SD Public Utilities

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 2023

Environmental Monitoring and Technical Services
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CERTIFIED
Public Utilities Department
Continual Improvement, Prevention of Pollution, Regulatory Compliance
ISO 14001

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

July 31, 2023

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 2023 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 Director, Public Utilities Department

PV/rk

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

INTRODUCTION

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

MATERIALS AND METHODS

Shore Stations

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

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

Kelp Bed Stations

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

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

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

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

Offshore Stations

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

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

Bacteriological Reporting and Quality Assurance

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

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

<u>Water-Contact Objectives</u>

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

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

Shellfish Harvesting Standards

Total coliform:

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

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

Quality controls of bacteriological data include laboratory and field duplicate analyses. Laboratory duplicates are performed on approximately 10% of the water quality samples, while field duplicates are performed six times a month (see Appendix A). Laboratory duplicates represent two aliquots of the original sample that are split in the laboratory and analyzed by the same analyst using identical procedures within the same analytical run. The results of these analyses provide a measure of intra-analyst precision. In contrast, field duplicates represent two separate samples collected at the same time from the same site, which are handled under identical circumstances and treated exactly the same throughout field and lab procedures. The results of these analyses provide a measure of precision associated with sample collection, preservation, storage, and lab procedures. The sign test (see Gilbert, 1987[2]) 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 2023 Quality Assurance Report, which will be completed in March 2024.

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**,** seven of the eight shore stations located north of the border were out of compliance with the 2019 California Ocean Plan (Ocean Plan) water contact standards on one or more days as follows:
    - The 30-day running geometric mean standard for fecal coliforms was exceeded at stations S4, S5, S6, S10, S11, and S12.
    - The single sample maximum (SSM) standard for fecal coliforms was exceeded at stations S4, S5, S6, S10, S11, and S12.
    - The 6-week running geometric mean standard for *Enterococcus* was exceeded at stations S4, S5, S6, S10, S11, and S12.

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

        - The statistical threshold value (STV) standard for *Enterococcus* was exceeded at stations S4, S5, S6, S10, S11, and S12.
        - The 30-day running median standard for total coliforms was exceeded at stations S4, S5, S6, S8, S10, S11, and S12.
        - The STV standard for total coliforms was exceeded at stations S4, S5, S6, S10, S11, and S12.
    - A sewage-like odor was observed at station S5 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 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, 6, 13, 20, and 26.
    - During June, three of the seven kelp bed stations were out of compliance with the various 2019 Ocean Plan water contact standards on one or more days as follows:
        - The 30-day running geometric mean standard for fecal coliforms was exceeded at station I40.
        - The SSM standard for fecal coliforms was exceeded at stations I19, I32, and I40.
        - The 6-week running geometric mean standard for *Enterococcus* was exceeded at stations I19 and I40.
        - The STV standard for *Enterococcus* was exceeded at stations I19, I32, and I40.
        - The 30-day running median standard for total coliforms was exceeded at stations I19, I32, and I40.
        - The STV standard for total coliforms was exceeded at stations I19, I32, and I40.
    - Water column temperatures ranged from 11.63 to 17.00°C. The difference between surface and bottom waters ranged from 0.46 to 5.03°C.
    - Concentrations of chlorophyll *a* ranged from 0.55 to 16.14 µg/L at the kelp bed stations.
    - A sewage-like odor was observed at station I40 on one or more days 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 2023.

TABLES AND FIGURES

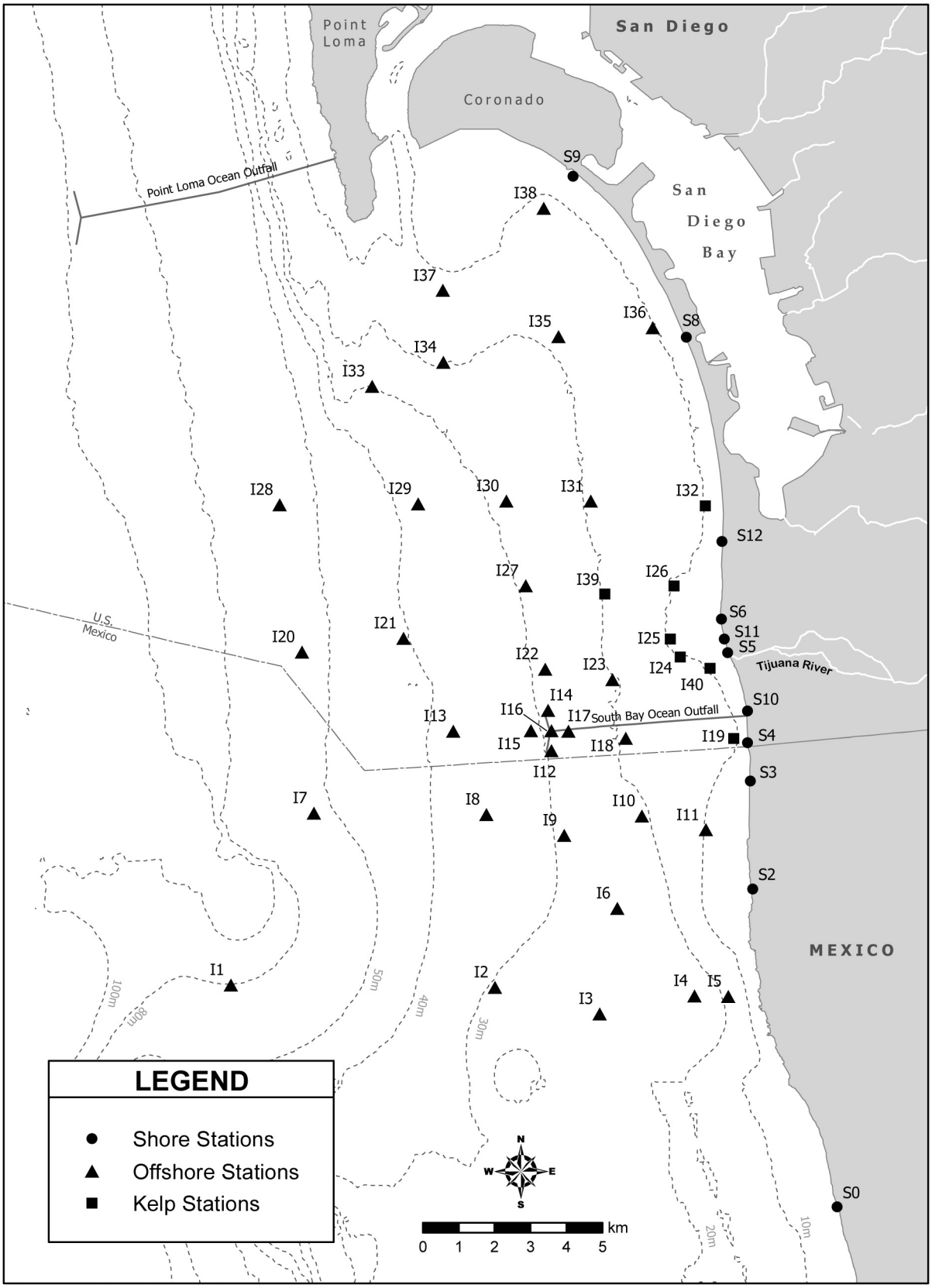

Figure 1.1 Station Map

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Shore Stations

Table 2.1

Summary of compliance with the Ocean Plan's 30-day Geometric Mean standard for 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 2023	**207**	**6447**	**258**	23	5	163	**1005**	**1061**
02 Jun 2023	**207**	**6447**	**258**	23	5	163	**1005**	**1061**
03 Jun 2023	**207**	**6447**	**258**	23	5	163	**1005**	**1061**
04 Jun 2023	**207**	**6447**	**258**	23	5	163	**1005**	**1061**
05 Jun 2023	**207**	**6447**	**258**	23	5	163	**1005**	**1061**
06 Jun 2023	**284**	**7300**	**555**	16	7	**234**	**1651**	**1397**
07 Jun 2023	**284**	**7300**	**555**	16	7	**234**	**1651**	**1397**
08 Jun 2023	148	**6447**	**2268**	17	9	111	**1720**	**7182**
09 Jun 2023	148	**6447**	**2268**	17	9	111	**1720**	**7182**
10 Jun 2023	148	**6447**	**2268**	17	9	111	**1720**	**7182**
11 Jun 2023	148	**6447**	**2268**	17	9	111	**1720**	**7182**
12 Jun 2023	148	**6447**	**2268**	17	9	111	**1720**	**7182**
13 Jun 2023	**304**	**6798**	**2459**	11	7	**243**	**1807**	**4631**
14 Jun 2023	**304**	**6798**	**2459**	11	7	**243**	**1807**	**4631**
15 Jun 2023	**370**	**5897**	**4032**	6	6	**321**	**2668**	**3650**
16 Jun 2023	**370**	**5897**	**4032**	6	6	**321**	**2668**	**3650**
17 Jun 2023	**370**	**5897**	**4032**	6	6	**321**	**2668**	**3650**
18 Jun 2023	**370**	**5897**	**4032**	6	6	**321**	**2668**	**3650**
19 Jun 2023	**370**	**5897**	**4032**	6	6	**321**	**2668**	**3650**
20 Jun 2023	130	**3955**	**1603**	7	5	**336**	**1843**	**813**
21 Jun 2023	130	**3955**	**1603**	7	5	**336**	**1843**	**813**
22 Jun 2023	179	**2997**	**969**	5	4	**540**	**1154**	**448**
23 Jun 2023	179	**2997**	**969**	5	4	**540**	**1154**	**448**
24 Jun 2023	179	**2997**	**969**	5	4	**540**	**1154**	**448**
25 Jun 2023	179	**2997**	**969**	5	4	**540**	**1154**	**448**
26 Jun 2023	179	**2997**	**969**	5	4	**540**	**1154**	**448**
27 Jun 2023	149	**3955**	**281**	4	5	**780**	**324**	152
28 Jun 2023	149	**3955**	**281**	4	5	**780**	**324**	152
29 Jun 2023	166	**5577**	**239**	4	6	**1661**	**386**	61
30 Jun 2023	166	**5577**	**239**	4	6	**1661**	**386**	61

* 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
06 Jun 2023	**E**	**E**	**E**	IC	IC	**E**	**E**	**E**
13 Jun 2023	**E**	**E**	**E**	IC	IC	**E**	**E**	**E**
20 Jun 2023	IC	**E**	IC	IC	IC	IC	**E**	IC
27 Jun 2023	IC	**E**	IC	IC	IC	**E**	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 2023	**95**	**2695**	**107**	11	3	**106**	**478**	**119**
02 Jun 2023	**95**	**2695**	**107**	11	3	**106**	**478**	**119**
03 Jun 2023	**95**	**2695**	**107**	11	3	**106**	**478**	**119**
04 Jun 2023	**95**	**2695**	**107**	11	3	**106**	**478**	**119**
05 Jun 2023	**95**	**2695**	**107**	11	3	**106**	**478**	**119**
06 Jun 2023	**252**	**2656**	**147**	10	5	**261**	**478**	**323**
07 Jun 2023	**252**	**2656**	**147**	10	5	**261**	**478**	**323**
08 Jun 2023	**252**	**2656**	**147**	10	5	**261**	**478**	**323**
09 Jun 2023	**252**	**2656**	**147**	10	5	**261**	**478**	**323**
10 Jun 2023	**252**	**2656**	**147**	10	5	**261**	**478**	**323**
11 Jun 2023	**252**	**2656**	**147**	10	5	**261**	**478**	**323**
12 Jun 2023	**252**	**2656**	**147**	10	5	**261**	**478**	**323**
13 Jun 2023	**190**	**4409**	**376**	10	6	**191**	**782**	**521**
14 Jun 2023	**190**	**4409**	**376**	10	6	**191**	**782**	**521**
15 Jun 2023	**190**	**4409**	**376**	10	6	**191**	**782**	**521**
16 Jun 2023	**190**	**4409**	**376**	10	6	**191**	**782**	**521**
17 Jun 2023	**190**	**4409**	**376**	10	6	**191**	**782**	**521**
18 Jun 2023	**190**	**4409**	**376**	10	6	**191**	**782**	**521**
19 Jun 2023	**190**	**4409**	**376**	10	6	**191**	**782**	**521**
20 Jun 2023	**66**	**3004**	**886**	10	6	**210**	**845**	**626**
21 Jun 2023	**66**	**3004**	**886**	10	6	**210**	**845**	**626**
22 Jun 2023	**66**	**3004**	**886**	10	6	**210**	**845**	**626**
23 Jun 2023	**66**	**3004**	**886**	10	6	**210**	**845**	**626**
24 Jun 2023	**66**	**3004**	**886**	10	6	**210**	**845**	**626**
25 Jun 2023	**66**	**3004**	**886**	10	6	**210**	**845**	**626**
26 Jun 2023	**66**	**3004**	**886**	10	6	**210**	**845**	**626**
27 Jun 2023	**66**	**3524**	**448**	5	6	**399**	**427**	**164**
28 Jun 2023	**66**	**3524**	**448**	5	6	**399**	**427**	**164**
29 Jun 2023	**66**	**3524**	**448**	5	6	**399**	**427**	**164**
30 Jun 2023	**66**	**3524**	**448**	5	6	**399**	**427**	**164**

* 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	**E**	**E**	**E**	IC	IC	**E**	**E**	**E**

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 2023	**460**	**16000**	**1700**	**110**	20	**320**	**8200**	**12100**
02 Jun 2023	**460**	**16000**	**1700**	**110**	20	**320**	**8200**	**12100**
03 Jun 2023	**460**	**16000**	**1700**	**110**	20	**320**	**8200**	**12100**
04 Jun 2023	**460**	**16000**	**1700**	**110**	20	**320**	**8200**	**12100**
05 Jun 2023	**460**	**16000**	**1700**	**110**	20	**320**	**8200**	**12100**
06 Jun 2023	**640**	**16000**	**1800**	20	20	**380**	**15000**	**9000**
07 Jun 2023	**640**	**16000**	**1800**	20	20	**380**	**15000**	**9000**
08 Jun 2023	**460**	**16000**	**8900**	**110**	20	**320**	**8700**	**12500**
09 Jun 2023	**460**	**16000**	**8900**	**110**	20	**320**	**8700**	**12500**
10 Jun 2023	**460**	**16000**	**8900**	**110**	20	**320**	**8700**	**12500**
11 Jun 2023	**460**	**16000**	**8900**	**110**	20	**320**	**8700**	**12500**
12 Jun 2023	**460**	**16000**	**8900**	**110**	20	**320**	**8700**	**12500**
13 Jun 2023	**640**	**16000**	**7400**	20	20	**380**	**11000**	**9000**
14 Jun 2023	**640**	**16000**	**7400**	20	20	**380**	**11000**	**9000**
15 Jun 2023	**3340**	**15500**	**11700**	20	20	**2730**	**13500**	**8600**
16 Jun 2023	**3340**	**15500**	**11700**	20	20	**2730**	**13500**	**8600**
17 Jun 2023	**3340**	**15500**	**11700**	20	20	**2730**	**13500**	**8600**
18 Jun 2023	**3340**	**15500**	**11700**	20	20	**2730**	**13500**	**8600**
19 Jun 2023	**3340**	**15500**	**11700**	20	20	**2730**	**13500**	**8600**
20 Jun 2023	**280**	**15000**	**7400**	20	20	**1400**	**11000**	**8200**
21 Jun 2023	**280**	**15000**	**7400**	20	20	**1400**	**11000**	**8200**
22 Jun 2023	**3340**	**10500**	**4600**	20	20	**3300**	**6000**	**5700**
23 Jun 2023	**3340**	**10500**	**4600**	20	20	**3300**	**6000**	**5700**
24 Jun 2023	**3340**	**10500**	**4600**	20	20	**3300**	**6000**	**5700**
25 Jun 2023	**3340**	**10500**	**4600**	20	20	**3300**	**6000**	**5700**
26 Jun 2023	**3340**	**10500**	**4600**	20	20	**3300**	**6000**	**5700**
27 Jun 2023	**280**	**15000**	**1800**	20	20	**5200**	**1000**	**3200**
28 Jun 2023	**280**	**15000**	**1800**	20	20	**5200**	**1000**	**3200**
29 Jun 2023	**3300**	**15500**	**3800**	20	20	**10600**	**6000**	**1610**
30 Jun 2023	**3300**	**15500**	**3800**	20	20	**10600**	**6000**	**1610**

* 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	**E**	**E**	**E**	IC	IC	**E**	**E**	**E**

IC = In Compliance
E = Exceedance
ns = not sampled
ND = no data

Table 2.7

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

Station	Date	Time	Total	Fecal	Entero
S0	06 Jun 2023	935	>16000	11000	4000
S0	13 Jun 2023	900	>16000	>12000	4800
S0	20 Jun 2023	858	>16000	3600e	840
S0	27 Jun 2023	1015	>16000	6400	380e
S2	06 Jun 2023	1040	>16000	7400	1000
S2	13 Jun 2023	1000	20e	2e	4e
S2	20 Jun 2023	1000	8e	<2	20e
S2	27 Jun 2023	1200	<20	10e	<2
S3	06 Jun 2023	1015	>16000	2400e	960
S3	13 Jun 2023	930	1400e	98	20e
S3	20 Jun 2023	935	120e	6e	4e
S3	27 Jun 2023	1120	<200	2e	<2
S4	06 Jun 2023	814	6400	1000e	720
S4	13 Jun 2023	912	>16000	5400	1100
S4	20 Jun 2023	919	<20	<2	<2
S4	27 Jun 2023	926	<200	70	80e
S5	06 Jun 2023	856	>16000	>12000	11000
S5	13 Jun 2023	820	15000	8400	1800e
S5	20 Jun 2023	837	3800e	800e	1200e
S5	27 Jun 2023	842	>16000	>12000	>12000
S6	06 Jun 2023	908	>16000	>12000	8000
S6	13 Jun 2023	833	7400	3400e	560
S6	20 Jun 2023	848	<200	40e	340e
S6	27 Jun 2023	856	<20	<2	2e
S8	06 Jun 2023	937	<20	4e	2e
S8	13 Jun 2023	750	<20	<2	<2
S8	20 Jun 2023	808	20e	14e	<2
S8	27 Jun 2023	812	<20	<2	<2
S9	06 Jun 2023	952	<20	20e	40e
S9	13 Jun 2023	735	<20	<2	6e
S9	20 Jun 2023	722	<20	<2	<2
S9	27 Jun 2023	755	20e	20e	2e
S10	06 Jun 2023	823	5200	1000	440
S10	13 Jun 2023	927	>16000	5600	1800e
S10	20 Jun 2023	933	1400e	400e	3200e
S10	27 Jun 2023	946	>16000	3400e	4000
S11	06 Jun 2023	902	>16000	>12000	>12000
S11	13 Jun 2023	828	11000	2200e	500
S11	20 Jun 2023	842	1000e	420	700
S11	27 Jun 2023	850	<20	2e	<2
S12	06 Jun 2023	919	9000	4200	1600e
S12	13 Jun 2023	805	3200e	800	140e
S12	20 Jun 2023	824	20e	<2	6e

Station	Date	Time	Total	Fecal	Entero
S12	27 Jun 2023	828	<20	<2	2e

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	06 Jun 2023	Arrive Time	935
S0	06 Jun 2023	Weather	Cloudy
S0	06 Jun 2023	Wind Speed (kts)	1.1
S0	06 Jun 2023	Wind Dir	SW
S0	06 Jun 2023	Animal Life	Seagull-20;
S0	06 Jun 2023	Floatables	None
S0	06 Jun 2023	Water Color	Green
S0	06 Jun 2023	Current Direction	S
S0	06 Jun 2023	Water Temp (C)	16.1
S0	06 Jun 2023	Wave Height Low (ft)	2
S0	06 Jun 2023	High Tide (ft)	3.43
S0	06 Jun 2023	High Tide Time	1234
S0	06 Jun 2023	Low Tide (ft)	-1.21
S0	06 Jun 2023	Low Tide Time	603
S0	06 Jun 2023	Comments	Water clear; Trash-0; Kelp; 1.0 L/sec water flowing from storm drain
S0	13 Jun 2023	Arrive Time	900
S0	13 Jun 2023	Weather	Cloudy
S0	13 Jun 2023	Wind Speed (kts)	2.3
S0	13 Jun 2023	Wind Dir	SW
S0	13 Jun 2023	Animal Life	Bird-20; Dog-2;
S0	13 Jun 2023	Floatables	None
S0	13 Jun 2023	Water Color	Green
S0	13 Jun 2023	Current Direction	SW
S0	13 Jun 2023	Water Temp (C)	14
S0	13 Jun 2023	Wave Height Low (ft)	2
S0	13 Jun 2023	High Tide (ft)	3.52
S0	13 Jun 2023	High Tide Time	635
S0	13 Jun 2023	Low Tide (ft)	0.72
S0	13 Jun 2023	Low Tide Time	57
S0	13 Jun 2023	Comments	Water turbid; Trash-0; Kelp; 1.0 L/sec water flowing from storm drain
S0	20 Jun 2023	Arrive Time	858
S0	20 Jun 2023	Weather	Sunny
S0	20 Jun 2023	Wind Speed (kts)	1.6
S0	20 Jun 2023	Wind Dir	SW
S0	20 Jun 2023	Animal Life	Bird-20;
S0	20 Jun 2023	Floatables	None
S0	20 Jun 2023	Water Color	Green
S0	20 Jun 2023	Current Direction	N
S0	20 Jun 2023	Water Temp (C)	15.7
S0	20 Jun 2023	Wave Height Low (ft)	2
S0	20 Jun 2023	High Tide (ft)	3.37
S0	20 Jun 2023	High Tide Time	1220
S0	20 Jun 2023	Low Tide (ft)	-0.47
S0	20 Jun 2023	Low Tide Time	546
S0	20 Jun 2023	Comments	Water turbid; Trash-0; Kelp; 1.0 L/sec water flowing from storm drain
S0	27 Jun 2023	Arrive Time	1015
S0	27 Jun 2023	Weather	Sunny
S0	27 Jun 2023	Wind Speed (kts)	3.5
S0	27 Jun 2023	Wind Dir	NE
S0	27 Jun 2023	Animal Life	Bird-10; Dog-1;

Station	Date	Parameter	Value
S0	27 Jun 2023	Floatables	None
S0	27 Jun 2023	Water Color	Green
S0	27 Jun 2023	Current Direction	N
S0	27 Jun 2023	Water Temp (C)	13
S0	27 Jun 2023	Wave Height Low (ft)	3
S0	27 Jun 2023	High Tide (ft)	3.04
S0	27 Jun 2023	High Tide Time	442
S0	27 Jun 2023	Low Tide (ft)	1.55
S0	27 Jun 2023	Low Tide Time	1031
S0	27 Jun 2023	Comments	Water clear; Trash-0; Kelp; Person/Walker/Jogger-6; 1.0 L/sec water flowing from storm drain
S2	06 Jun 2023	Arrive Time	1040
S2	06 Jun 2023	Weather	Cloudy
S2	06 Jun 2023	Wind Speed (kts)	1.6
S2	06 Jun 2023	Wind Dir	SW
S2	06 Jun 2023	Animal Life	Dog-2; Seagull-20;
S2	06 Jun 2023	Floatables	Foam
S2	06 Jun 2023	Water Color	Green
S2	06 Jun 2023	Current Direction	S
S2	06 Jun 2023	Water Temp (C)	16
S2	06 Jun 2023	Wave Height Low (ft)	2
S2	06 Jun 2023	High Tide (ft)	3.43
S2	06 Jun 2023	High Tide Time	1234
S2	06 Jun 2023	Low Tide (ft)	-1.21
S2	06 Jun 2023	Low Tide Time	603
S2	06 Jun 2023	Comments	Water turbid; Trash-0; Kelp; No flow from storm drain
S2	13 Jun 2023	Arrive Time	1000
S2	13 Jun 2023	Weather	Cloudy
S2	13 Jun 2023	Wind Speed (kts)	3.8
S2	13 Jun 2023	Wind Dir	SW
S2	13 Jun 2023	Animal Life	Bird-20; Dog-5;
S2	13 Jun 2023	Floatables	None
S2	13 Jun 2023	Water Color	Green
S2	13 Jun 2023	Current Direction	S
S2	13 Jun 2023	Water Temp (C)	14
S2	13 Jun 2023	Wave Height Low (ft)	2
S2	13 Jun 2023	High Tide (ft)	3.52
S2	13 Jun 2023	High Tide Time	635
S2	13 Jun 2023	Low Tide (ft)	0.72
S2	13 Jun 2023	Low Tide Time	57
S2	13 Jun 2023	Comments	Water turbid; Trash-0; Kelp; Seagrass; No flow from storm drain
S2	20 Jun 2023	Arrive Time	1000
S2	20 Jun 2023	Weather	Sunny
S2	20 Jun 2023	Wind Speed (kts)	1.7
S2	20 Jun 2023	Wind Dir	SW
S2	20 Jun 2023	Animal Life	Bird-20;
S2	20 Jun 2023	Floatables	None
S2	20 Jun 2023	Water Color	Green
S2	20 Jun 2023	Current Direction	N
S2	20 Jun 2023	Water Temp (C)	15.8
S2	20 Jun 2023	Wave Height Low (ft)	2
S2	20 Jun 2023	High Tide (ft)	3.37
S2	20 Jun 2023	High Tide Time	1220
S2	20 Jun 2023	Low Tide (ft)	-0.47
S2	20 Jun 2023	Low Tide Time	546
S2	20 Jun 2023	Comments	Water turbid; Trash-0; Kelp; No flow from storm drain

Station	Date	Parameter	Value
S2	27 Jun 2023	Arrive Time	1200
S2	27 Jun 2023	Weather	Sunny
S2	27 Jun 2023	Wind Speed (kts)	3.1
S2	27 Jun 2023	Wind Dir	NE
S2	27 Jun 2023	Animal Life	Bird-10; Dog-4;
S2	27 Jun 2023	Floatables	None
S2	27 Jun 2023	Water Color	Green
S2	27 Jun 2023	Current Direction	N
S2	27 Jun 2023	Water Temp (C)	13
S2	27 Jun 2023	Wave Height Low (ft)	3
S2	27 Jun 2023	High Tide (ft)	3.04
S2	27 Jun 2023	High Tide Time	442
S2	27 Jun 2023	Low Tide (ft)	1.55
S2	27 Jun 2023	Low Tide Time	1031
S2	27 Jun 2023	Comments	Water clear; Trash-0; Kelp; Person/Walker/Jogger-10; No flow from storm drain
S3	06 Jun 2023	Arrive Time	1015
S3	06 Jun 2023	Weather	Cloudy
S3	06 Jun 2023	Wind Speed (kts)	1.1
S3	06 Jun 2023	Wind Dir	SW
S3	06 Jun 2023	Animal Life	Seagull-20;
S3	06 Jun 2023	Floatables	None
S3	06 Jun 2023	Water Color	Green
S3	06 Jun 2023	Current Direction	S
S3	06 Jun 2023	Water Temp (C)	16.2
S3	06 Jun 2023	Wave Height Low (ft)	2
S3	06 Jun 2023	High Tide (ft)	3.43
S3	06 Jun 2023	High Tide Time	1234
S3	06 Jun 2023	Low Tide (ft)	-1.21
S3	06 Jun 2023	Low Tide Time	603
S3	06 Jun 2023	Comments	Water turbid; Trash-0; Kelp; No flow from storm drain
S3	13 Jun 2023	Arrive Time	930
S3	13 Jun 2023	Weather	Cloudy
S3	13 Jun 2023	Wind Speed (kts)	3.6
S3	13 Jun 2023	Wind Dir	SW
S3	13 Jun 2023	Animal Life	Bird-20;
S3	13 Jun 2023	Floatables	None
S3	13 Jun 2023	Water Color	Green
S3	13 Jun 2023	Current Direction	S
S3	13 Jun 2023	Water Temp (C)	14
S3	13 Jun 2023	Wave Height Low (ft)	2
S3	13 Jun 2023	High Tide (ft)	3.52
S3	13 Jun 2023	High Tide Time	635
S3	13 Jun 2023	Low Tide (ft)	0.72
S3	13 Jun 2023	Low Tide Time	57
S3	13 Jun 2023	Comments	Water turbid; Trash-0; Kelp; 0.5 L/sec water flowing from storm drain
S3	20 Jun 2023	Arrive Time	935
S3	20 Jun 2023	Weather	Sunny
S3	20 Jun 2023	Wind Speed (kts)	1.3
S3	20 Jun 2023	Wind Dir	SW
S3	20 Jun 2023	Animal Life	
S3	20 Jun 2023	Floatables	None
S3	20 Jun 2023	Water Color	Green
S3	20 Jun 2023	Current Direction	N
S3	20 Jun 2023	Water Temp (C)	15.1
S3	20 Jun 2023	Wave Height Low (ft)	2
S3	20 Jun 2023	High Tide (ft)	3.37

