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Annual seagrass survey of Chain Valley Bay, Summerland Point, Bardens Bay and Crangan Bay, Lake Macquarie, NSW

by Dr Emma Laxton

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Summary

The annual seagrass survey was conducted from 25th to 28th June and 23rd July 2024 off Summerland Point, Frying Pan Bay, Sugar Bay, off Sunshine, Chain Valley Bay, Bardens Bay and Crangan Bay, Lake Macquarie. A total of 53 transects were photographed.

The average length of transects in Chain Valley Bay, northern shore Summerland Point, and western shore Summerland Point was 65.3m, 59.9m and 40.4m respectively. The average length of transect in Bardens Bay, Sugar Bay and off Sunshine was 26.6m, 55.1m and 45.5m respectively. The transects along Crangan Bay off Gwandalan had an average of 38.9m. The transects with the greatest lengths were Transects E9 (152m), F2 (131m), S4 (105m) and C3 (91m). The transects with the shortest lengths were Transects C1, C2, T2, C6, S7 and A6, all approximately 14m in length.

Water Temperature ranged from 14.16°C to 17.69°C, with a mean water temperature of 16.28°C. Conductivity ranged from 47.88 mS/cm to 49.58 mS/cm. Mean conductivity was 48.47 mS/cm. Salinity ranged from 31.15 ppt to 32.45 ppt. Mean salinity was 31.61 ppt. Turbidity ranged from 1.2 NTU to 12.8 NTU, with a mean of 3.69 NTU. pH ranged from 4.96 to 9.42, with a mean of 7.15. Dissolved oxygen (% saturation) ranged from 43.4% to 126.6%. Mean dissolved oxygen was 89.57% saturation.

The influx of freshwater into Lake Macquarie due to high rainfall events has reduced the salinity of Lake Macquarie from an average of 37.16 ppt in June 2023 to 31.61 ppt in July 2024. Heavy continuous rain can cause sudden stress reactions in seagrasses. Reduced salinity will often cause seagrass leaves to die and seagrass beds to reduce their total biomass through defoliation. Mats of defoliated *Zostera capricorni*, *Cystoseira trinodis* and sea lettuce were observed during the June-July 2024 seagrass survey.

Two species of seagrass were identified in the study area, *Zostera capricorni* and *Halophila ovalis.* *Zostera capricorni* had the greatest coverage and was found along the entire length of the transects. *Halophila ovalis* was found predominantly in the shallower waters.

The growth form of *Zostera capricorni* in the Summerland Point, Frying Pan Bay, Sugar Bay, Sunshine and the Crangan Bay regions was predominantly short leaved. The growth form of *Zostera capricorni* in Chain Valley Bay and Bardens Bay was long leaved.

In June and July 2024, seagrass cover ranged from 79.8% to 96.7% on the northern shore of Summerland Point and Frying Pan Bay; 84.1% to 92.9% along the western shore of Summerland Point; 74.4% to 92.3% on the western shore of Summerland Point; 72.9% to 91.8% in Chain Valley Bay; 69.5% to 95.1% in Bardens Bay; 68.8% to 99.9% in Sugar Bay; 76.4% to 92.2% off Sunshine; and 93.7% to 99.0% in Crangan Bay.

At the time of survey, transects with the highest coverage of *Halophila ovalis* were A5 (19.1%), E15 (12.0%), E6 (7.5%) and A4 (7.2%).

Seagrasses were lightly to heavily fouled with epiphytic algae.

Five species of alga were recorded in the study area in June-July 2024, namely *Cystoseira trinodis* (synonym *Cystophyllum onustum*), *Codium fragile*, *Colpomenia sinuosa*, a species of Ulvaceae and green filamentous algae. The transects with the highest total coverage of *Cystoseira* were E2 (16.5% total coverage), E1 (12.6%), S2 (9.0%), E4 (7.6%), A1 (7.3%) and S1 (5.9%). *Codium fragile* was observed at transects C1 (0.4% total coverage) and C2 (0.1% total coverage) only. *Colpomenia* was recorded at T1 (0.2% total coverage), T2 (0.5% total coverage) and S6 (0.1% total coverage). Free floating filamentous algae was recorded at Transects C2, C6 and A5.

Seagrass cover continues to be high and consistent, with nine transects showing a decline in seagrass coverage in the June 2024 survey compared to previous years. Changes in coverage were due to several factors including increased boat activities in vicinity of experimental transects; deposition of fine sediment on seagrass beds due to prolonged wind and wave action and rainfall events; and a decline in salinity concentrations causing stress reactions in seagrasses.

Over the years, the increase in percentage cover of seagrasses marks the decrease in bare ground in the study area. Bare ground decreased from 38.13 percent in 2011 to 9.71 percent in 2024 in the Summerland Point, Frying Pan Bay and Sugar Bay region. In the Chain Valley Bay region, bare ground decreased from 13.32 percent in 2011 to 6.41 percent in 2023, with a slight increase to 10.71 percent in 2024. Seagrass cover in Bardens Bay has mostly been around 90 percent since 2014. However, there was an increase in bare ground from 8.8% in 2023 to 13.27%

in 2024. In the Crangan Bay study area, bare ground decreased from 26.98 percent in 2011 to 2.39 percent in 2024.

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1. Introduction

Lake Macquarie is the largest saline lake in New South Wales. It lies on the central coast between Sydney and Newcastle within the local government areas of Central Coast Council and Lake Macquarie Council. Lake Macquarie has a catchment of 700 square kilometers and a water surface area of 125 square kilometers (Bell & Edwards, 1980). The average depth of the lake is 8 metres (26 ft), with a maximum depth of 15 metres (49 ft). The lake has a permanent entrance to coastal waters at Swansea, and a shore length of approximately 174 kilometres.

Lake Macquarie contains approximately ten percent of the total area of seagrass beds in NSW (NSW DPI 2007). Four species of seagrass occur in the lake, namely *Zostera capricorni* (eelgrass), *Halophila ovalis* (paddle weed), *Posidonia australis* and *Ruppia. Posidonia australis* is listed as an endangered species under the Fisheries Management Act, 1994.

The catchment of Lake Macquarie is largely rural with large areas of bushland and grazing land. The shoreline of Lake Macquarie is heavily urbanized, especially the eastern, western and northern shorelines. The region has a relatively long history of coal mining and power generation, with mining occurring since the late 1800s and the first power station at Lake Macquarie commencing operations in 1958.

Chain Valley Colliery is situated on the southern shores of Lake Macquarie near Mannering Park, NSW. The mine has been operating since 1963. Mining is continuing within the Chain Valley Coal Lease Area using the miniwall method. Prior to mining, there were three economically viable seams in the lease area, namely the Wallarah seam (not mined since 1997), the Great Northern seam, and the Fassifern seam. In 2018 Chain Valley Colliery went into voluntary receivership and was taken over by Great Southern Energy Pty Ltd (trading as Delta Coal) to provide coal for Vales Point Power Station.

Delta Coal is currently mining the Fassifern Seam beneath Lake Macquarie. To protect the lake foreshore, a protection zone has been established as part of the Extraction Plan. This zone, known as the High Water Mark (HWM) Subsidence Barrier, was calculated using a 35^{o} angle of draw from the depth of mining. The zone is approximately 130 meters wide (Figure 1.1).

J.H. & E.S. Laxton – Environmental Consultants P/L was engaged to assess the potential effects of underground mining on seagrasses in Lake Macquarie. The mine is currently undertaking first workings. Ongoing monitoring of seagrasses is a requirement of Development Consent SSD-5465 (Modification 3), Schedule 4, Condition 7(i) and Schedule 4, Table 8, which states:

"7. The Applicant must prepare an Extraction Plan for all second workings on site, to the satisfaction of the Planning Secretary. Each Extraction Plan must:

(i) Include a Seagrass Management Plan, which has been prepared in consultation with BCD, LMCC, and DPI Fisheries, which provides for the management of the potential impacts and/or environmental consequences of the proposed second workings on seagrass beds, and which includes:

- A program of ongoing monitoring of seagrasses in both control and impact sites; and
- A program to predict and manage subsidence impacts and environmental consequences to seagrass beds to ensure the performance measures in Table 8 are met."

The subsidence impact performance measures relevant to seagrass beds contained in Table 8 are as follows:

- "Negligible environmental consequences including:
  - Negligible change in the size and distribution of seagrass beds;
  - Negligible change in the functioning of seagrass beds; and
  - Negligible change to the composition of distribution of seagrass species within seagrass beds."

The annual seagrass survey was conducted from the 25th to 28th June and 23 July 2024.

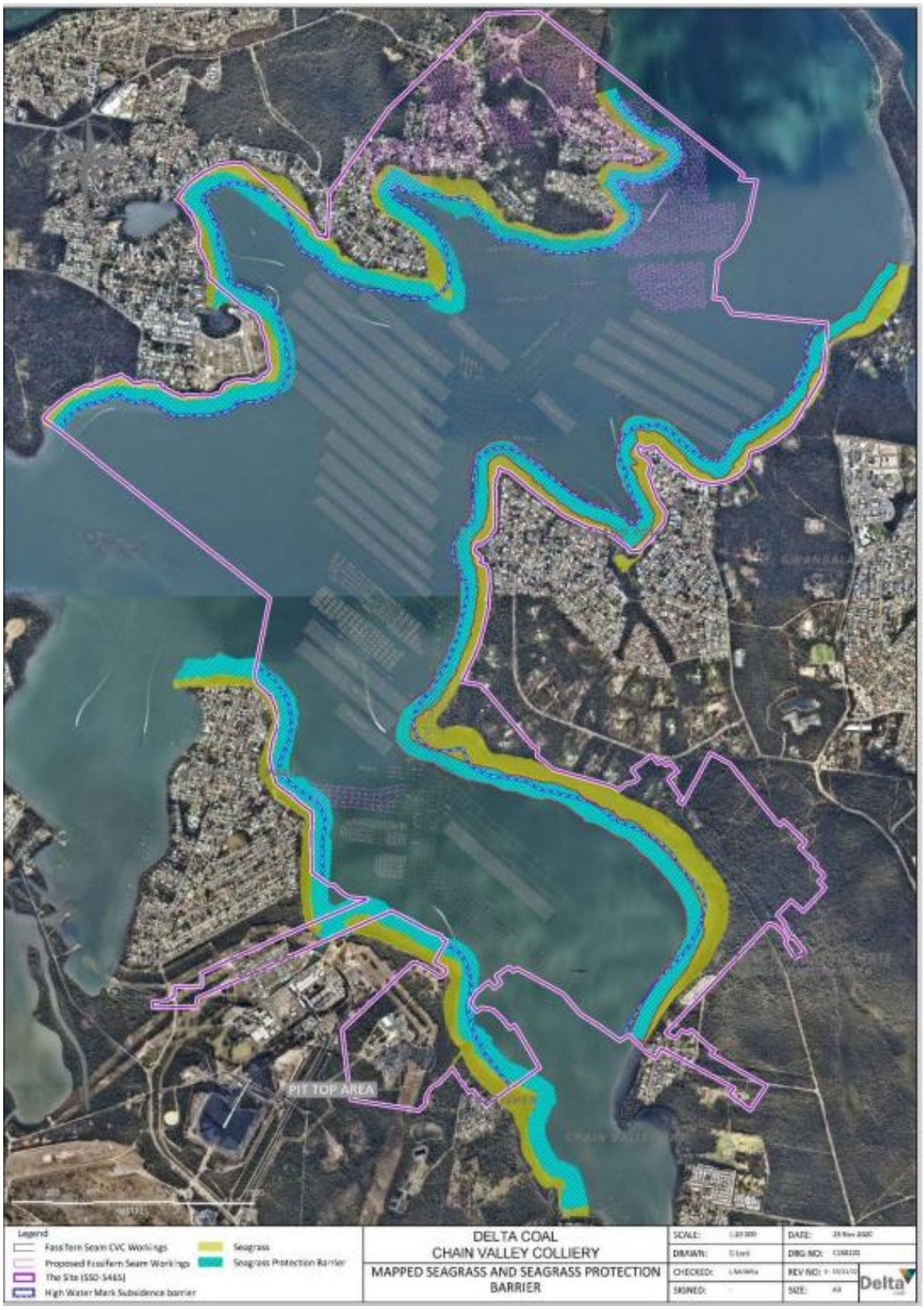

Figure 1.1 Mapped Seagrass, high water mark subsidence barrier and seagrass protection barrier

2. Factors affecting the depth of water in Lake Macquarie

The bathymetric chart (Figure 2.1) of Lake Macquarie shows water depths relative to AHD. The actual depth of water above the lakebed varied greatly, between 0 and 1.3m above AHD over a year.

Water depths in coastal saline lakes with an open entrance to coastal waters vary due to combinations of the following factors:

- The body of Lake Macquarie is subject to tidal influence. The height of the tidal prism at Swansea Head may reach almost 2m (during spring tides) but by the time the body of the lake is reached, the tidal prism has been reduced to around 0.05m.

- The height of coastal waters and coastal lakes are influenced by changes in atmospheric pressure. The Tasman Sea acts as a huge barometer. When the atmospheric pressure is high the sea surface is depressed. This causes water to drain from Lake Macquarie causing the depth of water in the body of the lake to decrease. When the atmospheric pressure over the Tasman Sea is low, the surface of the sea bulges upwards. This raising of sea level causes water to flow into Lake Macquarie, increasing the water depth.

- Low pressure systems in the Tasman Sea almost always generate strong winds and coastal rainfall. The strong winds cause large swells to form that impact the coast. Wave setup at the entrance to Lake Macquarie causes the water level in the lake to rise as large volumes of seawater enter the system.

- Rainfall during a period of low atmospheric pressure causes runoff into catchment rivers and streams to increase. When this extra water reaches the body of Lake Macquarie, the water level rises in proportion to the runoff volume. This water is prevented from exiting the lake by wave setup at the entrance and the state of the tide. Under these circumstances, the level of the lake can rise to heights of a meter or more above AHD.

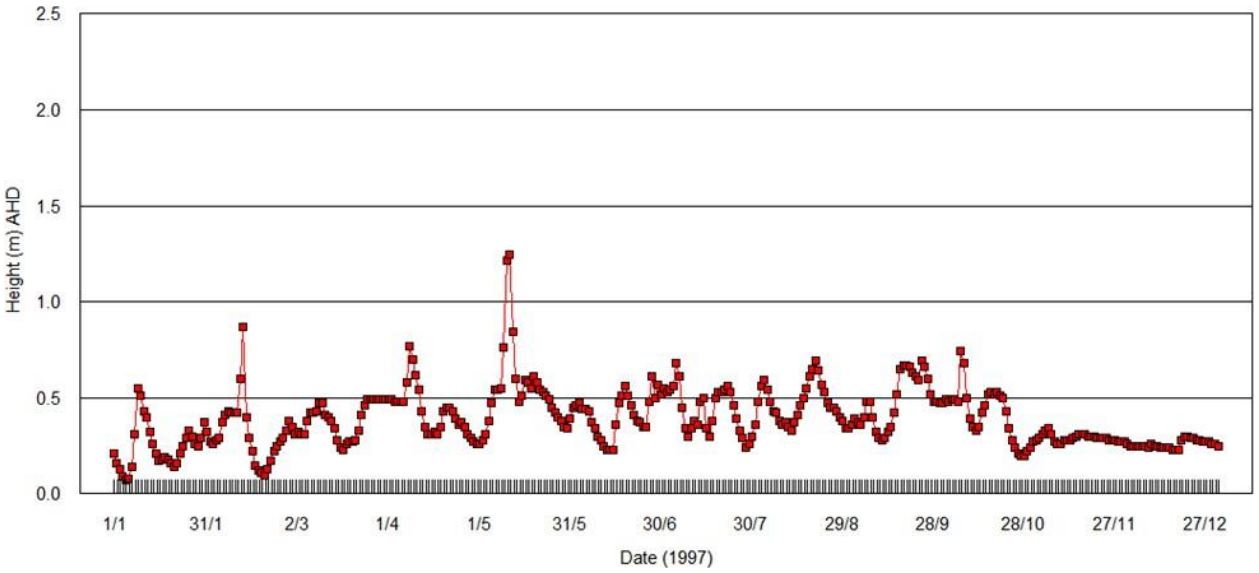

Figure 2.1 Water level changes in a coastal lagoon with an entrance open to coastal waters

3. Factor affecting presence of seagrasses in Lake Macquarie

Seagrasses and algae are confined to the shallow waters around the perimeter of Lake Macquarie (Laxton, 2007). In Chain Valley Bay, Bardens Bay and off Summerland Point, seagrasses and benthic algae generally grow between 0 and -1.89m below AHD.

Seagrass distribution within estuaries is influenced by light penetration, water depth, salinity, water temperature, nutrient status, bed stability, wave energy, estuary type, and the evolutionary stage of the estuary. Light is a major limiting factor for the growth of seagrasses and the effects of shading, either by artificial structures or increased turbidity associated with sediment re-suspension, are common light reducing factors in estuaries (BioAnalysis, 2008).

Photosynthetically Active Radiation (PAR) changes were measured off Wyee Point in 1983 by J.H. & E.S. Laxton – Environmental Consultants P/L. It was found that only 14% of the light present at the surface reached a depth of 2.0m below the surface. By 6m below the surface only between 2% and 4% of PAR remained. Seagrasses and algae barely survived at 14% of the surface radiation. At 6m below the surface, they were not able to grow (Figure 3.1).

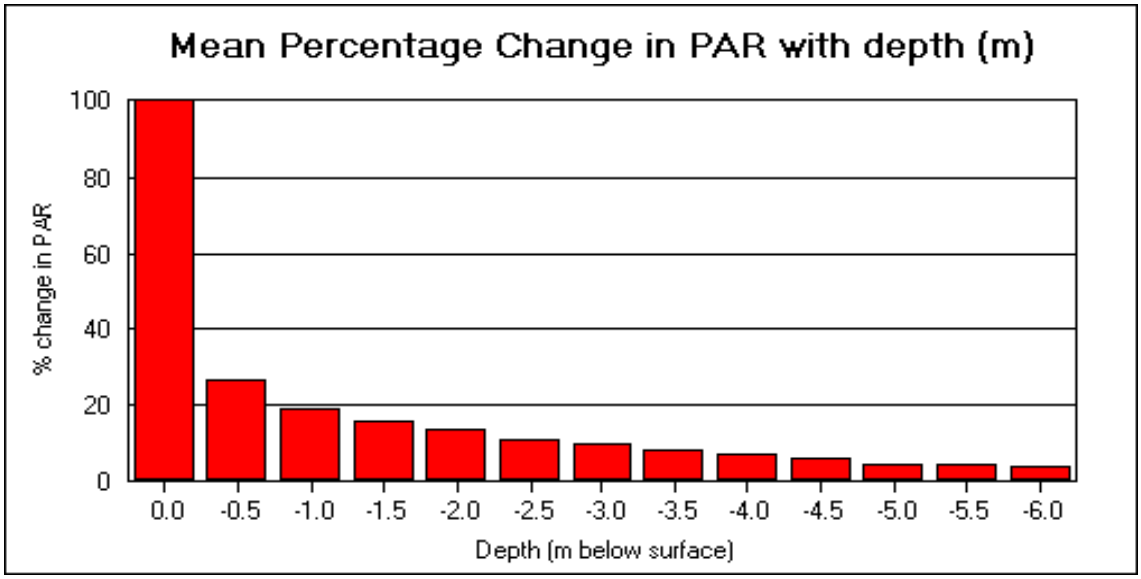

Figure 3.1 Mean percentage changes in PAR with depth at Wyee Point over 12 months

4. Seagrass survey methods

The seagrass survey was conducted from 25th to 28th June and 23rd July 2024 using a GoPro video camera. The water depth along most of the transect lines ranged from around 0.1 to 1.8m. Transect lines were photographed from the outer end to the inner end.

The video was examined by viewing still frames approximately every 0.5m along the transect. The following information was recorded:

1. The transect number and the date the video was taken.
2. The percentage areas occupied by the following plants in each still photograph:
   (a) % area occupied by long leaved seagrass *Zostera capricorni*;
   (b) % area occupied by short leaved seagrass *Zostera capricorni*;
   (c) % area occupied by the small seagrass *Halophila ovalis*;
   (d) degree of fouling of the seagrass leaves by algae (0=no fouling, 1=light to moderate fouling, 2=heavy fouling);
   (e) % area occupied by the large brown alga *Cystoseira trinodis*;
   (f) % area occupied by the green alga *Codium fragile*;
   (g) % area occupied by filamentous and thallous algae (green or brown algae);
   (h) % area occupied by the invasive alga *Caulerpa taxifolia*;
   (i) % area of uncolonised ground (bare ground, no macroscopic epibenthos).

5. Location of seagrass transects

Figure 5.1 shows the CVC SSD-5465 Consent Boundary and the location of the seagrass transects in Bardens Bay, Sugar Bay, off Sunshine, Frying Pan Bay, Summerland Point, Chain Valley Bay and Crangan Bay. From 2018 to 2024, a total of 50 transects were photographed annually. Three transects were added to the monitoring programme in July 2024:

- Transects C1 to C4 are established control stations in Crangan Bay
- Transects E1 to E16 are established experimental transects in Chain Valley Bay and Summerland Point
- Transects T1 to T8 are established experimental transects along Summerland Point
- Transect L1 was established in Chain Valley Bay in 2015 and is in vicinity of Vales Point Power Station
- Transects A1 to A6 are establised experimental stations in Bardens Bay. They were first surveyed in 2014
- Transects C5 to C6 were established in 2018
- Transects F1 to F7 are established experimental transects along Summerland Point, established in 2018, and
- Transects S1 to S6 are established experimental transects in Sugar Bay, also established in 2018.
- Transects S7 to S9 were established in July 2024 off Sunshine.

Tables 5.1 to 5.6 show the precise locations of the inner and outer ends of the permanent seagrass monitoring transects in Summerland Point, Chain Valley Bay, Bardens Bay, Sugar Bay, off Sunshine and Crangan Bay as determined by differential GPS. The approximate lengths of the transects are also presented.

The average length of transects in Chain Valley Bay, northern shore Summerland Point, and western shore Summerland Point was 65.3m, 59.9m and 40.4m respectively. The average length of transect in Bardens Bay, Sugar Bay and off Sunshine was 26.6m, 55.1m and 45.5m respectively. The transects along Crangan Bay off Gwandalan had an average of 38.9m.

The transects with the greatest lengths were Transects E9 (152m), F2 (131m), S4 (105m) and C3 (91m). The transects with the shortest lengths were Transects C1, C2, C6, T2, S7 and A6, all approximately 14m in length.

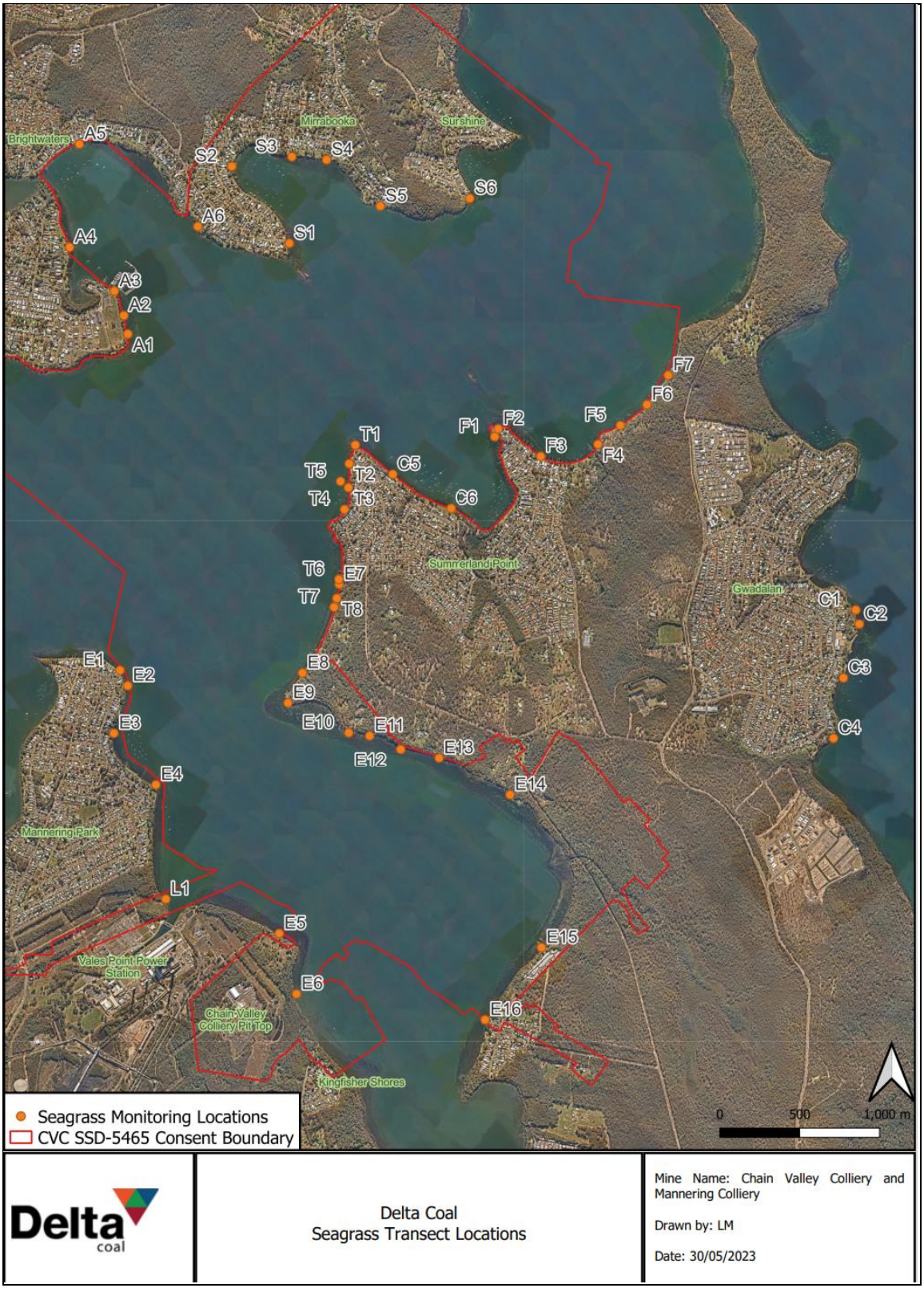

Figure 5.1 Locations of seagrass transects in Bardens Bay, Sugar Bay, Frying Pan Bay, Summerland Point, Chain Valley Bay and Crangan Bay, Lake Macquarie.

Table 5.1 Coordinates of inner and outer ends of permanent seagrass transects off northern shore Summerland Point and Frying Pan Bay

Transect No.	Easting	Northing	Transect No.	Easting	Northing	Transect Length (m)
C5 inner	56365676.16	6333038.68	C5 outer	56365702.98	6333084.58	41.57
C6 inner	56366045.20	6332831.77	C6 outer	56366058.95	6332870.63	13.67
F1 inner	56366320.96	6333281.31	F1 outer	56366285.58	6333249.79	47.11
F2 inner	56366342.19	6333330.55	F2 outer	56366290.92	6333450.31	130.55
F3 inner	56366611.11	6333163.11	F3 outer	56366621.00	6333228.01	65.64
F4 inner	56366968.01	6333242.46	F4 outer	56366918.81	6333285.18	65.04
F5 inner	56367106.95	6333361.98	F5 outer	56367068.97	6333421.28	70.46
F6 inner	56367271.10	6333493.19	F6 outer	56367202.42	6333522.83	74.81
F7 inner	56367402.36	6333682.09	F7 outer	56367374.73	6333694.93	30.47

Table 5.2 Coordinates of inner and outer ends of permanent seagrass transects along western shore Summerland Point

Transect No.	Easting	Northing	Transect No.	Easting	Northing	Transect Length (m)
E7 inner	56385350.74	6332350.32	**E7 outer**	56365297.96	6332344.97	52.44
T1 inner	56365439.70	6333217.30	**T1 outer**	56365442.62	6333264.67	47.48
T2 inner	56365402.69	6333100.83	**T2 outer**	56365388.27	6333100.67	14.39
T3 inner	56365400.34	6332951.79	**T3 outer**	56365384.15	6332949.28	16.32
T4 inner	56365377.42	6332816.19	**T4 outer**	56365357.10	6332831.62	25.14
T5 inner	56365350.31	6332990.09	**T5 outer**	56365309.37	6332575.63	49.14
T6 inner	56365347.91	6332380.19	**T6 outer**	56365300.00	6332337.91	63.53
T7 inner	56365320.68	6332207.46	**T7 outer**	56365267.96	6332206.74	52.90
T8 inner	56365336.86	6332262.46	**T8 outer**	56365295.11	6332270.42	42.36

Table 5.3 Coordinates of inner and outer ends of permanent seagrass transects in Chain Valley Bay

Transect No.	Easting	Northing	Transect No.	Easting	Northing	Transect Length (m)
E1 inner	56363985.56	6331796.12	**E1 outer**	56364003.66	6331816.06	26.25
E2 inner	56364035.74	6331701.21	**E2 outer**	56364076.97	6331716.45	44.60
E3 inner	56363953.19	6331404.63	**E3 outer**	56364027.57	6331417.71	75.09
E4 inner	56364220.41	6331078.04	**E4 outer**	56364259.92	6331122.01	59.30
L1 inner	56364292.62	6330367.65	**L1 outer**	56364304.40	6330399.71	20.00
E5 inner	56365005.52	6330163.60	**E5 outer**	56365034.44	6330225.24	67.45
E6 inner	56365118.34	6329788.72	**E6 outer**	56365174.56	6329802.58	57.97
E8 inner	56365128.31	6331795.44	**E8 outer**	56365096.58	6331811.56	35.36

E9 inner	56365040.02	6331607.80	**E9 outer**	56364913.26	6331523.98	152.68
E10 inner	56365422.82	6331427.70	**E10 outer**	56365394.86	6331361.84	71.01
E11 inner	56365554.10	6331410.24	**E11 outer**	56365524.31	6331343.51	73.21
E12 inner	56365749.60	6331328.35	**E12 outer**	56365735.31	6331284.62	46.22
E13 inner	56365990.71	6331278.46	**E13 outer**	56365970.44	6331190.80	89.54
E14 inner	56366447.51	6331046.57	**E14 outer**	56366370.49	6330984.28	98.63
E15 inner	56366657.26	6330098.71	**E15 outer**	56366610.88	6330167.27	82.85
E16 inner	56366310.52	6329644.48	**E16 outer**	56366272.93	6329666.33	44.26

Table 5.4 Coordinates of inner and outer ends of permanent seagrass transects in Bardens Bay.

Transect No.	Easting	Northing	Transect No.	Easting	Northing	Transect Length (m)
A1 inner	56364006.28	6333892.16	A1 outer	56364048.43	6333899.34	42.60
A2 inner	56363979.36	6334006.51	A2 outer	56364002.16	6334013.22	24.00
A3 inner	56363918.06	6334157.90	A3 outer	56363927.53	6334165.80	34.80
A4 inner	56363633.48	6334426.20	A4 outer	56363660.06	6334425.14	26.30
A5 inner	56363686.18	6335068.50	A5 outer	56363688.41	6335049.82	18.30
A6 inner	56364434.63	6334566.67	A6 outer	56364422.84	6334560.15	13.70

Table 5.5 Coordinates of inner and outer ends of permanent seagrass monitoring transects in Sugar Bay and off Sunshine.

Transect No.	Easting	Northing	Transect No.	Easting	Northing	Transect Length (m)
S1 inner	56365009.02	6334470.41	S1 outer	56365077.72	6334481.77	69.64
S2 inner	56364642.29	6334943.57	S2 outer	56364673.53	6334939.82	31.46
S3 inner	56365017.76	6335008.93	S3 outer	56365041.97	6334932.70	79.98
S4 inner	56365235.10	6334992.86	S4 outer	56365217.43	6334889.31	105.05
S5 inner	56365575.20	6334709.08	S5 outer	36365569.66	6334693.44	16.60
S6 inner	56366144.58	6334765.21	S6 outer	56366172.04	6334761.92	27.67
S7 inner	56366076.00	6334917.00	S7 outer	56366088.00	6334922.00	14.86
S8 inner	56366070.00	6335445.00	S8 outer	56366111.00	6335465.00	54.86
S9 inner	56366033.00	6335724.00	S9 outer	56366093.00	6335725.00	66.67

Table 5.6 Coordinates of inner and outer ends of permanent seagrass transects in Crangan Bay.

Transect No.	Easting	Northing	Transect No.	Easting	Northing	Transect Length (m)
C1 inner	56368596	6332235	C1 outer	56368616	6332250	13.64
C2 inner	56368619	6332147	C2 outer	56368658	6332151	13.84
C3 inner	56368524	6331811	C3 outer	56368538	6331806	90.91

C4 inner	56368467	6331435	C4 outer	56368486	6331421	37.50

6. Physical characteristics of water in Lake Macquarie

The physical characteristics of the waters above the seagrass beds in Lake Macquarie were measured on 28th June and 23rd July 2024 using a calibrated Yeo-Kal 618RU Analyser. Units of measurement were Temperature - degrees Celsius; Conductivity - mS/cm; Salinity - parts per thousand; pH, Dissolved Oxygen - % saturation and mg/L; Oxidization Reduction Potential (ORP) – mV and Turbidity - NTU.

The physical characteristics of the bottom water at each transect in the study area of Lake Macquarie are shown in Table 6.1 and were as follows:

- Water Temperature ranged from 14.16°C at Transect S7 to 17.69°C at Transect A1. The average water temperature was 16.28°C.
- Conductivity ranged from 47.88 mS/cm at Transect E14 to 49.58 mS/cm at Transect S7. Average conductivity was 48.47 mS/cm.
- Salinity ranged from 31.15 ppt at Transect E14 to 32.45 ppt at Transect S7. Average salinity was 31.61 ppt.
- pH ranged from 4.96 at Transect C1 to 9.42 at Transect E1. The average pH was 7.15.
- Dissolved oxygen (% saturation) ranged from 43.40% at Transect S7 to 126.6% at Transect C1. Mean dissolved oxygen was 89.57% saturation. Super saturation of dissolved oxygen was the result of oxygen production by the seagrasses and epiphytic algae during the process of photosynthesis on a sunny day. Low dissolved oxygen levels were due to utilization of oxygen during the process of respiration throughout the night.
- ORP ranged from 187mV at S7 to 587 mV at E1. Mean ORP was 437.3 mV.
- Turbidity ranged from 1.2 NTU at Transect E3 to 12.8 NTU at Transect S7. Mean turbidity was 3.69 NTU.

Total rainfall in the months preceding the survey was 22.6 mm, 269.8 mm and 193.2 mm for March, April and May 2024 respectively (Cooranbong Lake Macquarie AWS No. 061412). By 28th June a further 87.6 mm had fallen in the catchment. The influx of freshwater into Lake Macquarie has reduced the salinity of Lake Macquarie from an average of 37.16 ppt in June

2023 to 31.61 ppt in July 2024.

Table 6.1 Physical characteristics of waters above seagrass transects, Lake Macquarie – 2024

Northern Shore Summerland Point and Frying Pan Bay

Station	Temperature °C	Conductivity mS/cm	Salinity ppt	pH	Dissolved Oxygen % sat	Dissolved Oxygen mg/L	ORP mV	Turbidity NTU
C5	16.37	48.54	31.66	6.99	92.5	7.49	438	3.1
C6	16.39	48.54	31.66	7.00	92.3	7.47	435	3.0
F1	16.66	48.53	31.65	7.07	92.9	7.47	433	2.6
F2	16.77	48.52	31.64	7.08	93.3	7.49	432	2.6
F3	16.37	48.56	31.67	6.98	92.7	7.50	429	3.1
F4	16.38	48.56	31.67	7.00	94.5	7.64	430	2.8
F5	16.38	48.54	31.66	7.00	94.7	7.66	430	2.7
F6	16.40	48.57	31.67	7.03	94.9	7.67	429	2.7
F7	16.50	48.54	31.66	7.04	94.7	7.64	428	2.7
Average	16.47	48.54	31.66	7.02	93.61	7.56	431.6	2.81
Min	16.37	48.52	31.64	6.98	92.30	7.47	428	2.60
Max	16.77	48.57	31.67	7.08	94.90	7.67	438	3.10

Western Shore Summerland Point

Station	Temperature °C	Conductivity mS/cm	Salinity ppt	pH	Dissolved Oxygen % sat	Dissolved Oxygen mg/L	ORP mV	Turbidity NTU
E7	16.65	48.48	31.62	7.24	88.8	7.15	463	3.0
T1	16.97	48.51	31.62	7.15	93.3	7.47	443	2.8
T2	16.83	48.47	31.61	7.16	91.8	7.37	447	4.3
T3	16.82	48.53	31.64	7.22	91.0	7.29	452	3.2
T4	16.75	48.48	31.61	7.20	88.8	7.13	455	3.8
T5	16.76	48.47	31.61	7.23	91.3	7.34	457	3.5
T6	16.68	48.50	31.63	7.23	89.3	7.19	461	3.1
T7	16.67	48.53	31.65	7.29	88.8	7.14	466	3.0

T8	16.64	48.52	31.65	7.34	89.1	7.16	469	2.7
Average	**16.75**	**48.50**	**31.63**	**7.23**	**90.24**	**7.25**	**457.0**	**3.27**
Min	**16.64**	**48.47**	**31.61**	**7.15**	**88.80**	**7.13**	**443**	**2.70**
Max	**16.97**	**48.53**	**31.65**	**7.34**	**93.30**	**7.47**	**469**	**4.30**

Chain Valley Bay

Station	Temperature °C	Conductivity mS/cm	Salinity ppt	pH	Dissolved Oxygen % sat	Dissolved Oxygen mg/L	ORP mV	Turbidity NTU
E1	15.68	48.60	31.68	9.42	74.0	6.07	587	1.9
E2	15.59	48.63	31.64	9.01	81.3	6.67	573	1.7
E3	16.11	48.57	31.67	8.61	84.3	6.86	560	1.2
E4	15.29	48.44	31.57	8.07	84.2	6.97	545	2.2
L1	15.78	48.28	31.44	7.96	86.6	7.10	537	2.2
E5	15.20	47.99	31.25	7.65	85.4	7.09	531	3.2
E6	15.21	47.96	31.25	7.52	84.9	7.05	522	3.2
E8	16.58	48.52	31.64	7.41	90.5	7.27	471	2.5
E9	16.01	48.55	31.68	7.31	84.9	6.92	477	2.5
E10	15.79	48.20	31.38	7.35	89.9	7.37	481	2.7
E11	14.99	48.04	31.30	7.20	84.2	7.02	487	3.0
E12	15.26	47.98	31.26	7.29	86.6	7.18	492	3.1
E13	15.55	48.11	31.35	7.37	85.5	7.05	496	2.9
E14	15.29	47.88	31.15	7.37	88.7	7.37	501	3.0
E15	15.15	48.04	31.29	7.38	90.2	7.49	508	3.5
E16	15.30	48.01	31.25	7.46	90.2	7.47	514	2.9
Average	**15.55**	**48.24**	**31.43**	**7.77**	**85.71**	**1.06**	**517.6**	**2.61**
Min	**14.99**	**47.88**	**31.15**	**7.20**	**74.00**	**6.07**	**471**	**1.20**
Max	**16.58**	**48.63**	**31.68**	**9.42**	**90.50**	**7.49**	**587**	**3.50**

Bardens Bay

Station	Temperature °C	Conductivity mS/cm	Salinity ppt	pH	Dissolved Oxygen % sat	Dissolved Oxygen mg/L	ORP mV	Turbidity NTU
A1	17.69	48.44	31.57	6.63	91.1	7.19	352	3.8
A2	17.66	48.45	31.58	6.70	96.8	7.64	355	4.9
A3	17.46	48.43	31.59	6.74	90.0	7.14	364	5.8
A4	17.17	48.44	31.58	6.76	91.6	7.30	372	3.6
A5	16.55	48.44	31.58	6.61	89.3	7.20	372	4.6
A6	17.46	48.46	31.58	6.83	90.0	7.13	379	3.4
Average	**17.33**	**48.44**	**31.58**	**6.71**	**91.47**	**7.27**	**365.7**	**4.35**
Min	**16.55**	**48.43**	**31.57**	**6.61**	**89.30**	**7.13**	**352**	**3.40**
Max	**17.69**	**48.46**	**31.59**	**6.83**	**96.80**	**7.64**	**379**	**5.80**

Sugar Bay and Sunshine

Station	Temperature °C	Conductivity mS/cm	Salinity ppt	pH	Dissolved Oxygen % sat	Dissolved Oxygen mg/L	ORP mV	Turbidity NTU
S1	16.76	48.52	31.64	6.75	93.0	7.47	389	3.4
S2	16.47	48.48	31.62	6.72	90.8	7.33	404	3.7
S3	16.83	48.47	31.61	6.79	88.4	7.09	405	3.8
S4	17.01	48.47	31.61	6.93	92.8	7.42	411	3.8
S5	17.21	48.46	31.62	7.05	94.1	7.50	419	3.0
S6	17.14	48.44	31.60	7.12	94.1	7.50	427	3.1
S7	14.16	49.58	32.45	7.69	43.4	3.64	187	12.8
S8	14.42	49.55	32.39	7.74	55.4	4.65	192	10.7
S9	14.60	49.49	32.35	7.73	61.5	5.15	190	10.0
Average	**16.07**	**48.83**	**31.88**	**7.17**	**79.28**	**6.42**	**336**	**6.03**
Min	**14.16**	**48.44**	**31.60**	**6.72**	**43.40**	**3.64**	**187**	**3.00**
Max	**17.21**	**48.58**	**31.45**	**7.74**	**94.10**	**7.50**	**427**	**12.80**

Crangan Bay Gwandalan

Station	Temperature °C	Conductivity mS/cm	Salinity ppt	pH	Dissolved Oxygen % sat	Dissolved Oxygen mg/L	ORP mV	Turbidity NTU
C1	17.03	48.51	31.64	4.96	126.6	10.10	431	7.1
C2	16.61	48.44	31.56	4.98	111.9	8.99	431	6.4
C3	16.44	48.46	31.60	5.80	108.6	8.78	411	3.2
C4	16.50	48.39	31.54	5.94	111.9	9.04	409	2.1
Average	**16.65**	**48.45**	**31.59**	**5.42**	**114.75**	**9.23**	**420.5**	**4.70**
Min	**16.44**	**48.39**	**31.54**	**4.96**	**108.60**	**8.78**	**409**	**2.10**
Max	**17.03**	**48.51**	**31.64**	**5.94**	**126.60**	**10.10**	**431**	**7.10**

All Stations

	Temperature °C	Conductivity mS/cm	Salinity ppt	pH	Dissolved Oxygen % sat	Dissolved Oxygen mg/L	ORP mV	Turbidity NTU
Average	16.28	48.47	31.61	7.15	89.57	7.25	437.3	3.69
Min	14.16	47.88	31.15	4.96	43.40	3.64	187	1.20
Max	17.69	49.58	32.45	9.42	126.60	10.10	587	12.80

7. Plant species found in the study area

Plate 7.1 provides information about the plants monitored in the seagrass surveys of Lake Macquarie, NSW from 2007 to 2024. Two seagrass species and eight species of alga have been identified in the study area.

