LOWER SPRING LAKE PROTECTION & REHABILITATION DISTRICT

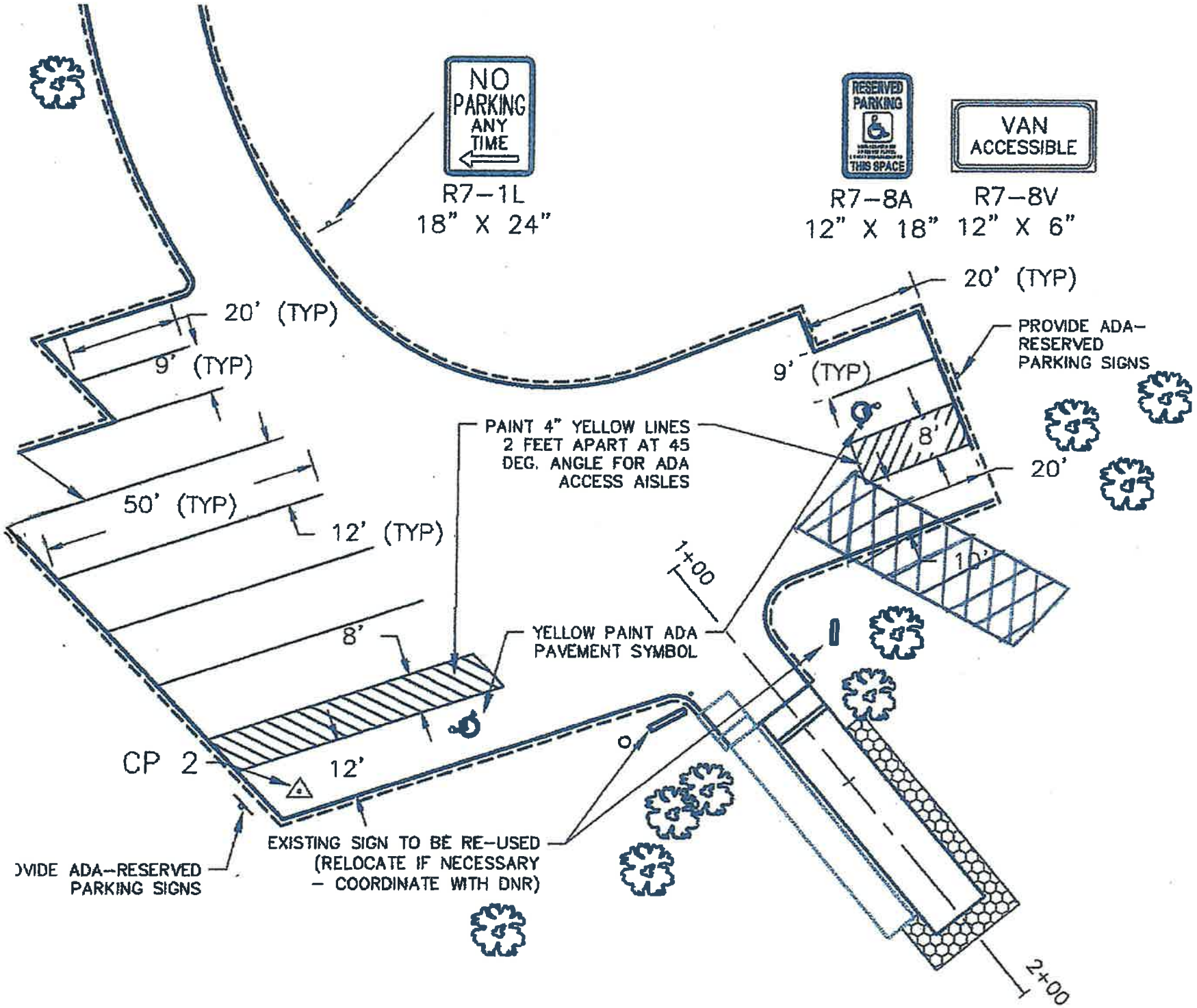
2nd Quarterly Meeting

Village Hall
100 Taft Street
Palmyra, WI

March 14, 2015 10:00 A.M.

