



POINT LOMA OCEAN OUTFALL MONTHLY RECEIVING WATERS MONITORING REPORT

POINT LOMA WASTEWATER TREATMENT PLANT

NPDES Permit No. CA0107409
SDRWQCB Order No. R9-2017-0007

APRIL 2019

Environmental Monitoring and Technical Services
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May 31, 2019

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

Attention: POTW Compliance Unit

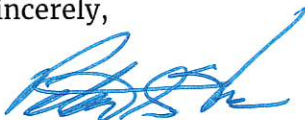
Dear Mr. Gibson:

Enclosed is the April 2019 Monthly Receiving Waters Monitoring Report for the Point Loma Ocean Outfall, Point Loma Wastewater Treatment Plant as required per Order No. R9-2017-0007, 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

TS/amw

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. R9-2017-0007, 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 required to be monitored at eight shoreline stations, including D4, D5, D7, D8, D9, D10, D11 and D12, which range from the tip of the Point Loma Peninsula to west of Mission Bay (see station locations map). Over the past several years, due to increasing instability in several cliffside areas of Point Loma, City staff have been unable to safely access and sample several stations at various times. This lack of access has resulted in the following modifications:

- Station D7 was not sampled between February and October 2018, except for the recording of visual observations. This station became accessible again and has been successfully sampled since October 31, 2018.
- Station D8 was replaced by alternate station D8-A during June 2016. However, due to increasing instability, City staff have been unable to safely access and sample station D8-A since February 7, 2018. During March 2018, the City identified an alternate location for stations D8/D8-A. This new station, designated D8-B, is located about 150 feet north of D8-A.
- Station D9 has been inaccessible since October 31, 2018 due to construction. Staff have resumed sampling for this station as of March 2019.

Seawater samples were collected from the surf zone at each station on a weekly basis. These samples were 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 were also recorded at the time of sample collection. Wind speed and direction were measured using a hand-held anemometer with a compass.

Kelp Bed Stations

The eight kelp stations were sampled weekly 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 consisted primarily of collecting seawater samples at discrete depths to determine concentrations of indicator bacteria (i.e., total coliforms, fecal coliforms, and *Enterococcus*). Water column profiles of various physical/chemical parameters were also generated during each sampling event, and visual observations of weather and water conditions were recorded at each station.

Seawater samples at the kelp bed stations were collected using a CTD-integrated rosette sampler with Niskin bottles. Aliquots for bacteriological analyses were drawn from these bottles into sterile sample bottles for processing at the City's Marine Microbiology Laboratory. Water column profiles of temperature, transmissivity, dissolved oxygen, pH, salinity, density, chlorophyll *a* were generated using a Sea-Bird conductivity, temperature and depth instrument (CTD), which collects these data at a rate of ≥ 4 scans per second. These scans were then internally averaged to create water column profiles with data readings at a rate of one per meter. Additionally, CTD profile data for each water sample depth are presented with the bacteriological data.

Offshore Stations

Offshore water quality sampling is conducted quarterly typically during the months of February, May, August and November. A total of 36 offshore stations (F01–F36) are sampled during each survey usually over a 3-day period. Three of the stations (F01–F03) are located along the 18-m depth contour, while 11 stations are located along each of the following contours: 60 m (stations F04–F14); 80 m (stations F15–F25); 98 m (stations F26–F36). Of these 36 stations, 15 (F01-F03, F06-F14, F18-F20) are located within State jurisdictional waters (i.e., within 3 nautical miles of shore) and are subject to the California Ocean Plan's compliance standards. Monitoring at all offshore sites includes measurements of *Enterococcus* bacteria, water temperature, salinity, density, dissolved oxygen, pH, chlorophyll *a*, transmissivity, chromomorphic dissolved organic matter (CDOM), and visual observations of weather and water conditions.

Seawater samples for bacteriological analyses at the offshore stations were 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. Additionally, data for depths closest to those at which bacteriological samples were collected were 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

^[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.

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;
- (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 2019 Quality Assurance Report, which will be completed in March 2020.

SUMMARY OF RESULTS

Shore Stations

- During April, all eight shore stations were in compliance with various California Ocean Plan (Ocean Plan) water-contact standards.
- 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 *Biennial Receiving Waters Monitoring and Assessment Report for the Point Loma and South Bay Ocean Outfalls* details (<https://www.sandiego.gov/public-utilities/sustainability/ocean-monitoring/reports>).
- Notable observations for April included a sewage-like odor at station D5 on April 10.

Kelp Bed Stations

- The eight kelp bed water quality stations (A1, A6, A7, C4, C5, C6, C7, C8) were sampled five times during the month (i.e. April 3, 8, 15, 22, 29).

- During April, all of the kelp bed stations were in compliance with various water-contact standards specified in the Ocean Plan.
- Water column temperatures ranged from 11.67 to 17.35°C during the month. The difference between surface and bottom waters ranged from 1.08 to 4.63°C, indicating that the water column was stratified at some of the kelp bed stations during the month.
- Chlorophyll *a* concentrations ranged from 0.38 to 9.64 µg/L during April, suggesting the presence of phytoplankton blooms during the month.
- Nothing of sewage origin was observed at any of the kelp stations.

Offshore Stations

- Quarterly water quality sampling was not conducted during April at the offshore stations. The next quarterly sampling is scheduled for May 2019.



TABLES AND FIGURES

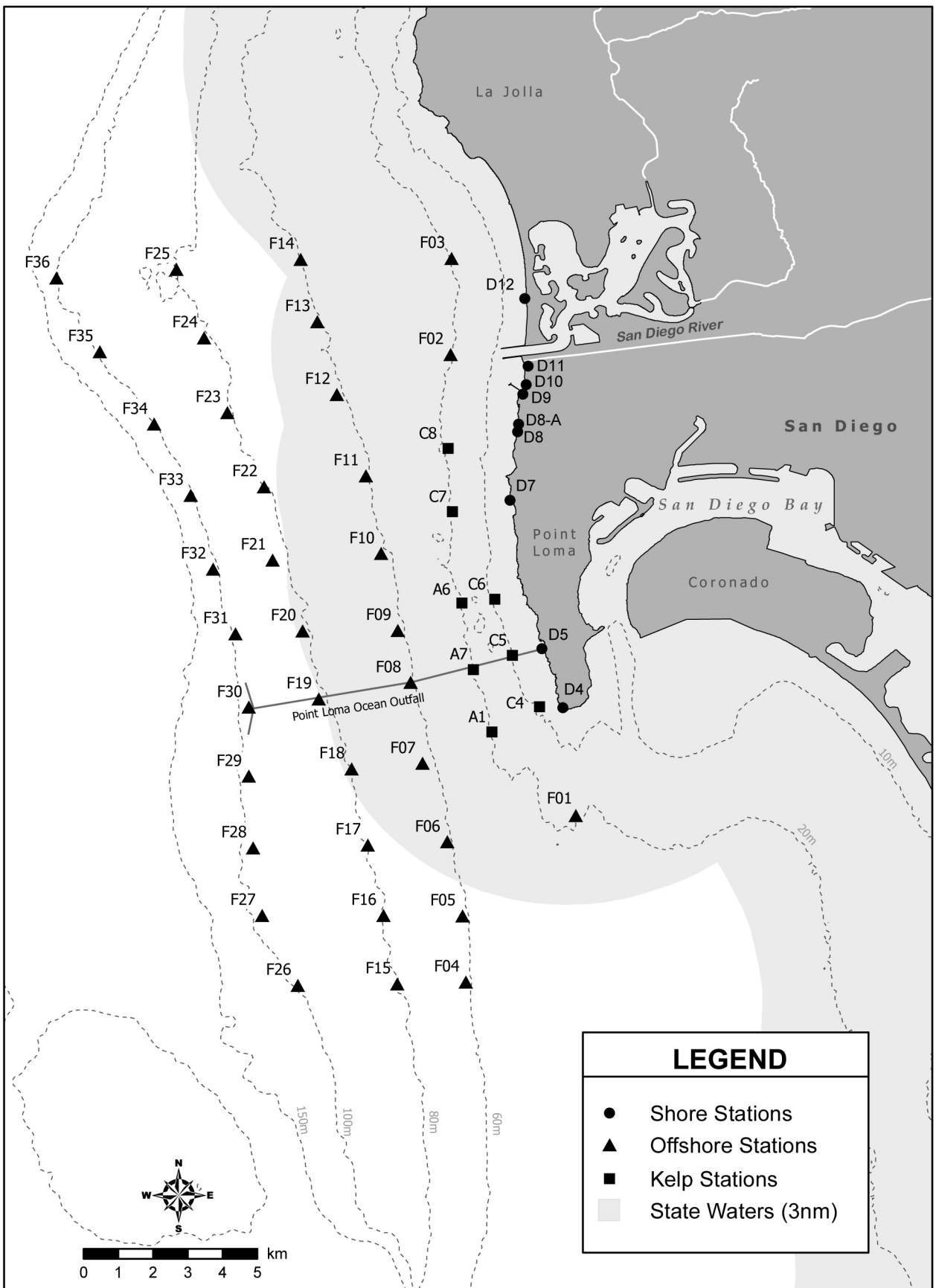


Figure 1.1 Station Map

Shore Stations

Table 2.1

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

| Date | D4 | D5 | D7 | D8-B | D9 | D10 | D11 | D12 |
|-------------|-----|-----|-----|------|-----|-----|-----|-----|
| 01 Apr 2019 | 13* | 16* | 14* | 11* | 17* | 95* | 169 | 4* |
| 02 Apr 2019 | 13* | 16* | 14* | 11* | 17* | 95* | 169 | 4* |
| 03 Apr 2019 | 9 | 13 | 12 | 17 | 20 | 55 | 99 | 3 |
| 04 Apr 2019 | 9 | 13 | 12 | 17 | 20 | 55 | 99 | 3 |
| 05 Apr 2019 | 13* | 18* | 12* | 17* | 18* | 70* | 222 | 3* |
| 06 Apr 2019 | 13* | 18* | 12* | 17* | 18* | 70* | 222 | 3* |
| 07 Apr 2019 | 13* | 18* | 12* | 17* | 18* | 70* | 222 | 3* |
| 08 Apr 2019 | 13* | 18* | 12* | 17* | 18* | 70* | 222 | 3* |
| 09 Apr 2019 | 13* | 18* | 12* | 17* | 18* | 70* | 222 | 3* |
| 10 Apr 2019 | 12 | 18 | 16 | 17 | 19 | 68 | 189 | 5 |
| 11 Apr 2019 | 12 | 18 | 16 | 17 | 19 | 68 | 189 | 5 |
| 12 Apr 2019 | 11* | 15* | 21* | 17* | 21* | 33* | 82 | 4* |
| 13 Apr 2019 | 11* | 15* | 21* | 17* | 21* | 33* | 82 | 4* |
| 14 Apr 2019 | 11* | 15* | 21* | 17* | 21* | 33* | 82* | 4* |
| 15 Apr 2019 | 11* | 15* | 21* | 17* | 21* | 33* | 82* | 4* |
| 16 Apr 2019 | 11* | 15* | 21* | 17* | 21* | 33* | 82* | 4* |
| 17 Apr 2019 | 11* | 15* | 21* | 17* | 21* | 33* | 82* | 4* |
| 18 Apr 2019 | 5* | 15* | 12* | 17* | 23* | 28* | 51* | 4* |
| 19 Apr 2019 | 5* | 15* | 12* | 17* | 23* | 28* | 51* | 4* |
| 20 Apr 2019 | 5* | 15* | 12* | 17* | 23* | 28* | 51* | 4* |
| 21 Apr 2019 | 5* | 15* | 12* | 17* | 23* | 28* | 51* | 4* |
| 22 Apr 2019 | 5* | 15* | 12* | 17* | 23* | 28* | 51* | 4* |
| 23 Apr 2019 | 5* | 15* | 12* | 17* | 23* | 28* | 51* | 4* |
| 24 Apr 2019 | 4 | 10 | 8 | 17 | 22 | 26 | 42 | 4 |
| 25 Apr 2019 | 4 | 10 | 8 | 17 | 22 | 26 | 42 | 4 |
| 26 Apr 2019 | 4* | 8* | 7* | 30* | 23* | 19* | 19* | 4* |
| 27 Apr 2019 | 4* | 8* | 7* | 30* | 23* | 19* | 19* | 4* |
| 28 Apr 2019 | 4* | 8* | 7* | 30* | 23* | 19* | 19* | 4* |
| 29 Apr 2019 | 4* | 8* | 7* | 30* | 23* | 19* | 19* | 4* |
| 30 Apr 2019 | 4 | 10 | 13 | 47 | 22 | 31 | 26 | 4 |

* 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-B | D9 | D10 | D11 | D12 |
|-------------|----|----|----|------|----|-----|-----|-----|
| 01 Apr 2019 | 5* | 2* | 4* | 3* | 2* | 12* | 19 | 2* |
| 02 Apr 2019 | 5* | 2* | 4* | 3* | 2* | 12* | 19 | 2* |
| 03 Apr 2019 | 4 | 3 | 3 | 3 | 2 | 8 | 14 | 2 |
| 04 Apr 2019 | 4 | 3 | 3 | 3 | 2 | 8 | 14 | 2 |
| 05 Apr 2019 | 5* | 3* | 4* | 3* | 2* | 10* | 22 | 2* |
| 06 Apr 2019 | 5* | 3* | 4* | 3* | 2* | 10* | 22 | 2* |
| 07 Apr 2019 | 5* | 3* | 4* | 3* | 2* | 10* | 22 | 2* |
| 08 Apr 2019 | 5* | 3* | 4* | 3* | 2* | 10* | 22 | 2* |
| 09 Apr 2019 | 5* | 3* | 4* | 3* | 2* | 10* | 22 | 2* |
| 10 Apr 2019 | 5 | 3 | 4 | 3 | 3 | 10 | 24 | 2 |
| 11 Apr 2019 | 5 | 3 | 4 | 3 | 3 | 10 | 24 | 2 |
| 12 Apr 2019 | 5* | 3* | 5* | 4* | 4* | 7* | 15 | 2* |
| 13 Apr 2019 | 5* | 3* | 5* | 4* | 4* | 7* | 15 | 2* |
| 14 Apr 2019 | 5* | 3* | 5* | 4* | 4* | 7* | 15* | 2* |
| 15 Apr 2019 | 5* | 3* | 5* | 4* | 4* | 7* | 15* | 2* |
| 16 Apr 2019 | 5* | 3* | 5* | 4* | 4* | 7* | 15* | 2* |
| 17 Apr 2019 | 5* | 3* | 5* | 4* | 4* | 7* | 15* | 2* |
| 18 Apr 2019 | 4* | 3* | 2* | 3* | 3* | 5* | 10* | 2* |
| 19 Apr 2019 | 4* | 3* | 2* | 3* | 3* | 5* | 10* | 2* |
| 20 Apr 2019 | 4* | 3* | 2* | 3* | 3* | 5* | 10* | 2* |
| 21 Apr 2019 | 4* | 3* | 2* | 3* | 3* | 5* | 10* | 2* |
| 22 Apr 2019 | 4* | 3* | 2* | 3* | 3* | 5* | 10* | 2* |
| 23 Apr 2019 | 4* | 3* | 2* | 3* | 3* | 5* | 10* | 2* |
| 24 Apr 2019 | 3 | 3 | 2 | 3 | 3 | 6 | 7 | 2 |
| 25 Apr 2019 | 3 | 3 | 2 | 3 | 3 | 6 | 7 | 2 |
| 26 Apr 2019 | 4* | 3* | 2* | 3* | 4* | 6* | 5* | 2* |
| 27 Apr 2019 | 4* | 3* | 2* | 3* | 4* | 6* | 5* | 2* |
| 28 Apr 2019 | 4* | 3* | 2* | 3* | 4* | 6* | 5* | 2* |
| 29 Apr 2019 | 4* | 3* | 2* | 3* | 4* | 6* | 5* | 2* |
| 30 Apr 2019 | 3 | 3 | 5 | 4 | 5 | 8 | 7 | 2 |

* Geometric mean calculated using n<5
 ns = not sampled

Table 2.3

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

| Date | D4 | D5 | D7 | D8-B | D9 | D10 | D11 | D12 |
|-------------|-----|----|----|------|----|-----|-----|-----|
| 01 Apr 2019 | 11* | 2* | 3* | 7* | 2* | 6* | 14 | 3* |
| 02 Apr 2019 | 11* | 2* | 3* | 7* | 2* | 6* | 14 | 3* |
| 03 Apr 2019 | 10 | 2 | 3 | 9 | 2 | 5 | 10 | 2 |
| 04 Apr 2019 | 10 | 2 | 3 | 9 | 2 | 5 | 10 | 2 |
| 05 Apr 2019 | 12* | 2* | 3* | 8* | 2* | 5* | 14 | 3* |
| 06 Apr 2019 | 12* | 2* | 3* | 8* | 2* | 5* | 14 | 3* |
| 07 Apr 2019 | 12* | 2* | 3* | 8* | 2* | 5* | 14 | 3* |
| 08 Apr 2019 | 12* | 2* | 3* | 8* | 2* | 5* | 14 | 3* |
| 09 Apr 2019 | 12* | 2* | 3* | 8* | 2* | 5* | 14 | 3* |
| 10 Apr 2019 | 10 | 2 | 4 | 9 | 3 | 7 | 15 | 2 |
| 11 Apr 2019 | 10 | 2 | 4 | 9 | 3 | 7 | 15 | 2 |
| 12 Apr 2019 | 11* | 3* | 4* | 9* | 4* | 5* | 10 | 2* |
| 13 Apr 2019 | 11* | 3* | 4* | 9* | 4* | 5* | 10 | 2* |
| 14 Apr 2019 | 11* | 3* | 4* | 9* | 4* | 5* | 8* | 2* |
| 15 Apr 2019 | 11* | 3* | 4* | 9* | 4* | 5* | 8* | 2* |
| 16 Apr 2019 | 11* | 3* | 4* | 9* | 4* | 5* | 8* | 2* |
| 17 Apr 2019 | 11* | 3* | 4* | 9* | 4* | 5* | 8* | 2* |
| 18 Apr 2019 | 5* | 3* | 2* | 6* | 4* | 4* | 4* | 2* |
| 19 Apr 2019 | 5* | 3* | 2* | 6* | 4* | 4* | 4* | 2* |
| 20 Apr 2019 | 5* | 3* | 2* | 6* | 4* | 4* | 4* | 2* |
| 21 Apr 2019 | 5* | 3* | 2* | 6* | 4* | 4* | 4* | 2* |
| 22 Apr 2019 | 5* | 3* | 2* | 6* | 4* | 4* | 4* | 2* |
| 23 Apr 2019 | 5* | 3* | 2* | 6* | 4* | 4* | 4* | 2* |
| 24 Apr 2019 | 4 | 2 | 2 | 5 | 3 | 5 | 5 | 2 |
| 25 Apr 2019 | 4 | 2 | 2 | 5 | 3 | 5 | 5 | 2 |
| 26 Apr 2019 | 4* | 3* | 2* | 6* | 4* | 6* | 6* | 2* |
| 27 Apr 2019 | 4* | 3* | 2* | 6* | 4* | 6* | 6* | 2* |
| 28 Apr 2019 | 4* | 3* | 2* | 6* | 4* | 6* | 6* | 2* |
| 29 Apr 2019 | 4* | 3* | 2* | 6* | 4* | 6* | 6* | 2* |
| 30 Apr 2019 | 4 | 2 | 3 | 10 | 3 | 6 | 11 | 2 |

* Geometric mean calculated using n<5

ns = not sampled

Table 2.4

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

| Date | D4 | D5 | D7 | D8-B | D9 | D10 | D11 | D12 |
|-------------|-----------|-----------|-----------|-------------|-----------|------------|------------|------------|
| 03 Apr 2019 | IC | IC | IC | IC | IC | IC | IC | IC |
| 10 Apr 2019 | IC | IC | IC | IC | IC | IC | IC | IC |
| 18 Apr 2019 | IC | IC | IC | IC | IC | IC | IC | IC |
| 24 Apr 2019 | IC | IC | IC | IC | IC | IC | IC | IC |
| 30 Apr 2019 | IC | IC | IC | IC | IC | IC | IC | IC |

IC = In Compliance

E = Exceedance

ns = not sampled

ND = no data

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-B | D9 | D10 | D11 | D12 |
|-------------|-----------|-----------|-----------|-------------|-----------|------------|------------|------------|
| 03 Apr 2019 | IC | IC | IC | IC | IC | IC | IC | IC |
| 10 Apr 2019 | IC | IC | IC | IC | IC | IC | IC | IC |
| 18 Apr 2019 | IC | IC | IC | IC | IC | IC | IC | IC |
| 24 Apr 2019 | IC | IC | IC | IC | IC | IC | IC | IC |
| 30 Apr 2019 | IC | IC | IC | IC | IC | IC | IC | IC |

IC = In Compliance

E = Exceedance

ns = not sampled

ND = no data

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-B | D9 | D10 | D11 | D12 |
|-------------|-----------|-----------|-----------|-------------|-----------|------------|------------|------------|
| 03 Apr 2019 | IC | IC | IC | IC | IC | IC | IC | IC |
| 10 Apr 2019 | IC | IC | IC | IC | IC | IC | IC | IC |
| 18 Apr 2019 | IC | IC | IC | IC | IC | IC | IC | IC |
| 24 Apr 2019 | IC | IC | IC | IC | IC | IC | IC | IC |
| 30 Apr 2019 | IC | IC | IC | IC | IC | IC | IC | IC |

IC = In Compliance

E = Exceedance

ns = not sampled

ND = no data

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-B | D9 | D10 | D11 | D12 |
|-------------|-----------|-----------|-----------|-------------|-----------|------------|------------|------------|
| 03 Apr 2019 | IC | IC | IC | IC | IC | IC | IC | IC |
| 10 Apr 2019 | IC | IC | IC | IC | IC | IC | IC | IC |
| 18 Apr 2019 | IC | IC | IC | IC | IC | IC | IC | IC |
| 24 Apr 2019 | IC | IC | IC | IC | IC | IC | IC | IC |
| 30 Apr 2019 | IC | IC | IC | IC | IC | IC | IC | IC |

IC = In Compliance

E = Exceedance

ns = not sampled

ND = no data

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 | 03 Apr 2019 | 813 | 2e | 2e | 6e | 1.00 |
| D4 | 10 Apr 2019 | 758 | 10e | 10e | 4e | 1.00 |
| D4 | 18 Apr 2019 | 809 | 8e | 4e | 6e | 0.50 |
| D4 | 24 Apr 2019 | 807 | <2 | <2 | <2 | 1.00 |
| D4 | 30 Apr 2019 | 838 | 4e | <2 | <2 | 0.50 |
| D5 | 03 Apr 2019 | 755 | 6e | 8e | 2e | 1.33 |
| D5 | 10 Apr 2019 | 739 | <20 | <2 | 6e | 0.10 |
| D5 | 18 Apr 2019 | 748 | <20 | <2 | 2e | 0.10 |
| D5 | 24 Apr 2019 | 751 | <2 | <2 | <2 | 1.00 |
| D5 | 30 Apr 2019 | 822 | <20 | <2 | <2 | 0.10 |
| D7 | 03 Apr 2019 | 841 | 8e | 2e | 2e | 0.25 |
| D7 | 10 Apr 2019 | 823 | 60e | 4e | 4e | 0.07 |
| D7 | 18 Apr 2019 | 837 | 2e | <2 | <2 | 1.00 |
| D7 | 24 Apr 2019 | 837 | <2 | <2 | <2 | 1.00 |
| D7 | 30 Apr 2019 | 929 | <200 | 60e | 6e | 0.30 |
| D8-B | 03 Apr 2019 | 901 | 100e | <2 | 18e | 0.02 |
| D8-B | 10 Apr 2019 | 841 | <20 | 4e | 14e | 0.20 |
| D8-B | 18 Apr 2019 | 857 | <20 | 4e | 2e | 0.20 |
| D8-B | 24 Apr 2019 | 901 | <20 | 2e | <2 | 0.10 |
| D8-B | 30 Apr 2019 | 944 | 300e | 20e | 100e | 0.07 |
| D9 | 03 Apr 2019 | 919 | 34e | <2 | <2 | 0.06 |
| D9 | 10 Apr 2019 | 900 | 20e | 14e | 22e | 0.70 |
| D9 | 18 Apr 2019 | 918 | <20 | <2 | 2e | 0.10 |
| D9 | 24 Apr 2019 | 909 | <20 | 4e | <2 | 0.20 |
| D9 | 30 Apr 2019 | 951 | <20 | 20e | <2 | 1.00 |
| D10 | 03 Apr 2019 | 951 | 6e | <2 | <2 | 0.33 |
| D10 | 10 Apr 2019 | 914 | 60e | 12e | 34e | 0.20 |
| D10 | 18 Apr 2019 | 941 | <20 | 2e | <2 | 0.10 |
| D10 | 24 Apr 2019 | 923 | 20e | 20e | 12e | 1.00 |
| D10 | 30 Apr 2019 | 1003 | <200 | 40e | 6e | 0.20 |
| D11 | 03 Apr 2019 | 1008 | 12e | 4e | <2 | 0.33 |
| D11 | 10 Apr 2019 | 928 | 100e | 30e | 30e | 0.30 |
| D11 | 18 Apr 2019 | 1004 | 6e | 2e | <2 | 0.33 |
| D11 | 24 Apr 2019 | 938 | 20e | 2e | 14e | 0.10 |
| D11 | 30 Apr 2019 | 1014 | 80e | 28e | 100 | 0.35 |

| Station | Date | Time | Total | Fecal | Entero | F:T |
|---------|-------------|------|-------|-------|--------|------|
| D12 | 03 Apr 2019 | 1034 | <2 | <2 | <2 | 1.00 |
| D12 | 10 Apr 2019 | 1008 | <20 | <2 | <2 | 0.10 |
| D12 | 18 Apr 2019 | 1032 | <2 | <2 | <2 | 1.00 |
| D12 | 24 Apr 2019 | 958 | 4e | 4e | <2 | 1.00 |
| D12 | 30 Apr 2019 | 1033 | 2e | <2 | <2 | 1.00 |

ns = not sampled

ND = no data

Table 2.9

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

| Station | Date | Parameter | Value |
|---------|-------------|----------------------|---|
| D4 | 03 Apr 2019 | Arrive Time | 813 |
| D4 | 03 Apr 2019 | Weather | Overcast |
| D4 | 03 Apr 2019 | Wind Speed (kts) | 7.7 |
| D4 | 03 Apr 2019 | Wind Dir | E |
| D4 | 03 Apr 2019 | Animal Life | 1 Cormorant |
| D4 | 03 Apr 2019 | Floatables | None |
| D4 | 03 Apr 2019 | Water Color | Green |
| D4 | 03 Apr 2019 | Current Direction | E |
| D4 | 03 Apr 2019 | Water Temp (C) | 16.2 |
| D4 | 03 Apr 2019 | Wave Height Low (ft) | 1 |
| D4 | 03 Apr 2019 | High Tide (ft) | 4.9 |
| D4 | 03 Apr 2019 | High Tide Time | 849 |
| D4 | 03 Apr 2019 | Low Tide (ft) | 0.7 |
| D4 | 03 Apr 2019 | Low Tide Time | 255 |
| D4 | 03 Apr 2019 | Comments | Kelp; Seagrass; Algae; 1 Boat; Water clear |
| D4 | 10 Apr 2019 | Arrive Time | 758 |
| D4 | 10 Apr 2019 | Weather | Sunny |
| D4 | 10 Apr 2019 | Wind Speed (kts) | 2.3 |
| D4 | 10 Apr 2019 | Wind Dir | S |
| D4 | 10 Apr 2019 | Animal Life | 150 Shorebirds; 200 Cormorants; 75 Pelicans; 250 Seagulls |
| D4 | 10 Apr 2019 | Floatables | None |
| D4 | 10 Apr 2019 | Water Color | Green |
| D4 | 10 Apr 2019 | Current Direction | S |
| D4 | 10 Apr 2019 | Water Temp (C) | 17.1 |
| D4 | 10 Apr 2019 | Wave Height Low (ft) | 2 |
| D4 | 10 Apr 2019 | High Tide (ft) | 2.8 |
| D4 | 10 Apr 2019 | High Tide Time | 1413 |
| D4 | 10 Apr 2019 | Low Tide (ft) | 0.3 |
| D4 | 10 Apr 2019 | Low Tide Time | 741 |
| D4 | 10 Apr 2019 | Comments | Kelp; Seagrass; Debris; Water clear |
| D4 | 18 Apr 2019 | Arrive Time | 809 |
| D4 | 18 Apr 2019 | Weather | Partly Cloudy |
| D4 | 18 Apr 2019 | Wind Speed (kts) | 0.7 |
| D4 | 18 Apr 2019 | Wind Dir | N |
| D4 | 18 Apr 2019 | Animal Life | None |
| D4 | 18 Apr 2019 | Floatables | None |
| D4 | 18 Apr 2019 | Water Color | Green |
| D4 | 18 Apr 2019 | Current Direction | N |
| D4 | 18 Apr 2019 | Water Temp (C) | 16 |
| D4 | 18 Apr 2019 | Wave Height Low (ft) | 2 |
| D4 | 18 Apr 2019 | High Tide (ft) | 5.2 |
| D4 | 18 Apr 2019 | High Tide Time | 906 |
| D4 | 18 Apr 2019 | Low Tide (ft) | -0.3 |
| D4 | 18 Apr 2019 | Low Tide Time | 308 |
| D4 | 18 Apr 2019 | Comments | Water clear |
| D4 | 24 Apr 2019 | Arrive Time | 807 |
| D4 | 24 Apr 2019 | Weather | Foggy |
| D4 | 24 Apr 2019 | Wind Speed (kts) | 1.8 |

| Station | Date | Parameter | Value |
|---------|-------------|----------------------|---|
| D4 | 24 Apr 2019 | Wind Dir | W |
| D4 | 24 Apr 2019 | Animal Life | 1 Bird |
| D4 | 24 Apr 2019 | Floatables | None |
| D4 | 24 Apr 2019 | Water Color | Green |
| D4 | 24 Apr 2019 | Current Direction | N |
| D4 | 24 Apr 2019 | Water Temp (C) | 16.8 |
| D4 | 24 Apr 2019 | Wave Height Low (ft) | 1 |
| D4 | 24 Apr 2019 | High Tide (ft) | 3 |
| D4 | 24 Apr 2019 | High Tide Time | 1507 |
| D4 | 24 Apr 2019 | Low Tide (ft) | 0.2 |
| D4 | 24 Apr 2019 | Low Tide Time | 806 |
| D4 | 24 Apr 2019 | Comments | Kelp; Seagrass; Algae; Water clear |
| D4 | 30 Apr 2019 | Arrive Time | 838 |
| D4 | 30 Apr 2019 | Weather | Overcast |
| D4 | 30 Apr 2019 | Wind Speed (kts) | 1.7 |
| D4 | 30 Apr 2019 | Wind Dir | N |
| D4 | 30 Apr 2019 | Animal Life | 4 Cormorants; 6 Pelicans |
| D4 | 30 Apr 2019 | Floatables | Foam |
| D4 | 30 Apr 2019 | Water Color | Green |
| D4 | 30 Apr 2019 | Current Direction | N |
| D4 | 30 Apr 2019 | Water Temp (C) | 17.3 |
| D4 | 30 Apr 2019 | Wave Height Low (ft) | 2 |
| D4 | 30 Apr 2019 | High Tide (ft) | 4.1 |
| D4 | 30 Apr 2019 | High Tide Time | 712 |
| D4 | 30 Apr 2019 | Low Tide (ft) | 0.4 |
| D4 | 30 Apr 2019 | Low Tide Time | 1335 |
| D4 | 30 Apr 2019 | Comments | Kelp; Seagrass; 1 Boat; Water clear |
| D5 | 03 Apr 2019 | Arrive Time | 755 |
| D5 | 03 Apr 2019 | Weather | Overcast |
| D5 | 03 Apr 2019 | Wind Speed (kts) | 4 |
| D5 | 03 Apr 2019 | Wind Dir | S |
| D5 | 03 Apr 2019 | Animal Life | 250 Cormorants; 5 Pelicans; 10 Seagulls |
| D5 | 03 Apr 2019 | Floatables | Foam; Film |
| D5 | 03 Apr 2019 | Water Color | Green |
| D5 | 03 Apr 2019 | Current Direction | S |
| D5 | 03 Apr 2019 | Water Temp (C) | 18 |
| D5 | 03 Apr 2019 | Wave Height Low (ft) | 3 |
| D5 | 03 Apr 2019 | High Tide (ft) | 4.9 |
| D5 | 03 Apr 2019 | High Tide Time | 849 |
| D5 | 03 Apr 2019 | Low Tide (ft) | 0.7 |
| D5 | 03 Apr 2019 | Low Tide Time | 255 |
| D5 | 03 Apr 2019 | Comments | Kelp; Seagrass; 3 Boats; Water clear |
| D5 | 10 Apr 2019 | Arrive Time | 739 |
| D5 | 10 Apr 2019 | Weather | Sunny |
| D5 | 10 Apr 2019 | Wind Speed (kts) | 5.8 |
| D5 | 10 Apr 2019 | Wind Dir | S |
| D5 | 10 Apr 2019 | Animal Life | 5 Cormorants; 25 Seagulls |
| D5 | 10 Apr 2019 | Floatables | Foam |
| D5 | 10 Apr 2019 | Water Color | Green |
| D5 | 10 Apr 2019 | Current Direction | S |
| D5 | 10 Apr 2019 | Water Temp (C) | 16.2 |
| D5 | 10 Apr 2019 | Wave Height Low (ft) | 3 |

| Station | Date | Parameter | Value |
|---------|-------------|----------------------|--|
| D5 | 10 Apr 2019 | High Tide (ft) | 2.8 |
| D5 | 10 Apr 2019 | High Tide Time | 1413 |
| D5 | 10 Apr 2019 | Low Tide (ft) | 0.3 |
| D5 | 10 Apr 2019 | Low Tide Time | 741 |
| D5 | 10 Apr 2019 | Comments | Kelp; Seagrass; Algae; Sewage-like odor; Water clear |
| D5 | 18 Apr 2019 | Arrive Time | 748 |
| D5 | 18 Apr 2019 | Weather | Partly Cloudy |
| D5 | 18 Apr 2019 | Wind Speed (kts) | 0.1 |
| D5 | 18 Apr 2019 | Wind Dir | N |
| D5 | 18 Apr 2019 | Animal Life | None |
| D5 | 18 Apr 2019 | Floatables | None |
| D5 | 18 Apr 2019 | Water Color | Green |
| D5 | 18 Apr 2019 | Current Direction | N |
| D5 | 18 Apr 2019 | Water Temp (C) | 15 |
| D5 | 18 Apr 2019 | Wave Height Low (ft) | 1 |
| D5 | 18 Apr 2019 | High Tide (ft) | 5.2 |
| D5 | 18 Apr 2019 | High Tide Time | 906 |
| D5 | 18 Apr 2019 | Low Tide (ft) | -0.3 |
| D5 | 18 Apr 2019 | Low Tide Time | 308 |
| D5 | 18 Apr 2019 | Comments | Water clear |
| D5 | 24 Apr 2019 | Arrive Time | 751 |
| D5 | 24 Apr 2019 | Weather | Foggy |
| D5 | 24 Apr 2019 | Wind Speed (kts) | 1.1 |
| D5 | 24 Apr 2019 | Wind Dir | W |
| D5 | 24 Apr 2019 | Animal Life | None |
| D5 | 24 Apr 2019 | Floatables | None |
| D5 | 24 Apr 2019 | Water Color | Green |
| D5 | 24 Apr 2019 | Current Direction | N |
| D5 | 24 Apr 2019 | Water Temp (C) | 16.2 |
| D5 | 24 Apr 2019 | Wave Height Low (ft) | 2 |
| D5 | 24 Apr 2019 | High Tide (ft) | 3 |
| D5 | 24 Apr 2019 | High Tide Time | 1507 |
| D5 | 24 Apr 2019 | Low Tide (ft) | 0.2 |
| D5 | 24 Apr 2019 | Low Tide Time | 806 |
| D5 | 24 Apr 2019 | Comments | Kelp; Seagrass; Algae; Water clear |
| D5 | 30 Apr 2019 | Arrive Time | 822 |
| D5 | 30 Apr 2019 | Weather | Overcast |
| D5 | 30 Apr 2019 | Wind Speed (kts) | 4.4 |
| D5 | 30 Apr 2019 | Wind Dir | N |
| D5 | 30 Apr 2019 | Animal Life | None |
| D5 | 30 Apr 2019 | Floatables | Foam |
| D5 | 30 Apr 2019 | Water Color | Green |
| D5 | 30 Apr 2019 | Current Direction | N |
| D5 | 30 Apr 2019 | Water Temp (C) | 19 |
| D5 | 30 Apr 2019 | Wave Height Low (ft) | 1 |
| D5 | 30 Apr 2019 | High Tide (ft) | 4.1 |
| D5 | 30 Apr 2019 | High Tide Time | 712 |
| D5 | 30 Apr 2019 | Low Tide (ft) | 0.4 |
| D5 | 30 Apr 2019 | Low Tide Time | 1335 |
| D5 | 30 Apr 2019 | Comments | Kelp; Seagrass; Algae; Water clear |
| D7 | 03 Apr 2019 | Arrive Time | 841 |

| Station | Date | Parameter | Value |
|---------|-------------|----------------------|--|
| D7 | 03 Apr 2019 | Weather | Overcast |
| D7 | 03 Apr 2019 | Wind Speed (kts) | 3.1 |
| D7 | 03 Apr 2019 | Wind Dir | S |
| D7 | 03 Apr 2019 | Animal Life | 12 Cormorants; 14 Seagulls |
| D7 | 03 Apr 2019 | Floatables | None |
| D7 | 03 Apr 2019 | Water Color | Green |
| D7 | 03 Apr 2019 | Current Direction | S |
| D7 | 03 Apr 2019 | Water Temp (C) | 16.9 |
| D7 | 03 Apr 2019 | Wave Height Low (ft) | 3 |
| D7 | 03 Apr 2019 | High Tide (ft) | 4.9 |
| D7 | 03 Apr 2019 | High Tide Time | 849 |
| D7 | 03 Apr 2019 | Low Tide (ft) | 0.7 |
| D7 | 03 Apr 2019 | Low Tide Time | 255 |
| D7 | 03 Apr 2019 | Comments | Kelp; Seagrass; 1 Jogger; 1 Person; 2 Surfers; Water clear |
| D7 | 10 Apr 2019 | Arrive Time | 823 |
| D7 | 10 Apr 2019 | Weather | Sunny |
| D7 | 10 Apr 2019 | Wind Speed (kts) | 3.6 |
| D7 | 10 Apr 2019 | Wind Dir | S |
| D7 | 10 Apr 2019 | Animal Life | 5 Seagulls |
| D7 | 10 Apr 2019 | Floatables | None |
| D7 | 10 Apr 2019 | Water Color | Green |
| D7 | 10 Apr 2019 | Current Direction | S |
| D7 | 10 Apr 2019 | Water Temp (C) | 17.2 |
| D7 | 10 Apr 2019 | Wave Height Low (ft) | 3 |
| D7 | 10 Apr 2019 | High Tide (ft) | 2.8 |
| D7 | 10 Apr 2019 | High Tide Time | 1413 |
| D7 | 10 Apr 2019 | Low Tide (ft) | 0.3 |
| D7 | 10 Apr 2019 | Low Tide Time | 741 |
| D7 | 10 Apr 2019 | Comments | Kelp; Seagrass; Algae; 2 Persons; Water clear |
| D7 | 18 Apr 2019 | Arrive Time | 837 |
| D7 | 18 Apr 2019 | Weather | Sunny |
| D7 | 18 Apr 2019 | Wind Speed (kts) | 0.7 |
| D7 | 18 Apr 2019 | Wind Dir | N |
| D7 | 18 Apr 2019 | Animal Life | None |
| D7 | 18 Apr 2019 | Floatables | None |
| D7 | 18 Apr 2019 | Water Color | Green |
| D7 | 18 Apr 2019 | Current Direction | N |
| D7 | 18 Apr 2019 | Water Temp (C) | 17 |
| D7 | 18 Apr 2019 | Wave Height Low (ft) | 4 |
| D7 | 18 Apr 2019 | High Tide (ft) | 5.2 |
| D7 | 18 Apr 2019 | High Tide Time | 906 |
| D7 | 18 Apr 2019 | Low Tide (ft) | -0.3 |
| D7 | 18 Apr 2019 | Low Tide Time | 308 |
| D7 | 18 Apr 2019 | Comments | 3 Surfers; Water clear |
| D7 | 24 Apr 2019 | Arrive Time | 837 |
| D7 | 24 Apr 2019 | Weather | Foggy |
| D7 | 24 Apr 2019 | Wind Speed (kts) | 3.1 |
| D7 | 24 Apr 2019 | Wind Dir | W |
| D7 | 24 Apr 2019 | Animal Life | None |
| D7 | 24 Apr 2019 | Floatables | None |
| D7 | 24 Apr 2019 | Water Color | Green |
| D7 | 24 Apr 2019 | Current Direction | N |

