 2015	2	16.62	79.58	7.5	33.38	8.2	24.4	0.62
C6	20 Jan 2015	3	16.60	79.64	7.5	33.38	8.2	24.4	0.64
C6	20 Jan 2015	4	16.60	79.66	7.5	33.38	8.2	24.4	0.66

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ -t)	Chlor (μ g/L)
C6	20 Jan 2015	5	16.59	79.86	7.5	33.38	8.2	24.4	0.65
C6	20 Jan 2015	6	16.58	79.94	7.4	33.38	8.2	24.4	0.64
C6	20 Jan 2015	7	16.58	80.10	7.4	33.38	8.2	24.4	0.65
C6	20 Jan 2015	8	16.56	80.48	7.4	33.38	8.2	24.4	0.64
C6	20 Jan 2015	9	16.49	80.36	7.3	33.38	8.2	24.4	0.61
C6	20 Jan 2015	10	16.43	79.88	7.2	33.38	8.2	24.4	0.59
C6	20 Jan 2015	11	16.43	77.56	7.2	33.39	8.2	24.4	0.59
C6	28 Jan 2015	1	16.58	77.40	7.5	33.42	8.2	24.4	0.51
C6	28 Jan 2015	2	16.56	77.25	7.5	33.41	8.2	24.4	0.59
C6	28 Jan 2015	3	16.50	76.77	7.4	33.41	8.2	24.4	0.70
C6	28 Jan 2015	4	16.48	75.31	7.4	33.42	8.2	24.4	0.74
C6	28 Jan 2015	5	16.47	72.85	7.4	33.42	8.2	24.4	0.72
C6	28 Jan 2015	6	16.47	71.42	7.3	33.42	8.2	24.4	0.71
C6	28 Jan 2015	7	16.47	69.86	7.3	33.42	8.2	24.4	0.71
C6	28 Jan 2015	8	16.47	68.77	7.3	33.41	8.2	24.4	0.74
C6	28 Jan 2015	9	16.47	67.18	7.3	33.42	8.2	24.4	0.70
C6	28 Jan 2015	10	16.47	66.51	7.3	33.42	8.2	24.4	0.70
A7	05 Jan 2015	1	15.91	89.23	8.0	33.44	8.2	24.6	0.97
A7	05 Jan 2015	2	15.89	89.29	8.0	33.44	8.2	24.6	0.97
A7	05 Jan 2015	3	15.80	88.83	7.9	33.44	8.2	24.6	1.04
A7	05 Jan 2015	4	15.79	89.12	7.8	33.44	8.1	24.6	1.15
A7	05 Jan 2015	5	15.80	88.78	7.8	33.44	8.1	24.6	1.22
A7	05 Jan 2015	6	15.80	88.30	7.7	33.44	8.1	24.6	1.28
A7	05 Jan 2015	7	15.79	88.85	7.6	33.44	8.1	24.6	1.34
A7	05 Jan 2015	8	15.78	89.27	7.8	33.44	8.1	24.6	1.34
A7	05 Jan 2015	9	15.78	89.05	7.9	33.44	8.1	24.6	1.40
A7	05 Jan 2015	10	15.77	88.92	7.9	33.44	8.1	24.6	1.43
A7	05 Jan 2015	11	15.75	89.20	7.8	33.44	8.1	24.6	1.53
A7	05 Jan 2015	12	15.73	88.98	7.7	33.44	8.1	24.6	1.54
A7	05 Jan 2015	13	15.71	89.11	7.7	33.44	8.1	24.6	1.57
A7	05 Jan 2015	14	15.68	89.31	7.6	33.43	8.1	24.6	1.57
A7	05 Jan 2015	15	15.65	89.00	7.5	33.42	8.1	24.6	1.57
A7	05 Jan 2015	16	15.58	89.26	7.4	33.41	8.1	24.6	1.44
A7	05 Jan 2015	17	15.46	89.61	7.3	33.45	8.1	24.7	1.30
A7	05 Jan 2015	18	15.49	89.47	7.3	33.43	8.1	24.7	1.24
A7	05 Jan 2015	19	15.32	89.81	7.2	33.43	8.1	24.7	1.14
A7	05 Jan 2015	20	15.33	89.98	7.2	33.42	8.1	24.7	1.13
A7	10 Jan 2015	1	16.09	89.84	8.0	33.43	8.2	24.5	0.77
A7	10 Jan 2015	2	16.09	90.23	8.0	33.43	8.2	24.5	0.82
A7	10 Jan 2015	3	16.09	90.27	8.0	33.43	8.2	24.5	0.85
A7	10 Jan 2015	4	16.09	89.41	8.0	33.43	8.2	24.5	0.85
A7	10 Jan 2015	5	16.07	90.33	8.0	33.43	8.2	24.5	0.86
A7	10 Jan 2015	6	16.06	90.63	8.0	33.43	8.2	24.5	0.81
A7	10 Jan 2015	7	16.03	90.68	8.0	33.44	8.2	24.5	0.79
A7	10 Jan 2015	8	16.01	90.72	8.0	33.44	8.2	24.5	0.77
A7	10 Jan 2015	9	15.98	90.59	8.1	33.44	8.2	24.5	0.77
A7	10 Jan 2015	10	15.97	90.57	8.1	33.44	8.2	24.6	0.76
A7	10 Jan 2015	11	15.97	90.68	8.0	33.44	8.2	24.6	0.76
A7	10 Jan 2015	12	15.96	90.83	8.1	33.44	8.2	24.6	0.81
A7	10 Jan 2015	13	15.94	90.75	8.1	33.44	8.2	24.6	0.81
A7	10 Jan 2015	14	15.90	90.62	8.0	33.44	8.2	24.6	0.79
A7	10 Jan 2015	15	15.80	90.04	8.0	33.45	8.2	24.6	0.79
A7	10 Jan 2015	16	15.79	88.00	7.9	33.45	8.2	24.6	0.82
A7	10 Jan 2015	17	15.77	86.91	7.9	33.45	8.2	24.6	0.78

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (µg/L)
A7	10 Jan 2015	18	15.77	85.98	7.9	33.45	8.2	24.6	0.82
A7	10 Jan 2015	19	15.77	85.57	7.9	33.45	8.2	24.6	0.85
A7	15 Jan 2015	1	16.18	85.71	7.8	33.43	8.2	24.5	1.10
A7	15 Jan 2015	2	16.18	85.78	7.8	33.43	8.2	24.5	1.17
A7	15 Jan 2015	3	16.18	85.80	7.8	33.43	8.2	24.5	1.18
A7	15 Jan 2015	4	16.18	85.82	7.8	33.43	8.2	24.5	1.15
A7	15 Jan 2015	5	16.18	86.00	7.8	33.43	8.2	24.5	1.15
A7	15 Jan 2015	6	16.18	85.98	7.8	33.43	8.2	24.5	1.19
A7	15 Jan 2015	7	16.17	85.99	7.8	33.43	8.2	24.5	1.18
A7	15 Jan 2015	8	16.17	86.03	7.7	33.43	8.2	24.5	1.18
A7	15 Jan 2015	9	16.17	86.22	7.7	33.43	8.2	24.5	1.19
A7	15 Jan 2015	10	16.16	86.33	7.6	33.43	8.2	24.5	1.18
A7	15 Jan 2015	11	16.15	86.39	7.6	33.43	8.2	24.5	1.15
A7	15 Jan 2015	12	16.12	86.64	7.6	33.42	8.2	24.5	1.11
A7	15 Jan 2015	13	16.06	87.02	7.5	33.42	8.2	24.5	1.08
A7	15 Jan 2015	14	15.89	87.27	7.4	33.41	8.2	24.6	1.08
A7	15 Jan 2015	15	15.76	87.73	7.3	33.41	8.2	24.6	1.02
A7	15 Jan 2015	16	15.60	87.97	7.2	33.41	8.2	24.6	0.94
A7	15 Jan 2015	17	15.54	88.04	7.1	33.40	8.2	24.6	0.87
A7	15 Jan 2015	18	15.37	88.27	6.9	33.40	8.1	24.7	0.78
A7	15 Jan 2015	19	15.20	88.08	6.8	33.40	8.1	24.7	0.70
A7	15 Jan 2015	20	15.13	87.56	6.7	33.40	8.1	24.7	0.63
A7	20 Jan 2015	1	16.55	83.01	7.7	33.39	8.2	24.4	1.19
A7	20 Jan 2015	2	16.52	83.58	7.8	33.39	8.2	24.4	1.21
A7	20 Jan 2015	3	16.49	84.05	7.8	33.39	8.2	24.4	1.26
A7	20 Jan 2015	4	16.49	84.63	7.7	33.39	8.2	24.4	1.27
A7	20 Jan 2015	5	16.49	84.99	7.8	33.39	8.2	24.4	1.28
A7	20 Jan 2015	6	16.49	85.20	7.8	33.39	8.2	24.4	1.28
A7	20 Jan 2015	7	16.47	85.24	7.7	33.39	8.2	24.4	1.22
A7	20 Jan 2015	8	16.38	85.50	7.6	33.39	8.2	24.4	1.11
A7	20 Jan 2015	9	16.30	85.80	7.4	33.39	8.2	24.4	0.97
A7	20 Jan 2015	10	16.17	85.77	7.3	33.39	8.2	24.5	0.92
A7	20 Jan 2015	11	16.05	85.39	7.2	33.40	8.2	24.5	0.91
A7	20 Jan 2015	12	15.82	84.87	7.2	33.39	8.2	24.6	0.96
A7	20 Jan 2015	13	15.56	84.09	7.2	33.40	8.2	24.6	1.03
A7	20 Jan 2015	14	15.42	83.20	7.2	33.40	8.2	24.6	1.08
A7	20 Jan 2015	15	15.34	82.71	7.2	33.40	8.2	24.7	1.10
A7	20 Jan 2015	16	15.30	82.83	7.2	33.39	8.2	24.7	1.14
A7	20 Jan 2015	17	15.26	83.58	7.1	33.39	8.2	24.7	1.13
A7	20 Jan 2015	18	15.23	83.80	7.1	33.40	8.2	24.7	1.07
A7	20 Jan 2015	19	15.22	82.29	7.0	33.39	8.1	24.7	1.04
A7	28 Jan 2015	1	16.45	85.18	7.2	33.41	8.2	24.4	0.69
A7	28 Jan 2015	2	16.44	85.00	7.2	33.41	8.2	24.4	0.71
A7	28 Jan 2015	3	16.44	85.05	7.2	33.41	8.2	24.4	0.71
A7	28 Jan 2015	4	16.45	85.13	7.2	33.41	8.2	24.4	0.74
A7	28 Jan 2015	5	16.44	85.06	7.2	33.41	8.2	24.4	0.75
A7	28 Jan 2015	6	16.44	85.10	7.2	33.41	8.2	24.4	0.74
A7	28 Jan 2015	7	16.44	85.20	7.2	33.41	8.2	24.4	0.77
A7	28 Jan 2015	8	16.43	85.17	7.2	33.41	8.2	24.4	0.76
A7	28 Jan 2015	9	16.43	85.30	7.2	33.41	8.2	24.4	0.77
A7	28 Jan 2015	10	16.43	85.32	7.2	33.41	8.2	24.4	0.77
A7	28 Jan 2015	11	16.42	85.54	7.3	33.40	8.2	24.4	0.78
A7	28 Jan 2015	12	16.40	85.70	7.3	33.40	8.2	24.4	0.77
A7	28 Jan 2015	13	16.37	86.34	7.4	33.40	8.2	24.4	0.81

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ -t)	Chlor (μ g/L)
A7	28 Jan 2015	14	16.30	86.47	7.5	33.40	8.2	24.4	0.88
A7	28 Jan 2015	15	16.24	86.98	7.4	33.39	8.2	24.5	0.85
A7	28 Jan 2015	16	16.07	87.64	7.3	33.39	8.2	24.5	0.78
A7	28 Jan 2015	17	15.97	87.95	7.2	33.38	8.2	24.5	0.73
A7	28 Jan 2015	18	15.77	87.88	7.1	33.38	8.2	24.5	0.71
A7	28 Jan 2015	19	15.65	86.58	7.0	33.37	8.2	24.6	0.71
C7	05 Jan 2015	1	15.80	89.83	8.3	33.45	8.2	24.6	1.24
C7	05 Jan 2015	2	15.76	89.58	8.2	33.45	8.2	24.6	1.40
C7	05 Jan 2015	3	15.74	89.73	8.1	33.45	8.2	24.6	1.54
C7	05 Jan 2015	4	15.73	89.80	8.0	33.45	8.1	24.6	1.64
C7	05 Jan 2015	5	15.73	89.75	8.0	33.45	8.1	24.6	1.70
C7	05 Jan 2015	6	15.72	89.73	7.9	33.45	8.1	24.6	1.77
C7	05 Jan 2015	7	15.72	89.44	8.0	33.45	8.1	24.6	1.78
C7	05 Jan 2015	8	15.71	88.89	7.9	33.45	8.1	24.6	1.79
C7	05 Jan 2015	9	15.71	89.50	7.9	33.45	8.1	24.6	1.77
C7	05 Jan 2015	10	15.69	89.43	7.8	33.45	8.1	24.6	1.73
C7	05 Jan 2015	11	15.68	88.91	7.8	33.45	8.1	24.6	1.69
C7	05 Jan 2015	12	15.66	89.18	7.8	33.46	8.1	24.6	1.56
C7	05 Jan 2015	13	15.63	89.75	7.7	33.46	8.1	24.6	1.33
C7	05 Jan 2015	14	15.60	89.83	7.7	33.46	8.1	24.7	1.16
C7	05 Jan 2015	15	15.58	90.06	7.7	33.47	8.1	24.7	0.93
C7	05 Jan 2015	16	15.56	89.99	7.6	33.47	8.1	24.7	0.82
C7	05 Jan 2015	17	15.55	89.92	7.5	33.47	8.1	24.7	0.76
C7	05 Jan 2015	18	15.50	89.71	7.4	33.46	8.1	24.7	0.75
C7	10 Jan 2015	1	16.22	89.95	8.6	33.44	8.3	24.5	0.91
C7	10 Jan 2015	2	16.22	90.14	8.6	33.44	8.3	24.5	0.91
C7	10 Jan 2015	3	16.21	90.20	8.6	33.44	8.3	24.5	0.92
C7	10 Jan 2015	4	16.20	90.34	8.6	33.44	8.3	24.5	0.95
C7	10 Jan 2015	5	16.20	90.22	8.5	33.44	8.3	24.5	1.00
C7	10 Jan 2015	6	16.19	90.29	8.4	33.44	8.3	24.5	1.01
C7	10 Jan 2015	7	16.19	90.41	8.4	33.44	8.3	24.5	1.02
C7	10 Jan 2015	8	16.18	90.43	8.3	33.44	8.2	24.5	1.02
C7	10 Jan 2015	9	16.18	90.40	8.3	33.44	8.2	24.5	1.04
C7	10 Jan 2015	10	16.17	90.32	8.3	33.44	8.2	24.5	1.06
C7	10 Jan 2015	11	16.16	90.24	8.2	33.44	8.2	24.5	1.05
C7	10 Jan 2015	12	16.14	90.23	8.1	33.44	8.2	24.5	1.04
C7	10 Jan 2015	13	16.12	90.21	8.1	33.43	8.2	24.5	1.00
C7	10 Jan 2015	14	16.09	90.08	7.9	33.43	8.2	24.5	0.94
C7	10 Jan 2015	15	16.02	89.72	7.7	33.43	8.2	24.5	0.81
C7	10 Jan 2015	16	15.94	88.15	7.5	33.43	8.2	24.6	0.69
C7	10 Jan 2015	17	15.90	83.95	7.4	33.44	8.2	24.6	0.64
C7	10 Jan 2015	18	15.90	78.71	7.3	33.44	8.2	24.6	0.61
C7	15 Jan 2015	1	16.21	82.03	8.3	33.30	8.2	24.4	1.98
C7	15 Jan 2015	2	16.22	81.89	8.3	33.30	8.2	24.4	1.95
C7	15 Jan 2015	3	16.22	82.32	8.3	33.30	8.2	24.4	1.80
C7	15 Jan 2015	4	16.21	83.46	8.3	33.30	8.2	24.4	1.51
C7	15 Jan 2015	5	16.21	82.42	8.4	33.30	8.2	24.4	1.47
C7	15 Jan 2015	6	16.21	81.47	8.2	33.31	8.2	24.4	1.49
C7	15 Jan 2015	7	16.22	81.99	8.1	33.33	8.2	24.4	1.48
C7	15 Jan 2015	8	16.23	82.34	8.0	33.35	8.2	24.4	1.43
C7	15 Jan 2015	9	16.23	83.20	7.8	33.38	8.2	24.4	1.32
C7	15 Jan 2015	10	16.23	83.81	7.7	33.38	8.2	24.5	1.24
C7	15 Jan 2015	11	16.19	84.58	7.6	33.40	8.2	24.5	1.11
C7	15 Jan 2015	12	16.15	86.85	7.5	33.40	8.2	24.5	1.03

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ -t)	Chlor (μ g/L)
C7	15 Jan 2015	13	16.11	87.71	7.4	33.41	8.2	24.5	0.94
C7	15 Jan 2015	14	16.05	88.02	7.3	33.41	8.2	24.5	0.88
C7	15 Jan 2015	15	15.95	88.10	7.0	33.41	8.2	24.5	0.80
C7	15 Jan 2015	16	15.71	88.12	6.8	33.40	8.2	24.6	0.74
C7	15 Jan 2015	17	15.49	87.71	6.7	33.40	8.1	24.6	0.69
C7	15 Jan 2015	18	15.44	86.23	6.7	33.41	8.1	24.6	0.67
C7	20 Jan 2015	1	16.70	86.81	8.2	33.39	8.2	24.4	0.97
C7	20 Jan 2015	2	16.69	86.91	8.2	33.39	8.2	24.4	1.01
C7	20 Jan 2015	3	16.69	86.91	8.1	33.39	8.2	24.4	1.04
C7	20 Jan 2015	4	16.69	86.70	8.0	33.39	8.2	24.4	1.04
C7	20 Jan 2015	5	16.69	86.64	8.1	33.39	8.2	24.4	1.05
C7	20 Jan 2015	6	16.69	86.62	8.0	33.39	8.2	24.4	1.06
C7	20 Jan 2015	7	16.69	85.40	8.0	33.39	8.2	24.4	1.07
C7	20 Jan 2015	8	16.69	84.37	8.0	33.39	8.2	24.4	1.07
C7	20 Jan 2015	9	16.69	85.92	8.1	33.39	8.2	24.4	1.08
C7	20 Jan 2015	10	16.68	84.87	8.0	33.39	8.2	24.4	1.08
C7	20 Jan 2015	11	16.68	82.99	7.9	33.39	8.2	24.4	1.07
C7	20 Jan 2015	12	16.60	85.81	7.6	33.39	8.2	24.4	0.96
C7	20 Jan 2015	13	16.54	87.62	7.4	33.39	8.2	24.4	0.83
C7	20 Jan 2015	14	16.46	87.93	7.2	33.39	8.2	24.4	0.74
C7	20 Jan 2015	15	16.36	87.80	7.1	33.39	8.2	24.4	0.65
C7	20 Jan 2015	16	16.22	87.32	7.1	33.39	8.2	24.5	0.67
C7	20 Jan 2015	17	16.06	86.64	7.2	33.39	8.2	24.5	0.70
C7	20 Jan 2015	18	15.95	85.88	7.1	33.39	8.2	24.5	0.69
C7	20 Jan 2015	19	15.93	84.68	7.2	33.39	8.2	24.5	0.70
C7	20 Jan 2015	20	15.93	83.59	7.2	33.39	8.2	24.5	0.70
C7	28 Jan 2015	1	16.53	81.85	8.6	33.41	8.3	24.4	0.96
C7	28 Jan 2015	2	16.52	NA	8.5	33.41	8.3	24.4	1.00
C7	28 Jan 2015	3	16.51	86.76	8.4	33.41	8.3	24.4	1.04
C7	28 Jan 2015	4	16.51	84.03	8.4	33.41	8.3	24.4	1.07
C7	28 Jan 2015	5	16.51	88.17	8.3	33.41	8.3	24.4	1.13
C7	28 Jan 2015	6	16.50	88.34	8.3	33.41	8.3	24.4	1.10
C7	28 Jan 2015	7	16.50	88.81	8.3	33.41	8.3	24.4	1.10
C7	28 Jan 2015	8	16.49	87.39	8.2	33.40	8.3	24.4	1.10
C7	28 Jan 2015	9	16.46	85.80	8.1	33.40	8.3	24.4	1.10
C7	28 Jan 2015	10	16.43	86.95	8.0	33.40	8.2	24.4	1.07
C7	28 Jan 2015	11	16.38	86.89	7.9	33.40	8.2	24.4	1.03
C7	28 Jan 2015	12	16.32	84.76	7.7	33.40	8.2	24.4	0.95
C7	28 Jan 2015	13	16.22	83.23	7.5	33.39	8.2	24.5	0.86
C7	28 Jan 2015	14	16.05	80.75	7.2	33.39	8.2	24.5	0.73
C7	28 Jan 2015	15	15.85	NA	7.0	33.37	8.2	24.5	0.67
C7	28 Jan 2015	16	15.61	NA	7.0	33.38	8.2	24.6	0.69
C7	28 Jan 2015	17	15.58	66.65	7.0	33.38	8.2	24.6	0.92
C7	28 Jan 2015	18	15.59	NA	7.0	33.38	8.2	24.6	0.71
C8	05 Jan 2015	1	15.70	89.05	7.8	33.44	8.1	24.6	0.97
C8	05 Jan 2015	2	15.68	88.73	7.8	33.44	8.1	24.6	0.98
C8	05 Jan 2015	3	15.66	88.86	7.8	33.44	8.1	24.6	1.07
C8	05 Jan 2015	4	15.65	88.36	7.8	33.44	8.1	24.6	1.13
C8	05 Jan 2015	5	15.64	88.48	7.8	33.44	8.1	24.6	1.24
C8	05 Jan 2015	6	15.63	88.46	7.8	33.44	8.1	24.6	1.37
C8	05 Jan 2015	7	15.63	88.42	7.8	33.44	8.1	24.6	1.45
C8	05 Jan 2015	8	15.63	88.56	7.8	33.44	8.1	24.6	1.56
C8	05 Jan 2015	9	15.61	88.58	7.7	33.45	8.1	24.6	1.48
C8	05 Jan 2015	10	15.56	89.03	7.6	33.44	8.1	24.6	1.22

