SD Public Utilities

MONTHLY RECEIVING WATERS MONITORING REPORT FOR THE POINT LOMA OCEAN OUTFALL

POINT LOMA METROPOLITAN WASTEWATER TREATMENT PLANT

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

JANUARY 2017

Environmental Monitoring and Technical Services
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CERTIFIED
Public Utilities Department
Continual Improvement, Prevention of Pollution, Regulatory Compliance
ISO 14001

The City of
SAN DIEGO
Public Utilities Department
Environmental Monitoring & Technical Services Division

February 28, 2017

Mr. David W. Gibson, Executive Officer
California Regional Water Quality Control Board
San Diego Region
2375 Northside Drive, Suite 100
San Diego, CA 92108

Attention: POTW Compliance Unit

Dear Mr. Gibson:

Enclosed is the January 2017 Monthly Receiving Waters Monitoring Report for the Point Loma Ocean Outfall, Point Loma Wastewater Treatment Plant as required per Order No. R9-2009-0001, NPDES Permit No. CA0107409.

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

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

Sincerely,

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

TDS/asb

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

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INTRODUCTION

Monthly reports of water quality and ocean conditions for the San Diego coastal region surrounding the Point Loma Ocean Outfall are submitted to the San Diego Regional Water Quality Control Board and U.S. EPA Region 9 in accordance with Order No. R9-2009-0001, NPDES Permit No. CA0107409 for the Point Loma Wastewater Treatment Plant (PLWTP), Point Loma Ocean Outfall (PLOO). This report includes receiving waters monitoring data collected from all shore, kelp and offshore stations specified in the above order. Data for influent and effluent monitoring activities for the PLWTP are presented in separate reports.

MATERIALS AND METHODS

Shore Stations

Water quality conditions are monitored at eight shore stations (D4, D5, D7–D12). These stations range from the tip of the Point Loma Peninsula to west of Mission Bay (see station locations map). Due to site inaccessibility, station D8 has been temporarily abandoned and replaced with station D8-A. This new location will be sampled until access is restored at the original location. Seawater samples are collected from the surf zone at each station five times during the month. These samples are subsequently transported to the City's Marine Microbiology Laboratory and analyzed for the presence of several types of fecal indicator bacteria (FIBs), including total coliforms, fecal coliforms, and *Enterococcus*. Visual observations of water color and clarity, surf height, human or animal activity, and weather conditions are also recorded at the time of sample collection. Wind speed and direction are measured using a hand-held anemometer with a compass.

Kelp Bed Stations

The eight kelp stations are sampled five times during the month according to permit specifications in order to monitor water quality conditions within the Point Loma kelp forest. These stations include three sites located along the inshore edge of the kelp bed paralleling the 9-m depth contour (i.e., stations C4, C5 and C6), and five sites located near the offshore edge of the kelp bed along the 18-m depth contour (i.e., stations A1, A6, A7, C7 and C8).

Routine weekly monitoring at each of the kelp bed sites consists primarily of collecting seawater samples at discrete depths to determine concentrations of indicator bacteria (i.e., total coliforms, fecal coliforms, and *Enterococcus*). Additional samples for ammonium analysis are collected at these same sites and depths on a quarterly basis in order to correspond to sampling at the offshore stations located within State waters that is typically scheduled during the months of February, May, August and November. Water column profiles of various physical/chemical parameters are also generated during each sampling event, and visual observations of weather and water conditions are recorded at each station.

Seawater samples at the kelp bed stations are primarily collected using a CTD-integrated rosette sampler with Niskin bottles. Aliquots for ammonium and bacteriological analyses are then drawn from these bottles into sterile sample bottles for processing at the City's Toxicology Laboratory (ammonium) and Marine Microbiology Laboratory (bacteria), respectively. Water column profiles of temperature, transmissivity, dissolved oxygen, pH, salinity, density, chlorophyll *a* are generated using a Sea-Bird conductivity, temperature and depth instrument (CTD), which collects these data

at a rate of eight scans per second. These scans are then internally averaged to create water column profiles with data readings at a rate of one per meter. The CTD data are presented in both graphical and tabular form. Additionally, data for depths closest to those where bacteriological samples are collected are extracted from the CTD profiles and presented with the bacteriological data.

Offshore Stations

Offshore water quality sampling is conducted quarterly, typically during the months of February, May, August and November. A total of 36 offshore stations (F01–F36) are sampled during each survey usually over a 3-day period. Three of the stations (F01–F03) are located along the 18-m depth contour, while 11 stations are located along each of the following contours: 60 m (stations F04–F14); 80 m (stations F15–F25); 98 m (stations F26–F36). Of these 36 stations, 15 (F01-F03, F06-F14, F18-F20) are located within State jurisdictional waters (i.e., within 3 nautical miles of shore) and are subject to the California Ocean Plan's compliance standards.

Monitoring at all offshore sites includes measurements of *Entercocccus* bacteria, water temperature, salinity, density, dissolved oxygen, pH, chlorophyll *a*, transmissivity, chromomorphic dissolved organic matter (CDOM), and visual observations of weather and water conditions. Monitoring at sites within State waters also include the collection of discrete grab samples for ammonium analysis (see Table 4.2).

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

Bacteriological Reporting and Quality Assurance

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

Results of the bacteriological analysis of seawater samples collected from each of the shore, kelp bed, and offshore stations located within State waters are assessed relative to the geometric mean and single sample maximum water-contact standards specified in the California Ocean Plan. The seven standards are defined as follows:

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

(1) Total coliform density shall not exceed 1000 CFU/100 mL;

[1]Bordner, R., J. Winter, and P. Scarpino (eds.). (1978). Microbiological Methods for Monitoring the Environment: Water and Wastes, EPA Research and Development, EPA-600/8-78-017. 337 p.

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

Single Sample Maximums:

(1) Total coliform density shall not exceed 10,000 CFU/100 mL;
(2) Fecal coliform density shall not exceed 400 CFU/100 mL;
(3) *Enterococcus* density shall not exceed 104 CFU/100 mL;
(4) Total coliform density shall not exceed 1,000 CFU/100 mL when the fecal coliform/total coliform ratio exceeds 0.1.

Quality controls of bacteriological data include laboratory and field duplicate analyses. Laboratory duplicates are performed on approximately 10% of the water quality samples, while field duplicates are performed six times a month (see Appendix A). Laboratory duplicates represent two aliquots of the original sample that are split in the laboratory and analyzed by the same analyst using identical procedures within the same analytical run. The results of these analyses provide a measure of intra-analyst precision. In contrast, field duplicates represent two separate samples collected at the same time from the same site, which are handled under identical circumstances and treated exactly the same throughout field and lab procedures. The results of these analyses provide a measure of precision associated with sample collection, preservation, storage, and lab procedures. The sign test (see Gilbert, 1987) is used to statistically compare both the results from the laboratory duplicates, as well as the results from the field duplicates. These data will be further analyzed in the City's 2017 Quality Assurance Report, which will be completed in March 2018.

SUMMARY OF RESULTS

Shore Stations

- During January 2017, three of the eight shore stations were out of compliance with various water-contact standards specified in the Ocean Plan as follows:
    - The 30-day geometric mean standard for *Enterococcus* was exceeded at stations D10 and D11 on multiple days during the month.
    - The single sample maximum (SSM) standard for fecal coliform bacteria and the standard that states total coliform densities shall not exceed 1000 CFU/100 mL when the fecal:total ratio exceeds 0.1 was exceeded at station D11 on January 23.
    - The SSM standard for *Enterococcus* was exceeded at stations D7 and D11 on one or more days during the month.
- Per permit requirements, resamples were collected in response to these SSM exceedances (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 *Point Loma Ocean Outfall Annual Receiving Waters Monitoring and Assessment Report* for details (http://www.sandiego.gov/mwwd/environment/oceanmonitor/reports/index.shtml).
- Notable visual observations included foam at station D11 on January 25.

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 6, 13, 17, 25, 29).
- During January, two of the eight kelp bed stations were out of compliance with various water-contact standards specified in the Ocean Plan (see below).
    - The SSM standard for *Enterococcus* was exceeded at stations A6 and C8 on January 13.
- Water column temperatures ranged from 12.48 to 15.06°C during the month. The difference between surface and bottom waters ranged from 0.07 to 2.02°C, indicating that the water column was stratified at some of the kelp bed stations during the month.
- Chlorophyll *a* concentrations ranged from 0.23 to 3.45 µg/L during January, suggesting the absence of phytoplankton blooms during the month.
- There were no notable visual observations for January.

Offshore Stations

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

TABLES AND FIGURES

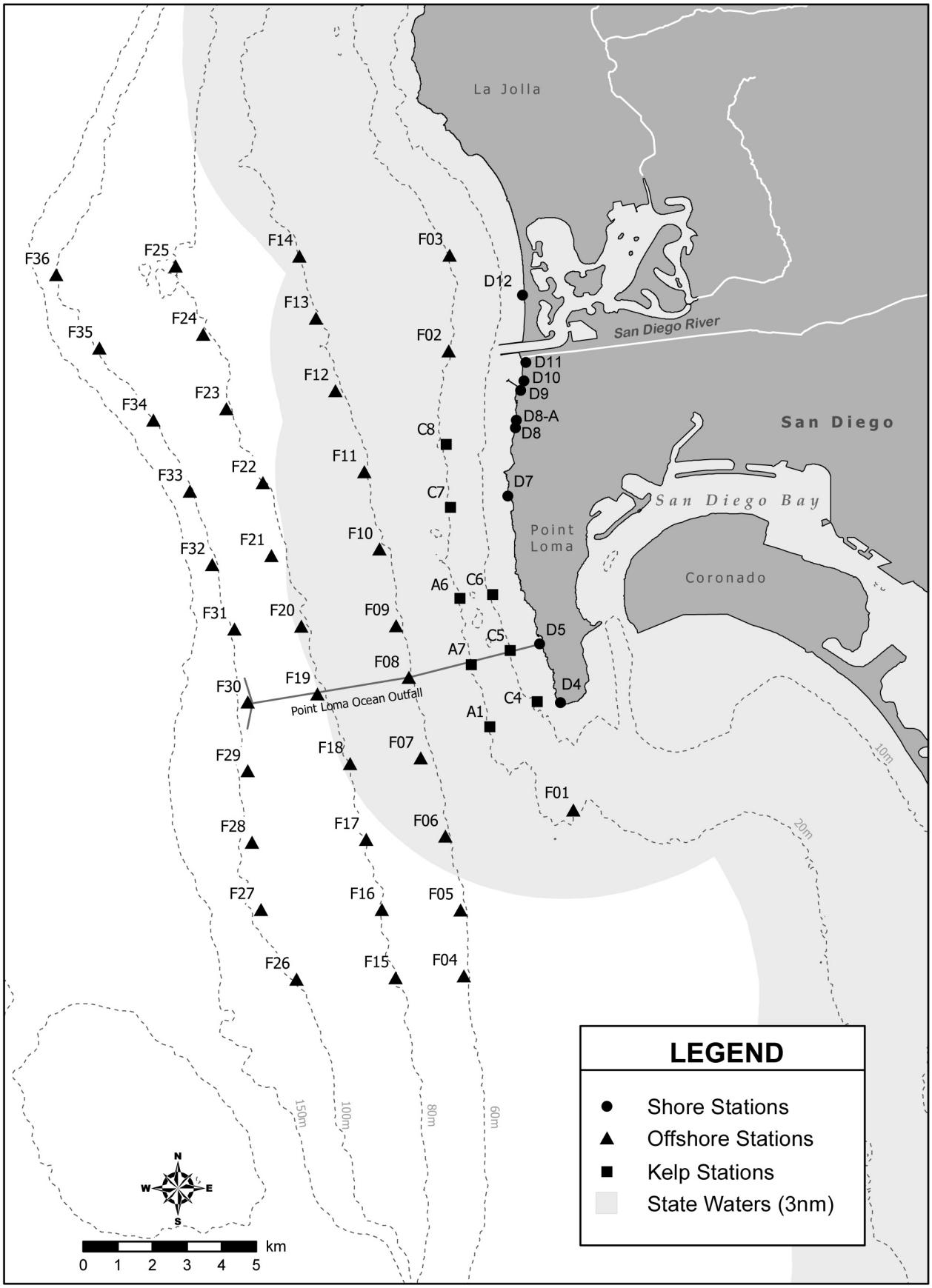

Figure 1.1 Station Map

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Shore Stations

Table 2.1

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

Date	D4	D5	D7	D8-A	D9	D10	D11	D12
01 Jan 2017	8	11	7	50	25	132	155	14
02 Jan 2017	8	11	7	50	25	132	155	14
03 Jan 2017	8	11	7	50	25	132	155	14
04 Jan 2017	8	11	7	50	25	132	155	14
05 Jan 2017	8	16	7	79	18	143	155	21
06 Jan 2017	8	16	7	79	18	143	155	21
07 Jan 2017	8	16	7	79	18	143	155	21
08 Jan 2017	8	16	7	79	18	143	155	21
09 Jan 2017	8	16	7	79	18	143	155	21
10 Jan 2017	8	16	7	79	18	143	155	21
11 Jan 2017	13	26	10	76	18	96	195	42
12 Jan 2017	13	26	10	76	18	96	195	42
13 Jan 2017	13	26	10	76	18	96	195	42
14 Jan 2017	13	26	10	76	18	96	195	42
15 Jan 2017	13	26	10	76	18	96	195	42
16 Jan 2017	13	26	10	76	18	96	195	42
17 Jan 2017	13	16	7	39	9	80	186	27
18 Jan 2017	13	16	7	39	9	80	186	27
19 Jan 2017	13	16	7	39	9	80	186	27
20 Jan 2017	13	16	7	39	9	80	186	27
21 Jan 2017	13	16	7	39	9	80	186	27
22 Jan 2017	13	16	7	39	9	80	186	27
23 Jan 2017	17	17	13	53	12	74	168	27
24 Jan 2017	17	17	13	53	12	74	168	27
25 Jan 2017	17	17	13	53	12	74	157	27
26 Jan 2017	17	17	13	53	12	74	157	27
27 Jan 2017	17	17	13	53	12	74	157	27
28 Jan 2017	17	17	13	53	12	74	157	27
29 Jan 2017	11	14	10	31	14	47	131	27
30 Jan 2017	11	14	10	31	14	47	131	27
31 Jan 2017	11	14	10	31	14	47	131	27

* Geometric mean calculated using n<5

ns = not sampled

Table 2.2

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

Date	D4	D5	D7	D8-A	D9	D10	D11	D12
01 Jan 2017	3	3	3	8	4	21	8	8
02 Jan 2017	3	3	3	8	4	21	8	8
03 Jan 2017	3	3	3	8	4	21	8	8
04 Jan 2017	3	3	3	8	4	21	8	8
05 Jan 2017	3	3	3	8	4	27	6	12
06 Jan 2017	3	3	3	8	4	27	6	12
07 Jan 2017	3	3	3	8	4	27	6	12
08 Jan 2017	3	3	3	8	4	27	6	12
09 Jan 2017	3	3	3	8	4	27	6	12
10 Jan 2017	3	3	3	8	4	27	6	12
11 Jan 2017	3	3	3	10	5	15	12	19
12 Jan 2017	3	3	3	10	5	15	12	19
13 Jan 2017	3	3	3	10	5	14	12	19
14 Jan 2017	3	3	3	10	5	14	12	19
15 Jan 2017	3	3	3	10	5	14	12	19
16 Jan 2017	3	3	3	10	5	14	12	19
17 Jan 2017	2	3	3	7	3	13	12	14
18 Jan 2017	2	3	3	7	3	13	12	14
19 Jan 2017	2	3	3	7	3	13	12	14
20 Jan 2017	2	3	3	7	3	13	12	14
21 Jan 2017	2	3	3	7	3	13	12	14
22 Jan 2017	2	3	3	7	3	13	12	14
23 Jan 2017	3	5	7	6	3	13	14	12
24 Jan 2017	3	5	7	6	3	13	14	12
25 Jan 2017	3	5	7	6	3	13	15	12
26 Jan 2017	3	5	7	6	3	13	15	12
27 Jan 2017	3	5	7	6	3	13	15	12
28 Jan 2017	3	5	7	6	3	13	15	12
29 Jan 2017	3	5	4	4	3	9	15	7
30 Jan 2017	3	5	4	4	3	9	15	7
31 Jan 2017	3	5	4	4	3	9	15	7

* Geometric mean calculated using n<5

ns = not sampled

Table 2.3

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

Date	D4	D5	D7	D8-A	D9	D10	D11	D12
01 Jan 2017	2	2	4	7	3	20	35	4
02 Jan 2017	2	2	4	7	3	20	35	4
03 Jan 2017	2	2	4	7	3	20	35	4
04 Jan 2017	2	2	4	7	3	20	35	4
05 Jan 2017	2	2	4	7	3	36	28	5
06 Jan 2017	2	2	4	7	3	36	28	5
07 Jan 2017	2	2	4	7	3	36	28	5
08 Jan 2017	2	2	4	7	3	36	28	5
09 Jan 2017	2	2	4	7	3	36	28	5
10 Jan 2017	2	2	4	7	3	36	28	5
11 Jan 2017	3	2	4	15	4	42	37	9
12 Jan 2017	3	2	4	15	4	42	37	9
13 Jan 2017	3	2	4	15	4	42	42	9
14 Jan 2017	3	2	4	15	4	42	42	9
15 Jan 2017	3	2	4	15	4	42	42	9
16 Jan 2017	3	2	4	15	4	42	42	9
17 Jan 2017	3	2	4	13	3	45	43	9
18 Jan 2017	3	2	4	13	3	45	43	9
19 Jan 2017	3	2	4	13	3	45	43	9
20 Jan 2017	3	2	4	13	3	45	43	9
21 Jan 2017	3	2	4	13	3	45	43	9
22 Jan 2017	3	2	4	13	3	45	43	9
23 Jan 2017	5	2	9	14	5	39	47	7
24 Jan 2017	5	2	9	14	5	39	47	7
25 Jan 2017	5	2	9	14	5	36	53	8
26 Jan 2017	5	2	9	14	5	36	53	8
27 Jan 2017	5	2	9	14	5	36	53	8
28 Jan 2017	5	2	9	14	5	36	53	8
29 Jan 2017	5	2	7	10	4	25	42	8
30 Jan 2017	5	2	7	10	4	25	42	8
31 Jan 2017	5	2	7	10	4	25	42	8

* Geometric mean calculated using n<5

ns = not sampled

Table 2.4

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

Date	D4	D5	D7	D8-A	D9	D10	D11	D12
05 Jan 2017	IC	IC	IC	IC	IC	IC	IC	IC
11 Jan 2017	IC	IC	IC	IC	IC	IC	IC	IC
17 Jan 2017	IC	IC	IC	IC	IC	IC	IC	IC
23 Jan 2017	IC	IC	IC	IC	IC	IC	IC	IC
25 Jan 2017	ns	ns	ns	ns	ns	ns	IC	ns
29 Jan 2017	IC	IC	IC	IC	IC	IC	IC	IC

IC = In Compliance
E = Exceedance
ns = not sampled

Table 2.5

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

Date	D4	D5	D7	D8-A	D9	D10	D11	D12
05 Jan 2017	IC	IC	IC	IC	IC	IC	IC	IC
11 Jan 2017	IC	IC	IC	IC	IC	IC	IC	IC
17 Jan 2017	IC	IC	IC	IC	IC	IC	IC	IC
23 Jan 2017	IC	IC	IC	IC	IC	IC	E	IC
25 Jan 2017	ns	ns	ns	ns	ns	ns	IC	ns
29 Jan 2017	IC	IC	IC	IC	IC	IC	IC	IC

IC = In Compliance
E = Exceedance
ns = not sampled

Table 2.6

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

Date	D4	D5	D7	D8-A	D9	D10	D11	D12
05 Jan 2017	IC	IC	IC	IC	IC	IC	IC	IC
11 Jan 2017	IC	IC	IC	IC	IC	IC	E	IC
13 Jan 2017	ns	ns	ns	ns	ns	ns	IC	ns
17 Jan 2017	IC	IC	IC	IC	IC	IC	IC	IC
23 Jan 2017	IC	IC	E	IC	IC	IC	E	IC
25 Jan 2017	ns	ns	IC	ns	ns	ns	IC	ns
29 Jan 2017	IC	IC	IC	IC	IC	IC	IC	IC

IC = In Compliance
E = Exceedance
ns = not sampled

Table 2.7

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

Date	D4	D5	D7	D8-A	D9	D10	D11	D12
05 Jan 2017	IC	IC	IC	IC	IC	IC	IC	IC
11 Jan 2017	IC	IC	IC	IC	IC	IC	IC	IC
17 Jan 2017	IC	IC	IC	IC	IC	IC	IC	IC
23 Jan 2017	IC	IC	IC	IC	IC	IC	E	IC
25 Jan 2017	ns	ns	ns	ns	ns	ns	IC	ns
29 Jan 2017	IC	IC	IC	IC	IC	IC	IC	IC

IC = In Compliance
E = Exceedance
ns = not sampled

Table 2.8

Summary of water quality parameters at the PLOO shore stations for each sample date. Densities of total coliform (Total), fecal coliform (Fecal), and *Enterococcus* (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	05 Jan 2017	834	<2	<2	<2	1.000
D4	11 Jan 2017	836	20e	<2	20e	0.100
D4	17 Jan 2017	1012	<20	<2	<2	0.100
D4	23 Jan 2017	905	100e	12e	30e	0.120
D4	29 Jan 2017	855	2e	<2	<2	1.000
D5	05 Jan 2017	900	14e	6e	<2	0.429
D5	11 Jan 2017	815	20e	2e	2e	0.100
D5	17 Jan 2017	1040	<2	<2	<2	1.000
D5	23 Jan 2017	844	140e	54	4e	0.386
D5	29 Jan 2017	839	8e	<2	<2	0.250
D7	05 Jan 2017	810	2e	<2	<2	1.000
D7	11 Jan 2017	909	12e	2e	4e	0.167
D7	17 Jan 2017	943	2e	2e	<2	1.000
D7	23 Jan 2017	943	440e	88	300e	0.200
D7	25 Jan 2017	1010	ns	ns	8e	ns
D7	29 Jan 2017	912	4e	2e	<2	0.500
D8-A	05 Jan 2017	750	40e	<2	<2	0.050
D8-A	11 Jan 2017	927	80e	60e	100	0.750
D8-A	17 Jan 2017	809	6e	<2	<2	0.333
D8-A	23 Jan 2017	956	380e	2e	52	0.005
D8-A	29 Jan 2017	923	4e	<2	4e	0.500
D9	05 Jan 2017	1030	4e	<2	<2	0.500
D9	11 Jan 2017	943	<20	6e	8e	0.300
D9	17 Jan 2017	926	6e	<2	2e	0.333
D9	23 Jan 2017	1011	60e	4e	20e	0.067
D9	29 Jan 2017	933	20e	4e	2e	0.200
D10	05 Jan 2017	1017	60e	<20	60	0.333
D10	11 Jan 2017	1002	100e	16e	76	0.160
D10	17 Jan 2017	907	40e	<2	12e	0.050
D10	23 Jan 2017	1019	460	40e	94	0.087
D10	29 Jan 2017	944	<2	2e	<2	1.000
D11	05 Jan 2017	947	10e	<2	<2	0.200
D11	11 Jan 2017	1021	240e	66	120e	0.275
D11	13 Jan 2017	832	ns	ns	90	ns
D11	17 Jan 2017	856	60e	<2	8e	0.033
D11	23 Jan 2017	1036	>=8600	1000e	3400e	0.116

Station	Date	Time	Total	Fecal	Entero	F:T
D11	25 Jan 2017	943	<200	20e	68	0.100
D11	29 Jan 2017	957	<20	<2	6e	0.100
D12	05 Jan 2017	1051	16e	14e	4e	0.875
D12	11 Jan 2017	1053	68	18e	56	0.265
D12	17 Jan 2017	835	<2	<2	2e	1.000
D12	23 Jan 2017	1110	360e	<20	40	0.056
D12	29 Jan 2017	1019	20e	2e	2e	0.100

ns = not sampled
ND = no data

Comments

Station	Date	Depth	Parameter	Comments
D11	13 Jan 2017			Resample
D7	25 Jan 2017			Resample
D11	25 Jan 2017			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	05 Jan 2017	Arrive Time	834
D4	05 Jan 2017	Weather	Drizzle
D4	05 Jan 2017	Wind Speed (kts)	7
D4	05 Jan 2017	Wind Dir	E
D4	05 Jan 2017	Animal Life	None
D4	05 Jan 2017	Floatables	None
D4	05 Jan 2017	Water Color	Colorless
D4	05 Jan 2017	Current Direction	E
D4	05 Jan 2017	Wave Height Low (ft)	2
D4	05 Jan 2017	High Tide (ft)	3.4
D4	05 Jan 2017	High Tide Time	1414
D4	05 Jan 2017	Low Tide (ft)	1.9
D4	05 Jan 2017	Low Tide Time	853
D4	05 Jan 2017	Comments	Kelp; Seagrass; Algae; 2 Surfers; Water clear
D4	05 Jan 2017		
D4	11 Jan 2017	Arrive Time	836
D4	11 Jan 2017	Weather	Cloudy
D4	11 Jan 2017	Wind Speed (kts)	8.7
D4	11 Jan 2017	Wind Dir	S
D4	11 Jan 2017	Animal Life	None
D4	11 Jan 2017	Floatables	None
D4	11 Jan 2017	Water Color	Green
D4	11 Jan 2017	Current Direction	S
D4	11 Jan 2017	Wave Height Low (ft)	2
D4	11 Jan 2017	High Tide (ft)	6.7
D4	11 Jan 2017	High Tide Time	734
D4	11 Jan 2017	Low Tide (ft)	-1.6
D4	11 Jan 2017	Low Tide Time	1445
D4	11 Jan 2017	Comments	Water clear
D4	11 Jan 2017		
D4	17 Jan 2017	Arrive Time	1012
D4	17 Jan 2017	Weather	Sunny
D4	17 Jan 2017	Wind Speed (kts)	2
D4	17 Jan 2017	Wind Dir	W
D4	17 Jan 2017	Animal Life	None
D4	17 Jan 2017	Floatables	None
D4	17 Jan 2017	Water Color	Green
D4	17 Jan 2017	Current Direction	W
D4	17 Jan 2017	Wave Height Low (ft)	2
D4	17 Jan 2017	High Tide (ft)	4.1
D4	17 Jan 2017	High Tide Time	1203
D4	17 Jan 2017	Low Tide (ft)	1.9
D4	17 Jan 2017	Low Tide Time	630
D4	17 Jan 2017	Comments	Kelp; Seagrass; Water turbid
D4	17 Jan 2017		
D4	23 Jan 2017	Arrive Time	905
D4	23 Jan 2017	Weather	Heavy Rain
D4	23 Jan 2017	Wind Speed (kts)	13.8

Station	Date	Parameter	Value
D4	23 Jan 2017	Wind Dir	W
D4	23 Jan 2017	Animal Life	None
D4	23 Jan 2017	Floatables	None
D4	23 Jan 2017	Water Color	Green
D4	23 Jan 2017	Current Direction	N
D4	23 Jan 2017	Wave Height Low (ft)	4
D4	23 Jan 2017	High Tide (ft)	5
D4	23 Jan 2017	High Tide Time	552
D4	23 Jan 2017	Low Tide (ft)	0.1
D4	23 Jan 2017	Low Tide Time	1312
D4	23 Jan 2017	Comments	Kelp; Seagrass; Algae; Water clear
D4	23 Jan 2017		
D4	29 Jan 2017	Arrive Time	855
D4	29 Jan 2017	Weather	Sunny
D4	29 Jan 2017	Wind Speed (kts)	0.4
D4	29 Jan 2017	Wind Dir	W
D4	29 Jan 2017	Animal Life	None
D4	29 Jan 2017	Floatables	None
D4	29 Jan 2017	Water Color	Green
D4	29 Jan 2017	Current Direction	N
D4	29 Jan 2017	Wave Height Low (ft)	3
D4	29 Jan 2017	High Tide (ft)	5.7
D4	29 Jan 2017	High Tide Time	919
D4	29 Jan 2017	Low Tide (ft)	1.3
D4	29 Jan 2017	Low Tide Time	319
D4	29 Jan 2017	Comments	Kelp; Seagrass; Water clear
D4	29 Jan 2017		
D5	05 Jan 2017	Arrive Time	900
D5	05 Jan 2017	Weather	Cloudy
D5	05 Jan 2017	Wind Speed (kts)	7
D5	05 Jan 2017	Wind Dir	E
D5	05 Jan 2017	Animal Life	None
D5	05 Jan 2017	Floatables	None
D5	05 Jan 2017	Water Color	Colorless
D5	05 Jan 2017	Current Direction	E
D5	05 Jan 2017	Wave Height Low (ft)	2
D5	05 Jan 2017	High Tide (ft)	3.4
D5	05 Jan 2017	High Tide Time	1414
D5	05 Jan 2017	Low Tide (ft)	1.9
D5	05 Jan 2017	Low Tide Time	853
D5	05 Jan 2017	Comments	Kelp; Seagrass; Algae; Water clear
D5	05 Jan 2017		
D5	11 Jan 2017	Arrive Time	815
D5	11 Jan 2017	Weather	Cloudy
D5	11 Jan 2017	Wind Speed (kts)	5.8
D5	11 Jan 2017	Wind Dir	S
D5	11 Jan 2017	Animal Life	None
D5	11 Jan 2017	Floatables	None
D5	11 Jan 2017	Water Color	Green
D5	11 Jan 2017	Current Direction	S
D5	11 Jan 2017	Wave Height Low (ft)	1
D5	11 Jan 2017	High Tide (ft)	6.7

Station	Date	Parameter	Value
D5	11 Jan 2017	High Tide Time	734
D5	11 Jan 2017	Low Tide (ft)	-1.6
D5	11 Jan 2017	Low Tide Time	1445
D5	11 Jan 2017	Comments	Kelp; Seagrass; Water clear
D5	11 Jan 2017		
D5	17 Jan 2017	Arrive Time	1040
D5	17 Jan 2017	Weather	Sunny
D5	17 Jan 2017	Wind Speed (kts)	3
D5	17 Jan 2017	Wind Dir	W
D5	17 Jan 2017	Animal Life	None
D5	17 Jan 2017	Floatables	None
D5	17 Jan 2017	Water Color	Green
D5	17 Jan 2017	Current Direction	W
D5	17 Jan 2017	Wave Height Low (ft)	2
D5	17 Jan 2017	High Tide (ft)	4.1
D5	17 Jan 2017	High Tide Time	1203
D5	17 Jan 2017	Low Tide (ft)	1.9
D5	17 Jan 2017	Low Tide Time	630
D5	17 Jan 2017	Comments	Kelp; Seagrass; Water turbid
D5	17 Jan 2017		
D5	23 Jan 2017	Arrive Time	844
D5	23 Jan 2017	Weather	Drizzle
D5	23 Jan 2017	Wind Speed (kts)	3.6
D5	23 Jan 2017	Wind Dir	W
D5	23 Jan 2017	Animal Life	None
D5	23 Jan 2017	Floatables	None
D5	23 Jan 2017	Water Color	Green
D5	23 Jan 2017	Current Direction	N
D5	23 Jan 2017	Wave Height Low (ft)	4
D5	23 Jan 2017	High Tide (ft)	5
D5	23 Jan 2017	High Tide Time	552
D5	23 Jan 2017	Low Tide (ft)	0.1
D5	23 Jan 2017	Low Tide Time	1312
D5	23 Jan 2017	Comments	Kelp; Seagrass; Algae; Water clear
D5	23 Jan 2017		
D5	29 Jan 2017	Arrive Time	839
D5	29 Jan 2017	Weather	Sunny
D5	29 Jan 2017	Wind Speed (kts)	0.2
D5	29 Jan 2017	Wind Dir	W
D5	29 Jan 2017	Animal Life	None
D5	29 Jan 2017	Floatables	None
D5	29 Jan 2017	Water Color	Green
D5	29 Jan 2017	Current Direction	N
D5	29 Jan 2017	Wave Height Low (ft)	2
D5	29 Jan 2017	High Tide (ft)	5.7
D5	29 Jan 2017	High Tide Time	919
D5	29 Jan 2017	Low Tide (ft)	1.3
D5	29 Jan 2017	Low Tide Time	319
D5	29 Jan 2017	Comments	Kelp; Seagrass; Water clear
D5	29 Jan 2017		
D7	05 Jan 2017	Arrive Time	810

