

SOUTH BAY OCEAN OUTFALL MONTHLY RECEIVING WATERS MONITORING REPORT

SOUTH BAY WATER RECLAMATION PLANT

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

MARCH 2021

Environmental Monitoring and Technical Services
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April 30, 2021

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

Attention: POTW Compliance Unit

Dear Mr. Gibson:

Enclosed is the March 2021 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 Director
Public Utilities Department

PV/rk

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

INTRODUCTION

Monthly reports of water quality and ocean conditions from Playa Blanco, Mexico to Coronado, USA are submitted to the San Diego Regional Water Quality Control Board and U.S. EPA Region 9 in accordance with Order No. R9-2013-0006 as amended by Order Nos. R9-2014-0071 and R9-2017-0023, NPDES Permit No. CA0109045, for the South Bay Water Reclamation Plant (SBWRP), South Bay Ocean Outfall (SBOO). This report includes receiving waters monitoring data collected from all shore, kelp and offshore stations specified in the above order. Data for influent and effluent monitoring activities for the SBWRP are presented in separate reports.

MATERIALS AND METHODS

Shore Stations

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

Seawater samples were collected from the surf zone at each station on a weekly basis. These samples were subsequently transported to the City's Marine Microbiology Laboratory and analyzed for the presence of total coliform, fecal coliform, and *Enterococcus* bacteria. Visual observations of water color and clarity, surf height, human or animal activity, and weather conditions were recorded at the time of sample collection. Wind speed and direction were measured using a hand-held anemometer with a compass.

Kelp Bed Stations

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

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

Seawater samples at the kelp bed stations are primarily collected using a CTD-integrated rosette sampler with Niskin bottles. Aliquots for bacteriological analyses were drawn from these bottles into sterile sample bottles for processing at the City's Marine Microbiology Laboratory. Water column profiles of the various physical/chemical parameters were taken using a CTD. The CTD collected these physical/chemical data at a rate ≥ 4 scans per second. The data were then internally averaged using the CTD proprietary software, Seasoft, to create water column profiles equivalent

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

Offshore Stations

Quarterly offshore water quality sampling is typically conducted over three days during February, May, August, and November for a total of 40 stations during each month (see station locations map). These offshore stations (I1–I40) are arranged in a grid surrounding the discharge site, and are generally located along the 9, 19, 28, 38, and 55-m depth contours. The seven offshore sites designated as kelp bed stations (described above) are included as part of the monthly offshore water quality sampling, however the data from these seven stations are reported within the kelp bed station section of the report with the other four days of kelp bed water quality sampling. Monitoring at all sites included measurements of various physical/chemical parameters, including water temperature, salinity, density, dissolved oxygen, pH, chlorophyll *a*, transmissivity, and chromomorphpic 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 2021 Quality Assurance Report, which will be completed in March 2022.

SUMMARY OF RESULTS

As of October 2020, new 2019 Ocean Plan Water Quality Objectives are included for a six-week rolling geometric mean of *Enterococcus* density, which shall not to exceed 30 cfu/100 ml, and a Statistical Threshold Value (STV) for *Enterococcus*, which shall not exceed 110 cfu/100 ml for more than 10% of samples per month (see Appendix B).

➤ 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 March, six of the eight shore stations located north of the border were out of compliance with 2015 California Ocean Plan (Ocean Plan) water contact standards on one or more days as follows:

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

- The 30-day geometric mean standards for total coliform, fecal coliform and *Enterococcus* were exceeded at stations S4, S5, and S10.
- The single sample maximum (SSM) standard for total coliform was exceeded at stations S4, S5, S10, and S11.
- The single sample maximum (SSM) standards for fecal coliform and *Enterococcus* were exceeded at stations S4, S5, S6, S10, S11, and S12.
- The SSM standard that states total coliform densities shall not exceed 1000 CFU/100 mL when the fecal:total ratio exceeds 0.1 was exceeded at stations S4, S5, S6, S10, S11, and S12.
- Per permit requirements, resamples were collected in response to these SSM exceedances (see Table 2.8 for details).
- Although the Ocean Plan standards do not apply to these stations, bacteria densities exceeded one or more benchmark levels (i.e., total coliforms >10,000 CFU/100mL; fecal coliforms >400 CFU/100 mL; *Enterococcus* >104 CFU/100 mL; total >1000 CFU/100 mL & F:T ratio >0.1) in the seawater samples collected from stations S0, S2, and S3 on one or more days during March.
- Notable observations included a sewage-like odor at stations S4, S5, S6, S10, and S11 on one or more days during March.
- 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 March 2, 8, 18, and 24.
- During March, four of the seven kelp stations were out of compliance with 2015 Ocean Plan water contact standards on one or more days as follows:
 - The 30-day geometric mean standard for total coliform was exceeded at station I19.
 - The 30-day geometric mean standard for fecal coliform was exceeded at station I19.
 - The 30-day geometric mean standard for *Enterococcus* was exceeded at stations I19 and I40.
 - The SSM standard for total coliform was exceeded at stations I24 and I40.
 - The SSM standard for fecal coliform was exceeded at stations I19, I24, I32, and I40.
 - The SSM standard for *Enterococcus* was exceeded at stations I19, I24, and I40.
 - 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 I19, I24, I32, and I40.

- Water column temperatures ranged from 10.78 to 15.39°C. The difference between surface and bottom waters ranged from 0.1 to 2.52°C.
- Concentrations of chlorophyll *a* ranged from 0.46 to 10.13 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 March at the offshore stations. The next quarterly sampling is scheduled for May 2021.

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TABLES AND FIGURES

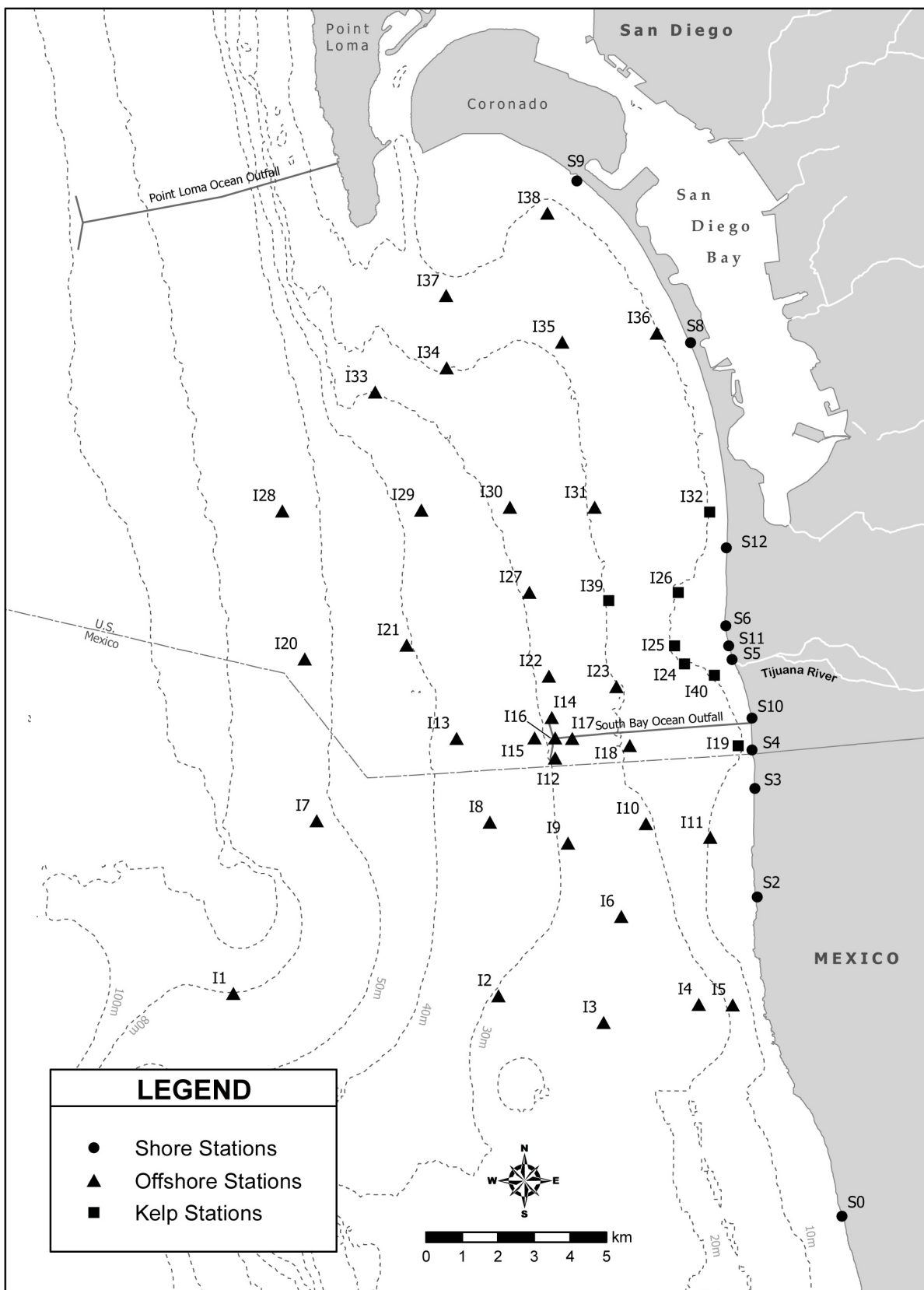


Figure 1.1 Station Map

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Shore Stations

Table 2.1

Summary of compliance with the Ocean Plan's 30-day Geometric Mean standard for total coliform bacteria at the 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 Mar 2021	5794	5567	367	23	24	9583	221	47
02 Mar 2021	2982	4690	255	15	36	5642	148	39
03 Mar 2021	2982	4235	255	15	36	5264	148	39
04 Mar 2021	2560	4927	332	23	36	4862	160	47
05 Mar 2021	2560	4927	332	23	36	4862	160	47
06 Mar 2021	2131	4927	332	23	36	4436	160	47
07 Mar 2021	2131	4927	332	23	36	4436	160	47
08 Mar 2021	1816	4927	332	23	36	4083	160	47
09 Mar 2021	2025	5435	234	20	20	4256	180	39
10 Mar 2021	1776	5435	234	20	20	3854	180	39
11 Mar 2021	2616	5435	170	7	20	3386	133	20
12 Mar 2021	2616	5435	170	7	20	3386	133	20
13 Mar 2021	2616	6215	111	5	20	2899	133	20
14 Mar 2021	2616	6215	111	5	20	2899	133	20
15 Mar 2021	2616	7930	55	5	20	2637	133	20
16 Mar 2021	3199	8370	36	7	20	3093	97	13
17 Mar 2021	3199	8370	36	7	20	2577	97	13
18 Mar 2021	3199	8412	14	5	20	2577	40	20
19 Mar 2021	3199	8412	14	5	20	2577	40	20
20 Mar 2021	3199	8412	13	5	20	2577	40	20
21 Mar 2021	3199	8412	13	5	20	2577	40	20
22 Mar 2021	3199	8412	13	5	20	2577	40	20
23 Mar 2021	3383	8807	14	7	26	3093	55	13
24 Mar 2021	3163	8412	14	7	26	2577	55	13
25 Mar 2021	2372	8412	13	9	28	1792	71	6
26 Mar 2021	2372	8412	13	9	28	1792	71	6
27 Mar 2021	3219	8269	13	9	28	2571	71	6
28 Mar 2021	3219	8269	13	9	28	2571	71	6
29 Mar 2021	3559	11465	13	9	28	2571	71	6
30 Mar 2021	3378	11741	49	11	26	2845	210	23
31 Mar 2021	3378	11741	49	11	26	2845	210	23

* 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 Mar 2021	2106	2205	62	10	2	4275	56	9
02 Mar 2021	1179	1802	40	7	2	2648	41	6
03 Mar 2021	1179	1550	40	7	2	2394	41	6
04 Mar 2021	955	2097	53	8	2	2133	56	7
05 Mar 2021	955	2097	53	8	2	2133	56	7
06 Mar 2021	741	2097	53	8	2	1868	56	7
07 Mar 2021	741	2097	53	8	2	1868	56	7
08 Mar 2021	681	2097	53	8	2	1817	56	7
09 Mar 2021	652	2425	43	7	2	1574	57	7
10 Mar 2021	651	2425	43	7	2	1509	57	7
11 Mar 2021	1248	2425	30	3	2	1335	40	3
12 Mar 2021	1248	2425	30	3	2	1335	40	3
13 Mar 2021	979	3065	20	4	2	1311	40	3
14 Mar 2021	979	3065	20	4	2	1311	40	3
15 Mar 2021	979	4654	12	4	2	1108	40	3
16 Mar 2021	1090	4634	9	3	2	1107	24	3
17 Mar 2021	1090	4634	9	3	2	867	24	3
18 Mar 2021	1090	4957	4	3	2	867	11	3
19 Mar 2021	1090	4957	4	3	2	867	11	3
20 Mar 2021	1090	4957	4	3	2	867	9	3
21 Mar 2021	1090	4957	4	3	2	867	9	3
22 Mar 2021	986	4957	4	3	2	867	9	3
23 Mar 2021	1003	5280	5	3	4	1127	11	3
24 Mar 2021	902	4957	5	3	4	867	11	3
25 Mar 2021	653	4957	5	3	3	609	12	3
26 Mar 2021	653	4957	5	3	3	609	12	3
27 Mar 2021	914	4766	5	3	3	887	12	3
28 Mar 2021	914	4766	5	3	3	887	12	3
29 Mar 2021	991	6791	5	3	3	887	12	3
30 Mar 2021	946	6918	19	3	3	1008	45	7
31 Mar 2021	946	6918	19	3	3	1008	45	7

* 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 Mar 2021	661	1143	21	7	2	1457	27	6
02 Mar 2021	437	843	17	6	2	989	18	5
03 Mar 2021	437	742	17	6	2	865	18	5
04 Mar 2021	361	906	17	7	2	726	19	5
05 Mar 2021	361	906	17	7	2	726	19	5
06 Mar 2021	270	906	17	7	2	605	19	5
07 Mar 2021	270	906	17	7	2	605	19	5
08 Mar 2021	255	906	17	7	2	599	19	5
09 Mar 2021	228	1105	17	6	2	534	21	6
10 Mar 2021	227	1105	17	6	2	535	21	6
11 Mar 2021	292	1105	12	2	2	647	17	3
12 Mar 2021	292	1105	12	2	2	647	17	3
13 Mar 2021	292	1242	11	2	2	695	17	3
14 Mar 2021	292	1242	11	2	2	695	17	3
15 Mar 2021	292	1888	11	2	2	852	17	3
16 Mar 2021	325	2155	11	2	2	821	14	3
17 Mar 2021	325	2155	11	2	2	739	14	3
18 Mar 2021	284	2540	6	2	2	803	7	3
19 Mar 2021	284	2540	6	2	2	803	7	3
20 Mar 2021	305	2540	6	2	2	898	7	3
21 Mar 2021	305	2540	6	2	2	898	7	3
22 Mar 2021	317	2540	6	2	2	1023	7	3
23 Mar 2021	330	2817	7	2	3	1220	9	3
24 Mar 2021	283	2540	7	2	3	1023	9	3
25 Mar 2021	215	2540	10	2	4	869	10	3
26 Mar 2021	215	2540	10	2	4	869	10	3
27 Mar 2021	202	2374	10	2	4	1025	10	3
28 Mar 2021	202	2374	10	2	4	1025	10	3
29 Mar 2021	190	2960	10	2	4	1267	10	3
30 Mar 2021	205	3183	24	3	3	1353	35	7
31 Mar 2021	342	4646	24	3	3	1353	35	7

* 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 Mar 2021	IC	IC	IC	IC	IC	IC	IC	IC
09 Mar 2021	IC	E	IC	IC	IC	IC	IC	IC
11 Mar 2021	ns	E	ns	ns	ns	ns	ns	ns
13 Mar 2021	ns	E	ns	ns	ns	ns	ns	ns
15 Mar 2021	ns	E	ns	ns	ns	ns	ns	ns
16 Mar 2021	E	E	IC	IC	IC	E	IC	IC
18 Mar 2021	E	E	ns	ns	ns	E	ns	ns
20 Mar 2021	E	E	ns	ns	ns	E	ns	ns
22 Mar 2021	E	E	ns	ns	ns	E	ns	ns
23 Mar 2021	IC	E	IC	IC	IC	E	IC	IC
25 Mar 2021	IC	E	ns	ns	ns	IC	ns	ns
27 Mar 2021	IC	IC	ns	ns	ns	ns	ns	ns
29 Mar 2021	IC	E	ns	ns	ns	ns	ns	ns
30 Mar 2021	IC	E	IC	IC	IC	IC	E	IC

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 Mar 2021	IC	IC	IC	IC	IC	IC	IC	IC
09 Mar 2021	E	E	IC	IC	IC	IC	IC	IC
11 Mar 2021	E	E	ns	ns	ns	ns	ns	ns
13 Mar 2021	IC	E	ns	ns	ns	ns	ns	ns
15 Mar 2021	ns	E	ns	ns	ns	ns	ns	ns
16 Mar 2021	E	E	IC	IC	IC	E	IC	IC
18 Mar 2021	E	E	ns	ns	ns	E	ns	ns
20 Mar 2021	E	E	ns	ns	ns	E	ns	ns
22 Mar 2021	E	E	ns	ns	ns	E	ns	ns
23 Mar 2021	E	E	IC	IC	IC	E	IC	IC
25 Mar 2021	IC	E	ns	ns	ns	IC	ns	ns
27 Mar 2021	E	E	ns	ns	ns	ns	ns	ns
29 Mar 2021	E	E	ns	ns	ns	ns	ns	ns
30 Mar 2021	E	E	E	IC	IC	E	E	E

IC = In Compliance

E = Exceedance

ns = not sampled

ND = no data

Table 2.6

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

Date	S4	S5	S6	S8	S9	S10	S11	S12
01 Mar 2021	IC	IC	ns	ns	ns	ns	ns	ns
02 Mar 2021	IC	IC	IC	IC	IC	IC	IC	IC
09 Mar 2021	IC	E	IC	IC	IC	E	IC	IC
11 Mar 2021	ns	E	ns	ns	ns	E	ns	ns
13 Mar 2021	ns	E	ns	ns	ns	E	ns	ns
15 Mar 2021	ns	E	ns	ns	ns	E	ns	ns
16 Mar 2021	E	E	IC	IC	IC	E	IC	IC
18 Mar 2021	E	E	ns	ns	ns	E	ns	ns
20 Mar 2021	E	E	ns	ns	ns	E	ns	ns
22 Mar 2021	E	E	ns	ns	ns	E	ns	ns
23 Mar 2021	E	E	IC	IC	IC	E	IC	IC
25 Mar 2021	IC	E	ns	ns	ns	IC	ns	ns
27 Mar 2021	ns	E	ns	ns	ns	ns	ns	ns
29 Mar 2021	ns	E	ns	ns	ns	ns	ns	ns
30 Mar 2021	E	E	E	IC	IC	E	E	E

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 Mar 2021	IC	IC	IC	IC	IC	IC	IC	IC
09 Mar 2021	IC	E	IC	IC	IC	IC	IC	IC
11 Mar 2021	ND	E	ns	ns	ns	ns	ns	ns
13 Mar 2021	ND	E	ns	ns	ns	ns	ns	ns
15 Mar 2021	ns	E	ns	ns	ns	ns	ns	ns
16 Mar 2021	E	E	IC	IC	IC	IC	IC	IC
18 Mar 2021	E	E	ns	ns	ns	E	ns	ns
20 Mar 2021	E	E	ns	ns	ns	E	ns	ns
22 Mar 2021	E	E	ns	ns	ns	E	ns	ns
23 Mar 2021	E	E	IC	IC	IC	E	IC	IC
25 Mar 2021	E	E	ns	ns	ns	IC	ns	ns
27 Mar 2021	E	E	ns	ns	ns	ns	ns	ns
29 Mar 2021	E	E	ns	ns	ns	ns	ns	ns
30 Mar 2021	E	E	E	IC	IC	E	E	E

IC = In Compliance

E = Exceedance

ns = not sampled

ND = no data

Table 2.8

Summary of water quality parameters at the SBOO shore stations for each sample date. Densities of total coliform (Total), fecal coliform (Fecal), and *Enterococcus* (Entero) are reported as CFU/100 mL. The fecal:total coliform ratio (F:T) is unitless. Comments follow the data summary.

Station	Date	Time	Total	Fecal	Entero	F:T
S0	02 Mar 2021	850	20e	6e	20e	0.30
S0	09 Mar 2021	1030	>16000	>12000	1800e	0.75
S0	16 Mar 2021	820	>16000	6200	6200	0.39
S0	23 Mar 2021	815	>16000	>12000	>12000	0.75
S0	30 Mar 2021	815	2400e	480	220e	0.20
S2	02 Mar 2021	945	<2	<2	<2	1.00
S2	09 Mar 2021	1235	880	220e	34e	0.25
S2	16 Mar 2021	855	>16000	>12000	8200	0.75
S2	23 Mar 2021	945	2000e	260e	240e	0.13
S2	30 Mar 2021	858	<20	4e	4e	0.20
S3	02 Mar 2021	920	<200	2e	8e	0.01
S3	09 Mar 2021	1308	>16000	2800e	1800e	0.17
S3	16 Mar 2021	915	>16000	>12000	>12000	0.75
S3	23 Mar 2021	1030	<200	48	34e	0.24
S3	30 Mar 2021	845	1400	64	42	0.05
S4	01 Mar 2021	1227	ns	ns	2e	ns
S4	02 Mar 2021	1018	<2	<2	<2	1.00
S4	09 Mar 2021	807	5400	440	66	0.08
S4	11 Mar 2021	1655	ns	4200	ns	ns
S4	13 Mar 2021	1100	ns	110	ns	ns
S4	16 Mar 2021	950	>16000	3200e	940	0.20
S4	18 Mar 2021	920	>16000	>12000	2200e	0.75
S4	20 Mar 2021	950	>16000	>12000	9400	0.75
S4	22 Mar 2021	840	>16000	4000	2400e	0.25
S4	23 Mar 2021	1035	5600	1200e	520	0.21
S4	25 Mar 2021	930	1200e	160e	50	0.13
S4	27 Mar 2021	845	7800	2600e	ns	0.33
S4	29 Mar 2021	915	8800	2400e	ns	0.27
S4	30 Mar 2021	1035	2000e	540	400	0.27
S5	01 Mar 2021	1305	ns	ns	16e	ns
S5	02 Mar 2021	805	600e	160e	16e	0.27
S5	09 Mar 2021	935	>16000	>12000	>12000	0.75
S5	11 Mar 2021	935	>16000	>12000	>12000	0.75
S5	13 Mar 2021	1010	>16000	>12000	1100	0.75
S5	15 Mar 2021	753	>16000	>12000	>12000	0.75
S5	16 Mar 2021	822	>16000	4400	>12000	0.28
S5	18 Mar 2021	820	>16000	>12000	>12000	0.75
S5	20 Mar 2021	900	>16000	>12000	>12000	0.75
S5	22 Mar 2021	920	>16000	>12000	>12000	0.75
S5	23 Mar 2021	920	>16000	>12000	>12000	0.75
S5	25 Mar 2021	1030	>16000	>12000	>12000	0.75
S5	27 Mar 2021	805	6400	3000e	620	0.47
S5	29 Mar 2021	825	14000	6000	4400	0.43
S5	30 Mar 2021	900	>16000	8800	8800	0.55
S6	02 Mar 2021	827	20e	<2	4e	0.10
S6	09 Mar 2021	1010	<20	10e	18e	0.50
S6	16 Mar 2021	855	4e	<2	12e	0.50
S6	23 Mar 2021	935	20e	18e	12e	0.90
S6	30 Mar 2021	925	9200	3200e	740	0.35

Station	Date	Time	Total	Fecal	Entero	F:T
S8	02 Mar 2021	930	<2	<2	<2	1.00
S8	09 Mar 2021	1035	10e	6e	2e	0.60
S8	16 Mar 2021	1025	<20	<2	2e	0.10
S8	23 Mar 2021	845	<20	2e	<2	0.10
S8	30 Mar 2021	825	20e	8e	10e	0.40
S9	02 Mar 2021	909	<200	<2	<2	0.01
S9	09 Mar 2021	1053	2e	<2	2e	1.00
S9	16 Mar 2021	1100	20e	2e	<2	0.10
S9	23 Mar 2021	830	80e	18e	32e	0.22
S9	30 Mar 2021	800	20e	<2	2e	0.10
S10	02 Mar 2021	1000	<2	<2	<2	1.00
S10	09 Mar 2021	748	7000	280e	120e	0.04
S10	11 Mar 2021	850	ns	ns	>12000	ns
S10	13 Mar 2021	1050	ns	ns	800	ns
S10	15 Mar 2021	835	ns	ns	>12000	ns
S10	16 Mar 2021	940	13000	1100	500	0.08
S10	18 Mar 2021	910	>16000	>12000	9400	0.75
S10	20 Mar 2021	940	>16000	>12000	>12000	0.75
S10	22 Mar 2021	825	>16000	>12000	>12000	0.75
S10	23 Mar 2021	1020	>16000	>12000	>12000	0.75
S10	25 Mar 2021	920	160e	30e	60e	0.19
S10	30 Mar 2021	1012	6400	2800e	2800e	0.44
S11	02 Mar 2021	818	<20	8e	<2	0.40
S11	09 Mar 2021	952	320e	58	40	0.18
S11	16 Mar 2021	840	20e	2e	6e	0.10
S11	23 Mar 2021	930	<200	20e	24e	0.10
S11	30 Mar 2021	920	>16000	10000	4400	0.62
S12	02 Mar 2021	845	<20	2e	<2	0.10
S12	09 Mar 2021	848	<20	6e	10e	0.30
S12	16 Mar 2021	905	2e	<2	<2	1.00
S12	23 Mar 2021	900	<2	<2	<2	1.00
S12	30 Mar 2021	845	3800e	460	260e	0.12

ns = not sampled
ND = no data

Comments

Station	Date	Depth	Parameter	Comments
S4	01 Mar 2021			Resample
S5	01 Mar 2021			Resample
S10	11 Mar 2021			Resample
S5	11 Mar 2021			Resample
S4	11 Mar 2021			Resample
S10	13 Mar 2021			Resample
S4	13 Mar 2021			Resample
S5	13 Mar 2021			Resample
S10	15 Mar 2021			Resample
S5	15 Mar 2021			Resample
S10	18 Mar 2021			Resample
S4	18 Mar 2021			Resample
S5	18 Mar 2021			Resample
S10	20 Mar 2021			Resample
S4	20 Mar 2021			Resample
S5	20 Mar 2021			Resample
S10	22 Mar 2021			Resample
S4	22 Mar 2021			Resample
S5	22 Mar 2021			Resample
S10	25 Mar 2021			Resample
S4	25 Mar 2021			Resample
S5	25 Mar 2021			Resample
S4	27 Mar 2021			Resample
S5	27 Mar 2021			Resample
S4	29 Mar 2021			Resample
S5	29 Mar 2021			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	02 Mar 2021	Arrive Time	850
S0	02 Mar 2021	Weather	Sunny
S0	02 Mar 2021	Wind Speed (kts)	1.6
S0	02 Mar 2021	Wind Dir	NE
S0	02 Mar 2021	Animal Life	10 Shorebirds; 2 Dogs
S0	02 Mar 2021	Floatables	None
S0	02 Mar 2021	Water Color	Green
S0	02 Mar 2021	Current Direction	N
S0	02 Mar 2021	Water Temp (C)	13
S0	02 Mar 2021	Wave Height Low (ft)	3
S0	02 Mar 2021	High Tide (ft)	4.55
S0	02 Mar 2021	High Tide Time	1053
S0	02 Mar 2021	Low Tide (ft)	0.35
S0	02 Mar 2021	Low Tide Time	459
S0	02 Mar 2021	Comments	Water clear; Algae; Kelp; 2 persons; 0.5 L/sec water flowing from storm drain.
S0	09 Mar 2021	Arrive Time	1030
S0	09 Mar 2021	Weather	Sunny
S0	09 Mar 2021	Wind Speed (kts)	3.2
S0	09 Mar 2021	Wind Dir	NW
S0	09 Mar 2021	Animal Life	20 Shorebirds
S0	09 Mar 2021	Floatables	None
S0	09 Mar 2021	Water Color	Green
S0	09 Mar 2021	Current Direction	S
S0	09 Mar 2021	Water Temp (C)	15
S0	09 Mar 2021	Wave Height Low (ft)	4
S0	09 Mar 2021	High Tide (ft)	5.35
S0	09 Mar 2021	High Tide Time	608
S0	09 Mar 2021	Low Tide (ft)	-0.95
S0	09 Mar 2021	Low Tide Time	1321
S0	09 Mar 2021	Comments	Resample; Water turbid; Algae; Kelp; 1.0 L/sec water flowing from storm drain.
S0	16 Mar 2021	Arrive Time	820
S0	16 Mar 2021	Weather	Cloudy
S0	16 Mar 2021	Wind Speed (kts)	4.9
S0	16 Mar 2021	Wind Dir	NW
S0	16 Mar 2021	Animal Life	2 Dogs; 20 Seagulls
S0	16 Mar 2021	Floatables	None
S0	16 Mar 2021	Water Color	Green
S0	16 Mar 2021	Current Direction	N
S0	16 Mar 2021	Water Temp (C)	10
S0	16 Mar 2021	Wave Height Low (ft)	3
S0	16 Mar 2021	High Tide (ft)	3.98
S0	16 Mar 2021	High Tide Time	1128
S0	16 Mar 2021	Low Tide (ft)	0.54
S0	16 Mar 2021	Low Tide Time	535
S0	16 Mar 2021	Comments	Water turbid; Algae; Kelp; Rain prior to sampling; 1L/sec water flowing from storm drain.
S0	23 Mar 2021	Arrive Time	815
S0	23 Mar 2021	Weather	Drizzle
S0	23 Mar 2021	Wind Speed (kts)	3.9
S0	23 Mar 2021	Wind Dir	NW
S0	23 Mar 2021	Animal Life	20 Shorebirds