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ -t)	Chlor (μ g/L)
C8	05 Jan 2015	11	15.49	89.14	7.4	33.44	8.1	24.7	1.07
C8	05 Jan 2015	12	15.43	88.62	7.4	33.44	8.1	24.7	1.02
C8	05 Jan 2015	13	15.42	88.03	7.3	33.44	8.1	24.7	0.98
C8	05 Jan 2015	14	15.42	87.84	7.3	33.44	8.1	24.7	1.01
C8	05 Jan 2015	15	15.42	87.81	7.3	33.44	8.1	24.7	0.98
C8	05 Jan 2015	16	15.41	87.66	7.3	33.44	8.1	24.7	0.98
C8	05 Jan 2015	17	15.39	87.91	7.3	33.44	8.1	24.7	0.95
C8	05 Jan 2015	18	15.38	87.87	7.2	33.44	8.1	24.7	0.93
C8	05 Jan 2015	19	15.36	87.82	7.2	33.43	8.1	24.7	0.93
C8	10 Jan 2015	1	16.20	91.20	7.9	33.43	8.2	24.5	0.49
C8	10 Jan 2015	2	16.21	91.26	7.9	33.43	8.2	24.5	0.46
C8	10 Jan 2015	3	16.22	91.34	7.8	33.43	8.2	24.5	0.43
C8	10 Jan 2015	4	16.20	91.33	7.9	33.43	8.2	24.5	0.45
C8	10 Jan 2015	5	16.18	91.39	7.9	33.43	8.2	24.5	0.49
C8	10 Jan 2015	6	16.15	91.40	7.9	33.43	8.2	24.5	0.53
C8	10 Jan 2015	7	16.15	91.27	7.9	33.43	8.2	24.5	0.53
C8	10 Jan 2015	8	16.15	91.07	7.9	33.43	8.2	24.5	0.55
C8	10 Jan 2015	9	16.14	91.21	7.9	33.43	8.2	24.5	0.57
C8	10 Jan 2015	10	16.13	91.17	7.9	33.43	8.2	24.5	0.62
C8	10 Jan 2015	11	16.11	91.12	8.0	33.43	8.2	24.5	0.72
C8	10 Jan 2015	12	16.10	91.10	8.0	33.42	8.2	24.5	0.82
C8	10 Jan 2015	13	16.10	90.73	8.0	33.42	8.2	24.5	0.90
C8	10 Jan 2015	14	16.07	90.49	8.0	33.42	8.2	24.5	0.93
C8	10 Jan 2015	15	16.03	90.25	7.8	33.42	8.2	24.5	0.88
C8	10 Jan 2015	16	15.89	90.15	7.5	33.42	8.2	24.6	0.75
C8	10 Jan 2015	17	15.79	89.33	7.4	33.42	8.2	24.6	0.74
C8	10 Jan 2015	18	15.73	85.20	7.2	33.42	8.2	24.6	0.87
C8	10 Jan 2015	19	15.65	78.45	7.2	33.41	8.2	24.6	1.19
C8	15 Jan 2015	1	16.13	85.79	8.0	33.38	8.2	24.5	0.92
C8	15 Jan 2015	2	16.14	85.54	8.0	33.38	8.2	24.5	0.95
C8	15 Jan 2015	3	16.13	85.85	8.0	33.38	8.2	24.5	1.14
C8	15 Jan 2015	4	16.13	85.90	7.9	33.38	8.2	24.5	1.24
C8	15 Jan 2015	5	16.14	85.87	8.0	33.39	8.2	24.5	1.29
C8	15 Jan 2015	6	16.15	85.94	8.0	33.39	8.2	24.5	1.54
C8	15 Jan 2015	7	16.14	86.03	7.9	33.39	8.2	24.5	1.70
C8	15 Jan 2015	8	16.14	86.18	7.9	33.39	8.2	24.5	1.82
C8	15 Jan 2015	9	16.14	86.00	8.0	33.40	8.2	24.5	1.87
C8	15 Jan 2015	10	16.14	85.90	8.0	33.40	8.2	24.5	1.84
C8	15 Jan 2015	11	16.14	85.81	7.9	33.40	8.2	24.5	1.80
C8	15 Jan 2015	12	16.14	85.84	8.0	33.40	8.2	24.5	1.83
C8	15 Jan 2015	13	16.14	85.75	8.0	33.40	8.2	24.5	1.92
C8	15 Jan 2015	14	16.14	85.88	7.9	33.40	8.2	24.5	2.01
C8	15 Jan 2015	15	16.13	85.87	7.9	33.40	8.2	24.5	2.02
C8	15 Jan 2015	16	16.04	85.95	7.6	33.39	8.2	24.5	1.97
C8	15 Jan 2015	17	15.74	85.64	7.4	33.40	8.2	24.6	1.75
C8	15 Jan 2015	18	15.63	83.44	7.3	33.41	8.2	24.6	1.63
C8	15 Jan 2015	19	15.62	78.49	7.2	33.41	8.2	24.6	1.65
C8	15 Jan 2015	20	15.63	73.86	7.2	33.41	8.2	24.6	1.71
C8	20 Jan 2015	1	16.79	89.62	7.8	33.39	8.2	24.3	0.37
C8	20 Jan 2015	2	16.79	89.74	7.8	33.39	8.2	24.3	0.39
C8	20 Jan 2015	3	16.78	89.80	7.8	33.39	8.2	24.3	0.40
C8	20 Jan 2015	4	16.78	89.98	7.8	33.39	8.2	24.3	0.41
C8	20 Jan 2015	5	16.78	90.04	7.8	33.39	8.2	24.3	0.42
C8	20 Jan 2015	6	16.78	90.24	7.8	33.39	8.2	24.3	0.44

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ -t)	Chlor (μ g/L)
C8	20 Jan 2015	7	16.77	90.32	7.8	33.39	8.2	24.3	0.48
C8	20 Jan 2015	8	16.76	90.26	7.8	33.39	8.2	24.3	0.52
C8	20 Jan 2015	9	16.76	89.97	7.8	33.39	8.2	24.3	0.52
C8	20 Jan 2015	10	16.75	90.04	7.7	33.39	8.2	24.3	0.58
C8	20 Jan 2015	11	16.75	90.06	7.8	33.38	8.2	24.3	0.61
C8	20 Jan 2015	12	16.74	89.73	7.8	33.38	8.2	24.3	0.64
C8	20 Jan 2015	13	16.74	89.59	7.7	33.38	8.2	24.3	0.66
C8	20 Jan 2015	14	16.65	89.70	7.6	33.38	8.2	24.4	0.72
C8	20 Jan 2015	15	16.50	88.84	7.5	33.38	8.2	24.4	0.76
C8	20 Jan 2015	16	16.34	83.93	7.4	33.38	8.2	24.4	0.74
C8	20 Jan 2015	17	16.21	83.13	7.3	33.38	8.2	24.5	0.74
C8	20 Jan 2015	18	15.96	82.75	7.2	33.38	8.2	24.5	0.80
C8	20 Jan 2015	19	15.80	80.99	7.2	33.39	8.2	24.6	0.91
C8	28 Jan 2015	1	16.53	89.55	7.7	33.41	8.2	24.4	0.57
C8	28 Jan 2015	2	16.52	89.81	7.8	33.41	8.2	24.4	0.60
C8	28 Jan 2015	3	16.51	89.80	7.8	33.41	8.2	24.4	0.66
C8	28 Jan 2015	4	16.49	89.70	7.8	33.41	8.2	24.4	0.73
C8	28 Jan 2015	5	16.47	89.58	7.8	33.41	8.2	24.4	0.79
C8	28 Jan 2015	6	16.47	89.68	7.8	33.41	8.2	24.4	0.82
C8	28 Jan 2015	7	16.44	89.64	7.8	33.41	8.2	24.4	0.86
C8	28 Jan 2015	8	16.43	89.72	7.8	33.41	8.2	24.4	0.92
C8	28 Jan 2015	9	16.40	89.73	7.8	33.40	8.2	24.4	1.00
C8	28 Jan 2015	10	16.35	89.65	7.8	33.40	8.2	24.4	1.05
C8	28 Jan 2015	11	16.33	89.26	7.8	33.40	8.2	24.4	1.10
C8	28 Jan 2015	12	16.32	88.86	7.7	33.40	8.2	24.4	1.14
C8	28 Jan 2015	13	16.32	88.77	7.7	33.40	8.2	24.4	1.16
C8	28 Jan 2015	14	16.32	88.73	7.7	33.40	8.2	24.4	1.20
C8	28 Jan 2015	15	16.23	88.72	7.5	33.39	8.2	24.5	1.23
C8	28 Jan 2015	16	16.11	85.66	7.3	33.38	8.2	24.5	1.22
C8	28 Jan 2015	17	15.83	82.96	7.2	33.38	8.2	24.5	1.16
C8	28 Jan 2015	18	15.69	77.34	7.1	33.38	8.2	24.6	1.10
C8	28 Jan 2015	19	15.65	72.49	7.1	33.38	8.2	24.6	1.07

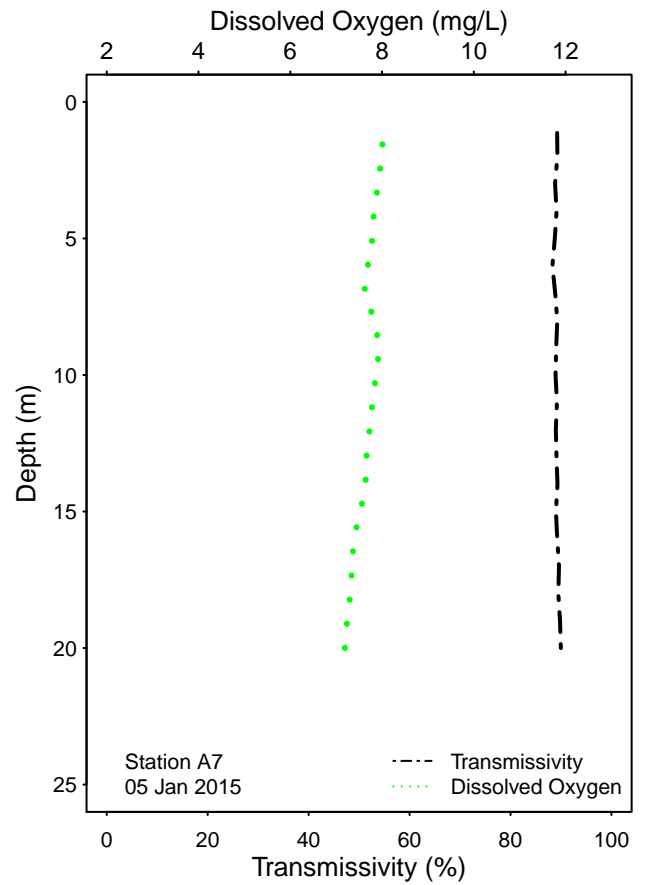
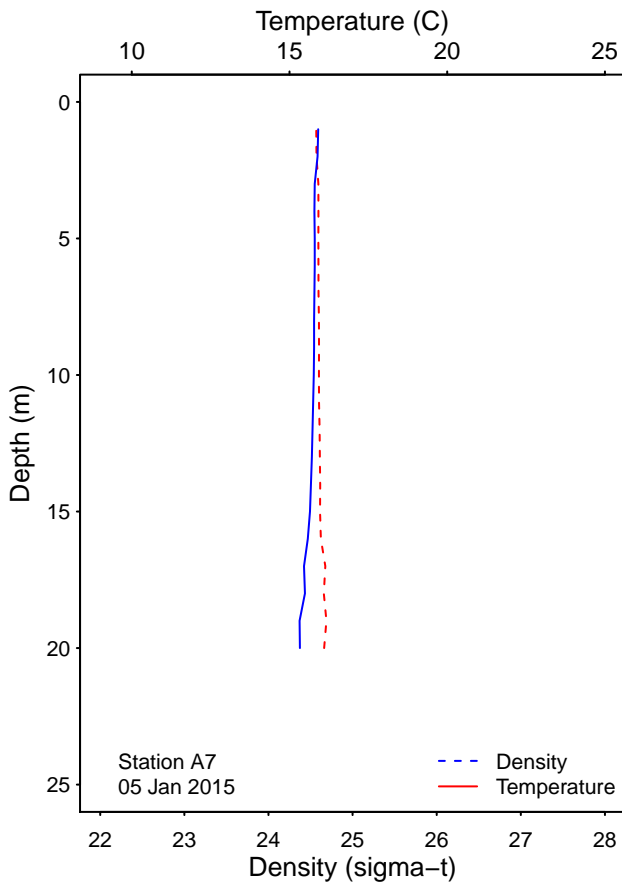
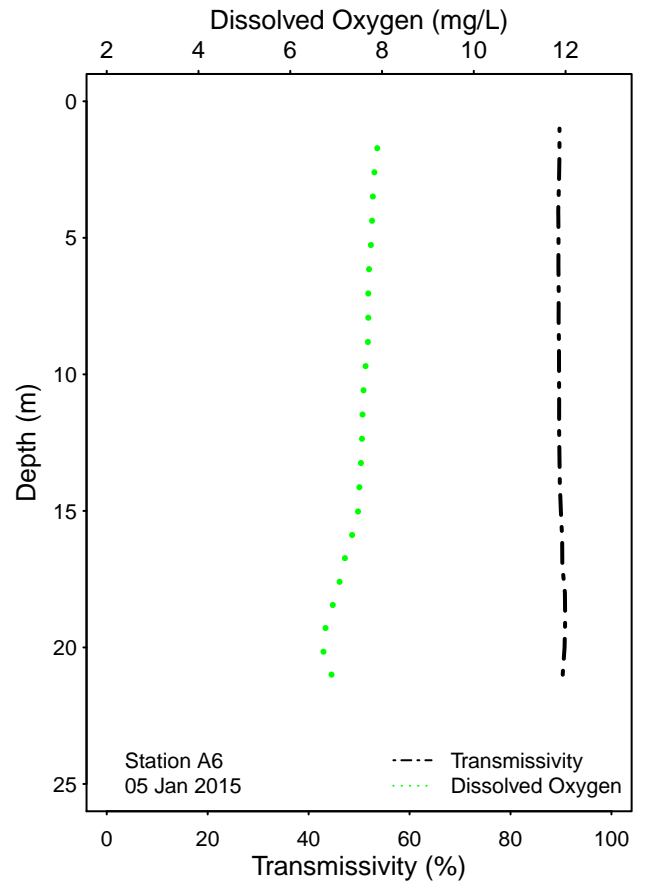
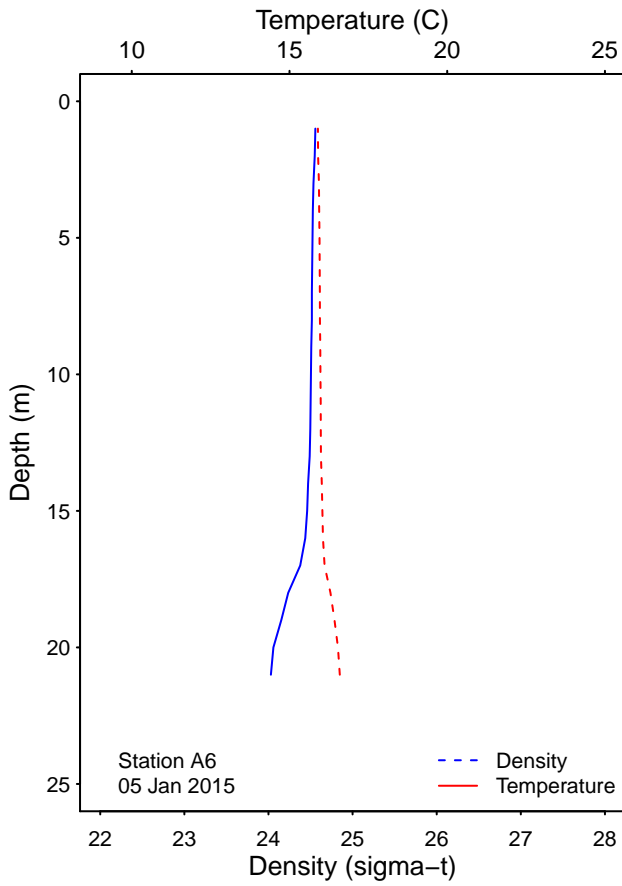


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

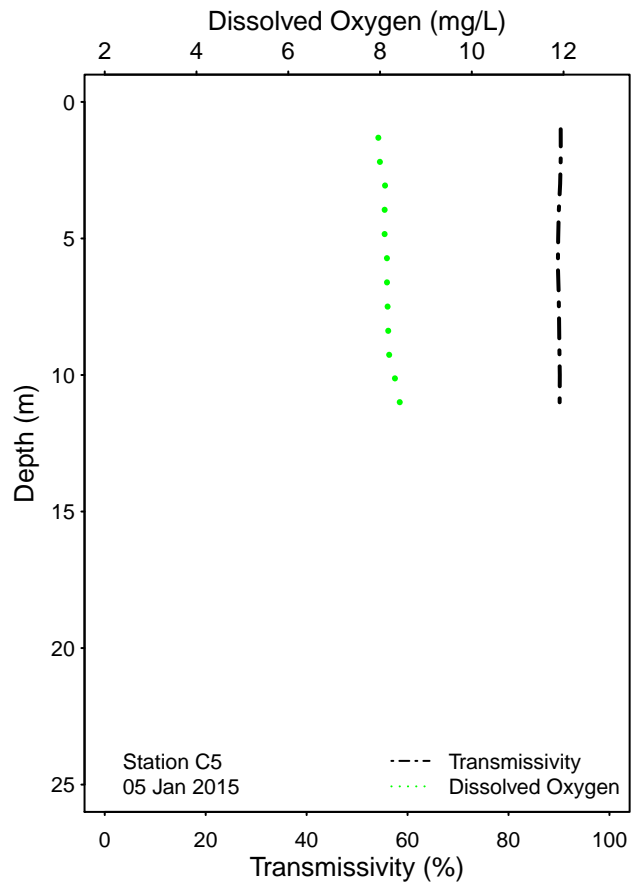
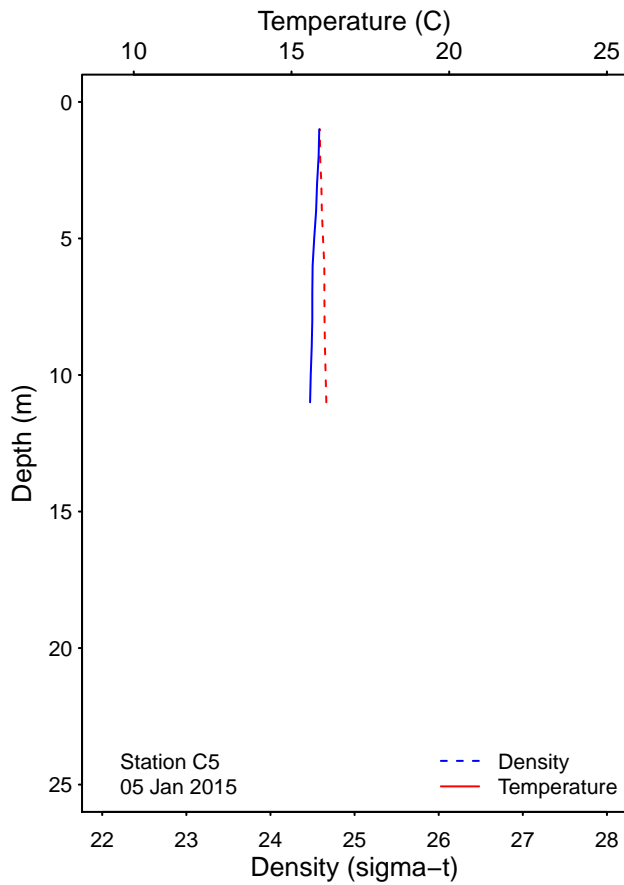
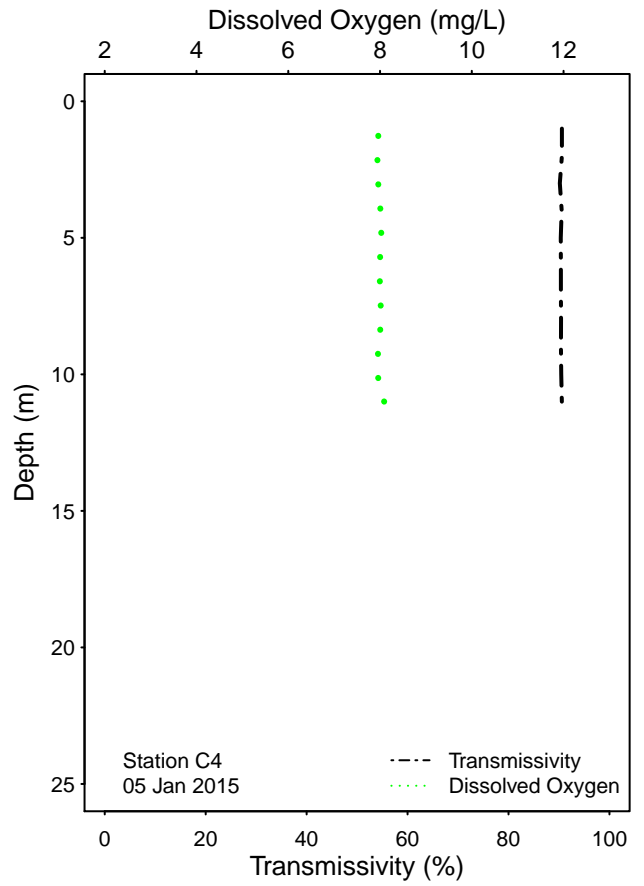
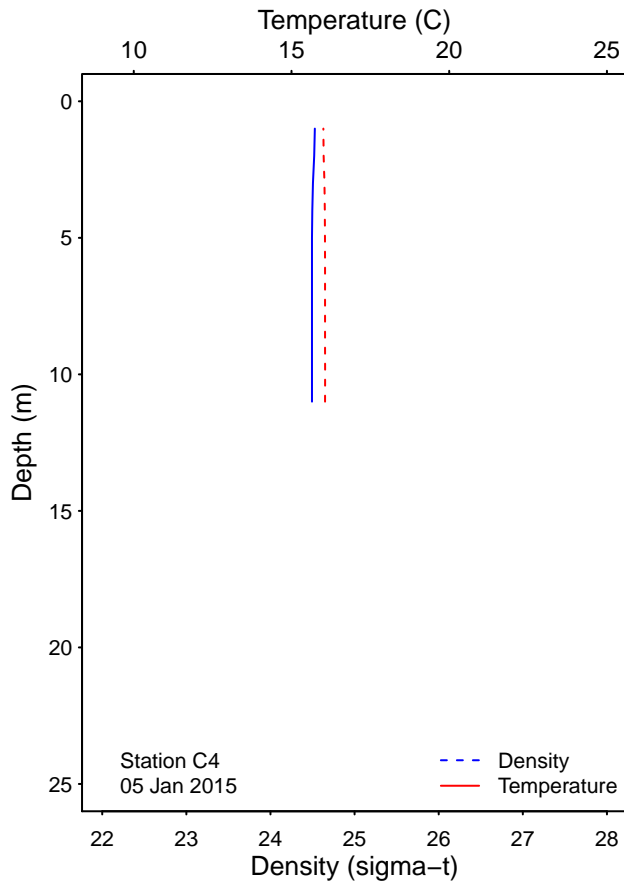


