



# POINT LOMA OCEAN OUTFALL MONTHLY RECEIVING WATERS MONITORING REPORT

## POINT LOMA WASTEWATER TREATMENT PLANT

NPDES Permit No. CA0107409  
SDRWQCB Order No. R9-2017-0007

### DECEMBER 2020

Environmental Monitoring and Technical Services  
2392 Kincaid Road • Mail Station 45A • San Diego, CA 92101  
Tel (619) 758-2300 Fax (619) 758-2309







# TABLES AND FIGURES



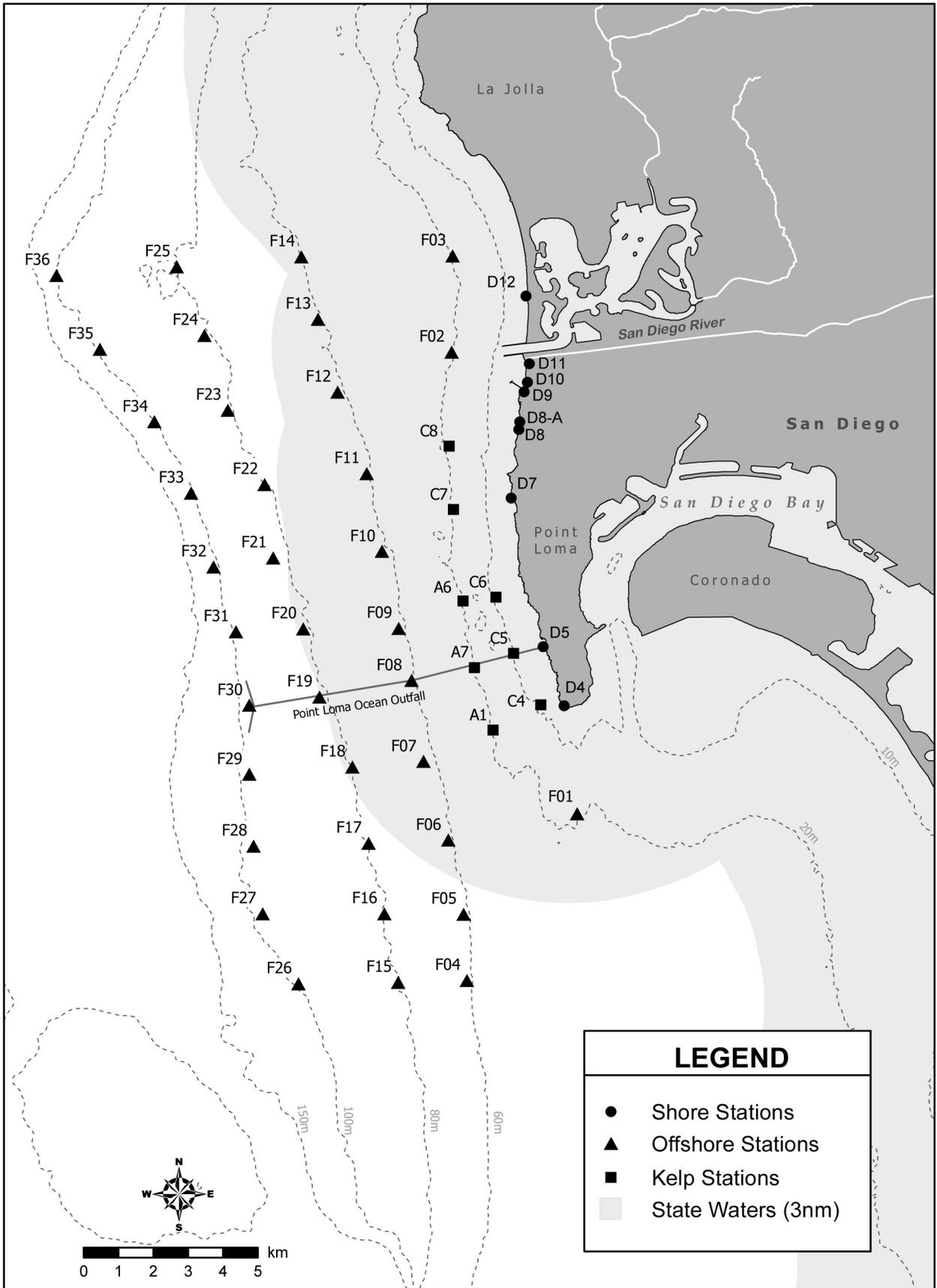


Figure 1.1 Station Map



# Shore Stations



**Table 2.1**

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

Date	D4	D5	D7	D8-B	D9	D10	D11	D12
01 Dec 2020	20*	13*	200*	200*	26*	24*	11*	19*
02 Dec 2020	20	14	126	200	25	23	13	19
03 Dec 2020	20	14	126	200	25	23	13	19
04 Dec 2020	20*	13*	112*	200*	20*	24*	20*	20*
05 Dec 2020	20*	13*	112*	200*	20*	24*	20*	20*
06 Dec 2020	20*	13*	112*	200*	20*	24*	20*	20*
07 Dec 2020	20*	13*	112*	200*	20*	24*	20*	20*
08 Dec 2020	20*	13*	112*	200*	20*	24*	20*	20*
09 Dec 2020	20	23	80	200*	36	36	32	20
10 Dec 2020	20	23	80	200*	36	36	32	20
11 Dec 2020	20	23	80	200*	36	36	32	20
12 Dec 2020	11*	24*	63*	200*	42*	42*	36*	20*
13 Dec 2020	11*	24*	63*	200*	42*	42*	36*	20*
14 Dec 2020	11*	24*	63*	200*	42*	42*	36*	20*
15 Dec 2020	11*	24*	63*	200*	42*	42*	36*	20*
16 Dec 2020	13	23	50	200*	45	58	50	20
17 Dec 2020	13	23	50	200*	45	58	50	20
18 Dec 2020	11*	36*	36*	200*	56*	75*	36*	20*
19 Dec 2020	11*	36*	36*	200*	56*	75*	36*	20*
20 Dec 2020	11*	36*	36*	200*	56*	75*	36*	20*
21 Dec 2020	11*	36*	36*	200*	56*	75*	36*	20*
22 Dec 2020	11*	36*	36*	200*	56*	75*	36*	20*
23 Dec 2020	11*	36*	11*	200*	56*	63*	42*	20*
24 Dec 2020	11*	36*	11*	200*	56*	63*	42*	20*
25 Dec 2020	11*	36*	11*	200*	56*	63*	42*	20*
26 Dec 2020	11*	36*	11*	200*	56*	63*	42*	20*
27 Dec 2020	11*	36*	11*	200*	56*	63*	42*	20*
28 Dec 2020	11*	36*	11*	200*	56*	63*	42*	20*
29 Dec 2020	11*	36*	11*	200*	56*	63*	42*	20*
30 Dec 2020	13	32	13	200*	45	74	60	20
31 Dec 2020	13	32	13	200*	45	74	60	20

\* Geometric mean calculated using n<5

ns = not sampled

**Table 2.2**

Summary of compliance with the Ocean Plan's 30-day Geometric Mean standard for fecal coliform bacteria at the PLOO 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	D4	D5	D7	D8-B	D9	D10	D11	D12
01 Dec 2020	2*	3*	11*	9*	2*	6*	4*	5*
02 Dec 2020	2	4	8	13	4	9	4	5
03 Dec 2020	2	4	8	13	4	9	4	5
04 Dec 2020	2*	5*	5*	10*	4*	10*	5*	4*
05 Dec 2020	2*	5*	5*	10*	4*	10*	5*	4*
06 Dec 2020	2*	5*	5*	10*	4*	10*	5*	4*
07 Dec 2020	2*	5*	5*	10*	4*	10*	5*	4*
08 Dec 2020	2*	5*	5*	10*	4*	10*	5*	4*
09 Dec 2020	2	6	4	10*	6	11	8	3
10 Dec 2020	2	6	4	10*	6	11	8	3
11 Dec 2020	2	6	4	10*	6	11	8	3
12 Dec 2020	2*	6*	3*	12*	8*	11*	5*	3*
13 Dec 2020	2*	6*	3*	12*	8*	11*	5*	3*
14 Dec 2020	2*	6*	3*	12*	8*	11*	5*	3*
15 Dec 2020	2*	6*	3*	12*	8*	11*	5*	3*
16 Dec 2020	2	5	3	12*	8	12	5	3
17 Dec 2020	2	5	3	12*	8	12	5	3
18 Dec 2020	2*	6*	2*	14*	11*	18*	7*	3*
19 Dec 2020	2*	6*	2*	14*	11*	18*	7*	3*
20 Dec 2020	2*	6*	2*	14*	11*	18*	7*	3*
21 Dec 2020	2*	6*	2*	14*	11*	18*	7*	3*
22 Dec 2020	2*	6*	2*	14*	11*	18*	7*	3*
23 Dec 2020	2*	6*	2*	52*	13*	22*	7*	2*
24 Dec 2020	2*	6*	2*	52*	13*	22*	7*	2*
25 Dec 2020	2*	6*	2*	52*	13*	22*	7*	2*
26 Dec 2020	2*	6*	2*	52*	13*	22*	7*	2*
27 Dec 2020	2*	6*	2*	52*	13*	22*	7*	2*
28 Dec 2020	2*	6*	2*	52*	13*	22*	7*	2*
29 Dec 2020	2*	6*	2*	52*	13*	22*	7*	2*
30 Dec 2020	2	6	2	52*	14	25	6	3
31 Dec 2020	2	6	2	52*	14	25	6	3

\* Geometric mean calculated using n<5

ns = not sampled

**Table 2.3**

Summary of compliance with the Ocean Plan's 30-day Geometric Mean standard for *Enterococcus* at the PLOO shore stations. Data are based on the geometric mean of the five most recent samples from each site over the previous 30 days unless otherwise noted (\*). Values >35 CFU/100 mL exceed the standard.

Date	D4	D5	D7	D8-B	D9	D10	D11	D12
01 Dec 2020	2*	2*	5*	4*	2*	3*	10*	2*
02 Dec 2020	3	2	4	8	2	3	9	2
03 Dec 2020	3	2	4	8	2	3	9	2
04 Dec 2020	4*	3*	5*	6*	2*	3*	13*	2*
05 Dec 2020	4*	3*	5*	6*	2*	3*	13*	2*
06 Dec 2020	4*	3*	5*	6*	2*	3*	13*	2*
07 Dec 2020	4*	3*	5*	6*	2*	3*	13*	2*
08 Dec 2020	4*	3*	5*	6*	2*	3*	13*	2*
09 Dec 2020	3	4	7	6*	4	5	15	2
10 Dec 2020	3	4	7	6*	4	5	15	2
11 Dec 2020	3	4	7	6*	4	5	15	2
12 Dec 2020	4*	5*	5*	7*	5*	7*	10*	2*
13 Dec 2020	4*	5*	5*	7*	5*	7*	10*	2*
14 Dec 2020	4*	5*	5*	7*	5*	7*	10*	2*
15 Dec 2020	4*	5*	5*	7*	5*	7*	10*	2*
16 Dec 2020	3	4	4	7*	6	6	8	2
17 Dec 2020	3	4	4	7*	6	6	8	2
18 Dec 2020	3*	5*	4*	13*	7*	7*	8*	2*
19 Dec 2020	3*	5*	4*	13*	7*	7*	8*	2*
20 Dec 2020	3*	5*	4*	13*	7*	7*	8*	2*
21 Dec 2020	3*	5*	4*	13*	7*	7*	8*	2*
22 Dec 2020	3*	5*	4*	13*	7*	7*	8*	2*
23 Dec 2020	3*	5*	4*	80*	7*	7*	7*	2*
24 Dec 2020	3*	5*	4*	80*	7*	7*	7*	2*
25 Dec 2020	3*	5*	4*	80*	7*	7*	7*	2*
26 Dec 2020	3*	5*	4*	80*	7*	7*	7*	2*
27 Dec 2020	3*	5*	4*	80*	7*	7*	7*	2*
28 Dec 2020	3*	5*	4*	80*	7*	7*	7*	2*
29 Dec 2020	3*	5*	4*	80*	7*	7*	7*	2*
30 Dec 2020	3	4	3	80*	6	8	6	2
31 Dec 2020	3	4	3	80*	6	8	6	2

\* Geometric mean calculated using n<5

ns = not sampled

**Table 2.4**

Summary of compliance at the PLOO shore stations with the Ocean Plan's Single Sample Maximum standard for total coliform bacteria, which states that total coliform density shall not exceed 10,000 CFU/100 mL.

Date	D4	D5	D7	D8-B	D9	D10	D11	D12
02 Dec 2020	IC	IC	IC	IC	IC	IC	IC	IC
09 Dec 2020	IC	IC	IC	ns	IC	IC	IC	IC
16 Dec 2020	IC	IC	IC	ns	IC	IC	IC	IC
23 Dec 2020	IC	IC	IC	ns	IC	IC	IC	IC
30 Dec 2020	IC	IC	IC	ns	IC	IC	IC	IC

IC = In Compliance

E = Exceedance

ns = not sampled

ND = no data

### Table 2.5

Summary of compliance at the PLOO 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	D4	D5	D7	D8-B	D9	D10	D11	D12
02 Dec 2020	IC	IC	IC	IC	IC	IC	IC	IC
09 Dec 2020	IC	IC	IC	ns	IC	IC	IC	IC
16 Dec 2020	IC	IC	IC	ns	IC	IC	IC	IC
23 Dec 2020	IC	IC	IC	ns	IC	IC	IC	IC
30 Dec 2020	IC	IC	IC	ns	IC	IC	IC	IC

IC = In Compliance

E = Exceedance

ns = not sampled

ND = no data

**Table 2.6**

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

Date	D4	D5	D7	D8-B	D9	D10	D11	D12
02 Dec 2020	IC	IC	IC	IC	IC	IC	IC	IC
09 Dec 2020	IC	IC	IC	ns	IC	IC	IC	IC
16 Dec 2020	IC	IC	IC	ns	IC	IC	IC	IC
23 Dec 2020	IC	IC	IC	ns	IC	IC	IC	IC
30 Dec 2020	IC	IC	IC	ns	IC	IC	IC	IC

IC = In Compliance

E = Exceedance

ns = not sampled

ND = no data

**Table 2.7**

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

Date	D4	D5	D7	D8-B	D9	D10	D11	D12
02 Dec 2020	IC	IC	IC	IC	IC	IC	IC	IC
09 Dec 2020	IC	IC	IC	ns	IC	IC	IC	IC
16 Dec 2020	IC	IC	IC	ns	IC	IC	IC	IC
23 Dec 2020	IC	IC	IC	ns	IC	IC	IC	IC
30 Dec 2020	IC	IC	IC	ns	IC	IC	IC	IC

IC = In Compliance

E = Exceedance

ns = not sampled

ND = no data

**Table 2.8**

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

Station	Date	Time	Total	Fecal	Entero	F:T
D4	02 Dec 2020	840	<20	2e	10e	0.10
D4	09 Dec 2020	731	<20	<2	<2	0.10
D4	16 Dec 2020	800	<20	2e	<2	0.10
D4	23 Dec 2020	1057	2e	<2	<2	1.00
D4	30 Dec 2020	824	20e	6e	2e	0.30
D5	02 Dec 2020	820	20e	<20	6e	1.00
D5	09 Dec 2020	752	<200	<20	32e	0.10
D5	16 Dec 2020	840	<20	<2	<2	0.10
D5	23 Dec 2020	1029	<20	<2	<2	0.10
D5	30 Dec 2020	813	20e	6e	<2	0.30
D7	02 Dec 2020	900	<20	<2	2e	0.10
D7	09 Dec 2020	828	<20	<2	24e	0.10
D7	16 Dec 2020	906	<20	4e	<2	0.20
D7	23 Dec 2020	941	<2	<2	<2	1.00
D7	30 Dec 2020	849	<20	2e	<2	0.10
D8-B	02 Dec 2020	915	<200	52	80e	0.26
D9	02 Dec 2020	930	<20	<20	<2	1.00
D9	09 Dec 2020	856	400e	60e	86	0.15
D9	16 Dec 2020	948	60e	6e	8e	0.10
D9	23 Dec 2020	910	<20	4e	2e	0.20
D9	30 Dec 2020	917	20e	20e	<2	1.00
D10	02 Dec 2020	946	<20	40e	8e	2.00
D10	09 Dec 2020	936	200e	20e	28e	0.10
D10	16 Dec 2020	1007	200e	16e	6e	0.08
D10	23 Dec 2020	851	<20	<20	<2	1.00
D10	30 Dec 2020	929	140e	40e	14e	0.29
D11	02 Dec 2020	1002	20e	6e	6e	0.30
D11	09 Dec 2020	946	200e	38e	28e	0.19
D11	16 Dec 2020	1020	<200	4e	4e	0.02
D11	23 Dec 2020	835	4e	<2	4e	0.50
D11	30 Dec 2020	940	240e	4e	2e	0.02
D12	02 Dec 2020	1037	20e	4e	2e	0.20
D12	09 Dec 2020	1034	<20	2e	2e	0.10
D12	16 Dec 2020	1101	<20	<2	2e	0.10
D12	23 Dec 2020	753	<20	<2	<2	0.10
D12	30 Dec 2020	959	<20	10e	2e	0.50

ns = not sampled

ND = no data

**Comments**

<b>Station</b>	<b>Date</b>	<b>Depth</b>	<b>Parameter</b>	<b>Comments</b>
D4	07 Dec 2020			Coordinate changed from 32.66566/-117.24367 to 32.66594/-117.24413 due to inaccessibility
D5	07 Dec 2020			Coordinate changed from 32.68083/-117.249 to 32.680721/-117.248604 due to inaccessibility
D9	07 Dec 2020			Coordinate changed from 32.74667/-117.254 to 32.746685/-117.254804 due to inaccessibility
D8-A	07 Dec 2020			D8-B replaced D8-A due to inaccessibility

**Table 2.9**

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

Station	Date	Parameter	Value
D4	02 Dec 2020	Arrive Time	840
D4	02 Dec 2020	Weather	Sunny
D4	02 Dec 2020	Wind Speed (kts)	1.3
D4	02 Dec 2020	Wind Dir	NW
D4	02 Dec 2020	Animal Life	2 Cormorants; 1000 Flies
D4	02 Dec 2020	Floatables	Foam
D4	02 Dec 2020	Water Color	Green
D4	02 Dec 2020	Current Direction	N
D4	02 Dec 2020	Water Temp (C)	15.8
D4	02 Dec 2020	Wave Height Low (ft)	3
D4	02 Dec 2020	High Tide (ft)	5.8
D4	02 Dec 2020	High Tide Time	905
D4	02 Dec 2020	Low Tide (ft)	2.3
D4	02 Dec 2020	Low Tide Time	253
D4	02 Dec 2020	Comments	Kelp; Algae; 4 Boats; Water clear
D4	09 Dec 2020	Arrive Time	731
D4	09 Dec 2020	Weather	Partly Cloudy
D4	09 Dec 2020	Wind Speed (kts)	7.5
D4	09 Dec 2020	Wind Dir	W
D4	09 Dec 2020	Animal Life	5 Cormorants; 2 Pelicans; 1 Seagull
D4	09 Dec 2020	Floatables	Foam
D4	09 Dec 2020	Water Color	Green
D4	09 Dec 2020	Current Direction	SE
D4	09 Dec 2020	Water Temp (C)	14.1
D4	09 Dec 2020	Wave Height Low (ft)	8
D4	09 Dec 2020	High Tide (ft)	4.9
D4	09 Dec 2020	High Tide Time	443
D4	09 Dec 2020	Low Tide (ft)	1.4
D4	09 Dec 2020	Low Tide Time	1108
D4	09 Dec 2020	Comments	16 Surfers; 12 Boats; Water clear
D4	16 Dec 2020	Arrive Time	800
D4	16 Dec 2020	Weather	Sunny
D4	16 Dec 2020	Wind Speed (kts)	5
D4	16 Dec 2020	Wind Dir	E
D4	16 Dec 2020	Animal Life	1 Cormorant; 2 Seagulls
D4	16 Dec 2020	Floatables	Foam
D4	16 Dec 2020	Water Color	Green
D4	16 Dec 2020	Current Direction	N
D4	16 Dec 2020	Water Temp (C)	14.9
D4	16 Dec 2020	Wave Height Low (ft)	3
D4	16 Dec 2020	High Tide (ft)	6.5
D4	16 Dec 2020	High Tide Time	922
D4	16 Dec 2020	Low Tide (ft)	1.9
D4	16 Dec 2020	Low Tide Time	312
D4	16 Dec 2020	Comments	Kelp; Algae; 2 Persons; 3 Surfers; 7 Boats; Water turbid
D4	23 Dec 2020	Arrive Time	1057
D4	23 Dec 2020	Weather	Overcast
D4	23 Dec 2020	Wind Speed (kts)	1.5
D4	23 Dec 2020	Wind Dir	NW
D4	23 Dec 2020	Animal Life	None
D4	23 Dec 2020	Floatables	None
D4	23 Dec 2020	Water Color	Blue
D4	23 Dec 2020	Current Direction	S

Station	Date	Parameter	Value
D4	23 Dec 2020	Water Temp (C)	16.4
D4	23 Dec 2020	Wave Height Low (ft)	3
D4	23 Dec 2020	High Tide (ft)	4.6
D4	23 Dec 2020	High Tide Time	445
D4	23 Dec 2020	Low Tide (ft)	1.5
D4	23 Dec 2020	Low Tide Time	1139
D4	23 Dec 2020	Comments	Kelp; Seagrass; 3 Surfers; 3 Boats; Water clear
D4	30 Dec 2020	Arrive Time	824
D4	30 Dec 2020	Weather	Sunny
D4	30 Dec 2020	Wind Speed (kts)	4.2
D4	30 Dec 2020	Wind Dir	E
D4	30 Dec 2020	Animal Life	2 Cormorants; 1 Pelican; 1 Seagull; 2 Terns
D4	30 Dec 2020	Floatables	None
D4	30 Dec 2020	Water Color	Green
D4	30 Dec 2020	Current Direction	S
D4	30 Dec 2020	Water Temp (C)	14
D4	30 Dec 2020	Wave Height Low (ft)	3
D4	30 Dec 2020	High Tide (ft)	6
D4	30 Dec 2020	High Tide Time	823
D4	30 Dec 2020	Low Tide (ft)	2
D4	30 Dec 2020	Low Tide Time	216
D4	30 Dec 2020	Comments	None
D5	02 Dec 2020	Arrive Time	820
D5	02 Dec 2020	Weather	Sunny
D5	02 Dec 2020	Wind Speed (kts)	0
D5	02 Dec 2020	Wind Dir	
D5	02 Dec 2020	Animal Life	1 Cormorant; 2 Seagulls
D5	02 Dec 2020	Floatables	Foam
D5	02 Dec 2020	Water Color	Green
D5	02 Dec 2020	Current Direction	N
D5	02 Dec 2020	Water Temp (C)	12.8
D5	02 Dec 2020	Wave Height Low (ft)	4
D5	02 Dec 2020	High Tide (ft)	5.8
D5	02 Dec 2020	High Tide Time	905
D5	02 Dec 2020	Low Tide (ft)	2.3
D5	02 Dec 2020	Low Tide Time	253
D5	02 Dec 2020	Comments	Algae; Water turbid
D5	09 Dec 2020	Arrive Time	752
D5	09 Dec 2020	Weather	Partly Cloudy
D5	09 Dec 2020	Wind Speed (kts)	5
D5	09 Dec 2020	Wind Dir	N
D5	09 Dec 2020	Animal Life	2 Cormorants; 2 Pelicans
D5	09 Dec 2020	Floatables	Foam
D5	09 Dec 2020	Water Color	Green
D5	09 Dec 2020	Current Direction	NW
D5	09 Dec 2020	Water Temp (C)	14.4
D5	09 Dec 2020	Wave Height Low (ft)	6
D5	09 Dec 2020	High Tide (ft)	4.9
D5	09 Dec 2020	High Tide Time	443
D5	09 Dec 2020	Low Tide (ft)	1.4
D5	09 Dec 2020	Low Tide Time	1108
D5	09 Dec 2020	Comments	Kelp; Seagrass; Algae; 1 Boat; Water clear
D5	16 Dec 2020	Arrive Time	840
D5	16 Dec 2020	Weather	Sunny
D5	16 Dec 2020	Wind Speed (kts)	4.6
D5	16 Dec 2020	Wind Dir	SE
D5	16 Dec 2020	Animal Life	None

Station	Date	Parameter	Value
D5	16 Dec 2020	Floatables	Foam
D5	16 Dec 2020	Water Color	Green
D5	16 Dec 2020	Current Direction	N
D5	16 Dec 2020	Water Temp (C)	14.6
D5	16 Dec 2020	Wave Height Low (ft)	4
D5	16 Dec 2020	High Tide (ft)	6.5
D5	16 Dec 2020	High Tide Time	922
D5	16 Dec 2020	Low Tide (ft)	1.9
D5	16 Dec 2020	Low Tide Time	312
D5	16 Dec 2020	Comments	Kelp; Algae; Water turbid
D5	23 Dec 2020	Arrive Time	1029
D5	23 Dec 2020	Weather	Overcast
D5	23 Dec 2020	Wind Speed (kts)	1.9
D5	23 Dec 2020	Wind Dir	W
D5	23 Dec 2020	Animal Life	3 Seagulls
D5	23 Dec 2020	Floatables	Foam; Film
D5	23 Dec 2020	Water Color	Green
D5	23 Dec 2020	Current Direction	W
D5	23 Dec 2020	Water Temp (C)	16.8
D5	23 Dec 2020	Wave Height Low (ft)	2
D5	23 Dec 2020	High Tide (ft)	4.6
D5	23 Dec 2020	High Tide Time	445
D5	23 Dec 2020	Low Tide (ft)	1.5
D5	23 Dec 2020	Low Tide Time	1139
D5	23 Dec 2020	Comments	Kelp; Seagrass; Algae; Water clear
D5	30 Dec 2020	Arrive Time	813
D5	30 Dec 2020	Weather	Sunny
D5	30 Dec 2020	Wind Speed (kts)	1.1
D5	30 Dec 2020	Wind Dir	SE
D5	30 Dec 2020	Animal Life	4 Cormorants; 1 Pelican; 1 Seagull
D5	30 Dec 2020	Floatables	Foam
D5	30 Dec 2020	Water Color	Green
D5	30 Dec 2020	Current Direction	S
D5	30 Dec 2020	Water Temp (C)	12.1
D5	30 Dec 2020	Wave Height Low (ft)	3
D5	30 Dec 2020	High Tide (ft)	6
D5	30 Dec 2020	High Tide Time	823
D5	30 Dec 2020	Low Tide (ft)	2
D5	30 Dec 2020	Low Tide Time	216
D5	30 Dec 2020	Comments	Sewage-like odor; Water turbid
D7	02 Dec 2020	Arrive Time	900
D7	02 Dec 2020	Weather	Sunny
D7	02 Dec 2020	Wind Speed (kts)	3.4
D7	02 Dec 2020	Wind Dir	N
D7	02 Dec 2020	Animal Life	1 Pelican; 1 Seagull
D7	02 Dec 2020	Floatables	None
D7	02 Dec 2020	Water Color	Green
D7	02 Dec 2020	Current Direction	S
D7	02 Dec 2020	Water Temp (C)	16.2
D7	02 Dec 2020	Wave Height Low (ft)	4
D7	02 Dec 2020	High Tide (ft)	5.8
D7	02 Dec 2020	High Tide Time	905
D7	02 Dec 2020	Low Tide (ft)	2.3
D7	02 Dec 2020	Low Tide Time	253
D7	02 Dec 2020	Comments	Kelp; Algae; 1 Person; 1 Boat; Water clear
D7	09 Dec 2020	Arrive Time	828
D7	09 Dec 2020	Weather	Partly Cloudy

Station	Date	Parameter	Value
D7	09 Dec 2020	Wind Speed (kts)	3.3
D7	09 Dec 2020	Wind Dir	E
D7	09 Dec 2020	Animal Life	None
D7	09 Dec 2020	Floatables	Foam; Toilet Tissues
D7	09 Dec 2020	Water Color	Green
D7	09 Dec 2020	Current Direction	SE
D7	09 Dec 2020	Water Temp (C)	16.1
D7	09 Dec 2020	Wave Height Low (ft)	6
D7	09 Dec 2020	High Tide (ft)	4.9
D7	09 Dec 2020	High Tide Time	443
D7	09 Dec 2020	Low Tide (ft)	1.4
D7	09 Dec 2020	Low Tide Time	1108
D7	09 Dec 2020	Comments	Kelp; Seagrass; 60 Persons; 2 Boats; Water clear
D7	16 Dec 2020	Arrive Time	906
D7	16 Dec 2020	Weather	Sunny
D7	16 Dec 2020	Wind Speed (kts)	5.6
D7	16 Dec 2020	Wind Dir	SE
D7	16 Dec 2020	Animal Life	1 Seagull
D7	16 Dec 2020	Floatables	Foam
D7	16 Dec 2020	Water Color	Green
D7	16 Dec 2020	Current Direction	N
D7	16 Dec 2020	Water Temp (C)	14.8
D7	16 Dec 2020	Wave Height Low (ft)	5
D7	16 Dec 2020	High Tide (ft)	6.5
D7	16 Dec 2020	High Tide Time	922
D7	16 Dec 2020	Low Tide (ft)	1.9
D7	16 Dec 2020	Low Tide Time	312
D7	16 Dec 2020	Comments	Kelp; Seagrass; Algae; 2 Persons; 2 Surfers; Water turbid
D7	23 Dec 2020	Arrive Time	941
D7	23 Dec 2020	Weather	Partly Cloudy
D7	23 Dec 2020	Wind Speed (kts)	3.1
D7	23 Dec 2020	Wind Dir	N
D7	23 Dec 2020	Animal Life	None
D7	23 Dec 2020	Floatables	Foam
D7	23 Dec 2020	Water Color	Green
D7	23 Dec 2020	Current Direction	S
D7	23 Dec 2020	Water Temp (C)	16
D7	23 Dec 2020	Wave Height Low (ft)	2
D7	23 Dec 2020	High Tide (ft)	4.6
D7	23 Dec 2020	High Tide Time	445
D7	23 Dec 2020	Low Tide (ft)	1.5
D7	23 Dec 2020	Low Tide Time	1139
D7	23 Dec 2020	Comments	Kelp; Seagrass; 40 Surfers; Water clear
D7	30 Dec 2020	Arrive Time	849
D7	30 Dec 2020	Weather	Sunny
D7	30 Dec 2020	Wind Speed (kts)	2.9
D7	30 Dec 2020	Wind Dir	SE
D7	30 Dec 2020	Animal Life	1 Pelican; 1 Tern
D7	30 Dec 2020	Floatables	None
D7	30 Dec 2020	Water Color	Green
D7	30 Dec 2020	Current Direction	S
D7	30 Dec 2020	Water Temp (C)	14.4
D7	30 Dec 2020	Wave Height Low (ft)	4
D7	30 Dec 2020	High Tide (ft)	6
D7	30 Dec 2020	High Tide Time	823
D7	30 Dec 2020	Low Tide (ft)	2
D7	30 Dec 2020	Low Tide Time	216
D7	30 Dec 2020	Comments	Kelp; 2 Surfers; Water clear

Station	Date	Parameter	Value
D8-A	09 Dec 2020	Arrive Time	840
D8-A	09 Dec 2020	Weather	Partly Cloudy
D8-A	09 Dec 2020	Wind Speed (kts)	1.5
D8-A	09 Dec 2020	Wind Dir	E
D8-A	09 Dec 2020	Animal Life	None
D8-A	09 Dec 2020	Floatables	Foam
D8-A	09 Dec 2020	Water Color	Green
D8-A	09 Dec 2020	Current Direction	S
D8-A	09 Dec 2020	Water Temp (C)	16.2
D8-A	09 Dec 2020	Wave Height Low (ft)	8
D8-A	09 Dec 2020	High Tide (ft)	4.9
D8-A	09 Dec 2020	High Tide Time	443
D8-A	09 Dec 2020	Low Tide (ft)	1.4
D8-A	09 Dec 2020	Low Tide Time	1108
D8-A	09 Dec 2020	Comments	Kelp; Seagrass; 3 Surfers; Water turbid
D8-A	16 Dec 2020	Arrive Time	927
D8-A	16 Dec 2020	Weather	Sunny
D8-A	16 Dec 2020	Wind Speed (kts)	0
D8-A	16 Dec 2020	Wind Dir	
D8-A	16 Dec 2020	Animal Life	None
D8-A	16 Dec 2020	Floatables	Foam
D8-A	16 Dec 2020	Water Color	Brown
D8-A	16 Dec 2020	Current Direction	S
D8-A	16 Dec 2020	Water Temp (C)	15.4
D8-A	16 Dec 2020	Wave Height Low (ft)	4
D8-A	16 Dec 2020	High Tide (ft)	6.5
D8-A	16 Dec 2020	High Tide Time	922
D8-A	16 Dec 2020	Low Tide (ft)	1.9
D8-A	16 Dec 2020	Low Tide Time	312
D8-A	16 Dec 2020	Comments	Kelp; Seagrass; Algae; 1 Person; Water turbid
D8-A	23 Dec 2020	Arrive Time	927
D8-A	23 Dec 2020	Weather	Partly Cloudy
D8-A	23 Dec 2020	Wind Speed (kts)	5.2
D8-A	23 Dec 2020	Wind Dir	NW
D8-A	23 Dec 2020	Animal Life	2 Seagulls
D8-A	23 Dec 2020	Floatables	Foam
D8-A	23 Dec 2020	Water Color	Green
D8-A	23 Dec 2020	Current Direction	S
D8-A	23 Dec 2020	Water Temp (C)	15.9
D8-A	23 Dec 2020	Wave Height Low (ft)	4
D8-A	23 Dec 2020	High Tide (ft)	4.6
D8-A	23 Dec 2020	High Tide Time	445
D8-A	23 Dec 2020	Low Tide (ft)	1.5
D8-A	23 Dec 2020	Low Tide Time	1139
D8-A	23 Dec 2020	Comments	Kelp; Seagrass; Algae; 2 Surfers; 3 Boats; Water clear
D8-A	30 Dec 2020	Arrive Time	906
D8-A	30 Dec 2020	Weather	Sunny
D8-A	30 Dec 2020	Wind Speed (kts)	3.4
D8-A	30 Dec 2020	Wind Dir	E
D8-A	30 Dec 2020	Animal Life	2 Pelicans; 25 Terns
D8-A	30 Dec 2020	Floatables	None
D8-A	30 Dec 2020	Water Color	Brown
D8-A	30 Dec 2020	Current Direction	S
D8-A	30 Dec 2020	Water Temp (C)	14
D8-A	30 Dec 2020	Wave Height Low (ft)	4
D8-A	30 Dec 2020	High Tide (ft)	6
D8-A	30 Dec 2020	High Tide Time	823

