



# **SOUTH BAY OCEAN OUTFALL MONTHLY RECEIVING WATERS MONITORING REPORT**

## **SOUTH BAY WATER RECLAMATION PLANT**

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

## **JUNE 2022**

Environmental Monitoring and Technical Services  
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July 31, 2022

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 June 2022 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  $\geq$  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)<sup>1</sup>. 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

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<sup>1</sup> 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, 1987<sup>2</sup>) 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 2022 Quality Assurance Report, which will be completed in March 2023.

## 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 June, one of the eight shore stations located north of the border was out of compliance with 2019 California Ocean Plan (Ocean Plan) water contact standards on one or more days as follows:
  - The 6-week geometric mean standard for *Enterococcus* was exceeded at station S5.
  - The 30-day running median standard for total coliform was exceeded at station S5.
- A sewage-like odor was observed at stations S5, S6, and S8 on one or more days in June.
- 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

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

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 June 1, 7, 14, 21, and 28.
- During June, six of the seven kelp stations were out of compliance with 2019 Ocean Plan water contact standards on one or more days as follows:
  - The statistical threshold value (STV) standard for total coliform was exceeded at stations I19, I24, I25, I32, I39, and I40.
- Water column temperatures ranged from 11.85 to 20.82°C. The difference between surface and bottom waters ranged from 0.37 to 8.57°C.
- Concentrations of chlorophyll *a* ranged from 1.42 to 68.16 µg/L at the kelp bed stations.
- Nothing of sewage origin was observed at SBOO kelp stations in June.

➤ **Offshore Water Quality Sampling**

- Quarterly sampling was not conducted during June at the offshore stations. The next quarterly sampling is scheduled for August 2022.



## 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 Jun 2022	6	10	4	2	2	8	5	3
02 Jun 2022	8	9	5	2	2*	11	6	4
03 Jun 2022	8	9	5	2	2*	11	6	4
04 Jun 2022	8	9	5	2	2*	11	6	4
05 Jun 2022	8	9	5	2	2*	11	6	4
06 Jun 2022	8	9	5	2	2*	11	6	4
07 Jun 2022	6	9	4	2	2	8	5	3
08 Jun 2022	6	9	4	2	2	8	5	3
09 Jun 2022	8	13	5	2	2*	11	7	4
10 Jun 2022	8	13	5	2	2*	11	7	4
11 Jun 2022	8	13	5	2	2*	11	7	4
12 Jun 2022	8	13	5	2	2*	11	7	4
13 Jun 2022	8	13	5	2	2*	11	7	4
14 Jun 2022	7	12	5	2	3	9	5	3
15 Jun 2022	7	12	5	2	3	9	5	3
16 Jun 2022	3	8	2	2	3*	4	3	2
17 Jun 2022	3	8	2	2	3*	4	3	2
18 Jun 2022	3	8	2	2	3*	4	3	2
19 Jun 2022	3	8	2	2	3*	4	3	2
20 Jun 2022	3	8	2	2	3*	4	3	2
21 Jun 2022	3	6	2	2	3	3	3	2
22 Jun 2022	3	6	2	2	3	3	3	2
23 Jun 2022	3	5	2	2	3*	4	2	2
24 Jun 2022	3	5	2	2	3*	4	2	2
25 Jun 2022	3	5	2	2	3*	4	2	2
26 Jun 2022	3	5	2	2	3*	4	2	2
27 Jun 2022	3	5	2	2	3*	4	2	2
28 Jun 2022	4	4	2	2	3	4	2	2
29 Jun 2022	4	4	2	2	3	4	2	2
30 Jun 2022	4	4	2	2	3	3	2	2

\* 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 Jun 2022	IC	IC	IC	IC	IC	IC	IC	IC
14 Jun 2022	IC	IC	IC	IC	IC	IC	IC	IC
21 Jun 2022	IC	IC	IC	IC	IC	IC	IC	IC
28 Jun 2022	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 Jun 2022	7	<b>34</b>	3	2	3	9	3	2
02 Jun 2022	7	<b>34</b>	3	2	3	9	3	2
03 Jun 2022	7	<b>34</b>	3	2	3	9	3	2
04 Jun 2022	7	<b>34</b>	3	2	3	9	3	2
05 Jun 2022	7	<b>34</b>	3	2	3	9	3	2
06 Jun 2022	7	<b>34</b>	3	2	3	9	3	2
07 Jun 2022	4	9	2	2	3	5	3	2
08 Jun 2022	4	9	2	2	3	5	3	2
09 Jun 2022	4	9	2	2	3	5	3	2
10 Jun 2022	4	9	2	2	3	5	3	2
11 Jun 2022	4	9	2	2	3	5	3	2
12 Jun 2022	4	9	2	2	3	5	3	2
13 Jun 2022	4	9	2	2	3	5	3	2
14 Jun 2022	4	5	2	2	5	5	3	2
15 Jun 2022	4	5	2	2	5	5	3	2
16 Jun 2022	4	5	2	2	5	5	3	2
17 Jun 2022	4	5	2	2	5	5	3	2
18 Jun 2022	4	5	2	2	5	5	3	2
19 Jun 2022	4	5	2	2	5	5	3	2
20 Jun 2022	4	5	2	2	5	5	3	2
21 Jun 2022	4	5	2	3	5	5	3	2
22 Jun 2022	4	5	2	3	5	5	3	2
23 Jun 2022	4	5	2	3	5	5	3	2
24 Jun 2022	4	5	2	3	5	5	3	2
25 Jun 2022	4	5	2	3	5	5	3	2
26 Jun 2022	4	5	2	3	5	5	3	2
27 Jun 2022	4	5	2	3	5	5	3	2
28 Jun 2022	3	3	2	3	3	4	2	2
29 Jun 2022	3	3	2	3	3	4	2	2
30 Jun 2022	3	3	2	3	3	4	2	2

\* 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
June	IC	IC	IC	IC	IC	IC	IC	IC

IC = In Compliance

E = Exceedance

ns = not sampled

ND = no data

**Table 2.5**

Summary of compliance 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 Jun 2022	20	200	20	2	11	20	20	4
02 Jun 2022	20	110	20	11	20*	22	20	11
03 Jun 2022	20	110	20	11	20*	22	20	11
04 Jun 2022	20	110	20	11	20*	22	20	11
05 Jun 2022	20	110	20	11	20*	22	20	11
06 Jun 2022	20	110	20	11	20*	22	20	11
07 Jun 2022	20	20	20	20	20	20	20	2
08 Jun 2022	20	20	20	20	20	20	20	2
09 Jun 2022	12	110	20	11	20*	22	20	11
10 Jun 2022	12	110	20	11	20*	22	20	11
11 Jun 2022	12	110	20	11	20*	22	20	11
12 Jun 2022	12	110	20	11	20*	22	20	11
13 Jun 2022	12	110	20	11	20*	22	20	11
14 Jun 2022	20	140	20	20	20	24	20	20
15 Jun 2022	20	140	20	20	20	24	20	20
16 Jun 2022	12	80	20	20	20*	22	20	11
17 Jun 2022	12	80	20	20	20*	22	20	11
18 Jun 2022	12	80	20	20	20*	22	20	11
19 Jun 2022	12	80	20	20	20*	22	20	11
20 Jun 2022	12	80	20	20	20*	22	20	11
21 Jun 2022	20	140	20	20	20	20	20	20
22 Jun 2022	20	140	20	20	20	20	20	20
23 Jun 2022	12	80	20	20	20*	22	20	11
24 Jun 2022	12	80	20	20	20*	22	20	11
25 Jun 2022	12	80	20	20	20*	22	20	11
26 Jun 2022	12	80	20	20	20*	22	20	11
27 Jun 2022	12	80	20	20	20*	22	20	11
28 Jun 2022	20	20	20	20	20	20	20	20
29 Jun 2022	20	20	20	20	20	20	20	20
30 Jun 2022	50	80	20	20	20	20	20	20

\* 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
June	IC	IC	IC	IC	IC	IC	IC	IC

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 Jun 2022	1110	>16000	>12000	5000
S0	14 Jun 2022	1120	>16000	7200	9400
S0	21 Jun 2022	915	5800	400	460
S0	28 Jun 2022	920	7600	2200e	960
S2	07 Jun 2022	1015	12e	8e	2e
S2	14 Jun 2022	1027	280e	32e	4e
S2	21 Jun 2022	1010	<20	<2	2e
S2	28 Jun 2022	825	12000	800e	3400e
S3	07 Jun 2022	1035	2e	2e	2e
S3	14 Jun 2022	1045	220e	8e	14e
S3	21 Jun 2022	955	<20	<2	<2
S3	28 Jun 2022	845	1000	100e	480
S4	07 Jun 2022	910	<2	<2	<2
S4	14 Jun 2022	1115	80e	4e	2e
S4	21 Jun 2022	900	<20	2e	<2
S4	28 Jun 2022	827	90	16e	40
S5	07 Jun 2022	952	20e	8e	6e
S5	14 Jun 2022	938	140e	12e	<2
S5	21 Jun 2022	942	<200	2e	<2
S5	28 Jun 2022	927	10e	2e	<2
S6	07 Jun 2022	1020	<2	<2	<2
S6	14 Jun 2022	955	20e	4e	<2
S6	21 Jun 2022	1005	<20	<2	<2
S6	28 Jun 2022	946	20e	<2	4e
S8	07 Jun 2022	1129	<20	<2	<2
S8	14 Jun 2022	848	<20	2e	6e
S8	21 Jun 2022	1128	<20	2e	4e
S8	28 Jun 2022	1108	<2	<2	<2
S9	07 Jun 2022	1159	<20	<2	<2
S9	14 Jun 2022	825	<20	10e	18e
S9	21 Jun 2022	1156	<200	<2	<2
S9	28 Jun 2022	1133	<20	<2	<2
S10	07 Jun 2022	857	<2	2e	2e
S10	14 Jun 2022	1107	100e	4e	<2
S10	21 Jun 2022	847	20e	<2	4e
S10	28 Jun 2022	840	20e	4e	34e
S11	07 Jun 2022	1006	<20	4e	<2
S11	14 Jun 2022	948	20e	<2	<2
S11	21 Jun 2022	955	<20	<2	<2
S11	28 Jun 2022	938	14e	<2	<2
S12	07 Jun 2022	1035	<2	<2	<2
S12	14 Jun 2022	910	<20	<2	2e
S12	21 Jun 2022	1020	<20	<2	<2

Station	Date	Time	Total	Fecal	Enter
S12	28 Jun 2022	1004	<20	2e	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 Jun 2022	Arrive Time	1624
S0	07 Jun 2022	Weather	Cloudy
S0	07 Jun 2022	Wind Speed (kts)	4.1
S0	07 Jun 2022	Wind Dir	N
S0	07 Jun 2022	Animal Life	Seagull-10
S0	07 Jun 2022	Floatables	None
S0	07 Jun 2022	Water Color	Green
S0	07 Jun 2022	Current Direction	N
S0	07 Jun 2022	Water Temp (C)	15
S0	07 Jun 2022	Wave Height Low (ft)	3
S0	07 Jun 2022	High Tide (ft)	3.82
S0	07 Jun 2022	High Tide Time	244
S0	07 Jun 2022	Low Tide (ft)	0.61
S0	07 Jun 2022	Low Tide Time	1007
S0	07 Jun 2022	Comments	Kelp; 1.0 L/sec water flowing from storm drain
S0	14 Jun 2022	Arrive Time	1642
S0	14 Jun 2022	Weather	Sunny
S0	14 Jun 2022	Wind Speed (kts)	2.7
S0	14 Jun 2022	Wind Dir	N
S0	14 Jun 2022	Animal Life	Seagull-10
S0	14 Jun 2022	Floatables	None
S0	14 Jun 2022	Water Color	Green
S0	14 Jun 2022	Current Direction	N
S0	14 Jun 2022	Water Temp (C)	15
S0	14 Jun 2022	Wave Height Low (ft)	3
S0	14 Jun 2022	High Tide (ft)	3.78
S0	14 Jun 2022	High Tide Time	1027
S0	14 Jun 2022	Low Tide (ft)	-1.62
S0	14 Jun 2022	Low Tide Time	406
S0	14 Jun 2022	Comments	Kelp; Algae; 1.0 L/sec water flowing from storm drain
S0	21 Jun 2022	Arrive Time	1641
S0	21 Jun 2022	Weather	Sunny
S0	21 Jun 2022	Wind Speed (kts)	
S0	21 Jun 2022	Wind Dir	S
S0	21 Jun 2022	Animal Life	Dog-1; Seagull-20
S0	21 Jun 2022	Floatables	None
S0	21 Jun 2022	Water Color	Green
S0	21 Jun 2022	Current Direction	S
S0	21 Jun 2022	Water Temp (C)	16
S0	21 Jun 2022	Wave Height Low (ft)	2
S0	21 Jun 2022	High Tide (ft)	3.9
S0	21 Jun 2022	High Tide Time	336
S0	21 Jun 2022	Low Tide (ft)	0.56
S0	21 Jun 2022	Low Tide Time	1016
S0	21 Jun 2022	Comments	Kelp; Algae; 1.0 L/sec water flowing from storm drain; Wind speed was not recorded
S0	28 Jun 2022	Arrive Time	1706
S0	28 Jun 2022	Weather	Cloudy
S0	28 Jun 2022	Wind Speed (kts)	2.6
S0	28 Jun 2022	Wind Dir	N
S0	28 Jun 2022	Animal Life	Seagull-15
S0	28 Jun 2022	Floatables	None
S0	28 Jun 2022	Water Color	Green

Station	Date	Parameter	Value
S0	28 Jun 2022	Current Direction	N
S0	28 Jun 2022	Water Temp (C)	15
S0	28 Jun 2022	Wave Height Low (ft)	3
S0	28 Jun 2022	High Tide (ft)	3.48
S0	28 Jun 2022	High Tide Time	1032
S0	28 Jun 2022	Low Tide (ft)	-0.55
S0	28 Jun 2022	Low Tide Time	404
S0	28 Jun 2022	Comments	Kelp; Algae; 1.0 L/sec Water flowing from storm drain
S2	07 Jun 2022	Arrive Time	1622
S2	07 Jun 2022	Weather	Cloudy
S2	07 Jun 2022	Wind Speed (kts)	3.2
S2	07 Jun 2022	Wind Dir	N
S2	07 Jun 2022	Animal Life	Dog-4; Seagull-15
S2	07 Jun 2022	Floatables	None
S2	07 Jun 2022	Water Color	Green
S2	07 Jun 2022	Current Direction	N
S2	07 Jun 2022	Water Temp (C)	15
S2	07 Jun 2022	Wave Height Low (ft)	3
S2	07 Jun 2022	High Tide (ft)	3.82
S2	07 Jun 2022	High Tide Time	244
S2	07 Jun 2022	Low Tide (ft)	0.61
S2	07 Jun 2022	Low Tide Time	1007
S2	07 Jun 2022	Comments	Kelp; Algae; No water flow from storm drain
S2	14 Jun 2022	Arrive Time	
S2	14 Jun 2022	Weather	Sunny
S2	14 Jun 2022	Wind Speed (kts)	2
S2	14 Jun 2022	Wind Dir	N
S2	14 Jun 2022	Animal Life	Dog-2; Seagull-15
S2	14 Jun 2022	Floatables	None
S2	14 Jun 2022	Water Color	Green
S2	14 Jun 2022	Current Direction	N
S2	14 Jun 2022	Water Temp (C)	15
S2	14 Jun 2022	Wave Height Low (ft)	3
S2	14 Jun 2022	High Tide (ft)	3.78
S2	14 Jun 2022	High Tide Time	1027
S2	14 Jun 2022	Low Tide (ft)	-1.62
S2	14 Jun 2022	Low Tide Time	406
S2	14 Jun 2022	Comments	Kelp; Algae; No water flow from storm drain
S2	21 Jun 2022	Arrive Time	1638
S2	21 Jun 2022	Weather	Sunny
S2	21 Jun 2022	Wind Speed (kts)	
S2	21 Jun 2022	Wind Dir	S
S2	21 Jun 2022	Animal Life	Dog-1; Seagull-8
S2	21 Jun 2022	Floatables	None
S2	21 Jun 2022	Water Color	Green
S2	21 Jun 2022	Current Direction	S
S2	21 Jun 2022	Water Temp (C)	16
S2	21 Jun 2022	Wave Height Low (ft)	2
S2	21 Jun 2022	High Tide (ft)	3.9
S2	21 Jun 2022	High Tide Time	336
S2	21 Jun 2022	Low Tide (ft)	0.56
S2	21 Jun 2022	Low Tide Time	1016
S2	21 Jun 2022	Comments	Kelp; Algae; No water from from storm drain; Wind speed was not recorded
S2	28 Jun 2022	Arrive Time	1658
S2	28 Jun 2022	Weather	Cloudy
S2	28 Jun 2022	Wind Speed (kts)	2.8

Station	Date	Parameter	Value
S2	28 Jun 2022	Wind Dir	N
S2	28 Jun 2022	Animal Life	Seagull-15
S2	28 Jun 2022	Floatables	None
S2	28 Jun 2022	Water Color	Grey
S2	28 Jun 2022	Current Direction	N
S2	28 Jun 2022	Water Temp (C)	15
S2	28 Jun 2022	Wave Height Low (ft)	3
S2	28 Jun 2022	High Tide (ft)	3.48
S2	28 Jun 2022	High Tide Time	1032
S2	28 Jun 2022	Low Tide (ft)	-0.55
S2	28 Jun 2022	Low Tide Time	404
S2	28 Jun 2022	Comments	Kelp; Seagrass; No water flow from storm drain
S3	07 Jun 2022	Arrive Time	1600
S3	07 Jun 2022	Weather	Cloudy
S3	07 Jun 2022	Wind Speed (kts)	2.7
S3	07 Jun 2022	Wind Dir	N
S3	07 Jun 2022	Animal Life	Dog-1: Seagull-15
S3	07 Jun 2022	Floatables	None
S3	07 Jun 2022	Water Color	Green
S3	07 Jun 2022	Current Direction	N
S3	07 Jun 2022	Water Temp (C)	15
S3	07 Jun 2022	Wave Height Low (ft)	3
S3	07 Jun 2022	High Tide (ft)	3.82
S3	07 Jun 2022	High Tide Time	244
S3	07 Jun 2022	Low Tide (ft)	0.61
S3	07 Jun 2022	Low Tide Time	1007
S3	07 Jun 2022	Comments	Kelp; Algae; Person/Walker/Jogger-6; No water flow from storm drain
S3	14 Jun 2022	Arrive Time	1637
S3	14 Jun 2022	Weather	Sunny
S3	14 Jun 2022	Wind Speed (kts)	2
S3	14 Jun 2022	Wind Dir	N
S3	14 Jun 2022	Animal Life	Seagull-10
S3	14 Jun 2022	Floatables	None
S3	14 Jun 2022	Water Color	Green
S3	14 Jun 2022	Current Direction	N
S3	14 Jun 2022	Water Temp (C)	15
S3	14 Jun 2022	Wave Height Low (ft)	3
S3	14 Jun 2022	High Tide (ft)	3.78
S3	14 Jun 2022	High Tide Time	1027
S3	14 Jun 2022	Low Tide (ft)	-1.62
S3	14 Jun 2022	Low Tide Time	406
S3	14 Jun 2022	Comments	Kelp; Algae
S3	21 Jun 2022	Arrive Time	1634
S3	21 Jun 2022	Weather	Sunny
S3	21 Jun 2022	Wind Speed (kts)	
S3	21 Jun 2022	Wind Dir	S
S3	21 Jun 2022	Animal Life	Dog-2; Seagull-20
S3	21 Jun 2022	Floatables	None
S3	21 Jun 2022	Water Color	Green
S3	21 Jun 2022	Current Direction	S
S3	21 Jun 2022	Water Temp (C)	16
S3	21 Jun 2022	Wave Height Low (ft)	2
S3	21 Jun 2022	High Tide (ft)	3.9
S3	21 Jun 2022	High Tide Time	336
S3	21 Jun 2022	Low Tide (ft)	0.56
S3	21 Jun 2022	Low Tide Time	1016

Station	Date	Parameter	Value
S3	21 Jun 2022	Comments	Kelp; Algae; No water from storm drain; Wind speed was not recorded
S3	28 Jun 2022	Arrive Time	1652
S3	28 Jun 2022	Weather	Cloudy
S3	28 Jun 2022	Wind Speed (kts)	2.1
S3	28 Jun 2022	Wind Dir	N
S3	28 Jun 2022	Animal Life	Dog-1; Seagull-15
S3	28 Jun 2022	Floatables	None
S3	28 Jun 2022	Water Color	Grey
S3	28 Jun 2022	Current Direction	N
S3	28 Jun 2022	Water Temp (C)	15
S3	28 Jun 2022	Wave Height Low (ft)	3
S3	28 Jun 2022	High Tide (ft)	3.48
S3	28 Jun 2022	High Tide Time	1032
S3	28 Jun 2022	Low Tide (ft)	-0.55
S3	28 Jun 2022	Low Tide Time	404
S3	28 Jun 2022	Comments	Kelp; Algae; No water flow from storm drain
S4	07 Jun 2022	Arrive Time	910
S4	07 Jun 2022	Weather	Cloudy
S4	07 Jun 2022	Wind Speed (kts)	10.3
S4	07 Jun 2022	Wind Dir	SW
S4	07 Jun 2022	Animal Life	Bird-3
S4	07 Jun 2022	Floatables	Foam
S4	07 Jun 2022	Water Color	Green
S4	07 Jun 2022	Current Direction	N
S4	07 Jun 2022	Water Temp (C)	21.8
S4	07 Jun 2022	Wave Height Low (ft)	3
S4	07 Jun 2022	High Tide (ft)	3.82
S4	07 Jun 2022	High Tide Time	244
S4	07 Jun 2022	Low Tide (ft)	0.61
S4	07 Jun 2022	Low Tide Time	1007
S4	07 Jun 2022	Comments	Seagrass; Kelp
S4	14 Jun 2022	Arrive Time	1115
S4	14 Jun 2022	Weather	Sunny
S4	14 Jun 2022	Wind Speed (kts)	9.1
S4	14 Jun 2022	Wind Dir	SW
S4	14 Jun 2022	Animal Life	Bird-3
S4	14 Jun 2022	Floatables	Foam
S4	14 Jun 2022	Water Color	Green
S4	14 Jun 2022	Current Direction	S
S4	14 Jun 2022	Water Temp (C)	20.9
S4	14 Jun 2022	Wave Height Low (ft)	4
S4	14 Jun 2022	High Tide (ft)	3.78
S4	14 Jun 2022	High Tide Time	1027
S4	14 Jun 2022	Low Tide (ft)	-1.62
S4	14 Jun 2022	Low Tide Time	406
S4	14 Jun 2022	Comments	Kelp; Seagrass; Algae
S4	21 Jun 2022	Arrive Time	900
S4	21 Jun 2022	Weather	Sunny
S4	21 Jun 2022	Wind Speed (kts)	8.3
S4	21 Jun 2022	Wind Dir	S
S4	21 Jun 2022	Animal Life	
S4	21 Jun 2022	Floatables	None
S4	21 Jun 2022	Water Color	Green
S4	21 Jun 2022	Current Direction	N
S4	21 Jun 2022	Water Temp (C)	22.6
S4	21 Jun 2022	Wave Height Low (ft)	2

Station	Date	Parameter	Value
S4	21 Jun 2022	High Tide (ft)	3.9
S4	21 Jun 2022	High Tide Time	336
S4	21 Jun 2022	Low Tide (ft)	0.56
S4	21 Jun 2022	Low Tide Time	1016
S4	21 Jun 2022	Comments	Kelp; Seagrass; Algae
S4	28 Jun 2022	Arrive Time	827
S4	28 Jun 2022	Weather	Foggy
S4	28 Jun 2022	Wind Speed (kts)	0.7
S4	28 Jun 2022	Wind Dir	W
S4	28 Jun 2022	Animal Life	
S4	28 Jun 2022	Floatables	Foam
S4	28 Jun 2022	Water Color	Green
S4	28 Jun 2022	Current Direction	N
S4	28 Jun 2022	Water Temp (C)	17.3
S4	28 Jun 2022	Wave Height Low (ft)	2
S4	28 Jun 2022	High Tide (ft)	3.48
S4	28 Jun 2022	High Tide Time	1032
S4	28 Jun 2022	Low Tide (ft)	-0.55
S4	28 Jun 2022	Low Tide Time	404
S4	28 Jun 2022	Comments	Water turbid; Boogie boarder/Swimmer-4; Trash-1; Seagrass; Kelp
S5	07 Jun 2022	Arrive Time	952
S5	07 Jun 2022	Weather	Partly cloudy
S5	07 Jun 2022	Wind Speed (kts)	7.4
S5	07 Jun 2022	Wind Dir	SW
S5	07 Jun 2022	Animal Life	Bird-3; Pelican-2
S5	07 Jun 2022	Floatables	Foam
S5	07 Jun 2022	Water Color	Brown
S5	07 Jun 2022	Current Direction	N
S5	07 Jun 2022	Water Temp (C)	22.8
S5	07 Jun 2022	Wave Height Low (ft)	1
S5	07 Jun 2022	High Tide (ft)	3.82
S5	07 Jun 2022	High Tide Time	244
S5	07 Jun 2022	Low Tide (ft)	0.61
S5	07 Jun 2022	Low Tide Time	1007
S5	07 Jun 2022	Comments	Water turbid; Trash-1; Seagrass; Kelp; Person/Walker/Jogger-2; Sewage-like odor
S5	14 Jun 2022	Arrive Time	938
S5	14 Jun 2022	Weather	Sunny
S5	14 Jun 2022	Wind Speed (kts)	4.6
S5	14 Jun 2022	Wind Dir	W
S5	14 Jun 2022	Animal Life	Bird-17; Dog-1
S5	14 Jun 2022	Floatables	Foam
S5	14 Jun 2022	Water Color	Green
S5	14 Jun 2022	Current Direction	S
S5	14 Jun 2022	Water Temp (C)	21.4
S5	14 Jun 2022	Wave Height Low (ft)	1
S5	14 Jun 2022	High Tide (ft)	3.78
S5	14 Jun 2022	High Tide Time	1027
S5	14 Jun 2022	Low Tide (ft)	-1.62
S5	14 Jun 2022	Low Tide Time	406
S5	14 Jun 2022	Comments	Water turbid; Trash-2; Kelp; Seagrass; Algae; Debris; Person/Walker/Jogger-1
S5	21 Jun 2022	Arrive Time	942
S5	21 Jun 2022	Weather	Cloudy
S5	21 Jun 2022	Wind Speed (kts)	6.6
S5	21 Jun 2022	Wind Dir	SW

