



SOUTH BAY OCEAN OUTFALL MONTHLY RECEIVING WATERS MONITORING REPORT

SOUTH BAY WATER RECLAMATION PLANT

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

JULY 2020

Environmental Monitoring and Technical Services
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August 31, 2020

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 July 2020 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 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

RK/rg

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, 1987²) 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 2020 Quality Assurance Report, which will be completed in March 2021.

SUMMARY OF RESULTS

➤ Shoreline Water Quality Sampling

- Due to site access restrictions in Mexico, the South Bay shoreline sampling is typically carried out on the same day each week (i.e., Tuesday) 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 USIBWC 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.
- During July, five of the eight shore stations located north of the border were out of compliance with California Ocean Plan (Ocean Plan) water contact standards on one or more days as follows:
 - The 30-day geometric mean standards for total and fecal coliform were exceeded at stations S5 and S11.
 - The 30-day geometric mean standard for *Enterococcus* was exceeded at stations S5, S6, S10, S11, and S12.
 - The single sample maximum (SSM) standard for total coliform was exceeded at station S5.

2 Gilbert, R.O. (1987). Statistical Methods for Environmental Pollution Monitoring. Van Nostrand Reinhold Co., New York.

- The SSM standard for fecal coliform was exceeded at stations S5, S10, and S11.
 - The SSM standard for *Enterococcus* was exceeded at stations S5, S6, S10, and S11.
 - 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 S5, S6, S10, and S11.
 - 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 the seawater samples collected from station S0 on one or more days during July.
- Notable observations included a sewage-like odor at stations S4, S5, and S10 on one or more days during July.
- 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 (<https://www.sandiego.gov/public-utilities/sustainability/ocean-monitoring/reports>).

➤ **Kelp Bed Water Quality Sampling**

- The seven kelp bed water quality stations (I19, I24, I25, I26, I32, I39, I40) were sampled on July 6, 13, 21, and 28.
- During July, four of the seven kelp bed stations were out of compliance with various Ocean Plan water contact standards, as follows:
 - The SSM standard for *Enterococcus* was exceeded at stations I19, I24, and I40.
 - The SSM standard that states total coliform density shall not exceed 1,000 per 100 mL when the fecal coliform/total coliform ratio exceeds 0.1 was exceeded at station I24.
- Water column temperatures ranged from 11.68 to 20.85°C. The difference between surface and bottom waters ranged from 1.45 to 8.40°C.
- Concentrations of chlorophyll *a* ranged from 0.78 to 12.67 µg/L at the kelp bed stations.
- Nothing of sewage origin was observed at any of these kelp stations.

➤ **Offshore Water Quality Sampling**

- Quarterly sampling was not conducted during July at the offshore stations. The next quarterly sampling is scheduled for August 2020.



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 Jul 2020	18	6172	183	25	23	44	2582	187
02 Jul 2020	26*	7736	183	26*	24*	54*	2475	147
03 Jul 2020	26*	7736	183	26*	24*	54*	2475	147
04 Jul 2020	26*	7736	183	26*	24*	54*	2475	147
05 Jul 2020	26*	7736	183	26*	24*	54*	2475	147
06 Jul 2020	26*	7736	183	26*	24*	54*	2475	147
07 Jul 2020	33	8219	257	43	23	44	2358	135
08 Jul 2020	33	8219	257	43	23	44	2358	135
09 Jul 2020	37*	8219	697	53*	24*	54*	3272	185
10 Jul 2020	37*	8219	697	53*	24*	54*	3272	185
11 Jul 2020	37*	8219	734	53*	24*	54*	3834	185
12 Jul 2020	37*	7736	734	53*	24*	54*	3834	185
13 Jul 2020	37*	8219	468	53*	24*	54*	3186	185
14 Jul 2020	33	8219	330	31	23	44	2212	135
15 Jul 2020	33	8219	330	31	23	44	2212	135
16 Jul 2020	66*	10086	468	35*	24*	73*	2992	92
17 Jul 2020	66*	10450	468	35*	24*	73*	2992	92
18 Jul 2020	66*	10450	468	35*	24*	73*	2992	91
19 Jul 2020	66*	10773	468	35*	24*	73*	2992	91
20 Jul 2020	66*	10773	468	35*	24*	73*	2992	91
21 Jul 2020	52	10236	330	50	36	182	1971	71
22 Jul 2020	52	10236	330	50	36	182	1971	71
23 Jul 2020	50*	9851	295	63*	42*	127	1629	79
24 Jul 2020	50*	9851	295	63*	42*	127	1629	79
25 Jul 2020	50*	9515	295	63*	42*	127	1297	79
26 Jul 2020	50*	9515	295	63*	42*	127	1297	79
27 Jul 2020	50*	9142	295	63*	42*	127	981	79
28 Jul 2020	60	9515	203	31	26	117	1190	63
29 Jul 2020	60	9142	203	31	26	117	892	63
30 Jul 2020	44*	8560	117	27*	24*	85	622	35
31 Jul 2020	44*	8560	117	27*	24*	85	622	35

* 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 Jul 2020	4	3515	66	3	4	10	868	28
02 Jul 2020	5*	4069	57	4*	4*	15*	1126	19
03 Jul 2020	5*	4069	57	4*	4*	15*	1126	19
04 Jul 2020	5*	4069	57	4*	4*	15*	1126	19
05 Jul 2020	5*	4069	57	4*	4*	15*	1126	19
06 Jul 2020	5*	4069	57	4*	4*	15*	1126	19
07 Jul 2020	6	4452	70	8	3	14	1046	15
08 Jul 2020	6	4452	70	8	3	14	1046	15
09 Jul 2020	8*	4452	156	12*	4*	16*	1601	21
10 Jul 2020	8*	4452	156	12*	4*	16*	1601	21
11 Jul 2020	8*	4452	186	12*	4*	16*	1959	21
12 Jul 2020	8*	4069	186	12*	4*	16*	1959	21
13 Jul 2020	8*	4452	139	12*	4*	16*	1443	21
14 Jul 2020	8	5026	87	8	3	13	883	15
15 Jul 2020	8	5026	87	8	3	13	883	15
16 Jul 2020	12*	6158	127	12*	4*	21*	1391	9
17 Jul 2020	12*	6482	127	12*	4*	21*	1391	9
18 Jul 2020	12*	6482	127	12*	4*	21*	1391	9
19 Jul 2020	12*	6774	127	12*	4*	21*	1391	9
20 Jul 2020	12*	6774	127	12*	4*	21*	1391	9
21 Jul 2020	11	6355	87	8	3	45	806	7
22 Jul 2020	11	6355	87	8	3	45	806	7
23 Jul 2020	16*	5204	75	12*	4*	27	672	7
24 Jul 2020	16*	5483	75	12*	4*	27	672	7
25 Jul 2020	16*	5204	75	12*	4*	27	513	7
26 Jul 2020	16*	4271	75	12*	4*	27	513	7
27 Jul 2020	16*	3986	75	12*	4*	27	361	7
28 Jul 2020	14	4271	50	8	3	21	385	6
29 Jul 2020	14	3986	50	8	3	21	263	6
30 Jul 2020	8*	3265	27	7*	2*	15	100	3
31 Jul 2020	8*	2147	27	7*	2*	15	100	3

* 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 Jul 2020	5	3310	283	2	4	6	647	24
02 Jul 2020	7*	4592	247	2*	5*	9*	675	22
03 Jul 2020	7*	4592	247	2*	5*	9*	675	22
04 Jul 2020	7*	4975	247	2*	5*	9*	675	22
05 Jul 2020	7*	4975	247	2*	5*	9*	675	22
06 Jul 2020	7*	4760	247	2*	5*	9*	675	22
07 Jul 2020	6	5085	287	2	4	9	732	24
08 Jul 2020	6	5085	287	2	4	9	732	24
09 Jul 2020	8*	5085	413	3*	3*	13*	1067	36
10 Jul 2020	8*	5085	413	3*	3*	13*	1067	36
11 Jul 2020	8*	5085	400	3*	3*	13*	1117	36
12 Jul 2020	8*	4760	400	3*	3*	13*	1021	36
13 Jul 2020	8*	5085	341	3*	3*	13*	832	36
14 Jul 2020	10	5190	295	2	3	14	1136	24
15 Jul 2020	10	5190	295	2	3	14	1136	24
16 Jul 2020	14*	6152	421	3*	3*	22*	1783	16
17 Jul 2020	14*	6432	421	3*	3*	22*	1783	16
18 Jul 2020	14*	6432	421	3*	3*	22*	1783	17
19 Jul 2020	14*	6688	421	3*	3*	22*	1783	17
20 Jul 2020	14*	6688	421	3*	3*	22*	1783	17
21 Jul 2020	13	5742	295	3	3	44	1012	15
22 Jul 2020	13	5742	295	3	3	44	1012	15
23 Jul 2020	14*	5199	312	3*	3*	27	882	23
24 Jul 2020	14*	5447	312	3*	3*	27	882	23
25 Jul 2020	14*	5199	249	3*	3*	27	733	23
26 Jul 2020	14*	4175	249	3*	3*	27	733	23
27 Jul 2020	14*	3923	227	3*	3*	27	574	23
28 Jul 2020	13	4175	158	3	5	21	551	15
29 Jul 2020	13	3923	106	3	5	21	391	15
30 Jul 2020	9*	3181	67	3*	6*	17	150	9
31 Jul 2020	9*	2353	67	3*	6*	17	150	9

* 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
02 Jul 2020	ns	IC	IC	ns	ns	ns	IC	IC
07 Jul 2020	IC	E	IC	IC	IC	IC	IC	IC
09 Jul 2020	ns	E	E	ns	ns	ns	E	ns
11 Jul 2020	ns	E	IC	ns	ns	ns	E	ns
13 Jul 2020	ns	E	IC	ns	ns	ns	IC	ns
14 Jul 2020	IC	E	IC	IC	IC	IC	IC	IC
16 Jul 2020	ns	IC	ns	ns	ns	ns	ns	ns
17 Jul 2020	ns	E	ns	ns	ns	ns	ns	ns
19 Jul 2020	ns	E	ns	ns	ns	ns	ns	ns
21 Jul 2020	IC	IC	IC	IC	IC	IC	IC	IC
23 Jul 2020	ns	IC	ns	ns	ns	IC	ns	ns
28 Jul 2020	IC	E	IC	IC	IC	IC	IC	IC
30 Jul 2020	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
02 Jul 2020	ns	IC	IC	ns	ns	ns	IC	IC
07 Jul 2020	IC	E	IC	IC	IC	IC	E	IC
09 Jul 2020	ns	E	E	ns	ns	ns	E	ns
11 Jul 2020	ns	E	E	ns	ns	ns	E	ns
13 Jul 2020	ns	E	IC	ns	ns	ns	IC	ns
14 Jul 2020	IC	E	IC	IC	IC	IC	IC	IC
16 Jul 2020	ns	E	ns	ns	ns	ns	ns	ns
17 Jul 2020	ns	E	ns	ns	ns	ns	ns	ns
19 Jul 2020	ns	E	ns	ns	ns	ns	ns	ns
21 Jul 2020	IC	E	IC	IC	IC	E	IC	IC
23 Jul 2020	ns	E	ns	ns	ns	IC	ns	ns
24 Jul 2020	ns	E	ns	ns	ns	ns	ns	ns
26 Jul 2020	ns	IC	ns	ns	ns	ns	ns	ns
28 Jul 2020	IC	E	IC	IC	IC	IC	E	IC
30 Jul 2020	ns	E	ns	ns	ns	ns	IC	ns
31 Jul 2020	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
02 Jul 2020	ns	E	IC	ns	ns	ns	IC	IC
04 Jul 2020	ns	E	ns	ns	ns	ns	ns	ns
06 Jul 2020	ns	E	ns	ns	ns	ns	ns	ns
07 Jul 2020	IC	E	E	IC	IC	IC	E	IC
09 Jul 2020	ns	E	E	ns	ns	ns	E	ns
11 Jul 2020	ns	E	E	ns	ns	ns	E	ns
13 Jul 2020	ns	E	IC	ns	ns	ns	IC	ns
14 Jul 2020	IC	E	IC	IC	IC	IC	IC	IC
16 Jul 2020	ns	E	ns	ns	ns	ns	ns	ns
17 Jul 2020	ns	E	ns	ns	ns	ns	ns	ns
19 Jul 2020	ns	E	ns	ns	ns	ns	ns	ns
21 Jul 2020	IC	E	IC	IC	IC	E	IC	IC
23 Jul 2020	ns	E	ns	ns	ns	IC	ns	ns
24 Jul 2020	ns	E	ns	ns	ns	ns	ns	ns
26 Jul 2020	ns	IC	ns	ns	ns	ns	ns	ns
28 Jul 2020	IC	E	IC	IC	IC	IC	E	IC
30 Jul 2020	ns	E	ns	ns	ns	ns	IC	ns
31 Jul 2020	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
02 Jul 2020	ns	IC	IC	ns	ns	ns	IC	IC
07 Jul 2020	IC	E	E	IC	IC	IC	E	IC
09 Jul 2020	ns	E	E	ns	ns	ns	E	ns
11 Jul 2020	ns	E	IC	ns	ns	ns	E	ns
13 Jul 2020	ns	E	IC	ns	ns	ns	IC	ns
14 Jul 2020	IC	E	IC	IC	IC	IC	IC	IC
16 Jul 2020	ns	E	ns	ns	ns	ns	ns	ns
17 Jul 2020	ns	E	ns	ns	ns	ns	ns	ns
19 Jul 2020	ns	E	ns	ns	ns	ns	ns	ns
21 Jul 2020	IC	E	IC	IC	IC	E	IC	IC
23 Jul 2020	ns	IC	ns	ns	ns	IC	ns	ns
24 Jul 2020	ns	ND	ns	ns	ns	ns	ns	ns
26 Jul 2020	ns	ND	ns	ns	ns	ns	ns	ns
28 Jul 2020	IC	E	IC	IC	IC	IC	IC	IC
30 Jul 2020	ns	IC	ns	ns	ns	ns	ND	ns
31 Jul 2020	ns	ND	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* (Enter) are reported as CFU/100 mL. The fecal:total coliform ratio (F:T) is unitless. Comments follow the data summary.

Station	Date	Time	Total	Fecal	Enter	F:T
S0	07 Jul 2020	1140	3800e	2600e	1100	0.68
S0	14 Jul 2020	1030	2400e	820	480	0.34
S0	21 Jul 2020	1010	>16000	2200e	8400	0.14
S0	28 Jul 2020	1135	240e	16e	30e	0.07
S2	07 Jul 2020	1235	<2	2e	<2	1.00
S2	14 Jul 2020	1130	60e	26e	90	0.43
S2	21 Jul 2020	1110	<20	<2	2e	0.10
S2	28 Jul 2020	1005	<20	<2	4e	0.10
S3	07 Jul 2020	1210	4e	<2	<2	0.50
S3	14 Jul 2020	1100	20e	<2	2e	0.10
S3	21 Jul 2020	1040	<200	4e	14e	0.02
S3	28 Jul 2020	943	140e	8e	24e	0.06
S4	07 Jul 2020	746	80e	10e	4e	0.12
S4	14 Jul 2020	825	<20	10e	18e	0.50
S4	21 Jul 2020	814	20e	6e	8e	0.30
S4	28 Jul 2020	1000	120	8e	10e	0.07
S5	02 Jul 2020	1103	240e	50	220e	0.21
S5	04 Jul 2020	609	ns	ns	>12000	ns
S5	06 Jul 2020	836	ns	ns	2800e	ns
S5	07 Jul 2020	835	>16000	>12000	>12000	0.75
S5	09 Jul 2020	747	>16000	>12000	>12000	0.75
S5	11 Jul 2020	714	>16000	>12000	>12000	0.75
S5	13 Jul 2020	740	>16000	>12000	>12000	0.75
S5	14 Jul 2020	921	>16000	>12000	>12000	0.75
S5	16 Jul 2020	735	4200	960	540	0.23
S5	17 Jul 2020	1101	>16000	>12000	>12000	0.75
S5	19 Jul 2020	642	>16000	>12000	>12000	0.75
S5	21 Jul 2020	852	5000	2600e	500	0.52
S5	23 Jul 2020	1011	9000	600e	1000	0.07
S5	24 Jul 2020	910	ns	>12000	>12000	ns
S5	26 Jul 2020	1142	ns	220e	100	ns
S5	28 Jul 2020	844	>16000	>12000	>12000	0.75
S5	30 Jul 2020	845	6800	600	340e	0.09
S5	31 Jul 2020	1009	ns	4e	14e	ns
S6	02 Jul 2020	1122	<20	4e	6e	0.20
S6	07 Jul 2020	848	1400	180e	960	0.13
S6	09 Jul 2020	807	>16000	2600e	1600e	0.16
S6	11 Jul 2020	731	1000	520	300e	0.52
S6	13 Jul 2020	820	<20	18e	70	0.90
S6	14 Jul 2020	946	<20	2e	60	0.10
S6	21 Jul 2020	916	20e	4e	6e	0.20
S6	28 Jul 2020	905	10e	<2	6e	0.20
S8	07 Jul 2020	945	320e	240e	6e	0.75

Station	Date	Time	Total	Fecal	Enteric	F:T
S8	14 Jul 2020	1044	4e	<2	2e	0.50
S8	21 Jul 2020	1051	<200	2e	4e	0.01
S8	28 Jul 2020	750	<2	<2	<2	1.00
S9	07 Jul 2020	1005	<20	2e	2e	0.10
S9	14 Jul 2020	1114	<20	<2	2e	0.10
S9	21 Jul 2020	1112	<200	<2	4e	0.01
S9	28 Jul 2020	729	4e	2e	68	0.50
S10	07 Jul 2020	753	<20	10e	10e	0.50
S10	14 Jul 2020	810	20e	6e	18e	0.30
S10	21 Jul 2020	805	7000	1000	640	0.14
S10	23 Jul 2020	926	<20	2e	2e	0.10
S10	28 Jul 2020	951	78	6e	6e	0.08
S11	02 Jul 2020	1114	20e	16e	16e	0.80
S11	07 Jul 2020	842	1600	580	1800e	0.36
S11	09 Jul 2020	758	>16000	>12000	11000	0.75
S11	11 Jul 2020	722	>16000	>12000	11000	0.75
S11	13 Jul 2020	804	500	68	88	0.14
S11	14 Jul 2020	938	40e	4e	84	0.10
S11	21 Jul 2020	909	20e	2e	<2	0.10
S11	28 Jul 2020	856	6800	680	380e	0.10
S11	30 Jul 2020	855	ns	2e	2e	ns
S12	02 Jul 2020	1035	80e	6e	68	0.07
S12	07 Jul 2020	858	80e	4e	32e	0.05
S12	14 Jul 2020	1004	<20	<2	2e	0.10
S12	21 Jul 2020	942	<20	2e	8e	0.10
S12	28 Jul 2020	822	20e	2e	2e	0.10

ns = not sampled

ND = no data

Comments

Station	Date	Depth	Parameter	Comments
S5	02 Jul 2020			Resample
S6	02 Jul 2020			Resample
S11	02 Jul 2020			Resample
S12	02 Jul 2020			Resample
S5	04 Jul 2020			Resample
S5	06 Jul 2020			Resample
S5	09 Jul 2020			Resample
S6	09 Jul 2020			Resample
S11	09 Jul 2020			Resample
S5	11 Jul 2020			Resample
S6	11 Jul 2020			Resample
S11	11 Jul 2020			Resample
S5	13 Jul 2020			Resample
S6	13 Jul 2020			Resample
S11	13 Jul 2020			Resample
S5	16 Jul 2020			Resample
S5	17 Jul 2020			Resample
S5	19 Jul 2020			Resample
S5	23 Jul 2020			Resample
S10	23 Jul 2020			Resample
S5	24 Jul 2020			Resample
S5	26 Jul 2020			Resample
S5	30 Jul 2020			Resample
S11	30 Jul 2020			Resample
S5	31 Jul 2020			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 Jul 2020	Arrive Time	1140
S0	07 Jul 2020	Weather	Sunny
S0	07 Jul 2020	Wind Speed (kts)	4.1
S0	07 Jul 2020	Wind Dir	NE
S0	07 Jul 2020	Animal Life	1 Dog; 10 Seagulls
S0	07 Jul 2020	Floatables	None
S0	07 Jul 2020	Water Color	Green
S0	07 Jul 2020	Current Direction	N
S0	07 Jul 2020	Water Temp (C)	15
S0	07 Jul 2020	Wave Height Low (ft)	3
S0	07 Jul 2020	High Tide (ft)	3.9
S0	07 Jul 2020	High Tide Time	1214
S0	07 Jul 2020	Low Tide (ft)	2.2
S0	07 Jul 2020	Low Tide Time	1708
S0	07 Jul 2020	Comments	Kelp; 1 Person; Water clear; 0.5 L/sec water flowing from storm drain
S0	14 Jul 2020	Arrive Time	1030
S0	14 Jul 2020	Weather	Sunny
S0	14 Jul 2020	Wind Speed (kts)	3.6
S0	14 Jul 2020	Wind Dir	NE
S0	14 Jul 2020	Animal Life	2 Dogs; 10 Seagulls
S0	14 Jul 2020	Floatables	None
S0	14 Jul 2020	Water Color	Green
S0	14 Jul 2020	Current Direction	N
S0	14 Jul 2020	Water Temp (C)	16
S0	14 Jul 2020	Wave Height Low (ft)	3
S0	14 Jul 2020	High Tide (ft)	2.9
S0	14 Jul 2020	High Tide Time	535
S0	14 Jul 2020	Low Tide (ft)	2
S0	14 Jul 2020	Low Tide Time	1051
S0	14 Jul 2020	Comments	Kelp; 4 Persons; Water clear; 0.5 L/sec water flowing from storm drain
S0	21 Jul 2020	Arrive Time	1010
S0	21 Jul 2020	Weather	Cloudy
S0	21 Jul 2020	Wind Speed (kts)	1.3
S0	21 Jul 2020	Wind Dir	NE
S0	21 Jul 2020	Animal Life	20 Seagulls
S0	21 Jul 2020	Floatables	None
S0	21 Jul 2020	Water Color	Green
S0	21 Jul 2020	Current Direction	N
S0	21 Jul 2020	Water Temp (C)	15
S0	21 Jul 2020	Wave Height Low (ft)	3
S0	21 Jul 2020	High Tide (ft)	4
S0	21 Jul 2020	High Tide Time	1104
S0	21 Jul 2020	Low Tide (ft)	-1
S0	21 Jul 2020	Low Tide Time	444
S0	21 Jul 2020	Comments	Kelp; Water clear; 0.5 L/sec water flowing from storm drain
S0	28 Jul 2020	Arrive Time	1135

Station	Date	Parameter	Value
S0	28 Jul 2020	Weather	Sunny
S0	28 Jul 2020	Wind Speed (kts)	3.8
S0	28 Jul 2020	Wind Dir	NE
S0	28 Jul 2020	Animal Life	5 Seagulls
S0	28 Jul 2020	Floatables	None
S0	28 Jul 2020	Water Color	Green
S0	28 Jul 2020	Current Direction	N
S0	28 Jul 2020	Water Temp (C)	18
S0	28 Jul 2020	Wave Height Low (ft)	3
S0	28 Jul 2020	High Tide (ft)	5.4
S0	28 Jul 2020	High Tide Time	1652
S0	28 Jul 2020	Low Tide (ft)	1.7
S0	28 Jul 2020	Low Tide Time	1007
S0	28 Jul 2020	Comments	Kelp; Water clear; 0.5 L/sec water flowing from storm drain
S2	07 Jul 2020	Arrive Time	1235
S2	07 Jul 2020	Weather	Sunny
S2	07 Jul 2020	Wind Speed (kts)	4.3
S2	07 Jul 2020	Wind Dir	NE
S2	07 Jul 2020	Animal Life	10 Seagulls
S2	07 Jul 2020	Floatables	None
S2	07 Jul 2020	Water Color	Green
S2	07 Jul 2020	Current Direction	N
S2	07 Jul 2020	Water Temp (C)	15
S2	07 Jul 2020	Wave Height Low (ft)	3
S2	07 Jul 2020	High Tide (ft)	3.9
S2	07 Jul 2020	High Tide Time	1214
S2	07 Jul 2020	Low Tide (ft)	2.2
S2	07 Jul 2020	Low Tide Time	1708
S2	07 Jul 2020	Comments	Kelp; 3 Persons; Water clear; No flow from storm drain
S2	14 Jul 2020	Arrive Time	1130
S2	14 Jul 2020	Weather	Sunny
S2	14 Jul 2020	Wind Speed (kts)	3.9
S2	14 Jul 2020	Wind Dir	NE
S2	14 Jul 2020	Animal Life	10 Seagulls
S2	14 Jul 2020	Floatables	None
S2	14 Jul 2020	Water Color	Green
S2	14 Jul 2020	Current Direction	N
S2	14 Jul 2020	Water Temp (C)	16
S2	14 Jul 2020	Wave Height Low (ft)	3
S2	14 Jul 2020	High Tide (ft)	2.9
S2	14 Jul 2020	High Tide Time	535
S2	14 Jul 2020	Low Tide (ft)	2
S2	14 Jul 2020	Low Tide Time	1051
S2	14 Jul 2020	Comments	Kelp; 5 Persons; Water clear; No flow from storm drain
S2	21 Jul 2020	Arrive Time	1110
S2	21 Jul 2020	Weather	Cloudy
S2	21 Jul 2020	Wind Speed (kts)	1.4
S2	21 Jul 2020	Wind Dir	NE
S2	21 Jul 2020	Animal Life	2 Dogs; 10 Seagulls
S2	21 Jul 2020	Floatables	None
S2	21 Jul 2020	Water Color	Green
S2	21 Jul 2020	Current Direction	N