Station	Date	Parameter	Value
D8-A	30 Dec 2020	Low Tide (ft)	-0.9
D8-A	30 Dec 2020	Low Tide Time	1545
D8-A	30 Dec 2020	Comments	Water turbid
D8-B	02 Dec 2020	Arrive Time	915
D8-B	02 Dec 2020	Weather	Sunny
D8-B	02 Dec 2020	Wind Speed (kts)	1.7
D8-B	02 Dec 2020	Wind Dir	W
D8-B	02 Dec 2020	Animal Life	1 Cormorant; 45 Seagulls
D8-B	02 Dec 2020	Floatables	Foam
D8-B	02 Dec 2020	Water Color	Green
D8-B	02 Dec 2020	Current Direction	S
D8-B	02 Dec 2020	Water Temp (C)	16.3
D8-B	02 Dec 2020	Wave Height Low (ft)	4
D8-B	02 Dec 2020	High Tide (ft)	5.8
D8-B	02 Dec 2020	High Tide Time	905
D8-B	02 Dec 2020	Low Tide (ft)	2.3
D8-B	02 Dec 2020	Low Tide Time	253
D8-B	02 Dec 2020	Comments	Kelp; Algae; 1 Person; Water clear
D9	02 Dec 2020	Arrive Time	930
D9	02 Dec 2020	Weather	Sunny
D9	02 Dec 2020	Wind Speed (kts)	2.5
D9	02 Dec 2020	Wind Dir	W
D9	02 Dec 2020	Animal Life	1 Seagull
D9	02 Dec 2020	Floatables	Foam
D9	02 Dec 2020	Water Color	Green
D9	02 Dec 2020	Current Direction	S
D9	02 Dec 2020	Water Temp (C)	15.5
D9	02 Dec 2020	Wave Height Low (ft)	4
D9	02 Dec 2020	High Tide (ft)	5.8
D9	02 Dec 2020	High Tide Time	905
D9	02 Dec 2020	Low Tide (ft)	2.3
D9	02 Dec 2020	Low Tide Time	253
D9	02 Dec 2020	Comments	Kelp; Seagrass; Algae; 2 Surfers; 1 Boat; Water turbid
D9	09 Dec 2020	Arrive Time	856
D9	09 Dec 2020	Weather	Partly Cloudy
D9	09 Dec 2020	Wind Speed (kts)	0.3
D9	09 Dec 2020	Wind Dir	NW
D9	09 Dec 2020	Animal Life	None
D9	09 Dec 2020	Floatables	Foam; Film
D9	09 Dec 2020	Water Color	Green
D9	09 Dec 2020	Current Direction	S
D9	09 Dec 2020	Water Temp (C)	15.7
D9	09 Dec 2020	Wave Height Low (ft)	7
D9	09 Dec 2020	High Tide (ft)	4.9
D9	09 Dec 2020	High Tide Time	443
D9	09 Dec 2020	Low Tide (ft)	1.4
D9	09 Dec 2020	Low Tide Time	1108
D9	09 Dec 2020	Comments	Kelp; Seagrass; Algae; 1 Surfer; Water clear
D9	16 Dec 2020	Arrive Time	948
D9	16 Dec 2020	Weather	Sunny
D9	16 Dec 2020	Wind Speed (kts)	0
D9	16 Dec 2020	Wind Dir	
D9	16 Dec 2020	Animal Life	None
D9	16 Dec 2020	Floatables	Foam
D9	16 Dec 2020	Water Color	Brown
D9	16 Dec 2020	Current Direction	S
D9	16 Dec 2020	Water Temp (C)	15.3

Station	Date	Parameter	Value
D9	16 Dec 2020	Wave Height Low (ft)	6
D9	16 Dec 2020	High Tide (ft)	6.5
D9	16 Dec 2020	High Tide Time	922
D9	16 Dec 2020	Low Tide (ft)	1.9
D9	16 Dec 2020	Low Tide Time	312
D9	16 Dec 2020	Comments	Kelp; Algae; 3 Persons; Water turbid
D9	23 Dec 2020	Arrive Time	910
D9	23 Dec 2020	Weather	Partly Cloudy
D9	23 Dec 2020	Wind Speed (kts)	0.5
D9	23 Dec 2020	Wind Dir	E
D9	23 Dec 2020	Animal Life	1 Grebe; 1 Seagull
D9	23 Dec 2020	Floatables	Foam; Film
D9	23 Dec 2020	Water Color	Green
D9	23 Dec 2020	Current Direction	S
D9	23 Dec 2020	Water Temp (C)	15.1
D9	23 Dec 2020	Wave Height Low (ft)	2
D9	23 Dec 2020	High Tide (ft)	4.6
D9	23 Dec 2020	High Tide Time	445
D9	23 Dec 2020	Low Tide (ft)	1.5
D9	23 Dec 2020	Low Tide Time	1139
D9	23 Dec 2020	Comments	Kelp; Seagrass; Algae; 3 Persons; 2 Boats; Water clear
D9	30 Dec 2020	Arrive Time	917
D9	30 Dec 2020	Weather	Sunny
D9	30 Dec 2020	Wind Speed (kts)	4.2
D9	30 Dec 2020	Wind Dir	E
D9	30 Dec 2020	Animal Life	1 Seagull
D9	30 Dec 2020	Floatables	Foam
D9	30 Dec 2020	Water Color	Brown
D9	30 Dec 2020	Current Direction	S
D9	30 Dec 2020	Water Temp (C)	15.1
D9	30 Dec 2020	Wave Height Low (ft)	4
D9	30 Dec 2020	High Tide (ft)	6
D9	30 Dec 2020	High Tide Time	823
D9	30 Dec 2020	Low Tide (ft)	-0.9
D9	30 Dec 2020	Low Tide Time	1545
D9	30 Dec 2020	Comments	Algae; 1 Surfer; Water turbid
D10	02 Dec 2020	Arrive Time	946
D10	02 Dec 2020	Weather	Sunny
D10	02 Dec 2020	Wind Speed (kts)	2.3
D10	02 Dec 2020	Wind Dir	W
D10	02 Dec 2020	Animal Life	2 Seagulls
D10	02 Dec 2020	Floatables	Foam
D10	02 Dec 2020	Water Color	Green
D10	02 Dec 2020	Current Direction	S
D10	02 Dec 2020	Water Temp (C)	15.9
D10	02 Dec 2020	Wave Height Low (ft)	5
D10	02 Dec 2020	High Tide (ft)	5.8
D10	02 Dec 2020	High Tide Time	905
D10	02 Dec 2020	Low Tide (ft)	2.3
D10	02 Dec 2020	Low Tide Time	253
D10	02 Dec 2020	Comments	Kelp; Seagrass; 10 Persons; 15 Surfers; 1 Swimmer; Water clear
D10	09 Dec 2020	Arrive Time	936
D10	09 Dec 2020	Weather	Partly Cloudy
D10	09 Dec 2020	Wind Speed (kts)	2.3
D10	09 Dec 2020	Wind Dir	SE
D10	09 Dec 2020	Animal Life	1 Dog
D10	09 Dec 2020	Floatables	Foam; Film

Station	Date	Parameter	Value
D10	09 Dec 2020	Water Color	Green
D10	09 Dec 2020	Current Direction	N
D10	09 Dec 2020	Water Temp (C)	16.8
D10	09 Dec 2020	Wave Height Low (ft)	10
D10	09 Dec 2020	High Tide (ft)	4.9
D10	09 Dec 2020	High Tide Time	443
D10	09 Dec 2020	Low Tide (ft)	1.4
D10	09 Dec 2020	Low Tide Time	1108
D10	09 Dec 2020	Comments	Kelp; Seagrass; 21 Persons; Water clear
D10	16 Dec 2020	Arrive Time	1007
D10	16 Dec 2020	Weather	Sunny
D10	16 Dec 2020	Wind Speed (kts)	2.5
D10	16 Dec 2020	Wind Dir	NW
D10	16 Dec 2020	Animal Life	1 Wren
D10	16 Dec 2020	Floatables	Foam
D10	16 Dec 2020	Water Color	Green
D10	16 Dec 2020	Current Direction	S
D10	16 Dec 2020	Water Temp (C)	16.3
D10	16 Dec 2020	Wave Height Low (ft)	6
D10	16 Dec 2020	High Tide (ft)	6.5
D10	16 Dec 2020	High Tide Time	922
D10	16 Dec 2020	Low Tide (ft)	-1.3
D10	16 Dec 2020	Low Tide Time	1646
D10	16 Dec 2020	Comments	Kelp; Seagrass; 7 Persons; 17 Surfers; 3 Swimmers; Water turbid
D10	23 Dec 2020	Arrive Time	851
D10	23 Dec 2020	Weather	Partly Cloudy
D10	23 Dec 2020	Wind Speed (kts)	0.3
D10	23 Dec 2020	Wind Dir	SE
D10	23 Dec 2020	Animal Life	1 Dog; 50 Seagulls
D10	23 Dec 2020	Floatables	Foam
D10	23 Dec 2020	Water Color	Green
D10	23 Dec 2020	Current Direction	S
D10	23 Dec 2020	Water Temp (C)	14.9
D10	23 Dec 2020	Wave Height Low (ft)	3
D10	23 Dec 2020	High Tide (ft)	4.6
D10	23 Dec 2020	High Tide Time	445
D10	23 Dec 2020	Low Tide (ft)	1.5
D10	23 Dec 2020	Low Tide Time	1139
D10	23 Dec 2020	Comments	Kelp; Seagrass; 20 Persons; 27 Surfers; Water clear
D10	30 Dec 2020	Arrive Time	929
D10	30 Dec 2020	Weather	Sunny
D10	30 Dec 2020	Wind Speed (kts)	2.7
D10	30 Dec 2020	Wind Dir	E
D10	30 Dec 2020	Animal Life	7 Seagulls
D10	30 Dec 2020	Floatables	None
D10	30 Dec 2020	Water Color	Brown
D10	30 Dec 2020	Current Direction	S
D10	30 Dec 2020	Water Temp (C)	15.2
D10	30 Dec 2020	Wave Height Low (ft)	4
D10	30 Dec 2020	High Tide (ft)	6
D10	30 Dec 2020	High Tide Time	823
D10	30 Dec 2020	Low Tide (ft)	-0.9
D10	30 Dec 2020	Low Tide Time	1545
D10	30 Dec 2020	Comments	Kelp; 4 Persons; 9 Surfers; Water turbid
D11	02 Dec 2020	Arrive Time	1002
D11	02 Dec 2020	Weather	Sunny
D11	02 Dec 2020	Wind Speed (kts)	2.1

Station	Date	Parameter	Value
D11	02 Dec 2020	Wind Dir	W
D11	02 Dec 2020	Animal Life	1 Dog; 1 Rat
D11	02 Dec 2020	Floatables	Foam
D11	02 Dec 2020	Water Color	Green
D11	02 Dec 2020	Current Direction	S
D11	02 Dec 2020	Water Temp (C)	17.2
D11	02 Dec 2020	Wave Height Low (ft)	4
D11	02 Dec 2020	High Tide (ft)	5.8
D11	02 Dec 2020	High Tide Time	905
D11	02 Dec 2020	Low Tide (ft)	-0.4
D11	02 Dec 2020	Low Tide Time	1635
D11	02 Dec 2020	Comments	Seagrass; Algae; 11 Persons; 16 Surfers; Water clear
D11	09 Dec 2020	Arrive Time	946
D11	09 Dec 2020	Weather	Partly Cloudy
D11	09 Dec 2020	Wind Speed (kts)	5
D11	09 Dec 2020	Wind Dir	SE
D11	09 Dec 2020	Animal Life	2 Dogs
D11	09 Dec 2020	Floatables	Foam
D11	09 Dec 2020	Water Color	Green
D11	09 Dec 2020	Current Direction	N
D11	09 Dec 2020	Water Temp (C)	16.7
D11	09 Dec 2020	Wave Height Low (ft)	10
D11	09 Dec 2020	High Tide (ft)	4.9
D11	09 Dec 2020	High Tide Time	443
D11	09 Dec 2020	Low Tide (ft)	1.4
D11	09 Dec 2020	Low Tide Time	1108
D11	09 Dec 2020	Comments	Kelp; Seagrass; 18 Persons; Water clear
D11	16 Dec 2020	Arrive Time	1020
D11	16 Dec 2020	Weather	Sunny
D11	16 Dec 2020	Wind Speed (kts)	2.5
D11	16 Dec 2020	Wind Dir	W
D11	16 Dec 2020	Animal Life	5 Dogs; 1 Godwit
D11	16 Dec 2020	Floatables	Foam
D11	16 Dec 2020	Water Color	Green
D11	16 Dec 2020	Current Direction	S
D11	16 Dec 2020	Water Temp (C)	16
D11	16 Dec 2020	Wave Height Low (ft)	3
D11	16 Dec 2020	High Tide (ft)	6.5
D11	16 Dec 2020	High Tide Time	922
D11	16 Dec 2020	Low Tide (ft)	-1.3
D11	16 Dec 2020	Low Tide Time	1646
D11	16 Dec 2020	Comments	2 Joggers; 8 Persons; 27 Surfers; Water turbid
D11	23 Dec 2020	Arrive Time	835
D11	23 Dec 2020	Weather	Partly Cloudy
D11	23 Dec 2020	Wind Speed (kts)	0.7
D11	23 Dec 2020	Wind Dir	E
D11	23 Dec 2020	Animal Life	3 Pigeons; 1 Seagull
D11	23 Dec 2020	Floatables	Foam
D11	23 Dec 2020	Water Color	Green
D11	23 Dec 2020	Current Direction	S
D11	23 Dec 2020	Water Temp (C)	14.7
D11	23 Dec 2020	Wave Height Low (ft)	2
D11	23 Dec 2020	High Tide (ft)	4.6
D11	23 Dec 2020	High Tide Time	445
D11	23 Dec 2020	Low Tide (ft)	1.5
D11	23 Dec 2020	Low Tide Time	1139
D11	23 Dec 2020	Comments	Kelp; Seagrass; 3 Persons; 35 Surfers; 1 Boat; Water clear

Station	Date	Parameter	Value
D11	30 Dec 2020	Arrive Time	940
D11	30 Dec 2020	Weather	Sunny
D11	30 Dec 2020	Wind Speed (kts)	4.2
D11	30 Dec 2020	Wind Dir	SE
D11	30 Dec 2020	Animal Life	2 Shorebirds; 4 Dogs
D11	30 Dec 2020	Floatables	None
D11	30 Dec 2020	Water Color	Brown
D11	30 Dec 2020	Current Direction	S
D11	30 Dec 2020	Water Temp (C)	14.7
D11	30 Dec 2020	Wave Height Low (ft)	4
D11	30 Dec 2020	High Tide (ft)	6
D11	30 Dec 2020	High Tide Time	823
D11	30 Dec 2020	Low Tide (ft)	-0.9
D11	30 Dec 2020	Low Tide Time	1545
D11	30 Dec 2020	Comments	Kelp; 2 Persons; 6 Surfers; Water turbid
D12	02 Dec 2020	Arrive Time	1037
D12	02 Dec 2020	Weather	Sunny
D12	02 Dec 2020	Wind Speed (kts)	1.7
D12	02 Dec 2020	Wind Dir	W
D12	02 Dec 2020	Animal Life	1 Godwit; 1 Seagull
D12	02 Dec 2020	Floatables	Foam
D12	02 Dec 2020	Water Color	Green
D12	02 Dec 2020	Current Direction	S
D12	02 Dec 2020	Water Temp (C)	17.9
D12	02 Dec 2020	Wave Height Low (ft)	3
D12	02 Dec 2020	High Tide (ft)	5.8
D12	02 Dec 2020	High Tide Time	905
D12	02 Dec 2020	Low Tide (ft)	-0.4
D12	02 Dec 2020	Low Tide Time	1635
D12	02 Dec 2020	Comments	Kelp; Seagrass; 4 Persons; 7 Surfers; 1 Swimmer; Water clear
D12	09 Dec 2020	Arrive Time	1034
D12	09 Dec 2020	Weather	Partly Cloudy
D12	09 Dec 2020	Wind Speed (kts)	2.3
D12	09 Dec 2020	Wind Dir	W
D12	09 Dec 2020	Animal Life	1 Dog; 1 Dolphin; 20 Seagulls
D12	09 Dec 2020	Floatables	None
D12	09 Dec 2020	Water Color	Green
D12	09 Dec 2020	Current Direction	N
D12	09 Dec 2020	Water Temp (C)	17.1
D12	09 Dec 2020	Wave Height Low (ft)	8
D12	09 Dec 2020	High Tide (ft)	4.9
D12	09 Dec 2020	High Tide Time	443
D12	09 Dec 2020	Low Tide (ft)	1.4
D12	09 Dec 2020	Low Tide Time	1108
D12	09 Dec 2020	Comments	Kelp; Seagrass; 18 Persons; 1 Swimmer; Water clear
D12	16 Dec 2020	Arrive Time	1101
D12	16 Dec 2020	Weather	Sunny
D12	16 Dec 2020	Wind Speed (kts)	3.4
D12	16 Dec 2020	Wind Dir	W
D12	16 Dec 2020	Animal Life	1 Seagull
D12	16 Dec 2020	Floatables	Foam
D12	16 Dec 2020	Water Color	Green
D12	16 Dec 2020	Current Direction	S
D12	16 Dec 2020	Water Temp (C)	17.7
D12	16 Dec 2020	Wave Height Low (ft)	3
D12	16 Dec 2020	High Tide (ft)	6.5
D12	16 Dec 2020	High Tide Time	922
D12	16 Dec 2020	Low Tide (ft)	-1.3

Station	Date	Parameter	Value
D12	16 Dec 2020	Low Tide Time	1646
D12	16 Dec 2020	Comments	Kelp; 1 Jogger; 8 Persons; 6 Surfers; 1 Swimmer; Water turbid
D12	23 Dec 2020	Arrive Time	753
D12	23 Dec 2020	Weather	Partly Cloudy
D12	23 Dec 2020	Wind Speed (kts)	0
D12	23 Dec 2020	Wind Dir	
D12	23 Dec 2020	Animal Life	3 Godwits; 1 Pelican; 6 Plovers; 8 Seagulls
D12	23 Dec 2020	Floatables	Foam; Film
D12	23 Dec 2020	Water Color	Green
D12	23 Dec 2020	Current Direction	S
D12	23 Dec 2020	Water Temp (C)	17.6
D12	23 Dec 2020	Wave Height Low (ft)	3
D12	23 Dec 2020	High Tide (ft)	4.6
D12	23 Dec 2020	High Tide Time	445
D12	23 Dec 2020	Low Tide (ft)	1.5
D12	23 Dec 2020	Low Tide Time	1139
D12	23 Dec 2020	Comments	Kelp; Seagrass; 7 Persons; 10 Surfers; 1 Boat; Water clear
D12	30 Dec 2020	Arrive Time	959
D12	30 Dec 2020	Weather	Sunny
D12	30 Dec 2020	Wind Speed (kts)	2.9
D12	30 Dec 2020	Wind Dir	E
D12	30 Dec 2020	Animal Life	1 Seagull
D12	30 Dec 2020	Floatables	None
D12	30 Dec 2020	Water Color	Brown
D12	30 Dec 2020	Current Direction	S
D12	30 Dec 2020	Water Temp (C)	17.4
D12	30 Dec 2020	Wave Height Low (ft)	4
D12	30 Dec 2020	High Tide (ft)	6
D12	30 Dec 2020	High Tide Time	823
D12	30 Dec 2020	Low Tide (ft)	-0.9
D12	30 Dec 2020	Low Tide Time	1545
D12	30 Dec 2020	Comments	Kelp; Seagrass; 4 Persons; 1 Surfer; Water turbid

# Kelp Stations



**Table 3.1**

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

Date	A1	A6	A7	C4	C5	C6	C7	C8
01 Dec 2020	12	6	9	4	3	3	6	8
02 Dec 2020	19*	7*	13*	3*	3*	3*	7*	11*
03 Dec 2020	19*	7*	13*	3*	3*	3*	7*	11*
04 Dec 2020	19*	7*	13*	3*	3*	3*	7*	11*
05 Dec 2020	19*	7*	13*	3*	3*	3*	7*	11*
06 Dec 2020	19*	7*	13*	3*	3*	3*	7*	11*
07 Dec 2020	14	6	11	3	4	4	6	8
08 Dec 2020	14	6	11	3	4	4	6	8
09 Dec 2020	14	6	11	3	4	4	6	8
10 Dec 2020	14	6	11	3	4	4	6	8
11 Dec 2020	9*	5*	12*	2*	3*	5*	5*	8*
12 Dec 2020	9*	5*	12*	2*	3*	5*	5*	8*
13 Dec 2020	9*	5*	12*	2*	3*	5*	5*	8*
14 Dec 2020	9*	5*	12*	2*	3*	5*	5*	8*
15 Dec 2020	10	5	11	3	5	4	6	6
16 Dec 2020	10	5	11	3	5	4	6	6
17 Dec 2020	9*	4*	12*	3*	5*	5*	4*	4*
18 Dec 2020	9*	4*	12*	3*	5*	5*	4*	4*
19 Dec 2020	9*	4*	12*	3*	5*	5*	4*	4*
20 Dec 2020	9*	4*	12*	3*	5*	5*	4*	4*
21 Dec 2020	9	4	8	3	4	4	4	4
22 Dec 2020	9	4	8	3	4	4	4	4
23 Dec 2020	8*	4*	9*	3*	5*	5*	4*	3*
24 Dec 2020	8*	4*	9*	3*	5*	5*	4*	3*
25 Dec 2020	8*	4*	9*	3*	5*	5*	4*	3*
26 Dec 2020	8*	4*	9*	3*	5*	5*	4*	3*
27 Dec 2020	13	4	13	3	6	4	4	3
28 Dec 2020	13	4	13	3	6	4	4	3
29 Dec 2020	13	4	13	3	6	4	4	3
30 Dec 2020	13	4	13	3	6	4	4	3
31 Dec 2020	15*	4*	9*	3*	7*	4*	3*	3*

\* Geometric mean calculated using n<5

**Table 3.2**

Summary of compliance with the Ocean Plan's 30-day Geometric Mean standard for fecal coliform bacteria at the PLOO 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	A1	A6	A7	C4	C5	C6	C7	C8
01 Dec 2020	2	2	3	2	2	2	2	2
02 Dec 2020	3*	2*	4*	2*	2*	2*	3*	3*
03 Dec 2020	3*	2*	4*	2*	2*	2*	3*	3*
04 Dec 2020	3*	2*	4*	2*	2*	2*	3*	3*
05 Dec 2020	3*	2*	4*	2*	2*	2*	3*	3*
06 Dec 2020	3*	2*	4*	2*	2*	2*	3*	3*
07 Dec 2020	3	2	4	2	2	2	2	2
08 Dec 2020	3	2	4	2	2	2	2	2
09 Dec 2020	3	2	4	2	2	2	2	2
10 Dec 2020	3	2	4	2	2	2	2	2
11 Dec 2020	2*	2*	4*	2*	2*	2*	2*	2*
12 Dec 2020	2*	2*	4*	2*	2*	2*	2*	2*
13 Dec 2020	2*	2*	4*	2*	2*	2*	2*	2*
14 Dec 2020	2*	2*	4*	2*	2*	2*	2*	2*
15 Dec 2020	2	2	3	2	2	2	2	2
16 Dec 2020	2	2	3	2	2	2	2	2
17 Dec 2020	2*	2*	4*	2*	2*	2*	2*	2*
18 Dec 2020	2*	2*	4*	2*	2*	2*	2*	2*
19 Dec 2020	2*	2*	4*	2*	2*	2*	2*	2*
20 Dec 2020	2*	2*	4*	2*	2*	2*	2*	2*
21 Dec 2020	2	2	3	2	2	2	2	2
22 Dec 2020	2	2	3	2	2	2	2	2
23 Dec 2020	2*	2*	4*	2*	2*	2*	2*	2*
24 Dec 2020	2*	2*	4*	2*	2*	2*	2*	2*
25 Dec 2020	2*	2*	4*	2*	2*	2*	2*	2*
26 Dec 2020	2*	2*	4*	2*	2*	2*	2*	2*
27 Dec 2020	3	2	3	2	2	2	2	2
28 Dec 2020	3	2	3	2	2	2	2	2
29 Dec 2020	3	2	3	2	2	2	2	2
30 Dec 2020	3	2	3	2	2	2	2	2
31 Dec 2020	3*	2*	2*	2*	2*	2*	2*	2*

\* Geometric mean calculated using n<5

**Table 3.3**

Summary of compliance with the Ocean Plan's 30-day Geometric Mean standard for *Enterococcus* at the PLOO kelp stations. Data are based on the geometric mean of the five most recent samples from each site over the previous 30 days unless otherwise noted (\*). Values >35 CFU/100 mL exceed the standard.

Date	A1	A6	A7	C4	C5	C6	C7	C8
01 Dec 2020	2	2	2	2	2	2	2	2
02 Dec 2020	2*	2*	2*	2*	2*	2*	2*	2*
03 Dec 2020	2*	2*	2*	2*	2*	2*	2*	2*
04 Dec 2020	2*	2*	2*	2*	2*	2*	2*	2*
05 Dec 2020	2*	2*	2*	2*	2*	2*	2*	2*
06 Dec 2020	2*	2*	2*	2*	2*	2*	2*	2*
07 Dec 2020	2	2	2	2	2	2	2	2
08 Dec 2020	2	2	2	2	2	2	2	2
09 Dec 2020	2	2	2	2	2	2	2	2
10 Dec 2020	2	2	2	2	2	2	2	2
11 Dec 2020	2*	2*	2*	2*	2*	2*	2*	2*
12 Dec 2020	2*	2*	2*	2*	2*	2*	2*	2*
13 Dec 2020	2*	2*	2*	2*	2*	2*	2*	2*
14 Dec 2020	2*	2*	2*	2*	2*	2*	2*	2*
15 Dec 2020	2	2	2	2	2	2	2	2
16 Dec 2020	2	2	2	2	2	2	2	2
17 Dec 2020	2*	2*	2*	2*	2*	2*	2*	2*
18 Dec 2020	2*	2*	2*	2*	2*	2*	2*	2*
19 Dec 2020	2*	2*	2*	2*	2*	2*	2*	2*
20 Dec 2020	2*	2*	2*	2*	2*	2*	2*	2*
21 Dec 2020	2	2	2	2	2	2	2	2
22 Dec 2020	2	2	2	2	2	2	2	2
23 Dec 2020	2*	2*	2*	2*	2*	2*	2*	2*
24 Dec 2020	2*	2*	2*	2*	2*	2*	2*	2*
25 Dec 2020	2*	2*	2*	2*	2*	2*	2*	2*
26 Dec 2020	2*	2*	2*	2*	2*	2*	2*	2*
27 Dec 2020	2	2	2	2	2	2	2	2
28 Dec 2020	2	2	2	2	2	2	2	2
29 Dec 2020	2	2	2	2	2	2	2	2
30 Dec 2020	2	2	2	2	2	2	2	2
31 Dec 2020	2*	2*	2*	2*	2*	2*	2*	2*

\* Geometric mean calculated using n<5

**Table 3.4**

Summary of compliance at the PLOO kelp stations with the Ocean Plan's Single Sample Maximum standard for total coliform bacteria, which states that total coliform density shall not exceed 10,000 CFU/100 mL.

<b>Date</b>	<b>A1</b>	<b>A6</b>	<b>A7</b>	<b>C4</b>	<b>C5</b>	<b>C6</b>	<b>C7</b>	<b>C8</b>
01 Dec 2020	IC							
07 Dec 2020	IC							
15 Dec 2020	IC							
21 Dec 2020	IC							
27 Dec 2020	IC							

IC = In Compliance

E = Exceedance

ns = not sampled

ND = no data

**Table 3.5**

Summary of compliance at the PLOO 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.

<b>Date</b>	<b>A1</b>	<b>A6</b>	<b>A7</b>	<b>C4</b>	<b>C5</b>	<b>C6</b>	<b>C7</b>	<b>C8</b>
01 Dec 2020	IC							
07 Dec 2020	IC							
15 Dec 2020	IC							
21 Dec 2020	IC							
27 Dec 2020	IC							

IC = In Compliance

E = Exceedance

ns = not sampled

ND = no data

**Table 3.6**

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

Date	A1	A6	A7	C4	C5	C6	C7	C8
01 Dec 2020	IC							
07 Dec 2020	IC							
15 Dec 2020	IC							
21 Dec 2020	IC							
27 Dec 2020	IC							

IC = In Compliance

E = Exceedance

ns = not sampled

ND = no data

**Table 3.7**

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

Date	A1	A6	A7	C4	C5	C6	C7	C8
01 Dec 2020	IC							
07 Dec 2020	IC							
15 Dec 2020	IC							
21 Dec 2020	IC							
27 Dec 2020	IC							

IC = In Compliance

E = Exceedance

ns = not sampled

ND = no data

**Table 3.8**

Summary of water quality parameters at the PLOO kelp stations for each sample date. Densities of total coliform (Total), fecal coliform (Fecal) and *Enterococcus* (Entero) bacteria are reported as CFU/100 mL; the fecal:total coliform ratio (F:T) is unitless; values for temperature (Temp, °C), transmissivity (XMS, ‰), dissolved oxygen (DO, mg/L), salinity (Sal, ppt) and pH were extracted from CTD profile data for depths closest to those at which the bacteriological samples were collected. Comments follow the data summary.