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

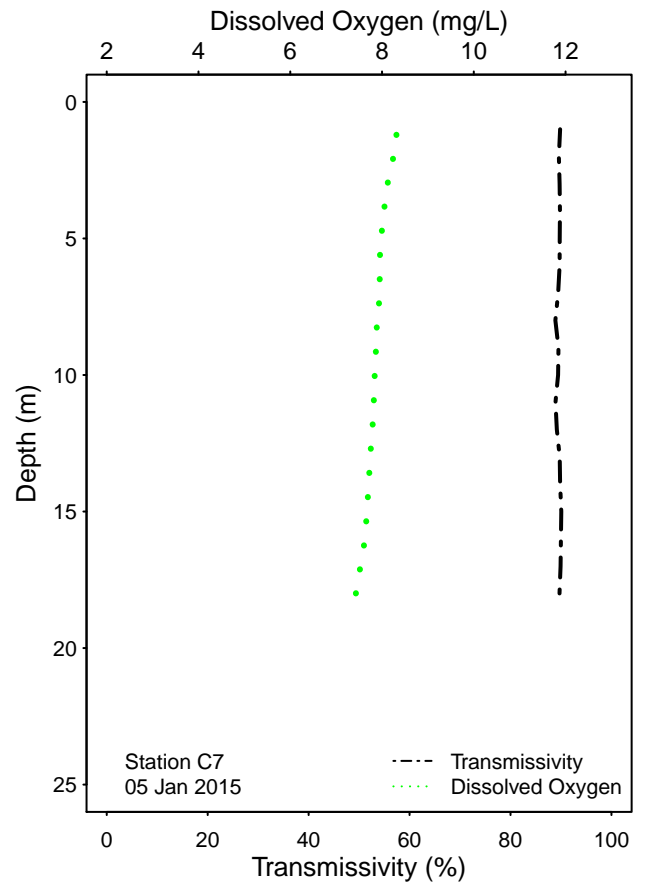
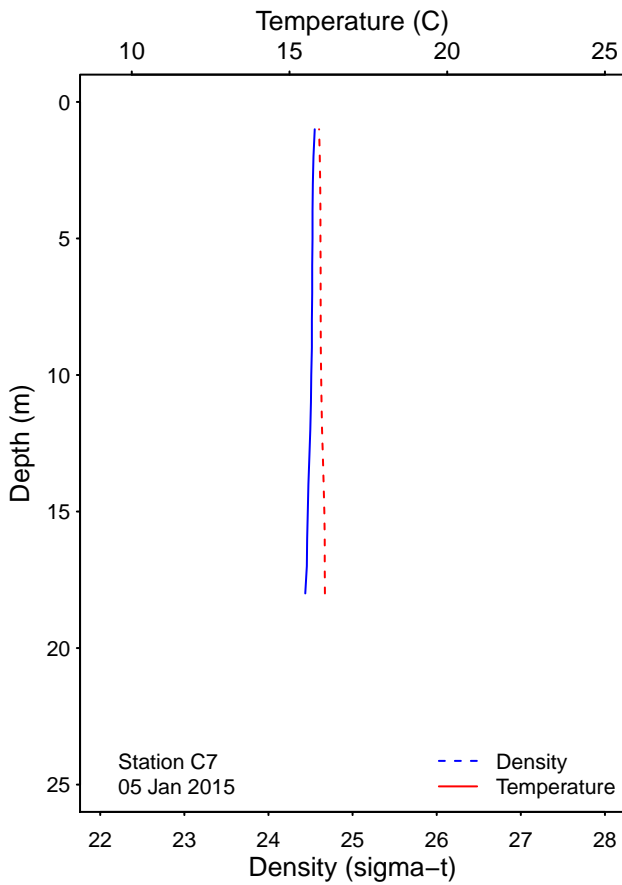
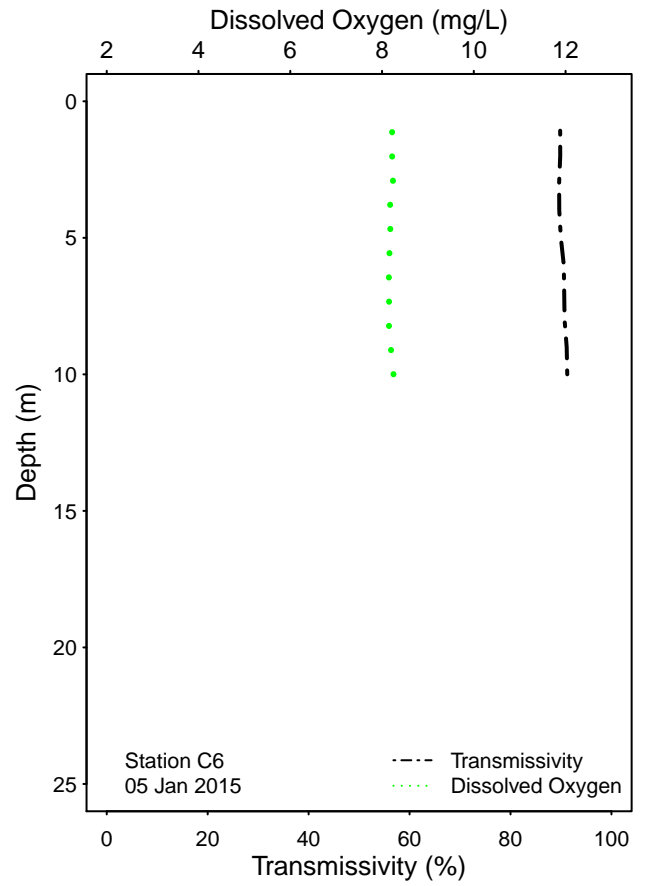
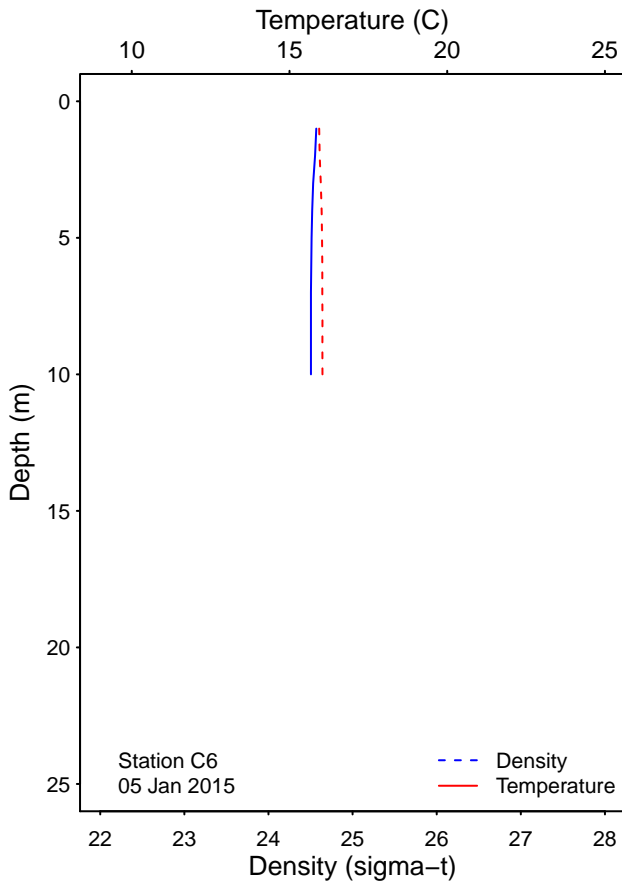


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

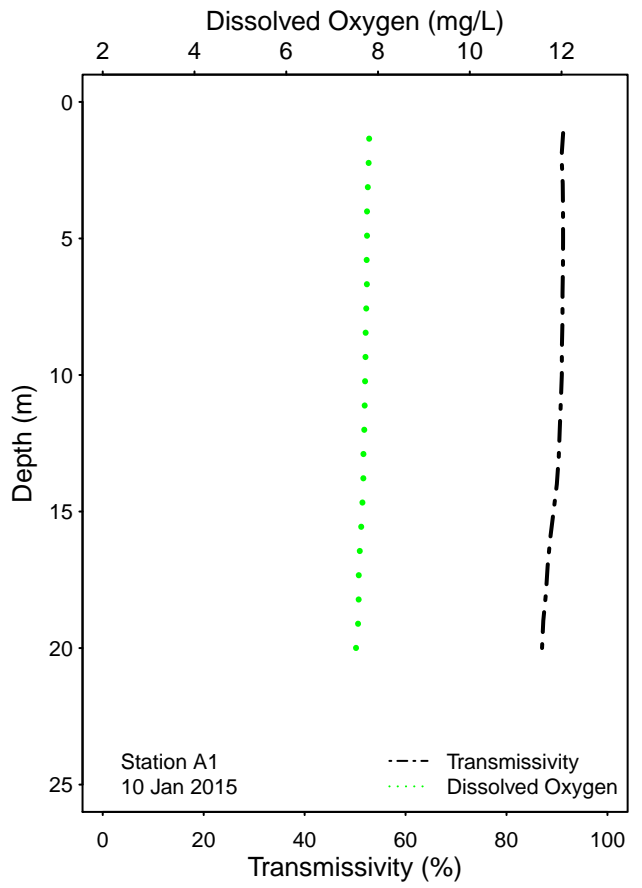
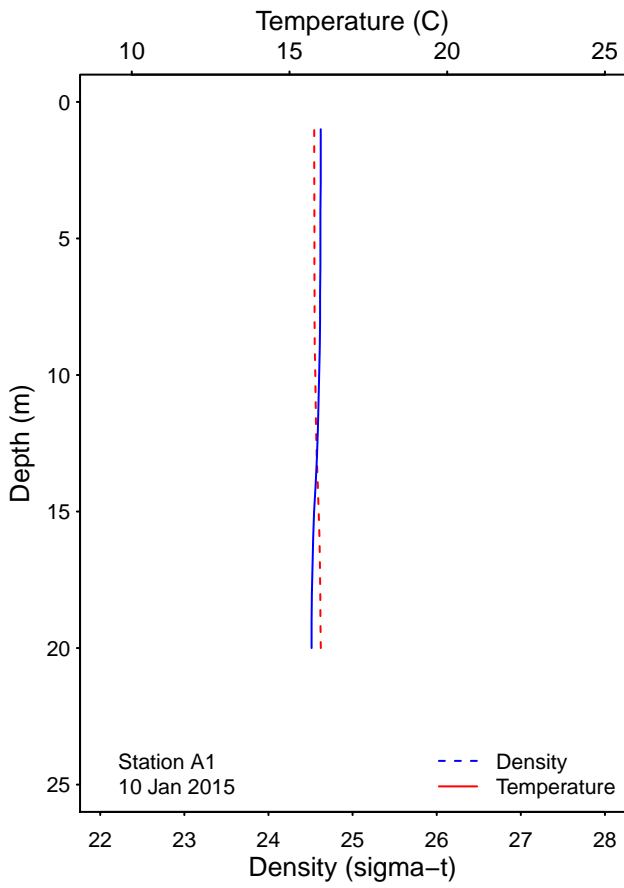
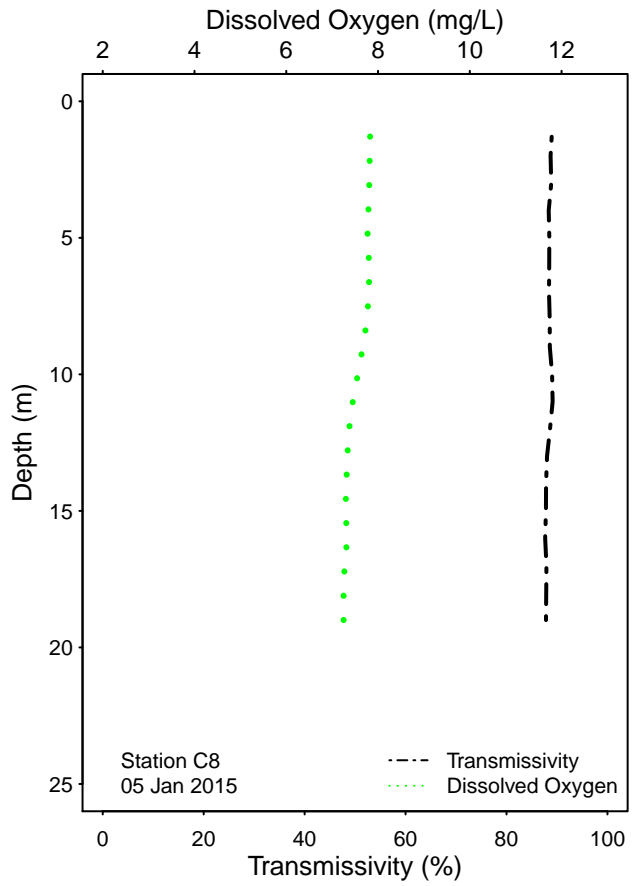
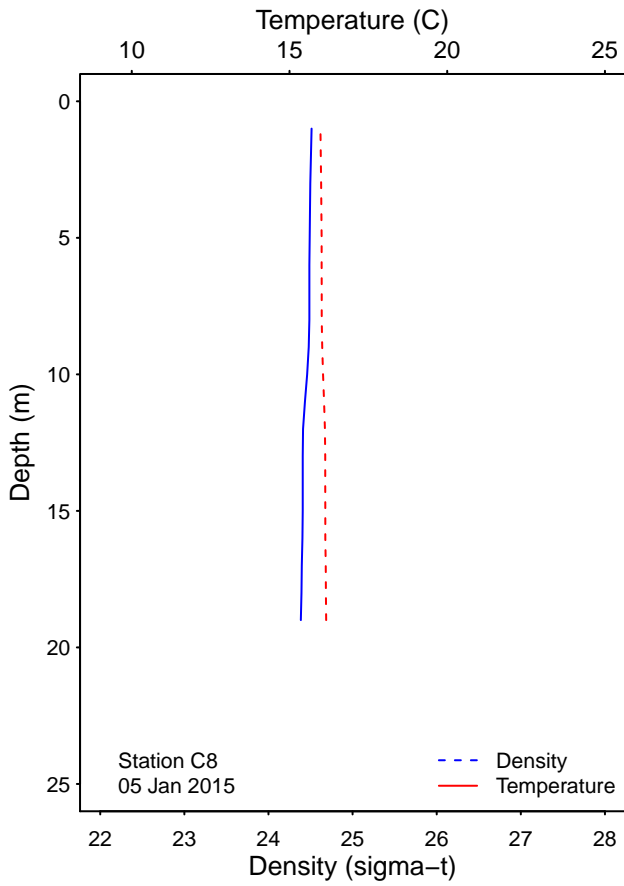


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

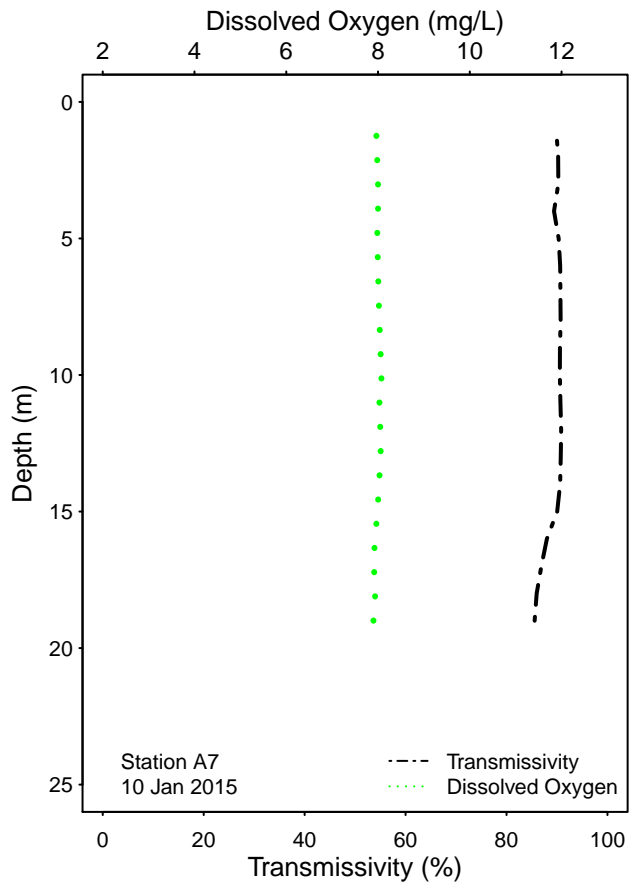
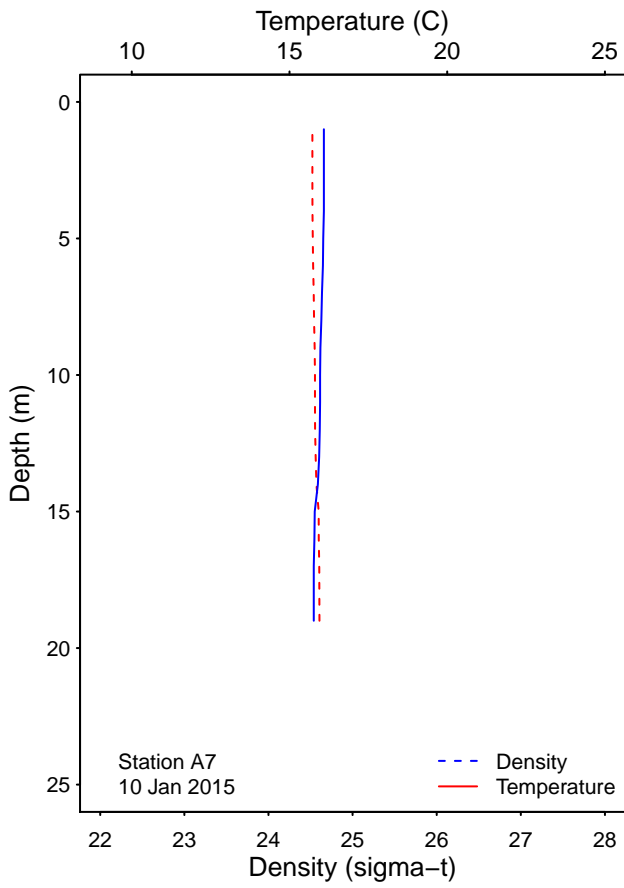
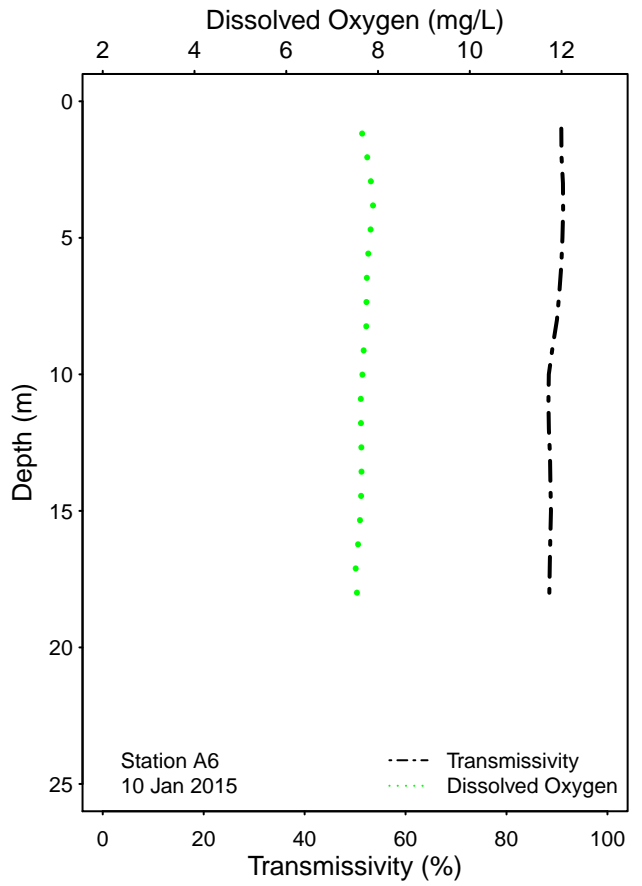
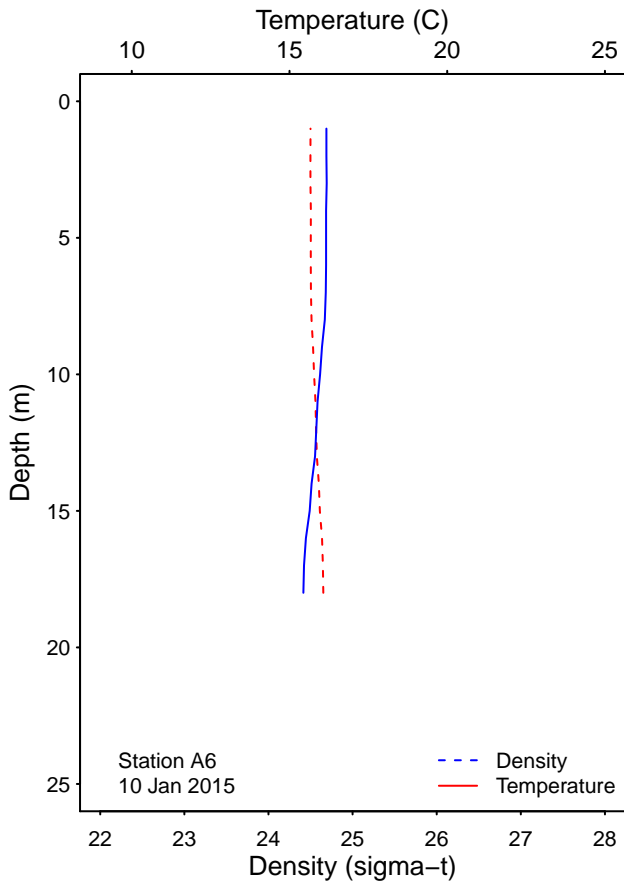