Plate 7.1 Plant species found in the study area of Lake Macquarie (2007 - 2024).

Kingdom: Plantae
Phylum: Magnoliophyta
Class: Liliopsida
Order: Potamogetonales
Family: Zosteraceae
Species: *Zostera capricorni*

Remarks: *Zostera capricorni* is a species of eelgrass native to the seacoasts of New Guinea, Queensland, New South Wales, Victoria, South Australia, Norfolk Island and the North Island of New Zealand. It was first discovered at Moreton Bay in Queensland in 1875.

Kingdom: Plantae
Phylum: Magnoliophyta
Class: Liliopsida
Order: Hydrocharitales
Family: Hydrocharitaceae
Species: *Halophila ovalis*

Remarks: *Halophila ovalis* commonly known as paddle weed, spoon grass or dugong grass, is a seagrass in the family Hydrocharitaceae. It is a small herbaceous plant that occurs in seabeds and other saltwater environments in the Indo-Pacific.

Kingdom: Plantae
Phylum: Phaeophyta
Class: Phaeophyceae
Order: Fucales
Family: Hormosiraceae
Species: *Hormosira banksii*

Remarks: *Hormosira banksii*, also known as Neptune's necklace, Neptune's pearls, sea grapes, or bubbleweed is a species of brown alga native to Australia and New Zealand. It is abundant on low-energy rocky reefs at midtide levels, where it outcompetes other algal species due to its high tolerance to desiccation. First recorded at Transect C1 in Crangan Bay on 12th June 2010.

Kingdom: Plantae
Phylum: Phaeophyta
Class: Phaeophyceae
Order: Fucales
Family: Sargassaceae
Genus: *Sargassum*

Remarks: *Sargassum* is a genus of brown macroalgae in the order Fucales. Numerous species are distributed throughout the temperate and tropical oceans of the world, where they generally inhabit shallow water and coral reefs, and the genus is widely known for its planktonic species.

Class: Phaeophyceae
Order: Fucales
Family: Cystoseiraceae
Species: *Cystoseira trinodis*
Synonym: *Cystophyllum onustum*

Remarks: A macroalgae widespread in Australia and the Indo-Pacific region. The plants vary considerably in size and form, with tall thin plants up to 1.5m high in very sheltered and estuarine waters, or more compact thicker-stemmed plants up to 30cm high in oceanic reef pools. Characterised by small peg-like projections on the lower parts of the main branches.

Class: Ulvophyceae
Order: Bryopsidales
Family: Codiaceae
Species: *Codium fragile*

Remarks: The cylindrical, forked, dark green fronds of *C. fragile* grow to 30 cm long. When the plant is under water, fine hairs can be seen over the surface of the branches. This is a species of temperate regions, found subtidally and in intertidal pools often on rough coasts. Small red algae are often found growing on C. fragile, giving a pink colour to the fronds.

Class: Ulvophyceae
Order: Ulvales
Family: Ulvaceae

Remarks: Ulvaceae is a widely distributed family of thin green algae having either a flat or a hollow tubular thallus. Commonly called sea lettuce. Attached or free floating. Cells with parietal, laminate or cup-shaped chloroplasts with 1-4 pyrenoids.

Class: Phaeophyceae
Order: Ectocarpales
Family: Scytosiphonaceae
Genus: *Colpomenia*

Remarks: Genus of brown macroalgae which grows as a baglike or globular algae attached to hard substrates in the intertidal zone.

Order: Bryopsidales
Family: Caulerpaceae
Species: *Caulerpa taxifolia*

Remarks: Fast growing marine alga native to tropical Australia and the South Pacific that is colonizing areas outside its range, including NSW waterways. *Caulerpa* is an aquatic pest that is extremely difficult to eradicate once established. The flattened feather-like fronds are bright green in colour and 3-25cm in length.

Kingdom: Plantae

Green filamentous algae

Remarks: Filamentous algae are colonies of microscopic plants that link together to form threads or mesh-like filaments. These primitive plants normally grow on the surface of hard objects or other substrates under the water but they can break loose and form floating mats.

8. Seagrass characteristics and fouling levels measured in surveys

The following plates show the various growth characteristics of the seagrass *Zostera capricorni* in regard to leaf length. In the study area, due to environmental factors, *Zostera capricorni* either had short leaf growth (Plate 8.1) or was long leaved (Plate 8.4). The plates also show the levels of fouling of seagrass beds by filamentous algae and other algal species. In this study, fouling is described as No (Level 0), Low to moderate (Level 1) or Heavy (Level 2) (Plates 8.1- 8.6).

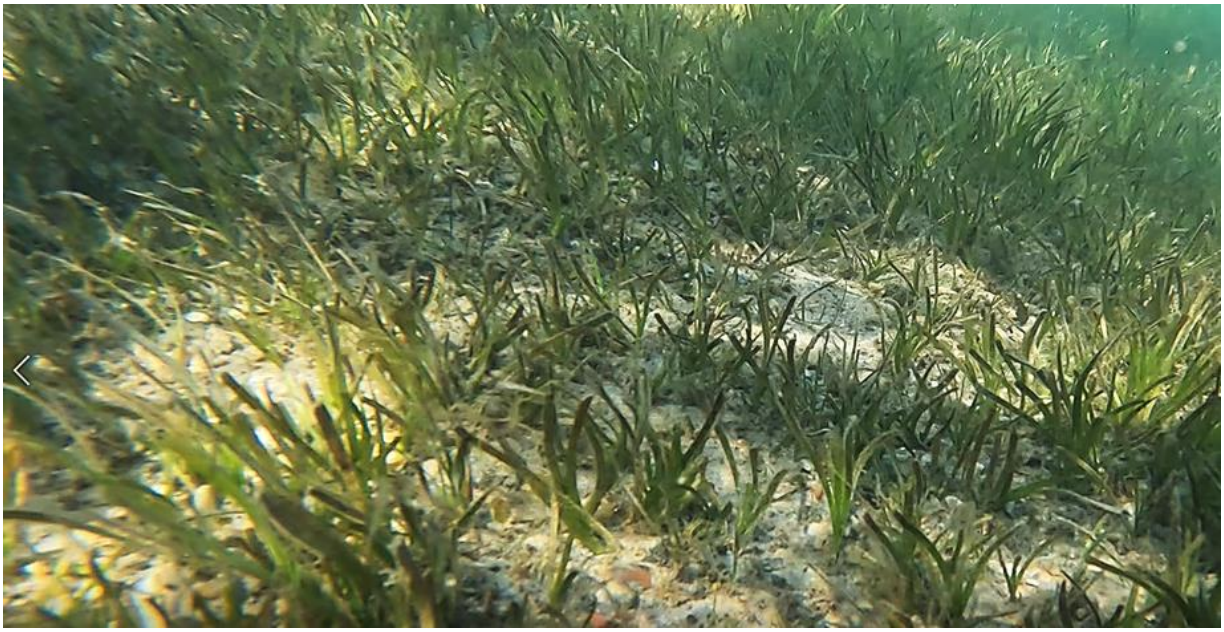

Plate 8.1 Short leaved sea grass with no fouling

Plate 8.2 Short leaved seagrass with low fouling

Plate 8.3 Short leaved seagrass with heavy fouling

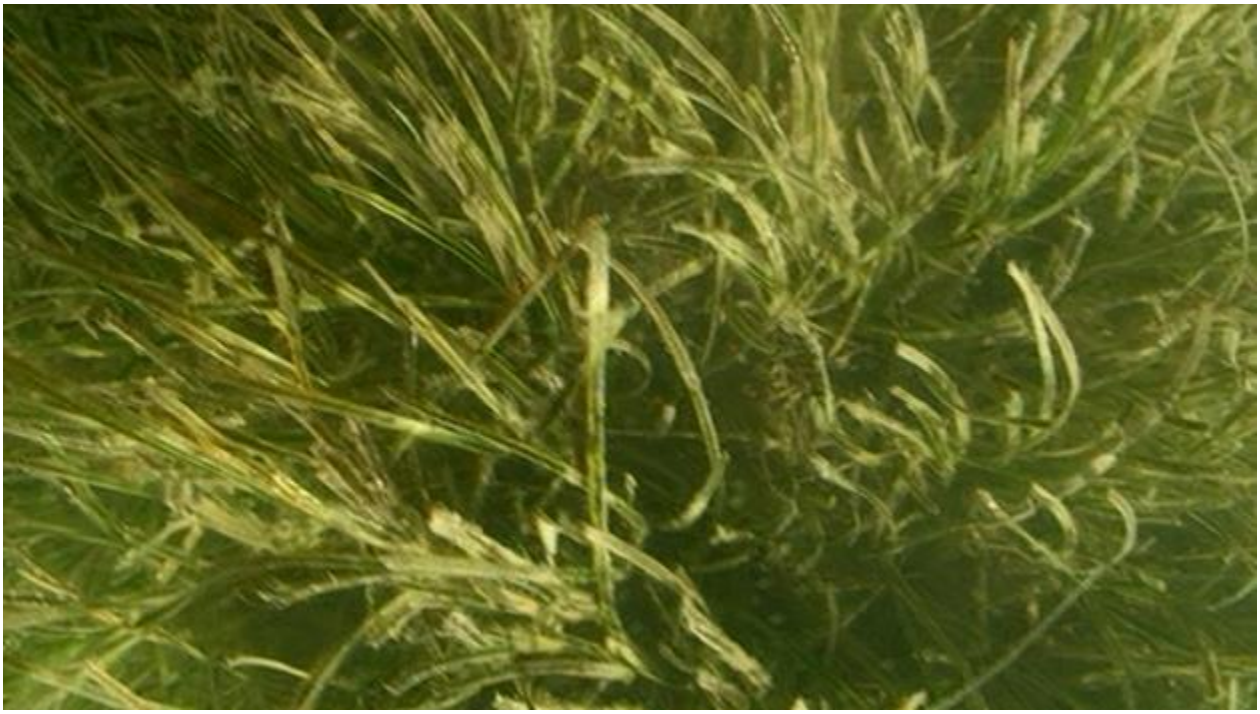

Plate 8.4 Long leaved seagrass with light fouling

Plate 8.5 Long leaved seagrass with light to moderate fouling

Plate 8.6 Long leaved seagrass with heavy fouling

Plate 8.7 Algae, *Halophila* and bare ground

9. Analysis of photographs along permanent transects

Two species of seagrass were identified in the study area, *Zostera capricorni* and *Halophila ovalis* (Plate 7.1). The seagrass *Zostera capricorni* had the greatest coverage and was found along the entire length of the transects. *Halophila ovalis* was found predominantly in the shallower waters on the shoreline or as single plants nestled amongst less dense patches of *Zostera capricorni*. In June and July 2024, the average total seagrass coverage in the study area ranged from:

- 79.77% at F2 to 96.7% at C5 on the northern shore of Summerland Point and Frying Pan Bay (Table 9.1)
- 84.12% at E7 to 92.9% at T5 along the western shore of Summerland Point (Table 9.2)
- 72.9% at E6 to 91.8% at E3 in Chain Valley Bay (Table 9.3)
- 69.5% at A5 to 95.07% at A2 in Bardens Bay (Table 9.4)
- 68.82% at S2 to 99.85% at S4 in Sugar Bay (Table 9.5)
- 76.4% at S7 to 92.2% at S8 off Sunshine (Table 9.5) and
- 93.7% at C2 to 99.04% at C3 in Crangan Bay (Table 9.6).

At the time of survey, transects with the highest coverage of *Halophila ovalis* were A5 (19.1%), E15 (12.0%), E6 (7.5%) and A4 (7.2%) (Tables 9.1-9.6).

Five species of algae were recorded in the study area in June and July 2024, namely *Cystoseira trinodis*, *Codium fragile*, *Colpomenia sinuosa*, a species of Ulvaceae and green filamentous algae. The transects with the highest total coverage of *Cystoseira* were E2 (16.5% total coverage), E1 (12.6%), S2 (9.0%), E4 (7.6%), A1 (7.3%) and S1 (5.9%). *Codium fragile* was observed at transects C1 (0.4% total coverage) and C2 (0.1% total coverage) only. *Colpomenia* was recorded at T1 (0.2% total coverage), T2 (0.5% total coverage) and S6 (0.1% total coverage). Free floating filamentous algae was recorded at Transects C2, C6 and A5.

Table 9.1 Average percent area cover of substratum by seagrasses and algae - northern shore Summerland Point and Frying Pan Bay

Percent Area	C5	C6	F1	F2	F3	F4	F5	F6	F7
Seagrasses									
Zostera	96.6	94.3	90.1	80.5	90.4	91.5	89.6	92.7	87.9
Halophila	0.1	0.0	0.2	0.0	3.2	0.0	0.5	0.1	1.0
Total	**96.7**	**94.3**	**90.4**	**80.5**	**93.6**	**91.5**	**90.1**	**92.8**	**89.0**
Algae									
Cystoseira	0.4	0.1	3.5	1.1	0.0	0.0	0.0	0.0	0.0
Codium	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Filamentous algae	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	**0.4**	**0.2**	**3.5**	**1.1**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Bare ground	**2.9**	**5.5**	**6.2**	**18.4**	**6.4**	**8.5**	**9.9**	**7.2**	**11.0**

Table 9.2 Average percent area cover of substratum by seagrasses and algae - western shore Summerland Point

Percent Area	E7	T1	T2	T3	T4	T5	T6	T7	T8
Seagrasses									
Zostera	78.0	87.5	87.8	84.2	88.5	92.6	89.2	86.5	87.3

Halophila	6.1	0.1	2.2	0.4	0.3	0.4	3.0	1.3	1.4
Total	**84.1**	**87.6**	**90.0**	**84.6**	**88.8**	**92.9**	**92.3**	**87.9**	**88.7**
Algae									
Cystoseira	0.1	0.7	0.4	0.0	0.4	0.1	0.0	0.0	0.0
Codium	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Colpomenia	0.0	0.2	0.5	0.0	0.0	0.0	0.0	0.0	0.0
Total	**0.1**	**0.9**	**0.9**	**0.0**	**0.4**	**0.1**	**0.0**	**0.0**	**0.0**
Bare ground	**15.8**	**11.5**	**9.1**	**15.4**	**10.9**	**7.0**	**7.8**	**12.1**	**11.3**

Table 9.3 Average percent area cover of substratum by seagrasses and algae – Chain Valley Bay

Percent Area	**E1**	**E2**	**E3**	**E4**	**L1**	**E5**	**E6**	**E8**	**E9**
Seagrasses									
Zostera	77.9	76.1	91.7	86.9	77.7	82.0	65.4	80.5	89.3
Halophila	4.7	0.3	0.1	0.6	1.4	6.1	7.5	5.7	0.7
Total	**82.6**	**76.4**	**91.8**	**87.5**	**79.1**	**88.1**	**72.9**	**86.3**	**90.1**
Algae									
Cystoseira	12.6	16.5	0.4	7.6	0.7	0.1	0.1	0.1	2.8
Codium	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ulvaceae	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.3
Total	**12.6**	**16.5**	**0.5**	**7.6**	**0.7**	**0.1**	**0.1**	**0.2**	**3.1**
Bare ground	**4.8**	**7.1**	**7.7**	**4.9**	**20.2**	**11.8**	**26.9**	**13.5**	**6.8**

Percent Area	**E10**	**E11**	**E12**	**E13**	**E14**	**E15**	**E16**
Seagrasses							
Zostera	94.8	96.5	85.2	88.3	76.0	74.3	84.6
Halophila	1.2	0.2	3.8	1.5	0.0	12.0	3.0

Total	**96.0**	**96.7**	**88.9**	**89.9**	**76.0**	**86.4**	**87.6**
Cystoseira	0.0	0.1	0.1	0.1	0.4	0.4	0.1
Codium	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ulvaceae	0.0	0.0	0.0	1.0	0.0	0.0	0.0
Total	**0.0**	**0.1**	**0.1**	**1.1**	**9.1**	**0.4**	**0.1**
Bare ground	**4.0**	**3.2**	**11.0**	**9.0**	**14.9**	**13.2**	**12.4**

Table 9.4 Average percent area cover of substratum by seagrasses and algae – Bardens Bay

Percent Area	**A1**	**A2**	**A3**	**A4**	**A5**	**A6**
Seagrasses						
Zostera	75.1	94.9	88.8	77.8	50.4	79.6
Halophila	6.5	0.2	5.6	7.2	19.1	2.1
Total	**81.5**	**95.1**	**94.4**	**85.0**	**69.5**	**81.8**
Cystoseira	7.3	2.4	0.7	1.1	0.3	1.3
Codium	0.0	0.0	0.0	0.0	0.0	0.0
Filamentous algae	0.0	0.0	0.0	0.0	0.1	0.0
Total	**7.3**	**2.4**	**0.7**	**1.1**	**0.4**	**1.3**
Bare ground	**11.2**	**2.6**	**4.9**	**13.9**	**30.1**	**17.0**

Table 9.5 Average percent area cover of substratum by seagrasses and algae – Sugar Bay and Sunshine

Percent Area	**S1**	**S2**	**S3**	**S4**	**S5**	**S6**	**S7**	**S8**	**S9**
Seagrasses									
Zostera	**89.2**	**63.9**	**96.4**	**99.2**	**80.7**	**65.4**	**77.1**	**92.4**	**81.0**
Halophila	1.0	4.9	0.4	0.7	2.7	2.6	0.5	0.7	0.5

Total	**90.2**	**68.8**	**96.8**	**99.9**	**83.4**	**68.1**	**76.4**	**92.2**	**81.0**
Algae									
Cystoseira	5.9	9.0	0.1	0.0	0.2	9.5	0.0	0.2	0.7
Codium	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Colpomenia	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Total	**5.9**	**9.0**	**0.1**	**0.0**	**0.2**	**9.6**	**0.0**	**0.2**	**1.0**
Bare ground	**3.9**	**22.1**	**3.1**	**0.1**	**16.4**	**22.3**	**23.6**	**7.6**	**17.9**

Table 9.6 Average percent area cover of substratum by seagrasses and algae – Crangan Bay

Percent Area	**C1**	**C2**	**C3**	**C4**
Seagrasses				
Zostera	95.3	93.4	98.2	97.3
Halophila	1.5	0.3	0.8	0.0
Total	**96.8**	**93.7**	**99.0**	**97.3**
Cystoseira	1.7	0.6	0.1	0.5
Codium	0.4	0.1	0.0	0.0
Filamentous algae	0.0	0.1	0.0	0.0
Total	**2.1**	**0.8**	**0.1**	**0.5**
Bare ground	**1.1**	**5.4**	**0.8**	**2.2**

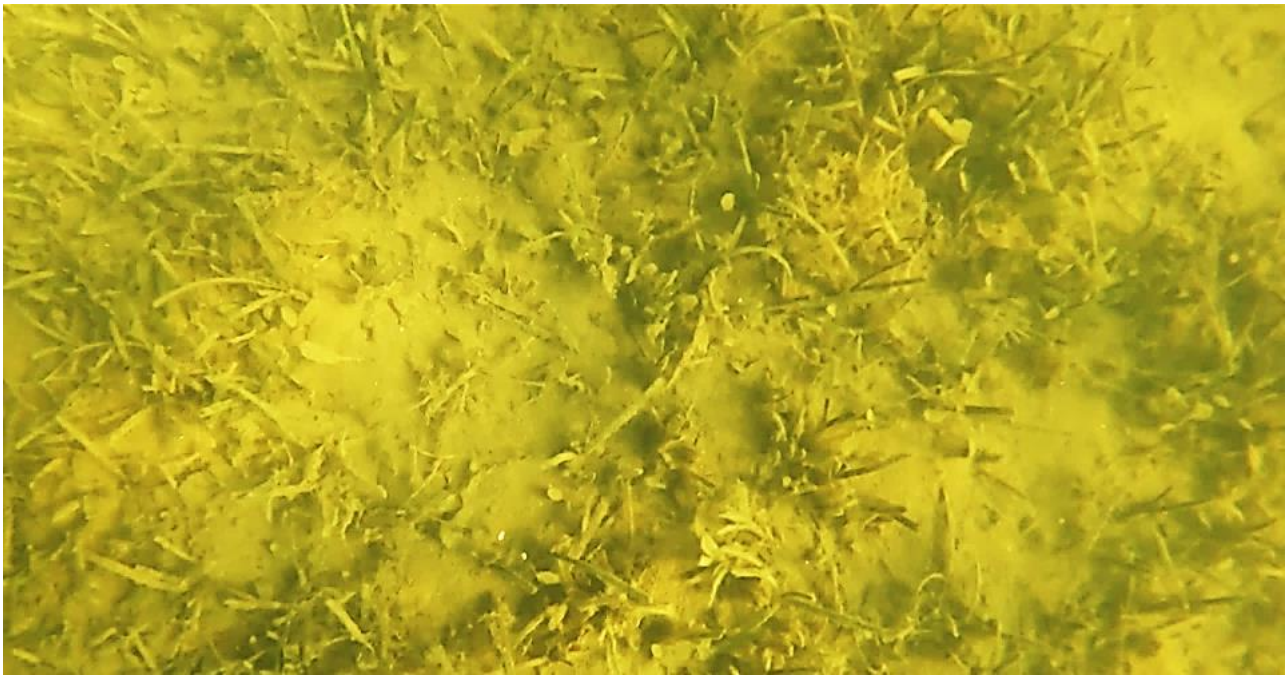

Plate 9.1 *Zostera capricorni* and *Halophilla ovalis* covered by fine sediment following strong southwesterly winds, June 2024.

Figures 9.1 to 9.6 show annual changes in the percentage cover of seagrasses off Summerland Point and in Chain Valley Bay, Bardens Bay, Sugar Bay and Crangan Bay. Numerical values are presented in Appendix 2. Seagrass cover continues to be high and consistent, with nine transects showing a decline in seagrass coverage in the June 2024 survey compared to 2023 findings. Changes in coverage were due to:

- Increased boating activity in the vicinity of experimental transects. For instance, Transect A5 is located between two private wharves. Total seagrass coverage has dropped from 84% to 69% due to the boating activities of the large power boats moored at those wharves. The remaining seagrasses are also being covered by fine sediment. At the time of survey, Bardens Bay had many moored vessels indicating increased boating activity in the area.
- Deposition of fine sediment on seagrass beds due to prolonged wind and wave action and rainfall events (Plate 9.1). Seagrasses being covered by sediment and potentially being smothered were observed at many Transects including E6, E9 and F5. Direct sedimentation effects are recognized as the major threat to seagrass growth and survival. Tolerance to burial varies amongst species, however studies have shown that fine sands and muds (<250μm) have the strongest suppression effects (Benham et al., 2019). Shoot

density declines significantly at burial depths of 5-7.5 mm in a mesocosm setting, with very low levels of growth observed above 10 mm or greater (Benham et al., 2019).

- Decline in salinity concentrations in Lake Macquarie from an average of 37.16 ppt in June 2023 to 31.61 ppt in July 2024. Heavy continuous rain can cause sudden stress reactions in seagrasses followed by slow recovery. A decrease in salinity is a stress factor that induces physiological responses and alters quantifiable features of seagrass population structure, biomass, morphometry and productivity (Chollett et al., 2007). Reduced salinity can cause seagrass leaves to die and seagrass beds to reduce their total biomass through defoliation. Mats of broken off *Zostera capricorni* leaves were observed during the June 2024 seagrass survey.
- Mats of detached fragments of algae and seagrass (Plate 9.2). Mats of detached *Cystoseira trinodis* covered underlying seagrasses at transect E2, and mats of broken off *Zostera capricorni* covered underlying seagrasses and bare ground at transect E9. These mats of vegetation affected the statistics, but they also have the capacity of reducing the ability of underlying seagrasses to photosynthesize.
- The presence of mussels amongst the seagrass beds (Plate 9.3). Mussel clumps were observed at transects E8, T1, T3, T4, T5, A1, A2, A6, C5, C6 and S6. Whilst an important part of the ecological community, the presence of mussels does have the effect of reducing the percent coverage of *Zostera capricorni* along those transects.
- The presence of *Halophila ovalis.* Changes in survey methods and camera are enabling photography in very shallow water. *Halophila ovalis* prefers an environment without competition and is usually observed growing in the sand along the shoreline above the *Zostera* beds. Photographing this band of sand to capture the presence of *H. ovalis* has affected the statistics by reducing the presence of *Zostera* and increasing the presence of bare ground. The changes in survey methods are also making it possible to distinguish *H. ovalis* in deeper water from shadows. These plants, which are nestled amongst the *Zostera*, are very difficult to observe, especially when the delicate leaves are covered by fine sediment or water clarity is very murky.

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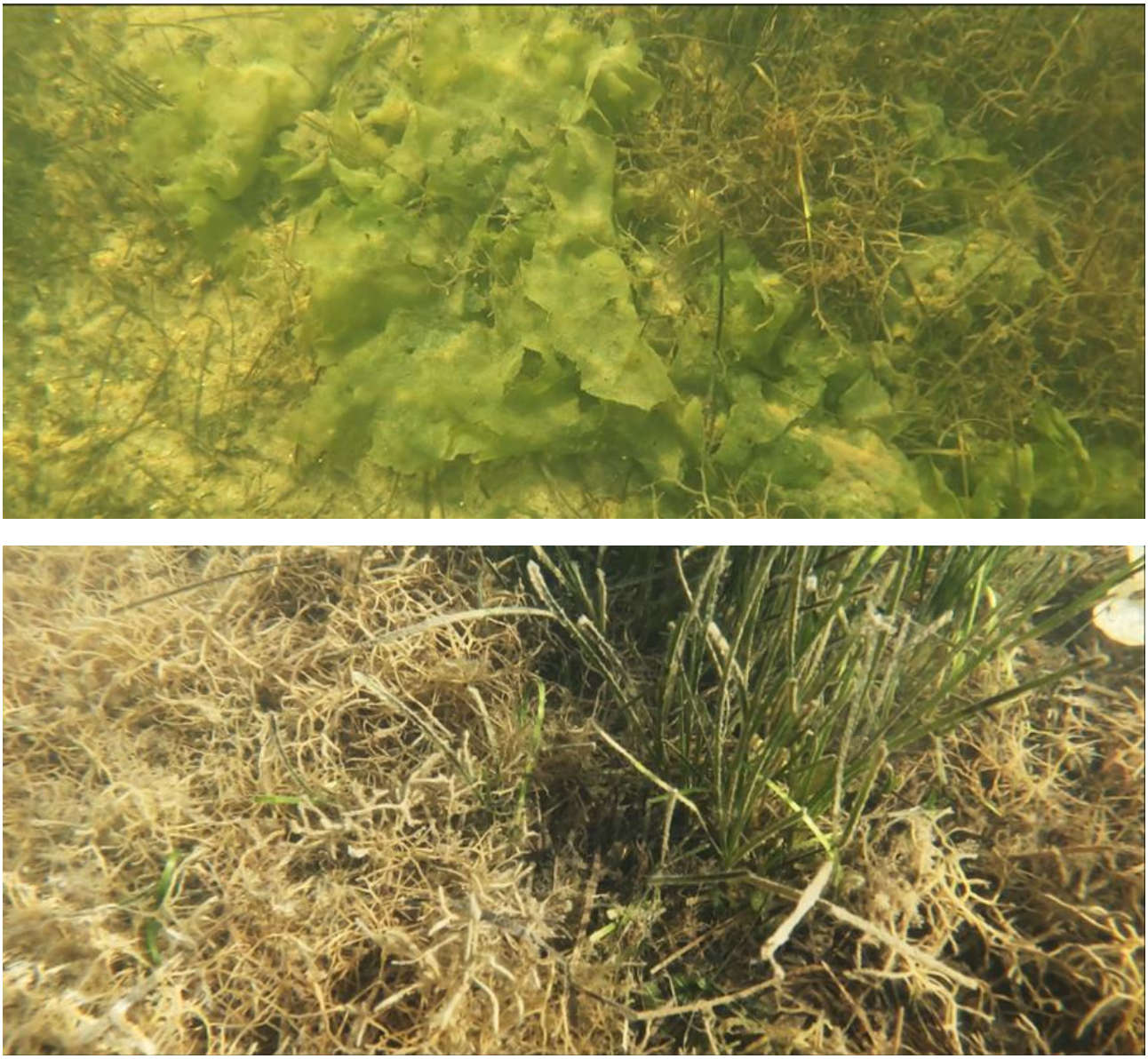

Plate 9.2 Mats of free-floating sea lettuce (top left) and detached *Cystoseira trinodis* (bottom left), June 2024

Plate 9.3 Colonies of mussels growing amongst seagrasses, June 2024

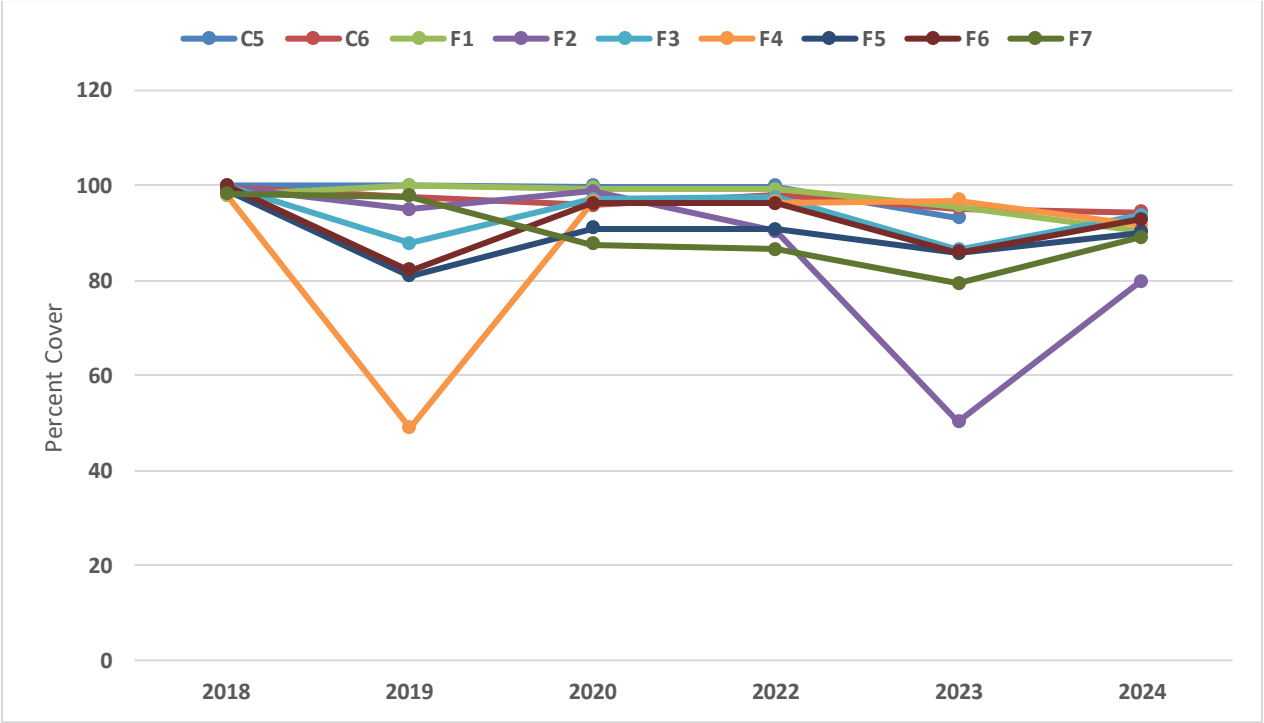

Figure 9.1 Changes in percent cover of seagrasses along Frying Pan Bay and northern shore of Summerland Point (2018-2024)

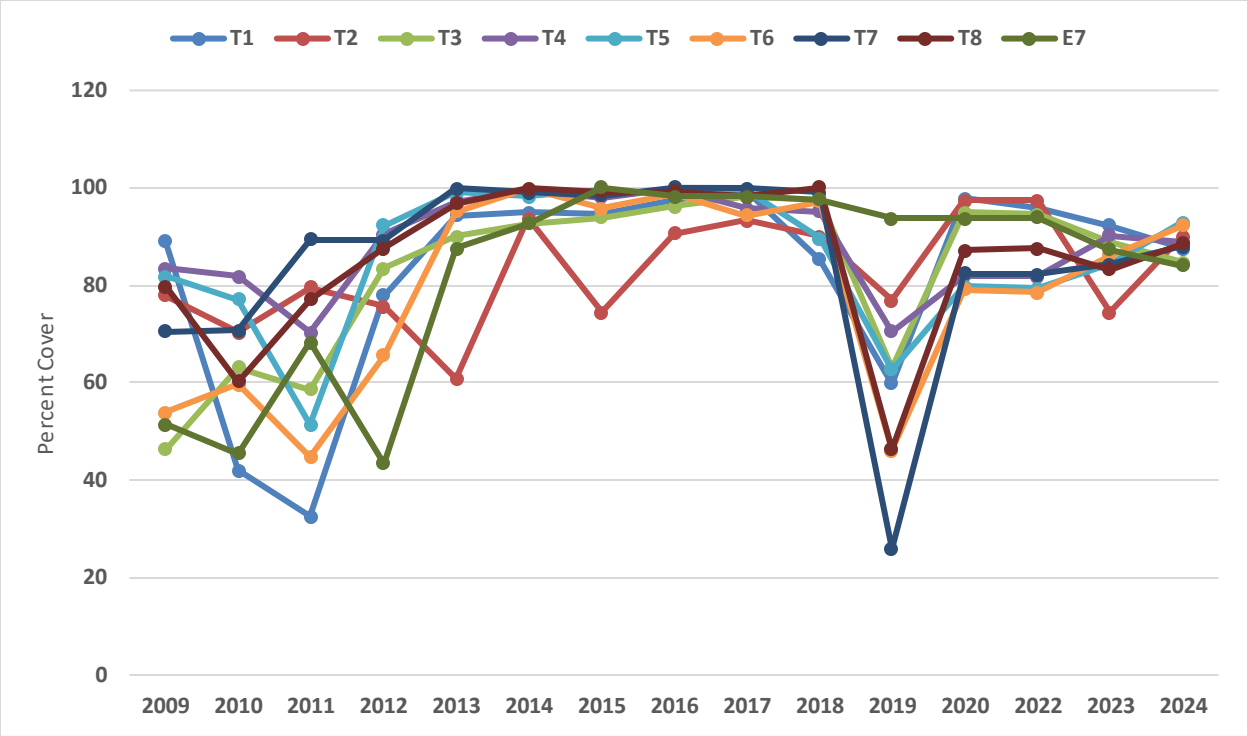

Figure 9.2 Changes in percent cover of seagrasses along western shore of Summerland Point (2009-2024)