Station	Date	Time	Depth	Total	Fecal	Entero	F:T	Temp	XMS	DO	Sal	pH
A1	01 Dec 2020	754	1	<2	<2	<2	1.00	14.8	85.79	7.2	33.59	8.0
A1	01 Dec 2020	754	12	2e	<2	<2	1.00	13.0	90.49	5.6	33.54	7.9
A1	01 Dec 2020	754	18	20e	<2	<2	0.10	12.8	90.43	5.4	33.55	7.9
A1	07 Dec 2020	807	1	2e	<2	<2	1.00	14.6	NA	7.3	33.58	8.0
A1	07 Dec 2020	807	12	<2	<2	<2	1.00	14.6	NA	7.3	33.58	8.0
A1	07 Dec 2020	807	18	6e	6e	<2	1.00	14.2	NA	6.6	33.57	7.9
A1	15 Dec 2020	819	1	4e	<2	<2	0.50	15.1	84.59	7.6	33.58	8.1
A1	15 Dec 2020	819	12	2e	<2	<2	1.00	15.1	85.19	7.5	33.58	8.1
A1	15 Dec 2020	819	18	40e	2e	<2	0.05	14.8	82.41	7.0	33.57	8.0
A1	21 Dec 2020	810	1	<2	<2	<2	1.00	14.5	85.71	7.5	33.59	8.0
A1	21 Dec 2020	810	12	<2	<2	<2	1.00	14.3	87.43	7.4	33.58	8.0
A1	21 Dec 2020	810	18	<20	<2	<2	0.10	14.0	88.51	6.8	33.57	8.0
A1	27 Dec 2020	756	1	2e	<2	<2	1.00	14.3	88.05	7.4	33.60	8.0
A1	27 Dec 2020	756	12	200e	<2	<2	0.01	14.2	89.29	7.2	33.60	8.0
A1	27 Dec 2020	756	18	160e	22e	<2	0.14	13.8	81.18	6.7	33.62	8.0
A6	01 Dec 2020	820	1	<2	<2	<2	1.00	15.4	88.75	7.8	33.60	8.1
A6	01 Dec 2020	820	12	<2	<2	<2	1.00	14.7	89.67	6.6	33.56	8.0
A6	01 Dec 2020	820	18	2e	<2	<2	1.00	13.6	90.43	5.9	33.55	7.9
A6	07 Dec 2020	834	1	2e	<2	<2	1.00	15.2	NA	7.6	33.59	8.0
A6	07 Dec 2020	834	12	2e	<2	<2	1.00	14.8	NA	7.3	33.58	8.0
A6	07 Dec 2020	834	18	4e	<2	<2	0.50	14.6	NA	6.9	33.58	8.0
A6	15 Dec 2020	848	1	<2	<2	<2	1.00	15.5	82.98	7.4	33.58	8.1
A6	15 Dec 2020	848	12	2e	<2	<2	1.00	15.5	82.55	7.3	33.58	8.1
A6	15 Dec 2020	848	18	<20	2e	2e	0.10	14.8	81.05	6.9	33.58	8.0
A6	21 Dec 2020	838	1	<2	<2	<2	1.00	15.0	86.77	7.7	33.60	8.1
A6	21 Dec 2020	838	12	<2	<2	2e	1.00	14.1	88.82	6.6	33.57	8.0
A6	21 Dec 2020	838	18	<20	4e	<2	0.20	13.6	88.76	6.1	33.58	7.9
A6	27 Dec 2020	822	1	<2	<2	<2	1.00	14.4	86.91	7.5	33.60	8.0
A6	27 Dec 2020	822	12	<2	2e	<2	1.00	14.3	86.67	7.4	33.60	8.0
A6	27 Dec 2020	822	18	2e	2e	<2	1.00	14.3	83.50	7.2	33.60	8.0
A7	01 Dec 2020	808	1	<20	<2	<2	0.10	15.1	88.48	7.2	33.59	8.1
A7	01 Dec 2020	808	12	20e	10e	2e	0.50	12.8	90.79	5.5	33.55	7.9
A7	01 Dec 2020	808	18	140e	32e	<2	0.23	12.6	90.14	5.2	33.57	7.9
A7	07 Dec 2020	820	1	<2	<2	<2	1.00	14.8	NA	7.5	33.59	8.0
A7	07 Dec 2020	820	12	<2	<2	<2	1.00	14.8	NA	7.3	33.59	8.0
A7	07 Dec 2020	820	18	12e	4e	<2	0.33	14.2	NA	6.6	33.57	8.0
A7	15 Dec 2020	834	1	<2	<2	<2	1.00	15.5	86.56	7.5	33.58	8.1
A7	15 Dec 2020	834	12	4e	2e	<2	0.50	15.2	86.18	7.2	33.57	8.1
A7	15 Dec 2020	834	18	20e	2e	<2	0.10	14.5	79.12	6.7	33.57	8.0
A7	21 Dec 2020	824	1	<2	<2	<2	1.00	14.8	87.73	7.1	33.59	8.0

Station	Date	Time	Depth	Total	Fecal	Enteroc	F:T	Temp	XMS	DO	Sal	pH
A7	21 Dec 2020	824	12	2e	<2	<2	1.00	14.2	88.59	6.7	33.58	8.0
A7	21 Dec 2020	824	18	2e	<2	<2	1.00	13.7	88.70	6.1	33.57	7.9
A7	27 Dec 2020	808	1	<2	<2	<2	1.00	14.5	86.90	7.2	33.61	8.0
A7	27 Dec 2020	808	12	2e	<2	<2	1.00	14.3	88.09	7.3	33.60	8.0
A7	27 Dec 2020	808	18	<200	2e	<2	0.01	14.2	87.30	7.1	33.61	8.0
C4	01 Dec 2020	933	1	<2	<2	<2	1.00	14.8	84.95	7.1	33.58	8.0
C4	01 Dec 2020	933	3	<2	<2	<2	1.00	14.8	84.85	7.1	33.58	8.0
C4	01 Dec 2020	933	9	4e	<2	<2	0.50	14.5	84.07	6.3	33.58	8.0
C4	07 Dec 2020	945	1	<2	<2	<2	1.00	14.5	NA	7.1	33.58	8.0
C4	07 Dec 2020	945	3	<2	2e	<2	1.00	14.5	NA	7.1	33.58	8.0
C4	07 Dec 2020	945	9	<2	<2	<2	1.00	14.5	NA	7.3	33.58	8.0
C4	15 Dec 2020	1011	1	<20	<2	<2	0.10	15.4	67.26	6.9	33.59	8.0
C4	15 Dec 2020	1011	3	<2	<2	<2	1.00	15.4	67.03	6.9	33.59	8.0
C4	15 Dec 2020	1011	9	<20	<2	<2	0.10	15.3	61.20	6.6	33.58	8.0
C4	21 Dec 2020	947	1	<2	<2	<2	1.00	14.8	84.50	7.3	33.60	8.0
C4	21 Dec 2020	947	3	<2	<2	<2	1.00	14.7	84.21	7.1	33.60	8.0
C4	21 Dec 2020	947	9	<2	<2	<2	1.00	14.5	83.17	6.1	33.59	7.9
C4	27 Dec 2020	928	1	<2	<2	<2	1.00	14.8	68.55	7.4	33.64	8.0
C4	27 Dec 2020	928	3	<2	2e	<2	1.00	14.8	67.02	7.3	33.64	8.0
C4	27 Dec 2020	928	9	<2	<2	<2	1.00	14.6	63.26	7.0	33.64	8.0
C5	01 Dec 2020	922	1	<2	<2	<2	1.00	15.3	87.68	7.6	33.60	8.1
C5	01 Dec 2020	922	3	<2	<2	<2	1.00	15.3	87.87	7.5	33.60	8.1
C5	01 Dec 2020	922	9	4e	2e	<2	0.50	14.2	82.31	6.0	33.57	8.0
C5	07 Dec 2020	933	1	<2	<2	<2	1.00	14.9	NA	6.5	33.62	7.9
C5	07 Dec 2020	933	3	2e	<2	<2	1.00	14.9	NA	6.4	33.62	7.9
C5	07 Dec 2020	933	9	20e	2e	<2	0.10	14.9	NA	6.6	33.63	7.9
C5	15 Dec 2020	958	1	<20	<2	<2	0.10	15.5	68.01	7.2	33.59	8.0
C5	15 Dec 2020	958	3	<20	<2	<2	0.10	15.5	67.78	7.1	33.59	8.0
C5	15 Dec 2020	958	9	<20	<2	<2	0.10	15.4	51.50	7.2	33.59	8.0
C5	21 Dec 2020	936	1	<2	2e	<2	1.00	14.9	72.58	6.8	33.60	8.0
C5	21 Dec 2020	936	3	<2	<2	<2	1.00	14.9	71.68	6.8	33.61	8.0
C5	21 Dec 2020	936	9	<2	<2	<2	1.00	14.8	66.00	6.6	33.60	8.0
C5	27 Dec 2020	918	1	<2	<2	<2	1.00	14.7	56.34	7.0	33.62	8.0
C5	27 Dec 2020	918	3	<2	<2	<2	1.00	14.7	56.25	6.8	33.62	8.0
C5	27 Dec 2020	918	9	<20	<2	<2	0.10	14.5	34.42	6.2	33.62	7.9
C6	01 Dec 2020	912	1	<2	<2	<2	1.00	15.5	87.47	7.2	33.61	8.1
C6	01 Dec 2020	912	3	<20	<2	<2	0.10	15.5	87.46	7.2	33.60	8.1
C6	01 Dec 2020	912	9	<2	<2	<2	1.00	14.2	88.47	5.8	33.55	7.9
C6	07 Dec 2020	921	1	<20	<2	<2	0.10	15.0	NA	6.9	33.62	7.9
C6	07 Dec 2020	921	3	<20	<2	<2	0.10	15.0	NA	6.9	33.62	7.9
C6	07 Dec 2020	921	9	<20	<2	<2	0.10	14.9	NA	6.7	33.61	7.9
C6	15 Dec 2020	943	1	<2	<2	<2	1.00	15.6	76.19	7.4	33.58	8.1
C6	15 Dec 2020	943	3	<2	<2	<2	1.00	15.6	77.51	7.3	33.58	8.1
C6	15 Dec 2020	943	9	<2	<2	<2	1.00	15.5	54.36	7.1	33.58	8.1
C6	21 Dec 2020	923	1	<2	<2	<2	1.00	15.0	78.87	7.2	33.59	8.0
C6	21 Dec 2020	923	3	4e	<2	<2	0.50	15.0	78.84	7.2	33.59	8.0

Station	Date	Time	Depth	Total	Fecal	Entero	F:T	Temp	XMS	DO	Sal	pH
C6	21 Dec 2020	923	9	<2	<2	<2	1.00	14.5	79.95	6.1	33.58	7.9
C6	27 Dec 2020	908	1	<2	<2	<2	1.00	14.5	78.23	6.9	33.60	8.0
C6	27 Dec 2020	908	3	2e	<2	<2	1.00	14.5	78.14	6.9	33.60	8.0
C6	27 Dec 2020	908	9	<2	<2	<2	1.00	14.4	81.65	6.9	33.60	8.0
C7	01 Dec 2020	838	1	2e	<2	<2	1.00	15.5	87.61	7.4	33.60	8.1
C7	01 Dec 2020	838	12	<2	<2	<2	1.00	15.2	86.58	7.2	33.57	8.1
C7	01 Dec 2020	838	18	<20	2e	<2	0.10	13.1	89.39	5.7	33.56	7.9
C7	07 Dec 2020	850	1	<2	<2	<2	1.00	15.8	NA	7.4	33.60	8.1
C7	07 Dec 2020	850	12	<2	<2	<2	1.00	15.3	NA	7.2	33.58	8.0
C7	07 Dec 2020	850	18	2e	<2	<2	1.00	14.5	NA	6.3	33.58	7.9
C7	15 Dec 2020	906	1	<20	<2	<2	0.10	15.6	73.43	7.6	33.58	8.1
C7	15 Dec 2020	906	12	2e	2e	<2	1.00	15.0	76.82	7.1	33.57	8.1
C7	15 Dec 2020	906	18	6e	2e	<2	0.33	14.4	82.49	6.7	33.56	8.0
C7	21 Dec 2020	852	1	<2	<2	<2	1.00	15.2	87.59	7.6	33.61	8.1
C7	21 Dec 2020	852	12	<2	<2	<2	1.00	14.8	86.57	7.2	33.59	8.0
C7	21 Dec 2020	852	18	4e	<2	<2	0.50	13.7	89.49	6.1	33.57	7.9
C7	27 Dec 2020	835	1	2e	<2	<2	1.00	14.5	86.25	7.7	33.60	8.0
C7	27 Dec 2020	835	12	<2	<2	<2	1.00	14.3	87.58	7.6	33.60	8.0
C7	27 Dec 2020	835	18	<2	<2	<2	1.00	14.3	87.64	7.0	33.60	8.0
C8	01 Dec 2020	850	1	2e	<2	<2	1.00	15.3	86.74	7.5	33.59	8.1
C8	01 Dec 2020	850	12	<2	<2	<2	1.00	15.3	87.11	7.4	33.60	8.1
C8	01 Dec 2020	850	18	<20	<2	<2	0.10	14.2	87.80	6.5	33.53	8.0
C8	07 Dec 2020	901	1	2e	<2	<2	1.00	15.6	NA	7.5	33.59	8.1
C8	07 Dec 2020	901	12	<2	<2	<2	1.00	15.3	NA	7.6	33.59	8.1
C8	07 Dec 2020	901	18	<2	<2	<2	1.00	14.8	NA	7.0	33.58	8.0
C8	15 Dec 2020	919	1	<2	2e	<2	1.00	15.6	79.90	7.6	33.59	8.1
C8	15 Dec 2020	919	12	<2	<2	<2	1.00	15.1	80.16	7.1	33.57	8.1
C8	15 Dec 2020	919	18	4e	4e	<2	1.00	14.8	82.76	6.9	33.56	8.0
C8	21 Dec 2020	903	1	<2	<2	<2	1.00	15.1	88.61	7.4	33.60	8.1
C8	21 Dec 2020	903	12	<2	<2	4e	1.00	14.3	90.25	6.7	33.55	8.0
C8	21 Dec 2020	903	18	4e	<2	<2	0.50	13.5	89.26	5.9	33.56	7.9
C8	27 Dec 2020	848	1	<2	<2	<2	1.00	14.6	85.33	7.5	33.60	8.0
C8	27 Dec 2020	848	12	6e	<2	<2	0.33	14.2	91.21	6.9	33.59	8.0
C8	27 Dec 2020	848	18	2e	<2	<2	1.00	14.1	70.73	6.5	33.59	8.0

ns = not sampled

ND = no data

**Table 3.9**

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

Station	Date	Parameter	Value
A1	01 Dec 2020	Depth (m)	21
A1	01 Dec 2020	Arrive Time	754
A1	01 Dec 2020	Depart Time	759
A1	01 Dec 2020	Air Temp (C)	15
A1	01 Dec 2020	Weather	Partly Cloudy
A1	01 Dec 2020	Visibility (mi)	5
A1	01 Dec 2020	Wind Speed (kts)	4
A1	01 Dec 2020	Wind Dir	N
A1	01 Dec 2020	Water Color	Brownish-Green
A1	01 Dec 2020	Wave Ht Low (ft)	5
A1	01 Dec 2020	Wave Period (sec)	11
A1	01 Dec 2020	Sea State	Wind ripples
A1	01 Dec 2020	High Tide (ft)	5.89
A1	01 Dec 2020	High Tide Time	835
A1	01 Dec 2020	Low Tide (ft)	-0.44
A1	01 Dec 2020	Low Tide Time	1556
A1	01 Dec 2020	Comments	Lobster floats
A1	07 Dec 2020	Depth (m)	18
A1	07 Dec 2020	Arrive Time	807
A1	07 Dec 2020	Depart Time	814
A1	07 Dec 2020	Air Temp (C)	14
A1	07 Dec 2020	Weather	Continuous layer of clouds
A1	07 Dec 2020	Visibility (mi)	8
A1	07 Dec 2020	Wind Speed (kts)	3
A1	07 Dec 2020	Wind Dir	SE
A1	07 Dec 2020	Water Color	Green
A1	07 Dec 2020	Wave Ht Low (ft)	4
A1	07 Dec 2020	Wave Period (sec)	13
A1	07 Dec 2020	Sea State	Light chop
A1	07 Dec 2020	High Tide (ft)	4.15
A1	07 Dec 2020	High Tide Time	1343
A1	07 Dec 2020	Low Tide (ft)	2.83
A1	07 Dec 2020	Low Tide Time	829
A1	07 Dec 2020	Comments	none
A1	15 Dec 2020	Depth (m)	20
A1	15 Dec 2020	Arrive Time	819
A1	15 Dec 2020	Depart Time	825
A1	15 Dec 2020	Air Temp (C)	13
A1	15 Dec 2020	Weather	Clear
A1	15 Dec 2020	Visibility (mi)	10
A1	15 Dec 2020	Wind Speed (kts)	2
A1	15 Dec 2020	Wind Dir	E
A1	15 Dec 2020	Water Color	Bluish-Green
A1	15 Dec 2020	Wave Ht Low (ft)	6
A1	15 Dec 2020	Wave Period (sec)	16
A1	15 Dec 2020	Sea State	Wind ripples
A1	15 Dec 2020	High Tide (ft)	6.8
A1	15 Dec 2020	High Tide Time	838
A1	15 Dec 2020	Low Tide (ft)	-1.54
A1	15 Dec 2020	Low Tide Time	1559
A1	15 Dec 2020	Comments	Lobster floats; Kelp
A1	21 Dec 2020	Depth (m)	19
A1	21 Dec 2020	Arrive Time	810

Station	Date	Parameter	Value
A1	21 Dec 2020	Depart Time	818
A1	21 Dec 2020	Air Temp (C)	16
A1	21 Dec 2020	Weather	Haze
A1	21 Dec 2020	Visibility (mi)	15
A1	21 Dec 2020	Wind Speed (kts)	3
A1	21 Dec 2020	Wind Dir	SE
A1	21 Dec 2020	Water Color	Green
A1	21 Dec 2020	Wave Ht Low (ft)	3
A1	21 Dec 2020	Wave Period (sec)	9
A1	21 Dec 2020	Sea State	Calm
A1	21 Dec 2020	High Tide (ft)	3.58
A1	21 Dec 2020	High Tide Time	1411
A1	21 Dec 2020	Low Tide (ft)	2.53
A1	21 Dec 2020	Low Tide Time	907
A1	21 Dec 2020	Comments	none
A1	27 Dec 2020	Depth (m)	19
A1	27 Dec 2020	Arrive Time	756
A1	27 Dec 2020	Depart Time	800
A1	27 Dec 2020	Air Temp (C)	13
A1	27 Dec 2020	Weather	Overcast
A1	27 Dec 2020	Visibility (mi)	7
A1	27 Dec 2020	Wind Speed (kts)	4
A1	27 Dec 2020	Wind Dir	SE
A1	27 Dec 2020	Water Color	Green
A1	27 Dec 2020	Wave Ht Low (ft)	5
A1	27 Dec 2020	Wave Period (sec)	13
A1	27 Dec 2020	Sea State	Calm
A1	27 Dec 2020	High Tide (ft)	5.63
A1	27 Dec 2020	High Tide Time	647
A1	27 Dec 2020	Low Tide (ft)	-0.34
A1	27 Dec 2020	Low Tide Time	1404
A1	27 Dec 2020	Comments	Kelp; Boats
A6	01 Dec 2020	Depth (m)	20
A6	01 Dec 2020	Arrive Time	820
A6	01 Dec 2020	Depart Time	827
A6	01 Dec 2020	Air Temp (C)	15
A6	01 Dec 2020	Weather	Clear
A6	01 Dec 2020	Visibility (mi)	10
A6	01 Dec 2020	Wind Speed (kts)	2
A6	01 Dec 2020	Wind Dir	NW
A6	01 Dec 2020	Water Color	Bluish-Green
A6	01 Dec 2020	Wave Ht Low (ft)	4
A6	01 Dec 2020	Wave Period (sec)	13
A6	01 Dec 2020	Sea State	Wind ripples
A6	01 Dec 2020	High Tide (ft)	5.89
A6	01 Dec 2020	High Tide Time	835
A6	01 Dec 2020	Low Tide (ft)	-0.44
A6	01 Dec 2020	Low Tide Time	1556
A6	01 Dec 2020	Comments	~200 birds on station; Kelp; Lobster floats
A6	07 Dec 2020	Depth (m)	20
A6	07 Dec 2020	Arrive Time	834
A6	07 Dec 2020	Depart Time	838
A6	07 Dec 2020	Air Temp (C)	14
A6	07 Dec 2020	Weather	Continuous layer of clouds
A6	07 Dec 2020	Visibility (mi)	8
A6	07 Dec 2020	Wind Speed (kts)	1
A6	07 Dec 2020	Wind Dir	E
A6	07 Dec 2020	Water Color	Green

Station	Date	Parameter	Value
A6	07 Dec 2020	Wave Ht Low (ft)	4
A6	07 Dec 2020	Wave Period (sec)	13
A6	07 Dec 2020	Sea State	Light chop
A6	07 Dec 2020	High Tide (ft)	4.15
A6	07 Dec 2020	High Tide Time	1343
A6	07 Dec 2020	Low Tide (ft)	2.83
A6	07 Dec 2020	Low Tide Time	829
A6	07 Dec 2020	Comments	none
A6	15 Dec 2020	Depth (m)	20
A6	15 Dec 2020	Arrive Time	848
A6	15 Dec 2020	Depart Time	855
A6	15 Dec 2020	Air Temp (C)	14
A6	15 Dec 2020	Weather	Clear
A6	15 Dec 2020	Visibility (mi)	10
A6	15 Dec 2020	Wind Speed (kts)	2
A6	15 Dec 2020	Wind Dir	SE
A6	15 Dec 2020	Water Color	Bluish-Green
A6	15 Dec 2020	Wave Ht Low (ft)	6
A6	15 Dec 2020	Wave Period (sec)	16
A6	15 Dec 2020	Sea State	Wind ripples
A6	15 Dec 2020	High Tide (ft)	6.8
A6	15 Dec 2020	High Tide Time	838
A6	15 Dec 2020	Low Tide (ft)	-1.54
A6	15 Dec 2020	Low Tide Time	1559
A6	15 Dec 2020	Comments	Lobster floats; Kelp
A6	21 Dec 2020	Depth (m)	20
A6	21 Dec 2020	Arrive Time	838
A6	21 Dec 2020	Depart Time	841
A6	21 Dec 2020	Air Temp (C)	15
A6	21 Dec 2020	Weather	Haze
A6	21 Dec 2020	Visibility (mi)	15
A6	21 Dec 2020	Wind Speed (kts)	3
A6	21 Dec 2020	Wind Dir	NW
A6	21 Dec 2020	Water Color	Green
A6	21 Dec 2020	Wave Ht Low (ft)	3
A6	21 Dec 2020	Wave Period (sec)	9
A6	21 Dec 2020	Sea State	Calm
A6	21 Dec 2020	High Tide (ft)	3.58
A6	21 Dec 2020	High Tide Time	1411
A6	21 Dec 2020	Low Tide (ft)	2.53
A6	21 Dec 2020	Low Tide Time	907
A6	21 Dec 2020	Comments	Kelp; Lobster floats
A6	27 Dec 2020	Depth (m)	20
A6	27 Dec 2020	Arrive Time	822
A6	27 Dec 2020	Depart Time	825
A6	27 Dec 2020	Air Temp (C)	13
A6	27 Dec 2020	Weather	Overcast
A6	27 Dec 2020	Visibility (mi)	7
A6	27 Dec 2020	Wind Speed (kts)	7
A6	27 Dec 2020	Wind Dir	SE
A6	27 Dec 2020	Water Color	Green
A6	27 Dec 2020	Wave Ht Low (ft)	5
A6	27 Dec 2020	Wave Period (sec)	13
A6	27 Dec 2020	Sea State	Calm
A6	27 Dec 2020	High Tide (ft)	5.63
A6	27 Dec 2020	High Tide Time	647
A6	27 Dec 2020	Low Tide (ft)	-0.34
A6	27 Dec 2020	Low Tide Time	1404

Station	Date	Parameter	Value
A6	27 Dec 2020	Comments	Kelp; Lobster floats
A7	01 Dec 2020	Depth (m)	20
A7	01 Dec 2020	Arrive Time	808
A7	01 Dec 2020	Depart Time	813
A7	01 Dec 2020	Air Temp (C)	15
A7	01 Dec 2020	Weather	Partly Cloudy
A7	01 Dec 2020	Visibility (mi)	5
A7	01 Dec 2020	Wind Speed (kts)	4
A7	01 Dec 2020	Wind Dir	N
A7	01 Dec 2020	Water Color	Brownish-Green
A7	01 Dec 2020	Wave Ht Low (ft)	4
A7	01 Dec 2020	Wave Period (sec)	13
A7	01 Dec 2020	Sea State	Wind ripples
A7	01 Dec 2020	High Tide (ft)	5.89
A7	01 Dec 2020	High Tide Time	835
A7	01 Dec 2020	Low Tide (ft)	-0.44
A7	01 Dec 2020	Low Tide Time	1556
A7	01 Dec 2020	Comments	Kelp; CDOM Spikes; Lobster floats
A7	07 Dec 2020	Depth (m)	19
A7	07 Dec 2020	Arrive Time	820
A7	07 Dec 2020	Depart Time	825
A7	07 Dec 2020	Air Temp (C)	14
A7	07 Dec 2020	Weather	Continuous layer of clouds
A7	07 Dec 2020	Visibility (mi)	8
A7	07 Dec 2020	Wind Speed (kts)	1
A7	07 Dec 2020	Wind Dir	N
A7	07 Dec 2020	Water Color	Green
A7	07 Dec 2020	Wave Ht Low (ft)	4
A7	07 Dec 2020	Wave Period (sec)	13
A7	07 Dec 2020	Sea State	Light chop
A7	07 Dec 2020	High Tide (ft)	4.15
A7	07 Dec 2020	High Tide Time	1343
A7	07 Dec 2020	Low Tide (ft)	2.83
A7	07 Dec 2020	Low Tide Time	829
A7	07 Dec 2020	Comments	none
A7	15 Dec 2020	Depth (m)	20
A7	15 Dec 2020	Arrive Time	834
A7	15 Dec 2020	Depart Time	840
A7	15 Dec 2020	Air Temp (C)	14
A7	15 Dec 2020	Weather	Clear
A7	15 Dec 2020	Visibility (mi)	10
A7	15 Dec 2020	Wind Speed (kts)	3
A7	15 Dec 2020	Wind Dir	SE
A7	15 Dec 2020	Water Color	Bluish-Green
A7	15 Dec 2020	Wave Ht Low (ft)	6
A7	15 Dec 2020	Wave Period (sec)	16
A7	15 Dec 2020	Sea State	Wind ripples
A7	15 Dec 2020	High Tide (ft)	6.8
A7	15 Dec 2020	High Tide Time	838
A7	15 Dec 2020	Low Tide (ft)	-1.54
A7	15 Dec 2020	Low Tide Time	1559
A7	15 Dec 2020	Comments	Lobster floats; Kelp
A7	21 Dec 2020	Depth (m)	18
A7	21 Dec 2020	Arrive Time	824
A7	21 Dec 2020	Depart Time	830
A7	21 Dec 2020	Air Temp (C)	16
A7	21 Dec 2020	Weather	Haze

Station	Date	Parameter	Value
A7	21 Dec 2020	Visibility (mi)	15
A7	21 Dec 2020	Wind Speed (kts)	5
A7	21 Dec 2020	Wind Dir	W
A7	21 Dec 2020	Water Color	Green
A7	21 Dec 2020	Wave Ht Low (ft)	3
A7	21 Dec 2020	Wave Period (sec)	9
A7	21 Dec 2020	Sea State	Calm
A7	21 Dec 2020	High Tide (ft)	3.58
A7	21 Dec 2020	High Tide Time	1411
A7	21 Dec 2020	Low Tide (ft)	2.53
A7	21 Dec 2020	Low Tide Time	907
A7	21 Dec 2020	Comments	none
A7	27 Dec 2020	Depth (m)	21
A7	27 Dec 2020	Arrive Time	808
A7	27 Dec 2020	Depart Time	813
A7	27 Dec 2020	Air Temp (C)	13
A7	27 Dec 2020	Weather	Overcast
A7	27 Dec 2020	Visibility (mi)	7
A7	27 Dec 2020	Wind Speed (kts)	5
A7	27 Dec 2020	Wind Dir	SE
A7	27 Dec 2020	Water Color	Green
A7	27 Dec 2020	Wave Ht Low (ft)	5
A7	27 Dec 2020	Wave Period (sec)	13
A7	27 Dec 2020	Sea State	Calm
A7	27 Dec 2020	High Tide (ft)	5.63
A7	27 Dec 2020	High Tide Time	647
A7	27 Dec 2020	Low Tide (ft)	-0.34
A7	27 Dec 2020	Low Tide Time	1404
A7	27 Dec 2020	Comments	Kelp; Lobster floats
C4	01 Dec 2020	Depth (m)	12
C4	01 Dec 2020	Arrive Time	933
C4	01 Dec 2020	Depart Time	935
C4	01 Dec 2020	Air Temp (C)	16
C4	01 Dec 2020	Weather	Clear
C4	01 Dec 2020	Visibility (mi)	10
C4	01 Dec 2020	Wind Speed (kts)	8
C4	01 Dec 2020	Wind Dir	N
C4	01 Dec 2020	Water Color	Bluish-Green
C4	01 Dec 2020	Wave Ht Low (ft)	4
C4	01 Dec 2020	Wave Period (sec)	13
C4	01 Dec 2020	Sea State	Wind ripples
C4	01 Dec 2020	High Tide (ft)	5.89
C4	01 Dec 2020	High Tide Time	835
C4	01 Dec 2020	Low Tide (ft)	-0.44
C4	01 Dec 2020	Low Tide Time	1556
C4	01 Dec 2020	Comments	Lobster floats
C4	07 Dec 2020	Depth (m)	12
C4	07 Dec 2020	Arrive Time	945
C4	07 Dec 2020	Depart Time	949
C4	07 Dec 2020	Air Temp (C)	15
C4	07 Dec 2020	Weather	Continuous layer of clouds
C4	07 Dec 2020	Visibility (mi)	8
C4	07 Dec 2020	Wind Speed (kts)	4
C4	07 Dec 2020	Wind Dir	E
C4	07 Dec 2020	Water Color	Green
C4	07 Dec 2020	Wave Ht Low (ft)	4
C4	07 Dec 2020	Wave Period (sec)	13
C4	07 Dec 2020	Sea State	Light chop

Station	Date	Parameter	Value
C4	07 Dec 2020	High Tide (ft)	4.15
C4	07 Dec 2020	High Tide Time	1343
C4	07 Dec 2020	Low Tide (ft)	2.83
C4	07 Dec 2020	Low Tide Time	829
C4	07 Dec 2020	Comments	Kelp
C4	15 Dec 2020	Depth (m)	13
C4	15 Dec 2020	Arrive Time	1011
C4	15 Dec 2020	Depart Time	1017
C4	15 Dec 2020	Air Temp (C)	14
C4	15 Dec 2020	Weather	Clear
C4	15 Dec 2020	Visibility (mi)	10
C4	15 Dec 2020	Wind Speed (kts)	5
C4	15 Dec 2020	Wind Dir	SE
C4	15 Dec 2020	Water Color	Greenish-Brown
C4	15 Dec 2020	Wave Ht Low (ft)	6
C4	15 Dec 2020	Wave Period (sec)	16
C4	15 Dec 2020	Sea State	Wind ripples
C4	15 Dec 2020	High Tide (ft)	6.8
C4	15 Dec 2020	High Tide Time	838
C4	15 Dec 2020	Low Tide (ft)	-1.54
C4	15 Dec 2020	Low Tide Time	1559
C4	15 Dec 2020	Comments	Lobster floats; Kelp debris
C4	21 Dec 2020	Depth (m)	12
C4	21 Dec 2020	Arrive Time	947
C4	21 Dec 2020	Depart Time	949
C4	21 Dec 2020	Air Temp (C)	16
C4	21 Dec 2020	Weather	Haze
C4	21 Dec 2020	Visibility (mi)	15
C4	21 Dec 2020	Wind Speed (kts)	3
C4	21 Dec 2020	Wind Dir	NW
C4	21 Dec 2020	Water Color	Green
C4	21 Dec 2020	Wave Ht Low (ft)	3
C4	21 Dec 2020	Wave Period (sec)	9
C4	21 Dec 2020	Sea State	Calm
C4	21 Dec 2020	High Tide (ft)	3.58
C4	21 Dec 2020	High Tide Time	1411
C4	21 Dec 2020	Low Tide (ft)	2.53
C4	21 Dec 2020	Low Tide Time	907
C4	21 Dec 2020	Comments	Kelp; Lobster floats
C4	27 Dec 2020	Depth (m)	12
C4	27 Dec 2020	Arrive Time	928
C4	27 Dec 2020	Depart Time	932
C4	27 Dec 2020	Air Temp (C)	14
C4	27 Dec 2020	Weather	Overcast
C4	27 Dec 2020	Visibility (mi)	7
C4	27 Dec 2020	Wind Speed (kts)	3
C4	27 Dec 2020	Wind Dir	SE
C4	27 Dec 2020	Water Color	Green
C4	27 Dec 2020	Wave Ht Low (ft)	5
C4	27 Dec 2020	Wave Period (sec)	13
C4	27 Dec 2020	Sea State	Calm
C4	27 Dec 2020	High Tide (ft)	5.63
C4	27 Dec 2020	High Tide Time	647
C4	27 Dec 2020	Low Tide (ft)	-0.34
C4	27 Dec 2020	Low Tide Time	1404
C4	27 Dec 2020	Comments	Kelp; lobster floats; surfers; Boats
C5	01 Dec 2020	Depth (m)	11

Station	Date	Parameter	Value
C5	01 Dec 2020	Arrive Time	922
C5	01 Dec 2020	Depart Time	927
C5	01 Dec 2020	Air Temp (C)	16
C5	01 Dec 2020	Weather	Clear
C5	01 Dec 2020	Visibility (mi)	10
C5	01 Dec 2020	Wind Speed (kts)	6
C5	01 Dec 2020	Wind Dir	N
C5	01 Dec 2020	Water Color	Bluish-Green
C5	01 Dec 2020	Wave Ht Low (ft)	4
C5	01 Dec 2020	Wave Period (sec)	13
C5	01 Dec 2020	Sea State	Wind ripples
C5	01 Dec 2020	High Tide (ft)	5.89
C5	01 Dec 2020	High Tide Time	835
C5	01 Dec 2020	Low Tide (ft)	-0.44
C5	01 Dec 2020	Low Tide Time	1556
C5	01 Dec 2020	Comments	Lobster floats; Boats
C5	07 Dec 2020	Depth (m)	12
C5	07 Dec 2020	Arrive Time	933
C5	07 Dec 2020	Depart Time	936
C5	07 Dec 2020	Air Temp (C)	15
C5	07 Dec 2020	Weather	Continuous layer of clouds
C5	07 Dec 2020	Visibility (mi)	8
C5	07 Dec 2020	Wind Speed (kts)	1
C5	07 Dec 2020	Wind Dir	SE
C5	07 Dec 2020	Water Color	Green
C5	07 Dec 2020	Wave Ht Low (ft)	4
C5	07 Dec 2020	Wave Period (sec)	13
C5	07 Dec 2020	Sea State	Light chop
C5	07 Dec 2020	High Tide (ft)	4.15
C5	07 Dec 2020	High Tide Time	1343
C5	07 Dec 2020	Low Tide (ft)	2.83
C5	07 Dec 2020	Low Tide Time	829
C5	07 Dec 2020	Comments	Kelp
C5	15 Dec 2020	Depth (m)	12
C5	15 Dec 2020	Arrive Time	958
C5	15 Dec 2020	Depart Time	1003
C5	15 Dec 2020	Air Temp (C)	15
C5	15 Dec 2020	Weather	Clear
C5	15 Dec 2020	Visibility (mi)	10
C5	15 Dec 2020	Wind Speed (kts)	5
C5	15 Dec 2020	Wind Dir	S
C5	15 Dec 2020	Water Color	Greenish-Brown
C5	15 Dec 2020	Wave Ht Low (ft)	6
C5	15 Dec 2020	Wave Period (sec)	16
C5	15 Dec 2020	Sea State	Wind ripples
C5	15 Dec 2020	High Tide (ft)	6.8
C5	15 Dec 2020	High Tide Time	838
C5	15 Dec 2020	Low Tide (ft)	-1.54
C5	15 Dec 2020	Low Tide Time	1559
C5	15 Dec 2020	Comments	Kelp; Lobster floats
C5	21 Dec 2020	Depth (m)	11
C5	21 Dec 2020	Arrive Time	936
C5	21 Dec 2020	Depart Time	940
C5	21 Dec 2020	Air Temp (C)	16
C5	21 Dec 2020	Weather	Haze
C5	21 Dec 2020	Visibility (mi)	15
C5	21 Dec 2020	Wind Speed (kts)	4
C5	21 Dec 2020	Wind Dir	NW

