

SOUTH BAY OCEAN OUTFALL MONTHLY RECEIVING WATERS MONITORING REPORT

SOUTH BAY WATER RECLAMATION PLANT

NPDES Permit No. CA0109045
SDRWQCB Order No. R9-2013-0006

MAY 2019

REVISED MARCH 2021

Environmental Monitoring and Technical Services
2392 Kincaid Road • Mail Station 45A • San Diego, CA 92101
Tel (619) 758-2300 Fax (619) 758-2309



April 1, 2021

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 revised May 2019 Monthly Receiving Waters Monitoring Report for the South Bay Ocean Outfall, South Bay Water Reclamation Plant as required per Order No. R9-2013-0006 as amended by Order Nos. R9-2014-0071 and R9-2017-0023, NPDES Permit No. CA0109045. This revised report is being submitted to address data integrity issues identified to the Board in the letter dated October 22, 2020, subject: "San Diego NPDES Shoreline Sampling Program Report."

This report includes raw ocean monitoring data and summaries of water quality parameters and ocean conditions measured during the month for the South Bay outfall region. Also included are summaries of compliance with the bacterial water-contact standards specified in the California Ocean Plan. These data are also presented in the monthly report submitted by the International Boundary and Water Commission, U.S. Section for discharge from the South Bay International Wastewater Treatment Plant (Order No. R9-2014-0009 as amended by Order Nos. R9-2014-0094, R9-2017-0024, R9-2019-0012, NPDES Permit No. CA0108928).

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

Sincerely,



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

PV/rk

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

INTRODUCTION

Monthly reports of water quality and ocean conditions from Playa Blanco, Mexico to Coronado, USA are submitted to the San Diego Regional Water Quality Control Board and U.S. EPA Region 9 in accordance with Order No. R9-2013-0006 as amended by Order Nos. R9-2014-0071 and R9-2017-0023, NPDES Permit No. CA0109045, for the South Bay Water Reclamation Plant (SBWRP), South Bay Ocean Outfall (SBOO). 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 SBWRP are presented in separate reports.

MATERIALS AND METHODS

Shore Stations

Water quality monitoring was conducted at 11 stations located along the shore from Playa Blanca, Mexico to Coronado, USA (see station locations map). Three sites are located south of the international border (stations S0, S2, S3), while eight sites are in the United States (stations S4–S6 and S8–S12).

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 total coliform, fecal coliform, and *Enterococcus* bacteria. Visual observations of water color and clarity, surf height, human or animal activity, and weather conditions were recorded at the time of sample collection. Wind speed and direction were measured using a hand-held anemometer with a compass.

Kelp Bed Stations

Seven kelp bed and other nearshore stations (I19, I24, I25, I26, I32, I39, I40; collectively referred to as “kelp” stations herein) were sampled four times during the month according to NPDES permit specifications. Six stations (I19, I24, I25, I26, I32, I40) are located along the 9- m depth contour, and one (I39) is located along the 18-m depth contour. Three of these stations, I25, I26, and I39, were selected based on their proximity to suitable substrates for the Imperial Beach kelp bed (see station locations map); however, this kelp bed has been historically transient and variable in terms of size and density. Thus, these three stations are only occasionally located within an area where kelp is actually found.

The seven kelp stations are sampled on a weekly basis during the month. Routine monitoring at each kelp site consists of collecting seawater samples at three discrete depths for bacteriological analyses (total coliforms, fecal coliforms, and *Enterococcus* bacteria) and generating water column profiles of various physical/chemical parameters, including water temperature, salinity, density, dissolved oxygen, pH, chlorophyll *a*, and transmissivity. Visual observations of weather and water conditions are also recorded at all stations.

Seawater samples at the kelp bed stations are primarily 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 the various physical/chemical parameters were taken using a CTD. The CTD collected these physical/chemical data at a rate ≥ 4 scans per second. The data were then internally averaged using the CTD proprietary software, Seasoft, to create water column profiles equivalent

to one reading per meter. Additionally, CTD profile data for each water sample depth are presented with the bacteriological data.

Offshore Stations

Quarterly offshore water quality sampling is typically conducted over three days during February, May, August, and November for a total of 40 stations during each month (see station locations map). These offshore stations (I1–I40) are arranged in a grid surrounding the discharge site, and are generally located along the 9, 19, 28, 38, and 55-m depth contours. The seven offshore sites designated as kelp bed stations (described above) are included as part of the monthly offshore water quality sampling, however the data from these seven stations are reported within the kelp bed station section of the report with the other four days of kelp bed water quality sampling. Monitoring at all sites included measurements of various physical/chemical parameters, including water temperature, salinity, density, dissolved oxygen, pH, chlorophyll *a*, transmissivity, and chromomorphic dissolved organic matter (CDOM). Visual observations of weather and water conditions were also recorded at all stations. Seawater samples for the analysis of indicator bacteria, suspended solids, and oil and grease concentrations were collected at 28 of the stations.

At these offshore stations, water samples for bacteriological analyses were collected using a rosette sampler with Niskin bottles. Measurements of the physical/chemical parameters listed above were taken using a Sea-Bird CTD. Additionally, CTD profile data for depths closest to those at which bacteriological samples were collected were extracted from the CTD profiles and are 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 (Ocean Plan). The seven standards are defined as follows:

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

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

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

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.

Compliance with the seven Ocean Plan standards are summarized below for the stations located in USA waters. In contrast, no such compliance summaries are presented for the three shore stations located in Mexican waters south of the International Border (i.e., S0, S2, and S3) since this region is not subject to the Ocean Plan standards.

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

➤ Shoreline Water Quality Sampling

- Because of site access restrictions in Mexico, the South Bay shoreline sampling is typically carried out on the same day each week (i.e., Tuesday) in order to coordinate sampling between the Mexican and USA based stations. Seawater samples at the three shore stations located south of the USA/Mexico border (i.e., stations S0, S2 and S3) are presently collected by the Comisión Internacional de Límites y Aguas (CILA) and transported to the IBWC for subsequent delivery to the City's Marine Microbiology Lab, while samples from the eight stations located in USA waters are sampled by City staff.
- Due to a Mexican holiday on May 1, sampling at the three shore stations south of the USA/Mexico border was conducted on April 30 and included in this report.
- Additional shore station sampling occurred on May 1, 7, 14, 21 and 28. Subsequent to initial reporting, the sample collected at station S5 on May 21 was determined to be problematic. The results from this sample has been removed from this report.
- During May, seven of the eight shore stations located north of the border were out of compliance with various California Ocean Plan (Ocean Plan) water contact standards on one or more days as follows (these standards do not apply to stations located in Mexican waters):

- The 30-day geometric mean standard for total coliform densities was exceeded at stations S5 and S12.
- The 30-day geometric mean standard for fecal coliform densities was exceeded at station S5.
- The 30-day geometric mean standard for *Enterococcus* bacteria was exceeded at stations S5 and S10.
- The SSM standard for total coliform densities was exceeded at stations S4, S5, S10, and S12.
- The SSM standard for fecal coliform densities was exceeded at stations S4, S5, S6, S8, S10, and S12.
- The SSM standard for *Enterococcus* bacteria was exceeded at stations S4, S5, S9, S10, and S12.
- The SSM standard that states total coliform densities shall not exceed 1000 CFU/100 mL when the fecal:total ratio exceeds 0.1 was exceeded at stations S4, S5, S6, S10, and S12.
- Per permit requirements, resamples were collected in response to these SSM exceedances (see Table 2.8 for details).
- Although the Ocean Plan standards do not apply to these stations, bacteria densities exceeded one or more benchmark levels (i.e., total coliforms >10,000 CFU/100mL; fecal coliforms >400 CFU/100 mL; *Enterococcus* >104 CFU/100 mL; total >1000 CFU/100 mL & F:T ratio >0.1) in seawater samples collected at stations S0 and S3 on one or more days during the month.
- Historical analyses of Ocean Plan compliance rates for the South Bay outfall shore and kelp monitoring stations, combined with the results of satellite imagery data, suggest that outflows from the Tijuana River and Los Buenos Creek, as well as surface runoff during or after rain events (storms), are likely to be the cause of impacted water quality along the shore and in near shore recreational waters in the South Bay region. 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* for details (<http://www.sandiego.gov/mwwd/environment/oceanmonitor/reports/index.shtml>).
- Notable observations for May included a sewage-like odor at station S5 on May 16, 25, 27, 28, 30, 31.

➤ **Kelp Bed Water Quality Sampling**

- The seven kelp bed water quality stations (I19, I24, I25, I26, I32, I39, I40) were sampled five times during the month (i.e. May 6, 13, 23, 29).
- During May, one of the seven stations was out of compliance with various Ocean Plan water contact standards on one or more days as follows:
 - The SSM standard that states total coliform densities shall not exceed 1000 CFU/100 mL when the fecal:total ratio exceeds 0.1 was exceeded at station I19.
- Water column temperatures ranged from 11.06 to 18.22°C. The difference between surface and bottom waters ranged from 0.79 to 5.20°C, indicating the water column was stratified at some of these sites during the month.
- Chlorophyll *a* concentrations ranged from 0.57 to 25.31 µg/L at the kelp bed stations, suggesting the presence of phytoplankton blooms during the month.
- Nothing of sewage origin was observed at any of the kelp stations.

➤ **Offshore Water Quality Sampling**

- Quarterly offshore water quality sampling was conducted over three days during the month (i.e., May 14, 15, 16).
- During May, all offshore stations located within State jurisdictional waters (i.e., I12, I14, I16, I18, I22, I23, I33, I36–I38) were in compliance with the relevant Ocean Plan single sample maximum standard for *Enterococcus*.
- Although the Ocean Plan standards do not apply to stations outside State jurisdictional waters, none of the remaining offshore stations had elevated bacterial densities.
- Water column temperatures ranged from 10.94 to 18.50°C at the offshore sites. The difference between surface and bottom waters ranged from 3.65 to 7.28°C, indicating that the water column was stratified at some of the offshore stations during the month.
- Chlorophyll *a* concentrations ranged from 0.27 to 8.33 µg/L at the offshore sites, suggesting the presence of phytoplankton blooms during the month.
- CDOM data are available upon request.
- Nothing of sewage origin was observed at any of the offshore stations.



TABLES AND FIGURES

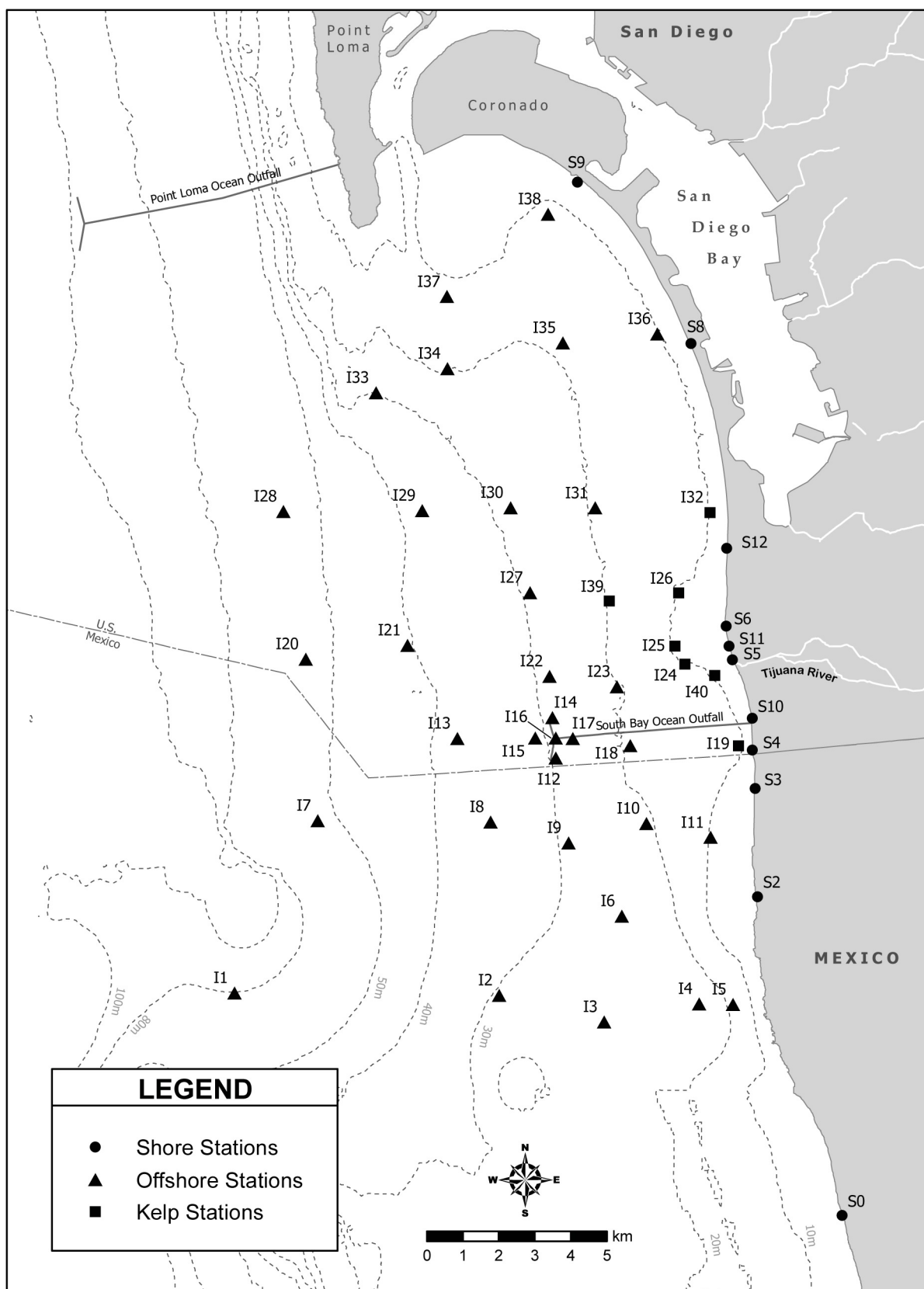


Figure 1.1 Station Map

Shore Stations

Table 2.1

Summary of compliance with the Ocean Plan's 30-day Geometric Mean standard for total coliform bacteria at the SBOO 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	S4	S5	S6	S8	S9	S10	S11	S12
01 May 2019	77	328	27	6	16	47	36	28
02 May 2019	42	287	22	8	27	23	42	46
03 May 2019	42	287	74	8	27	23	42	117
04 May 2019	36	287	74	8	27	23	42	117
05 May 2019	36	287	74	8	27	23	42	117
06 May 2019	36	287	74	8	27	23	42	117
07 May 2019	30	210	99	6	25	20	74	147
08 May 2019	30	210	99	6	25	20	74	147
09 May 2019	15	241	137	5	48	8	103	218
10 May 2019	15	241	137	5	48	8	103	218
11 May 2019	15	241	137	5	48	8	103	218
12 May 2019	15	241	137	5	48	8	103	218
13 May 2019	15	241	137	5	48	8	103	218
14 May 2019	16	352	141	21	64	9	137	432
15 May 2019	16	352	141	21	64	9	137	432
16 May 2019	15	365	329	16	51	14	300	1203
17 May 2019	15	365	329	16	51	14	300	1203
18 May 2019	15	365	329	16	51	14	300	1203
19 May 2019	15	365	329	16	51	14	300	1203
20 May 2019	15	365	329	16	51	14	300	1203
21 May 2019	61	365	328	27	67	57	367	670
22 May 2019	61	365	328	27	67	57	367	670
23 May 2019	110	504	909	52	161	259	537	1310
24 May 2019	110	504	909	52	161	259	537	1310
25 May 2019	110	896	909	52	161	318	537	1310
26 May 2019	110	896	909	52	161	318	537	1310
27 May 2019	110	1353	909	52	161	318	537	1310
28 May 2019	154	1843	481	43	168	384	278	721
29 May 2019	154	1843	481	43	168	384	278	721
30 May 2019	154	1997	481	43	168	384	278	721
31 May 2019	175	2067	329	92	112	499	268	473

* Geometric mean calculated using n<5

Table 2.2

Summary of compliance with the Ocean Plan's 30-day Geometric Mean standard for fecal coliform bacteria at the SBOO 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	S4	S5	S6	S8	S9	S10	S11	S12
01 May 2019	13	28	9	4	12	17	6	12
02 May 2019	6	20	8	5	18	8	5	19
03 May 2019	6	20	20	5	18	8	5	37
04 May 2019	5	20	20	5	18	9	5	37
05 May 2019	5	20	13	5	18	9	5	25
06 May 2019	5	20	13	5	18	9	5	25
07 May 2019	6	20	17	4	15	9	8	22
08 May 2019	6	20	17	4	15	9	8	22
09 May 2019	3	30	24	5	25	4	11	30
10 May 2019	3	30	24	5	25	4	11	30
11 May 2019	3	30	24	5	25	4	11	30
12 May 2019	3	30	24	5	25	4	11	30
13 May 2019	3	30	24	5	25	4	11	30
14 May 2019	3	43	26	14	23	5	15	47
15 May 2019	3	43	26	14	23	5	15	47
16 May 2019	3	43	40	10	17	6	25	87
17 May 2019	3	43	40	10	17	6	25	87
18 May 2019	3	43	40	10	17	6	25	87
19 May 2019	3	43	40	10	17	6	25	87
20 May 2019	3	43	40	10	17	6	25	87
21 May 2019	16	43	46	8	13	27	30	54
22 May 2019	16	43	46	8	13	27	30	54
23 May 2019	24	109	78	10	20	94	44	71
24 May 2019	24	109	78	10	20	94	44	71
25 May 2019	24	239	78	10	20	96	44	71
26 May 2019	24	239	78	10	20	96	44	71
27 May 2019	24	418	78	10	20	96	44	71
28 May 2019	29	614	51	11	13	99	24	46
29 May 2019	29	614	51	11	13	99	24	46
30 May 2019	29	585	51	11	13	99	24	46
31 May 2019	50	535	35	10	6	170	24	26

* Geometric mean calculated using $n < 5$

Table 2.3

Summary of compliance with the Ocean Plan's 30-day Geometric Mean standard for *Enterococcus* at the SBOO 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	S4	S5	S6	S8	S9	S10	S11	S12
01 May 2019	8	16	7	3	11	9	6	5
02 May 2019	4	10	5	3	18	5	5	6
03 May 2019	4	10	5	3	15	5	5	7
04 May 2019	4	10	5	3	15	5	5	7
05 May 2019	4	10	5	3	15	5	5	7
06 May 2019	4	10	5	3	15	5	5	7
07 May 2019	5	11	6	3	11	5	6	8
08 May 2019	5	11	6	3	11	5	6	8
09 May 2019	4	14	8	3	15	3	8	10
10 May 2019	4	14	8	3	15	3	8	10
11 May 2019	4	14	8	3	15	3	8	10
12 May 2019	4	14	8	3	15	3	8	10
13 May 2019	4	14	8	3	15	3	8	10
14 May 2019	4	13	6	6	12	4	8	12
15 May 2019	4	13	6	6	12	4	8	12
16 May 2019	4	20	8	4	8	5	11	17
17 May 2019	4	20	8	4	8	5	11	17
18 May 2019	4	20	8	4	8	5	11	17
19 May 2019	4	20	8	4	8	5	11	17
20 May 2019	4	20	8	4	8	5	11	17
21 May 2019	14	20	10	4	6	16	10	12
22 May 2019	14	20	10	4	6	16	10	12
23 May 2019	14	85	15	4	8	36	10	17
24 May 2019	14	85	15	4	8	36	10	17
25 May 2019	14	229	15	4	8	36	10	17
26 May 2019	14	229	15	4	8	36	10	17
27 May 2019	14	407	15	4	8	36	10	17
28 May 2019	12	494	10	4	6	32	7	12
29 May 2019	12	494	10	4	6	32	7	12
30 May 2019	12	345	10	4	6	32	7	12
31 May 2019	13	481	6	4	3	49	6	8

* Geometric mean calculated using n<5

Table 2.4

Summary of compliance at the SBOO 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	S4	S5	S6	S8	S9	S10	S11	S12
01 May 2019	IC	IC	IC	IC	IC	IC	IC	IC
03 May 2019	ns	ns	IC	ns	ns	ns	ns	IC
07 May 2019	IC	IC	IC	IC	IC	IC	IC	IC
14 May 2019	IC	IC	IC	IC	IC	IC	IC	E
16 May 2019	ns	IC	ns	ns	ns	ns	ns	IC
21 May 2019	E	ns	IC	IC	IC	E	IC	IC
23 May 2019	IC	E	ns	ns	ns	IC	ns	ns
25 May 2019	ns	E	ns	ns	ns	IC	ns	ns
27 May 2019	ns	E	ns	ns	ns	ns	ns	ns
28 May 2019	IC	E	IC	IC	IC	IC	IC	IC
30 May 2019	ns	IC	ns	ns	ns	ns	ns	ns
31 May 2019	ns	IC	ns	ns	ns	ns	ns	ns

IC = In Compliance

E = Exceedance

ns = not sampled

ND = no data

Table 2.5

Summary of compliance at the SBOO 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	S4	S5	S6	S8	S9	S10	S11	S12
01 May 2019	IC	IC	E	IC	IC	IC	IC	E
03 May 2019	ns	ns	E	ns	ns	ns	ns	E
05 May 2019	ns	ns	IC	ns	ns	ns	ns	IC
07 May 2019	IC	IC	IC	IC	IC	IC	IC	IC
14 May 2019	IC	IC	IC	E	IC	IC	IC	E
16 May 2019	ns	IC	ns	IC	ns	ns	ns	IC
21 May 2019	E	ns	IC	IC	IC	E	IC	IC
23 May 2019	IC	E	ns	ns	ns	E	ns	ns
25 May 2019	ns	E	ns	ns	ns	IC	ns	ns
27 May 2019	ns	E	ns	ns	ns	ns	ns	ns
28 May 2019	IC	E	IC	IC	IC	IC	IC	IC
30 May 2019	ns	IC	ns	ns	ns	ns	ns	ns
31 May 2019	ns	IC	ns	ns	ns	ns	ns	ns

IC = In Compliance

E = Exceedance

ns = not sampled

ND = no data

Table 2.6

Summary of compliance at the SBOO 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	S4	S5	S6	S8	S9	S10	S11	S12
01 May 2019	IC	IC	IC	IC	E	IC	IC	E
03 May 2019	ns	ns	ns	ns	IC	ns	ns	IC
07 May 2019	IC	IC	IC	IC	IC	IC	IC	IC
14 May 2019	IC	IC	IC	IC	IC	IC	IC	IC
21 May 2019	E	ns	IC	IC	IC	E	IC	IC
23 May 2019	IC	E	ns	ns	ns	IC	ns	ns
25 May 2019	ns	E	ns	ns	ns	ns	ns	ns
27 May 2019	ns	E	ns	ns	ns	ns	ns	ns
28 May 2019	IC	E	IC	IC	IC	IC	IC	IC
30 May 2019	ns	IC	ns	ns	ns	ns	ns	ns

IC = In Compliance

E = Exceedance

ns = not sampled

ND = no data

Table 2.7

Summary of compliance at the SBOO 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	S4	S5	S6	S8	S9	S10	S11	S12
01 May 2019	IC	IC	E	IC	IC	IC	IC	E
03 May 2019	ns	ns	IC	ns	ns	ns	ns	IC
05 May 2019	ns	ns	ND	ns	ns	ns	ns	ND
07 May 2019	IC	IC	IC	IC	IC	IC	IC	IC
14 May 2019	IC	E	IC	IC	IC	IC	IC	IC
16 May 2019	ns	IC	ns	ND	ns	ns	ns	IC
21 May 2019	E	ns	IC	IC	IC	E	IC	IC
23 May 2019	IC	E	ns	ns	ns	E	ns	ns
25 May 2019	ns	E	ns	ns	ns	IC	ns	ns
27 May 2019	ns	E	ns	ns	ns	ns	ns	ns
28 May 2019	IC	E	IC	IC	IC	IC	IC	IC
30 May 2019	ns	E	ns	ns	ns	ns	ns	ns
31 May 2019	ns	IC	ns	ns	ns	ns	ns	ns

IC = In Compliance

E = Exceedance

ns = not sampled

ND = no data

Table 2.8

Summary of water quality parameters at the SBOO 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
S0	07 May 2019	1125	56	10e	36e	0.18
S0	14 May 2019	1055	12000	1600e	1200	0.13
S0	21 May 2019	1025	7800	1000	580	0.13
S0	28 May 2019	1045	7200	880	2000e	0.12
S2	07 May 2019	1235	<2	<2	<2	1.00
S2	14 May 2019	1015	20e	<2	2e	0.10
S2	21 May 2019	1210	800e	110	6e	0.14
S2	28 May 2019	1245	10e	8e	<2	0.80
S3	07 May 2019	1200	4e	<2	<2	0.50
S3	14 May 2019	945	40e	6e	2e	0.15
S3	21 May 2019	1135	>16000	5600	120	0.35
S3	28 May 2019	1200	2e	4e	<2	2.00
S4	01 May 2019	819	80e	2e	8e	0.02
S4	07 May 2019	838	16e	18e	12e	1.12
S4	14 May 2019	1055	20e	<2	<2	0.10
S4	21 May 2019	854	>16000	6800	1600e	0.42
S4	23 May 2019	932	40e	16e	<2	0.40
S4	28 May 2019	741	800e	78	4e	0.10
S5	01 May 2019	926	880	180e	34e	0.20
S5	07 May 2019	1006	60e	18e	16e	0.30
S5	14 May 2019	851	1600e	200e	8e	0.12
S5	16 May 2019	839	24e	<2	ns	0.08
S5	21 May 2019		ns	ns	ns	ns
S5	23 May 2019	1040	>16000	>12000	>12000	0.75
S5	25 May 2019	833	>16000	>12000	>12000	0.75
S5	27 May 2019	752	>16000	>12000	7200	0.75
S5	28 May 2019	842	>16000	9000	1600e	0.56
S5	30 May 2019	822	3800e	400	28e	0.11
S5	31 May 2019	1012	1200e	80	ns	0.07
S6	01 May 2019	941	3200e	520	86	0.16
S6	03 May 2019	805	8600	680	ns	0.08
S6	05 May 2019	708	ns	2e	ns	ns
S6	07 May 2019	1043	440	76	12e	0.17
S6	14 May 2019	920	160e	36e	<2	0.22
S6	21 May 2019	1007	320e	120e	26e	0.38
S6	28 May 2019	858	20e	4e	2e	0.20
S8	01 May 2019	1118	<2	<20	<2	10.00
S8	07 May 2019	1140	<2	<2	<2	1.00
S8	14 May 2019	747	9000	580	40	0.06
S8	16 May 2019	745	ns	<2	ns	ns
S8	21 May 2019	1145	<200	<2	<2	0.01
S8	28 May 2019	1009	<20	<20	2e	1.00
S9	01 May 2019	1157	840	320e	240e	0.38
S9	03 May 2019	855	ns	ns	8e	ns
S9	07 May 2019	1231	20e	8e	2e	0.40
S9	14 May 2019	730	200e	16e	4e	0.08
S9	21 May 2019	1225	<200	4e	<2	0.02

Station	Date	Time	Total	Fecal	Entero	F:T
S9	28 May 2019	1036	<200	<2	<2	0.01
S10	01 May 2019	810	80e	4e	4e	0.05
S10	07 May 2019	900	12e	12e	6e	1.00
S10	14 May 2019	1029	<20	16e	12e	0.80
S10	21 May 2019	858	>16000	10000	2000e	0.62
S10	23 May 2019	958	3800	940	100	0.25
S10	25 May 2019	736	880	110	ns	0.12
S10	28 May 2019	728	1200e	120	20e	0.10
S11	01 May 2019	936	320e	22e	18e	0.07
S11	07 May 2019	1028	720	56	12e	0.08
S11	14 May 2019	909	440	52	8e	0.12
S11	21 May 2019	1003	820	60e	6e	0.07
S11	28 May 2019	852	<20	2e	<2	0.10
S12	01 May 2019	951	9000	2200e	120e	0.24
S12	03 May 2019	819	5000	480	24e	0.10
S12	05 May 2019	725	ns	4e	ns	ns
S12	07 May 2019	1101	460	10e	8e	0.02
S12	14 May 2019	804	13000	800	32e	0.06
S12	16 May 2019	759	940	140e	ns	0.15
S12	21 May 2019	1014	<20	<2	<2	0.10
S12	28 May 2019	909	20e	<2	<2	0.10

ns = not sampled

ND = no data

Comments

Station	Date	Depth	Parameter	Comments
S6	03 May 2019			Resample
S9	03 May 2019			Resample
S12	03 May 2019			Resample
S6	05 May 2019			Resample
S12	05 May 2019			Resample
S5	16 May 2019			Resample
S8	16 May 2019			Resample
S12	16 May 2019			Resample
S4	23 May 2019			Resample
S5	23 May 2019			Resample
S10	23 May 2019			Resample
S5	25 May 2019			Resample
S10	25 May 2019			Resample
S5	27 May 2019			Resample
S5	30 May 2019			Resample
S5	31 May 2019			Resample

Table 2.9

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

Station	Date	Parameter	Value
S0	07 May 2019	Arrive Time	1125
S0	07 May 2019	Weather	Cloudy
S0	07 May 2019	Wind Speed (kts)	5.2
S0	07 May 2019	Wind Dir	SW
S0	07 May 2019	Animal Life	3 Dogs; 20 Seagulls
S0	07 May 2019	Floatables	None
S0	07 May 2019	Water Color	Green
S0	07 May 2019	Current Direction	N
S0	07 May 2019	Water Temp (C)	15
S0	07 May 2019	Wave Height Low (ft)	2
S0	07 May 2019	High Tide (ft)	3.5
S0	07 May 2019	High Tide Time	1201
S0	07 May 2019	Low Tide (ft)	1.9
S0	07 May 2019	Low Tide Time	1651
S0	07 May 2019	Comments	Kelp; Water turbid; 4 L/s water flowing from stormdrain
S0	14 May 2019	Arrive Time	1055
S0	14 May 2019	Weather	Cloudy
S0	14 May 2019	Wind Speed (kts)	0.9
S0	14 May 2019	Wind Dir	SW
S0	14 May 2019	Animal Life	20 Birds
S0	14 May 2019	Floatables	None
S0	14 May 2019	Water Color	Green
S0	14 May 2019	Current Direction	N
S0	14 May 2019	Water Temp (C)	15
S0	14 May 2019	Wave Height Low (ft)	2
S0	14 May 2019	High Tide (ft)	4.4
S0	14 May 2019	High Tide Time	616
S0	14 May 2019	Low Tide (ft)	-0.1
S0	14 May 2019	Low Tide Time	1245
S0	14 May 2019	Comments	Water clear; 0.5 L/s water flowing from storm drain; Red algae
S0	21 May 2019	Arrive Time	1025
S0	21 May 2019	Weather	Cloudy
S0	21 May 2019	Wind Speed (kts)	6.5
S0	21 May 2019	Wind Dir	SW
S0	21 May 2019	Animal Life	5 Shorebirds
S0	21 May 2019	Floatables	None
S0	21 May 2019	Water Color	Green
S0	21 May 2019	Current Direction	N
S0	21 May 2019	Water Temp (C)	15
S0	21 May 2019	Wave Height Low (ft)	3
S0	21 May 2019	High Tide (ft)	3.5
S0	21 May 2019	High Tide Time	1219
S0	21 May 2019	Low Tide (ft)	-0.7
S0	21 May 2019	Low Tide Time	554
S0	21 May 2019	Comments	Kelp; Seagrass; Water clear; 0.5 L/s water flowing from stormdrain
S0	28 May 2019	Arrive Time	1045
S0	28 May 2019	Weather	Sunny
S0	28 May 2019	Wind Speed (kts)	2.6
S0	28 May 2019	Wind Dir	NE
S0	28 May 2019	Animal Life	10 Shorebirds
S0	28 May 2019	Floatables	None
S0	28 May 2019	Water Color	Green

Station	Date	Parameter	Value
S0	28 May 2019	Current Direction	N
S0	28 May 2019	Water Temp (C)	15
S0	28 May 2019	Wave Height Low (ft)	2
S0	28 May 2019	High Tide (ft)	3.5
S0	28 May 2019	High Tide Time	536
S0	28 May 2019	Low Tide (ft)	0.8
S0	28 May 2019	Low Tide Time	1201
S0	28 May 2019	Comments	Kelp; Algae; 2 Persons; Water clear; 0.5 L/s water flowing from storm drain
S2	07 May 2019	Arrive Time	1235
S2	07 May 2019	Weather	Cloudy
S2	07 May 2019	Wind Speed (kts)	5.8
S2	07 May 2019	Wind Dir	SW
S2	07 May 2019	Animal Life	3 Dogs; 20 Seagulls
S2	07 May 2019	Floatables	None
S2	07 May 2019	Water Color	Green
S2	07 May 2019	Current Direction	N
S2	07 May 2019	Water Temp (C)	16
S2	07 May 2019	Wave Height Low (ft)	2
S2	07 May 2019	High Tide (ft)	3.5
S2	07 May 2019	High Tide Time	1201
S2	07 May 2019	Low Tide (ft)	1.9
S2	07 May 2019	Low Tide Time	1651
S2	07 May 2019	Comments	Kelp; Water turbid; No flow from storm drain
S2	14 May 2019	Arrive Time	1015
S2	14 May 2019	Weather	Cloudy
S2	14 May 2019	Wind Speed (kts)	0.8
S2	14 May 2019	Wind Dir	SW
S2	14 May 2019	Animal Life	15 Shorebirds; 5 Dogs
S2	14 May 2019	Floatables	None
S2	14 May 2019	Water Color	Green
S2	14 May 2019	Current Direction	N
S2	14 May 2019	Water Temp (C)	15
S2	14 May 2019	Wave Height Low (ft)	2
S2	14 May 2019	High Tide (ft)	4.4
S2	14 May 2019	High Tide Time	616
S2	14 May 2019	Low Tide (ft)	-0.1
S2	14 May 2019	Low Tide Time	1245
S2	14 May 2019	Comments	5 Persons; Water clear; No flow from storm drain
S2	21 May 2019	Arrive Time	1210
S2	21 May 2019	Weather	Sunny
S2	21 May 2019	Wind Speed (kts)	6.9
S2	21 May 2019	Wind Dir	SW
S2	21 May 2019	Animal Life	5 Shorebirds; 1 Dog
S2	21 May 2019	Floatables	None
S2	21 May 2019	Water Color	Green
S2	21 May 2019	Current Direction	N
S2	21 May 2019	Water Temp (C)	15
S2	21 May 2019	Wave Height Low (ft)	3
S2	21 May 2019	High Tide (ft)	3.5
S2	21 May 2019	High Tide Time	1219
S2	21 May 2019	Low Tide (ft)	2.2
S2	21 May 2019	Low Tide Time	1703
S2	21 May 2019	Comments	Kelp; Algae; 2 Persons; Water clear; No flow from storm drain
S2	28 May 2019	Arrive Time	1245
S2	28 May 2019	Weather	Sunny
S2	28 May 2019	Wind Speed (kts)	2.9

Station	Date	Parameter	Value
S2	28 May 2019	Wind Dir	NE
S2	28 May 2019	Animal Life	10 Shorebirds; 1 Dog
S2	28 May 2019	Floatables	None
S2	28 May 2019	Water Color	Green
S2	28 May 2019	Current Direction	N
S2	28 May 2019	Water Temp (C)	15
S2	28 May 2019	Wave Height Low (ft)	2
S2	28 May 2019	High Tide (ft)	4.5
S2	28 May 2019	High Tide Time	1836
S2	28 May 2019	Low Tide (ft)	0.8
S2	28 May 2019	Low Tide Time	1201
S2	28 May 2019	Comments	Kelp; Algae; 5 Persons; Water clear; No flow from storm drain
S3	07 May 2019	Arrive Time	1200
S3	07 May 2019	Weather	Cloudy
S3	07 May 2019	Wind Speed (kts)	4.3
S3	07 May 2019	Wind Dir	SW
S3	07 May 2019	Animal Life	2 Dogs
S3	07 May 2019	Floatables	None
S3	07 May 2019	Water Color	Green
S3	07 May 2019	Current Direction	N
S3	07 May 2019	Water Temp (C)	16
S3	07 May 2019	Wave Height Low (ft)	2
S3	07 May 2019	High Tide (ft)	3.5
S3	07 May 2019	High Tide Time	1201
S3	07 May 2019	Low Tide (ft)	1.9
S3	07 May 2019	Low Tide Time	1651
S3	07 May 2019	Comments	Kelp; Water turbid; No flow from storm drain
S3	14 May 2019	Arrive Time	945
S3	14 May 2019	Weather	Cloudy
S3	14 May 2019	Wind Speed (kts)	0.5
S3	14 May 2019	Wind Dir	SW
S3	14 May 2019	Animal Life	5 Shorebirds; 5 Dogs
S3	14 May 2019	Floatables	None
S3	14 May 2019	Water Color	Green
S3	14 May 2019	Current Direction	N
S3	14 May 2019	Water Temp (C)	15
S3	14 May 2019	Wave Height Low (ft)	2
S3	14 May 2019	High Tide (ft)	4.4
S3	14 May 2019	High Tide Time	616
S3	14 May 2019	Low Tide (ft)	-0.1
S3	14 May 2019	Low Tide Time	1245
S3	14 May 2019	Comments	15 Persons; Water clear; No flow from storm drain; Red algae
S3	21 May 2019	Arrive Time	1135
S3	21 May 2019	Weather	Sunny
S3	21 May 2019	Wind Speed (kts)	6.6
S3	21 May 2019	Wind Dir	SW
S3	21 May 2019	Animal Life	5 Shorebirds; 1 Dog
S3	21 May 2019	Floatables	None
S3	21 May 2019	Water Color	Green
S3	21 May 2019	Current Direction	N
S3	21 May 2019	Water Temp (C)	15
S3	21 May 2019	Wave Height Low (ft)	3
S3	21 May 2019	High Tide (ft)	3.5
S3	21 May 2019	High Tide Time	1219
S3	21 May 2019	Low Tide (ft)	2.2
S3	21 May 2019	Low Tide Time	1703
S3	21 May 2019	Comments	Kelp; Algae; 2 Persons; Water clear; No flow from storm drain

Station	Date	Parameter	Value
S3	28 May 2019	Arrive Time	1200
S3	28 May 2019	Weather	Sunny
S3	28 May 2019	Wind Speed (kts)	2.8
S3	28 May 2019	Wind Dir	NE
S3	28 May 2019	Animal Life	10 Shorebirds; 2 Dogs
S3	28 May 2019	Floatables	None
S3	28 May 2019	Water Color	Green
S3	28 May 2019	Current Direction	N
S3	28 May 2019	Water Temp (C)	15
S3	28 May 2019	Wave Height Low (ft)	2
S3	28 May 2019	High Tide (ft)	3.5
S3	28 May 2019	High Tide Time	536
S3	28 May 2019	Low Tide (ft)	0.8
S3	28 May 2019	Low Tide Time	1201
S3	28 May 2019	Comments	5 Persons; Water clear; No flow from storm drain
S4	01 May 2019	Arrive Time	819
S4	01 May 2019	Weather	Cloudy
S4	01 May 2019	Wind Speed (kts)	3.8
S4	01 May 2019	Wind Dir	W
S4	01 May 2019	Animal Life	None
S4	01 May 2019	Floatables	None
S4	01 May 2019	Water Color	Green
S4	01 May 2019	Current Direction	N
S4	01 May 2019	Water Temp (C)	16.8
S4	01 May 2019	Wave Height Low (ft)	4
S4	01 May 2019	High Tide (ft)	4.2
S4	01 May 2019	High Tide Time	751
S4	01 May 2019	Low Tide (ft)	0.4
S4	01 May 2019	Low Tide Time	1403
S4	01 May 2019	Comments	Kelp; Seagrass; Water clear
S4	07 May 2019	Arrive Time	838
S4	07 May 2019	Weather	Partly Cloudy
S4	07 May 2019	Wind Speed (kts)	2.2
S4	07 May 2019	Wind Dir	W
S4	07 May 2019	Animal Life	None
S4	07 May 2019	Floatables	None
S4	07 May 2019	Water Color	Green
S4	07 May 2019	Current Direction	N
S4	07 May 2019	Water Temp (C)	17.2
S4	07 May 2019	Wave Height Low (ft)	3
S4	07 May 2019	High Tide (ft)	3.5
S4	07 May 2019	High Tide Time	1201
S4	07 May 2019	Low Tide (ft)	-0.6
S4	07 May 2019	Low Tide Time	542
S4	07 May 2019	Comments	Kelp; Seagrass; Water clear
S4	14 May 2019	Arrive Time	1055
S4	14 May 2019	Weather	Sunny
S4	14 May 2019	Wind Speed (kts)	4.8
S4	14 May 2019	Wind Dir	E
S4	14 May 2019	Animal Life	3 Grebes; 1 Seagull
S4	14 May 2019	Floatables	None
S4	14 May 2019	Water Color	Green
S4	14 May 2019	Current Direction	E
S4	14 May 2019	Water Temp (C)	21.2
S4	14 May 2019	Wave Height Low (ft)	6
S4	14 May 2019	High Tide (ft)	4.4
S4	14 May 2019	High Tide Time	616
S4	14 May 2019	Low Tide (ft)	-0.1

Station	Date	Parameter	Value
S4	14 May 2019	Low Tide Time	1245
S4	14 May 2019	Comments	Kelp; Seagrass; Debris; Water clear
S4	21 May 2019	Arrive Time	854
S4	21 May 2019	Weather	Cloudy
S4	21 May 2019	Wind Speed (kts)	10.3
S4	21 May 2019	Wind Dir	W
S4	21 May 2019	Animal Life	None
S4	21 May 2019	Floatables	None
S4	21 May 2019	Water Color	Green
S4	21 May 2019	Current Direction	S
S4	21 May 2019	Water Temp (C)	16.2
S4	21 May 2019	Wave Height Low (ft)	4
S4	21 May 2019	High Tide (ft)	3.5
S4	21 May 2019	High Tide Time	1219
S4	21 May 2019	Low Tide (ft)	-0.7
S4	21 May 2019	Low Tide Time	554
S4	21 May 2019	Comments	Kelp; Seagrass; Debris; Water clear
S4	23 May 2019	Arrive Time	932
S4	23 May 2019	Weather	Overcast
S4	23 May 2019	Wind Speed (kts)	8.3
S4	23 May 2019	Wind Dir	E
S4	23 May 2019	Animal Life	25 Seagulls
S4	23 May 2019	Floatables	Foam
S4	23 May 2019	Water Color	Green
S4	23 May 2019	Current Direction	E
S4	23 May 2019	Water Temp (C)	18
S4	23 May 2019	Wave Height Low (ft)	5
S4	23 May 2019	High Tide (ft)	3.2
S4	23 May 2019	High Tide Time	1432
S4	23 May 2019	Low Tide (ft)	-0.1
S4	23 May 2019	Low Tide Time	732
S4	23 May 2019	Comments	Resample; Kelp; Seagrass; Debris; Water clear
S4	28 May 2019	Arrive Time	741
S4	28 May 2019	Weather	Sunny
S4	28 May 2019	Wind Speed (kts)	1.5
S4	28 May 2019	Wind Dir	E
S4	28 May 2019	Animal Life	None
S4	28 May 2019	Floatables	Foam
S4	28 May 2019	Water Color	Green
S4	28 May 2019	Current Direction	E
S4	28 May 2019	Water Temp (C)	15
S4	28 May 2019	Wave Height Low (ft)	3
S4	28 May 2019	High Tide (ft)	3.5
S4	28 May 2019	High Tide Time	536
S4	28 May 2019	Low Tide (ft)	0.8
S4	28 May 2019	Low Tide Time	1201
S4	28 May 2019	Comments	Kelp; Seagrass; Debris; Water clear
S5	01 May 2019	Arrive Time	926
S5	01 May 2019	Weather	Cloudy
S5	01 May 2019	Wind Speed (kts)	5.4
S5	01 May 2019	Wind Dir	W
S5	01 May 2019	Animal Life	None
S5	01 May 2019	Floatables	None
S5	01 May 2019	Water Color	Green
S5	01 May 2019	Current Direction	N
S5	01 May 2019	Water Temp (C)	16.8
S5	01 May 2019	Wave Height Low (ft)	3

Station	Date	Parameter	Value
S5	01 May 2019	High Tide (ft)	4.2
S5	01 May 2019	High Tide Time	751
S5	01 May 2019	Low Tide (ft)	0.4
S5	01 May 2019	Low Tide Time	1403
S5	01 May 2019	Comments	Kelp; Seagrass; Debris; Water clear
S5	07 May 2019	Arrive Time	1006
S5	07 May 2019	Weather	Partly Cloudy
S5	07 May 2019	Wind Speed (kts)	1.5
S5	07 May 2019	Wind Dir	W
S5	07 May 2019	Animal Life	2 Dogs
S5	07 May 2019	Floatables	None
S5	07 May 2019	Water Color	Green
S5	07 May 2019	Current Direction	N
S5	07 May 2019	Water Temp (C)	16.9
S5	07 May 2019	Wave Height Low (ft)	3
S5	07 May 2019	High Tide (ft)	3.5
S5	07 May 2019	High Tide Time	1201
S5	07 May 2019	Low Tide (ft)	-0.6
S5	07 May 2019	Low Tide Time	542
S5	07 May 2019	Comments	Kelp; Seagrass; Debris; 2 Persons; Water clear
S5	14 May 2019	Arrive Time	927
S5	14 May 2019	Weather	Overcast
S5	14 May 2019	Wind Speed (kts)	4.6
S5	14 May 2019	Wind Dir	S
S5	14 May 2019	Animal Life	15 Grebes; 2 Seagulls
S5	14 May 2019	Floatables	Foam
S5	14 May 2019	Water Color	Green
S5	14 May 2019	Current Direction	S
S5	14 May 2019	Water Temp (C)	20.7
S5	14 May 2019	Wave Height Low (ft)	3
S5	14 May 2019	High Tide (ft)	4.4
S5	14 May 2019	High Tide Time	616
S5	14 May 2019	Low Tide (ft)	-0.1
S5	14 May 2019	Low Tide Time	1245
S5	14 May 2019	Comments	Kelp; Seagrass; Debris; Water clear
S5	16 May 2019	Arrive Time	839
S5	16 May 2019	Weather	Overcast
S5	16 May 2019	Wind Speed (kts)	13.9
S5	16 May 2019	Wind Dir	N
S5	16 May 2019	Animal Life	None
S5	16 May 2019	Floatables	Foam; Film
S5	16 May 2019	Water Color	Green
S5	16 May 2019	Current Direction	N
S5	16 May 2019	Water Temp (C)	19.8
S5	16 May 2019	Wave Height Low (ft)	2
S5	16 May 2019	High Tide (ft)	4.5
S5	16 May 2019	High Tide Time	811
S5	16 May 2019	Low Tide (ft)	0.4
S5	16 May 2019	Low Tide Time	1405
S5	16 May 2019	Comments	Resample; Kelp; Seagrass; Debris; Sewage-like odor; 1 Jogger; Water clear
S5	23 May 2019	Arrive Time	1040
S5	23 May 2019	Weather	Overcast
S5	23 May 2019	Wind Speed (kts)	5.4
S5	23 May 2019	Wind Dir	N
S5	23 May 2019	Animal Life	14 Pelicans; 3 Seagulls
S5	23 May 2019	Floatables	Foam; Film

Station	Date	Parameter	Value
S5	23 May 2019	Water Color	Green
S5	23 May 2019	Current Direction	N
S5	23 May 2019	Water Temp (C)	18.3
S5	23 May 2019	Wave Height Low (ft)	4
S5	23 May 2019	High Tide (ft)	3.2
S5	23 May 2019	High Tide Time	1432
S5	23 May 2019	Low Tide (ft)	-0.1
S5	23 May 2019	Low Tide Time	732
S5	23 May 2019	Comments	Resample; Kelp; Seagrass; Debris; Water clear
S5	25 May 2019	Arrive Time	833
S5	25 May 2019	Weather	Sunny
S5	25 May 2019	Wind Speed (kts)	1.9
S5	25 May 2019	Wind Dir	E
S5	25 May 2019	Animal Life	20 Seagulls
S5	25 May 2019	Floatables	Foam; Dead Animals; Film
S5	25 May 2019	Water Color	Brown
S5	25 May 2019	Current Direction	E
S5	25 May 2019	Water Temp (C)	21.8
S5	25 May 2019	Wave Height Low (ft)	3
S5	25 May 2019	High Tide (ft)	4
S5	25 May 2019	High Tide Time	136
S5	25 May 2019	Low Tide (ft)	0.5
S5	25 May 2019	Low Tide Time	930
S5	25 May 2019	Comments	Resample; Kelp; Seagrass; Debris; Sewage-like odor; Water clear
S5	27 May 2019	Arrive Time	752
S5	27 May 2019	Weather	Partly Cloudy
S5	27 May 2019	Wind Speed (kts)	3.6
S5	27 May 2019	Wind Dir	S
S5	27 May 2019	Animal Life	5 Seagulls
S5	27 May 2019	Floatables	Foam; Film
S5	27 May 2019	Water Color	Green
S5	27 May 2019	Current Direction	S
S5	27 May 2019	Water Temp (C)	19.4
S5	27 May 2019	Wave Height Low (ft)	2
S5	27 May 2019	High Tide (ft)	3.5
S5	27 May 2019	High Tide Time	425
S5	27 May 2019	Low Tide (ft)	0.8
S5	27 May 2019	Low Tide Time	1119
S5	27 May 2019	Comments	Resample; Kelp; Seagrass; Debris; Sewage-like odor; 1 Person; Water clear
S5	28 May 2019	Arrive Time	842
S5	28 May 2019	Weather	Sunny
S5	28 May 2019	Wind Speed (kts)	3.6
S5	28 May 2019	Wind Dir	N
S5	28 May 2019	Animal Life	16 Pelicans
S5	28 May 2019	Floatables	Foam; Film
S5	28 May 2019	Water Color	Brown
S5	28 May 2019	Current Direction	N
S5	28 May 2019	Water Temp (C)	17.2
S5	28 May 2019	Wave Height Low (ft)	3
S5	28 May 2019	High Tide (ft)	3.5
S5	28 May 2019	High Tide Time	536
S5	28 May 2019	Low Tide (ft)	0.8
S5	28 May 2019	Low Tide Time	1201
S5	28 May 2019	Comments	Kelp; Seagrass; Debris; Sewage-like odor; Water clear
S5	30 May 2019	Arrive Time	822

