

**Eurasian water milfoil (*Myriophyllum spicatum*)
Shoreline Survey and Pre/Posttreatment
Dive Assessment of Previous Beds
Gilmore Lake (WBIC: 2695800)
Washburn County, WI**



Eurasian water milfoil (Berg, 2006)

Project Sponsored by:
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Surveys Conducted by and Report Prepared by:
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INTRODUCTION:

In August 2009, the Wisconsin Department of Natural Resources confirmed the presence of Eurasian water milfoil (*Myriophyllum sibiricum*) in Gilmore Lake. Since this time, the Gilmore Lake Association (GLA) has used herbicide applications and manual removal to keep the infestation in check. As a prerequisite to use herbicides, we completed a meandering shoreline survey to delineate areas and determine the acreage of potential treatment areas. We also conducted a SCUBA assessment of the original EWM bed on the west side of the lake's southern basin to assess the need for continued treatment in this area. This report is the summary analysis of the data collected during these two surveys.

METHODS:

We search the shoreline of Little Gilmore Lake and the western shoreline of Gilmore Lake for EWM beds in areas it was previously known to occur. Upon locating a bed, we motored around the perimeter of the area and took GPS coordinates at regular intervals. These data were then mapped using ArcMap 9.3.1., and the acreage of each bed was calculated to the nearest hundredth of an acre.

RESULTS AND DISCUSSION:

Pretreatment:

On July 15th, we located two small beds of EWM totaling 0.21 acres (Bed 1 = 0.12 and Bed 2 = 0.09). Both were canopied with not more than 50 plants each. EWM plants were mixed throughout areas that were dominated by Large-leaf pondweed (*Potamogeton amplifolius*), White-stem pondweed (*Potamogeton praelongus*), and Variable pondweed (*Potamogeton gramineus*) making them more of a high density area than a true bed. Although Bed 2 on the south shoreline was known prior to our survey, Bed 1 was the first time EWM plants had been found on the midlake bar.

EWM in Little Gilmore was scattered along the channel in the southern outlet, on the eastern shoreline, and along the north shore. Of the 14 plants we located, most were represented by multiple stems and growing among Watershield (*Brasenia schreberi*) making it difficult to manually remove them and get the entire root crown.

During our dive survey of the pioneer bed on the west side of Gilmore's south basin, we did not find a single EWM plant. Due to poor water clarity, the littoral zone had contracted dramatically to approximately 10ft (down from the usual 18-20ft we've seen from 2009-2011). We also noted that expansive beds of Northern water milfoil (*Myriophyllum sibiricum*) that formed a solid ribbon along the shoreline in the past were totally absent with only a handful of NWM plants seen in the area.

Posttreatment:

On September 2nd, we returned to the lake and found four plants in Bed 1 that had survived. Each showed evidence of chemical burn, but all showed evidence of bright green new growth. In Bed 2, we found no evidence of any EWM plants. Native pondweeds in both beds showed no evidence of chemical burn/damage.

In Little Gilmore, problems with the applicator accessing the lake meant that the scheduled chemical treatment did not happen. Although an attempt was made to use a hand spreader to limit EWM, we found 28 individual plants posttreatment – a 2 to 1 increase over the pretreatment survey (Figure 1).

During the follow up SCUBA survey of the original pioneer bed, we again failed to locate any evidence of EWM. We also noted the littoral zone was little changed from July, and we again saw only a handful of NWM plants.

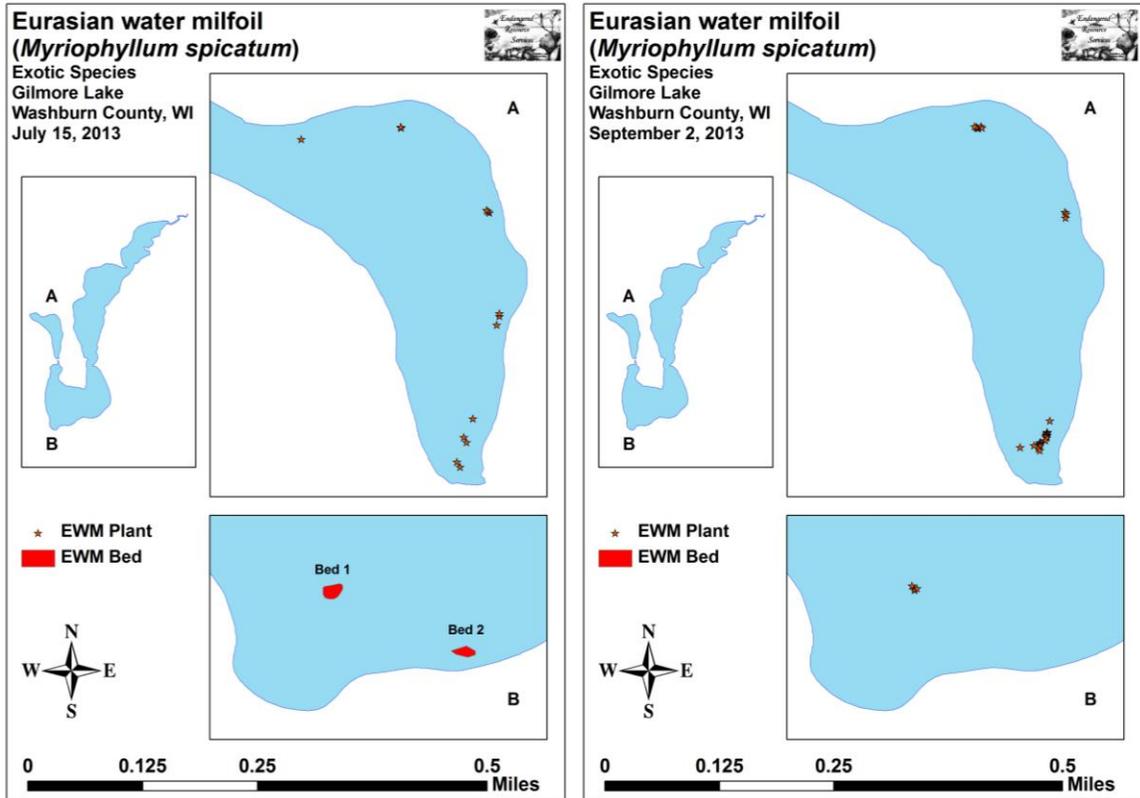


Figure 1: EWM During Pre and Posttreatment Surveys

CONSIDERATIONS FOR FUTURE MANAGEMENT:

Once the Watershield dies back in the fall and before it begins growing in the spring, manual removal in Little Gilmore may be feasible. If this is not possible, an early-season herbicide treatment, if possible, seem warranted. Elsewhere, continued monitoring of EWM in known locations and regular shoreline surveys throughout the lake appear to be keeping the infestation well in check.