Station	Date	Parameter	Value
S2	21 Jul 2020	Water Temp (C)	15
S2	21 Jul 2020	Wave Height Low (ft)	3
S2	21 Jul 2020	High Tide (ft)	4
S2	21 Jul 2020	High Tide Time	1104
S2	21 Jul 2020	Low Tide (ft)	1.9
S2	21 Jul 2020	Low Tide Time	1603
S2	21 Jul 2020	Comments	Kelp; 5 Persons; Water clear; No flow from storm drain
S2	28 Jul 2020	Arrive Time	1005
S2	28 Jul 2020	Weather	Cloudy
S2	28 Jul 2020	Wind Speed (kts)	1
S2	28 Jul 2020	Wind Dir	NE
S2	28 Jul 2020	Animal Life	1 Dog; 10 Seagulls
S2	28 Jul 2020	Floatables	None
S2	28 Jul 2020	Water Color	Green
S2	28 Jul 2020	Current Direction	N
S2	28 Jul 2020	Water Temp (C)	18
S2	28 Jul 2020	Wave Height Low (ft)	3
S2	28 Jul 2020	High Tide (ft)	3.3
S2	28 Jul 2020	High Tide Time	441
S2	28 Jul 2020	Low Tide (ft)	1.7
S2	28 Jul 2020	Low Tide Time	1007
S2	28 Jul 2020	Comments	Kelp; 6 Persons; Water clear; No flow from storm drain
S3	07 Jul 2020	Arrive Time	1210
S3	07 Jul 2020	Weather	Sunny
S3	07 Jul 2020	Wind Speed (kts)	4.5
S3	07 Jul 2020	Wind Dir	NE
S3	07 Jul 2020	Animal Life	10 Seagulls
S3	07 Jul 2020	Floatables	None
S3	07 Jul 2020	Water Color	Green
S3	07 Jul 2020	Current Direction	N
S3	07 Jul 2020	Water Temp (C)	15
S3	07 Jul 2020	Wave Height Low (ft)	3
S3	07 Jul 2020	High Tide (ft)	3.9
S3	07 Jul 2020	High Tide Time	1214
S3	07 Jul 2020	Low Tide (ft)	2.2
S3	07 Jul 2020	Low Tide Time	1708
S3	07 Jul 2020	Comments	Kelp; 3 Persons; Water clear; No flow from storm drain
S3	14 Jul 2020	Arrive Time	1100
S3	14 Jul 2020	Weather	Sunny
S3	14 Jul 2020	Wind Speed (kts)	4.1
S3	14 Jul 2020	Wind Dir	NE
S3	14 Jul 2020	Animal Life	10 Seagulls
S3	14 Jul 2020	Floatables	None
S3	14 Jul 2020	Water Color	Green
S3	14 Jul 2020	Current Direction	N
S3	14 Jul 2020	Water Temp (C)	16
S3	14 Jul 2020	Wave Height Low (ft)	3
S3	14 Jul 2020	High Tide (ft)	2.9
S3	14 Jul 2020	High Tide Time	535
S3	14 Jul 2020	Low Tide (ft)	2
S3	14 Jul 2020	Low Tide Time	1051
S3	14 Jul 2020	Comments	Kelp; Water clear; No flow from storm drain

Station	Date	Parameter	Value
S3	21 Jul 2020	Arrive Time	1040
S3	21 Jul 2020	Weather	Cloudy
S3	21 Jul 2020	Wind Speed (kts)	1.2
S3	21 Jul 2020	Wind Dir	NE
S3	21 Jul 2020	Animal Life	10 Seagulls
S3	21 Jul 2020	Floatables	None
S3	21 Jul 2020	Water Color	Green
S3	21 Jul 2020	Current Direction	N
S3	21 Jul 2020	Water Temp (C)	15
S3	21 Jul 2020	Wave Height Low (ft)	3
S3	21 Jul 2020	High Tide (ft)	4
S3	21 Jul 2020	High Tide Time	1104
S3	21 Jul 2020	Low Tide (ft)	1.9
S3	21 Jul 2020	Low Tide Time	1603
S3	21 Jul 2020	Comments	Kelp; Water clear; No flow from storm drain
S3	28 Jul 2020	Arrive Time	943
S3	28 Jul 2020	Weather	Cloudy
S3	28 Jul 2020	Wind Speed (kts)	0.6
S3	28 Jul 2020	Wind Dir	NE
S3	28 Jul 2020	Animal Life	1 Dog
S3	28 Jul 2020	Floatables	None
S3	28 Jul 2020	Water Color	Green
S3	28 Jul 2020	Current Direction	N
S3	28 Jul 2020	Water Temp (C)	18
S3	28 Jul 2020	Wave Height Low (ft)	3
S3	28 Jul 2020	High Tide (ft)	3.3
S3	28 Jul 2020	High Tide Time	441
S3	28 Jul 2020	Low Tide (ft)	1.7
S3	28 Jul 2020	Low Tide Time	1007
S3	28 Jul 2020	Comments	Kelp; 4 Persons; Water clear; No flow from storm drain
S4	07 Jul 2020	Arrive Time	746
S4	07 Jul 2020	Weather	Overcast
S4	07 Jul 2020	Wind Speed (kts)	1.3
S4	07 Jul 2020	Wind Dir	W
S4	07 Jul 2020	Animal Life	40 Cormorants; 2 Godwits; 30 Seagulls; 2 Stingray
S4	07 Jul 2020	Floatables	None
S4	07 Jul 2020	Water Color	Green
S4	07 Jul 2020	Current Direction	N
S4	07 Jul 2020	Water Temp (C)	19.2
S4	07 Jul 2020	Wave Height Low (ft)	3
S4	07 Jul 2020	High Tide (ft)	3.9
S4	07 Jul 2020	High Tide Time	1214
S4	07 Jul 2020	Low Tide (ft)	-0.8
S4	07 Jul 2020	Low Tide Time	547
S4	07 Jul 2020	Comments	Kelp; Seagrass; Sewage-like odor; Water clear
S4	14 Jul 2020	Arrive Time	825
S4	14 Jul 2020	Weather	Cloudy
S4	14 Jul 2020	Wind Speed (kts)	3.4
S4	14 Jul 2020	Wind Dir	SW
S4	14 Jul 2020	Animal Life	33 Godwits; 12 Seagulls; 2 Terns
S4	14 Jul 2020	Floatables	None

Station	Date	Parameter	Value
S4	14 Jul 2020	Water Color	Blue
S4	14 Jul 2020	Current Direction	S
S4	14 Jul 2020	Water Temp (C)	20.8
S4	14 Jul 2020	Wave Height Low (ft)	2
S4	14 Jul 2020	High Tide (ft)	2.9
S4	14 Jul 2020	High Tide Time	535
S4	14 Jul 2020	Low Tide (ft)	2
S4	14 Jul 2020	Low Tide Time	1051
S4	14 Jul 2020	Comments	Kelp; Water clear
S4	21 Jul 2020	Arrive Time	814
S4	21 Jul 2020	Weather	Overcast
S4	21 Jul 2020	Wind Speed (kts)	2.5
S4	21 Jul 2020	Wind Dir	W
S4	21 Jul 2020	Animal Life	35 Godwits; 23 Pelicans; 200 Seagulls
S4	21 Jul 2020	Floatables	Foam
S4	21 Jul 2020	Water Color	Green
S4	21 Jul 2020	Current Direction	N
S4	21 Jul 2020	Water Temp (C)	15.8
S4	21 Jul 2020	Wave Height Low (ft)	3
S4	21 Jul 2020	High Tide (ft)	4
S4	21 Jul 2020	High Tide Time	1104
S4	21 Jul 2020	Low Tide (ft)	-1
S4	21 Jul 2020	Low Tide Time	444
S4	21 Jul 2020	Comments	Kelp; Seagrass; Debris; Water clear
S4	28 Jul 2020	Arrive Time	1000
S4	28 Jul 2020	Weather	Overcast
S4	28 Jul 2020	Wind Speed (kts)	2.3
S4	28 Jul 2020	Wind Dir	W
S4	28 Jul 2020	Animal Life	70 Godwits; 3 Pelicans; 25 Seagulls; 30 Terns
S4	28 Jul 2020	Floatables	Foam
S4	28 Jul 2020	Water Color	Green
S4	28 Jul 2020	Current Direction	S
S4	28 Jul 2020	Water Temp (C)	16.6
S4	28 Jul 2020	Wave Height Low (ft)	2
S4	28 Jul 2020	High Tide (ft)	3.3
S4	28 Jul 2020	High Tide Time	441
S4	28 Jul 2020	Low Tide (ft)	1.7
S4	28 Jul 2020	Low Tide Time	1007
S4	28 Jul 2020	Comments	Kelp; Seagrass; Water clear
S5	02 Jul 2020	Arrive Time	1103
S5	02 Jul 2020	Weather	Sunny
S5	02 Jul 2020	Wind Speed (kts)	6.9
S5	02 Jul 2020	Wind Dir	NW
S5	02 Jul 2020	Animal Life	4 Terns
S5	02 Jul 2020	Floatables	None
S5	02 Jul 2020	Water Color	Green
S5	02 Jul 2020	Current Direction	N
S5	02 Jul 2020	Water Temp (C)	22.6
S5	02 Jul 2020	Wave Height Low (ft)	2
S5	02 Jul 2020	High Tide (ft)	3.7
S5	02 Jul 2020	High Tide Time	823
S5	02 Jul 2020	Low Tide (ft)	1.7

Station	Date	Parameter	Value
S5	02 Jul 2020	Low Tide Time	1323
S5	02 Jul 2020	Comments	Resample; Kelp; Sewage-like odor; Water turbid
S5	04 Jul 2020	Arrive Time	609
S5	04 Jul 2020	Weather	Hazy
S5	04 Jul 2020	Wind Speed (kts)	0
S5	04 Jul 2020	Wind Dir	
S5	04 Jul 2020	Animal Life	1 Godwit; 1 Tern
S5	04 Jul 2020	Floatables	Foam; Film
S5	04 Jul 2020	Water Color	Green
S5	04 Jul 2020	Current Direction	N
S5	04 Jul 2020	Water Temp (C)	20
S5	04 Jul 2020	Wave Height Low (ft)	5
S5	04 Jul 2020	High Tide (ft)	3.9
S5	04 Jul 2020	High Tide Time	1005
S5	04 Jul 2020	Low Tide (ft)	-1.2
S5	04 Jul 2020	Low Tide Time	345
S5	04 Jul 2020	Comments	Resample; Kelp; Seagrass; Algae; Debris; Sewage-like odor; Water turbid
S5	06 Jul 2020	Arrive Time	836
S5	06 Jul 2020	Weather	Foggy
S5	06 Jul 2020	Wind Speed (kts)	2.9
S5	06 Jul 2020	Wind Dir	NW
S5	06 Jul 2020	Animal Life	1 Godwit; 5 Seagulls
S5	06 Jul 2020	Floatables	None
S5	06 Jul 2020	Water Color	Blue
S5	06 Jul 2020	Current Direction	N
S5	06 Jul 2020	Water Temp (C)	18.2
S5	06 Jul 2020	Wave Height Low (ft)	1
S5	06 Jul 2020	High Tide (ft)	3.9
S5	06 Jul 2020	High Tide Time	1132
S5	06 Jul 2020	Low Tide (ft)	-1.1
S5	06 Jul 2020	Low Tide Time	508
S5	06 Jul 2020	Comments	Resample; Kelp; 1 Person; Water clear
S5	07 Jul 2020	Arrive Time	835
S5	07 Jul 2020	Weather	Partly Cloudy
S5	07 Jul 2020	Wind Speed (kts)	1.7
S5	07 Jul 2020	Wind Dir	W
S5	07 Jul 2020	Animal Life	None
S5	07 Jul 2020	Floatables	Foam; Film
S5	07 Jul 2020	Water Color	Green
S5	07 Jul 2020	Current Direction	N
S5	07 Jul 2020	Water Temp (C)	22.1
S5	07 Jul 2020	Wave Height Low (ft)	2
S5	07 Jul 2020	High Tide (ft)	3.9
S5	07 Jul 2020	High Tide Time	1214
S5	07 Jul 2020	Low Tide (ft)	-0.8
S5	07 Jul 2020	Low Tide Time	547
S5	07 Jul 2020	Comments	Kelp; Seagrass; Debris; Sewage-like odor; 2 Persons; Water clear
S5	09 Jul 2020	Arrive Time	747
S5	09 Jul 2020	Weather	Cloudy
S5	09 Jul 2020	Wind Speed (kts)	3.1

Station	Date	Parameter	Value
S5	09 Jul 2020	Wind Dir	E
S5	09 Jul 2020	Animal Life	1 Dog; 1 Godwit; 12 Pelicans; 3 Terns
S5	09 Jul 2020	Floatables	Foam; Film
S5	09 Jul 2020	Water Color	Green
S5	09 Jul 2020	Current Direction	S
S5	09 Jul 2020	Water Temp (C)	22.3
S5	09 Jul 2020	Wave Height Low (ft)	2
S5	09 Jul 2020	High Tide (ft)	3.9
S5	09 Jul 2020	High Tide Time	1342
S5	09 Jul 2020	Low Tide (ft)	0
S5	09 Jul 2020	Low Tide Time	706
S5	09 Jul 2020	Comments	Resample; Kelp; Seagrass; Algae; Debris; 5 Persons; Water turbid
S5	11 Jul 2020	Arrive Time	714
S5	11 Jul 2020	Weather	Sunny
S5	11 Jul 2020	Wind Speed (kts)	3.1
S5	11 Jul 2020	Wind Dir	N
S5	11 Jul 2020	Animal Life	3 Godwits; 12 Pelicans; 40 Seagulls
S5	11 Jul 2020	Floatables	Foam; Film
S5	11 Jul 2020	Water Color	Brown
S5	11 Jul 2020	Current Direction	S
S5	11 Jul 2020	Water Temp (C)	23
S5	11 Jul 2020	Wave Height Low (ft)	1
S5	11 Jul 2020	High Tide (ft)	4
S5	11 Jul 2020	High Tide Time	122
S5	11 Jul 2020	Low Tide (ft)	0.9
S5	11 Jul 2020	Low Tide Time	827
S5	11 Jul 2020	Comments	Resample; Kelp; Seagrass; Debris; Sewage-like odor; 3 Persons; Water clear
S5	13 Jul 2020	Arrive Time	740
S5	13 Jul 2020	Weather	Cloudy
S5	13 Jul 2020	Wind Speed (kts)	4
S5	13 Jul 2020	Wind Dir	SW
S5	13 Jul 2020	Animal Life	3 Godwits; 27 Pelicans; 200 Plovers; 31 Seagulls; 86 Terns; 4 Egret
S5	13 Jul 2020	Floatables	Foam
S5	13 Jul 2020	Water Color	Brown
S5	13 Jul 2020	Current Direction	N
S5	13 Jul 2020	Water Temp (C)	22.9
S5	13 Jul 2020	Wave Height Low (ft)	1
S5	13 Jul 2020	High Tide (ft)	3.1
S5	13 Jul 2020	High Tide Time	358
S5	13 Jul 2020	Low Tide (ft)	1.7
S5	13 Jul 2020	Low Tide Time	959
S5	13 Jul 2020	Comments	Resample; Kelp; Sewage-like odor; 4 Persons; Water turbid
S5	14 Jul 2020	Arrive Time	921
S5	14 Jul 2020	Weather	Cloudy
S5	14 Jul 2020	Wind Speed (kts)	7.7
S5	14 Jul 2020	Wind Dir	NW
S5	14 Jul 2020	Animal Life	1 Cormorant; 3 Godwits; 2 Grebes; 1 Pelican; 6 Terns
S5	14 Jul 2020	Floatables	None
S5	14 Jul 2020	Water Color	Brown
S5	14 Jul 2020	Current Direction	S
S5	14 Jul 2020	Water Temp (C)	24

Station	Date	Parameter	Value
S5	14 Jul 2020	Wave Height Low (ft)	1
S5	14 Jul 2020	High Tide (ft)	2.9
S5	14 Jul 2020	High Tide Time	535
S5	14 Jul 2020	Low Tide (ft)	2
S5	14 Jul 2020	Low Tide Time	1051
S5	14 Jul 2020	Comments	Kelp; Seagrass; Sewage-like odor; 3 Persons; Water turbid
S5	16 Jul 2020	Arrive Time	735
S5	16 Jul 2020	Weather	Overcast
S5	16 Jul 2020	Wind Speed (kts)	1.7
S5	16 Jul 2020	Wind Dir	W
S5	16 Jul 2020	Animal Life	7 Godwits; 12 Pelicans; 10 Terns
S5	16 Jul 2020	Floatables	Foam; Film
S5	16 Jul 2020	Water Color	Brown
S5	16 Jul 2020	Current Direction	N
S5	16 Jul 2020	Water Temp (C)	18.6
S5	16 Jul 2020	Wave Height Low (ft)	1
S5	16 Jul 2020	High Tide (ft)	3.2
S5	16 Jul 2020	High Tide Time	755
S5	16 Jul 2020	Low Tide (ft)	2.2
S5	16 Jul 2020	Low Tide Time	1232
S5	16 Jul 2020	Comments	Resample; Kelp; Seagrass; Debris; Sewage-like odor; 1 Person; Water clear
S5	17 Jul 2020	Arrive Time	1101
S5	17 Jul 2020	Weather	Sunny
S5	17 Jul 2020	Wind Speed (kts)	4.2
S5	17 Jul 2020	Wind Dir	W
S5	17 Jul 2020	Animal Life	2 Dogs; 1 Seagull; 11 Terns
S5	17 Jul 2020	Floatables	Foam
S5	17 Jul 2020	Water Color	Green
S5	17 Jul 2020	Current Direction	S
S5	17 Jul 2020	Water Temp (C)	22.1
S5	17 Jul 2020	Wave Height Low (ft)	1
S5	17 Jul 2020	High Tide (ft)	3.4
S5	17 Jul 2020	High Tide Time	838
S5	17 Jul 2020	Low Tide (ft)	2.2
S5	17 Jul 2020	Low Tide Time	1316
S5	17 Jul 2020	Comments	Resample; Kelp; Seagrass; Sewage-like odor; 2 Persons; Water clear; Detergent odor
S5	19 Jul 2020	Arrive Time	642
S5	19 Jul 2020	Weather	Overcast
S5	19 Jul 2020	Wind Speed (kts)	6.4
S5	19 Jul 2020	Wind Dir	N
S5	19 Jul 2020	Animal Life	4 Godwits; 60 Pelicans; 50 Seagulls
S5	19 Jul 2020	Floatables	Foam; Film
S5	19 Jul 2020	Water Color	Green
S5	19 Jul 2020	Current Direction	S
S5	19 Jul 2020	Water Temp (C)	17.6
S5	19 Jul 2020	Wave Height Low (ft)	1
S5	19 Jul 2020	High Tide (ft)	3.8
S5	19 Jul 2020	High Tide Time	951
S5	19 Jul 2020	Low Tide (ft)	-0.7
S5	19 Jul 2020	Low Tide Time	330

Station	Date	Parameter	Value
S5	19 Jul 2020	Comments	Resample; Kelp; Seagrass; Debris; Sewage-like odor; 1 Person; Water clear
S5	21 Jul 2020	Arrive Time	852
S5	21 Jul 2020	Weather	Cloudy
S5	21 Jul 2020	Wind Speed (kts)	1.9
S5	21 Jul 2020	Wind Dir	W
S5	21 Jul 2020	Animal Life	1 Dog; 5 Dolphins; 3 Godwits; 40 Pelicans; 45 Seagulls
S5	21 Jul 2020	Floatables	Foam
S5	21 Jul 2020	Water Color	Green
S5	21 Jul 2020	Current Direction	S
S5	21 Jul 2020	Water Temp (C)	18
S5	21 Jul 2020	Wave Height Low (ft)	2
S5	21 Jul 2020	High Tide (ft)	4
S5	21 Jul 2020	High Tide Time	1104
S5	21 Jul 2020	Low Tide (ft)	-1
S5	21 Jul 2020	Low Tide Time	444
S5	21 Jul 2020	Comments	Kelp; Seagrass; Algae; 1 Jogger; 2 Persons; Water clear
S5	23 Jul 2020	Arrive Time	1011
S5	23 Jul 2020	Weather	Cloudy
S5	23 Jul 2020	Wind Speed (kts)	3.3
S5	23 Jul 2020	Wind Dir	NW
S5	23 Jul 2020	Animal Life	1 Dolphin; 37 Pelicans; 20 Seagulls; 1 Seal
S5	23 Jul 2020	Floatables	None
S5	23 Jul 2020	Water Color	Green
S5	23 Jul 2020	Current Direction	S
S5	23 Jul 2020	Water Temp (C)	18.5
S5	23 Jul 2020	Wave Height Low (ft)	1
S5	23 Jul 2020	High Tide (ft)	4.3
S5	23 Jul 2020	High Tide Time	1225
S5	23 Jul 2020	Low Tide (ft)	-0.8
S5	23 Jul 2020	Low Tide Time	601
S5	23 Jul 2020	Comments	Resample; Kelp; Seagrass; 1 Person; Water clear
S5	24 Jul 2020	Arrive Time	910
S5	24 Jul 2020	Weather	Overcast
S5	24 Jul 2020	Wind Speed (kts)	3.3
S5	24 Jul 2020	Wind Dir	W
S5	24 Jul 2020	Animal Life	8 Godwits; 120 Pelicans; 16 Seagulls
S5	24 Jul 2020	Floatables	Foam
S5	24 Jul 2020	Water Color	Green
S5	24 Jul 2020	Current Direction	S
S5	24 Jul 2020	Water Temp (C)	18.2
S5	24 Jul 2020	Wave Height Low (ft)	1
S5	24 Jul 2020	High Tide (ft)	4.4
S5	24 Jul 2020	High Tide Time	1310
S5	24 Jul 2020	Low Tide (ft)	-0.4
S5	24 Jul 2020	Low Tide Time	642
S5	24 Jul 2020	Comments	Resample; Kelp; Seagrass; Sewage-like odor; 1 Jogger; 2 Persons; Water clear
S5	26 Jul 2020	Arrive Time	1142
S5	26 Jul 2020	Weather	Sunny
S5	26 Jul 2020	Wind Speed (kts)	7.7

Station	Date	Parameter	Value
S5	26 Jul 2020	Wind Dir	NW
S5	26 Jul 2020	Animal Life	1 Dog; 3 Fish; 2 Godwits; 1 Pelican; 6 Terns
S5	26 Jul 2020	Floatables	None
S5	26 Jul 2020	Water Color	Green
S5	26 Jul 2020	Current Direction	S
S5	26 Jul 2020	Water Temp (C)	21.6
S5	26 Jul 2020	Wave Height Low (ft)	1
S5	26 Jul 2020	High Tide (ft)	4.9
S5	26 Jul 2020	High Tide Time	1453
S5	26 Jul 2020	Low Tide (ft)	0.7
S5	26 Jul 2020	Low Tide Time	811
S5	26 Jul 2020	Comments	Resample; Kelp; 3 Persons; Water clear
S5	28 Jul 2020	Arrive Time	844
S5	28 Jul 2020	Weather	Overcast
S5	28 Jul 2020	Wind Speed (kts)	2.5
S5	28 Jul 2020	Wind Dir	NW
S5	28 Jul 2020	Animal Life	14 Godwits; 7 Pelicans; 10 Seagulls
S5	28 Jul 2020	Floatables	Foam; Film
S5	28 Jul 2020	Water Color	Brown
S5	28 Jul 2020	Current Direction	S
S5	28 Jul 2020	Water Temp (C)	20.3
S5	28 Jul 2020	Wave Height Low (ft)	1
S5	28 Jul 2020	High Tide (ft)	3.3
S5	28 Jul 2020	High Tide Time	441
S5	28 Jul 2020	Low Tide (ft)	1.7
S5	28 Jul 2020	Low Tide Time	1007
S5	28 Jul 2020	Comments	Kelp; Seagrass; Algae; Sewage-like odor; 4 Persons; Water turbid
S5	30 Jul 2020	Arrive Time	845
S5	30 Jul 2020	Weather	Foggy
S5	30 Jul 2020	Wind Speed (kts)	5.6
S5	30 Jul 2020	Wind Dir	N
S5	30 Jul 2020	Animal Life	1 Godwit; 5 Seagulls; 1 Seal
S5	30 Jul 2020	Floatables	None
S5	30 Jul 2020	Water Color	Green
S5	30 Jul 2020	Current Direction	S
S5	30 Jul 2020	Water Temp (C)	15.7
S5	30 Jul 2020	Wave Height Low (ft)	1
S5	30 Jul 2020	High Tide (ft)	3.5
S5	30 Jul 2020	High Tide Time	741
S5	30 Jul 2020	Low Tide (ft)	2.2
S5	30 Jul 2020	Low Tide Time	1222
S5	30 Jul 2020	Comments	Resample; Kelp; Seagrass; Debris; 11 Persons; Water clear
S5	31 Jul 2020	Arrive Time	1009
S5	31 Jul 2020	Weather	Sunny
S5	31 Jul 2020	Wind Speed (kts)	3.4
S5	31 Jul 2020	Wind Dir	N
S5	31 Jul 2020	Animal Life	1 Cormorant; 1 Godwit; 10 Seagulls; 1 Stingray
S5	31 Jul 2020	Floatables	Foam
S5	31 Jul 2020	Water Color	Green
S5	31 Jul 2020	Current Direction	S
S5	31 Jul 2020	Water Temp (C)	17.1
S5	31 Jul 2020	Wave Height Low (ft)	1

Station	Date	Parameter	Value
S5	31 Jul 2020	High Tide (ft)	3.7
S5	31 Jul 2020	High Tide Time	835
S5	31 Jul 2020	Low Tide (ft)	2.1
S5	31 Jul 2020	Low Tide Time	1319
S5	31 Jul 2020	Comments	Resample; Kelp; Seagrass; Debris; Water clear
S6	02 Jul 2020	Arrive Time	1122
S6	02 Jul 2020	Weather	Sunny
S6	02 Jul 2020	Wind Speed (kts)	5
S6	02 Jul 2020	Wind Dir	W
S6	02 Jul 2020	Animal Life	14 Terns
S6	02 Jul 2020	Floatables	None
S6	02 Jul 2020	Water Color	Green
S6	02 Jul 2020	Current Direction	N
S6	02 Jul 2020	Water Temp (C)	21.2
S6	02 Jul 2020	Wave Height Low (ft)	2
S6	02 Jul 2020	High Tide (ft)	3.7
S6	02 Jul 2020	High Tide Time	823
S6	02 Jul 2020	Low Tide (ft)	1.7
S6	02 Jul 2020	Low Tide Time	1323
S6	02 Jul 2020	Comments	Resample; Kelp; 2 Persons; 3 Surfers; Water clear
S6	07 Jul 2020	Arrive Time	848
S6	07 Jul 2020	Weather	Overcast
S6	07 Jul 2020	Wind Speed (kts)	1.1
S6	07 Jul 2020	Wind Dir	W
S6	07 Jul 2020	Animal Life	1 Dog
S6	07 Jul 2020	Floatables	Foam; Film
S6	07 Jul 2020	Water Color	Green
S6	07 Jul 2020	Current Direction	N
S6	07 Jul 2020	Water Temp (C)	21
S6	07 Jul 2020	Wave Height Low (ft)	3
S6	07 Jul 2020	High Tide (ft)	3.9
S6	07 Jul 2020	High Tide Time	1214
S6	07 Jul 2020	Low Tide (ft)	-0.8
S6	07 Jul 2020	Low Tide Time	547
S6	07 Jul 2020	Comments	Kelp; Seagrass; Debris; 3 Joggers; 2 Persons; 1 Surfer; Water clear
S6	09 Jul 2020	Arrive Time	807
S6	09 Jul 2020	Weather	Partly Cloudy
S6	09 Jul 2020	Wind Speed (kts)	2.3
S6	09 Jul 2020	Wind Dir	W
S6	09 Jul 2020	Animal Life	1 Godwit
S6	09 Jul 2020	Floatables	None
S6	09 Jul 2020	Water Color	Green
S6	09 Jul 2020	Current Direction	S
S6	09 Jul 2020	Water Temp (C)	21.5
S6	09 Jul 2020	Wave Height Low (ft)	3
S6	09 Jul 2020	High Tide (ft)	3.9
S6	09 Jul 2020	High Tide Time	1342
S6	09 Jul 2020	Low Tide (ft)	0
S6	09 Jul 2020	Low Tide Time	706
S6	09 Jul 2020	Comments	Resample; Kelp; Seagrass; 2 Persons; Water clear