| Station | Date | Parameter | Value |
|---------|-------------|----------------------|---|
| D7 | 24 Apr 2019 | Water Temp (C) | 18.7 |
| D7 | 24 Apr 2019 | Wave Height Low (ft) | 1 |
| D7 | 24 Apr 2019 | High Tide (ft) | 3 |
| D7 | 24 Apr 2019 | High Tide Time | 1507 |
| D7 | 24 Apr 2019 | Low Tide (ft) | 0.2 |
| D7 | 24 Apr 2019 | Low Tide Time | 806 |
| D7 | 24 Apr 2019 | Comments | Kelp; Seagrass; Algae; 6 Persons; 1 Surfer; Water clear |
| D7 | 30 Apr 2019 | Arrive Time | 929 |
| D7 | 30 Apr 2019 | Weather | Overcast |
| D7 | 30 Apr 2019 | Wind Speed (kts) | 3.8 |
| D7 | 30 Apr 2019 | Wind Dir | S |
| D7 | 30 Apr 2019 | Animal Life | None |
| D7 | 30 Apr 2019 | Floatables | Foam |
| D7 | 30 Apr 2019 | Water Color | Green |
| D7 | 30 Apr 2019 | Current Direction | S |
| D7 | 30 Apr 2019 | Water Temp (C) | 18.5 |
| D7 | 30 Apr 2019 | Wave Height Low (ft) | 2 |
| D7 | 30 Apr 2019 | High Tide (ft) | 4.1 |
| D7 | 30 Apr 2019 | High Tide Time | 712 |
| D7 | 30 Apr 2019 | Low Tide (ft) | 0.4 |
| D7 | 30 Apr 2019 | Low Tide Time | 1335 |
| D7 | 30 Apr 2019 | Comments | Kelp; Seagrass; Algae; 1 Person; 2 Surfers; Water clear |
| D8-B | 03 Apr 2019 | Arrive Time | 901 |
| D8-B | 03 Apr 2019 | Weather | Overcast |
| D8-B | 03 Apr 2019 | Wind Speed (kts) | 2.7 |
| D8-B | 03 Apr 2019 | Wind Dir | N |
| D8-B | 03 Apr 2019 | Animal Life | 4 Cormorants; 2 Seagulls; 1 Seal |
| D8-B | 03 Apr 2019 | Floatables | Foam |
| D8-B | 03 Apr 2019 | Water Color | Green |
| D8-B | 03 Apr 2019 | Current Direction | N |
| D8-B | 03 Apr 2019 | Water Temp (C) | 17.4 |
| D8-B | 03 Apr 2019 | Wave Height Low (ft) | 2 |
| D8-B | 03 Apr 2019 | High Tide (ft) | 4.9 |
| D8-B | 03 Apr 2019 | High Tide Time | 849 |
| D8-B | 03 Apr 2019 | Low Tide (ft) | 0.7 |
| D8-B | 03 Apr 2019 | Low Tide Time | 255 |
| D8-B | 03 Apr 2019 | Comments | Kelp; Algae; Water clear |
| D8-B | 10 Apr 2019 | Arrive Time | 841 |
| D8-B | 10 Apr 2019 | Weather | Sunny |
| D8-B | 10 Apr 2019 | Wind Speed (kts) | 1.3 |
| D8-B | 10 Apr 2019 | Wind Dir | S |
| D8-B | 10 Apr 2019 | Animal Life | 1 Pelican; 1 Seagull |
| D8-B | 10 Apr 2019 | Floatables | None |
| D8-B | 10 Apr 2019 | Water Color | Green |
| D8-B | 10 Apr 2019 | Current Direction | S |
| D8-B | 10 Apr 2019 | Water Temp (C) | 17 |
| D8-B | 10 Apr 2019 | Wave Height Low (ft) | 3 |
| D8-B | 10 Apr 2019 | High Tide (ft) | 2.8 |
| D8-B | 10 Apr 2019 | High Tide Time | 1413 |
| D8-B | 10 Apr 2019 | Low Tide (ft) | 0.3 |
| D8-B | 10 Apr 2019 | Low Tide Time | 741 |
| D8-B | 10 Apr 2019 | Comments | Kelp; Seagrass; Algae; 1 Person; Water clear |

| Station | Date | Parameter | Value |
|---------|-------------|----------------------|------------------------------------|
| D8-B | 18 Apr 2019 | Arrive Time | 857 |
| D8-B | 18 Apr 2019 | Weather | Sunny |
| D8-B | 18 Apr 2019 | Wind Speed (kts) | 3.8 |
| D8-B | 18 Apr 2019 | Wind Dir | W |
| D8-B | 18 Apr 2019 | Animal Life | None |
| D8-B | 18 Apr 2019 | Floatables | None |
| D8-B | 18 Apr 2019 | Water Color | Green |
| D8-B | 18 Apr 2019 | Current Direction | N |
| D8-B | 18 Apr 2019 | Water Temp (C) | 16 |
| D8-B | 18 Apr 2019 | Wave Height Low (ft) | 2 |
| D8-B | 18 Apr 2019 | High Tide (ft) | 5.2 |
| D8-B | 18 Apr 2019 | High Tide Time | 906 |
| D8-B | 18 Apr 2019 | Low Tide (ft) | -0.3 |
| D8-B | 18 Apr 2019 | Low Tide Time | 308 |
| D8-B | 18 Apr 2019 | Comments | Seagrass; Water clear |
| D8-B | 24 Apr 2019 | Arrive Time | 901 |
| D8-B | 24 Apr 2019 | Weather | Cloudy |
| D8-B | 24 Apr 2019 | Wind Speed (kts) | 5 |
| D8-B | 24 Apr 2019 | Wind Dir | W |
| D8-B | 24 Apr 2019 | Animal Life | None |
| D8-B | 24 Apr 2019 | Floatables | None |
| D8-B | 24 Apr 2019 | Water Color | Green |
| D8-B | 24 Apr 2019 | Current Direction | N |
| D8-B | 24 Apr 2019 | Water Temp (C) | 17.5 |
| D8-B | 24 Apr 2019 | Wave Height Low (ft) | 3 |
| D8-B | 24 Apr 2019 | High Tide (ft) | 3 |
| D8-B | 24 Apr 2019 | High Tide Time | 1507 |
| D8-B | 24 Apr 2019 | Low Tide (ft) | 0.2 |
| D8-B | 24 Apr 2019 | Low Tide Time | 806 |
| D8-B | 24 Apr 2019 | Comments | Kelp; Seagrass; Algae; Water clear |
| D8-B | 30 Apr 2019 | Arrive Time | 944 |
| D8-B | 30 Apr 2019 | Weather | Cloudy |
| D8-B | 30 Apr 2019 | Wind Speed (kts) | 6 |
| D8-B | 30 Apr 2019 | Wind Dir | N |
| D8-B | 30 Apr 2019 | Animal Life | None |
| D8-B | 30 Apr 2019 | Floatables | Foam |
| D8-B | 30 Apr 2019 | Water Color | Green |
| D8-B | 30 Apr 2019 | Current Direction | N |
| D8-B | 30 Apr 2019 | Water Temp (C) | 18.6 |
| D8-B | 30 Apr 2019 | Wave Height Low (ft) | 1 |
| D8-B | 30 Apr 2019 | High Tide (ft) | 4.1 |
| D8-B | 30 Apr 2019 | High Tide Time | 712 |
| D8-B | 30 Apr 2019 | Low Tide (ft) | 0.4 |
| D8-B | 30 Apr 2019 | Low Tide Time | 1335 |
| D8-B | 30 Apr 2019 | Comments | Kelp; Seagrass; Algae; Water clear |
| D9 | 03 Apr 2019 | Arrive Time | 919 |
| D9 | 03 Apr 2019 | Weather | Drizzle |
| D9 | 03 Apr 2019 | Wind Speed (kts) | 1.7 |
| D9 | 03 Apr 2019 | Wind Dir | E |
| D9 | 03 Apr 2019 | Animal Life | None |
| D9 | 03 Apr 2019 | Floatables | None |

| Station | Date | Parameter | Value |
|---------|-------------|----------------------|---|
| D9 | 03 Apr 2019 | Water Color | Green |
| D9 | 03 Apr 2019 | Current Direction | E |
| D9 | 03 Apr 2019 | Water Temp (C) | 17.7 |
| D9 | 03 Apr 2019 | Wave Height Low (ft) | 2 |
| D9 | 03 Apr 2019 | High Tide (ft) | 4.9 |
| D9 | 03 Apr 2019 | High Tide Time | 849 |
| D9 | 03 Apr 2019 | Low Tide (ft) | -0.1 |
| D9 | 03 Apr 2019 | Low Tide Time | 1514 |
| D9 | 03 Apr 2019 | Comments | Algae; Water clear |
| D9 | 10 Apr 2019 | Arrive Time | 900 |
| D9 | 10 Apr 2019 | Weather | Sunny |
| D9 | 10 Apr 2019 | Wind Speed (kts) | 1.9 |
| D9 | 10 Apr 2019 | Wind Dir | E |
| D9 | 10 Apr 2019 | Animal Life | 8 Seagulls |
| D9 | 10 Apr 2019 | Floatables | Film |
| D9 | 10 Apr 2019 | Water Color | Green |
| D9 | 10 Apr 2019 | Current Direction | E |
| D9 | 10 Apr 2019 | Water Temp (C) | 19.3 |
| D9 | 10 Apr 2019 | Wave Height Low (ft) | 3 |
| D9 | 10 Apr 2019 | High Tide (ft) | 2.8 |
| D9 | 10 Apr 2019 | High Tide Time | 1413 |
| D9 | 10 Apr 2019 | Low Tide (ft) | 0.3 |
| D9 | 10 Apr 2019 | Low Tide Time | 741 |
| D9 | 10 Apr 2019 | Comments | Kelp; Seagrass; Algae; 2 Persons; Water clear |
| D9 | 18 Apr 2019 | Arrive Time | 918 |
| D9 | 18 Apr 2019 | Weather | Sunny |
| D9 | 18 Apr 2019 | Wind Speed (kts) | 1.3 |
| D9 | 18 Apr 2019 | Wind Dir | N |
| D9 | 18 Apr 2019 | Animal Life | None |
| D9 | 18 Apr 2019 | Floatables | None |
| D9 | 18 Apr 2019 | Water Color | Green |
| D9 | 18 Apr 2019 | Current Direction | N |
| D9 | 18 Apr 2019 | Water Temp (C) | 17 |
| D9 | 18 Apr 2019 | Wave Height Low (ft) | 3 |
| D9 | 18 Apr 2019 | High Tide (ft) | 5.2 |
| D9 | 18 Apr 2019 | High Tide Time | 906 |
| D9 | 18 Apr 2019 | Low Tide (ft) | -0.3 |
| D9 | 18 Apr 2019 | Low Tide Time | 1516 |
| D9 | 18 Apr 2019 | Comments | 1 Person; Water turbid |
| D9 | 24 Apr 2019 | Arrive Time | 909 |
| D9 | 24 Apr 2019 | Weather | Cloudy |
| D9 | 24 Apr 2019 | Wind Speed (kts) | 2.5 |
| D9 | 24 Apr 2019 | Wind Dir | W |
| D9 | 24 Apr 2019 | Animal Life | None |
| D9 | 24 Apr 2019 | Floatables | None |
| D9 | 24 Apr 2019 | Water Color | Green |
| D9 | 24 Apr 2019 | Current Direction | N |
| D9 | 24 Apr 2019 | Water Temp (C) | 17.8 |
| D9 | 24 Apr 2019 | Wave Height Low (ft) | 3 |
| D9 | 24 Apr 2019 | High Tide (ft) | 3 |
| D9 | 24 Apr 2019 | High Tide Time | 1507 |
| D9 | 24 Apr 2019 | Low Tide (ft) | 0.2 |

| Station | Date | Parameter | Value |
|---------|-------------|----------------------|--|
| D9 | 24 Apr 2019 | Low Tide Time | 806 |
| D9 | 24 Apr 2019 | Comments | Kelp; Seagrass; Algae; 2 Persons; Water clear |
| D9 | 30 Apr 2019 | Arrive Time | 951 |
| D9 | 30 Apr 2019 | Weather | Cloudy |
| D9 | 30 Apr 2019 | Wind Speed (kts) | 5 |
| D9 | 30 Apr 2019 | Wind Dir | N |
| D9 | 30 Apr 2019 | Animal Life | None |
| D9 | 30 Apr 2019 | Floatables | Foam |
| D9 | 30 Apr 2019 | Water Color | Green |
| D9 | 30 Apr 2019 | Current Direction | N |
| D9 | 30 Apr 2019 | Water Temp (C) | 19.4 |
| D9 | 30 Apr 2019 | Wave Height Low (ft) | 1 |
| D9 | 30 Apr 2019 | High Tide (ft) | 4.1 |
| D9 | 30 Apr 2019 | High Tide Time | 712 |
| D9 | 30 Apr 2019 | Low Tide (ft) | 0.4 |
| D9 | 30 Apr 2019 | Low Tide Time | 1335 |
| D9 | 30 Apr 2019 | Comments | Kelp; Seagrass; Algae; Water clear |
| D10 | 03 Apr 2019 | Arrive Time | 951 |
| D10 | 03 Apr 2019 | Weather | Partly Cloudy |
| D10 | 03 Apr 2019 | Wind Speed (kts) | 2.7 |
| D10 | 03 Apr 2019 | Wind Dir | W |
| D10 | 03 Apr 2019 | Animal Life | None |
| D10 | 03 Apr 2019 | Floatables | Foam |
| D10 | 03 Apr 2019 | Water Color | Green |
| D10 | 03 Apr 2019 | Current Direction | W |
| D10 | 03 Apr 2019 | Water Temp (C) | 17.8 |
| D10 | 03 Apr 2019 | Wave Height Low (ft) | 2 |
| D10 | 03 Apr 2019 | High Tide (ft) | 4.9 |
| D10 | 03 Apr 2019 | High Tide Time | 849 |
| D10 | 03 Apr 2019 | Low Tide (ft) | -0.1 |
| D10 | 03 Apr 2019 | Low Tide Time | 1514 |
| D10 | 03 Apr 2019 | Comments | Kelp; Seagrass; 20 Persons; 4 Surfers; Water clear |
| D10 | 10 Apr 2019 | Arrive Time | 914 |
| D10 | 10 Apr 2019 | Weather | Sunny |
| D10 | 10 Apr 2019 | Wind Speed (kts) | 3.3 |
| D10 | 10 Apr 2019 | Wind Dir | S |
| D10 | 10 Apr 2019 | Animal Life | 3 Shorebirds; 6 Seagulls |
| D10 | 10 Apr 2019 | Floatables | Foam; Film |
| D10 | 10 Apr 2019 | Water Color | Green |
| D10 | 10 Apr 2019 | Current Direction | S |
| D10 | 10 Apr 2019 | Water Temp (C) | 18.1 |
| D10 | 10 Apr 2019 | Wave Height Low (ft) | 4 |
| D10 | 10 Apr 2019 | High Tide (ft) | 2.8 |
| D10 | 10 Apr 2019 | High Tide Time | 1413 |
| D10 | 10 Apr 2019 | Low Tide (ft) | 0.3 |
| D10 | 10 Apr 2019 | Low Tide Time | 741 |
| D10 | 10 Apr 2019 | Comments | Kelp; Seagrass; 7 Persons; Water clear |
| D10 | 18 Apr 2019 | Arrive Time | 941 |
| D10 | 18 Apr 2019 | Weather | Sunny |
| D10 | 18 Apr 2019 | Wind Speed (kts) | 2.3 |
| D10 | 18 Apr 2019 | Wind Dir | W |

| Station | Date | Parameter | Value |
|---------|-------------|----------------------|---|
| D10 | 18 Apr 2019 | Animal Life | None |
| D10 | 18 Apr 2019 | Floatables | None |
| D10 | 18 Apr 2019 | Water Color | Green |
| D10 | 18 Apr 2019 | Current Direction | N |
| D10 | 18 Apr 2019 | Water Temp (C) | 17 |
| D10 | 18 Apr 2019 | Wave Height Low (ft) | 3 |
| D10 | 18 Apr 2019 | High Tide (ft) | 5.2 |
| D10 | 18 Apr 2019 | High Tide Time | 906 |
| D10 | 18 Apr 2019 | Low Tide (ft) | -0.3 |
| D10 | 18 Apr 2019 | Low Tide Time | 1516 |
| D10 | 18 Apr 2019 | Comments | Seagrass; 13 Persons; 11 Surfers; Water clear |
| D10 | 24 Apr 2019 | Arrive Time | 923 |
| D10 | 24 Apr 2019 | Weather | Cloudy |
| D10 | 24 Apr 2019 | Wind Speed (kts) | 4.4 |
| D10 | 24 Apr 2019 | Wind Dir | E |
| D10 | 24 Apr 2019 | Animal Life | None |
| D10 | 24 Apr 2019 | Floatables | None |
| D10 | 24 Apr 2019 | Water Color | Green |
| D10 | 24 Apr 2019 | Current Direction | N |
| D10 | 24 Apr 2019 | Water Temp (C) | 17 |
| D10 | 24 Apr 2019 | Wave Height Low (ft) | 3 |
| D10 | 24 Apr 2019 | High Tide (ft) | 3 |
| D10 | 24 Apr 2019 | High Tide Time | 1507 |
| D10 | 24 Apr 2019 | Low Tide (ft) | 0.2 |
| D10 | 24 Apr 2019 | Low Tide Time | 806 |
| D10 | 24 Apr 2019 | Comments | Kelp; Seagrass; 4 Persons; Water clear |
| D10 | 30 Apr 2019 | Arrive Time | 1003 |
| D10 | 30 Apr 2019 | Weather | Cloudy |
| D10 | 30 Apr 2019 | Wind Speed (kts) | 4 |
| D10 | 30 Apr 2019 | Wind Dir | N |
| D10 | 30 Apr 2019 | Animal Life | 3 Shorebirds |
| D10 | 30 Apr 2019 | Floatables | Foam |
| D10 | 30 Apr 2019 | Water Color | Green |
| D10 | 30 Apr 2019 | Current Direction | N |
| D10 | 30 Apr 2019 | Water Temp (C) | 19.5 |
| D10 | 30 Apr 2019 | Wave Height Low (ft) | 2 |
| D10 | 30 Apr 2019 | High Tide (ft) | 4.1 |
| D10 | 30 Apr 2019 | High Tide Time | 712 |
| D10 | 30 Apr 2019 | Low Tide (ft) | 0.4 |
| D10 | 30 Apr 2019 | Low Tide Time | 1335 |
| D10 | 30 Apr 2019 | Comments | Kelp; Seagrass; 2 Persons; 3 Surfers; Water clear |
| D11 | 03 Apr 2019 | Arrive Time | 1008 |
| D11 | 03 Apr 2019 | Weather | Partly Cloudy |
| D11 | 03 Apr 2019 | Wind Speed (kts) | 1.7 |
| D11 | 03 Apr 2019 | Wind Dir | E |
| D11 | 03 Apr 2019 | Animal Life | None |
| D11 | 03 Apr 2019 | Floatables | Foam |
| D11 | 03 Apr 2019 | Water Color | Green |
| D11 | 03 Apr 2019 | Current Direction | E |
| D11 | 03 Apr 2019 | Water Temp (C) | 19.3 |
| D11 | 03 Apr 2019 | Wave Height Low (ft) | 3 |
| D11 | 03 Apr 2019 | High Tide (ft) | 4.9 |

| Station | Date | Parameter | Value |
|---------|-------------|----------------------|---|
| D11 | 03 Apr 2019 | High Tide Time | 849 |
| D11 | 03 Apr 2019 | Low Tide (ft) | -0.1 |
| D11 | 03 Apr 2019 | Low Tide Time | 1514 |
| D11 | 03 Apr 2019 | Comments | Kelp; Seagrass; 7 Persons; 1 Surfer; 1 Boat; Water clear |
| D11 | 10 Apr 2019 | Arrive Time | 928 |
| D11 | 10 Apr 2019 | Weather | Sunny |
| D11 | 10 Apr 2019 | Wind Speed (kts) | 3.3 |
| D11 | 10 Apr 2019 | Wind Dir | E |
| D11 | 10 Apr 2019 | Animal Life | 2 Seagulls |
| D11 | 10 Apr 2019 | Floatables | Foam; Film |
| D11 | 10 Apr 2019 | Water Color | Brown |
| D11 | 10 Apr 2019 | Current Direction | E |
| D11 | 10 Apr 2019 | Water Temp (C) | 19.3 |
| D11 | 10 Apr 2019 | Wave Height Low (ft) | 3 |
| D11 | 10 Apr 2019 | High Tide (ft) | 2.8 |
| D11 | 10 Apr 2019 | High Tide Time | 1413 |
| D11 | 10 Apr 2019 | Low Tide (ft) | 0.3 |
| D11 | 10 Apr 2019 | Low Tide Time | 741 |
| D11 | 10 Apr 2019 | Comments | Kelp; Seagrass; 5 Persons; 1 Surfer; Water clear |
| D11 | 18 Apr 2019 | Arrive Time | 1004 |
| D11 | 18 Apr 2019 | Weather | Sunny |
| D11 | 18 Apr 2019 | Wind Speed (kts) | 2.1 |
| D11 | 18 Apr 2019 | Wind Dir | N |
| D11 | 18 Apr 2019 | Animal Life | None |
| D11 | 18 Apr 2019 | Floatables | None |
| D11 | 18 Apr 2019 | Water Color | Green |
| D11 | 18 Apr 2019 | Current Direction | N |
| D11 | 18 Apr 2019 | Water Temp (C) | 17 |
| D11 | 18 Apr 2019 | Wave Height Low (ft) | 5 |
| D11 | 18 Apr 2019 | High Tide (ft) | 5.2 |
| D11 | 18 Apr 2019 | High Tide Time | 906 |
| D11 | 18 Apr 2019 | Low Tide (ft) | -0.3 |
| D11 | 18 Apr 2019 | Low Tide Time | 1516 |
| D11 | 18 Apr 2019 | Comments | 55 Persons; 19 Surfers; 7 Swimmers; Water clear |
| D11 | 24 Apr 2019 | Arrive Time | 938 |
| D11 | 24 Apr 2019 | Weather | Cloudy |
| D11 | 24 Apr 2019 | Wind Speed (kts) | 2.3 |
| D11 | 24 Apr 2019 | Wind Dir | W |
| D11 | 24 Apr 2019 | Animal Life | 8 Dogs |
| D11 | 24 Apr 2019 | Floatables | None |
| D11 | 24 Apr 2019 | Water Color | Green |
| D11 | 24 Apr 2019 | Current Direction | N |
| D11 | 24 Apr 2019 | Water Temp (C) | 17.3 |
| D11 | 24 Apr 2019 | Wave Height Low (ft) | 3 |
| D11 | 24 Apr 2019 | High Tide (ft) | 3 |
| D11 | 24 Apr 2019 | High Tide Time | 1507 |
| D11 | 24 Apr 2019 | Low Tide (ft) | 0.2 |
| D11 | 24 Apr 2019 | Low Tide Time | 806 |
| D11 | 24 Apr 2019 | Comments | Kelp; Seagrass; 6 Persons; 4 Surfers; 3 Swimmers; Water clear |
| D11 | 30 Apr 2019 | Arrive Time | 1014 |
| D11 | 30 Apr 2019 | Weather | Cloudy |

| Station | Date | Parameter | Value |
|---------|-------------|----------------------|--|
| D11 | 30 Apr 2019 | Wind Speed (kts) | 3.1 |
| D11 | 30 Apr 2019 | Wind Dir | E |
| D11 | 30 Apr 2019 | Animal Life | None |
| D11 | 30 Apr 2019 | Floatables | Foam |
| D11 | 30 Apr 2019 | Water Color | Green |
| D11 | 30 Apr 2019 | Current Direction | E |
| D11 | 30 Apr 2019 | Water Temp (C) | 19.5 |
| D11 | 30 Apr 2019 | Wave Height Low (ft) | 2 |
| D11 | 30 Apr 2019 | High Tide (ft) | 4.1 |
| D11 | 30 Apr 2019 | High Tide Time | 712 |
| D11 | 30 Apr 2019 | Low Tide (ft) | 0.4 |
| D11 | 30 Apr 2019 | Low Tide Time | 1335 |
| D11 | 30 Apr 2019 | Comments | Kelp; Seagrass; 3 Persons; 6 Surfers; Water clear |
| D12 | 03 Apr 2019 | Arrive Time | 1034 |
| D12 | 03 Apr 2019 | Weather | Partly Cloudy |
| D12 | 03 Apr 2019 | Wind Speed (kts) | 3.4 |
| D12 | 03 Apr 2019 | Wind Dir | E |
| D12 | 03 Apr 2019 | Animal Life | 2 Seagulls |
| D12 | 03 Apr 2019 | Floatables | None |
| D12 | 03 Apr 2019 | Water Color | Green |
| D12 | 03 Apr 2019 | Current Direction | E |
| D12 | 03 Apr 2019 | Water Temp (C) | 19.8 |
| D12 | 03 Apr 2019 | Wave Height Low (ft) | 2 |
| D12 | 03 Apr 2019 | High Tide (ft) | 4.9 |
| D12 | 03 Apr 2019 | High Tide Time | 849 |
| D12 | 03 Apr 2019 | Low Tide (ft) | -0.1 |
| D12 | 03 Apr 2019 | Low Tide Time | 1514 |
| D12 | 03 Apr 2019 | Comments | Kelp; Seagrass; 30 Persons; Water clear |
| D12 | 10 Apr 2019 | Arrive Time | 1008 |
| D12 | 10 Apr 2019 | Weather | Sunny |
| D12 | 10 Apr 2019 | Wind Speed (kts) | 5.6 |
| D12 | 10 Apr 2019 | Wind Dir | E |
| D12 | 10 Apr 2019 | Animal Life | None |
| D12 | 10 Apr 2019 | Floatables | Foam; Film |
| D12 | 10 Apr 2019 | Water Color | Green |
| D12 | 10 Apr 2019 | Current Direction | E |
| D12 | 10 Apr 2019 | Water Temp (C) | 19.6 |
| D12 | 10 Apr 2019 | Wave Height Low (ft) | 2 |
| D12 | 10 Apr 2019 | High Tide (ft) | 2.8 |
| D12 | 10 Apr 2019 | High Tide Time | 1413 |
| D12 | 10 Apr 2019 | Low Tide (ft) | 0.3 |
| D12 | 10 Apr 2019 | Low Tide Time | 741 |
| D12 | 10 Apr 2019 | Comments | Kelp; Seagrass; 1 Jogger; 32 Persons; 1 Swimmer; Water clear |
| D12 | 18 Apr 2019 | Arrive Time | 1032 |
| D12 | 18 Apr 2019 | Weather | Sunny |
| D12 | 18 Apr 2019 | Wind Speed (kts) | 5.4 |
| D12 | 18 Apr 2019 | Wind Dir | W |
| D12 | 18 Apr 2019 | Animal Life | None |
| D12 | 18 Apr 2019 | Floatables | None |
| D12 | 18 Apr 2019 | Water Color | Green |
| D12 | 18 Apr 2019 | Current Direction | N |
| D12 | 18 Apr 2019 | Water Temp (C) | 17 |

| Station | Date | Parameter | Value |
|---------|-------------|----------------------|--|
| D12 | 18 Apr 2019 | Wave Height Low (ft) | 3 |
| D12 | 18 Apr 2019 | High Tide (ft) | 5.2 |
| D12 | 18 Apr 2019 | High Tide Time | 906 |
| D12 | 18 Apr 2019 | Low Tide (ft) | -0.3 |
| D12 | 18 Apr 2019 | Low Tide Time | 1516 |
| D12 | 18 Apr 2019 | Comments | Kelp; 60 Persons; 10 Swimmers; Water clear |
| D12 | 24 Apr 2019 | Arrive Time | 958 |
| D12 | 24 Apr 2019 | Weather | Cloudy |
| D12 | 24 Apr 2019 | Wind Speed (kts) | 3.1 |
| D12 | 24 Apr 2019 | Wind Dir | W |
| D12 | 24 Apr 2019 | Animal Life | None |
| D12 | 24 Apr 2019 | Floatables | None |
| D12 | 24 Apr 2019 | Water Color | Green |
| D12 | 24 Apr 2019 | Current Direction | N |
| D12 | 24 Apr 2019 | Water Temp (C) | 17.6 |
| D12 | 24 Apr 2019 | Wave Height Low (ft) | 3 |
| D12 | 24 Apr 2019 | High Tide (ft) | 3 |
| D12 | 24 Apr 2019 | High Tide Time | 1507 |
| D12 | 24 Apr 2019 | Low Tide (ft) | 0.2 |
| D12 | 24 Apr 2019 | Low Tide Time | 806 |
| D12 | 24 Apr 2019 | Comments | Kelp; Seagrass; Water clear |
| D12 | 30 Apr 2019 | Arrive Time | 1033 |
| D12 | 30 Apr 2019 | Weather | Cloudy |
| D12 | 30 Apr 2019 | Wind Speed (kts) | 3.1 |
| D12 | 30 Apr 2019 | Wind Dir | E |
| D12 | 30 Apr 2019 | Animal Life | None |
| D12 | 30 Apr 2019 | Floatables | None |
| D12 | 30 Apr 2019 | Water Color | Green |
| D12 | 30 Apr 2019 | Current Direction | E |
| D12 | 30 Apr 2019 | Water Temp (C) | 19.9 |
| D12 | 30 Apr 2019 | Wave Height Low (ft) | 2 |
| D12 | 30 Apr 2019 | High Tide (ft) | 4.1 |
| D12 | 30 Apr 2019 | High Tide Time | 712 |
| D12 | 30 Apr 2019 | Low Tide (ft) | 0.4 |
| D12 | 30 Apr 2019 | Low Tide Time | 1335 |
| D12 | 30 Apr 2019 | Comments | Kelp; Seagrass; 15 Persons; 1 Swimmer; Water clear |

Kelp Stations

Table 3.1

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

| Date | A1 | A6 | A7 | C4 | C5 | C6 | C7 | C8 |
|-------------|-----|-----|-----|----|----|----|----|----|
| 01 Apr 2019 | 10* | 7* | 12* | 2* | 3* | 2* | 4* | 5* |
| 02 Apr 2019 | 10* | 7* | 12* | 2* | 3* | 2* | 4* | 5* |
| 03 Apr 2019 | 4* | 5* | 6* | 2* | 3* | 2* | 3* | 6* |
| 04 Apr 2019 | 4* | 5* | 6* | 2* | 3* | 2* | 3* | 6* |
| 05 Apr 2019 | 4* | 5* | 6* | 2* | 3* | 2* | 3* | 6* |
| 06 Apr 2019 | 4* | 5* | 6* | 2* | 3* | 2* | 3* | 6* |
| 07 Apr 2019 | 4* | 5* | 6* | 2* | 3* | 2* | 3* | 6* |
| 08 Apr 2019 | 6 | 6 | 8 | 2 | 3 | 2 | 3 | 5 |
| 09 Apr 2019 | 6 | 6 | 8 | 2 | 3 | 2 | 3 | 5 |
| 10 Apr 2019 | 7* | 9* | 8* | 3* | 3* | 2* | 3* | 4* |
| 11 Apr 2019 | 7* | 9* | 8* | 3* | 3* | 2* | 3* | 4* |
| 12 Apr 2019 | 7* | 9* | 8* | 3* | 3* | 2* | 3* | 4* |
| 13 Apr 2019 | 7* | 9* | 8* | 3* | 3* | 2* | 3* | 4* |
| 14 Apr 2019 | 7* | 9* | 8* | 3* | 3* | 2* | 3* | 4* |
| 15 Apr 2019 | 6 | 12 | 11 | 2 | 3 | 2 | 4 | 4 |
| 16 Apr 2019 | 6 | 12 | 11 | 2 | 3 | 2 | 4 | 4 |
| 17 Apr 2019 | 7* | 15* | 16* | 3* | 2* | 2* | 5* | 4* |
| 18 Apr 2019 | 7* | 15* | 16* | 3* | 2* | 2* | 5* | 4* |
| 19 Apr 2019 | 7* | 15* | 16* | 3* | 2* | 2* | 5* | 4* |
| 20 Apr 2019 | 7* | 15* | 16* | 3* | 2* | 2* | 5* | 4* |
| 21 Apr 2019 | 7* | 15* | 16* | 3* | 2* | 2* | 5* | 4* |
| 22 Apr 2019 | 9 | 12 | 14 | 2 | 2 | 2 | 4 | 3 |
| 23 Apr 2019 | 9 | 12 | 14 | 2 | 2 | 2 | 4 | 3 |
| 24 Apr 2019 | 7* | 12* | 16* | 2* | 2* | 2* | 4* | 4* |
| 25 Apr 2019 | 7* | 12* | 16* | 2* | 2* | 2* | 4* | 4* |
| 26 Apr 2019 | 7* | 12* | 16* | 2* | 2* | 2* | 4* | 4* |
| 27 Apr 2019 | 7* | 12* | 16* | 2* | 2* | 2* | 4* | 4* |
| 28 Apr 2019 | 7* | 12* | 16* | 2* | 2* | 2* | 4* | 4* |
| 29 Apr 2019 | 5 | 8 | 11 | 2 | 2 | 2 | 3 | 3 |
| 30 Apr 2019 | 5 | 8 | 11 | 2 | 2 | 2 | 3 | 3 |

* Geometric mean calculated using n<5

Table 3.2

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

| Date | A1 | A6 | A7 | C4 | C5 | C6 | C7 | C8 |
|-------------|----|----|----|----|----|----|----|----|
| 01 Apr 2019 | 3* | 3* | 3* | 2* | 2* | 2* | 2* | 3* |
| 02 Apr 2019 | 3* | 3* | 3* | 2* | 2* | 2* | 2* | 3* |
| 03 Apr 2019 | 3* | 2* | 3* | 2* | 2* | 2* | 2* | 2* |
| 04 Apr 2019 | 3* | 2* | 3* | 2* | 2* | 2* | 2* | 2* |
| 05 Apr 2019 | 3* | 2* | 3* | 2* | 2* | 2* | 2* | 2* |
| 06 Apr 2019 | 3* | 2* | 3* | 2* | 2* | 2* | 2* | 2* |
| 07 Apr 2019 | 3* | 2* | 3* | 2* | 2* | 2* | 2* | 2* |
| 08 Apr 2019 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 2 |
| 09 Apr 2019 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 2 |
| 10 Apr 2019 | 3* | 3* | 3* | 2* | 2* | 2* | 2* | 2* |
| 11 Apr 2019 | 3* | 3* | 3* | 2* | 2* | 2* | 2* | 2* |
| 12 Apr 2019 | 3* | 3* | 3* | 2* | 2* | 2* | 2* | 2* |
| 13 Apr 2019 | 3* | 3* | 3* | 2* | 2* | 2* | 2* | 2* |
| 14 Apr 2019 | 3* | 3* | 3* | 2* | 2* | 2* | 2* | 2* |
| 15 Apr 2019 | 3 | 4 | 3 | 2 | 2 | 2 | 2 | 2 |
| 16 Apr 2019 | 3 | 4 | 3 | 2 | 2 | 2 | 2 | 2 |
| 17 Apr 2019 | 3* | 4* | 4* | 2* | 2* | 2* | 3* | 2* |
| 18 Apr 2019 | 3* | 4* | 4* | 2* | 2* | 2* | 3* | 2* |
| 19 Apr 2019 | 3* | 4* | 4* | 2* | 2* | 2* | 3* | 2* |
| 20 Apr 2019 | 3* | 4* | 4* | 2* | 2* | 2* | 3* | 2* |
| 21 Apr 2019 | 3* | 4* | 4* | 2* | 2* | 2* | 3* | 2* |
| 22 Apr 2019 | 4 | 4 | 3 | 2 | 2 | 2 | 2 | 2 |
| 23 Apr 2019 | 4 | 4 | 3 | 2 | 2 | 2 | 2 | 2 |
| 24 Apr 2019 | 3* | 4* | 4* | 2* | 2* | 2* | 2* | 2* |
| 25 Apr 2019 | 3* | 4* | 4* | 2* | 2* | 2* | 2* | 2* |
| 26 Apr 2019 | 3* | 4* | 4* | 2* | 2* | 2* | 2* | 2* |
| 27 Apr 2019 | 3* | 4* | 4* | 2* | 2* | 2* | 2* | 2* |
| 28 Apr 2019 | 3* | 4* | 4* | 2* | 2* | 2* | 2* | 2* |
| 29 Apr 2019 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 2 |
| 30 Apr 2019 | 3 | 3 | 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 Apr 2019 | 2* | 2* | 2* | 2* | 2* | 2* | 2* | 2* |
| 02 Apr 2019 | 2* | 2* | 2* | 2* | 2* | 2* | 2* | 2* |
| 03 Apr 2019 | 2* | 2* | 2* | 2* | 2* | 2* | 2* | 2* |
| 04 Apr 2019 | 2* | 2* | 2* | 2* | 2* | 2* | 2* | 2* |
| 05 Apr 2019 | 2* | 2* | 2* | 2* | 2* | 2* | 2* | 2* |
| 06 Apr 2019 | 2* | 2* | 2* | 2* | 2* | 2* | 2* | 2* |
| 07 Apr 2019 | 2* | 2* | 2* | 2* | 2* | 2* | 2* | 2* |
| 08 Apr 2019 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 09 Apr 2019 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 10 Apr 2019 | 2* | 2* | 2* | 2* | 2* | 2* | 2* | 2* |
| 11 Apr 2019 | 2* | 2* | 2* | 2* | 2* | 2* | 2* | 2* |
| 12 Apr 2019 | 2* | 2* | 2* | 2* | 2* | 2* | 2* | 2* |
| 13 Apr 2019 | 2* | 2* | 2* | 2* | 2* | 2* | 2* | 2* |
| 14 Apr 2019 | 2* | 2* | 2* | 2* | 2* | 2* | 2* | 2* |
| 15 Apr 2019 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 16 Apr 2019 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 17 Apr 2019 | 2* | 2* | 2* | 2* | 2* | 2* | 2* | 2* |
| 18 Apr 2019 | 2* | 2* | 2* | 2* | 2* | 2* | 2* | 2* |
| 19 Apr 2019 | 2* | 2* | 2* | 2* | 2* | 2* | 2* | 2* |
| 20 Apr 2019 | 2* | 2* | 2* | 2* | 2* | 2* | 2* | 2* |
| 21 Apr 2019 | 2* | 2* | 2* | 2* | 2* | 2* | 2* | 2* |
| 22 Apr 2019 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 23 Apr 2019 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 24 Apr 2019 | 2* | 2* | 2* | 2* | 2* | 2* | 2* | 2* |
| 25 Apr 2019 | 2* | 2* | 2* | 2* | 2* | 2* | 2* | 2* |
| 26 Apr 2019 | 2* | 2* | 2* | 2* | 2* | 2* | 2* | 2* |
| 27 Apr 2019 | 2* | 2* | 2* | 2* | 2* | 2* | 2* | 2* |
| 28 Apr 2019 | 2* | 2* | 2* | 2* | 2* | 2* | 2* | 2* |
| 29 Apr 2019 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 30 Apr 2019 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |

* Geometric mean calculated using n<5

Table 3.4

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

| Date | A1 | A6 | A7 | C4 | C5 | C6 | C7 | C8 |
|-------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 03 Apr 2019 | IC | IC | IC | IC | IC | IC | IC | IC |
| 08 Apr 2019 | IC | IC | IC | IC | IC | IC | IC | IC |
| 15 Apr 2019 | IC | IC | IC | IC | IC | IC | IC | IC |
| 22 Apr 2019 | IC | IC | IC | IC | IC | IC | IC | IC |
| 29 Apr 2019 | IC | IC | IC | IC | IC | IC | IC | IC |

IC = In Compliance

E = Exceedance

ns = not sampled

ND = no data

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 |
|-------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 03 Apr 2019 | IC | IC | IC | IC | IC | IC | IC | IC |
| 08 Apr 2019 | IC | IC | IC | IC | IC | IC | IC | IC |
| 15 Apr 2019 | IC | IC | IC | IC | IC | IC | IC | IC |
| 22 Apr 2019 | IC | IC | IC | IC | IC | IC | IC | IC |
| 29 Apr 2019 | IC | IC | IC | IC | IC | IC | IC | IC |

IC = In Compliance

E = Exceedance

ns = not sampled

ND = no data

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 |
|-------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 03 Apr 2019 | IC | IC | IC | IC | IC | IC | IC | IC |
| 08 Apr 2019 | IC | IC | IC | IC | IC | IC | IC | IC |
| 15 Apr 2019 | IC | IC | IC | IC | IC | IC | IC | IC |
| 22 Apr 2019 | IC | IC | IC | IC | IC | IC | IC | IC |
| 29 Apr 2019 | IC | IC | IC | IC | IC | IC | IC | IC |

IC = In Compliance

E = Exceedance

ns = not sampled

ND = no data

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 |
|-------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 03 Apr 2019 | IC | IC | IC | IC | IC | IC | IC | IC |
| 08 Apr 2019 | IC | IC | IC | IC | IC | IC | IC | IC |
| 15 Apr 2019 | IC | IC | IC | IC | IC | IC | IC | IC |
| 22 Apr 2019 | IC | IC | IC | IC | IC | IC | IC | IC |
| 29 Apr 2019 | IC | IC | IC | IC | IC | IC | IC | IC |

