

Charlotte Harbor Aquatic Preserves- Seagrass Monitoring Data Sheet

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Date: <u>6/14/2021</u>	Wind Dir: N / NE (<u>NW</u>) / S / SE / SW / E / W	Observers: <u>MJ, KW, NR, TB</u>	Tide Start: <u>1.2</u> FT <u>↑</u> MHW
Site # <u>CRO4</u>	Wind Sp: Calm / 0-4 / 5-10 (<u>11-15</u>) / 16-20 / >20	Compass Heading: <u>16°</u>	Tide End: <u>0.8</u> FT <u>↑</u> MHW
Offset from Flagging: <u>1.9</u> m	Seas: Calm / R (<u>LC</u>) / MC / HC	Site Comments: <u>Right of aussie pine, left of high rise, PVC pipe is flag</u>	
Cloud Cover %: 0 / 1-25 (<u>26-50</u>) / 51-75 / 76-99 / 100			

Station (m)	Repeat Quad (y/n)	Stake Found (y/n)	Time	Depth (cm)	Sedi-ment	Total Abund	Species	Species Abund	Shoot Count	Blade Lengths (5) (cm)					Epi Density	Epi Type	Bed	Flagging stake?	Flagging?	Comments
-1.9	N	N	11:57	65	1 2	1	H	1 1	82	14	16	13	12	11	2	A	B			
0	Y	Y	12:02	70	2	5	H	5	119	21	14	19	18	13	3	A	M			
25	Y	Y	12:11	110	3	2	H	2	69	7	7	9	20	25	3	A	M			
50	Y	Y	12:26	120	3	2	H	2	54	4	25	23	10	10	2	A	M			DA 5-25
75	Y	Y	12:39	150	3	+	HE	+	6						2	A	M			DA 5-25 SE = STAR Grass
100	X	Y	12:50	190	4	3	DA	3												DA 50
106.3	N	N	12:55	200	4	1	HE	1	17						1		E			PG = Puddle Grass
106.3	N	N	:	:	:	+	DA	+												
			:	:	:															
			:	:	:															
			:	:	:															
			:	:	:															
			:	:	:															
			:	:	:															

Water Chemistry Sonde:	WQ Depth (m)	DO (mg/l)	Salinity (ppt)	Temp (°C)	Secchi (m)	Location along transect	Snorkelers <u>KW, NR, TB</u>	Divers	Data Recorder
							start time <u>10:57</u> end time <u>13:24</u>	start time end time	Monica Jaeger
Time :								total depth	
Species: (H) Halodule, (R) Ruppia, (T) Thalassia, (S) Syringodium, (HE) Halophila, (AA) Attached Algae, (DA) Drift Algae									
BB Abundance cover: r = solitary, + = few, 1 = < 5%, 2 = 5-25%, 3 = 26-50%, 4 = 51-75%, 5 = 76-100% Bed: B = Beginning, M = Middle, E = End									
Epiphyte Density: 1 = clean / none, 2 = light, 3 = moderate, 4 = heavy Sediment: 1 = shelly sand, 2 = sand, 3 = muddy sand, 4 = muck									

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Date: 6/14/2021	Wind Dir: N / NE / NW / S / SE / SW / E / W (W)	Observers: KTB, NR, M	Tide Start: 1.3 FT $\uparrow$ MHW
Site # SC03	Wind Sp: Calm / 0-4 / 5-10 / 11-15 / 16-20 / >20	Compass Heading: Lot of moderate	Tide End: FT $\uparrow$ MHW
Offset from Flagging: 23 m	Seas: Calm / R / LC / MC / HC	Site Comments: Off wall between 6m and 7m. Horizontal Line from East of Bridge.	
Cloud Cover %: 0 / 1-25 / 26-50 / 51-75 / 76-99 / 100			