Station	Date	Parameter	Value
D7	05 Jan 2017	Weather	Cloudy
D7	05 Jan 2017	Wind Speed (kts)	7
D7	05 Jan 2017	Wind Dir	E
D7	05 Jan 2017	Animal Life	None
D7	05 Jan 2017	Floatables	None
D7	05 Jan 2017	Water Color	Green
D7	05 Jan 2017	Current Direction	E
D7	05 Jan 2017	Wave Height Low (ft)	2
D7	05 Jan 2017	High Tide (ft)	4.3
D7	05 Jan 2017	High Tide Time	232
D7	05 Jan 2017	Low Tide (ft)	1.9
D7	05 Jan 2017	Low Tide Time	853
D7	05 Jan 2017	Comments	Kelp; Algae; 1 Surfer; Water clear
D7	05 Jan 2017		15
D7	11 Jan 2017	Arrive Time	909
D7	11 Jan 2017	Weather	Cloudy
D7	11 Jan 2017	Wind Speed (kts)	10.1
D7	11 Jan 2017	Wind Dir	S
D7	11 Jan 2017	Animal Life	None
D7	11 Jan 2017	Floatables	None
D7	11 Jan 2017	Water Color	Green
D7	11 Jan 2017	Current Direction	S
D7	11 Jan 2017	Wave Height Low (ft)	2
D7	11 Jan 2017	High Tide (ft)	6.7
D7	11 Jan 2017	High Tide Time	734
D7	11 Jan 2017	Low Tide (ft)	-1.6
D7	11 Jan 2017	Low Tide Time	1445
D7	11 Jan 2017	Comments	Water clear
D7	11 Jan 2017		
D7	17 Jan 2017	Arrive Time	943
D7	17 Jan 2017	Weather	Sunny
D7	17 Jan 2017	Wind Speed (kts)	2
D7	17 Jan 2017	Wind Dir	W
D7	17 Jan 2017	Animal Life	None
D7	17 Jan 2017	Floatables	None
D7	17 Jan 2017	Water Color	Green
D7	17 Jan 2017	Current Direction	W
D7	17 Jan 2017	Wave Height Low (ft)	2
D7	17 Jan 2017	High Tide (ft)	4.1
D7	17 Jan 2017	High Tide Time	1203
D7	17 Jan 2017	Low Tide (ft)	1.9
D7	17 Jan 2017	Low Tide Time	630
D7	17 Jan 2017	Comments	Kelp; Seagrass; Water turbid
D7	17 Jan 2017		
D7	23 Jan 2017	Arrive Time	943
D7	23 Jan 2017	Weather	Drizzle
D7	23 Jan 2017	Wind Speed (kts)	5.2
D7	23 Jan 2017	Wind Dir	W
D7	23 Jan 2017	Animal Life	None
D7	23 Jan 2017	Floatables	None
D7	23 Jan 2017	Water Color	Green
D7	23 Jan 2017	Current Direction	N

Station	Date	Parameter	Value
D7	23 Jan 2017	Wave Height Low (ft)	3
D7	23 Jan 2017	High Tide (ft)	5
D7	23 Jan 2017	High Tide Time	552
D7	23 Jan 2017	Low Tide (ft)	0.1
D7	23 Jan 2017	Low Tide Time	1312
D7	23 Jan 2017	Comments	Kelp; Seagrass; Algae; 1 Jogger; 4 Persons; Water clear
D7	23 Jan 2017		
D7	25 Jan 2017	Arrive Time	1010
D7	25 Jan 2017	Weather	Sunny
D7	25 Jan 2017	Wind Speed (kts)	5
D7	25 Jan 2017	Wind Dir	W
D7	25 Jan 2017	Animal Life	None
D7	25 Jan 2017	Floatables	None
D7	25 Jan 2017	Water Color	Green
D7	25 Jan 2017	Current Direction	W
D7	25 Jan 2017	Wave Height Low (ft)	3
D7	25 Jan 2017	High Tide (ft)	5.6
D7	25 Jan 2017	High Tide Time	703
D7	25 Jan 2017	Low Tide (ft)	-0.6
D7	25 Jan 2017	Low Tide Time	1413
D7	25 Jan 2017	Comments	Kelp; Seagrass; 3 Surfers; Water turbid
D7	25 Jan 2017		
D7	29 Jan 2017	Arrive Time	912
D7	29 Jan 2017	Weather	Sunny
D7	29 Jan 2017	Wind Speed (kts)	0
D7	29 Jan 2017	Wind Dir	
D7	29 Jan 2017	Animal Life	None
D7	29 Jan 2017	Floatables	None
D7	29 Jan 2017	Water Color	Green
D7	29 Jan 2017	Current Direction	N
D7	29 Jan 2017	Wave Height Low (ft)	3
D7	29 Jan 2017	High Tide (ft)	5.7
D7	29 Jan 2017	High Tide Time	919
D7	29 Jan 2017	Low Tide (ft)	1.3
D7	29 Jan 2017	Low Tide Time	319
D7	29 Jan 2017	Comments	Kelp; Seagrass; 2 Persons; 1 Surfer; Water clear
D7	29 Jan 2017		
D8-A	05 Jan 2017	Arrive Time	750
D8-A	05 Jan 2017	Weather	Cloudy
D8-A	05 Jan 2017	Wind Speed (kts)	6
D8-A	05 Jan 2017	Wind Dir	E
D8-A	05 Jan 2017	Animal Life	None
D8-A	05 Jan 2017	Floatables	None
D8-A	05 Jan 2017	Water Color	Colorless
D8-A	05 Jan 2017	Current Direction	E
D8-A	05 Jan 2017	Wave Height Low (ft)	2
D8-A	05 Jan 2017	High Tide (ft)	4.3
D8-A	05 Jan 2017	High Tide Time	232
D8-A	05 Jan 2017	Low Tide (ft)	1.9
D8-A	05 Jan 2017	Low Tide Time	853
D8-A	05 Jan 2017	Comments	Kelp; Seagrass; Water turbid
D8-A	05 Jan 2017		

Station	Date	Parameter	Value
D8-A	11 Jan 2017	Arrive Time	927
D8-A	11 Jan 2017	Weather	Cloudy
D8-A	11 Jan 2017	Wind Speed (kts)	2.9
D8-A	11 Jan 2017	Wind Dir	S
D8-A	11 Jan 2017	Animal Life	None
D8-A	11 Jan 2017	Floatables	None
D8-A	11 Jan 2017	Water Color	Green
D8-A	11 Jan 2017	Current Direction	S
D8-A	11 Jan 2017	Wave Height Low (ft)	3
D8-A	11 Jan 2017	High Tide (ft)	6.7
D8-A	11 Jan 2017	High Tide Time	734
D8-A	11 Jan 2017	Low Tide (ft)	-1.6
D8-A	11 Jan 2017	Low Tide Time	1445
D8-A	11 Jan 2017	Comments	Kelp; Water clear
D8-A	11 Jan 2017		
D8-A	17 Jan 2017	Arrive Time	809
D8-A	17 Jan 2017	Weather	Sunny
D8-A	17 Jan 2017	Wind Speed (kts)	2
D8-A	17 Jan 2017	Wind Dir	W
D8-A	17 Jan 2017	Animal Life	None
D8-A	17 Jan 2017	Floatables	None
D8-A	17 Jan 2017	Water Color	Green
D8-A	17 Jan 2017	Current Direction	W
D8-A	17 Jan 2017	Wave Height Low (ft)	3
D8-A	17 Jan 2017	High Tide (ft)	4.1
D8-A	17 Jan 2017	High Tide Time	1203
D8-A	17 Jan 2017	Low Tide (ft)	1.9
D8-A	17 Jan 2017	Low Tide Time	630
D8-A	17 Jan 2017	Comments	Kelp; Seagrass; Water turbid
D8-A	17 Jan 2017		
D8-A	23 Jan 2017	Arrive Time	956
D8-A	23 Jan 2017	Weather	Cloudy
D8-A	23 Jan 2017	Wind Speed (kts)	10.4
D8-A	23 Jan 2017	Wind Dir	W
D8-A	23 Jan 2017	Animal Life	None
D8-A	23 Jan 2017	Floatables	None
D8-A	23 Jan 2017	Water Color	Green
D8-A	23 Jan 2017	Current Direction	N
D8-A	23 Jan 2017	Wave Height Low (ft)	3
D8-A	23 Jan 2017	High Tide (ft)	5
D8-A	23 Jan 2017	High Tide Time	552
D8-A	23 Jan 2017	Low Tide (ft)	0.1
D8-A	23 Jan 2017	Low Tide Time	1312
D8-A	23 Jan 2017	Comments	Kelp; Seagrass; Algae; Water clear
D8-A	23 Jan 2017		
D8-A	29 Jan 2017	Arrive Time	923
D8-A	29 Jan 2017	Weather	Sunny
D8-A	29 Jan 2017	Wind Speed (kts)	1.1
D8-A	29 Jan 2017	Wind Dir	W
D8-A	29 Jan 2017	Animal Life	None
D8-A	29 Jan 2017	Floatables	None

Station	Date	Parameter	Value
D8-A	29 Jan 2017	Water Color	Green
D8-A	29 Jan 2017	Current Direction	N
D8-A	29 Jan 2017	Wave Height Low (ft)	3
D8-A	29 Jan 2017	High Tide (ft)	5.7
D8-A	29 Jan 2017	High Tide Time	919
D8-A	29 Jan 2017	Low Tide (ft)	1.3
D8-A	29 Jan 2017	Low Tide Time	319
D8-A	29 Jan 2017	Comments	Kelp; Seagrass; Water clear
D8-A	29 Jan 2017		
D9	05 Jan 2017	Arrive Time	1030
D9	05 Jan 2017	Weather	Cloudy
D9	05 Jan 2017	Wind Speed (kts)	3
D9	05 Jan 2017	Wind Dir	E
D9	05 Jan 2017	Animal Life	None
D9	05 Jan 2017	Floatables	None
D9	05 Jan 2017	Water Color	Colorless
D9	05 Jan 2017	Current Direction	E
D9	05 Jan 2017	Wave Height Low (ft)	2
D9	05 Jan 2017	High Tide (ft)	3.4
D9	05 Jan 2017	High Tide Time	1414
D9	05 Jan 2017	Low Tide (ft)	1.9
D9	05 Jan 2017	Low Tide Time	853
D9	05 Jan 2017	Comments	Kelp; Seagrass; Algae; Water clear
D9	05 Jan 2017		
D9	11 Jan 2017	Arrive Time	943
D9	11 Jan 2017	Weather	Drizzle
D9	11 Jan 2017	Wind Speed (kts)	0.1
D9	11 Jan 2017	Wind Dir	W
D9	11 Jan 2017	Animal Life	None
D9	11 Jan 2017	Floatables	None
D9	11 Jan 2017	Water Color	Green
D9	11 Jan 2017	Current Direction	W
D9	11 Jan 2017	Wave Height Low (ft)	3
D9	11 Jan 2017	High Tide (ft)	6.7
D9	11 Jan 2017	High Tide Time	734
D9	11 Jan 2017	Low Tide (ft)	-1.6
D9	11 Jan 2017	Low Tide Time	1445
D9	11 Jan 2017	Comments	Algae; Water clear
D9	11 Jan 2017		
D9	17 Jan 2017	Arrive Time	926
D9	17 Jan 2017	Weather	Sunny
D9	17 Jan 2017	Wind Speed (kts)	2
D9	17 Jan 2017	Wind Dir	W
D9	17 Jan 2017	Animal Life	None
D9	17 Jan 2017	Floatables	None
D9	17 Jan 2017	Water Color	Green
D9	17 Jan 2017	Current Direction	W
D9	17 Jan 2017	Wave Height Low (ft)	3
D9	17 Jan 2017	High Tide (ft)	4.1
D9	17 Jan 2017	High Tide Time	1203
D9	17 Jan 2017	Low Tide (ft)	1.9
D9	17 Jan 2017	Low Tide Time	630

Station	Date	Parameter	Value
D9	17 Jan 2017	Comments	Kelp; Seagrass; Water turbid
D9	17 Jan 2017		
D9	23 Jan 2017	Arrive Time	1011
D9	23 Jan 2017	Weather	Cloudy
D9	23 Jan 2017	Wind Speed (kts)	2.1
D9	23 Jan 2017	Wind Dir	W
D9	23 Jan 2017	Animal Life	None
D9	23 Jan 2017	Floatables	None
D9	23 Jan 2017	Water Color	Green
D9	23 Jan 2017	Current Direction	N
D9	23 Jan 2017	Wave Height Low (ft)	2
D9	23 Jan 2017	High Tide (ft)	5
D9	23 Jan 2017	High Tide Time	552
D9	23 Jan 2017	Low Tide (ft)	0.1
D9	23 Jan 2017	Low Tide Time	1312
D9	23 Jan 2017	Comments	Kelp; Seagrass; Algae; 1 Person; Water clear
D9	23 Jan 2017		
D9	29 Jan 2017	Arrive Time	933
D9	29 Jan 2017	Weather	Sunny
D9	29 Jan 2017	Wind Speed (kts)	0
D9	29 Jan 2017	Wind Dir	
D9	29 Jan 2017	Animal Life	None
D9	29 Jan 2017	Floatables	None
D9	29 Jan 2017	Water Color	Green
D9	29 Jan 2017	Current Direction	N
D9	29 Jan 2017	Wave Height Low (ft)	2
D9	29 Jan 2017	High Tide (ft)	5.7
D9	29 Jan 2017	High Tide Time	919
D9	29 Jan 2017	Low Tide (ft)	1.3
D9	29 Jan 2017	Low Tide Time	319
D9	29 Jan 2017	Comments	Kelp; Seagrass; 3 Persons; Water clear
D9	29 Jan 2017		
D10	05 Jan 2017	Arrive Time	1017
D10	05 Jan 2017	Weather	Cloudy
D10	05 Jan 2017	Wind Speed (kts)	2
D10	05 Jan 2017	Wind Dir	E
D10	05 Jan 2017	Animal Life	None
D10	05 Jan 2017	Floatables	None
D10	05 Jan 2017	Water Color	Green
D10	05 Jan 2017	Current Direction	E
D10	05 Jan 2017	Wave Height Low (ft)	3
D10	05 Jan 2017	High Tide (ft)	3.4
D10	05 Jan 2017	High Tide Time	1414
D10	05 Jan 2017	Low Tide (ft)	1.9
D10	05 Jan 2017	Low Tide Time	853
D10	05 Jan 2017	Comments	Kelp; Seagrass; 1 Surfer; Water clear
D10	05 Jan 2017		
D10	11 Jan 2017	Arrive Time	1002
D10	11 Jan 2017	Weather	Drizzle
D10	11 Jan 2017	Wind Speed (kts)	2.1
D10	11 Jan 2017	Wind Dir	S

Station	Date	Parameter	Value
D10	11 Jan 2017	Animal Life	None
D10	11 Jan 2017	Floatables	None
D10	11 Jan 2017	Water Color	Green
D10	11 Jan 2017	Current Direction	S
D10	11 Jan 2017	Wave Height Low (ft)	3
D10	11 Jan 2017	High Tide (ft)	6.7
D10	11 Jan 2017	High Tide Time	734
D10	11 Jan 2017	Low Tide (ft)	-1.6
D10	11 Jan 2017	Low Tide Time	1445
D10	11 Jan 2017	Comments	3 Surfers; Water clear
D10	11 Jan 2017		
D10	17 Jan 2017	Arrive Time	907
D10	17 Jan 2017	Weather	Sunny
D10	17 Jan 2017	Wind Speed (kts)	2
D10	17 Jan 2017	Wind Dir	W
D10	17 Jan 2017	Animal Life	None
D10	17 Jan 2017	Floatables	None
D10	17 Jan 2017	Water Color	Green
D10	17 Jan 2017	Current Direction	W
D10	17 Jan 2017	Wave Height Low (ft)	2
D10	17 Jan 2017	High Tide (ft)	4.1
D10	17 Jan 2017	High Tide Time	1203
D10	17 Jan 2017	Low Tide (ft)	1.9
D10	17 Jan 2017	Low Tide Time	630
D10	17 Jan 2017	Comments	Kelp; Seagrass; 2 Surfers; Water turbid
D10	17 Jan 2017		
D10	23 Jan 2017	Arrive Time	1019
D10	23 Jan 2017	Weather	Cloudy
D10	23 Jan 2017	Wind Speed (kts)	3.6
D10	23 Jan 2017	Wind Dir	W
D10	23 Jan 2017	Animal Life	None
D10	23 Jan 2017	Floatables	None
D10	23 Jan 2017	Water Color	Green
D10	23 Jan 2017	Current Direction	N
D10	23 Jan 2017	Wave Height Low (ft)	3
D10	23 Jan 2017	High Tide (ft)	5
D10	23 Jan 2017	High Tide Time	552
D10	23 Jan 2017	Low Tide (ft)	0.1
D10	23 Jan 2017	Low Tide Time	1312
D10	23 Jan 2017	Comments	Kelp; Seagrass; Water clear
D10	23 Jan 2017		
D10	29 Jan 2017	Arrive Time	944
D10	29 Jan 2017	Weather	Sunny
D10	29 Jan 2017	Wind Speed (kts)	1.7
D10	29 Jan 2017	Wind Dir	W
D10	29 Jan 2017	Animal Life	None
D10	29 Jan 2017	Floatables	None
D10	29 Jan 2017	Water Color	Green
D10	29 Jan 2017	Current Direction	W
D10	29 Jan 2017	Wave Height Low (ft)	4
D10	29 Jan 2017	High Tide (ft)	5.7
D10	29 Jan 2017	High Tide Time	919

Station	Date	Parameter	Value
D10	29 Jan 2017	Low Tide (ft)	1.3
D10	29 Jan 2017	Low Tide Time	319
D10	29 Jan 2017	Comments	Kelp; Seagrass; 3 Joggers; 7 Persons; 8 Surfers; 2 Swimmers; Water clear
D10	29 Jan 2017		
D11	05 Jan 2017	Arrive Time	947
D11	05 Jan 2017	Weather	Cloudy
D11	05 Jan 2017	Wind Speed (kts)	2
D11	05 Jan 2017	Wind Dir	E
D11	05 Jan 2017	Animal Life	None
D11	05 Jan 2017	Floatables	None
D11	05 Jan 2017	Water Color	Colorless
D11	05 Jan 2017	Current Direction	E
D11	05 Jan 2017	Wave Height Low (ft)	3
D11	05 Jan 2017	High Tide (ft)	3.4
D11	05 Jan 2017	High Tide Time	1414
D11	05 Jan 2017	Low Tide (ft)	1.9
D11	05 Jan 2017	Low Tide Time	853
D11	05 Jan 2017	Comments	Kelp; Seagrass; Algae; 1 Surfer; Water clear
D11	05 Jan 2017		
D11	11 Jan 2017	Arrive Time	1021
D11	11 Jan 2017	Weather	Drizzle
D11	11 Jan 2017	Wind Speed (kts)	5
D11	11 Jan 2017	Wind Dir	SE
D11	11 Jan 2017	Animal Life	None
D11	11 Jan 2017	Floatables	None
D11	11 Jan 2017	Water Color	Green
D11	11 Jan 2017	Current Direction	SE
D11	11 Jan 2017	Wave Height Low (ft)	2
D11	11 Jan 2017	High Tide (ft)	6.7
D11	11 Jan 2017	High Tide Time	734
D11	11 Jan 2017	Low Tide (ft)	-1.6
D11	11 Jan 2017	Low Tide Time	1445
D11	11 Jan 2017	Comments	3 Persons; Water clear
D11	11 Jan 2017		
D11	13 Jan 2017	Arrive Time	832
D11	13 Jan 2017	Weather	Cloudy
D11	13 Jan 2017	Wind Speed (kts)	1.7
D11	13 Jan 2017	Wind Dir	W
D11	13 Jan 2017	Animal Life	None
D11	13 Jan 2017	Floatables	None
D11	13 Jan 2017	Water Color	Green
D11	13 Jan 2017	Current Direction	W
D11	13 Jan 2017	Wave Height Low (ft)	3
D11	13 Jan 2017	High Tide (ft)	6.5
D11	13 Jan 2017	High Tide Time	902
D11	13 Jan 2017	Low Tide (ft)	1.3
D11	13 Jan 2017	Low Tide Time	300
D11	13 Jan 2017	Comments	2 Persons; Water clear
D11	13 Jan 2017		
D11	17 Jan 2017	Arrive Time	856

Station	Date	Parameter	Value
D11	17 Jan 2017	Weather	Sunny
D11	17 Jan 2017	Wind Speed (kts)	2
D11	17 Jan 2017	Wind Dir	W
D11	17 Jan 2017	Animal Life	None
D11	17 Jan 2017	Floatables	None
D11	17 Jan 2017	Water Color	Green
D11	17 Jan 2017	Current Direction	W
D11	17 Jan 2017	Wave Height Low (ft)	2
D11	17 Jan 2017	High Tide (ft)	4.1
D11	17 Jan 2017	High Tide Time	1203
D11	17 Jan 2017	Low Tide (ft)	1.9
D11	17 Jan 2017	Low Tide Time	630
D11	17 Jan 2017	Comments	Kelp; Seagrass; Algae; Water turbid
D11	17 Jan 2017		
D11	23 Jan 2017	Arrive Time	1036
D11	23 Jan 2017	Weather	Cloudy
D11	23 Jan 2017	Wind Speed (kts)	5.6
D11	23 Jan 2017	Wind Dir	W
D11	23 Jan 2017	Animal Life	None
D11	23 Jan 2017	Floatables	None
D11	23 Jan 2017	Water Color	Brown
D11	23 Jan 2017	Current Direction	N
D11	23 Jan 2017	Wave Height Low (ft)	3
D11	23 Jan 2017	High Tide (ft)	5
D11	23 Jan 2017	High Tide Time	552
D11	23 Jan 2017	Low Tide (ft)	0.1
D11	23 Jan 2017	Low Tide Time	1312
D11	23 Jan 2017	Comments	Kelp; Seagrass; 7 Persons; Water clear
D11	23 Jan 2017		
D11	25 Jan 2017	Arrive Time	943
D11	25 Jan 2017	Weather	Sunny
D11	25 Jan 2017	Wind Speed (kts)	3
D11	25 Jan 2017	Wind Dir	W
D11	25 Jan 2017	Animal Life	None
D11	25 Jan 2017	Floatables	None
D11	25 Jan 2017	Water Color	Green
D11	25 Jan 2017	Current Direction	W
D11	25 Jan 2017	Wave Height Low (ft)	5
D11	25 Jan 2017	High Tide (ft)	5.6
D11	25 Jan 2017	High Tide Time	703
D11	25 Jan 2017	Low Tide (ft)	-0.6
D11	25 Jan 2017	Low Tide Time	1413
D11	25 Jan 2017	Comments	Kelp; Seagrass; 3 Surfers; Water turbid; Foam
D11	25 Jan 2017		
D11	29 Jan 2017	Arrive Time	957
D11	29 Jan 2017	Weather	Sunny
D11	29 Jan 2017	Wind Speed (kts)	2.2
D11	29 Jan 2017	Wind Dir	W
D11	29 Jan 2017	Animal Life	3 Dogs
D11	29 Jan 2017	Floatables	None
D11	29 Jan 2017	Water Color	Green
D11	29 Jan 2017	Current Direction	N

Station	Date	Parameter	Value
D11	29 Jan 2017	Wave Height Low (ft)	5
D11	29 Jan 2017	High Tide (ft)	5.7
D11	29 Jan 2017	High Tide Time	919
D11	29 Jan 2017	Low Tide (ft)	-0.8
D11	29 Jan 2017	Low Tide Time	1618
D11	29 Jan 2017	Comments	Kelp; Seagrass; 2 Joggers; 12 Persons; 13 Surfers; 4 Swimmers; Water clear
D11	29 Jan 2017		
D12	05 Jan 2017	Arrive Time	1051
D12	05 Jan 2017	Weather	Drizzle
D12	05 Jan 2017	Wind Speed (kts)	2
D12	05 Jan 2017	Wind Dir	E
D12	05 Jan 2017	Animal Life	None
D12	05 Jan 2017	Floatables	None
D12	05 Jan 2017	Water Color	Colorless
D12	05 Jan 2017	Current Direction	E
D12	05 Jan 2017	Wave Height Low (ft)	2
D12	05 Jan 2017	High Tide (ft)	3.4
D12	05 Jan 2017	High Tide Time	1414
D12	05 Jan 2017	Low Tide (ft)	1.9
D12	05 Jan 2017	Low Tide Time	853
D12	05 Jan 2017	Comments	Kelp; Seagrass; 2 Surfers; Water clear
D12	05 Jan 2017		
D12	11 Jan 2017	Arrive Time	1053
D12	11 Jan 2017	Weather	Drizzle
D12	11 Jan 2017	Wind Speed (kts)	3.1
D12	11 Jan 2017	Wind Dir	S
D12	11 Jan 2017	Animal Life	None
D12	11 Jan 2017	Floatables	None
D12	11 Jan 2017	Water Color	Green
D12	11 Jan 2017	Current Direction	S
D12	11 Jan 2017	Wave Height Low (ft)	2
D12	11 Jan 2017	High Tide (ft)	6.7
D12	11 Jan 2017	High Tide Time	734
D12	11 Jan 2017	Low Tide (ft)	-1.6
D12	11 Jan 2017	Low Tide Time	1445
D12	11 Jan 2017	Comments	Water clear
D12	11 Jan 2017		
D12	17 Jan 2017	Arrive Time	835
D12	17 Jan 2017	Weather	Sunny
D12	17 Jan 2017	Wind Speed (kts)	2
D12	17 Jan 2017	Wind Dir	W
D12	17 Jan 2017	Animal Life	None
D12	17 Jan 2017	Floatables	None
D12	17 Jan 2017	Water Color	Green
D12	17 Jan 2017	Current Direction	W
D12	17 Jan 2017	Wave Height Low (ft)	2
D12	17 Jan 2017	High Tide (ft)	4.1
D12	17 Jan 2017	High Tide Time	1203
D12	17 Jan 2017	Low Tide (ft)	1.9
D12	17 Jan 2017	Low Tide Time	630
D12	17 Jan 2017	Comments	Kelp; Seagrass; Water turbid

Station	Date	Parameter	Value
D12	17 Jan 2017		
D12	23 Jan 2017	Arrive Time	1110
D12	23 Jan 2017	Weather	Cloudy
D12	23 Jan 2017	Wind Speed (kts)	10.6
D12	23 Jan 2017	Wind Dir	W
D12	23 Jan 2017	Animal Life	None
D12	23 Jan 2017	Floatables	None
D12	23 Jan 2017	Water Color	Green
D12	23 Jan 2017	Current Direction	N
D12	23 Jan 2017	Wave Height Low (ft)	5
D12	23 Jan 2017	High Tide (ft)	5
D12	23 Jan 2017	High Tide Time	552
D12	23 Jan 2017	Low Tide (ft)	0.1
D12	23 Jan 2017	Low Tide Time	1312
D12	23 Jan 2017	Comments	Kelp; Seagrass; Water clear
D12	23 Jan 2017		
D12	29 Jan 2017	Arrive Time	1019
D12	29 Jan 2017	Weather	Sunny
D12	29 Jan 2017	Wind Speed (kts)	2.1
D12	29 Jan 2017	Wind Dir	W
D12	29 Jan 2017	Animal Life	None
D12	29 Jan 2017	Floatables	None
D12	29 Jan 2017	Water Color	Green
D12	29 Jan 2017	Current Direction	N
D12	29 Jan 2017	Wave Height Low (ft)	3
D12	29 Jan 2017	High Tide (ft)	5.7
D12	29 Jan 2017	High Tide Time	919
D12	29 Jan 2017	Low Tide (ft)	-0.8
D12	29 Jan 2017	Low Tide Time	1618
D12	29 Jan 2017	Comments	Kelp; Seagrass; 4 Joggers; 2 Persons; Water clear
D12	29 Jan 2017		

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Kelp Stations

Table 3.1

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

Date	A1	A6	A7	C4	C5	C6	C7	C8
01 Jan 2017	4*	22*	14*	4*	3*	2*	11*	9*
02 Jan 2017	4*	22*	14*	4*	3*	2*	11*	9*
03 Jan 2017	4*	22*	14*	4*	3*	2*	11*	9*
04 Jan 2017	4*	30*	21*	4*	3*	2*	14*	12*
05 Jan 2017	4*	30*	21*	4*	3*	2*	14*	12*
06 Jan 2017	4*	19*	24*	3*	3*	2*	11*	9*
07 Jan 2017	4*	19*	24*	3*	3*	2*	11*	9*
08 Jan 2017	4*	19*	24*	3*	3*	2*	11*	9*
09 Jan 2017	4*	19*	24*	3*	3*	2*	11*	9*
10 Jan 2017	4*	19*	24*	3*	3*	2*	11*	9*
11 Jan 2017	4*	19*	24*	3*	3*	2*	11*	9*
12 Jan 2017	5*	15*	38*	4*	3*	2*	8*	7*
13 Jan 2017	4*	12*	18*	3*	4*	2*	7*	7*
14 Jan 2017	4*	12*	18*	3*	4*	2*	7*	7*
15 Jan 2017	4*	12*	18*	3*	4*	2*	7*	7*
16 Jan 2017	4*	9*	17*	2*	4*	2*	3*	4*
17 Jan 2017	8*	11*	26*	2*	3*	2*	3*	3*
18 Jan 2017	8*	11*	26*	2*	3*	2*	3*	3*
19 Jan 2017	7*	8*	19*	2*	4*	2*	4*	4*
20 Jan 2017	7*	8*	19*	2*	4*	2*	4*	4*
21 Jan 2017	7*	8*	19*	2*	4*	2*	4*	4*
22 Jan 2017	7*	8*	19*	2*	4*	2*	4*	4*
23 Jan 2017	7*	8*	19*	2*	4*	2*	4*	4*
24 Jan 2017	7*	8*	19*	2*	4*	2*	4*	4*
25 Jan 2017	12*	12*	28*	3*	5*	4*	6*	6*
26 Jan 2017	12*	12*	28*	3*	5*	4*	6*	6*
27 Jan 2017	12*	12*	28*	3*	5*	4*	6*	6*
28 Jan 2017	12*	12*	28*	3*	5*	4*	6*	6*
29 Jan 2017	17	10	19	3	4	3	5	5
30 Jan 2017	17	10	19	3	4	3	5	5
31 Jan 2017	17	10	19	3	4	3	5	5

* Geometric mean calculated using n<5

Table 3.2

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

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

* Geometric mean calculated using n<5

Table 3.3

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

Date	A1	A6	A7	C4	C5	C6	C7	C8
01 Jan 2017	2*	2*	3*	2*	2*	2*	5*	2*
02 Jan 2017	2*	2*	3*	2*	2*	2*	5*	2*
03 Jan 2017	2*	2*	3*	2*	2*	2*	5*	2*
04 Jan 2017	2*	2*	3*	2*	2*	2*	6*	2*
05 Jan 2017	2*	2*	3*	2*	2*	2*	6*	2*
06 Jan 2017	2*	2*	3*	3*	2*	2*	5*	2*
07 Jan 2017	2*	2*	3*	3*	2*	2*	5*	2*
08 Jan 2017	2*	2*	3*	3*	2*	2*	5*	2*
09 Jan 2017	2*	2*	3*	3*	2*	2*	5*	2*
10 Jan 2017	2*	2*	3*	3*	2*	2*	5*	2*
11 Jan 2017	2*	2*	3*	3*	2*	2*	5*	2*
12 Jan 2017	2*	2*	3*	3*	2*	2*	5*	2*
13 Jan 2017	3*	4*	5*	3*	2*	4*	7*	5*
14 Jan 2017	3*	4*	5*	3*	2*	4*	7*	5*
15 Jan 2017	3*	4	5*	3*	2*	4*	7*	4
16 Jan 2017	3*	4*	7*	3*	2*	5*	7*	4*
17 Jan 2017	4*	5	6*	3*	2*	4*	8*	4
18 Jan 2017	4*	5	6*	3*	2*	4*	8*	4
19 Jan 2017	5*	7*	5*	3*	2*	5*	8*	4*
20 Jan 2017	5*	7*	5*	3*	2*	5*	8*	4*
21 Jan 2017	5*	7*	5*	3*	2*	5*	8*	4*
22 Jan 2017	5*	7*	5*	3*	2*	5*	8*	4*
23 Jan 2017	5*	7*	5*	3*	2*	5*	8*	4*
24 Jan 2017	5*	7*	5*	3*	2*	5*	8*	4*
25 Jan 2017	6*	7	6*	3*	2*	4*	8*	5
26 Jan 2017	6*	7	6*	3*	2*	4*	8*	5
27 Jan 2017	6*	7	6*	3*	2*	4*	8*	5
28 Jan 2017	6*	7	6*	3*	2*	4*	8*	5
29 Jan 2017	8	6	5	3	2	4	6	4
30 Jan 2017	8	6	5	3	2	4	6	4
31 Jan 2017	8	6	5	3	2	4	6	4

* Geometric mean calculated using n<5

Table 3.4

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

Date	A1	A6	A7	C4	C5	C6	C7	C8
06 Jan 2017	IC	IC	IC	IC	IC	IC	IC	IC
13 Jan 2017	IC	IC	IC	IC	IC	IC	IC	IC
17 Jan 2017	IC	IC	IC	IC	IC	IC	IC	IC
25 Jan 2017	IC	IC	IC	IC	IC	IC	IC	IC
29 Jan 2017	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 Ocean Plan's Single Sample Maximum standard for fecal coliform bacteria, which states that fecal coliform density shall not exceed 400 CFU/100 mL.

Date	A1	A6	A7	C4	C5	C6	C7	C8
06 Jan 2017	IC	IC	IC	IC	IC	IC	IC	IC
13 Jan 2017	IC	IC	IC	IC	IC	IC	IC	IC
17 Jan 2017	IC	IC	IC	IC	IC	IC	IC	IC
25 Jan 2017	IC	IC	IC	IC	IC	IC	IC	IC
29 Jan 2017	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 Ocean Plan's Single Sample Maximum standard for *Enterococcus* bacteria, which states that *Enterococcus* density shall not exceed 104 CFU/100 mL.

Date	A1	A6	A7	C4	C5	C6	C7	C8
06 Jan 2017	IC	IC	IC	IC	IC	IC	IC	IC
13 Jan 2017	IC	E	IC	IC	IC	IC	IC	E
15 Jan 2017	ns	IC	ns	ns	ns	ns	ns	IC
17 Jan 2017	IC	IC	IC	IC	IC	IC	IC	IC
25 Jan 2017	IC	IC	IC	IC	IC	IC	IC	IC
29 Jan 2017	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 Ocean Plan's Single Sample Maximum standard for total coliform bacteria and the fecal/total coliform ratio (F:T), which states that total coliform density shall not exceed 1,000 CFU/100 mL when F:T > 0.1.