Station	Date	Parameter	Value
S6	11 Jul 2020	Arrive Time	731
S6	11 Jul 2020	Weather	Sunny
S6	11 Jul 2020	Wind Speed (kts)	2.1
S6	11 Jul 2020	Wind Dir	NW
S6	11 Jul 2020	Animal Life	1 Dog; 3 Godwits
S6	11 Jul 2020	Floatables	Foam; Film
S6	11 Jul 2020	Water Color	Green
S6	11 Jul 2020	Current Direction	S
S6	11 Jul 2020	Water Temp (C)	20.7
S6	11 Jul 2020	Wave Height Low (ft)	1
S6	11 Jul 2020	High Tide (ft)	4
S6	11 Jul 2020	High Tide Time	122
S6	11 Jul 2020	Low Tide (ft)	0.9
S6	11 Jul 2020	Low Tide Time	827
S6	11 Jul 2020	Comments	Resample; Kelp; Seagrass; Debris; 3 Persons; Water clear
S6	13 Jul 2020	Arrive Time	820
S6	13 Jul 2020	Weather	Cloudy
S6	13 Jul 2020	Wind Speed (kts)	6.2
S6	13 Jul 2020	Wind Dir	SW
S6	13 Jul 2020	Animal Life	5 Godwits; 2 Pelicans; 1 Seagull
S6	13 Jul 2020	Floatables	None
S6	13 Jul 2020	Water Color	Blue
S6	13 Jul 2020	Current Direction	N
S6	13 Jul 2020	Water Temp (C)	22
S6	13 Jul 2020	Wave Height Low (ft)	2
S6	13 Jul 2020	High Tide (ft)	3.1
S6	13 Jul 2020	High Tide Time	358
S6	13 Jul 2020	Low Tide (ft)	1.7
S6	13 Jul 2020	Low Tide Time	959
S6	13 Jul 2020	Comments	Resample; Kelp; 2 Persons; Water clear
S6	14 Jul 2020	Arrive Time	946
S6	14 Jul 2020	Weather	Sunny
S6	14 Jul 2020	Wind Speed (kts)	5.4
S6	14 Jul 2020	Wind Dir	NW
S6	14 Jul 2020	Animal Life	1 Dog; 3 Godwits; 6 Terns
S6	14 Jul 2020	Floatables	None
S6	14 Jul 2020	Water Color	Green
S6	14 Jul 2020	Current Direction	S
S6	14 Jul 2020	Water Temp (C)	21.6
S6	14 Jul 2020	Wave Height Low (ft)	2
S6	14 Jul 2020	High Tide (ft)	2.9
S6	14 Jul 2020	High Tide Time	535
S6	14 Jul 2020	Low Tide (ft)	2
S6	14 Jul 2020	Low Tide Time	1051
S6	14 Jul 2020	Comments	Kelp; 1 Jogger; 2 Persons; Water clear
S6	21 Jul 2020	Arrive Time	916
S6	21 Jul 2020	Weather	Cloudy
S6	21 Jul 2020	Wind Speed (kts)	1.7
S6	21 Jul 2020	Wind Dir	W
S6	21 Jul 2020	Animal Life	2 Dogs
S6	21 Jul 2020	Floatables	Foam; Film
S6	21 Jul 2020	Water Color	Green

Station	Date	Parameter	Value
S6	21 Jul 2020	Current Direction	N
S6	21 Jul 2020	Water Temp (C)	15
S6	21 Jul 2020	Wave Height Low (ft)	3
S6	21 Jul 2020	High Tide (ft)	4
S6	21 Jul 2020	High Tide Time	1104
S6	21 Jul 2020	Low Tide (ft)	-1
S6	21 Jul 2020	Low Tide Time	444
S6	21 Jul 2020	Comments	Kelp; Seagrass; Algae; 2 Persons; 4 Surfers; Water clear
S6	28 Jul 2020	Arrive Time	905
S6	28 Jul 2020	Weather	Overcast
S6	28 Jul 2020	Wind Speed (kts)	2.7
S6	28 Jul 2020	Wind Dir	NW
S6	28 Jul 2020	Animal Life	None
S6	28 Jul 2020	Floatables	Foam
S6	28 Jul 2020	Water Color	Green
S6	28 Jul 2020	Current Direction	S
S6	28 Jul 2020	Water Temp (C)	16.8
S6	28 Jul 2020	Wave Height Low (ft)	1
S6	28 Jul 2020	High Tide (ft)	3.3
S6	28 Jul 2020	High Tide Time	441
S6	28 Jul 2020	Low Tide (ft)	1.7
S6	28 Jul 2020	Low Tide Time	1007
S6	28 Jul 2020	Comments	Kelp; Seagrass; Debris; 14 Persons; Water clear
S8	07 Jul 2020	Arrive Time	945
S8	07 Jul 2020	Weather	Partly Cloudy
S8	07 Jul 2020	Wind Speed (kts)	3.6
S8	07 Jul 2020	Wind Dir	W
S8	07 Jul 2020	Animal Life	1 Seagull
S8	07 Jul 2020	Floatables	Foam; Film
S8	07 Jul 2020	Water Color	Green
S8	07 Jul 2020	Current Direction	N
S8	07 Jul 2020	Water Temp (C)	21.9
S8	07 Jul 2020	Wave Height Low (ft)	3
S8	07 Jul 2020	High Tide (ft)	3.9
S8	07 Jul 2020	High Tide Time	1214
S8	07 Jul 2020	Low Tide (ft)	-0.8
S8	07 Jul 2020	Low Tide Time	547
S8	07 Jul 2020	Comments	Kelp; Seagrass; 9 Persons; 7 Swimmers; Water clear
S8	14 Jul 2020	Arrive Time	1044
S8	14 Jul 2020	Weather	Sunny
S8	14 Jul 2020	Wind Speed (kts)	6.2
S8	14 Jul 2020	Wind Dir	W
S8	14 Jul 2020	Animal Life	5 Seagulls
S8	14 Jul 2020	Floatables	None
S8	14 Jul 2020	Water Color	Green
S8	14 Jul 2020	Current Direction	S
S8	14 Jul 2020	Water Temp (C)	25.1
S8	14 Jul 2020	Wave Height Low (ft)	2
S8	14 Jul 2020	High Tide (ft)	2.9
S8	14 Jul 2020	High Tide Time	535
S8	14 Jul 2020	Low Tide (ft)	2
S8	14 Jul 2020	Low Tide Time	1051

Station	Date	Parameter	Value
S8	14 Jul 2020	Comments	Kelp; 17 Persons; 1 Surfer; 1 Fisherman; Water clear
S8	21 Jul 2020	Arrive Time	1051
S8	21 Jul 2020	Weather	Sunny
S8	21 Jul 2020	Wind Speed (kts)	4.6
S8	21 Jul 2020	Wind Dir	W
S8	21 Jul 2020	Animal Life	5 Plovers; 12 Seagulls
S8	21 Jul 2020	Floatables	Foam
S8	21 Jul 2020	Water Color	Green
S8	21 Jul 2020	Current Direction	S
S8	21 Jul 2020	Water Temp (C)	18.2
S8	21 Jul 2020	Wave Height Low (ft)	2
S8	21 Jul 2020	High Tide (ft)	4
S8	21 Jul 2020	High Tide Time	1104
S8	21 Jul 2020	Low Tide (ft)	1.9
S8	21 Jul 2020	Low Tide Time	1603
S8	21 Jul 2020	Comments	Kelp; Seagrass; 28 Persons; 3 Swimmers; Water clear
S8	28 Jul 2020	Arrive Time	750
S8	28 Jul 2020	Weather	Overcast
S8	28 Jul 2020	Wind Speed (kts)	1.3
S8	28 Jul 2020	Wind Dir	N
S8	28 Jul 2020	Animal Life	2 Godwits; 2 Plovers
S8	28 Jul 2020	Floatables	None
S8	28 Jul 2020	Water Color	Green
S8	28 Jul 2020	Current Direction	S
S8	28 Jul 2020	Water Temp (C)	17.7
S8	28 Jul 2020	Wave Height Low (ft)	1
S8	28 Jul 2020	High Tide (ft)	3.3
S8	28 Jul 2020	High Tide Time	441
S8	28 Jul 2020	Low Tide (ft)	1.7
S8	28 Jul 2020	Low Tide Time	1007
S8	28 Jul 2020	Comments	Kelp; Seagrass; 1 Fisherman; Water clear
S9	07 Jul 2020	Arrive Time	1005
S9	07 Jul 2020	Weather	Sunny
S9	07 Jul 2020	Wind Speed (kts)	3.8
S9	07 Jul 2020	Wind Dir	W
S9	07 Jul 2020	Animal Life	1 Seagull
S9	07 Jul 2020	Floatables	Foam; Film
S9	07 Jul 2020	Water Color	Green
S9	07 Jul 2020	Current Direction	N
S9	07 Jul 2020	Water Temp (C)	21.7
S9	07 Jul 2020	Wave Height Low (ft)	2
S9	07 Jul 2020	High Tide (ft)	3.9
S9	07 Jul 2020	High Tide Time	1214
S9	07 Jul 2020	Low Tide (ft)	-0.8
S9	07 Jul 2020	Low Tide Time	547
S9	07 Jul 2020	Comments	Kelp; Seagrass; Algae; 12 Persons; 11 Surfers; 3 Swimmers; Water clear
S9	14 Jul 2020	Arrive Time	1114
S9	14 Jul 2020	Weather	Sunny
S9	14 Jul 2020	Wind Speed (kts)	5.6
S9	14 Jul 2020	Wind Dir	W

Station	Date	Parameter	Value
S9	14 Jul 2020	Animal Life	1 Seagull
S9	14 Jul 2020	Floatables	None
S9	14 Jul 2020	Water Color	Brown
S9	14 Jul 2020	Current Direction	N
S9	14 Jul 2020	Water Temp (C)	25.5
S9	14 Jul 2020	Wave Height Low (ft)	1
S9	14 Jul 2020	High Tide (ft)	2.9
S9	14 Jul 2020	High Tide Time	535
S9	14 Jul 2020	Low Tide (ft)	2
S9	14 Jul 2020	Low Tide Time	1051
S9	14 Jul 2020	Comments	Kelp; Seagrass; 2 Joggers; 14 Persons; 18 Surfers; 1 Fisherman; Water turbid
S9	21 Jul 2020	Arrive Time	1112
S9	21 Jul 2020	Weather	Sunny
S9	21 Jul 2020	Wind Speed (kts)	3.3
S9	21 Jul 2020	Wind Dir	W
S9	21 Jul 2020	Animal Life	1 Seagull
S9	21 Jul 2020	Floatables	None
S9	21 Jul 2020	Water Color	Green
S9	21 Jul 2020	Current Direction	S
S9	21 Jul 2020	Water Temp (C)	19.8
S9	21 Jul 2020	Wave Height Low (ft)	1
S9	21 Jul 2020	High Tide (ft)	4
S9	21 Jul 2020	High Tide Time	1104
S9	21 Jul 2020	Low Tide (ft)	1.9
S9	21 Jul 2020	Low Tide Time	1603
S9	21 Jul 2020	Comments	Kelp; Seagrass; 1 Jogger; 14 Persons; 10 Surfers; 3 Swimmers; Water clear
S9	28 Jul 2020	Arrive Time	729
S9	28 Jul 2020	Weather	Overcast
S9	28 Jul 2020	Wind Speed (kts)	3.3
S9	28 Jul 2020	Wind Dir	E
S9	28 Jul 2020	Animal Life	1 Dolphin; 1 Godwit; 3 Pelicans; 5 Seagulls; 1 Tern
S9	28 Jul 2020	Floatables	Foam
S9	28 Jul 2020	Water Color	Green
S9	28 Jul 2020	Current Direction	S
S9	28 Jul 2020	Water Temp (C)	16.9
S9	28 Jul 2020	Wave Height Low (ft)	1
S9	28 Jul 2020	High Tide (ft)	3.3
S9	28 Jul 2020	High Tide Time	441
S9	28 Jul 2020	Low Tide (ft)	1.7
S9	28 Jul 2020	Low Tide Time	1007
S9	28 Jul 2020	Comments	15 Persons; Water clear
S10	07 Jul 2020	Arrive Time	753
S10	07 Jul 2020	Weather	Overcast
S10	07 Jul 2020	Wind Speed (kts)	2.3
S10	07 Jul 2020	Wind Dir	W
S10	07 Jul 2020	Animal Life	8 Godwits; 1 Seagull
S10	07 Jul 2020	Floatables	Foam; Film
S10	07 Jul 2020	Water Color	Green
S10	07 Jul 2020	Current Direction	N
S10	07 Jul 2020	Water Temp (C)	20.8

Station	Date	Parameter	Value
S10	07 Jul 2020	Wave Height Low (ft)	2
S10	07 Jul 2020	High Tide (ft)	3.9
S10	07 Jul 2020	High Tide Time	1214
S10	07 Jul 2020	Low Tide (ft)	-0.8
S10	07 Jul 2020	Low Tide Time	547
S10	07 Jul 2020	Comments	Kelp; Seagrass; Sewage-like odor; Water clear
S10	14 Jul 2020	Arrive Time	810
S10	14 Jul 2020	Weather	Cloudy
S10	14 Jul 2020	Wind Speed (kts)	2.1
S10	14 Jul 2020	Wind Dir	SW
S10	14 Jul 2020	Animal Life	25 Godwits; 8 Seagulls; 12 Terns
S10	14 Jul 2020	Floatables	None
S10	14 Jul 2020	Water Color	Green
S10	14 Jul 2020	Current Direction	S
S10	14 Jul 2020	Water Temp (C)	20.6
S10	14 Jul 2020	Wave Height Low (ft)	2
S10	14 Jul 2020	High Tide (ft)	2.9
S10	14 Jul 2020	High Tide Time	535
S10	14 Jul 2020	Low Tide (ft)	2
S10	14 Jul 2020	Low Tide Time	1051
S10	14 Jul 2020	Comments	Kelp; 1 Tractor; Water clear
S10	21 Jul 2020	Arrive Time	805
S10	21 Jul 2020	Weather	Overcast
S10	21 Jul 2020	Wind Speed (kts)	1.3
S10	21 Jul 2020	Wind Dir	W
S10	21 Jul 2020	Animal Life	7 Godwits; 2 Plovers
S10	21 Jul 2020	Floatables	Foam
S10	21 Jul 2020	Water Color	Green
S10	21 Jul 2020	Current Direction	N
S10	21 Jul 2020	Water Temp (C)	15.6
S10	21 Jul 2020	Wave Height Low (ft)	2
S10	21 Jul 2020	High Tide (ft)	4
S10	21 Jul 2020	High Tide Time	1104
S10	21 Jul 2020	Low Tide (ft)	-1
S10	21 Jul 2020	Low Tide Time	444
S10	21 Jul 2020	Comments	Kelp; Seagrass; Algae; Water clear
S10	23 Jul 2020	Arrive Time	926
S10	23 Jul 2020	Weather	Cloudy
S10	23 Jul 2020	Wind Speed (kts)	2.7
S10	23 Jul 2020	Wind Dir	W
S10	23 Jul 2020	Animal Life	12 Godwits
S10	23 Jul 2020	Floatables	Foam
S10	23 Jul 2020	Water Color	Green
S10	23 Jul 2020	Current Direction	
S10	23 Jul 2020	Water Temp (C)	17.8
S10	23 Jul 2020	Wave Height Low (ft)	2
S10	23 Jul 2020	High Tide (ft)	4.3
S10	23 Jul 2020	High Tide Time	1225
S10	23 Jul 2020	Low Tide (ft)	-0.8
S10	23 Jul 2020	Low Tide Time	601
S10	23 Jul 2020	Comments	Resample; Kelp; Seagrass; Water clear

Station	Date	Parameter	Value
S10	28 Jul 2020	Arrive Time	951
S10	28 Jul 2020	Weather	Overcast
S10	28 Jul 2020	Wind Speed (kts)	2.5
S10	28 Jul 2020	Wind Dir	W
S10	28 Jul 2020	Animal Life	5 Godwits; 1 Plover
S10	28 Jul 2020	Floatables	None
S10	28 Jul 2020	Water Color	Green
S10	28 Jul 2020	Current Direction	S
S10	28 Jul 2020	Water Temp (C)	17
S10	28 Jul 2020	Wave Height Low (ft)	2
S10	28 Jul 2020	High Tide (ft)	3.3
S10	28 Jul 2020	High Tide Time	441
S10	28 Jul 2020	Low Tide (ft)	1.7
S10	28 Jul 2020	Low Tide Time	1007
S10	28 Jul 2020	Comments	Kelp; Seagrass; Water clear
S11	02 Jul 2020	Arrive Time	1114
S11	02 Jul 2020	Weather	Sunny
S11	02 Jul 2020	Wind Speed (kts)	5
S11	02 Jul 2020	Wind Dir	W
S11	02 Jul 2020	Animal Life	2 Godwits; 13 Terns
S11	02 Jul 2020	Floatables	None
S11	02 Jul 2020	Water Color	Green
S11	02 Jul 2020	Current Direction	N
S11	02 Jul 2020	Water Temp (C)	20.5
S11	02 Jul 2020	Wave Height Low (ft)	3
S11	02 Jul 2020	High Tide (ft)	3.7
S11	02 Jul 2020	High Tide Time	823
S11	02 Jul 2020	Low Tide (ft)	1.7
S11	02 Jul 2020	Low Tide Time	1323
S11	02 Jul 2020	Comments	Resample; Kelp; 2 Persons; Water clear
S11	07 Jul 2020	Arrive Time	842
S11	07 Jul 2020	Weather	Overcast
S11	07 Jul 2020	Wind Speed (kts)	0.3
S11	07 Jul 2020	Wind Dir	NW
S11	07 Jul 2020	Animal Life	4 Godwits
S11	07 Jul 2020	Floatables	Foam; Film
S11	07 Jul 2020	Water Color	Green
S11	07 Jul 2020	Current Direction	N
S11	07 Jul 2020	Water Temp (C)	21
S11	07 Jul 2020	Wave Height Low (ft)	3
S11	07 Jul 2020	High Tide (ft)	3.9
S11	07 Jul 2020	High Tide Time	1214
S11	07 Jul 2020	Low Tide (ft)	-0.8
S11	07 Jul 2020	Low Tide Time	547
S11	07 Jul 2020	Comments	Kelp; Seagrass; Debris; 4 Persons; Water clear
S11	09 Jul 2020	Arrive Time	758
S11	09 Jul 2020	Weather	Cloudy
S11	09 Jul 2020	Wind Speed (kts)	2.1
S11	09 Jul 2020	Wind Dir	W
S11	09 Jul 2020	Animal Life	2 Pelicans
S11	09 Jul 2020	Floatables	Foam; Film
S11	09 Jul 2020	Water Color	Green

Station	Date	Parameter	Value
S11	09 Jul 2020	Current Direction	S
S11	09 Jul 2020	Water Temp (C)	21.5
S11	09 Jul 2020	Wave Height Low (ft)	2
S11	09 Jul 2020	High Tide (ft)	3.9
S11	09 Jul 2020	High Tide Time	1342
S11	09 Jul 2020	Low Tide (ft)	0
S11	09 Jul 2020	Low Tide Time	706
S11	09 Jul 2020	Comments	Resample; Kelp; Seagrass; 3 Persons; Water clear
S11	11 Jul 2020	Arrive Time	722
S11	11 Jul 2020	Weather	Sunny
S11	11 Jul 2020	Wind Speed (kts)	1.1
S11	11 Jul 2020	Wind Dir	NW
S11	11 Jul 2020	Animal Life	5 Godwits
S11	11 Jul 2020	Floatables	Foam; Film
S11	11 Jul 2020	Water Color	Green
S11	11 Jul 2020	Current Direction	S
S11	11 Jul 2020	Water Temp (C)	21.3
S11	11 Jul 2020	Wave Height Low (ft)	2
S11	11 Jul 2020	High Tide (ft)	4
S11	11 Jul 2020	High Tide Time	122
S11	11 Jul 2020	Low Tide (ft)	0.9
S11	11 Jul 2020	Low Tide Time	827
S11	11 Jul 2020	Comments	Resample; Kelp; Seagrass; Debris; 2 Persons; Water clear
S11	13 Jul 2020	Arrive Time	804
S11	13 Jul 2020	Weather	Cloudy
S11	13 Jul 2020	Wind Speed (kts)	5
S11	13 Jul 2020	Wind Dir	SW
S11	13 Jul 2020	Animal Life	1 Cormorant; 7 Terns
S11	13 Jul 2020	Floatables	None
S11	13 Jul 2020	Water Color	Grey
S11	13 Jul 2020	Current Direction	N
S11	13 Jul 2020	Water Temp (C)	21.4
S11	13 Jul 2020	Wave Height Low (ft)	1
S11	13 Jul 2020	High Tide (ft)	3.1
S11	13 Jul 2020	High Tide Time	358
S11	13 Jul 2020	Low Tide (ft)	1.7
S11	13 Jul 2020	Low Tide Time	959
S11	13 Jul 2020	Comments	Resample; Kelp; Water clear
S11	14 Jul 2020	Arrive Time	938
S11	14 Jul 2020	Weather	Partly Cloudy
S11	14 Jul 2020	Wind Speed (kts)	5.8
S11	14 Jul 2020	Wind Dir	NW
S11	14 Jul 2020	Animal Life	1 Cormorant; 4 Godwits; 11 Terns
S11	14 Jul 2020	Floatables	None
S11	14 Jul 2020	Water Color	Green
S11	14 Jul 2020	Current Direction	S
S11	14 Jul 2020	Water Temp (C)	21.2
S11	14 Jul 2020	Wave Height Low (ft)	1
S11	14 Jul 2020	High Tide (ft)	2.9
S11	14 Jul 2020	High Tide Time	535
S11	14 Jul 2020	Low Tide (ft)	2
S11	14 Jul 2020	Low Tide Time	1051

Station	Date	Parameter	Value
S11	14 Jul 2020	Comments	Kelp; Seagrass; 2 Persons; Water clear
S11	21 Jul 2020	Arrive Time	909
S11	21 Jul 2020	Weather	Cloudy
S11	21 Jul 2020	Wind Speed (kts)	1.9
S11	21 Jul 2020	Wind Dir	W
S11	21 Jul 2020	Animal Life	1 Dog; 3 Dolphins
S11	21 Jul 2020	Floatables	Foam
S11	21 Jul 2020	Water Color	Green
S11	21 Jul 2020	Current Direction	S
S11	21 Jul 2020	Water Temp (C)	16.4
S11	21 Jul 2020	Wave Height Low (ft)	2
S11	21 Jul 2020	High Tide (ft)	4
S11	21 Jul 2020	High Tide Time	1104
S11	21 Jul 2020	Low Tide (ft)	-1
S11	21 Jul 2020	Low Tide Time	444
S11	21 Jul 2020	Comments	Kelp; Seagrass; 1 Person; Water clear
S11	28 Jul 2020	Arrive Time	856
S11	28 Jul 2020	Weather	Overcast
S11	28 Jul 2020	Wind Speed (kts)	2.3
S11	28 Jul 2020	Wind Dir	NW
S11	28 Jul 2020	Animal Life	3 Seagulls
S11	28 Jul 2020	Floatables	Dead Animals
S11	28 Jul 2020	Water Color	Brown
S11	28 Jul 2020	Current Direction	S
S11	28 Jul 2020	Water Temp (C)	17.2
S11	28 Jul 2020	Wave Height Low (ft)	1
S11	28 Jul 2020	High Tide (ft)	3.3
S11	28 Jul 2020	High Tide Time	441
S11	28 Jul 2020	Low Tide (ft)	1.7
S11	28 Jul 2020	Low Tide Time	1007
S11	28 Jul 2020	Comments	Kelp; Seagrass; 9 Persons; Water turbid
S11	30 Jul 2020	Arrive Time	855
S11	30 Jul 2020	Weather	Foggy
S11	30 Jul 2020	Wind Speed (kts)	7.1
S11	30 Jul 2020	Wind Dir	N
S11	30 Jul 2020	Animal Life	1 Fish; 5 Seagulls
S11	30 Jul 2020	Floatables	Foam; Film
S11	30 Jul 2020	Water Color	Green
S11	30 Jul 2020	Current Direction	S
S11	30 Jul 2020	Water Temp (C)	15.5
S11	30 Jul 2020	Wave Height Low (ft)	0.5
S11	30 Jul 2020	High Tide (ft)	3.5
S11	30 Jul 2020	High Tide Time	741
S11	30 Jul 2020	Low Tide (ft)	2.2
S11	30 Jul 2020	Low Tide Time	1222
S11	30 Jul 2020	Comments	Resample; Kelp; Seagrass; Debris; Water clear
S12	02 Jul 2020	Arrive Time	1035
S12	02 Jul 2020	Weather	Partly Cloudy
S12	02 Jul 2020	Wind Speed (kts)	3.6
S12	02 Jul 2020	Wind Dir	W
S12	02 Jul 2020	Animal Life	1 Dog; 1 Seagull; 1 Tern

