



Rice Lake, Scott County, Minnesota, 2017

Aquatic Plant Point-Intercept Survey for Rice Lake, Scott County, Minnesota

[Plant Survey Conducted September 27, 2017]

Prepared for:
Prior Lake-Spring Lake
Watershed District



Prepared by:
Steve McComas
Jo Stuckert
Blue Water Science

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Aquatic Plant Point-Intercept Survey for Rice Lake, Scott County, Minnesota

Summary

Rice Lake (MnDNR ID 70-6000) is a 30 acre lake located in Scott County, Minnesota. An aquatic plant survey was conducted on September 27, 2017 by Blue Water Science to characterize conditions of native aquatic plants and to look for the non-native Eurasian watermilfoil.

Rice Lake has a moderate diversity of submerged aquatic plants, with 5 species of rooted submerged plants found. Plants covered 95% of the lake area. The entire shoreline was ringed with native wetland plant species.

Table S1. The percent occurrence of summer aquatic plants for Rice Lake on September 27, 2017. Percent occurrence is calculated based on the number of times a plant species occurs at a sampling station divided into the total number of stations for the survey.

	Rice Lake September 27, 2017 (63 sites)		
	% Occurrence	Occurrence	Density
Spatterdock (<i>Nuphar luteum</i>)	52	33	2.7
White water lilies (<i>Nymphaea sp</i>)	40	25	1.8
Coontail (<i>Ceratophyllum demersum</i>)	86	54	3.1
Naiads (<i>Najas spp.</i>)	8	5	1.0
Flatstem pondweed (<i>Potamogeton zosteriformis</i>)	17	11	1.0
Sago (<i>Stuckenia pectinata</i>)	8	5	1.0
Bladderwort (<i>Utricularia spp.</i>)	6	4	1.0
Total submerged species	5		



Figure S1. Coontail and White lilies are widespread in Rice lake.

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Rice Lake, Scott County (MnDNR ID: 70-6000)

Size: 30 acres (source: PLSLWD website)

Maximum observed depth: 5 feet

Introduction

An aquatic plant survey was conducted on 30 acre Rice Lake, located in Scott County, on September 27, 2017. The objective of the survey was to characterize the aquatic plant community and to look for Eurasian watermilfoil.

Methods

An aquatic plant point-intercept survey of Rice Lake was conducted by Blue Water Science on September 27, 2017 and 63 points were sampled. Sample points were placed 50 meters apart on a grid that covered the lake (Figure 1). At each sample point, a sampling rake was lowered into the water and a plant sample was taken. The plant species were recorded and the density of each species was assigned. Densities were based on the coverage on the teeth of the rake. Density ratings were from 1 to 4 with 1 being sparse and 4 being a nuisance. Based on these sample sites, a plant distribution map was constructed.



Figure 1. Sample location map for the aquatic plant survey conducted on Rice Lake.

Results

Results of the summer aquatic plant survey conducted on September 27, 2017 found there were five submerged plants (Table 1)(Figure 2).

Eurasian watermilfoil was not observed in this survey.

Aquatic plant coverage was approximately 95%. Distribution and abundance plant maps are shown in Figure 2.