Station	Date	Parameter	Value
S3	20 Jun 2023	High Tide Time	1220
S3	20 Jun 2023	Low Tide (ft)	-0.47
S3	20 Jun 2023	Low Tide Time	546
S3	20 Jun 2023	Comments	Water turbid; Trash-0; Kelp; Algae; No flow from storm drain
S3	27 Jun 2023	Arrive Time	1120
S3	27 Jun 2023	Weather	Sunny
S3	27 Jun 2023	Wind Speed (kts)	3.4
S3	27 Jun 2023	Wind Dir	NE
S3	27 Jun 2023	Animal Life	Bird-10; Dog-2;
S3	27 Jun 2023	Floatables	None
S3	27 Jun 2023	Water Color	Green
S3	27 Jun 2023	Current Direction	N
S3	27 Jun 2023	Water Temp (C)	13
S3	27 Jun 2023	Wave Height Low (ft)	3
S3	27 Jun 2023	High Tide (ft)	3.04
S3	27 Jun 2023	High Tide Time	442
S3	27 Jun 2023	Low Tide (ft)	1.55
S3	27 Jun 2023	Low Tide Time	1031
S3	27 Jun 2023	Comments	Water clear; Trash-0; Kelp; Person/Walker/Jogger-10; No flow from storm drain
S4	06 Jun 2023	Arrive Time	814
S4	06 Jun 2023	Weather	Cloudy
S4	06 Jun 2023	Wind Speed (kts)	3.8
S4	06 Jun 2023	Wind Dir	W
S4	06 Jun 2023	Animal Life	Bird-3;
S4	06 Jun 2023	Floatables	None
S4	06 Jun 2023	Water Color	Green
S4	06 Jun 2023	Current Direction	S
S4	06 Jun 2023	Water Temp (C)	11.7
S4	06 Jun 2023	Wave Height Low (ft)	5
S4	06 Jun 2023	High Tide (ft)	3.43
S4	06 Jun 2023	High Tide Time	1234
S4	06 Jun 2023	Low Tide (ft)	-1.21
S4	06 Jun 2023	Low Tide Time	603
S4	06 Jun 2023	Comments	Water clear; Trash-1; Seagrass; Kelp; Debris
S4	13 Jun 2023	Arrive Time	912
S4	13 Jun 2023	Weather	Cloudy
S4	13 Jun 2023	Wind Speed (kts)	7.9
S4	13 Jun 2023	Wind Dir	N
S4	13 Jun 2023	Animal Life	
S4	13 Jun 2023	Floatables	None
S4	13 Jun 2023	Water Color	Green
S4	13 Jun 2023	Current Direction	S
S4	13 Jun 2023	Water Temp (C)	13.1
S4	13 Jun 2023	Wave Height Low (ft)	4
S4	13 Jun 2023	High Tide (ft)	3.52
S4	13 Jun 2023	High Tide Time	635
S4	13 Jun 2023	Low Tide (ft)	0.72
S4	13 Jun 2023	Low Tide Time	57
S4	13 Jun 2023	Comments	Water turbid; Trash-4; Kelp; Seagrass; Debris
S4	20 Jun 2023	Arrive Time	919
S4	20 Jun 2023	Weather	Sunny
S4	20 Jun 2023	Wind Speed (kts)	4.3
S4	20 Jun 2023	Wind Dir	NW
S4	20 Jun 2023	Animal Life	
S4	20 Jun 2023	Floatables	None
S4	20 Jun 2023	Water Color	Green

Station	Date	Parameter	Value
S4	20 Jun 2023	Current Direction	S
S4	20 Jun 2023	Water Temp (C)	16
S4	20 Jun 2023	Wave Height Low (ft)	4
S4	20 Jun 2023	High Tide (ft)	3.37
S4	20 Jun 2023	High Tide Time	1220
S4	20 Jun 2023	Low Tide (ft)	-0.47
S4	20 Jun 2023	Low Tide Time	546
S4	20 Jun 2023	Comments	Water clear; Trash-2; Kelp; Seagrass; Debris
S4	27 Jun 2023	Arrive Time	926
S4	27 Jun 2023	Weather	Sunny
S4	27 Jun 2023	Wind Speed (kts)	5.7
S4	27 Jun 2023	Wind Dir	W
S4	27 Jun 2023	Animal Life	
S4	27 Jun 2023	Floatables	None
S4	27 Jun 2023	Water Color	Green
S4	27 Jun 2023	Current Direction	S
S4	27 Jun 2023	Water Temp (C)	11.7
S4	27 Jun 2023	Wave Height Low (ft)	5
S4	27 Jun 2023	High Tide (ft)	3.04
S4	27 Jun 2023	High Tide Time	442
S4	27 Jun 2023	Low Tide (ft)	1.55
S4	27 Jun 2023	Low Tide Time	1031
S4	27 Jun 2023	Comments	Water clear; Trash-2; Seagrass; Kelp
S5	06 Jun 2023	Arrive Time	856
S5	06 Jun 2023	Weather	Cloudy
S5	06 Jun 2023	Wind Speed (kts)	4.6
S5	06 Jun 2023	Wind Dir	W
S5	06 Jun 2023	Animal Life	
S5	06 Jun 2023	Floatables	None
S5	06 Jun 2023	Water Color	Green
S5	06 Jun 2023	Current Direction	S
S5	06 Jun 2023	Water Temp (C)	13
S5	06 Jun 2023	Wave Height Low (ft)	4
S5	06 Jun 2023	High Tide (ft)	3.43
S5	06 Jun 2023	High Tide Time	1234
S5	06 Jun 2023	Low Tide (ft)	-1.21
S5	06 Jun 2023	Low Tide Time	603
S5	06 Jun 2023	Comments	Water clear; Trash-2; Kelp; Seagrass; Sewage-like odor
S5	13 Jun 2023	Arrive Time	820
S5	13 Jun 2023	Weather	Drizzle
S5	13 Jun 2023	Wind Speed (kts)	6.6
S5	13 Jun 2023	Wind Dir	NW
S5	13 Jun 2023	Animal Life	
S5	13 Jun 2023	Floatables	None
S5	13 Jun 2023	Water Color	Green
S5	13 Jun 2023	Current Direction	S
S5	13 Jun 2023	Water Temp (C)	14.1
S5	13 Jun 2023	Wave Height Low (ft)	3
S5	13 Jun 2023	High Tide (ft)	3.52
S5	13 Jun 2023	High Tide Time	635
S5	13 Jun 2023	Low Tide (ft)	0.72
S5	13 Jun 2023	Low Tide Time	57
S5	13 Jun 2023	Comments	Water turbid; Trash-3; Kelp; Seagrass; Debris; Person/Walker/Jogger-1
S5	20 Jun 2023	Arrive Time	837
S5	20 Jun 2023	Weather	Partly cloudy
S5	20 Jun 2023	Wind Speed (kts)	3.4

Station	Date	Parameter	Value
S5	20 Jun 2023	Wind Dir	NW
S5	20 Jun 2023	Animal Life	
S5	20 Jun 2023	Floatables	None
S5	20 Jun 2023	Water Color	Green
S5	20 Jun 2023	Current Direction	S
S5	20 Jun 2023	Water Temp (C)	15.7
S5	20 Jun 2023	Wave Height Low (ft)	3
S5	20 Jun 2023	High Tide (ft)	3.37
S5	20 Jun 2023	High Tide Time	1220
S5	20 Jun 2023	Low Tide (ft)	-0.47
S5	20 Jun 2023	Low Tide Time	546
S5	20 Jun 2023	Comments	Water clear; Trash-2; Kelp; Seagrass; Debris
S5	27 Jun 2023	Arrive Time	842
S5	27 Jun 2023	Weather	Partly cloudy
S5	27 Jun 2023	Wind Speed (kts)	4.6
S5	27 Jun 2023	Wind Dir	W
S5	27 Jun 2023	Animal Life	Dog-1;
S5	27 Jun 2023	Floatables	None
S5	27 Jun 2023	Water Color	Green
S5	27 Jun 2023	Current Direction	SE
S5	27 Jun 2023	Water Temp (C)	15.5
S5	27 Jun 2023	Wave Height Low (ft)	4
S5	27 Jun 2023	High Tide (ft)	3.04
S5	27 Jun 2023	High Tide Time	442
S5	27 Jun 2023	Low Tide (ft)	1.55
S5	27 Jun 2023	Low Tide Time	1031
S5	27 Jun 2023	Comments	Water clear; Trash-2; Kelp; Seagrass; Person/Walker/Jogger-2
S6	06 Jun 2023	Arrive Time	908
S6	06 Jun 2023	Weather	Cloudy
S6	06 Jun 2023	Wind Speed (kts)	2.1
S6	06 Jun 2023	Wind Dir	W
S6	06 Jun 2023	Animal Life	Dog-1;
S6	06 Jun 2023	Floatables	None
S6	06 Jun 2023	Water Color	Green
S6	06 Jun 2023	Current Direction	S
S6	06 Jun 2023	Water Temp (C)	14.4
S6	06 Jun 2023	Wave Height Low (ft)	4
S6	06 Jun 2023	High Tide (ft)	3.43
S6	06 Jun 2023	High Tide Time	1234
S6	06 Jun 2023	Low Tide (ft)	-1.21
S6	06 Jun 2023	Low Tide Time	603
S6	06 Jun 2023	Comments	Water clear; Trash-2; Seagrass; Algae; Kelp; Person/Walker/Jogger-1
S6	13 Jun 2023	Arrive Time	833
S6	13 Jun 2023	Weather	Drizzle
S6	13 Jun 2023	Wind Speed (kts)	7.9
S6	13 Jun 2023	Wind Dir	N
S6	13 Jun 2023	Animal Life	
S6	13 Jun 2023	Floatables	None
S6	13 Jun 2023	Water Color	Green
S6	13 Jun 2023	Current Direction	S
S6	13 Jun 2023	Water Temp (C)	13.1
S6	13 Jun 2023	Wave Height Low (ft)	4
S6	13 Jun 2023	High Tide (ft)	3.52
S6	13 Jun 2023	High Tide Time	635
S6	13 Jun 2023	Low Tide (ft)	0.72
S6	13 Jun 2023	Low Tide Time	57

Station	Date	Parameter	Value
S6	13 Jun 2023	Comments	Water turbid; Trash-3; Kelp; Seagrass; Algae; Debris
S6	20 Jun 2023	Arrive Time	848
S6	20 Jun 2023	Weather	Partly cloudy
S6	20 Jun 2023	Wind Speed (kts)	3.1
S6	20 Jun 2023	Wind Dir	NW
S6	20 Jun 2023	Animal Life	
S6	20 Jun 2023	Floatables	Foam
S6	20 Jun 2023	Water Color	Green
S6	20 Jun 2023	Current Direction	S
S6	20 Jun 2023	Water Temp (C)	14.2
S6	20 Jun 2023	Wave Height Low (ft)	4
S6	20 Jun 2023	High Tide (ft)	3.37
S6	20 Jun 2023	High Tide Time	1220
S6	20 Jun 2023	Low Tide (ft)	-0.47
S6	20 Jun 2023	Low Tide Time	546
S6	20 Jun 2023	Comments	Water turbid; Surfer/Paddle boarder-1; Trash-1; Kelp; Seagrass; Debris; Person/Walker/Jogger-3
S6	27 Jun 2023	Arrive Time	856
S6	27 Jun 2023	Weather	Partly cloudy
S6	27 Jun 2023	Wind Speed (kts)	7
S6	27 Jun 2023	Wind Dir	W
S6	27 Jun 2023	Animal Life	
S6	27 Jun 2023	Floatables	None
S6	27 Jun 2023	Water Color	Green
S6	27 Jun 2023	Current Direction	S
S6	27 Jun 2023	Water Temp (C)	11
S6	27 Jun 2023	Wave Height Low (ft)	6
S6	27 Jun 2023	High Tide (ft)	3.04
S6	27 Jun 2023	High Tide Time	442
S6	27 Jun 2023	Low Tide (ft)	1.55
S6	27 Jun 2023	Low Tide Time	1031
S6	27 Jun 2023	Comments	Water clear; Trash-1; Kelp; Seagrass; Person/Walker/Jogger-5
S8	06 Jun 2023	Arrive Time	937
S8	06 Jun 2023	Weather	Cloudy
S8	06 Jun 2023	Wind Speed (kts)	2.1
S8	06 Jun 2023	Wind Dir	W
S8	06 Jun 2023	Animal Life	
S8	06 Jun 2023	Floatables	None
S8	06 Jun 2023	Water Color	Green
S8	06 Jun 2023	Current Direction	S
S8	06 Jun 2023	Water Temp (C)	14.5
S8	06 Jun 2023	Wave Height Low (ft)	3
S8	06 Jun 2023	High Tide (ft)	3.43
S8	06 Jun 2023	High Tide Time	1234
S8	06 Jun 2023	Low Tide (ft)	-1.21
S8	06 Jun 2023	Low Tide Time	603
S8	06 Jun 2023	Comments	Water clear; Trash-2; Kelp; Seagrass; Person/Walker/Jogger-1
S8	13 Jun 2023	Arrive Time	750
S8	13 Jun 2023	Weather	Drizzle
S8	13 Jun 2023	Wind Speed (kts)	7.5
S8	13 Jun 2023	Wind Dir	NW
S8	13 Jun 2023	Animal Life	
S8	13 Jun 2023	Floatables	None
S8	13 Jun 2023	Water Color	Green
S8	13 Jun 2023	Current Direction	S

Station	Date	Parameter	Value
S8	13 Jun 2023	Water Temp (C)	12.4
S8	13 Jun 2023	Wave Height Low (ft)	4
S8	13 Jun 2023	High Tide (ft)	3.52
S8	13 Jun 2023	High Tide Time	635
S8	13 Jun 2023	Low Tide (ft)	0.72
S8	13 Jun 2023	Low Tide Time	57
S8	13 Jun 2023	Comments	Water turbid; Trash-2; Kelp; Seagrass; Debris
S8	20 Jun 2023	Arrive Time	808
S8	20 Jun 2023	Weather	Partly cloudy
S8	20 Jun 2023	Wind Speed (kts)	4.33
S8	20 Jun 2023	Wind Dir	NW
S8	20 Jun 2023	Animal Life	Bird-10;
S8	20 Jun 2023	Floatables	None
S8	20 Jun 2023	Water Color	Green
S8	20 Jun 2023	Current Direction	S
S8	20 Jun 2023	Water Temp (C)	15.3
S8	20 Jun 2023	Wave Height Low (ft)	3
S8	20 Jun 2023	High Tide (ft)	3.37
S8	20 Jun 2023	High Tide Time	1220
S8	20 Jun 2023	Low Tide (ft)	-0.47
S8	20 Jun 2023	Low Tide Time	546
S8	20 Jun 2023	Comments	Water clear; Trash-1; Kelp; Seagrass; Debris; Person/Walker/Jogger-1
S8	27 Jun 2023	Arrive Time	812
S8	27 Jun 2023	Weather	Cloudy
S8	27 Jun 2023	Wind Speed (kts)	4.6
S8	27 Jun 2023	Wind Dir	W
S8	27 Jun 2023	Animal Life	
S8	27 Jun 2023	Floatables	None
S8	27 Jun 2023	Water Color	Green
S8	27 Jun 2023	Current Direction	S
S8	27 Jun 2023	Water Temp (C)	11.7
S8	27 Jun 2023	Wave Height Low (ft)	5
S8	27 Jun 2023	High Tide (ft)	3.04
S8	27 Jun 2023	High Tide Time	442
S8	27 Jun 2023	Low Tide (ft)	1.55
S8	27 Jun 2023	Low Tide Time	1031
S8	27 Jun 2023	Comments	Water clear; Trash-2; Kelp; Seagrass; Debris
S9	06 Jun 2023	Arrive Time	952
S9	06 Jun 2023	Weather	Cloudy
S9	06 Jun 2023	Wind Speed (kts)	2.4
S9	06 Jun 2023	Wind Dir	W
S9	06 Jun 2023	Animal Life	
S9	06 Jun 2023	Floatables	None
S9	06 Jun 2023	Water Color	Green
S9	06 Jun 2023	Current Direction	S
S9	06 Jun 2023	Water Temp (C)	14.3
S9	06 Jun 2023	Wave Height Low (ft)	4
S9	06 Jun 2023	High Tide (ft)	3.43
S9	06 Jun 2023	High Tide Time	1234
S9	06 Jun 2023	Low Tide (ft)	-1.21
S9	06 Jun 2023	Low Tide Time	603
S9	06 Jun 2023	Comments	Water clear; Trash-1; Kelp
S9	13 Jun 2023	Arrive Time	735
S9	13 Jun 2023	Weather	Drizzle
S9	13 Jun 2023	Wind Speed (kts)	6.7
S9	13 Jun 2023	Wind Dir	NW

Station	Date	Parameter	Value
S9	13 Jun 2023	Animal Life	Bird-42;
S9	13 Jun 2023	Floatables	None
S9	13 Jun 2023	Water Color	Green
S9	13 Jun 2023	Current Direction	S
S9	13 Jun 2023	Water Temp (C)	12.7
S9	13 Jun 2023	Wave Height Low (ft)	4
S9	13 Jun 2023	High Tide (ft)	3.52
S9	13 Jun 2023	High Tide Time	635
S9	13 Jun 2023	Low Tide (ft)	0.72
S9	13 Jun 2023	Low Tide Time	57
S9	13 Jun 2023	Comments	Water turbid; Trash-2; Kelp; Seagrass; Person/Walker/Jogger-2
S9	20 Jun 2023	Arrive Time	752
S9	20 Jun 2023	Weather	Partly cloudy
S9	20 Jun 2023	Wind Speed (kts)	3.7
S9	20 Jun 2023	Wind Dir	NW
S9	20 Jun 2023	Animal Life	
S9	20 Jun 2023	Floatables	None
S9	20 Jun 2023	Water Color	Green
S9	20 Jun 2023	Current Direction	S
S9	20 Jun 2023	Water Temp (C)	13.7
S9	20 Jun 2023	Wave Height Low (ft)	2
S9	20 Jun 2023	High Tide (ft)	3.37
S9	20 Jun 2023	High Tide Time	1220
S9	20 Jun 2023	Low Tide (ft)	-0.47
S9	20 Jun 2023	Low Tide Time	546
S9	20 Jun 2023	Comments	Water clear; Trash-2; Kelp; Seagrass; Debris
S9	27 Jun 2023	Arrive Time	755
S9	27 Jun 2023	Weather	Cloudy
S9	27 Jun 2023	Wind Speed (kts)	2
S9	27 Jun 2023	Wind Dir	W
S9	27 Jun 2023	Animal Life	
S9	27 Jun 2023	Floatables	None
S9	27 Jun 2023	Water Color	Green
S9	27 Jun 2023	Current Direction	S
S9	27 Jun 2023	Water Temp (C)	10.4
S9	27 Jun 2023	Wave Height Low (ft)	4
S9	27 Jun 2023	High Tide (ft)	3.04
S9	27 Jun 2023	High Tide Time	442
S9	27 Jun 2023	Low Tide (ft)	1.55
S9	27 Jun 2023	Low Tide Time	1031
S9	27 Jun 2023	Comments	Water clear; Trash-1; Kelp; Seagrass; Person/Walker/Jogger-2
S10	06 Jun 2023	Arrive Time	823
S10	06 Jun 2023	Weather	Cloudy
S10	06 Jun 2023	Wind Speed (kts)	5.3
S10	06 Jun 2023	Wind Dir	W
S10	06 Jun 2023	Animal Life	
S10	06 Jun 2023	Floatables	None
S10	06 Jun 2023	Water Color	Green
S10	06 Jun 2023	Current Direction	S
S10	06 Jun 2023	Water Temp (C)	12.4
S10	06 Jun 2023	Wave Height Low (ft)	5
S10	06 Jun 2023	High Tide (ft)	3.43
S10	06 Jun 2023	High Tide Time	1234
S10	06 Jun 2023	Low Tide (ft)	-1.21
S10	06 Jun 2023	Low Tide Time	603
S10	06 Jun 2023	Comments	Water clear; Trash-2; Kelp; Seagrass; Debris

Station	Date	Parameter	Value
S10	13 Jun 2023	Arrive Time	927
S10	13 Jun 2023	Weather	Drizzle
S10	13 Jun 2023	Wind Speed (kts)	5.8
S10	13 Jun 2023	Wind Dir	N
S10	13 Jun 2023	Animal Life	
S10	13 Jun 2023	Floatables	None
S10	13 Jun 2023	Water Color	Green
S10	13 Jun 2023	Current Direction	S
S10	13 Jun 2023	Water Temp (C)	13.3
S10	13 Jun 2023	Wave Height Low (ft)	4
S10	13 Jun 2023	High Tide (ft)	3.52
S10	13 Jun 2023	High Tide Time	635
S10	13 Jun 2023	Low Tide (ft)	0.72
S10	13 Jun 2023	Low Tide Time	57
S10	13 Jun 2023	Comments	Water turbid; Trash-4; Kelp; Seagrass; Debris
S10	20 Jun 2023	Arrive Time	933
S10	20 Jun 2023	Weather	Sunny
S10	20 Jun 2023	Wind Speed (kts)	5.1
S10	20 Jun 2023	Wind Dir	NW
S10	20 Jun 2023	Animal Life	
S10	20 Jun 2023	Floatables	Foam
S10	20 Jun 2023	Water Color	Green
S10	20 Jun 2023	Current Direction	S
S10	20 Jun 2023	Water Temp (C)	15.1
S10	20 Jun 2023	Wave Height Low (ft)	4
S10	20 Jun 2023	High Tide (ft)	3.37
S10	20 Jun 2023	High Tide Time	1220
S10	20 Jun 2023	Low Tide (ft)	-0.47
S10	20 Jun 2023	Low Tide Time	546
S10	20 Jun 2023	Comments	Water turbid; Trash-2; Kelp; Seagrass; Debris
S10	27 Jun 2023	Arrive Time	946
S10	27 Jun 2023	Weather	Sunny
S10	27 Jun 2023	Wind Speed (kts)	5.7
S10	27 Jun 2023	Wind Dir	W
S10	27 Jun 2023	Animal Life	
S10	27 Jun 2023	Floatables	None
S10	27 Jun 2023	Water Color	Green
S10	27 Jun 2023	Current Direction	S
S10	27 Jun 2023	Water Temp (C)	13.6
S10	27 Jun 2023	Wave Height Low (ft)	6
S10	27 Jun 2023	High Tide (ft)	3.04
S10	27 Jun 2023	High Tide Time	442
S10	27 Jun 2023	Low Tide (ft)	1.55
S10	27 Jun 2023	Low Tide Time	1031
S10	27 Jun 2023	Comments	Water clear; Trash-2; Kelp; Seagrass
S11	06 Jun 2023	Arrive Time	902
S11	06 Jun 2023	Weather	Cloudy
S11	06 Jun 2023	Wind Speed (kts)	3.4
S11	06 Jun 2023	Wind Dir	W
S11	06 Jun 2023	Animal Life	Dog-1;
S11	06 Jun 2023	Floatables	None
S11	06 Jun 2023	Water Color	Green
S11	06 Jun 2023	Current Direction	S
S11	06 Jun 2023	Water Temp (C)	14.2
S11	06 Jun 2023	Wave Height Low (ft)	6
S11	06 Jun 2023	High Tide (ft)	3.43
S11	06 Jun 2023	High Tide Time	1234

Station	Date	Parameter	Value
S11	06 Jun 2023	Low Tide (ft)	-1.21
S11	06 Jun 2023	Low Tide Time	603
S11	06 Jun 2023	Comments	Water clear; Trash-2; Kelp; Seagrass; Debris; Person/Walker/Jogger-3
S11	13 Jun 2023	Arrive Time	828
S11	13 Jun 2023	Weather	Foggy
S11	13 Jun 2023	Wind Speed (kts)	7.2
S11	13 Jun 2023	Wind Dir	N
S11	13 Jun 2023	Animal Life	
S11	13 Jun 2023	Floatables	None
S11	13 Jun 2023	Water Color	Green
S11	13 Jun 2023	Current Direction	S
S11	13 Jun 2023	Water Temp (C)	13.3
S11	13 Jun 2023	Wave Height Low (ft)	4
S11	13 Jun 2023	High Tide (ft)	3.52
S11	13 Jun 2023	High Tide Time	635
S11	13 Jun 2023	Low Tide (ft)	0.72
S11	13 Jun 2023	Low Tide Time	57
S11	13 Jun 2023	Comments	Water turbid; Trash-3; Kelp; Seagrass; Debris
S11	20 Jun 2023	Arrive Time	842
S11	20 Jun 2023	Weather	Partly cloudy
S11	20 Jun 2023	Wind Speed (kts)	3.2
S11	20 Jun 2023	Wind Dir	NW
S11	20 Jun 2023	Animal Life	Bird-1;
S11	20 Jun 2023	Floatables	Foam
S11	20 Jun 2023	Water Color	Green
S11	20 Jun 2023	Current Direction	S
S11	20 Jun 2023	Water Temp (C)	13.5
S11	20 Jun 2023	Wave Height Low (ft)	3
S11	20 Jun 2023	High Tide (ft)	3.37
S11	20 Jun 2023	High Tide Time	1220
S11	20 Jun 2023	Low Tide (ft)	-0.47
S11	20 Jun 2023	Low Tide Time	546
S11	20 Jun 2023	Comments	Water clear; Trash-2; Kelp; Seagrass; Debris
S11	27 Jun 2023	Arrive Time	850
S11	27 Jun 2023	Weather	Partly cloudy
S11	27 Jun 2023	Wind Speed (kts)	5.5
S11	27 Jun 2023	Wind Dir	W
S11	27 Jun 2023	Animal Life	
S11	27 Jun 2023	Floatables	None
S11	27 Jun 2023	Water Color	Green
S11	27 Jun 2023	Current Direction	S
S11	27 Jun 2023	Water Temp (C)	13.8
S11	27 Jun 2023	Wave Height Low (ft)	6
S11	27 Jun 2023	High Tide (ft)	3.04
S11	27 Jun 2023	High Tide Time	442
S11	27 Jun 2023	Low Tide (ft)	1.55
S11	27 Jun 2023	Low Tide Time	1031
S11	27 Jun 2023	Comments	Water clear; Trash-1; Kelp; Seagrass
S12	06 Jun 2023	Arrive Time	919
S12	06 Jun 2023	Weather	Cloudy
S12	06 Jun 2023	Wind Speed (kts)	1.8
S12	06 Jun 2023	Wind Dir	W
S12	06 Jun 2023	Animal Life	Dog-1;
S12	06 Jun 2023	Floatables	None
S12	06 Jun 2023	Water Color	Green
S12	06 Jun 2023	Current Direction	S

Station	Date	Parameter	Value
S12	06 Jun 2023	Water Temp (C)	14.2
S12	06 Jun 2023	Wave Height Low (ft)	4
S12	06 Jun 2023	High Tide (ft)	3.43
S12	06 Jun 2023	High Tide Time	1234
S12	06 Jun 2023	Low Tide (ft)	-1.21
S12	06 Jun 2023	Low Tide Time	603
S12	06 Jun 2023	Comments	Water clear; Trash-1; Kelp; Seagrass; Debris; Person/Walker/Jogger-1
S12	13 Jun 2023	Arrive Time	805
S12	13 Jun 2023	Weather	Drizzle
S12	13 Jun 2023	Wind Speed (kts)	6.6
S12	13 Jun 2023	Wind Dir	NW
S12	13 Jun 2023	Animal Life	
S12	13 Jun 2023	Floatables	None
S12	13 Jun 2023	Water Color	Green
S12	13 Jun 2023	Current Direction	S
S12	13 Jun 2023	Water Temp (C)	13.4
S12	13 Jun 2023	Wave Height Low (ft)	3
S12	13 Jun 2023	High Tide (ft)	3.52
S12	13 Jun 2023	High Tide Time	635
S12	13 Jun 2023	Low Tide (ft)	0.72
S12	13 Jun 2023	Low Tide Time	57
S12	13 Jun 2023	Comments	Water turbid; Trash-3; Kelp; Seagrass; Debris; Person/Walker/Jogger-1
S12	20 Jun 2023	Arrive Time	824
S12	20 Jun 2023	Weather	Partly cloudy
S12	20 Jun 2023	Wind Speed (kts)	2
S12	20 Jun 2023	Wind Dir	W
S12	20 Jun 2023	Animal Life	
S12	20 Jun 2023	Floatables	None
S12	20 Jun 2023	Water Color	Green
S12	20 Jun 2023	Current Direction	S
S12	20 Jun 2023	Water Temp (C)	15.4
S12	20 Jun 2023	Wave Height Low (ft)	3
S12	20 Jun 2023	High Tide (ft)	3.37
S12	20 Jun 2023	High Tide Time	1220
S12	20 Jun 2023	Low Tide (ft)	-0.47
S12	20 Jun 2023	Low Tide Time	546
S12	20 Jun 2023	Comments	Water clear; Trash-1; Kelp; Seagrass; Debris; Person/Walker/Jogger-3
S12	27 Jun 2023	Arrive Time	828
S12	27 Jun 2023	Weather	Cloudy
S12	27 Jun 2023	Wind Speed (kts)	3.7
S12	27 Jun 2023	Wind Dir	W
S12	27 Jun 2023	Animal Life	
S12	27 Jun 2023	Floatables	None
S12	27 Jun 2023	Water Color	Green
S12	27 Jun 2023	Current Direction	S
S12	27 Jun 2023	Water Temp (C)	12.6
S12	27 Jun 2023	Wave Height Low (ft)	5
S12	27 Jun 2023	High Tide (ft)	3.04
S12	27 Jun 2023	High Tide Time	442
S12	27 Jun 2023	Low Tide (ft)	1.55
S12	27 Jun 2023	Low Tide Time	1031
S12	27 Jun 2023	Comments	Water clear; Trash-1; Kelp; Seagrass

Kelp Stations

Table 3.1

Summary of compliance with the Ocean Plan's 30-day Geometric Mean standard for fecal coliform bacteria at the SBOO kelp stations. Data are based on the geometric mean of the five most recent samples from each site over the previous 30 days unless otherwise noted (*). Values >200 CFU/100 mL exceed the standard.

