



A Stream Enters Jeffers Pond, Scott County, Minnesota, 2016

Aquatic Plant Point-Intercept Survey for Jeffers Pond, Scott County, Minnesota

[Plant Survey Conducted August 29, 2016]

Prepared for:
Prior Lake-Spring Lake
Watershed District



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Aquatic Plant Point-Intercept Survey for Jeffers Pond, Scott County, Minnesota

Summary

Jeffers Pond (MnDNR ID #70-007700) is a 39 acre lake located in Scott County, Minnesota. An aquatic plant survey was conducted on August 29, 2016 by Blue Water Science to characterize conditions of native aquatic plants and to look for the non-native Eurasian watermilfoil.

Jeffers Pond has a low diversity of submerged aquatic plants, with 7 species of rooted submerged plants found. A majority of the shoreline was ringed with a narrow buffer of native wetland plant species.



Figure S1. The shoreline of Jeffers Pond has a walking path around the pond, houses are set back from the pond. Jeffers Pond was sampled by kayak. Here plants were sampled with a sampling rake and on the sample rake are coontail and Eurasian watermilfoil.

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Jeffers Pond, Scott County (MnDNR ID: 70-007700)

Size: 39 acres (source: PLSLWD website)

Introduction

An aquatic plant survey was conducted on 39 acre Jeffers Pond, located in Scott County, on August 29, 2016. 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 Jeffers Pond was conducted by Blue Water Science on August 29, 2016 and 56 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 5 with 1 being sparse and 5 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 Jeffers Pond.

Results

Results of the summer aquatic plant survey conducted on August 29, 2016 found there were 7 submerged plant species (Table 1)(Figure 2).

Plant coverage was basically 100%.

Eurasian watermilfoil was observed in this survey at a majority of sites (48 out of 55 sites).

Table 1. The percent occurrence of summer aquatic plants for Jeffers Pond on August 29, 2016. 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.

	Jeffers Pond August 29, 2016 (55 sites)		
	% Occurrence	Occurrence	Density
Coontail (<i>Ceratophyllum demersum</i>)	96	53	95
Elodea (<i>Elodea canadensis</i>)	36	20	36
Northern watermilfoil (<i>Myriophyllum sibiricum</i>)	40	22	39
Eurasian watermilfoil (<i>M. spicatum</i>)	87	48	86
Floatingleaf pondweed (<i>Potamogeton natans</i>)	2	1	2
Flatstem pondweed (<i>P. zosteriformis</i>)	13	7	13
Sago pondweed (<i>Stuckenia pectinata</i>)	2	1	2
Filamentous algae	7	4	7
Aquatic Plant Coverage (ac)	39 (100%)		
Total submerged species	7		