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

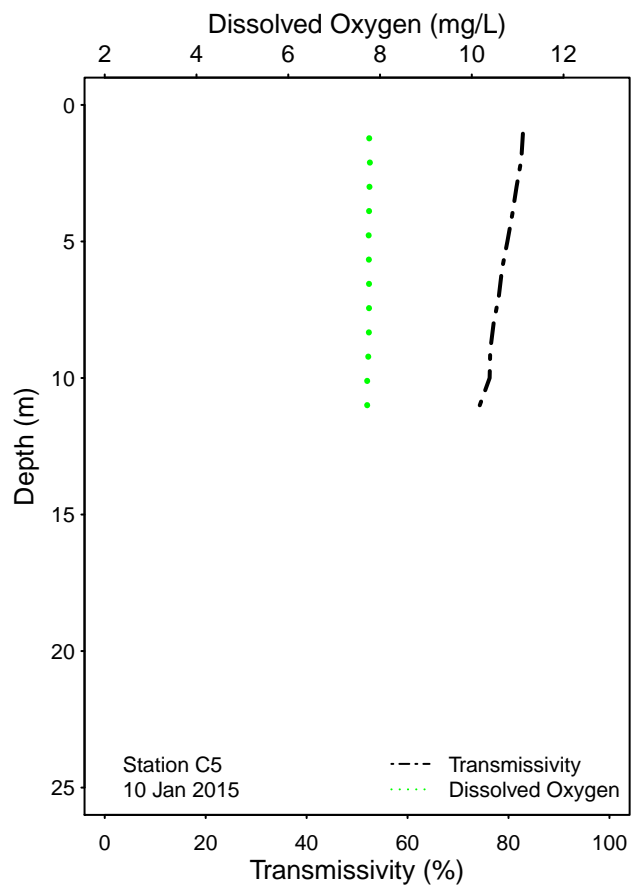
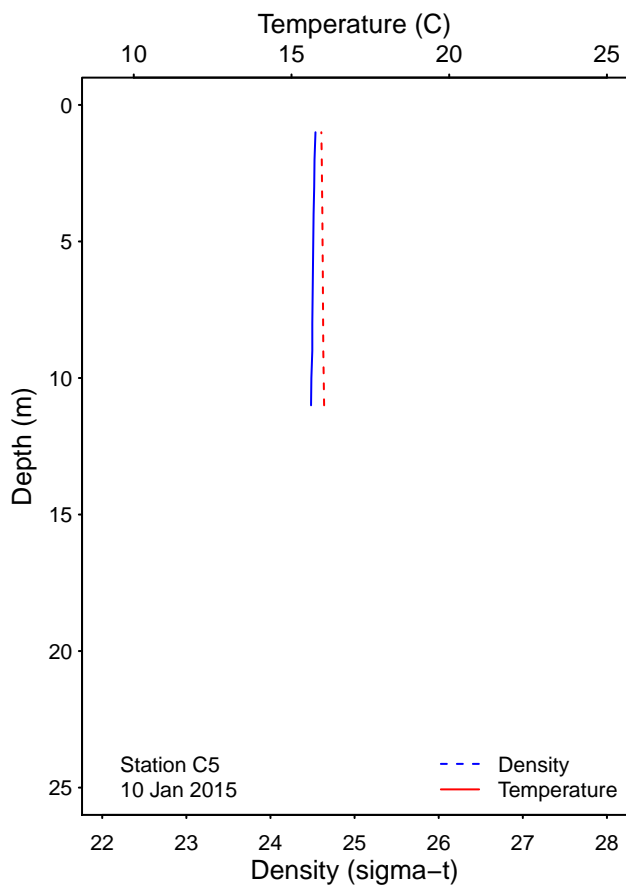
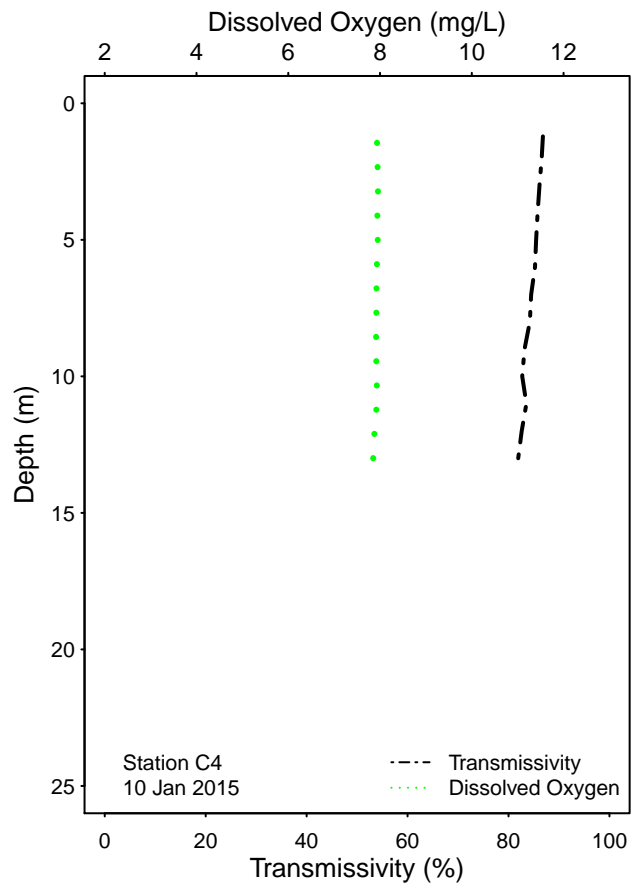
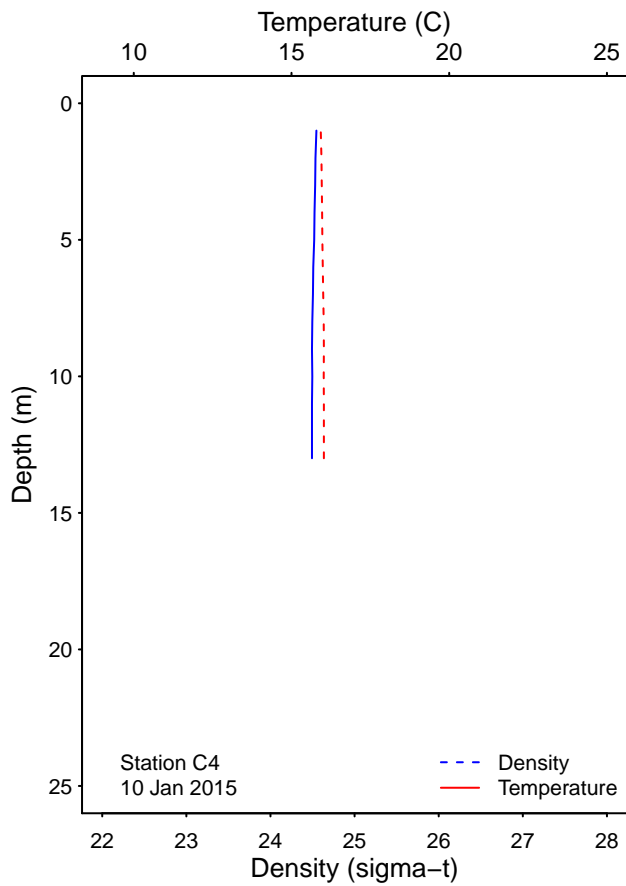


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

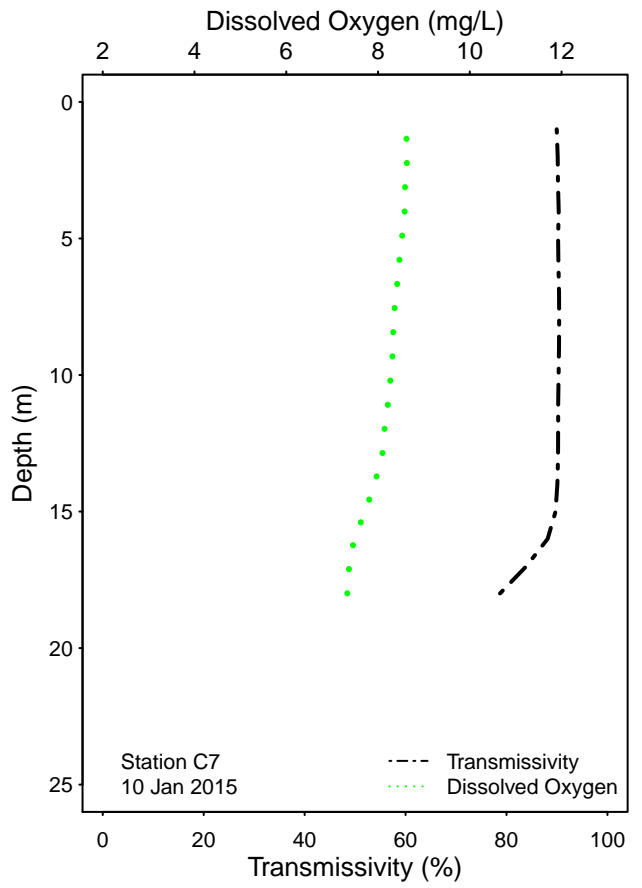
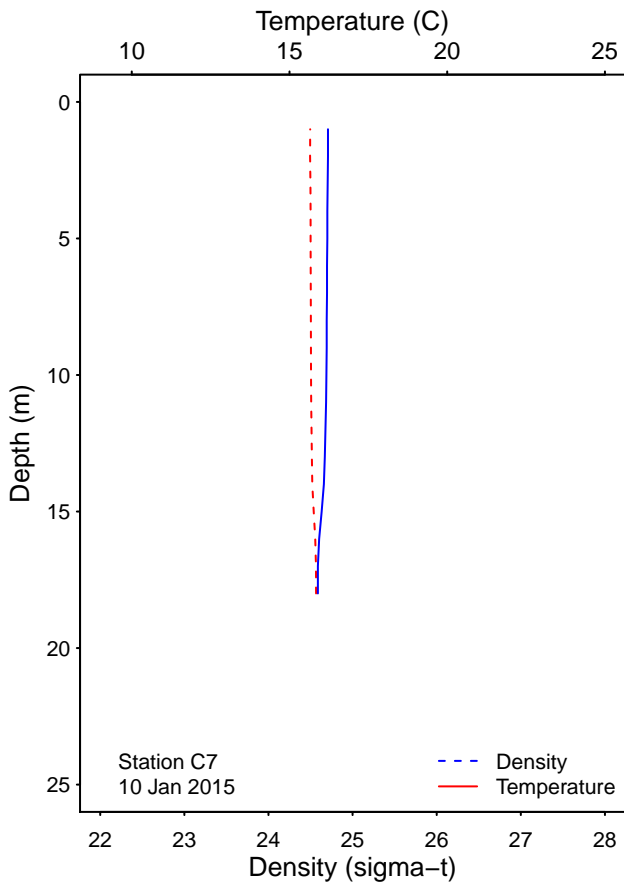
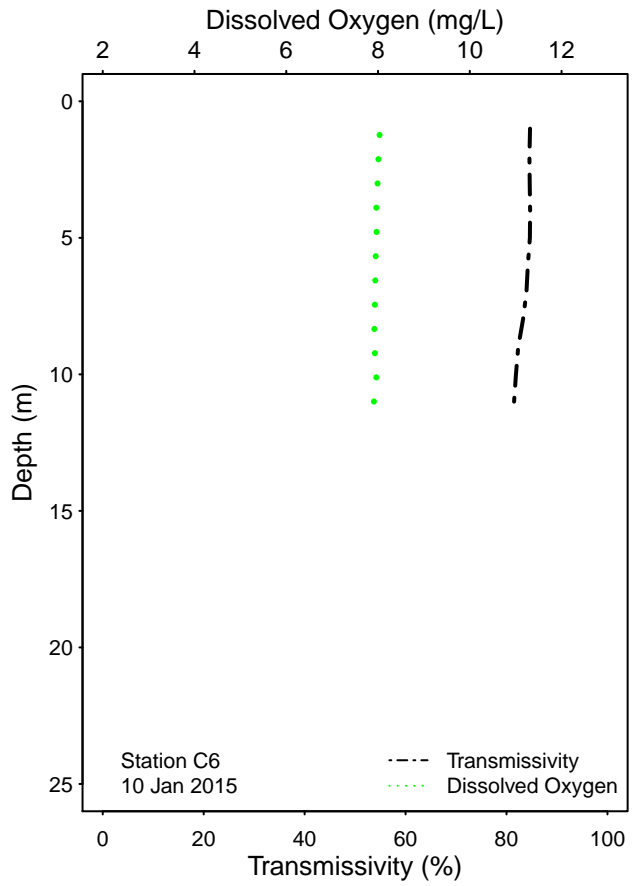
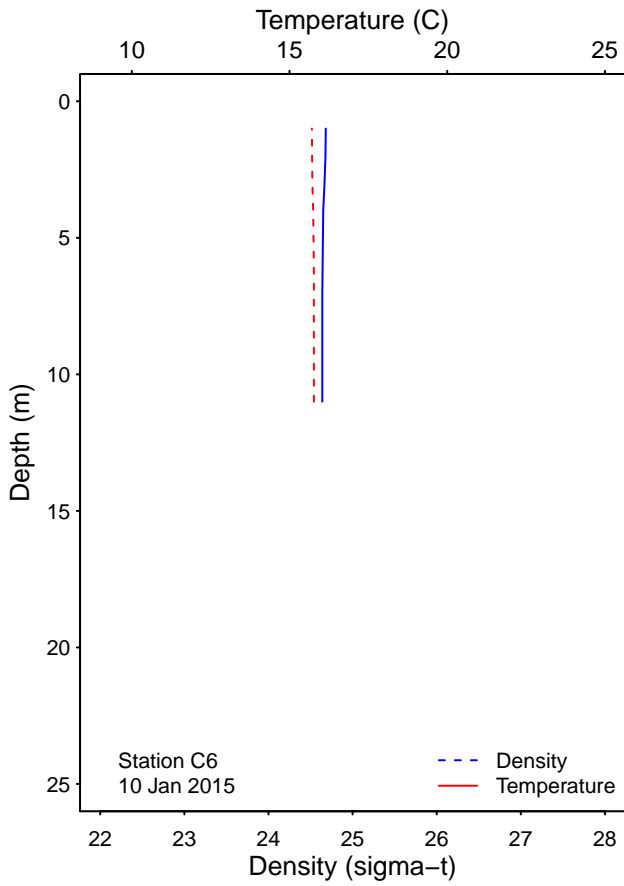


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

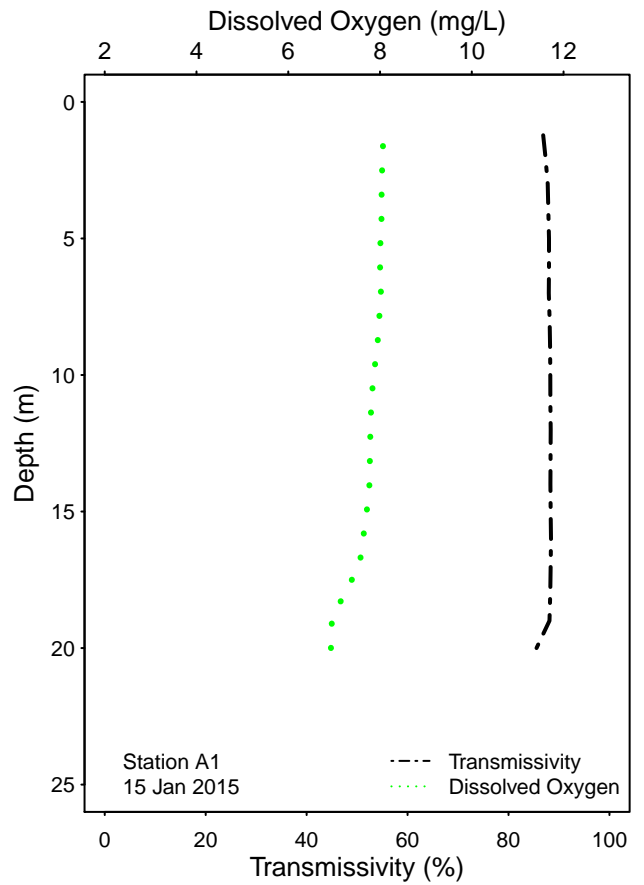
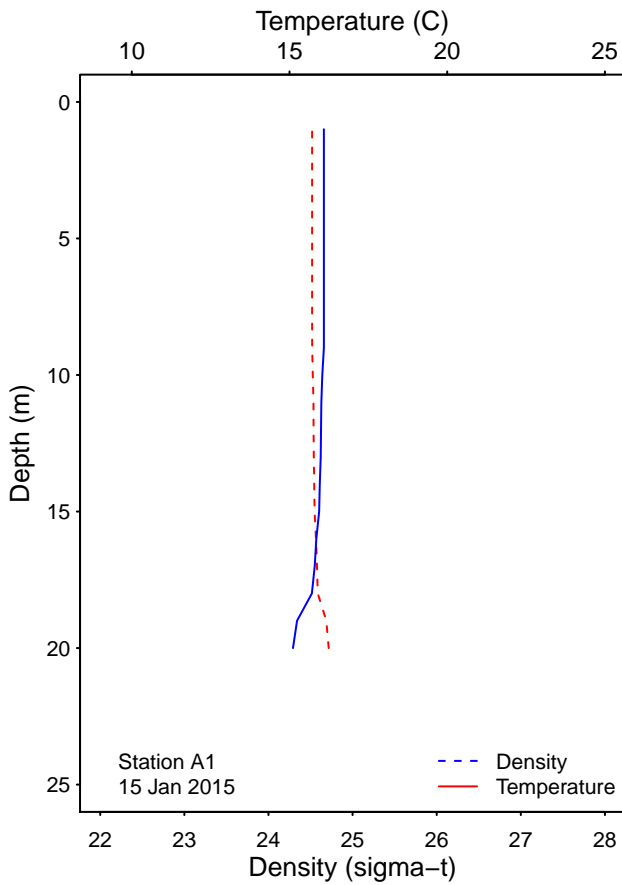
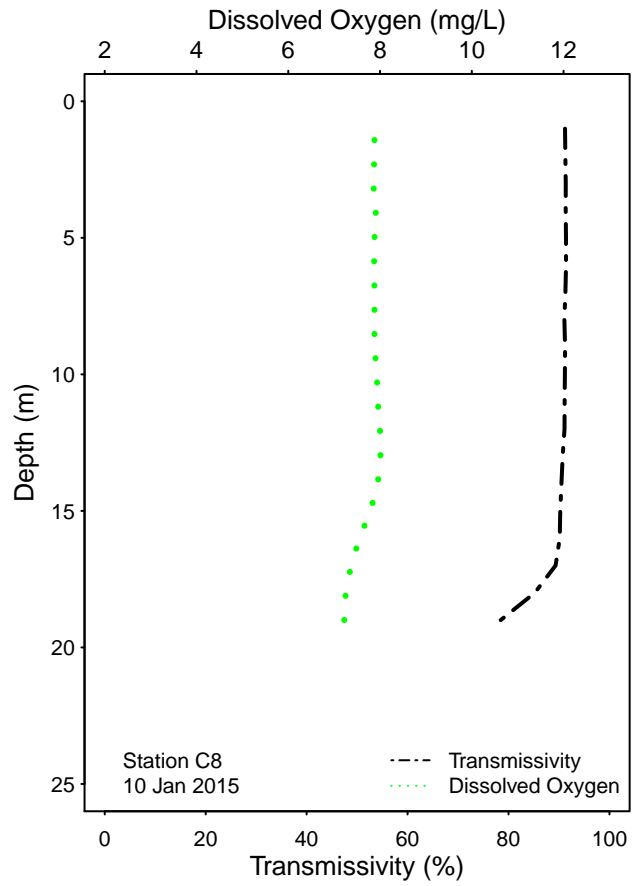
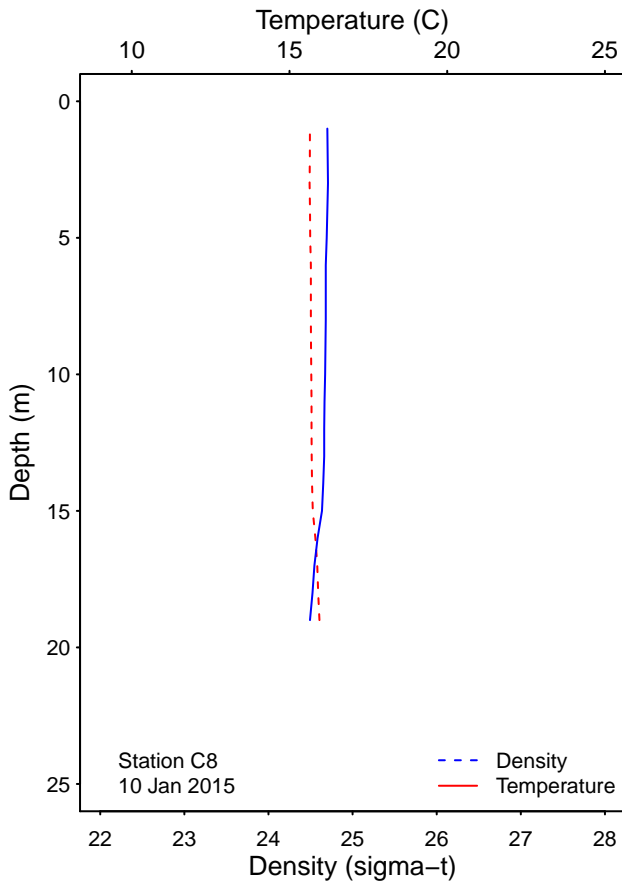


