

**Update on Eurasian Water Milfoil (*Myriophyllum spicatum*)
Control Measures at the Lower Vermillion Lake Boat Launch
Barron County, WI - May 2009**



(Koshere, 2007)

Project Initiated by:
Tony Zodrow; Vermillion Lakes Association



(Berg, 2007)

Survey Conducted by and Report Prepared by:
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May 16, 2009

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INTRODUCTION:

During the summer of 2008, Dave and Harold Blumer discovered Eurasian water milfoil (*Myriophyllum spicatum*), an aquatic invasive species, at the Lower Vermillion Lake boat launch on 9th St. near the jct. with 21 ½ Avenue. The lake is approximately 2 ½ miles southeast of Cumberland (2 miles east on HWY 48 – ½ mile south on 9th street) (N45.51771 W91.97212 WGS84) (Figure 1). A follow-up boat survey located EWM at scattered locations out from the landing and on the north and south shores immediately adjacent to the landing. Based on this information, Tony Zodrow, on behalf of the newly forming Lower Vermillion Lake Association, authorized a manual removal dive effort and herbicide application of approximately 2.7 acres. As a follow up to the fall herbicide application, we conducted a plant survey at the landing to see if we could locate any surviving/additional EWM in the spring of 2009.

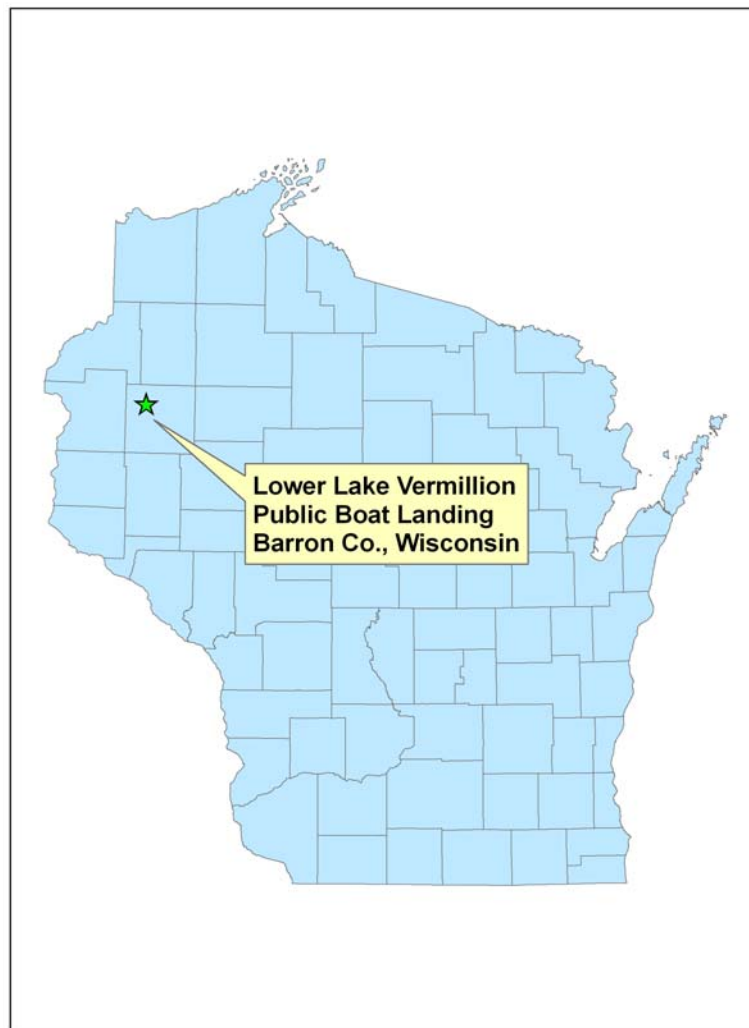


Figure 1: Lower Vermillion Lake, Barron Co., WI

METHODS:

On May 16, 2009, we conducted a plant survey in the bay out from the landing using the WDNR's methodology for conducting pre/post treatment point intercept surveys. We expanded the limited treatment area where EWM was initially found in 2008 (Figure 2) to include surrounding littoral areas for a total survey area of approximately 7 acres. Within this area, we used ArcMap to generate 28 survey points (4 pts/acre) (Figure 3). In addition, to these points, we randomly sampled within the blue triangle of heaviest infestation.