Date	I19	I24	I25	I26	I32	I39	I40
01 Jun 2023	18	3	2	2	22	5	**910**
02 Jun 2023	18	3	2	2	22	5	**910**
03 Jun 2023	18	3	2	2	22	5	**910**
04 Jun 2023	18	3	2	2	22	5	**910**
05 Jun 2023	18	3	2	2	22	5	**910**
06 Jun 2023	35	3	2	2	36	4	**456**
07 Jun 2023	35	3	2	2	36	4	**456**
08 Jun 2023	16	3	2	2	75	5	**263**
09 Jun 2023	16	3	2	2	75	5	**263**
10 Jun 2023	16	3	2	2	75	5	**263**
11 Jun 2023	16	3	2	2	75	5	**263**
12 Jun 2023	16	3	2	2	75	5	**263**
13 Jun 2023	21	3	2	2	36	4	151
14 Jun 2023	38	2	2	2	16	2	111
15 Jun 2023	38	2	2	2	16	2	111
16 Jun 2023	38	2	2	2	16	2	111
17 Jun 2023	38	2	2	2	16	2	111
18 Jun 2023	38	2	2	2	16	2	111
19 Jun 2023	38	2	2	2	16	2	111
20 Jun 2023	21	2	2	2	11	2	50
21 Jun 2023	25	2	2	2	7	2	31
22 Jun 2023	25	2	2	2	7	2	31
23 Jun 2023	25	2	2	2	7	2	31
24 Jun 2023	25	2	2	2	7	2	31
25 Jun 2023	25	2	2	2	7	2	31
26 Jun 2023	33	2	2	2	5	2	18
27 Jun 2023	33	2	2	2	5	2	18
28 Jun 2023	33	2	2	2	5	2	18
29 Jun 2023	33	2	2	2	5	2	18
30 Jun 2023	33	2	2	2	5	2	18

* 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 2023	IC	IC	IC	IC	IC	IC	**E**
06 Jun 2023	**E**	IC	IC	IC	**E**	IC	IC
13 Jun 2023	IC	IC	IC	IC	IC	IC	IC
20 Jun 2023	IC	IC	IC	IC	IC	IC	IC
26 Jun 2023	IC	IC	IC	IC	IC	IC	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 2023	29	6	3	3	11	4	**441**
02 Jun 2023	29	6	3	3	11	4	**441**
03 Jun 2023	29	6	3	3	11	4	**441**
04 Jun 2023	29	6	3	3	11	4	**441**
05 Jun 2023	29	6	3	3	11	4	**441**
06 Jun 2023	**38**	5	3	3	17	4	**249**
07 Jun 2023	**32**	2	2	2	17	3	**232**
08 Jun 2023	**32**	2	2	2	17	3	**232**
09 Jun 2023	**32**	2	2	2	17	3	**232**
10 Jun 2023	**32**	2	2	2	17	3	**232**
11 Jun 2023	**32**	2	2	2	17	3	**232**
12 Jun 2023	**32**	2	2	2	17	3	**232**
13 Jun 2023	21	2	2	2	15	3	**134**
14 Jun 2023	21	2	2	2	15	3	**134**
15 Jun 2023	21	2	2	2	15	3	**134**
16 Jun 2023	21	2	2	2	15	3	**134**
17 Jun 2023	21	2	2	2	15	3	**134**
18 Jun 2023	21	2	2	2	15	3	**134**
19 Jun 2023	21	2	2	2	15	3	**134**
20 Jun 2023	11	2	2	2	15	3	**53**
21 Jun 2023	11	2	2	2	15	3	**53**
22 Jun 2023	11	2	2	2	15	3	**53**
23 Jun 2023	11	2	2	2	15	3	**53**
24 Jun 2023	11	2	2	2	15	3	**53**
25 Jun 2023	11	2	2	2	15	3	**53**
26 Jun 2023	19	2	2	2	6	2	22
27 Jun 2023	19	2	2	2	6	2	22
28 Jun 2023	19	2	2	2	6	2	22
29 Jun 2023	19	2	2	2	6	2	22
30 Jun 2023	19	2	2	2	6	2	22

* 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	**E**	IC	IC	IC	**E**	IC	**E**

IC = In Compliance
E = Exceedance
ns = not sampled
ND = no data

Table 3.5

Summary of compliance with the Ocean Plan's 30-day Median standard for total coliform bacteria at the SBOO kelp stations. Data are based on the median of the five most recent samples from each site and depth over the previous 30 days unless otherwise noted (*). Values >70 CFU/100 mL exceed the standard. Median calculated using n<5

	I19			I24			I25			I26			I32			I39			I40		
Date	**2m**	**6m**	**11m**	**2m**	**6m**	**11m**	**2m**	**6m**	**9m**	**2m**	**6m**	**9m**	**2m**	**6m**	**9m**	**2m**	**12m**	**18m**	**2m**	**6m**	**9m**
01 Jun 2023	50	55	**90**	4	20	7	2	3	11	2	11	2	20	**200**	**260**	2	2	2	**7200**	**950**	**990**
02 Jun 2023	50	55	**90**	4	20	7	2	3	11	2	11	2	20	**200**	**260**	2	2	2	**7200**	**950**	**990**
03 Jun 2023	50	55	**90**	4	20	7	2	3	11	2	11	2	20	**200**	**260**	2	2	2	**7200**	**950**	**990**
04 Jun 2023	50	55	**90**	4	20	7	2	3	11	2	11	2	20	**200**	**260**	2	2	2	**7200**	**950**	**990**
05 Jun 2023	50	55	**90**	4	20	7	2	3	11	2	11	2	20	**200**	**260**	2	2	2	**7200**	**950**	**990**
06 Jun 2023	**80**	**100**	**140**	4	20	4	2	2	20	2	4	2	20	**380**	**500**	2	2	2	**7000**	**900**	**200**
07 Jun 2023	**80**	**100**	**140**	4	20	4	2	2	20	2	4	2	20	**380**	**500**	2	2	2	**7000**	**900**	**200**
08 Jun 2023	50	55	**90**	3	11	7	2	2	11	2	3	2	70	**890**	**550**	2	2	2	**6800**	**750**	**190**
09 Jun 2023	50	55	**90**	3	11	7	2	2	11	2	3	2	70	**890**	**550**	2	2	2	**6800**	**750**	**190**
10 Jun 2023	50	55	**90**	3	11	7	2	2	11	2	3	2	70	**890**	**550**	2	2	2	**6800**	**750**	**190**
11 Jun 2023	50	55	**90**	3	11	7	2	2	11	2	3	2	70	**890**	**550**	2	2	2	**6800**	**750**	**190**
12 Jun 2023	50	55	**90**	3	11	7	2	2	11	2	3	2	70	**890**	**550**	2	2	2	**6800**	**750**	**190**
13 Jun 2023	**80**	20	40	2	2	4	2	2	2	2	2	2	20	**380**	**500**	2	2	2	**6600**	**500**	**180**
14 Jun 2023	**460**	60	**90**	2	2	3	2	2	2	2	2	2	11	**191**	**260**	2	2	2	**3460**	**320**	**140**
15 Jun 2023	**460**	60	**90**	2	2	3	2	2	2	2	2	2	11	**191**	**260**	2	2	2	**3460**	**320**	**140**
16 Jun 2023	**460**	60	**90**	2	2	3	2	2	2	2	2	2	11	**191**	**260**	2	2	2	**3460**	**320**	**140**
17 Jun 2023	**460**	60	**90**	2	2	3	2	2	2	2	2	2	11	**191**	**260**	2	2	2	**3460**	**320**	**140**
18 Jun 2023	**460**	60	**90**	2	2	3	2	2	2	2	2	2	11	**191**	**260**	2	2	2	**3460**	**320**	**140**
19 Jun 2023	**460**	60	**90**	2	2	3	2	2	2	2	2	2	11	**191**	**260**	2	2	2	**3460**	**320**	**140**
20 Jun 2023	**80**	20	40	2	2	2	2	2	2	2	2	2	2	2	20	2	2	2	**320**	**140**	**100**
21 Jun 2023	**430**	60	**90**	2	2	2	2	2	2	2	2	2	11	2	11	2	2	2	**200**	**90**	60
22 Jun 2023	**430**	60	**90**	2	2	2	2	2	2	2	2	2	11	2	11	2	2	2	**200**	**90**	60
23 Jun 2023	**430**	60	**90**	2	2	2	2	2	2	2	2	2	11	2	11	2	2	2	**200**	**90**	60
24 Jun 2023	**430**	60	**90**	2	2	2	2	2	2	2	2	2	11	2	11	2	2	2	**200**	**90**	60
25 Jun 2023	**430**	60	**90**	2	2	2	2	2	2	2	2	2	11	2	11	2	2	2	**200**	**90**	60
26 Jun 2023	**840**	20	40	2	2	2	2	2	2	2	2	2	2	2	20	2	2	2	**80**	40	20
27 Jun 2023	**840**	20	40	2	2	2	2	2	2	2	2	2	2	2	20	2	2	2	**80**	40	20
28 Jun 2023	**840**	20	40	2	2	2	2	2	2	2	2	2	2	2	20	2	2	2	**80**	40	20
29 Jun 2023	**840**	20	40	2	2	2	2	2	2	2	2	2	2	2	20	2	2	2	**80**	40	20
30 Jun 2023	**840**	20	40	2	2	2	2	2	2	2	2	2	2	2	20	2	2	2	**80**	40	20

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.

	I19			I24			I25			I26			I32			I39			I40		
Date	**2m**	**6m**	**11m**	**2m**	**6m**	**11m**	**2m**	**6m**	**9m**	**2m**	**6m**	**9m**	**2m**	**6m**	**9m**	**2m**	**12m**	**18m**	**2m**	**6m**	**9m**
June	**E**	**E**	**E**	IC	IC	IC	IC	IC	IC	IC	IC	IC	IC	**E**	**E**	IC	IC	IC	**E**	**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 2023	937	2	20e	2e	2e	16.6	61.12	9.8	33.44	8.3
I19	01 Jun 2023	937	6	100e	12e	2e	14.7	62.98	8.1	33.46	8.1
I19	01 Jun 2023	937	11	140e	10e	<2	14.3	68.49	5.8	33.47	7.9
I19	06 Jun 2023	1043	2	6000	840	460	16.9	56.82	10.3	33.35	8.3
I19	06 Jun 2023	1043	6	800e	380e	82	16.5	68.08	9.2	33.37	8.2
I19	06 Jun 2023	1043	11	680	110	30e	15.5	59.06	7.5	33.45	8.1
I19	13 Jun 2023	1103	2	840	160e	60	15.6	68.46	7.3	33.45	8.1
I19	13 Jun 2023	1103	6	20e	2e	<2	13.3	74.59	4.8	33.44	7.8
I19	13 Jun 2023	1103	11	40e	6e	2e	13.2	33.76	3.7	33.45	7.7
I19	20 Jun 2023	1025	2	2e	<2	8e	16.6	75.10	8.0	33.41	8.1
I19	20 Jun 2023	1025	6	<2	<2	<2	13.4	77.34	7.6	33.42	8.0
I19	20 Jun 2023	1025	11	2e	<2	<2	12.6	66.82	6.4	33.41	7.9
I19	26 Jun 2023	1057	2	940	280e	220e	15.4	51.58	8.4	33.18	8.1
I19	26 Jun 2023	1057	6	18e	6e	<2	12.4	69.96	7.1	33.43	8.0
I19	26 Jun 2023	1057	11	<20	<2	<2	11.9	63.33	5.6	33.42	7.8
I24	01 Jun 2023	958	2	<2	<2	<2	16.3	75.42	8.5	33.49	8.2
I24	01 Jun 2023	958	6	<20	4e	<2	14.5	68.45	6.1	33.47	8.0
I24	01 Jun 2023	958	11	18e	<2	<2	14.2	69.68	4.6	33.48	7.8
I24	06 Jun 2023	1103	2	<2	<2	<2	16.2	79.89	9.0	33.46	8.2
I24	06 Jun 2023	1103	6	<2	<2	<2	16.1	78.73	9.1	33.45	8.2
I24	06 Jun 2023	1103	11	2e	<2	<2	14.4	72.12	7.1	33.49	8.0
I24	13 Jun 2023	1125	2	<2	<2	<2	16.9	83.26	8.6	33.45	8.2
I24	13 Jun 2023	1125	6	<2	<2	<2	14.2	80.79	7.5	33.44	8.0
I24	13 Jun 2023	1125	11	2e	<2	<2	13.6	77.50	4.6	33.44	7.8
I24	20 Jun 2023	1044	2	<2	<2	<2	16.1	77.79	9.0	33.42	8.1
I24	20 Jun 2023	1044	6	<2	<2	<2	13.3	78.30	7.5	33.45	8.0
I24	20 Jun 2023	1044	11	<2	<2	<2	12.6	52.95	6.3	33.42	7.9
I24	26 Jun 2023	1119	2	<2	<2	<2	15.7	78.56	8.7	33.46	8.1
I24	26 Jun 2023	1119	6	2e	<2	<2	12.6	70.78	7.9	33.43	8.0
I24	26 Jun 2023	1119	11	<2	<2	<2	12.2	59.53	5.8	33.42	7.8
I25	01 Jun 2023	1004	2	<2	<2	<2	16.3	79.21	8.7	33.50	8.2
I25	01 Jun 2023	1004	6	<2	<2	<2	14.3	72.91	5.1	33.48	7.9
I25	01 Jun 2023	1004	9	<2	<2	<2	14.3	79.72	5.3	33.46	7.8
I25	06 Jun 2023	1113	2	<2	<2	<2	16.1	80.52	9.1	33.46	8.2
I25	06 Jun 2023	1113	6	<2	<2	<2	16.0	78.07	9.1	33.45	8.2
I25	06 Jun 2023	1113	9	20e	<2	2e	14.9	69.71	7.4	33.45	8.0
I25	13 Jun 2023	1133	2	<2	<2	<2	16.9	79.92	8.7	33.46	8.2
I25	13 Jun 2023	1133	6	<2	<2	<2	15.4	84.52	8.6	33.45	8.1
I25	13 Jun 2023	1133	9	<2	<2	<2	14.0	81.12	8.3	33.40	8.1

Station	Date	Time	Depth	Total	Fecal	Entero	Temp	XMS	DO	Sal	pH
I25	20 Jun 2023	1051	2	<2	<2	<2	16.2	82.19	9.3	33.44	8.2
I25	20 Jun 2023	1051	6	<2	<2	<2	14.9	74.70	8.5	33.44	8.1
I25	20 Jun 2023	1051	9	<2	<2	<2	13.1	80.94	8.1	33.41	8.0
I25	26 Jun 2023	1125	2	<2	<2	<2	16.4	79.91	9.0	33.44	8.2
I25	26 Jun 2023	1125	6	<2	<2	<2	13.2	65.79	8.5	33.41	8.1
I25	26 Jun 2023	1125	9	<2	<2	<2	12.6	73.88	7.7	33.41	8.0
I26	01 Jun 2023	1015	2	<2	<2	<2	16.3	71.90	8.6	33.49	8.2
I26	01 Jun 2023	1015	6	<2	<2	<2	14.3	76.76	6.6	33.47	8.0
I26	01 Jun 2023	1015	9	<2	<2	<2	14.1	80.56	5.8	33.46	7.9
I26	06 Jun 2023	1119	2	<2	<2	<2	16.3	68.87	9.7	33.44	8.2
I26	06 Jun 2023	1119	6	4e	<2	<2	15.5	67.63	8.2	33.44	8.1
I26	06 Jun 2023	1119	9	2e	2e	<2	14.6	74.63	6.9	33.45	8.0
I26	13 Jun 2023	1143	2	<2	<2	<2	16.7	86.28	8.8	33.46	8.2
I26	13 Jun 2023	1143	6	<2	<2	<2	15.8	86.02	9.1	33.45	8.2
I26	13 Jun 2023	1143	9	<2	<2	<2	14.1	88.75	9.2	33.41	8.1
I26	20 Jun 2023	1103	2	<2	<2	<2	16.2	82.76	9.1	33.45	8.2
I26	20 Jun 2023	1103	6	<2	<2	<2	15.3	81.08	8.9	33.46	8.2
I26	20 Jun 2023	1103	9	<2	<2	<2	13.4	81.85	8.2	33.43	8.1
I26	26 Jun 2023	1136	2	<2	<2	<2	16.4	78.23	9.1	33.44	8.2
I26	26 Jun 2023	1136	6	<2	<2	<2	12.7	78.66	8.4	33.41	8.1
I26	26 Jun 2023	1136	9	<2	<2	<2	12.1	70.78	6.9	33.40	8.0
I32	01 Jun 2023	1029	2	<20	<2	<2	16.3	65.03	8.3	33.46	8.2
I32	01 Jun 2023	1029	6	<2	<2	<2	14.1	73.44	6.7	33.45	8.0
I32	01 Jun 2023	1029	9	<2	<2	2e	13.8	72.85	6.2	33.44	7.9
I32	06 Jun 2023	1130	2	120e	20e	120e	16.8	43.17	9.3	33.29	8.2
I32	06 Jun 2023	1130	6	2400e	96	60e	16.6	57.84	9.2	33.34	8.2
I32	06 Jun 2023	1130	9	600e	780	620	16.3	60.43	8.5	33.38	8.1
I32	13 Jun 2023	1154	2	<2	<2	<2	16.9	81.24	8.7	33.46	8.2
I32	13 Jun 2023	1154	6	<2	<2	<2	16.0	75.90	8.0	33.45	8.1
I32	13 Jun 2023	1154	9	<20	<2	<2	13.9	51.98	6.3	33.42	7.9
I32	20 Jun 2023	1114	2	<2	<2	<2	16.3	74.66	8.0	33.39	8.1
I32	20 Jun 2023	1114	6	<2	<2	<2	13.1	67.46	7.3	33.39	8.0
I32	20 Jun 2023	1114	9	<2	<2	<2	12.8	67.85	6.9	33.40	8.0
I32	26 Jun 2023	1151	2	<2	<2	<2	15.9	73.02	8.6	33.43	8.1
I32	26 Jun 2023	1151	6	<20	<2	<2	13.4	53.15	7.4	33.46	8.0
I32	26 Jun 2023	1151	9	<20	<2	<2	12.3	51.80	6.2	33.40	7.9
I39	01 Jun 2023	916	2	<2	<2	<2	16.1	83.16	9.0	33.49	8.2
I39	01 Jun 2023	916	12	<2	<2	<2	13.5	80.70	6.3	33.47	7.9
I39	01 Jun 2023	916	18	<2	<2	<2	13.1	85.99	6.2	33.46	7.9
I39	06 Jun 2023	1019	2	<2	<2	<2	16.2	80.14	8.8	33.47	8.2
I39	06 Jun 2023	1019	12	<2	<2	<2	15.8	80.35	9.0	33.45	8.2
I39	06 Jun 2023	1019	18	<2	<2	<2	13.1	76.86	7.2	33.43	8.0
I39	13 Jun 2023	1042	2	<2	<2	<2	16.7	86.75	8.8	33.46	8.2
I39	13 Jun 2023	1042	12	<2	<2	<2	14.2	88.02	9.0	33.38	8.1
I39	13 Jun 2023	1042	18	6e	2e	<2	12.7	87.29	5.7	33.42	7.9

Station	Date	Time	Depth	Total	Fecal	Entero	Temp	XMS	DO	Sal	pH
I39	20 Jun 2023	1004	2	<2	<2	<2	15.8	81.68	8.8	33.46	8.2
I39	20 Jun 2023	1004	12	<2	<2	<2	15.3	82.00	8.7	33.44	8.1
I39	20 Jun 2023	1004	18	2e	<2	<2	12.6	84.69	7.6	33.47	8.0
I39	26 Jun 2023	1029	2	<2	<2	<2	16.4	77.65	9.2	33.44	8.2
I39	26 Jun 2023	1029	12	<2	<2	<2	12.3	79.67	8.3	33.40	8.1
I39	26 Jun 2023	1029	18	<2	<2	<2	11.6	82.86	6.0	33.43	7.9
I40	01 Jun 2023	949	2	6600	2600e	1200e	16.2	54.10	7.7	33.36	8.2
I40	01 Jun 2023	949	6	1600e	340e	82	14.4	76.18	7.8	33.43	8.1
I40	01 Jun 2023	949	9	100e	10e	10e	14.4	72.07	6.4	33.46	8.0
I40	06 Jun 2023	1056	2	80e	30e	6e	16.5	73.14	9.6	33.42	8.2
I40	06 Jun 2023	1056	6	140e	36e	10e	16.4	67.53	9.5	33.41	8.2
I40	06 Jun 2023	1056	9	<200	20e	8e	16.1	72.24	8.1	33.42	8.1
I40	13 Jun 2023	1117	2	320e	28e	2e	16.5	77.45	7.5	33.44	8.1
I40	13 Jun 2023	1117	6	40e	2e	2e	13.7	66.02	3.5	33.46	7.7
I40	13 Jun 2023	1117	9	20e	<20	<2	13.5	49.75	3.2	33.44	7.6
I40	20 Jun 2023	1036	2	<2	<2	14e	16.5	76.72	8.6	33.37	8.1
I40	20 Jun 2023	1036	6	<2	<2	<2	13.3	78.15	7.5	33.44	8.0
I40	20 Jun 2023	1036	9	<2	<2	<2	12.6	60.20	6.2	33.41	7.9
I40	26 Jun 2023	1109	2	2e	<2	<2	14.5	66.96	8.0	33.42	8.0
I40	26 Jun 2023	1109	6	<2	<2	<2	12.7	68.99	8.2	33.42	8.0
I40	26 Jun 2023	1109	9	<20	<2	<2	12.1	60.15	5.9	33.43	7.9

ns = not sampled
ND = no data

Table 3.8

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

Station	Date	Parameter	Value
I19	01 Jun 2023	Depth (m)	11
I19	01 Jun 2023	Arrive Time	937
I19	01 Jun 2023	Depart Time	941
I19	01 Jun 2023	Air Temp (C)	15.9
I19	01 Jun 2023	Weather	Overcast
I19	01 Jun 2023	Visibility (mi)	10
I19	01 Jun 2023	Wind Speed (kts)	5
I19	01 Jun 2023	Wind Dir	W
I19	01 Jun 2023	Water Color	Green
I19	01 Jun 2023	Wave Ht Low (ft)	3
I19	01 Jun 2023	Wave Period (sec)	12
I19	01 Jun 2023	Sea State	Light Chop
I19	01 Jun 2023	High Tide (ft)	5.81
I19	01 Jun 2023	High Tide Time	1948
I19	01 Jun 2023	Low Tide (ft)	-0.01
I19	01 Jun 2023	Low Tide Time	218
I19	01 Jun 2023	Comments	none
I19	06 Jun 2023	Depth (m)	11
I19	06 Jun 2023	Arrive Time	1043
I19	06 Jun 2023	Depart Time	1048
I19	06 Jun 2023	Air Temp (C)	16.2
I19	06 Jun 2023	Weather	Overcast
I19	06 Jun 2023	Visibility (mi)	9
I19	06 Jun 2023	Wind Speed (kts)	4.7
I19	06 Jun 2023	Wind Dir	S
I19	06 Jun 2023	Water Color	Brownish-Green
I19	06 Jun 2023	Wave Ht Low (ft)	3
I19	06 Jun 2023	Wave Period (sec)	12
I19	06 Jun 2023	Sea State	Calm
I19	06 Jun 2023	High Tide (ft)	6.16
I19	06 Jun 2023	High Tide Time	2306
I19	06 Jun 2023	Low Tide (ft)	-1.36
I19	06 Jun 2023	Low Tide Time	554
I19	06 Jun 2023	Comments	none
I19	13 Jun 2023	Depth (m)	10
I19	13 Jun 2023	Arrive Time	1103
I19	13 Jun 2023	Depart Time	1108
I19	13 Jun 2023	Air Temp (C)	16.9
I19	13 Jun 2023	Weather	Overcast
I19	13 Jun 2023	Visibility (mi)	8
I19	13 Jun 2023	Wind Speed (kts)	4.2
I19	13 Jun 2023	Wind Dir	NW
I19	13 Jun 2023	Water Color	Blueish-Green
I19	13 Jun 2023	Wave Ht Low (ft)	3
I19	13 Jun 2023	Wave Period (sec)	15
I19	13 Jun 2023	Sea State	Light Chop
I19	13 Jun 2023	High Tide (ft)	5.72
I19	13 Jun 2023	High Tide Time	1842
I19	13 Jun 2023	Low Tide (ft)	0.67
I19	13 Jun 2023	Low Tide Time	54
I19	13 Jun 2023	Comments	none
I19	20 Jun 2023	Depth (m)	10
I19	20 Jun 2023	Arrive Time	1025