Station	Date	Parameter	Value
S5	21 Jun 2022	Animal Life	Bird-5; Dog-2
S5	21 Jun 2022	Floatables	Foam
S5	21 Jun 2022	Water Color	Green
S5	21 Jun 2022	Current Direction	N
S5	21 Jun 2022	Water Temp (C)	24
S5	21 Jun 2022	Wave Height Low (ft)	1
S5	21 Jun 2022	High Tide (ft)	3.9
S5	21 Jun 2022	High Tide Time	336
S5	21 Jun 2022	Low Tide (ft)	0.56
S5	21 Jun 2022	Low Tide Time	1016
S5	21 Jun 2022	Comments	Water turbid; Trash-2; Kelp; Seagrass; Algae; Person/Walker/Jogger-4; Sewage-like odor
S5	28 Jun 2022	Arrive Time	927
S5	28 Jun 2022	Weather	Foggy
S5	28 Jun 2022	Wind Speed (kts)	2.8
S5	28 Jun 2022	Wind Dir	W
S5	28 Jun 2022	Animal Life	
S5	28 Jun 2022	Floatables	None
S5	28 Jun 2022	Water Color	Green
S5	28 Jun 2022	Current Direction	N
S5	28 Jun 2022	Water Temp (C)	18.7
S5	28 Jun 2022	Wave Height Low (ft)	1
S5	28 Jun 2022	High Tide (ft)	3.48
S5	28 Jun 2022	High Tide Time	1032
S5	28 Jun 2022	Low Tide (ft)	-0.55
S5	28 Jun 2022	Low Tide Time	404
S5	28 Jun 2022	Comments	Water clear; Trash-2; Kelp; Seagrass; Algae; Debris; Person/Walker/Jogger-2
S6	07 Jun 2022	Arrive Time	1020
S6	07 Jun 2022	Weather	Cloudy
S6	07 Jun 2022	Wind Speed (kts)	4.92
S6	07 Jun 2022	Wind Dir	SW
S6	07 Jun 2022	Animal Life	Bird-3; Pelican-1
S6	07 Jun 2022	Floatables	Foam
S6	07 Jun 2022	Water Color	Green
S6	07 Jun 2022	Current Direction	N
S6	07 Jun 2022	Water Temp (C)	22
S6	07 Jun 2022	Wave Height Low (ft)	2
S6	07 Jun 2022	High Tide (ft)	3.82
S6	07 Jun 2022	High Tide Time	244
S6	07 Jun 2022	Low Tide (ft)	0.61
S6	07 Jun 2022	Low Tide Time	1007
S6	07 Jun 2022	Comments	Water clear; Trash-1; Seagrass; Kelp; Person/Walker/Jogger-11
S6	14 Jun 2022	Arrive Time	955
S6	14 Jun 2022	Weather	Sunny
S6	14 Jun 2022	Wind Speed (kts)	5.7
S6	14 Jun 2022	Wind Dir	W
S6	14 Jun 2022	Animal Life	Dog-1
S6	14 Jun 2022	Floatables	Foam
S6	14 Jun 2022	Water Color	Green
S6	14 Jun 2022	Current Direction	S
S6	14 Jun 2022	Water Temp (C)	21.2
S6	14 Jun 2022	Wave Height Low (ft)	2
S6	14 Jun 2022	High Tide (ft)	3.78
S6	14 Jun 2022	High Tide Time	1027
S6	14 Jun 2022	Low Tide (ft)	-1.62
S6	14 Jun 2022	Low Tide Time	406

Station	Date	Parameter	Value
S6	14 Jun 2022	Comments	Water turbid; Surfer/Paddle boarder-1; Trash-1; Kelp; Seagrass; Algae; Person/Walker/Jogger-2
S6	21 Jun 2022	Arrive Time	1005
S6	21 Jun 2022	Weather	Cloudy
S6	21 Jun 2022	Wind Speed (kts)	3.7
S6	21 Jun 2022	Wind Dir	N
S6	21 Jun 2022	Animal Life	Bird-6; Dog-2
S6	21 Jun 2022	Floatables	None
S6	21 Jun 2022	Water Color	Green
S6	21 Jun 2022	Current Direction	N
S6	21 Jun 2022	Water Temp (C)	23
S6	21 Jun 2022	Wave Height Low (ft)	1
S6	21 Jun 2022	High Tide (ft)	3.9
S6	21 Jun 2022	High Tide Time	336
S6	21 Jun 2022	Low Tide (ft)	0.56
S6	21 Jun 2022	Low Tide Time	1016
S6	21 Jun 2022	Comments	Water turbid; Trash-2; Kelp; Seagrass; Algae; Person/Walker/Jogger-4; Abandoned sea doo ; Sewage-like odor
S6	28 Jun 2022	Arrive Time	946
S6	28 Jun 2022	Weather	Foggy
S6	28 Jun 2022	Wind Speed (kts)	4
S6	28 Jun 2022	Wind Dir	W
S6	28 Jun 2022	Animal Life	
S6	28 Jun 2022	Floatables	None
S6	28 Jun 2022	Water Color	Green
S6	28 Jun 2022	Current Direction	N
S6	28 Jun 2022	Water Temp (C)	18.8
S6	28 Jun 2022	Wave Height Low (ft)	3
S6	28 Jun 2022	High Tide (ft)	3.48
S6	28 Jun 2022	High Tide Time	1032
S6	28 Jun 2022	Low Tide (ft)	-0.55
S6	28 Jun 2022	Low Tide Time	404
S6	28 Jun 2022	Comments	Water clear; Trash-1; Kelp; Seagrass; Debris; Person/Walker/Jogger-1
S8	07 Jun 2022	Arrive Time	1129
S8	07 Jun 2022	Weather	Cloudy
S8	07 Jun 2022	Wind Speed (kts)	7.9
S8	07 Jun 2022	Wind Dir	SW
S8	07 Jun 2022	Animal Life	Seagull-3
S8	07 Jun 2022	Floatables	None
S8	07 Jun 2022	Water Color	Green
S8	07 Jun 2022	Current Direction	N
S8	07 Jun 2022	Water Temp (C)	23.3
S8	07 Jun 2022	Wave Height Low (ft)	1
S8	07 Jun 2022	High Tide (ft)	3.82
S8	07 Jun 2022	High Tide Time	244
S8	07 Jun 2022	Low Tide (ft)	0.61
S8	07 Jun 2022	Low Tide Time	1007
S8	07 Jun 2022	Comments	Water turbid; Trash-1; Seagrass; Kelp; Person/Walker/Jogger-10; Sewage-like odor
S8	14 Jun 2022	Arrive Time	848
S8	14 Jun 2022	Weather	Partly cloudy
S8	14 Jun 2022	Wind Speed (kts)	3
S8	14 Jun 2022	Wind Dir	SW
S8	14 Jun 2022	Animal Life	Seagull-10
S8	14 Jun 2022	Floatables	Foam

Station	Date	Parameter	Value
S8	14 Jun 2022	Water Color	Green
S8	14 Jun 2022	Current Direction	S
S8	14 Jun 2022	Water Temp (C)	21.9
S8	14 Jun 2022	Wave Height Low (ft)	2
S8	14 Jun 2022	High Tide (ft)	3.78
S8	14 Jun 2022	High Tide Time	1027
S8	14 Jun 2022	Low Tide (ft)	-1.62
S8	14 Jun 2022	Low Tide Time	406
S8	14 Jun 2022	Comments	Kelp; Seagrass; Algae
S8	21 Jun 2022	Arrive Time	1128
S8	21 Jun 2022	Weather	Sunny
S8	21 Jun 2022	Wind Speed (kts)	5.9
S8	21 Jun 2022	Wind Dir	S
S8	21 Jun 2022	Animal Life	Bird-20
S8	21 Jun 2022	Floatables	None
S8	21 Jun 2022	Water Color	Green
S8	21 Jun 2022	Current Direction	N
S8	21 Jun 2022	Water Temp (C)	22.9
S8	21 Jun 2022	Wave Height Low (ft)	1
S8	21 Jun 2022	High Tide (ft)	3.9
S8	21 Jun 2022	High Tide Time	336
S8	21 Jun 2022	Low Tide (ft)	0.56
S8	21 Jun 2022	Low Tide Time	1016
S8	21 Jun 2022	Comments	Water clear; Trash-1; Kelp; Seagrass; Algae; Person/Walker/Jogger-15
S8	28 Jun 2022	Arrive Time	1106
S8	28 Jun 2022	Weather	Sunny
S8	28 Jun 2022	Wind Speed (kts)	4.5
S8	28 Jun 2022	Wind Dir	SW
S8	28 Jun 2022	Animal Life	
S8	28 Jun 2022	Floatables	Foam
S8	28 Jun 2022	Water Color	Green
S8	28 Jun 2022	Current Direction	N
S8	28 Jun 2022	Water Temp (C)	21
S8	28 Jun 2022	Wave Height Low (ft)	1
S8	28 Jun 2022	High Tide (ft)	3.48
S8	28 Jun 2022	High Tide Time	1032
S8	28 Jun 2022	Low Tide (ft)	-0.55
S8	28 Jun 2022	Low Tide Time	404
S8	28 Jun 2022	Comments	Water turbid; Fisherperson-1; Trash-1; Kelp; Seagrass; Person/Walker/Jogger-20
S9	07 Jun 2022	Arrive Time	1159
S9	07 Jun 2022	Weather	Cloudy
S9	07 Jun 2022	Wind Speed (kts)	9.9
S9	07 Jun 2022	Wind Dir	W
S9	07 Jun 2022	Animal Life	Seagull-2
S9	07 Jun 2022	Floatables	Foam
S9	07 Jun 2022	Water Color	Green
S9	07 Jun 2022	Current Direction	N
S9	07 Jun 2022	Water Temp (C)	24.9
S9	07 Jun 2022	Wave Height Low (ft)	1
S9	07 Jun 2022	High Tide (ft)	3.82
S9	07 Jun 2022	High Tide Time	244
S9	07 Jun 2022	Low Tide (ft)	0.61
S9	07 Jun 2022	Low Tide Time	1007
S9	07 Jun 2022	Comments	Water clear; Boogie boarder/Swimmer-2; Trash-1; Seagrass; Kelp; Person/Walker/Jogger-13

Station	Date	Parameter	Value
S9	14 Jun 2022	Arrive Time	825
S9	14 Jun 2022	Weather	Cloudy
S9	14 Jun 2022	Wind Speed (kts)	5.6
S9	14 Jun 2022	Wind Dir	SW
S9	14 Jun 2022	Animal Life	
S9	14 Jun 2022	Floatables	Foam
S9	14 Jun 2022	Water Color	Green
S9	14 Jun 2022	Current Direction	S
S9	14 Jun 2022	Water Temp (C)	21.3
S9	14 Jun 2022	Wave Height Low (ft)	1
S9	14 Jun 2022	High Tide (ft)	3.78
S9	14 Jun 2022	High Tide Time	1027
S9	14 Jun 2022	Low Tide (ft)	-1.62
S9	14 Jun 2022	Low Tide Time	406
S9	14 Jun 2022	Comments	Water turbid; Boogie boarder/Swimmer-1; Boater/Kayaker-3; Trash-1; Kelp; Seagrass; Algae; Person/Walker/Jogger-7
S9	21 Jun 2022	Arrive Time	1156
S9	21 Jun 2022	Weather	Sunny
S9	21 Jun 2022	Wind Speed (kts)	4
S9	21 Jun 2022	Wind Dir	SW
S9	21 Jun 2022	Animal Life	Bird-2
S9	21 Jun 2022	Floatables	None
S9	21 Jun 2022	Water Color	Green
S9	21 Jun 2022	Current Direction	N
S9	21 Jun 2022	Water Temp (C)	25.7
S9	21 Jun 2022	Wave Height Low (ft)	1
S9	21 Jun 2022	High Tide (ft)	3.9
S9	21 Jun 2022	High Tide Time	336
S9	21 Jun 2022	Low Tide (ft)	0.56
S9	21 Jun 2022	Low Tide Time	1016
S9	21 Jun 2022	Comments	Water clear; Trash-1; Seagrass; Person/Walker/Jogger-10
S9	28 Jun 2022	Arrive Time	1133
S9	28 Jun 2022	Weather	Sunny
S9	28 Jun 2022	Wind Speed (kts)	2.1
S9	28 Jun 2022	Wind Dir	W
S9	28 Jun 2022	Animal Life	Seagull-1
S9	28 Jun 2022	Floatables	None
S9	28 Jun 2022	Water Color	Green
S9	28 Jun 2022	Current Direction	S
S9	28 Jun 2022	Water Temp (C)	22.6
S9	28 Jun 2022	Wave Height Low (ft)	1
S9	28 Jun 2022	High Tide (ft)	3.48
S9	28 Jun 2022	High Tide Time	1032
S9	28 Jun 2022	Low Tide (ft)	-0.55
S9	28 Jun 2022	Low Tide Time	404
S9	28 Jun 2022	Comments	Water turbid; Surfer/Paddle boarder-16; Trash-1; Kelp; Seagrass; Algae; Person/Walker/Jogger-20
S10	07 Jun 2022	Arrive Time	857
S10	07 Jun 2022	Weather	Cloudy
S10	07 Jun 2022	Wind Speed (kts)	5.7
S10	07 Jun 2022	Wind Dir	SW
S10	07 Jun 2022	Animal Life	
S10	07 Jun 2022	Floatables	Foam
S10	07 Jun 2022	Water Color	Green
S10	07 Jun 2022	Current Direction	N
S10	07 Jun 2022	Water Temp (C)	21.9
S10	07 Jun 2022	Wave Height Low (ft)	3
S10	07 Jun 2022	High Tide (ft)	3.82

Station	Date	Parameter	Value
S10	07 Jun 2022	High Tide Time	244
S10	07 Jun 2022	Low Tide (ft)	0.61
S10	07 Jun 2022	Low Tide Time	1007
S10	07 Jun 2022	Comments	Kelp; Seagrass
S10	14 Jun 2022	Arrive Time	1107
S10	14 Jun 2022	Weather	Sunny
S10	14 Jun 2022	Wind Speed (kts)	8.9
S10	14 Jun 2022	Wind Dir	SW
S10	14 Jun 2022	Animal Life	
S10	14 Jun 2022	Floatables	Foam
S10	14 Jun 2022	Water Color	Green
S10	14 Jun 2022	Current Direction	S
S10	14 Jun 2022	Water Temp (C)	21.4
S10	14 Jun 2022	Wave Height Low (ft)	3
S10	14 Jun 2022	High Tide (ft)	3.78
S10	14 Jun 2022	High Tide Time	1027
S10	14 Jun 2022	Low Tide (ft)	-1.62
S10	14 Jun 2022	Low Tide Time	406
S10	14 Jun 2022	Comments	Water turbid; Trash-1; Kelp; Seagrass; Algae; Person/Walker/Jogger-4
S10	21 Jun 2022	Arrive Time	847
S10	21 Jun 2022	Weather	Sunny
S10	21 Jun 2022	Wind Speed (kts)	7.4
S10	21 Jun 2022	Wind Dir	SW
S10	21 Jun 2022	Animal Life	Bird-10; Pelican-4; Seagull-5
S10	21 Jun 2022	Floatables	None
S10	21 Jun 2022	Water Color	Green
S10	21 Jun 2022	Current Direction	N
S10	21 Jun 2022	Water Temp (C)	22.7
S10	21 Jun 2022	Wave Height Low (ft)	2
S10	21 Jun 2022	High Tide (ft)	3.9
S10	21 Jun 2022	High Tide Time	336
S10	21 Jun 2022	Low Tide (ft)	0.56
S10	21 Jun 2022	Low Tide Time	1016
S10	21 Jun 2022	Comments	Kelp; Algae; Seagrass
S10	28 Jun 2022	Arrive Time	840
S10	28 Jun 2022	Weather	Foggy
S10	28 Jun 2022	Wind Speed (kts)	1.6
S10	28 Jun 2022	Wind Dir	W
S10	28 Jun 2022	Animal Life	
S10	28 Jun 2022	Floatables	None
S10	28 Jun 2022	Water Color	Green
S10	28 Jun 2022	Current Direction	N
S10	28 Jun 2022	Water Temp (C)	17.2
S10	28 Jun 2022	Wave Height Low (ft)	1
S10	28 Jun 2022	High Tide (ft)	3.48
S10	28 Jun 2022	High Tide Time	1032
S10	28 Jun 2022	Low Tide (ft)	-0.55
S10	28 Jun 2022	Low Tide Time	404
S10	28 Jun 2022	Comments	Water turbid; Trash-1; Kelp; Seagrass; Person/Walker/Jogger-7
S11	07 Jun 2022	Arrive Time	1006
S11	07 Jun 2022	Weather	Cloudy
S11	07 Jun 2022	Wind Speed (kts)	8.1
S11	07 Jun 2022	Wind Dir	SW
S11	07 Jun 2022	Animal Life	Bird-1
S11	07 Jun 2022	Floatables	Foam

Station	Date	Parameter	Value
S11	07 Jun 2022	Water Color	Green
S11	07 Jun 2022	Current Direction	N
S11	07 Jun 2022	Water Temp (C)	21.9
S11	07 Jun 2022	Wave Height Low (ft)	2
S11	07 Jun 2022	High Tide (ft)	3.82
S11	07 Jun 2022	High Tide Time	244
S11	07 Jun 2022	Low Tide (ft)	0.61
S11	07 Jun 2022	Low Tide Time	1007
S11	07 Jun 2022	Comments	Water clear; Trash-1; Seagrass; Kelp; Person/Walker/Jogger-1
S11	14 Jun 2022	Arrive Time	948
S11	14 Jun 2022	Weather	Sunny
S11	14 Jun 2022	Wind Speed (kts)	6
S11	14 Jun 2022	Wind Dir	W
S11	14 Jun 2022	Animal Life	Dog-1
S11	14 Jun 2022	Floatables	Foam
S11	14 Jun 2022	Water Color	Green
S11	14 Jun 2022	Current Direction	S
S11	14 Jun 2022	Water Temp (C)	21.4
S11	14 Jun 2022	Wave Height Low (ft)	3
S11	14 Jun 2022	High Tide (ft)	3.78
S11	14 Jun 2022	High Tide Time	1027
S11	14 Jun 2022	Low Tide (ft)	-1.62
S11	14 Jun 2022	Low Tide Time	406
S11	14 Jun 2022	Comments	Water turbid; Trash-1; Kelp; Seagrass; Algae; Person/Walker/Jogger-4
S11	21 Jun 2022	Arrive Time	955
S11	21 Jun 2022	Weather	Cloudy
S11	21 Jun 2022	Wind Speed (kts)	5.8
S11	21 Jun 2022	Wind Dir	SW
S11	21 Jun 2022	Animal Life	Bird-1; Seagull-1
S11	21 Jun 2022	Floatables	Foam
S11	21 Jun 2022	Water Color	Green
S11	21 Jun 2022	Current Direction	N
S11	21 Jun 2022	Water Temp (C)	21.7
S11	21 Jun 2022	Wave Height Low (ft)	1
S11	21 Jun 2022	High Tide (ft)	3.9
S11	21 Jun 2022	High Tide Time	336
S11	21 Jun 2022	Low Tide (ft)	0.56
S11	21 Jun 2022	Low Tide Time	1016
S11	21 Jun 2022	Comments	Water turbid; Trash-1; Kelp; Algae; Seagrass; Person/Walker/Jogger-1
S11	28 Jun 2022	Arrive Time	938
S11	28 Jun 2022	Weather	Foggy
S11	28 Jun 2022	Wind Speed (kts)	2.6
S11	28 Jun 2022	Wind Dir	W
S11	28 Jun 2022	Animal Life	Bird-5; Dog-1
S11	28 Jun 2022	Floatables	Foam
S11	28 Jun 2022	Water Color	Green
S11	28 Jun 2022	Current Direction	N
S11	28 Jun 2022	Water Temp (C)	19
S11	28 Jun 2022	Wave Height Low (ft)	2
S11	28 Jun 2022	High Tide (ft)	3.48
S11	28 Jun 2022	High Tide Time	1032
S11	28 Jun 2022	Low Tide (ft)	-0.55
S11	28 Jun 2022	Low Tide Time	404
S11	28 Jun 2022	Comments	Water clear; Trash-1; Kelp; Seagrass; Algae; Person/Walker/Jogger-1

Station	Date	Parameter	Value
S12	07 Jun 2022	Arrive Time	1035
S12	07 Jun 2022	Weather	Cloudy
S12	07 Jun 2022	Wind Speed (kts)	7.3
S12	07 Jun 2022	Wind Dir	S
S12	07 Jun 2022	Animal Life	Dog-2; Pelican-1; Seagull-110
S12	07 Jun 2022	Floatables	None
S12	07 Jun 2022	Water Color	Green
S12	07 Jun 2022	Current Direction	N
S12	07 Jun 2022	Water Temp (C)	23
S12	07 Jun 2022	Wave Height Low (ft)	2
S12	07 Jun 2022	High Tide (ft)	3.82
S12	07 Jun 2022	High Tide Time	244
S12	07 Jun 2022	Low Tide (ft)	0.61
S12	07 Jun 2022	Low Tide Time	1007
S12	07 Jun 2022	Comments	Water clear; Trash-1; Seagrass; Kelp; Person/Walker/Jogger-10
S12	14 Jun 2022	Arrive Time	910
S12	14 Jun 2022	Weather	Cloudy
S12	14 Jun 2022	Wind Speed (kts)	4
S12	14 Jun 2022	Wind Dir	SW
S12	14 Jun 2022	Animal Life	Bird-1; Dog-1
S12	14 Jun 2022	Floatables	Foam
S12	14 Jun 2022	Water Color	Green
S12	14 Jun 2022	Current Direction	S
S12	14 Jun 2022	Water Temp (C)	20.8
S12	14 Jun 2022	Wave Height Low (ft)	2
S12	14 Jun 2022	High Tide (ft)	3.78
S12	14 Jun 2022	High Tide Time	1027
S12	14 Jun 2022	Low Tide (ft)	-1.62
S12	14 Jun 2022	Low Tide Time	406
S12	14 Jun 2022	Comments	Water turbid; Boogie boarder/Swimmer-2; Fisherperson-1; Trash-1; Kelp; Seagrass; Algae; Person/Walker/Jogger-8
S12	21 Jun 2022	Arrive Time	1020
S12	21 Jun 2022	Weather	Partly cloudy
S12	21 Jun 2022	Wind Speed (kts)	6.5
S12	21 Jun 2022	Wind Dir	S
S12	21 Jun 2022	Animal Life	Bird-4
S12	21 Jun 2022	Floatables	None
S12	21 Jun 2022	Water Color	Green
S12	21 Jun 2022	Current Direction	N
S12	21 Jun 2022	Water Temp (C)	23.8
S12	21 Jun 2022	Wave Height Low (ft)	1
S12	21 Jun 2022	High Tide (ft)	3.9
S12	21 Jun 2022	High Tide Time	336
S12	21 Jun 2022	Low Tide (ft)	0.56
S12	21 Jun 2022	Low Tide Time	1016
S12	21 Jun 2022	Comments	Water turbid; Boogie boarder/Swimmer-23; Trash-1; Kelp; Seagrass; Algae; Person/Walker/Jogger-6
S12	28 Jun 2022	Arrive Time	1004
S12	28 Jun 2022	Weather	Foggy
S12	28 Jun 2022	Wind Speed (kts)	4.2
S12	28 Jun 2022	Wind Dir	SW
S12	28 Jun 2022	Animal Life	
S12	28 Jun 2022	Floatables	None
S12	28 Jun 2022	Water Color	Green
S12	28 Jun 2022	Current Direction	N
S12	28 Jun 2022	Water Temp (C)	19.3

Station	Date	Parameter	Value
S12	28 Jun 2022	Wave Height Low (ft)	2
S12	28 Jun 2022	High Tide (ft)	3.48
S12	28 Jun 2022	High Tide Time	1032
S12	28 Jun 2022	Low Tide (ft)	-0.55
S12	28 Jun 2022	Low Tide Time	404
S12	28 Jun 2022	Comments	Water clear; Trash-1; Kelp; Seagrass; Debris; Person/Walker/Jogger-3



# 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 Jun 2022	11	4	6	5	3	3	7
02 Jun 2022	11	4	6	5	3	3	7
03 Jun 2022	11	4	6	5	3	3	7
04 Jun 2022	11	4	6	5	3	3	7
05 Jun 2022	11	4	6	5	3	3	7
06 Jun 2022	11	4	6	5	3	3	7
07 Jun 2022	8	4	5	4	3	3	5
08 Jun 2022	8	4	5	4	3	3	5
09 Jun 2022	8	4	5	4	3	3	5
10 Jun 2022	8	4	5	4	3	3	5
11 Jun 2022	11	4	6	5	3	3	7
12 Jun 2022	11	4	6	5	3	3	7
13 Jun 2022	11	4	6	5	3	3	7
14 Jun 2022	10	5	8	6	5	3	8
15 Jun 2022	10	5	8	6	5	3	8
16 Jun 2022	3	3	4	3	4	2	3
17 Jun 2022	3	3	4	3	4	2	3
18 Jun 2022	3	3	4	3	4	2	3
19 Jun 2022	3	3	4	3	4	2	3
20 Jun 2022	3	3	4	3	4	2	3
21 Jun 2022	3	3	4	3	3	2	3
22 Jun 2022	3	3	4	3	3	2	3
23 Jun 2022	3	3	4	3	4	2	3
24 Jun 2022	3	3	4	3	4	2	3
25 Jun 2022	3	3	4	3	4	2	3
26 Jun 2022	3	3	4	3	4	2	3
27 Jun 2022	3	3	4	3	4	2	3
28 Jun 2022	5	3	5	3	4	3	4
29 Jun 2022	5	3	5	3	4	3	4
30 Jun 2022	5	3	5	3	4	3	4

