2021 Cyanobacteria Monitoring Data

2021 Cyanobacteria Monitoring Data		Field Data								<50			WLW			BFC			Dominance (%)				Regressions			Scum				Growth Rates		
Sample Date	Pond Name	Sample Time	Town	Pond Temp (F)	Air Temp (F)	Weather	Wind Speed	Wind Direction	Last Rainfall and Amount	Tubidity (C/ST/T)	PC (ug/L)	CHLA (ug/L)	Ratio	PC (ug/L)	CHLA (ug/L)	Ratio	PC (ug/L)	CHLA (ug/L)	Ratio	MC	DS	Other	Dominant Genus	BFC PC to MC Regressions	WLW PC to MC Regressions	Map Cyano Status	PC	Chl-a	Ratio	Notes	<50	WLW	BFC
5/26/2021	Bakers Pond	8:00	Brewster/Orleans	68	68	mostly sunny	light breeze	NE	<72 hrs, <1"	Clear, 1.2 m	1.0	0.2	5.5	2.7	0.2	14.2	265.6	2.2	122.2		100		Dolichospermum	0.06	0.00	Low					NA	NA	NA
6/9/2021	Bakers Pond	8:15	Brewster/Orleans	76	72	Mostly Cloudy	Calm	On Shore	<48 hrs.	Clear, 1.2 m	1.4	0.2	7.7	1.7	0.2	10.9	1019.6	5.0	204.2		100		Dolichospermum	0.14	0.00	Low					0.02144	-0.03032	0.09607
6/15/2021	Bakers Pond	10:00	Brewster/Orleans	73	68	partly cloudy	light breeze	SE	<48 hrs.	Clear, 1.2 m	1.2	0.2	5.2	3.0	0.2	13.4	29.0	0.3	81.3	12	88		Mixed	0.07	0.01	Low				waterfowl	-0.02196	0.08957	-0.5935
6/23/2021	Bakers Pond	8:00	Brewster/Orleans	76	63	Mostly Sunny	Light breeze	NE	<24 hours	Clear 1.2m	0.0	0.1	0.0	0.0	0.1	0.0	1.3	0.2	6.6		100		Dolichospermum	0.00	0.00	Low				red wing blackbird.	-0.59669	-0.71158	-0.38649
7/7/2021	Bakers Pond	8:15	Brewster/Orleans	76	75	Sunny	Light breeze	SW	<24 hrs.	Clear (120 mm)	0.0	0.1	0.0	0.0	0.2	0.0	2.8	0.1	17.7	NA			NA	0.01	0.00	Low					0	0	0.05438
7/21/2021	Bakers Pond	8:00	Brewster/Orleans	80	73	Sunny	Calm	On Shore	No Rain	Clear	0.4	0.4	0.9	0.7	0.4	1.6	64.6	0.9	65.4		100		Dolichospermum	0.03	0.00	Low					0.26148	0.30635	0.22377
8/4/2021	Bakers Pond	8:15	Brewster/Orleans	78	70	Mostly Cloudy	Calm	On Shore, E	No Rain	Clear (120 mm)	3.7	0.5	7.5	4.2	0.5	8.6	673.5	3.6	169.0		100		Dolichospermum	0.11	0.01	Low				2 gulls/cormorants, 1 duck	0.15994	0.12509	0.16743
8/18/2021	Bakers Pond	8:00	Brewster/Orleans	80	72	Mostly Sunny	Calm	On Shore	<72	Clear	0.6	0.3	1.8	0.5	0.3	1.8	2.4	0.5	4.2	NA			NA	0.01	0.00	Low					-0.13139	-0.14922	-0.40284
8/30/2021	Bakers Pond	10:30	Brewster/Orleans	80	79	Mostly Sunny	Light Breeze	On Shore	No Rain	Clear	0.5	0.3	2.1	0.5	0.2	2.2	16.0	0.7	24.1			80	OS(20)	Mixed	0.04	0.00	Low					-0.0091	0	0.15813