Station	Date	Parameter	Value
I19	20 Jun 2023	Depart Time	1027
I19	20 Jun 2023	Air Temp (C)	16.8
I19	20 Jun 2023	Weather	Partly Cloudy
I19	20 Jun 2023	Visibility (mi)	10
I19	20 Jun 2023	Wind Speed (kts)	5.2
I19	20 Jun 2023	Wind Dir	W
I19	20 Jun 2023	Water Color	Brownish-Green
I19	20 Jun 2023	Wave Ht Low (ft)	3
I19	20 Jun 2023	Wave Period (sec)	8
I19	20 Jun 2023	Sea State	Light Chop
I19	20 Jun 2023	High Tide (ft)	5.54
I19	20 Jun 2023	High Tide Time	2242
I19	20 Jun 2023	Low Tide (ft)	-0.56
I19	20 Jun 2023	Low Tide Time	536
I19	20 Jun 2023	Comments	none
I19	26 Jun 2023	Depth (m)	10
I19	26 Jun 2023	Arrive Time	1057
I19	26 Jun 2023	Depart Time	1106
I19	26 Jun 2023	Air Temp (C)	16.5
I19	26 Jun 2023	Weather	Clear
I19	26 Jun 2023	Visibility (mi)	10
I19	26 Jun 2023	Wind Speed (kts)	9.1
I19	26 Jun 2023	Wind Dir	NW
I19	26 Jun 2023	Water Color	Brown
I19	26 Jun 2023	Wave Ht Low (ft)	5
I19	26 Jun 2023	Wave Period (sec)	7
I19	26 Jun 2023	Sea State	Confused Swell
I19	26 Jun 2023	High Tide (ft)	4.39
I19	26 Jun 2023	High Tide Time	1648
I19	26 Jun 2023	Low Tide (ft)	1.31
I19	26 Jun 2023	Low Tide Time	930
I19	26 Jun 2023	Comments	none
I24	01 Jun 2023	Depth (m)	10
I24	01 Jun 2023	Arrive Time	958
I24	01 Jun 2023	Depart Time	1002
I24	01 Jun 2023	Air Temp (C)	15.9
I24	01 Jun 2023	Weather	Overcast
I24	01 Jun 2023	Visibility (mi)	10
I24	01 Jun 2023	Wind Speed (kts)	9.7
I24	01 Jun 2023	Wind Dir	W
I24	01 Jun 2023	Water Color	Greenish-Brown
I24	01 Jun 2023	Wave Ht Low (ft)	3
I24	01 Jun 2023	Wave Period (sec)	12
I24	01 Jun 2023	Sea State	Light Chop
I24	01 Jun 2023	High Tide (ft)	5.81
I24	01 Jun 2023	High Tide Time	1948
I24	01 Jun 2023	Low Tide (ft)	-0.01
I24	01 Jun 2023	Low Tide Time	218
I24	01 Jun 2023	Comments	none
I24	06 Jun 2023	Depth (m)	1
I24	06 Jun 2023	Arrive Time	1103
I24	06 Jun 2023	Depart Time	1106
I24	06 Jun 2023	Air Temp (C)	16.4
I24	06 Jun 2023	Weather	Overcast
I24	06 Jun 2023	Visibility (mi)	9
I24	06 Jun 2023	Wind Speed (kts)	1.8
I24	06 Jun 2023	Wind Dir	SW
I24	06 Jun 2023	Water Color	Brownish-Green

Station	Date	Parameter	Value
I24	06 Jun 2023	Wave Ht Low (ft)	3
I24	06 Jun 2023	Wave Period (sec)	12
I24	06 Jun 2023	Sea State	Calm
I24	06 Jun 2023	High Tide (ft)	6.16
I24	06 Jun 2023	High Tide Time	2306
I24	06 Jun 2023	Low Tide (ft)	-1.36
I24	06 Jun 2023	Low Tide Time	554
I24	06 Jun 2023	Comments	none
I24	13 Jun 2023	Depth (m)	10
I24	13 Jun 2023	Arrive Time	1125
I24	13 Jun 2023	Depart Time	1129
I24	13 Jun 2023	Air Temp (C)	16.9
I24	13 Jun 2023	Weather	Overcast
I24	13 Jun 2023	Visibility (mi)	8
I24	13 Jun 2023	Wind Speed (kts)	3.9
I24	13 Jun 2023	Wind Dir	NW
I24	13 Jun 2023	Water Color	Blueish-Green
I24	13 Jun 2023	Wave Ht Low (ft)	3
I24	13 Jun 2023	Wave Period (sec)	15
I24	13 Jun 2023	Sea State	Light Chop
I24	13 Jun 2023	High Tide (ft)	5.72
I24	13 Jun 2023	High Tide Time	1842
I24	13 Jun 2023	Low Tide (ft)	0.67
I24	13 Jun 2023	Low Tide Time	54
I24	13 Jun 2023	Comments	none
I24	20 Jun 2023	Depth (m)	10
I24	20 Jun 2023	Arrive Time	1044
I24	20 Jun 2023	Depart Time	1045
I24	20 Jun 2023	Air Temp (C)	16.8
I24	20 Jun 2023	Weather	Partly Cloudy
I24	20 Jun 2023	Visibility (mi)	10
I24	20 Jun 2023	Wind Speed (kts)	7.1
I24	20 Jun 2023	Wind Dir	W
I24	20 Jun 2023	Water Color	Brownish-Green
I24	20 Jun 2023	Wave Ht Low (ft)	3
I24	20 Jun 2023	Wave Period (sec)	8
I24	20 Jun 2023	Sea State	Light Chop
I24	20 Jun 2023	High Tide (ft)	5.54
I24	20 Jun 2023	High Tide Time	2242
I24	20 Jun 2023	Low Tide (ft)	-0.56
I24	20 Jun 2023	Low Tide Time	536
I24	20 Jun 2023	Comments	none
I24	26 Jun 2023	Depth (m)	10
I24	26 Jun 2023	Arrive Time	1119
I24	26 Jun 2023	Depart Time	1122
I24	26 Jun 2023	Air Temp (C)	16.7
I24	26 Jun 2023	Weather	Clear
I24	26 Jun 2023	Visibility (mi)	10
I24	26 Jun 2023	Wind Speed (kts)	8.8
I24	26 Jun 2023	Wind Dir	NW
I24	26 Jun 2023	Water Color	Brownish-Green
I24	26 Jun 2023	Wave Ht Low (ft)	5
I24	26 Jun 2023	Wave Period (sec)	7
I24	26 Jun 2023	Sea State	Confused Swell
I24	26 Jun 2023	High Tide (ft)	4.39
I24	26 Jun 2023	High Tide Time	1648
I24	26 Jun 2023	Low Tide (ft)	1.31
I24	26 Jun 2023	Low Tide Time	930

Station	Date	Parameter	Value
I24	26 Jun 2023	Comments	none
I25	01 Jun 2023	Depth (m)	9
I25	01 Jun 2023	Arrive Time	1004
I25	01 Jun 2023	Depart Time	1009
I25	01 Jun 2023	Air Temp (C)	16
I25	01 Jun 2023	Weather	Overcast
I25	01 Jun 2023	Visibility (mi)	10
I25	01 Jun 2023	Wind Speed (kts)	5.4
I25	01 Jun 2023	Wind Dir	NW
I25	01 Jun 2023	Water Color	Greenish-Brown
I25	01 Jun 2023	Wave Ht Low (ft)	3
I25	01 Jun 2023	Wave Period (sec)	12
I25	01 Jun 2023	Sea State	Light Chop
I25	01 Jun 2023	High Tide (ft)	5.81
I25	01 Jun 2023	High Tide Time	1948
I25	01 Jun 2023	Low Tide (ft)	-0.01
I25	01 Jun 2023	Low Tide Time	218
I25	01 Jun 2023	Comments	none
I25	06 Jun 2023	Depth (m)	9
I25	06 Jun 2023	Arrive Time	1113
I25	06 Jun 2023	Depart Time	1114
I25	06 Jun 2023	Air Temp (C)	16.5
I25	06 Jun 2023	Weather	Overcast
I25	06 Jun 2023	Visibility (mi)	9
I25	06 Jun 2023	Wind Speed (kts)	2.6
I25	06 Jun 2023	Wind Dir	S
I25	06 Jun 2023	Water Color	Brownish-Green
I25	06 Jun 2023	Wave Ht Low (ft)	3
I25	06 Jun 2023	Wave Period (sec)	12
I25	06 Jun 2023	Sea State	Calm
I25	06 Jun 2023	High Tide (ft)	6.16
I25	06 Jun 2023	High Tide Time	2306
I25	06 Jun 2023	Low Tide (ft)	-1.36
I25	06 Jun 2023	Low Tide Time	554
I25	06 Jun 2023	Comments	none
I25	13 Jun 2023	Depth (m)	8
I25	13 Jun 2023	Arrive Time	1133
I25	13 Jun 2023	Depart Time	1136
I25	13 Jun 2023	Air Temp (C)	17.1
I25	13 Jun 2023	Weather	Overcast
I25	13 Jun 2023	Visibility (mi)	8
I25	13 Jun 2023	Wind Speed (kts)	2.7
I25	13 Jun 2023	Wind Dir	NW
I25	13 Jun 2023	Water Color	Green
I25	13 Jun 2023	Wave Ht Low (ft)	3
I25	13 Jun 2023	Wave Period (sec)	15
I25	13 Jun 2023	Sea State	Light Chop
I25	13 Jun 2023	High Tide (ft)	5.72
I25	13 Jun 2023	High Tide Time	1842
I25	13 Jun 2023	Low Tide (ft)	0.67
I25	13 Jun 2023	Low Tide Time	54
I25	13 Jun 2023	Comments	none
I25	20 Jun 2023	Depth (m)	9
I25	20 Jun 2023	Arrive Time	1051
I25	20 Jun 2023	Depart Time	1053
I25	20 Jun 2023	Air Temp (C)	16.8
I25	20 Jun 2023	Weather	Partly Cloudy

Station	Date	Parameter	Value
I25	20 Jun 2023	Visibility (mi)	10
I25	20 Jun 2023	Wind Speed (kts)	6.6
I25	20 Jun 2023	Wind Dir	W
I25	20 Jun 2023	Water Color	Greenish-Brown
I25	20 Jun 2023	Wave Ht Low (ft)	3
I25	20 Jun 2023	Wave Period (sec)	8
I25	20 Jun 2023	Sea State	Light Chop
I25	20 Jun 2023	High Tide (ft)	5.54
I25	20 Jun 2023	High Tide Time	2242
I25	20 Jun 2023	Low Tide (ft)	-0.56
I25	20 Jun 2023	Low Tide Time	536
I25	20 Jun 2023	Comments	none
I25	26 Jun 2023	Depth (m)	10
I25	26 Jun 2023	Arrive Time	1125
I25	26 Jun 2023	Depart Time	1129
I25	26 Jun 2023	Air Temp (C)	16.6
I25	26 Jun 2023	Weather	Clear
I25	26 Jun 2023	Visibility (mi)	10
I25	26 Jun 2023	Wind Speed (kts)	10.3
I25	26 Jun 2023	Wind Dir	NW
I25	26 Jun 2023	Water Color	Brownish-Green
I25	26 Jun 2023	Wave Ht Low (ft)	5
I25	26 Jun 2023	Wave Period (sec)	7
I25	26 Jun 2023	Sea State	Confused Swell
I25	26 Jun 2023	High Tide (ft)	4.39
I25	26 Jun 2023	High Tide Time	1648
I25	26 Jun 2023	Low Tide (ft)	1.31
I25	26 Jun 2023	Low Tide Time	930
I25	26 Jun 2023	Comments	none
I26	01 Jun 2023	Depth (m)	9
I26	01 Jun 2023	Arrive Time	1015
I26	01 Jun 2023	Depart Time	1019
I26	01 Jun 2023	Air Temp (C)	15.9
I26	01 Jun 2023	Weather	Overcast
I26	01 Jun 2023	Visibility (mi)	10
I26	01 Jun 2023	Wind Speed (kts)	9.9
I26	01 Jun 2023	Wind Dir	W
I26	01 Jun 2023	Water Color	Greenish-Brown
I26	01 Jun 2023	Wave Ht Low (ft)	3
I26	01 Jun 2023	Wave Period (sec)	12
I26	01 Jun 2023	Sea State	Light Chop
I26	01 Jun 2023	High Tide (ft)	5.81
I26	01 Jun 2023	High Tide Time	1948
I26	01 Jun 2023	Low Tide (ft)	-0.01
I26	01 Jun 2023	Low Tide Time	218
I26	01 Jun 2023	Comments	none
I26	06 Jun 2023	Depth (m)	9
I26	06 Jun 2023	Arrive Time	1119
I26	06 Jun 2023	Depart Time	1123
I26	06 Jun 2023	Air Temp (C)	16.3
I26	06 Jun 2023	Weather	Overcast
I26	06 Jun 2023	Visibility (mi)	9
I26	06 Jun 2023	Wind Speed (kts)	9.4
I26	06 Jun 2023	Wind Dir	N
I26	06 Jun 2023	Water Color	Brownish-Green
I26	06 Jun 2023	Wave Ht Low (ft)	3
I26	06 Jun 2023	Wave Period (sec)	12
I26	06 Jun 2023	Sea State	Calm

Station	Date	Parameter	Value
I26	06 Jun 2023	High Tide (ft)	6.16
I26	06 Jun 2023	High Tide Time	2306
I26	06 Jun 2023	Low Tide (ft)	-1.36
I26	06 Jun 2023	Low Tide Time	554
I26	06 Jun 2023	Comments	none
I26	13 Jun 2023	Depth (m)	9
I26	13 Jun 2023	Arrive Time	1143
I26	13 Jun 2023	Depart Time	1146
I26	13 Jun 2023	Air Temp (C)	17
I26	13 Jun 2023	Weather	Overcast
I26	13 Jun 2023	Visibility (mi)	8
I26	13 Jun 2023	Wind Speed (kts)	4.6
I26	13 Jun 2023	Wind Dir	NW
I26	13 Jun 2023	Water Color	Green
I26	13 Jun 2023	Wave Ht Low (ft)	3
I26	13 Jun 2023	Wave Period (sec)	15
I26	13 Jun 2023	Sea State	Light Chop
I26	13 Jun 2023	High Tide (ft)	5.72
I26	13 Jun 2023	High Tide Time	1842
I26	13 Jun 2023	Low Tide (ft)	0.67
I26	13 Jun 2023	Low Tide Time	54
I26	13 Jun 2023	Comments	none
I26	20 Jun 2023	Depth (m)	10
I26	20 Jun 2023	Arrive Time	1103
I26	20 Jun 2023	Depart Time	1113
I26	20 Jun 2023	Air Temp (C)	16.8
I26	20 Jun 2023	Weather	Partly Cloudy
I26	20 Jun 2023	Visibility (mi)	10
I26	20 Jun 2023	Wind Speed (kts)	7.7
I26	20 Jun 2023	Wind Dir	W
I26	20 Jun 2023	Water Color	Green
I26	20 Jun 2023	Wave Ht Low (ft)	3
I26	20 Jun 2023	Wave Period (sec)	8
I26	20 Jun 2023	Sea State	Light Chop
I26	20 Jun 2023	High Tide (ft)	5.54
I26	20 Jun 2023	High Tide Time	2242
I26	20 Jun 2023	Low Tide (ft)	-0.56
I26	20 Jun 2023	Low Tide Time	536
I26	20 Jun 2023	Comments	none
I26	26 Jun 2023	Depth (m)	9
I26	26 Jun 2023	Arrive Time	1136
I26	26 Jun 2023	Depart Time	1151
I26	26 Jun 2023	Air Temp (C)	16.7
I26	26 Jun 2023	Weather	Clear
I26	26 Jun 2023	Visibility (mi)	10
I26	26 Jun 2023	Wind Speed (kts)	9.6
I26	26 Jun 2023	Wind Dir	NW
I26	26 Jun 2023	Water Color	Brownish-Green
I26	26 Jun 2023	Wave Ht Low (ft)	5
I26	26 Jun 2023	Wave Period (sec)	7
I26	26 Jun 2023	Sea State	Confused Swell
I26	26 Jun 2023	High Tide (ft)	4.39
I26	26 Jun 2023	High Tide Time	1648
I26	26 Jun 2023	Low Tide (ft)	1.31
I26	26 Jun 2023	Low Tide Time	930
I26	26 Jun 2023	Comments	none
I32	01 Jun 2023	Depth (m)	1

Station	Date	Parameter	Value
I32	01 Jun 2023	Arrive Time	1029
I32	01 Jun 2023	Depart Time	1035
I32	01 Jun 2023	Air Temp (C)	15.8
I32	01 Jun 2023	Weather	Overcast
I32	01 Jun 2023	Visibility (mi)	10
I32	01 Jun 2023	Wind Speed (kts)	6.5
I32	01 Jun 2023	Wind Dir	NW
I32	01 Jun 2023	Water Color	Greenish-Brown
I32	01 Jun 2023	Wave Ht Low (ft)	3
I32	01 Jun 2023	Wave Period (sec)	12
I32	01 Jun 2023	Sea State	Light Chop
I32	01 Jun 2023	High Tide (ft)	5.81
I32	01 Jun 2023	High Tide Time	1948
I32	01 Jun 2023	Low Tide (ft)	-0.01
I32	01 Jun 2023	Low Tide Time	218
I32	01 Jun 2023	Comments	none
I32	06 Jun 2023	Depth (m)	10
I32	06 Jun 2023	Arrive Time	1130
I32	06 Jun 2023	Depart Time	1133
I32	06 Jun 2023	Air Temp (C)	16.5
I32	06 Jun 2023	Weather	Overcast
I32	06 Jun 2023	Visibility (mi)	9
I32	06 Jun 2023	Wind Speed (kts)	3.2
I32	06 Jun 2023	Wind Dir	W
I32	06 Jun 2023	Water Color	Brownish-Green
I32	06 Jun 2023	Wave Ht Low (ft)	3
I32	06 Jun 2023	Wave Period (sec)	12
I32	06 Jun 2023	Sea State	Calm
I32	06 Jun 2023	High Tide (ft)	6.16
I32	06 Jun 2023	High Tide Time	2306
I32	06 Jun 2023	Low Tide (ft)	-1.36
I32	06 Jun 2023	Low Tide Time	554
I32	06 Jun 2023	Comments	none
I32	13 Jun 2023	Depth (m)	10
I32	13 Jun 2023	Arrive Time	1154
I32	13 Jun 2023	Depart Time	1157
I32	13 Jun 2023	Air Temp (C)	17.1
I32	13 Jun 2023	Weather	Overcast
I32	13 Jun 2023	Visibility (mi)	8
I32	13 Jun 2023	Wind Speed (kts)	6.3
I32	13 Jun 2023	Wind Dir	NW
I32	13 Jun 2023	Water Color	Green
I32	13 Jun 2023	Wave Ht Low (ft)	3
I32	13 Jun 2023	Wave Period (sec)	15
I32	13 Jun 2023	Sea State	Light Chop
I32	13 Jun 2023	High Tide (ft)	5.72
I32	13 Jun 2023	High Tide Time	1842
I32	13 Jun 2023	Low Tide (ft)	0.67
I32	13 Jun 2023	Low Tide Time	54
I32	13 Jun 2023	Comments	none
I32	20 Jun 2023	Depth (m)	10
I32	20 Jun 2023	Arrive Time	1114
I32	20 Jun 2023	Depart Time	1115
I32	20 Jun 2023	Air Temp (C)	16.7
I32	20 Jun 2023	Weather	Partly Cloudy
I32	20 Jun 2023	Visibility (mi)	10
I32	20 Jun 2023	Wind Speed (kts)	8.9
I32	20 Jun 2023	Wind Dir	W

Station	Date	Parameter	Value
I32	20 Jun 2023	Water Color	Green
I32	20 Jun 2023	Wave Ht Low (ft)	3
I32	20 Jun 2023	Wave Period (sec)	8
I32	20 Jun 2023	Sea State	Light Chop
I32	20 Jun 2023	High Tide (ft)	5.54
I32	20 Jun 2023	High Tide Time	2242
I32	20 Jun 2023	Low Tide (ft)	-0.56
I32	20 Jun 2023	Low Tide Time	536
I32	20 Jun 2023	Comments	none
I32	26 Jun 2023	Depth (m)	9
I32	26 Jun 2023	Arrive Time	1151
I32	26 Jun 2023	Depart Time	1302
I32	26 Jun 2023	Air Temp (C)	16.7
I32	26 Jun 2023	Weather	Clear
I32	26 Jun 2023	Visibility (mi)	10
I32	26 Jun 2023	Wind Speed (kts)	9
I32	26 Jun 2023	Wind Dir	W
I32	26 Jun 2023	Water Color	Brownish-Green
I32	26 Jun 2023	Wave Ht Low (ft)	5
I32	26 Jun 2023	Wave Period (sec)	7
I32	26 Jun 2023	Sea State	Confused Swell
I32	26 Jun 2023	High Tide (ft)	4.39
I32	26 Jun 2023	High Tide Time	1648
I32	26 Jun 2023	Low Tide (ft)	1.31
I32	26 Jun 2023	Low Tide Time	930
I32	26 Jun 2023	Comments	Surface sample taken from Niskin 4; Btl 1 fired too deep
I39	01 Jun 2023	Depth (m)	20
I39	01 Jun 2023	Arrive Time	916
I39	01 Jun 2023	Depart Time	920
I39	01 Jun 2023	Air Temp (C)	15.9
I39	01 Jun 2023	Weather	Overcast
I39	01 Jun 2023	Visibility (mi)	10
I39	01 Jun 2023	Wind Speed (kts)	4.9
I39	01 Jun 2023	Wind Dir	NW
I39	01 Jun 2023	Water Color	Green
I39	01 Jun 2023	Wave Ht Low (ft)	3
I39	01 Jun 2023	Wave Period (sec)	12
I39	01 Jun 2023	Sea State	Light Chop
I39	01 Jun 2023	High Tide (ft)	5.81
I39	01 Jun 2023	High Tide Time	1948
I39	01 Jun 2023	Low Tide (ft)	-0.01
I39	01 Jun 2023	Low Tide Time	218
I39	01 Jun 2023	Comments	none
I39	06 Jun 2023	Depth (m)	18
I39	06 Jun 2023	Arrive Time	1019
I39	06 Jun 2023	Depart Time	1025
I39	06 Jun 2023	Air Temp (C)	16.2
I39	06 Jun 2023	Weather	Overcast
I39	06 Jun 2023	Visibility (mi)	9
I39	06 Jun 2023	Wind Speed (kts)	8.2
I39	06 Jun 2023	Wind Dir	S
I39	06 Jun 2023	Water Color	Blueish-Green
I39	06 Jun 2023	Wave Ht Low (ft)	3
I39	06 Jun 2023	Wave Period (sec)	12
I39	06 Jun 2023	Sea State	Calm
I39	06 Jun 2023	High Tide (ft)	6.16
I39	06 Jun 2023	High Tide Time	2306
I39	06 Jun 2023	Low Tide (ft)	-1.36

Station	Date	Parameter	Value
I39	06 Jun 2023	Low Tide Time	554
I39	06 Jun 2023	Comments	none
I39	13 Jun 2023	Depth (m)	19
I39	13 Jun 2023	Arrive Time	1042
I39	13 Jun 2023	Depart Time	1046
I39	13 Jun 2023	Air Temp (C)	16.8
I39	13 Jun 2023	Weather	Overcast
I39	13 Jun 2023	Visibility (mi)	8
I39	13 Jun 2023	Wind Speed (kts)	6.7
I39	13 Jun 2023	Wind Dir	NW
I39	13 Jun 2023	Water Color	Blueish-Green
I39	13 Jun 2023	Wave Ht Low (ft)	3
I39	13 Jun 2023	Wave Period (sec)	15
I39	13 Jun 2023	Sea State	Light Chop
I39	13 Jun 2023	High Tide (ft)	5.72
I39	13 Jun 2023	High Tide Time	1842
I39	13 Jun 2023	Low Tide (ft)	0.67
I39	13 Jun 2023	Low Tide Time	54
I39	13 Jun 2023	Comments	none
I39	20 Jun 2023	Depth (m)	18
I39	20 Jun 2023	Arrive Time	1004
I39	20 Jun 2023	Depart Time	1006
I39	20 Jun 2023	Air Temp (C)	16.8
I39	20 Jun 2023	Weather	Partly Cloudy
I39	20 Jun 2023	Visibility (mi)	10
I39	20 Jun 2023	Wind Speed (kts)	4.5
I39	20 Jun 2023	Wind Dir	W
I39	20 Jun 2023	Water Color	Green
I39	20 Jun 2023	Wave Ht Low (ft)	3
I39	20 Jun 2023	Wave Period (sec)	8
I39	20 Jun 2023	Sea State	Light Chop
I39	20 Jun 2023	High Tide (ft)	5.54
I39	20 Jun 2023	High Tide Time	2242
I39	20 Jun 2023	Low Tide (ft)	-0.56
I39	20 Jun 2023	Low Tide Time	536
I39	20 Jun 2023	Comments	none
I39	26 Jun 2023	Depth (m)	19
I39	26 Jun 2023	Arrive Time	1029
I39	26 Jun 2023	Depart Time	1033
I39	26 Jun 2023	Air Temp (C)	16.5
I39	26 Jun 2023	Weather	Clear
I39	26 Jun 2023	Visibility (mi)	10
I39	26 Jun 2023	Wind Speed (kts)	7.9
I39	26 Jun 2023	Wind Dir	NW
I39	26 Jun 2023	Water Color	Green
I39	26 Jun 2023	Wave Ht Low (ft)	5
I39	26 Jun 2023	Wave Period (sec)	7
I39	26 Jun 2023	Sea State	Confused Swell
I39	26 Jun 2023	High Tide (ft)	4.39
I39	26 Jun 2023	High Tide Time	1648
I39	26 Jun 2023	Low Tide (ft)	1.31
I39	26 Jun 2023	Low Tide Time	930
I39	26 Jun 2023	Comments	none
I40	01 Jun 2023	Depth (m)	11
I40	01 Jun 2023	Arrive Time	949
I40	01 Jun 2023	Depart Time	954
I40	01 Jun 2023	Air Temp (C)	15.9