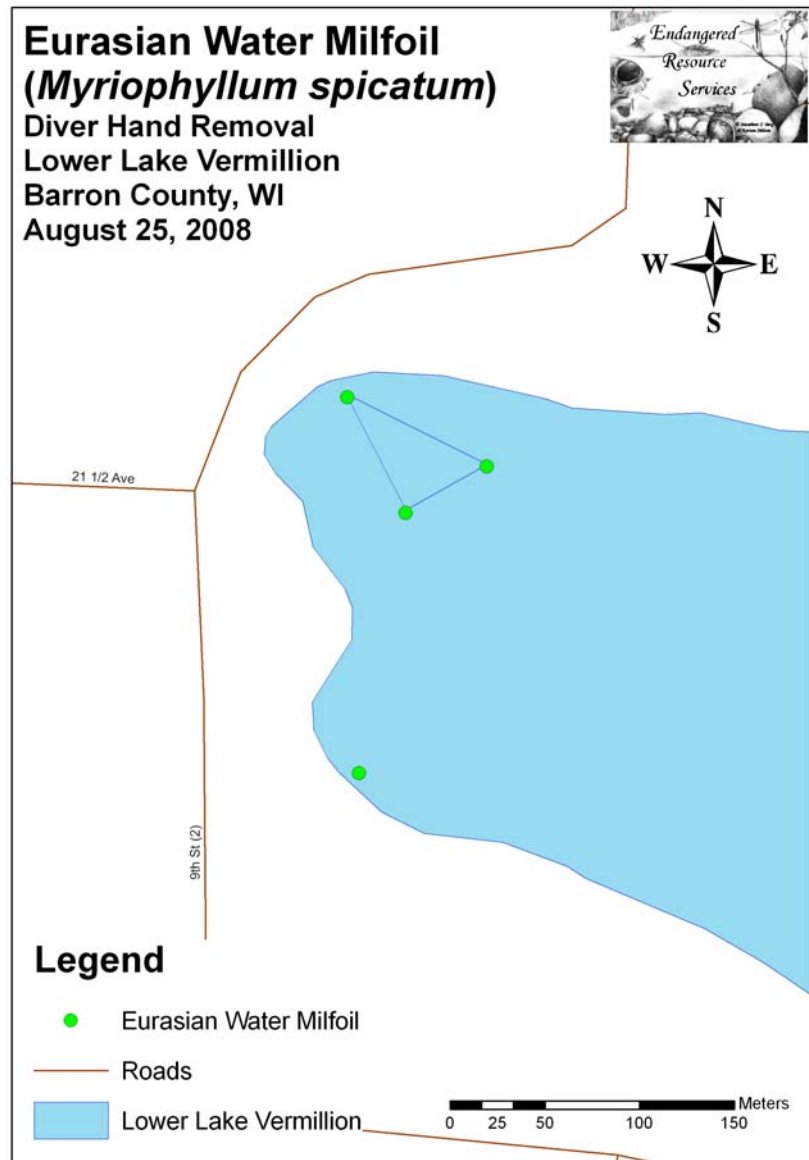


Figure 2: Diver Hand Removal and Approx. Herbicide Area 2008

RESULTS:

Despite expanding the survey area from where EWM was initially found in 2008 (Figure 3), we did not locate any EWM at any of the sample points, during random raking in the triangle or while visually scanning between points.