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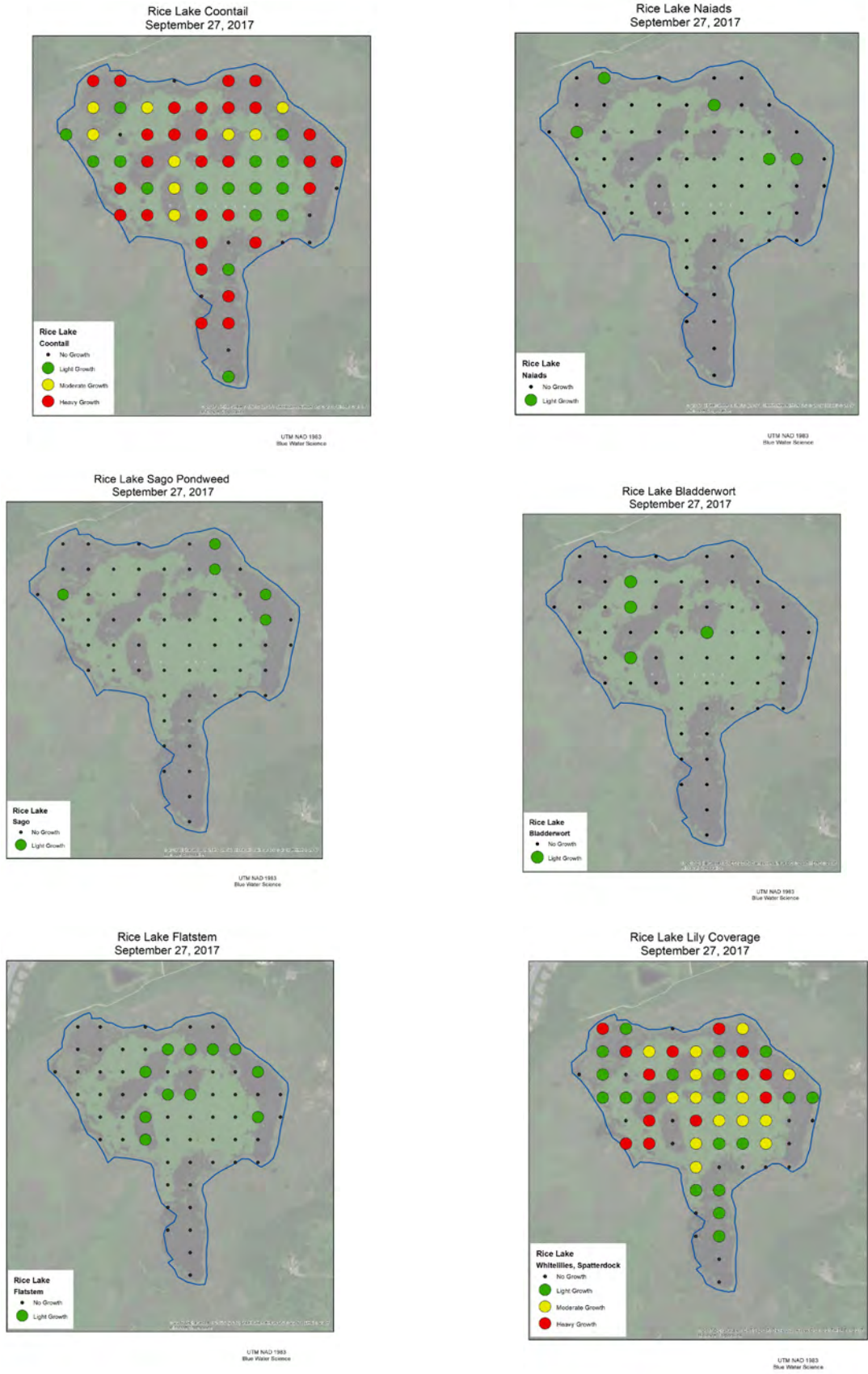


Figure 2. Rice Lake aquatic plant coverage maps. For individual species maps: green = light growth, yellow = moderate growth, and red = heavy growth.

Table 2. Rice Lake, individual site data collected on September 27, 2017.

Site	Depth (ft)	Cattail	Duckweed	Spatterdock	White lilies	Bladderwort	Coontail	Flatstem	Naiads	Sago	No Plants
1	3		1				1				
2	4										1
3	3						4				
4	4			1			4				
5	3										1
6	3			1	1		4				
7	3			1	2		4				
8	4				1		1				
9				2	3		4				
10	1	1									
11	4						4				
12	1	1									
13	1	1									
14	3			4			4				
15	3			4	1		4				
16	2						3	1			
17	3			3	1		4				
18	3			2	2		4				
19	4			2	2		2				
20	3			3	1		2				
21	4										1
22	3						4				
23	4			4		1	1				
24	3						3	1			
25	4			4			1				
26	4			3			2				
27	4			3	1		2				
28	4			3	1		2				
29	4						4	1			
30	1	1									
31	3			1			1				
32	3			1			1				
33	3			2			4				
34	3			3			3				
35	5			3	1		4	1			
36	5			1		1	4	1			
37	4			3			2				
38	4			4			2		1		
39	4				1		4		1	1	
40	3				2		4				
41	3						2				
42	3				1		3		1	1	
43	1	1									
44	3			4		1	4				
45	4			1			4	1			
46	4			3	1		4				
47	4			1			3				
48	3			4			3				
49	4			4			2				
50	4				3		4	1		1	
51	4				1		3				
52	4			4			2				
53	3			3		1	3				
54	4			4			4				
55	4			3			4	1			
56	4				1		4	1	1		
57	4				4		4	1		1	
58	3				2		3	1			
59	3				4		4				
60	4				2		4		1		
61	1	1									
62	4				4		4				
63	3				3		4			1	
Average		1.0	1.0	2.7	1.8	1.0	3.1	1.0	1.0	1.0	
Occur (63 sites)		6	1	33	25	4	54	11	5	5	3
% occur		10	2	52	40	6	86	17	8	8	

General Findings of This Study

- Native shoreline conditions offer good wildlife habitat.
- Submerged plants were abundant covering nearly 95% of the open water area and coontail was the dominant plant.
- Species diversity was moderate, five submerged plant species were observed.
- No non-native plant species were found in Rice lake.



Figure 3. Rice Lake plants September 27, 2017.