Date	A1	A6	A7	C4	C5	C6	C7	C8
06 Jan 2017	IC	IC	IC	IC	IC	IC	IC	IC
13 Jan 2017	IC	IC	IC	IC	IC	IC	IC	IC
17 Jan 2017	IC	IC	IC	IC	IC	IC	IC	IC
25 Jan 2017	IC	IC	IC	IC	IC	IC	IC	IC
29 Jan 2017	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 mg/L; values for temperature (Temp,°C), transmissivity (XMS, %), dissolved oxygen (DO, mg/L), salinity (Sal, ppt) and pH were extracted from CTD profile data for depths closest to those at which the bacteriological samples were collected. Comments follow the data summary.

Station	Date	Time	Depth	Total	Fecal	Entero	F:T	N-NH3	Temp	XMS	DO	Sal	pH
A1	06 Jan 2017	817	1	<2	<2	4e	1.00	ns	14.4	80.74	7.6	33.10	8.1
A1	06 Jan 2017	817	12	2e	<2	<2	1.00	ns	14.6	84.99	7.9	33.23	8.1
A1	06 Jan 2017	817	18	6e	2e	<2	0.33	ns	14.0	86.43	7.2	33.27	8.0
A1	13 Jan 2017	816	1	<2	<2	<2	1.00	ns	15.0	87.23	8.0	33.23	8.1
A1	13 Jan 2017	816	12	<2	<2	4e	1.00	ns	14.6	86.62	7.0	33.31	8.1
A1	13 Jan 2017	816	18	<2	<2	6e	1.00	ns	13.8	86.77	6.1	33.33	8.0
A1	17 Jan 2017	755	1	4e	2e	6e	0.50	ns	14.9	87.20	7.8	33.26	8.1
A1	17 Jan 2017	755	12	78	4e	24e	0.05	ns	14.3	86.70	6.9	33.31	8.1
A1	17 Jan 2017	755	18	88	10e	2e	0.11	ns	14.1	84.83	6.8	33.32	8.1
A1	25 Jan 2017	825	1	26e	2e	2e	0.08	ns	14.3	67.80	7.7	33.07	8.1
A1	25 Jan 2017	825	12	28e	<2	12e	0.07	ns	14.4	68.74	7.4	33.19	8.1
A1	25 Jan 2017	825	18	120e	12e	26e	0.10	ns	14.5	60.03	6.9	33.27	8.1
A1	29 Jan 2017	747	1	<2	<2	4e	1.00	ns	14.5	82.11	7.8	33.21	8.1
A1	29 Jan 2017	747	12	<2	<2	2e	1.00	ns	14.3	78.05	7.4	33.20	8.1
A1	29 Jan 2017	747	18	180e	16e	42	0.09	ns	12.5	72.90	4.9	33.41	8.0
C4	06 Jan 2017	1019	1	<2	<2	<2	1.00	ns	14.5	80.15	7.8	33.05	8.1
C4	06 Jan 2017	1019	3	<2	2e	<2	1.00	ns	14.5	66.66	7.6	33.07	8.1
C4	06 Jan 2017	1019	9	<2	<2	20e	1.00	ns	14.4	77.87	6.9	33.10	8.1
C4	13 Jan 2017	957	1	<2	<2	<2	1.00	ns	14.9	82.52	7.9	33.19	8.1
C4	13 Jan 2017	957	3	<2	<2	<2	1.00	ns	15.0	84.41	7.8	33.20	8.1
C4	13 Jan 2017	957	9	<2	<2	<2	1.00	ns	14.8	81.37	7.1	33.27	8.1
C4	17 Jan 2017	1031	1	<2	<2	<2	1.00	ns	14.9	79.37	8.0	33.18	8.1
C4	17 Jan 2017	1031	3	<2	<2	<2	1.00	ns	14.8	77.05	7.9	33.19	8.1
C4	17 Jan 2017	1031	9	<2	<2	<2	1.00	ns	14.7	64.89	7.4	33.22	8.1
C4	25 Jan 2017	956	1	<2	<2	2e	1.00	ns	14.3	55.13	8.0	33.13	8.1
C4	25 Jan 2017	956	3	2e	4e	4e	2.00	ns	14.3	53.02	7.9	33.13	8.1
C4	25 Jan 2017	956	9	20e	<2	2e	0.10	ns	14.2	42.24	7.6	33.13	8.1
C4	29 Jan 2017	934	1	<2	4e	<2	2.00	ns	14.2	68.02	7.5	33.06	8.1
C4	29 Jan 2017	934	3	2e	<2	<2	1.00	ns	14.1	67.01	7.5	33.06	8.1
C4	29 Jan 2017	934	9	6e	<2	<2	0.33	ns	14.1	65.42	5.7	33.26	8.1
C5	06 Jan 2017	959	1	2e	<2	<2	1.00	ns	14.5	79.53	7.6	33.07	8.1
C5	06 Jan 2017	959	3	2e	<2	<2	1.00	ns	14.5	80.29	8.2	33.08	8.1
C5	06 Jan 2017	959	9	<2	<2	<2	1.00	ns	14.3	79.70	6.3	33.16	8.1
C5	13 Jan 2017	945	1	<20	4e	2e	0.20	ns	14.7	55.56	7.8	33.11	8.1
C5	13 Jan 2017	945	3	<20	<2	<2	0.10	ns	14.7	58.33	7.5	33.13	8.1

Station	Date	Time	Depth	Total	Fecal	Entero	F:T	N-NH3	Temp	XMS	DO	Sal	pH
C5	13 Jan 2017	945	9	4e	<2	<2	0.50	ns	14.5	72.43	6.3	33.23	8.1
C5	17 Jan 2017	1018	1	<2	<2	<2	1.00	ns	14.8	75.52	7.9	33.19	8.1
C5	17 Jan 2017	1018	3	<2	<2	<2	1.00	ns	14.8	74.93	7.7	33.19	8.1
C5	17 Jan 2017	1018	9	<2	<2	<2	1.00	ns	14.7	66.59	7.0	33.19	8.1
C5	25 Jan 2017	945	1	6e	<2	<2	0.33	ns	14.5	61.93	7.8	33.18	8.1
C5	25 Jan 2017	945	3	6e	<2	<2	0.33	ns	14.4	60.82	7.7	33.18	8.1
C5	25 Jan 2017	945	9	<20	<2	6e	0.10	ns	14.2	41.38	7.8	33.17	8.1
C5	29 Jan 2017	923	1	<2	<2	<2	1.00	ns	14.4	74.30	7.3	33.22	8.1
C5	29 Jan 2017	923	3	2e	<2	<2	1.00	ns	14.4	65.47	7.2	33.22	8.1
C5	29 Jan 2017	923	9	<2	<2	<2	1.00	ns	14.3	63.27	7.0	33.22	8.1
A6	06 Jan 2017	856	1	<2	<2	<2	1.00	ns	14.5	83.07	7.4	33.12	8.1
A6	06 Jan 2017	856	12	<2	<2	<2	1.00	ns	14.5	84.79	7.8	33.16	8.1
A6	06 Jan 2017	856	18	10e	2e	2e	0.20	ns	14.2	86.44	7.6	33.26	8.1
A6	13 Jan 2017	843	1	<2	<2	<2	1.00	ns	15.0	84.13	8.0	33.20	8.1
A6	13 Jan 2017	843	12	4e	<2	26e	0.50	ns	14.8	85.49	7.6	33.28	8.1
A6	13 Jan 2017	843	18	12e	<2	110	0.17	ns	14.5	85.28	7.0	33.29	8.1
A6	15 Jan 2017	740	18	ns	ns	<2	ns	ns	ns	ns	ns	ns	ns
A6	17 Jan 2017	825	1	2e	<2	6e	1.00	ns	14.9	87.47	7.9	33.23	8.1
A6	17 Jan 2017	825	12	10e	<2	<2	0.20	ns	14.6	85.33	7.1	33.28	8.1
A6	17 Jan 2017	825	18	42	<2	22e	0.05	ns	14.1	79.39	6.8	33.30	8.1
A6	25 Jan 2017	850	1	22e	2e	12e	0.09	ns	14.6	73.69	7.4	33.25	8.1
A6	25 Jan 2017	850	12	56	2e	14e	0.04	ns	14.6	68.92	7.2	33.27	8.1
A6	25 Jan 2017	850	18	58	6e	12e	0.10	ns	14.6	65.89	7.2	33.28	8.1
A6	29 Jan 2017	815	1	<2	<2	2e	1.00	ns	14.3	74.79	8.0	33.18	8.2
A6	29 Jan 2017	815	12	6e	4e	<2	0.67	ns	14.2	77.44	6.6	33.28	8.1
A6	29 Jan 2017	815	18	8e	<2	2e	0.25	ns	14.0	76.27	6.6	33.30	8.1
C6	06 Jan 2017	948	1	<2	<2	<2	1.00	ns	14.6	83.33	7.2	33.12	8.1
C6	06 Jan 2017	948	3	<2	<2	<2	1.00	ns	14.5	83.33	7.9	33.12	8.1
C6	06 Jan 2017	948	9	<2	<2	<2	1.00	ns	14.5	84.15	6.4	33.16	8.1
C6	13 Jan 2017	932	1	2e	<2	2e	1.00	ns	14.6	65.45	7.7	33.10	8.1
C6	13 Jan 2017	932	3	<2	<2	68	1.00	ns	14.5	77.24	7.7	33.13	8.1
C6	13 Jan 2017	932	9	4e	<2	22e	0.50	ns	14.3	74.21	6.4	33.23	8.1
C6	17 Jan 2017	1006	1	<2	<2	<2	1.00	ns	14.9	80.83	7.9	33.20	8.1
C6	17 Jan 2017	1006	3	<2	<2	2e	1.00	ns	14.8	80.65	7.8	33.20	8.1
C6	17 Jan 2017	1006	9	<2	<2	<2	1.00	ns	14.8	80.21	7.6	33.20	8.1
C6	25 Jan 2017	935	1	6e	2e	2e	0.33	ns	14.6	66.95	7.5	33.21	8.1
C6	25 Jan 2017	935	3	28e	<2	<2	0.07	ns	14.6	65.29	7.5	33.21	8.1
C6	25 Jan 2017	935	9	24e	<2	4e	0.08	ns	14.5	62.12	7.5	33.20	8.1
C6	29 Jan 2017	912	1	2e	<2	<2	1.00	ns	14.4	70.82	7.8	33.16	8.1
C6	29 Jan 2017	912	3	<2	<2	<2	1.00	ns	14.3	70.55	7.6	33.17	8.1
C6	29 Jan 2017	912	9	2e	<2	<2	1.00	ns	14.3	60.98	6.6	33.23	8.1

Station	Date	Time	Depth	Total	Fecal	Entero	F:T	N-NH3	Temp	XMS	DO	Sal	pH
A7	06 Jan 2017	838	1	12e	4e	<2	0.33	ns	14.4	81.22	7.7	33.12	8.1
A7	06 Jan 2017	838	12	24e	<2	2e	0.08	ns	14.4	81.49	7.2	33.11	8.1
A7	06 Jan 2017	838	18	68	2e	2e	0.03	ns	14.1	85.89	6.7	33.26	8.1
A7	13 Jan 2017	829	1	2e	<2	4e	1.00	ns	15.0	65.52	7.9	33.16	8.1
A7	13 Jan 2017	829	12	2e	<2	40	1.00	ns	14.6	88.56	7.2	33.30	8.1
A7	13 Jan 2017	829	18	2e	<2	10e	1.00	ns	13.8	85.69	6.2	33.33	8.0
A7	17 Jan 2017	814	1	<2	<2	<2	1.00	ns	14.8	83.55	7.9	33.23	8.1
A7	17 Jan 2017	814	12	90	10e	2e	0.11	ns	13.9	83.29	6.5	33.32	8.1
A7	17 Jan 2017	814	18	200e	6e	6e	0.03	ns	13.7	77.51	6.5	33.33	8.0
A7	25 Jan 2017	838	1	18e	<2	<2	0.11	ns	14.6	73.52	7.5	33.24	8.1
A7	25 Jan 2017	838	12	34e	2e	<2	0.06	ns	14.5	69.88	7.4	33.23	8.1
A7	25 Jan 2017	838	18	220e	16e	28e	0.07	ns	14.5	62.96	6.9	33.26	8.1
A7	29 Jan 2017	759	1	<2	<2	<2	1.00	ns	14.6	80.14	7.8	33.20	8.2
A7	29 Jan 2017	759	12	<2	<2	2e	1.00	ns	14.3	81.40	6.8	33.26	8.1
A7	29 Jan 2017	759	18	8e	<2	<2	0.25	ns	13.9	79.69	5.8	33.29	8.1
C7	06 Jan 2017	911	1	<2	<2	<2	1.00	ns	14.6	84.18	8.1	33.15	8.1
C7	06 Jan 2017	911	12	4e	<2	<2	0.50	ns	14.3	86.59	7.1	33.29	8.1
C7	06 Jan 2017	911	18	6e	<2	<2	0.33	ns	14.1	86.69	6.8	33.27	8.0
C7	13 Jan 2017	858	1	<2	<2	<2	1.00	ns	15.0	85.45	8.0	33.28	8.1
C7	13 Jan 2017	858	12	<2	<2	58	1.00	ns	14.9	88.76	7.2	33.29	8.1
C7	13 Jan 2017	858	18	10e	<2	<2	0.20	ns	14.0	85.86	6.7	33.31	8.0
C7	17 Jan 2017	840	1	4e	2e	16e	0.50	ns	14.9	86.55	7.9	33.22	8.1
C7	17 Jan 2017	840	12	<2	<2	22e	1.00	ns	14.8	86.62	7.8	33.22	8.1
C7	17 Jan 2017	840	18	6e	<2	<2	0.33	ns	14.5	81.65	7.1	33.27	8.1
C7	25 Jan 2017	904	1	18e	2e	6e	0.11	ns	14.5	67.16	7.7	33.17	8.1
C7	25 Jan 2017	904	12	12e	6e	8e	0.50	ns	14.5	70.91	7.4	33.19	8.1
C7	25 Jan 2017	904	18	18e	6e	14e	0.33	ns	14.6	60.29	7.2	33.27	8.1
C7	29 Jan 2017	838	1	<2	<2	<2	1.00	ns	14.4	73.77	7.8	33.18	8.2
C7	29 Jan 2017	838	12	2e	<2	<2	1.00	ns	14.3	66.24	6.7	33.27	8.1
C7	29 Jan 2017	838	18	2e	<2	2e	1.00	ns	13.9	72.40	6.0	33.32	8.1
C8	06 Jan 2017	923	1	2e	<2	<2	1.00	ns	14.8	84.50	7.4	33.20	8.1
C8	06 Jan 2017	923	12	<2	<2	<2	1.00	ns	14.7	86.20	7.3	33.30	8.1
C8	06 Jan 2017	923	18	8e	<2	<2	0.25	ns	14.1	85.92	6.9	33.28	8.1
C8	13 Jan 2017	911	1	6e	<2	16e	0.33	ns	14.9	82.94	8.0	33.23	8.1
C8	13 Jan 2017	911	12	<2	<2	6e	1.00	ns	14.9	86.98	7.7	33.29	8.1
C8	13 Jan 2017	911	18	10e	6e	120e	0.60	ns	14.5	86.64	6.6	33.29	8.1
C8	15 Jan 2017	754	18	ns	ns	<2	ns	ns	ns	ns	ns	ns	ns
C8	17 Jan 2017	850	1	<2	<2	<2	1.00	ns	14.9	82.94	7.7	33.19	8.1
C8	17 Jan 2017	850	12	<2	<2	<2	1.00	ns	14.6	82.30	7.2	33.25	8.1
C8	17 Jan 2017	850	18	<2	<2	2e	1.00	ns	14.2	81.62	6.8	33.30	8.1

Station	Date	Time	Depth	Total	Fecal	Entero	F:T	N-NH3	Temp	XMS	DO	Sal	pH
C8	25 Jan 2017	915	1	14e	<2	6e	0.14	ns	14.3	54.82	8.0	32.98	8.1
C8	25 Jan 2017	915	12	22e	4e	8e	0.18	ns	14.6	66.23	7.4	33.23	8.1
C8	25 Jan 2017	915	18	40e	2e	10e	0.05	ns	14.5	54.41	6.9	33.25	8.1
C8	29 Jan 2017	852	1	4e	<2	<2	0.50	ns	14.3	71.73	7.8	33.17	8.2
C8	29 Jan 2017	852	12	<2	<2	<2	1.00	ns	14.4	76.36	7.6	33.23	8.2
C8	29 Jan 2017	852	18	4e	<2	<2	0.50	ns	14.2	78.27	7.0	33.27	8.1

ns = not sampled
ND = no data

Comments

Station	Date	Depth	Parameter	Comments
A6	15 Jan 2017	18		Resample
C8	15 Jan 2017	18		Resample

Table 3.9

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

Station	Date	Parameter	Value
A1	06 Jan 2017	Depth (m)	18
A1	06 Jan 2017	Arrive Time	817
A1	06 Jan 2017	Depart Time	831
A1	06 Jan 2017	Air Temp (C)	14
A1	06 Jan 2017	Weather	Partly Cloudy
A1	06 Jan 2017	Visibility (mi)	9
A1	06 Jan 2017	Wind Speed (kts)	1
A1	06 Jan 2017	Wind Dir	SE
A1	06 Jan 2017	Water Color	Greenish-Blue
A1	06 Jan 2017	Wave Ht Low (ft)	3
A1	06 Jan 2017	Wave Period (sec)	16
A1	06 Jan 2017	Sea State	Calm
A1	06 Jan 2017	High Tide (ft)	3.2
A1	06 Jan 2017	High Tide Time	1556
A1	06 Jan 2017	Low Tide (ft)	1.3
A1	06 Jan 2017	Low Tide Time	1022
A1	06 Jan 2017	Comments	
A1	13 Jan 2017	Depth (m)	19
A1	13 Jan 2017	Arrive Time	816
A1	13 Jan 2017	Depart Time	820
A1	13 Jan 2017	Air Temp (C)	13
A1	13 Jan 2017	Weather	Rain
A1	13 Jan 2017	Visibility (mi)	6
A1	13 Jan 2017	Wind Speed (kts)	0
A1	13 Jan 2017	Wind Dir	
A1	13 Jan 2017	Water Color	Green
A1	13 Jan 2017	Wave Ht Low (ft)	6
A1	13 Jan 2017	Wave Period (sec)	13
A1	13 Jan 2017	Sea State	Confused swell
A1	13 Jan 2017	High Tide (ft)	6.5
A1	13 Jan 2017	High Tide Time	902
A1	13 Jan 2017	Low Tide (ft)	-1.4
A1	13 Jan 2017	Low Tide Time	1608
A1	13 Jan 2017	Comments	Kelp; Lobster floats
A1	17 Jan 2017	Depth (m)	19
A1	17 Jan 2017	Arrive Time	755
A1	17 Jan 2017	Depart Time	807
A1	17 Jan 2017	Air Temp (C)	12
A1	17 Jan 2017	Weather	Clear
A1	17 Jan 2017	Visibility (mi)	9
A1	17 Jan 2017	Wind Speed (kts)	8
A1	17 Jan 2017	Wind Dir	SE
A1	17 Jan 2017	Water Color	Bluish-Green
A1	17 Jan 2017	Wave Ht Low (ft)	3
A1	17 Jan 2017	Wave Period (sec)	9
A1	17 Jan 2017	Sea State	Calm
A1	17 Jan 2017	High Tide (ft)	4.1
A1	17 Jan 2017	High Tide Time	1203
A1	17 Jan 2017	Low Tide (ft)	1.9

Station	Date	Parameter	Value
A1	17 Jan 2017	Low Tide Time	630
A1	17 Jan 2017	Comments	
A1	25 Jan 2017	Depth (m)	18
A1	25 Jan 2017	Arrive Time	825
A1	25 Jan 2017	Depart Time	829
A1	25 Jan 2017	Air Temp (C)	10
A1	25 Jan 2017	Weather	Clear
A1	25 Jan 2017	Visibility (mi)	12
A1	25 Jan 2017	Wind Speed (kts)	6
A1	25 Jan 2017	Wind Dir	NW
A1	25 Jan 2017	Water Color	Green
A1	25 Jan 2017	Wave Ht Low (ft)	8
A1	25 Jan 2017	Wave Period (sec)	9
A1	25 Jan 2017	Sea State	Calm
A1	25 Jan 2017	High Tide (ft)	5.6
A1	25 Jan 2017	High Tide Time	703
A1	25 Jan 2017	Low Tide (ft)	-0.6
A1	25 Jan 2017	Low Tide Time	1413
A1	25 Jan 2017	Comments	Kelp; Lobster floats
A1	29 Jan 2017	Depth (m)	20
A1	29 Jan 2017	Arrive Time	747
A1	29 Jan 2017	Depart Time	751
A1	29 Jan 2017	Air Temp (C)	15
A1	29 Jan 2017	Weather	Clear
A1	29 Jan 2017	Visibility (mi)	8
A1	29 Jan 2017	Wind Speed (kts)	3
A1	29 Jan 2017	Wind Dir	NE
A1	29 Jan 2017	Water Color	Green
A1	29 Jan 2017	Wave Ht Low (ft)	3
A1	29 Jan 2017	Wave Period (sec)	9
A1	29 Jan 2017	Sea State	Calm
A1	29 Jan 2017	High Tide (ft)	5.7
A1	29 Jan 2017	High Tide Time	919
A1	29 Jan 2017	Low Tide (ft)	-0.8
A1	29 Jan 2017	Low Tide Time	1618
A1	29 Jan 2017	Comments	Kelp
C4	06 Jan 2017	Depth (m)	9
C4	06 Jan 2017	Arrive Time	1019
C4	06 Jan 2017	Depart Time	1024
C4	06 Jan 2017	Air Temp (C)	14
C4	06 Jan 2017	Weather	Clear
C4	06 Jan 2017	Visibility (mi)	9
C4	06 Jan 2017	Wind Speed (kts)	1
C4	06 Jan 2017	Wind Dir	SE
C4	06 Jan 2017	Water Color	Green
C4	06 Jan 2017	Wave Ht Low (ft)	3
C4	06 Jan 2017	Wave Period (sec)	16
C4	06 Jan 2017	Sea State	Calm
C4	06 Jan 2017	High Tide (ft)	3.2
C4	06 Jan 2017	High Tide Time	1556
C4	06 Jan 2017	Low Tide (ft)	1.3
C4	06 Jan 2017	Low Tide Time	1022

Station	Date	Parameter	Value
C4	06 Jan 2017	Comments	Kelp
C4	13 Jan 2017	Depth (m)	12
C4	13 Jan 2017	Arrive Time	957
C4	13 Jan 2017	Depart Time	1001
C4	13 Jan 2017	Air Temp (C)	14
C4	13 Jan 2017	Weather	Partly Cloudy
C4	13 Jan 2017	Visibility (mi)	9
C4	13 Jan 2017	Wind Speed (kts)	8
C4	13 Jan 2017	Wind Dir	E
C4	13 Jan 2017	Water Color	Green
C4	13 Jan 2017	Wave Ht Low (ft)	6
C4	13 Jan 2017	Wave Period (sec)	4
C4	13 Jan 2017	Sea State	Confused swell
C4	13 Jan 2017	High Tide (ft)	6.5
C4	13 Jan 2017	High Tide Time	902
C4	13 Jan 2017	Low Tide (ft)	-1.4
C4	13 Jan 2017	Low Tide Time	1608
C4	13 Jan 2017	Comments	Kelp; Lobster floats
C4	17 Jan 2017	Depth (m)	10
C4	17 Jan 2017	Arrive Time	1031
C4	17 Jan 2017	Depart Time	1035
C4	17 Jan 2017	Air Temp (C)	13
C4	17 Jan 2017	Weather	Clear
C4	17 Jan 2017	Visibility (mi)	9
C4	17 Jan 2017	Wind Speed (kts)	4
C4	17 Jan 2017	Wind Dir	N
C4	17 Jan 2017	Water Color	Green
C4	17 Jan 2017	Wave Ht Low (ft)	3
C4	17 Jan 2017	Wave Period (sec)	13
C4	17 Jan 2017	Sea State	Calm
C4	17 Jan 2017	High Tide (ft)	4.1
C4	17 Jan 2017	High Tide Time	1203
C4	17 Jan 2017	Low Tide (ft)	1.9
C4	17 Jan 2017	Low Tide Time	630
C4	17 Jan 2017	Comments	
C4	25 Jan 2017	Depth (m)	9
C4	25 Jan 2017	Arrive Time	956
C4	25 Jan 2017	Depart Time	959
C4	25 Jan 2017	Air Temp (C)	11
C4	25 Jan 2017	Weather	Clear
C4	25 Jan 2017	Visibility (mi)	12
C4	25 Jan 2017	Wind Speed (kts)	2
C4	25 Jan 2017	Wind Dir	SE
C4	25 Jan 2017	Water Color	Green
C4	25 Jan 2017	Wave Ht Low (ft)	8
C4	25 Jan 2017	Wave Period (sec)	9
C4	25 Jan 2017	Sea State	Calm
C4	25 Jan 2017	High Tide (ft)	5.6
C4	25 Jan 2017	High Tide Time	703
C4	25 Jan 2017	Low Tide (ft)	-0.6
C4	25 Jan 2017	Low Tide Time	1413
C4	25 Jan 2017	Comments	Kelp; Seagrass

Station	Date	Parameter	Value
C4	29 Jan 2017	Depth (m)	11
C4	29 Jan 2017	Arrive Time	934
C4	29 Jan 2017	Depart Time	938
C4	29 Jan 2017	Air Temp (C)	15
C4	29 Jan 2017	Weather	Clear
C4	29 Jan 2017	Visibility (mi)	14
C4	29 Jan 2017	Wind Speed (kts)	2
C4	29 Jan 2017	Wind Dir	E
C4	29 Jan 2017	Water Color	Green
C4	29 Jan 2017	Wave Ht Low (ft)	3
C4	29 Jan 2017	Wave Period (sec)	9
C4	29 Jan 2017	Sea State	Calm
C4	29 Jan 2017	High Tide (ft)	5.7
C4	29 Jan 2017	High Tide Time	919
C4	29 Jan 2017	Low Tide (ft)	-0.8
C4	29 Jan 2017	Low Tide Time	1618
C4	29 Jan 2017	Comments	Lobster floats
C5	06 Jan 2017	Depth (m)	9
C5	06 Jan 2017	Arrive Time	959
C5	06 Jan 2017	Depart Time	1011
C5	06 Jan 2017	Air Temp (C)	14
C5	06 Jan 2017	Weather	Clear
C5	06 Jan 2017	Visibility (mi)	9
C5	06 Jan 2017	Wind Speed (kts)	3
C5	06 Jan 2017	Wind Dir	E
C5	06 Jan 2017	Water Color	Green
C5	06 Jan 2017	Wave Ht Low (ft)	3
C5	06 Jan 2017	Wave Period (sec)	16
C5	06 Jan 2017	Sea State	Calm
C5	06 Jan 2017	High Tide (ft)	3.2
C5	06 Jan 2017	High Tide Time	1556
C5	06 Jan 2017	Low Tide (ft)	1.3
C5	06 Jan 2017	Low Tide Time	1022
C5	06 Jan 2017	Comments	Kelp
C5	13 Jan 2017	Depth (m)	11
C5	13 Jan 2017	Arrive Time	945
C5	13 Jan 2017	Depart Time	949
C5	13 Jan 2017	Air Temp (C)	13
C5	13 Jan 2017	Weather	Overcast
C5	13 Jan 2017	Visibility (mi)	9
C5	13 Jan 2017	Wind Speed (kts)	5
C5	13 Jan 2017	Wind Dir	N
C5	13 Jan 2017	Water Color	Green
C5	13 Jan 2017	Wave Ht Low (ft)	6
C5	13 Jan 2017	Wave Period (sec)	4
C5	13 Jan 2017	Sea State	Confused swell
C5	13 Jan 2017	High Tide (ft)	6.5
C5	13 Jan 2017	High Tide Time	902
C5	13 Jan 2017	Low Tide (ft)	-1.4
C5	13 Jan 2017	Low Tide Time	1608
C5	13 Jan 2017	Comments	Kelp

Station	Date	Parameter	Value
C5	17 Jan 2017	Depth (m)	9
C5	17 Jan 2017	Arrive Time	1018
C5	17 Jan 2017	Depart Time	1025
C5	17 Jan 2017	Air Temp (C)	14
C5	17 Jan 2017	Weather	Clear
C5	17 Jan 2017	Visibility (mi)	9
C5	17 Jan 2017	Wind Speed (kts)	3
C5	17 Jan 2017	Wind Dir	W
C5	17 Jan 2017	Water Color	Green
C5	17 Jan 2017	Wave Ht Low (ft)	3
C5	17 Jan 2017	Wave Period (sec)	13
C5	17 Jan 2017	Sea State	Calm
C5	17 Jan 2017	High Tide (ft)	4.1
C5	17 Jan 2017	High Tide Time	1203
C5	17 Jan 2017	Low Tide (ft)	1.9
C5	17 Jan 2017	Low Tide Time	630
C5	17 Jan 2017	Comments	
C5	25 Jan 2017	Depth (m)	9
C5	25 Jan 2017	Arrive Time	945
C5	25 Jan 2017	Depart Time	948
C5	25 Jan 2017	Air Temp (C)	12
C5	25 Jan 2017	Weather	Clear
C5	25 Jan 2017	Visibility (mi)	12
C5	25 Jan 2017	Wind Speed (kts)	0
C5	25 Jan 2017	Wind Dir	
C5	25 Jan 2017	Water Color	Green
C5	25 Jan 2017	Wave Ht Low (ft)	8
C5	25 Jan 2017	Wave Period (sec)	9
C5	25 Jan 2017	Sea State	Calm
C5	25 Jan 2017	High Tide (ft)	5.6
C5	25 Jan 2017	High Tide Time	703
C5	25 Jan 2017	Low Tide (ft)	-0.6
C5	25 Jan 2017	Low Tide Time	1413
C5	25 Jan 2017	Comments	floatables on surface; Kelp; Seagrass
C5	29 Jan 2017	Depth (m)	10
C5	29 Jan 2017	Arrive Time	923
C5	29 Jan 2017	Depart Time	927
C5	29 Jan 2017	Air Temp (C)	15
C5	29 Jan 2017	Weather	Clear
C5	29 Jan 2017	Visibility (mi)	14
C5	29 Jan 2017	Wind Speed (kts)	3
C5	29 Jan 2017	Wind Dir	E
C5	29 Jan 2017	Water Color	Green
C5	29 Jan 2017	Wave Ht Low (ft)	3
C5	29 Jan 2017	Wave Period (sec)	9
C5	29 Jan 2017	Sea State	Calm
C5	29 Jan 2017	High Tide (ft)	5.7
C5	29 Jan 2017	High Tide Time	919
C5	29 Jan 2017	Low Tide (ft)	-0.8
C5	29 Jan 2017	Low Tide Time	1618
C5	29 Jan 2017	Comments	
A6	06 Jan 2017	Depth (m)	18

Station	Date	Parameter	Value
A6	06 Jan 2017	Arrive Time	856
A6	06 Jan 2017	Depart Time	901
A6	06 Jan 2017	Air Temp (C)	13
A6	06 Jan 2017	Weather	Partly Cloudy
A6	06 Jan 2017	Visibility (mi)	9
A6	06 Jan 2017	Wind Speed (kts)	2
A6	06 Jan 2017	Wind Dir	NE
A6	06 Jan 2017	Water Color	Greenish-Blue
A6	06 Jan 2017	Wave Ht Low (ft)	3
A6	06 Jan 2017	Wave Period (sec)	16
A6	06 Jan 2017	Sea State	Calm
A6	06 Jan 2017	High Tide (ft)	3.2
A6	06 Jan 2017	High Tide Time	1556
A6	06 Jan 2017	Low Tide (ft)	1.3
A6	06 Jan 2017	Low Tide Time	1022
A6	06 Jan 2017	Comments	
A6	13 Jan 2017	Depth (m)	19
A6	13 Jan 2017	Arrive Time	843
A6	13 Jan 2017	Depart Time	847
A6	13 Jan 2017	Air Temp (C)	13
A6	13 Jan 2017	Weather	Overcast
A6	13 Jan 2017	Visibility (mi)	6
A6	13 Jan 2017	Wind Speed (kts)	5
A6	13 Jan 2017	Wind Dir	E
A6	13 Jan 2017	Water Color	Bluish-Green
A6	13 Jan 2017	Wave Ht Low (ft)	6
A6	13 Jan 2017	Wave Period (sec)	4
A6	13 Jan 2017	Sea State	Confused swell
A6	13 Jan 2017	High Tide (ft)	6.5
A6	13 Jan 2017	High Tide Time	902
A6	13 Jan 2017	Low Tide (ft)	-1.4
A6	13 Jan 2017	Low Tide Time	1608
A6	13 Jan 2017	Comments	Kelp; Kelp debris
A6	15 Jan 2017	Depth (m)	18
A6	15 Jan 2017	Arrive Time	740
A6	15 Jan 2017	Depart Time	743
A6	15 Jan 2017	Air Temp (C)	13
A6	15 Jan 2017	Weather	Partly Cloudy
A6	15 Jan 2017	Visibility (mi)	8
A6	15 Jan 2017	Wind Speed (kts)	11
A6	15 Jan 2017	Wind Dir	SE
A6	15 Jan 2017	Water Color	Greenish-Blue
A6	15 Jan 2017	Wave Ht Low (ft)	4
A6	15 Jan 2017	Wave Period (sec)	11
A6	15 Jan 2017	Sea State	Confused swell
A6	15 Jan 2017	High Tide (ft)	5.5
A6	15 Jan 2017	High Tide Time	1028
A6	15 Jan 2017	Low Tide (ft)	1.5
A6	15 Jan 2017	Low Tide Time	435
A6	15 Jan 2017	Comments	none
A6	17 Jan 2017	Depth (m)	18
A6	17 Jan 2017	Arrive Time	825