Station	Date	Parameter	Value
S5	30 May 2019	Weather	Overcast
S5	30 May 2019	Wind Speed (kts)	4.6
S5	30 May 2019	Wind Dir	S
S5	30 May 2019	Animal Life	1 Pelican; 85 Seagulls
S5	30 May 2019	Floatables	Foam; Film
S5	30 May 2019	Water Color	Brown
S5	30 May 2019	Current Direction	S
S5	30 May 2019	Water Temp (C)	17.8
S5	30 May 2019	Wave Height Low (ft)	3
S5	30 May 2019	High Tide (ft)	3.7
S5	30 May 2019	High Tide Time	724
S5	30 May 2019	Low Tide (ft)	1
S5	30 May 2019	Low Tide Time	1311
S5	30 May 2019	Comments	Resample; Kelp; Seagrass; Debris; Sewage-like odor; Water clear
S5	31 May 2019	Arrive Time	1012
S5	31 May 2019	Weather	Overcast
S5	31 May 2019	Wind Speed (kts)	2.7
S5	31 May 2019	Wind Dir	E
S5	31 May 2019	Animal Life	None
S5	31 May 2019	Floatables	Foam; Film; Yellow film
S5	31 May 2019	Water Color	Brown
S5	31 May 2019	Current Direction	E
S5	31 May 2019	Water Temp (C)	18.8
S5	31 May 2019	Wave Height Low (ft)	2
S5	31 May 2019	High Tide (ft)	3.8
S5	31 May 2019	High Tide Time	810
S5	31 May 2019	Low Tide (ft)	1.2
S5	31 May 2019	Low Tide Time	1343
S5	31 May 2019	Comments	Resample; Kelp; Seagrass; Debris; Sewage-like odor; Water clear
S6	01 May 2019	Arrive Time	941
S6	01 May 2019	Weather	Cloudy
S6	01 May 2019	Wind Speed (kts)	4.8
S6	01 May 2019	Wind Dir	NW
S6	01 May 2019	Animal Life	None
S6	01 May 2019	Floatables	None
S6	01 May 2019	Water Color	Green
S6	01 May 2019	Current Direction	W
S6	01 May 2019	Water Temp (C)	18.4
S6	01 May 2019	Wave Height Low (ft)	3
S6	01 May 2019	High Tide (ft)	4.2
S6	01 May 2019	High Tide Time	751
S6	01 May 2019	Low Tide (ft)	0.4
S6	01 May 2019	Low Tide Time	1403
S6	01 May 2019	Comments	Kelp; Seagrass; 1 Person; Water clear
S6	03 May 2019	Arrive Time	805
S6	03 May 2019	Weather	Overcast
S6	03 May 2019	Wind Speed (kts)	3.3
S6	03 May 2019	Wind Dir	N
S6	03 May 2019	Animal Life	1 Grebe; 20 Velella jellyfish
S6	03 May 2019	Floatables	Foam
S6	03 May 2019	Water Color	Green
S6	03 May 2019	Current Direction	N
S6	03 May 2019	Water Temp (C)	16.7
S6	03 May 2019	Wave Height Low (ft)	3
S6	03 May 2019	High Tide (ft)	4.3
S6	03 May 2019	High Tide Time	905

Station	Date	Parameter	Value
S6	03 May 2019	Low Tide (ft)	0.1
S6	03 May 2019	Low Tide Time	308
S6	03 May 2019	Comments	Resample; Kelp; Seagrass; Debris; Water clear
S6	05 May 2019	Arrive Time	708
S6	05 May 2019	Weather	Overcast
S6	05 May 2019	Wind Speed (kts)	1.5
S6	05 May 2019	Wind Dir	E
S6	05 May 2019	Animal Life	None
S6	05 May 2019	Floatables	None
S6	05 May 2019	Water Color	Green
S6	05 May 2019	Current Direction	N
S6	05 May 2019	Water Temp (C)	17.1
S6	05 May 2019	Wave Height Low (ft)	1
S6	05 May 2019	High Tide (ft)	4
S6	05 May 2019	High Tide Time	1024
S6	05 May 2019	Low Tide (ft)	-0.5
S6	05 May 2019	Low Tide Time	419
S6	05 May 2019	Comments	Resample; Kelp; Seagrass; Water clear
S6	07 May 2019	Arrive Time	1043
S6	07 May 2019	Weather	Partly Cloudy
S6	07 May 2019	Wind Speed (kts)	1.7
S6	07 May 2019	Wind Dir	W
S6	07 May 2019	Animal Life	None
S6	07 May 2019	Floatables	None
S6	07 May 2019	Water Color	Green
S6	07 May 2019	Current Direction	N
S6	07 May 2019	Water Temp (C)	17.9
S6	07 May 2019	Wave Height Low (ft)	2
S6	07 May 2019	High Tide (ft)	3.5
S6	07 May 2019	High Tide Time	1201
S6	07 May 2019	Low Tide (ft)	-0.6
S6	07 May 2019	Low Tide Time	542
S6	07 May 2019	Comments	Kelp; Seagrass; 3 Persons; Water clear
S6	14 May 2019	Arrive Time	920
S6	14 May 2019	Weather	Overcast
S6	14 May 2019	Wind Speed (kts)	5.6
S6	14 May 2019	Wind Dir	S
S6	14 May 2019	Animal Life	1 Dog
S6	14 May 2019	Floatables	Foam
S6	14 May 2019	Water Color	Green
S6	14 May 2019	Current Direction	S
S6	14 May 2019	Water Temp (C)	21.1
S6	14 May 2019	Wave Height Low (ft)	5
S6	14 May 2019	High Tide (ft)	4.4
S6	14 May 2019	High Tide Time	616
S6	14 May 2019	Low Tide (ft)	-0.1
S6	14 May 2019	Low Tide Time	1245
S6	14 May 2019	Comments	Kelp; Seagrass; Debris; 4 Persons; 2 Surfers; Water clear
S6	21 May 2019	Arrive Time	1007
S6	21 May 2019	Weather	Cloudy
S6	21 May 2019	Wind Speed (kts)	9.3
S6	21 May 2019	Wind Dir	W
S6	21 May 2019	Animal Life	None
S6	21 May 2019	Floatables	None
S6	21 May 2019	Water Color	Green
S6	21 May 2019	Current Direction	SW
S6	21 May 2019	Water Temp (C)	16.2

Station	Date	Parameter	Value
S6	21 May 2019	Wave Height Low (ft)	4
S6	21 May 2019	High Tide (ft)	3.5
S6	21 May 2019	High Tide Time	1219
S6	21 May 2019	Low Tide (ft)	-0.7
S6	21 May 2019	Low Tide Time	554
S6	21 May 2019	Comments	Kelp; Seagrass; 1 Person; Water clear
S6	28 May 2019	Arrive Time	858
S6	28 May 2019	Weather	Sunny
S6	28 May 2019	Wind Speed (kts)	2.3
S6	28 May 2019	Wind Dir	N
S6	28 May 2019	Animal Life	25 Grebes
S6	28 May 2019	Floatables	Foam
S6	28 May 2019	Water Color	Green
S6	28 May 2019	Current Direction	N
S6	28 May 2019	Water Temp (C)	15.9
S6	28 May 2019	Wave Height Low (ft)	3
S6	28 May 2019	High Tide (ft)	3.5
S6	28 May 2019	High Tide Time	536
S6	28 May 2019	Low Tide (ft)	0.8
S6	28 May 2019	Low Tide Time	1201
S6	28 May 2019	Comments	Kelp; Seagrass; Debris; 1 Person; Water clear
S8	01 May 2019	Arrive Time	1118
S8	01 May 2019	Weather	Partly Cloudy
S8	01 May 2019	Wind Speed (kts)	7.1
S8	01 May 2019	Wind Dir	NW
S8	01 May 2019	Animal Life	None
S8	01 May 2019	Floatables	None
S8	01 May 2019	Water Color	Green
S8	01 May 2019	Current Direction	N
S8	01 May 2019	Water Temp (C)	17.8
S8	01 May 2019	Wave Height Low (ft)	2
S8	01 May 2019	High Tide (ft)	4.2
S8	01 May 2019	High Tide Time	751
S8	01 May 2019	Low Tide (ft)	0.4
S8	01 May 2019	Low Tide Time	1403
S8	01 May 2019	Comments	Kelp; Seagrass; 2 Persons; Water clear
S8	07 May 2019	Arrive Time	1140
S8	07 May 2019	Weather	Partly Cloudy
S8	07 May 2019	Wind Speed (kts)	2
S8	07 May 2019	Wind Dir	W
S8	07 May 2019	Animal Life	None
S8	07 May 2019	Floatables	None
S8	07 May 2019	Water Color	Green
S8	07 May 2019	Current Direction	N
S8	07 May 2019	Water Temp (C)	18.1
S8	07 May 2019	Wave Height Low (ft)	3
S8	07 May 2019	High Tide (ft)	3.5
S8	07 May 2019	High Tide Time	1201
S8	07 May 2019	Low Tide (ft)	1.9
S8	07 May 2019	Low Tide Time	1651
S8	07 May 2019	Comments	Kelp; Seagrass; Water clear
S8	14 May 2019	Arrive Time	747
S8	14 May 2019	Weather	Overcast
S8	14 May 2019	Wind Speed (kts)	3.4
S8	14 May 2019	Wind Dir	E
S8	14 May 2019	Animal Life	None
S8	14 May 2019	Floatables	Foam

Station	Date	Parameter	Value
S8	14 May 2019	Water Color	Green
S8	14 May 2019	Current Direction	E
S8	14 May 2019	Water Temp (C)	20.4
S8	14 May 2019	Wave Height Low (ft)	2
S8	14 May 2019	High Tide (ft)	4.4
S8	14 May 2019	High Tide Time	616
S8	14 May 2019	Low Tide (ft)	-0.1
S8	14 May 2019	Low Tide Time	1245
S8	14 May 2019	Comments	Kelp; Seagrass; Water clear
S8	16 May 2019	Arrive Time	745
S8	16 May 2019	Weather	Overcast
S8	16 May 2019	Wind Speed (kts)	6.6
S8	16 May 2019	Wind Dir	N
S8	16 May 2019	Animal Life	2 Shorebirds
S8	16 May 2019	Floatables	Foam
S8	16 May 2019	Water Color	Green
S8	16 May 2019	Current Direction	N
S8	16 May 2019	Water Temp (C)	19.1
S8	16 May 2019	Wave Height Low (ft)	3
S8	16 May 2019	High Tide (ft)	4.5
S8	16 May 2019	High Tide Time	811
S8	16 May 2019	Low Tide (ft)	-0.1
S8	16 May 2019	Low Tide Time	219
S8	16 May 2019	Comments	Resample; Kelp; Seagrass; Debris; Water clear
S8	21 May 2019	Arrive Time	1145
S8	21 May 2019	Weather	Partly Cloudy
S8	21 May 2019	Wind Speed (kts)	9.7
S8	21 May 2019	Wind Dir	W
S8	21 May 2019	Animal Life	None
S8	21 May 2019	Floatables	None
S8	21 May 2019	Water Color	Green
S8	21 May 2019	Current Direction	S
S8	21 May 2019	Water Temp (C)	17.2
S8	21 May 2019	Wave Height Low (ft)	3
S8	21 May 2019	High Tide (ft)	3.5
S8	21 May 2019	High Tide Time	1219
S8	21 May 2019	Low Tide (ft)	2.2
S8	21 May 2019	Low Tide Time	1703
S8	21 May 2019	Comments	Kelp; Seagrass; Water clear
S8	28 May 2019	Arrive Time	1009
S8	28 May 2019	Weather	Sunny
S8	28 May 2019	Wind Speed (kts)	3.6
S8	28 May 2019	Wind Dir	E
S8	28 May 2019	Animal Life	None
S8	28 May 2019	Floatables	None
S8	28 May 2019	Water Color	Green
S8	28 May 2019	Current Direction	E
S8	28 May 2019	Water Temp (C)	17.9
S8	28 May 2019	Wave Height Low (ft)	2
S8	28 May 2019	High Tide (ft)	3.5
S8	28 May 2019	High Tide Time	536
S8	28 May 2019	Low Tide (ft)	0.8
S8	28 May 2019	Low Tide Time	1201
S8	28 May 2019	Comments	Kelp; Seagrass; 15 Persons; Water clear
S9	01 May 2019	Arrive Time	1157
S9	01 May 2019	Weather	Partly Cloudy
S9	01 May 2019	Wind Speed (kts)	6.8

Station	Date	Parameter	Value
S9	01 May 2019	Wind Dir	W
S9	01 May 2019	Animal Life	60 Seagulls
S9	01 May 2019	Floatables	None
S9	01 May 2019	Water Color	Green
S9	01 May 2019	Current Direction	N
S9	01 May 2019	Water Temp (C)	17.7
S9	01 May 2019	Wave Height Low (ft)	2
S9	01 May 2019	High Tide (ft)	4.2
S9	01 May 2019	High Tide Time	751
S9	01 May 2019	Low Tide (ft)	0.4
S9	01 May 2019	Low Tide Time	1403
S9	01 May 2019	Comments	Kelp; Seagrass; 1 Person; Water clear
S9	03 May 2019	Arrive Time	855
S9	03 May 2019	Weather	Overcast
S9	03 May 2019	Wind Speed (kts)	1.7
S9	03 May 2019	Wind Dir	E
S9	03 May 2019	Animal Life	22 Seagulls
S9	03 May 2019	Floatables	Foam
S9	03 May 2019	Water Color	Green
S9	03 May 2019	Current Direction	E
S9	03 May 2019	Water Temp (C)	18.2
S9	03 May 2019	Wave Height Low (ft)	0.5
S9	03 May 2019	High Tide (ft)	4.3
S9	03 May 2019	High Tide Time	905
S9	03 May 2019	Low Tide (ft)	0.1
S9	03 May 2019	Low Tide Time	308
S9	03 May 2019	Comments	Resample; Kelp; Seagrass; 9 Persons; 8 Surfers; Water clear
S9	07 May 2019	Arrive Time	1231
S9	07 May 2019	Weather	Partly Cloudy
S9	07 May 2019	Wind Speed (kts)	3.8
S9	07 May 2019	Wind Dir	W
S9	07 May 2019	Animal Life	1 Shorebird; 6 Seagulls
S9	07 May 2019	Floatables	None
S9	07 May 2019	Water Color	Green
S9	07 May 2019	Current Direction	N
S9	07 May 2019	Water Temp (C)	17.4
S9	07 May 2019	Wave Height Low (ft)	2
S9	07 May 2019	High Tide (ft)	3.5
S9	07 May 2019	High Tide Time	1201
S9	07 May 2019	Low Tide (ft)	1.9
S9	07 May 2019	Low Tide Time	1651
S9	07 May 2019	Comments	Kelp; Seagrass; 2 Joggers; 3 Persons; Water clear
S9	14 May 2019	Arrive Time	730
S9	14 May 2019	Weather	Overcast
S9	14 May 2019	Wind Speed (kts)	2.1
S9	14 May 2019	Wind Dir	S
S9	14 May 2019	Animal Life	13 Seagulls
S9	14 May 2019	Floatables	Foam
S9	14 May 2019	Water Color	Green
S9	14 May 2019	Current Direction	S
S9	14 May 2019	Water Temp (C)	20.3
S9	14 May 2019	Wave Height Low (ft)	2
S9	14 May 2019	High Tide (ft)	4.4
S9	14 May 2019	High Tide Time	616
S9	14 May 2019	Low Tide (ft)	-0.1
S9	14 May 2019	Low Tide Time	1245
S9	14 May 2019	Comments	Kelp; Seagrass; 13 Surfers; Water clear

Station	Date	Parameter	Value
S9	21 May 2019	Arrive Time	1225
S9	21 May 2019	Weather	Partly Cloudy
S9	21 May 2019	Wind Speed (kts)	8.3
S9	21 May 2019	Wind Dir	W
S9	21 May 2019	Animal Life	None
S9	21 May 2019	Floatables	None
S9	21 May 2019	Water Color	Green
S9	21 May 2019	Current Direction	S
S9	21 May 2019	Water Temp (C)	17
S9	21 May 2019	Wave Height Low (ft)	2
S9	21 May 2019	High Tide (ft)	3.5
S9	21 May 2019	High Tide Time	1219
S9	21 May 2019	Low Tide (ft)	2.2
S9	21 May 2019	Low Tide Time	1703
S9	21 May 2019	Comments	Kelp; Seagrass; 5 Persons; Water clear
S9	28 May 2019	Arrive Time	1036
S9	28 May 2019	Weather	Sunny
S9	28 May 2019	Wind Speed (kts)	7.1
S9	28 May 2019	Wind Dir	E
S9	28 May 2019	Animal Life	35 Seagulls
S9	28 May 2019	Floatables	None
S9	28 May 2019	Water Color	Green
S9	28 May 2019	Current Direction	E
S9	28 May 2019	Water Temp (C)	19.7
S9	28 May 2019	Wave Height Low (ft)	1
S9	28 May 2019	High Tide (ft)	3.5
S9	28 May 2019	High Tide Time	536
S9	28 May 2019	Low Tide (ft)	0.8
S9	28 May 2019	Low Tide Time	1201
S9	28 May 2019	Comments	Kelp; Seagrass; 40 Persons; Water clear
S10	01 May 2019	Arrive Time	810
S10	01 May 2019	Weather	Cloudy
S10	01 May 2019	Wind Speed (kts)	3.8
S10	01 May 2019	Wind Dir	W
S10	01 May 2019	Animal Life	None
S10	01 May 2019	Floatables	None
S10	01 May 2019	Water Color	Green
S10	01 May 2019	Current Direction	N
S10	01 May 2019	Water Temp (C)	17.1
S10	01 May 2019	Wave Height Low (ft)	3
S10	01 May 2019	High Tide (ft)	4.2
S10	01 May 2019	High Tide Time	751
S10	01 May 2019	Low Tide (ft)	0.4
S10	01 May 2019	Low Tide Time	1403
S10	01 May 2019	Comments	Kelp; Seagrass; Water clear
S10	07 May 2019	Arrive Time	900
S10	07 May 2019	Weather	Partly Cloudy
S10	07 May 2019	Wind Speed (kts)	1.5
S10	07 May 2019	Wind Dir	W
S10	07 May 2019	Animal Life	None
S10	07 May 2019	Floatables	None
S10	07 May 2019	Water Color	Green
S10	07 May 2019	Current Direction	N
S10	07 May 2019	Water Temp (C)	17.5
S10	07 May 2019	Wave Height Low (ft)	3
S10	07 May 2019	High Tide (ft)	3.5
S10	07 May 2019	High Tide Time	1201
S10	07 May 2019	Low Tide (ft)	-0.6

Station	Date	Parameter	Value
S10	07 May 2019	Low Tide Time	542
S10	07 May 2019	Comments	Kelp; Seagrass; Water clear
S10	14 May 2019	Arrive Time	1029
S10	14 May 2019	Weather	Partly Cloudy
S10	14 May 2019	Wind Speed (kts)	5.2
S10	14 May 2019	Wind Dir	E
S10	14 May 2019	Animal Life	1 Cormorant; 16 Grebes; 3 Horses
S10	14 May 2019	Floatables	None
S10	14 May 2019	Water Color	Green
S10	14 May 2019	Current Direction	E
S10	14 May 2019	Water Temp (C)	21.4
S10	14 May 2019	Wave Height Low (ft)	2
S10	14 May 2019	High Tide (ft)	4.4
S10	14 May 2019	High Tide Time	616
S10	14 May 2019	Low Tide (ft)	-0.1
S10	14 May 2019	Low Tide Time	1245
S10	14 May 2019	Comments	Kelp; Seagrass; Debris; 3 Persons; Water clear
S10	21 May 2019	Arrive Time	858
S10	21 May 2019	Weather	Cloudy
S10	21 May 2019	Wind Speed (kts)	11.2
S10	21 May 2019	Wind Dir	W
S10	21 May 2019	Animal Life	None
S10	21 May 2019	Floatables	None
S10	21 May 2019	Water Color	Green
S10	21 May 2019	Current Direction	S
S10	21 May 2019	Water Temp (C)	16
S10	21 May 2019	Wave Height Low (ft)	3
S10	21 May 2019	High Tide (ft)	3.5
S10	21 May 2019	High Tide Time	1219
S10	21 May 2019	Low Tide (ft)	-0.7
S10	21 May 2019	Low Tide Time	554
S10	21 May 2019	Comments	Kelp; Seagrass; Debris; Water clear
S10	23 May 2019	Arrive Time	958
S10	23 May 2019	Weather	Partly Cloudy
S10	23 May 2019	Wind Speed (kts)	5.6
S10	23 May 2019	Wind Dir	E
S10	23 May 2019	Animal Life	None
S10	23 May 2019	Floatables	Foam
S10	23 May 2019	Water Color	Green
S10	23 May 2019	Current Direction	E
S10	23 May 2019	Water Temp (C)	18.1
S10	23 May 2019	Wave Height Low (ft)	5
S10	23 May 2019	High Tide (ft)	3.2
S10	23 May 2019	High Tide Time	1432
S10	23 May 2019	Low Tide (ft)	-0.1
S10	23 May 2019	Low Tide Time	732
S10	23 May 2019	Comments	Resample; Kelp; Seagrass; Debris; Water clear
S10	25 May 2019	Arrive Time	736
S10	25 May 2019	Weather	Partly Cloudy
S10	25 May 2019	Wind Speed (kts)	1.7
S10	25 May 2019	Wind Dir	N
S10	25 May 2019	Animal Life	None
S10	25 May 2019	Floatables	None
S10	25 May 2019	Water Color	Green
S10	25 May 2019	Current Direction	N
S10	25 May 2019	Water Temp (C)	16.3
S10	25 May 2019	Wave Height Low (ft)	3

Station	Date	Parameter	Value
S10	25 May 2019	High Tide (ft)	4
S10	25 May 2019	High Tide Time	136
S10	25 May 2019	Low Tide (ft)	0.5
S10	25 May 2019	Low Tide Time	930
S10	25 May 2019	Comments	Resample; Kelp; Seagrass; Debris; Water clear
S10	28 May 2019	Arrive Time	728
S10	28 May 2019	Weather	Sunny
S10	28 May 2019	Wind Speed (kts)	4.6
S10	28 May 2019	Wind Dir	W
S10	28 May 2019	Animal Life	1 Pelican
S10	28 May 2019	Floatables	Foam
S10	28 May 2019	Water Color	Green
S10	28 May 2019	Current Direction	W
S10	28 May 2019	Water Temp (C)	15.9
S10	28 May 2019	Wave Height Low (ft)	3
S10	28 May 2019	High Tide (ft)	3.5
S10	28 May 2019	High Tide Time	536
S10	28 May 2019	Low Tide (ft)	0.8
S10	28 May 2019	Low Tide Time	1201
S10	28 May 2019	Comments	Kelp; Seagrass; Debris; Water clear
S11	01 May 2019	Arrive Time	936
S11	01 May 2019	Weather	Cloudy
S11	01 May 2019	Wind Speed (kts)	4.4
S11	01 May 2019	Wind Dir	NW
S11	01 May 2019	Animal Life	None
S11	01 May 2019	Floatables	None
S11	01 May 2019	Water Color	Green
S11	01 May 2019	Current Direction	N
S11	01 May 2019	Water Temp (C)	17.9
S11	01 May 2019	Wave Height Low (ft)	3
S11	01 May 2019	High Tide (ft)	4.2
S11	01 May 2019	High Tide Time	751
S11	01 May 2019	Low Tide (ft)	0.4
S11	01 May 2019	Low Tide Time	1403
S11	01 May 2019	Comments	Water clear
S11	07 May 2019	Arrive Time	1028
S11	07 May 2019	Weather	Partly Cloudy
S11	07 May 2019	Wind Speed (kts)	2.2
S11	07 May 2019	Wind Dir	W
S11	07 May 2019	Animal Life	None
S11	07 May 2019	Floatables	None
S11	07 May 2019	Water Color	Green
S11	07 May 2019	Current Direction	N
S11	07 May 2019	Water Temp (C)	17.8
S11	07 May 2019	Wave Height Low (ft)	3
S11	07 May 2019	High Tide (ft)	3.5
S11	07 May 2019	High Tide Time	1201
S11	07 May 2019	Low Tide (ft)	-0.6
S11	07 May 2019	Low Tide Time	542
S11	07 May 2019	Comments	Kelp; Seagrass; Water clear
S11	14 May 2019	Arrive Time	909
S11	14 May 2019	Weather	Overcast
S11	14 May 2019	Wind Speed (kts)	5.2
S11	14 May 2019	Wind Dir	E
S11	14 May 2019	Animal Life	None
S11	14 May 2019	Floatables	Foam
S11	14 May 2019	Water Color	Green

Station	Date	Parameter	Value
S11	14 May 2019	Current Direction	W
S11	14 May 2019	Water Temp (C)	21.7
S11	14 May 2019	Wave Height Low (ft)	3
S11	14 May 2019	High Tide (ft)	4.4
S11	14 May 2019	High Tide Time	616
S11	14 May 2019	Low Tide (ft)	-0.1
S11	14 May 2019	Low Tide Time	1245
S11	14 May 2019	Comments	Kelp; Seagrass; Debris; 1 Person; Water clear
S11	21 May 2019	Arrive Time	1003
S11	21 May 2019	Weather	Cloudy
S11	21 May 2019	Wind Speed (kts)	11.1
S11	21 May 2019	Wind Dir	W
S11	21 May 2019	Animal Life	None
S11	21 May 2019	Floatables	None
S11	21 May 2019	Water Color	Green
S11	21 May 2019	Current Direction	S
S11	21 May 2019	Water Temp (C)	15.6
S11	21 May 2019	Wave Height Low (ft)	3
S11	21 May 2019	High Tide (ft)	3.5
S11	21 May 2019	High Tide Time	1219
S11	21 May 2019	Low Tide (ft)	-0.7
S11	21 May 2019	Low Tide Time	554
S11	21 May 2019	Comments	Kelp; Seagrass; Water clear
S11	28 May 2019	Arrive Time	852
S11	28 May 2019	Weather	Sunny
S11	28 May 2019	Wind Speed (kts)	2.3
S11	28 May 2019	Wind Dir	N
S11	28 May 2019	Animal Life	None
S11	28 May 2019	Floatables	Foam
S11	28 May 2019	Water Color	Green
S11	28 May 2019	Current Direction	N
S11	28 May 2019	Water Temp (C)	16.2
S11	28 May 2019	Wave Height Low (ft)	3
S11	28 May 2019	High Tide (ft)	3.5
S11	28 May 2019	High Tide Time	536
S11	28 May 2019	Low Tide (ft)	0.8
S11	28 May 2019	Low Tide Time	1201
S11	28 May 2019	Comments	Kelp; Seagrass; Debris; 1 Jogger; 1 Person; Water clear
S12	01 May 2019	Arrive Time	951
S12	01 May 2019	Weather	Cloudy
S12	01 May 2019	Wind Speed (kts)	4.6
S12	01 May 2019	Wind Dir	NW
S12	01 May 2019	Animal Life	None
S12	01 May 2019	Floatables	None
S12	01 May 2019	Water Color	Green
S12	01 May 2019	Current Direction	N
S12	01 May 2019	Water Temp (C)	18.2
S12	01 May 2019	Wave Height Low (ft)	3
S12	01 May 2019	High Tide (ft)	4.2
S12	01 May 2019	High Tide Time	751
S12	01 May 2019	Low Tide (ft)	0.4
S12	01 May 2019	Low Tide Time	1403
S12	01 May 2019	Comments	Kelp; Seagrass; Water clear
S12	03 May 2019	Arrive Time	819
S12	03 May 2019	Weather	Overcast
S12	03 May 2019	Wind Speed (kts)	2.3
S12	03 May 2019	Wind Dir	W

Station	Date	Parameter	Value
S12	03 May 2019	Animal Life	10 Cormorants; 5 Grebes
S12	03 May 2019	Floatables	Foam
S12	03 May 2019	Water Color	Green
S12	03 May 2019	Current Direction	W
S12	03 May 2019	Water Temp (C)	16.8
S12	03 May 2019	Wave Height Low (ft)	2
S12	03 May 2019	High Tide (ft)	4.3
S12	03 May 2019	High Tide Time	905
S12	03 May 2019	Low Tide (ft)	0.1
S12	03 May 2019	Low Tide Time	308
S12	03 May 2019	Comments	Resample; Kelp; Seagrass; 3 Persons; Water clear
S12	05 May 2019	Arrive Time	725
S12	05 May 2019	Weather	Overcast
S12	05 May 2019	Wind Speed (kts)	2.1
S12	05 May 2019	Wind Dir	N
S12	05 May 2019	Animal Life	None
S12	05 May 2019	Floatables	None
S12	05 May 2019	Water Color	Green
S12	05 May 2019	Current Direction	N
S12	05 May 2019	Water Temp (C)	17.3
S12	05 May 2019	Wave Height Low (ft)	1
S12	05 May 2019	High Tide (ft)	4
S12	05 May 2019	High Tide Time	1024
S12	05 May 2019	Low Tide (ft)	-0.5
S12	05 May 2019	Low Tide Time	419
S12	05 May 2019	Comments	Resample; Seagrass; 2 Persons; 5 Fishermen; Water clear
S12	07 May 2019	Arrive Time	1101
S12	07 May 2019	Weather	Partly Cloudy
S12	07 May 2019	Wind Speed (kts)	1.3
S12	07 May 2019	Wind Dir	W
S12	07 May 2019	Animal Life	2 Seagulls
S12	07 May 2019	Floatables	None
S12	07 May 2019	Water Color	Green
S12	07 May 2019	Current Direction	N
S12	07 May 2019	Water Temp (C)	17.4
S12	07 May 2019	Wave Height Low (ft)	2
S12	07 May 2019	High Tide (ft)	3.5
S12	07 May 2019	High Tide Time	1201
S12	07 May 2019	Low Tide (ft)	-0.6
S12	07 May 2019	Low Tide Time	542
S12	07 May 2019	Comments	Kelp; Seagrass; 4 Persons; Water clear
S12	14 May 2019	Arrive Time	804
S12	14 May 2019	Weather	Overcast
S12	14 May 2019	Wind Speed (kts)	3.6
S12	14 May 2019	Wind Dir	S
S12	14 May 2019	Animal Life	1 Dog; 15 Grebes
S12	14 May 2019	Floatables	Foam
S12	14 May 2019	Water Color	Green
S12	14 May 2019	Current Direction	S
S12	14 May 2019	Water Temp (C)	20.8
S12	14 May 2019	Wave Height Low (ft)	2
S12	14 May 2019	High Tide (ft)	4.4
S12	14 May 2019	High Tide Time	616
S12	14 May 2019	Low Tide (ft)	-0.1
S12	14 May 2019	Low Tide Time	1245
S12	14 May 2019	Comments	Kelp; Seagrass; 2 Persons; 2 Fishermen; Water clear
S12	16 May 2019	Arrive Time	759

Station	Date	Parameter	Value
S12	16 May 2019	Weather	Overcast
S12	16 May 2019	Wind Speed (kts)	2.9
S12	16 May 2019	Wind Dir	N
S12	16 May 2019	Animal Life	1 Dog
S12	16 May 2019	Floatables	Foam
S12	16 May 2019	Water Color	Green
S12	16 May 2019	Current Direction	N
S12	16 May 2019	Water Temp (C)	18.7
S12	16 May 2019	Wave Height Low (ft)	3
S12	16 May 2019	High Tide (ft)	4.5
S12	16 May 2019	High Tide Time	811
S12	16 May 2019	Low Tide (ft)	-0.1
S12	16 May 2019	Low Tide Time	219
S12	16 May 2019	Comments	Resample; Kelp; Seagrass; Debris; 4 Persons; 3 Fishermen; Water clear
S12	21 May 2019	Arrive Time	1014
S12	21 May 2019	Weather	Cloudy
S12	21 May 2019	Wind Speed (kts)	9.6
S12	21 May 2019	Wind Dir	W
S12	21 May 2019	Animal Life	1 Dog
S12	21 May 2019	Floatables	None
S12	21 May 2019	Water Color	Green
S12	21 May 2019	Current Direction	SW
S12	21 May 2019	Water Temp (C)	16.9
S12	21 May 2019	Wave Height Low (ft)	3
S12	21 May 2019	High Tide (ft)	3.5
S12	21 May 2019	High Tide Time	1219
S12	21 May 2019	Low Tide (ft)	-0.7
S12	21 May 2019	Low Tide Time	554
S12	21 May 2019	Comments	Kelp; Seagrass; 1 Person; Water clear
S12	28 May 2019	Arrive Time	909
S12	28 May 2019	Weather	Partly Cloudy
S12	28 May 2019	Wind Speed (kts)	3.7
S12	28 May 2019	Wind Dir	N
S12	28 May 2019	Animal Life	10 Dogs
S12	28 May 2019	Floatables	None
S12	28 May 2019	Water Color	Green
S12	28 May 2019	Current Direction	N
S12	28 May 2019	Water Temp (C)	17.8
S12	28 May 2019	Wave Height Low (ft)	2
S12	28 May 2019	High Tide (ft)	3.5
S12	28 May 2019	High Tide Time	536
S12	28 May 2019	Low Tide (ft)	0.8
S12	28 May 2019	Low Tide Time	1201
S12	28 May 2019	Comments	Kelp; Seagrass; 6 Persons; 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 SBOO 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	I19	I24	I25	I26	I32	I39	I40
01 May 2019	37	28	9	5	3	2	9
02 May 2019	37	28	9	5	3	2	9
03 May 2019	15*	20*	6*	5*	4*	2*	6*
04 May 2019	15*	20*	6*	5*	4*	2*	6*
05 May 2019	15*	20*	6*	5*	4*	2*	6*
06 May 2019	10	13	5	5	5	2	5
07 May 2019	10	13	5	5	5	2	5
08 May 2019	10*	12*	6*	6*	6*	2*	6*
09 May 2019	10*	12*	6*	6*	6*	2*	6*
10 May 2019	10*	12*	6*	6*	6*	2*	6*
11 May 2019	10*	12*	6*	6*	6*	2*	6*
12 May 2019	10*	12*	6*	6*	6*	2*	6*
13 May 2019	7	9	5	5	13	2	17
14 May 2019	7	9	5	5	13	2	17
15 May 2019	9*	14*	6*	6*	22*	2*	27*
16 May 2019	9*	14*	6*	6*	22*	2*	27*
17 May 2019	9*	14*	6*	6*	22*	2*	27*
18 May 2019	9*	14*	6*	6*	22*	2*	27*
19 May 2019	9*	14*	6*	6*	22*	2*	27*
20 May 2019	9*	14*	6*	6*	22*	2*	27*
21 May 2019	9*	14*	6*	6*	22*	2*	27*
22 May 2019	9*	14*	6*	6*	22*	2*	27*
23 May 2019	25*	6*	6*	10*	22*	3*	70*
24 May 2019	25*	6*	6*	10*	22*	3*	70*
25 May 2019	25*	6*	6*	10*	22*	3*	70*
26 May 2019	25*	6*	6*	10*	22*	3*	70*
27 May 2019	25*	6*	6*	10*	22*	3*	70*
28 May 2019	25*	6*	6*	10*	22*	3*	70*
29 May 2019	51	12	11	12	13	3	80
30 May 2019	37*	7*	6*	7*	12*	3*	87*
31 May 2019	37*	7*	6*	7*	12*	3*	87*

* 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 SBOO 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	I19	I24	I25	I26	I32	I39	I40
01 May 2019	9	5	4	2	2	2	3
02 May 2019	9	5	4	2	2	2	3
03 May 2019	4*	3*	3*	2*	2*	2*	3*
04 May 2019	4*	3*	3*	2*	2*	2*	3*
05 May 2019	4*	3*	3*	2*	2*	2*	3*
06 May 2019	3	3	3	2	2	2	3
07 May 2019	3	3	3	2	2	2	3
08 May 2019	3*	3*	3*	2*	3*	2*	3*
09 May 2019	3*	3*	3*	2*	3*	2*	3*
10 May 2019	3*	3*	3*	2*	3*	2*	3*
11 May 2019	3*	3*	3*	2*	3*	2*	3*
12 May 2019	3*	3*	3*	2*	3*	2*	3*
13 May 2019	3	3	3	2	5	2	6
14 May 2019	3	3	3	2	5	2	6
15 May 2019	3*	3*	3*	2*	6*	2*	8*
16 May 2019	3*	3*	3*	2*	6*	2*	8*
17 May 2019	3*	3*	3*	2*	6*	2*	8*
18 May 2019	3*	3*	3*	2*	6*	2*	8*
19 May 2019	3*	3*	3*	2*	6*	2*	8*
20 May 2019	3*	3*	3*	2*	6*	2*	8*
21 May 2019	3*	3*	3*	2*	6*	2*	8*
22 May 2019	3*	3*	3*	2*	6*	2*	8*
23 May 2019	10*	3*	3*	3*	6*	2*	18*
24 May 2019	10*	3*	3*	3*	6*	2*	18*
25 May 2019	10*	3*	3*	3*	6*	2*	18*
26 May 2019	10*	3*	3*	3*	6*	2*	18*
27 May 2019	10*	3*	3*	3*	6*	2*	18*
28 May 2019	10*	3*	3*	3*	6*	2*	18*
29 May 2019	17	6	5	3	5	2	18
30 May 2019	16*	6*	4*	3*	6*	2*	24*
31 May 2019	16*	6*	4*	3*	6*	2*	24*

* 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 SBOO 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	I19	I24	I25	I26	I32	I39	I40
01 May 2019	6	3	3	2	2	2	3
02 May 2019	6	3	3	2	2	2	3
03 May 2019	3*	3*	3*	3*	2*	2*	3*
04 May 2019	3*	3*	3*	3*	2*	2*	3*
05 May 2019	3*	3*	3*	3*	2*	2*	3*
06 May 2019	3	3	3	2	2	2	3
07 May 2019	3	3	3	2	2	2	3
08 May 2019	3*	3*	3*	3*	2*	2*	3*
09 May 2019	3*	3*	3*	3*	2*	2*	3*
10 May 2019	3*	3*	3*	3*	2*	2*	3*
11 May 2019	3*	3*	3*	3*	2*	2*	3*
12 May 2019	3*	3*	3*	3*	2*	2*	3*
13 May 2019	3	3	3	2	2	2	4
14 May 2019	3	3	3	2	2	2	4
15 May 2019	3*	3*	3*	3*	2*	2*	4*
16 May 2019	3*	3*	3*	3*	2*	2*	4*
17 May 2019	3*	3*	3*	3*	2*	2*	4*
18 May 2019	3*	3*	3*	3*	2*	2*	4*
19 May 2019	3*	3*	3*	3*	2*	2*	4*
20 May 2019	3*	3*	3*	3*	2*	2*	4*
21 May 2019	3*	3*	3*	3*	2*	2*	4*
22 May 2019	3*	3*	3*	3*	2*	2*	4*
23 May 2019	4*	3*	3*	3*	2*	2*	5*
24 May 2019	4*	3*	3*	3*	2*	2*	5*
25 May 2019	4*	3*	3*	3*	2*	2*	5*
26 May 2019	4*	3*	3*	3*	2*	2*	5*
27 May 2019	4*	3*	3*	3*	2*	2*	5*
28 May 2019	4*	3*	3*	3*	2*	2*	5*
29 May 2019	5	2	3	2	2	2	4
30 May 2019	4*	2*	2*	2*	2*	2*	4*
31 May 2019	4*	2*	2*	2*	2*	2*	4*

* Geometric mean calculated using n<5

Table 3.4

Summary of compliance at the SBOO 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	I19	I24	I25	I26	I32	I39	I40
06 May 2019	IC	IC	IC	IC	IC	IC	IC
13 May 2019	IC	IC	IC	IC	IC	IC	IC
23 May 2019	IC	IC	IC	IC	IC	IC	IC
29 May 2019	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 SBOO 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	I19	I24	I25	I26	I32	I39	I40
06 May 2019	IC	IC	IC	IC	IC	IC	IC
13 May 2019	IC	IC	IC	IC	IC	IC	IC
23 May 2019	IC	IC	IC	IC	IC	IC	IC
29 May 2019	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 SBOO 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	I19	I24	I25	I26	I32	I39	I40
06 May 2019	IC	IC	IC	IC	IC	IC	IC
13 May 2019	IC	IC	IC	IC	IC	IC	IC
23 May 2019	IC	IC	IC	IC	IC	IC	IC
29 May 2019	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 SBOO 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	I19	I24	I25	I26	I32	I39	I40
06 May 2019	IC	IC	IC	IC	IC	IC	IC
13 May 2019	IC	IC	IC	IC	IC	IC	IC
23 May 2019	E	IC	IC	IC	IC	IC	IC
29 May 2019	E	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 SBOO 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
I19	06 May 2019	1036	2	<2	<2	<2	1.00	16.7	77.25	8.3	33.63	8.2
I19	06 May 2019	1036	6	<2	<2	<2	1.00	14.3	69.66	7.4	33.71	8.1
I19	06 May 2019	1036	11	<2	<2	<2	1.00	12.8	61.95	5.8	33.63	8.0
I19	13 May 2019	1123	2	<2	<2	<2	1.00	18.1	71.75	8.7	33.60	8.2
I19	13 May 2019	1123	6	<2	2e	<2	1.00	17.4	71.25	8.2	33.64	8.2
I19	13 May 2019	1123	11	2e	<2	<2	1.00	13.3	41.08	6.8	33.62	8.0
I19	23 May 2019	1128	2	1400	320e	26e	0.23	15.1	47.52	8.4	33.50	8.2
I19	23 May 2019	1128	6	130	18e	4e	0.14	11.8	37.14	5.2	33.67	8.0
I19	23 May 2019	1128	11	40	16e	<2	0.40	11.6	64.49	5.2	33.63	7.9
I19	29 May 2019	1045	2	400e	100e	4e	0.25	15.6	42.96	9.5	33.56	8.2
I19	29 May 2019	1045	6	1600e	300e	16e	0.19	14.9	52.21	8.4	33.55	8.1
I19	29 May 2019	1045	11	800e	60e	8e	0.07	12.8	23.87	6.4	33.60	7.9
I24	06 May 2019	1052	2	<2	<2	<2	1.00	16.9	77.10	8.4	33.63	8.2
I24	06 May 2019	1052	6	<2	<2	<2	1.00	14.5	72.69	7.6	33.69	8.1
I24	06 May 2019	1052	11	<2	<2	<2	1.00	12.5	77.05	6.1	33.61	8.0
I24	13 May 2019	1145	2	2e	4e	<2	2.00	17.9	80.82	8.6	33.63	8.2
I24	13 May 2019	1145	6	6e	<2	<2	0.33	17.8	80.12	8.5	33.62	8.2
I24	13 May 2019	1145	11	2e	<2	<2	1.00	15.7	74.57	8.9	33.62	8.2
I24	23 May 2019	1150	2	<2	<2	<2	1.00	15.1	67.15	9.1	33.63	8.3
I24	23 May 2019	1150	6	<2	<2	<2	1.00	14.8	62.49	9.3	33.62	8.3
I24	23 May 2019	1150	11	<2	<2	<2	1.00	12.1	69.75	5.9	33.65	8.0
I24	29 May 2019	1108	2	60e	200e	<2	3.33	16.5	49.83	11.1	33.54	8.3
I24	29 May 2019	1108	6	540	110	2e	0.20	14.9	63.52	7.2	33.58	8.1
I24	29 May 2019	1108	11	40e	4e	<2	0.10	13.0	63.64	5.8	33.60	7.9
I25	06 May 2019	1101	2	<2	<2	<2	1.00	16.9	77.28	8.3	33.63	8.2
I25	06 May 2019	1101	6	2e	<2	<2	1.00	14.0	79.10	7.3	33.62	8.1
I25	06 May 2019	1101	9	<2	<2	<2	1.00	13.2	77.65	6.7	33.62	8.0
I25	13 May 2019	1153	2	<2	<2	<2	1.00	18.2	82.70	8.4	33.64	8.2
I25	13 May 2019	1153	6	<2	<2	<2	1.00	18.0	82.61	8.4	33.64	8.2
I25	13 May 2019	1153	9	<2	<2	<2	1.00	16.5	77.41	8.8	33.71	8.2
I25	23 May 2019	1158	2	<2	<2	<2	1.00	15.2	67.32	9.1	33.63	8.3
I25	23 May 2019	1158	6	<2	<2	<2	1.00	14.6	62.38	8.0	33.64	8.2
I25	23 May 2019	1158	9	<2	<2	<2	1.00	12.2	60.05	5.7	33.62	8.0
I25	29 May 2019	1116	2	<20	10e	2e	0.50	16.3	57.03	11.0	33.55	8.3
I25	29 May 2019	1116	6	420	78	<2	0.19	14.3	64.48	7.0	33.68	8.1
I25	29 May 2019	1116	9	<20	4e	<2	0.20	13.0	66.55	6.1	33.64	8.0
I26	06 May 2019	1109	2	<2	<2	<2	1.00	16.7	77.85	8.3	33.64	8.2
I26	06 May 2019	1109	6	4e	2e	<2	0.50	13.6	71.90	7.3	33.64	8.1
I26	06 May 2019	1109	9	2e	<2	2e	1.00	12.7	80.27	6.5	33.60	8.0

Station	Date	Time	Depth	Total	Fecal	Entero	F:T	Temp	XMS	DO	Sal	pH
I26	13 May 2019	1203	2	<2	<2	<2	1.00	18.1	81.64	8.4	33.65	8.2
I26	13 May 2019	1203	6	<2	<2	<2	1.00	17.7	80.37	8.5	33.63	8.2
I26	13 May 2019	1203	9	<2	<2	<2	1.00	14.9	71.85	8.6	33.53	8.1
I26	23 May 2019	1210	2	<2	4e	<2	2.00	15.4	60.22	8.8	33.60	8.2
I26	23 May 2019	1210	6	20e	2e	<2	0.10	15.0	53.61	8.2	33.62	8.2
I26	23 May 2019	1210	9	40e	18e	<2	0.45	12.6	55.91	5.9	33.69	8.1
I26	29 May 2019	1132	2	<2	<2	<2	1.00	16.6	62.79	10.8	33.57	8.3
I26	29 May 2019	1132	6	42	4e	<2	0.10	15.4	57.11	10.2	33.61	8.3
I26	29 May 2019	1132	9	<20	4e	<2	0.20	12.5	62.97	6.3	33.60	7.9
I32	06 May 2019	1119	2	<2	<2	<2	1.00	16.9	76.21	8.4	33.63	8.2
I32	06 May 2019	1119	6	2e	<2	<2	1.00	16.4	72.27	8.1	33.58	8.1
I32	06 May 2019	1119	9	46	12e	2e	0.26	12.7	65.79	6.2	33.64	8.0
I32	13 May 2019	1218	2	320e	54	2e	0.17	18.0	71.50	8.5	33.59	8.2
I32	13 May 2019	1218	6	300e	68	<2	0.23	17.4	74.36	8.1	33.64	8.2
I32	13 May 2019	1218	9	380e	32e	4e	0.08	13.1	61.80	7.5	33.67	8.1
I32	23 May 2019	1223	2	<2	<2	<2	1.00	15.6	58.41	8.8	33.53	8.2
I32	23 May 2019	1223	6	<2	<2	<2	1.00	15.4	57.36	8.8	33.59	8.2
I32	23 May 2019	1223	9	<2	<2	<2	1.00	15.4	58.77	8.5	33.60	8.2
I32	29 May 2019	1146	2	<2	<2	<2	1.00	17.0	59.89	11.1	33.60	8.4
I32	29 May 2019	1146	6	<2	2e	<2	1.00	16.4	49.71	10.7	33.61	8.4
I32	29 May 2019	1146	9	<2	<2	<2	1.00	15.8	47.77	9.2	33.62	8.3
I39	06 May 2019	1016	2	<2	<2	<2	1.00	16.6	78.18	8.2	33.63	8.2
I39	06 May 2019	1016	12	<2	<2	<2	1.00	12.4	80.83	6.4	33.61	8.0
I39	06 May 2019	1016	18	<2	<2	<2	1.00	11.9	85.64	5.7	33.65	7.9
I39	13 May 2019	1053	2	<2	<2	<2	1.00	18.1	85.03	8.4	33.64	8.2
I39	13 May 2019	1053	12	<2	<2	<2	1.00	16.0	82.14	8.8	33.61	8.2
I39	13 May 2019	1053	18	<2	<2	<2	1.00	12.8	77.47	7.2	33.61	8.0
I39	23 May 2019	1106	2	<2	<2	<2	1.00	15.3	57.22	8.5	33.62	8.2
I39	23 May 2019	1106	12	10e	<2	<2	0.20	11.2	71.49	4.8	33.66	7.9
I39	23 May 2019	1106	18	10e	4e	<2	0.40	11.1	58.85	4.5	33.68	7.9
I39	29 May 2019	1021	2	<2	<2	<2	1.00	16.5	66.47	10.5	33.58	8.3
I39	29 May 2019	1021	12	6e	<2	<2	0.33	12.2	70.64	6.1	33.62	7.9
I39	29 May 2019	1021	18	<2	<2	<2	1.00	11.6	75.56	5.0	33.65	7.8
I40	06 May 2019	1047	2	<2	<2	<2	1.00	16.9	77.10	8.3	33.63	8.2
I40	06 May 2019	1047	6	<2	<2	<2	1.00	14.8	65.79	7.3	33.71	8.1
I40	06 May 2019	1047	9	6e	<2	2e	0.33	12.9	80.56	6.7	33.61	8.0
I40	13 May 2019	1136	2	3600e	360e	16e	0.10	17.7	67.15	8.4	33.59	8.2
I40	13 May 2019	1136	6	800e	160e	16e	0.20	17.0	60.70	7.7	33.62	8.2
I40	13 May 2019	1136	9	46	46	<2	1.00	13.6	60.24	7.2	33.72	8.1
I40	23 May 2019	1140	2	180e	88	12e	0.49	15.6	62.59	8.8	33.27	8.2
I40	23 May 2019	1140	6	76	22e	<2	0.29	14.9	63.59	9.1	33.60	8.2
I40	23 May 2019	1140	9	10e	2e	2e	0.20	12.4	49.12	6.0	33.65	8.0
I40	29 May 2019	1059	2	60e	16e	<2	0.27	15.9	57.09	8.3	33.53	8.2
I40	29 May 2019	1059	6	80e	26e	2e	0.32	14.7	54.19	7.6	33.62	8.1
I40	29 May 2019	1059	9	260e	26e	<2	0.10	13.5	53.88	6.8	33.61	8.0

ns = not sampled

ND = no data

Table 3.9

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

Station	Date	Parameter	Value
I19	06 May 2019	Depth (m)	9
I19	06 May 2019	Arrive Time	1036
I19	06 May 2019	Depart Time	1039
I19	06 May 2019	Air Temp (C)	16
I19	06 May 2019	Weather	Rain
I19	06 May 2019	Visibility (mi)	5
I19	06 May 2019	Wind Speed (kts)	13
I19	06 May 2019	Wind Dir	SE
I19	06 May 2019	Water Color	Brownish-Green
I19	06 May 2019	Wave Ht Low (ft)	3
I19	06 May 2019	Wave Period (sec)	13
I19	06 May 2019	Sea State	Light chop
I19	06 May 2019	High Tide (ft)	6.33
I19	06 May 2019	High Tide Time	2106
I19	06 May 2019	Low Tide (ft)	-0.71
I19	06 May 2019	Low Tide Time	405
I19	06 May 2019	Comments	none
I19	13 May 2019	Depth (m)	11
I19	13 May 2019	Arrive Time	1123
I19	13 May 2019	Depart Time	1128
I19	13 May 2019	Air Temp (C)	17
I19	13 May 2019	Weather	Overcast
I19	13 May 2019	Visibility (mi)	8
I19	13 May 2019	Wind Speed (kts)	7
I19	13 May 2019	Wind Dir	W
I19	13 May 2019	Water Color	Green
I19	13 May 2019	Wave Ht Low (ft)	3
I19	13 May 2019	Wave Period (sec)	13
I19	13 May 2019	Sea State	Calm
I19	13 May 2019	High Tide (ft)	4.34
I19	13 May 2019	High Tide Time	505
I19	13 May 2019	Low Tide (ft)	-0.12
I19	13 May 2019	Low Tide Time	1158
I19	13 May 2019	Comments	none
I19	23 May 2019	Depth (m)	11
I19	23 May 2019	Arrive Time	1128
I19	23 May 2019	Depart Time	1132
I19	23 May 2019	Air Temp (C)	15
I19	23 May 2019	Weather	Overcast
I19	23 May 2019	Visibility (mi)	9
I19	23 May 2019	Wind Speed (kts)	8
I19	23 May 2019	Wind Dir	SW
I19	23 May 2019	Water Color	Green
I19	23 May 2019	Wave Ht Low (ft)	6
I19	23 May 2019	Wave Period (sec)	11
I19	23 May 2019	Sea State	Confused swell
I19	23 May 2019	High Tide (ft)	3.24
I19	23 May 2019	High Tide Time	1432
I19	23 May 2019	Low Tide (ft)	-0.05
I19	23 May 2019	Low Tide Time	732
I19	23 May 2019	Comments	none
I19	29 May 2019	Depth (m)	11
I19	29 May 2019	Arrive Time	1045