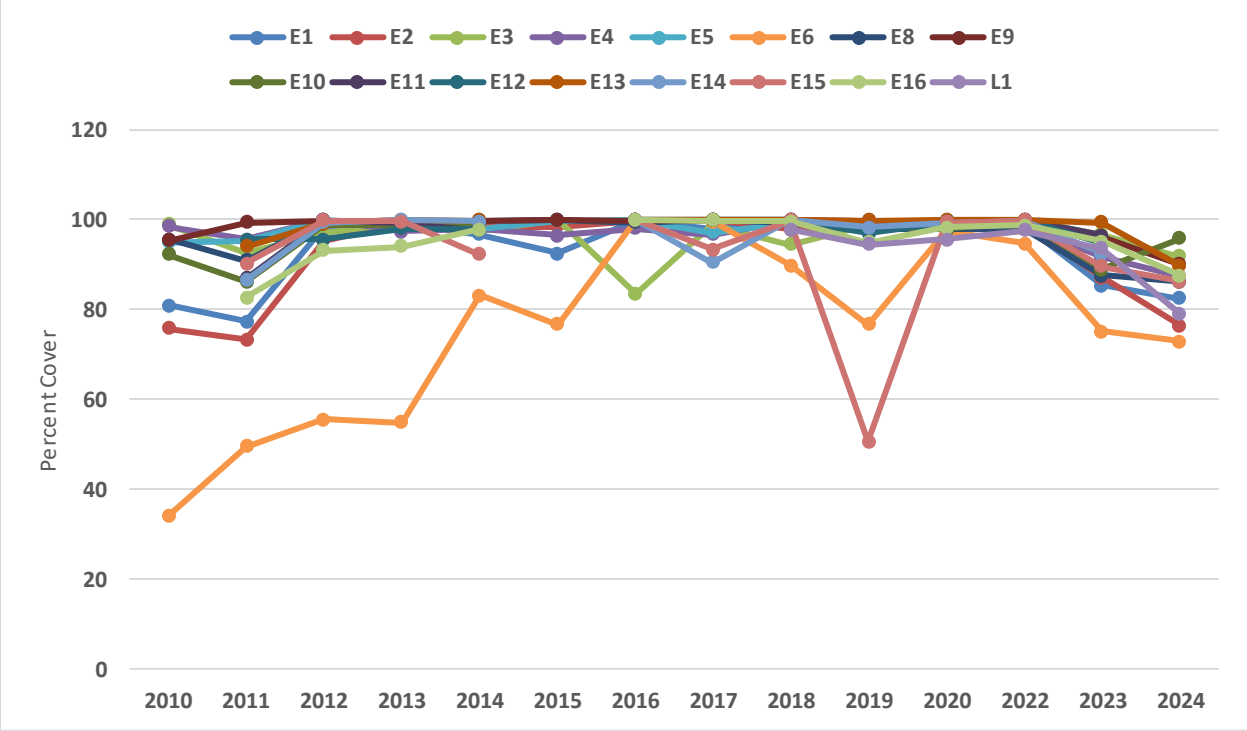

Figure 9.3 Changes in percent cover of seagrasses in Chain Valley Bay (2008-2024)

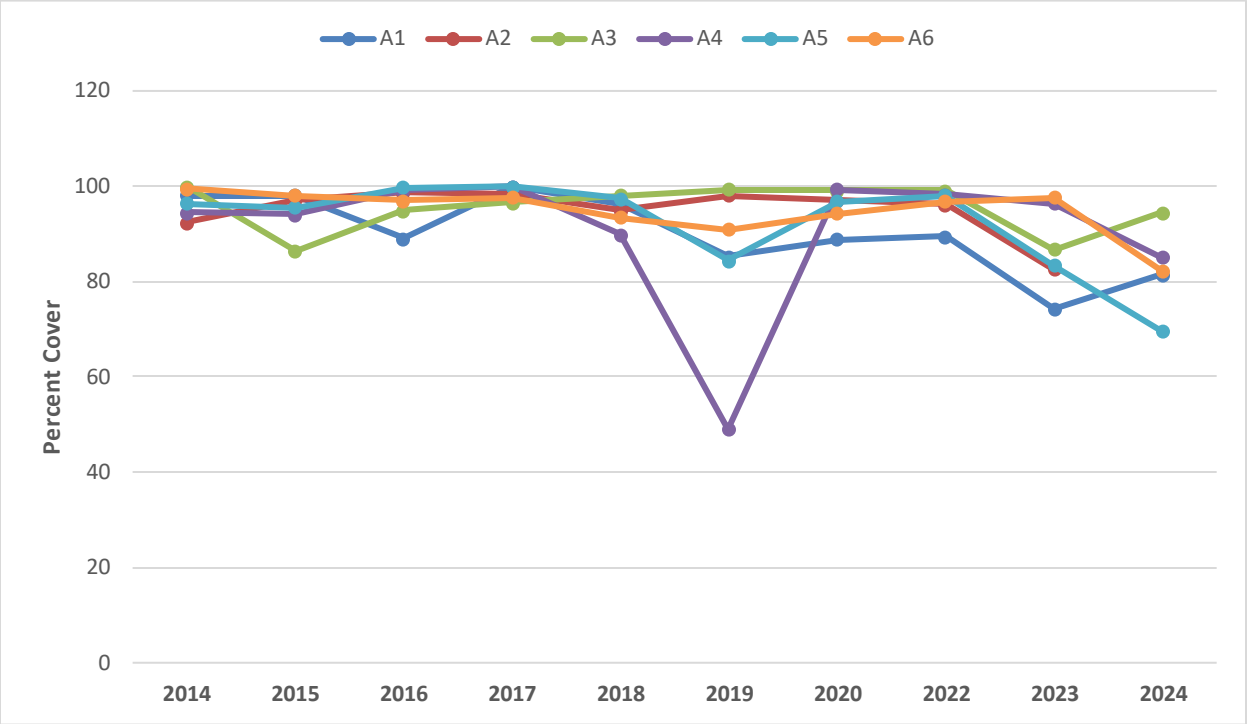

Figure 9.4 Changes in percent cover of seagrasses in Bardens Bay (2014-2024)

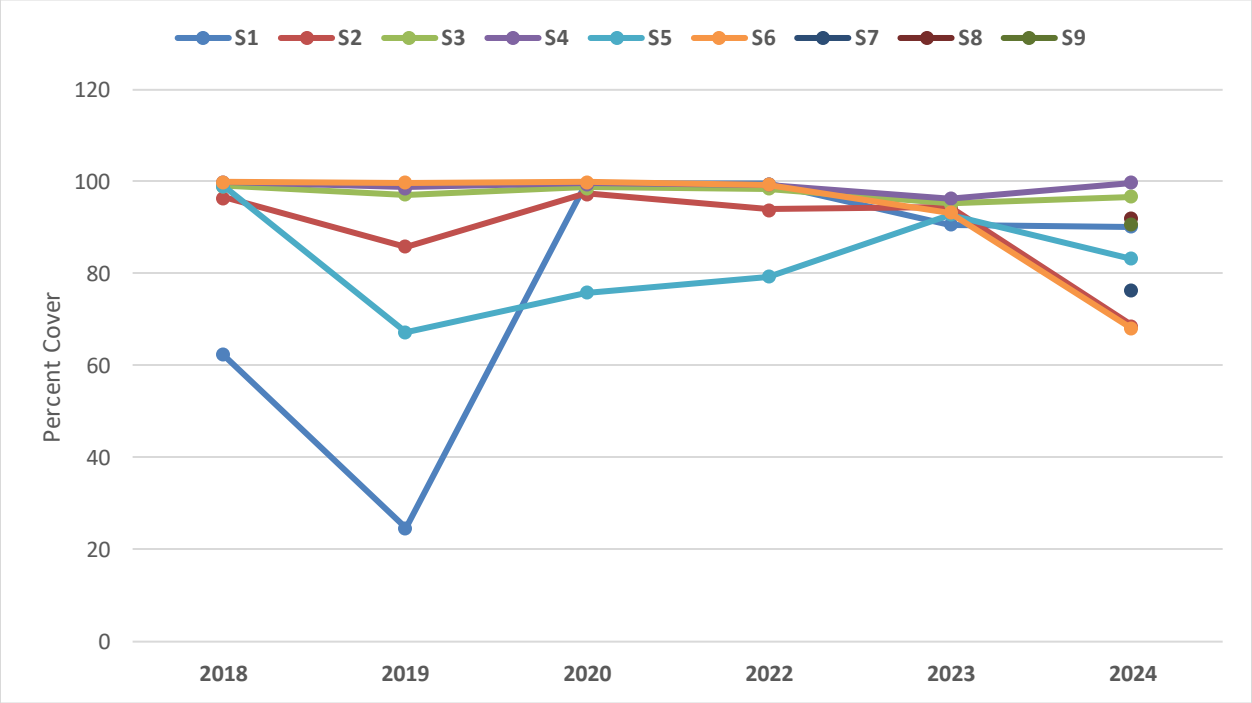

Figure 9.5 Changes in percent cover of seagrasses in Sugar Bay (2018-2024)

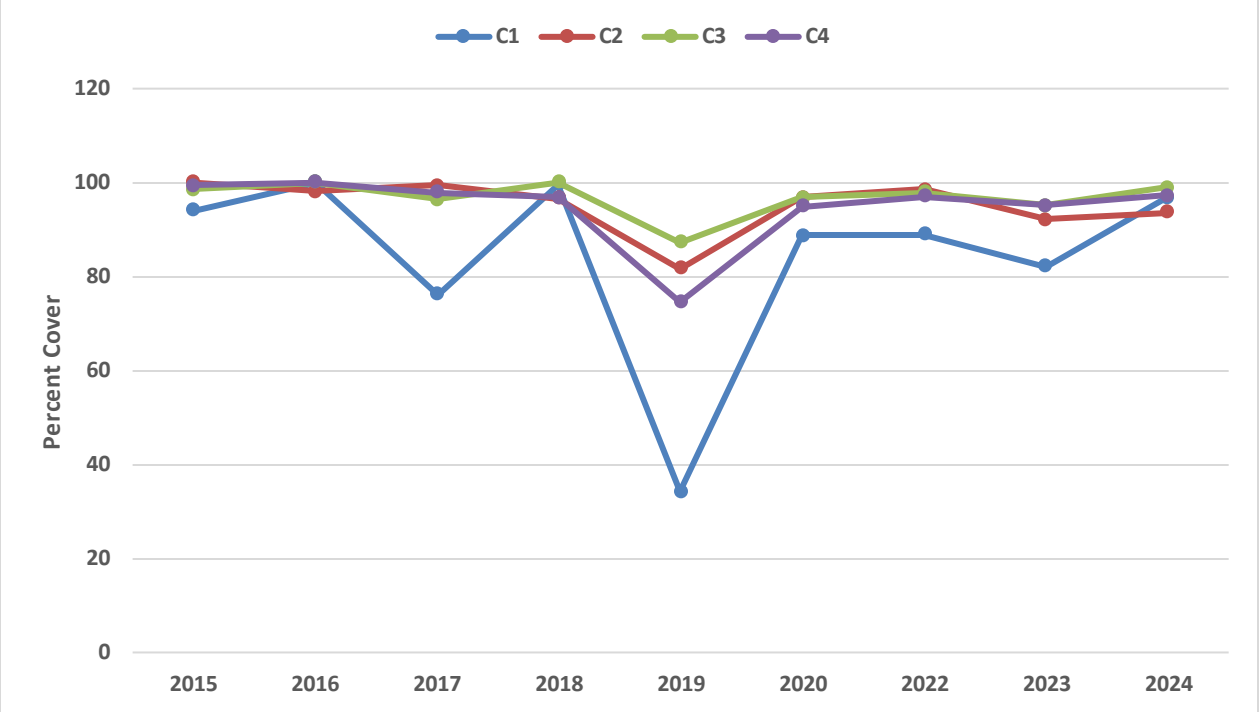

Figure 9.6 Changes in percent cover of seagrasses in Crangan Bay (2015-2024)

In June and July 2024, the seagrasses were lightly to heavily fouled with epiphytic algae. Transects that had seagrasses encrusted with high levels of epiphytic algae and sediment include transects C2, E6, E7, E8, E9, A3, A4, T2, T3 and T4 (Appendix 1).

Table 9.7 shows the average composition, percent cover and condition of seagrass beds in the four regions of Lake Macquarie under investigation for the years 2011 to 2024. It shows that the growth form of *Zostera capricorni* in the Summerland Point, Frying Pan Bay and Crangan Bay region is predominantly short leaved. The growth form of *Z. capricorni* in Chain Valley Bay and Bardens Bay, however, is long leaved.

Table 9.7 also shows in greater detail the increase in percent cover of seagrasses, with bare ground decreasing from 38.13 percent in 2011 to 9.71 percent in 2024 in the Summerland Point, Frying Pan Bay and Sugar Bay region. In the Chain Valley Bay region, bare ground decreased from 13.32 percent in 2011 to 6.41 percent in 2023, with a slight increase to 10.71 percent in 2024. Seagrass cover in Bardens Bay has mostly been around 90 percent since 2014. However, there was an increase in bare ground from 8.8% in 2023 to 13.27% in 2024. In the Crangan Bay study area, bare ground decreased from 26.98 percent in 2011 to 2.39 percent in 2024.

Table 9.7 Average composition, % cover and condition of seagrass beds in the four regions of Lake Macquarie under investigation for the years 2011 to 2024.

0-No fouling; 1-Light to moderately fouled; 2-Heavily fouled

Year	Total SG	% long	% short	% long 0	% long 1	% short 0	% short 1	algae	bare gr.
Summerland Point, Frying Pan Bay and Sugar Bay									
2011	61.74	9.88	51.86	9.98	0.00	51.86	0.00	0.27	38.13
2012	82.18	38.03	44.15	38.03	0.00	44.15	0.00	0.00	17.85
2013	90.92	25.19	65.88	25.03	0.32	64.92	0.80	0.82	8.26
2014	96.74	19.73	80.27	19.93	0.00	80.27	0.00	0.00	3.26
2015	95.06	17.31	69.33	17.31	0.00	77.75	0.00	0.00	4.93
2016	98.15	20.82	77.64	28.32	0.00	77.66	0.00	0.00	1.30
2017	97.92	17.05	80.63	14.61	2.50	65.14	15.63	0.24	1.35
2018	96.22	28.00	66.03	25.44	5.36	67.00	0.91	1.31	2.28
2019	77.37	32.99	40.16	36.46	0.00	44.00	0.00	2.11	20.51
2020	93.29	35.89	57.40	33.99	1.67	56.91	0.49	0.03	6.64
2021	97.76	48.55	48.14	17.35	26.98	11.33	33.43	0.52	2.00
2022	93.53	28.19	65.33	27.36	0.83	65.08	0.26	0.03	6.36
2023	87.84	26.85	59.54	10.01	16.58	24.58	33.83	2.6	9.59
2024	88.11	38.11	48.82	5.82	25.84	18.37	29.87	2.38	9.71
Chain Valley Bay									
2011	85.44	41.75	43.68	40.28	1.47	43.68	0.00	0.99	13.32
2012	95.26	89.97	5.28	89.97	0.00	5.28	0.00	2.89	1.92
2013	95.63	62.25	35.84	55.83	1.06	35.84	0.00	0.25	4.00
2014	96.57	34.15	65.85	34.14	0.64	65.85	0.00	0.69	2.74
2015	94.70	70.26	18.80	58.28	11.97	24.45	0.00	1.02	5.06
2016	98.65	74.52	27.13	71.30	0.00	27.13	0.00	1.20	0.15
2017	97.63	52.60	42.79	36.35	18.19	49.82	0.11	0.60	1.62
2018	98.46	72.25	25.48	66.32	5.88	23.48	1.79	0.83	0.71
2019	93.15	84.48	8.64	84.48	0.00	15.66	0.00	0.39	6.72
2020	98.82	94.53	4.29	91.70	2.84	4.29	0.00	0.21	0.92
2021	99.65	95.35	4.30	2.84	74.63	0.21	2.51	0.00	0.26
2022	99.00	95.27	4.11	92.18	1.67	4.11	0.00	0.31	0.58
2023	91.67	59.42	31.51	3.49	52.08	4.93	25.43	1.73	6.41
2024	86.01	64.89	18.02	13.47	50.66	8.56	10.81	3.27	10.71
Crangan Bay (Control)									
2011	72.52	28.47	44.05	28.47	0.00	43.31	0.74	0.87	26.98
2012	92.38	0.00	92.38	0.00	0.00	92.38	0.00	0.01	7.99
2013	98.82	13.79	85.52	10.84	2.96	85.52	0.00	0.02	1.02
2014	97.94	23.23	76.77	23.23	0.00	76.77	0.00	0.06	2.02
2015	98.00	23.53	74.47	23.53	0.00	74.47	0.00	0.00	2.01
2016	99.47	15.90	83.30	6.99	9.18	55.37	27.93	0.13	0.49
2017	92.48	16.73	75.75	15.99	3.20	74.71	1.05	0.02	7.57
2018	98.28	46.25	52.03	5.48	89.13	49.09	2.94	0.01	1.74
2019	69.39	39.56	29.95	39.56	0.00	29.95	0.00	0.00	30.40
2020	94.30	25.40	68.90	25.40	0.70	59.12	7.06	0.57	4.01
2021	97.87	67.28	30.59	16.54	50.74	20.66	9.93	0.00	1.32
2022	95.65	19.50	74.35	15.46	5.85	61.07	13.28	0.09	2.50
2023	91.16	18.82	71.42	3.25	5.75	28.99	48.70	3.57	5.35
2024	96.69	32.52	63.53	0.64	23.24	8.64	50.46	0.92	2.39
Bardens Bay									
2014	96.87	54.20	45.80	54.20	0.00	45.80	0.00	1.20	2.03
2015	94.84	68.18	26.67	68.18	0.00	26.67	0.00	0.00	2.92
2016	96.40	63.48	33.01	63.98	0.00	33.01	0.00	0.00	3.61
2017	98.78	76.02	22.75	51.51	24.51	20.59	3.78	0.03	1.23
2018	94.96	55.58	39.39	38.78	16.80	37.67	2.45	2.19	2.68

2019	84.48	73.08	6.40	73.03	11.40	11.40	0.00	0.00	15.52
2020	95.89	81.08	16.04	63.26	1.69	14.60	0.22	0.00	4.11
2021	96.63	96.63	0.00	12.41	78.48	0.00	0.00	3.79	3.24
2022	96.31	81.41	16.07	79.72	1.69	14.90	0.00	0.01	3.57
2023	86.62	34.51	49.84	2.59	32.21	2.32	47.52	4.39	8.80
2024	84.61	37.79	39.96	1.64	36.15	7.55	24.28	1.97	13.27

10. Extent of Coal Mining

Figure 10.1 shows the extent of mining reviewed in March 2024. Mining of the Fassifern seam is currently underway in the Brightwaters and Summerland Point regions. Mining ceased in the Chain Valley Bay region on 24 December 2017.

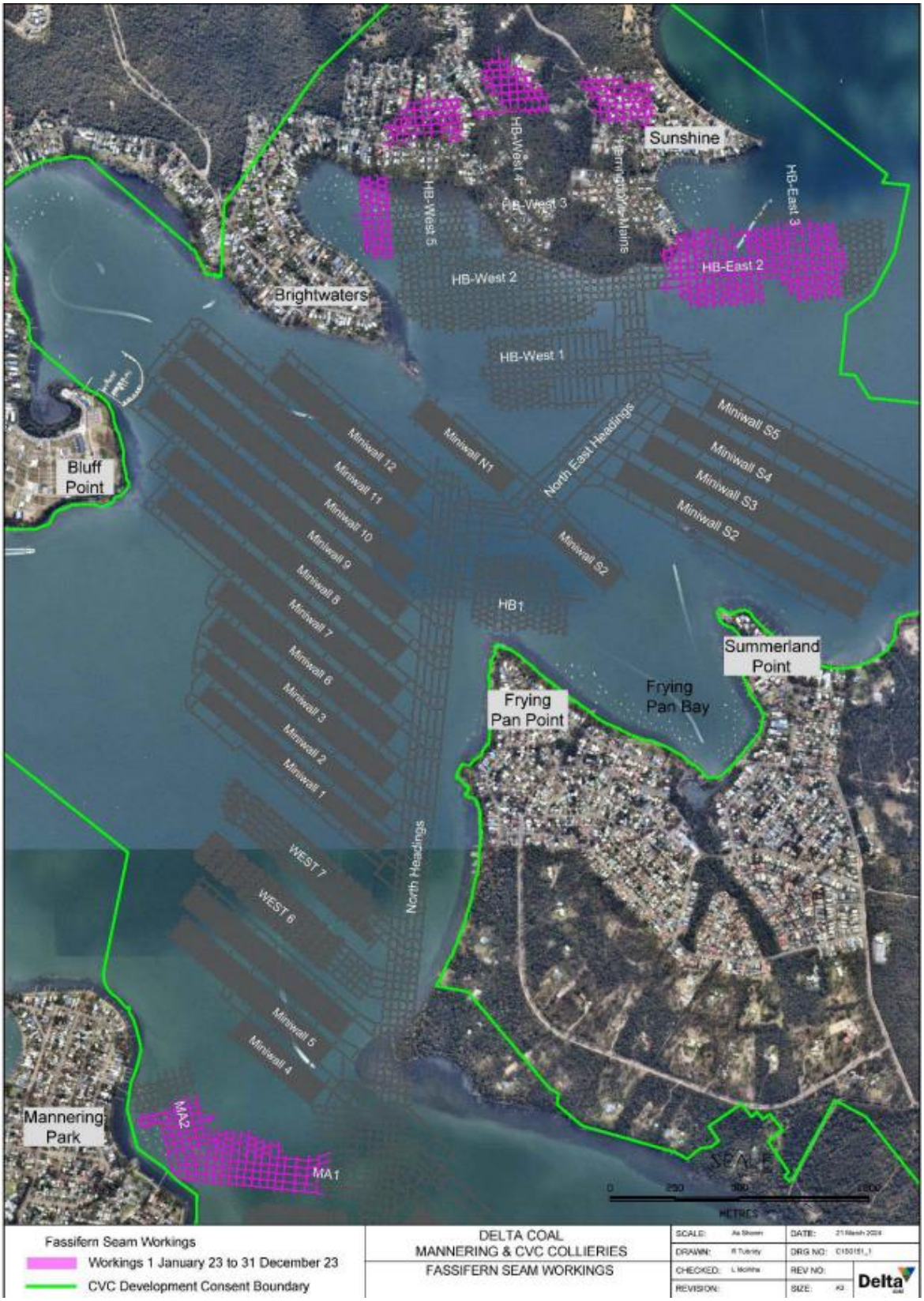

Figure 10.1 Extent of Fassifern Seam Workings – 21 March 2024

11. Seagrass Management Plan

The mine, in conjunction with the relevant stakeholders, has developed a Seagrass Management Plan. While the colliery is not mining beneath the seagrass beds, the purpose of the plan is to monitor any changes and identify if subsidence is the cause.

Elements of the plan require:

- That the July 2008 survey is to act as a baseline of seagrass distribution, density and condition. Since this time new seagrass transects have been added to the sampling schedule (now 50 transects in 2018-2024).
- Annual re-surveys of the permanent transect lines will be carried out.
- If, during the annual re-surveys, either:
    - Subsidence along the seagrass permanent transects greater than 150mm is detected, or
    - There are reductions in seagrass cover of 20% or more (compared to 2008 values),

then Mine Management will notify the relevant stakeholders of the event and convene a meeting to discuss the implications.

12. Conclusion

In June and July 2024, 53 seagrass monitoring transects located in the Summerland Point, Chain Valley Bay, Bardens Bay, Sugar Bay, Sunshine and Crangan Bay areas were photographed as part of a study to monitor the effects of underground coal mining on seagrass communities.

Two species of seagrass were identified in the study area, *Zostera capricorni* and *Halophila ovalis. Zostera capricorni* had the greatest coverage and was often found along the entire length of the transects. The growth form of *Zostera capricorni* was predominantly short leaved in the Summerland Point, Frying Pan Bay, Sugar Bay, Sunshine and Crangan Bay regions, and long leaved in Chain Valley Bay and Bardens Bay. *Halophila ovalis* was found predominantly along the water's edge, and was observed at many sites including A5, E15, E6 and A4.

At the time of the survey, total seagrass cover ranged from 79.8% to 96.7% on the northern shore of Summerland Point and Frying Pan Bay; 84.1% to 92.9% along the western shore of Summerland Point; 74.4% to 92.3% on the western shore of Summerland Point; 72.9% to 91.8%

in Chain Valley Bay; 69.5% to 95.1% in Bardens Bay; 68.8% to 99.9% in Sugar Bay; 76.4% to 92.2% off Sunshine and 93.7% to 99.0% in Crangan Bay.

The seagrasses were mostly lightly to heavily fouled with epiphytic algae. Transects that had seagrasses encrusted with high levels of epiphytic algae and sediment include transects C2, E6, E7, E8, E9, A3, A4, T2, T3 and T4.

Seagrass cover continues to be high and consistent, with nine transects showing a decline in seagrass coverage in the June-July 2024 survey compared to previous years. Changes in coverage were due to several factors including increased boat activities in vicinity of experimental transects; deposition of fine sediment on seagrass beds due to prolonged wind and wave action and rainfall events; and a decline in salinity concentrations causing stress reactions in seagrasses.

Over the years, the increase in percentage cover of seagrasses marks the decrease in bare ground in the study area. Bare ground decreased from 38.13 percent in 2011 to 9.71 percent in 2024 in the Summerland Point, Frying Pan Bay and Sugar Bay region. In the Chain Valley Bay region, bare ground decreased from 13.32 percent in 2011 to 6.41 percent in 2023, with a slight increase to 10.71 percent in 2024. Seagrass cover in Bardens Bay has mostly been around 90 percent since 2014. However, there was an increase in bare ground from 8.8% in 2023 to 13.27% in 2024. In the Crangan Bay study area, bare ground decreased from 26.98 percent in 2011 to 2.39 percent in 2024.

The annual seagrass monitoring survey found the size and distribution of seagrass beds had not been affected by subsidence, and there was no significant change in the composition of distribution of seagrass species within the seagrass beds. The results from the June-July 2024 seagrass monitoring programme therefore shows compliance to the Schedule 4 Environmental Conditions - underground mining of SSD5465 - Modification 4 in the Performance Measures table with respect to the Subsidence Impact Performance Measure for Natural Environment Biodiversity - Seagrass which display nil to minor environmental consequences due to underground mining.

The below summary of findings outline the historical basis for this compliance statement and the compliance is detailed in the table below.

Condition from SSD5465 - Mod 4	Compliance Status and Comments
Schedule 4 Environmental Conditions - underground mining Performance Measures - Natural Environment Biodiversity - Benthic Communities. Subsidence Impact Performance Measure - Minor environmental consequences, including minor changes composition and/or distribution.	Compliant - See section 16 - Conclusions
Measurements undertaken by generally accepted methods.	Compliant - See section 4 and 5
Measurements Methods fully described.	Compliant - See section 4 and 5

13. References

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Appendix 1 Analysis of photographs for each transect (June 2024)

Northern Shore Summerland Point, Frying Pan Bay

Transect C5									Surveyed 27 June 2024		
		Seagrasses				Algae					
Long=1 Short=2	Fouling 0,1,2	*Zostera* % cover	*Halophila* % cover	Total Seagrasses	*Codium* % cover	*Cystoseira* % cover	*Caulerpa* % cover	% algae Filamentous	Total Algae	% Bare Ground	Total Cover
1	1	85	0	85	0	0	0	0	0	15	85
1	1	85	0	85	0	0	0	0	0	15	85
1	1	85	0	85	0	0	0	0	0	15	85
1	1	65	0	65	0	0	0	0	0	35	65
1	1	95	0	95	0	0	0	0	0	5	95
1	1	75	0	75	0	0	0	0	0	25	75
1	1	100	0	100	0	0	0	0	0	0	100
1	1	95	0	95	0	0	0	0	0	5	95
1	1	95	0	95	0	0	0	0	0	5	95
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	95	0	95	0	0	0	0	0	5	95
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	90	0	90	0	0	0	0	0	10	90
2	1	90	0	90	0	0	0	0	0	10	90
2	1	100	0	100	0	0	0	0	0	0	100
2	1	95	0	95	0	5	0	0	5	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	90	5	95	0	0	0	0	0	5	95
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	95	0	95	0	0	0	0	0	5	95
2	1	100	0	100	0	0	0	0	0	0	100
2	1	90	0	90	0	0	0	0	0	10	90
2	1	95	0	95	0	0	0	0	0	5	95
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	90	0	90	0	0	0	0	0	10	90
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	90	0	90	0	10	0	0	10	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	80	0	80	0	0	0	0	0	20	80
2	1	95	0	95	0	5	0	0	5	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	95	0	95	0	5	0	0	5	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
Average		**96.6**	**0.1**	**96.7**	**0.0**	**0.4**	**0.0**	**0.0**	**0.4**	**2.9**	**97.1**

Transect C6									**Surveyed 28 June 2024**		
			Seagrasses			**Algae**					
Long=1 Short=2	**Fouling 0,1,2**	***Zostera* % cover**	***Halophila* % cover**	**Total Seagrasses**	***Codium* % cover**	***Cystoseira* % cover**	***Caulerpa* % cover**	**% algae Filamentous**	**Total Algae**	**% Bare Ground**	**Total Cover**
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	65	0	65	0	0	0	0	0	35	65
1	1	30	0	30	0	0	0	0	0	70	30
1	1	30	0	30	0	0	0	0	0	70	30
1	1	95	0	95	0	0	0	0	0	5	95
1	1	90	0	90	0	5	0	0	5	5	95
1	1	90	0	90	0	0	0	0	0	10	90
1	1	95	0	95	0	0	0	0	0	5	95
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	90	0	90	0	0	0	0	0	10	90
1	2	100	0	100	0	0	0	0	0	0	100
1	2	100	0	100	0	0	0	0	0	0	100
1	2	100	0	100	0	0	0	0	0	0	100
1	2	100	0	100	0	0	0	0	0	0	100
1	2	100	0	100	0	0	0	0	0	0	100
1	2	100	0	100	0	0	0	0	0	0	100
2	1	95	0	95	0	0	0	0	0	5	95
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	85	0	85	0	0	0	0	0	15	85
2	1	90	0	90	0	0	0	0	0	10	90
2	1	95	0	95	0	0	0	0	0	5	95
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	90	0	90	0	0	0	0	0	10	90
2	1	85	0	85	0	0	0	0	0	15	85
2	1	85	0	85	0	0	0	0	0	15	85
2	1	85	0	85	0	0	0	0	0	15	85
2	1	70	0	70	0	0	0	0	0	30	70
2	1	90	0	90	0	0	0	0	0	10	90
2	1	90	0	90	0	0	0	0	0	10	90
2	1	90	0	90	0	0	0	0	0	10	90
2	1	100	0	100	0	0	0	0	0	0	100
2	1	95	0	95	0	0	0	0	0	5	95
2	1	100	0	100	0	0	0	0	0	0	100
2	1	90	0	90	0	5	0	0	5	5	95
2	1	90	0	90	0	0	0	5	5	5	95
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
Average		**94.3**	**0.0**	**94.3**	**0.0**	**0.1**	**0.0**	**0.1**	**0.2**	**5.5**	**94.5**

Transect F1 **Surveyed 27 June 2024**

			Seagrasses			Algae					
Long=1 Short=2	**Fouling 0,1,2**	***Zostera* % cover**	***Halophila* % cover**	**Total seagrasses**	***Codium* % cover**	***Cystoseira* % cover**	***Caulerpa* % cover**	**% algae Filamentous**	**Total Algae**	**% Bare Ground**	**Total Cover**
1	0	95	0	95	0	0	0	0	0	5	95
1	0	100	0	100	0	0	0	0	0	0	100
1	0	100	0	100	0	0	0	0	0	0	100
1	0	100	0	100	0	0	0	0	0	0	100
1	0	100	0	100	0	0	0	0	0	0	100
1	0	100	0	100	0	0	0	0	0	0	100
1	0	100	0	100	0	0	0	0	0	0	100
1	0	100	0	100	0	0	0	0	0	0	100
1	0	100	0	100	0	0	0	0	0	0	100
1	0	100	0	100	0	0	0	0	0	0	100
1	0	80	0	80	0	0	0	0	0	20	80
1	0	100	0	100	0	0	0	0	0	0	100
1	0	100	0	100	0	0	0	0	0	0	100
1	0	100	0	100	0	0	0	0	0	0	100
1	0	95	0	95	0	5	0	0	5	0	100
1	0	90	0	90	0	10	0	0	10	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	70	5	75	0	5	0	0	5	20	80
1	1	95	0	95	0	0	0	0	0	5	95
1	1	90	0	90	0	0	0	0	0	10	90
1	1	100	0	100	0	0	0	0	0	0	100
1	1	90	0	90	0	0	0	0	0	10	90
1	1	95	0	95	0	0	0	0	0	5	95
1	1	95	0	95	0	0	0	0	0	5	95
1	1	95	0	95	0	0	0	0	0	5	95
1	1	70	0	70	0	0	0	0	0	30	70
1	1	80	0	80	0	0	0	0	0	20	80
1	1	90	0	90	0	0	0	0	0	10	90
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
2	0	80	0	80	0	20	0	0	20	0	100
2	0	95	0	95	0	5	0	0	5	0	100
2	0	80	0	80	0	0	0	0	0	20	80
2	1	80	0	80	0	0	0	0	0	20	80
2	1	85	0	85	0	0	0	0	0	15	85
2	1	80	5	85	0	0	0	0	0	15	85
2	1	80	0	80	0	0	0	0	0	20	80
2	1	85	0	85	0	0	0	0	0	15	85
2	1	90	0	90	0	0	0	0	0	10	90
2	1	90	0	90	0	5	0	0	5	5	95
2	1	90	0	90	0	5	0	0	5	5	95
2	1	100	0	100	0	0	0	0	0	0	100
2	1	90	0	90	0	5	0	0	5	5	95
2	1	80	0	80	0	20	0	0	20	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	90	0	90	0	0	0	0	0	10	90
2	1	95	0	95	0	0	0	0	0	5	95
2	1	80	0	80	0	5	0	0	5	15	85
2	1	95	0	95	0	0	0	0	0	5	95
2	1	80	0	80	0	0	0	0	0	20	80
2	1	95	0	95	0	0	0	0	0	5	95
2	1	85	0	85	0	5	0	0	5	10	90
2	1	60	0	60	0	30	0	0	30	10	90
2	1	90	0	90	0	0	0	0	0	10	90
2	1	85	0	85	0	5	0	0	5	10	90
2	1	95	0	95	0	0	0	0	0	5	95
2	1	90	0	90	0	5	0	0	5	5	95
2	1	70	0	70	0	30	0	0	30	0	100
2	1	70	0	70	0	30	0	0	30	0	100
2	1	70	0	70	0	30	0	0	30	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	85	5	90	0	10	0	0	10	0	100
2	1	95	0	95	0	5	0	0	5	0	100
2	1	95	0	95	0	0	0	0	0	5	95
2	1	75	0	75	0	0	0	0	0	25	75
2	1	95	0	95	0	0	0	0	0	5	95
Average		**90.1**	**0.2**	**90.4**	**0.0**	**3.5**	**0.0**	**0.0**	**3.5**	**6.2**	**93.8**

Transect F2 **Surveyed 27 June 2024**

		Seagrasses			Algae						
Long=1 Short=2	**Fouling 0,1,2**	***Zostera* % cover**	***Halophila* % cover**	**Total seagrasses**	***Codium* % cover**	***Cystoseira* % cover**	***Caulerpa* % cover**	**% algae Filamentous**	**Total Algae**	**% Bare Ground**	**Total Cover**
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
2	0	65	0	65	0	0	0	0	0	35	65
2	0	5	0	5	0	0	0	0	0	95	5
2	0	5	0	5	0	0	0	0	0	95	5
2	0	5	0	5	0	0	0	0	0	95	5
2	0	85	0	85	0	0	0	0	0	15	85
2	0	90	0	90	0	0	0	0	0	10	90
2	0	85	0	85	0	0	0	0	0	15	85
2	0	85	0	85	0	0	0	0	0	15	85
2	0	90	0	90	0	0	0	0	0	10	90
2	0	90	0	90	0	0	0	0	0	10	90
2	0	5	0	5	0	0	0	0	0	95	5
2	0	85	0	85	0	0	0	0	0	15	85
2	0	75	0	75	0	5	0	0	5	20	80
2	0	65	0	65	0	0	0	0	0	35	65
2	0	75	0	75	0	0	0	0	0	25	75
2	1	85	0	85	0	0	0	0	0	15	85
2	1	90	0	90	0	0	0	0	0	10	90
2	1	85	0	85	0	0	0	0	0	15	85
2	1	30	0	30	0	0	0	0	0	70	30
2	1	55	0	55	0	0	0	0	0	45	55
2	1	90	0	90	0	0	0	0	0	10	90
2	1	95	0	95	0	0	0	0	0	5	95
2	1	85	0	85	0	0	0	0	0	15	85
2	1	80	0	80	0	0	0	0	0	20	80
2	1	80	0	80	0	0	0	0	0	20	80
2	1	85	0	85	0	0	0	0	0	15	85
2	1	90	0	90	0	0	0	0	0	10	90
2	1	95	0	95	0	0	0	0	0	5	95
2	1	80	0	80	0	5	0	0	5	15	85
2	1	80	0	80	0	0	0	0	0	20	80
2	1	80	0	80	0	0	0	0	0	20	80
2	1	75	0	75	0	0	0	0	0	25	75
2	1	75	0	75	0	0	0	0	0	25	75
2	1	45	0	45	0	10	0	0	10	45	55
2	1	60	0	60	0	0	0	0	0	40	60
2	1	70	0	70	0	0	0	0	0	30	70
2	1	80	0	80	0	0	0	0	0	20	80
2	1	90	0	90	0	0	0	0	0	10	90
2	1	90	0	90	0	0	0	0	0	10	90
2	1	75	0	75	0	15	0	0	15	10	90
2	1	90	0	90	0	0	0	0	0	10	90
2	1	80	0	80	0	10	0	0	10	10	90
2	1	85	0	85	0	5	0	0	5	10	90
2	1	80	0	80	0	0	0	0	0	20	80
2	1	75	0	75	0	0	0	0	0	25	75
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	95	0	95	0	0	0	0	0	5	95
2	1	90	0	90	0	0	0	0	0	10	90
2	1	85	0	85	0	10	0	0	10	5	95
2	1	95	0	95	0	0	0	0	0	5	95
2	1	95	0	95	0	0	0	0	0	5	95
2	1	80	0	80	0	0	0	0	0	20	80
2	1	90	0	90	0	0	0	0	0	10	90
2	1	95	0	95	0	5	0	0	5	0	100
2	1	95	0	95	0	0	0	0	0	5	95
2	1	100	0	100	0	0	0	0	0	0	100
2	1	95	0	95	0	5	0	0	5	0	100
2	1	95	0	95	0	5	0	0	5	0	100
2	1	100	0	100	0	0	0	0	0	0	100
Average		**80.5**	**0.0**	**80.5**	**0.0**	**1.1**	**0.0**	**0.0**	**1.1**	**18.4**	**81.6**