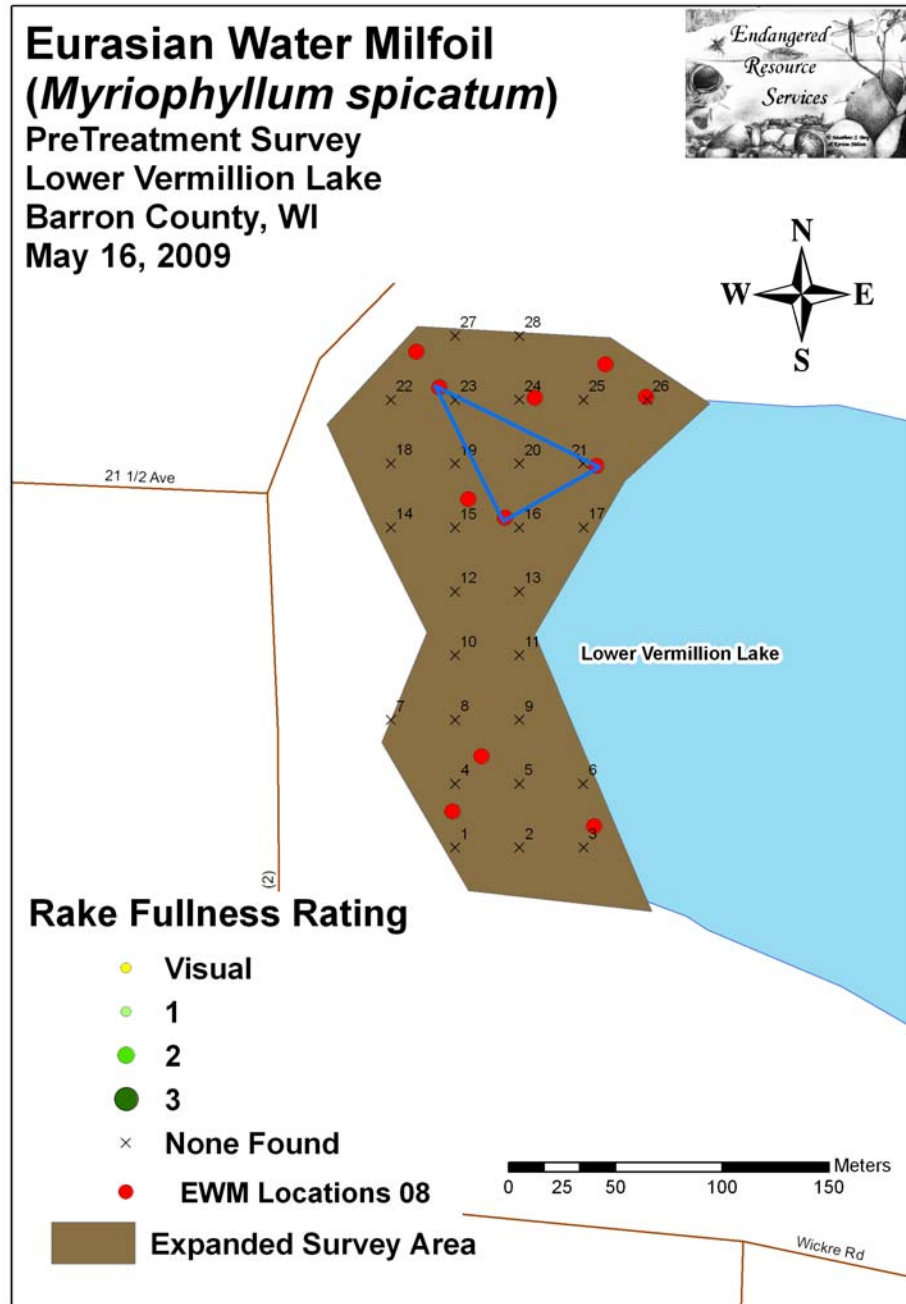


Figure 3: Expanded Survey Area Spring 2009

We noted that, compared to other lakes we have been on this spring, macrophyte growth was considerably behind on Lower Vermillion (ex. CLP on Clam Lakes 3ft+ - Lower Vermillion 6in+). The six stems of Northern water milfoil (*Myriophyllum sibiricum*) that we found were all <6in. and appeared to have just begun active growth. Dense stands of filamentous algae and pioneering beds of CLP made it very difficult to see other plants outside the treatment area. Within the treatment area, we found little besides filamentous algae.

DISCUSSION AND FUTURE MANAGEMENT CONSIDERATIONS:

This survey was undertaken as a possible Pre-herbicide treatment survey, but, due to lack of finding any EWM plants, this does not seem to be a likely management option at this time. That said, our lack of finding EWM should not be taken to mean the plants have been eradicated from the lake. For the time being at least, it appears that the infestation has been knocked back near the boat landing. Whether the plants managed to escape this area last summer/fall is not known, but the upcoming CLP survey and full point intercept surveys in the summer of 2009 should hopefully locate any other significant beds.

At this point, there are at least three possibilities for the lake association to consider.

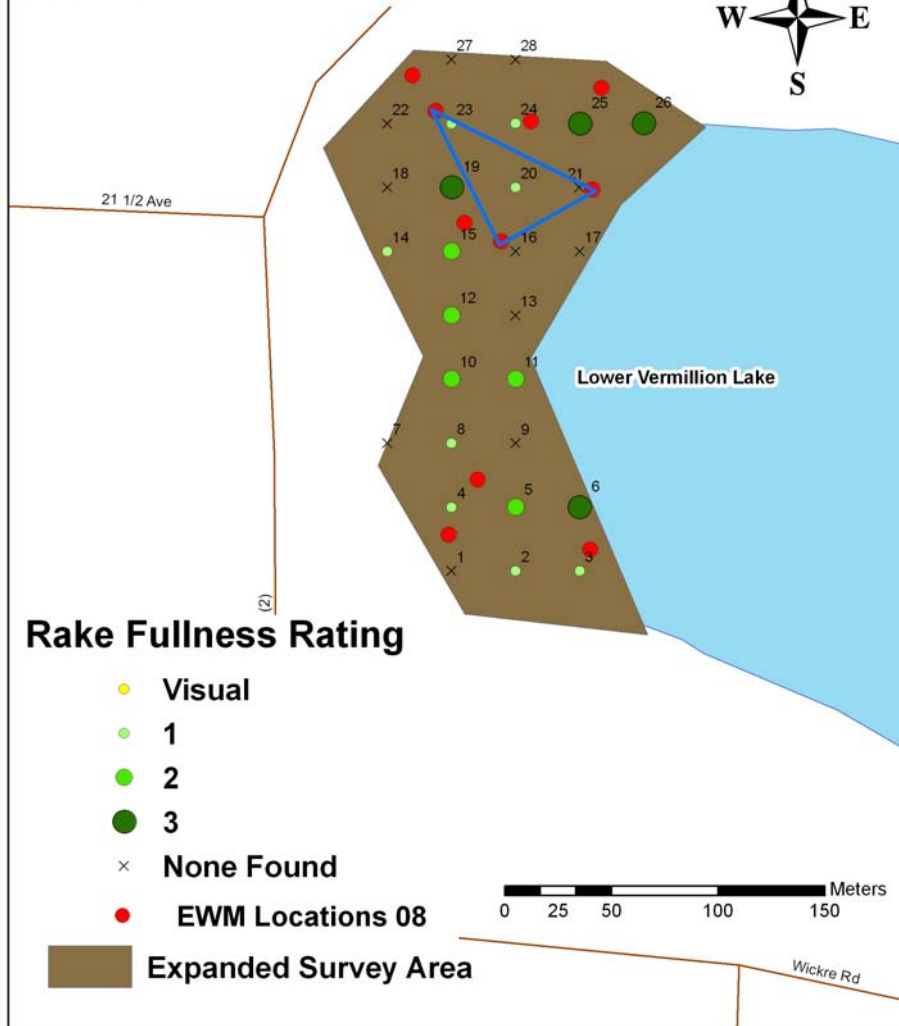
1. Do nothing further at the landing and wait to see what information the other surveys provide.
2. Wait a couple of weeks for the plants to further develop and do a swimover dive inspection to look for new EWM plants at the landing.
3. Continue to boat/rake monitor at the landing and encourage lake residents to be on the look out for plants elsewhere. If found and if possible, plants should be removed, the location recorded (with GPS if possible), and a physical sample and jpg sent to the lake coordinator and WDNR for confirmation.

