



Birch Lake, Ramsey County, Minnesota, September 2015

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## Aquatic Plant Check for Birch Lake, Ramsey County, Minnesota, 2015

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Prepared for:  
**Birch Lake Improvement  
District**



Prepared by:  
**Steve McComas and  
Jo Stuckert  
Blue Water Science  
St. Paul, MN**

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## – Overview –

Aquatic plants in Birch Lake were checked at 13 points on September 8, 2015 using the same sites that were sampled in 2013. Results of the 2015 plant check indicate aquatic plants were similar in abundance when compared to results from the 2013 survey (Table 1).

In 2015, fern pondweed and water celery were the dominant plants and this was true for the 2013 survey as well (Tables 1 and 2).

The conclusion is that, accounting for seasonal variations, the plant community in Birch Lake in 2015 was similar to conditions in 2013. In 2013, the lake was about 1 foot lower in depth and plants may have been closer to the surface. However plant distribution and coverage remains excellent.

**Table 1. Individual site data for 13 point intercept points collected on September 8, 2015.**

Site	Depth (ft)	Cabbage	Chara	EWM	Fern	Flatstem	Naiads	Stringy	Water celery	Water stargrass	Fila algae
5	4		2		1				2		
7	6				3				2		2
9	6	1			2		1		2		
11	5				3						
13	4		3						1		
22	3	1			2				2	1	
25	7		1		3				1		
27	6				3						
29	5	2			3				2		
36	6		1		2				3		
39	6	3			3			1			
41	6	2			3	1	1				
45	5		2	1	3	1	2		1		
Occurrence (13 sites)		5	5	1	12	2	3	1	9	1	1
Average Density (2015)		1.8	1.8	1.0	2.6	1.0	1.3	1.0	1.8	1.0	2.0
Average Density (2013)		1.7	0.5	1.0	2.3	1.5	1.5	1.0	1.6	ND	ND



**Figure 1. [left] Cabbage, fern pondweed, water celery, and water stargrass all on a sample rake head. [right] Fern pondweed was the most common plant sampled on September 8, 2015.**