Transect F3											Surveyed 27 June 2024
		Seagrasses				Algae					
Long=1 Short=2	Fouling 0,1,2	*Zostera* % cover	*Halophila* % cover	Total Seagrasses	*Codium* % cover	*Cystoseira* % cover	*Caulerpa* % cover	% algae Filamentous	Total Algae	% Bare Ground	Total Cover
1	1	100	0	100	0	0	0	0	0	0	100
1	1	85	0	85	0	0	0	0	0	15	85
1	1	80	0	80	0	0	0	0	0	20	80
1	1	65	0	65	0	0	0	0	0	35	65
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
2	1	75	0	75	0	0	0	0	0	25	75
2	1	75	0	75	0	0	0	0	0	25	75
2	1	30	0	30	0	0	0	0	0	70	30
2	1	15	50	65	0	0	0	0	0	35	65
2	1	30	35	65	0	0	0	0	0	35	65
2	1	10	75	85	0	0	0	0	0	15	85
2	1	40	40	80	0	0	0	0	0	20	80
2	1	80	10	90	0	0	0	0	0	10	90
2	1	95	0	95	0	0	0	0	0	5	95
2	1	95	0	95	0	0	0	0	0	5	95
2	1	95	0	95	0	0	0	0	0	5	95
2	1	90	0	90	0	0	0	0	0	10	90
2	1	90	0	90	0	0	0	0	0	10	90
2	1	90	0	90	0	0	0	0	0	10	90
2	1	90	0	90	0	0	0	0	0	10	90
2	1	100	0	100	0	0	0	0	0	0	100
2	1	90	0	90	0	0	0	0	0	10	90
2	1	95	0	95	0	0	0	0	0	5	95
2	1	100	0	100	0	0	0	0	0	0	100
2	1	95	0	95	0	0	0	0	0	5	95
2	1	100	0	100	0	0	0	0	0	0	100
2	1	95	0	95	0	0	0	0	0	5	95
2	1	90	5	95	0	0	0	0	0	5	95
2	1	100	0	100	0	0	0	0	0	0	100
2	1	85	0	85	0	0	0	0	0	15	85
2	1	95	0	95	0	0	0	0	0	5	95
2	1	85	0	85	0	0	0	0	0	15	85
2	1	95	0	95	0	0	0	0	0	5	95
2	1	95	0	95	0	0	0	0	0	5	95
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
Average		90.4	3.2	93.6	0.0	0.0	0.0	0.0	0.0	6.4	93.6

Transect F4 **Surveyed 27 June 2024**

		Seagrasses			Algae						
Long=1 Short=2	Fouling 0,1,2	*Zostera* % cover	*Halophila* % cover	Total Seagrasses	*Codium* % cover	*Cystoseira* % cover	*Caulerpa* % cover	% algae Filamentous	Total Algae	% Bare Ground	Total Cover
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	95	0	95	0	0	0	0	0	5	95
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	90	0	90	0	0	0	0	0	10	90
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
2	1	65	0	65	0	0	0	0	0	35	65
2	1	75	0	75	0	0	0	0	0	25	75
2	1	60	0	60	0	0	0	0	0	40	60
2	1	60	0	60	0	0	0	0	0	40	60
2	1	65	0	65	0	0	0	0	0	35	65
2	1	75	0	75	0	0	0	0	0	25	75
2	1	45	0	45	0	0	0	0	0	55	45
2	1	65	0	65	0	0	0	0	0	35	65
2	1	90	0	90	0	0	0	0	0	10	90
2	1	95	0	95	0	0	0	0	0	5	95
2	1	90	0	90	0	0	0	0	0	10	90
2	1	50	0	50	0	0	0	0	0	50	50
2	1	80	0	80	0	0	0	0	0	20	80
2	1	60	0	60	0	0	0	0	0	40	60
2	1	70	0	70	0	0	0	0	0	30	70
2	1	90	0	90	0	0	0	0	0	10	90
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	95	0	95	0	0	0	0	0	5	95
2	1	95	0	95	0	0	0	0	0	5	95
2	1	95	0	95	0	0	0	0	0	5	95
2	1	95	0	95	0	0	0	0	0	5	95
2	1	95	0	95	0	0	0	0	0	5	95
2	1	90	0	90	0	0	0	0	0	10	90
2	1	95	0	95	0	0	0	0	0	5	95
2	1	95	0	95	0	0	0	0	0	5	95
2	1	95	0	95	0	0	0	0	0	5	95
2	1	100	0	100	0	0	0	0	0	0	100
2	1	95	0	95	0	0	0	0	0	5	95
2	1	90	0	90	0	0	0	0	0	10	90
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	95	0	95	0	0	0	0	0	5	95
2	1	95	0	95	0	0	0	0	0	5	95
2	1	95	0	95	0	0	0	0	0	5	95
2	1	90	0	90	0	0	0	0	0	10	90
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	95	0	95	0	0	0	0	0	5	95
2	1	100	0	100	0	0	0	0	0	0	100
Average		**91.5**	**0.0**	**91.5**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**8.5**	**91.5**

Transect F5									Surveyed 27 June 2024		
		Seagrasses			Algae						
Long=1	Fouling	*Zostera*	*Halophila*	Total	*Codium*	*Cystoseira*	*Caulerpa*	% algae	Total	% Bare	Total
Short=2	0,1,2	% cover	% cover	Seagrasses	% cover	% cover	% cover	Filamentous	Algae	Ground	Cover
2	0	60	0	60	0	0	0	0	0	40	60
2	0	75	0	75	0	0	0	0	0	25	75
2	0	75	0	75	0	0	0	0	0	25	75
2	0	80	0	80	0	0	0	0	0	20	80
2	0	90	0	90	0	0	0	0	0	10	90
2	0	95	0	95	0	0	0	0	0	5	95
2	0	90	0	90	0	0	0	0	0	10	90
2	0	90	0	90	0	0	0	0	0	10	90
2	0	95	0	95	0	0	0	0	0	5	95
2	0	95	0	95	0	0	0	0	0	5	95
2	0	100	0	100	0	0	0	0	0	0	100
2	0	95	0	95	0	0	0	0	0	5	95
2	0	80	0	80	0	0	0	0	0	20	80
2	0	95	0	95	0	0	0	0	0	5	95
2	0	90	5	95	0	0	0	0	0	5	95
2	0	100	0	100	0	0	0	0	0	0	100
2	0	80	0	80	0	0	0	0	0	20	80
2	0	85	0	85	0	0	0	0	0	15	85
2	0	85	0	85	0	0	0	0	0	15	85
2	0	85	0	85	0	0	0	0	0	15	85
2	0	95	0	95	0	0	0	0	0	5	95
2	0	70	0	70	0	0	0	0	0	30	70
2	0	70	0	70	0	0	0	0	0	30	70
2	0	85	0	85	0	0	0	0	0	15	85
2	0	85	0	85	0	0	0	0	0	15	85
2	0	85	0	85	0	0	0	0	0	15	85
2	0	85	0	85	0	0	0	0	0	15	85
2	0	100	0	100	0	0	0	0	0	0	100
2	0	90	0	90	0	0	0	0	0	10	90
2	0	95	0	95	0	0	0	0	0	5	95
2	0	100	0	100	0	0	0	0	0	0	100
2	0	100	0	100	0	0	0	0	0	0	100
2	0	95	0	95	0	0	0	0	0	5	95
2	0	95	0	95	0	0	0	0	0	5	95
2	0	90	0	90	0	0	0	0	0	10	90
2	0	90	0	90	0	0	0	0	0	10	90
2	0	90	0	90	0	0	0	0	0	10	90
2	0	95	0	95	0	0	0	0	0	5	95
2	0	80	0	80	0	0	0	0	0	20	80
2	0	80	0	80	0	0	0	0	0	20	80
2	0	90	0	90	0	0	0	0	0	10	90
2	0	85	0	85	0	0	0	0	0	15	85
2	0	95	0	95	0	0	0	0	0	5	95
2	0	95	0	95	0	0	0	0	0	5	95
2	0	95	0	95	0	0	0	0	0	5	95
2	0	100	0	100	0	0	0	0	0	0	100
2	0	95	0	95	0	0	0	0	0	5	95
2	0	95	0	95	0	0	0	0	0	5	95
2	0	90	0	90	0	0	0	0	0	10	90
2	0	95	0	95	0	0	0	0	0	5	95
2	0	90	0	90	0	0	0	0	0	10	90
2	0	85	0	85	0	0	0	0	0	15	85
2	0	100	0	100	0	0	0	0	0	0	100
2	0	85	0	85	0	0	0	0	0	15	85
2	0	85	0	85	0	0	0	0	0	15	85
2	0	85	5	90	0	0	0	0	0	10	90
2	0	85	0	85	0	0	0	0	0	15	85
2	0	90	0	90	0	0	0	0	0	10	90
2	0	90	0	90	0	0	0	0	0	10	90
2	0	90	0	90	0	0	0	0	0	10	90
2	0	95	0	95	0	0	0	0	0	5	95
2	1	95	0	95	0	0	0	0	0	5	95
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	90	10	100	0	0	0	0	0	0	100
2	1	90	5	95	0	0	0	0	0	5	95
2	1	85	10	95	0	0	0	0	0	5	95
Average		89.6	0.5	90.1	0.0	0.0	0.0	0.0	0.0	9.9	90.1

Transect F6 **Surveyed 27 June 2024**

		Seagrasses			Algae						
Long=1 Short=2	Fouling 0,1,2	*Zostera* % cover	*Halophila* % cover	Total Seagrasses	*Codium* % cover	*Cystoseira* % cover	*Caulerpa* % cover	% algae Filamentous	Total Algae	% Bare Ground	Total Cover
2	0	85	0	85	0	0	0	0	0	15	85
2	0	100	0	100	0	0	0	0	0	0	100
2	0	100	0	100	0	0	0	0	0	0	100
2	0	100	0	100	0	0	0	0	0	0	100
2	0	90	0	90	0	0	0	0	0	10	90
2	0	95	0	95	0	0	0	0	0	5	95
2	0	95	0	95	0	0	0	0	0	5	95
2	0	90	0	90	0	0	0	0	0	10	90
2	0	90	0	90	0	0	0	0	0	10	90
2	0	95	0	95	0	0	0	0	0	5	95
2	0	95	0	95	0	0	0	0	0	5	95
2	0	95	0	95	0	0	0	0	0	5	95
2	0	95	0	95	0	0	0	0	0	5	95
2	0	95	0	95	0	0	0	0	0	5	95
2	0	100	0	100	0	0	0	0	0	0	100
2	0	95	0	95	0	0	0	0	0	5	95
2	0	90	0	90	0	0	0	0	0	10	90
2	0	85	0	85	0	0	0	0	0	15	85
2	0	85	0	85	0	0	0	0	0	15	85
2	0	90	0	90	0	0	0	0	0	10	90
2	0	90	0	90	0	0	0	0	0	10	90
2	0	95	0	95	0	0	0	0	0	5	95
2	0	95	0	95	0	0	0	0	0	5	95
2	0	95	0	95	0	0	0	0	0	5	95
2	0	95	0	95	0	0	0	0	0	5	95
2	0	100	0	100	0	0	0	0	0	0	100
2	0	95	0	95	0	0	0	0	0	5	95
2	0	100	0	100	0	0	0	0	0	0	100
2	0	100	0	100	0	0	0	0	0	0	100
2	0	100	0	100	0	0	0	0	0	0	100
2	0	100	0	100	0	0	0	0	0	0	100
2	0	100	0	100	0	0	0	0	0	0	100
2	0	100	0	100	0	0	0	0	0	0	100
2	0	100	0	100	0	0	0	0	0	0	100
2	0	100	0	100	0	0	0	0	0	0	100
2	0	95	0	95	0	0	0	0	0	5	95
2	0	90	0	90	0	0	0	0	0	10	90
2	0	90	0	90	0	0	0	0	0	10	90
2	0	95	0	95	0	0	0	0	0	5	95
2	0	100	0	100	0	0	0	0	0	0	100
2	0	100	0	100	0	0	0	0	0	0	100
2	0	95	0	95	0	0	0	0	0	5	95
2	0	90	0	90	0	0	0	0	0	10	90
2	0	90	0	90	0	0	0	0	0	10	90
2	0	95	0	95	0	0	0	0	0	5	95
2	0	95	0	95	0	0	0	0	0	5	95
2	0	95	0	95	0	0	0	0	0	5	95
2	0	85	0	85	0	0	0	0	0	15	85
2	0	85	0	85	0	0	0	0	0	15	85
2	0	90	0	90	0	0	0	0	0	10	90
2	0	85	0	85	0	0	0	0	0	15	85
2	0	95	0	95	0	0	0	0	0	5	95
2	0	90	0	90	0	0	0	0	0	10	90
2	0	85	0	85	0	0	0	0	0	15	85
2	0	85	0	85	0	0	0	0	0	15	85
2	0	90	0	90	0	0	0	0	0	10	90
2	0	90	0	90	0	0	0	0	0	10	90
2	0	85	0	85	0	0	0	0	0	15	85
2	0	85	0	85	0	0	0	0	0	15	85
2	0	70	0	70	0	0	0	0	0	30	70
2	1	90	0	90	0	0	0	0	0	10	90
2	1	95	0	95	0	0	0	0	0	5	95
2	1	90	0	90	0	0	0	0	0	10	90
2	1	80	0	80	0	0	0	0	0	20	80
2	1	90	2	92	0	0	0	0	0	8	92
2	1	95	2	97	0	0	0	0	0	3	97
2	1	95	0	95	0	0	0	0	0	5	95
2	1	90	0	90	0	0	0	0	0	10	90
Average		**92.7**	**0.1**	**92.8**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**7.2**	**92.8**

Transect F7 **Surveyed 27 June 2024**

		Seagrasses			Algae						
Long=1 Short=2	**Fouling 0,1,2**	***Zostera* % cover**	***Halophila* % cover**	**Total Seagrasses**	***Codium* % cover**	***Cystoseira* % cover**	***Caulerpa* % cover**	**% algae Filamentous**	**Total Algae**	**% Bare Ground**	**Total Cover**
2	0	80	15	95	0	0	0	0	0	5	95
2	0	85	0	85	0	0	0	0	0	15	85
2	0	75	0	75	0	0	0	0	0	25	75
2	0	75	0	75	0	0	0	0	0	25	75
2	0	95	0	95	0	0	0	0	0	5	95
2	0	80	0	80	0	0	0	0	0	20	80
2	0	70	0	70	0	0	0	0	0	30	70
2	0	50	0	50	0	0	0	0	0	50	50
2	0	80	0	80	0	0	0	0	0	20	80
2	0	80	0	80	0	0	0	0	0	20	80
2	0	85	0	85	0	0	0	0	0	15	85
2	0	75	0	75	0	0	0	0	0	25	75
2	0	95	0	95	0	0	0	0	0	5	95
2	0	95	0	95	0	0	0	0	0	5	95
2	0	85	0	85	0	0	0	0	0	15	85
2	0	80	0	80	0	0	0	0	0	20	80
2	0	80	0	80	0	0	0	0	0	20	80
2	0	95	0	95	0	0	0	0	0	5	95
2	0	100	0	100	0	0	0	0	0	0	100
2	0	100	0	100	0	0	0	0	0	0	100
2	0	100	0	100	0	0	0	0	0	0	100
2	0	100	0	100	0	0	0	0	0	0	100
2	0	100	0	100	0	0	0	0	0	0	100
2	0	100	0	100	0	0	0	0	0	0	100
2	0	100	0	100	0	0	0	0	0	0	100
2	0	95	0	95	0	0	0	0	0	5	95
2	0	90	0	90	0	0	0	0	0	10	90
2	0	80	0	80	0	0	0	0	0	20	80
2	0	80	0	80	0	0	0	0	0	20	80
2	0	85	0	85	0	0	0	0	0	15	85
2	0	80	0	80	0	0	0	0	0	20	80
2	0	70	0	70	0	0	0	0	0	30	70
2	0	70	0	70	0	0	0	0	0	30	70
2	0	80	0	80	0	0	0	0	0	20	80
2	0	75	0	75	0	0	0	0	0	25	75
2	0	75	0	75	0	0	0	0	0	25	75
2	0	75	15	90	0	0	0	0	0	10	90
2	0	85	0	85	0	0	0	0	0	15	85
2	0	80	5	85	0	0	0	0	0	15	85
2	0	90	5	95	0	0	0	0	0	5	95
2	0	95	5	100	0	0	0	0	0	0	100
2	0	100	0	100	0	0	0	0	0	0	100
2	0	100	0	100	0	0	0	0	0	0	100
2	0	100	0	100	0	0	0	0	0	0	100
2	0	100	0	100	0	0	0	0	0	0	100
2	0	100	0	100	0	0	0	0	0	0	100
2	0	85	10	95	0	0	0	0	0	5	95
2	0	80	15	95	0	0	0	0	0	5	95
2	0	75	0	75	0	0	0	0	0	25	75
2	0	100	0	100	0	0	0	0	0	0	100
2	0	95	0	95	0	0	0	0	0	5	95
2	0	95	0	95	0	0	0	0	0	5	95
2	0	90	0	90	0	0	0	0	0	10	90
2	0	100	0	100	0	0	0	0	0	0	100
2	0	95	0	95	0	0	0	0	0	5	95
2	0	85	0	85	0	0	0	0	0	15	85
2	0	85	0	85	0	0	0	0	0	15	85
2	0	95	0	95	0	0	0	0	0	5	95
2	0	95	0	95	0	0	0	0	0	5	95
2	0	95	0	95	0	0	0	0	0	5	95
2	0	95	0	95	0	0	0	0	0	5	95
2	0	95	0	95	0	0	0	0	0	5	95
2	0	100	0	100	0	0	0	0	0	0	100
2	0	100	0	100	0	0	0	0	0	0	100
2	0	90	0	90	0	0	0	0	0	10	90
2	0	90	0	90	0	0	0	0	0	10	90
2	2	95	0	95	0	0	0	0	0	5	95
2	2	80	0	80	0	0	0	0	0	20	80
Average		**87.9**	**1.0**	**89.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**11.0**	**89.0**

Western shore Summerland Point

Transect E7											Surveyed 27 June 2024
		Seagrasses			Algae						
Long=1	Fouling	*Zostera*	*Halophila*	Total	*Codium*	*Cystoseira*	*Caulerpa*	% algae	Total	% Bare	Total
Short=2	0,1,2	% cover	% cover	Seagrasses	% cover	% cover	% cover	Filamentous	Algae	Ground	Cover
2	1	75	0	75	0	0	0	0	0	25	75
2	1	75	10	85	0	0	0	0	0	15	85
2	1	85	0	85	0	0	0	0	0	15	85
2	1	45	15	60	0	0	0	0	0	40	60
2	1	10	60	70	0	0	0	0	0	30	70
2	1	55	5	60	0	0	0	0	0	40	60
2	1	15	30	45	0	0	0	0	0	55	45
2	1	40	40	80	0	0	0	0	0	20	80
2	1	65	25	90	0	0	0	0	0	10	90
2	1	60	30	90	0	0	0	0	0	10	90
2	1	60	25	85	0	0	0	0	0	15	85
2	1	70	15	85	0	0	0	0	0	15	85
2	1	70	15	85	0	0	0	0	0	15	85
2	1	70	20	90	0	0	0	0	0	10	90
2	1	80	15	95	0	0	0	0	0	5	95
2	1	85	0	85	0	0	0	0	0	15	85
2	1	70	5	75	0	0	0	0	0	25	75
2	1	95	0	95	0	0	0	0	0	5	95
2	1	85	0	85	0	0	0	0	0	15	85
2	1	75	10	85	0	0	0	0	0	15	85
2	1	65	15	80	0	0	0	0	0	20	80
2	1	70	0	70	0	0	0	0	0	30	70
2	1	80	0	80	0	0	0	0	0	20	80
2	1	70	15	85	0	0	0	0	0	15	85
2	1	75	0	75	0	0	0	0	0	25	75
2	1	80	5	85	0	0	0	0	0	15	85
2	1	75	5	80	0	0	0	0	0	20	80
2	1	75	5	80	0	0	0	0	0	20	80
2	1	80	0	80	0	0	0	0	0	20	80
2	1	75	5	80	0	0	0	0	0	20	80
2	1	75	5	80	0	0	0	0	0	20	80
2	1	90	0	90	0	0	0	0	0	10	90
2	1	85	5	90	0	0	0	0	0	10	90
2	1	80	5	85	0	0	0	0	0	15	85
2	1	85	0	85	0	0	0	0	0	15	85
2	1	75	0	75	0	0	0	0	0	25	75
2	1	85	0	85	0	0	0	0	0	15	85
2	1	85	0	85	0	0	0	0	0	15	85
2	1	85	0	85	0	0	0	0	0	15	85
2	1	75	5	80	0	0	0	0	0	20	80
2	1	85	5	90	0	0	0	0	0	10	90
2	1	85	5	90	0	0	0	0	0	10	90
2	1	80	5	85	0	0	0	0	0	15	85
2	1	90	0	90	0	0	0	0	0	10	90
2	1	85	0	85	0	0	0	0	0	15	85
2	1	85	0	85	0	0	0	0	0	15	85
2	1	85	5	90	0	0	0	0	0	10	90
2	1	90	0	90	0	0	0	0	0	10	90
2	1	85	5	90	0	0	0	0	0	10	90
2	1	80	0	80	0	0	0	0	0	20	80
2	1	85	0	85	0	0	0	0	0	15	85
2	1	85	0	85	0	0	0	0	0	15	85
2	1	100	0	100	0	0	0	0	0	0	100
2	1	95	0	95	0	0	0	0	0	5	95
2	1	85	0	85	0	5	0	0	5	10	90
2	1	100	0	100	0	0	0	0	0	0	100
2	1	95	0	95	0	0	0	0	0	5	95
2	1	95	0	95	0	0	0	0	0	5	95
2	1	90	0	90	0	0	0	0	0	10	90
2	1	95	0	95	0	0	0	0	0	5	95
2	1	95	0	95	0	0	0	0	0	5	95
2	1	90	0	90	0	0	0	0	0	10	90
2	1	85	0	85	0	0	0	0	0	15	85
2	1	90	0	90	0	0	0	0	0	10	90
2	1	90	0	90	0	0	0	0	0	10	90
2	1	90	0	90	0	0	0	0	0	10	90
2	1	70	0	70	0	0	0	0	0	30	70
2	1	70	0	70	0	0	0	0	0	30	70
Average		78.0	6.1	84.1	0.0	0.1	0.0	0.0	0.1	15.8	84.2

Transect T1 **Surveyed 27 June 2024**

		Seagrasses			Algae						
Long=1 Short=2	**Fouling 0,1,2**	***Zostera* % cover**	***Halophila* % cover**	**Total Seagrasses**	***Codium* % cover**	***Cystoseira* % cover**	***Caulerpa* % cover**	**% algae *Colpomenia***	**Total Algae**	**% Bare Ground**	**Total Cover**
1	0	95	0	95	0	0	0	0	0	5	95
1	0	90	0	90	0	0	0	0	0	10	90
1	0	90	0	90	0	0	0	0	0	10	90
1	0	95	0	95	0	0	0	0	0	5	95
1	0	95	0	95	0	0	0	0	0	5	95
1	0	100	0	100	0	0	0	0	0	0	100
1	0	100	0	100	0	0	0	0	0	0	100
1	0	90	0	90	0	0	0	5	5	5	95
1	0	100	0	100	0	0	0	0	0	0	100
1	0	100	0	100	0	0	0	0	0	0	100
1	0	100	0	100	0	0	0	0	0	0	100
1	0	100	0	100	0	0	0	0	0	0	100
1	0	100	0	100	0	0	0	0	0	0	100
1	0	100	0	100	0	0	0	0	0	0	100
1	0	100	0	100	0	0	0	0	0	0	100
1	0	100	0	100	0	0	0	0	0	0	100
1	1	95	0	95	0	0	0	0	0	5	95
1	1	90	0	90	0	0	0	0	0	10	90
1	1	100	0	100	0	0	0	0	0	0	100
1	1	90	0	90	0	0	0	0	0	10	90
1	1	100	0	100	0	0	0	0	0	0	100
1	1	50	0	50	0	0	0	0	0	50	50
1	1	80	0	80	0	5	0	0	5	15	85
1	1	65	0	65	0	0	0	0	0	35	65
2	0	65	0	65	0	0	0	0	0	35	65
2	0	65	0	65	0	0	0	0	0	35	65
2	0	65	0	65	0	0	0	0	0	35	65
2	0	65	0	65	0	0	0	0	0	35	65
2	0	75	0	75	0	0	0	0	0	25	75
2	0	85	0	85	0	0	0	0	0	15	85
2	0	80	0	80	0	5	0	0	5	15	85
2	0	80	0	80	0	0	0	0	0	20	80
2	0	90	0	90	0	0	0	0	0	10	90
2	0	95	0	95	0	0	0	0	0	5	95
2	0	90	0	90	0	0	0	0	0	10	90
2	0	95	0	95	0	0	0	0	0	5	95
2	0	90	0	90	0	0	0	0	0	10	90
2	0	90	0	90	0	0	0	0	0	10	90
2	0	80	0	80	0	0	0	0	0	20	80
2	0	90	0	90	0	5	0	0	5	5	95
2	0	90	0	90	0	0	0	0	0	10	90
2	0	80	0	80	0	0	0	0	0	20	80
2	0	90	0	90	0	0	0	0	0	10	90
2	0	80	0	80	0	0	0	0	0	20	80
2	0	90	0	90	0	0	0	0	0	10	90
2	0	75	0	75	0	0	0	0	0	25	75
2	0	95	0	95	0	5	0	0	5	0	100
2	0	95	0	95	0	0	0	0	0	5	95
2	0	90	0	90	0	0	0	0	0	10	90
2	0	85	0	85	0	0	0	0	0	15	85
2	0	85	0	85	0	0	0	0	0	15	85
2	0	95	0	95	0	0	0	0	0	5	95
2	0	90	0	90	0	0	0	0	0	10	90
2	0	95	0	95	0	0	0	0	0	5	95
2	0	90	5	95	0	0	0	0	0	5	95
2	0	95	0	95	0	0	0	0	0	5	95
2	0	100	0	100	0	0	0	0	0	0	100
2	0	95	0	95	0	0	0	0	0	5	95
2	0	90	0	90	0	5	0	0	5	5	95
2	0	95	0	95	0	0	0	0	0	5	95
2	0	95	0	95	0	0	0	0	0	5	95
2	0	70	0	70	0	10	0	5	15	15	85
2	0	80	0	80	0	0	0	0	0	20	80
2	0	75	0	75	0	5	0	5	10	15	85
2	0	75	0	75	0	0	0	0	0	25	75
2	0	75	0	75	0	5	0	0	5	20	80
2	0	75	0	75	0	0	0	0	0	25	75
2	0	80	0	80	0	0	0	0	0	20	80
Average		**87.5**	**0.1**	**87.6**	**0.0**	**0.7**	**0.0**	**0.2**	**0.9**	**11.5**	**88.5**

Transect T2 **Surveyed 27 June 2024**

		Seagrasses			Algae						
Long=1 Short=2	Fouling 0,1,2	*Zostera* % cover	*Halophila* % cover	Total Seagrasses	*Codium* % cover	*Cystoseira* % cover	*Caulerpa* % cover	% algae *Colpomenia*	Total Algae	% Bare Ground	Total Cover
2	0	90	0	90	0	0	0	0	0	10	90
2	0	90	10	100	0	0	0	0	0	0	100
2	0	90	10	100	0	0	0	0	0	0	100
2	0	85	0	85	2	0	0	0	2	13	87
2	0	100	0	100	0	0	0	0	0	0	100
2	0	100	0	100	0	0	0	0	0	0	100
2	0	100	0	100	0	0	0	0	0	0	100
2	0	100	0	100	0	0	0	0	0	0	100
2	0	100	0	100	0	0	0	0	0	0	100
2	0	100	0	100	0	0	0	0	0	0	100
2	0	95	0	95	0	0	0	0	0	5	95
2	0	95	0	95	0	0	0	0	0	5	95
2	0	65	0	65	0	0	0	0	0	35	65
2	0	65	0	65	0	0	0	10	10	25	75
2	0	50	5	55	0	0	0	5	5	40	60
2	0	65	0	65	0	0	0	0	0	35	65
2	0	65	15	80	0	0	0	0	0	20	80
2	0	75	15	90	0	0	0	0	0	10	90
2	0	75	15	90	0	0	0	0	0	10	90
2	0	85	5	90	0	5	0	0	5	5	95
2	0	75	15	90	0	0	0	0	0	10	90
2	0	65	0	65	0	0	0	0	0	35	65
2	0	65	0	65	0	0	0	5	5	30	70
2	0	75	0	75	0	0	0	0	0	25	75
2	0	90	0	90	0	0	0	0	0	10	90
2	0	90	0	90	0	0	0	0	0	10	90
2	0	95	0	95	0	0	0	0	0	5	95
2	0	100	0	100	0	0	0	0	0	0	100
2	0	100	0	100	0	0	0	0	0	0	100
2	0	95	5	100	0	0	0	0	0	0	100
2	0	100	0	100	0	0	0	0	0	0	100
2	0	100	0	100	0	0	0	0	0	0	100
2	0	100	0	100	0	0	0	0	0	0	100
2	0	100	0	100	0	0	0	0	0	0	100
2	0	90	10	100	0	0	0	0	0	0	100
2	0	95	0	95	0	0	0	0	0	5	95
2	0	90	5	95	0	0	0	0	0	5	95
2	0	95	0	95	0	0	0	0	0	5	95
2	0	90	0	90	0	0	0	0	0	10	90
2	0	90	5	95	0	0	0	0	0	5	95
2	0	80	20	100	0	0	0	0	0	0	100
2	0	90	5	95	0	0	0	0	0	5	95
2	0	90	5	95	0	0	0	0	0	5	95
2	0	90	5	95	0	0	0	0	0	5	95
2	0	100	0	100	0	0	0	0	0	0	100
2	0	50	0	50	0	15	0	0	15	35	65
2	0	90	0	90	0	5	0	0	5	5	95
2	0	100	0	100	0	0	0	0	0	0	100
2	0	100	0	100	0	0	0	0	0	0	100
2	0	100	0	100	0	0	0	0	0	0	100
2	0	100	0	100	0	0	0	0	0	0	100
2	0	100	0	100	0	0	0	0	0	0	100
2	0	90	0	90	0	0	0	0	0	10	90
2	0	95	0	95	0	0	0	0	0	5	95
2	0	95	0	95	0	0	0	0	0	5	95
2	0	65	0	65	0	0	0	15	15	20	80
2	0	65	0	65	0	0	0	0	0	35	65
2	0	65	0	65	0	0	0	0	0	35	65
2	0	80	0	80	0	0	0	0	0	20	80
2	0	90	0	90	0	0	0	0	0	10	90
2	0	90	0	90	0	0	0	0	0	10	90
2	0	90	0	90	0	0	0	0	0	10	90
2	0	95	0	95	0	0	0	0	0	5	95
2	0	85	0	85	0	0	0	0	0	15	85
2	0	85	0	85	0	0	0	0	0	15	85
2	0	100	0	100	0	0	0	0	0	0	100
2	0	100	0	100	0	0	0	0	0	0	100
2	0	100	0	100	0	0	0	0	0	0	100
Average		**87.8**	**2.2**	**90.0**	**0.0**	**0.4**	**0.0**	**0.5**	**0.9**	**9.1**	**90.9**

Transect T3										Surveyed 27 June 2024	
		Seagrasses			Algae						
Long=1 Short=2	Fouling 0,1,2	*Zostera* % cover	*Halophila* % cover	Total seagrasses	*Codium* % cover	*Cystoseira* % cover	*Caulerpa* % cover	% algae Filamentous	Total Algae	% Bare Ground	Total Cover
2	0	85	0	85	0	0	0	0	0	15	85
2	0	85	0	85	0	0	0	0	0	15	85
2	0	75	0	75	0	0	0	0	0	25	75
2	0	90	0	90	0	0	0	0	0	10	90
2	0	90	0	90	0	0	0	0	0	10	90
2	0	90	0	90	0	0	0	0	0	10	90
2	0	85	0	85	0	0	0	0	0	15	85
2	0	90	0	90	0	0	0	0	0	10	90
2	0	85	0	85	0	0	0	0	0	15	85
2	0	90	0	90	0	0	0	0	0	10	90
2	0	90	0	90	0	0	0	0	0	10	90
2	0	85	0	85	0	0	0	0	0	15	85
2	0	90	5	95	0	0	0	0	0	5	95
2	0	85	0	85	0	0	0	0	0	15	85
2	0	85	5	90	0	0	0	0	0	10	90
2	0	95	0	95	0	0	0	0	0	5	95
2	0	85	0	85	0	0	0	0	0	15	85
2	0	85	0	85	0	0	0	0	0	15	85
2	0	75	5	80	0	0	0	0	0	20	80
2	0	85	0	85	0	0	0	0	0	15	85
2	0	70	0	70	0	0	0	0	0	30	70
2	0	75	0	75	0	0	0	0	0	25	75
2	0	75	0	75	0	0	0	0	0	25	75
2	0	65	0	65	0	0	0	0	0	35	65
2	0	70	0	70	0	0	0	0	0	30	70
2	0	65	0	65	0	0	0	0	0	35	65
2	0	70	0	70	0	0	0	0	0	30	70
2	0	50	0	50	0	0	0	0	0	50	50
2	0	90	0	90	0	0	0	0	0	10	90
2	0	90	0	90	0	0	0	0	0	10	90
2	0	95	0	95	0	0	0	0	0	5	95
2	0	90	0	90	0	0	0	0	0	10	90
2	0	85	0	85	0	0	0	0	0	15	85
2	0	95	0	95	0	0	0	0	0	5	95
2	0	80	0	80	0	0	0	0	0	20	80
2	0	80	0	80	0	0	0	0	0	20	80
2	0	80	0	80	0	0	0	0	0	20	80
2	0	80	0	80	0	0	0	0	0	20	80
2	0	85	0	85	0	0	0	0	0	15	85
2	0	85	0	85	0	0	0	0	0	15	85
2	0	85	0	85	0	0	0	0	0	15	85
2	0	80	0	80	0	0	0	0	0	20	80
2	0	80	0	80	0	0	0	0	0	20	80
2	0	90	0	90	0	0	0	0	0	10	90
2	0	90	0	90	0	0	0	0	0	10	90
2	0	90	0	90	0	0	0	0	0	10	90
2	0	90	0	90	0	0	0	0	0	10	90
2	0	90	0	90	0	0	0	0	0	10	90
2	0	80	0	80	0	0	0	0	0	20	80
2	0	90	0	90	0	0	0	0	0	10	90
2	0	90	0	90	0	0	0	0	0	10	90
2	0	90	0	90	0	0	0	0	0	10	90
2	0	85	0	85	0	0	0	0	0	15	85
2	0	90	0	90	0	0	0	0	0	10	90
2	0	85	0	85	0	0	0	0	0	15	85
2	0	90	0	90	0	0	0	0	0	10	90
2	0	90	0	90	0	0	0	0	0	10	90
2	0	85	0	85	0	0	0	0	0	15	85
2	0	90	5	95	0	0	0	0	0	5	95
2	0	85	0	85	0	0	0	0	0	15	85
2	0	85	5	90	0	0	0	0	0	10	90
2	0	95	0	95	0	0	0	0	0	5	95
2	0	85	0	85	0	0	0	0	0	15	85
2	0	85	0	85	0	0	0	0	0	15	85
2	0	75	5	80	0	0	0	0	0	20	80
2	0	85	0	85	0	0	0	0	0	15	85
2	0	85	0	85	0	0	0	0	0	15	85
2	0	85	0	85	0	0	0	0	0	15	85
Average		**84.2**	**0.4**	**84.6**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**15.4**	**84.6**

Transect T4										Surveyed 27 June 2024	
		Seagrasses			Algae						
Long=1	Fouling	*Zostera*	*Halophila*	Total	*Codium*	*Cystoseira*	*Caulerpa*	% algae	Total	% Bare	Total
Short=2	0,1,2	% cover	% cover	Seagrasses	% cover	% cover	% cover	Filamentous	Algae	Ground	Cover
2	0	80	0	80	0	0	0	0	0	20	80
2	0	70	0	70	0	0	0	0	0	30	70
2	0	95	0	95	0	0	0	0	0	5	95
2	0	100	0	100	0	0	0	0	0	0	100
2	0	90	0	90	0	0	0	0	0	10	90
2	0	95	0	95	0	0	0	0	0	5	95
2	0	95	0	95	0	0	0	0	0	5	95
2	0	70	10	80	0	0	0	0	0	20	80
2	0	80	0	80	0	0	0	0	0	20	80
2	0	95	0	95	0	0	0	0	0	5	95
2	0	90	0	90	0	0	0	0	0	10	90
2	0	90	0	90	0	0	0	0	0	10	90
2	0	95	0	95	0	0	0	0	0	5	95
2	0	100	0	100	0	0	0	0	0	0	100
2	0	95	0	95	0	0	0	0	0	5	95
2	0	95	0	95	0	0	0	0	0	5	95
2	0	90	0	90	0	0	0	0	0	10	90
2	0	90	0	90	0	0	0	0	0	10	90
2	0	100	0	100	0	0	0	0	0	0	100
2	0	90	0	90	0	0	0	0	0	10	90
2	0	90	0	90	0	0	0	0	0	10	90
2	0	100	0	100	0	0	0	0	0	0	100
2	0	95	0	95	0	0	0	0	0	5	95
2	0	100	0	100	0	0	0	0	0	0	100
2	0	75	0	75	0	0	0	0	0	25	75
2	0	75	0	75	0	0	0	0	0	25	75
2	0	85	0	85	0	0	0	0	0	15	85
2	0	90	0	90	0	0	0	0	0	10	90
2	0	75	0	75	0	0	0	0	0	25	75
2	0	90	0	90	0	0	0	0	0	10	90
2	0	75	0	75	0	0	0	0	0	25	75
2	0	85	0	85	0	0	0	0	0	15	85
2	0	85	0	85	0	0	0	0	0	15	85
2	0	95	0	95	0	0	0	0	0	5	95
2	0	85	0	85	0	0	0	0	0	15	85
2	0	100	0	100	0	0	0	0	0	0	100
2	0	90	0	90	0	0	0	0	0	10	90
2	0	95	0	95	0	0	0	0	0	5	95
2	0	85	0	85	0	0	0	0	0	15	85
2	0	70	0	70	0	5	0	0	5	25	75
2	0	95	0	95	0	0	0	0	0	5	95
2	0	100	0	100	0	0	0	0	0	0	100
2	0	100	0	100	0	0	0	0	0	0	100
2	0	85	0	85	0	0	0	0	0	15	85
2	0	80	0	80	0	0	0	0	0	20	80
2	0	75	0	75	0	0	0	0	0	25	75
2	0	90	5	95	0	0	0	0	0	5	95
2	0	100	0	100	0	0	0	0	0	0	100
2	0	80	0	80	0	0	0	0	0	20	80
2	0	80	5	85	0	15	0	0	15	0	100
2	0	75	0	75	0	0	0	0	0	25	75
2	0	85	0	85	0	0	0	0	0	15	85
2	0	85	0	85	0	0	0	0	0	15	85
2	0	80	0	80	0	0	0	0	0	20	80
2	0	75	0	75	0	0	0	0	0	25	75
2	0	80	0	80	0	0	0	0	0	20	80
2	0	95	0	95	0	0	0	0	0	5	95
2	0	90	0	90	0	0	0	0	0	10	90
2	0	95	0	95	0	0	0	0	0	5	95
2	0	90	0	90	0	0	0	0	0	10	90
2	0	90	0	90	0	0	0	0	0	10	90
2	0	90	0	90	0	0	0	0	0	10	90
2	0	90	0	90	0	5	0	0	5	5	95
2	0	90	0	90	0	0	0	0	0	10	90
2	0	85	0	85	0	0	0	0	0	15	85
2	0	100	0	100	0	0	0	0	0	0	100
2	0	90	0	90	0	0	0	0	0	10	90
2	0	100	0	100	0	0	0	0	0	0	100
Average		**88.5**	**0.3**	**88.8**	**0.0**	**0.4**	**0.0**	**0.0**	**0.4**	**10.9**	**89.1**