Station	Date	Parameter	Value
I40	01 Jun 2023	Weather	Overcast
I40	01 Jun 2023	Visibility (mi)	10
I40	01 Jun 2023	Wind Speed (kts)	11
I40	01 Jun 2023	Wind Dir	W
I40	01 Jun 2023	Water Color	Greenish-Brown
I40	01 Jun 2023	Wave Ht Low (ft)	3
I40	01 Jun 2023	Wave Period (sec)	12
I40	01 Jun 2023	Sea State	Light Chop
I40	01 Jun 2023	High Tide (ft)	5.81
I40	01 Jun 2023	High Tide Time	1948
I40	01 Jun 2023	Low Tide (ft)	-0.01
I40	01 Jun 2023	Low Tide Time	218
I40	01 Jun 2023	Comments	Sewage-like odor
I40	06 Jun 2023	Depth (m)	10
I40	06 Jun 2023	Arrive Time	1056
I40	06 Jun 2023	Depart Time	1058
I40	06 Jun 2023	Air Temp (C)	16.3
I40	06 Jun 2023	Weather	Overcast
I40	06 Jun 2023	Visibility (mi)	9
I40	06 Jun 2023	Wind Speed (kts)	4.2
I40	06 Jun 2023	Wind Dir	SW
I40	06 Jun 2023	Water Color	Brownish-Green
I40	06 Jun 2023	Wave Ht Low (ft)	3
I40	06 Jun 2023	Wave Period (sec)	12
I40	06 Jun 2023	Sea State	Calm
I40	06 Jun 2023	High Tide (ft)	6.16
I40	06 Jun 2023	High Tide Time	2306
I40	06 Jun 2023	Low Tide (ft)	-1.36
I40	06 Jun 2023	Low Tide Time	554
I40	06 Jun 2023	Comments	none
I40	13 Jun 2023	Depth (m)	9
I40	13 Jun 2023	Arrive Time	1117
I40	13 Jun 2023	Depart Time	1120
I40	13 Jun 2023	Air Temp (C)	16.7
I40	13 Jun 2023	Weather	Overcast
I40	13 Jun 2023	Visibility (mi)	8
I40	13 Jun 2023	Wind Speed (kts)	4.3
I40	13 Jun 2023	Wind Dir	NW
I40	13 Jun 2023	Water Color	Blueish-Green
I40	13 Jun 2023	Wave Ht Low (ft)	3
I40	13 Jun 2023	Wave Period (sec)	15
I40	13 Jun 2023	Sea State	Light Chop
I40	13 Jun 2023	High Tide (ft)	5.72
I40	13 Jun 2023	High Tide Time	1842
I40	13 Jun 2023	Low Tide (ft)	0.67
I40	13 Jun 2023	Low Tide Time	54
I40	13 Jun 2023	Comments	none
I40	20 Jun 2023	Depth (m)	10
I40	20 Jun 2023	Arrive Time	1036
I40	20 Jun 2023	Depart Time	1038
I40	20 Jun 2023	Air Temp (C)	16.8
I40	20 Jun 2023	Weather	Partly Cloudy
I40	20 Jun 2023	Visibility (mi)	10
I40	20 Jun 2023	Wind Speed (kts)	6.4
I40	20 Jun 2023	Wind Dir	W
I40	20 Jun 2023	Water Color	Brownish-Green
I40	20 Jun 2023	Wave Ht Low (ft)	3
I40	20 Jun 2023	Wave Period (sec)	8

Station	Date	Parameter	Value
I40	20 Jun 2023	Sea State	Light Chop
I40	20 Jun 2023	High Tide (ft)	5.54
I40	20 Jun 2023	High Tide Time	2242
I40	20 Jun 2023	Low Tide (ft)	-0.56
I40	20 Jun 2023	Low Tide Time	536
I40	20 Jun 2023	Comments	none
I40	26 Jun 2023	Depth (m)	10
I40	26 Jun 2023	Arrive Time	1109
I40	26 Jun 2023	Depart Time	1113
I40	26 Jun 2023	Air Temp (C)	16.4
I40	26 Jun 2023	Weather	Clear
I40	26 Jun 2023	Visibility (mi)	10
I40	26 Jun 2023	Wind Speed (kts)	8.6
I40	26 Jun 2023	Wind Dir	NW
I40	26 Jun 2023	Water Color	Brownish-Green
I40	26 Jun 2023	Wave Ht Low (ft)	5
I40	26 Jun 2023	Wave Period (sec)	7
I40	26 Jun 2023	Sea State	Confused Swell
I40	26 Jun 2023	High Tide (ft)	4.39
I40	26 Jun 2023	High Tide Time	1648
I40	26 Jun 2023	Low Tide (ft)	1.31
I40	26 Jun 2023	Low Tide Time	930
I40	26 Jun 2023	Comments	Low tide- unable to collect 10m bin

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 (σ-t)	Chlor (μg/L)
I19	01 Jun 2023	1	16.64	61.26	9.9	33.44	8.3	24.4	9.81
I19	01 Jun 2023	2	16.62	61.12	9.8	33.44	8.3	24.4	12.04
I19	01 Jun 2023	3	16.53	60.11	9.4	33.45	8.3	24.4	14.03
I19	01 Jun 2023	4	16.37	59.60	8.5	33.45	8.2	24.5	10.62
I19	01 Jun 2023	5	15.53	62.51	7.9	33.49	8.2	24.7	9.20
I19	01 Jun 2023	6	14.74	62.98	8.1	33.46	8.1	24.8	8.04
I19	01 Jun 2023	7	14.56	69.64	7.9	33.45	8.1	24.9	7.10
I19	01 Jun 2023	8	14.46	74.06	7.4	33.45	8.0	24.9	7.82
I19	01 Jun 2023	9	14.53	72.37	6.7	33.44	8.0	24.9	7.67
I19	01 Jun 2023	10	14.33	68.49	5.8	33.47	7.9	24.9	5.94
I19	06 Jun 2023	1	17.00	58.61	10.6	33.36	8.3	24.3	9.46
I19	06 Jun 2023	2	16.90	56.82	10.3	33.35	8.3	24.3	13.41
I19	06 Jun 2023	3	16.78	54.47	9.8	33.33	8.3	24.3	11.84
I19	06 Jun 2023	4	16.65	59.54	9.4	33.34	8.2	24.3	7.15
I19	06 Jun 2023	5	16.57	65.44	9.3	33.36	8.2	24.4	5.44
I19	06 Jun 2023	6	16.54	68.08	9.2	33.37	8.2	24.4	4.81
I19	06 Jun 2023	7	16.52	69.10	9.2	33.37	8.2	24.4	4.50
I19	06 Jun 2023	8	16.47	68.95	8.8	33.37	8.2	24.4	4.13
I19	06 Jun 2023	9	16.04	65.03	8.1	33.41	8.1	24.5	4.15
I19	06 Jun 2023	10	15.54	59.06	7.5	33.45	8.1	24.7	3.90
I19	13 Jun 2023	1	16.35	67.28	7.7	33.40	8.1	24.4	3.78
I19	13 Jun 2023	2	15.58	68.46	7.3	33.45	8.1	24.7	3.80
I19	13 Jun 2023	3	14.83	73.32	6.9	33.45	8.0	24.8	4.04
I19	13 Jun 2023	4	13.95	75.69	6.5	33.45	8.0	25.0	4.34
I19	13 Jun 2023	5	13.53	76.43	5.4	33.44	7.9	25.1	4.37
I19	13 Jun 2023	6	13.35	74.59	4.8	33.44	7.8	25.1	4.76
I19	13 Jun 2023	7	13.27	70.81	4.6	33.44	7.8	25.1	4.91
I19	13 Jun 2023	8	13.28	67.18	4.1	33.44	7.7	25.1	4.73
I19	13 Jun 2023	9	13.19	49.58	3.7	33.45	7.7	25.2	4.12
I19	13 Jun 2023	10	13.20	33.76	3.7	33.45	7.7	25.2	3.63
I19	20 Jun 2023	1	16.91	77.00	8.2	33.41	8.1	24.3	0.86
I19	20 Jun 2023	2	16.58	75.10	8.0	33.41	8.1	24.4	1.06
I19	20 Jun 2023	3	15.42	70.04	8.0	33.43	8.1	24.7	2.01
I19	20 Jun 2023	4	14.86	69.94	8.0	33.43	8.1	24.8	2.86
I19	20 Jun 2023	5	14.15	73.52	8.0	33.42	8.1	24.9	3.55
I19	20 Jun 2023	6	13.45	77.34	7.6	33.42	8.0	25.1	3.65
I19	20 Jun 2023	7	13.09	76.06	7.1	33.41	8.0	25.1	5.64
I19	20 Jun 2023	8	12.74	67.66	6.7	33.41	8.0	25.2	8.76
I19	20 Jun 2023	9	12.66	65.98	6.5	33.41	8.0	25.2	8.68
I19	20 Jun 2023	10	12.61	66.82	6.4	33.41	7.9	25.2	7.04
I19	26 Jun 2023	1	15.89	51.78	8.2	33.06	8.1	24.3	1.68
I19	26 Jun 2023	2	15.45	51.58	8.4	33.18	8.1	24.5	2.12
I19	26 Jun 2023	3	15.44	54.02	8.2	33.30	8.1	24.6	3.08
I19	26 Jun 2023	4	14.29	59.33	8.4	33.46	8.1	24.9	4.46
I19	26 Jun 2023	5	13.13	67.88	8.1	33.44	8.1	25.2	6.77
I19	26 Jun 2023	6	12.39	69.96	7.1	33.43	8.0	25.3	11.36
I19	26 Jun 2023	7	12.00	64.97	6.3	33.43	7.9	25.4	13.83
I19	26 Jun 2023	8	11.93	64.80	5.9	33.42	7.9	25.4	13.17
I19	26 Jun 2023	9	11.87	65.08	5.8	33.42	7.9	25.4	11.38
I19	26 Jun 2023	10	11.86	63.33	5.6	33.42	7.8	25.4	10.33

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (μg/L)
I24	01 Jun 2023	1	16.37	75.49	8.6	33.49	8.2	24.5	2.29
I24	01 Jun 2023	2	16.34	75.42	8.5	33.49	8.2	24.5	2.74
I24	01 Jun 2023	3	16.06	75.19	7.9	33.49	8.2	24.6	3.25
I24	01 Jun 2023	4	15.31	75.76	7.0	33.49	8.1	24.7	6.79
I24	01 Jun 2023	5	14.60	70.24	6.7	33.47	8.0	24.9	10.44
I24	01 Jun 2023	6	14.47	68.45	6.1	33.47	8.0	24.9	8.60
I24	01 Jun 2023	7	14.49	70.86	5.8	33.47	7.9	24.9	7.39
I24	01 Jun 2023	8	14.43	73.44	5.2	33.47	7.9	24.9	6.05
I24	01 Jun 2023	9	14.33	74.05	4.8	33.48	7.8	24.9	5.48
I24	01 Jun 2023	10	14.25	69.68	4.6	33.48	7.8	25.0	3.91
I24	06 Jun 2023	1	16.16	79.61	9.0	33.45	8.2	24.5	1.45
I24	06 Jun 2023	2	16.18	79.89	9.0	33.46	8.2	24.5	1.51
I24	06 Jun 2023	3	16.14	80.00	9.0	33.46	8.2	24.5	1.69
I24	06 Jun 2023	4	16.11	79.88	9.0	33.46	8.2	24.5	2.09
I24	06 Jun 2023	5	16.10	79.64	9.1	33.45	8.2	24.5	2.84
I24	06 Jun 2023	6	16.08	78.73	9.1	33.45	8.2	24.5	5.04
I24	06 Jun 2023	7	15.98	75.48	9.0	33.45	8.2	24.6	6.99
I24	06 Jun 2023	8	15.82	73.00	8.7	33.45	8.2	24.6	7.58
I24	06 Jun 2023	9	15.28	72.01	7.9	33.46	8.1	24.7	6.96
I24	06 Jun 2023	10	14.42	72.12	7.1	33.49	8.0	24.9	6.42
I24	13 Jun 2023	1	16.91	83.41	8.7	33.45	8.2	24.3	0.81
I24	13 Jun 2023	2	16.90	83.26	8.6	33.45	8.2	24.3	0.86
I24	13 Jun 2023	3	16.77	82.89	8.6	33.45	8.2	24.4	1.16
I24	13 Jun 2023	4	16.62	82.01	8.2	33.44	8.1	24.4	1.54
I24	13 Jun 2023	5	15.48	81.34	7.5	33.46	8.1	24.7	1.77
I24	13 Jun 2023	6	14.15	80.79	7.5	33.44	8.0	24.9	1.39
I24	13 Jun 2023	7	14.07	82.84	7.2	33.41	8.0	24.9	1.22
I24	13 Jun 2023	8	13.83	83.18	6.2	33.42	8.0	25.0	1.04
I24	13 Jun 2023	9	13.58	77.50	4.6	33.44	7.8	25.1	1.23
I24	20 Jun 2023	1	16.16	77.85	9.0	33.42	8.1	24.5	1.74
I24	20 Jun 2023	2	16.09	77.79	9.0	33.42	8.1	24.5	1.92
I24	20 Jun 2023	3	16.00	77.32	8.9	33.42	8.1	24.5	2.14
I24	20 Jun 2023	4	15.66	77.07	8.6	33.43	8.1	24.6	2.51
I24	20 Jun 2023	5	14.94	77.25	7.9	33.44	8.1	24.8	2.36
I24	20 Jun 2023	6	13.35	78.30	7.5	33.45	8.0	25.1	3.15
I24	20 Jun 2023	7	13.23	76.79	7.2	33.41	8.0	25.1	5.18
I24	20 Jun 2023	8	12.85	74.40	6.8	33.43	8.0	25.2	6.00
I24	20 Jun 2023	9	12.61	65.24	6.3	33.42	7.9	25.2	4.29
I24	20 Jun 2023	10	12.60	54.16	6.2	33.42	7.9	25.2	2.90
I24	20 Jun 2023	11	12.62	52.95	6.3	33.42	7.9	25.2	2.59
I24	26 Jun 2023	1	16.21	78.43	8.8	33.43	8.1	24.5	0.88
I24	26 Jun 2023	2	15.74	78.56	8.7	33.46	8.1	24.6	0.93
I24	26 Jun 2023	3	15.33	77.13	8.6	33.44	8.1	24.7	1.21
I24	26 Jun 2023	4	14.52	74.09	8.5	33.45	8.1	24.9	1.74
I24	26 Jun 2023	5	13.91	71.79	8.3	33.44	8.1	25.0	2.80
I24	26 Jun 2023	6	12.64	70.78	7.9	33.43	8.0	25.2	4.07
I24	26 Jun 2023	7	12.46	75.78	7.5	33.40	8.0	25.3	4.16
I24	26 Jun 2023	8	12.52	77.94	7.3	33.39	8.0	25.2	4.39
I24	26 Jun 2023	9	12.27	76.42	6.6	33.41	8.0	25.3	4.86
I24	26 Jun 2023	10	12.19	68.13	6.0	33.42	7.9	25.3	5.83
I24	26 Jun 2023	11	12.19	59.53	5.8	33.42	7.8	25.3	6.30
I25	01 Jun 2023	1	16.28	79.31	8.7	33.50	8.2	24.5	1.83
I25	01 Jun 2023	2	16.26	79.21	8.7	33.50	8.2	24.5	2.14
I25	01 Jun 2023	3	16.12	78.82	8.4	33.50	8.2	24.6	3.78
I25	01 Jun 2023	4	15.77	77.07	7.4	33.49	8.2	24.6	6.17
I25	01 Jun 2023	5	14.83	73.53	5.8	33.52	8.0	24.9	8.69

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (μg/L)
I25	01 Jun 2023	6	14.32	72.91	5.1	33.48	7.9	24.9	5.83
I25	01 Jun 2023	7	14.28	79.04	5.2	33.47	7.8	24.9	3.03
I25	01 Jun 2023	8	14.29	80.05	5.3	33.46	7.8	24.9	1.87
I25	01 Jun 2023	9	14.28	79.72	5.3	33.46	7.8	24.9	1.63
I25	06 Jun 2023	1	16.12	80.48	9.1	33.46	8.2	24.5	1.34
I25	06 Jun 2023	2	16.12	80.52	9.1	33.46	8.2	24.5	1.40
I25	06 Jun 2023	3	16.09	80.54	9.1	33.46	8.2	24.5	1.64
I25	06 Jun 2023	4	16.06	80.36	9.1	33.46	8.2	24.5	2.32
I25	06 Jun 2023	5	16.03	79.50	9.2	33.45	8.2	24.6	3.52
I25	06 Jun 2023	6	16.00	78.07	9.1	33.45	8.2	24.6	4.82
I25	06 Jun 2023	7	15.84	76.18	8.8	33.44	8.2	24.6	6.94
I25	06 Jun 2023	8	15.29	73.21	8.1	33.45	8.1	24.7	7.59
I25	06 Jun 2023	9	14.94	69.71	7.4	33.45	8.0	24.8	5.85
I25	13 Jun 2023	1	16.93	81.40	8.7	33.46	8.2	24.4	0.58
I25	13 Jun 2023	2	16.89	79.92	8.7	33.46	8.2	24.4	0.61
I25	13 Jun 2023	3	16.80	85.47	8.6	33.46	8.2	24.4	0.74
I25	13 Jun 2023	4	16.52	85.34	8.6	33.45	8.2	24.4	0.91
I25	13 Jun 2023	5	15.88	85.19	8.5	33.46	8.1	24.6	1.19
I25	13 Jun 2023	6	15.44	84.52	8.6	33.45	8.1	24.7	1.62
I25	13 Jun 2023	7	14.89	83.38	8.6	33.43	8.1	24.8	1.88
I25	13 Jun 2023	8	14.10	82.83	8.4	33.42	8.1	24.9	2.15
I25	13 Jun 2023	9	14.03	81.12	8.3	33.40	8.1	24.9	1.99
I25	20 Jun 2023	1	16.40	83.60	9.2	33.44	8.2	24.5	1.14
I25	20 Jun 2023	2	16.16	82.19	9.3	33.44	8.2	24.5	1.67
I25	20 Jun 2023	3	16.06	78.11	9.3	33.43	8.2	24.5	2.32
I25	20 Jun 2023	4	15.86	76.81	9.2	33.42	8.2	24.6	3.31
I25	20 Jun 2023	5	15.43	76.09	8.9	33.42	8.1	24.7	4.36
I25	20 Jun 2023	6	14.92	74.70	8.5	33.44	8.1	24.8	4.39
I25	20 Jun 2023	7	13.73	79.06	8.2	33.43	8.1	25.0	3.95
I25	20 Jun 2023	8	13.11	79.90	8.0	33.42	8.1	25.1	3.64
I25	20 Jun 2023	9	13.13	80.94	8.1	33.41	8.0	25.1	2.90
I25	26 Jun 2023	1	16.48	80.03	9.2	33.45	8.2	24.4	0.86
I25	26 Jun 2023	2	16.42	79.91	9.0	33.44	8.2	24.5	0.87
I25	26 Jun 2023	3	14.74	79.68	9.2	33.48	8.2	24.9	1.05
I25	26 Jun 2023	4	13.73	76.20	9.2	33.43	8.1	25.0	1.64
I25	26 Jun 2023	5	13.57	70.65	9.0	33.41	8.1	25.0	2.43
I25	26 Jun 2023	6	13.21	65.79	8.5	33.41	8.1	25.1	4.90
I25	26 Jun 2023	7	12.53	64.32	8.0	33.41	8.0	25.3	8.18
I25	26 Jun 2023	8	12.55	73.88	7.7	33.41	8.0	25.2	8.14
I26	01 Jun 2023	1	16.40	71.64	8.6	33.48	8.2	24.5	3.39
I26	01 Jun 2023	2	16.31	71.90	8.6	33.49	8.2	24.5	4.79
I26	01 Jun 2023	3	15.89	71.31	8.6	33.49	8.2	24.6	9.02
I26	01 Jun 2023	4	14.91	70.71	8.4	33.49	8.2	24.8	9.62
I26	01 Jun 2023	5	14.61	74.31	7.6	33.47	8.1	24.9	7.55
I26	01 Jun 2023	6	14.35	76.76	6.6	33.47	8.0	24.9	6.13
I26	01 Jun 2023	7	14.08	77.21	5.8	33.46	7.9	25.0	3.83
I26	01 Jun 2023	8	14.06	80.42	5.8	33.46	7.9	25.0	2.47
I26	01 Jun 2023	9	14.06	80.56	5.8	33.46	7.9	25.0	1.88
I26	06 Jun 2023	1	16.32	68.98	9.7	33.43	8.2	24.5	3.04
I26	06 Jun 2023	2	16.26	68.87	9.7	33.44	8.2	24.5	3.80
I26	06 Jun 2023	3	16.19	66.54	9.5	33.44	8.2	24.5	7.09
I26	06 Jun 2023	4	15.93	63.80	9.0	33.45	8.2	24.6	8.50
I26	06 Jun 2023	5	15.50	65.28	8.4	33.45	8.1	24.7	7.47
I26	06 Jun 2023	6	15.46	67.63	8.2	33.44	8.1	24.7	6.34
I26	06 Jun 2023	7	15.46	70.06	8.0	33.44	8.1	24.7	5.72

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (μg/L)
I26	06 Jun 2023	8	15.02	71.73	7.3	33.46	8.0	24.8	4.09
I26	06 Jun 2023	9	14.60	74.63	6.9	33.45	8.0	24.9	2.20
I26	13 Jun 2023	1	16.80	86.35	8.8	33.46	8.2	24.4	0.55
I26	13 Jun 2023	2	16.74	86.28	8.8	33.46	8.2	24.4	0.61
I26	13 Jun 2023	3	16.70	85.97	8.8	33.46	8.2	24.4	0.66
I26	13 Jun 2023	4	16.67	85.79	8.8	33.46	8.2	24.4	0.76
I26	13 Jun 2023	5	16.29	85.74	9.0	33.46	8.2	24.5	0.93
I26	13 Jun 2023	6	15.81	86.02	9.1	33.45	8.2	24.6	1.06
I26	13 Jun 2023	7	15.18	87.56	9.3	33.44	8.2	24.7	1.03
I26	13 Jun 2023	8	14.43	88.79	9.3	33.42	8.2	24.9	1.06
I26	13 Jun 2023	9	14.07	88.75	9.2	33.41	8.1	24.9	1.11
I26	20 Jun 2023	1	16.39	82.76	9.1	33.44	8.2	24.5	0.98
I26	20 Jun 2023	2	16.25	82.76	9.1	33.45	8.2	24.5	1.04
I26	20 Jun 2023	3	16.05	81.98	9.3	33.44	8.2	24.5	1.45
I26	20 Jun 2023	4	16.11	81.35	9.2	33.43	8.2	24.5	1.65
I26	20 Jun 2023	5	15.85	81.25	9.0	33.44	8.2	24.6	1.77
I26	20 Jun 2023	6	15.31	81.08	8.9	33.46	8.2	24.7	1.88
I26	20 Jun 2023	7	14.35	81.49	8.9	33.46	8.1	24.9	1.97
I26	20 Jun 2023	8	13.78	83.12	8.8	33.44	8.1	25.0	2.57
I26	20 Jun 2023	9	13.36	81.85	8.2	33.43	8.1	25.1	3.00
I26	26 Jun 2023	1	16.48	78.92	9.2	33.44	8.2	24.4	0.85
I26	26 Jun 2023	2	16.39	78.23	9.1	33.44	8.2	24.5	0.90
I26	26 Jun 2023	3	15.81	78.33	8.6	33.46	8.2	24.6	1.08
I26	26 Jun 2023	4	13.67	74.53	9.1	33.48	8.1	25.1	1.52
I26	26 Jun 2023	5	12.98	74.91	9.2	33.41	8.1	25.2	1.79
I26	26 Jun 2023	6	12.71	78.66	8.4	33.41	8.1	25.2	2.14
I26	26 Jun 2023	7	12.26	78.27	7.4	33.41	8.0	25.3	3.88
I26	26 Jun 2023	8	12.12	72.20	6.9	33.40	8.0	25.3	6.64
I26	26 Jun 2023	9	12.12	70.78	6.9	33.40	8.0	25.3	6.34
I32	01 Jun 2023	1	16.29	65.29	8.3	33.46	8.2	24.5	5.78
I32	01 Jun 2023	2	16.28	65.03	8.3	33.46	8.2	24.5	6.60
I32	01 Jun 2023	3	16.26	64.92	8.0	33.47	8.2	24.5	7.94
I32	01 Jun 2023	4	15.19	65.72	7.3	33.49	8.1	24.8	7.27
I32	01 Jun 2023	5	14.34	72.13	6.8	33.46	8.0	24.9	6.67
I32	01 Jun 2023	6	14.08	73.44	6.7	33.45	8.0	25.0	6.35
I32	01 Jun 2023	7	13.94	73.72	6.5	33.44	8.0	25.0	5.86
I32	01 Jun 2023	8	13.87	73.84	6.3	33.44	7.9	25.0	5.59
I32	01 Jun 2023	9	13.85	72.85	6.2	33.44	7.9	25.0	4.75
I32	01 Jun 2023	10	13.84	70.26	6.0	33.44	7.9	25.0	3.64
I32	06 Jun 2023	1	17.00	42.58	9.0	33.10	8.1	24.1	7.39
I32	06 Jun 2023	2	16.78	43.17	9.3	33.29	8.2	24.3	8.14
I32	06 Jun 2023	3	16.72	54.58	9.3	33.31	8.2	24.3	8.80
I32	06 Jun 2023	4	16.65	57.99	9.3	33.33	8.2	24.3	10.42
I32	06 Jun 2023	5	16.59	57.48	9.2	33.34	8.2	24.3	10.72
I32	06 Jun 2023	6	16.56	57.84	9.2	33.34	8.2	24.3	10.71
I32	06 Jun 2023	7	16.53	58.87	8.9	33.34	8.2	24.4	9.90
I32	06 Jun 2023	8	16.44	60.37	8.6	33.34	8.1	24.4	7.59
I32	06 Jun 2023	9	16.27	60.43	8.5	33.38	8.1	24.4	5.11
I32	13 Jun 2023	1	16.99	82.15	8.7	33.46	8.2	24.3	0.91
I32	13 Jun 2023	2	16.91	81.24	8.7	33.46	8.2	24.4	1.11
I32	13 Jun 2023	3	16.88	80.88	8.6	33.46	8.2	24.4	1.35
I32	13 Jun 2023	4	16.74	80.41	8.5	33.46	8.2	24.4	1.73
I32	13 Jun 2023	5	16.52	79.05	8.3	33.45	8.1	24.4	2.41
I32	13 Jun 2023	6	16.01	75.90	8.0	33.45	8.1	24.6	3.54
I32	13 Jun 2023	7	14.81	72.35	7.5	33.47	8.1	24.8	4.39