IC = In Compliance

E = Exceedance

ns = not sampled

ND = no data

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; 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 | Temp | XMS | DO | Sal | pH |
|---------|-------------|------|-------|-------|-------|--------|------|------|-------|-----|-------|-----|
| A1 | 03 Apr 2019 | 826 | 1 | 2e | <2 | <2 | 1.00 | 15.0 | 65.22 | 9.6 | 33.60 | 8.2 |
| A1 | 03 Apr 2019 | 826 | 12 | 2e | 2e | <2 | 1.00 | 13.4 | 76.53 | 7.3 | 33.62 | 8.0 |
| A1 | 03 Apr 2019 | 826 | 18 | 6e | <2 | <2 | 0.33 | 13.2 | 78.13 | 6.8 | 33.62 | 8.0 |
| A1 | 08 Apr 2019 | 802 | 1 | 4e | <2 | <2 | 0.50 | 15.8 | 81.19 | 8.7 | 33.59 | 8.1 |
| A1 | 08 Apr 2019 | 802 | 12 | 30e | 2e | <2 | 0.07 | 12.4 | 84.70 | 6.0 | 33.63 | 7.9 |
| A1 | 08 Apr 2019 | 802 | 18 | 26e | 10e | <2 | 0.38 | 12.3 | 81.62 | 5.7 | 33.65 | 7.9 |
| A1 | 15 Apr 2019 | 750 | 1 | <2 | <2 | <2 | 1.00 | 14.2 | 82.45 | 7.3 | 33.62 | 8.0 |
| A1 | 15 Apr 2019 | 750 | 12 | <2 | <2 | <2 | 1.00 | 12.1 | 82.87 | 5.7 | 33.65 | 7.8 |
| A1 | 15 Apr 2019 | 750 | 18 | <2 | <2 | <2 | 1.00 | 12.0 | 83.19 | 5.4 | 33.65 | 7.8 |
| A1 | 22 Apr 2019 | 753 | 1 | <2 | <2 | <2 | 1.00 | 16.4 | 80.46 | 8.4 | 33.62 | 8.1 |
| A1 | 22 Apr 2019 | 753 | 12 | 10e | 2e | <2 | 0.20 | 13.5 | 82.42 | 7.3 | 33.61 | 8.0 |
| A1 | 22 Apr 2019 | 753 | 18 | 40e | 18e | 6e | 0.45 | 12.4 | 82.62 | 5.9 | 33.65 | 7.9 |
| A1 | 29 Apr 2019 | 750 | 1 | <2 | <2 | <2 | 1.00 | 15.5 | 74.83 | 8.8 | 33.63 | 8.0 |
| A1 | 29 Apr 2019 | 750 | 12 | <2 | <2 | <2 | 1.00 | 14.0 | 78.33 | 7.1 | 33.67 | 7.9 |
| A1 | 29 Apr 2019 | 750 | 18 | <2 | <2 | <2 | 1.00 | 12.8 | 84.11 | 6.1 | 33.63 | 7.8 |
| A6 | 03 Apr 2019 | 855 | 1 | 2e | <2 | <2 | 1.00 | 15.5 | 78.49 | 8.8 | 33.59 | 8.2 |
| A6 | 03 Apr 2019 | 855 | 12 | 6e | <2 | <2 | 0.33 | 12.5 | 77.47 | 6.3 | 33.63 | 8.0 |
| A6 | 03 Apr 2019 | 855 | 18 | 12e | <2 | <2 | 0.17 | 12.2 | 79.28 | 5.7 | 33.65 | 7.9 |
| A6 | 08 Apr 2019 | 835 | 1 | <2 | <2 | <2 | 1.00 | 16.0 | 80.90 | 8.2 | 33.58 | 8.1 |
| A6 | 08 Apr 2019 | 835 | 12 | 14e | 8e | <2 | 0.57 | 13.4 | 82.92 | 7.6 | 34.06 | 8.0 |
| A6 | 08 Apr 2019 | 835 | 18 | 30e | 8e | 2e | 0.27 | 12.7 | 83.07 | 6.2 | 33.66 | 7.9 |
| A6 | 15 Apr 2019 | 819 | 1 | <2 | <2 | <2 | 1.00 | 15.0 | 78.81 | 8.1 | 33.62 | 8.1 |
| A6 | 15 Apr 2019 | 819 | 12 | 12e | 4e | <2 | 0.33 | 11.9 | 85.34 | 5.5 | 33.65 | 7.8 |
| A6 | 15 Apr 2019 | 819 | 18 | 110 | 20e | <2 | 0.18 | 11.8 | 84.68 | 5.4 | 33.66 | 7.8 |
| A6 | 22 Apr 2019 | 823 | 1 | <2 | <2 | <2 | 1.00 | 16.5 | 84.38 | 8.1 | 33.62 | 8.1 |
| A6 | 22 Apr 2019 | 823 | 12 | 2e | <2 | <2 | 1.00 | 14.9 | 82.80 | 7.5 | 33.62 | 8.1 |
| A6 | 22 Apr 2019 | 823 | 18 | 10e | 2e | <2 | 0.20 | 13.4 | 83.96 | 6.7 | 33.64 | 8.0 |
| A6 | 29 Apr 2019 | 821 | 1 | <2 | <2 | <2 | 1.00 | 17.2 | 81.16 | 8.8 | 33.65 | 8.0 |
| A6 | 29 Apr 2019 | 821 | 12 | <2 | <2 | <2 | 1.00 | 14.2 | 84.20 | 7.0 | 33.64 | 7.9 |
| A6 | 29 Apr 2019 | 821 | 18 | <2 | <2 | 14e | 1.00 | 12.9 | 85.21 | 6.1 | 33.63 | 7.8 |
| A7 | 03 Apr 2019 | 842 | 1 | 6e | <2 | <2 | 0.33 | 15.1 | 72.20 | 9.6 | 33.57 | 8.2 |
| A7 | 03 Apr 2019 | 842 | 12 | 4e | <2 | <2 | 0.50 | 13.5 | 75.34 | 7.3 | 33.62 | 8.1 |
| A7 | 03 Apr 2019 | 842 | 18 | 16e | 8e | <2 | 0.50 | 12.3 | 79.66 | 5.8 | 33.64 | 7.9 |
| A7 | 08 Apr 2019 | 821 | 1 | <2 | <2 | <2 | 1.00 | 15.9 | 77.44 | 8.4 | 33.61 | 8.1 |
| A7 | 08 Apr 2019 | 821 | 12 | 34e | 4e | <2 | 0.12 | 13.0 | 83.27 | 6.8 | 33.60 | 8.0 |
| A7 | 08 Apr 2019 | 821 | 18 | 18e | <2 | <2 | 0.11 | 12.7 | 82.44 | 6.2 | 33.63 | 7.9 |

| Station | Date | Time | Depth | Total | Fecal | Entero | F:T | Temp | XMS | DO | Sal | pH |
|---------|-------------|------|-------|-------|-------|--------|------|------|-------|-----|-------|-----|
| A7 | 15 Apr 2019 | 803 | 1 | <2 | <2 | <2 | 1.00 | 15.9 | 78.25 | 8.6 | 33.61 | 8.1 |
| A7 | 15 Apr 2019 | 803 | 12 | 10e | 2e | <2 | 0.20 | 11.8 | 83.09 | 5.4 | 33.67 | 7.8 |
| A7 | 15 Apr 2019 | 803 | 18 | 110 | 18e | 2e | 0.16 | 11.7 | 81.44 | 5.2 | 33.67 | 7.8 |
| A7 | 22 Apr 2019 | 808 | 1 | <2 | <2 | <2 | 1.00 | 16.4 | 82.20 | 8.5 | 33.62 | 8.1 |
| A7 | 22 Apr 2019 | 808 | 12 | 10e | <2 | <2 | 0.20 | 14.9 | 83.56 | 7.5 | 33.63 | 8.1 |
| A7 | 22 Apr 2019 | 808 | 18 | 20e | <2 | <2 | 0.10 | 12.9 | 83.75 | 6.4 | 33.64 | 8.0 |
| A7 | 29 Apr 2019 | 803 | 1 | <2 | <2 | <2 | 1.00 | 16.2 | 79.02 | 8.5 | 33.64 | 8.0 |
| A7 | 29 Apr 2019 | 803 | 12 | <2 | <2 | <2 | 1.00 | 15.1 | 74.26 | 8.2 | 33.63 | 8.0 |
| A7 | 29 Apr 2019 | 803 | 18 | 2e | <2 | <2 | 1.00 | 13.4 | 80.34 | 7.0 | 33.64 | 7.9 |
| C4 | 03 Apr 2019 | 1006 | 1 | 4e | <2 | <2 | 0.50 | 15.4 | 70.31 | 9.3 | 33.59 | 8.2 |
| C4 | 03 Apr 2019 | 1006 | 3 | <2 | <2 | <2 | 1.00 | 15.4 | 71.01 | 9.2 | 33.59 | 8.2 |
| C4 | 03 Apr 2019 | 1006 | 9 | <2 | <2 | <2 | 1.00 | 14.5 | 77.63 | 8.2 | 33.61 | 8.1 |
| C4 | 08 Apr 2019 | 947 | 1 | 4e | 6e | 2e | 1.50 | 16.2 | 73.10 | 7.9 | 33.61 | 8.1 |
| C4 | 08 Apr 2019 | 947 | 3 | 4e | <2 | 2e | 0.50 | 15.9 | 73.30 | 7.8 | 33.62 | 8.1 |
| C4 | 08 Apr 2019 | 947 | 9 | <2 | <2 | <2 | 1.00 | 14.6 | 71.29 | 7.0 | 33.77 | 8.1 |
| C4 | 15 Apr 2019 | 924 | 1 | <2 | <2 | <2 | 1.00 | 16.4 | 72.41 | 8.3 | 33.62 | 8.1 |
| C4 | 15 Apr 2019 | 924 | 3 | 2e | <2 | <2 | 1.00 | 16.1 | 73.68 | 8.5 | 33.63 | 8.1 |
| C4 | 15 Apr 2019 | 924 | 9 | 2e | <2 | <2 | 1.00 | 12.9 | 80.98 | 5.4 | 33.62 | 7.9 |
| C4 | 22 Apr 2019 | 939 | 1 | 2e | <2 | <2 | 1.00 | 16.8 | 75.58 | 8.5 | 33.63 | 8.2 |
| C4 | 22 Apr 2019 | 939 | 3 | <2 | <2 | <2 | 1.00 | 16.7 | 75.72 | 8.4 | 33.63 | 8.2 |
| C4 | 22 Apr 2019 | 939 | 9 | <2 | <2 | <2 | 1.00 | 15.4 | 70.34 | 6.9 | 33.65 | 8.1 |
| C4 | 29 Apr 2019 | 947 | 1 | <2 | <2 | <2 | 1.00 | 15.1 | 72.82 | 7.8 | 33.62 | 7.9 |
| C4 | 29 Apr 2019 | 947 | 3 | 2e | <2 | <2 | 1.00 | 15.1 | 72.99 | 7.7 | 33.62 | 7.9 |
| C4 | 29 Apr 2019 | 947 | 9 | <2 | <2 | <2 | 1.00 | 13.6 | 80.19 | 6.2 | 33.66 | 7.9 |
| C5 | 03 Apr 2019 | 954 | 1 | <2 | <2 | <2 | 1.00 | 15.8 | 75.16 | 8.7 | 33.61 | 8.2 |
| C5 | 03 Apr 2019 | 954 | 3 | <2 | <2 | <2 | 1.00 | 15.6 | 75.27 | 8.7 | 33.60 | 8.2 |
| C5 | 03 Apr 2019 | 954 | 9 | <2 | <2 | <2 | 1.00 | 14.7 | 77.39 | 8.3 | 33.61 | 8.1 |
| C5 | 08 Apr 2019 | 937 | 1 | 6e | <2 | <2 | 0.33 | 15.9 | 76.33 | 8.1 | 33.61 | 8.1 |
| C5 | 08 Apr 2019 | 937 | 3 | 2e | <2 | <2 | 1.00 | 15.9 | 77.44 | 8.1 | 33.61 | 8.1 |
| C5 | 08 Apr 2019 | 937 | 9 | 2e | <2 | <2 | 1.00 | 14.6 | 67.52 | 7.1 | 33.61 | 8.0 |
| C5 | 15 Apr 2019 | 913 | 1 | 2e | <2 | <2 | 1.00 | 16.1 | 77.08 | 8.4 | 33.62 | 8.1 |
| C5 | 15 Apr 2019 | 913 | 3 | 2e | <2 | <2 | 1.00 | 16.0 | 77.73 | 8.2 | 33.62 | 8.1 |
| C5 | 15 Apr 2019 | 913 | 9 | <2 | <2 | <2 | 1.00 | 12.9 | 84.25 | 6.5 | 33.61 | 8.0 |
| C5 | 22 Apr 2019 | 927 | 1 | <2 | <2 | <2 | 1.00 | 16.8 | 77.83 | 8.1 | 33.63 | 8.2 |
| C5 | 22 Apr 2019 | 927 | 3 | <2 | <2 | <2 | 1.00 | 16.7 | 79.21 | 8.5 | 33.63 | 8.2 |
| C5 | 22 Apr 2019 | 927 | 9 | <2 | <2 | <2 | 1.00 | 15.2 | 76.25 | 7.7 | 33.71 | 8.1 |
| C5 | 29 Apr 2019 | 927 | 1 | 2e | <2 | <2 | 1.00 | 17.0 | 81.41 | 8.6 | 33.65 | 8.1 |
| C5 | 29 Apr 2019 | 927 | 3 | <2 | <2 | <2 | 1.00 | 16.9 | 81.58 | 8.6 | 33.66 | 8.1 |
| C5 | 29 Apr 2019 | 927 | 9 | <2 | <2 | <2 | 1.00 | 14.1 | 78.62 | 7.9 | 33.66 | 8.0 |
| C6 | 03 Apr 2019 | 942 | 1 | <2 | <2 | <2 | 1.00 | 15.8 | 79.48 | 8.8 | 33.60 | 8.2 |
| C6 | 03 Apr 2019 | 942 | 3 | <2 | <2 | <2 | 1.00 | 15.8 | 79.63 | 8.7 | 33.60 | 8.2 |

| Station | Date | Time | Depth | Total | Fecal | Entero | F:T | Temp | XMS | DO | Sal | pH |
|---------|-------------|------|-------|-------|-------|--------|------|------|-------|-----|-------|-----|
| C6 | 03 Apr 2019 | 942 | 9 | 2e | <2 | <2 | 1.00 | 14.0 | 84.01 | 7.2 | 33.62 | 8.1 |
| C6 | 08 Apr 2019 | 925 | 1 | <2 | <2 | <2 | 1.00 | 16.1 | 78.39 | 8.3 | 33.60 | 8.1 |
| C6 | 08 Apr 2019 | 925 | 3 | 2e | <2 | <2 | 1.00 | 15.9 | 78.35 | 8.1 | 33.62 | 8.1 |
| C6 | 08 Apr 2019 | 925 | 9 | 4e | <2 | <2 | 0.50 | 13.9 | 78.44 | 6.6 | 33.69 | 8.0 |
| C6 | 15 Apr 2019 | 902 | 1 | <2 | <2 | <2 | 1.00 | 16.1 | 73.59 | 8.2 | 33.62 | 8.1 |
| C6 | 15 Apr 2019 | 902 | 3 | <2 | <2 | <2 | 1.00 | 15.1 | 75.92 | 8.0 | 33.64 | 8.1 |
| C6 | 15 Apr 2019 | 902 | 9 | <2 | <2 | <2 | 1.00 | 12.8 | 84.41 | 6.6 | 33.63 | 8.0 |
| C6 | 22 Apr 2019 | 916 | 1 | <2 | <2 | <2 | 1.00 | 16.7 | 79.81 | 8.5 | 33.63 | 8.2 |
| C6 | 22 Apr 2019 | 916 | 3 | <2 | <2 | <2 | 1.00 | 16.6 | 79.63 | 8.5 | 33.63 | 8.2 |
| C6 | 22 Apr 2019 | 916 | 9 | <2 | <2 | <2 | 1.00 | 13.9 | 76.64 | 6.7 | 33.65 | 8.0 |
| C6 | 29 Apr 2019 | 908 | 1 | <2 | <2 | <2 | 1.00 | 17.3 | 80.88 | 8.7 | 33.65 | 8.1 |
| C6 | 29 Apr 2019 | 908 | 3 | <2 | <2 | <2 | 1.00 | 17.4 | 81.55 | 8.6 | 33.66 | 8.1 |
| C6 | 29 Apr 2019 | 908 | 9 | <2 | <2 | <2 | 1.00 | 15.2 | 83.43 | 7.7 | 33.61 | 7.9 |
| C7 | 03 Apr 2019 | 910 | 1 | <2 | <2 | <2 | 1.00 | 15.7 | 78.36 | 8.9 | 33.59 | 8.2 |
| C7 | 03 Apr 2019 | 910 | 12 | <2 | <2 | <2 | 1.00 | 13.8 | 74.27 | 7.8 | 33.64 | 8.1 |
| C7 | 03 Apr 2019 | 910 | 18 | <2 | <2 | <2 | 1.00 | 12.8 | 75.14 | 6.7 | 33.62 | 8.0 |
| C7 | 08 Apr 2019 | 854 | 1 | <2 | <2 | <2 | 1.00 | 16.2 | 80.34 | 8.6 | 33.59 | 8.1 |
| C7 | 08 Apr 2019 | 854 | 12 | <2 | <2 | <2 | 1.00 | 13.7 | 80.93 | 7.7 | 33.60 | 8.0 |
| C7 | 08 Apr 2019 | 854 | 18 | <2 | <2 | <2 | 1.00 | 13.4 | 80.80 | 7.0 | 33.61 | 8.0 |
| C7 | 15 Apr 2019 | 834 | 1 | <2 | <2 | <2 | 1.00 | 15.9 | 74.22 | 8.3 | 33.60 | 8.1 |
| C7 | 15 Apr 2019 | 834 | 12 | 48 | 6e | <2 | 0.12 | 11.9 | 85.48 | 5.5 | 33.65 | 7.9 |
| C7 | 15 Apr 2019 | 834 | 18 | 32e | 4e | <2 | 0.12 | 11.9 | 85.16 | 5.4 | 33.66 | 7.9 |
| C7 | 22 Apr 2019 | 840 | 1 | <2 | <2 | <2 | 1.00 | 16.6 | 81.26 | 8.3 | 33.62 | 8.1 |
| C7 | 22 Apr 2019 | 840 | 12 | <2 | <2 | <2 | 1.00 | 15.5 | 81.91 | 7.9 | 33.61 | 8.1 |
| C7 | 22 Apr 2019 | 840 | 18 | 2e | <2 | <2 | 1.00 | 13.7 | 83.86 | 7.0 | 33.67 | 8.0 |
| C7 | 29 Apr 2019 | 835 | 1 | <2 | <2 | <2 | 1.00 | 17.2 | 81.52 | 8.3 | 33.65 | 8.0 |
| C7 | 29 Apr 2019 | 835 | 12 | <2 | <2 | <2 | 1.00 | 14.2 | 80.37 | 7.8 | 33.62 | 8.0 |
| C7 | 29 Apr 2019 | 835 | 18 | <2 | 2e | <2 | 1.00 | 12.8 | 85.08 | 6.4 | 33.63 | 7.9 |
| C8 | 03 Apr 2019 | 922 | 1 | <2 | <2 | <2 | 1.00 | 15.6 | 76.58 | 9.0 | 33.58 | 8.2 |
| C8 | 03 Apr 2019 | 922 | 12 | 4e | <2 | <2 | 0.50 | 13.6 | 70.73 | 8.0 | 33.61 | 8.1 |
| C8 | 03 Apr 2019 | 922 | 18 | 12e | 2e | <2 | 0.17 | 12.7 | 77.26 | 6.5 | 33.63 | 8.0 |
| C8 | 08 Apr 2019 | 905 | 1 | <2 | <2 | <2 | 1.00 | 16.2 | 74.51 | 8.6 | 33.58 | 8.1 |
| C8 | 08 Apr 2019 | 905 | 12 | <2 | <2 | <2 | 1.00 | 13.9 | 80.50 | 7.9 | 33.59 | 8.0 |
| C8 | 08 Apr 2019 | 905 | 18 | 2e | <2 | <2 | 1.00 | 13.2 | 80.92 | 6.6 | 33.62 | 8.0 |
| C8 | 15 Apr 2019 | 845 | 1 | <2 | <2 | <2 | 1.00 | 15.7 | 71.77 | 7.8 | 33.59 | 8.0 |
| C8 | 15 Apr 2019 | 845 | 12 | 12e | <2 | <2 | 0.17 | 12.3 | 85.41 | 5.9 | 33.63 | 7.9 |
| C8 | 15 Apr 2019 | 845 | 18 | 14e | 2e | <2 | 0.14 | 12.1 | 85.28 | 5.6 | 33.65 | 7.9 |
| C8 | 22 Apr 2019 | 853 | 1 | <2 | <2 | <2 | 1.00 | 16.8 | 82.07 | 8.3 | 33.62 | 8.2 |
| C8 | 22 Apr 2019 | 853 | 12 | <2 | <2 | <2 | 1.00 | 16.1 | 82.68 | 8.3 | 33.62 | 8.1 |
| C8 | 22 Apr 2019 | 853 | 18 | <2 | 2e | <2 | 1.00 | 13.5 | 81.50 | 7.0 | 33.61 | 8.0 |
| C8 | 29 Apr 2019 | 847 | 1 | <2 | <2 | 2e | 1.00 | 17.1 | 82.71 | 8.5 | 33.64 | 8.0 |

| Station | Date | Time | Depth | Total | Fecal | Enterococci | F:T | Temp | XMS | DO | Sal | pH |
|---------|-------------|------|-------|-------|-------|-------------|------|------|-------|-----|-------|-----|
| C8 | 29 Apr 2019 | 847 | 12 | <2 | <2 | <2 | 1.00 | 14.5 | 78.63 | 8.3 | 33.61 | 8.0 |
| C8 | 29 Apr 2019 | 847 | 18 | <2 | <2 | <2 | 1.00 | 12.5 | 84.52 | 6.3 | 33.62 | 7.8 |

ns = not sampled

ND = no data

Table 3.9

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

| Station | Date | Parameter | Value |
|---------|-------------|-------------------|---------------|
| A1 | 03 Apr 2019 | Depth (m) | 19 |
| A1 | 03 Apr 2019 | Arrive Time | 826 |
| A1 | 03 Apr 2019 | Depart Time | 835 |
| A1 | 03 Apr 2019 | Air Temp (C) | 14 |
| A1 | 03 Apr 2019 | Weather | Overcast |
| A1 | 03 Apr 2019 | Visibility (mi) | 5 |
| A1 | 03 Apr 2019 | Wind Speed (kts) | 6 |
| A1 | 03 Apr 2019 | Wind Dir | S |
| A1 | 03 Apr 2019 | Water Color | Bluish-Green |
| A1 | 03 Apr 2019 | Wave Ht Low (ft) | 4 |
| A1 | 03 Apr 2019 | Wave Period (sec) | 13 |
| A1 | 03 Apr 2019 | Sea State | Heavy chop |
| A1 | 03 Apr 2019 | High Tide (ft) | 4.86 |
| A1 | 03 Apr 2019 | High Tide Time | 849 |
| A1 | 03 Apr 2019 | Low Tide (ft) | -0.07 |
| A1 | 03 Apr 2019 | Low Tide Time | 1514 |
| A1 | 03 Apr 2019 | Comments | none |
| A1 | 08 Apr 2019 | Depth (m) | 20 |
| A1 | 08 Apr 2019 | Arrive Time | 802 |
| A1 | 08 Apr 2019 | Depart Time | 816 |
| A1 | 08 Apr 2019 | Air Temp (C) | 16 |
| A1 | 08 Apr 2019 | Weather | Haze |
| A1 | 08 Apr 2019 | Visibility (mi) | 8 |
| A1 | 08 Apr 2019 | Wind Speed (kts) | 3 |
| A1 | 08 Apr 2019 | Wind Dir | N |
| A1 | 08 Apr 2019 | Water Color | Green |
| A1 | 08 Apr 2019 | Wave Ht Low (ft) | 5 |
| A1 | 08 Apr 2019 | Wave Period (sec) | 13 |
| A1 | 08 Apr 2019 | Sea State | Light chop |
| A1 | 08 Apr 2019 | High Tide (ft) | 3.57 |
| A1 | 08 Apr 2019 | High Tide Time | 1151 |
| A1 | 08 Apr 2019 | Low Tide (ft) | 0.02 |
| A1 | 08 Apr 2019 | Low Tide Time | 548 |
| A1 | 08 Apr 2019 | Comments | none |
| A1 | 15 Apr 2019 | Depth (m) | 18 |
| A1 | 15 Apr 2019 | Arrive Time | 750 |
| A1 | 15 Apr 2019 | Depart Time | 754 |
| A1 | 15 Apr 2019 | Air Temp (C) | 14 |
| A1 | 15 Apr 2019 | Weather | Partly Cloudy |
| A1 | 15 Apr 2019 | Visibility (mi) | 7 |
| A1 | 15 Apr 2019 | Wind Speed (kts) | 4 |
| A1 | 15 Apr 2019 | Wind Dir | SW |
| A1 | 15 Apr 2019 | Water Color | Greenish-Blue |
| A1 | 15 Apr 2019 | Wave Ht Low (ft) | 3 |
| A1 | 15 Apr 2019 | Wave Period (sec) | 11 |
| A1 | 15 Apr 2019 | Sea State | Calm |
| A1 | 15 Apr 2019 | High Tide (ft) | 4.99 |
| A1 | 15 Apr 2019 | High Tide Time | 631 |
| A1 | 15 Apr 2019 | Low Tide (ft) | -0.64 |

| Station | Date | Parameter | Value |
|---------|-------------|-------------------|---------------|
| A1 | 15 Apr 2019 | Low Tide Time | 1323 |
| A1 | 15 Apr 2019 | Comments | Kelp |
| A1 | 22 Apr 2019 | Depth (m) | 18 |
| A1 | 22 Apr 2019 | Arrive Time | 753 |
| A1 | 22 Apr 2019 | Depart Time | 800 |
| A1 | 22 Apr 2019 | Air Temp (C) | 15 |
| A1 | 22 Apr 2019 | Weather | Partly Cloudy |
| A1 | 22 Apr 2019 | Visibility (mi) | 12 |
| A1 | 22 Apr 2019 | Wind Speed (kts) | 6 |
| A1 | 22 Apr 2019 | Wind Dir | NE |
| A1 | 22 Apr 2019 | Water Color | Bluish-Green |
| A1 | 22 Apr 2019 | Wave Ht Low (ft) | 5 |
| A1 | 22 Apr 2019 | Wave Period (sec) | 11 |
| A1 | 22 Apr 2019 | Sea State | Wind ripples |
| A1 | 22 Apr 2019 | High Tide (ft) | 3.57 |
| A1 | 22 Apr 2019 | High Tide Time | 1224 |
| A1 | 22 Apr 2019 | Low Tide (ft) | -0.54 |
| A1 | 22 Apr 2019 | Low Tide Time | 610 |
| A1 | 22 Apr 2019 | Comments | none |
| A1 | 29 Apr 2019 | Depth (m) | 18 |
| A1 | 29 Apr 2019 | Arrive Time | 750 |
| A1 | 29 Apr 2019 | Depart Time | 756 |
| A1 | 29 Apr 2019 | Air Temp (C) | 16 |
| A1 | 29 Apr 2019 | Weather | Rain |
| A1 | 29 Apr 2019 | Visibility (mi) | 7 |
| A1 | 29 Apr 2019 | Wind Speed (kts) | 10 |
| A1 | 29 Apr 2019 | Wind Dir | SE |
| A1 | 29 Apr 2019 | Water Color | Greenish-Blue |
| A1 | 29 Apr 2019 | Wave Ht Low (ft) | 4 |
| A1 | 29 Apr 2019 | Wave Period (sec) | 11 |
| A1 | 29 Apr 2019 | Sea State | Heavy chop |
| A1 | 29 Apr 2019 | High Tide (ft) | 3.97 |
| A1 | 29 Apr 2019 | High Tide Time | 627 |
| A1 | 29 Apr 2019 | Low Tide (ft) | 0.37 |
| A1 | 29 Apr 2019 | Low Tide Time | 1305 |
| A1 | 29 Apr 2019 | Comments | Kelp |
| A6 | 03 Apr 2019 | Depth (m) | 18 |
| A6 | 03 Apr 2019 | Arrive Time | 855 |
| A6 | 03 Apr 2019 | Depart Time | 859 |
| A6 | 03 Apr 2019 | Air Temp (C) | 14 |
| A6 | 03 Apr 2019 | Weather | Overcast |
| A6 | 03 Apr 2019 | Visibility (mi) | 5 |
| A6 | 03 Apr 2019 | Wind Speed (kts) | 4 |
| A6 | 03 Apr 2019 | Wind Dir | SW |
| A6 | 03 Apr 2019 | Water Color | Bluish-Green |
| A6 | 03 Apr 2019 | Wave Ht Low (ft) | 4 |
| A6 | 03 Apr 2019 | Wave Period (sec) | 13 |
| A6 | 03 Apr 2019 | Sea State | Heavy chop |
| A6 | 03 Apr 2019 | High Tide (ft) | 4.86 |
| A6 | 03 Apr 2019 | High Tide Time | 849 |
| A6 | 03 Apr 2019 | Low Tide (ft) | -0.07 |
| A6 | 03 Apr 2019 | Low Tide Time | 1514 |

| Station | Date | Parameter | Value |
|---------|-------------|-------------------|--|
| A6 | 03 Apr 2019 | Comments | none |
| A6 | 08 Apr 2019 | Depth (m) | 18 |
| A6 | 08 Apr 2019 | Arrive Time | 835 |
| A6 | 08 Apr 2019 | Depart Time | 846 |
| A6 | 08 Apr 2019 | Air Temp (C) | 17 |
| A6 | 08 Apr 2019 | Weather | Haze |
| A6 | 08 Apr 2019 | Visibility (mi) | 8 |
| A6 | 08 Apr 2019 | Wind Speed (kts) | 2 |
| A6 | 08 Apr 2019 | Wind Dir | E |
| A6 | 08 Apr 2019 | Water Color | Green |
| A6 | 08 Apr 2019 | Wave Ht Low (ft) | 5 |
| A6 | 08 Apr 2019 | Wave Period (sec) | 13 |
| A6 | 08 Apr 2019 | Sea State | Light chop |
| A6 | 08 Apr 2019 | High Tide (ft) | 3.57 |
| A6 | 08 Apr 2019 | High Tide Time | 1151 |
| A6 | 08 Apr 2019 | Low Tide (ft) | 0.02 |
| A6 | 08 Apr 2019 | Low Tide Time | 548 |
| A6 | 08 Apr 2019 | Comments | Kelp; 18m depth not achieved due to extreme low tide |
| A6 | 15 Apr 2019 | Depth (m) | 19 |
| A6 | 15 Apr 2019 | Arrive Time | 819 |
| A6 | 15 Apr 2019 | Depart Time | 821 |
| A6 | 15 Apr 2019 | Air Temp (C) | 15 |
| A6 | 15 Apr 2019 | Weather | Partly Cloudy |
| A6 | 15 Apr 2019 | Visibility (mi) | 7 |
| A6 | 15 Apr 2019 | Wind Speed (kts) | 7 |
| A6 | 15 Apr 2019 | Wind Dir | SW |
| A6 | 15 Apr 2019 | Water Color | Greenish-Blue |
| A6 | 15 Apr 2019 | Wave Ht Low (ft) | 2 |
| A6 | 15 Apr 2019 | Wave Period (sec) | 11 |
| A6 | 15 Apr 2019 | Sea State | Light chop |
| A6 | 15 Apr 2019 | High Tide (ft) | 4.99 |
| A6 | 15 Apr 2019 | High Tide Time | 631 |
| A6 | 15 Apr 2019 | Low Tide (ft) | -0.64 |
| A6 | 15 Apr 2019 | Low Tide Time | 1323 |
| A6 | 15 Apr 2019 | Comments | Kelp |
| A6 | 22 Apr 2019 | Depth (m) | 18 |
| A6 | 22 Apr 2019 | Arrive Time | 823 |
| A6 | 22 Apr 2019 | Depart Time | 828 |
| A6 | 22 Apr 2019 | Air Temp (C) | 15 |
| A6 | 22 Apr 2019 | Weather | Partly Cloudy |
| A6 | 22 Apr 2019 | Visibility (mi) | 12 |
| A6 | 22 Apr 2019 | Wind Speed (kts) | 4 |
| A6 | 22 Apr 2019 | Wind Dir | NE |
| A6 | 22 Apr 2019 | Water Color | Green |
| A6 | 22 Apr 2019 | Wave Ht Low (ft) | 5 |
| A6 | 22 Apr 2019 | Wave Period (sec) | 11 |
| A6 | 22 Apr 2019 | Sea State | Wind ripples |
| A6 | 22 Apr 2019 | High Tide (ft) | 3.57 |
| A6 | 22 Apr 2019 | High Tide Time | 1224 |
| A6 | 22 Apr 2019 | Low Tide (ft) | -0.54 |
| A6 | 22 Apr 2019 | Low Tide Time | 610 |
| A6 | 22 Apr 2019 | Comments | Kelp; Kelp debris |

| Station | Date | Parameter | Value |
|---------|-------------|-------------------|-------------------|
| A6 | 29 Apr 2019 | Depth (m) | 18 |
| A6 | 29 Apr 2019 | Arrive Time | 821 |
| A6 | 29 Apr 2019 | Depart Time | 824 |
| A6 | 29 Apr 2019 | Air Temp (C) | 16 |
| A6 | 29 Apr 2019 | Weather | Drizzle |
| A6 | 29 Apr 2019 | Visibility (mi) | 7 |
| A6 | 29 Apr 2019 | Wind Speed (kts) | 14 |
| A6 | 29 Apr 2019 | Wind Dir | E |
| A6 | 29 Apr 2019 | Water Color | Greenish-Blue |
| A6 | 29 Apr 2019 | Wave Ht Low (ft) | 4 |
| A6 | 29 Apr 2019 | Wave Period (sec) | 11 |
| A6 | 29 Apr 2019 | Sea State | Heavy chop |
| A6 | 29 Apr 2019 | High Tide (ft) | 3.97 |
| A6 | 29 Apr 2019 | High Tide Time | 627 |
| A6 | 29 Apr 2019 | Low Tide (ft) | 0.37 |
| A6 | 29 Apr 2019 | Low Tide Time | 1305 |
| A6 | 29 Apr 2019 | Comments | Kelp; Kelp debris |
| | | | |
| A7 | 03 Apr 2019 | Depth (m) | 20 |
| A7 | 03 Apr 2019 | Arrive Time | 842 |
| A7 | 03 Apr 2019 | Depart Time | 846 |
| A7 | 03 Apr 2019 | Air Temp (C) | 15 |
| A7 | 03 Apr 2019 | Weather | Overcast |
| A7 | 03 Apr 2019 | Visibility (mi) | 5 |
| A7 | 03 Apr 2019 | Wind Speed (kts) | 9 |
| A7 | 03 Apr 2019 | Wind Dir | SW |
| A7 | 03 Apr 2019 | Water Color | Bluish-Green |
| A7 | 03 Apr 2019 | Wave Ht Low (ft) | 4 |
| A7 | 03 Apr 2019 | Wave Period (sec) | 13 |
| A7 | 03 Apr 2019 | Sea State | Heavy chop |
| A7 | 03 Apr 2019 | High Tide (ft) | 4.86 |
| A7 | 03 Apr 2019 | High Tide Time | 849 |
| A7 | 03 Apr 2019 | Low Tide (ft) | -0.07 |
| A7 | 03 Apr 2019 | Low Tide Time | 1514 |
| A7 | 03 Apr 2019 | Comments | none |
| | | | |
| A7 | 08 Apr 2019 | Depth (m) | 18 |
| A7 | 08 Apr 2019 | Arrive Time | 821 |
| A7 | 08 Apr 2019 | Depart Time | 827 |
| A7 | 08 Apr 2019 | Air Temp (C) | 17 |
| A7 | 08 Apr 2019 | Weather | Haze |
| A7 | 08 Apr 2019 | Visibility (mi) | 8 |
| A7 | 08 Apr 2019 | Wind Speed (kts) | 2 |
| A7 | 08 Apr 2019 | Wind Dir | S |
| A7 | 08 Apr 2019 | Water Color | Green |
| A7 | 08 Apr 2019 | Wave Ht Low (ft) | 5 |
| A7 | 08 Apr 2019 | Wave Period (sec) | 13 |
| A7 | 08 Apr 2019 | Sea State | Light chop |
| A7 | 08 Apr 2019 | High Tide (ft) | 3.57 |
| A7 | 08 Apr 2019 | High Tide Time | 1151 |
| A7 | 08 Apr 2019 | Low Tide (ft) | 0.02 |
| A7 | 08 Apr 2019 | Low Tide Time | 548 |
| A7 | 08 Apr 2019 | Comments | Kelp |

| Station | Date | Parameter | Value |
|---------|-------------|-------------------|----------------|
| A7 | 15 Apr 2019 | Depth (m) | 18 |
| A7 | 15 Apr 2019 | Arrive Time | 803 |
| A7 | 15 Apr 2019 | Depart Time | 807 |
| A7 | 15 Apr 2019 | Air Temp (C) | 15 |
| A7 | 15 Apr 2019 | Weather | Partly Cloudy |
| A7 | 15 Apr 2019 | Visibility (mi) | 7 |
| A7 | 15 Apr 2019 | Wind Speed (kts) | 2 |
| A7 | 15 Apr 2019 | Wind Dir | W |
| A7 | 15 Apr 2019 | Water Color | Greenish-Blue |
| A7 | 15 Apr 2019 | Wave Ht Low (ft) | 2 |
| A7 | 15 Apr 2019 | Wave Period (sec) | 11 |
| A7 | 15 Apr 2019 | Sea State | Light chop |
| A7 | 15 Apr 2019 | High Tide (ft) | 4.99 |
| A7 | 15 Apr 2019 | High Tide Time | 631 |
| A7 | 15 Apr 2019 | Low Tide (ft) | -0.64 |
| A7 | 15 Apr 2019 | Low Tide Time | 1323 |
| A7 | 15 Apr 2019 | Comments | none |
| A7 | 22 Apr 2019 | Depth (m) | 18 |
| A7 | 22 Apr 2019 | Arrive Time | 808 |
| A7 | 22 Apr 2019 | Depart Time | 814 |
| A7 | 22 Apr 2019 | Air Temp (C) | 15 |
| A7 | 22 Apr 2019 | Weather | Partly Cloudy |
| A7 | 22 Apr 2019 | Visibility (mi) | 12 |
| A7 | 22 Apr 2019 | Wind Speed (kts) | 3 |
| A7 | 22 Apr 2019 | Wind Dir | NE |
| A7 | 22 Apr 2019 | Water Color | Bluish-Green |
| A7 | 22 Apr 2019 | Wave Ht Low (ft) | 5 |
| A7 | 22 Apr 2019 | Wave Period (sec) | 11 |
| A7 | 22 Apr 2019 | Sea State | Wind ripples |
| A7 | 22 Apr 2019 | High Tide (ft) | 3.57 |
| A7 | 22 Apr 2019 | High Tide Time | 1224 |
| A7 | 22 Apr 2019 | Low Tide (ft) | -0.54 |
| A7 | 22 Apr 2019 | Low Tide Time | 610 |
| A7 | 22 Apr 2019 | Comments | Seagrass; Kelp |
| A7 | 29 Apr 2019 | Depth (m) | 18 |
| A7 | 29 Apr 2019 | Arrive Time | 803 |
| A7 | 29 Apr 2019 | Depart Time | 805 |
| A7 | 29 Apr 2019 | Air Temp (C) | 16 |
| A7 | 29 Apr 2019 | Weather | Rain |
| A7 | 29 Apr 2019 | Visibility (mi) | 7 |
| A7 | 29 Apr 2019 | Wind Speed (kts) | 15 |
| A7 | 29 Apr 2019 | Wind Dir | E |
| A7 | 29 Apr 2019 | Water Color | Greenish-Blue |
| A7 | 29 Apr 2019 | Wave Ht Low (ft) | 4 |
| A7 | 29 Apr 2019 | Wave Period (sec) | 11 |
| A7 | 29 Apr 2019 | Sea State | Heavy chop |
| A7 | 29 Apr 2019 | High Tide (ft) | 3.97 |
| A7 | 29 Apr 2019 | High Tide Time | 627 |
| A7 | 29 Apr 2019 | Low Tide (ft) | 0.37 |
| A7 | 29 Apr 2019 | Low Tide Time | 1305 |
| A7 | 29 Apr 2019 | Comments | Kelp |
| C4 | 03 Apr 2019 | Depth (m) | 11 |