Station	Date	Parameter	Value
S0	23 Mar 2021	Floatables	None
S0	23 Mar 2021	Water Color	Green
S0	23 Mar 2021	Current Direction	N
S0	23 Mar 2021	Water Temp (C)	14
S0	23 Mar 2021	Wave Height Low (ft)	3
S0	23 Mar 2021	High Tide (ft)	4.32
S0	23 Mar 2021	High Tide Time	537
S0	23 Mar 2021	Low Tide (ft)	-0.07
S0	23 Mar 2021	Low Tide Time	1313
S0	23 Mar 2021	Comments	Water clear; Rain water spilling; 0.5L/sec water flowing from storm drain
S0	30 Mar 2021	Arrive Time	815
S0	30 Mar 2021	Weather	Cloudy
S0	30 Mar 2021	Wind Speed (kts)	3.1
S0	30 Mar 2021	Wind Dir	SW
S0	30 Mar 2021	Animal Life	20 Seagulls; 4 Dogs
S0	30 Mar 2021	Floatables	None
S0	30 Mar 2021	Water Color	Green
S0	30 Mar 2021	Current Direction	S
S0	30 Mar 2021	Water Temp (C)	13
S0	30 Mar 2021	Wave Height Low (ft)	2
S0	30 Mar 2021	High Tide (ft)	4.7
S0	30 Mar 2021	High Tide Time	1101
S0	30 Mar 2021	Low Tide (ft)	-0.58
S0	30 Mar 2021	Low Tide Time	501
S0	30 Mar 2021	Comments	Water turbid; Algae; Kelp; 1.0 L/sec water flowing from storm drain
S2	02 Mar 2021	Arrive Time	945
S2	02 Mar 2021	Weather	Sunny
S2	02 Mar 2021	Wind Speed (kts)	1.7
S2	02 Mar 2021	Wind Dir	NE
S2	02 Mar 2021	Animal Life	10 Shorebirds
S2	02 Mar 2021	Floatables	None
S2	02 Mar 2021	Water Color	Green
S2	02 Mar 2021	Current Direction	N
S2	02 Mar 2021	Water Temp (C)	13
S2	02 Mar 2021	Wave Height Low (ft)	3
S2	02 Mar 2021	High Tide (ft)	4.55
S2	02 Mar 2021	High Tide Time	1053
S2	02 Mar 2021	Low Tide (ft)	0.35
S2	02 Mar 2021	Low Tide Time	459
S2	02 Mar 2021	Comments	Algae; Kelp; No flow from storm drain; Beach closed from 6 to 8 AM
S2	09 Mar 2021	Arrive Time	1235
S2	09 Mar 2021	Weather	Sunny
S2	09 Mar 2021	Wind Speed (kts)	3.8
S2	09 Mar 2021	Wind Dir	NW
S2	09 Mar 2021	Animal Life	2 Dogs; 20 Shorebirds
S2	09 Mar 2021	Floatables	None
S2	09 Mar 2021	Water Color	Green
S2	09 Mar 2021	Current Direction	S
S2	09 Mar 2021	Water Temp (C)	15
S2	09 Mar 2021	Wave Height Low (ft)	4
S2	09 Mar 2021	High Tide (ft)	5.35
S2	09 Mar 2021	High Tide Time	608
S2	09 Mar 2021	Low Tide (ft)	-0.95
S2	09 Mar 2021	Low Tide Time	1321

Station	Date	Parameter	Value
S2	09 Mar 2021	Comments	Resample; Water turbid; Algae; Kelp; Fish remains; 4 Swimmers; No flow from storm drain.
S2	16 Mar 2021	Arrive Time	855
S2	16 Mar 2021	Weather	Cloudy
S2	16 Mar 2021	Wind Speed (kts)	6.7
S2	16 Mar 2021	Wind Dir	NW
S2	16 Mar 2021	Animal Life	20 Seagulls
S2	16 Mar 2021	Floatables	None
S2	16 Mar 2021	Water Color	Green
S2	16 Mar 2021	Current Direction	N
S2	16 Mar 2021	Water Temp (C)	11
S2	16 Mar 2021	Wave Height Low (ft)	3
S2	16 Mar 2021	High Tide (ft)	3.98
S2	16 Mar 2021	High Tide Time	1128
S2	16 Mar 2021	Low Tide (ft)	0.54
S2	16 Mar 2021	Low Tide Time	535
S2	16 Mar 2021	Comments	Water turbid; Algae; Kelp; Rain prior to sampling; No flow from storm drain.
S2	23 Mar 2021	Arrive Time	945
S2	23 Mar 2021	Weather	Cloudy
S2	23 Mar 2021	Wind Speed (kts)	3.1
S2	23 Mar 2021	Wind Dir	NW
S2	23 Mar 2021	Animal Life	10 Shorebirds; 2 Dogs; 1 Pelican
S2	23 Mar 2021	Floatables	None
S2	23 Mar 2021	Water Color	Green
S2	23 Mar 2021	Current Direction	N
S2	23 Mar 2021	Water Temp (C)	14
S2	23 Mar 2021	Wave Height Low (ft)	3
S2	23 Mar 2021	High Tide (ft)	4.32
S2	23 Mar 2021	High Tide Time	537
S2	23 Mar 2021	Low Tide (ft)	-0.07
S2	23 Mar 2021	Low Tide Time	1313
S2	23 Mar 2021	Comments	Water clear; Algae; Kelp; Rain water not spilling; No flow from storm drain
S2	30 Mar 2021	Arrive Time	858
S2	30 Mar 2021	Weather	Cloudy
S2	30 Mar 2021	Wind Speed (kts)	0.7
S2	30 Mar 2021	Wind Dir	SW
S2	30 Mar 2021	Animal Life	20 Seagulls; 4 Dogs
S2	30 Mar 2021	Floatables	None
S2	30 Mar 2021	Water Color	Green
S2	30 Mar 2021	Current Direction	S
S2	30 Mar 2021	Water Temp (C)	13
S2	30 Mar 2021	Wave Height Low (ft)	2
S2	30 Mar 2021	High Tide (ft)	4.7
S2	30 Mar 2021	High Tide Time	1101
S2	30 Mar 2021	Low Tide (ft)	-0.58
S2	30 Mar 2021	Low Tide Time	501
S2	30 Mar 2021	Comments	Water turbid; Algae; Kelp; No flow from storm drain
S3	02 Mar 2021	Arrive Time	920
S3	02 Mar 2021	Weather	Sunny
S3	02 Mar 2021	Wind Speed (kts)	1.5
S3	02 Mar 2021	Wind Dir	NE
S3	02 Mar 2021	Animal Life	10 Shorebirds
S3	02 Mar 2021	Floatables	None
S3	02 Mar 2021	Water Color	Green
S3	02 Mar 2021	Current Direction	N

Station	Date	Parameter	Value
S3	02 Mar 2021	Water Temp (C)	13
S3	02 Mar 2021	Wave Height Low (ft)	3
S3	02 Mar 2021	High Tide (ft)	4.55
S3	02 Mar 2021	High Tide Time	1053
S3	02 Mar 2021	Low Tide (ft)	0.35
S3	02 Mar 2021	Low Tide Time	459
S3	02 Mar 2021	Comments	Algae; Kelp; 0.5 L/sec water flowing from storm drain; Beach closed from 6 to 8 AM per Municipal policy
S3	09 Mar 2021	Arrive Time	1308
S3	09 Mar 2021	Weather	Sunny
S3	09 Mar 2021	Wind Speed (kts)	3.8
S3	09 Mar 2021	Wind Dir	NW
S3	09 Mar 2021	Animal Life	15 Shorebirds
S3	09 Mar 2021	Floatables	None
S3	09 Mar 2021	Water Color	Green
S3	09 Mar 2021	Current Direction	S
S3	09 Mar 2021	Water Temp (C)	15
S3	09 Mar 2021	Wave Height Low (ft)	4
S3	09 Mar 2021	High Tide (ft)	5.35
S3	09 Mar 2021	High Tide Time	608
S3	09 Mar 2021	Low Tide (ft)	-0.95
S3	09 Mar 2021	Low Tide Time	1321
S3	09 Mar 2021	Comments	Resample; Water turbid; Algae; Kelp; No flow from storm drain.
S3	16 Mar 2021	Arrive Time	915
S3	16 Mar 2021	Weather	Sunny
S3	16 Mar 2021	Wind Speed (kts)	6.3
S3	16 Mar 2021	Wind Dir	NW
S3	16 Mar 2021	Animal Life	20 Seagulls
S3	16 Mar 2021	Floatables	None
S3	16 Mar 2021	Water Color	Green
S3	16 Mar 2021	Current Direction	N
S3	16 Mar 2021	Water Temp (C)	11
S3	16 Mar 2021	Wave Height Low (ft)	3
S3	16 Mar 2021	High Tide (ft)	3.98
S3	16 Mar 2021	High Tide Time	1128
S3	16 Mar 2021	Low Tide (ft)	0.54
S3	16 Mar 2021	Low Tide Time	535
S3	16 Mar 2021	Comments	Water turbid; Algae; Kelp; Rain prior to sampling; No flow from storm drain.
S3	23 Mar 2021	Arrive Time	1030
S3	23 Mar 2021	Weather	Clear
S3	23 Mar 2021	Wind Speed (kts)	2.5
S3	23 Mar 2021	Wind Dir	NW
S3	23 Mar 2021	Animal Life	10 Shorebirds
S3	23 Mar 2021	Floatables	None
S3	23 Mar 2021	Water Color	Green
S3	23 Mar 2021	Current Direction	N
S3	23 Mar 2021	Water Temp (C)	14
S3	23 Mar 2021	Wave Height Low (ft)	3
S3	23 Mar 2021	High Tide (ft)	4.32
S3	23 Mar 2021	High Tide Time	537
S3	23 Mar 2021	Low Tide (ft)	-0.07
S3	23 Mar 2021	Low Tide Time	1313
S3	23 Mar 2021	Comments	Water clear; Rain water not spilling; No flow from storm drain
S3	30 Mar 2021	Arrive Time	845
S3	30 Mar 2021	Weather	Cloudy

Station	Date	Parameter	Value
S3	30 Mar 2021	Wind Speed (kts)	2.6
S3	30 Mar 2021	Wind Dir	SW
S3	30 Mar 2021	Animal Life	20 Seagulls; 4 Dogs
S3	30 Mar 2021	Floatables	None
S3	30 Mar 2021	Water Color	Green
S3	30 Mar 2021	Current Direction	S
S3	30 Mar 2021	Water Temp (C)	13
S3	30 Mar 2021	Wave Height Low (ft)	2
S3	30 Mar 2021	High Tide (ft)	4.7
S3	30 Mar 2021	High Tide Time	1101
S3	30 Mar 2021	Low Tide (ft)	-0.58
S3	30 Mar 2021	Low Tide Time	501
S3	30 Mar 2021	Comments	Water turbid; Algae; Kelp; 1.0 L/sec water flowing from storm drain
S4	01 Mar 2021	Arrive Time	1227
S4	01 Mar 2021	Weather	Sunny
S4	01 Mar 2021	Wind Speed (kts)	6.8
S4	01 Mar 2021	Wind Dir	E
S4	01 Mar 2021	Animal Life	12 Plovers; 15 Godwits; 4 Cormorants
S4	01 Mar 2021	Floatables	Foam; Film
S4	01 Mar 2021	Water Color	Green
S4	01 Mar 2021	Current Direction	N
S4	01 Mar 2021	Water Temp (C)	17.5
S4	01 Mar 2021	Wave Height Low (ft)	3
S4	01 Mar 2021	High Tide (ft)	5.26
S4	01 Mar 2021	High Tide Time	1004
S4	01 Mar 2021	Low Tide (ft)	-0.35
S4	01 Mar 2021	Low Tide Time	1632
S4	01 Mar 2021	Comments	Water Turbid; Trash-1; Debris
S4	02 Mar 2021	Arrive Time	1018
S4	02 Mar 2021	Weather	Sunny
S4	02 Mar 2021	Wind Speed (kts)	7.5
S4	02 Mar 2021	Wind Dir	SW
S4	02 Mar 2021	Animal Life	2 Cormorants; 20 Seagulls; 8 Plovers; 1 Godwit
S4	02 Mar 2021	Floatables	Foam
S4	02 Mar 2021	Water Color	Green
S4	02 Mar 2021	Current Direction	N
S4	02 Mar 2021	Water Temp (C)	15.5
S4	02 Mar 2021	Wave Height Low (ft)	2
S4	02 Mar 2021	High Tide (ft)	4.55
S4	02 Mar 2021	High Tide Time	1053
S4	02 Mar 2021	Low Tide (ft)	0.35
S4	02 Mar 2021	Low Tide Time	459
S4	02 Mar 2021	Comments	Water Clear; Trash-1
S4	09 Mar 2021	Arrive Time	807
S4	09 Mar 2021	Weather	Partly cloudy
S4	09 Mar 2021	Wind Speed (kts)	2.9
S4	09 Mar 2021	Wind Dir	SW
S4	09 Mar 2021	Animal Life	2 Godwits; 1 Plover
S4	09 Mar 2021	Floatables	Foam; Film; Soap
S4	09 Mar 2021	Water Color	Green
S4	09 Mar 2021	Current Direction	N
S4	09 Mar 2021	Water Temp (C)	15.5
S4	09 Mar 2021	Wave Height Low (ft)	3
S4	09 Mar 2021	High Tide (ft)	5.35
S4	09 Mar 2021	High Tide Time	608
S4	09 Mar 2021	Low Tide (ft)	-0.95
S4	09 Mar 2021	Low Tide Time	1321

Station	Date	Parameter	Value
S4	09 Mar 2021	Comments	Resample; Kelp; Seagrass; Water clear; Trash 2
S4	11 Mar 2021	Arrive Time	1655
S4	11 Mar 2021	Weather	Sunny
S4	11 Mar 2021	Wind Speed (kts)	6
S4	11 Mar 2021	Wind Dir	SW
S4	11 Mar 2021	Animal Life	2 Godwits; 2 Plovers; 1 Seal
S4	11 Mar 2021	Floatables	Foam; Film
S4	11 Mar 2021	Water Color	Green
S4	11 Mar 2021	Current Direction	N
S4	11 Mar 2021	Water Temp (C)	14.9
S4	11 Mar 2021	Wave Height Low (ft)	2
S4	11 Mar 2021	High Tide (ft)	5.62
S4	11 Mar 2021	High Tide Time	737
S4	11 Mar 2021	Low Tide (ft)	-0.93
S4	11 Mar 2021	Low Tide Time	1427
S4	11 Mar 2021	Comments	Resample; Kelp; Seagrass; Trash-1; Water clear
S4	13 Mar 2021	Arrive Time	1010
S4	13 Mar 2021	Weather	Partly cloudy
S4	13 Mar 2021	Wind Speed (kts)	9.9
S4	13 Mar 2021	Wind Dir	W
S4	13 Mar 2021	Animal Life	None
S4	13 Mar 2021	Floatables	Foam
S4	13 Mar 2021	Water Color	Green
S4	13 Mar 2021	Current Direction	N
S4	13 Mar 2021	Water Temp (C)	16.1
S4	13 Mar 2021	Wave Height Low (ft)	1
S4	13 Mar 2021	High Tide (ft)	5.3
S4	13 Mar 2021	High Tide Time	848
S4	13 Mar 2021	Low Tide (ft)	-0.42
S4	13 Mar 2021	Low Tide Time	1520
S4	13 Mar 2021	Comments	Resample; Kelp; Debris; Trash 2; Water clear
S4	16 Mar 2021	Arrive Time	950
S4	16 Mar 2021	Weather	Partly cloudy
S4	16 Mar 2021	Wind Speed (kts)	4.8
S4	16 Mar 2021	Wind Dir	W
S4	16 Mar 2021	Animal Life	6 Plovers
S4	16 Mar 2021	Floatables	Foam; Film
S4	16 Mar 2021	Water Color	Green
S4	16 Mar 2021	Current Direction	S
S4	16 Mar 2021	Water Temp (C)	13.5
S4	16 Mar 2021	Wave Height Low (ft)	6
S4	16 Mar 2021	High Tide (ft)	3.98
S4	16 Mar 2021	High Tide Time	1128
S4	16 Mar 2021	Low Tide (ft)	0.54
S4	16 Mar 2021	Low Tide Time	535
S4	16 Mar 2021	Comments	Kelp; Seagrass; Trash-3; Water turbid
S4	18 Mar 2021	Arrive Time	920
S4	18 Mar 2021	Weather	Partly cloudy
S4	18 Mar 2021	Wind Speed (kts)	5.2
S4	18 Mar 2021	Wind Dir	E
S4	18 Mar 2021	Animal Life	None
S4	18 Mar 2021	Floatables	Foam; Film
S4	18 Mar 2021	Water Color	Green
S4	18 Mar 2021	Current Direction	S
S4	18 Mar 2021	Water Temp (C)	14.5
S4	18 Mar 2021	Wave Height Low (ft)	3
S4	18 Mar 2021	High Tide (ft)	2.89

Station	Date	Parameter	Value
S4	18 Mar 2021	High Tide Time	1255
S4	18 Mar 2021	Low Tide (ft)	0.85
S4	18 Mar 2021	Low Tide Time	700
S4	18 Mar 2021	Comments	Resample; Water clear
S4	20 Mar 2021	Arrive Time	950
S4	20 Mar 2021	Weather	Cloudy
S4	20 Mar 2021	Wind Speed (kts)	6.9
S4	20 Mar 2021	Wind Dir	W
S4	20 Mar 2021	Animal Life	5 Seagulls
S4	20 Mar 2021	Floatables	Foam; Film
S4	20 Mar 2021	Water Color	Green
S4	20 Mar 2021	Current Direction	S
S4	20 Mar 2021	Water Temp (C)	13.9
S4	20 Mar 2021	Wave Height Low (ft)	3
S4	20 Mar 2021	High Tide (ft)	4.1
S4	20 Mar 2021	High Tide Time	108
S4	20 Mar 2021	Low Tide (ft)	1.07
S4	20 Mar 2021	Low Tide Time	942
S4	20 Mar 2021	Comments	Resample; Trash-1; Water turbid; Kelp; Seagrass; Sewage-like odor
S4	22 Mar 2021	Arrive Time	840
S4	22 Mar 2021	Weather	Sunny
S4	22 Mar 2021	Wind Speed (kts)	0
S4	22 Mar 2021	Wind Dir	
S4	22 Mar 2021	Animal Life	3 Plovers; 2 Godwits
S4	22 Mar 2021	Floatables	Foam; Film
S4	22 Mar 2021	Water Color	Green
S4	22 Mar 2021	Current Direction	S
S4	22 Mar 2021	Water Temp (C)	13.1
S4	22 Mar 2021	Wave Height Low (ft)	2
S4	22 Mar 2021	High Tide (ft)	3.98
S4	22 Mar 2021	High Tide Time	417
S4	22 Mar 2021	Low Tide (ft)	0.37
S4	22 Mar 2021	Low Tide Time	1232
S4	22 Mar 2021	Comments	Resample; Kelp; Seagrass; Trash 3; Water turbid
S4	23 Mar 2021	Arrive Time	1035
S4	23 Mar 2021	Weather	Overcast
S4	23 Mar 2021	Wind Speed (kts)	6.7
S4	23 Mar 2021	Wind Dir	W
S4	23 Mar 2021	Animal Life	2 Godwits
S4	23 Mar 2021	Floatables	Foam; film
S4	23 Mar 2021	Water Color	Brown
S4	23 Mar 2021	Current Direction	S
S4	23 Mar 2021	Water Temp (C)	14.2
S4	23 Mar 2021	Wave Height Low (ft)	3
S4	23 Mar 2021	High Tide (ft)	4.32
S4	23 Mar 2021	High Tide Time	537
S4	23 Mar 2021	Low Tide (ft)	-0.07
S4	23 Mar 2021	Low Tide Time	1313
S4	23 Mar 2021	Comments	Kelp; Seagrass; Trash-2
S4	25 Mar 2021	Arrive Time	930
S4	25 Mar 2021	Weather	Partly cloudy
S4	25 Mar 2021	Wind Speed (kts)	12.2
S4	25 Mar 2021	Wind Dir	SW
S4	25 Mar 2021	Animal Life	1 Godwits
S4	25 Mar 2021	Floatables	Foam
S4	25 Mar 2021	Water Color	Green

Station	Date	Parameter	Value
S4	25 Mar 2021	Current Direction	N
S4	25 Mar 2021	Water Temp (C)	14.3
S4	25 Mar 2021	Wave Height Low (ft)	2
S4	25 Mar 2021	High Tide (ft)	5.21
S4	25 Mar 2021	High Tide Time	720
S4	25 Mar 2021	Low Tide (ft)	-0.73
S4	25 Mar 2021	Low Tide Time	1419
S4	25 Mar 2021	Comments	Resample; Water clear; Kelp; Seagrass; Trash-1; Debris
S4	27 Mar 2021	Arrive Time	845
S4	27 Mar 2021	Weather	Sunny
S4	27 Mar 2021	Wind Speed (kts)	5.2
S4	27 Mar 2021	Wind Dir	E
S4	27 Mar 2021	Animal Life	4 Godwits
S4	27 Mar 2021	Floatables	None
S4	27 Mar 2021	Water Color	Green
S4	27 Mar 2021	Current Direction	S
S4	27 Mar 2021	Water Temp (C)	14.3
S4	27 Mar 2021	Wave Height Low (ft)	4
S4	27 Mar 2021	High Tide (ft)	5.66
S4	27 Mar 2021	High Tide Time	846
S4	27 Mar 2021	Low Tide (ft)	0.52
S4	27 Mar 2021	Low Tide Time	249
S4	27 Mar 2021	Comments	Resample; Water clear; Debris; Trash 1; Seagrass; Kelp
S4	29 Mar 2021	Arrive Time	915
S4	29 Mar 2021	Weather	Sunny
S4	29 Mar 2021	Wind Speed (kts)	1.7
S4	29 Mar 2021	Wind Dir	SW
S4	29 Mar 2021	Animal Life	None
S4	29 Mar 2021	Floatables	None
S4	29 Mar 2021	Water Color	Green
S4	29 Mar 2021	Current Direction	S
S4	29 Mar 2021	Water Temp (C)	14.5
S4	29 Mar 2021	Wave Height Low (ft)	2
S4	29 Mar 2021	High Tide (ft)	5.24
S4	29 Mar 2021	High Tide Time	1013
S4	29 Mar 2021	Low Tide (ft)	-0.38
S4	29 Mar 2021	Low Tide Time	414
S4	29 Mar 2021	Comments	Resample; Water turbid; Kelp; Trash 2
S4	30 Mar 2021	Arrive Time	1035
S4	30 Mar 2021	Weather	Sunny
S4	30 Mar 2021	Wind Speed (kts)	10.2
S4	30 Mar 2021	Wind Dir	SW
S4	30 Mar 2021	Animal Life	None
S4	30 Mar 2021	Floatables	Foam; Film; Soap
S4	30 Mar 2021	Water Color	Green
S4	30 Mar 2021	Current Direction	N
S4	30 Mar 2021	Water Temp (C)	15.6
S4	30 Mar 2021	Wave Height Low (ft)	4
S4	30 Mar 2021	High Tide (ft)	4.7
S4	30 Mar 2021	High Tide Time	1101
S4	30 Mar 2021	Low Tide (ft)	-0.58
S4	30 Mar 2021	Low Tide Time	501
S4	30 Mar 2021	Comments	Kelp; Seagrass; Debris; Trash-2; Water clear
S5	01 Mar 2021	Arrive Time	1305
S5	01 Mar 2021	Weather	Sunny
S5	01 Mar 2021	Wind Speed (kts)	6.6
S5	01 Mar 2021	Wind Dir	W

Station	Date	Parameter	Value
S5	01 Mar 2021	Animal Life	4 Tern; 30 Plovers; 8 Seagulls; 1 Person
S5	01 Mar 2021	Floatables	Foam
S5	01 Mar 2021	Water Color	Green
S5	01 Mar 2021	Current Direction	N
S5	01 Mar 2021	Water Temp (C)	17.2
S5	01 Mar 2021	Wave Height Low (ft)	1
S5	01 Mar 2021	High Tide (ft)	5.26
S5	01 Mar 2021	High Tide Time	1004
S5	01 Mar 2021	Low Tide (ft)	-0.35
S5	01 Mar 2021	Low Tide Time	1632
S5	01 Mar 2021	Comments	Kelp; Seagrass; 1 Person
S5	02 Mar 2021	Arrive Time	805
S5	02 Mar 2021	Weather	Sunny
S5	02 Mar 2021	Wind Speed (kts)	2.1
S5	02 Mar 2021	Wind Dir	E
S5	02 Mar 2021	Animal Life	2 Dogs; 1 Seagull
S5	02 Mar 2021	Floatables	None
S5	02 Mar 2021	Water Color	Green
S5	02 Mar 2021	Current Direction	S
S5	02 Mar 2021	Water Temp (C)	13.9
S5	02 Mar 2021	Wave Height Low (ft)	2
S5	02 Mar 2021	High Tide (ft)	4.55
S5	02 Mar 2021	High Tide Time	1053
S5	02 Mar 2021	Low Tide (ft)	0.35
S5	02 Mar 2021	Low Tide Time	459
S5	02 Mar 2021	Comments	Water Clear; 2 People
S5	09 Mar 2021	Arrive Time	935
S5	09 Mar 2021	Weather	Partly cloudy
S5	09 Mar 2021	Wind Speed (kts)	9.7
S5	09 Mar 2021	Wind Dir	W
S5	09 Mar 2021	Animal Life	1 Pelican; 2 Plovers; 1 Godwit
S5	09 Mar 2021	Floatables	Foam; Film
S5	09 Mar 2021	Water Color	Green
S5	09 Mar 2021	Current Direction	N
S5	09 Mar 2021	Water Temp (C)	17.3
S5	09 Mar 2021	Wave Height Low (ft)	2
S5	09 Mar 2021	High Tide (ft)	5.35
S5	09 Mar 2021	High Tide Time	608
S5	09 Mar 2021	Low Tide (ft)	-0.95
S5	09 Mar 2021	Low Tide Time	1321
S5	09 Mar 2021	Comments	Resample; Kelp; Seagrass; Trash 2; Sewage like odor; Water clear
S5	11 Mar 2021	Arrive Time	935
S5	11 Mar 2021	Weather	Drizzle
S5	11 Mar 2021	Wind Speed (kts)	5.6
S5	11 Mar 2021	Wind Dir	E
S5	11 Mar 2021	Animal Life	30 Plovers; 45 Seagulls; 1 Tern
S5	11 Mar 2021	Floatables	Foam; Film
S5	11 Mar 2021	Water Color	Brown
S5	11 Mar 2021	Current Direction	S
S5	11 Mar 2021	Water Temp (C)	15.6
S5	11 Mar 2021	Wave Height Low (ft)	3
S5	11 Mar 2021	High Tide (ft)	5.62
S5	11 Mar 2021	High Tide Time	737
S5	11 Mar 2021	Low Tide (ft)	-0.93
S5	11 Mar 2021	Low Tide Time	1427
S5	11 Mar 2021	Comments	Resample; Water turbid; Trash-1; Debris; Seagrass; Kelp; Sewage-like odor

Station	Date	Parameter	Value
S5	13 Mar 2021	Arrive Time	1050
S5	13 Mar 2021	Weather	Cloudy
S5	13 Mar 2021	Wind Speed (kts)	11
S5	13 Mar 2021	Wind Dir	W
S5	13 Mar 2021	Animal Life	1 Godwit
S5	13 Mar 2021	Floatables	Foam
S5	13 Mar 2021	Water Color	Green
S5	13 Mar 2021	Current Direction	S
S5	13 Mar 2021	Water Temp (C)	15.1
S5	13 Mar 2021	Wave Height Low (ft)	2
S5	13 Mar 2021	High Tide (ft)	5.3
S5	13 Mar 2021	High Tide Time	848
S5	13 Mar 2021	Low Tide (ft)	-0.42
S5	13 Mar 2021	Low Tide Time	1520
S5	13 Mar 2021	Comments	Resample; Water clear
S5	15 Mar 2021	Arrive Time	753
S5	15 Mar 2021	Weather	Cloudy
S5	15 Mar 2021	Wind Speed (kts)	3.4
S5	15 Mar 2021	Wind Dir	W
S5	15 Mar 2021	Animal Life	4 Pelican; 12 Seagulls; 30 Terns
S5	15 Mar 2021	Floatables	Foam; Film
S5	15 Mar 2021	Water Color	Brown
S5	15 Mar 2021	Current Direction	S
S5	15 Mar 2021	Water Temp (C)	15.4
S5	15 Mar 2021	Wave Height Low (ft)	1
S5	15 Mar 2021	High Tide (ft)	4.5
S5	15 Mar 2021	High Tide Time	1054
S5	15 Mar 2021	Low Tide (ft)	0.49
S5	15 Mar 2021	Low Tide Time	459
S5	15 Mar 2021	Comments	Resample; 1 Person; Kelp; Seagrass; Debris; Trash 1; Water turbid
S5	16 Mar 2021	Arrive Time	822
S5	16 Mar 2021	Weather	Partly cloudy
S5	16 Mar 2021	Wind Speed (kts)	5
S5	16 Mar 2021	Wind Dir	NW
S5	16 Mar 2021	Animal Life	120 Plovers; 1 Godwit; 3 Pelicans
S5	16 Mar 2021	Floatables	Foam; Film
S5	16 Mar 2021	Water Color	Green
S5	16 Mar 2021	Current Direction	S
S5	16 Mar 2021	Water Temp (C)	14.8
S5	16 Mar 2021	Wave Height Low (ft)	3
S5	16 Mar 2021	High Tide (ft)	3.98
S5	16 Mar 2021	High Tide Time	1128
S5	16 Mar 2021	Low Tide (ft)	0.54
S5	16 Mar 2021	Low Tide Time	535
S5	16 Mar 2021	Comments	Kelp; Seagrass; Trash-2; Water turbid
S5	18 Mar 2021	Arrive Time	820
S5	18 Mar 2021	Weather	Partly cloudy
S5	18 Mar 2021	Wind Speed (kts)	5.2
S5	18 Mar 2021	Wind Dir	E
S5	18 Mar 2021	Animal Life	5 Pelicans; 1 Cormorant; 6 Seagulls; 5 Plovers
S5	18 Mar 2021	Floatables	Foam; Film
S5	18 Mar 2021	Water Color	Brown
S5	18 Mar 2021	Current Direction	S
S5	18 Mar 2021	Water Temp (C)	14.5
S5	18 Mar 2021	Wave Height Low (ft)	2
S5	18 Mar 2021	High Tide (ft)	2.89