9/15/2021	Bakers Pond	8:00	Brewster/Orleans	75	72	Cloudy	Calm	NW On shore	No Rain, More than 2 days ago,	Clear, 120 cm	1.2	0.3	3.7	5.3	0.4	14.1	715.1	4.9	146.2	8	92		Dolichospermum	0.11	0.01	Low					0.05174	0.14557	0.23763
9/27/2021	Bakers Pond	8:15	Brewster/Orleans	72	58	Sunny	Calm		No Rain	Clear (1.2 m)	1.6	0.3	5.5	1.4	0.3	5.0	14.4	0.6	22.5	75	20	OS(5)	Mixed	0.04	0.00	Low					0.02274	-0.11418	-0.32568
10/13/2021	Bakers Pond	8:00	Brewster/Orleans	68	55	Sunny	Calm		No Rain, <72 hrs.	Clear	1.2	0.6	2.0	1.6	0.6	2.7	362.6	3.7	97.5	92	6	OS(1), WO	Microcystis	13.22	0.06	High				11 gulls, 1 duck	-0.01901	0.00886	0.20182
10/19/2021	Bakers Pond	8:00	Brewster/Orleans	67	50	Sunny	Light breeze	W	No Rain	Clear	1.7	0.3	6.4	4.8	0.3	15.9	154.3	1.5	106.5	65	23	AE(12)	Mixed	0.44	0.01	High					0.0665	0.18681	-0.14239
10/29/2021	Bakers Pond	10:00	Brewster/Orleans	60	52	Cloudy	Light breeze	NE	Yesterday	Clear	1.0	0.2	3.9	0.8	0.3	3.2	26.9	0.6	42.3	15	85		Mixed	0.07	0.00	High	9385.7	53.8	175.4	A confirmed cyanobacteria scum found on the sand at the shoreline.	-0.0593	-0.17381	-0.17452
11/2/2021	Bakers Pond	8:00	Brewster/Orleans	60	45	Mostly Sunny	Calm		<48 hours ago	Clear - 120 CM	2.5	0.3	8.7	3.2	0.3	10.3	791.6	5.2	153.1	73	27		Mixed	2.51	0.01	High					0.23922	0.33391	0.84504
11/8/2021	Bakers Pond	8:15	Brewster/Orleans	57	52	Mostly sunny	Light breeze	On Shore	No Rain, <72 hrs.	Clear	1.8	0.1	12.8	0.2	0.2	1.1	263.9	1.7	155.2	51	49		Mixed	0.78	0.00	Low					-0.05451	-0.4491	-0.1831
	Total Sampling Events: 16																															
5/28/2021	Crystal Lake	7:00	Orleans	67.8	55	partly cloudy		W	yesterday	Clear	0.4	0.2	2.1	0.4	0.2	1.7	2.7	0.4	7.6	0	0	WO 100%	Woronichinia	0.01	0.00	Low				ducks and birds	NA	NA	NA
6/11/2021	Crystal Lake	7:20	Orleans	70.5	58	sunny	calm	E	> 2 days ago, <1"	Clear	0.7	0.3	2.0	0.4	0.4	1.1	1.4	0.6	2.2			WO(100)	Woronichinia	0.00	0.00	Low					0.03005	0.00954	-0.04661
6/25/2021	Crystal Lake	7:20	Orleans	72.9		cloudy	Light breeze	S	Today	Clear	0.4	0.4	1.1	1.0	0.4	2.3	70.9	1.1	62.5		70	WO(30)	Mixed	0.19	0.00	Low					-0.03228	0.06773	0.28135
7/8/2021	Crystal Lake	7:53	Orleans	75.2		Foggy/Rainy	Light breeze	SW	Today	Clear	1.6	0.4	4.7	1.6	0.4	4.3	11.7	0.4	28.4		100		Dolichospermum	0.01	0.00	Low				Bald Eagle, paddle boarders, swimmers	0.10408	0.03451	-0.13846
