



SOUTH BAY OCEAN OUTFALL MONTHLY RECEIVING WATERS MONITORING REPORT

SOUTH BAY WATER RECLAMATION PLANT

NPDES Permit No. CA0109045
SDRWQCB Order No. R9-2021-0011

SEPTEMBER 2021

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

Environmental Monitoring & Technical Services Division

October 31, 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 September 2021 Monthly Receiving Waters Monitoring Report for the South Bay Ocean Outfall, South Bay Water Reclamation Plant as required per Order No. R9-2021-0011, 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. R9-2021-0001, NPDES Permit No. CA0108928).

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

Sincerely,



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

PV/rk

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

INTRODUCTION

Monthly reports of water quality and ocean conditions from Playa Blanco, Mexico to Coronado, USA are submitted to the San Diego Regional Water Quality Control Board and U.S. EPA Region 9 in accordance with Order No. R9-2021-0011, NPDES Permit No. CA0109045, for the South Bay Water Reclamation Plant (SBWRP), South Bay Ocean Outfall (SBOO). This report includes receiving waters monitoring data collected from all shore, kelp and offshore stations specified in the above order. Data for influent and effluent monitoring activities for the SBWRP are presented in separate reports.

MATERIALS AND METHODS

Shore Stations

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

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

Kelp Bed Stations

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

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

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

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

Offshore Stations

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

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

Bacteriological Reporting and Quality Assurance

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

Results of the bacteriological analysis of seawater samples collected from each of the shore, kelp bed, and offshore stations located within State waters are assessed relative to the water-contact standards specified in the 2019 California Ocean Plan (Ocean Plan). The six standards are defined as follows:

Water-Contact Objectives

Fecal coliform:

- (1) The 30-day geometric mean (GM) of fecal coliform density not to exceed 200 CFU/100 mL, calculated based on the five most recent samples from each site
- (2) The single sample maximum (SSM) not to exceed 400 CFU/100 mL

Enterococci:

- (1) The six-week rolling GM of *Enterococci* not to exceed 30 CFU/100 mL, calculated weekly
- (2) The statistical threshold value (STV) of 110 CFU/100 mL not to be exceeded by more than 10 percent of the samples collected in a calendar month, calculated in a static manner

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.

Shellfish Harvesting Standards

Total coliform:

- (1) The median total coliform density shall not exceed 70 CFU/100 mL
- (2) The STV of 230 CFU/100 mL not to be exceeded by more than 10 percent of the samples collected in a calendar month, calculated in a static manner

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

➤ 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 September, six of the eight shore stations located north of the border were out of compliance with 2019 California Ocean Plan (Ocean Plan) water contact standards on one or more days as follows:
 - The single sample maximum (SSM) standard for fecal coliforms was exceeded at stations S4, S5, S6, S10, and S11.
 - The statistical threshold value (STV) standard for *Enterococcus* was exceeded at stations S4, S5, S6, S10, and S11.
 - The 30-day running median standard for total coliform was exceeded at stations S4, S5, S6, S10, S11, and S12.
 - The statistical threshold value (STV) standard for total coliforms was exceeded at stations S4, S5, S6, S10, S11, and S12.

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

- Nothing of sewage origin was observed at any of the shore stations in September.
- 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 September 7, 13, 22, and 28.
- During September, five of the seven kelp stations were out of compliance with 2019 Ocean Plan water contact standards on one or more days as follows:
 - The single sample maximum (SSM) standard for fecal coliforms was exceeded at station I19.
 - The statistical threshold value (STV) standard for *Enterococcus* was exceeded at stations I19, I24, I25, and I40.
 - The 30-day running median standard for total coliform was exceeded at stations I19, I24, I25, and I40.
 - The statistical threshold value (STV) standard for total coliforms was exceeded at stations I19, I24, I25, I26, and I40.
- Water column temperatures ranged from 12.85 to 20.05°C. The difference between surface and bottom waters ranged from 1.15 to 4.83°C.
- Concentrations of chlorophyll *a* ranged from 0.69 to 15.46 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 September at the offshore stations. The next quarterly sampling is scheduled for November 2021.



TABLES AND FIGURES



Figure 1.1 Station Map

Shore Stations

Table 2.1

Summary of compliance with the Ocean Plan's 30-day Geometric Mean standard for 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 Sep 2021	3	3	3	2	9	2	5	3
02 Sep 2021	4	3	3	2	13	2	5	3
03 Sep 2021	4	3	3	2	13	2	5	3
04 Sep 2021	4	3	3	2	13	2	5	3
05 Sep 2021	4	3	3	2	13	2	5	3
06 Sep 2021	4	3	3	2	13	2	5	3
07 Sep 2021	10	10	8	2	14	8	14	4
08 Sep 2021	10	10	8	2	14	8	14	4
09 Sep 2021	10	13	8	2	11	9	14	5
10 Sep 2021	10	13	8	2	11	9	14	5
11 Sep 2021	10	13	8	2	11	9	14	5
12 Sep 2021	10	13	8	2	11	9	14	5
13 Sep 2021	10	13	8	2	11	9	14	5
14 Sep 2021	16	10	8	2	8	14	12	5
15 Sep 2021	16	10	8	2	8	14	12	5
16 Sep 2021	21	13	11	2	6	24	13	6
17 Sep 2021	21	13	11	2	6	24	13	6
18 Sep 2021	21	13	11	2	6	24	13	6
19 Sep 2021	21	13	11	2	6	24	13	6
20 Sep 2021	21	13	11	2	6	24	13	6
21 Sep 2021	13	9	8	2	5	14	9	5
22 Sep 2021	13	9	8	2	5	14	9	5
23 Sep 2021	21	13	11	2	4	24	13	4
24 Sep 2021	21	13	11	2	4	24	13	4
25 Sep 2021	21	13	11	2	4	24	13	4
26 Sep 2021	21	13	11	2	4	24	13	4
27 Sep 2021	21	13	11	2	4	24	13	4
28 Sep 2021	28	19	15	2	5	30	19	4
29 Sep 2021	28	19	15	2	5	30	19	4
30 Sep 2021	55	34	25	2	6	60	34	5

* Geometric mean calculated using n<5

Table 2.2

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
07 Sep 2021	E	E	E	IC	IC	E	E	IC
14 Sep 2021	IC	IC	IC	IC	IC	IC	IC	IC
21 Sep 2021	IC	IC	IC	IC	IC	IC	IC	IC
28 Sep 2021	IC	IC	IC	IC	IC	IC	IC	IC

IC = In Compliance

E = Exceedance

ns = not sampled

ND = no data

Table 2.3

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 Sep 2021	5	5	3	2	10	3	3	3
02 Sep 2021	5	5	3	2	10	3	3	3
03 Sep 2021	5	5	3	2	10	3	3	3
04 Sep 2021	5	5	3	2	10	3	3	3
05 Sep 2021	5	5	3	2	10	3	3	3
06 Sep 2021	5	5	3	2	10	3	3	3
07 Sep 2021	12	15	8	2	10	9	9	3
08 Sep 2021	12	15	8	2	10	9	9	3
09 Sep 2021	12	15	8	2	10	9	9	3
10 Sep 2021	12	15	8	2	10	9	9	3
11 Sep 2021	12	15	8	2	10	9	9	3
12 Sep 2021	12	15	8	2	10	9	9	3
13 Sep 2021	12	15	8	2	10	9	9	3
14 Sep 2021	21	25	12	2	11	18	14	4
15 Sep 2021	21	25	12	2	11	18	14	4
16 Sep 2021	21	25	12	2	11	18	14	4
17 Sep 2021	21	25	12	2	11	18	14	4
18 Sep 2021	21	25	12	2	11	18	14	4
19 Sep 2021	21	25	12	2	11	18	14	4
20 Sep 2021	21	25	12	2	11	18	14	4
21 Sep 2021	16	15	8	3	7	15	9	4
22 Sep 2021	16	15	8	3	7	15	9	4
23 Sep 2021	16	15	8	3	7	15	9	4
24 Sep 2021	16	15	8	3	7	15	9	4
25 Sep 2021	16	15	8	3	7	15	9	4
26 Sep 2021	16	15	8	3	7	15	9	4
27 Sep 2021	16	15	8	3	7	15	9	4
28 Sep 2021	22	24	15	3	10	29	18	5
29 Sep 2021	22	24	15	3	10	29	18	5
30 Sep 2021	22	24	15	3	10	29	18	5

* Geometric mean calculated using n<5

Table 2.4

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
September	E	E	E	IC	IC	E	E	IC

IC = In Compliance

E = Exceedance

ns = not sampled

ND = no data

Table 2.5

Summary of compliance with the Ocean Plan's 30-day Median standard for total coliform bacteria at the SBOO shore stations. Data are based on the median of the five most recent samples from each site over the previous 30 days unless otherwise noted (*). Values >70 CFU/100 mL exceed the standard.

Date	S4	S5	S6	S8	S9	S10	S11	S12
01 Sep 2021	40	22	20	20	20	20	20	40
02 Sep 2021	40	111	20	12	30	20	20	120
03 Sep 2021	40	111	20	12	30	20	20	120
04 Sep 2021	40	111	20	12	30	20	20	120
05 Sep 2021	40	111	20	12	30	20	20	120
06 Sep 2021	40	111	20	12	30	20	20	120
07 Sep 2021	40	200	20	20	40	20	20	200
08 Sep 2021	40	200	20	20	40	20	20	200
09 Sep 2021	47	111	20	20	30	20	20	200
10 Sep 2021	47	111	20	20	30	20	20	200
11 Sep 2021	47	111	20	20	30	20	20	200
12 Sep 2021	47	111	20	20	30	20	20	200
13 Sep 2021	47	111	20	20	30	20	20	200
14 Sep 2021	54	100	20	20	20	20	20	200
15 Sep 2021	54	100	20	20	20	20	20	200
16 Sep 2021	827	61	50	20	30	470	50	120
17 Sep 2021	827	61	50	20	30	470	50	120
18 Sep 2021	827	61	50	20	30	470	50	120
19 Sep 2021	827	61	50	20	30	470	50	120
20 Sep 2021	827	61	50	20	30	470	50	120
21 Sep 2021	200	22	20	20	40	200	20	40
22 Sep 2021	200	22	20	20	40	200	20	40
23 Sep 2021	900	61	41	11	30	560	42	30
24 Sep 2021	900	61	41	11	30	560	42	30
25 Sep 2021	900	61	41	11	30	560	42	30
26 Sep 2021	900	61	41	11	30	560	42	30
27 Sep 2021	900	61	41	11	30	560	42	30
28 Sep 2021	1400	100	80	2	20	920	80	20
29 Sep 2021	1400	100	80	2	20	920	80	20
30 Sep 2021	1500	700	360	11	30	1460	480	30

* Median calculated using n<5

Table 2.6

Summary of compliance at the SBOO shore stations with the Ocean Plan's Statistical Threshold Value standard for total coliform bacteria, which states that total coliform density shall not exceed 230 CFU/100 mL in more than 10% of samples per month.

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

IC = In Compliance

E = Exceedance

ns = not sampled

ND = no data

Table 2.7

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. Comments follow the data summary.

Station	Date	Time	Total	Fecal	Entero
S0	07 Sep 2021	1110	8000	1600e	1200e
S0	14 Sep 2021	1152	660	96	92
S0	21 Sep 2021	950	>16000	1200	1800e
S0	28 Sep 2021	1155	3200e	820	320e
S2	07 Sep 2021	1150	1200e	68	62
S2	14 Sep 2021	1238	720	66	110
S2	21 Sep 2021	1050	<20	4e	<2
S2	28 Sep 2021	1227	>16000	1600e	2000e
S3	07 Sep 2021	1210	180e	14e	84
S3	14 Sep 2021	1250	280e	28e	72
S3	21 Sep 2021	1025	24e	<2	<2
S3	28 Sep 2021	1240	7800	400	260e
S4	07 Sep 2021	1036	>16000	460	2200e
S4	14 Sep 2021	1044	1600e	100	60e
S4	21 Sep 2021	841	<200	<2	<2
S4	28 Sep 2021	947	1400	100	120e
S5	07 Sep 2021	901	>16000	1600e	5200
S5	14 Sep 2021	918	100e	4e	42
S5	21 Sep 2021	939	2e	<2	<2
S5	28 Sep 2021	808	1300	110	110
S6	07 Sep 2021	928	6400	420	720
S6	14 Sep 2021	937	80e	8e	30e
S6	21 Sep 2021	955	<2	<2	<2
S6	28 Sep 2021	838	640	56	64
S8	07 Sep 2021	818	<200	2e	2e
S8	14 Sep 2021	828	<20	<2	4e
S8	21 Sep 2021	1058	<2	<2	8e
S8	28 Sep 2021	1056	<2	<2	<2
S9	07 Sep 2021	757	40e	<20	16e
S9	14 Sep 2021	805	<20	<2	4e
S9	21 Sep 2021	1118	<200	<2	4e
S9	28 Sep 2021	1119	<20	<20	20e
S10	07 Sep 2021	1027	>16000	880	4600
S10	14 Sep 2021	1029	920	90	160e
S10	21 Sep 2021	851	<200	<2	<2
S10	28 Sep 2021	938	2000e	80e	110
S11	07 Sep 2021	920	>16000	1100	1800e
S11	14 Sep 2021	929	80e	6e	24e
S11	21 Sep 2021	947	<2	<2	<2
S11	28 Sep 2021	828	880	100	98
S12	07 Sep 2021	838	400e	16e	20e
S12	14 Sep 2021	857	40e	6e	20e
S12	21 Sep 2021	1014	<2	<2	<2

Station	Date	Time	Total	Fecal	Enteric
S12	28 Sep 2021	857	20e	4e	4e

ns = not sampled

ND = no data

Table 2.8

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

Station	Date	Parameter	Value
S0	07 Sep 2021	Arrive Time	1110
S0	07 Sep 2021	Weather	Sunny
S0	07 Sep 2021	Wind Speed (kts)	4.4
S0	07 Sep 2021	Wind Dir	N
S0	07 Sep 2021	Animal Life	Bird-10
S0	07 Sep 2021	Floatables	None
S0	07 Sep 2021	Water Color	Green
S0	07 Sep 2021	Current Direction	N
S0	07 Sep 2021	Water Temp (C)	16
S0	07 Sep 2021	Wave Height Low (ft)	3
S0	07 Sep 2021	High Tide (ft)	4.99
S0	07 Sep 2021	High Tide Time	1013
S0	07 Sep 2021	Low Tide (ft)	-0.4
S0	07 Sep 2021	Low Tide Time	406
S0	07 Sep 2021	Comments	Kelp; 0.5 L/sec water flowing from storm drain
S0	14 Sep 2021	Arrive Time	1152
S0	14 Sep 2021	Weather	Sunny
S0	14 Sep 2021	Wind Speed (kts)	4.1
S0	14 Sep 2021	Wind Dir	N
S0	14 Sep 2021	Animal Life	Bird-15; Dog-2
S0	14 Sep 2021	Floatables	None
S0	14 Sep 2021	Water Color	Green
S0	14 Sep 2021	Current Direction	N
S0	14 Sep 2021	Water Temp (C)	15
S0	14 Sep 2021	Wave Height Low (ft)	4
S0	14 Sep 2021	High Tide (ft)	3.29
S0	14 Sep 2021	High Tide Time	600
S0	14 Sep 2021	Low Tide (ft)	2.97
S0	14 Sep 2021	Low Tide Time	937
S0	14 Sep 2021	Comments	Kelp; 0.5 L/sec water flowing from storm drain
S0	21 Sep 2021	Arrive Time	950
S0	21 Sep 2021	Weather	Sunny
S0	21 Sep 2021	Wind Speed (kts)	1.4
S0	21 Sep 2021	Wind Dir	NE
S0	21 Sep 2021	Animal Life	Bird-10; Dog-1
S0	21 Sep 2021	Floatables	None
S0	21 Sep 2021	Water Color	Green
S0	21 Sep 2021	Current Direction	N
S0	21 Sep 2021	Water Temp (C)	18
S0	21 Sep 2021	Wave Height Low (ft)	3
S0	21 Sep 2021	High Tide (ft)	5.26
S0	21 Sep 2021	High Tide Time	1003
S0	21 Sep 2021	Low Tide (ft)	0.07
S0	21 Sep 2021	Low Tide Time	359
S0	21 Sep 2021	Comments	Water clear; Surfer/Paddle boarder-5; Trash-0; Kelp; Person/Walker/Jogger-7; 0.5 L/sec water flowing from storm drain
S0	28 Sep 2021	Arrive Time	1155
S0	28 Sep 2021	Weather	Cloudy
S0	28 Sep 2021	Wind Speed (kts)	4.2
S0	28 Sep 2021	Wind Dir	N
S0	28 Sep 2021	Animal Life	Bird-15; Dog-2
S0	28 Sep 2021	Floatables	None

Station	Date	Parameter	Value
S0	28 Sep 2021	Water Color	Green
S0	28 Sep 2021	Current Direction	N
S0	28 Sep 2021	Water Temp (C)	15
S0	28 Sep 2021	Wave Height Low (ft)	3
S0	28 Sep 2021	High Tide (ft)	4.22
S0	28 Sep 2021	High Tide Time	1411
S0	28 Sep 2021	Low Tide (ft)	1.17
S0	28 Sep 2021	Low Tide Time	2308
S0	28 Sep 2021	Comments	Kelp; 0.5 L/sec water flowing from storm drain
S2	07 Sep 2021	Arrive Time	1150
S2	07 Sep 2021	Weather	Sunny
S2	07 Sep 2021	Wind Speed (kts)	3.8
S2	07 Sep 2021	Wind Dir	N
S2	07 Sep 2021	Animal Life	Bird-15; Dog-3
S2	07 Sep 2021	Floatables	None
S2	07 Sep 2021	Water Color	Green
S2	07 Sep 2021	Current Direction	N
S2	07 Sep 2021	Water Temp (C)	16
S2	07 Sep 2021	Wave Height Low (ft)	3
S2	07 Sep 2021	High Tide (ft)	4.99
S2	07 Sep 2021	High Tide Time	1013
S2	07 Sep 2021	Low Tide (ft)	-0.4
S2	07 Sep 2021	Low Tide Time	406
S2	07 Sep 2021	Comments	Kelp; No flow from storm drain
S2	14 Sep 2021	Arrive Time	1238
S2	14 Sep 2021	Weather	Sunny
S2	14 Sep 2021	Wind Speed (kts)	4.7
S2	14 Sep 2021	Wind Dir	N
S2	14 Sep 2021	Animal Life	
S2	14 Sep 2021	Floatables	None
S2	14 Sep 2021	Water Color	Green
S2	14 Sep 2021	Current Direction	N
S2	14 Sep 2021	Water Temp (C)	15
S2	14 Sep 2021	Wave Height Low (ft)	4
S2	14 Sep 2021	High Tide (ft)	3.29
S2	14 Sep 2021	High Tide Time	600
S2	14 Sep 2021	Low Tide (ft)	2.97
S2	14 Sep 2021	Low Tide Time	937
S2	14 Sep 2021	Comments	Kelp; No flow from storm drain
S2	21 Sep 2021	Arrive Time	1050
S2	21 Sep 2021	Weather	Sunny
S2	21 Sep 2021	Wind Speed (kts)	1.1
S2	21 Sep 2021	Wind Dir	NE
S2	21 Sep 2021	Animal Life	Bird-10; Dog-2
S2	21 Sep 2021	Floatables	None
S2	21 Sep 2021	Water Color	Green
S2	21 Sep 2021	Current Direction	N
S2	21 Sep 2021	Water Temp (C)	18
S2	21 Sep 2021	Wave Height Low (ft)	3
S2	21 Sep 2021	High Tide (ft)	5.26
S2	21 Sep 2021	High Tide Time	1003
S2	21 Sep 2021	Low Tide (ft)	0.07
S2	21 Sep 2021	Low Tide Time	359
S2	21 Sep 2021	Comments	Water clear; Trash-0; Kelp; Person/Walker/Jogger-10; no flow from storm drain
S2	28 Sep 2021	Arrive Time	1227
S2	28 Sep 2021	Weather	Cloudy

Station	Date	Parameter	Value
S2	28 Sep 2021	Wind Speed (kts)	5.2
S2	28 Sep 2021	Wind Dir	N
S2	28 Sep 2021	Animal Life	Bird-15
S2	28 Sep 2021	Floatables	None
S2	28 Sep 2021	Water Color	Green
S2	28 Sep 2021	Current Direction	N
S2	28 Sep 2021	Water Temp (C)	15
S2	28 Sep 2021	Wave Height Low (ft)	4
S2	28 Sep 2021	High Tide (ft)	4.22
S2	28 Sep 2021	High Tide Time	1411
S2	28 Sep 2021	Low Tide (ft)	1.17
S2	28 Sep 2021	Low Tide Time	2308
S2	28 Sep 2021	Comments	Kelp; No flow from storm drain
S3	07 Sep 2021	Arrive Time	10
S3	07 Sep 2021	Weather	Sunny
S3	07 Sep 2021	Wind Speed (kts)	2.3
S3	07 Sep 2021	Wind Dir	N
S3	07 Sep 2021	Animal Life	Bird-20
S3	07 Sep 2021	Floatables	None
S3	07 Sep 2021	Water Color	Green
S3	07 Sep 2021	Current Direction	N
S3	07 Sep 2021	Water Temp (C)	16
S3	07 Sep 2021	Wave Height Low (ft)	3
S3	07 Sep 2021	High Tide (ft)	4.99
S3	07 Sep 2021	High Tide Time	1013
S3	07 Sep 2021	Low Tide (ft)	-0.4
S3	07 Sep 2021	Low Tide Time	406
S3	07 Sep 2021	Comments	Water turbid; Surfer/Paddle boarder-3; Trash-0; Kelp; 0.1 L/sec water flowing from storm drain
S3	14 Sep 2021	Arrive Time	1250
S3	14 Sep 2021	Weather	Sunny
S3	14 Sep 2021	Wind Speed (kts)	3.8
S3	14 Sep 2021	Wind Dir	N
S3	14 Sep 2021	Animal Life	Bird-15; Dog-1
S3	14 Sep 2021	Floatables	None
S3	14 Sep 2021	Water Color	Green
S3	14 Sep 2021	Current Direction	N
S3	14 Sep 2021	Water Temp (C)	15
S3	14 Sep 2021	Wave Height Low (ft)	4
S3	14 Sep 2021	High Tide (ft)	3.29
S3	14 Sep 2021	High Tide Time	600
S3	14 Sep 2021	Low Tide (ft)	2.97
S3	14 Sep 2021	Low Tide Time	937
S3	14 Sep 2021	Comments	Kelp; No flow from storm drain
S3	21 Sep 2021	Arrive Time	1025
S3	21 Sep 2021	Weather	Sunny
S3	21 Sep 2021	Wind Speed (kts)	1.3
S3	21 Sep 2021	Wind Dir	NE
S3	21 Sep 2021	Animal Life	Bird-5; Dog-2
S3	21 Sep 2021	Floatables	None
S3	21 Sep 2021	Water Color	Green
S3	21 Sep 2021	Current Direction	N
S3	21 Sep 2021	Water Temp (C)	18
S3	21 Sep 2021	Wave Height Low (ft)	3
S3	21 Sep 2021	High Tide (ft)	5.26
S3	21 Sep 2021	High Tide Time	1003
S3	21 Sep 2021	Low Tide (ft)	0.07
S3	21 Sep 2021	Low Tide Time	359