| Station | Date | Parameter | Value |
|---------|-------------|-------------------|----------------------------|
| C4 | 03 Apr 2019 | Arrive Time | 1006 |
| C4 | 03 Apr 2019 | Depart Time | 1009 |
| C4 | 03 Apr 2019 | Air Temp (C) | 15 |
| C4 | 03 Apr 2019 | Weather | Overcast |
| C4 | 03 Apr 2019 | Visibility (mi) | 5 |
| C4 | 03 Apr 2019 | Wind Speed (kts) | 4 |
| C4 | 03 Apr 2019 | Wind Dir | NW |
| C4 | 03 Apr 2019 | Water Color | Greenish-Blue |
| C4 | 03 Apr 2019 | Wave Ht Low (ft) | 4 |
| C4 | 03 Apr 2019 | Wave Period (sec) | 13 |
| C4 | 03 Apr 2019 | Sea State | Heavy chop |
| C4 | 03 Apr 2019 | High Tide (ft) | 4.86 |
| C4 | 03 Apr 2019 | High Tide Time | 849 |
| C4 | 03 Apr 2019 | Low Tide (ft) | -0.07 |
| C4 | 03 Apr 2019 | Low Tide Time | 1514 |
| C4 | 03 Apr 2019 | Comments | Kelp |
| C4 | 08 Apr 2019 | Depth (m) | 9 |
| C4 | 08 Apr 2019 | Arrive Time | 947 |
| C4 | 08 Apr 2019 | Depart Time | 951 |
| C4 | 08 Apr 2019 | Air Temp (C) | 17 |
| C4 | 08 Apr 2019 | Weather | Haze |
| C4 | 08 Apr 2019 | Visibility (mi) | 8 |
| C4 | 08 Apr 2019 | Wind Speed (kts) | 7 |
| C4 | 08 Apr 2019 | Wind Dir | W |
| C4 | 08 Apr 2019 | Water Color | Green |
| C4 | 08 Apr 2019 | Wave Ht Low (ft) | 5 |
| C4 | 08 Apr 2019 | Wave Period (sec) | 13 |
| C4 | 08 Apr 2019 | Sea State | Light chop |
| C4 | 08 Apr 2019 | High Tide (ft) | 3.57 |
| C4 | 08 Apr 2019 | High Tide Time | 1151 |
| C4 | 08 Apr 2019 | Low Tide (ft) | 0.02 |
| C4 | 08 Apr 2019 | Low Tide Time | 548 |
| C4 | 08 Apr 2019 | Comments | Kelp |
| C4 | 15 Apr 2019 | Depth (m) | 9 |
| C4 | 15 Apr 2019 | Arrive Time | 924 |
| C4 | 15 Apr 2019 | Depart Time | 926 |
| C4 | 15 Apr 2019 | Air Temp (C) | 15 |
| C4 | 15 Apr 2019 | Weather | Continuous layer of clouds |
| C4 | 15 Apr 2019 | Visibility (mi) | 6 |
| C4 | 15 Apr 2019 | Wind Speed (kts) | 3 |
| C4 | 15 Apr 2019 | Wind Dir | S |
| C4 | 15 Apr 2019 | Water Color | Green |
| C4 | 15 Apr 2019 | Wave Ht Low (ft) | 2 |
| C4 | 15 Apr 2019 | Wave Period (sec) | 11 |
| C4 | 15 Apr 2019 | Sea State | Light chop |
| C4 | 15 Apr 2019 | High Tide (ft) | 4.99 |
| C4 | 15 Apr 2019 | High Tide Time | 631 |
| C4 | 15 Apr 2019 | Low Tide (ft) | -0.64 |
| C4 | 15 Apr 2019 | Low Tide Time | 1323 |
| C4 | 15 Apr 2019 | Comments | none |
| C4 | 22 Apr 2019 | Depth (m) | 9 |
| C4 | 22 Apr 2019 | Arrive Time | 939 |

| Station | Date | Parameter | Value |
|---------|-------------|-------------------|----------------------------|
| C4 | 22 Apr 2019 | Depart Time | 944 |
| C4 | 22 Apr 2019 | Air Temp (C) | 15 |
| C4 | 22 Apr 2019 | Weather | Clear |
| C4 | 22 Apr 2019 | Visibility (mi) | 12 |
| C4 | 22 Apr 2019 | Wind Speed (kts) | 3 |
| C4 | 22 Apr 2019 | Wind Dir | SE |
| C4 | 22 Apr 2019 | Water Color | Green |
| C4 | 22 Apr 2019 | Wave Ht Low (ft) | 5 |
| C4 | 22 Apr 2019 | Wave Period (sec) | 11 |
| C4 | 22 Apr 2019 | Sea State | Light chop |
| C4 | 22 Apr 2019 | High Tide (ft) | 3.57 |
| C4 | 22 Apr 2019 | High Tide Time | 1224 |
| C4 | 22 Apr 2019 | Low Tide (ft) | -0.54 |
| C4 | 22 Apr 2019 | Low Tide Time | 610 |
| C4 | 22 Apr 2019 | Comments | Kelp |
| C4 | 29 Apr 2019 | Depth (m) | 9 |
| C4 | 29 Apr 2019 | Arrive Time | 947 |
| C4 | 29 Apr 2019 | Depart Time | 950 |
| C4 | 29 Apr 2019 | Air Temp (C) | 16 |
| C4 | 29 Apr 2019 | Weather | Continuous layer of clouds |
| C4 | 29 Apr 2019 | Visibility (mi) | 7 |
| C4 | 29 Apr 2019 | Wind Speed (kts) | 10 |
| C4 | 29 Apr 2019 | Wind Dir | E |
| C4 | 29 Apr 2019 | Water Color | Greenish-Brown |
| C4 | 29 Apr 2019 | Wave Ht Low (ft) | 4 |
| C4 | 29 Apr 2019 | Wave Period (sec) | 11 |
| C4 | 29 Apr 2019 | Sea State | Heavy chop |
| C4 | 29 Apr 2019 | High Tide (ft) | 3.97 |
| C4 | 29 Apr 2019 | High Tide Time | 627 |
| C4 | 29 Apr 2019 | Low Tide (ft) | 0.37 |
| C4 | 29 Apr 2019 | Low Tide Time | 1305 |
| C4 | 29 Apr 2019 | Comments | none |
| C5 | 03 Apr 2019 | Depth (m) | 12 |
| C5 | 03 Apr 2019 | Arrive Time | 954 |
| C5 | 03 Apr 2019 | Depart Time | 958 |
| C5 | 03 Apr 2019 | Air Temp (C) | 16 |
| C5 | 03 Apr 2019 | Weather | Overcast |
| C5 | 03 Apr 2019 | Visibility (mi) | 5 |
| C5 | 03 Apr 2019 | Wind Speed (kts) | 2 |
| C5 | 03 Apr 2019 | Wind Dir | SW |
| C5 | 03 Apr 2019 | Water Color | Bluish-Green |
| C5 | 03 Apr 2019 | Wave Ht Low (ft) | 4 |
| C5 | 03 Apr 2019 | Wave Period (sec) | 13 |
| C5 | 03 Apr 2019 | Sea State | Heavy chop |
| C5 | 03 Apr 2019 | High Tide (ft) | 4.86 |
| C5 | 03 Apr 2019 | High Tide Time | 849 |
| C5 | 03 Apr 2019 | Low Tide (ft) | -0.07 |
| C5 | 03 Apr 2019 | Low Tide Time | 1514 |
| C5 | 03 Apr 2019 | Comments | none |
| C5 | 08 Apr 2019 | Depth (m) | 9 |
| C5 | 08 Apr 2019 | Arrive Time | 937 |
| C5 | 08 Apr 2019 | Depart Time | 941 |

| Station | Date | Parameter | Value |
|---------|-------------|-------------------|----------------------------|
| C5 | 08 Apr 2019 | Air Temp (C) | 17 |
| C5 | 08 Apr 2019 | Weather | Haze |
| C5 | 08 Apr 2019 | Visibility (mi) | 8 |
| C5 | 08 Apr 2019 | Wind Speed (kts) | 6 |
| C5 | 08 Apr 2019 | Wind Dir | SW |
| C5 | 08 Apr 2019 | Water Color | Green |
| C5 | 08 Apr 2019 | Wave Ht Low (ft) | 5 |
| C5 | 08 Apr 2019 | Wave Period (sec) | 13 |
| C5 | 08 Apr 2019 | Sea State | Light chop |
| C5 | 08 Apr 2019 | High Tide (ft) | 3.57 |
| C5 | 08 Apr 2019 | High Tide Time | 1151 |
| C5 | 08 Apr 2019 | Low Tide (ft) | 0.02 |
| C5 | 08 Apr 2019 | Low Tide Time | 548 |
| C5 | 08 Apr 2019 | Comments | Kelp debris |
| C5 | 15 Apr 2019 | Depth (m) | 9 |
| C5 | 15 Apr 2019 | Arrive Time | 913 |
| C5 | 15 Apr 2019 | Depart Time | 915 |
| C5 | 15 Apr 2019 | Air Temp (C) | 15 |
| C5 | 15 Apr 2019 | Weather | Continuous layer of clouds |
| C5 | 15 Apr 2019 | Visibility (mi) | 6 |
| C5 | 15 Apr 2019 | Wind Speed (kts) | 4 |
| C5 | 15 Apr 2019 | Wind Dir | SW |
| C5 | 15 Apr 2019 | Water Color | Green |
| C5 | 15 Apr 2019 | Wave Ht Low (ft) | 2 |
| C5 | 15 Apr 2019 | Wave Period (sec) | 11 |
| C5 | 15 Apr 2019 | Sea State | Light chop |
| C5 | 15 Apr 2019 | High Tide (ft) | 4.99 |
| C5 | 15 Apr 2019 | High Tide Time | 631 |
| C5 | 15 Apr 2019 | Low Tide (ft) | -0.64 |
| C5 | 15 Apr 2019 | Low Tide Time | 1323 |
| C5 | 15 Apr 2019 | Comments | Kelp |
| C5 | 22 Apr 2019 | Depth (m) | 14 |
| C5 | 22 Apr 2019 | Arrive Time | 927 |
| C5 | 22 Apr 2019 | Depart Time | 932 |
| C5 | 22 Apr 2019 | Air Temp (C) | 15 |
| C5 | 22 Apr 2019 | Weather | Clear |
| C5 | 22 Apr 2019 | Visibility (mi) | 12 |
| C5 | 22 Apr 2019 | Wind Speed (kts) | 3 |
| C5 | 22 Apr 2019 | Wind Dir | E |
| C5 | 22 Apr 2019 | Water Color | Green |
| C5 | 22 Apr 2019 | Wave Ht Low (ft) | 5 |
| C5 | 22 Apr 2019 | Wave Period (sec) | 11 |
| C5 | 22 Apr 2019 | Sea State | Light chop |
| C5 | 22 Apr 2019 | High Tide (ft) | 3.57 |
| C5 | 22 Apr 2019 | High Tide Time | 1224 |
| C5 | 22 Apr 2019 | Low Tide (ft) | -0.54 |
| C5 | 22 Apr 2019 | Low Tide Time | 610 |
| C5 | 22 Apr 2019 | Comments | none |
| C5 | 29 Apr 2019 | Depth (m) | 11 |
| C5 | 29 Apr 2019 | Arrive Time | 927 |
| C5 | 29 Apr 2019 | Depart Time | 937 |
| C5 | 29 Apr 2019 | Air Temp (C) | 16 |

| Station | Date | Parameter | Value |
|---------|-------------|-------------------|----------------------------|
| C5 | 29 Apr 2019 | Weather | Continuous layer of clouds |
| C5 | 29 Apr 2019 | Visibility (mi) | 5 |
| C5 | 29 Apr 2019 | Wind Speed (kts) | 11 |
| C5 | 29 Apr 2019 | Wind Dir | E |
| C5 | 29 Apr 2019 | Water Color | Greenish-Brown |
| C5 | 29 Apr 2019 | Wave Ht Low (ft) | 4 |
| C5 | 29 Apr 2019 | Wave Period (sec) | 11 |
| C5 | 29 Apr 2019 | Sea State | Heavy chop |
| C5 | 29 Apr 2019 | High Tide (ft) | 3.97 |
| C5 | 29 Apr 2019 | High Tide Time | 627 |
| C5 | 29 Apr 2019 | Low Tide (ft) | 0.37 |
| C5 | 29 Apr 2019 | Low Tide Time | 1305 |
| C5 | 29 Apr 2019 | Comments | Kelp |
| C6 | 03 Apr 2019 | Depth (m) | 9 |
| C6 | 03 Apr 2019 | Arrive Time | 942 |
| C6 | 03 Apr 2019 | Depart Time | 946 |
| C6 | 03 Apr 2019 | Air Temp (C) | 15 |
| C6 | 03 Apr 2019 | Weather | Overcast |
| C6 | 03 Apr 2019 | Visibility (mi) | 5 |
| C6 | 03 Apr 2019 | Wind Speed (kts) | 2 |
| C6 | 03 Apr 2019 | Wind Dir | W |
| C6 | 03 Apr 2019 | Water Color | Bluish-Green |
| C6 | 03 Apr 2019 | Wave Ht Low (ft) | 4 |
| C6 | 03 Apr 2019 | Wave Period (sec) | 13 |
| C6 | 03 Apr 2019 | Sea State | Heavy chop |
| C6 | 03 Apr 2019 | High Tide (ft) | 4.86 |
| C6 | 03 Apr 2019 | High Tide Time | 849 |
| C6 | 03 Apr 2019 | Low Tide (ft) | -0.07 |
| C6 | 03 Apr 2019 | Low Tide Time | 1514 |
| C6 | 03 Apr 2019 | Comments | none |
| C6 | 08 Apr 2019 | Depth (m) | 9 |
| C6 | 08 Apr 2019 | Arrive Time | 925 |
| C6 | 08 Apr 2019 | Depart Time | 929 |
| C6 | 08 Apr 2019 | Air Temp (C) | 17 |
| C6 | 08 Apr 2019 | Weather | Haze |
| C6 | 08 Apr 2019 | Visibility (mi) | 8 |
| C6 | 08 Apr 2019 | Wind Speed (kts) | 4 |
| C6 | 08 Apr 2019 | Wind Dir | W |
| C6 | 08 Apr 2019 | Water Color | Green |
| C6 | 08 Apr 2019 | Wave Ht Low (ft) | 5 |
| C6 | 08 Apr 2019 | Wave Period (sec) | 13 |
| C6 | 08 Apr 2019 | Sea State | Light chop |
| C6 | 08 Apr 2019 | High Tide (ft) | 3.57 |
| C6 | 08 Apr 2019 | High Tide Time | 1151 |
| C6 | 08 Apr 2019 | Low Tide (ft) | 0.02 |
| C6 | 08 Apr 2019 | Low Tide Time | 548 |
| C6 | 08 Apr 2019 | Comments | Kelp debris |
| C6 | 15 Apr 2019 | Depth (m) | 9 |
| C6 | 15 Apr 2019 | Arrive Time | 902 |
| C6 | 15 Apr 2019 | Depart Time | 905 |
| C6 | 15 Apr 2019 | Air Temp (C) | 15 |
| C6 | 15 Apr 2019 | Weather | Continuous layer of clouds |

| Station | Date | Parameter | Value |
|---------|-------------|-------------------|----------------------------|
| C6 | 15 Apr 2019 | Visibility (mi) | 6 |
| C6 | 15 Apr 2019 | Wind Speed (kts) | 4 |
| C6 | 15 Apr 2019 | Wind Dir | SW |
| C6 | 15 Apr 2019 | Water Color | Green |
| C6 | 15 Apr 2019 | Wave Ht Low (ft) | 2 |
| C6 | 15 Apr 2019 | Wave Period (sec) | 11 |
| C6 | 15 Apr 2019 | Sea State | Light chop |
| C6 | 15 Apr 2019 | High Tide (ft) | 4.99 |
| C6 | 15 Apr 2019 | High Tide Time | 631 |
| C6 | 15 Apr 2019 | Low Tide (ft) | -0.64 |
| C6 | 15 Apr 2019 | Low Tide Time | 1323 |
| C6 | 15 Apr 2019 | Comments | Kelp |
| C6 | 22 Apr 2019 | Depth (m) | 10 |
| C6 | 22 Apr 2019 | Arrive Time | 916 |
| C6 | 22 Apr 2019 | Depart Time | 921 |
| C6 | 22 Apr 2019 | Air Temp (C) | 15 |
| C6 | 22 Apr 2019 | Weather | Clear |
| C6 | 22 Apr 2019 | Visibility (mi) | 12 |
| C6 | 22 Apr 2019 | Wind Speed (kts) | 4 |
| C6 | 22 Apr 2019 | Wind Dir | SE |
| C6 | 22 Apr 2019 | Water Color | Green |
| C6 | 22 Apr 2019 | Wave Ht Low (ft) | 5 |
| C6 | 22 Apr 2019 | Wave Period (sec) | 11 |
| C6 | 22 Apr 2019 | Sea State | Light chop |
| C6 | 22 Apr 2019 | High Tide (ft) | 3.57 |
| C6 | 22 Apr 2019 | High Tide Time | 1224 |
| C6 | 22 Apr 2019 | Low Tide (ft) | -0.54 |
| C6 | 22 Apr 2019 | Low Tide Time | 610 |
| C6 | 22 Apr 2019 | Comments | Seagrass |
| C6 | 29 Apr 2019 | Depth (m) | 9 |
| C6 | 29 Apr 2019 | Arrive Time | 908 |
| C6 | 29 Apr 2019 | Depart Time | 916 |
| C6 | 29 Apr 2019 | Air Temp (C) | 16 |
| C6 | 29 Apr 2019 | Weather | Continuous layer of clouds |
| C6 | 29 Apr 2019 | Visibility (mi) | 5 |
| C6 | 29 Apr 2019 | Wind Speed (kts) | 9 |
| C6 | 29 Apr 2019 | Wind Dir | E |
| C6 | 29 Apr 2019 | Water Color | Greenish-Brown |
| C6 | 29 Apr 2019 | Wave Ht Low (ft) | 4 |
| C6 | 29 Apr 2019 | Wave Period (sec) | 11 |
| C6 | 29 Apr 2019 | Sea State | Heavy chop |
| C6 | 29 Apr 2019 | High Tide (ft) | 3.97 |
| C6 | 29 Apr 2019 | High Tide Time | 627 |
| C6 | 29 Apr 2019 | Low Tide (ft) | 0.37 |
| C6 | 29 Apr 2019 | Low Tide Time | 1305 |
| C6 | 29 Apr 2019 | Comments | none |
| C7 | 03 Apr 2019 | Depth (m) | 18 |
| C7 | 03 Apr 2019 | Arrive Time | 910 |
| C7 | 03 Apr 2019 | Depart Time | 914 |
| C7 | 03 Apr 2019 | Air Temp (C) | 15 |
| C7 | 03 Apr 2019 | Weather | Overcast |
| C7 | 03 Apr 2019 | Visibility (mi) | 5 |

| Station | Date | Parameter | Value |
|---------|-------------|-------------------|----------------------------|
| C7 | 03 Apr 2019 | Wind Speed (kts) | 3 |
| C7 | 03 Apr 2019 | Wind Dir | SW |
| C7 | 03 Apr 2019 | Water Color | Bluish-Green |
| C7 | 03 Apr 2019 | Wave Ht Low (ft) | 4 |
| C7 | 03 Apr 2019 | Wave Period (sec) | 13 |
| C7 | 03 Apr 2019 | Sea State | Heavy chop |
| C7 | 03 Apr 2019 | High Tide (ft) | 4.86 |
| C7 | 03 Apr 2019 | High Tide Time | 849 |
| C7 | 03 Apr 2019 | Low Tide (ft) | -0.07 |
| C7 | 03 Apr 2019 | Low Tide Time | 1514 |
| C7 | 03 Apr 2019 | Comments | none |
| C7 | 08 Apr 2019 | Depth (m) | 18 |
| C7 | 08 Apr 2019 | Arrive Time | 854 |
| C7 | 08 Apr 2019 | Depart Time | 859 |
| C7 | 08 Apr 2019 | Air Temp (C) | 17 |
| C7 | 08 Apr 2019 | Weather | Haze |
| C7 | 08 Apr 2019 | Visibility (mi) | 8 |
| C7 | 08 Apr 2019 | Wind Speed (kts) | 2 |
| C7 | 08 Apr 2019 | Wind Dir | E |
| C7 | 08 Apr 2019 | Water Color | Green |
| C7 | 08 Apr 2019 | Wave Ht Low (ft) | 5 |
| C7 | 08 Apr 2019 | Wave Period (sec) | 13 |
| C7 | 08 Apr 2019 | Sea State | Light chop |
| C7 | 08 Apr 2019 | High Tide (ft) | 3.57 |
| C7 | 08 Apr 2019 | High Tide Time | 1151 |
| C7 | 08 Apr 2019 | Low Tide (ft) | 0.02 |
| C7 | 08 Apr 2019 | Low Tide Time | 548 |
| C7 | 08 Apr 2019 | Comments | Kelp |
| C7 | 15 Apr 2019 | Depth (m) | 18 |
| C7 | 15 Apr 2019 | Arrive Time | 834 |
| C7 | 15 Apr 2019 | Depart Time | 836 |
| C7 | 15 Apr 2019 | Air Temp (C) | 15 |
| C7 | 15 Apr 2019 | Weather | Continuous layer of clouds |
| C7 | 15 Apr 2019 | Visibility (mi) | 6 |
| C7 | 15 Apr 2019 | Wind Speed (kts) | 2 |
| C7 | 15 Apr 2019 | Wind Dir | SW |
| C7 | 15 Apr 2019 | Water Color | Greenish-Blue |
| C7 | 15 Apr 2019 | Wave Ht Low (ft) | 2 |
| C7 | 15 Apr 2019 | Wave Period (sec) | 11 |
| C7 | 15 Apr 2019 | Sea State | Light chop |
| C7 | 15 Apr 2019 | High Tide (ft) | 4.99 |
| C7 | 15 Apr 2019 | High Tide Time | 631 |
| C7 | 15 Apr 2019 | Low Tide (ft) | -0.64 |
| C7 | 15 Apr 2019 | Low Tide Time | 1323 |
| C7 | 15 Apr 2019 | Comments | Kelp |
| C7 | 22 Apr 2019 | Depth (m) | 18 |
| C7 | 22 Apr 2019 | Arrive Time | 840 |
| C7 | 22 Apr 2019 | Depart Time | 846 |
| C7 | 22 Apr 2019 | Air Temp (C) | 15 |
| C7 | 22 Apr 2019 | Weather | Clear |
| C7 | 22 Apr 2019 | Visibility (mi) | 12 |
| C7 | 22 Apr 2019 | Wind Speed (kts) | 3 |

| Station | Date | Parameter | Value |
|---------|-------------|-------------------|--------------|
| C7 | 22 Apr 2019 | Wind Dir | E |
| C7 | 22 Apr 2019 | Water Color | Green |
| C7 | 22 Apr 2019 | Wave Ht Low (ft) | 5 |
| C7 | 22 Apr 2019 | Wave Period (sec) | 11 |
| C7 | 22 Apr 2019 | Sea State | Wind ripples |
| C7 | 22 Apr 2019 | High Tide (ft) | 3.57 |
| C7 | 22 Apr 2019 | High Tide Time | 1224 |
| C7 | 22 Apr 2019 | Low Tide (ft) | -0.54 |
| C7 | 22 Apr 2019 | Low Tide Time | 610 |
| C7 | 22 Apr 2019 | Comments | none |
| C7 | 29 Apr 2019 | Depth (m) | 18 |
| C7 | 29 Apr 2019 | Arrive Time | 835 |
| C7 | 29 Apr 2019 | Depart Time | 837 |
| C7 | 29 Apr 2019 | Air Temp (C) | 16 |
| C7 | 29 Apr 2019 | Weather | Drizzle |
| C7 | 29 Apr 2019 | Visibility (mi) | 7 |
| C7 | 29 Apr 2019 | Wind Speed (kts) | 17 |
| C7 | 29 Apr 2019 | Wind Dir | E |
| C7 | 29 Apr 2019 | Water Color | Green |
| C7 | 29 Apr 2019 | Wave Ht Low (ft) | 4 |
| C7 | 29 Apr 2019 | Wave Period (sec) | 11 |
| C7 | 29 Apr 2019 | Sea State | Heavy chop |
| C7 | 29 Apr 2019 | High Tide (ft) | 3.97 |
| C7 | 29 Apr 2019 | High Tide Time | 627 |
| C7 | 29 Apr 2019 | Low Tide (ft) | 0.37 |
| C7 | 29 Apr 2019 | Low Tide Time | 1305 |
| C7 | 29 Apr 2019 | Comments | none |
| C8 | 03 Apr 2019 | Depth (m) | 20 |
| C8 | 03 Apr 2019 | Arrive Time | 922 |
| C8 | 03 Apr 2019 | Depart Time | 926 |
| C8 | 03 Apr 2019 | Air Temp (C) | 15 |
| C8 | 03 Apr 2019 | Weather | Overcast |
| C8 | 03 Apr 2019 | Visibility (mi) | 5 |
| C8 | 03 Apr 2019 | Wind Speed (kts) | 2 |
| C8 | 03 Apr 2019 | Wind Dir | SW |
| C8 | 03 Apr 2019 | Water Color | Bluish-Green |
| C8 | 03 Apr 2019 | Wave Ht Low (ft) | 4 |
| C8 | 03 Apr 2019 | Wave Period (sec) | 13 |
| C8 | 03 Apr 2019 | Sea State | Heavy chop |
| C8 | 03 Apr 2019 | High Tide (ft) | 4.86 |
| C8 | 03 Apr 2019 | High Tide Time | 849 |
| C8 | 03 Apr 2019 | Low Tide (ft) | -0.07 |
| C8 | 03 Apr 2019 | Low Tide Time | 1514 |
| C8 | 03 Apr 2019 | Comments | none |
| C8 | 08 Apr 2019 | Depth (m) | 18 |
| C8 | 08 Apr 2019 | Arrive Time | 905 |
| C8 | 08 Apr 2019 | Depart Time | 910 |
| C8 | 08 Apr 2019 | Air Temp (C) | 17 |
| C8 | 08 Apr 2019 | Weather | Haze |
| C8 | 08 Apr 2019 | Visibility (mi) | 8 |
| C8 | 08 Apr 2019 | Wind Speed (kts) | 2 |
| C8 | 08 Apr 2019 | Wind Dir | S |

| Station | Date | Parameter | Value |
|---------|-------------|-------------------|----------------------------|
| C8 | 08 Apr 2019 | Water Color | Green |
| C8 | 08 Apr 2019 | Wave Ht Low (ft) | 5 |
| C8 | 08 Apr 2019 | Wave Period (sec) | 13 |
| C8 | 08 Apr 2019 | Sea State | Light chop |
| C8 | 08 Apr 2019 | High Tide (ft) | 3.57 |
| C8 | 08 Apr 2019 | High Tide Time | 1151 |
| C8 | 08 Apr 2019 | Low Tide (ft) | 0.02 |
| C8 | 08 Apr 2019 | Low Tide Time | 548 |
| C8 | 08 Apr 2019 | Comments | none |
| C8 | 15 Apr 2019 | Depth (m) | 19 |
| C8 | 15 Apr 2019 | Arrive Time | 845 |
| C8 | 15 Apr 2019 | Depart Time | 848 |
| C8 | 15 Apr 2019 | Air Temp (C) | 15 |
| C8 | 15 Apr 2019 | Weather | Continuous layer of clouds |
| C8 | 15 Apr 2019 | Visibility (mi) | 6 |
| C8 | 15 Apr 2019 | Wind Speed (kts) | 5 |
| C8 | 15 Apr 2019 | Wind Dir | S |
| C8 | 15 Apr 2019 | Water Color | Greenish-Blue |
| C8 | 15 Apr 2019 | Wave Ht Low (ft) | 2 |
| C8 | 15 Apr 2019 | Wave Period (sec) | 11 |
| C8 | 15 Apr 2019 | Sea State | Light chop |
| C8 | 15 Apr 2019 | High Tide (ft) | 4.99 |
| C8 | 15 Apr 2019 | High Tide Time | 631 |
| C8 | 15 Apr 2019 | Low Tide (ft) | -0.64 |
| C8 | 15 Apr 2019 | Low Tide Time | 1323 |
| C8 | 15 Apr 2019 | Comments | Kelp debris |
| C8 | 22 Apr 2019 | Depth (m) | 18 |
| C8 | 22 Apr 2019 | Arrive Time | 853 |
| C8 | 22 Apr 2019 | Depart Time | 859 |
| C8 | 22 Apr 2019 | Air Temp (C) | 15 |
| C8 | 22 Apr 2019 | Weather | Clear |
| C8 | 22 Apr 2019 | Visibility (mi) | 12 |
| C8 | 22 Apr 2019 | Wind Speed (kts) | 4 |
| C8 | 22 Apr 2019 | Wind Dir | SE |
| C8 | 22 Apr 2019 | Water Color | Green |
| C8 | 22 Apr 2019 | Wave Ht Low (ft) | 5 |
| C8 | 22 Apr 2019 | Wave Period (sec) | 11 |
| C8 | 22 Apr 2019 | Sea State | Light chop |
| C8 | 22 Apr 2019 | High Tide (ft) | 3.57 |
| C8 | 22 Apr 2019 | High Tide Time | 1224 |
| C8 | 22 Apr 2019 | Low Tide (ft) | -0.54 |
| C8 | 22 Apr 2019 | Low Tide Time | 610 |
| C8 | 22 Apr 2019 | Comments | none |
| C8 | 29 Apr 2019 | Depth (m) | 19 |
| C8 | 29 Apr 2019 | Arrive Time | 847 |
| C8 | 29 Apr 2019 | Depart Time | 850 |
| C8 | 29 Apr 2019 | Air Temp (C) | 17 |
| C8 | 29 Apr 2019 | Weather | Drizzle |
| C8 | 29 Apr 2019 | Visibility (mi) | 7 |
| C8 | 29 Apr 2019 | Wind Speed (kts) | 14 |
| C8 | 29 Apr 2019 | Wind Dir | SE |
| C8 | 29 Apr 2019 | Water Color | Green |

| Station | Date | Parameter | Value |
|----------------|-------------|-------------------|--------------|
| C8 | 29 Apr 2019 | Wave Ht Low (ft) | 4 |
| C8 | 29 Apr 2019 | Wave Period (sec) | 11 |
| C8 | 29 Apr 2019 | Sea State | Heavy chop |
| C8 | 29 Apr 2019 | High Tide (ft) | 3.97 |
| C8 | 29 Apr 2019 | High Tide Time | 627 |
| C8 | 29 Apr 2019 | Low Tide (ft) | 0.37 |
| C8 | 29 Apr 2019 | Low Tide Time | 1305 |
| C8 | 29 Apr 2019 | Comments | none |

Table 3.10

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

| Station | Date | Depth (m) | Temp (°C) | XMS (%) | DO (mg/L) | Sal (ppt) | pH | Dens (σ -t) | Chlor (μ g/L) |
|---------|-------------|-----------|-----------|---------|-----------|-----------|-----|---------------------|--------------------|
| A1 | 03 Apr 2019 | 1 | 15.00 | 65.22 | 9.6 | 33.60 | 8.2 | 24.9 | 3.99 |
| A1 | 03 Apr 2019 | 2 | 15.00 | 71.99 | 9.7 | 33.60 | 8.2 | 24.9 | 4.24 |
| A1 | 03 Apr 2019 | 3 | 14.99 | 71.91 | 9.7 | 33.60 | 8.2 | 24.9 | 4.37 |
| A1 | 03 Apr 2019 | 4 | 14.96 | 71.13 | 9.6 | 33.61 | 8.2 | 24.9 | 4.60 |
| A1 | 03 Apr 2019 | 5 | 14.84 | 71.08 | 9.5 | 33.62 | 8.2 | 24.9 | 4.57 |
| A1 | 03 Apr 2019 | 6 | 14.68 | 70.28 | 9.1 | 33.65 | 8.2 | 25.0 | 4.64 |
| A1 | 03 Apr 2019 | 7 | 14.14 | 71.34 | 8.7 | 33.65 | 8.1 | 25.1 | 4.63 |
| A1 | 03 Apr 2019 | 8 | 13.94 | 72.57 | 8.4 | 33.63 | 8.1 | 25.1 | 4.69 |
| A1 | 03 Apr 2019 | 9 | 13.93 | 73.07 | 8.2 | 33.62 | 8.1 | 25.1 | 4.50 |
| A1 | 03 Apr 2019 | 10 | 13.69 | 73.42 | 7.8 | 33.64 | 8.1 | 25.2 | 4.96 |
| A1 | 03 Apr 2019 | 11 | 13.40 | 74.96 | 7.5 | 33.63 | 8.0 | 25.3 | 5.32 |
| A1 | 03 Apr 2019 | 12 | 13.37 | 76.53 | 7.3 | 33.62 | 8.0 | 25.2 | 4.85 |
| A1 | 03 Apr 2019 | 13 | 13.29 | 75.91 | 7.2 | 33.62 | 8.0 | 25.3 | 4.76 |
| A1 | 03 Apr 2019 | 14 | 13.24 | 77.15 | 7.0 | 33.62 | 8.0 | 25.3 | 4.37 |
| A1 | 03 Apr 2019 | 15 | 13.23 | 77.89 | 7.0 | 33.62 | 8.0 | 25.3 | 4.25 |
| A1 | 03 Apr 2019 | 16 | 13.22 | 77.36 | 7.0 | 33.62 | 8.0 | 25.3 | 4.84 |
| A1 | 03 Apr 2019 | 17 | 13.19 | 77.20 | 6.9 | 33.62 | 8.0 | 25.3 | 4.66 |
| A1 | 03 Apr 2019 | 18 | 13.18 | 78.13 | 6.8 | 33.62 | 8.0 | 25.3 | 4.06 |
| A1 | 03 Apr 2019 | 19 | 13.17 | 79.16 | 6.8 | 33.62 | 8.0 | 25.3 | 3.54 |
| | | | | | | | | | |
| A1 | 08 Apr 2019 | 1 | 15.84 | 81.19 | 8.7 | 33.59 | 8.1 | 24.7 | 0.73 |
| A1 | 08 Apr 2019 | 2 | 15.53 | 81.24 | 8.2 | 33.63 | 8.1 | 24.8 | 0.80 |
| A1 | 08 Apr 2019 | 3 | 14.15 | 81.19 | 7.8 | 33.60 | 8.0 | 25.1 | 1.17 |
| A1 | 08 Apr 2019 | 4 | 13.84 | 81.95 | 7.6 | 33.64 | 8.0 | 25.2 | 1.49 |
| A1 | 08 Apr 2019 | 5 | 13.51 | 82.81 | 7.4 | 33.59 | 8.0 | 25.2 | 1.59 |
| A1 | 08 Apr 2019 | 6 | 13.12 | 83.62 | 7.1 | 33.60 | 8.0 | 25.3 | 1.58 |
| A1 | 08 Apr 2019 | 7 | 13.08 | 84.16 | 7.0 | 33.59 | 8.0 | 25.3 | 1.53 |
| A1 | 08 Apr 2019 | 8 | 12.98 | 84.61 | 6.8 | 33.61 | 8.0 | 25.3 | 1.49 |
| A1 | 08 Apr 2019 | 9 | 12.82 | 85.13 | 6.6 | 33.62 | 7.9 | 25.4 | 1.26 |
| A1 | 08 Apr 2019 | 10 | 12.69 | 85.48 | 6.4 | 33.61 | 7.9 | 25.4 | 1.21 |
| A1 | 08 Apr 2019 | 11 | 12.56 | 85.49 | 6.2 | 33.63 | 7.9 | 25.4 | 0.94 |
| A1 | 08 Apr 2019 | 12 | 12.45 | 84.70 | 6.0 | 33.63 | 7.9 | 25.4 | 0.90 |
| A1 | 08 Apr 2019 | 13 | 12.44 | 83.56 | 5.9 | 33.64 | 7.9 | 25.4 | 0.83 |
| A1 | 08 Apr 2019 | 14 | 12.35 | 82.73 | 5.8 | 33.64 | 7.9 | 25.5 | 0.73 |
| A1 | 08 Apr 2019 | 15 | 12.33 | 82.47 | 5.8 | 33.64 | 7.9 | 25.5 | 0.71 |
| A1 | 08 Apr 2019 | 16 | 12.33 | 82.40 | 5.8 | 33.64 | 7.9 | 25.5 | 0.72 |
| A1 | 08 Apr 2019 | 17 | 12.33 | 82.08 | 5.7 | 33.64 | 7.9 | 25.5 | 0.72 |
| A1 | 08 Apr 2019 | 18 | 12.32 | 81.62 | 5.7 | 33.65 | 7.9 | 25.5 | 0.71 |
| A1 | 08 Apr 2019 | 19 | 12.33 | 81.02 | 5.7 | 33.64 | 7.9 | 25.5 | 0.70 |
| | | | | | | | | | |
| A1 | 15 Apr 2019 | 1 | 14.19 | 82.45 | 7.3 | 33.62 | 8.0 | 25.1 | 1.01 |
| A1 | 15 Apr 2019 | 2 | 13.42 | 83.05 | 6.8 | 33.64 | 8.0 | 25.3 | 1.04 |
| A1 | 15 Apr 2019 | 3 | 12.74 | 83.67 | 6.3 | 33.66 | 7.9 | 25.4 | 1.06 |
| A1 | 15 Apr 2019 | 4 | 12.39 | 83.94 | 6.1 | 33.61 | 7.9 | 25.4 | 1.16 |
| A1 | 15 Apr 2019 | 5 | 12.36 | 83.82 | 6.1 | 33.62 | 7.9 | 25.4 | 1.19 |
| A1 | 15 Apr 2019 | 6 | 12.35 | 83.92 | 6.1 | 33.62 | 7.9 | 25.4 | 1.27 |
| A1 | 15 Apr 2019 | 7 | 12.35 | 83.99 | 6.1 | 33.62 | 7.9 | 25.5 | 1.34 |
| A1 | 15 Apr 2019 | 8 | 12.33 | 84.14 | 6.1 | 33.62 | 7.9 | 25.5 | 1.42 |
| A1 | 15 Apr 2019 | 9 | 12.32 | 84.31 | 6.0 | 33.63 | 7.9 | 25.5 | 1.42 |
| A1 | 15 Apr 2019 | 10 | 12.21 | 84.14 | 5.9 | 33.64 | 7.9 | 25.5 | 1.42 |