Station	Date	Parameter	Value
A6	17 Jan 2017	Depart Time	832
A6	17 Jan 2017	Air Temp (C)	13
A6	17 Jan 2017	Weather	Clear
A6	17 Jan 2017	Visibility (mi)	9
A6	17 Jan 2017	Wind Speed (kts)	4
A6	17 Jan 2017	Wind Dir	SE
A6	17 Jan 2017	Water Color	Blue
A6	17 Jan 2017	Wave Ht Low (ft)	3
A6	17 Jan 2017	Wave Period (sec)	13
A6	17 Jan 2017	Sea State	Calm
A6	17 Jan 2017	High Tide (ft)	4.1
A6	17 Jan 2017	High Tide Time	1203
A6	17 Jan 2017	Low Tide (ft)	1.9
A6	17 Jan 2017	Low Tide Time	630
A6	17 Jan 2017	Comments	
A6	25 Jan 2017	Depth (m)	19
A6	25 Jan 2017	Arrive Time	850
A6	25 Jan 2017	Depart Time	855
A6	25 Jan 2017	Air Temp (C)	11
A6	25 Jan 2017	Weather	Clear
A6	25 Jan 2017	Visibility (mi)	12
A6	25 Jan 2017	Wind Speed (kts)	3
A6	25 Jan 2017	Wind Dir	NE
A6	25 Jan 2017	Water Color	Green
A6	25 Jan 2017	Wave Ht Low (ft)	8
A6	25 Jan 2017	Wave Period (sec)	9
A6	25 Jan 2017	Sea State	Calm
A6	25 Jan 2017	High Tide (ft)	5.6
A6	25 Jan 2017	High Tide Time	703
A6	25 Jan 2017	Low Tide (ft)	-0.6
A6	25 Jan 2017	Low Tide Time	1413
A6	25 Jan 2017	Comments	Kelp; Lobster floats
A6	29 Jan 2017	Depth (m)	18
A6	29 Jan 2017	Arrive Time	815
A6	29 Jan 2017	Depart Time	823
A6	29 Jan 2017	Air Temp (C)	14
A6	29 Jan 2017	Weather	Clear
A6	29 Jan 2017	Visibility (mi)	14
A6	29 Jan 2017	Wind Speed (kts)	3
A6	29 Jan 2017	Wind Dir	NW
A6	29 Jan 2017	Water Color	Green
A6	29 Jan 2017	Wave Ht Low (ft)	3
A6	29 Jan 2017	Wave Period (sec)	9
A6	29 Jan 2017	Sea State	Calm
A6	29 Jan 2017	High Tide (ft)	5.7
A6	29 Jan 2017	High Tide Time	919
A6	29 Jan 2017	Low Tide (ft)	-0.8
A6	29 Jan 2017	Low Tide Time	1618
A6	29 Jan 2017	Comments	Kelp
C6	06 Jan 2017	Depth (m)	9
C6	06 Jan 2017	Arrive Time	948
C6	06 Jan 2017	Depart Time	951

Station	Date	Parameter	Value
C6	06 Jan 2017	Air Temp (C)	14
C6	06 Jan 2017	Weather	Clear
C6	06 Jan 2017	Visibility (mi)	9
C6	06 Jan 2017	Wind Speed (kts)	1
C6	06 Jan 2017	Wind Dir	E
C6	06 Jan 2017	Water Color	Green
C6	06 Jan 2017	Wave Ht Low (ft)	3
C6	06 Jan 2017	Wave Period (sec)	16
C6	06 Jan 2017	Sea State	Calm
C6	06 Jan 2017	High Tide (ft)	3.2
C6	06 Jan 2017	High Tide Time	1556
C6	06 Jan 2017	Low Tide (ft)	1.3
C6	06 Jan 2017	Low Tide Time	1022
C6	06 Jan 2017	Comments	
C6	13 Jan 2017	Depth (m)	11
C6	13 Jan 2017	Arrive Time	932
C6	13 Jan 2017	Depart Time	936
C6	13 Jan 2017	Air Temp (C)	13
C6	13 Jan 2017	Weather	Overcast
C6	13 Jan 2017	Visibility (mi)	9
C6	13 Jan 2017	Wind Speed (kts)	3
C6	13 Jan 2017	Wind Dir	SE
C6	13 Jan 2017	Water Color	Green
C6	13 Jan 2017	Wave Ht Low (ft)	6
C6	13 Jan 2017	Wave Period (sec)	4
C6	13 Jan 2017	Sea State	Confused swell
C6	13 Jan 2017	High Tide (ft)	6.5
C6	13 Jan 2017	High Tide Time	902
C6	13 Jan 2017	Low Tide (ft)	-1.4
C6	13 Jan 2017	Low Tide Time	1608
C6	13 Jan 2017	Comments	Kelp; Seagrass
C6	17 Jan 2017	Depth (m)	9
C6	17 Jan 2017	Arrive Time	1006
C6	17 Jan 2017	Depart Time	1009
C6	17 Jan 2017	Air Temp (C)	14
C6	17 Jan 2017	Weather	Clear
C6	17 Jan 2017	Visibility (mi)	9
C6	17 Jan 2017	Wind Speed (kts)	3
C6	17 Jan 2017	Wind Dir	S
C6	17 Jan 2017	Water Color	Green
C6	17 Jan 2017	Wave Ht Low (ft)	3
C6	17 Jan 2017	Wave Period (sec)	13
C6	17 Jan 2017	Sea State	Calm
C6	17 Jan 2017	High Tide (ft)	4.1
C6	17 Jan 2017	High Tide Time	1203
C6	17 Jan 2017	Low Tide (ft)	1.9
C6	17 Jan 2017	Low Tide Time	630
C6	17 Jan 2017	Comments	
C6	25 Jan 2017	Depth (m)	10
C6	25 Jan 2017	Arrive Time	935
C6	25 Jan 2017	Depart Time	939
C6	25 Jan 2017	Air Temp (C)	12

Station	Date	Parameter	Value
C6	25 Jan 2017	Weather	Clear
C6	25 Jan 2017	Visibility (mi)	12
C6	25 Jan 2017	Wind Speed (kts)	0
C6	25 Jan 2017	Wind Dir	
C6	25 Jan 2017	Water Color	Green
C6	25 Jan 2017	Wave Ht Low (ft)	8
C6	25 Jan 2017	Wave Period (sec)	9
C6	25 Jan 2017	Sea State	Calm
C6	25 Jan 2017	High Tide (ft)	5.6
C6	25 Jan 2017	High Tide Time	703
C6	25 Jan 2017	Low Tide (ft)	-0.6
C6	25 Jan 2017	Low Tide Time	1413
C6	25 Jan 2017	Comments	Kelp; Seagrass
C6	29 Jan 2017	Depth (m)	10
C6	29 Jan 2017	Arrive Time	912
C6	29 Jan 2017	Depart Time	915
C6	29 Jan 2017	Air Temp (C)	15
C6	29 Jan 2017	Weather	Clear
C6	29 Jan 2017	Visibility (mi)	14
C6	29 Jan 2017	Wind Speed (kts)	2
C6	29 Jan 2017	Wind Dir	N
C6	29 Jan 2017	Water Color	Green
C6	29 Jan 2017	Wave Ht Low (ft)	3
C6	29 Jan 2017	Wave Period (sec)	9
C6	29 Jan 2017	Sea State	Calm
C6	29 Jan 2017	High Tide (ft)	5.7
C6	29 Jan 2017	High Tide Time	919
C6	29 Jan 2017	Low Tide (ft)	-0.8
C6	29 Jan 2017	Low Tide Time	1618
C6	29 Jan 2017	Comments	Kelp
A7	06 Jan 2017	Depth (m)	18
A7	06 Jan 2017	Arrive Time	838
A7	06 Jan 2017	Depart Time	848
A7	06 Jan 2017	Air Temp (C)	13
A7	06 Jan 2017	Weather	Partly Cloudy
A7	06 Jan 2017	Visibility (mi)	9
A7	06 Jan 2017	Wind Speed (kts)	3
A7	06 Jan 2017	Wind Dir	S
A7	06 Jan 2017	Water Color	Greenish-Blue
A7	06 Jan 2017	Wave Ht Low (ft)	3
A7	06 Jan 2017	Wave Period (sec)	16
A7	06 Jan 2017	Sea State	Calm
A7	06 Jan 2017	High Tide (ft)	3.2
A7	06 Jan 2017	High Tide Time	1556
A7	06 Jan 2017	Low Tide (ft)	1.3
A7	06 Jan 2017	Low Tide Time	1022
A7	06 Jan 2017	Comments	
A7	13 Jan 2017	Depth (m)	21
A7	13 Jan 2017	Arrive Time	829
A7	13 Jan 2017	Depart Time	832
A7	13 Jan 2017	Air Temp (C)	13
A7	13 Jan 2017	Weather	Overcast

Station	Date	Parameter	Value
A7	13 Jan 2017	Visibility (mi)	6
A7	13 Jan 2017	Wind Speed (kts)	0
A7	13 Jan 2017	Wind Dir	
A7	13 Jan 2017	Water Color	Green
A7	13 Jan 2017	Wave Ht Low (ft)	6
A7	13 Jan 2017	Wave Period (sec)	13
A7	13 Jan 2017	Sea State	Confused swell
A7	13 Jan 2017	High Tide (ft)	6.5
A7	13 Jan 2017	High Tide Time	902
A7	13 Jan 2017	Low Tide (ft)	-1.4
A7	13 Jan 2017	Low Tide Time	1608
A7	13 Jan 2017	Comments	Kelp; Lobster floats
A7	17 Jan 2017	Depth (m)	18
A7	17 Jan 2017	Arrive Time	814
A7	17 Jan 2017	Depart Time	818
A7	17 Jan 2017	Air Temp (C)	13
A7	17 Jan 2017	Weather	Clear
A7	17 Jan 2017	Visibility (mi)	9
A7	17 Jan 2017	Wind Speed (kts)	7
A7	17 Jan 2017	Wind Dir	NE
A7	17 Jan 2017	Water Color	Blue
A7	17 Jan 2017	Wave Ht Low (ft)	3
A7	17 Jan 2017	Wave Period (sec)	13
A7	17 Jan 2017	Sea State	Calm
A7	17 Jan 2017	High Tide (ft)	4.1
A7	17 Jan 2017	High Tide Time	1203
A7	17 Jan 2017	Low Tide (ft)	1.9
A7	17 Jan 2017	Low Tide Time	630
A7	17 Jan 2017	Comments	
A7	25 Jan 2017	Depth (m)	18
A7	25 Jan 2017	Arrive Time	838
A7	25 Jan 2017	Depart Time	841
A7	25 Jan 2017	Air Temp (C)	10
A7	25 Jan 2017	Weather	Clear
A7	25 Jan 2017	Visibility (mi)	12
A7	25 Jan 2017	Wind Speed (kts)	2
A7	25 Jan 2017	Wind Dir	NE
A7	25 Jan 2017	Water Color	Green
A7	25 Jan 2017	Wave Ht Low (ft)	8
A7	25 Jan 2017	Wave Period (sec)	9
A7	25 Jan 2017	Sea State	Calm
A7	25 Jan 2017	High Tide (ft)	5.6
A7	25 Jan 2017	High Tide Time	703
A7	25 Jan 2017	Low Tide (ft)	-0.6
A7	25 Jan 2017	Low Tide Time	1413
A7	25 Jan 2017	Comments	Kelp
A7	29 Jan 2017	Depth (m)	19
A7	29 Jan 2017	Arrive Time	759
A7	29 Jan 2017	Depart Time	803
A7	29 Jan 2017	Air Temp (C)	14
A7	29 Jan 2017	Weather	Clear
A7	29 Jan 2017	Visibility (mi)	8

Station	Date	Parameter	Value
A7	29 Jan 2017	Wind Speed (kts)	3
A7	29 Jan 2017	Wind Dir	E
A7	29 Jan 2017	Water Color	Green
A7	29 Jan 2017	Wave Ht Low (ft)	3
A7	29 Jan 2017	Wave Period (sec)	9
A7	29 Jan 2017	Sea State	Calm
A7	29 Jan 2017	High Tide (ft)	5.7
A7	29 Jan 2017	High Tide Time	919
A7	29 Jan 2017	Low Tide (ft)	-0.8
A7	29 Jan 2017	Low Tide Time	1618
A7	29 Jan 2017	Comments	Kelp
C7	06 Jan 2017	Depth (m)	22
C7	06 Jan 2017	Arrive Time	911
C7	06 Jan 2017	Depart Time	915
C7	06 Jan 2017	Air Temp (C)	14
C7	06 Jan 2017	Weather	Clear
C7	06 Jan 2017	Visibility (mi)	9
C7	06 Jan 2017	Wind Speed (kts)	3
C7	06 Jan 2017	Wind Dir	N
C7	06 Jan 2017	Water Color	Blue
C7	06 Jan 2017	Wave Ht Low (ft)	3
C7	06 Jan 2017	Wave Period (sec)	16
C7	06 Jan 2017	Sea State	Calm
C7	06 Jan 2017	High Tide (ft)	3.2
C7	06 Jan 2017	High Tide Time	1556
C7	06 Jan 2017	Low Tide (ft)	1.3
C7	06 Jan 2017	Low Tide Time	1022
C7	06 Jan 2017	Comments	birds on station
C7	13 Jan 2017	Depth (m)	19
C7	13 Jan 2017	Arrive Time	858
C7	13 Jan 2017	Depart Time	902
C7	13 Jan 2017	Air Temp (C)	13
C7	13 Jan 2017	Weather	Overcast
C7	13 Jan 2017	Visibility (mi)	9
C7	13 Jan 2017	Wind Speed (kts)	3
C7	13 Jan 2017	Wind Dir	SW
C7	13 Jan 2017	Water Color	Bluish-Green
C7	13 Jan 2017	Wave Ht Low (ft)	6
C7	13 Jan 2017	Wave Period (sec)	4
C7	13 Jan 2017	Sea State	Confused swell
C7	13 Jan 2017	High Tide (ft)	6.5
C7	13 Jan 2017	High Tide Time	902
C7	13 Jan 2017	Low Tide (ft)	-1.4
C7	13 Jan 2017	Low Tide Time	1608
C7	13 Jan 2017	Comments	Kelp; Lobster floats
C7	17 Jan 2017	Depth (m)	18
C7	17 Jan 2017	Arrive Time	840
C7	17 Jan 2017	Depart Time	845
C7	17 Jan 2017	Air Temp (C)	13
C7	17 Jan 2017	Weather	Clear
C7	17 Jan 2017	Visibility (mi)	9
C7	17 Jan 2017	Wind Speed (kts)	4

Station	Date	Parameter	Value
C7	17 Jan 2017	Wind Dir	SE
C7	17 Jan 2017	Water Color	Blue
C7	17 Jan 2017	Wave Ht Low (ft)	3
C7	17 Jan 2017	Wave Period (sec)	13
C7	17 Jan 2017	Sea State	Calm
C7	17 Jan 2017	High Tide (ft)	4.1
C7	17 Jan 2017	High Tide Time	1203
C7	17 Jan 2017	Low Tide (ft)	1.9
C7	17 Jan 2017	Low Tide Time	630
C7	17 Jan 2017	Comments	
C7	25 Jan 2017	Depth (m)	19
C7	25 Jan 2017	Arrive Time	904
C7	25 Jan 2017	Depart Time	908
C7	25 Jan 2017	Air Temp (C)	11
C7	25 Jan 2017	Weather	Clear
C7	25 Jan 2017	Visibility (mi)	12
C7	25 Jan 2017	Wind Speed (kts)	1
C7	25 Jan 2017	Wind Dir	SE
C7	25 Jan 2017	Water Color	Green
C7	25 Jan 2017	Wave Ht Low (ft)	8
C7	25 Jan 2017	Wave Period (sec)	9
C7	25 Jan 2017	Sea State	Calm
C7	25 Jan 2017	High Tide (ft)	5.6
C7	25 Jan 2017	High Tide Time	703
C7	25 Jan 2017	Low Tide (ft)	-0.6
C7	25 Jan 2017	Low Tide Time	1413
C7	25 Jan 2017	Comments	Kelp; Lobster floats
C7	29 Jan 2017	Depth (m)	19
C7	29 Jan 2017	Arrive Time	838
C7	29 Jan 2017	Depart Time	841
C7	29 Jan 2017	Air Temp (C)	15
C7	29 Jan 2017	Weather	Clear
C7	29 Jan 2017	Visibility (mi)	14
C7	29 Jan 2017	Wind Speed (kts)	0
C7	29 Jan 2017	Wind Dir	
C7	29 Jan 2017	Water Color	Green
C7	29 Jan 2017	Wave Ht Low (ft)	3
C7	29 Jan 2017	Wave Period (sec)	9
C7	29 Jan 2017	Sea State	Calm
C7	29 Jan 2017	High Tide (ft)	5.7
C7	29 Jan 2017	High Tide Time	919
C7	29 Jan 2017	Low Tide (ft)	-0.8
C7	29 Jan 2017	Low Tide Time	1618
C7	29 Jan 2017	Comments	Kelp
C8	06 Jan 2017	Depth (m)	18
C8	06 Jan 2017	Arrive Time	923
C8	06 Jan 2017	Depart Time	928
C8	06 Jan 2017	Air Temp (C)	14
C8	06 Jan 2017	Weather	Clear
C8	06 Jan 2017	Visibility (mi)	9
C8	06 Jan 2017	Wind Speed (kts)	2
C8	06 Jan 2017	Wind Dir	SW

Station	Date	Parameter	Value
C8	06 Jan 2017	Water Color	Blue
C8	06 Jan 2017	Wave Ht Low (ft)	3
C8	06 Jan 2017	Wave Period (sec)	16
C8	06 Jan 2017	Sea State	Calm
C8	06 Jan 2017	High Tide (ft)	3.2
C8	06 Jan 2017	High Tide Time	1556
C8	06 Jan 2017	Low Tide (ft)	1.3
C8	06 Jan 2017	Low Tide Time	1022
C8	06 Jan 2017	Comments	Kelp debris
C8	13 Jan 2017	Depth (m)	21
C8	13 Jan 2017	Arrive Time	911
C8	13 Jan 2017	Depart Time	914
C8	13 Jan 2017	Air Temp (C)	13
C8	13 Jan 2017	Weather	Overcast
C8	13 Jan 2017	Visibility (mi)	9
C8	13 Jan 2017	Wind Speed (kts)	4
C8	13 Jan 2017	Wind Dir	SE
C8	13 Jan 2017	Water Color	Bluish-Green
C8	13 Jan 2017	Wave Ht Low (ft)	6
C8	13 Jan 2017	Wave Period (sec)	4
C8	13 Jan 2017	Sea State	Confused swell
C8	13 Jan 2017	High Tide (ft)	6.5
C8	13 Jan 2017	High Tide Time	902
C8	13 Jan 2017	Low Tide (ft)	-1.4
C8	13 Jan 2017	Low Tide Time	1608
C8	13 Jan 2017	Comments	Kelp; Lobster floats
C8	15 Jan 2017	Depth (m)	18
C8	15 Jan 2017	Arrive Time	754
C8	15 Jan 2017	Depart Time	757
C8	15 Jan 2017	Air Temp (C)	13
C8	15 Jan 2017	Weather	Partly Cloudy
C8	15 Jan 2017	Visibility (mi)	8
C8	15 Jan 2017	Wind Speed (kts)	15
C8	15 Jan 2017	Wind Dir	N
C8	15 Jan 2017	Water Color	Greenish-Blue
C8	15 Jan 2017	Wave Ht Low (ft)	4
C8	15 Jan 2017	Wave Period (sec)	11
C8	15 Jan 2017	Sea State	Confused swell
C8	15 Jan 2017	High Tide (ft)	5.5
C8	15 Jan 2017	High Tide Time	1028
C8	15 Jan 2017	Low Tide (ft)	1.5
C8	15 Jan 2017	Low Tide Time	435
C8	15 Jan 2017	Comments	none
C8	17 Jan 2017	Depth (m)	19
C8	17 Jan 2017	Arrive Time	850
C8	17 Jan 2017	Depart Time	856
C8	17 Jan 2017	Air Temp (C)	13
C8	17 Jan 2017	Weather	Clear
C8	17 Jan 2017	Visibility (mi)	9
C8	17 Jan 2017	Wind Speed (kts)	5
C8	17 Jan 2017	Wind Dir	S
C8	17 Jan 2017	Water Color	Blue

Station	Date	Parameter	Value
C8	17 Jan 2017	Wave Ht Low (ft)	3
C8	17 Jan 2017	Wave Period (sec)	13
C8	17 Jan 2017	Sea State	Calm
C8	17 Jan 2017	High Tide (ft)	4.1
C8	17 Jan 2017	High Tide Time	1203
C8	17 Jan 2017	Low Tide (ft)	1.9
C8	17 Jan 2017	Low Tide Time	630
C8	17 Jan 2017	Comments	
C8	25 Jan 2017	Depth (m)	19
C8	25 Jan 2017	Arrive Time	915
C8	25 Jan 2017	Depart Time	919
C8	25 Jan 2017	Air Temp (C)	11
C8	25 Jan 2017	Weather	Clear
C8	25 Jan 2017	Visibility (mi)	12
C8	25 Jan 2017	Wind Speed (kts)	3
C8	25 Jan 2017	Wind Dir	NE
C8	25 Jan 2017	Water Color	Green
C8	25 Jan 2017	Wave Ht Low (ft)	8
C8	25 Jan 2017	Wave Period (sec)	9
C8	25 Jan 2017	Sea State	Calm
C8	25 Jan 2017	High Tide (ft)	5.6
C8	25 Jan 2017	High Tide Time	703
C8	25 Jan 2017	Low Tide (ft)	-0.6
C8	25 Jan 2017	Low Tide Time	1413
C8	25 Jan 2017	Comments	Kelp; Seagrass
C8	29 Jan 2017	Depth (m)	20
C8	29 Jan 2017	Arrive Time	852
C8	29 Jan 2017	Depart Time	857
C8	29 Jan 2017	Air Temp (C)	14
C8	29 Jan 2017	Weather	Clear
C8	29 Jan 2017	Visibility (mi)	14
C8	29 Jan 2017	Wind Speed (kts)	1
C8	29 Jan 2017	Wind Dir	NW
C8	29 Jan 2017	Water Color	Green
C8	29 Jan 2017	Wave Ht Low (ft)	3
C8	29 Jan 2017	Wave Period (sec)	9
C8	29 Jan 2017	Sea State	Calm
C8	29 Jan 2017	High Tide (ft)	5.7
C8	29 Jan 2017	High Tide Time	919
C8	29 Jan 2017	Low Tide (ft)	-0.8
C8	29 Jan 2017	Low Tide Time	1618
C8	29 Jan 2017	Comments	

Table 3.10

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

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (μg/L)
A1	06 Jan 2017	1	14.41	80.74	7.6	33.10	8.1	24.6	0.33
A1	06 Jan 2017	2	14.42	80.65	7.8	33.10	8.1	24.6	0.41
A1	06 Jan 2017	3	14.43	80.60	8.1	33.09	8.1	24.6	0.43
A1	06 Jan 2017	4	14.50	81.37	7.9	33.09	8.1	24.6	3.10
A1	06 Jan 2017	5	14.52	82.46	7.9	33.14	8.1	24.6	3.14
A1	06 Jan 2017	6	14.52	82.64	7.7	33.15	8.1	24.6	3.07
A1	06 Jan 2017	7	14.56	83.31	7.4	33.17	8.1	24.7	3.33
A1	06 Jan 2017	8	14.59	84.06	7.4	33.20	8.1	24.7	2.85
A1	06 Jan 2017	9	14.62	84.43	7.4	33.19	8.1	24.7	2.99
A1	06 Jan 2017	10	14.64	84.81	7.5	33.19	8.1	24.7	2.94
A1	06 Jan 2017	11	14.64	84.96	7.6	33.23	8.1	24.7	2.73
A1	06 Jan 2017	12	14.63	84.99	7.9	33.23	8.1	24.7	2.62
A1	06 Jan 2017	13	14.61	85.22	8.1	33.24	8.1	24.7	2.39
A1	06 Jan 2017	14	14.57	85.49	7.8	33.25	8.1	24.7	1.91
A1	06 Jan 2017	15	14.51	85.82	7.4	33.25	8.1	24.7	1.44
A1	06 Jan 2017	16	14.39	86.28	6.9	33.26	8.1	24.8	1.03
A1	06 Jan 2017	17	14.28	86.25	6.7	33.26	8.1	24.8	0.87
A1	06 Jan 2017	18	14.03	86.43	7.2	33.27	8.0	24.8	0.95
A1	13 Jan 2017	1	14.99	87.23	8.0	33.23	8.1	24.6	1.51
A1	13 Jan 2017	2	14.99	87.58	8.0	33.23	8.1	24.6	1.50
A1	13 Jan 2017	3	15.03	87.84	8.0	33.25	8.1	24.6	1.45
A1	13 Jan 2017	4	15.05	88.24	7.9	33.27	8.1	24.6	1.44
A1	13 Jan 2017	5	15.05	88.28	7.9	33.27	8.1	24.6	1.44
A1	13 Jan 2017	6	15.05	88.25	7.9	33.27	8.1	24.6	1.47
A1	13 Jan 2017	7	15.04	88.25	7.9	33.28	8.1	24.6	1.44
A1	13 Jan 2017	8	15.03	88.14	7.8	33.28	8.1	24.6	1.30
A1	13 Jan 2017	9	14.98	88.22	7.6	33.29	8.1	24.7	1.20
A1	13 Jan 2017	10	14.92	88.03	7.4	33.29	8.1	24.7	0.95
A1	13 Jan 2017	11	14.86	88.20	7.0	33.29	8.1	24.7	0.85
A1	13 Jan 2017	12	14.57	86.62	7.0	33.31	8.1	24.8	0.85
A1	13 Jan 2017	13	14.50	85.39	7.0	33.31	8.1	24.8	0.91
A1	13 Jan 2017	14	14.45	85.47	7.0	33.31	8.1	24.8	0.94
A1	13 Jan 2017	15	14.36	85.91	7.0	33.31	8.1	24.8	0.91
A1	13 Jan 2017	16	14.27	87.34	6.7	33.31	8.1	24.8	0.86
A1	13 Jan 2017	17	14.21	86.62	6.4	33.31	8.0	24.8	0.77
A1	13 Jan 2017	18	13.85	86.77	6.1	33.33	8.0	24.9	0.68
A1	13 Jan 2017	19	13.53	86.10	6.2	33.32	8.0	25.0	0.70
A1	17 Jan 2017	1	14.89	87.20	7.8	33.26	8.1	24.7	1.36
A1	17 Jan 2017	2	14.89	87.26	7.6	33.26	8.1	24.7	1.29
A1	17 Jan 2017	3	14.87	87.23	7.3	33.27	8.1	24.7	1.20
A1	17 Jan 2017	4	14.79	87.41	7.2	33.29	8.1	24.7	1.15
A1	17 Jan 2017	5	14.69	87.31	7.2	33.30	8.1	24.7	1.06
A1	17 Jan 2017	6	14.64	87.45	7.2	33.30	8.1	24.7	1.01
A1	17 Jan 2017	7	14.55	87.27	7.1	33.31	8.1	24.8	1.00
A1	17 Jan 2017	8	14.53	87.20	7.1	33.30	8.1	24.8	0.96
A1	17 Jan 2017	9	14.49	87.28	7.0	33.30	8.1	24.8	0.93
A1	17 Jan 2017	10	14.45	87.15	6.9	33.30	8.1	24.8	0.99
A1	17 Jan 2017	11	14.35	86.93	6.9	33.31	8.1	24.8	0.92

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (μg/L)
A1	17 Jan 2017	12	14.31	86.70	6.9	33.31	8.1	24.8	0.93
A1	17 Jan 2017	13	14.24	86.20	6.9	33.31	8.1	24.8	0.96
A1	17 Jan 2017	14	14.18	85.90	6.8	33.31	8.1	24.8	0.97
A1	17 Jan 2017	15	14.14	85.49	6.8	33.31	8.1	24.9	0.96
A1	17 Jan 2017	16	14.10	85.71	6.8	33.32	8.1	24.9	0.95
A1	17 Jan 2017	17	14.08	85.88	6.8	33.32	8.1	24.9	0.92
A1	17 Jan 2017	18	14.05	84.83	6.8	33.32	8.1	24.9	0.92
A1	17 Jan 2017	19	14.06	84.47	6.8	33.32	8.1	24.9	0.92
A1	25 Jan 2017	1	14.32	67.80	7.7	33.07	8.1	24.6	1.19
A1	25 Jan 2017	2	14.35	67.47	7.7	33.08	8.1	24.6	1.26
A1	25 Jan 2017	3	14.35	67.65	7.7	33.08	8.1	24.6	1.26
A1	25 Jan 2017	4	14.37	67.78	7.6	33.09	8.1	24.6	1.16
A1	25 Jan 2017	5	14.40	68.15	7.6	33.10	8.1	24.6	1.07
A1	25 Jan 2017	6	14.44	68.63	7.5	33.13	8.1	24.6	1.05
A1	25 Jan 2017	7	14.49	69.58	7.5	33.16	8.1	24.7	1.01
A1	25 Jan 2017	8	14.49	70.82	7.5	33.16	8.1	24.7	0.95
A1	25 Jan 2017	9	14.49	70.56	7.5	33.17	8.1	24.7	0.89
A1	25 Jan 2017	10	14.47	69.95	7.4	33.18	8.1	24.7	0.82
A1	25 Jan 2017	11	14.45	69.71	7.4	33.18	8.1	24.7	0.77
A1	25 Jan 2017	12	14.42	68.74	7.4	33.19	8.1	24.7	0.76
A1	25 Jan 2017	13	14.41	68.58	7.3	33.19	8.1	24.7	0.69
A1	25 Jan 2017	14	14.40	67.18	7.2	33.20	8.1	24.7	0.67
A1	25 Jan 2017	15	14.40	65.59	7.2	33.22	8.1	24.7	0.69
A1	25 Jan 2017	16	14.41	61.35	7.2	33.23	8.1	24.7	0.68
A1	25 Jan 2017	17	14.41	60.96	7.1	33.24	8.1	24.7	0.67
A1	25 Jan 2017	18	14.46	60.03	6.9	33.27	8.1	24.8	0.71
A1	25 Jan 2017	19	14.39	58.04	6.9	33.29	8.1	24.8	0.69
A1	25 Jan 2017	20	14.36	54.33	6.8	33.28	8.1	24.8	0.74
A1	29 Jan 2017	1	14.49	82.11	7.8	33.21	8.1	24.7	1.51
A1	29 Jan 2017	2	14.49	82.02	7.8	33.21	8.1	24.7	1.58
A1	29 Jan 2017	3	14.50	82.02	7.7	33.21	8.1	24.7	1.62
A1	29 Jan 2017	4	14.50	81.94	7.7	33.21	8.1	24.7	1.49
A1	29 Jan 2017	5	14.45	82.07	7.6	33.22	8.1	24.7	1.46
A1	29 Jan 2017	6	14.38	80.95	7.6	33.22	8.1	24.7	1.30
A1	29 Jan 2017	7	14.38	80.67	7.5	33.22	8.1	24.7	1.19
A1	29 Jan 2017	8	14.30	80.19	7.5	33.21	8.1	24.7	1.13
A1	29 Jan 2017	9	14.24	78.52	7.5	33.20	8.1	24.7	1.13
A1	29 Jan 2017	10	14.27	77.61	7.5	33.20	8.1	24.7	1.10
A1	29 Jan 2017	11	14.24	77.72	7.5	33.20	8.1	24.7	1.07
A1	29 Jan 2017	12	14.26	78.05	7.4	33.20	8.1	24.7	1.06
A1	29 Jan 2017	13	14.21	76.52	7.0	33.20	8.1	24.8	0.95
A1	29 Jan 2017	14	14.20	76.54	6.4	33.20	8.1	24.8	0.90
A1	29 Jan 2017	15	14.10	76.97	5.7	33.25	8.1	24.8	0.71
A1	29 Jan 2017	16	13.83	78.07	5.0	33.31	8.1	24.9	0.55
A1	29 Jan 2017	17	13.47	77.08	4.6	33.34	8.1	25.0	0.45
A1	29 Jan 2017	18	12.48	72.90	4.9	33.41	8.0	25.3	0.48
A1	29 Jan 2017	19	12.53	68.83	5.7	33.36	8.0	25.2	0.51
C4	06 Jan 2017	1	14.51	80.15	7.8	33.05	8.1	24.6	0.25
C4	06 Jan 2017	2	14.50	80.15	7.7	33.05	8.1	24.6	0.27
C4	06 Jan 2017	3	14.47	66.66	7.6	33.07	8.1	24.6	0.28
C4	06 Jan 2017	4	14.45	62.49	7.4	33.07	8.1	24.6	0.26
C4	06 Jan 2017	5	14.45	72.30	7.5	33.07	8.1	24.6	0.97