Station	Date	Parameter	Value
S3	21 Sep 2021	Comments	Water clear; Trash-0; Kelp; Person/Walker/Jogger-5; no flow from storm drain
S3	28 Sep 2021	Arrive Time	1240
S3	28 Sep 2021	Weather	Cloudy
S3	28 Sep 2021	Wind Speed (kts)	5.1
S3	28 Sep 2021	Wind Dir	N
S3	28 Sep 2021	Animal Life	Bird-15; Dog-2
S3	28 Sep 2021	Floatables	None
S3	28 Sep 2021	Water Color	Green
S3	28 Sep 2021	Current Direction	N
S3	28 Sep 2021	Water Temp (C)	15
S3	28 Sep 2021	Wave Height Low (ft)	4
S3	28 Sep 2021	High Tide (ft)	4.22
S3	28 Sep 2021	High Tide Time	1411
S3	28 Sep 2021	Low Tide (ft)	1.17
S3	28 Sep 2021	Low Tide Time	2308
S3	28 Sep 2021	Comments	Kelp; No flow from storm drain
S4	07 Sep 2021	Arrive Time	1036
S4	07 Sep 2021	Weather	Sunny
S4	07 Sep 2021	Wind Speed (kts)	2.4
S4	07 Sep 2021	Wind Dir	W
S4	07 Sep 2021	Animal Life	Bird-19; Dolphin-2
S4	07 Sep 2021	Floatables	Foam; Film
S4	07 Sep 2021	Water Color	Green
S4	07 Sep 2021	Current Direction	N
S4	07 Sep 2021	Water Temp (C)	21.6
S4	07 Sep 2021	Wave Height Low (ft)	2
S4	07 Sep 2021	High Tide (ft)	4.99
S4	07 Sep 2021	High Tide Time	1013
S4	07 Sep 2021	Low Tide (ft)	-0.4
S4	07 Sep 2021	Low Tide Time	406
S4	07 Sep 2021	Comments	Kelp; Seagrass
S4	14 Sep 2021	Arrive Time	1044
S4	14 Sep 2021	Weather	Partly cloudy
S4	14 Sep 2021	Wind Speed (kts)	5.5
S4	14 Sep 2021	Wind Dir	W
S4	14 Sep 2021	Animal Life	Bird-36
S4	14 Sep 2021	Floatables	Foam
S4	14 Sep 2021	Water Color	Green
S4	14 Sep 2021	Current Direction	N
S4	14 Sep 2021	Water Temp (C)	17.4
S4	14 Sep 2021	Wave Height Low (ft)	4
S4	14 Sep 2021	High Tide (ft)	3.29
S4	14 Sep 2021	High Tide Time	600
S4	14 Sep 2021	Low Tide (ft)	2.97
S4	14 Sep 2021	Low Tide Time	937
S4	14 Sep 2021	Comments	Water clear; Trash-2; Kelp; Seagrass; Person/Walker/Jogger-1
S4	21 Sep 2021	Arrive Time	841
S4	21 Sep 2021	Weather	Sunny
S4	21 Sep 2021	Wind Speed (kts)	5.5
S4	21 Sep 2021	Wind Dir	NW
S4	21 Sep 2021	Animal Life	
S4	21 Sep 2021	Floatables	Foam; Film
S4	21 Sep 2021	Water Color	Green
S4	21 Sep 2021	Current Direction	S
S4	21 Sep 2021	Water Temp (C)	17.5

Station	Date	Parameter	Value
S4	21 Sep 2021	Wave Height Low (ft)	5
S4	21 Sep 2021	High Tide (ft)	5.26
S4	21 Sep 2021	High Tide Time	1003
S4	21 Sep 2021	Low Tide (ft)	0.07
S4	21 Sep 2021	Low Tide Time	359
S4	21 Sep 2021	Comments	Kelp; Seagrass
S4	28 Sep 2021	Arrive Time	947
S4	28 Sep 2021	Weather	Cloudy
S4	28 Sep 2021	Wind Speed (kts)	2.1
S4	28 Sep 2021	Wind Dir	W
S4	28 Sep 2021	Animal Life	Bird-5; Dolphin-3; Horse-4; Pelican-1; Seagull-20
S4	28 Sep 2021	Floatables	Foam
S4	28 Sep 2021	Water Color	Green
S4	28 Sep 2021	Current Direction	N
S4	28 Sep 2021	Water Temp (C)	18.1
S4	28 Sep 2021	Wave Height Low (ft)	3
S4	28 Sep 2021	High Tide (ft)	4.22
S4	28 Sep 2021	High Tide Time	1411
S4	28 Sep 2021	Low Tide (ft)	1.17
S4	28 Sep 2021	Low Tide Time	2308
S4	28 Sep 2021	Comments	Water turbid; Trash-1; Kelp; Seagrass; Person/Walker/Jogger-4
S5	07 Sep 2021	Arrive Time	901
S5	07 Sep 2021	Weather	Overcast
S5	07 Sep 2021	Wind Speed (kts)	4.2
S5	07 Sep 2021	Wind Dir	W
S5	07 Sep 2021	Animal Life	
S5	07 Sep 2021	Floatables	None
S5	07 Sep 2021	Water Color	Green
S5	07 Sep 2021	Current Direction	N
S5	07 Sep 2021	Water Temp (C)	21
S5	07 Sep 2021	Wave Height Low (ft)	1
S5	07 Sep 2021	High Tide (ft)	4.99
S5	07 Sep 2021	High Tide Time	1013
S5	07 Sep 2021	Low Tide (ft)	-0.4
S5	07 Sep 2021	Low Tide Time	406
S5	07 Sep 2021	Comments	Water turbid; Trash-1; Kelp; Seagrass; Person/Walker/Jogger-3
S5	14 Sep 2021	Arrive Time	918
S5	14 Sep 2021	Weather	Overcast
S5	14 Sep 2021	Wind Speed (kts)	5.8
S5	14 Sep 2021	Wind Dir	W
S5	14 Sep 2021	Animal Life	Bird-1
S5	14 Sep 2021	Floatables	None
S5	14 Sep 2021	Water Color	Green
S5	14 Sep 2021	Current Direction	N
S5	14 Sep 2021	Water Temp (C)	17.4
S5	14 Sep 2021	Wave Height Low (ft)	4
S5	14 Sep 2021	High Tide (ft)	3.29
S5	14 Sep 2021	High Tide Time	600
S5	14 Sep 2021	Low Tide (ft)	2.97
S5	14 Sep 2021	Low Tide Time	937
S5	14 Sep 2021	Comments	Water turbid; Trash-2; Seagrass; Person/Walker/Jogger-2
S5	21 Sep 2021	Arrive Time	939
S5	21 Sep 2021	Weather	Sunny
S5	21 Sep 2021	Wind Speed (kts)	6.6
S5	21 Sep 2021	Wind Dir	NW

Station	Date	Parameter	Value
S5	21 Sep 2021	Animal Life	
S5	21 Sep 2021	Floatables	Foam
S5	21 Sep 2021	Water Color	Green
S5	21 Sep 2021	Current Direction	S
S5	21 Sep 2021	Water Temp (C)	21.7
S5	21 Sep 2021	Wave Height Low (ft)	2
S5	21 Sep 2021	High Tide (ft)	5.26
S5	21 Sep 2021	High Tide Time	1003
S5	21 Sep 2021	Low Tide (ft)	0.07
S5	21 Sep 2021	Low Tide Time	359
S5	21 Sep 2021	Comments	Water clear; Trash-1; Kelp; Seagrass; Debris; Person/Walker/Jogger-1
S5	28 Sep 2021	Arrive Time	808
S5	28 Sep 2021	Weather	Cloudy
S5	28 Sep 2021	Wind Speed (kts)	1.9
S5	28 Sep 2021	Wind Dir	W
S5	28 Sep 2021	Animal Life	Bird-20; Pelican-1
S5	28 Sep 2021	Floatables	Foam
S5	28 Sep 2021	Water Color	Grey
S5	28 Sep 2021	Current Direction	N
S5	28 Sep 2021	Water Temp (C)	17.4
S5	28 Sep 2021	Wave Height Low (ft)	2
S5	28 Sep 2021	High Tide (ft)	4.22
S5	28 Sep 2021	High Tide Time	1411
S5	28 Sep 2021	Low Tide (ft)	1.17
S5	28 Sep 2021	Low Tide Time	2308
S5	28 Sep 2021	Comments	Water turbid; Trash-1; Kelp; Seagrass; Debris; Person/Walker/Jogger-1
S6	07 Sep 2021	Arrive Time	928
S6	07 Sep 2021	Weather	Overcast
S6	07 Sep 2021	Wind Speed (kts)	2.5
S6	07 Sep 2021	Wind Dir	SW
S6	07 Sep 2021	Animal Life	
S6	07 Sep 2021	Floatables	Foam
S6	07 Sep 2021	Water Color	Green
S6	07 Sep 2021	Current Direction	N
S6	07 Sep 2021	Water Temp (C)	21.3
S6	07 Sep 2021	Wave Height Low (ft)	4
S6	07 Sep 2021	High Tide (ft)	4.99
S6	07 Sep 2021	High Tide Time	1013
S6	07 Sep 2021	Low Tide (ft)	-0.4
S6	07 Sep 2021	Low Tide Time	406
S6	07 Sep 2021	Comments	Water turbid; Surfer/Paddle boarder-19; Trash-1; Kelp; Seagrass; Person/Walker/Jogger-5
S6	14 Sep 2021	Arrive Time	937
S6	14 Sep 2021	Weather	Overcast
S6	14 Sep 2021	Wind Speed (kts)	5.1
S6	14 Sep 2021	Wind Dir	W
S6	14 Sep 2021	Animal Life	Dog-2
S6	14 Sep 2021	Floatables	Foam
S6	14 Sep 2021	Water Color	Green
S6	14 Sep 2021	Current Direction	N
S6	14 Sep 2021	Water Temp (C)	17.2
S6	14 Sep 2021	Wave Height Low (ft)	3
S6	14 Sep 2021	High Tide (ft)	3.29
S6	14 Sep 2021	High Tide Time	600
S6	14 Sep 2021	Low Tide (ft)	2.97
S6	14 Sep 2021	Low Tide Time	937

Station	Date	Parameter	Value
S6	14 Sep 2021	Comments	Water turbid; Surfer/Paddle boarder-2; Trash-1; Kelp; Person/Walker/Jogger-4
S6	21 Sep 2021	Arrive Time	955
S6	21 Sep 2021	Weather	Sunny
S6	21 Sep 2021	Wind Speed (kts)	4.9
S6	21 Sep 2021	Wind Dir	NW
S6	21 Sep 2021	Animal Life	
S6	21 Sep 2021	Floatables	Foam
S6	21 Sep 2021	Water Color	Green
S6	21 Sep 2021	Current Direction	S
S6	21 Sep 2021	Water Temp (C)	19.8
S6	21 Sep 2021	Wave Height Low (ft)	3
S6	21 Sep 2021	High Tide (ft)	5.26
S6	21 Sep 2021	High Tide Time	1003
S6	21 Sep 2021	Low Tide (ft)	0.07
S6	21 Sep 2021	Low Tide Time	359
S6	21 Sep 2021	Comments	Water turbid; Surfer/Paddle boarder-2; Trash-1; Kelp; Seagrass; Person/Walker/Jogger-2
S6	28 Sep 2021	Arrive Time	838
S6	28 Sep 2021	Weather	Cloudy
S6	28 Sep 2021	Wind Speed (kts)	0.9
S6	28 Sep 2021	Wind Dir	W
S6	28 Sep 2021	Animal Life	Bird-5
S6	28 Sep 2021	Floatables	Foam; Fecal matter
S6	28 Sep 2021	Water Color	Green
S6	28 Sep 2021	Current Direction	N
S6	28 Sep 2021	Water Temp (C)	17.7
S6	28 Sep 2021	Wave Height Low (ft)	3
S6	28 Sep 2021	High Tide (ft)	4.22
S6	28 Sep 2021	High Tide Time	1411
S6	28 Sep 2021	Low Tide (ft)	1.17
S6	28 Sep 2021	Low Tide Time	2308
S6	28 Sep 2021	Comments	Water turbid; Trash-1; Kelp; Seagrass; Person/Walker/Jogger-1
S8	07 Sep 2021	Arrive Time	818
S8	07 Sep 2021	Weather	Overcast
S8	07 Sep 2021	Wind Speed (kts)	1.4
S8	07 Sep 2021	Wind Dir	W
S8	07 Sep 2021	Animal Life	Bird-7
S8	07 Sep 2021	Floatables	None
S8	07 Sep 2021	Water Color	Green
S8	07 Sep 2021	Current Direction	N
S8	07 Sep 2021	Water Temp (C)	21.6
S8	07 Sep 2021	Wave Height Low (ft)	1
S8	07 Sep 2021	High Tide (ft)	4.99
S8	07 Sep 2021	High Tide Time	1013
S8	07 Sep 2021	Low Tide (ft)	-0.4
S8	07 Sep 2021	Low Tide Time	406
S8	07 Sep 2021	Comments	Water clear; Trash-1; Kelp; Seagrass; Person/Walker/Jogger-3
S8	14 Sep 2021	Arrive Time	828
S8	14 Sep 2021	Weather	Overcast
S8	14 Sep 2021	Wind Speed (kts)	3.6
S8	14 Sep 2021	Wind Dir	W
S8	14 Sep 2021	Animal Life	Seagull-1
S8	14 Sep 2021	Floatables	Foam
S8	14 Sep 2021	Water Color	Green

Station	Date	Parameter	Value
S8	14 Sep 2021	Current Direction	N
S8	14 Sep 2021	Water Temp (C)	17.6
S8	14 Sep 2021	Wave Height Low (ft)	3
S8	14 Sep 2021	High Tide (ft)	3.29
S8	14 Sep 2021	High Tide Time	600
S8	14 Sep 2021	Low Tide (ft)	2.97
S8	14 Sep 2021	Low Tide Time	937
S8	14 Sep 2021	Comments	Water clear; Trash-1; Seagrass; Person/Walker/Jogger-4
S8	21 Sep 2021	Arrive Time	1058
S8	21 Sep 2021	Weather	Sunny
S8	21 Sep 2021	Wind Speed (kts)	4.7
S8	21 Sep 2021	Wind Dir	W
S8	21 Sep 2021	Animal Life	Seagull-7
S8	21 Sep 2021	Floatables	Foam
S8	21 Sep 2021	Water Color	Green
S8	21 Sep 2021	Current Direction	S
S8	21 Sep 2021	Water Temp (C)	19.9
S8	21 Sep 2021	Wave Height Low (ft)	1
S8	21 Sep 2021	High Tide (ft)	5.26
S8	21 Sep 2021	High Tide Time	1003
S8	21 Sep 2021	Low Tide (ft)	0.07
S8	21 Sep 2021	Low Tide Time	359
S8	21 Sep 2021	Comments	Water turbid; Fisherperson-2; Trash-1; Kelp; Seagrass; Person/Walker/Jogger-22
S8	28 Sep 2021	Arrive Time	1056
S8	28 Sep 2021	Weather	Cloudy
S8	28 Sep 2021	Wind Speed (kts)	1.8
S8	28 Sep 2021	Wind Dir	W
S8	28 Sep 2021	Animal Life	Bird-1; Seagull-1
S8	28 Sep 2021	Floatables	Foam
S8	28 Sep 2021	Water Color	Green
S8	28 Sep 2021	Current Direction	N
S8	28 Sep 2021	Water Temp (C)	19.2
S8	28 Sep 2021	Wave Height Low (ft)	2
S8	28 Sep 2021	High Tide (ft)	4.22
S8	28 Sep 2021	High Tide Time	1411
S8	28 Sep 2021	Low Tide (ft)	1.17
S8	28 Sep 2021	Low Tide Time	2308
S8	28 Sep 2021	Comments	Water turbid; Boogie boarder/Swimmer-2; Trash-1; Kelp; Seagrass; Person/Walker/Jogger-6
S9	07 Sep 2021	Arrive Time	757
S9	07 Sep 2021	Weather	Overcast
S9	07 Sep 2021	Wind Speed (kts)	0.4
S9	07 Sep 2021	Wind Dir	SW
S9	07 Sep 2021	Animal Life	Bird-17
S9	07 Sep 2021	Floatables	Foam
S9	07 Sep 2021	Water Color	Green
S9	07 Sep 2021	Current Direction	N
S9	07 Sep 2021	Water Temp (C)	21.5
S9	07 Sep 2021	Wave Height Low (ft)	1
S9	07 Sep 2021	High Tide (ft)	4.99
S9	07 Sep 2021	High Tide Time	1013
S9	07 Sep 2021	Low Tide (ft)	-0.4
S9	07 Sep 2021	Low Tide Time	406
S9	07 Sep 2021	Comments	Water turbid; Surfer/Paddle boarder-1; Trash-1; Kelp; Seagrass; Person/Walker/Jogger-10
S9	14 Sep 2021	Arrive Time	805

Station	Date	Parameter	Value
S9	14 Sep 2021	Weather	Overcast
S9	14 Sep 2021	Wind Speed (kts)	2.4
S9	14 Sep 2021	Wind Dir	W
S9	14 Sep 2021	Animal Life	Seagull-9
S9	14 Sep 2021	Floatables	Foam
S9	14 Sep 2021	Water Color	Green
S9	14 Sep 2021	Current Direction	N
S9	14 Sep 2021	Water Temp (C)	17.3
S9	14 Sep 2021	Wave Height Low (ft)	1
S9	14 Sep 2021	High Tide (ft)	3.29
S9	14 Sep 2021	High Tide Time	600
S9	14 Sep 2021	Low Tide (ft)	2.97
S9	14 Sep 2021	Low Tide Time	937
S9	14 Sep 2021	Comments	Water clear; Trash-1; Kelp; Seagrass; Person/Walker/Jogger-5
S9	21 Sep 2021	Arrive Time	1118
S9	21 Sep 2021	Weather	Sunny
S9	21 Sep 2021	Wind Speed (kts)	4.1
S9	21 Sep 2021	Wind Dir	N
S9	21 Sep 2021	Animal Life	Seagull-13
S9	21 Sep 2021	Floatables	Foam
S9	21 Sep 2021	Water Color	Green
S9	21 Sep 2021	Current Direction	S
S9	21 Sep 2021	Water Temp (C)	21.5
S9	21 Sep 2021	Wave Height Low (ft)	1
S9	21 Sep 2021	High Tide (ft)	5.26
S9	21 Sep 2021	High Tide Time	1003
S9	21 Sep 2021	Low Tide (ft)	0.07
S9	21 Sep 2021	Low Tide Time	359
S9	21 Sep 2021	Comments	Water turbid; Trash-1; Kelp; Seagrass; Person/Walker/Jogger-18
S9	28 Sep 2021	Arrive Time	1119
S9	28 Sep 2021	Weather	Cloudy
S9	28 Sep 2021	Wind Speed (kts)	2.8
S9	28 Sep 2021	Wind Dir	W
S9	28 Sep 2021	Animal Life	Seagull-35
S9	28 Sep 2021	Floatables	Foam
S9	28 Sep 2021	Water Color	Green
S9	28 Sep 2021	Current Direction	N
S9	28 Sep 2021	Water Temp (C)	20
S9	28 Sep 2021	Wave Height Low (ft)	1
S9	28 Sep 2021	High Tide (ft)	4.22
S9	28 Sep 2021	High Tide Time	1411
S9	28 Sep 2021	Low Tide (ft)	1.17
S9	28 Sep 2021	Low Tide Time	2308
S9	28 Sep 2021	Comments	Water turbid; Trash-1; Kelp; Seagrass; Person/Walker/Jogger-8
S10	07 Sep 2021	Arrive Time	1027
S10	07 Sep 2021	Weather	Partly cloudy
S10	07 Sep 2021	Wind Speed (kts)	2.1
S10	07 Sep 2021	Wind Dir	W
S10	07 Sep 2021	Animal Life	Bird-3; Seagull-2
S10	07 Sep 2021	Floatables	Foam; Film
S10	07 Sep 2021	Water Color	Green
S10	07 Sep 2021	Current Direction	N
S10	07 Sep 2021	Water Temp (C)	21.4
S10	07 Sep 2021	Wave Height Low (ft)	3
S10	07 Sep 2021	High Tide (ft)	4.99

Station	Date	Parameter	Value
S10	07 Sep 2021	High Tide Time	1013
S10	07 Sep 2021	Low Tide (ft)	-0.4
S10	07 Sep 2021	Low Tide Time	406
S10	07 Sep 2021	Comments	Kelp; Seagrass
S10	14 Sep 2021	Arrive Time	1029
S10	14 Sep 2021	Weather	Partly cloudy
S10	14 Sep 2021	Wind Speed (kts)	4.8
S10	14 Sep 2021	Wind Dir	W
S10	14 Sep 2021	Animal Life	
S10	14 Sep 2021	Floatables	Foam
S10	14 Sep 2021	Water Color	Green
S10	14 Sep 2021	Current Direction	N
S10	14 Sep 2021	Water Temp (C)	17.5
S10	14 Sep 2021	Wave Height Low (ft)	4
S10	14 Sep 2021	High Tide (ft)	3.29
S10	14 Sep 2021	High Tide Time	600
S10	14 Sep 2021	Low Tide (ft)	2.97
S10	14 Sep 2021	Low Tide Time	937
S10	14 Sep 2021	Comments	Seagrass; Kelp
S10	21 Sep 2021	Arrive Time	851
S10	21 Sep 2021	Weather	Sunny
S10	21 Sep 2021	Wind Speed (kts)	4.9
S10	21 Sep 2021	Wind Dir	NW
S10	21 Sep 2021	Animal Life	Bird-30
S10	21 Sep 2021	Floatables	Foam
S10	21 Sep 2021	Water Color	Green
S10	21 Sep 2021	Current Direction	S
S10	21 Sep 2021	Water Temp (C)	18.8
S10	21 Sep 2021	Wave Height Low (ft)	3
S10	21 Sep 2021	High Tide (ft)	5.26
S10	21 Sep 2021	High Tide Time	1003
S10	21 Sep 2021	Low Tide (ft)	0.07
S10	21 Sep 2021	Low Tide Time	359
S10	21 Sep 2021	Comments	Kelp; Seagrass
S10	28 Sep 2021	Arrive Time	938
S10	28 Sep 2021	Weather	Cloudy
S10	28 Sep 2021	Wind Speed (kts)	2.2
S10	28 Sep 2021	Wind Dir	W
S10	28 Sep 2021	Animal Life	Bird-5
S10	28 Sep 2021	Floatables	Foam
S10	28 Sep 2021	Water Color	Green
S10	28 Sep 2021	Current Direction	N
S10	28 Sep 2021	Water Temp (C)	17.8
S10	28 Sep 2021	Wave Height Low (ft)	3
S10	28 Sep 2021	High Tide (ft)	4.22
S10	28 Sep 2021	High Tide Time	1411
S10	28 Sep 2021	Low Tide (ft)	1.17
S10	28 Sep 2021	Low Tide Time	2308
S10	28 Sep 2021	Comments	Seagrass; Kelp; Debris
S11	07 Sep 2021	Arrive Time	920
S11	07 Sep 2021	Weather	Overcast
S11	07 Sep 2021	Wind Speed (kts)	4.2
S11	07 Sep 2021	Wind Dir	SW
S11	07 Sep 2021	Animal Life	
S11	07 Sep 2021	Floatables	None
S11	07 Sep 2021	Water Color	Green
S11	07 Sep 2021	Current Direction	N