Station	Date	Parameter	Value
S5	18 Mar 2021	High Tide Time	1255
S5	18 Mar 2021	Low Tide (ft)	0.85
S5	18 Mar 2021	Low Tide Time	700
S5	18 Mar 2021	Comments	Resample; Kelp; Sewage like odor; 1 Person
S5	20 Mar 2021	Arrive Time	900
S5	20 Mar 2021	Weather	Cloudy
S5	20 Mar 2021	Wind Speed (kts)	7.9
S5	20 Mar 2021	Wind Dir	NW
S5	20 Mar 2021	Animal Life	12 Plovers; 12 Seagulls; 30 Terns
S5	20 Mar 2021	Floatables	Foam; Film
S5	20 Mar 2021	Water Color	Green
S5	20 Mar 2021	Current Direction	S
S5	20 Mar 2021	Water Temp (C)	17.1
S5	20 Mar 2021	Wave Height Low (ft)	2
S5	20 Mar 2021	High Tide (ft)	4.1
S5	20 Mar 2021	High Tide Time	108
S5	20 Mar 2021	Low Tide (ft)	1.07
S5	20 Mar 2021	Low Tide Time	942
S5	20 Mar 2021	Comments	Resample; Kelp; Seagrass; Debris; Water turbid; Sewage-like odor
S5	22 Mar 2021	Arrive Time	920
S5	22 Mar 2021	Weather	Sunny
S5	22 Mar 2021	Wind Speed (kts)	2.7
S5	22 Mar 2021	Wind Dir	W
S5	22 Mar 2021	Animal Life	9 Plovers
S5	22 Mar 2021	Floatables	Foam; Film
S5	22 Mar 2021	Water Color	Brown
S5	22 Mar 2021	Current Direction	S
S5	22 Mar 2021	Water Temp (C)	14.8
S5	22 Mar 2021	Wave Height Low (ft)	2
S5	22 Mar 2021	High Tide (ft)	3.98
S5	22 Mar 2021	High Tide Time	417
S5	22 Mar 2021	Low Tide (ft)	0.37
S5	22 Mar 2021	Low Tide Time	1232
S5	22 Mar 2021	Comments	Resample; Kelp; Seagrass; Trash 1; Dead animals; 3 People; Sewage-like odor; Water turbid
S5	23 Mar 2021	Arrive Time	920
S5	23 Mar 2021	Weather	Rainy
S5	23 Mar 2021	Wind Speed (kts)	2.3
S5	23 Mar 2021	Wind Dir	W
S5	23 Mar 2021	Animal Life	13 Terns; 1 Godwit; 10 Seagulls
S5	23 Mar 2021	Floatables	Foam; film
S5	23 Mar 2021	Water Color	Brown
S5	23 Mar 2021	Current Direction	S
S5	23 Mar 2021	Water Temp (C)	14.3
S5	23 Mar 2021	Wave Height Low (ft)	4
S5	23 Mar 2021	High Tide (ft)	4.32
S5	23 Mar 2021	High Tide Time	537
S5	23 Mar 2021	Low Tide (ft)	-0.07
S5	23 Mar 2021	Low Tide Time	1313
S5	23 Mar 2021	Comments	Kelp; Seagrass; Turbid water
S5	25 Mar 2021	Arrive Time	1030
S5	25 Mar 2021	Weather	Cloudy
S5	25 Mar 2021	Wind Speed (kts)	8.5
S5	25 Mar 2021	Wind Dir	W
S5	25 Mar 2021	Animal Life	60 Terns; 12 Seagulls; 8 Pelicans
S5	25 Mar 2021	Floatables	Foam; Film

Station	Date	Parameter	Value
S5	25 Mar 2021	Water Color	Green
S5	25 Mar 2021	Current Direction	N
S5	25 Mar 2021	Water Temp (C)	16
S5	25 Mar 2021	Wave Height Low (ft)	2
S5	25 Mar 2021	High Tide (ft)	5.21
S5	25 Mar 2021	High Tide Time	720
S5	25 Mar 2021	Low Tide (ft)	-0.73
S5	25 Mar 2021	Low Tide Time	1419
S5	25 Mar 2021	Comments	Resample; Water turbid; Seagrass; Kelp; Trash-1; Debris
S5	27 Mar 2021	Arrive Time	805
S5	27 Mar 2021	Weather	Sunny
S5	27 Mar 2021	Wind Speed (kts)	5
S5	27 Mar 2021	Wind Dir	E
S5	27 Mar 2021	Animal Life	1 Pelican
S5	27 Mar 2021	Floatables	Foam; Film
S5	27 Mar 2021	Water Color	Green
S5	27 Mar 2021	Current Direction	S
S5	27 Mar 2021	Water Temp (C)	13.7
S5	27 Mar 2021	Wave Height Low (ft)	4
S5	27 Mar 2021	High Tide (ft)	5.66
S5	27 Mar 2021	High Tide Time	846
S5	27 Mar 2021	Low Tide (ft)	0.52
S5	27 Mar 2021	Low Tide Time	249
S5	27 Mar 2021	Comments	Resample; 1 Person; Seagrass; Kelp; Debris; Water clear
S5	29 Mar 2021	Arrive Time	825
S5	29 Mar 2021	Weather	Partly cloudy
S5	29 Mar 2021	Wind Speed (kts)	5.3
S5	29 Mar 2021	Wind Dir	E
S5	29 Mar 2021	Animal Life	1 Seagull; 1 Godwit; 1 Cormorant
S5	29 Mar 2021	Floatables	Foam; Film
S5	29 Mar 2021	Water Color	Brown
S5	29 Mar 2021	Current Direction	S
S5	29 Mar 2021	Water Temp (C)	13.8
S5	29 Mar 2021	Wave Height Low (ft)	1
S5	29 Mar 2021	High Tide (ft)	5.24
S5	29 Mar 2021	High Tide Time	1013
S5	29 Mar 2021	Low Tide (ft)	-0.38
S5	29 Mar 2021	Low Tide Time	414
S5	29 Mar 2021	Comments	Resample; Kelp; Seagrass; Water clear
S5	30 Mar 2021	Arrive Time	900
S5	30 Mar 2021	Weather	Partly Cloudy
S5	30 Mar 2021	Wind Speed (kts)	5
S5	30 Mar 2021	Wind Dir	S
S5	30 Mar 2021	Animal Life	1 Dog; 1 Godwit; 3 Pelicans
S5	30 Mar 2021	Floatables	Foam; Film; Soap
S5	30 Mar 2021	Water Color	Brown
S5	30 Mar 2021	Current Direction	N
S5	30 Mar 2021	Water Temp (C)	15.3
S5	30 Mar 2021	Wave Height Low (ft)	3
S5	30 Mar 2021	High Tide (ft)	4.7
S5	30 Mar 2021	High Tide Time	1101
S5	30 Mar 2021	Low Tide (ft)	-0.58
S5	30 Mar 2021	Low Tide Time	501
S5	30 Mar 2021	Comments	Kelp; Seagrass; Sewage-like odor; 3 Persons; Water turbid
S6	02 Mar 2021	Arrive Time	827
S6	02 Mar 2021	Weather	Sunny
S6	02 Mar 2021	Wind Speed (kts)	2.7

Station	Date	Parameter	Value
S6	02 Mar 2021	Wind Dir	E
S6	02 Mar 2021	Animal Life	2 Dogs; 1 Godwit
S6	02 Mar 2021	Floatables	Foam
S6	02 Mar 2021	Water Color	Green
S6	02 Mar 2021	Current Direction	S
S6	02 Mar 2021	Water Temp (C)	14.1
S6	02 Mar 2021	Wave Height Low (ft)	3
S6	02 Mar 2021	High Tide (ft)	4.55
S6	02 Mar 2021	High Tide Time	1053
S6	02 Mar 2021	Low Tide (ft)	0.35
S6	02 Mar 2021	Low Tide Time	459
S6	02 Mar 2021	Comments	Water Clear; 4 Surfers; 2 People
S6	09 Mar 2021	Arrive Time	1010
S6	09 Mar 2021	Weather	Partly cloudy
S6	09 Mar 2021	Wind Speed (kts)	7.3
S6	09 Mar 2021	Wind Dir	W
S6	09 Mar 2021	Animal Life	1 Godwit; 1 Dog
S6	09 Mar 2021	Floatables	Foam; Film; Soap
S6	09 Mar 2021	Water Color	Green
S6	09 Mar 2021	Current Direction	S
S6	09 Mar 2021	Water Temp (C)	16.5
S6	09 Mar 2021	Wave Height Low (ft)	4
S6	09 Mar 2021	High Tide (ft)	5.35
S6	09 Mar 2021	High Tide Time	608
S6	09 Mar 2021	Low Tide (ft)	-0.95
S6	09 Mar 2021	Low Tide Time	1321
S6	09 Mar 2021	Comments	Resample; Kelp; Seagrass; Trash-1; 2 People; Water clear
S6	16 Mar 2021	Arrive Time	855
S6	16 Mar 2021	Weather	Partly cloudy
S6	16 Mar 2021	Wind Speed (kts)	6.8
S6	16 Mar 2021	Wind Dir	W
S6	16 Mar 2021	Animal Life	1 Dog
S6	16 Mar 2021	Floatables	Foam; Film
S6	16 Mar 2021	Water Color	Green
S6	16 Mar 2021	Current Direction	S
S6	16 Mar 2021	Water Temp (C)	13.1
S6	16 Mar 2021	Wave Height Low (ft)	4
S6	16 Mar 2021	High Tide (ft)	3.98
S6	16 Mar 2021	High Tide Time	1128
S6	16 Mar 2021	Low Tide (ft)	0.54
S6	16 Mar 2021	Low Tide Time	535
S6	16 Mar 2021	Comments	2 Walkers; Seagrass; Trash 1; Water turbid
S6	23 Mar 2021	Arrive Time	935
S6	23 Mar 2021	Weather	Overcast
S6	23 Mar 2021	Wind Speed (kts)	6.7
S6	23 Mar 2021	Wind Dir	W
S6	23 Mar 2021	Animal Life	9 Godwits
S6	23 Mar 2021	Floatables	Foam; film
S6	23 Mar 2021	Water Color	Green
S6	23 Mar 2021	Current Direction	S
S6	23 Mar 2021	Water Temp (C)	13.7
S6	23 Mar 2021	Wave Height Low (ft)	3
S6	23 Mar 2021	High Tide (ft)	4.32
S6	23 Mar 2021	High Tide Time	537
S6	23 Mar 2021	Low Tide (ft)	-0.07
S6	23 Mar 2021	Low Tide Time	1313
S6	23 Mar 2021	Comments	1 Walker; 1 Truck on beach; Water turbid

Station	Date	Parameter	Value
S6	30 Mar 2021	Arrive Time	925
S6	30 Mar 2021	Weather	Sunny
S6	30 Mar 2021	Wind Speed (kts)	6.9
S6	30 Mar 2021	Wind Dir	W
S6	30 Mar 2021	Animal Life	2 Dogs; 2 Godwits; 1 Seagull
S6	30 Mar 2021	Floatables	Foam; Film; Soap
S6	30 Mar 2021	Water Color	Green
S6	30 Mar 2021	Current Direction	N
S6	30 Mar 2021	Water Temp (C)	15.2
S6	30 Mar 2021	Wave Height Low (ft)	3
S6	30 Mar 2021	High Tide (ft)	4.7
S6	30 Mar 2021	High Tide Time	1101
S6	30 Mar 2021	Low Tide (ft)	-0.58
S6	30 Mar 2021	Low Tide Time	501
S6	30 Mar 2021	Comments	Kelp; Seagrass; Debris; Sewage-like odor; 6 Persons; Water clear
S8	02 Mar 2021	Arrive Time	930
S8	02 Mar 2021	Weather	Sunny
S8	02 Mar 2021	Wind Speed (kts)	3.8
S8	02 Mar 2021	Wind Dir	NW
S8	02 Mar 2021	Animal Life	None
S8	02 Mar 2021	Floatables	None
S8	02 Mar 2021	Water Color	Green
S8	02 Mar 2021	Current Direction	S
S8	02 Mar 2021	Water Temp (C)	15.8
S8	02 Mar 2021	Wave Height Low (ft)	1
S8	02 Mar 2021	High Tide (ft)	4.55
S8	02 Mar 2021	High Tide Time	1053
S8	02 Mar 2021	Low Tide (ft)	0.35
S8	02 Mar 2021	Low Tide Time	459
S8	02 Mar 2021	Comments	Water Clear; Seagrass; 4 People
S8	09 Mar 2021	Arrive Time	1035
S8	09 Mar 2021	Weather	Partly cloudy
S8	09 Mar 2021	Wind Speed (kts)	10.4
S8	09 Mar 2021	Wind Dir	W
S8	09 Mar 2021	Animal Life	2 Cormorants
S8	09 Mar 2021	Floatables	Foam; Film
S8	09 Mar 2021	Water Color	Green
S8	09 Mar 2021	Current Direction	S
S8	09 Mar 2021	Water Temp (C)	17.7
S8	09 Mar 2021	Wave Height Low (ft)	3
S8	09 Mar 2021	High Tide (ft)	5.35
S8	09 Mar 2021	High Tide Time	608
S8	09 Mar 2021	Low Tide (ft)	-0.95
S8	09 Mar 2021	Low Tide Time	1321
S8	09 Mar 2021	Comments	Resample; Kelp; Seagrass; Trash 1; 1 Person; Water clear
S8	16 Mar 2021	Arrive Time	1025
S8	16 Mar 2021	Weather	Sunny
S8	16 Mar 2021	Wind Speed (kts)	1.1
S8	16 Mar 2021	Wind Dir	E
S8	16 Mar 2021	Animal Life	None
S8	16 Mar 2021	Floatables	Foam; Film
S8	16 Mar 2021	Water Color	Green
S8	16 Mar 2021	Current Direction	S
S8	16 Mar 2021	Water Temp (C)	14.6
S8	16 Mar 2021	Wave Height Low (ft)	3
S8	16 Mar 2021	High Tide (ft)	3.98
S8	16 Mar 2021	High Tide Time	1128

Station	Date	Parameter	Value
S8	16 Mar 2021	Low Tide (ft)	0.54
S8	16 Mar 2021	Low Tide Time	535
S8	16 Mar 2021	Comments	13 People; Kelp; Seagrass; Trash 2; Water clear
S8	23 Mar 2021	Arrive Time	848
S8	23 Mar 2021	Weather	Rainy
S8	23 Mar 2021	Wind Speed (kts)	5.8
S8	23 Mar 2021	Wind Dir	W
S8	23 Mar 2021	Animal Life	5 Plovers; 100 Flies
S8	23 Mar 2021	Floatables	Foam; film
S8	23 Mar 2021	Water Color	Brown
S8	23 Mar 2021	Current Direction	S
S8	23 Mar 2021	Water Temp (C)	14.9
S8	23 Mar 2021	Wave Height Low (ft)	2
S8	23 Mar 2021	High Tide (ft)	4.32
S8	23 Mar 2021	High Tide Time	537
S8	23 Mar 2021	Low Tide (ft)	-0.07
S8	23 Mar 2021	Low Tide Time	1313
S8	23 Mar 2021	Comments	Water clear; Kelp; Seagrass; Debris
S8	30 Mar 2021	Arrive Time	825
S8	30 Mar 2021	Weather	Partly Cloudy
S8	30 Mar 2021	Wind Speed (kts)	4.2
S8	30 Mar 2021	Wind Dir	SW
S8	30 Mar 2021	Animal Life	None
S8	30 Mar 2021	Floatables	Foam; Film
S8	30 Mar 2021	Water Color	Green
S8	30 Mar 2021	Current Direction	N
S8	30 Mar 2021	Water Temp (C)	16.1
S8	30 Mar 2021	Wave Height Low (ft)	2
S8	30 Mar 2021	High Tide (ft)	4.7
S8	30 Mar 2021	High Tide Time	1101
S8	30 Mar 2021	Low Tide (ft)	-0.58
S8	30 Mar 2021	Low Tide Time	501
S8	30 Mar 2021	Comments	Kelp; Seagrass; Debris; 6 Persons, 1 Swimmer; Water turbid
S9	02 Mar 2021	Arrive Time	909
S9	02 Mar 2021	Weather	Sunny
S9	02 Mar 2021	Wind Speed (kts)	2.1
S9	02 Mar 2021	Wind Dir	W
S9	02 Mar 2021	Animal Life	5 Godwit
S9	02 Mar 2021	Floatables	Foam
S9	02 Mar 2021	Water Color	Green
S9	02 Mar 2021	Current Direction	S
S9	02 Mar 2021	Water Temp (C)	14.7
S9	02 Mar 2021	Wave Height Low (ft)	1
S9	02 Mar 2021	High Tide (ft)	4.55
S9	02 Mar 2021	High Tide Time	1053
S9	02 Mar 2021	Low Tide (ft)	0.35
S9	02 Mar 2021	Low Tide Time	459
S9	02 Mar 2021	Comments	Turbid; 1 Person
S9	09 Mar 2021	Arrive Time	1053
S9	09 Mar 2021	Weather	Partly cloudy
S9	09 Mar 2021	Wind Speed (kts)	6
S9	09 Mar 2021	Wind Dir	W
S9	09 Mar 2021	Animal Life	2 Seagulls
S9	09 Mar 2021	Floatables	Foam; Film
S9	09 Mar 2021	Water Color	Green
S9	09 Mar 2021	Current Direction	S
S9	09 Mar 2021	Water Temp (C)	17.6

Station	Date	Parameter	Value
S9	09 Mar 2021	Wave Height Low (ft)	2
S9	09 Mar 2021	High Tide (ft)	5.35
S9	09 Mar 2021	High Tide Time	608
S9	09 Mar 2021	Low Tide (ft)	-0.95
S9	09 Mar 2021	Low Tide Time	1321
S9	09 Mar 2021	Comments	Resample; 6 Walkers; 1 Jogger; 1 Fisherman; Trash-1; Water clear
S9	16 Mar 2021	Arrive Time	1100
S9	16 Mar 2021	Weather	Sunny
S9	16 Mar 2021	Wind Speed (kts)	3.3
S9	16 Mar 2021	Wind Dir	W
S9	16 Mar 2021	Animal Life	20 Godwits
S9	16 Mar 2021	Floatables	Foam; Film
S9	16 Mar 2021	Water Color	Green
S9	16 Mar 2021	Current Direction	S
S9	16 Mar 2021	Water Temp (C)	15.4
S9	16 Mar 2021	Wave Height Low (ft)	2
S9	16 Mar 2021	High Tide (ft)	3.98
S9	16 Mar 2021	High Tide Time	1128
S9	16 Mar 2021	Low Tide (ft)	0.54
S9	16 Mar 2021	Low Tide Time	535
S9	16 Mar 2021	Comments	1 Jogger; 3 People; Seagrass; Trash-1; Water turbid
S9	23 Mar 2021	Arrive Time	830
S9	23 Mar 2021	Weather	Overcast
S9	23 Mar 2021	Wind Speed (kts)	1.7
S9	23 Mar 2021	Wind Dir	NW
S9	23 Mar 2021	Animal Life	6 Godwits
S9	23 Mar 2021	Floatables	Foam; film
S9	23 Mar 2021	Water Color	Grey
S9	23 Mar 2021	Current Direction	S
S9	23 Mar 2021	Water Temp (C)	14.8
S9	23 Mar 2021	Wave Height Low (ft)	2
S9	23 Mar 2021	High Tide (ft)	4.32
S9	23 Mar 2021	High Tide Time	537
S9	23 Mar 2021	Low Tide (ft)	-0.07
S9	23 Mar 2021	Low Tide Time	1313
S9	23 Mar 2021	Comments	2 Walkers; Water clear; Kelp; Seagrass
S9	30 Mar 2021	Arrive Time	800
S9	30 Mar 2021	Weather	Overcast
S9	30 Mar 2021	Wind Speed (kts)	6.2
S9	30 Mar 2021	Wind Dir	S
S9	30 Mar 2021	Animal Life	2 Godwits
S9	30 Mar 2021	Floatables	Foam; Film
S9	30 Mar 2021	Water Color	Grey
S9	30 Mar 2021	Current Direction	N
S9	30 Mar 2021	Water Temp (C)	15.5
S9	30 Mar 2021	Wave Height Low (ft)	1
S9	30 Mar 2021	High Tide (ft)	4.7
S9	30 Mar 2021	High Tide Time	1101
S9	30 Mar 2021	Low Tide (ft)	-0.58
S9	30 Mar 2021	Low Tide Time	501
S9	30 Mar 2021	Comments	Kelp; Seagrass; Water clear; 3 Persons; 2 Joggers
S10	02 Mar 2021	Arrive Time	1000
S10	02 Mar 2021	Weather	Sunny
S10	02 Mar 2021	Wind Speed (kts)	5.8
S10	02 Mar 2021	Wind Dir	SW
S10	02 Mar 2021	Animal Life	2 Cormorants; 1 Tern

Station	Date	Parameter	Value
S10	02 Mar 2021	Floatables	Foam
S10	02 Mar 2021	Water Color	Green
S10	02 Mar 2021	Current Direction	N
S10	02 Mar 2021	Water Temp (C)	16.1
S10	02 Mar 2021	Wave Height Low (ft)	2
S10	02 Mar 2021	High Tide (ft)	4.55
S10	02 Mar 2021	High Tide Time	1053
S10	02 Mar 2021	Low Tide (ft)	0.35
S10	02 Mar 2021	Low Tide Time	459
S10	02 Mar 2021	Comments	Water Clear; Trash-1
S10	09 Mar 2021	Arrive Time	748
S10	09 Mar 2021	Weather	Partly cloudy
S10	09 Mar 2021	Wind Speed (kts)	1.9
S10	09 Mar 2021	Wind Dir	SW
S10	09 Mar 2021	Animal Life	None
S10	09 Mar 2021	Floatables	Foam; Film; Sewage-like odor; Water clear
S10	09 Mar 2021	Water Color	Green
S10	09 Mar 2021	Current Direction	N
S10	09 Mar 2021	Water Temp (C)	15.5
S10	09 Mar 2021	Wave Height Low (ft)	3
S10	09 Mar 2021	High Tide (ft)	5.35
S10	09 Mar 2021	High Tide Time	608
S10	09 Mar 2021	Low Tide (ft)	-0.95
S10	09 Mar 2021	Low Tide Time	1321
S10	09 Mar 2021	Comments	Resample; Kelp; Seagrass
S10	11 Mar 2021	Arrive Time	850
S10	11 Mar 2021	Weather	Cloudy
S10	11 Mar 2021	Wind Speed (kts)	5.8
S10	11 Mar 2021	Wind Dir	E
S10	11 Mar 2021	Animal Life	None
S10	11 Mar 2021	Floatables	Foam; Film
S10	11 Mar 2021	Water Color	Green
S10	11 Mar 2021	Current Direction	S
S10	11 Mar 2021	Water Temp (C)	15.4
S10	11 Mar 2021	Wave Height Low (ft)	4
S10	11 Mar 2021	High Tide (ft)	5.62
S10	11 Mar 2021	High Tide Time	737
S10	11 Mar 2021	Low Tide (ft)	-0.93
S10	11 Mar 2021	Low Tide Time	1427
S10	11 Mar 2021	Comments	Resample; Water Turbid; Trash-1; Kelp; Seagrass
S10	13 Mar 2021	Arrive Time	1100
S10	13 Mar 2021	Weather	Cloudy
S10	13 Mar 2021	Wind Speed (kts)	12.8
S10	13 Mar 2021	Wind Dir	W
S10	13 Mar 2021	Animal Life	1 Plover
S10	13 Mar 2021	Floatables	Foam; Film
S10	13 Mar 2021	Water Color	Green
S10	13 Mar 2021	Current Direction	S
S10	13 Mar 2021	Water Temp (C)	14.4
S10	13 Mar 2021	Wave Height Low (ft)	2
S10	13 Mar 2021	High Tide (ft)	5.3
S10	13 Mar 2021	High Tide Time	848
S10	13 Mar 2021	Low Tide (ft)	-0.42
S10	13 Mar 2021	Low Tide Time	1520
S10	13 Mar 2021	Comments	Resample; Kelp; Seagrass; Trash-4; Water clear
S10	15 Mar 2021	Arrive Time	835
S10	15 Mar 2021	Weather	Cloudy

Station	Date	Parameter	Value
S10	15 Mar 2021	Wind Speed (kts)	5.4
S10	15 Mar 2021	Wind Dir	W
S10	15 Mar 2021	Animal Life	1 Plover; 1 Pelican
S10	15 Mar 2021	Floatables	Foam; Film
S10	15 Mar 2021	Water Color	Green
S10	15 Mar 2021	Current Direction	S
S10	15 Mar 2021	Water Temp (C)	15.1
S10	15 Mar 2021	Wave Height Low (ft)	2
S10	15 Mar 2021	High Tide (ft)	4.5
S10	15 Mar 2021	High Tide Time	1054
S10	15 Mar 2021	Low Tide (ft)	0.49
S10	15 Mar 2021	Low Tide Time	459
S10	15 Mar 2021	Comments	Resample; Kelp; Seagrass; Trash-1; Water clear
S10	16 Mar 2021	Arrive Time	940
S10	16 Mar 2021	Weather	Partly cloudy
S10	16 Mar 2021	Wind Speed (kts)	7.5
S10	16 Mar 2021	Wind Dir	W
S10	16 Mar 2021	Animal Life	None
S10	16 Mar 2021	Floatables	Foam; Film
S10	16 Mar 2021	Water Color	Green
S10	16 Mar 2021	Current Direction	S
S10	16 Mar 2021	Water Temp (C)	13.1
S10	16 Mar 2021	Wave Height Low (ft)	3
S10	16 Mar 2021	High Tide (ft)	3.98
S10	16 Mar 2021	High Tide Time	1128
S10	16 Mar 2021	Low Tide (ft)	0.54
S10	16 Mar 2021	Low Tide Time	535
S10	16 Mar 2021	Comments	Seagrass; Trash 3; Water turbid
S10	18 Mar 2021	Arrive Time	910
S10	18 Mar 2021	Weather	Partly cloudy
S10	18 Mar 2021	Wind Speed (kts)	5.4
S10	18 Mar 2021	Wind Dir	E
S10	18 Mar 2021	Animal Life	3 Pelican; 1 Godwit; 3 Plovers
S10	18 Mar 2021	Floatables	Foam; Film
S10	18 Mar 2021	Water Color	Green
S10	18 Mar 2021	Current Direction	S
S10	18 Mar 2021	Water Temp (C)	13.3
S10	18 Mar 2021	Wave Height Low (ft)	3
S10	18 Mar 2021	High Tide (ft)	2.89
S10	18 Mar 2021	High Tide Time	1255
S10	18 Mar 2021	Low Tide (ft)	0.85
S10	18 Mar 2021	Low Tide Time	700
S10	18 Mar 2021	Comments	Resample; Water clear
S10	20 Mar 2021	Arrive Time	940
S10	20 Mar 2021	Weather	Cloudy
S10	20 Mar 2021	Wind Speed (kts)	8.1
S10	20 Mar 2021	Wind Dir	W
S10	20 Mar 2021	Animal Life	1 Pelicans
S10	20 Mar 2021	Floatables	Foam; Film
S10	20 Mar 2021	Water Color	Grey
S10	20 Mar 2021	Current Direction	S
S10	20 Mar 2021	Water Temp (C)	14
S10	20 Mar 2021	Wave Height Low (ft)	3
S10	20 Mar 2021	High Tide (ft)	4.1
S10	20 Mar 2021	High Tide Time	108
S10	20 Mar 2021	Low Tide (ft)	1.07
S10	20 Mar 2021	Low Tide Time	942
S10	20 Mar 2021	Comments	Resample; Trash-1; Sewage-like odor; Water turbid