7/23/2021	Crystal Lake	7:20	Orleans	76.9	70	partly cloudy	calm	NW	More than 2 days ago	Clear	2.9	0.4	7.0	3.3	0.4	8.2	7.9	1.0	7.9		100		Dolichospermum	0.01	0.00	Low				seagulls, egrets, swimmers and paddleboarders. scum collected, 1-2" along shore, mostly plant matter/algae with some DS	0.03861	0.04655	-0.02628
8/6/2021	Crystal Lake	7:20	Orleans	72.5		Sunny	Light breeze	SW	Yesterday	Clear	1.3	0.9	1.4	1.4	0.9	1.5	3.4	1.4	2.4			WO(100)	Woronichinia	0.01	0.00	Low					-0.05973	-0.06223	-0.06078
8/20/2021	Crystal Lake	7:20	Orleans	76.6	75	Sunny	Light breeze	SW	Yesterday	Clear	1.7	0.4	4.7	1.8	0.4	4.0	2.4	1.5	1.9	100			Microcystis	0.09	0.06	Low				seagulls, swimmer, boater	0.02158	0.01801	-0.02432
9/3/2021	Crystal Lake	7:45	Orleans	72.7		Sunny	Light breeze	NW	Yesterday	Clear	1.0	1.0	1.0	1.1	1.1	1.0	4.1	1.2	3.4	8		WO(92)	Mixed	0.01	0.00	Low					-0.04157	-0.03649	0.03825
9/16/2021	Crystal Lake	7:20	Orleans	73		Rain	Light breeze	NW	Today	Clear	0.0	0.4	0.0	0.0	0.4	0.0	64.7	0.9	69.5			WO(100)	Woronichinia	0.18	0.00	Low				crows, seagulls	-0.3503	-0.358	0.21221
9/30/2021	Crystal Lake	9:00	Orleans	68.8	54	Cloudy	Light breeze	NW	Today	Clear	1.3	0.6	2.1	1.6	0.7	2.4	2.2	4.1	1.0		14	WO(86)	Mixed	0.00	0.00	Low				seagulls	0.34805	0.3634	-0.24206
10/14/2021	Crystal Lake	7:30	Orleans	65.6	63	Partly cloudy	6 knots	W	More than 2 days ago	Clear	4.3	0.6	7.7	4.6	0.8	8.3	4.7	0.8	5.9			WO(100)	Woronichinia	0.01	0.01	Low					0.08491	0.07434	0.05451
11/1/2021	Crystal Lake	7:25	Orleans	56.5	53	Sunny	Light breeze	W	2 Days ago	Clear	0.0	0.0	0.0	0.0	0.1	0.0	0.9	0.3	0.0			WO(100)	Woronichinia	0.00	0.00	Low					-0.33675	-0.34046	-0.34162
	Total Sampling Events: 12																															
5/28/2021	Ice House Pond	8:00	Orleans	68	55.1	mostly cloudy	light breeze	NE	>2 days ago, <1"	Clear	0.9	0.4	2.4	1.1	0.4	2.9	6.0	0.4	12.4	NA			NA	0.01	0.00	Low				many birds, mayflies, algae along shore, no scum collected	NA	NA	NA
6/11/2021	Ice House Pond	7:45	Orleans	72	58	sunny	calm	E	>2 days ago, <1"	Clear	0.6	0.5	1.1	0.5	0.8	0.8	1.1	0.7	1.5	NA			NA	0.00	0.00	Low					-0.03005	-0.05565	-0.12447
6/25/2021	Ice House Pond	7:30	Orleans	72.5	64.8	Cloudy	Windy	SW	Today	Clear	1.3	0.4	3.6	0.4	0.4	1.0	1.1	0.4	2.6	100			Microcystis	0.04	0.01	Low					0.05673	-0.02075	0.00523