Members: Carol Dixon, President; Pat Zimmerman, Secretary; Vicki Bradford, Treasurer; Blane Poulson, County Board Rep; David Turner, Village of Palmyra Rep

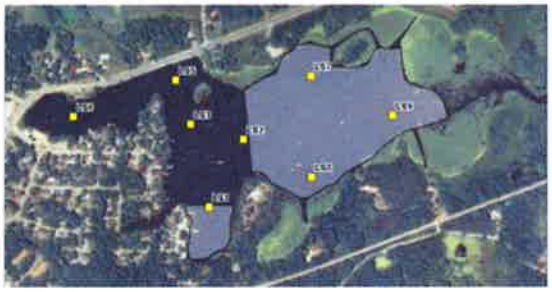
- Call to order (Carol)
- Reading of Minutes for January 17th, 2015 (Pat)
- Treasurer's Report (Vicki)
- Chemical Treatment Report (Patricia & Steve)
- Clean Boats, Clean Waters Report (Dorothy)
- Boat Launch Improvement Update (Al & Lance Stocks, DNR)
- Geese Depredation Proposal and Vote (Bill & Mike Jones, DNR)
- Dam Repair Grant Update (Josh - email)
- Village Board Presentation (Carol)
- Open Forum
- Next Meeting Date
- Adjournment


NO PARKING ANY TIME
R7-1L
18" X 24"
RESERVED PARKING
THIS SPACE
R7-8A
12" X 18"
VAN ACCESSIBLE
R7-8V
12" X 6"
20' (TYP)
9' (TYP)
50' (TYP)
12' (TYP)
8'
12'
CP 2
20' (TYP)
9' (TYP)
PROVIDE ADA-RESERVED PARKING SIGNS
PAINT 4" YELLOW LINES 2 FEET APART AT 45 DEG. ANGLE FOR ADA ACCESS AISLES
8'
20'
10'
1+00
YELLOW PAINT ADA PAVEMENT SYMBOL
2+00
EXISTING SIGN TO BE RE-USED (RELOCATE IF NECESSARY - COORDINATE WITH DNR)
PROVIDE ADA-RESERVED PARKING SIGNS

January 16, 2015

2010 Treatment for Eurasian Water Milfoil
- May 4, 2010, whole-lake treatment
- 25 acres (10 acres adjacent to riparian lots, 15 acres in middle of lake)
- Liquid 2, 4-D
- Target application rate 0.2 ppm in the target area and 0.333 ppm lake wide

2011 Treatment for Eurasian Water Milfoil
- May 16, 2011, whole lake treatment
- 39 acres (5 acres in SW bay, 34 acres in eastern part of lake)
- Liquid 2, 4-D
- Target application concentration 0.275 ppm



2012 Treatment for Eurasian Water Milfoil
- April 11, 2012, whole-lake treatment
- Liquid 2, 4-D
- EWM site 1 (chemical placed in eastern portion of lake): 27.3 acre; target application concentration of 1 mg/l
- EWM site 2 (chemical placed in southwest finger bay): 1.1 acres; target application concentration of 0.5 mg/l

2012 Treatment for Curly-Leaf Pondweed
- April 11, 2012, whole-lake treatment
- Endothall (Aquathol K)
- 61 acres (chemical placed in entire lake except for northwest finger)
- Target application concentration of 1 ppm