Station	Date	Parameter	Value
S11	07 Sep 2021	Water Temp (C)	21.3
S11	07 Sep 2021	Wave Height Low (ft)	3
S11	07 Sep 2021	High Tide (ft)	4.99
S11	07 Sep 2021	High Tide Time	1013
S11	07 Sep 2021	Low Tide (ft)	-0.4
S11	07 Sep 2021	Low Tide Time	406
S11	07 Sep 2021	Comments	Water turbid; Trash-2; Kelp; Seagrass; Debris; Person/Walker/Jogger-3
S11	14 Sep 2021	Arrive Time	929
S11	14 Sep 2021	Weather	Overcast
S11	14 Sep 2021	Wind Speed (kts)	6.6
S11	14 Sep 2021	Wind Dir	W
S11	14 Sep 2021	Animal Life	Bird-1
S11	14 Sep 2021	Floatables	Foam
S11	14 Sep 2021	Water Color	Green
S11	14 Sep 2021	Current Direction	N
S11	14 Sep 2021	Water Temp (C)	17.3
S11	14 Sep 2021	Wave Height Low (ft)	4
S11	14 Sep 2021	High Tide (ft)	3.29
S11	14 Sep 2021	High Tide Time	600
S11	14 Sep 2021	Low Tide (ft)	2.97
S11	14 Sep 2021	Low Tide Time	937
S11	14 Sep 2021	Comments	Water turbid; Surfer/Paddle boarder-1; Trash-1; Kelp; Seagrass; Person/Walker/Jogger-3
S11	21 Sep 2021	Arrive Time	947
S11	21 Sep 2021	Weather	Sunny
S11	21 Sep 2021	Wind Speed (kts)	5.9
S11	21 Sep 2021	Wind Dir	NW
S11	21 Sep 2021	Animal Life	Bird-1
S11	21 Sep 2021	Floatables	Foam; Film
S11	21 Sep 2021	Water Color	Green
S11	21 Sep 2021	Current Direction	S
S11	21 Sep 2021	Water Temp (C)	21.1
S11	21 Sep 2021	Wave Height Low (ft)	3
S11	21 Sep 2021	High Tide (ft)	5.26
S11	21 Sep 2021	High Tide Time	1003
S11	21 Sep 2021	Low Tide (ft)	0.07
S11	21 Sep 2021	Low Tide Time	359
S11	21 Sep 2021	Comments	Water clear; Trash-1; Kelp; Seagrass; Debris; Person/Walker/Jogger-9
S11	28 Sep 2021	Arrive Time	828
S11	28 Sep 2021	Weather	Cloudy
S11	28 Sep 2021	Wind Speed (kts)	2.7
S11	28 Sep 2021	Wind Dir	W
S11	28 Sep 2021	Animal Life	Bird-2; Pelican-1
S11	28 Sep 2021	Floatables	Foam
S11	28 Sep 2021	Water Color	Green
S11	28 Sep 2021	Current Direction	N
S11	28 Sep 2021	Water Temp (C)	17.6
S11	28 Sep 2021	Wave Height Low (ft)	3
S11	28 Sep 2021	High Tide (ft)	4.22
S11	28 Sep 2021	High Tide Time	1411
S11	28 Sep 2021	Low Tide (ft)	1.17
S11	28 Sep 2021	Low Tide Time	2308
S11	28 Sep 2021	Comments	Water turbid; Trash-1; Kelp; Seagrass; Person/Walker/Jogger-3
S12	07 Sep 2021	Arrive Time	838

Station	Date	Parameter	Value
S12	07 Sep 2021	Weather	Overcast
S12	07 Sep 2021	Wind Speed (kts)	2.7
S12	07 Sep 2021	Wind Dir	SW
S12	07 Sep 2021	Animal Life	Bird-3; Dog-1
S12	07 Sep 2021	Floatables	None
S12	07 Sep 2021	Water Color	Green
S12	07 Sep 2021	Current Direction	N
S12	07 Sep 2021	Water Temp (C)	21.5
S12	07 Sep 2021	Wave Height Low (ft)	2
S12	07 Sep 2021	High Tide (ft)	4.99
S12	07 Sep 2021	High Tide Time	1013
S12	07 Sep 2021	Low Tide (ft)	-0.4
S12	07 Sep 2021	Low Tide Time	406
S12	07 Sep 2021	Comments	Water clear; Trash-1; Kelp; Seagrass; Person/Walker/Jogger-6
S12	14 Sep 2021	Arrive Time	857
S12	14 Sep 2021	Weather	Overcast
S12	14 Sep 2021	Wind Speed (kts)	2.6
S12	14 Sep 2021	Wind Dir	W
S12	14 Sep 2021	Animal Life	Bird-9
S12	14 Sep 2021	Floatables	None
S12	14 Sep 2021	Water Color	Green
S12	14 Sep 2021	Current Direction	N
S12	14 Sep 2021	Water Temp (C)	17.6
S12	14 Sep 2021	Wave Height Low (ft)	3
S12	14 Sep 2021	High Tide (ft)	3.29
S12	14 Sep 2021	High Tide Time	600
S12	14 Sep 2021	Low Tide (ft)	2.97
S12	14 Sep 2021	Low Tide Time	937
S12	14 Sep 2021	Comments	Water clear; Trash-1; Kelp; Seagrass; Person/Walker/Jogger-2
S12	21 Sep 2021	Arrive Time	1014
S12	21 Sep 2021	Weather	Sunny
S12	21 Sep 2021	Wind Speed (kts)	4.9
S12	21 Sep 2021	Wind Dir	NW
S12	21 Sep 2021	Animal Life	
S12	21 Sep 2021	Floatables	Foam
S12	21 Sep 2021	Water Color	Green
S12	21 Sep 2021	Current Direction	S
S12	21 Sep 2021	Water Temp (C)	17.9
S12	21 Sep 2021	Wave Height Low (ft)	2
S12	21 Sep 2021	High Tide (ft)	5.26
S12	21 Sep 2021	High Tide Time	1003
S12	21 Sep 2021	Low Tide (ft)	0.07
S12	21 Sep 2021	Low Tide Time	359
S12	21 Sep 2021	Comments	Water turbid; Trash-1; Kelp; Seagrass; Person/Walker/Jogger-6
S12	28 Sep 2021	Arrive Time	857
S12	28 Sep 2021	Weather	Cloudy
S12	28 Sep 2021	Wind Speed (kts)	1.8
S12	28 Sep 2021	Wind Dir	W
S12	28 Sep 2021	Animal Life	Bird-5; Seagull-10
S12	28 Sep 2021	Floatables	Foam
S12	28 Sep 2021	Water Color	Green
S12	28 Sep 2021	Current Direction	N
S12	28 Sep 2021	Water Temp (C)	17.8
S12	28 Sep 2021	Wave Height Low (ft)	2
S12	28 Sep 2021	High Tide (ft)	4.22

Station	Date	Parameter	Value
S12	28 Sep 2021	High Tide Time	1411
S12	28 Sep 2021	Low Tide (ft)	1.17
S12	28 Sep 2021	Low Tide Time	2308
S12	28 Sep 2021	Comments	Kelp; Seagrass

Kelp Stations

Table 3.1

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 Sep 2021	5	2	2	2	2	4	2
02 Sep 2021	5	2	2	2	2	4	2
03 Sep 2021	5	2	2	2	2	4	2
04 Sep 2021	5	2	2	2	2	4	2
05 Sep 2021	5	2	2	2	2	4	2
06 Sep 2021	5	2	2	2	2	4	2
07 Sep 2021	12	4	3	3	2	4	5
08 Sep 2021	16	4	3	3	2	2	6
09 Sep 2021	16	4	3	3	2	2	6
10 Sep 2021	16	4	3	3	2	2	6
11 Sep 2021	16	4	3	3	2	2	6
12 Sep 2021	16	4	3	3	2	2	6
13 Sep 2021	11	4	3	3	2	2	5
14 Sep 2021	11	4	3	3	2	2	5
15 Sep 2021	11	4	3	3	2	2	5
16 Sep 2021	16	4	3	3	2	2	6
17 Sep 2021	16	4	3	3	2	2	6
18 Sep 2021	16	4	3	3	2	2	6
19 Sep 2021	16	4	3	3	2	2	6
20 Sep 2021	16	4	3	3	2	2	6
21 Sep 2021	16	4	3	3	2	2	6
22 Sep 2021	11	4	3	3	2	2	5
23 Sep 2021	16	4	3	3	2	2	6
24 Sep 2021	16	4	3	3	2	2	6
25 Sep 2021	16	4	3	3	2	2	6
26 Sep 2021	16	4	3	3	2	2	6
27 Sep 2021	16	4	3	3	2	2	6
28 Sep 2021	22	9	6	4	2	2	8
29 Sep 2021	22	9	6	4	2	2	8
30 Sep 2021	17	13	8	5	2	3	11

* Geometric mean calculated using n<5

Table 3.2

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
07 Sep 2021	E	IC	IC	IC	IC	IC	IC
13 Sep 2021	IC						
22 Sep 2021	IC						
28 Sep 2021	IC						

IC = In Compliance

E = Exceedance

ns = not sampled

ND = no data

Table 3.3

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 Sep 2021	4	2	2	2	2	4	2
02 Sep 2021	4	2	2	2	2	4	2
03 Sep 2021	4	2	2	2	2	4	2
04 Sep 2021	4	2	2	2	2	4	2
05 Sep 2021	4	2	2	2	2	4	2
06 Sep 2021	5	2	2	2	2	4	2
07 Sep 2021	12	4	3	3	3	5	4
08 Sep 2021	12	4	3	3	3	5	4
09 Sep 2021	12	4	3	3	3	5	4
10 Sep 2021	12	4	3	3	3	5	4
11 Sep 2021	12	4	3	3	3	5	4
12 Sep 2021	12	4	3	3	3	5	4
13 Sep 2021	12	4	3	3	3	5	5
14 Sep 2021	12	4	3	3	3	5	5
15 Sep 2021	12	4	3	3	3	5	5
16 Sep 2021	12	4	3	3	3	5	5
17 Sep 2021	12	4	3	3	3	5	5
18 Sep 2021	12	4	3	3	3	5	5
19 Sep 2021	12	4	3	3	3	5	5
20 Sep 2021	17	4	3	3	3	3	5
21 Sep 2021	17	4	3	3	3	3	5
22 Sep 2021	12	4	3	3	2	3	4
23 Sep 2021	12	4	3	3	2	3	4
24 Sep 2021	12	4	3	3	2	3	4
25 Sep 2021	12	4	3	3	2	3	4
26 Sep 2021	12	4	3	3	2	3	4
27 Sep 2021	12	4	3	3	2	3	4
28 Sep 2021	21	7	6	3	2	3	7
29 Sep 2021	21	7	6	3	2	3	7
30 Sep 2021	21	7	6	3	2	3	7

* Geometric mean calculated using n<5

Table 3.4

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
September	E	E	E	IC	IC	IC	E

IC = In Compliance

E = Exceedance

ns = not sampled

ND = no data

Table 3.5

Summary of compliance with the Ocean Plan's 30-day Median standard for total coliform bacteria at the SBOO kelp stations. Data are based on the median of the five most recent samples from each site and depth over the previous 30 days unless otherwise noted (*). Values >70 CFU/100 mL exceed the standard.

Date	I19			I24			I25			I26			I32			I39			I40		
	2m	6m	11m	2m	6m	11m	2m	6m	9m	2m	6m	9m	2m	6m	9m	2m	12m	18m	2m	6m	9m
01 Sep 2021	9	18	20	2	2	4	2	2	3	2	2	11	2	2	2	2	3	3	2	5	9
02 Sep 2021	9	18	20	2	2	4	2	2	3	2	2	11	2	2	2	2	3	3	2	5	9
03 Sep 2021	9	18	20	2	2	4	2	2	3	2	2	11	2	2	2	2	3	3	2	5	9
04 Sep 2021	9	18	20	2	2	4	2	2	3	2	2	11	2	2	2	2	3	3	2	5	9
05 Sep 2021	9	18	20	2	2	4	2	2	3	2	2	11	2	2	2	2	3	3	2	5	9
06 Sep 2021	9	18	20	2	2	4	2	2	3	2	2	11	2	2	2	2	3	3	2	5	9
07 Sep 2021	16	20	20	2	2	6	2	2	4	2	2	20	2	2	2	2	4	4	2	8	14
08 Sep 2021	24	498	710	2	2	4	2	3	6	2	2	20	2	2	2	2	3	3	3	5	12
09 Sep 2021	24	498	710	2	2	4	2	3	6	2	2	20	2	2	2	2	3	3	3	5	12
10 Sep 2021	24	498	710	2	2	4	2	3	6	2	2	20	2	2	2	2	3	3	3	5	12
11 Sep 2021	24	498	710	2	2	4	2	3	6	2	2	20	2	2	2	2	3	3	3	5	12
12 Sep 2021	24	498	710	2	2	4	2	3	6	2	2	20	2	2	2	2	3	3	3	5	12
13 Sep 2021	16	16	20	2	2	6	2	4	2	2	2	20	2	2	2	2	2	2	4	2	20
14 Sep 2021	16	16	20	2	2	6	2	4	2	2	2	20	2	2	2	2	2	2	4	2	20
15 Sep 2021	16	16	20	2	2	6	2	4	2	2	2	20	2	2	2	2	2	2	4	2	20
16 Sep 2021	24	498	710	2	3	13	2	12	6	2	2	11	2	2	11	2	3	3	12	5	20
17 Sep 2021	24	498	710	2	3	13	2	12	6	2	2	11	2	2	11	2	3	3	12	5	20
18 Sep 2021	24	498	710	2	3	13	2	12	6	2	2	11	2	2	11	2	3	3	12	5	20
19 Sep 2021	24	498	710	2	3	13	2	12	6	2	2	11	2	2	11	2	3	3	12	5	20
20 Sep 2021	24	498	710	2	3	13	2	12	6	2	2	11	2	2	11	2	3	3	12	5	20
21 Sep 2021	24	498	710	2	3	13	2	12	6	2	2	11	2	2	11	2	3	3	12	5	20
22 Sep 2021	16	16	20	2	2	6	2	4	2	2	2	2	2	2	2	2	2	2	4	2	20
23 Sep 2021	17	491	710	2	3	11	2	11	2	2	2	2	2	2	2	2	2	2	2	11	2
24 Sep 2021	17	491	710	2	3	11	2	11	2	2	2	2	2	2	2	2	2	2	2	11	2
25 Sep 2021	17	491	710	2	3	11	2	11	2	2	2	2	2	2	2	2	2	2	2	11	2
26 Sep 2021	17	491	710	2	3	11	2	11	2	2	2	2	2	2	2	2	2	2	2	11	2
27 Sep 2021	17	491	710	2	3	11	2	11	2	2	2	2	2	2	2	2	2	2	2	11	2
28 Sep 2021	32	760	1400	2	4	20	2	20	2	2	2	2	2	2	2	2	12	2	2	20	2
29 Sep 2021	32	760	1400	2	4	20	2	20	2	2	2	2	2	2	2	2	12	2	2	20	2
30 Sep 2021	101	381	1210	121	802	110	41	70	121	19	61	31	2	3	16	2	41	4	30	31	200

* Median calculated using n<5

Table 3.6

Summary of compliance at the SBOO kelp stations with the Ocean Plan's Statistical Threshold standard for total coliform bacteria, which states that total coliform density shall not exceed 230 CFU/100 mL in more than 10% of samples per station by depth, per month.

Date	I19			I24			I25			I26			I32			I39			I40		
	2m	6m	11m	2m	6m	11m	2m	6m	9m	2m	6m	9m	2m	6m	9m	2m	12m	18m	2m	6m	9m
September	E	E	E	E	E	E	E	E	E	IC	E	E	IC	IC	IC	IC	IC	IC	E	E	E

IC = In Compliance

E = Exceedance

ns = not sampled

ND = no data

Table 3.7

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; 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	Temp	XMS	DO	Sal	pH
I19	07 Sep 2021	1121	2	5200	300e	920	19.2	73.16	8.2	33.42	8.1
I19	07 Sep 2021	1121	6	11000	160e	2400e	18.7	72.50	8.1	33.44	8.1
I19	07 Sep 2021	1121	11	4000	500	460	17.2	76.38	8.1	33.51	8.1
I19	13 Sep 2021	1056	2	<2	<2	<2	16.0	71.83	7.3	33.50	7.9
I19	13 Sep 2021	1056	6	<2	<2	<2	14.1	77.66	6.6	33.49	7.9
I19	13 Sep 2021	1056	11	<20	<2	<2	13.7	67.40	6.0	33.49	7.8
I19	22 Sep 2021	1058	2	<2	<2	<2	17.6	73.24	8.2	33.49	8.1
I19	22 Sep 2021	1058	6	<2	<2	<2	16.5	67.03	8.2	33.51	8.1
I19	22 Sep 2021	1058	11	<2	<2	<2	14.7	67.17	8.1	33.45	8.0
I19	28 Sep 2021	1103	2	200e	16e	24e	16.4	53.81	9.4	33.39	8.1
I19	28 Sep 2021	1103	6	760	76	90	15.5	64.76	8.2	33.41	8.0
I19	28 Sep 2021	1103	11	2400e	110	92	15.3	64.20	7.9	33.44	7.9
I24	07 Sep 2021	1143	2	240e	20e	34e	18.8	79.14	8.3	33.47	8.1
I24	07 Sep 2021	1143	6	1600e	42	80e	17.6	75.86	8.3	33.49	8.1
I24	07 Sep 2021	1143	11	200e	48	62	16.3	71.97	7.7	33.52	8.0
I24	13 Sep 2021	1118	2	<2	<2	<2	15.8	75.86	7.5	33.54	8.0
I24	13 Sep 2021	1118	6	4e	<2	<2	13.9	80.61	6.3	33.51	7.9
I24	13 Sep 2021	1118	11	<20	<2	2e	13.8	52.45	5.8	33.48	7.8
I24	22 Sep 2021	1123	2	<2	<2	<2	17.2	76.88	8.6	33.44	8.1
I24	22 Sep 2021	1123	6	<2	<2	<2	16.1	76.58	8.6	33.46	8.1
I24	22 Sep 2021	1123	11	<2	<2	<2	14.4	61.56	7.7	33.50	8.0
I24	28 Sep 2021	1127	2	1000e	68	64	16.5	66.98	8.9	33.44	8.1
I24	28 Sep 2021	1127	6	1600e	280e	300e	15.8	68.61	8.2	33.41	8.0
I24	28 Sep 2021	1127	11	1200	180e	120	15.1	63.96	7.4	33.44	7.9
I25	07 Sep 2021	1147	2	600e	26e	26e	18.6	77.75	8.3	33.49	8.1
I25	07 Sep 2021	1147	6	120e	12e	20e	16.9	73.98	8.6	33.49	8.1
I25	07 Sep 2021	1147	9	240e	10e	28e	16.7	74.06	8.3	33.48	8.0
I25	13 Sep 2021	1126	2	2e	<2	<2	16.0	75.28	7.5	33.51	8.0
I25	13 Sep 2021	1126	6	<20	<2	<2	13.9	67.27	6.5	33.45	7.9
I25	13 Sep 2021	1126	9	<2	<2	<2	13.9	70.74	6.5	33.44	7.9
I25	22 Sep 2021	1131	2	<2	<2	<2	17.0	77.64	8.5	33.44	8.1
I25	22 Sep 2021	1131	6	<2	<2	<2	16.1	80.50	8.7	33.43	8.1
I25	22 Sep 2021	1131	9	<2	<2	<2	14.8	72.81	8.4	33.51	8.0
I25	28 Sep 2021	1135	2	80e	6e	<2	16.6	70.05	9.0	33.40	8.0
I25	28 Sep 2021	1135	6	2400e	140e	320e	15.6	66.45	8.2	33.43	8.0
I25	28 Sep 2021	1135	9	720	66	70	15.2	67.86	7.5	33.44	7.9
I26	07 Sep 2021	1159	2	36e	2e	2e	19.4	74.91	8.2	33.48	8.1
I26	07 Sep 2021	1159	6	300e	10e	10e	18.0	76.08	8.1	33.49	8.1
I26	07 Sep 2021	1159	9	320e	12e	16e	16.4	74.36	7.2	33.53	8.0