Station	Date	Parameter	Value
I19	29 May 2019	Depart Time	1053
I19	29 May 2019	Air Temp (C)	16
I19	29 May 2019	Weather	Clear
I19	29 May 2019	Visibility (mi)	6
I19	29 May 2019	Wind Speed (kts)	5
I19	29 May 2019	Wind Dir	W
I19	29 May 2019	Water Color	Brown
I19	29 May 2019	Wave Ht Low (ft)	4
I19	29 May 2019	Wave Period (sec)	9
I19	29 May 2019	Sea State	Calm
I19	29 May 2019	High Tide (ft)	3.59
I19	29 May 2019	High Tide Time	635
I19	29 May 2019	Low Tide (ft)	0.93
I19	29 May 2019	Low Tide Time	1237
I19	29 May 2019	Comments	none
I24	06 May 2019	Depth (m)	9
I24	06 May 2019	Arrive Time	1052
I24	06 May 2019	Depart Time	1100
I24	06 May 2019	Air Temp (C)	16
I24	06 May 2019	Weather	Rain
I24	06 May 2019	Visibility (mi)	5
I24	06 May 2019	Wind Speed (kts)	13
I24	06 May 2019	Wind Dir	E
I24	06 May 2019	Water Color	Brownish-Green
I24	06 May 2019	Wave Ht Low (ft)	3
I24	06 May 2019	Wave Period (sec)	13
I24	06 May 2019	Sea State	Light chop
I24	06 May 2019	High Tide (ft)	6.33
I24	06 May 2019	High Tide Time	2106
I24	06 May 2019	Low Tide (ft)	-0.71
I24	06 May 2019	Low Tide Time	405
I24	06 May 2019	Comments	none
I24	13 May 2019	Depth (m)	11
I24	13 May 2019	Arrive Time	1145
I24	13 May 2019	Depart Time	1149
I24	13 May 2019	Air Temp (C)	17
I24	13 May 2019	Weather	Overcast
I24	13 May 2019	Visibility (mi)	8
I24	13 May 2019	Wind Speed (kts)	5
I24	13 May 2019	Wind Dir	SW
I24	13 May 2019	Water Color	Green
I24	13 May 2019	Wave Ht Low (ft)	3
I24	13 May 2019	Wave Period (sec)	13
I24	13 May 2019	Sea State	Calm
I24	13 May 2019	High Tide (ft)	4.34
I24	13 May 2019	High Tide Time	505
I24	13 May 2019	Low Tide (ft)	-0.12
I24	13 May 2019	Low Tide Time	1158
I24	13 May 2019	Comments	none
I24	23 May 2019	Depth (m)	11
I24	23 May 2019	Arrive Time	1150
I24	23 May 2019	Depart Time	1155
I24	23 May 2019	Air Temp (C)	15
I24	23 May 2019	Weather	Overcast
I24	23 May 2019	Visibility (mi)	9
I24	23 May 2019	Wind Speed (kts)	5
I24	23 May 2019	Wind Dir	SW
I24	23 May 2019	Water Color	Green

Station	Date	Parameter	Value
I24	23 May 2019	Wave Ht Low (ft)	6
I24	23 May 2019	Wave Period (sec)	11
I24	23 May 2019	Sea State	Confused swell
I24	23 May 2019	High Tide (ft)	3.24
I24	23 May 2019	High Tide Time	1432
I24	23 May 2019	Low Tide (ft)	-0.05
I24	23 May 2019	Low Tide Time	732
I24	23 May 2019	Comments	none
I24	29 May 2019	Depth (m)	10
I24	29 May 2019	Arrive Time	1108
I24	29 May 2019	Depart Time	1112
I24	29 May 2019	Air Temp (C)	16
I24	29 May 2019	Weather	Clear
I24	29 May 2019	Visibility (mi)	6
I24	29 May 2019	Wind Speed (kts)	8
I24	29 May 2019	Wind Dir	W
I24	29 May 2019	Water Color	Brown
I24	29 May 2019	Wave Ht Low (ft)	4
I24	29 May 2019	Wave Period (sec)	9
I24	29 May 2019	Sea State	Calm
I24	29 May 2019	High Tide (ft)	3.59
I24	29 May 2019	High Tide Time	635
I24	29 May 2019	Low Tide (ft)	0.93
I24	29 May 2019	Low Tide Time	1237
I24	29 May 2019	Comments	none
I25	06 May 2019	Depth (m)	9
I25	06 May 2019	Arrive Time	1101
I25	06 May 2019	Depart Time	1103
I25	06 May 2019	Air Temp (C)	16
I25	06 May 2019	Weather	Rain
I25	06 May 2019	Visibility (mi)	5
I25	06 May 2019	Wind Speed (kts)	9
I25	06 May 2019	Wind Dir	SE
I25	06 May 2019	Water Color	Brownish-Green
I25	06 May 2019	Wave Ht Low (ft)	3
I25	06 May 2019	Wave Period (sec)	13
I25	06 May 2019	Sea State	Light chop
I25	06 May 2019	High Tide (ft)	6.33
I25	06 May 2019	High Tide Time	2106
I25	06 May 2019	Low Tide (ft)	-0.71
I25	06 May 2019	Low Tide Time	405
I25	06 May 2019	Comments	none
I25	13 May 2019	Depth (m)	9
I25	13 May 2019	Arrive Time	1153
I25	13 May 2019	Depart Time	1157
I25	13 May 2019	Air Temp (C)	17
I25	13 May 2019	Weather	Partly Cloudy
I25	13 May 2019	Visibility (mi)	8
I25	13 May 2019	Wind Speed (kts)	4
I25	13 May 2019	Wind Dir	SW
I25	13 May 2019	Water Color	Bluish-Green
I25	13 May 2019	Wave Ht Low (ft)	3
I25	13 May 2019	Wave Period (sec)	13
I25	13 May 2019	Sea State	Calm
I25	13 May 2019	High Tide (ft)	4.34
I25	13 May 2019	High Tide Time	505
I25	13 May 2019	Low Tide (ft)	-0.12
I25	13 May 2019	Low Tide Time	1158

Station	Date	Parameter	Value
I25	13 May 2019	Comments	Unable to obtain station depth
I25	23 May 2019	Depth (m)	9
I25	23 May 2019	Arrive Time	1158
I25	23 May 2019	Depart Time	1205
I25	23 May 2019	Air Temp (C)	15
I25	23 May 2019	Weather	Overcast
I25	23 May 2019	Visibility (mi)	9
I25	23 May 2019	Wind Speed (kts)	6
I25	23 May 2019	Wind Dir	SW
I25	23 May 2019	Water Color	Green
I25	23 May 2019	Wave Ht Low (ft)	6
I25	23 May 2019	Wave Period (sec)	11
I25	23 May 2019	Sea State	Confused swell
I25	23 May 2019	High Tide (ft)	3.24
I25	23 May 2019	High Tide Time	1432
I25	23 May 2019	Low Tide (ft)	-0.05
I25	23 May 2019	Low Tide Time	732
I25	23 May 2019	Comments	none
I25	29 May 2019	Depth (m)	10
I25	29 May 2019	Arrive Time	1116
I25	29 May 2019	Depart Time	1126
I25	29 May 2019	Air Temp (C)	16
I25	29 May 2019	Weather	Clear
I25	29 May 2019	Visibility (mi)	6
I25	29 May 2019	Wind Speed (kts)	6
I25	29 May 2019	Wind Dir	W
I25	29 May 2019	Water Color	Brown
I25	29 May 2019	Wave Ht Low (ft)	4
I25	29 May 2019	Wave Period (sec)	9
I25	29 May 2019	Sea State	Calm
I25	29 May 2019	High Tide (ft)	3.59
I25	29 May 2019	High Tide Time	635
I25	29 May 2019	Low Tide (ft)	0.93
I25	29 May 2019	Low Tide Time	1237
I25	29 May 2019	Comments	none
I26	06 May 2019	Depth (m)	9
I26	06 May 2019	Arrive Time	1109
I26	06 May 2019	Depart Time	1112
I26	06 May 2019	Air Temp (C)	16
I26	06 May 2019	Weather	Rain
I26	06 May 2019	Visibility (mi)	5
I26	06 May 2019	Wind Speed (kts)	8
I26	06 May 2019	Wind Dir	SE
I26	06 May 2019	Water Color	Brownish-Green
I26	06 May 2019	Wave Ht Low (ft)	3
I26	06 May 2019	Wave Period (sec)	13
I26	06 May 2019	Sea State	Light chop
I26	06 May 2019	High Tide (ft)	6.33
I26	06 May 2019	High Tide Time	2106
I26	06 May 2019	Low Tide (ft)	-0.71
I26	06 May 2019	Low Tide Time	405
I26	06 May 2019	Comments	none
I26	13 May 2019	Depth (m)	9
I26	13 May 2019	Arrive Time	1203
I26	13 May 2019	Depart Time	1208
I26	13 May 2019	Air Temp (C)	17
I26	13 May 2019	Weather	Partly Cloudy

Station	Date	Parameter	Value
I26	13 May 2019	Visibility (mi)	8
I26	13 May 2019	Wind Speed (kts)	4
I26	13 May 2019	Wind Dir	SW
I26	13 May 2019	Water Color	Bluish-Green
I26	13 May 2019	Wave Ht Low (ft)	3
I26	13 May 2019	Wave Period (sec)	13
I26	13 May 2019	Sea State	Wind ripples
I26	13 May 2019	High Tide (ft)	4.34
I26	13 May 2019	High Tide Time	505
I26	13 May 2019	Low Tide (ft)	-0.12
I26	13 May 2019	Low Tide Time	1158
I26	13 May 2019	Comments	none
I26	23 May 2019	Depth (m)	10
I26	23 May 2019	Arrive Time	1210
I26	23 May 2019	Depart Time	1216
I26	23 May 2019	Air Temp (C)	15
I26	23 May 2019	Weather	Overcast
I26	23 May 2019	Visibility (mi)	9
I26	23 May 2019	Wind Speed (kts)	6
I26	23 May 2019	Wind Dir	SW
I26	23 May 2019	Water Color	Green
I26	23 May 2019	Wave Ht Low (ft)	6
I26	23 May 2019	Wave Period (sec)	11
I26	23 May 2019	Sea State	Confused swell
I26	23 May 2019	High Tide (ft)	3.24
I26	23 May 2019	High Tide Time	1432
I26	23 May 2019	Low Tide (ft)	-0.05
I26	23 May 2019	Low Tide Time	732
I26	23 May 2019	Comments	none
I26	29 May 2019	Depth (m)	10
I26	29 May 2019	Arrive Time	1132
I26	29 May 2019	Depart Time	1136
I26	29 May 2019	Air Temp (C)	16
I26	29 May 2019	Weather	Clear
I26	29 May 2019	Visibility (mi)	6
I26	29 May 2019	Wind Speed (kts)	5
I26	29 May 2019	Wind Dir	W
I26	29 May 2019	Water Color	Green
I26	29 May 2019	Wave Ht Low (ft)	4
I26	29 May 2019	Wave Period (sec)	9
I26	29 May 2019	Sea State	Calm
I26	29 May 2019	High Tide (ft)	3.59
I26	29 May 2019	High Tide Time	635
I26	29 May 2019	Low Tide (ft)	0.93
I26	29 May 2019	Low Tide Time	1237
I26	29 May 2019	Comments	none
I32	06 May 2019	Depth (m)	9
I32	06 May 2019	Arrive Time	1119
I32	06 May 2019	Depart Time	1124
I32	06 May 2019	Air Temp (C)	16
I32	06 May 2019	Weather	Partly Cloudy
I32	06 May 2019	Visibility (mi)	5
I32	06 May 2019	Wind Speed (kts)	5
I32	06 May 2019	Wind Dir	SE
I32	06 May 2019	Water Color	Brownish-Green
I32	06 May 2019	Wave Ht Low (ft)	3
I32	06 May 2019	Wave Period (sec)	13
I32	06 May 2019	Sea State	Light chop

Station	Date	Parameter	Value
I32	06 May 2019	High Tide (ft)	6.33
I32	06 May 2019	High Tide Time	2106
I32	06 May 2019	Low Tide (ft)	-0.71
I32	06 May 2019	Low Tide Time	405
I32	06 May 2019	Comments	none
I32	13 May 2019	Depth (m)	10
I32	13 May 2019	Arrive Time	1218
I32	13 May 2019	Depart Time	1223
I32	13 May 2019	Air Temp (C)	17
I32	13 May 2019	Weather	Partly Cloudy
I32	13 May 2019	Visibility (mi)	8
I32	13 May 2019	Wind Speed (kts)	6
I32	13 May 2019	Wind Dir	SW
I32	13 May 2019	Water Color	Green
I32	13 May 2019	Wave Ht Low (ft)	3
I32	13 May 2019	Wave Period (sec)	13
I32	13 May 2019	Sea State	Wind ripples
I32	13 May 2019	High Tide (ft)	4.34
I32	13 May 2019	High Tide Time	505
I32	13 May 2019	Low Tide (ft)	-0.12
I32	13 May 2019	Low Tide Time	1158
I32	13 May 2019	Comments	none
I32	23 May 2019	Depth (m)	11
I32	23 May 2019	Arrive Time	1223
I32	23 May 2019	Depart Time	1229
I32	23 May 2019	Air Temp (C)	16
I32	23 May 2019	Weather	Overcast
I32	23 May 2019	Visibility (mi)	9
I32	23 May 2019	Wind Speed (kts)	5
I32	23 May 2019	Wind Dir	W
I32	23 May 2019	Water Color	Green
I32	23 May 2019	Wave Ht Low (ft)	6
I32	23 May 2019	Wave Period (sec)	11
I32	23 May 2019	Sea State	Confused swell
I32	23 May 2019	High Tide (ft)	3.24
I32	23 May 2019	High Tide Time	1432
I32	23 May 2019	Low Tide (ft)	-0.05
I32	23 May 2019	Low Tide Time	732
I32	23 May 2019	Comments	none
I32	29 May 2019	Depth (m)	11
I32	29 May 2019	Arrive Time	1146
I32	29 May 2019	Depart Time	1151
I32	29 May 2019	Air Temp (C)	16
I32	29 May 2019	Weather	Clear
I32	29 May 2019	Visibility (mi)	6
I32	29 May 2019	Wind Speed (kts)	8
I32	29 May 2019	Wind Dir	W
I32	29 May 2019	Water Color	Green
I32	29 May 2019	Wave Ht Low (ft)	4
I32	29 May 2019	Wave Period (sec)	9
I32	29 May 2019	Sea State	Calm
I32	29 May 2019	High Tide (ft)	3.59
I32	29 May 2019	High Tide Time	635
I32	29 May 2019	Low Tide (ft)	0.93
I32	29 May 2019	Low Tide Time	1237
I32	29 May 2019	Comments	none
I39	06 May 2019	Depth (m)	18

Station	Date	Parameter	Value
I39	06 May 2019	Arrive Time	1016
I39	06 May 2019	Depart Time	1021
I39	06 May 2019	Air Temp (C)	16
I39	06 May 2019	Weather	Partly Cloudy
I39	06 May 2019	Visibility (mi)	5
I39	06 May 2019	Wind Speed (kts)	7
I39	06 May 2019	Wind Dir	E
I39	06 May 2019	Water Color	Brownish-Green
I39	06 May 2019	Wave Ht Low (ft)	3
I39	06 May 2019	Wave Period (sec)	13
I39	06 May 2019	Sea State	Light chop
I39	06 May 2019	High Tide (ft)	6.33
I39	06 May 2019	High Tide Time	2106
I39	06 May 2019	Low Tide (ft)	-0.71
I39	06 May 2019	Low Tide Time	405
I39	06 May 2019	Comments	none
I39	13 May 2019	Depth (m)	18
I39	13 May 2019	Arrive Time	1053
I39	13 May 2019	Depart Time	1105
I39	13 May 2019	Air Temp (C)	17
I39	13 May 2019	Weather	Overcast
I39	13 May 2019	Visibility (mi)	8
I39	13 May 2019	Wind Speed (kts)	4
I39	13 May 2019	Wind Dir	S
I39	13 May 2019	Water Color	Blue
I39	13 May 2019	Wave Ht Low (ft)	4
I39	13 May 2019	Wave Period (sec)	13
I39	13 May 2019	Sea State	Calm
I39	13 May 2019	High Tide (ft)	4.34
I39	13 May 2019	High Tide Time	505
I39	13 May 2019	Low Tide (ft)	-0.12
I39	13 May 2019	Low Tide Time	1158
I39	13 May 2019	Comments	none
I39	23 May 2019	Depth (m)	20
I39	23 May 2019	Arrive Time	1106
I39	23 May 2019	Depart Time	1111
I39	23 May 2019	Air Temp (C)	15
I39	23 May 2019	Weather	Overcast
I39	23 May 2019	Visibility (mi)	9
I39	23 May 2019	Wind Speed (kts)	5
I39	23 May 2019	Wind Dir	SW
I39	23 May 2019	Water Color	Brownish-Green
I39	23 May 2019	Wave Ht Low (ft)	8
I39	23 May 2019	Wave Period (sec)	11
I39	23 May 2019	Sea State	Confused swell
I39	23 May 2019	High Tide (ft)	3.24
I39	23 May 2019	High Tide Time	1432
I39	23 May 2019	Low Tide (ft)	-0.05
I39	23 May 2019	Low Tide Time	732
I39	23 May 2019	Comments	Kelp debris
I39	29 May 2019	Depth (m)	20
I39	29 May 2019	Arrive Time	1021
I39	29 May 2019	Depart Time	1026
I39	29 May 2019	Air Temp (C)	16
I39	29 May 2019	Weather	Partly Cloudy
I39	29 May 2019	Visibility (mi)	6
I39	29 May 2019	Wind Speed (kts)	4
I39	29 May 2019	Wind Dir	SW

Station	Date	Parameter	Value
I39	29 May 2019	Water Color	Green
I39	29 May 2019	Wave Ht Low (ft)	4
I39	29 May 2019	Wave Period (sec)	9
I39	29 May 2019	Sea State	Calm
I39	29 May 2019	High Tide (ft)	3.59
I39	29 May 2019	High Tide Time	635
I39	29 May 2019	Low Tide (ft)	0.93
I39	29 May 2019	Low Tide Time	1237
I39	29 May 2019	Comments	none
I40	06 May 2019	Depth (m)	9
I40	06 May 2019	Arrive Time	1047
I40	06 May 2019	Depart Time	1051
I40	06 May 2019	Air Temp (C)	16
I40	06 May 2019	Weather	Rain
I40	06 May 2019	Visibility (mi)	5
I40	06 May 2019	Wind Speed (kts)	10
I40	06 May 2019	Wind Dir	SE
I40	06 May 2019	Water Color	Brownish-Green
I40	06 May 2019	Wave Ht Low (ft)	3
I40	06 May 2019	Wave Period (sec)	13
I40	06 May 2019	Sea State	Light chop
I40	06 May 2019	High Tide (ft)	6.33
I40	06 May 2019	High Tide Time	2106
I40	06 May 2019	Low Tide (ft)	-0.71
I40	06 May 2019	Low Tide Time	405
I40	06 May 2019	Comments	none
I40	13 May 2019	Depth (m)	10
I40	13 May 2019	Arrive Time	1136
I40	13 May 2019	Depart Time	1139
I40	13 May 2019	Air Temp (C)	17
I40	13 May 2019	Weather	Overcast
I40	13 May 2019	Visibility (mi)	8
I40	13 May 2019	Wind Speed (kts)	6
I40	13 May 2019	Wind Dir	SW
I40	13 May 2019	Water Color	Green
I40	13 May 2019	Wave Ht Low (ft)	3
I40	13 May 2019	Wave Period (sec)	13
I40	13 May 2019	Sea State	Calm
I40	13 May 2019	High Tide (ft)	4.34
I40	13 May 2019	High Tide Time	505
I40	13 May 2019	Low Tide (ft)	-0.12
I40	13 May 2019	Low Tide Time	1158
I40	13 May 2019	Comments	none
I40	23 May 2019	Depth (m)	1
I40	23 May 2019	Arrive Time	1140
I40	23 May 2019	Depart Time	1146
I40	23 May 2019	Air Temp (C)	15
I40	23 May 2019	Weather	Overcast
I40	23 May 2019	Visibility (mi)	9
I40	23 May 2019	Wind Speed (kts)	6
I40	23 May 2019	Wind Dir	SW
I40	23 May 2019	Water Color	Green
I40	23 May 2019	Wave Ht Low (ft)	6
I40	23 May 2019	Wave Period (sec)	11
I40	23 May 2019	Sea State	Confused swell
I40	23 May 2019	High Tide (ft)	3.24
I40	23 May 2019	High Tide Time	1432
I40	23 May 2019	Low Tide (ft)	-0.05

Station	Date	Parameter	Value
I40	23 May 2019	Low Tide Time	732
I40	23 May 2019	Comments	High CDOM at surface
I40	29 May 2019	Depth (m)	11
I40	29 May 2019	Arrive Time	1059
I40	29 May 2019	Depart Time	1103
I40	29 May 2019	Air Temp (C)	16
I40	29 May 2019	Weather	Clear
I40	29 May 2019	Visibility (mi)	6
I40	29 May 2019	Wind Speed (kts)	6
I40	29 May 2019	Wind Dir	SW
I40	29 May 2019	Water Color	Brown
I40	29 May 2019	Wave Ht Low (ft)	4
I40	29 May 2019	Wave Period (sec)	9
I40	29 May 2019	Sea State	Calm
I40	29 May 2019	High Tide (ft)	3.59
I40	29 May 2019	High Tide Time	635
I40	29 May 2019	Low Tide (ft)	0.93
I40	29 May 2019	Low Tide Time	1237
I40	29 May 2019	Comments	TJ river plume on station

Table 3.10

Summary of CTD profile data from the SBOO 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)
I19	06 May 2019	1	16.69	76.97	8.3	33.63	8.2	24.5	1.02
I19	06 May 2019	2	16.68	77.25	8.3	33.63	8.2	24.5	1.06
I19	06 May 2019	3	16.60	77.08	8.2	33.64	8.2	24.6	1.16
I19	06 May 2019	4	16.14	74.96	7.9	33.67	8.2	24.7	1.48
I19	06 May 2019	5	15.37	71.60	7.5	33.69	8.1	24.9	1.88
I19	06 May 2019	6	14.26	69.66	7.4	33.71	8.1	25.1	2.42
I19	06 May 2019	7	13.40	72.29	7.5	33.66	8.1	25.3	3.15
I19	06 May 2019	8	13.16	71.04	7.3	33.62	8.1	25.3	4.53
I19	06 May 2019	9	13.01	68.37	6.6	33.62	8.0	25.3	5.55
I19	06 May 2019	10	12.75	61.95	5.8	33.63	8.0	25.4	4.89
I19	13 May 2019	1	18.13	71.56	8.8	33.59	8.2	24.2	1.53
I19	13 May 2019	2	18.08	71.75	8.7	33.60	8.2	24.2	1.58
I19	13 May 2019	3	17.96	72.78	8.8	33.60	8.2	24.2	1.78
I19	13 May 2019	4	17.80	75.22	8.6	33.61	8.2	24.3	2.01
I19	13 May 2019	5	17.73	74.30	8.5	33.60	8.2	24.3	2.44
I19	13 May 2019	6	17.43	71.25	8.2	33.64	8.2	24.4	3.16
I19	13 May 2019	7	15.82	69.98	8.7	33.65	8.2	24.8	4.13
I19	13 May 2019	8	15.42	68.43	8.3	33.65	8.2	24.8	5.26
I19	13 May 2019	9	13.54	58.10	7.1	33.68	8.1	25.3	7.13
I19	13 May 2019	10	13.29	41.08	6.8	33.62	8.0	25.3	7.72
I19	23 May 2019	1	15.08	52.44	8.4	33.49	8.2	24.8	1.78
I19	23 May 2019	2	15.08	47.52	8.4	33.50	8.2	24.8	1.83
I19	23 May 2019	3	15.00	54.75	8.1	33.55	8.2	24.9	2.07
I19	23 May 2019	4	14.09	55.22	7.3	33.70	8.2	25.2	2.74
I19	23 May 2019	5	12.64	47.61	6.1	33.73	8.1	25.5	3.16
I19	23 May 2019	6	11.84	37.14	5.2	33.67	8.0	25.6	3.31
I19	23 May 2019	7	11.71	43.43	5.0	33.63	7.9	25.6	2.96
I19	23 May 2019	8	11.78	63.62	5.1	33.62	7.9	25.6	2.61
I19	23 May 2019	9	11.65	70.26	5.2	33.62	7.9	25.6	2.51
I19	23 May 2019	10	11.63	64.49	5.2	33.63	7.9	25.6	2.48
I19	29 May 2019	1	16.15	44.87	10.5	33.48	8.3	24.5	7.37
I19	29 May 2019	2	15.58	42.96	9.5	33.56	8.2	24.7	11.05
I19	29 May 2019	3	15.05	43.65	8.9	33.54	8.2	24.8	16.41
I19	29 May 2019	4	14.99	49.80	8.6	33.55	8.1	24.9	16.82
I19	29 May 2019	5	14.87	51.36	8.5	33.55	8.1	24.9	14.69
I19	29 May 2019	6	14.86	52.21	8.4	33.55	8.1	24.9	13.39
I19	29 May 2019	7	14.82	53.23	8.5	33.57	8.1	24.9	12.30
I19	29 May 2019	8	14.83	53.39	8.4	33.57	8.1	24.9	11.52
I19	29 May 2019	9	13.93	48.73	7.1	33.69	8.1	25.2	10.21
I19	29 May 2019	10	12.78	23.87	6.4	33.60	7.9	25.4	7.07
I24	06 May 2019	1	16.85	77.05	8.4	33.63	8.2	24.5	0.83
I24	06 May 2019	2	16.85	77.10	8.4	33.63	8.2	24.5	0.86
I24	06 May 2019	3	16.83	76.98	8.3	33.63	8.2	24.5	0.99
I24	06 May 2019	4	16.74	76.79	8.1	33.64	8.2	24.5	1.15
I24	06 May 2019	5	15.83	74.20	7.8	33.69	8.2	24.8	1.63
I24	06 May 2019	6	14.50	72.69	7.6	33.69	8.1	25.1	2.41
I24	06 May 2019	7	13.28	76.57	7.2	33.68	8.1	25.3	2.67
I24	06 May 2019	8	12.82	78.96	6.7	33.63	8.0	25.4	2.66
I24	06 May 2019	9	12.51	79.24	6.2	33.62	8.0	25.4	1.89
I24	06 May 2019	10	12.49	77.79	6.0	33.61	8.0	25.4	1.33
I24	06 May 2019	11	12.49	77.05	6.1	33.61	8.0	25.4	1.15

Station	Date	Depth (m)	Temp (°C)	XMS (‰)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (µg/L)
I24	13 May 2019	1	18.02	81.12	8.5	33.64	8.2	24.2	0.87
I24	13 May 2019	2	17.90	80.82	8.6	33.63	8.2	24.2	0.92
I24	13 May 2019	3	17.86	80.36	8.6	33.62	8.2	24.2	1.04
I24	13 May 2019	4	17.85	80.01	8.6	33.62	8.2	24.3	1.16
I24	13 May 2019	5	17.83	80.06	8.6	33.62	8.2	24.3	1.27
I24	13 May 2019	6	17.82	80.12	8.5	33.62	8.2	24.3	1.33
I24	13 May 2019	7	17.78	80.15	8.6	33.62	8.2	24.3	1.41
I24	13 May 2019	8	17.47	78.78	8.4	33.63	8.2	24.4	1.64
I24	13 May 2019	9	16.61	75.35	8.4	33.69	8.2	24.6	2.17
I24	13 May 2019	10	15.66	74.57	8.9	33.62	8.2	24.8	2.61
I24	23 May 2019	1	15.15	66.92	9.1	33.62	8.2	24.9	1.58
I24	23 May 2019	2	15.08	67.15	9.1	33.63	8.3	24.9	1.68
I24	23 May 2019	3	14.97	66.16	9.2	33.62	8.3	24.9	2.00
I24	23 May 2019	4	14.88	64.54	9.2	33.63	8.3	24.9	2.64
I24	23 May 2019	5	14.82	63.70	9.2	33.62	8.3	24.9	3.92
I24	23 May 2019	6	14.78	62.49	9.3	33.62	8.3	25.0	5.76
I24	23 May 2019	7	14.76	63.98	8.6	33.61	8.3	25.0	6.95
I24	23 May 2019	8	12.94	66.55	6.9	33.84	8.2	25.5	6.43
I24	23 May 2019	9	12.34	68.79	6.0	33.60	8.0	25.4	3.74
I24	23 May 2019	10	12.10	69.75	5.9	33.65	8.0	25.5	2.85
I24	29 May 2019	1	16.86	50.21	10.9	33.43	8.3	24.3	4.26
I24	29 May 2019	2	16.52	49.83	11.1	33.54	8.3	24.5	5.11
I24	29 May 2019	3	16.21	52.64	10.6	33.56	8.3	24.6	9.39
I24	29 May 2019	4	15.82	60.53	8.9	33.55	8.2	24.7	8.36
I24	29 May 2019	5	15.18	62.67	7.9	33.54	8.2	24.8	5.65
I24	29 May 2019	6	14.87	63.52	7.2	33.58	8.1	24.9	4.90
I24	29 May 2019	7	13.40	66.49	6.3	33.67	8.0	25.3	3.17
I24	29 May 2019	8	13.10	66.36	5.9	33.60	7.9	25.3	2.16
I24	29 May 2019	9	13.06	65.63	5.8	33.60	7.9	25.3	1.98
I24	29 May 2019	10	13.03	63.64	5.8	33.60	7.9	25.3	1.94
I25	06 May 2019	1	16.93	77.28	8.3	33.63	8.2	24.5	0.61
I25	06 May 2019	2	16.91	77.28	8.3	33.63	8.2	24.5	0.63
I25	06 May 2019	3	16.80	76.93	8.2	33.63	8.2	24.5	0.73
I25	06 May 2019	4	16.24	75.56	7.8	33.70	8.2	24.7	0.97
I25	06 May 2019	5	14.62	71.29	7.5	33.70	8.1	25.1	1.41
I25	06 May 2019	6	13.99	79.10	7.3	33.62	8.1	25.1	1.27
I25	06 May 2019	7	13.50	80.02	6.9	33.65	8.0	25.2	1.09
I25	06 May 2019	8	13.34	79.10	6.7	33.61	8.0	25.2	0.92
I25	06 May 2019	9	13.20	77.65	6.7	33.62	8.0	25.3	0.87
I25	13 May 2019	1	18.22	82.59	8.5	33.64	8.2	24.2	0.68
I25	13 May 2019	2	18.21	82.70	8.4	33.64	8.2	24.2	0.71
I25	13 May 2019	3	18.20	82.78	8.4	33.65	8.2	24.2	0.71
I25	13 May 2019	4	18.11	83.08	8.4	33.64	8.2	24.2	0.75
I25	13 May 2019	5	18.03	82.81	8.4	33.64	8.2	24.2	0.84
I25	13 May 2019	6	18.01	82.61	8.4	33.64	8.2	24.2	0.94
I25	13 May 2019	7	17.62	80.95	8.6	33.63	8.2	24.3	1.24
I25	13 May 2019	8	16.54	77.41	8.8	33.71	8.2	24.6	1.64
I25	23 May 2019	1	15.32	67.81	9.1	33.58	8.2	24.8	1.36
I25	23 May 2019	2	15.22	67.32	9.1	33.63	8.3	24.9	1.47
I25	23 May 2019	3	15.03	64.75	9.2	33.62	8.3	24.9	1.95
I25	23 May 2019	4	14.99	63.61	9.1	33.62	8.3	24.9	2.56
I25	23 May 2019	5	14.92	61.81	8.9	33.62	8.3	24.9	3.98
I25	23 May 2019	6	14.58	62.38	8.0	33.64	8.2	25.0	5.29
I25	23 May 2019	7	12.66	63.19	7.0	33.70	8.1	25.5	5.23
I25	23 May 2019	8	13.41	62.70	6.6	33.59	8.0	25.2	4.72
I25	23 May 2019	9	12.24	60.05	5.7	33.62	8.0	25.5	3.35

Station	Date	Depth (m)	Temp (°C)	XMS (‰)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (µg/L)
I25	29 May 2019	1	16.65	57.59	10.7	33.51	8.3	24.5	2.87
I25	29 May 2019	2	16.32	57.03	11.0	33.55	8.3	24.6	3.91
I25	29 May 2019	3	16.16	52.84	10.6	33.54	8.3	24.6	7.64
I25	29 May 2019	4	15.94	58.90	9.6	33.55	8.2	24.6	7.56
I25	29 May 2019	5	15.58	62.52	8.5	33.54	8.2	24.7	5.84
I25	29 May 2019	6	14.32	64.48	7.0	33.68	8.1	25.1	4.42
I25	29 May 2019	7	13.56	66.98	6.4	33.58	8.0	25.2	3.38
I25	29 May 2019	8	13.04	66.55	6.1	33.64	8.0	25.3	3.05
I26	06 May 2019	1	16.81	78.11	8.3	33.63	8.2	24.5	0.57
I26	06 May 2019	2	16.72	77.85	8.3	33.64	8.2	24.5	0.63
I26	06 May 2019	3	16.54	76.83	8.2	33.63	8.2	24.6	0.77
I26	06 May 2019	4	16.10	74.46	7.7	33.68	8.2	24.7	1.04
I26	06 May 2019	5	14.09	70.31	7.6	33.71	8.1	25.2	1.66
I26	06 May 2019	6	13.58	71.90	7.3	33.64	8.1	25.2	2.20
I26	06 May 2019	7	12.91	78.82	6.7	33.65	8.0	25.4	1.93
I26	06 May 2019	8	12.69	80.92	6.5	33.61	8.0	25.4	1.28
I26	06 May 2019	9	12.68	80.27	6.5	33.60	8.0	25.4	0.97
I26	13 May 2019	1	18.17	81.69	8.4	33.64	8.2	24.2	0.78
I26	13 May 2019	2	18.08	81.64	8.4	33.65	8.2	24.2	0.80
I26	13 May 2019	3	17.96	82.06	8.4	33.64	8.2	24.2	0.83
I26	13 May 2019	4	17.93	82.15	8.5	33.64	8.2	24.2	0.92
I26	13 May 2019	5	17.89	81.64	8.5	33.63	8.2	24.3	1.16
I26	13 May 2019	6	17.73	80.37	8.5	33.63	8.2	24.3	1.48
I26	13 May 2019	7	17.43	78.92	8.5	33.64	8.2	24.4	1.91
I26	13 May 2019	8	15.52	72.15	8.4	33.73	8.2	24.9	2.86
I26	13 May 2019	9	14.88	71.85	8.6	33.53	8.1	24.9	2.68
I26	23 May 2019	1	15.46	61.41	8.8	33.61	8.2	24.8	1.70
I26	23 May 2019	2	15.44	60.22	8.8	33.60	8.2	24.8	1.80
I26	23 May 2019	3	15.35	54.66	8.7	33.59	8.2	24.8	2.09
I26	23 May 2019	4	15.26	54.16	8.7	33.61	8.2	24.8	3.88
I26	23 May 2019	5	15.12	51.27	8.5	33.62	8.2	24.9	6.05
I26	23 May 2019	6	15.00	53.61	8.2	33.62	8.2	24.9	7.18
I26	23 May 2019	7	14.67	57.13	7.9	33.62	8.2	25.0	6.53
I26	23 May 2019	8	14.33	59.59	7.3	33.64	8.2	25.1	5.55
I26	23 May 2019	9	12.63	55.91	5.9	33.69	8.1	25.4	3.94
I26	29 May 2019	1	16.94	61.67	10.7	33.55	8.3	24.4	1.76
I26	29 May 2019	2	16.58	62.79	10.8	33.57	8.3	24.5	1.90
I26	29 May 2019	3	16.18	63.21	10.5	33.59	8.3	24.6	2.43
I26	29 May 2019	4	16.06	59.11	10.4	33.57	8.3	24.6	4.14
I26	29 May 2019	5	15.77	55.72	10.6	33.61	8.3	24.7	9.24
I26	29 May 2019	6	15.45	57.11	10.2	33.61	8.3	24.8	12.92
I26	29 May 2019	7	14.41	57.20	8.2	33.69	8.2	25.1	11.51
I26	29 May 2019	8	12.44	62.26	6.4	33.66	8.0	25.5	8.47
I26	29 May 2019	9	12.51	62.97	6.3	33.60	7.9	25.4	6.87
I32	06 May 2019	1	16.94	74.95	8.4	33.63	8.2	24.5	0.83
I32	06 May 2019	2	16.92	76.21	8.4	33.63	8.2	24.5	0.89
I32	06 May 2019	3	16.85	76.25	8.4	33.63	8.2	24.5	1.00
I32	06 May 2019	4	16.79	75.76	8.3	33.63	8.2	24.5	1.17
I32	06 May 2019	5	16.58	74.78	8.2	33.63	8.2	24.6	1.43
I32	06 May 2019	6	16.37	72.27	8.1	33.58	8.1	24.6	1.78
I32	06 May 2019	7	16.05	70.15	7.5	33.62	8.1	24.7	2.05
I32	06 May 2019	8	13.68	68.26	6.6	33.78	8.1	25.3	2.29
I32	06 May 2019	9	12.69	65.79	6.2	33.64	8.0	25.4	2.27
I32	06 May 2019	10	12.67	62.49	6.3	33.61	8.0	25.4	2.27

Station	Date	Depth (m)	Temp (°C)	XMS (‰)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (µg/L)
I32	13 May 2019	1	18.00	71.50	8.5	33.59	8.2	24.2	1.38
I32	13 May 2019	2	17.96	71.50	8.5	33.59	8.2	24.2	1.41
I32	13 May 2019	3	17.82	71.05	8.5	33.60	8.2	24.2	1.56
I32	13 May 2019	4	17.72	70.35	8.5	33.60	8.2	24.3	1.85
I32	13 May 2019	5	17.67	74.41	8.5	33.61	8.2	24.3	1.82
I32	13 May 2019	6	17.43	74.36	8.1	33.64	8.2	24.4	1.82
I32	13 May 2019	7	14.91	59.72	8.0	33.88	8.2	25.1	3.11
I32	13 May 2019	8	13.78	66.77	8.1	33.64	8.1	25.2	4.20
I32	13 May 2019	9	13.05	61.80	7.5	33.67	8.1	25.4	4.61
I32	23 May 2019	1	15.78	58.99	8.7	33.56	8.2	24.7	1.75
I32	23 May 2019	2	15.63	58.41	8.8	33.53	8.2	24.7	2.23
I32	23 May 2019	3	15.48	58.59	8.8	33.59	8.2	24.8	3.47
I32	23 May 2019	4	15.45	57.03	8.9	33.59	8.3	24.8	4.85
I32	23 May 2019	5	15.43	56.82	8.8	33.59	8.3	24.8	6.39
I32	23 May 2019	6	15.43	57.36	8.8	33.59	8.2	24.8	7.39
I32	23 May 2019	7	15.40	58.68	8.7	33.59	8.2	24.8	7.31
I32	23 May 2019	8	15.38	59.66	8.6	33.59	8.2	24.8	6.57
I32	23 May 2019	9	15.36	58.77	8.5	33.60	8.2	24.8	6.35
I32	23 May 2019	10	14.99	58.00	8.3	33.64	8.2	24.9	5.58
I32	29 May 2019	1	17.14	60.21	11.2	33.58	8.4	24.4	2.45
I32	29 May 2019	2	17.00	59.89	11.1	33.60	8.4	24.4	2.65
I32	29 May 2019	3	16.56	51.48	11.8	33.59	8.4	24.5	8.21
I32	29 May 2019	4	16.48	37.08	12.1	33.58	8.4	24.5	21.96
I32	29 May 2019	5	16.47	41.42	11.6	33.59	8.4	24.6	25.31
I32	29 May 2019	6	16.37	49.71	10.7	33.61	8.4	24.6	18.67
I32	29 May 2019	7	16.31	50.35	10.1	33.61	8.3	24.6	13.64
I32	29 May 2019	8	16.08	46.61	9.6	33.62	8.3	24.7	13.19
I32	29 May 2019	9	15.78	47.77	9.2	33.62	8.3	24.7	13.92
I39	06 May 2019	1	16.57	78.37	8.2	33.63	8.2	24.6	0.91
I39	06 May 2019	2	16.57	78.18	8.2	33.63	8.2	24.6	0.95
I39	06 May 2019	3	16.57	78.55	8.2	33.63	8.2	24.6	1.00
I39	06 May 2019	4	16.49	78.46	7.9	33.64	8.2	24.6	1.09
I39	06 May 2019	5	15.11	77.90	7.3	33.83	8.1	25.0	1.27
I39	06 May 2019	6	12.96	78.89	7.0	33.70	8.1	25.4	1.87
I39	06 May 2019	7	12.79	78.22	7.0	33.62	8.0	25.4	2.72
I39	06 May 2019	8	12.61	78.63	6.8	33.62	8.0	25.4	3.11
I39	06 May 2019	9	12.49	80.37	6.6	33.61	8.0	25.4	3.04
I39	06 May 2019	10	12.46	80.39	6.5	33.60	8.0	25.4	3.34
I39	06 May 2019	11	12.45	80.34	6.5	33.61	8.0	25.4	3.39
I39	06 May 2019	12	12.40	80.83	6.4	33.61	8.0	25.4	3.42
I39	06 May 2019	13	12.35	81.81	6.3	33.62	8.0	25.4	3.24
I39	06 May 2019	14	12.32	82.80	6.2	33.62	8.0	25.5	2.96
I39	06 May 2019	15	12.28	83.42	6.2	33.62	8.0	25.5	2.65
I39	06 May 2019	16	12.26	83.86	6.1	33.62	8.0	25.5	2.39
I39	06 May 2019	17	12.13	84.61	6.0	33.64	8.0	25.5	2.34
I39	06 May 2019	18	11.94	85.64	5.7	33.65	7.9	25.5	1.61
I39	13 May 2019	1	18.05	84.77	8.4	33.64	8.2	24.2	0.60
I39	13 May 2019	2	18.05	85.03	8.4	33.64	8.2	24.2	0.61
I39	13 May 2019	3	18.01	85.14	8.4	33.64	8.2	24.2	0.60
I39	13 May 2019	4	17.94	85.13	8.4	33.64	8.2	24.2	0.64
I39	13 May 2019	5	17.83	84.85	8.4	33.64	8.2	24.3	0.65
I39	13 May 2019	6	17.78	84.90	8.5	33.63	8.2	24.3	0.70
I39	13 May 2019	7	17.67	84.93	8.4	33.64	8.2	24.3	0.76
I39	13 May 2019	8	17.48	84.70	8.6	33.62	8.2	24.3	0.76
I39	13 May 2019	9	17.42	84.87	8.4	33.63	8.2	24.4	0.81
I39	13 May 2019	10	16.44	85.31	8.7	33.66	8.2	24.6	0.90
I39	13 May 2019	11	16.14	84.22	8.8	33.60	8.2	24.6	1.28

Station	Date	Depth (m)	Temp (°C)	XMS (‰)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (µg/L)
I39	13 May 2019	12	15.99	82.14	8.8	33.61	8.2	24.7	1.93
I39	13 May 2019	13	15.74	79.27	8.6	33.62	8.2	24.7	3.08
I39	13 May 2019	14	14.21	75.49	8.7	33.67	8.2	25.1	4.51
I39	13 May 2019	15	14.27	74.80	8.7	33.56	8.1	25.0	5.32
I39	13 May 2019	16	13.78	74.22	8.2	33.66	8.2	25.2	5.42
I39	13 May 2019	17	13.16	74.83	7.6	33.62	8.1	25.3	5.20
I39	13 May 2019	18	12.85	77.47	7.2	33.61	8.0	25.3	4.64
I39	23 May 2019	1	15.28	55.05	8.5	33.62	8.2	24.8	3.10
I39	23 May 2019	2	15.34	57.22	8.5	33.62	8.2	24.8	2.81
I39	23 May 2019	3	15.30	59.07	8.4	33.63	8.2	24.8	3.01
I39	23 May 2019	4	14.79	55.24	7.9	33.67	8.2	25.0	5.54
I39	23 May 2019	5	13.85	60.84	7.1	33.65	8.1	25.2	6.90
I39	23 May 2019	6	13.22	70.01	6.3	33.71	8.1	25.4	6.42
I39	23 May 2019	7	11.90	75.98	5.8	33.68	8.0	25.6	4.81
I39	23 May 2019	8	11.85	76.07	5.5	33.62	8.0	25.5	3.31
I39	23 May 2019	9	11.86	76.58	5.4	33.61	8.0	25.5	2.65
I39	23 May 2019	10	11.59	76.12	5.2	33.64	8.0	25.6	2.53
I39	23 May 2019	11	11.31	73.83	4.9	33.66	7.9	25.7	2.01
I39	23 May 2019	12	11.22	71.49	4.8	33.66	7.9	25.7	1.65
I39	23 May 2019	13	11.20	72.95	4.8	33.66	7.9	25.7	1.44
I39	23 May 2019	14	11.19	73.66	4.8	33.66	7.9	25.7	1.39
I39	23 May 2019	15	11.14	75.88	4.7	33.67	7.9	25.7	1.30
I39	23 May 2019	16	11.06	67.96	4.6	33.68	7.9	25.7	1.21
I39	23 May 2019	17	11.06	59.81	4.5	33.68	7.9	25.7	1.17
I39	23 May 2019	18	11.07	58.85	4.5	33.68	7.9	25.7	1.17
I39	29 May 2019	1	16.46	66.20	10.6	33.58	8.3	24.6	2.25
I39	29 May 2019	2	16.48	66.47	10.5	33.58	8.3	24.5	2.13
I39	29 May 2019	3	16.24	65.49	10.5	33.59	8.3	24.6	2.26
I39	29 May 2019	4	16.17	65.73	10.1	33.61	8.3	24.6	2.96
I39	29 May 2019	5	15.73	70.45	9.4	33.68	8.3	24.8	3.30
I39	29 May 2019	6	14.36	73.41	9.0	33.67	8.2	25.1	3.30
I39	29 May 2019	7	13.61	73.89	8.1	33.71	8.1	25.3	4.02
I39	29 May 2019	8	12.29	71.24	7.3	33.60	8.0	25.4	7.02
I39	29 May 2019	9	12.30	72.76	6.9	33.59	8.0	25.4	7.95
I39	29 May 2019	10	12.27	72.06	6.6	33.59	8.0	25.4	7.80
I39	29 May 2019	11	12.24	71.04	6.4	33.61	8.0	25.5	7.81
I39	29 May 2019	12	12.20	70.64	6.1	33.62	7.9	25.5	7.66
I39	29 May 2019	13	12.10	70.53	5.8	33.63	7.9	25.5	7.35
I39	29 May 2019	14	12.01	72.42	5.6	33.63	7.9	25.5	6.27
I39	29 May 2019	15	11.85	74.53	5.3	33.65	7.9	25.6	4.96
I39	29 May 2019	16	11.68	77.28	5.2	33.65	7.9	25.6	3.68
I39	29 May 2019	17	11.60	77.44	5.0	33.65	7.9	25.6	2.74
I39	29 May 2019	18	11.59	75.56	5.0	33.65	7.8	25.6	2.26
I40	06 May 2019	1	16.91	76.99	8.3	33.63	8.2	24.5	0.94
I40	06 May 2019	2	16.90	77.10	8.3	33.63	8.2	24.5	0.99
I40	06 May 2019	3	16.86	76.88	8.3	33.64	8.2	24.5	1.09
I40	06 May 2019	4	16.74	75.13	8.2	33.63	8.2	24.5	1.31
I40	06 May 2019	5	16.17	70.44	7.7	33.68	8.1	24.7	1.90
I40	06 May 2019	6	14.81	65.79	7.3	33.71	8.1	25.0	2.66
I40	06 May 2019	7	13.49	74.85	7.4	33.63	8.1	25.2	3.04
I40	06 May 2019	8	13.26	78.28	7.1	33.63	8.1	25.3	3.05
I40	06 May 2019	9	12.89	80.56	6.7	33.61	8.0	25.3	2.32
I40	06 May 2019	10	12.78	62.07	6.4	33.62	8.0	25.4	2.27
I40	13 May 2019	1	17.78	67.75	8.3	33.59	8.2	24.2	2.21
I40	13 May 2019	2	17.70	67.15	8.4	33.59	8.2	24.3	2.72
I40	13 May 2019	3	17.69	66.20	8.4	33.59	8.2	24.3	3.22
I40	13 May 2019	4	17.62	65.70	8.3	33.59	8.2	24.3	3.60