Each of these three possibilities could be used alone or in combination. Further discussion and input with/from Frank Kosher, WDNR or Pamela Toshner, WDNR will help the lake association determine what their best options are going forward.

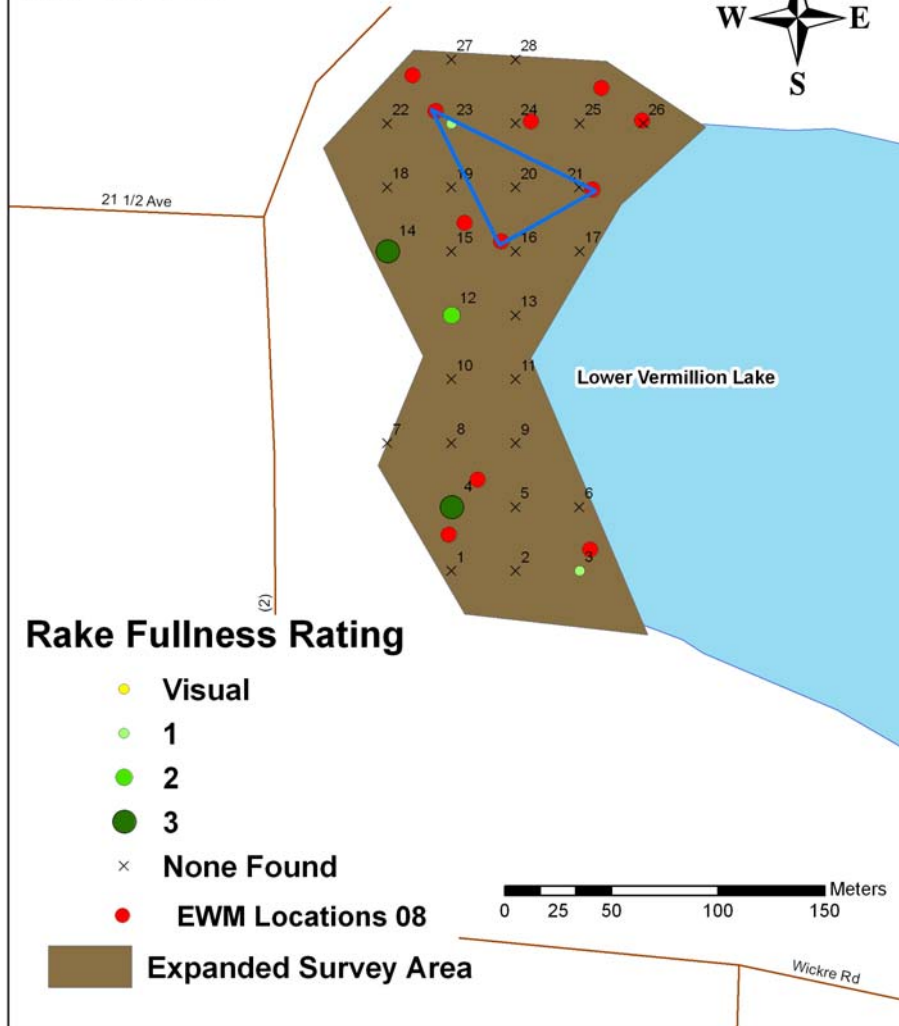
If you have further questions or if I can be of further service as you go through the process, please feel free to contact me.