Station	Date	Parameter	Value
S10	22 Mar 2021	Arrive Time	825
S10	22 Mar 2021	Weather	Sunny
S10	22 Mar 2021	Wind Speed (kts)	3.8
S10	22 Mar 2021	Wind Dir	E
S10	22 Mar 2021	Animal Life	None
S10	22 Mar 2021	Floatables	Foam; Film
S10	22 Mar 2021	Water Color	Green
S10	22 Mar 2021	Current Direction	S
S10	22 Mar 2021	Water Temp (C)	13.2
S10	22 Mar 2021	Wave Height Low (ft)	2
S10	22 Mar 2021	High Tide (ft)	3.98
S10	22 Mar 2021	High Tide Time	417
S10	22 Mar 2021	Low Tide (ft)	0.37
S10	22 Mar 2021	Low Tide Time	1232
S10	22 Mar 2021	Comments	Resample; Kelp; seagrass; Dead animals; Trash 2; Water turbid
S10	23 Mar 2021	Arrive Time	1020
S10	23 Mar 2021	Weather	Overcast
S10	23 Mar 2021	Wind Speed (kts)	7.9
S10	23 Mar 2021	Wind Dir	NW
S10	23 Mar 2021	Animal Life	None
S10	23 Mar 2021	Floatables	Foam; film
S10	23 Mar 2021	Water Color	Grey
S10	23 Mar 2021	Current Direction	S
S10	23 Mar 2021	Water Temp (C)	13.5
S10	23 Mar 2021	Wave Height Low (ft)	2
S10	23 Mar 2021	High Tide (ft)	4.32
S10	23 Mar 2021	High Tide Time	537
S10	23 Mar 2021	Low Tide (ft)	-0.07
S10	23 Mar 2021	Low Tide Time	1313
S10	23 Mar 2021	Comments	Kelp; Seagrass; Water turbid; Trash-1
S10	25 Mar 2021	Arrive Time	920
S10	25 Mar 2021	Weather	Partly cloudy
S10	25 Mar 2021	Wind Speed (kts)	10.8
S10	25 Mar 2021	Wind Dir	W
S10	25 Mar 2021	Animal Life	1 Plover
S10	25 Mar 2021	Floatables	Foam
S10	25 Mar 2021	Water Color	Blue
S10	25 Mar 2021	Current Direction	N
S10	25 Mar 2021	Water Temp (C)	14.5
S10	25 Mar 2021	Wave Height Low (ft)	2
S10	25 Mar 2021	High Tide (ft)	5.21
S10	25 Mar 2021	High Tide Time	720
S10	25 Mar 2021	Low Tide (ft)	-0.73
S10	25 Mar 2021	Low Tide Time	1419
S10	25 Mar 2021	Comments	Resample; Water clear; Seagrass; Kelp; Trash-1
S10	30 Mar 2021	Arrive Time	1012
S10	30 Mar 2021	Weather	Sunny
S10	30 Mar 2021	Wind Speed (kts)	10.4
S10	30 Mar 2021	Wind Dir	SW
S10	30 Mar 2021	Animal Life	3 Plovers; 60 Seagulls
S10	30 Mar 2021	Floatables	Foam; Film; Soap
S10	30 Mar 2021	Water Color	Green
S10	30 Mar 2021	Current Direction	N
S10	30 Mar 2021	Water Temp (C)	16.1
S10	30 Mar 2021	Wave Height Low (ft)	4
S10	30 Mar 2021	High Tide (ft)	4.7

Station	Date	Parameter	Value
S10	30 Mar 2021	High Tide Time	1101
S10	30 Mar 2021	Low Tide (ft)	-0.58
S10	30 Mar 2021	Low Tide Time	501
S10	30 Mar 2021	Comments	Kelp; Seagrass; Sewage-like odor; Trash-1; Water clear
S11	02 Mar 2021	Arrive Time	818
S11	02 Mar 2021	Weather	Sunny
S11	02 Mar 2021	Wind Speed (kts)	4
S11	02 Mar 2021	Wind Dir	E
S11	02 Mar 2021	Animal Life	1 Pelican; 1 Seagull; 1 Dog
S11	02 Mar 2021	Floatables	Foam
S11	02 Mar 2021	Water Color	Green
S11	02 Mar 2021	Current Direction	S
S11	02 Mar 2021	Water Temp (C)	13.8
S11	02 Mar 2021	Wave Height Low (ft)	3
S11	02 Mar 2021	High Tide (ft)	4.55
S11	02 Mar 2021	High Tide Time	1053
S11	02 Mar 2021	Low Tide (ft)	0.35
S11	02 Mar 2021	Low Tide Time	459
S11	02 Mar 2021	Comments	Water Clear; Seagrass; 1 Person
S11	09 Mar 2021	Arrive Time	952
S11	09 Mar 2021	Weather	Partly cloudy
S11	09 Mar 2021	Wind Speed (kts)	6.5
S11	09 Mar 2021	Wind Dir	W
S11	09 Mar 2021	Animal Life	5 Godwits; 6 Plovers; 1 Dog
S11	09 Mar 2021	Floatables	Foam; Film
S11	09 Mar 2021	Water Color	Green
S11	09 Mar 2021	Current Direction	S
S11	09 Mar 2021	Water Temp (C)	16
S11	09 Mar 2021	Wave Height Low (ft)	4
S11	09 Mar 2021	High Tide (ft)	5.35
S11	09 Mar 2021	High Tide Time	608
S11	09 Mar 2021	Low Tide (ft)	-0.95
S11	09 Mar 2021	Low Tide Time	1321
S11	09 Mar 2021	Comments	Resample; 2 People; Kelp; Seagrass; Trash 1; Sewage like odor; Water clear
S11	16 Mar 2021	Arrive Time	840
S11	16 Mar 2021	Weather	Partly cloudy
S11	16 Mar 2021	Wind Speed (kts)	7.7
S11	16 Mar 2021	Wind Dir	W
S11	16 Mar 2021	Animal Life	1 Dog; 1 Godwit
S11	16 Mar 2021	Floatables	Foam; Film
S11	16 Mar 2021	Water Color	Green
S11	16 Mar 2021	Current Direction	S
S11	16 Mar 2021	Water Temp (C)	13.2
S11	16 Mar 2021	Wave Height Low (ft)	4
S11	16 Mar 2021	High Tide (ft)	3.98
S11	16 Mar 2021	High Tide Time	1128
S11	16 Mar 2021	Low Tide (ft)	0.54
S11	16 Mar 2021	Low Tide Time	535
S11	16 Mar 2021	Comments	2 Joggers; 2 People; kelp; Trash 2; Water turbid
S11	23 Mar 2021	Arrive Time	930
S11	23 Mar 2021	Weather	Rainy
S11	23 Mar 2021	Wind Speed (kts)	0
S11	23 Mar 2021	Wind Dir	
S11	23 Mar 2021	Animal Life	1 Godwit
S11	23 Mar 2021	Floatables	Foam; film
S11	23 Mar 2021	Water Color	Green

Station	Date	Parameter	Value
S11	23 Mar 2021	Current Direction	S
S11	23 Mar 2021	Water Temp (C)	13.7
S11	23 Mar 2021	Wave Height Low (ft)	4
S11	23 Mar 2021	High Tide (ft)	4.32
S11	23 Mar 2021	High Tide Time	537
S11	23 Mar 2021	Low Tide (ft)	-0.07
S11	23 Mar 2021	Low Tide Time	1313
S11	23 Mar 2021	Comments	1 Walker; Debris; Kelp; Seagrass; Water turbid
S11	30 Mar 2021	Arrive Time	920
S11	30 Mar 2021	Weather	Sunny
S11	30 Mar 2021	Wind Speed (kts)	6.8
S11	30 Mar 2021	Wind Dir	SW
S11	30 Mar 2021	Animal Life	1 Cormorant; 1 Godwit; 2 Pelicans
S11	30 Mar 2021	Floatables	Foam; Film; Soap
S11	30 Mar 2021	Water Color	Grey
S11	30 Mar 2021	Current Direction	N
S11	30 Mar 2021	Water Temp (C)	15.5
S11	30 Mar 2021	Wave Height Low (ft)	4
S11	30 Mar 2021	High Tide (ft)	4.7
S11	30 Mar 2021	High Tide Time	1101
S11	30 Mar 2021	Low Tide (ft)	-0.58
S11	30 Mar 2021	Low Tide Time	501
S11	30 Mar 2021	Comments	Kelp; Seagrass; Debris; Water turbid
S12	02 Mar 2021	Arrive Time	845
S12	02 Mar 2021	Weather	Sunny
S12	02 Mar 2021	Wind Speed (kts)	2.1
S12	02 Mar 2021	Wind Dir	E
S12	02 Mar 2021	Animal Life	1 Dog; 7 Cormorant
S12	02 Mar 2021	Floatables	None
S12	02 Mar 2021	Water Color	Green
S12	02 Mar 2021	Current Direction	S
S12	02 Mar 2021	Water Temp (C)	15
S12	02 Mar 2021	Wave Height Low (ft)	2
S12	02 Mar 2021	High Tide (ft)	4.55
S12	02 Mar 2021	High Tide Time	1053
S12	02 Mar 2021	Low Tide (ft)	0.35
S12	02 Mar 2021	Low Tide Time	459
S12	02 Mar 2021	Comments	Water Clear; 3 People
S12	09 Mar 2021	Arrive Time	848
S12	09 Mar 2021	Weather	Partly cloudy
S12	09 Mar 2021	Wind Speed (kts)	5.2
S12	09 Mar 2021	Wind Dir	SW
S12	09 Mar 2021	Animal Life	2 Godwits
S12	09 Mar 2021	Floatables	Foam; Film
S12	09 Mar 2021	Water Color	Green
S12	09 Mar 2021	Current Direction	N
S12	09 Mar 2021	Water Temp (C)	16.6
S12	09 Mar 2021	Wave Height Low (ft)	3
S12	09 Mar 2021	High Tide (ft)	5.35
S12	09 Mar 2021	High Tide Time	608
S12	09 Mar 2021	Low Tide (ft)	-0.95
S12	09 Mar 2021	Low Tide Time	1321
S12	09 Mar 2021	Comments	Resample; Kelp; Seagrass; 5 Walkers; Trash-1; Water clear
S12	16 Mar 2021	Arrive Time	905
S12	16 Mar 2021	Weather	Partly cloudy
S12	16 Mar 2021	Wind Speed (kts)	6
S12	16 Mar 2021	Wind Dir	W

Station	Date	Parameter	Value
S12	16 Mar 2021	Animal Life	2 Dog; 1 Godwit
S12	16 Mar 2021	Floatables	Foam; Film
S12	16 Mar 2021	Water Color	Green
S12	16 Mar 2021	Current Direction	South
S12	16 Mar 2021	Water Temp (C)	14.6
S12	16 Mar 2021	Wave Height Low (ft)	3
S12	16 Mar 2021	High Tide (ft)	3.98
S12	16 Mar 2021	High Tide Time	1128
S12	16 Mar 2021	Low Tide (ft)	0.54
S12	16 Mar 2021	Low Tide Time	535
S12	16 Mar 2021	Comments	4 People; 1 Jogger; Kelp; Seagrass; Water turbid
S12	23 Mar 2021	Arrive Time	900
S12	23 Mar 2021	Weather	Rainy
S12	23 Mar 2021	Wind Speed (kts)	4.2
S12	23 Mar 2021	Wind Dir	W
S12	23 Mar 2021	Animal Life	3 Grebes; 6 Godwits
S12	23 Mar 2021	Floatables	Foam; film
S12	23 Mar 2021	Water Color	Green
S12	23 Mar 2021	Current Direction	S
S12	23 Mar 2021	Water Temp (C)	13.8
S12	23 Mar 2021	Wave Height Low (ft)	3
S12	23 Mar 2021	High Tide (ft)	4.32
S12	23 Mar 2021	High Tide Time	537
S12	23 Mar 2021	Low Tide (ft)	-0.07
S12	23 Mar 2021	Low Tide Time	1313
S12	23 Mar 2021	Comments	1 Jogger; 1 Walker; Kelp; Seagrass; Water clear
S12	30 Mar 2021	Arrive Time	845
S12	30 Mar 2021	Weather	Partly Cloudy
S12	30 Mar 2021	Wind Speed (kts)	2.1
S12	30 Mar 2021	Wind Dir	S
S12	30 Mar 2021	Animal Life	4 Godwits; 2 Seagulls
S12	30 Mar 2021	Floatables	Foam; Film
S12	30 Mar 2021	Water Color	Green
S12	30 Mar 2021	Current Direction	N
S12	30 Mar 2021	Water Temp (C)	15.2
S12	30 Mar 2021	Wave Height Low (ft)	3
S12	30 Mar 2021	High Tide (ft)	4.7
S12	30 Mar 2021	High Tide Time	1101
S12	30 Mar 2021	Low Tide (ft)	-0.58
S12	30 Mar 2021	Low Tide Time	501
S12	30 Mar 2021	Comments	Kelp; Seagrass; 1 Fisherman; Water clear

Kelp Stations

Table 3.1

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

Date	I19	I24	I25	I26	I32	I39	I40
01 Mar 2021	1189	119	184	67	8	58	626
02 Mar 2021	489	80	135	33	7	30	198
03 Mar 2021	271	33	62	13	4	14	81
04 Mar 2021	271	33	62	13	4	14	81
05 Mar 2021	271	33	62	13	4	14	81
06 Mar 2021	271	33	62	13	4	14	81
07 Mar 2021	271	33	62	13	4	14	81
08 Mar 2021	258	59	53	9	16	10	187
09 Mar 2021	258	59	53	9	16	10	187
10 Mar 2021	309	25	19	3	15	2	67
11 Mar 2021	309	25	19	3	15	2	67
12 Mar 2021	309	25	19	3	15	2	67
13 Mar 2021	309	25	19	3	15	2	67
14 Mar 2021	309	25	19	3	15	2	67
15 Mar 2021	309	25	19	3	15	2	67
16 Mar 2021	309	25	19	3	15	2	67
17 Mar 2021	309	25	19	3	15	2	67
18 Mar 2021	493	73	18	4	10	3	135
19 Mar 2021	493	73	18	4	10	3	135
20 Mar 2021	242	179	23	5	15	3	147
21 Mar 2021	242	179	23	5	15	3	147
22 Mar 2021	242	179	23	5	15	3	147
23 Mar 2021	242	179	23	5	15	3	147
24 Mar 2021	195	101	14	3	15	3	123
25 Mar 2021	195	101	14	3	15	3	123
26 Mar 2021	195	101	14	3	15	3	123
27 Mar 2021	195	101	14	3	15	3	123
28 Mar 2021	195	101	14	3	15	3	123
29 Mar 2021	195	101	14	3	15	3	123
30 Mar 2021	195	101	14	3	15	3	123
31 Mar 2021	195	101	14	3	15	3	123

* 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 Mar 2021	263	38	33	21	3	20	108
02 Mar 2021	105	21	27	13	3	13	49
03 Mar 2021	64	14	15	7	3	9	25
04 Mar 2021	64	14	15	7	3	9	25
05 Mar 2021	64	14	15	7	3	9	25
06 Mar 2021	64	14	15	7	3	9	25
07 Mar 2021	64	14	15	7	3	9	25
08 Mar 2021	61	27	12	5	8	6	52
09 Mar 2021	61	27	12	5	8	6	52
10 Mar 2021	80	12	5	2	8	2	17
11 Mar 2021	80	12	5	2	8	2	17
12 Mar 2021	80	12	5	2	8	2	17
13 Mar 2021	80	12	5	2	8	2	17
14 Mar 2021	80	12	5	2	8	2	17
15 Mar 2021	80	12	5	2	8	2	17
16 Mar 2021	80	12	5	2	8	2	17
17 Mar 2021	80	12	5	2	8	2	17
18 Mar 2021	133	37	4	2	6	2	29
19 Mar 2021	133	37	4	2	6	2	29
20 Mar 2021	68	76	5	2	8	2	32
21 Mar 2021	68	76	5	2	8	2	32
22 Mar 2021	68	76	5	2	8	2	32
23 Mar 2021	68	76	5	2	8	2	32
24 Mar 2021	50	46	4	2	8	2	35
25 Mar 2021	50	46	4	2	8	2	35
26 Mar 2021	50	46	4	2	8	2	35
27 Mar 2021	50	46	4	2	8	2	35
28 Mar 2021	50	46	4	2	8	2	35
29 Mar 2021	50	46	4	2	8	2	35
30 Mar 2021	50	46	4	2	8	2	35
31 Mar 2021	50	46	4	2	8	2	35

* 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 Mar 2021	123	32	18	10	3	13	112
02 Mar 2021	54	22	15	7	3	9	50
03 Mar 2021	43	13	8	5	2	6	29
04 Mar 2021	43	13	8	5	2	6	29
05 Mar 2021	43	13	8	5	2	6	29
06 Mar 2021	43	13	8	5	2	6	29
07 Mar 2021	43	13	8	5	2	6	29
08 Mar 2021	33	13	6	4	3	5	35
09 Mar 2021	33	13	6	4	3	5	35
10 Mar 2021	31	6	3	2	3	2	10
11 Mar 2021	31	6	3	2	3	2	10
12 Mar 2021	31	6	3	2	3	2	10
13 Mar 2021	31	6	3	2	3	2	10
14 Mar 2021	31	6	3	2	3	2	10
15 Mar 2021	31	6	3	2	3	2	10
16 Mar 2021	31	6	3	2	3	2	10
17 Mar 2021	31	6	3	2	3	2	10
18 Mar 2021	38	11	3	2	3	2	10
19 Mar 2021	38	11	3	2	3	2	10
20 Mar 2021	21	16	3	2	3	2	9
21 Mar 2021	21	16	3	2	3	2	9
22 Mar 2021	21	16	3	2	3	2	9
23 Mar 2021	21	16	3	2	3	2	9
24 Mar 2021	15	11	3	2	3	2	10
25 Mar 2021	15	11	3	2	3	2	10
26 Mar 2021	15	11	3	2	3	2	10
27 Mar 2021	15	11	3	2	3	2	10
28 Mar 2021	15	11	3	2	3	2	10
29 Mar 2021	15	11	3	2	3	2	10
30 Mar 2021	15	11	3	2	3	2	10
31 Mar 2021	15	11	3	2	3	2	10

* 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
02 Mar 2021	IC	IC	IC	IC	IC	IC	IC
08 Mar 2021	IC	IC	IC	IC	IC	IC	E
18 Mar 2021	IC	E	IC	IC	IC	IC	IC
24 Mar 2021	IC	IC	IC	IC	IC	IC	IC

IC = In Compliance

E = Exceedance

ns = not sampled

ND = no data

Table 3.5

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

Date	I19	I24	I25	I26	I32	I39	I40
02 Mar 2021	IC	IC	IC	IC	IC	IC	IC
08 Mar 2021	IC	E	IC	IC	E	IC	E
18 Mar 2021	E	E	IC	IC	IC	IC	E
24 Mar 2021	IC	IC	IC	IC	IC	IC	IC

IC = In Compliance

E = Exceedance

ns = not sampled

ND = no data

Table 3.6

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

Date	I19	I24	I25	I26	I32	I39	I40
02 Mar 2021	IC	IC	IC	IC	IC	IC	IC
08 Mar 2021	IC	IC	IC	IC	IC	IC	E
18 Mar 2021	E	E	IC	IC	IC	IC	IC
24 Mar 2021	IC	IC	IC	IC	IC	IC	IC

IC = In Compliance

E = Exceedance

ns = not sampled

ND = no data

Table 3.7

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

Date	I19	I24	I25	I26	I32	I39	I40
02 Mar 2021	IC	IC	IC	IC	IC	IC	IC
08 Mar 2021	IC	E	IC	IC	E	IC	E
18 Mar 2021	E	E	IC	IC	IC	IC	E
24 Mar 2021	IC	IC	IC	IC	IC	IC	IC

IC = In Compliance

E = Exceedance

ns = not sampled

ND = no data

Table 3.8

Summary of water quality parameters at the 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	02 Mar 2021	1036	2	<2	<2	<2	1.00	14.2	73.66	7.6	33.59	8.1
I19	02 Mar 2021	1036	6	20e	4e	<2	0.20	13.7	74.05	7.1	33.59	8.0
I19	02 Mar 2021	1036	11	<20	<2	<2	0.10	13.6	58.41	7.0	33.60	8.0
I19	08 Mar 2021	1131	2	32e	22e	2e	0.69	15.1	58.08	9.0	33.52	8.3
I19	08 Mar 2021	1131	6	280e	46	8e	0.16	14.9	55.72	8.9	33.52	8.2
I19	08 Mar 2021	1131	11	320e	78	24e	0.24	14.8	58.84	8.8	33.52	8.2
I19	18 Mar 2021	1050	2	9000	3000e	200e	0.33	11.9	59.45	5.2	33.68	7.8
I19	18 Mar 2021	1050	6	240e	16e	40	0.07	11.3	61.15	4.7	33.77	7.8
I19	18 Mar 2021	1050	11	320e	16e	14e	0.05	11.0	65.41	4.1	33.79	7.8
I19	24 Mar 2021	953	2	40e	<2	<2	0.05	13.2	63.72	8.3	33.70	8.1
I19	24 Mar 2021	953	6	20e	24e	10e	1.20	12.8	70.94	7.5	33.70	8.1
I19	24 Mar 2021	953	11	400e	120e	60	0.30	12.6	71.24	6.9	33.73	8.1
I24	02 Mar 2021	1057	2	<2	<2	2e	1.00	14.6	72.95	7.8	33.58	8.1
I24	02 Mar 2021	1057	6	44	2e	12e	0.05	14.1	73.90	6.9	33.59	8.1
I24	02 Mar 2021	1057	11	2e	<2	2e	1.00	13.6	58.16	5.9	33.59	8.0
I24	08 Mar 2021	1151	2	280e	110	<2	0.39	15.2	63.18	8.8	33.51	8.2
I24	08 Mar 2021	1151	6	1200e	480	8e	0.40	14.9	61.30	8.5	33.51	8.2
I24	08 Mar 2021	1151	11	400e	520	26e	1.30	14.9	59.31	8.5	33.51	8.2
I24	18 Mar 2021	1112	2	12000	9000	320e	0.75	12.6	51.14	6.2	33.64	7.9
I24	18 Mar 2021	1112	6	3000e	320e	28e	0.11	11.8	59.62	4.7	33.74	7.8
I24	18 Mar 2021	1112	11	360e	80e	2e	0.22	11.4	74.35	4.4	33.75	7.8
I24	24 Mar 2021	1012	2	<2	<2	<2	1.00	13.2	67.74	8.7	33.70	8.2
I24	24 Mar 2021	1012	6	2e	<2	<2	1.00	12.7	72.59	7.2	33.73	8.1
I24	24 Mar 2021	1012	11	2e	2e	<2	1.00	11.4	49.14	4.5	33.78	7.8
I25	02 Mar 2021	1103	2	<2	<2	<2	1.00	14.5	75.74	7.2	33.59	8.1
I25	02 Mar 2021	1103	6	18e	14e	4e	0.78	14.1	69.78	7.5	33.59	8.1
I25	02 Mar 2021	1103	9	100e	24e	18e	0.24	14.0	74.11	7.4	33.59	8.1
I25	08 Mar 2021	1203	2	<2	<2	<2	1.00	14.9	71.25	8.7	33.53	8.2
I25	08 Mar 2021	1203	6	46	4e	<2	0.09	14.8	70.33	8.8	33.53	8.2
I25	08 Mar 2021	1203	9	38e	8e	<2	0.21	14.8	68.78	8.8	33.53	8.2
I25	18 Mar 2021	1123	2	40e	<2	<2	0.05	12.6	67.56	6.0	33.74	8.0
I25	18 Mar 2021	1123	6	<2	2e	<2	1.00	11.9	73.15	5.0	33.74	7.9
I25	18 Mar 2021	1123	9	<2	<2	<2	1.00	11.4	77.85	4.5	33.76	7.8
I25	24 Mar 2021	1020	2	<2	<2	<2	1.00	13.2	67.25	8.6	33.70	8.2
I25	24 Mar 2021	1020	6	<2	<2	<2	1.00	13.0	69.85	8.2	33.70	8.1
I25	24 Mar 2021	1020	9	<2	<2	<2	1.00	11.5	73.41	5.0	33.79	7.9
I26	02 Mar 2021	1112	2	<2	<2	<2	1.00	14.7	71.41	8.3	33.61	8.2
I26	02 Mar 2021	1112	6	<2	<2	<2	1.00	14.6	71.95	8.3	33.60	8.2
I26	02 Mar 2021	1112	9	<2	<2	<2	1.00	14.5	76.47	8.1	33.60	8.2

Station	Date	Time	Depth	Total	Fecal	Entero	F:T	Temp	XMS	DO	Sal	pH
I26	08 Mar 2021	1217	2	<2	<2	<2	1.00	15.3	54.53	9.0	33.45	8.3
I26	08 Mar 2021	1217	6	<2	<2	<2	1.00	15.2	55.11	8.8	33.47	8.2
I26	08 Mar 2021	1217	9	4e	<2	2e	0.50	14.7	69.52	8.6	33.53	8.2
I26	18 Mar 2021	1133	2	<2	<2	<2	1.00	12.4	68.61	5.9	33.74	8.0
I26	18 Mar 2021	1133	6	<2	<2	<2	1.00	11.3	77.88	4.3	33.77	7.8
I26	18 Mar 2021	1133	9	<20	<2	<2	0.10	11.2	79.84	4.3	33.77	7.8
I26	24 Mar 2021	1029	2	<2	<2	<2	1.00	13.4	63.69	8.4	33.72	8.1
I26	24 Mar 2021	1029	6	<2	<2	<2	1.00	12.8	71.37	7.3	33.73	8.1
I26	24 Mar 2021	1029	9	<2	<2	<2	1.00	11.3	76.70	4.7	33.77	7.8
I32	02 Mar 2021	1122	2	<2	<2	<2	1.00	14.7	68.64	8.0	33.61	8.1
I32	02 Mar 2021	1122	6	<2	<2	<2	1.00	14.2	61.45	7.6	33.61	8.1
I32	02 Mar 2021	1122	9	4e	<2	<2	0.50	14.0	61.26	7.0	33.60	8.0
I32	08 Mar 2021	1231	2	1200	540	8e	0.45	15.3	54.53	9.0	33.45	8.3
I32	08 Mar 2021	1231	6	8600	860	18e	0.10	15.2	55.11	8.8	33.47	8.2
I32	08 Mar 2021	1231	9	2800e	460	20e	0.16	14.7	69.52	8.6	33.53	8.2
I32	18 Mar 2021	1148	2	<2	<2	<2	1.00	12.4	54.06	6.2	33.75	8.0
I32	18 Mar 2021	1148	6	2e	<2	<2	1.00	12.2	43.98	6.3	33.72	7.9
I32	18 Mar 2021	1148	9	2e	<2	<2	1.00	11.8	42.55	5.3	33.76	7.8
I32	24 Mar 2021	1040	2	<2	<2	<2	1.00	13.4	59.84	8.5	33.74	8.1
I32	24 Mar 2021	1040	6	2e	<2	2e	1.00	13.1	59.44	7.9	33.78	8.1
I32	24 Mar 2021	1040	9	<2	2e	<2	1.00	11.5	51.92	5.3	33.83	7.9
I39	02 Mar 2021	1017	2	<2	<2	<2	1.00	14.7	78.94	8.6	33.58	8.2
I39	02 Mar 2021	1017	12	2e	<2	<2	1.00	13.8	82.55	7.6	33.58	8.1
I39	02 Mar 2021	1017	18	2e	<2	<2	1.00	13.6	82.45	6.6	33.58	8.0
I39	08 Mar 2021	1113	2	<2	<2	<2	1.00	14.7	72.48	8.6	33.53	8.2
I39	08 Mar 2021	1113	12	<2	<2	<2	1.00	14.6	72.91	8.6	33.54	8.2
I39	08 Mar 2021	1113	18	<2	<2	<2	1.00	14.3	71.51	7.5	33.53	8.1
I39	18 Mar 2021	1032	2	<2	<2	<2	1.00	13.3	66.23	7.7	33.65	8.1
I39	18 Mar 2021	1032	12	2e	<2	2e	1.00	10.9	85.30	4.1	33.81	7.8
I39	18 Mar 2021	1032	18	<20	<2	2e	0.10	10.8	84.77	4.0	33.84	7.8
I39	24 Mar 2021	935	2	<2	<2	<2	1.00	13.4	76.99	8.3	33.62	8.2
I39	24 Mar 2021	935	12	<2	<2	<2	1.00	13.2	73.24	8.2	33.69	8.1
I39	24 Mar 2021	935	18	<2	<2	2e	1.00	11.8	77.89	5.8	33.81	8.0
I40	02 Mar 2021	1048	2	<2	<2	<2	1.00	14.6	77.65	8.2	33.59	8.2
I40	02 Mar 2021	1048	6	2e	<2	<2	1.00	13.9	75.28	7.1	33.59	8.1
I40	02 Mar 2021	1048	9	2e	<2	2e	1.00	13.6	58.59	6.4	33.58	8.0
I40	08 Mar 2021	1143	2	<20	<20	<2	1.00	15.4	44.75	7.9	33.37	8.2
I40	08 Mar 2021	1143	6	>16000	3200e	200e	0.20	14.9	52.85	8.1	33.52	8.2
I40	08 Mar 2021	1143	9	20e	<20	<2	1.00	14.8	12.31	8.1	33.52	8.2
I40	18 Mar 2021	1105	2	6000	720	18e	0.12	12.0	42.75	5.6	33.73	7.8
I40	18 Mar 2021	1105	6	200e	30e	2e	0.15	11.2	71.95	4.2	33.78	7.8
I40	18 Mar 2021	1105	9	320e	22e	12e	0.07	11.2	41.04	4.0	33.78	7.8
I40	24 Mar 2021	1005	2	<2	<2	<2	1.00	13.3	66.80	8.8	33.69	8.2
I40	24 Mar 2021	1005	6	<20	<2	<2	0.10	12.5	56.25	8.1	33.76	8.1
I40	24 Mar 2021	1005	9	8e	4e	14e	0.50	11.6	34.85	5.9	33.84	7.9