Station	Date	Parameter	Value
C5	21 Dec 2020	Water Color	Green
C5	21 Dec 2020	Wave Ht Low (ft)	3
C5	21 Dec 2020	Wave Period (sec)	9
C5	21 Dec 2020	Sea State	Calm
C5	21 Dec 2020	High Tide (ft)	3.58
C5	21 Dec 2020	High Tide Time	1411
C5	21 Dec 2020	Low Tide (ft)	2.53
C5	21 Dec 2020	Low Tide Time	907
C5	21 Dec 2020	Comments	Lobster floats
C5	27 Dec 2020	Depth (m)	10
C5	27 Dec 2020	Arrive Time	918
C5	27 Dec 2020	Depart Time	921
C5	27 Dec 2020	Air Temp (C)	14
C5	27 Dec 2020	Weather	Overcast
C5	27 Dec 2020	Visibility (mi)	7
C5	27 Dec 2020	Wind Speed (kts)	4
C5	27 Dec 2020	Wind Dir	SE
C5	27 Dec 2020	Water Color	Green
C5	27 Dec 2020	Wave Ht Low (ft)	5
C5	27 Dec 2020	Wave Period (sec)	13
C5	27 Dec 2020	Sea State	Calm
C5	27 Dec 2020	High Tide (ft)	5.63
C5	27 Dec 2020	High Tide Time	647
C5	27 Dec 2020	Low Tide (ft)	-0.34
C5	27 Dec 2020	Low Tide Time	1404
C5	27 Dec 2020	Comments	Kelp; boats; Lobster floats
C6	01 Dec 2020	Depth (m)	11
C6	01 Dec 2020	Arrive Time	912
C6	01 Dec 2020	Depart Time	914
C6	01 Dec 2020	Air Temp (C)	16
C6	01 Dec 2020	Weather	Clear
C6	01 Dec 2020	Visibility (mi)	10
C6	01 Dec 2020	Wind Speed (kts)	4
C6	01 Dec 2020	Wind Dir	N
C6	01 Dec 2020	Water Color	Bluish-Green
C6	01 Dec 2020	Wave Ht Low (ft)	4
C6	01 Dec 2020	Wave Period (sec)	13
C6	01 Dec 2020	Sea State	Wind ripples
C6	01 Dec 2020	High Tide (ft)	5.89
C6	01 Dec 2020	High Tide Time	835
C6	01 Dec 2020	Low Tide (ft)	-0.44
C6	01 Dec 2020	Low Tide Time	1556
C6	01 Dec 2020	Comments	Lobster floats
C6	07 Dec 2020	Depth (m)	10
C6	07 Dec 2020	Arrive Time	921
C6	07 Dec 2020	Depart Time	927
C6	07 Dec 2020	Air Temp (C)	14
C6	07 Dec 2020	Weather	Continuous layer of clouds
C6	07 Dec 2020	Visibility (mi)	8
C6	07 Dec 2020	Wind Speed (kts)	2
C6	07 Dec 2020	Wind Dir	SE
C6	07 Dec 2020	Water Color	Green
C6	07 Dec 2020	Wave Ht Low (ft)	4
C6	07 Dec 2020	Wave Period (sec)	13
C6	07 Dec 2020	Sea State	Light chop
C6	07 Dec 2020	High Tide (ft)	4.15
C6	07 Dec 2020	High Tide Time	1343
C6	07 Dec 2020	Low Tide (ft)	2.83

Station	Date	Parameter	Value
C6	07 Dec 2020	Low Tide Time	829
C6	07 Dec 2020	Comments	Kelp
C6	15 Dec 2020	Depth (m)	11
C6	15 Dec 2020	Arrive Time	943
C6	15 Dec 2020	Depart Time	945
C6	15 Dec 2020	Air Temp (C)	14
C6	15 Dec 2020	Weather	Clear
C6	15 Dec 2020	Visibility (mi)	10
C6	15 Dec 2020	Wind Speed (kts)	3
C6	15 Dec 2020	Wind Dir	SW
C6	15 Dec 2020	Water Color	Bluish-Green
C6	15 Dec 2020	Wave Ht Low (ft)	6
C6	15 Dec 2020	Wave Period (sec)	16
C6	15 Dec 2020	Sea State	Wind ripples
C6	15 Dec 2020	High Tide (ft)	6.8
C6	15 Dec 2020	High Tide Time	838
C6	15 Dec 2020	Low Tide (ft)	-1.54
C6	15 Dec 2020	Low Tide Time	1559
C6	15 Dec 2020	Comments	Kelp debris
C6	21 Dec 2020	Depth (m)	9
C6	21 Dec 2020	Arrive Time	923
C6	21 Dec 2020	Depart Time	928
C6	21 Dec 2020	Air Temp (C)	16
C6	21 Dec 2020	Weather	Haze
C6	21 Dec 2020	Visibility (mi)	15
C6	21 Dec 2020	Wind Speed (kts)	0
C6	21 Dec 2020	Wind Dir	
C6	21 Dec 2020	Water Color	Green
C6	21 Dec 2020	Wave Ht Low (ft)	3
C6	21 Dec 2020	Wave Period (sec)	9
C6	21 Dec 2020	Sea State	Calm
C6	21 Dec 2020	High Tide (ft)	3.58
C6	21 Dec 2020	High Tide Time	1411
C6	21 Dec 2020	Low Tide (ft)	2.53
C6	21 Dec 2020	Low Tide Time	907
C6	21 Dec 2020	Comments	Kelp
C6	27 Dec 2020	Depth (m)	10
C6	27 Dec 2020	Arrive Time	908
C6	27 Dec 2020	Depart Time	910
C6	27 Dec 2020	Air Temp (C)	14
C6	27 Dec 2020	Weather	Overcast
C6	27 Dec 2020	Visibility (mi)	7
C6	27 Dec 2020	Wind Speed (kts)	8
C6	27 Dec 2020	Wind Dir	SE
C6	27 Dec 2020	Water Color	Green
C6	27 Dec 2020	Wave Ht Low (ft)	5
C6	27 Dec 2020	Wave Period (sec)	13
C6	27 Dec 2020	Sea State	Calm
C6	27 Dec 2020	High Tide (ft)	5.63
C6	27 Dec 2020	High Tide Time	647
C6	27 Dec 2020	Low Tide (ft)	-0.34
C6	27 Dec 2020	Low Tide Time	1404
C6	27 Dec 2020	Comments	Kelp; Lobster floats
C7	01 Dec 2020	Depth (m)	18
C7	01 Dec 2020	Arrive Time	838
C7	01 Dec 2020	Depart Time	843
C7	01 Dec 2020	Air Temp (C)	16

Station	Date	Parameter	Value
C7	01 Dec 2020	Weather	Clear
C7	01 Dec 2020	Visibility (mi)	10
C7	01 Dec 2020	Wind Speed (kts)	4
C7	01 Dec 2020	Wind Dir	NE
C7	01 Dec 2020	Water Color	Bluish-Green
C7	01 Dec 2020	Wave Ht Low (ft)	4
C7	01 Dec 2020	Wave Period (sec)	13
C7	01 Dec 2020	Sea State	Wind ripples
C7	01 Dec 2020	High Tide (ft)	5.89
C7	01 Dec 2020	High Tide Time	835
C7	01 Dec 2020	Low Tide (ft)	-0.44
C7	01 Dec 2020	Low Tide Time	1556
C7	01 Dec 2020	Comments	Kelp debris; Lobster floats
C7	07 Dec 2020	Depth (m)	18
C7	07 Dec 2020	Arrive Time	850
C7	07 Dec 2020	Depart Time	853
C7	07 Dec 2020	Air Temp (C)	14
C7	07 Dec 2020	Weather	Continuous layer of clouds
C7	07 Dec 2020	Visibility (mi)	8
C7	07 Dec 2020	Wind Speed (kts)	4
C7	07 Dec 2020	Wind Dir	NE
C7	07 Dec 2020	Water Color	Green
C7	07 Dec 2020	Wave Ht Low (ft)	4
C7	07 Dec 2020	Wave Period (sec)	13
C7	07 Dec 2020	Sea State	Light chop
C7	07 Dec 2020	High Tide (ft)	4.15
C7	07 Dec 2020	High Tide Time	1343
C7	07 Dec 2020	Low Tide (ft)	2.83
C7	07 Dec 2020	Low Tide Time	829
C7	07 Dec 2020	Comments	none
C7	15 Dec 2020	Depth (m)	20
C7	15 Dec 2020	Arrive Time	906
C7	15 Dec 2020	Depart Time	912
C7	15 Dec 2020	Air Temp (C)	14
C7	15 Dec 2020	Weather	Clear
C7	15 Dec 2020	Visibility (mi)	10
C7	15 Dec 2020	Wind Speed (kts)	0
C7	15 Dec 2020	Wind Dir	
C7	15 Dec 2020	Water Color	Bluish-Green
C7	15 Dec 2020	Wave Ht Low (ft)	6
C7	15 Dec 2020	Wave Period (sec)	16
C7	15 Dec 2020	Sea State	Wind ripples
C7	15 Dec 2020	High Tide (ft)	6.8
C7	15 Dec 2020	High Tide Time	838
C7	15 Dec 2020	Low Tide (ft)	-1.54
C7	15 Dec 2020	Low Tide Time	1559
C7	15 Dec 2020	Comments	Lobster floats; Kelp
C7	21 Dec 2020	Depth (m)	19
C7	21 Dec 2020	Arrive Time	852
C7	21 Dec 2020	Depart Time	857
C7	21 Dec 2020	Air Temp (C)	15
C7	21 Dec 2020	Weather	Haze
C7	21 Dec 2020	Visibility (mi)	15
C7	21 Dec 2020	Wind Speed (kts)	4
C7	21 Dec 2020	Wind Dir	N
C7	21 Dec 2020	Water Color	Green
C7	21 Dec 2020	Wave Ht Low (ft)	3
C7	21 Dec 2020	Wave Period (sec)	9

Station	Date	Parameter	Value
C7	21 Dec 2020	Sea State	Calm
C7	21 Dec 2020	High Tide (ft)	3.58
C7	21 Dec 2020	High Tide Time	1411
C7	21 Dec 2020	Low Tide (ft)	2.53
C7	21 Dec 2020	Low Tide Time	907
C7	21 Dec 2020	Comments	Lobster floats
C7	27 Dec 2020	Depth (m)	18
C7	27 Dec 2020	Arrive Time	835
C7	27 Dec 2020	Depart Time	838
C7	27 Dec 2020	Air Temp (C)	14
C7	27 Dec 2020	Weather	Overcast
C7	27 Dec 2020	Visibility (mi)	7
C7	27 Dec 2020	Wind Speed (kts)	5
C7	27 Dec 2020	Wind Dir	SE
C7	27 Dec 2020	Water Color	Green
C7	27 Dec 2020	Wave Ht Low (ft)	5
C7	27 Dec 2020	Wave Period (sec)	13
C7	27 Dec 2020	Sea State	Calm
C7	27 Dec 2020	High Tide (ft)	5.63
C7	27 Dec 2020	High Tide Time	647
C7	27 Dec 2020	Low Tide (ft)	-0.34
C7	27 Dec 2020	Low Tide Time	1404
C7	27 Dec 2020	Comments	Kelp; Lobster floats
C8	01 Dec 2020	Depth (m)	21
C8	01 Dec 2020	Arrive Time	850
C8	01 Dec 2020	Depart Time	856
C8	01 Dec 2020	Air Temp (C)	15
C8	01 Dec 2020	Weather	Clear
C8	01 Dec 2020	Visibility (mi)	10
C8	01 Dec 2020	Wind Speed (kts)	3
C8	01 Dec 2020	Wind Dir	NE
C8	01 Dec 2020	Water Color	Bluish-Green
C8	01 Dec 2020	Wave Ht Low (ft)	4
C8	01 Dec 2020	Wave Period (sec)	13
C8	01 Dec 2020	Sea State	Wind ripples
C8	01 Dec 2020	High Tide (ft)	5.89
C8	01 Dec 2020	High Tide Time	835
C8	01 Dec 2020	Low Tide (ft)	-0.44
C8	01 Dec 2020	Low Tide Time	1556
C8	01 Dec 2020	Comments	Kelp debris; Lobster floats
C8	07 Dec 2020	Depth (m)	19
C8	07 Dec 2020	Arrive Time	901
C8	07 Dec 2020	Depart Time	905
C8	07 Dec 2020	Air Temp (C)	14
C8	07 Dec 2020	Weather	Continuous layer of clouds
C8	07 Dec 2020	Visibility (mi)	8
C8	07 Dec 2020	Wind Speed (kts)	4
C8	07 Dec 2020	Wind Dir	NE
C8	07 Dec 2020	Water Color	Green
C8	07 Dec 2020	Wave Ht Low (ft)	4
C8	07 Dec 2020	Wave Period (sec)	13
C8	07 Dec 2020	Sea State	Light chop
C8	07 Dec 2020	High Tide (ft)	4.15
C8	07 Dec 2020	High Tide Time	1343
C8	07 Dec 2020	Low Tide (ft)	2.83
C8	07 Dec 2020	Low Tide Time	829
C8	07 Dec 2020	Comments	none

Station	Date	Parameter	Value
C8	15 Dec 2020	Depth (m)	21
C8	15 Dec 2020	Arrive Time	919
C8	15 Dec 2020	Depart Time	925
C8	15 Dec 2020	Air Temp (C)	14
C8	15 Dec 2020	Weather	Clear
C8	15 Dec 2020	Visibility (mi)	10
C8	15 Dec 2020	Wind Speed (kts)	0
C8	15 Dec 2020	Wind Dir	
C8	15 Dec 2020	Water Color	Bluish-Green
C8	15 Dec 2020	Wave Ht Low (ft)	6
C8	15 Dec 2020	Wave Period (sec)	16
C8	15 Dec 2020	Sea State	Wind ripples
C8	15 Dec 2020	High Tide (ft)	6.8
C8	15 Dec 2020	High Tide Time	838
C8	15 Dec 2020	Low Tide (ft)	-1.54
C8	15 Dec 2020	Low Tide Time	1559
C8	15 Dec 2020	Comments	Lobster floats; Kelp debris
C8	21 Dec 2020	Depth (m)	20
C8	21 Dec 2020	Arrive Time	903
C8	21 Dec 2020	Depart Time	907
C8	21 Dec 2020	Air Temp (C)	15
C8	21 Dec 2020	Weather	Haze
C8	21 Dec 2020	Visibility (mi)	15
C8	21 Dec 2020	Wind Speed (kts)	6
C8	21 Dec 2020	Wind Dir	NE
C8	21 Dec 2020	Water Color	Green
C8	21 Dec 2020	Wave Ht Low (ft)	3
C8	21 Dec 2020	Wave Period (sec)	9
C8	21 Dec 2020	Sea State	Calm
C8	21 Dec 2020	High Tide (ft)	3.58
C8	21 Dec 2020	High Tide Time	1411
C8	21 Dec 2020	Low Tide (ft)	2.53
C8	21 Dec 2020	Low Tide Time	907
C8	21 Dec 2020	Comments	none
C8	27 Dec 2020	Depth (m)	20
C8	27 Dec 2020	Arrive Time	848
C8	27 Dec 2020	Depart Time	850
C8	27 Dec 2020	Air Temp (C)	14
C8	27 Dec 2020	Weather	Overcast
C8	27 Dec 2020	Visibility (mi)	7
C8	27 Dec 2020	Wind Speed (kts)	5
C8	27 Dec 2020	Wind Dir	SE
C8	27 Dec 2020	Water Color	Green
C8	27 Dec 2020	Wave Ht Low (ft)	5
C8	27 Dec 2020	Wave Period (sec)	13
C8	27 Dec 2020	Sea State	Calm
C8	27 Dec 2020	High Tide (ft)	5.63
C8	27 Dec 2020	High Tide Time	647
C8	27 Dec 2020	Low Tide (ft)	-0.34
C8	27 Dec 2020	Low Tide Time	1404
C8	27 Dec 2020	Comments	Kelp; Kelp debris

**Table 3.10**

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

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens ( $\sigma$ -t)	Chlor ( $\mu$ g/L)
A1	01 Dec 2020	1	14.78	85.79	7.2	33.59	8.0	24.9	1.28
A1	01 Dec 2020	2	14.78	85.45	7.1	33.59	8.0	24.9	1.37
A1	01 Dec 2020	3	14.77	86.60	7.1	33.59	8.0	24.9	1.41
A1	01 Dec 2020	4	14.74	87.04	7.1	33.59	8.0	24.9	1.59
A1	01 Dec 2020	5	14.74	87.47	7.0	33.59	8.0	24.9	1.46
A1	01 Dec 2020	6	14.38	87.47	6.8	33.59	8.0	25.0	1.50
A1	01 Dec 2020	7	14.19	88.37	6.5	33.55	8.0	25.0	1.50
A1	01 Dec 2020	8	13.50	89.59	6.3	33.58	8.0	25.2	1.43
A1	01 Dec 2020	9	13.21	90.08	5.9	33.55	7.9	25.2	1.17
A1	01 Dec 2020	10	13.29	90.30	5.8	33.53	7.9	25.2	1.14
A1	01 Dec 2020	11	13.08	90.50	5.7	33.54	7.9	25.2	1.03
A1	01 Dec 2020	12	13.04	90.49	5.6	33.54	7.9	25.3	0.90
A1	01 Dec 2020	13	13.00	90.41	5.6	33.54	7.9	25.3	0.88
A1	01 Dec 2020	14	12.96	90.50	5.6	33.54	7.9	25.3	0.81
A1	01 Dec 2020	15	12.89	90.53	5.5	33.55	7.9	25.3	0.79
A1	01 Dec 2020	16	12.81	90.46	5.5	33.55	7.9	25.3	0.82
A1	01 Dec 2020	17	12.78	90.44	5.4	33.55	7.9	25.3	0.84
A1	01 Dec 2020	18	12.76	90.43	5.4	33.55	7.9	25.3	0.84
A1	01 Dec 2020	19	12.71	90.54	5.4	33.56	7.9	25.3	0.83
A1	01 Dec 2020	20	12.61	90.25	5.3	33.57	7.9	25.4	0.78
A1	07 Dec 2020	1	14.63	NA	7.3	33.58	8.0	25.0	2.07
A1	07 Dec 2020	2	14.63	NA	7.3	33.58	8.0	25.0	2.02
A1	07 Dec 2020	3	14.63	NA	7.4	33.58	8.0	25.0	2.31
A1	07 Dec 2020	4	14.63	NA	7.4	33.58	8.0	25.0	2.38
A1	07 Dec 2020	5	14.63	NA	7.3	33.58	8.0	25.0	2.36
A1	07 Dec 2020	6	14.63	NA	7.3	33.58	8.0	25.0	2.38
A1	07 Dec 2020	7	14.63	NA	7.3	33.58	8.0	25.0	2.31
A1	07 Dec 2020	8	14.63	NA	7.3	33.58	8.0	25.0	2.40
A1	07 Dec 2020	9	14.63	NA	7.3	33.58	8.0	25.0	2.33
A1	07 Dec 2020	10	14.63	NA	7.3	33.58	8.0	25.0	2.27
A1	07 Dec 2020	11	14.63	NA	7.3	33.58	8.0	25.0	2.38
A1	07 Dec 2020	12	14.61	NA	7.3	33.58	8.0	25.0	2.42
A1	07 Dec 2020	13	14.61	NA	7.3	33.58	8.0	25.0	2.38
A1	07 Dec 2020	14	14.59	NA	7.2	33.58	8.0	25.0	2.16
A1	07 Dec 2020	15	14.54	NA	7.0	33.58	8.0	25.0	1.76
A1	07 Dec 2020	16	14.45	NA	6.9	33.58	8.0	25.0	1.50
A1	07 Dec 2020	17	14.37	NA	6.7	33.57	7.9	25.0	1.10
A1	07 Dec 2020	18	14.19	NA	6.6	33.57	7.9	25.0	0.99
A1	15 Dec 2020	1	15.07	84.59	7.6	33.58	8.1	24.9	1.46
A1	15 Dec 2020	2	15.07	85.11	7.5	33.58	8.1	24.9	1.53
A1	15 Dec 2020	3	15.07	83.63	7.5	33.58	8.1	24.9	1.66
A1	15 Dec 2020	4	15.07	84.88	7.5	33.58	8.1	24.9	1.77
A1	15 Dec 2020	5	15.07	84.87	7.5	33.58	8.1	24.9	1.84
A1	15 Dec 2020	6	15.07	84.91	7.5	33.58	8.1	24.9	1.86
A1	15 Dec 2020	7	15.07	85.02	7.5	33.58	8.1	24.9	1.86
A1	15 Dec 2020	8	15.07	85.09	7.5	33.58	8.1	24.9	1.91
A1	15 Dec 2020	9	15.07	85.17	7.5	33.58	8.1	24.9	1.96
A1	15 Dec 2020	10	15.07	85.13	7.5	33.58	8.1	24.9	1.92
A1	15 Dec 2020	11	15.07	85.06	7.5	33.58	8.1	24.9	1.85
A1	15 Dec 2020	12	15.06	85.19	7.5	33.58	8.1	24.9	1.83
A1	15 Dec 2020	13	15.04	85.03	7.4	33.58	8.1	24.9	1.70
A1	15 Dec 2020	14	15.01	85.06	7.4	33.58	8.1	24.9	1.57
A1	15 Dec 2020	15	14.95	85.10	7.2	33.58	8.1	24.9	1.34
A1	15 Dec 2020	16	14.92	84.72	7.2	33.58	8.1	24.9	1.24

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens ( $\sigma$ -t)	Chlor ( $\mu$ g/L)
A1	15 Dec 2020	17	14.77	84.31	7.1	33.58	8.1	24.9	1.04
A1	15 Dec 2020	18	14.76	82.41	7.0	33.57	8.0	24.9	0.94
A1	15 Dec 2020	19	14.70	81.79	6.9	33.57	8.0	24.9	0.89
A1	21 Dec 2020	1	14.54	85.71	7.5	33.59	8.0	25.0	2.22
A1	21 Dec 2020	2	14.52	85.17	7.5	33.59	8.0	25.0	2.42
A1	21 Dec 2020	3	14.51	85.36	7.4	33.59	8.0	25.0	2.71
A1	21 Dec 2020	4	14.45	85.72	7.4	33.59	8.0	25.0	2.85
A1	21 Dec 2020	5	14.41	85.96	7.4	33.58	8.0	25.0	3.01
A1	21 Dec 2020	6	14.38	86.04	7.5	33.58	8.0	25.0	3.14
A1	21 Dec 2020	7	14.37	86.11	7.5	33.58	8.0	25.0	3.04
A1	21 Dec 2020	8	14.36	86.49	7.5	33.58	8.0	25.0	3.04
A1	21 Dec 2020	9	14.36	86.78	7.5	33.58	8.0	25.0	2.95
A1	21 Dec 2020	10	14.35	86.86	7.5	33.58	8.0	25.0	2.99
A1	21 Dec 2020	11	14.34	86.86	7.5	33.58	8.0	25.0	2.96
A1	21 Dec 2020	12	14.31	87.43	7.4	33.58	8.0	25.0	2.86
A1	21 Dec 2020	13	14.28	87.90	7.3	33.58	8.0	25.0	2.60
A1	21 Dec 2020	14	14.24	88.04	7.2	33.58	8.0	25.0	2.42
A1	21 Dec 2020	15	14.19	88.32	7.2	33.57	8.0	25.0	2.25
A1	21 Dec 2020	16	14.14	88.76	7.0	33.58	8.0	25.1	1.98
A1	21 Dec 2020	17	14.06	89.37	6.9	33.58	8.0	25.1	1.70
A1	21 Dec 2020	18	14.04	88.51	6.8	33.57	8.0	25.1	1.45
A1	27 Dec 2020	1	14.30	88.05	7.4	33.60	8.0	25.0	1.89
A1	27 Dec 2020	2	14.30	88.03	7.4	33.60	8.0	25.0	1.96
A1	27 Dec 2020	3	14.29	87.99	7.3	33.60	8.0	25.0	2.14
A1	27 Dec 2020	4	14.29	87.82	7.3	33.60	8.0	25.0	1.96
A1	27 Dec 2020	5	14.29	87.81	7.3	33.60	8.0	25.0	1.81
A1	27 Dec 2020	6	14.27	88.21	7.3	33.60	8.0	25.1	1.69
A1	27 Dec 2020	7	14.25	88.12	7.3	33.60	8.0	25.1	1.69
A1	27 Dec 2020	8	14.25	88.14	7.3	33.60	8.0	25.1	1.76
A1	27 Dec 2020	9	14.23	88.47	7.3	33.60	8.0	25.1	1.74
A1	27 Dec 2020	10	14.20	88.71	7.3	33.60	8.0	25.1	1.66
A1	27 Dec 2020	11	14.18	88.98	7.3	33.60	8.0	25.1	1.50
A1	27 Dec 2020	12	14.16	89.29	7.2	33.60	8.0	25.1	1.43
A1	27 Dec 2020	13	14.13	89.08	7.2	33.61	8.0	25.1	1.33
A1	27 Dec 2020	14	14.11	87.60	7.1	33.61	8.0	25.1	1.20
A1	27 Dec 2020	15	14.06	86.19	7.0	33.61	8.0	25.1	1.25
A1	27 Dec 2020	16	13.99	85.25	6.9	33.61	8.0	25.1	1.14
A1	27 Dec 2020	17	13.90	83.06	6.8	33.62	8.0	25.1	1.13
A1	27 Dec 2020	18	13.79	81.18	6.7	33.62	8.0	25.2	1.00
A1	27 Dec 2020	19	13.85	75.62	6.8	33.61	7.9	25.1	1.02
A6	01 Dec 2020	1	15.45	88.75	7.8	33.60	8.1	24.8	1.18
A6	01 Dec 2020	2	15.45	88.72	7.8	33.60	8.1	24.8	1.38
A6	01 Dec 2020	3	15.45	88.70	7.8	33.60	8.1	24.8	1.43
A6	01 Dec 2020	4	15.44	88.73	7.8	33.60	8.1	24.8	1.50
A6	01 Dec 2020	5	15.44	88.61	7.8	33.60	8.1	24.8	1.60
A6	01 Dec 2020	6	15.43	88.72	7.8	33.60	8.1	24.8	1.53
A6	01 Dec 2020	7	15.41	88.63	7.7	33.60	8.1	24.8	1.65
A6	01 Dec 2020	8	15.35	88.64	7.6	33.59	8.1	24.8	1.48
A6	01 Dec 2020	9	15.23	88.80	7.2	33.59	8.1	24.8	1.42
A6	01 Dec 2020	10	14.90	88.95	6.9	33.58	8.0	24.9	1.24
A6	01 Dec 2020	11	14.80	89.41	6.7	33.57	8.0	24.9	1.18
A6	01 Dec 2020	12	14.73	89.67	6.6	33.56	8.0	24.9	1.15
A6	01 Dec 2020	13	14.64	89.76	6.5	33.56	8.0	24.9	1.11
A6	01 Dec 2020	14	14.60	89.77	6.4	33.56	8.0	24.9	1.08
A6	01 Dec 2020	15	14.45	90.01	6.3	33.56	8.0	25.0	1.03
A6	01 Dec 2020	16	14.31	90.12	6.2	33.56	8.0	25.0	1.02
A6	01 Dec 2020	17	14.00	90.29	6.0	33.56	8.0	25.1	0.99
A6	01 Dec 2020	18	13.55	90.43	5.9	33.55	7.9	25.2	0.92

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens ( $\sigma$ -t)	Chlor ( $\mu$ g/L)
A6	01 Dec 2020	19	13.36	90.45	5.8	33.55	7.9	25.2	0.94
A6	01 Dec 2020	20	13.15	90.74	5.7	33.55	7.9	25.2	0.96
A6	01 Dec 2020	21	13.00	90.67	5.6	33.55	7.9	25.3	0.94
A6	07 Dec 2020	1	15.21	NA	7.6	33.59	8.0	24.8	1.52
A6	07 Dec 2020	2	15.14	NA	7.6	33.60	8.0	24.9	1.60
A6	07 Dec 2020	3	15.13	NA	7.6	33.60	8.0	24.9	1.73
A6	07 Dec 2020	4	15.12	NA	7.6	33.60	8.0	24.9	1.74
A6	07 Dec 2020	5	15.10	NA	7.6	33.60	8.0	24.9	1.75
A6	07 Dec 2020	6	15.09	NA	7.6	33.60	8.0	24.9	1.68
A6	07 Dec 2020	7	15.07	NA	7.5	33.60	8.0	24.9	1.58
A6	07 Dec 2020	8	15.02	NA	7.4	33.60	8.0	24.9	1.49
A6	07 Dec 2020	9	14.95	NA	7.4	33.60	8.0	24.9	1.28
A6	07 Dec 2020	10	14.91	NA	7.2	33.59	8.0	24.9	1.17
A6	07 Dec 2020	11	14.82	NA	7.2	33.59	8.0	24.9	1.18
A6	07 Dec 2020	12	14.75	NA	7.3	33.58	8.0	24.9	1.45
A6	07 Dec 2020	13	14.72	NA	7.3	33.58	8.0	24.9	1.73
A6	07 Dec 2020	14	14.69	NA	7.3	33.57	8.0	24.9	1.87
A6	07 Dec 2020	15	14.67	NA	7.2	33.57	8.0	24.9	1.80
A6	07 Dec 2020	16	14.66	NA	7.2	33.57	8.0	24.9	1.78
A6	07 Dec 2020	17	14.61	NA	7.1	33.58	8.0	25.0	1.44
A6	07 Dec 2020	18	14.56	NA	6.9	33.58	8.0	25.0	1.09
A6	07 Dec 2020	19	14.51	NA	6.8	33.57	8.0	25.0	0.95
A6	07 Dec 2020	20	14.50	NA	6.7	33.57	8.0	25.0	0.84
A6	15 Dec 2020	1	15.49	82.98	7.4	33.58	8.1	24.8	1.20
A6	15 Dec 2020	2	15.48	82.90	7.4	33.58	8.1	24.8	1.30
A6	15 Dec 2020	3	15.47	83.00	7.4	33.58	8.1	24.8	1.33
A6	15 Dec 2020	4	15.47	82.65	7.4	33.58	8.1	24.8	1.38
A6	15 Dec 2020	5	15.47	82.61	7.3	33.58	8.1	24.8	1.42
A6	15 Dec 2020	6	15.47	82.42	7.3	33.58	8.1	24.8	1.42
A6	15 Dec 2020	7	15.47	82.40	7.4	33.58	8.1	24.8	1.46
A6	15 Dec 2020	8	15.47	82.31	7.3	33.58	8.1	24.8	1.51
A6	15 Dec 2020	9	15.47	82.25	7.3	33.58	8.1	24.8	1.46
A6	15 Dec 2020	10	15.48	82.57	7.3	33.58	8.1	24.8	1.49
A6	15 Dec 2020	11	15.47	82.53	7.3	33.58	8.1	24.8	1.49
A6	15 Dec 2020	12	15.47	82.55	7.3	33.58	8.1	24.8	1.39
A6	15 Dec 2020	13	15.40	82.50	7.3	33.58	8.1	24.8	1.37
A6	15 Dec 2020	14	15.36	81.96	7.2	33.58	8.1	24.8	1.34
A6	15 Dec 2020	15	15.34	81.77	7.2	33.58	8.1	24.8	1.26
A6	15 Dec 2020	16	15.22	81.79	7.2	33.58	8.1	24.8	1.11
A6	15 Dec 2020	17	15.10	81.72	7.1	33.57	8.1	24.8	1.00
A6	15 Dec 2020	18	14.81	81.05	6.9	33.58	8.0	24.9	0.89
A6	15 Dec 2020	19	14.70	80.06	6.8	33.57	8.0	24.9	0.80
A6	15 Dec 2020	20	14.77	78.13	6.8	33.56	8.0	24.9	0.82
A6	21 Dec 2020	1	15.01	86.77	7.7	33.60	8.1	24.9	1.95
A6	21 Dec 2020	2	15.01	86.73	7.7	33.60	8.1	24.9	2.11
A6	21 Dec 2020	3	14.98	86.62	7.7	33.60	8.1	24.9	2.48
A6	21 Dec 2020	4	14.95	86.51	7.6	33.60	8.1	24.9	2.76
A6	21 Dec 2020	5	14.83	86.54	7.5	33.60	8.0	24.9	2.53
A6	21 Dec 2020	6	14.67	86.87	7.3	33.59	8.0	25.0	2.05
A6	21 Dec 2020	7	14.59	87.68	7.2	33.59	8.0	25.0	1.80
A6	21 Dec 2020	8	14.45	88.09	7.1	33.59	8.0	25.0	1.54
A6	21 Dec 2020	9	14.39	88.34	6.9	33.59	8.0	25.0	1.43
A6	21 Dec 2020	10	14.30	88.49	6.8	33.58	8.0	25.0	1.39
A6	21 Dec 2020	11	14.15	88.65	6.7	33.58	8.0	25.1	1.26
A6	21 Dec 2020	12	14.10	88.82	6.6	33.57	8.0	25.1	1.19
A6	21 Dec 2020	13	14.09	89.01	6.6	33.57	8.0	25.1	1.14
A6	21 Dec 2020	14	14.02	89.18	6.5	33.58	8.0	25.1	1.11
A6	21 Dec 2020	15	13.90	89.10	6.4	33.58	7.9	25.1	1.00