# Aquatic Plant Coverage Maps for September 5, 2013

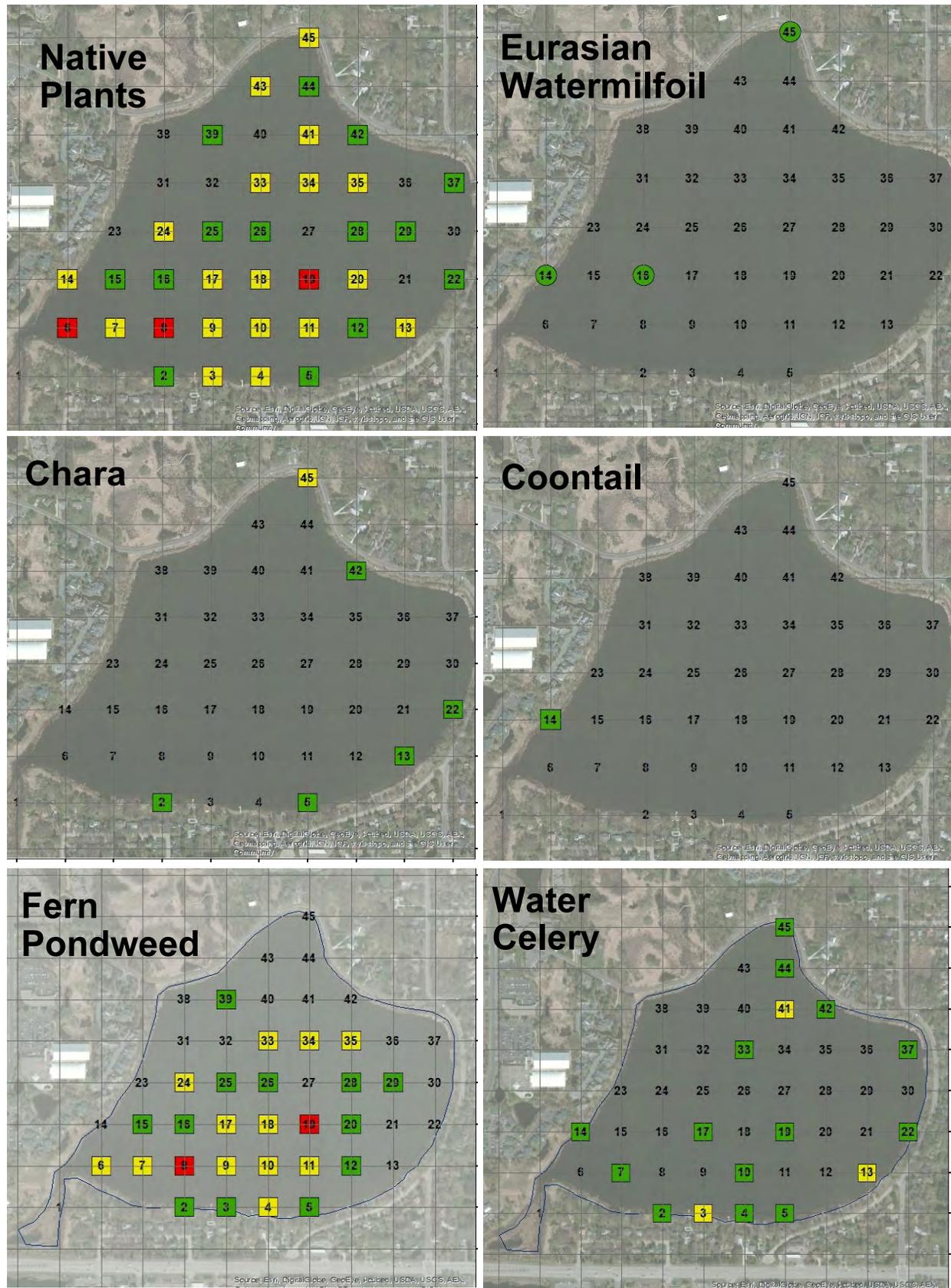


Figure 2. Coverage Maps for September 5, 2013: (top-left) Native aquatic plant; (top-right) Eurasian watermilfoil; (middle-left) Chara; (middle-right) Coontail; (bottom-left) Fern pondweed; and (bottom-right) Water celery.

Key: Green shading = light growth, yellow shading = moderate growth, and red shading = heavy growth.

## Aquatic Plant Point Intercept Data for September 5, 2013

**Table 2. Individual site data for September 5, 2013. Numbers in the columns under plant headings represent the plant density rating.**

site	depth (ft)	Cattails	Spatter-dock	White lilies	Cabbage	Chara	Coontail	EWM	Fern pond-weed	Flatstem pond-weed	Illinois pond-weed	Naiads	Stringy pond-weed	Water celery	no plants
1	1	5													
2	4					1			1					1	
3	4								2				1	3	
4	5								3			2		1	
5	2					1			1					2	
6	4		1	4					3						
7	5								3					1	
8	5								4						
9	6				2				3						
10	5								3					1	
11	5				2				3						
12	6								1						
13	4					1				1		1	1	3	
14	2		3	1	1		0.5	1					1	1	
15	5								1						
16	5							1	1						
17	5				1				3					2	
18	5								3						
19	5								4					2	
20	5								1		3				
21	5														1
22	3					2								2	
23	5														1
24	5								3						
25	5				2				2		1				
26	5								2	1					
27	5														1
28	5								1						
29	5								1						
30	4														1
31	5														1
32	5														1
33	5								3					1	
34	5								3						
35	5								3						
36	5														1
37	4													1	
38	4														1
39	5								1						
40	5														1
41	5													3	
42	4					2				1				1	
43	5									3					
44	5													1	
45	1	1		3		3		1						1	
<b>Average Density</b>		<b>3.0</b>	<b>2.0</b>	<b>2.7</b>	<b>1.6</b>	<b>1.7</b>	<b>0.5</b>	<b>1.0</b>	<b>2.3</b>	<b>1.5</b>	<b>2.0</b>	<b>1.5</b>	<b>1.0</b>	<b>1.6</b>	
<b>occurrence (45 sites)</b>		<b>2</b>	<b>2</b>	<b>3</b>	<b>5</b>	<b>6</b>	<b>1</b>	<b>3</b>	<b>26</b>	<b>4</b>	<b>2</b>	<b>2</b>	<b>3</b>	<b>17</b>	<b>9</b>
<b>% occurrence</b>		<b>4</b>	<b>4</b>	<b>7</b>	<b>11</b>	<b>13</b>	<b>2</b>	<b>7</b>	<b>58</b>	<b>9</b>	<b>4</b>	<b>4</b>	<b>7</b>	<b>38</b>	



**Figure 3. Fern pondweed is the dominant plant in Birch Lake (from 2013).**