Station	Date	Time	Depth	Total	Fecal	Enterο	Temp	XMS	DO	Sal	pH
I26	13 Sep 2021	1137	2	<2	<2	<2	16.5	74.17	7.5	33.50	8.0
I26	13 Sep 2021	1137	6	<2	<2	<2	13.4	79.86	7.3	33.46	8.0
I26	13 Sep 2021	1137	9	<2	<2	<2	13.4	78.76	6.8	33.44	7.9
I26	22 Sep 2021	1141	2	<2	<2	<2	17.0	75.98	8.5	33.44	8.1
I26	22 Sep 2021	1141	6	<2	<2	<2	15.9	77.45	8.7	33.42	8.1
I26	22 Sep 2021	1141	9	<2	<2	<2	14.5	74.33	8.4	33.51	8.0
I26	28 Sep 2021	1145	2	100e	22e	8e	16.3	59.93	9.3	33.43	8.1
I26	28 Sep 2021	1145	6	120e	16e	8e	15.6	65.23	8.0	33.44	8.0
I26	28 Sep 2021	1145	9	60e	12e	4e	15.0	68.41	7.1	33.43	7.9
I32	07 Sep 2021	1207	2	<2	2e	<2	19.7	76.84	8.2	33.49	8.1
I32	07 Sep 2021	1207	6	48	2e	4e	16.3	71.76	7.8	33.62	8.0
I32	07 Sep 2021	1207	9	36e	4e	16e	15.6	75.62	7.8	33.52	8.0
I32	13 Sep 2021	1149	2	<2	<2	<2	15.4	72.45	6.9	33.63	7.9
I32	13 Sep 2021	1149	6	<2	<2	<2	14.0	77.87	6.1	33.50	7.9
I32	13 Sep 2021	1149	9	<20	<2	<2	13.9	72.45	5.9	33.50	7.8
I32	22 Sep 2021	1155	2	<2	<2	<2	17.2	76.91	8.5	33.46	8.1
I32	22 Sep 2021	1155	6	<2	<2	<2	16.1	71.35	8.7	33.44	8.1
I32	22 Sep 2021	1155	9	<2	<2	<2	14.3	63.30	8.3	33.47	8.0
I32	28 Sep 2021	1206	2	<2	<2	<2	17.1	74.22	8.5	33.43	8.0
I32	28 Sep 2021	1206	6	4e	6e	<2	16.0	67.25	8.1	33.42	8.0
I32	28 Sep 2021	1206	9	12e	<2	2e	14.9	72.11	7.5	33.42	7.9
I39	07 Sep 2021	1057	2	<2	<2	<2	19.0	81.83	8.5	33.48	8.1
I39	07 Sep 2021	1057	12	140e	6e	24e	15.5	75.83	8.6	33.51	8.1
I39	07 Sep 2021	1057	18	6e	2e	2e	14.3	76.38	7.1	33.53	7.9
I39	13 Sep 2021	1032	2	<2	<2	<2	17.4	77.42	8.2	33.46	8.0
I39	13 Sep 2021	1032	12	<2	<2	<2	13.1	86.53	7.6	33.54	8.0
I39	13 Sep 2021	1032	18	<2	<2	<2	12.9	82.41	6.5	33.49	7.9
I39	22 Sep 2021	1036	2	<2	<2	<2	17.1	77.89	8.4	33.46	8.1
I39	22 Sep 2021	1036	12	<2	<2	<2	15.0	84.22	8.8	33.36	8.1
I39	22 Sep 2021	1036	18	<2	<2	<2	13.7	80.34	7.5	33.43	8.0
I39	28 Sep 2021	1041	2	<20	<2	<2	17.1	73.14	8.6	33.42	8.1
I39	28 Sep 2021	1041	12	80e	<2	2e	14.7	73.35	7.3	33.45	7.9
I39	28 Sep 2021	1041	18	120e	6e	2e	14.6	72.34	7.1	33.45	7.9
I40	07 Sep 2021	1121	2	800	220e	160e	18.9	73.62	8.3	33.41	8.1
I40	07 Sep 2021	1121	6	600e	74	140e	17.5	74.26	7.9	33.51	8.0
I40	07 Sep 2021	1121	9	1000e	100e	140e	16.9	72.86	8.4	33.50	8.1
I40	13 Sep 2021	1109	2	<20	<2	<2	15.8	64.14	7.0	33.48	7.9
I40	13 Sep 2021	1109	6	<2	<2	<2	13.9	76.77	6.5	33.47	7.9
I40	13 Sep 2021	1109	9	<20	<2	4e	13.9	70.82	6.2	33.47	7.8
I40	22 Sep 2021	1112	2	<2	<2	<2	17.1	74.68	8.3	33.45	8.0
I40	22 Sep 2021	1112	6	<2	<2	2e	16.0	70.40	8.5	33.43	8.1
I40	22 Sep 2021	1112	9	<2	<2	2e	14.9	60.21	7.8	33.46	8.0
I40	28 Sep 2021	1119	2	40e	8e	10e	16.5	52.89	9.5	33.44	8.1
I40	28 Sep 2021	1119	6	60e	12e	6e	16.0	54.88	8.9	33.41	8.0
I40	28 Sep 2021	1119	9	380e	68	58	15.5	63.85	7.8	33.43	7.9

ns = not sampled

ND = no data

Table 3.8

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

Station	Date	Parameter	Value
I19	07 Sep 2021	Depth (m)	11
I19	07 Sep 2021	Arrive Time	1121
I19	07 Sep 2021	Depart Time	1123
I19	07 Sep 2021	Air Temp (C)	21
I19	07 Sep 2021	Weather	Haze
I19	07 Sep 2021	Visibility (mi)	14
I19	07 Sep 2021	Wind Speed (kts)	4.1
I19	07 Sep 2021	Wind Dir	W
I19	07 Sep 2021	Water Color	Blueish-Green
I19	07 Sep 2021	Wave Ht Low (ft)	3
I19	07 Sep 2021	Wave Period (sec)	15
I19	07 Sep 2021	Sea State	Light Chop
I19	07 Sep 2021	High Tide (ft)	5.97
I19	07 Sep 2021	High Tide Time	2200
I19	07 Sep 2021	Low Tide (ft)	-0.26
I19	07 Sep 2021	Low Tide Time	406
I19	07 Sep 2021	Comments	Kelp debris
I19	13 Sep 2021	Depth (m)	10
I19	13 Sep 2021	Arrive Time	1056
I19	13 Sep 2021	Depart Time	1101
I19	13 Sep 2021	Air Temp (C)	17.8
I19	13 Sep 2021	Weather	Overcast
I19	13 Sep 2021	Visibility (mi)	2
I19	13 Sep 2021	Wind Speed (kts)	11.5
I19	13 Sep 2021	Wind Dir	NW
I19	13 Sep 2021	Water Color	Green
I19	13 Sep 2021	Wave Ht Low (ft)	3
I19	13 Sep 2021	Wave Period (sec)	19
I19	13 Sep 2021	Sea State	Confused Swell
I19	13 Sep 2021	High Tide (ft)	5.31
I19	13 Sep 2021	High Tide Time	1436
I19	13 Sep 2021	Low Tide (ft)	0.51
I19	13 Sep 2021	Low Tide Time	2248
I19	13 Sep 2021	Comments	none
I19	22 Sep 2021	Depth (m)	11
I19	22 Sep 2021	Arrive Time	1058
I19	22 Sep 2021	Depart Time	1103
I19	22 Sep 2021	Air Temp (C)	19.6
I19	22 Sep 2021	Weather	Clear
I19	22 Sep 2021	Visibility (mi)	9
I19	22 Sep 2021	Wind Speed (kts)	8.3
I19	22 Sep 2021	Wind Dir	NW
I19	22 Sep 2021	Water Color	Green
I19	22 Sep 2021	Wave Ht Low (ft)	4
I19	22 Sep 2021	Wave Period (sec)	18
I19	22 Sep 2021	Sea State	Calm
I19	22 Sep 2021	High Tide (ft)	5.3
I19	22 Sep 2021	High Tide Time	1030
I19	22 Sep 2021	Low Tide (ft)	0.61
I19	22 Sep 2021	Low Tide Time	418
I19	22 Sep 2021	Comments	Kelp debris; Seagrass
I19	28 Sep 2021	Depth (m)	12
I19	28 Sep 2021	Arrive Time	1100

Station	Date	Parameter	Value
I19	28 Sep 2021	Depart Time	1105
I19	28 Sep 2021	Air Temp (C)	17.5
I19	28 Sep 2021	Weather	Overcast
I19	28 Sep 2021	Visibility (mi)	10
I19	28 Sep 2021	Wind Speed (kts)	4.1
I19	28 Sep 2021	Wind Dir	SW
I19	28 Sep 2021	Water Color	Greenish-Brown
I19	28 Sep 2021	Wave Ht Low (ft)	2
I19	28 Sep 2021	Wave Period (sec)	14
I19	28 Sep 2021	Sea State	Calm
I19	28 Sep 2021	High Tide (ft)	4.33
I19	28 Sep 2021	High Tide Time	1406
I19	28 Sep 2021	Low Tide (ft)	1.15
I19	28 Sep 2021	Low Tide Time	2318
I19	28 Sep 2021	Comments	Possible bloom present
I24	07 Sep 2021	Depth (m)	10
I24	07 Sep 2021	Arrive Time	1143
I24	07 Sep 2021	Depart Time	1147
I24	07 Sep 2021	Air Temp (C)	20.9
I24	07 Sep 2021	Weather	Haze
I24	07 Sep 2021	Visibility (mi)	14
I24	07 Sep 2021	Wind Speed (kts)	2.7
I24	07 Sep 2021	Wind Dir	NW
I24	07 Sep 2021	Water Color	Blueish-Green
I24	07 Sep 2021	Wave Ht Low (ft)	3
I24	07 Sep 2021	Wave Period (sec)	15
I24	07 Sep 2021	Sea State	Light Chop
I24	07 Sep 2021	High Tide (ft)	5.97
I24	07 Sep 2021	High Tide Time	2200
I24	07 Sep 2021	Low Tide (ft)	-0.26
I24	07 Sep 2021	Low Tide Time	406
I24	07 Sep 2021	Comments	Kelp debris
I24	13 Sep 2021	Depth (m)	10
I24	13 Sep 2021	Arrive Time	1118
I24	13 Sep 2021	Depart Time	1122
I24	13 Sep 2021	Air Temp (C)	17.6
I24	13 Sep 2021	Weather	Overcast
I24	13 Sep 2021	Visibility (mi)	2
I24	13 Sep 2021	Wind Speed (kts)	8.7
I24	13 Sep 2021	Wind Dir	NW
I24	13 Sep 2021	Water Color	Green
I24	13 Sep 2021	Wave Ht Low (ft)	3
I24	13 Sep 2021	Wave Period (sec)	19
I24	13 Sep 2021	Sea State	Confused Swell
I24	13 Sep 2021	High Tide (ft)	5.31
I24	13 Sep 2021	High Tide Time	1436
I24	13 Sep 2021	Low Tide (ft)	0.51
I24	13 Sep 2021	Low Tide Time	2248
I24	13 Sep 2021	Comments	none
I24	22 Sep 2021	Depth (m)	10
I24	22 Sep 2021	Arrive Time	1123
I24	22 Sep 2021	Depart Time	1127
I24	22 Sep 2021	Air Temp (C)	19.1
I24	22 Sep 2021	Weather	Clear
I24	22 Sep 2021	Visibility (mi)	9
I24	22 Sep 2021	Wind Speed (kts)	11.9
I24	22 Sep 2021	Wind Dir	NW
I24	22 Sep 2021	Water Color	Green

Station	Date	Parameter	Value
I24	22 Sep 2021	Wave Ht Low (ft)	4
I24	22 Sep 2021	Wave Period (sec)	18
I24	22 Sep 2021	Sea State	Regular Swell
I24	22 Sep 2021	High Tide (ft)	5.3
I24	22 Sep 2021	High Tide Time	1030
I24	22 Sep 2021	Low Tide (ft)	0.61
I24	22 Sep 2021	Low Tide Time	418
I24	22 Sep 2021	Comments	Kelp debris
I24	28 Sep 2021	Depth (m)	11
I24	28 Sep 2021	Arrive Time	1123
I24	28 Sep 2021	Depart Time	1126
I24	28 Sep 2021	Air Temp (C)	17.5
I24	28 Sep 2021	Weather	Overcast
I24	28 Sep 2021	Visibility (mi)	10
I24	28 Sep 2021	Wind Speed (kts)	3.8
I24	28 Sep 2021	Wind Dir	S
I24	28 Sep 2021	Water Color	Green
I24	28 Sep 2021	Wave Ht Low (ft)	2
I24	28 Sep 2021	Wave Period (sec)	14
I24	28 Sep 2021	Sea State	Calm
I24	28 Sep 2021	High Tide (ft)	4.33
I24	28 Sep 2021	High Tide Time	1406
I24	28 Sep 2021	Low Tide (ft)	1.15
I24	28 Sep 2021	Low Tide Time	2318
I24	28 Sep 2021	Comments	none
I25	07 Sep 2021	Depth (m)	10
I25	07 Sep 2021	Arrive Time	1147
I25	07 Sep 2021	Depart Time	1151
I25	07 Sep 2021	Air Temp (C)	21
I25	07 Sep 2021	Weather	Haze
I25	07 Sep 2021	Visibility (mi)	14
I25	07 Sep 2021	Wind Speed (kts)	12.4
I25	07 Sep 2021	Wind Dir	NW
I25	07 Sep 2021	Water Color	Blueish-Green
I25	07 Sep 2021	Wave Ht Low (ft)	3
I25	07 Sep 2021	Wave Period (sec)	15
I25	07 Sep 2021	Sea State	Light Chop
I25	07 Sep 2021	High Tide (ft)	5.97
I25	07 Sep 2021	High Tide Time	2200
I25	07 Sep 2021	Low Tide (ft)	-0.26
I25	07 Sep 2021	Low Tide Time	406
I25	07 Sep 2021	Comments	none
I25	13 Sep 2021	Depth (m)	9
I25	13 Sep 2021	Arrive Time	1126
I25	13 Sep 2021	Depart Time	1130
I25	13 Sep 2021	Air Temp (C)	17.7
I25	13 Sep 2021	Weather	Overcast
I25	13 Sep 2021	Visibility (mi)	2
I25	13 Sep 2021	Wind Speed (kts)	10.1
I25	13 Sep 2021	Wind Dir	NW
I25	13 Sep 2021	Water Color	Green
I25	13 Sep 2021	Wave Ht Low (ft)	3
I25	13 Sep 2021	Wave Period (sec)	19
I25	13 Sep 2021	Sea State	Confused Swell
I25	13 Sep 2021	High Tide (ft)	5.31
I25	13 Sep 2021	High Tide Time	1436
I25	13 Sep 2021	Low Tide (ft)	0.51
I25	13 Sep 2021	Low Tide Time	2248

Station	Date	Parameter	Value
I25	13 Sep 2021	Comments	none
I25	22 Sep 2021	Depth (m)	10
I25	22 Sep 2021	Arrive Time	1131
I25	22 Sep 2021	Depart Time	1135
I25	22 Sep 2021	Air Temp (C)	19
I25	22 Sep 2021	Weather	Haze
I25	22 Sep 2021	Visibility (mi)	9
I25	22 Sep 2021	Wind Speed (kts)	9.5
I25	22 Sep 2021	Wind Dir	NW
I25	22 Sep 2021	Water Color	Green
I25	22 Sep 2021	Wave Ht Low (ft)	4
I25	22 Sep 2021	Wave Period (sec)	18
I25	22 Sep 2021	Sea State	Regular Swell
I25	22 Sep 2021	High Tide (ft)	5.3
I25	22 Sep 2021	High Tide Time	1030
I25	22 Sep 2021	Low Tide (ft)	0.61
I25	22 Sep 2021	Low Tide Time	418
I25	22 Sep 2021	Comments	none
I25	28 Sep 2021	Depth (m)	10
I25	28 Sep 2021	Arrive Time	1129
I25	28 Sep 2021	Depart Time	1132
I25	28 Sep 2021	Air Temp (C)	17.6
I25	28 Sep 2021	Weather	Overcast
I25	28 Sep 2021	Visibility (mi)	10
I25	28 Sep 2021	Wind Speed (kts)	1.9
I25	28 Sep 2021	Wind Dir	S
I25	28 Sep 2021	Water Color	Green
I25	28 Sep 2021	Wave Ht Low (ft)	2
I25	28 Sep 2021	Wave Period (sec)	14
I25	28 Sep 2021	Sea State	Calm
I25	28 Sep 2021	High Tide (ft)	4.33
I25	28 Sep 2021	High Tide Time	1406
I25	28 Sep 2021	Low Tide (ft)	1.15
I25	28 Sep 2021	Low Tide Time	2318
I25	28 Sep 2021	Comments	none
I26	07 Sep 2021	Depth (m)	10
I26	07 Sep 2021	Arrive Time	1159
I26	07 Sep 2021	Depart Time	1201
I26	07 Sep 2021	Air Temp (C)	20.9
I26	07 Sep 2021	Weather	Haze
I26	07 Sep 2021	Visibility (mi)	14
I26	07 Sep 2021	Wind Speed (kts)	4.6
I26	07 Sep 2021	Wind Dir	SW
I26	07 Sep 2021	Water Color	Blueish-Green
I26	07 Sep 2021	Wave Ht Low (ft)	3
I26	07 Sep 2021	Wave Period (sec)	15
I26	07 Sep 2021	Sea State	Light Chop
I26	07 Sep 2021	High Tide (ft)	5.97
I26	07 Sep 2021	High Tide Time	2200
I26	07 Sep 2021	Low Tide (ft)	-0.26
I26	07 Sep 2021	Low Tide Time	406
I26	07 Sep 2021	Comments	none
I26	13 Sep 2021	Depth (m)	9
I26	13 Sep 2021	Arrive Time	1137
I26	13 Sep 2021	Depart Time	1145
I26	13 Sep 2021	Air Temp (C)	17.8
I26	13 Sep 2021	Weather	Overcast

Station	Date	Parameter	Value
I26	13 Sep 2021	Visibility (mi)	2
I26	13 Sep 2021	Wind Speed (kts)	10.4
I26	13 Sep 2021	Wind Dir	E
I26	13 Sep 2021	Water Color	Green
I26	13 Sep 2021	Wave Ht Low (ft)	3
I26	13 Sep 2021	Wave Period (sec)	19
I26	13 Sep 2021	Sea State	Confused Swell
I26	13 Sep 2021	High Tide (ft)	5.31
I26	13 Sep 2021	High Tide Time	1436
I26	13 Sep 2021	Low Tide (ft)	0.51
I26	13 Sep 2021	Low Tide Time	2248
I26	13 Sep 2021	Comments	none
I26	22 Sep 2021	Depth (m)	10
I26	22 Sep 2021	Arrive Time	1141
I26	22 Sep 2021	Depart Time	1145
I26	22 Sep 2021	Air Temp (C)	19.1
I26	22 Sep 2021	Weather	Haze
I26	22 Sep 2021	Visibility (mi)	9
I26	22 Sep 2021	Wind Speed (kts)	12.3
I26	22 Sep 2021	Wind Dir	NW
I26	22 Sep 2021	Water Color	Green
I26	22 Sep 2021	Wave Ht Low (ft)	4
I26	22 Sep 2021	Wave Period (sec)	18
I26	22 Sep 2021	Sea State	Regular Swell
I26	22 Sep 2021	High Tide (ft)	5.3
I26	22 Sep 2021	High Tide Time	1030
I26	22 Sep 2021	Low Tide (ft)	0.61
I26	22 Sep 2021	Low Tide Time	418
I26	22 Sep 2021	Comments	none
I26	28 Sep 2021	Depth (m)	10
I26	28 Sep 2021	Arrive Time	1138
I26	28 Sep 2021	Depart Time	1142
I26	28 Sep 2021	Air Temp (C)	17.5
I26	28 Sep 2021	Weather	Overcast
I26	28 Sep 2021	Visibility (mi)	10
I26	28 Sep 2021	Wind Speed (kts)	3.5
I26	28 Sep 2021	Wind Dir	S
I26	28 Sep 2021	Water Color	Green
I26	28 Sep 2021	Wave Ht Low (ft)	2
I26	28 Sep 2021	Wave Period (sec)	14
I26	28 Sep 2021	Sea State	Calm
I26	28 Sep 2021	High Tide (ft)	4.33
I26	28 Sep 2021	High Tide Time	1406
I26	28 Sep 2021	Low Tide (ft)	1.15
I26	28 Sep 2021	Low Tide Time	2318
I26	28 Sep 2021	Comments	none
I32	07 Sep 2021	Depth (m)	14
I32	07 Sep 2021	Arrive Time	1207
I32	07 Sep 2021	Depart Time	1213
I32	07 Sep 2021	Air Temp (C)	20.9
I32	07 Sep 2021	Weather	Haze
I32	07 Sep 2021	Visibility (mi)	14
I32	07 Sep 2021	Wind Speed (kts)	12.7
I32	07 Sep 2021	Wind Dir	W
I32	07 Sep 2021	Water Color	Green
I32	07 Sep 2021	Wave Ht Low (ft)	3
I32	07 Sep 2021	Wave Period (sec)	15
I32	07 Sep 2021	Sea State	Light Chop

Station	Date	Parameter	Value
I32	07 Sep 2021	High Tide (ft)	5.97
I32	07 Sep 2021	High Tide Time	2200
I32	07 Sep 2021	Low Tide (ft)	-0.26
I32	07 Sep 2021	Low Tide Time	406
I32	07 Sep 2021	Comments	Late entry
I32	13 Sep 2021	Depth (m)	10
I32	13 Sep 2021	Arrive Time	1149
I32	13 Sep 2021	Depart Time	1153
I32	13 Sep 2021	Air Temp (C)	17.6
I32	13 Sep 2021	Weather	Overcast
I32	13 Sep 2021	Visibility (mi)	2
I32	13 Sep 2021	Wind Speed (kts)	16.6
I32	13 Sep 2021	Wind Dir	W
I32	13 Sep 2021	Water Color	Green
I32	13 Sep 2021	Wave Ht Low (ft)	3
I32	13 Sep 2021	Wave Period (sec)	19
I32	13 Sep 2021	Sea State	Confused Swell
I32	13 Sep 2021	High Tide (ft)	5.31
I32	13 Sep 2021	High Tide Time	1436
I32	13 Sep 2021	Low Tide (ft)	0.51
I32	13 Sep 2021	Low Tide Time	2248
I32	13 Sep 2021	Comments	none
I32	22 Sep 2021	Depth (m)	10
I32	22 Sep 2021	Arrive Time	1155
I32	22 Sep 2021	Depart Time	1206
I32	22 Sep 2021	Air Temp (C)	19.3
I32	22 Sep 2021	Weather	Haze
I32	22 Sep 2021	Visibility (mi)	9
I32	22 Sep 2021	Wind Speed (kts)	16
I32	22 Sep 2021	Wind Dir	W
I32	22 Sep 2021	Water Color	Green
I32	22 Sep 2021	Wave Ht Low (ft)	4
I32	22 Sep 2021	Wave Period (sec)	18
I32	22 Sep 2021	Sea State	Regular Swell
I32	22 Sep 2021	High Tide (ft)	5.3
I32	22 Sep 2021	High Tide Time	1030
I32	22 Sep 2021	Low Tide (ft)	0.61
I32	22 Sep 2021	Low Tide Time	418
I32	22 Sep 2021	Comments	none
I32	28 Sep 2021	Depth (m)	11
I32	28 Sep 2021	Arrive Time	1150
I32	28 Sep 2021	Depart Time	1153
I32	28 Sep 2021	Air Temp (C)	17.6
I32	28 Sep 2021	Weather	Overcast
I32	28 Sep 2021	Visibility (mi)	10
I32	28 Sep 2021	Wind Speed (kts)	2.9
I32	28 Sep 2021	Wind Dir	SW
I32	28 Sep 2021	Water Color	Green
I32	28 Sep 2021	Wave Ht Low (ft)	2
I32	28 Sep 2021	Wave Period (sec)	14
I32	28 Sep 2021	Sea State	Calm
I32	28 Sep 2021	High Tide (ft)	4.33
I32	28 Sep 2021	High Tide Time	1406
I32	28 Sep 2021	Low Tide (ft)	1.15
I32	28 Sep 2021	Low Tide Time	2318
I32	28 Sep 2021	Comments	none
I39	07 Sep 2021	Depth (m)	20