7/9/2021	Ice House Pond	7:30	Orleans	75.7	68.5	cloudy	light breeze	SW	today	Clear	0.0	0.4	0.0	0.0	0.4	0.0	0.6	0.9	0.8	NA			NA	0.00	0.00	Low				lily pads, red wing blackbird, great egret, fishersman leaving as they arrived.	-0.34676	-0.26148	-0.04951
7/23/2021	Ice House Pond	7:30	Orleans	77.4	68.5	partly cloudy	calm	NW	More than 2 days ago	Clear	1.3	0.6	2.0	1.8	0.7	2.7	18.1	1.8	10.9		6	AZ(41) OS	Mixed	0.05	0.00	Low				lily pads, milkweed	0.34507	0.36986	0.24758
8/6/2021	Ice House Pond	7:30	Orleans	68.18	72.32	Sunny	Calm		Yesterday	Clear	3.3	0.5	6.6	3.2	0.5	5.1	7.0	0.9	8.6	25	50	AZ(25)	Mixed	0.02	0.01	Low					0.06806	0.04216	-0.06805
8/20/2021	Ice House Pond		Orleans	76.6	72.5	Sunny	Light breeze	SW	Yesterday	Clear	4.9	0.5	7.2	2.3	0.4	5.2	3.3	0.6	5.7		33	WO(33),A	Mixed	0.01	0.01	Low				water lillies, bluejays	0.02957	-0.02359	-0.05371
9/3/2021	Ice House Pond	9:15	Orleans	71.6	61.7	Sunny	Calm	SW	Yesterday	Clear	2.4	0.6	4.1	2.1	0.6	3.6	3.3	1.0	3.3	100			Microcystis	0.12	0.08	Low				7 canada geese, water lillies, old tangled fishing line (threw it in the trash)	-0.05273	-0.0065	-1.6E-17
9/16/2021	Ice House Pond	7:45	Orleans	72.7	71	Rain	Windy	NE	Today	Clear	0.8	0.7	1.1	0.8	0.6	1.4	3.9	3.9	1.0	88	12		Mixed	0.01	0.00	Low				lily pads	-0.08785	-0.07818	0.01265
9/30/2021	Ice House Pond	7:35	Orleans	66.2	56.3	Cloudy	Light breeze	NW	Today	Clear	0.8	0.5	1.5	0.9	0.6	1.5	2.2	2.0	1.2	NA			NA	0.00	0.00	Low				pair of mallard ducks, catbird, goldfinch	0.00637	0.01518	-0.03942
10/14/2021	Ice House Pond	7:36	Orleans	64.9	61.7	Partly cloudy	Calm	WSW	More than 2 days ago	Clear	3.9	0.7	6.7	3.4	0.6	5.9	34.3	11.3	3.1	100			Microcystis	1.26	0.12	Low				Kingfisher, took sample of floating algae - no cyano found in it upon examination at lab.	0.11059	0.09092	0.19495
11/1/2021	Ice House Pond	7:45	Orleans	56.4	53	Sunny	3mph	W	2 Days Ago	Clear	0.0	0.0	0.0	0.0	0.0	0.0	8.9	1.4	5.3			WO(100)	Woronichinia	0.02	0.00	Low					-0.33083	-0.32312	-0.07486
	Total Sampling Events: 12																															
5/28/2021	Pilgrim Lake	8:00	Orleans	67	56	partly cloudy	15mph	NE	2 days ago, < .5 in	Clear	1.1	0.3	3.9	1.4	0.3	4.6	142.3	1.5	84.2		90	WO- 10%	Dolichospermum	0.04	0.00	Low					#DIV/0!	#DIV/0!	#DIV/0!