\* 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
01 Jun 2022	IC						
07 Jun 2022	IC						
14 Jun 2022	IC						
21 Jun 2022	IC						
28 Jun 2022	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 Jun 2022	8	3	3	3	2	2	4
02 Jun 2022	8	3	3	3	2	2	4
03 Jun 2022	8	3	3	3	2	2	4
04 Jun 2022	8	3	3	3	2	2	4
05 Jun 2022	8	3	3	3	2	2	4
06 Jun 2022	8	3	3	3	2	2	4
07 Jun 2022	6	3	3	3	2	2	4
08 Jun 2022	6	3	3	3	2	2	4
09 Jun 2022	6	3	3	3	2	2	4
10 Jun 2022	6	3	3	3	2	2	4
11 Jun 2022	6	3	3	3	2	2	4
12 Jun 2022	6	3	3	3	2	2	4
13 Jun 2022	7	4	4	3	2	2	5
14 Jun 2022	7	4	5	3	3	2	7
15 Jun 2022	7	4	5	3	3	2	7
16 Jun 2022	7	4	5	3	3	2	7
17 Jun 2022	7	4	5	3	3	2	7
18 Jun 2022	7	4	5	3	3	2	7
19 Jun 2022	7	4	5	3	3	2	7
20 Jun 2022	7	4	5	3	3	2	7
21 Jun 2022	6	4	4	3	3	2	6
22 Jun 2022	6	4	4	3	3	2	6
23 Jun 2022	7	4	5	3	3	2	7
24 Jun 2022	7	4	5	3	3	2	7
25 Jun 2022	7	4	5	3	3	2	7
26 Jun 2022	7	4	5	3	3	2	7
27 Jun 2022	7	4	5	3	3	2	7
28 Jun 2022	5	3	4	3	3	3	4
29 Jun 2022	5	3	4	3	3	3	4
30 Jun 2022	5	3	4	3	3	3	4

\* 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
June	IC						

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 Jun 2022	2	13	13	11	31	12	2	2	2	11	2	4	2	20	11	2	3	8	2	11	5
02 Jun 2022	2	13	13	11	31	12	2	2	2	11	2	4	2	20	11	2	3	8	2	11	5
03 Jun 2022	2	13	13	11	31	12	2	2	2	11	2	4	2	20	11	2	3	8	2	11	5
04 Jun 2022	2	13	13	11	31	12	2	2	2	11	2	4	2	20	11	2	3	8	2	11	5
05 Jun 2022	2	13	13	11	31	12	2	2	2	11	2	4	2	20	11	2	3	8	2	11	5
06 Jun 2022	2	13	13	11	31	12	2	2	2	11	2	4	2	20	11	2	3	8	2	11	5
07 Jun 2022	2	6	6	2	6	6	2	2	2	10	2	4	2	20	2	2	2	6	2	8	2
08 Jun 2022	2	6	6	2	6	6	2	2	2	10	2	4	2	20	2	2	2	6	2	8	2
09 Jun 2022	2	6	6	2	6	6	2	2	2	10	2	4	2	20	2	2	2	6	2	8	2
10 Jun 2022	2	6	6	2	6	6	2	2	2	10	2	4	2	20	2	2	2	6	2	8	2
11 Jun 2022	2	13	13	11	33	13	2	2	11	15	2	3	2	20	11	2	2	9	3	14	5
12 Jun 2022	2	13	13	11	33	13	2	2	11	15	2	3	2	20	11	2	2	9	3	14	5
13 Jun 2022	2	13	13	11	33	13	2	2	11	15	2	3	2	20	11	2	2	9	3	14	5
14 Jun 2022	2	20	20	10	60	20	2	2	20	10	2	4	2	20	20	2	2	12	4	20	8
15 Jun 2022	2	20	20	10	60	20	2	2	20	10	2	4	2	20	20	2	2	12	4	20	8
16 Jun 2022	2	13	13	6	33	13	2	2	11	8	2	3	2	20	11	2	2	9	3	14	5
17 Jun 2022	2	13	13	6	33	13	2	2	11	8	2	3	2	20	11	2	2	9	3	14	5
18 Jun 2022	2	13	13	6	33	13	2	2	11	8	2	3	2	20	11	2	2	9	3	14	5
19 Jun 2022	2	13	13	6	33	13	2	2	11	8	2	3	2	20	11	2	2	9	3	14	5
20 Jun 2022	2	13	13	6	33	13	2	2	11	8	2	3	2	20	11	2	2	9	3	14	5
21 Jun 2022	2	20	20	2	20	20	2	2	20	6	2	2	2	20	2	2	2	6	4	20	8
22 Jun 2022	2	20	20	2	20	20	2	2	20	6	2	2	2	20	2	2	2	6	4	20	8
23 Jun 2022	2	20	13	2	40	20	2	2	20	4	2	2	2	11	11	2	7	4	12	14	11
24 Jun 2022	2	20	13	2	40	20	2	2	20	4	2	2	2	11	11	2	7	4	12	14	11
25 Jun 2022	2	20	13	2	40	20	2	2	20	4	2	2	2	11	11	2	7	4	12	14	11
26 Jun 2022	2	20	13	2	40	20	2	2	20	4	2	2	2	11	11	2	7	4	12	14	11
27 Jun 2022	2	20	13	2	40	20	2	2	20	4	2	2	2	11	11	2	7	4	12	14	11
28 Jun 2022	2	20	20	2	20	20	2	2	20	2	2	2	2	20	20	2	12	6	20	20	20
29 Jun 2022	2	20	20	2	20	20	2	2	20	2	2	2	2	20	20	2	12	6	20	20	20
30 Jun 2022	2	20	20	2	20	20	2	2	20	2	2	2	2	20	20	2	12	6	20	20	20

\* 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
June	IC	IC	E	IC	E	E	IC	E	E	IC	IC	IC	IC	E	E	IC	E	IC	IC	E	IC

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	01 Jun 2022	1013	2	<2	<2	<2	18.6	68.24	8.1	33.74	8.3
I19	01 Jun 2022	1013	6	20e	6e	6e	15.1	31.56	4.4	33.75	8.0
I19	01 Jun 2022	1013	11	6e	<2	2e	13.8	45.82	4.0	33.73	7.8
I19	07 Jun 2022	1005	2	<2	<2	<2	19.8	67.19	8.1	33.76	8.3
I19	07 Jun 2022	1005	6	2e	<2	<2	19.7	64.54	7.7	33.76	8.2
I19	07 Jun 2022	1005	11	<2	2e	<2	19.5	56.49	7.4	33.75	8.2
I19	14 Jun 2022	1057	2	34e	2e	8e	19.4	47.78	9.5	33.59	8.4
I19	14 Jun 2022	1057	6	160e	8e	4e	19.1	48.27	8.7	33.62	8.3
I19	14 Jun 2022	1057	11	180e	16e	12e	16.8	66.20	8.6	33.69	8.3
I19	21 Jun 2022	1017	2	<2	<2	<2	19.7	63.54	7.6	33.68	8.2
I19	21 Jun 2022	1017	6	<20	<2	<2	14.9	62.54	8.4	33.57	8.1
I19	21 Jun 2022	1017	11	<20	<2	<2	14.5	57.21	6.5	33.61	8.0
I19	28 Jun 2022	1054	2	<20	<2	8e	15.8	60.54	10.2	33.47	8.2
I19	28 Jun 2022	1054	6	180e	24e	78	14.7	45.83	8.6	33.45	8.1
I19	28 Jun 2022	1054	11	340e	26e	46	14.0	64.69	8.8	33.48	8.1
I24	01 Jun 2022	1033	2	<2	2e	<2	19.0	61.01	8.1	33.77	8.3
I24	01 Jun 2022	1033	6	60e	<2	<2	17.9	55.50	6.0	33.77	8.2
I24	01 Jun 2022	1033	11	20e	2e	<2	13.8	39.54	3.7	33.72	7.8
I24	07 Jun 2022	1023	2	2e	<2	<2	20.1	63.93	8.8	33.74	8.3
I24	07 Jun 2022	1023	6	6e	2e	<2	19.1	62.54	6.5	33.74	8.2
I24	07 Jun 2022	1023	11	6e	2e	<2	15.1	50.30	3.8	33.70	7.8
I24	14 Jun 2022	1116	2	10e	<2	<2	19.8	64.81	9.0	33.66	8.3
I24	14 Jun 2022	1116	6	280e	30e	10e	18.8	57.89	8.1	33.61	8.3
I24	14 Jun 2022	1116	11	68	2e	14e	16.6	53.01	8.6	33.65	8.2
I24	21 Jun 2022	1036	2	<2	<2	<2	20.7	62.36	8.2	33.72	8.3
I24	21 Jun 2022	1036	6	<20	<2	<2	15.1	59.87	7.2	33.62	8.1
I24	21 Jun 2022	1036	11	<20	<2	<2	13.9	68.68	5.4	33.61	7.9
I24	28 Jun 2022	1115	2	8e	<2	2e	14.6	66.72	10.6	33.53	8.3
I24	28 Jun 2022	1115	6	12e	<2	4e	13.4	62.70	9.1	33.50	8.1
I24	28 Jun 2022	1115	11	240e	12e	16e	13.2	69.85	8.6	33.51	8.1
I25	01 Jun 2022	1038	2	<2	<2	<2	18.8	60.95	8.2	33.76	8.3
I25	01 Jun 2022	1038	6	2e	4e	<2	17.0	58.43	5.3	33.75	8.2
I25	01 Jun 2022	1038	9	<2	4e	<2	14.1	62.65	4.1	33.70	7.9
I25	07 Jun 2022	1032	2	<2	<2	<2	20.4	59.54	9.3	33.72	8.4
I25	07 Jun 2022	1032	6	<2	<2	<2	18.8	61.47	5.5	33.71	8.2
I25	07 Jun 2022	1032	9	<20	<2	<2	17.1	52.28	5.0	33.67	7.9
I25	14 Jun 2022	1125	2	<2	<2	24e	19.8	62.91	9.4	33.64	8.4
I25	14 Jun 2022	1125	6	580	52	26e	17.9	61.84	8.6	33.65	8.3
I25	14 Jun 2022	1125	9	360e	36e	<2	16.8	54.41	7.8	33.65	8.2

Station	Date	Time	Depth	Total	Fecal	Enteric	Temp	XMS	DO	Sal	pH
I25	21 Jun 2022	1042	2	<20	<2	<2	20.1	61.85	7.8	33.71	8.2
I25	21 Jun 2022	1042	6	<2	2e	<2	16.5	65.34	8.2	33.63	8.1
I25	21 Jun 2022	1042	9	<20	<2	<2	14.5	72.37	5.6	33.60	7.9
I25	28 Jun 2022	1121	2	2e	<2	<2	16.7	68.93	10.0	33.52	8.2
I25	28 Jun 2022	1121	6	<20	4e	6e	13.4	70.41	8.9	33.49	8.2
I25	28 Jun 2022	1121	9	80e	14e	12e	13.3	67.37	8.8	33.49	8.1
I26	01 Jun 2022	1051	2	<2	<2	<2	18.7	60.18	8.9	33.76	8.3
I26	01 Jun 2022	1051	6	<2	<2	<2	18.4	60.01	8.1	33.76	8.3
I26	01 Jun 2022	1051	9	2e	2e	<2	14.2	66.51	4.4	33.71	7.9
I26	07 Jun 2022	1044	2	10e	<2	<2	20.5	56.29	9.7	33.74	8.4
I26	07 Jun 2022	1044	6	<2	<2	<2	20.2	59.20	8.5	33.74	8.4
I26	07 Jun 2022	1044	9	2e	<2	<2	14.5	65.78	4.0	33.77	7.9
I26	14 Jun 2022	1134	2	6e	4e	<2	19.8	62.43	9.5	33.63	8.4
I26	14 Jun 2022	1134	6	66	8e	4e	19.4	59.97	8.3	33.66	8.3
I26	14 Jun 2022	1134	9	78	16e	4e	18.2	57.71	7.7	33.64	8.2
I26	21 Jun 2022	1051	2	<2	<2	<2	20.3	61.19	7.9	33.73	8.2
I26	21 Jun 2022	1051	6	2e	<2	<2	14.9	62.97	7.7	33.62	8.1
I26	21 Jun 2022	1051	9	<2	<2	<2	14.7	68.18	7.2	33.59	8.1
I26	28 Jun 2022	1129	2	<2	<2	<2	16.9	65.35	9.8	33.58	8.2
I26	28 Jun 2022	1129	6	<20	<2	6e	14.1	67.83	10.9	33.49	8.3
I26	28 Jun 2022	1129	9	20e	4e	6e	13.7	64.05	10.0	33.50	8.2
I32	01 Jun 2022	1103	2	<2	<2	<2	19.0	44.53	9.1	33.77	8.3
I32	01 Jun 2022	1103	6	<20	<2	<2	16.8	34.48	5.6	33.76	8.1
I32	01 Jun 2022	1103	9	20e	4e	<2	14.4	38.67	4.4	33.72	7.9
I32	07 Jun 2022	1054	2	<2	<2	<2	20.6	54.25	8.7	33.75	8.4
I32	07 Jun 2022	1054	6	2e	<2	<2	20.3	58.27	9.0	33.76	8.4
I32	07 Jun 2022	1054	9	<2	4e	<2	19.0	54.42	7.0	33.73	8.3
I32	14 Jun 2022	1145	2	2e	2e	<2	20.1	64.94	8.8	33.66	8.3
I32	14 Jun 2022	1145	6	380e	10e	16	19.6	55.26	8.8	33.64	8.3
I32	14 Jun 2022	1145	9	280e	42	28e	19.5	65.78	8.4	33.65	8.3
I32	21 Jun 2022	1103	2	<20	<2	<2	19.0	62.58	7.4	33.72	8.2
I32	21 Jun 2022	1103	6	<2	<2	<2	14.3	64.26	7.4	33.56	8.1
I32	21 Jun 2022	1103	9	<2	<2	<2	14.3	64.22	7.4	33.57	8.1
I32	28 Jun 2022	1141	2	<20	<2	<2	16.6	49.39	10.6	33.49	8.2
I32	28 Jun 2022	1141	6	20e	<2	2e	15.2	44.71	10.2	33.50	8.2
I32	28 Jun 2022	1141	9	40e	4e	4e	14.4	63.30	9.0	33.54	8.1
I39	01 Jun 2022	955	2	<2	<2	<2	18.4	70.18	8.5	33.73	8.3
I39	01 Jun 2022	955	12	2e	<2	<2	18.0	67.35	8.2	33.73	8.3
I39	01 Jun 2022	955	18	<2	<2	<2	12.4	64.69	4.2	33.72	7.9
I39	07 Jun 2022	947	2	<2	<2	<2	20.1	61.81	9.4	33.73	8.4
I39	07 Jun 2022	947	12	<2	<2	<2	13.6	67.23	4.1	33.71	7.8
I39	07 Jun 2022	947	18	6e	<2	<2	11.8	67.90	3.5	33.70	7.8
I39	14 Jun 2022	1038	2	<2	<2	2e	20.1	72.29	8.2	33.72	8.3
I39	14 Jun 2022	1038	12	54	<2	<2	15.1	66.64	8.1	33.67	8.2
I39	14 Jun 2022	1038	18	18e	<2	2e	13.8	52.08	6.9	33.64	8.1

Station	Date	Time	Depth	Total	Fecal	Enteric	Temp	XMS	DO	Sal	pH
I39	21 Jun 2022	953	2	<2	<2	<2	20.7	62.27	8.2	33.73	8.3
I39	21 Jun 2022	953	12	12e	<2	<2	13.4	70.49	5.7	33.60	7.9
I39	21 Jun 2022	953	18	<2	2e	<2	12.2	77.07	4.9	33.58	7.8
I39	28 Jun 2022	1032	2	<2	<2	<2	17.4	62.40	9.5	33.58	8.2
I39	28 Jun 2022	1032	12	260e	10e	32e	12.7	70.44	7.5	33.51	8.0
I39	28 Jun 2022	1032	18	180e	10e	10e	12.6	72.50	7.2	33.54	8.0
I40	01 Jun 2022	1024	2	2e	<2	<2	18.9	58.14	8.0	33.76	8.3
I40	01 Jun 2022	1024	6	2e	2e	<2	16.6	56.48	5.4	33.74	8.1
I40	01 Jun 2022	1024	9	<2	<2	<2	14.1	42.09	3.8	33.72	7.8
I40	07 Jun 2022	1015	2	4e	<2	<2	20.1	62.29	8.4	33.75	8.3
I40	07 Jun 2022	1015	6	8e	<2	2e	19.7	64.80	7.3	33.75	8.2
I40	07 Jun 2022	1015	9	2e	<2	2e	14.9	35.12	3.8	33.70	7.8
I40	14 Jun 2022	1108	2	60e	12e	18e	19.4	52.16	9.3	33.59	8.3
I40	14 Jun 2022	1108	6	380e	20e	22e	19.2	51.33	8.3	33.59	8.3
I40	14 Jun 2022	1108	9	220e	20e	34e	16.9	23.78	7.9	33.64	8.2
I40	21 Jun 2022	1027	2	<20	<2	<2	20.1	62.25	7.3	33.73	8.2
I40	21 Jun 2022	1027	6	<20	<2	<2	14.9	57.50	7.6	33.61	8.1
I40	21 Jun 2022	1027	9	<20	<2	<2	14.3	60.05	5.6	33.61	7.9
I40	28 Jun 2022	1106	2	<20	<2	<2	15.1	66.95	10.4	33.50	8.2
I40	28 Jun 2022	1106	6	140e	6e	12e	14.5	51.39	9.7	33.48	8.2
I40	28 Jun 2022	1106	9	<20	4e	10e	14.1	62.13	9.1	33.48	8.2

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	01 Jun 2022	Depth (m)	11
I19	01 Jun 2022	Arrive Time	1013
I19	01 Jun 2022	Depart Time	1019
I19	01 Jun 2022	Air Temp (C)	16.7
I19	01 Jun 2022	Weather	Continuous Layer of Clouds
I19	01 Jun 2022	Visibility (mi)	9
I19	01 Jun 2022	Wind Speed (kts)	5.2
I19	01 Jun 2022	Wind Dir	S
I19	01 Jun 2022	Water Color	Blueish-Green
I19	01 Jun 2022	Wave Ht Low (ft)	4
I19	01 Jun 2022	Wave Period (sec)	17
I19	01 Jun 2022	Sea State	Regular Swell
I19	01 Jun 2022	High Tide (ft)	5.46
I19	01 Jun 2022	High Tide Time	524
I19	01 Jun 2022	Low Tide (ft)	-0.53
I19	01 Jun 2022	Low Tide Time	1224
I19	01 Jun 2022	Comments	none
I19	07 Jun 2022	Depth (m)	9
I19	07 Jun 2022	Arrive Time	1005
I19	07 Jun 2022	Depart Time	1010
I19	07 Jun 2022	Air Temp (C)	17.1
I19	07 Jun 2022	Weather	Overcast
I19	07 Jun 2022	Visibility (mi)	4
I19	07 Jun 2022	Wind Speed (kts)	7.8
I19	07 Jun 2022	Wind Dir	W
I19	07 Jun 2022	Water Color	Brownish-Green
I19	07 Jun 2022	Wave Ht Low (ft)	3
I19	07 Jun 2022	Wave Period (sec)	12
I19	07 Jun 2022	Sea State	Light Chop
I19	07 Jun 2022	High Tide (ft)	4.03
I19	07 Jun 2022	High Tide Time	18
I19	07 Jun 2022	Low Tide (ft)	0.66
I19	07 Jun 2022	Low Tide Time	1700
I19	07 Jun 2022	Comments	none
I19	14 Jun 2022	Depth (m)	11
I19	14 Jun 2022	Arrive Time	1057
I19	14 Jun 2022	Depart Time	1101
I19	14 Jun 2022	Air Temp (C)	17.7
I19	14 Jun 2022	Weather	Continuous Layer of Clouds
I19	14 Jun 2022	Visibility (mi)	10
I19	14 Jun 2022	Wind Speed (kts)	8.9
I19	14 Jun 2022	Wind Dir	S
I19	14 Jun 2022	Water Color	Greenish-Brown
I19	14 Jun 2022	Wave Ht Low (ft)	7
I19	14 Jun 2022	Wave Period (sec)	10
I19	14 Jun 2022	Sea State	Regular Swell
I19	14 Jun 2022	High Tide (ft)	6.95
I19	14 Jun 2022	High Tide Time	430
I19	14 Jun 2022	Low Tide (ft)	-1.64
I19	14 Jun 2022	Low Tide Time	1106
I19	14 Jun 2022	Comments	none
I19	21 Jun 2022	Depth (m)	10
I19	21 Jun 2022	Arrive Time	1017

Station	Date	Parameter	Value
I19	21 Jun 2022	Depart Time	1021
I19	21 Jun 2022	Air Temp (C)	18.1
I19	21 Jun 2022	Weather	Overcast
I19	21 Jun 2022	Visibility (mi)	8
I19	21 Jun 2022	Wind Speed (kts)	7.6
I19	21 Jun 2022	Wind Dir	S
I19	21 Jun 2022	Water Color	Green
I19	21 Jun 2022	Wave Ht Low (ft)	3.6
I19	21 Jun 2022	Wave Period (sec)	9
I19	21 Jun 2022	Sea State	Regular Swell
I19	21 Jun 2022	High Tide (ft)	4.83
I19	21 Jun 2022	High Tide Time	6
I19	21 Jun 2022	Low Tide (ft)	0.63
I19	21 Jun 2022	Low Tide Time	1718
I19	21 Jun 2022	Comments	none
I19	28 Jun 2022	Depth (m)	11
I19	28 Jun 2022	Arrive Time	1054
I19	28 Jun 2022	Depart Time	1100
I19	28 Jun 2022	Air Temp (C)	18.1
I19	28 Jun 2022	Weather	Fog
I19	28 Jun 2022	Visibility (mi)	0
I19	28 Jun 2022	Wind Speed (kts)	3.7
I19	28 Jun 2022	Wind Dir	SW
I19	28 Jun 2022	Water Color	Brownish-Green
I19	28 Jun 2022	Wave Ht Low (ft)	3
I19	28 Jun 2022	Wave Period (sec)	18
I19	28 Jun 2022	Sea State	Calm
I19	28 Jun 2022	High Tide (ft)	5.92
I19	28 Jun 2022	High Tide Time	406
I19	28 Jun 2022	Low Tide (ft)	-0.55
I19	28 Jun 2022	Low Tide Time	1100
I19	28 Jun 2022	Comments	Possible Red Tide
I24	01 Jun 2022	Depth (m)	11
I24	01 Jun 2022	Arrive Time	1033
I24	01 Jun 2022	Depart Time	1037
I24	01 Jun 2022	Air Temp (C)	16.9
I24	01 Jun 2022	Weather	Continuous Layer of Clouds
I24	01 Jun 2022	Visibility (mi)	9
I24	01 Jun 2022	Wind Speed (kts)	3.2
I24	01 Jun 2022	Wind Dir	SE
I24	01 Jun 2022	Water Color	Greenish-Brown
I24	01 Jun 2022	Wave Ht Low (ft)	4
I24	01 Jun 2022	Wave Period (sec)	17
I24	01 Jun 2022	Sea State	Regular Swell
I24	01 Jun 2022	High Tide (ft)	5.46
I24	01 Jun 2022	High Tide Time	524
I24	01 Jun 2022	Low Tide (ft)	-0.53
I24	01 Jun 2022	Low Tide Time	1224
I24	01 Jun 2022	Comments	none
I24	07 Jun 2022	Depth (m)	9
I24	07 Jun 2022	Arrive Time	1023
I24	07 Jun 2022	Depart Time	1031
I24	07 Jun 2022	Air Temp (C)	17.2
I24	07 Jun 2022	Weather	Overcast
I24	07 Jun 2022	Visibility (mi)	4
I24	07 Jun 2022	Wind Speed (kts)	9.6
I24	07 Jun 2022	Wind Dir	NE
I24	07 Jun 2022	Water Color	Brownish-Green

Station	Date	Parameter	Value
I24	07 Jun 2022	Wave Ht Low (ft)	3
I24	07 Jun 2022	Wave Period (sec)	12
I24	07 Jun 2022	Sea State	Light Chop
I24	07 Jun 2022	High Tide (ft)	4.03
I24	07 Jun 2022	High Tide Time	18
I24	07 Jun 2022	Low Tide (ft)	0.66
I24	07 Jun 2022	Low Tide Time	1700
I24	07 Jun 2022	Comments	none
I24	14 Jun 2022	Depth (m)	10
I24	14 Jun 2022	Arrive Time	1116
I24	14 Jun 2022	Depart Time	1121
I24	14 Jun 2022	Air Temp (C)	17.9
I24	14 Jun 2022	Weather	Continuous Layer of Clouds
I24	14 Jun 2022	Visibility (mi)	10
I24	14 Jun 2022	Wind Speed (kts)	7.8
I24	14 Jun 2022	Wind Dir	S
I24	14 Jun 2022	Water Color	Greenish-Brown
I24	14 Jun 2022	Wave Ht Low (ft)	7
I24	14 Jun 2022	Wave Period (sec)	10
I24	14 Jun 2022	Sea State	Regular Swell
I24	14 Jun 2022	High Tide (ft)	6.95
I24	14 Jun 2022	High Tide Time	430
I24	14 Jun 2022	Low Tide (ft)	-1.64
I24	14 Jun 2022	Low Tide Time	1106
I24	14 Jun 2022	Comments	none
I24	21 Jun 2022	Depth (m)	10
I24	21 Jun 2022	Arrive Time	1036
I24	21 Jun 2022	Depart Time	1040
I24	21 Jun 2022	Air Temp (C)	18
I24	21 Jun 2022	Weather	Overcast
I24	21 Jun 2022	Visibility (mi)	8
I24	21 Jun 2022	Wind Speed (kts)	5.3
I24	21 Jun 2022	Wind Dir	S
I24	21 Jun 2022	Water Color	Green
I24	21 Jun 2022	Wave Ht Low (ft)	3.6
I24	21 Jun 2022	Wave Period (sec)	9
I24	21 Jun 2022	Sea State	Regular Swell
I24	21 Jun 2022	High Tide (ft)	4.83
I24	21 Jun 2022	High Tide Time	6
I24	21 Jun 2022	Low Tide (ft)	0.63
I24	21 Jun 2022	Low Tide Time	1718
I24	21 Jun 2022	Comments	none
I24	28 Jun 2022	Depth (m)	9
I24	28 Jun 2022	Arrive Time	1115
I24	28 Jun 2022	Depart Time	1118
I24	28 Jun 2022	Air Temp (C)	18.6
I24	28 Jun 2022	Weather	Fog
I24	28 Jun 2022	Visibility (mi)	0
I24	28 Jun 2022	Wind Speed (kts)	3
I24	28 Jun 2022	Wind Dir	SW
I24	28 Jun 2022	Water Color	Green
I24	28 Jun 2022	Wave Ht Low (ft)	3
I24	28 Jun 2022	Wave Period (sec)	18
I24	28 Jun 2022	Sea State	Calm
I24	28 Jun 2022	High Tide (ft)	5.92
I24	28 Jun 2022	High Tide Time	406
I24	28 Jun 2022	Low Tide (ft)	-0.55
I24	28 Jun 2022	Low Tide Time	1100