Station	Date	Depth (m)	Temp (°C)	XMS (‰)	DO (mg/L)	Sal (ppt)	pH	Dens ( $\sigma$ -t)	Chlor ( $\mu$ g/L)
A6	21 Dec 2020	16	13.89	88.84	6.3	33.58	7.9	25.1	0.94
A6	21 Dec 2020	17	13.82	88.89	6.2	33.58	7.9	25.1	0.91
A6	21 Dec 2020	18	13.62	88.76	6.1	33.58	7.9	25.2	0.83
A6	21 Dec 2020	19	13.41	88.44	5.9	33.58	7.9	25.2	0.77
A6	21 Dec 2020	20	13.34	87.95	5.8	33.57	7.9	25.2	0.72
A6	21 Dec 2020	21	13.33	86.93	5.7	33.57	7.9	25.2	0.71
A6	27 Dec 2020	1	14.44	86.91	7.5	33.60	8.0	25.0	1.71
A6	27 Dec 2020	2	14.44	86.94	7.5	33.60	8.0	25.0	1.96
A6	27 Dec 2020	3	14.43	86.86	7.5	33.60	8.0	25.0	2.14
A6	27 Dec 2020	4	14.40	86.44	7.5	33.60	8.0	25.0	2.34
A6	27 Dec 2020	5	14.39	86.13	7.5	33.60	8.0	25.0	2.37
A6	27 Dec 2020	6	14.36	86.21	7.5	33.60	8.0	25.0	2.42
A6	27 Dec 2020	7	14.35	86.37	7.5	33.60	8.0	25.0	2.22
A6	27 Dec 2020	8	14.34	86.46	7.5	33.60	8.0	25.0	2.19
A6	27 Dec 2020	9	14.33	86.37	7.5	33.60	8.0	25.0	2.07
A6	27 Dec 2020	10	14.32	86.65	7.5	33.60	8.0	25.0	2.01
A6	27 Dec 2020	11	14.31	86.57	7.4	33.60	8.0	25.0	1.88
A6	27 Dec 2020	12	14.31	86.67	7.4	33.60	8.0	25.0	1.85
A6	27 Dec 2020	13	14.31	86.69	7.4	33.60	8.0	25.0	1.72
A6	27 Dec 2020	14	14.30	86.63	7.3	33.60	8.0	25.0	1.59
A6	27 Dec 2020	15	14.29	86.35	7.3	33.60	8.0	25.0	1.56
A6	27 Dec 2020	16	14.28	86.02	7.3	33.60	8.0	25.0	1.40
A6	27 Dec 2020	17	14.27	85.41	7.2	33.60	8.0	25.0	1.32
A6	27 Dec 2020	18	14.27	83.50	7.2	33.60	8.0	25.0	1.23
A7	01 Dec 2020	1	15.14	88.48	7.2	33.59	8.1	24.9	1.26
A7	01 Dec 2020	2	15.19	88.43	7.2	33.59	8.1	24.8	1.37
A7	01 Dec 2020	3	15.09	88.63	7.0	33.59	8.1	24.9	1.37
A7	01 Dec 2020	4	14.50	88.88	6.5	33.58	8.0	25.0	1.13
A7	01 Dec 2020	5	14.12	89.43	6.1	33.56	8.0	25.0	0.97
A7	01 Dec 2020	6	13.72	90.13	6.0	33.55	7.9	25.1	0.91
A7	01 Dec 2020	7	13.46	87.97	5.8	33.54	7.9	25.2	0.94
A7	01 Dec 2020	8	13.17	86.01	5.8	33.54	7.9	25.2	0.96
A7	01 Dec 2020	9	13.06	88.57	5.7	33.53	7.9	25.2	0.99
A7	01 Dec 2020	10	13.00	90.02	5.7	33.53	7.9	25.3	0.99
A7	01 Dec 2020	11	12.95	90.36	5.6	33.54	7.9	25.3	0.97
A7	01 Dec 2020	12	12.79	90.79	5.5	33.55	7.9	25.3	0.93
A7	01 Dec 2020	13	12.73	90.91	5.5	33.55	7.9	25.3	0.89
A7	01 Dec 2020	14	12.72	90.96	5.4	33.55	7.9	25.3	0.87
A7	01 Dec 2020	15	12.68	90.91	5.4	33.56	7.9	25.3	0.86
A7	01 Dec 2020	16	12.66	90.77	5.3	33.56	7.9	25.3	0.75
A7	01 Dec 2020	17	12.65	90.49	5.3	33.56	7.9	25.4	0.76
A7	01 Dec 2020	18	12.63	90.14	5.2	33.57	7.9	25.4	0.80
A7	01 Dec 2020	19	12.61	89.92	5.2	33.57	7.9	25.4	0.80
A7	01 Dec 2020	20	12.59	89.50	5.2	33.57	7.9	25.4	0.71
A7	01 Dec 2020	21	12.58	89.14	5.2	33.58	7.9	25.4	0.74
A7	07 Dec 2020	1	14.75	NA	7.5	33.59	8.0	24.9	2.03
A7	07 Dec 2020	2	14.76	NA	7.4	33.59	8.0	24.9	2.19
A7	07 Dec 2020	3	14.76	NA	7.4	33.59	8.0	24.9	2.27
A7	07 Dec 2020	4	14.76	NA	7.4	33.59	8.0	24.9	2.24
A7	07 Dec 2020	5	14.76	NA	7.4	33.59	8.0	24.9	2.22
A7	07 Dec 2020	6	14.76	NA	7.4	33.59	8.0	24.9	2.21
A7	07 Dec 2020	7	14.76	NA	7.4	33.59	8.0	24.9	2.12
A7	07 Dec 2020	8	14.76	NA	7.4	33.59	8.0	24.9	2.14
A7	07 Dec 2020	9	14.76	NA	7.4	33.59	8.0	24.9	2.18
A7	07 Dec 2020	10	14.76	NA	7.4	33.59	8.0	24.9	2.04
A7	07 Dec 2020	11	14.75	NA	7.4	33.59	8.0	24.9	1.92
A7	07 Dec 2020	12	14.75	NA	7.3	33.59	8.0	24.9	1.80
A7	07 Dec 2020	13	14.73	NA	7.3	33.59	8.0	24.9	1.87

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens ( $\sigma$ -t)	Chlor ( $\mu$ g/L)
A7	07 Dec 2020	14	14.61	NA	7.3	33.58	8.0	25.0	1.92
A7	07 Dec 2020	15	14.55	NA	7.2	33.57	8.0	25.0	1.83
A7	07 Dec 2020	16	14.48	NA	7.0	33.57	8.0	25.0	1.72
A7	07 Dec 2020	17	14.42	NA	6.8	33.57	8.0	25.0	1.45
A7	07 Dec 2020	18	14.17	NA	6.6	33.57	8.0	25.0	1.15
A7	07 Dec 2020	19	14.00	NA	6.5	33.57	7.9	25.1	1.02
A7	15 Dec 2020	1	15.48	86.56	7.5	33.58	8.1	24.8	1.18
A7	15 Dec 2020	2	15.48	86.52	7.5	33.58	8.1	24.8	1.24
A7	15 Dec 2020	3	15.47	86.37	7.4	33.58	8.1	24.8	1.35
A7	15 Dec 2020	4	15.46	86.18	7.4	33.58	8.1	24.8	1.55
A7	15 Dec 2020	5	15.45	86.34	7.4	33.58	8.1	24.8	1.58
A7	15 Dec 2020	6	15.44	86.54	7.4	33.58	8.1	24.8	1.67
A7	15 Dec 2020	7	15.42	86.49	7.3	33.58	8.1	24.8	1.65
A7	15 Dec 2020	8	15.40	86.29	7.3	33.58	8.1	24.8	1.63
A7	15 Dec 2020	9	15.39	86.27	7.4	33.58	8.1	24.8	1.58
A7	15 Dec 2020	10	15.38	86.20	7.4	33.58	8.1	24.8	1.59
A7	15 Dec 2020	11	15.28	86.22	7.3	33.58	8.1	24.8	1.43
A7	15 Dec 2020	12	15.19	86.18	7.2	33.57	8.1	24.8	1.32
A7	15 Dec 2020	13	15.16	86.20	7.2	33.57	8.1	24.8	1.20
A7	15 Dec 2020	14	15.07	86.08	7.1	33.57	8.1	24.9	1.13
A7	15 Dec 2020	15	14.90	85.96	7.0	33.57	8.0	24.9	1.03
A7	15 Dec 2020	16	14.77	84.68	6.9	33.57	8.0	24.9	0.92
A7	15 Dec 2020	17	14.60	82.30	6.8	33.56	8.0	25.0	0.86
A7	15 Dec 2020	18	14.49	79.12	6.7	33.57	8.0	25.0	0.82
A7	15 Dec 2020	19	14.19	76.25	6.5	33.57	8.0	25.0	0.76
A7	21 Dec 2020	1	14.82	87.73	7.1	33.59	8.0	24.9	1.21
A7	21 Dec 2020	2	14.80	87.63	7.1	33.59	8.0	24.9	1.39
A7	21 Dec 2020	3	14.72	87.39	7.2	33.59	8.0	24.9	1.90
A7	21 Dec 2020	4	14.67	87.22	7.2	33.59	8.0	25.0	2.14
A7	21 Dec 2020	5	14.65	87.08	7.2	33.59	8.0	25.0	2.05
A7	21 Dec 2020	6	14.56	87.28	7.1	33.59	8.0	25.0	1.84
A7	21 Dec 2020	7	14.49	87.60	7.0	33.59	8.0	25.0	1.65
A7	21 Dec 2020	8	14.43	87.73	7.0	33.59	8.0	25.0	1.55
A7	21 Dec 2020	9	14.38	88.08	6.9	33.58	8.0	25.0	1.44
A7	21 Dec 2020	10	14.31	88.43	6.8	33.58	8.0	25.0	1.37
A7	21 Dec 2020	11	14.27	88.53	6.8	33.58	8.0	25.0	1.36
A7	21 Dec 2020	12	14.23	88.59	6.7	33.58	8.0	25.0	1.32
A7	21 Dec 2020	13	14.15	88.54	6.6	33.58	8.0	25.1	1.21
A7	21 Dec 2020	14	14.13	88.80	6.5	33.58	8.0	25.1	1.16
A7	21 Dec 2020	15	14.09	88.80	6.5	33.58	8.0	25.1	1.13
A7	21 Dec 2020	16	13.98	88.87	6.4	33.58	8.0	25.1	1.04
A7	21 Dec 2020	17	13.80	88.87	6.3	33.57	7.9	25.1	0.91
A7	21 Dec 2020	18	13.69	88.70	6.1	33.57	7.9	25.1	0.85
A7	21 Dec 2020	19	13.65	88.38	6.0	33.57	7.9	25.2	0.80
A7	27 Dec 2020	1	14.53	86.90	7.2	33.61	8.0	25.0	1.12
A7	27 Dec 2020	2	14.53	86.81	7.2	33.61	8.0	25.0	1.25
A7	27 Dec 2020	3	14.52	86.84	7.2	33.61	8.0	25.0	1.38
A7	27 Dec 2020	4	14.52	87.03	7.2	33.61	8.0	25.0	1.47
A7	27 Dec 2020	5	14.52	87.10	7.2	33.61	8.0	25.0	1.51
A7	27 Dec 2020	6	14.51	87.11	7.2	33.61	8.0	25.0	1.53
A7	27 Dec 2020	7	14.50	87.13	7.2	33.60	8.0	25.0	1.58
A7	27 Dec 2020	8	14.48	87.33	7.2	33.61	8.0	25.0	1.56
A7	27 Dec 2020	9	14.41	87.63	7.2	33.61	8.0	25.0	1.50
A7	27 Dec 2020	10	14.36	87.88	7.3	33.60	8.0	25.0	1.45
A7	27 Dec 2020	11	14.35	87.89	7.4	33.60	8.0	25.0	1.49
A7	27 Dec 2020	12	14.34	88.09	7.3	33.60	8.0	25.0	1.37
A7	27 Dec 2020	13	14.33	88.05	7.3	33.60	8.0	25.0	1.41
A7	27 Dec 2020	14	14.33	87.97	7.3	33.60	8.0	25.0	1.36

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens ( $\sigma$ -t)	Chlor ( $\mu$ g/L)
A7	27 Dec 2020	15	14.32	88.06	7.3	33.60	8.0	25.0	1.39
A7	27 Dec 2020	16	14.30	88.07	7.3	33.60	8.0	25.0	1.32
A7	27 Dec 2020	17	14.26	87.79	7.2	33.60	8.0	25.1	1.21
A7	27 Dec 2020	18	14.17	87.30	7.1	33.61	8.0	25.1	1.10
A7	27 Dec 2020	19	14.15	86.14	7.0	33.61	8.0	25.1	1.01
C4	01 Dec 2020	1	14.82	84.95	7.1	33.58	8.0	24.9	0.86
C4	01 Dec 2020	2	14.82	84.82	7.1	33.58	8.0	24.9	0.93
C4	01 Dec 2020	3	14.81	84.85	7.1	33.58	8.0	24.9	1.04
C4	01 Dec 2020	4	14.78	84.68	7.1	33.58	8.0	24.9	1.20
C4	01 Dec 2020	5	14.76	84.30	7.0	33.58	8.0	24.9	1.46
C4	01 Dec 2020	6	14.74	84.24	7.0	33.58	8.0	24.9	1.55
C4	01 Dec 2020	7	14.72	84.13	6.9	33.58	8.0	24.9	1.54
C4	01 Dec 2020	8	14.66	83.94	6.7	33.58	8.0	24.9	1.34
C4	01 Dec 2020	9	14.48	84.07	6.3	33.58	8.0	25.0	1.02
C4	01 Dec 2020	10	14.21	83.84	5.6	33.57	7.9	25.0	0.79
C4	01 Dec 2020	11	14.02	79.48	5.0	33.55	7.9	25.1	0.64
C4	01 Dec 2020	12	13.97	72.71	4.9	33.55	7.8	25.1	0.63
C4	07 Dec 2020	1	14.52	NA	7.1	33.58	8.0	25.0	1.48
C4	07 Dec 2020	2	14.52	NA	7.1	33.58	8.0	25.0	1.52
C4	07 Dec 2020	3	14.52	NA	7.1	33.58	8.0	25.0	1.59
C4	07 Dec 2020	4	14.52	NA	7.1	33.58	8.0	25.0	1.69
C4	07 Dec 2020	5	14.52	NA	7.1	33.58	8.0	25.0	1.72
C4	07 Dec 2020	6	14.52	NA	7.1	33.58	8.0	25.0	1.68
C4	07 Dec 2020	7	14.52	NA	7.1	33.58	8.0	25.0	1.79
C4	07 Dec 2020	8	14.52	NA	7.1	33.58	8.0	25.0	1.69
C4	07 Dec 2020	9	14.52	NA	7.3	33.58	8.0	25.0	1.62
C4	07 Dec 2020	10	14.52	NA	7.5	33.58	8.0	25.0	1.59
C4	07 Dec 2020	11	14.53	NA	7.2	33.58	8.0	25.0	1.69
C4	07 Dec 2020	12	14.53	NA	7.2	33.58	8.0	25.0	1.80
C4	15 Dec 2020	1	15.43	67.26	6.9	33.59	8.0	24.8	0.60
C4	15 Dec 2020	2	15.44	67.23	7.0	33.59	8.0	24.8	0.59
C4	15 Dec 2020	3	15.44	67.03	6.9	33.59	8.0	24.8	0.62
C4	15 Dec 2020	4	15.41	66.78	6.9	33.59	8.0	24.8	0.68
C4	15 Dec 2020	5	15.34	66.76	6.9	33.58	8.0	24.8	0.75
C4	15 Dec 2020	6	15.31	66.29	6.8	33.58	8.0	24.8	0.70
C4	15 Dec 2020	7	15.30	65.49	6.7	33.58	8.0	24.8	0.67
C4	15 Dec 2020	8	15.29	62.75	6.7	33.58	8.0	24.8	0.65
C4	15 Dec 2020	9	15.27	61.20	6.6	33.58	8.0	24.8	0.60
C4	15 Dec 2020	10	15.26	60.01	6.5	33.58	8.0	24.8	0.62
C4	15 Dec 2020	11	15.25	52.39	6.4	33.58	8.0	24.8	0.59
C4	15 Dec 2020	12	15.23	45.68	6.3	33.58	8.0	24.8	0.62
C4	15 Dec 2020	13	15.23	34.77	6.2	33.58	8.0	24.8	0.65
C4	21 Dec 2020	1	14.78	84.50	7.3	33.60	8.0	24.9	1.30
C4	21 Dec 2020	2	14.76	84.28	7.2	33.60	8.0	24.9	1.41
C4	21 Dec 2020	3	14.73	84.21	7.1	33.60	8.0	25.0	1.59
C4	21 Dec 2020	4	14.72	83.79	7.1	33.60	8.0	25.0	1.77
C4	21 Dec 2020	5	14.69	83.91	7.0	33.60	8.0	25.0	1.87
C4	21 Dec 2020	6	14.64	83.89	6.8	33.60	8.0	25.0	1.70
C4	21 Dec 2020	7	14.57	83.83	6.5	33.60	8.0	25.0	1.26
C4	21 Dec 2020	8	14.53	83.90	6.3	33.60	7.9	25.0	0.96
C4	21 Dec 2020	9	14.49	83.17	6.1	33.59	7.9	25.0	0.77
C4	21 Dec 2020	10	14.46	81.57	5.9	33.59	7.9	25.0	0.65
C4	27 Dec 2020	1	14.78	68.55	7.4	33.64	8.0	25.0	0.91
C4	27 Dec 2020	2	14.78	68.32	7.4	33.64	8.0	25.0	1.00
C4	27 Dec 2020	3	14.76	67.02	7.3	33.64	8.0	25.0	1.07
C4	27 Dec 2020	4	14.76	66.47	7.3	33.64	8.0	25.0	1.10

Station	Date	Depth (m)	Temp (°C)	XMS (‰)	DO (mg/L)	Sal (ppt)	pH	Dens ( $\sigma$ -t)	Chlor ( $\mu$ g/L)
C4	27 Dec 2020	5	14.73	66.41	7.2	33.64	8.0	25.0	0.97
C4	27 Dec 2020	6	14.72	65.09	7.2	33.64	8.0	25.0	0.93
C4	27 Dec 2020	7	14.70	65.18	7.2	33.64	8.0	25.0	0.91
C4	27 Dec 2020	8	14.67	64.13	7.1	33.64	8.0	25.0	0.88
C4	27 Dec 2020	9	14.64	63.26	7.0	33.64	8.0	25.0	0.83
C4	27 Dec 2020	10	14.62	65.40	6.8	33.64	8.0	25.0	0.79
C4	27 Dec 2020	11	14.62	63.02	6.8	33.64	8.0	25.0	0.78
C5	01 Dec 2020	1	15.35	87.68	7.6	33.60	8.1	24.8	1.01
C5	01 Dec 2020	2	15.34	87.79	7.6	33.60	8.1	24.8	1.12
C5	01 Dec 2020	3	15.32	87.87	7.5	33.60	8.1	24.8	1.25
C5	01 Dec 2020	4	15.29	87.69	7.4	33.60	8.1	24.8	1.37
C5	01 Dec 2020	5	15.24	87.51	7.3	33.60	8.1	24.8	1.41
C5	01 Dec 2020	6	14.95	86.92	6.9	33.59	8.1	24.9	1.16
C5	01 Dec 2020	7	14.71	85.48	6.5	33.58	8.0	24.9	0.90
C5	01 Dec 2020	8	14.66	84.30	6.2	33.56	8.0	24.9	0.71
C5	01 Dec 2020	9	14.25	82.31	6.0	33.57	8.0	25.0	0.69
C5	01 Dec 2020	10	13.95	83.04	5.8	33.55	7.9	25.1	0.63
C5	01 Dec 2020	11	13.97	82.99	5.8	33.54	7.9	25.1	0.64
C5	07 Dec 2020	1	14.92	NA	6.5	33.62	7.9	24.9	0.73
C5	07 Dec 2020	2	14.92	NA	6.5	33.62	7.9	24.9	0.77
C5	07 Dec 2020	3	14.92	NA	6.4	33.62	7.9	24.9	0.76
C5	07 Dec 2020	4	14.92	NA	6.4	33.62	7.9	24.9	0.75
C5	07 Dec 2020	5	14.92	NA	6.4	33.62	7.9	24.9	0.75
C5	07 Dec 2020	6	14.92	NA	6.4	33.62	7.9	24.9	0.78
C5	07 Dec 2020	7	14.92	NA	6.5	33.62	7.9	24.9	0.78
C5	07 Dec 2020	8	14.92	NA	6.5	33.62	7.9	24.9	0.81
C5	07 Dec 2020	9	14.91	NA	6.6	33.63	7.9	24.9	0.85
C5	07 Dec 2020	10	14.92	NA	6.6	33.63	7.9	24.9	1.14
C5	07 Dec 2020	11	14.92	NA	6.6	33.63	7.9	24.9	1.49
C5	15 Dec 2020	1	15.54	68.01	7.2	33.59	8.0	24.8	0.44
C5	15 Dec 2020	2	15.54	67.87	7.2	33.59	8.0	24.8	0.46
C5	15 Dec 2020	3	15.48	67.78	7.1	33.59	8.0	24.8	0.59
C5	15 Dec 2020	4	15.45	66.79	7.1	33.59	8.0	24.8	0.67
C5	15 Dec 2020	5	15.43	63.62	7.1	33.59	8.0	24.8	0.67
C5	15 Dec 2020	6	15.42	62.24	7.1	33.59	8.0	24.8	0.71
C5	15 Dec 2020	7	15.42	60.56	7.1	33.59	8.0	24.8	0.68
C5	15 Dec 2020	8	15.40	57.11	7.1	33.59	8.0	24.8	0.70
C5	15 Dec 2020	9	15.38	51.50	7.2	33.59	8.0	24.8	0.69
C5	15 Dec 2020	10	15.33	48.74	7.0	33.59	8.0	24.8	0.73
C5	15 Dec 2020	11	15.20	42.50	6.8	33.58	8.0	24.8	0.83
C5	21 Dec 2020	1	14.90	72.58	6.8	33.60	8.0	24.9	0.58
C5	21 Dec 2020	2	14.89	72.12	6.8	33.60	8.0	24.9	0.65
C5	21 Dec 2020	3	14.90	71.68	6.8	33.61	8.0	24.9	0.69
C5	21 Dec 2020	4	14.91	71.80	6.8	33.60	8.0	24.9	0.70
C5	21 Dec 2020	5	14.88	71.88	6.7	33.60	8.0	24.9	0.67
C5	21 Dec 2020	6	14.86	71.39	6.7	33.60	8.0	24.9	0.68
C5	21 Dec 2020	7	14.86	71.34	6.7	33.60	8.0	24.9	0.67
C5	21 Dec 2020	8	14.85	70.67	6.6	33.60	8.0	24.9	0.69
C5	21 Dec 2020	9	14.84	66.00	6.6	33.60	8.0	24.9	0.72
C5	27 Dec 2020	1	14.74	56.34	7.0	33.62	8.0	25.0	0.71
C5	27 Dec 2020	2	14.74	56.12	6.9	33.63	8.0	25.0	0.75
C5	27 Dec 2020	3	14.66	56.25	6.8	33.62	8.0	25.0	0.70
C5	27 Dec 2020	4	14.55	59.78	6.5	33.63	8.0	25.0	0.71
C5	27 Dec 2020	5	14.52	61.52	6.4	33.62	7.9	25.0	0.79
C5	27 Dec 2020	6	14.49	53.32	6.3	33.62	7.9	25.0	0.82
C5	27 Dec 2020	7	14.49	45.42	6.3	33.62	7.9	25.0	0.88

Station	Date	Depth (m)	Temp (°C)	XMS (‰)	DO (mg/L)	Sal (ppt)	pH	Dens ( $\sigma$ -t)	Chlor ( $\mu$ g/L)
C5	27 Dec 2020	8	14.49	43.00	6.3	33.62	7.9	25.0	0.94
C5	27 Dec 2020	9	14.49	34.42	6.2	33.62	7.9	25.0	1.15
C5	27 Dec 2020	10	14.49	29.83	6.2	33.62	7.9	25.0	1.22
C6	01 Dec 2020	1	15.53	87.47	7.2	33.61	8.1	24.8	0.63
C6	01 Dec 2020	2	15.50	87.37	7.2	33.61	8.1	24.8	0.71
C6	01 Dec 2020	3	15.46	87.46	7.2	33.60	8.1	24.8	0.84
C6	01 Dec 2020	4	15.42	87.48	7.2	33.60	8.1	24.8	0.99
C6	01 Dec 2020	5	15.37	87.56	7.1	33.60	8.1	24.8	0.94
C6	01 Dec 2020	6	15.09	87.63	6.8	33.59	8.1	24.9	0.80
C6	01 Dec 2020	7	14.72	87.42	6.4	33.57	8.0	24.9	0.67
C6	01 Dec 2020	8	14.34	88.03	6.1	33.55	8.0	25.0	0.67
C6	01 Dec 2020	9	14.20	88.47	5.8	33.55	7.9	25.0	0.52
C6	01 Dec 2020	10	14.04	85.60	5.7	33.54	7.9	25.1	0.49
C6	01 Dec 2020	11	14.04	81.09	5.6	33.54	7.9	25.0	0.51
C6	07 Dec 2020	1	14.96	NA	6.9	33.62	7.9	24.9	0.88
C6	07 Dec 2020	2	14.97	NA	6.9	33.62	7.9	24.9	0.90
C6	07 Dec 2020	3	14.97	NA	6.9	33.62	7.9	24.9	0.92
C6	07 Dec 2020	4	14.95	NA	6.9	33.62	7.9	24.9	0.93
C6	07 Dec 2020	5	14.93	NA	6.8	33.62	7.9	24.9	0.84
C6	07 Dec 2020	6	14.91	NA	6.8	33.61	7.9	24.9	0.83
C6	07 Dec 2020	7	14.91	NA	6.8	33.61	7.9	24.9	0.84
C6	07 Dec 2020	8	14.91	NA	6.7	33.61	7.9	24.9	0.81
C6	07 Dec 2020	9	14.91	NA	6.7	33.61	7.9	24.9	0.81
C6	15 Dec 2020	1	15.61	76.19	7.4	33.58	8.1	24.7	0.78
C6	15 Dec 2020	2	15.61	77.63	7.4	33.58	8.1	24.7	0.87
C6	15 Dec 2020	3	15.57	77.51	7.3	33.58	8.1	24.8	1.03
C6	15 Dec 2020	4	15.54	76.13	7.3	33.58	8.1	24.8	1.07
C6	15 Dec 2020	5	15.53	74.54	7.3	33.58	8.1	24.8	1.15
C6	15 Dec 2020	6	15.50	72.54	7.2	33.58	8.1	24.8	1.04
C6	15 Dec 2020	7	15.49	67.34	7.1	33.58	8.1	24.8	0.88
C6	15 Dec 2020	8	15.49	59.05	7.1	33.58	8.1	24.8	0.82
C6	15 Dec 2020	9	15.49	54.36	7.1	33.58	8.1	24.8	0.78
C6	15 Dec 2020	10	15.49	53.85	7.1	33.58	8.1	24.8	0.77
C6	21 Dec 2020	1	15.02	78.87	7.2	33.59	8.0	24.9	0.62
C6	21 Dec 2020	2	15.03	78.84	7.2	33.59	8.0	24.9	0.61
C6	21 Dec 2020	3	14.99	78.84	7.2	33.59	8.0	24.9	0.67
C6	21 Dec 2020	4	14.95	78.28	7.2	33.59	8.0	24.9	0.73
C6	21 Dec 2020	5	14.93	78.47	7.1	33.59	8.0	24.9	0.70
C6	21 Dec 2020	6	14.89	79.23	7.0	33.59	8.0	24.9	0.65
C6	21 Dec 2020	7	14.84	80.43	6.8	33.59	8.0	24.9	0.62
C6	21 Dec 2020	8	14.58	80.94	6.4	33.59	8.0	25.0	0.60
C6	21 Dec 2020	9	14.49	79.95	6.1	33.58	7.9	25.0	0.55
C6	21 Dec 2020	10	14.53	79.17	6.1	33.58	7.9	25.0	0.57
C6	27 Dec 2020	1	14.50	78.23	6.9	33.60	8.0	25.0	0.50
C6	27 Dec 2020	2	14.49	78.22	6.9	33.60	8.0	25.0	0.54
C6	27 Dec 2020	3	14.49	78.14	6.9	33.60	8.0	25.0	0.57
C6	27 Dec 2020	4	14.48	77.91	6.9	33.60	8.0	25.0	0.57
C6	27 Dec 2020	5	14.47	78.26	6.9	33.60	8.0	25.0	0.58
C6	27 Dec 2020	6	14.42	78.76	6.8	33.60	8.0	25.0	0.62
C6	27 Dec 2020	7	14.40	80.35	6.9	33.60	8.0	25.0	0.65
C6	27 Dec 2020	8	14.39	81.02	6.9	33.60	8.0	25.0	0.63
C6	27 Dec 2020	9	14.39	81.65	6.9	33.60	8.0	25.0	0.64
C7	01 Dec 2020	1	15.48	87.61	7.4	33.60	8.1	24.8	1.42
C7	01 Dec 2020	2	15.45	87.59	7.4	33.60	8.1	24.8	1.54
C7	01 Dec 2020	3	15.38	87.50	7.4	33.59	8.1	24.8	1.72

Station	Date	Depth (m)	Temp (°C)	XMS (‰)	DO (mg/L)	Sal (ppt)	pH	Dens ( $\sigma$ -t)	Chlor ( $\mu$ g/L)
C7	01 Dec 2020	4	15.28	87.21	7.4	33.59	8.1	24.8	1.90
C7	01 Dec 2020	5	15.26	87.03	7.3	33.59	8.1	24.8	1.99
C7	01 Dec 2020	6	15.25	86.60	7.3	33.59	8.1	24.8	2.12
C7	01 Dec 2020	7	15.25	86.36	7.3	33.59	8.1	24.8	2.12
C7	01 Dec 2020	8	15.24	86.35	7.3	33.59	8.1	24.8	2.20
C7	01 Dec 2020	9	15.24	86.26	7.3	33.59	8.1	24.8	2.27
C7	01 Dec 2020	10	15.22	86.38	7.3	33.58	8.1	24.8	2.13
C7	01 Dec 2020	11	15.19	86.49	7.2	33.58	8.1	24.8	2.19
C7	01 Dec 2020	12	15.15	86.58	7.2	33.57	8.1	24.8	2.14
C7	01 Dec 2020	13	14.99	86.79	7.0	33.56	8.1	24.9	2.04
C7	01 Dec 2020	14	14.71	87.42	6.9	33.56	8.0	24.9	1.99
C7	01 Dec 2020	15	14.50	88.04	6.7	33.55	8.0	25.0	1.72
C7	01 Dec 2020	16	14.21	88.64	6.4	33.56	8.0	25.0	1.35
C7	01 Dec 2020	17	13.77	88.86	6.0	33.55	8.0	25.1	0.99
C7	01 Dec 2020	18	13.06	89.39	5.7	33.56	7.9	25.3	0.81
C7	01 Dec 2020	19	12.98	89.84	5.6	33.55	7.9	25.3	0.74
C7	07 Dec 2020	1	15.81	NA	7.4	33.60	8.1	24.7	1.35
C7	07 Dec 2020	2	15.81	NA	7.4	33.60	8.1	24.7	1.44
C7	07 Dec 2020	3	15.80	NA	7.4	33.60	8.1	24.7	1.50
C7	07 Dec 2020	4	15.78	NA	7.4	33.60	8.1	24.7	1.56
C7	07 Dec 2020	5	15.74	NA	7.4	33.60	8.1	24.7	1.72
C7	07 Dec 2020	6	15.65	NA	7.4	33.59	8.1	24.7	1.91
C7	07 Dec 2020	7	15.56	NA	7.4	33.59	8.0	24.8	1.98
C7	07 Dec 2020	8	15.50	NA	7.4	33.59	8.0	24.8	2.12
C7	07 Dec 2020	9	15.44	NA	7.3	33.59	8.0	24.8	1.93
C7	07 Dec 2020	10	15.43	NA	7.3	33.59	8.0	24.8	1.74
C7	07 Dec 2020	11	15.40	NA	7.3	33.58	8.0	24.8	1.67
C7	07 Dec 2020	12	15.35	NA	7.2	33.58	8.0	24.8	1.56
C7	07 Dec 2020	13	15.32	NA	7.1	33.58	8.0	24.8	1.52
C7	07 Dec 2020	14	15.29	NA	7.1	33.58	8.0	24.8	1.37
C7	07 Dec 2020	15	15.22	NA	7.0	33.58	8.0	24.8	1.23
C7	07 Dec 2020	16	15.07	NA	6.7	33.58	8.0	24.9	1.04
C7	07 Dec 2020	17	14.85	NA	6.4	33.58	8.0	24.9	0.84
C7	07 Dec 2020	18	14.47	NA	6.3	33.58	7.9	25.0	0.69
C7	15 Dec 2020	1	15.63	73.43	7.6	33.58	8.1	24.7	1.33
C7	15 Dec 2020	2	15.63	73.17	7.6	33.58	8.1	24.7	1.41
C7	15 Dec 2020	3	15.63	73.10	7.6	33.58	8.1	24.7	1.58
C7	15 Dec 2020	4	15.59	73.11	7.6	33.58	8.1	24.7	1.83
C7	15 Dec 2020	5	15.56	73.68	7.6	33.58	8.1	24.8	1.89
C7	15 Dec 2020	6	15.54	74.56	7.5	33.58	8.1	24.8	1.82
C7	15 Dec 2020	7	15.54	74.44	7.5	33.58	8.1	24.8	1.75
C7	15 Dec 2020	8	15.54	74.38	7.4	33.58	8.1	24.8	1.70
C7	15 Dec 2020	9	15.53	74.28	7.4	33.58	8.1	24.8	1.55
C7	15 Dec 2020	10	15.47	74.26	7.4	33.58	8.1	24.8	1.44
C7	15 Dec 2020	11	15.27	74.46	7.2	33.57	8.1	24.8	1.24
C7	15 Dec 2020	12	15.03	76.82	7.1	33.57	8.1	24.9	1.10
C7	15 Dec 2020	13	14.90	80.62	7.0	33.56	8.1	24.9	1.00
C7	15 Dec 2020	14	14.83	81.09	6.9	33.56	8.0	24.9	0.96
C7	15 Dec 2020	15	14.74	81.85	6.9	33.56	8.0	24.9	0.95
C7	15 Dec 2020	16	14.68	82.75	6.9	33.55	8.0	24.9	0.95
C7	15 Dec 2020	17	14.52	83.63	6.8	33.56	8.0	25.0	0.83
C7	15 Dec 2020	18	14.40	82.49	6.7	33.56	8.0	25.0	0.80
C7	15 Dec 2020	19	14.41	77.62	6.6	33.55	8.0	25.0	0.78
C7	21 Dec 2020	1	15.24	87.59	7.6	33.61	8.1	24.8	1.46
C7	21 Dec 2020	2	15.24	87.48	7.6	33.61	8.1	24.8	1.45
C7	21 Dec 2020	3	15.24	87.40	7.6	33.61	8.1	24.8	1.54
C7	21 Dec 2020	4	15.24	87.62	7.6	33.61	8.1	24.8	1.73
C7	21 Dec 2020	5	15.23	87.60	7.6	33.61	8.1	24.8	1.97