Station	Date	Parameter	Value
S12	02 Jul 2020	Floatables	None
S12	02 Jul 2020	Water Color	Green
S12	02 Jul 2020	Current Direction	N
S12	02 Jul 2020	Water Temp (C)	21.3
S12	02 Jul 2020	Wave Height Low (ft)	1
S12	02 Jul 2020	High Tide (ft)	3.7
S12	02 Jul 2020	High Tide Time	823
S12	02 Jul 2020	Low Tide (ft)	1.7
S12	02 Jul 2020	Low Tide Time	1323
S12	02 Jul 2020	Comments	Resample; Kelp; 6 Persons; 1 Fisherman; Water turbid
S12	07 Jul 2020	Arrive Time	858
S12	07 Jul 2020	Weather	Partly Cloudy
S12	07 Jul 2020	Wind Speed (kts)	4.8
S12	07 Jul 2020	Wind Dir	W
S12	07 Jul 2020	Animal Life	2 Dogs; 21 Godwits; 25 Seagulls
S12	07 Jul 2020	Floatables	Foam; Film
S12	07 Jul 2020	Water Color	Green
S12	07 Jul 2020	Current Direction	N
S12	07 Jul 2020	Water Temp (C)	21.4
S12	07 Jul 2020	Wave Height Low (ft)	3
S12	07 Jul 2020	High Tide (ft)	3.9
S12	07 Jul 2020	High Tide Time	1214
S12	07 Jul 2020	Low Tide (ft)	-0.8
S12	07 Jul 2020	Low Tide Time	547
S12	07 Jul 2020	Comments	Kelp; Seagrass; 7 Persons; 1 Swimmer; 2 Fishermen; Water clear
S12	14 Jul 2020	Arrive Time	1004
S12	14 Jul 2020	Weather	Sunny
S12	14 Jul 2020	Wind Speed (kts)	5.8
S12	14 Jul 2020	Wind Dir	W
S12	14 Jul 2020	Animal Life	2 Grebes; 3 Terns
S12	14 Jul 2020	Floatables	None
S12	14 Jul 2020	Water Color	Green
S12	14 Jul 2020	Current Direction	S
S12	14 Jul 2020	Water Temp (C)	23.1
S12	14 Jul 2020	Wave Height Low (ft)	1
S12	14 Jul 2020	High Tide (ft)	2.9
S12	14 Jul 2020	High Tide Time	535
S12	14 Jul 2020	Low Tide (ft)	2
S12	14 Jul 2020	Low Tide Time	1051
S12	14 Jul 2020	Comments	Kelp; 1 Jogger; 4 Persons; 1 Fisherman; Water clear
S12	21 Jul 2020	Arrive Time	942
S12	21 Jul 2020	Weather	Cloudy
S12	21 Jul 2020	Wind Speed (kts)	3.4
S12	21 Jul 2020	Wind Dir	W
S12	21 Jul 2020	Animal Life	2 Dogs; 3 Godwits; 1 Seagull
S12	21 Jul 2020	Floatables	Foam
S12	21 Jul 2020	Water Color	Brown
S12	21 Jul 2020	Current Direction	S
S12	21 Jul 2020	Water Temp (C)	17.1
S12	21 Jul 2020	Wave Height Low (ft)	2
S12	21 Jul 2020	High Tide (ft)	4
S12	21 Jul 2020	High Tide Time	1104

Station	Date	Parameter	Value
S12	21 Jul 2020	Low Tide (ft)	-1
S12	21 Jul 2020	Low Tide Time	444
S12	21 Jul 2020	Comments	Kelp; Seagrass; 9 Persons; Water turbid
S12	28 Jul 2020	Arrive Time	822
S12	28 Jul 2020	Weather	Overcast
S12	28 Jul 2020	Wind Speed (kts)	0.7
S12	28 Jul 2020	Wind Dir	W
S12	28 Jul 2020	Animal Life	33 Godwits; 1 Pelican; 24 Seagulls
S12	28 Jul 2020	Floatables	Foam
S12	28 Jul 2020	Water Color	Green
S12	28 Jul 2020	Current Direction	S
S12	28 Jul 2020	Water Temp (C)	18.4
S12	28 Jul 2020	Wave Height Low (ft)	1
S12	28 Jul 2020	High Tide (ft)	3.3
S12	28 Jul 2020	High Tide Time	441
S12	28 Jul 2020	Low Tide (ft)	1.7
S12	28 Jul 2020	Low Tide Time	1007
S12	28 Jul 2020	Comments	Kelp; Seagrass; 1 Fisherman; Water clear

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Kelp Stations

Table 3.1

Summary of compliance with the Ocean Plan's 30-day Geometric Mean standard for total coliform bacteria at the 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 Jul 2020	14	10	6	7	23	4	33
02 Jul 2020	13*	11*	6*	9*	11*	5*	23*
03 Jul 2020	13*	11*	6*	9*	11*	5*	23*
04 Jul 2020	13*	11*	6*	9*	11*	5*	23*
05 Jul 2020	13*	11*	6*	9*	11*	5*	23*
06 Jul 2020	12	12	6	9	19	4	36
07 Jul 2020	12	12	6	9	19	4	36
08 Jul 2020	12	12	6	9	19	4	36
09 Jul 2020	19*	14*	6*	12*	34*	5*	53*
10 Jul 2020	19*	14*	6*	12*	34*	5*	53*
11 Jul 2020	19*	14*	6*	12*	34*	5*	53*
12 Jul 2020	19*	14*	6*	12*	34*	5*	53*
13 Jul 2020	32	18	9	12	26	4	53
14 Jul 2020	32	18	9	12	26	4	53
15 Jul 2020	32	18	9	12	26	4	53
16 Jul 2020	63*	32*	13*	13*	34*	5*	74*
17 Jul 2020	63*	32*	13*	13*	34*	5*	74*
18 Jul 2020	63*	32*	13*	13*	34*	5*	74*
19 Jul 2020	63*	32*	13*	13*	34*	5*	74*
20 Jul 2020	63*	32*	13*	13*	34*	5*	74*
21 Jul 2020	50	65	13	13	40	6	92
22 Jul 2020	50	65	13	13	40	6	92
23 Jul 2020	48*	110*	22*	19*	60*	7*	96*
24 Jul 2020	48*	110*	22*	19*	60*	7*	96*
25 Jul 2020	48*	110*	22*	19*	60*	7*	96*
26 Jul 2020	48*	110*	22*	19*	60*	7*	96*
27 Jul 2020	48*	110*	22*	19*	60*	7*	96*
28 Jul 2020	68	49	13	12	30	6	136
29 Jul 2020	68	49	13	12	30	6	136
30 Jul 2020	58*	41*	10*	7*	21*	3*	193*
31 Jul 2020	58*	41*	10*	7*	21*	3*	193*

* 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 Jul 2020	5	3	3	4	6	3	5
02 Jul 2020	6*	3*	3*	4*	4*	3*	6*
03 Jul 2020	6*	3*	3*	4*	4*	3*	6*
04 Jul 2020	6*	3*	3*	4*	4*	3*	6*
05 Jul 2020	6*	3*	3*	4*	4*	3*	6*
06 Jul 2020	5	3	3	4	6	3	8
07 Jul 2020	5	3	3	4	6	3	8
08 Jul 2020	5	3	3	4	6	3	8
09 Jul 2020	6*	4*	3*	4*	7*	3*	11*
10 Jul 2020	6*	4*	3*	4*	7*	3*	11*
11 Jul 2020	6*	4*	3*	4*	7*	3*	11*
12 Jul 2020	6*	4*	3*	4*	7*	3*	11*
13 Jul 2020	9	5	3	4	6	3	11
14 Jul 2020	9	5	3	4	6	3	11
15 Jul 2020	9	5	3	4	6	3	11
16 Jul 2020	13*	6*	4*	5*	7*	3*	16*
17 Jul 2020	13*	6*	4*	5*	7*	3*	16*
18 Jul 2020	13*	6*	4*	5*	7*	3*	16*
19 Jul 2020	13*	6*	4*	5*	7*	3*	16*
20 Jul 2020	13*	6*	4*	5*	7*	3*	16*
21 Jul 2020	9	11	3	4	6	3	21
22 Jul 2020	9	11	3	4	6	3	21
23 Jul 2020	9*	18*	4*	5*	7*	3*	20*
24 Jul 2020	9*	18*	4*	5*	7*	3*	20*
25 Jul 2020	9*	18*	4*	5*	7*	3*	20*
26 Jul 2020	9*	18*	4*	5*	7*	3*	20*
27 Jul 2020	9*	18*	4*	5*	7*	3*	20*
28 Jul 2020	11	11	3	4	6	3	23
29 Jul 2020	11	11	3	4	6	3	23
30 Jul 2020	8*	10*	3*	2*	4*	2*	27*
31 Jul 2020	8*	10*	3*	2*	4*	2*	27*

* 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 Jul 2020	6	3	3	3	5	3	9
02 Jul 2020	8*	4*	3*	3*	3*	4*	9*
03 Jul 2020	8*	4*	3*	3*	3*	4*	9*
04 Jul 2020	8*	4*	3*	3*	3*	4*	9*
05 Jul 2020	8*	4*	3*	3*	3*	4*	9*
06 Jul 2020	6	4	3	3	6	3	13
07 Jul 2020	6	4	3	3	6	3	13
08 Jul 2020	6	4	3	3	6	3	13
09 Jul 2020	8*	4*	3*	4*	8*	4*	16*
10 Jul 2020	8*	4*	3*	4*	8*	4*	16*
11 Jul 2020	8*	4*	3*	4*	8*	4*	16*
12 Jul 2020	8*	4*	3*	4*	8*	4*	16*
13 Jul 2020	12	5	4	3	7	3	15
14 Jul 2020	12	5	4	3	7	3	15
15 Jul 2020	12	5	4	3	7	3	15
16 Jul 2020	18*	6*	4*	4*	9*	4*	23*
17 Jul 2020	18*	6*	4*	4*	9*	4*	23*
18 Jul 2020	18*	6*	4*	4*	9*	4*	23*
19 Jul 2020	18*	6*	4*	4*	9*	4*	23*
20 Jul 2020	18*	6*	4*	4*	9*	4*	23*
21 Jul 2020	13	14	5	3	7	3	31
22 Jul 2020	13	14	5	3	7	3	31
23 Jul 2020	11*	21*	6*	4*	9*	4*	31*
24 Jul 2020	11*	21*	6*	4*	9*	4*	31*
25 Jul 2020	11*	21*	6*	4*	9*	4*	31*
26 Jul 2020	11*	21*	6*	4*	9*	4*	31*
27 Jul 2020	11*	21*	6*	4*	9*	4*	31*
28 Jul 2020	14	13	5	3	7	3	29
29 Jul 2020	14	13	5	3	7	3	29
30 Jul 2020	11*	13*	4*	2*	5*	2*	33*
31 Jul 2020	11*	13*	4*	2*	5*	2*	33*

* 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 Jul 2020	IC						
13 Jul 2020	IC						
21 Jul 2020	IC						
28 Jul 2020	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 Jul 2020	IC						
13 Jul 2020	IC						
21 Jul 2020	IC						
28 Jul 2020	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 Jul 2020	IC						
13 Jul 2020	IC						
21 Jul 2020	IC	E	IC	IC	IC	IC	E
28 Jul 2020	E	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 Jul 2020	IC						
13 Jul 2020	IC						
21 Jul 2020	IC	E	IC	IC	IC	IC	IC
28 Jul 2020	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 Jul 2020	1126	2	<2	<2	<2	1.00	18.6	78.03	8.6	33.65	8.2
I19	06 Jul 2020	1126	6	2e	<2	<2	1.00	18.2	72.79	8.4	33.66	8.2
I19	06 Jul 2020	1126	11	20e	<2	2e	0.10	17.0	69.62	7.8	33.66	8.2
I19	13 Jul 2020	1110	2	80e	26e	22e	0.32	19.1	69.71	8.6	33.71	8.3
I19	13 Jul 2020	1110	6	60e	16e	24e	0.27	15.6	62.52	8.8	33.72	8.2
I19	13 Jul 2020	1110	11	660	96	96	0.15	14.3	67.98	8.2	33.68	8.2
I19	21 Jul 2020	1054	2	<20	<2	8e	0.10	15.9	76.24	7.1	33.73	8.1
I19	21 Jul 2020	1054	6	<20	2e	2e	0.10	12.8	69.05	6.1	33.83	8.0
I19	21 Jul 2020	1054	11	<20	4e	<2	0.20	11.8	63.70	4.1	33.76	7.8
I19	28 Jul 2020	1043	2	680	56	120	0.08	16.0	68.82	8.3	33.65	8.1
I19	28 Jul 2020	1043	6	100	2e	12e	0.02	13.9	72.52	8.7	33.62	8.1
I19	28 Jul 2020	1043	11	22e	2e	2e	0.09	13.0	73.21	7.1	33.65	8.0
I24	06 Jul 2020	1148	2	<2	<2	<2	1.00	17.9	79.25	8.7	33.68	8.2
I24	06 Jul 2020	1148	6	4e	4e	2e	1.00	16.6	76.39	8.6	33.69	8.2
I24	06 Jul 2020	1148	11	60e	4e	6e	0.07	14.3	74.46	6.6	33.72	8.0
I24	13 Jul 2020	1134	2	<2	<2	<2	1.00	20.4	72.44	9.0	33.71	8.3
I24	13 Jul 2020	1134	6	24e	2e	4e	0.08	16.1	64.17	8.8	33.67	8.2
I24	13 Jul 2020	1134	11	160e	32e	22e	0.20	13.6	67.23	7.5	33.67	8.1
I24	21 Jul 2020	1120	2	400e	96	460	0.24	15.7	77.58	7.9	33.79	8.2
I24	21 Jul 2020	1120	6	2800e	300e	800	0.11	13.0	67.11	6.6	33.86	8.0
I24	21 Jul 2020	1120	11	60e	14e	2e	0.23	12.0	64.52	3.8	33.75	7.8
I24	28 Jul 2020	1108	2	<2	<2	<2	1.00	16.9	78.83	8.8	33.72	8.2
I24	28 Jul 2020	1108	6	<2	<2	<2	1.00	13.6	77.92	8.8	33.61	8.1
I24	28 Jul 2020	1108	11	<2	<2	<2	1.00	12.5	73.24	4.9	33.66	7.8
I25	06 Jul 2020	1156	2	<2	<2	<2	1.00	17.9	79.07	8.7	33.67	8.2
I25	06 Jul 2020	1156	6	2e	<2	4e	1.00	16.7	77.50	8.7	33.70	8.2
I25	06 Jul 2020	1156	9	<20	4e	<2	0.20	14.6	74.98	7.5	33.80	8.1
I25	13 Jul 2020	1142	2	<2	<2	<2	1.00	20.6	76.50	9.3	33.69	8.3
I25	13 Jul 2020	1142	6	<2	<2	<2	1.00	18.2	72.68	8.7	33.68	8.2
I25	13 Jul 2020	1142	9	140e	8e	14e	0.06	14.2	63.30	8.4	33.67	8.2
I25	21 Jul 2020	1130	2	<2	<2	<2	1.00	16.5	81.77	8.4	33.66	8.2
I25	21 Jul 2020	1130	6	<20	<2	22e	0.10	15.1	72.62	8.3	33.64	8.2
I25	21 Jul 2020	1130	9	20e	2e	4e	0.10	12.5	66.42	6.8	33.76	8.0
I25	28 Jul 2020	1120	2	<2	<2	<2	1.00	17.2	81.23	8.7	33.72	8.2
I25	28 Jul 2020	1120	6	<2	<2	<2	1.00	13.4	78.76	8.4	33.64	8.1
I25	28 Jul 2020	1120	9	2e	<2	<2	1.00	13.3	81.54	7.6	33.59	8.1

Station	Date	Time	Depth	Total	Fecal	Enteric	F:T	Temp	XMS	DO	Sal	pH
I26	06 Jul 2020	1207	2	<2	<2	<2	1.00	17.8	77.59	8.5	33.68	8.2
I26	06 Jul 2020	1207	6	4e	<2	<2	0.50	16.2	74.72	8.5	33.67	8.2
I26	06 Jul 2020	1207	9	<20	<2	6e	0.10	14.4	67.95	6.8	33.76	8.0
I26	13 Jul 2020	1152	2	<2	<2	<2	1.00	20.6	76.43	9.5	33.69	8.3
I26	13 Jul 2020	1152	6	<20	<2	2e	0.10	17.9	71.88	8.5	33.84	8.3
I26	13 Jul 2020	1152	9	4e	4e	<2	1.00	13.9	73.70	6.2	33.67	8.0
I26	21 Jul 2020	1142	2	<2	<2	<2	1.00	16.9	40.54	8.3	33.65	8.2
I26	21 Jul 2020	1142	6	<20	<2	<2	0.10	14.6	72.96	8.4	33.64	8.2
I26	21 Jul 2020	1142	9	<20	<2	<2	0.10	12.4	63.93	5.4	33.80	8.0
I26	28 Jul 2020	1133	2	<2	<2	<2	1.00	16.5	80.35	8.8	33.78	8.2
I26	28 Jul 2020	1133	6	<2	<2	<2	1.00	13.3	78.80	9.0	33.70	8.2
I26	28 Jul 2020	1133	9	<2	<2	<2	1.00	12.8	81.55	7.3	33.66	8.0
I32	06 Jul 2020	1222	2	<2	<2	<2	1.00	18.4	77.13	8.5	33.69	8.2
I32	06 Jul 2020	1222	6	320e	74	88	0.23	17.8	67.14	8.2	33.61	8.2
I32	06 Jul 2020	1222	9	180e	28e	42	0.16	17.6	65.95	7.9	33.58	8.2
I32	13 Jul 2020	1209	2	<2	<2	<2	1.00	20.6	74.62	9.1	33.69	8.3
I32	13 Jul 2020	1209	6	<2	<2	<2	1.00	20.2	73.98	8.7	33.68	8.3
I32	13 Jul 2020	1209	9	20e	2e	10e	0.10	14.0	63.89	7.6	33.90	8.2
I32	21 Jul 2020	1204	2	<2	<2	<2	1.00	16.3	80.31	8.2	33.67	8.2
I32	21 Jul 2020	1204	6	<200	<2	<2	0.01	15.8	73.24	7.6	33.65	8.1
I32	21 Jul 2020	1204	9	<20	<2	<2	0.10	12.5	56.94	5.9	33.83	7.9
I32	28 Jul 2020	1146	2	<2	<2	<2	1.00	17.4	79.84	8.8	33.64	8.2
I32	28 Jul 2020	1146	6	<2	<2	<2	1.00	14.0	69.26	8.9	33.85	8.2
I32	28 Jul 2020	1146	9	2e	<2	<2	1.00	12.6	70.96	7.2	33.66	8.0
I39	06 Jul 2020	1101	2	<2	<2	<2	1.00	18.2	79.26	8.7	33.66	8.2
I39	06 Jul 2020	1101	12	<2	<2	<2	1.00	13.8	69.78	6.8	33.82	8.1
I39	06 Jul 2020	1101	18	<2	<2	<2	1.00	11.8	84.41	5.0	33.69	7.9
I39	13 Jul 2020	1043	2	<2	<2	<2	1.00	20.6	81.73	8.7	33.70	8.3
I39	13 Jul 2020	1043	12	4e	<2	<2	0.50	12.7	74.17	6.8	33.67	8.1
I39	13 Jul 2020	1043	18	2e	<2	2e	1.00	12.3	78.71	5.4	33.65	8.0
I39	21 Jul 2020	1032	2	<2	<2	<2	1.00	16.2	74.66	8.5	33.65	8.2
I39	21 Jul 2020	1032	12	<20	<2	<2	0.10	13.0	76.68	7.1	33.69	8.1
I39	21 Jul 2020	1032	18	<2	<2	<2	1.00	11.7	83.23	3.8	33.74	7.8
I39	28 Jul 2020	1021	2	<2	<2	<2	1.00	17.9	82.13	8.7	33.64	8.2
I39	28 Jul 2020	1021	12	<2	<2	<2	1.00	12.3	82.54	6.7	33.63	8.0
I39	28 Jul 2020	1021	18	<2	<2	<2	1.00	12.1	85.75	5.5	33.63	7.9
I40	06 Jul 2020	1138	2	20e	4e	20e	0.20	17.8	72.56	8.3	33.63	8.2
I40	06 Jul 2020	1138	6	280e	40	64	0.14	17.4	69.34	8.1	33.62	8.2
I40	06 Jul 2020	1138	9	320e	32e	38e	0.10	16.1	66.03	7.5	33.64	8.1
I40	13 Jul 2020	1125	2	<2	<2	<2	1.00	18.9	70.77	8.6	33.87	8.3
I40	13 Jul 2020	1125	6	20e	14e	6e	0.70	16.3	58.32	8.9	33.65	8.2

Station	Date	Time	Depth	Total	Fecal	Enteric	F:T	Temp	XMS	DO	Sal	pH
I40	13 Jul 2020	1125	9	140e	12e	24e	0.09	15.0	63.12	8.4	33.69	8.2
I40	21 Jul 2020	1108	2	400	140e	320e	0.35	15.0	62.35	6.1	33.56	8.0
I40	21 Jul 2020	1108	6	80e	22e	22e	0.28	12.2	66.13	4.6	33.78	7.9
I40	21 Jul 2020	1108	9	<200	4e	6e	0.02	11.9	61.18	3.7	33.73	7.8
I40	28 Jul 2020	1058	2	1500	110	66	0.07	15.2	66.79	7.6	33.76	8.1
I40	28 Jul 2020	1058	6	94	6e	2e	0.06	13.4	75.59	7.1	33.68	8.0
I40	28 Jul 2020	1058	9	48	6e	<2	0.12	12.9	67.80	6.2	33.69	7.9

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 Jul 2020	Depth (m)	11
I19	06 Jul 2020	Arrive Time	1126
I19	06 Jul 2020	Depart Time	1131
I19	06 Jul 2020	Air Temp (C)	18
I19	06 Jul 2020	Weather	Fog
I19	06 Jul 2020	Visibility (mi)	2
I19	06 Jul 2020	Wind Speed (kts)	8
I19	06 Jul 2020	Wind Dir	S
I19	06 Jul 2020	Water Color	Bluish-Green
I19	06 Jul 2020	Wave Ht Low (ft)	4
I19	06 Jul 2020	Wave Period (sec)	13
I19	06 Jul 2020	Sea State	Wind ripples
I19	06 Jul 2020	High Tide (ft)	3.91
I19	06 Jul 2020	High Tide Time	1132
I19	06 Jul 2020	Low Tide (ft)	-1.1
I19	06 Jul 2020	Low Tide Time	508
I19	06 Jul 2020	Comments	none
I19	13 Jul 2020	Depth (m)	10
I19	13 Jul 2020	Arrive Time	1110
I19	13 Jul 2020	Depart Time	1115
I19	13 Jul 2020	Air Temp (C)	20
I19	13 Jul 2020	Weather	Partly Cloudy
I19	13 Jul 2020	Visibility (mi)	3
I19	13 Jul 2020	Wind Speed (kts)	9
I19	13 Jul 2020	Wind Dir	S
I19	13 Jul 2020	Water Color	Green
I19	13 Jul 2020	Wave Ht Low (ft)	3
I19	13 Jul 2020	Wave Period (sec)	9
I19	13 Jul 2020	Sea State	Light chop
I19	13 Jul 2020	High Tide (ft)	3.08
I19	13 Jul 2020	High Tide Time	358
I19	13 Jul 2020	Low Tide (ft)	1.66
I19	13 Jul 2020	Low Tide Time	959
I19	13 Jul 2020	Comments	none
I19	21 Jul 2020	Depth (m)	11
I19	21 Jul 2020	Arrive Time	1054
I19	21 Jul 2020	Depart Time	1057
I19	21 Jul 2020	Air Temp (C)	18
I19	21 Jul 2020	Weather	Continuous layer of clouds
I19	21 Jul 2020	Visibility (mi)	7
I19	21 Jul 2020	Wind Speed (kts)	1
I19	21 Jul 2020	Wind Dir	S
I19	21 Jul 2020	Water Color	Brownish-Green
I19	21 Jul 2020	Wave Ht Low (ft)	3
I19	21 Jul 2020	Wave Period (sec)	11
I19	21 Jul 2020	Sea State	Calm
I19	21 Jul 2020	High Tide (ft)	4.02
I19	21 Jul 2020	High Tide Time	1104
I19	21 Jul 2020	Low Tide (ft)	-1.04

Station	Date	Parameter	Value
I19	21 Jul 2020	Low Tide Time	444
I19	21 Jul 2020	Comments	none
I19	28 Jul 2020	Depth (m)	9
I19	28 Jul 2020	Arrive Time	1043
I19	28 Jul 2020	Depart Time	1050
I19	28 Jul 2020	Air Temp (C)	18
I19	28 Jul 2020	Weather	Partly Cloudy
I19	28 Jul 2020	Visibility (mi)	5
I19	28 Jul 2020	Wind Speed (kts)	0
I19	28 Jul 2020	Wind Dir	
I19	28 Jul 2020	Water Color	Brownish-Green
I19	28 Jul 2020	Wave Ht Low (ft)	3
I19	28 Jul 2020	Wave Period (sec)	11
I19	28 Jul 2020	Sea State	Calm
I19	28 Jul 2020	High Tide (ft)	3.26
I19	28 Jul 2020	High Tide Time	441
I19	28 Jul 2020	Low Tide (ft)	1.71
I19	28 Jul 2020	Low Tide Time	1007
I19	28 Jul 2020	Comments	none
I24	06 Jul 2020	Depth (m)	10
I24	06 Jul 2020	Arrive Time	1148
I24	06 Jul 2020	Depart Time	1153
I24	06 Jul 2020	Air Temp (C)	18
I24	06 Jul 2020	Weather	Fog
I24	06 Jul 2020	Visibility (mi)	3
I24	06 Jul 2020	Wind Speed (kts)	8
I24	06 Jul 2020	Wind Dir	S
I24	06 Jul 2020	Water Color	Bluish-Green
I24	06 Jul 2020	Wave Ht Low (ft)	4
I24	06 Jul 2020	Wave Period (sec)	13
I24	06 Jul 2020	Sea State	Wind ripples
I24	06 Jul 2020	High Tide (ft)	3.91
I24	06 Jul 2020	High Tide Time	1132
I24	06 Jul 2020	Low Tide (ft)	-1.1
I24	06 Jul 2020	Low Tide Time	508
I24	06 Jul 2020	Comments	none
I24	13 Jul 2020	Depth (m)	10
I24	13 Jul 2020	Arrive Time	1134
I24	13 Jul 2020	Depart Time	1139
I24	13 Jul 2020	Air Temp (C)	20
I24	13 Jul 2020	Weather	Partly Cloudy
I24	13 Jul 2020	Visibility (mi)	3
I24	13 Jul 2020	Wind Speed (kts)	11
I24	13 Jul 2020	Wind Dir	S
I24	13 Jul 2020	Water Color	Green
I24	13 Jul 2020	Wave Ht Low (ft)	3
I24	13 Jul 2020	Wave Period (sec)	9
I24	13 Jul 2020	Sea State	Light chop
I24	13 Jul 2020	High Tide (ft)	3.08
I24	13 Jul 2020	High Tide Time	358
I24	13 Jul 2020	Low Tide (ft)	1.66
I24	13 Jul 2020	Low Tide Time	959