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

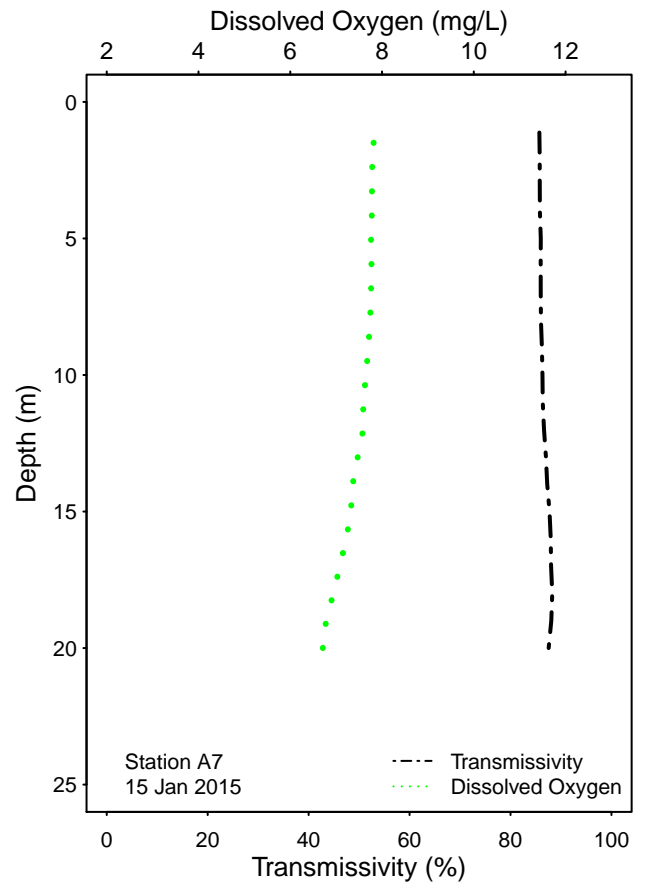
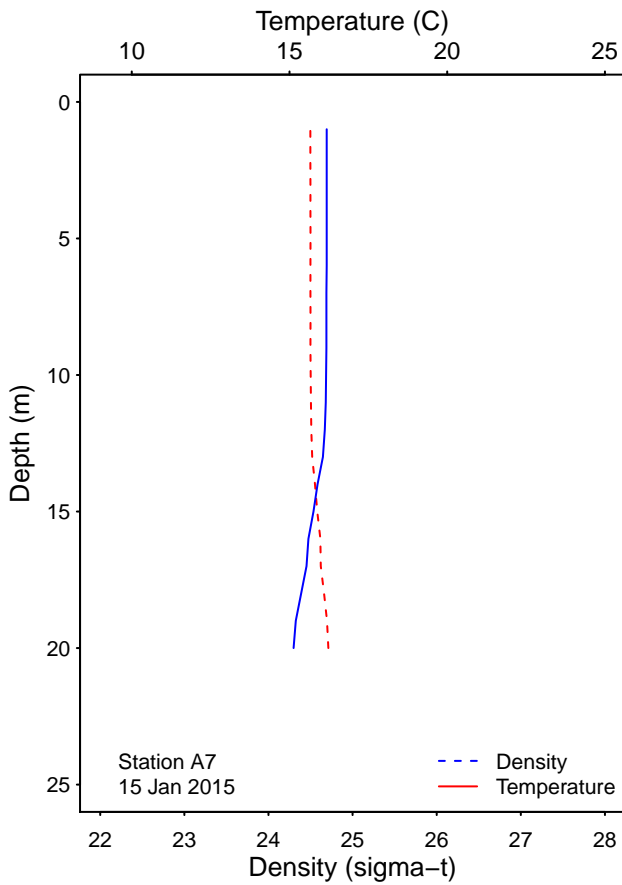
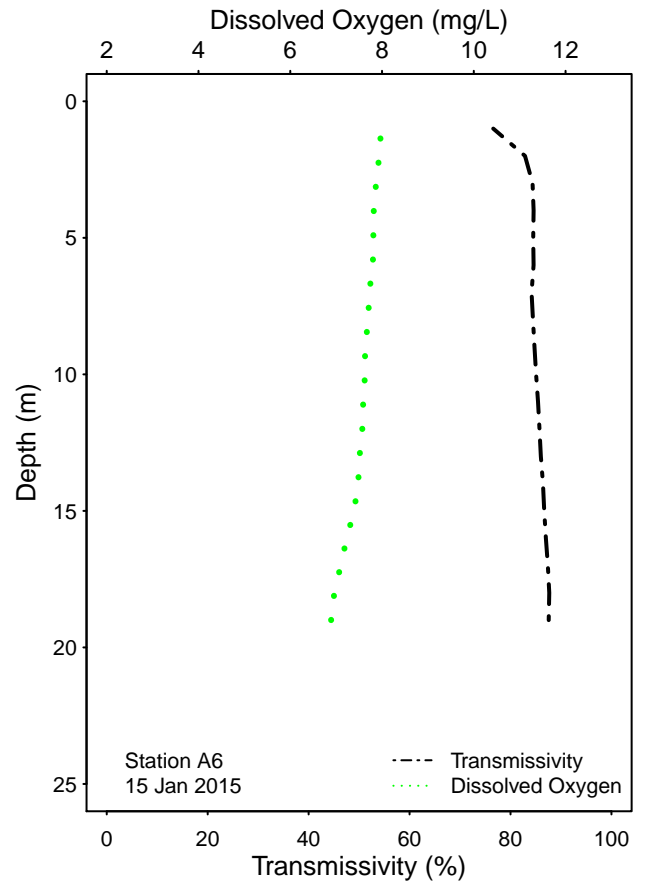
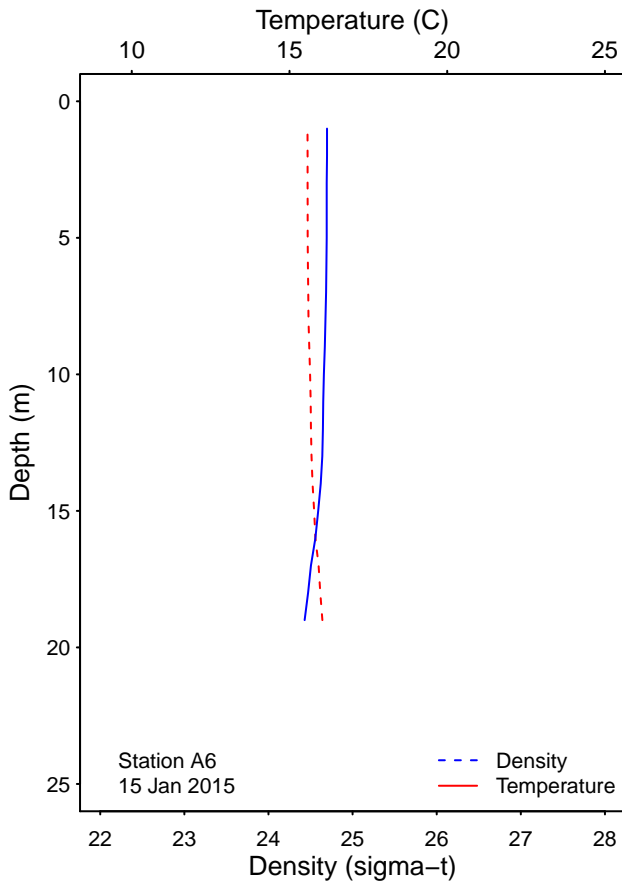


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

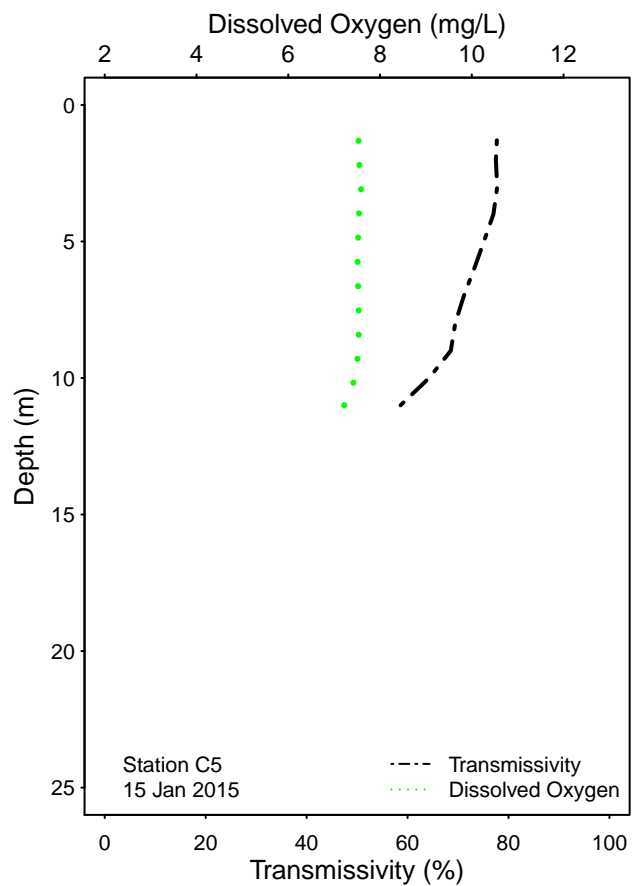
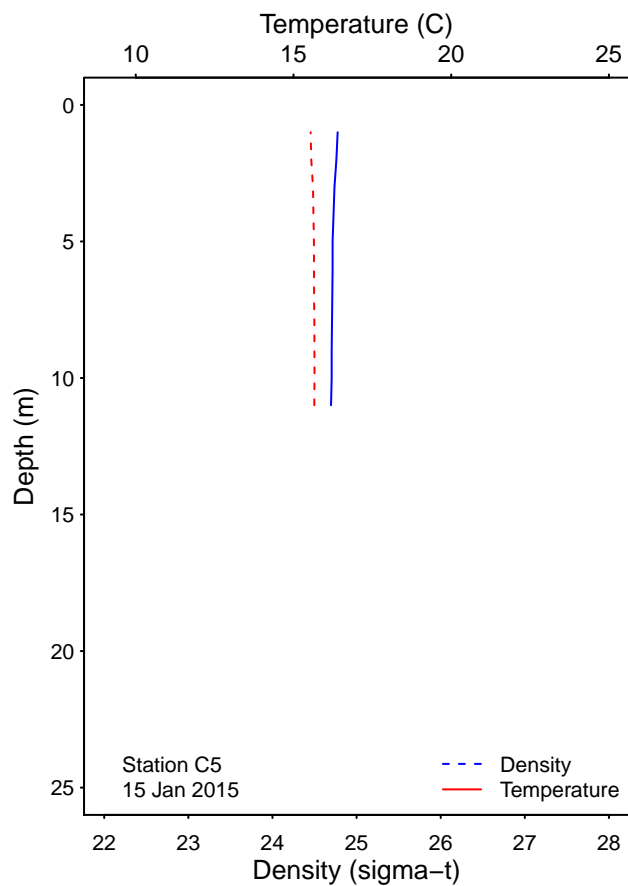
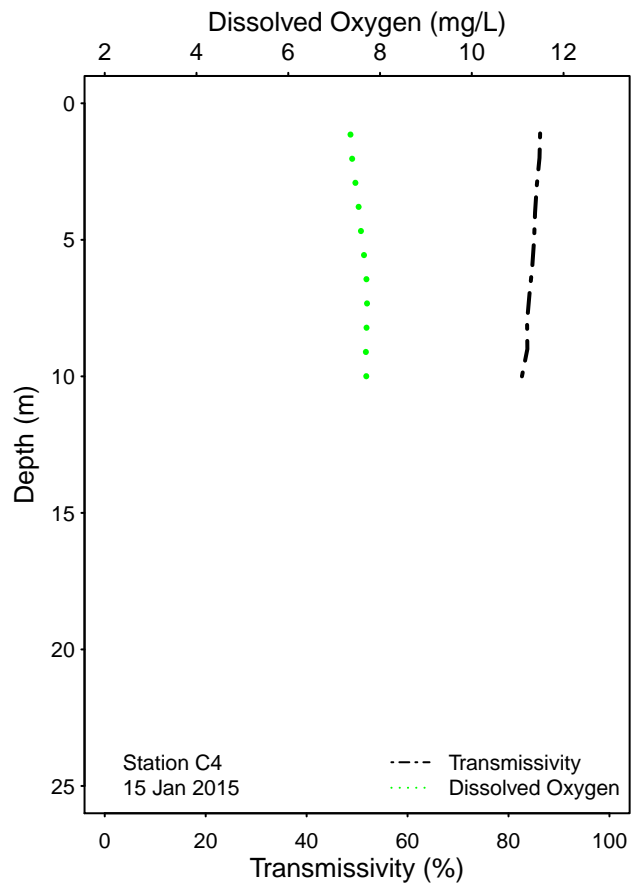
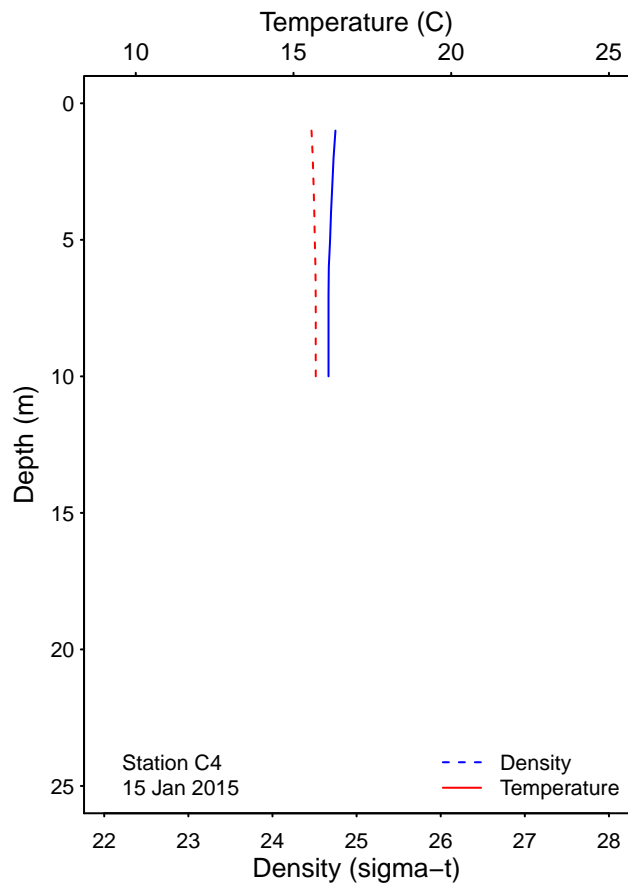


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

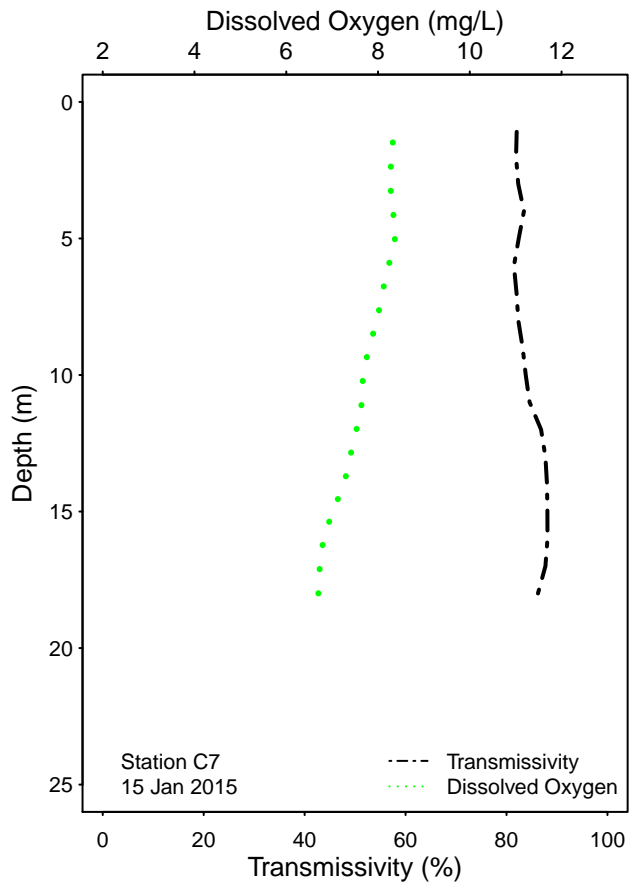
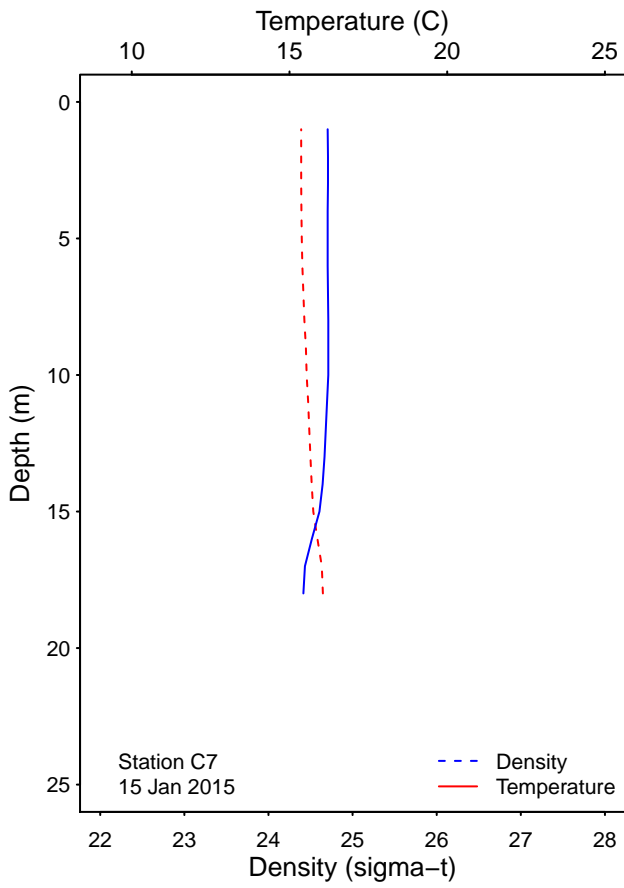
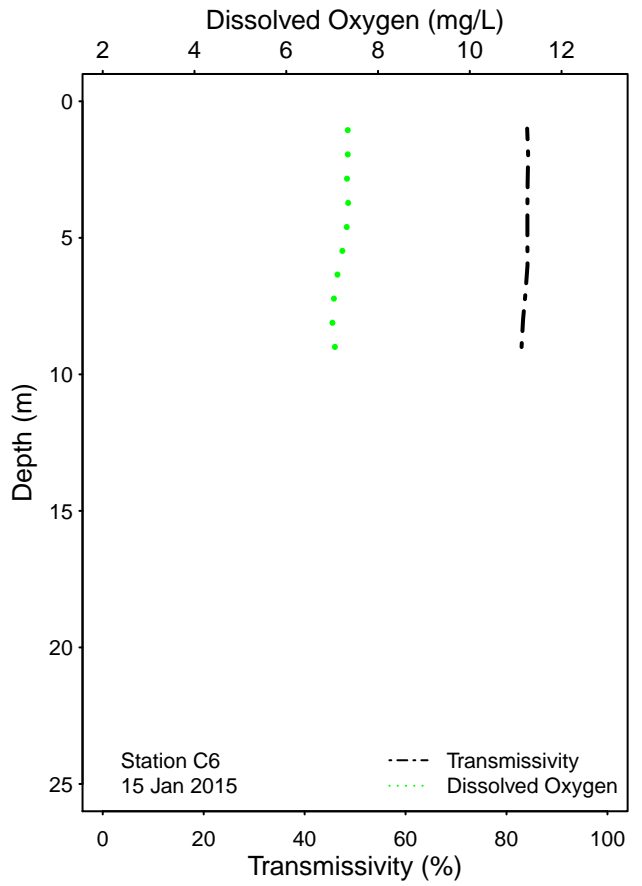
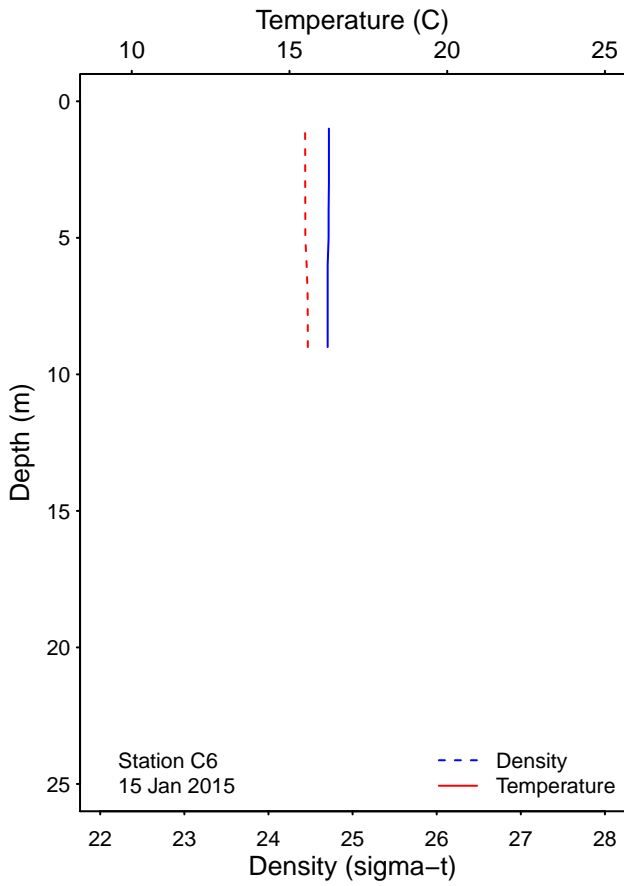