Station	Date	Depth (m)	Temp (°C)	XMS (‰)	DO (mg/L)	Sal (ppt)	pH	Dens (σ-t)	Chlor (µg/L)
C7	21 Dec 2020	6	15.23	87.35	7.6	33.61	8.1	24.8	2.16
C7	21 Dec 2020	7	15.23	87.08	7.6	33.61	8.1	24.8	2.27
C7	21 Dec 2020	8	15.21	86.96	7.6	33.61	8.1	24.9	2.37
C7	21 Dec 2020	9	15.19	86.74	7.6	33.60	8.1	24.9	2.37
C7	21 Dec 2020	10	15.12	86.47	7.5	33.60	8.1	24.9	2.22
C7	21 Dec 2020	11	14.90	86.39	7.3	33.60	8.0	24.9	1.95
C7	21 Dec 2020	12	14.81	86.57	7.2	33.59	8.0	24.9	1.79
C7	21 Dec 2020	13	14.71	86.96	7.0	33.59	8.0	24.9	1.64
C7	21 Dec 2020	14	14.38	87.53	6.8	33.59	8.0	25.0	1.41
C7	21 Dec 2020	15	14.24	88.17	6.6	33.58	8.0	25.0	1.24
C7	21 Dec 2020	16	14.10	88.98	6.5	33.57	8.0	25.1	1.13
C7	21 Dec 2020	17	13.84	89.43	6.2	33.57	7.9	25.1	0.98
C7	21 Dec 2020	18	13.70	89.49	6.1	33.57	7.9	25.1	0.83
C7	27 Dec 2020	1	14.54	86.25	7.7	33.60	8.0	25.0	2.32
C7	27 Dec 2020	2	14.54	86.15	7.8	33.60	8.0	25.0	2.60
C7	27 Dec 2020	3	14.47	86.17	7.7	33.60	8.0	25.0	3.07
C7	27 Dec 2020	4	14.42	85.61	7.7	33.60	8.0	25.0	3.29
C7	27 Dec 2020	5	14.39	85.24	7.7	33.60	8.0	25.0	3.30
C7	27 Dec 2020	6	14.37	85.57	7.7	33.60	8.0	25.0	3.03
C7	27 Dec 2020	7	14.35	85.87	7.7	33.60	8.0	25.0	2.90
C7	27 Dec 2020	8	14.34	86.22	7.7	33.60	8.0	25.0	2.89
C7	27 Dec 2020	9	14.33	86.73	7.7	33.60	8.0	25.0	2.59
C7	27 Dec 2020	10	14.33	87.17	7.6	33.60	8.0	25.0	2.31
C7	27 Dec 2020	11	14.32	87.39	7.6	33.60	8.0	25.0	2.08
C7	27 Dec 2020	12	14.32	87.58	7.6	33.60	8.0	25.0	1.97
C7	27 Dec 2020	13	14.32	87.77	7.5	33.60	8.0	25.0	1.80
C7	27 Dec 2020	14	14.29	88.04	7.4	33.60	8.0	25.0	1.39
C7	27 Dec 2020	15	14.28	88.41	7.2	33.60	8.0	25.0	1.11
C7	27 Dec 2020	16	14.28	88.41	7.1	33.60	8.0	25.0	0.88
C7	27 Dec 2020	17	14.27	88.19	7.0	33.60	8.0	25.0	0.79
C7	27 Dec 2020	18	14.28	87.64	7.0	33.60	8.0	25.0	0.75
C7	27 Dec 2020	19	14.28	85.75	7.0	33.60	8.0	25.0	0.72
C8	01 Dec 2020	1	15.32	86.74	7.5	33.59	8.1	24.8	1.58
C8	01 Dec 2020	2	15.32	87.09	7.4	33.59	8.1	24.8	1.64
C8	01 Dec 2020	3	15.31	87.10	7.4	33.59	8.1	24.8	1.80
C8	01 Dec 2020	4	15.31	87.21	7.4	33.59	8.1	24.8	2.00
C8	01 Dec 2020	5	15.31	87.14	7.4	33.59	8.1	24.8	2.02
C8	01 Dec 2020	6	15.31	87.11	7.4	33.59	8.1	24.8	2.07
C8	01 Dec 2020	7	15.31	87.11	7.4	33.59	8.1	24.8	2.22
C8	01 Dec 2020	8	15.31	87.17	7.4	33.59	8.1	24.8	2.36
C8	01 Dec 2020	9	15.31	87.28	7.4	33.59	8.1	24.8	2.34
C8	01 Dec 2020	10	15.31	87.22	7.4	33.59	8.1	24.8	2.37
C8	01 Dec 2020	11	15.30	87.16	7.4	33.59	8.1	24.8	2.34
C8	01 Dec 2020	12	15.29	87.11	7.4	33.60	8.1	24.8	2.25
C8	01 Dec 2020	13	15.26	87.04	7.3	33.60	8.1	24.8	2.22
C8	01 Dec 2020	14	15.09	86.98	7.2	33.59	8.1	24.9	2.08
C8	01 Dec 2020	15	14.88	87.00	7.0	33.58	8.0	24.9	2.04
C8	01 Dec 2020	16	14.64	87.28	6.9	33.56	8.0	24.9	1.96
C8	01 Dec 2020	17	14.50	87.56	6.7	33.55	8.0	25.0	1.96
C8	01 Dec 2020	18	14.23	87.80	6.5	33.53	8.0	25.0	1.82
C8	01 Dec 2020	19	13.69	88.22	6.3	33.55	8.0	25.1	1.53
C8	01 Dec 2020	20	13.17	89.04	6.0	33.56	7.9	25.2	1.27
C8	07 Dec 2020	1	15.65	NA	7.5	33.59	8.1	24.7	1.71
C8	07 Dec 2020	2	15.65	NA	7.5	33.59	8.1	24.7	1.71
C8	07 Dec 2020	3	15.65	NA	7.5	33.59	8.1	24.7	1.84
C8	07 Dec 2020	4	15.65	NA	7.5	33.59	8.1	24.7	1.84
C8	07 Dec 2020	5	15.65	NA	7.5	33.59	8.1	24.7	1.84
C8	07 Dec 2020	6	15.64	NA	7.5	33.59	8.1	24.7	1.94

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens ( $\sigma$ -t)	Chlor ( $\mu$ g/L)
C8	07 Dec 2020	7	15.64	NA	7.5	33.59	8.1	24.7	1.99
C8	07 Dec 2020	8	15.62	NA	7.5	33.59	8.1	24.7	2.02
C8	07 Dec 2020	9	15.58	NA	7.5	33.59	8.1	24.8	1.98
C8	07 Dec 2020	10	15.54	NA	7.5	33.59	8.1	24.8	2.00
C8	07 Dec 2020	11	15.48	NA	7.5	33.59	8.1	24.8	2.01
C8	07 Dec 2020	12	15.33	NA	7.6	33.59	8.1	24.8	2.12
C8	07 Dec 2020	13	15.21	NA	7.5	33.58	8.1	24.8	2.17
C8	07 Dec 2020	14	15.18	NA	7.4	33.58	8.0	24.8	2.05
C8	07 Dec 2020	15	15.12	NA	7.3	33.58	8.0	24.9	1.97
C8	07 Dec 2020	16	15.03	NA	7.3	33.58	8.0	24.9	1.96
C8	07 Dec 2020	17	14.95	NA	7.1	33.58	8.0	24.9	1.78
C8	07 Dec 2020	18	14.77	NA	7.0	33.58	8.0	24.9	1.58
C8	07 Dec 2020	19	14.58	NA	6.9	33.57	8.0	25.0	1.51
C8	07 Dec 2020	20	14.71	NA	6.9	33.55	8.0	24.9	1.39
C8	15 Dec 2020	1	15.55	79.90	7.6	33.59	8.1	24.8	1.42
C8	15 Dec 2020	2	15.54	78.69	7.6	33.59	8.1	24.8	1.61
C8	15 Dec 2020	3	15.52	78.36	7.6	33.59	8.1	24.8	2.07
C8	15 Dec 2020	4	15.51	79.23	7.7	33.59	8.1	24.8	2.30
C8	15 Dec 2020	5	15.51	79.59	7.6	33.59	8.1	24.8	2.37
C8	15 Dec 2020	6	15.51	80.11	7.6	33.59	8.1	24.8	2.35
C8	15 Dec 2020	7	15.51	80.13	7.6	33.59	8.1	24.8	2.36
C8	15 Dec 2020	8	15.50	80.38	7.6	33.59	8.1	24.8	2.33
C8	15 Dec 2020	9	15.48	80.78	7.5	33.58	8.1	24.8	2.02
C8	15 Dec 2020	10	15.21	81.35	7.3	33.58	8.1	24.8	1.58
C8	15 Dec 2020	11	15.08	80.91	7.2	33.57	8.1	24.9	1.30
C8	15 Dec 2020	12	15.05	80.16	7.1	33.57	8.1	24.9	1.23
C8	15 Dec 2020	13	14.94	80.87	7.0	33.57	8.1	24.9	1.09
C8	15 Dec 2020	14	14.81	83.69	7.0	33.56	8.0	24.9	0.97
C8	15 Dec 2020	15	14.77	84.64	7.0	33.56	8.0	24.9	0.94
C8	15 Dec 2020	16	14.76	84.45	7.0	33.56	8.0	24.9	0.92
C8	15 Dec 2020	17	14.77	83.47	7.0	33.56	8.0	24.9	0.91
C8	15 Dec 2020	18	14.77	82.76	6.9	33.56	8.0	24.9	0.94
C8	15 Dec 2020	19	14.78	80.76	6.9	33.56	8.0	24.9	0.93
C8	15 Dec 2020	20	14.80	77.14	6.9	33.56	8.0	24.9	1.00
C8	21 Dec 2020	1	15.14	88.61	7.4	33.60	8.1	24.9	1.36
C8	21 Dec 2020	2	15.13	88.66	7.4	33.60	8.1	24.9	1.39
C8	21 Dec 2020	3	15.13	88.47	7.5	33.60	8.1	24.9	1.49
C8	21 Dec 2020	4	15.13	88.47	7.5	33.60	8.1	24.9	1.71
C8	21 Dec 2020	5	15.13	88.40	7.4	33.60	8.1	24.9	1.76
C8	21 Dec 2020	6	15.13	88.39	7.5	33.60	8.1	24.9	1.92
C8	21 Dec 2020	7	15.12	88.42	7.5	33.60	8.1	24.9	2.03
C8	21 Dec 2020	8	15.10	88.51	7.4	33.60	8.1	24.9	2.11
C8	21 Dec 2020	9	15.00	88.58	7.3	33.59	8.0	24.9	1.92
C8	21 Dec 2020	10	14.90	89.21	7.2	33.58	8.0	24.9	1.72
C8	21 Dec 2020	11	14.60	89.78	7.0	33.56	8.0	25.0	1.63
C8	21 Dec 2020	12	14.33	90.25	6.7	33.55	8.0	25.0	1.56
C8	21 Dec 2020	13	14.11	90.49	6.5	33.56	8.0	25.1	1.39
C8	21 Dec 2020	14	13.98	89.88	6.4	33.57	8.0	25.1	1.22
C8	21 Dec 2020	15	13.90	89.00	6.3	33.56	7.9	25.1	1.09
C8	21 Dec 2020	16	13.78	88.93	6.2	33.56	7.9	25.1	1.05
C8	21 Dec 2020	17	13.63	89.33	6.0	33.56	7.9	25.2	0.92
C8	21 Dec 2020	18	13.53	89.26	5.9	33.56	7.9	25.2	0.83
C8	21 Dec 2020	19	13.52	87.74	5.9	33.56	7.9	25.2	0.78
C8	21 Dec 2020	20	13.51	87.02	5.9	33.56	7.9	25.2	0.78
C8	27 Dec 2020	1	14.56	85.33	7.5	33.60	8.0	25.0	2.59
C8	27 Dec 2020	2	14.56	85.07	7.5	33.60	8.0	25.0	2.73
C8	27 Dec 2020	3	14.56	85.37	7.5	33.60	8.0	25.0	2.95
C8	27 Dec 2020	4	14.56	85.42	7.5	33.60	8.0	25.0	3.10

Station	Date	Depth (m)	Temp (°C)	XMS (%)	DO (mg/L)	Sal (ppt)	pH	Dens ( $\sigma$ -t)	Chlor ( $\mu$ g/L)
C8	27 Dec 2020	5	14.56	85.45	7.5	33.60	8.0	25.0	3.11
C8	27 Dec 2020	6	14.55	85.64	7.5	33.60	8.0	25.0	2.87
C8	27 Dec 2020	7	14.52	86.04	7.3	33.60	8.0	25.0	2.53
C8	27 Dec 2020	8	14.42	86.61	7.2	33.60	8.0	25.0	1.95
C8	27 Dec 2020	9	14.33	88.06	7.1	33.59	8.0	25.0	1.48
C8	27 Dec 2020	10	14.27	90.23	7.0	33.59	8.0	25.0	1.26
C8	27 Dec 2020	11	14.26	90.99	7.0	33.59	8.0	25.0	1.09
C8	27 Dec 2020	12	14.21	91.21	6.9	33.59	8.0	25.1	0.98
C8	27 Dec 2020	13	14.18	90.05	6.8	33.59	8.0	25.1	0.88
C8	27 Dec 2020	14	14.17	88.04	6.7	33.59	8.0	25.1	0.85
C8	27 Dec 2020	15	14.13	86.44	6.6	33.59	8.0	25.1	0.79
C8	27 Dec 2020	16	14.12	81.42	6.5	33.59	8.0	25.1	0.82
C8	27 Dec 2020	17	14.11	77.89	6.5	33.59	8.0	25.1	0.92
C8	27 Dec 2020	18	14.11	70.73	6.5	33.59	8.0	25.1	0.90
C8	27 Dec 2020	19	14.11	67.18	6.5	33.59	8.0	25.1	0.96
C8	27 Dec 2020	20	14.11	65.21	6.5	33.59	8.0	25.1	0.99

NA = not available

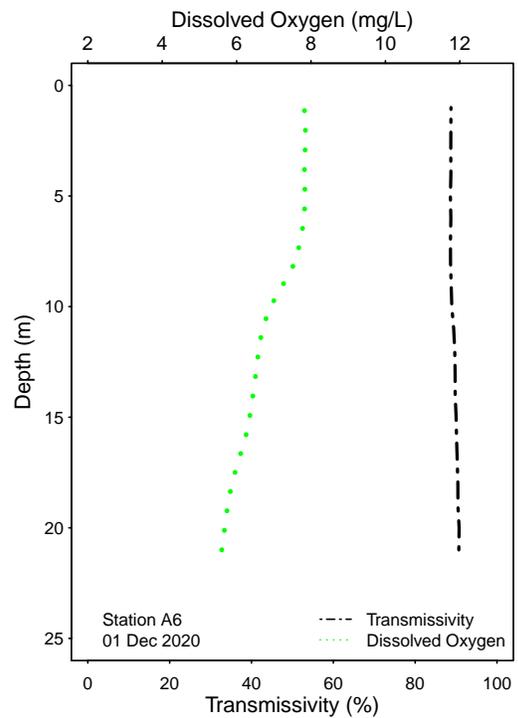
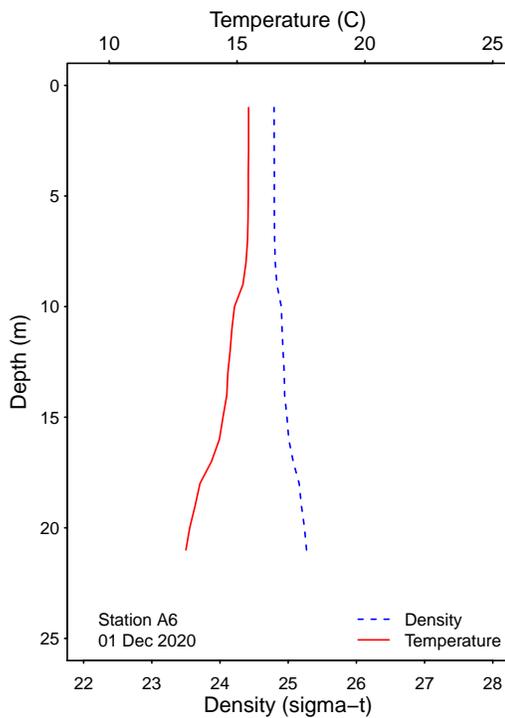
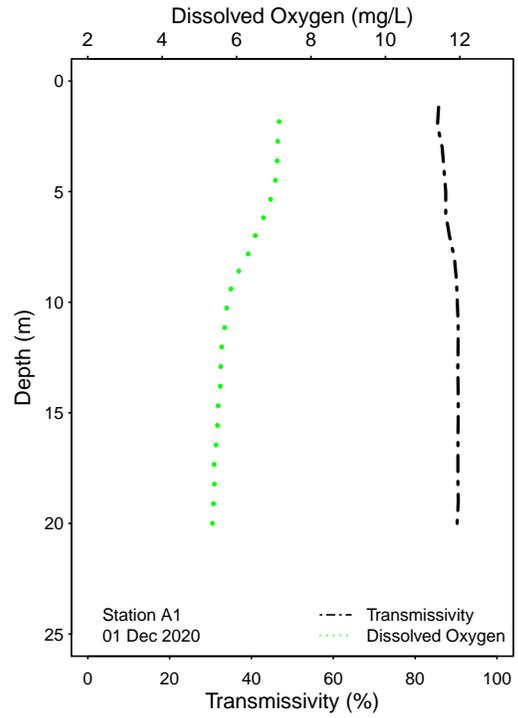
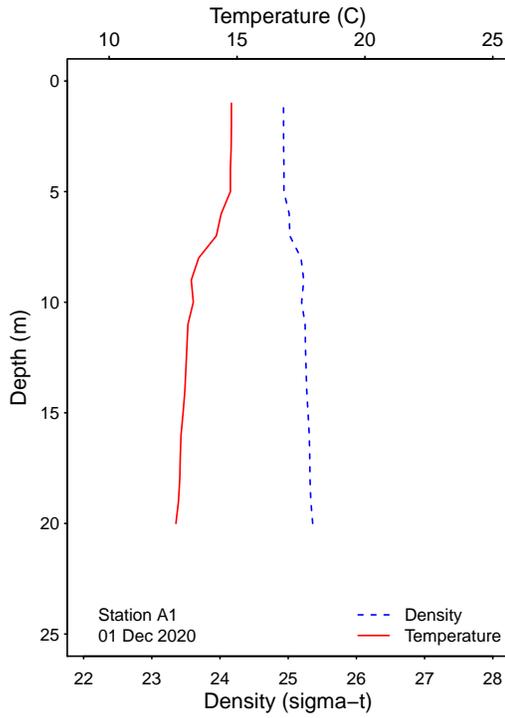