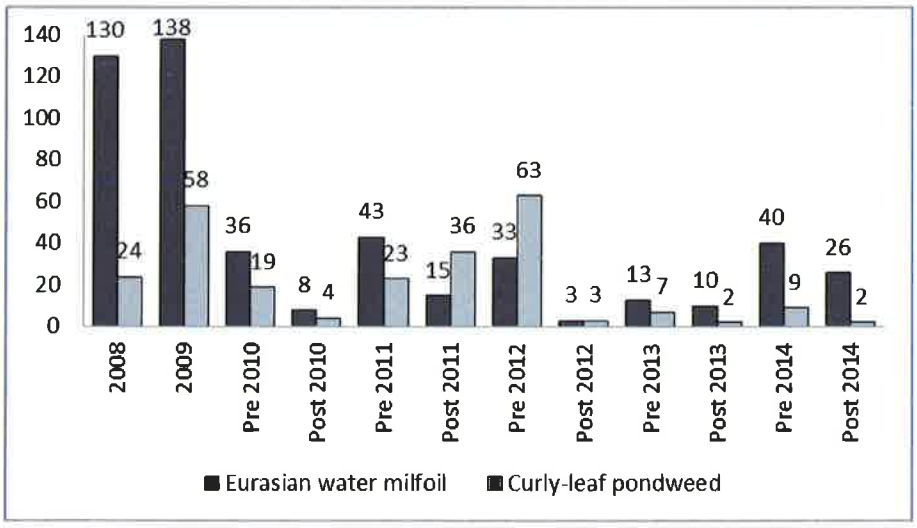
2013 Treatment for Curly-Leaf Pondweed
- May 13, 2013, whole-lake treatment
- Endothall (Aquathol K)
- 61 acres (chemical placed in entire lake except for northwest finger)
- Target application concentration of 1 ppm

January 16, 2015

2014 Treatment for Eurasian Water Milfoil
- May 19, 2014, whole lake treatment
- Liquid 2, 4-D
- 66 acres
- Target application concentration of 0.35 ppm a.e.

Survey Data for Eurasian Water Milfoil and Curly-Leaf Pondweed

Plant surveys have been implemented on Lower Spring Lake throughout the years both for development of an aquatic plant management plan and for determining progress on meeting the goals of the plan. The following graph shows the number of points where Eurasian water milfoil and curly-leaf pondweed have been documented. The 2008 and 2009 surveys were done prior to whole lake treatments. The remainder of the surveys were done both pre and post treatment for each year. A subset of the survey points were used for 2010 through 2013. Please note that the total points surveyed in 2010 were about half of what was surveyed in 2011 through 2013. The 2014 surveys included all of the points that were able to be accessed. The long-term management goal is to reduce the number of points where each species is found in the lake.