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (μg/L)
I32	13 Jun 2023	8	14.35	71.31	6.6	33.43	8.0	24.9	5.61
I32	13 Jun 2023	9	13.91	51.98	6.3	33.42	7.9	25.0	4.14
I32	20 Jun 2023	1	16.52	75.18	8.4	33.40	8.1	24.4	0.98
I32	20 Jun 2023	2	16.33	74.66	8.0	33.39	8.1	24.4	1.13
I32	20 Jun 2023	3	14.75	73.95	8.2	33.45	8.1	24.8	1.93
I32	20 Jun 2023	4	14.14	68.44	8.4	33.41	8.1	24.9	3.22
I32	20 Jun 2023	5	13.49	65.59	7.9	33.41	8.1	25.1	5.66
I32	20 Jun 2023	6	13.13	67.46	7.3	33.39	8.0	25.1	6.33
I32	20 Jun 2023	7	12.97	67.71	7.1	33.38	8.0	25.1	5.64
I32	20 Jun 2023	8	12.82	69.02	7.0	33.39	8.0	25.2	4.42
I32	20 Jun 2023	9	12.79	67.85	6.9	33.40	8.0	25.2	3.05
I32	20 Jun 2023	10	12.79	63.47	6.9	33.40	8.0	25.2	2.46
I32	26 Jun 2023	1	15.87	73.09	8.7	33.43	8.1	24.6	1.06
I32	26 Jun 2023	2	15.90	73.02	8.6	33.43	8.1	24.6	1.03
I32	26 Jun 2023	3	15.90	73.18	8.5	33.43	8.1	24.6	1.08
I32	26 Jun 2023	4	15.52	73.45	8.1	33.43	8.1	24.6	1.53
I32	26 Jun 2023	5	14.63	64.39	7.8	33.43	8.0	24.8	2.65
I32	26 Jun 2023	6	13.40	53.15	7.4	33.46	8.0	25.1	5.43
I32	26 Jun 2023	7	12.45	52.30	6.7	33.41	8.0	25.3	7.99
I32	26 Jun 2023	8	12.29	56.52	6.2	33.40	7.9	25.3	8.10
I32	26 Jun 2023	9	12.29	51.80	6.2	33.40	7.9	25.3	8.38
I39	01 Jun 2023	1	16.11	83.13	9.1	33.49	8.2	24.6	1.56
I39	01 Jun 2023	2	16.10	83.16	9.0	33.49	8.2	24.6	1.71
I39	01 Jun 2023	3	15.92	82.86	9.0	33.50	8.2	24.6	3.09
I39	01 Jun 2023	4	15.70	81.47	8.5	33.47	8.2	24.6	4.26
I39	01 Jun 2023	5	14.71	76.96	7.9	33.48	8.1	24.9	5.07
I39	01 Jun 2023	6	14.51	74.22	7.7	33.46	8.1	24.9	5.88
I39	01 Jun 2023	7	14.27	74.74	7.5	33.46	8.1	24.9	6.18
I39	01 Jun 2023	8	14.04	74.95	6.9	33.47	8.0	25.0	6.27
I39	01 Jun 2023	9	13.92	75.05	6.5	33.47	8.0	25.0	5.20
I39	01 Jun 2023	10	13.86	78.13	6.5	33.46	8.0	25.0	4.60
I39	01 Jun 2023	11	13.72	79.96	6.4	33.47	8.0	25.1	4.66
I39	01 Jun 2023	12	13.47	80.70	6.3	33.47	7.9	25.1	4.97
I39	01 Jun 2023	13	13.45	81.63	6.4	33.46	7.9	25.1	4.65
I39	01 Jun 2023	14	13.33	82.81	6.3	33.47	7.9	25.1	4.08
I39	01 Jun 2023	15	13.17	84.29	6.3	33.46	7.9	25.2	2.66
I39	01 Jun 2023	16	13.11	85.80	6.3	33.46	7.9	25.2	1.65
I39	01 Jun 2023	17	13.11	86.23	6.2	33.46	7.9	25.2	1.43
I39	01 Jun 2023	18	13.11	85.99	6.2	33.46	7.9	25.2	1.06
I39	06 Jun 2023	1	16.21	80.17	8.8	33.47	8.2	24.5	2.09
I39	06 Jun 2023	2	16.21	80.14	8.8	33.47	8.2	24.5	2.05
I39	06 Jun 2023	3	16.20	80.36	8.8	33.47	8.2	24.5	2.17
I39	06 Jun 2023	4	16.16	80.34	8.9	33.47	8.2	24.5	2.59
I39	06 Jun 2023	5	16.16	80.15	8.9	33.47	8.2	24.5	2.86
I39	06 Jun 2023	6	16.14	79.96	8.9	33.47	8.2	24.5	2.91
I39	06 Jun 2023	7	16.08	79.81	8.9	33.47	8.2	24.6	3.11
I39	06 Jun 2023	8	16.05	79.83	8.9	33.46	8.2	24.6	3.19
I39	06 Jun 2023	9	16.00	79.88	8.9	33.46	8.2	24.6	3.11
I39	06 Jun 2023	10	15.90	79.95	9.0	33.46	8.2	24.6	3.23
I39	06 Jun 2023	11	15.84	80.17	9.0	33.46	8.2	24.6	3.28
I39	06 Jun 2023	12	15.79	80.35	9.0	33.45	8.2	24.6	3.33
I39	06 Jun 2023	13	15.69	80.50	9.1	33.45	8.2	24.6	3.28
I39	06 Jun 2023	14	15.48	80.66	9.1	33.45	8.2	24.7	3.47
I39	06 Jun 2023	15	15.25	80.04	8.9	33.44	8.2	24.7	3.90
I39	06 Jun 2023	16	14.51	78.98	8.4	33.45	8.1	24.9	5.35
I39	06 Jun 2023	17	13.27	76.45	7.6	33.46	8.1	25.1	5.84
I39	06 Jun 2023	18	13.08	76.86	7.2	33.43	8.0	25.2	5.15

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (µg/L)
I39	13 Jun 2023	1	16.76	86.95	8.8	33.46	8.2	24.4	0.87
I39	13 Jun 2023	2	16.73	86.75	8.8	33.46	8.2	24.4	1.01
I39	13 Jun 2023	3	16.70	86.35	8.8	33.46	8.2	24.4	1.14
I39	13 Jun 2023	4	16.66	86.26	8.8	33.46	8.2	24.4	1.38
I39	13 Jun 2023	5	16.57	86.20	8.8	33.46	8.2	24.4	1.55
I39	13 Jun 2023	6	16.25	86.66	8.7	33.46	8.2	24.5	1.35
I39	13 Jun 2023	7	14.99	88.79	9.0	33.47	8.1	24.8	1.21
I39	13 Jun 2023	8	14.57	90.18	9.1	33.41	8.1	24.8	1.31
I39	13 Jun 2023	9	14.38	89.93	9.1	33.40	8.1	24.9	1.48
I39	13 Jun 2023	10	14.32	89.27	9.1	33.38	8.1	24.9	1.84
I39	13 Jun 2023	11	14.21	88.72	9.1	33.38	8.1	24.9	2.10
I39	13 Jun 2023	12	14.15	88.02	9.0	33.38	8.1	24.9	2.39
I39	13 Jun 2023	13	14.04	87.41	8.6	33.37	8.1	24.9	2.74
I39	13 Jun 2023	14	13.38	86.80	7.7	33.39	8.1	25.1	2.23
I39	13 Jun 2023	15	13.17	87.40	7.0	33.38	8.0	25.1	1.57
I39	13 Jun 2023	16	13.06	87.92	6.5	33.38	7.9	25.1	1.35
I39	13 Jun 2023	17	12.86	87.78	6.1	33.40	7.9	25.2	1.41
I39	13 Jun 2023	18	12.71	87.29	5.7	33.42	7.9	25.2	1.24
I39	20 Jun 2023	1	15.95	81.71	8.8	33.45	8.2	24.6	1.15
I39	20 Jun 2023	2	15.83	81.68	8.8	33.46	8.2	24.6	1.28
I39	20 Jun 2023	3	15.77	81.74	8.8	33.45	8.2	24.6	1.41
I39	20 Jun 2023	4	15.73	81.70	8.8	33.45	8.1	24.6	1.66
I39	20 Jun 2023	5	15.70	81.59	8.8	33.45	8.1	24.6	1.86
I39	20 Jun 2023	6	15.66	81.60	8.8	33.45	8.1	24.6	2.05
I39	20 Jun 2023	7	15.52	81.76	8.8	33.45	8.1	24.7	2.13
I39	20 Jun 2023	8	15.44	82.16	8.8	33.45	8.1	24.7	2.39
I39	20 Jun 2023	9	15.38	82.19	8.8	33.44	8.1	24.7	2.69
I39	20 Jun 2023	10	15.37	82.09	8.8	33.44	8.1	24.7	3.07
I39	20 Jun 2023	11	15.31	82.11	8.8	33.44	8.1	24.7	3.21
I39	20 Jun 2023	12	15.26	82.00	8.7	33.44	8.1	24.7	3.44
I39	20 Jun 2023	13	15.16	81.98	8.7	33.45	8.1	24.7	3.50
I39	20 Jun 2023	14	14.91	81.57	8.7	33.45	8.1	24.8	3.76
I39	20 Jun 2023	15	14.93	81.63	8.6	33.43	8.1	24.8	4.16
I39	20 Jun 2023	16	14.21	81.68	8.3	33.46	8.1	25.0	4.33
I39	20 Jun 2023	17	13.88	82.69	7.9	33.45	8.1	25.0	4.18
I39	20 Jun 2023	18	12.61	84.69	7.6	33.47	8.0	25.3	3.65
I39	26 Jun 2023	1	16.66	77.84	9.4	33.44	8.2	24.4	0.89
I39	26 Jun 2023	2	16.39	77.65	9.2	33.44	8.2	24.5	0.98
I39	26 Jun 2023	3	14.87	76.53	9.4	33.45	8.2	24.8	1.25
I39	26 Jun 2023	4	14.45	77.90	9.4	33.41	8.1	24.9	1.54
I39	26 Jun 2023	5	13.97	80.04	9.2	33.41	8.1	25.0	1.81
I39	26 Jun 2023	6	13.16	81.32	9.1	33.40	8.1	25.1	2.70
I39	26 Jun 2023	7	13.02	79.54	9.0	33.39	8.1	25.1	3.48
I39	26 Jun 2023	8	12.55	77.32	8.9	33.39	8.1	25.2	5.74
I39	26 Jun 2023	9	12.43	77.88	8.7	33.39	8.1	25.3	7.89
I39	26 Jun 2023	10	12.41	78.73	8.7	33.39	8.1	25.3	9.01
I39	26 Jun 2023	11	12.42	78.51	8.6	33.40	8.1	25.3	8.77
I39	26 Jun 2023	12	12.31	79.67	8.3	33.40	8.1	25.3	8.24
I39	26 Jun 2023	13	12.22	79.52	7.9	33.41	8.0	25.3	9.46
I39	26 Jun 2023	14	12.13	79.43	7.5	33.41	8.0	25.3	8.76
I39	26 Jun 2023	15	11.81	80.86	6.6	33.42	8.0	25.4	6.81
I39	26 Jun 2023	16	11.71	83.40	6.2	33.42	7.9	25.4	5.10
I39	26 Jun 2023	17	11.74	83.94	6.2	33.42	7.9	25.4	4.73
I39	26 Jun 2023	18	11.63	82.86	6.0	33.43	7.9	25.4	3.74
I40	01 Jun 2023	1	16.46	54.11	8.1	33.23	8.2	24.3	8.53
I40	01 Jun 2023	2	16.19	54.10	7.7	33.36	8.2	24.4	9.80
I40	01 Jun 2023	3	15.57	57.76	7.8	33.46	8.1	24.7	8.80

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (μg/L)
I40	01 Jun 2023	4	15.25	66.42	8.4	33.45	8.1	24.7	7.84
I40	01 Jun 2023	5	14.46	72.28	8.9	33.44	8.2	24.9	6.63
I40	01 Jun 2023	6	14.39	76.18	7.8	33.43	8.1	24.9	5.78
I40	01 Jun 2023	7	14.43	75.95	6.8	33.45	8.0	24.9	5.46
I40	01 Jun 2023	8	14.42	72.83	6.6	33.46	8.0	24.9	5.31
I40	01 Jun 2023	9	14.43	72.07	6.4	33.46	8.0	24.9	4.90
I40	01 Jun 2023	10	14.45	70.27	6.0	33.47	7.9	24.9	3.90
I40	06 Jun 2023	1	16.55	73.53	9.6	33.42	8.2	24.4	2.95
I40	06 Jun 2023	2	16.53	73.14	9.6	33.42	8.2	24.4	3.49
I40	06 Jun 2023	3	16.52	72.04	9.7	33.42	8.2	24.4	4.82
I40	06 Jun 2023	4	16.49	70.92	9.7	33.41	8.2	24.4	6.79
I40	06 Jun 2023	5	16.45	68.20	9.6	33.41	8.2	24.4	9.30
I40	06 Jun 2023	6	16.45	67.53	9.5	33.41	8.2	24.4	9.57
I40	06 Jun 2023	7	16.43	70.06	9.4	33.42	8.2	24.4	7.72
I40	06 Jun 2023	8	16.34	72.79	8.9	33.42	8.2	24.5	5.33
I40	06 Jun 2023	9	16.09	72.24	8.1	33.42	8.1	24.5	4.17
I40	13 Jun 2023	1	16.73	77.54	7.9	33.42	8.1	24.4	1.23
I40	13 Jun 2023	2	16.54	77.45	7.5	33.44	8.1	24.4	1.37
I40	13 Jun 2023	3	16.01	77.13	6.7	33.44	8.1	24.5	2.23
I40	13 Jun 2023	4	15.14	74.11	5.4	33.47	8.0	24.8	3.59
I40	13 Jun 2023	5	14.10	71.43	3.9	33.47	7.8	25.0	4.37
I40	13 Jun 2023	6	13.67	66.02	3.5	33.46	7.7	25.1	4.54
I40	13 Jun 2023	7	13.53	64.60	3.3	33.45	7.7	25.1	3.79
I40	13 Jun 2023	8	13.49	57.51	3.2	33.44	7.6	25.1	3.02
I40	13 Jun 2023	9	13.46	49.75	3.2	33.44	7.6	25.1	2.84
I40	20 Jun 2023	1	16.77	73.84	8.4	33.33	8.1	24.3	1.06
I40	20 Jun 2023	2	16.47	76.72	8.6	33.37	8.1	24.4	1.23
I40	20 Jun 2023	3	16.14	78.34	8.6	33.42	8.1	24.5	1.53
I40	20 Jun 2023	4	15.41	80.08	8.5	33.43	8.1	24.7	2.21
I40	20 Jun 2023	5	14.41	80.21	8.1	33.43	8.1	24.9	3.44
I40	20 Jun 2023	6	13.27	78.15	7.5	33.44	8.0	25.1	3.65
I40	20 Jun 2023	7	12.76	77.58	7.0	33.41	8.0	25.2	7.05
I40	20 Jun 2023	8	12.61	70.08	6.5	33.41	8.0	25.2	9.85
I40	20 Jun 2023	9	12.57	60.20	6.2	33.41	7.9	25.2	5.63
I40	26 Jun 2023	1	14.52	66.71	8.0	33.42	8.0	24.9	1.06
I40	26 Jun 2023	2	14.47	66.96	8.0	33.42	8.0	24.9	1.21
I40	26 Jun 2023	3	14.00	66.66	7.8	33.44	8.0	25.0	1.82
I40	26 Jun 2023	4	13.09	65.84	8.2	33.43	8.0	25.2	3.58
I40	26 Jun 2023	5	13.05	69.41	8.3	33.41	8.0	25.2	5.19
I40	26 Jun 2023	6	12.74	68.99	8.2	33.42	8.0	25.2	9.37
I40	26 Jun 2023	7	12.61	67.62	7.6	33.42	8.0	25.2	12.77
I40	26 Jun 2023	8	12.42	64.09	6.7	33.42	7.9	25.3	16.14
I40	26 Jun 2023	9	12.11	60.15	5.9	33.43	7.9	25.4	14.16