Station	Date	Parameter	Value
I39	07 Sep 2021	Arrive Time	1057
I39	07 Sep 2021	Depart Time	1101
I39	07 Sep 2021	Air Temp (C)	21.1
I39	07 Sep 2021	Weather	Haze
I39	07 Sep 2021	Visibility (mi)	14
I39	07 Sep 2021	Wind Speed (kts)	2.3
I39	07 Sep 2021	Wind Dir	W
I39	07 Sep 2021	Water Color	Blueish-Green
I39	07 Sep 2021	Wave Ht Low (ft)	3
I39	07 Sep 2021	Wave Period (sec)	15
I39	07 Sep 2021	Sea State	Light Chop
I39	07 Sep 2021	High Tide (ft)	5.97
I39	07 Sep 2021	High Tide Time	2200
I39	07 Sep 2021	Low Tide (ft)	-0.26
I39	07 Sep 2021	Low Tide Time	406
I39	07 Sep 2021	Comments	Kelp debris
I39	13 Sep 2021	Depth (m)	18
I39	13 Sep 2021	Arrive Time	1032
I39	13 Sep 2021	Depart Time	1040
I39	13 Sep 2021	Air Temp (C)	17.7
I39	13 Sep 2021	Weather	Overcast
I39	13 Sep 2021	Visibility (mi)	2
I39	13 Sep 2021	Wind Speed (kts)	10
I39	13 Sep 2021	Wind Dir	NW
I39	13 Sep 2021	Water Color	Green
I39	13 Sep 2021	Wave Ht Low (ft)	3
I39	13 Sep 2021	Wave Period (sec)	19
I39	13 Sep 2021	Sea State	Confused Swell
I39	13 Sep 2021	High Tide (ft)	5.31
I39	13 Sep 2021	High Tide Time	1436
I39	13 Sep 2021	Low Tide (ft)	0.51
I39	13 Sep 2021	Low Tide Time	2248
I39	13 Sep 2021	Comments	none
I39	22 Sep 2021	Depth (m)	21
I39	22 Sep 2021	Arrive Time	1036
I39	22 Sep 2021	Depart Time	1041
I39	22 Sep 2021	Air Temp (C)	18.9
I39	22 Sep 2021	Weather	Clear
I39	22 Sep 2021	Visibility (mi)	9
I39	22 Sep 2021	Wind Speed (kts)	9.5
I39	22 Sep 2021	Wind Dir	NW
I39	22 Sep 2021	Water Color	Green
I39	22 Sep 2021	Wave Ht Low (ft)	4
I39	22 Sep 2021	Wave Period (sec)	18
I39	22 Sep 2021	Sea State	Calm
I39	22 Sep 2021	High Tide (ft)	5.3
I39	22 Sep 2021	High Tide Time	1030
I39	22 Sep 2021	Low Tide (ft)	0.61
I39	22 Sep 2021	Low Tide Time	418
I39	22 Sep 2021	Comments	Kelp debris; Seagrass
I39	28 Sep 2021	Depth (m)	19
I39	28 Sep 2021	Arrive Time	1034
I39	28 Sep 2021	Depart Time	1043
I39	28 Sep 2021	Air Temp (C)	17.4
I39	28 Sep 2021	Weather	Overcast
I39	28 Sep 2021	Visibility (mi)	10
I39	28 Sep 2021	Wind Speed (kts)	3.1
I39	28 Sep 2021	Wind Dir	S

Station	Date	Parameter	Value
I39	28 Sep 2021	Water Color	Blueish-Green
I39	28 Sep 2021	Wave Ht Low (ft)	2
I39	28 Sep 2021	Wave Period (sec)	14
I39	28 Sep 2021	Sea State	Calm
I39	28 Sep 2021	High Tide (ft)	4.33
I39	28 Sep 2021	High Tide Time	1406
I39	28 Sep 2021	Low Tide (ft)	1.15
I39	28 Sep 2021	Low Tide Time	2318
I39	28 Sep 2021	Comments	none
I40	07 Sep 2021	Depth (m)	1
I40	07 Sep 2021	Arrive Time	1133
I40	07 Sep 2021	Depart Time	1135
I40	07 Sep 2021	Air Temp (C)	20.8
I40	07 Sep 2021	Weather	Haze
I40	07 Sep 2021	Visibility (mi)	14
I40	07 Sep 2021	Wind Speed (kts)	2.8
I40	07 Sep 2021	Wind Dir	W
I40	07 Sep 2021	Water Color	Blueish-Green
I40	07 Sep 2021	Wave Ht Low (ft)	3
I40	07 Sep 2021	Wave Period (sec)	15
I40	07 Sep 2021	Sea State	Light Chop
I40	07 Sep 2021	High Tide (ft)	5.97
I40	07 Sep 2021	High Tide Time	2200
I40	07 Sep 2021	Low Tide (ft)	-0.26
I40	07 Sep 2021	Low Tide Time	406
I40	07 Sep 2021	Comments	none
I40	13 Sep 2021	Depth (m)	10
I40	13 Sep 2021	Arrive Time	1109
I40	13 Sep 2021	Depart Time	1114
I40	13 Sep 2021	Air Temp (C)	17.6
I40	13 Sep 2021	Weather	Overcast
I40	13 Sep 2021	Visibility (mi)	2
I40	13 Sep 2021	Wind Speed (kts)	15.4
I40	13 Sep 2021	Wind Dir	W
I40	13 Sep 2021	Water Color	Green
I40	13 Sep 2021	Wave Ht Low (ft)	3
I40	13 Sep 2021	Wave Period (sec)	19
I40	13 Sep 2021	Sea State	Confused Swell
I40	13 Sep 2021	High Tide (ft)	5.31
I40	13 Sep 2021	High Tide Time	1436
I40	13 Sep 2021	Low Tide (ft)	0.51
I40	13 Sep 2021	Low Tide Time	2248
I40	13 Sep 2021	Comments	none
I40	22 Sep 2021	Depth (m)	11
I40	22 Sep 2021	Arrive Time	1112
I40	22 Sep 2021	Depart Time	1119
I40	22 Sep 2021	Air Temp (C)	19.2
I40	22 Sep 2021	Weather	Clear
I40	22 Sep 2021	Visibility (mi)	9
I40	22 Sep 2021	Wind Speed (kts)	12.7
I40	22 Sep 2021	Wind Dir	NW
I40	22 Sep 2021	Water Color	Green
I40	22 Sep 2021	Wave Ht Low (ft)	4
I40	22 Sep 2021	Wave Period (sec)	18
I40	22 Sep 2021	Sea State	Light Chop
I40	22 Sep 2021	High Tide (ft)	5.3
I40	22 Sep 2021	High Tide Time	1030
I40	22 Sep 2021	Low Tide (ft)	0.61

Station	Date	Parameter	Value
I40	22 Sep 2021	Low Tide Time	418
I40	22 Sep 2021	Comments	Bacti taken from niskin bottles; Taken on upcast of second cast
I40	28 Sep 2021	Depth (m)	10
I40	28 Sep 2021	Arrive Time	1114
I40	28 Sep 2021	Depart Time	1118
I40	28 Sep 2021	Air Temp (C)	17.5
I40	28 Sep 2021	Weather	Overcast
I40	28 Sep 2021	Visibility (mi)	10
I40	28 Sep 2021	Wind Speed (kts)	5.5
I40	28 Sep 2021	Wind Dir	S
I40	28 Sep 2021	Water Color	Greenish-Brown
I40	28 Sep 2021	Wave Ht Low (ft)	2
I40	28 Sep 2021	Wave Period (sec)	14
I40	28 Sep 2021	Sea State	Calm
I40	28 Sep 2021	High Tide (ft)	4.33
I40	28 Sep 2021	High Tide Time	1406
I40	28 Sep 2021	Low Tide (ft)	1.15
I40	28 Sep 2021	Low Tide Time	2318
I40	28 Sep 2021	Comments	Possible bloom present

Table 3.9

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

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens ($\sigma\text{-t}$)	Chlor ($\mu\text{g/L}$)
I19	07 Sep 2021	1	19.38	72.98	8.2	33.42	8.1	23.7	1.01
I19	07 Sep 2021	2	19.20	73.16	8.2	33.42	8.1	23.8	1.05
I19	07 Sep 2021	3	19.15	74.55	8.1	33.39	8.1	23.8	1.09
I19	07 Sep 2021	4	19.06	73.78	8.1	33.42	8.1	23.8	1.17
I19	07 Sep 2021	5	18.84	73.03	8.2	33.42	8.1	23.9	1.29
I19	07 Sep 2021	6	18.66	72.50	8.1	33.44	8.1	23.9	1.57
I19	07 Sep 2021	7	18.38	71.84	8.1	33.46	8.1	24.0	1.81
I19	07 Sep 2021	8	18.19	73.91	8.1	33.48	8.1	24.1	1.88
I19	07 Sep 2021	9	17.66	75.89	8.2	33.52	8.1	24.2	1.90
I19	07 Sep 2021	10	17.17	76.38	8.1	33.51	8.1	24.3	2.07
I19	13 Sep 2021	1	16.14	71.84	7.4	33.46	7.9	24.5	0.87
I19	13 Sep 2021	2	16.01	71.83	7.3	33.50	7.9	24.6	0.86
I19	13 Sep 2021	3	15.19	72.76	7.3	33.59	7.9	24.8	0.85
I19	13 Sep 2021	4	14.44	76.69	7.2	33.53	7.9	25.0	0.90
I19	13 Sep 2021	5	14.16	79.25	6.9	33.50	7.9	25.0	1.02
I19	13 Sep 2021	6	14.10	77.66	6.6	33.49	7.9	25.0	1.14
I19	13 Sep 2021	7	14.00	75.69	6.4	33.48	7.9	25.0	1.22
I19	13 Sep 2021	8	13.93	69.68	6.2	33.48	7.9	25.0	1.28
I19	13 Sep 2021	9	13.83	67.08	6.1	33.48	7.8	25.0	1.39
I19	13 Sep 2021	10	13.71	67.40	6.0	33.49	7.8	25.1	1.66
I19	22 Sep 2021	1	17.93	73.67	8.2	33.44	8.1	24.1	1.12
I19	22 Sep 2021	2	17.62	73.24	8.2	33.49	8.1	24.2	1.12
I19	22 Sep 2021	3	17.34	72.88	8.3	33.48	8.1	24.3	1.15
I19	22 Sep 2021	4	17.18	70.10	8.2	33.47	8.1	24.3	1.27
I19	22 Sep 2021	5	16.90	67.30	8.2	33.48	8.1	24.4	1.58
I19	22 Sep 2021	6	16.52	67.03	8.2	33.51	8.1	24.5	2.13
I19	22 Sep 2021	7	15.48	71.50	8.4	33.53	8.1	24.7	2.95
I19	22 Sep 2021	8	15.22	72.27	8.5	33.43	8.1	24.7	3.66
I19	22 Sep 2021	9	15.09	70.56	8.3	33.48	8.0	24.8	4.36
I19	22 Sep 2021	10	14.67	67.17	8.1	33.45	8.0	24.8	4.63
I19	28 Sep 2021	1	16.46	53.79	9.4	33.40	8.1	24.4	10.11
I19	28 Sep 2021	2	16.43	53.81	9.4	33.39	8.1	24.4	10.62
I19	28 Sep 2021	3	16.14	55.10	9.1	33.43	8.0	24.5	12.36
I19	28 Sep 2021	4	15.77	63.82	8.5	33.42	8.0	24.6	10.84
I19	28 Sep 2021	5	15.61	65.50	8.4	33.42	8.0	24.6	7.67
I19	28 Sep 2021	6	15.51	64.76	8.2	33.41	8.0	24.6	6.68
I19	28 Sep 2021	7	15.47	64.68	8.1	33.42	7.9	24.6	6.34
I19	28 Sep 2021	8	15.48	65.27	8.1	33.41	7.9	24.6	6.08
I19	28 Sep 2021	9	15.43	65.24	8.0	33.43	7.9	24.7	5.90
I19	28 Sep 2021	10	15.31	64.20	7.9	33.44	7.9	24.7	5.49
I24	07 Sep 2021	1	19.32	79.48	8.3	33.49	8.1	23.8	0.98
I24	07 Sep 2021	2	18.75	79.14	8.3	33.47	8.1	23.9	0.97
I24	07 Sep 2021	3	18.60	76.89	8.3	33.44	8.1	23.9	0.99
I24	07 Sep 2021	4	18.36	74.93	8.2	33.47	8.1	24.0	1.15
I24	07 Sep 2021	5	17.93	74.52	8.3	33.51	8.1	24.2	1.47
I24	07 Sep 2021	6	17.55	75.86	8.3	33.49	8.1	24.2	1.89
I24	07 Sep 2021	7	17.32	75.10	8.2	33.49	8.1	24.3	2.05
I24	07 Sep 2021	8	16.62	73.51	8.1	33.53	8.0	24.5	2.36
I24	07 Sep 2021	9	16.51	72.46	7.9	33.49	8.0	24.5	3.01
I24	07 Sep 2021	10	16.34	71.97	7.7	33.52	8.0	24.5	3.23

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens ($\sigma\text{-t}$)	Chlor ($\mu\text{g/L}$)
I24	13 Sep 2021	1	16.25	76.02	7.6	33.45	8.0	24.5	0.81
	13 Sep 2021	2	15.76	75.86	7.5	33.54	8.0	24.7	0.82
	13 Sep 2021	3	15.55	76.30	7.3	33.50	7.9	24.7	0.81
	13 Sep 2021	4	14.21	80.00	6.9	33.58	7.9	25.0	0.87
	13 Sep 2021	5	14.09	80.30	6.5	33.50	7.9	25.0	0.86
	13 Sep 2021	6	13.93	80.61	6.3	33.51	7.9	25.0	0.88
	13 Sep 2021	7	13.81	76.42	6.2	33.49	7.9	25.1	0.95
	13 Sep 2021	8	13.75	64.37	6.0	33.49	7.8	25.1	0.95
	13 Sep 2021	9	13.75	53.86	5.9	33.48	7.8	25.1	0.96
	13 Sep 2021	10	13.75	52.45	5.8	33.48	7.8	25.1	1.03
I24	22 Sep 2021	1	17.26	76.91	8.6	33.44	8.1	24.3	1.01
	22 Sep 2021	2	17.24	76.88	8.6	33.44	8.1	24.3	1.01
	22 Sep 2021	3	17.15	76.82	8.5	33.46	8.1	24.3	1.00
	22 Sep 2021	4	16.55	76.78	8.6	33.51	8.1	24.5	1.03
	22 Sep 2021	5	16.31	76.31	8.6	33.45	8.1	24.5	1.12
	22 Sep 2021	6	16.12	76.58	8.6	33.46	8.1	24.5	1.30
	22 Sep 2021	7	15.94	75.76	8.6	33.45	8.1	24.6	1.49
	22 Sep 2021	8	15.77	75.33	8.6	33.45	8.1	24.6	1.84
	22 Sep 2021	9	15.48	71.93	8.3	33.48	8.0	24.7	2.06
	22 Sep 2021	10	14.68	65.68	8.0	33.50	8.0	24.9	2.28
	22 Sep 2021	11	14.40	61.56	7.7	33.50	8.0	24.9	2.87
I24	28 Sep 2021	1	17.08	70.26	9.1	33.37	8.1	24.2	3.38
	28 Sep 2021	2	16.52	66.98	8.9	33.44	8.1	24.4	3.44
	28 Sep 2021	3	16.15	65.27	8.7	33.40	8.0	24.5	3.84
	28 Sep 2021	4	16.12	65.94	8.6	33.39	8.0	24.5	4.72
	28 Sep 2021	5	15.99	66.39	8.4	33.40	8.0	24.5	5.41
	28 Sep 2021	6	15.76	68.61	8.2	33.41	8.0	24.6	6.15
	28 Sep 2021	7	15.45	69.72	8.0	33.44	8.0	24.7	6.29
	28 Sep 2021	8	15.22	67.79	7.7	33.44	7.9	24.7	5.95
	28 Sep 2021	9	15.18	65.44	7.5	33.44	7.9	24.7	5.50
	28 Sep 2021	10	15.12	63.96	7.4	33.44	7.9	24.7	4.72
	I25	07 Sep 2021	1	18.93	78.06	8.3	33.44	8.1	23.8
		2	18.60	77.75	8.3	33.49	8.1	24.0	1.04
		3	18.07	75.84	8.3	33.52	8.1	24.1	1.05
		4	17.37	74.41	8.3	33.56	8.1	24.3	1.21
		5	17.00	73.86	8.4	33.51	8.1	24.4	1.61
		6	16.88	73.98	8.6	33.49	8.1	24.4	2.05
		7	16.84	74.24	8.7	33.49	8.1	24.4	2.42
		8	16.75	74.26	8.6	33.49	8.1	24.4	2.88
		9	16.71	74.06	8.3	33.48	8.0	24.4	3.22
		I25	13 Sep 2021	1	16.36	75.89	7.6	33.45	8.0
			2	15.98	75.28	7.5	33.51	8.0	24.6
			3	14.42	78.01	7.2	33.67	7.9	25.1
			4	14.03	74.17	6.7	33.49	7.9	25.0
			5	14.06	70.93	6.5	33.45	7.9	25.0
			6	13.90	67.27	6.5	33.45	7.9	25.0
			7	13.91	69.61	6.5	33.45	7.9	25.0
			8	13.87	70.08	6.5	33.45	7.9	25.0
			9	13.88	70.74	6.5	33.44	7.9	25.0
			I25	13 Sep 2021	1	17.01	77.63	8.5	33.44
				2	16.99	77.64	8.5	33.44	8.1
				3	16.70	77.60	8.5	33.49	8.1
				4	16.38	78.70	8.6	33.45	8.1
				5	16.28	79.58	8.7	33.44	8.1
				6	16.09	80.50	8.7	33.43	8.1
				7	16.03	78.98	8.8	33.42	8.1

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens ($\sigma\text{-t}$)	Chlor ($\mu\text{g/L}$)
I25	22 Sep 2021	8	15.61	76.32	8.5	33.49	8.1	24.7	1.28
I25	22 Sep 2021	9	14.85	72.81	8.4	33.51	8.0	24.9	1.37
I25	28 Sep 2021	1	16.76	70.79	9.0	33.39	8.0	24.3	2.93
I25	28 Sep 2021	2	16.57	70.05	9.0	33.40	8.0	24.4	3.01
I25	28 Sep 2021	3	16.18	66.85	8.8	33.41	8.0	24.5	3.42
I25	28 Sep 2021	4	16.07	63.51	8.6	33.39	8.0	24.5	4.80
I25	28 Sep 2021	5	15.97	64.07	8.5	33.40	8.0	24.5	6.49
I25	28 Sep 2021	6	15.65	66.45	8.2	33.43	8.0	24.6	7.38
I25	28 Sep 2021	7	15.34	68.55	7.8	33.45	7.9	24.7	6.88
I25	28 Sep 2021	8	15.27	68.41	7.6	33.43	7.9	24.7	5.90
I25	28 Sep 2021	9	15.24	67.86	7.5	33.44	7.9	24.7	4.98
I26	07 Sep 2021	1	19.47	74.79	8.3	33.44	8.1	23.7	1.54
I26	07 Sep 2021	2	19.40	74.91	8.2	33.48	8.1	23.8	1.51
I26	07 Sep 2021	3	19.18	76.07	8.2	33.47	8.1	23.8	1.56
I26	07 Sep 2021	4	19.05	77.13	8.1	33.47	8.1	23.8	1.59
I26	07 Sep 2021	5	18.53	77.08	8.1	33.54	8.1	24.0	1.51
I26	07 Sep 2021	6	18.04	76.08	8.1	33.49	8.1	24.1	1.49
I26	07 Sep 2021	7	17.79	75.30	7.8	33.50	8.0	24.2	1.63
I26	07 Sep 2021	8	16.86	74.73	7.4	33.60	8.0	24.5	1.70
I26	07 Sep 2021	9	16.44	74.36	7.2	33.53	8.0	24.5	1.63
I26	13 Sep 2021	1	16.63	74.10	7.6	33.48	8.0	24.4	0.83
I26	13 Sep 2021	2	16.46	74.17	7.5	33.50	8.0	24.5	0.87
I26	13 Sep 2021	3	14.93	74.91	7.5	33.70	8.0	25.0	0.88
I26	13 Sep 2021	4	13.99	78.55	7.7	33.51	8.0	25.0	0.95
I26	13 Sep 2021	5	13.64	79.19	7.6	33.47	8.0	25.1	1.01
I26	13 Sep 2021	6	13.44	79.86	7.3	33.46	8.0	25.1	1.14
I26	13 Sep 2021	7	13.43	78.96	7.0	33.44	7.9	25.1	1.29
I26	13 Sep 2021	8	13.43	78.67	6.8	33.44	7.9	25.1	1.34
I26	13 Sep 2021	9	13.44	78.76	6.8	33.44	7.9	25.1	1.26
I26	22 Sep 2021	1	17.04	76.06	8.5	33.44	8.1	24.3	1.13
I26	22 Sep 2021	2	17.04	75.98	8.5	33.44	8.1	24.3	1.12
I26	22 Sep 2021	3	16.75	76.03	8.5	33.48	8.1	24.4	1.11
I26	22 Sep 2021	4	16.44	76.18	8.5	33.45	8.1	24.5	1.18
I26	22 Sep 2021	5	16.04	77.51	8.6	33.46	8.1	24.6	1.33
I26	22 Sep 2021	6	15.94	77.45	8.7	33.42	8.1	24.5	1.52
I26	22 Sep 2021	7	15.55	76.05	8.6	33.48	8.1	24.7	1.60
I26	22 Sep 2021	8	15.25	74.93	8.6	33.46	8.1	24.7	1.75
I26	22 Sep 2021	9	14.49	74.33	8.4	33.51	8.0	24.9	2.23
I26	28 Sep 2021	1	16.68	63.02	9.4	33.43	8.1	24.4	5.20
I26	28 Sep 2021	2	16.31	59.93	9.3	33.43	8.1	24.5	5.49
I26	28 Sep 2021	3	16.24	57.04	8.9	33.41	8.0	24.5	7.51
I26	28 Sep 2021	4	16.10	59.10	8.6	33.43	8.0	24.5	9.75
I26	28 Sep 2021	5	15.77	62.59	8.3	33.45	8.0	24.6	10.06
I26	28 Sep 2021	6	15.61	65.23	8.0	33.44	8.0	24.6	9.07
I26	28 Sep 2021	7	15.24	66.65	7.6	33.46	7.9	24.7	7.50
I26	28 Sep 2021	8	15.05	68.17	7.3	33.45	7.9	24.8	6.34
I26	28 Sep 2021	9	15.01	68.41	7.1	33.43	7.9	24.8	4.95
I32	07 Sep 2021	1	20.05	76.81	8.3	33.47	8.1	23.6	1.37
I32	07 Sep 2021	2	19.66	76.84	8.2	33.49	8.1	23.7	1.39
I32	07 Sep 2021	3	19.32	76.29	7.9	33.51	8.1	23.8	1.44
I32	07 Sep 2021	4	18.05	73.95	7.7	33.68	8.1	24.3	1.48
I32	07 Sep 2021	5	16.89	70.86	7.7	33.62	8.0	24.5	1.50
I32	07 Sep 2021	6	16.32	71.76	7.8	33.62	8.0	24.6	1.54
I32	07 Sep 2021	7	15.84	74.29	7.8	33.56	8.0	24.7	1.78
I32	07 Sep 2021	8	15.62	75.74	7.8	33.54	8.0	24.7	2.01