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

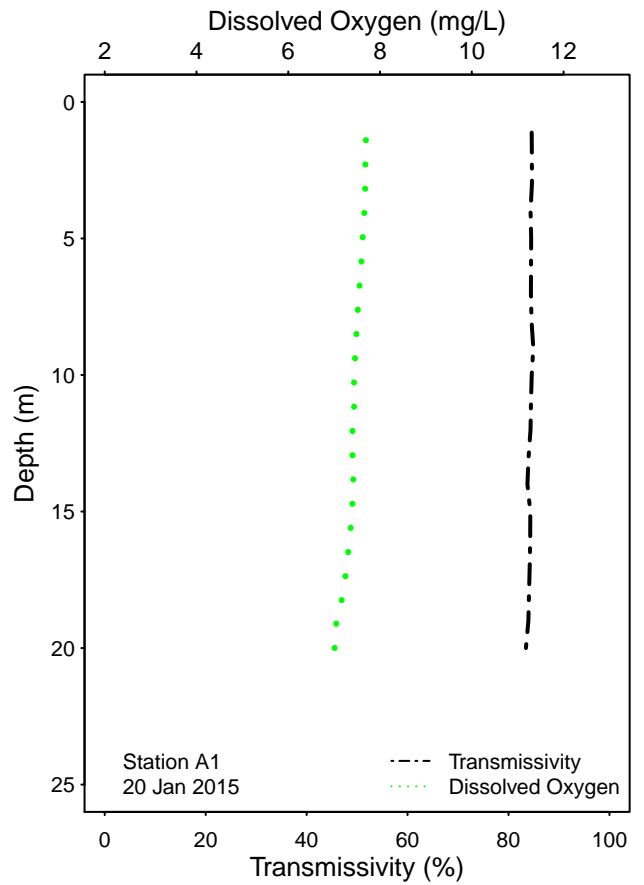
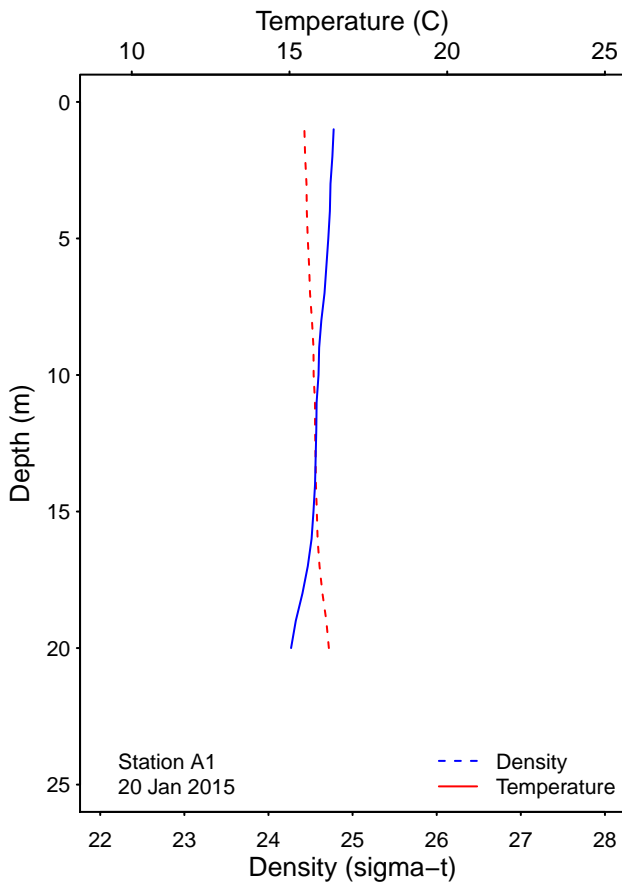
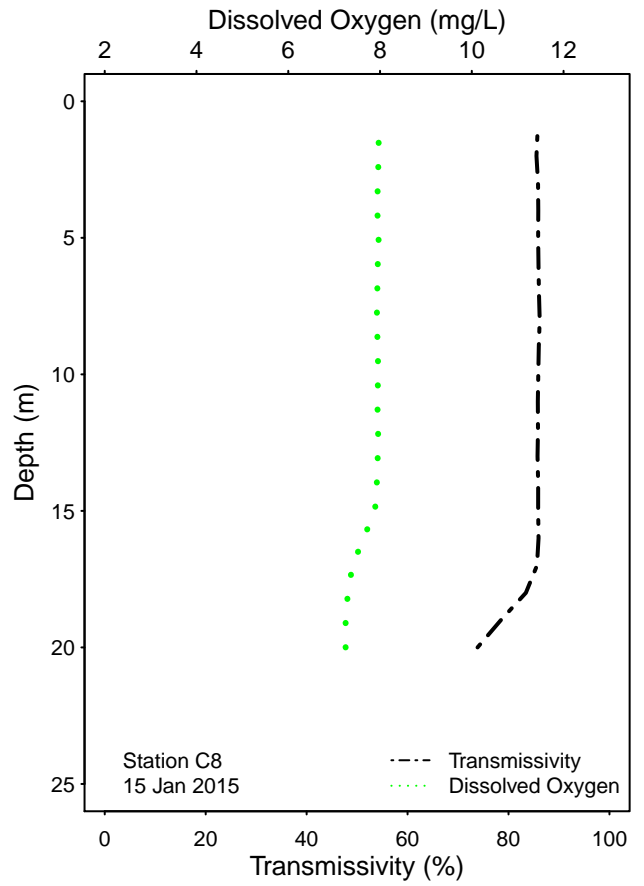
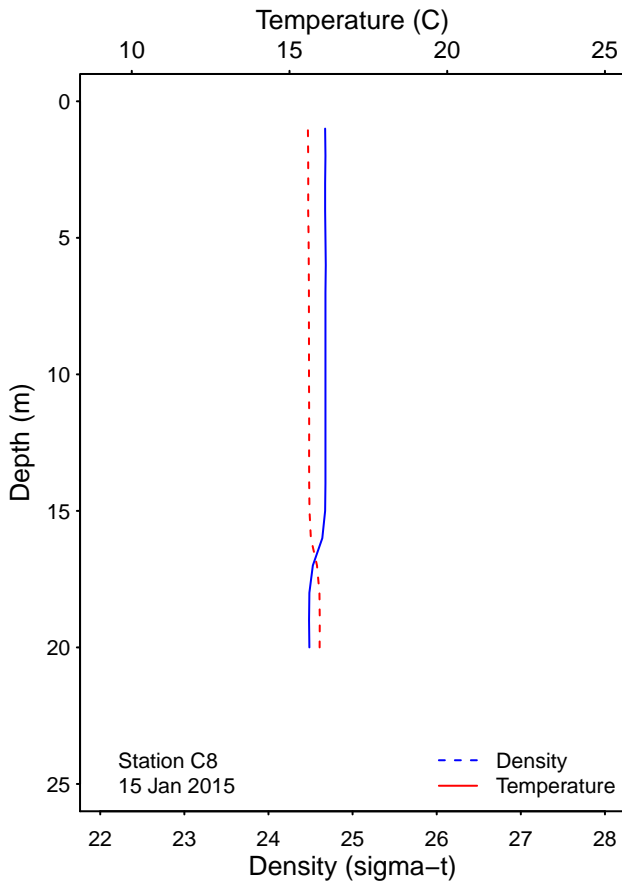


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

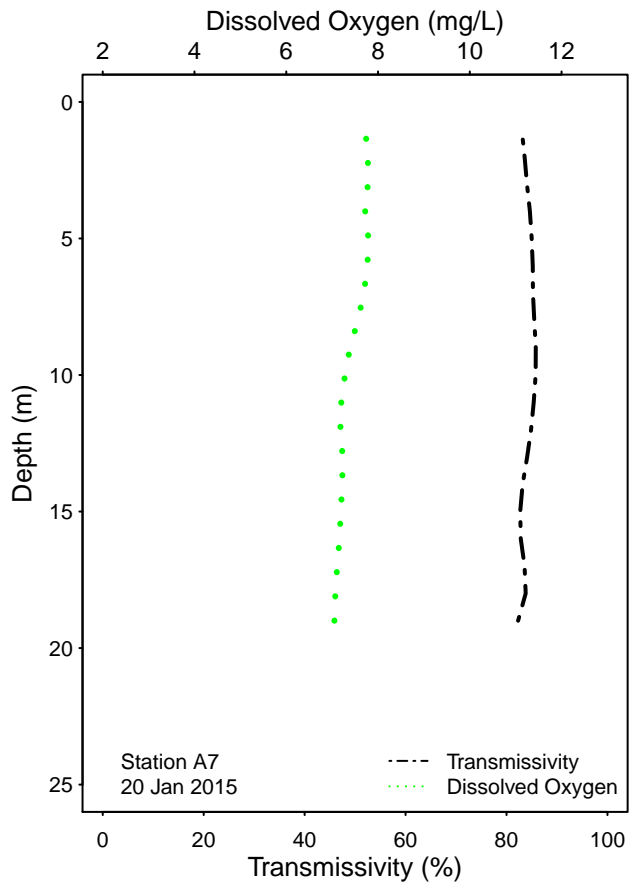
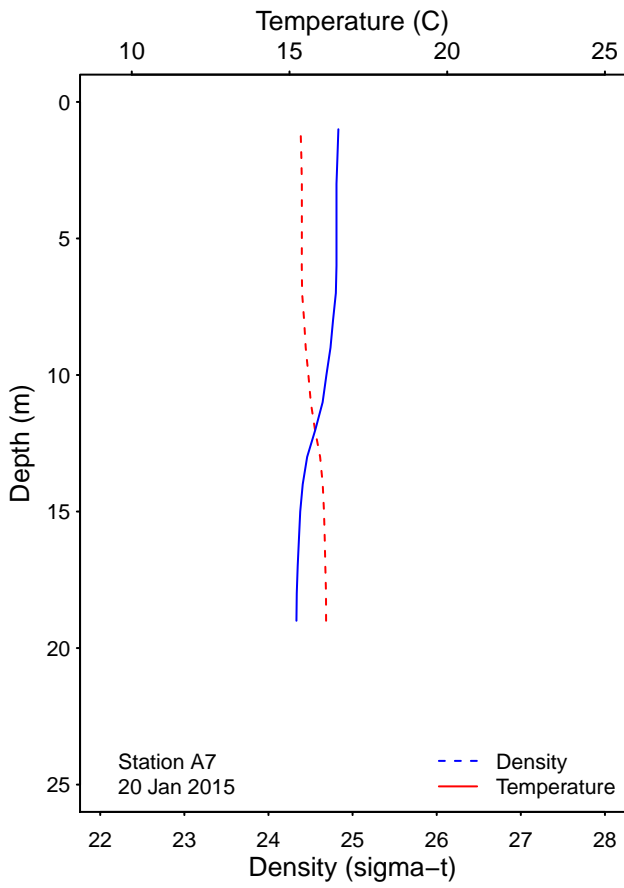
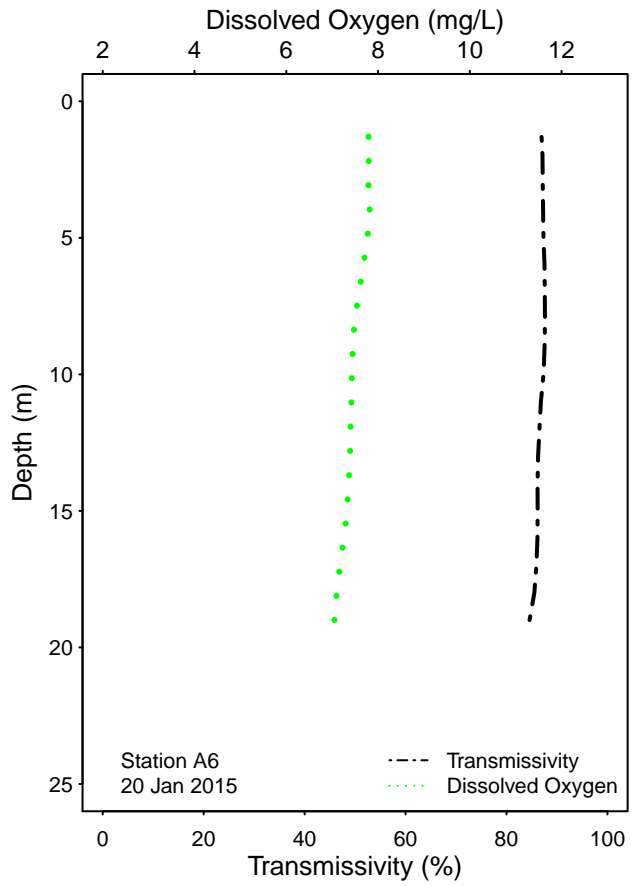
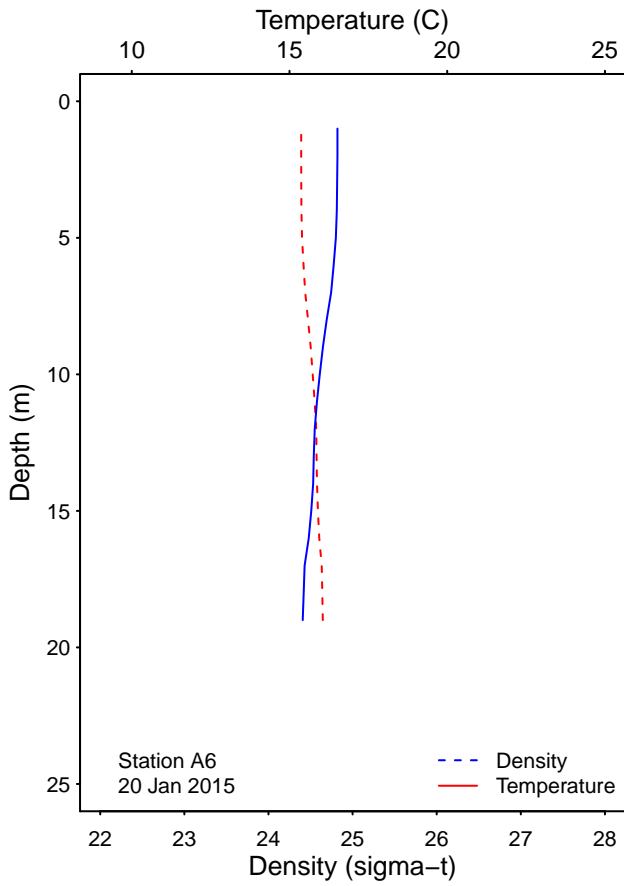


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

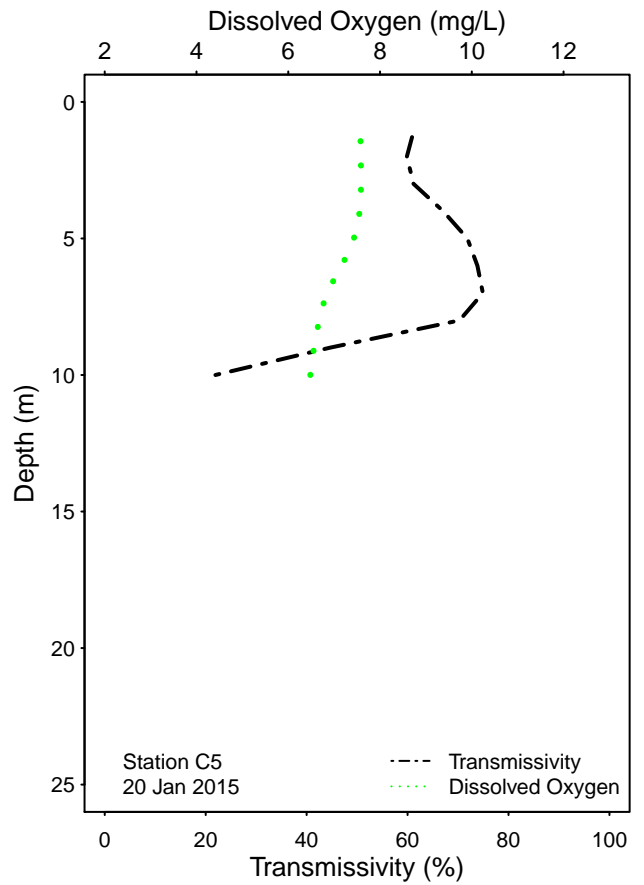
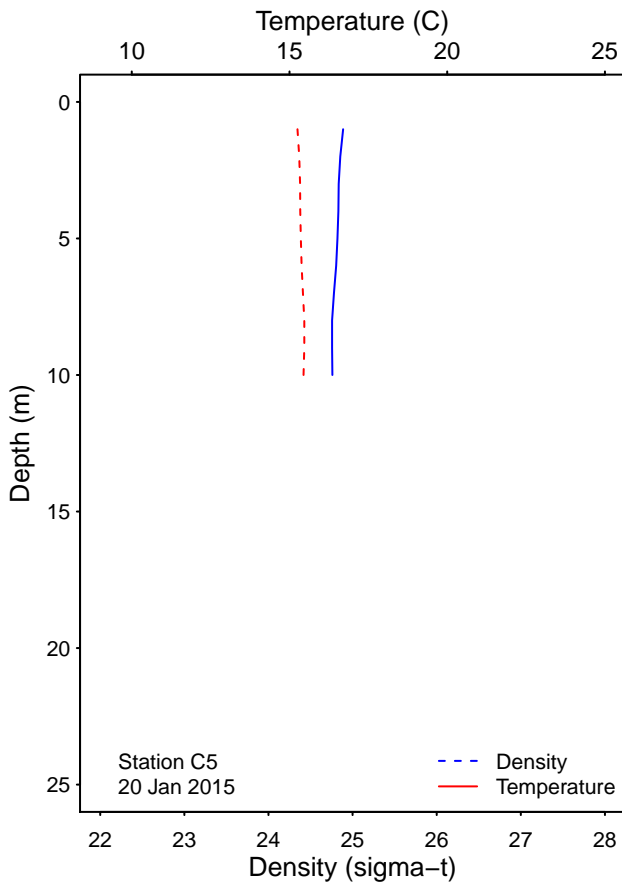
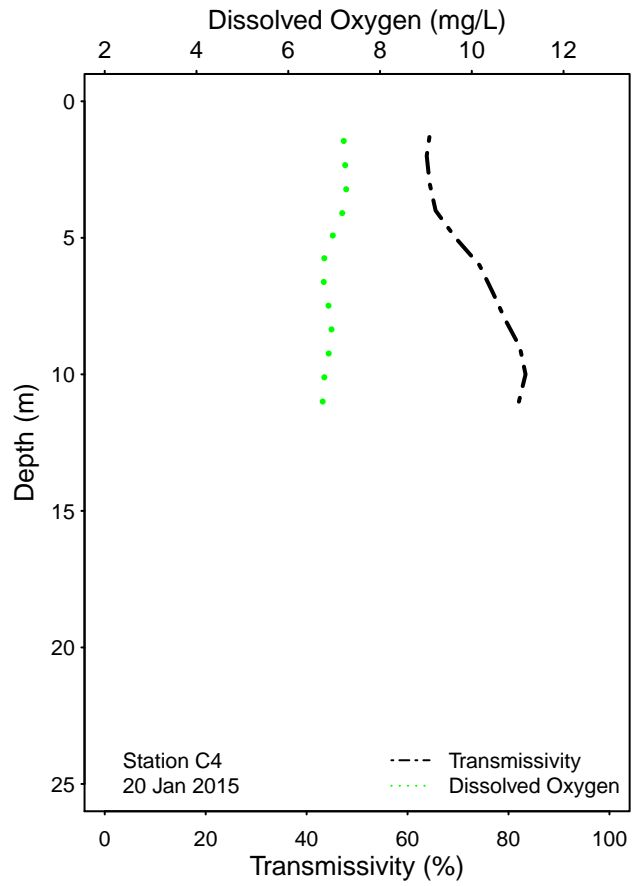
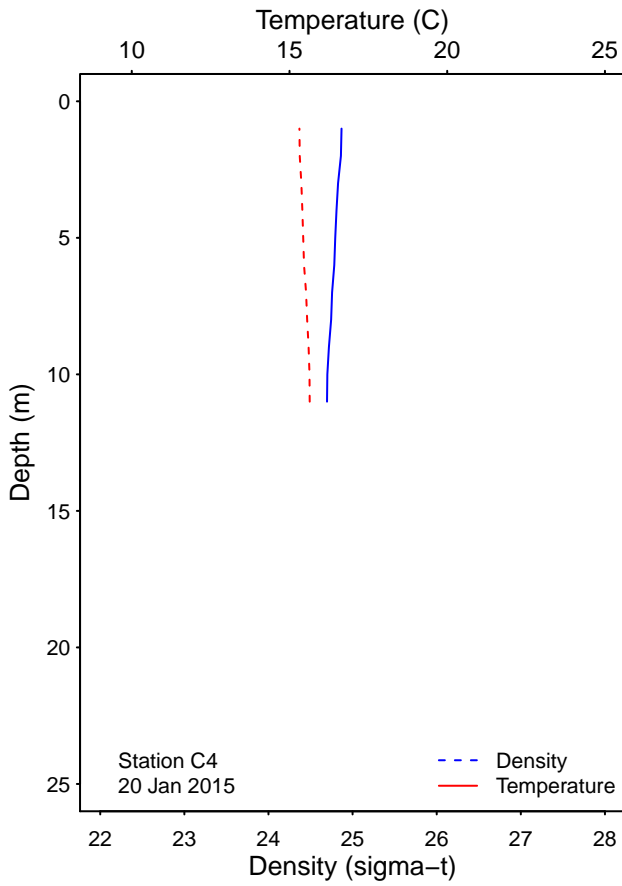