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (μg/L)
C4	06 Jan 2017	6	14.44	75.08	7.8	33.07	8.1	24.6	1.32
C4	06 Jan 2017	7	14.44	75.77	7.7	33.08	8.1	24.6	1.28
C4	06 Jan 2017	8	14.44	76.56	7.3	33.09	8.1	24.6	1.44
C4	06 Jan 2017	9	14.44	77.87	6.9	33.10	8.1	24.6	1.40
C4	06 Jan 2017	10	14.44	77.75	6.8	33.10	8.1	24.6	1.41
C4	06 Jan 2017	11	14.44	76.11	6.4	33.10	8.1	24.6	1.32
C4	13 Jan 2017	1	14.95	82.52	7.9	33.19	8.1	24.6	1.63
C4	13 Jan 2017	2	14.95	83.63	7.9	33.17	8.1	24.6	1.84
C4	13 Jan 2017	3	14.96	84.41	7.8	33.20	8.1	24.6	1.95
C4	13 Jan 2017	4	14.97	84.49	7.8	33.21	8.1	24.6	1.92
C4	13 Jan 2017	5	14.97	84.53	7.7	33.22	8.1	24.6	1.78
C4	13 Jan 2017	6	14.96	84.68	7.6	33.23	8.1	24.6	1.58
C4	13 Jan 2017	7	14.93	84.93	7.4	33.25	8.1	24.6	1.26
C4	13 Jan 2017	8	14.92	84.60	7.2	33.25	8.1	24.6	1.08
C4	13 Jan 2017	9	14.80	81.37	7.1	33.27	8.1	24.7	0.85
C4	13 Jan 2017	10	14.80	78.34	6.9	33.27	8.1	24.7	0.72
C4	13 Jan 2017	11	14.69	66.80	7.0	33.28	8.1	24.7	0.70
C4	13 Jan 2017	12	14.69	64.47	7.2	33.28	8.1	24.7	0.71
C4	17 Jan 2017	1	14.92	79.37	8.0	33.18	8.1	24.6	0.99
C4	17 Jan 2017	2	14.89	78.64	8.0	33.18	8.1	24.6	1.22
C4	17 Jan 2017	3	14.82	77.05	7.9	33.19	8.1	24.6	1.27
C4	17 Jan 2017	4	14.78	75.98	7.9	33.19	8.1	24.6	1.16
C4	17 Jan 2017	5	14.77	76.66	7.8	33.19	8.1	24.6	0.95
C4	17 Jan 2017	6	14.76	77.21	7.6	33.19	8.1	24.6	0.87
C4	17 Jan 2017	7	14.74	77.49	7.5	33.19	8.1	24.6	0.79
C4	17 Jan 2017	8	14.71	78.11	7.4	33.20	8.1	24.6	0.68
C4	17 Jan 2017	9	14.66	64.89	7.4	33.22	8.1	24.7	0.72
C4	17 Jan 2017	10	14.63	65.53	7.5	33.22	8.1	24.7	0.87
C4	17 Jan 2017	11	14.66	71.02	7.6	33.22	8.1	24.7	1.06
C4	25 Jan 2017	1	14.35	55.13	8.0	33.13	8.1	24.7	0.58
C4	25 Jan 2017	2	14.34	54.76	8.0	33.13	8.1	24.7	0.64
C4	25 Jan 2017	3	14.30	53.02	7.9	33.13	8.1	24.7	0.67
C4	25 Jan 2017	4	14.27	50.10	7.9	33.13	8.1	24.7	0.72
C4	25 Jan 2017	5	14.27	47.57	7.9	33.13	8.1	24.7	0.73
C4	25 Jan 2017	6	14.27	45.30	8.0	33.13	8.1	24.7	0.71
C4	25 Jan 2017	7	14.26	42.68	8.0	33.13	8.1	24.7	0.73
C4	25 Jan 2017	8	14.25	43.12	7.8	33.13	8.1	24.7	0.72
C4	25 Jan 2017	9	14.25	42.24	7.6	33.13	8.1	24.7	0.74
C4	25 Jan 2017	10	14.28	36.28	7.6	33.13	8.1	24.7	0.75
C4	25 Jan 2017	11	14.28	36.25	7.7	33.13	8.1	24.7	0.74
C4	25 Jan 2017	12	14.28	34.89	7.7	33.13	8.1	24.7	0.75
C4	29 Jan 2017	1	14.17	68.02	7.5	33.06	8.1	24.7	0.90
C4	29 Jan 2017	2	14.13	68.08	7.5	33.06	8.1	24.7	1.07
C4	29 Jan 2017	3	14.13	67.01	7.5	33.06	8.1	24.7	1.10
C4	29 Jan 2017	4	14.09	68.40	7.5	33.07	8.1	24.7	0.98
C4	29 Jan 2017	5	14.09	68.17	7.4	33.10	8.1	24.7	0.84
C4	29 Jan 2017	6	14.16	68.30	7.2	33.14	8.1	24.7	0.74
C4	29 Jan 2017	7	14.21	68.41	6.5	33.17	8.1	24.7	0.62
C4	29 Jan 2017	8	14.17	67.74	5.8	33.19	8.1	24.8	0.57
C4	29 Jan 2017	9	14.06	65.42	5.7	33.26	8.1	24.8	0.58
C4	29 Jan 2017	10	13.99	62.91	5.8	33.28	8.1	24.9	0.61

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (μg/L)
C4	29 Jan 2017	11	13.96	58.69	6.0	33.28	8.1	24.9	0.61
C4	29 Jan 2017	12	13.94	53.45	6.1	33.28	8.1	24.9	0.59
C5	06 Jan 2017	1	14.49	79.53	7.6	33.07	8.1	24.6	0.23
C5	06 Jan 2017	2	14.49	79.71	8.1	33.07	8.1	24.6	0.26
C5	06 Jan 2017	3	14.49	80.29	8.2	33.08	8.1	24.6	0.28
C5	06 Jan 2017	4	14.47	80.47	7.7	33.09	8.1	24.6	0.35
C5	06 Jan 2017	5	14.42	80.88	7.6	33.10	8.1	24.6	0.62
C5	06 Jan 2017	6	14.42	81.30	8.0	33.10	8.1	24.6	0.41
C5	06 Jan 2017	7	14.42	81.81	7.6	33.10	8.1	24.6	0.81
C5	06 Jan 2017	8	14.38	81.33	7.0	33.13	8.1	24.7	1.12
C5	06 Jan 2017	9	14.34	79.70	6.3	33.16	8.1	24.7	1.14
C5	13 Jan 2017	1	14.72	55.56	7.8	33.11	8.1	24.6	1.00
C5	13 Jan 2017	2	14.73	56.68	7.6	33.10	8.1	24.6	0.93
C5	13 Jan 2017	3	14.70	58.33	7.5	33.13	8.1	24.6	0.82
C5	13 Jan 2017	4	14.69	60.89	7.4	33.17	8.1	24.6	0.75
C5	13 Jan 2017	5	14.69	70.36	7.2	33.19	8.1	24.6	0.68
C5	13 Jan 2017	6	14.67	75.58	7.1	33.21	8.1	24.7	0.62
C5	13 Jan 2017	7	14.65	75.37	7.0	33.21	8.1	24.7	0.61
C5	13 Jan 2017	8	14.61	73.60	6.7	33.22	8.1	24.7	0.58
C5	13 Jan 2017	9	14.54	72.43	6.3	33.23	8.1	24.7	0.63
C5	13 Jan 2017	10	14.34	64.68	6.3	33.25	8.1	24.8	0.69
C5	13 Jan 2017	11	14.23	52.75	6.9	33.26	8.0	24.8	0.61
C5	17 Jan 2017	1	14.83	75.52	7.9	33.19	8.1	24.6	0.63
C5	17 Jan 2017	2	14.81	75.20	7.8	33.19	8.1	24.6	0.72
C5	17 Jan 2017	3	14.78	74.93	7.7	33.19	8.1	24.6	0.75
C5	17 Jan 2017	4	14.76	73.64	7.6	33.19	8.1	24.6	0.76
C5	17 Jan 2017	5	14.75	72.86	7.6	33.19	8.1	24.6	0.76
C5	17 Jan 2017	6	14.74	72.03	7.5	33.19	8.1	24.6	0.75
C5	17 Jan 2017	7	14.73	70.36	7.5	33.19	8.1	24.6	0.77
C5	17 Jan 2017	8	14.72	69.20	7.3	33.19	8.1	24.6	0.73
C5	17 Jan 2017	9	14.71	66.59	7.0	33.19	8.1	24.6	0.83
C5	17 Jan 2017	10	14.70	61.15	6.9	33.20	8.1	24.7	0.87
C5	17 Jan 2017	11	14.68	40.45	7.0	33.21	8.1	24.7	0.92
C5	25 Jan 2017	1	14.47	61.93	7.8	33.18	8.1	24.7	0.52
C5	25 Jan 2017	2	14.46	61.86	7.8	33.18	8.1	24.7	0.52
C5	25 Jan 2017	3	14.44	60.82	7.7	33.18	8.1	24.7	0.55
C5	25 Jan 2017	4	14.39	58.48	7.7	33.18	8.1	24.7	0.60
C5	25 Jan 2017	5	14.37	56.94	7.8	33.18	8.1	24.7	0.63
C5	25 Jan 2017	6	14.32	54.97	7.9	33.18	8.1	24.7	0.65
C5	25 Jan 2017	7	14.23	50.41	8.0	33.18	8.1	24.7	0.69
C5	25 Jan 2017	8	14.21	44.41	8.0	33.18	8.1	24.7	0.74
C5	25 Jan 2017	9	14.20	41.38	7.8	33.17	8.1	24.7	0.89
C5	25 Jan 2017	10	14.23	28.72	7.8	33.17	8.1	24.7	0.88
C5	25 Jan 2017	11	14.24	28.06	7.9	33.17	8.1	24.7	0.84
C5	29 Jan 2017	1	14.41	74.30	7.3	33.22	8.1	24.7	0.80
C5	29 Jan 2017	2	14.40	71.56	7.3	33.22	8.1	24.7	0.81
C5	29 Jan 2017	3	14.37	65.47	7.2	33.22	8.1	24.7	0.85
C5	29 Jan 2017	4	14.37	62.66	7.2	33.22	8.1	24.7	0.86
C5	29 Jan 2017	5	14.36	62.35	7.0	33.22	8.1	24.7	0.90
C5	29 Jan 2017	6	14.35	61.43	7.0	33.22	8.1	24.7	0.86

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (μg/L)
C5	29 Jan 2017	7	14.35	62.65	7.0	33.22	8.1	24.7	0.83
C5	29 Jan 2017	8	14.34	62.27	7.0	33.22	8.1	24.7	0.80
C5	29 Jan 2017	9	14.34	63.27	7.0	33.22	8.1	24.7	0.81
C5	29 Jan 2017	10	14.33	61.84	6.9	33.23	8.1	24.7	0.80
C5	29 Jan 2017	11	14.23	62.84	7.0	33.27	8.1	24.8	0.91
A6	06 Jan 2017	1	14.52	83.07	7.4	33.12	8.1	24.6	0.32
A6	06 Jan 2017	2	14.52	83.09	8.1	33.13	8.1	24.6	0.38
A6	06 Jan 2017	3	14.51	83.07	8.0	33.14	8.1	24.6	1.06
A6	06 Jan 2017	4	14.50	83.13	7.7	33.14	8.1	24.6	2.58
A6	06 Jan 2017	5	14.50	83.27	7.9	33.14	8.1	24.6	2.64
A6	06 Jan 2017	6	14.51	83.39	8.0	33.13	8.1	24.6	2.34
A6	06 Jan 2017	7	14.51	84.32	7.5	33.15	8.1	24.7	2.12
A6	06 Jan 2017	8	14.51	84.81	7.0	33.16	8.1	24.7	2.31
A6	06 Jan 2017	9	14.50	84.63	7.2	33.16	8.1	24.7	2.21
A6	06 Jan 2017	10	14.50	84.63	7.6	33.16	8.1	24.7	2.13
A6	06 Jan 2017	11	14.50	84.80	7.8	33.16	8.1	24.7	2.07
A6	06 Jan 2017	12	14.50	84.79	7.8	33.16	8.1	24.7	2.01
A6	06 Jan 2017	13	14.50	84.82	7.9	33.16	8.1	24.7	1.81
A6	06 Jan 2017	14	14.50	84.73	7.5	33.16	8.1	24.7	1.42
A6	06 Jan 2017	15	14.45	85.06	7.1	33.18	8.1	24.7	1.10
A6	06 Jan 2017	16	14.28	86.14	7.0	33.24	8.1	24.8	0.99
A6	06 Jan 2017	17	14.20	86.19	7.3	33.25	8.1	24.8	0.91
A6	06 Jan 2017	18	14.17	86.44	7.6	33.26	8.1	24.8	0.86
A6	13 Jan 2017	1	14.96	84.13	8.0	33.20	8.1	24.6	1.10
A6	13 Jan 2017	2	14.98	85.41	7.9	33.25	8.1	24.6	1.10
A6	13 Jan 2017	3	14.97	87.36	7.9	33.25	8.1	24.6	1.14
A6	13 Jan 2017	4	14.97	87.29	7.9	33.25	8.1	24.6	1.10
A6	13 Jan 2017	5	14.96	87.49	7.8	33.25	8.1	24.6	1.07
A6	13 Jan 2017	6	14.95	87.58	7.7	33.26	8.1	24.6	1.08
A6	13 Jan 2017	7	14.93	87.30	7.7	33.26	8.1	24.6	1.08
A6	13 Jan 2017	8	14.84	86.78	7.7	33.27	8.1	24.7	1.09
A6	13 Jan 2017	9	14.82	86.26	7.6	33.27	8.1	24.7	1.08
A6	13 Jan 2017	10	14.78	86.01	7.6	33.27	8.1	24.7	1.08
A6	13 Jan 2017	11	14.77	85.53	7.7	33.28	8.1	24.7	1.07
A6	13 Jan 2017	12	14.77	85.49	7.6	33.28	8.1	24.7	1.07
A6	13 Jan 2017	13	14.76	85.36	7.6	33.28	8.1	24.7	1.06
A6	13 Jan 2017	14	14.73	85.40	7.5	33.28	8.1	24.7	0.99
A6	13 Jan 2017	15	14.68	85.12	7.4	33.29	8.1	24.7	0.92
A6	13 Jan 2017	16	14.65	85.14	7.2	33.29	8.1	24.7	0.91
A6	13 Jan 2017	17	14.55	85.09	7.2	33.30	8.1	24.8	0.81
A6	13 Jan 2017	18	14.54	85.28	7.0	33.29	8.1	24.8	0.77
A6	13 Jan 2017	19	14.37	84.65	7.2	33.30	8.1	24.8	0.75
A6	17 Jan 2017	1	14.89	87.47	7.9	33.23	8.1	24.6	1.19
A6	17 Jan 2017	2	14.90	87.18	7.9	33.23	8.1	24.6	1.28
A6	17 Jan 2017	3	14.90	87.30	7.9	33.23	8.1	24.6	1.41
A6	17 Jan 2017	4	14.91	87.33	7.9	33.23	8.1	24.6	1.48
A6	17 Jan 2017	5	14.91	87.37	7.9	33.23	8.1	24.6	1.47
A6	17 Jan 2017	6	14.91	87.53	7.7	33.24	8.1	24.6	1.40
A6	17 Jan 2017	7	14.91	87.51	7.6	33.24	8.1	24.6	1.29
A6	17 Jan 2017	8	14.90	87.56	7.4	33.25	8.1	24.6	1.09
A6	17 Jan 2017	9	14.87	87.47	7.2	33.25	8.1	24.7	0.98
A6	17 Jan 2017	10	14.70	86.73	7.2	33.27	8.1	24.7	0.91

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (μg/L)
A6	17 Jan 2017	11	14.67	85.75	7.2	33.27	8.1	24.7	0.89
A6	17 Jan 2017	12	14.61	85.33	7.1	33.28	8.1	24.7	0.90
A6	17 Jan 2017	13	14.55	84.41	7.0	33.28	8.1	24.7	0.86
A6	17 Jan 2017	14	14.51	84.29	6.9	33.28	8.1	24.8	0.85
A6	17 Jan 2017	15	14.33	82.60	6.8	33.30	8.1	24.8	0.81
A6	17 Jan 2017	16	14.30	82.14	6.7	33.29	8.1	24.8	0.84
A6	17 Jan 2017	17	14.18	81.26	6.7	33.30	8.1	24.8	0.80
A6	17 Jan 2017	18	14.11	79.39	6.8	33.30	8.1	24.9	0.82
A6	25 Jan 2017	1	14.62	73.69	7.4	33.25	8.1	24.7	0.42
A6	25 Jan 2017	2	14.62	73.84	7.4	33.25	8.1	24.7	0.46
A6	25 Jan 2017	3	14.62	73.52	7.4	33.25	8.1	24.7	0.52
A6	25 Jan 2017	4	14.64	72.88	7.3	33.26	8.1	24.7	0.59
A6	25 Jan 2017	5	14.64	72.22	7.3	33.26	8.1	24.7	0.63
A6	25 Jan 2017	6	14.64	72.37	7.3	33.26	8.1	24.7	0.61
A6	25 Jan 2017	7	14.64	72.57	7.3	33.26	8.1	24.7	0.61
A6	25 Jan 2017	8	14.65	73.06	7.3	33.26	8.1	24.7	0.60
A6	25 Jan 2017	9	14.65	72.90	7.3	33.27	8.1	24.7	0.60
A6	25 Jan 2017	10	14.63	72.36	7.2	33.27	8.1	24.7	0.58
A6	25 Jan 2017	11	14.60	71.40	7.2	33.27	8.1	24.7	0.55
A6	25 Jan 2017	12	14.61	68.92	7.2	33.27	8.1	24.7	0.58
A6	25 Jan 2017	13	14.61	68.35	7.2	33.27	8.1	24.7	0.55
A6	25 Jan 2017	14	14.61	68.51	7.2	33.27	8.1	24.7	0.56
A6	25 Jan 2017	15	14.61	68.34	7.2	33.27	8.1	24.7	0.57
A6	25 Jan 2017	16	14.61	67.97	7.2	33.27	8.1	24.7	0.54
A6	25 Jan 2017	17	14.60	67.21	7.2	33.28	8.1	24.7	0.53
A6	25 Jan 2017	18	14.58	65.89	7.2	33.28	8.1	24.7	0.52
A6	25 Jan 2017	19	14.58	65.25	7.1	33.28	8.1	24.7	0.55
A6	25 Jan 2017	20	14.58	65.57	7.0	33.28	8.1	24.7	0.55
A6	29 Jan 2017	1	14.35	74.79	8.0	33.18	8.2	24.7	2.27
A6	29 Jan 2017	2	14.35	74.79	7.9	33.18	8.2	24.7	2.55
A6	29 Jan 2017	3	14.35	74.70	7.9	33.19	8.2	24.7	2.59
A6	29 Jan 2017	4	14.35	74.79	7.8	33.19	8.2	24.7	2.32
A6	29 Jan 2017	5	14.36	74.87	7.7	33.20	8.2	24.7	2.11
A6	29 Jan 2017	6	14.37	75.56	7.5	33.21	8.2	24.7	1.84
A6	29 Jan 2017	7	14.37	75.77	7.3	33.21	8.2	24.7	1.68
A6	29 Jan 2017	8	14.41	76.39	7.2	33.24	8.2	24.7	1.57
A6	29 Jan 2017	9	14.42	77.14	7.1	33.25	8.1	24.7	1.35
A6	29 Jan 2017	10	14.42	77.26	6.9	33.25	8.1	24.8	1.20
A6	29 Jan 2017	11	14.33	77.30	6.7	33.26	8.1	24.8	1.07
A6	29 Jan 2017	12	14.19	77.44	6.6	33.28	8.1	24.8	0.99
A6	29 Jan 2017	13	14.09	77.14	6.6	33.29	8.1	24.8	0.95
A6	29 Jan 2017	14	14.05	76.83	6.6	33.29	8.1	24.9	0.88
A6	29 Jan 2017	15	14.03	76.84	6.6	33.30	8.1	24.9	0.88
A6	29 Jan 2017	16	14.01	76.64	6.6	33.30	8.1	24.9	0.93
A6	29 Jan 2017	17	13.96	76.51	6.6	33.30	8.1	24.9	0.90
A6	29 Jan 2017	18	13.97	76.27	6.6	33.30	8.1	24.9	0.88
A6	29 Jan 2017	19	13.99	76.01	6.4	33.29	8.1	24.9	0.80
A6	29 Jan 2017	20	13.95	76.20	5.9	33.30	8.1	24.9	0.71
A6	29 Jan 2017	21	13.66	74.50	5.4	33.32	8.1	25.0	0.61
C6	06 Jan 2017	1	14.55	83.33	7.2	33.12	8.1	24.6	0.24
C6	06 Jan 2017	2	14.54	83.44	8.2	33.12	8.1	24.6	0.25
C6	06 Jan 2017	3	14.53	83.33	7.9	33.12	8.1	24.6	0.27

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (μg/L)
C6	06 Jan 2017	4	14.51	83.55	8.0	33.13	8.1	24.6	0.45
C6	06 Jan 2017	5	14.51	83.49	8.0	33.12	8.1	24.6	0.33
C6	06 Jan 2017	6	14.49	83.98	7.9	33.13	8.1	24.6	0.26
C6	06 Jan 2017	7	14.48	84.15	7.4	33.13	8.1	24.6	0.25
C6	06 Jan 2017	8	14.47	84.27	6.7	33.15	8.1	24.7	0.25
C6	06 Jan 2017	9	14.46	84.15	6.4	33.16	8.1	24.7	0.25
C6	13 Jan 2017	1	14.55	65.45	7.7	33.10	8.1	24.6	1.42
C6	13 Jan 2017	2	14.54	73.87	7.7	33.12	8.1	24.6	1.43
C6	13 Jan 2017	3	14.53	77.24	7.7	33.13	8.1	24.6	1.29
C6	13 Jan 2017	4	14.53	77.34	7.5	33.13	8.1	24.6	1.08
C6	13 Jan 2017	5	14.53	77.87	7.4	33.14	8.1	24.6	0.99
C6	13 Jan 2017	6	14.52	77.88	7.2	33.15	8.1	24.6	0.81
C6	13 Jan 2017	7	14.50	77.65	6.6	33.16	8.1	24.7	0.61
C6	13 Jan 2017	8	14.41	76.49	6.3	33.19	8.1	24.7	0.56
C6	13 Jan 2017	9	14.28	74.21	6.4	33.23	8.1	24.8	0.55
C6	13 Jan 2017	10	14.27	71.39	6.5	33.23	8.0	24.8	0.53
C6	13 Jan 2017	11	14.22	69.24	6.5	33.25	8.0	24.8	0.51
C6	17 Jan 2017	1	14.87	80.83	7.9	33.20	8.1	24.6	0.52
C6	17 Jan 2017	2	14.87	80.46	7.9	33.20	8.1	24.6	0.64
C6	17 Jan 2017	3	14.84	80.65	7.8	33.20	8.1	24.6	0.68
C6	17 Jan 2017	4	14.81	77.04	7.7	33.20	8.1	24.6	0.69
C6	17 Jan 2017	5	14.80	76.34	7.6	33.20	8.1	24.6	0.70
C6	17 Jan 2017	6	14.79	78.15	7.6	33.20	8.1	24.6	0.68
C6	17 Jan 2017	7	14.79	80.19	7.6	33.20	8.1	24.6	0.69
C6	17 Jan 2017	8	14.79	80.42	7.6	33.20	8.1	24.6	0.75
C6	17 Jan 2017	9	14.79	80.21	7.6	33.20	8.1	24.6	0.75
C6	17 Jan 2017	10	14.79	77.71	7.7	33.18	8.1	24.6	0.76
C6	25 Jan 2017	1	14.61	66.95	7.5	33.21	8.1	24.7	0.55
C6	25 Jan 2017	2	14.60	66.62	7.5	33.21	8.1	24.7	0.62
C6	25 Jan 2017	3	14.55	65.29	7.5	33.21	8.1	24.7	0.67
C6	25 Jan 2017	4	14.54	64.02	7.5	33.21	8.1	24.7	0.62
C6	25 Jan 2017	5	14.50	62.91	7.5	33.20	8.1	24.7	0.62
C6	25 Jan 2017	6	14.47	61.44	7.5	33.20	8.1	24.7	0.60
C6	25 Jan 2017	7	14.48	61.41	7.5	33.20	8.1	24.7	0.61
C6	25 Jan 2017	8	14.48	61.50	7.5	33.20	8.1	24.7	0.59
C6	25 Jan 2017	9	14.47	62.12	7.5	33.20	8.1	24.7	0.61
C6	25 Jan 2017	10	14.47	62.23	7.5	33.20	8.1	24.7	0.58
C6	29 Jan 2017	1	14.38	70.82	7.8	33.16	8.1	24.7	0.90
C6	29 Jan 2017	2	14.35	70.21	7.8	33.17	8.1	24.7	0.97
C6	29 Jan 2017	3	14.33	70.55	7.6	33.17	8.1	24.7	0.89
C6	29 Jan 2017	4	14.32	70.49	7.3	33.17	8.1	24.7	0.83
C6	29 Jan 2017	5	14.31	70.48	6.9	33.18	8.1	24.7	0.74
C6	29 Jan 2017	6	14.30	69.58	6.5	33.19	8.1	24.7	0.70
C6	29 Jan 2017	7	14.30	66.81	6.3	33.20	8.1	24.7	0.71
C6	29 Jan 2017	8	14.28	62.85	6.3	33.22	8.1	24.8	0.69
C6	29 Jan 2017	9	14.26	60.98	6.6	33.23	8.1	24.8	0.69
A7	06 Jan 2017	1	14.45	81.22	7.7	33.12	8.1	24.6	0.32
A7	06 Jan 2017	2	14.45	80.89	8.0	33.11	8.1	24.6	0.40
A7	06 Jan 2017	3	14.45	81.01	8.1	33.12	8.1	24.6	0.48
A7	06 Jan 2017	4	14.44	81.15	7.9	33.12	8.1	24.6	1.34

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (μg/L)
A7	06 Jan 2017	5	14.44	81.22	7.5	33.11	8.1	24.6	2.27
A7	06 Jan 2017	6	14.44	81.18	7.8	33.11	8.1	24.6	3.43
A7	06 Jan 2017	7	14.44	81.26	8.2	33.12	8.1	24.6	3.21
A7	06 Jan 2017	8	14.44	81.19	8.0	33.12	8.1	24.6	3.45
A7	06 Jan 2017	9	14.43	81.25	7.3	33.11	8.1	24.6	3.29
A7	06 Jan 2017	10	14.44	81.29	7.2	33.11	8.1	24.6	2.92
A7	06 Jan 2017	11	14.44	81.43	7.4	33.11	8.1	24.6	3.09
A7	06 Jan 2017	12	14.44	81.49	7.2	33.11	8.1	24.6	3.01
A7	06 Jan 2017	13	14.44	82.21	7.3	33.13	8.1	24.6	3.12
A7	06 Jan 2017	14	14.42	82.93	7.7	33.15	8.1	24.7	3.12
A7	06 Jan 2017	15	14.39	84.60	7.6	33.18	8.1	24.7	2.65
A7	06 Jan 2017	16	14.27	85.65	7.2	33.24	8.1	24.8	2.04
A7	06 Jan 2017	17	14.19	85.96	7.0	33.24	8.1	24.8	1.32
A7	06 Jan 2017	18	14.13	85.89	6.7	33.26	8.1	24.8	0.92
A7	06 Jan 2017	19	14.00	86.42	7.0	33.27	8.0	24.9	0.81
A7	13 Jan 2017	1	14.97	65.52	7.9	33.16	8.1	24.6	1.38
A7	13 Jan 2017	2	14.97	69.59	7.9	33.24	8.1	24.6	1.36
A7	13 Jan 2017	3	14.97	84.37	7.8	33.27	8.1	24.6	1.34
A7	13 Jan 2017	4	14.96	86.44	7.7	33.27	8.1	24.6	1.30
A7	13 Jan 2017	5	14.95	86.44	7.7	33.28	8.1	24.7	1.22
A7	13 Jan 2017	6	14.92	86.27	7.6	33.28	8.1	24.7	1.24
A7	13 Jan 2017	7	14.90	86.49	7.5	33.29	8.1	24.7	1.29
A7	13 Jan 2017	8	14.81	86.30	7.5	33.30	8.1	24.7	1.34
A7	13 Jan 2017	9	14.72	87.51	7.4	33.30	8.1	24.7	1.41
A7	13 Jan 2017	10	14.67	87.80	7.5	33.30	8.1	24.7	1.38
A7	13 Jan 2017	11	14.65	87.78	7.4	33.30	8.1	24.7	1.27
A7	13 Jan 2017	12	14.63	88.56	7.2	33.30	8.1	24.7	1.16
A7	13 Jan 2017	13	14.59	88.21	7.1	33.30	8.1	24.8	1.13
A7	13 Jan 2017	14	14.48	88.33	7.0	33.31	8.1	24.8	1.05
A7	13 Jan 2017	15	14.35	87.90	6.8	33.31	8.1	24.8	0.95
A7	13 Jan 2017	16	14.24	87.06	6.4	33.32	8.1	24.8	0.78
A7	13 Jan 2017	17	14.15	86.52	6.2	33.31	8.0	24.9	0.74
A7	13 Jan 2017	18	13.85	85.69	6.2	33.33	8.0	24.9	0.71
A7	13 Jan 2017	19	13.62	85.87	6.4	33.33	8.0	25.0	0.73
A7	13 Jan 2017	20	13.61	85.26	6.7	33.33	8.0	25.0	0.76
A7	17 Jan 2017	1	14.82	83.55	7.9	33.23	8.1	24.6	1.15
A7	17 Jan 2017	2	14.83	86.01	7.7	33.23	8.1	24.6	1.06
A7	17 Jan 2017	3	14.84	86.13	7.3	33.24	8.1	24.7	0.99
A7	17 Jan 2017	4	14.83	86.31	7.0	33.27	8.1	24.7	0.89
A7	17 Jan 2017	5	14.77	86.34	6.7	33.28	8.1	24.7	0.85
A7	17 Jan 2017	6	14.55	85.49	6.6	33.29	8.1	24.8	0.85
A7	17 Jan 2017	7	14.34	84.69	6.6	33.31	8.1	24.8	0.82
A7	17 Jan 2017	8	14.15	83.85	6.6	33.31	8.1	24.9	0.84
A7	17 Jan 2017	9	14.08	82.80	6.6	33.31	8.1	24.9	0.85
A7	17 Jan 2017	10	14.04	82.85	6.6	33.31	8.1	24.9	0.84
A7	17 Jan 2017	11	14.01	83.32	6.5	33.31	8.1	24.9	0.85
A7	17 Jan 2017	12	13.92	83.29	6.5	33.32	8.1	24.9	0.83
A7	17 Jan 2017	13	13.83	82.60	6.5	33.33	8.0	24.9	0.82
A7	17 Jan 2017	14	13.79	80.46	6.5	33.32	8.0	24.9	0.81
A7	17 Jan 2017	15	13.77	79.40	6.5	33.32	8.0	24.9	0.80
A7	17 Jan 2017	16	13.76	79.05	6.5	33.32	8.0	24.9	0.79
A7	17 Jan 2017	17	13.74	77.86	6.5	33.33	8.0	24.9	0.79
A7	17 Jan 2017	18	13.74	77.51	6.5	33.33	8.0	24.9	0.81