Station	Date	Parameter	Value
I24	13 Jul 2020	Comments	none
I24	21 Jul 2020	Depth (m)	11
I24	21 Jul 2020	Arrive Time	1120
I24	21 Jul 2020	Depart Time	1122
I24	21 Jul 2020	Air Temp (C)	19
I24	21 Jul 2020	Weather	Partly Cloudy
I24	21 Jul 2020	Visibility (mi)	7
I24	21 Jul 2020	Wind Speed (kts)	7
I24	21 Jul 2020	Wind Dir	NW
I24	21 Jul 2020	Water Color	Brownish-Green
I24	21 Jul 2020	Wave Ht Low (ft)	3
I24	21 Jul 2020	Wave Period (sec)	11
I24	21 Jul 2020	Sea State	Calm
I24	21 Jul 2020	High Tide (ft)	4.02
I24	21 Jul 2020	High Tide Time	1104
I24	21 Jul 2020	Low Tide (ft)	-1.04
I24	21 Jul 2020	Low Tide Time	444
I24	21 Jul 2020	Comments	none
I24	28 Jul 2020	Depth (m)	9
I24	28 Jul 2020	Arrive Time	1108
I24	28 Jul 2020	Depart Time	1113
I24	28 Jul 2020	Air Temp (C)	18
I24	28 Jul 2020	Weather	Partly Cloudy
I24	28 Jul 2020	Visibility (mi)	5
I24	28 Jul 2020	Wind Speed (kts)	9
I24	28 Jul 2020	Wind Dir	S
I24	28 Jul 2020	Water Color	Brownish-Green
I24	28 Jul 2020	Wave Ht Low (ft)	3
I24	28 Jul 2020	Wave Period (sec)	11
I24	28 Jul 2020	Sea State	Calm
I24	28 Jul 2020	High Tide (ft)	3.26
I24	28 Jul 2020	High Tide Time	441
I24	28 Jul 2020	Low Tide (ft)	1.71
I24	28 Jul 2020	Low Tide Time	1007
I24	28 Jul 2020	Comments	none
I25	06 Jul 2020	Depth (m)	9
I25	06 Jul 2020	Arrive Time	1156
I25	06 Jul 2020	Depart Time	1201
I25	06 Jul 2020	Air Temp (C)	18
I25	06 Jul 2020	Weather	Fog
I25	06 Jul 2020	Visibility (mi)	3
I25	06 Jul 2020	Wind Speed (kts)	8
I25	06 Jul 2020	Wind Dir	S
I25	06 Jul 2020	Water Color	Bluish-Green
I25	06 Jul 2020	Wave Ht Low (ft)	4
I25	06 Jul 2020	Wave Period (sec)	13
I25	06 Jul 2020	Sea State	Wind ripples
I25	06 Jul 2020	High Tide (ft)	3.91
I25	06 Jul 2020	High Tide Time	1132
I25	06 Jul 2020	Low Tide (ft)	-1.1
I25	06 Jul 2020	Low Tide Time	508
I25	06 Jul 2020	Comments	none

Station	Date	Parameter	Value
I25	13 Jul 2020	Depth (m)	9
I25	13 Jul 2020	Arrive Time	1142
I25	13 Jul 2020	Depart Time	1146
I25	13 Jul 2020	Air Temp (C)	20
I25	13 Jul 2020	Weather	Partly Cloudy
I25	13 Jul 2020	Visibility (mi)	3
I25	13 Jul 2020	Wind Speed (kts)	12
I25	13 Jul 2020	Wind Dir	S
I25	13 Jul 2020	Water Color	Green
I25	13 Jul 2020	Wave Ht Low (ft)	3
I25	13 Jul 2020	Wave Period (sec)	9
I25	13 Jul 2020	Sea State	Light chop
I25	13 Jul 2020	High Tide (ft)	3.08
I25	13 Jul 2020	High Tide Time	358
I25	13 Jul 2020	Low Tide (ft)	1.66
I25	13 Jul 2020	Low Tide Time	959
I25	13 Jul 2020	Comments	none
I25	21 Jul 2020	Depth (m)	9
I25	21 Jul 2020	Arrive Time	1130
I25	21 Jul 2020	Depart Time	1133
I25	21 Jul 2020	Air Temp (C)	19
I25	21 Jul 2020	Weather	Partly Cloudy
I25	21 Jul 2020	Visibility (mi)	7
I25	21 Jul 2020	Wind Speed (kts)	6
I25	21 Jul 2020	Wind Dir	NW
I25	21 Jul 2020	Water Color	Brownish-Green
I25	21 Jul 2020	Wave Ht Low (ft)	3
I25	21 Jul 2020	Wave Period (sec)	11
I25	21 Jul 2020	Sea State	Calm
I25	21 Jul 2020	High Tide (ft)	4.02
I25	21 Jul 2020	High Tide Time	1104
I25	21 Jul 2020	Low Tide (ft)	-1.04
I25	21 Jul 2020	Low Tide Time	444
I25	21 Jul 2020	Comments	none
I25	28 Jul 2020	Depth (m)	9
I25	28 Jul 2020	Arrive Time	1120
I25	28 Jul 2020	Depart Time	1124
I25	28 Jul 2020	Air Temp (C)	19
I25	28 Jul 2020	Weather	Partly Cloudy
I25	28 Jul 2020	Visibility (mi)	5
I25	28 Jul 2020	Wind Speed (kts)	7
I25	28 Jul 2020	Wind Dir	S
I25	28 Jul 2020	Water Color	Brownish-Green
I25	28 Jul 2020	Wave Ht Low (ft)	3
I25	28 Jul 2020	Wave Period (sec)	11
I25	28 Jul 2020	Sea State	Calm
I25	28 Jul 2020	High Tide (ft)	3.26
I25	28 Jul 2020	High Tide Time	441
I25	28 Jul 2020	Low Tide (ft)	1.71
I25	28 Jul 2020	Low Tide Time	1007
I25	28 Jul 2020	Comments	none

Station	Date	Parameter	Value
I26	06 Jul 2020	Depth (m)	9
I26	06 Jul 2020	Arrive Time	1207
I26	06 Jul 2020	Depart Time	1213
I26	06 Jul 2020	Air Temp (C)	18
I26	06 Jul 2020	Weather	Fog
I26	06 Jul 2020	Visibility (mi)	3
I26	06 Jul 2020	Wind Speed (kts)	7
I26	06 Jul 2020	Wind Dir	S
I26	06 Jul 2020	Water Color	Bluish-Green
I26	06 Jul 2020	Wave Ht Low (ft)	4
I26	06 Jul 2020	Wave Period (sec)	13
I26	06 Jul 2020	Sea State	Wind ripples
I26	06 Jul 2020	High Tide (ft)	3.91
I26	06 Jul 2020	High Tide Time	1132
I26	06 Jul 2020	Low Tide (ft)	-1.1
I26	06 Jul 2020	Low Tide Time	508
I26	06 Jul 2020	Comments	none
I26	13 Jul 2020	Depth (m)	9
I26	13 Jul 2020	Arrive Time	1152
I26	13 Jul 2020	Depart Time	1159
I26	13 Jul 2020	Air Temp (C)	20
I26	13 Jul 2020	Weather	Partly Cloudy
I26	13 Jul 2020	Visibility (mi)	5
I26	13 Jul 2020	Wind Speed (kts)	2
I26	13 Jul 2020	Wind Dir	SW
I26	13 Jul 2020	Water Color	Green
I26	13 Jul 2020	Wave Ht Low (ft)	3
I26	13 Jul 2020	Wave Period (sec)	9
I26	13 Jul 2020	Sea State	Light chop
I26	13 Jul 2020	High Tide (ft)	3.08
I26	13 Jul 2020	High Tide Time	358
I26	13 Jul 2020	Low Tide (ft)	1.66
I26	13 Jul 2020	Low Tide Time	959
I26	13 Jul 2020	Comments	none
I26	21 Jul 2020	Depth (m)	9
I26	21 Jul 2020	Arrive Time	1142
I26	21 Jul 2020	Depart Time	1144
I26	21 Jul 2020	Air Temp (C)	18
I26	21 Jul 2020	Weather	Partly Cloudy
I26	21 Jul 2020	Visibility (mi)	7
I26	21 Jul 2020	Wind Speed (kts)	8
I26	21 Jul 2020	Wind Dir	NW
I26	21 Jul 2020	Water Color	Brownish-Green
I26	21 Jul 2020	Wave Ht Low (ft)	3
I26	21 Jul 2020	Wave Period (sec)	11
I26	21 Jul 2020	Sea State	Calm
I26	21 Jul 2020	High Tide (ft)	4.02
I26	21 Jul 2020	High Tide Time	1104
I26	21 Jul 2020	Low Tide (ft)	-1.04
I26	21 Jul 2020	Low Tide Time	444
I26	21 Jul 2020	Comments	none
I26	28 Jul 2020	Depth (m)	9

Station	Date	Parameter	Value
I26	28 Jul 2020	Arrive Time	1133
I26	28 Jul 2020	Depart Time	1136
I26	28 Jul 2020	Air Temp (C)	18
I26	28 Jul 2020	Weather	Partly Cloudy
I26	28 Jul 2020	Visibility (mi)	5
I26	28 Jul 2020	Wind Speed (kts)	9
I26	28 Jul 2020	Wind Dir	SW
I26	28 Jul 2020	Water Color	Brownish-Green
I26	28 Jul 2020	Wave Ht Low (ft)	3
I26	28 Jul 2020	Wave Period (sec)	11
I26	28 Jul 2020	Sea State	Calm
I26	28 Jul 2020	High Tide (ft)	3.26
I26	28 Jul 2020	High Tide Time	441
I26	28 Jul 2020	Low Tide (ft)	1.71
I26	28 Jul 2020	Low Tide Time	1007
I26	28 Jul 2020	Comments	none
I32	06 Jul 2020	Depth (m)	10
I32	06 Jul 2020	Arrive Time	1222
I32	06 Jul 2020	Depart Time	1225
I32	06 Jul 2020	Air Temp (C)	18
I32	06 Jul 2020	Weather	Fog
I32	06 Jul 2020	Visibility (mi)	3
I32	06 Jul 2020	Wind Speed (kts)	6
I32	06 Jul 2020	Wind Dir	S
I32	06 Jul 2020	Water Color	Bluish-Green
I32	06 Jul 2020	Wave Ht Low (ft)	4
I32	06 Jul 2020	Wave Period (sec)	13
I32	06 Jul 2020	Sea State	Wind ripples
I32	06 Jul 2020	High Tide (ft)	3.91
I32	06 Jul 2020	High Tide Time	1132
I32	06 Jul 2020	Low Tide (ft)	-1.1
I32	06 Jul 2020	Low Tide Time	508
I32	06 Jul 2020	Comments	none
I32	13 Jul 2020	Depth (m)	9
I32	13 Jul 2020	Arrive Time	1209
I32	13 Jul 2020	Depart Time	1213
I32	13 Jul 2020	Air Temp (C)	21
I32	13 Jul 2020	Weather	Partly Cloudy
I32	13 Jul 2020	Visibility (mi)	5
I32	13 Jul 2020	Wind Speed (kts)	1
I32	13 Jul 2020	Wind Dir	S
I32	13 Jul 2020	Water Color	Green
I32	13 Jul 2020	Wave Ht Low (ft)	3
I32	13 Jul 2020	Wave Period (sec)	9
I32	13 Jul 2020	Sea State	Light chop
I32	13 Jul 2020	High Tide (ft)	3.08
I32	13 Jul 2020	High Tide Time	358
I32	13 Jul 2020	Low Tide (ft)	1.66
I32	13 Jul 2020	Low Tide Time	959
I32	13 Jul 2020	Comments	
I32	21 Jul 2020	Depth (m)	10
I32	21 Jul 2020	Arrive Time	1204

Station	Date	Parameter	Value
I32	21 Jul 2020	Depart Time	1208
I32	21 Jul 2020	Air Temp (C)	18
I32	21 Jul 2020	Weather	Partly Cloudy
I32	21 Jul 2020	Visibility (mi)	7
I32	21 Jul 2020	Wind Speed (kts)	6
I32	21 Jul 2020	Wind Dir	NW
I32	21 Jul 2020	Water Color	Brownish-Green
I32	21 Jul 2020	Wave Ht Low (ft)	3
I32	21 Jul 2020	Wave Period (sec)	11
I32	21 Jul 2020	Sea State	Calm
I32	21 Jul 2020	High Tide (ft)	4.02
I32	21 Jul 2020	High Tide Time	1104
I32	21 Jul 2020	Low Tide (ft)	-1.04
I32	21 Jul 2020	Low Tide Time	444
I32	21 Jul 2020	Comments	none
I32	28 Jul 2020	Depth (m)	6
I32	28 Jul 2020	Arrive Time	1146
I32	28 Jul 2020	Depart Time	1151
I32	28 Jul 2020	Air Temp (C)	18
I32	28 Jul 2020	Weather	Partly Cloudy
I32	28 Jul 2020	Visibility (mi)	5
I32	28 Jul 2020	Wind Speed (kts)	8
I32	28 Jul 2020	Wind Dir	SW
I32	28 Jul 2020	Water Color	Brownish-Green
I32	28 Jul 2020	Wave Ht Low (ft)	3
I32	28 Jul 2020	Wave Period (sec)	11
I32	28 Jul 2020	Sea State	Calm
I32	28 Jul 2020	High Tide (ft)	3.26
I32	28 Jul 2020	High Tide Time	441
I32	28 Jul 2020	Low Tide (ft)	1.71
I32	28 Jul 2020	Low Tide Time	1007
I32	28 Jul 2020	Comments	none
I39	06 Jul 2020	Depth (m)	19
I39	06 Jul 2020	Arrive Time	1101
I39	06 Jul 2020	Depart Time	1108
I39	06 Jul 2020	Air Temp (C)	18
I39	06 Jul 2020	Weather	Fog
I39	06 Jul 2020	Visibility (mi)	2
I39	06 Jul 2020	Wind Speed (kts)	8
I39	06 Jul 2020	Wind Dir	S
I39	06 Jul 2020	Water Color	Bluish-Green
I39	06 Jul 2020	Wave Ht Low (ft)	4
I39	06 Jul 2020	Wave Period (sec)	13
I39	06 Jul 2020	Sea State	Wind ripples
I39	06 Jul 2020	High Tide (ft)	3.91
I39	06 Jul 2020	High Tide Time	1132
I39	06 Jul 2020	Low Tide (ft)	-1.1
I39	06 Jul 2020	Low Tide Time	508
I39	06 Jul 2020	Comments	none
I39	13 Jul 2020	Depth (m)	18
I39	13 Jul 2020	Arrive Time	1043
I39	13 Jul 2020	Depart Time	1048

Station	Date	Parameter	Value
I39	13 Jul 2020	Air Temp (C)	20
I39	13 Jul 2020	Weather	Partly Cloudy
I39	13 Jul 2020	Visibility (mi)	3
I39	13 Jul 2020	Wind Speed (kts)	11
I39	13 Jul 2020	Wind Dir	SW
I39	13 Jul 2020	Water Color	Green
I39	13 Jul 2020	Wave Ht Low (ft)	3
I39	13 Jul 2020	Wave Period (sec)	9
I39	13 Jul 2020	Sea State	Calm
I39	13 Jul 2020	High Tide (ft)	3.08
I39	13 Jul 2020	High Tide Time	358
I39	13 Jul 2020	Low Tide (ft)	1.66
I39	13 Jul 2020	Low Tide Time	959
I39	13 Jul 2020	Comments	none
I39	21 Jul 2020	Depth (m)	18
I39	21 Jul 2020	Arrive Time	1032
I39	21 Jul 2020	Depart Time	1034
I39	21 Jul 2020	Air Temp (C)	18
I39	21 Jul 2020	Weather	Continuous layer of clouds
I39	21 Jul 2020	Visibility (mi)	7
I39	21 Jul 2020	Wind Speed (kts)	0
I39	21 Jul 2020	Wind Dir	
I39	21 Jul 2020	Water Color	Brownish-Green
I39	21 Jul 2020	Wave Ht Low (ft)	4
I39	21 Jul 2020	Wave Period (sec)	11
I39	21 Jul 2020	Sea State	Calm
I39	21 Jul 2020	High Tide (ft)	4.02
I39	21 Jul 2020	High Tide Time	1104
I39	21 Jul 2020	Low Tide (ft)	-1.04
I39	21 Jul 2020	Low Tide Time	444
I39	21 Jul 2020	Comments	none
I39	28 Jul 2020	Depth (m)	18
I39	28 Jul 2020	Arrive Time	1021
I39	28 Jul 2020	Depart Time	1027
I39	28 Jul 2020	Air Temp (C)	18
I39	28 Jul 2020	Weather	Partly Cloudy
I39	28 Jul 2020	Visibility (mi)	5
I39	28 Jul 2020	Wind Speed (kts)	6
I39	28 Jul 2020	Wind Dir	SW
I39	28 Jul 2020	Water Color	Brownish-Green
I39	28 Jul 2020	Wave Ht Low (ft)	3
I39	28 Jul 2020	Wave Period (sec)	11
I39	28 Jul 2020	Sea State	Calm
I39	28 Jul 2020	High Tide (ft)	3.26
I39	28 Jul 2020	High Tide Time	441
I39	28 Jul 2020	Low Tide (ft)	1.71
I39	28 Jul 2020	Low Tide Time	1007
I39	28 Jul 2020	Comments	Station depth 17m due to low tide
I40	06 Jul 2020	Depth (m)	10
I40	06 Jul 2020	Arrive Time	1138
I40	06 Jul 2020	Depart Time	1144
I40	06 Jul 2020	Air Temp (C)	18

Station	Date	Parameter	Value
I40	06 Jul 2020	Weather	Fog
I40	06 Jul 2020	Visibility (mi)	3
I40	06 Jul 2020	Wind Speed (kts)	8
I40	06 Jul 2020	Wind Dir	S
I40	06 Jul 2020	Water Color	Bluish-Green
I40	06 Jul 2020	Wave Ht Low (ft)	4
I40	06 Jul 2020	Wave Period (sec)	13
I40	06 Jul 2020	Sea State	Wind ripples
I40	06 Jul 2020	High Tide (ft)	3.91
I40	06 Jul 2020	High Tide Time	1132
I40	06 Jul 2020	Low Tide (ft)	-1.1
I40	06 Jul 2020	Low Tide Time	508
I40	06 Jul 2020	Comments	none
I40	13 Jul 2020	Depth (m)	9
I40	13 Jul 2020	Arrive Time	1125
I40	13 Jul 2020	Depart Time	1128
I40	13 Jul 2020	Air Temp (C)	20
I40	13 Jul 2020	Weather	Partly Cloudy
I40	13 Jul 2020	Visibility (mi)	3
I40	13 Jul 2020	Wind Speed (kts)	7
I40	13 Jul 2020	Wind Dir	S
I40	13 Jul 2020	Water Color	Green
I40	13 Jul 2020	Wave Ht Low (ft)	3
I40	13 Jul 2020	Wave Period (sec)	9
I40	13 Jul 2020	Sea State	Light chop
I40	13 Jul 2020	High Tide (ft)	3.08
I40	13 Jul 2020	High Tide Time	358
I40	13 Jul 2020	Low Tide (ft)	1.66
I40	13 Jul 2020	Low Tide Time	959
I40	13 Jul 2020	Comments	none
I40	21 Jul 2020	Depth (m)	10
I40	21 Jul 2020	Arrive Time	1108
I40	21 Jul 2020	Depart Time	1113
I40	21 Jul 2020	Air Temp (C)	18
I40	21 Jul 2020	Weather	Continuous layer of clouds
I40	21 Jul 2020	Visibility (mi)	7
I40	21 Jul 2020	Wind Speed (kts)	2
I40	21 Jul 2020	Wind Dir	W
I40	21 Jul 2020	Water Color	Brownish-Green
I40	21 Jul 2020	Wave Ht Low (ft)	3
I40	21 Jul 2020	Wave Period (sec)	11
I40	21 Jul 2020	Sea State	Calm
I40	21 Jul 2020	High Tide (ft)	4.02
I40	21 Jul 2020	High Tide Time	1104
I40	21 Jul 2020	Low Tide (ft)	-1.04
I40	21 Jul 2020	Low Tide Time	444
I40	21 Jul 2020	Comments	High CDOM levels and low oxygen detected after multiple casts
I40	28 Jul 2020	Depth (m)	9
I40	28 Jul 2020	Arrive Time	1058
I40	28 Jul 2020	Depart Time	1102
I40	28 Jul 2020	Air Temp (C)	18
I40	28 Jul 2020	Weather	Partly Cloudy

Station	Date	Parameter	Value
I40	28 Jul 2020	Visibility (mi)	5
I40	28 Jul 2020	Wind Speed (kts)	9
I40	28 Jul 2020	Wind Dir	SE
I40	28 Jul 2020	Water Color	Brownish-Green
I40	28 Jul 2020	Wave Ht Low (ft)	3
I40	28 Jul 2020	Wave Period (sec)	11
I40	28 Jul 2020	Sea State	Calm
I40	28 Jul 2020	High Tide (ft)	3.26
I40	28 Jul 2020	High Tide Time	441
I40	28 Jul 2020	Low Tide (ft)	1.71
I40	28 Jul 2020	Low Tide Time	1007
I40	28 Jul 2020	Comments	none

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 ($\sigma\text{-t}$)	Chlor ($\mu\text{g/L}$)
I19	06 Jul 2020	1	18.63	78.00	8.6	33.65	8.2	24.1	0.93
I19	06 Jul 2020	2	18.61	78.03	8.6	33.65	8.2	24.1	0.93
I19	06 Jul 2020	3	18.52	77.91	8.6	33.66	8.2	24.1	0.95
I19	06 Jul 2020	4	18.42	76.85	8.6	33.66	8.2	24.1	1.03
I19	06 Jul 2020	5	18.27	74.97	8.5	33.66	8.2	24.2	1.26
I19	06 Jul 2020	6	18.20	72.79	8.4	33.66	8.2	24.2	1.64
I19	06 Jul 2020	7	18.05	71.03	8.4	33.65	8.2	24.2	2.09
I19	06 Jul 2020	8	17.97	69.87	8.3	33.65	8.2	24.2	2.85
I19	06 Jul 2020	9	17.23	69.94	8.0	33.73	8.2	24.5	3.29
I19	06 Jul 2020	10	16.97	69.62	7.8	33.66	8.2	24.5	3.48
I19	13 Jul 2020	1	19.59	69.67	8.7	33.65	8.3	23.8	1.71
I19	13 Jul 2020	2	19.13	69.71	8.6	33.71	8.3	24.0	1.76
I19	13 Jul 2020	3	18.03	69.23	8.5	33.74	8.2	24.3	1.83
I19	13 Jul 2020	4	17.34	67.77	8.4	33.71	8.2	24.4	2.07
I19	13 Jul 2020	5	16.66	65.75	8.4	33.71	8.2	24.6	2.96
I19	13 Jul 2020	6	15.62	62.52	8.8	33.72	8.2	24.9	4.23
I19	13 Jul 2020	7	15.05	63.40	8.9	33.69	8.2	25.0	7.36
I19	13 Jul 2020	8	14.93	66.19	8.6	33.66	8.2	25.0	9.99
I19	13 Jul 2020	9	14.63	67.24	8.4	33.68	8.2	25.0	10.12
I19	13 Jul 2020	10	14.31	67.98	8.2	33.68	8.2	25.1	9.87
I19	21 Jul 2020	1	16.28	75.56	7.2	33.62	8.1	24.6	1.12
I19	21 Jul 2020	2	15.86	76.24	7.1	33.73	8.1	24.8	1.17
I19	21 Jul 2020	3	14.68	73.97	6.9	33.76	8.1	25.1	1.16
I19	21 Jul 2020	4	14.43	70.75	6.7	33.70	8.0	25.1	1.25
I19	21 Jul 2020	5	13.82	68.73	6.5	33.86	8.0	25.3	1.65
I19	21 Jul 2020	6	12.80	69.05	6.1	33.83	8.0	25.5	2.13
I19	21 Jul 2020	7	12.40	68.50	5.3	33.75	7.9	25.5	2.86
I19	21 Jul 2020	8	12.30	68.06	4.8	33.76	7.9	25.6	4.91
I19	21 Jul 2020	9	12.00	66.36	4.5	33.78	7.8	25.6	6.81
I19	21 Jul 2020	10	11.82	63.70	4.1	33.76	7.8	25.7	6.96
I19	28 Jul 2020	1	16.58	68.67	8.2	33.51	8.1	24.5	2.64
I19	28 Jul 2020	2	15.96	68.82	8.3	33.65	8.1	24.7	2.77
I19	28 Jul 2020	3	14.93	71.60	8.8	33.67	8.2	25.0	2.92
I19	28 Jul 2020	4	14.22	73.97	9.2	33.66	8.2	25.1	3.15
I19	28 Jul 2020	5	13.99	73.58	9.1	33.62	8.1	25.1	3.40
I19	28 Jul 2020	6	13.88	72.52	8.7	33.62	8.1	25.1	4.44
I19	28 Jul 2020	7	13.48	74.45	7.8	33.69	8.0	25.3	5.59
I19	28 Jul 2020	8	13.28	74.10	7.2	33.67	8.0	25.3	5.80
I19	28 Jul 2020	9	13.03	73.21	7.1	33.65	8.0	25.3	5.58
I24	06 Jul 2020	1	18.19	79.25	8.7	33.66	8.2	24.2	0.81
I24	06 Jul 2020	2	17.90	79.25	8.7	33.68	8.2	24.3	0.78
I24	06 Jul 2020	3	17.83	78.91	8.8	33.66	8.2	24.3	0.85
I24	06 Jul 2020	4	17.42	78.45	8.7	33.69	8.2	24.4	0.93
I24	06 Jul 2020	5	17.14	77.52	8.7	33.69	8.2	24.5	1.14
I24	06 Jul 2020	6	16.62	76.39	8.6	33.69	8.2	24.6	1.43
I24	06 Jul 2020	7	16.49	74.68	8.4	33.67	8.2	24.6	1.89
I24	06 Jul 2020	8	16.24	71.64	7.9	33.66	8.2	24.7	2.40

