



Pike Lake, Scott County, Minnesota, 2012

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# Aquatic Plant Survey for Pike Lake, Scott County, Minnesota

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[Plant Survey Conducted August 6, 2012]

Prepared for:  
Prior Lake/Spring Lake  
Watershed District



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# Aquatic Plant Survey for Pike Lake, Scott County, Minnesota

## Summary

Pike Lake (MnDNR ID #70-0076) is a 43 acre lake located in Scott County, Minnesota. An aquatic plant point-intercept survey was conducted on August 6, 2012 by Blue Water Science to characterize conditions of native aquatic plants and to look for the non-native Eurasian watermilfoil.

Pike Lake has a low diversity of submerged aquatic plants with four species of submerged plants found in the survey. The submerged plants observed in the survey were coontail, elodea, northern watermilfoil, and sago pondweed (Figure 1). It appears a fifth species, Eurasian watermilfoil, is present in Pike Lake and was observed just north of sample point 37. This is the first time Eurasian watermilfoil has been observed in Pike Lake. All submerged plants were found in water depths of three feet or less. The shoreline was ringed with natural emergent vegetation.

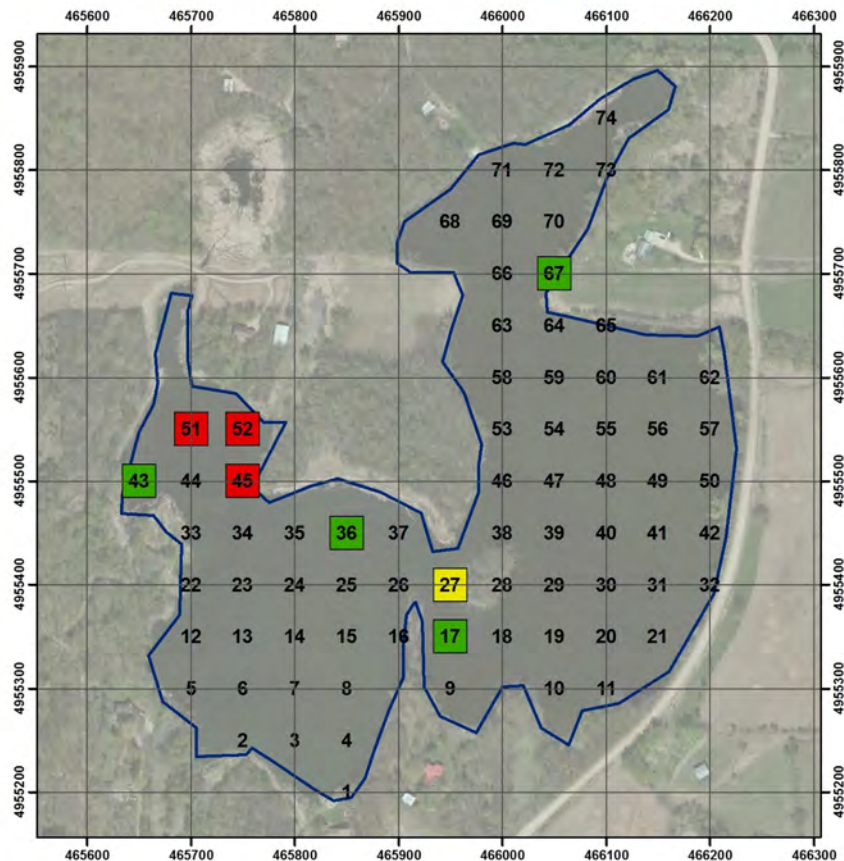


Figure 1. Submerged aquatic plant coverage for Pike Lake on August 6, 2012. Green squares = light growth, yellow squares = moderate growth, and red squares = heavy growth.

# Pike Lake, Scott County (ID: 70-0076)

Size: 43 acres (MnDNR)

Maximum depth: 9 ft (MnDNR)

## Introduction

An aquatic plant survey was conducted on 43 acre Pike Lake, located in Scott County, on August 6, 2012. The objective of the survey was to characterize the aquatic plant community.