Station (m)	Repeat Quad (y/n)	Stake Found (y/n)	Time	Depth (cm)	Sediment	Total Abund	Species	Species Abund	Shoot Count	Blade Lengths (5) (cm)					Epi Density	Epi Type	Bed	Flagging stake?	Flagging?	Comments
-13.3	N	N	9:40	35	2	1	H	1	194	8	6	5	4	5	1		B			No Encrusting
0	Y	N	9:45	55	2	2	H	1	184	7	10	6	5	8	1		M			New stake placed
50	Y	Y	10:00	110	4	2	S	2	70	32	32	13	20	25	2	AA	M			
50	Y	Y	10:00	110	4	2	S	1	13	20	35	25	20	25	3	AA	M			
75	Y	Y	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:			Reference stake no data collected
100	Y	Y	10:51	210	4	1	S	1	37	30	29	25	15	21	2	Algae	M			
103.7	N	N	11:05	300	4	R	T	R	1	39						2	Algae	E		
			:																	
			:																	
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Water Chemistry	WQ Depth (m)	DO (mg/l)	Salinity (ppt)	Temp (°C)	Secchi (m)	Location along transect	Snorkelers start time end time	Divers start time end time total depth	Data Recorder Thomas Burke
Time :									
Species: (H) Halodule, (R) Ruppia, (T) Thalassia, (S) Syringodium, (HE) Halophilla, (AA) Attached Algae, (DA) Drift Algae									
BB Abundance cover: r = solitary, + = few, 1 = < 5%, 2 = 5-25%, 3 = 26-50%, 4 = 51-75%, 5 = 76-100% Bed: B = Beginning, M = Middle, E = End									
Epiphyte Density: 1 = clean / none, 2 = light, 3 = moderate, 4 = heavy Sediment: 1 = shelly sand, 2 = sand, 3 = muddy sand, 4 = muck									

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Date: 6/28/2021	Wind Dir: N / NE / NW / S / SE / SW / E / W	Observers: JB, MJ, GS, KW	Tide Start: 1.5 FT $\uparrow$ MHW
Site # M8D5	Wind Sp: Calm / 0-4 / 5-10 / 11-15 / 16-20 / >20	Compass Heading: 395°	Tide End: 1.1 FT $\uparrow$ MHW
Offset from Flagging: 24 m	Seas: Calm / R / C / MC / HC	Site Comments: Island South of Mucker ID - North central Island ~ 20 east of Bird Island	
Cloud Cover %: 0 / 1-25 / 26-50 / 51-75 / 76-99 / 100			

Station (m)	Repeat Quad (y/n)	Stake Found (y/n)	Time	m Depth (cm)	Sedi-ment	Total Abund	Species	Species Abund	Shoot Count	Blade Lengths (5) (cm)	Epi Density	Epi Type	Bed	Flagging stake?	Flagging?	Comments
0	y	y	9:30	0.9	1	2	H	2	62	15 20 20 16 20	2	A _{1/2}	M			
-2.84	y	y	9:25	0.9	1	+	H	+	7	18 16 15 8 9	2	A _{1/2}	B			
50	y	y	9:40	1.0	3	5	T	5	70	30 35 40 39 42	3	A _{1/2}	M			
100	y	y	9:40	1.0	3	5	H	-1	21	26 30 30 30 25	3	A _{1/2}	M			
100	y	y	9:55	1.1	3	3	T	3	37	19 35 37 22 29	2	A _{1/2}	M			
100	y	y	9:55	1.1	3	3	H	2	30	8 9 15 14 9	2	A _{1/2}	M			
150	y	y	10:06	1.2	3	4	T	4	24	42 35 47 43 30	2	A _{1/2}	M			
150	y	y	10:06	1.2	3	4	H	3	35	15 7 15 16 19	2	A _{1/2}	M			
200	y	y	10:35	1.3	2	3	H	3	88	15 16 18 22 22	2	A _{1/2}	M			
250	y	y	10:50	1.5	3	1	H	1	94	26 26 25 24 23	2	A _{1/2}	M			
300	y	y	11:02	1.6	3	2	H	2	150	19 20 20 23 33	2	A _{1/2}	M			
350	y	y	11:16	1.6	3	2	H	2	45	21 22 25 27 32	2	A _{1/2}	M			Star grass outside of Quad
400	y	y	11:35	1.7	3	2	H	2	64	29 27 30 33 24	2	A _{1/2}	M			