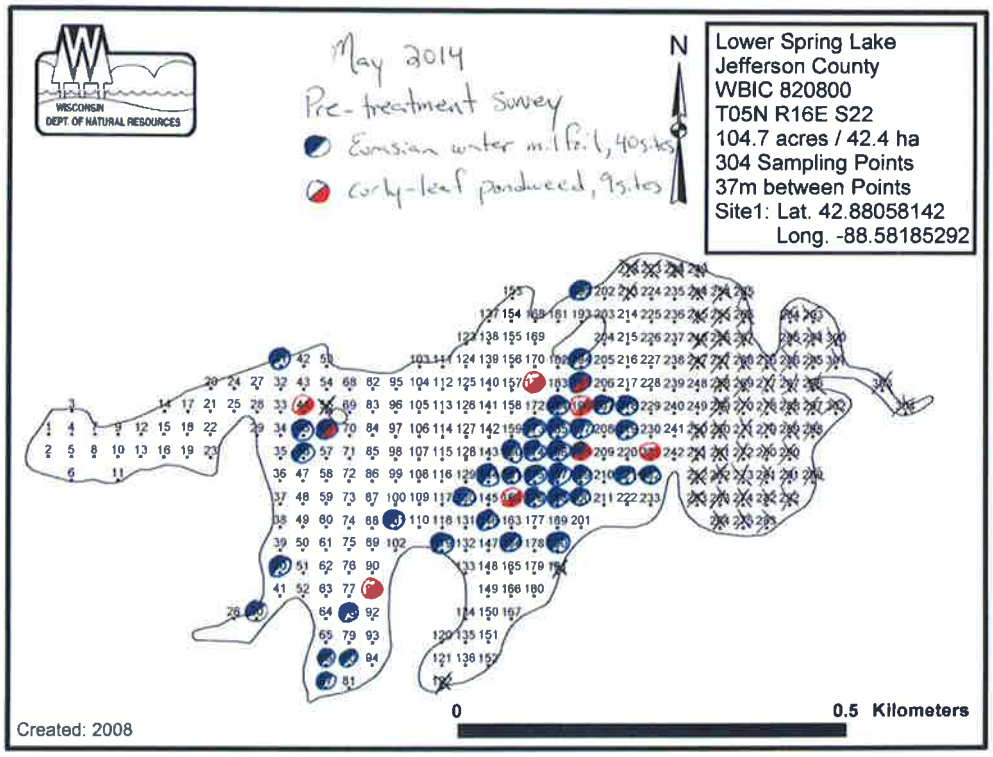


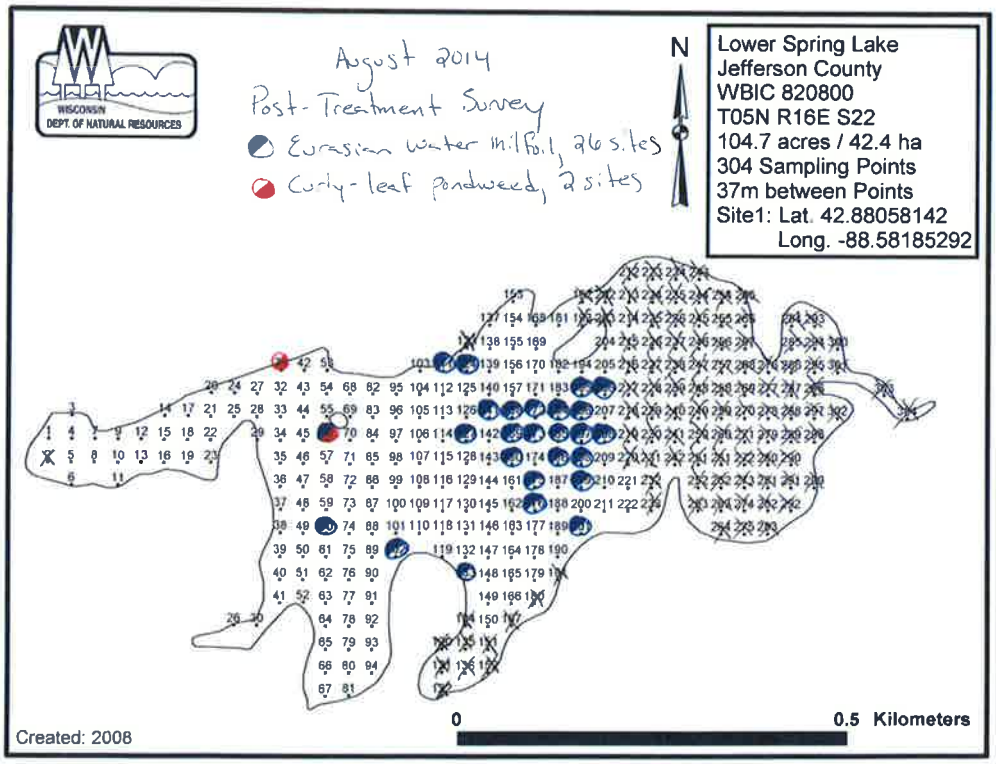
January 16, 2015

2008, whole lake PI on Lower Spring Lake June 18, 19, 2008 - 220 points sampled Frequency of Occurrence for EWM = 56.5 % (found at 121 points + 9 visual) Frequency of occurrence for CLP = 6.54 % (found at 14 sites + 10 visual)		
2009, whole lake PI on Lower Spring Lake June 30, July 7, 9, 13, 15, 2009 - 226 points sampled Frequency of Occurrence for EWM = 57.6 % (found at 125 points + 13 visual) Frequency of Occurrence for CLP = 17.5% (found at 37 points + 21 visual)		
	May 3, 2010 Pre Treatment - 61 points	July 1, 2010 Post Treatment - 60 points
EWM	Found at 36 points	Found at 8 points
CLP	Found at 19 points	Found at 4 points
	April 29, May 3, 2011 Pre Treatment - 113 points	July 11-12, 2011 Post Treatment - 113 points
EWM	Found at 43 points	Found at 15 points
CLP	Found at 23 points	Found at 36 points
	March 29, 2012 Pre Treatment - 112 points	June 7, 8, 13, 2012 Post Treatment - 107 points
EWM	Found at 33 points	Found at 3 points
CLP	Found at 63 points	Found at 3 points