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

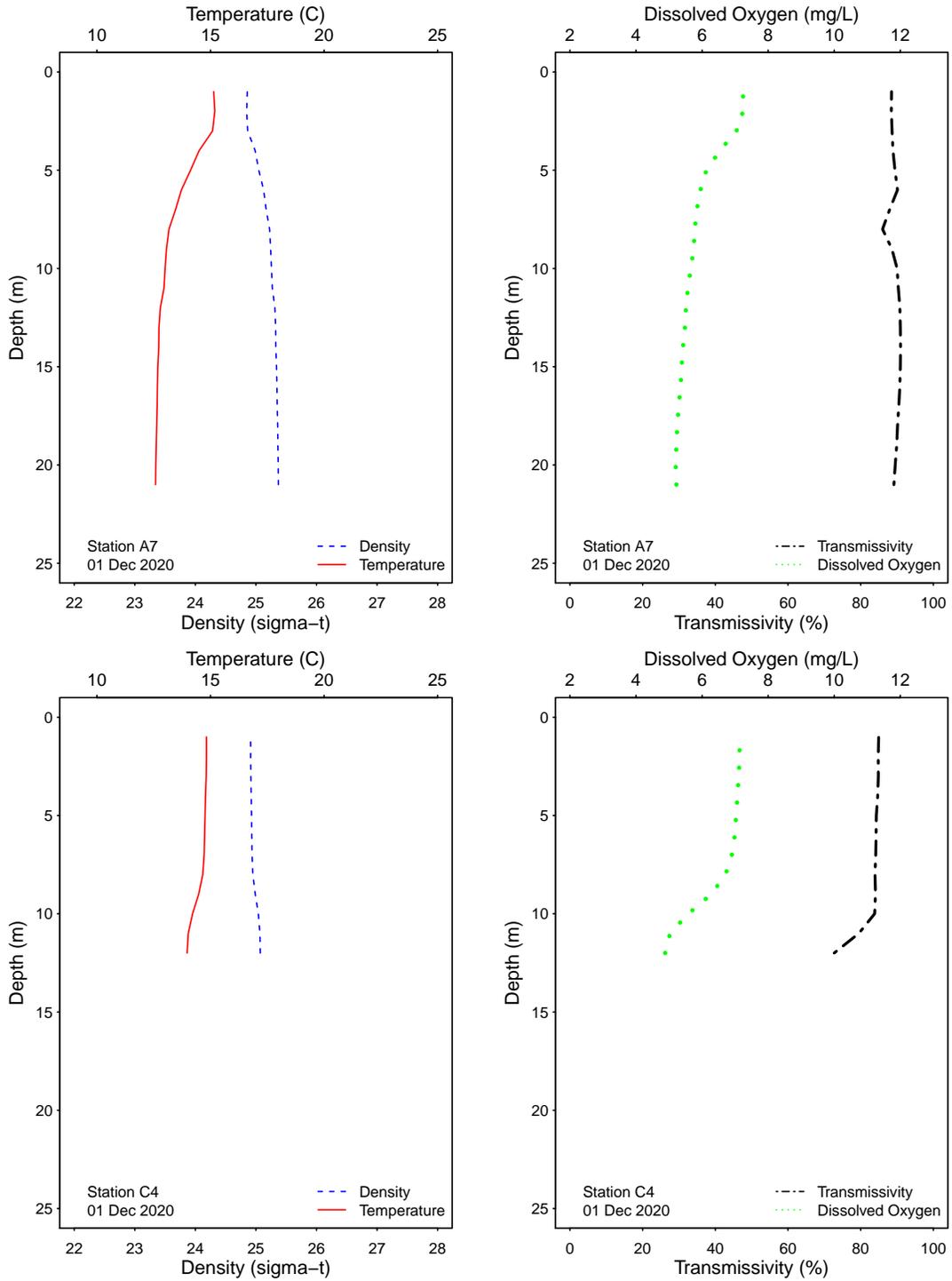


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

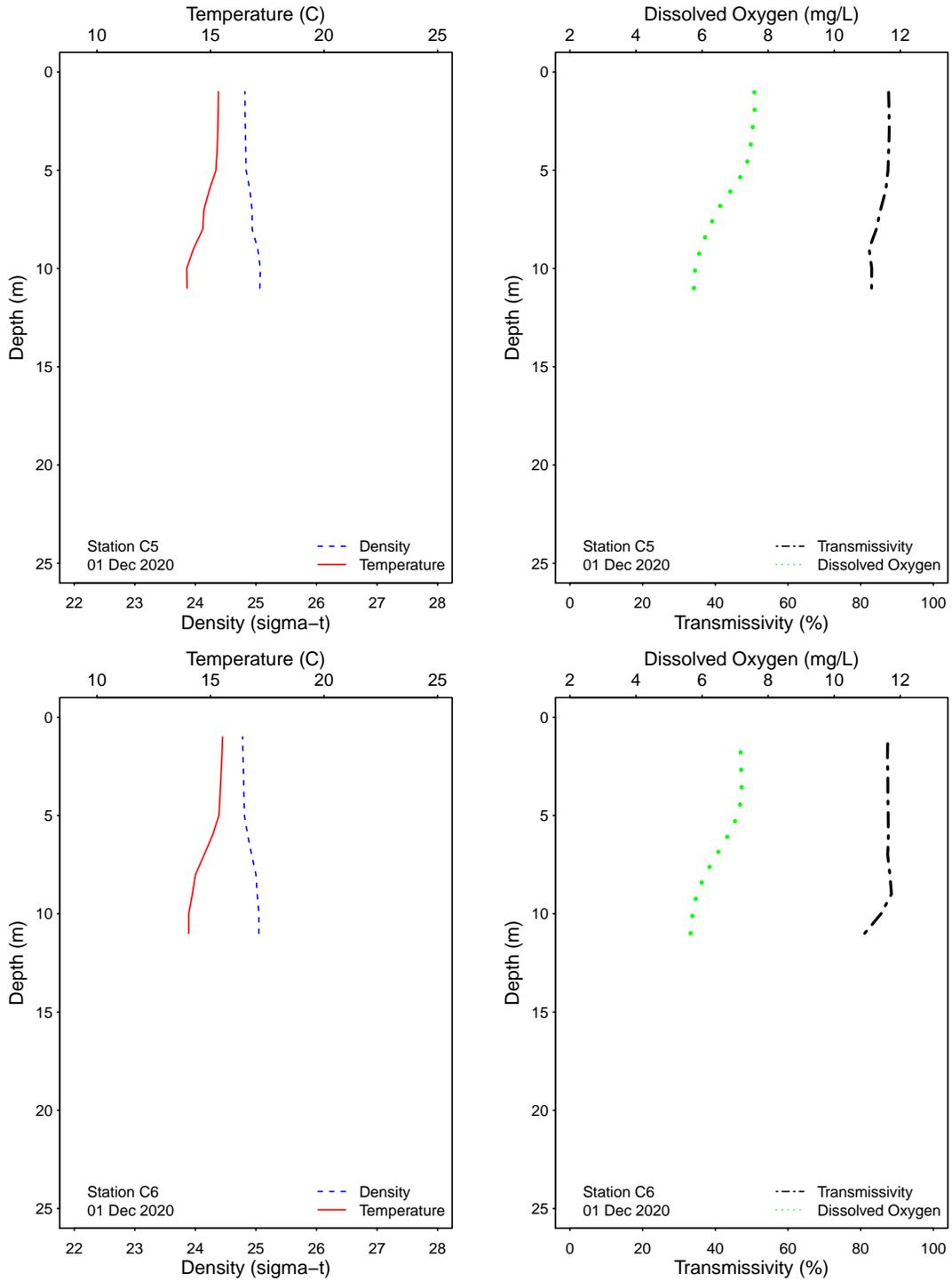


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

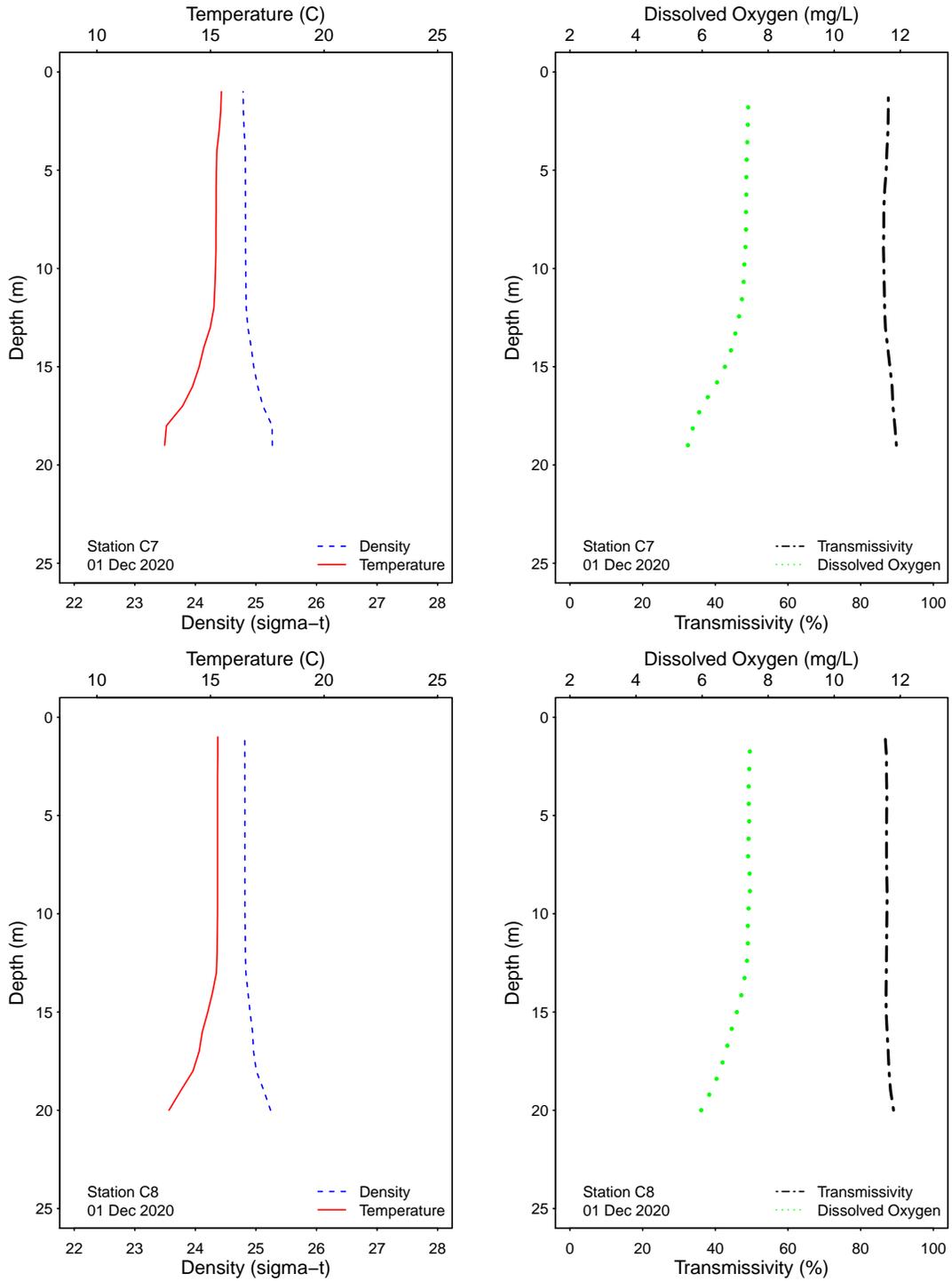


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

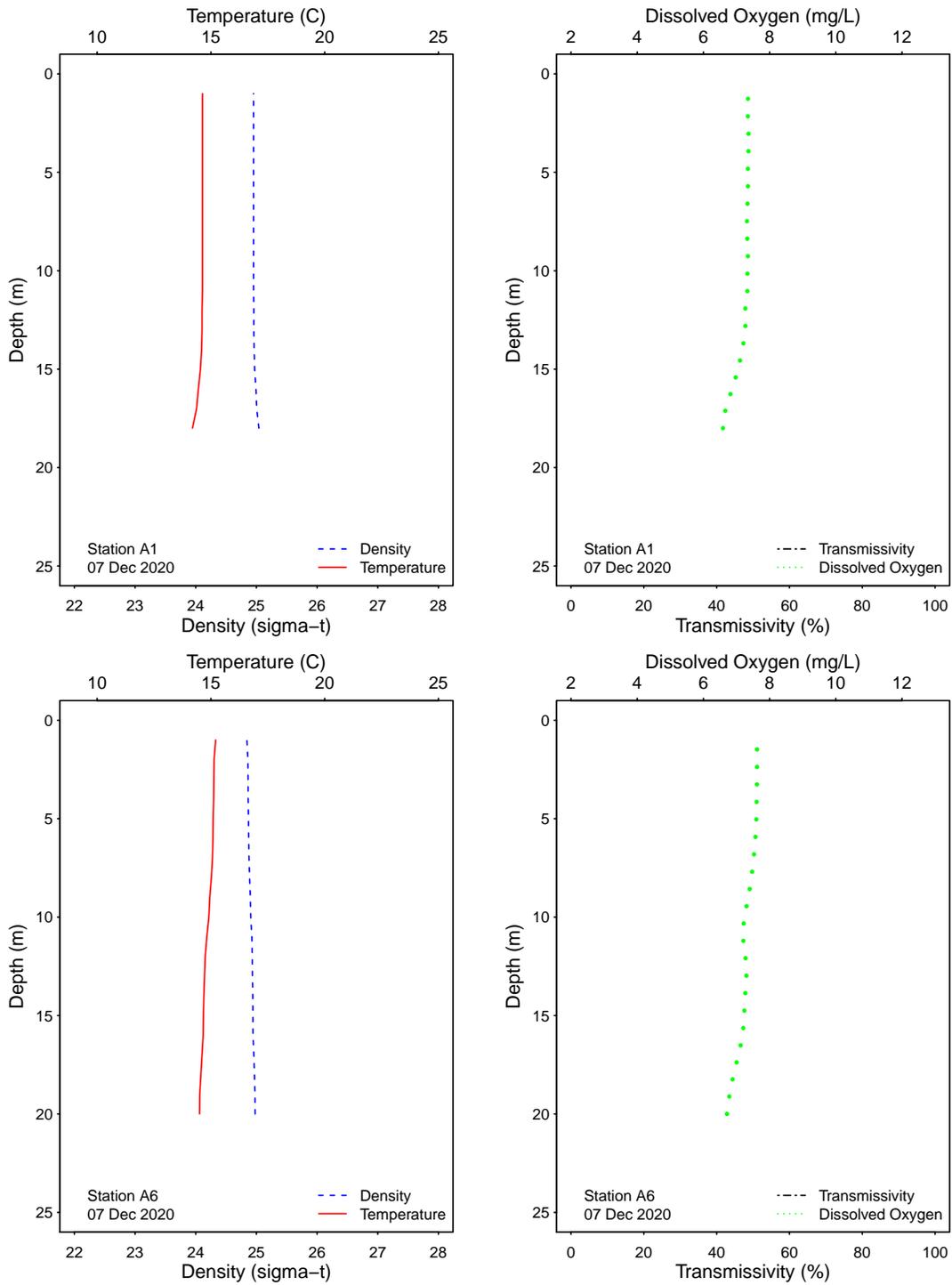


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

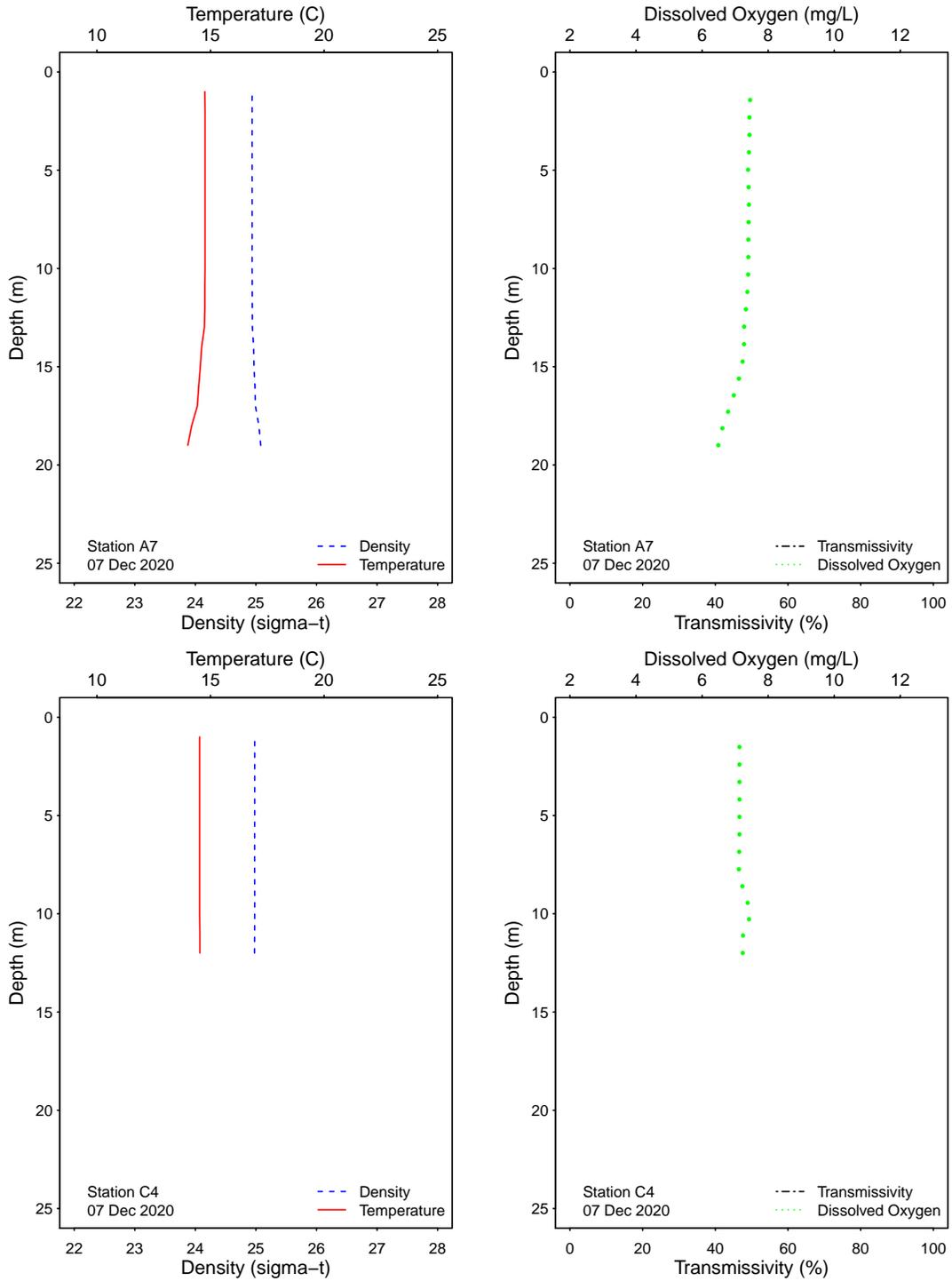


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

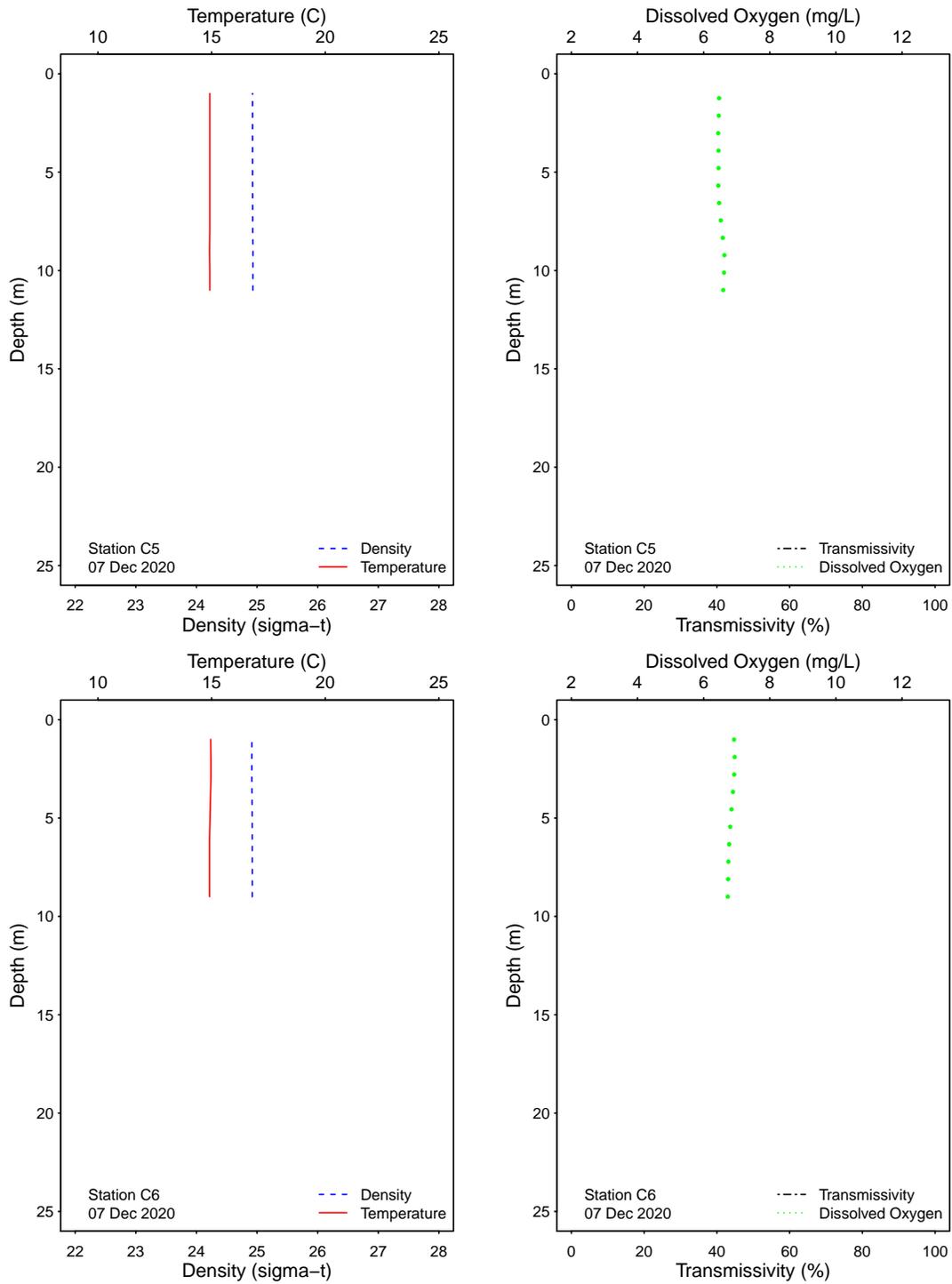


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

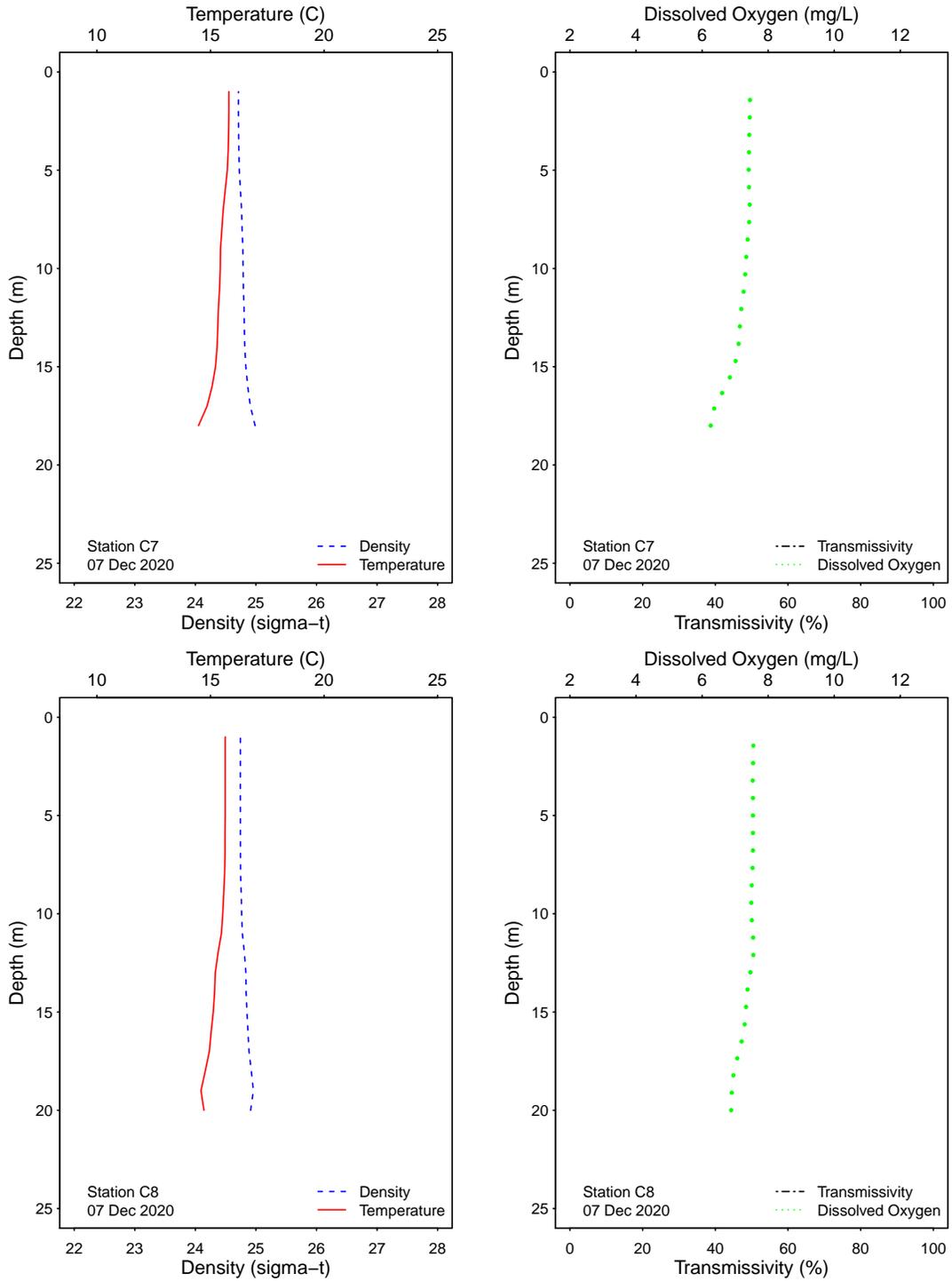


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

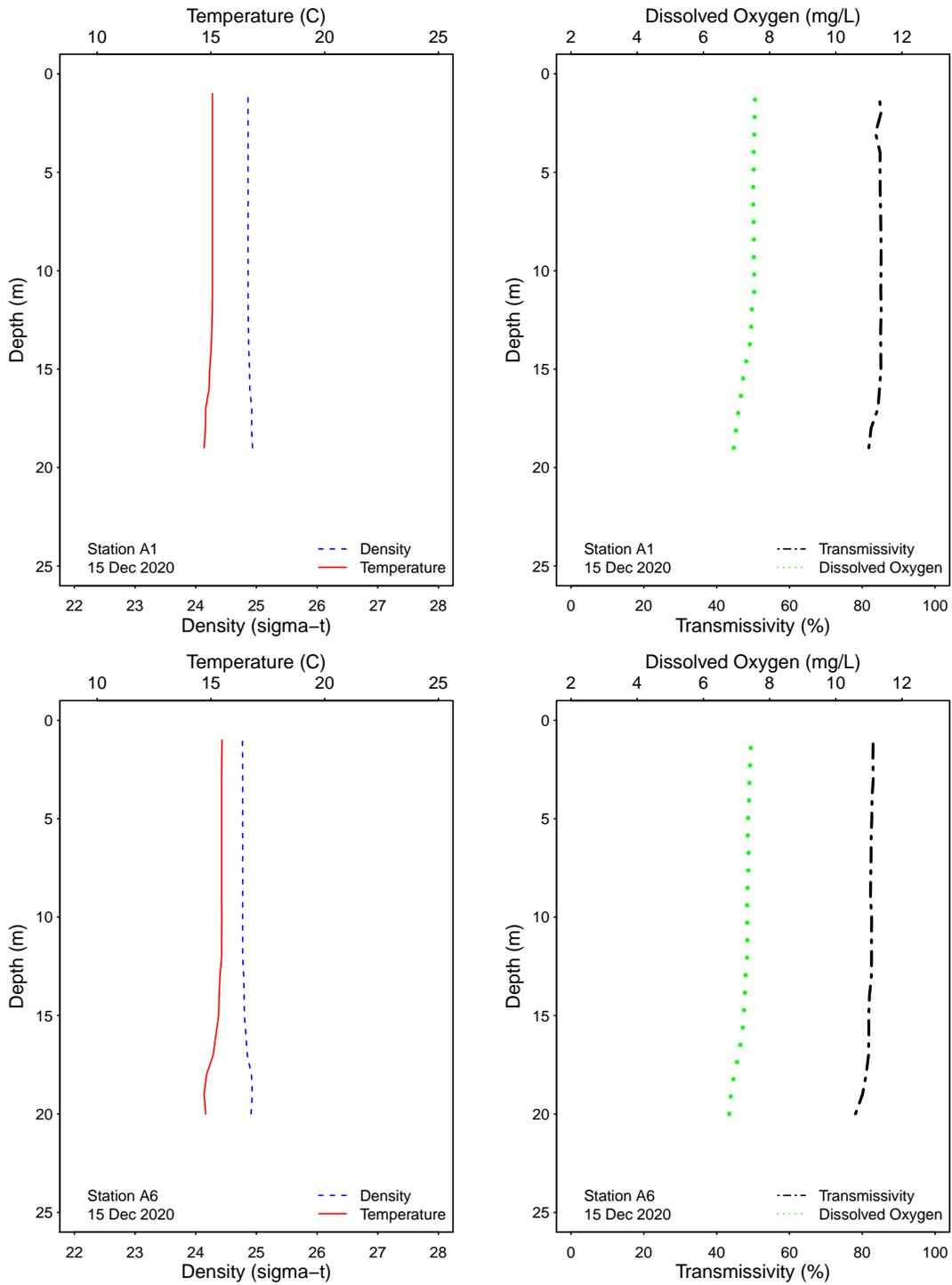


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

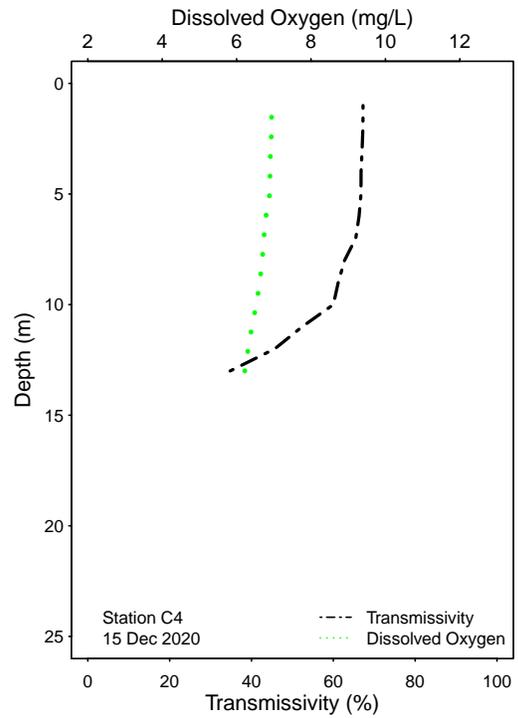
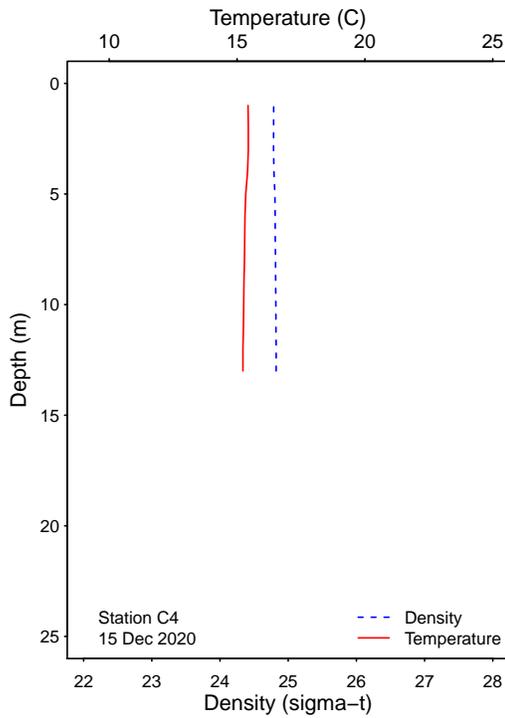
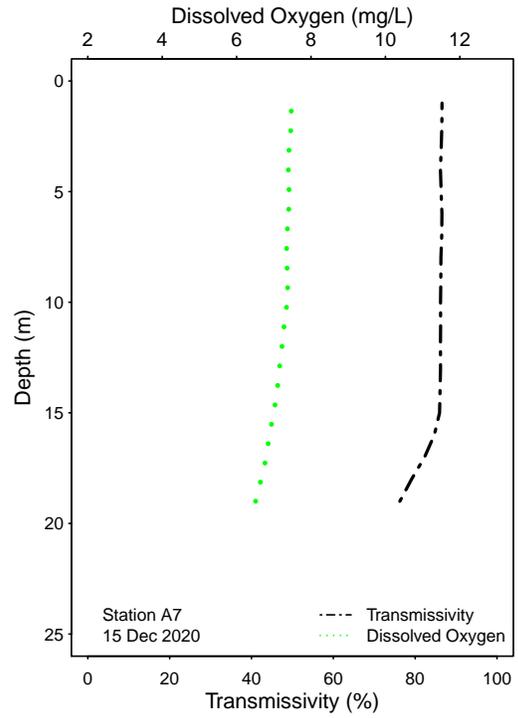
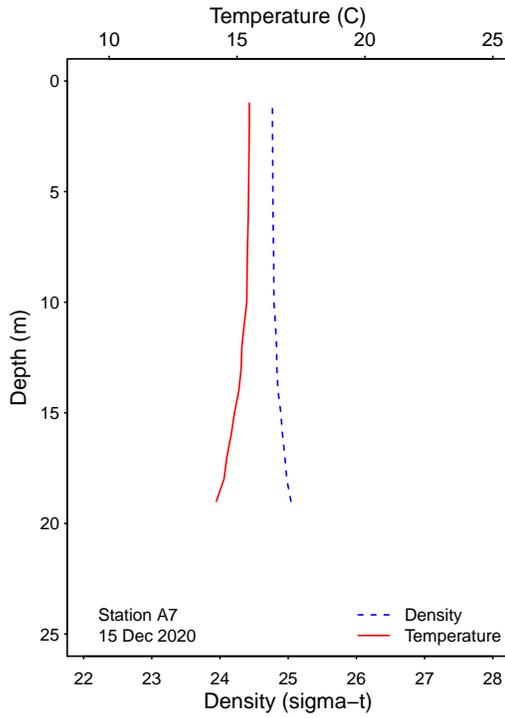