DISTRIBUTION MAPS OF ADDITIONAL SPECIES FOUND

Coontail
(*Ceratophyllum demersum*)
 PreTreatment Survey
 Lower Vermillion Lake
 Barron County, WI
 May 16, 2009

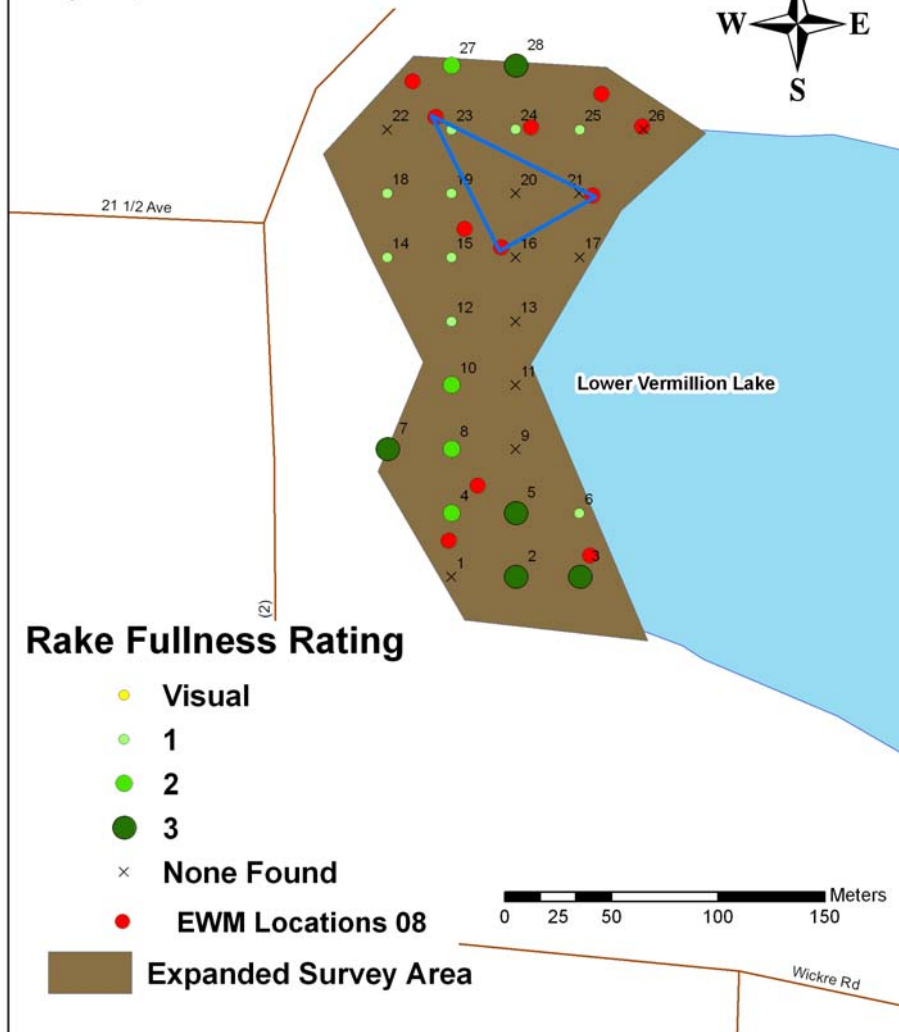


**Common waterweed
(*Elodea canadensis*)**
PreTreatment Survey