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (µg/L)
I24	06 Jul 2020	9	15.23	70.34	7.1	33.83	8.1	25.0	3.02
I24	06 Jul 2020	10	14.28	74.46	6.6	33.72	8.0	25.1	3.33
I24	13 Jul 2020	1	20.85	71.77	9.0	33.66	8.3	23.5	1.40
I24	13 Jul 2020	2	20.44	72.44	9.0	33.71	8.3	23.7	1.40
I24	13 Jul 2020	3	20.11	72.67	8.8	33.72	8.3	23.8	1.50
I24	13 Jul 2020	4	18.06	71.97	8.7	33.78	8.3	24.3	1.70
I24	13 Jul 2020	5	16.00	70.38	9.2	33.84	8.3	24.9	1.91
I24	13 Jul 2020	6	16.12	64.17	8.8	33.67	8.2	24.7	3.09
I24	13 Jul 2020	7	14.43	63.60	8.2	33.75	8.2	25.1	4.22
I24	13 Jul 2020	8	13.74	63.82	7.8	33.75	8.2	25.3	5.89
I24	13 Jul 2020	9	13.59	66.03	7.5	33.70	8.1	25.3	8.13
I24	13 Jul 2020	10	13.63	67.23	7.5	33.67	8.1	25.2	9.24
I24	21 Jul 2020	1	16.59	77.98	7.9	33.61	8.2	24.5	1.24
I24	21 Jul 2020	2	15.72	77.58	7.9	33.79	8.2	24.9	1.23
I24	21 Jul 2020	3	15.11	72.22	7.9	33.61	8.1	24.9	1.21
I24	21 Jul 2020	4	14.61	64.17	7.7	33.69	8.1	25.0	1.28
I24	21 Jul 2020	5	14.10	60.93	7.3	33.70	8.1	25.2	1.78
I24	21 Jul 2020	6	13.04	67.11	6.6	33.86	8.0	25.5	2.93
I24	21 Jul 2020	7	12.84	71.53	5.7	33.75	8.0	25.5	3.84
I24	21 Jul 2020	8	12.35	71.76	5.2	33.82	7.9	25.6	4.37
I24	21 Jul 2020	9	12.61	70.87	4.6	33.74	7.9	25.5	5.66
I24	21 Jul 2020	10	11.99	64.73	4.4	33.79	7.8	25.6	6.66
I24	21 Jul 2020	11	12.04	64.52	3.8	33.75	7.8	25.6	7.75
I24	28 Jul 2020	1	17.52	77.95	8.8	33.61	8.2	24.3	1.08
I24	28 Jul 2020	2	16.87	78.83	8.8	33.72	8.2	24.6	1.15
I24	28 Jul 2020	3	15.11	77.58	8.9	33.74	8.2	25.0	1.27
I24	28 Jul 2020	4	14.07	76.58	9.1	33.72	8.2	25.2	1.68
I24	28 Jul 2020	5	13.78	77.93	9.0	33.62	8.2	25.2	2.31
I24	28 Jul 2020	6	13.64	77.92	8.8	33.61	8.1	25.2	2.56
I24	28 Jul 2020	7	13.53	79.12	8.5	33.60	8.1	25.2	2.80
I24	28 Jul 2020	8	13.22	80.42	7.9	33.65	8.1	25.3	3.04
I24	28 Jul 2020	9	12.70	80.22	6.8	33.69	8.0	25.4	2.97
I24	28 Jul 2020	10	12.54	76.01	5.5	33.68	7.9	25.5	2.53
I24	28 Jul 2020	11	12.51	73.24	4.9	33.66	7.8	25.4	2.71
I25	06 Jul 2020	1	18.03	79.05	8.7	33.65	8.2	24.2	0.79
I25	06 Jul 2020	2	17.94	79.07	8.7	33.67	8.2	24.3	0.79
I25	06 Jul 2020	3	17.54	78.53	8.7	33.66	8.2	24.4	0.85
I25	06 Jul 2020	4	17.50	77.92	8.6	33.66	8.2	24.4	0.98
I25	06 Jul 2020	5	17.38	77.60	8.6	33.66	8.2	24.4	1.09
I25	06 Jul 2020	6	16.72	77.50	8.7	33.70	8.2	24.6	1.31
I25	06 Jul 2020	7	16.49	76.37	8.7	33.68	8.2	24.6	1.61
I25	06 Jul 2020	8	16.22	75.32	8.4	33.67	8.2	24.7	2.10
I25	06 Jul 2020	9	14.64	74.98	7.5	33.80	8.1	25.1	2.85
I25	13 Jul 2020	1	20.65	76.79	9.4	33.68	8.3	23.6	1.08
I25	13 Jul 2020	2	20.57	76.50	9.3	33.69	8.3	23.6	1.09
I25	13 Jul 2020	3	20.49	75.26	9.2	33.67	8.3	23.6	1.24
I25	13 Jul 2020	4	19.75	73.68	8.7	33.77	8.3	23.9	1.42
I25	13 Jul 2020	5	17.80	72.32	8.9	33.78	8.3	24.4	1.63
I25	13 Jul 2020	6	18.25	72.68	8.7	33.68	8.2	24.2	1.93
I25	13 Jul 2020	7	15.31	70.91	8.8	33.93	8.3	25.1	2.15

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (µg/L)
I25	13 Jul 2020	8	14.21	64.11	8.6	33.77	8.2	25.2	2.98
I25	13 Jul 2020	9	14.21	63.30	8.4	33.67	8.2	25.1	4.98
I25	21 Jul 2020	1	16.68	81.92	8.3	33.64	8.2	24.5	0.97
I25	21 Jul 2020	2	16.50	81.77	8.4	33.66	8.2	24.6	0.99
I25	21 Jul 2020	3	16.35	80.59	8.4	33.65	8.2	24.6	0.99
I25	21 Jul 2020	4	16.26	78.00	8.3	33.66	8.2	24.7	1.06
I25	21 Jul 2020	5	15.37	76.78	8.3	33.80	8.2	25.0	1.21
I25	21 Jul 2020	6	15.06	72.62	8.3	33.64	8.2	24.9	1.51
I25	21 Jul 2020	7	13.64	70.30	8.1	33.86	8.2	25.4	2.11
I25	21 Jul 2020	8	13.19	62.29	7.7	33.74	8.1	25.4	2.72
I25	21 Jul 2020	9	12.50	66.42	6.8	33.76	8.0	25.5	4.14
I25	28 Jul 2020	1	17.75	81.24	8.7	33.63	8.2	24.3	0.98
I25	28 Jul 2020	2	17.25	81.23	8.7	33.72	8.2	24.5	0.97
I25	28 Jul 2020	3	15.47	79.90	8.8	33.80	8.2	24.9	1.01
I25	28 Jul 2020	4	14.64	77.34	8.8	33.66	8.2	25.0	1.36
I25	28 Jul 2020	5	13.70	77.33	8.7	33.70	8.2	25.2	1.99
I25	28 Jul 2020	6	13.37	78.76	8.4	33.64	8.1	25.3	2.34
I25	28 Jul 2020	7	13.24	80.29	8.1	33.62	8.1	25.3	2.60
I25	28 Jul 2020	8	13.21	81.70	7.8	33.60	8.1	25.3	2.71
I25	28 Jul 2020	9	13.27	81.54	7.6	33.59	8.1	25.2	2.49
I26	06 Jul 2020	1	18.20	77.01	8.4	33.64	8.2	24.2	0.81
I26	06 Jul 2020	2	17.84	77.59	8.5	33.68	8.2	24.3	0.82
I26	06 Jul 2020	3	17.17	77.46	8.5	33.75	8.2	24.5	0.87
I26	06 Jul 2020	4	16.58	76.27	8.7	33.67	8.2	24.6	0.99
I26	06 Jul 2020	5	16.46	75.27	8.6	33.69	8.2	24.6	1.33
I26	06 Jul 2020	6	16.20	74.72	8.5	33.67	8.2	24.7	1.63
I26	06 Jul 2020	7	16.12	73.70	8.3	33.67	8.2	24.7	2.19
I26	06 Jul 2020	8	15.36	70.92	7.6	33.77	8.1	24.9	2.77
I26	06 Jul 2020	9	14.42	67.95	6.8	33.76	8.0	25.1	3.74
I26	13 Jul 2020	1	20.68	75.85	9.5	33.68	8.3	23.6	0.99
I26	13 Jul 2020	2	20.63	76.43	9.5	33.69	8.3	23.6	1.01
I26	13 Jul 2020	3	20.52	77.23	9.4	33.69	8.3	23.6	1.04
I26	13 Jul 2020	4	20.42	76.42	9.3	33.68	8.3	23.6	1.18
I26	13 Jul 2020	5	20.03	73.99	8.9	33.75	8.3	23.8	1.50
I26	13 Jul 2020	6	17.94	71.88	8.5	33.84	8.3	24.4	1.90
I26	13 Jul 2020	7	16.04	69.19	8.2	33.83	8.2	24.8	2.28
I26	13 Jul 2020	8	14.36	65.51	7.0	33.83	8.1	25.2	3.26
I26	13 Jul 2020	9	13.88	73.70	6.2	33.67	8.0	25.2	4.82
I26	21 Jul 2020	1	17.01	80.68	8.3	33.63	8.2	24.5	0.91
I26	21 Jul 2020	2	16.92	40.54	8.3	33.65	8.2	24.5	0.93
I26	21 Jul 2020	3	16.33	49.90	8.2	33.74	8.2	24.7	0.93
I26	21 Jul 2020	4	15.83	78.02	8.3	33.64	8.2	24.7	0.94
I26	21 Jul 2020	5	15.21	77.96	8.3	33.80	8.2	25.0	1.12
I26	21 Jul 2020	6	14.62	72.96	8.4	33.64	8.2	25.0	1.39
I26	21 Jul 2020	7	14.27	71.12	8.1	33.78	8.2	25.2	2.22
I26	21 Jul 2020	8	13.06	67.53	6.7	33.76	8.0	25.4	2.72
I26	21 Jul 2020	9	12.43	63.93	5.4	33.80	8.0	25.6	3.17
I26	28 Jul 2020	1	16.83	79.91	8.6	33.66	8.2	24.5	1.12
I26	28 Jul 2020	2	16.54	80.35	8.8	33.78	8.2	24.7	1.09

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (µg/L)
I26	28 Jul 2020	3	14.77	79.13	8.9	34.00	8.2	25.2	1.16
I26	28 Jul 2020	4	13.98	77.60	8.8	33.84	8.2	25.3	1.22
I26	28 Jul 2020	5	13.64	77.89	8.8	33.76	8.2	25.3	1.47
I26	28 Jul 2020	6	13.33	78.80	9.0	33.70	8.2	25.3	1.92
I26	28 Jul 2020	7	13.11	75.45	8.7	33.72	8.1	25.4	2.30
I26	28 Jul 2020	8	12.84	81.03	7.8	33.68	8.0	25.4	2.00
I26	28 Jul 2020	9	12.83	81.55	7.3	33.66	8.0	25.4	2.98
I32	06 Jul 2020	1	18.73	77.32	8.4	33.66	8.2	24.1	0.93
I32	06 Jul 2020	2	18.39	77.13	8.5	33.69	8.2	24.2	0.96
I32	06 Jul 2020	3	18.08	74.07	8.6	33.67	8.2	24.2	1.13
I32	06 Jul 2020	4	17.95	69.53	8.5	33.63	8.2	24.2	1.53
I32	06 Jul 2020	5	17.85	68.66	8.3	33.63	8.2	24.3	1.96
I32	06 Jul 2020	6	17.80	67.14	8.2	33.61	8.2	24.3	2.54
I32	06 Jul 2020	7	17.80	66.77	8.2	33.60	8.2	24.3	3.30
I32	06 Jul 2020	8	17.62	66.63	8.0	33.60	8.2	24.3	3.55
I32	06 Jul 2020	9	17.55	65.95	7.9	33.58	8.2	24.3	3.72
I32	06 Jul 2020	10	17.28	65.73	7.7	33.58	8.1	24.4	3.92
I32	13 Jul 2020	1	20.70	73.42	9.1	33.68	8.3	23.6	1.10
I32	13 Jul 2020	2	20.59	74.62	9.1	33.69	8.3	23.6	1.13
I32	13 Jul 2020	3	20.49	74.82	9.0	33.68	8.3	23.6	1.19
I32	13 Jul 2020	4	20.41	74.66	9.0	33.68	8.3	23.6	1.32
I32	13 Jul 2020	5	20.33	74.46	8.9	33.67	8.3	23.7	1.51
I32	13 Jul 2020	6	20.16	73.98	8.7	33.68	8.3	23.7	1.69
I32	13 Jul 2020	7	19.90	72.63	8.0	33.68	8.3	23.8	1.86
I32	13 Jul 2020	8	16.85	70.37	7.4	34.15	8.2	24.9	2.11
I32	13 Jul 2020	9	14.00	63.89	7.6	33.90	8.2	25.3	2.62
I32	13 Jul 2020	10	13.81	66.06	7.8	33.70	8.1	25.2	3.84
I32	21 Jul 2020	1	16.51	78.92	8.2	33.64	8.2	24.6	0.89
I32	21 Jul 2020	2	16.31	80.31	8.2	33.67	8.2	24.7	0.93
I32	21 Jul 2020	3	15.91	79.34	8.0	33.68	8.1	24.8	0.91
I32	21 Jul 2020	4	15.85	76.15	7.8	33.66	8.1	24.8	0.93
I32	21 Jul 2020	5	15.77	74.74	7.6	33.66	8.1	24.8	0.98
I32	21 Jul 2020	6	15.81	73.24	7.6	33.65	8.1	24.8	1.18
I32	21 Jul 2020	7	15.61	71.38	7.4	33.69	8.1	24.8	1.33
I32	21 Jul 2020	8	13.76	67.81	7.0	34.03	8.0	25.5	1.32
I32	21 Jul 2020	9	12.52	56.94	5.9	33.83	7.9	25.6	1.57
I32	21 Jul 2020	10	12.72	55.75	5.2	33.64	7.9	25.4	2.45
I32	28 Jul 2020	1	17.49	79.98	8.8	33.63	8.2	24.4	0.91
I32	28 Jul 2020	2	17.39	79.84	8.8	33.64	8.2	24.4	0.91
I32	28 Jul 2020	3	17.11	79.23	8.8	33.69	8.2	24.5	0.91
I32	28 Jul 2020	4	16.75	76.16	8.7	33.66	8.2	24.5	0.96
I32	28 Jul 2020	5	15.71	73.55	8.6	33.84	8.2	24.9	1.09
I32	28 Jul 2020	6	14.00	69.26	8.9	33.85	8.2	25.3	1.29
I32	28 Jul 2020	7	13.51	69.61	8.7	33.72	8.1	25.3	1.96
I32	28 Jul 2020	8	12.87	70.96	8.0	33.73	8.1	25.4	3.04
I32	28 Jul 2020	9	12.64	70.96	7.2	33.66	8.0	25.4	3.34
I32	28 Jul 2020	10	12.93	71.41	6.9	33.56	8.0	25.3	4.68
I39	06 Jul 2020	1	18.28	79.27	8.8	33.64	8.2	24.2	0.87
I39	06 Jul 2020	2	18.20	79.26	8.7	33.66	8.2	24.2	0.88
I39	06 Jul 2020	3	17.88	78.92	8.7	33.69	8.2	24.3	0.89

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (μg/L)
I39	06 Jul 2020	4	17.46	77.61	8.7	33.66	8.2	24.4	1.09
I39	06 Jul 2020	5	16.94	77.25	8.6	33.72	8.2	24.5	1.31
I39	06 Jul 2020	6	16.56	75.76	8.7	33.66	8.2	24.6	1.81
I39	06 Jul 2020	7	15.36	75.80	8.6	33.81	8.2	25.0	2.64
I39	06 Jul 2020	8	15.01	77.13	8.5	33.66	8.2	24.9	3.13
I39	06 Jul 2020	9	14.95	76.66	8.3	33.66	8.2	24.9	3.94
I39	06 Jul 2020	10	14.78	76.25	7.9	33.67	8.2	25.0	4.47
I39	06 Jul 2020	11	14.72	72.44	7.5	33.65	8.1	25.0	5.82
I39	06 Jul 2020	12	13.80	69.78	6.8	33.82	8.1	25.3	6.78
I39	06 Jul 2020	13	12.52	69.93	5.9	33.76	8.0	25.5	9.36
I39	06 Jul 2020	14	12.30	81.51	5.5	33.72	8.0	25.5	7.55
I39	06 Jul 2020	15	12.10	82.94	5.3	33.72	7.9	25.6	4.76
I39	06 Jul 2020	16	11.85	83.60	5.1	33.71	7.9	25.6	3.88
I39	06 Jul 2020	17	11.82	84.31	5.0	33.70	7.9	25.6	3.23
I39	06 Jul 2020	18	11.83	84.41	5.0	33.69	7.9	25.6	2.88
I39	13 Jul 2020	1	20.68	81.66	8.7	33.69	8.3	23.6	0.82
I39	13 Jul 2020	2	20.62	81.73	8.7	33.70	8.3	23.6	0.83
I39	13 Jul 2020	3	20.47	81.70	8.9	33.70	8.3	23.6	0.84
I39	13 Jul 2020	4	20.23	81.48	9.2	33.71	8.3	23.7	0.88
I39	13 Jul 2020	5	19.97	80.35	9.2	33.70	8.3	23.8	1.05
I39	13 Jul 2020	6	18.05	78.77	8.4	33.97	8.3	24.5	1.27
I39	13 Jul 2020	7	14.28	75.31	8.4	34.10	8.2	25.4	1.43
I39	13 Jul 2020	8	13.35	74.15	8.2	33.79	8.2	25.4	2.00
I39	13 Jul 2020	9	12.98	76.36	7.7	33.72	8.2	25.4	2.74
I39	13 Jul 2020	10	12.84	76.44	7.3	33.69	8.1	25.4	3.59
I39	13 Jul 2020	11	12.74	76.56	7.1	33.68	8.1	25.4	4.75
I39	13 Jul 2020	12	12.70	74.17	6.8	33.67	8.1	25.4	5.72
I39	13 Jul 2020	13	12.67	70.99	6.5	33.67	8.1	25.4	7.43
I39	13 Jul 2020	14	12.64	68.89	6.4	33.67	8.1	25.4	9.46
I39	13 Jul 2020	15	12.63	67.94	6.5	33.67	8.1	25.4	11.43
I39	13 Jul 2020	16	12.53	68.92	5.8	33.68	8.0	25.5	11.69
I39	13 Jul 2020	17	12.28	74.27	5.6	33.69	8.0	25.5	12.67
I39	13 Jul 2020	18	12.34	78.71	5.4	33.65	8.0	25.5	12.03
I39	21 Jul 2020	1	16.26	69.02	8.5	33.46	8.2	24.5	1.41
I39	21 Jul 2020	2	16.24	74.66	8.5	33.65	8.2	24.7	1.37
I39	21 Jul 2020	3	16.07	78.98	8.5	33.66	8.2	24.7	1.39
I39	21 Jul 2020	4	15.99	79.94	8.5	33.66	8.2	24.7	1.41
I39	21 Jul 2020	5	15.81	79.84	8.4	33.71	8.2	24.8	1.52
I39	21 Jul 2020	6	15.25	79.18	8.3	33.76	8.2	25.0	1.72
I39	21 Jul 2020	7	14.46	77.84	7.9	33.85	8.2	25.2	2.08
I39	21 Jul 2020	8	14.02	75.71	7.5	33.78	8.1	25.2	2.80
I39	21 Jul 2020	9	13.41	71.51	7.3	33.79	8.1	25.4	3.76
I39	21 Jul 2020	10	13.12	73.74	7.3	33.71	8.1	25.4	5.41
I39	21 Jul 2020	11	13.07	75.77	7.2	33.69	8.1	25.4	6.74
I39	21 Jul 2020	12	12.99	76.68	7.1	33.69	8.1	25.4	7.34
I39	21 Jul 2020	13	12.75	77.29	7.0	33.72	8.1	25.5	7.72
I39	21 Jul 2020	14	12.39	74.75	6.7	33.77	8.0	25.6	7.68
I39	21 Jul 2020	15	11.98	76.29	5.9	33.76	7.9	25.6	7.91
I39	21 Jul 2020	16	11.85	78.21	5.0	33.75	7.9	25.6	8.50
I39	21 Jul 2020	17	11.69	80.24	4.4	33.77	7.8	25.7	9.18
I39	21 Jul 2020	18	11.68	83.23	3.8	33.74	7.8	25.7	8.38
I39	28 Jul 2020	1	17.96	83.24	8.8	33.62	8.2	24.2	0.85

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (µg/L)
I39	28 Jul 2020	2	17.89	82.13	8.7	33.64	8.2	24.3	0.84
I39	28 Jul 2020	3	15.93	82.56	8.8	33.87	8.2	24.9	0.88
I39	28 Jul 2020	4	15.25	79.78	8.9	33.66	8.2	24.9	1.19
I39	28 Jul 2020	5	14.43	79.57	8.7	33.76	8.2	25.1	1.73
I39	28 Jul 2020	6	13.44	79.59	8.5	33.61	8.1	25.2	2.16
I39	28 Jul 2020	7	13.03	77.49	8.1	33.63	8.1	25.3	2.83
I39	28 Jul 2020	8	12.66	76.82	7.7	33.57	8.0	25.4	3.28
I39	28 Jul 2020	9	12.58	81.56	7.3	33.57	8.0	25.4	4.31
I39	28 Jul 2020	10	12.51	81.07	7.0	33.60	8.0	25.4	5.52
I39	28 Jul 2020	11	12.43	82.57	6.9	33.62	8.0	25.4	6.30
I39	28 Jul 2020	12	12.31	82.54	6.7	33.63	8.0	25.5	6.65
I39	28 Jul 2020	13	12.21	85.14	6.5	33.64	8.0	25.5	6.79
I39	28 Jul 2020	14	12.12	85.46	6.2	33.64	7.9	25.5	6.43
I39	28 Jul 2020	15	12.07	85.40	5.9	33.63	7.9	25.5	6.10
I39	28 Jul 2020	16	12.07	85.46	5.6	33.63	7.9	25.5	5.40
I39	28 Jul 2020	17	12.07	85.75	5.5	33.63	7.9	25.5	4.30
I40	06 Jul 2020	1	17.80	72.72	8.3	33.63	8.2	24.3	1.14
I40	06 Jul 2020	2	17.76	72.56	8.3	33.63	8.2	24.3	1.19
I40	06 Jul 2020	3	17.69	71.50	8.3	33.63	8.2	24.3	1.24
I40	06 Jul 2020	4	17.70	70.92	8.3	33.62	8.2	24.3	1.52
I40	06 Jul 2020	5	17.56	70.23	8.2	33.64	8.2	24.3	1.74
I40	06 Jul 2020	6	17.45	69.34	8.1	33.62	8.2	24.4	2.13
I40	06 Jul 2020	7	16.68	67.74	7.8	33.72	8.2	24.6	2.70
I40	06 Jul 2020	8	16.23	66.95	7.6	33.66	8.1	24.7	3.20
I40	06 Jul 2020	9	16.14	66.03	7.5	33.64	8.1	24.7	3.62
I40	06 Jul 2020	10	15.40	63.91	7.0	33.74	8.1	24.9	3.97
I40	13 Jul 2020	1	20.35	70.36	8.7	33.67	8.3	23.7	1.72
I40	13 Jul 2020	2	18.95	70.77	8.6	33.87	8.3	24.2	1.77
I40	13 Jul 2020	3	17.27	71.06	8.8	33.78	8.2	24.5	1.79
I40	13 Jul 2020	4	16.53	68.65	9.0	33.72	8.2	24.6	1.85
I40	13 Jul 2020	5	16.44	58.27	9.1	33.66	8.2	24.6	3.02
I40	13 Jul 2020	6	16.28	58.32	8.9	33.65	8.2	24.6	5.42
I40	13 Jul 2020	7	15.90	59.41	8.7	33.71	8.2	24.8	7.77
I40	13 Jul 2020	8	15.48	62.81	8.4	33.70	8.2	24.9	9.55
I40	13 Jul 2020	9	15.03	63.12	8.4	33.69	8.2	25.0	10.42
I40	21 Jul 2020	1	14.99	62.29	6.2	33.60	8.0	24.9	3.29
I40	21 Jul 2020	2	15.03	62.35	6.1	33.56	8.0	24.9	3.30
I40	21 Jul 2020	3	14.00	62.10	5.9	33.83	8.0	25.3	3.46
I40	21 Jul 2020	4	13.04	66.54	5.4	33.83	7.9	25.5	3.44
I40	21 Jul 2020	5	12.53	71.07	5.0	33.77	7.9	25.5	3.40
I40	21 Jul 2020	6	12.15	66.13	4.6	33.78	7.9	25.6	3.94
I40	21 Jul 2020	7	11.98	59.80	4.1	33.74	7.8	25.6	6.29
I40	21 Jul 2020	8	11.92	59.77	3.8	33.73	7.8	25.6	9.49
I40	21 Jul 2020	9	11.92	61.18	3.7	33.73	7.8	25.6	11.73
I40	21 Jul 2020	10	11.91	61.15	3.6	33.72	7.8	25.6	10.24
I40	28 Jul 2020	1	15.95	66.81	7.6	33.50	8.1	24.6	1.91
I40	28 Jul 2020	2	15.20	66.79	7.6	33.76	8.1	25.0	1.90
I40	28 Jul 2020	3	14.31	70.80	7.8	33.68	8.1	25.1	1.93
I40	28 Jul 2020	4	14.11	75.00	7.7	33.66	8.1	25.1	1.96
I40	28 Jul 2020	5	14.02	75.09	7.5	33.65	8.0	25.1	1.96
I40	28 Jul 2020	6	13.41	75.59	7.1	33.68	8.0	25.3	1.96

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens ($\sigma\text{-t}$)	Chlor ($\mu\text{g/L}$)
I40	28 Jul 2020	7	13.42	74.50	6.7	33.64	8.0	25.3	2.10
I40	28 Jul 2020	8	13.24	71.58	6.5	33.65	8.0	25.3	2.53
I40	28 Jul 2020	9	12.93	67.80	6.2	33.69	7.9	25.4	3.40
I40	28 Jul 2020	10	12.85	65.90	6.0	33.66	7.9	25.4	4.07