Table 3.9

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

Station	Date	Parameter	Value
I19	02 Mar 2021	Depth (m)	11
I19	02 Mar 2021	Arrive Time	1036
I19	02 Mar 2021	Depart Time	1041
I19	02 Mar 2021	Air Temp (C)	14
I19	02 Mar 2021	Weather	Clear
I19	02 Mar 2021	Visibility (mi)	12
I19	02 Mar 2021	Wind Speed (kts)	14
I19	02 Mar 2021	Wind Dir	S
I19	02 Mar 2021	Water Color	Green
I19	02 Mar 2021	Wave Ht Low (ft)	3
I19	02 Mar 2021	Wave Period (sec)	13
I19	02 Mar 2021	Sea State	Light chop
I19	02 Mar 2021	High Tide (ft)	4.55
I19	02 Mar 2021	High Tide Time	1053
I19	02 Mar 2021	Low Tide (ft)	0.35
I19	02 Mar 2021	Low Tide Time	459
I19	02 Mar 2021	Comments	none
I19	08 Mar 2021	Depth (m)	10
I19	08 Mar 2021	Arrive Time	1131
I19	08 Mar 2021	Depart Time	1134
I19	08 Mar 2021	Air Temp (C)	14
I19	08 Mar 2021	Weather	Partly Cloudy
I19	08 Mar 2021	Visibility (mi)	9
I19	08 Mar 2021	Wind Speed (kts)	7
I19	08 Mar 2021	Wind Dir	W
I19	08 Mar 2021	Water Color	Green
I19	08 Mar 2021	Wave Ht Low (ft)	6
I19	08 Mar 2021	Wave Period (sec)	11
I19	08 Mar 2021	Sea State	Light chop
I19	08 Mar 2021	High Tide (ft)	5.07
I19	08 Mar 2021	High Tide Time	509
I19	08 Mar 2021	Low Tide (ft)	-0.73
I19	08 Mar 2021	Low Tide Time	1240
I19	08 Mar 2021	Comments	none
I19	18 Mar 2021	Depth (m)	11.2
I19	18 Mar 2021	Arrive Time	1050
I19	18 Mar 2021	Depart Time	1056
I19	18 Mar 2021	Air Temp (C)	13.2
I19	18 Mar 2021	Weather	Haze
I19	18 Mar 2021	Visibility (mi)	9
I19	18 Mar 2021	Wind Speed (kts)	2.9
I19	18 Mar 2021	Wind Dir	W
I19	18 Mar 2021	Water Color	Greenish-Brown
I19	18 Mar 2021	Wave Ht Low (ft)	2
I19	18 Mar 2021	Wave Period (sec)	12
I19	18 Mar 2021	Sea State	Wind Ripples
I19	18 Mar 2021	High Tide (ft)	2.89
I19	18 Mar 2021	High Tide Time	1255
I19	18 Mar 2021	Low Tide (ft)	0.85
I19	18 Mar 2021	Low Tide Time	700
I19	18 Mar 2021	Comments	none
I19	24 Mar 2021	Depth (m)	10.4
I19	24 Mar 2021	Arrive Time	953

Station	Date	Parameter	Value
I19	24 Mar 2021	Depart Time	957
I19	24 Mar 2021	Air Temp (C)	13
I19	24 Mar 2021	Weather	Haze
I19	24 Mar 2021	Visibility (mi)	8
I19	24 Mar 2021	Wind Speed (kts)	0.6
I19	24 Mar 2021	Wind Dir	SE
I19	24 Mar 2021	Water Color	Brownish-Green
I19	24 Mar 2021	Wave Ht Low (ft)	2
I19	24 Mar 2021	Wave Period (sec)	8
I19	24 Mar 2021	Sea State	Light Chop
I19	24 Mar 2021	High Tide (ft)	5.3
I19	24 Mar 2021	High Tide Time	6:46
I19	24 Mar 2021	Low Tide (ft)	-0.4
I19	24 Mar 2021	Low Tide Time	13:48
I19	24 Mar 2021	Comments	none
I24	02 Mar 2021	Depth (m)	11
I24	02 Mar 2021	Arrive Time	1057
I24	02 Mar 2021	Depart Time	1101
I24	02 Mar 2021	Air Temp (C)	14
I24	02 Mar 2021	Weather	Clear
I24	02 Mar 2021	Visibility (mi)	12
I24	02 Mar 2021	Wind Speed (kts)	6
I24	02 Mar 2021	Wind Dir	S
I24	02 Mar 2021	Water Color	Green
I24	02 Mar 2021	Wave Ht Low (ft)	3
I24	02 Mar 2021	Wave Period (sec)	13
I24	02 Mar 2021	Sea State	Light chop
I24	02 Mar 2021	High Tide (ft)	4.55
I24	02 Mar 2021	High Tide Time	1053
I24	02 Mar 2021	Low Tide (ft)	0.35
I24	02 Mar 2021	Low Tide Time	459
I24	02 Mar 2021	Comments	none
I24	08 Mar 2021	Depth (m)	10
I24	08 Mar 2021	Arrive Time	1151
I24	08 Mar 2021	Depart Time	1156
I24	08 Mar 2021	Air Temp (C)	15
I24	08 Mar 2021	Weather	Partly Cloudy
I24	08 Mar 2021	Visibility (mi)	9
I24	08 Mar 2021	Wind Speed (kts)	3
I24	08 Mar 2021	Wind Dir	W
I24	08 Mar 2021	Water Color	Green
I24	08 Mar 2021	Wave Ht Low (ft)	6
I24	08 Mar 2021	Wave Period (sec)	11
I24	08 Mar 2021	Sea State	Light chop
I24	08 Mar 2021	High Tide (ft)	5.07
I24	08 Mar 2021	High Tide Time	509
I24	08 Mar 2021	Low Tide (ft)	-0.73
I24	08 Mar 2021	Low Tide Time	1240
I24	08 Mar 2021	Comments	none
I24	18 Mar 2021	Depth (m)	10.5
I24	18 Mar 2021	Arrive Time	1112
I24	18 Mar 2021	Depart Time	1121
I24	18 Mar 2021	Air Temp (C)	12.9
I24	18 Mar 2021	Weather	Haze
I24	18 Mar 2021	Visibility (mi)	9
I24	18 Mar 2021	Wind Speed (kts)	9.6
I24	18 Mar 2021	Wind Dir	W
I24	18 Mar 2021	Water Color	Greenish-Brown

Station	Date	Parameter	Value
I24	18 Mar 2021	Wave Ht Low (ft)	2
I24	18 Mar 2021	Wave Period (sec)	12
I24	18 Mar 2021	Sea State	Wind Ripples
I24	18 Mar 2021	High Tide (ft)	2.89
I24	18 Mar 2021	High Tide Time	1255
I24	18 Mar 2021	Low Tide (ft)	0.85
I24	18 Mar 2021	Low Tide Time	700
I24	18 Mar 2021	Comments	none
I24	24 Mar 2021	Depth (m)	9.9
I24	24 Mar 2021	Arrive Time	1012
I24	24 Mar 2021	Depart Time	1016
I24	24 Mar 2021	Air Temp (C)	13.4
I24	24 Mar 2021	Weather	Haze
I24	24 Mar 2021	Visibility (mi)	8
I24	24 Mar 2021	Wind Speed (kts)	2.9
I24	24 Mar 2021	Wind Dir	SW
I24	24 Mar 2021	Water Color	Brownish-Green
I24	24 Mar 2021	Wave Ht Low (ft)	2
I24	24 Mar 2021	Wave Period (sec)	8
I24	24 Mar 2021	Sea State	Light Chop
I24	24 Mar 2021	High Tide (ft)	5.3
I24	24 Mar 2021	High Tide Time	6:46
I24	24 Mar 2021	Low Tide (ft)	-0.4
I24	24 Mar 2021	Low Tide Time	13:48
I24	24 Mar 2021	Comments	none
I25	02 Mar 2021	Depth (m)	9
I25	02 Mar 2021	Arrive Time	1103
I25	02 Mar 2021	Depart Time	1107
I25	02 Mar 2021	Air Temp (C)	14
I25	02 Mar 2021	Weather	Clear
I25	02 Mar 2021	Visibility (mi)	12
I25	02 Mar 2021	Wind Speed (kts)	4
I25	02 Mar 2021	Wind Dir	S
I25	02 Mar 2021	Water Color	Green
I25	02 Mar 2021	Wave Ht Low (ft)	3
I25	02 Mar 2021	Wave Period (sec)	13
I25	02 Mar 2021	Sea State	Light chop
I25	02 Mar 2021	High Tide (ft)	4.55
I25	02 Mar 2021	High Tide Time	1053
I25	02 Mar 2021	Low Tide (ft)	0.35
I25	02 Mar 2021	Low Tide Time	459
I25	02 Mar 2021	Comments	none
I25	08 Mar 2021	Depth (m)	9
I25	08 Mar 2021	Arrive Time	1203
I25	08 Mar 2021	Depart Time	1213
I25	08 Mar 2021	Air Temp (C)	14
I25	08 Mar 2021	Weather	Partly Cloudy
I25	08 Mar 2021	Visibility (mi)	9
I25	08 Mar 2021	Wind Speed (kts)	8
I25	08 Mar 2021	Wind Dir	NW
I25	08 Mar 2021	Water Color	Green
I25	08 Mar 2021	Wave Ht Low (ft)	6
I25	08 Mar 2021	Wave Period (sec)	11
I25	08 Mar 2021	Sea State	Light chop
I25	08 Mar 2021	High Tide (ft)	5.07
I25	08 Mar 2021	High Tide Time	509
I25	08 Mar 2021	Low Tide (ft)	-0.73
I25	08 Mar 2021	Low Tide Time	1240

Station	Date	Parameter	Value
I25	08 Mar 2021	Comments	none
I25	18 Mar 2021	Depth (m)	9.3
I25	18 Mar 2021	Arrive Time	1123
I25	18 Mar 2021	Depart Time	1128
I25	18 Mar 2021	Air Temp (C)	13.3
I25	18 Mar 2021	Weather	Haze
I25	18 Mar 2021	Visibility (mi)	9
I25	18 Mar 2021	Wind Speed (kts)	4.9
I25	18 Mar 2021	Wind Dir	SW
I25	18 Mar 2021	Water Color	Greenish-Brown
I25	18 Mar 2021	Wave Ht Low (ft)	2
I25	18 Mar 2021	Wave Period (sec)	12
I25	18 Mar 2021	Sea State	Wind Ripples
I25	18 Mar 2021	High Tide (ft)	2.89
I25	18 Mar 2021	High Tide Time	1255
I25	18 Mar 2021	Low Tide (ft)	0.85
I25	18 Mar 2021	Low Tide Time	700
I25	18 Mar 2021	Comments	none
I25	24 Mar 2021	Depth (m)	9
I25	24 Mar 2021	Arrive Time	1020
I25	24 Mar 2021	Depart Time	1024
I25	24 Mar 2021	Air Temp (C)	13.5
I25	24 Mar 2021	Weather	Haze
I25	24 Mar 2021	Visibility (mi)	8
I25	24 Mar 2021	Wind Speed (kts)	1.9
I25	24 Mar 2021	Wind Dir	E
I25	24 Mar 2021	Water Color	Brownish-Green
I25	24 Mar 2021	Wave Ht Low (ft)	2
I25	24 Mar 2021	Wave Period (sec)	8
I25	24 Mar 2021	Sea State	Light Chop
I25	24 Mar 2021	High Tide (ft)	5.3
I25	24 Mar 2021	High Tide Time	6:46
I25	24 Mar 2021	Low Tide (ft)	-0.4
I25	24 Mar 2021	Low Tide Time	13:48
I25	24 Mar 2021	Comments	none
I26	02 Mar 2021	Depth (m)	10
I26	02 Mar 2021	Arrive Time	1112
I26	02 Mar 2021	Depart Time	1115
I26	02 Mar 2021	Air Temp (C)	15
I26	02 Mar 2021	Weather	Clear
I26	02 Mar 2021	Visibility (mi)	12
I26	02 Mar 2021	Wind Speed (kts)	3
I26	02 Mar 2021	Wind Dir	SW
I26	02 Mar 2021	Water Color	Green
I26	02 Mar 2021	Wave Ht Low (ft)	3
I26	02 Mar 2021	Wave Period (sec)	13
I26	02 Mar 2021	Sea State	Light chop
I26	02 Mar 2021	High Tide (ft)	4.55
I26	02 Mar 2021	High Tide Time	1053
I26	02 Mar 2021	Low Tide (ft)	0.35
I26	02 Mar 2021	Low Tide Time	459
I26	02 Mar 2021	Comments	none
I26	08 Mar 2021	Depth (m)	10
I26	08 Mar 2021	Arrive Time	1217
I26	08 Mar 2021	Depart Time	1221
I26	08 Mar 2021	Air Temp (C)	14
I26	08 Mar 2021	Weather	Partly Cloudy

Station	Date	Parameter	Value
I26	08 Mar 2021	Visibility (mi)	9
I26	08 Mar 2021	Wind Speed (kts)	9
I26	08 Mar 2021	Wind Dir	SW
I26	08 Mar 2021	Water Color	Green
I26	08 Mar 2021	Wave Ht Low (ft)	6
I26	08 Mar 2021	Wave Period (sec)	11
I26	08 Mar 2021	Sea State	Light chop
I26	08 Mar 2021	High Tide (ft)	5.07
I26	08 Mar 2021	High Tide Time	509
I26	08 Mar 2021	Low Tide (ft)	-0.73
I26	08 Mar 2021	Low Tide Time	1240
I26	08 Mar 2021	Comments	none
I26	18 Mar 2021	Depth (m)	9.6
I26	18 Mar 2021	Arrive Time	1133
I26	18 Mar 2021	Depart Time	1140
I26	18 Mar 2021	Air Temp (C)	13
I26	18 Mar 2021	Weather	Haze
I26	18 Mar 2021	Visibility (mi)	9
I26	18 Mar 2021	Wind Speed (kts)	2.2
I26	18 Mar 2021	Wind Dir	W
I26	18 Mar 2021	Water Color	Greenish-Brown
I26	18 Mar 2021	Wave Ht Low (ft)	2
I26	18 Mar 2021	Wave Period (sec)	12
I26	18 Mar 2021	Sea State	Wind Ripples
I26	18 Mar 2021	High Tide (ft)	2.89
I26	18 Mar 2021	High Tide Time	1255
I26	18 Mar 2021	Low Tide (ft)	0.85
I26	18 Mar 2021	Low Tide Time	700
I26	18 Mar 2021	Comments	none
I26	24 Mar 2021	Depth (m)	9.3
I26	24 Mar 2021	Arrive Time	1029
I26	24 Mar 2021	Depart Time	1035
I26	24 Mar 2021	Air Temp (C)	13.6
I26	24 Mar 2021	Weather	Haze
I26	24 Mar 2021	Visibility (mi)	9
I26	24 Mar 2021	Wind Speed (kts)	0
I26	24 Mar 2021	Wind Dir	W
I26	24 Mar 2021	Water Color	Brownish-Green
I26	24 Mar 2021	Wave Ht Low (ft)	2
I26	24 Mar 2021	Wave Period (sec)	8
I26	24 Mar 2021	Sea State	Calm
I26	24 Mar 2021	High Tide (ft)	5.3
I26	24 Mar 2021	High Tide Time	6:46
I26	24 Mar 2021	Low Tide (ft)	-0.4
I26	24 Mar 2021	Low Tide Time	13:48
I26	24 Mar 2021	Comments	none
I32	02 Mar 2021	Depth (m)	11
I32	02 Mar 2021	Arrive Time	1122
I32	02 Mar 2021	Depart Time	1127
I32	02 Mar 2021	Air Temp (C)	15
I32	02 Mar 2021	Weather	Clear
I32	02 Mar 2021	Visibility (mi)	12
I32	02 Mar 2021	Wind Speed (kts)	13
I32	02 Mar 2021	Wind Dir	S
I32	02 Mar 2021	Water Color	Brownish-Green
I32	02 Mar 2021	Wave Ht Low (ft)	3
I32	02 Mar 2021	Wave Period (sec)	13
I32	02 Mar 2021	Sea State	Light chop

Station	Date	Parameter	Value
I32	02 Mar 2021	High Tide (ft)	4.55
I32	02 Mar 2021	High Tide Time	1053
I32	02 Mar 2021	Low Tide (ft)	0.35
I32	02 Mar 2021	Low Tide Time	459
I32	02 Mar 2021	Comments	none
I32	08 Mar 2021	Depth (m)	10
I32	08 Mar 2021	Arrive Time	1231
I32	08 Mar 2021	Depart Time	1235
I32	08 Mar 2021	Air Temp (C)	14
I32	08 Mar 2021	Weather	Partly Cloudy
I32	08 Mar 2021	Visibility (mi)	9
I32	08 Mar 2021	Wind Speed (kts)	11
I32	08 Mar 2021	Wind Dir	SW
I32	08 Mar 2021	Water Color	Green
I32	08 Mar 2021	Wave Ht Low (ft)	6
I32	08 Mar 2021	Wave Period (sec)	11
I32	08 Mar 2021	Sea State	Light chop
I32	08 Mar 2021	High Tide (ft)	5.07
I32	08 Mar 2021	High Tide Time	509
I32	08 Mar 2021	Low Tide (ft)	-0.73
I32	08 Mar 2021	Low Tide Time	1240
I32	08 Mar 2021	Comments	none
I32	18 Mar 2021	Depth (m)	10.2
I32	18 Mar 2021	Arrive Time	1148
I32	18 Mar 2021	Depart Time	1153
I32	18 Mar 2021	Air Temp (C)	13.1
I32	18 Mar 2021	Weather	Haze
I32	18 Mar 2021	Visibility (mi)	9
I32	18 Mar 2021	Wind Speed (kts)	12.1
I32	18 Mar 2021	Wind Dir	W
I32	18 Mar 2021	Water Color	Greenish-Brown
I32	18 Mar 2021	Wave Ht Low (ft)	2
I32	18 Mar 2021	Wave Period (sec)	12
I32	18 Mar 2021	Sea State	Wind Ripples
I32	18 Mar 2021	High Tide (ft)	2.89
I32	18 Mar 2021	High Tide Time	1255
I32	18 Mar 2021	Low Tide (ft)	0.85
I32	18 Mar 2021	Low Tide Time	700
I32	18 Mar 2021	Comments	none
I32	24 Mar 2021	Depth (m)	10.2
I32	24 Mar 2021	Arrive Time	1040
I32	24 Mar 2021	Depart Time	1043
I32	24 Mar 2021	Air Temp (C)	13.6
I32	24 Mar 2021	Weather	Haze
I32	24 Mar 2021	Visibility (mi)	9
I32	24 Mar 2021	Wind Speed (kts)	2
I32	24 Mar 2021	Wind Dir	W
I32	24 Mar 2021	Water Color	Brownish-Green
I32	24 Mar 2021	Wave Ht Low (ft)	2
I32	24 Mar 2021	Wave Period (sec)	8
I32	24 Mar 2021	Sea State	Calm
I32	24 Mar 2021	High Tide (ft)	5.3
I32	24 Mar 2021	High Tide Time	6:46
I32	24 Mar 2021	Low Tide (ft)	-0.4
I32	24 Mar 2021	Low Tide Time	13:48
I32	24 Mar 2021	Comments	none
I39	02 Mar 2021	Depth (m)	19

Station	Date	Parameter	Value
I39	02 Mar 2021	Arrive Time	1017
I39	02 Mar 2021	Depart Time	1021
I39	02 Mar 2021	Air Temp (C)	14
I39	02 Mar 2021	Weather	Clear
I39	02 Mar 2021	Visibility (mi)	12
I39	02 Mar 2021	Wind Speed (kts)	12
I39	02 Mar 2021	Wind Dir	E
I39	02 Mar 2021	Water Color	Bluish-Green
I39	02 Mar 2021	Wave Ht Low (ft)	3
I39	02 Mar 2021	Wave Period (sec)	13
I39	02 Mar 2021	Sea State	Light chop
I39	02 Mar 2021	High Tide (ft)	4.55
I39	02 Mar 2021	High Tide Time	1053
I39	02 Mar 2021	Low Tide (ft)	0.35
I39	02 Mar 2021	Low Tide Time	459
I39	02 Mar 2021	Comments	none
I39	08 Mar 2021	Depth (m)	19
I39	08 Mar 2021	Arrive Time	1113
I39	08 Mar 2021	Depart Time	1116
I39	08 Mar 2021	Air Temp (C)	14
I39	08 Mar 2021	Weather	Partly Cloudy
I39	08 Mar 2021	Visibility (mi)	9
I39	08 Mar 2021	Wind Speed (kts)	5
I39	08 Mar 2021	Wind Dir	W
I39	08 Mar 2021	Water Color	Green
I39	08 Mar 2021	Wave Ht Low (ft)	4
I39	08 Mar 2021	Wave Period (sec)	11
I39	08 Mar 2021	Sea State	Calm
I39	08 Mar 2021	High Tide (ft)	5.07
I39	08 Mar 2021	High Tide Time	509
I39	08 Mar 2021	Low Tide (ft)	-0.73
I39	08 Mar 2021	Low Tide Time	1240
I39	08 Mar 2021	Comments	none
I39	18 Mar 2021	Depth (m)	19
I39	18 Mar 2021	Arrive Time	1032
I39	18 Mar 2021	Depart Time	1035
I39	18 Mar 2021	Air Temp (C)	12.9
I39	18 Mar 2021	Weather	Haze
I39	18 Mar 2021	Visibility (mi)	9
I39	18 Mar 2021	Wind Speed (kts)	4.1
I39	18 Mar 2021	Wind Dir	N
I39	18 Mar 2021	Water Color	Greenish-Blue
I39	18 Mar 2021	Wave Ht Low (ft)	2
I39	18 Mar 2021	Wave Period (sec)	12
I39	18 Mar 2021	Sea State	Wind Ripples
I39	18 Mar 2021	High Tide (ft)	2.89
I39	18 Mar 2021	High Tide Time	1255
I39	18 Mar 2021	Low Tide (ft)	0.85
I39	18 Mar 2021	Low Tide Time	700
I39	18 Mar 2021	Comments	none
I39	24 Mar 2021	Depth (m)	18.7
I39	24 Mar 2021	Arrive Time	935
I39	24 Mar 2021	Depart Time	940
I39	24 Mar 2021	Air Temp (C)	13.4
I39	24 Mar 2021	Weather	Haze
I39	24 Mar 2021	Visibility (mi)	8
I39	24 Mar 2021	Wind Speed (kts)	0
I39	24 Mar 2021	Wind Dir	E

Station	Date	Parameter	Value
I39	24 Mar 2021	Water Color	Blueish-Green
I39	24 Mar 2021	Wave Ht Low (ft)	2
I39	24 Mar 2021	Wave Period (sec)	8
I39	24 Mar 2021	Sea State	Light Chop
I39	24 Mar 2021	High Tide (ft)	5.3
I39	24 Mar 2021	High Tide Time	6:46
I39	24 Mar 2021	Low Tide (ft)	-0.4
I39	24 Mar 2021	Low Tide Time	13:48
I39	24 Mar 2021	Comments	none
I40	02 Mar 2021	Depth (m)	11
I40	02 Mar 2021	Arrive Time	1048
I40	02 Mar 2021	Depart Time	1053
I40	02 Mar 2021	Air Temp (C)	14
I40	02 Mar 2021	Weather	Clear
I40	02 Mar 2021	Visibility (mi)	12
I40	02 Mar 2021	Wind Speed (kts)	14
I40	02 Mar 2021	Wind Dir	SE
I40	02 Mar 2021	Water Color	Green
I40	02 Mar 2021	Wave Ht Low (ft)	3
I40	02 Mar 2021	Wave Period (sec)	13
I40	02 Mar 2021	Sea State	Light chop
I40	02 Mar 2021	High Tide (ft)	4.55
I40	02 Mar 2021	High Tide Time	1053
I40	02 Mar 2021	Low Tide (ft)	0.35
I40	02 Mar 2021	Low Tide Time	459
I40	02 Mar 2021	Comments	none
I40	08 Mar 2021	Depth (m)	11
I40	08 Mar 2021	Arrive Time	1143
I40	08 Mar 2021	Depart Time	1146
I40	08 Mar 2021	Air Temp (C)	14
I40	08 Mar 2021	Weather	Partly Cloudy
I40	08 Mar 2021	Visibility (mi)	9
I40	08 Mar 2021	Wind Speed (kts)	5
I40	08 Mar 2021	Wind Dir	SW
I40	08 Mar 2021	Water Color	Green
I40	08 Mar 2021	Wave Ht Low (ft)	6
I40	08 Mar 2021	Wave Period (sec)	11
I40	08 Mar 2021	Sea State	Light chop
I40	08 Mar 2021	High Tide (ft)	5.07
I40	08 Mar 2021	High Tide Time	509
I40	08 Mar 2021	Low Tide (ft)	-0.73
I40	08 Mar 2021	Low Tide Time	1240
I40	08 Mar 2021	Comments	none
I40	18 Mar 2021	Depth (m)	9.2
I40	18 Mar 2021	Arrive Time	1105
I40	18 Mar 2021	Depart Time	1107
I40	18 Mar 2021	Air Temp (C)	13.2
I40	18 Mar 2021	Weather	Haze
I40	18 Mar 2021	Visibility (mi)	9
I40	18 Mar 2021	Wind Speed (kts)	2.7
I40	18 Mar 2021	Wind Dir	SW
I40	18 Mar 2021	Water Color	Greenish-Brown
I40	18 Mar 2021	Wave Ht Low (ft)	2
I40	18 Mar 2021	Wave Period (sec)	12
I40	18 Mar 2021	Sea State	Wind Ripples
I40	18 Mar 2021	High Tide (ft)	2.89
I40	18 Mar 2021	High Tide Time	1255
I40	18 Mar 2021	Low Tide (ft)	0.85

Station	Date	Parameter	Value
I40	18 Mar 2021	Low Tide Time	700
I40	18 Mar 2021	Comments	none
I40	24 Mar 2021	Depth (m)	10.2
I40	24 Mar 2021	Arrive Time	1005
I40	24 Mar 2021	Depart Time	1009
I40	24 Mar 2021	Air Temp (C)	13.4
I40	24 Mar 2021	Weather	Haze
I40	24 Mar 2021	Visibility (mi)	8
I40	24 Mar 2021	Wind Speed (kts)	1.7
I40	24 Mar 2021	Wind Dir	SW
I40	24 Mar 2021	Water Color	Brownish-Green
I40	24 Mar 2021	Wave Ht Low (ft)	2
I40	24 Mar 2021	Wave Period (sec)	8
I40	24 Mar 2021	Sea State	Light Chop
I40	24 Mar 2021	High Tide (ft)	5.3
I40	24 Mar 2021	High Tide Time	6:46
I40	24 Mar 2021	Low Tide (ft)	-0.4
I40	24 Mar 2021	Low Tide Time	13:48
I40	24 Mar 2021	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 (σ-t)	Chlor (µg/L)
I19	02 Mar 2021	1	14.18	73.57	7.6	33.59	8.1	25.1	0.71
I19	02 Mar 2021	2	14.16	73.66	7.6	33.59	8.1	25.1	0.74
I19	02 Mar 2021	3	14.15	73.51	7.5	33.59	8.1	25.1	0.81
I19	02 Mar 2021	4	14.07	71.45	7.5	33.59	8.1	25.1	0.97
I19	02 Mar 2021	5	13.82	69.86	7.2	33.61	8.1	25.1	1.37
I19	02 Mar 2021	6	13.73	74.05	7.1	33.59	8.0	25.2	1.74
I19	02 Mar 2021	7	13.70	74.62	7.0	33.59	8.0	25.2	1.91
I19	02 Mar 2021	8	13.60	71.02	6.9	33.60	8.0	25.2	2.14
I19	02 Mar 2021	9	13.60	70.84	7.0	33.60	8.0	25.2	2.29
I19	02 Mar 2021	10	13.60	58.41	7.0	33.60	8.0	25.2	2.42
I19	08 Mar 2021	1	15.08	57.76	9.0	33.52	8.3	24.8	2.72
I19	08 Mar 2021	2	15.08	58.08	9.0	33.52	8.3	24.8	2.83
I19	08 Mar 2021	3	15.01	57.50	9.0	33.53	8.3	24.8	4.06
I19	08 Mar 2021	4	14.96	56.66	9.0	33.52	8.3	24.8	6.26
I19	08 Mar 2021	5	14.90	55.43	8.9	33.52	8.2	24.9	8.06
I19	08 Mar 2021	6	14.88	55.72	8.9	33.52	8.2	24.9	9.00
I19	08 Mar 2021	7	14.87	56.31	8.9	33.52	8.2	24.9	9.22
I19	08 Mar 2021	8	14.85	57.02	8.8	33.52	8.2	24.9	8.80
I19	08 Mar 2021	9	14.85	57.18	8.8	33.52	8.2	24.9	8.48
I19	08 Mar 2021	10	14.84	58.84	8.8	33.52	8.2	24.9	8.03
I19	18 Mar 2021	1	12.23	58.98	5.9	33.58	7.9	25.4	0.72
I19	18 Mar 2021	2	11.93	59.45	5.2	33.68	7.8	25.6	0.73
I19	18 Mar 2021	3	11.62	65.91	4.5	33.73	7.8	25.7	0.75
I19	18 Mar 2021	4	11.58	72.87	4.5	33.73	7.8	25.7	0.82
I19	18 Mar 2021	5	11.57	71.74	4.7	33.73	7.8	25.7	0.87
I19	18 Mar 2021	6	11.35	61.15	4.7	33.77	7.8	25.8	1.03
I19	18 Mar 2021	7	11.12	61.78	4.3	33.79	7.8	25.8	1.04
I19	18 Mar 2021	8	11.06	69.29	4.1	33.79	7.8	25.8	0.85
I19	18 Mar 2021	9	11.03	72.68	4.1	33.79	7.8	25.8	0.83
I19	18 Mar 2021	10	11.04	65.41	4.1	33.79	7.8	25.8	0.94
I19	24 Mar 2021	1	13.20	62.98	8.3	33.70	8.1	25.3	6.20
I19	24 Mar 2021	2	13.18	63.72	8.3	33.70	8.1	25.3	8.02
I19	24 Mar 2021	3	13.10	66.90	8.2	33.70	8.1	25.4	9.67
I19	24 Mar 2021	4	12.96	69.08	7.9	33.70	8.1	25.4	10.01
I19	24 Mar 2021	5	12.87	69.59	7.6	33.70	8.1	25.4	10.04
I19	24 Mar 2021	6	12.85	70.94	7.5	33.70	8.1	25.4	9.90
I19	24 Mar 2021	7	12.82	71.13	7.4	33.70	8.1	25.4	10.08
I19	24 Mar 2021	8	12.79	70.80	7.3	33.70	8.1	25.4	10.13
I19	24 Mar 2021	9	12.77	70.98	7.2	33.70	8.1	25.4	9.87
I19	24 Mar 2021	10	12.58	71.24	6.9	33.73	8.1	25.5	8.47
I24	02 Mar 2021	1	14.56	72.78	7.8	33.58	8.1	25.0	0.74
I24	02 Mar 2021	2	14.57	72.95	7.8	33.58	8.1	25.0	0.75
I24	02 Mar 2021	3	14.41	72.31	7.7	33.60	8.1	25.0	0.93
I24	02 Mar 2021	4	14.28	71.05	7.6	33.59	8.1	25.0	1.34
I24	02 Mar 2021	5	14.21	71.98	7.3	33.59	8.1	25.1	1.64
I24	02 Mar 2021	6	14.14	73.90	6.9	33.59	8.1	25.1	1.60
I24	02 Mar 2021	7	13.88	74.03	6.5	33.61	8.0	25.1	1.75
I24	02 Mar 2021	8	13.64	71.60	6.2	33.60	8.0	25.2	1.79
I24	02 Mar 2021	9	13.60	65.53	6.0	33.59	8.0	25.2	1.89
I24	02 Mar 2021	10	13.57	62.28	5.9	33.59	8.0	25.2	1.89
I24	02 Mar 2021	11	13.57	58.16	5.9	33.59	8.0	25.2	1.88