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (μg/L)
A7	17 Jan 2017	19	13.75	76.64	6.5	33.33	8.0	24.9	0.80
A7	25 Jan 2017	1	14.58	73.52	7.5	33.24	8.1	24.7	0.68
A7	25 Jan 2017	2	14.57	74.41	7.5	33.24	8.1	24.7	0.75
A7	25 Jan 2017	3	14.56	74.84	7.5	33.24	8.1	24.7	0.83
A7	25 Jan 2017	4	14.56	73.67	7.5	33.24	8.1	24.7	0.87
A7	25 Jan 2017	5	14.56	72.28	7.5	33.24	8.1	24.7	0.85
A7	25 Jan 2017	6	14.56	71.56	7.4	33.24	8.1	24.7	0.92
A7	25 Jan 2017	7	14.54	69.97	7.5	33.24	8.1	24.7	1.00
A7	25 Jan 2017	8	14.52	70.48	7.5	33.23	8.1	24.7	0.95
A7	25 Jan 2017	9	14.51	70.59	7.5	33.23	8.1	24.7	0.97
A7	25 Jan 2017	10	14.51	69.85	7.5	33.23	8.1	24.7	0.97
A7	25 Jan 2017	11	14.52	70.09	7.5	33.23	8.1	24.7	0.92
A7	25 Jan 2017	12	14.53	69.88	7.4	33.23	8.1	24.7	0.90
A7	25 Jan 2017	13	14.52	70.42	7.4	33.24	8.1	24.7	0.80
A7	25 Jan 2017	14	14.55	68.74	7.3	33.24	8.1	24.7	0.82
A7	25 Jan 2017	15	14.57	67.55	7.3	33.25	8.1	24.7	0.79
A7	25 Jan 2017	16	14.56	68.01	7.2	33.25	8.1	24.7	0.70
A7	25 Jan 2017	17	14.56	65.48	7.1	33.26	8.1	24.7	0.69
A7	25 Jan 2017	18	14.52	62.96	6.9	33.26	8.1	24.7	0.70
A7	25 Jan 2017	19	14.45	52.04	6.9	33.27	8.1	24.8	0.69
A7	25 Jan 2017	20	14.45	47.33	7.0	33.27	8.1	24.8	0.70
A7	29 Jan 2017	1	14.55	80.14	7.8	33.20	8.2	24.7	1.69
A7	29 Jan 2017	2	14.55	80.34	7.8	33.21	8.2	24.7	1.84
A7	29 Jan 2017	3	14.55	80.64	7.8	33.21	8.2	24.7	1.84
A7	29 Jan 2017	4	14.55	81.11	7.8	33.21	8.2	24.7	1.97
A7	29 Jan 2017	5	14.55	81.10	7.7	33.21	8.2	24.7	1.84
A7	29 Jan 2017	6	14.54	80.97	7.7	33.21	8.2	24.7	1.75
A7	29 Jan 2017	7	14.53	81.24	7.6	33.21	8.2	24.7	1.67
A7	29 Jan 2017	8	14.49	81.41	7.4	33.22	8.2	24.7	1.54
A7	29 Jan 2017	9	14.47	81.47	7.3	33.23	8.2	24.7	1.42
A7	29 Jan 2017	10	14.43	81.49	7.2	33.23	8.2	24.7	1.34
A7	29 Jan 2017	11	14.37	81.39	7.0	33.25	8.1	24.8	1.18
A7	29 Jan 2017	12	14.33	81.40	6.8	33.26	8.1	24.8	1.08
A7	29 Jan 2017	13	14.25	81.52	6.7	33.27	8.1	24.8	1.05
A7	29 Jan 2017	14	14.12	81.50	6.7	33.29	8.1	24.8	1.02
A7	29 Jan 2017	15	14.10	81.22	6.6	33.29	8.1	24.8	1.01
A7	29 Jan 2017	16	14.01	80.61	6.5	33.29	8.1	24.9	0.93
A7	29 Jan 2017	17	13.91	79.93	6.3	33.30	8.1	24.9	0.84
A7	29 Jan 2017	18	13.94	79.69	5.8	33.29	8.1	24.9	0.70
A7	29 Jan 2017	19	13.63	78.75	5.3	33.32	8.1	25.0	0.60
A7	29 Jan 2017	20	13.01	75.52	5.6	33.37	8.0	25.1	0.67
A7	29 Jan 2017	21	12.95	73.84	6.3	33.35	8.0	25.1	0.76
C7	06 Jan 2017	1	14.62	84.18	8.1	33.15	8.1	24.6	0.32
C7	06 Jan 2017	2	14.61	83.64	8.4	33.16	8.1	24.6	0.37
C7	06 Jan 2017	3	14.60	84.16	8.2	33.17	8.1	24.6	0.28
C7	06 Jan 2017	4	14.60	83.94	7.8	33.16	8.1	24.6	1.67
C7	06 Jan 2017	5	14.59	84.63	7.9	33.18	8.1	24.7	2.41
C7	06 Jan 2017	6	14.59	85.03	7.8	33.19	8.1	24.7	1.95
C7	06 Jan 2017	7	14.59	85.39	7.4	33.20	8.1	24.7	1.96
C7	06 Jan 2017	8	14.55	86.00	7.2	33.25	8.1	24.7	1.81
C7	06 Jan 2017	9	14.50	86.32	7.1	33.27	8.1	24.7	1.93
C7	06 Jan 2017	10	14.42	86.64	7.0	33.29	8.1	24.8	1.73

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (μg/L)
C7	06 Jan 2017	11	14.39	86.78	6.8	33.27	8.1	24.8	1.72
C7	06 Jan 2017	12	14.33	86.59	7.1	33.29	8.1	24.8	1.54
C7	06 Jan 2017	13	14.33	86.72	7.2	33.28	8.1	24.8	1.11
C7	06 Jan 2017	14	14.31	86.73	7.0	33.26	8.1	24.8	0.82
C7	06 Jan 2017	15	14.25	86.83	6.9	33.26	8.1	24.8	0.77
C7	06 Jan 2017	16	14.28	86.52	6.7	33.25	8.1	24.8	0.59
C7	06 Jan 2017	17	14.23	86.80	6.7	33.25	8.1	24.8	0.55
C7	06 Jan 2017	18	14.14	86.69	6.8	33.27	8.0	24.8	0.50
C7	13 Jan 2017	1	15.04	85.45	8.0	33.28	8.1	24.6	1.47
C7	13 Jan 2017	2	15.03	88.06	8.0	33.28	8.1	24.6	1.45
C7	13 Jan 2017	3	15.04	88.08	8.0	33.28	8.1	24.6	1.42
C7	13 Jan 2017	4	15.05	88.99	8.0	33.28	8.1	24.6	1.42
C7	13 Jan 2017	5	15.06	89.04	8.0	33.29	8.1	24.6	1.41
C7	13 Jan 2017	6	15.06	89.06	8.0	33.29	8.1	24.6	1.38
C7	13 Jan 2017	7	15.06	89.08	8.0	33.29	8.1	24.6	1.39
C7	13 Jan 2017	8	15.06	89.10	7.9	33.29	8.1	24.6	1.40
C7	13 Jan 2017	9	15.05	89.13	7.8	33.29	8.1	24.6	1.26
C7	13 Jan 2017	10	15.02	89.14	7.6	33.29	8.1	24.6	1.21
C7	13 Jan 2017	11	14.91	88.73	7.5	33.29	8.1	24.7	1.07
C7	13 Jan 2017	12	14.92	88.76	7.2	33.29	8.1	24.7	0.93
C7	13 Jan 2017	13	14.66	87.97	7.1	33.30	8.1	24.7	0.83
C7	13 Jan 2017	14	14.60	88.04	6.8	33.29	8.1	24.7	0.73
C7	13 Jan 2017	15	14.45	86.61	6.6	33.30	8.1	24.8	0.67
C7	13 Jan 2017	16	14.12	86.09	6.6	33.32	8.1	24.9	0.63
C7	13 Jan 2017	17	14.03	85.86	6.6	33.31	8.1	24.9	0.59
C7	13 Jan 2017	18	13.99	85.86	6.7	33.31	8.0	24.9	0.59
C7	13 Jan 2017	19	13.95	85.72	6.7	33.31	8.0	24.9	0.59
C7	13 Jan 2017	20	13.94	85.13	6.7	33.31	8.0	24.9	0.58
C7	17 Jan 2017	1	14.86	86.55	7.9	33.22	8.1	24.6	1.31
C7	17 Jan 2017	2	14.86	86.64	7.9	33.22	8.1	24.6	1.45
C7	17 Jan 2017	3	14.85	86.54	7.9	33.22	8.1	24.6	1.61
C7	17 Jan 2017	4	14.85	86.61	7.9	33.22	8.1	24.6	1.62
C7	17 Jan 2017	5	14.84	86.44	7.9	33.21	8.1	24.6	1.75
C7	17 Jan 2017	6	14.85	86.71	7.9	33.22	8.1	24.6	1.67
C7	17 Jan 2017	7	14.85	86.64	7.9	33.22	8.1	24.6	1.71
C7	17 Jan 2017	8	14.85	86.69	7.9	33.22	8.1	24.6	1.66
C7	17 Jan 2017	9	14.85	86.61	7.8	33.22	8.1	24.6	1.70
C7	17 Jan 2017	10	14.85	86.56	7.8	33.22	8.1	24.6	1.68
C7	17 Jan 2017	11	14.85	86.58	7.8	33.22	8.1	24.6	1.63
C7	17 Jan 2017	12	14.84	86.62	7.8	33.22	8.1	24.6	1.56
C7	17 Jan 2017	13	14.84	86.70	7.6	33.22	8.1	24.6	1.33
C7	17 Jan 2017	14	14.83	87.06	7.4	33.23	8.1	24.6	1.10
C7	17 Jan 2017	15	14.80	87.12	7.2	33.25	8.1	24.7	0.94
C7	17 Jan 2017	16	14.74	87.10	6.9	33.26	8.1	24.7	0.79
C7	17 Jan 2017	17	14.57	84.93	7.0	33.27	8.1	24.7	0.74
C7	17 Jan 2017	18	14.50	81.65	7.1	33.27	8.1	24.7	0.81
C7	25 Jan 2017	1	14.54	67.16	7.7	33.17	8.1	24.7	0.50
C7	25 Jan 2017	2	14.54	67.28	7.6	33.17	8.1	24.7	0.62
C7	25 Jan 2017	3	14.53	67.96	7.6	33.17	8.1	24.7	0.74
C7	25 Jan 2017	4	14.52	68.45	7.6	33.17	8.1	24.7	0.76
C7	25 Jan 2017	5	14.51	69.06	7.5	33.17	8.1	24.7	0.78
C7	25 Jan 2017	6	14.50	69.40	7.6	33.17	8.1	24.7	0.75

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (μg/L)
C7	25 Jan 2017	7	14.50	69.72	7.5	33.17	8.1	24.7	0.77
C7	25 Jan 2017	8	14.50	69.83	7.5	33.17	8.1	24.7	0.77
C7	25 Jan 2017	9	14.50	69.83	7.5	33.17	8.1	24.7	0.69
C7	25 Jan 2017	10	14.50	69.78	7.5	33.17	8.1	24.7	0.66
C7	25 Jan 2017	11	14.51	70.28	7.5	33.18	8.1	24.7	0.64
C7	25 Jan 2017	12	14.53	70.91	7.4	33.19	8.1	24.7	0.60
C7	25 Jan 2017	13	14.56	71.55	7.3	33.20	8.1	24.7	0.58
C7	25 Jan 2017	14	14.60	71.58	7.3	33.23	8.1	24.7	0.57
C7	25 Jan 2017	15	14.61	70.35	7.2	33.24	8.1	24.7	0.59
C7	25 Jan 2017	16	14.62	70.52	7.1	33.25	8.1	24.7	0.57
C7	25 Jan 2017	17	14.60	63.82	7.1	33.26	8.1	24.7	0.58
C7	25 Jan 2017	18	14.60	60.29	7.2	33.27	8.1	24.7	0.55
C7	29 Jan 2017	1	14.40	73.77	7.8	33.18	8.2	24.7	2.16
C7	29 Jan 2017	2	14.41	73.58	7.6	33.19	8.2	24.7	2.14
C7	29 Jan 2017	3	14.38	73.11	7.6	33.20	8.2	24.7	2.16
C7	29 Jan 2017	4	14.37	72.85	7.6	33.21	8.2	24.7	2.23
C7	29 Jan 2017	5	14.36	72.50	7.6	33.21	8.2	24.7	2.24
C7	29 Jan 2017	6	14.35	72.43	7.6	33.21	8.1	24.7	2.15
C7	29 Jan 2017	7	14.34	72.00	7.5	33.21	8.1	24.7	2.06
C7	29 Jan 2017	8	14.33	71.70	7.4	33.22	8.1	24.7	1.93
C7	29 Jan 2017	9	14.33	70.98	7.2	33.23	8.1	24.7	1.88
C7	29 Jan 2017	10	14.35	69.52	7.0	33.24	8.1	24.8	1.73
C7	29 Jan 2017	11	14.35	68.52	6.9	33.26	8.1	24.8	1.52
C7	29 Jan 2017	12	14.30	66.24	6.7	33.27	8.1	24.8	1.34
C7	29 Jan 2017	13	14.23	64.79	6.7	33.28	8.1	24.8	1.27
C7	29 Jan 2017	14	14.21	67.27	6.7	33.28	8.1	24.8	1.19
C7	29 Jan 2017	15	14.20	69.11	6.7	33.29	8.1	24.8	1.15
C7	29 Jan 2017	16	14.18	70.02	6.6	33.29	8.1	24.8	1.06
C7	29 Jan 2017	17	14.17	70.43	6.2	33.29	8.1	24.8	0.79
C7	29 Jan 2017	18	13.86	72.40	6.0	33.32	8.1	24.9	0.73
C8	06 Jan 2017	1	14.77	84.50	7.4	33.20	8.1	24.6	0.26
C8	06 Jan 2017	2	14.77	84.39	8.2	33.20	8.1	24.6	0.30
C8	06 Jan 2017	3	14.77	84.39	7.9	33.21	8.1	24.6	0.34
C8	06 Jan 2017	4	14.77	84.71	7.9	33.21	8.1	24.6	0.35
C8	06 Jan 2017	5	14.77	84.69	8.0	33.21	8.1	24.6	1.81
C8	06 Jan 2017	6	14.77	84.81	8.2	33.21	8.1	24.6	1.97
C8	06 Jan 2017	7	14.77	84.98	8.2	33.21	8.1	24.6	1.79
C8	06 Jan 2017	8	14.77	85.36	7.8	33.22	8.1	24.6	1.70
C8	06 Jan 2017	9	14.77	85.43	7.3	33.22	8.1	24.6	1.67
C8	06 Jan 2017	10	14.77	85.68	7.0	33.23	8.1	24.7	1.62
C8	06 Jan 2017	11	14.72	85.88	7.0	33.26	8.1	24.7	1.71
C8	06 Jan 2017	12	14.66	86.20	7.3	33.30	8.1	24.7	1.75
C8	06 Jan 2017	13	14.62	86.21	7.7	33.28	8.1	24.7	1.68
C8	06 Jan 2017	14	14.54	86.29	7.5	33.30	8.1	24.8	1.37
C8	06 Jan 2017	15	14.47	85.96	7.0	33.29	8.1	24.8	1.09
C8	06 Jan 2017	16	14.33	85.55	6.9	33.30	8.1	24.8	0.89
C8	06 Jan 2017	17	14.25	85.74	6.8	33.29	8.1	24.8	0.76
C8	06 Jan 2017	18	14.14	85.92	6.9	33.28	8.1	24.8	0.69
C8	06 Jan 2017	19	14.13	85.66	6.9	33.28	8.0	24.8	0.67
C8	13 Jan 2017	1	14.91	82.94	8.0	33.23	8.1	24.6	1.07
C8	13 Jan 2017	2	14.91	85.48	8.0	33.19	8.1	24.6	1.05
C8	13 Jan 2017	3	14.92	87.82	8.0	33.24	8.1	24.6	1.01

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (μg/L)
C8	13 Jan 2017	4	14.94	88.38	7.9	33.24	8.1	24.6	1.03
C8	13 Jan 2017	5	14.95	88.54	7.9	33.25	8.1	24.6	1.02
C8	13 Jan 2017	6	14.95	88.69	7.9	33.25	8.1	24.6	1.00
C8	13 Jan 2017	7	14.94	88.63	7.8	33.25	8.1	24.6	1.04
C8	13 Jan 2017	8	14.92	88.19	7.7	33.25	8.1	24.6	1.02
C8	13 Jan 2017	9	14.89	87.05	7.6	33.26	8.1	24.7	1.00
C8	13 Jan 2017	10	14.87	86.20	7.6	33.27	8.1	24.7	1.00
C8	13 Jan 2017	11	14.86	86.55	7.6	33.28	8.1	24.7	1.03
C8	13 Jan 2017	12	14.86	86.98	7.7	33.29	8.1	24.7	1.01
C8	13 Jan 2017	13	14.86	87.11	7.6	33.28	8.1	24.7	0.99
C8	13 Jan 2017	14	14.84	87.36	7.5	33.29	8.1	24.7	0.99
C8	13 Jan 2017	15	14.81	87.50	7.5	33.29	8.1	24.7	0.95
C8	13 Jan 2017	16	14.76	87.23	7.2	33.29	8.1	24.7	0.88
C8	13 Jan 2017	17	14.67	85.96	6.8	33.29	8.1	24.7	0.76
C8	13 Jan 2017	18	14.54	86.64	6.6	33.29	8.1	24.8	0.74
C8	13 Jan 2017	19	14.24	85.48	6.7	33.31	8.1	24.8	0.74
C8	13 Jan 2017	20	14.12	82.58	6.9	33.32	8.1	24.9	0.74
C8	17 Jan 2017	1	14.87	82.94	7.7	33.19	8.1	24.6	1.05
C8	17 Jan 2017	2	14.87	82.87	7.6	33.19	8.1	24.6	1.16
C8	17 Jan 2017	3	14.86	82.95	7.5	33.21	8.1	24.6	1.23
C8	17 Jan 2017	4	14.85	82.43	7.5	33.22	8.1	24.6	1.22
C8	17 Jan 2017	5	14.83	83.06	7.4	33.23	8.1	24.6	1.25
C8	17 Jan 2017	6	14.82	83.19	7.3	33.23	8.1	24.6	1.22
C8	17 Jan 2017	7	14.80	83.87	7.3	33.24	8.1	24.7	1.22
C8	17 Jan 2017	8	14.72	83.19	7.3	33.24	8.1	24.7	1.18
C8	17 Jan 2017	9	14.73	83.46	7.2	33.24	8.1	24.7	1.16
C8	17 Jan 2017	10	14.67	82.45	7.3	33.25	8.1	24.7	1.12
C8	17 Jan 2017	11	14.65	81.78	7.3	33.25	8.1	24.7	1.05
C8	17 Jan 2017	12	14.65	82.30	7.2	33.25	8.1	24.7	1.01
C8	17 Jan 2017	13	14.63	81.96	7.2	33.25	8.1	24.7	0.95
C8	17 Jan 2017	14	14.61	82.25	7.0	33.25	8.1	24.7	0.92
C8	17 Jan 2017	15	14.55	82.91	6.8	33.26	8.1	24.7	0.88
C8	17 Jan 2017	16	14.39	84.00	6.7	33.29	8.1	24.8	0.87
C8	17 Jan 2017	17	14.27	83.95	6.7	33.29	8.1	24.8	0.90
C8	17 Jan 2017	18	14.20	81.62	6.8	33.30	8.1	24.8	0.89
C8	17 Jan 2017	19	14.20	80.23	6.9	33.30	8.1	24.8	0.88
C8	25 Jan 2017	1	14.35	54.82	8.0	32.98	8.1	24.6	0.61
C8	25 Jan 2017	2	14.35	54.49	8.0	32.99	8.1	24.6	0.72
C8	25 Jan 2017	3	14.35	55.49	7.9	32.99	8.1	24.6	0.87
C8	25 Jan 2017	4	14.36	55.85	7.8	33.01	8.1	24.6	0.86
C8	25 Jan 2017	5	14.44	56.29	7.6	33.04	8.1	24.6	0.79
C8	25 Jan 2017	6	14.50	54.65	7.5	33.10	8.1	24.6	0.76
C8	25 Jan 2017	7	14.50	57.51	7.4	33.12	8.1	24.6	0.72
C8	25 Jan 2017	8	14.51	58.14	7.4	33.15	8.1	24.6	0.74
C8	25 Jan 2017	9	14.53	59.91	7.5	33.17	8.1	24.7	0.67
C8	25 Jan 2017	10	14.55	60.82	7.4	33.18	8.1	24.7	0.62
C8	25 Jan 2017	11	14.60	63.43	7.4	33.21	8.1	24.7	0.63
C8	25 Jan 2017	12	14.63	66.23	7.4	33.23	8.1	24.7	0.69
C8	25 Jan 2017	13	14.63	67.89	7.3	33.23	8.1	24.7	0.59
C8	25 Jan 2017	14	14.64	69.26	7.3	33.24	8.1	24.7	0.58
C8	25 Jan 2017	15	14.63	68.02	7.2	33.25	8.1	24.7	0.54
C8	25 Jan 2017	16	14.62	65.30	7.0	33.25	8.1	24.7	0.57
C8	25 Jan 2017	17	14.56	61.02	7.0	33.25	8.1	24.7	1.13

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (μg/L)
C8	25 Jan 2017	18	14.53	54.41	6.9	33.25	8.1	24.7	1.92
C8	25 Jan 2017	19	14.51	35.13	6.9	33.24	8.1	24.7	2.00
C8	29 Jan 2017	1	14.34	71.73	7.8	33.17	8.2	24.7	1.82
C8	29 Jan 2017	2	14.32	71.61	7.8	33.17	8.2	24.7	2.06
C8	29 Jan 2017	3	14.33	71.51	7.8	33.18	8.2	24.7	2.40
C8	29 Jan 2017	4	14.35	71.78	7.7	33.19	8.2	24.7	2.36
C8	29 Jan 2017	5	14.37	72.09	7.7	33.20	8.2	24.7	2.25
C8	29 Jan 2017	6	14.38	72.97	7.7	33.20	8.2	24.7	2.18
C8	29 Jan 2017	7	14.38	74.22	7.7	33.21	8.2	24.7	2.18
C8	29 Jan 2017	8	14.38	74.43	7.7	33.21	8.2	24.7	1.98
C8	29 Jan 2017	9	14.38	74.60	7.6	33.21	8.2	24.7	1.89
C8	29 Jan 2017	10	14.39	74.93	7.6	33.22	8.2	24.7	1.86
C8	29 Jan 2017	11	14.39	75.70	7.6	33.22	8.2	24.7	1.82
C8	29 Jan 2017	12	14.40	76.36	7.6	33.23	8.2	24.7	1.71
C8	29 Jan 2017	13	14.41	77.04	7.5	33.24	8.2	24.7	1.68
C8	29 Jan 2017	14	14.41	77.73	7.5	33.25	8.2	24.7	1.59
C8	29 Jan 2017	15	14.40	78.41	7.4	33.25	8.2	24.8	1.55
C8	29 Jan 2017	16	14.39	78.56	7.3	33.26	8.2	24.8	1.46
C8	29 Jan 2017	17	14.37	78.67	7.1	33.26	8.2	24.8	1.40
C8	29 Jan 2017	18	14.25	78.27	7.0	33.27	8.1	24.8	1.41
C8	29 Jan 2017	19	14.17	73.75	7.0	33.28	8.1	24.8	1.42
C8	29 Jan 2017	20	14.13	62.64	7.1	33.28	8.1	24.8	1.42