Transect T5

Surveyed 27 June 2024

		Seagrasses			**Algae**						
Long=1 Short=2	**Fouling 0,1,2**	***Zostera* % cover**	***Halophila* % cover**	**Total seagrasses**	***Codium* % cover**	***Cystoseira* % cover**	***Caulerpa* % cover**	**% algae Filamentous**	**Total Algae**	**% Bare Ground**	**Total Cover**
1	0	95	0	95	0	0	0	0	0	5	95
1	0	100	0	100	0	0	0	0	0	0	100
1	0	95	0	95	0	0	0	0	0	5	95
1	0	100	0	100	0	0	0	0	0	0	100
1	1	80	0	80	0	0	0	0	0	20	80
1	1	90	0	90	0	0	0	0	0	10	90
1	1	95	5	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	90	0	90	0	0	0	0	0	10	90
1	1	60	0	60	0	0	0	0	0	40	60
1	1	95	0	95	0	0	0	0	0	5	95
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	95	5	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	90	0	90	0	0	0	0	0	10	90
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
2	0	100	0	100	0	0	0	0	0	0	100
2	0	95	0	95	0	0	0	0	0	5	95
2	0	60	0	60	0	0	0	0	0	40	60
2	0	30	0	30	0	0	0	0	0	70	30
2	0	80	10	90	0	0	0	0	0	10	90
2	0	85	0	85	0	0	0	0	0	15	85
2	0	85	5	90	0	0	0	0	0	10	90
2	0	90	0	90	0	5	0	0	5	5	95
2	0	100	0	100	0	0	0	0	0	0	100
2	0	100	0	100	0	0	0	0	0	0	100
2	0	80	0	80	0	0	0	0	0	20	80
2	0	95	0	95	0	0	0	0	0	5	95
2	0	95	0	95	0	0	0	0	0	5	95
2	0	50	0	50	0	0	0	0	0	50	50
2	1	80	0	80	0	0	0	0	0	20	80
2	1	75	0	75	0	0	0	0	0	25	75
2	1	80	0	80	0	0	0	0	0	20	80
2	1	85	0	85	0	0	0	0	0	15	85
2	1	95	0	95	0	0	0	0	0	5	95
2	1	100	0	100	0	0	0	0	0	0	100
2	1	95	0	95	0	0	0	0	0	5	95
2	1	90	0	90	0	0	0	0	0	10	90
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	95	0	95	0	0	0	0	0	5	95
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	95	0	95	0	0	0	0	0	5	95
2	1	95	0	95	0	0	0	0	0	5	95
2	1	95	0	95	0	0	0	0	0	5	95
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	85	0	85	0	0	0	0	0	15	85
Average		**92.6**	**0.4**	**92.9**	**0.0**	**0.1**	**0.0**	**0.0**	**0.1**	**7.0**	**93.0**

Transect T6											Surveyed 27 June 2024
		Seagrasses			Algae						
Long=1 Short=2	Fouling 0,1,2	*Zostera* % cover	*Halophila* % cover	Total seagrasses	*Codium* % cover	*Cystoseira* % cover	*Caulerpa* % cover	% algae Filamentous	Total Algae	% Bare Ground	Total Cover
1	1	95	0	95	0	0	0	0	0	5	95
1	1	100	0	100	0	0	0	0	0	0	100
1	1	95	0	95	0	0	0	0	0	5	95
1	1	85	0	85	0	0	0	0	0	15	85
1	1	85	0	85	0	0	0	0	0	15	85
1	1	90	0	90	0	0	0	0	0	10	90
1	1	85	0	85	0	0	0	0	0	15	85
1	1	85	0	85	0	0	0	0	0	15	85
1	1	90	0	90	0	0	0	0	0	10	90
1	1	100	0	100	0	0	0	0	0	0	100
1	1	90	0	90	0	0	0	0	0	10	90
1	1	100	0	100	0	0	0	0	0	0	100
1	1	90	0	90	0	0	0	0	0	10	90
1	1	85	0	85	0	0	0	0	0	15	85
1	1	85	0	85	0	0	0	0	0	15	85
1	1	85	0	85	0	0	0	0	0	15	85
1	1	90	0	90	0	0	0	0	0	10	90
1	1	85	0	85	0	0	0	0	0	15	85
1	1	80	0	80	0	0	0	0	0	20	80
1	1	95	0	95	0	0	0	0	0	5	95
1	1	90	0	90	0	0	0	0	0	10	90
1	1	85	0	85	0	0	0	0	0	15	85
1	1	100	0	100	0	0	0	0	0	0	100
1	1	90	0	90	0	0	0	0	0	10	90
1	1	95	0	95	0	0	0	0	0	5	95
1	1	90	0	90	0	0	0	0	0	10	90
1	1	85	0	85	0	0	0	0	0	15	85
1	1	90	0	90	0	0	0	0	0	10	90
1	1	95	5	100	0	0	0	0	0	0	100
1	1	95	5	100	0	0	0	0	0	0	100
1	1	90	10	100	0	0	0	0	0	0	100
1	1	95	5	100	0	0	0	0	0	0	100
2	0	85	10	95	0	0	0	0	0	5	95
2	0	95	0	95	0	0	0	0	0	5	95
2	0	85	10	95	0	0	0	0	0	5	95
2	0	100	0	100	0	0	0	0	0	0	100
2	0	75	15	90	0	0	0	0	0	10	90
2	0	80	20	100	0	0	0	0	0	0	100
2	1	85	5	90	0	0	0	0	0	10	90
2	1	65	15	80	0	0	0	0	0	20	80
2	1	75	15	90	0	0	0	0	0	10	90
2	1	80	10	90	0	0	0	0	0	10	90
2	1	85	0	85	0	0	0	0	0	15	85
2	1	80	0	80	0	0	0	0	0	20	80
2	1	100	0	100	0	0	0	0	0	0	100
2	1	85	10	95	0	0	0	0	0	5	95
2	1	85	15	100	0	0	0	0	0	0	100
2	1	85	10	95	0	0	0	0	0	5	95
2	1	85	5	90	0	0	0	0	0	10	90
2	1	90	0	90	0	0	0	0	0	10	90
2	1	95	0	95	0	0	0	0	0	5	95
2	1	85	5	90	0	0	0	0	0	10	90
2	1	85	5	90	0	0	0	0	0	10	90
2	1	90	5	95	0	0	0	0	0	5	95
2	1	80	10	90	0	0	0	0	0	10	90
2	1	85	5	90	0	0	0	0	0	10	90
2	1	90	0	90	0	0	0	0	0	10	90
2	1	85	5	90	0	0	0	0	0	10	90
2	1	85	0	85	0	0	0	0	0	15	85
2	1	95	0	95	0	0	0	0	0	5	95
2	1	100	0	100	0	0	0	0	0	0	100
2	1	98	0	98	0	0	0	0	0	2	98
2	1	90	0	90	0	0	0	0	0	10	90
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	90	5	95	0	0	0	0	0	5	95
2	1	100	0	100	0	0	0	0	0	0	100
Average		**89.2**	**3.0**	**92.3**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**7.8**	**92.3**

Transect T7									Surveyed 27 June 2024		
		Seagrasses			Algae						
Long=1 Short=2	Fouling 0,1,2	*Zostera* % cover	*Halophila* % cover	Total seagrasses	*Codium* % cover	*Cystoseira* % cover	*Caulerpa* % cover	% algae Filamentous	Total Algae	% Bare Ground	Total Cover
1	0	85	0	85	0	0	0	0	0	15	85
1	0	95	0	95	0	0	0	0	0	5	95
1	0	100	0	100	0	0	0	0	0	0	100
1	1	90	0	90	0	0	0	0	0	10	90
1	1	95	0	95	0	0	0	0	0	5	95
1	1	85	0	85	0	0	0	0	0	15	85
1	1	90	0	90	0	0	0	0	0	10	90
1	1	85	0	85	0	0	0	0	0	15	85
1	1	85	0	85	0	0	0	0	0	15	85
1	1	85	0	85	0	0	0	0	0	15	85
1	1	95	0	95	0	0	0	0	0	5	95
1	1	95	0	95	0	0	0	0	0	5	95
1	1	95	0	95	0	0	0	0	0	5	95
1	1	90	0	90	0	0	0	0	0	10	90
1	1	90	0	90	0	0	0	0	0	10	90
1	1	95	0	95	0	0	0	0	0	5	95
1	1	95	0	95	0	0	0	0	0	5	95
1	1	95	0	95	0	0	0	0	0	5	95
1	1	100	0	100	0	0	0	0	0	0	100
1	1	90	0	90	0	0	0	0	0	10	90
1	1	95	0	95	0	0	0	0	0	5	95
1	1	85	0	85	0	0	0	0	0	15	85
1	1	85	0	85	0	0	0	0	0	15	85
1	1	80	0	80	0	0	0	0	0	20	80
1	1	100	0	100	0	0	0	0	0	0	100
1	1	95	0	95	0	0	0	0	0	5	95
1	1	95	0	95	0	0	0	0	0	5	95
1	1	95	0	95	0	0	0	0	0	5	95
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	95	0	95	0	0	0	0	0	5	95
1	1	95	0	95	0	0	0	0	0	5	95
1	1	100	0	100	0	0	0	0	0	0	100
1	1	95	5	100	0	0	0	0	0	0	100
2	0	100	0	100	0	0	0	0	0	0	100
2	0	90	0	90	0	0	0	0	0	10	90
2	0	95	0	95	0	0	0	0	0	5	95
2	0	95	0	95	0	0	0	0	0	5	95
2	0	95	0	95	0	0	0	0	0	5	95
2	0	85	10	95	0	0	0	0	0	5	95
2	0	90	0	90	0	0	0	0	0	10	90
2	1	75	0	75	0	0	0	0	0	25	75
2	1	65	0	65	0	0	0	0	0	35	65
2	1	50	0	50	0	0	0	0	0	50	50
2	1	65	0	65	0	0	0	0	0	35	65
2	1	65	0	65	0	0	0	0	0	35	65
2	1	45	5	50	0	0	0	0	0	50	50
2	1	45	15	60	0	0	0	0	0	40	60
2	1	55	15	70	0	0	0	0	0	30	70
2	1	80	10	90	0	0	0	0	0	10	90
2	1	70	0	70	0	0	0	0	0	30	70
2	1	80	0	85	0	0	0	0	0	15	85
2	1	90	5	95	0	0	0	0	0	5	95
2	1	90	0	90	0	0	0	0	0	10	90
2	1	85	0	85	0	0	0	0	0	15	85
2	1	80	5	85	0	0	0	0	0	15	85
2	1	85	0	85	0	0	0	0	0	15	85
2	1	90	5	95	0	0	0	0	0	5	95
2	1	90	0	90	0	0	0	0	0	10	90
2	1	95	5	100	0	0	0	0	0	0	100
2	1	85	0	85	0	0	0	0	0	15	85
2	1	80	10	90	0	0	0	0	0	10	90
2	1	85	0	85	0	0	0	0	0	15	85
2	1	80	0	80	0	0	0	0	0	20	80
2	1	75	0	75	0	0	0	0	0	25	75
2	1	85	0	85	0	0	0	0	0	15	85
2	1	95	0	95	0	0	0	0	0	5	95
2	1	95	0	95	0	0	0	0	0	5	95
Average		**86.5**	**1.3**	**87.9**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**12.1**	**87.9**

Transect T8									Surveyed 27 June 2024		
		Seagrasses			Algae						
Long=1	Fouling	*Zostera*	*Halophila*	Total	*Codium*	*Cystoseira*	*Caulerpa*	% algae	Total	% Bare	Total
Short=2	0,1,2	% cover	% cover	seagrasses	% cover	% cover	% cover	Filamentous	Algae	Ground	Cover
1	0	80	0	80	0	0	0	0	0	20	80
1	0	30	0	30	0	0	0	0	0	70	30
1	0	95	0	95	0	0	0	0	0	5	95
1	1	65	0	65	0	0	0	0	0	35	65
1	1	90	0	90	0	0	0	0	0	10	90
1	1	65	5	70	0	0	0	0	0	30	70
1	1	70	0	70	0	0	0	0	0	30	70
1	1	90	0	90	0	0	0	0	0	10	90
1	1	100	0	100	0	0	0	0	0	0	100
1	1	95	0	95	0	0	0	0	0	5	95
1	1	85	5	90	0	0	0	0	0	10	90
1	1	90	0	90	0	0	0	0	0	10	90
1	1	85	0	85	0	0	0	0	0	15	85
1	1	95	0	95	0	0	0	0	0	5	95
1	1	90	0	90	0	0	0	0	0	10	90
1	1	95	0	95	0	0	0	0	0	5	95
1	1	95	0	95	0	0	0	0	0	5	95
1	1	95	0	95	0	0	0	0	0	5	95
1	1	100	0	100	0	0	0	0	0	0	100
1	1	95	0	95	0	0	0	0	0	5	95
1	1	95	0	95	0	0	0	0	0	5	95
1	1	100	0	100	0	0	0	0	0	0	100
1	1	85	0	85	0	0	0	0	0	15	85
1	1	85	0	85	0	0	0	0	0	15	85
1	1	90	0	90	0	0	0	0	0	10	90
1	1	90	0	90	0	0	0	0	0	10	90
1	1	95	0	95	0	0	0	0	0	5	95
1	1	95	0	95	0	0	0	0	0	5	95
1	1	90	0	90	0	0	0	0	0	10	90
1	1	95	0	95	0	0	0	0	0	5	95
1	1	95	0	95	0	0	0	0	0	5	95
1	1	85	0	85	0	0	0	0	0	15	85
1	1	85	0	85	0	0	0	0	0	15	85
1	1	95	0	95	0	0	0	0	0	5	95
1	1	100	0	100	0	0	0	0	0	0	100
1	1	95	0	95	0	0	0	0	0	5	95
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	90	0	90	0	0	0	0	0	10	90
1	1	80	0	80	0	0	0	0	0	20	80
1	1	100	0	100	0	0	0	0	0	0	100
1	1	90	0	90	0	0	0	0	0	10	90
1	1	85	0	85	0	0	0	0	0	15	85
1	1	85	0	85	0	0	0	0	0	15	85
1	1	90	0	90	0	0	0	0	0	10	90
1	1	100	0	100	0	0	0	0	0	0	100
1	1	85	5	90	0	0	0	0	0	10	90
1	1	95	0	95	0	0	0	0	0	5	95
2	0	90	5	95	0	0	0	0	0	5	95
2	0	50	10	60	0	0	0	0	0	40	60
2	0	75	0	75	0	0	0	0	0	25	75
2	0	95	0	95	0	0	0	0	0	5	95
2	1	75	5	80	0	0	0	0	0	20	80
2	1	65	5	70	0	0	0	0	0	30	70
2	1	80	0	80	0	0	0	0	0	20	80
2	1	90	0	90	0	0	0	0	0	10	90
2	1	90	0	90	0	0	0	0	0	10	90
2	1	95	0	95	0	0	0	0	0	5	95
2	1	85	5	90	0	0	0	0	0	10	90
2	1	90	0	90	0	0	0	0	0	10	90
2	1	80	0	80	0	0	0	0	0	20	80
2	1	90	5	95	0	0	0	0	0	5	95
2	1	90	5	95	0	0	0	0	0	5	95
2	1	85	10	95	0	0	0	0	0	5	95
2	1	75	15	90	0	0	0	0	0	10	90
2	1	65	15	80	0	0	0	0	0	20	80
2	1	90	0	90	0	0	0	0	0	10	90
Average		**87.3**	**1.4**	**88.7**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**11.3**	**88.7**

Chain Valley Bay

Transect E1											Surveyed 27 June 2024
		Seagrasses			Algae						
Long=1 Short=2	Fouling 0,1,2	*Zostera* % cover	*Halophila* % cover	Total seagrasses	*Codium* % cover	*Cystoseira* % cover	*Caulerpa* % cover	% algae Filamentous	Total Algae	% Bare Ground	Total Cover
1	1	60	0	60	0	25	0	0	25	15	85
1	1	100	0	100	0	0	0	0	0	0	100
1	1	90	0	90	0	10	0	0	10	0	100
1	1	85	0	85	0	10	0	0	10	5	95
1	1	90	0	90	0	10	0	0	10	0	100
1	1	90	0	90	0	10	0	0	10	0	100
1	1	90	0	90	0	10	0	0	10	0	100
1	1	75	0	75	0	20	0	0	20	5	95
1	1	85	0	85	0	15	0	0	15	0	100
1	1	85	0	85	0	15	0	0	15	0	100
1	1	90	0	90	0	10	0	0	10	0	100
1	1	75	0	75	0	25	0	0	25	0	100
1	1	95	0	95	0	5	0	0	5	0	100
1	1	90	0	90	0	10	0	0	10	0	100
1	1	85	0	85	0	15	0	0	15	0	100
1	1	85	0	85	0	15	0	0	15	0	100
1	1	75	0	75	0	25	0	0	25	0	100
1	1	75	0	75	0	25	0	0	25	0	100
1	1	90	0	90	0	10	0	0	10	0	100
1	1	85	0	85	0	15	0	0	15	0	100
1	1	50	0	50	0	50	0	0	50	0	100
1	1	80	0	80	0	20	0	0	20	0	100
1	1	85	0	85	0	15	0	0	15	0	100
1	1	75	0	75	0	25	0	0	25	0	100
1	1	75	0	75	0	25	0	0	25	0	100
1	1	80	0	80	0	15	0	0	15	5	95
1	1	45	0	45	0	50	0	0	50	5	95
1	1	95	0	95	0	5	0	0	5	0	100
1	1	95	0	95	0	5	0	0	5	0	100
1	1	85	0	85	0	10	0	0	10	5	95
1	1	75	0	75	0	25	0	0	25	0	100
1	1	80	0	80	0	20	0	0	20	0	100
1	1	85	0	85	0	5	0	0	5	10	90
1	1	95	0	95	0	5	0	0	5	0	100
1	1	95	0	95	0	5	0	0	5	0	100
1	1	85	0	85	0	15	0	0	15	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	95	0	95	0	0	0	0	0	5	95
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	90	0	90	0	5	0	0	5	5	95
1	1	100	0	100	0	0	0	0	0	0	100
1	1	50	0	50	0	50	0	0	50	0	100
1	1	50	0	50	0	15	0	0	15	35	65
1	1	70	0	70	0	20	0	0	20	10	90
1	1	80	0	80	0	10	0	0	10	10	90
1	1	100	0	100	0	0	0	0	0	0	100
1	1	95	0	95	0	5	0	0	5	0	100
1	1	75	0	75	0	5	0	0	5	20	80
2	0	55	0	55	0	10	0	0	10	35	65
2	0	80	0	80	0	10	0	0	10	10	90
2	1	55	0	55	0	20	0	0	20	25	75
2	1	80	0	80	0	20	0	0	20	0	100
2	1	50	0	50	0	50	0	0	50	0	100
2	1	75	0	75	0	15	0	0	15	10	90
2	1	80	0	80	0	10	0	0	10	10	90
2	1	90	0	90	0	5	0	0	5	5	95
2	1	90	0	90	0	10	0	0	10	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	95	0	95	0	0	0	0	0	5	95
2	1	5	90	95	0	5	0	0	5	0	100
2	1	10	80	90	0	5	0	0	5	5	95
2	1	45	50	95	0	0	0	0	0	5	95
2	1	65	25	90	0	0	0	0	0	10	90
2	1	15	40	55	0	10	0	0	10	35	65
2	1	55	30	85	0	0	0	0	0	15	85
2	1	70	5	75	0	5	0		5	20	80
Average		77.9	4.7	82.6	0.0	12.6	0.0	0.0	12.6	4.8	95.2

Transect E2									Surveyed 25 June 2024		
		Seagrasses			Algae						
Long=1	Fouling	*Zostera*	*Halophila*	Total	*Codium*	*Cystoseira*	*Caulerpa*	% algae	Total	% Bare	Total
Short=2	0,1,2	% cover	% cover	seagrasses	% cover	% cover	% cover	Filamentous	Algae	Ground	Cover
1	0	65	0	65	0	30	0	0	30	5	95
1	0	85	0	85	0	15	0	0	15	0	100
1	0	45	0	45	0	45	0	0	45	10	90
1	0	55	0	55	0	35	0	0	35	10	90
1	0	80	0	80	0	15	0	0	15	5	95
1	0	80	0	80	0	15	0	0	15	5	95
1	0	80	0	80	0	15	0	0	15	5	95
1	0	75	0	75	0	20	0	0	20	5	95
1	0	90	0	90	0	10	0	0	10	0	100
1	0	90	0	90	0	10	0	0	10	0	100
1	0	80	0	80	0	20	0	0	20	0	100
1	0	50	0	50	0	50	0	0	50	0	100
1	0	95	0	95	0	5	0	0	5	0	100
1	0	90	0	90	0	5	0	0	5	5	95
1	0	85	0	85	0	10	0	0	10	5	95
1	0	85	0	85	0	10	0	0	10	5	95
1	0	70	0	70	0	30	0	0	30	0	100
1	0	75	0	75	0	20	0	0	20	5	95
1	0	65	0	65	0	35	0	0	35	0	100
1	0	75	0	75	0	25	0	0	25	0	100
1	0	95	0	95	0	5	0	0	5	0	100
1	0	50	0	50	0	50	0	0	50	0	100
1	0	95	0	95	0	5	0	0	5	0	100
1	0	95	0	95	0	5	0	0	5	0	100
1	0	95	0	95	0	5	0	0	5	0	100
1	0	90	0	90	0	10	0	0	10	0	100
1	0	95	0	95	0	5	0	0	5	0	100
1	1	75	0	75	0	10	0	0	10	15	85
1	1	85	0	85	0	5	0	0	5	10	90
1	1	85	0	85	0	10	0	0	10	5	95
1	1	85	0	85	0	10	0	0	10	5	95
1	1	60	0	60	0	35	0	0	35	5	95
1	1	80	0	80	0	15	0	0	15	5	95
1	1	75	0	75	0	20	0	0	20	5	95
1	1	85	0	85	0	5	0	0	5	10	90
1	1	75	0	75	0	15	0	0	15	10	90
1	1	65	0	65	0	20	0	0	20	15	85
1	1	80	0	80	0	15	0	0	15	5	95
1	1	70	0	70	0	30	0	0	30	0	100
1	1	70	0	70	0	25	0	0	25	5	95
1	1	75	0	75	0	20	0	0	20	5	95
1	1	75	0	75	0	15	0	0	15	10	90
1	1	70	0	70	0	25	0	0	25	5	95
1	1	75	0	75	0	15	0	0	15	10	90
1	1	75	0	75	0	20	0	0	20	5	95
1	1	90	0	90	0	5	0	0	5	5	95
1	1	90	0	90	0	5	0	0	5	5	95
1	1	65	0	65	0	35	0	0	35	0	100
1	1	85	0	85	0	15	0	0	15	0	100
1	1	80	0	80	0	20	0	0	20	0	100
1	1	95	0	95	0	5	0	0	5	0	100
1	1	95	0	95	0	5	0	0	5	0	100
1	1	95	0	95	0	5	0	0	5	0	100
1	1	95	0	95	0	0	0	0	0	5	95
1	1	95	0	95	0	5	0	0	5	0	100
2	0	80	0	80	0	20	0	0	20	0	100
2	0	80	0	80	0	15	0	0	15	5	95
2	0	80	0	80	0	20	0	0	20	0	100
2	0	90	0	90	0	10	0	0	10	0	100
2	0	95	0	95	0	5	0	0	5	0	100
2	0	5	10	15	0	0	0	0	0	85	15
2	1	30	0	30	0	10	0	0	10	60	40
2	1	30	0	30	0	25	0	0	25	45	55
2	1	70	5	75	0	15	0	0	15	10	90
2	1	70	2	72	0	10	0	0	10	18	82
2	1	65	0	65	0	15	0	0	15	20	80
2	1	30	5	35	0	45	0	0	45	20	80
2	1	75	0	75	0	15	0	0	15	10	90
Average		**76.1**	**0.3**	**76.4**	**0.0**	**16.5**	**0.0**	**0.0**	**16.5**	**7.1**	**92.9**

Transect E3 **Surveyed 25 June 2024**

		Seagrasses			**Algae**						
Long=1 Short=2	**Fouling 0,1,2**	***Zostera* % cover**	***Halophila* % cover**	**Total seagrasses**	***Codium* % cover**	***Cystoseira* % cover**	***Caulerpa* % cover**	**% algae Filamentous**	**Total Algae**	**% Bare Ground**	**Total Cover**
1	0	85	0	85	0	0	0	0	0	15	85
1	0	85	0	85	0	0	0	0	0	15	85
1	0	95	0	95	0	0	0	0	0	5	95
1	0	100	0	100	0	0	0	0	0	0	100
1	0	95	0	95	0	0	0	0	0	5	95
1	0	95	0	95	0	0	0	0	0	5	95
1	1	50	0	50	0	0	0	0	0	50	50
1	1	50	0	50	0	0	0	0	0	50	50
1	1	75	0	75	0	0	0	0	0	25	75
1	1	70	0	70	0	0	0	0	0	30	70
1	1	80	0	80	0	0	0	0	0	20	80
1	1	85	0	85	0	0	0	0	0	15	85
1	1	80	0	80	0	0	0	0	0	20	80
1	1	85	0	85	0	0	0	0	0	15	85
1	1	90	0	90	0	0	0	0	0	10	90
1	1	80	0	80	0	0	0	0	0	20	80
1	1	85	0	85	0	0	0	0	0	15	85
1	1	95	0	95	0	0	0	0	0	5	95
1	1	95	0	95	0	0	0	0	0	5	95
1	1	95	0	95	0	0	0	0	0	5	95
1	1	95	0	95	0	0	0	0	0	5	95
1	1	95	0	95	0	5	0	0	5	0	100
1	1	90	0	90	0	10	0	0	10	0	100
1	1	95	0	95	0	0	0	0	0	5	95
1	1	90	0	90	0	0	0	0	0	10	90
1	1	95	0	95	0	0	0	0	0	5	95
1	1	100	0	100	0	0	0	0	0	0	100
1	1	80	0	80	0	0	0	0	0	20	80
1	1	95	0	95	0	0	0	0	0	5	95
1	1	95	0	95	0	0	0	0	0	5	95
1	1	95	0	95	0	0	0	0	0	5	95
1	1	98	0	98	0	0	0	0	0	2	98
1	1	100	0	100	0	0	0	0	0	0	100
1	1	95	0	95	0	0	0	0	0	5	95
1	1	95	0	95	0	0	0	0	0	5	95
1	1	90	0	90	0	5	0	0	5	5	95
1	1	95	0	95	0	0	0	0	0	5	95
1	1	85	0	85	0	0	0	0	0	15	85
1	1	90	0	90	0	0	0	0	0	10	90
1	1	100	0	100	0	0	0	0	0	0	100
1	1	90	0	90	0	0	0	0	0	10	90
1	1	90	0	90	0	0	0	0	0	10	90
1	1	90	0	90	0	0	0	0	0	10	90
1	1	95	0	95	0	0	0	0	0	5	95
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	95	0	95	0	0	0	0	0	5	95
1	1	95	0	95	0	0	0	0	0	5	95
1	1	95	0	95	0	0	0	0	0	5	95
1	1	100	0	100	0	0	0	0	0	0	100
1	1	95	0	95	0	0	0	0	0	5	95
1	1	100	0	100	0	0	0	0	0	0	100
1	1	95	0	95	0	0	0	0	0	5	95
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	95	0	95	0	0	0	0	0	5	95
1	1	95	0	95	0	0	0	0	0	5	95
1	1	90	0	90	0	10	0	0	10	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	95	0	95	0	0	0	0	0	5	95
1	1	95	0	95	0	0	0	0	0	5	95
1	1	95	0	95	0	0	0	5	5	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
2	0	90	5	95	0	0	0	0	0	5	95
Average		**91.7**	**0.1**	**91.8**	**0.0**	**0.4**	**0.0**	**0.1**	**0.5**	**7.7**	**92.3**

Transect E4									Surveyed 25 June 2024		
		Seagrasses			Algae						
Long=1	Fouling	*Zostera*	*Halophila*	Total	*Codium*	*Cystoseira*	*Caulerpa*	% algae	Total	% Bare	Total
Short=2	0,1,2	% cover	% cover	seagrasses	% cover	% cover	% cover	Filamentous	Algae	Ground	Cover
1	0	85	0	85	0	15	0	0	15	0	100
1	0	95	0	95	0	0	0	0	0	5	95
1	0	100	0	100	0	0	0	0	0	0	100
1	0	95	0	95	0	0	0	0	0	5	95
1	0	100	0	100	0	0	0	0	0	0	100
1	0	95	0	95	0	5	0	0	5	0	100
1	0	100	0	100	0	0	0	0	0	0	100
1	0	90	0	90	0	10	0	0	10	0	100
1	0	90	0	90	0	10	0	0	10	0	100
1	0	90	0	90	0	10	0	0	10	0	100
1	0	98	0	98	0	2	0	0	2	0	100
1	0	80	0	80	0	20	0	0	20	0	100
1	0	60	0	60	0	30	0	0	30	10	90
1	0	60	10	70	0	20	0	0	20	10	90
1	0	90	0	90	0	10	0	0	10	0	100
1	0	90	0	90	0	5	0	0	5	5	95
1	1	80	0	80	0	0	0	0	0	20	80
1	1	95	0	95	0	0	0	0	0	5	95
1	1	90	0	90	0	0	0	0	0	10	90
1	1	80	0	80	0	0	0	0	0	20	80
1	1	70	0	70	0	0	0	0	0	30	70
1	1	70	0	70	0	0	0	0	0	30	70
1	1	80	0	80	0	0	0	0	0	20	80
1	1	90	0	90	0	0	0	0	0	10	90
1	1	60	0	60	0	0	0	0	0	40	60
1	1	85	0	85	0	0	0	0	0	15	85
1	1	90	0	90	0	0	0	0	0	10	90
1	1	90	0	90	0	5	0	0	5	5	95
1	1	90	0	90	0	0	0	0	0	10	90
1	1	80	0	80	0	0	0	0	0	20	80
1	1	80	0	80	0	0	0	0	0	20	80
1	1	90	0	90	0	5	0	0	5	5	95
1	1	95	0	95	0	5	0	0	5	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	90	0	90	0	2	0	0	2	8	92
1	1	100	0	100	0	0	0	0	0	0	100
1	1	95	0	95	0	5	0	0	5	0	100
1	1	95	0	95	0	5	0	0	5	0	100
1	1	95	0	95	0	5	0	0	5	0	100
1	1	95	0	95	0	5	0	0	5	0	100
1	1	90	0	90	0	10	0	0	10	0	100
1	1	95	0	95	0	5	0	0	5	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	95	0	95	0	5	0	0	5	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	85	0	85	0	15	0	0	15	0	100
1	1	95	0	95	0	5	0	0	5	0	100
1	1	85	0	85	0	15	0	0	15	0	100
1	1	90	0	90	0	10	0	0	10	0	100
1	1	95	0	95	0	5	0	0	5	0	100
1	1	80	0	80	0	20	0	0	20	0	100
1	1	80	0	80	0	20	0	0	20	0	100
1	1	90	0	90	0	10	0	0	10	0	100
1	1	95	0	95	0	5	0	0	5	0	100
1	1	85	0	85	0	15	0	0	15	0	100
1	1	90	0	90	0	10	0	0	10	0	100
1	1	90	0	90	0	10	0	0	10	0	100
1	1	95	0	95	0	5	0	0	5	0	100
1	1	85	0	85	0	15	0	0	15	0	100
1	1	80	0	80	0	20	0	0	20	0	100
1	1	80	0	80	0	20	0	0	20	0	100
1	1	50	15	65	0	30	0	0	30	5	95
1	1	75	0	75	0	25	0	0	25	0	100
1	1	90	0	90	0	5	0	0	5	5	95
1	1	90	0	90	0	10	0	0	10	0	100
2	1	70	15	85	0	10	0	0	10	5	95
2	0	50	0	50	0	45	0	0	45	5	95
Average		**86.9**	**0.6**	**87.5**	**0.0**	**7.6**	**0.0**	**0.0**	**7.6**	**4.9**	**95.1**

Transect L1										Surveyed 25 June 2024	
		Seagrasses			Algae						
Long=1 Short=2	Fouling 0,1,2	*Zostera* % cover	*Halophila* % cover	Total seagrasses	*Codium* % cover	*Cystoseira* % cover	*Caulerpa* % cover	% algae Filamentous	Total Algae	% Bare Ground	Total Cover
1	0	40	2	42	0	0	0	0	0	58	42
1	0	60	5	65	0	0	0	0	0	35	65
1	1	30	0	30	0	0	0	0	0	70	30
1	1	100	0	100	0	0	0	0	0	0	100
1	1	90	0	90	0	0	0	0	0	10	90
1	1	90	0	90	0	0	0	0	0	10	90
1	1	90	0	90	0	0	0	0	0	10	90
1	1	85	0	85	0	0	0	0	0	15	85
1	1	85	0	85	0	0	0	0	0	15	85
1	1	85	0	85	0	0	0	0	0	15	85
1	1	95	0	95	0	0	0	0	0	5	95
1	1	80	0	80	0	0	0	0	0	20	80
1	1	100	0	100	0	0	0	0	0	0	100
1	1	95	0	95	0	0	0	0	0	5	95
1	1	95	0	95	0	0	0	0	0	5	95
1	1	90	0	90	0	0	0	0	0	10	90
1	1	95	0	95	0	0	0	0	0	5	95
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	80	0	80	0	0	0	0	0	20	80
1	1	95	0	95	0	0	0	0	0	5	95
1	1	85	0	85	0	0	0	0	0	15	85
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	85	0	85	0	0	0	0	0	15	85
1	1	60	5	65	0	0	0	0	0	35	65
1	1	100	0	100	0	0	0	0	0	0	100
1	1	90	0	90	0	0	0	0	0	10	90
1	1	95	0	95	0	0	0	0	0	5	95
1	1	70	0	70	0	0	0	0	0	30	70
1	1	90	0	90	0	0	0	0	0	10	90
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	80	0	80	0	0	0	0	0	20	80
1	2	100	0	100	0	0	0	0	0	0	100
1	2	100	0	100	0	0	0	0	0	0	100
1	2	100	0	100	0	0	0	0	0	0	100
2	0	20	5	25	0	5	0	0	5	70	30
2	0	85	0	85	0	5	0	0	5	10	90
2	0	60	0	60	0	0	0	0	0	40	60
2	0	50	0	50	0	0	0	0	0	50	50
2	0	40	5	45	0	5	0	0	5	50	50
2	1	45	5	50	0	5	0	0	5	45	55
2	1	10	0	10	0	0	0	0	0	90	10
2	1	30	0	30	0	0	0	0	0	70	30
2	1	20	10	30	0	0	0	0	0	70	30
2	1	50	0	50	0	0	0	0	0	50	50
2	1	70	0	70	0	0	0	0	0	30	70
2	1	25	0	25	0	0	0	0	0	75	25
2	1	70	0	70	0	0	0	0	0	30	70
2	1	95	0	95	0	0	0	0	0	5	95
2	1	70	0	70	0	0	0	0	0	30	70
2	1	95	0	95	0	0	0	0	0	5	95
2	1	85	0	85	0	0	0	0	0	15	85
2	1	80	0	80	0	15	0	0	15	5	95
2	1	80	5	85	0	0	0	0	0	15	85
2	1	80	5	85	0	0	0	0	0	15	85
2	1	60	10	70	0	0	0	0	0	30	70
2	1	75	5	80	0	0	0	0	0	20	80
2	1	80	5	85	0	0	0	0	0	15	85
2	1	60	5	65	0	10	0	0	10	25	75
2	1	90	5	95	0	0	0	0	0	5	95
2	1	75	15	90	0	0	0	0	0	10	90
2	1	75	5	80	0	0	0	0	0	20	80
2	1	75	0	75	0	0	0	0	0	25	75
Average		**77.7**	**1.4**	**79.1**	**0.0**	**0.7**	**0.0**	**0.0**	**0.7**	**20.2**	**79.8**

Transect E5									Surveyed 25 June 2024		
			Seagrasses			Algae					
Long=1 Short=2	Fouling 0,1,2	*Zostera* % cover	*Halophila* % cover	Total seagrasses	*Codium* % cover	*Cystoseira* % cover	*Caulerpa* % cover	% algae Filamentous	Total Algae	% Bare Ground	Total Cover
0	0	0	0	0	0	5	0	0	5	95	5
1	0	45	0	45	0	0	0	0	0	55	45
1	0	60	0	60	0	0	0	0	0	40	60
1	0	80	0	80	0	0	0	0	0	20	80
1	0	95	0	95	0	0	0	0	0	5	95
1	0	100	0	100	0	0	0	0	0	0	100
1	0	95	0	95	0	0	0	0	0	5	95
1	0	100	0	100	0	0	0	0	0	0	100
1	0	95	0	95	0	0	0	0	0	5	95
1	1	75	0	75	0	0	0	0	0	25	75
1	1	95	0	95	0	0	0	0	0	5	95
1	1	95	0	95	0	0	0	0	0	5	95
1	1	95	0	95	0	0	0	0	0	5	95
1	1	95	0	95	0	0	0	0	0	5	95
1	1	95	0	95	0	0	0	0	0	5	95
2	0	90	0	90	0	0	0	0	0	10	90
2	0	100	0	100	0	0	0	0	0	0	100
2	0	95	0	95	0	0	0	0	0	5	95
2	0	95	0	95	0	0	0	0	0	5	95
2	0	100	0	100	0	0	0	0	0	0	100
2	0	100	0	100	0	0	0	0	0	0	100
2	0	100	0	100	0	0	0	0	0	0	100
2	0	100	0	100	0	0	0	0	0	0	100
2	0	95	5	100	0	0	0	0	0	0	100
2	0	95	5	100	0	0	0	0	0	0	100
2	0	100	0	100	0	0	0	0	0	0	100
2	0	95	0	95	0	0	0	0	0	5	95
2	0	100	0	100	0	0	0	0	0	0	100
2	0	95	0	95	0	0	0	0	0	5	95
2	0	100	0	100	0	0	0	0	0	0	100
2	0	95	0	95	0	0	0	0	0	5	95
2	0	100	0	100	0	0	0	0	0	0	100
2	0	90	10	100	0	0	0	0	0	0	100
2	0	90	10	100	0	0	0	0	0	0	100
2	0	100	0	100	0	0	0	0	0	0	100
2	0	95	0	95	0	0	0	0	0	5	95
2	0	100	0	100	0	0	0	0	0	0	100
2	0	90	0	90	0	0	0	0	0	10	90
2	0	95	0	95	0	0	0	0	0	5	95
2	0	85	0	85	0	0	0	0	0	15	85
2	0	90	0	90	0	0	0	0	0	10	90
2	0	85	10	95	0	0	0	0	0	5	95
2	0	100	0	100	0	0	0	0	0	0	100
2	0	80	10	90	0	0	0	0	0	10	90
2	0	25	20	45	0	0	0	0	0	55	45
2	0	20	35	55	0	0	0	0	0	45	55
2	0	50	25	75	0	0	0	0	0	25	75
2	0	50	30	80	0	0	0	0	0	20	80
2	0	90	0	90	0	0	0	0	0	10	90
2	0	95	0	95	0	0	0	0	0	5	95
2	0	95	0	95	0	0	0	0	0	5	95
2	0	90	10	100	0	0	0	0	0	0	100
2	0	85	15	100	0	0	0	0	0	0	100
2	0	90	5	95	0	0	0	0	0	5	95
2	0	90	10	100	0	0	0	0	0	0	100
2	0	80	5	85	0	0	0	0	0	15	85
2	0	30	20	50	0	0	0	0	0	50	50
2	0	70	25	95	0	0	0	0	0	5	95
2	0	65	25	90	0	0	0	0	0	10	90
2	0	65	20	85	0	0	0	0	0	15	85
2	0	65	15	80	0	0	0	0	0	20	80
2	0	70	15	85	0	0	0	0	0	15	85
2	0	80	15	95	0	0	0	0	0	5	95
2	0	70	15	85	0	0	0	0	0	15	85
2	0	50	15	65	0	0	0	0	0	35	65
2	0	40	20	60	0	0	0	0	0	40	60
2	0	40	25	65	0	0	0	0	0	35	65
2	1	95	0	95	0	0	0	0	0	5	95
Average		82.0	6.1	88.1	0.0	0.1	0.0	0.0	0.1	11.8	88.2