| Station | Date | Depth (m) | Temp (°C) | XMS (%) | DO (mg/L) | Sal (ppt) | pH | Dens (σ -t) | Chlor (μ g/L) |
|---------|-------------|-----------|-----------|---------|-----------|-----------|-----|---------------------|--------------------|
| A1 | 15 Apr 2019 | 11 | 12.20 | 83.81 | 5.8 | 33.63 | 7.9 | 25.5 | 1.40 |
| A1 | 15 Apr 2019 | 12 | 12.12 | 82.87 | 5.7 | 33.65 | 7.8 | 25.5 | 1.34 |
| A1 | 15 Apr 2019 | 13 | 12.09 | 82.73 | 5.7 | 33.65 | 7.8 | 25.5 | 1.33 |
| A1 | 15 Apr 2019 | 14 | 12.03 | 82.19 | 5.6 | 33.65 | 7.8 | 25.5 | 1.32 |
| A1 | 15 Apr 2019 | 15 | 12.01 | 82.39 | 5.5 | 33.65 | 7.8 | 25.5 | 1.25 |
| A1 | 15 Apr 2019 | 16 | 11.99 | 82.78 | 5.5 | 33.65 | 7.8 | 25.5 | 1.16 |
| A1 | 15 Apr 2019 | 17 | 11.98 | 83.28 | 5.5 | 33.65 | 7.8 | 25.5 | 1.10 |
| A1 | 15 Apr 2019 | 18 | 11.97 | 83.19 | 5.4 | 33.65 | 7.8 | 25.5 | 1.03 |
| A1 | 22 Apr 2019 | 1 | 16.37 | 80.46 | 8.4 | 33.62 | 8.1 | 24.6 | 0.68 |
| A1 | 22 Apr 2019 | 2 | 16.37 | 81.62 | 8.4 | 33.62 | 8.1 | 24.6 | 0.69 |
| A1 | 22 Apr 2019 | 3 | 16.37 | 82.41 | 8.3 | 33.62 | 8.1 | 24.6 | 0.78 |
| A1 | 22 Apr 2019 | 4 | 16.18 | 82.54 | 8.2 | 33.64 | 8.1 | 24.7 | 0.92 |
| A1 | 22 Apr 2019 | 5 | 15.71 | 82.09 | 8.0 | 33.63 | 8.1 | 24.8 | 1.16 |
| A1 | 22 Apr 2019 | 6 | 15.00 | 82.36 | 7.7 | 33.64 | 8.1 | 24.9 | 1.38 |
| A1 | 22 Apr 2019 | 7 | 14.40 | 82.35 | 7.6 | 33.63 | 8.1 | 25.0 | 1.59 |
| A1 | 22 Apr 2019 | 8 | 14.13 | 81.54 | 7.5 | 33.62 | 8.1 | 25.1 | 1.87 |
| A1 | 22 Apr 2019 | 9 | 13.78 | 81.51 | 7.5 | 33.61 | 8.0 | 25.2 | 2.00 |
| A1 | 22 Apr 2019 | 10 | 13.88 | 81.78 | 7.5 | 33.60 | 8.0 | 25.1 | 2.05 |
| A1 | 22 Apr 2019 | 11 | 13.61 | 82.04 | 7.5 | 33.60 | 8.0 | 25.2 | 2.11 |
| A1 | 22 Apr 2019 | 12 | 13.48 | 82.42 | 7.3 | 33.61 | 8.0 | 25.2 | 2.08 |
| A1 | 22 Apr 2019 | 13 | 13.29 | 82.88 | 7.0 | 33.62 | 8.0 | 25.3 | 1.86 |
| A1 | 22 Apr 2019 | 14 | 13.03 | 83.70 | 6.7 | 33.63 | 8.0 | 25.3 | 1.67 |
| A1 | 22 Apr 2019 | 15 | 12.70 | 83.99 | 6.3 | 33.65 | 8.0 | 25.4 | 1.35 |
| A1 | 22 Apr 2019 | 16 | 12.56 | 84.14 | 6.1 | 33.65 | 7.9 | 25.4 | 1.07 |
| A1 | 22 Apr 2019 | 17 | 12.49 | 83.82 | 6.0 | 33.65 | 7.9 | 25.4 | 0.90 |
| A1 | 22 Apr 2019 | 18 | 12.45 | 82.62 | 5.9 | 33.65 | 7.9 | 25.5 | 0.82 |
| A1 | 29 Apr 2019 | 1 | 15.51 | 74.83 | 8.8 | 33.63 | 8.0 | 24.8 | 2.65 |
| A1 | 29 Apr 2019 | 2 | 15.46 | 75.01 | 8.7 | 33.64 | 8.0 | 24.8 | 2.77 |
| A1 | 29 Apr 2019 | 3 | 15.27 | 74.82 | 8.5 | 33.64 | 8.0 | 24.9 | 2.99 |
| A1 | 29 Apr 2019 | 4 | 15.22 | 74.76 | 8.5 | 33.63 | 8.0 | 24.9 | 3.15 |
| A1 | 29 Apr 2019 | 5 | 15.22 | 74.77 | 8.5 | 33.63 | 8.0 | 24.9 | 3.12 |
| A1 | 29 Apr 2019 | 6 | 15.22 | 74.76 | 8.5 | 33.63 | 8.0 | 24.9 | 3.10 |
| A1 | 29 Apr 2019 | 7 | 15.21 | 74.76 | 8.5 | 33.63 | 8.0 | 24.9 | 3.14 |
| A1 | 29 Apr 2019 | 8 | 15.20 | 74.80 | 8.5 | 33.63 | 8.0 | 24.9 | 3.12 |
| A1 | 29 Apr 2019 | 9 | 15.20 | 74.77 | 8.4 | 33.63 | 8.0 | 24.9 | 3.08 |
| A1 | 29 Apr 2019 | 10 | 15.18 | 74.91 | 8.3 | 33.63 | 8.0 | 24.9 | 3.13 |
| A1 | 29 Apr 2019 | 11 | 14.84 | 75.55 | 7.8 | 33.65 | 8.0 | 25.0 | 3.07 |
| A1 | 29 Apr 2019 | 12 | 14.00 | 78.33 | 7.1 | 33.67 | 7.9 | 25.2 | 2.81 |
| A1 | 29 Apr 2019 | 13 | 13.36 | 81.55 | 6.5 | 33.66 | 7.9 | 25.3 | 2.18 |
| A1 | 29 Apr 2019 | 14 | 12.95 | 83.08 | 6.2 | 33.63 | 7.8 | 25.3 | 1.66 |
| A1 | 29 Apr 2019 | 15 | 12.89 | 83.52 | 6.2 | 33.62 | 7.8 | 25.3 | 1.34 |
| A1 | 29 Apr 2019 | 16 | 12.87 | 83.67 | 6.2 | 33.62 | 7.8 | 25.3 | 1.20 |
| A1 | 29 Apr 2019 | 17 | 12.87 | 83.58 | 6.2 | 33.62 | 7.8 | 25.3 | 1.15 |
| A1 | 29 Apr 2019 | 18 | 12.79 | 84.11 | 6.1 | 33.63 | 7.8 | 25.4 | 1.08 |
| A1 | 29 Apr 2019 | 19 | 12.73 | 83.04 | 6.0 | 33.62 | 7.8 | 25.4 | 0.95 |
| A6 | 03 Apr 2019 | 1 | 15.53 | 78.49 | 8.8 | 33.59 | 8.2 | 24.8 | 2.11 |
| A6 | 03 Apr 2019 | 2 | 15.54 | 78.31 | 8.8 | 33.59 | 8.2 | 24.8 | 2.27 |
| A6 | 03 Apr 2019 | 3 | 15.28 | 78.72 | 8.8 | 33.63 | 8.2 | 24.9 | 2.74 |
| A6 | 03 Apr 2019 | 4 | 14.74 | 75.45 | 8.9 | 33.61 | 8.2 | 25.0 | 4.65 |
| A6 | 03 Apr 2019 | 5 | 14.41 | 71.81 | 8.9 | 33.63 | 8.2 | 25.0 | 5.75 |
| A6 | 03 Apr 2019 | 6 | 14.17 | 71.67 | 8.8 | 33.62 | 8.2 | 25.1 | 6.66 |
| A6 | 03 Apr 2019 | 7 | 13.97 | 70.04 | 8.4 | 33.62 | 8.2 | 25.1 | 7.49 |

| Station | Date | Depth (m) | Temp (°C) | XMS (%) | DO (mg/L) | Sal (ppt) | pH | Dens (σ -t) | Chlor (μ g/L) |
|---------|-------------|-----------|-----------|---------|-----------|-----------|-----|---------------------|--------------------|
| A6 | 03 Apr 2019 | 8 | 13.57 | 70.23 | 7.8 | 33.65 | 8.1 | 25.2 | 7.46 |
| A6 | 03 Apr 2019 | 9 | 13.08 | 75.31 | 7.1 | 33.65 | 8.0 | 25.3 | 6.46 |
| A6 | 03 Apr 2019 | 10 | 12.79 | 76.94 | 6.6 | 33.64 | 8.0 | 25.4 | 5.61 |
| A6 | 03 Apr 2019 | 11 | 12.66 | 77.30 | 6.4 | 33.63 | 8.0 | 25.4 | 5.44 |
| A6 | 03 Apr 2019 | 12 | 12.52 | 77.47 | 6.3 | 33.63 | 8.0 | 25.4 | 4.98 |
| A6 | 03 Apr 2019 | 13 | 12.54 | 78.42 | 6.3 | 33.63 | 8.0 | 25.4 | 5.03 |
| A6 | 03 Apr 2019 | 14 | 12.36 | 78.71 | 6.1 | 33.65 | 8.0 | 25.5 | 4.37 |
| A6 | 03 Apr 2019 | 15 | 12.26 | 79.34 | 5.9 | 33.64 | 7.9 | 25.5 | 4.09 |
| A6 | 03 Apr 2019 | 16 | 12.27 | 79.32 | 5.8 | 33.64 | 7.9 | 25.5 | 3.84 |
| A6 | 03 Apr 2019 | 17 | 12.29 | 79.13 | 5.9 | 33.64 | 7.9 | 25.5 | 3.85 |
| A6 | 03 Apr 2019 | 18 | 12.22 | 79.28 | 5.7 | 33.65 | 7.9 | 25.5 | 3.68 |
| A6 | 03 Apr 2019 | 19 | 12.17 | 80.09 | 5.7 | 33.65 | 7.9 | 25.5 | 3.23 |
| A6 | 03 Apr 2019 | 20 | 12.17 | 80.41 | 5.7 | 33.65 | 7.9 | 25.5 | 3.28 |
| A6 | 03 Apr 2019 | 21 | 12.16 | 80.36 | 5.6 | 33.65 | 7.9 | 25.5 | 3.09 |
| A6 | 08 Apr 2019 | 1 | 15.98 | 80.90 | 8.2 | 33.58 | 8.1 | 24.7 | 0.64 |
| A6 | 08 Apr 2019 | 2 | 15.93 | 81.30 | 8.3 | 33.62 | 8.1 | 24.7 | 0.60 |
| A6 | 08 Apr 2019 | 3 | 15.75 | 81.36 | 8.3 | 33.66 | 8.1 | 24.8 | 0.63 |
| A6 | 08 Apr 2019 | 4 | 15.61 | 81.62 | 8.5 | 33.63 | 8.1 | 24.8 | 0.74 |
| A6 | 08 Apr 2019 | 5 | 15.49 | 81.67 | 8.4 | 33.63 | 8.1 | 24.8 | 0.66 |
| A6 | 08 Apr 2019 | 6 | 15.31 | 81.64 | 8.3 | 33.63 | 8.1 | 24.9 | 0.86 |
| A6 | 08 Apr 2019 | 7 | 15.15 | 81.93 | 8.2 | 33.62 | 8.1 | 24.9 | 1.18 |
| A6 | 08 Apr 2019 | 8 | 14.98 | 82.10 | 7.9 | 33.62 | 8.1 | 24.9 | 1.58 |
| A6 | 08 Apr 2019 | 9 | 14.85 | 82.24 | 7.5 | 33.66 | 8.1 | 25.0 | 1.38 |
| A6 | 08 Apr 2019 | 10 | 14.57 | 82.42 | 7.4 | 33.85 | 8.1 | 25.2 | 1.37 |
| A6 | 08 Apr 2019 | 11 | 13.83 | 82.80 | 7.5 | 34.32 | 8.0 | 25.7 | 1.30 |
| A6 | 08 Apr 2019 | 12 | 13.38 | 82.92 | 7.6 | 34.06 | 8.0 | 25.6 | 1.30 |
| A6 | 08 Apr 2019 | 13 | 12.86 | 83.29 | 7.0 | 33.98 | 7.9 | 25.6 | 1.19 |
| A6 | 08 Apr 2019 | 14 | 12.75 | 83.52 | 6.5 | 33.77 | 7.9 | 25.5 | 1.29 |
| A6 | 08 Apr 2019 | 15 | 12.74 | 83.42 | 6.3 | 33.70 | 7.9 | 25.4 | 1.29 |
| A6 | 08 Apr 2019 | 16 | 12.73 | 83.36 | 6.3 | 33.67 | 7.9 | 25.4 | 1.56 |
| A6 | 08 Apr 2019 | 17 | 12.73 | 83.07 | 6.2 | 33.66 | 7.9 | 25.4 | 1.03 |
| A6 | 15 Apr 2019 | 1 | 14.97 | 78.81 | 8.1 | 33.62 | 8.1 | 24.9 | 1.83 |
| A6 | 15 Apr 2019 | 2 | 14.59 | 80.60 | 7.8 | 33.63 | 8.0 | 25.0 | 1.72 |
| A6 | 15 Apr 2019 | 3 | 13.91 | 82.22 | 7.3 | 33.62 | 8.0 | 25.1 | 1.46 |
| A6 | 15 Apr 2019 | 4 | 13.35 | 83.14 | 6.8 | 33.63 | 8.0 | 25.3 | 1.28 |
| A6 | 15 Apr 2019 | 5 | 12.87 | 83.96 | 6.4 | 33.63 | 7.9 | 25.4 | 1.21 |
| A6 | 15 Apr 2019 | 6 | 12.63 | 84.30 | 6.2 | 33.64 | 7.9 | 25.4 | 1.19 |
| A6 | 15 Apr 2019 | 7 | 12.36 | 84.45 | 6.0 | 33.64 | 7.9 | 25.5 | 1.09 |
| A6 | 15 Apr 2019 | 8 | 12.11 | 84.92 | 5.8 | 33.67 | 7.9 | 25.5 | 1.10 |
| A6 | 15 Apr 2019 | 9 | 12.01 | 85.05 | 5.6 | 33.63 | 7.9 | 25.5 | 0.97 |
| A6 | 15 Apr 2019 | 10 | 11.99 | 85.32 | 5.6 | 33.66 | 7.9 | 25.5 | 0.97 |
| A6 | 15 Apr 2019 | 11 | 11.87 | 85.35 | 5.5 | 33.65 | 7.8 | 25.6 | 0.88 |
| A6 | 15 Apr 2019 | 12 | 11.87 | 85.34 | 5.5 | 33.65 | 7.8 | 25.6 | 0.86 |
| A6 | 15 Apr 2019 | 13 | 11.85 | 85.25 | 5.5 | 33.65 | 7.8 | 25.6 | 0.86 |
| A6 | 15 Apr 2019 | 14 | 11.83 | 85.09 | 5.4 | 33.65 | 7.8 | 25.6 | 0.85 |
| A6 | 15 Apr 2019 | 15 | 11.82 | 84.90 | 5.4 | 33.66 | 7.8 | 25.6 | 0.85 |
| A6 | 15 Apr 2019 | 16 | 11.82 | 84.84 | 5.4 | 33.66 | 7.8 | 25.6 | 0.82 |
| A6 | 15 Apr 2019 | 17 | 11.80 | 84.75 | 5.3 | 33.66 | 7.8 | 25.6 | 0.83 |
| A6 | 15 Apr 2019 | 18 | 11.80 | 84.68 | 5.4 | 33.66 | 7.8 | 25.6 | 0.81 |
| A6 | 15 Apr 2019 | 19 | 11.81 | 84.74 | 5.4 | 33.66 | 7.8 | 25.6 | 0.84 |
| A6 | 22 Apr 2019 | 1 | 16.52 | 84.38 | 8.1 | 33.62 | 8.1 | 24.6 | 0.51 |
| A6 | 22 Apr 2019 | 2 | 16.52 | 84.63 | 8.1 | 33.63 | 8.1 | 24.6 | 0.53 |

| Station | Date | Depth (m) | Temp (°C) | XMS (%) | DO (mg/L) | Sal (ppt) | pH | Dens (σ -t) | Chlor (μ g/L) |
|---------|-------------|-----------|-----------|---------|-----------|-----------|-----|---------------------|--------------------|
| A6 | 22 Apr 2019 | 3 | 16.48 | 84.79 | 8.0 | 33.63 | 8.1 | 24.6 | 0.53 |
| A6 | 22 Apr 2019 | 4 | 16.31 | 84.52 | 8.0 | 33.64 | 8.1 | 24.6 | 0.67 |
| A6 | 22 Apr 2019 | 5 | 16.13 | 83.89 | 7.9 | 33.63 | 8.1 | 24.7 | 0.86 |
| A6 | 22 Apr 2019 | 6 | 15.99 | 83.68 | 7.9 | 33.63 | 8.1 | 24.7 | 1.02 |
| A6 | 22 Apr 2019 | 7 | 15.86 | 83.27 | 7.9 | 33.62 | 8.1 | 24.7 | 1.16 |
| A6 | 22 Apr 2019 | 8 | 15.68 | 82.84 | 7.9 | 33.63 | 8.1 | 24.8 | 1.32 |
| A6 | 22 Apr 2019 | 9 | 15.40 | 82.64 | 7.8 | 33.63 | 8.1 | 24.8 | 1.38 |
| A6 | 22 Apr 2019 | 10 | 15.27 | 82.95 | 7.8 | 33.62 | 8.1 | 24.9 | 1.29 |
| A6 | 22 Apr 2019 | 11 | 15.05 | 82.88 | 7.6 | 33.63 | 8.1 | 24.9 | 1.90 |
| A6 | 22 Apr 2019 | 12 | 14.90 | 82.80 | 7.5 | 33.62 | 8.1 | 24.9 | 1.86 |
| A6 | 22 Apr 2019 | 13 | 14.76 | 83.42 | 7.5 | 33.62 | 8.1 | 25.0 | 1.26 |
| A6 | 22 Apr 2019 | 14 | 14.67 | 83.65 | 7.3 | 33.62 | 8.1 | 25.0 | 1.15 |
| A6 | 22 Apr 2019 | 15 | 14.24 | 84.00 | 7.0 | 33.64 | 8.0 | 25.1 | 1.00 |
| A6 | 22 Apr 2019 | 16 | 14.03 | 84.25 | 6.9 | 33.64 | 8.0 | 25.1 | 0.90 |
| A6 | 22 Apr 2019 | 17 | 13.61 | 83.90 | 6.7 | 33.65 | 8.0 | 25.2 | 0.92 |
| A6 | 22 Apr 2019 | 18 | 13.45 | 83.96 | 6.7 | 33.64 | 8.0 | 25.2 | 0.96 |
| A6 | 22 Apr 2019 | 19 | 13.61 | 84.10 | 6.8 | 33.62 | 8.0 | 25.2 | 0.89 |
| A6 | 29 Apr 2019 | 1 | 17.23 | 81.16 | 8.8 | 33.65 | 8.0 | 24.4 | 0.88 |
| A6 | 29 Apr 2019 | 2 | 17.23 | 82.34 | 8.8 | 33.65 | 8.0 | 24.4 | 0.89 |
| A6 | 29 Apr 2019 | 3 | 17.22 | 82.73 | 8.8 | 33.65 | 8.0 | 24.4 | 0.88 |
| A6 | 29 Apr 2019 | 4 | 17.22 | 82.71 | 8.8 | 33.65 | 8.0 | 24.4 | 0.88 |
| A6 | 29 Apr 2019 | 5 | 17.21 | 82.72 | 8.8 | 33.65 | 8.0 | 24.4 | 0.91 |
| A6 | 29 Apr 2019 | 6 | 17.20 | 82.73 | 8.7 | 33.65 | 8.0 | 24.4 | 0.96 |
| A6 | 29 Apr 2019 | 7 | 17.13 | 82.70 | 8.7 | 33.65 | 8.0 | 24.5 | 0.95 |
| A6 | 29 Apr 2019 | 8 | 17.14 | 82.74 | 8.4 | 33.65 | 8.0 | 24.4 | 0.98 |
| A6 | 29 Apr 2019 | 9 | 15.98 | 82.30 | 7.8 | 33.76 | 8.0 | 24.8 | 1.05 |
| A6 | 29 Apr 2019 | 10 | 15.02 | 83.08 | 7.5 | 33.65 | 8.0 | 24.9 | 1.03 |
| A6 | 29 Apr 2019 | 11 | 14.95 | 83.58 | 7.2 | 33.64 | 7.9 | 24.9 | 0.97 |
| A6 | 29 Apr 2019 | 12 | 14.24 | 84.20 | 7.0 | 33.64 | 7.9 | 25.1 | 0.85 |
| A6 | 29 Apr 2019 | 13 | 14.04 | 84.73 | 6.7 | 33.64 | 7.9 | 25.1 | 0.76 |
| A6 | 29 Apr 2019 | 14 | 13.30 | 84.95 | 6.4 | 33.65 | 7.9 | 25.3 | 0.69 |
| A6 | 29 Apr 2019 | 15 | 13.38 | 84.96 | 6.3 | 33.61 | 7.8 | 25.2 | 0.67 |
| A6 | 29 Apr 2019 | 16 | 12.98 | 85.10 | 6.2 | 33.63 | 7.8 | 25.3 | 0.67 |
| A6 | 29 Apr 2019 | 17 | 13.01 | 85.11 | 6.2 | 33.62 | 7.8 | 25.3 | 0.62 |
| A6 | 29 Apr 2019 | 18 | 12.91 | 85.21 | 6.1 | 33.63 | 7.8 | 25.3 | 0.59 |
| A7 | 03 Apr 2019 | 1 | 15.12 | 72.20 | 9.6 | 33.57 | 8.2 | 24.8 | 3.61 |
| A7 | 03 Apr 2019 | 2 | 15.05 | 72.62 | 9.5 | 33.60 | 8.2 | 24.9 | 3.74 |
| A7 | 03 Apr 2019 | 3 | 14.98 | 71.16 | 9.5 | 33.59 | 8.2 | 24.9 | 4.50 |
| A7 | 03 Apr 2019 | 4 | 14.67 | 71.64 | 9.3 | 33.62 | 8.2 | 25.0 | 4.88 |
| A7 | 03 Apr 2019 | 5 | 14.47 | 71.61 | 8.9 | 33.61 | 8.2 | 25.0 | 5.35 |
| A7 | 03 Apr 2019 | 6 | 14.13 | 71.70 | 8.6 | 33.62 | 8.1 | 25.1 | 5.86 |
| A7 | 03 Apr 2019 | 7 | 14.06 | 71.93 | 8.4 | 33.61 | 8.1 | 25.1 | 6.44 |
| A7 | 03 Apr 2019 | 8 | 13.87 | 72.39 | 8.0 | 33.62 | 8.1 | 25.1 | 6.17 |
| A7 | 03 Apr 2019 | 9 | 13.73 | 73.48 | 7.7 | 33.62 | 8.1 | 25.2 | 5.32 |
| A7 | 03 Apr 2019 | 10 | 13.65 | 74.97 | 7.5 | 33.62 | 8.1 | 25.2 | 5.02 |
| A7 | 03 Apr 2019 | 11 | 13.61 | 75.91 | 7.4 | 33.62 | 8.1 | 25.2 | 4.56 |
| A7 | 03 Apr 2019 | 12 | 13.49 | 75.34 | 7.3 | 33.62 | 8.1 | 25.2 | 4.19 |
| A7 | 03 Apr 2019 | 13 | 13.46 | 73.83 | 7.2 | 33.62 | 8.0 | 25.2 | 4.32 |
| A7 | 03 Apr 2019 | 14 | 13.20 | 75.25 | 6.9 | 33.65 | 8.0 | 25.3 | 4.03 |
| A7 | 03 Apr 2019 | 15 | 12.98 | 77.53 | 6.5 | 33.63 | 8.0 | 25.3 | 3.61 |
| A7 | 03 Apr 2019 | 16 | 12.50 | 78.90 | 6.1 | 33.67 | 8.0 | 25.5 | 3.25 |
| A7 | 03 Apr 2019 | 17 | 12.36 | 79.32 | 5.9 | 33.64 | 7.9 | 25.5 | 3.20 |
| A7 | 03 Apr 2019 | 18 | 12.27 | 79.66 | 5.8 | 33.64 | 7.9 | 25.5 | 3.02 |

| Station | Date | Depth (m) | Temp (°C) | XMS (%) | DO (mg/L) | Sal (ppt) | pH | Dens (σ -t) | Chlor (μ g/L) |
|---------|-------------|-----------|-----------|---------|-----------|-----------|-----|---------------------|--------------------|
| A7 | 03 Apr 2019 | 19 | 12.26 | 79.90 | 5.7 | 33.64 | 7.9 | 25.5 | 3.03 |
| A7 | 08 Apr 2019 | 1 | 15.87 | 77.44 | 8.4 | 33.61 | 8.1 | 24.7 | 1.07 |
| A7 | 08 Apr 2019 | 2 | 15.87 | 79.11 | 8.4 | 33.61 | 8.1 | 24.7 | 1.00 |
| A7 | 08 Apr 2019 | 3 | 15.68 | 79.92 | 8.3 | 33.61 | 8.1 | 24.8 | 1.00 |
| A7 | 08 Apr 2019 | 4 | 15.55 | 80.63 | 8.1 | 33.62 | 8.1 | 24.8 | 1.02 |
| A7 | 08 Apr 2019 | 5 | 15.05 | 81.30 | 7.9 | 33.63 | 8.1 | 24.9 | 1.04 |
| A7 | 08 Apr 2019 | 6 | 14.89 | 81.79 | 7.8 | 33.61 | 8.1 | 24.9 | 1.04 |
| A7 | 08 Apr 2019 | 7 | 14.56 | 81.92 | 7.5 | 33.64 | 8.0 | 25.0 | 1.07 |
| A7 | 08 Apr 2019 | 8 | 13.91 | 81.78 | 7.1 | 33.65 | 8.0 | 25.2 | 1.14 |
| A7 | 08 Apr 2019 | 9 | 13.51 | 81.71 | 7.0 | 33.62 | 8.0 | 25.2 | 1.25 |
| A7 | 08 Apr 2019 | 10 | 13.15 | 82.31 | 6.9 | 33.62 | 8.0 | 25.3 | 1.40 |
| A7 | 08 Apr 2019 | 11 | 13.04 | 83.54 | 6.8 | 33.61 | 8.0 | 25.3 | 1.38 |
| A7 | 08 Apr 2019 | 12 | 13.00 | 83.27 | 6.8 | 33.60 | 8.0 | 25.3 | 1.34 |
| A7 | 08 Apr 2019 | 13 | 12.97 | 83.71 | 6.7 | 33.61 | 8.0 | 25.3 | 1.54 |
| A7 | 08 Apr 2019 | 14 | 12.82 | 83.79 | 6.5 | 33.63 | 7.9 | 25.4 | 1.28 |
| A7 | 08 Apr 2019 | 15 | 12.73 | 83.71 | 6.3 | 33.62 | 7.9 | 25.4 | 1.11 |
| A7 | 08 Apr 2019 | 16 | 12.70 | 83.32 | 6.3 | 33.62 | 7.9 | 25.4 | 1.06 |
| A7 | 08 Apr 2019 | 17 | 12.71 | 83.04 | 6.3 | 33.62 | 7.9 | 25.4 | 1.05 |
| A7 | 08 Apr 2019 | 18 | 12.69 | 82.44 | 6.2 | 33.63 | 7.9 | 25.4 | 0.93 |
| A7 | 08 Apr 2019 | 19 | 12.70 | 82.54 | 6.2 | 33.63 | 7.9 | 25.4 | 1.03 |
| A7 | 15 Apr 2019 | 1 | 15.88 | 78.25 | 8.6 | 33.61 | 8.1 | 24.7 | 1.51 |
| A7 | 15 Apr 2019 | 2 | 15.68 | 78.90 | 8.2 | 33.65 | 8.1 | 24.8 | 1.52 |
| A7 | 15 Apr 2019 | 3 | 14.35 | 81.01 | 7.5 | 33.66 | 8.0 | 25.1 | 1.40 |
| A7 | 15 Apr 2019 | 4 | 12.94 | 83.02 | 6.6 | 33.69 | 8.0 | 25.4 | 1.30 |
| A7 | 15 Apr 2019 | 5 | 12.27 | 84.55 | 6.0 | 33.62 | 7.9 | 25.5 | 1.12 |
| A7 | 15 Apr 2019 | 6 | 12.09 | 85.19 | 5.8 | 33.63 | 7.9 | 25.5 | 1.01 |
| A7 | 15 Apr 2019 | 7 | 12.05 | 85.21 | 5.7 | 33.63 | 7.9 | 25.5 | 0.98 |
| A7 | 15 Apr 2019 | 8 | 11.99 | 85.22 | 5.6 | 33.64 | 7.9 | 25.5 | 0.93 |
| A7 | 15 Apr 2019 | 9 | 11.90 | 84.98 | 5.5 | 33.65 | 7.9 | 25.6 | 0.85 |
| A7 | 15 Apr 2019 | 10 | 11.88 | 84.40 | 5.4 | 33.65 | 7.8 | 25.6 | 1.08 |
| A7 | 15 Apr 2019 | 11 | 11.88 | 84.13 | 5.4 | 33.65 | 7.8 | 25.6 | 1.11 |
| A7 | 15 Apr 2019 | 12 | 11.78 | 83.09 | 5.4 | 33.67 | 7.8 | 25.6 | 0.86 |
| A7 | 15 Apr 2019 | 13 | 11.75 | 83.32 | 5.3 | 33.66 | 7.8 | 25.6 | 0.77 |
| A7 | 15 Apr 2019 | 14 | 11.72 | 83.69 | 5.3 | 33.67 | 7.8 | 25.6 | 0.75 |
| A7 | 15 Apr 2019 | 15 | 11.69 | 80.99 | 5.3 | 33.67 | 7.8 | 25.6 | 0.75 |
| A7 | 15 Apr 2019 | 16 | 11.73 | 81.43 | 5.2 | 33.66 | 7.8 | 25.6 | 0.74 |
| A7 | 15 Apr 2019 | 17 | 11.68 | 80.28 | 5.2 | 33.67 | 7.8 | 25.6 | 0.79 |
| A7 | 15 Apr 2019 | 18 | 11.68 | 81.44 | 5.2 | 33.67 | 7.8 | 25.6 | 0.83 |
| A7 | 15 Apr 2019 | 19 | 11.67 | 83.47 | 5.2 | 33.67 | 7.8 | 25.6 | 0.84 |
| A7 | 22 Apr 2019 | 1 | 16.45 | 82.20 | 8.5 | 33.62 | 8.1 | 24.6 | 0.69 |
| A7 | 22 Apr 2019 | 2 | 16.42 | 82.52 | 8.4 | 33.63 | 8.1 | 24.6 | 0.72 |
| A7 | 22 Apr 2019 | 3 | 16.41 | 82.78 | 8.4 | 33.62 | 8.1 | 24.6 | 0.78 |
| A7 | 22 Apr 2019 | 4 | 16.39 | 82.90 | 8.4 | 33.62 | 8.1 | 24.6 | 0.81 |
| A7 | 22 Apr 2019 | 5 | 16.35 | 83.02 | 8.4 | 33.62 | 8.1 | 24.6 | 0.82 |
| A7 | 22 Apr 2019 | 6 | 16.25 | 83.25 | 8.3 | 33.62 | 8.1 | 24.6 | 0.87 |
| A7 | 22 Apr 2019 | 7 | 16.19 | 83.18 | 8.3 | 33.62 | 8.1 | 24.6 | 0.91 |
| A7 | 22 Apr 2019 | 8 | 16.15 | 83.19 | 8.2 | 33.62 | 8.1 | 24.7 | 0.95 |
| A7 | 22 Apr 2019 | 9 | 16.12 | 83.23 | 8.2 | 33.62 | 8.1 | 24.7 | 0.98 |
| A7 | 22 Apr 2019 | 10 | 16.03 | 83.22 | 8.1 | 33.62 | 8.1 | 24.7 | 1.03 |
| A7 | 22 Apr 2019 | 11 | 15.47 | 83.05 | 7.8 | 33.67 | 8.1 | 24.8 | 1.07 |
| A7 | 22 Apr 2019 | 12 | 14.95 | 83.56 | 7.5 | 33.63 | 8.1 | 24.9 | 1.00 |
| A7 | 22 Apr 2019 | 13 | 14.79 | 84.14 | 7.3 | 33.63 | 8.1 | 25.0 | 0.86 |

| Station | Date | Depth (m) | Temp (°C) | XMS (%) | DO (mg/L) | Sal (ppt) | pH | Dens (σ -t) | Chlor (μ g/L) |
|---------|-------------|-----------|-----------|---------|-----------|-----------|-----|---------------------|--------------------|
| A7 | 22 Apr 2019 | 14 | 14.58 | 84.23 | 7.0 | 33.63 | 8.1 | 25.0 | 0.76 |
| A7 | 22 Apr 2019 | 15 | 13.82 | 84.22 | 6.8 | 33.69 | 8.0 | 25.2 | 0.65 |
| A7 | 22 Apr 2019 | 16 | 13.48 | 83.45 | 6.6 | 33.63 | 8.0 | 25.2 | 0.68 |
| A7 | 22 Apr 2019 | 17 | 13.22 | 83.32 | 6.5 | 33.65 | 8.0 | 25.3 | 0.79 |
| A7 | 22 Apr 2019 | 18 | 12.91 | 83.75 | 6.4 | 33.64 | 8.0 | 25.4 | 0.91 |
| A7 | 22 Apr 2019 | 19 | 12.89 | 83.80 | 6.4 | 33.63 | 8.0 | 25.4 | 0.95 |
| A7 | 29 Apr 2019 | 1 | 16.19 | 79.02 | 8.5 | 33.64 | 8.0 | 24.7 | 1.70 |
| A7 | 29 Apr 2019 | 2 | 16.18 | 79.36 | 8.4 | 33.64 | 8.0 | 24.7 | 1.76 |
| A7 | 29 Apr 2019 | 3 | 15.79 | 77.52 | 8.3 | 33.66 | 8.0 | 24.8 | 2.04 |
| A7 | 29 Apr 2019 | 4 | 15.75 | 76.86 | 8.4 | 33.64 | 8.0 | 24.8 | 2.37 |
| A7 | 29 Apr 2019 | 5 | 15.65 | 76.56 | 8.3 | 33.64 | 8.0 | 24.8 | 2.63 |
| A7 | 29 Apr 2019 | 6 | 15.48 | 75.26 | 8.3 | 33.64 | 8.0 | 24.8 | 2.89 |
| A7 | 29 Apr 2019 | 7 | 15.37 | 74.16 | 8.2 | 33.63 | 8.0 | 24.8 | 3.18 |
| A7 | 29 Apr 2019 | 8 | 15.33 | 73.97 | 8.2 | 33.63 | 8.0 | 24.8 | 3.43 |
| A7 | 29 Apr 2019 | 9 | 15.27 | 74.04 | 8.3 | 33.63 | 8.0 | 24.9 | 3.56 |
| A7 | 29 Apr 2019 | 10 | 15.27 | 74.11 | 8.3 | 33.63 | 8.0 | 24.9 | 3.68 |
| A7 | 29 Apr 2019 | 11 | 15.21 | 74.15 | 8.3 | 33.64 | 8.0 | 24.9 | 3.67 |
| A7 | 29 Apr 2019 | 12 | 15.13 | 74.26 | 8.2 | 33.63 | 8.0 | 24.9 | 3.72 |
| A7 | 29 Apr 2019 | 13 | 15.11 | 74.19 | 8.2 | 33.63 | 8.0 | 24.9 | 3.81 |
| A7 | 29 Apr 2019 | 14 | 15.06 | 74.22 | 8.1 | 33.63 | 8.0 | 24.9 | 3.84 |
| A7 | 29 Apr 2019 | 15 | 14.63 | 74.99 | 7.7 | 33.67 | 8.0 | 25.0 | 3.82 |
| A7 | 29 Apr 2019 | 16 | 14.01 | 77.08 | 7.4 | 33.65 | 7.9 | 25.1 | 3.66 |
| A7 | 29 Apr 2019 | 17 | 13.69 | 78.03 | 7.2 | 33.64 | 7.9 | 25.2 | 3.36 |
| A7 | 29 Apr 2019 | 18 | 13.39 | 80.34 | 7.0 | 33.64 | 7.9 | 25.3 | 2.93 |
| C4 | 03 Apr 2019 | 1 | 15.39 | 70.31 | 9.3 | 33.59 | 8.2 | 24.8 | 2.38 |
| C4 | 03 Apr 2019 | 2 | 15.38 | 70.60 | 9.2 | 33.59 | 8.2 | 24.8 | 2.61 |
| C4 | 03 Apr 2019 | 3 | 15.39 | 71.01 | 9.2 | 33.59 | 8.2 | 24.8 | 2.87 |
| C4 | 03 Apr 2019 | 4 | 15.18 | 70.98 | 9.2 | 33.60 | 8.2 | 24.9 | 3.43 |
| C4 | 03 Apr 2019 | 5 | 15.05 | 71.12 | 9.1 | 33.60 | 8.2 | 24.9 | 3.81 |
| C4 | 03 Apr 2019 | 6 | 14.93 | 72.27 | 9.0 | 33.60 | 8.2 | 24.9 | 3.56 |
| C4 | 03 Apr 2019 | 7 | 14.81 | 73.33 | 8.7 | 33.60 | 8.2 | 24.9 | 3.17 |
| C4 | 03 Apr 2019 | 8 | 14.62 | 75.26 | 8.5 | 33.60 | 8.2 | 25.0 | 2.58 |
| C4 | 03 Apr 2019 | 9 | 14.48 | 77.63 | 8.2 | 33.61 | 8.1 | 25.0 | 2.05 |
| C4 | 03 Apr 2019 | 10 | 14.31 | 79.52 | 8.0 | 33.60 | 8.1 | 25.0 | 1.49 |
| C4 | 08 Apr 2019 | 1 | 16.20 | 73.10 | 7.9 | 33.61 | 8.1 | 24.6 | 0.41 |
| C4 | 08 Apr 2019 | 2 | 16.08 | 72.24 | 7.9 | 33.62 | 8.1 | 24.7 | 0.43 |
| C4 | 08 Apr 2019 | 3 | 15.93 | 73.30 | 7.8 | 33.62 | 8.1 | 24.7 | 0.48 |
| C4 | 08 Apr 2019 | 4 | 15.78 | 74.01 | 7.8 | 33.62 | 8.1 | 24.7 | 0.49 |
| C4 | 08 Apr 2019 | 5 | 15.66 | 74.62 | 7.6 | 33.62 | 8.1 | 24.8 | 0.50 |
| C4 | 08 Apr 2019 | 6 | 15.34 | 75.94 | 7.4 | 33.69 | 8.1 | 24.9 | 0.53 |
| C4 | 08 Apr 2019 | 7 | 15.20 | 77.09 | 7.3 | 33.72 | 8.1 | 24.9 | 0.56 |
| C4 | 08 Apr 2019 | 8 | 14.88 | 72.21 | 7.3 | 33.77 | 8.1 | 25.0 | 0.60 |
| C4 | 08 Apr 2019 | 9 | 14.61 | 71.29 | 7.0 | 33.77 | 8.1 | 25.1 | 0.63 |
| C4 | 08 Apr 2019 | 10 | 14.40 | 71.15 | 6.9 | 33.73 | 8.1 | 25.1 | 0.60 |
| C4 | 08 Apr 2019 | 11 | 14.23 | 71.27 | 6.8 | 33.63 | 8.0 | 25.1 | 0.57 |
| C4 | 15 Apr 2019 | 1 | 16.38 | 72.41 | 8.3 | 33.62 | 8.1 | 24.6 | 0.99 |
| C4 | 15 Apr 2019 | 2 | 16.34 | 72.53 | 8.3 | 33.63 | 8.1 | 24.6 | 1.03 |
| C4 | 15 Apr 2019 | 3 | 16.14 | 73.68 | 8.5 | 33.63 | 8.1 | 24.7 | 1.33 |
| C4 | 15 Apr 2019 | 4 | 15.67 | 75.13 | 8.1 | 33.67 | 8.1 | 24.8 | 1.47 |
| C4 | 15 Apr 2019 | 5 | 14.48 | 77.58 | 7.2 | 33.71 | 8.1 | 25.1 | 1.44 |
| C4 | 15 Apr 2019 | 6 | 13.26 | 81.24 | 6.0 | 33.68 | 8.0 | 25.3 | 1.13 |

| Station | Date | Depth (m) | Temp (°C) | XMS (%) | DO (mg/L) | Sal (ppt) | pH | Dens (σ -t) | Chlor (μ g/L) |
|---------|-------------|-----------|-----------|---------|-----------|-----------|-----|---------------------|--------------------|
| C4 | 15 Apr 2019 | 7 | 13.01 | 82.63 | 5.6 | 33.63 | 7.9 | 25.3 | 0.78 |
| C4 | 15 Apr 2019 | 8 | 12.91 | 82.17 | 5.5 | 33.63 | 7.9 | 25.3 | 0.59 |
| C4 | 15 Apr 2019 | 9 | 12.89 | 80.98 | 5.4 | 33.62 | 7.9 | 25.4 | 0.46 |
| C4 | 15 Apr 2019 | 10 | 12.88 | 81.07 | 5.4 | 33.62 | 7.9 | 25.4 | 0.40 |
| C4 | 15 Apr 2019 | 11 | 12.87 | 80.36 | 5.4 | 33.63 | 7.9 | 25.4 | 0.38 |
| C4 | 22 Apr 2019 | 1 | 16.82 | 75.58 | 8.5 | 33.63 | 8.2 | 24.5 | 0.56 |
| C4 | 22 Apr 2019 | 2 | 16.79 | 75.46 | 8.4 | 33.63 | 8.2 | 24.5 | 0.58 |
| C4 | 22 Apr 2019 | 3 | 16.69 | 75.72 | 8.4 | 33.63 | 8.2 | 24.5 | 0.67 |
| C4 | 22 Apr 2019 | 4 | 16.65 | 76.11 | 8.3 | 33.63 | 8.2 | 24.5 | 0.81 |
| C4 | 22 Apr 2019 | 5 | 16.60 | 76.33 | 8.2 | 33.63 | 8.2 | 24.6 | 0.83 |
| C4 | 22 Apr 2019 | 6 | 16.49 | 76.46 | 8.1 | 33.63 | 8.2 | 24.6 | 0.82 |
| C4 | 22 Apr 2019 | 7 | 16.39 | 76.12 | 7.7 | 33.65 | 8.2 | 24.6 | 0.79 |
| C4 | 22 Apr 2019 | 8 | 15.43 | 74.64 | 7.1 | 33.66 | 8.1 | 24.8 | 1.13 |
| C4 | 22 Apr 2019 | 9 | 15.42 | 70.34 | 6.9 | 33.65 | 8.1 | 24.8 | 0.51 |
| C4 | 22 Apr 2019 | 10 | 14.93 | 66.91 | 6.7 | 33.62 | 8.0 | 24.9 | 0.47 |
| C4 | 29 Apr 2019 | 1 | 15.07 | 72.82 | 7.8 | 33.62 | 7.9 | 24.9 | 2.01 |
| C4 | 29 Apr 2019 | 2 | 15.06 | 73.01 | 7.8 | 33.62 | 7.9 | 24.9 | 2.21 |
| C4 | 29 Apr 2019 | 3 | 15.05 | 72.99 | 7.7 | 33.62 | 7.9 | 24.9 | 2.71 |
| C4 | 29 Apr 2019 | 4 | 15.04 | 72.79 | 7.7 | 33.62 | 7.9 | 24.9 | 3.00 |
| C4 | 29 Apr 2019 | 5 | 15.04 | 73.15 | 7.6 | 33.62 | 7.9 | 24.9 | 3.15 |
| C4 | 29 Apr 2019 | 6 | 15.03 | 73.32 | 7.6 | 33.62 | 7.9 | 24.9 | 3.29 |
| C4 | 29 Apr 2019 | 7 | 14.94 | 74.34 | 7.4 | 33.63 | 7.9 | 24.9 | 3.19 |
| C4 | 29 Apr 2019 | 8 | 14.43 | 78.41 | 6.8 | 33.68 | 7.9 | 25.1 | 2.56 |
| C4 | 29 Apr 2019 | 9 | 13.60 | 80.19 | 6.2 | 33.66 | 7.9 | 25.2 | 1.25 |
| C4 | 29 Apr 2019 | 10 | 13.50 | 80.71 | 6.1 | 33.62 | 7.8 | 25.2 | 0.69 |
| C5 | 03 Apr 2019 | 1 | 15.79 | 75.16 | 8.7 | 33.61 | 8.2 | 24.7 | 1.28 |
| C5 | 03 Apr 2019 | 2 | 15.74 | 75.34 | 8.7 | 33.61 | 8.2 | 24.7 | 1.40 |
| C5 | 03 Apr 2019 | 3 | 15.64 | 75.27 | 8.7 | 33.60 | 8.2 | 24.8 | 1.56 |
| C5 | 03 Apr 2019 | 4 | 15.64 | 75.60 | 8.6 | 33.61 | 8.2 | 24.8 | 1.71 |
| C5 | 03 Apr 2019 | 5 | 15.35 | 72.61 | 8.5 | 33.62 | 8.2 | 24.8 | 1.90 |
| C5 | 03 Apr 2019 | 6 | 15.10 | 74.54 | 8.3 | 33.61 | 8.2 | 24.9 | 2.23 |
| C5 | 03 Apr 2019 | 7 | 14.96 | 76.12 | 8.2 | 33.62 | 8.2 | 24.9 | 2.21 |
| C5 | 03 Apr 2019 | 8 | 14.62 | 74.31 | 8.4 | 33.61 | 8.1 | 25.0 | 2.55 |
| C5 | 03 Apr 2019 | 9 | 14.71 | 77.39 | 8.3 | 33.61 | 8.1 | 25.0 | 2.58 |
| C5 | 03 Apr 2019 | 10 | 14.48 | 78.77 | 8.1 | 33.63 | 8.1 | 25.0 | 2.63 |
| C5 | 03 Apr 2019 | 11 | 14.25 | 80.03 | 8.0 | 33.63 | 8.1 | 25.1 | 2.51 |
| C5 | 08 Apr 2019 | 1 | 15.95 | 76.33 | 8.1 | 33.61 | 8.1 | 24.7 | 0.57 |
| C5 | 08 Apr 2019 | 2 | 15.91 | 77.08 | 8.2 | 33.61 | 8.1 | 24.7 | 0.63 |
| C5 | 08 Apr 2019 | 3 | 15.89 | 77.44 | 8.1 | 33.61 | 8.1 | 24.7 | 0.69 |
| C5 | 08 Apr 2019 | 4 | 15.72 | 78.49 | 8.1 | 33.61 | 8.1 | 24.7 | 0.67 |
| C5 | 08 Apr 2019 | 5 | 15.68 | 79.67 | 8.0 | 33.62 | 8.1 | 24.8 | 0.68 |
| C5 | 08 Apr 2019 | 6 | 15.52 | 79.53 | 7.8 | 33.61 | 8.1 | 24.8 | 0.65 |
| C5 | 08 Apr 2019 | 7 | 15.33 | 79.61 | 7.4 | 33.63 | 8.1 | 24.8 | 0.63 |
| C5 | 08 Apr 2019 | 8 | 14.49 | 76.50 | 7.1 | 33.66 | 8.0 | 25.1 | 0.52 |
| C5 | 08 Apr 2019 | 9 | 14.62 | 67.52 | 7.1 | 33.61 | 8.0 | 25.0 | 0.55 |
| C5 | 15 Apr 2019 | 1 | 16.14 | 77.08 | 8.4 | 33.62 | 8.1 | 24.7 | 0.83 |
| C5 | 15 Apr 2019 | 2 | 16.05 | 77.43 | 8.4 | 33.62 | 8.1 | 24.7 | 0.92 |
| C5 | 15 Apr 2019 | 3 | 15.97 | 77.73 | 8.2 | 33.62 | 8.1 | 24.7 | 0.98 |
| C5 | 15 Apr 2019 | 4 | 14.79 | 76.15 | 7.5 | 33.69 | 8.1 | 25.0 | 1.15 |
| C5 | 15 Apr 2019 | 5 | 13.70 | 80.00 | 7.1 | 33.63 | 8.0 | 25.2 | 1.23 |