NA = not available

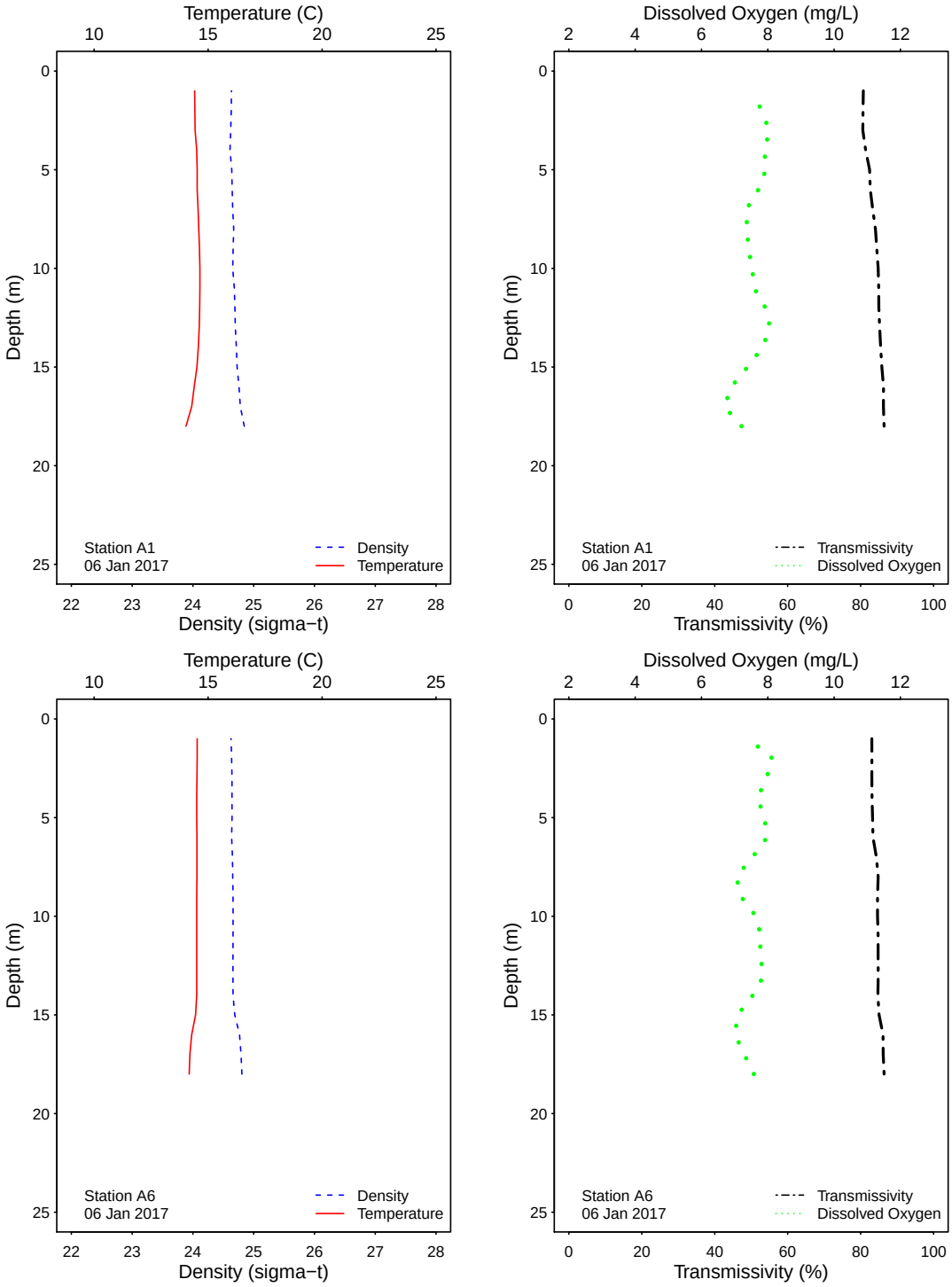


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

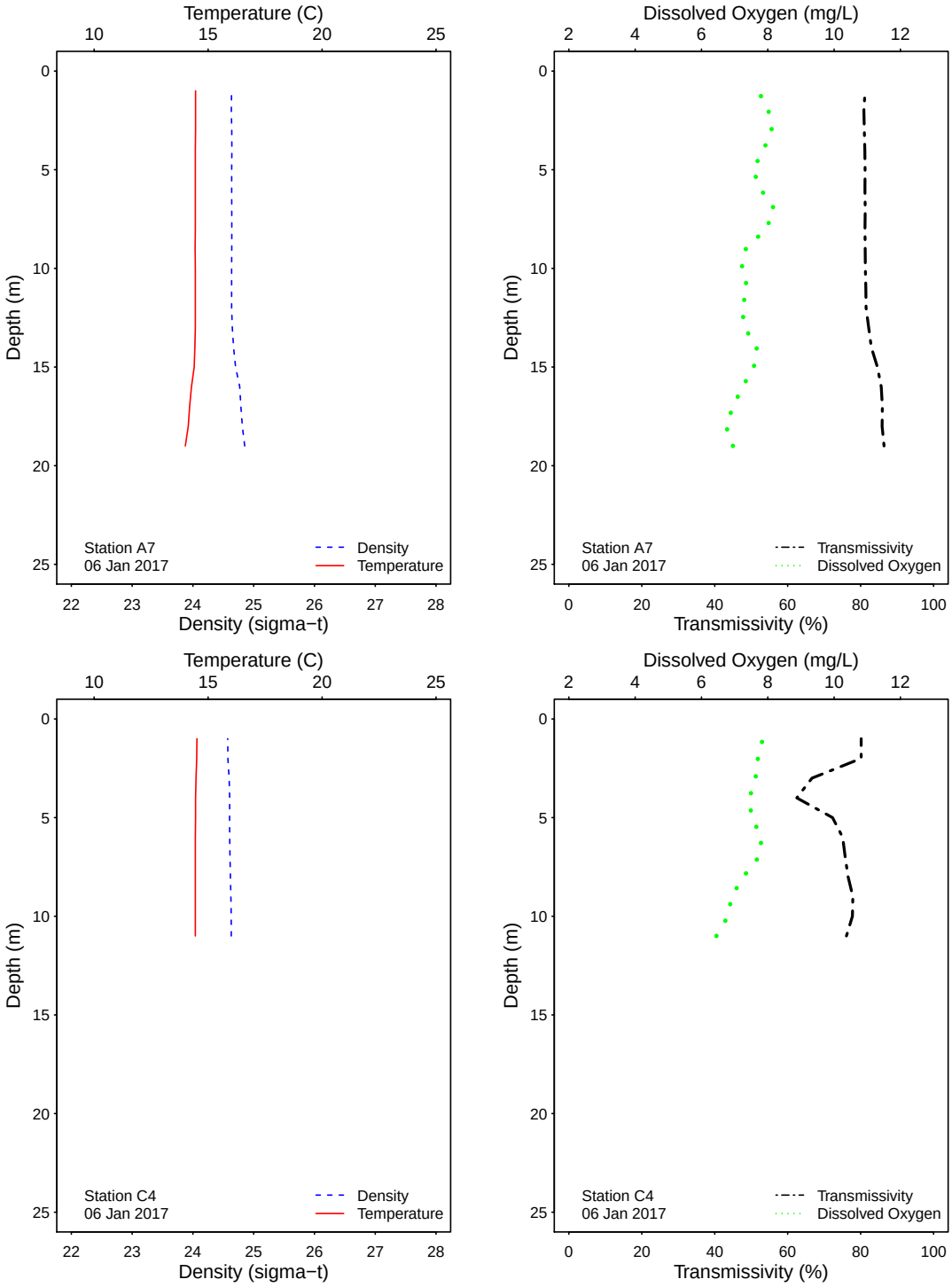


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

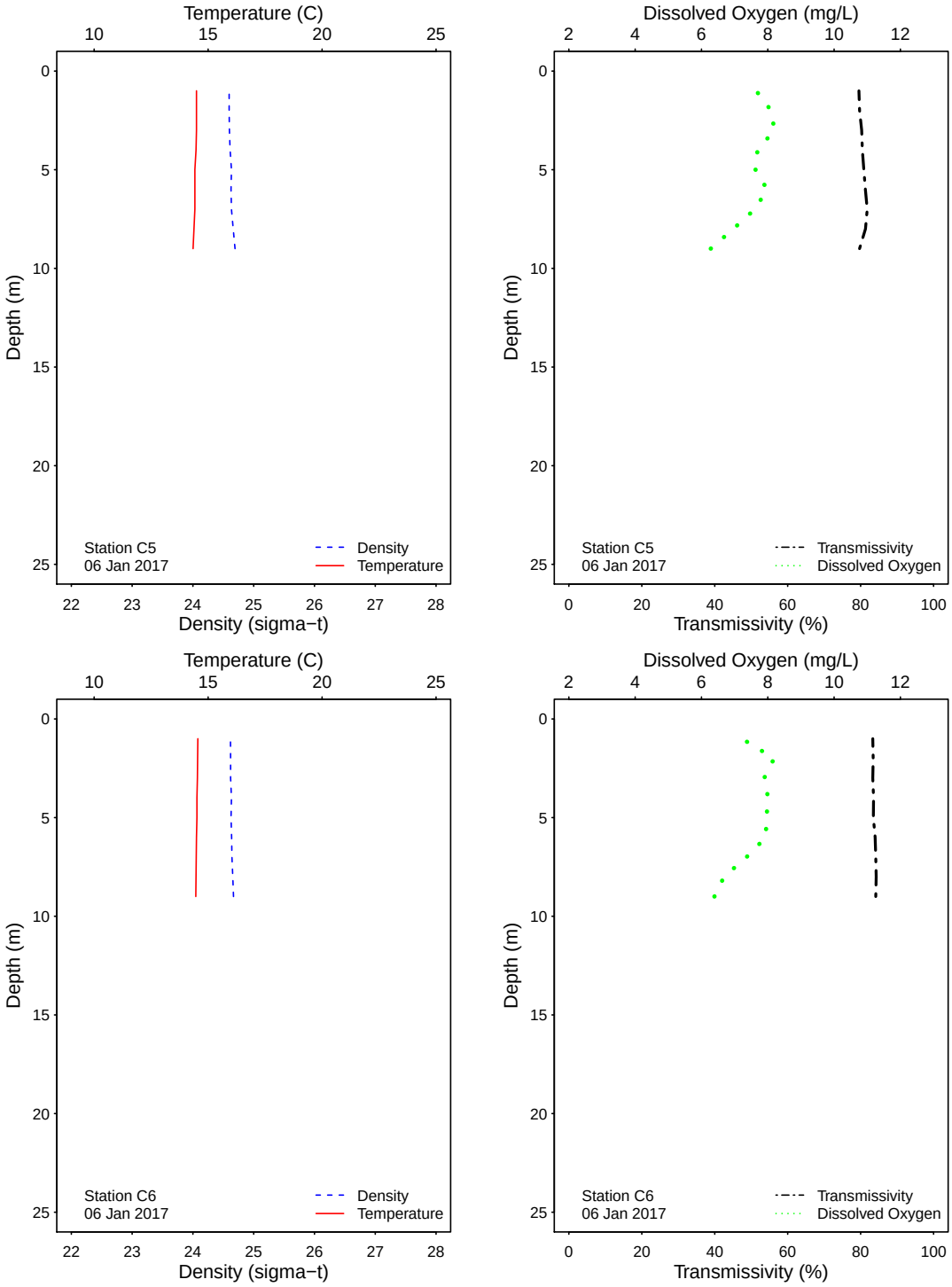


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

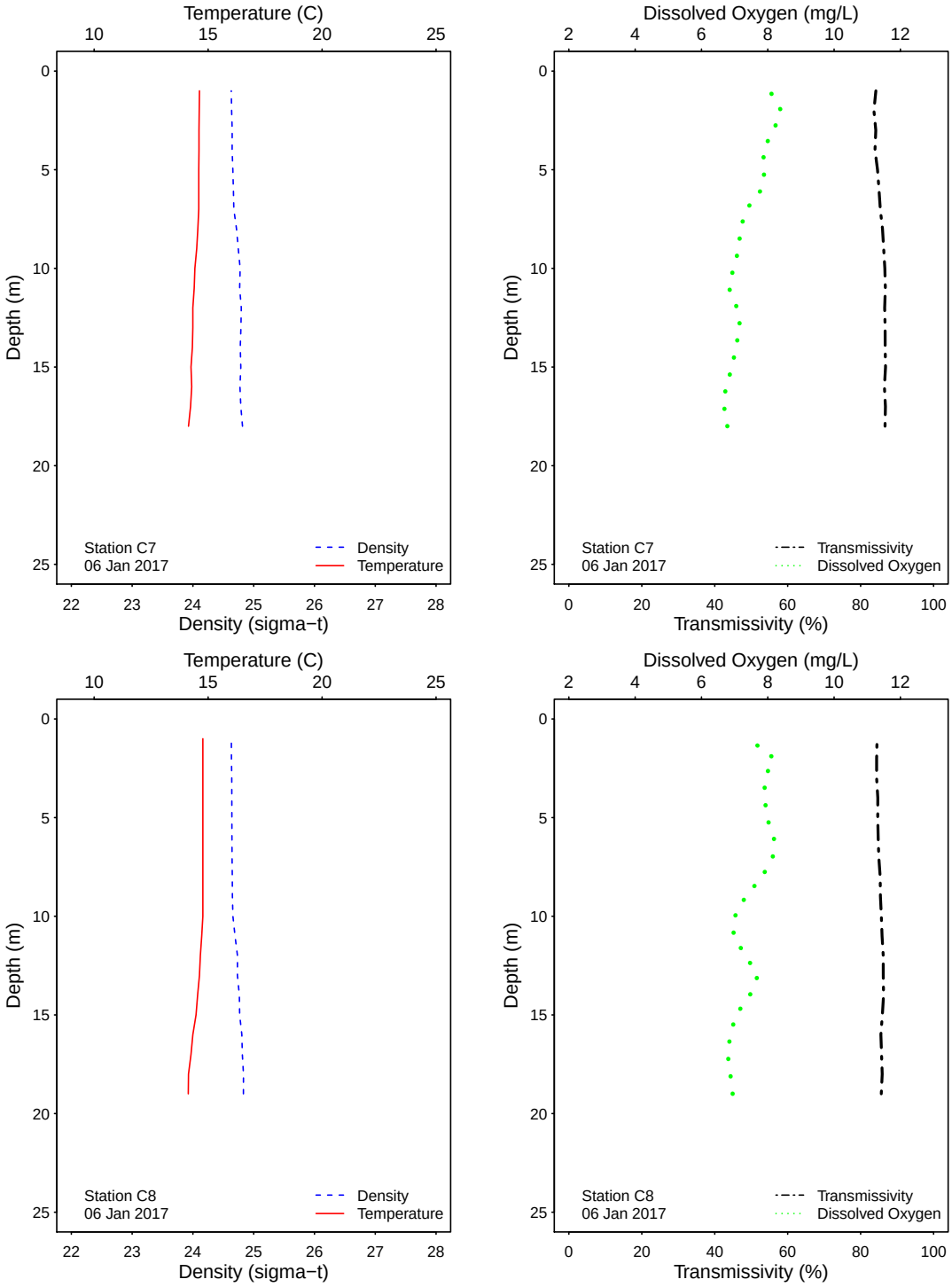


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

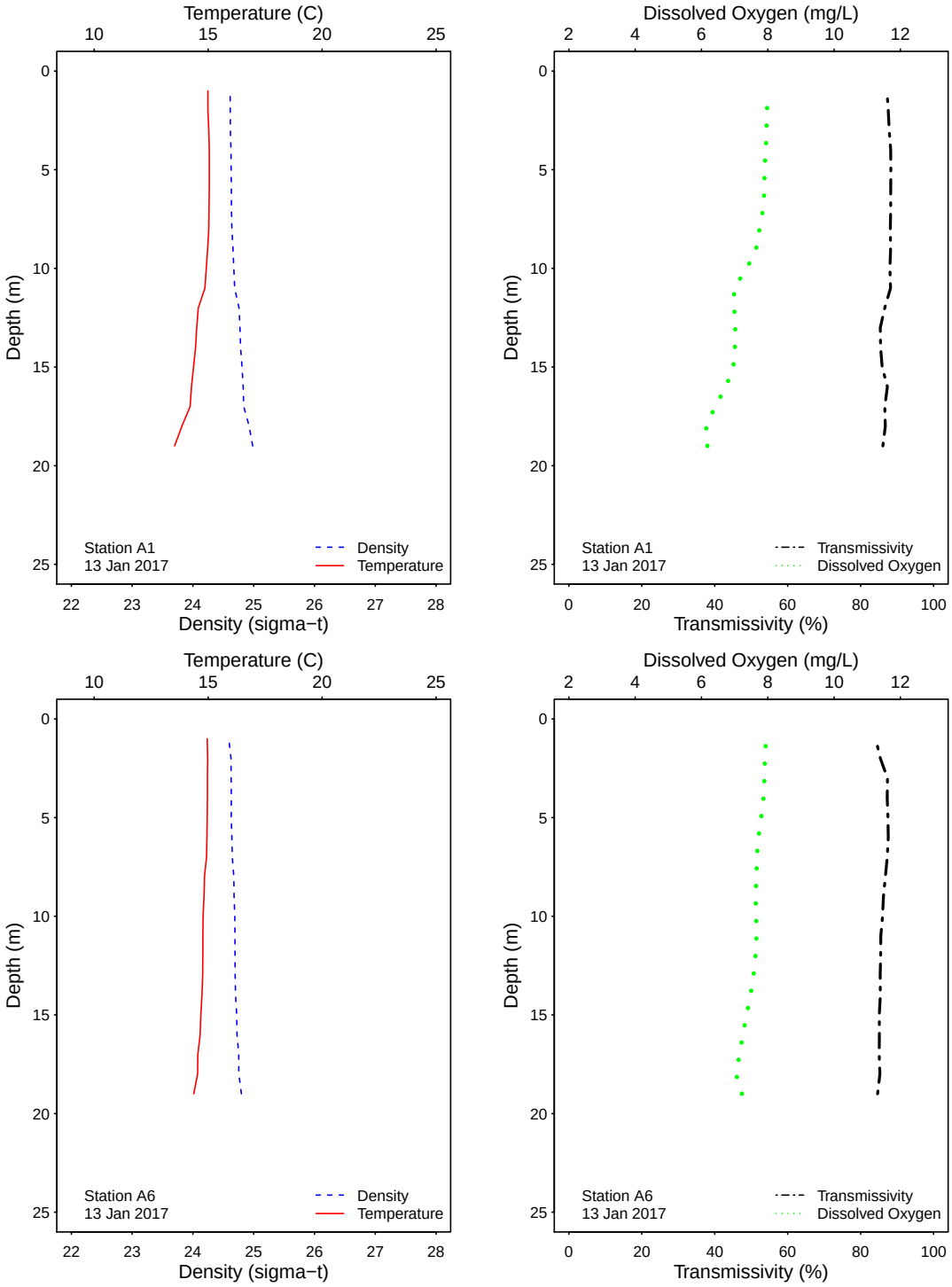
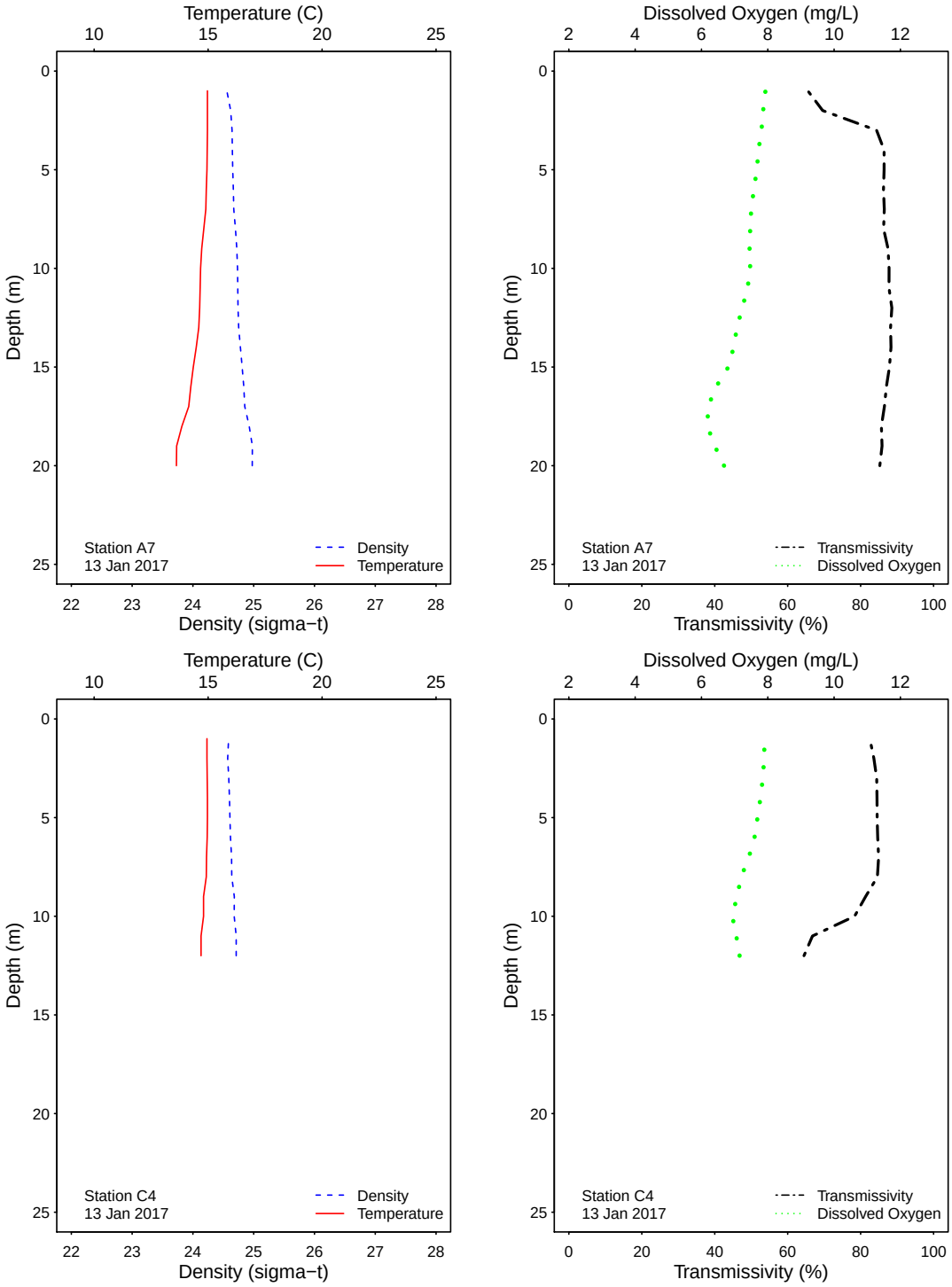


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.



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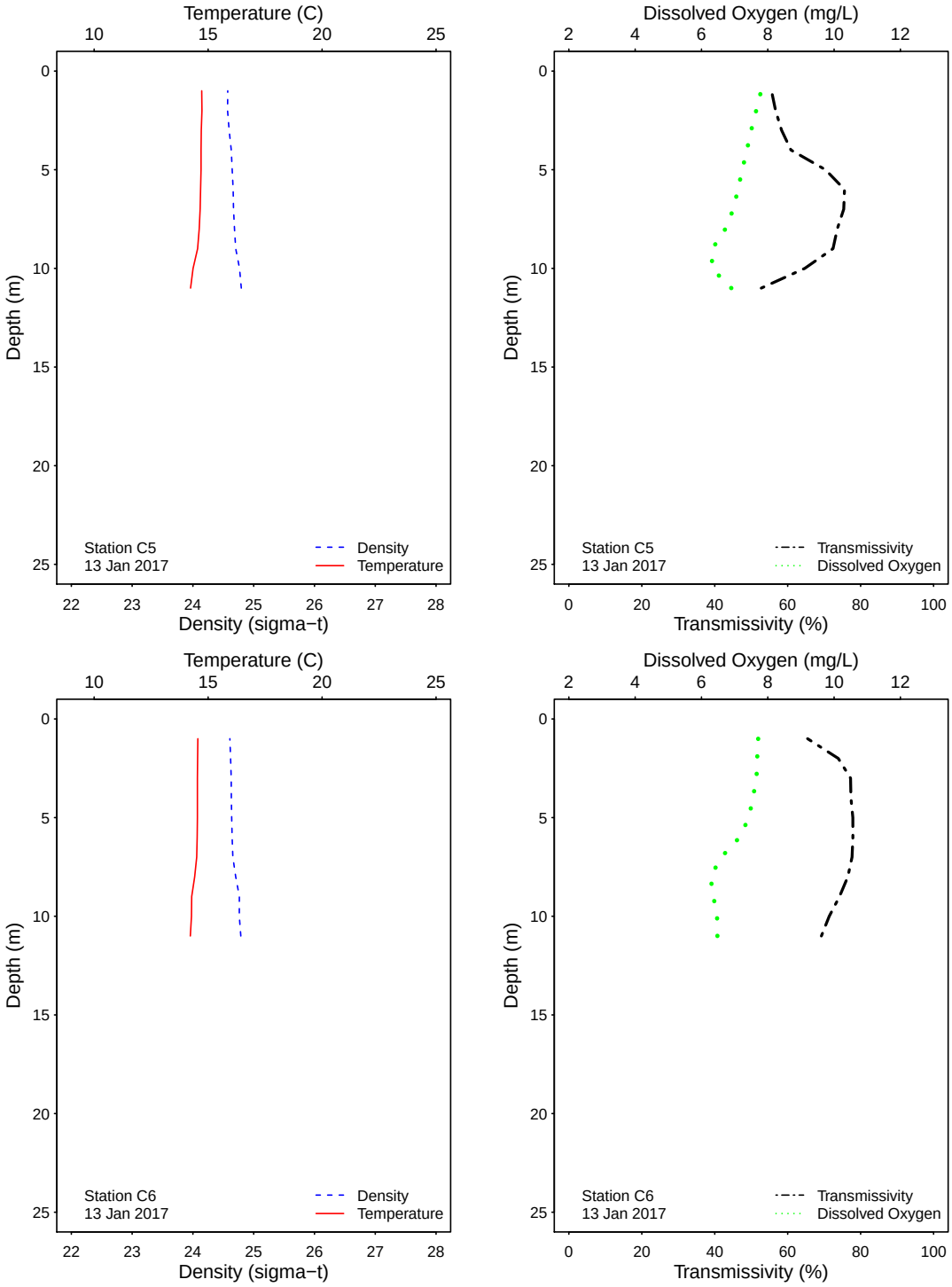

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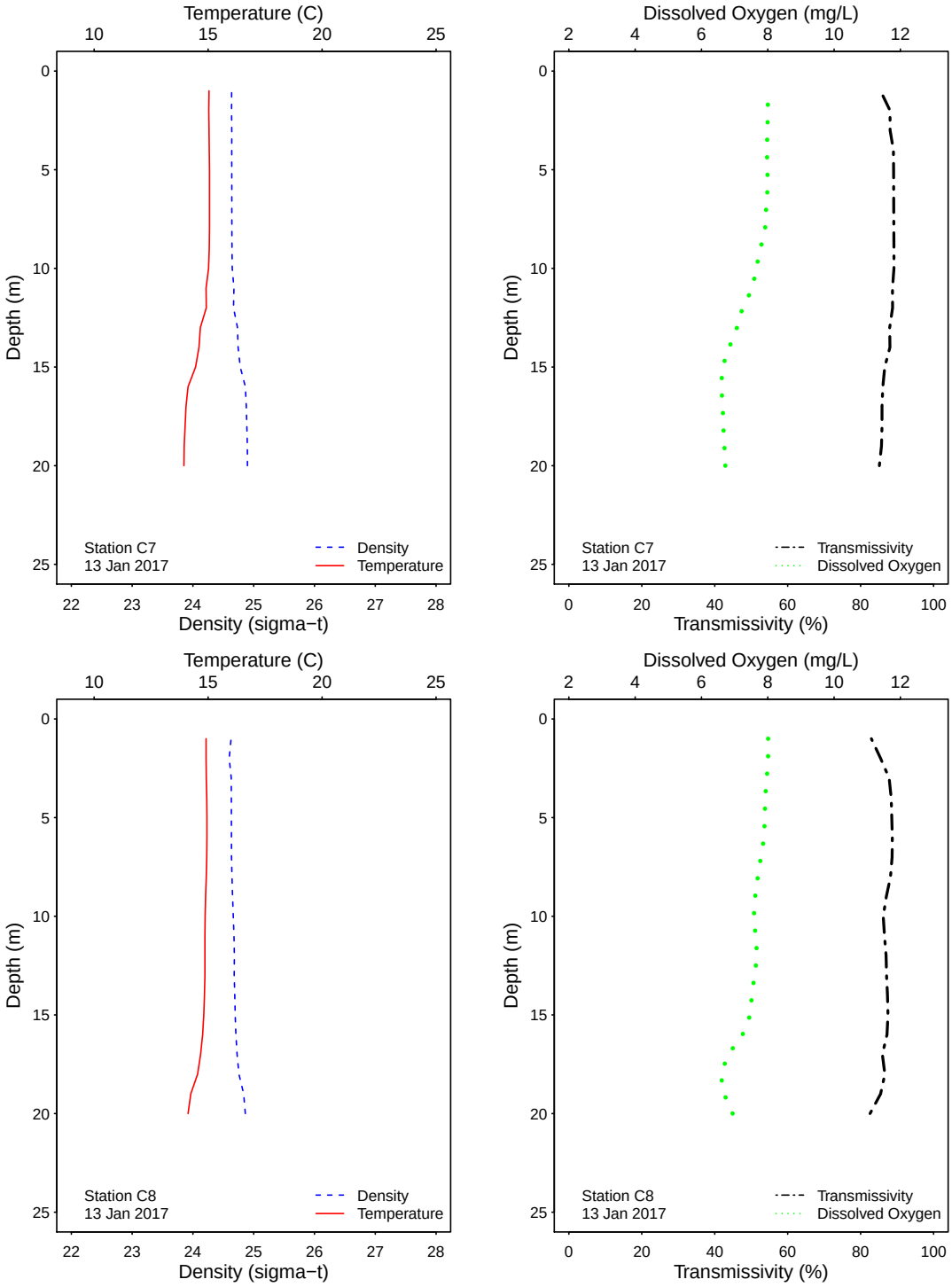

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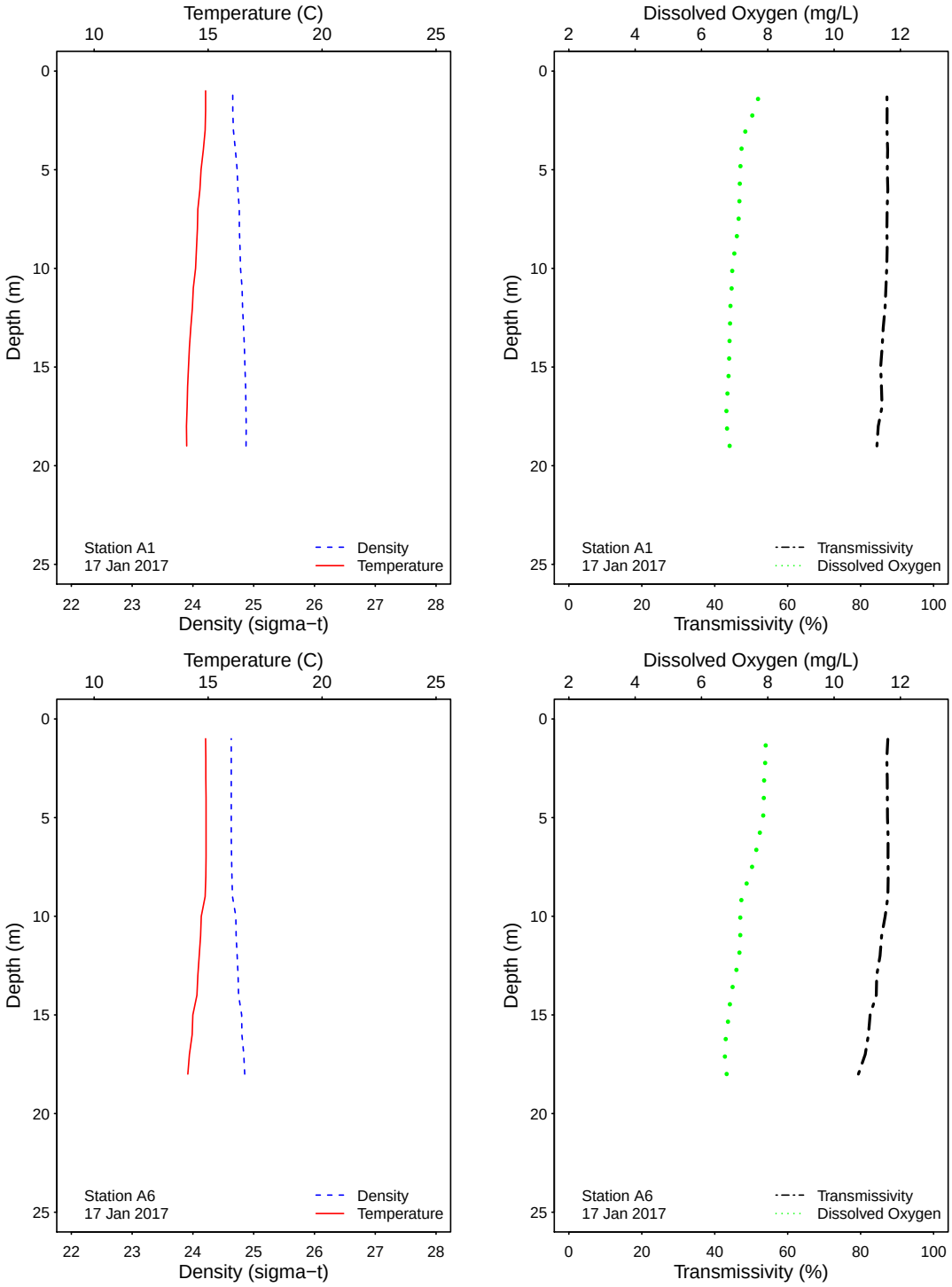

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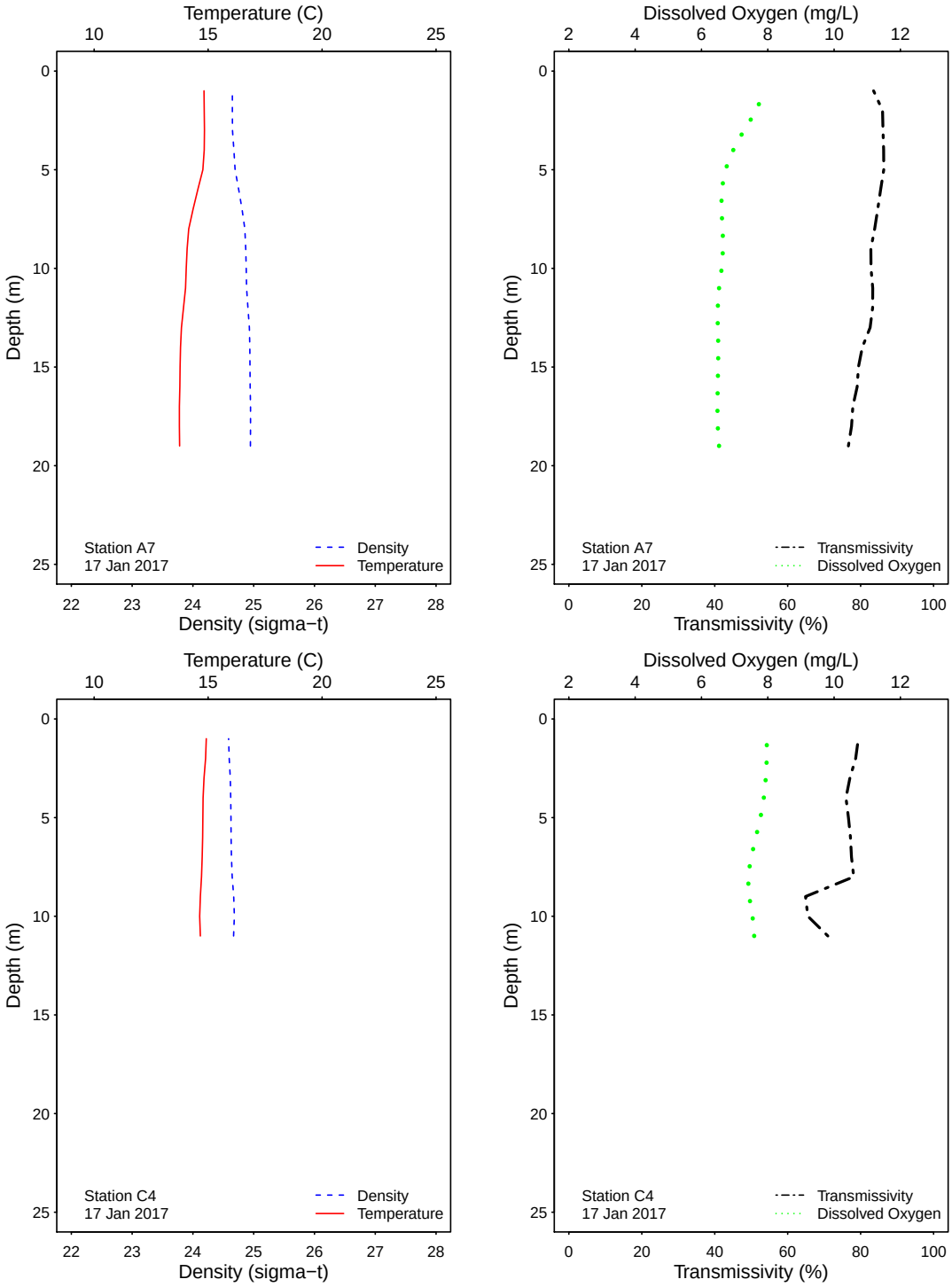

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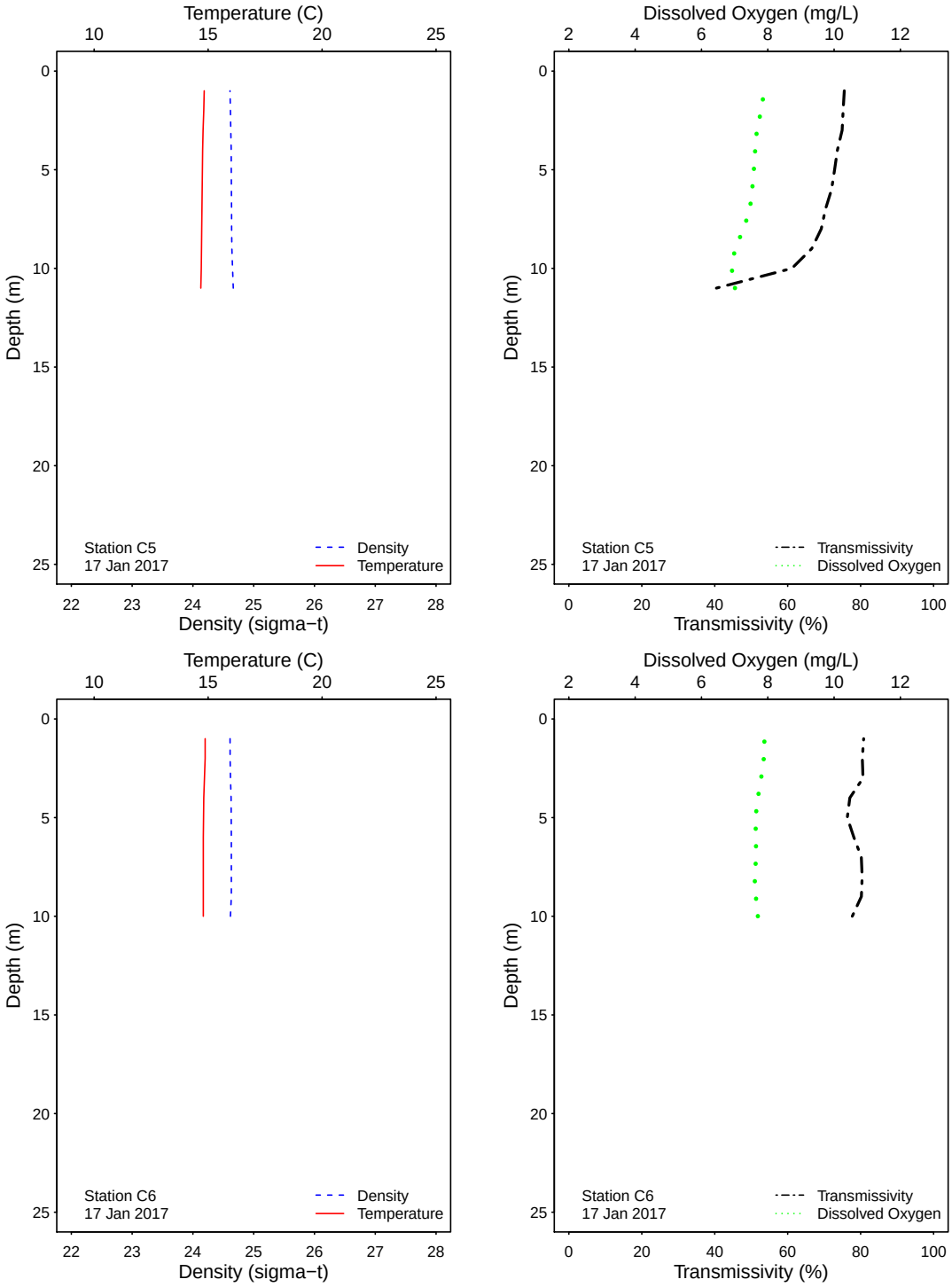

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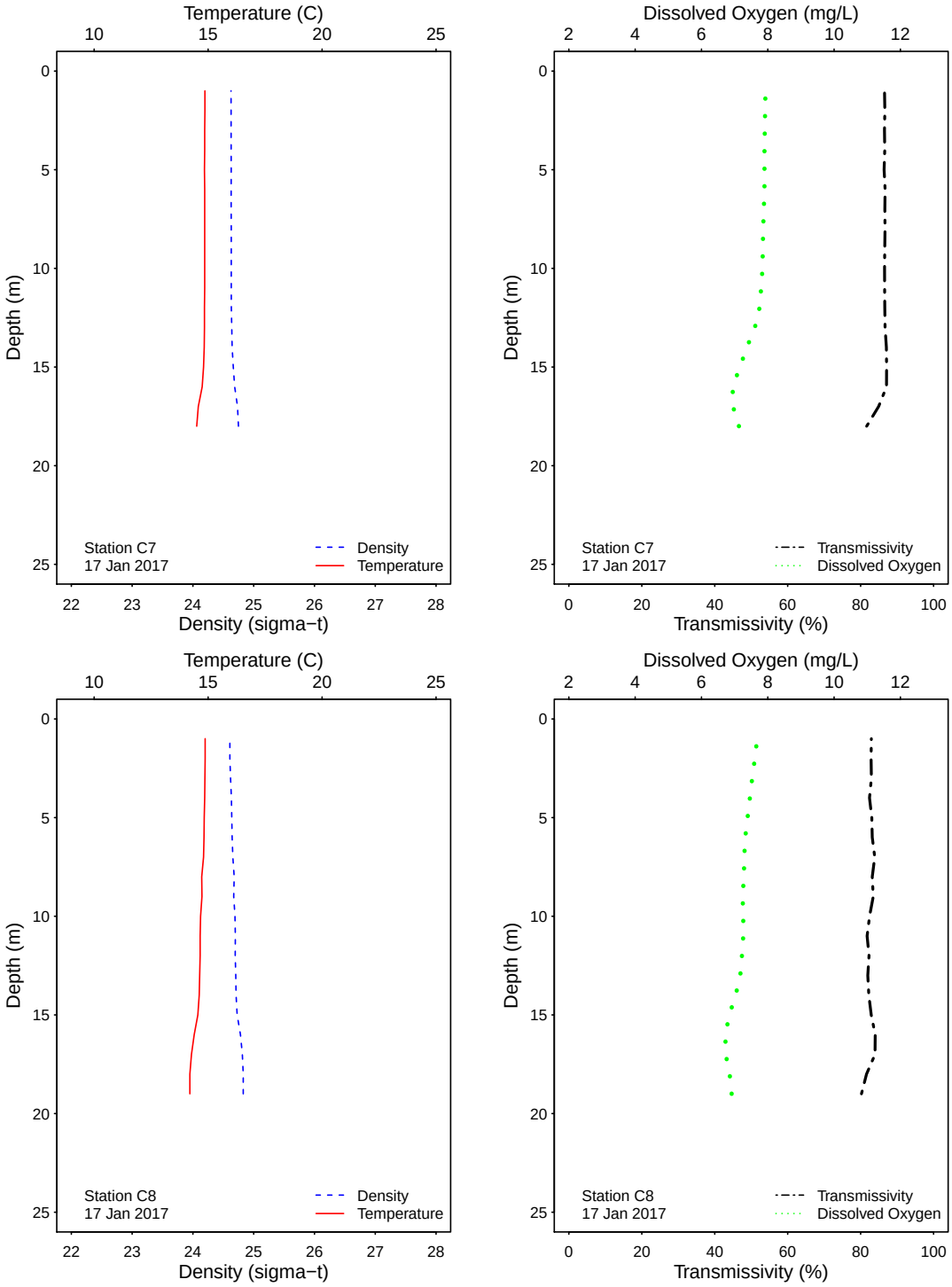