6/11/2021	Pilgrim Lake	7:45	Orleans	69.5	58	sunny	calm	E	2 days ago	Clear	1.2	0.5	2.7	8.7	0.5	16.9	2454.9	13.9	147.4	1	97	CS(1), WO	Dolichospermum	0.23	0.01	Moderate					0.00742	0.13009	0.2034
6/18/2021	Pilgrim Lake	7:50	Orleans	71	66	sunny	3 mph	SW	>2 days ago, 2" +	Clear	0.7	2.8	0.3	1.7	3.8	0.5	4.7	3.5	1.4		25	WO(75)	Mixed	0.01	0.00	Low				songbirds, heron, minnows, trout, bullfrog, fisherman in boat, SUP-Boarder	-0.07643	-0.23273	-0.89506
6/25/2021	Pilgrim Lake	8:00	Orleans	72.6	66	Cloudy	Light breeze	SE	Today	Clear	0.5	0.4	1.1	1.5	0.4	3.6	2.2	0.8	2.7	NA			NA	0.00	0.00	Low					-0.04851	-0.01657	-0.10961
7/9/2021	Pilgrim Lake	8:20	Orleans	74.5	70	foggy	light breeze	SE	today	Slightly Turbid	0.4	0.6	0.8	0.3	0.6	0.5	7.1	1.1	6.7			WO(100)	Woronichinia	0.02	0.00	Low				small fish, 7 ducks.	-0.01147	-0.11575	0.08516
7/23/2021	Pilgrim Lake	7:50	Orleans	76.6		partly cloudy	light breeze	NW	2 days ago	Clear	3.9	0.6	6.5	3.5	0.6	5.5	6.2	0.9	6.7			OS(67), WO	Mixed	0.01	0.01	Low				ducks, frogs	0.15493	0.17548	-0.01045
8/6/2021	Pilgrim Lake	7:45	Orleans	72.5		Sunny	Light breeze	SW	Yesterday	Clear	3.7	0.5	7.1	3.9	0.4	7.2	11.2	1.3	8.8		75	25	Mixed	0.03	0.01	Low					-0.00375	0.00773	0.04233
8/20/2021	Pilgrim Lake		Orleans	76		Sunny	Light breeze		Yesterday	Clear	0.8	0.4	1.8	0.8	0.5	1.7	3.6	1.7	2.1		29	OS(50), W	Mixed	0.01	0.00	Low				birds, lillies along shore	-0.11215	-0.11226	-0.08009
9/3/2021	Pilgrim Lake	8:00	Orleans	72.3	63	Sunny	Light breeze	Light Breeze	Yesterday	Clear	2.5	0.4	7.0	5.0	0.4	11.2	7.7	1.4	6.2			WO(100)	Woronichinia	0.02	0.01	Low				little fish	0.086	0.13049	0.05362
9/16/2021	Pilgrim Lake	8:00	Orleans	72.2	65	Rain	Windy	NE	Today	Clear	1.0	0.7	1.5	1.3	0.7	1.8	2.2	2.3	1.0			WO(67), C	Mixed	0.00	0.00	Low				small fish, thunderstorm in distance	-0.06849	-0.10694	-0.09692
9/30/2021	Pilgrim Lake	7:50	Orleans	68.2	54	Cloudy	Light breeze	N	Today	Clear	1.4	0.5	2.7	2.2	0.7	3.1	4.5	1.6	2.8			OS(100),	Oscillatoria	0.01	0.00	Low				some small fish, ~1" long	0.02191	0.03976	0.05102
10/14/2021	Pilgrim Lake	7:45	Orleans	65	63		Calm	W	More than 2 days ago	Clear	2.0	0.6	3.6	2.4	0.5	4.5	13.6	2.3	5.9			WO(79), C	Mixed	0.03	0.01	Low				small 1-3" fish	0.02408	0.00575	0.07943
11/1/2021	Pilgrim Lake	7:40	Orleans	55.76	57.02	Sunny	Light breeze	W	Yesterday	Clear	0.0	0.0	0.0	0.0	0.0	0.0	11.0	1.6	5.8	100			Microcystis	0.40	0.00						-0.29379	-0.30378	-0.01156
	Total Sampling Events: 13																															
5/28/2021	Uncle Harvey Pond	8:00	Orleans	69.8	53	sunny	light breeze	NE	>2 days ago, <1"	Clear	1.1	0.3	4.2	1.3	0.3	4.1	17.3	0.8	22.0			WO(94), C	Woronichinia	0.04	0.00	Low					NA	NA	NA