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens ($\sigma\text{-t}$)	Chlor ($\mu\text{g/L}$)
I32	07 Sep 2021	9	15.59	75.62	7.8	33.52	8.0	24.7	2.21
I32	07 Sep 2021	10	15.56	74.07	7.6	33.51	8.0	24.7	2.48
I32	13 Sep 2021	1	16.31	71.98	7.2	33.47	7.9	24.5	0.76
I32	13 Sep 2021	2	15.36	72.45	6.9	33.63	7.9	24.8	0.77
I32	13 Sep 2021	3	14.19	72.99	6.4	33.58	7.9	25.1	0.78
I32	13 Sep 2021	4	14.06	77.08	6.2	33.51	7.9	25.0	0.78
I32	13 Sep 2021	5	14.04	78.25	6.2	33.50	7.9	25.0	0.82
I32	13 Sep 2021	6	13.98	77.87	6.1	33.50	7.9	25.0	0.85
I32	13 Sep 2021	7	13.94	76.18	6.1	33.50	7.9	25.0	0.89
I32	13 Sep 2021	8	13.91	74.47	6.0	33.50	7.9	25.0	1.00
I32	13 Sep 2021	9	13.89	72.45	5.9	33.50	7.8	25.0	1.03
I32	13 Sep 2021	10	13.89	55.21	5.8	33.49	7.8	25.0	1.20
I32	22 Sep 2021	1	17.33	77.12	8.5	33.44	8.1	24.2	1.03
I32	22 Sep 2021	2	17.23	76.91	8.5	33.46	8.1	24.3	1.05
I32	22 Sep 2021	3	17.09	76.41	8.5	33.45	8.1	24.3	1.07
I32	22 Sep 2021	4	16.44	73.70	8.6	33.51	8.1	24.5	1.14
I32	22 Sep 2021	5	16.17	71.86	8.7	33.45	8.1	24.5	1.31
I32	22 Sep 2021	6	16.14	71.35	8.7	33.44	8.1	24.5	1.62
I32	22 Sep 2021	7	15.60	69.17	8.6	33.53	8.1	24.7	1.98
I32	22 Sep 2021	8	14.75	65.84	8.6	33.49	8.1	24.9	2.37
I32	22 Sep 2021	9	14.31	63.30	8.3	33.47	8.0	24.9	3.13
I32	22 Sep 2021	10	14.10	61.75	7.9	33.45	8.0	25.0	4.29
I32	28 Sep 2021	1	17.28	75.01	8.5	33.41	8.1	24.2	2.09
I32	28 Sep 2021	2	17.05	74.22	8.5	33.43	8.0	24.3	2.11
I32	28 Sep 2021	3	16.75	72.85	8.4	33.42	8.0	24.4	2.29
I32	28 Sep 2021	4	16.50	71.55	8.3	33.44	8.0	24.4	2.63
I32	28 Sep 2021	5	16.09	69.12	8.2	33.44	8.0	24.5	2.95
I32	28 Sep 2021	6	15.96	67.25	8.1	33.42	8.0	24.5	3.51
I32	28 Sep 2021	7	15.65	69.37	7.8	33.44	8.0	24.6	3.95
I32	28 Sep 2021	8	15.21	70.46	7.6	33.45	8.0	24.7	3.94
I32	28 Sep 2021	9	14.90	72.11	7.5	33.42	7.9	24.8	4.12
I32	28 Sep 2021	10	14.61	67.31	7.4	33.42	7.9	24.8	3.86
I39	07 Sep 2021	1	19.11	82.01	8.5	33.46	8.1	23.8	0.69
I39	07 Sep 2021	2	19.03	81.83	8.5	33.48	8.1	23.9	0.72
I39	07 Sep 2021	3	19.02	81.44	8.4	33.47	8.1	23.8	0.70
I39	07 Sep 2021	4	18.31	81.15	8.5	33.58	8.1	24.1	0.75
I39	07 Sep 2021	5	17.23	80.72	8.7	33.61	8.1	24.4	0.88
I39	07 Sep 2021	6	16.59	79.83	9.0	33.55	8.1	24.5	1.10
I39	07 Sep 2021	7	16.01	79.18	9.1	33.58	8.1	24.7	1.30
I39	07 Sep 2021	8	15.64	78.14	9.1	33.53	8.1	24.7	1.70
I39	07 Sep 2021	9	15.58	76.38	9.0	33.51	8.1	24.7	2.11
I39	07 Sep 2021	10	15.56	75.83	8.9	33.50	8.1	24.7	2.65
I39	07 Sep 2021	11	15.56	75.81	8.8	33.50	8.1	24.7	3.04
I39	07 Sep 2021	12	15.52	75.83	8.6	33.51	8.1	24.7	3.26
I39	07 Sep 2021	13	15.26	75.28	8.2	33.54	8.0	24.8	3.38
I39	07 Sep 2021	14	14.80	74.69	7.7	33.57	8.0	24.9	3.73
I39	07 Sep 2021	15	14.46	74.69	7.4	33.55	8.0	25.0	3.91
I39	07 Sep 2021	16	14.38	75.03	7.2	33.53	7.9	25.0	4.13
I39	07 Sep 2021	17	14.32	75.64	7.1	33.53	7.9	25.0	4.18
I39	07 Sep 2021	18	14.28	76.38	7.1	33.53	7.9	25.0	4.00
I39	13 Sep 2021	1	17.38	77.35	8.2	33.46	8.0	24.2	1.11
I39	13 Sep 2021	2	17.37	77.42	8.2	33.46	8.0	24.2	1.17
I39	13 Sep 2021	3	17.36	77.42	8.2	33.46	8.0	24.2	1.16
I39	13 Sep 2021	4	17.35	77.41	8.2	33.46	8.0	24.3	1.16
I39	13 Sep 2021	5	17.30	77.42	8.1	33.47	8.0	24.3	1.25
I39	13 Sep 2021	6	17.09	77.44	8.1	33.49	8.0	24.3	1.33

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (μg/L)
I39	13 Sep 2021	7	16.97	77.84	8.1	33.47	8.0	24.4	1.42
I39	13 Sep 2021	8	16.08	78.40	8.0	33.58	8.0	24.6	1.59
I39	13 Sep 2021	9	15.01	79.76	8.0	33.57	8.0	24.9	1.64
I39	13 Sep 2021	10	14.57	81.49	8.1	33.48	8.0	24.9	1.70
I39	13 Sep 2021	11	13.72	84.31	7.8	33.57	8.0	25.1	1.77
I39	13 Sep 2021	12	13.10	86.53	7.6	33.54	8.0	25.2	1.89
I39	13 Sep 2021	13	13.00	87.06	7.3	33.49	8.0	25.2	1.91
I39	13 Sep 2021	14	12.86	86.99	7.1	33.49	7.9	25.3	1.83
I39	13 Sep 2021	15	12.86	86.18	6.9	33.48	7.9	25.2	1.63
I39	13 Sep 2021	16	12.85	85.65	6.8	33.48	7.9	25.2	1.37
I39	13 Sep 2021	17	12.86	84.81	6.7	33.48	7.9	25.2	1.33
I39	13 Sep 2021	18	12.88	82.41	6.5	33.49	7.9	25.2	1.33
I39	22 Sep 2021	1	17.16	77.61	8.4	33.44	8.1	24.3	1.12
I39	22 Sep 2021	2	17.06	77.89	8.4	33.46	8.1	24.3	1.13
I39	22 Sep 2021	3	16.86	77.98	8.4	33.47	8.1	24.4	1.15
I39	22 Sep 2021	4	16.60	78.06	8.5	33.45	8.1	24.4	1.16
I39	22 Sep 2021	5	16.56	78.12	8.5	33.44	8.1	24.4	1.26
I39	22 Sep 2021	6	16.54	78.15	8.5	33.44	8.1	24.4	1.40
I39	22 Sep 2021	7	16.51	78.10	8.5	33.44	8.1	24.4	1.54
I39	22 Sep 2021	8	16.01	79.66	8.5	33.49	8.1	24.6	1.67
I39	22 Sep 2021	9	15.12	84.46	8.7	33.42	8.1	24.7	1.75
I39	22 Sep 2021	10	14.94	85.72	8.8	33.36	8.1	24.7	1.58
I39	22 Sep 2021	11	14.93	85.58	8.9	33.35	8.1	24.7	1.33
I39	22 Sep 2021	12	14.96	84.22	8.8	33.36	8.1	24.7	1.17
I39	22 Sep 2021	13	15.00	82.40	8.7	33.38	8.1	24.7	1.16
I39	22 Sep 2021	14	15.00	81.34	8.6	33.39	8.1	24.7	1.43
I39	22 Sep 2021	15	14.45	81.47	8.4	33.45	8.0	24.9	1.66
I39	22 Sep 2021	16	14.22	82.10	8.1	33.43	8.0	24.9	1.98
I39	22 Sep 2021	17	13.75	81.51	7.8	33.44	8.0	25.0	2.17
I39	22 Sep 2021	18	13.67	80.34	7.5	33.43	8.0	25.0	2.24
I39	28 Sep 2021	1	17.21	71.82	8.6	33.41	8.1	24.2	2.39
I39	28 Sep 2021	2	17.10	73.14	8.6	33.42	8.1	24.3	2.43
I39	28 Sep 2021	3	16.95	73.65	8.6	33.42	8.0	24.3	2.87
I39	28 Sep 2021	4	16.52	74.87	8.5	33.46	8.0	24.4	3.35
I39	28 Sep 2021	5	16.02	74.68	8.3	33.46	8.0	24.6	3.60
I39	28 Sep 2021	6	15.72	73.14	8.2	33.45	8.0	24.6	4.19
I39	28 Sep 2021	7	15.36	72.89	8.0	33.48	8.0	24.7	4.76
I39	28 Sep 2021	8	15.00	73.19	7.8	33.46	8.0	24.8	4.74
I39	28 Sep 2021	9	14.83	73.45	7.5	33.46	7.9	24.8	4.28
I39	28 Sep 2021	10	14.78	73.45	7.3	33.45	7.9	24.8	3.86
I39	28 Sep 2021	11	14.83	73.40	7.4	33.46	7.9	24.8	3.62
I39	28 Sep 2021	12	14.69	73.35	7.3	33.45	7.9	24.8	3.53
I39	28 Sep 2021	13	14.68	73.30	7.2	33.45	7.9	24.8	3.41
I39	28 Sep 2021	14	14.67	73.27	7.2	33.45	7.9	24.9	3.30
I39	28 Sep 2021	15	14.66	73.33	7.2	33.45	7.9	24.9	3.18
I39	28 Sep 2021	16	14.66	72.79	7.1	33.45	7.9	24.9	3.10
I39	28 Sep 2021	17	14.64	72.53	7.1	33.45	7.9	24.9	3.09
I39	28 Sep 2021	18	14.63	72.34	7.1	33.45	7.9	24.9	2.98
I40	07 Sep 2021	1	18.85	73.71	8.4	33.41	8.1	23.8	1.81
I40	07 Sep 2021	2	18.88	73.62	8.3	33.41	8.1	23.8	1.75
I40	07 Sep 2021	3	18.66	73.87	8.3	33.45	8.1	23.9	1.73
I40	07 Sep 2021	4	18.28	73.89	8.2	33.48	8.1	24.0	1.78
I40	07 Sep 2021	5	17.93	74.92	8.1	33.51	8.1	24.1	1.76
I40	07 Sep 2021	6	17.49	74.26	7.9	33.51	8.0	24.3	1.72
I40	07 Sep 2021	7	17.35	71.86	7.9	33.48	8.0	24.3	1.67
I40	07 Sep 2021	8	17.10	70.30	8.2	33.51	8.1	24.3	1.83
I40	07 Sep 2021	9	16.85	72.86	8.4	33.50	8.1	24.4	2.12
I40	07 Sep 2021	10	16.27	71.85	8.0	33.62	8.0	24.6	2.46

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens ($\sigma\text{-t}$)	Chlor ($\mu\text{g/L}$)
I40	13 Sep 2021	1	15.84	64.45	7.1	33.46	7.9	24.6	0.86
I40	13 Sep 2021	2	15.76	64.14	7.0	33.48	7.9	24.6	0.86
I40	13 Sep 2021	3	14.63	63.68	6.9	33.62	7.9	25.0	0.88
I40	13 Sep 2021	4	14.09	75.03	6.7	33.50	7.9	25.0	0.97
I40	13 Sep 2021	5	13.97	79.40	6.6	33.48	7.9	25.0	1.02
I40	13 Sep 2021	6	13.93	76.77	6.5	33.47	7.9	25.0	1.17
I40	13 Sep 2021	7	13.90	72.35	6.3	33.47	7.9	25.0	1.29
I40	13 Sep 2021	8	13.86	71.14	6.2	33.47	7.9	25.0	1.39
I40	13 Sep 2021	9	13.86	70.82	6.2	33.47	7.8	25.0	1.53
I40	13 Sep 2021	10	13.82	61.94	6.0	33.48	7.8	25.0	1.66
I40	22 Sep 2021	1	17.20	75.07	8.3	33.44	8.0	24.3	1.14
I40	22 Sep 2021	2	17.15	74.68	8.3	33.45	8.0	24.3	1.12
I40	22 Sep 2021	3	17.01	73.95	8.3	33.45	8.0	24.3	1.16
I40	22 Sep 2021	4	16.83	72.85	8.2	33.46	8.0	24.4	1.25
I40	22 Sep 2021	5	16.23	70.63	8.4	33.50	8.1	24.5	1.43
I40	22 Sep 2021	6	16.04	70.40	8.5	33.43	8.1	24.5	2.01
I40	22 Sep 2021	7	15.40	67.95	8.4	33.50	8.0	24.7	2.84
I40	22 Sep 2021	8	15.07	61.50	8.2	33.46	8.0	24.8	3.60
I40	22 Sep 2021	9	14.90	60.21	7.8	33.46	8.0	24.8	4.30
I40	22 Sep 2021	10	14.31	48.68	7.1	33.49	7.9	25.0	4.88
I40	28 Sep 2021	1	16.82	53.31	9.7	33.37	8.1	24.3	12.82
I40	28 Sep 2021	2	16.46	52.89	9.5	33.44	8.1	24.4	13.13
I40	28 Sep 2021	3	16.04	53.26	9.0	33.41	8.0	24.5	14.37
I40	28 Sep 2021	4	16.14	54.59	9.0	33.40	8.0	24.5	14.34
I40	28 Sep 2021	5	16.24	52.19	9.1	33.40	8.0	24.5	14.58
I40	28 Sep 2021	6	16.03	54.88	8.9	33.41	8.0	24.5	15.46
I40	28 Sep 2021	7	15.82	64.51	8.6	33.44	8.0	24.6	15.12
I40	28 Sep 2021	8	15.52	65.69	8.0	33.44	7.9	24.7	13.54
I40	28 Sep 2021	9	15.47	63.85	7.8	33.43	7.9	24.7	9.24
I40	28 Sep 2021	10	15.29	61.43	7.6	33.45	7.9	24.7	6.93