## Methods

An aquatic plant point-intercept survey of Pike Lake was conducted by Blue Water Science on August 6, 2012, and all 74 points were sampled. Sample points were spaced 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 ranged from 1 to 5 with 1 being sparse and 5 being heavy growth. Based on these sample sites, a plant distribution map was constructed.

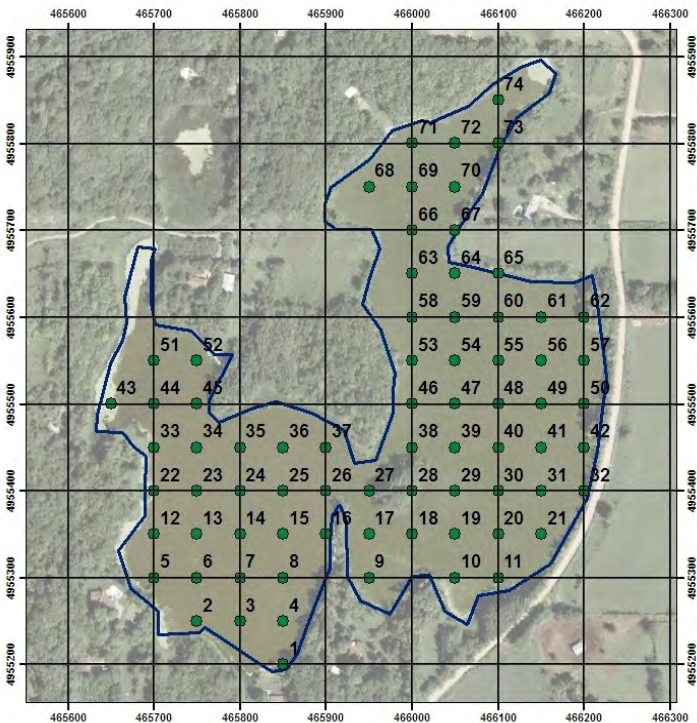


Figure 1. Sample location map for the aquatic plant survey conducted on Pike Lake.

## Results

Results of the summer aquatic plant survey conducted on August 6, 2012 found that four submerged plant species were present and were restricted to water depths of 3 feet or less in Pike Lake (Tables 1 and 2).

Eurasian watermilfoil was observed in this survey, however it was not found at a sample site on the grid, but rather north of sample point 37.

**Table 1. Pike Lake aquatic plant occurrence and density for the August 6, 2012 survey based on 74 sites. Density ratings are 1-5 with 1 being low and 5 being most dense.**

	All Stations (n=39)	
	Occur	Average Density
Coontail ( <i>Ceratophyllum demersum</i> )	7	2.7
Elodea ( <i>Elodea canadensis</i> )	1	1.0
Northern watermilfoil ( <i>Myriophyllum sibiricum</i> )	1	2.0
Sago pondweed ( <i>Stuckenia pectinata</i> )	1	1.0

**Table 2. Occurrence of submerged plants by sites in Pike Lake.**

Sample Site	Depth (ft)	Coontail	Elodea	Northern Watermilfoil	Sago Pondweed
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17	3	1			
18					
19					
20					
21					
22					
23					
24					
25					
26					

**Table 2. Occurrence of submerged plants by sites in Pike Lake.**

Sample Site	Depth (ft)	Coontail	Elodea	Northern Watermilfoil	Sago Pondweed
27	2	3			
28					
29					
30					
31					
32					
33					
34					
35					
36	3		1		1
37					
38					
39					
40					
41					
42					
43	2	2			
44					
45	2	4		2	
46					
47					
48					
49					
50					
51	2	4			
52	2	4			
53					
54					
55					
56					
57					
58					
59					
60					
61					
62					
63					
64					
65					
66					
67	2	1			
68					
69					
70					
71					
72					
73					
74					
Average Density		2.7	1.0	1.0	1.0
Occurrence		7	1	1	1
% Occurrence (74 sites)		9	1	1	1

In 2012 four submerged aquatic plants were found in the survey (Figures 2 and 3) with a fifth species, Eurasian watermilfoil, found at one location north of point 37. However, abundant native emergent plants were found around the perimeter of Pike Lake.