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

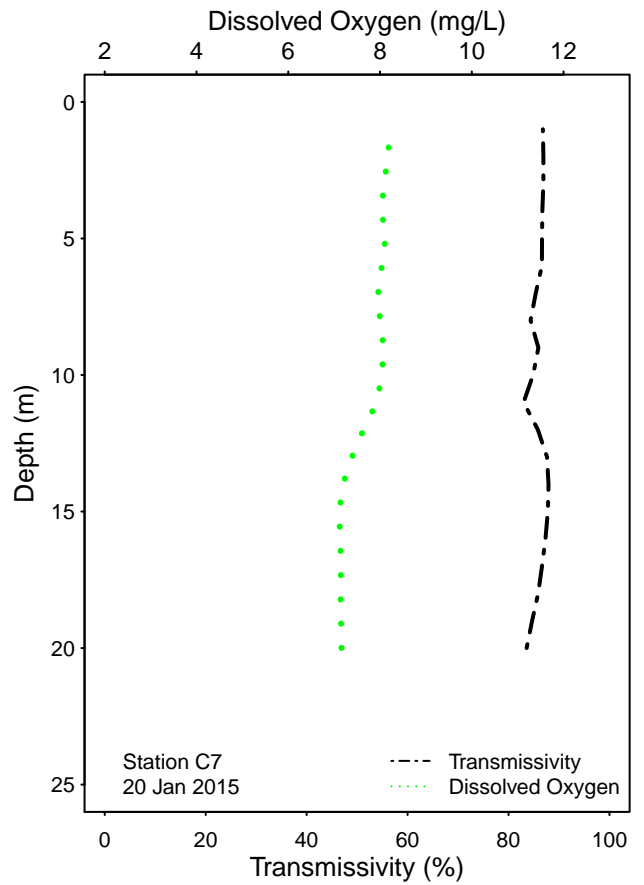
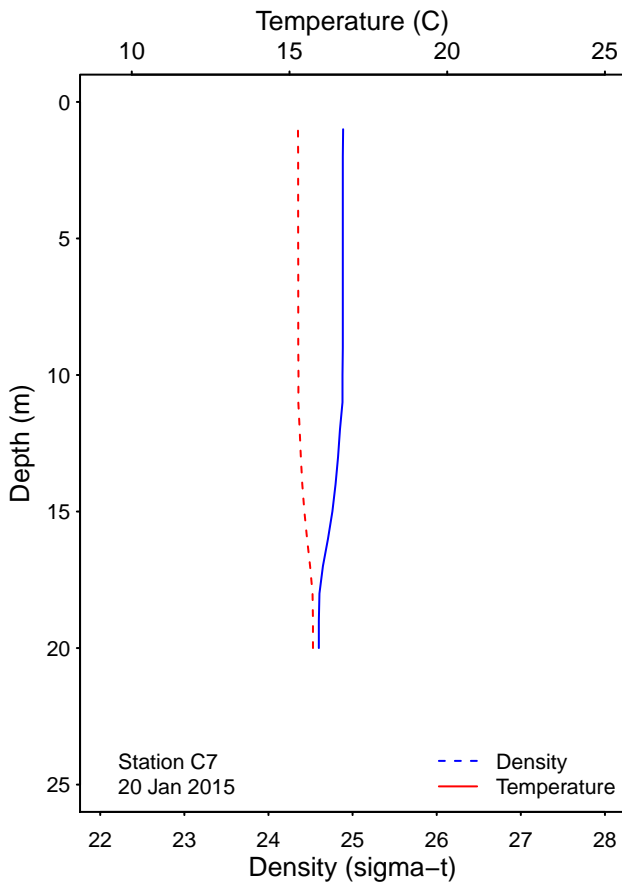
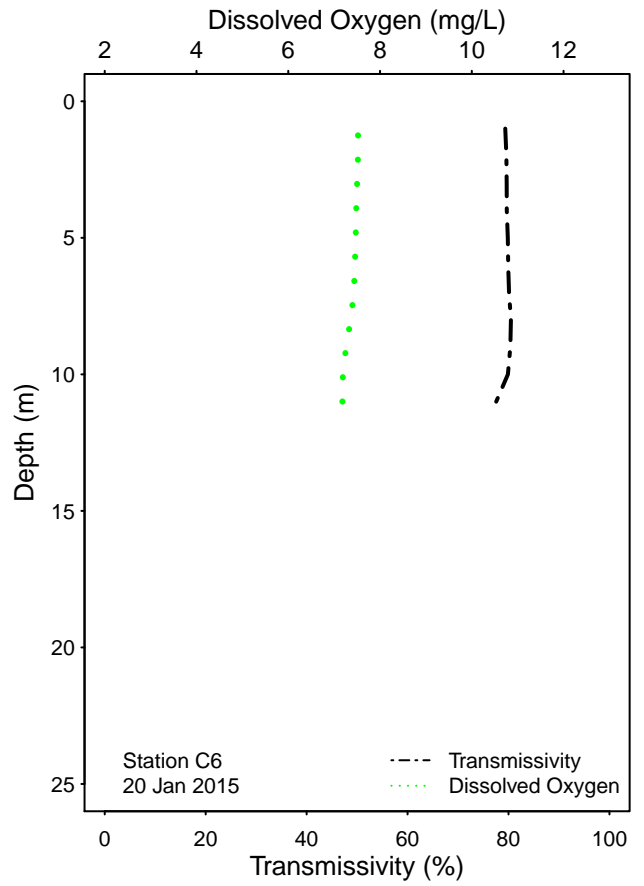
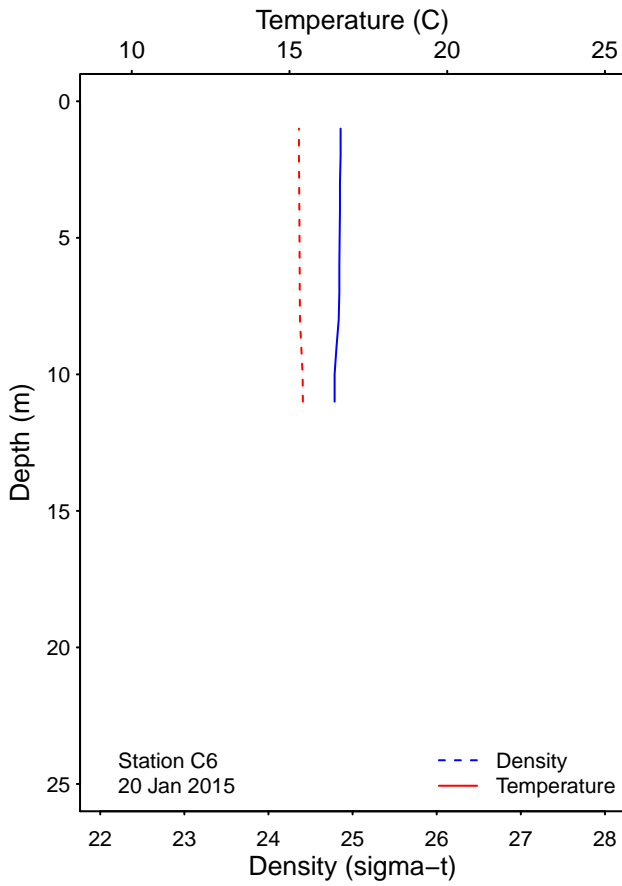


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

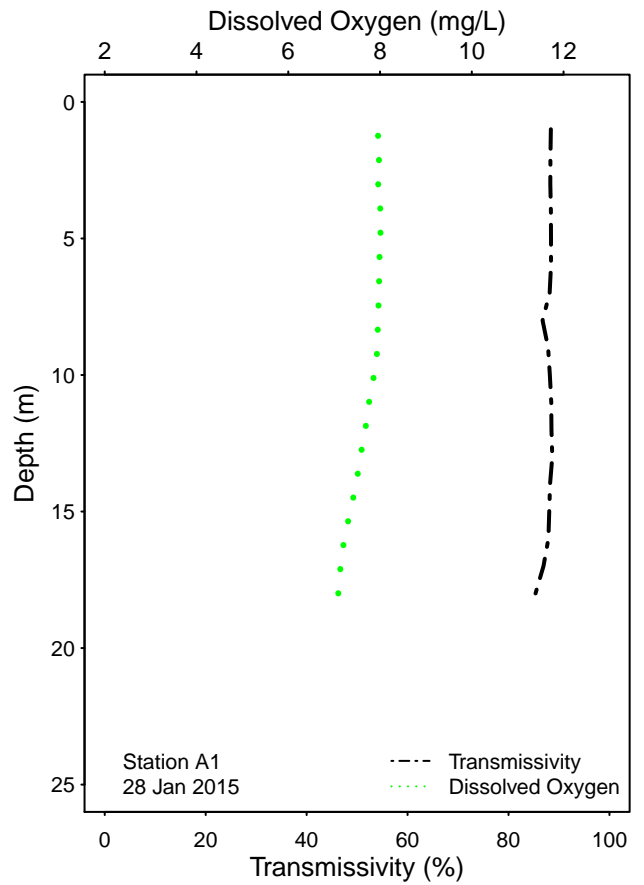
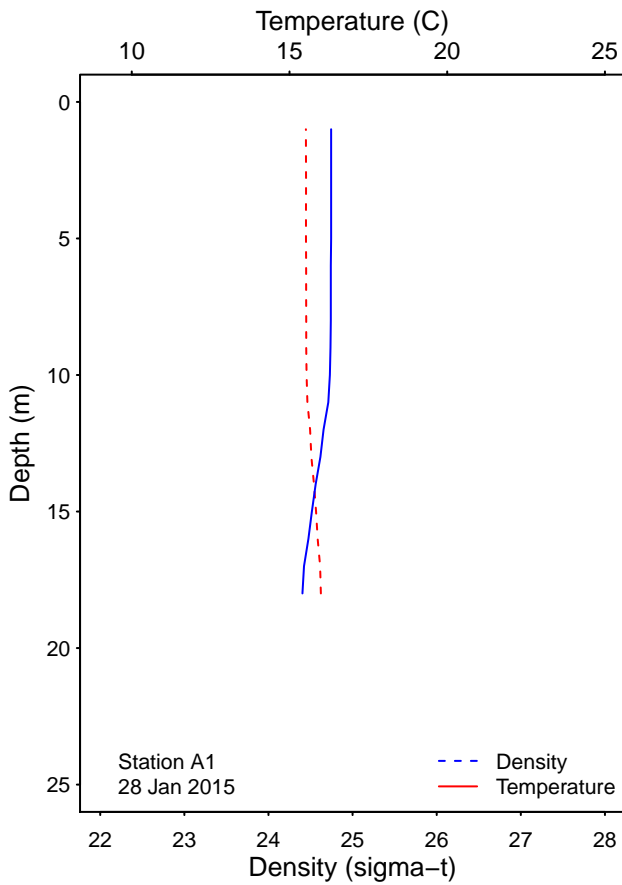
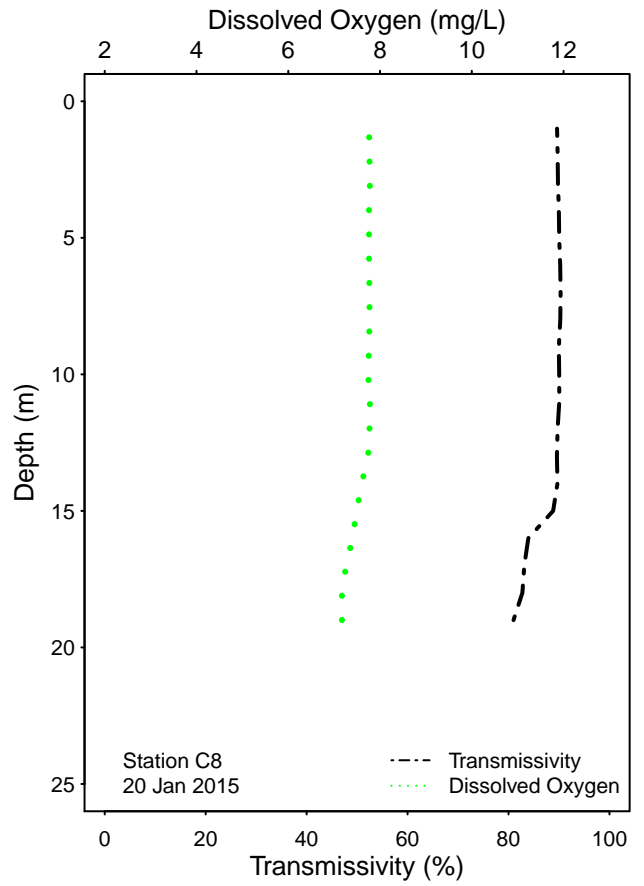
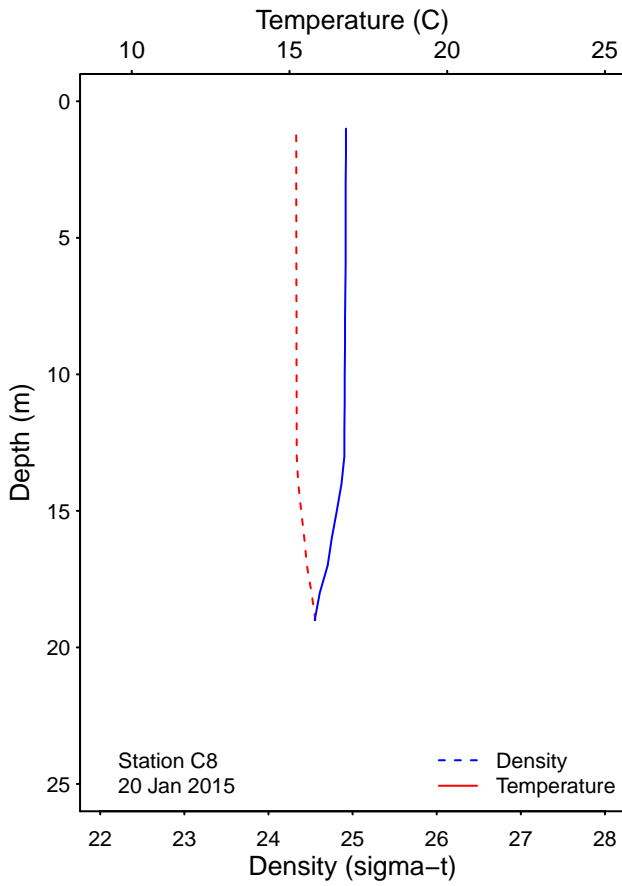


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

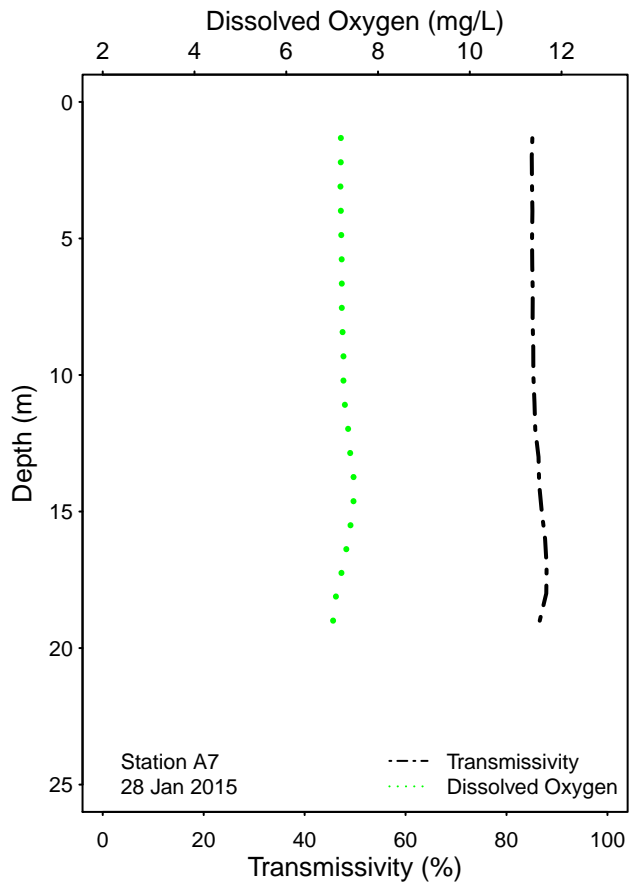
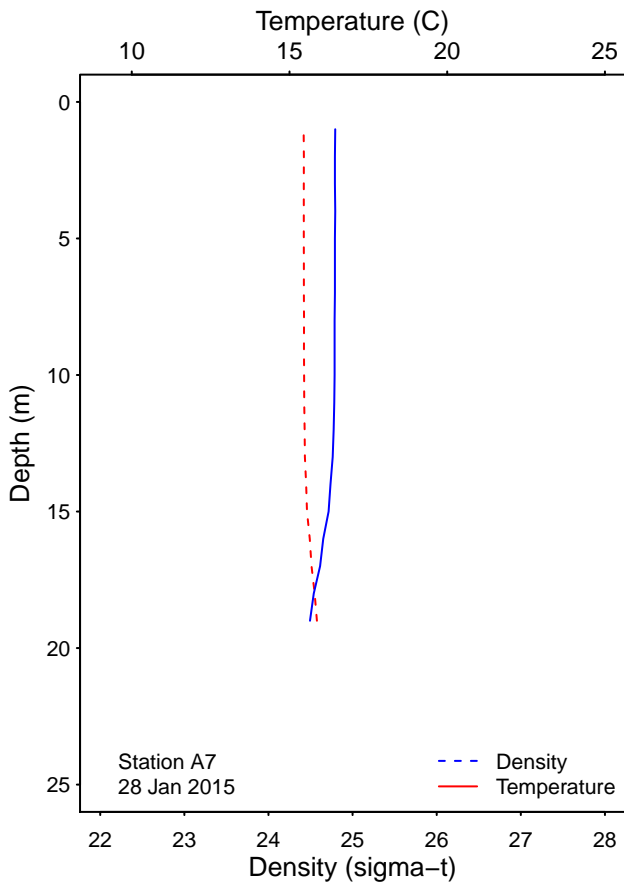
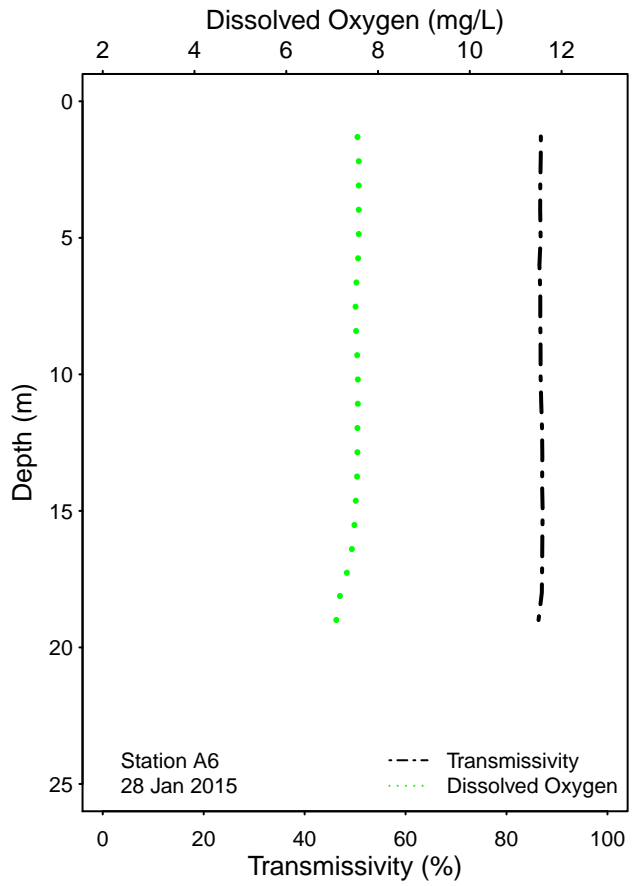
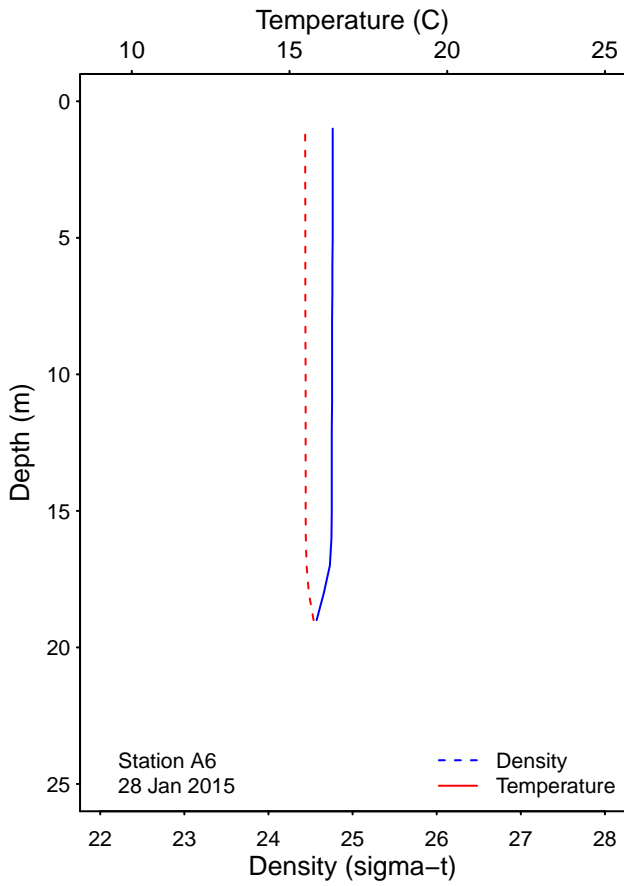