Station	Date	Parameter	Value
I24	28 Jun 2022	Comments	none
I25	01 Jun 2022	Depth (m)	10
I25	01 Jun 2022	Arrive Time	1038
I25	01 Jun 2022	Depart Time	1044
I25	01 Jun 2022	Air Temp (C)	16.7
I25	01 Jun 2022	Weather	Continuous Layer of Clouds
I25	01 Jun 2022	Visibility (mi)	9
I25	01 Jun 2022	Wind Speed (kts)	1.9
I25	01 Jun 2022	Wind Dir	S
I25	01 Jun 2022	Water Color	Greenish-Brown
I25	01 Jun 2022	Wave Ht Low (ft)	4
I25	01 Jun 2022	Wave Period (sec)	17
I25	01 Jun 2022	Sea State	Regular Swell
I25	01 Jun 2022	High Tide (ft)	5.46
I25	01 Jun 2022	High Tide Time	524
I25	01 Jun 2022	Low Tide (ft)	-0.53
I25	01 Jun 2022	Low Tide Time	1224
I25	01 Jun 2022	Comments	none
I25	07 Jun 2022	Depth (m)	9
I25	07 Jun 2022	Arrive Time	1032
I25	07 Jun 2022	Depart Time	1038
I25	07 Jun 2022	Air Temp (C)	17.3
I25	07 Jun 2022	Weather	Overcast
I25	07 Jun 2022	Visibility (mi)	4
I25	07 Jun 2022	Wind Speed (kts)	3.9
I25	07 Jun 2022	Wind Dir	SE
I25	07 Jun 2022	Water Color	Brownish-Green
I25	07 Jun 2022	Wave Ht Low (ft)	3
I25	07 Jun 2022	Wave Period (sec)	12
I25	07 Jun 2022	Sea State	Light Chop
I25	07 Jun 2022	High Tide (ft)	4.03
I25	07 Jun 2022	High Tide Time	18
I25	07 Jun 2022	Low Tide (ft)	0.66
I25	07 Jun 2022	Low Tide Time	1700
I25	07 Jun 2022	Comments	9m depth bin not sampled due to low tide; Multiple attempts made
I25	14 Jun 2022	Depth (m)	9
I25	14 Jun 2022	Arrive Time	1125
I25	14 Jun 2022	Depart Time	1131
I25	14 Jun 2022	Air Temp (C)	18.2
I25	14 Jun 2022	Weather	Continuous Layer of Clouds
I25	14 Jun 2022	Visibility (mi)	10
I25	14 Jun 2022	Wind Speed (kts)	5.8
I25	14 Jun 2022	Wind Dir	S
I25	14 Jun 2022	Water Color	Greenish-Brown
I25	14 Jun 2022	Wave Ht Low (ft)	7
I25	14 Jun 2022	Wave Period (sec)	10
I25	14 Jun 2022	Sea State	Regular Swell
I25	14 Jun 2022	High Tide (ft)	6.95
I25	14 Jun 2022	High Tide Time	430
I25	14 Jun 2022	Low Tide (ft)	-1.64
I25	14 Jun 2022	Low Tide Time	1106
I25	14 Jun 2022	Comments	none
I25	21 Jun 2022	Depth (m)	9
I25	21 Jun 2022	Arrive Time	1042
I25	21 Jun 2022	Depart Time	1045
I25	21 Jun 2022	Air Temp (C)	18

Station	Date	Parameter	Value
I25	21 Jun 2022	Weather	Overcast
I25	21 Jun 2022	Visibility (mi)	8
I25	21 Jun 2022	Wind Speed (kts)	5.8
I25	21 Jun 2022	Wind Dir	S
I25	21 Jun 2022	Water Color	Green
I25	21 Jun 2022	Wave Ht Low (ft)	3.6
I25	21 Jun 2022	Wave Period (sec)	9
I25	21 Jun 2022	Sea State	Regular Swell
I25	21 Jun 2022	High Tide (ft)	4.83
I25	21 Jun 2022	High Tide Time	6
I25	21 Jun 2022	Low Tide (ft)	0.63
I25	21 Jun 2022	Low Tide Time	1718
I25	21 Jun 2022	Comments	none
I25	28 Jun 2022	Depth (m)	9
I25	28 Jun 2022	Arrive Time	1121
I25	28 Jun 2022	Depart Time	1124
I25	28 Jun 2022	Air Temp (C)	18.6
I25	28 Jun 2022	Weather	Fog
I25	28 Jun 2022	Visibility (mi)	3
I25	28 Jun 2022	Wind Speed (kts)	3.8
I25	28 Jun 2022	Wind Dir	SW
I25	28 Jun 2022	Water Color	Green
I25	28 Jun 2022	Wave Ht Low (ft)	3
I25	28 Jun 2022	Wave Period (sec)	18
I25	28 Jun 2022	Sea State	Calm
I25	28 Jun 2022	High Tide (ft)	5.92
I25	28 Jun 2022	High Tide Time	406
I25	28 Jun 2022	Low Tide (ft)	-0.55
I25	28 Jun 2022	Low Tide Time	1100
I25	28 Jun 2022	Comments	none
I26	01 Jun 2022	Depth (m)	10
I26	01 Jun 2022	Arrive Time	1051
I26	01 Jun 2022	Depart Time	1056
I26	01 Jun 2022	Air Temp (C)	16.7
I26	01 Jun 2022	Weather	Continuous Layer of Clouds
I26	01 Jun 2022	Visibility (mi)	9
I26	01 Jun 2022	Wind Speed (kts)	6.9
I26	01 Jun 2022	Wind Dir	S
I26	01 Jun 2022	Water Color	Greenish-Brown
I26	01 Jun 2022	Wave Ht Low (ft)	4
I26	01 Jun 2022	Wave Period (sec)	17
I26	01 Jun 2022	Sea State	Regular Swell
I26	01 Jun 2022	High Tide (ft)	5.46
I26	01 Jun 2022	High Tide Time	524
I26	01 Jun 2022	Low Tide (ft)	-0.53
I26	01 Jun 2022	Low Tide Time	1224
I26	01 Jun 2022	Comments	none
I26	07 Jun 2022	Depth (m)	9
I26	07 Jun 2022	Arrive Time	1044
I26	07 Jun 2022	Depart Time	1047
I26	07 Jun 2022	Air Temp (C)	17.2
I26	07 Jun 2022	Weather	Overcast
I26	07 Jun 2022	Visibility (mi)	4
I26	07 Jun 2022	Wind Speed (kts)	7.7
I26	07 Jun 2022	Wind Dir	S
I26	07 Jun 2022	Water Color	Brownish-Green
I26	07 Jun 2022	Wave Ht Low (ft)	3
I26	07 Jun 2022	Wave Period (sec)	12

Station	Date	Parameter	Value
I26	07 Jun 2022	Sea State	Light Chop
I26	07 Jun 2022	High Tide (ft)	4.03
I26	07 Jun 2022	High Tide Time	18
I26	07 Jun 2022	Low Tide (ft)	0.66
I26	07 Jun 2022	Low Tide Time	1700
I26	07 Jun 2022	Comments	none
I26	14 Jun 2022	Depth (m)	10
I26	14 Jun 2022	Arrive Time	1134
I26	14 Jun 2022	Depart Time	1139
I26	14 Jun 2022	Air Temp (C)	18.1
I26	14 Jun 2022	Weather	Continuous Layer of Clouds
I26	14 Jun 2022	Visibility (mi)	10
I26	14 Jun 2022	Wind Speed (kts)	6.8
I26	14 Jun 2022	Wind Dir	S
I26	14 Jun 2022	Water Color	Greenish-Brown
I26	14 Jun 2022	Wave Ht Low (ft)	7
I26	14 Jun 2022	Wave Period (sec)	10
I26	14 Jun 2022	Sea State	Regular Swell
I26	14 Jun 2022	High Tide (ft)	6.95
I26	14 Jun 2022	High Tide Time	430
I26	14 Jun 2022	Low Tide (ft)	-1.64
I26	14 Jun 2022	Low Tide Time	1106
I26	14 Jun 2022	Comments	none
I26	21 Jun 2022	Depth (m)	8
I26	21 Jun 2022	Arrive Time	1051
I26	21 Jun 2022	Depart Time	1054
I26	21 Jun 2022	Air Temp (C)	17.9
I26	21 Jun 2022	Weather	Overcast
I26	21 Jun 2022	Visibility (mi)	8
I26	21 Jun 2022	Wind Speed (kts)	5.4
I26	21 Jun 2022	Wind Dir	S
I26	21 Jun 2022	Water Color	Greenish-Blue
I26	21 Jun 2022	Wave Ht Low (ft)	3.6
I26	21 Jun 2022	Wave Period (sec)	9
I26	21 Jun 2022	Sea State	Regular Swell
I26	21 Jun 2022	High Tide (ft)	4.83
I26	21 Jun 2022	High Tide Time	6
I26	21 Jun 2022	Low Tide (ft)	0.63
I26	21 Jun 2022	Low Tide Time	1718
I26	21 Jun 2022	Comments	none
I26	28 Jun 2022	Depth (m)	9
I26	28 Jun 2022	Arrive Time	1129
I26	28 Jun 2022	Depart Time	1141
I26	28 Jun 2022	Air Temp (C)	18.9
I26	28 Jun 2022	Weather	Fog
I26	28 Jun 2022	Visibility (mi)	3
I26	28 Jun 2022	Wind Speed (kts)	2.5
I26	28 Jun 2022	Wind Dir	W
I26	28 Jun 2022	Water Color	Green
I26	28 Jun 2022	Wave Ht Low (ft)	3
I26	28 Jun 2022	Wave Period (sec)	18
I26	28 Jun 2022	Sea State	Calm
I26	28 Jun 2022	High Tide (ft)	5.92
I26	28 Jun 2022	High Tide Time	406
I26	28 Jun 2022	Low Tide (ft)	-0.55
I26	28 Jun 2022	Low Tide Time	1100
I26	28 Jun 2022	Comments	none

Station	Date	Parameter	Value
I32	01 Jun 2022	Depth (m)	11
I32	01 Jun 2022	Arrive Time	1103
I32	01 Jun 2022	Depart Time	1108
I32	01 Jun 2022	Air Temp (C)	16.6
I32	01 Jun 2022	Weather	Continuous Layer of Clouds
I32	01 Jun 2022	Visibility (mi)	9
I32	01 Jun 2022	Wind Speed (kts)	6.6
I32	01 Jun 2022	Wind Dir	S
I32	01 Jun 2022	Water Color	Greenish-Brown
I32	01 Jun 2022	Wave Ht Low (ft)	4
I32	01 Jun 2022	Wave Period (sec)	17
I32	01 Jun 2022	Sea State	Regular Swell
I32	01 Jun 2022	High Tide (ft)	5.46
I32	01 Jun 2022	High Tide Time	524
I32	01 Jun 2022	Low Tide (ft)	-0.53
I32	01 Jun 2022	Low Tide Time	1224
I32	01 Jun 2022	Comments	none
I32	07 Jun 2022	Depth (m)	10
I32	07 Jun 2022	Arrive Time	1054
I32	07 Jun 2022	Depart Time	1058
I32	07 Jun 2022	Air Temp (C)	17.5
I32	07 Jun 2022	Weather	Overcast
I32	07 Jun 2022	Visibility (mi)	4
I32	07 Jun 2022	Wind Speed (kts)	8.3
I32	07 Jun 2022	Wind Dir	SE
I32	07 Jun 2022	Water Color	Brownish-Green
I32	07 Jun 2022	Wave Ht Low (ft)	3
I32	07 Jun 2022	Wave Period (sec)	12
I32	07 Jun 2022	Sea State	Light Chop
I32	07 Jun 2022	High Tide (ft)	4.03
I32	07 Jun 2022	High Tide Time	18
I32	07 Jun 2022	Low Tide (ft)	0.66
I32	07 Jun 2022	Low Tide Time	1700
I32	07 Jun 2022	Comments	none
I32	14 Jun 2022	Depth (m)	11
I32	14 Jun 2022	Arrive Time	1145
I32	14 Jun 2022	Depart Time	1151
I32	14 Jun 2022	Air Temp (C)	18.2
I32	14 Jun 2022	Weather	Continuous Layer of Clouds
I32	14 Jun 2022	Visibility (mi)	10
I32	14 Jun 2022	Wind Speed (kts)	7.9
I32	14 Jun 2022	Wind Dir	S
I32	14 Jun 2022	Water Color	Greenish-Brown
I32	14 Jun 2022	Wave Ht Low (ft)	7
I32	14 Jun 2022	Wave Period (sec)	10
I32	14 Jun 2022	Sea State	Regular Swell
I32	14 Jun 2022	High Tide (ft)	6.95
I32	14 Jun 2022	High Tide Time	430
I32	14 Jun 2022	Low Tide (ft)	-1.64
I32	14 Jun 2022	Low Tide Time	1106
I32	14 Jun 2022	Comments	none
I32	21 Jun 2022	Depth (m)	10
I32	21 Jun 2022	Arrive Time	1103
I32	21 Jun 2022	Depart Time	1103
I32	21 Jun 2022	Air Temp (C)	18.1
I32	21 Jun 2022	Weather	Overcast
I32	21 Jun 2022	Visibility (mi)	8
I32	21 Jun 2022	Wind Speed (kts)	5.3

Station	Date	Parameter	Value
I32	21 Jun 2022	Wind Dir	S
I32	21 Jun 2022	Water Color	Greenish-Blue
I32	21 Jun 2022	Wave Ht Low (ft)	3.6
I32	21 Jun 2022	Wave Period (sec)	9
I32	21 Jun 2022	Sea State	Regular Swell
I32	21 Jun 2022	High Tide (ft)	4.83
I32	21 Jun 2022	High Tide Time	6
I32	21 Jun 2022	Low Tide (ft)	0.63
I32	21 Jun 2022	Low Tide Time	1718
I32	21 Jun 2022	Comments	none
I32	28 Jun 2022	Depth (m)	11
I32	28 Jun 2022	Arrive Time	1141
I32	28 Jun 2022	Depart Time	1148
I32	28 Jun 2022	Air Temp (C)	19
I32	28 Jun 2022	Weather	Fog
I32	28 Jun 2022	Visibility (mi)	3
I32	28 Jun 2022	Wind Speed (kts)	3.6
I32	28 Jun 2022	Wind Dir	N
I32	28 Jun 2022	Water Color	Brownish-Green
I32	28 Jun 2022	Wave Ht Low (ft)	3
I32	28 Jun 2022	Wave Period (sec)	18
I32	28 Jun 2022	Sea State	Calm
I32	28 Jun 2022	High Tide (ft)	5.92
I32	28 Jun 2022	High Tide Time	406
I32	28 Jun 2022	Low Tide (ft)	-0.55
I32	28 Jun 2022	Low Tide Time	1100
I32	28 Jun 2022	Comments	Btl 4 for chlorophyll study; Possible Red Tide
I39	01 Jun 2022	Depth (m)	19
I39	01 Jun 2022	Arrive Time	955
I39	01 Jun 2022	Depart Time	1003
I39	01 Jun 2022	Air Temp (C)	16.7
I39	01 Jun 2022	Weather	Continuous Layer of Clouds
I39	01 Jun 2022	Visibility (mi)	9
I39	01 Jun 2022	Wind Speed (kts)	1
I39	01 Jun 2022	Wind Dir	SE
I39	01 Jun 2022	Water Color	Greenish-Brown
I39	01 Jun 2022	Wave Ht Low (ft)	4
I39	01 Jun 2022	Wave Period (sec)	17
I39	01 Jun 2022	Sea State	Regular Swell
I39	01 Jun 2022	High Tide (ft)	5.46
I39	01 Jun 2022	High Tide Time	524
I39	01 Jun 2022	Low Tide (ft)	-0.53
I39	01 Jun 2022	Low Tide Time	1224
I39	01 Jun 2022	Comments	none
I39	07 Jun 2022	Depth (m)	19
I39	07 Jun 2022	Arrive Time	947
I39	07 Jun 2022	Depart Time	1005
I39	07 Jun 2022	Air Temp (C)	16.8
I39	07 Jun 2022	Weather	Overcast
I39	07 Jun 2022	Visibility (mi)	4
I39	07 Jun 2022	Wind Speed (kts)	13.6
I39	07 Jun 2022	Wind Dir	SE
I39	07 Jun 2022	Water Color	Brownish-Green
I39	07 Jun 2022	Wave Ht Low (ft)	3
I39	07 Jun 2022	Wave Period (sec)	12
I39	07 Jun 2022	Sea State	Light Chop
I39	07 Jun 2022	High Tide (ft)	4.03
I39	07 Jun 2022	High Tide Time	18

Station	Date	Parameter	Value
I39	07 Jun 2022	Low Tide (ft)	0.66
I39	07 Jun 2022	Low Tide Time	1700
I39	07 Jun 2022	Comments	none
I39	14 Jun 2022	Depth (m)	20
I39	14 Jun 2022	Arrive Time	1038
I39	14 Jun 2022	Depart Time	1044
I39	14 Jun 2022	Air Temp (C)	17.9
I39	14 Jun 2022	Weather	Continuous Layer of Clouds
I39	14 Jun 2022	Visibility (mi)	10
I39	14 Jun 2022	Wind Speed (kts)	6.8
I39	14 Jun 2022	Wind Dir	S
I39	14 Jun 2022	Water Color	Green
I39	14 Jun 2022	Wave Ht Low (ft)	7
I39	14 Jun 2022	Wave Period (sec)	10
I39	14 Jun 2022	Sea State	Regular Swell
I39	14 Jun 2022	High Tide (ft)	6.95
I39	14 Jun 2022	High Tide Time	430
I39	14 Jun 2022	Low Tide (ft)	-1.64
I39	14 Jun 2022	Low Tide Time	1106
I39	14 Jun 2022	Comments	none
I39	21 Jun 2022	Depth (m)	19
I39	21 Jun 2022	Arrive Time	953
I39	21 Jun 2022	Depart Time	1002
I39	21 Jun 2022	Air Temp (C)	18.3
I39	21 Jun 2022	Weather	Overcast
I39	21 Jun 2022	Visibility (mi)	8
I39	21 Jun 2022	Wind Speed (kts)	5.9
I39	21 Jun 2022	Wind Dir	S
I39	21 Jun 2022	Water Color	Greenish-Blue
I39	21 Jun 2022	Wave Ht Low (ft)	3.6
I39	21 Jun 2022	Wave Period (sec)	9
I39	21 Jun 2022	Sea State	Regular Swell
I39	21 Jun 2022	High Tide (ft)	4.83
I39	21 Jun 2022	High Tide Time	6
I39	21 Jun 2022	Low Tide (ft)	0.63
I39	21 Jun 2022	Low Tide Time	1718
I39	21 Jun 2022	Comments	Recast due to bubble
I39	28 Jun 2022	Depth (m)	20
I39	28 Jun 2022	Arrive Time	1032
I39	28 Jun 2022	Depart Time	1037
I39	28 Jun 2022	Air Temp (C)	18.7
I39	28 Jun 2022	Weather	Fog
I39	28 Jun 2022	Visibility (mi)	0
I39	28 Jun 2022	Wind Speed (kts)	4.4
I39	28 Jun 2022	Wind Dir	W
I39	28 Jun 2022	Water Color	Green
I39	28 Jun 2022	Wave Ht Low (ft)	3
I39	28 Jun 2022	Wave Period (sec)	18
I39	28 Jun 2022	Sea State	Calm
I39	28 Jun 2022	High Tide (ft)	5.92
I39	28 Jun 2022	High Tide Time	406
I39	28 Jun 2022	Low Tide (ft)	-0.55
I39	28 Jun 2022	Low Tide Time	1100
I39	28 Jun 2022	Comments	none
I40	01 Jun 2022	Depth (m)	10
I40	01 Jun 2022	Arrive Time	1024
I40	01 Jun 2022	Depart Time	1029

Station	Date	Parameter	Value
I40	01 Jun 2022	Air Temp (C)	16.8
I40	01 Jun 2022	Weather	Continuous Layer of Clouds
I40	01 Jun 2022	Visibility (mi)	9
I40	01 Jun 2022	Wind Speed (kts)	4.7
I40	01 Jun 2022	Wind Dir	SW
I40	01 Jun 2022	Water Color	Greenish-Brown
I40	01 Jun 2022	Wave Ht Low (ft)	4
I40	01 Jun 2022	Wave Period (sec)	17
I40	01 Jun 2022	Sea State	Regular Swell
I40	01 Jun 2022	High Tide (ft)	5.46
I40	01 Jun 2022	High Tide Time	524
I40	01 Jun 2022	Low Tide (ft)	-0.53
I40	01 Jun 2022	Low Tide Time	1224
I40	01 Jun 2022	Comments	none
I40	07 Jun 2022	Depth (m)	10
I40	07 Jun 2022	Arrive Time	1015
I40	07 Jun 2022	Depart Time	1025
I40	07 Jun 2022	Air Temp (C)	17.4
I40	07 Jun 2022	Weather	Overcast
I40	07 Jun 2022	Visibility (mi)	4
I40	07 Jun 2022	Wind Speed (kts)	4.4
I40	07 Jun 2022	Wind Dir	E
I40	07 Jun 2022	Water Color	Brownish-Green
I40	07 Jun 2022	Wave Ht Low (ft)	3
I40	07 Jun 2022	Wave Period (sec)	12
I40	07 Jun 2022	Sea State	Light Chop
I40	07 Jun 2022	High Tide (ft)	4.03
I40	07 Jun 2022	High Tide Time	18
I40	07 Jun 2022	Low Tide (ft)	0.66
I40	07 Jun 2022	Low Tide Time	1700
I40	07 Jun 2022	Comments	none
I40	14 Jun 2022	Depth (m)	10
I40	14 Jun 2022	Arrive Time	1108
I40	14 Jun 2022	Depart Time	1113
I40	14 Jun 2022	Air Temp (C)	17.8
I40	14 Jun 2022	Weather	Continuous Layer of Clouds
I40	14 Jun 2022	Visibility (mi)	10
I40	14 Jun 2022	Wind Speed (kts)	17
I40	14 Jun 2022	Wind Dir	SW
I40	14 Jun 2022	Water Color	Greenish-Brown
I40	14 Jun 2022	Wave Ht Low (ft)	7
I40	14 Jun 2022	Wave Period (sec)	10
I40	14 Jun 2022	Sea State	Regular Swell
I40	14 Jun 2022	High Tide (ft)	6.95
I40	14 Jun 2022	High Tide Time	430
I40	14 Jun 2022	Low Tide (ft)	-1.64
I40	14 Jun 2022	Low Tide Time	1106
I40	14 Jun 2022	Comments	none
I40	21 Jun 2022	Depth (m)	10
I40	21 Jun 2022	Arrive Time	1027
I40	21 Jun 2022	Depart Time	1031
I40	21 Jun 2022	Air Temp (C)	18.1
I40	21 Jun 2022	Weather	Overcast
I40	21 Jun 2022	Visibility (mi)	8
I40	21 Jun 2022	Wind Speed (kts)	7.4
I40	21 Jun 2022	Wind Dir	S
I40	21 Jun 2022	Water Color	Green
I40	21 Jun 2022	Wave Ht Low (ft)	3.6

<b>Station</b>	<b>Date</b>	<b>Parameter</b>	<b>Value</b>
I40	21 Jun 2022	Wave Period (sec)	9
I40	21 Jun 2022	Sea State	Regular Swell
I40	21 Jun 2022	High Tide (ft)	4.83
I40	21 Jun 2022	High Tide Time	6
I40	21 Jun 2022	Low Tide (ft)	0.63
I40	21 Jun 2022	Low Tide Time	1718
I40	21 Jun 2022	Comments	none
I40	28 Jun 2022	Depth (m)	10
I40	28 Jun 2022	Arrive Time	1106
I40	28 Jun 2022	Depart Time	1114
I40	28 Jun 2022	Air Temp (C)	18.5
I40	28 Jun 2022	Weather	Fog
I40	28 Jun 2022	Visibility (mi)	0
I40	28 Jun 2022	Wind Speed (kts)	4.1
I40	28 Jun 2022	Wind Dir	SW
I40	28 Jun 2022	Water Color	Brownish-Green
I40	28 Jun 2022	Wave Ht Low (ft)	3
I40	28 Jun 2022	Wave Period (sec)	18
I40	28 Jun 2022	Sea State	Calm
I40	28 Jun 2022	High Tide (ft)	5.92
I40	28 Jun 2022	High Tide Time	406
I40	28 Jun 2022	Low Tide (ft)	-0.55
I40	28 Jun 2022	Low Tide Time	1100
I40	28 Jun 2022	Comments	Possible Red Tide