Transect E6									Surveyed 25 June 2024		
		Seagrasses			Algae						
Long=1	Fouling	*Zostera*	*Halophila*	Total	*Codium*	*Cystoseira*	*Caulerpa*	% algae	Total	% Bare	Total
Short=2	0,1,2	% cover	% cover	seagrasses	% cover	% cover	% cover	Filamentous	Algae	Ground	Cover
0	0	0	0	0	0	0	0	0	0	100	0
0	0	0	0	0	0	0	0	0	0	100	0
0	0	0	0	0	0	0	0	0	0	100	0
1	1	75	0	75	0	0	0	0	0	25	75
1	1	80	0	80	0	0	0	0	0	20	80
1	1	80	0	80	0	0	0	0	0	20	80
1	1	75	0	75	0	0	0	0	0	25	75
1	1	50	0	50	0	0	0	0	0	50	50
1	1	60	0	60	0	0	0	0	0	40	60
1	1	75	0	75	0	0	0	0	0	25	75
1	2	80	0	80	0	0	0	0	0	20	80
1	2	60	0	60	0	0	0	0	0	40	60
1	2	70	0	70	0	0	0	0	0	30	70
1	2	30	0	30	0	0	0	0	0	70	30
1	2	80	0	80	0	0	0	0	0	20	80
1	2	85	0	85	0	0	0	0	0	15	85
1	2	100	0	100	0	0	0	0	0	0	100
1	2	100	0	100	0	0	0	0	0	0	100
2	1	5	0	5	0	0	0	0	0	95	5
2	1	50	5	55	0	0	0	0	0	45	55
2	1	50	5	55	0	0	0	0	0	45	55
2	1	70	5	75	0	0	0	0	0	25	75
2	1	75	5	80	0	0	0	0	0	20	80
2	1	65	5	70	0	0	0	0	0	30	70
2	1	55	10	65	0	5	0	0	5	30	70
2	1	65	0	65	0	0	0	0	0	35	65
2	1	60	5	65	0	0	0	0	0	35	65
2	1	60	10	70	0	0	0	0	0	30	70
2	1	70	0	70	0	5	0	0	5	25	75
2	1	80	0	80	0	0	0	0	0	20	80
2	1	60	10	70	0	0	0	0	0	30	70
2	1	60	20	80	0	0	0	0	0	20	80
2	1	65	20	85	0	0	0	0	0	15	85
2	1	50	5	55	0	0	0	0	0	45	55
2	1	60	15	75	0	0	0	0	0	25	75
2	1	65	5	70	0	0	0	0	0	30	70
2	1	85	0	85	0	0	0	0	0	15	85
2	1	75	5	80	0	0	0	0	0	20	80
2	1	75	5	80	0	0	0	0	0	20	80
2	1	65	15	80	0	0	0	0	0	20	80
2	1	60	10	70	0	0	0	0	0	30	70
2	1	60	10	70	0	0	0	0	0	30	70
2	1	85	0	85	0	0	0	0	0	15	85
2	1	50	15	65	0	0	0	0	0	35	65
2	1	80	10	90	0	0	0	0	0	10	90
2	1	70	10	80	0	0	0	0	0	20	80
2	1	80	15	95	0	0	0	0	0	5	95
2	1	85	10	95	0	0	0	0	0	5	95
2	1	85	5	90	0	0	0	0	0	10	90
2	1	100	0	100	0	0	0	0	0	0	100
2	1	95	0	95	0	0	0	0	0	5	95
2	1	95	0	95	0	0	0	0	0	5	95
2	1	80	5	85	0	0	0	0	0	15	85
2	1	70	5	75	0	0	0	0	0	25	75
2	1	70	5	75	0	0	0	0	0	25	75
2	1	60	25	85	0	0	0	0	0	15	85
2	1	50	25	75	0	0	0	0	0	25	75
2	1	50	35	85	0	0	0	0	0	15	85
2	1	40	35	75	0	0	0	0	0	25	75
2	1	30	35	65	0	0	0	0	0	35	65
2	1	85	10	95	0	0	0	0	0	5	95
2	1	55	25	80	0	0	0	0	0	20	80
2	1	90	5	95	0	0	0	0	0	5	95
2	1	70	10	80	0	0	0	0	0	20	80
2	1	55	30	85	0	0	0	0	0	15	85
2	1	65	20	85	0	0	0	0	0	15	85
2	1	90	0	90	0	0	0	0	0	10	90
2	1	80	5	85	0	0	0	0	0	15	85
Average		**65.4**	**7.5**	**72.9**	**0.0**	**0.1**	**0.0**	**0.0**	**0.1**	**26.9**	**73.1**

Transect E8										Surveyed 27 June 2024	
		Seagrasses				Algae					
Long=1 Short=2	Fouling 0,1,2	*Zostera* % cover	*Halophila* % cover	Total Seagrasses	*Codium* % cover	*Cystoseira* % cover	*Caulerpa* % cover	% algae Ulvaceae	Total Algae	% Bare Ground	Total Cover
1	0	85	5	90	0	0	0	0	0	10	90
1	1	70	0	70	0	0	0	0	0	30	70
1	1	70	0	70	0	0	0	0	0	30	70
1	1	50	0	50	0	0	0	0	0	50	50
1	1	60	0	60	0	0	0	0	0	40	60
1	1	65	0	65	0	0	0	0	0	35	65
1	1	20	5	25	0	0	0	0	0	75	25
1	1	75	5	80	0	0	0	0	0	20	80
1	1	80	0	80	0	0	0	0	0	20	80
1	1	100	0	100	0	0	0	0	0	0	100
1	1	80	0	80	0	0	0	0	0	20	80
1	1	70	0	70	0	0	0	0	0	30	70
1	1	90	0	90	0	0	0	0	0	10	90
1	1	85	0	85	0	0	0	0	0	15	85
1	1	60	0	60	0	0	0	0	0	40	60
1	1	90	0	90	0	0	0	0	0	10	90
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	95	0	95	0	0	0	0	0	5	95
1	1	90	0	90	0	0	0	0	0	10	90
1	1	80	0	80	0	0	0	0	0	20	80
1	1	100	0	100	0	0	0	0	0	0	100
1	1	90	0	90	0	0	0	0	0	10	90
1	1	95	0	95	0	0	0	0	0	5	95
1	1	85	0	85	0	0	0	0	0	15	85
1	1	100	0	100	0	0	0	0	0	0	100
1	1	95	0	95	0	0	0	0	0	5	95
1	1	95	0	95	0	0	0	0	0	5	95
1	1	80	0	80	0	0	0	0	0	20	80
1	1	95	0	95	0	0	0	0	0	5	95
1	1	95	0	95	0	0	0	0	0	5	95
1	1	75	0	75	0	0	0	0	0	25	75
1	1	85	0	85	0	0	0	0	0	15	85
1	1	95	0	95	0	0	0	0	0	5	95
1	1	90	0	90	0	0	0	0	0	10	90
1	1	90	0	90	0	0	0	0	0	10	90
1	1	85	0	85	0	0	0	0	0	15	85
1	1	100	0	100	0	0	0	0	0	0	100
2	0	55	25	80	0	0	0	0	0	20	80
2	0	82	15	97	0	0	0	0	0	3	97
2	0	20	20	40	0	0	0	0	0	60	40
2	0	60	20	80	0	0	0	0	0	20	80
2	0	60	20	80	0	0	0	0	0	20	80
2	0	45	45	90	0	0	0	0	0	10	90
2	0	70	25	95	0	0	0	0	0	5	95
2	0	80	10	90	0	0	0	0	0	10	90
2	0	80	15	95	0	0	0	0	0	5	95
2	0	75	10	85	0	0	0	0	0	15	85
2	0	75	20	95	0	0	0	0	0	5	95
2	0	70	15	85	0	5	0	0	5	10	90
2	0	90	0	90	0	0	0	0	0	10	90
2	0	80	10	90	0	0	0	0	0	10	90
2	0	50	10	60	0	0	0	10	10	30	70
2	0	85	10	95	0	0	0	0	0	5	95
2	0	90	5	95	0	0	0	0	0	5	95
2	1	80	5	85	0	0	0	0	0	15	85
2	1	95	0	95	0	0	0	0	0	5	95
2	1	85	15	100	0	0	0	0	0	0	100
2	1	80	5	85	0	0	0	0	0	15	85
2	1	85	15	100	0	0	0	0	0	0	100
2	1	85	15	100	0	0	0	0	0	0	100
2	1	75	15	90	0	0	0	0	0	10	90
2	1	60	30	90	0	0	0	0	0	10	90
Average		80.5	5.7	86.3	0.0	0.1	0.0	0.1	0.2	13.5	86.5

Transect E9 **Surveyed 25 June 2024**

		Seagrasses			Algae						
Long=1 Short=2	**Fouling 0,1,2**	***Zostera* % cover**	***Halophila* % cover**	**Total Seagrasses**	***Codium* % cover**	***Cystoseira* % cover**	***Caulerpa* % cover**	**% algae Ulvaceae**	**Total Algae**	**% Bare Ground**	**Total Cover**
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	90	0	90	0	0	0	0	0	10	90
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	90	0	90	0	10	0	0	10	0	100
1	1	95	0	95	0	0	0	5	5	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	95	0	95	0	5	0	0	5	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	95	0	95	0	5	0	0	5	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	90	0	90	0	10	0	0	10	0	100
1	1	95	0	95	0	5	0	0	5	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	95	0	95	0	5	0	0	5	0	100
1	1	90	0	90	0	10	0	0	10	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	95	0	95	0	5	0	0	5	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	95	0	95	0	5	0	0	5	0	100
1	1	95	0	95	0	5	0	0	5	0	100
1	1	95	0	95	0	5	0	0	5	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	90	0	90	0	10	0	0	10	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	90	0	90	0	0	0	0	0	10	90
1	1	100	0	100	0	0	0	0	0	0	100
1	1	85	0	85	0	5	0	5	10	5	95
1	1	90	0	90	0	0	0	0	0	10	90
1	1	85	0	85	0	10	0	5	15	0	100
1	1	95	0	95	0	0	0	5	5	0	100
1	1	85	0	85	0	15	0	0	15	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	70	0	70	0	0	0	0	0	30	70
1	1	100	0	100	0	0	0	0	0	0	100
1	1	85	5	95	0	5	0	0	5	0	100
1	1	80	0	80	0	15	0	0	15	5	95
1	1	90	0	90	0	0	0	0	0	10	90
1	1	80	10	90	0	0	0	0	0	10	90
2	1	45	5	50	0	15	0	0	15	35	65
2	1	50	0	50	0	10	0	0	10	40	60
2	1	60	0	60	0	0	0	0	0	40	60
2	1	30	0	30	0	10	0	0	10	60	40
2	1	80	0	80	0	10	0	0	10	10	90
2	1	55	5	60	0	0	0	0	0	40	60
2	1	45	10	55	0	0	0	0	0	45	55
2	1	40	10	50	0	0	0	0	0	50	50
2	1	55	0	55	0	15	0	0	15	30	70
2	1	85	5	90	0	0	0	0	0	10	90
2	1	85	0	85	0	0	0	0	0	15	85
Average		**89.3**	**0.7**	**90.1**	**0.0**	**2.8**	**0.0**	**0.3**	**3.1**	**6.8**	**93.2**

Transect E10										Surveyed 25 June 2024	
		Seagrasses				Algae					
Long=1 Short=2	Fouling 0,1,2	*Zostera* % cover	*Halophila* % cover	Total seagrasses	*Codium* % cover	*Cystoseira* % cover	*Caulerpa* % cover	% algae Filamentous	Total Algae	% Bare Ground	Total Cover
1	0	40	0	40	0	0	0	0	0	60	40
1	0	70	0	70	0	0	0	0	0	30	70
1	0	70	0	70	0	0	0	0	0	30	70
1	0	100	0	100	0	0	0	0	0	0	100
1	0	100	0	100	0	0	0	0	0	0	100
1	0	100	0	100	0	0	0	0	0	0	100
1	0	100	0	100	0	0	0	0	0	0	100
1	0	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	95	0	95	0	0	0	0	0	5	95
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
2	0	60	0	60	0	0	0	0	0	40	60
2	0	20	0	20	0	0	0	0	0	80	20
2	0	100	0	100	0	0	0	0	0	0	100
2	1	10	70	80	0	0	0	0	0	20	80
2	1	80	10	90	0	0	0	0	0	10	90
Average		94.8	1.2	96.0	0.0	0.0	0.0	0.0	0.0	4.0	96.0

Transect E11										Surveyed 25 June 2024	
			Seagrasses			Algae					
Long=1 Short=2	Fouling 0,1,2	*Zostera* % cover	*Halophila* % cover	Total Seagrasses	*Codium* % cover	*Cystoseira* % cover	*Caulerpa* % cover	% algae Filamentous	Total Algae	% Bare Ground	Total Cover
1	0	85	5	90	0	0	0	0	0	10	90
1	0	85	0	85	0	10	0	0	10	5	95
1	0	65	10	75	0	0	0	0	0	25	75
1	0	100	0	100	0	0	0	0	0	0	100
1	0	50	0	50	0	0	0	0	0	50	50
1	0	65	0	65	0	0	0	0	0	35	65
1	0	100	0	100	0	0	0	0	0	0	100
1	0	55	0	55	0	0	0	0	0	45	55
1	0	100	0	100	0	0	0	0	0	0	100
1	0	100	0	100	0	0	0	0	0	0	100
1	0	100	0	100	0	0	0	0	0	0	100
1	0	100	0	100	0	0	0	0	0	0	100
1	0	100	0	100	0	0	0	0	0	0	100
1	0	100	0	100	0	0	0	0	0	0	100
1	0	100	0	100	0	0	0	0	0	0	100
1	0	100	0	100	0	0	0	0	0	0	100
1	0	100	0	100	0	0	0	0	0	0	100
1	0	100	0	100	0	0	0	0	0	0	100
1	0	100	0	100	0	0	0	0	0	0	100
1	0	100	0	100	0	0	0	0	0	0	100
1	1	85	0	80	0	0	0	0	0	20	80
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	95	0	95	0	0	0	0	0	5	95
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	95	0	95	0	0	0	0	0	5	95
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	90	0	90	0	0	0	0	0	10	90
1	1	100	0	100	0	0	0	0	0	0	100
1	1	95	0	95	0	0	0	0	0	5	95
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
Average		96.5	0.2	96.7	0.0	0.1	0.0	0.0	0.1	3.2	96.8

Transect E12 **Surveyed 25 June 2024**

		Seagrasses				**Algae**					
Long=1 Short=2	**Fouling 0,1,2**	***Zostera* % cover**	***Halophila* % cover**	**Total Seagrasses**	***Codium* % cover**	***Cystoseira* % cover**	***Caulerpa* % cover**	**% algae Filamentous**	**Total Algae**	**% Bare Ground**	**Total Cover**
1	0	65	0	65	0	0	0	0	0	35	65
1	0	45	0	45	0	0	0	0	0	55	45
1	0	45	20	65	0	0	0	0	0	35	65
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	95	0	95	0	0	0	0	0	5	95
1	1	98	0	98	0	0	0	0	0	2	98
1	1	95	0	95	0	0	0	0	0	5	95
1	1	98	0	98	0	0	0	0	0	2	98
1	1	98	0	98	0	0	0	0	0	2	98
1	1	98	0	98	0	0	0	0	0	2	98
1	1	95	0	95	0	0	0	0	0	5	95
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	95	0	95	0	5	0	0	5	0	100
1	1	95	0	95	0	0	0	0	0	5	95
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	50	5	55	0	0	0	0	0	45	55
1	1	90	0	90	0	0	0	0	0	10	90
1	1	60	5	65	0	0	0	0	0	35	65
1	1	95	0	95	0	0	0	0	0	5	95
1	1	85	0	85	0	0	0	0	0	15	85
1	1	65	10	75	0	0	0	0	0	25	75
1	1	50	5	55	0	0	0	0	0	45	55
1	1	40	10	50	0	0	0	0	0	50	50
1	1	100	0	100	0	0	0	0	0	0	100
1	1	90	0	90	0	0	0	0	0	10	90
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	20	30	50	0	0	0	0	0	50	50
2	0	20	15	35	0	0	0	0	0	65	35
2	0	70	20	90	0	0	0	0	0	10	90
2	0	70	20	90	0	0	0	0	0	10	90
2	0	75	5	80	0	0	0	0	0	20	80
2	0	65	10	75	0	0	0	0	0	25	75
2	0	30	25	55	0	0	0	0	0	45	55
2	0	30	30	60	0	0	0	0	0	40	60
2	1	65	0	65	0	0	0	0	0	35	65
2	1	75	5	80	0	0	0	0	0	20	80
2	1	85	10	95	0	0	0	0	0	5	95
2	1	100	0	100	0	0	0	0	0	0	100
2	1	95	0	95	0	0	0	0	0	5	95
2	1	80	10	90	0	0	0	0	0	10	90
2	1	65	20	85	0	0	0	0	0	15	85
2	1	100	0	100	0	0	0	0	0	0	100
Average		**85.2**	**3.8**	**88.9**	**0.0**	**0.1**	**0.0**	**0.0**	**0.1**	**11.0**	**89.0**

Transect E13										Surveyed 25 June 2024		
		Seagrasses				Algae						
Long=1 Short=2	Fouling 0,1,2	*Zostera* % cover	*Halophila* % cover	Total Seagrasses	*Codium* % cover	*Cystoseira* % cover	*Caulerpa* % cover	% algae Ulvaceae	Total Algae	% Bare Ground	Total Cover
1	0	55	0	55	0	0	0	0	0	45	55
1	0	65	0	65	0	0	0	0	0	35	65
1	0	65	0	65	0	0	0	5	5	30	70
1	0	60	0	60	0	0	0	0	0	40	60
1	0	50	0	50	0	0	0	0	0	50	50
1	0	70	0	70	0	0	0	0	0	30	70
1	0	80	0	80	0	0	0	0	0	20	80
1	0	80	0	80	0	0	0	0	0	20	80
1	0	90	0	90	0	0	0	0	0	10	90
1	0	100	0	100	0	0	0	0	0	0	100
1	0	70	0	70	0	0	0	10	10	20	80
1	0	95	0	95	0	0	0	0	0	5	95
1	0	75	0	75	0	0	0	5	5	20	80
1	0	90	0	90	0	0	0	10	10	0	100
1	0	100	0	100	0	0	0	0	0	0	100
1	0	100	0	100	0	0	0	0	0	0	100
1	0	100	0	100	0	0	0	0	0	0	100
1	0	100	0	100	0	0	0	0	0	0	100
1	0	100	0	100	0	0	0	0	0	0	100
1	0	100	0	100	0	0	0	0	0	0	100
1	0	100	0	100	0	0	0	0	0	0	100
1	0	90	0	90	0	0	0	5	5	5	95
1	0	100	0	100	0	0	0	0	0	0	100
1	0	100	0	100	0	0	0	0	0	0	100
1	0	100	0	100	0	0	0	0	0	0	100
1	0	90	0	90	0	0	0	0	0	10	90
1	0	60	15	75	0	0	0	5	5	20	80
1	0	30	0	30	0	0	0	0	0	70	30
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	90	0	90	0	0	0	0	0	10	90
1	1	80	0	80	0	0	0	5	5	15	85
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	95	0	95	0	0	0	5	5	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	95	0	95	0	0	0	5	5	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	80	0	80	0	0	0	5	5	15	85
1	1	10	30	40	0	0	0	0	0	60	40
1	1	55	25	80	0	0	0	0	0	20	80
1	1	35	30	65	0	10	0	0	10	25	75
2	0	50	5	55	0	0	0	5	5	40	60
Average		88.3	1.5	89.9	0.0	0.1	0.0	1.0	1.1	9.0	91.0

Transect E14											Surveyed 25 June 2024
		Seagrasses			Algae						
Long=1	Fouling	*Zostera*	*Halophila*	Total	*Codium*	*Cystoseira*	*Caulerpa*	% algae	Total	% Bare	Total
Short=2	0,1,2	% cover	% cover	Seagrasses	% cover	% cover	% cover	Ulvaceae	Algae	Ground	Cover
1	0	95	0	95	0	0	0	5	5	0	100
1	0	100	0	100	0	0	0	0	0	0	100
1	0	100	0	100	0	0	0	0	0	0	100
1	0	100	0	100	0	0	0	0	0	0	100
1	0	95	0	95	0	0	0	5	5	0	100
1	0	100	0	100	0	0	0	0	0	0	100
1	0	95	0	95	0	0	0	5	5	0	100
1	0	100	0	100	0	0	0	0	0	0	100
1	0	100	0	100	0	0	0	0	0	0	100
1	0	100	0	100	0	0	0	0	0	0	100
1	0	95	0	95	0	0	0	5	5	0	100
1	0	100	0	100	0	0	0	0	0	0	100
1	0	100	0	100	0	0	0	0	0	0	100
1	0	80	0	80	0	0	0	5	5	15	85
1	0	100	0	100	0	0	0	0	0	0	100
1	0	100	0	100	0	0	0	0	0	0	100
1	0	95	0	95	0	0	0	5	5	0	100
1	0	95	0	95	0	0	0	0	0	5	95
1	0	95	0	95	0	0	0	0	0	5	95
1	0	98	0	98	0	0	0	0	0	2	98
1	0	100	0	100	0	0	0	0	0	0	100
1	0	95	0	95	0	0	0	5	5	0	100
1	0	100	0	100	0	0	0	0	0	0	100
1	0	100	0	100	0	0	0	0	0	0	100
1	0	100	0	100	0	0	0	0	0	0	100
1	0	100	0	100	0	0	0	0	0	0	100
1	0	90	0	90	0	0	0	5	5	5	95
1	0	100	0	100	0	0	0	0	0	0	100
1	0	98	0	98	0	0	0	0	0	2	98
1	0	100	0	100	0	0	0	0	0	0	100
1	0	90	0	90	0	0	0	0	0	10	90
1	0	50	0	50	0	0	0	5	5	45	55
1	0	20	0	20	0	0	0	30	30	50	50
1	0	65	0	65	0	0	0	0	0	35	65
1	0	95	0	95	0	0	0	5	5	0	100
1	0	30	0	30	0	0	0	10	10	60	40
1	0	90	0	90	0	0	0	0	0	10	90
1	0	90	0	90	0	0	0	0	0	10	90
1	0	85	0	85	0	0	0	10	10	5	95
1	0	10	0	10	0	5	0	25	30	60	40
1	0	10	0	10	0	0	0	30	30	60	40
1	0	95	0	95	0	0	0	0	0	5	95
1	0	85	0	85	0	0	0	2	2	13	87
1	0	80	0	80	0	0	0	0	0	20	80
1	0	60	0	60	0	0	0	10	10	30	70
1	0	10	0	10	0	0	0	80	80	10	90
1	0	80	0	80	0	0	0	15	15	5	95
1	0	80	0	80	0	0	0	20	20	0	100
1	0	60	0	60	0	0	0	20	20	20	80
1	0	40	0	40	0	0	0	25	25	35	65
1	0	80	0	80	0	0	0	15	15	5	95
1	0	100	0	100	0	0	0	0	0	0	100
1	0	65	0	65	0	0	0	10	10	25	75
1	0	20	0	20	0	0	0	30	30	50	50
2	0	25	0	25	0	0	0	15	15	60	40
2	0	80	0	80	0	0	0	0	0	20	80
2	0	60	0	60	0	0	0	10	10	30	70
2	0	65	0	65	0	2	0	10	12	23	77
2	0	80	0	80	0	0	0	15	15	5	95
2	0	80	0	80	0	2	0	8	10	10	90
2	0	25	0	25	0	0	0	25	25	50	50
2	0	75	0	75	0	0	0	15	15	10	90
2	0	65	0	65	0	0	0	10	10	25	75
2	0	60	0	60	0	0	0	10	10	30	70
2	0	80	0	80	0	0	0	0	0	20	80
2	0	45	0	45	0	0	0	5	5	50	50
2	0	10	0	10	0	5	0	10	15	75	25
2	0	5	0	5	0	10	0	80	90	5	95
Average		**76.0**	**0.0**	**76.0**	**0.0**	**0.4**	**0.0**	**8.8**	**9.1**	**14.9**	**85.1**

Transect E15										**Surveyed 25 June 2024**	
		Seagrasses				**Algae**					
Long=1 Short=2	**Fouling 0,1,2**	***Zostera* % cover**	***Halophila* % cover**	**Total Seagrasses**	***Codium* % cover**	***Cystoseira* % cover**	***Caulerpa* % cover**	**% algae Filamentous**	**Total Algae**	**% Bare Ground**	**Total Cover**
0	0	0	5	5	0	0	0	0	0	95	5
0	0	0	0	0	0	0	0	0	0	100	0
1	1	65	0	65	0	0	0	0	0	35	65
1	1	80	0	80	0	5	0	0	5	15	85
1	1	70	0	70	0	0	0	0	0	30	70
1	1	70	5	75	0	0	0	0	0	25	75
1	1	95	0	95	0	0	0	0	0	5	95
1	1	100	0	100	0	0	0	0	0	0	100
1	1	90	0	90	0	0	0	0	0	10	90
1	1	70	0	70	0	0	0	0	0	30	70
1	1	60	20	80	0	0	0	0	0	20	80
1	1	90	5	95	0	0	0	0	0	5	95
1	1	98	2	100	0	0	0	0	0	0	100
1	1	95	0	95	0	0	0	0	0	5	95
1	1	95	5	100	0	0	0	0	0	0	100
1	1	65	25	90	0	0	0	0	0	10	90
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	90	0	90	0	0	0	0	0	10	90
1	1	90	0	90	0	0	0	0	0	10	90
1	1	85	5	90	0	0	0	0	0	10	90
2	0	85	5	90	0	0	0	0	0	10	90
2	1	30	25	55	0	0	0	0	0	45	55
2	1	65	30	95	0	0	0	0	0	5	95
2	1	90	5	95	0	0	0	0	0	5	95
2	1	25	25	50	0	0	0	0	0	50	50
2	1	75	20	95	0	0	0	0	0	5	95
2	1	80	10	90	0	0	0	0	0	10	90
2	1	65	2	67	0	25	0	0	25	8	92
2	1	80	20	100	0	0	0	0	0	0	100
2	1	80	15	95	0	0	0	0	0	5	95
2	1	85	5	90	0	0	0	0	0	10	90
2	1	80	10	90	0	0	0	0	0	10	90
2	1	95	0	95	0	0	0	0	0	5	95
2	1	85	5	90	0	0	0	0	0	10	90
2	1	95	0	95	0	0	0	0	0	5	95
2	1	90	0	90	0	0	0	0	0	10	90
2	1	90	5	95	0	0	0	0	0	5	95
2	1	95	0	95	0	0	0	0	0	5	95
2	1	80	0	80	0	0	0	0	0	20	80
2	1	90	5	95	0	0	0	0	0	5	95
2	1	100	0	100	0	0	0	0	0	0	100
2	1	95	0	95	0	0	0	0	0	5	95
2	1	95	0	95	0	0	0	0	0	5	95
2	1	35	45	80	0	0	0	0	0	20	80
2	1	80	15	95	0	0	0	0	0	5	95
2	1	15	60	75	0	0	0	0	0	25	75
2	1	15	55	70	0	0	0	0	0	30	70
2	1	35	50	85	0	0	0	0	0	15	85
2	1	20	55	75	0	0	0	0	0	25	75
2	1	45	50	95	0	0	0	0	0	5	95
2	1	60	25	85	0	0	0	0	0	15	85
2	1	60	25	85	0	0	0	0	0	15	85
2	1	60	35	95	0	0	0	0	0	5	95
2	1	75	15	90	0	0	0	0	0	10	90
2	1	90	5	95	0	0	0	0	0	5	95
2	1	85	5	90	0	0	0	0	0	10	90
2	1	80	5	85	0	0	0	0	0	15	85
2	1	75	15	90	0	0	0	0	0	10	90
2	1	95	0	95	0	0	0	0	0	5	95
2	1	70	25	95	0	0	0	0	0	5	95
2	1	80	10	90	0	0	0	0	0	10	90
2	1	75	20	95	0	0	0	0	0	5	95
2	1	45	45	90	0	0	0	0	0	10	90
Average		**74.3**	**12.0**	**86.4**	**0.0**	**0.4**	**0.0**	**0.0**	**0.4**	**13.2**	**86.8**

Transect E16										**Surveyed 25 June 2024**	
			Seagrasses			**Algae**					
Long=1 Short=2	**Fouling 0,1,2**	***Zostera* % cover**	***Halophila* % cover**	**Total Seagrasses**	***Codium* % cover**	***Cystoseira* % cover**	***Caulerpa* % cover**	**% algae Filamentous**	**Total Algae**	**% Bare Ground**	**Total Cover**
1	0	100	0	100	0	0	0	0	0	0	100
1	0	50	0	50	0	0	0	0	0	50	50
1	0	65	0	65	0	0	0	0	0	35	65
1	0	30	0	30	0	0	0	0	0	70	30
1	0	80	0	80	0	0	0	0	0	20	80
1	1	85	0	85	0	0	0	0	0	15	85
1	1	60	0	60	0	0	0	0	0	40	60
1	1	75	0	75	0	0	0	0	0	25	75
1	1	60	0	60	0	0	0	0	0	40	60
1	1	80	0	80	0	0	0	0	0	20	80
1	1	90	0	90	0	0	0	0	0	10	90
1	1	90	0	90	0	0	0	0	0	10	90
1	1	95	0	95	0	0	0	0	0	5	95
1	1	85	0	85	0	0	0	0	0	15	85
1	1	90	5	95	0	0	0	0	0	5	95
1	1	95	0	95	0	5	0	0	5	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	80	0	80	0	0	0	0	0	20	80
1	1	95	0	95	0	0	0	0	0	5	95
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	95	0	95	0	0	0	0	0	5	95
1	1	90	5	95	0	0	0	0	0	5	95
1	1	100	0	100	0	0	0	0	0	0	100
1	1	95	0	95	0	0	0	0	0	5	95
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	90	0	90	0	0	0	0	0	10	90
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	90	0	90	0	0	0	0	0	10	90
2	1	85	10	95	0	0	0	0	0	5	95
2	1	95	0	95	0	0	0	0	0	5	95
2	1	100	0	100	0	0	0	0	0	0	100
2	1	40	20	60	0	0	0	0	0	40	60
2	1	10	30	40	0	0	0	0	0	60	40
2	1	40	30	70	0	0	0	0	0	30	70
2	1	20	20	40	0	0	0	0	0	60	40
2	1	40	10	50	0	0	0	0	0	50	50
2	1	15	30	45	0	0	0	0	0	55	45
2	1	30	25	55	0	0	0	0	0	45	55
2	1	10	20	30	0	0	0	0	0	70	30
Average		**84.6**	**3.0**	**87.6**	**0.0**	**0.1**	**0.0**	**0.0**	**0.1**	**12.4**	**87.6**

Bardens Bay

Transect A1											Surveyed 28 June 2024
		Seagrasses			Algae						
Long=1 Short=2	Fouling 0,1,2	*Zostera* % cover	*Halophila* % cover	Total Seagrasses	*Codium* % cover	*Cystoseira* % cover	*Caulerpa* % cover	% algae Filamentous	Total Algae	% Bare Ground	Total Cover
0	0	0	0	0	0	65	0	0	65	35	65
1	0	10	0	10	0	25	0	0	25	65	35
1	0	85	5	90	0	0	0	0	0	10	90
1	0	75	5	80	0	0	0	0	0	20	80
1	0	80	5	85	0	0	0	0	0	15	85
1	0	75	10	85	0	0	0	0	0	15	85
1	0	85	10	95	0	0	0	0	0	5	95
1	0	85	15	100	0	0	0	0	0	0	100
1	0	75	10	85	0	0	0	0	0	15	85
1	1	40	0	40	0	0	0	0	0	60	40
1	1	75	0	75	0	15	0	0	15	10	90
1	1	75	0	75	0	10	0	0	10	15	85
1	1	65	0	65	0	5	0	0	5	30	70
1	1	45	0	45	0	55	0	0	55	0	100
1	1	75	0	75	0	25	0	0	25	0	100
1	1	50	0	50	0	40	0	0	40	10	90
1	1	80	0	80	0	15	0	0	15	5	95
1	1	50	0	50	0	10	0	0	10	40	60
1	1	100	0	100	0	0	0	0	0	0	100
1	1	80	0	80	0	0	0	0	0	20	80
1	1	90	0	90	0	5	0	0	5	5	95
1	1	85	0	85	0	0	0	0	0	15	85
1	1	75	0	75	0	25	0	0	25	0	100
1	1	65	0	65	0	0	0	0	0	35	65
1	1	80	10	90	0	5	0	0	5	5	95
1	1	85	5	90	0	0	0	0	0	10	90
2	0	85	10	95	0	0	0	0	0	5	95
2	0	85	5	90	0	0	0	0	0	10	90
2	0	65	15	80	0	10	0	0	10	10	90
2	0	75	10	85	0	0	0	0	0	15	85
2	0	95	5	100	0	0	0	0	0	0	100
2	0	75	10	85	0	10	0	0	10	5	95
2	0	80	0	80	0	20	0	0	20	0	100
2	0	95	5	100	0	0	0	0	0	0	100
2	0	75	15	90	0	10	0	0	10	0	100
2	0	85	15	100	0	0	0	0	0	0	100
2	0	55	5	60	0	5	0	0	5	35	65
2	0	95	5	100	0	0	0	0	0	0	100
2	0	75	5	80	0	0	0	0	0	20	80
2	0	95	0	95	0	0	0	0	0	5	95
2	0	55	30	85	0	0	0	0	0	15	85
2	0	60	25	85	0	0	0	0	0	15	85
2	0	50	15	65	0	0	0	0	0	35	65
2	0	75	10	85	0	5	0	0	5	10	90
2	0	100	0	100	0	0	0	0	0	0	100
2	0	100	0	100	0	0	0	0	0	0	100
2	0	95	5	100	0	0	0	0	0	0	100
2	0	85	15	100	0	0	0	0	0	0	100
2	0	85	15	100	0	0	0	0	0	0	100
2	0	85	15	100	0	0	0	0	0	0	100
2	0	90	10	100	0	0	0	0	0	0	100
2	0	85	15	100	0	0	0	0	0	0	100
2	0	85	10	95	0	5	0	0	5	0	100
2	0	85	10	95	0	0	0	0	0	5	95
2	0	10	60	70	0	0	0	0	0	30	70
2	1	75	0	75	0	15	0	0	15	10	90
2	1	75	0	75	0	25	0	0	25	0	100
2	1	75	0	75	0	20	0	0	20	5	95
2	1	90	0	90	0	0	0	0	0	10	90
2	1	60	0	60	0	30	0	0	30	10	90
2	1	65	0	65	0	15	0	0	15	20	80
2	1	85	0	85	0	10	0	0	10	5	95
2	1	85	0	85	0	5	0	0	5	10	90
2	1	95	0	95	0	0	0	0	0	5	95
2	1	80	5	85	0	0	0	0	0	15	85
2	1	75	10	85	0	0	0	0	0	15	85
2	1	80	10	90	0	10	0	0	10	0	100
2	1	100	0	100	0	0	0	0	0	0	100
Average		**75.1**	**6.5**	**81.5**	**0.0**	**7.3**	**0.0**	**0.0**	**7.3**	**11.2**	**88.8**

Transect A2 **Surveyed 28 June 2024**

			Seagrasses			Algae					
Long=1 Short=2	Fouling 0,1,2	*Zostera* % cover	*Halophila* % cover	Total Seagrasses	*Codium* % cover	*Cystoseira* % cover	*Caulerpa* % cover	% algae Filamentous	Total Algae	% Bare Ground	Total Cover
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	80	0	80	0	0	0	0	0	20	80
1	1	90	0	90	0	0	0	0	0	10	90
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	90	0	90	0	0	0	0	0	10	90
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	85	0	85	0	0	0	0	0	15	85
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	80	0	80	0	10	0	0	10	10	90
1	1	90	0	90	0	10	0	0	10	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	90	0	90	0	10	0	0	10	0	100
1	1	90	0	90	0	0	0	0	0	10	90
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	90	0	90	0	0	0	0	0	10	90
1	1	95	0	95	0	5	0	0	5	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	90	0	90	0	10	0	0	10	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	90	0	90	0	0	0	0	0	10	90
1	1	95	0	95	0	0	0	0	0	5	95
1	1	100	0	100	0	0	0	0	0	0	100
1	1	90	0	90	0	0	0	0	0	10	90
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	75	0	75	0	15	0	0	15	10	90
1	1	90	0	90	0	0	0	0	0	10	90
1	1	95	0	95	0	0	0	0	0	5	95
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	80	15	95	0	0	0	0	0	5	95
2	0	95	0	95	0	5	0	0	5	0	100
2	0	100	0	100	0	0	0	0	0	0	100
2	0	85	0	85	0	15	0	0	15	0	100
2	0	95	0	95	0	0	0	0	0	5	95
2	0	80	0	80	0	10	0	0	10	10	90
2	0	80	0	80	0	20	0	0	20	0	100
2	0	90	0	90	0	10	0	0	10	0	100
2	0	90	0	90	0	0	0	0	0	10	90
2	0	85	0	85	0	10	0	0	10	5	95
2	1	85	0	85	0	15	0	0	15	0	100
2	1	85	0	85	0	15	0	0	15	0	100
2	1	95	0	95	0	0	0	0	0	5	95
Average		**94.9**	**0.2**	**95.1**	**0.0**	**2.4**	**0.0**	**0.0**	**2.4**	**2.6**	**97.4**