Station	Date	Depth (m)	Temp (°C)	XMS (‰)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (µg/L)
I24	08 Mar 2021	1	15.14	63.31	8.8	33.52	8.2	24.8	2.04
I24	08 Mar 2021	2	15.15	63.18	8.8	33.51	8.2	24.8	1.98
I24	08 Mar 2021	3	15.14	64.13	8.8	33.52	8.2	24.8	2.10
I24	08 Mar 2021	4	15.05	62.32	8.7	33.52	8.2	24.8	2.94
I24	08 Mar 2021	5	14.98	61.46	8.6	33.51	8.2	24.8	4.49
I24	08 Mar 2021	6	14.95	61.30	8.5	33.51	8.2	24.8	5.18
I24	08 Mar 2021	7	14.94	61.26	8.5	33.51	8.2	24.8	5.34
I24	08 Mar 2021	8	14.94	60.85	8.5	33.51	8.2	24.8	5.06
I24	08 Mar 2021	9	14.93	59.31	8.5	33.51	8.2	24.8	4.71
I24	18 Mar 2021	1	13.13	50.32	6.6	33.44	7.9	25.2	1.16
I24	18 Mar 2021	2	12.61	51.14	6.2	33.64	7.9	25.4	1.41
I24	18 Mar 2021	3	12.49	52.01	5.9	33.66	7.9	25.5	1.67
I24	18 Mar 2021	4	12.20	52.23	5.5	33.73	7.9	25.6	2.00
I24	18 Mar 2021	5	12.01	55.61	4.9	33.72	7.8	25.6	2.20
I24	18 Mar 2021	6	11.84	59.62	4.7	33.74	7.8	25.6	2.01
I24	18 Mar 2021	7	11.69	65.80	4.6	33.74	7.8	25.7	1.76
I24	18 Mar 2021	8	11.51	71.58	4.5	33.76	7.8	25.7	1.52
I24	18 Mar 2021	9	11.40	74.68	4.4	33.76	7.8	25.7	1.27
I24	18 Mar 2021	10	11.41	74.35	4.4	33.75	7.8	25.7	1.29
I24	24 Mar 2021	1	13.29	68.67	8.7	33.68	8.2	25.3	3.70
I24	24 Mar 2021	2	13.19	67.74	8.7	33.70	8.2	25.3	4.48
I24	24 Mar 2021	3	13.09	67.36	8.5	33.71	8.2	25.4	6.61
I24	24 Mar 2021	4	13.01	69.28	8.3	33.70	8.1	25.4	8.51
I24	24 Mar 2021	5	12.91	71.78	7.9	33.71	8.1	25.4	8.51
I24	24 Mar 2021	6	12.73	72.59	7.2	33.73	8.1	25.5	7.27
I24	24 Mar 2021	7	12.61	66.33	6.9	33.73	8.0	25.5	6.64
I24	24 Mar 2021	8	12.34	54.66	6.4	33.77	8.0	25.6	6.08
I24	24 Mar 2021	9	11.43	53.41	4.9	33.82	7.9	25.8	3.96
I24	24 Mar 2021	10	11.45	49.14	4.5	33.78	7.8	25.7	3.22
I25	02 Mar 2021	1	14.52	75.85	7.2	33.59	8.1	25.0	0.52
I25	02 Mar 2021	2	14.50	75.74	7.2	33.59	8.1	25.0	0.55
I25	02 Mar 2021	3	14.27	72.80	7.5	33.62	8.1	25.1	0.74
I25	02 Mar 2021	4	14.17	67.71	7.8	33.60	8.1	25.1	1.31
I25	02 Mar 2021	5	14.12	66.66	7.7	33.60	8.1	25.1	2.13
I25	02 Mar 2021	6	14.06	69.78	7.5	33.59	8.1	25.1	2.39
I25	02 Mar 2021	7	14.05	70.86	7.4	33.59	8.1	25.1	2.41
I25	02 Mar 2021	8	14.00	72.25	7.4	33.59	8.1	25.1	2.14
I25	02 Mar 2021	9	13.99	74.11	7.4	33.59	8.1	25.1	1.69
I25	08 Mar 2021	1	14.88	70.63	8.7	33.53	8.2	24.9	1.97
I25	08 Mar 2021	2	14.87	71.25	8.7	33.53	8.2	24.9	2.13
I25	08 Mar 2021	3	14.87	71.61	8.8	33.53	8.2	24.9	2.10
I25	08 Mar 2021	4	14.85	71.30	8.7	33.53	8.2	24.9	2.19
I25	08 Mar 2021	5	14.83	70.87	8.7	33.53	8.2	24.9	2.82
I25	08 Mar 2021	6	14.82	70.33	8.8	33.53	8.2	24.9	3.39
I25	08 Mar 2021	7	14.79	69.87	8.8	33.53	8.2	24.9	3.68
I25	08 Mar 2021	8	14.78	69.51	8.8	33.53	8.2	24.9	4.20
I25	08 Mar 2021	9	14.78	68.78	8.8	33.53	8.2	24.9	4.61
I25	18 Mar 2021	1	13.08	67.04	6.7	33.67	8.0	25.3	1.54
I25	18 Mar 2021	2	12.56	67.56	6.0	33.74	8.0	25.5	1.49
I25	18 Mar 2021	3	12.18	71.31	5.3	33.74	7.9	25.6	1.21
I25	18 Mar 2021	4	12.07	72.69	5.1	33.73	7.9	25.6	1.13
I25	18 Mar 2021	5	12.01	72.73	5.1	33.73	7.9	25.6	1.16
I25	18 Mar 2021	6	11.95	73.15	5.0	33.74	7.9	25.6	1.26
I25	18 Mar 2021	7	11.85	73.21	4.9	33.74	7.8	25.6	1.42
I25	18 Mar 2021	8	11.58	75.10	4.6	33.78	7.8	25.7	1.37
I25	18 Mar 2021	9	11.42	77.85	4.5	33.76	7.8	25.7	1.22

Station	Date	Depth (m)	Temp (°C)	XMS (‰)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (µg/L)
I25	24 Mar 2021	1	13.19	67.32	8.6	33.70	8.2	25.3	4.47
I25	24 Mar 2021	2	13.16	67.25	8.6	33.70	8.2	25.4	5.13
I25	24 Mar 2021	3	13.11	67.18	8.6	33.70	8.2	25.4	6.38
I25	24 Mar 2021	4	13.08	67.73	8.6	33.70	8.2	25.4	7.84
I25	24 Mar 2021	5	13.05	67.97	8.4	33.70	8.1	25.4	9.46
I25	24 Mar 2021	6	13.03	69.85	8.2	33.70	8.1	25.4	9.79
I25	24 Mar 2021	7	12.76	73.33	7.4	33.73	8.1	25.5	8.23
I25	24 Mar 2021	8	12.13	72.79	5.9	33.81	8.0	25.6	5.14
I25	24 Mar 2021	9	11.49	73.41	5.0	33.79	7.9	25.7	3.33
I26	02 Mar 2021	1	14.79	73.72	8.3	33.61	8.2	24.9	0.88
I26	02 Mar 2021	2	14.73	71.41	8.3	33.61	8.2	25.0	1.13
I26	02 Mar 2021	3	14.62	69.27	8.4	33.60	8.2	25.0	1.95
I26	02 Mar 2021	4	14.59	69.73	8.4	33.60	8.2	25.0	2.85
I26	02 Mar 2021	5	14.57	70.54	8.4	33.60	8.2	25.0	3.61
I26	02 Mar 2021	6	14.55	71.95	8.3	33.60	8.2	25.0	3.84
I26	02 Mar 2021	7	14.53	73.11	8.2	33.60	8.2	25.0	3.73
I26	02 Mar 2021	8	14.51	74.31	8.1	33.60	8.2	25.0	3.27
I26	02 Mar 2021	9	14.50	76.47	8.1	33.60	8.2	25.0	2.66
I26	08 Mar 2021	1	15.30	53.80	8.9	33.45	8.3	24.7	3.75
I26	08 Mar 2021	2	15.30	54.53	9.0	33.45	8.3	24.7	3.99
I26	08 Mar 2021	3	15.32	54.94	9.0	33.45	8.3	24.7	4.44
I26	08 Mar 2021	4	15.32	54.74	8.9	33.46	8.3	24.7	5.59
I26	08 Mar 2021	5	15.29	54.05	8.9	33.46	8.3	24.7	7.01
I26	08 Mar 2021	6	15.22	55.11	8.8	33.47	8.2	24.7	7.72
I26	08 Mar 2021	7	14.78	67.11	8.6	33.54	8.2	24.9	6.41
I26	08 Mar 2021	8	14.73	70.69	8.6	33.53	8.2	24.9	5.17
I26	08 Mar 2021	9	14.72	69.52	8.6	33.53	8.2	24.9	4.55
I26	18 Mar 2021	1	13.13	71.25	6.3	33.67	8.0	25.3	1.08
I26	18 Mar 2021	2	12.44	68.61	5.9	33.74	8.0	25.5	1.43
I26	18 Mar 2021	3	12.16	64.80	5.7	33.71	7.9	25.6	1.99
I26	18 Mar 2021	4	11.77	66.49	5.2	33.76	7.9	25.7	2.65
I26	18 Mar 2021	5	11.47	72.47	4.7	33.76	7.9	25.7	2.86
I26	18 Mar 2021	6	11.29	77.88	4.3	33.77	7.8	25.8	1.47
I26	18 Mar 2021	7	11.27	79.39	4.3	33.77	7.8	25.8	1.03
I26	18 Mar 2021	8	11.25	79.56	4.2	33.77	7.8	25.8	0.89
I26	18 Mar 2021	9	11.25	79.84	4.3	33.77	7.8	25.8	0.87
I26	24 Mar 2021	1	13.48	64.48	8.3	33.72	8.1	25.3	2.94
I26	24 Mar 2021	2	13.36	63.69	8.4	33.72	8.1	25.3	3.94
I26	24 Mar 2021	3	13.18	63.35	8.4	33.71	8.1	25.4	6.62
I26	24 Mar 2021	4	13.02	65.65	8.1	33.71	8.1	25.4	8.94
I26	24 Mar 2021	5	12.92	69.80	7.7	33.71	8.1	25.4	8.10
I26	24 Mar 2021	6	12.84	71.37	7.3	33.73	8.1	25.4	7.44
I26	24 Mar 2021	7	12.45	69.63	6.5	33.77	8.0	25.5	5.87
I26	24 Mar 2021	8	11.42	72.56	5.2	33.84	7.9	25.8	3.64
I26	24 Mar 2021	9	11.33	76.70	4.7	33.77	7.8	25.8	2.27
I32	02 Mar 2021	1	14.79	69.82	8.1	33.61	8.1	24.9	0.97
I32	02 Mar 2021	2	14.70	68.64	8.0	33.61	8.1	25.0	1.20
I32	02 Mar 2021	3	14.53	64.03	7.9	33.62	8.1	25.0	1.68
I32	02 Mar 2021	4	14.34	61.54	7.8	33.61	8.1	25.0	3.51
I32	02 Mar 2021	5	14.29	61.37	7.7	33.61	8.1	25.1	5.17
I32	02 Mar 2021	6	14.24	61.45	7.6	33.61	8.1	25.1	5.99
I32	02 Mar 2021	7	14.17	62.73	7.3	33.61	8.1	25.1	5.55
I32	02 Mar 2021	8	14.14	63.59	7.2	33.60	8.1	25.1	5.02
I32	02 Mar 2021	9	14.00	61.26	7.0	33.60	8.0	25.1	4.50
I32	02 Mar 2021	10	13.98	59.50	7.2	33.61	8.0	25.1	4.09

Station	Date	Depth (m)	Temp (°C)	XMS (‰)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (µg/L)
I32	08 Mar 2021	1	15.30	53.80	8.9	33.45	8.3	24.7	3.75
I32	08 Mar 2021	2	15.30	54.53	9.0	33.45	8.3	24.7	3.99
I32	08 Mar 2021	3	15.32	54.94	9.0	33.45	8.3	24.7	4.44
I32	08 Mar 2021	4	15.32	54.74	8.9	33.46	8.3	24.7	5.59
I32	08 Mar 2021	5	15.29	54.05	8.9	33.46	8.3	24.7	7.01
I32	08 Mar 2021	6	15.22	55.11	8.8	33.47	8.2	24.7	7.72
I32	08 Mar 2021	7	14.78	67.11	8.6	33.54	8.2	24.9	6.41
I32	08 Mar 2021	8	14.73	70.69	8.6	33.53	8.2	24.9	5.17
I32	08 Mar 2021	9	14.72	69.52	8.6	33.53	8.2	24.9	4.55
I32	18 Mar 2021	1	13.09	59.65	6.6	33.68	8.0	25.4	1.50
I32	18 Mar 2021	2	12.39	54.06	6.2	33.75	8.0	25.5	1.76
I32	18 Mar 2021	3	12.19	47.93	6.1	33.72	7.9	25.6	2.38
I32	18 Mar 2021	4	12.19	46.14	6.2	33.71	7.9	25.6	3.62
I32	18 Mar 2021	5	12.18	45.14	6.3	33.72	7.9	25.6	4.54
I32	18 Mar 2021	6	12.15	43.98	6.3	33.72	7.9	25.6	4.48
I32	18 Mar 2021	7	12.10	43.18	6.1	33.73	7.9	25.6	3.88
I32	18 Mar 2021	8	12.00	41.91	5.8	33.74	7.9	25.6	3.13
I32	18 Mar 2021	9	11.84	42.55	5.3	33.76	7.8	25.7	2.48
I32	18 Mar 2021	10	11.60	35.47	5.0	33.76	7.8	25.7	2.31
I32	24 Mar 2021	1	13.59	59.50	8.7	33.70	8.1	25.3	4.58
I32	24 Mar 2021	2	13.41	59.84	8.5	33.74	8.1	25.3	5.59
I32	24 Mar 2021	3	13.44	60.58	8.5	33.73	8.1	25.3	6.10
I32	24 Mar 2021	4	13.49	60.42	8.6	33.73	8.1	25.3	6.05
I32	24 Mar 2021	5	13.45	59.72	8.5	33.73	8.1	25.3	6.38
I32	24 Mar 2021	6	13.07	59.44	7.9	33.78	8.1	25.4	7.62
I32	24 Mar 2021	7	12.69	53.43	7.2	33.76	8.0	25.5	8.24
I32	24 Mar 2021	8	12.16	49.36	6.4	33.81	8.0	25.6	6.78
I32	24 Mar 2021	9	11.48	51.92	5.3	33.83	7.9	25.8	4.94
I32	24 Mar 2021	10	11.71	29.18	5.5	33.74	7.9	25.7	4.78
I39	02 Mar 2021	1	14.72	79.65	8.6	33.58	8.2	24.9	0.87
I39	02 Mar 2021	2	14.68	78.94	8.6	33.58	8.2	24.9	1.01
I39	02 Mar 2021	3	14.63	78.06	8.6	33.58	8.2	25.0	1.30
I39	02 Mar 2021	4	14.61	77.88	8.6	33.58	8.2	25.0	1.55
I39	02 Mar 2021	5	14.57	77.69	8.6	33.58	8.2	25.0	1.81
I39	02 Mar 2021	6	14.53	77.89	8.5	33.57	8.2	25.0	2.36
I39	02 Mar 2021	7	14.40	77.81	8.3	33.57	8.2	25.0	2.78
I39	02 Mar 2021	8	14.23	77.96	8.1	33.57	8.2	25.0	2.96
I39	02 Mar 2021	9	14.02	79.21	7.8	33.57	8.1	25.1	2.98
I39	02 Mar 2021	10	13.92	81.13	7.7	33.57	8.1	25.1	2.93
I39	02 Mar 2021	11	13.87	82.09	7.7	33.58	8.1	25.1	2.71
I39	02 Mar 2021	12	13.82	82.55	7.6	33.58	8.1	25.1	2.70
I39	02 Mar 2021	13	13.76	82.87	7.4	33.59	8.1	25.1	2.43
I39	02 Mar 2021	14	13.66	82.88	7.1	33.59	8.1	25.2	2.14
I39	02 Mar 2021	15	13.61	82.81	6.9	33.58	8.1	25.2	1.92
I39	02 Mar 2021	16	13.60	82.62	6.8	33.58	8.0	25.2	1.79
I39	02 Mar 2021	17	13.59	82.51	6.7	33.58	8.0	25.2	1.61
I39	02 Mar 2021	18	13.58	82.45	6.6	33.58	8.0	25.2	1.49
I39	08 Mar 2021	1	14.70	71.65	8.6	33.53	8.2	24.9	2.30
I39	08 Mar 2021	2	14.72	72.48	8.6	33.53	8.2	24.9	2.36
I39	08 Mar 2021	3	14.71	72.35	8.6	33.53	8.2	24.9	2.43
I39	08 Mar 2021	4	14.71	72.65	8.7	33.53	8.2	24.9	2.70
I39	08 Mar 2021	5	14.68	72.26	8.6	33.54	8.2	24.9	3.25
I39	08 Mar 2021	6	14.63	71.60	8.6	33.54	8.2	24.9	4.52
I39	08 Mar 2021	7	14.63	71.76	8.7	33.53	8.2	24.9	5.44
I39	08 Mar 2021	8	14.62	71.61	8.7	33.54	8.2	24.9	6.18
I39	08 Mar 2021	9	14.61	71.66	8.7	33.54	8.2	24.9	6.82

Station	Date	Depth (m)	Temp (°C)	XMS (‰)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (µg/L)
I39	08 Mar 2021	10	14.61	71.92	8.7	33.54	8.2	24.9	7.07
I39	08 Mar 2021	11	14.60	72.19	8.7	33.54	8.2	24.9	7.30
I39	08 Mar 2021	12	14.58	72.91	8.6	33.54	8.2	24.9	7.03
I39	08 Mar 2021	13	14.58	73.61	8.6	33.54	8.2	24.9	6.75
I39	08 Mar 2021	14	14.57	74.33	8.5	33.54	8.2	24.9	6.36
I39	08 Mar 2021	15	14.55	75.42	8.4	33.54	8.2	24.9	5.84
I39	08 Mar 2021	16	14.48	76.33	8.2	33.55	8.2	25.0	4.89
I39	08 Mar 2021	17	14.21	74.55	7.6	33.57	8.1	25.0	3.45
I39	08 Mar 2021	18	14.27	71.51	7.5	33.53	8.1	25.0	2.81
I39	18 Mar 2021	1	13.30	66.23	7.7	33.65	8.1	25.3	3.00
I39	18 Mar 2021	2	13.29	66.23	7.7	33.65	8.1	25.3	3.16
I39	18 Mar 2021	3	13.23	66.27	7.7	33.66	8.1	25.3	3.67
I39	18 Mar 2021	4	13.15	65.11	7.6	33.65	8.1	25.3	5.43
I39	18 Mar 2021	5	12.88	65.55	6.9	33.69	8.1	25.4	5.89
I39	18 Mar 2021	6	11.98	74.49	5.7	33.77	8.0	25.6	3.71
I39	18 Mar 2021	7	11.61	81.13	5.0	33.76	7.9	25.7	2.22
I39	18 Mar 2021	8	11.20	84.56	4.6	33.78	7.8	25.8	1.34
I39	18 Mar 2021	9	11.10	84.98	4.4	33.78	7.8	25.8	0.96
I39	18 Mar 2021	10	10.94	85.34	4.2	33.81	7.8	25.9	0.69
I39	18 Mar 2021	11	10.90	85.38	4.1	33.81	7.8	25.9	0.56
I39	18 Mar 2021	12	10.89	85.30	4.1	33.81	7.8	25.9	0.50
I39	18 Mar 2021	13	10.88	84.91	4.1	33.81	7.8	25.9	0.50
I39	18 Mar 2021	14	10.88	85.14	4.1	33.82	7.8	25.9	0.47
I39	18 Mar 2021	15	10.83	84.92	4.1	33.83	7.8	25.9	0.47
I39	18 Mar 2021	16	10.79	84.84	4.0	33.84	7.8	25.9	0.47
I39	18 Mar 2021	17	10.78	84.83	4.0	33.84	7.8	25.9	0.47
I39	18 Mar 2021	18	10.78	84.77	4.0	33.84	7.8	25.9	0.46
I39	24 Mar 2021	1	13.44	77.26	8.3	33.62	8.2	25.2	2.44
I39	24 Mar 2021	2	13.41	76.99	8.3	33.62	8.2	25.2	3.22
I39	24 Mar 2021	3	13.37	77.07	8.3	33.62	8.1	25.3	4.38
I39	24 Mar 2021	4	13.35	76.71	8.3	33.62	8.1	25.3	5.11
I39	24 Mar 2021	5	13.33	76.26	8.3	33.63	8.1	25.3	6.08
I39	24 Mar 2021	6	13.31	75.46	8.3	33.64	8.1	25.3	6.89
I39	24 Mar 2021	7	13.30	74.23	8.3	33.65	8.1	25.3	7.53
I39	24 Mar 2021	8	13.30	74.00	8.3	33.65	8.1	25.3	7.77
I39	24 Mar 2021	9	13.30	74.14	8.3	33.66	8.1	25.3	7.66
I39	24 Mar 2021	10	13.28	73.83	8.3	33.67	8.1	25.3	7.63
I39	24 Mar 2021	11	13.26	73.74	8.3	33.68	8.1	25.3	8.18
I39	24 Mar 2021	12	13.21	73.24	8.2	33.69	8.1	25.3	7.77
I39	24 Mar 2021	13	13.17	72.94	8.2	33.69	8.1	25.3	7.94
I39	24 Mar 2021	14	13.11	72.99	8.1	33.70	8.1	25.4	8.27
I39	24 Mar 2021	15	13.01	73.01	8.0	33.71	8.1	25.4	8.14
I39	24 Mar 2021	16	13.00	73.22	7.9	33.70	8.1	25.4	7.93
I39	24 Mar 2021	17	12.77	74.08	7.3	33.74	8.1	25.5	7.46
I39	24 Mar 2021	18	11.80	77.89	5.8	33.81	8.0	25.7	4.87
I40	02 Mar 2021	1	14.56	77.39	8.2	33.59	8.2	25.0	0.82
I40	02 Mar 2021	2	14.57	77.65	8.2	33.59	8.2	25.0	0.82
I40	02 Mar 2021	3	14.44	75.83	8.3	33.60	8.2	25.0	1.06
I40	02 Mar 2021	4	14.35	73.82	8.3	33.59	8.2	25.0	1.62
I40	02 Mar 2021	5	14.18	73.96	7.8	33.60	8.2	25.1	2.10
I40	02 Mar 2021	6	13.87	75.28	7.1	33.59	8.1	25.1	2.13
I40	02 Mar 2021	7	13.72	72.16	6.8	33.58	8.0	25.2	1.93
I40	02 Mar 2021	8	13.68	62.84	6.5	33.59	8.0	25.2	2.19
I40	02 Mar 2021	9	13.65	58.59	6.4	33.58	8.0	25.2	2.49
I40	02 Mar 2021	10	13.65	54.75	6.4	33.58	8.0	25.2	2.62
I40	08 Mar 2021	1	15.38	42.38	7.4	33.37	8.2	24.6	2.51
I40	08 Mar 2021	2	15.39	44.75	7.9	33.37	8.2	24.6	2.43

Station	Date	Depth (m)	Temp (°C)	XMS (‰)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (µg/L)
I40	08 Mar 2021	3	15.33	45.04	8.1	33.41	8.2	24.7	2.71
I40	08 Mar 2021	4	15.24	46.36	8.1	33.42	8.2	24.7	2.95
I40	08 Mar 2021	5	15.00	50.77	8.2	33.50	8.2	24.8	3.67
I40	08 Mar 2021	6	14.94	52.85	8.1	33.52	8.2	24.8	4.28
I40	08 Mar 2021	7	14.93	51.10	8.3	33.51	8.2	24.8	5.01
I40	08 Mar 2021	8	14.84	51.19	8.4	33.54	8.2	24.9	4.72
I40	08 Mar 2021	9	14.81	12.31	8.1	33.52	8.2	24.9	5.58
I40	18 Mar 2021	1	12.27	43.42	6.6	33.70	7.8	25.5	0.88
I40	18 Mar 2021	2	12.03	42.75	5.6	33.73	7.8	25.6	0.92
I40	18 Mar 2021	3	11.64	54.86	4.3	33.74	7.8	25.7	0.90
I40	18 Mar 2021	4	11.41	66.33	4.1	33.77	7.8	25.7	0.80
I40	18 Mar 2021	5	11.26	71.85	4.2	33.78	7.8	25.8	0.73
I40	18 Mar 2021	6	11.19	71.95	4.2	33.78	7.8	25.8	0.74
I40	18 Mar 2021	7	11.16	69.68	4.2	33.78	7.8	25.8	0.88
I40	18 Mar 2021	8	11.16	64.11	4.1	33.78	7.8	25.8	1.16
I40	18 Mar 2021	9	11.18	41.04	4.0	33.78	7.8	25.8	2.06
I40	24 Mar 2021	1	13.35	66.71	8.9	33.69	8.2	25.3	4.79
I40	24 Mar 2021	2	13.35	66.80	8.8	33.69	8.2	25.3	5.36
I40	24 Mar 2021	3	13.25	66.59	8.6	33.70	8.2	25.3	6.74
I40	24 Mar 2021	4	13.11	62.53	8.4	33.71	8.1	25.4	7.92
I40	24 Mar 2021	5	12.90	57.83	8.3	33.74	8.1	25.4	7.88
I40	24 Mar 2021	6	12.51	56.25	8.1	33.76	8.1	25.5	6.71
I40	24 Mar 2021	7	12.20	53.22	7.9	33.77	8.0	25.6	5.23
I40	24 Mar 2021	8	12.15	46.29	7.6	33.76	8.0	25.6	4.70
I40	24 Mar 2021	9	11.56	34.85	5.9	33.84	7.9	25.8	4.25
I40	24 Mar 2021	10	11.22	38.66	4.5	33.80	7.8	25.8	3.43

