Curlyleaf pondweed sampled in Fish Lake, Scott County, April 29, 2019

Curlyleaf Pondweed Assessment Survey for Fish Lake, Scott County, Minnesota, 2019

No Open Lake CLP Herbicide Application in 2019

Curlyleaf Pondweed Assessment: May 29, 2019

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Curlyleaf Pondweed Assessment Survey for Fish Lake, Scott County, Minnesota, 2019

Summary

Curlyleaf Pondweed Assessment, May 29, 2019: A curlyleaf assessment was conducted on May 29, 2019. Curlyleaf was found at 67 out of 147 sample sites. Heavy curlyleaf growth was found at 14 sample sites, mostly in the north end of the lake (Figure S1). No treatment occurred in 2019. Coontail was found at 74 our 147 sample sites and was well distributed around the lake growing at light to moderate densities (Figure S1).

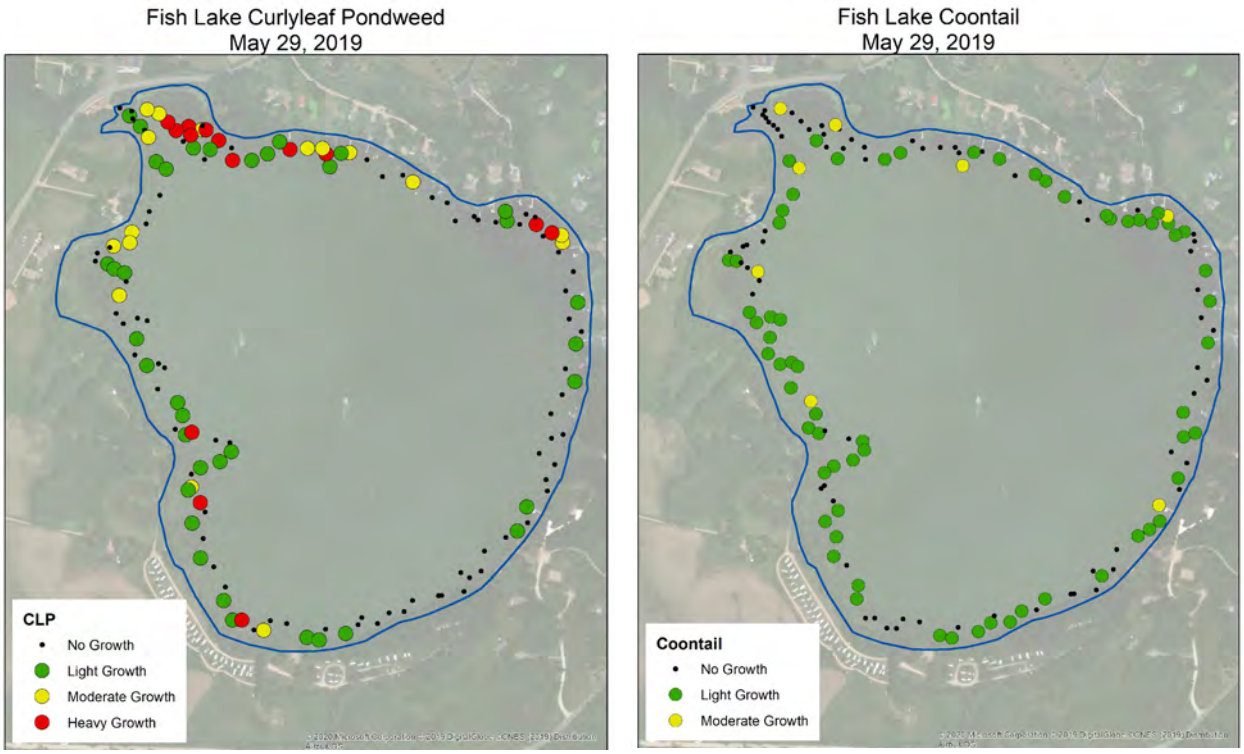

Figure S1. [left] Fish Lake curlyleaf pondweed delineation on May 29, 2019. [right] Fish Lake coontail on May 29, 2019.

Curlyleaf Pondweed Assessment Survey for Fish Lake, Scott County, Minnesota, 2019

Fish Lake, Scott County (MnDNR ID: 70006900)
Area: 175.92 acres
Littoral Area: 74 acres
Shore Length: 2.3 miles
Maximum Depth: 28 feet

Introduction

Fish Lake has an area of 176 acres with a littoral area of 74 acres (source: MnDNR). A meandering curlyleaf pondweed delineation survey was conducted on May 29, 2019.