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

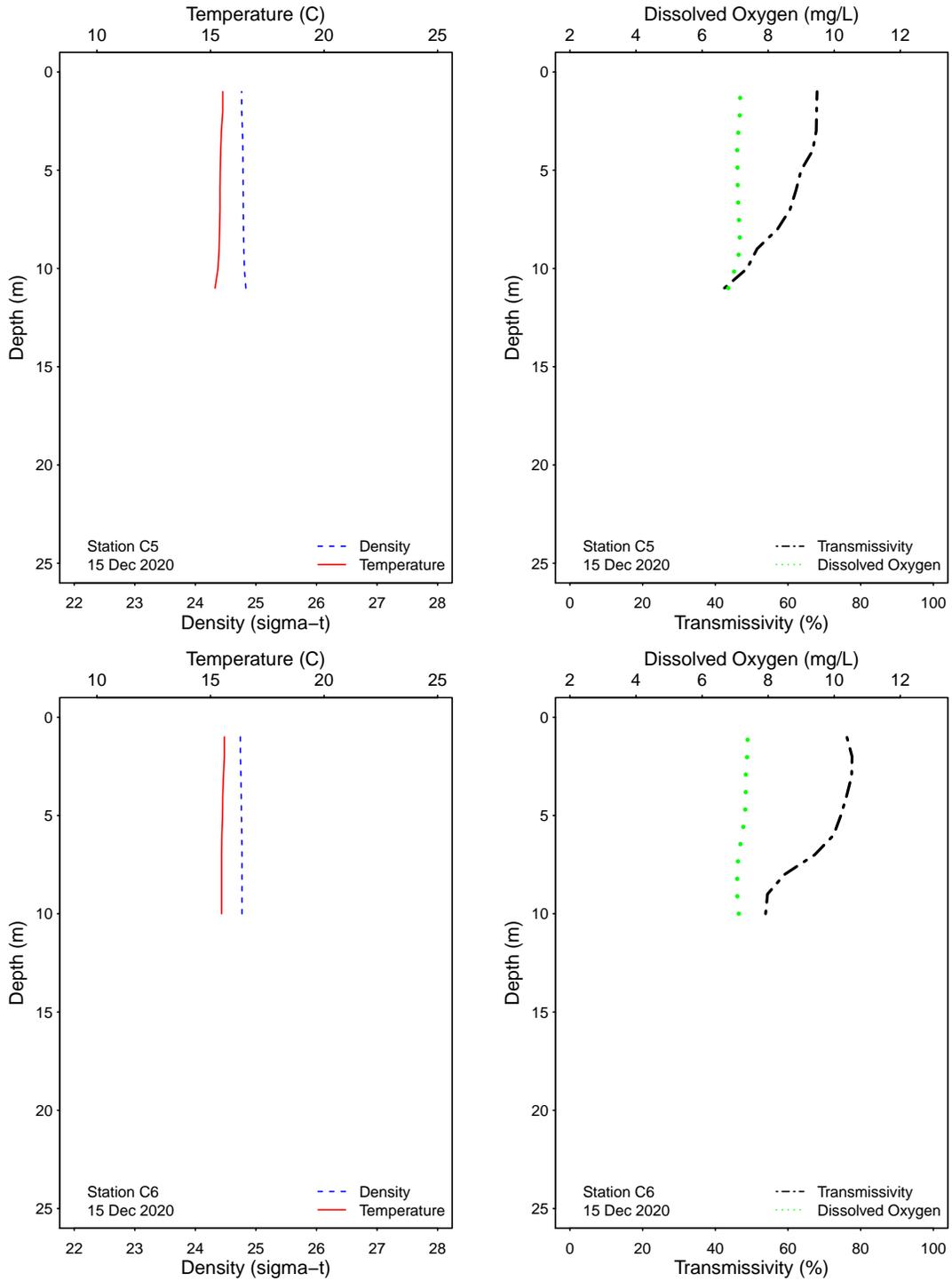


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

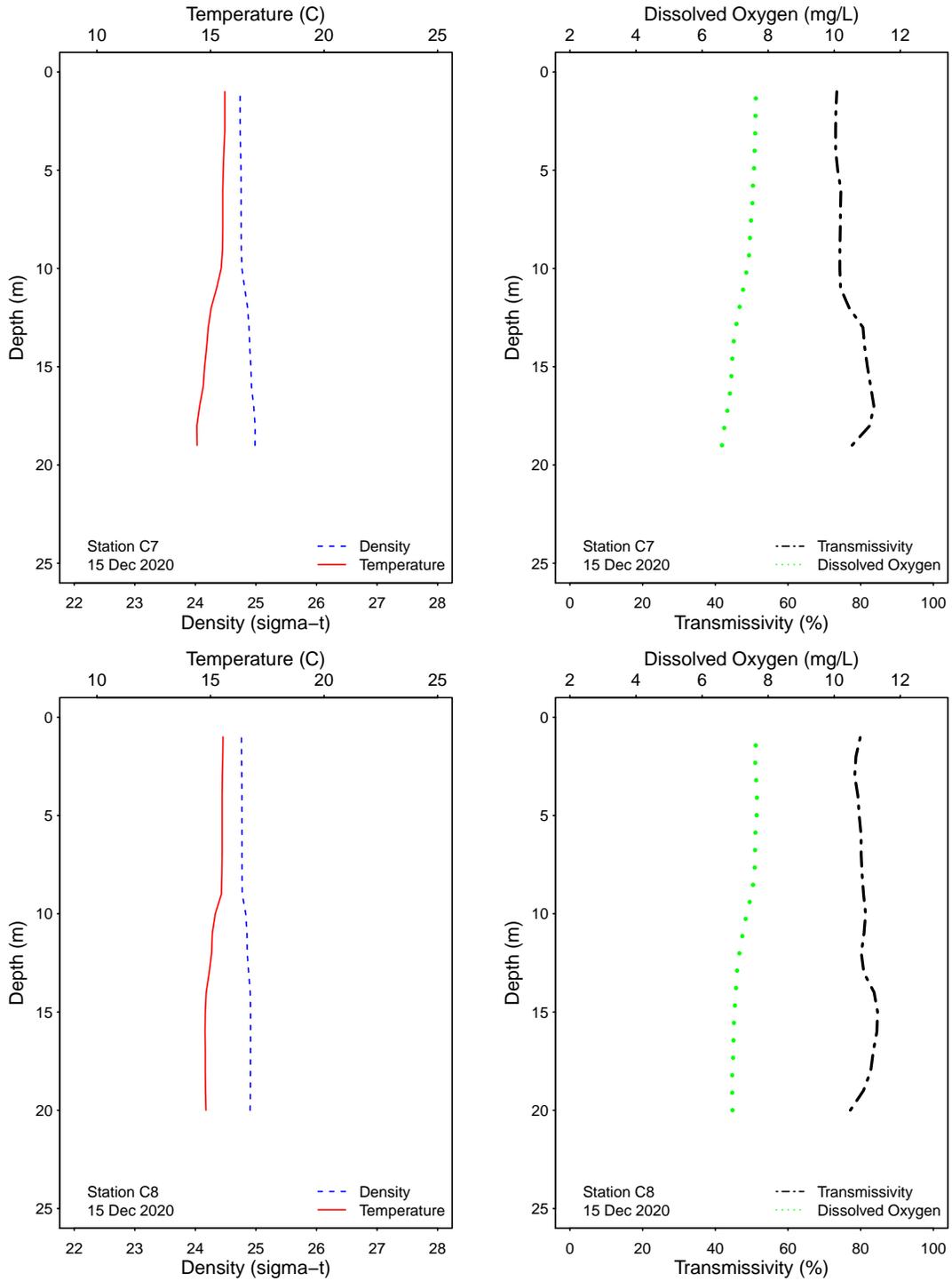


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

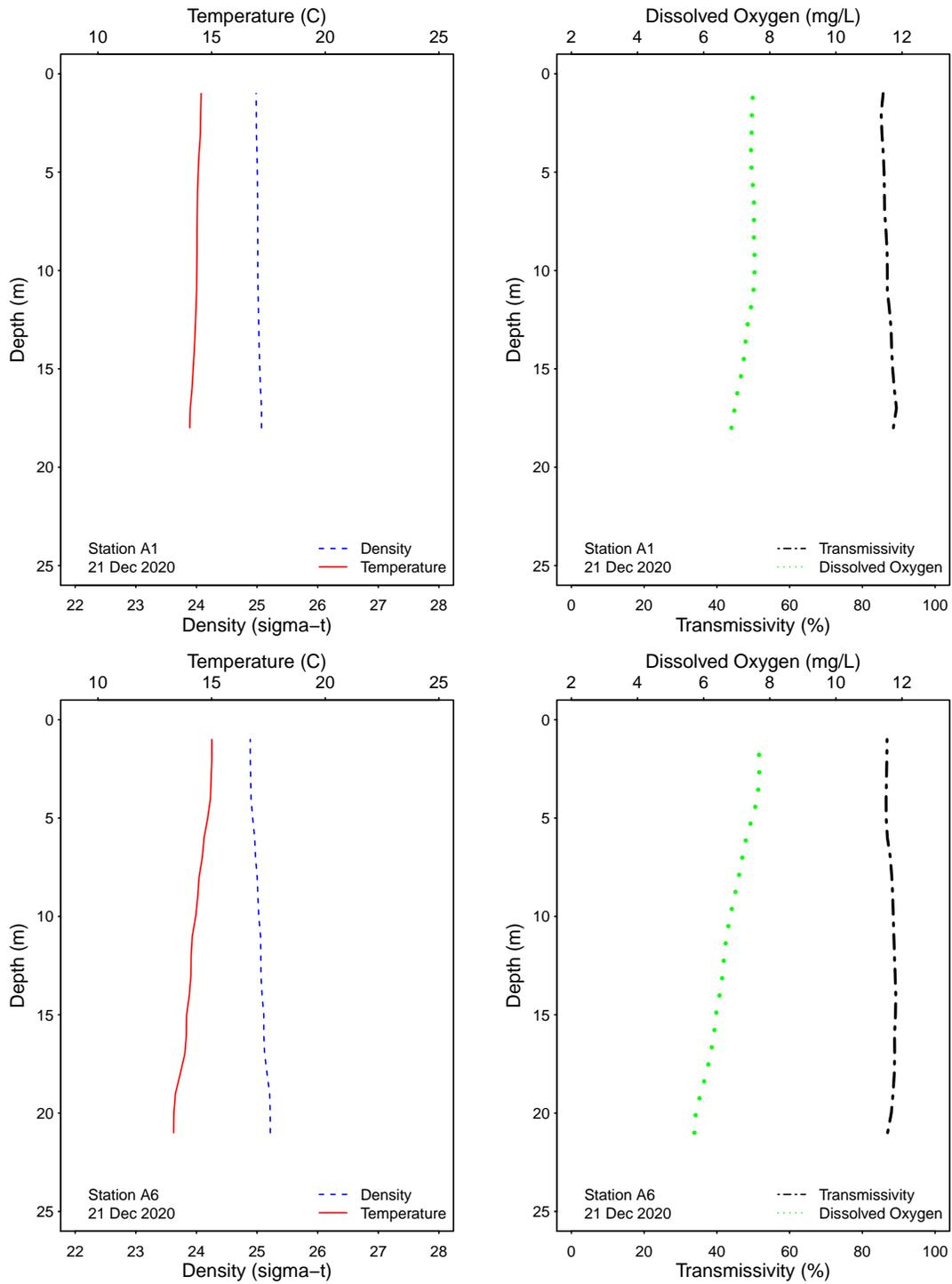


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

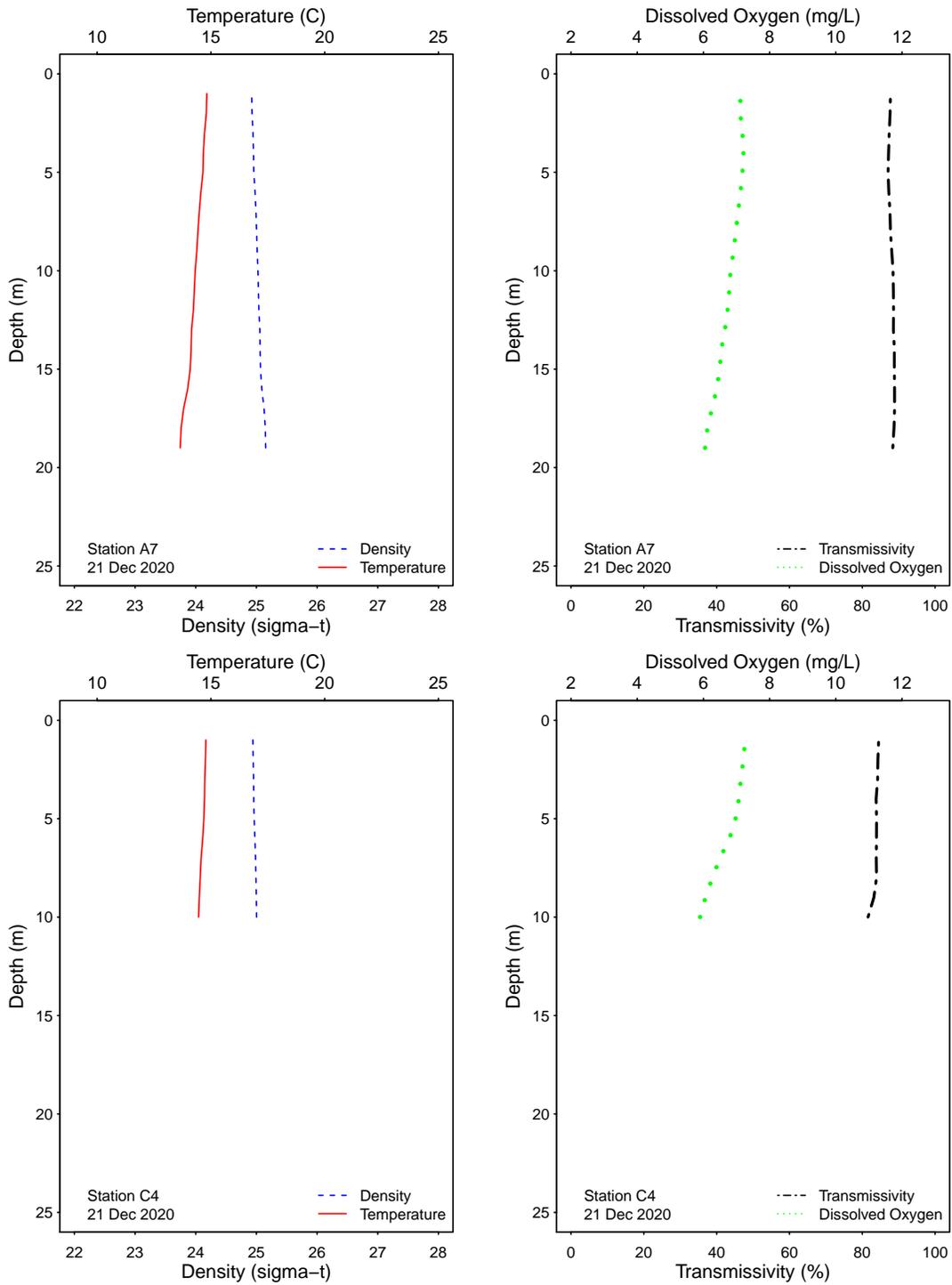


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

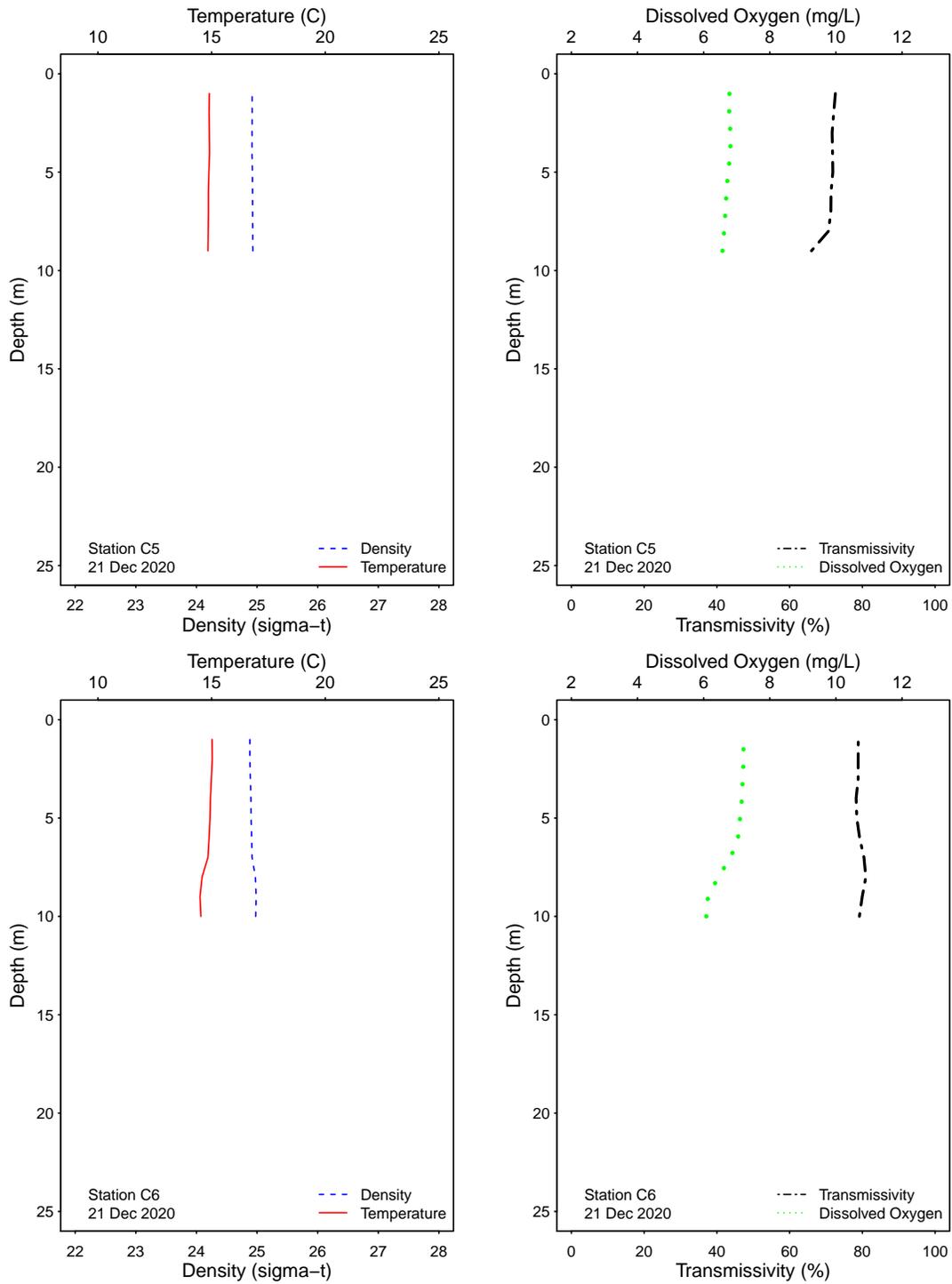


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

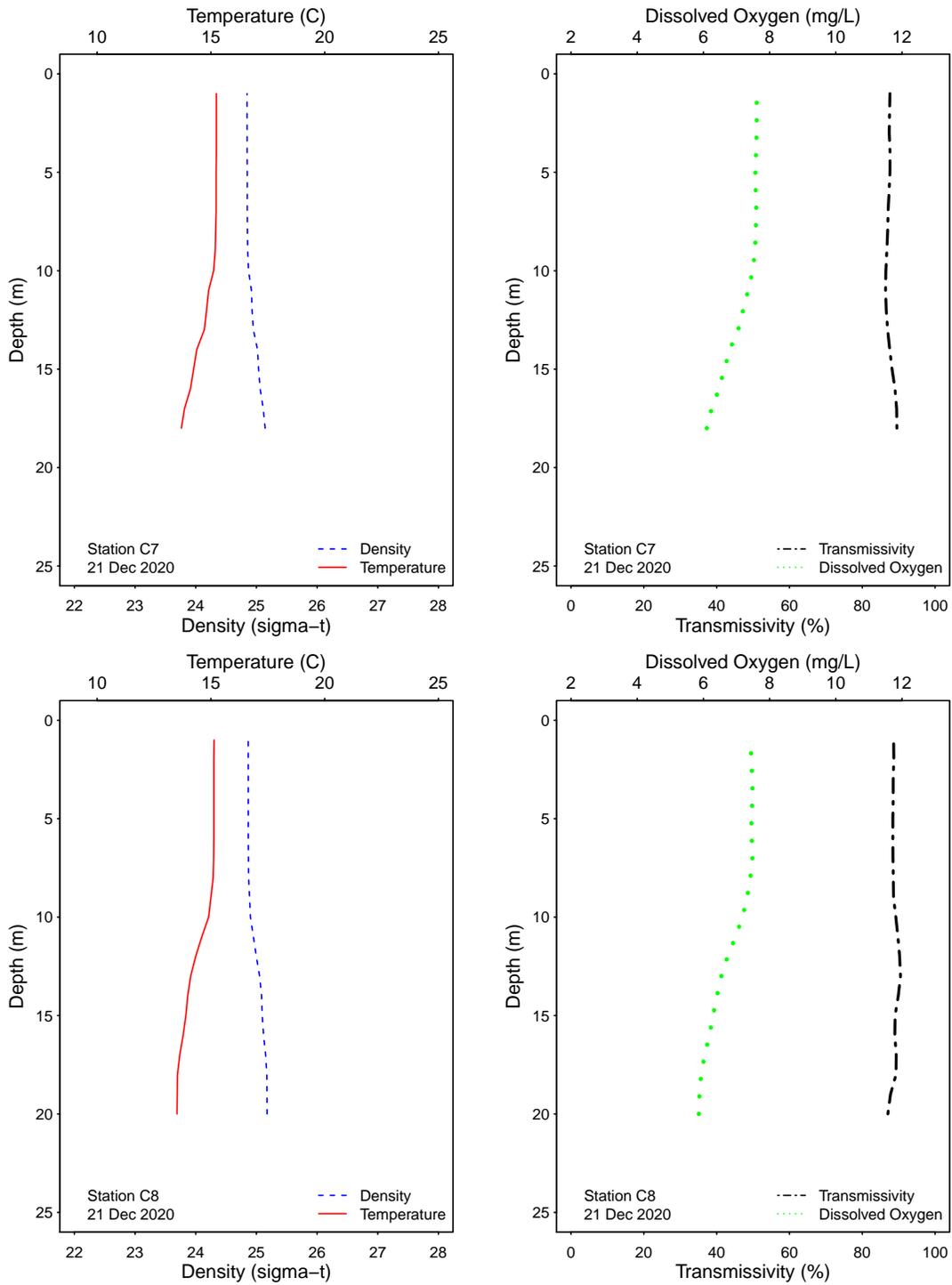


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

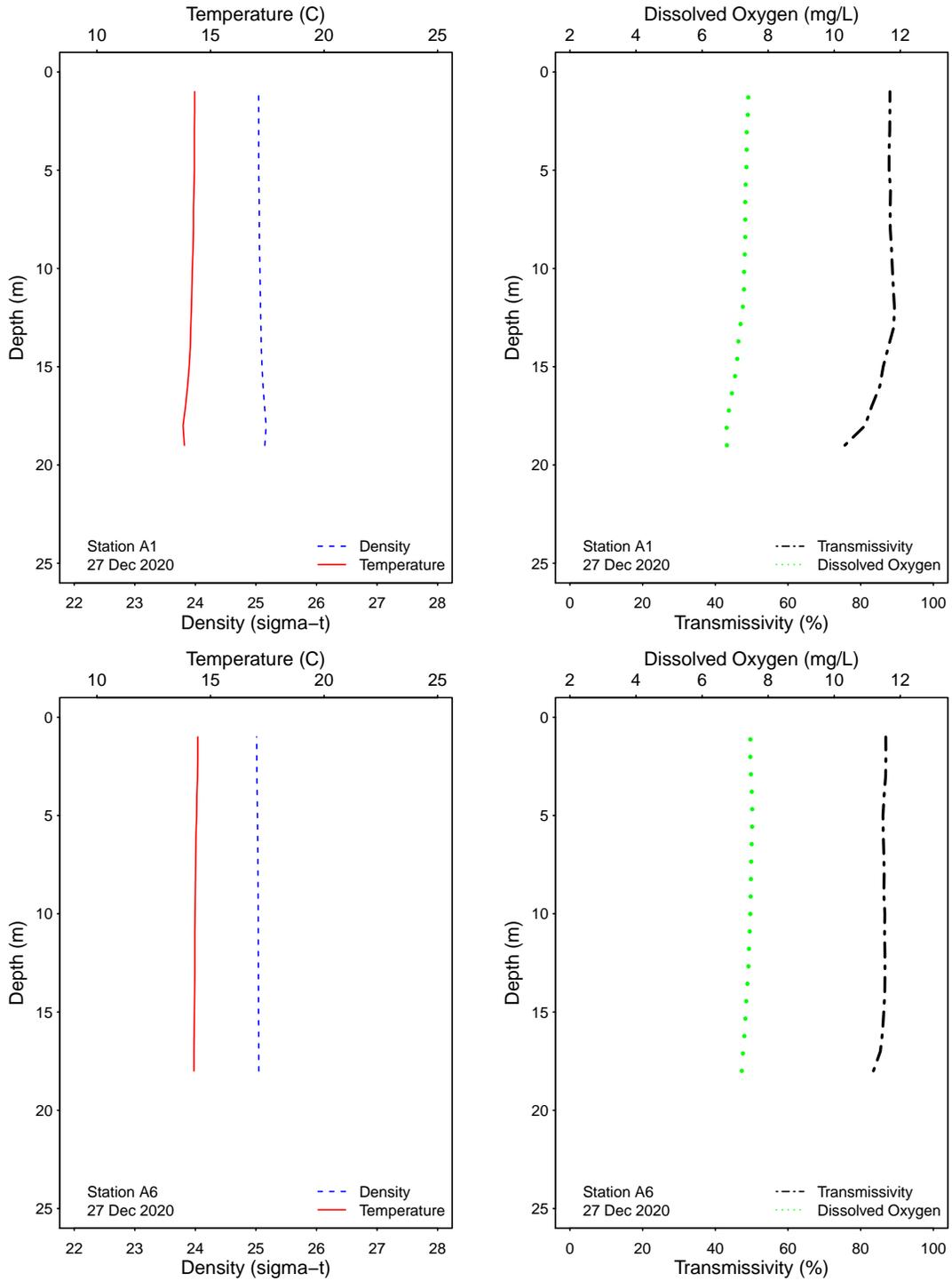


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

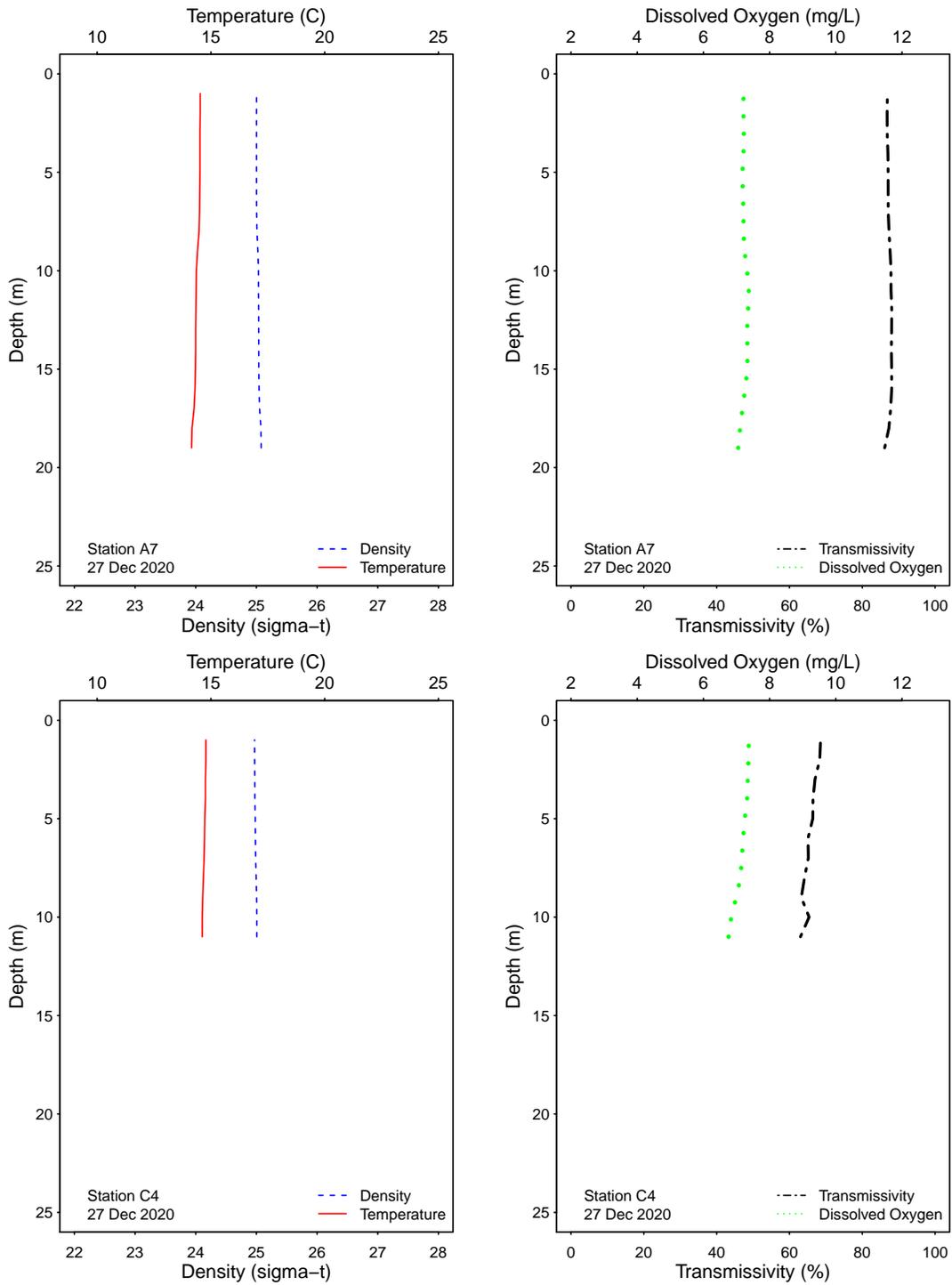


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

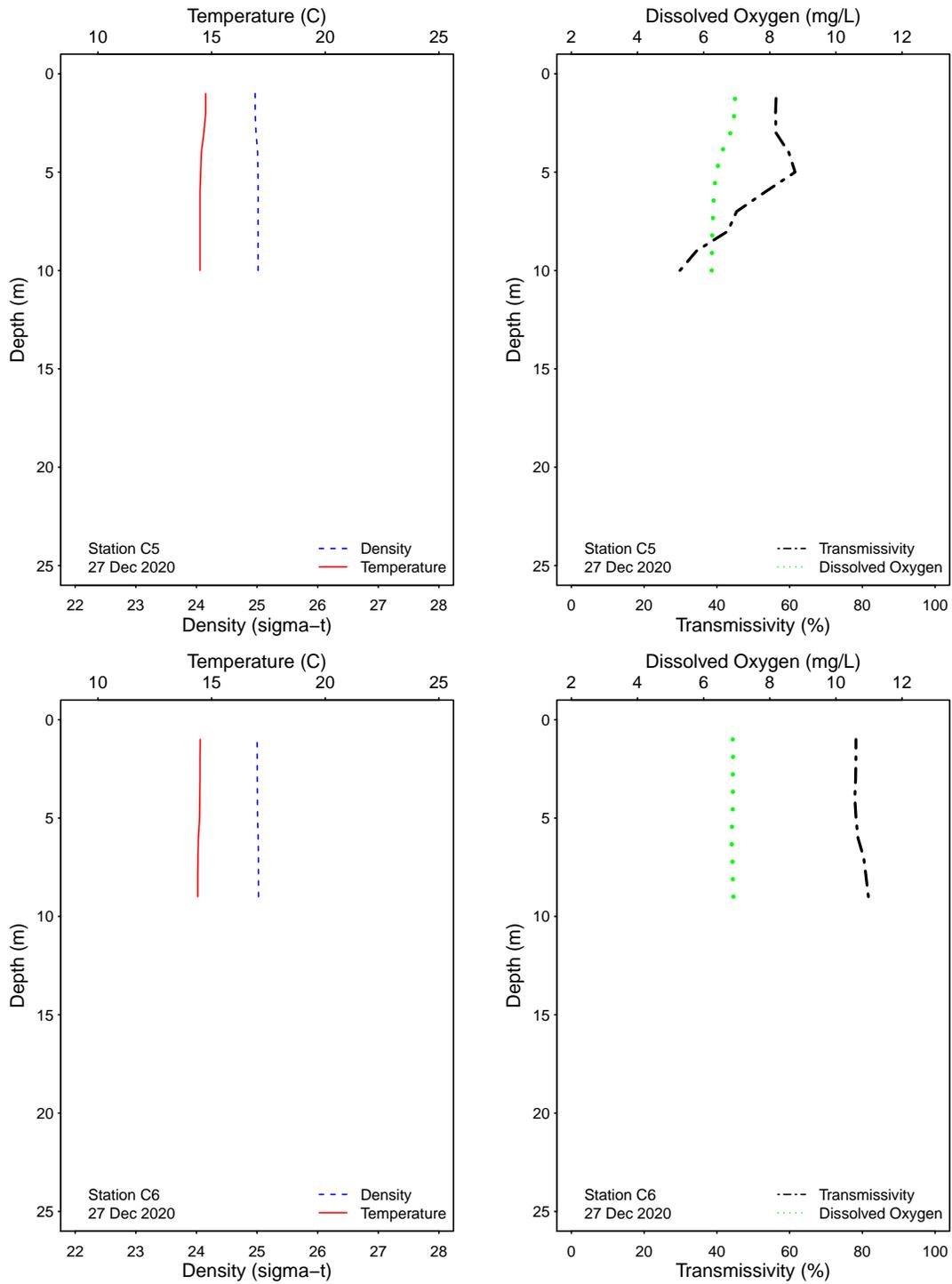


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

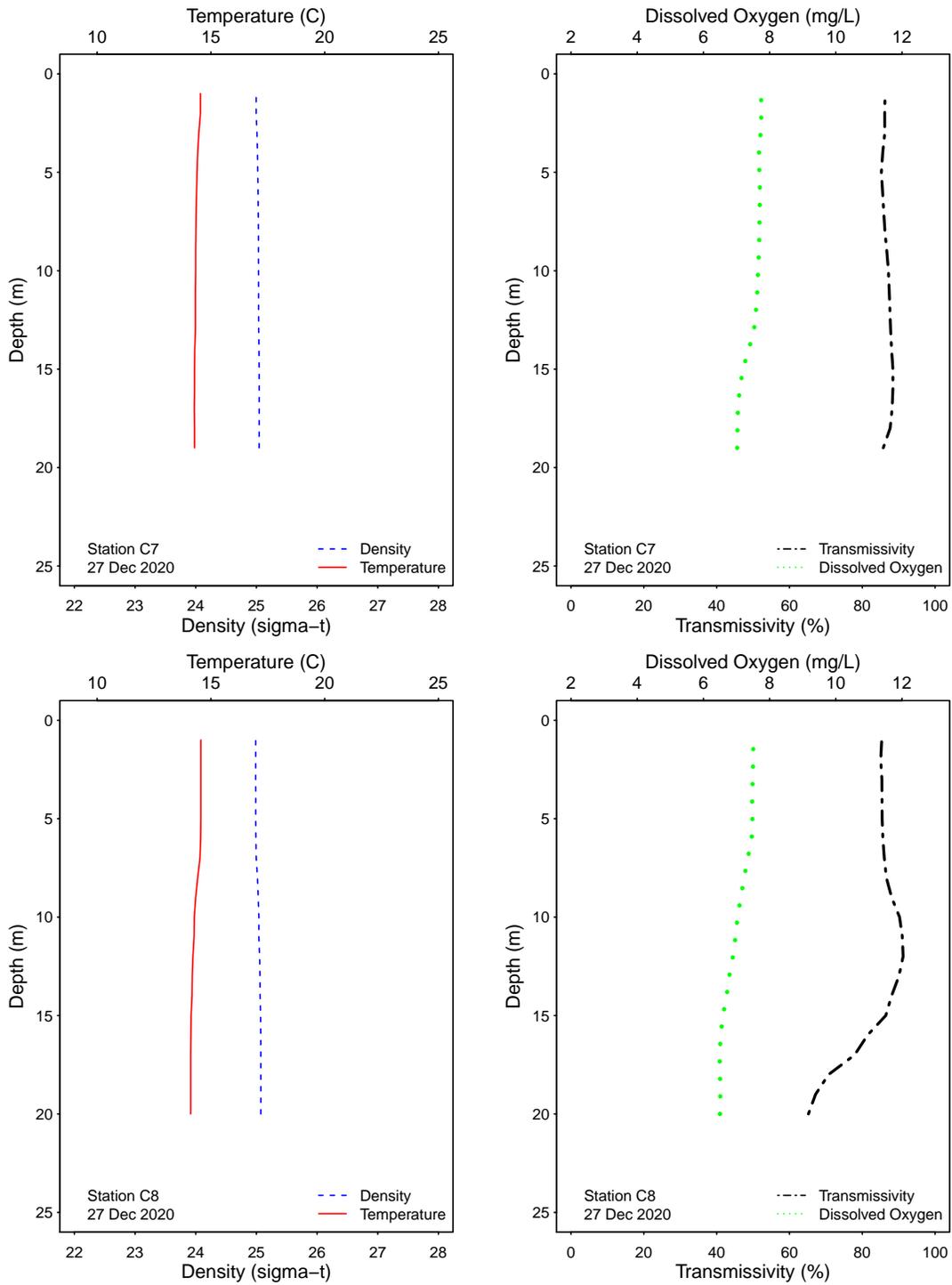


Figure 3.1: Graphics of CTD profile data from the PLOO kelp stations for each sample date.

**APPENDIX A**

**Quality Assurance**



**Table A.1**

Summary of bacteriological quality assurance field and lab duplicate sample analyses at selected PLOO 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
A7	01 Dec 2020	18	JF	LAB DUPLICATE	180e	38e	10e
A7	07 Dec 2020	18	BS	LAB DUPLICATE	40e	2e	<2
A7	15 Dec 2020	18	AE	LAB DUPLICATE	20e	6e	2e
A7	21 Dec 2020	18	AE	LAB DUPLICATE	4e	<2	<2
A7	27 Dec 2020	18	JF	LAB DUPLICATE	12e	2e	2e
C7	01 Dec 2020	18	BS	LAB DUPLICATE	<20	6e	<2
C7	07 Dec 2020	18	AE	LAB DUPLICATE	2e	<2	<2
C7	15 Dec 2020	18	BS	LAB DUPLICATE	8e	4e	<2
C7	21 Dec 2020	18	AE	LAB DUPLICATE	4e	<2	2e
C7	27 Dec 2020	18	JF	LAB DUPLICATE	2e	<2	<2
C8	01 Dec 2020	12	JF	LAB DUPLICATE	2e	<2	<2
C8	07 Dec 2020	12	JF	LAB DUPLICATE	<2	<2	<2
C8	15 Dec 2020	12	AE	LAB DUPLICATE	<2	<2	2e
C8	21 Dec 2020	12	JF	LAB DUPLICATE	<2	<2	<2
C8	27 Dec 2020	12	BS	LAB DUPLICATE	<2	<2	<2
D12	02 Dec 2020		AR	FIELD DUPLICATE	<20	<2	2e
D12	02 Dec 2020		AR	LAB DUPLICATE	<20	2e	4e
D12	09 Dec 2020		JF	FIELD DUPLICATE	<20	<2	4e
D12	09 Dec 2020		JF	LAB DUPLICATE	<200	4e	4e
D12	16 Dec 2020		AR	FIELD DUPLICATE	<20	<2	6e
D12	16 Dec 2020		AR	LAB DUPLICATE	<20	<2	<2
D12	23 Dec 2020		JF	FIELD DUPLICATE	2e	<2	4e
D12	23 Dec 2020		JF	LAB DUPLICATE	<2	<2	<2
D12	30 Dec 2020		AE	FIELD DUPLICATE	60e	2e	4e
D12	30 Dec 2020		AE	LAB DUPLICATE	40e	6e	4e

ns = not sampled

ND = no data



# APPENDIX B

## New 2019 Ocean Plan Water Quality Objectives



# Shore Stations



**Table 2.2**

Summary of compliance with the Ocean Plan's 6-week Geometric Mean standard for *Enterococcus* at the PLOO 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	D4	D5	D7	D8-B	D9	D10	D11	D12
01 Dec 2020	3	2	6	4	2	3	6	3
02 Dec 2020	3	2	6	8	2	3	7	3
03 Dec 2020	3	2	6	8	2	3	7	3
04 Dec 2020	3	2	6	8	2	3	7	3
05 Dec 2020	3	2	6	8	2	3	7	3
06 Dec 2020	3	2	6	8	2	3	7	3
07 Dec 2020	3	2	6	8	2	3	7	3
08 Dec 2020	3	2	6	8	2	3	7	3
09 Dec 2020	3	4	6	8	4	5	11	2
10 Dec 2020	3	4	6	8	4	5	11	2
11 Dec 2020	3	4	6	8	4	5	11	2
12 Dec 2020	3	4	6	8	4	5	11	2
13 Dec 2020	3	4	6	8	4	5	11	2
14 Dec 2020	3	4	6	8	4	5	11	2
15 Dec 2020	3	4	6	8	4	5	11	2
16 Dec 2020	3	4	6	6*	5	5	12	2
17 Dec 2020	3	4	6	6*	5	5	12	2
18 Dec 2020	3	4	6	6*	5	5	12	2
19 Dec 2020	3	4	6	6*	5	5	12	2
20 Dec 2020	3	4	6	6*	5	5	12	2
21 Dec 2020	3	4	6	6*	5	5	12	2
22 Dec 2020	3	4	6	6*	5	5	12	2
23 Dec 2020	3	3	5	6*	4	5	10	2
24 Dec 2020	3	4	4	7*	5	5	7	2
25 Dec 2020	3	4	4	7*	5	5	7	2
26 Dec 2020	3	4	4	7*	5	5	7	2
27 Dec 2020	3	4	4	7*	5	5	7	2
28 Dec 2020	3	4	4	7*	5	5	7	2
29 Dec 2020	3	4	4	7*	5	5	7	2
30 Dec 2020	3	4	3	13*	5	6	6	2
31 Dec 2020	3	4	3	13*	5	6	6	2

\* Geometric mean calculated using n<5  
 ns = not sampled

## Table 2.4

Summary of compliance at the PLOO 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	D4	D5	D7	D8-B	D9	D10	D11	D12
December	IC	IC	IC	IC	IC	IC	IC	IC

IC = In Compliance

E = Exceedance

ns = not sampled

ND = no data

# Kelp Stations



**Table 3.2**

Summary of compliance with the Ocean Plan's 6-week Geometric Mean standard for *Enterococcus* at the PLOO 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	A1	A6	A7	C4	C5	C6	C7	C8
01 Dec 2020	2	2	2	2	2	2	2	2
02 Dec 2020	2	2	2	2	2	2	2	2
03 Dec 2020	2	2	2	2	2	2	2	2
04 Dec 2020	2	2	2	2	2	2	2	2
05 Dec 2020	2	2	2	2	2	2	2	2
06 Dec 2020	2	2	2	2	2	2	2	2
07 Dec 2020	2	2	2	2	2	2	2	2
08 Dec 2020	2	2	2	2	2	2	2	2
09 Dec 2020	2	2	2	2	2	2	2	2
10 Dec 2020	2	2	2	2	2	2	2	2
11 Dec 2020	2	2	2	2	2	2	2	2
12 Dec 2020	2	2	2	2	2	2	2	2
13 Dec 2020	2	2	2	2	2	2	2	2
14 Dec 2020	2	2	2	2	2	2	2	2
15 Dec 2020	2	2	2	2	2	2	2	2
16 Dec 2020	2	2	2	2	2	2	2	2
17 Dec 2020	2	2	2	2	2	2	2	2
18 Dec 2020	2	2	2	2	2	2	2	2
19 Dec 2020	2	2	2	2	2	2	2	2
20 Dec 2020	2	2	2	2	2	2	2	2
21 Dec 2020	2	2	2	2	2	2	2	2
22 Dec 2020	2	2	2	2	2	2	2	2
23 Dec 2020	2	2	2	2	2	2	2	2
24 Dec 2020	2	2	2	2	2	2	2	2
25 Dec 2020	2	2	2	2	2	2	2	2
26 Dec 2020	2	2	2	2	2	2	2	2
27 Dec 2020	2	2	2	2	2	2	2	2
28 Dec 2020	2	2	2	2	2	2	2	2
29 Dec 2020	2	2	2	2	2	2	2	2
30 Dec 2020	2	2	2	2	2	2	2	2
31 Dec 2020	2	2	2	2	2	2	2	2

\* Geometric mean calculated using n<5

### Table 3.4

Summary of compliance at the PLOO 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	A1	A6	A7	C4	C5	C6	C7	C8
December	IC							

IC = In Compliance

E = Exceedance

ns = not sampled

ND = no data