NA = not available

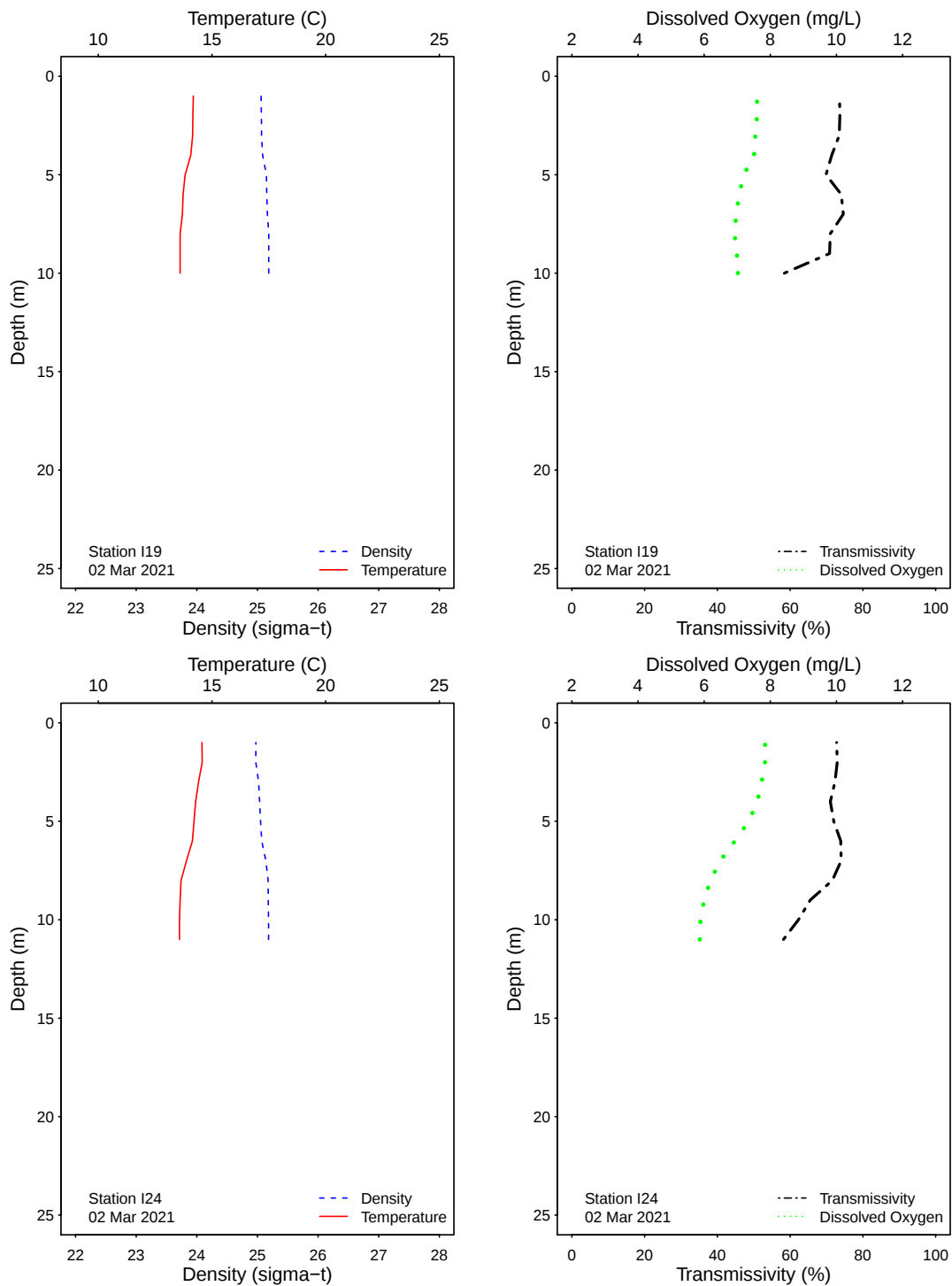


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

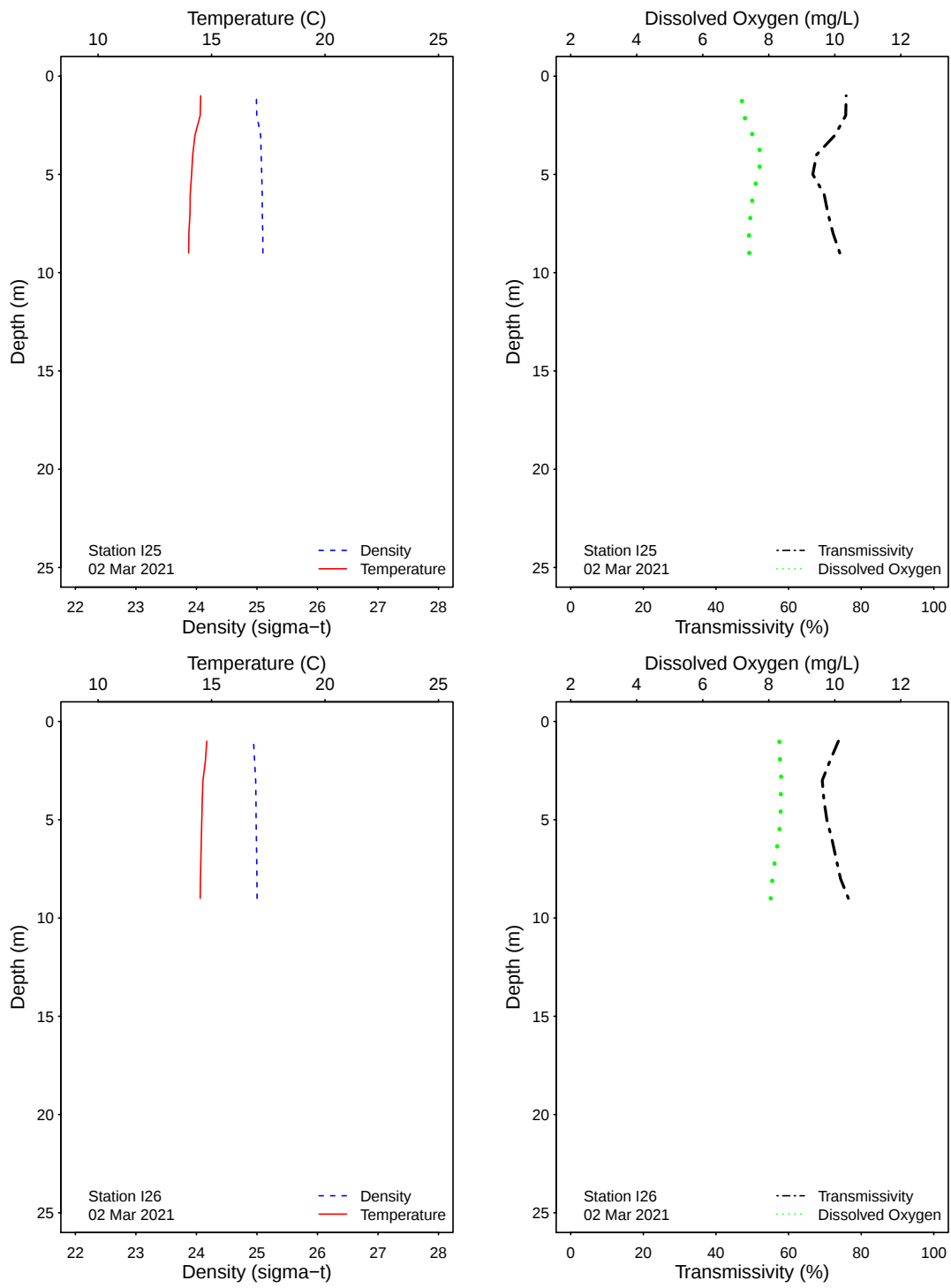


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

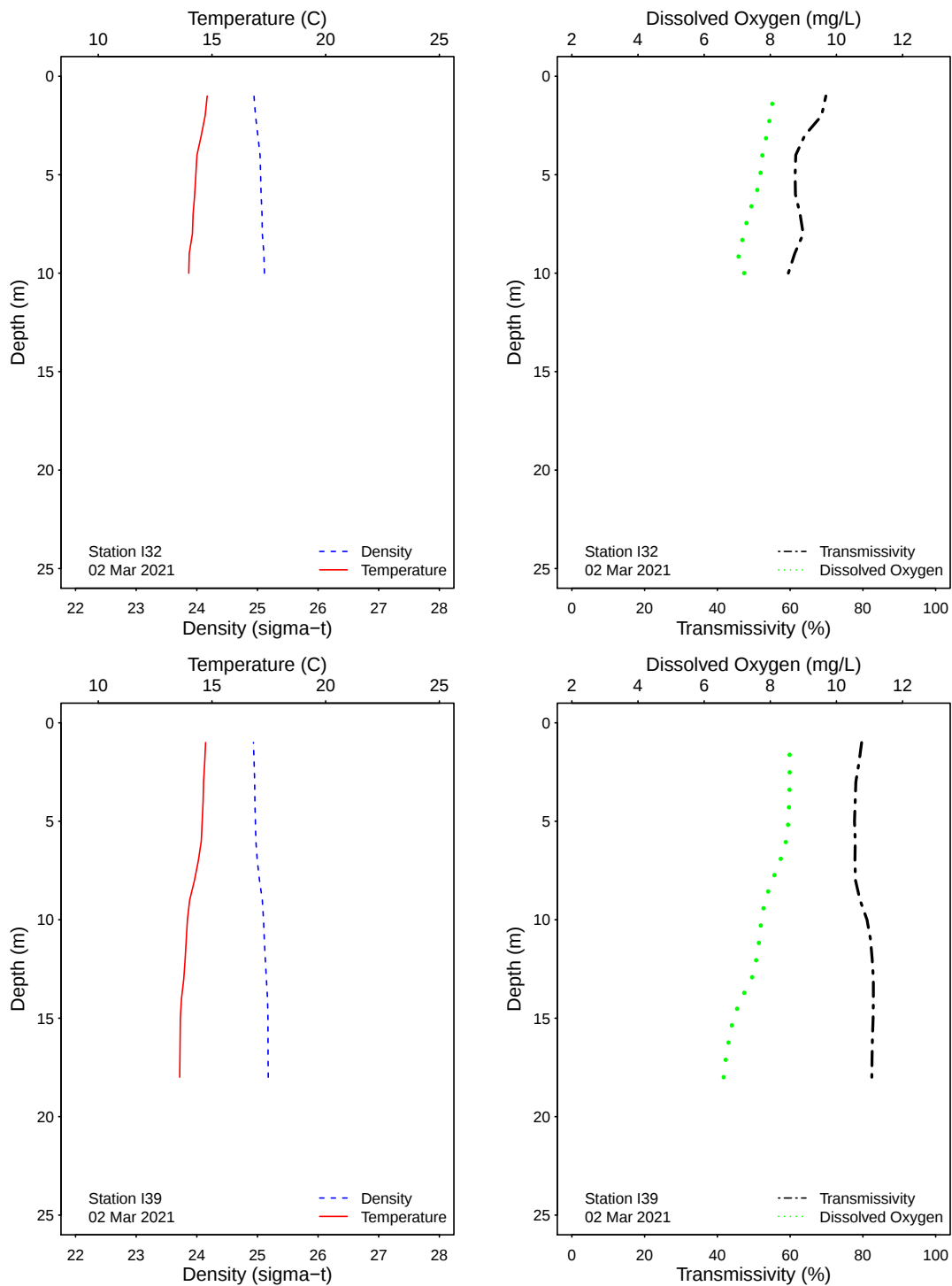


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

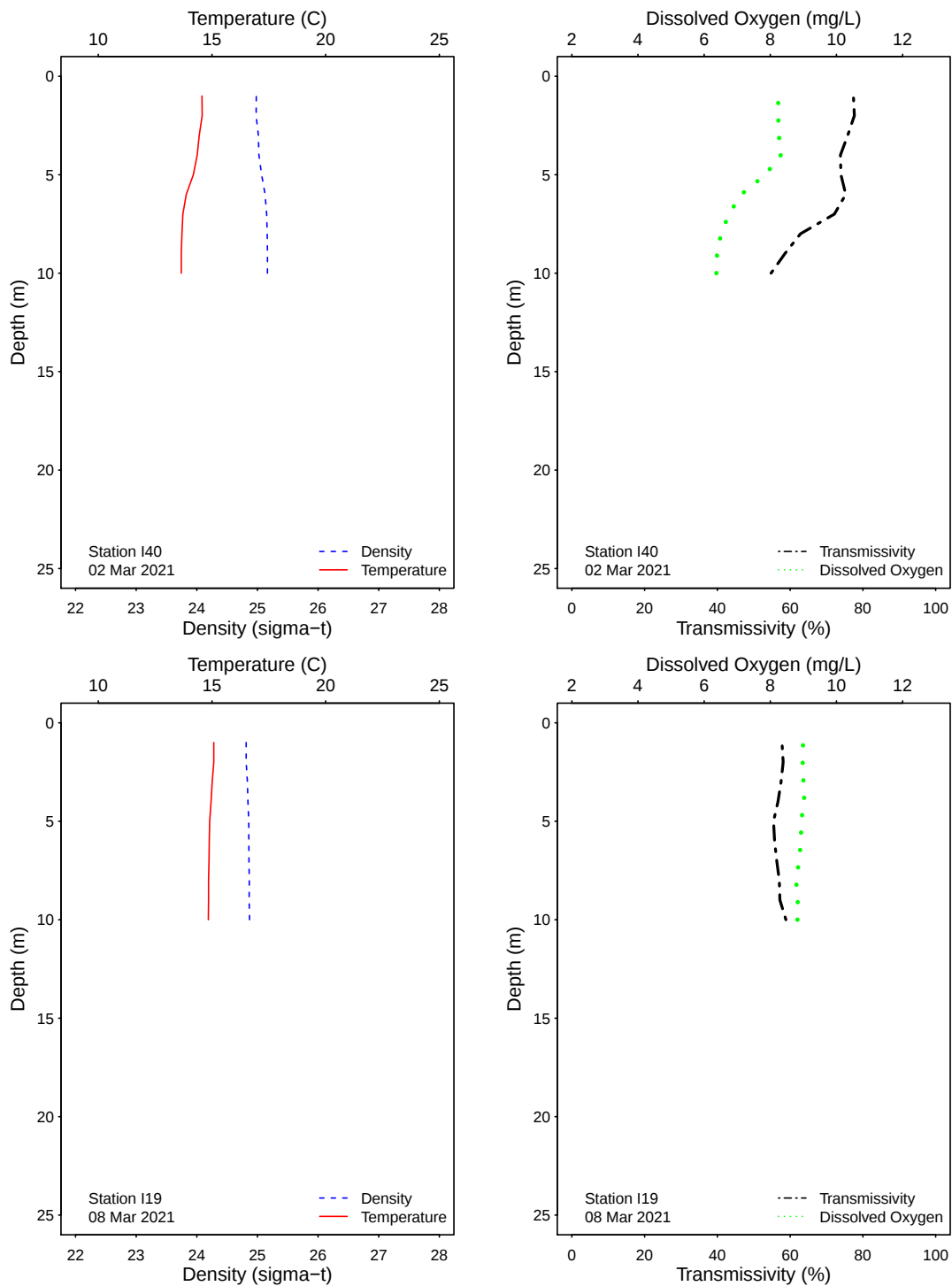


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

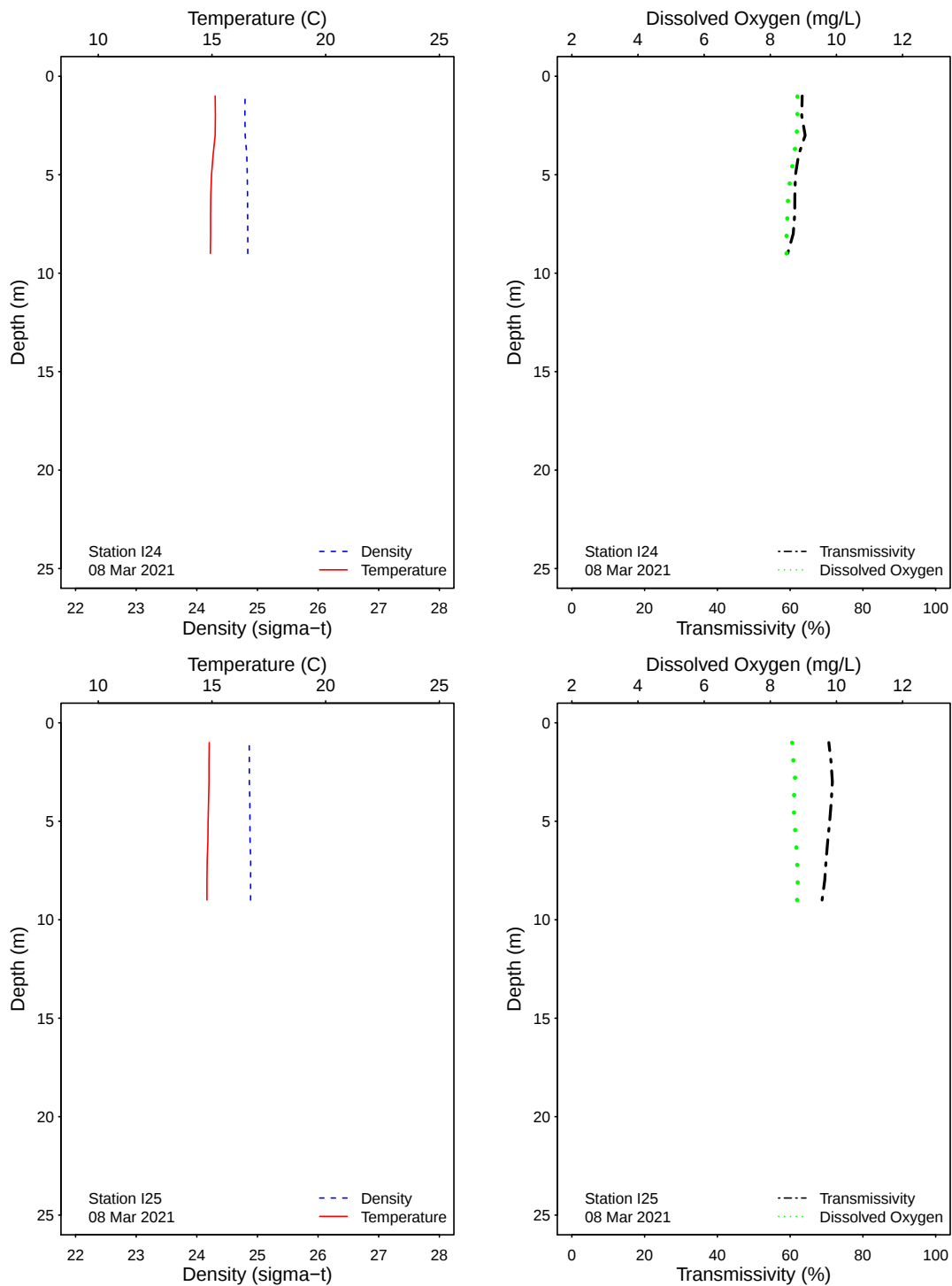


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

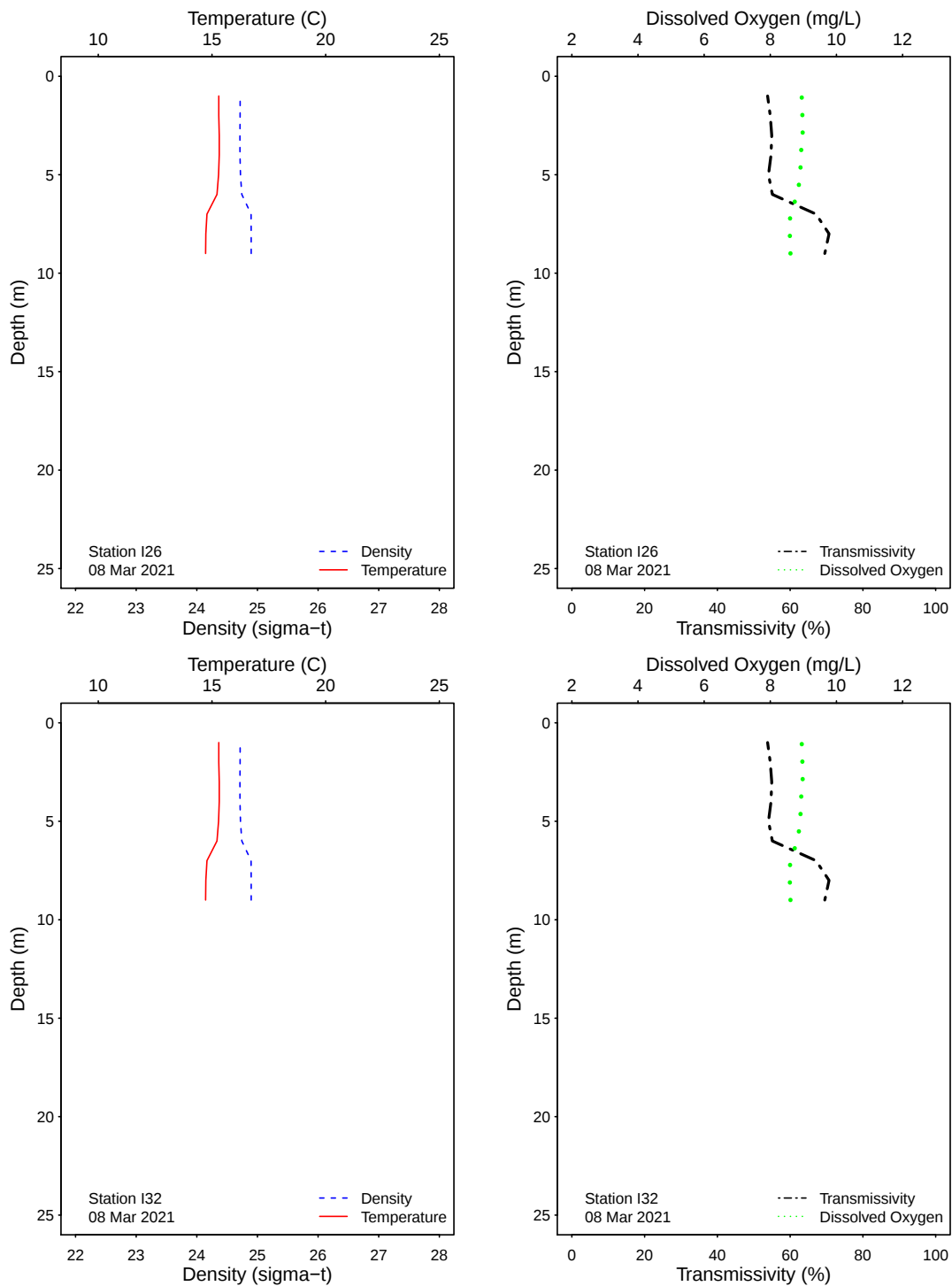


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

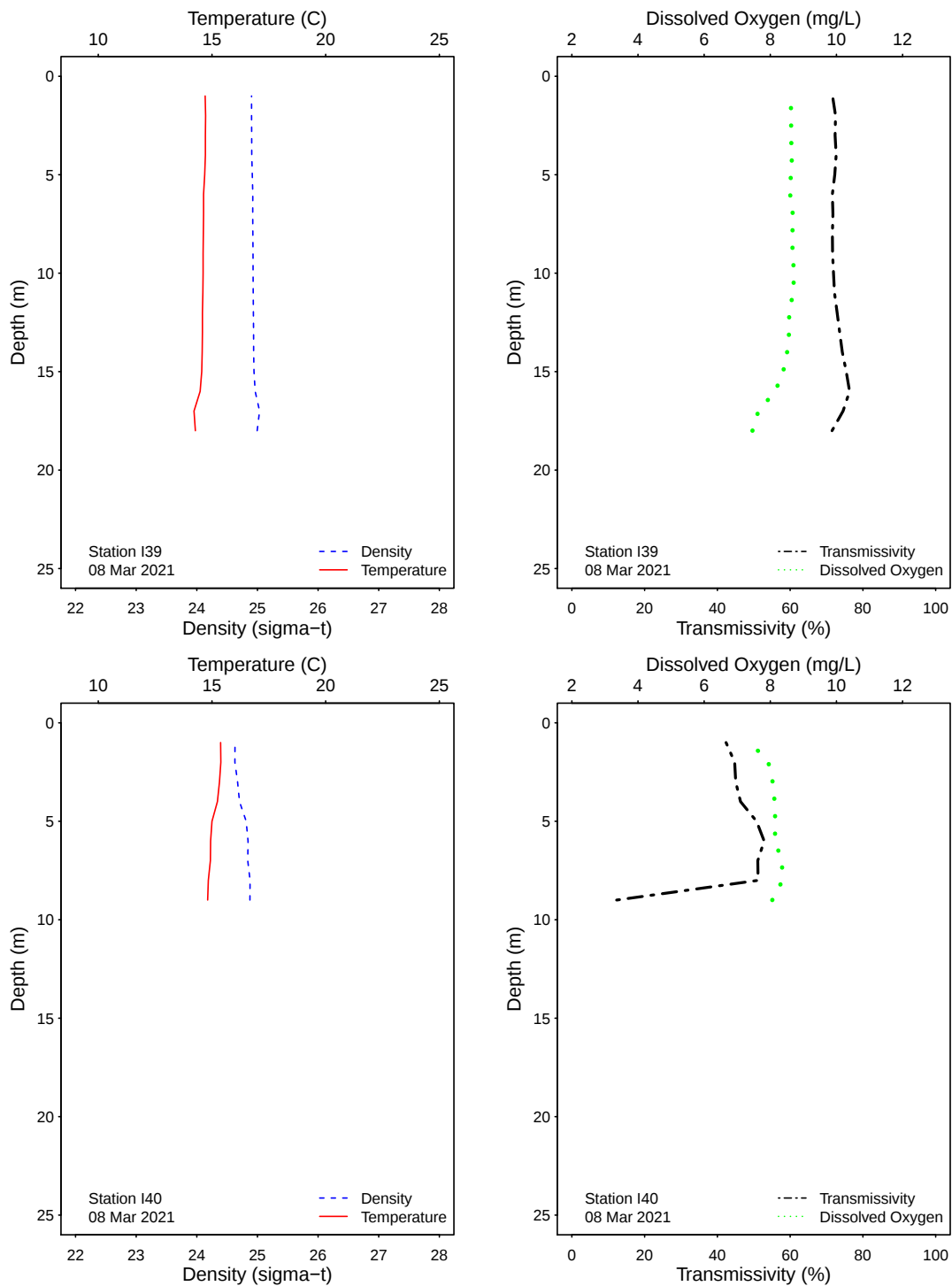


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

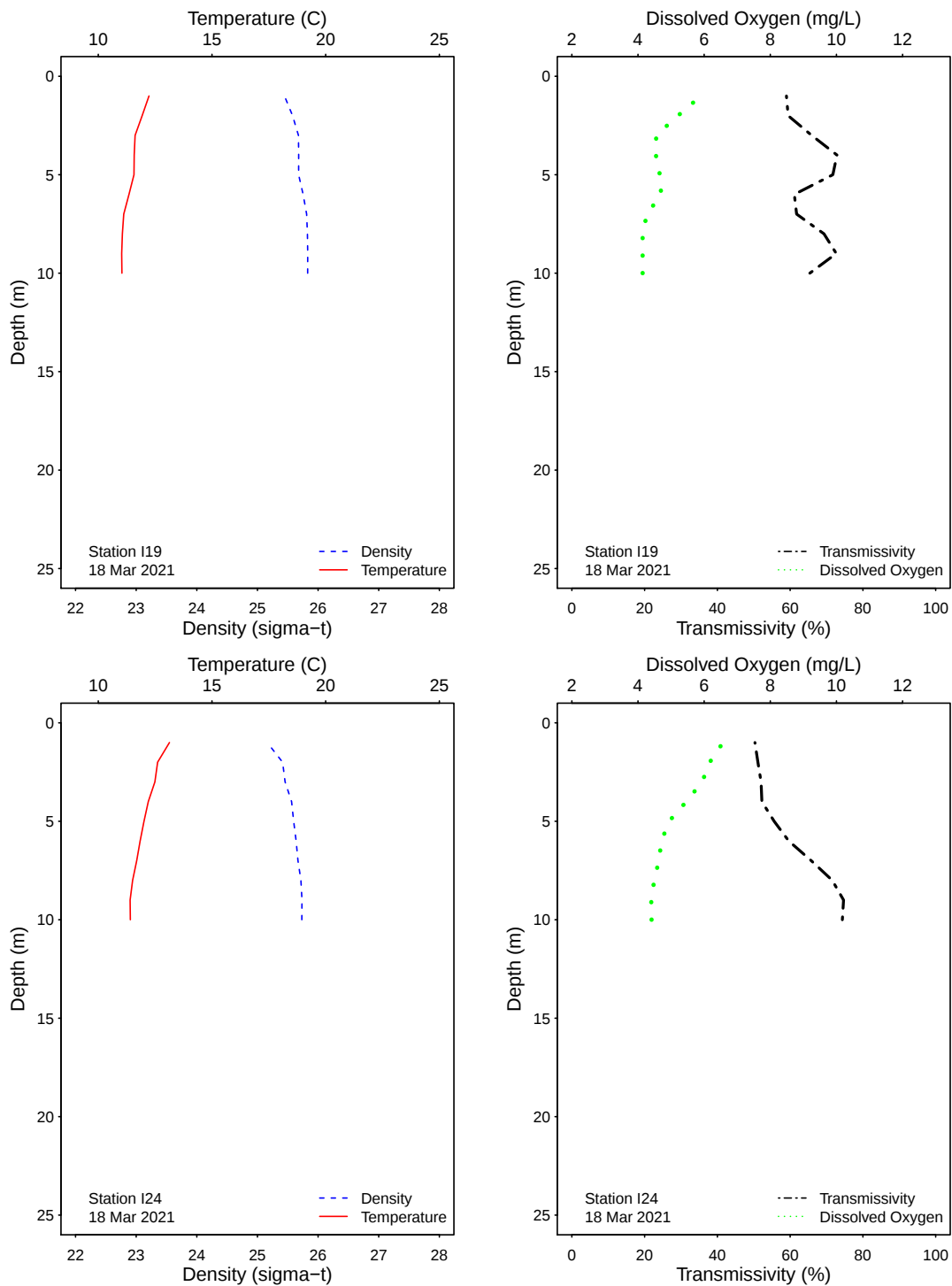


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

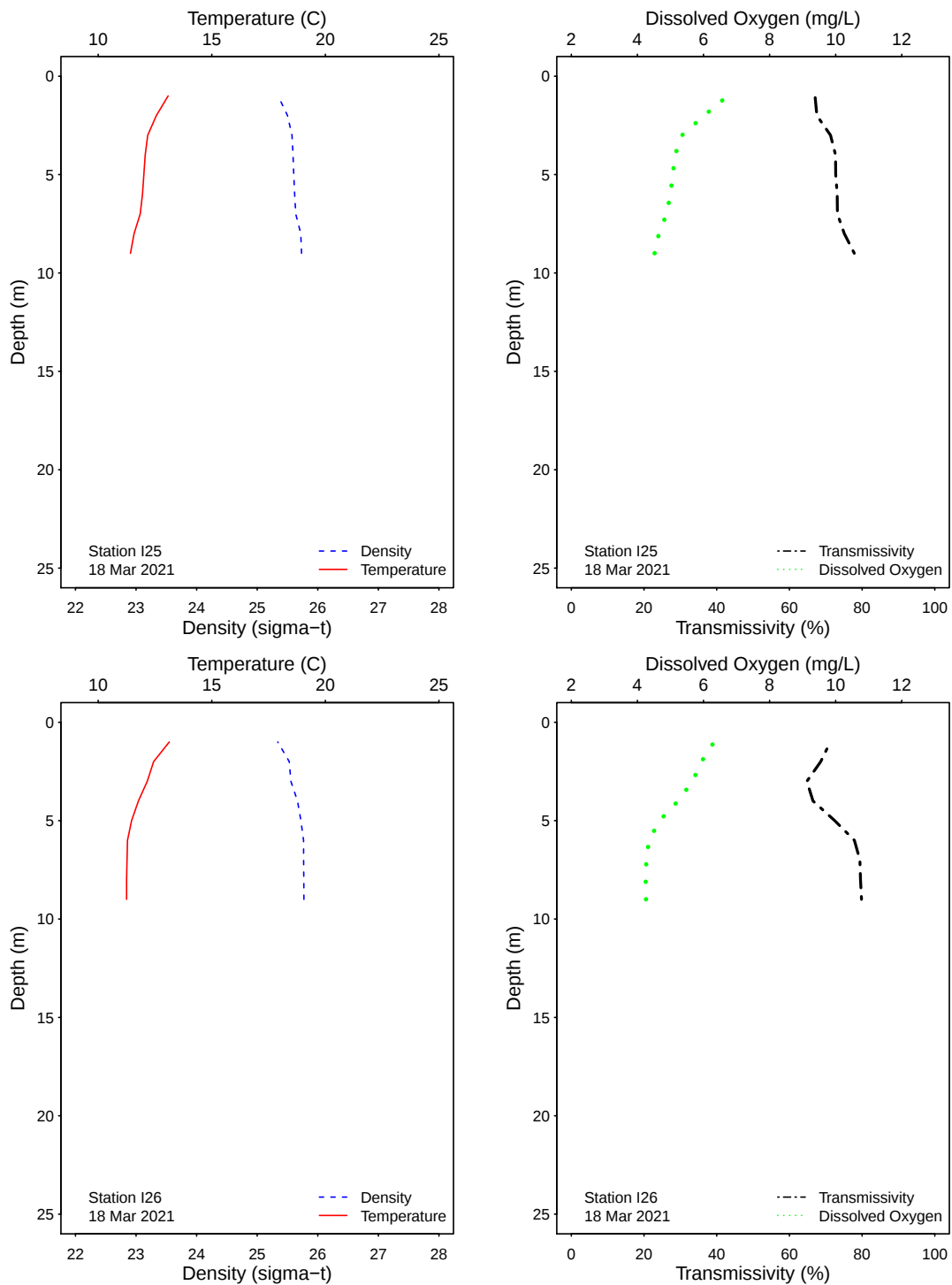


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

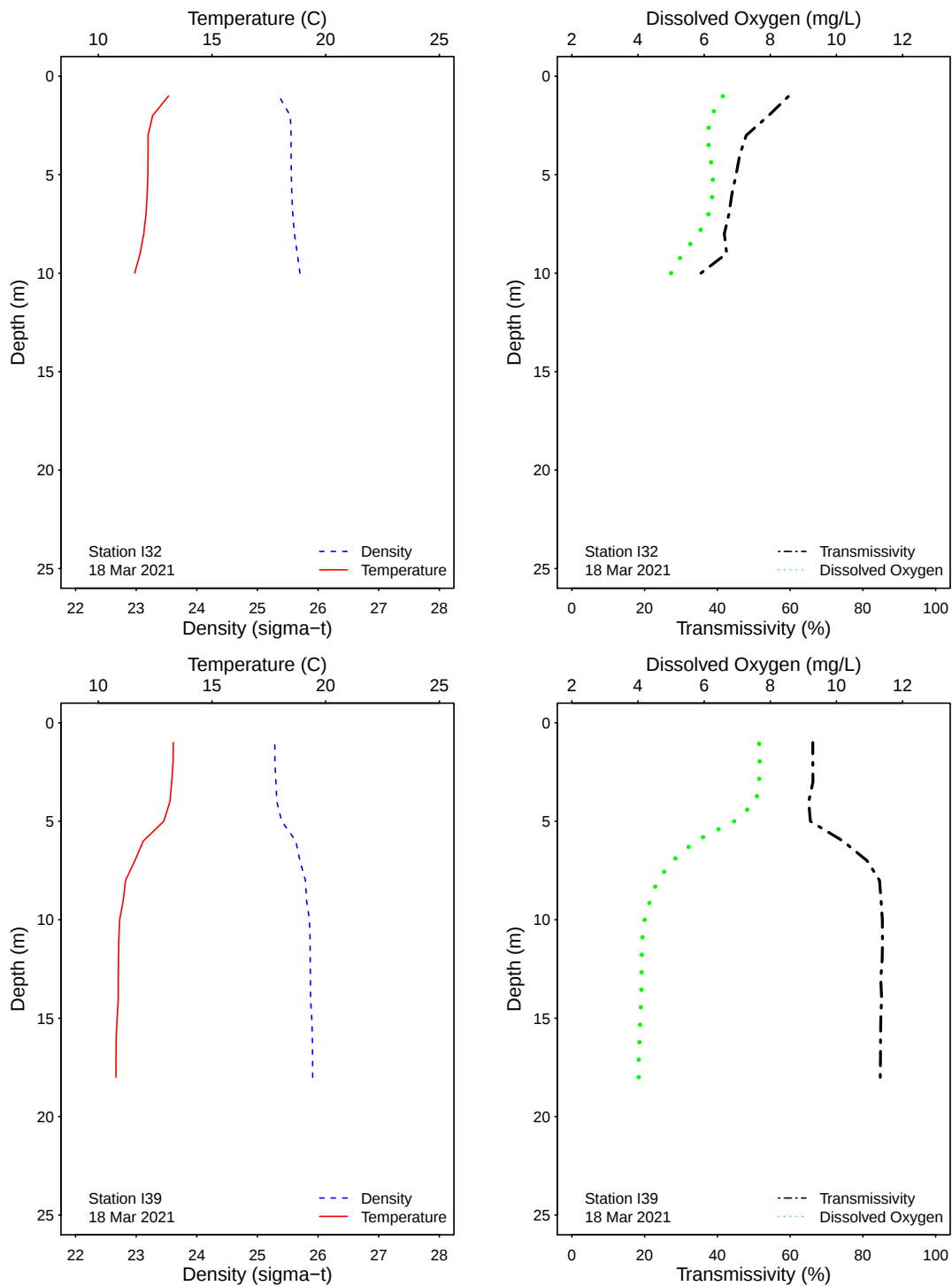


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

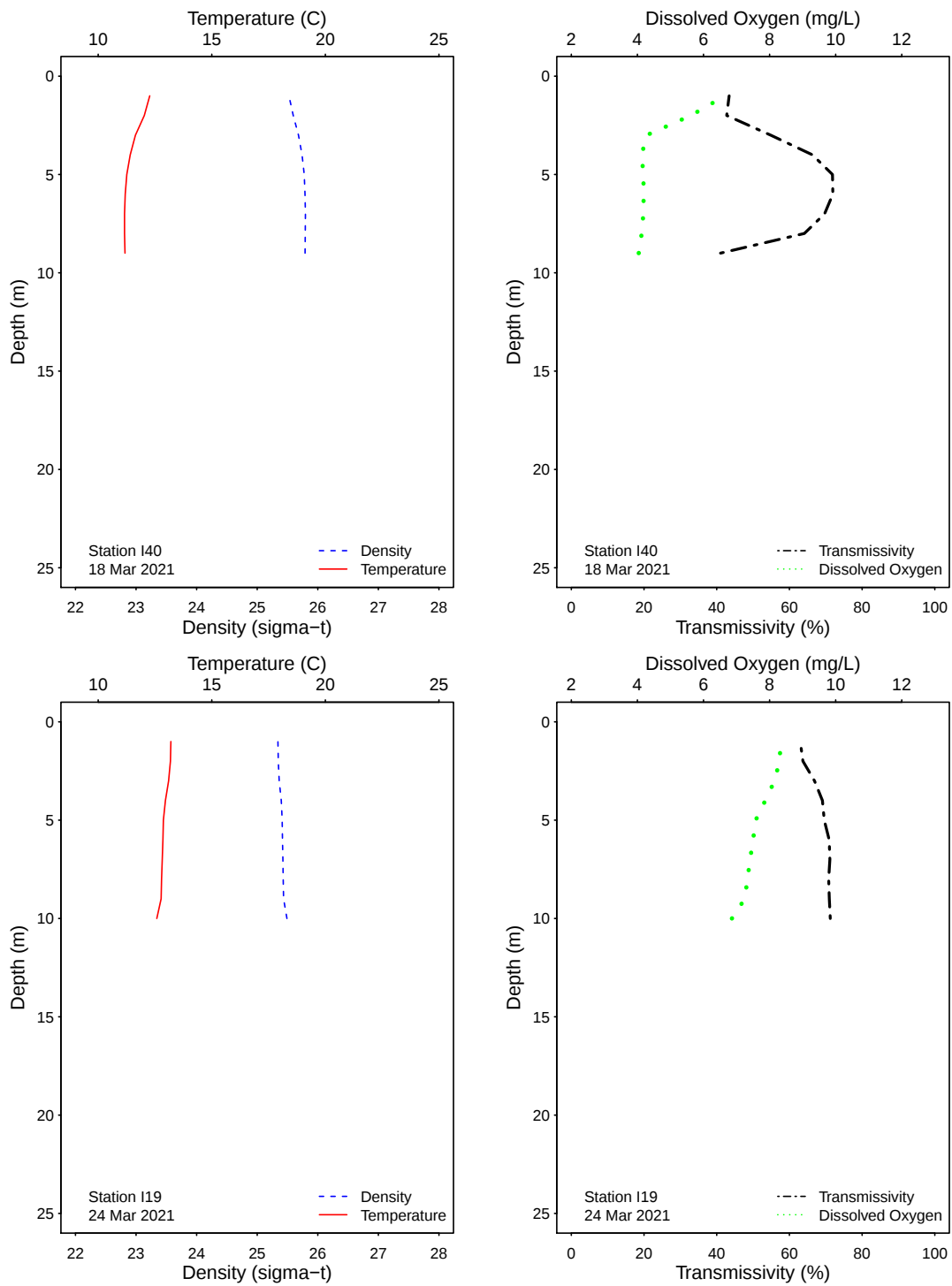


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

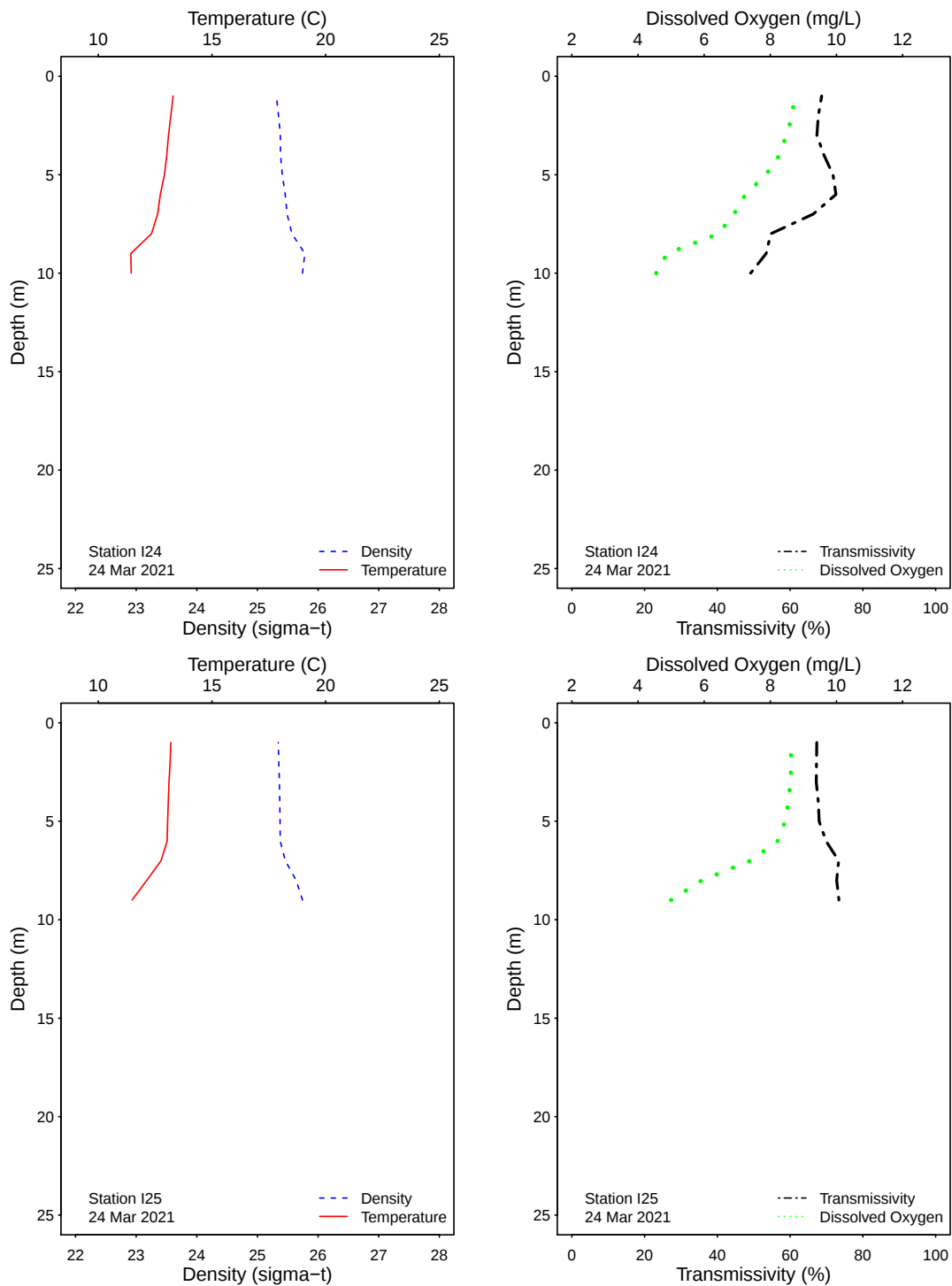


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

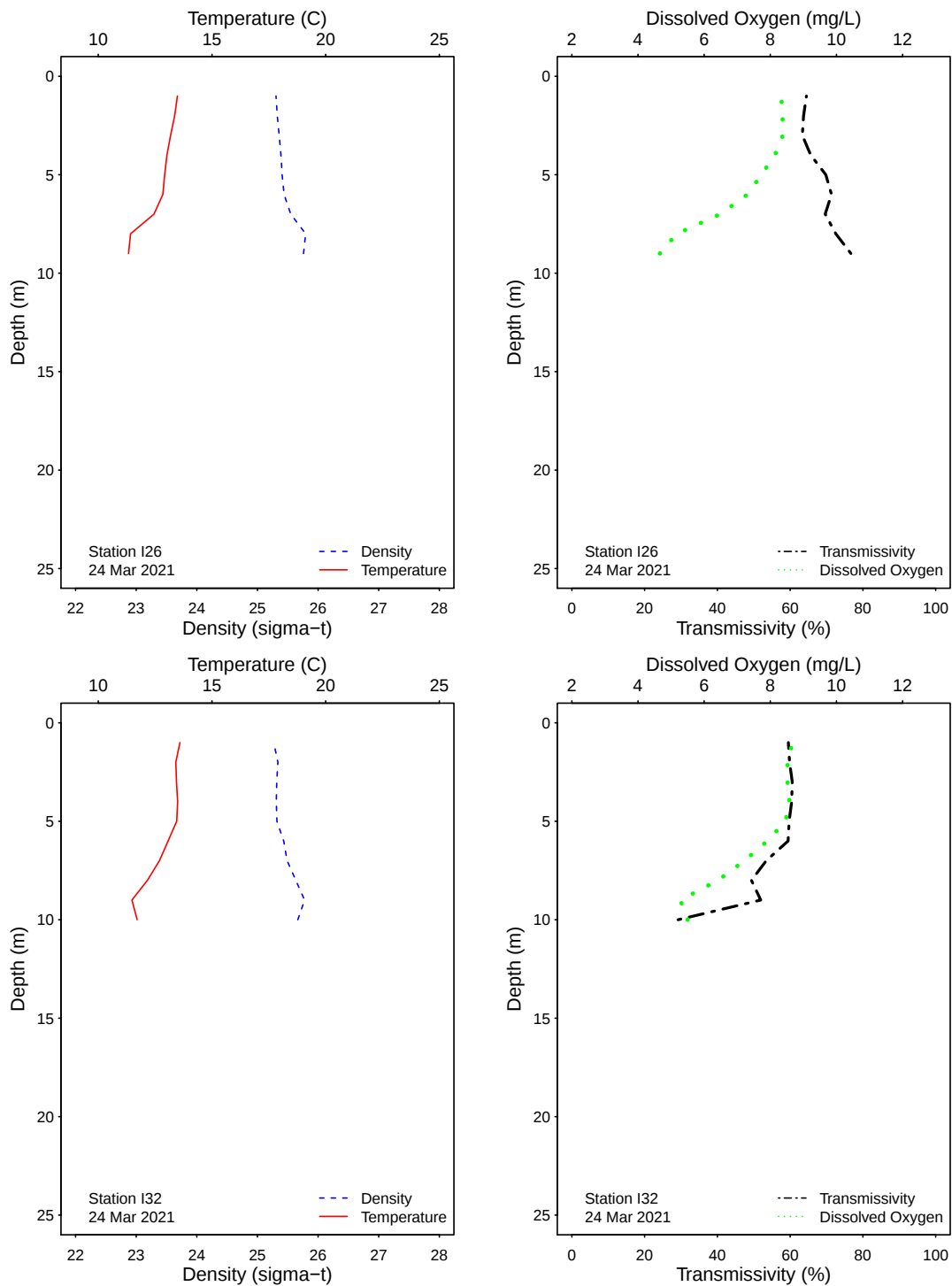


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

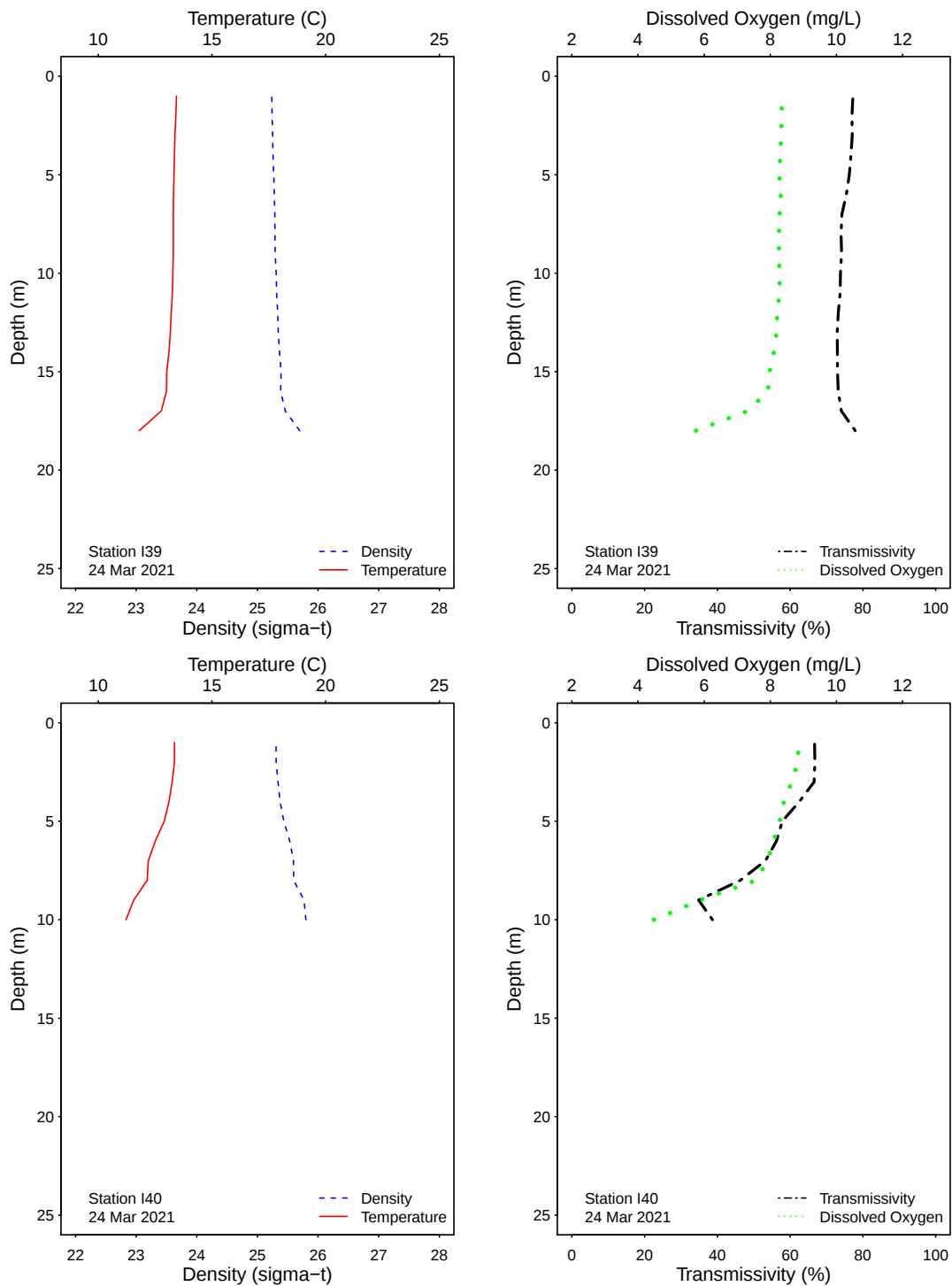


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

APPENDIX A

Quality Assurance

Table A.1

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

Station	Date	Depth	Analyst	Procedure	Total	Fecal	Entero
I19	02 Mar 2021	6	JF	LAB DUPLICATE	<20	2e	4e
I19	08 Mar 2021	6	BS	LAB DUPLICATE	260e	68	16e
I19	18 Mar 2021	6	JF	LAB DUPLICATE	200e	12e	28e
I19	24 Mar 2021	6	BS	LAB DUPLICATE	80e	28e	12e
I40	02 Mar 2021	6	AE	LAB DUPLICATE	<2	<2	<2
I40	08 Mar 2021	6	AE	LAB DUPLICATE	> 16000	3000e	120e
I40	18 Mar 2021	6	JF	LAB DUPLICATE	600e	20e	2e
I40	24 Mar 2021	6	BS	LAB DUPLICATE	<20	2e	<2
S12	02 Mar 2021		JF	FIELD DUPLICATE	4e	2e	2e
S12	02 Mar 2021		JF	LAB DUPLICATE	<20	2e	<2
S12	09 Mar 2021		AR	FIELD DUPLICATE	20e	8e	2e
S12	09 Mar 2021		AR	LAB DUPLICATE	80e	14e	2e
S12	16 Mar 2021		AR	FIELD DUPLICATE	<20	6e	<2
S12	16 Mar 2021		AR	LAB DUPLICATE	<20	<2	2e
S12	23 Mar 2021		AE	FIELD DUPLICATE	<20	<2	<2
S12	23 Mar 2021		AE	LAB DUPLICATE	<20	<2	<2
S12	30 Mar 2021		AR	FIELD DUPLICATE	2800e	820	80e
S12	30 Mar 2021		AR	LAB DUPLICATE	2600e	720	200e

ns = not sampled

ND = no data

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APPENDIX B

New 2019 Ocean Plan Water Quality Objectives

Shore Stations

Table B.1

Summary of compliance with the Ocean Plan's 6-week 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 6 weeks unless otherwise noted (*). Values >30 CFU/100 mL exceed the standard.

Date	S4	S5	S6	S8	S9	S10	S11	S12
01 Mar 2021	411	922	14	6	3	1062	20	5
02 Mar 2021	382	882	15	6	3	991	20	5
03 Mar 2021	382	882	15	6	3	991	20	5
04 Mar 2021	382	882	15	6	3	991	20	5
05 Mar 2021	382	882	15	6	3	991	20	5