Lower Vermillion Lake
Barron County, WI
May 16, 2009



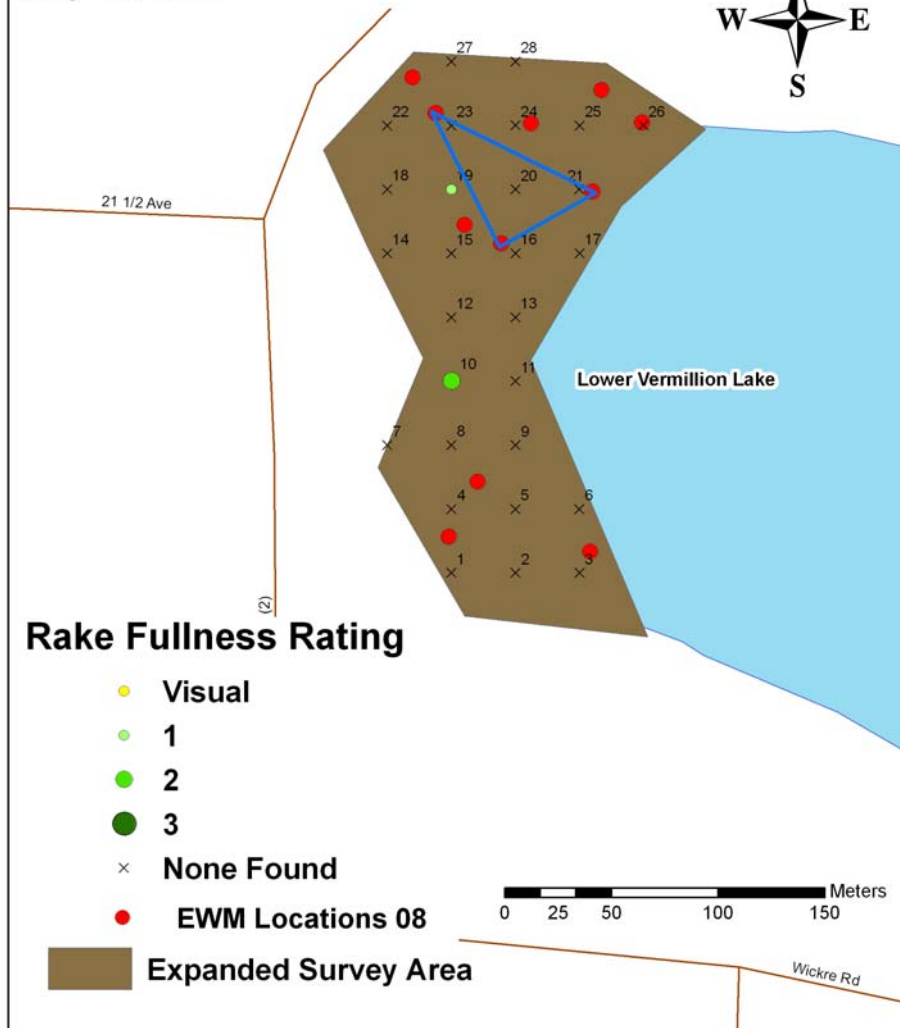
Filamentous algae

PreTreatment Survey
Lower Vermillion Lake
Barron County, WI
May 16, 2009

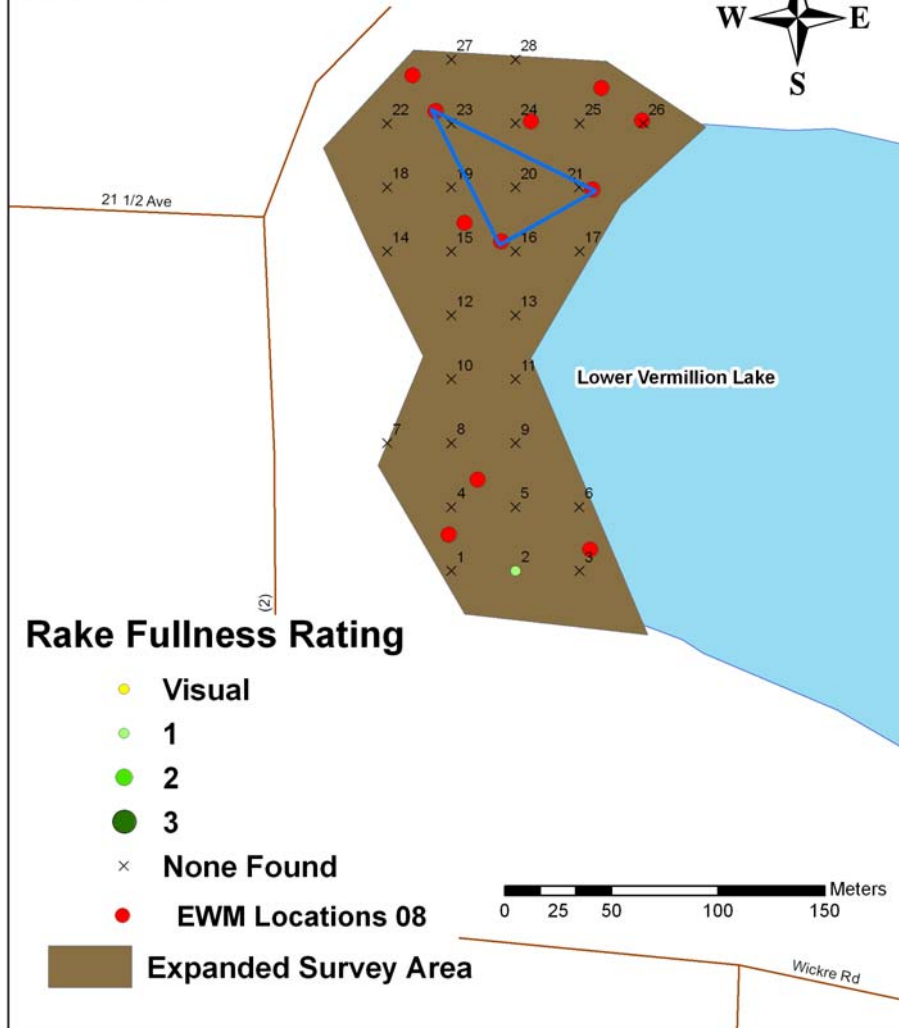


Northern water milfoil (*Myriophyllum sibiricum*)