NA = not available

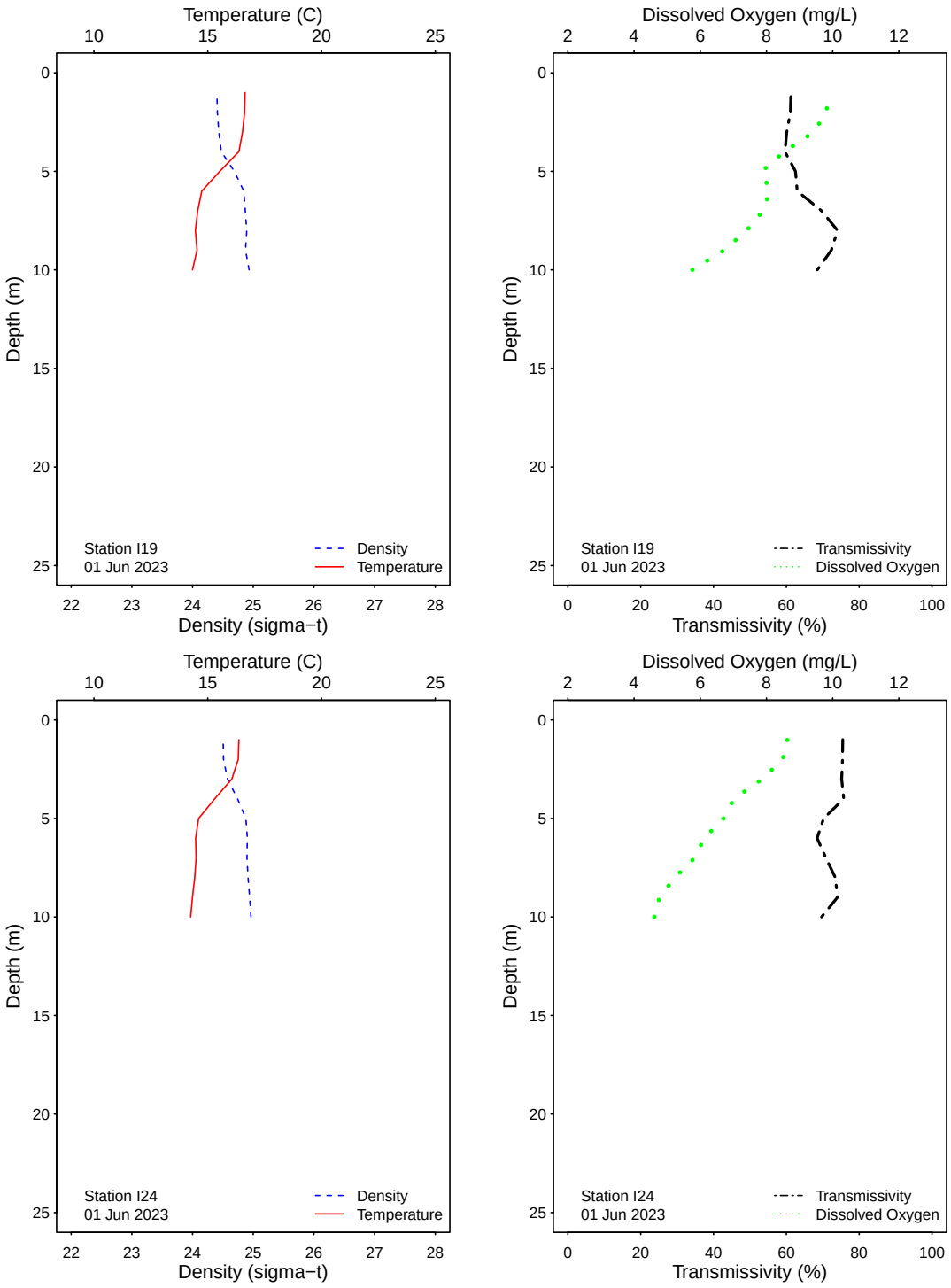

Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

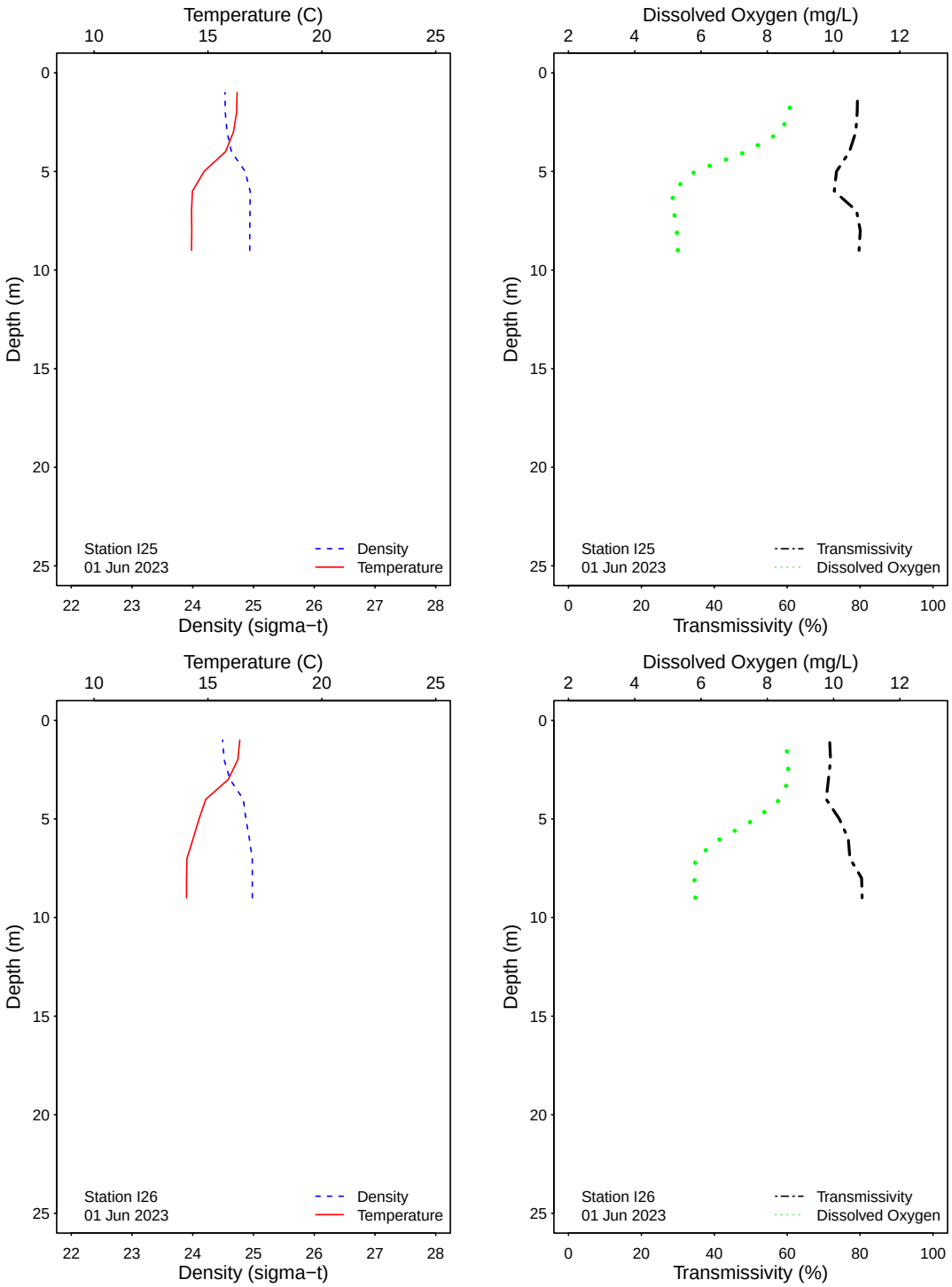

Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

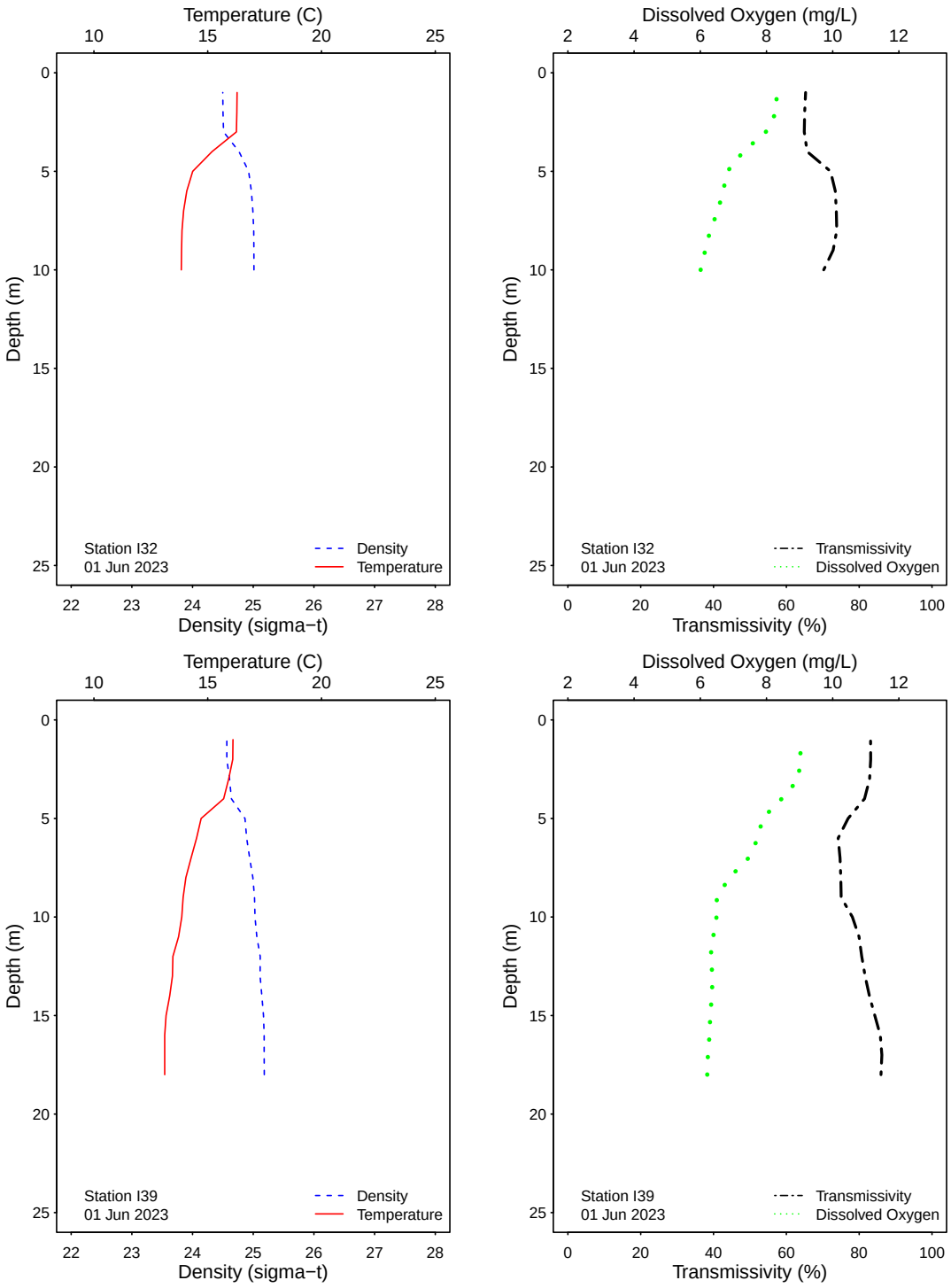

Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

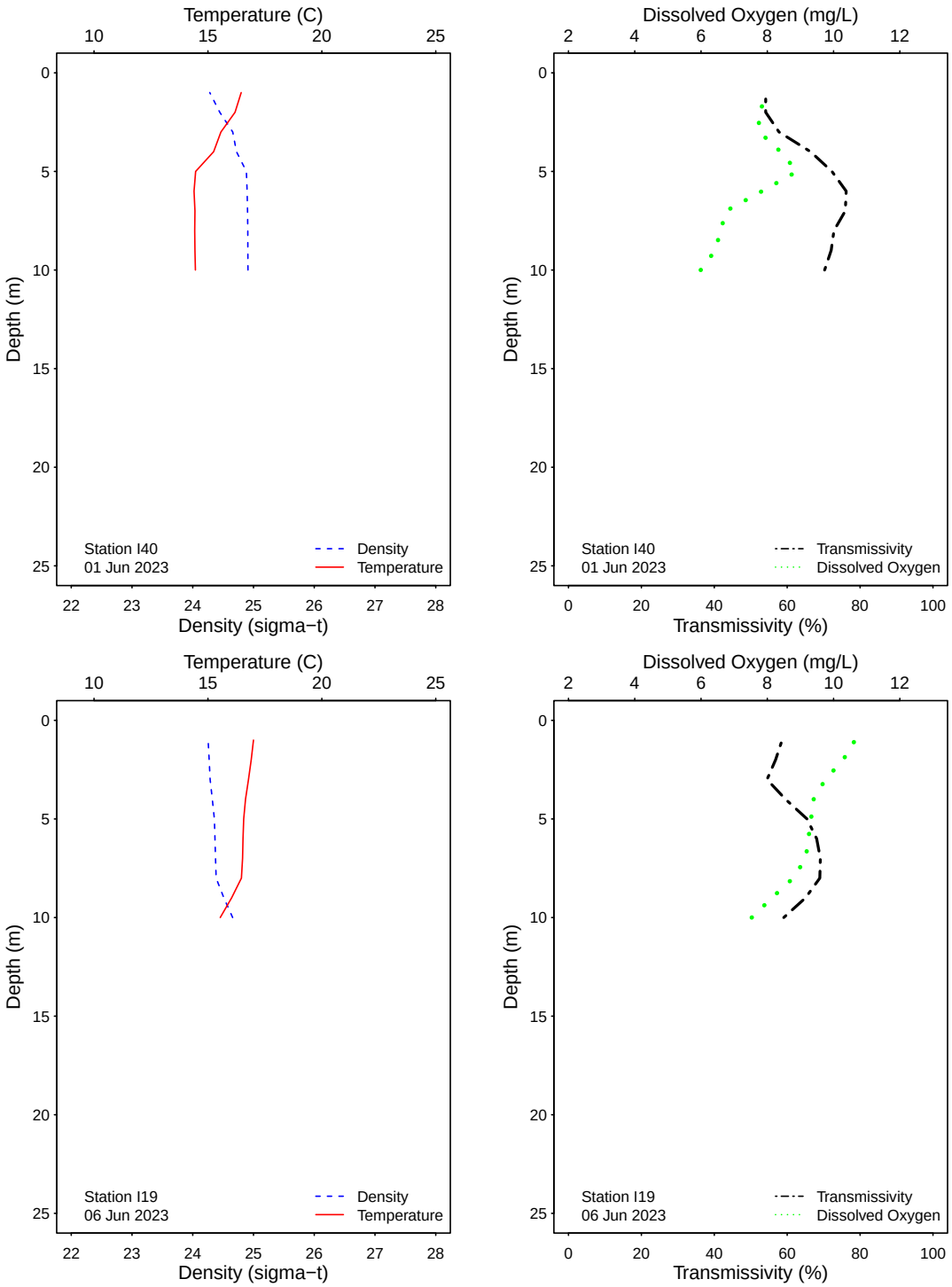

Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

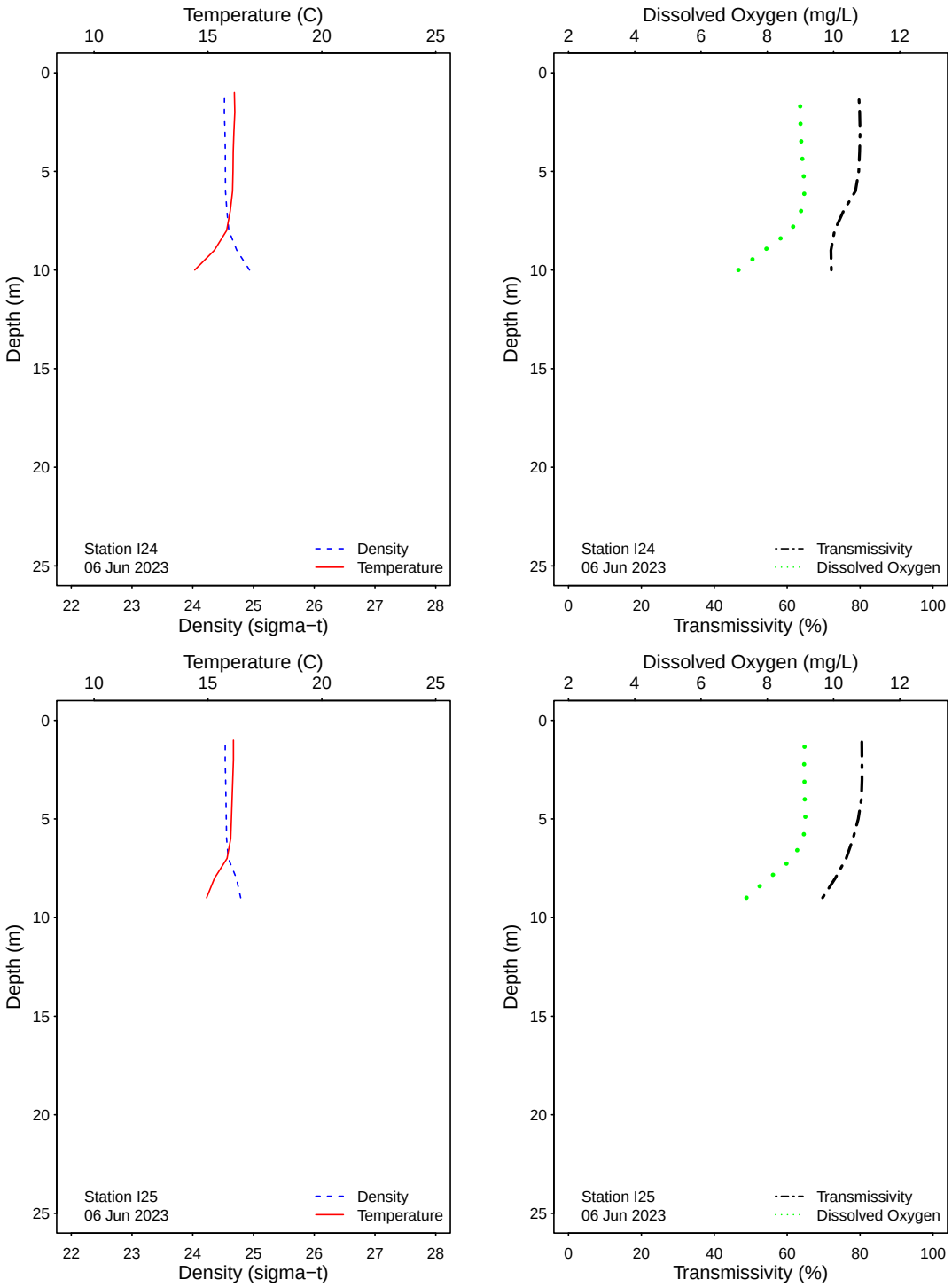

Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

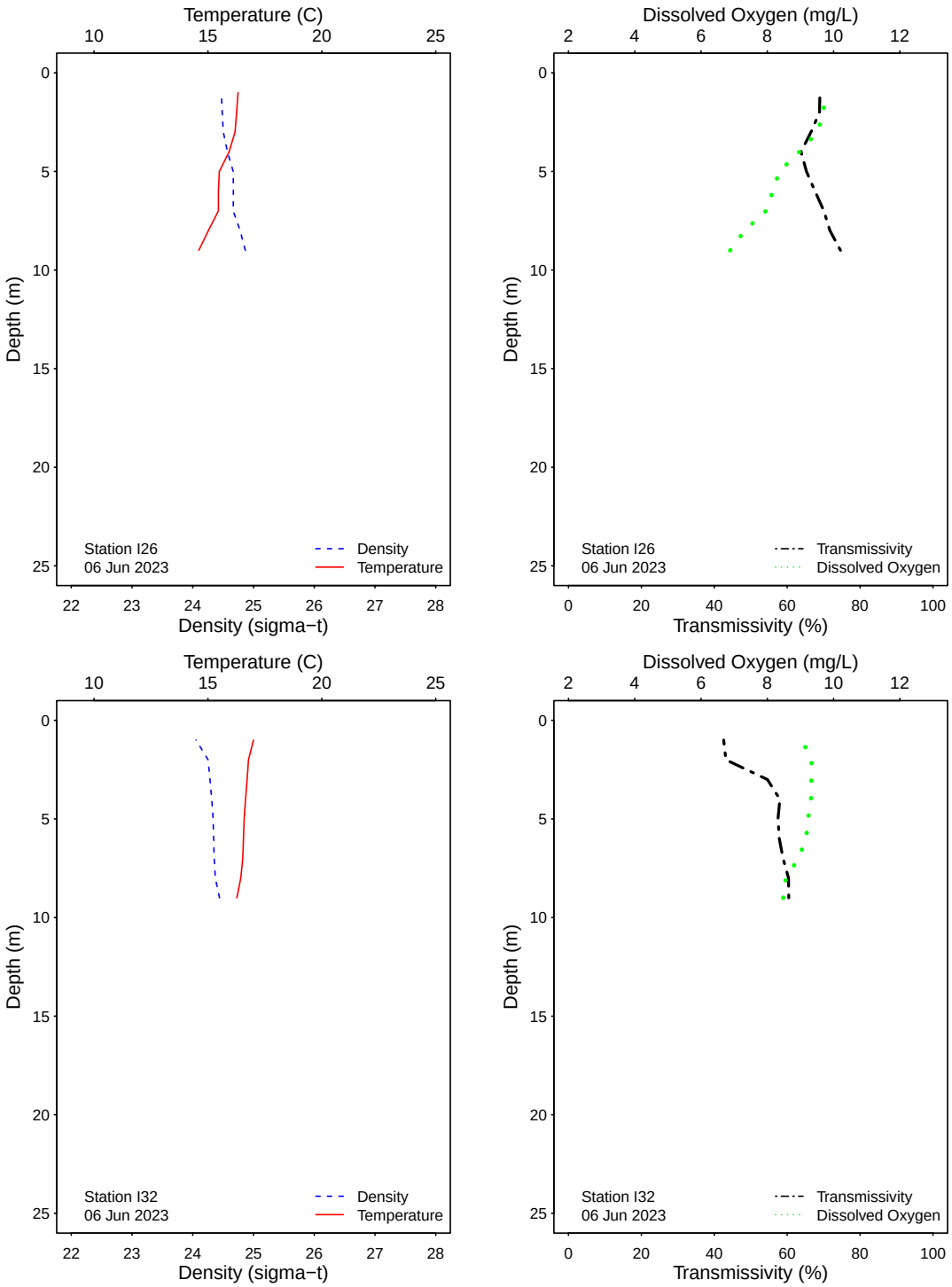

Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

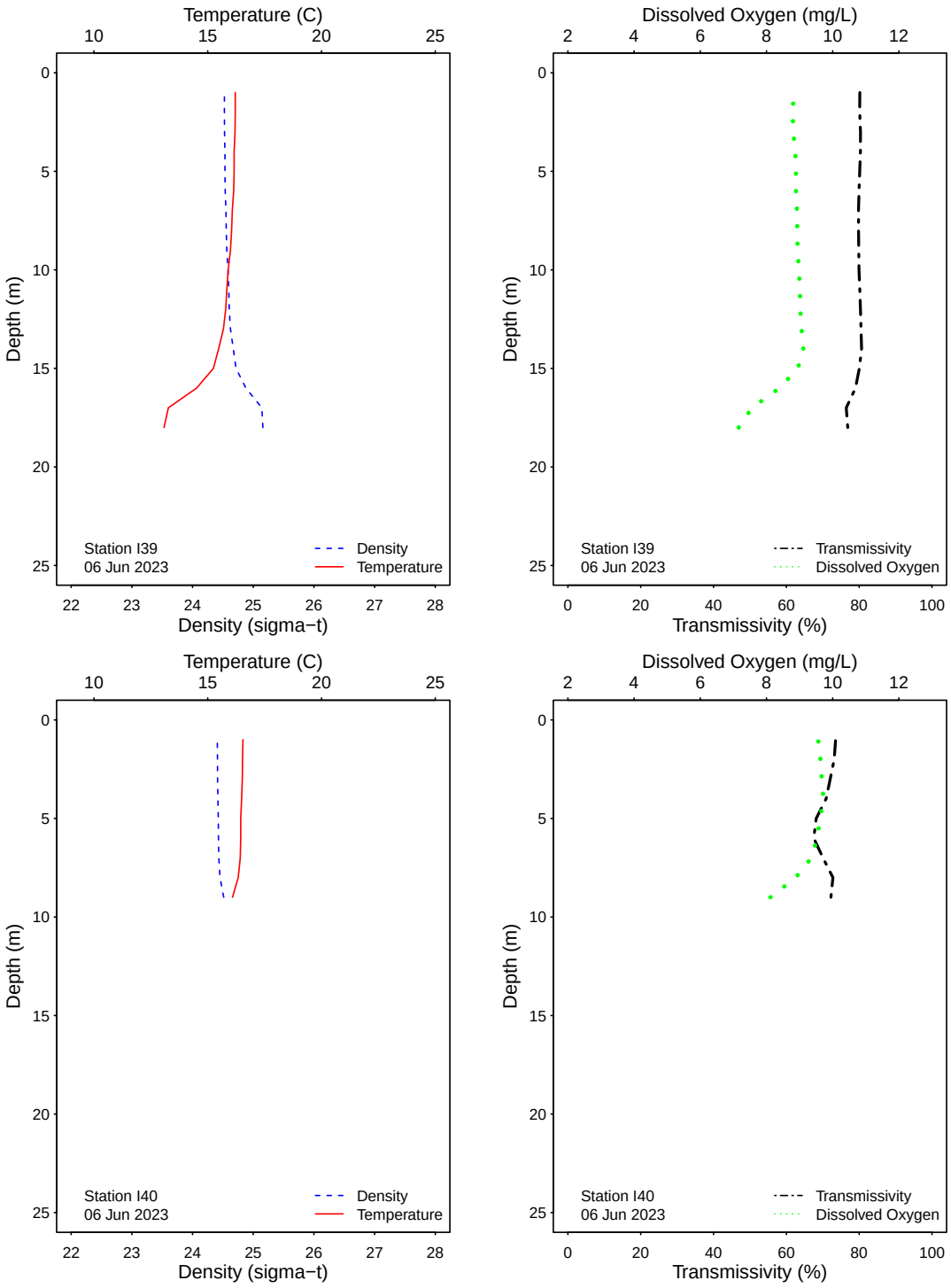

Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

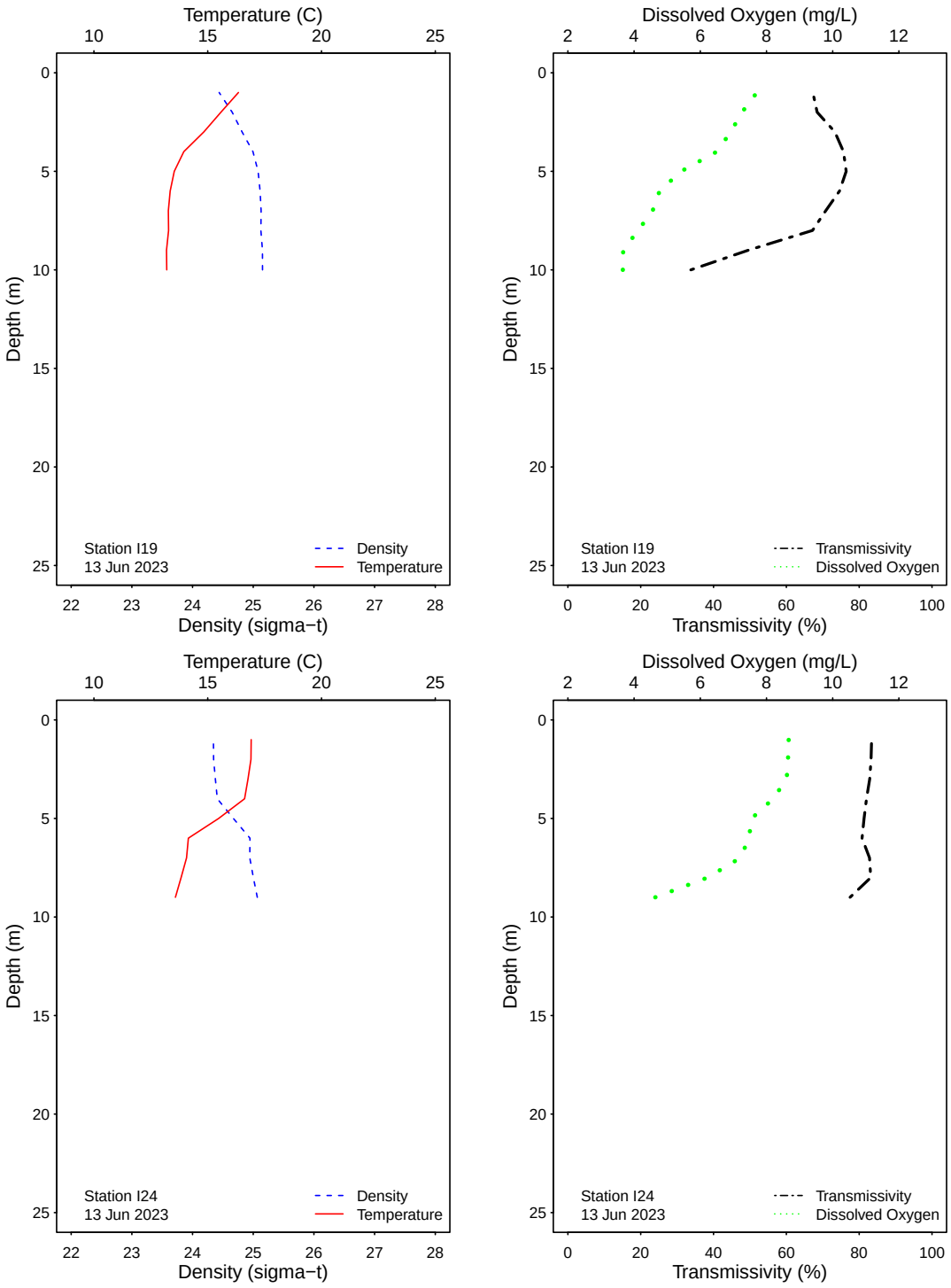

Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

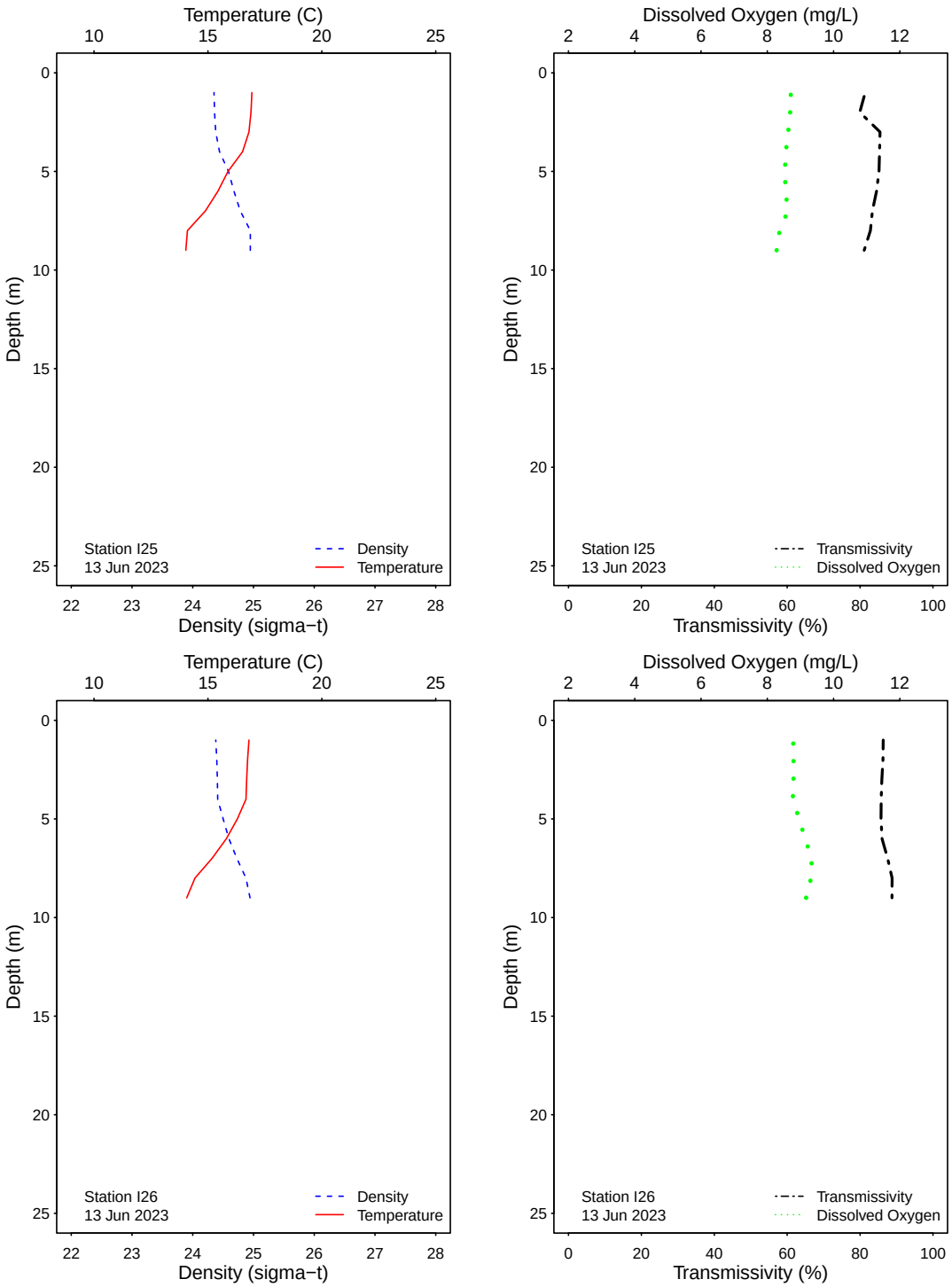

Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

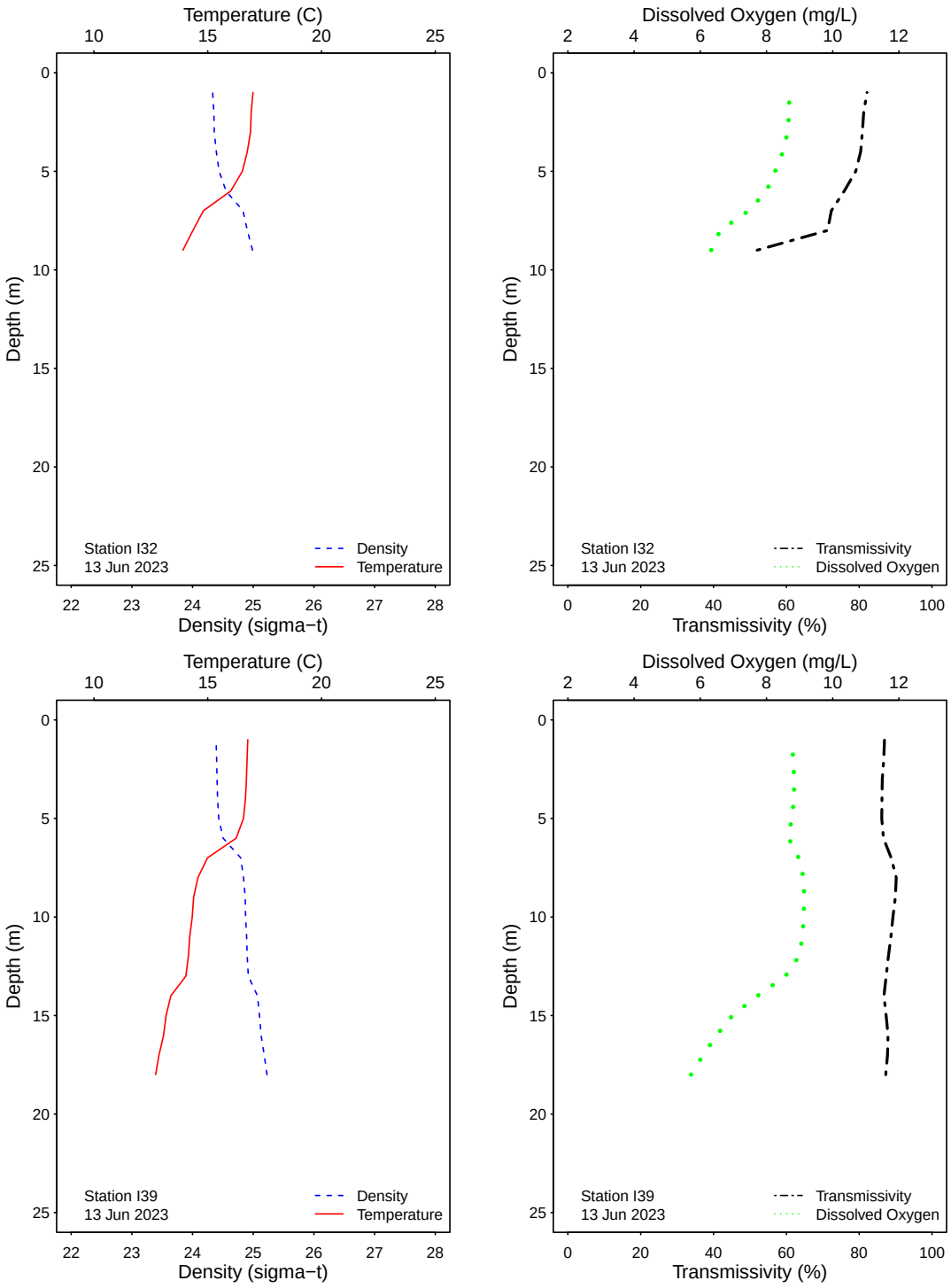

Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

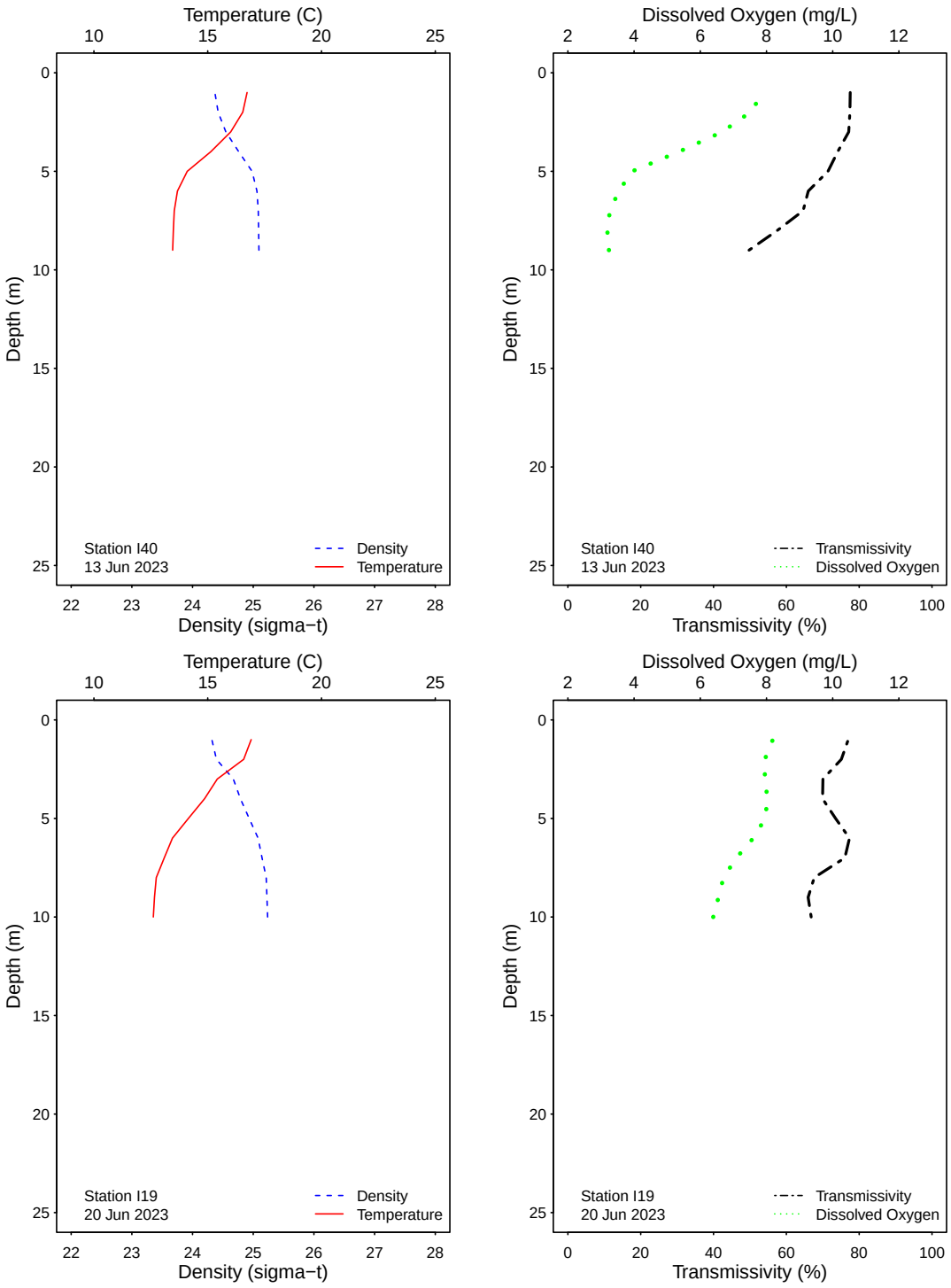

Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

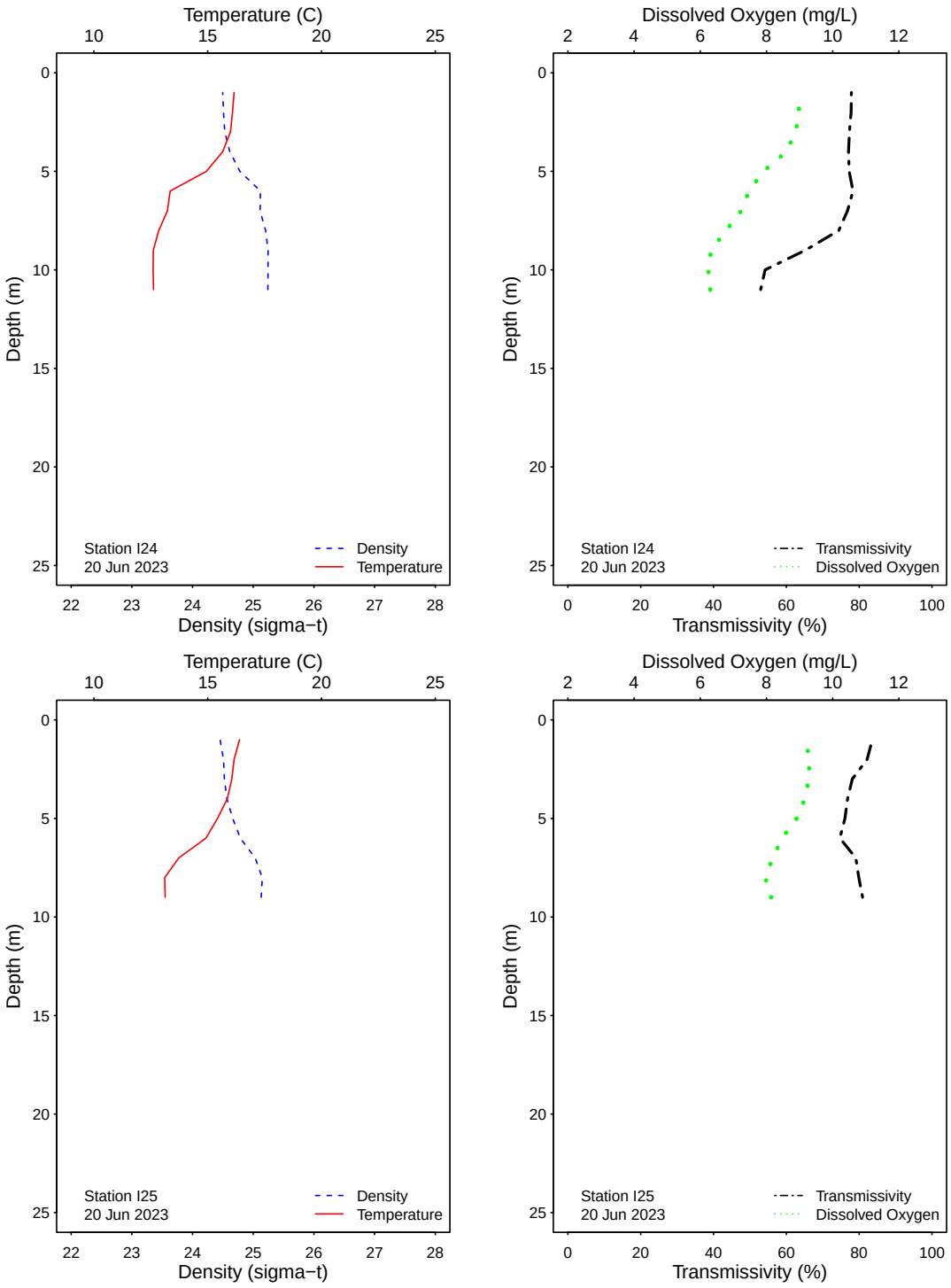

Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

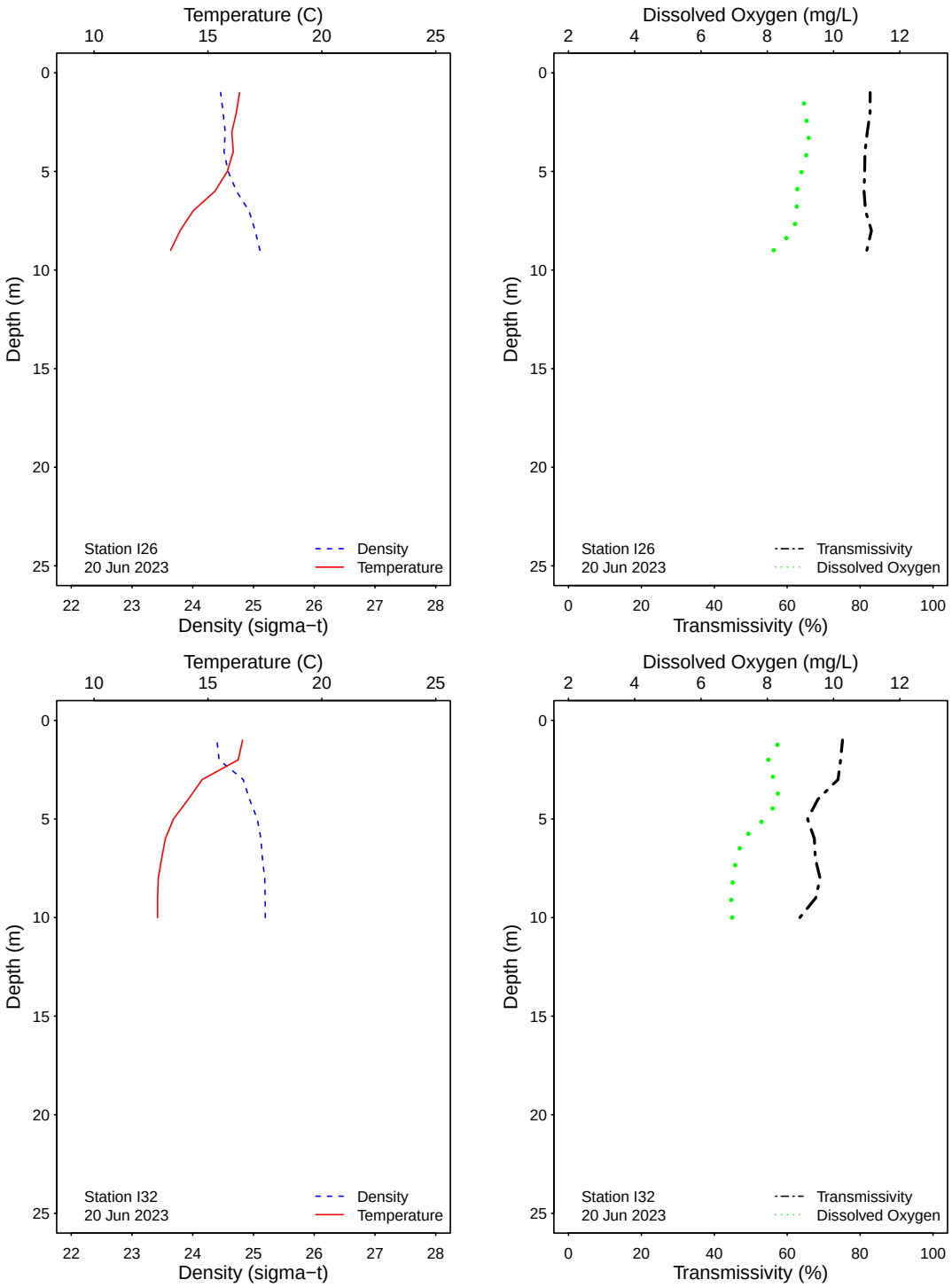

Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

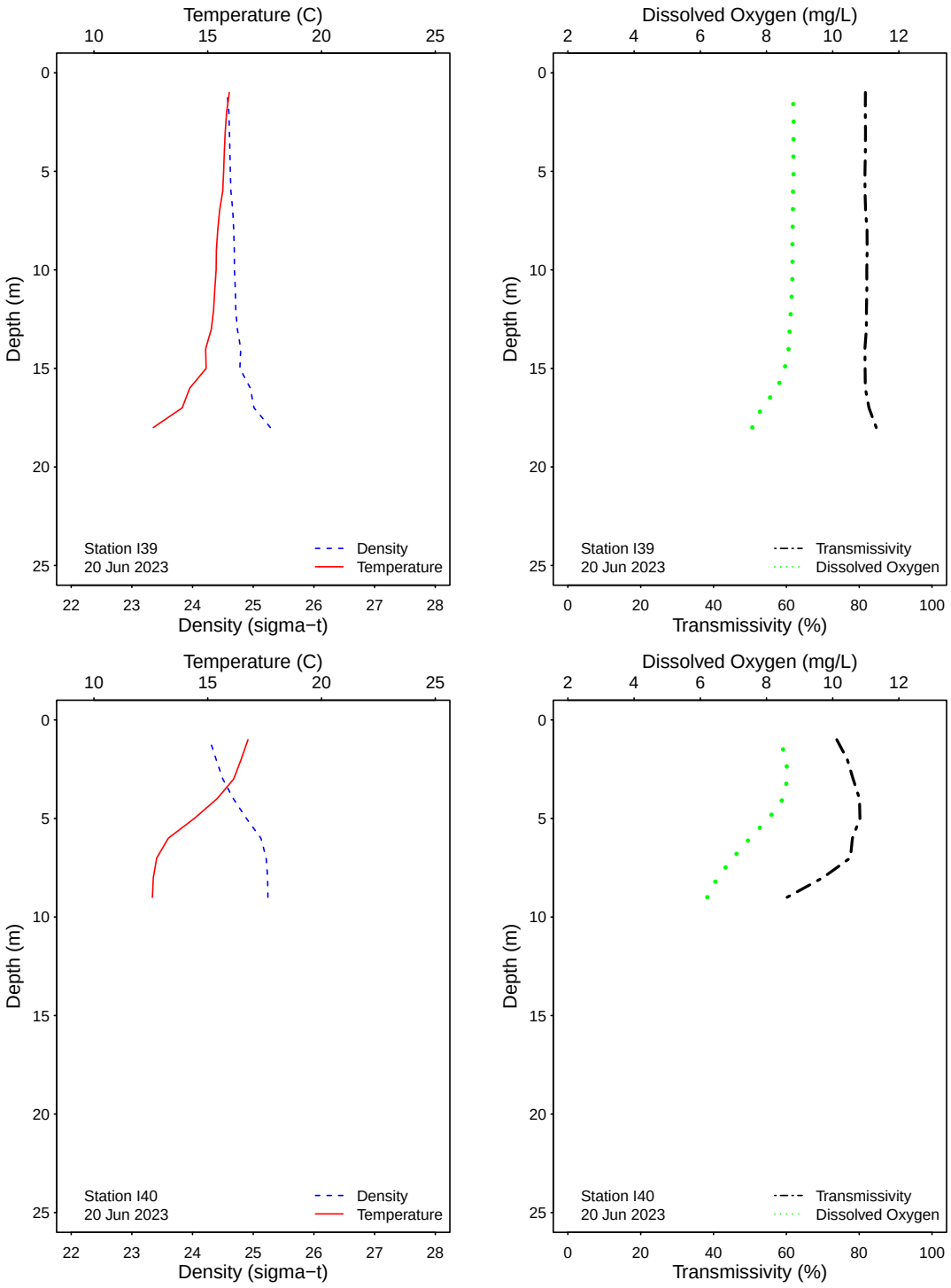

Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

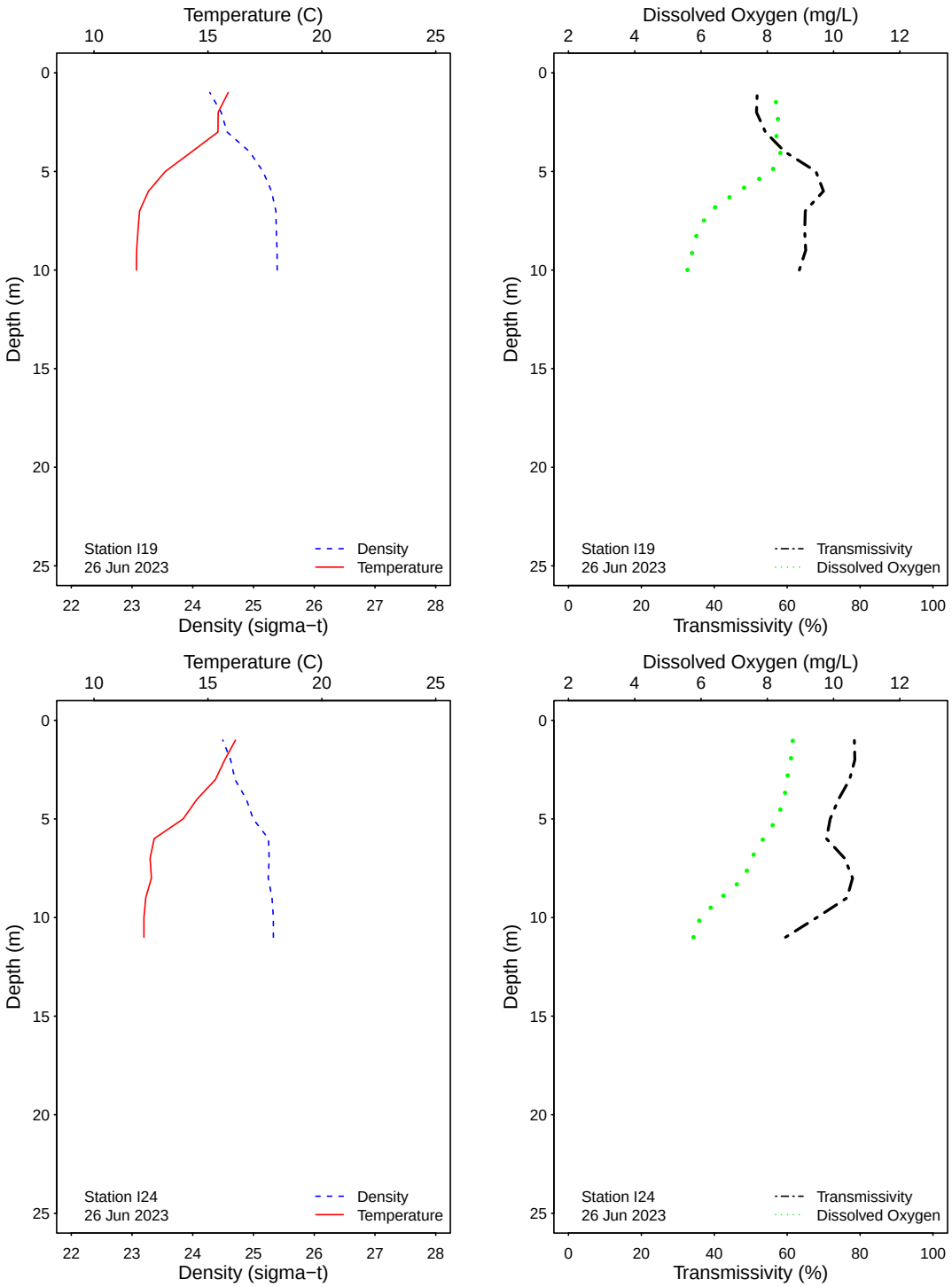

Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