Station	Date	Depth (m)	Temp (°C)	XMS (‰)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (µg/L)
I40	13 May 2019	5	17.38	65.28	8.1	33.63	8.2	24.4	3.95
I40	13 May 2019	6	16.96	60.70	7.7	33.62	8.2	24.5	4.36
I40	13 May 2019	7	15.81	58.21	7.9	33.67	8.1	24.8	4.54
I40	13 May 2019	8	15.30	59.67	7.9	33.67	8.1	24.9	4.44
I40	13 May 2019	9	13.62	60.24	7.2	33.72	8.1	25.3	4.19
I40	23 May 2019	1	15.71	62.54	8.8	33.21	8.2	24.4	1.71
I40	23 May 2019	2	15.63	62.59	8.8	33.27	8.2	24.5	1.99
I40	23 May 2019	3	15.14	61.99	9.1	33.56	8.2	24.8	2.81
I40	23 May 2019	4	15.21	63.02	9.1	33.49	8.3	24.8	3.62
I40	23 May 2019	5	14.93	63.41	9.1	33.62	8.3	24.9	4.71
I40	23 May 2019	6	14.88	63.59	9.1	33.60	8.2	24.9	6.08
I40	23 May 2019	7	14.83	64.48	8.4	33.61	8.2	24.9	6.58
I40	23 May 2019	8	13.86	63.26	7.1	33.72	8.2	25.2	6.17
I40	23 May 2019	9	12.38	49.12	6.0	33.65	8.0	25.5	4.50
I40	23 May 2019	10	13.06	50.50	6.0	33.62	8.0	25.3	3.99
I40	29 May 2019	1	16.04	57.49	8.3	33.53	8.2	24.6	1.31
I40	29 May 2019	2	15.94	57.09	8.3	33.53	8.2	24.6	1.48
I40	29 May 2019	3	15.79	55.08	8.4	33.51	8.2	24.6	1.97
I40	29 May 2019	4	15.73	54.23	8.3	33.51	8.2	24.7	2.51
I40	29 May 2019	5	15.45	52.94	8.0	33.54	8.2	24.7	3.95
I40	29 May 2019	6	14.71	54.19	7.6	33.62	8.1	25.0	5.32
I40	29 May 2019	7	13.98	59.03	7.8	33.60	8.1	25.1	6.50
I40	29 May 2019	8	13.96	59.93	7.6	33.59	8.0	25.1	7.12
I40	29 May 2019	9	13.50	53.88	6.8	33.61	8.0	25.2	5.84
I40	29 May 2019	10	13.53	48.42	6.6	33.58	7.9	25.2	4.97

NA = not available

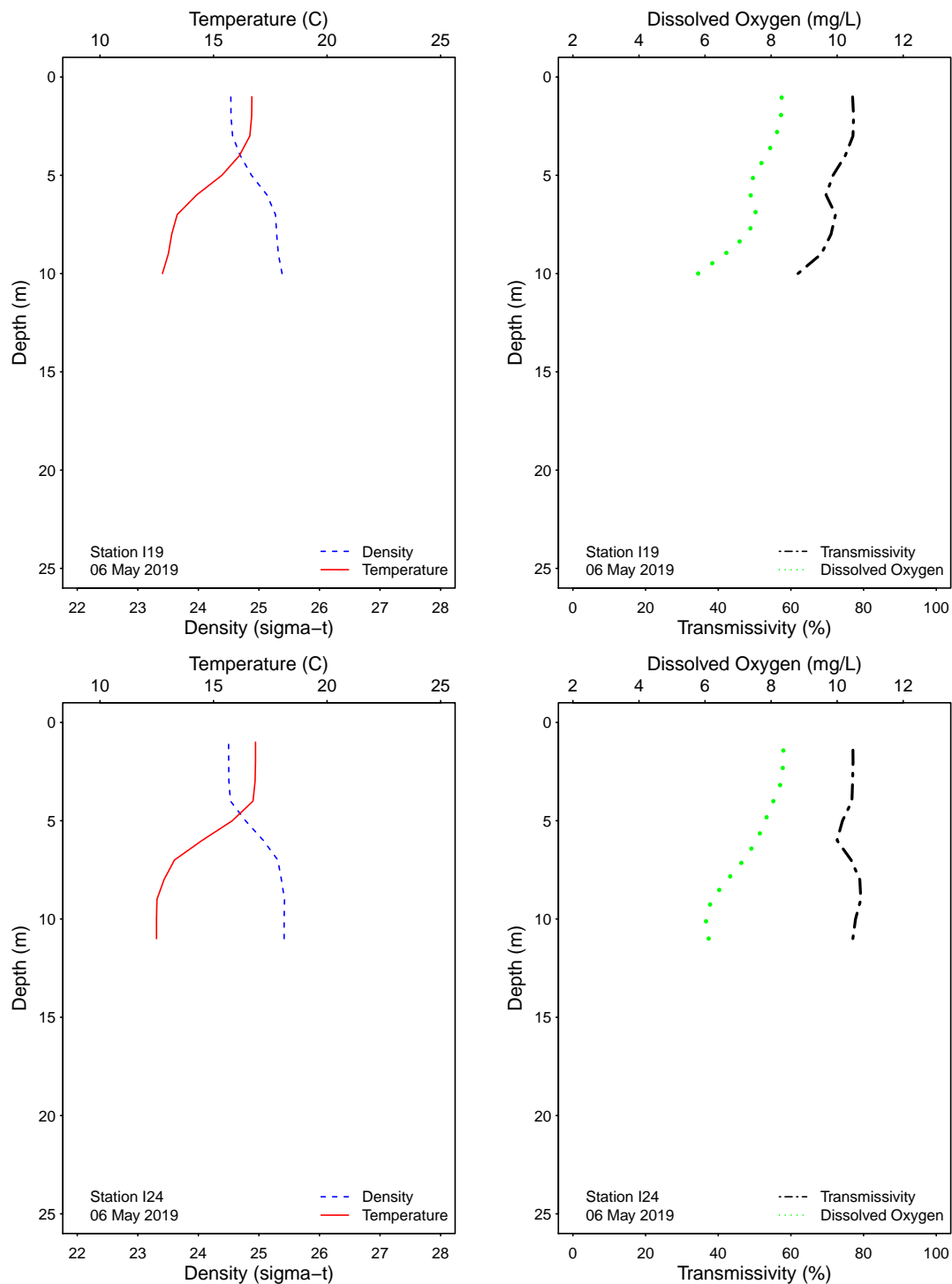


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

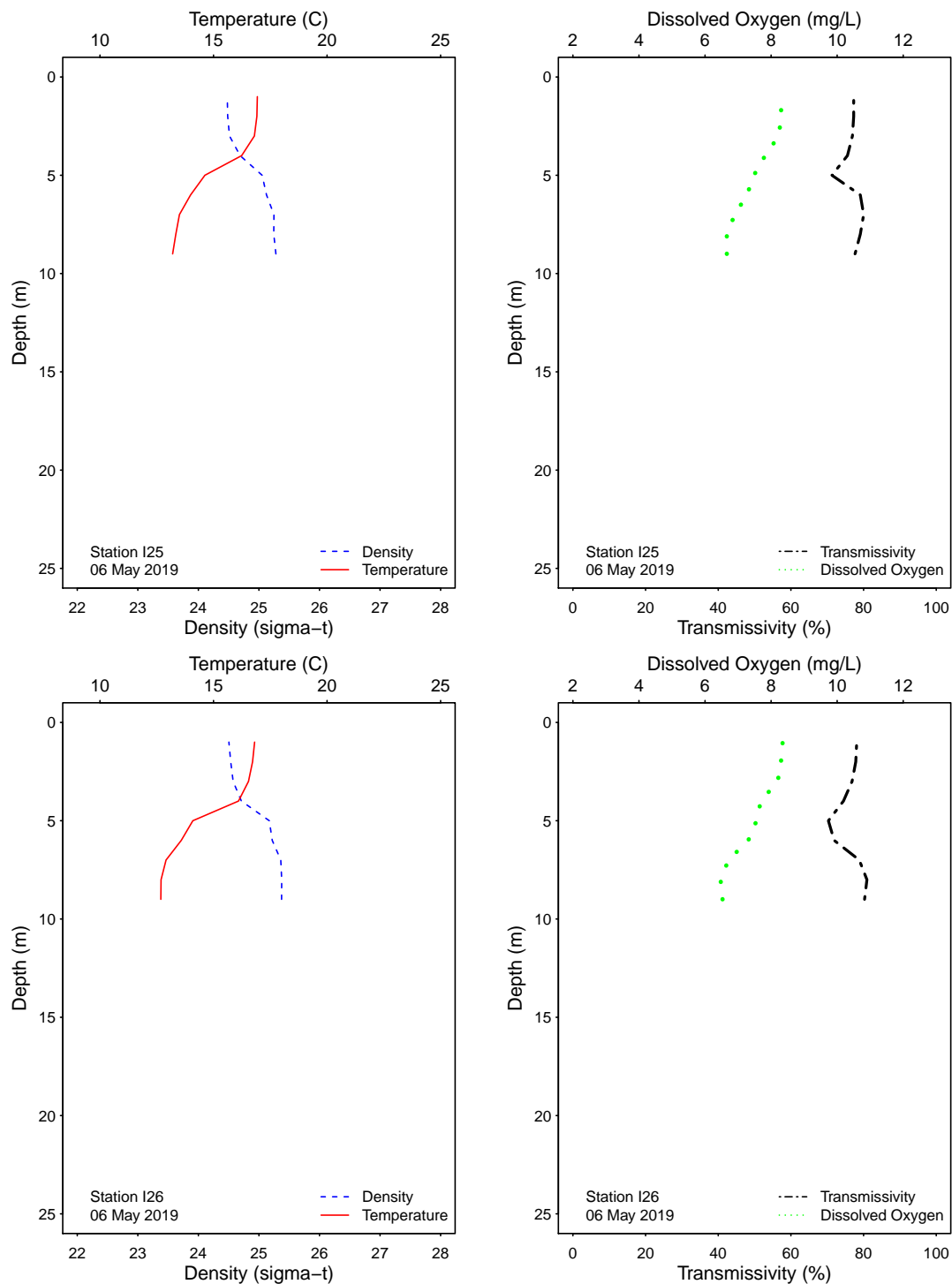


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

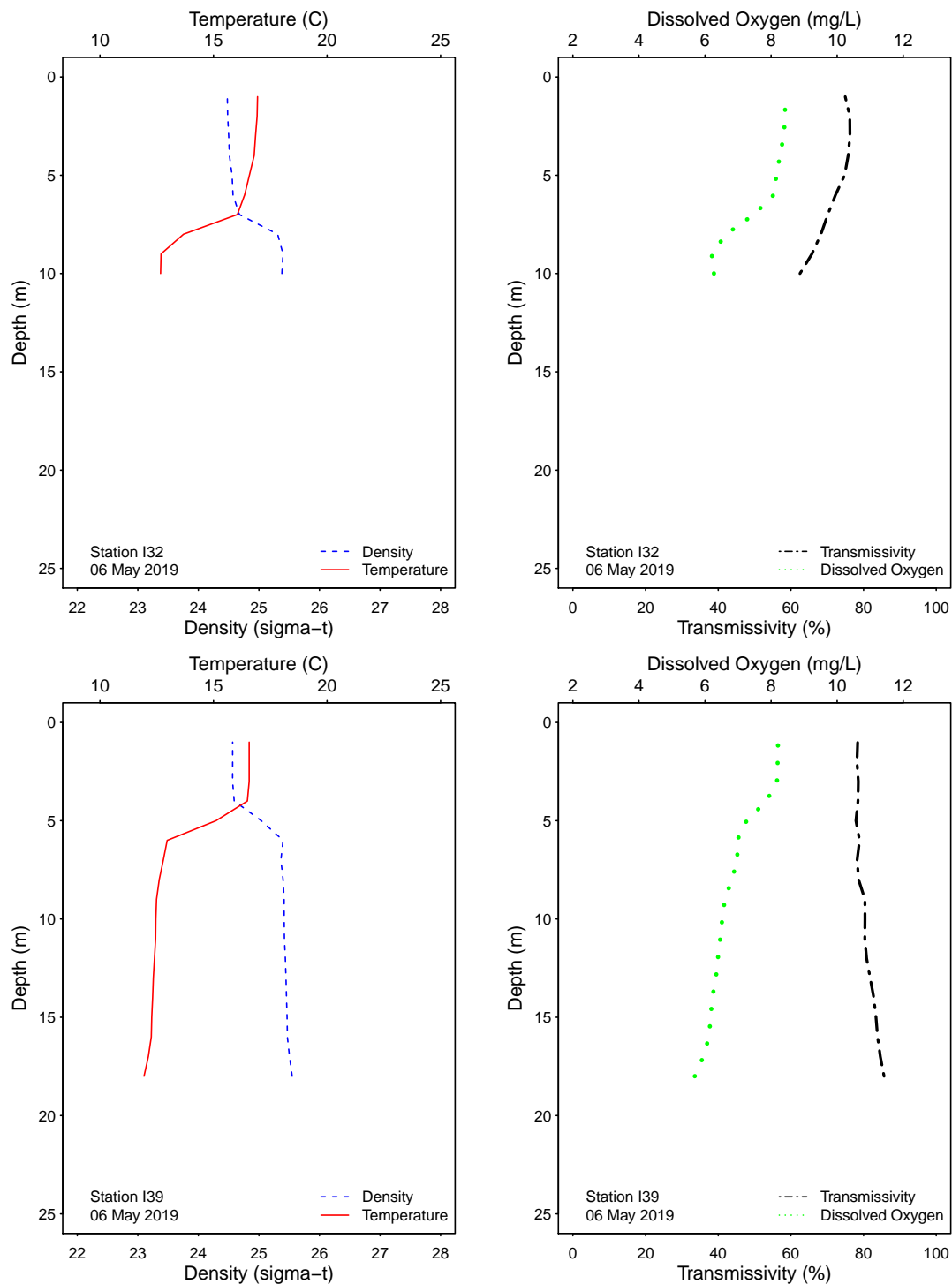


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

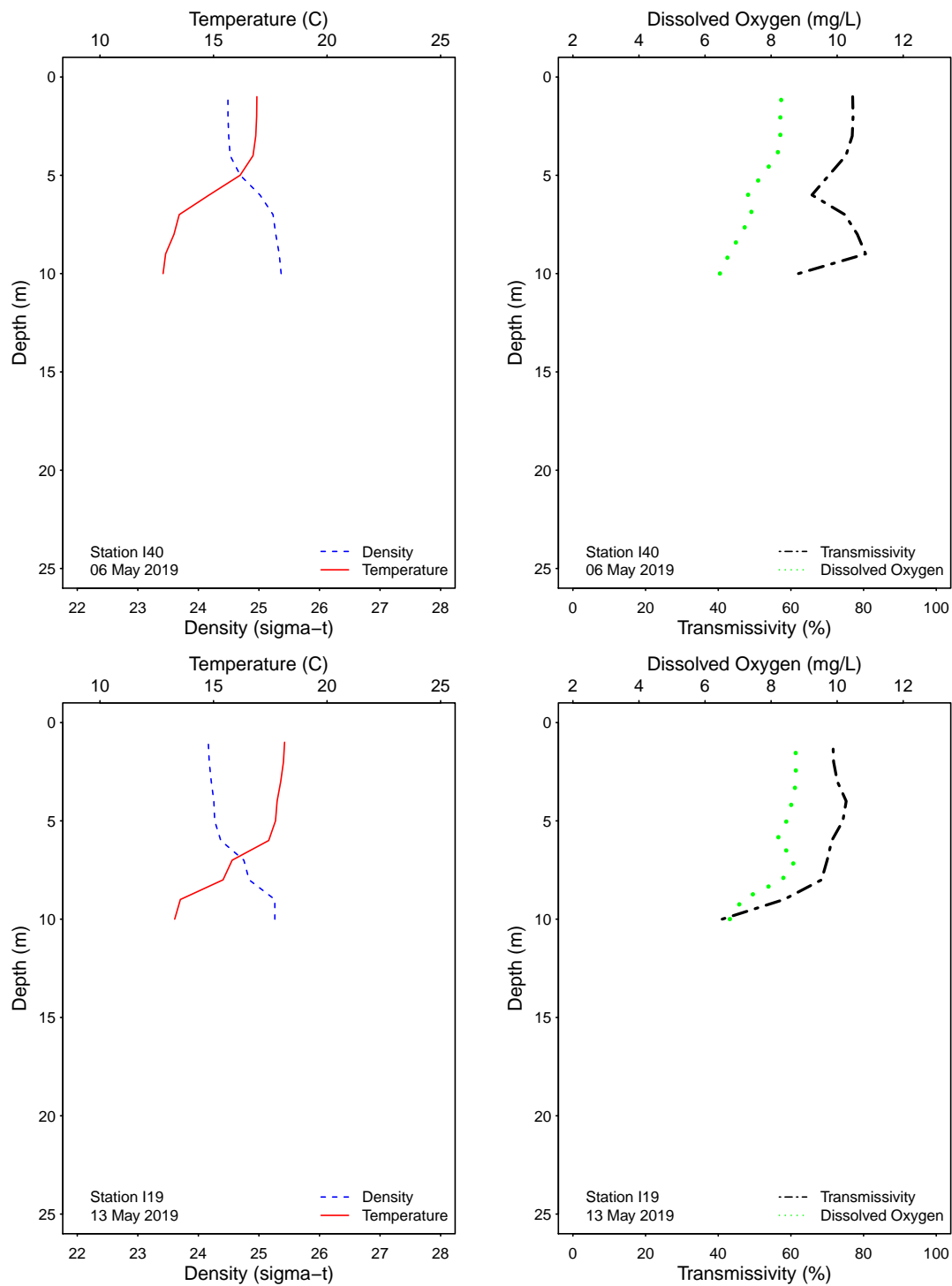


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

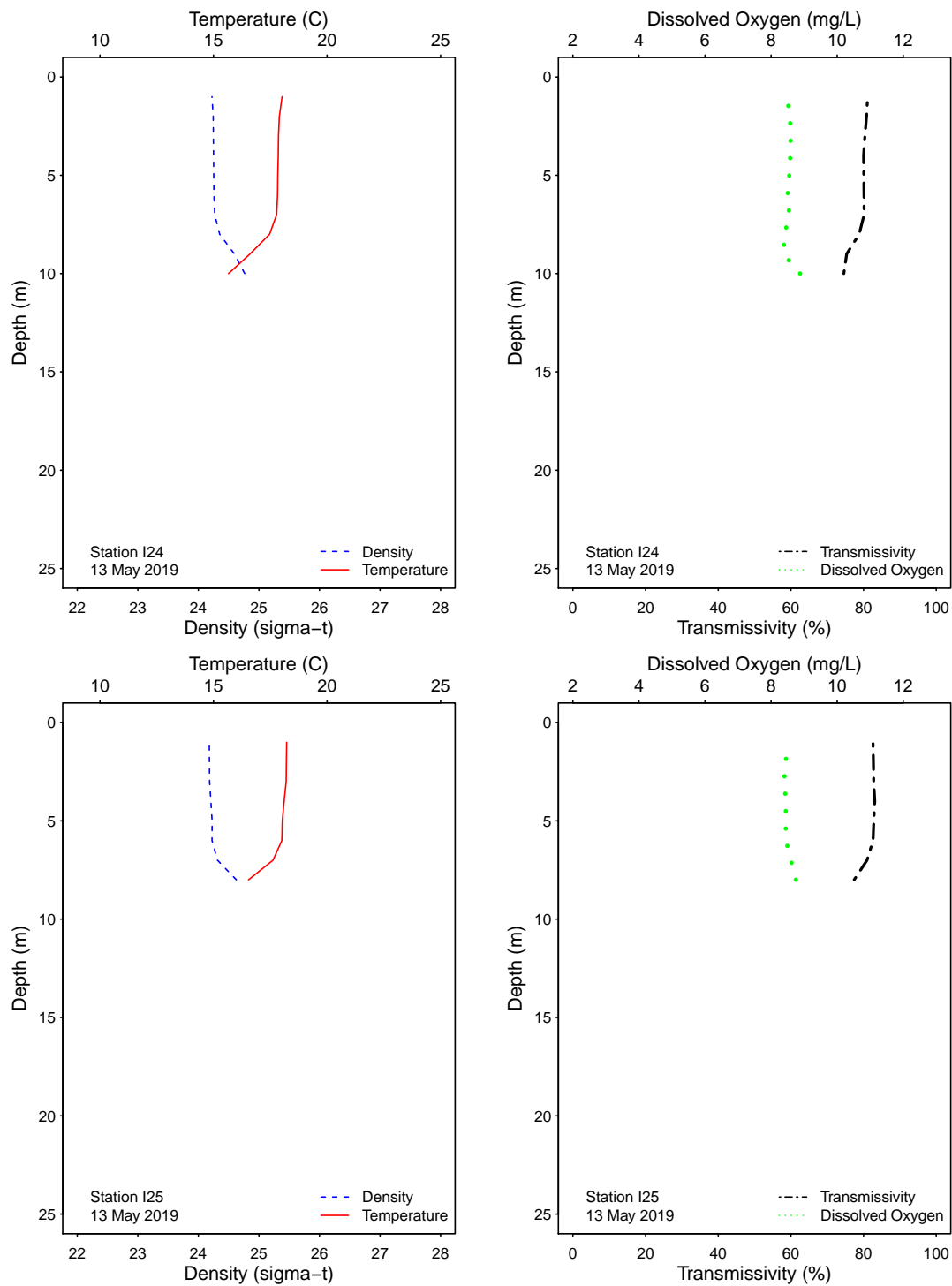


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

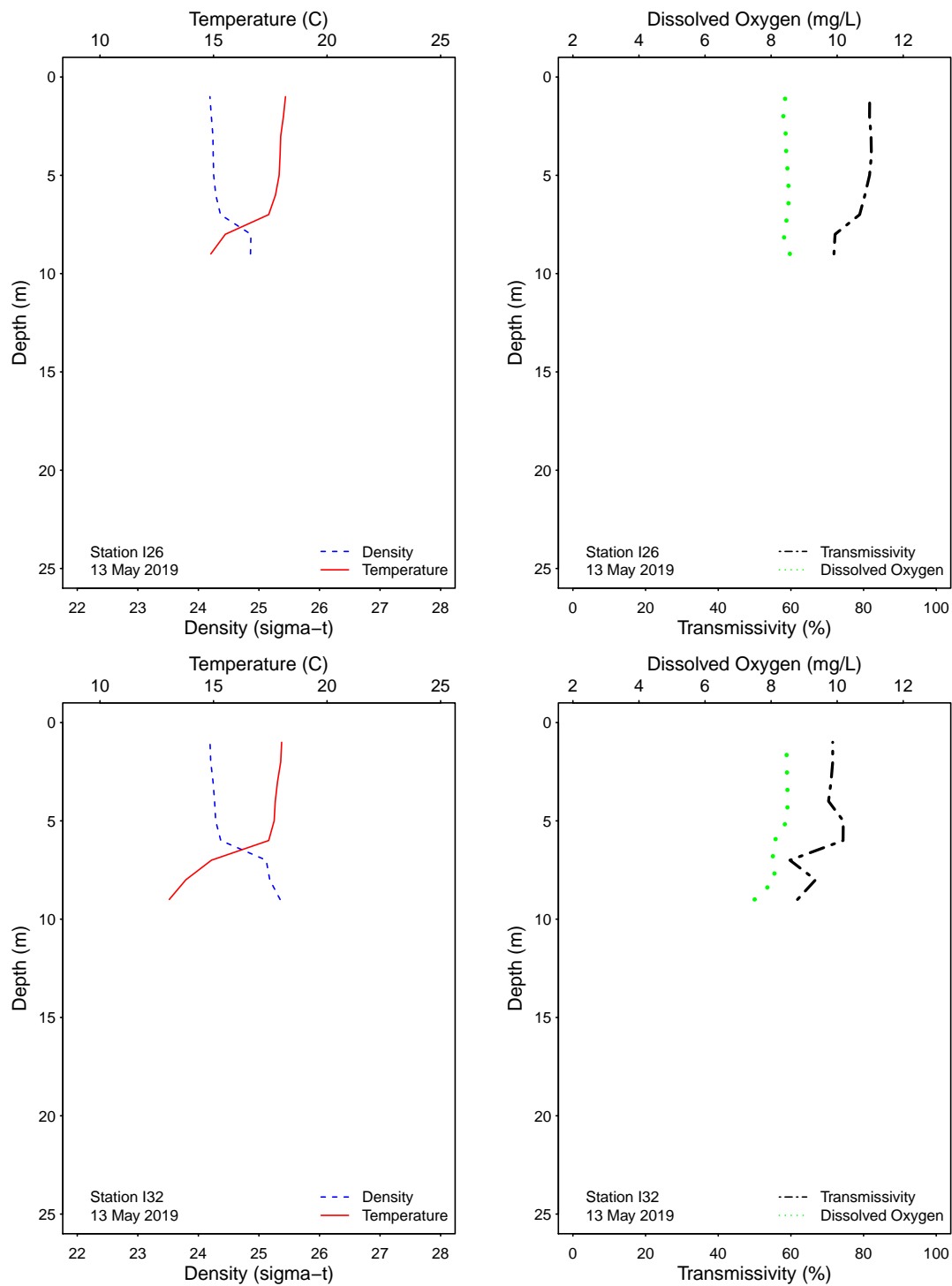


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

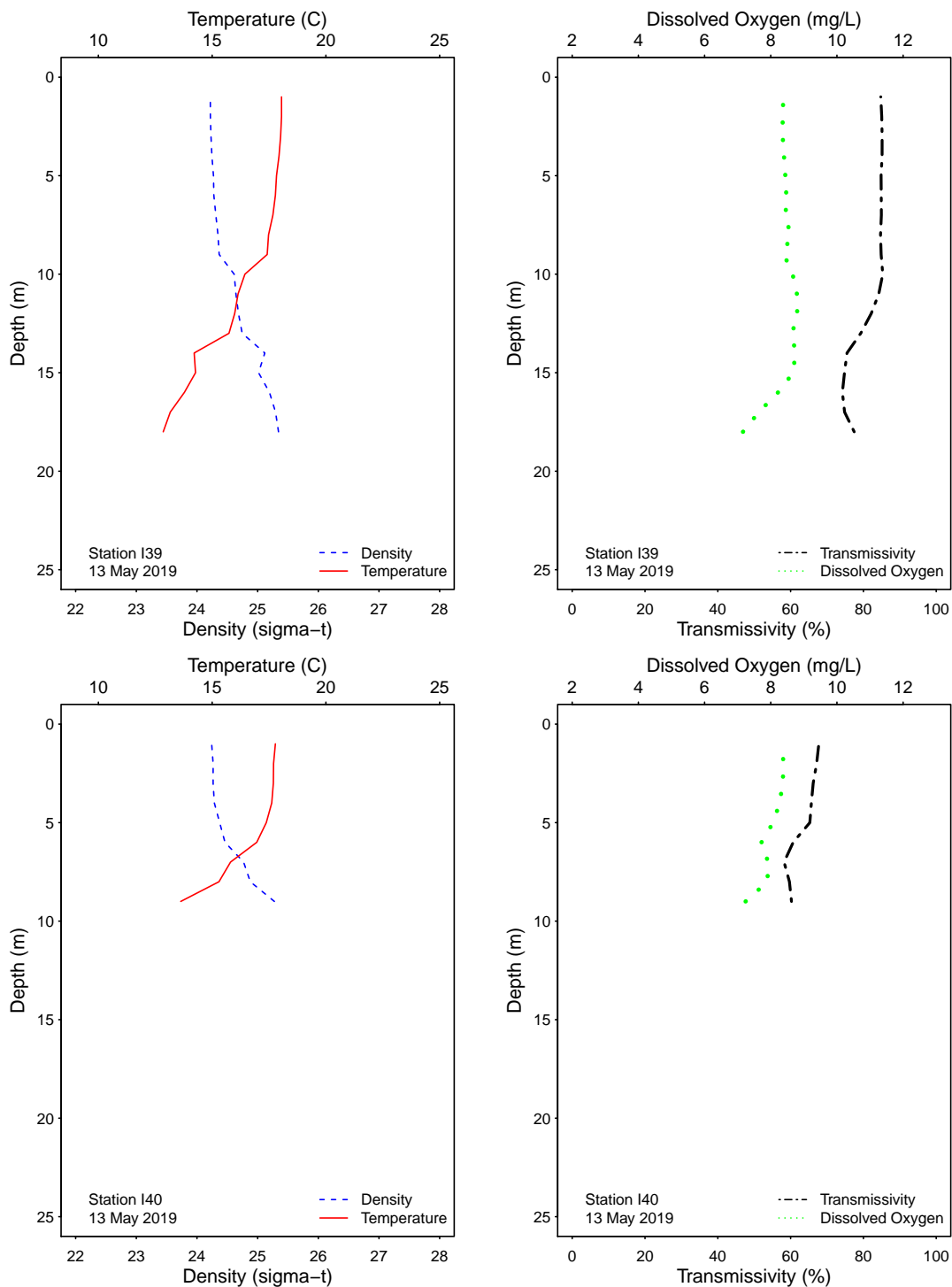


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

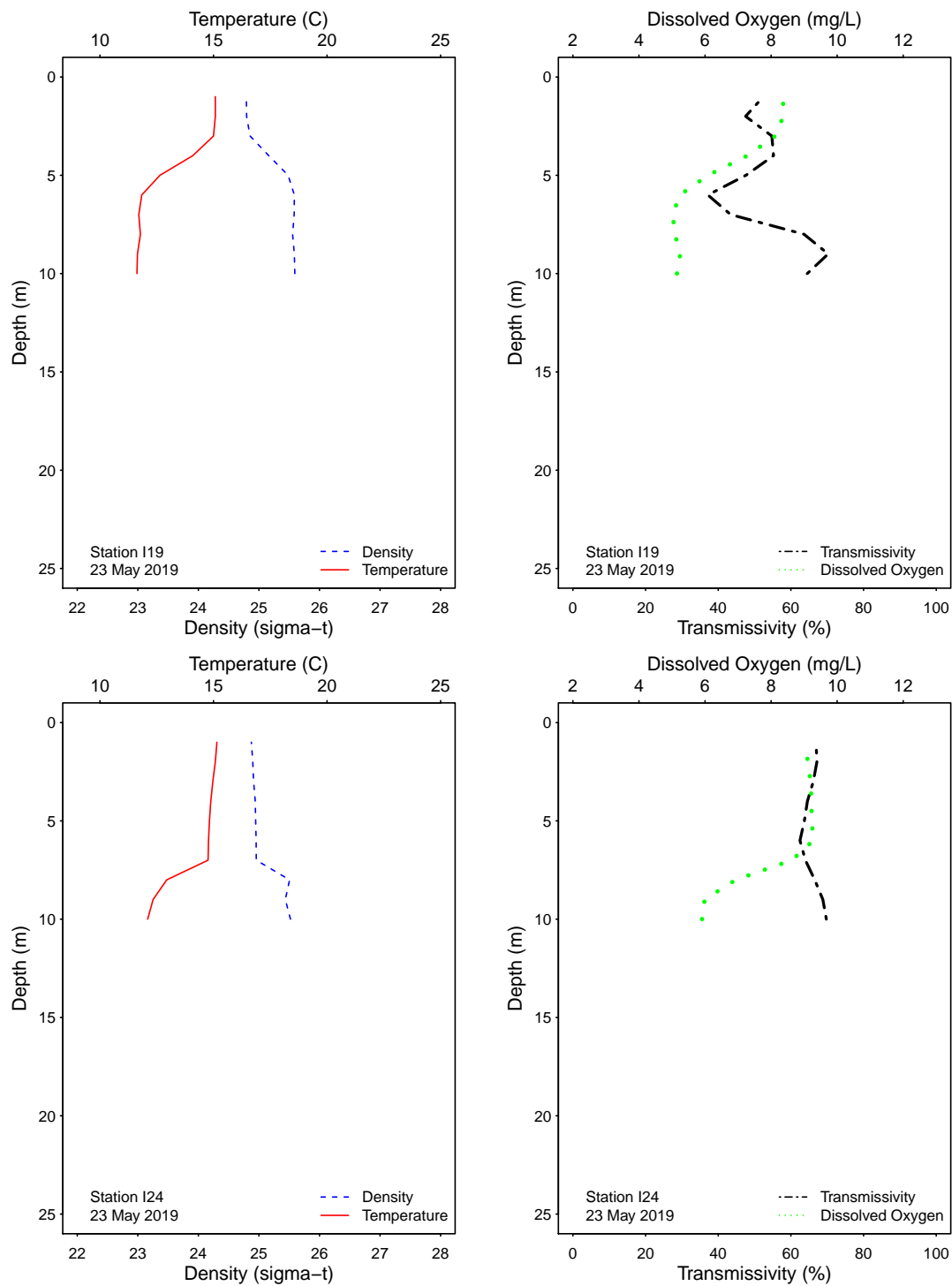


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

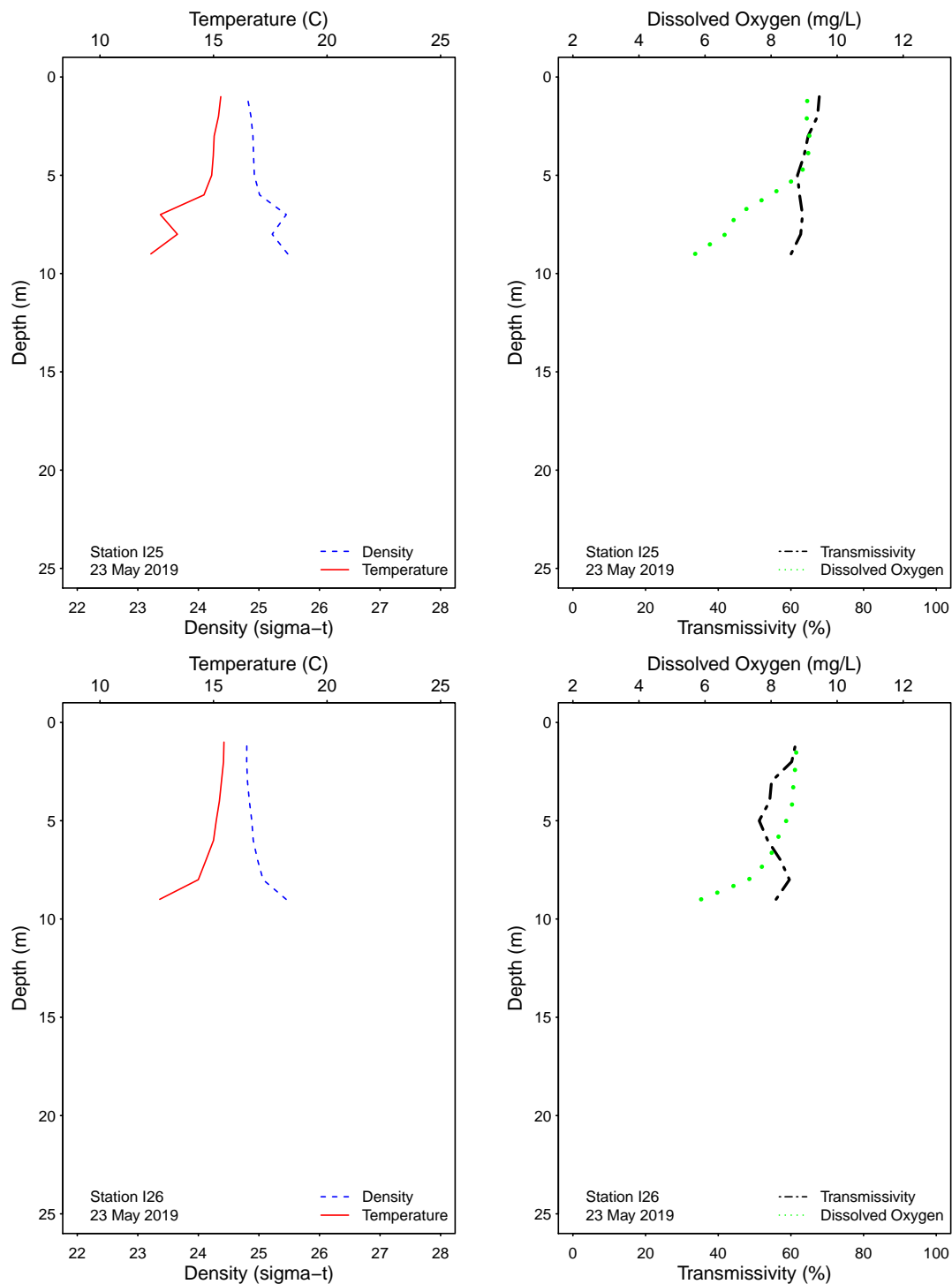


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

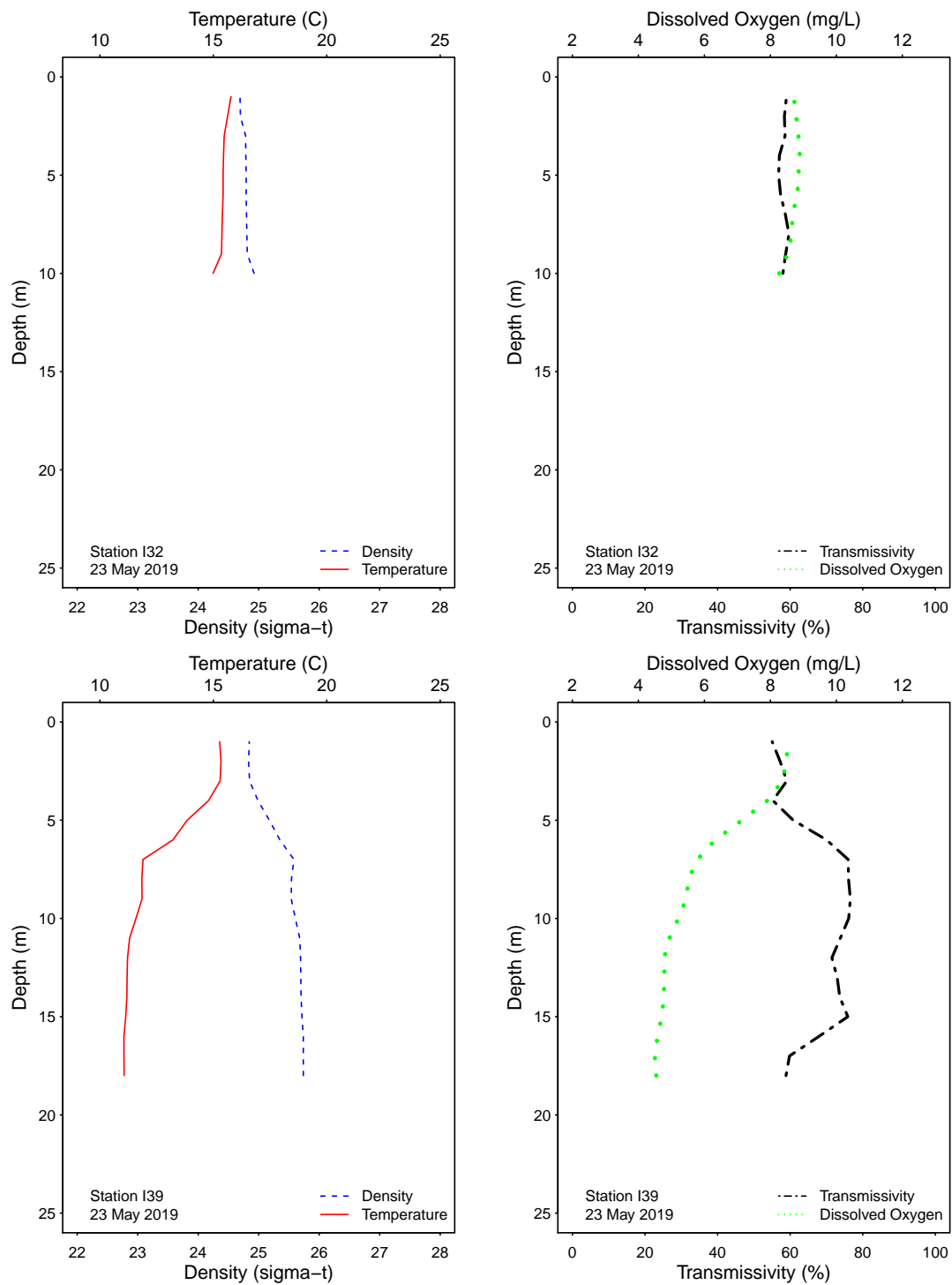


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

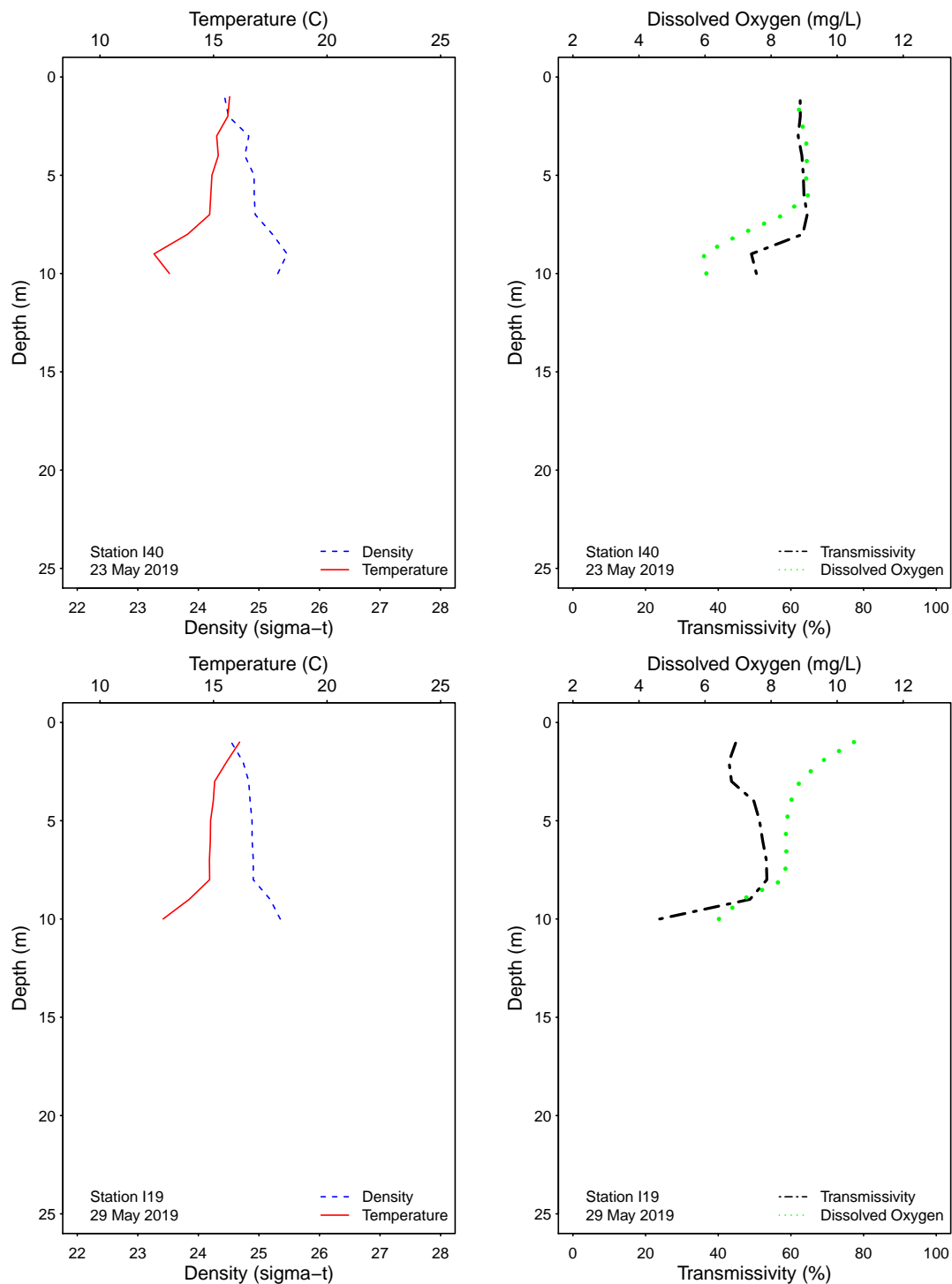


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

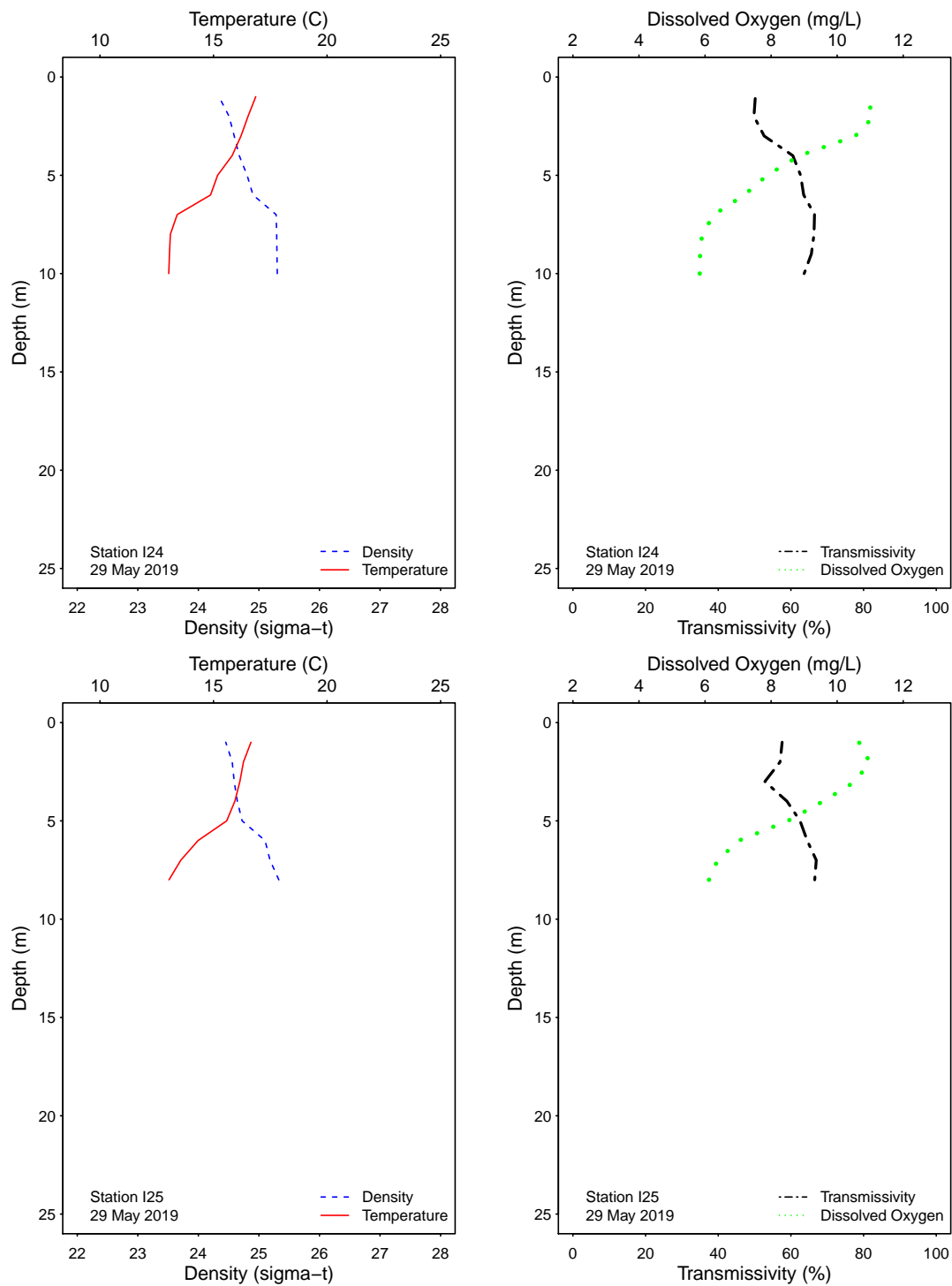


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

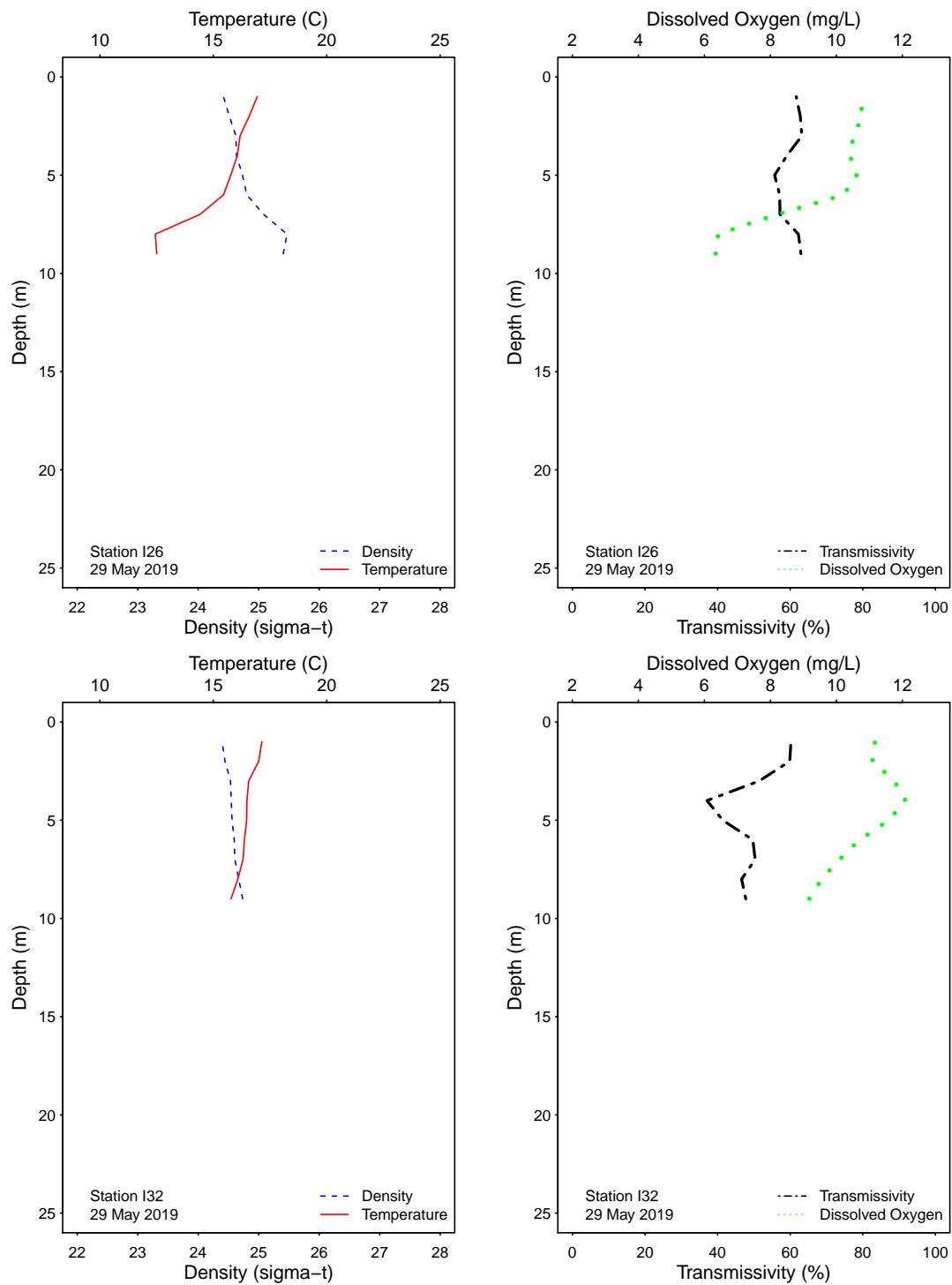


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

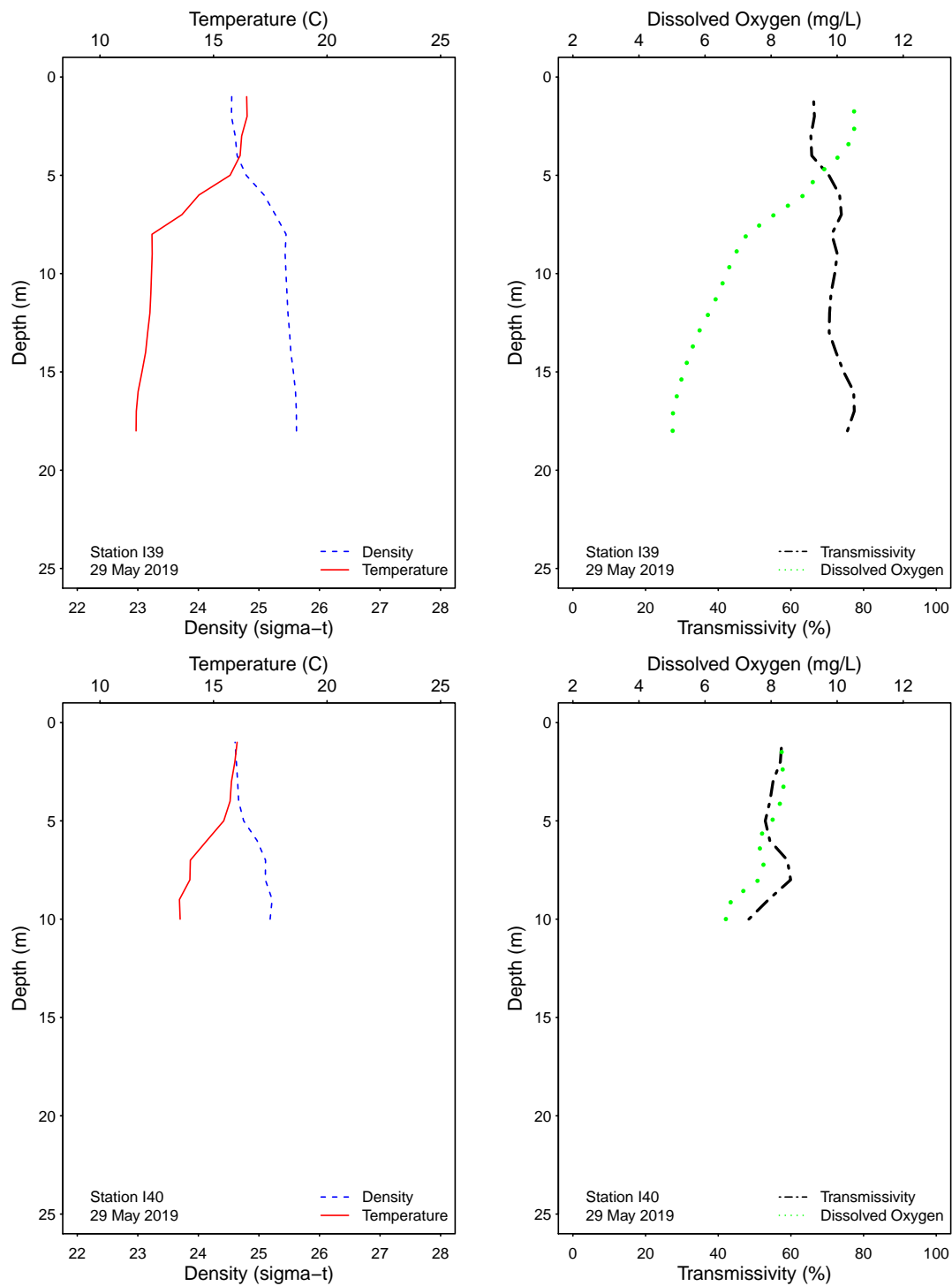


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

Offshore Stations

Table 4.1

Summary of compliance with the Ocean Plan's Single Sample Maximum standard for total coliform bacteria at the SBOO offshore stations within three nautical miles of shore. Total coliform density shall not exceed 10,000 CFU/100 mL.