**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	01 Jun 2022	1	18.70	69.27	8.3	33.74	8.3	24.1	2.32
I19	01 Jun 2022	2	18.60	68.24	8.1	33.74	8.3	24.2	2.48
I19	01 Jun 2022	3	18.39	63.99	7.8	33.74	8.2	24.2	3.30
I19	01 Jun 2022	4	18.32	60.36	7.4	33.74	8.2	24.2	4.33
I19	01 Jun 2022	5	16.75	49.41	5.6	33.77	8.2	24.6	5.53
I19	01 Jun 2022	6	15.09	31.56	4.4	33.75	8.0	25.0	8.00
I19	01 Jun 2022	7	14.85	36.63	4.3	33.72	7.9	25.0	9.05
I19	01 Jun 2022	8	14.58	46.74	4.4	33.72	7.9	25.1	9.70
I19	01 Jun 2022	9	14.05	50.94	4.2	33.72	7.9	25.2	11.15
I19	01 Jun 2022	10	13.76	45.82	4.0	33.73	7.8	25.3	9.10
I19	07 Jun 2022	1	19.83	66.95	8.1	33.76	8.3	23.9	3.20
I19	07 Jun 2022	2	19.82	67.19	8.1	33.76	8.3	23.9	3.51
I19	07 Jun 2022	3	19.81	67.09	8.0	33.76	8.3	23.9	3.86
I19	07 Jun 2022	4	19.77	66.86	7.9	33.76	8.3	23.9	4.03
I19	07 Jun 2022	5	19.72	65.83	7.7	33.76	8.3	23.9	4.23
I19	07 Jun 2022	6	19.69	64.54	7.7	33.76	8.2	23.9	4.27
I19	07 Jun 2022	7	19.67	63.67	7.6	33.76	8.2	23.9	4.42
I19	07 Jun 2022	8	19.59	62.09	7.4	33.76	8.2	23.9	4.51
I19	07 Jun 2022	9	19.48	60.23	7.3	33.75	8.2	23.9	4.50
I19	07 Jun 2022	10	19.46	56.49	7.4	33.75	8.2	23.9	4.45
I19	14 Jun 2022	1	19.50	50.20	9.5	33.59	8.4	23.8	9.11
I19	14 Jun 2022	2	19.44	47.78	9.5	33.59	8.4	23.8	13.88
I19	14 Jun 2022	3	19.36	44.77	9.4	33.59	8.4	23.9	20.80
I19	14 Jun 2022	4	19.26	42.14	9.2	33.60	8.4	23.9	23.47
I19	14 Jun 2022	5	19.16	44.54	9.1	33.61	8.3	23.9	20.70
I19	14 Jun 2022	6	19.12	48.27	8.7	33.62	8.3	23.9	18.39
I19	14 Jun 2022	7	18.97	48.46	8.3	33.62	8.3	24.0	15.15
I19	14 Jun 2022	8	18.50	52.14	8.3	33.65	8.3	24.1	11.16
I19	14 Jun 2022	9	18.34	57.15	8.1	33.62	8.3	24.1	8.59
I19	14 Jun 2022	10	16.82	66.20	8.6	33.69	8.3	24.6	6.12
I19	21 Jun 2022	1	20.22	63.68	7.9	33.70	8.2	23.7	2.42
I19	21 Jun 2022	2	19.74	63.54	7.6	33.68	8.2	23.8	2.84
I19	21 Jun 2022	3	17.09	61.16	8.4	33.70	8.2	24.5	3.24
I19	21 Jun 2022	4	15.90	63.76	8.6	33.63	8.2	24.7	4.10
I19	21 Jun 2022	5	15.30	63.60	8.4	33.60	8.2	24.8	6.32
I19	21 Jun 2022	6	14.89	62.54	8.4	33.57	8.1	24.9	8.63
I19	21 Jun 2022	7	14.68	62.82	8.2	33.56	8.1	24.9	10.01
I19	21 Jun 2022	8	14.63	63.15	7.8	33.57	8.1	24.9	10.08
I19	21 Jun 2022	9	14.61	65.09	7.1	33.59	8.1	25.0	8.33
I19	21 Jun 2022	10	14.50	57.21	6.5	33.61	8.0	25.0	9.50
I19	28 Jun 2022	1	16.24	62.18	10.0	33.47	8.2	24.5	9.28
I19	28 Jun 2022	2	15.77	60.54	10.2	33.47	8.2	24.6	10.57
I19	28 Jun 2022	3	15.31	53.04	10.1	33.44	8.2	24.7	39.18
I19	28 Jun 2022	4	15.05	29.88	9.3	33.44	8.2	24.8	54.90
I19	28 Jun 2022	5	14.90	33.45	8.8	33.44	8.1	24.8	36.54
I19	28 Jun 2022	6	14.69	45.83	8.6	33.45	8.1	24.8	21.98
I19	28 Jun 2022	7	14.25	57.56	8.9	33.47	8.1	25.0	13.95
I19	28 Jun 2022	8	14.13	60.74	9.2	33.47	8.1	25.0	10.26
I19	28 Jun 2022	9	14.12	63.61	9.1	33.47	8.1	25.0	8.56
I19	28 Jun 2022	10	14.04	64.69	8.8	33.48	8.1	25.0	6.53

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (μg/L)
I24	01 Jun 2022	1	19.21	61.48	8.2	33.77	8.3	24.0	2.84
I24	01 Jun 2022	2	19.04	61.01	8.1	33.77	8.3	24.1	3.07
I24	01 Jun 2022	3	18.72	58.68	8.1	33.77	8.3	24.1	4.27
I24	01 Jun 2022	4	18.65	57.18	7.7	33.76	8.2	24.2	5.22
I24	01 Jun 2022	5	18.41	56.38	7.0	33.77	8.2	24.2	5.75
I24	01 Jun 2022	6	17.85	55.50	6.0	33.77	8.2	24.4	5.53
I24	01 Jun 2022	7	16.23	56.36	4.8	33.78	8.0	24.8	5.25
I24	01 Jun 2022	8	15.75	59.17	4.5	33.73	8.0	24.8	5.32
I24	01 Jun 2022	9	15.67	62.05	4.4	33.72	8.0	24.8	5.32
I24	01 Jun 2022	10	13.93	56.79	3.9	33.76	7.9	25.2	3.90
I24	01 Jun 2022	11	13.81	39.54	3.7	33.72	7.8	25.2	3.11
I24	07 Jun 2022	1	20.14	64.21	8.8	33.74	8.3	23.8	3.73
I24	07 Jun 2022	2	20.12	63.93	8.8	33.74	8.3	23.8	4.18
I24	07 Jun 2022	3	20.10	63.58	8.8	33.74	8.3	23.8	4.89
I24	07 Jun 2022	4	20.06	63.49	8.6	33.74	8.3	23.8	5.74
I24	07 Jun 2022	5	19.96	64.06	8.1	33.75	8.3	23.8	6.31
I24	07 Jun 2022	6	19.15	62.54	6.5	33.74	8.2	24.0	7.19
I24	07 Jun 2022	7	17.53	56.32	5.2	33.74	8.1	24.4	7.28
I24	07 Jun 2022	8	16.98	60.73	4.5	33.71	8.0	24.5	6.21
I24	07 Jun 2022	9	15.06	58.95	3.8	33.73	7.9	25.0	4.15
I24	07 Jun 2022	10	15.09	50.30	3.8	33.70	7.8	24.9	3.42
I24	14 Jun 2022	1	19.86	64.17	9.1	33.66	8.3	23.8	2.55
I24	14 Jun 2022	2	19.76	64.81	9.0	33.66	8.3	23.8	3.06
I24	14 Jun 2022	3	19.54	62.73	9.0	33.63	8.3	23.8	4.17
I24	14 Jun 2022	4	19.49	62.25	8.9	33.63	8.3	23.8	4.87
I24	14 Jun 2022	5	19.31	57.89	8.4	33.62	8.3	23.9	6.75
I24	14 Jun 2022	6	18.84	57.89	8.1	33.61	8.3	24.0	8.76
I24	14 Jun 2022	7	17.49	63.99	9.1	33.66	8.3	24.4	7.99
I24	14 Jun 2022	8	17.00	65.51	9.1	33.65	8.3	24.5	7.65
I24	14 Jun 2022	9	16.82	64.85	8.8	33.65	8.3	24.5	6.52
I24	14 Jun 2022	10	16.74	59.06	8.7	33.65	8.2	24.5	5.22
I24	14 Jun 2022	11	16.64	53.01	8.6	33.65	8.2	24.6	4.28
I24	21 Jun 2022	1	20.79	62.06	8.3	33.72	8.3	23.6	2.55
I24	21 Jun 2022	2	20.73	62.36	8.2	33.72	8.3	23.6	2.68
I24	21 Jun 2022	3	19.61	61.35	8.0	33.71	8.2	23.9	3.30
I24	21 Jun 2022	4	18.73	59.82	7.6	33.69	8.2	24.1	4.19
I24	21 Jun 2022	5	16.61	58.33	7.1	33.67	8.1	24.6	5.27
I24	21 Jun 2022	6	15.12	59.87	7.2	33.62	8.1	24.9	7.26
I24	21 Jun 2022	7	15.37	63.12	6.6	33.57	8.0	24.8	7.51
I24	21 Jun 2022	8	13.97	65.57	5.9	33.62	8.0	25.1	7.22
I24	21 Jun 2022	9	13.98	67.55	5.7	33.61	7.9	25.1	6.11
I24	21 Jun 2022	10	13.89	68.68	5.4	33.61	7.9	25.1	4.86
I24	28 Jun 2022	1	16.13	66.44	10.6	33.49	8.2	24.6	2.93
I24	28 Jun 2022	2	14.60	66.72	10.6	33.53	8.3	24.9	2.59
I24	28 Jun 2022	3	13.90	69.07	9.8	33.51	8.2	25.1	2.77
I24	28 Jun 2022	4	13.57	70.83	9.3	33.50	8.2	25.1	5.18
I24	28 Jun 2022	5	13.46	65.22	9.2	33.49	8.1	25.1	10.14
I24	28 Jun 2022	6	13.44	62.70	9.1	33.50	8.1	25.1	11.11
I24	28 Jun 2022	7	13.39	65.70	8.9	33.50	8.1	25.2	9.25
I24	28 Jun 2022	8	13.25	68.75	8.8	33.50	8.1	25.2	6.37
I24	28 Jun 2022	9	13.23	69.85	8.6	33.51	8.1	25.2	5.02
I25	01 Jun 2022	1	19.03	61.43	8.3	33.76	8.3	24.1	2.88
I25	01 Jun 2022	2	18.83	60.95	8.2	33.76	8.3	24.1	3.52
I25	01 Jun 2022	3	18.61	59.01	8.2	33.76	8.3	24.2	5.13
I25	01 Jun 2022	4	18.48	57.54	7.9	33.76	8.3	24.2	5.93
I25	01 Jun 2022	5	18.31	57.76	7.0	33.75	8.2	24.2	6.25

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (μg/L)
I25	01 Jun 2022	6	16.96	58.43	5.3	33.75	8.2	24.6	5.58
I25	01 Jun 2022	7	14.76	63.05	4.6	33.74	8.0	25.1	4.86
I25	01 Jun 2022	8	14.12	64.98	4.1	33.72	7.9	25.2	3.88
I25	01 Jun 2022	9	14.14	62.65	4.1	33.70	7.9	25.2	2.91
I25	07 Jun 2022	1	20.38	59.13	9.3	33.72	8.4	23.7	4.50
I25	07 Jun 2022	2	20.37	59.54	9.3	33.72	8.4	23.7	4.93
I25	07 Jun 2022	3	20.28	59.09	9.1	33.72	8.4	23.7	6.34
I25	07 Jun 2022	4	20.12	59.62	8.6	33.73	8.3	23.8	6.76
I25	07 Jun 2022	5	19.79	63.35	7.7	33.73	8.3	23.8	6.17
I25	07 Jun 2022	6	18.75	61.47	5.5	33.71	8.2	24.1	6.12
I25	07 Jun 2022	7	15.14	60.49	3.9	33.79	7.9	25.0	4.67
I25	07 Jun 2022	8	17.11	52.28	5.0	33.67	7.9	24.5	4.42
I25	14 Jun 2022	1	19.85	63.46	9.4	33.64	8.4	23.8	3.27
I25	14 Jun 2022	2	19.79	62.91	9.4	33.64	8.4	23.8	3.80
I25	14 Jun 2022	3	19.54	60.89	9.2	33.62	8.4	23.8	5.34
I25	14 Jun 2022	4	19.35	57.87	8.7	33.61	8.3	23.9	7.81
I25	14 Jun 2022	5	18.70	55.61	8.0	33.63	8.3	24.1	8.58
I25	14 Jun 2022	6	17.93	61.84	8.6	33.65	8.3	24.3	7.04
I25	14 Jun 2022	7	17.99	65.64	8.5	33.63	8.3	24.2	6.42
I25	14 Jun 2022	8	17.30	64.76	8.2	33.65	8.3	24.4	5.29
I25	14 Jun 2022	9	16.77	54.41	7.8	33.65	8.2	24.5	3.80
I25	21 Jun 2022	1	20.57	61.84	8.2	33.72	8.2	23.6	2.67
I25	21 Jun 2022	2	20.08	61.85	7.8	33.71	8.2	23.8	2.77
I25	21 Jun 2022	3	18.65	62.33	7.7	33.67	8.2	24.1	2.92
I25	21 Jun 2022	4	17.24	61.54	7.8	33.67	8.2	24.4	3.39
I25	21 Jun 2022	5	16.80	63.75	8.0	33.62	8.1	24.5	4.16
I25	21 Jun 2022	6	16.49	65.34	8.2	33.63	8.1	24.6	4.52
I25	21 Jun 2022	7	16.18	66.25	7.7	33.60	8.1	24.6	4.92
I25	21 Jun 2022	8	14.58	72.01	5.9	33.63	8.0	25.0	3.64
I25	21 Jun 2022	9	14.47	72.37	5.6	33.60	7.9	25.0	2.70
I25	28 Jun 2022	1	17.01	68.95	10.2	33.51	8.2	24.4	1.91
I25	28 Jun 2022	2	16.69	68.93	10.0	33.52	8.2	24.4	2.05
I25	28 Jun 2022	3	15.85	69.39	10.4	33.52	8.2	24.6	2.15
I25	28 Jun 2022	4	14.25	70.39	10.5	33.52	8.3	25.0	2.22
I25	28 Jun 2022	5	13.64	72.54	9.5	33.50	8.2	25.1	3.55
I25	28 Jun 2022	6	13.40	70.41	8.9	33.49	8.2	25.1	6.89
I25	28 Jun 2022	7	13.34	65.33	9.0	33.49	8.1	25.2	8.77
I25	28 Jun 2022	8	13.32	66.39	8.8	33.49	8.1	25.2	9.13
I25	28 Jun 2022	9	13.31	67.37	8.8	33.49	8.1	25.2	8.85
I26	01 Jun 2022	1	18.80	59.95	8.9	33.76	8.3	24.1	3.81
I26	01 Jun 2022	2	18.74	60.18	8.9	33.76	8.3	24.1	4.22
I26	01 Jun 2022	3	18.68	58.29	8.9	33.76	8.3	24.2	5.40
I26	01 Jun 2022	4	18.63	56.97	8.8	33.76	8.3	24.2	6.89
I26	01 Jun 2022	5	18.55	57.39	8.5	33.76	8.3	24.2	7.88
I26	01 Jun 2022	6	18.45	60.01	8.1	33.76	8.3	24.2	7.86
I26	01 Jun 2022	7	17.63	61.60	6.5	33.74	8.2	24.4	7.89
I26	01 Jun 2022	8	14.55	61.52	4.9	33.79	8.0	25.1	6.22
I26	01 Jun 2022	9	14.25	66.51	4.4	33.71	7.9	25.1	3.71
I26	07 Jun 2022	1	20.50	56.05	9.7	33.74	8.4	23.7	6.37
I26	07 Jun 2022	2	20.49	56.29	9.7	33.74	8.4	23.7	7.25
I26	07 Jun 2022	3	20.40	53.55	9.8	33.74	8.4	23.7	12.26
I26	07 Jun 2022	4	20.37	50.21	9.5	33.74	8.4	23.7	14.26
I26	07 Jun 2022	5	20.30	53.86	9.2	33.74	8.4	23.7	12.07
I26	07 Jun 2022	6	20.21	59.20	8.5	33.74	8.4	23.7	9.66
I26	07 Jun 2022	7	19.34	62.56	7.1	33.71	8.2	24.0	6.92

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (μg/L)
I26	07 Jun 2022	8	17.58	62.93	5.2	33.76	8.1	24.4	5.54
I26	07 Jun 2022	9	14.52	65.78	4.0	33.77	7.9	25.1	4.08
I26	14 Jun 2022	1	19.93	62.96	9.3	33.64	8.4	23.7	3.64
I26	14 Jun 2022	2	19.78	62.43	9.5	33.63	8.4	23.8	6.22
I26	14 Jun 2022	3	19.59	51.87	9.2	33.64	8.4	23.8	27.13
I26	14 Jun 2022	4	19.60	45.31	8.6	33.66	8.3	23.8	25.75
I26	14 Jun 2022	5	19.55	56.94	8.5	33.67	8.3	23.9	19.00
I26	14 Jun 2022	6	19.44	59.97	8.3	33.66	8.3	23.9	14.98
I26	14 Jun 2022	7	19.27	62.87	8.1	33.65	8.3	23.9	10.84
I26	14 Jun 2022	8	18.97	62.44	7.8	33.64	8.2	24.0	6.66
I26	14 Jun 2022	9	18.18	57.71	7.7	33.64	8.2	24.2	4.33
I26	21 Jun 2022	1	20.67	61.59	8.0	33.73	8.2	23.6	2.64
I26	21 Jun 2022	2	20.28	61.19	7.9	33.73	8.2	23.7	3.98
I26	21 Jun 2022	3	19.31	59.50	7.7	33.72	8.2	24.0	5.33
I26	21 Jun 2022	4	16.65	62.11	8.4	33.67	8.2	24.6	4.63
I26	21 Jun 2022	5	15.43	65.11	8.2	33.63	8.2	24.8	5.27
I26	21 Jun 2022	6	14.95	62.97	7.7	33.62	8.1	24.9	7.52
I26	21 Jun 2022	7	14.70	61.85	7.7	33.59	8.1	24.9	10.18
I26	21 Jun 2022	8	14.65	65.56	7.1	33.58	8.1	25.0	7.99
I26	21 Jun 2022	9	14.66	68.18	7.2	33.59	8.1	25.0	6.23
I26	28 Jun 2022	1	17.64	65.01	9.7	33.56	8.2	24.3	2.17
I26	28 Jun 2022	2	16.86	65.35	9.8	33.58	8.2	24.5	2.24
I26	28 Jun 2022	3	15.89	66.46	10.4	33.53	8.2	24.6	2.29
I26	28 Jun 2022	4	15.02	68.15	11.2	33.50	8.3	24.8	2.39
I26	28 Jun 2022	5	14.34	69.64	11.3	33.50	8.3	25.0	3.64
I26	28 Jun 2022	6	14.05	67.83	10.9	33.49	8.3	25.0	10.61
I26	28 Jun 2022	7	13.87	57.61	10.6	33.49	8.2	25.0	16.89
I26	28 Jun 2022	8	13.76	57.63	10.4	33.49	8.2	25.1	15.57
I26	28 Jun 2022	9	13.70	64.05	10.0	33.50	8.2	25.1	10.67
I32	01 Jun 2022	1	19.18	45.13	9.2	33.77	8.3	24.0	9.07
I32	01 Jun 2022	2	18.97	44.53	9.1	33.77	8.3	24.1	15.47
I32	01 Jun 2022	3	18.85	40.56	8.6	33.77	8.3	24.1	18.82
I32	01 Jun 2022	4	18.72	45.47	7.6	33.77	8.3	24.2	14.24
I32	01 Jun 2022	5	18.00	45.35	6.6	33.77	8.2	24.3	10.03
I32	01 Jun 2022	6	16.78	34.48	5.6	33.76	8.1	24.6	6.84
I32	01 Jun 2022	7	15.37	41.74	4.8	33.75	8.0	24.9	5.56
I32	01 Jun 2022	8	15.10	43.72	4.6	33.70	7.9	24.9	5.07
I32	01 Jun 2022	9	14.44	38.67	4.4	33.72	7.9	25.1	5.14
I32	01 Jun 2022	10	14.03	36.47	4.2	33.70	7.9	25.2	5.05
I32	07 Jun 2022	1	20.59	54.22	8.7	33.75	8.4	23.7	5.45
I32	07 Jun 2022	2	20.57	54.25	8.7	33.75	8.4	23.7	6.45
I32	07 Jun 2022	3	20.46	53.09	9.0	33.76	8.4	23.7	9.11
I32	07 Jun 2022	4	20.38	52.22	9.1	33.76	8.4	23.7	11.48
I32	07 Jun 2022	5	20.35	55.42	9.2	33.76	8.4	23.7	12.16
I32	07 Jun 2022	6	20.29	58.27	9.0	33.76	8.4	23.7	10.68
I32	07 Jun 2022	7	20.23	60.92	9.0	33.77	8.4	23.8	8.91
I32	07 Jun 2022	8	20.20	62.49	8.6	33.76	8.4	23.8	7.97
I32	07 Jun 2022	9	19.02	54.42	7.0	33.73	8.3	24.0	7.30
I32	07 Jun 2022	10	19.71	35.82	7.1	33.67	8.2	23.8	7.12
I32	14 Jun 2022	1	20.10	63.66	8.8	33.66	8.3	23.7	3.14
I32	14 Jun 2022	2	20.08	64.94	8.8	33.66	8.3	23.7	3.25
I32	14 Jun 2022	3	19.98	62.55	8.9	33.66	8.3	23.7	4.61
I32	14 Jun 2022	4	19.88	60.46	9.2	33.66	8.3	23.8	7.97
I32	14 Jun 2022	5	19.73	53.38	9.3	33.64	8.4	23.8	13.54
I32	14 Jun 2022	6	19.58	55.26	8.8	33.64	8.3	23.8	14.99

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (μg/L)
I32	14 Jun 2022	7	19.55	60.69	8.6	33.63	8.3	23.8	12.64
I32	14 Jun 2022	8	19.51	64.43	8.4	33.64	8.3	23.9	9.55
I32	14 Jun 2022	9	19.51	65.78	8.4	33.65	8.3	23.9	8.31
I32	14 Jun 2022	10	19.48	65.77	8.4	33.65	8.3	23.9	7.65
I32	21 Jun 2022	1	20.82	62.33	7.7	33.73	8.2	23.6	2.11
I32	21 Jun 2022	2	19.01	62.58	7.4	33.72	8.2	24.0	2.63
I32	21 Jun 2022	3	15.98	61.21	7.9	33.63	8.2	24.7	3.74
I32	21 Jun 2022	4	15.24	61.58	7.6	33.58	8.1	24.8	5.08
I32	21 Jun 2022	5	14.40	62.52	7.5	33.58	8.1	25.0	6.04
I32	21 Jun 2022	6	14.33	64.26	7.4	33.56	8.1	25.0	5.85
I32	21 Jun 2022	7	14.32	64.70	7.4	33.56	8.1	25.0	5.54
I32	21 Jun 2022	8	14.30	64.22	7.4	33.56	8.1	25.0	5.51
I32	21 Jun 2022	9	14.29	64.22	7.4	33.57	8.1	25.0	5.30
I32	21 Jun 2022	10	14.29	63.23	7.4	33.58	8.1	25.0	5.22
I32	28 Jun 2022	1	16.70	57.03	10.8	33.50	8.2	24.4	8.92
I32	28 Jun 2022	2	16.62	49.39	10.6	33.49	8.2	24.4	24.99
I32	28 Jun 2022	3	16.17	27.48	10.1	33.50	8.2	24.6	68.16
I32	28 Jun 2022	4	15.94	15.69	9.4	33.51	8.2	24.6	64.45
I32	28 Jun 2022	5	15.53	32.52	9.6	33.51	8.1	24.7	41.55
I32	28 Jun 2022	6	15.23	44.71	10.2	33.50	8.2	24.8	27.20
I32	28 Jun 2022	7	15.05	53.60	9.6	33.51	8.2	24.8	15.62
I32	28 Jun 2022	8	14.78	62.44	9.0	33.53	8.1	24.9	10.04
I32	28 Jun 2022	9	14.44	63.30	9.0	33.54	8.1	25.0	8.42
I32	28 Jun 2022	10	13.88	64.02	8.6	33.56	8.1	25.1	7.69
I39	01 Jun 2022	1	18.48	71.07	8.5	33.73	8.3	24.2	2.00
I39	01 Jun 2022	2	18.39	70.18	8.5	33.73	8.3	24.2	2.29
I39	01 Jun 2022	3	18.34	69.59	8.5	33.73	8.3	24.2	2.67
I39	01 Jun 2022	4	18.33	69.90	8.5	33.73	8.3	24.2	2.91
I39	01 Jun 2022	5	18.30	70.16	8.5	33.73	8.3	24.2	3.16
I39	01 Jun 2022	6	18.30	70.38	8.5	33.73	8.3	24.2	3.25
I39	01 Jun 2022	7	18.27	70.29	8.5	33.73	8.3	24.2	3.42
I39	01 Jun 2022	8	18.27	70.10	8.4	33.73	8.3	24.2	3.66
I39	01 Jun 2022	9	18.25	69.52	8.4	33.73	8.3	24.2	4.05
I39	01 Jun 2022	10	18.24	69.20	8.4	33.73	8.3	24.2	4.30
I39	01 Jun 2022	11	18.03	68.81	8.3	33.73	8.3	24.3	5.01
I39	01 Jun 2022	12	17.99	67.35	8.2	33.73	8.3	24.3	5.54
I39	01 Jun 2022	13	16.99	65.16	7.3	33.74	8.2	24.5	10.09
I39	01 Jun 2022	14	15.60	56.41	6.3	33.73	8.2	24.9	14.01
I39	01 Jun 2022	15	13.93	62.78	5.0	33.73	8.0	25.2	10.18
I39	01 Jun 2022	16	13.76	68.97	4.8	33.70	7.9	25.2	6.71
I39	01 Jun 2022	17	12.77	70.28	4.5	33.73	7.9	25.5	4.00
I39	01 Jun 2022	18	12.41	64.69	4.2	33.72	7.9	25.5	2.47
I39	07 Jun 2022	1	20.14	61.61	9.4	33.73	8.4	23.8	5.26
I39	07 Jun 2022	2	20.14	61.81	9.4	33.73	8.4	23.8	5.53
I39	07 Jun 2022	3	20.13	61.39	9.3	33.73	8.4	23.8	6.30
I39	07 Jun 2022	4	20.01	60.67	9.0	33.73	8.3	23.8	7.64
I39	07 Jun 2022	5	19.37	57.73	8.0	33.73	8.3	24.0	9.08
I39	07 Jun 2022	6	17.06	59.45	8.3	33.72	8.2	24.5	10.12
I39	07 Jun 2022	7	16.43	59.86	7.7	33.68	8.2	24.6	12.17
I39	07 Jun 2022	8	15.83	58.04	6.3	33.71	8.1	24.8	12.57
I39	07 Jun 2022	9	15.03	60.89	5.5	33.71	8.0	25.0	9.59
I39	07 Jun 2022	10	14.71	64.58	5.1	33.70	7.9	25.0	7.55
I39	07 Jun 2022	11	13.87	65.88	4.8	33.71	7.9	25.2	6.65
I39	07 Jun 2022	12	13.60	67.23	4.1	33.71	7.8	25.3	5.88
I39	07 Jun 2022	13	13.51	68.03	4.0	33.71	7.8	25.3	5.51
I39	07 Jun 2022	14	13.42	69.07	3.9	33.70	7.8	25.3	4.88
I39	07 Jun 2022	15	12.20	72.46	3.7	33.71	7.8	25.6	2.73