Methods

Methods for Delineating and Assessing Curlyleaf Pondweed: The assessment survey is conducted using a meandering path around the nearshore area of the entire lake. Curlyleaf as well as other plants are sampled using a fixed 14 tine rakehead on a pole.

For a curlyleaf assessment, the curlyleaf density is based on a scale of 0 to 3 with 3 being the densest (chart is shown below).

Chart of Aquatic Plant Density Ratings

Aquatic plant density ratings from 1 to 3.

Results of Curlyleaf Pondweed Delineation, May 29, 2019: A curlyleaf assessment using a meandering GPS survey method was conducted on May 29, 2019. Curlyleaf was found at 22 out of 65 sites (Figure 1). Several CLP sites were found with moderate to heavy growth potential. Curlyleaf was found growing out to a depth of 10 feet.

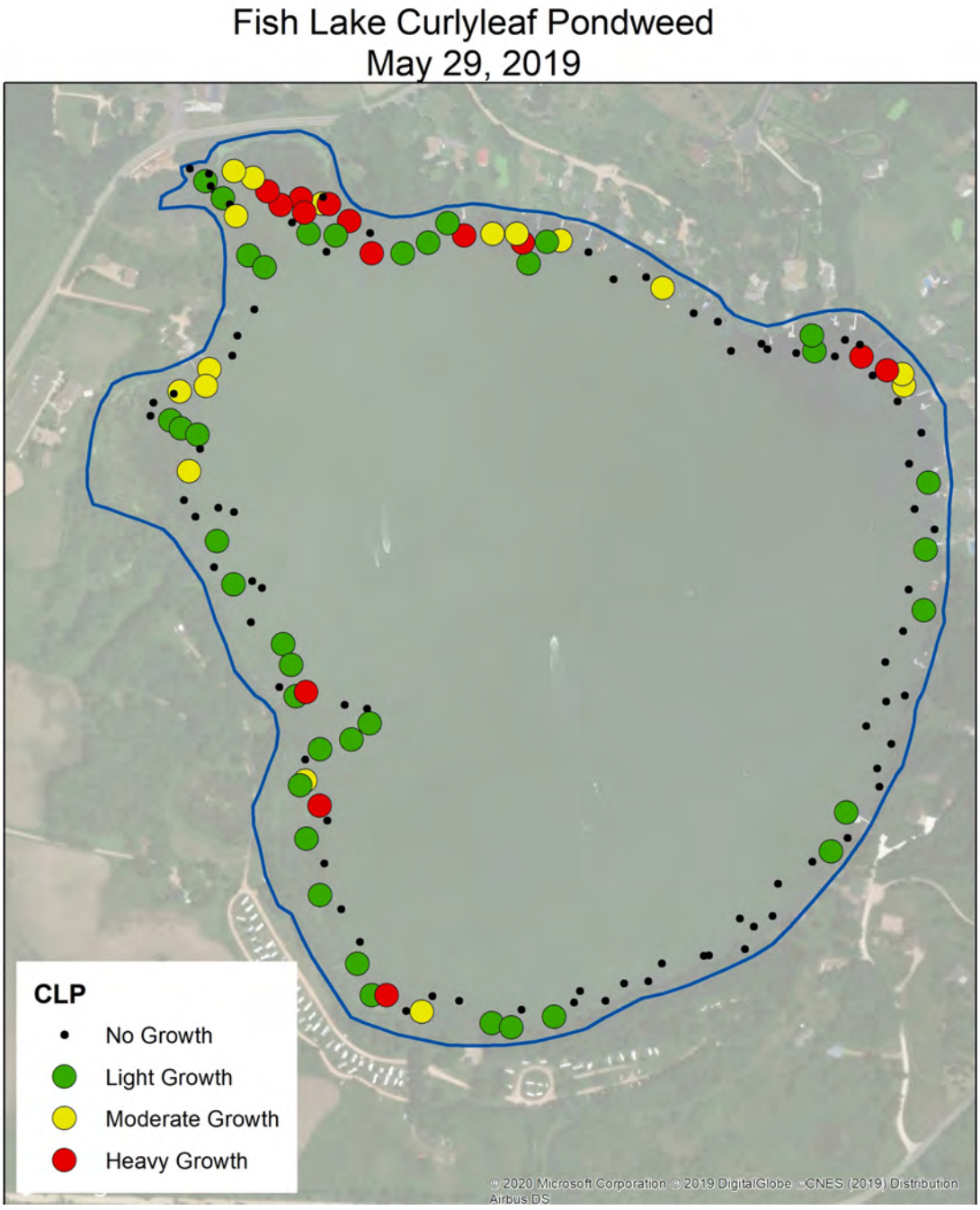

Figure 1. Map of curlyleaf pondweed for May 29, 2019. Colored sample areas indicate the growth in late May of 2019 for curlyleaf pondweed. Key: green = light potential growth, yellow = moderate potential growth, red = heavy potential growth, and black dot = no curlyleaf.