Date	I12	I14	I16	I18	I22	I23	I33	I36	I37	I38
15 May 2019	ns	ns	ns	ns	ns	ns	IC	IC	IC	IC
16 May 2019	IC	IC	IC	IC	IC	IC	ns	ns	ns	ns

IC = In Compliance

E = Exceedance

ns = not sampled

ND = no data

Table 4.2

Summary of compliance with the Ocean Plan's Single Sample Maximum standard for fecal coliform bacteria at the SBOO offshore stations within three nautical miles of shore. Fecal coliform density shall not exceed 400 CFU/100 mL.

Date	I12	I14	I16	I18	I22	I23	I33	I36	I37	I38
15 May 2019	ns	ns	ns	ns	ns	ns	IC	IC	IC	IC
16 May 2019	IC	IC	IC	IC	IC	IC	ns	ns	ns	ns

IC = In Compliance

E = Exceedance

ns = not sampled

ND = no data

Table 4.3

Summary of compliance with the Ocean Plan's Single Sample Maximum standard for *Enterococcus* bacteria at the SBOO offshore stations within three nautical miles of shore. *Enterococcus* density shall not exceed 104 CFU/100 mL.

Date	I12	I14	I16	I18	I22	I23	I33	I36	I37	I38
15 May 2019	ns	ns	ns	ns	ns	ns	IC	IC	IC	IC
16 May 2019	IC	IC	IC	IC	IC	IC	ns	ns	ns	ns

IC = In Compliance

E = Exceedance

ns = not sampled

ND = no data

Table 4.4

Summary of compliance with the Ocean Plan's Single Sample Maximum standard for total coliform bacteria and the fecal/total coliform ratio (F:T) at the SBOO offshore stations within three nautical miles of shore. Total coliform density shall not exceed 1,000 CFU/100 mL when F:T > 0.1.

Date	I12	I14	I16	I18	I22	I23	I33	I36	I37	I38
15 May 2019	ns	ns	ns	ns	ns	ns	IC	IC	IC	IC
16 May 2019	IC	IC	IC	IC	IC	IC	ns	ns	ns	ns

IC = In Compliance

E = Exceedance

ns = not sampled

ND = no data

Table 4.5

Summary of water quality parameters at the SBOO offshore 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
I10	14 May 2019	1125	2	<2	<2	<2	1.0	18.3	84.40	8.4	33.65	8.2
I10	14 May 2019	1125	12	<2	<2	<2	1.0	14.3	85.54	8.7	33.57	8.2
I10	14 May 2019	1125	18	<2	<2	<2	1.0	12.7	75.00	7.5	33.59	8.1
I11	14 May 2019	1112	2	<2	<2	<2	1.0	18.2	83.89	8.5	33.65	8.2
I11	14 May 2019	1112	6	<2	<2	<2	1.0	15.5	82.93	9.0	33.63	8.2
I11	14 May 2019	1112	11	<2	<2	<2	1.0	13.3	74.56	7.9	33.59	8.1
I12	16 May 2019	1031	2	<2	<2	<2	1.0	16.8	81.75	8.6	33.62	8.2
I12	16 May 2019	1031	18	2e	<2	<2	1.0	13.3	81.73	7.6	33.57	8.1
I12	16 May 2019	1031	27	<2	<2	<2	1.0	12.3	82.30	6.3	33.61	8.0
I13	16 May 2019	1054	2	<2	<2	<2	1.0	16.6	85.03	8.5	33.60	8.2
I13	16 May 2019	1054	18	<2	<2	<2	1.0	13.4	79.81	7.9	33.59	8.1
I13	16 May 2019	1054	37	<2	<2	<2	1.0	11.7	84.91	5.5	33.63	7.9
I14	16 May 2019	1115	2	<2	<2	<2	1.0	16.3	85.77	8.5	33.60	8.2
I14	16 May 2019	1115	18	<2	<2	<2	1.0	13.0	81.69	7.3	33.58	8.1
I14	16 May 2019	1115	27	<2	<2	<2	1.0	12.2	81.69	6.2	33.63	8.0
I16	16 May 2019	1020	2	<2	<2	<2	1.0	16.3	85.47	8.6	33.60	8.2
I16	16 May 2019	1020	18	<2	<2	<2	1.0	13.6	81.35	8.1	33.57	8.2
I16	16 May 2019	1020	27	<2	<2	<2	1.0	12.3	82.64	6.4	33.62	8.0
I18	16 May 2019	959	2	<2	<2	<2	1.0	16.9	77.60	8.6	33.62	8.2
I18	16 May 2019	959	12	<2	<2	<2	1.0	13.8	78.00	8.3	33.58	8.2
I18	16 May 2019	959	18	<2	<2	<2	1.0	12.8	81.93	6.8	33.60	8.1
I20	16 May 2019	840	2	<2	<2	<2	1.0	18.0	85.95	8.3	33.66	8.2
I20	16 May 2019	840	18	<2	<2	<2	1.0	14.8	87.04	8.4	33.59	8.2
I20	16 May 2019	840	55	<2	<2	2e	1.0	11.1	87.26	5.0	33.69	7.9
I21	16 May 2019	819	2	<2	<2	<2	1.0	17.9	85.39	8.4	33.66	8.2
I21	16 May 2019	819	18	<2	<2	<2	1.0	13.3	79.63	7.5	33.58	8.1
I21	16 May 2019	819	37	<2	<2	<2	1.0	11.8	86.84	5.9	33.62	8.0
I22	16 May 2019	930	2	<2	<2	<2	1.0	16.9	84.86	8.5	33.63	8.2
I22	16 May 2019	930	18	<2	<2	<2	1.0	13.1	81.70	7.4	33.58	8.1
I22	16 May 2019	930	27	<2	<2	<2	1.0	12.3	82.52	6.2	33.61	8.0
I23	16 May 2019	943	2	<2	<2	<2	1.0	16.6	81.67	8.6	33.62	8.2
I23	16 May 2019	943	12	<2	<2	<2	1.0	14.1	75.57	8.3	33.60	8.2
I23	16 May 2019	943	18	<2	<2	<2	1.0	13.1	81.92	7.3	33.61	8.1
I3	14 May 2019	1012	2	<2	<2	<2	1.0	18.2	85.70	8.4	33.66	8.2
I3	14 May 2019	1012	18	<2	<2	<2	1.0	13.5	82.19	8.6	33.57	8.1
I3	14 May 2019	1012	27	<2	<2	<2	1.0	11.9	83.42	5.8	33.62	8.0
I30	15 May 2019	903	2	<2	<2	<2	1.0	18.4	83.20	8.6	33.67	8.2
I30	15 May 2019	903	18	<2	<2	<2	1.0	12.9	82.22	7.0	33.59	8.1
I30	15 May 2019	903	27	<2	<2	<2	1.0	11.9	81.93	5.6	33.65	8.0

Station	Date	Time	Depth	Total	Fecal	Entero	F:T	Temp	XMS	DO	Sal	pH
I33	15 May 2019	805	2	<2	<2	<2	1.0	18.4	82.91	8.7	33.65	8.2
I33	15 May 2019	805	18	<2	<2	<2	1.0	12.8	82.52	6.9	33.59	8.0
I33	15 May 2019	805	27	<2	<2	<2	1.0	11.6	85.02	5.6	33.64	7.9
I36	15 May 2019	940	2	2e	<2	<2	1.0	18.2	67.97	8.7	33.61	8.2
I36	15 May 2019	940	6	4e	<2	<2	0.5	15.8	67.53	10.3	33.66	8.3
I36	15 May 2019	940	11	<2	<2	<2	1.0	13.2	54.02	7.2	33.60	8.0
I37	15 May 2019	738	2	<2	<2	<2	1.0	17.8	80.84	8.2	33.64	8.2
I37	15 May 2019	738	6	<2	<2	<2	1.0	14.1	73.37	7.3	33.61	8.1
I37	15 May 2019	738	11	<2	<2	<2	1.0	12.6	75.87	6.5	33.59	8.0
I38	15 May 2019	1012	2	<2	<2	<2	1.0	18.4	65.59	9.0	33.61	8.2
I38	15 May 2019	1012	6	2e	<2	<2	1.0	16.1	76.12	9.7	33.64	8.2
I38	15 May 2019	1012	11	<2	<2	<2	1.0	13.3	67.16	6.1	33.61	8.0
I5	14 May 2019	1035	2	<2	<2	<2	1.0	18.2	83.19	8.5	33.65	8.2
I5	14 May 2019	1035	6	16e	4e	2e	0.2	16.8	65.47	7.8	33.66	8.2
I5	14 May 2019	1035	11	4e	<2	<2	0.5	12.9	69.20	7.1	33.63	8.1
I7	14 May 2019	851	2	2e	<2	<2	1.0	18.0	84.53	8.6	33.65	8.2
I7	14 May 2019	851	18	<2	<2	<2	1.0	13.9	86.15	8.5	33.57	8.1
I7	14 May 2019	851	52	2e	<2	<2	1.0	11.2	87.24	5.3	33.66	7.9
I8	14 May 2019	1155	2	<2	<2	<2	1.0	18.1	84.29	8.5	33.64	8.2
I8	14 May 2019	1155	18	<2	<2	<2	1.0	13.4	80.11	8.4	33.58	8.2
I8	14 May 2019	1155	37	2e	<2	<2	1.0	11.6	82.76	5.3	33.65	7.9
I9	14 May 2019	1139	2	<2	<2	<2	1.0	17.9	85.45	8.5	33.65	8.2
I9	14 May 2019	1139	18	2e	<2	<2	1.0	13.6	82.43	8.6	33.56	8.2
I9	14 May 2019	1139	27	4e	<2	<2	0.5	11.8	81.79	5.5	33.65	7.9

ns = not sampled

ND = no data

Table 4.6

Summary of visual observations made during the month for each SBOO offshore station by sample date.

Station	Date	Parameter	Value
I1	14 May 2019	Depth (m)	61
I1	14 May 2019	Arrive Time	918
I1	14 May 2019	Depart Time	929
I1	14 May 2019	Air Temp (C)	17
I1	14 May 2019	Weather	Continuous layer of clouds
I1	14 May 2019	Visibility (mi)	11
I1	14 May 2019	Wind Speed (kts)	2
I1	14 May 2019	Wind Dir	NW
I1	14 May 2019	Water Color	Greenish-Blue
I1	14 May 2019	Wave Ht Low (ft)	5
I1	14 May 2019	Wave Period (sec)	13
I1	14 May 2019	Sea State	Calm
I1	14 May 2019	High Tide (ft)	4.41
I1	14 May 2019	High Tide Time	616
I1	14 May 2019	Low Tide (ft)	-0.05
I1	14 May 2019	Low Tide Time	1245
I1	14 May 2019	Comments	none
I10	14 May 2019	Depth (m)	20
I10	14 May 2019	Arrive Time	1125
I10	14 May 2019	Depart Time	1130
I10	14 May 2019	Air Temp (C)	18
I10	14 May 2019	Weather	Continuous layer of clouds
I10	14 May 2019	Visibility (mi)	13
I10	14 May 2019	Wind Speed (kts)	10
I10	14 May 2019	Wind Dir	W
I10	14 May 2019	Water Color	Bluish-Green
I10	14 May 2019	Wave Ht Low (ft)	5
I10	14 May 2019	Wave Period (sec)	13
I10	14 May 2019	Sea State	Calm
I10	14 May 2019	High Tide (ft)	4.41
I10	14 May 2019	High Tide Time	616
I10	14 May 2019	Low Tide (ft)	-0.05
I10	14 May 2019	Low Tide Time	1245
I10	14 May 2019	Comments	none
I11	14 May 2019	Depth (m)	13
I11	14 May 2019	Arrive Time	1112
I11	14 May 2019	Depart Time	1118
I11	14 May 2019	Air Temp (C)	18
I11	14 May 2019	Weather	Continuous layer of clouds
I11	14 May 2019	Visibility (mi)	13
I11	14 May 2019	Wind Speed (kts)	10
I11	14 May 2019	Wind Dir	W
I11	14 May 2019	Water Color	Bluish-Green
I11	14 May 2019	Wave Ht Low (ft)	5
I11	14 May 2019	Wave Period (sec)	13
I11	14 May 2019	Sea State	Calm
I11	14 May 2019	High Tide (ft)	4.41
I11	14 May 2019	High Tide Time	616
I11	14 May 2019	Low Tide (ft)	-0.05
I11	14 May 2019	Low Tide Time	1245
I11	14 May 2019	Comments	none
I12	16 May 2019	Depth (m)	29
I12	16 May 2019	Arrive Time	1031

Station	Date	Parameter	Value
I12	16 May 2019	Depart Time	1035
I12	16 May 2019	Air Temp (C)	16
I12	16 May 2019	Weather	Rain
I12	16 May 2019	Visibility (mi)	7
I12	16 May 2019	Wind Speed (kts)	16
I12	16 May 2019	Wind Dir	SE
I12	16 May 2019	Water Color	Green
I12	16 May 2019	Wave Ht Low (ft)	5
I12	16 May 2019	Wave Period (sec)	9
I12	16 May 2019	Sea State	Heavy chop
I12	16 May 2019	High Tide (ft)	4.47
I12	16 May 2019	High Tide Time	811
I12	16 May 2019	Low Tide (ft)	0.35
I12	16 May 2019	Low Tide Time	1405
I12	16 May 2019	Comments	none
I13	16 May 2019	Depth (m)	39
I13	16 May 2019	Arrive Time	1054
I13	16 May 2019	Depart Time	1102
I13	16 May 2019	Air Temp (C)	15
I13	16 May 2019	Weather	Rain
I13	16 May 2019	Visibility (mi)	7
I13	16 May 2019	Wind Speed (kts)	15
I13	16 May 2019	Wind Dir	S
I13	16 May 2019	Water Color	Green
I13	16 May 2019	Wave Ht Low (ft)	5
I13	16 May 2019	Wave Period (sec)	9
I13	16 May 2019	Sea State	Heavy chop
I13	16 May 2019	High Tide (ft)	4.47
I13	16 May 2019	High Tide Time	811
I13	16 May 2019	Low Tide (ft)	0.35
I13	16 May 2019	Low Tide Time	1405
I13	16 May 2019	Comments	none
I14	16 May 2019	Depth (m)	30
I14	16 May 2019	Arrive Time	1115
I14	16 May 2019	Depart Time	1122
I14	16 May 2019	Air Temp (C)	16
I14	16 May 2019	Weather	Rain
I14	16 May 2019	Visibility (mi)	7
I14	16 May 2019	Wind Speed (kts)	22
I14	16 May 2019	Wind Dir	S
I14	16 May 2019	Water Color	Green
I14	16 May 2019	Wave Ht Low (ft)	7
I14	16 May 2019	Wave Period (sec)	9
I14	16 May 2019	Sea State	Heavy chop
I14	16 May 2019	High Tide (ft)	4.47
I14	16 May 2019	High Tide Time	811
I14	16 May 2019	Low Tide (ft)	0.35
I14	16 May 2019	Low Tide Time	1405
I14	16 May 2019	Comments	none
I15	16 May 2019	Depth (m)	32
I15	16 May 2019	Arrive Time	1040
I15	16 May 2019	Depart Time	1044
I15	16 May 2019	Air Temp (C)	16
I15	16 May 2019	Weather	Rain
I15	16 May 2019	Visibility (mi)	7
I15	16 May 2019	Wind Speed (kts)	16
I15	16 May 2019	Wind Dir	S
I15	16 May 2019	Water Color	Green

Station	Date	Parameter	Value
I15	16 May 2019	Wave Ht Low (ft)	5
I15	16 May 2019	Wave Period (sec)	9
I15	16 May 2019	Sea State	Heavy chop
I15	16 May 2019	High Tide (ft)	4.47
I15	16 May 2019	High Tide Time	811
I15	16 May 2019	Low Tide (ft)	0.35
I15	16 May 2019	Low Tide Time	1405
I15	16 May 2019	Comments	none
I16	16 May 2019	Depth (m)	29
I16	16 May 2019	Arrive Time	1020
I16	16 May 2019	Depart Time	1024
I16	16 May 2019	Air Temp (C)	16
I16	16 May 2019	Weather	Rain
I16	16 May 2019	Visibility (mi)	7
I16	16 May 2019	Wind Speed (kts)	18
I16	16 May 2019	Wind Dir	SE
I16	16 May 2019	Water Color	Green
I16	16 May 2019	Wave Ht Low (ft)	5
I16	16 May 2019	Wave Period (sec)	9
I16	16 May 2019	Sea State	Heavy chop
I16	16 May 2019	High Tide (ft)	4.47
I16	16 May 2019	High Tide Time	811
I16	16 May 2019	Low Tide (ft)	0.35
I16	16 May 2019	Low Tide Time	1405
I16	16 May 2019	Comments	none
I17	16 May 2019	Depth (m)	28
I17	16 May 2019	Arrive Time	1012
I17	16 May 2019	Depart Time	1016
I17	16 May 2019	Air Temp (C)	16
I17	16 May 2019	Weather	Rain
I17	16 May 2019	Visibility (mi)	7
I17	16 May 2019	Wind Speed (kts)	18
I17	16 May 2019	Wind Dir	SE
I17	16 May 2019	Water Color	Green
I17	16 May 2019	Wave Ht Low (ft)	5
I17	16 May 2019	Wave Period (sec)	9
I17	16 May 2019	Sea State	Heavy chop
I17	16 May 2019	High Tide (ft)	4.47
I17	16 May 2019	High Tide Time	811
I17	16 May 2019	Low Tide (ft)	0.35
I17	16 May 2019	Low Tide Time	1405
I17	16 May 2019	Comments	none
I18	16 May 2019	Depth (m)	21
I18	16 May 2019	Arrive Time	959
I18	16 May 2019	Depart Time	1003
I18	16 May 2019	Air Temp (C)	16
I18	16 May 2019	Weather	Rain
I18	16 May 2019	Visibility (mi)	7
I18	16 May 2019	Wind Speed (kts)	25
I18	16 May 2019	Wind Dir	S
I18	16 May 2019	Water Color	Green
I18	16 May 2019	Wave Ht Low (ft)	5
I18	16 May 2019	Wave Period (sec)	9
I18	16 May 2019	Sea State	Heavy chop
I18	16 May 2019	High Tide (ft)	4.47
I18	16 May 2019	High Tide Time	811
I18	16 May 2019	Low Tide (ft)	0.35
I18	16 May 2019	Low Tide Time	1405

Station	Date	Parameter	Value
I18	16 May 2019	Comments	none
I2	14 May 2019	Depth (m)	33
I2	14 May 2019	Arrive Time	958
I2	14 May 2019	Depart Time	1004
I2	14 May 2019	Air Temp (C)	17
I2	14 May 2019	Weather	Continuous layer of clouds
I2	14 May 2019	Visibility (mi)	11
I2	14 May 2019	Wind Speed (kts)	5
I2	14 May 2019	Wind Dir	NW
I2	14 May 2019	Water Color	Greenish-Blue
I2	14 May 2019	Wave Ht Low (ft)	5
I2	14 May 2019	Wave Period (sec)	13
I2	14 May 2019	Sea State	Calm
I2	14 May 2019	High Tide (ft)	4.41
I2	14 May 2019	High Tide Time	616
I2	14 May 2019	Low Tide (ft)	-0.05
I2	14 May 2019	Low Tide Time	1245
I2	14 May 2019	Comments	none
I20	16 May 2019	Depth (m)	56
I20	16 May 2019	Arrive Time	840
I20	16 May 2019	Depart Time	846
I20	16 May 2019	Air Temp (C)	17
I20	16 May 2019	Weather	Continuous layer of clouds
I20	16 May 2019	Visibility (mi)	7
I20	16 May 2019	Wind Speed (kts)	15
I20	16 May 2019	Wind Dir	SE
I20	16 May 2019	Water Color	Green
I20	16 May 2019	Wave Ht Low (ft)	4
I20	16 May 2019	Wave Period (sec)	9
I20	16 May 2019	Sea State	Heavy chop
I20	16 May 2019	High Tide (ft)	4.47
I20	16 May 2019	High Tide Time	811
I20	16 May 2019	Low Tide (ft)	0.35
I20	16 May 2019	Low Tide Time	1405
I20	16 May 2019	Comments	none
I21	16 May 2019	Depth (m)	42
I21	16 May 2019	Arrive Time	819
I21	16 May 2019	Depart Time	823
I21	16 May 2019	Air Temp (C)	17
I21	16 May 2019	Weather	Continuous layer of clouds
I21	16 May 2019	Visibility (mi)	7
I21	16 May 2019	Wind Speed (kts)	13
I21	16 May 2019	Wind Dir	SE
I21	16 May 2019	Water Color	Green
I21	16 May 2019	Wave Ht Low (ft)	4
I21	16 May 2019	Wave Period (sec)	9
I21	16 May 2019	Sea State	Heavy chop
I21	16 May 2019	High Tide (ft)	4.47
I21	16 May 2019	High Tide Time	811
I21	16 May 2019	Low Tide (ft)	0.35
I21	16 May 2019	Low Tide Time	1405
I21	16 May 2019	Comments	none
I22	16 May 2019	Depth (m)	30
I22	16 May 2019	Arrive Time	930
I22	16 May 2019	Depart Time	934
I22	16 May 2019	Air Temp (C)	16
I22	16 May 2019	Weather	Rain

Station	Date	Parameter	Value
I22	16 May 2019	Visibility (mi)	7
I22	16 May 2019	Wind Speed (kts)	26
I22	16 May 2019	Wind Dir	S
I22	16 May 2019	Water Color	Green
I22	16 May 2019	Wave Ht Low (ft)	4
I22	16 May 2019	Wave Period (sec)	9
I22	16 May 2019	Sea State	Heavy chop
I22	16 May 2019	High Tide (ft)	4.47
I22	16 May 2019	High Tide Time	811
I22	16 May 2019	Low Tide (ft)	0.35
I22	16 May 2019	Low Tide Time	1405
I22	16 May 2019	Comments	none
I23	16 May 2019	Depth (m)	24
I23	16 May 2019	Arrive Time	943
I23	16 May 2019	Depart Time	949
I23	16 May 2019	Air Temp (C)	16
I23	16 May 2019	Weather	Rain
I23	16 May 2019	Visibility (mi)	7
I23	16 May 2019	Wind Speed (kts)	16
I23	16 May 2019	Wind Dir	SE
I23	16 May 2019	Water Color	Green
I23	16 May 2019	Wave Ht Low (ft)	5
I23	16 May 2019	Wave Period (sec)	9
I23	16 May 2019	Sea State	Heavy chop
I23	16 May 2019	High Tide (ft)	4.47
I23	16 May 2019	High Tide Time	811
I23	16 May 2019	Low Tide (ft)	0.35
I23	16 May 2019	Low Tide Time	1405
I23	16 May 2019	Comments	none
I27	16 May 2019	Depth (m)	30
I27	16 May 2019	Arrive Time	914
I27	16 May 2019	Depart Time	917
I27	16 May 2019	Air Temp (C)	16
I27	16 May 2019	Weather	Rain
I27	16 May 2019	Visibility (mi)	7
I27	16 May 2019	Wind Speed (kts)	18
I27	16 May 2019	Wind Dir	S
I27	16 May 2019	Water Color	Green
I27	16 May 2019	Wave Ht Low (ft)	4
I27	16 May 2019	Wave Period (sec)	9
I27	16 May 2019	Sea State	Heavy chop
I27	16 May 2019	High Tide (ft)	4.47
I27	16 May 2019	High Tide Time	811
I27	16 May 2019	Low Tide (ft)	0.35
I27	16 May 2019	Low Tide Time	1405
I27	16 May 2019	Comments	none
I28	15 May 2019	Depth (m)	58
I28	15 May 2019	Arrive Time	832
I28	15 May 2019	Depart Time	837
I28	15 May 2019	Air Temp (C)	17
I28	15 May 2019	Weather	Overcast
I28	15 May 2019	Visibility (mi)	7
I28	15 May 2019	Wind Speed (kts)	3
I28	15 May 2019	Wind Dir	W
I28	15 May 2019	Water Color	Blue
I28	15 May 2019	Wave Ht Low (ft)	5
I28	15 May 2019	Wave Period (sec)	16
I28	15 May 2019	Sea State	Calm

Station	Date	Parameter	Value
I28	15 May 2019	High Tide (ft)	4.48
I28	15 May 2019	High Tide Time	717
I28	15 May 2019	Low Tide (ft)	0.11
I28	15 May 2019	Low Tide Time	1327
I28	15 May 2019	Comments	none
I29	15 May 2019	Depth (m)	39
I29	15 May 2019	Arrive Time	851
I29	15 May 2019	Depart Time	855
I29	15 May 2019	Air Temp (C)	17
I29	15 May 2019	Weather	Overcast
I29	15 May 2019	Visibility (mi)	7
I29	15 May 2019	Wind Speed (kts)	3
I29	15 May 2019	Wind Dir	NW
I29	15 May 2019	Water Color	Bluish-Green
I29	15 May 2019	Wave Ht Low (ft)	5
I29	15 May 2019	Wave Period (sec)	16
I29	15 May 2019	Sea State	Calm
I29	15 May 2019	High Tide (ft)	4.48
I29	15 May 2019	High Tide Time	717
I29	15 May 2019	Low Tide (ft)	0.11
I29	15 May 2019	Low Tide Time	1327
I29	15 May 2019	Comments	none
I3	14 May 2019	Depth (m)	27
I3	14 May 2019	Arrive Time	1012
I3	14 May 2019	Depart Time	1018
I3	14 May 2019	Air Temp (C)	18
I3	14 May 2019	Weather	Continuous layer of clouds
I3	14 May 2019	Visibility (mi)	11
I3	14 May 2019	Wind Speed (kts)	6
I3	14 May 2019	Wind Dir	NW
I3	14 May 2019	Water Color	Greenish-Blue
I3	14 May 2019	Wave Ht Low (ft)	5
I3	14 May 2019	Wave Period (sec)	13
I3	14 May 2019	Sea State	Calm
I3	14 May 2019	High Tide (ft)	4.41
I3	14 May 2019	High Tide Time	616
I3	14 May 2019	Low Tide (ft)	-0.05
I3	14 May 2019	Low Tide Time	1245
I3	14 May 2019	Comments	none
I30	15 May 2019	Depth (m)	30
I30	15 May 2019	Arrive Time	903
I30	15 May 2019	Depart Time	907
I30	15 May 2019	Air Temp (C)	17
I30	15 May 2019	Weather	Overcast
I30	15 May 2019	Visibility (mi)	9
I30	15 May 2019	Wind Speed (kts)	1
I30	15 May 2019	Wind Dir	NW
I30	15 May 2019	Water Color	Bluish-Green
I30	15 May 2019	Wave Ht Low (ft)	5
I30	15 May 2019	Wave Period (sec)	16
I30	15 May 2019	Sea State	Calm
I30	15 May 2019	High Tide (ft)	4.48
I30	15 May 2019	High Tide Time	717
I30	15 May 2019	Low Tide (ft)	0.11
I30	15 May 2019	Low Tide Time	1327
I30	15 May 2019	Comments	none
I31	15 May 2019	Depth (m)	21

Station	Date	Parameter	Value
I31	15 May 2019	Arrive Time	915
I31	15 May 2019	Depart Time	918
I31	15 May 2019	Air Temp (C)	17
I31	15 May 2019	Weather	Overcast
I31	15 May 2019	Visibility (mi)	9
I31	15 May 2019	Wind Speed (kts)	1
I31	15 May 2019	Wind Dir	NW
I31	15 May 2019	Water Color	Bluish-Green
I31	15 May 2019	Wave Ht Low (ft)	5
I31	15 May 2019	Wave Period (sec)	16
I31	15 May 2019	Sea State	Calm
I31	15 May 2019	High Tide (ft)	4.48
I31	15 May 2019	High Tide Time	717
I31	15 May 2019	Low Tide (ft)	0.11
I31	15 May 2019	Low Tide Time	1327
I31	15 May 2019	Comments	none
I33	15 May 2019	Depth (m)	32
I33	15 May 2019	Arrive Time	805
I33	15 May 2019	Depart Time	816
I33	15 May 2019	Air Temp (C)	16
I33	15 May 2019	Weather	Overcast
I33	15 May 2019	Visibility (mi)	7
I33	15 May 2019	Wind Speed (kts)	2
I33	15 May 2019	Wind Dir	NW
I33	15 May 2019	Water Color	Green
I33	15 May 2019	Wave Ht Low (ft)	5
I33	15 May 2019	Wave Period (sec)	16
I33	15 May 2019	Sea State	Calm
I33	15 May 2019	High Tide (ft)	4.48
I33	15 May 2019	High Tide Time	717
I33	15 May 2019	Low Tide (ft)	0.11
I33	15 May 2019	Low Tide Time	1327
I33	15 May 2019	Comments	Lobster floats
I34	15 May 2019	Depth (m)	21
I34	15 May 2019	Arrive Time	751
I34	15 May 2019	Depart Time	754
I34	15 May 2019	Air Temp (C)	16
I34	15 May 2019	Weather	Overcast
I34	15 May 2019	Visibility (mi)	5
I34	15 May 2019	Wind Speed (kts)	2
I34	15 May 2019	Wind Dir	NE
I34	15 May 2019	Water Color	Green
I34	15 May 2019	Wave Ht Low (ft)	5
I34	15 May 2019	Wave Period (sec)	16
I34	15 May 2019	Sea State	Calm
I34	15 May 2019	High Tide (ft)	4.48
I34	15 May 2019	High Tide Time	717
I34	15 May 2019	Low Tide (ft)	0.11
I34	15 May 2019	Low Tide Time	1327
I34	15 May 2019	Comments	none
I35	15 May 2019	Depth (m)	20
I35	15 May 2019	Arrive Time	955
I35	15 May 2019	Depart Time	958
I35	15 May 2019	Air Temp (C)	17
I35	15 May 2019	Weather	Overcast
I35	15 May 2019	Visibility (mi)	9
I35	15 May 2019	Wind Speed (kts)	0
I35	15 May 2019	Wind Dir	

Station	Date	Parameter	Value
I35	15 May 2019	Water Color	Green
I35	15 May 2019	Wave Ht Low (ft)	5
I35	15 May 2019	Wave Period (sec)	16
I35	15 May 2019	Sea State	Calm
I35	15 May 2019	High Tide (ft)	4.48
I35	15 May 2019	High Tide Time	717
I35	15 May 2019	Low Tide (ft)	0.11
I35	15 May 2019	Low Tide Time	1327
I35	15 May 2019	Comments	Cargo ship on station
I36	15 May 2019	Depth (m)	13
I36	15 May 2019	Arrive Time	940
I36	15 May 2019	Depart Time	943
I36	15 May 2019	Air Temp (C)	17
I36	15 May 2019	Weather	Overcast
I36	15 May 2019	Visibility (mi)	9
I36	15 May 2019	Wind Speed (kts)	4
I36	15 May 2019	Wind Dir	W
I36	15 May 2019	Water Color	Green
I36	15 May 2019	Wave Ht Low (ft)	5
I36	15 May 2019	Wave Period (sec)	16
I36	15 May 2019	Sea State	Calm
I36	15 May 2019	High Tide (ft)	4.48
I36	15 May 2019	High Tide Time	717
I36	15 May 2019	Low Tide (ft)	0.11
I36	15 May 2019	Low Tide Time	1327
I36	15 May 2019	Comments	none
I37	15 May 2019	Depth (m)	14
I37	15 May 2019	Arrive Time	738
I37	15 May 2019	Depart Time	741
I37	15 May 2019	Air Temp (C)	16
I37	15 May 2019	Weather	Overcast
I37	15 May 2019	Visibility (mi)	5
I37	15 May 2019	Wind Speed (kts)	2
I37	15 May 2019	Wind Dir	SW
I37	15 May 2019	Water Color	Green
I37	15 May 2019	Wave Ht Low (ft)	5
I37	15 May 2019	Wave Period (sec)	16
I37	15 May 2019	Sea State	Calm
I37	15 May 2019	High Tide (ft)	4.48
I37	15 May 2019	High Tide Time	717
I37	15 May 2019	Low Tide (ft)	0.11
I37	15 May 2019	Low Tide Time	1327
I37	15 May 2019	Comments	none
I38	15 May 2019	Depth (m)	13
I38	15 May 2019	Arrive Time	1012
I38	15 May 2019	Depart Time	1016
I38	15 May 2019	Air Temp (C)	17
I38	15 May 2019	Weather	Overcast
I38	15 May 2019	Visibility (mi)	9
I38	15 May 2019	Wind Speed (kts)	1
I38	15 May 2019	Wind Dir	W
I38	15 May 2019	Water Color	Green
I38	15 May 2019	Wave Ht Low (ft)	5
I38	15 May 2019	Wave Period (sec)	16
I38	15 May 2019	Sea State	Calm
I38	15 May 2019	High Tide (ft)	4.48
I38	15 May 2019	High Tide Time	717
I38	15 May 2019	Low Tide (ft)	0.11

Station	Date	Parameter	Value
I38	15 May 2019	Low Tide Time	1327
I38	15 May 2019	Comments	2 Navy seal inflatables near station
I4	14 May 2019	Depth (m)	19
I4	14 May 2019	Arrive Time	1027
I4	14 May 2019	Depart Time	1031
I4	14 May 2019	Air Temp (C)	18
I4	14 May 2019	Weather	Continuous layer of clouds
I4	14 May 2019	Visibility (mi)	11
I4	14 May 2019	Wind Speed (kts)	5
I4	14 May 2019	Wind Dir	NW
I4	14 May 2019	Water Color	Greenish-Blue
I4	14 May 2019	Wave Ht Low (ft)	5
I4	14 May 2019	Wave Period (sec)	13
I4	14 May 2019	Sea State	Calm
I4	14 May 2019	High Tide (ft)	4.41
I4	14 May 2019	High Tide Time	616
I4	14 May 2019	Low Tide (ft)	-0.05
I4	14 May 2019	Low Tide Time	1245
I4	14 May 2019	Comments	none
I5	14 May 2019	Depth (m)	14
I5	14 May 2019	Arrive Time	1035
I5	14 May 2019	Depart Time	1041
I5	14 May 2019	Air Temp (C)	18
I5	14 May 2019	Weather	Continuous layer of clouds
I5	14 May 2019	Visibility (mi)	11
I5	14 May 2019	Wind Speed (kts)	6
I5	14 May 2019	Wind Dir	W
I5	14 May 2019	Water Color	Green
I5	14 May 2019	Wave Ht Low (ft)	5
I5	14 May 2019	Wave Period (sec)	13
I5	14 May 2019	Sea State	Calm
I5	14 May 2019	High Tide (ft)	4.41
I5	14 May 2019	High Tide Time	616
I5	14 May 2019	Low Tide (ft)	-0.05
I5	14 May 2019	Low Tide Time	1245
I5	14 May 2019	Comments	none
I6	14 May 2019	Depth (m)	26
I6	14 May 2019	Arrive Time	1056
I6	14 May 2019	Depart Time	1100
I6	14 May 2019	Air Temp (C)	18
I6	14 May 2019	Weather	Continuous layer of clouds
I6	14 May 2019	Visibility (mi)	11
I6	14 May 2019	Wind Speed (kts)	7
I6	14 May 2019	Wind Dir	NW
I6	14 May 2019	Water Color	Greenish-Blue
I6	14 May 2019	Wave Ht Low (ft)	5
I6	14 May 2019	Wave Period (sec)	13
I6	14 May 2019	Sea State	Calm
I6	14 May 2019	High Tide (ft)	4.41
I6	14 May 2019	High Tide Time	616
I6	14 May 2019	Low Tide (ft)	-0.05
I6	14 May 2019	Low Tide Time	1245
I6	14 May 2019	Comments	none
I7	14 May 2019	Depth (m)	52
I7	14 May 2019	Arrive Time	851
I7	14 May 2019	Depart Time	858
I7	14 May 2019	Air Temp (C)	17

Station	Date	Parameter	Value
17	14 May 2019	Weather	Continuous layer of clouds
17	14 May 2019	Visibility (mi)	11
17	14 May 2019	Wind Speed (kts)	2
17	14 May 2019	Wind Dir	N
17	14 May 2019	Water Color	Greenish-Blue
17	14 May 2019	Wave Ht Low (ft)	3
17	14 May 2019	Wave Period (sec)	13
17	14 May 2019	Sea State	Calm
17	14 May 2019	High Tide (ft)	4.41
17	14 May 2019	High Tide Time	616
17	14 May 2019	Low Tide (ft)	-0.05
17	14 May 2019	Low Tide Time	1245
17	14 May 2019	Comments	none
18	14 May 2019	Depth (m)	36
18	14 May 2019	Arrive Time	1155
18	14 May 2019	Depart Time	1214
18	14 May 2019	Air Temp (C)	17
18	14 May 2019	Weather	Continuous layer of clouds
18	14 May 2019	Visibility (mi)	13
18	14 May 2019	Wind Speed (kts)	8
18	14 May 2019	Wind Dir	NW
18	14 May 2019	Water Color	Greenish-Blue
18	14 May 2019	Wave Ht Low (ft)	5
18	14 May 2019	Wave Period (sec)	13
18	14 May 2019	Sea State	Calm
18	14 May 2019	High Tide (ft)	4.41
18	14 May 2019	High Tide Time	616
18	14 May 2019	Low Tide (ft)	-0.05
18	14 May 2019	Low Tide Time	1245
18	14 May 2019	Comments	none
19	14 May 2019	Depth (m)	29
19	14 May 2019	Arrive Time	1139
19	14 May 2019	Depart Time	1146
19	14 May 2019	Air Temp (C)	18
19	14 May 2019	Weather	Continuous layer of clouds
19	14 May 2019	Visibility (mi)	13
19	14 May 2019	Wind Speed (kts)	8
19	14 May 2019	Wind Dir	NW
19	14 May 2019	Water Color	Greenish-Blue
19	14 May 2019	Wave Ht Low (ft)	5
19	14 May 2019	Wave Period (sec)	13
19	14 May 2019	Sea State	Calm
19	14 May 2019	High Tide (ft)	4.41
19	14 May 2019	High Tide Time	616
19	14 May 2019	Low Tide (ft)	-0.05
19	14 May 2019	Low Tide Time	1245
19	14 May 2019	Comments	none

Table 4.7

Summary of CTD profile data from the SBOO offshore 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)
I1	14 May 2019	1	18.22	86.78	8.0	33.65	8.2	24.2	0.27
I1	14 May 2019	2	18.21	86.85	8.0	33.65	8.2	24.2	0.27
I1	14 May 2019	3	18.19	87.35	8.0	33.65	8.2	24.2	0.29
I1	14 May 2019	4	18.19	87.37	8.0	33.64	8.2	24.2	0.29
I1	14 May 2019	5	18.18	87.37	8.0	33.64	8.2	24.2	0.29
I1	14 May 2019	6	18.14	87.28	8.0	33.64	8.2	24.2	0.30
I1	14 May 2019	7	18.08	87.27	8.0	33.64	8.2	24.2	0.32
I1	14 May 2019	8	18.01	87.31	8.0	33.64	8.2	24.2	0.33
I1	14 May 2019	9	17.84	87.37	8.0	33.64	8.2	24.3	0.36
I1	14 May 2019	10	16.95	87.30	8.3	33.67	8.2	24.5	0.38
I1	14 May 2019	11	15.99	87.37	8.5	33.62	8.2	24.7	0.39
I1	14 May 2019	12	15.42	87.55	8.6	33.58	8.2	24.8	0.41
I1	14 May 2019	13	15.30	87.45	8.5	33.56	8.2	24.8	0.43
I1	14 May 2019	14	15.22	87.35	8.5	33.56	8.2	24.8	0.47
I1	14 May 2019	15	15.09	87.23	8.5	33.57	8.2	24.8	0.49
I1	14 May 2019	16	14.98	87.19	8.5	33.57	8.2	24.9	0.55
I1	14 May 2019	17	14.91	87.01	8.5	33.57	8.2	24.9	0.58
I1	14 May 2019	18	14.81	86.98	8.5	33.58	8.2	24.9	0.59
I1	14 May 2019	19	14.72	86.93	8.4	33.58	8.2	24.9	0.62
I1	14 May 2019	20	14.58	86.70	8.5	33.58	8.2	25.0	0.67
I1	14 May 2019	21	14.35	86.54	8.6	33.58	8.2	25.0	0.74
I1	14 May 2019	22	14.09	86.25	8.6	33.58	8.2	25.1	0.88
I1	14 May 2019	23	13.97	86.07	8.6	33.57	8.2	25.1	1.06
I1	14 May 2019	24	13.80	85.65	8.6	33.57	8.2	25.1	1.34
I1	14 May 2019	25	13.69	85.32	8.5	33.57	8.2	25.1	1.83
I1	14 May 2019	26	13.48	84.23	8.3	33.57	8.1	25.2	2.72
I1	14 May 2019	27	13.36	82.85	8.1	33.57	8.1	25.2	3.44
I1	14 May 2019	28	13.26	82.49	7.8	33.57	8.1	25.2	3.68
I1	14 May 2019	29	13.08	82.87	7.4	33.58	8.1	25.3	3.47
I1	14 May 2019	30	12.96	83.31	7.1	33.58	8.1	25.3	3.00
I1	14 May 2019	31	12.70	84.68	6.7	33.60	8.0	25.4	2.46
I1	14 May 2019	32	12.60	85.86	6.5	33.59	8.0	25.4	2.04
I1	14 May 2019	33	12.57	86.13	6.4	33.59	8.0	25.4	1.80
I1	14 May 2019	34	12.54	86.28	6.3	33.60	8.0	25.4	1.70
I1	14 May 2019	35	12.46	86.40	6.3	33.60	8.0	25.4	1.66
I1	14 May 2019	36	12.41	86.41	6.2	33.60	8.0	25.4	1.66
I1	14 May 2019	37	12.40	86.33	6.2	33.60	8.0	25.4	1.69
I1	14 May 2019	38	12.37	86.21	6.2	33.60	8.0	25.4	1.74
I1	14 May 2019	39	12.37	86.24	6.2	33.60	8.0	25.4	1.81
I1	14 May 2019	40	12.24	86.25	6.1	33.62	8.0	25.5	1.66
I1	14 May 2019	41	12.01	86.46	6.0	33.61	8.0	25.5	1.60
I1	14 May 2019	42	11.94	86.94	6.0	33.61	8.0	25.5	1.36
I1	14 May 2019	43	11.93	87.48	5.9	33.61	8.0	25.5	1.27
I1	14 May 2019	44	11.93	87.71	5.9	33.61	8.0	25.5	1.15
I1	14 May 2019	45	11.92	87.66	5.8	33.61	8.0	25.5	1.08
I1	14 May 2019	46	11.91	87.76	5.8	33.62	8.0	25.5	1.08
I1	14 May 2019	47	11.88	87.76	5.8	33.62	7.9	25.5	1.04
I1	14 May 2019	48	11.81	87.91	5.7	33.63	7.9	25.6	0.93
I1	14 May 2019	49	11.75	87.95	5.6	33.64	7.9	25.6	0.89
I1	14 May 2019	50	11.66	88.13	5.5	33.65	7.9	25.6	0.82
I1	14 May 2019	51	11.52	88.17	5.6	33.64	7.9	25.6	0.78
I1	14 May 2019	52	11.50	88.18	5.6	33.63	7.9	25.6	0.78
I1	14 May 2019	53	11.49	88.17	5.5	33.63	7.9	25.6	0.78
I1	14 May 2019	54	11.49	88.13	5.6	33.63	7.9	25.6	0.77
I1	14 May 2019	55	11.48	88.13	5.5	33.64	7.9	25.6	0.80
I1	14 May 2019	56	11.42	88.05	5.4	33.65	7.9	25.6	0.83