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (μg/L)
I39	07 Jun 2022	16	12.09	72.61	3.6	33.70	7.8	25.6	1.83
I39	07 Jun 2022	17	11.96	72.23	3.7	33.70	7.8	25.6	1.49
I39	07 Jun 2022	18	11.85	67.90	3.5	33.70	7.8	25.6	1.42
I39	14 Jun 2022	1	20.14	72.41	8.1	33.72	8.3	23.8	1.52
I39	14 Jun 2022	2	20.10	72.29	8.2	33.72	8.3	23.8	1.57
I39	14 Jun 2022	3	20.03	72.14	8.2	33.72	8.3	23.8	1.71
I39	14 Jun 2022	4	19.97	71.92	8.3	33.72	8.3	23.8	1.91
I39	14 Jun 2022	5	19.86	71.72	8.4	33.72	8.3	23.8	2.21
I39	14 Jun 2022	6	19.66	71.03	8.6	33.70	8.3	23.9	3.15
I39	14 Jun 2022	7	18.81	66.47	9.1	33.68	8.3	24.1	7.00
I39	14 Jun 2022	8	17.73	61.12	9.3	33.66	8.3	24.3	10.22
I39	14 Jun 2022	9	16.40	62.21	9.0	33.67	8.3	24.6	10.10
I39	14 Jun 2022	10	15.60	64.01	8.6	33.66	8.3	24.8	8.83
I39	14 Jun 2022	11	15.73	64.38	8.4	33.63	8.2	24.8	8.07
I39	14 Jun 2022	12	15.05	66.64	8.1	33.67	8.2	24.9	7.47
I39	14 Jun 2022	13	14.32	66.98	7.3	33.64	8.2	25.1	7.13
I39	14 Jun 2022	14	13.88	68.48	7.0	33.64	8.1	25.2	5.72
I39	14 Jun 2022	15	13.81	64.75	6.9	33.63	8.1	25.2	4.67
I39	14 Jun 2022	16	13.74	57.66	6.8	33.63	8.1	25.2	3.85
I39	14 Jun 2022	17	13.73	55.03	6.8	33.63	8.1	25.2	3.44
I39	14 Jun 2022	18	13.84	52.08	6.9	33.64	8.1	25.2	3.62
I39	21 Jun 2022	1	20.72	62.23	8.3	33.73	8.3	23.6	2.81
I39	21 Jun 2022	2	20.67	62.27	8.2	33.73	8.3	23.6	3.13
I39	21 Jun 2022	3	20.65	61.88	8.2	33.73	8.3	23.6	3.47
I39	21 Jun 2022	4	19.50	60.72	8.3	33.72	8.3	23.9	4.01
I39	21 Jun 2022	5	18.35	64.75	8.6	33.67	8.2	24.2	3.65
I39	21 Jun 2022	6	17.75	66.20	9.0	33.65	8.2	24.3	3.45
I39	21 Jun 2022	7	17.56	66.62	8.9	33.64	8.2	24.3	3.50
I39	21 Jun 2022	8	16.46	67.32	8.6	33.64	8.2	24.6	3.69
I39	21 Jun 2022	9	15.56	68.90	8.0	33.58	8.1	24.8	4.48
I39	21 Jun 2022	10	13.68	67.61	7.1	33.58	8.1	25.2	6.74
I39	21 Jun 2022	11	13.45	68.54	6.1	33.59	8.0	25.2	6.65
I39	21 Jun 2022	12	13.38	70.49	5.7	33.60	7.9	25.2	5.52
I39	21 Jun 2022	13	13.01	71.69	5.4	33.60	7.9	25.3	5.26
I39	21 Jun 2022	14	12.79	74.09	5.2	33.60	7.9	25.3	4.52
I39	21 Jun 2022	15	12.49	74.60	5.1	33.59	7.9	25.4	3.73
I39	21 Jun 2022	16	12.31	75.13	5.1	33.59	7.8	25.4	2.97
I39	21 Jun 2022	17	12.24	76.39	5.1	33.59	7.8	25.4	2.45
I39	21 Jun 2022	18	12.15	77.07	4.9	33.58	7.8	25.5	1.82
I39	28 Jun 2022	1	18.07	62.97	9.5	33.58	8.2	24.2	3.04
I39	28 Jun 2022	2	17.39	62.40	9.5	33.58	8.2	24.3	3.09
I39	28 Jun 2022	3	16.04	64.94	10.0	33.56	8.2	24.6	3.02
I39	28 Jun 2022	4	14.61	67.47	10.6	33.53	8.3	24.9	2.97
I39	28 Jun 2022	5	13.78	69.81	10.7	33.48	8.3	25.1	3.34
I39	28 Jun 2022	6	13.56	72.03	10.2	33.48	8.2	25.1	4.55
I39	28 Jun 2022	7	13.35	71.74	9.2	33.48	8.2	25.1	5.87
I39	28 Jun 2022	8	12.76	70.73	8.0	33.51	8.1	25.3	8.43
I39	28 Jun 2022	9	12.66	69.15	7.4	33.50	8.0	25.3	9.09
I39	28 Jun 2022	10	12.66	69.83	7.4	33.51	8.0	25.3	8.46
I39	28 Jun 2022	11	12.66	70.28	7.5	33.51	8.0	25.3	8.01
I39	28 Jun 2022	12	12.66	70.44	7.5	33.51	8.0	25.3	7.45
I39	28 Jun 2022	13	12.65	71.05	7.4	33.52	8.0	25.3	6.59
I39	28 Jun 2022	14	12.65	71.48	7.4	33.53	8.0	25.3	6.14
I39	28 Jun 2022	15	12.64	71.81	7.3	33.53	8.0	25.3	5.81
I39	28 Jun 2022	16	12.64	71.84	7.3	33.53	8.0	25.3	5.45
I39	28 Jun 2022	17	12.62	72.09	7.3	33.53	8.0	25.3	5.13
I39	28 Jun 2022	18	12.61	72.50	7.2	33.54	8.0	25.3	4.84

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (μg/L)
I40	01 Jun 2022	1	18.89	58.64	8.0	33.76	8.3	24.1	4.36
I40	01 Jun 2022	2	18.88	58.14	8.0	33.76	8.3	24.1	4.71
I40	01 Jun 2022	3	18.84	57.64	8.0	33.76	8.3	24.1	5.93
I40	01 Jun 2022	4	18.65	55.80	7.9	33.75	8.3	24.2	8.58
I40	01 Jun 2022	5	17.98	58.13	6.6	33.76	8.2	24.3	10.03
I40	01 Jun 2022	6	16.60	56.48	5.4	33.74	8.1	24.6	12.89
I40	01 Jun 2022	7	15.28	60.05	4.5	33.73	8.0	24.9	8.59
I40	01 Jun 2022	8	14.54	45.77	3.7	33.73	7.9	25.1	5.60
I40	01 Jun 2022	9	14.08	42.09	3.8	33.72	7.8	25.2	4.34
I40	01 Jun 2022	10	13.96	28.24	3.9	33.71	7.8	25.2	3.76
I40	07 Jun 2022	1	20.10	62.39	8.4	33.75	8.3	23.8	4.82
I40	07 Jun 2022	2	20.09	62.29	8.4	33.75	8.3	23.8	5.44
I40	07 Jun 2022	3	20.00	61.84	8.1	33.75	8.3	23.8	7.36
I40	07 Jun 2022	4	19.88	61.59	7.7	33.75	8.3	23.8	7.47
I40	07 Jun 2022	5	19.79	63.71	7.5	33.75	8.2	23.9	6.39
I40	07 Jun 2022	6	19.69	64.80	7.3	33.75	8.2	23.9	5.52
I40	07 Jun 2022	7	19.55	63.97	6.7	33.75	8.2	23.9	4.94
I40	07 Jun 2022	8	17.38	57.28	4.5	33.73	8.2	24.4	4.01
I40	07 Jun 2022	9	14.91	35.12	3.8	33.70	7.8	25.0	3.20
I40	14 Jun 2022	1	19.45	51.25	9.4	33.59	8.4	23.8	8.19
I40	14 Jun 2022	2	19.41	52.16	9.3	33.59	8.3	23.8	9.65
I40	14 Jun 2022	3	19.32	50.48	8.8	33.59	8.3	23.9	12.71
I40	14 Jun 2022	4	19.22	49.79	8.6	33.58	8.3	23.9	15.82
I40	14 Jun 2022	5	19.22	50.10	8.5	33.58	8.3	23.9	16.72
I40	14 Jun 2022	6	19.21	51.33	8.3	33.59	8.3	23.9	15.47
I40	14 Jun 2022	7	18.92	52.63	7.8	33.61	8.3	24.0	10.60
I40	14 Jun 2022	8	17.42	42.00	7.8	33.68	8.2	24.4	5.98
I40	14 Jun 2022	9	16.88	23.78	7.9	33.64	8.2	24.5	4.57
I40	14 Jun 2022	10	16.45	19.37	8.0	33.66	8.2	24.6	4.33
I40	21 Jun 2022	1	20.61	62.69	7.6	33.72	8.2	23.6	2.28
I40	21 Jun 2022	2	20.07	62.25	7.3	33.73	8.2	23.8	2.65
I40	21 Jun 2022	3	19.03	59.48	7.2	33.69	8.2	24.0	3.32
I40	21 Jun 2022	4	17.91	57.24	7.2	33.68	8.2	24.3	4.54
I40	21 Jun 2022	5	15.95	57.61	7.9	33.65	8.1	24.7	7.71
I40	21 Jun 2022	6	14.94	57.50	7.6	33.61	8.1	24.9	11.94
I40	21 Jun 2022	7	14.33	60.15	7.3	33.59	8.1	25.0	12.80
I40	21 Jun 2022	8	14.32	62.88	6.5	33.60	8.0	25.0	10.69
I40	21 Jun 2022	9	14.27	60.05	5.6	33.61	7.9	25.1	8.06
I40	21 Jun 2022	10	14.28	55.57	5.7	33.61	7.9	25.1	7.00
I40	28 Jun 2022	1	16.29	65.64	10.2	33.48	8.2	24.5	2.66
I40	28 Jun 2022	2	15.11	66.95	10.4	33.50	8.2	24.8	3.82
I40	28 Jun 2022	3	15.04	57.82	9.7	33.46	8.2	24.8	7.71
I40	28 Jun 2022	4	14.56	53.46	9.3	33.47	8.2	24.9	14.51
I40	28 Jun 2022	5	14.58	53.90	9.5	33.47	8.2	24.9	18.89
I40	28 Jun 2022	6	14.48	51.39	9.7	33.48	8.2	24.9	23.22
I40	28 Jun 2022	7	14.42	52.87	9.6	33.48	8.2	24.9	20.96
I40	28 Jun 2022	8	14.27	58.67	9.1	33.48	8.2	25.0	12.15
I40	28 Jun 2022	9	14.12	62.13	9.1	33.48	8.2	25.0	7.69
I40	28 Jun 2022	10	13.66	63.09	9.4	33.51	8.2	25.1	5.70