NA = not available

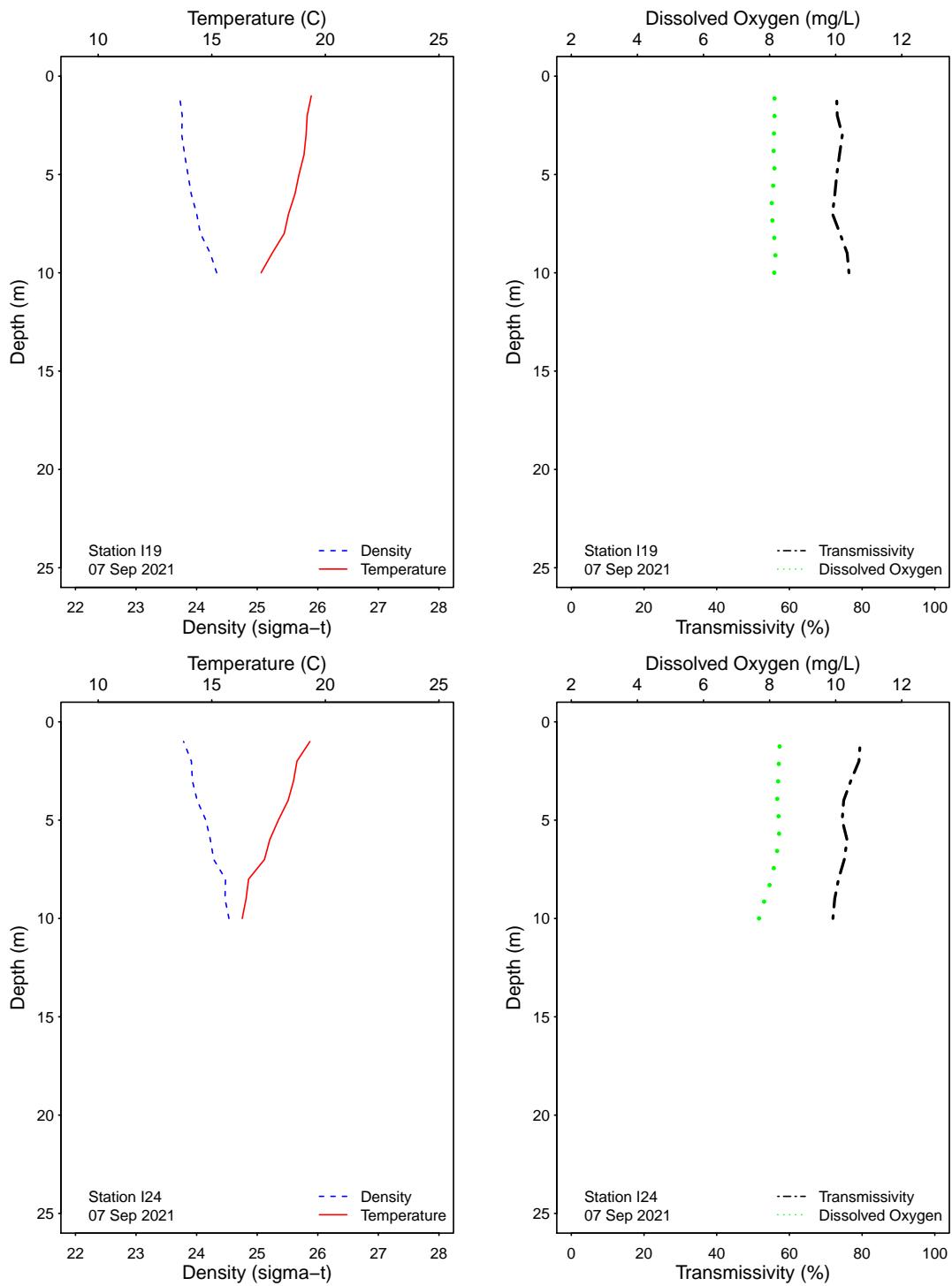


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

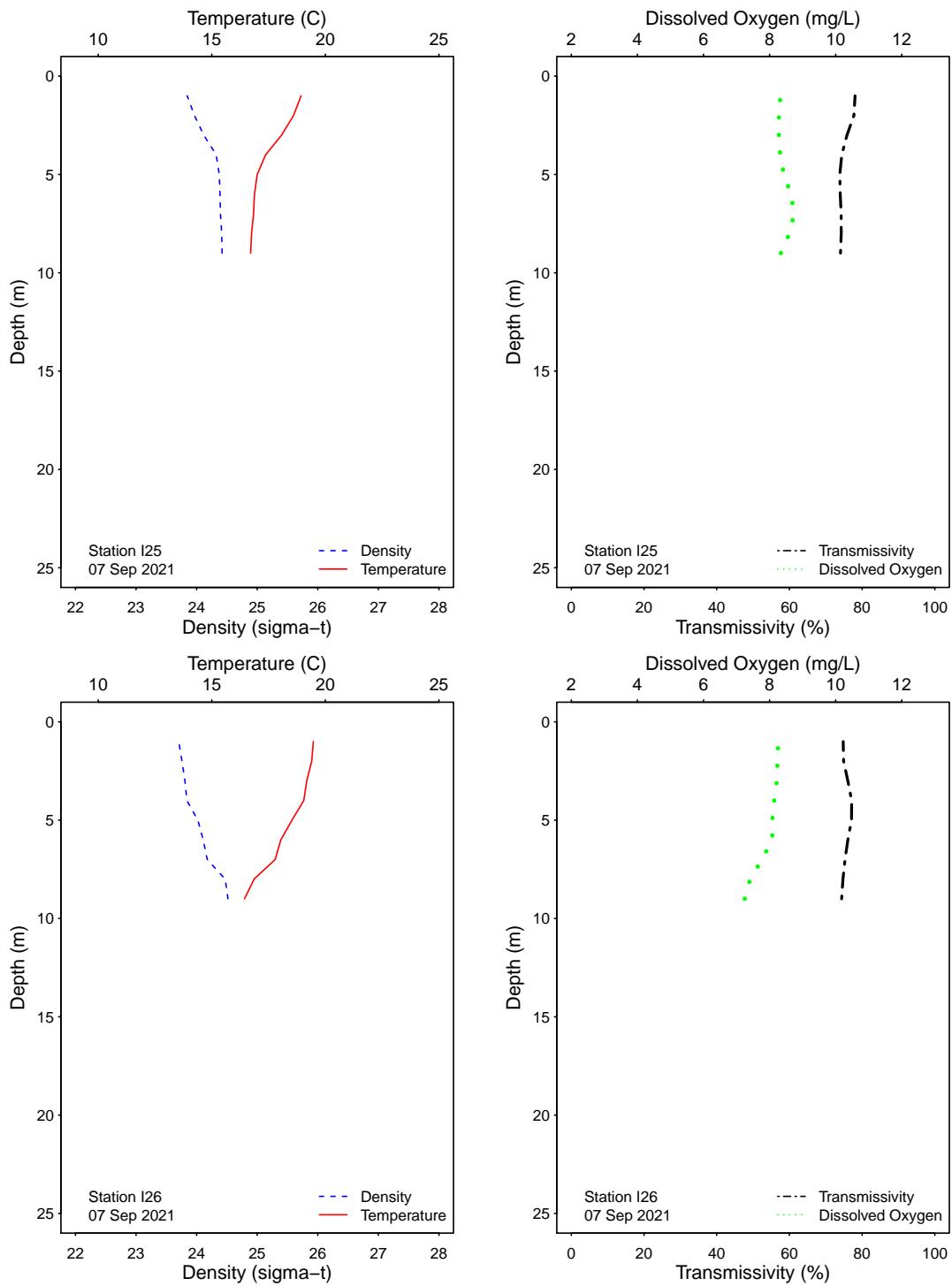


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

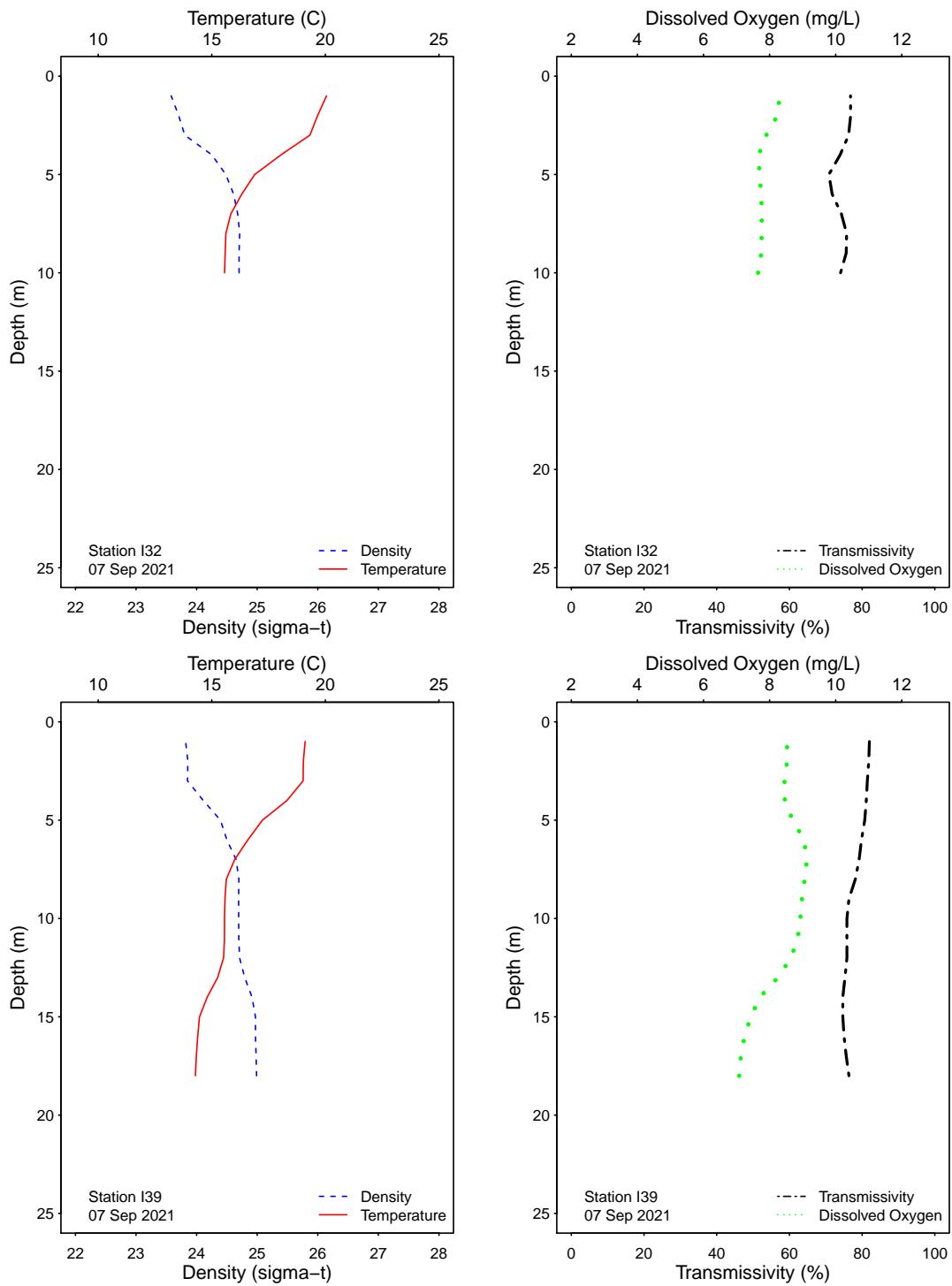


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

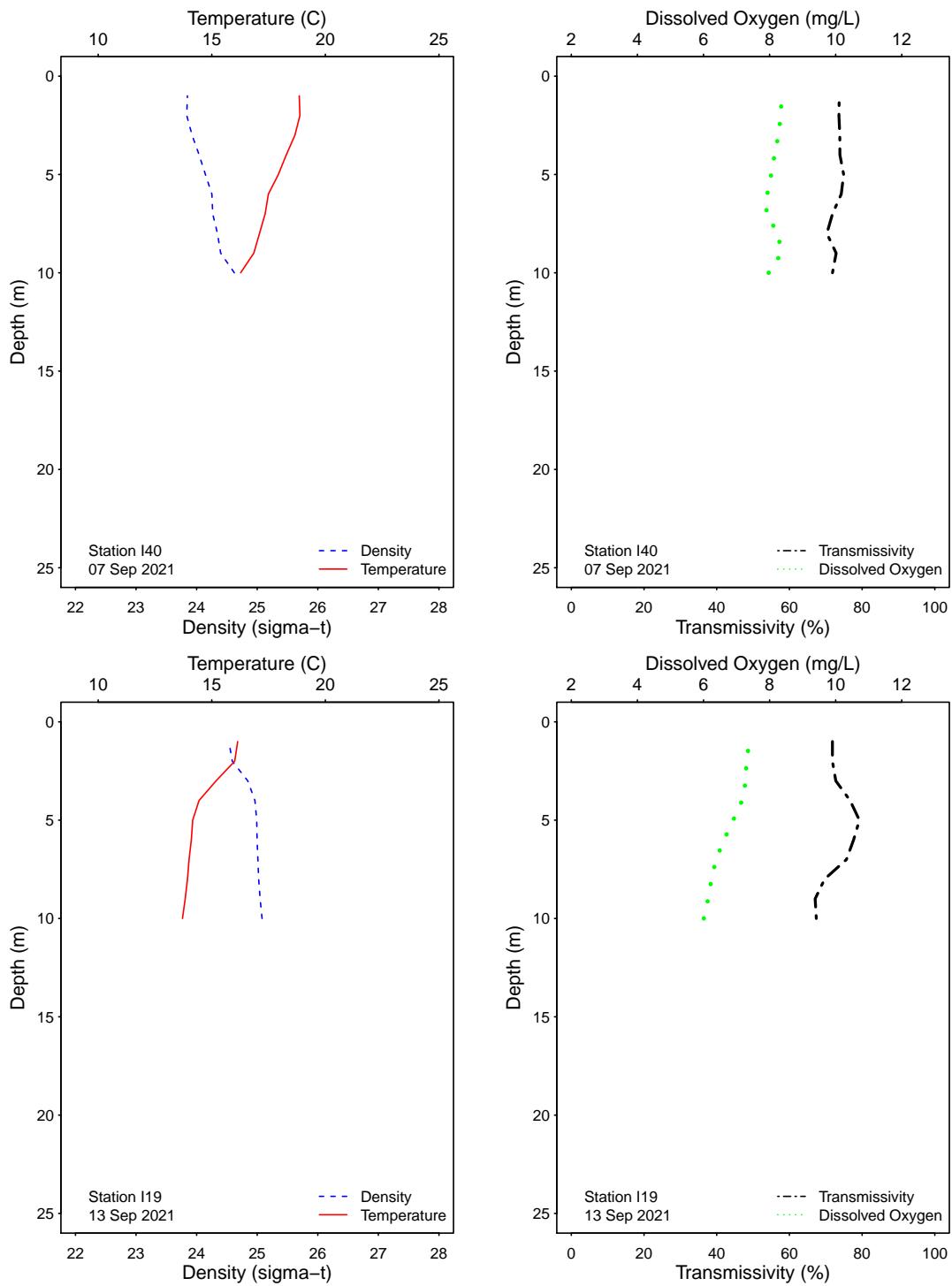


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

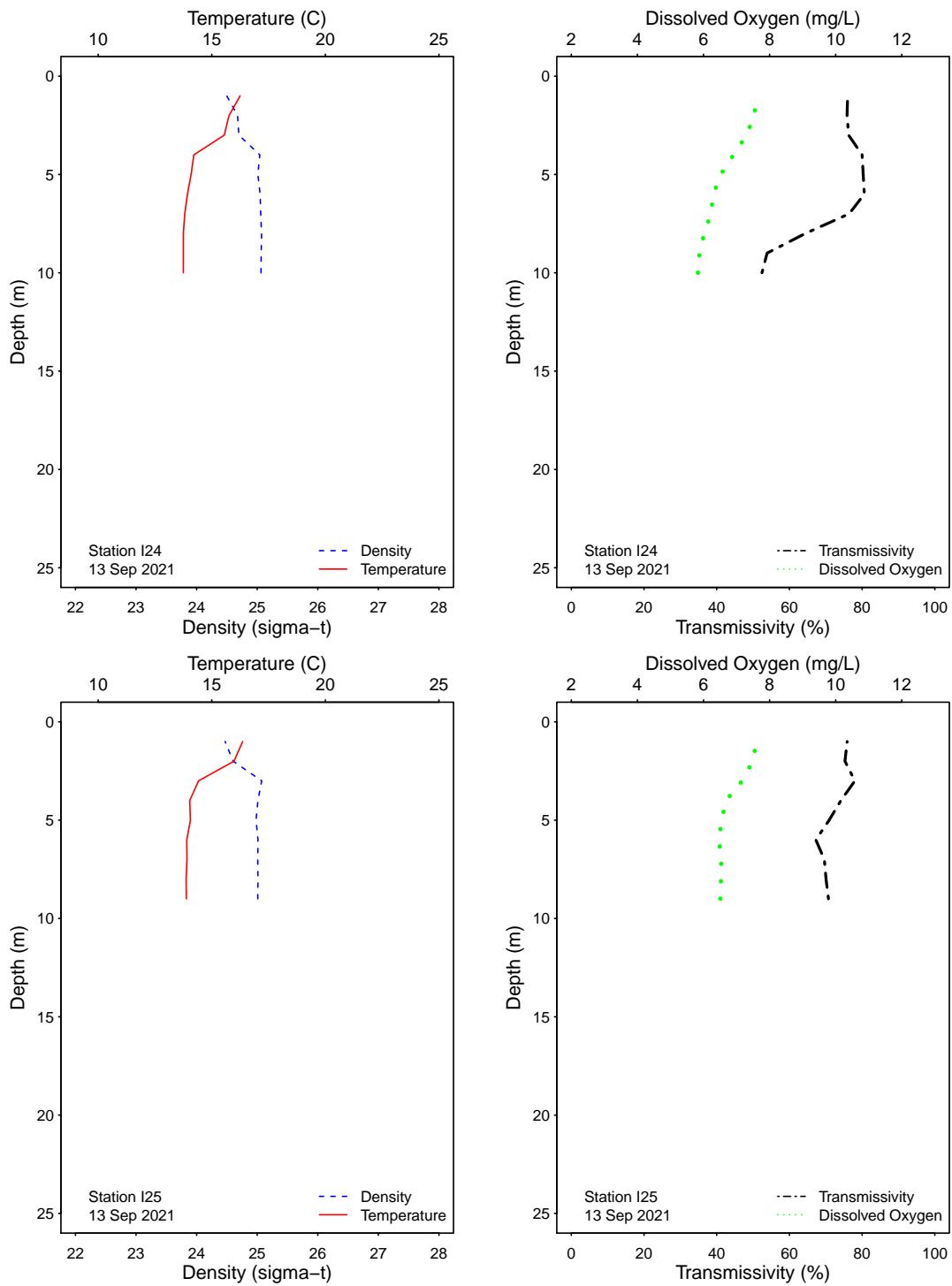


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

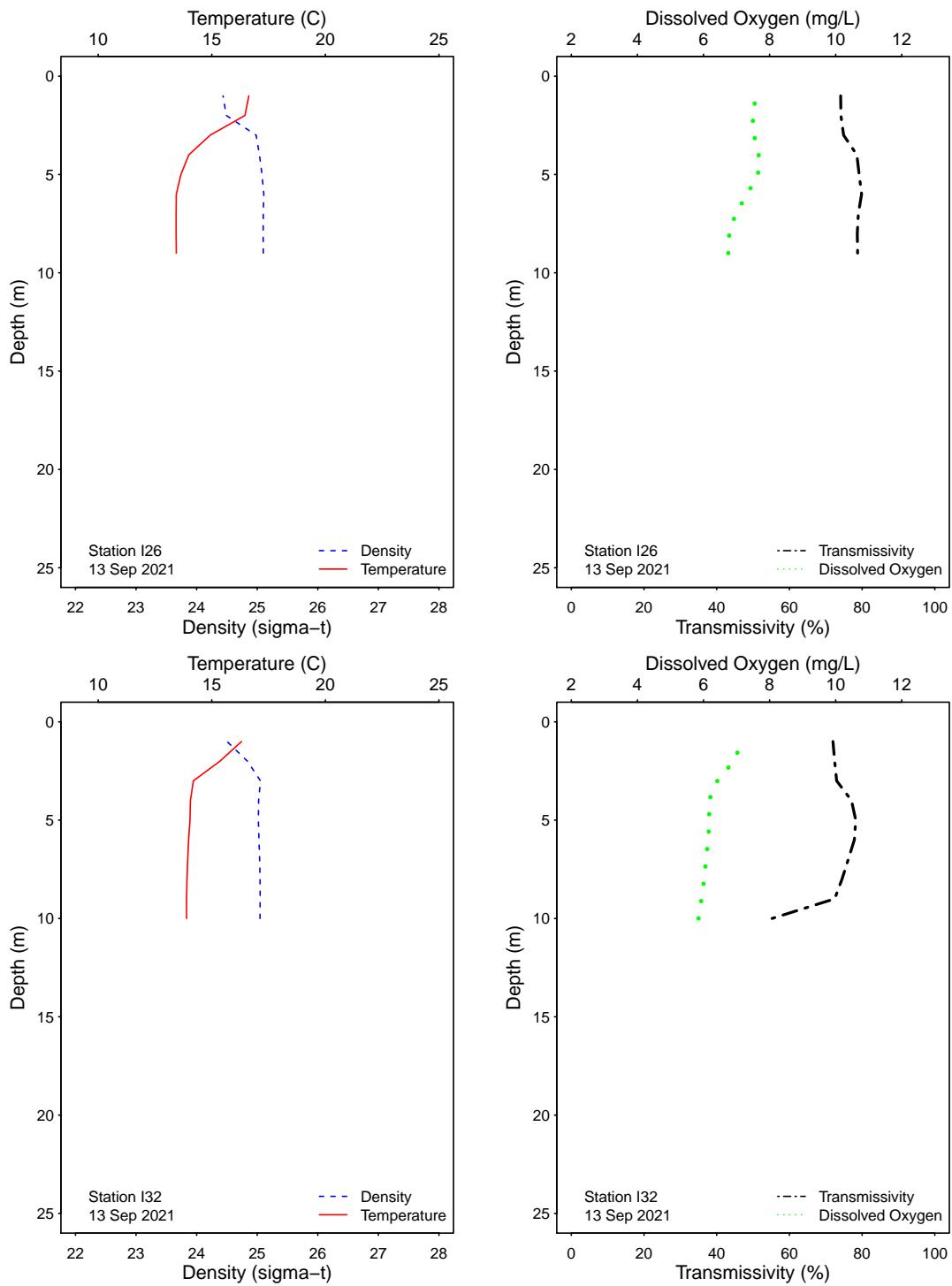


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

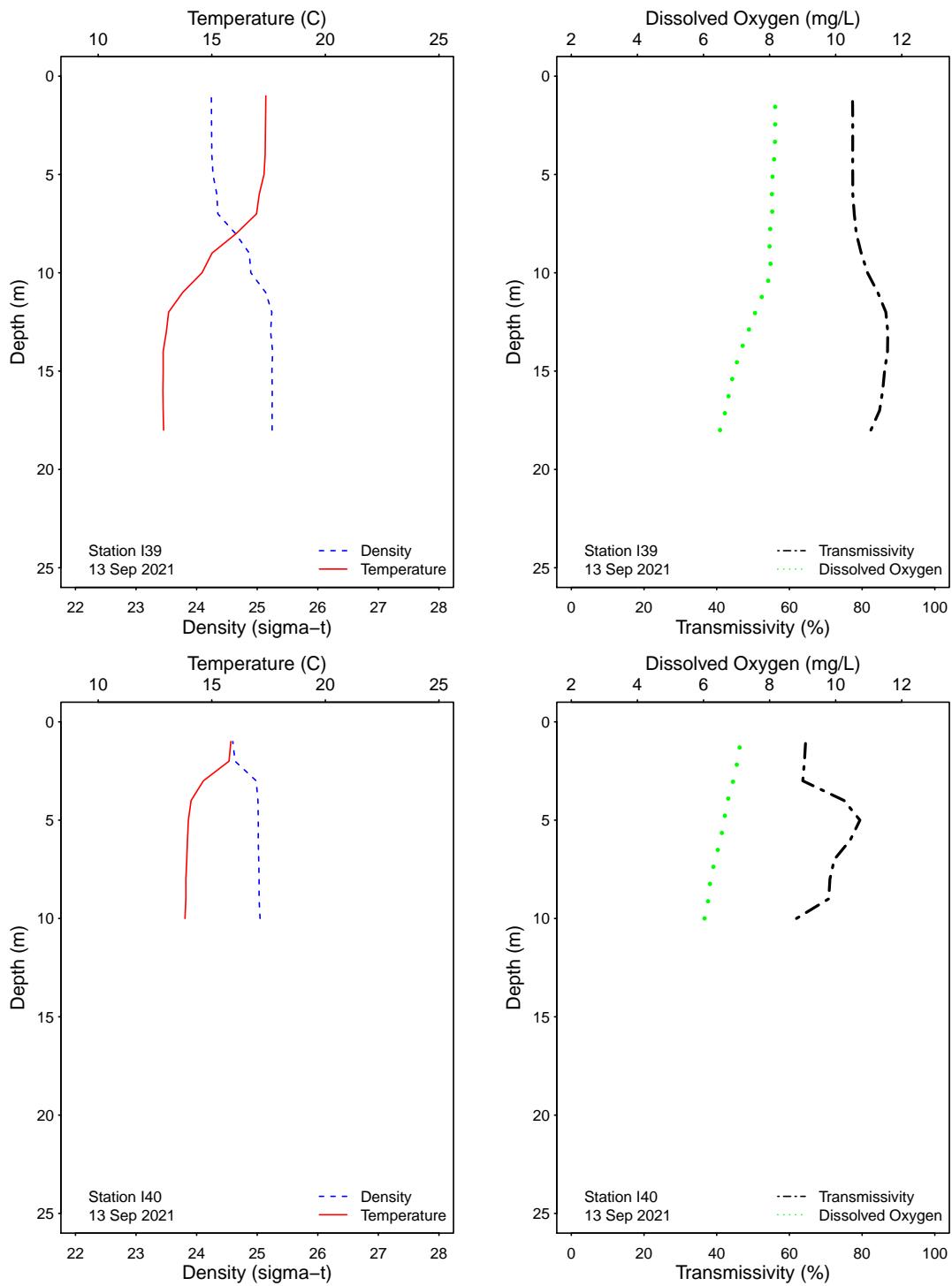


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

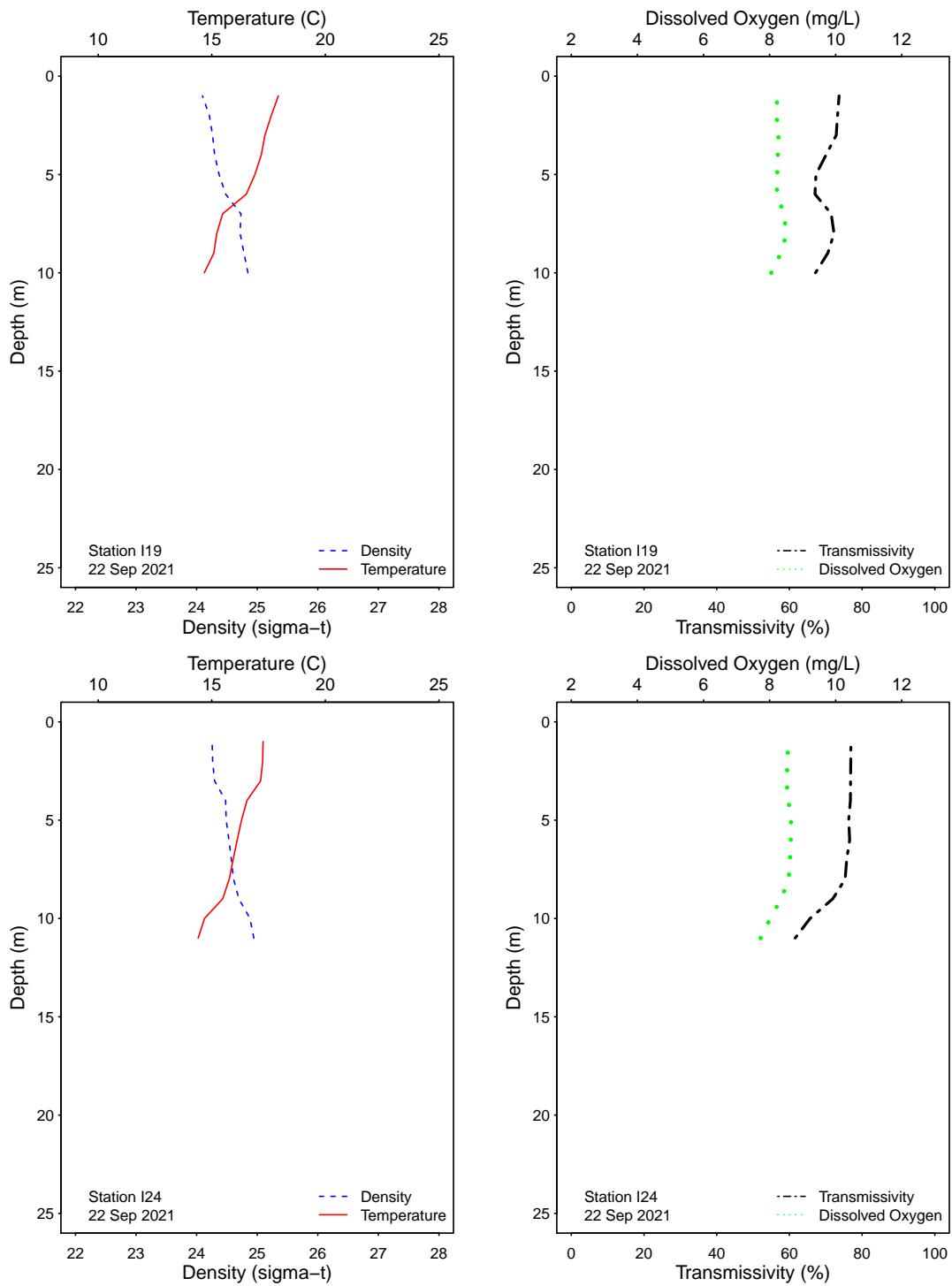


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

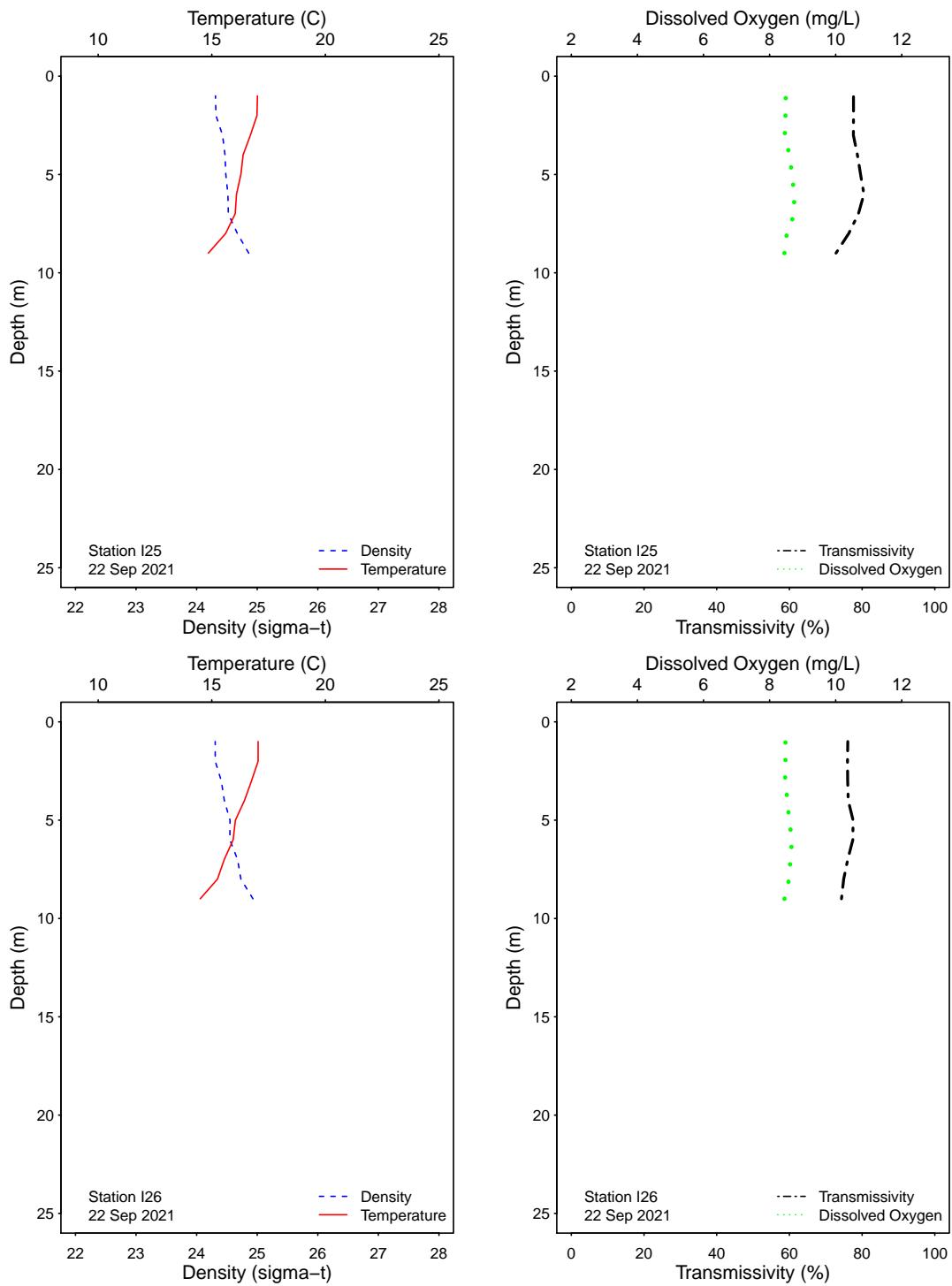


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

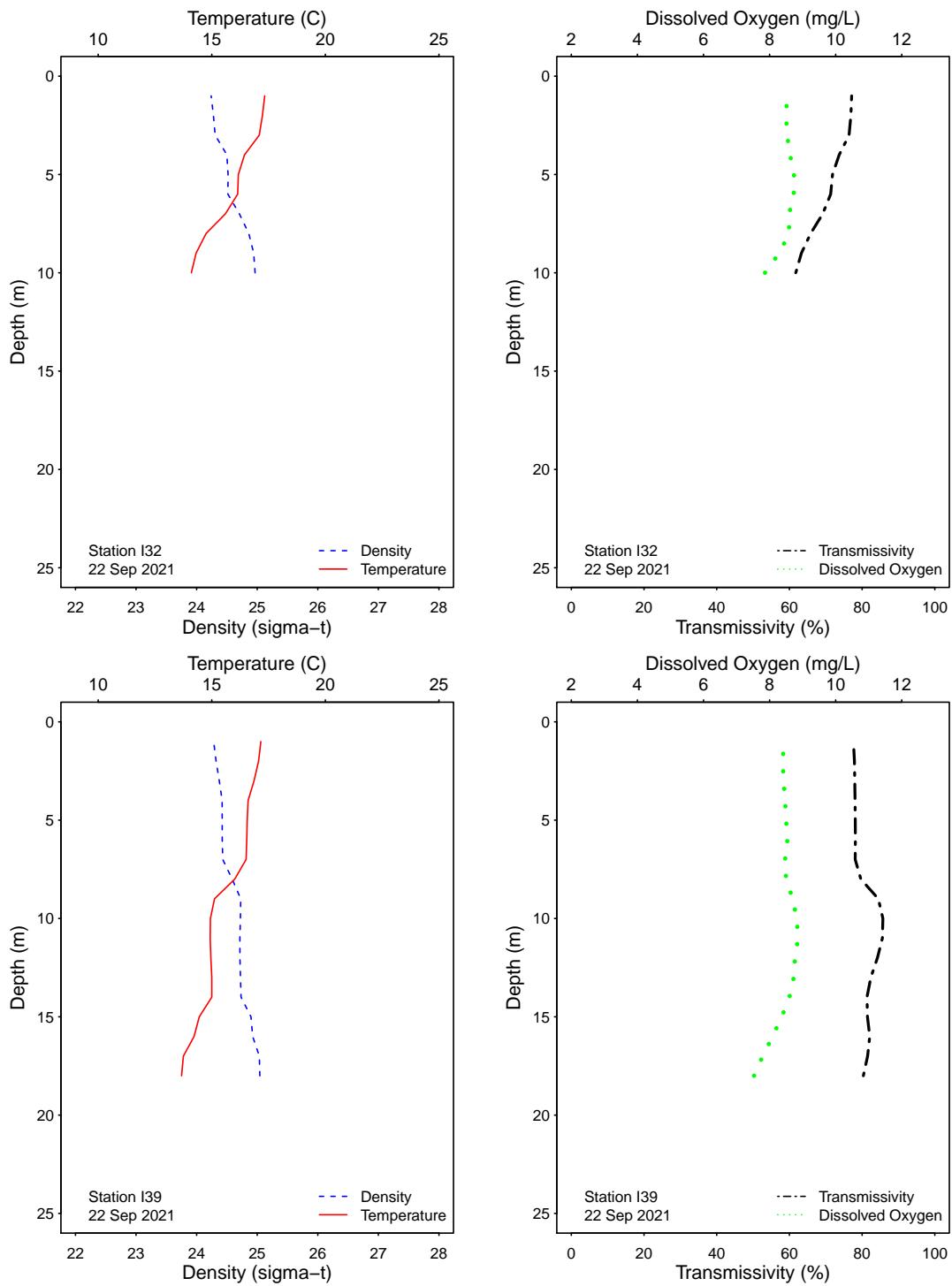


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

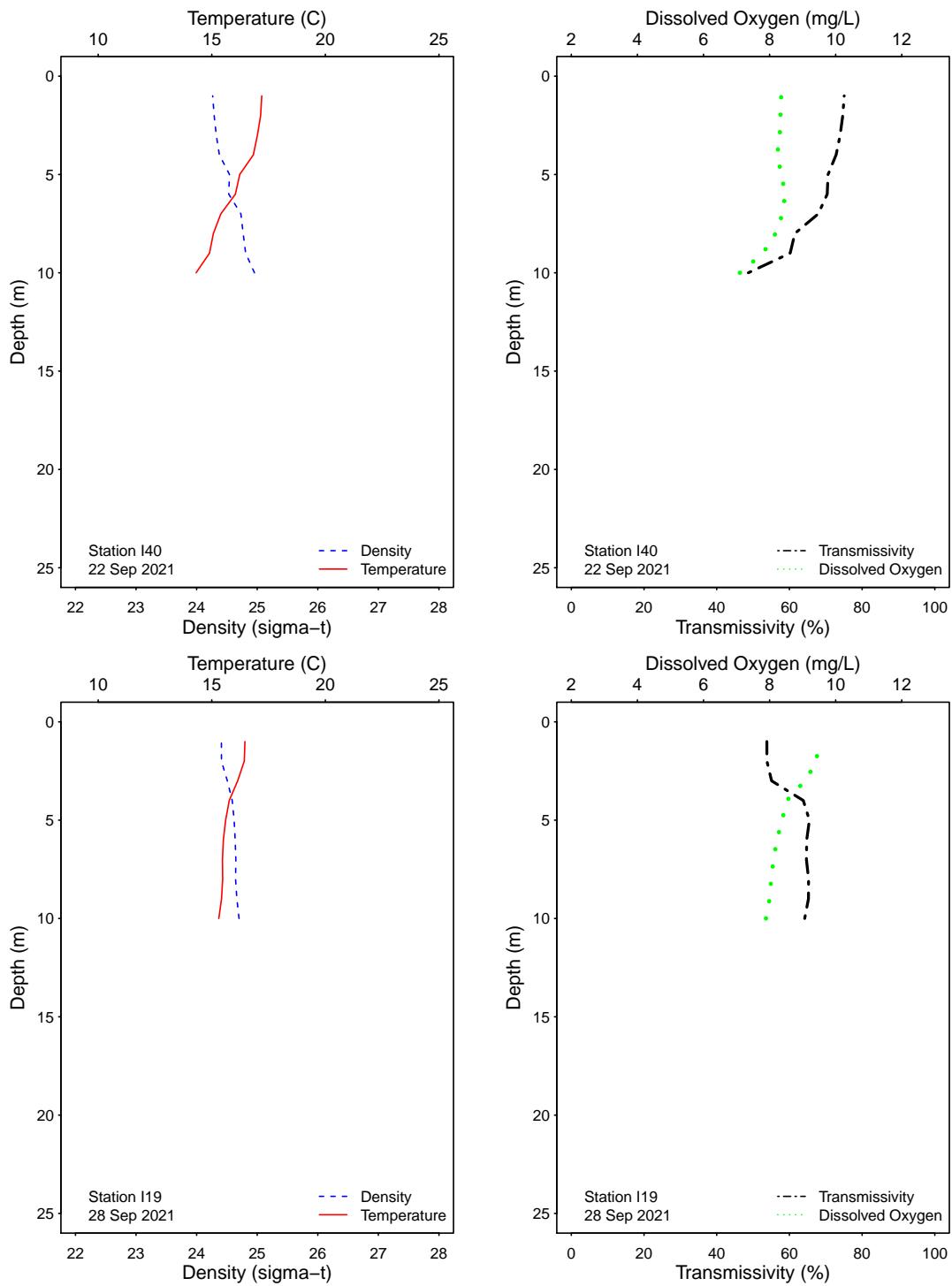


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

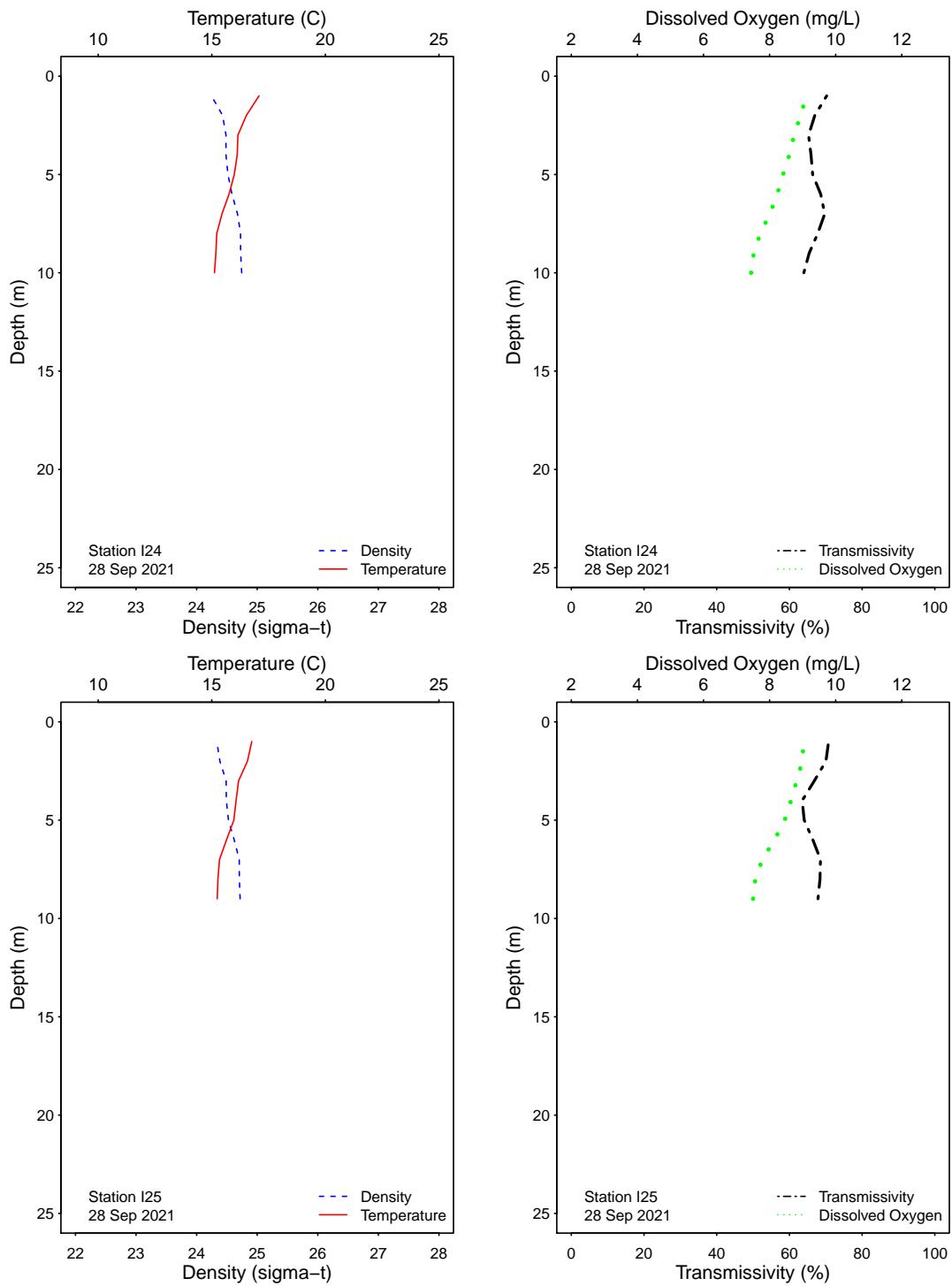