2012, whole lake PI on Lower Spring Lake June 7, 8, 13, 2012 - 213 points sampled Frequency of Occurrence for EWM = 0.95 % (found at 2 points + 4 visual) Frequency of Occurrence for CLP = 0 % (found at 0 points + 3 visual)		
	May 2 & 6, 2013 Pre Treatment - 111 points	June, 2013 Post Treatment - 107 points
EWM	Found at 13 points	Found at 12 points
CLP	Found at 7 points	Found at 3 points
2013, whole lake PI on Lower Spring Lake June 13, 19, 20 - 219 points sampled Frequency of Occurrence for EWM = 10.71% (found at 21 points + 2 visual) Frequency of Occurrence for CLP = 1.02% (found at 2 points + 2 visual)		
2014, whole lake PI on Lower Spring Lake May 14, 2014 - 236 points sampled Frequency of Occurrence for EWM = 17.33% (found at 39 points + 1 visual) Frequency of Occurrence for CLP = 4.0% (found at 9 points + 0 visual)		
2014, whole lake PI on Lower Spring Lake August 14, 15, 19, 25, 27, 2014 - 195 points sampled Frequency of Occurrence for EWM = 8.43% (found at 15 points + 11 visual) Frequency of Occurrence for CLP = 0% (found at 0 points + 2 visual)		