Transect A3										Surveyed 28 June 2024	
		Seagrasses			Algae						
Long=1	Fouling	*Zostera*	*Halophila*	Total	*Codium*	*Cystoseira*	*Caulerpa*	% algae	Total	% Bare	Total
Short=2	0,1,2	% cover	% cover	seagrasses	% cover	% cover	% cover	Filamentous	Algae	Ground	Cover
1	0	100	0	100	0	0	0	0	0	0	100
1	1	80	0	80	0	0	0	0	0	20	80
1	1	75	0	75	0	5	0	0	5	20	80
1	1	95	0	95	0	0	0	0	0	5	95
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	90	0	90	0	0	0	0	0	10	90
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	95	0	95	0	0	0	0	0	5	95
1	1	90	5	95	0	0	0	0	0	5	95
1	1	90	0	90	0	0	0	0	0	10	90
1	1	95	5	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	90	5	95	0	0	0	0	0	5	95
1	1	85	5	90	0	0	0	0	0	10	90
2	1	75	15	90	0	0	0	0	0	10	90
2	1	75	15	90	0	0	0	0	0	10	90
2	1	80	0	80	0	0	0	0	0	20	80
2	1	80	10	90	0	5	0	0	5	5	95
2	1	90	5	95	0	0	0	0	0	5	95
2	1	90	10	100	0	0	0	0	0	0	100
2	1	90	5	95	0	5	0	0	5	0	100
2	1	80	5	85	0	5	0	0	5	10	90
2	1	90	5	95	0	0	0	0	0	5	95
2	1	95	5	100	0	0	0	0	0	0	100
2	1	90	5	95	0	0	0	0	0	5	95
2	1	80	15	95	0	0	0	0	0	5	95
2	1	80	15	95	0	0	0	0	0	5	95
2	1	85	10	95	0	0	0	0	0	5	95
2	1	85	5	90	0	0	0	0	0	10	90
2	1	90	5	95	0	0	0	0	0	5	95
2	1	90	5	95	0	0	0	0	0	5	95
2	1	90	5	95	0	0	0	0	0	5	95
2	1	90	0	90	0	0	0	0	0	10	90
2	1	90	0	90	0	0	0	0	0	10	90
2	1	95	0	95	0	0	0	0	0	5	95
2	1	95	0	95	0	0	0	0	0	5	95
2	1	95	0	95	0	5	0	0	5	0	100
2	1	90	0	90	0	5	0	0	5	5	95
2	1	90	0	90	0	0	0	0	0	10	90
2	1	100	0	100	0	0	0	0	0	0	100
2	1	95	0	95	0	0	0	0	0	5	95
2	1	100	0	100	0	0	0	0	0	0	100
2	1	90	0	90	0	5	0	0	5	5	95
2	1	95	5	100	0	0	0	0	0	0	100
2	1	90	5	95	0	0	0	0	0	5	95
2	1	95	5	100	0	0	0	0	0	0	100
2	1	75	5	80	0	10	0	0	10	10	90
2	1	95	5	100	0	0	0	0	0	0	100
2	1	80	20	100	0	0	0	0	0	0	100
2	1	85	15	100	0	0	0	0	0	0	100
2	1	50	50	100	0	0	0	0	0	0	100
2	1	95	5	100	0	0	0	0	0	0	100
2	1	85	10	95	0	0	0	0	0	5	95
2	1	90	5	95	0	0	0	0	0	5	95
2	1	85	15	100	0	0	0	0	0	0	100
2	1	85	15	100	0	0	0	0	0	0	100
2	1	85	15	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	90	0	90	0	0	0	0	0	10	90
2	1	95	0	95	0	0	0	0	0	5	95
2	1	90	0	90	0	0	0	0	0	10	90
2	1	25	45	70	0	0	0	0	0	30	70
Average		88.8	5.6	94.4	0.0	0.7	0.0	0.0	0.7	4.9	95.1

Transect A4											Surveyed 28 June 2024
		Seagrasses			Algae						
Long=1	Fouling	*Zostera*	*Halophila*	Total	*Codium*	*Cystoseira*	*Caulerpa*	% algae	Total	% Bare	Total
Short=2	0,1,2	% cover	% cover	Seagrasses	% cover	% cover	% cover	Filamentous	Algae	Ground	Cover
1	1	50	0	50	0	0	0	0	0	50	50
1	1	55	0	55	0	0	0	0	0	45	55
1	1	75	0	75	0	0	0	0	0	25	75
1	1	75	0	75	0	0	0	0	0	25	75
1	1	70	10	80	0	0	0	0	0	20	80
1	1	70	15	85	0	0	0	0	0	15	85
1	1	65	0	65	0	0	0	0	0	35	65
1	1	45	5	50	0	0	0	0	0	50	50
1	1	85	0	85	0	0	0	0	0	15	85
1	1	60	5	65	0	0	0	0	0	35	65
1	1	50	0	50	0	5	0	0	5	45	55
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	80	5	85	0	0	0	0	0	15	85
1	1	50	0	50	0	5	0	0	5	45	55
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	80	5	85	0	0	0	0	0	15	85
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	80	5	85	0	0	0	0	0	15	85
2	1	30	10	40	0	0	0	0	0	60	40
2	1	60	10	70	0	0	0	0	0	30	70
2	1	70	0	70	0	0	0	0	0	30	70
2	1	55	20	75	0	0	0	0	0	25	75
2	1	65	15	80	0	0	0	0	0	20	80
2	1	20	15	35	0	0	0	0	0	65	35
2	1	45	35	80	0	0	0	0	0	20	80
2	1	70	20	90	0	0	0	0	0	10	90
2	1	75	20	95	0	0	0	0	0	5	95
2	1	60	20	80	0	10	0	0	10	10	90
2	1	50	30	80	0	10	0	0	10	10	90
2	1	45	30	75	0	5	0	0	5	20	80
2	1	45	15	60	0	0	0	0	0	40	60
2	1	80	5	85	0	0	0	0	0	15	85
2	1	100	0	100	0	0	0	0	0	0	100
2	1	95	5	100	0	0	0	0	0	0	100
2	1	95	5	100	0	0	0	0	0	0	100
2	1	80	5	85	0	0	0	0	0	15	85
2	1	95	0	95	0	0	0	0	0	5	95
2	1	80	5	85	0	5	0	0	5	10	90
2	1	95	5	100	0	0	0	0	0	0	100
2	1	95	0	95	0	0	0	0	0	5	95
2	1	95	5	100	0	0	0	0	0	0	100
2	1	45	10	55	0	0	0	0	0	45	55
2	1	50	15	65	0	0	0	0	0	35	65
2	1	90	5	95	0	0	0	0	0	5	95
2	1	80	10	90	0	0	0	0	0	10	90
2	1	95	5	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	95	5	100	0	0	0	0	0	0	100
2	1	88	2	90	0	10	0	0	10	0	100
2	1	90	5	95	0	0	0	0	0	5	95
2	1	90	10	100	0	0	0	0	0	0	100
2	2	95	5	100	0	0	0	0	0	0	100
2	2	100	0	100	0	0	0	0	0	0	100
2	2	95	5	100	0	0	0	0	0	0	100
2	2	100	0	100	0	0	0	0	0	0	100
2	2	90	10	100	0	0	0	0	0	0	100
2	2	95	5	100	0	0	0	0	0	0	100
2	2	80	10	90	0	10	0	0	10	0	100
2	2	90	10	100	0	0	0	0	0	0	100
2	2	95	5	100	0	0	0	0	0	0	100
2	2	95	5	100	0	0	0	0	0	0	100
2	2	85	10	95	0	5	0	0	5	0	100
2	2	85	15	100	0	0	0	0	0	0	100
2	2	80	10	90	0	10	0	0	10	0	100
2	2	90	10	100	0	0	0	0	0	0	100
Average		77.8	7.2	85.0	0.0	1.1	0.0	0.0	1.1	13.9	86.1

Transect A5											Surveyed 28 June 2024
		Seagrasses			Algae						
Long=1	Fouling	*Zostera*	*Halophila*	Total	*Codium*	*Cystoseira*	*Caulerpa*	% algae	Total	% Bare	Total
Short=2	0,1,2	% cover	% cover	Seagrasses	% cover	% cover	% cover	Filamentous	Algae	Ground	Cover
2	1	50	45	95	0	0	0	0	0	5	95
2	1	50	45	95	0	0	0	0	0	5	95
2	1	95	5	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	50	50	100	0	0	0	0	0	0	100
2	1	40	60	100	0	0	0	0	0	0	100
2	1	60	30	90	0	0	0	10	10	0	100
2	1	80	20	100	0	0	0	0	0	0	100
2	1	80	20	100	0	0	0	0	0	0	100
2	1	80	20	100	0	0	0	0	0	0	100
2	1	80	20	100	0	0	0	0	0	0	100
2	1	65	35	100	0	0	0	0	0	0	100
2	1	55	35	90	0	0	0	0	0	10	90
2	1	75	25	100	0	0	0	0	0	0	100
2	1	85	5	90	0	0	0	0	0	10	90
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	90	5	95	0	0	0	0	0	5	95
2	1	50	50	100	0	0	0	0	0	0	100
2	2	75	0	75	0	0	0	0	0	25	75
2	2	75	5	80	0	0	0	0	0	20	80
2	2	45	0	45	0	0	0	0	0	55	45
2	2	15	0	15	0	0	0	0	0	85	15
2	2	35	20	55	0	0	0	0	0	45	55
2	2	30	20	50	0	0	0	0	0	50	50
2	2	15	15	30	0	0	0	0	0	70	30
2	2	10	20	30	0	0	0	0	0	70	30
2	2	10	20	30	0	0	0	0	0	70	30
2	2	40	10	50	0	0	0	0	0	50	50
2	2	30	5	35	0	0	0	0	0	65	35
2	2	20	20	40	0	0	0	0	0	60	40
2	2	25	15	40	0	0	0	0	0	60	40
2	2	20	15	35	0	0	0	0	0	65	35
2	2	65	10	75	0	0	0	0	0	25	75
2	2	60	0	60	0	0	0	0	0	40	60
2	2	60	0	60	0	0	0	0	0	40	60
2	2	65	15	80	0	0	0	0	0	20	80
2	2	70	5	75	0	0	0	0	0	25	75
2	2	55	10	65	0	0	0	0	0	35	65
2	2	50	0	50	0	0	0	0	0	50	50
2	2	65	10	75	0	0	0	0	0	25	75
2	2	65	5	70	0	0	0	0	0	30	70
2	2	45	15	60	0	0	0	0	0	40	60
2	2	60	5	65	0	0	0	0	0	35	65
2	2	60	5	65	0	0	0	0	0	35	65
2	2	50	10	60	0	0	0	0	0	40	60
2	2	25	25	50	0	0	0	0	0	50	50
2	2	50	15	65	0	0	0	0	0	35	65
2	2	20	20	40	0	0	0	0	0	60	40
2	2	40	25	65	0	0	0	0	0	35	65
2	2	25	25	50	0	0	0	0	0	50	50
2	2	50	5	55	0	0	0	0	0	45	55
2	2	30	5	35	0	0	0	0	0	65	35
2	2	15	20	35	0	0	0	0	0	65	35
2	2	25	25	50	0	0	0	0	0	50	50
2	2	25	25	50	0	0	0	0	0	50	50
2	2	45	20	65	0	0	0	0	0	35	65
2	2	15	30	45	0	0	0	0	0	55	45
2	2	20	35	55	0	0	0	0	0	45	55
2	2	45	20	65	0	0	0	0	0	35	65
2	2	50	30	80	0	0	0	0	0	20	80
2	2	35	35	70	0	10	0	0	10	20	80
2	2	45	35	80	0	0	0	0	0	20	80
2	2	40	40	80	0	5	0	0	5	15	85
2	2	65	20	85	0	0	0	0	0	15	85
2	2	55	40	95	0	0	0	0	0	5	95
2	2	40	45	85	0	5	0	0	5	10	90
2	2	65	35	100	0	0	0	0	0	0	100
Average		50.4	19.1	69.5	0.0	0.3	0.0	0.1	0.4	30.1	69.9

Transect A6									Surveyed 28 June 2024		
		Seagrasses			Algae						
Long=1	Fouling	*Zostera*	*Halophila*	Total	*Codium*	*Cystoseira*	*Caulerpa*	% algae	Total	% Bare	Total
Short=2	0,1,2	% cover	% cover	Seagrasses	% cover	% cover	% cover	Filamentous	Algae	Ground	Cover
0	0	0	0	0	0	0	0	0	0	100	0
1	1	85	0	85	0	0	0	0	0	15	85
1	1	85	0	85	0	0	0	0	0	15	85
1	1	90	0	90	0	0	0	0	0	10	90
1	1	90	0	90	0	0	0	0	0	10	90
1	1	95	0	95	0	0	0	0	0	5	95
1	1	95	0	95	0	0	0	0	0	5	95
1	1	90	0	90	0	0	0	0	0	10	90
1	1	95	0	95	0	0	0	0	0	5	95
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	95	0	95	0	0	0	0	0	5	95
1	1	95	0	95	0	0	0	0	0	5	95
1	1	100	0	100	0	0	0	0	0	0	100
1	1	95	0	95	0	0	0	0	0	5	95
1	1	95	0	95	0	0	0	0	0	5	95
1	1	100	0	100	0	0	0	0	0	0	100
1	1	95	5	100	0	0	0	0	0	0	100
1	1	95	0	95	0	0	0	0	0	5	95
1	1	90	0	90	0	5	0	0	5	5	95
1	1	85	5	90	0	0	0	0	0	10	90
1	1	95	0	95	0	0	0	0	0	5	95
1	1	80	10	90	0	0	0	0	0	10	90
1	1	75	10	85	0	5	0	0	5	10	90
1	1	80	0	80	0	5	0	0	5	15	85
1	1	65	10	75	0	0	0	0	0	25	75
1	1	80	0	80	0	0	0	0	0	20	80
1	1	95	0	95	0	0	0	0	0	5	95
1	1	80	0	80	0	0	0	0	0	20	80
1	1	95	0	95	0	0	0	0	0	5	95
1	1	95	0	95	0	0	0	0	0	5	95
1	1	95	0	95	0	0	0	0	0	5	95
1	1	80	5	85	0	10	0	0	10	5	95
1	1	75	5	80	0	10	0	0	10	10	90
1	1	65	0	65	0	0	0	0	0	35	65
1	1	65	0	65	0	0	0	0	0	35	65
1	1	75	5	80	0	0	0	0	0	20	80
1	1	90	5	95	0	0	0	0	0	5	95
1	1	80	5	85	0	0	0	0	0	15	85
1	1	65	0	65	0	5	0	0	5	30	70
1	1	55	0	55	0	5	0	0	5	40	60
1	1	65	0	65	0	0	0	0	0	35	65
1	1	85	5	90	0	0	0	0	0	10	90
1	1	75	0	75	0	15	0	0	15	10	90
1	1	65	0	65	0	5	0	0	5	30	70
1	1	65	5	70	0	5	0	0	5	25	75
1	1	70	0	70	0	0	0	0	0	30	70
1	1	70	0	70	0	0	0	0	0	30	70
1	1	70	5	75	0	0	0	0	0	25	75
1	1	70	5	75	0	0	0	0	0	25	75
1	1	70	5	75	0	10	0	0	10	15	85
1	1	70	5	75	0	0	0	0	0	25	75
1	1	70	0	70	0	0	0	0	0	30	70
1	1	75	0	75	0	0	0	0	0	25	75
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
2	1	45	0	45	0	0	0	0	0	55	45
2	1	55	5	60	0	0	0	0	0	40	60
2	1	75	0	75	0	0	0	0	0	25	75
2	1	65	0	65	0	5	0	0	5	30	70
2	1	80	0	80	0	0	0	0	0	20	80
2	1	65	10	75	0	0	0	0	0	25	75
2	1	60	10	70	0	0	0	0	0	30	70
2	1	60	5	65	0	0	0	0	0	35	65
2	1	60	5	65	0	0	0	0	0	35	65
2	1	75	15	90	0	0	0	0	0	10	90
Average		**79.6**	**2.1**	**81.8**	**0.0**	**1.3**	**0.0**	**0.0**	**1.3**	**17.0**	**83.0**

Sugar Bay and Sunshine

Transect S1											Surveyed 28 June 2024
		Seagrasses			Algae						
Long=1	Fouling	*Zostera*	*Halophila*	Total	*Codium*	*Cystoseira*	*Caulerpa*	% algae	Total	% Bare	Total
Short=2	0,1,2	% cover	% cover	seagrasses	% cover	% cover	% cover	Filamentous	Algae	Ground	Cover
1	1	90	0	90	0	5	0	0	5	5	95
1	1	95	0	95	0	0	0	0	0	5	95
1	1	80	0	80	0	15	0	0	15	5	95
1	1	90	0	90	0	0	0	0	0	10	90
1	1	80	0	80	0	15	0	0	15	5	95
1	1	95	0	95	0	0	0	0	0	5	95
1	1	90	0	90	0	0	0	0	0	10	90
1	1	90	0	90	0	10	0	0	10	0	100
1	1	90	0	90	0	10	0	0	10	0	100
1	1	90	0	90	0	5	0	0	5	5	95
1	1	80	0	80	0	15	0	0	15	5	95
1	1	95	0	95	0	0	0	0	0	5	95
1	1	85	0	85	0	10	0	0	10	5	95
1	1	100	0	100	0	0	0	0	0	0	100
1	1	95	0	95	0	0	0	0	0	5	95
1	1	100	0	100	0	0	0	0	0	0	100
1	1	80	0	80	0	20	0	0	20	0	100
1	1	85	0	85	0	15	0	0	15	0	100
1	1	75	0	75	0	25	0	0	25	0	100
1	1	90	0	90	0	10	0	0	10	0	100
1	1	90	0	90	0	10	0	0	10	0	100
1	1	85	0	85	0	15	0	0	15	0	100
1	1	95	0	95	0	5	0	0	5	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	90	0	90	0	5	0	0	5	5	95
1	1	95	0	95	0	0	0	0	0	5	95
1	1	80	0	80	0	20	0	0	20	0	100
1	1	90	0	90	0	10	0	0	10	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	95	0	95	0	0	0	0	0	5	95
1	1	90	5	95	0	5	0	0	5	0	100
1	1	90	0	90	0	5	0	0	5	5	95
1	1	100	0	100	0	0	0	0	0	0	100
1	1	90	0	90	0	5	0	0	5	5	95
1	1	95	0	95	0	5	0	0	5	0	100
1	1	85	0	85	0	5	0	0	5	10	90
1	1	90	0	90	0	5	0	0	5	5	95
1	2	90	0	90	0	10	0	0	10	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	90	0	90	0	10	0	0	10	0	100
1	1	95	0	95	0	0	0	0	0	5	95
1	1	95	0	95	0	5	0	0	5	0	100
1	1	95	0	95	0	5	0	0	5	0	100
1	1	95	0	95	0	5	0	0	5	0	100
1	1	95	0	95	0	5	0	0	5	0	100
1	1	80	0	80	0	15	0	0	15	5	95
1	1	80	0	80	0	15	0	0	15	5	95
1	1	100	0	100	0	0	0	0	0	0	100
1	1	95	0	95	0	5	0	0	5	0	100
1	1	90	0	90	0	5	0	0	5	5	95
1	1	85	0	85	0	5	0	0	5	10	90
1	1	100	0	100	0	0	0	0	0	0	100
2	1	80	0	80	0	10	0	0	10	10	90
2	1	90	0	90	0	5	0	0	5	5	95
2	1	85	5	90	0	10	0	0	10	0	100
2	1	85	5	90	0	5	0	0	5	5	95
2	1	90	5	95	0	0	0	0	0	5	95
2	1	100	0	100	0	0	0	0	0	0	100
2	1	80	0	80	0	5	0	0	5	15	85
2	1	75	10	85	0	0	0	0	0	15	85
2	1	10	25	35	0	15	0	0	15	50	50
2	1	75	10	85	0	0	0	0	0	15	85
2	1	90	0	90	0	5	0	0	5	5	95
2	1	85	5	90	0	10	0	0	10	0	100
2	2	100	0	100	0	0	0	0	0	0	100
2	2	100	0	100	0	0	0	0	0	0	100
Average		89.2	1.0	90.2	0.0	5.9	0.0	0.0	5.9	3.9	96.1

Transect S2									Surveyed 28 June 2024		
		Seagrasses			Algae						
Long=1	Fouling	*Zostera*	*Halophila*	Total	*Codium*	*Cystoseira*	*Caulerpa*	% algae	Total	% Bare	Total
Short=2	0,1,2	% cover	% cover	seagrasses	% cover	% cover	% cover	Filamentous	Algae	Ground	Cover
0	0	0	0	0	0	100	0	0	100	0	100
0	0	0	0	0	0	100	0	0	100	0	100
0	0	0	0	0	0	90	0	0	90	10	90
0	0	0	0	0	0	90	0	0	90	10	90
0	0	0	40	40	0	15	0	0	15	45	55
0	0	0	55	55	0	0	0	0	0	45	55
1	1	95	0	95	0	0	0	0	0	5	95
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	75	0	75	0	0	0	0	0	25	75
1	1	75	0	75	0	0	0	0	0	25	75
1	1	65	0	65	0	0	0	0	0	35	65
1	1	35	0	35	0	0	0	0	0	65	35
1	1	25	0	25	0	0	0	0	0	75	25
1	1	55	0	55	0	0	0	0	0	45	55
1	1	75	0	75	0	0	0	0	0	25	75
1	1	70	10	80	0	0	0	0	0	20	80
1	1	80	0	80	0	0	0	0	0	20	80
1	1	65	0	65	0	0	0	0	0	35	65
1	1	95	0	95	0	0	0	0	0	5	95
1	1	85	0	85	0	0	0	0	0	15	85
1	1	85	5	90	0	0	0	0	0	10	90
1	1	90	0	90	0	0	0	0	0	10	90
1	1	90	0	90	0	0	0	0	0	10	90
1	1	90	0	90	0	0	0	0	0	10	90
1	1	60	0	60	0	0	0	0	0	40	60
1	1	95	0	95	0	0	0	0	0	5	95
1	1	75	0	75	0	0	0	0	0	25	75
1	1	85	0	85	0	0	0	0	0	15	85
1	1	80	0	80	0	0	0	0	0	20	80
1	1	90	0	90	0	0	0	0	0	10	90
1	1	95	0	95	0	0	0	0	0	5	95
1	1	95	0	95	0	0	0	0	0	5	95
1	1	85	0	85	0	0	0	0	0	15	85
1	1	65	0	65	0	0	0	0	0	35	65
1	1	60	0	60	0	30	0	0	30	10	90
1	1	35	0	35	0	55	0	0	55	10	90
1	1	10	0	10	0	80	0	0	80	10	90
1	1	65	0	65	0	0	0	0	0	35	65
1	1	50	15	65	0	5	0	0	5	30	70
1	1	85	0	85	0	0	0	0	0	15	85
1	1	85	0	85	0	0	0	0	0	15	85
1	1	75	10	85	0	0	0	0	0	15	85
1	1	85	0	85	0	0	0	0	0	15	85
1	1	85	0	85	0	0	0	0	0	15	85
1	1	90	0	90	0	0	0	0	0	10	90
1	1	90	0	90	0	0	0	0	0	10	90
1	1	80	0	80	0	0	0	0	0	20	80
1	1	65	5	70	0	0	0	0	0	30	70
1	1	85	0	85	0	0	0	0	0	15	85
1	1	75	0	75	0	0	0	0	0	25	75
1	1	80	5	85	0	0	0	0	0	15	85
1	1	45	10	55	0	0	0	0	0	45	55
1	1	45	0	45	0	0	0	0	0	55	45
1	1	20	0	20	0	0	0	0	0	80	20
1	1	55	5	60	0	0	0	0	0	40	60
2	1	10	0	10	0	0	0	0	0	90	10
2	1	65	0	65	0	0	0	0	0	35	65
2	1	70	25	95	0	0	0	0	0	5	95
2	1	60	15	75	0	25	0	0	25	0	100
2	1	70	10	80	0	15	0	0	15	5	95
2	1	40	50	90	0	5	0	0	5	5	95
2	1	40	45	85	0	5	0	0	5	10	90
2	1	50	10	60	0	0	0	0	0	40	60
2	1	50	5	55	0	0	0	0	0	45	55
2	1	50	15	65	0	0	0	0	0	35	65
Average		**63.9**	**4.9**	**68.8**	**0.0**	**9.0**	**0.0**	**0.0**	**9.0**	**22.1**	**77.9**

Transect S3											Surveyed 28 June 2024
		Seagrasses			Algae						
Long=1 Short=2	Fouling 0,1,2	*Zostera* % cover	*Halophila* % cover	Total seagrasses	*Codium* % cover	*Cystoseira* % cover	*Caulerpa* % cover	% algae Filamentous	Total Algae	% Bare Ground	Total Cover
1	1	85	0	85	0	0	0	0	0	15	85
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	85	5	90	0	0	0	0	0	10	90
1	1	90	0	90	0	0	0	0	0	10	90
1	1	30	10	40	0	5	0	0	5	55	45
1	1	50	10	60	0	0	0	0	0	40	60
1	1	85	5	90	0	0	0	0	0	10	90
1	1	80	0	80	0	0	0	0	0	20	80
1	1	95	0	95	0	0	0	0	0	5	95
1	1	75	0	75	0	0	0	0	0	25	75
1	1	80	0	80	0	0	0	0	0	20	80
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	2	100	0	100	0	0	0	0	0	0	100
1	2	100	0	100	0	0	0	0	0	0	100
1	2	100	0	100	0	0	0	0	0	0	100
1	2	100	0	100	0	0	0	0	0	0	100
1	2	100	0	100	0	0	0	0	0	0	100
1	2	100	0	100	0	0	0	0	0	0	100
1	2	100	0	100	0	0	0	0	0	0	100
1	2	100	0	100	0	0	0	0	0	0	100
1	2	100	0	100	0	0	0	0	0	0	100
1	2	100	0	100	0	0	0	0	0	0	100
1	2	100	0	100	0	0	0	0	0	0	100
1	2	100	0	100	0	0	0	0	0	0	100
1	2	100	0	100	0	0	0	0	0	0	100
1	2	100	0	100	0	0	0	0	0	0	100
1	2	100	0	100	0	0	0	0	0	0	100
1	2	100	0	100	0	0	0	0	0	0	100
1	2	100	0	100	0	0	0	0	0	0	100
1	2	100	0	100	0	0	0	0	0	0	100
1	2	100	0	100	0	0	0	0	0	0	100
1	2	100	0	100	0	0	0	0	0	0	100
1	2	100	0	100	0	0	0	0	0	0	100
1	2	100	0	100	0	0	0	0	0	0	100
1	2	100	0	100	0	0	0	0	0	0	100
1	2	100	0	100	0	0	0	0	0	0	100
1	2	100	0	100	0	0	0	0	0	0	100
1	2	100	0	100	0	0	0	0	0	0	100
1	2	100	0	100	0	0	0	0	0	0	100
1	2	100	0	100	0	0	0	0	0	0	100
1	2	100	0	100	0	0	0	0	0	0	100
1	2	100	0	100	0	0	0	0	0	0	100
1	2	100	0	100	0	0	0	0	0	0	100
1	2	100	0	100	0	0	0	0	0	0	100
1	2	100	0	100	0	0	0	0	0	0	100
1	2	100	0	100	0	0	0	0	0	0	100
1	2	100	0	100	0	0	0	0	0	0	100
1	2	100	0	100	0	0	0	0	0	0	100
1	2	100	0	100	0	0	0	0	0	0	100
1	2	100	0	100	0	0	0	0	0	0	100
1	2	100	0	100	0	0	0	0	0	0	100
1	2	100	0	100	0	0	0	0	0	0	100
1	2	100	0	100	0	0	0	0	0	0	100
1	2	100	0	100	0	0	0	0	0	0	100
1	2	100	0	100	0	0	0	0	0	0	100
1	2	100	0	100	0	0	0	0	0	0	100
1	2	100	0	100	0	0	0	0	0	0	100
1	2	100	0	100	0	0	0	0	0	0	100
1	2	100	0	100	0	0	0	0	0	0	100
1	2	100	0	100	0	0	0	0	0	0	100
1	2	100	0	100	0	0	0	0	0	0	100
1	2	100	0	100	0	0	0	0	0	0	100
1	2	100	0	100	0	0	0	0	0	0	100
1	2	100	0	100	0	0	0	0	0	0	100
Average		96.4	0.4	96.8	0.0	0.1	0.0	0.0	0.1	3.1	96.9

Transcect S4										Surveyed 28 June 2024	
		Seagrasses				Algae					
Long=1 Short=2	Fouling 0,1,2	*Zostera* % cover	*Halophila* % cover	Total seagrasses	*Codium* % cover	*Cystoseira* % cover	*Caulerpa* % cover	% algae Filamentous	Total Algae	% Bare Ground	Total Cover
1	0	100	0	100	0	0	0	0	0	0	100
1	0	95	0	95	0	0	0	0	0	5	95
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	95	5	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	95	5	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	2	100	0	100	0	0	0	0	0	0	100
1	2	100	0	100	0	0	0	0	0	0	100
1	2	100	0	100	0	0	0	0	0	0	100
2	0	100	0	100	0	0	0	0	0	0	100
2	0	100	0	100	0	0	0	0	0	0	100
2	1	90	5	95	0	0	0	0	0	5	95
2	1	100	0	100	0	0	0	0	0	0	100
2	1	95	5	100	0	0	0	0	0	0	100
2	1	95	5	100	0	0	0	0	0	0	100
2	1	95	5	100	0	0	0	0	0	0	100
2	1	95	5	100	0	0	0	0	0	0	100
2	1	90	10	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
Average		99.2	0.7	99.9	0.0	0.0	0.0	0.0	0.0	0.1	99.9

Transect S5										**Surveyed 28 June 2024**	
		Seagrasses				**Algae**					
Long=1 Short=2	**Fouling 0,1,2**	***Zostera* % cover**	***Halophila* % cover**	**Total seagrasses**	***Codium* % cover**	***Cystoseira* % cover**	***Caulerpa* % cover**	**% algae Filamentous**	**Total Algae**	**% Bare Ground**	**Total Cover**
1	0	70	0	70	0	0	0	0	0	30	70
1	0	60	0	60	0	0	0	0	0	40	60
1	0	65	0	65	0	0	0	0	0	35	65
1	0	75	10	85	0	0	0	0	0	15	85
1	0	75	10	85	0	0	0	0	0	15	85
1	0	70	10	80	0	0	0	0	0	20	80
1	0	80	5	85	0	0	0	0	0	15	85
1	0	90	0	90	0	0	0	0	0	10	90
1	0	75	5	80	0	0	0	0	0	20	80
1	0	80	0	80	0	0	0	0	0	20	80
1	0	95	0	95	0	0	0	0	0	5	95
1	0	90	0	90	0	0	0	0	0	10	90
1	0	100	0	100	0	0	0	0	0	0	100
1	0	100	0	100	0	0	0	0	0	0	100
1	0	100	0	100	0	0	0	0	0	0	100
1	0	95	0	95	0	0	0	0	0	5	95
1	0	100	0	100	0	0	0	0	0	0	100
1	0	95	0	95	0	0	0	0	0	5	95
1	0	100	0	100	0	0	0	0	0	0	100
1	0	100	0	100	0	0	0	0	0	0	100
1	0	100	0	100	0	0	0	0	0	0	100
1	0	90	0	90	0	0	0	0	0	10	90
1	0	100	0	100	0	0	0	0	0	0	100
1	0	100	0	100	0	0	0	0	0	0	100
1	0	100	0	100	0	0	0	0	0	0	100
1	0	100	0	100	0	0	0	0	0	0	100
1	0	100	0	100	0	0	0	0	0	0	100
1	0	100	0	100	0	0	0	0	0	0	100
1	0	100	0	100	0	0	0	0	0	0	100
1	0	95	0	95	0	5	0	0	5	0	100
1	0	95	0	95	0	0	0	0	0	5	95
1	0	100	0	100	0	0	0	0	0	0	100
1	0	95	0	95	0	0	0	0	0	5	95
1	0	85	0	85	0	0	0	0	0	15	85
1	0	90	0	90	0	0	0	0	0	10	90
1	0	80	0	80	0	0	0	0	0	20	80
1	0	95	0	95	0	0	0	0	0	5	95
1	0	95	0	95	0	0	0	0	0	5	95
1	0	95	0	95	0	0	0	0	0	5	95
1	0	90	0	90	0	0	0	0	0	10	90
1	0	95	0	95	0	0	0	0	0	5	95
1	0	90	0	90	0	0	0	0	0	10	90
1	0	90	5	95	0	0	0	0	0	5	95
2	0	55	0	55	0	0	0	0	0	45	55
2	0	55	15	70	0	0	0	0	0	30	70
2	0	55	20	75	0	0	0	0	0	25	75
2	0	40	15	55	0	10	0	0	10	35	65
2	0	55	20	75	0	0	0	0	0	25	75
2	0	50	0	50	0	0	0	0	0	50	50
2	0	60	0	60	0	0	0	0	0	40	60
2	0	60	10	70	0	0	0	0	0	30	70
2	0	75	0	75	0	0	0	0	0	25	75
2	0	70	5	75	0	0	0	0	0	25	75
2	0	70	5	75	0	0	0	0	0	25	75
2	0	65	10	75	0	0	0	0	0	25	75
2	0	45	5	50	0	0	0	0	0	50	50
2	0	45	5	50	0	0	0	0	0	50	50
2	0	40	0	40	0	0	0	0	0	60	40
2	0	70	0	70	0	0	0	0	0	30	70
2	0	75	5	80	0	0	0	0	0	20	80
2	0	90	0	90	0	0	0	0	0	10	90
2	0	70	0	70	0	0	0	0	0	30	70
2	0	70	0	70	0	0	0	0	0	30	70
2	0	70	5	75	0	0	0	0	0	25	75
2	0	75	10	85	0	0	0	0	0	15	85
2	0	80	10	90	0	0	0	0	0	10	90
2	0	80	0	80	0	0	0	0	0	20	80
2	1	70	0	70	0	0	0	0	0	30	70
Average		**80.7**	**2.7**	**83.4**	**0.0**	**0.2**	**0.0**	**0.0**	**0.2**	**16.4**	**83.6**

Transect S6										**Surveyed 28 June 2024**	
		Seagrasses				**Algae**					
Long=1 Short=2	**Fouling 0,1,2**	***Zostera* % cover**	***Halophila* % cover**	**Total seagrasses**	***Codium* % cover**	***Cystoseira* % cover**	***Caulerpa* % cover**	**% algae *Colpomenia***	**Total Algae**	**% Bare Ground**	**Total Cover**
2	1	95	0	95	0	0	0	0	0	5	95
2	1	95	0	95	0	0	0	0	0	5	95
2	1	95	0	95	0	0	0	0	0	5	95
2	1	95	0	95	0	0	0	0	0	5	95
2	1	95	0	95	0	0	0	0	0	5	95
2	1	95	0	95	0	0	0	0	0	5	95
2	1	90	0	90	0	0	0	0	0	10	90
2	1	90	0	90	0	0	0	0	0	10	90
2	1	100	0	100	0	0	0	0	0	0	100
2	1	95	0	95	0	0	0	0	0	5	95
2	1	55	5	60	0	0	0	0	0	40	60
2	1	85	5	90	0	0	0	0	0	10	90
2	1	65	5	70	0	0	0	0	0	30	70
2	1	55	10	65	0	5	0	0	5	30	70
2	1	20	0	20	0	5	0	0	5	75	25
2	1	60	0	60	0	15	0	0	15	25	75
2	1	25	0	25	0	20	0	0	20	55	45
2	1	10	0	10	0	55	0	0	55	35	65
2	1	5	0	5	0	15	0	0	15	80	20
2	1	5	0	5	0	25	0	0	25	70	30
2	1	60	0	60	0	5	0	0	5	35	65
2	1	55	0	55	0	2	0	0	2	43	57
2	1	45	0	45	0	15	0	0	15	40	60
2	1	40	0	40	0	15	0	0	15	45	55
2	1	15	0	15	0	65	0	0	65	20	80
2	1	40	0	40	0	50	0	0	50	10	90
2	1	45	0	45	0	2	0	0	2	53	47
2	1	30	0	35	0	40	0	0	40	25	75
2	1	60	0	60	0	15	0	0	15	25	75
2	1	60	0	60	0	0	0	0	0	40	60
2	1	75	0	75	0	10	0	0	10	15	85
2	1	70	0	70	0	15	0	0	15	15	85
2	1	80	5	85	0	10	0	0	10	5	95
2	1	95	0	95	0	5	0	0	5	0	100
2	1	85	0	85	0	10	0	0	10	5	95
2	1	75	0	75	0	5	0	0	5	20	80
2	1	85	0	85	0	0	0	0	0	15	85
2	1	90	0	90	0	10	0	0	10	0	100
2	1	50	0	50	0	0	0	0	0	50	50
2	1	80	0	80	0	20	0	0	20	0	100
2	1	95	0	95	0	0	0	0	0	5	95
2	1	50	5	55	0	0	0	0	0	45	55
2	1	55	0	55	0	10	0	0	10	35	65
2	1	80	0	80	0	15	0	0	15	5	95
2	1	55	10	65	0	0	0	0	0	35	65
2	1	45	15	60	0	5	0	0	5	35	65
2	1	15	45	60	0	0	0	5	5	35	65
2	1	30	40	70	0	0	0	0	0	30	70
2	1	75	15	90	0	0	0	0	0	10	90
2	1	60	5	65	0	30	0	0	30	5	95
2	1	75	10	85	0	10	0	0	10	5	95
2	1	80	5	85	0	0	0	0	0	15	85
2	1	50	0	50	0	0	0	0	0	50	50
2	1	75	0	75	0	0	0	0	0	25	75
2	1	80	0	80	0	0	0	0	0	20	80
2	1	65	0	65	0	20	0	0	20	15	85
2	1	80	0	80	0	10	0	0	10	10	90
2	1	65	0	65	0	10	0	0	10	25	75
2	1	75	0	75	0	15	0	0	15	10	90
2	1	85	0	85	0	5	0	0	5	10	90
2	1	70	0	70	0	10	0	0	10	20	80
2	1	70	0	70	0	15	0	0	15	15	85
2	1	70	0	70	0	10	0	0	10	20	80
2	1	70	0	70	0	15	0	0	15	15	85
2	1	45	0	45	0	20	0	0	20	35	65
2	1	75	0	75	0	15	0	0	15	10	90
2	2	95	0	95	0	0	0	0	0	5	95
2	2	95	0	95	0	0	0	0	0	5	95
Average		**65.4**	**2.6**	**68.1**	**0.0**	**9.5**	**0.0**	**0.1**	**9.6**	**22.3**	**77.7**