Fish Lake Plant Maps from a Meandering Survey on May 29, 2019

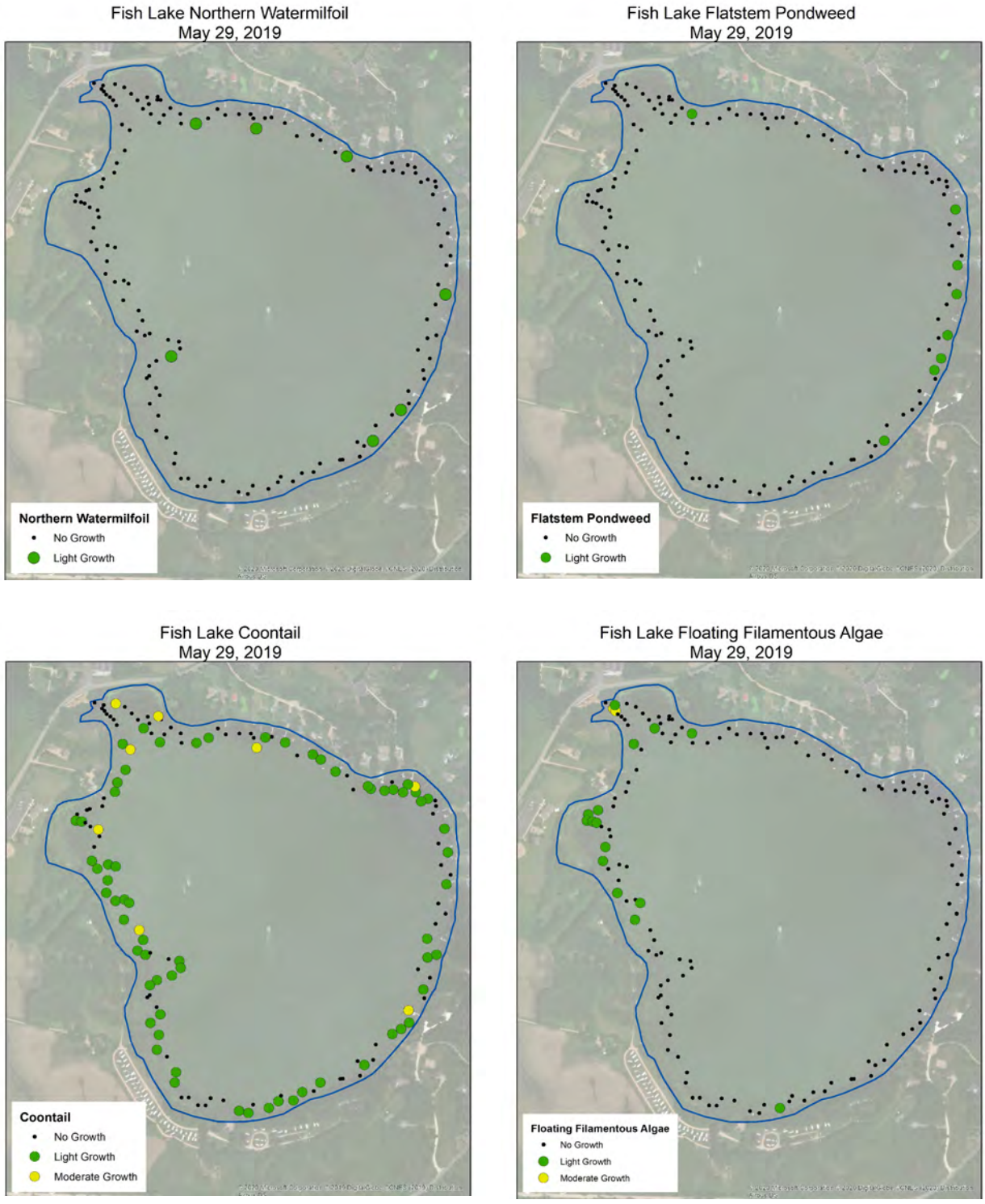

Figure 2. Individual plant species distribution and abundance on May 29, 2019 in Fish Lake.

Fish Lake Aquatic Plant Conditions on May 29, 2019

Figure 3. Photos of plant conditions in Fish Lake on May 29, 2019.