NA = not available

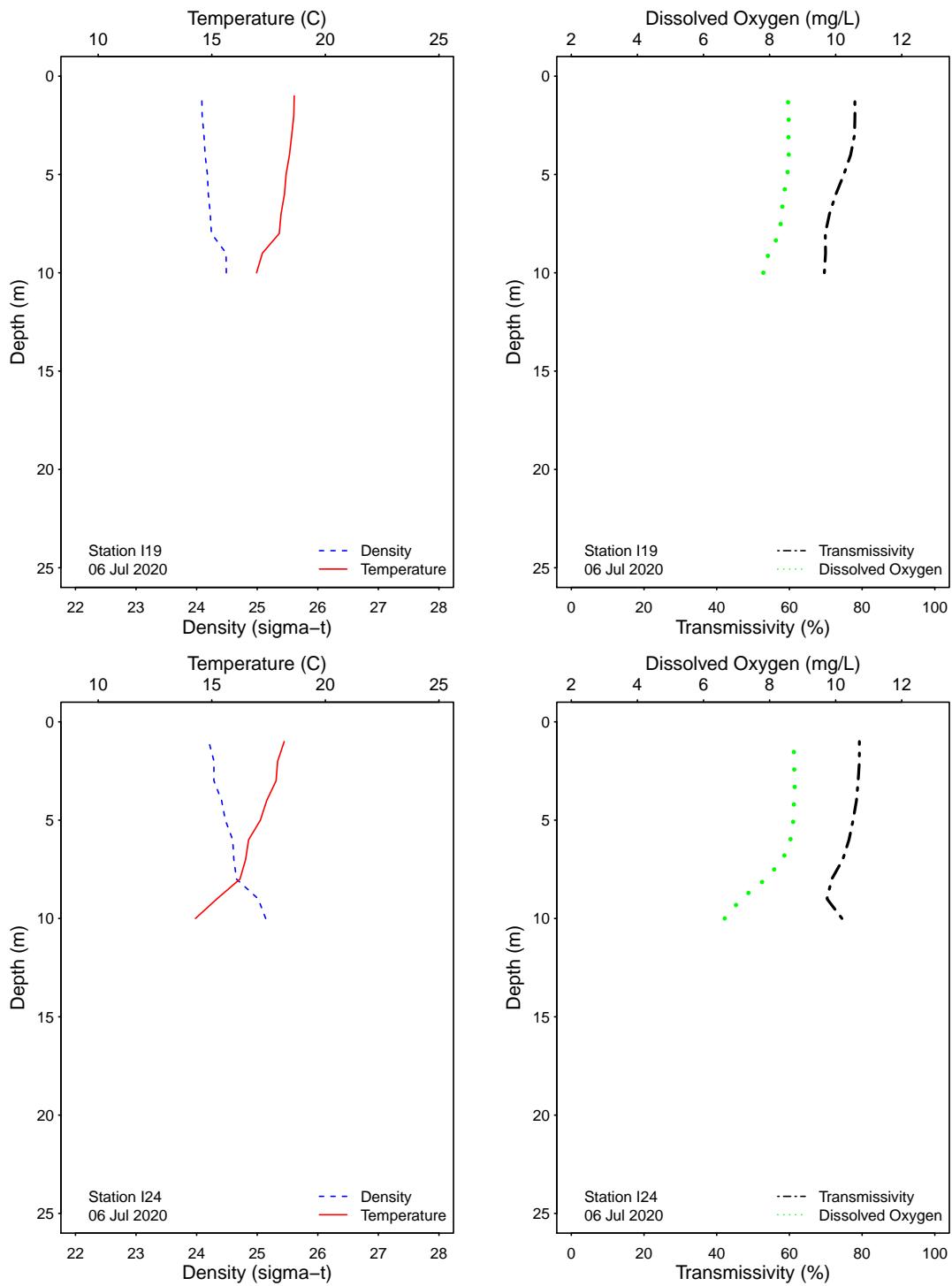


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

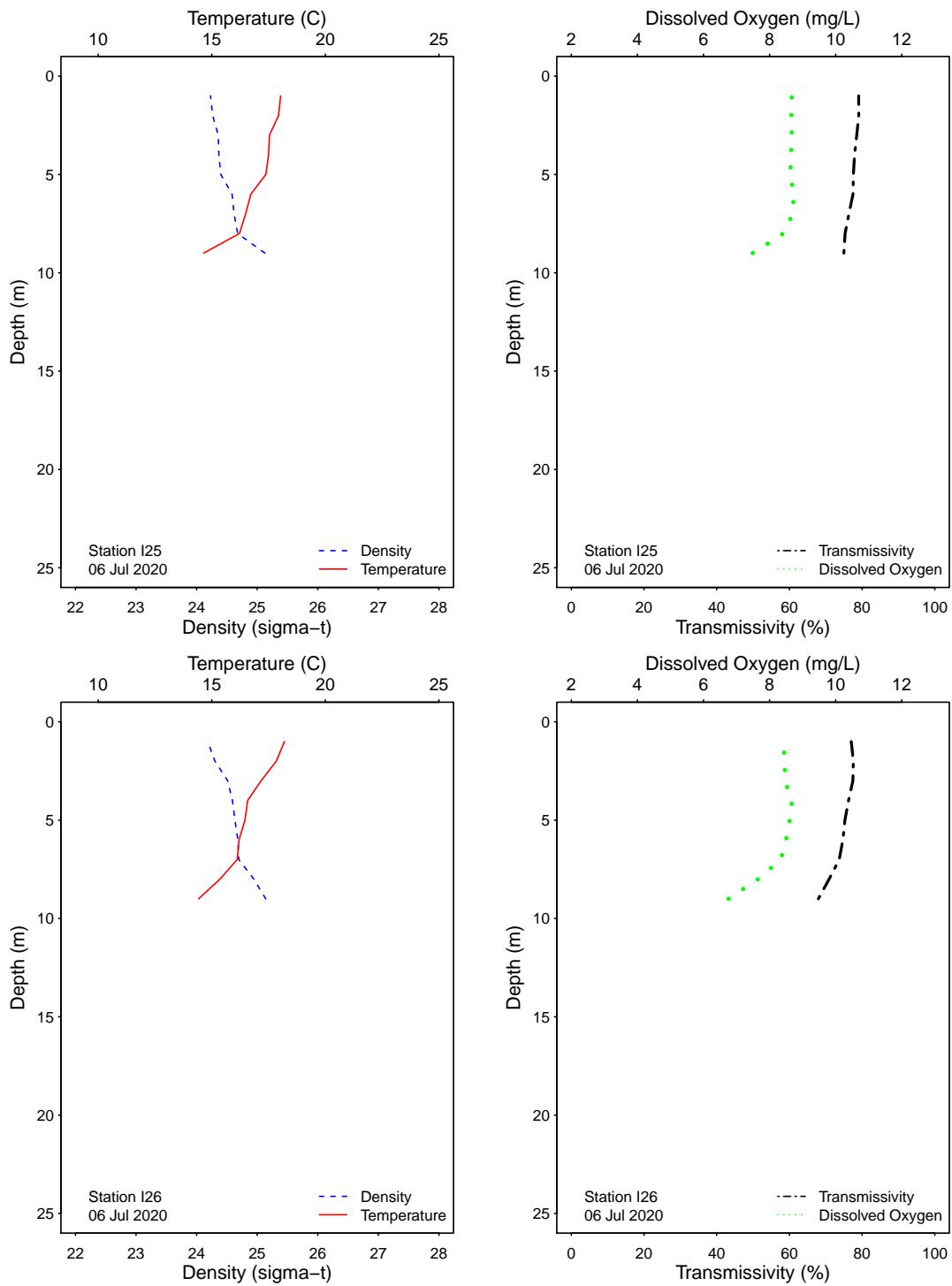


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

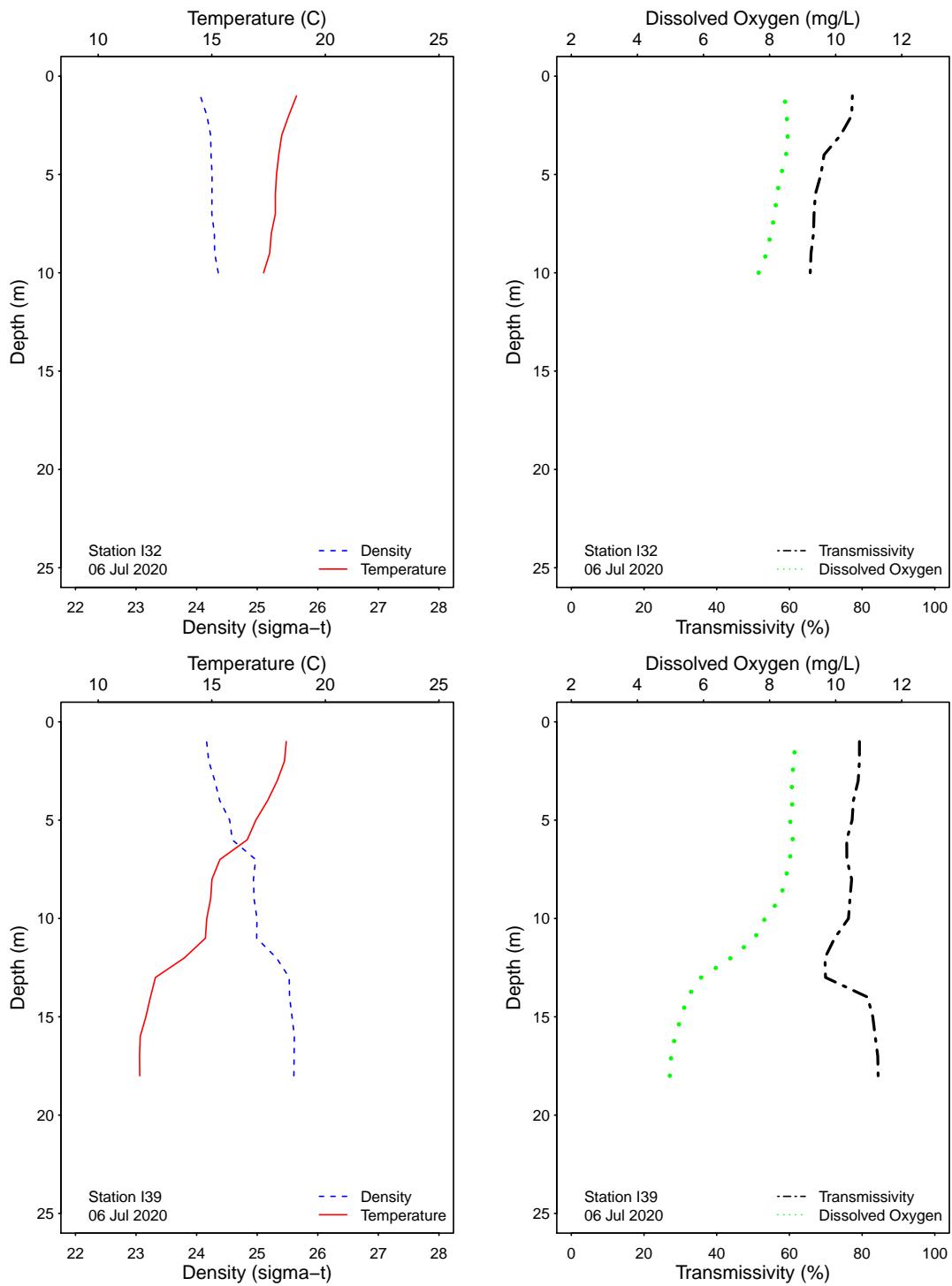


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

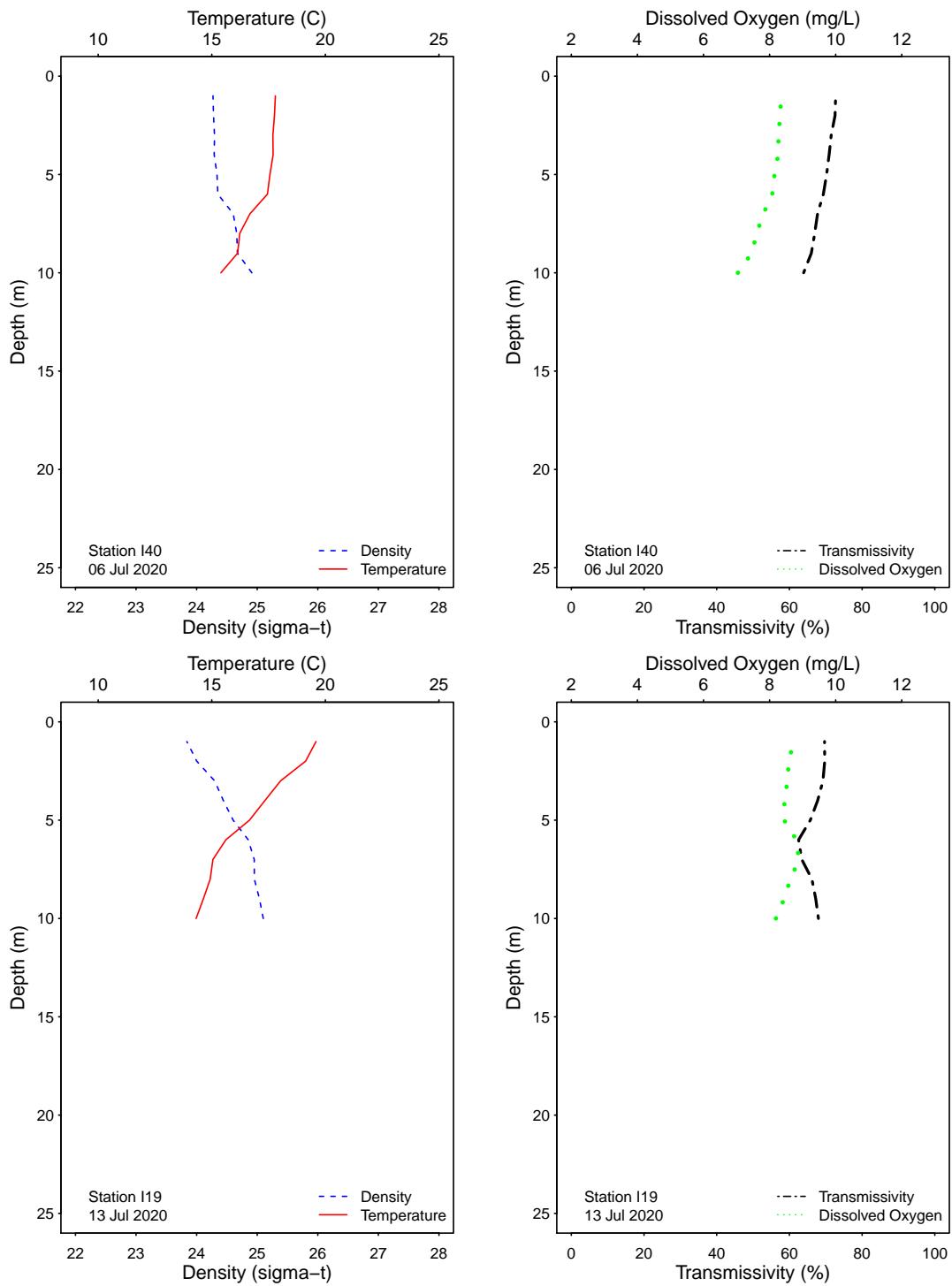


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

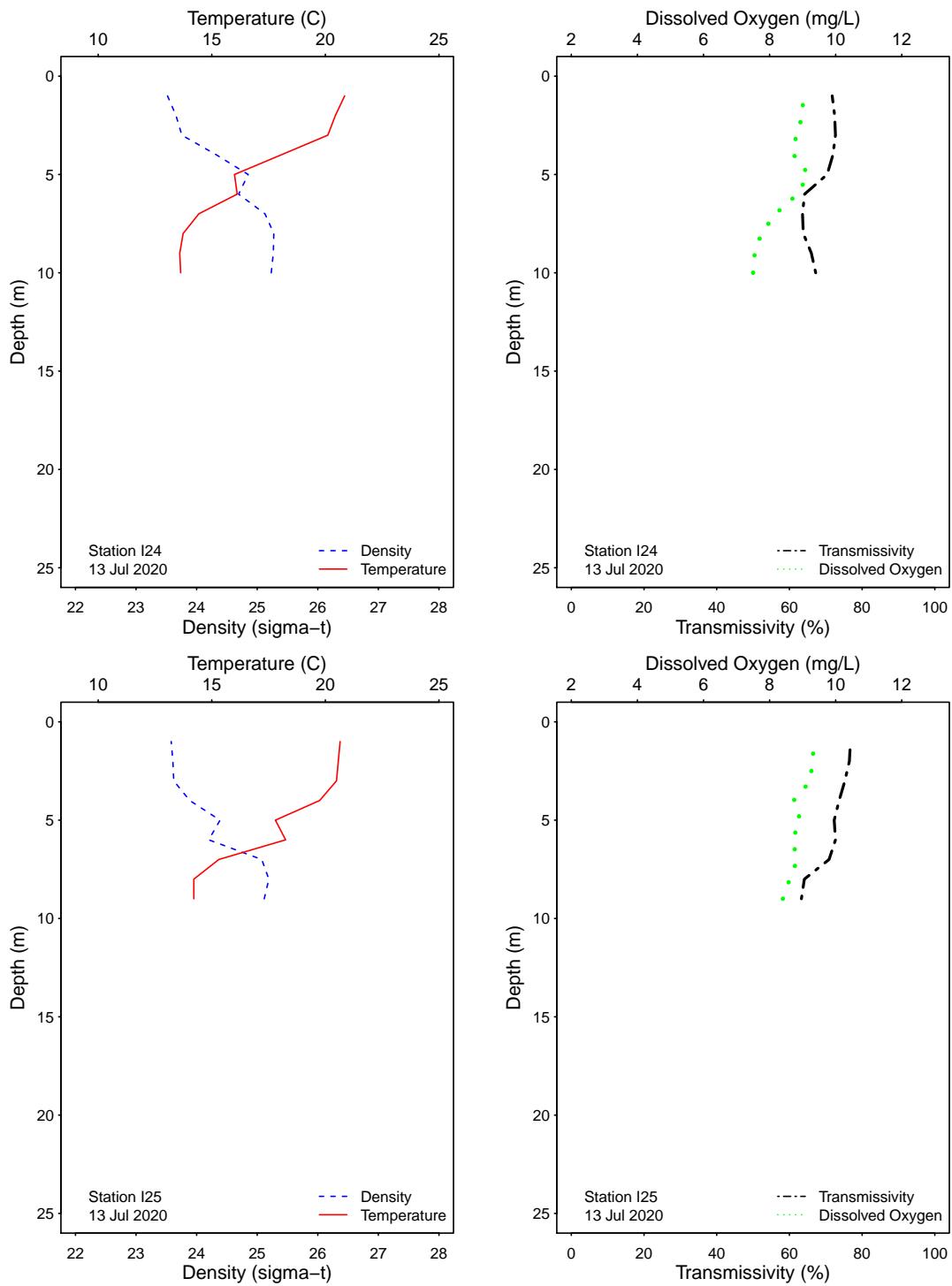


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

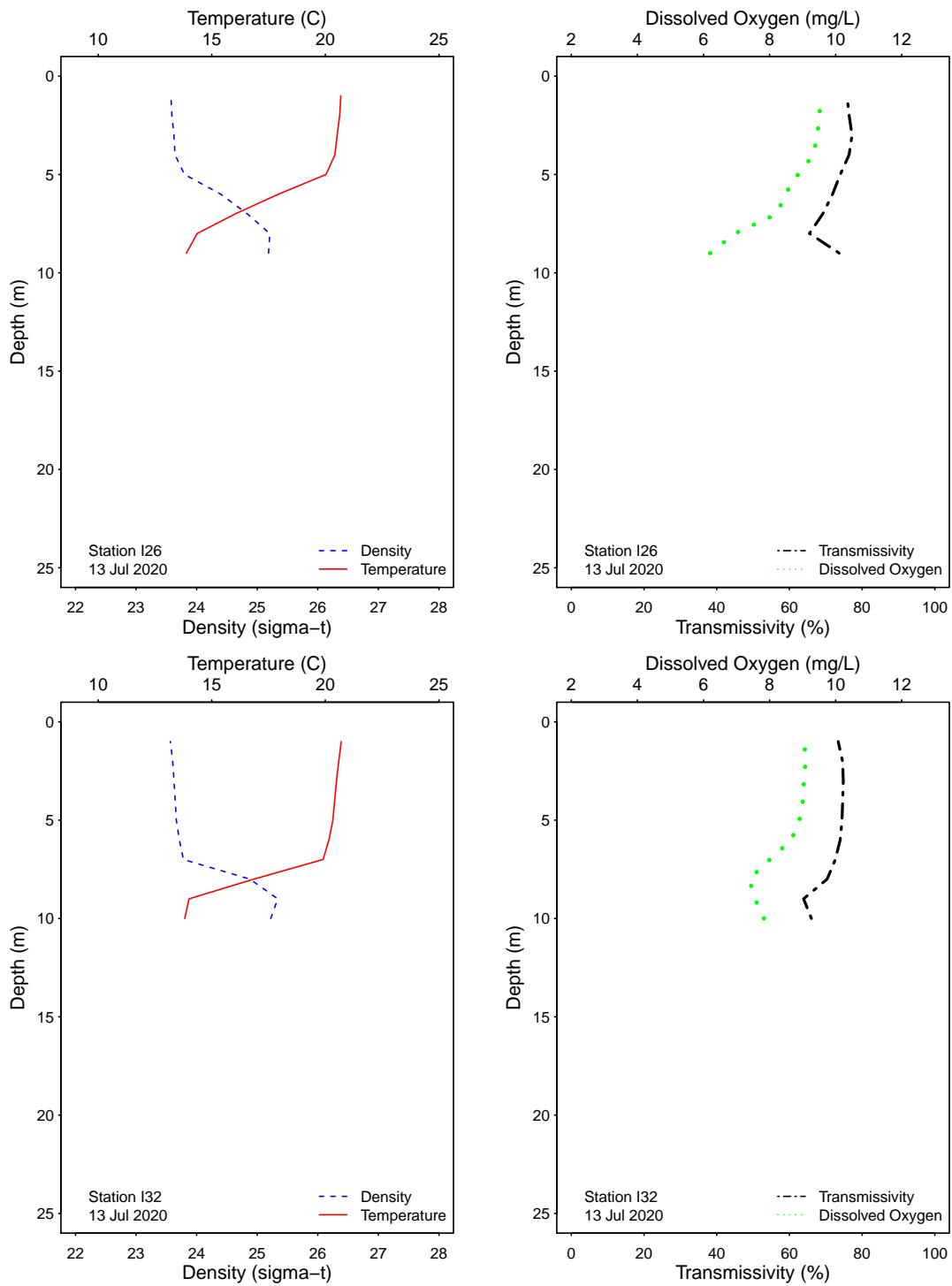


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

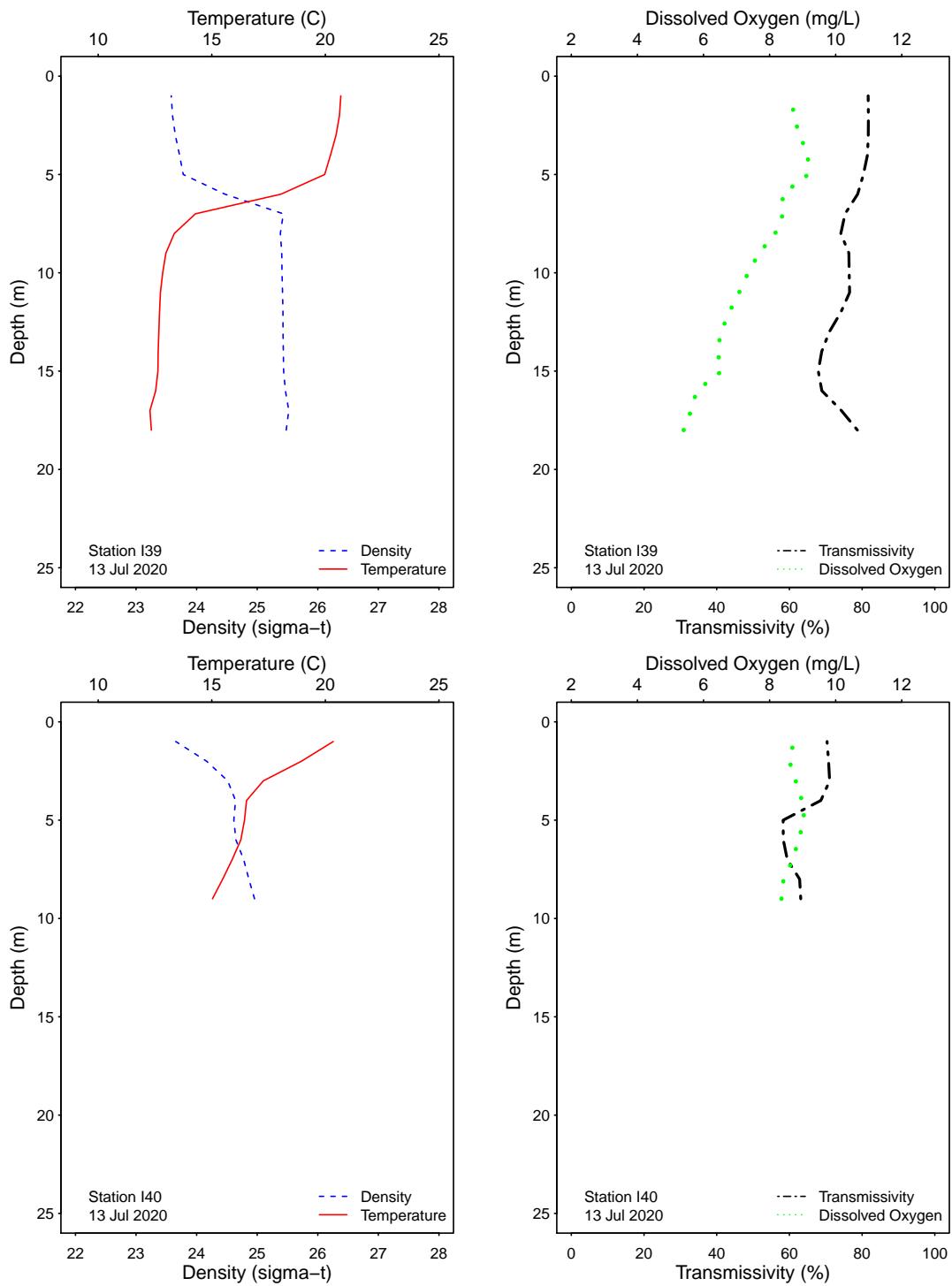


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

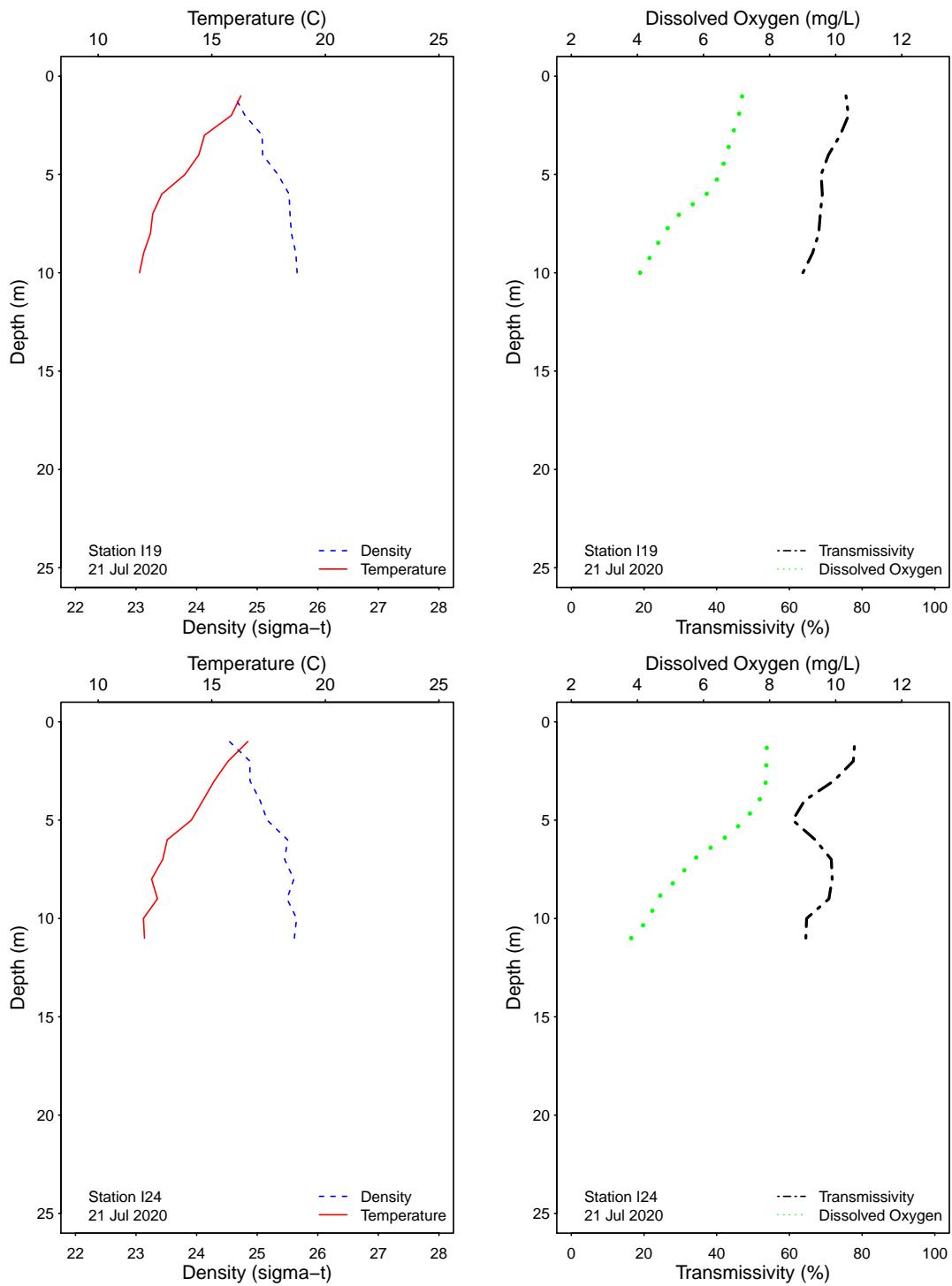


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

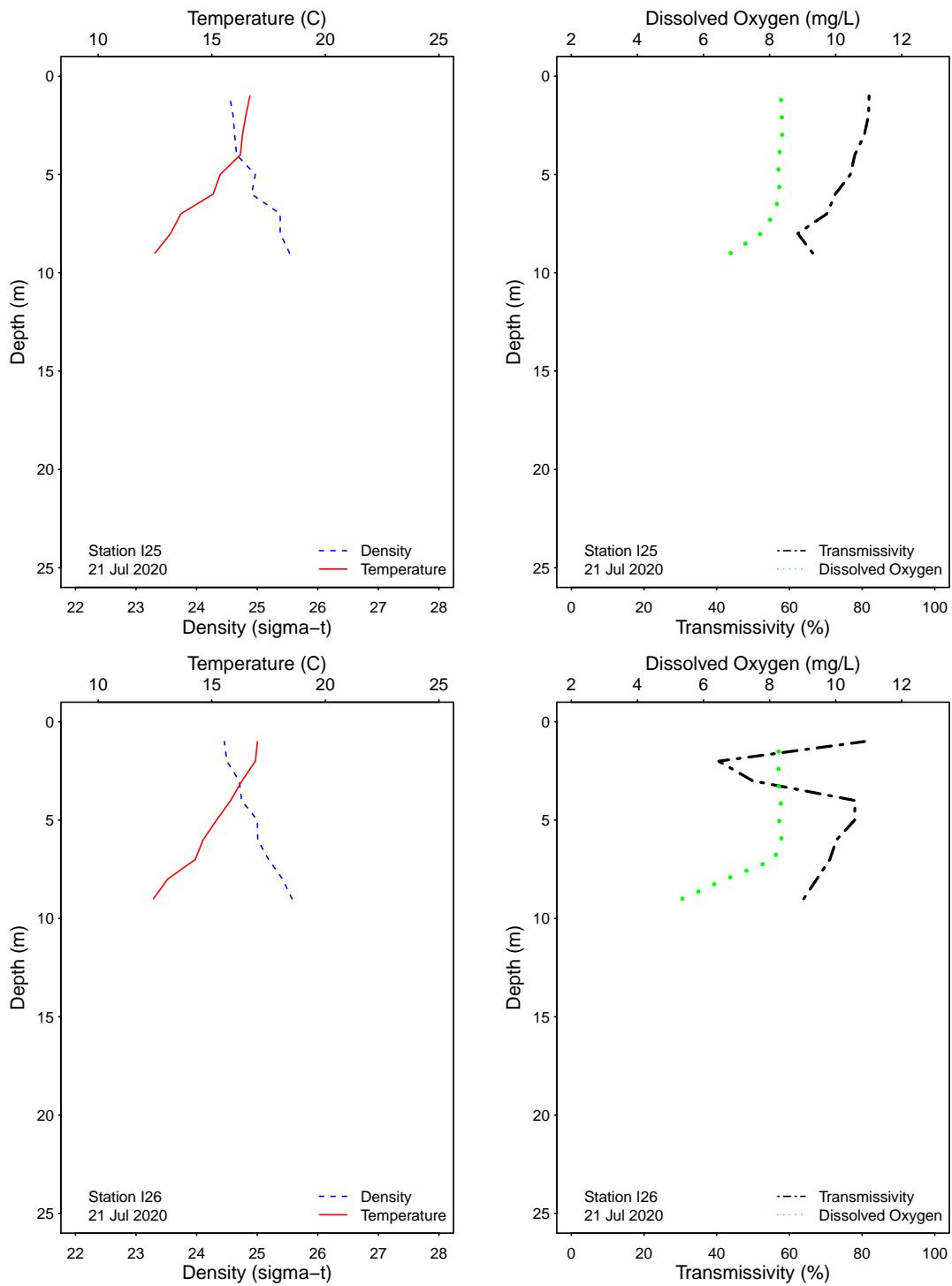


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

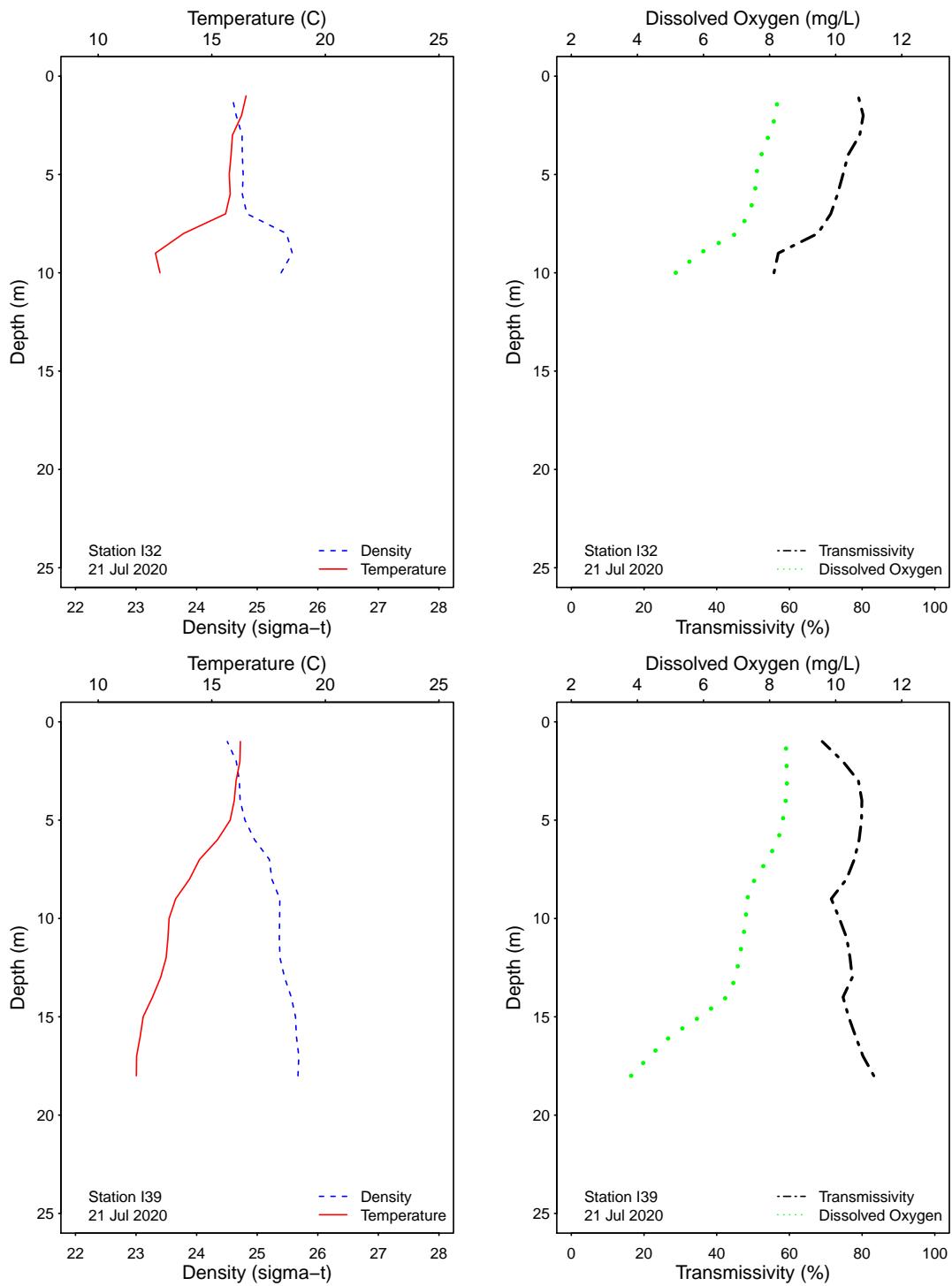


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

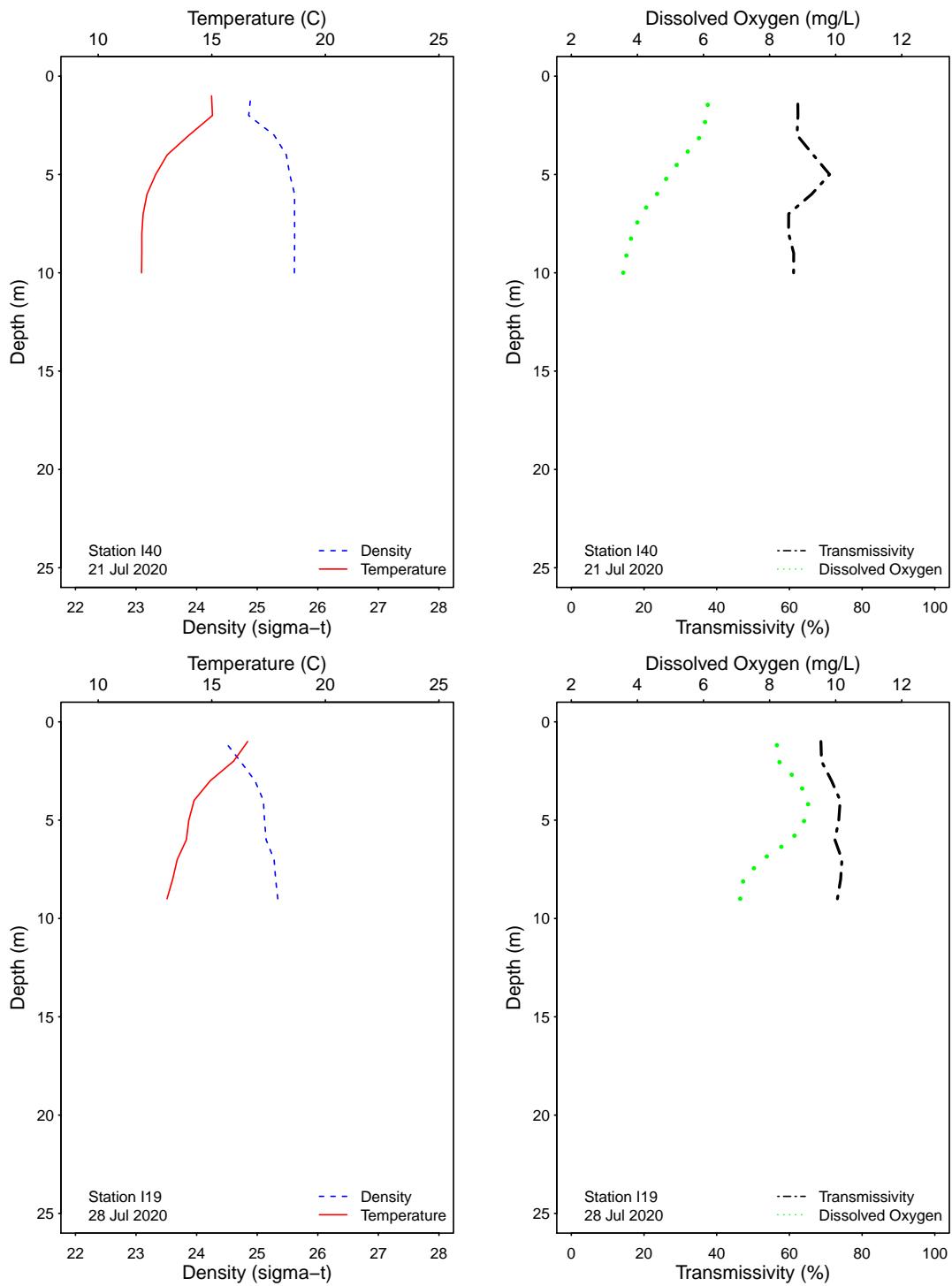


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

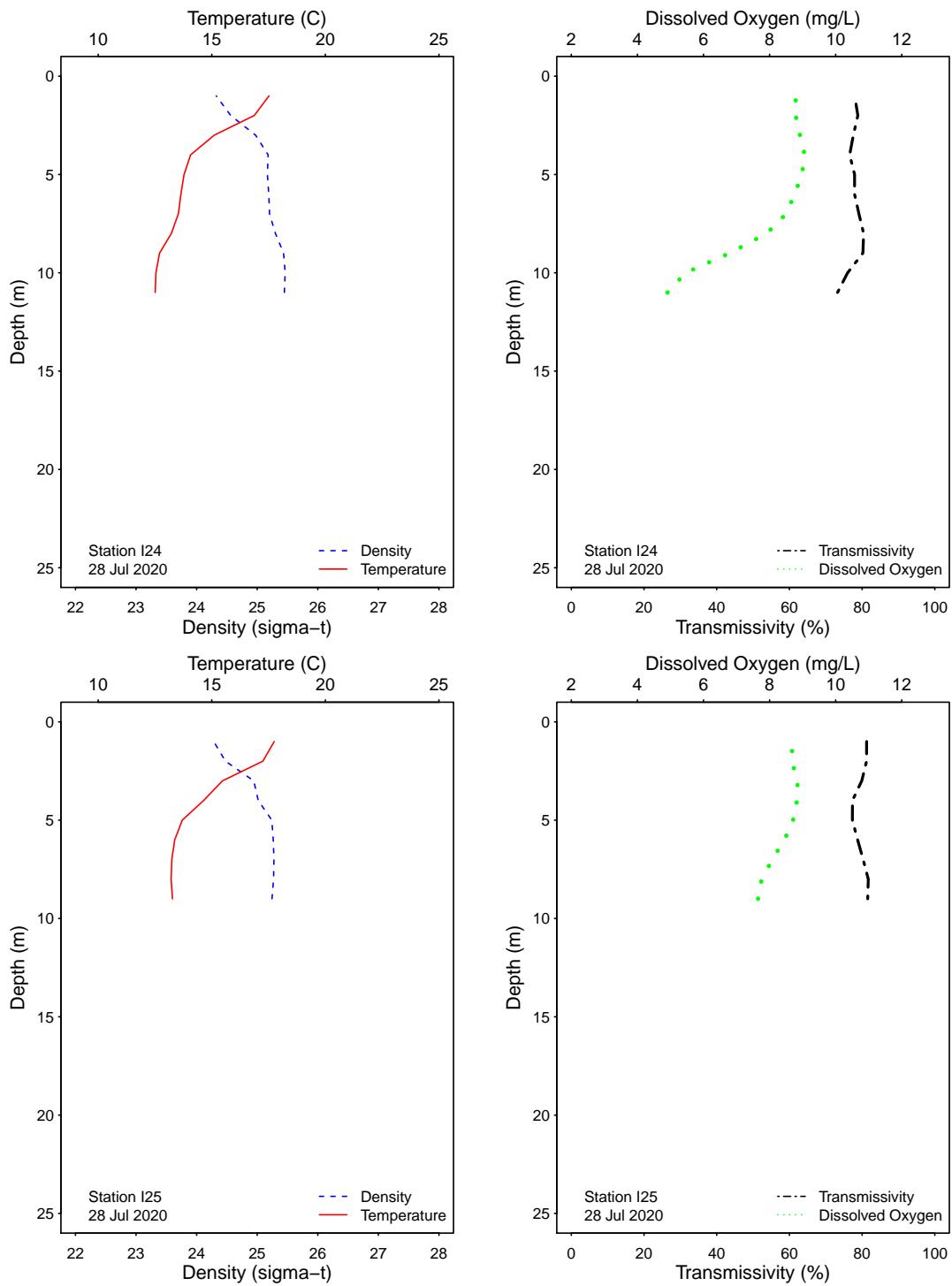


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