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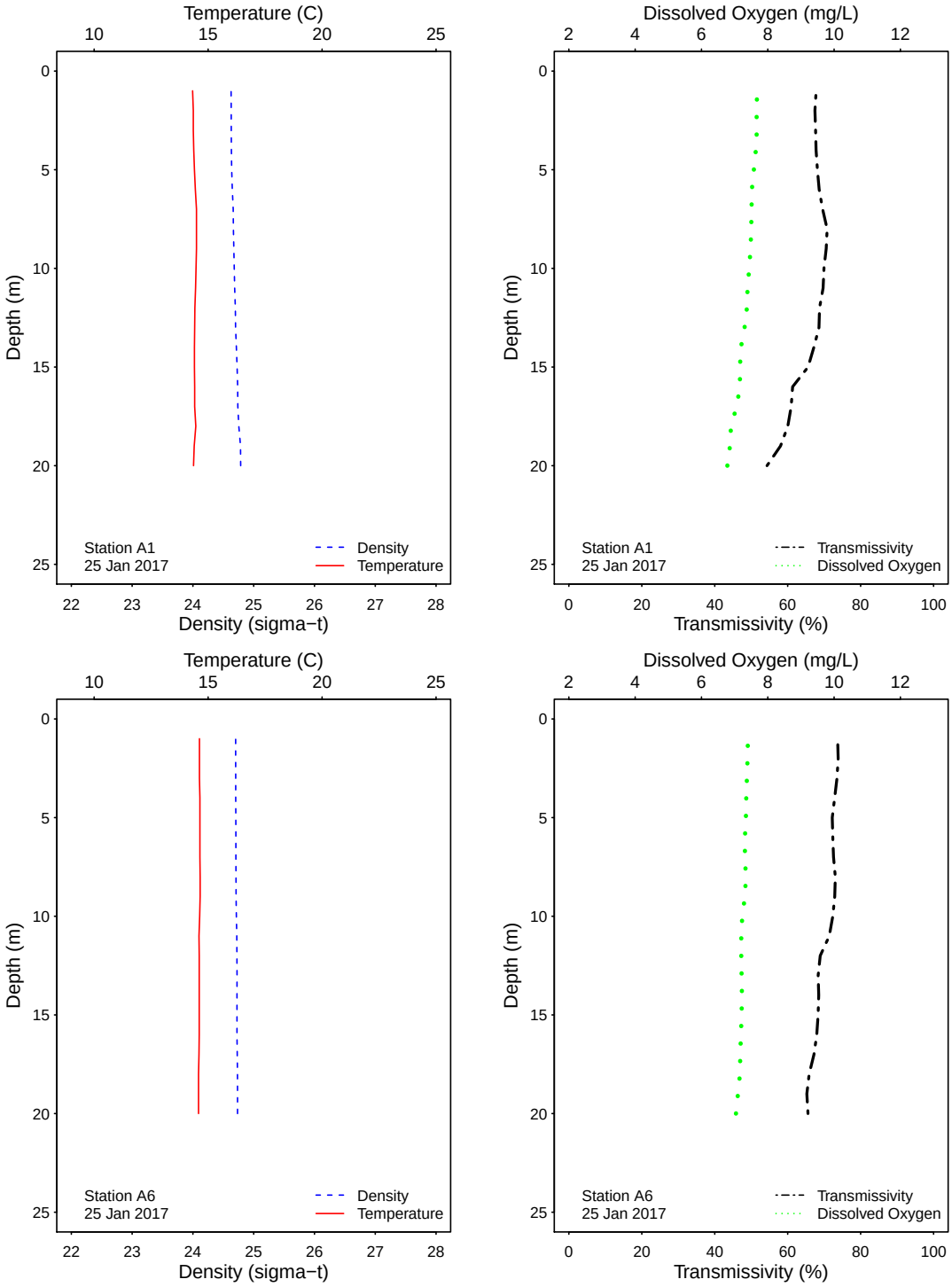

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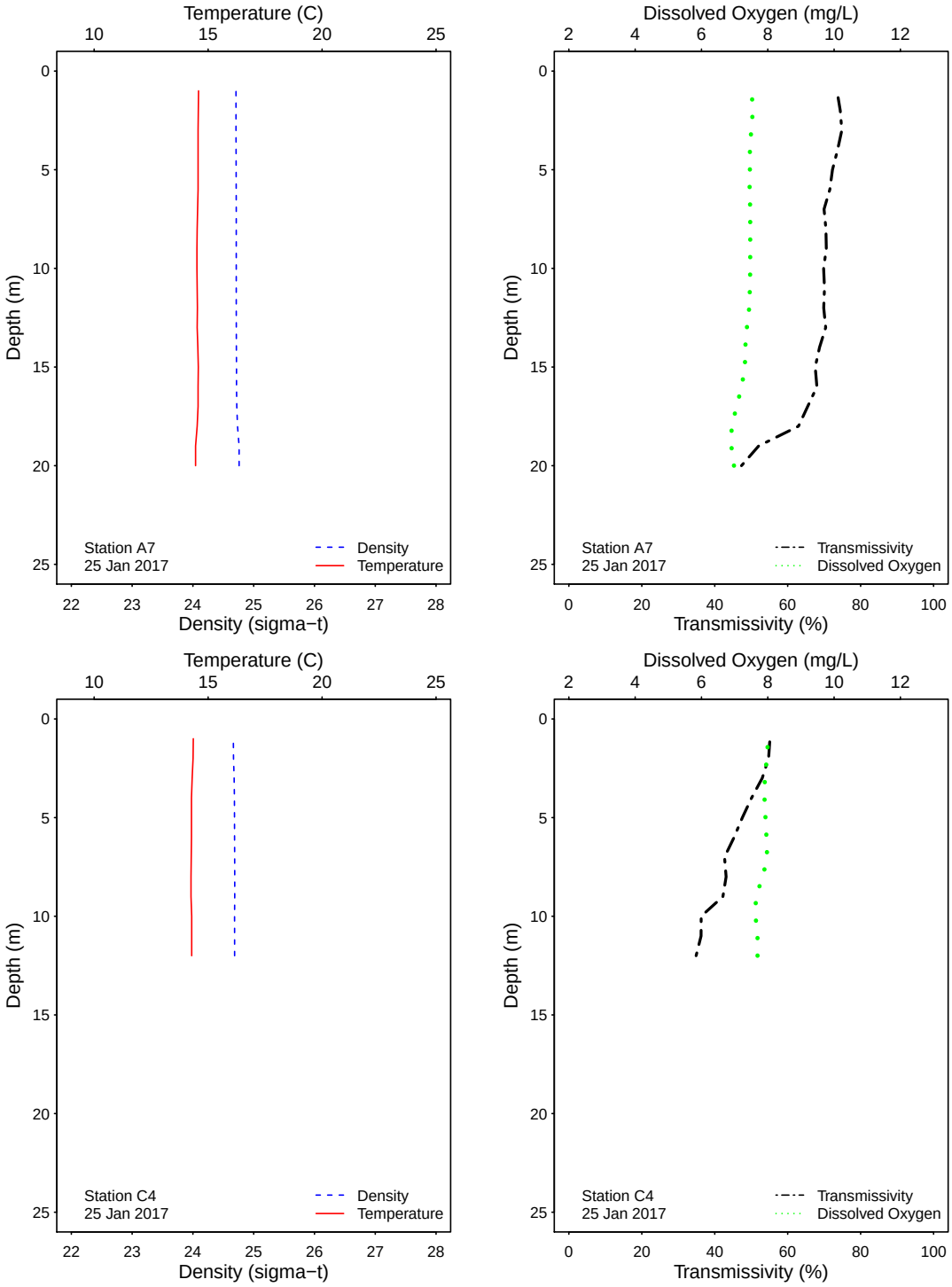

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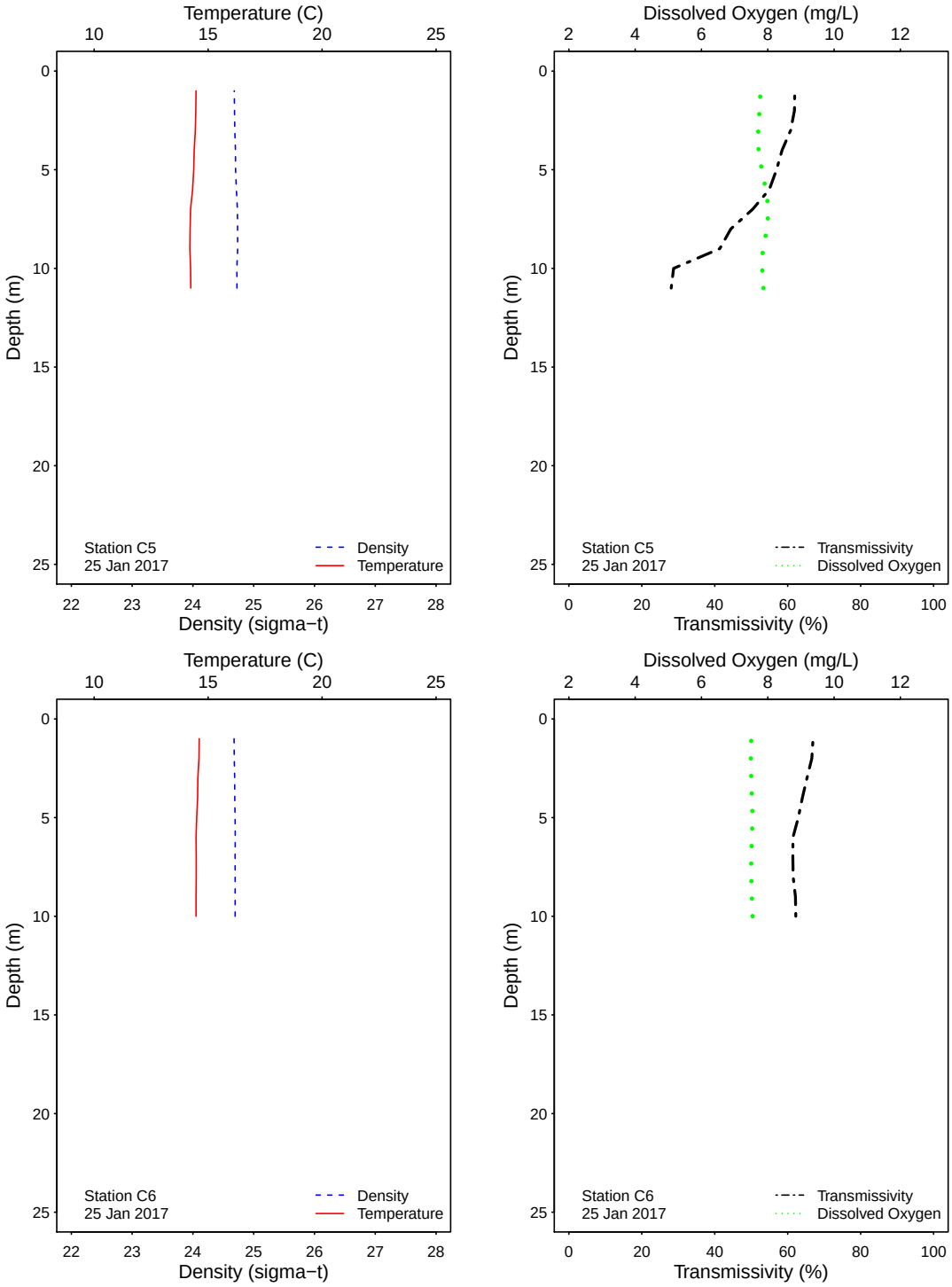

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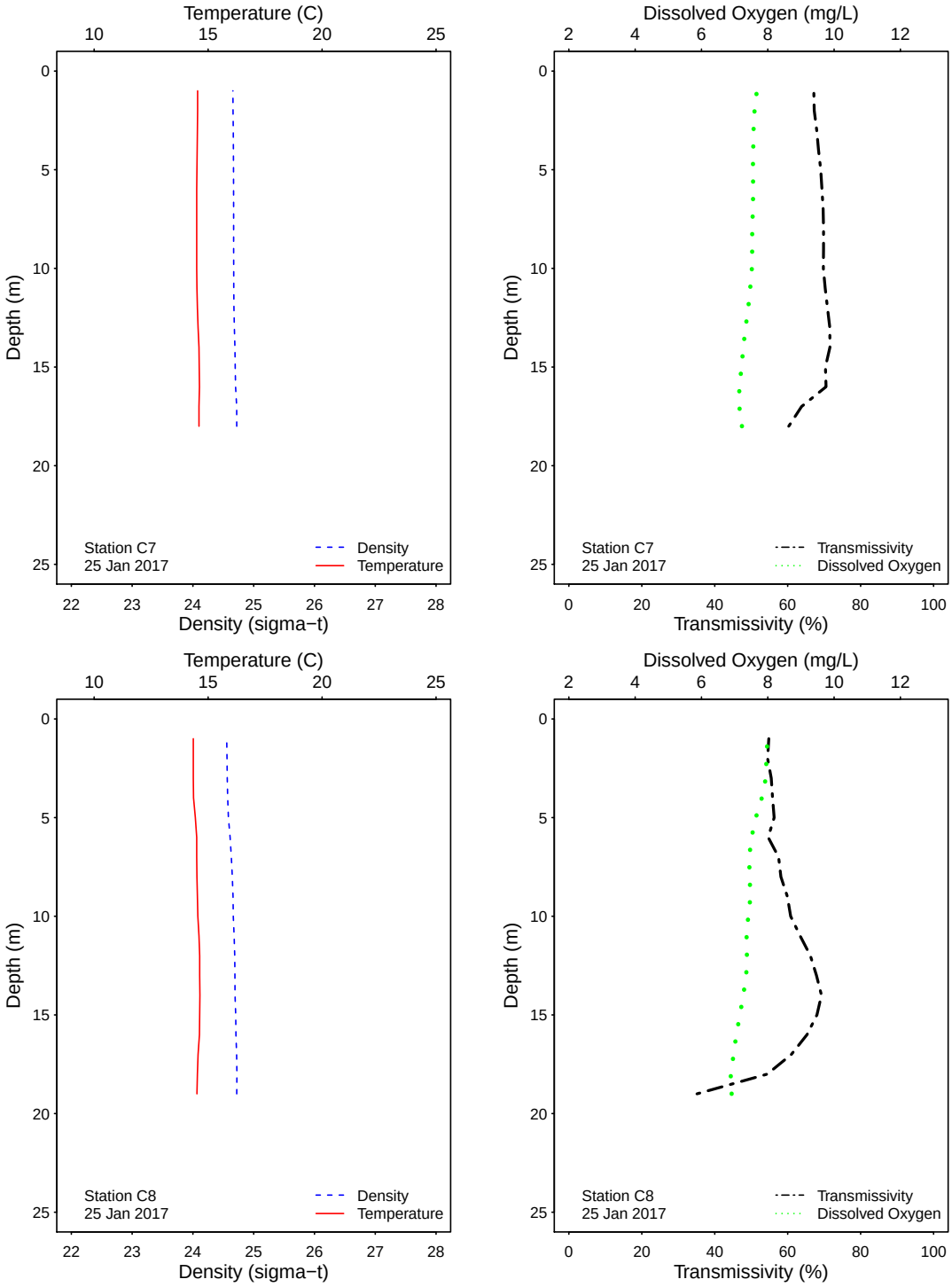

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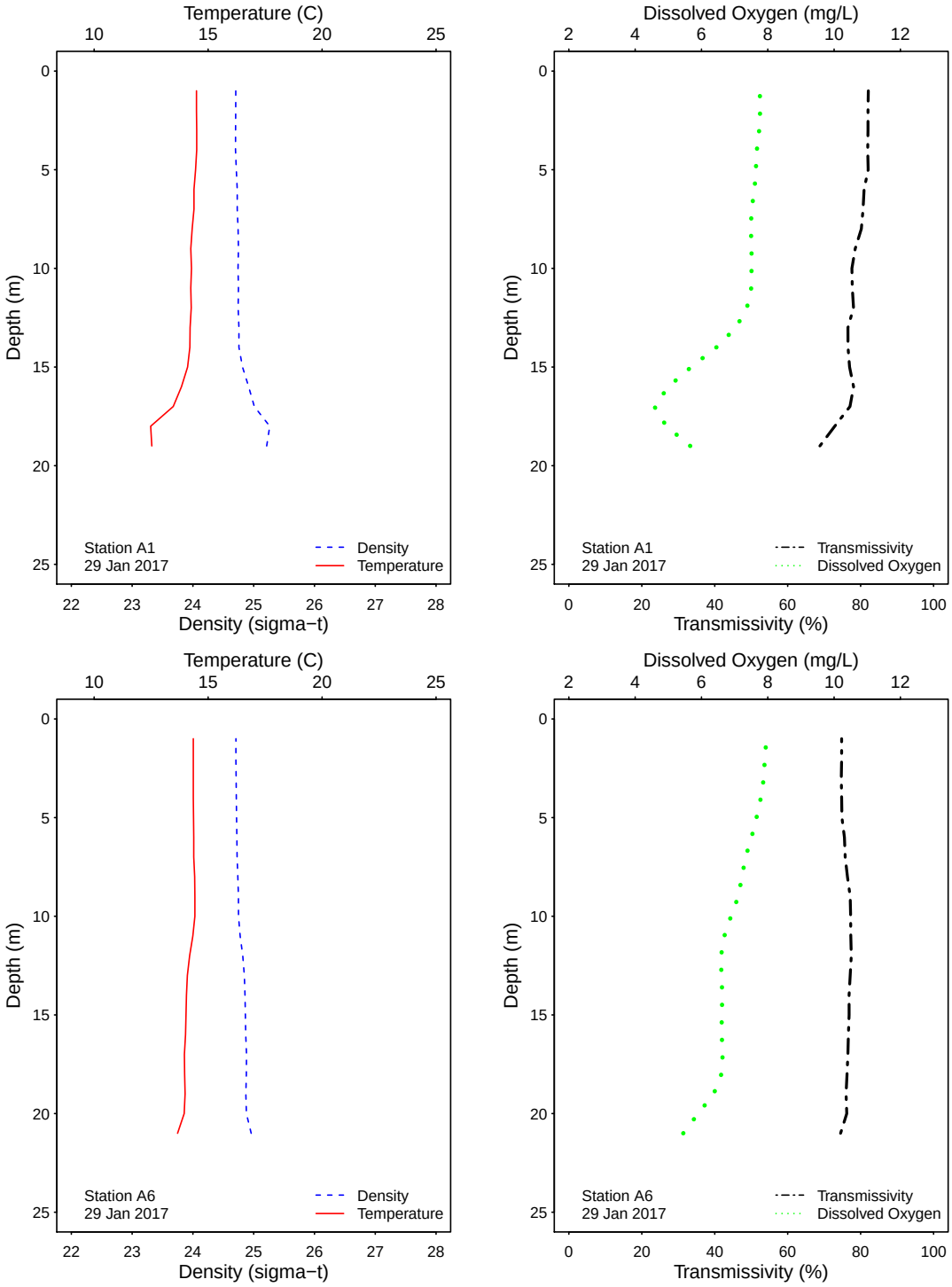

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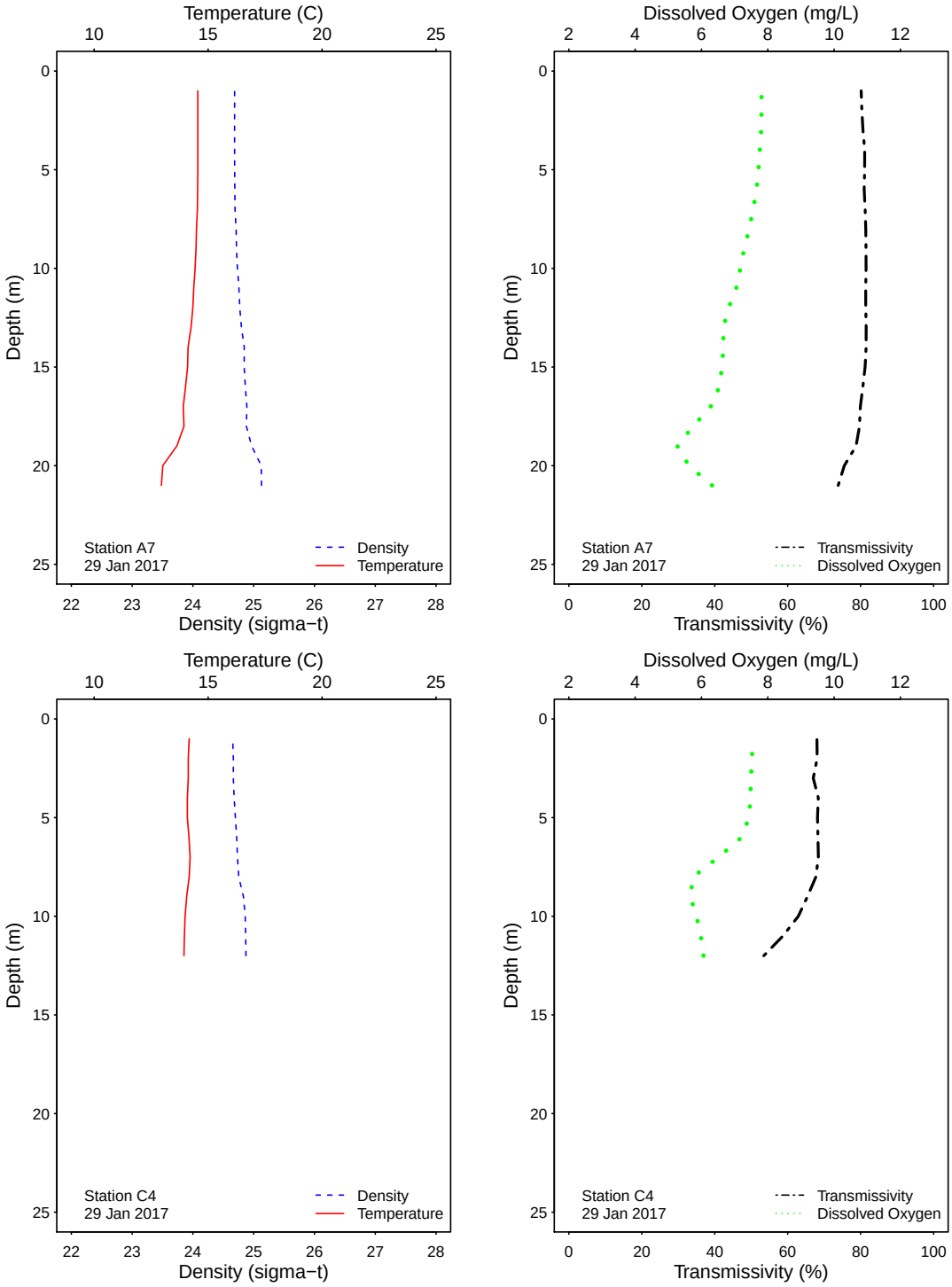

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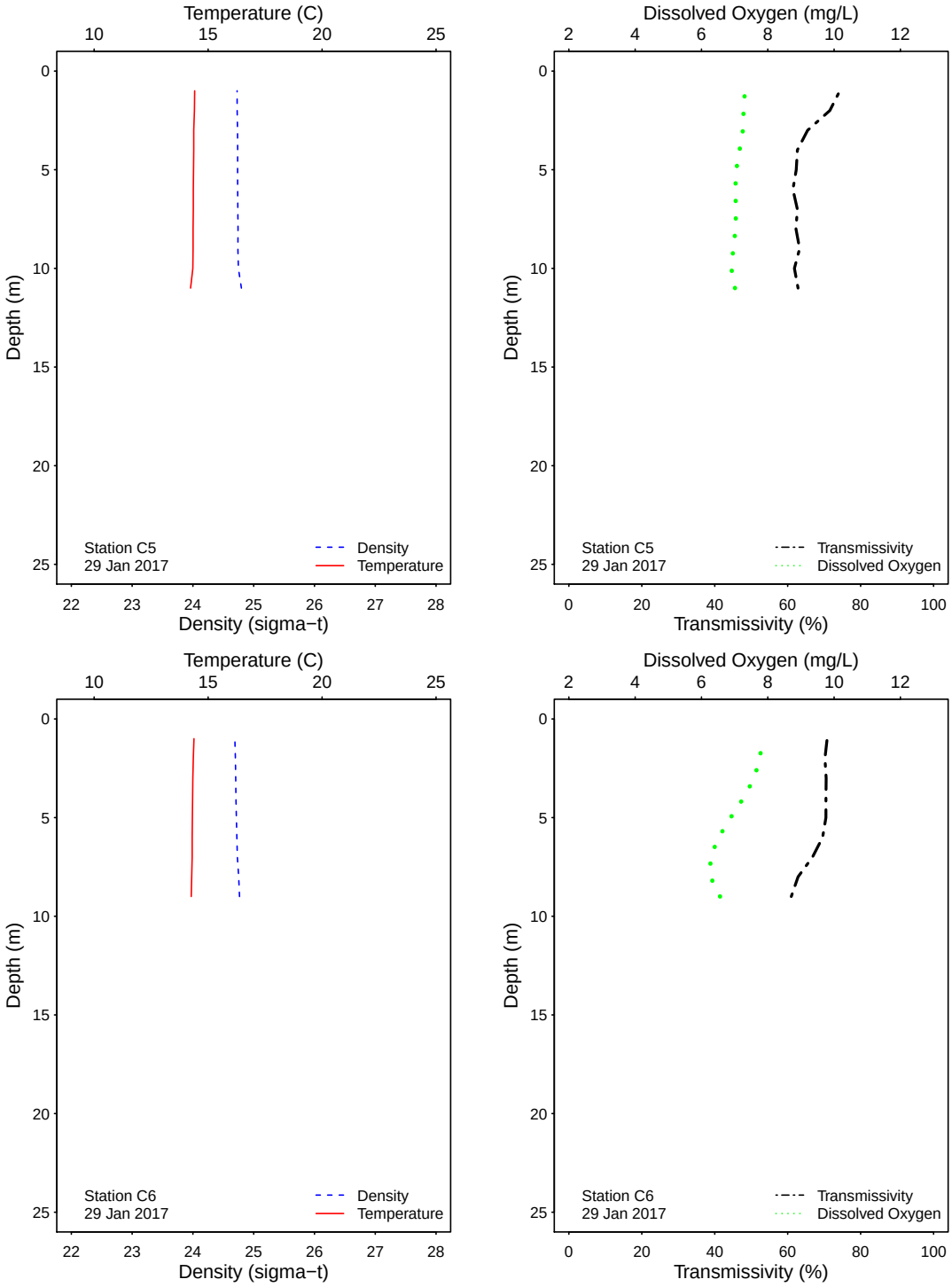

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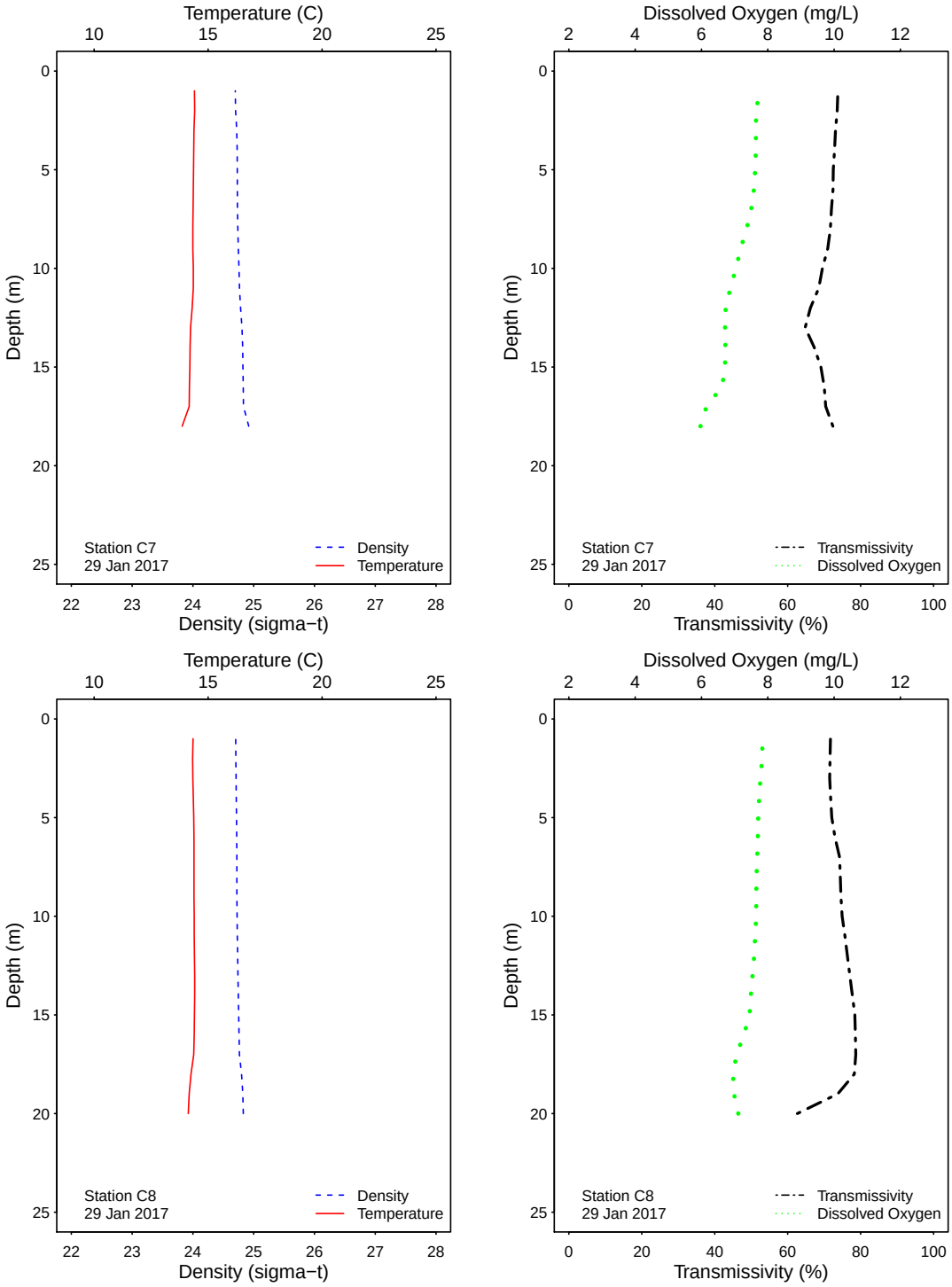

Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

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APPENDIX A

Quality Assurance

Table A.1

Summary of bacteriological quality assurance field and lab duplicate 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	06 Jan 2017	18	JT	LAB DUPLICATE	44	6e	2e
A7	13 Jan 2017	18	ZV	LAB DUPLICATE	<2	<2	8e
A7	17 Jan 2017	18	JT	LAB DUPLICATE	ns	ns	2e
A7	17 Jan 2017	18	ZV	LAB DUPLICATE	180e	18e	ns
A7	25 Jan 2017	18	LMA	LAB DUPLICATE	220e	22e	<2
A7	29 Jan 2017	18	JT	LAB DUPLICATE	12e	<2	8e
C7	06 Jan 2017	18	AR	LAB DUPLICATE	2e	<2	<2
C7	13 Jan 2017	18	ZV	LAB DUPLICATE	22e	<2	4e
C7	17 Jan 2017	18	JT	LAB DUPLICATE	ns	ns	<2
C7	17 Jan 2017	18	ZV	LAB DUPLICATE	4e	<2	ns
C7	25 Jan 2017	18	ZV	LAB DUPLICATE	12e	4e	12e
C7	29 Jan 2017	18	JT	LAB DUPLICATE	2e	<2	<2
C8	06 Jan 2017	12	JT	LAB DUPLICATE	<2	<2	<2
C8	13 Jan 2017	12	ZV	LAB DUPLICATE	2e	<2	6e
C8	17 Jan 2017	12	JT	LAB DUPLICATE	ns	ns	<2
C8	17 Jan 2017	12	ZV	LAB DUPLICATE	<2	<2	ns
C8	25 Jan 2017	12	ZV	LAB DUPLICATE	34e	6e	16e
C8	29 Jan 2017	12	JT	LAB DUPLICATE	<2	<2	<2
D12	05 Jan 2017		AR	FIELD DUPLICATE	28e	8e	4e
D12	05 Jan 2017		AR	LAB DUPLICATE	24e	20e	10e
D12	11 Jan 2017		JT	FIELD DUPLICATE	82	12e	46
D12	11 Jan 2017		JT	LAB DUPLICATE	72	28e	36e
D12	17 Jan 2017		JT	FIELD DUPLICATE	10e	2e	<2
D12	17 Jan 2017		JT	LAB DUPLICATE	<2	<2	<2
D12	23 Jan 2017		JT	FIELD DUPLICATE	260e	20e	56
D12	23 Jan 2017		JT	LAB DUPLICATE	280e	<20	46
D12	29 Jan 2017		JT	FIELD DUPLICATE	<20	<2	2e
D12	29 Jan 2017		JT	LAB DUPLICATE	<20	<2	4e

ns = not sampled
ND = no data

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