Station	Date	Depth (m)	Temp (°C)	XMS (‰)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (µg/L)
I1	14 May 2019	57	11.25	87.89	5.2	33.69	7.9	25.7	0.73
I1	14 May 2019	58	10.98	87.60	4.9	33.72	7.9	25.8	0.59
I1	14 May 2019	59	10.96	87.54	4.8	33.72	7.8	25.8	0.55
I1	14 May 2019	60	10.94	87.47	4.8	33.72	7.8	25.8	0.47
I10	14 May 2019	1	18.34	84.12	8.4	33.65	8.2	24.2	0.40
I10	14 May 2019	2	18.33	84.40	8.4	33.65	8.2	24.2	0.42
I10	14 May 2019	3	18.25	84.32	8.4	33.66	8.2	24.2	0.46
I10	14 May 2019	4	18.17	84.15	8.5	33.65	8.2	24.2	0.49
I10	14 May 2019	5	18.09	84.00	8.5	33.65	8.2	24.2	0.50
I10	14 May 2019	6	18.01	84.04	8.5	33.65	8.2	24.2	0.55
I10	14 May 2019	7	17.75	83.65	8.4	33.66	8.2	24.3	0.59
I10	14 May 2019	8	17.45	83.53	8.6	33.63	8.2	24.4	0.68
I10	14 May 2019	9	17.00	83.64	8.5	33.67	8.2	24.5	0.73
I10	14 May 2019	10	15.62	84.05	8.8	33.63	8.2	24.8	0.78
I10	14 May 2019	11	15.19	85.00	8.7	33.61	8.2	24.9	0.76
I10	14 May 2019	12	14.26	85.54	8.7	33.57	8.2	25.0	0.72
I10	14 May 2019	13	14.20	84.97	8.7	33.55	8.2	25.0	0.72
I10	14 May 2019	14	14.11	84.02	8.7	33.55	8.2	25.0	0.83
I10	14 May 2019	15	14.04	83.29	8.6	33.56	8.2	25.1	1.01
I10	14 May 2019	16	13.44	80.55	8.2	33.62	8.2	25.2	1.69
I10	14 May 2019	17	12.80	74.46	7.8	33.59	8.1	25.3	3.48
I10	14 May 2019	18	12.74	75.00	7.5	33.59	8.1	25.4	4.48
I10	14 May 2019	19	12.57	75.64	7.2	33.60	8.1	25.4	4.66
I11	14 May 2019	1	18.21	83.82	8.5	33.64	8.2	24.2	0.45
I11	14 May 2019	2	18.19	83.89	8.5	33.65	8.2	24.2	0.45
I11	14 May 2019	3	18.02	83.80	8.5	33.65	8.2	24.2	0.49
I11	14 May 2019	4	17.69	83.67	8.5	33.65	8.2	24.3	0.56
I11	14 May 2019	5	16.62	82.98	8.6	33.71	8.2	24.6	0.69
I11	14 May 2019	6	15.51	82.93	9.0	33.63	8.2	24.8	0.75
I11	14 May 2019	7	15.32	83.41	9.0	33.58	8.2	24.8	0.73
I11	14 May 2019	8	14.82	83.28	8.9	33.60	8.2	24.9	0.80
I11	14 May 2019	9	14.30	82.16	8.7	33.59	8.2	25.0	1.00
I11	14 May 2019	10	13.67	78.64	8.3	33.62	8.2	25.2	1.73
I11	14 May 2019	11	13.27	74.56	7.9	33.59	8.1	25.2	2.69
I11	14 May 2019	12	13.02	72.90	7.6	33.61	8.1	25.3	3.07
I11	14 May 2019	13	12.99	72.76	7.4	33.59	8.1	25.3	2.97
I12	16 May 2019	1	16.79	83.55	8.6	33.62	8.2	24.5	0.47
I12	16 May 2019	2	16.78	81.75	8.6	33.62	8.2	24.5	0.47
I12	16 May 2019	3	16.74	83.47	8.5	33.60	8.2	24.5	0.47
I12	16 May 2019	4	16.59	85.69	8.5	33.62	8.2	24.6	0.50
I12	16 May 2019	5	16.56	85.73	8.6	33.61	8.2	24.6	0.52
I12	16 May 2019	6	16.53	85.71	8.5	33.61	8.2	24.6	0.53
I12	16 May 2019	7	16.40	85.76	8.5	33.61	8.2	24.6	0.55
I12	16 May 2019	8	16.41	85.75	8.5	33.61	8.2	24.6	0.57
I12	16 May 2019	9	16.15	85.84	8.4	33.63	8.2	24.7	0.58
I12	16 May 2019	10	15.79	85.94	8.5	33.60	8.2	24.7	0.61
I12	16 May 2019	11	15.53	86.04	8.4	33.62	8.2	24.8	0.63
I12	16 May 2019	12	14.36	85.94	8.4	33.62	8.2	25.0	0.68
I12	16 May 2019	13	14.24	85.48	8.5	33.56	8.2	25.0	0.81
I12	16 May 2019	14	13.87	84.70	8.5	33.58	8.2	25.1	0.95
I12	16 May 2019	15	13.76	83.54	8.4	33.56	8.2	25.1	1.24
I12	16 May 2019	16	13.58	81.67	8.1	33.57	8.2	25.2	1.90
I12	16 May 2019	17	13.43	81.47	7.8	33.57	8.1	25.2	2.79
I12	16 May 2019	18	13.26	81.73	7.6	33.57	8.1	25.2	3.22
I12	16 May 2019	19	13.19	82.04	7.5	33.57	8.1	25.2	3.59
I12	16 May 2019	20	13.16	82.37	7.4	33.57	8.1	25.3	3.77
I12	16 May 2019	21	13.07	82.44	7.3	33.58	8.1	25.3	3.67
I12	16 May 2019	22	13.05	82.63	7.3	33.58	8.1	25.3	3.51

Station	Date	Depth (m)	Temp (°C)	XMS (‰)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (µg/L)
I12	16 May 2019	23	12.98	83.06	7.1	33.59	8.1	25.3	3.36
I12	16 May 2019	24	12.80	83.36	6.9	33.60	8.1	25.4	3.25
I12	16 May 2019	25	12.59	82.93	6.7	33.59	8.0	25.4	3.08
I12	16 May 2019	26	12.46	82.74	6.5	33.61	8.0	25.4	3.06
I12	16 May 2019	27	12.33	82.30	6.3	33.61	8.0	25.4	2.91
I12	16 May 2019	28	12.25	82.22	6.2	33.61	8.0	25.5	2.74
I13	16 May 2019	1	16.67	85.00	8.5	33.60	8.2	24.5	0.46
I13	16 May 2019	2	16.63	85.03	8.5	33.60	8.2	24.5	0.50
I13	16 May 2019	3	16.63	86.24	8.5	33.61	8.2	24.5	0.49
I13	16 May 2019	4	16.63	86.26	8.5	33.61	8.2	24.5	0.51
I13	16 May 2019	5	16.59	86.28	8.5	33.62	8.2	24.5	0.52
I13	16 May 2019	6	16.51	86.30	8.5	33.61	8.2	24.6	0.54
I13	16 May 2019	7	16.53	86.30	8.5	33.61	8.2	24.6	0.55
I13	16 May 2019	8	16.12	86.34	8.4	33.63	8.2	24.7	0.56
I13	16 May 2019	9	16.01	86.38	8.4	33.60	8.2	24.7	0.60
I13	16 May 2019	10	15.17	86.40	8.2	33.64	8.2	24.9	0.61
I13	16 May 2019	11	14.76	86.44	8.4	33.56	8.2	24.9	0.64
I13	16 May 2019	12	14.69	86.47	8.4	33.58	8.2	24.9	0.65
I13	16 May 2019	13	14.62	86.36	8.4	33.56	8.2	24.9	0.68
I13	16 May 2019	14	14.45	86.09	8.4	33.57	8.2	25.0	0.73
I13	16 May 2019	15	14.35	85.80	8.3	33.56	8.2	25.0	0.77
I13	16 May 2019	16	14.05	84.31	8.2	33.58	8.2	25.1	0.96
I13	16 May 2019	17	13.77	81.29	8.2	33.58	8.2	25.1	1.71
I13	16 May 2019	18	13.40	79.81	7.9	33.59	8.1	25.2	3.87
I13	16 May 2019	19	13.21	81.39	7.5	33.59	8.1	25.3	5.02
I13	16 May 2019	20	12.95	82.22	7.2	33.59	8.1	25.3	4.78
I13	16 May 2019	21	12.97	82.63	7.1	33.58	8.1	25.3	4.36
I13	16 May 2019	22	12.84	83.15	7.0	33.59	8.1	25.3	4.02
I13	16 May 2019	23	12.79	83.78	7.0	33.59	8.1	25.3	3.77
I13	16 May 2019	24	12.78	83.81	6.9	33.59	8.1	25.3	3.41
I13	16 May 2019	25	12.75	83.93	6.8	33.59	8.1	25.3	3.48
I13	16 May 2019	26	12.69	84.37	6.8	33.59	8.1	25.4	3.06
I13	16 May 2019	27	12.67	84.40	6.8	33.59	8.1	25.4	3.07
I13	16 May 2019	28	12.57	84.71	6.7	33.60	8.0	25.4	3.06
I13	16 May 2019	29	12.57	84.90	6.6	33.59	8.0	25.4	2.81
I13	16 May 2019	30	12.37	85.32	6.4	33.61	8.0	25.4	2.75
I13	16 May 2019	31	12.26	85.85	6.3	33.60	8.0	25.5	2.38
I13	16 May 2019	32	12.15	86.03	6.2	33.60	8.0	25.5	2.00
I13	16 May 2019	33	12.07	86.20	6.1	33.61	8.0	25.5	2.10
I13	16 May 2019	34	12.03	85.95	6.0	33.61	8.0	25.5	2.14
I13	16 May 2019	35	11.78	85.10	5.8	33.64	8.0	25.6	1.80
I13	16 May 2019	36	11.66	84.81	5.5	33.63	7.9	25.6	1.47
I13	16 May 2019	37	11.68	84.91	5.5	33.63	7.9	25.6	1.32
I13	16 May 2019	38	11.66	84.83	5.5	33.63	7.9	25.6	1.27
I14	16 May 2019	1	16.27	85.75	8.5	33.60	8.2	24.6	0.53
I14	16 May 2019	2	16.27	85.77	8.5	33.60	8.2	24.6	0.53
I14	16 May 2019	3	16.25	85.78	8.5	33.60	8.2	24.6	0.55
I14	16 May 2019	4	16.17	85.77	8.5	33.62	8.2	24.6	0.55
I14	16 May 2019	5	16.10	85.73	8.5	33.60	8.2	24.6	0.58
I14	16 May 2019	6	15.99	85.65	8.5	33.62	8.2	24.7	0.62
I14	16 May 2019	7	15.83	85.51	8.5	33.61	8.2	24.7	0.67
I14	16 May 2019	8	15.85	85.31	8.4	33.60	8.2	24.7	0.70
I14	16 May 2019	9	15.61	85.44	8.3	33.61	8.2	24.8	0.72
I14	16 May 2019	10	15.38	85.21	8.4	33.62	8.2	24.8	0.75
I14	16 May 2019	11	14.97	84.86	8.2	33.64	8.2	24.9	0.84
I14	16 May 2019	12	14.23	83.71	8.2	33.64	8.2	25.1	1.02
I14	16 May 2019	13	13.64	81.60	8.1	33.62	8.1	25.2	1.40
I14	16 May 2019	14	13.29	80.39	7.8	33.61	8.1	25.3	2.26
I14	16 May 2019	15	13.03	81.16	7.5	33.59	8.1	25.3	3.20

Station	Date	Depth (m)	Temp (°C)	XMS (‰)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (µg/L)
I14	16 May 2019	16	13.08	81.34	7.4	33.57	8.1	25.3	3.77
I14	16 May 2019	17	12.97	81.38	7.4	33.58	8.1	25.3	4.07
I14	16 May 2019	18	12.96	81.69	7.3	33.58	8.1	25.3	4.05
I14	16 May 2019	19	12.96	82.20	7.3	33.58	8.1	25.3	3.90
I14	16 May 2019	20	12.92	82.61	7.2	33.58	8.1	25.3	3.80
I14	16 May 2019	21	12.91	82.78	7.1	33.58	8.1	25.3	3.81
I14	16 May 2019	22	12.88	83.21	7.1	33.59	8.1	25.3	3.56
I14	16 May 2019	23	12.87	83.34	7.0	33.59	8.1	25.3	3.28
I14	16 May 2019	24	12.82	83.85	6.9	33.59	8.1	25.3	3.34
I14	16 May 2019	25	12.72	83.92	6.8	33.60	8.1	25.4	3.09
I14	16 May 2019	26	12.51	83.50	6.5	33.61	8.0	25.4	2.93
I14	16 May 2019	27	12.23	81.69	6.2	33.63	8.0	25.5	2.77
I14	16 May 2019	28	11.96	78.30	5.8	33.64	8.0	25.5	2.59
I15	16 May 2019	1	16.90	79.59	8.5	33.62	8.2	24.5	0.39
I15	16 May 2019	2	16.90	85.02	8.5	33.62	8.2	24.5	0.39
I15	16 May 2019	3	16.90	85.72	8.5	33.62	8.2	24.5	0.39
I15	16 May 2019	4	16.86	85.73	8.4	33.63	8.2	24.5	0.41
I15	16 May 2019	5	16.73	85.74	8.5	33.62	8.2	24.5	0.42
I15	16 May 2019	6	16.47	85.75	8.4	33.63	8.2	24.6	0.43
I15	16 May 2019	7	16.29	85.77	8.5	33.62	8.2	24.6	0.47
I15	16 May 2019	8	16.16	85.80	8.5	33.61	8.2	24.6	0.48
I15	16 May 2019	9	15.81	85.84	8.3	33.62	8.2	24.7	0.50
I15	16 May 2019	10	15.34	85.88	8.3	33.61	8.2	24.8	0.54
I15	16 May 2019	11	14.97	85.80	8.3	33.61	8.2	24.9	0.56
I15	16 May 2019	12	14.22	85.37	8.3	33.59	8.2	25.1	0.62
I15	16 May 2019	13	13.75	84.21	8.3	33.58	8.2	25.1	0.83
I15	16 May 2019	14	13.73	82.29	8.4	33.55	8.2	25.1	1.20
I15	16 May 2019	15	13.59	81.40	8.1	33.58	8.2	25.2	1.73
I15	16 May 2019	16	13.41	80.78	7.8	33.57	8.1	25.2	2.55
I15	16 May 2019	17	13.25	80.96	7.6	33.59	8.1	25.2	3.06
I15	16 May 2019	18	13.03	82.06	7.3	33.58	8.1	25.3	3.33
I15	16 May 2019	19	13.02	82.33	7.3	33.58	8.1	25.3	3.48
I15	16 May 2019	20	12.95	82.78	7.2	33.58	8.1	25.3	3.40
I15	16 May 2019	21	12.94	82.88	7.1	33.58	8.1	25.3	3.42
I15	16 May 2019	22	12.90	83.16	7.0	33.59	8.1	25.3	3.34
I15	16 May 2019	23	12.83	83.43	6.9	33.59	8.1	25.3	3.34
I15	16 May 2019	24	12.80	83.77	6.8	33.59	8.1	25.3	3.25
I15	16 May 2019	25	12.63	83.55	6.7	33.60	8.1	25.4	3.11
I15	16 May 2019	26	12.49	83.33	6.5	33.60	8.0	25.4	3.07
I15	16 May 2019	27	12.25	82.94	6.3	33.62	8.0	25.5	2.90
I15	16 May 2019	28	12.08	82.91	5.9	33.63	8.0	25.5	2.50
I15	16 May 2019	29	11.87	82.14	5.6	33.63	8.0	25.6	2.18
I15	16 May 2019	30	11.79	81.81	5.5	33.64	8.0	25.6	2.14
I15	16 May 2019	31	11.74	80.68	5.5	33.64	7.9	25.6	1.98
I16	16 May 2019	1	16.29	84.08	8.6	33.61	8.2	24.6	0.46
I16	16 May 2019	2	16.30	85.47	8.6	33.60	8.2	24.6	0.46
I16	16 May 2019	3	16.30	85.81	8.6	33.61	8.2	24.6	0.47
I16	16 May 2019	4	16.29	85.80	8.6	33.61	8.2	24.6	0.47
I16	16 May 2019	5	16.28	85.83	8.5	33.61	8.2	24.6	0.50
I16	16 May 2019	6	16.26	85.80	8.6	33.61	8.2	24.6	0.52
I16	16 May 2019	7	16.23	85.82	8.5	33.61	8.2	24.6	0.55
I16	16 May 2019	8	16.13	85.83	8.5	33.61	8.2	24.6	0.57
I16	16 May 2019	9	15.97	85.88	8.5	33.61	8.2	24.7	0.59
I16	16 May 2019	10	15.72	85.90	8.4	33.61	8.2	24.7	0.62
I16	16 May 2019	11	15.58	85.95	8.4	33.60	8.2	24.8	0.65
I16	16 May 2019	12	15.17	86.02	8.2	33.62	8.2	24.9	0.66
I16	16 May 2019	13	14.15	85.94	8.3	33.62	8.2	25.1	0.72
I16	16 May 2019	14	13.83	85.31	8.4	33.56	8.2	25.1	0.88
I16	16 May 2019	15	13.80	84.41	8.4	33.56	8.2	25.1	1.05

Station	Date	Depth (m)	Temp (°C)	XMS (‰)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (µg/L)
I16	16 May 2019	16	13.70	83.54	8.3	33.56	8.2	25.1	1.34
I16	16 May 2019	17	13.66	82.37	8.3	33.56	8.2	25.1	1.84
I16	16 May 2019	18	13.55	81.35	8.1	33.57	8.2	25.2	2.34
I16	16 May 2019	19	13.28	81.43	7.7	33.58	8.1	25.2	3.04
I16	16 May 2019	20	13.21	81.78	7.5	33.57	8.1	25.2	3.71
I16	16 May 2019	21	13.09	82.26	7.3	33.58	8.1	25.3	4.04
I16	16 May 2019	22	13.05	82.49	7.3	33.58	8.1	25.3	3.76
I16	16 May 2019	23	13.00	82.92	7.2	33.58	8.1	25.3	3.70
I16	16 May 2019	24	12.94	82.99	7.1	33.59	8.1	25.3	3.57
I16	16 May 2019	25	12.89	83.73	7.0	33.59	8.1	25.3	3.35
I16	16 May 2019	26	12.62	83.61	6.7	33.62	8.1	25.4	3.15
I16	16 May 2019	27	12.30	82.64	6.4	33.62	8.0	25.5	3.13
I16	16 May 2019	28	12.15	81.41	6.0	33.63	8.0	25.5	2.67
I17	16 May 2019	1	16.73	85.31	8.5	33.62	8.2	24.5	0.51
I17	16 May 2019	2	16.73	85.36	8.6	33.62	8.2	24.5	0.51
I17	16 May 2019	3	16.71	85.37	8.5	33.62	8.2	24.5	0.52
I17	16 May 2019	4	16.71	85.39	8.6	33.62	8.2	24.5	0.53
I17	16 May 2019	5	16.53	85.35	8.4	33.64	8.2	24.6	0.53
I17	16 May 2019	6	16.29	85.36	8.5	33.63	8.2	24.6	0.58
I17	16 May 2019	7	16.10	85.28	8.5	33.63	8.2	24.7	0.64
I17	16 May 2019	8	15.39	85.12	8.4	33.67	8.2	24.9	0.67
I17	16 May 2019	9	14.54	85.11	8.6	33.64	8.2	25.0	0.71
I17	16 May 2019	10	14.43	85.49	8.6	33.60	8.2	25.0	0.81
I17	16 May 2019	11	14.07	85.25	8.5	33.57	8.2	25.1	0.87
I17	16 May 2019	12	13.94	84.43	8.5	33.58	8.2	25.1	0.96
I17	16 May 2019	13	13.71	83.81	8.3	33.57	8.2	25.1	1.18
I17	16 May 2019	14	13.70	83.67	8.5	33.56	8.2	25.1	1.47
I17	16 May 2019	15	13.68	82.61	8.4	33.56	8.2	25.1	1.69
I17	16 May 2019	16	13.55	80.97	8.1	33.58	8.2	25.2	2.05
I17	16 May 2019	17	13.32	81.59	7.8	33.59	8.1	25.2	2.73
I17	16 May 2019	18	13.24	81.79	7.6	33.59	8.1	25.3	3.38
I17	16 May 2019	19	13.11	81.80	7.3	33.59	8.1	25.3	3.53
I17	16 May 2019	20	13.07	82.40	7.3	33.59	8.1	25.3	3.84
I17	16 May 2019	21	12.99	82.89	7.1	33.59	8.1	25.3	3.76
I17	16 May 2019	22	12.86	83.85	7.0	33.59	8.1	25.3	3.63
I17	16 May 2019	23	12.78	83.92	6.8	33.60	8.1	25.4	3.21
I17	16 May 2019	24	12.56	82.41	6.6	33.61	8.0	25.4	3.05
I17	16 May 2019	25	12.34	81.57	6.3	33.62	8.0	25.5	2.86
I18	16 May 2019	1	16.87	75.14	8.6	33.62	8.2	24.5	1.17
I18	16 May 2019	2	16.86	77.60	8.6	33.62	8.2	24.5	1.20
I18	16 May 2019	3	16.78	77.70	8.5	33.63	8.2	24.5	1.29
I18	16 May 2019	4	16.67	77.29	8.5	33.63	8.2	24.5	1.65
I18	16 May 2019	5	16.61	76.80	8.5	33.63	8.2	24.6	1.89
I18	16 May 2019	6	16.39	75.53	8.3	33.64	8.2	24.6	2.21
I18	16 May 2019	7	15.54	73.78	8.1	33.68	8.2	24.8	2.84
I18	16 May 2019	8	14.92	76.41	8.2	33.62	8.2	24.9	3.68
I18	16 May 2019	9	14.41	76.62	8.2	33.62	8.2	25.0	3.85
I18	16 May 2019	10	14.22	76.88	8.2	33.59	8.2	25.1	4.17
I18	16 May 2019	11	13.97	77.92	8.3	33.58	8.2	25.1	4.19
I18	16 May 2019	12	13.80	78.00	8.3	33.58	8.2	25.1	4.36
I18	16 May 2019	13	13.62	77.79	8.2	33.57	8.1	25.2	4.52
I18	16 May 2019	14	13.61	77.94	8.0	33.57	8.1	25.2	4.76
I18	16 May 2019	15	13.39	78.55	7.6	33.59	8.1	25.2	4.54
I18	16 May 2019	16	13.17	80.73	7.2	33.60	8.1	25.3	4.01
I18	16 May 2019	17	12.94	81.67	7.0	33.59	8.1	25.3	3.42
I18	16 May 2019	18	12.76	81.93	6.8	33.60	8.1	25.4	3.18
I18	16 May 2019	19	12.72	81.91	6.8	33.59	8.0	25.4	2.74
I2	14 May 2019	1	18.14	87.20	8.2	33.65	8.2	24.2	0.29

Station	Date	Depth (m)	Temp (°C)	XMS (‰)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (µg/L)
I2	14 May 2019	2	18.13	87.13	8.2	33.65	8.2	24.2	0.32
I2	14 May 2019	3	18.07	87.15	8.2	33.65	8.2	24.2	0.32
I2	14 May 2019	4	18.06	87.09	8.2	33.65	8.2	24.2	0.33
I2	14 May 2019	5	18.04	87.15	8.2	33.64	8.2	24.2	0.34
I2	14 May 2019	6	18.03	87.15	8.2	33.64	8.2	24.2	0.35
I2	14 May 2019	7	18.00	87.16	8.2	33.64	8.2	24.2	0.38
I2	14 May 2019	8	17.93	87.16	8.2	33.64	8.2	24.2	0.39
I2	14 May 2019	9	17.63	87.18	8.2	33.66	8.2	24.3	0.41
I2	14 May 2019	10	16.90	87.26	8.3	33.63	8.2	24.5	0.40
I2	14 May 2019	11	15.96	87.21	8.5	33.65	8.2	24.7	0.42
I2	14 May 2019	12	15.41	87.12	8.8	33.59	8.2	24.8	0.46
I2	14 May 2019	13	15.20	86.90	8.6	33.60	8.2	24.8	0.50
I2	14 May 2019	14	14.49	86.70	8.6	33.59	8.2	25.0	0.53
I2	14 May 2019	15	14.18	86.42	8.7	33.56	8.2	25.0	0.64
I2	14 May 2019	16	14.16	86.10	8.7	33.56	8.2	25.0	0.72
I2	14 May 2019	17	13.95	85.81	8.6	33.57	8.2	25.1	0.87
I2	14 May 2019	18	13.63	84.97	8.5	33.58	8.2	25.2	1.31
I2	14 May 2019	19	13.36	81.84	8.3	33.58	8.1	25.2	2.70
I2	14 May 2019	20	13.26	79.46	8.2	33.56	8.1	25.2	3.98
I2	14 May 2019	21	13.22	78.74	8.1	33.57	8.1	25.2	4.90
I2	14 May 2019	22	13.11	79.37	7.8	33.58	8.1	25.3	5.56
I2	14 May 2019	23	12.95	79.20	7.5	33.58	8.1	25.3	6.15
I2	14 May 2019	24	12.81	80.55	7.2	33.58	8.1	25.3	5.46
I2	14 May 2019	25	12.66	82.56	6.8	33.60	8.0	25.4	4.61
I2	14 May 2019	26	12.56	83.48	6.7	33.60	8.0	25.4	3.73
I2	14 May 2019	27	12.51	83.97	6.6	33.60	8.0	25.4	3.47
I2	14 May 2019	28	12.37	84.31	6.5	33.61	8.0	25.4	3.51
I2	14 May 2019	29	12.28	84.77	6.4	33.61	8.0	25.5	3.23
I2	14 May 2019	30	12.18	85.15	6.3	33.61	8.0	25.5	2.81
I2	14 May 2019	31	12.04	85.69	6.0	33.63	8.0	25.5	2.40
I2	14 May 2019	32	11.92	84.00	5.8	33.63	8.0	25.5	2.21
I20	16 May 2019	1	17.99	85.76	8.3	33.66	8.2	24.2	0.43
I20	16 May 2019	2	17.99	85.95	8.3	33.66	8.2	24.2	0.46
I20	16 May 2019	3	17.99	86.13	8.3	33.66	8.2	24.2	0.46
I20	16 May 2019	4	17.99	86.17	8.3	33.66	8.2	24.2	0.48
I20	16 May 2019	5	18.00	86.16	8.3	33.66	8.2	24.2	0.49
I20	16 May 2019	6	17.99	86.13	8.2	33.66	8.2	24.2	0.53
I20	16 May 2019	7	17.98	86.16	8.3	33.66	8.2	24.2	0.52
I20	16 May 2019	8	17.96	86.16	8.2	33.66	8.2	24.3	0.52
I20	16 May 2019	9	17.85	86.25	8.2	33.65	8.2	24.3	0.52
I20	16 May 2019	10	16.86	86.64	8.2	33.74	8.2	24.6	0.54
I20	16 May 2019	11	15.57	87.14	8.6	33.60	8.2	24.8	0.50
I20	16 May 2019	12	15.54	87.10	8.7	33.57	8.2	24.7	0.50
I20	16 May 2019	13	15.49	87.00	8.7	33.58	8.2	24.8	0.49
I20	16 May 2019	14	15.34	86.92	8.7	33.57	8.2	24.8	0.48
I20	16 May 2019	15	15.26	87.07	8.7	33.57	8.2	24.8	0.50
I20	16 May 2019	16	15.10	87.08	8.6	33.57	8.2	24.8	0.48
I20	16 May 2019	17	15.05	86.99	8.5	33.57	8.2	24.9	0.49
I20	16 May 2019	18	14.81	87.04	8.4	33.59	8.2	24.9	0.51
I20	16 May 2019	19	14.44	86.98	8.4	33.58	8.2	25.0	0.56
I20	16 May 2019	20	14.14	86.67	8.4	33.58	8.2	25.1	0.63
I20	16 May 2019	21	14.01	86.25	8.3	33.58	8.2	25.1	0.76
I20	16 May 2019	22	13.89	85.40	8.3	33.57	8.2	25.1	1.02
I20	16 May 2019	23	13.76	84.67	8.2	33.58	8.2	25.1	1.40
I20	16 May 2019	24	13.43	81.83	8.0	33.60	8.1	25.2	2.30
I20	16 May 2019	25	13.31	80.43	7.8	33.57	8.1	25.2	4.13
I20	16 May 2019	26	13.15	80.85	7.5	33.59	8.1	25.3	4.54
I20	16 May 2019	27	13.01	82.94	7.2	33.59	8.1	25.3	4.36
I20	16 May 2019	28	12.91	84.01	7.0	33.59	8.1	25.3	3.50
I20	16 May 2019	29	12.70	84.89	6.8	33.59	8.1	25.4	2.78

Station	Date	Depth (m)	Temp (°C)	XMS (‰)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (µg/L)
I20	16 May 2019	30	12.61	85.13	6.7	33.59	8.0	25.4	2.72
I20	16 May 2019	31	12.63	85.34	6.7	33.59	8.0	25.4	2.40
I20	16 May 2019	32	12.52	85.52	6.6	33.60	8.0	25.4	2.20
I20	16 May 2019	33	12.51	85.56	6.5	33.60	8.0	25.4	2.26
I20	16 May 2019	34	12.27	86.14	6.3	33.62	8.0	25.5	2.32
I20	16 May 2019	35	12.23	86.64	6.1	33.60	8.0	25.5	1.85
I20	16 May 2019	36	12.08	86.95	6.0	33.62	8.0	25.5	1.63
I20	16 May 2019	37	12.03	87.03	5.9	33.61	8.0	25.5	1.50
I20	16 May 2019	38	12.00	87.02	5.9	33.61	8.0	25.5	1.41
I20	16 May 2019	39	11.94	87.20	5.9	33.61	8.0	25.5	1.40
I20	16 May 2019	40	11.88	87.27	5.9	33.61	8.0	25.5	1.40
I20	16 May 2019	41	11.82	87.55	5.9	33.61	8.0	25.5	1.36
I20	16 May 2019	42	11.72	87.82	5.8	33.62	8.0	25.6	1.11
I20	16 May 2019	43	11.70	87.78	5.8	33.62	8.0	25.6	1.02
I20	16 May 2019	44	11.68	87.88	5.7	33.62	8.0	25.6	0.99
I20	16 May 2019	45	11.66	87.96	5.6	33.62	7.9	25.6	0.92
I20	16 May 2019	46	11.58	87.96	5.5	33.65	7.9	25.6	0.97
I20	16 May 2019	47	11.47	87.96	5.4	33.66	7.9	25.6	0.95
I20	16 May 2019	48	11.41	88.09	5.3	33.66	7.9	25.7	0.79
I20	16 May 2019	49	11.38	88.20	5.3	33.66	7.9	25.7	0.77
I20	16 May 2019	50	11.31	88.29	5.2	33.67	7.9	25.7	0.78
I20	16 May 2019	51	11.25	88.10	5.2	33.67	7.9	25.7	0.77
I20	16 May 2019	52	11.20	88.00	5.1	33.68	7.9	25.7	0.65
I20	16 May 2019	53	11.12	87.64	5.0	33.68	7.9	25.7	0.65
I20	16 May 2019	54	11.10	87.23	5.0	33.69	7.9	25.7	0.63
I20	16 May 2019	55	11.10	87.26	5.0	33.69	7.9	25.7	0.65
I21	16 May 2019	1	17.89	85.42	8.4	33.66	8.2	24.3	0.53
I21	16 May 2019	2	17.90	85.39	8.4	33.66	8.2	24.3	0.53
I21	16 May 2019	3	17.85	85.39	8.4	33.66	8.2	24.3	0.57
I21	16 May 2019	4	17.60	85.42	8.4	33.67	8.2	24.4	0.58
I21	16 May 2019	5	16.93	85.48	8.4	33.67	8.2	24.5	0.60
I21	16 May 2019	6	15.47	86.39	8.6	33.67	8.2	24.8	0.58
I21	16 May 2019	7	14.98	86.95	8.7	33.57	8.2	24.9	0.52
I21	16 May 2019	8	14.89	86.93	8.6	33.57	8.1	24.9	0.53
I21	16 May 2019	9	14.74	86.90	8.4	33.56	8.1	24.9	0.54
I21	16 May 2019	10	14.63	86.74	8.4	33.56	8.1	24.9	0.57
I21	16 May 2019	11	14.60	86.65	8.4	33.55	8.1	24.9	0.58
I21	16 May 2019	12	14.51	86.56	8.4	33.56	8.1	25.0	0.63
I21	16 May 2019	13	14.44	86.37	8.4	33.56	8.1	25.0	0.64
I21	16 May 2019	14	14.29	86.16	8.3	33.57	8.1	25.0	0.68
I21	16 May 2019	15	14.04	85.41	8.2	33.56	8.1	25.1	0.90
I21	16 May 2019	16	13.80	82.70	8.1	33.59	8.1	25.1	1.62
I21	16 May 2019	17	13.40	80.16	7.8	33.58	8.1	25.2	3.74
I21	16 May 2019	18	13.32	79.63	7.5	33.58	8.1	25.2	5.00
I21	16 May 2019	19	13.08	81.87	7.3	33.59	8.1	25.3	4.98
I21	16 May 2019	20	13.02	83.12	7.2	33.58	8.1	25.3	4.14
I21	16 May 2019	21	12.92	83.51	7.0	33.59	8.1	25.3	3.49
I21	16 May 2019	22	12.75	84.38	6.9	33.58	8.0	25.3	3.46
I21	16 May 2019	23	12.71	84.78	6.8	33.59	8.0	25.4	3.15
I21	16 May 2019	24	12.54	85.37	6.7	33.59	8.0	25.4	2.61
I21	16 May 2019	25	12.47	85.62	6.5	33.59	8.0	25.4	2.31
I21	16 May 2019	26	12.39	85.86	6.4	33.60	8.0	25.4	2.21
I21	16 May 2019	27	12.34	85.99	6.4	33.60	8.0	25.4	2.23
I21	16 May 2019	28	12.32	85.99	6.4	33.60	8.0	25.4	1.96
I21	16 May 2019	29	12.31	86.18	6.4	33.60	8.0	25.4	1.96
I21	16 May 2019	30	12.30	86.25	6.3	33.60	8.0	25.4	1.89
I21	16 May 2019	31	12.29	86.24	6.3	33.60	8.0	25.4	1.84
I21	16 May 2019	32	12.27	86.27	6.3	33.60	8.0	25.4	1.86
I21	16 May 2019	33	12.26	86.27	6.3	33.60	8.0	25.5	1.71
I21	16 May 2019	34	12.22	86.34	6.2	33.61	8.0	25.5	1.59

Station	Date	Depth (m)	Temp (°C)	XMS (‰)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (µg/L)
I21	16 May 2019	35	12.13	86.37	6.1	33.61	8.0	25.5	1.55
I21	16 May 2019	36	11.93	86.67	6.0	33.62	8.0	25.5	1.61
I21	16 May 2019	37	11.78	86.84	5.9	33.62	8.0	25.6	1.41
I21	16 May 2019	38	11.70	86.98	5.7	33.62	7.9	25.6	1.12
I21	16 May 2019	39	11.67	86.93	5.6	33.62	7.9	25.6	1.12
I21	16 May 2019	40	11.62	86.90	5.5	33.63	7.9	25.6	0.95
I21	16 May 2019	41	11.60	86.75	5.4	33.63	7.9	25.6	0.90
I22	16 May 2019	1	16.95	84.82	8.6	33.62	8.2	24.5	0.56
I22	16 May 2019	2	16.92	84.86	8.5	33.63	8.2	24.5	0.58
I22	16 May 2019	3	16.79	84.99	8.6	33.62	8.2	24.5	0.62
I22	16 May 2019	4	16.54	85.05	8.5	33.64	8.2	24.6	0.63
I22	16 May 2019	5	16.32	85.07	8.6	33.60	8.2	24.6	0.66
I22	16 May 2019	6	15.98	85.16	8.3	33.66	8.2	24.7	0.66
I22	16 May 2019	7	14.76	85.92	8.6	33.60	8.2	24.9	0.66
I22	16 May 2019	8	14.56	86.03	8.5	33.58	8.2	25.0	0.69
I22	16 May 2019	9	14.08	85.81	8.4	33.57	8.2	25.1	0.77
I22	16 May 2019	10	13.98	85.19	8.4	33.56	8.2	25.1	0.92
I22	16 May 2019	11	13.73	84.37	8.3	33.56	8.1	25.1	1.18
I22	16 May 2019	12	13.60	83.66	8.3	33.56	8.1	25.2	1.47
I22	16 May 2019	13	13.52	82.00	8.1	33.56	8.1	25.2	2.06
I22	16 May 2019	14	13.52	81.36	8.2	33.56	8.1	25.2	2.66
I22	16 May 2019	15	13.48	80.77	8.0	33.56	8.1	25.2	3.23
I22	16 May 2019	16	13.33	80.39	7.8	33.57	8.1	25.2	3.60
I22	16 May 2019	17	13.23	81.00	7.6	33.58	8.1	25.2	4.09
I22	16 May 2019	18	13.08	81.70	7.4	33.58	8.1	25.3	4.03
I22	16 May 2019	19	13.01	82.27	7.3	33.58	8.1	25.3	3.77
I22	16 May 2019	20	12.95	82.75	7.2	33.58	8.1	25.3	3.50
I22	16 May 2019	21	12.91	83.20	7.1	33.58	8.1	25.3	3.57
I22	16 May 2019	22	12.87	83.41	7.0	33.59	8.1	25.3	3.00
I22	16 May 2019	23	12.78	83.85	6.9	33.59	8.1	25.3	2.88
I22	16 May 2019	24	12.76	84.02	6.8	33.59	8.0	25.3	2.75
I22	16 May 2019	25	12.60	84.43	6.6	33.60	8.0	25.4	2.77
I22	16 May 2019	26	12.40	83.68	6.4	33.61	8.0	25.4	2.74
I22	16 May 2019	27	12.29	82.52	6.2	33.61	8.0	25.5	2.57
I22	16 May 2019	28	12.04	81.36	5.8	33.64	8.0	25.5	2.39
I23	16 May 2019	1	16.62	81.56	8.6	33.62	8.2	24.5	0.88
I23	16 May 2019	2	16.63	81.67	8.6	33.62	8.2	24.5	0.89
I23	16 May 2019	3	16.63	81.61	8.6	33.62	8.2	24.5	0.94
I23	16 May 2019	4	16.61	81.64	8.5	33.62	8.2	24.5	1.04
I23	16 May 2019	5	16.60	81.66	8.6	33.63	8.2	24.6	1.13
I23	16 May 2019	6	16.46	81.82	8.5	33.63	8.2	24.6	1.24
I23	16 May 2019	7	16.33	81.70	8.5	33.62	8.2	24.6	1.38
I23	16 May 2019	8	16.32	81.65	8.5	33.62	8.2	24.6	1.46
I23	16 May 2019	9	15.80	81.26	8.2	33.67	8.2	24.8	1.67
I23	16 May 2019	10	14.44	78.57	8.4	33.66	8.2	25.1	2.21
I23	16 May 2019	11	14.62	76.09	8.5	33.57	8.2	25.0	3.10
I23	16 May 2019	12	14.12	75.57	8.3	33.60	8.2	25.1	3.94
I23	16 May 2019	13	14.12	75.38	8.3	33.58	8.2	25.1	4.83
I23	16 May 2019	14	14.08	75.28	8.2	33.58	8.2	25.1	5.08
I23	16 May 2019	15	14.06	75.44	8.1	33.58	8.2	25.1	5.32
I23	16 May 2019	16	14.05	75.80	8.1	33.59	8.1	25.1	5.36
I23	16 May 2019	17	13.83	76.96	7.8	33.61	8.1	25.2	5.10
I23	16 May 2019	18	13.10	81.92	7.3	33.61	8.1	25.3	4.35
I23	16 May 2019	19	13.02	82.21	7.1	33.59	8.1	25.3	3.42
I23	16 May 2019	20	13.00	82.28	7.1	33.59	8.1	25.3	3.10
I23	16 May 2019	21	12.98	82.53	7.1	33.58	8.1	25.3	2.91
I27	16 May 2019	1	16.12	80.55	8.5	33.60	8.2	24.6	1.28
I27	16 May 2019	2	16.17	80.87	8.4	33.62	8.2	24.6	1.29

Station	Date	Depth (m)	Temp (°C)	XMS (‰)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (µg/L)
I27	16 May 2019	3	16.10	80.84	8.4	33.62	8.2	24.7	1.30
I27	16 May 2019	4	15.98	80.87	8.3	33.65	8.2	24.7	1.32
I27	16 May 2019	5	15.54	80.88	8.3	33.62	8.2	24.8	1.43
I27	16 May 2019	6	14.43	82.43	8.3	33.67	8.2	25.1	1.45
I27	16 May 2019	7	13.95	84.07	8.5	33.57	8.1	25.1	1.29
I27	16 May 2019	8	13.80	83.93	8.4	33.57	8.1	25.1	1.31
I27	16 May 2019	9	13.52	81.62	8.3	33.57	8.1	25.2	1.74
I27	16 May 2019	10	13.38	80.86	8.0	33.58	8.1	25.2	2.39
I27	16 May 2019	11	13.15	81.21	7.6	33.58	8.1	25.3	3.07
I27	16 May 2019	12	13.15	81.36	7.5	33.57	8.1	25.3	3.75
I27	16 May 2019	13	13.12	82.04	7.4	33.58	8.1	25.3	3.79
I27	16 May 2019	14	12.99	82.22	7.2	33.58	8.1	25.3	3.62
I27	16 May 2019	15	12.97	82.36	7.2	33.58	8.1	25.3	3.98
I27	16 May 2019	16	12.86	82.24	7.0	33.59	8.1	25.3	4.13
I27	16 May 2019	17	12.78	82.58	6.8	33.59	8.1	25.3	4.11
I27	16 May 2019	18	12.77	82.86	6.8	33.58	8.0	25.3	3.67
I27	16 May 2019	19	12.71	83.22	6.8	33.59	8.0	25.4	3.56
I27	16 May 2019	20	12.59	84.20	6.6	33.60	8.0	25.4	3.16
I27	16 May 2019	21	12.52	84.56	6.6	33.60	8.0	25.4	2.84
I27	16 May 2019	22	12.52	84.67	6.6	33.59	8.0	25.4	2.54
I27	16 May 2019	23	12.49	84.70	6.5	33.59	8.0	25.4	2.42
I27	16 May 2019	24	12.46	84.94	6.5	33.60	8.0	25.4	2.45
I27	16 May 2019	25	12.42	85.02	6.4	33.60	8.0	25.4	2.30
I27	16 May 2019	26	12.30	85.26	6.2	33.61	8.0	25.5	2.09
I27	16 May 2019	27	12.01	84.10	6.0	33.62	8.0	25.5	1.81
I27	16 May 2019	28	11.97	81.94	5.8	33.62	8.0	25.5	1.92
I28	15 May 2019	1	18.44	86.41	8.3	33.66	8.2	24.1	0.61
I28	15 May 2019	2	18.35	86.36	8.3	33.66	8.2	24.2	0.62
I28	15 May 2019	3	18.26	86.49	8.4	33.65	8.2	24.2	0.62
I28	15 May 2019	4	18.11	86.61	8.3	33.65	8.2	24.2	0.61
I28	15 May 2019	5	17.85	86.73	8.3	33.65	8.2	24.3	0.60
I28	15 May 2019	6	17.22	86.88	8.4	33.66	8.2	24.4	0.60
I28	15 May 2019	7	16.25	86.80	8.8	33.63	8.2	24.6	0.64
I28	15 May 2019	8	15.92	86.83	8.7	33.60	8.2	24.7	0.61
I28	15 May 2019	9	15.64	87.01	8.7	33.58	8.2	24.7	0.62
I28	15 May 2019	10	15.44	87.16	8.5	33.58	8.2	24.8	0.61
I28	15 May 2019	11	15.18	87.13	8.5	33.58	8.2	24.8	0.59
I28	15 May 2019	12	15.07	87.14	8.5	33.57	8.2	24.9	0.59
I28	15 May 2019	13	14.94	87.19	8.4	33.57	8.2	24.9	0.59
I28	15 May 2019	14	14.79	87.19	8.4	33.57	8.2	24.9	0.63
I28	15 May 2019	15	14.67	87.08	8.4	33.57	8.2	24.9	0.63
I28	15 May 2019	16	14.49	86.95	8.4	33.57	8.2	25.0	0.65
I28	15 May 2019	17	14.36	86.71	8.4	33.57	8.2	25.0	0.70
I28	15 May 2019	18	14.23	86.65	8.4	33.57	8.2	25.0	0.74
I28	15 May 2019	19	14.12	86.37	8.3	33.58	8.2	25.1	0.97
I28	15 May 2019	20	13.74	85.27	8.0	33.58	8.1	25.1	1.79
I28	15 May 2019	21	13.57	83.64	7.9	33.58	8.1	25.2	2.85
I28	15 May 2019	22	13.35	82.39	7.6	33.59	8.1	25.2	3.66
I28	15 May 2019	23	13.08	82.16	7.3	33.59	8.1	25.3	3.66
I28	15 May 2019	24	13.06	83.16	7.2	33.58	8.1	25.3	3.21
I28	15 May 2019	25	12.97	83.71	7.1	33.59	8.1	25.3	3.16
I28	15 May 2019	26	12.99	83.65	7.0	33.58	8.1	25.3	3.04
I28	15 May 2019	27	12.82	84.18	6.9	33.60	8.1	25.3	2.81
I28	15 May 2019	28	12.71	84.61	6.8	33.59	8.0	25.4	2.70
I28	15 May 2019	29	12.67	84.76	6.7	33.59	8.0	25.4	2.44
I28	15 May 2019	30	12.51	84.84	6.6	33.60	8.0	25.4	2.50
I28	15 May 2019	31	12.38	85.46	6.4	33.60	8.0	25.4	2.29
I28	15 May 2019	32	12.28	86.15	6.3	33.60	8.0	25.5	2.02
I28	15 May 2019	33	12.16	86.33	6.2	33.60	8.0	25.5	1.83
I28	15 May 2019	34	12.15	86.70	6.2	33.60	8.0	25.5	1.74

Station	Date	Depth (m)	Temp (°C)	XMS (‰)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (µg/L)
I28	15 May 2019	35	12.06	87.11	6.0	33.61	8.0	25.5	1.55
I28	15 May 2019	36	11.95	87.28	5.9	33.62	8.0	25.5	1.41
I28	15 May 2019	37	11.89	87.53	5.9	33.62	8.0	25.5	1.24
I28	15 May 2019	38	11.84	87.74	5.8	33.62	8.0	25.5	1.26
I28	15 May 2019	39	11.80	87.83	5.8	33.62	8.0	25.6	1.25
I28	15 May 2019	40	11.63	87.88	5.8	33.62	8.0	25.6	1.19
I28	15 May 2019	41	11.58	88.01	5.8	33.61	8.0	25.6	1.24
I28	15 May 2019	42	11.53	88.09	5.8	33.62	7.9	25.6	1.02
I28	15 May 2019	43	11.46	88.09	5.6	33.63	7.9	25.6	0.98
I28	15 May 2019	44	11.44	88.06	5.5	33.64	7.9	25.6	0.96
I28	15 May 2019	45	11.43	88.03	5.4	33.64	7.9	25.6	0.92
I28	15 May 2019	46	11.43	87.81	5.4	33.64	7.9	25.6	0.89
I28	15 May 2019	47	11.42	87.81	5.3	33.65	7.9	25.6	0.95
I28	15 May 2019	48	11.41	87.76	5.2	33.65	7.9	25.7	0.97
I28	15 May 2019	49	11.35	87.52	5.1	33.66	7.9	25.7	0.92
I28	15 May 2019	50	11.33	87.33	5.1	33.66	7.9	25.7	0.94
I28	15 May 2019	51	11.28	87.15	5.1	33.66	7.9	25.7	0.89
I28	15 May 2019	52	11.25	86.98	5.0	33.67	7.9	25.7	0.87
I28	15 May 2019	53	11.20	86.66	5.0	33.67	7.9	25.7	0.90
I28	15 May 2019	54	11.17	86.15	5.0	33.67	7.9	25.7	0.83
I28	15 May 2019	55	11.17	85.27	5.0	33.67	7.9	25.7	0.81
I29	15 May 2019	1	18.50	84.66	8.5	33.65	8.2	24.1	0.74
I29	15 May 2019	2	18.39	84.75	8.5	33.66	8.2	24.2	0.77
I29	15 May 2019	3	18.19	85.36	8.5	33.65	8.2	24.2	0.80
I29	15 May 2019	4	18.07	85.43	8.5	33.65	8.2	24.2	0.78
I29	15 May 2019	5	17.77	85.32	8.5	33.67	8.2	24.3	0.87
I29	15 May 2019	6	17.11	85.01	8.6	33.67	8.2	24.5	0.99
I29	15 May 2019	7	16.40	84.29	8.9	33.65	8.2	24.6	1.09
I29	15 May 2019	8	16.06	83.62	8.9	33.62	8.2	24.7	1.17
I29	15 May 2019	9	15.67	83.00	8.8	33.62	8.2	24.8	1.25
I29	15 May 2019	10	15.14	82.65	8.7	33.62	8.2	24.9	1.32
I29	15 May 2019	11	14.43	82.55	8.6	33.61	8.2	25.0	1.40
I29	15 May 2019	12	14.04	82.86	8.4	33.56	8.2	25.1	1.49
I29	15 May 2019	13	13.90	83.81	8.3	33.56	8.1	25.1	1.70
I29	15 May 2019	14	13.77	84.13	8.2	33.56	8.1	25.1	1.99
I29	15 May 2019	15	13.56	83.50	7.8	33.58	8.1	25.2	2.38
I29	15 May 2019	16	13.30	82.89	7.6	33.57	8.1	25.2	2.80
I29	15 May 2019	17	13.19	82.82	7.3	33.58	8.1	25.3	3.00
I29	15 May 2019	18	12.96	82.95	7.1	33.59	8.1	25.3	2.98
I29	15 May 2019	19	12.89	83.61	7.0	33.58	8.1	25.3	2.77
I29	15 May 2019	20	12.83	84.08	6.8	33.58	8.0	25.3	2.70
I29	15 May 2019	21	12.74	84.21	6.8	33.59	8.0	25.4	2.80
I29	15 May 2019	22	12.68	84.29	6.8	33.59	8.0	25.4	2.73
I29	15 May 2019	23	12.60	84.10	6.7	33.59	8.0	25.4	2.82
I29	15 May 2019	24	12.55	84.52	6.6	33.59	8.0	25.4	2.62
I29	15 May 2019	25	12.51	84.92	6.5	33.59	8.0	25.4	2.54
I29	15 May 2019	26	12.37	85.26	6.4	33.60	8.0	25.4	2.25
I29	15 May 2019	27	12.26	85.60	6.3	33.60	8.0	25.5	2.08
I29	15 May 2019	28	12.20	85.91	6.3	33.60	8.0	25.5	1.97
I29	15 May 2019	29	12.20	86.31	6.2	33.60	8.0	25.5	1.95
I29	15 May 2019	30	12.01	86.35	6.1	33.63	8.0	25.5	1.54
I29	15 May 2019	31	11.75	86.89	6.0	33.61	8.0	25.6	1.34
I29	15 May 2019	32	11.68	87.46	6.0	33.60	8.0	25.6	1.22
I29	15 May 2019	33	11.66	87.65	5.9	33.61	8.0	25.6	1.16
I29	15 May 2019	34	11.55	86.69	5.6	33.63	7.9	25.6	1.11
I29	15 May 2019	35	11.53	85.25	5.4	33.64	7.9	25.6	1.11
I29	15 May 2019	36	11.53	84.03	5.2	33.64	7.9	25.6	1.15
I29	15 May 2019	37	11.52	82.92	5.2	33.65	7.9	25.6	1.20
I29	15 May 2019	38	11.52	80.92	5.2	33.65	7.9	25.6	1.41