NA = not available

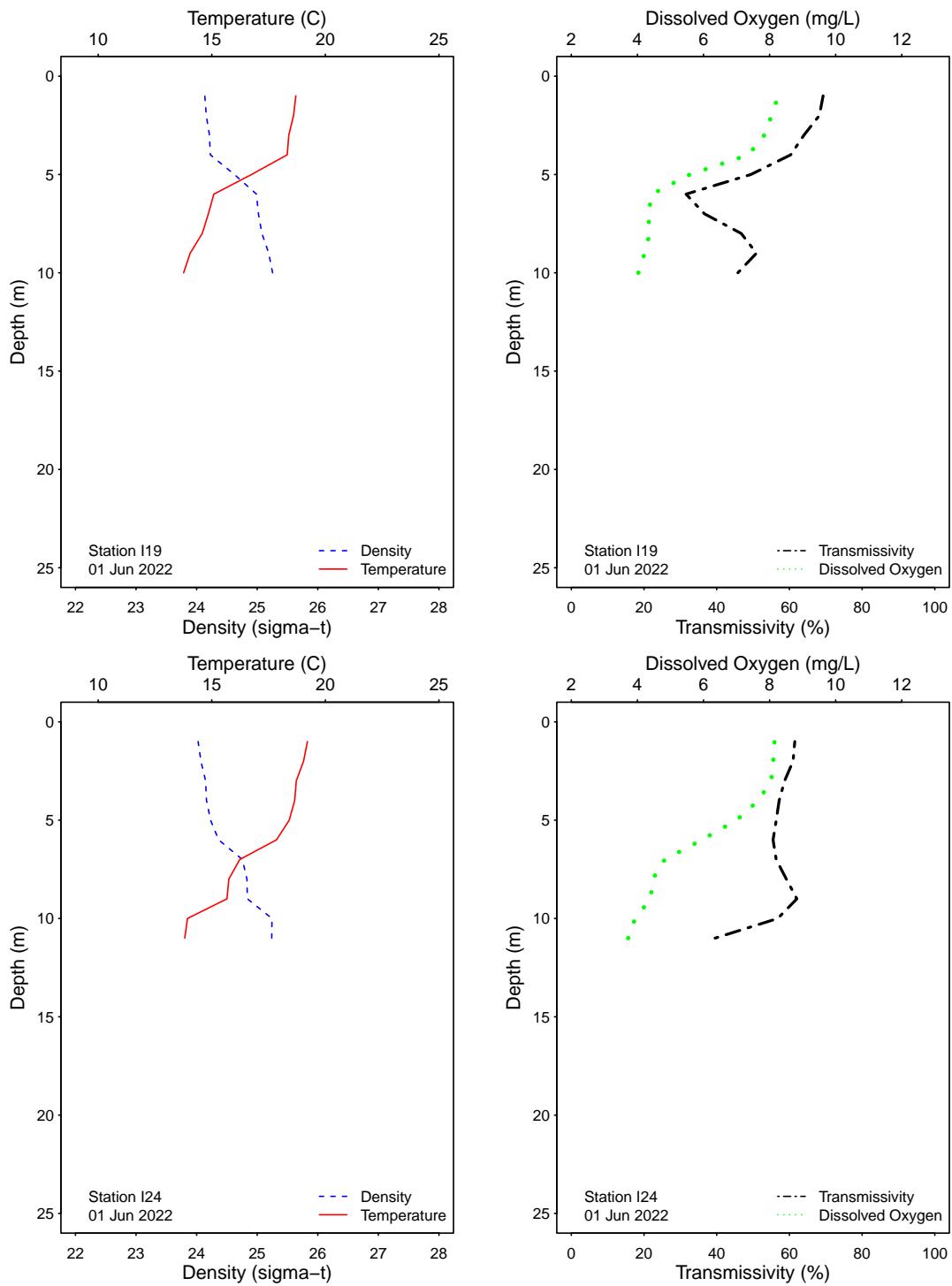


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

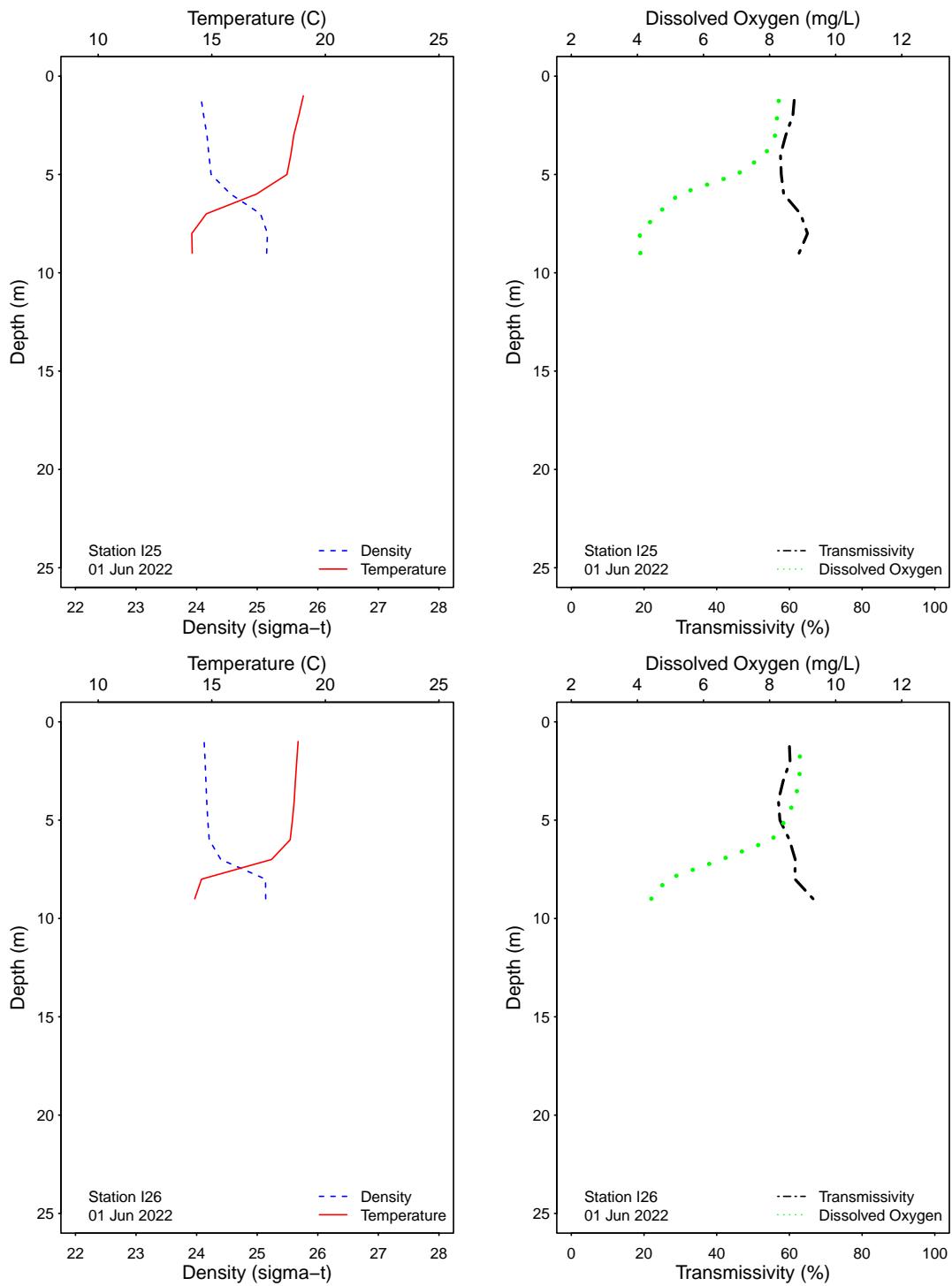


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

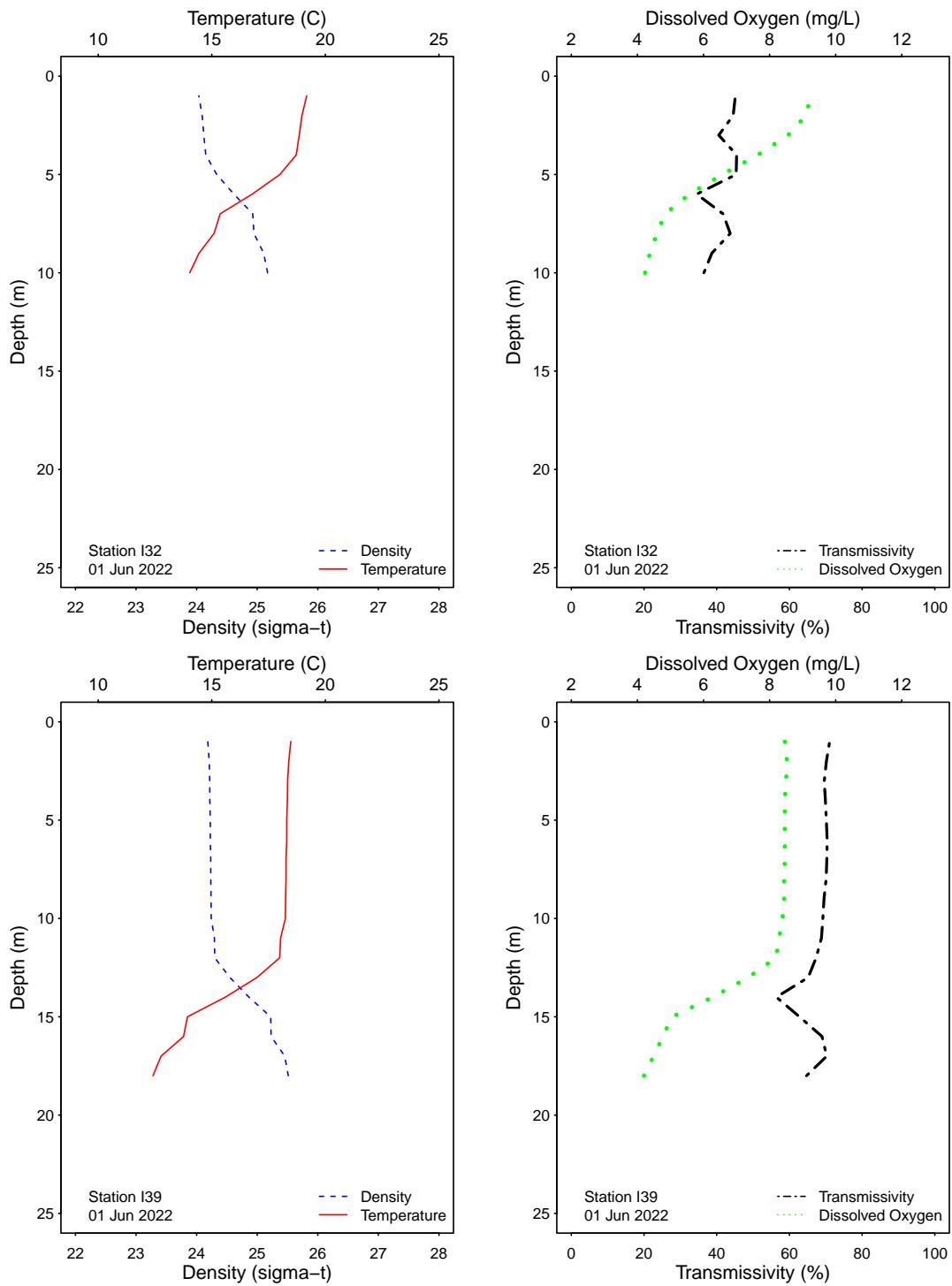


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

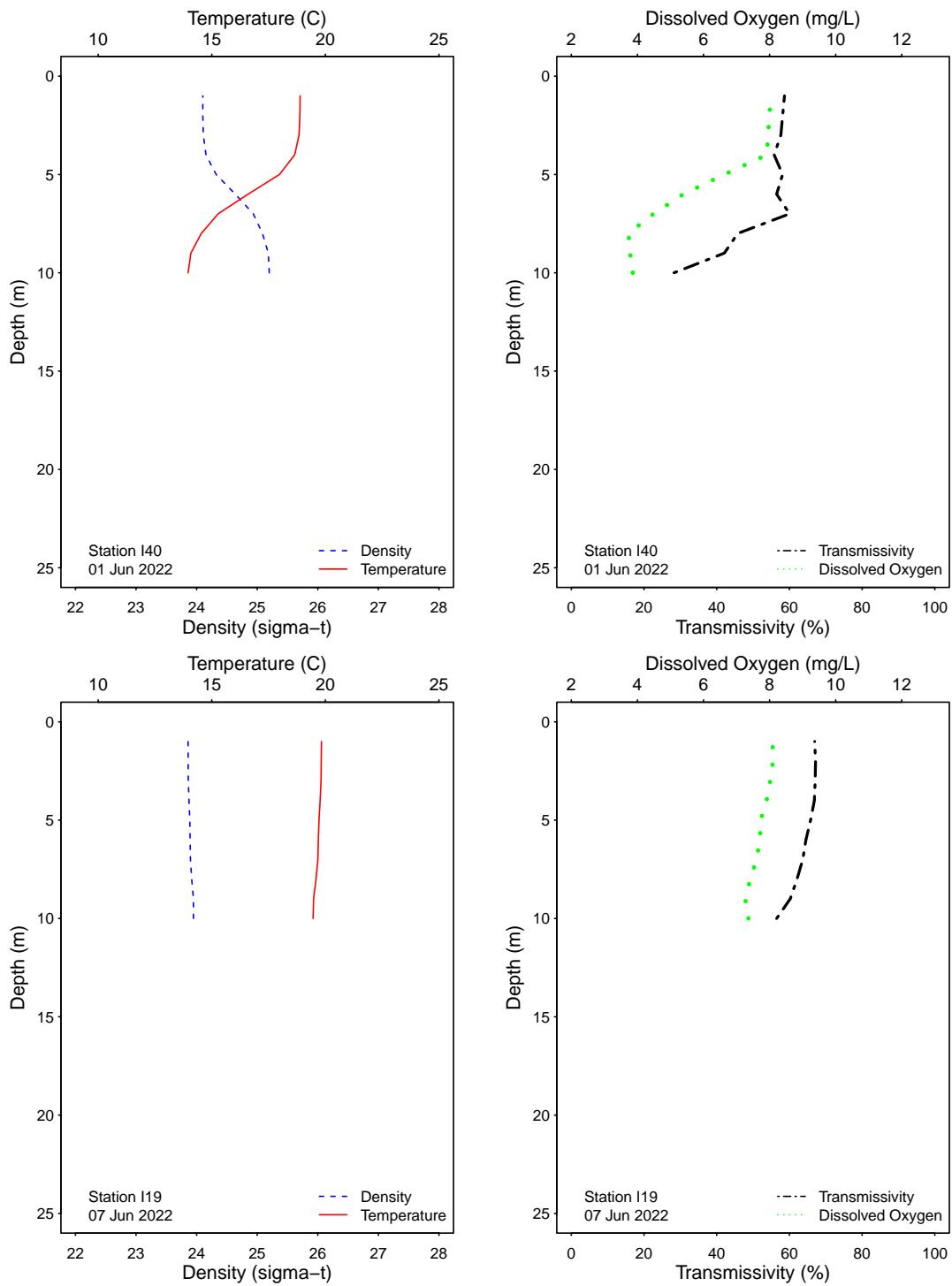


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

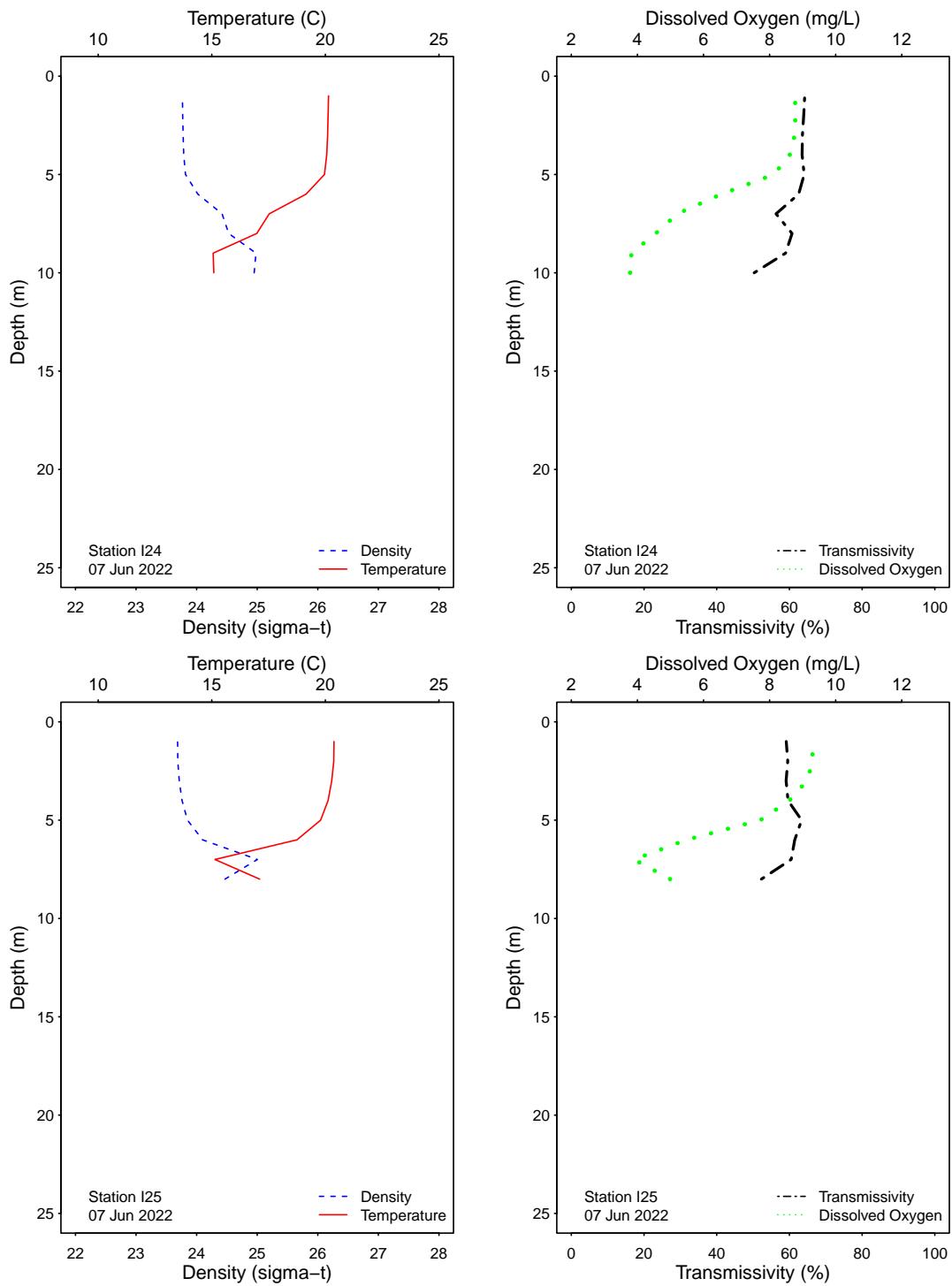


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

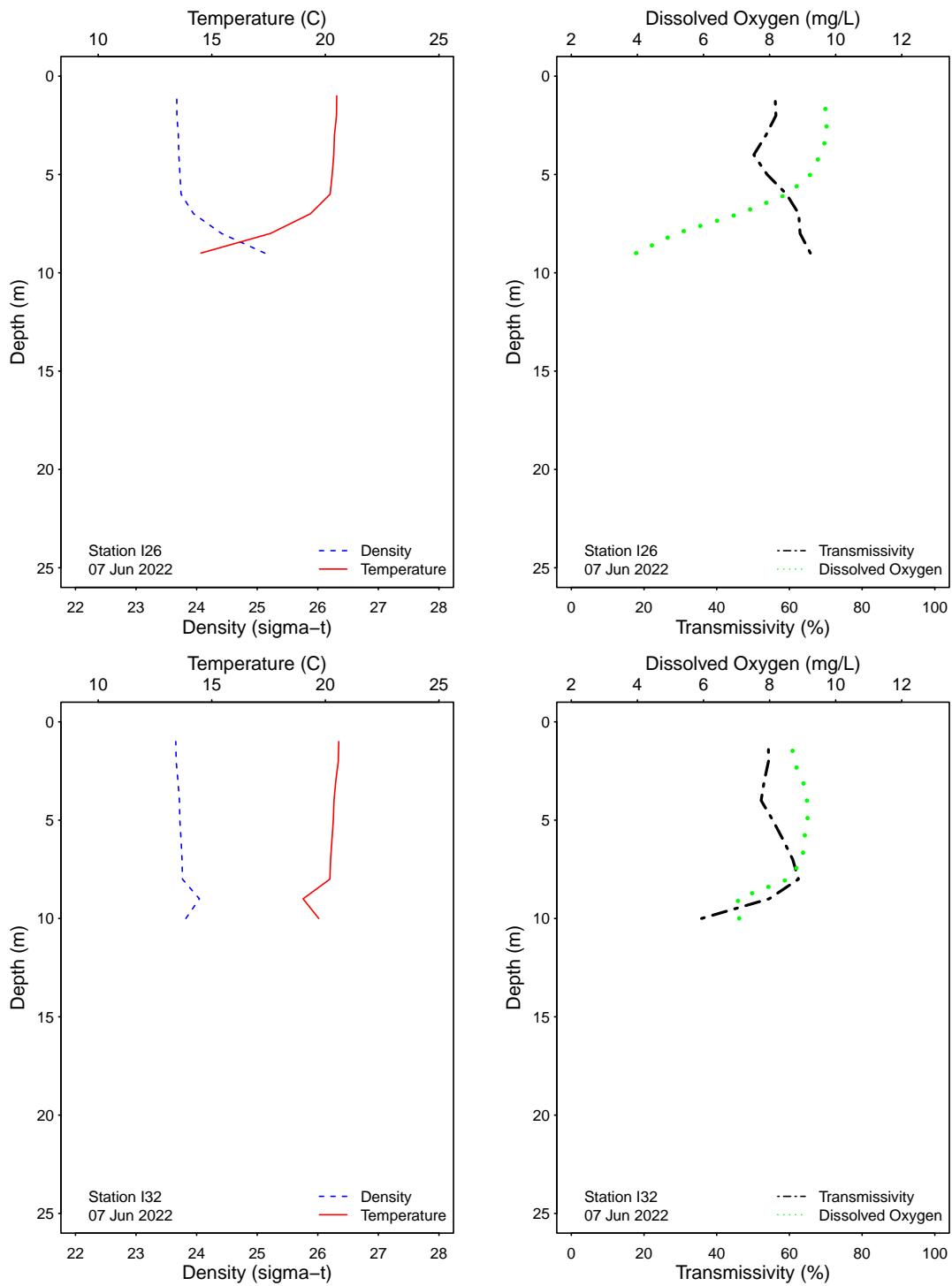


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

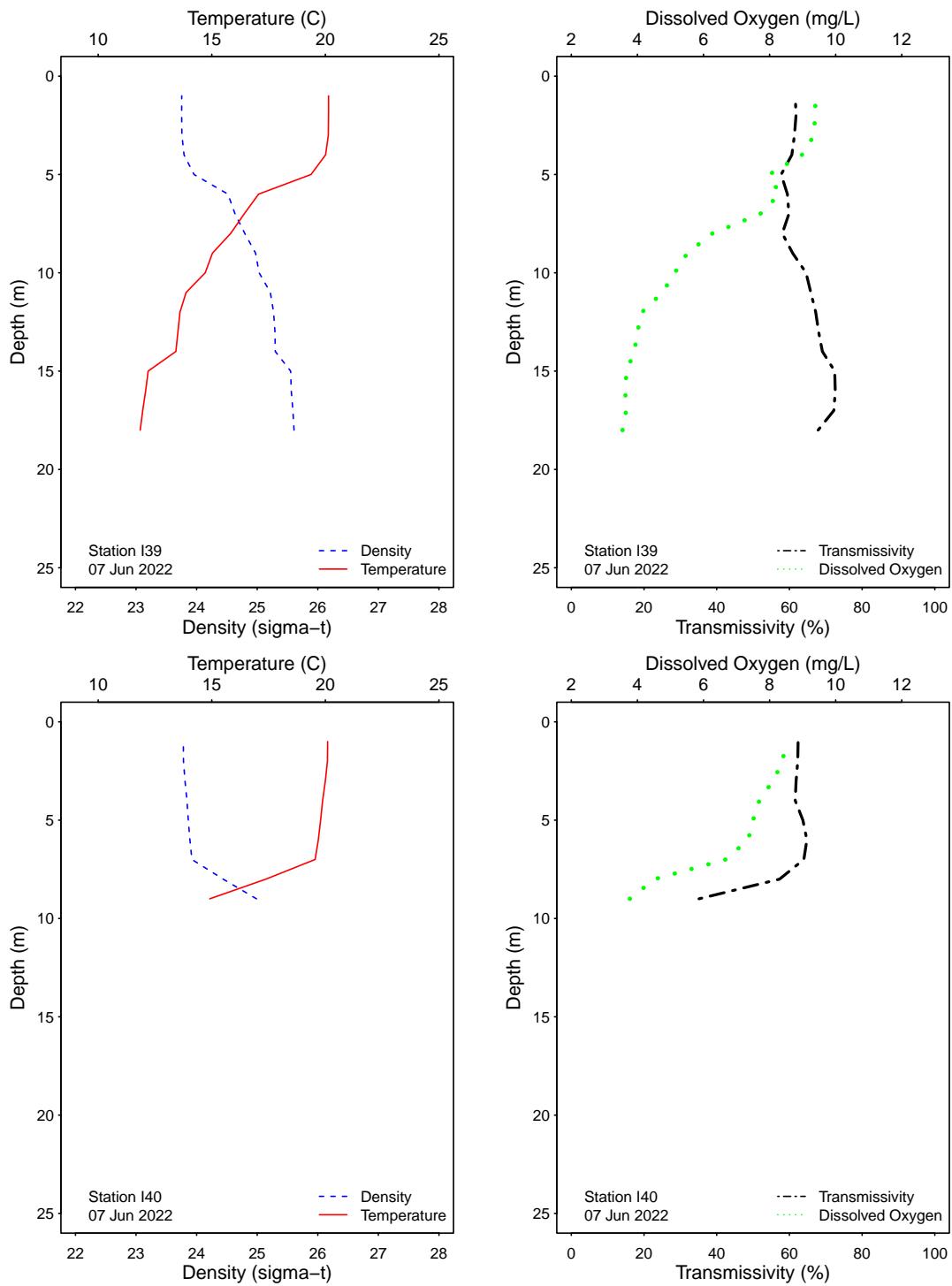


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

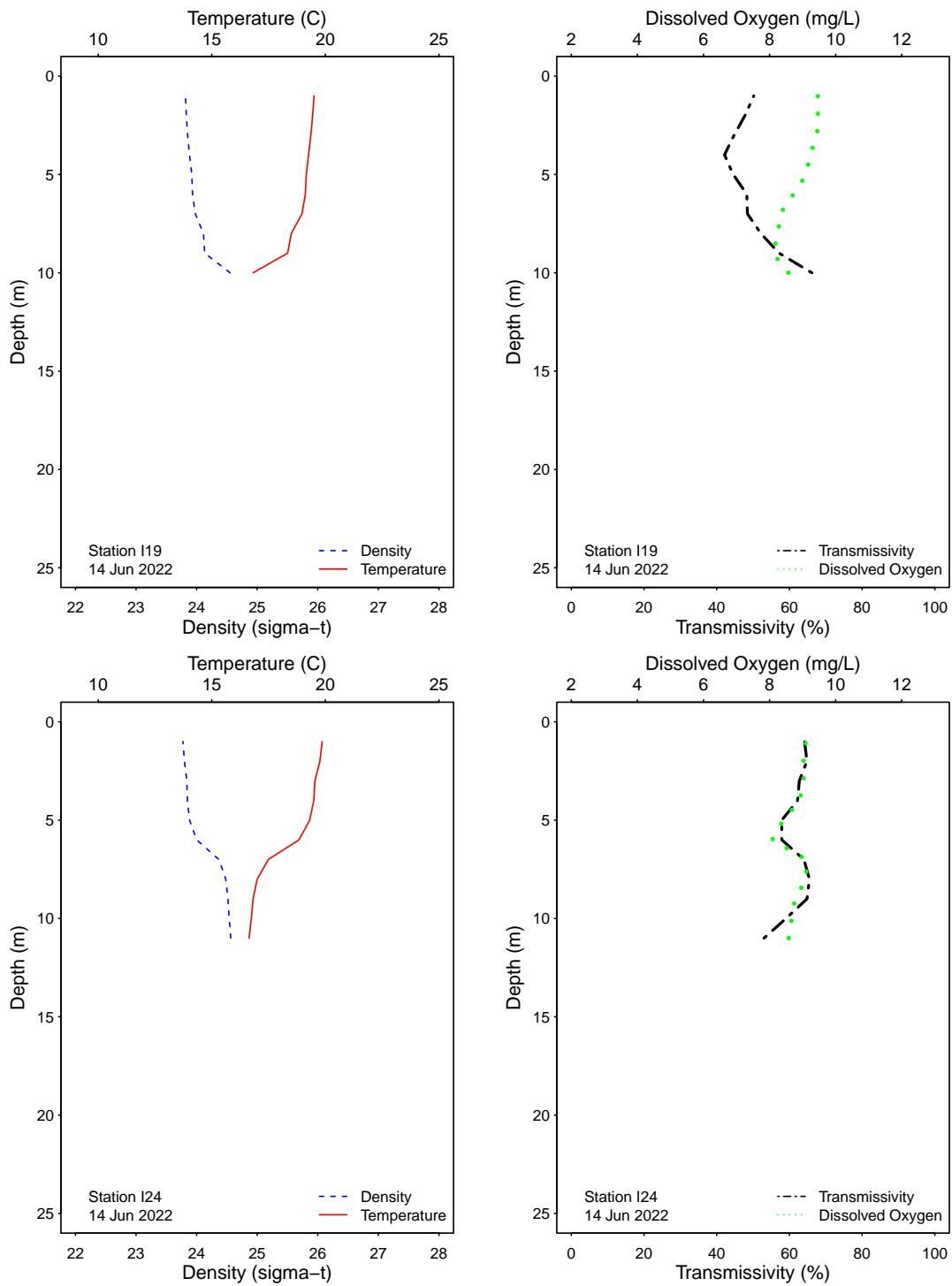


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

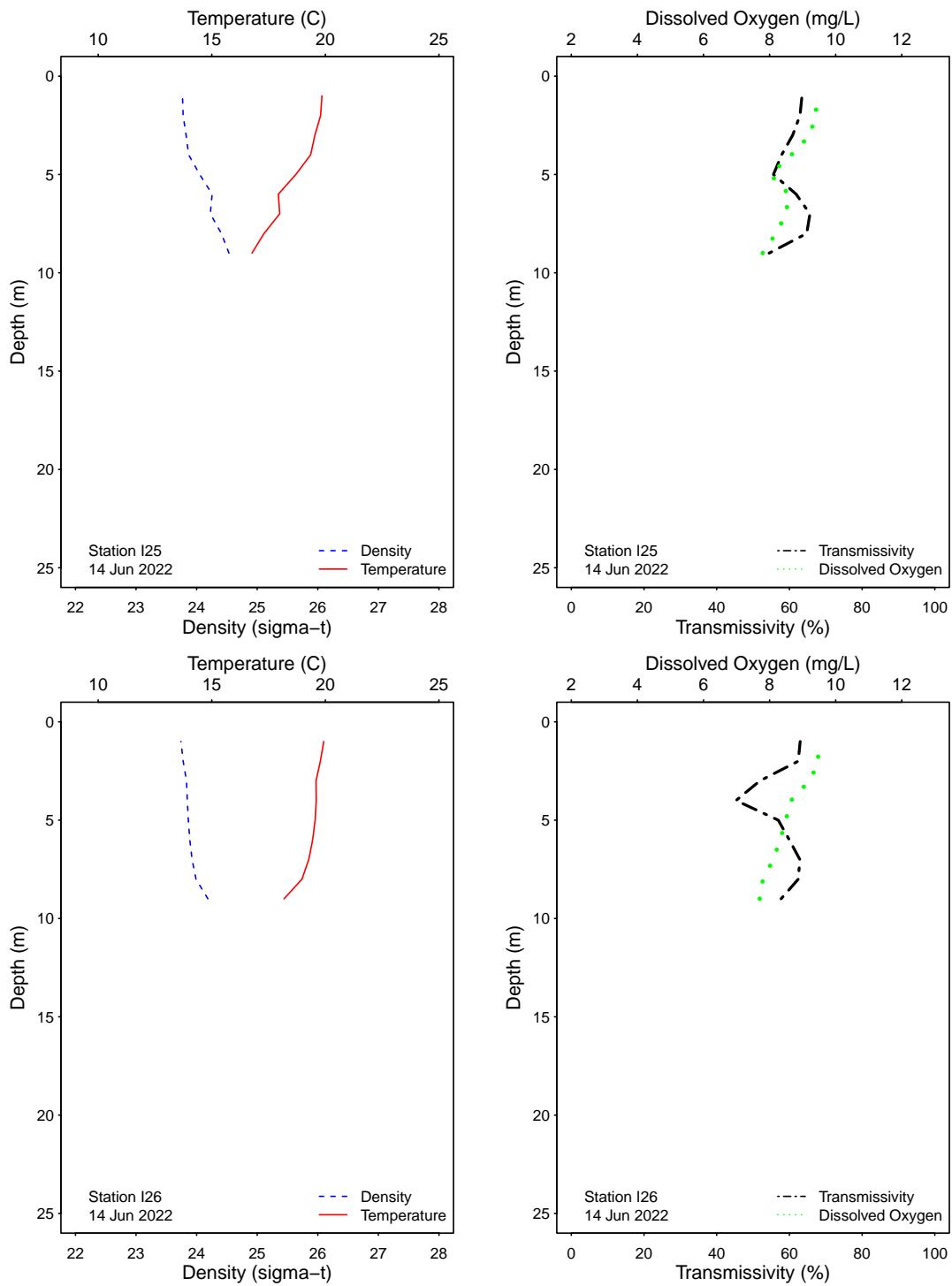


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

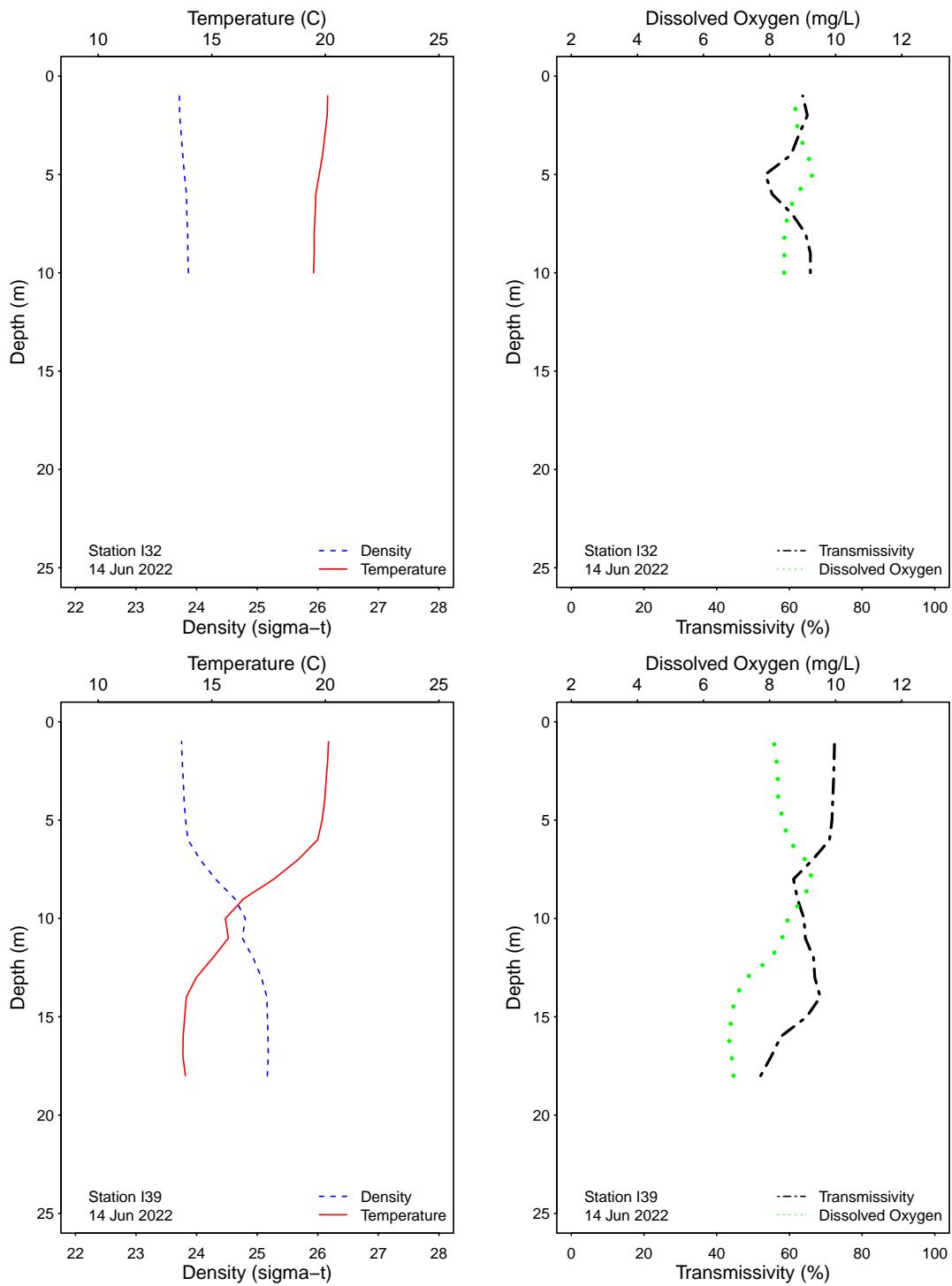


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

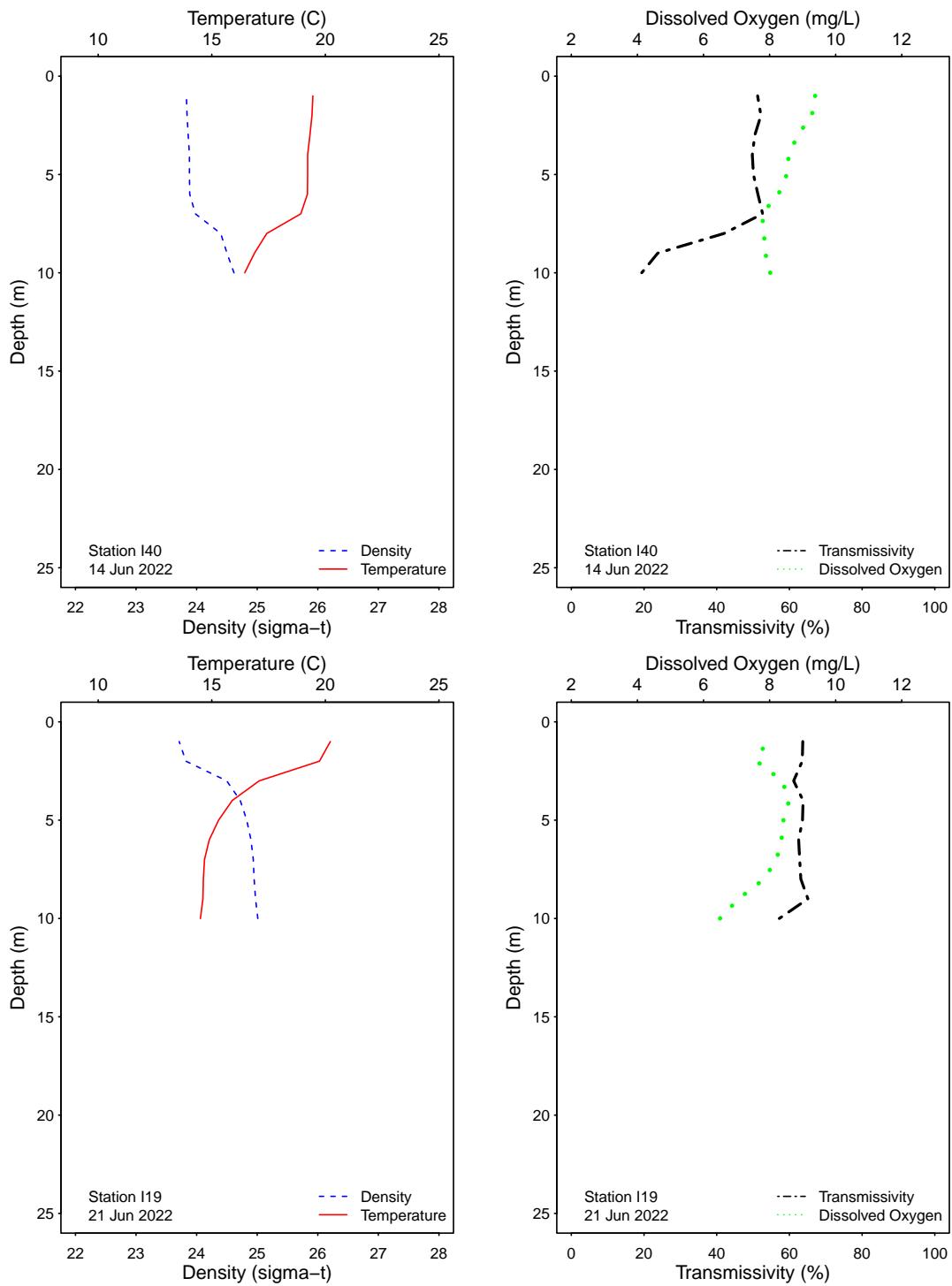


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

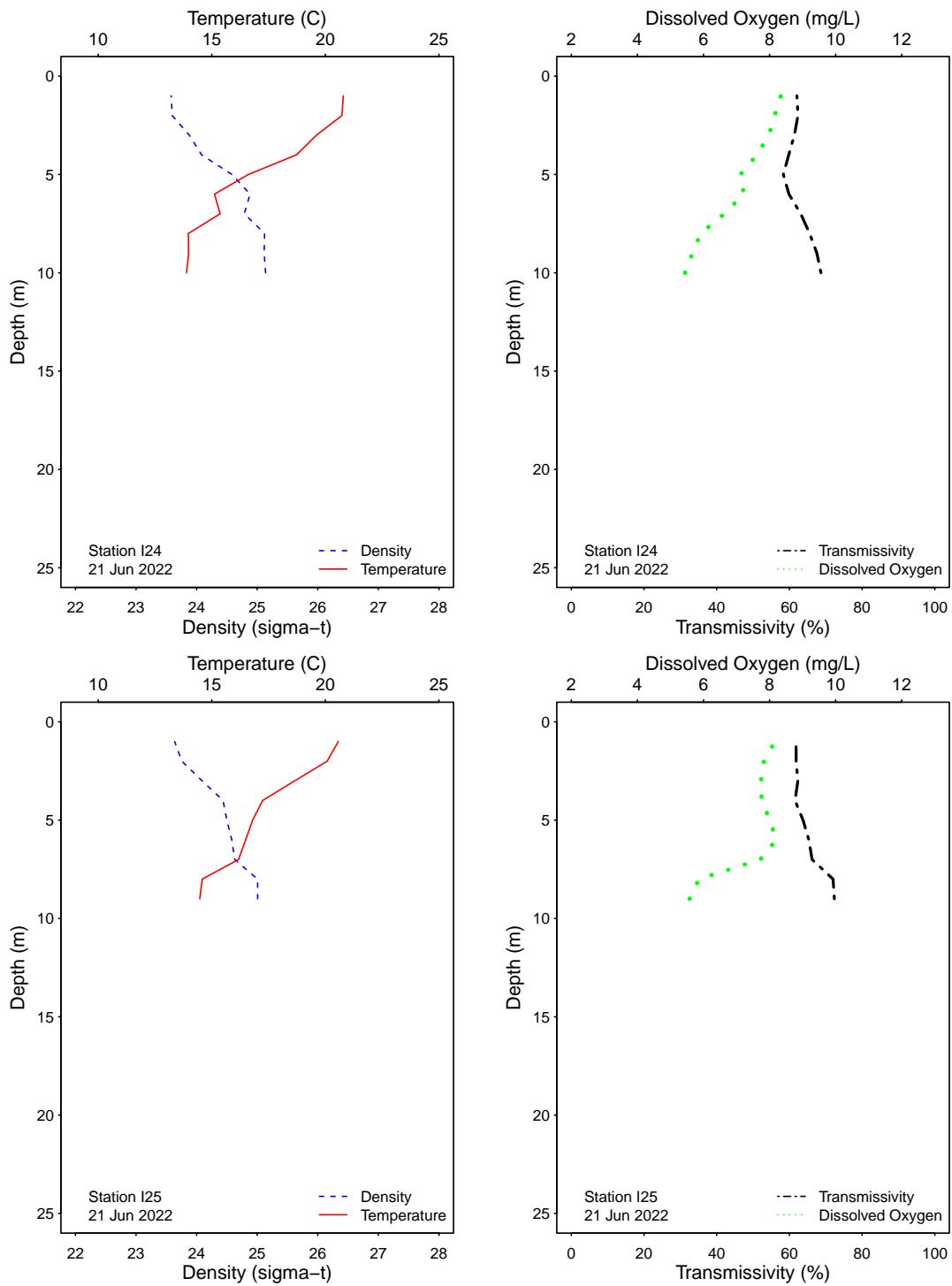


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

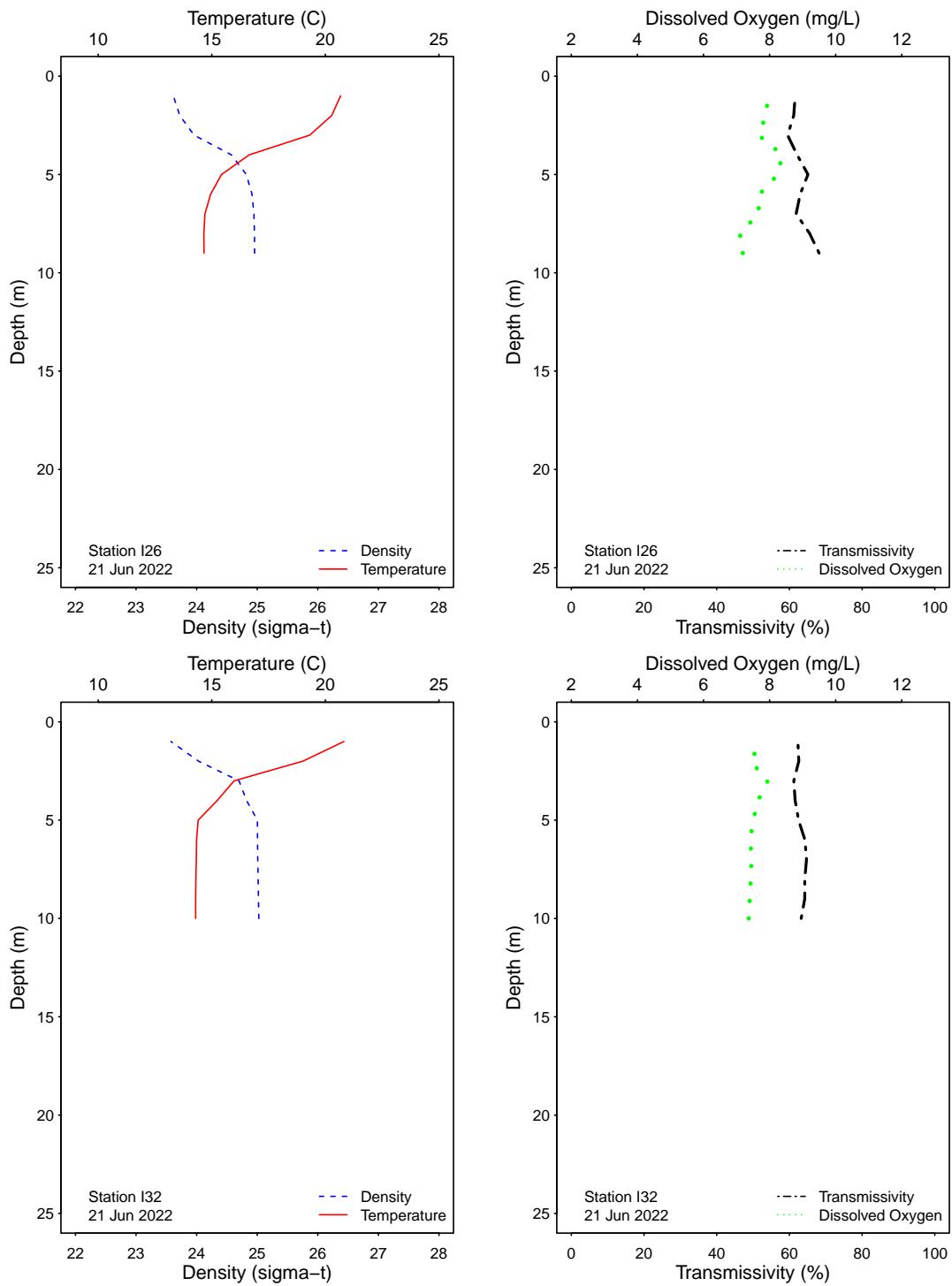


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

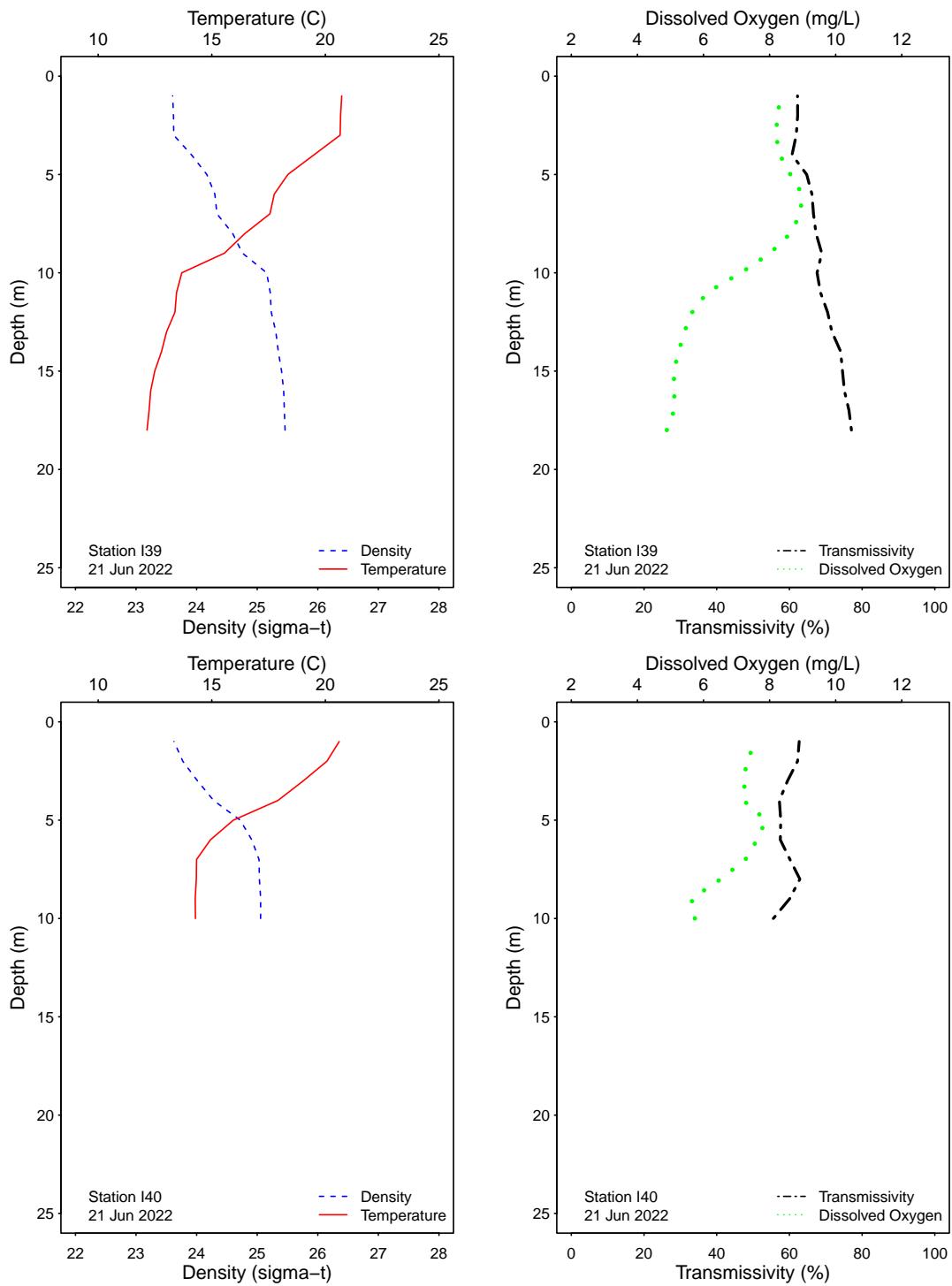


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