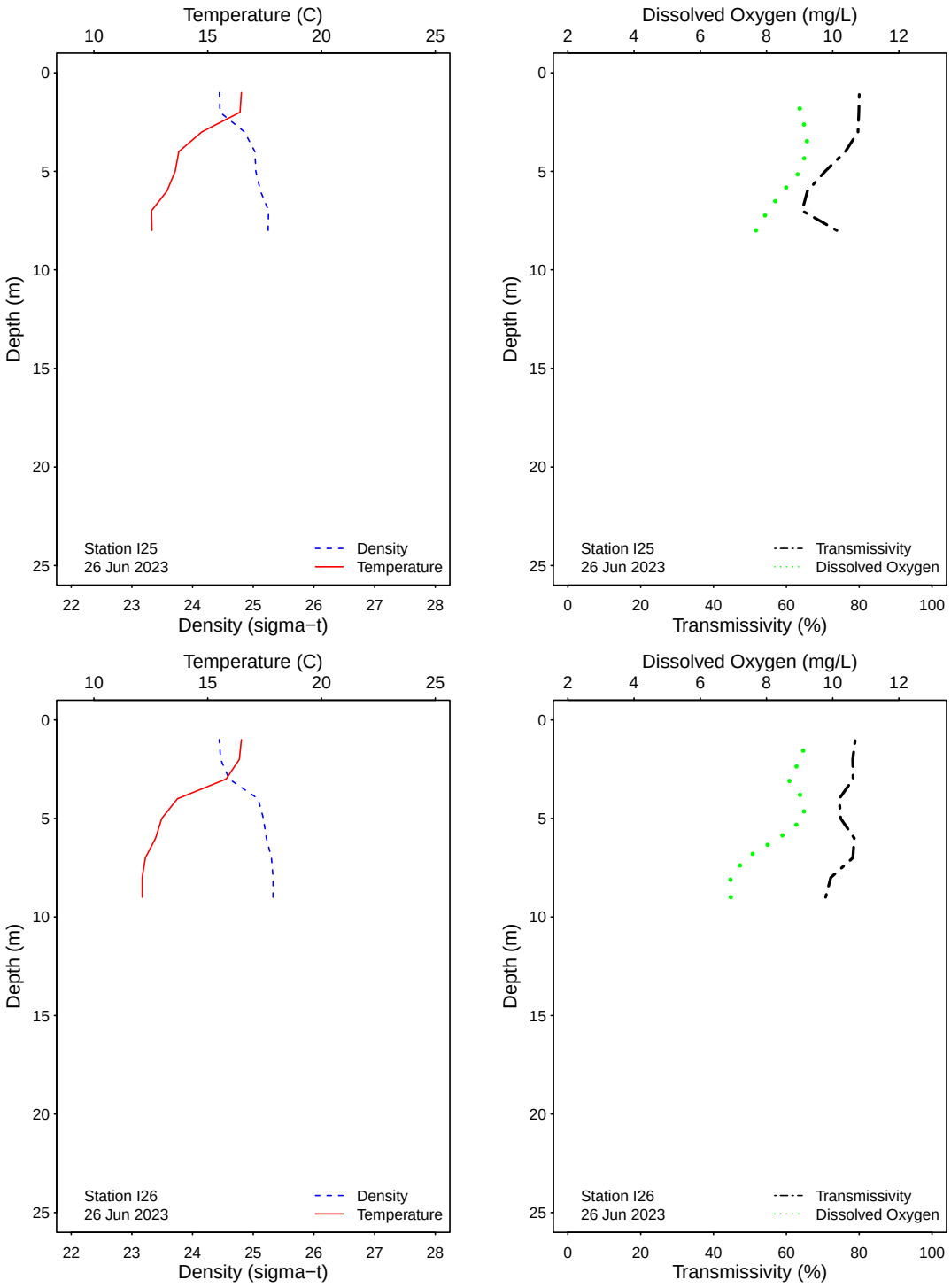

Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

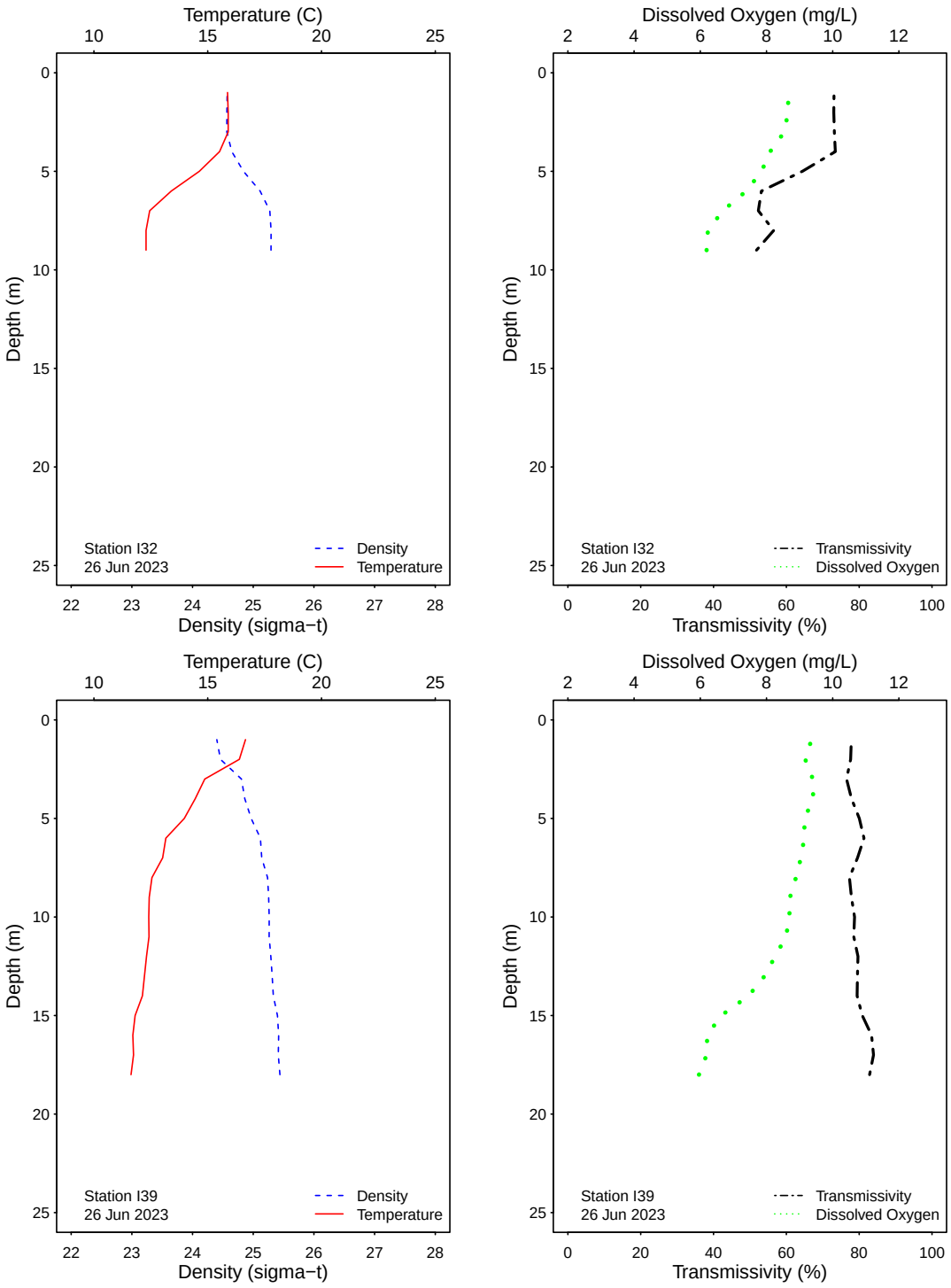

Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

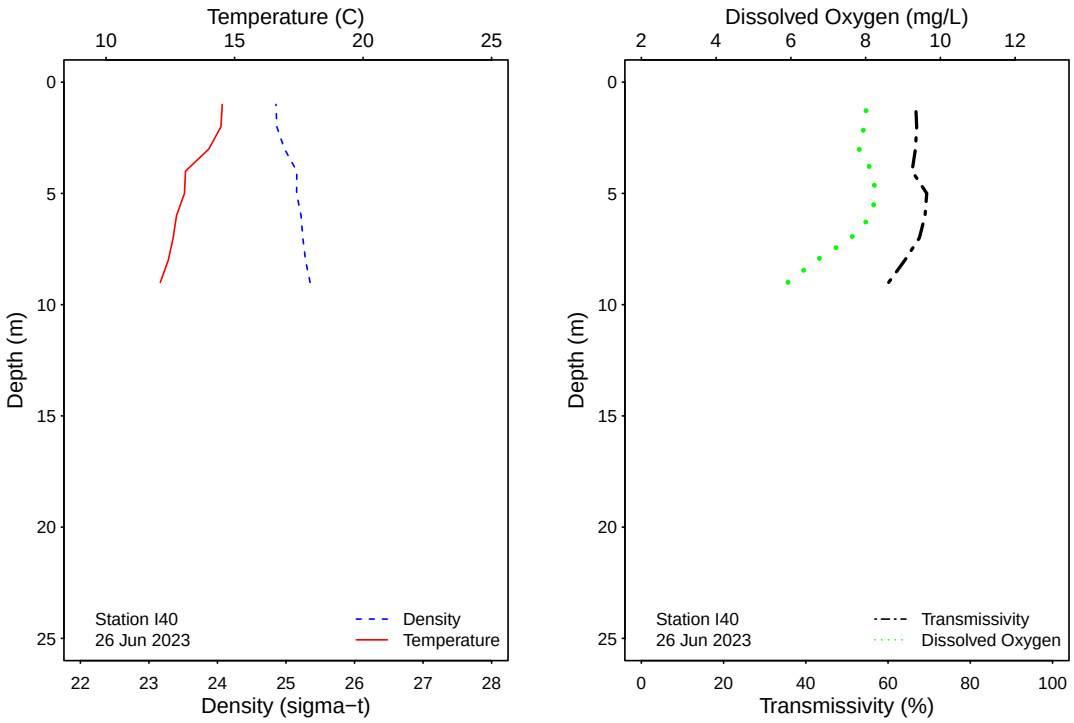

Figure 3.1: Graphics of CTD profile data from the SBOO kelp stations for each sample date.

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APPENDIX A

Quality Assurance

Table A.1

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

Station	Date	Depth	Analyst	Procedure	Total	Fecal	Entero
I19	01 Jun 2023	6	JF	LAB DUPLICATE	200e	10e	6e
I19	06 Jun 2023	6	WT	LAB DUPLICATE	3800e	440	110
I19	13 Jun 2023	6	CRE	LAB DUPLICATE	<20	2e	2e
I19	20 Jun 2023	6	WT	LAB DUPLICATE	<2	<2	<2
I19	26 Jun 2023	6	KA	LAB DUPLICATE	14e	6e	<2
I40	01 Jun 2023	6	JF	LAB DUPLICATE	800e	260e	76
I40	06 Jun 2023	6	WT	LAB DUPLICATE	160e	32e	12e
I40	13 Jun 2023	6	CRE	LAB DUPLICATE	60e	4e	<2
I40	20 Jun 2023	6	WT	LAB DUPLICATE	<2	<2	<2
I40	26 Jun 2023	6	KA	LAB DUPLICATE	<2	<2	<2
S12	06 Jun 2023		KA	FIELD DUPLICATE	14000	4400	1600e
S12	06 Jun 2023		KA	LAB DUPLICATE	15000	5000	2400e
S12	13 Jun 2023		KT	FIELD DUPLICATE	3600e	380e	100e
S12	13 Jun 2023		KT	LAB DUPLICATE	4000	640	160e
S12	20 Jun 2023		JF	FIELD DUPLICATE	<20	2e	<2
S12	20 Jun 2023		JF	LAB DUPLICATE	20e	<2	2e
S12	27 Jun 2023		KA	FIELD DUPLICATE	<20	2e	<2
S12	27 Jun 2023		KA	LAB DUPLICATE	<20	<2	<2

ns = not sampled
ND = no data

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