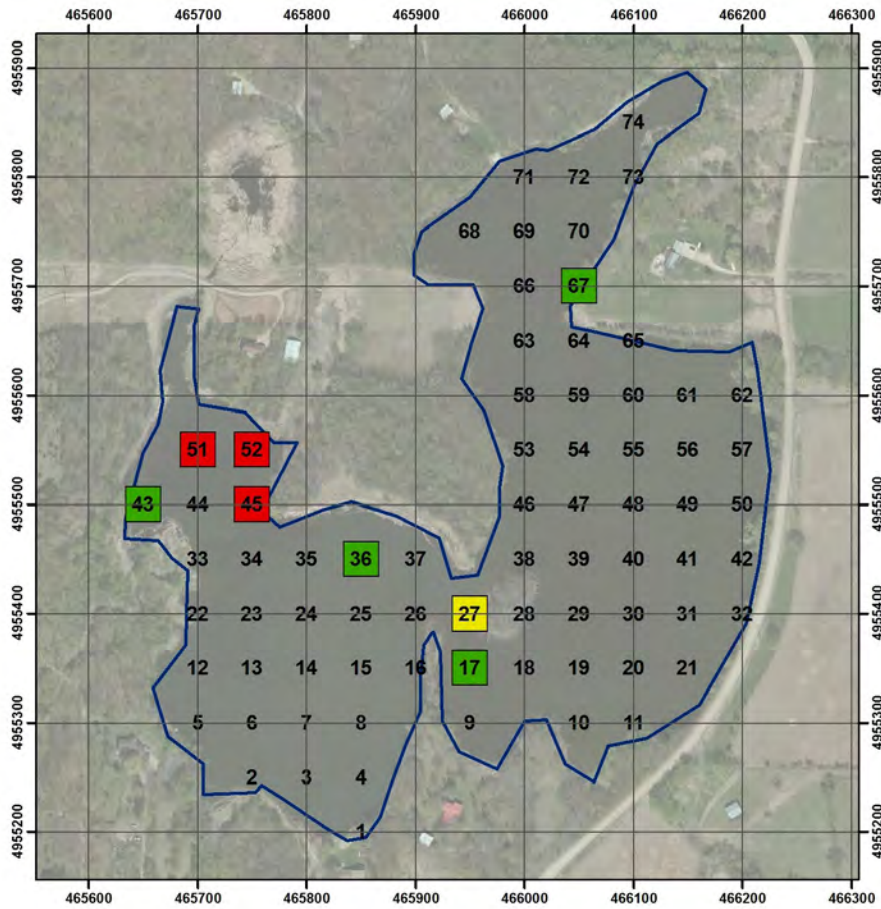


Figure 2. Native submerged aquatic plant coverage for Pike Lake on August 6, 2012. Green squares = light growth, yellow squares = moderate growth, and red squares = heavy growth.



Figure 3. [left] Aquatic plants were sparse in Pike Lake but coontail was abundant in the shallow northwest bay. [right] In shallow water at site 67 coontail was present but was not abundant.

## Eurasian Watermilfoil Was Collected from a Site North of Point 37 in Pike Lake

### Pike Lake, Scott County DOW 70-007600

Suspected Eurasian watermilfoil, *Myriophyllum spicatum*, observation



Collected by:  
Steve McComas,  
Blue Water  
Science

August 6, 2012





**Eurasian watermilfoil collected in Pike Lake on August 6, 2012.**



# Pike Lake



● Red dot indicates location of suspected Eurasian watermilfoil occurrence.

UTM NAD 1983  
Blue Water Science

## General Findings of This Study

- Emergent plants along the shoreline were abundant and offer good wildlife habitat.
- Submerged plants were found in water depths of three feet or less and were scarce except for the shallow northwest bay where coontail was growing to the surface in shallow water (Figure 4). Coontail was the dominant plant in the lake. The reasons for low plant abundance are likely a combination of low light penetration and the impact of bottom feeding fish such as carp.
- An increase in submerged plants probably will not occur unless the roughfish population in Pike Lake is reduced.



- The first observation of Eurasian watermilfoil was found in the western side of the lake, on the northern shoreline in several small patches.



**Figure 4. [top] Most of the shoreline of Pike Lake is in a natural state. [bottom] Coontail, a native submerged aquatic plant, was abundant in a few sites, especially in the northwest bay in Pike Lake in 2012.**