| Station | Date | Depth (m) | Temp (°C) | XMS (%) | DO (mg/L) | Sal (ppt) | pH | Dens (σ -t) | Chlor (μ g/L) |
|---------|-------------|-----------|-----------|---------|-----------|-----------|-----|---------------------|--------------------|
| C5 | 15 Apr 2019 | 6 | 13.22 | 82.96 | 6.8 | 33.63 | 8.0 | 25.3 | 0.96 |
| C5 | 15 Apr 2019 | 7 | 12.97 | 83.84 | 6.5 | 33.61 | 8.0 | 25.3 | 0.80 |
| C5 | 15 Apr 2019 | 8 | 12.94 | 84.13 | 6.5 | 33.61 | 8.0 | 25.3 | 0.73 |
| C5 | 15 Apr 2019 | 9 | 12.93 | 84.25 | 6.5 | 33.61 | 8.0 | 25.3 | 0.73 |
| C5 | 15 Apr 2019 | 10 | 12.92 | 84.10 | 6.5 | 33.62 | 8.0 | 25.3 | 0.71 |
| C5 | 22 Apr 2019 | 1 | 16.81 | 77.83 | 8.1 | 33.63 | 8.2 | 24.5 | 0.42 |
| C5 | 22 Apr 2019 | 2 | 16.70 | 78.61 | 8.3 | 33.63 | 8.2 | 24.5 | 0.58 |
| C5 | 22 Apr 2019 | 3 | 16.66 | 79.21 | 8.5 | 33.63 | 8.2 | 24.5 | 0.74 |
| C5 | 22 Apr 2019 | 4 | 16.59 | 79.65 | 8.5 | 33.63 | 8.2 | 24.6 | 0.92 |
| C5 | 22 Apr 2019 | 5 | 16.54 | 79.73 | 8.5 | 33.63 | 8.2 | 24.6 | 1.12 |
| C5 | 22 Apr 2019 | 6 | 16.41 | 79.55 | 8.4 | 33.64 | 8.2 | 24.6 | 1.31 |
| C5 | 22 Apr 2019 | 7 | 15.84 | 78.15 | 8.2 | 33.66 | 8.2 | 24.8 | 1.51 |
| C5 | 22 Apr 2019 | 8 | 15.79 | 74.72 | 8.1 | 33.59 | 8.1 | 24.7 | 1.61 |
| C5 | 22 Apr 2019 | 9 | 15.15 | 76.25 | 7.7 | 33.71 | 8.1 | 24.9 | 1.52 |
| C5 | 22 Apr 2019 | 10 | 14.44 | 72.03 | 7.6 | 33.61 | 8.1 | 25.0 | 0.92 |
| C5 | 29 Apr 2019 | 1 | 16.96 | 81.41 | 8.6 | 33.65 | 8.1 | 24.5 | 0.79 |
| C5 | 29 Apr 2019 | 2 | 16.93 | 81.60 | 8.6 | 33.65 | 8.1 | 24.5 | 0.83 |
| C5 | 29 Apr 2019 | 3 | 16.85 | 81.58 | 8.6 | 33.66 | 8.1 | 24.5 | 0.92 |
| C5 | 29 Apr 2019 | 4 | 16.60 | 80.82 | 8.5 | 33.67 | 8.1 | 24.6 | 1.10 |
| C5 | 29 Apr 2019 | 5 | 15.66 | 78.71 | 8.3 | 33.69 | 8.0 | 24.8 | 1.74 |
| C5 | 29 Apr 2019 | 6 | 15.31 | 78.61 | 8.3 | 33.63 | 8.0 | 24.9 | 2.23 |
| C5 | 29 Apr 2019 | 7 | 15.27 | 77.94 | 8.2 | 33.63 | 8.0 | 24.9 | 2.36 |
| C5 | 29 Apr 2019 | 8 | 14.97 | 78.02 | 8.0 | 33.66 | 8.0 | 24.9 | 2.31 |
| C5 | 29 Apr 2019 | 9 | 14.13 | 78.62 | 7.9 | 33.66 | 8.0 | 25.1 | 1.22 |
| C5 | 29 Apr 2019 | 10 | 13.78 | 80.86 | 7.9 | 33.65 | 8.0 | 25.2 | 0.74 |
| C6 | 03 Apr 2019 | 1 | 15.80 | 79.48 | 8.8 | 33.60 | 8.2 | 24.7 | 1.00 |
| C6 | 03 Apr 2019 | 2 | 15.80 | 79.64 | 8.8 | 33.60 | 8.2 | 24.7 | 1.04 |
| C6 | 03 Apr 2019 | 3 | 15.82 | 79.63 | 8.7 | 33.60 | 8.2 | 24.7 | 1.18 |
| C6 | 03 Apr 2019 | 4 | 15.64 | 79.61 | 8.5 | 33.63 | 8.2 | 24.8 | 1.24 |
| C6 | 03 Apr 2019 | 5 | 15.26 | 80.13 | 8.4 | 33.62 | 8.2 | 24.8 | 1.36 |
| C6 | 03 Apr 2019 | 6 | 15.23 | 80.11 | 8.2 | 33.61 | 8.2 | 24.8 | 1.44 |
| C6 | 03 Apr 2019 | 7 | 14.56 | 79.60 | 7.7 | 33.68 | 8.1 | 25.1 | 1.44 |
| C6 | 03 Apr 2019 | 8 | 14.12 | 82.43 | 7.2 | 33.64 | 8.1 | 25.1 | 1.05 |
| C6 | 03 Apr 2019 | 9 | 14.04 | 84.01 | 7.2 | 33.62 | 8.1 | 25.1 | 0.69 |
| C6 | 08 Apr 2019 | 1 | 16.11 | 78.39 | 8.3 | 33.60 | 8.1 | 24.6 | 0.64 |
| C6 | 08 Apr 2019 | 2 | 16.14 | 78.49 | 8.3 | 33.60 | 8.1 | 24.6 | 0.67 |
| C6 | 08 Apr 2019 | 3 | 15.95 | 78.35 | 8.1 | 33.62 | 8.1 | 24.7 | 0.80 |
| C6 | 08 Apr 2019 | 4 | 15.74 | 76.65 | 7.9 | 33.61 | 8.1 | 24.7 | 0.91 |
| C6 | 08 Apr 2019 | 5 | 15.71 | 76.23 | 7.8 | 33.60 | 8.1 | 24.7 | 0.86 |
| C6 | 08 Apr 2019 | 6 | 15.23 | 76.44 | 7.4 | 33.64 | 8.1 | 24.9 | 0.79 |
| C6 | 08 Apr 2019 | 7 | 14.73 | 77.32 | 7.3 | 33.64 | 8.0 | 25.0 | 0.67 |
| C6 | 08 Apr 2019 | 8 | 14.59 | 77.52 | 7.1 | 33.61 | 8.0 | 25.0 | 0.62 |
| C6 | 08 Apr 2019 | 9 | 13.93 | 78.44 | 6.6 | 33.69 | 8.0 | 25.2 | 0.56 |
| C6 | 08 Apr 2019 | 10 | 13.38 | 77.30 | 6.4 | 33.62 | 7.9 | 25.2 | 0.52 |
| C6 | 08 Apr 2019 | 11 | 13.94 | 75.62 | 6.7 | 33.60 | 7.9 | 25.1 | 0.49 |
| C6 | 15 Apr 2019 | 1 | 16.05 | 73.59 | 8.2 | 33.62 | 8.1 | 24.7 | 1.12 |
| C6 | 15 Apr 2019 | 2 | 15.96 | 73.88 | 8.1 | 33.63 | 8.1 | 24.7 | 1.20 |
| C6 | 15 Apr 2019 | 3 | 15.05 | 75.92 | 8.0 | 33.64 | 8.1 | 24.9 | 1.74 |
| C6 | 15 Apr 2019 | 4 | 14.20 | 79.81 | 7.4 | 33.65 | 8.0 | 25.1 | 1.62 |
| C6 | 15 Apr 2019 | 5 | 13.58 | 82.94 | 6.9 | 33.64 | 8.0 | 25.2 | 1.16 |

| Station | Date | Depth (m) | Temp (°C) | XMS (%) | DO (mg/L) | Sal (ppt) | pH | Dens (σ -t) | Chlor (μ g/L) |
|---------|-------------|-----------|-----------|---------|-----------|-----------|-----|---------------------|--------------------|
| C6 | 15 Apr 2019 | 6 | 13.29 | 84.27 | 6.6 | 33.62 | 8.0 | 25.3 | 0.92 |
| C6 | 15 Apr 2019 | 7 | 13.02 | 84.80 | 6.5 | 33.63 | 8.0 | 25.3 | 0.74 |
| C6 | 15 Apr 2019 | 8 | 12.89 | 84.77 | 6.5 | 33.63 | 8.0 | 25.4 | 0.66 |
| C6 | 15 Apr 2019 | 9 | 12.79 | 84.41 | 6.6 | 33.63 | 8.0 | 25.4 | 0.56 |
| C6 | 15 Apr 2019 | 10 | 12.77 | 84.19 | 6.5 | 33.63 | 8.0 | 25.4 | 0.50 |
| C6 | 22 Apr 2019 | 1 | 16.68 | 79.81 | 8.5 | 33.63 | 8.2 | 24.5 | 0.53 |
| C6 | 22 Apr 2019 | 2 | 16.66 | 79.75 | 8.5 | 33.63 | 8.2 | 24.5 | 0.59 |
| C6 | 22 Apr 2019 | 3 | 16.62 | 79.63 | 8.5 | 33.63 | 8.2 | 24.6 | 0.72 |
| C6 | 22 Apr 2019 | 4 | 16.61 | 79.30 | 8.5 | 33.63 | 8.2 | 24.6 | 0.82 |
| C6 | 22 Apr 2019 | 5 | 16.61 | 79.28 | 8.4 | 33.63 | 8.2 | 24.6 | 0.90 |
| C6 | 22 Apr 2019 | 6 | 16.57 | 79.09 | 8.3 | 33.63 | 8.2 | 24.6 | 0.98 |
| C6 | 22 Apr 2019 | 7 | 16.38 | 78.58 | 7.8 | 33.65 | 8.2 | 24.6 | 0.94 |
| C6 | 22 Apr 2019 | 8 | 15.05 | 79.71 | 6.9 | 33.73 | 8.1 | 25.0 | 0.71 |
| C6 | 22 Apr 2019 | 9 | 13.93 | 76.64 | 6.7 | 33.65 | 8.0 | 25.2 | 0.55 |
| C6 | 29 Apr 2019 | 1 | 17.33 | 80.88 | 8.7 | 33.65 | 8.1 | 24.4 | 0.65 |
| C6 | 29 Apr 2019 | 2 | 17.35 | 81.23 | 8.6 | 33.66 | 8.1 | 24.4 | 0.71 |
| C6 | 29 Apr 2019 | 3 | 17.35 | 81.55 | 8.6 | 33.66 | 8.1 | 24.4 | 0.72 |
| C6 | 29 Apr 2019 | 4 | 17.29 | 81.59 | 8.6 | 33.66 | 8.1 | 24.4 | 0.73 |
| C6 | 29 Apr 2019 | 5 | 17.27 | 81.62 | 8.6 | 33.65 | 8.1 | 24.4 | 0.74 |
| C6 | 29 Apr 2019 | 6 | 17.09 | 81.69 | 8.4 | 33.67 | 8.1 | 24.5 | 0.73 |
| C6 | 29 Apr 2019 | 7 | 16.66 | 82.06 | 7.9 | 33.68 | 8.0 | 24.6 | 0.70 |
| C6 | 29 Apr 2019 | 8 | 14.48 | 82.89 | 7.4 | 33.67 | 8.0 | 25.1 | 0.61 |
| C6 | 29 Apr 2019 | 9 | 15.17 | 83.43 | 7.7 | 33.61 | 7.9 | 24.9 | 0.60 |
| C7 | 03 Apr 2019 | 1 | 15.70 | 78.36 | 8.9 | 33.59 | 8.2 | 24.7 | 1.98 |
| C7 | 03 Apr 2019 | 2 | 15.71 | 78.62 | 8.8 | 33.59 | 8.2 | 24.7 | 2.03 |
| C7 | 03 Apr 2019 | 3 | 15.69 | 78.39 | 8.9 | 33.59 | 8.2 | 24.7 | 2.35 |
| C7 | 03 Apr 2019 | 4 | 15.63 | 78.30 | 8.8 | 33.59 | 8.2 | 24.7 | 2.79 |
| C7 | 03 Apr 2019 | 5 | 15.53 | 77.84 | 8.8 | 33.59 | 8.2 | 24.8 | 2.94 |
| C7 | 03 Apr 2019 | 6 | 15.45 | 77.37 | 8.9 | 33.59 | 8.2 | 24.8 | 3.36 |
| C7 | 03 Apr 2019 | 7 | 15.34 | 77.08 | 8.8 | 33.59 | 8.2 | 24.8 | 3.74 |
| C7 | 03 Apr 2019 | 8 | 15.22 | 76.62 | 8.6 | 33.60 | 8.2 | 24.8 | 3.95 |
| C7 | 03 Apr 2019 | 9 | 14.98 | 76.20 | 8.6 | 33.60 | 8.2 | 24.9 | 4.40 |
| C7 | 03 Apr 2019 | 10 | 14.85 | 75.93 | 8.4 | 33.62 | 8.2 | 24.9 | 4.61 |
| C7 | 03 Apr 2019 | 11 | 14.47 | 75.65 | 8.2 | 33.62 | 8.1 | 25.0 | 4.90 |
| C7 | 03 Apr 2019 | 12 | 13.85 | 74.27 | 7.8 | 33.64 | 8.1 | 25.2 | 5.25 |
| C7 | 03 Apr 2019 | 13 | 13.54 | 72.39 | 7.6 | 33.63 | 8.1 | 25.2 | 5.74 |
| C7 | 03 Apr 2019 | 14 | 13.39 | 73.45 | 7.5 | 33.62 | 8.1 | 25.2 | 6.91 |
| C7 | 03 Apr 2019 | 15 | 13.02 | 71.26 | 7.2 | 33.64 | 8.1 | 25.3 | 7.29 |
| C7 | 03 Apr 2019 | 16 | 12.83 | 72.28 | 6.9 | 33.63 | 8.0 | 25.4 | 7.34 |
| C7 | 03 Apr 2019 | 17 | 12.77 | 74.04 | 6.7 | 33.62 | 8.0 | 25.4 | 6.29 |
| C7 | 03 Apr 2019 | 18 | 12.76 | 75.14 | 6.7 | 33.62 | 8.0 | 25.4 | 6.11 |
| C7 | 08 Apr 2019 | 1 | 16.19 | 80.34 | 8.6 | 33.59 | 8.1 | 24.6 | 0.79 |
| C7 | 08 Apr 2019 | 2 | 15.73 | 79.99 | 8.4 | 33.63 | 8.1 | 24.8 | 0.91 |
| C7 | 08 Apr 2019 | 3 | 14.90 | 79.32 | 8.4 | 33.62 | 8.1 | 24.9 | 1.04 |
| C7 | 08 Apr 2019 | 4 | 14.55 | 79.66 | 8.2 | 33.60 | 8.1 | 25.0 | 1.02 |
| C7 | 08 Apr 2019 | 5 | 14.26 | 80.45 | 8.3 | 33.59 | 8.1 | 25.0 | 1.24 |
| C7 | 08 Apr 2019 | 6 | 14.12 | 81.06 | 8.2 | 33.59 | 8.1 | 25.1 | 1.33 |
| C7 | 08 Apr 2019 | 7 | 14.02 | 81.60 | 8.2 | 33.58 | 8.1 | 25.1 | 1.49 |
| C7 | 08 Apr 2019 | 8 | 13.95 | 82.05 | 8.0 | 33.58 | 8.1 | 25.1 | 1.68 |
| C7 | 08 Apr 2019 | 9 | 13.90 | 81.73 | 7.9 | 33.59 | 8.0 | 25.1 | 1.96 |
| C7 | 08 Apr 2019 | 10 | 13.81 | 80.98 | 7.8 | 33.60 | 8.0 | 25.1 | 2.04 |

| Station | Date | Depth (m) | Temp (°C) | XMS (%) | DO (mg/L) | Sal (ppt) | pH | Dens (σ-t) | Chlor (µg/L) |
|---------|-------------|-----------|-----------|---------|-----------|-----------|-----|------------|--------------|
| C7 | 08 Apr 2019 | 11 | 13.69 | 80.89 | 7.8 | 33.59 | 8.0 | 25.2 | 2.34 |
| C7 | 08 Apr 2019 | 12 | 13.66 | 80.93 | 7.7 | 33.60 | 8.0 | 25.2 | 2.35 |
| C7 | 08 Apr 2019 | 13 | 13.56 | 81.19 | 7.6 | 33.60 | 8.0 | 25.2 | 2.38 |
| C7 | 08 Apr 2019 | 14 | 13.50 | 81.39 | 7.5 | 33.60 | 8.0 | 25.2 | 2.29 |
| C7 | 08 Apr 2019 | 15 | 13.53 | 81.55 | 7.4 | 33.60 | 8.0 | 25.2 | 2.11 |
| C7 | 08 Apr 2019 | 16 | 13.45 | 81.65 | 7.3 | 33.61 | 8.0 | 25.2 | 1.92 |
| C7 | 08 Apr 2019 | 17 | 13.42 | 81.78 | 7.1 | 33.61 | 8.0 | 25.2 | 1.55 |
| C7 | 08 Apr 2019 | 18 | 13.40 | 80.80 | 7.0 | 33.61 | 8.0 | 25.2 | 1.26 |
| C7 | 15 Apr 2019 | 1 | 15.91 | 74.22 | 8.3 | 33.60 | 8.1 | 24.7 | 1.52 |
| C7 | 15 Apr 2019 | 2 | 15.50 | 75.53 | 7.9 | 33.66 | 8.1 | 24.8 | 1.62 |
| C7 | 15 Apr 2019 | 3 | 13.71 | 80.44 | 7.1 | 33.64 | 8.0 | 25.2 | 1.58 |
| C7 | 15 Apr 2019 | 4 | 13.14 | 81.96 | 6.6 | 33.63 | 8.0 | 25.3 | 1.53 |
| C7 | 15 Apr 2019 | 5 | 12.61 | 83.70 | 6.2 | 33.63 | 7.9 | 25.4 | 1.21 |
| C7 | 15 Apr 2019 | 6 | 12.42 | 84.50 | 6.0 | 33.63 | 7.9 | 25.4 | 1.12 |
| C7 | 15 Apr 2019 | 7 | 12.35 | 84.85 | 6.0 | 33.63 | 7.9 | 25.5 | 1.17 |
| C7 | 15 Apr 2019 | 8 | 12.31 | 84.89 | 6.0 | 33.63 | 7.9 | 25.5 | 1.17 |
| C7 | 15 Apr 2019 | 9 | 12.23 | 85.01 | 5.9 | 33.64 | 7.9 | 25.5 | 1.21 |
| C7 | 15 Apr 2019 | 10 | 11.97 | 85.53 | 5.6 | 33.65 | 7.9 | 25.6 | 1.02 |
| C7 | 15 Apr 2019 | 11 | 11.93 | 85.55 | 5.6 | 33.65 | 7.9 | 25.6 | 0.90 |
| C7 | 15 Apr 2019 | 12 | 11.95 | 85.48 | 5.5 | 33.65 | 7.9 | 25.5 | 0.89 |
| C7 | 15 Apr 2019 | 13 | 11.87 | 85.21 | 5.5 | 33.65 | 7.9 | 25.6 | 0.85 |
| C7 | 15 Apr 2019 | 14 | 11.87 | 85.25 | 5.5 | 33.65 | 7.9 | 25.6 | 0.84 |
| C7 | 15 Apr 2019 | 15 | 11.87 | 85.27 | 5.5 | 33.66 | 7.9 | 25.6 | 0.84 |
| C7 | 15 Apr 2019 | 16 | 11.86 | 85.31 | 5.5 | 33.66 | 7.9 | 25.6 | 0.88 |
| C7 | 15 Apr 2019 | 17 | 11.86 | 85.29 | 5.5 | 33.66 | 7.9 | 25.6 | 0.86 |
| C7 | 15 Apr 2019 | 18 | 11.87 | 85.16 | 5.4 | 33.66 | 7.9 | 25.6 | 0.85 |
| C7 | 15 Apr 2019 | 19 | 11.88 | 85.27 | 5.5 | 33.66 | 7.9 | 25.6 | 0.88 |
| C7 | 22 Apr 2019 | 1 | 16.65 | 81.26 | 8.3 | 33.62 | 8.1 | 24.5 | 0.65 |
| C7 | 22 Apr 2019 | 2 | 16.66 | 82.02 | 8.3 | 33.62 | 8.1 | 24.5 | 0.64 |
| C7 | 22 Apr 2019 | 3 | 16.59 | 82.50 | 8.3 | 33.62 | 8.1 | 24.6 | 0.65 |
| C7 | 22 Apr 2019 | 4 | 16.41 | 82.55 | 8.3 | 33.63 | 8.1 | 24.6 | 0.69 |
| C7 | 22 Apr 2019 | 5 | 16.16 | 82.70 | 8.3 | 33.62 | 8.1 | 24.6 | 0.79 |
| C7 | 22 Apr 2019 | 6 | 16.05 | 82.38 | 8.3 | 33.62 | 8.1 | 24.7 | 0.97 |
| C7 | 22 Apr 2019 | 7 | 15.89 | 82.16 | 8.2 | 33.62 | 8.1 | 24.7 | 1.13 |
| C7 | 22 Apr 2019 | 8 | 15.69 | 82.06 | 8.2 | 33.61 | 8.1 | 24.7 | 1.27 |
| C7 | 22 Apr 2019 | 9 | 15.61 | 81.99 | 8.1 | 33.62 | 8.1 | 24.8 | 1.37 |
| C7 | 22 Apr 2019 | 10 | 15.52 | 81.95 | 8.1 | 33.61 | 8.1 | 24.8 | 1.40 |
| C7 | 22 Apr 2019 | 11 | 15.51 | 82.01 | 8.1 | 33.60 | 8.1 | 24.8 | 1.45 |
| C7 | 22 Apr 2019 | 12 | 15.49 | 81.91 | 7.9 | 33.61 | 8.1 | 24.8 | 1.49 |
| C7 | 22 Apr 2019 | 13 | 15.28 | 81.98 | 7.8 | 33.62 | 8.1 | 24.8 | 1.48 |
| C7 | 22 Apr 2019 | 14 | 15.19 | 82.13 | 7.8 | 33.61 | 8.1 | 24.9 | 1.45 |
| C7 | 22 Apr 2019 | 15 | 14.94 | 82.39 | 7.5 | 33.64 | 8.1 | 24.9 | 1.40 |
| C7 | 22 Apr 2019 | 16 | 14.38 | 82.71 | 7.3 | 33.66 | 8.1 | 25.1 | 1.25 |
| C7 | 22 Apr 2019 | 17 | 14.04 | 83.47 | 7.1 | 33.63 | 8.0 | 25.1 | 1.02 |
| C7 | 22 Apr 2019 | 18 | 13.67 | 83.86 | 7.0 | 33.67 | 8.0 | 25.2 | 0.86 |
| C7 | 29 Apr 2019 | 1 | 17.22 | 81.52 | 8.3 | 33.65 | 8.0 | 24.4 | 0.70 |
| C7 | 29 Apr 2019 | 2 | 17.22 | 83.04 | 8.3 | 33.65 | 8.0 | 24.4 | 0.72 |
| C7 | 29 Apr 2019 | 3 | 17.23 | 83.20 | 8.3 | 33.65 | 8.0 | 24.4 | 0.74 |
| C7 | 29 Apr 2019 | 4 | 17.23 | 83.17 | 8.2 | 33.65 | 8.0 | 24.4 | 0.76 |
| C7 | 29 Apr 2019 | 5 | 17.20 | 83.13 | 8.2 | 33.65 | 8.0 | 24.4 | 0.78 |
| C7 | 29 Apr 2019 | 6 | 17.06 | 82.85 | 8.2 | 33.66 | 8.0 | 24.5 | 0.83 |
| C7 | 29 Apr 2019 | 7 | 16.56 | 82.08 | 8.3 | 33.67 | 8.0 | 24.6 | 1.01 |

| Station | Date | Depth (m) | Temp (°C) | XMS (%) | DO (mg/L) | Sal (ppt) | pH | Dens (σ -t) | Chlor (μ g/L) |
|---------|-------------|-----------|-----------|---------|-----------|-----------|-----|---------------------|--------------------|
| C7 | 29 Apr 2019 | 8 | 16.19 | 80.98 | 8.3 | 33.65 | 8.0 | 24.7 | 1.29 |
| C7 | 29 Apr 2019 | 9 | 15.41 | 79.95 | 8.2 | 33.67 | 8.0 | 24.9 | 1.65 |
| C7 | 29 Apr 2019 | 10 | 14.85 | 79.13 | 8.2 | 33.63 | 8.0 | 24.9 | 2.00 |
| C7 | 29 Apr 2019 | 11 | 14.49 | 79.50 | 8.0 | 33.64 | 8.0 | 25.0 | 2.16 |
| C7 | 29 Apr 2019 | 12 | 14.22 | 80.37 | 7.8 | 33.62 | 8.0 | 25.1 | 2.15 |
| C7 | 29 Apr 2019 | 13 | 14.00 | 80.59 | 7.6 | 33.62 | 8.0 | 25.1 | 2.15 |
| C7 | 29 Apr 2019 | 14 | 13.76 | 81.78 | 7.4 | 33.62 | 8.0 | 25.2 | 2.07 |
| C7 | 29 Apr 2019 | 15 | 13.49 | 82.52 | 7.0 | 33.63 | 8.0 | 25.2 | 1.76 |
| C7 | 29 Apr 2019 | 16 | 13.15 | 83.81 | 6.6 | 33.64 | 7.9 | 25.3 | 1.37 |
| C7 | 29 Apr 2019 | 17 | 12.83 | 85.08 | 6.4 | 33.63 | 7.9 | 25.4 | 0.96 |
| C8 | 03 Apr 2019 | 1 | 15.59 | 76.58 | 9.0 | 33.58 | 8.2 | 24.8 | 1.62 |
| C8 | 03 Apr 2019 | 2 | 15.58 | 77.23 | 9.0 | 33.59 | 8.2 | 24.8 | 1.90 |
| C8 | 03 Apr 2019 | 3 | 15.56 | 77.24 | 9.0 | 33.59 | 8.2 | 24.8 | 2.13 |
| C8 | 03 Apr 2019 | 4 | 15.54 | 77.21 | 9.1 | 33.59 | 8.2 | 24.8 | 2.67 |
| C8 | 03 Apr 2019 | 5 | 15.55 | 77.05 | 9.0 | 33.59 | 8.2 | 24.8 | 3.04 |
| C8 | 03 Apr 2019 | 6 | 15.54 | 77.33 | 9.0 | 33.59 | 8.2 | 24.8 | 3.14 |
| C8 | 03 Apr 2019 | 7 | 15.49 | 77.23 | 8.9 | 33.60 | 8.2 | 24.8 | 3.08 |
| C8 | 03 Apr 2019 | 8 | 15.15 | 76.76 | 8.7 | 33.64 | 8.2 | 24.9 | 3.50 |
| C8 | 03 Apr 2019 | 9 | 14.33 | 72.63 | 8.7 | 33.62 | 8.2 | 25.0 | 6.27 |
| C8 | 03 Apr 2019 | 10 | 14.28 | 70.48 | 8.6 | 33.62 | 8.2 | 25.1 | 7.43 |
| C8 | 03 Apr 2019 | 11 | 13.82 | 69.41 | 8.3 | 33.62 | 8.1 | 25.2 | 8.69 |
| C8 | 03 Apr 2019 | 12 | 13.56 | 70.73 | 8.0 | 33.61 | 8.1 | 25.2 | 9.64 |
| C8 | 03 Apr 2019 | 13 | 13.46 | 71.23 | 7.8 | 33.62 | 8.1 | 25.2 | 9.49 |
| C8 | 03 Apr 2019 | 14 | 13.06 | 72.65 | 7.3 | 33.62 | 8.1 | 25.3 | 8.63 |
| C8 | 03 Apr 2019 | 15 | 13.01 | 73.37 | 7.0 | 33.62 | 8.0 | 25.3 | 8.38 |
| C8 | 03 Apr 2019 | 16 | 12.80 | 76.68 | 6.8 | 33.62 | 8.0 | 25.4 | 6.52 |
| C8 | 03 Apr 2019 | 17 | 12.73 | 76.87 | 6.6 | 33.63 | 8.0 | 25.4 | 5.82 |
| C8 | 03 Apr 2019 | 18 | 12.71 | 77.26 | 6.5 | 33.63 | 8.0 | 25.4 | 5.56 |
| C8 | 03 Apr 2019 | 19 | 12.68 | 77.56 | 6.4 | 33.63 | 8.0 | 25.4 | 5.55 |
| C8 | 03 Apr 2019 | 20 | 12.65 | 77.21 | 6.4 | 33.63 | 8.0 | 25.4 | 5.35 |
| C8 | 08 Apr 2019 | 1 | 16.20 | 74.51 | 8.6 | 33.58 | 8.1 | 24.6 | 1.20 |
| C8 | 08 Apr 2019 | 2 | 16.16 | 76.36 | 8.7 | 33.59 | 8.1 | 24.6 | 1.38 |
| C8 | 08 Apr 2019 | 3 | 16.01 | 77.61 | 8.5 | 33.60 | 8.1 | 24.7 | 1.54 |
| C8 | 08 Apr 2019 | 4 | 15.78 | 77.47 | 8.3 | 33.60 | 8.1 | 24.7 | 2.01 |
| C8 | 08 Apr 2019 | 5 | 15.07 | 76.54 | 8.0 | 33.62 | 8.1 | 24.9 | 2.53 |
| C8 | 08 Apr 2019 | 6 | 14.91 | 75.82 | 7.9 | 33.59 | 8.1 | 24.9 | 2.88 |
| C8 | 08 Apr 2019 | 7 | 14.86 | 76.34 | 8.0 | 33.59 | 8.1 | 24.9 | 2.64 |
| C8 | 08 Apr 2019 | 8 | 14.65 | 77.18 | 8.0 | 33.61 | 8.1 | 25.0 | 2.67 |
| C8 | 08 Apr 2019 | 9 | 14.33 | 78.15 | 8.1 | 33.61 | 8.1 | 25.0 | 2.52 |
| C8 | 08 Apr 2019 | 10 | 14.15 | 79.35 | 8.0 | 33.60 | 8.1 | 25.1 | 2.49 |
| C8 | 08 Apr 2019 | 11 | 14.03 | 79.93 | 8.0 | 33.59 | 8.1 | 25.1 | 2.45 |
| C8 | 08 Apr 2019 | 12 | 13.92 | 80.50 | 7.9 | 33.59 | 8.0 | 25.1 | 2.42 |
| C8 | 08 Apr 2019 | 13 | 13.84 | 80.78 | 7.7 | 33.59 | 8.0 | 25.1 | 2.44 |
| C8 | 08 Apr 2019 | 14 | 13.61 | 81.04 | 7.4 | 33.62 | 8.0 | 25.2 | 2.16 |
| C8 | 08 Apr 2019 | 15 | 13.54 | 80.94 | 7.2 | 33.61 | 8.0 | 25.2 | 1.85 |
| C8 | 08 Apr 2019 | 16 | 13.48 | 80.86 | 7.1 | 33.61 | 8.0 | 25.2 | 1.61 |
| C8 | 08 Apr 2019 | 17 | 13.35 | 80.61 | 6.8 | 33.62 | 8.0 | 25.3 | 1.29 |
| C8 | 08 Apr 2019 | 18 | 13.15 | 80.92 | 6.6 | 33.62 | 8.0 | 25.3 | 1.14 |
| C8 | 08 Apr 2019 | 19 | 13.08 | 80.27 | 6.5 | 33.62 | 7.9 | 25.3 | 1.05 |
| C8 | 15 Apr 2019 | 1 | 15.66 | 71.77 | 7.8 | 33.59 | 8.0 | 24.7 | 1.81 |
| C8 | 15 Apr 2019 | 2 | 14.44 | 75.64 | 7.2 | 33.66 | 8.0 | 25.1 | 1.93 |
| C8 | 15 Apr 2019 | 3 | 13.40 | 80.64 | 6.9 | 33.62 | 8.0 | 25.2 | 1.89 |

| Station | Date | Depth (m) | Temp (°C) | XMS (%) | DO (mg/L) | Sal (ppt) | pH | Dens (σ -t) | Chlor (μ g/L) |
|---------|-------------|-----------|-----------|---------|-----------|-----------|-----|---------------------|--------------------|
| C8 | 15 Apr 2019 | 4 | 13.03 | 82.11 | 6.7 | 33.63 | 8.0 | 25.3 | 1.76 |
| C8 | 15 Apr 2019 | 5 | 12.83 | 83.22 | 6.4 | 33.62 | 7.9 | 25.4 | 1.61 |
| C8 | 15 Apr 2019 | 6 | 12.58 | 84.19 | 6.1 | 33.62 | 7.9 | 25.4 | 1.34 |
| C8 | 15 Apr 2019 | 7 | 12.55 | 84.26 | 6.1 | 33.62 | 7.9 | 25.4 | 1.28 |
| C8 | 15 Apr 2019 | 8 | 12.45 | 84.50 | 6.0 | 33.63 | 7.9 | 25.4 | 1.24 |
| C8 | 15 Apr 2019 | 9 | 12.45 | 84.52 | 6.1 | 33.63 | 7.9 | 25.4 | 1.27 |
| C8 | 15 Apr 2019 | 10 | 12.40 | 84.65 | 6.0 | 33.64 | 7.9 | 25.5 | 1.35 |
| C8 | 15 Apr 2019 | 11 | 12.27 | 85.20 | 5.9 | 33.64 | 7.9 | 25.5 | 1.30 |
| C8 | 15 Apr 2019 | 12 | 12.27 | 85.41 | 5.9 | 33.63 | 7.9 | 25.5 | 1.31 |
| C8 | 15 Apr 2019 | 13 | 12.24 | 85.36 | 5.9 | 33.64 | 7.9 | 25.5 | 1.29 |
| C8 | 15 Apr 2019 | 14 | 12.20 | 85.37 | 5.8 | 33.64 | 7.9 | 25.5 | 1.32 |
| C8 | 15 Apr 2019 | 15 | 12.16 | 85.26 | 5.7 | 33.64 | 7.9 | 25.5 | 1.07 |
| C8 | 15 Apr 2019 | 16 | 12.10 | 85.23 | 5.7 | 33.65 | 7.9 | 25.5 | 0.99 |
| C8 | 15 Apr 2019 | 17 | 12.06 | 85.26 | 5.6 | 33.65 | 7.9 | 25.5 | 0.92 |
| C8 | 15 Apr 2019 | 18 | 12.06 | 85.28 | 5.6 | 33.65 | 7.9 | 25.5 | 0.89 |
| C8 | 15 Apr 2019 | 19 | 12.07 | 85.15 | 5.6 | 33.65 | 7.9 | 25.5 | 0.85 |
| C8 | 22 Apr 2019 | 1 | 16.78 | 82.07 | 8.3 | 33.62 | 8.2 | 24.5 | 0.48 |
| C8 | 22 Apr 2019 | 2 | 16.78 | 82.09 | 8.3 | 33.62 | 8.2 | 24.5 | 0.49 |
| C8 | 22 Apr 2019 | 3 | 16.73 | 82.39 | 8.3 | 33.63 | 8.2 | 24.5 | 0.51 |
| C8 | 22 Apr 2019 | 4 | 16.68 | 82.71 | 8.3 | 33.62 | 8.2 | 24.5 | 0.55 |
| C8 | 22 Apr 2019 | 5 | 16.63 | 82.53 | 8.3 | 33.62 | 8.2 | 24.5 | 0.61 |
| C8 | 22 Apr 2019 | 6 | 16.57 | 82.50 | 8.3 | 33.62 | 8.2 | 24.6 | 0.67 |
| C8 | 22 Apr 2019 | 7 | 16.53 | 82.39 | 8.3 | 33.62 | 8.2 | 24.6 | 0.72 |
| C8 | 22 Apr 2019 | 8 | 16.51 | 82.22 | 8.3 | 33.62 | 8.2 | 24.6 | 0.78 |
| C8 | 22 Apr 2019 | 9 | 16.49 | 82.12 | 8.3 | 33.62 | 8.2 | 24.6 | 0.85 |
| C8 | 22 Apr 2019 | 10 | 16.45 | 82.18 | 8.2 | 33.62 | 8.2 | 24.6 | 0.84 |
| C8 | 22 Apr 2019 | 11 | 16.26 | 82.88 | 8.2 | 33.63 | 8.2 | 24.6 | 0.89 |
| C8 | 22 Apr 2019 | 12 | 16.09 | 82.68 | 8.3 | 33.62 | 8.1 | 24.7 | 1.13 |
| C8 | 22 Apr 2019 | 13 | 15.97 | 81.07 | 8.2 | 33.61 | 8.1 | 24.7 | 1.50 |
| C8 | 22 Apr 2019 | 14 | 15.94 | 80.63 | 8.2 | 33.61 | 8.1 | 24.7 | 1.68 |
| C8 | 22 Apr 2019 | 15 | 15.80 | 80.51 | 7.9 | 33.62 | 8.1 | 24.7 | 1.79 |
| C8 | 22 Apr 2019 | 16 | 15.54 | 80.53 | 7.4 | 33.63 | 8.1 | 24.8 | 1.77 |
| C8 | 22 Apr 2019 | 17 | 13.84 | 81.01 | 7.1 | 33.70 | 8.1 | 25.2 | 1.38 |
| C8 | 22 Apr 2019 | 18 | 13.50 | 81.50 | 7.0 | 33.61 | 8.0 | 25.2 | 1.02 |
| C8 | 22 Apr 2019 | 19 | 13.51 | 81.10 | 7.0 | 33.59 | 8.0 | 25.2 | 0.90 |
| C8 | 29 Apr 2019 | 1 | 17.12 | 82.71 | 8.5 | 33.64 | 8.0 | 24.4 | 0.66 |
| C8 | 29 Apr 2019 | 2 | 17.12 | 82.92 | 8.5 | 33.64 | 8.0 | 24.4 | 0.68 |
| C8 | 29 Apr 2019 | 3 | 17.12 | 82.90 | 8.5 | 33.64 | 8.0 | 24.4 | 0.72 |
| C8 | 29 Apr 2019 | 4 | 17.12 | 82.92 | 8.5 | 33.64 | 8.0 | 24.4 | 0.74 |
| C8 | 29 Apr 2019 | 5 | 17.12 | 82.87 | 8.6 | 33.64 | 8.0 | 24.4 | 0.76 |
| C8 | 29 Apr 2019 | 6 | 17.12 | 82.89 | 8.5 | 33.64 | 8.0 | 24.4 | 0.78 |
| C8 | 29 Apr 2019 | 7 | 17.11 | 82.89 | 8.5 | 33.64 | 8.0 | 24.4 | 0.80 |
| C8 | 29 Apr 2019 | 8 | 17.11 | 82.90 | 8.4 | 33.64 | 8.0 | 24.4 | 0.80 |
| C8 | 29 Apr 2019 | 9 | 16.43 | 81.58 | 8.1 | 33.71 | 8.0 | 24.7 | 1.01 |
| C8 | 29 Apr 2019 | 10 | 14.78 | 80.05 | 8.5 | 33.67 | 8.0 | 25.0 | 1.57 |
| C8 | 29 Apr 2019 | 11 | 14.64 | 79.41 | 8.7 | 33.60 | 8.0 | 25.0 | 2.09 |
| C8 | 29 Apr 2019 | 12 | 14.46 | 78.63 | 8.3 | 33.61 | 8.0 | 25.0 | 2.50 |
| C8 | 29 Apr 2019 | 13 | 13.75 | 78.04 | 7.8 | 33.63 | 8.0 | 25.2 | 3.08 |
| C8 | 29 Apr 2019 | 14 | 13.19 | 79.33 | 7.4 | 33.61 | 7.9 | 25.3 | 3.27 |
| C8 | 29 Apr 2019 | 15 | 12.98 | 80.88 | 7.0 | 33.60 | 7.9 | 25.3 | 2.87 |
| C8 | 29 Apr 2019 | 16 | 12.77 | 83.22 | 6.7 | 33.61 | 7.9 | 25.4 | 2.11 |
| C8 | 29 Apr 2019 | 17 | 12.66 | 83.93 | 6.4 | 33.62 | 7.9 | 25.4 | 1.62 |
| C8 | 29 Apr 2019 | 18 | 12.49 | 84.52 | 6.3 | 33.62 | 7.8 | 25.4 | 1.26 |

| Station | Date | Depth (m) | Temp (°C) | XMS (%) | DO (mg/L) | Sal (ppt) | pH | Dens (σ -t) | Chlor (μ g/L) |
|---------|-------------|-----------|-----------|---------|-----------|-----------|-----|---------------------|--------------------|
| C8 | 29 Apr 2019 | 19 | 12.54 | 84.62 | 6.2 | 33.62 | 7.8 | 25.4 | 1.03 |