Transect S7											Surveyed 23 July 2024
		Seagrasses			Algae						
Long=1	Fouling	*Zostera*	*Halophila*	Total	*Codium*	*Cystoseira*	*Caulerpa*	% algae	Total	% Bare	Total
Short=2	0,1,2	% cover	% cover	seagrasses	% cover	% cover	% cover	*Colpomenia*	Algae	Ground	Cover
1	1	85	0	85	0	0	0	0	0	15	85
1	1	75	0	75	0	0	0	0	0	25	75
1	1	75	0	75	0	0	0	0	0	25	75
1	1	60	0	60	0	0	0	0	0	40	60
1	1	70	0	70	0	0	0	0	0	30	70
1	1	60	0	60	0	0	0	0	0	40	60
1	1	80	0	80	0	0	0	0	0	20	80
1	1	90	0	90	0	0	0	0	0	10	90
1	1	95	0	95	0	0	0	0	0	5	95
1	1	85	0	85	0	0	0	0	0	15	85
1	1	90	0	90	0	0	0	0	0	10	90
1	1	95	0	95	0	0	0	0	0	5	95
1	1	90	0	90	0	0	0	0	0	10	90
1	1	90	0	90	0	0	0	0	0	10	90
1	1	85	0	85	0	0	0	0	0	15	85
1	1	85	0	85	0	0	0	0	0	15	85
1	1	85	0	85	0	0	0	0	0	15	85
1	1	85	0	85	0	0	0	0	0	15	85
2	1	85	0	85	0	0	0	0	0	15	85
2	1	65	0	65	0	0	0	0	0	35	65
2	1	90	0	90	0	0	0	0	0	10	90
2	1	60	5	65	0	0	0	0	0	35	65
2	1	90	0	90	0	0	0	0	0	10	90
2	1	45	0	45	0	0	0	0	0	55	45
2	1	45	0	45	0	0	0	0	0	55	45
2	1	40	5	45	0	0	0	0	0	55	45
2	1	85	0	85	0	0	0	0	0	15	85
2	1	70	0	35	0	0	0	0	0	65	35
2	1	80	5	85	0	0	0	0	0	15	85
Average		**77.1**	**0.5**	**76.4**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**23.6**	**76.4**

Transect S8										Surveyed 23 July 2024	
		Seagrasses			Algae						
Long=1 Short=2	Fouling 0,1,2	*Zostera* % cover	*Halophila* % cover	Total seagrasses	*Codium* % cover	*Cystoseira* % cover	*Caulerpa* % cover	% algae *Colpomenia*	Total Algae	% Bare Ground	Total Cover
2	1	75	0	75	0	0	0	0	0	25	75
2	1	70	0	70	0	0	0	0	0	30	70
2	1	80	0	80	0	0	0	0	0	20	80
2	1	85	0	85	0	0	0	0	0	15	85
2	1	100	0	100	0	0	0	0	0	0	100
2	1	95	0	95	0	0	0	0	0	5	95
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	95	0	95	0	0	0	0	0	5	95
2	1	100	0	100	0	0	0	0	0	0	100
2	1	95	0	95	0	0	0	0	0	5	95
2	1	95	0	95	0	0	0	0	0	5	95
2	1	95	0	95	0	0	0	0	0	5	95
2	1	95	0	95	0	0	0	0	0	5	95
2	1	95	0	95	0	0	0	0	0	5	95
2	1	95	0	95	0	0	0	0	0	5	95
2	1	90	0	90	0	0	0	0	0	10	90
2	1	95	0	95	0	0	0	0	0	5	95
2	1	95	0	95	0	0	0	0	0	5	95
2	1	95	0	95	0	5	0	0	5	0	100
2	1	95	0	95	0	0	0	0	0	5	95
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	95	0	95	0	0	0	0	0	5	95
2	1	95	0	35	0	0	0	0	0	65	35
2	1	95	0	95	0	0	0	0	0	5	95
2	1	95	0	95	0	0	0	0	0	5	95
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	95	0	95	0	0	0	0	0	5	95
2	1	100	0	100	0	0	0	0	0	0	100
2	1	95	0	95	0	0	0	0	0	5	95
2	1	95	0	95	0	0	0	0	0	5	95
2	1	90	5	95	0	0	0	0	0	5	95
2	1	95	0	95	0	0	0	0	0	5	95
2	1	95	0	95	0	0	0	0	0	5	95
2	1	95	0	95	0	0	0	0	0	5	95
2	1	90	5	95	0	0	0	0	0	5	95
2	1	85	5	90	0	0	0	0	0	10	90
2	1	85	5	90	0	0	0	0	0	10	90
2	1	85	0	85	0	0	0	0	0	15	85
2	1	90	0	90	0	0	0	0	0	10	90
2	1	85	5	90	0	0	0	0	0	10	90
2	1	75	5	80	0	0	0	0	0	20	80
2	1	80	2	82	0	0	0	0	0	18	82
2	1	95	0	95	0	0	0	0	0	5	95
2	1	95	0	95	0	0	0	0	0	5	95
2	1	85	0	85	0	0	0	0	0	15	85
2	1	75	0	75	0	0	0	0	0	25	75
2	1	100	0	100	0	0	0	0	0	0	100
2	1	95	0	95	0	0	0	0	0	5	95
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	95	0	95	0	5	0	0	5	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	95	0	95	0	0	0	0	0	5	95
2	1	95	0	95	0	0	0	0	0	5	95
2	1	90	0	90	0	0	0	0	0	10	90
2	1	90	0	90	0	0	0	0	0	10	90
2	1	90	0	90	0	0	0	0	0	10	90
2	1	90	0	90	0	0	0	0	0	10	90
2	1	80	5	85	0	0	0	0	0	15	85
2	1	75	5	80	0	5	0	0	5	15	85
2	1	90	0	90	0	0	0	0	0	10	90
2	1	90	5	95	0	0	0	0	0	5	95
Average		92.4	0.7	92.2	0.0	0.2	0.0	0.0	0.2	7.6	92.4

Transect S9											Surveyed 23 July 2024
		Seagrasses			Algae						
Long=1	Fouling	*Zostera*	*Halophila*	Total	*Codium*	*Cystoseira*	*Caulerpa*	% algae	Total	% Bare	Total
Short=2	0,1,2	% cover	% cover	seagrasses	% cover	% cover	% cover	Other	Algae	Ground	Cover
2	1	70	0	70	0	0	0	0	0	30	70
2	1	80	0	80	0	0	0	0	0	20	80
2	1	70	0	70	0	0	0	0	0	30	70
2	1	50	0	50	0	0	0	0	0	50	50
2	1	10	0	10	0	0	0	0	0	90	10
2	1	10	0	10	0	0	0	0	0	90	10
2	1	90	0	90	0	0	0	0	0	10	90
2	1	90	0	90	0	0	0	0	0	10	90
2	1	90	0	90	0	0	0	0	0	10	90
2	1	90	0	90	0	0	0	0	0	10	90
2	1	95	0	95	0	0	0	0	0	5	95
2	1	95	2	97	0	0	0	0	0	3	97
2	1	95	0	95	0	0	0	0	0	5	95
2	1	75	5	80	0	0	0	0	0	20	80
2	1	75	0	75	0	0	0	0	0	25	75
2	1	75	0	75	0	0	0	0	0	25	75
2	1	75	0	75	0	0	0	0	0	25	75
2	1	75	5	80	0	0	0	0	0	20	80
2	1	85	0	85	0	0	0	2	2	13	87
2	1	70	5	75	0	0	0	0	0	25	75
2	1	75	0	75	0	0	0	0	0	25	75
2	1	70	0	70	0	0	0	0	0	30	70
2	1	65	2	67	0	0	0	0	0	33	67
2	1	75	2	77	0	0	0	0	0	23	77
2	1	65	0	65	0	0	0	0	0	35	65
2	1	60	0	60	0	0	0	5	5	35	65
2	1	65	5	70	0	0	0	0	0	30	70
2	1	65	0	35	0	0	0	0	0	65	35
2	1	65	0	65	0	0	0	0	0	35	65
2	1	70	0	70	0	0	0	0	0	30	70
2	1	75	0	75	0	0	0	0	0	25	75
2	1	75	0	75	0	0	0	2	2	23	77
2	1	80	0	80	0	0	0	0	0	20	80
2	1	80	0	80	0	0	0	0	0	20	80
2	1	80	0	80	0	0	0	0	0	20	80
2	1	85	0	85	0	0	0	0	0	15	85
2	1	85	0	85	0	0	0	0	0	15	85
2	1	75	0	75	0	0	0	0	0	25	75
2	1	90	0	90	0	0	0	0	0	10	90
2	1	90	0	90	0	0	0	0	0	10	90
2	1	85	0	85	0	5	0	0	5	10	90
2	1	80	0	80	0	0	0	0	0	20	80
2	1	90	0	90	0	0	0	0	0	10	90
2	1	80	0	80	0	15	0	0	15	5	95
2	1	85	0	85	0	5	0	0	5	10	90
2	1	90	0	90	0	5	0	0	5	5	95
2	1	95	0	95	0	0	0	0	0	5	95
2	1	85	0	85	0	0	0	5	5	10	90
2	1	90	0	90	0	0	0	0	0	10	90
2	1	90	0	90	0	0	0	0	0	10	90
2	1	95	0	95	0	0	0	0	0	5	95
2	1	90	0	90	0	0	0	0	0	10	90
2	1	85	0	85	0	5	0	0	5	10	90
2	1	90	0	90	0	0	0	0	0	10	90
2	1	90	0	90	0	0	0	5	5	5	95
2	1	90	0	90	0	5	0	0	5	5	95
2	1	95	0	95	0	0	0	0	0	5	95
2	1	95	0	95	0	0	0	0	0	5	95
2	1	95	0	95	0	0	0	0	0	5	95
2	1	100	0	100	0	0	0	0	0	0	100
2	1	95	0	95	0	0	0	0	0	5	95
2	1	95	0	95	0	0	0	0	0	5	95
2	1	90	0	90	0	5	0	0	5	5	95
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	95	0	95	0	5	0	0	5	0	100
2	1	95	0	95	0	0	0	0	0	5	95
2	1	90	5	95	0	0	0	0	0	5	95
Average		**81.0**	**0.5**	**81.0**	**0.0**	**0.7**	**0.0**	**0.3**	**1.0**	**17.9**	**82.1**

Crangan Bay

Transect C1									Surveyed 28 June 2024		
			Seagrasses			Algae					
Long=1 Short=2	Fouling 0,1,2	*Zostera* % cover	*Halophila* % cover	Total Seagrasses	*Codium* % cover	*Cystoseira* % cover	*Caulerpa* % cover	% algae Filamentous	Total Algae	% Bare Ground	Total Cover
1	0	95	5	100	0	0	0	0	0	0	100
1	0	80	0	80	0	20	0	0	20	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	95	0	95	0	5	0	0	5	0	100
1	1	90	0	90	0	10	0	0	10	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	2	90	0	90	0	10	0	0	10	0	100
1	2	80	0	80	0	20	0	0	20	0	100
1	2	100	0	100	0	0	0	0	0	0	100
1	2	100	0	100	0	0	0	0	0	0	100
1	2	100	0	100	0	0	0	0	0	0	100
1	2	100	0	100	0	0	0	0	0	0	100
1	2	100	0	100	0	0	0	0	0	0	100
1	2	100	0	100	0	0	0	0	0	0	100
2	0	95	5	100	0	0	0	0	0	0	100
2	0	100	0	100	0	0	0	0	0	0	100
2	0	100	0	100	0	0	0	0	0	0	100
2	0	100	0	100	0	0	0	0	0	0	100
2	0	95	5	100	0	0	0	0	0	0	100
2	0	100	0	100	0	0	0	0	0	0	100
2	0	100	0	100	0	0	0	0	0	0	100
2	0	90	10	100	0	0	0	0	0	0	100
2	0	95	5	100	0	0	0	0	0	0	100
2	0	85	5	90	0	5	0	0	5	5	95
2	1	95	0	95	0	5	0	0	5	0	100
2	1	95	0	95	0	5	0	0	5	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	80	0	80	15	5	0	0	20	0	100
2	1	95	0	95	0	0	0	0	0	5	95
2	1	80	0	80	0	20	0	0	20	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	95	0	95	0	0	0	0	0	5	95
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	95	0	95	0	5	0	0	5	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	95	0	95	0	5	0	0	5	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	85	0	85	15	0	0	0	15	0	100
2	1	95	0	95	0	0	0	0	0	5	95
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	95	5	100	0	0	0	0	0	0	100
2	1	95	0	95	0	0	0	0	0	5	95
2	1	70	20	90	0	0	0	0	0	10	90
2	1	35	25	60	0	0	0	0	0	40	60
2	1	90	10	100	0	0	0	0	0	0	100
2	1	95	5	100	0	0	0	0	0	0	100
Average		**95.3**	**1.5**	**96.8**	**0.4**	**1.7**	**0.0**	**0.0**	**2.1**	**1.1**	**98.9**

Transect C2									**Surveyed 28 June 2024**		
		Seagrasses				**Algae**					
Long=1 Short=2	**Fouling 0,1,2**	***Zostera* % cover**	***Halophila* % cover**	**Total Seagrasses**	***Codium* % cover**	***Cystoseira* % cover**	***Caulerpa* % cover**	**% algae Filamentous**	**Total Algae**	**% Bare Ground**	**Total Cover**
0	0	0	0	0	0	5	0	0	5	95	5
0	0	0	0	0	0	0	0	5	5	95	5
0	0	0	0	0	0	0	0	5	5	95	5
2	0	95	0	95	0	0	0	0	0	5	95
2	0	90	0	90	0	0	0	0	0	10	90
2	0	75	0	75	0	5	0	0	5	20	80
2	0	75	5	80	0	0	0	0	0	20	80
2	0	95	0	95	0	0	0	0	0	5	95
2	0	80	0	80	0	0	0	0	0	20	80
2	0	95	0	95	0	0	0	0	0	5	95
2	0	95	5	100	0	0	0	0	0	0	100
2	0	95	5	100	0	0	0	0	0	0	100
2	0	100	0	100	0	0	0	0	0	0	100
2	0	100	0	100	0	0	0	0	0	0	100
2	0	100	0	100	0	0	0	0	0	0	100
2	0	100	0	100	0	0	0	0	0	0	100
2	0	100	0	100	0	0	0	0	0	0	100
2	0	100	0	100	0	0	0	0	0	0	100
2	0	100	0	100	0	0	0	0	0	0	100
2	0	100	0	100	0	0	0	0	0	0	100
2	0	100	0	100	0	0	0	0	0	0	100
2	0	100	0	100	0	0	0	0	0	0	100
2	0	100	0	100	0	0	0	0	0	0	100
2	0	100	0	100	0	0	0	0	0	0	100
2	0	100	0	100	0	0	0	0	0	0	100
2	0	100	0	100	0	0	0	0	0	0	100
2	0	100	0	100	0	0	0	0	0	0	100
2	0	100	0	100	0	0	0	0	0	0	100
2	0	100	0	100	0	0	0	0	0	0	100
2	0	100	0	100	0	0	0	0	0	0	100
2	0	100	0	100	0	0	0	0	0	0	100
2	0	100	0	100	0	0	0	0	0	0	100
2	0	90	0	90	10	0	0	0	10	0	100
2	0	100	0	100	0	0	0	0	0	0	100
2	0	100	0	100	0	0	0	0	0	0	100
2	0	100	0	100	0	0	0	0	0	0	100
2	0	100	0	100	0	0	0	0	0	0	100
2	0	80	0	80	0	20	0	0	20	0	100
2	0	90	0	90	0	10	0	0	10	0	100
2	0	100	0	100	0	0	0	0	0	0	100
2	0	100	0	100	0	0	0	0	0	0	100
2	0	100	0	100	0	0	0	0	0	0	100
2	0	100	0	100	0	0	0	0	0	0	100
2	0	100	0	100	0	0	0	0	0	0	100
2	0	100	0	100	0	0	0	0	0	0	100
2	0	100	0	100	0	0	0	0	0	0	100
2	0	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	95	5	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
Average		**93.4**	**0.3**	**93.7**	**0.1**	**0.6**	**0.0**	**0.1**	**0.9**	**5.4**	**94.6**

Transect C3 **Surveyed 28 June 2024**

		Seagrasses			Algae						
Long=1 Short=2	**Fouling 0,1,2**	***Zostera* % cover**	***Halophila* % cover**	**Total Seagrasses**	***Codium* % cover**	***Cystoseira* % cover**	***Caulerpa* % cover**	**% algae Filamentous**	**Total Algae**	**% Bare Ground**	**Total Cover**
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	90	10	100	0	0	0	0	0	0	100
2	1	90	10	100	0	0	0	0	0	0	100
2	1	90	10	100	0	0	0	0	0	0	100
2	1	95	5	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	95	0	95	0	0	0	0	0	5	95
2	1	85	5	90	0	10	0	0	10	0	100
2	1	95	5	100	0	0	0	0	0	0	100
2	1	95	5	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	95	5	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	90	0	90	0	0	0	0	0	10	90
2	1	90	0	90	0	0	0	0	0	10	90
2	1	90	0	90	0	0	0	0	0	10	90
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	100	0	100	0	0	0	0	0	0	100
2	1	80	0	80	0	0	0	0	0	20	80
2	1	100	0	100	0	0	0	0	0	0	100
2	2	100	0	100	0	0	0	0	0	0	100
2	2	100	0	100	0	0	0	0	0	0	100
2	2	100	0	100	0	0	0	0	0	0	100
2	2	100	0	100	0	0	0	0	0	0	100
2	2	100	0	100	0	0	0	0	0	0	100
Average		**98.2**	**0.8**	**99.0**	**0.0**	**0.1**	**0.0**	**0.0**	**0.1**	**0.8**	**99.2**

Transect C4 **Surveyed 28 June 2024**

		Seagrasses			Algae						
Long=1 Short=2	Fouling 0,1,2	*Zostera* % cover	*Halophila* % cover	Total Seagrasses	*Codium* % cover	*Cystoseira* % cover	*Caulerpa* % cover	% algae Filamentous	Total Algae	% Bare Ground	Total Cover
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	90	0	90	0	0	0	0	0	10	90
1	1	90	0	90	0	0	0	0	0	10	90
1	1	85	0	85	0	0	0	0	0	15	85
1	1	85	0	85	0	0	0	0	0	15	85
1	1	75	0	75	0	0	0	0	0	25	75
1	1	70	0	70	0	0	0	0	0	30	70
1	1	85	0	85	0	0	0	0	0	15	85
1	1	90	0	90	0	0	0	0	0	10	90
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	95	0	95	0	5	0	0	5	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	90	0	90	0	10	0	0	10	0	100
1	1	90	0	90	0	10	0	0	10	0	100
1	1	90	0	90	0	10	0	0	10	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	1	100	0	100	0	0	0	0	0	0	100
1	2	100	0	100	0	0	0	0	0	0	100
1	2	100	0	100	0	0	0	0	0	0	100
1	2	100	0	100	0	0	0	0	0	0	100
1	2	100	0	100	0	0	0	0	0	0	100
1	2	100	0	100	0	0	0	0	0	0	100
1	2	100	0	100	0	0	0	0	0	0	100
1	2	100	0	100	0	0	0	0	0	0	100
1	2	100	0	100	0	0	0	0	0	0	100
1	2	85	0	85	0	0	0	0	0	15	85
1	2	100	0	100	0	0	0	0	0	0	100
1	2	95	0	95	0	0	0	0	0	5	95
1	2	100	0	100	0	0	0	0	0	0	100
1	2	100	0	100	0	0	0	0	0	0	100
1	2	100	0	100	0	0	0	0	0	0	100
1	2	100	0	100	0	0	0	0	0	0	100
1	2	100	0	100	0	0	0	0	0	0	100
Average		**97.3**	**0.0**	**97.3**	**0.0**	**0.5**	**0.0**	**0.0**	**0.5**	**2.2**	**97.8**

Appendix 2 Changes in percent cover of seagrasses in the study area from 2008 to 2024

Changes in percent cover of the substratum by seagrasses off the northern shore of Summerland Point and Frying Pan Bay (2018-2024)

Transect C5	2018	2019	2020	2021	2022	2023	2024
% seagrass	100.0	100.0	99.71	99.71	99.71	93.12	96.6
% bare ground	0.00	0.00	0.29	0.00	0.29	3.47	2.9
Transect C6	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**
% seagrass	99.56	97.76	95.88	98.60	98.09	95.13	94.3
% bare ground	0.44	2.24	4.11	1.25	1.91	4.13	5.5
Transect F1	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**
% seagrass	97.81	100.0	99.34	99.41	99.19	95.65	90.4
% bare ground	2.19	0.00	0.66	0.59	0.81	3.71	6.2
Transect F2	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**
% seagrass	99.63	94.93	98.82	96.03	90.29	50.23	79.77
% bare ground	0.37	5.07	1.18	2.13	9.71	21.38	18.4
Transect F3	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**
% seagrass	99.93	87.82	97.06	97.65	97.53	86.47	93.6
% bare ground	0.07	12.18	2.94	2.35	2.47	11.66	6.4
Transect F4	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**
% seagrass	98.16	48.90	96.40	97.94	96.40	96.84	91.5
% bare ground	1.84	51.1	3.60	2.06	3.60	2.79	8.5
Transect F5	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**
% seagrass	99.04	80.80	90.96	96.40	90.66	85.68	90.1
% bare ground	0.96	19.2	9.04	3.53	9.34	10.54	9.9
Transect F6	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**
% seagrass	100.0	81.99	96.25	95.96	96.10	85.96	92.8
% bare ground	10.00	18.01	3.75	3.97	3.90	12.57	7.2
Transect F7	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**
% seagrass	98.24	97.65	87.57	95.22	86.62	79.41	89.0
% bare ground	1.76	2.35	12.43	4.78	13.38	20.29	11.0

Changes in percent cover of the substratum by seagrasses off the western shore of Summerland Point (2008-2024)

Transect E7	2008	2010	2011	2012	2013	2015	2016	2017	2018	2019	2020
% seagrass	97.93	51.40	45.47	68.31	43.38	92.65	100.0	98.16	98.16	97.65	93.75
% bare ground	2.07	48.60	54.53	31.69	56.62	7.35	0.00	1.84	1.84	2.35	6.25
Transect T1	**2008**	**2010**	**2011**	**2012**	**2013**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
% seagrass	88.94	41.90	32.60	77.91	94.41	94.65	97.35	99.47	85.29	59.92	97.87
% bare ground	11.06	58.10	67.40	22.09	5.59	5.35	2.65	0.53	14.71	40.08	2.13
Transect T2	**2008**	**2010**	**2011**	**2012**	**2013**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
% seagrass	77.91	70.29	7.95	75.74	60.83	74.41	90.59	93.31	90.00	76.87	97.50
% bare ground	22.09	29.71	92.05	24.26	39.17	25.59	9.41	6.69	10.00	23.13	2.5

Transect T3	2008	2010	2011	2012	2013	2015	2016	2017	2018	2019	2020
% seagrass	46.20	63.16	58.53	83.53	89.93	93.82	96.10	98.19	97.57	63.01	94.85
% bare ground	53.80	36.84	41.47	16.47	10.07	6.18	3.90	1.81	2.43	36.99	5.14
Transect T4	**2008**	**2010**	**2011**	**2012**	**2013**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
% seagrass	83.51	81.89	70.37	90.37	97.28	97.94	99.85	95.76	95.07	70.44	82.06
% bare ground	16.49	18.01	29.63	9.63	2.72	2.06	0.15	4.24	4.93	29.56	17.94
Transect T5	**2008**	**2010**	**2011**	**2012**	**2013**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
% seagrass	81.78	77.00	51.40	92.35	99.12	99.41	98.82	99.56	89.63	62.65	79.71
% bare ground	18.22	23.00	48.60	7.65	0.88	0.59	1.18	0.44	10.37	37.35	20.29
Transect T6	**2008**	**2010**	**2011**	**2012**	**2013**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
% seagrass	53.82	59.63	44.77	65.59	95.22	95.74	98.82	94.41	97.13	46.18	79.12
% bare ground	46.18	40.37	53.23	34.41	4.78	4.26	1.18	5.59	2.87	53.82	20.88
Transect T7	**2008**	**2010**	**2011**	**2012**	**2013**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
% seagrass	97.93	70.79	89.34	89.09	99.78	98.38	100.0	99.85	98.97	25.88	82.50
% bare ground	2.07	29.51	10.66	10.91	0.22	1.62	0.00	0.15	1.03	74.12	17.50
Transect T8	**2008**	**2010**	**2011**	**2012**	**2013**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
% seagrass	95.94	60.29	76.99	87.64	96.76	99.26	99.26	98.24	100.0	46.32	87.21
% bare ground	4.06	39.71	23.01	13.26	3.24	0.74	0.74	1.76	0.00	53.68	12.79

Transect E7	2021	2022	2023	2024	
% seagrass	93.75	93.90	87.28	84.1	
% bare ground	6.18	6.10	12.65	15.8	
Transect T1	**2021**	**2022**	**2023**	**2024**	
% seagrass	90.96	95.81	92.25	87.5	
% bare ground	7.06	4.19	5.00	11.5	
Transect T2	**2021**	**2022**	**2023**	**2024**	
% seagrass	98.31	97.35	74.41	90.0	
% bare ground	1.32	2.65	20.66	9.1	
Transect T3	**2021**	**2022**	**2023**	**2024**	
% seagrass	98.68	94.56	88.75	84.6	
% bare ground	1.32	5.44	9.12	15.4	
Transect T4	**2021**	**2022**	**2023**	**2024**	
% seagrass	99.93	89.85	90.26	88.8	
% bare ground	0.07	10.15	8.63	10.9	
Transect T5	**2021**	**2022**	**2023**	**2024**	
% seagrass	98.97	86.40	84.26	92.6	
% bare ground	1.03	13.6	15.15	7.0	
Transect T6	**2021**	**2022**	**2023**	**2024**	
% seagrass	98.16	81.47	86.03	92.3	
% bare ground	1.84	18.53	13.90	7.8	
Transect T7	**2021**	**2022**	**2023**	**2024**	
% seagrass	100.0	82.28	84.25	87.9	
% bare ground	0.00	17.72	15.46	12.1	

Transect T8	2021	2022	2023	2024	
% seagrass	98.82	87.50	83.24	88.7	
% bare ground	1.18	12.50	16.99	11.3	

Changes in percent cover of the substratum by seagrasses in Chain Valley Bay (2008-2024)

Transect E1	2008	2010	2011	2012	2013	2015	2016	2017	2018	2019	2020
% seagrass	84.15	81.01	77.75	98.62	99.44	92.44	99.88	97.96	97.87	99.12	99.04
% bare ground	15.85	18.99	22.25	1.38	0.56	7.56	0.12	2.04	2.13	0.88	0.96
Transect E2	**2008**	**2010**	**2011**	**2012**	**2013**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
% seagrass	83.72	75.87	73.38	95.49	99.09	98.49	99.71	100.0	97.94	97.94	98.53
% bare ground	16.28	24.13	26.62	4.49	0.91	1.51	0.29	0.00	2.06	2.06	1.47
Transect E3	**2008**	**2010**	**2011**	**2012**	**2013**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
% seagrass	98.29	98.97	92.76	96.97	99.16	100.0	83.53	98.90	94.56	98.97	100.0
% bare ground	1.71	1.03	7.24	1.54	0.84	0.00	16.47	1.10	5.44	1.03	0.00
Transect E4	**2008**	**2010**	**2011**	**2012**	**2013**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
% seagrass	80.16	98.54	95.74	100.0	97.50	96.43	98.01	96.76	99.71	99.85	98.82
% bare ground	19.84	1.46	4.26	0.00	2.50	3.57	1.99	3.24	0.29	0.15	1.18
Transect L1	**2008**	**2010**	**2011**	**2012**	**2013**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
% seagrass						99.12	99.71	97.87	97.87	94.63	95.74
% bare ground						0.88	0.29	2.13	2.13	5.37	4.26
Transect E5	**2008**	**2010**	**2011**	**2012**	**2013**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
% seagrass	95.88	94.93	95.19	100.0	98.82	99.82	100.0	97.22	99.41	98.97	100.0
% bare ground	4.12	5.07	4.81	0.00	1.18	0.18	0.00	2.78	0.59	1.03	0.00
Transect E6	**2008**	**2010**	**2011**	**2012**	**2013**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
% seagrass	17.74	34.06	49.56	55.51	54.93	76.62	100.0	99.56	89.91	76.69	97.35
% bare ground	82.16	65.94	50.44	44.49	45.07	23.38	0.00	0.44	10.09	23.31	2.65
Transect E8	**2008**	**2010**	**2011**	**2012**	**2013**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
% seagrass	99.32	84.26	95.56	90.96	99.93	99.85	100.0	99.34	100.0	99.34	97.87
% bare ground	0.68	15.74	4.44	9.04	0.07	0.15	0.00	0.66	0.00	0.66	2.13
Transect E9	**2008**	**2010**	**2011**	**2012**	**2013**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
% seagrass	95.94	99.39	95.51	99.49	99.71	99.56	100.0	99.78	100.0	100.0	99.71
% bare ground	4.06	0.61	4.49	0.51	0.29	0.44	0.00	0.22	0.00	0.00	0.29
Transect E10	**2008**	**2010**	**2011**	**2012**	**2013**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
% seagrass	97.94	92.21	86.25	98.99	98.82	NS	100.0	100.0	100.0	98.21	97.94
% bare ground	2.06	7.79	13.75	1.01	1.18		0.00	0.00	0.00	1.79	2.06
Transect E11	**2008**	**2010**	**2011**	**2012**	**2013**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
% seagrass			86.93	99.85	99.49	NS	100.0	100.0	100.0	98.94	99.63
% bare ground			13.07	0.15	0.51		0.00	0.00	0.00	1.06	0.37
Transect E12	**2008**	**2010**	**2011**	**2012**	**2013**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
% seagrass			95.68	95.53	98.09	NS	100.0	100.0	100.0	97.0	99.26
% bare ground			7.32	4.47	1.91		0.00	0.00	0.00	3.0	0.74
Transect E13	**2008**	**2010**	**2011**	**2012**	**2013**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
% seagrass			93.97	99.26	100.0	NS	100.0	100.0	100.0	99.95	100

% bare ground			6.03	0.74	0.00		0.00	0.00	0.00	0.05	0.00
Transect E14	**2008**	**2010**	**2011**	**2012**	**2013**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
% seagrass			86.54	99.34	100.0	NS	100.0	90.44	100.0	98.24	99.41
% bare ground			13.46	0.56	0.00		0.00	9.56	0.00	1.76	0.59
Transect E15	**2008**	**2010**	**2011**	**2012**	**2013**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
% seagrass			90.29	99.93	99.66	NS	100.0	93.31	99.85	50.66	99.34
% bare ground			9.71	0.07	0.34		0.00	6.69	0.15	49.34	0.66
Transect E16	**2008**	**2010**	**2011**	**2012**	**2013**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
% seagrass			82.79	93.22	94.12	NS	100.0	99.94	99.71	95.0	98.31
% bare ground			17.21	6.78	5.88		0.00	0.06	0.29	5.0	1.69

Transect E1	**2021**	**2022**	**2023**	**2024**	
% seagrass	99.34	98.81	85.35	82.6	
% bare ground	0.66	1.19	9.03	4.8	
Transect E2	**2021**	**2022**	**2023**	**2024**	
% seagrass	99.26	98.74	87.24	76.4	
% bare ground	0.37	1.26	5.07	7.1	
Transect E3	**2021**	**2022**	**2023**	**2024**	
% seagrass	99.93	100.0	96.69	91.8	
% bare ground	0.66	0.00	3.31	7.7	
Transect E4	**2021**	**2022**	**2023**	**2024**	
% seagrass	98.68	98.68	91.51	87.5	
% bare ground	0.88	1.32	5.81	4.9	
Transect L1	**2021**	**2022**	**2023**	**2024**	
% seagrass	99.85	97.65	93.65	79.15	
% bare ground	0.15	2.35	5.62	20.2	
Transect E5	**2021**	**2022**	**2023**	**2024**	
% seagrass	100.0	99.54	96.37	88.09	
% bare ground	0.00	0.46	3.12	11.8	
Transect E6	**2021**	**2022**	**2023**	**2024**	
% seagrass	99.78	94.71	75.04	72.94	
% bare ground	0.00	5.29	22.09	26.9	
Transect E8	**2021**	**2022**	**2023**	**2024**	
% seagrass	99.78	98.09	87.51	86.28	
% bare ground	0.00	1.91	12.41	13.5	
Transect E9	**2021**	**2022**	**2023**	**2024**	
% seagrass	100.0	99.71	96.22	90.07	
% bare ground	0.00	0.29	3.46	6.8	
Transect E10	**2021**	**2022**	**2023**	**2024**	
% seagrass	100.0	99.72	89.03	95.96	
% bare ground	0.00	0.28	2.75	4.0	
Transect E11	**2021**	**2022**	**2023**	**2024**	
% seagrass	100.0	100	96.56	96.7	
% bare ground	0.00	0.00	3.22	3.2	

Transect E12	2021	2022	2023	2024	
% seagrass	100.0	100	94.82	88.93	
% bare ground	0.00	0.00	4.81	11.0	
Transect E13	**2021**	**2022**	**2023**	**2024**	
% seagrass	99.71	100	99.34	89.85	
% bare ground	0.29	0.00	0.44	9.0	
Transect E14	**2021**	**2022**	**2023**	**2024**	
% seagrass	99.78	99.63	92.50	76.0	
% bare ground	0.22	0.37	6.62	14.9	
Transect E15	**2021**	**2022**	**2023**	**2024**	
% seagrass	100.0	99.78	89.63	86.4	
% bare ground	0.00	0.22	10.15	13.2	
Transect E16	**2021**	**2022**	**2023**	**2024**	
% seagrass	98.75	98.75	95.22	87.6	
% bare ground	1.25	1.25	4.63	12.4	

Changes in percent cover of the substratum by seagrasses in Bardens Bay (2014-2024)

Transect A1	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
% seagrass	97.97	98.09	88.97	99.85	96.18	85.15	88.88	97.87	89.41	74.26	81.5
% bare ground	2.03	1.91	11.03	0.15	3.82	14.85	11.10	1.91	10.59	16.32	11.2
Transect A2	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**
% seagrass	92.38	96.99	98.75	98.38	94.93	98.09	96.91	97.13	96.18	82.47	95.1
% bare ground	7.62	3.01	1.25	1.62	5.07	1.91	3.09	2.28	3.82	8.90	2.6
Transect A3	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**
% seagrass	100.0	86.40	94.85	96.69	98.01	99.26	99.12	91.03	99.19	86.78	94.4
% bare ground	0.00	13.60	5.15	3.31	1.99	0.74	0.88	8.97	0.81	6.09	4.9
Transect A4	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**
% seagrass	94.51	93.97	99.12	100.0	89.78	48.98	99.41	100.0	98.31	96.40	85.0
% bare ground	5.49	6.03	0.88	0.00	10.22	51.02	0.59	0.00	1.69	3.53	13.9
Transect A5	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**
% seagrass	96.37	95.59	99.71	100.0	97.35	84.50	96.76	97.13	97.96	83.46	69.5
% bare ground	3.63	4.41	0.29	0.00	2.65	15.50	3.24	2.87	2.04	16.62	30.1
Transect A6	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**
% seagrass	99.56	98.01	96.97	97.65	93.53	90.88	94.26	96.62	96.84	97.57	82.2
% bare ground	0.44	1.99	3.03	2.35	6.47	9.12	5.74	3.38	3.16	1.35	17.0

Changes in percent cover of the substratum by seagrasses in Sugar Bay (2018-2024) and off Sunshine (2024)

Transect S1	2018	2019	2020	2021	2022	2023	2024
% seagrass	62.50	24.71	99.63	97.79	99.63	90.69	90.22
% bare ground	37.50	75.29	0.37	0.74	0.37	2.06	3.9
Transect S2	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**
% seagrass	96.62	85.83	97.50	96.54	93.90	94.34	68.82
% bare ground	3.38	14.17	2.50	3.46	6.10	5.37	22.1
Transect S3	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**
% seagrass	99.19	97.13	98.75	100.0	98.53	95.32	96.84
% bare ground	0.81	2.87	1.25	0.00	1.47	4.01	3.1
Transect S4	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**
% seagrass	99.97	98.82	99.56	100.0	99.41	96.32	99.85
% bare ground	0.03	1.18	0.44	0.00	0.59	3.46	0.1
Transect S5	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**
% seagrass	99.12	67.08	75.88	94.56	79.34	92.94	83.38
% bare ground	0.88	32.92	24.11	5.37	20.66	5.96	16.4
Transect S6	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**
% seagrass	100.0	99.78	100.0	98.57	99.41	93.38	68.09
% bare ground	0.00	0.22	0.00	1.32	0.59	6.32	22.3
Transect S7	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**
% seagrass							76.4
% bare ground							23.6
Transect S8	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**
% seagrass							92.2
% bare ground							7.6
Transect S9	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**
% seagrass							81.0
% bare ground							17.9

Changes in percent cover of the substratum by seagrasses in Crangan Bay – Controls (2008-2024)

Transect C1	2008	2010	2011	2012	2013	2015	2016	2017	2018	2019	2020
% seagrass	48.60	80.53	68.71	85.38	99.31	94.04	99.94	76.18	99.68	34.26	88.68
% bare ground	51.40	19.47	31.29	14.62	0.69	5.96	0.06	23.82	0.32	65.74	11.32
Transect C2	**2008**	**2010**	**2011**	**2012**	**2013**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
% seagrass	93.09	98.03	67.79	95.21	97.24	100.0	98.09	99.40	96.69	81.62	96.76
% bare ground	6.91	1.97	32.21	4.79	2.76	0.00	1.91	0.60	3.31	18.38	3.24
Transect C3	**2008**	**2010**	**2011**	**2012**	**2013**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
% seagrass	95.59	88.75	94.41	97.16	99.93	98.46	99.90	96.47	100.0	87.21	96.84
% bare ground	4.41	11.25	5.59	2.84	0.07	1.54	0.10	3.53	0.00	12.79	3.16
Transect C4	**2008**	**2010**	**2011**	**2012**	**2013**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
% seagrass	87.25	86.56	58.09	90.40	100.0	99.49	99.96	96.47	96.76	74.56	94.93
% bare ground	12.75	13.44	41.91	9.60	0.00	0.51	0.04	3.53	3.24	25.44	5.07

Transect C1	2021	2022	2023	2024
% seagrass	93.90	89.04	82.07	96.76
% bare ground	3.90	10.96	10.35	1.1
Transect C2	**2021**	**2022**	**2023**	**2024**
% seagrass	97.72	98.60	92.21	93.68
% bare ground	1.25	1.40	6.54	5.4
Transect C3	**2021**	**2022**	**2023**	**2024**
% seagrass	100.0	97.81	95.15	99.04
% bare ground	0.00	2.19	2.87	0.8
Transect C4	**2021**	**2022**	**2023**	**2024**
% seagrass	99.85	97.15	95.22	97.28
% bare ground	0.15	2.85	1.62	2.2