PreTreatment Survey
Lower Vermillion Lake
Barron County, WI
May 16, 2009

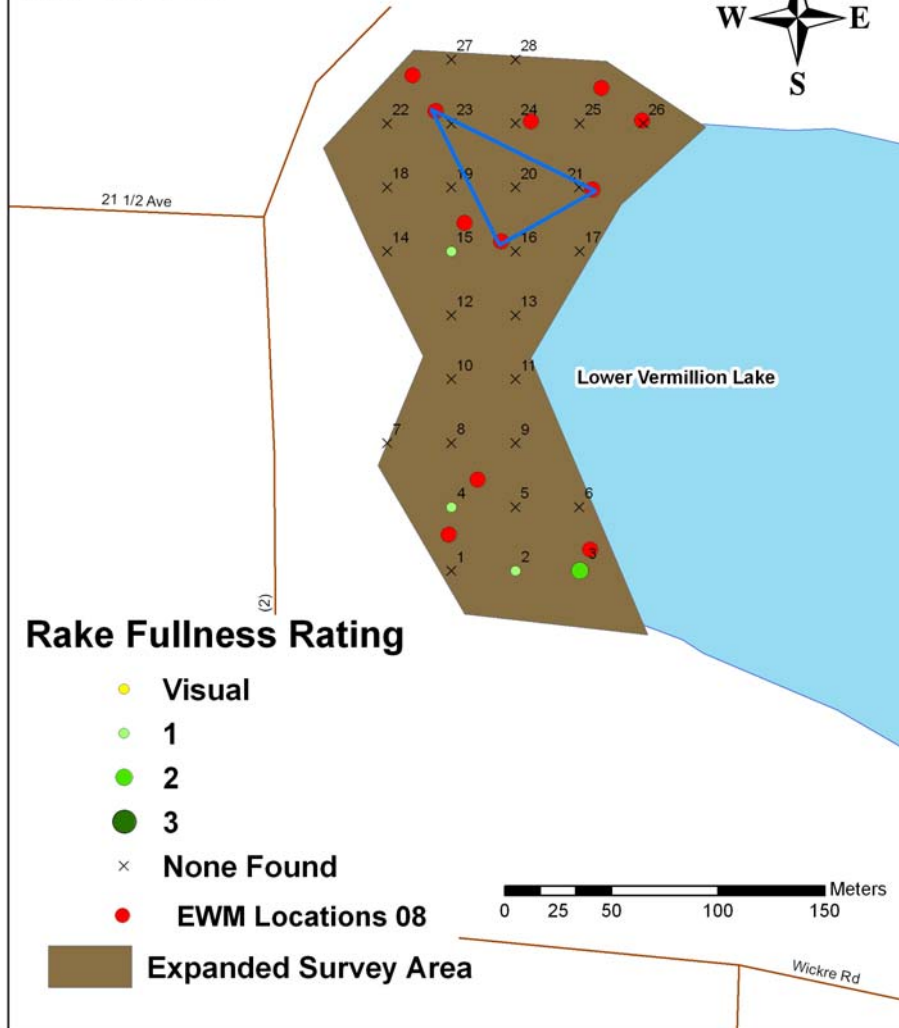


**White water lily
(*Nymphaea odorata*)**
 PreTreatment Survey
 Lower Vermillion Lake
 Barron County, WI
 May 16, 2009

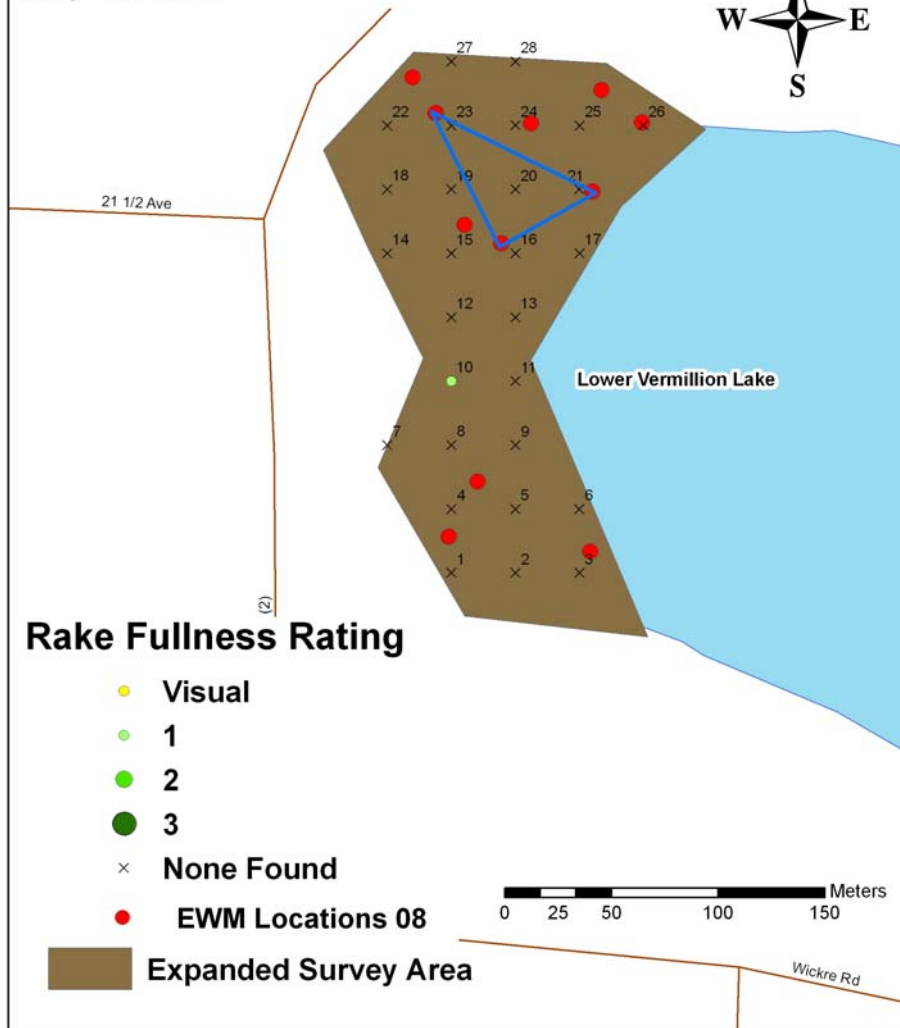


Curly-leaf pondweed (*Potamogeton crispus*)

PreTreatment Survey
Lower Vermillion Lake