NA = not available

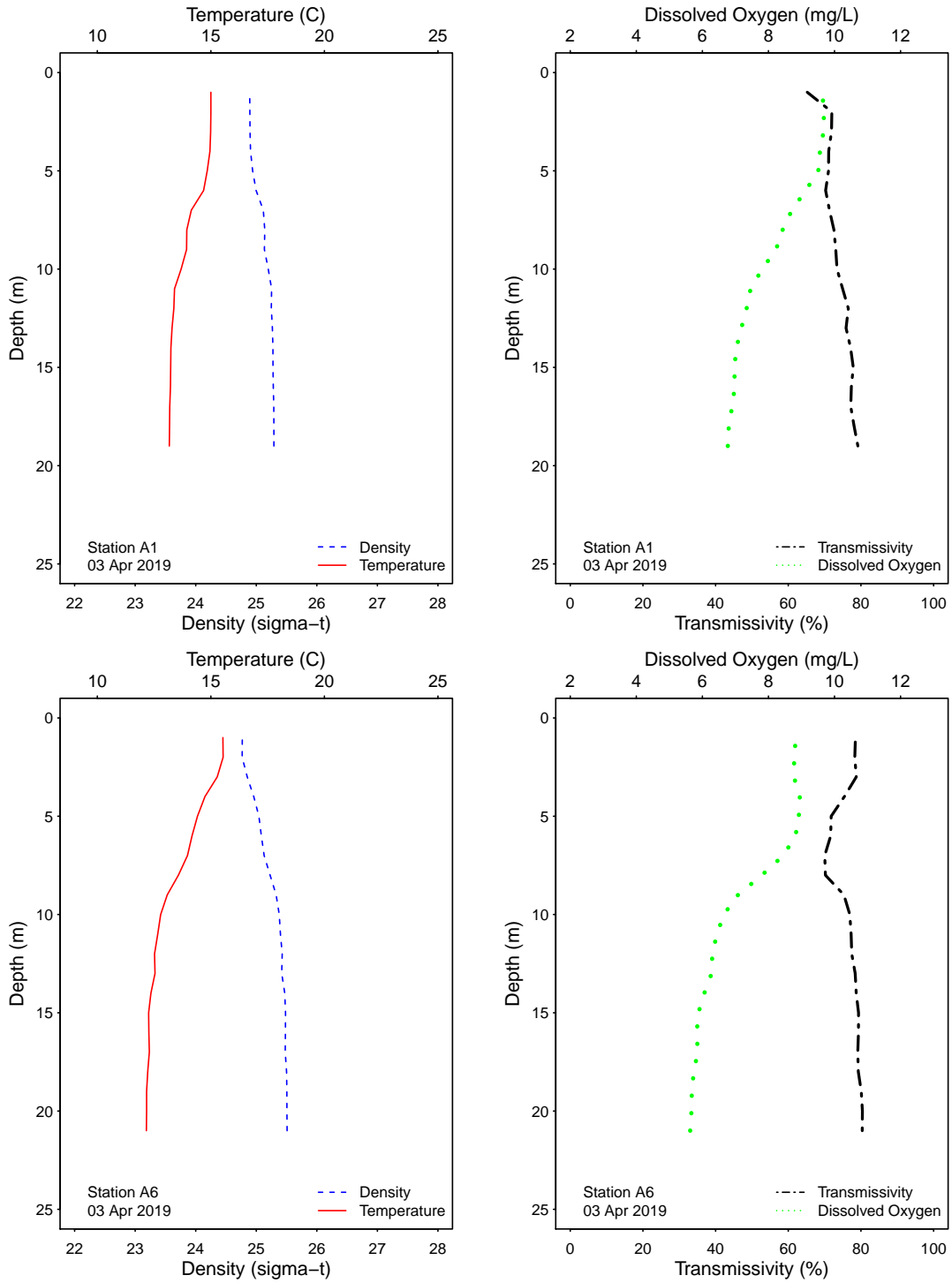


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

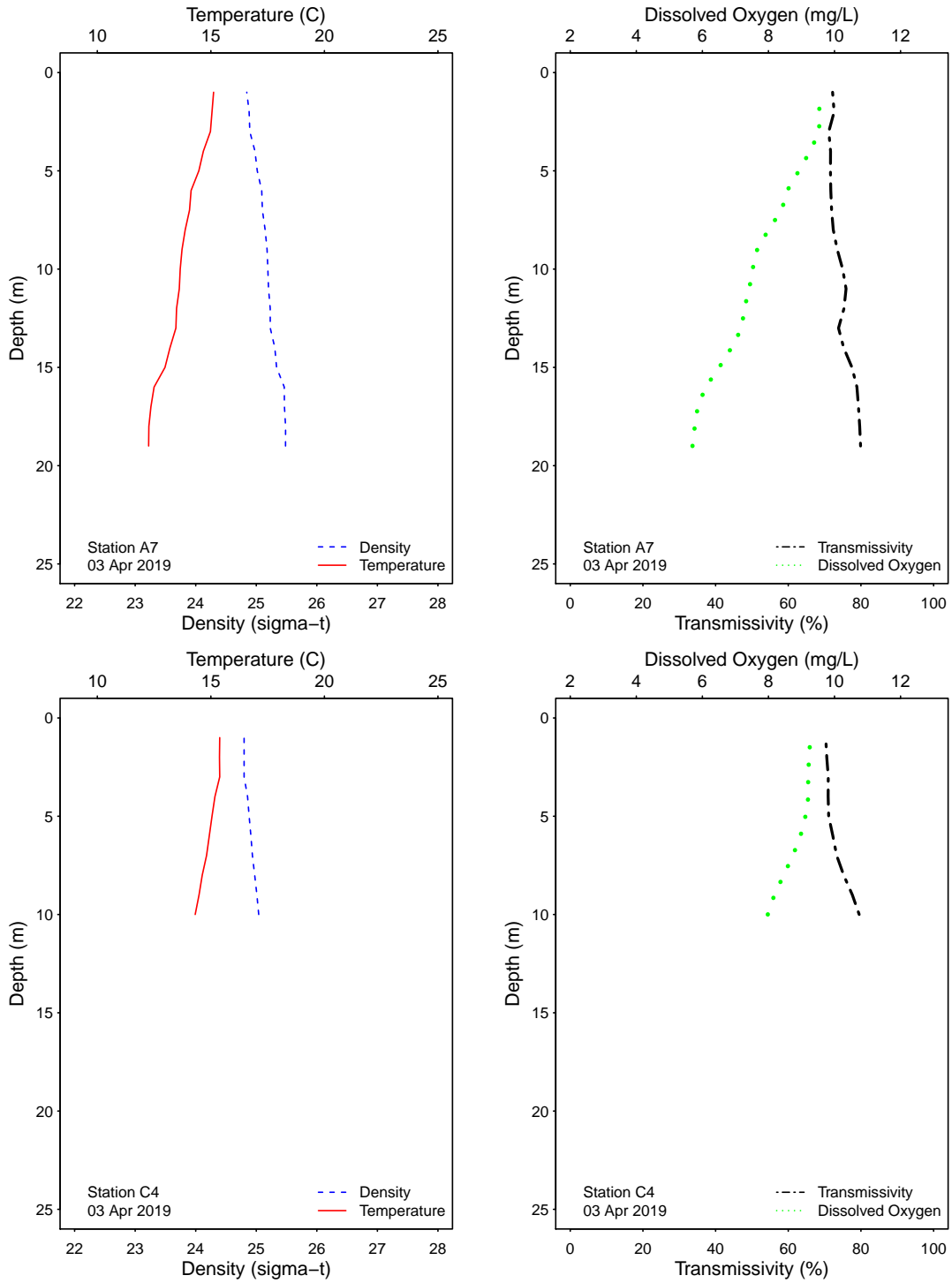


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

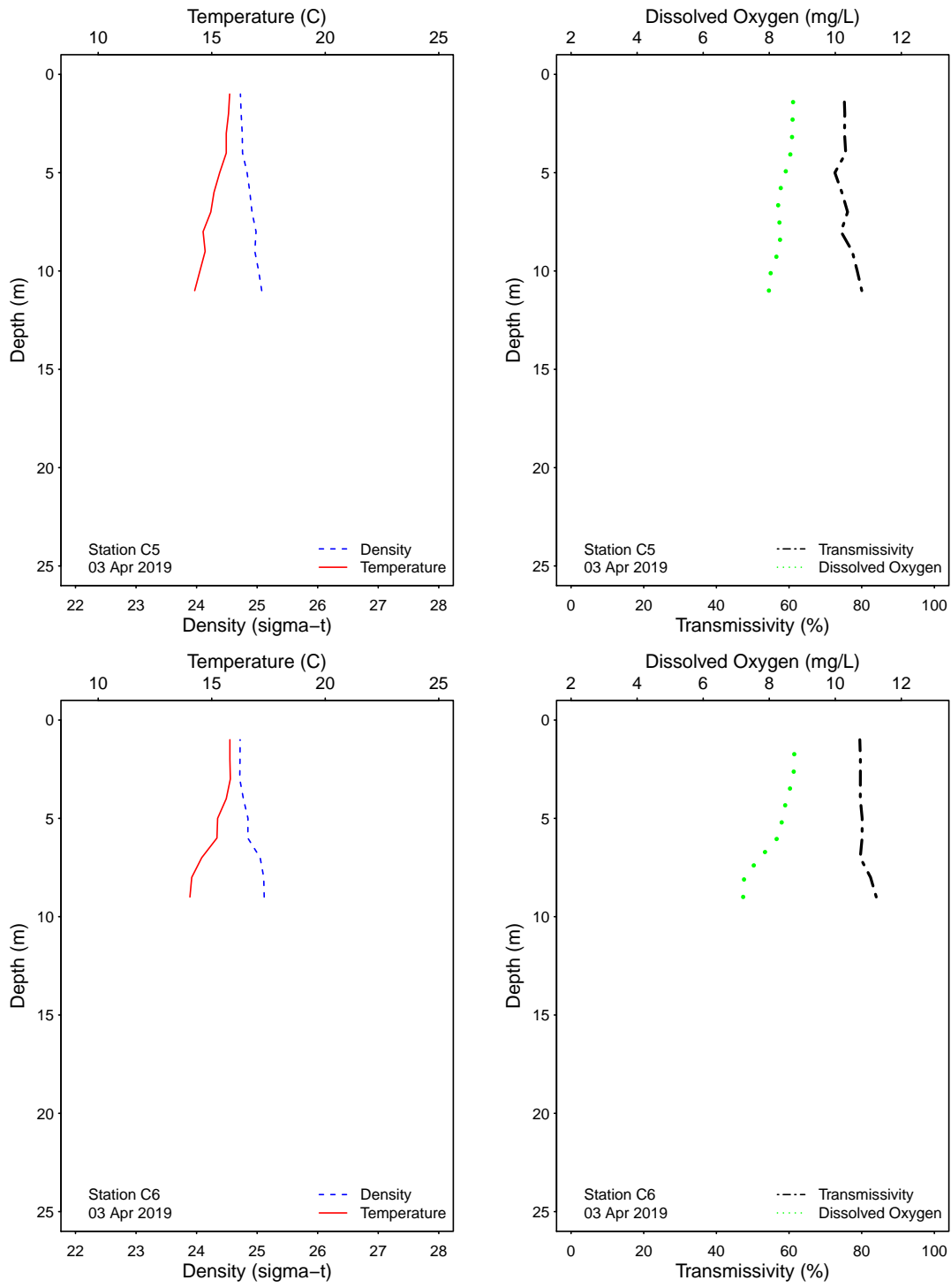


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

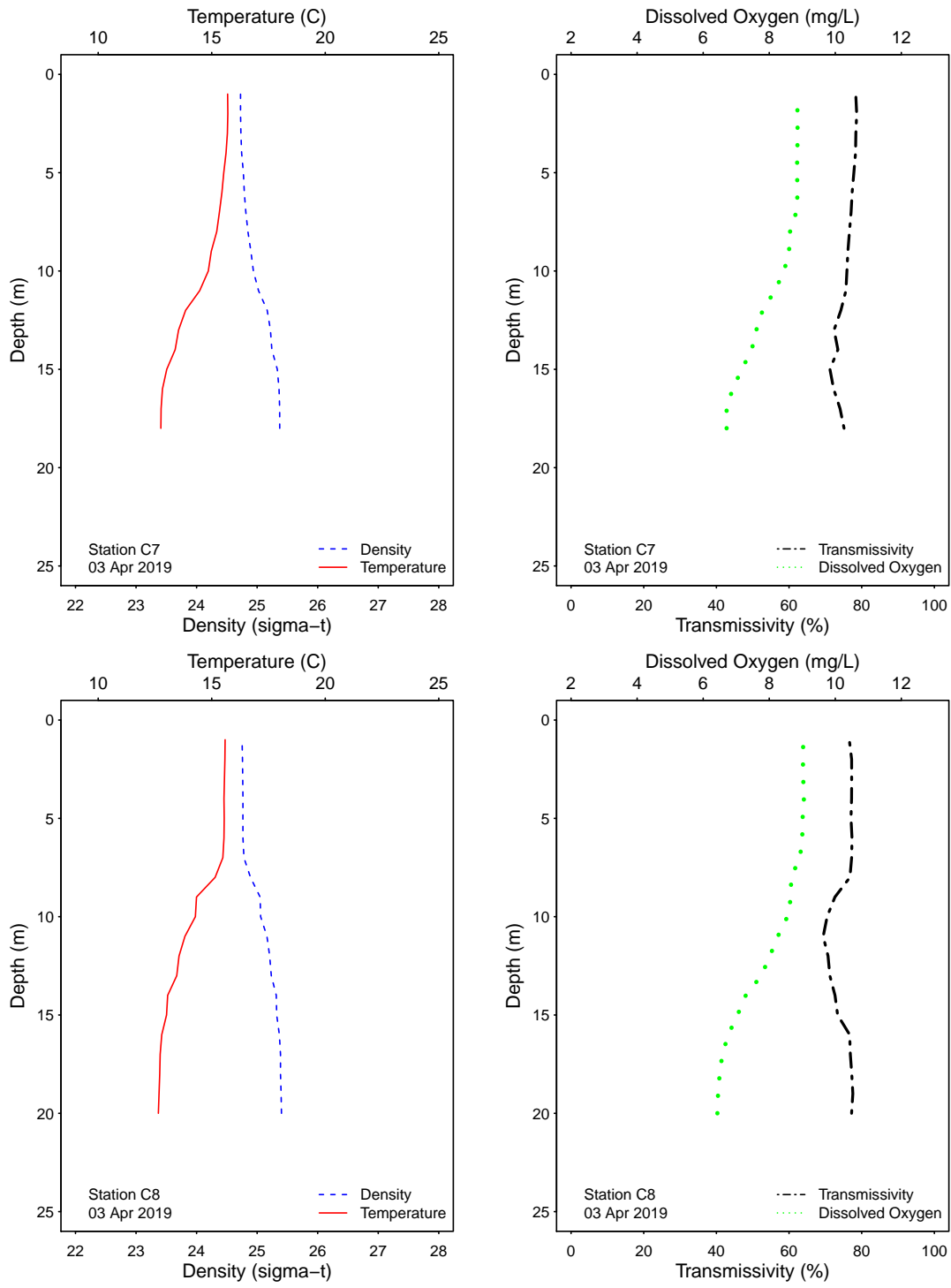


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

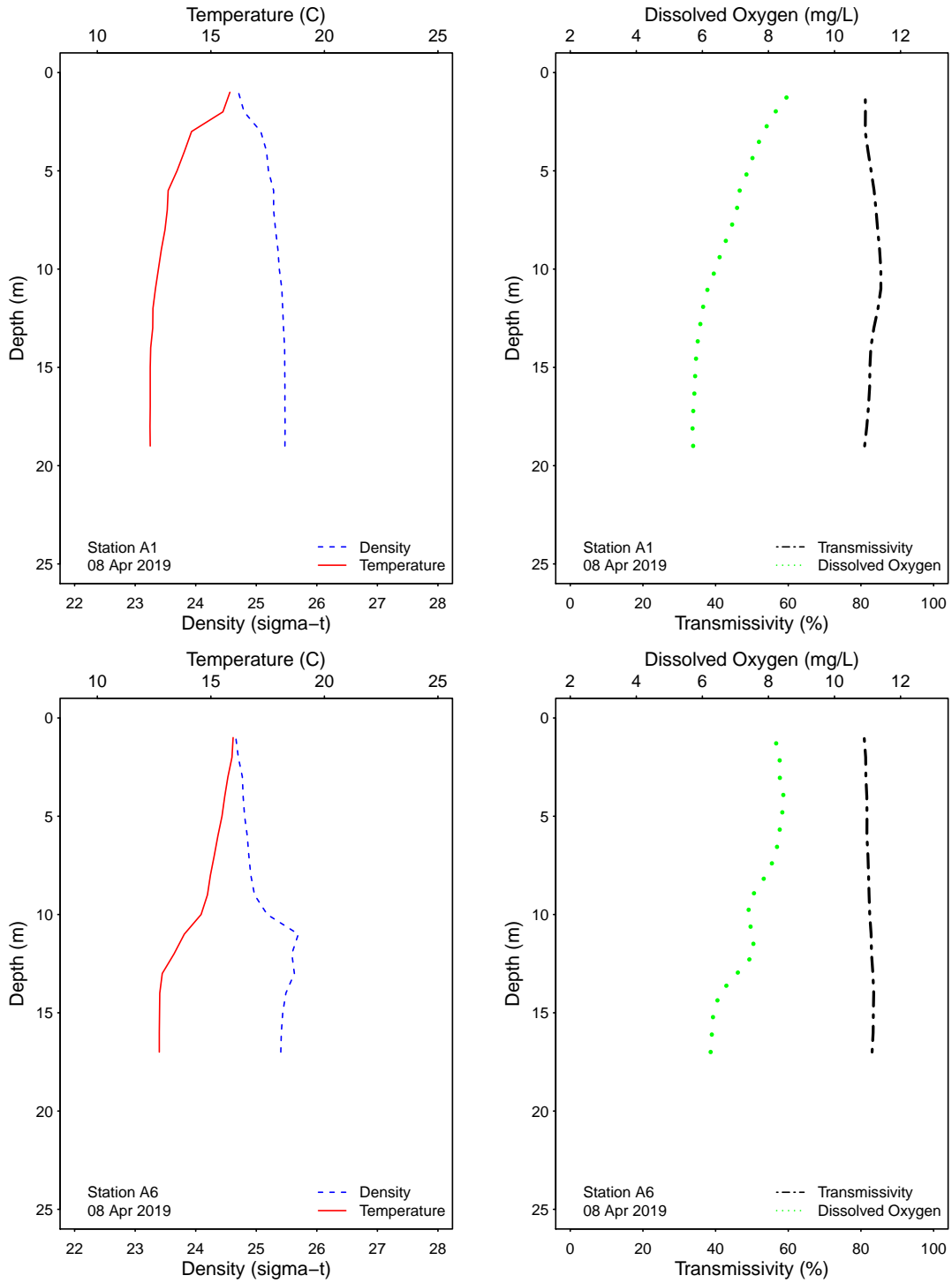


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

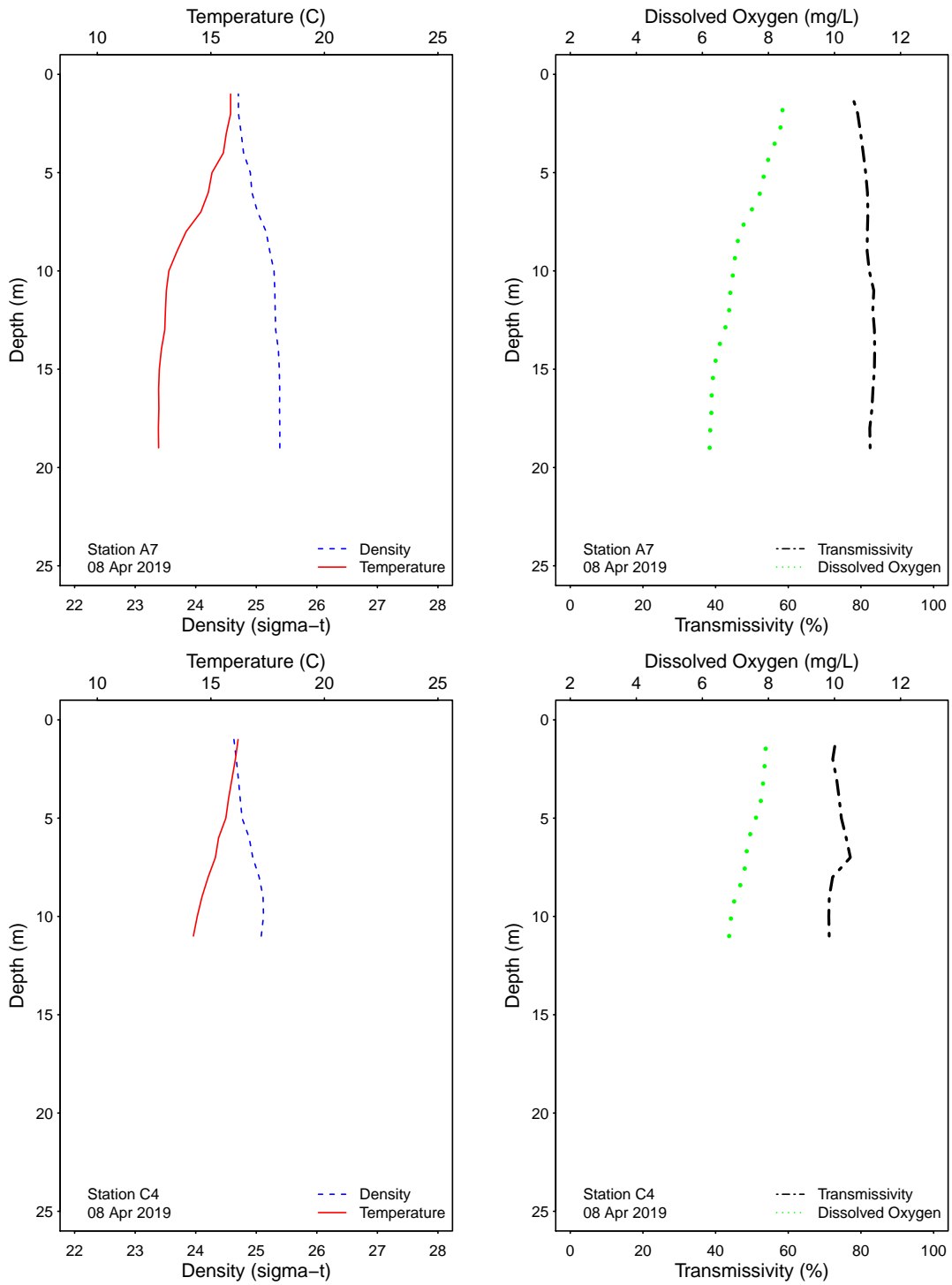


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

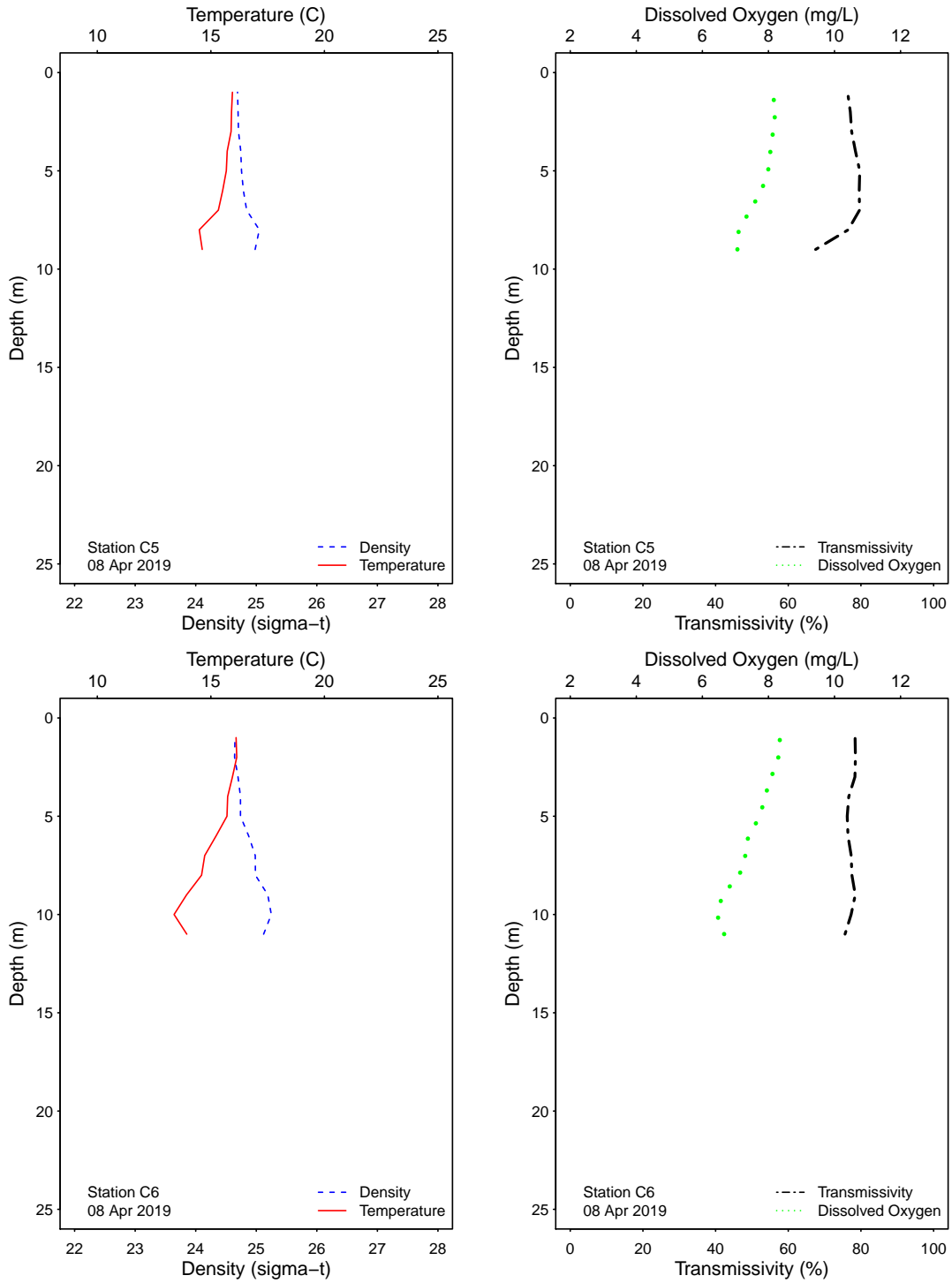


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

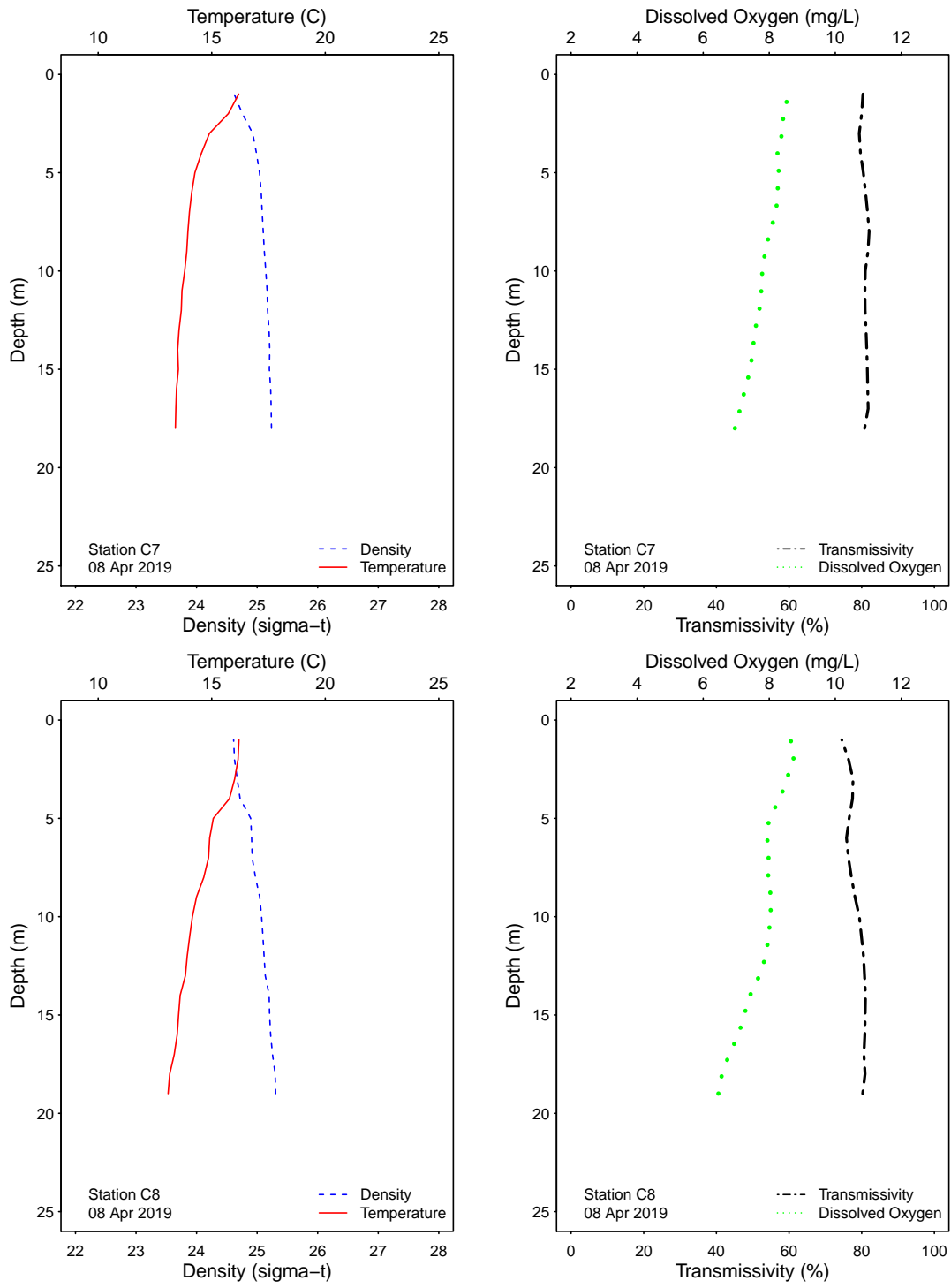


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

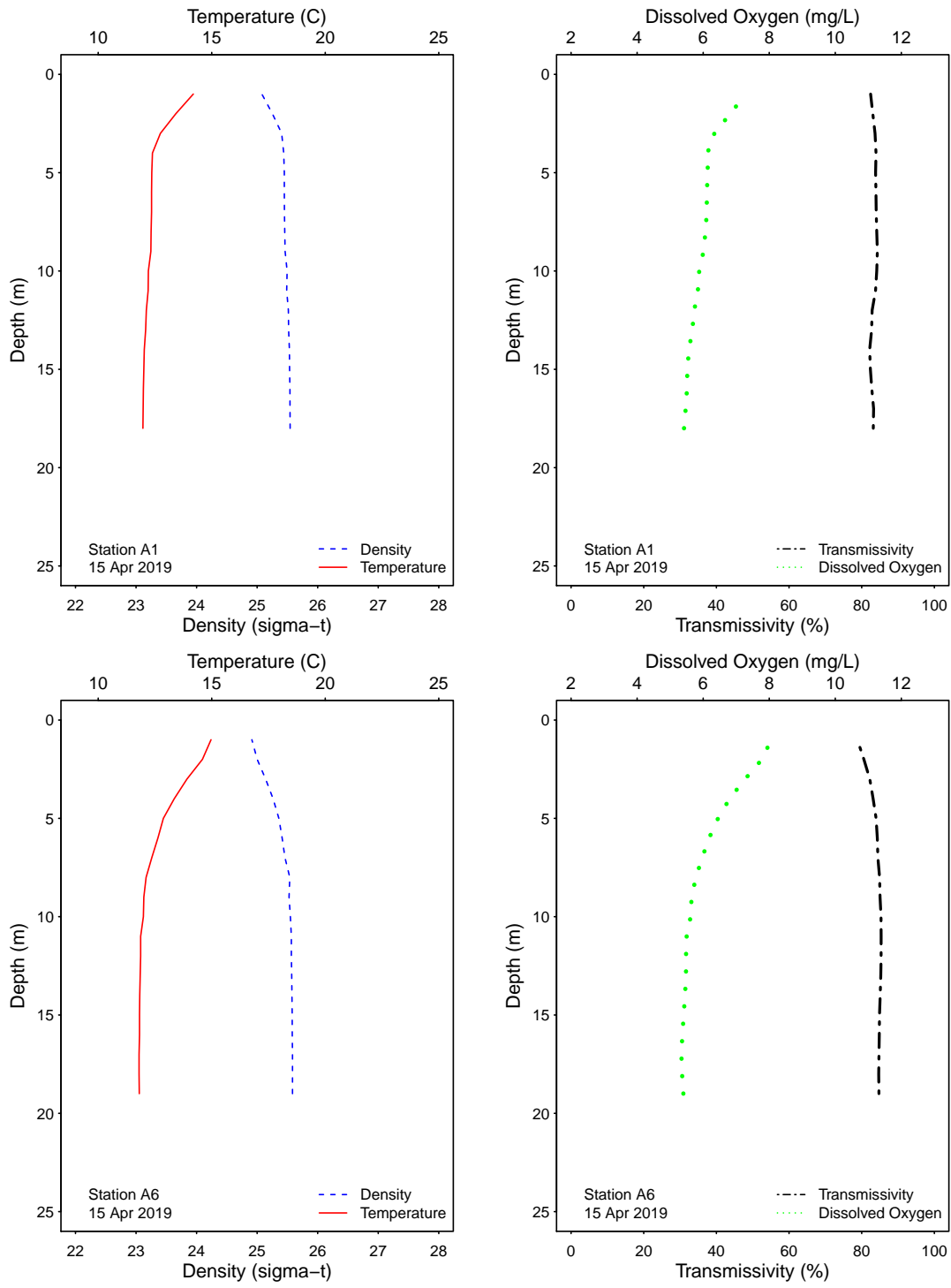


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

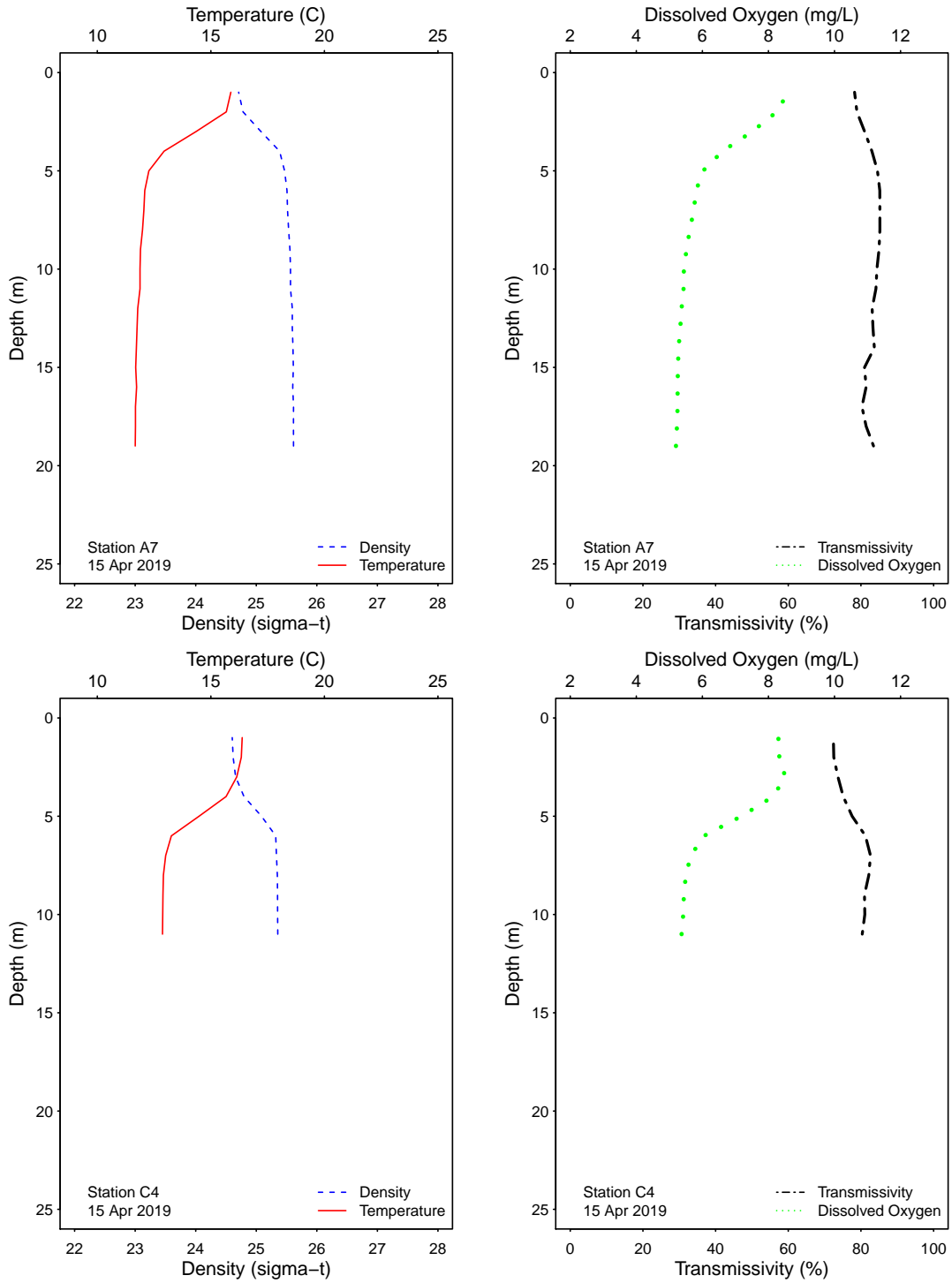


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

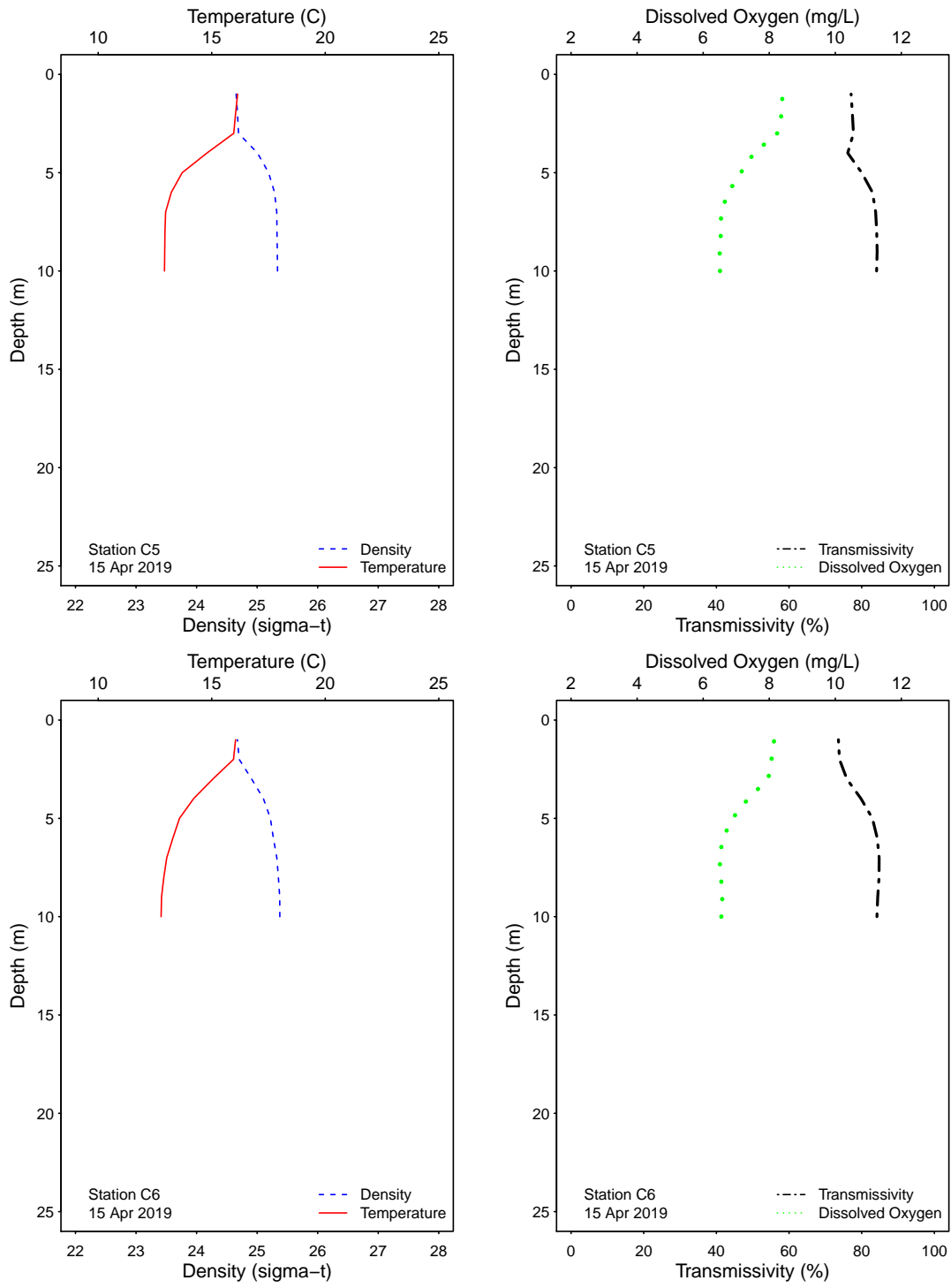


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

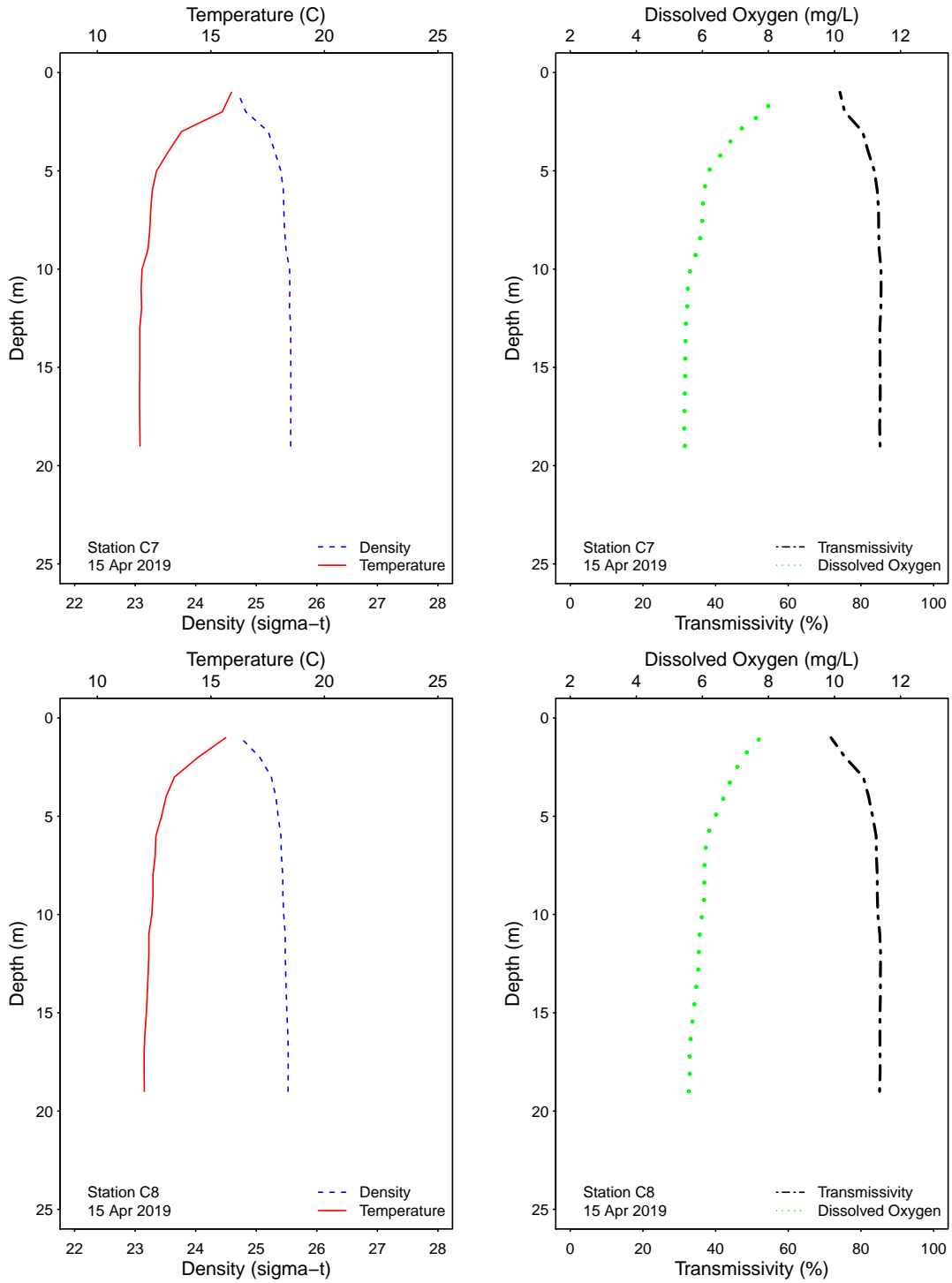


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

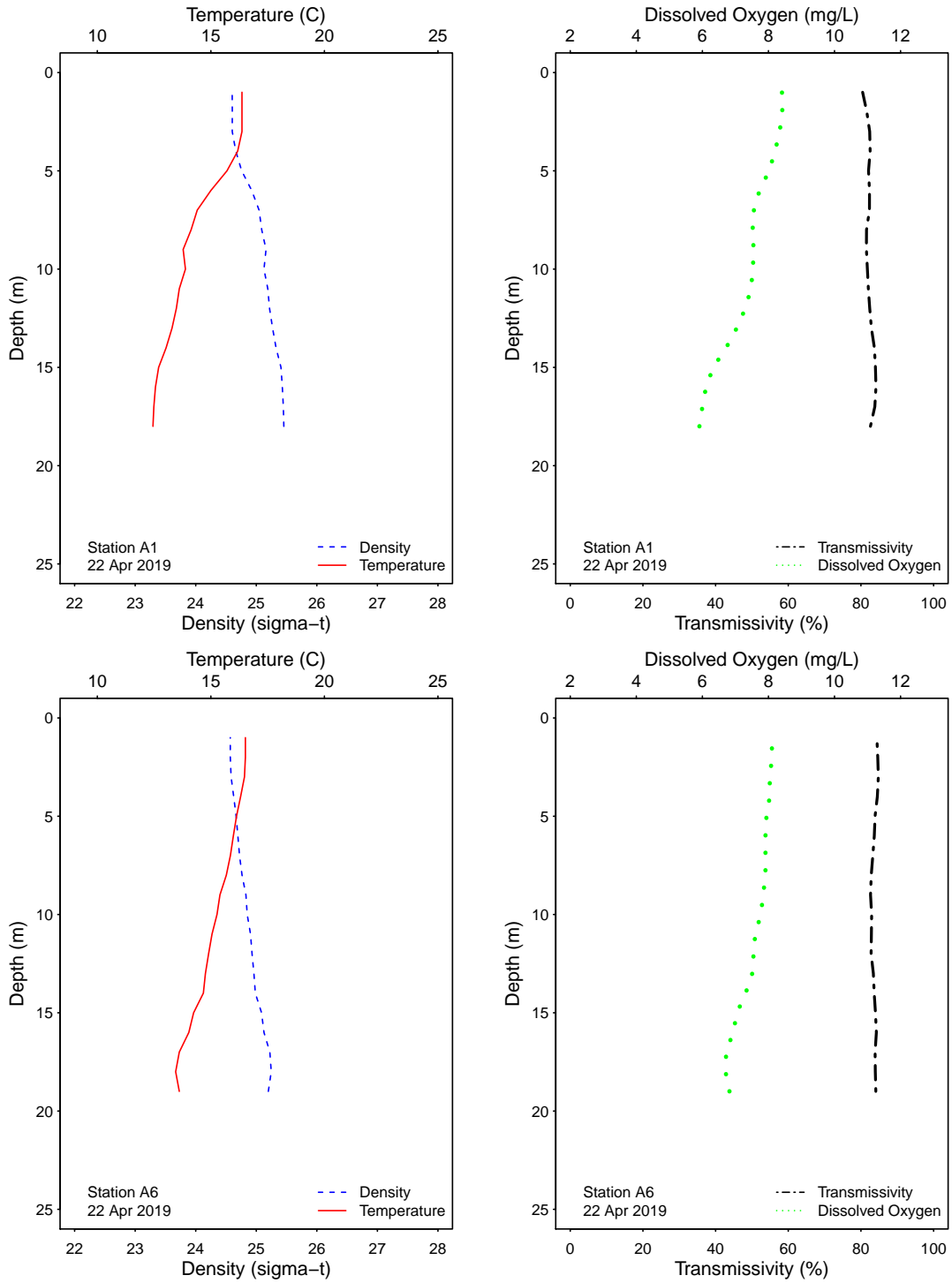


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

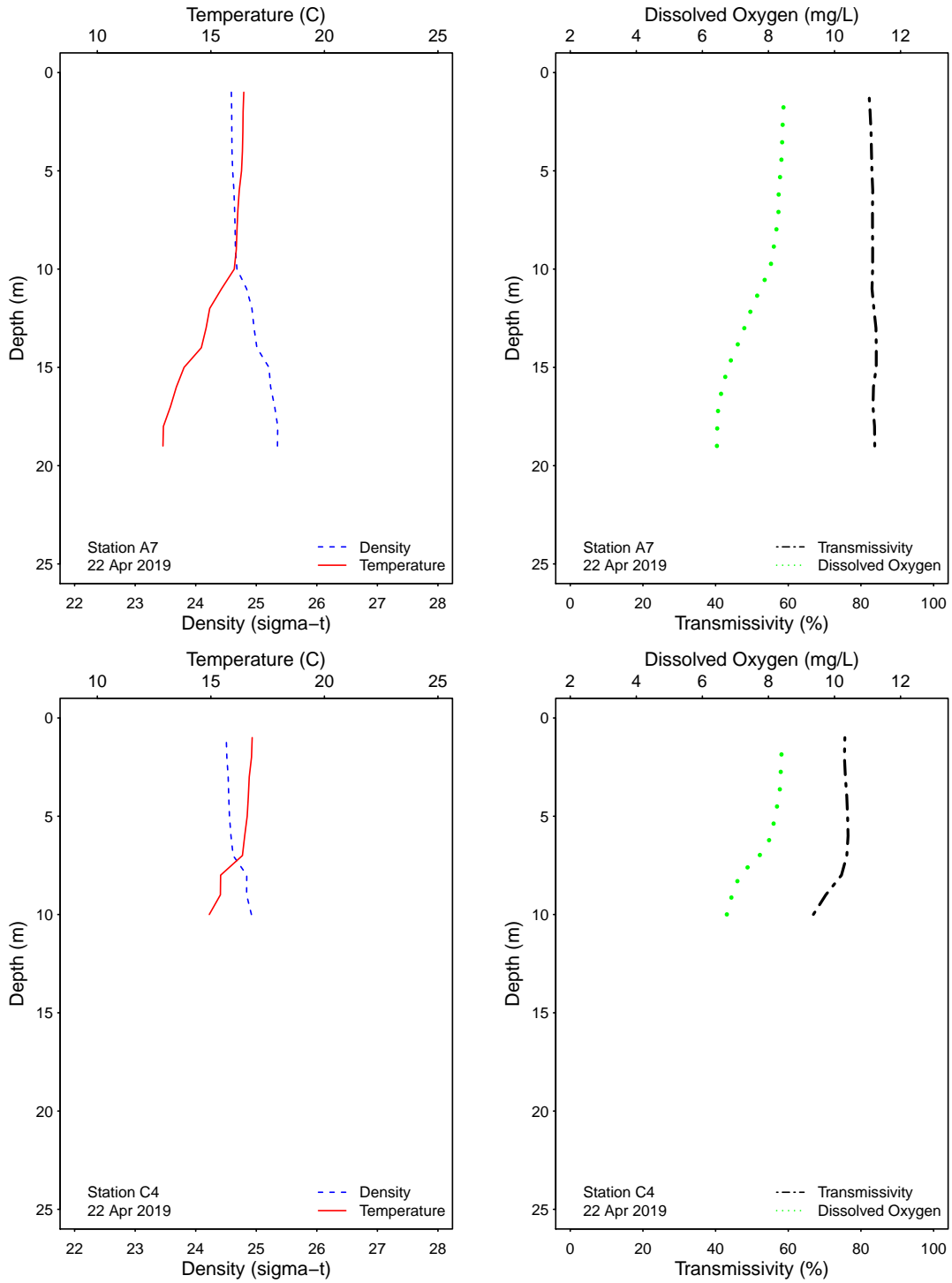


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

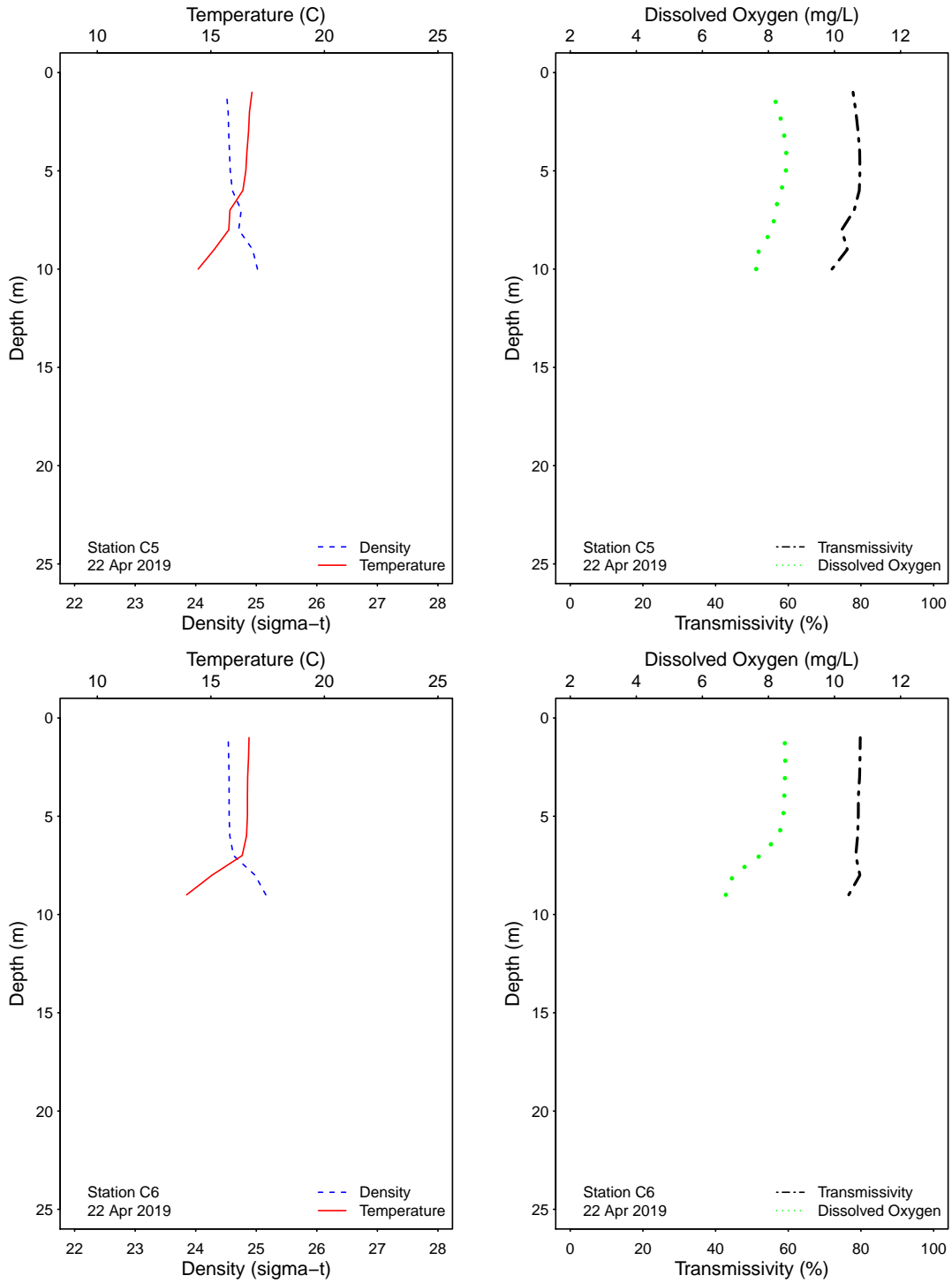


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

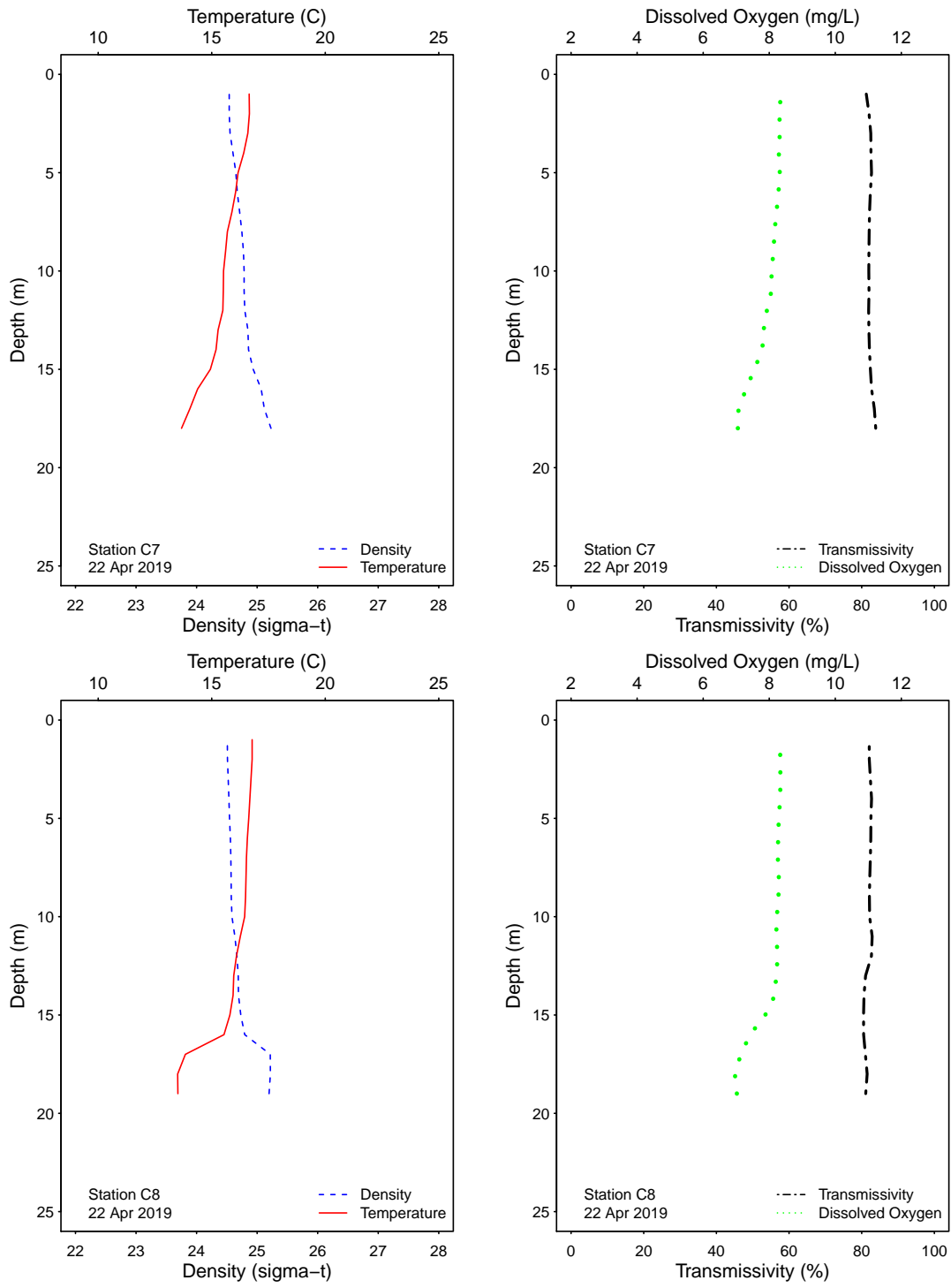


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

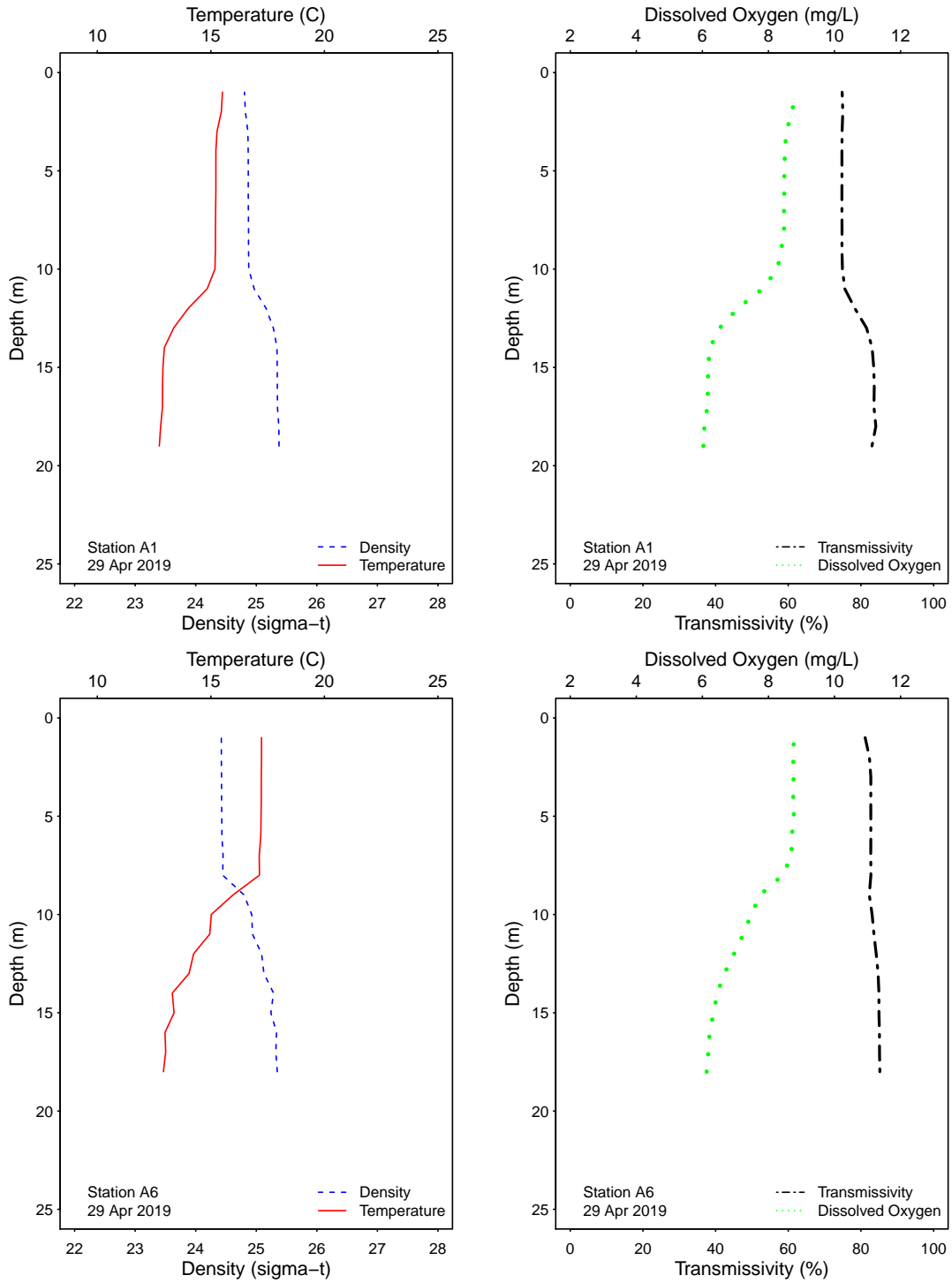


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

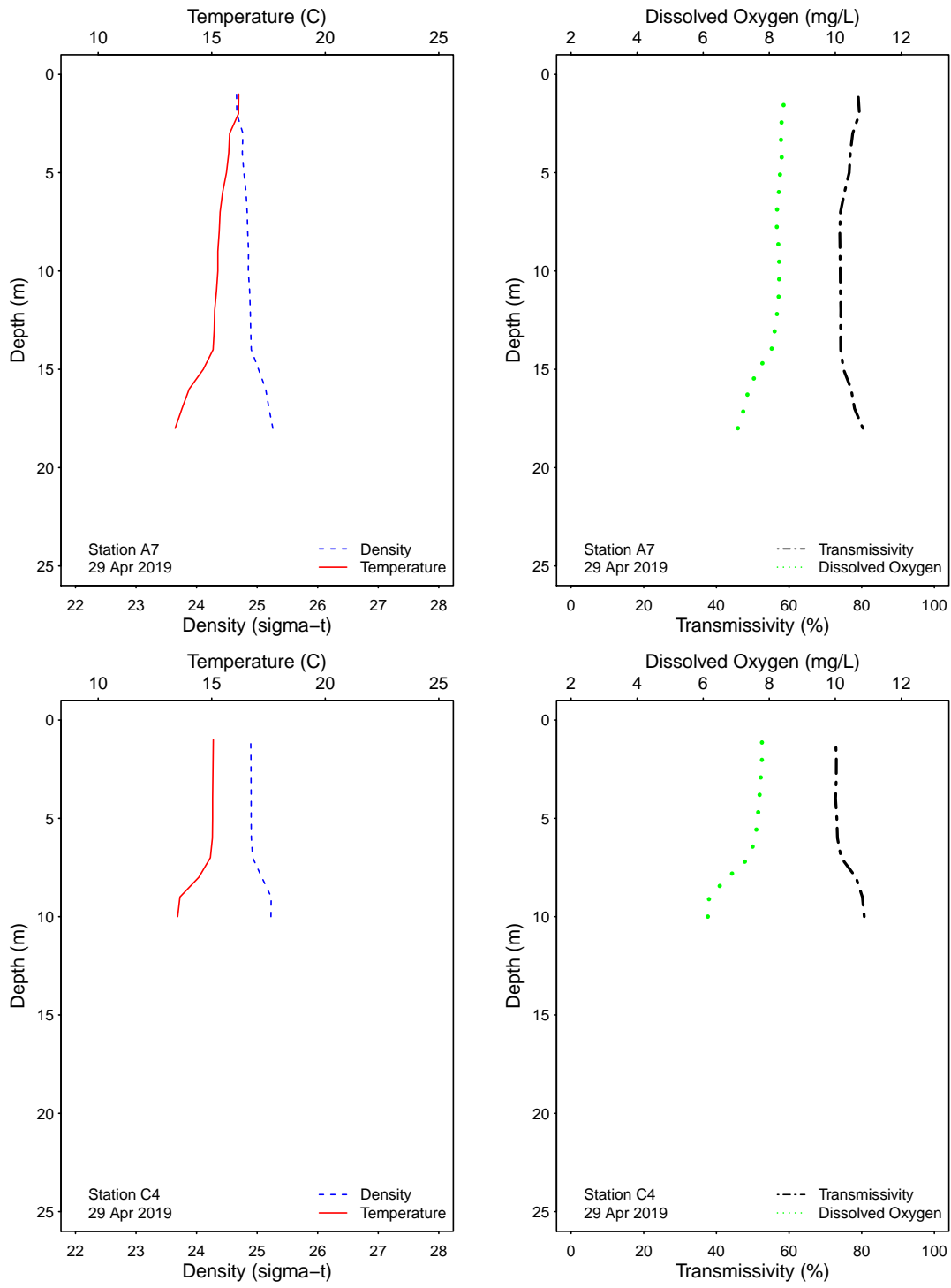


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

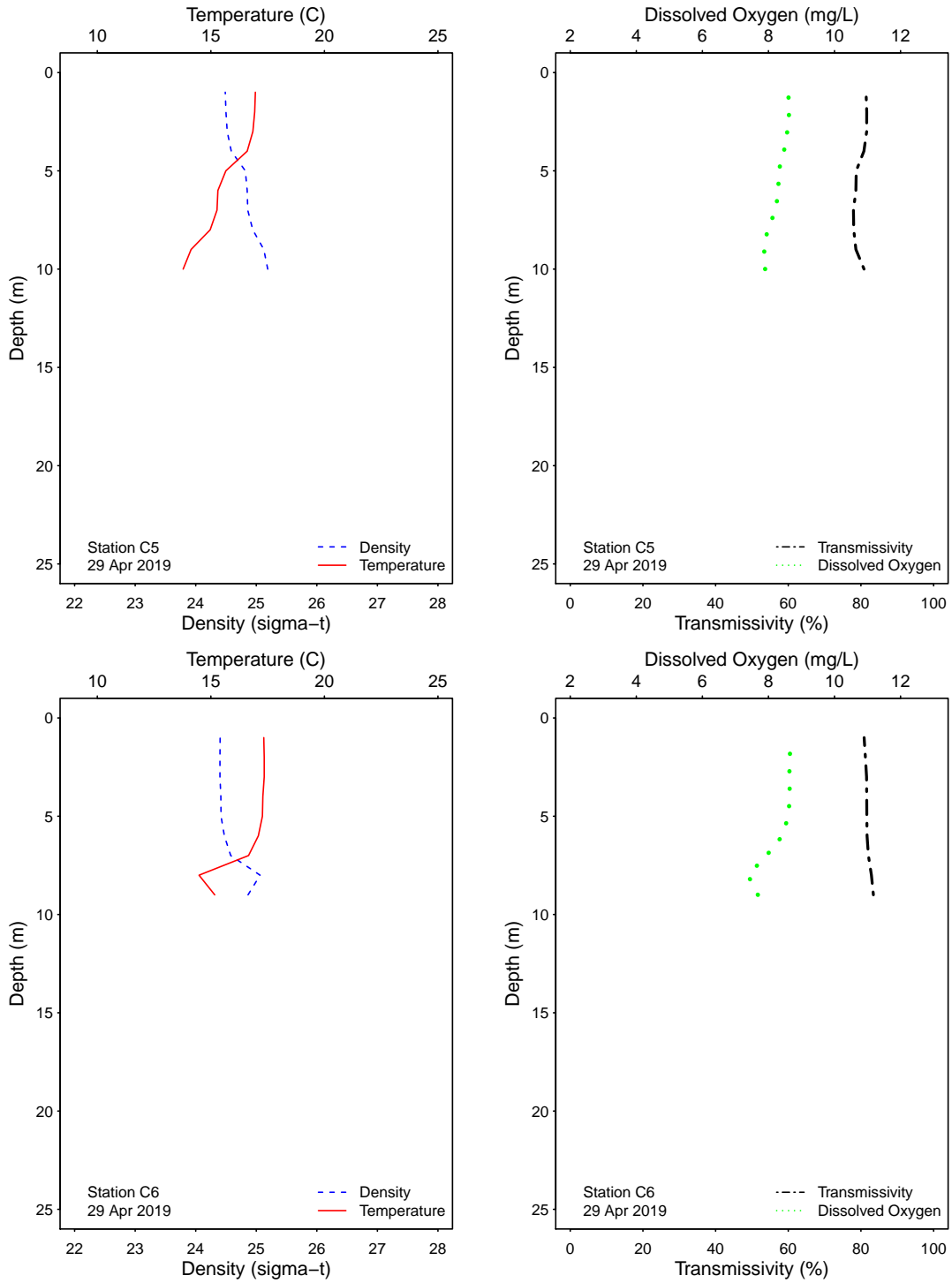


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

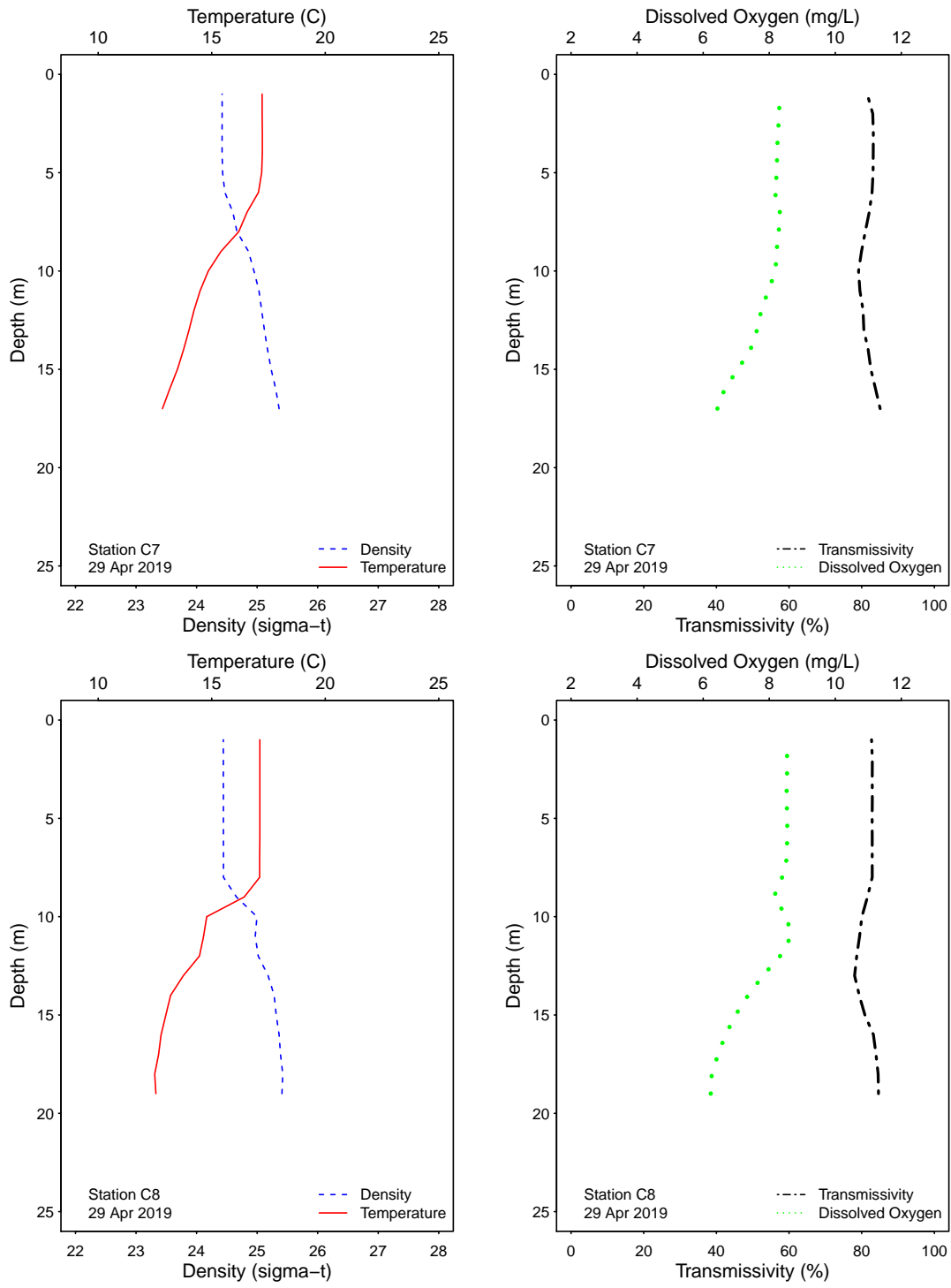