Residence time = 0.3 years

January 16, 2015

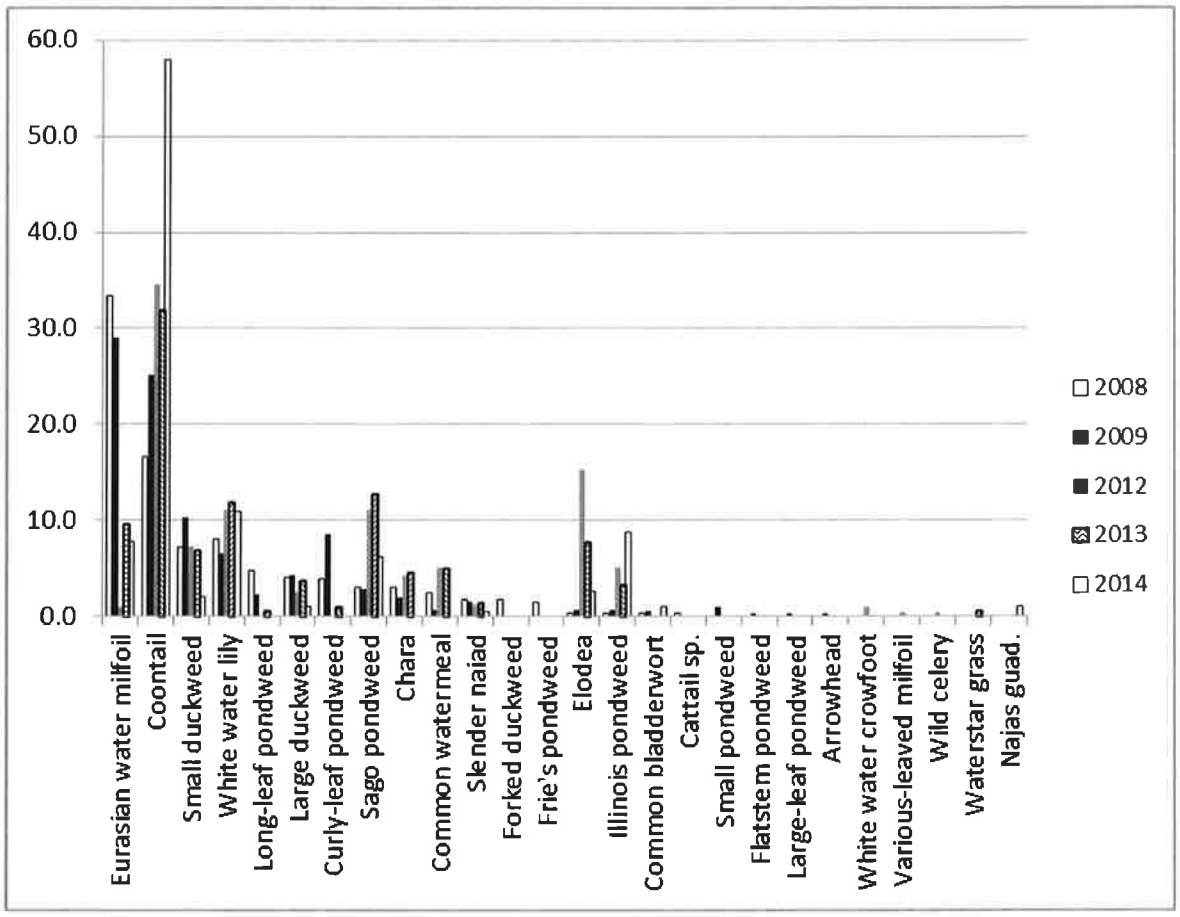




January 16, 2015

Relative Frequency of Occurrence

The relative frequency of occurrence gives an indication of how the plants occur throughout a lake in relation to each other. The data from 2008, 2009, 2012, 2013 and 2014 are presented below and comes from the whole lake plant surveys.



Frequency of Occurrence

The aquatic plant management goals are tied to frequency of occurrence. This value is a percentage and is the number of times that a plant was found divided by the total number of sites shallower than the maximum depth of plants.

Aquatic Management Plan for Lower Spring Lake, 2011:

> *"Current guidance on chemical treatment by the Department of Natural Resources is to have an annual goal of 50% reduction of the target species annually. In addition, if 50% reduction is not reached given proper implementation of the chemical treatment, then it is likely the case that the reduction of exotic species is not achievable in the lake.*
>
> *This plan recommends the following annual goal for management of exotic species:*

- *50% reduction of Eurasian water milfoil (measured with frequency of occurrence)*
- *50% reduction of curly-leaf pondweed (measured with frequency of occurrence)*

The long term objective of exotic species management in Lower Spring Lake is to achieve a maintenance level of exotic species in the lake of 10% coverage (measured with frequency of occurrence).

Another long term objective is to have a healthy native plant population which will benefit recreational uses, and the functioning of the lake ecology."

The frequency of occurrence is calculated after a whole lake plant survey is completed on the lake. The data on Lower Spring Lake is in the following table.

	2008 June	2009 June/July	2012 June	2013 June	2014 May	2014 Aug
Eurasian water milfoil	56.54	57.6	0.95	10.71	17.33	8.43
Curly-leaf pondweed	6.54	17.05	0	1.02	4.0	0

Clean Boats/Clean Waters

	2012	**2013**	**2014**
Boats inspected	12	36	25
People contacted	19	74	42
Hours spent by inspectors	106	97	46
% of boats used on a different waterbody during past 5 days	33%		26%
% Aware of Laws	100%	64%	NA