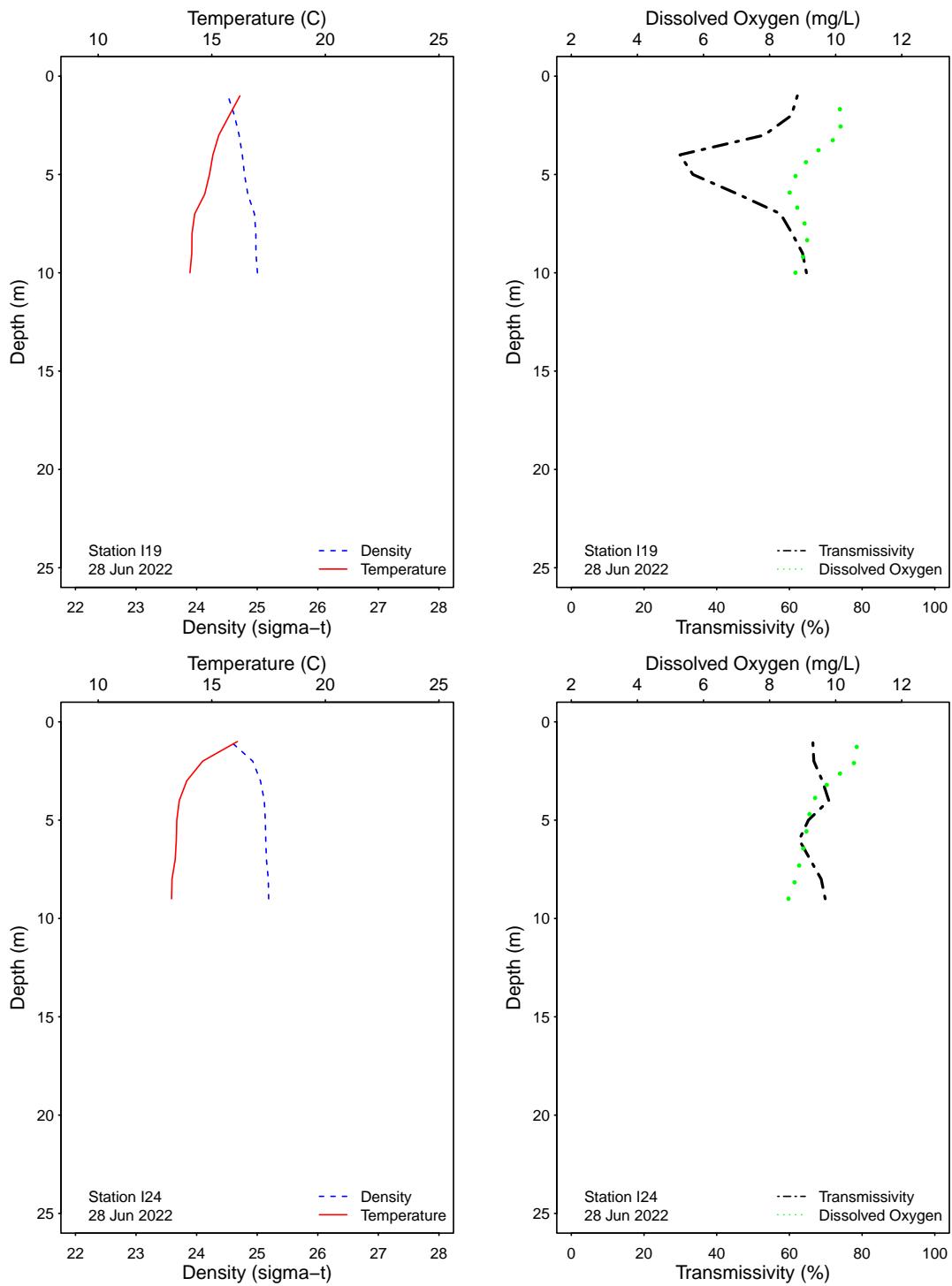


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

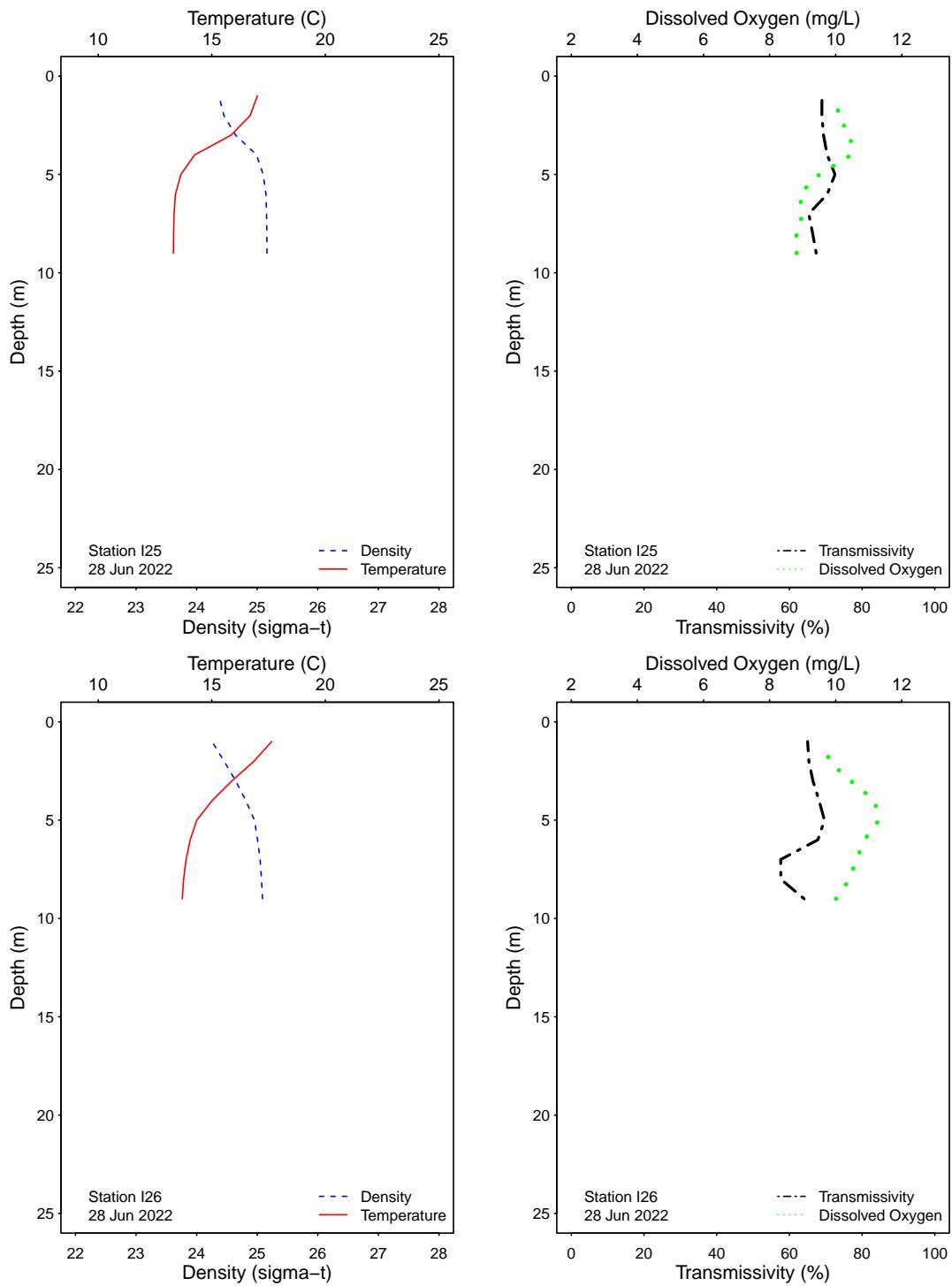


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

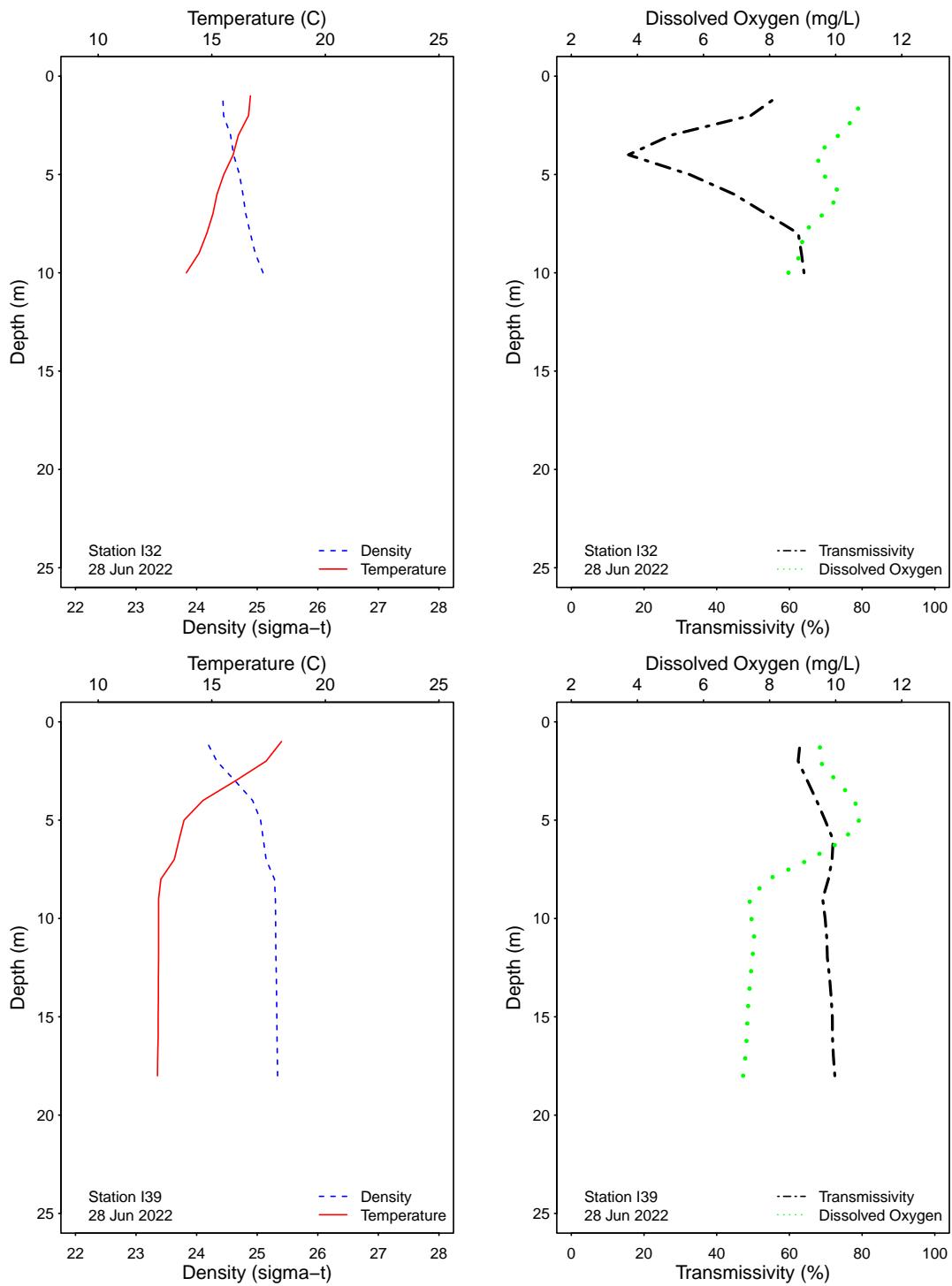


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

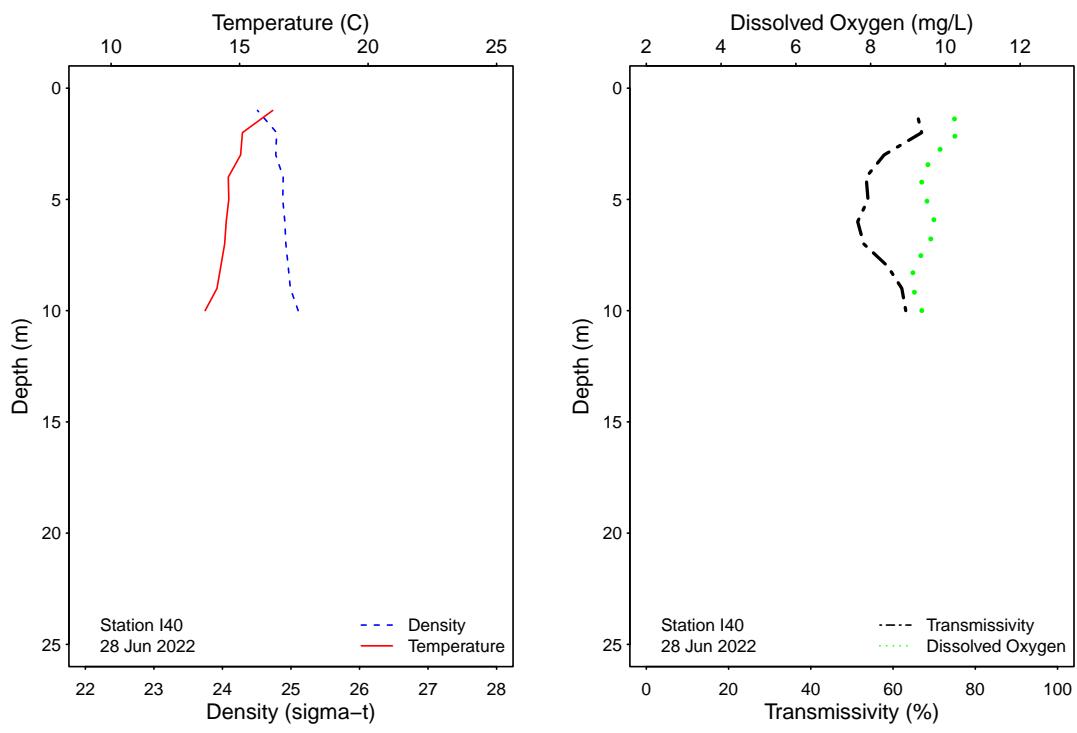


Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.



## 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.

<b>Station</b>	<b>Date</b>	<b>Depth</b>	<b>Analyst</b>	<b>Procedure</b>	<b>Total</b>	<b>Fecal</b>	<b>Enter</b>
I19	01 Jun 2022	6	KA	LAB DUPLICATE	<20	2e	6e
I19	07 Jun 2022	6	CRE	LAB DUPLICATE	2e	<2	<2
I19	14 Jun 2022	6	CRE	LAB DUPLICATE	120e	20e	6e
I19	21 Jun 2022	6	BS	LAB DUPLICATE	<20	4e	<2
I19	28 Jun 2022	6	BS	LAB DUPLICATE	120e	26e	86
I40	01 Jun 2022	6	KA	LAB DUPLICATE	6e	<2	<2
I40	07 Jun 2022	6	CRE	LAB DUPLICATE	6e	<2	<2
I40	14 Jun 2022	6	CRE	LAB DUPLICATE	320e	20e	20e
I40	21 Jun 2022	6	BS	LAB DUPLICATE	<20	<2	<2
I40	28 Jun 2022	6	BS	LAB DUPLICATE	60e	6e	14e
S12	07 Jun 2022		JF	FIELD DUPLICATE	<2	<2	<2
S12	07 Jun 2022		JF	LAB DUPLICATE	<2	<2	<2
S12	14 Jun 2022		JF	FIELD DUPLICATE	<20	4e	<2
S12	14 Jun 2022		JF	LAB DUPLICATE	<20	4e	<2
S12	21 Jun 2022		HF	FIELD DUPLICATE	<20	<2	8e
S12	21 Jun 2022		HF	LAB DUPLICATE	<20	<2	<2
S12	28 Jun 2022		BS	FIELD DUPLICATE	<20	2e	<2
S12	28 Jun 2022		BS	LAB DUPLICATE	<20	<2	<2

ns = not sampled

ND = no data