Water Chemistry Sonde:	WQ Depth (m)	DO (mg/l)	Salinity (ppt)	Temp (°C)	Secchi (m)	Location along transect	Snorkelers start time end time	Divers start time end time	Data Recorder KW
	Time							total depth	

Species: (H) Halodule, (R) Ruppia, (T) Thalassia, (S) Syringodium, (HE) Halophilla, (AA) Attached Algae, (DA) Drift Algae
BB Abundance cover: r = solitary, + = few, 1 = < 5%, 2 = 5-25%, 3 = 26-50%, 4 = 51-75%, 5 = 76-100% Bed: B = Beginning, M = Middle, E = End
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Date: <u>6 / 28 / 2021</u>	Wind Dir: N / NE / NW <u>SE</u> / SW / E / W	Observers: _____	Tide Start: FT <u>↑</u> MHW
Site # <u>MP05</u>	Wind Sp: Calm / 0-4 / 5-10 / <u>11-16</u> / 16-20 / >20	Compass Heading: _____	Tide End: FT <u>↑</u> MHW
Offset from Flagging _____ m	Seas: Calm / R <u>MC</u> / MC / HC	Site Comments: _____	
Cloud Cover %: 0 / 1-25 / 26-50 / 51-75 / 76-99 / 100			

Station (m)	Repeat Quad (y/n)	Stake Found (y/n)	Time	m Depth (cm)	Sedi-ment	Total Abund	Species	Species Abund	Shoot Count	Blade Lengths (5) (cm)				Epi Density	Epi Type	Bed	Flagging stake?	Flagging?	Comments
450	y	x	11:44	1.7	3	2	H	2	49	12	15	20	21	18	2	A1/2	M		
500	y	y	11:52	1.7	3	1	HE	1	35					4	A1/2	M			Star Grass
549	y	y	12:00	2.1	1		ND	SAV								M			Grass Cont into Channel
			:																
			:																
			:																
			:																
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Water Chemistry	WQ Depth (m)	DO (mg/l)	Salinity (ppt)	Temp (°C)	Secchi (m)	Location along transect	Snorkelers start time end time	Divers start time end time total depth	Data Recorder
Sonde: _____									
Time: _____									

Species: (H) Halodule, (R) Ruppia, (T) Thalassia, (S) Syringodium, (HE) Halophila, (AA) Attached Algae, (DA) Drift Algae
BB Abundance cover: r = solitary, + = few, 1 = < 5%, 2 = 5-25%, 3 = 26-50%, 4 = 51-75%, 5 = 76-100% Bed: B = Beginning, M = Middle, E = End
Epiphyte Density: 1 = clean / none, 2 = light, 3 = moderate, 4 = heavy Sediment: 1 = shelly sand, 2 = sand, 3 = muddy sand, 4 = muck

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Date: 6/15/2021	Wind Dir: N / NE / NW / S / SE / SW / E (W)	Observers: W, KW, NR, TB	Tide Start: 1.1 FT 10 MHW
Site # C205	Wind Sp: Calm 0-4 / 5-10 / 11-15 / 16-20 / >20	Compass Heading: 132°	Tide End: 1.0 FT 10 MHW
Offset from Flagging: 11.9 m	Seas: Calm / R / LC / MC / HC	Site Comments: in front of resort lawn, line up with USGS station and depth gauge (stake is flag)	
Cloud Cover %: 0 / 1-25 (26-50) / 51-75 / 76-99 / 100			