Jeffers Lake Species Richness

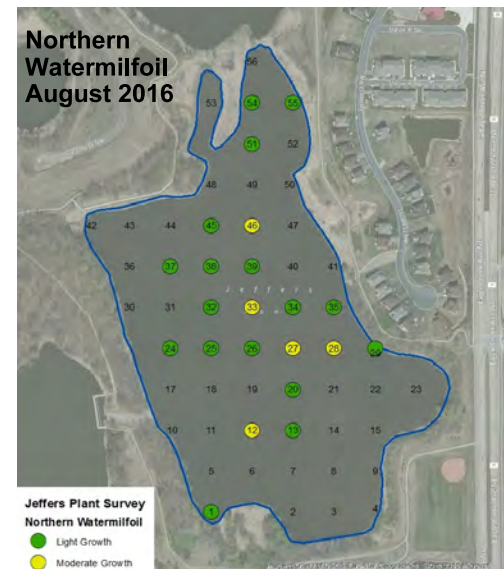
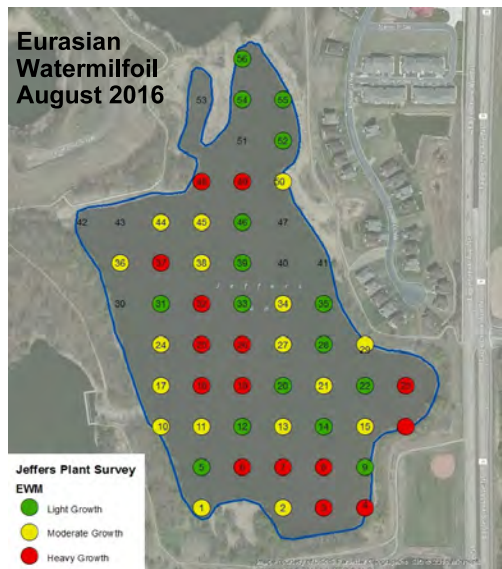
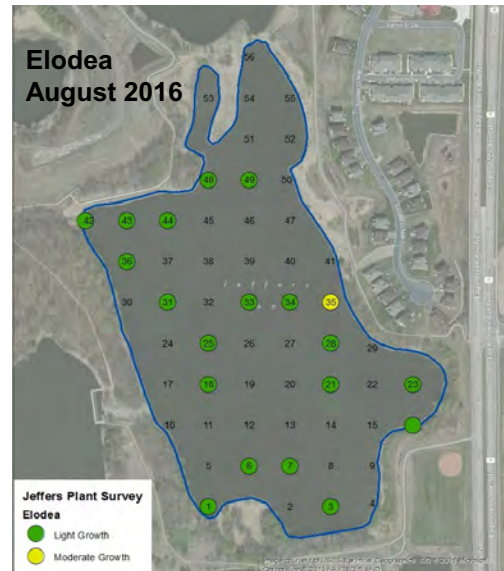
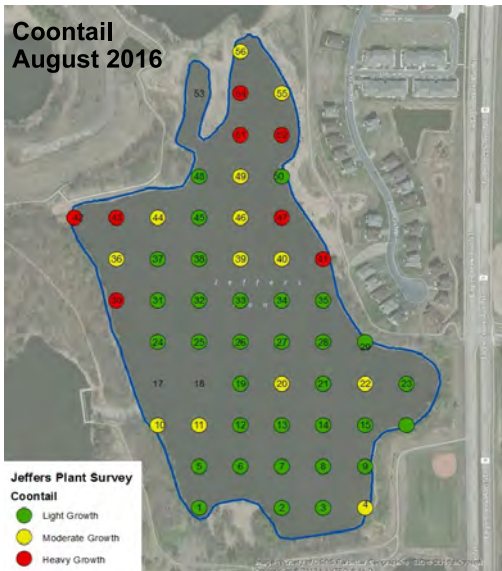
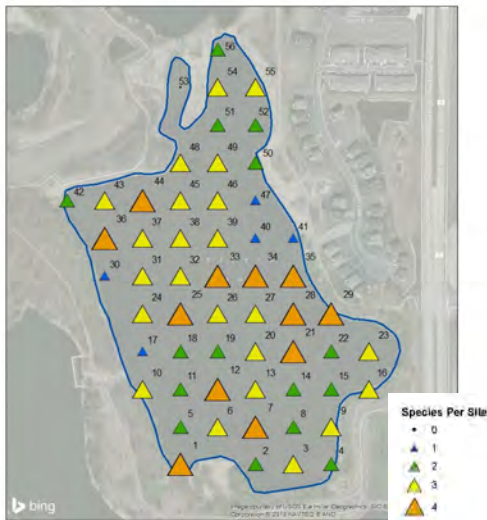


Figure 2. Jeffers Pond aquatic plant richness (upper left) and plant species distribution and abundance maps.

Table 2. Jeffers Pond, individual site data collected on August 29, 2016.

Site	Depth (ft)	Coontail	Elodea	EWM	Flatstem	Floatingleaf	NWM	Sago	FA	No Plants
1	2	2	1	3			1			
2	2	2		3						
3	3	1	1	4						
4	2	3		4						
5	2	1		1						
6	3	2	2	4						
7	3	2	1	4	1					
8	3	1		4						
9	2	2		2	1					
10	5	3		3	1					
11	4	3		3						
12	4	2		2	1		3			
13	4	2		3			1			
14	3	1		2						
15	3	1		3						
16	3	1	1	4						
17	3			3						
18	4		1	4						
19	4	2		4						
20	4	3		2			1			
21	4	2	1	3	1					
22	4	3		2						
23	4	2	1	4					1	
24	3	1		3			1			
25	4	1	1	4			1			
26	4	1		4			1			
27	3	1		3			3		1	
28	3	1	1	2			3		1	
29	2	1		3		2	1			
30	4	4								
31	4	2	1	2						
32	4	1		4			2			
33	4	1	1	1			3			
34	4	1	1	3			2		2	
35	4	1	3	1			1			
36	4	3	1	3	1					
37	4	2		4			2			
38	4	1		3			2			
39	4	3		2			1			
40	4	3								
41	3	4								
42	3	4	1							
43	4	4	1		1					
44	4	3	1	3				1		
45	4	1		3			2			
46	5	3		1			3			
47	4	4								
48	4	2	1	4						
49	4	3	2	4						
50	2	2		3						
51	3	4					1			
52	4	4		1						
53	land									1
54	4	4		2			1			
55	4	3		2			1			
56	4	3		2						
Average		2.2	1.2	2.9	1.0	2.0	1.7	1.0	1.3	
Occurrence (55 sites)		53	20	48	7	1	22	1	4	1
% occur		96	36	87	13	2	40	2	7	

Jeffers Pond, Scott County DOW 70-007700

Suspected Eurasian watermilfoil, *Myriophyllum spicatum*, observation



Collected by:
Steve McComas,
Blue Water Science

August 29, 2016



General Findings of This Study

- Emergent plants along the shoreline were abundant and offer good wildlife habitat.
- Submerged plants were widespread. The relatively shallow basin offers good growing conditions.
- Eurasian watermilfoil growth was moderate to heavy through much of the lake.



Figure 3. Eurasian watermilfoil was topping out around most of Jeffers Pond.