Station	Date	Depth (m)	Temp (°C)	XMS (‰)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (µg/L)
I3	14 May 2019	1	18.25	85.86	8.4	33.65	8.2	24.2	0.41
I3	14 May 2019	2	18.22	85.70	8.4	33.66	8.2	24.2	0.42
I3	14 May 2019	3	18.15	85.53	8.4	33.65	8.2	24.2	0.46
I3	14 May 2019	4	18.06	85.56	8.3	33.66	8.2	24.2	0.50
I3	14 May 2019	5	17.56	85.59	8.4	33.66	8.2	24.4	0.54
I3	14 May 2019	6	17.31	86.24	8.5	33.63	8.2	24.4	0.51
I3	14 May 2019	7	17.15	86.71	8.5	33.62	8.2	24.4	0.47
I3	14 May 2019	8	16.95	86.91	8.5	33.62	8.2	24.5	0.44
I3	14 May 2019	9	16.62	86.93	8.5	33.62	8.2	24.5	0.46
I3	14 May 2019	10	16.09	86.94	8.5	33.62	8.2	24.7	0.47
I3	14 May 2019	11	15.48	86.94	8.7	33.60	8.2	24.8	0.50
I3	14 May 2019	12	15.12	86.93	8.7	33.59	8.2	24.9	0.52
I3	14 May 2019	13	14.72	86.84	8.8	33.59	8.2	24.9	0.59
I3	14 May 2019	14	14.50	86.75	8.8	33.56	8.2	25.0	0.65
I3	14 May 2019	15	14.43	86.72	8.8	33.56	8.2	25.0	0.67
I3	14 May 2019	16	14.20	86.71	8.6	33.57	8.2	25.0	0.72
I3	14 May 2019	17	13.69	85.70	8.6	33.59	8.2	25.2	1.23
I3	14 May 2019	18	13.49	82.19	8.6	33.57	8.1	25.2	2.31
I3	14 May 2019	19	13.34	79.53	8.4	33.58	8.1	25.2	3.77
I3	14 May 2019	20	13.06	76.55	8.1	33.59	8.1	25.3	5.77
I3	14 May 2019	21	12.79	76.05	7.8	33.56	8.1	25.3	7.43
I3	14 May 2019	22	12.62	78.50	7.1	33.60	8.1	25.4	6.70
I3	14 May 2019	23	12.04	82.35	6.3	33.63	8.0	25.5	4.86
I3	14 May 2019	24	11.92	83.61	5.9	33.62	8.0	25.5	3.16
I3	14 May 2019	25	11.89	83.69	5.8	33.62	8.0	25.5	2.54
I3	14 May 2019	26	11.88	83.34	5.8	33.62	8.0	25.5	2.33
I3	14 May 2019	27	11.90	83.42	5.8	33.62	8.0	25.5	2.74
I30	15 May 2019	1	18.49	83.22	8.6	33.66	8.2	24.1	0.90
I30	15 May 2019	2	18.40	83.20	8.6	33.67	8.2	24.2	0.97
I30	15 May 2019	3	18.02	82.90	8.6	33.66	8.2	24.2	1.21
I30	15 May 2019	4	17.75	81.39	8.5	33.65	8.2	24.3	1.52
I30	15 May 2019	5	17.27	79.54	8.2	33.67	8.2	24.4	1.86
I30	15 May 2019	6	16.43	77.69	8.0	33.72	8.2	24.7	2.14
I30	15 May 2019	7	14.64	77.79	8.1	33.74	8.2	25.1	2.32
I30	15 May 2019	8	13.82	79.29	8.3	33.59	8.1	25.1	2.78
I30	15 May 2019	9	13.73	79.83	8.2	33.56	8.1	25.1	3.09
I30	15 May 2019	10	13.54	80.11	8.0	33.57	8.1	25.2	3.42
I30	15 May 2019	11	13.32	80.20	7.8	33.56	8.1	25.2	3.62
I30	15 May 2019	12	13.31	80.48	7.7	33.55	8.1	25.2	3.71
I30	15 May 2019	13	13.29	80.90	7.6	33.56	8.1	25.2	3.68
I30	15 May 2019	14	13.23	81.10	7.5	33.56	8.1	25.2	3.62
I30	15 May 2019	15	13.18	81.51	7.5	33.57	8.1	25.2	3.53
I30	15 May 2019	16	13.13	81.74	7.4	33.57	8.1	25.3	3.35
I30	15 May 2019	17	13.02	82.03	7.2	33.58	8.1	25.3	3.36
I30	15 May 2019	18	12.89	82.22	7.0	33.59	8.1	25.3	3.46
I30	15 May 2019	19	12.79	82.70	6.9	33.59	8.1	25.3	3.16
I30	15 May 2019	20	12.66	83.63	6.7	33.60	8.0	25.4	3.12
I30	15 May 2019	21	12.36	83.25	6.6	33.60	8.0	25.4	2.98
I30	15 May 2019	22	12.31	84.16	6.5	33.59	8.0	25.4	2.72
I30	15 May 2019	23	12.25	84.16	6.4	33.60	8.0	25.5	2.71
I30	15 May 2019	24	12.20	84.32	6.3	33.60	8.0	25.5	2.75
I30	15 May 2019	25	12.16	83.96	6.2	33.61	8.0	25.5	3.05
I30	15 May 2019	26	12.09	82.67	5.9	33.63	8.0	25.5	2.94
I30	15 May 2019	27	11.95	81.93	5.6	33.65	8.0	25.5	2.75
I30	15 May 2019	28	11.79	77.91	5.3	33.65	7.9	25.6	2.45
I31	15 May 2019	1	17.88	78.71	8.6	33.63	8.2	24.3	1.68
I31	15 May 2019	2	17.88	78.58	8.5	33.63	8.2	24.3	1.78
I31	15 May 2019	3	17.66	78.24	8.4	33.67	8.2	24.3	1.97
I31	15 May 2019	4	16.56	78.40	8.6	33.70	8.2	24.6	1.91

Station	Date	Depth (m)	Temp (°C)	XMS (‰)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (µg/L)
I31	15 May 2019	5	15.28	80.67	8.7	33.64	8.2	24.9	1.69
I31	15 May 2019	6	14.69	81.86	8.5	33.63	8.2	25.0	1.73
I31	15 May 2019	7	13.93	82.12	8.5	33.59	8.1	25.1	2.22
I31	15 May 2019	8	13.70	81.29	8.3	33.56	8.1	25.1	2.74
I31	15 May 2019	9	13.55	80.82	8.2	33.56	8.1	25.2	3.22
I31	15 May 2019	10	13.44	79.82	8.2	33.55	8.1	25.2	3.88
I31	15 May 2019	11	13.41	79.23	8.2	33.55	8.1	25.2	4.79
I31	15 May 2019	12	13.41	78.11	8.1	33.56	8.1	25.2	5.10
I31	15 May 2019	13	13.40	77.64	8.1	33.56	8.1	25.2	5.24
I31	15 May 2019	14	13.39	77.28	8.1	33.56	8.1	25.2	5.36
I31	15 May 2019	15	13.37	77.08	7.9	33.57	8.1	25.2	5.15
I31	15 May 2019	16	13.17	77.14	7.5	33.59	8.1	25.3	5.07
I31	15 May 2019	17	12.87	78.84	7.2	33.60	8.1	25.3	4.63
I31	15 May 2019	18	12.59	79.86	6.9	33.61	8.1	25.4	4.53
I31	15 May 2019	19	12.28	78.97	6.3	33.64	8.0	25.5	4.31
I33	15 May 2019	1	18.38	82.74	8.7	33.65	8.2	24.1	0.94
I33	15 May 2019	2	18.38	82.91	8.7	33.65	8.2	24.1	0.95
I33	15 May 2019	3	18.38	83.56	8.5	33.66	8.2	24.2	0.96
I33	15 May 2019	4	17.06	83.58	8.8	33.72	8.2	24.5	1.14
I33	15 May 2019	5	16.09	82.67	9.0	33.65	8.2	24.7	1.49
I33	15 May 2019	6	15.79	81.67	8.8	33.62	8.2	24.7	1.82
I33	15 May 2019	7	15.08	80.93	8.6	33.64	8.2	24.9	2.15
I33	15 May 2019	8	14.73	80.42	8.5	33.58	8.2	24.9	2.45
I33	15 May 2019	9	14.66	79.92	8.4	33.58	8.2	25.0	2.77
I33	15 May 2019	10	14.55	79.71	8.3	33.58	8.1	25.0	2.97
I33	15 May 2019	11	14.50	79.44	8.2	33.58	8.1	25.0	3.23
I33	15 May 2019	12	14.30	79.18	8.1	33.61	8.1	25.0	3.17
I33	15 May 2019	13	13.75	79.95	8.0	33.60	8.1	25.2	3.14
I33	15 May 2019	14	13.51	80.79	7.8	33.58	8.1	25.2	3.27
I33	15 May 2019	15	13.31	80.88	7.6	33.58	8.1	25.2	3.39
I33	15 May 2019	16	13.19	81.22	7.4	33.57	8.1	25.2	3.43
I33	15 May 2019	17	13.00	81.73	7.2	33.59	8.1	25.3	3.36
I33	15 May 2019	18	12.78	82.52	6.9	33.59	8.0	25.3	3.10
I33	15 May 2019	19	12.67	82.96	6.7	33.59	8.0	25.4	2.98
I33	15 May 2019	20	12.62	82.87	6.6	33.59	8.0	25.4	2.85
I33	15 May 2019	21	12.44	83.68	6.5	33.61	8.0	25.4	2.58
I33	15 May 2019	22	12.29	84.70	6.3	33.60	8.0	25.4	2.17
I33	15 May 2019	23	12.27	84.93	6.2	33.60	8.0	25.4	1.85
I33	15 May 2019	24	12.23	84.98	6.2	33.60	8.0	25.5	1.77
I33	15 May 2019	25	12.17	85.36	6.1	33.60	8.0	25.5	1.70
I33	15 May 2019	26	11.95	85.75	5.9	33.64	8.0	25.5	1.57
I33	15 May 2019	27	11.64	85.02	5.6	33.64	7.9	25.6	1.29
I33	15 May 2019	28	11.62	84.43	5.4	33.63	7.9	25.6	1.18
I33	15 May 2019	29	11.62	83.64	5.4	33.63	7.9	25.6	1.11
I33	15 May 2019	30	11.62	81.07	5.5	33.63	7.9	25.6	1.14
I34	15 May 2019	1	17.60	80.32	8.6	33.63	8.2	24.3	1.55
I34	15 May 2019	2	17.48	79.96	8.5	33.64	8.2	24.4	1.67
I34	15 May 2019	3	17.20	78.09	8.2	33.64	8.2	24.4	2.20
I34	15 May 2019	4	16.95	72.96	8.0	33.63	8.1	24.5	2.75
I34	15 May 2019	5	16.73	70.58	7.9	33.62	8.1	24.5	3.06
I34	15 May 2019	6	16.46	70.50	7.9	33.63	8.1	24.6	3.13
I34	15 May 2019	7	16.10	72.18	8.0	33.62	8.1	24.7	2.96
I34	15 May 2019	8	15.74	74.35	8.2	33.62	8.1	24.7	2.70
I34	15 May 2019	9	15.53	77.08	8.4	33.60	8.2	24.8	2.37
I34	15 May 2019	10	15.42	77.80	8.4	33.60	8.2	24.8	2.19
I34	15 May 2019	11	15.10	78.65	8.4	33.61	8.2	24.9	2.35
I34	15 May 2019	12	15.02	78.71	8.2	33.60	8.1	24.9	2.45
I34	15 May 2019	13	14.31	78.52	7.6	33.66	8.1	25.1	2.65
I34	15 May 2019	14	12.82	81.05	6.9	33.64	8.1	25.4	2.85

Station	Date	Depth (m)	Temp (°C)	XMS (‰)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (µg/L)
I34	15 May 2019	15	12.65	83.66	6.7	33.58	8.0	25.4	2.46
I34	15 May 2019	16	12.48	84.24	6.5	33.60	8.0	25.4	2.25
I34	15 May 2019	17	12.29	84.17	6.2	33.60	8.0	25.4	1.99
I34	15 May 2019	18	12.13	82.40	6.0	33.61	8.0	25.5	1.85
I34	15 May 2019	19	12.08	80.54	5.9	33.61	8.0	25.5	1.90
I35	15 May 2019	1	17.81	78.10	8.6	33.64	8.2	24.3	1.69
I35	15 May 2019	2	17.49	78.20	8.6	33.64	8.2	24.4	1.81
I35	15 May 2019	3	17.12	78.38	8.5	33.66	8.2	24.5	2.01
I35	15 May 2019	4	15.87	78.46	8.6	33.64	8.2	24.7	2.35
I35	15 May 2019	5	15.51	77.90	8.4	33.63	8.2	24.8	2.89
I35	15 May 2019	6	14.63	76.90	8.3	33.63	8.2	25.0	4.20
I35	15 May 2019	7	14.33	75.34	8.2	33.60	8.2	25.0	5.09
I35	15 May 2019	8	13.64	74.98	7.9	33.62	8.1	25.2	5.15
I35	15 May 2019	9	13.08	75.47	7.5	33.59	8.1	25.3	5.28
I35	15 May 2019	10	12.80	76.74	7.0	33.60	8.1	25.3	4.76
I35	15 May 2019	11	12.46	78.68	6.7	33.60	8.0	25.4	4.26
I35	15 May 2019	12	12.41	79.21	6.5	33.61	8.0	25.4	4.51
I35	15 May 2019	13	12.37	77.99	6.4	33.61	8.0	25.4	4.63
I35	15 May 2019	14	12.30	77.78	6.4	33.62	8.0	25.5	4.14
I35	15 May 2019	15	12.24	78.65	6.1	33.63	8.0	25.5	3.92
I35	15 May 2019	16	12.08	77.97	5.6	33.64	8.0	25.5	3.89
I35	15 May 2019	17	12.05	71.28	5.3	33.64	7.9	25.5	3.38
I35	15 May 2019	18	12.04	66.80	5.3	33.64	7.9	25.5	2.89
I35	15 May 2019	19	12.04	62.05	5.2	33.64	7.9	25.5	2.77
I36	15 May 2019	1	18.23	67.98	8.8	33.60	8.2	24.1	2.76
I36	15 May 2019	2	18.18	67.97	8.7	33.61	8.2	24.2	3.01
I36	15 May 2019	3	17.99	68.54	8.4	33.62	8.2	24.2	3.06
I36	15 May 2019	4	17.53	69.20	8.6	33.64	8.2	24.3	3.18
I36	15 May 2019	5	16.84	69.03	9.6	33.66	8.2	24.5	5.13
I36	15 May 2019	6	15.75	67.53	10.3	33.66	8.3	24.8	7.53
I36	15 May 2019	7	14.89	63.63	10.2	33.66	8.3	25.0	7.70
I36	15 May 2019	8	13.97	65.91	9.6	33.65	8.2	25.2	6.89
I36	15 May 2019	9	13.58	66.73	9.2	33.62	8.2	25.2	6.58
I36	15 May 2019	10	13.37	64.29	8.1	33.62	8.1	25.2	6.90
I36	15 May 2019	11	13.22	54.02	7.2	33.60	8.0	25.3	8.33
I37	15 May 2019	1	17.80	81.11	8.5	33.63	8.2	24.3	1.37
I37	15 May 2019	2	17.81	80.84	8.2	33.64	8.2	24.3	1.40
I37	15 May 2019	3	16.63	77.22	7.9	33.73	8.2	24.6	2.10
I37	15 May 2019	4	15.01	77.16	7.8	33.68	8.1	24.9	3.07
I37	15 May 2019	5	14.44	75.95	7.5	33.62	8.1	25.0	3.50
I37	15 May 2019	6	14.05	73.37	7.3	33.61	8.1	25.1	3.31
I37	15 May 2019	7	13.63	75.70	7.1	33.62	8.1	25.2	3.02
I37	15 May 2019	8	12.99	77.49	6.9	33.61	8.0	25.3	2.82
I37	15 May 2019	9	12.83	78.09	6.7	33.58	8.0	25.3	2.58
I37	15 May 2019	10	12.74	76.71	6.6	33.59	8.0	25.4	2.66
I37	15 May 2019	11	12.59	75.87	6.5	33.59	8.0	25.4	2.63
I37	15 May 2019	12	12.54	72.30	6.4	33.59	8.0	25.4	2.63
I38	15 May 2019	1	18.42	65.60	9.1	33.61	8.2	24.1	4.06
I38	15 May 2019	2	18.42	65.59	9.0	33.61	8.2	24.1	4.30
I38	15 May 2019	3	18.03	65.59	8.9	33.62	8.2	24.2	4.34
I38	15 May 2019	4	17.88	66.78	8.8	33.61	8.2	24.2	3.79
I38	15 May 2019	5	17.07	70.10	9.2	33.66	8.2	24.5	3.24
I38	15 May 2019	6	16.09	76.12	9.7	33.64	8.2	24.7	2.73
I38	15 May 2019	7	15.68	77.73	9.6	33.62	8.2	24.8	2.90
I38	15 May 2019	8	15.15	76.81	9.8	33.64	8.2	24.9	3.96
I38	15 May 2019	9	13.88	75.24	9.0	33.67	8.2	25.2	4.80
I38	15 May 2019	10	13.34	71.85	7.1	33.62	8.1	25.3	5.78

Station	Date	Depth (m)	Temp (°C)	XMS (‰)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (µg/L)
I38	15 May 2019	11	13.29	67.16	6.1	33.61	8.0	25.3	5.48
I4	14 May 2019	1	18.27	83.59	8.5	33.65	8.2	24.2	0.48
I4	14 May 2019	2	18.20	83.87	8.5	33.65	8.2	24.2	0.50
I4	14 May 2019	3	18.12	83.86	8.5	33.65	8.2	24.2	0.53
I4	14 May 2019	4	18.09	83.85	8.5	33.65	8.2	24.2	0.58
I4	14 May 2019	5	17.81	83.96	8.5	33.66	8.2	24.3	0.63
I4	14 May 2019	6	17.21	84.24	8.4	33.67	8.2	24.4	0.70
I4	14 May 2019	7	15.86	84.57	8.6	33.68	8.2	24.8	0.74
I4	14 May 2019	8	15.04	84.32	8.9	33.60	8.2	24.9	0.79
I4	14 May 2019	9	14.85	83.97	8.9	33.57	8.2	24.9	0.90
I4	14 May 2019	10	14.64	83.78	8.8	33.55	8.2	24.9	1.07
I4	14 May 2019	11	14.52	83.47	8.6	33.56	8.2	25.0	1.25
I4	14 May 2019	12	13.85	80.85	8.4	33.63	8.2	25.2	2.04
I4	14 May 2019	13	13.27	76.83	8.2	33.60	8.1	25.3	3.32
I4	14 May 2019	14	13.10	74.58	7.7	33.60	8.1	25.3	4.29
I4	14 May 2019	15	12.72	75.91	7.0	33.62	8.1	25.4	4.24
I4	14 May 2019	16	12.34	77.18	6.5	33.62	8.0	25.5	3.76
I4	14 May 2019	17	12.09	77.86	6.1	33.63	8.0	25.5	3.34
I4	14 May 2019	18	11.96	76.27	5.8	33.62	8.0	25.5	2.83
I5	14 May 2019	1	18.22	83.29	8.5	33.64	8.2	24.2	0.48
I5	14 May 2019	2	18.17	83.19	8.5	33.65	8.2	24.2	0.50
I5	14 May 2019	3	18.03	82.03	8.4	33.65	8.2	24.2	0.60
I5	14 May 2019	4	17.52	79.68	8.4	33.66	8.2	24.4	0.89
I5	14 May 2019	5	17.29	74.44	8.1	33.63	8.2	24.4	1.30
I5	14 May 2019	6	16.82	65.47	7.8	33.66	8.2	24.5	1.79
I5	14 May 2019	7	15.74	62.31	8.0	33.67	8.2	24.8	2.48
I5	14 May 2019	8	15.08	64.51	8.0	33.64	8.1	24.9	3.45
I5	14 May 2019	9	14.75	62.77	7.7	33.64	8.1	25.0	4.10
I5	14 May 2019	10	13.53	64.74	7.4	33.65	8.1	25.2	4.48
I5	14 May 2019	11	12.93	69.20	7.1	33.63	8.1	25.3	4.33
I5	14 May 2019	12	12.50	73.88	6.6	33.62	8.0	25.4	4.03
I5	14 May 2019	13	12.04	69.05	6.0	33.63	8.0	25.5	3.81
I6	14 May 2019	1	18.14	84.33	8.5	33.64	8.2	24.2	0.38
I6	14 May 2019	2	18.18	84.45	8.5	33.65	8.2	24.2	0.37
I6	14 May 2019	3	18.13	84.59	8.4	33.66	8.2	24.2	0.37
I6	14 May 2019	4	17.85	84.56	8.5	33.65	8.2	24.3	0.41
I6	14 May 2019	5	17.47	84.65	8.6	33.66	8.2	24.4	0.44
I6	14 May 2019	6	17.19	85.46	8.6	33.63	8.2	24.4	0.44
I6	14 May 2019	7	16.94	86.05	8.6	33.63	8.2	24.5	0.44
I6	14 May 2019	8	16.45	86.16	8.7	33.62	8.2	24.6	0.46
I6	14 May 2019	9	16.21	86.05	8.7	33.61	8.2	24.6	0.48
I6	14 May 2019	10	15.92	85.99	8.8	33.59	8.2	24.7	0.53
I6	14 May 2019	11	15.85	86.03	8.8	33.59	8.2	24.7	0.56
I6	14 May 2019	12	15.64	86.14	8.8	33.59	8.2	24.7	0.59
I6	14 May 2019	13	15.38	86.22	8.7	33.58	8.2	24.8	0.63
I6	14 May 2019	14	14.54	86.26	8.6	33.62	8.2	25.0	0.61
I6	14 May 2019	15	13.89	85.30	8.7	33.57	8.2	25.1	0.82
I6	14 May 2019	16	13.78	83.73	8.6	33.55	8.2	25.1	1.15
I6	14 May 2019	17	13.62	83.08	8.6	33.54	8.1	25.1	1.41
I6	14 May 2019	18	13.58	82.51	8.6	33.55	8.2	25.2	1.65
I6	14 May 2019	19	13.54	82.36	8.6	33.56	8.2	25.2	1.77
I6	14 May 2019	20	13.25	79.66	8.4	33.59	8.2	25.2	2.86
I6	14 May 2019	21	13.02	75.26	8.0	33.58	8.1	25.3	5.31
I6	14 May 2019	22	12.44	74.53	7.0	33.63	8.1	25.4	5.95
I6	14 May 2019	23	12.09	80.41	6.2	33.62	8.0	25.5	4.62
I6	14 May 2019	24	11.97	80.35	5.9	33.62	8.0	25.5	3.35
I6	14 May 2019	25	11.96	79.72	5.9	33.62	8.0	25.5	3.19

Station	Date	Depth (m)	Temp (°C)	XMS (‰)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (µg/L)
I7	14 May 2019	1	18.02	84.55	8.5	33.65	8.2	24.2	0.59
I7	14 May 2019	2	18.01	84.53	8.6	33.65	8.2	24.2	0.63
I7	14 May 2019	3	17.99	84.15	8.5	33.65	8.2	24.2	0.71
I7	14 May 2019	4	17.88	84.48	8.5	33.65	8.2	24.3	0.72
I7	14 May 2019	5	17.78	84.60	8.5	33.65	8.2	24.3	0.74
I7	14 May 2019	6	17.35	84.75	8.6	33.65	8.2	24.4	0.73
I7	14 May 2019	7	17.05	85.50	8.4	33.64	8.2	24.5	0.65
I7	14 May 2019	8	16.36	86.47	8.5	33.63	8.2	24.6	0.55
I7	14 May 2019	9	16.05	86.96	8.4	33.60	8.2	24.7	0.53
I7	14 May 2019	10	15.36	87.13	8.6	33.60	8.1	24.8	0.51
I7	14 May 2019	11	15.05	87.05	8.8	33.58	8.2	24.9	0.50
I7	14 May 2019	12	14.91	86.87	8.8	33.57	8.2	24.9	0.51
I7	14 May 2019	13	14.79	86.89	8.7	33.56	8.2	24.9	0.49
I7	14 May 2019	14	14.69	86.84	8.7	33.56	8.2	24.9	0.51
I7	14 May 2019	15	14.50	86.95	8.6	33.57	8.1	25.0	0.52
I7	14 May 2019	16	14.30	86.69	8.5	33.57	8.1	25.0	0.58
I7	14 May 2019	17	14.10	86.49	8.5	33.58	8.1	25.1	0.81
I7	14 May 2019	18	13.91	86.15	8.5	33.57	8.1	25.1	1.23
I7	14 May 2019	19	13.84	84.81	8.5	33.57	8.1	25.1	2.20
I7	14 May 2019	20	13.68	83.26	8.5	33.58	8.1	25.2	3.45
I7	14 May 2019	21	13.52	81.63	8.4	33.58	8.1	25.2	4.20
I7	14 May 2019	22	13.43	80.56	8.3	33.58	8.1	25.2	4.72
I7	14 May 2019	23	13.38	79.90	8.2	33.58	8.1	25.2	5.62
I7	14 May 2019	24	13.34	78.54	8.0	33.58	8.1	25.2	5.60
I7	14 May 2019	25	13.26	78.84	7.8	33.58	8.1	25.2	5.43
I7	14 May 2019	26	13.14	79.79	7.5	33.58	8.1	25.3	4.93
I7	14 May 2019	27	13.03	82.14	7.2	33.58	8.1	25.3	3.95
I7	14 May 2019	28	12.89	83.45	7.1	33.59	8.0	25.3	3.54
I7	14 May 2019	29	12.81	83.49	7.0	33.58	8.0	25.3	3.55
I7	14 May 2019	30	12.71	83.52	6.9	33.58	8.0	25.4	3.62
I7	14 May 2019	31	12.64	84.17	6.8	33.59	8.0	25.4	2.99
I7	14 May 2019	32	12.51	84.73	6.6	33.60	8.0	25.4	2.51
I7	14 May 2019	33	12.45	85.23	6.5	33.60	8.0	25.4	2.09
I7	14 May 2019	34	12.40	85.86	6.4	33.59	8.0	25.4	2.16
I7	14 May 2019	35	12.32	86.10	6.4	33.60	8.0	25.4	1.93
I7	14 May 2019	36	12.18	86.17	6.4	33.60	8.0	25.5	1.74
I7	14 May 2019	37	12.07	86.78	6.3	33.59	8.0	25.5	1.58
I7	14 May 2019	38	12.05	87.29	6.2	33.59	8.0	25.5	1.40
I7	14 May 2019	39	12.04	87.25	6.2	33.60	8.0	25.5	1.40
I7	14 May 2019	40	11.94	87.38	6.0	33.61	8.0	25.5	1.31
I7	14 May 2019	41	11.89	87.87	5.9	33.62	8.0	25.5	1.23
I7	14 May 2019	42	11.86	88.00	5.8	33.62	7.9	25.5	0.99
I7	14 May 2019	43	11.69	87.96	5.7	33.63	7.9	25.6	0.95
I7	14 May 2019	44	11.64	87.49	5.5	33.64	7.9	25.6	0.99
I7	14 May 2019	45	11.61	87.36	5.4	33.65	7.9	25.6	0.92
I7	14 May 2019	46	11.56	87.26	5.2	33.66	7.9	25.6	0.90
I7	14 May 2019	47	11.40	87.40	5.2	33.68	7.9	25.7	0.87
I7	14 May 2019	48	11.27	87.58	5.2	33.67	7.9	25.7	0.78
I7	14 May 2019	49	11.26	87.83	5.3	33.66	7.9	25.7	0.73
I7	14 May 2019	50	11.25	87.87	5.3	33.66	7.9	25.7	0.65
I7	14 May 2019	51	11.24	87.72	5.3	33.66	7.9	25.7	0.63
I7	14 May 2019	52	11.25	87.24	5.3	33.66	7.9	25.7	0.63
I8	14 May 2019	1	18.09	84.30	8.5	33.64	8.2	24.2	0.45
I8	14 May 2019	2	18.07	84.29	8.5	33.64	8.2	24.2	0.44
I8	14 May 2019	3	17.92	84.37	8.6	33.65	8.2	24.3	0.45
I8	14 May 2019	4	17.80	84.53	8.6	33.64	8.2	24.3	0.46
I8	14 May 2019	5	17.73	84.54	8.6	33.64	8.2	24.3	0.48
I8	14 May 2019	6	17.66	84.49	8.6	33.64	8.2	24.3	0.51
I8	14 May 2019	7	17.56	84.48	8.5	33.65	8.2	24.3	0.55
I8	14 May 2019	8	16.31	84.49	8.6	33.67	8.2	24.7	0.58

Station	Date	Depth (m)	Temp (°C)	XMS (‰)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (µg/L)
I8	14 May 2019	9	15.60	85.53	8.7	33.60	8.2	24.8	0.59
I8	14 May 2019	10	15.20	86.19	8.7	33.58	8.2	24.8	0.56
I8	14 May 2019	11	14.93	86.57	8.6	33.57	8.2	24.9	0.56
I8	14 May 2019	12	14.55	86.60	8.7	33.57	8.2	25.0	0.61
I8	14 May 2019	13	14.39	86.28	8.6	33.56	8.2	25.0	0.63
I8	14 May 2019	14	14.03	85.45	8.6	33.58	8.2	25.1	0.74
I8	14 May 2019	15	13.95	84.50	8.6	33.55	8.2	25.1	0.88
I8	14 May 2019	16	13.78	83.78	8.5	33.58	8.2	25.1	1.09
I8	14 May 2019	17	13.60	81.86	8.5	33.57	8.2	25.2	1.56
I8	14 May 2019	18	13.41	80.11	8.4	33.58	8.2	25.2	2.22
I8	14 May 2019	19	13.10	77.45	8.1	33.58	8.1	25.3	3.94
I8	14 May 2019	20	12.96	78.05	7.8	33.58	8.1	25.3	5.15
I8	14 May 2019	21	12.90	78.98	7.7	33.58	8.1	25.3	4.96
I8	14 May 2019	22	12.85	79.74	7.5	33.58	8.1	25.3	5.23
I8	14 May 2019	23	12.81	80.37	7.4	33.58	8.1	25.3	5.07
I8	14 May 2019	24	12.79	80.82	7.3	33.58	8.1	25.3	4.84
I8	14 May 2019	25	12.69	81.55	7.0	33.60	8.1	25.4	4.84
I8	14 May 2019	26	12.41	83.29	6.7	33.61	8.0	25.4	3.93
I8	14 May 2019	27	12.27	84.15	6.6	33.60	8.0	25.4	3.78
I8	14 May 2019	28	12.23	84.33	6.5	33.61	8.0	25.5	3.45
I8	14 May 2019	29	12.10	84.55	6.4	33.61	8.0	25.5	3.53
I8	14 May 2019	30	12.06	85.21	6.3	33.61	8.0	25.5	3.11
I8	14 May 2019	31	11.98	86.06	6.1	33.62	8.0	25.5	2.48
I8	14 May 2019	32	11.93	86.74	5.9	33.62	8.0	25.5	2.14
I8	14 May 2019	33	11.75	86.60	5.6	33.65	8.0	25.6	1.83
I8	14 May 2019	34	11.60	84.89	5.3	33.66	7.9	25.6	1.73
I8	14 May 2019	35	11.58	83.49	5.3	33.66	7.9	25.6	1.60
I8	14 May 2019	36	11.58	82.76	5.3	33.65	7.9	25.6	1.59
I9	14 May 2019	1	17.98	85.60	8.5	33.64	8.2	24.2	0.35
I9	14 May 2019	2	17.88	85.45	8.5	33.65	8.2	24.3	0.36
I9	14 May 2019	3	17.60	85.30	8.6	33.64	8.2	24.3	0.37
I9	14 May 2019	4	17.46	85.38	8.7	33.63	8.2	24.4	0.39
I9	14 May 2019	5	17.41	85.34	8.6	33.63	8.2	24.4	0.41
I9	14 May 2019	6	17.27	85.48	8.6	33.63	8.2	24.4	0.42
I9	14 May 2019	7	17.15	85.52	8.7	33.62	8.2	24.4	0.45
I9	14 May 2019	8	17.02	85.63	8.7	33.62	8.2	24.5	0.46
I9	14 May 2019	9	16.84	85.71	8.7	33.62	8.2	24.5	0.47
I9	14 May 2019	10	16.65	85.82	8.7	33.62	8.2	24.5	0.50
I9	14 May 2019	11	15.83	85.80	8.7	33.63	8.2	24.7	0.52
I9	14 May 2019	12	15.27	85.03	8.6	33.57	8.2	24.8	0.71
I9	14 May 2019	13	14.44	84.23	8.6	33.50	8.2	24.9	0.85
I9	14 May 2019	14	14.50	85.71	8.7	33.54	8.2	25.0	0.73
I9	14 May 2019	15	14.45	85.94	8.7	33.56	8.2	25.0	0.73
I9	14 May 2019	16	14.17	85.40	8.6	33.58	8.2	25.1	0.79
I9	14 May 2019	17	13.69	83.78	8.6	33.58	8.2	25.1	1.22
I9	14 May 2019	18	13.65	82.43	8.6	33.56	8.2	25.1	1.70
I9	14 May 2019	19	13.42	81.62	8.5	33.58	8.2	25.2	2.26
I9	14 May 2019	20	13.27	79.38	8.3	33.57	8.1	25.2	3.44
I9	14 May 2019	21	13.22	77.31	8.2	33.58	8.1	25.3	4.66
I9	14 May 2019	22	12.87	74.08	7.9	33.58	8.1	25.3	7.17
I9	14 May 2019	23	12.72	75.71	7.6	33.58	8.1	25.4	8.16
I9	14 May 2019	24	12.57	77.07	7.3	33.59	8.1	25.4	7.54
I9	14 May 2019	25	12.26	79.79	6.6	33.64	8.0	25.5	5.97
I9	14 May 2019	26	11.96	81.95	5.9	33.63	8.0	25.5	3.65
I9	14 May 2019	27	11.80	81.79	5.5	33.65	7.9	25.6	2.82
I9	14 May 2019	28	11.64	80.40	5.3	33.66	7.9	25.6	2.19
I9	14 May 2019	29	11.64	78.28	5.3	33.65	7.9	25.6	1.77

NA = not available

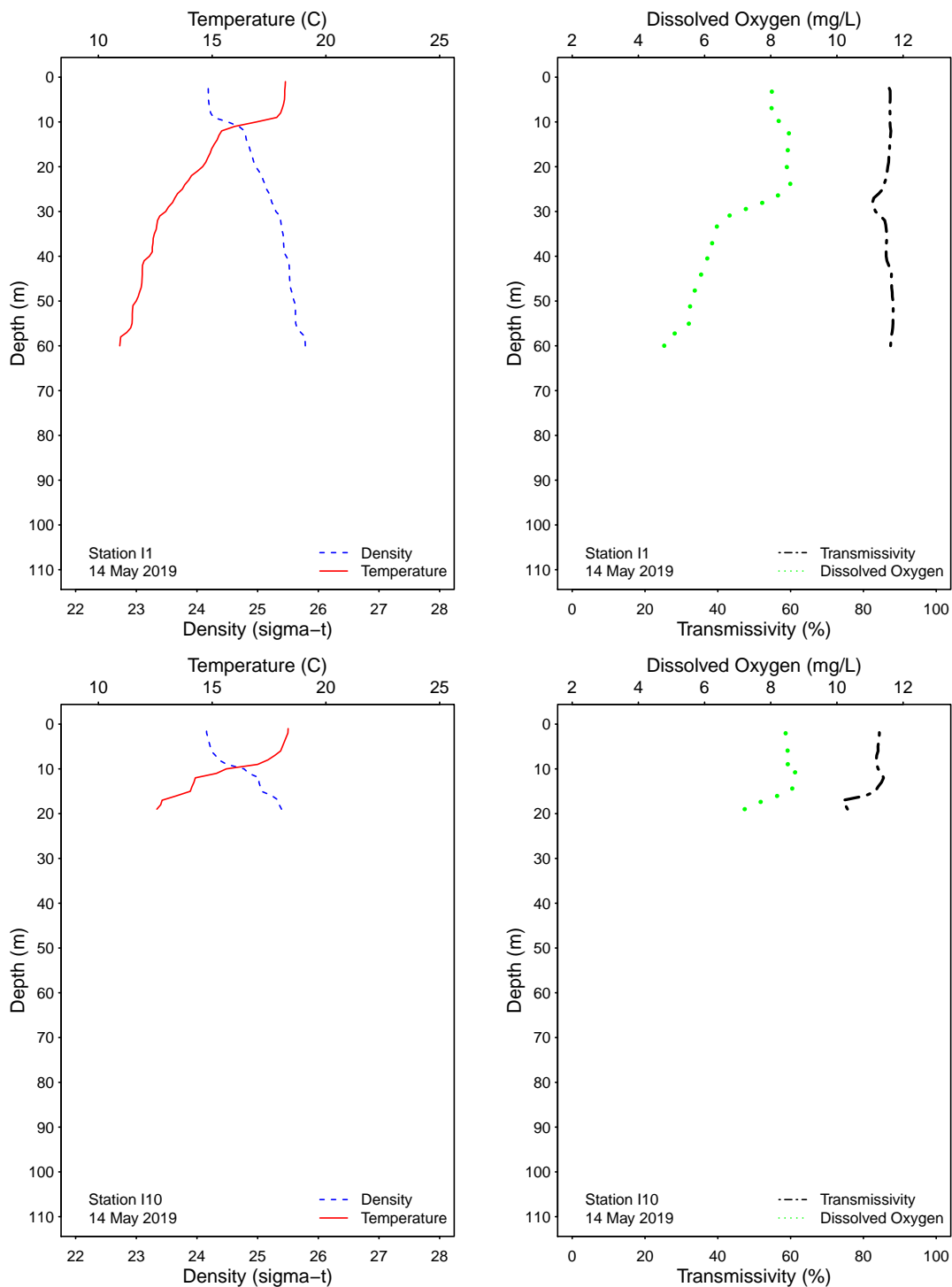


Figure 4.1: Graphics of CTD profile data from the SBOO offshore stations for each sample date.

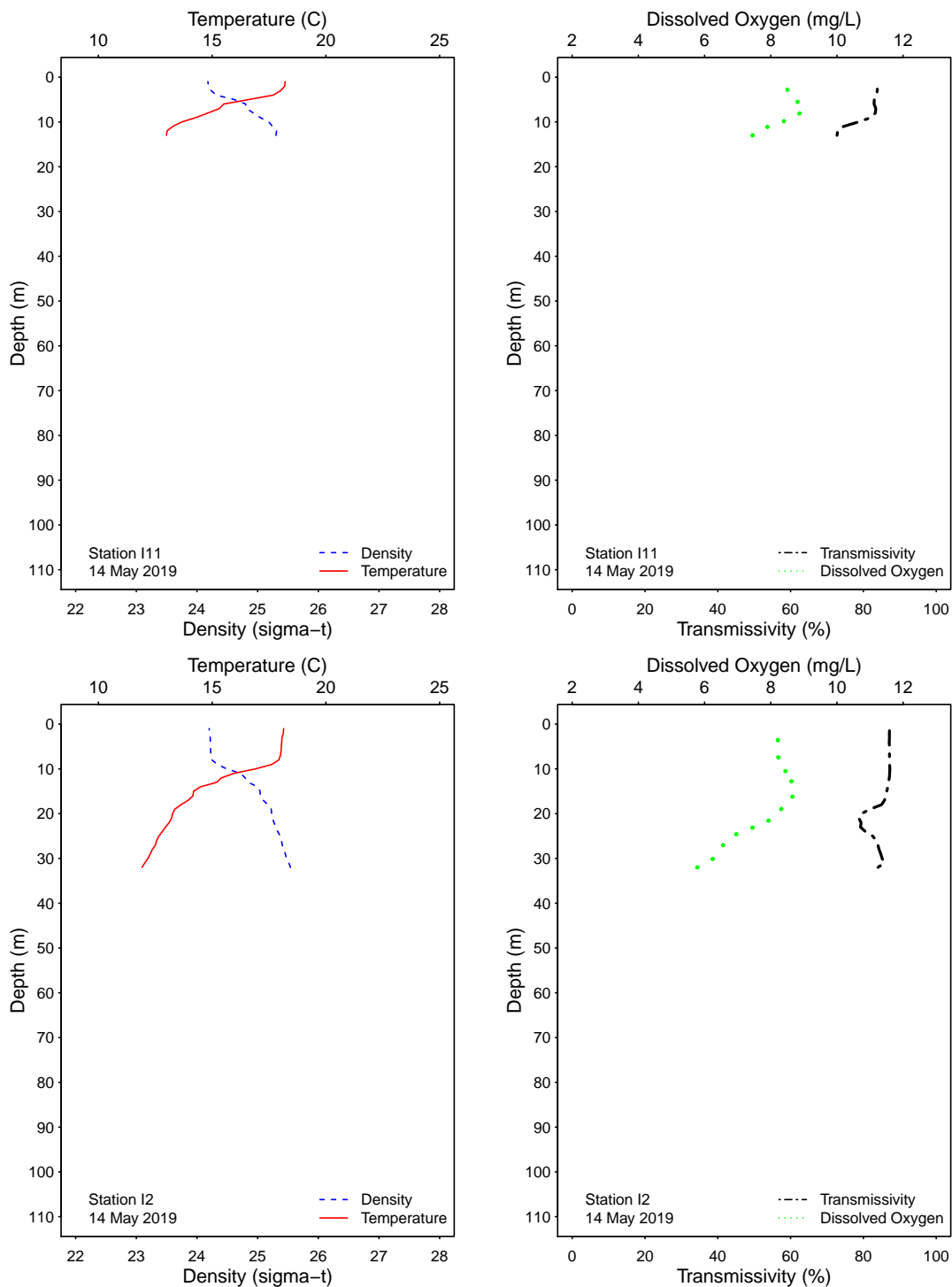


Figure 4.1: Graphics of CTD profile data from the SBOO offshore stations for each sample date.

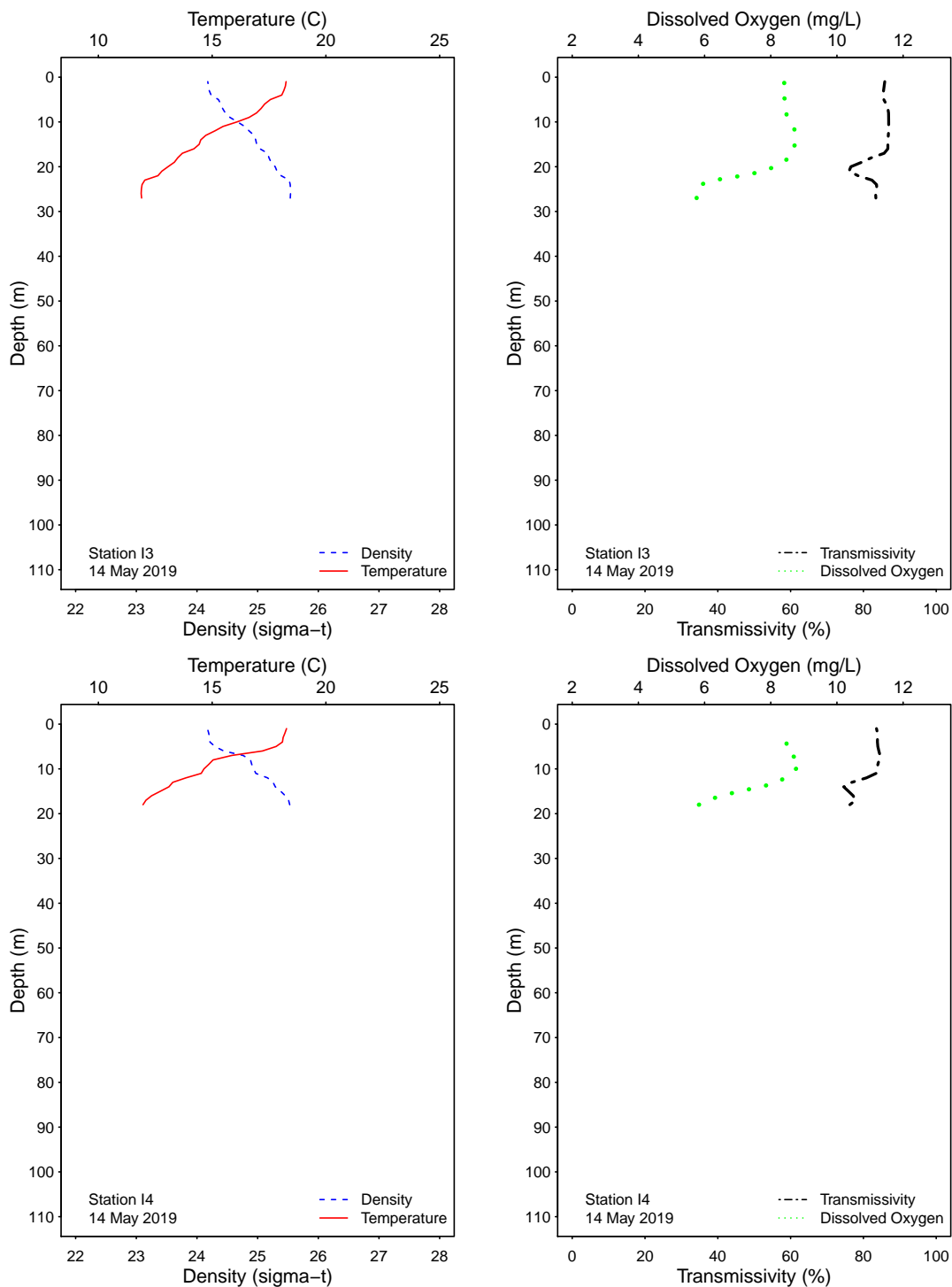


Figure 4.1: Graphics of CTD profile data from the SBOO offshore stations for each sample date.

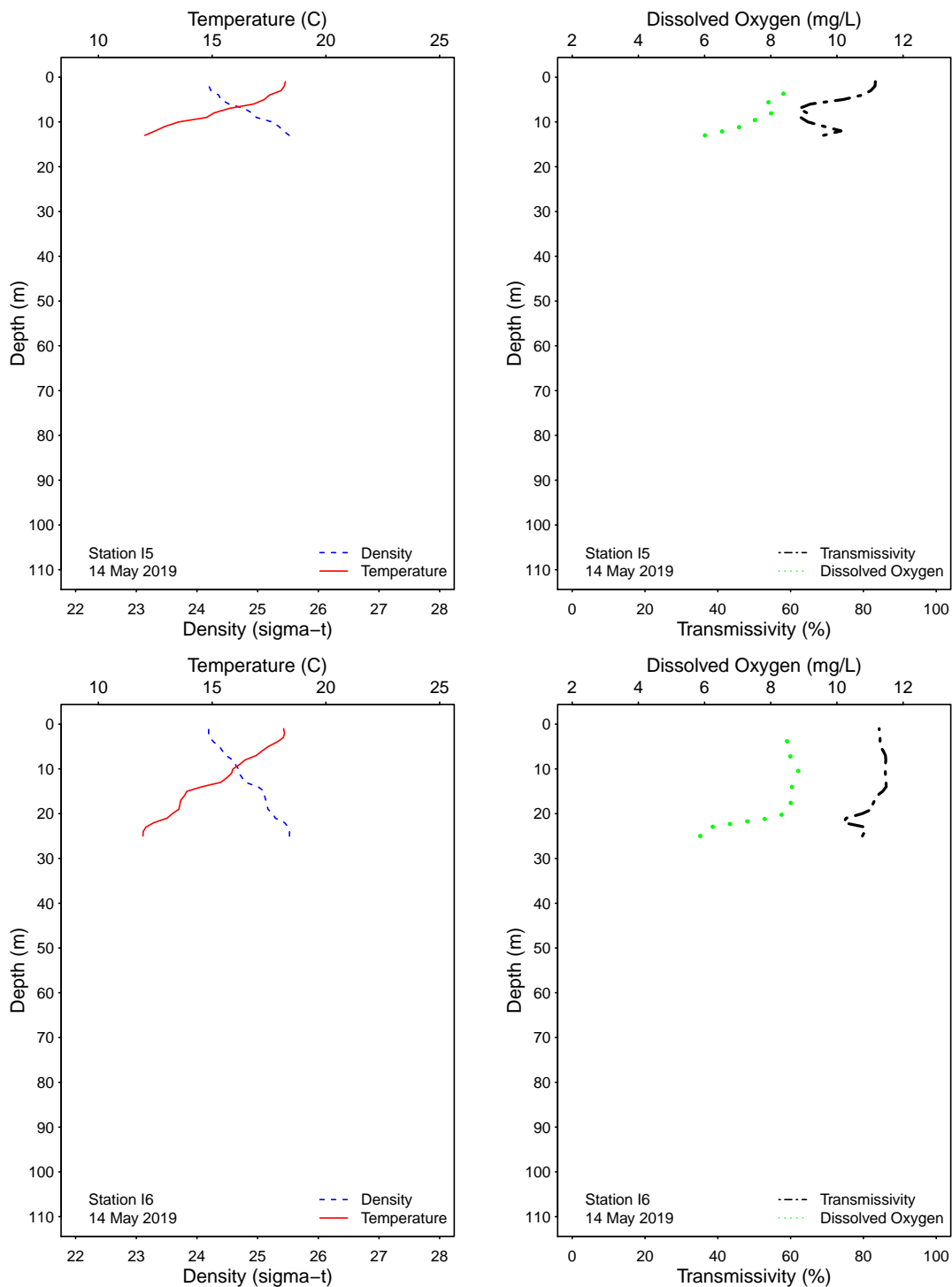


Figure 4.1: Graphics of CTD profile data from the SBOO offshore stations for each sample date.