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May 16, 2009

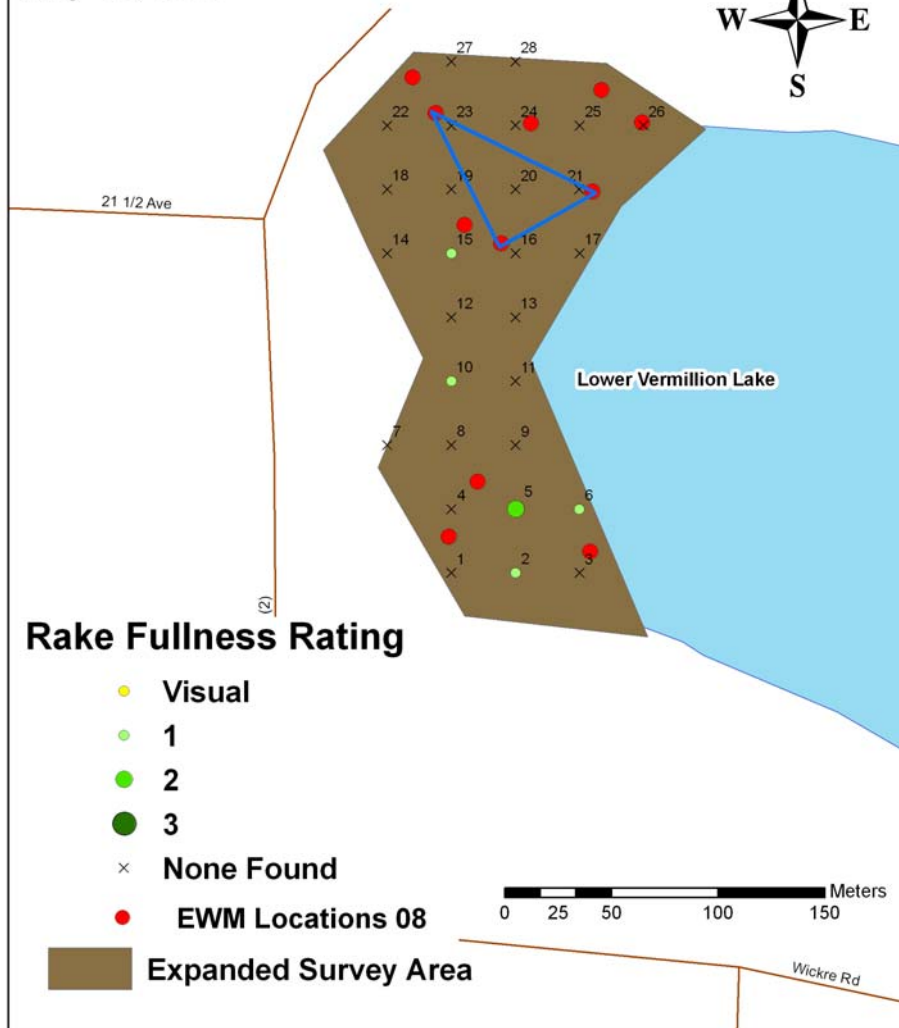


**Small pondweed
(*Potamogeton pusillus*)**
PreTreatment Survey
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Flat-stem pondweed (*Potamogeton zosteriformis*)

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Stiff water crowfoot (*Ranunculus aquatilis*)

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