Station (m)	Repeat Quad (y/n)	Stake Found (y/n)	Time	Depth (cm)	Sediment	Total Abund	Species	Species Abund	Shoot Count	Blade Lengths (5) (cm)					Epi Density	Epi Type	Bed	Flagging stake?	Flagging?	Comments
-10.3	N	N	9:08	65	3	1	H	1	79	10	12	8	5	9	2	A	B			Light Attached Algae Light EPI
0	Y	Y	9:15	70	3	1	H	1	78	8	6	7	4	7	2	A C	M			C = Crustacean Light AA Light EPI
25	Y	Y	9:22	70	3	1	H	1	200	12	11	6	4	8	2	A	M			Light AA Light EPI
50	Y	Y	9:35	80	3	1	H	1	186	11	6	14	10	7	2	A	M			Light AA Light EPI
100	Y	Y	9:43	95	3	1	H	1	189	10	9	5	4	7	2	A	M			Light AA Light (EPI = E)
142.0	N	N	9:49	140	4	1	H	1	43	18	14	12	8	10	2	A E	E			
			:																	
			:																	
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Water Chemistry	WQ Depth (m)	DO (mg/l)	Salinity (ppt)	Temp (°C)	Secchi (m)	Location along transect	Snorkelers KW, NR, TB start time 9:08 end time 10:00	Divers start time end time	Data Recorder
Sonde:									
Time :									
							total depth		
Species: (H) Halodule, (R) Ruppia, (T) Thalassia, (S) Syringodium, (HE) Halophilla, (AA) Attached Algae, (DA) Drift Algae									
BB Abundance cover: r = solitary, + = few, 1 = < 5%, 2 = 5-25%, 3 = 26-50%, 4 = 51-75%, 5 = 76-100% Bed: B = Beginning, M = Middle, E = End									
Epiphyte Density: 1 = clean / none, 2 = light, 3 = moderate, 4 = heavy Sediment: 1 = shelly sand, 2 = sand, 3 = muddy sand, 4 = muck									

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V = V_{al}

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Date: 10/15/2021	Wind Dir: N / NE / NW / S / SE / <u>SW</u> / E / W	Observers: <u>KW, NR, MJ, TS</u>	Tide Start: 1.1 FT <u>↑</u> MHW
Site # <u>CRO2</u>	Wind Sp: Calm / 0-4 / 5-10 / <u>11-15</u> / 16-20 / >20	Compass Heading <u>170°</u> between house and Highrise	Tide End: 1.1 FT <u>↑</u> MHW
Offset from Flagging <u>8.1</u> m	Seas: Calm / R / <u>LC</u> / MC / HC	Site Comments: North of the 41 Bridge to downtown fort Myers. On the North side of the river. Between jetty and road, about 75 yards west of road in the middle of the Cove	
Cloud Cover %: 0 / 1-25 / 26-50 / 51-75 / <u>76-99</u> / 100			

Station (m)	Repeat Quad (y/n)	Stake Found (y/n)	Time	Depth (cm)	Sedi-ment	Total Abund	Species	Species Abund	Shoot Count	Blade Lengths (5) (cm)	Epi Density	Epi Type	Bed	Flagging stake?	Flagging?	Comments
0	Y	Y	11:35	70	3		<u>NO SAV</u>									
2	N	N	11:40	70	3	1	R	1	42	10 8 6 6 9	1	-	B			
25	Y	Y	11:55	85	3	1	R	1	18	5 4 4 4 6	3	Encrusting	M			Moderate Encrusting
25	Y	Y	11:55	85	3	1	V	1	66	9 6 13 12 7	3	AA	M			Moderate Encrusting V = light Algae
50	Y	Y	12:10	80	3	1	R	1	14	8 5 3 6 6	4	A	M			Some covered in algae some clean
75	Y	Y	12:15	90	3		<u>NO SAV</u>									
100	Y	Y	12:20	110	3		<u>NO SAV</u>									Drift Algae
57.5	N	N	12:30	80	3	1	V	1	47	11 9 7 4 5	3	A	E			
			:													
			:													
			:													
			:													
			:													
			:													

Water Chemistry Sonde:	WQ Depth (m)	DO (mg/l)	Salinity (ppt)	Temp (°C)	Secchi (m)	Location along transect	Snorkelers start time end time	Divers start time end time	Data Recorder <u>Thomas Baker</u>
Species: (H) Halodule, (R) Ruppia, (T) Thalassia, (S) Syringodium, (HE) Halophila, (AA) Attached Algae, (DA) Drift Algae									
BB Abundance cover: r = solitary, + = few, 1 = < 5%, 2 = 5-25%, 3 = 26-50%, 4 = 51-75%, 5 = 76-100%								Bed: B = Beginning, M = Middle, E = End	
Epiphyte Density: 1 = clean / none, 2 = light, 3 = moderate, 4 = heavy						Sediment: 1 = shelly sand, 2 = sand, 3 = muddy sand, 4 = muck			

V = V_{al} is in air