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

APPENDIX A

Quality Assurance

Table A.1

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

| Station | Date | Depth | Analyst | Procedure | Total | Fecal | Entero |
|---------|-------------|-------|---------|-----------------|-------|-------|--------|
| A7 | 03 Apr 2019 | 18 | JLT | LAB DUPLICATE | 30e | 8e | <2 |
| A7 | 08 Apr 2019 | 18 | AR | LAB DUPLICATE | 12e | <2 | <2 |
| A7 | 15 Apr 2019 | 18 | AE | LAB DUPLICATE | 110 | 18e | <2 |
| A7 | 22 Apr 2019 | 18 | AR | LAB DUPLICATE | <20 | 2e | <2 |
| A7 | 29 Apr 2019 | 18 | AR | LAB DUPLICATE | <2 | <2 | 2e |
| C7 | 03 Apr 2019 | 18 | LMA | LAB DUPLICATE | 2e | 2e | 2e |
| C7 | 08 Apr 2019 | 18 | AE | LAB DUPLICATE | <2 | <2 | <2 |
| C7 | 15 Apr 2019 | 18 | AR | LAB DUPLICATE | 32e | 6e | <2 |
| C7 | 22 Apr 2019 | 18 | AR | LAB DUPLICATE | 12e | <2 | <2 |
| C7 | 29 Apr 2019 | 18 | AR | LAB DUPLICATE | <2 | <2 | <2 |
| C8 | 03 Apr 2019 | 12 | JLT | LAB DUPLICATE | 2e | <2 | <2 |
| C8 | 08 Apr 2019 | 12 | JLT | LAB DUPLICATE | <2 | <2 | <2 |
| C8 | 15 Apr 2019 | 12 | JLT | LAB DUPLICATE | 2e | 2e | <2 |
| C8 | 22 Apr 2019 | 12 | AE | LAB DUPLICATE | <2 | <2 | <2 |
| C8 | 29 Apr 2019 | 12 | AR | LAB DUPLICATE | <2 | <2 | <2 |
| D12 | 03 Apr 2019 | | AR | FIELD DUPLICATE | 2e | <2 | <2 |
| D12 | 03 Apr 2019 | | AR | LAB DUPLICATE | <2 | <2 | <2 |
| D12 | 10 Apr 2019 | | JLT | FIELD DUPLICATE | <20 | <2 | 2e |
| D12 | 10 Apr 2019 | | JLT | LAB DUPLICATE | 20e | 6e | <2 |
| D12 | 18 Apr 2019 | | AR | FIELD DUPLICATE | <2 | <2 | <2 |
| D12 | 18 Apr 2019 | | AR | LAB DUPLICATE | <2 | <2 | <2 |
| D12 | 24 Apr 2019 | | AE | FIELD DUPLICATE | 16e | <2 | <2 |
| D12 | 24 Apr 2019 | | AE | LAB DUPLICATE | 12e | 10e | <2 |
| D12 | 30 Apr 2019 | | JLT | FIELD DUPLICATE | <2 | <2 | <2 |
| D12 | 30 Apr 2019 | | JLT | LAB DUPLICATE | 2e | <2 | <2 |

ns = not sampled

ND = no data