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

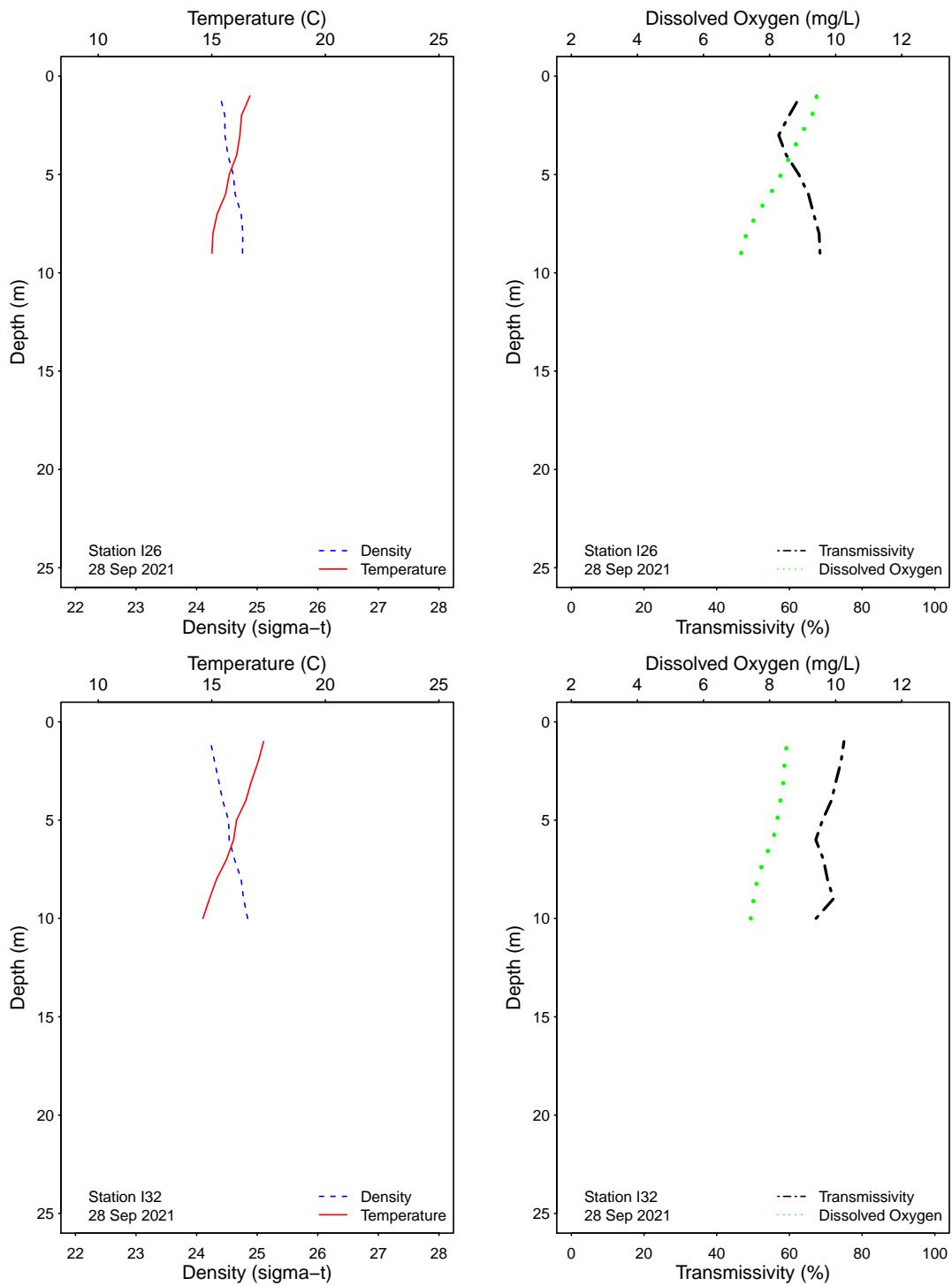


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

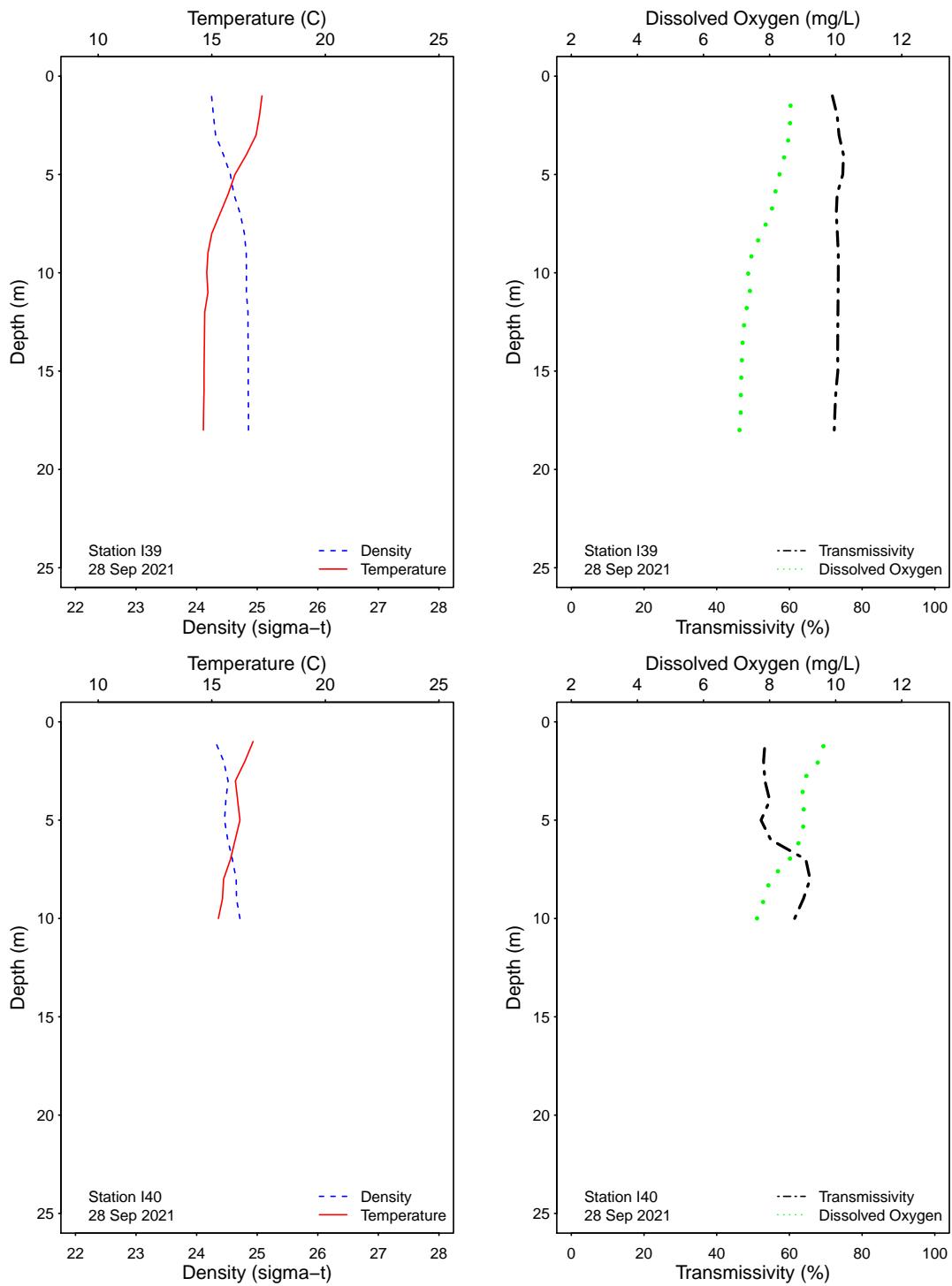


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

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

Station	Date	Depth	Analyst	Procedure	Total	Fecal	Enter
I19	07 Sep 2021	6	CRE	LAB DUPLICATE	11000	340e	2200e
I19	13 Sep 2021	6	BS	LAB DUPLICATE	2e	<2	<2
I19	22 Sep 2021	6	KA	LAB DUPLICATE	2e	<2	<2
I19	28 Sep 2021	6	KA	LAB DUPLICATE	1000e	68	78
I40	07 Sep 2021	6	CRE	LAB DUPLICATE	700	56	120e
I40	13 Sep 2021	6	BS	LAB DUPLICATE	<20	<2	<2
I40	22 Sep 2021	6	KA	LAB DUPLICATE	<2	<2	<2
I40	28 Sep 2021	6	KA	LAB DUPLICATE	60e	12e	8e
S12	07 Sep 2021		AR	FIELD DUPLICATE	500	24e	30e
S12	07 Sep 2021		AR	LAB DUPLICATE	<200	34e	34e
S12	14 Sep 2021		JF	FIELD DUPLICATE	20e	10e	32e
S12	14 Sep 2021		JF	LAB DUPLICATE	60e	2e	20e
S12	21 Sep 2021		HF	FIELD DUPLICATE	<2	<2	2e
S12	21 Sep 2021		CRE	LAB DUPLICATE	<2	<2	<2
S12	28 Sep 2021		JF	FIELD DUPLICATE	60e	12e	6e
S12	28 Sep 2021		JF	LAB DUPLICATE	40e	2e	2e

ns = not sampled

ND = no data