APPENDIX

May 29, 2019 Meandering Survey

Individual sample site data for the meandering survey on Fish Lake on May 29, 2019.

Site	Depth (ft)	Spatter-dock	White lilies	Coontail	CLP	Flat-stem	NWM	FA	No plants
2	4								1
3	4				1			2	
4	4							2	1
5	4								1
6	4				1				
7	4								1
8	4				2				
9	5			1	1			1	
10	7			2	1				
11	8			1					
12	6			1					
13	8			1					
14	5				2				
15	6				2				
16	6				2				
17	4							1	1
18	4		1					1	
19	4			1				1	
20	5			1				1	
21	5				1			1	
22	6				1				
23	8			2	1				
24	9								1
25	7				2			1	
26	5			1				1	
27	6			1					
28	10			1					
29	12			1					
30	7			1	1				
31	4			1				1	
32	6			1	1				
33	9			1					
34	11			1				1	
35	5			1				1	
36	9			2	1				
37	7			1	1				
38	5	1		1					
39	5			1	1				
40	6				3				
41	7								1
42	6			1					
43	7			1	1				
44	8			1	1		1		
45	6			1	1				
46	5			1					
47	5				2				
48	6				1				
49	7				3				
50	8			1					
51	5		1	1	1				
52	10			1					
53	6			1	1				
54	12								1
55	12			1					
56	8			1	1				
57	5	1			1				
58	6				3				
59	6	1							
60	7				2				
61	11								1
62	13								1
63	7			1	1				
64	5			1	1				
65	13								1
66	6			1	1			1	
67	11			1					
68	13								1
69	6	1		1					
70	10			1					
71	7								1
72	6			1					
73	12								1
74	7								1
75	4								1
76	7			1					
77	14								1

Site	Depth (ft)	Spatter-dock	White lilies	Coontail	CLP	Flat-stem	NWM	FA	No plants
78	5					1	1		
79	12								1
80	9			1					
81	4			1	1		1		
82	5			1					
83	8			2	1				
84	5								1
85	6			1		1			
86	5					1			
87	13								1
88	10			1					
89	5			1		1			
90	10			1					
91	12								1
92	5				1	1	1		
93	12								1
94	7			1	1	1			
95	6								1
96	12								1
97	6			1	1				
98	13								1
99	8			1		1			
100	12								1
101	7				2				
102	7				2				
103	5			1	3				
104	9			1					
105	6			1	3				
106	5			2					
107	5			1					
108	8			1					
109	8			1	1				
110	6				1				
111	9			1					
112	5			1					
113	5			1					
114	14								1
115	5						1		
116	8			1					
117	6			1	2				
118	7			1					
119	12								1
120	5			1					
121	5				2				
122	6			1	1				
123	8			2	1		1		
124	6				3				
125	6				2				
126	5				2				
127	6				3				
128	3				1				
129	5			1	1				
130	6			1	1		1		
131	6				3				
132	4					1		1	
133	5				3				
134	6				1				
135	8			1					
136	5				1				
137	5				2				
138	5				3				
139	5			2					
140	5				3				
141	5				3				
142	5			1				1	
143	4				3				
144	4				3				
145	4				2				
146	4			2	2				
147	3							1	1
Average		1.0	1.0	1.1	1.7	1.0	1.0	1.1	
Occur (146 sites)		4	2	74	67	8	7	17	29
% occur		3	1	51	46	5	5	12	

August 17, 2018 Point Intercept Survey

Individual sample site data for the point intercept survey on Fish Lake on August 17, 2018.

Site	Depth (ft)	Spatter-dock	White lilies	Coon-tail	Flat-stem	NWM	Water celery	FA	No plants
1	4		3	1					
2	6			1				1	
3	4	1		1				1	
4	4	1	2	1				1	
5	17								1
8	16								1
9	6			1		1	1		
10	7			3				2	
16	6			1		1	1		
17	6			2				2	
18	9			2				1	
23	17								1
24	8			2				1	
25	11								1
31	5			1	1		1		
32	4			1				2	
33	14								1
40	9			2					
41	4		3	1					
42	10			1					
49	23								1
50	9			2		1			
51	3		3	1				2	
52	10			2					
59	18								1
60	10			1					
61	5			2	1			1	
62	16								1
66	17								1
67	3					1	1		
68	4						1		
69	6							2	1
70	5			1		1	1	2	
71	6			1				1	
72	5			1			1		
73	3			1				3	
74	3			2				3	
Average		1.0	2.8	1.4	1.0	1.0	1.0	1.7	
Occur (74 sites)		2	4	25	2	5	7	15	47
% occur		3	5	34	3	7	9	20	

Fish Lake 74 points