6/11/2021	Uncle Harvey Pond	7:45	Orleans	71.6	55	sunny	calm	S	>2 days ago, <1"	Clear	0.5	0.4	1.2	0.7	0.4	1.7	1.5	0.6	2.4	100			Microcystis	0.05	0.03	Low				turtle swimming	-0.05352	-0.04236	-0.17508
6/25/2021	Uncle Harvey Pond	7:00	Orleans	74.8	64.22	Cloudy/foggy	Light breeze	SW	Today	Clear	0.6	0.6	1.1	1.0	0.7	1.5	1.2	0.7	1.8	NA			NA	0.00	0.00	Low					0.01483	0.02428	-0.01842
7/9/2021	Uncle Harvey Pond	7:30	Orleans	74.1	69	Foggy	Light breeze	SW	More than 2 days ago	Clear	1.5	0.4	3.5	1.3	0.4	3.5	1.9	0.6	3.4		100		Dolichospermum	0.00	0.00	Low					0.05842	0.02175	0.03446
7/23/2021	Uncle Harvey Pond	7:00	Orleans	78.3	65.3	partly cloudy	calm	NW	today	Clear	0.8	0.6	1.5	0.9	0.6	1.4	2.0	0.7	2.7	NA			NA	0.00	0.00	Low				blue heron	-0.04072	-0.02968	0.00341
8/6/2021	Uncle Harvey Pond	6:57	Orleans	74.8	67.28	Sunny	Light breeze	S	Today	Clear	1.0	0.8	1.2	1.1	0.8	1.4	26.2	1.3	20.4	95	5		Microcystis	0.96	0.04	Low					0.01346	0.01615	0.18525
8/20/2021	Uncle Harvey Pond	7:30	Orleans	77.7	75.2	Sunny			Yesterday	Clear, green	1.9	0.5	3.9	3.8	0.5	7.5	48.0	0.8	52.9	2	95	WO(3)	Dolichospermum	0.02	0.01	Low					0.04656	0.08739	0.04334
9/3/2021	Uncle Harvey Pond	7:30	Orleans	74.6	62.6	Sunny	Light breeze	W	Yesterday	Clear	1.6	0.6	2.8	1.9	0.6	3.2	99.6	1.2	86.1	96	2	WO(2)	Microcystis	3.64	0.07	Low					-0.01228	-0.04856	0.05207
9/10/2021	Uncle Harvey Pond	8:00	Orleans	66.7	72.3	Sunny	Calm		Yesterday	Clear	0.0	0.3	0.0	0.0	0.3	0.0	65.6	0.9	82.0	90	5	WO(5)	Microcystis	2.40	0.00	Low					-0.72502	-0.74957	-0.05965
9/16/2021	Uncle Harvey Pond	7:05	Orleans	74.1	71.2	Rain	Calm		Today	Clear	0.0	0.4	0.0	0.0	0.4	0.0	0.0	0.5	0.0	83	10	WO(7)	Mixed	0.00	0.00	Low					0	0	-1.46479
9/30/2021	Uncle Harvey Pond	7:30	Orleans	69.4	55.8	Mostly Cloudy	Light breeze	W	Today	Clear	0.8	0.6	1.2	1.5	0.6	2.4	44.8	1.7	29.3	97		WO(3)	Microcystis	1.64	0.06	Low					0.30934	0.35853	0.60056
10/14/2021	Uncle Harvey Pond	7:30	Orleans	65.7	60	Partly cloudy	Calm		More than 2 days ago	Clear	4.5	0.7	6.5	11.0	1.0	11.5	54.1	2.1	26.4	91		WO(7), OS	Microcystis	1.98	0.40	Low				minnows	0.12762	0.14149	0.0134
11/1/2021	Uncle Harvey Pond	8:00	Orleans	57.02	54.86	Sunny	8mph	W	2 Days Ago	Clear	0.0	0.0	0.0	0.0	0.1	0.0	264.0	18.1	14.5	92	14	WO(6)	Mixed	0.78	0.00						-0.33985	-0.38891	0.0881

Key

Additional weekly samples taken outside the originally planned schedule

DS	Dolichospermum spp.
MC	Microcystis spp.
WO	Woronichinia spp.
OS	Oscillatoria spp.
CS	Colosoarium coo.
AE	Anabaena spp.
AP	Aphanocapsa spp.
AZ	Aphanozoemon spp.
BFC	Bloom Forming Colonies
PC	Phycocyanin
CHLA	Chlorophyll A