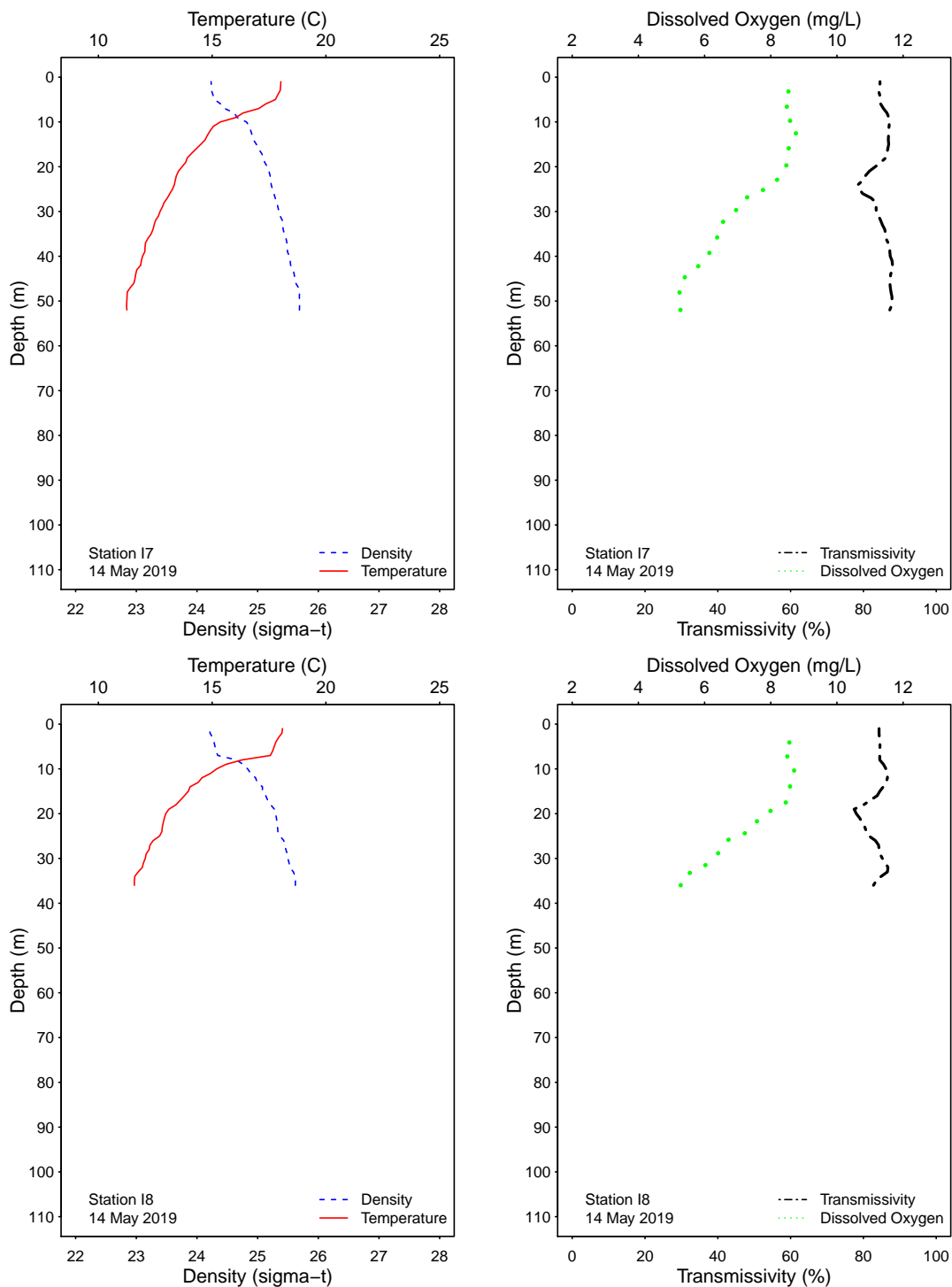


Figure 4.1: Graphics of CTD profile data from the SBOO offshore stations for each sample date.

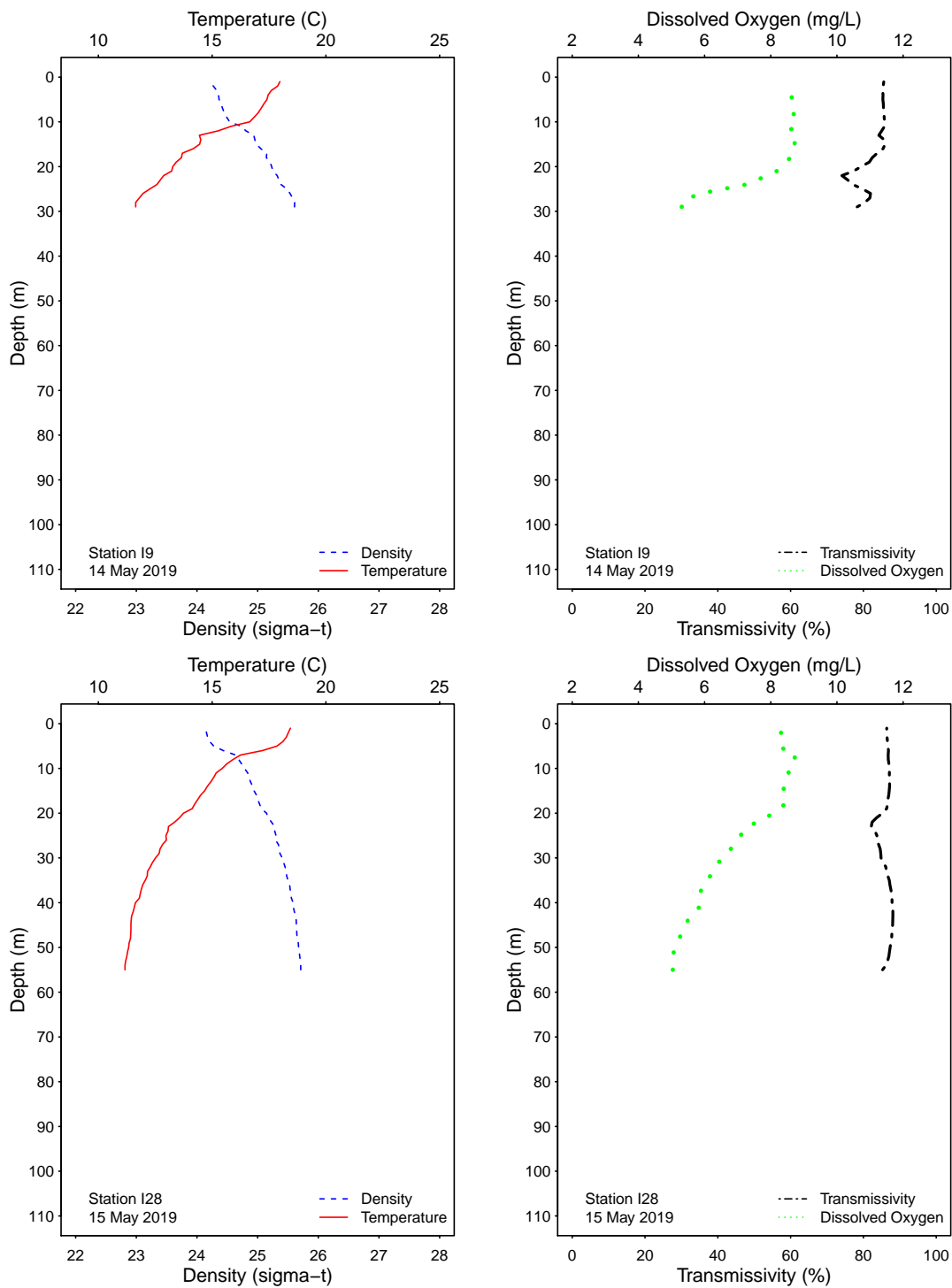


Figure 4.1: Graphics of CTD profile data from the SBOO offshore stations for each sample date.

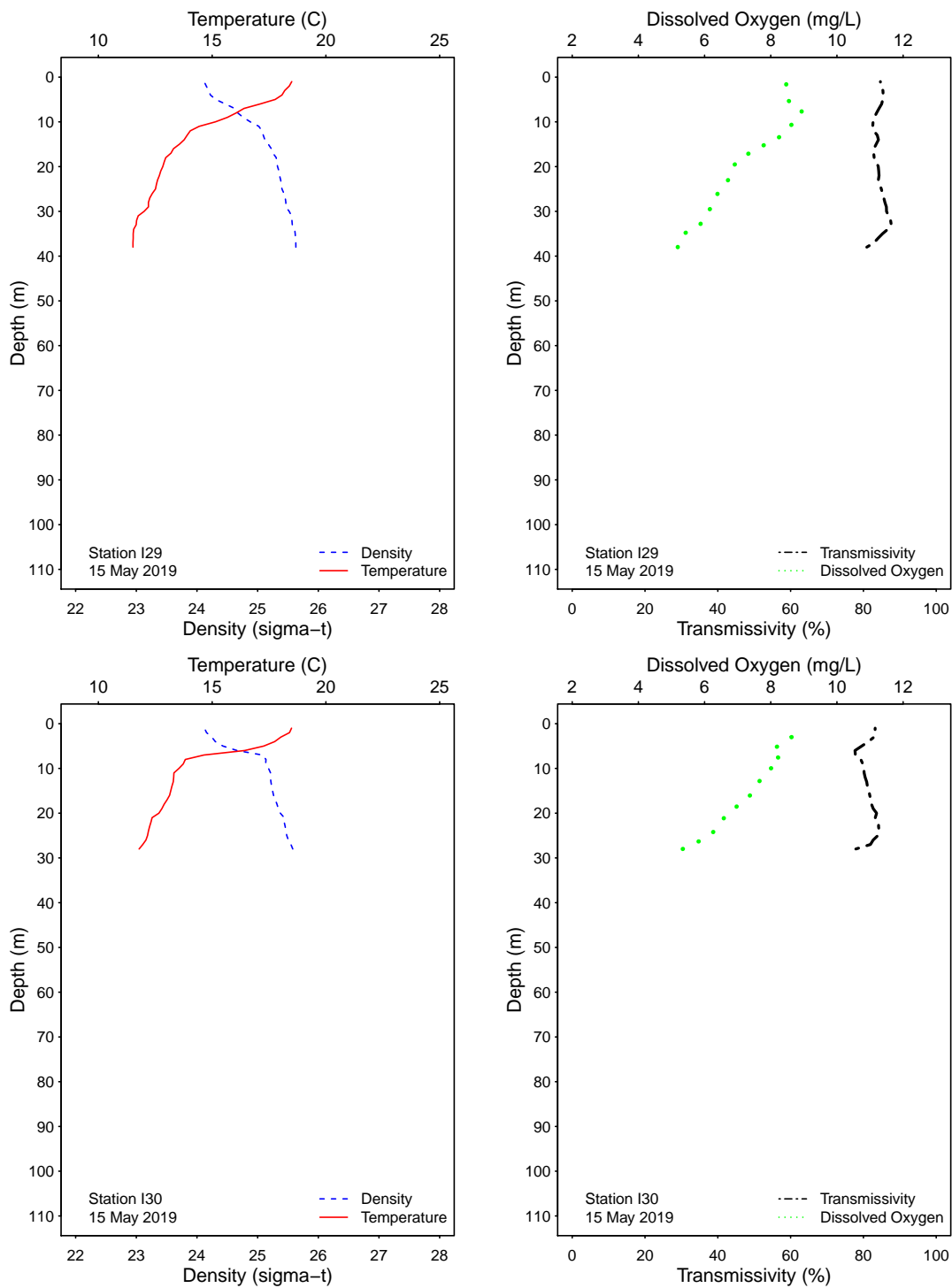


Figure 4.1: Graphics of CTD profile data from the SBOO offshore stations for each sample date.

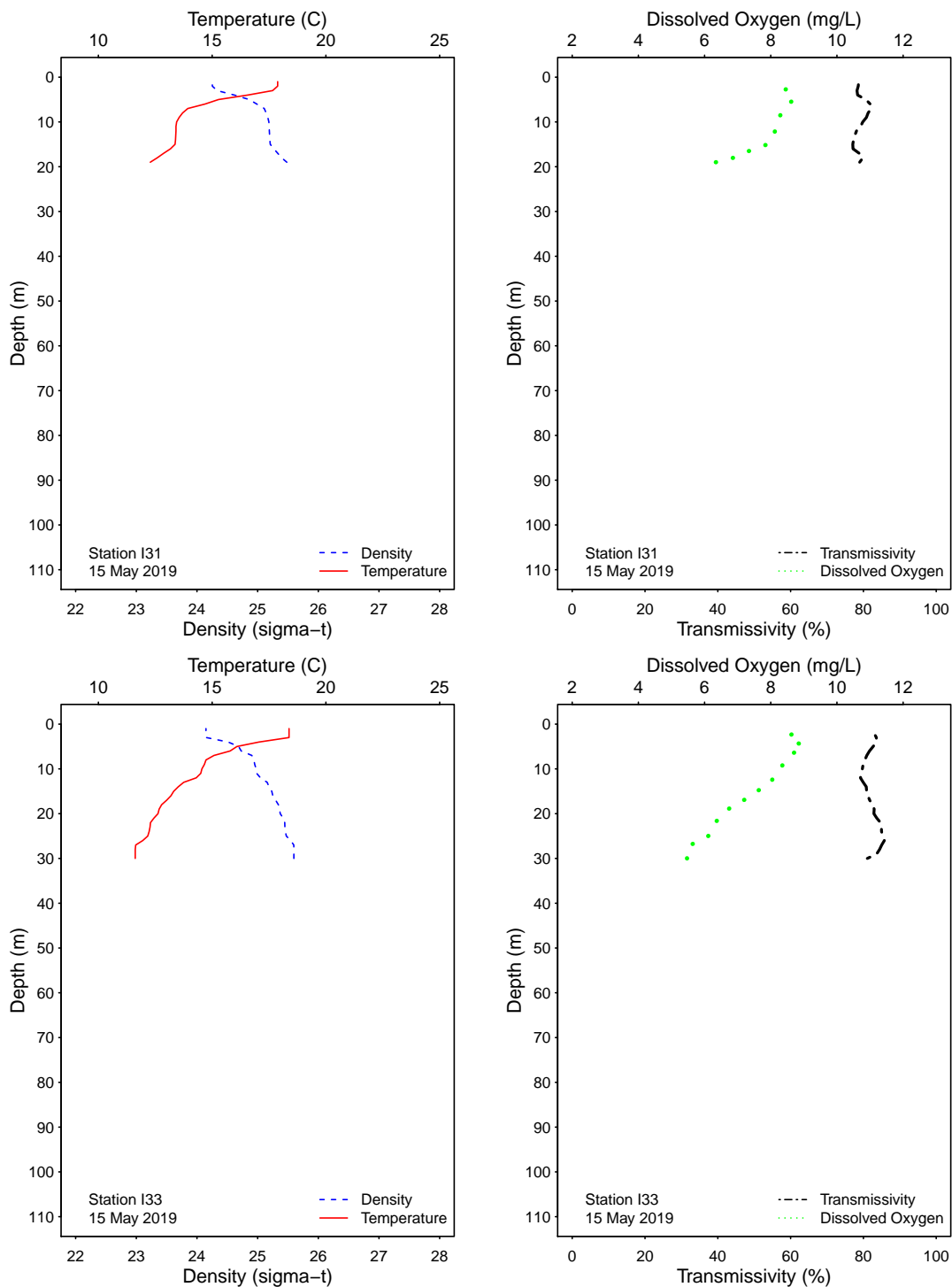


Figure 4.1: Graphics of CTD profile data from the SBOO offshore stations for each sample date.

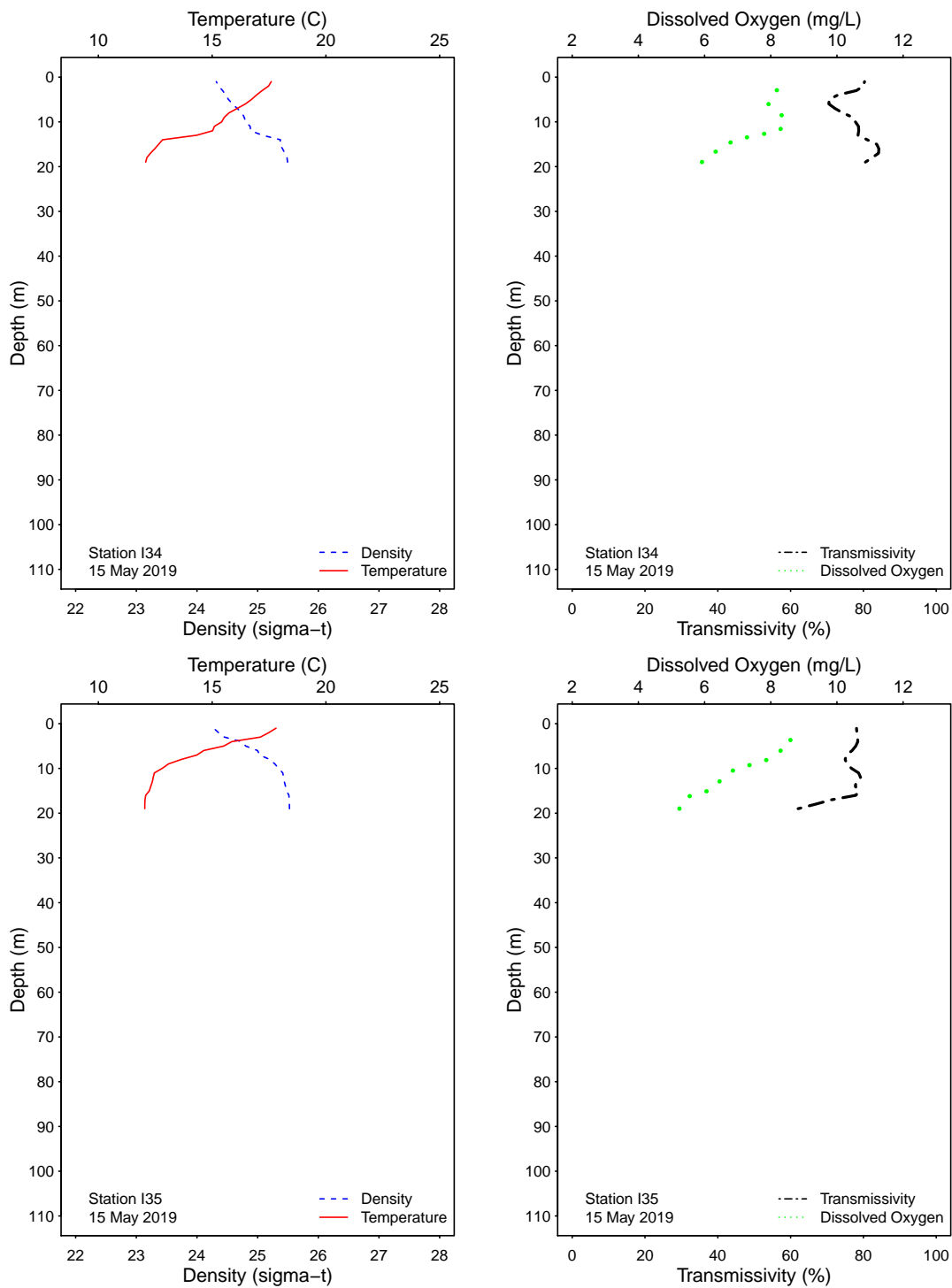


Figure 4.1: Graphics of CTD profile data from the SBOO offshore stations for each sample date.

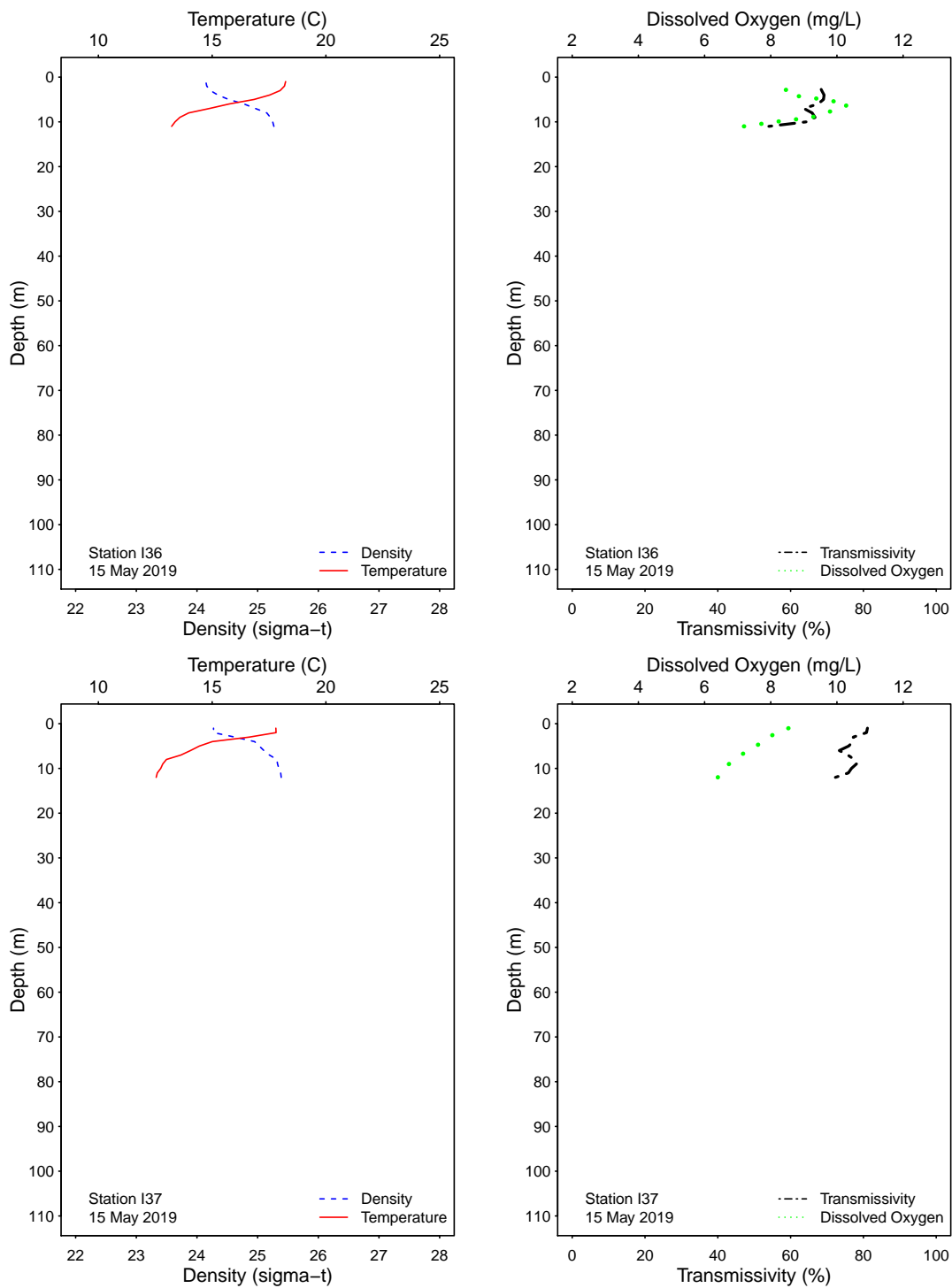


Figure 4.1: Graphics of CTD profile data from the SBOO offshore stations for each sample date.

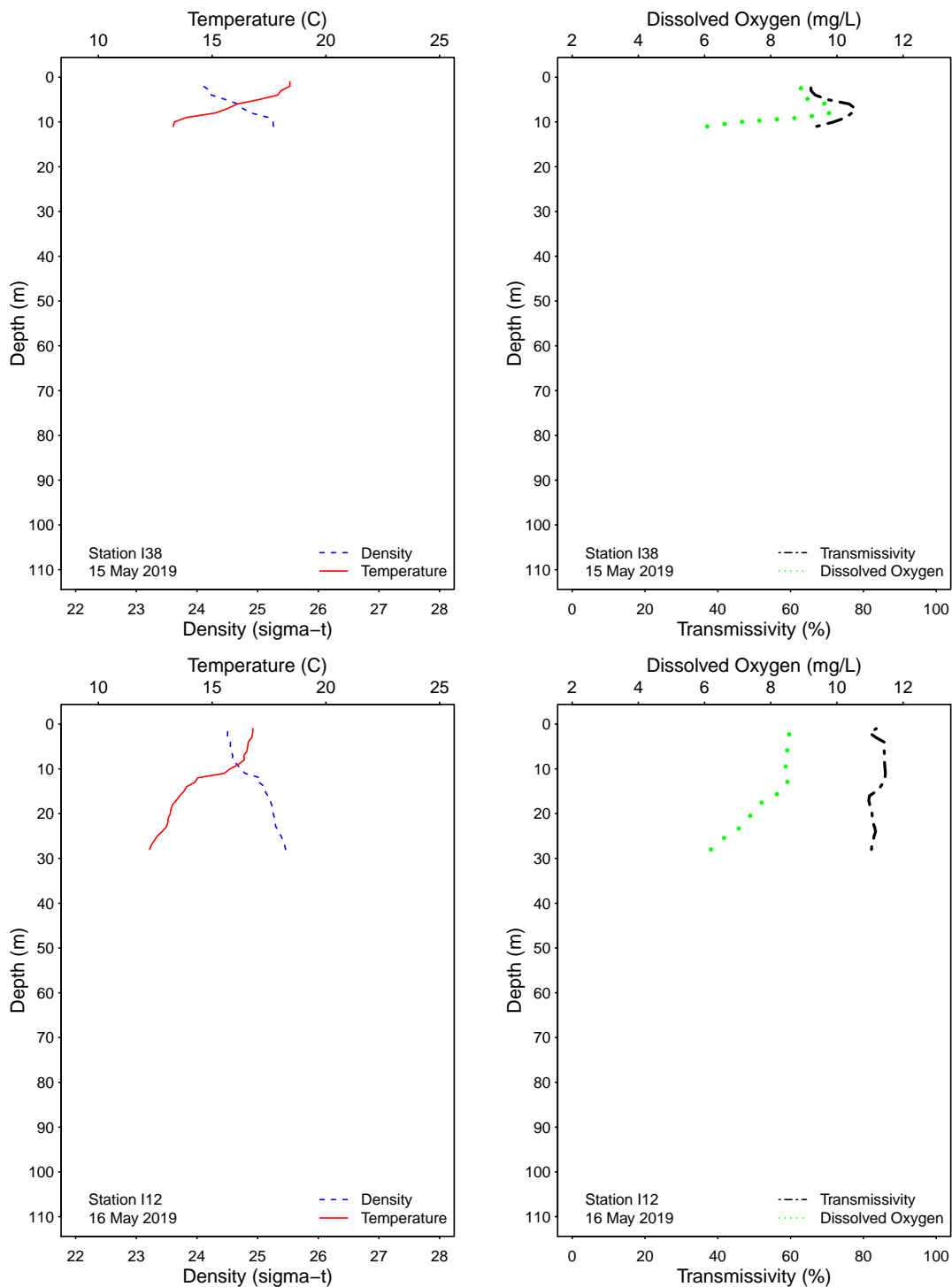


Figure 4.1: Graphics of CTD profile data from the SBOO offshore stations for each sample date.

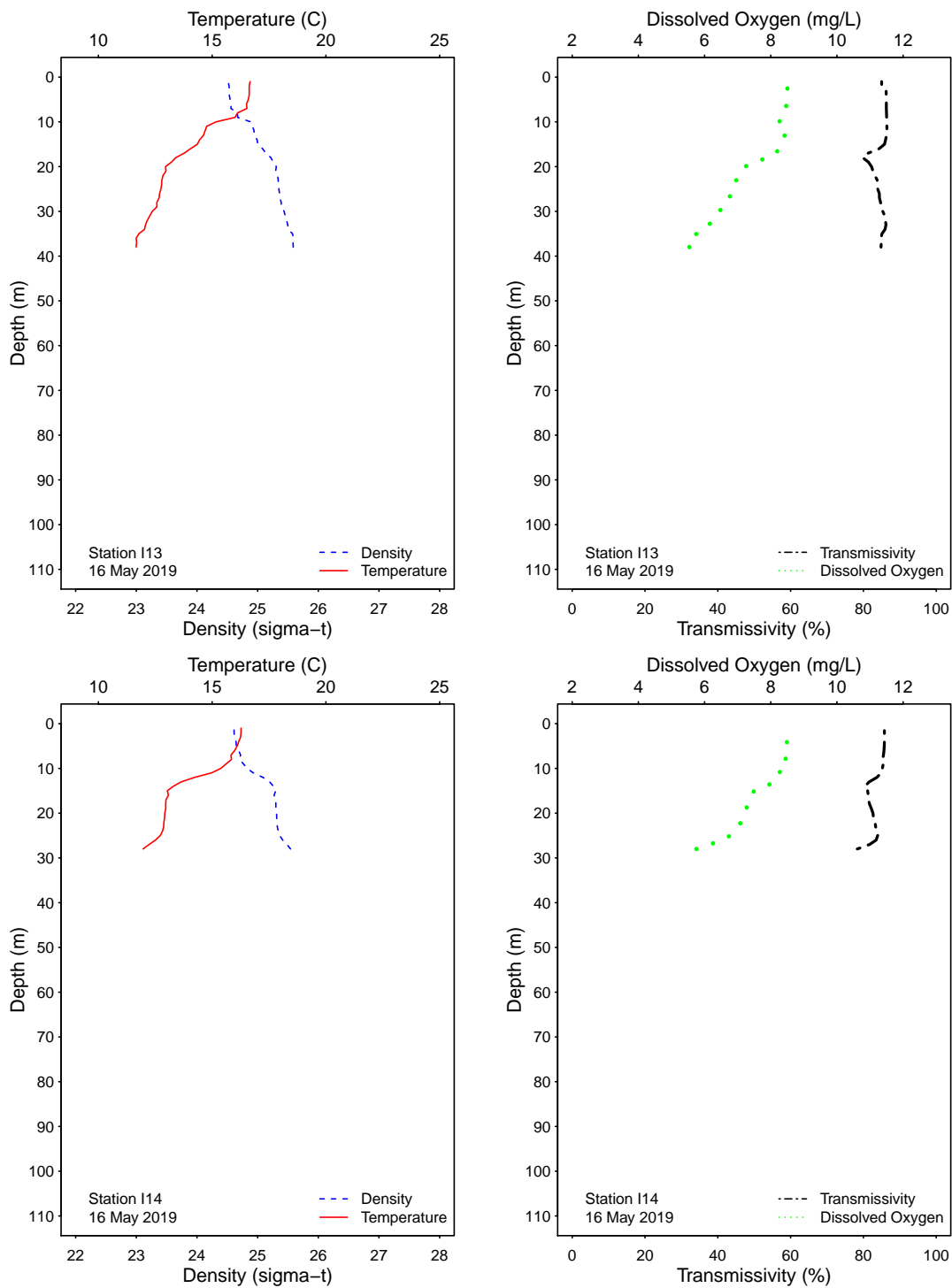


Figure 4.1: Graphics of CTD profile data from the SBOO offshore stations for each sample date.

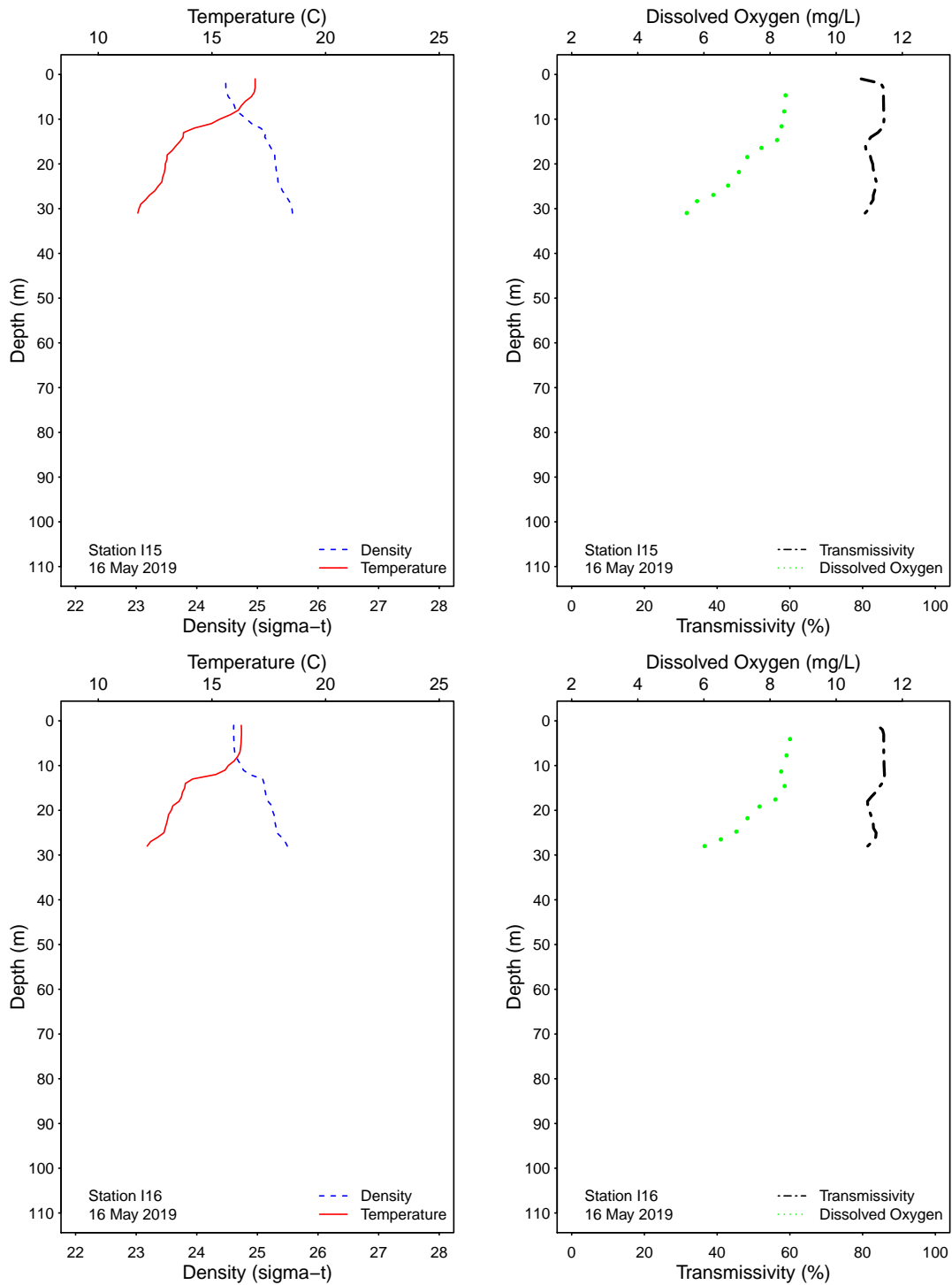


Figure 4.1: Graphics of CTD profile data from the SBOO offshore stations for each sample date.

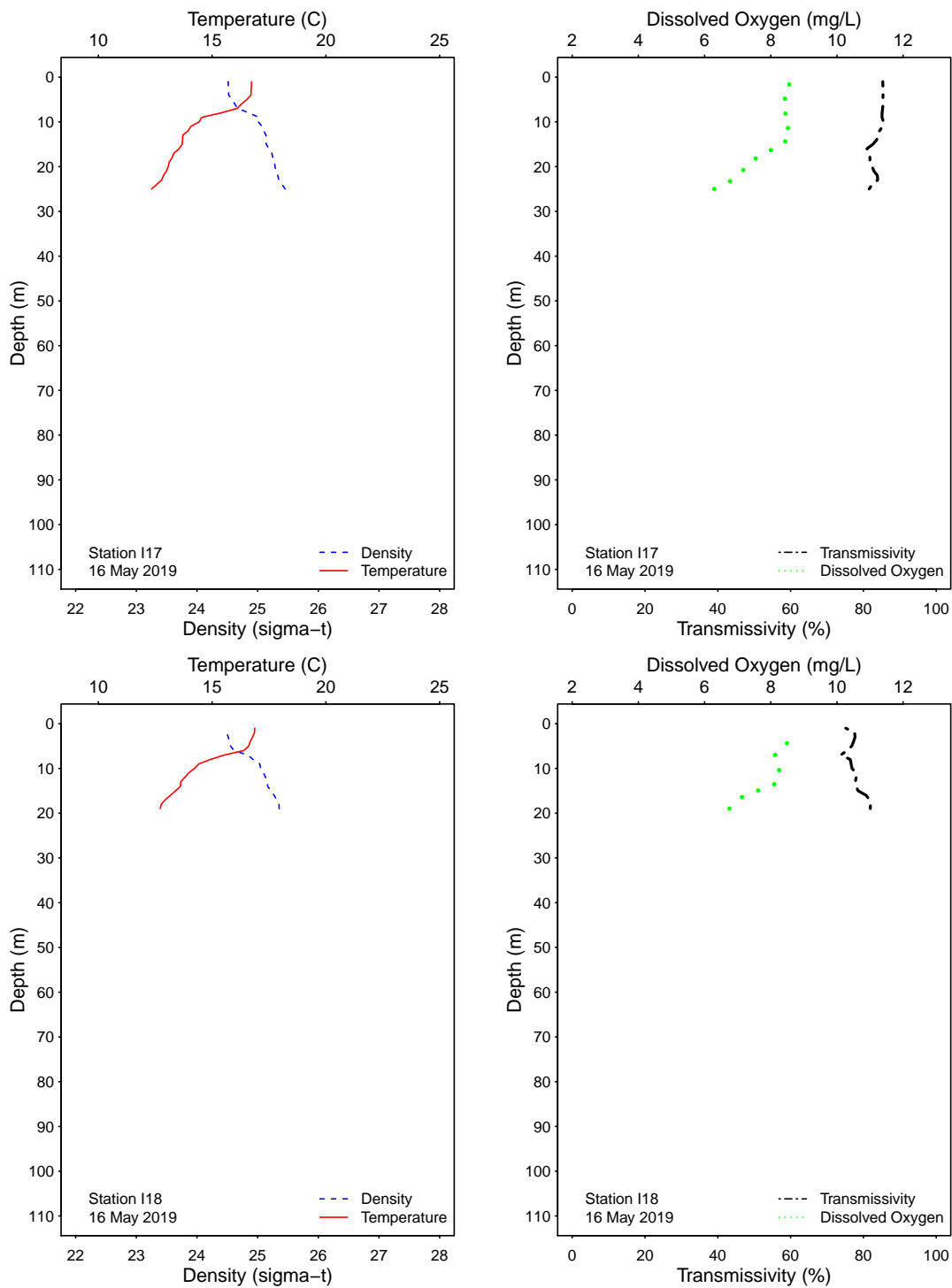


Figure 4.1: Graphics of CTD profile data from the SBOO offshore stations for each sample date.

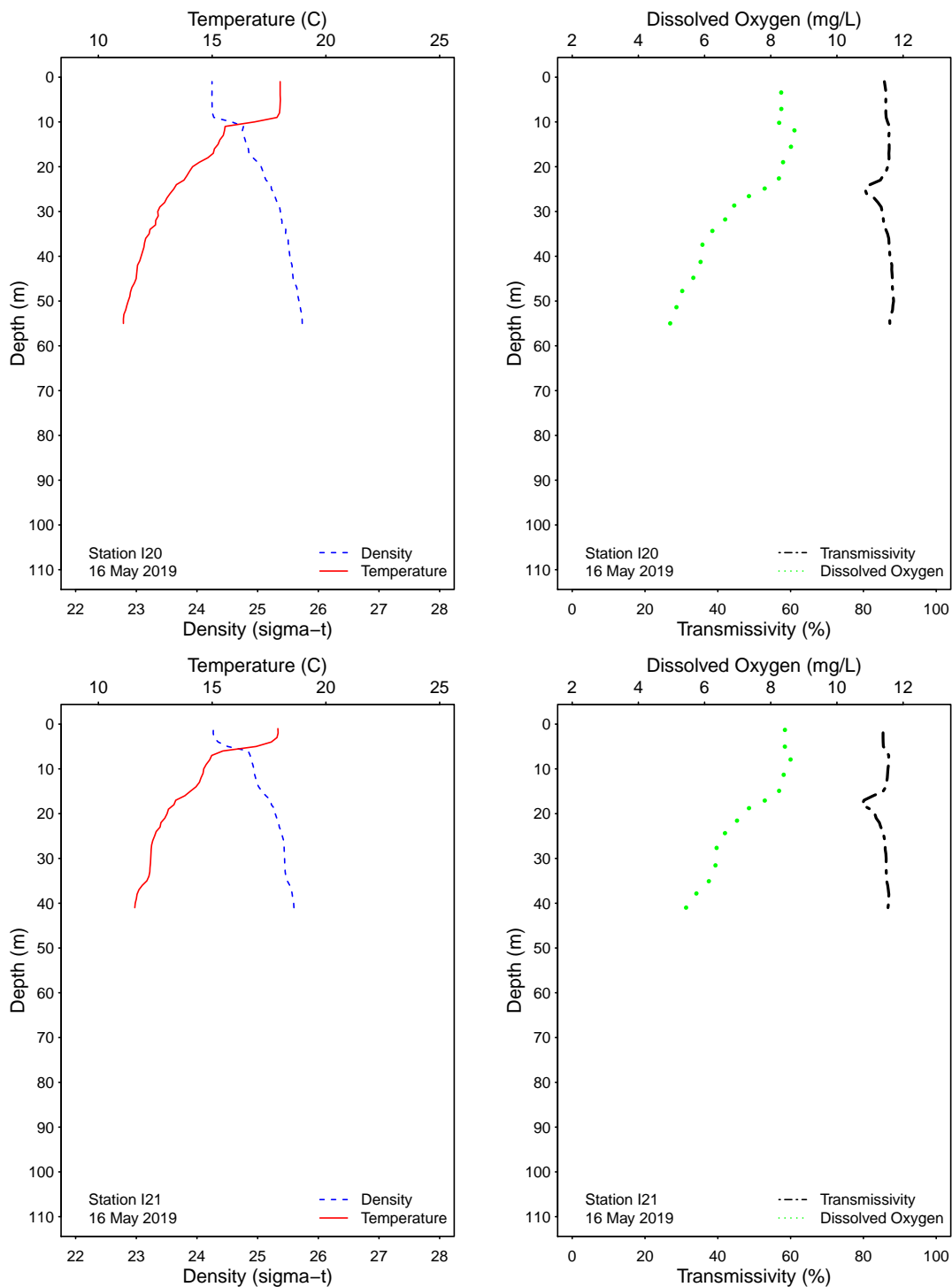


Figure 4.1: Graphics of CTD profile data from the SBOO offshore stations for each sample date.

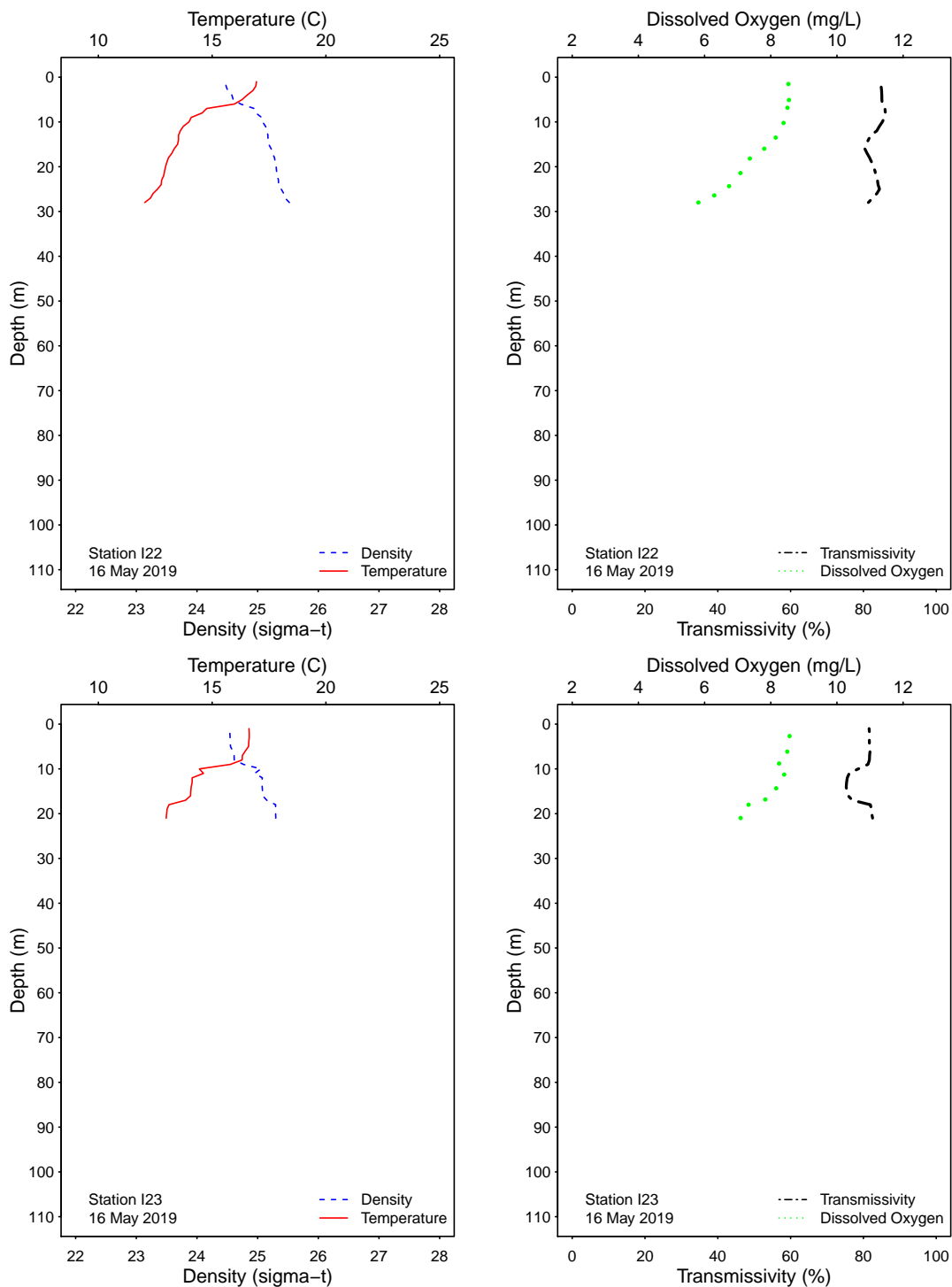


Figure 4.1: Graphics of CTD profile data from the SBOO offshore stations for each sample date.

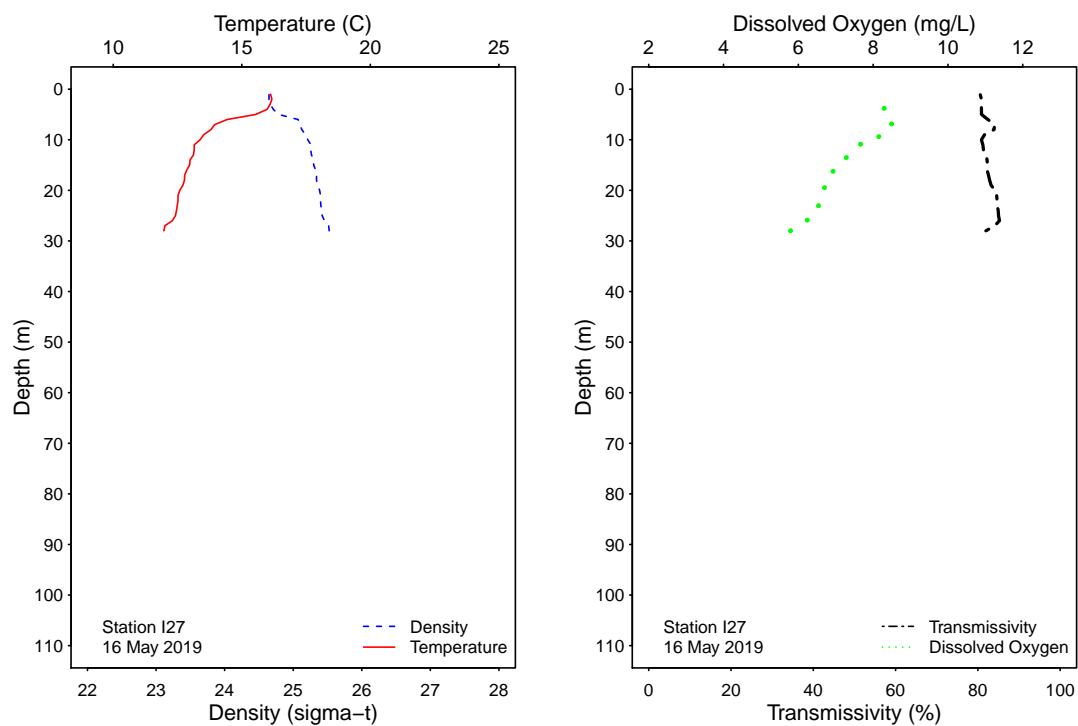


Figure 4.1: Graphics of CTD profile data from the SBOO offshore stations for each sample date.

This page intentionally left blank

APPENDIX A

Quality Assurance

Table A.1

Summary of bacteriological quality assurance field and lab duplicate sample analyses at selected SBOO 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
I3	14 May 2019	18	AE	LAB DUPLICATE	<2	<2	<2
I8	14 May 2019	37	AR	LAB DUPLICATE	<2	<2	<2
I9	14 May 2019	27	AR	LAB DUPLICATE	<2	<2	<2
I12	16 May 2019	18	AE	LAB DUPLICATE	<2	<2	2e
I13	16 May 2019	18	JLT	LAB DUPLICATE	<4	<4	<4
I14	16 May 2019	2	AR	LAB DUPLICATE	<2	<2	2e
I16	16 May 2019	18	AR	LAB DUPLICATE	<2	<2	<2
I19	06 May 2019	6	JLT	LAB DUPLICATE	<2	<2	<2
I19	13 May 2019	6	AE	LAB DUPLICATE	<2	<2	<2
I19	23 May 2019	6	AE	LAB DUPLICATE	140e	28e	<2
I19	29 May 2019	6	JF	LAB DUPLICATE	1600e	340e	8e
I20	16 May 2019	55	JLT	LAB DUPLICATE	<2	<2	<2
I30	15 May 2019	27	AE	LAB DUPLICATE	<2	<2	<2
I36	15 May 2019	11	AE	FIELD DUPLICATE	<2	<2	<2
I36	15 May 2019	11	AE	LAB DUPLICATE	6e	<2	<2
I40	06 May 2019	6	JLT	LAB DUPLICATE	<2	<2	<2
I40	13 May 2019	6	AR	LAB DUPLICATE	1000e	260e	14e
I40	23 May 2019	6	AE	LAB DUPLICATE	70	32e	<2
I40	29 May 2019	6	JF	LAB DUPLICATE	220e	14e	<2
S12	01 May 2019		JLT	FIELD DUPLICATE	13000	3400e	260e
S12	01 May 2019		JLT	LAB DUPLICATE	10000	3400e	240e
S12	07 May 2019		AE	FIELD DUPLICATE	360e	14e	6e
S12	07 May 2019		AE	LAB DUPLICATE	240e	22e	2e
S12	14 May 2019		JF	FIELD DUPLICATE	12000	980	48
S12	14 May 2019		JF	LAB DUPLICATE	10000	1000	40
S12	21 May 2019		AE	FIELD DUPLICATE	<20	<2	<2
S12	21 May 2019		AE	LAB DUPLICATE	<20	<2	<2
S12	28 May 2019		AE	FIELD DUPLICATE	<20	<2	<2
S12	28 May 2019		AE	LAB DUPLICATE	<20	2e	<2

ns = not sampled

ND = no data