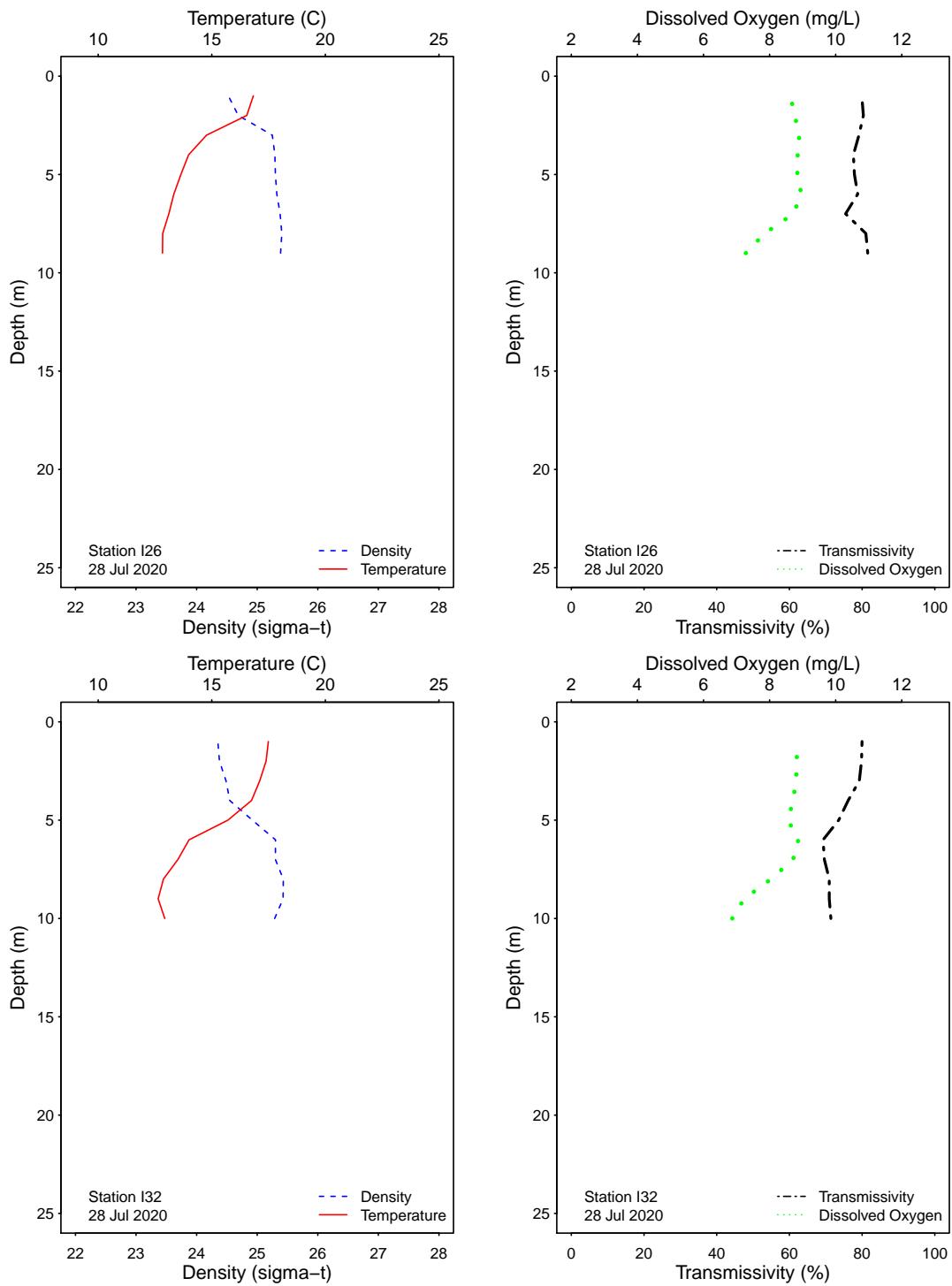


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

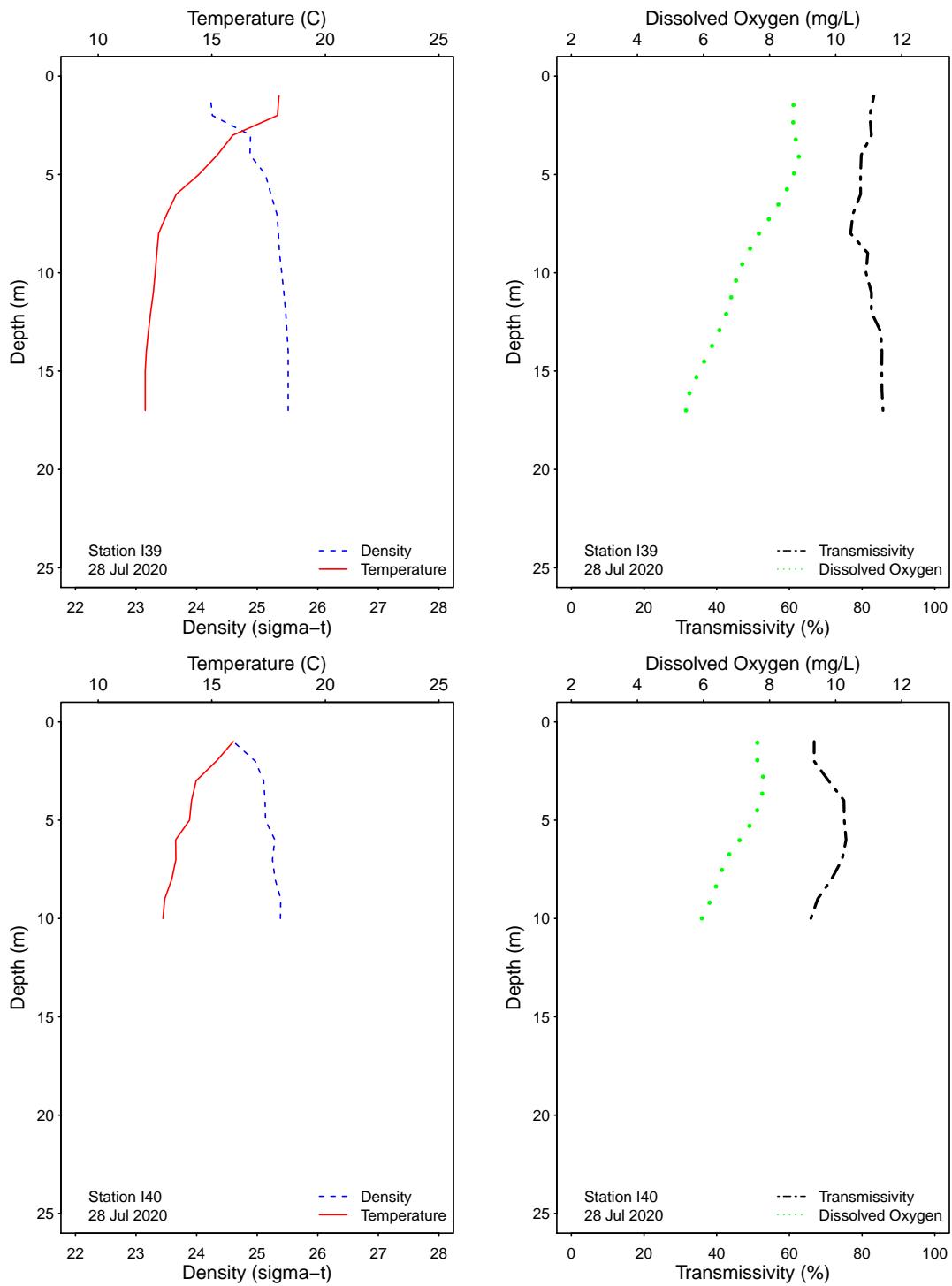


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

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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* (Enter) are reported as CFU/100 mL.

Station	Date	Depth	Analyst	Procedure	Total	Fecal	Enter
I19	06 Jul 2020	6	AE	LAB DUPLICATE	2e	<2	<2
I19	13 Jul 2020	6	AE	LAB DUPLICATE	220e	26e	12e
I19	21 Jul 2020	6	JF	LAB DUPLICATE	<20	4e	<2
I19	28 Jul 2020	6	JF	LAB DUPLICATE	120	2e	10e
I40	06 Jul 2020	6	AE	LAB DUPLICATE	320e	36e	62
I40	13 Jul 2020	6	AE	LAB DUPLICATE	160e	2e	16e
I40	21 Jul 2020	6	BS	LAB DUPLICATE	12e	24e	30e
I40	28 Jul 2020	6	JF	LAB DUPLICATE	72	8e	2e
S12	07 Jul 2020		AE	FIELD DUPLICATE	20e	2e	26e
S12	07 Jul 2020		AE	LAB DUPLICATE	40e	2e	26e
S12	14 Jul 2020		BS	FIELD DUPLICATE	<20	<2	<2
S12	14 Jul 2020		BS	LAB DUPLICATE	<20	<2	<2
S12	21 Jul 2020		JF	FIELD DUPLICATE	<200	2e	2e
S12	21 Jul 2020		JF	LAB DUPLICATE	<20	<2	2e
S12	28 Jul 2020		HR	FIELD DUPLICATE	<20	6e	<2
S12	28 Jul 2020		HR	LAB DUPLICATE	<20	2e	2e

ns = not sampled

ND = no data