06 Mar 2021	382	882	15	6	3	991	20	5
07 Mar 2021	382	882	15	6	3	991	20	5
08 Mar 2021	382	882	15	6	3	991	20	5
09 Mar 2021	385	882	17	5	2	935	20	6
10 Mar 2021	385	882	17	5	2	935	20	6
11 Mar 2021	385	1156	17	5	2	1054	20	6
12 Mar 2021	385	1156	17	5	2	1054	20	6
13 Mar 2021	385	1170	17	5	2	997	20	6
14 Mar 2021	385	1170	17	5	2	997	20	6
15 Mar 2021	385	1241	17	5	2	1015	20	6
16 Mar 2021	344	1683	16	5	2	866	18	5
17 Mar 2021	344	1683	16	5	2	866	18	5
18 Mar 2021	307	1877	16	5	2	867	18	5
19 Mar 2021	307	1877	16	5	2	867	18	5
20 Mar 2021	373	2069	16	5	2	999	18	5
21 Mar 2021	373	2069	16	5	2	999	18	5
22 Mar 2021	435	2260	16	5	2	1169	18	5
23 Mar 2021	544	2260	12	2	3	1324	15	3
24 Mar 2021	544	2260	12	2	3	1324	15	3
25 Mar 2021	469	2748	11	2	3	1218	15	3
26 Mar 2021	469	2748	11	2	3	1218	15	3
27 Mar 2021	469	3110	11	2	3	1242	15	3
28 Mar 2021	469	3110	11	2	3	1242	15	3
29 Mar 2021	469	3162	11	2	3	1178	15	3
30 Mar 2021	384	3477	14	3	3	1169	22	6
31 Mar 2021	384	3477	14	3	3	1169	22	6

* Geometric mean calculated using n<5

Table B.2

Summary of compliance at the SBOO shore stations with the Ocean Plan's Statistical Threshold Value standard for *Enterococcus* bacteria, which states that *Enterococcus* density shall not exceed 110 CFU/100 mL in more than 10% of samples per month.

Date	S4	S5	S6	S8	S9	S10	S11	S12
March	E	E	E	IC	IC	E	E	E

IC = In Compliance

E = Exceedance

ns = not sampled

ND = no data

Kelp Stations

Table B.3

Summary of compliance with the Ocean Plan's 6-week 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 6 weeks unless otherwise noted (*). Values >30 CFU/100 mL exceed the standard.

Date	I19	I24	I25	I26	I32	I39	I40
01 Mar 2021	88	26	17	13	4	8	65
02 Mar 2021	75	31	22	13	4	7	65
03 Mar 2021	75	31	22	13	4	7	65
04 Mar 2021	75	31	22	13	4	7	65
05 Mar 2021	75	31	22	13	4	7	65
06 Mar 2021	75	31	22	13	4	7	65
07 Mar 2021	75	31	22	13	4	7	65
08 Mar 2021	57	27	16	10	5	6	65
09 Mar 2021	57	27	16	10	5	6	65
10 Mar 2021	42	20	11	6	4	7	53
11 Mar 2021	42	20	11	6	4	7	53
12 Mar 2021	42	20	11	6	4	7	53
13 Mar 2021	42	20	11	6	4	7	53
14 Mar 2021	42	20	11	6	4	7	53
15 Mar 2021	33	13	6	4	3	5	35
16 Mar 2021	33	13	6	4	3	5	35
17 Mar 2021	33	13	6	4	3	5	35
18 Mar 2021	38	18	5	3	3	4	29
19 Mar 2021	38	18	5	3	3	4	29
20 Mar 2021	38	18	5	3	3	4	29
21 Mar 2021	38	18	5	3	3	4	29
22 Mar 2021	38	11	3	2	3	2	10
23 Mar 2021	38	11	3	2	3	2	10
24 Mar 2021	35	8	3	2	3	2	10
25 Mar 2021	35	8	3	2	3	2	10
26 Mar 2021	35	8	3	2	3	2	10
27 Mar 2021	35	8	3	2	3	2	10
28 Mar 2021	35	8	3	2	3	2	10
29 Mar 2021	35	8	3	2	3	2	10
30 Mar 2021	35	8	3	2	3	2	10
31 Mar 2021	35	8	3	2	3	2	10

* Geometric mean calculated using $n < 5$

Table B.4

Summary of compliance at the SBOO kelp stations with the Ocean Plan's Statistical Threshold Value standard for *Enterococcus* bacteria, which states that *Enterococcus* density shall not exceed 110 CFU/100 mL in more than 10% of samples per month.

Date	I19	I24	I25	I26	I32	I39	I40
March	E	E	IC	IC	IC	IC	E

IC = In Compliance

E = Exceedance

ns = not sampled

ND = no data