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

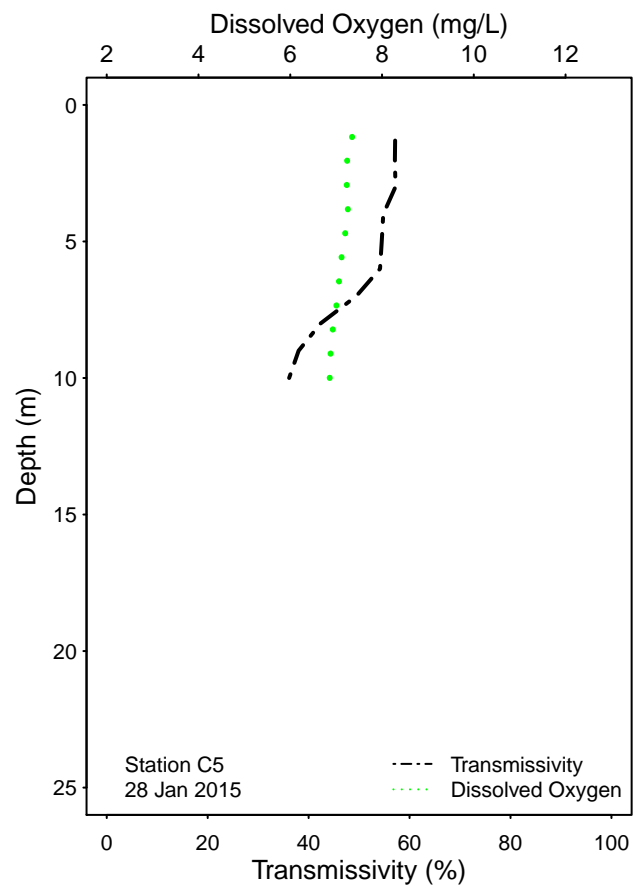
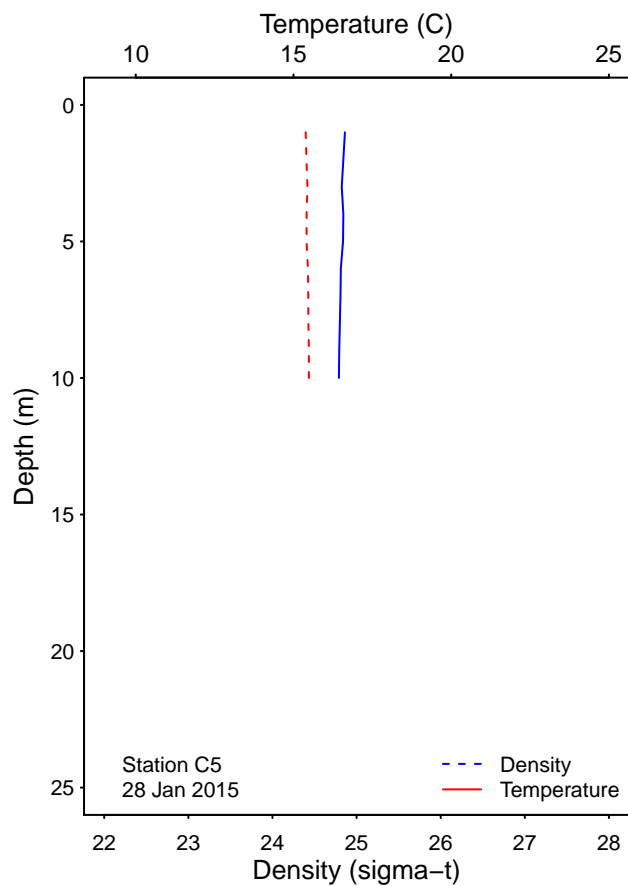
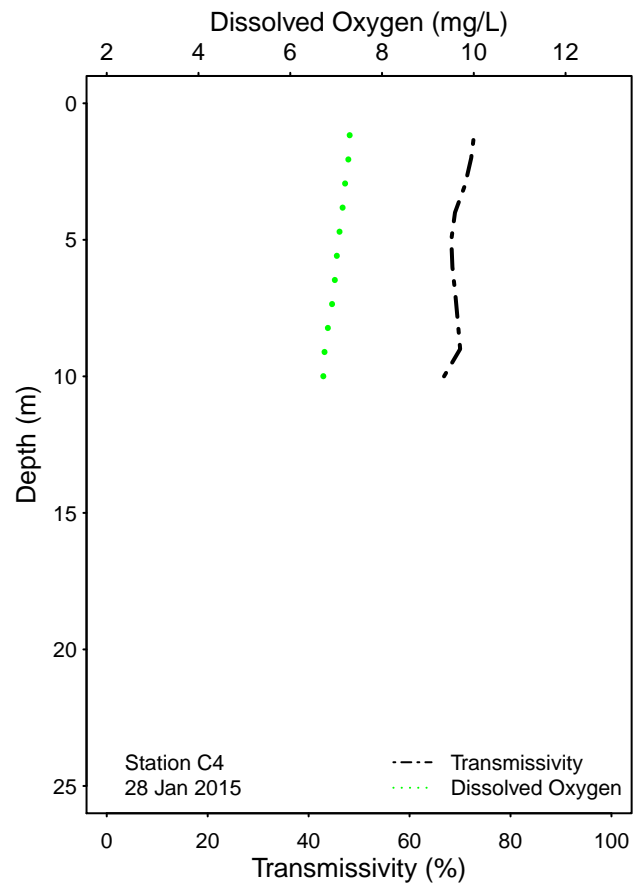
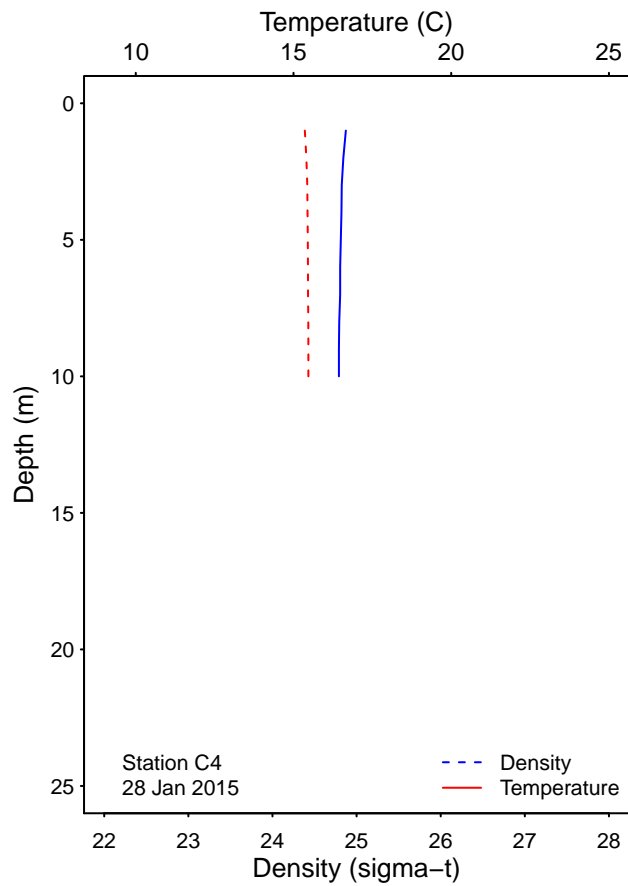


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

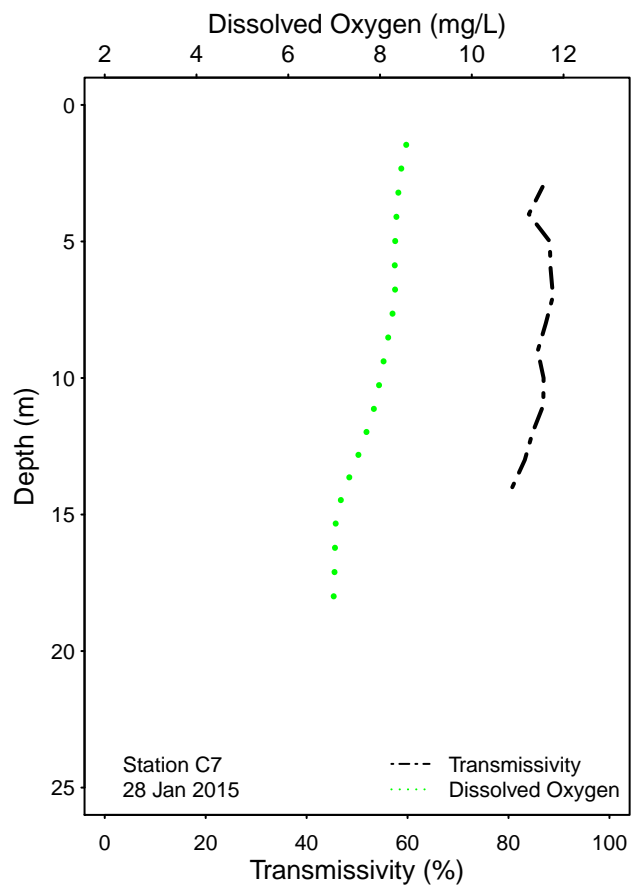
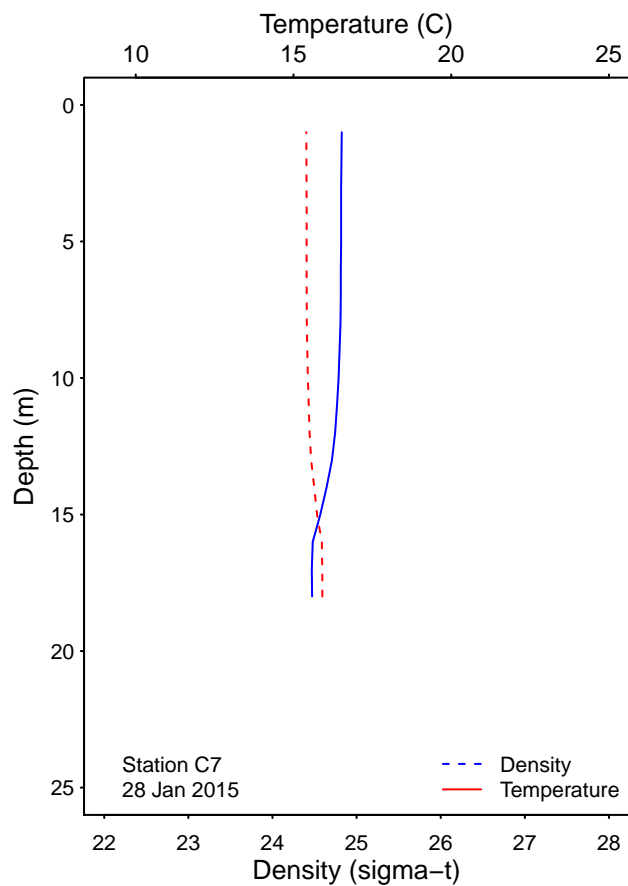
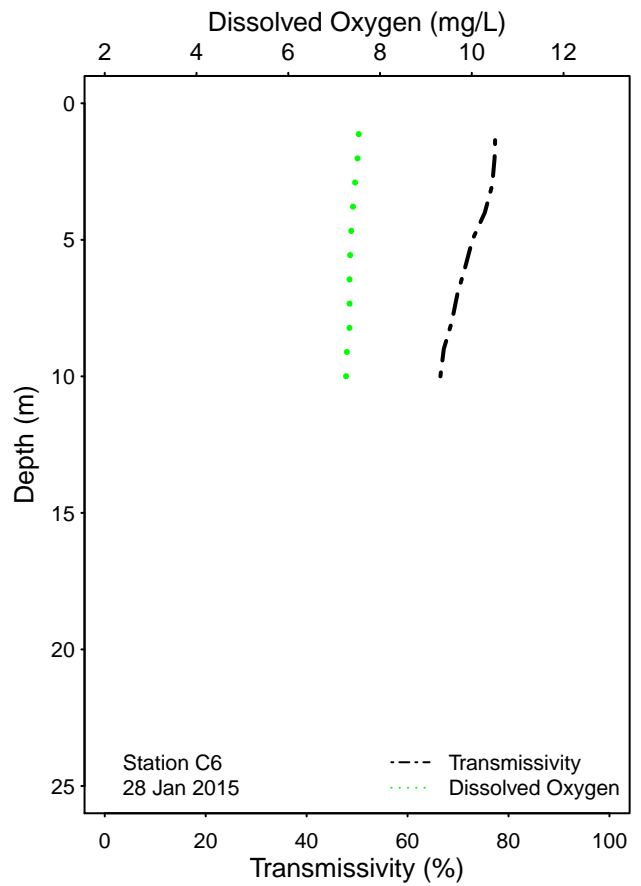
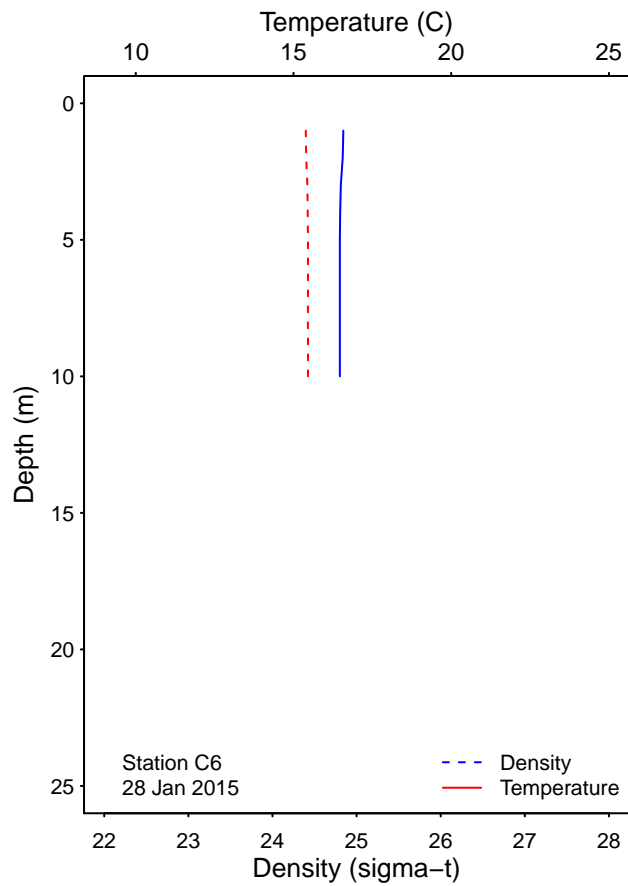


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

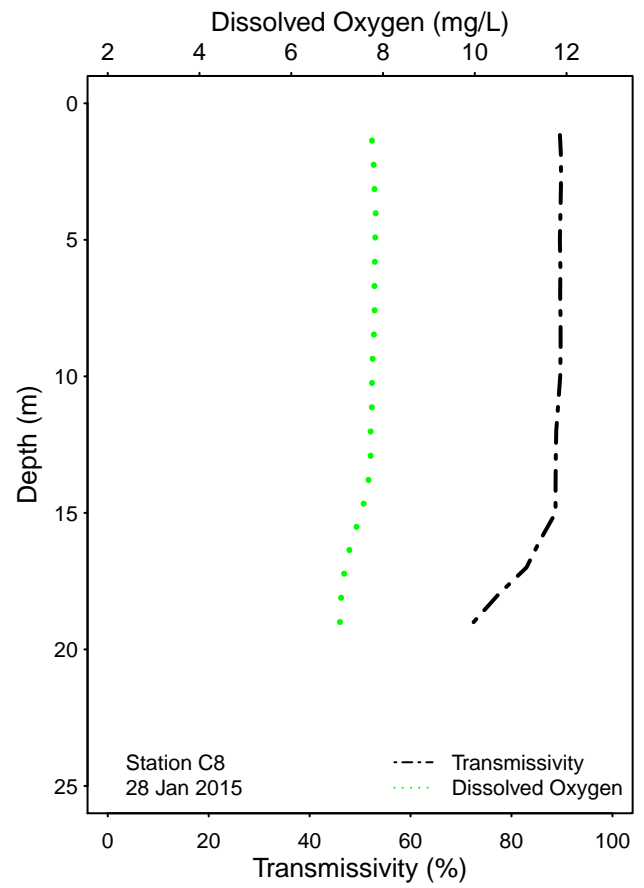
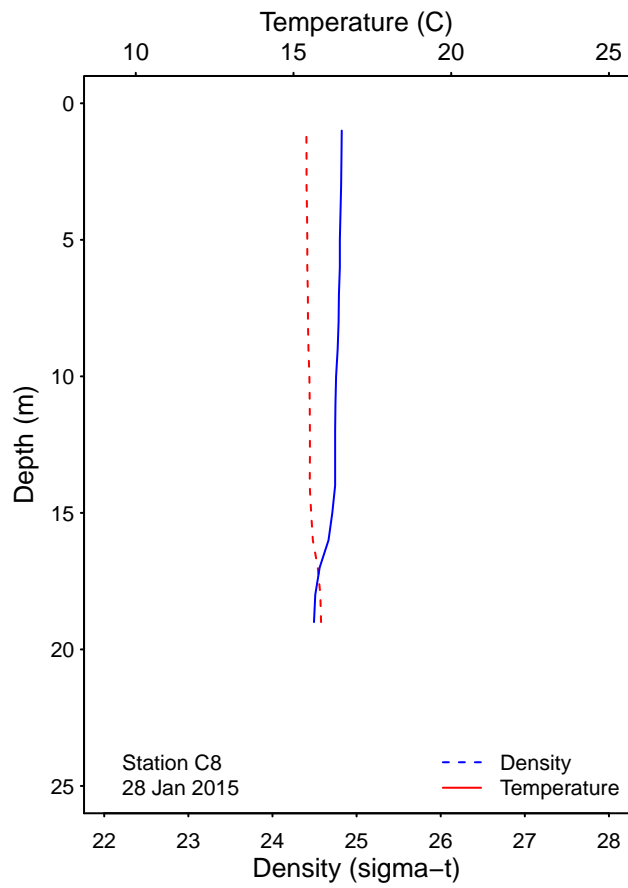


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

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APPENDIX A

Quality Assurance

Table A.1

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

Station	Date	Depth	Analyst	Procedure	Total	Fecal	Entero
A7	05 Jan 2015	18	SR	LAB DUPLICATE	<2	ns	<2
A7	05 Jan 2015	18	ZV	LAB DUPLICATE	ns	<2	ns
A7	10 Jan 2015	18	LMA	LAB DUPLICATE	<2	<2	<2
A7	15 Jan 2015	18	SR	LAB DUPLICATE	22e	4e	<2
A7	20 Jan 2015	18	JLT	LAB DUPLICATE	2e	<2	<2
A7	28 Jan 2015	18	ZV	LAB DUPLICATE	2e	<2	<2
C7	05 Jan 2015	18	SR	LAB DUPLICATE	<2	ns	<2
C7	05 Jan 2015	18	ZV	LAB DUPLICATE	ns	<2	ns
C7	10 Jan 2015	18	LMA	LAB DUPLICATE	<2	<2	<2
C7	15 Jan 2015	18	SR	LAB DUPLICATE	6e	<2	<2
C7	20 Jan 2015	18	JLT	LAB DUPLICATE	<2	2e	<2
C7	28 Jan 2015	18	ZV	LAB DUPLICATE	<2	<2	2e
C8	05 Jan 2015	12	SR	LAB DUPLICATE	<2	ns	<2
C8	05 Jan 2015	12	ZV	LAB DUPLICATE	ns	<2	ns
C8	10 Jan 2015	12	LMA	LAB DUPLICATE	<2	<2	<2
C8	15 Jan 2015	12	SR	LAB DUPLICATE	<2	<2	<2
C8	20 Jan 2015	12	JLT	LAB DUPLICATE	<2	<2	<2
C8	28 Jan 2015	12	ZV	LAB DUPLICATE	2e	<2	2e
D8	06 Jan 2015		AR	FIELD DUPLICATE	<200	10e	24e
D8	06 Jan 2015		AR	LAB DUPLICATE	<200	4e	10e
D8	12 Jan 2015		AR	FIELD DUPLICATE	200e	100e	58
D8	12 Jan 2015		AR	LAB DUPLICATE	200e	160e	86
D8	18 Jan 2015		SR	FIELD DUPLICATE	20e	6e	2e
D8	18 Jan 2015		SR	LAB DUPLICATE	40e	6e	2e
D8	24 Jan 2015		LMA	FIELD DUPLICATE	<20	6e	<2
D8	24 Jan 2015		LMA	LAB DUPLICATE	<20	2e	6e
D8	30 Jan 2015		ZV	FIELD DUPLICATE	20e	10e	4e
D8	30 Jan 2015		ZV	LAB DUPLICATE	<20	6e	10e

ns = not sampled

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