

**Summary of Monitoring at Boat Landings and Water Inlets for
Eurasian Water Milfoil (*Myriophyllum spicatum*) on
Wood (Big Wood) Lake (WBIC: 2649800)
Burnett County, WI**



Project Initiated by:
The Big Wood Lake Association



(EWM Scan - Berg, 2007)

Landing Monitoring Conducted by and Report Prepared by:
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June-October, 2014

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INTRODUCTION:

During the summers of 2006 and 2013, extensive point-intercept plant surveys found no evidence of Eurasian water milfoil (*Myriophyllum spicatum*) in Wood Lake (Figure 1). As part of completing an Aquatic Plant Management Plan (APMP), the Wood Lake Association and Harmony Environmental decided that monthly transect surveys at the lake's boat landings and water inlets would be a prudent measure considering the increasing number of neighboring lakes that EWM has invaded (Round Lake, Long Trade, Big Trade, and Little Trade Lakes). These surveys will be conducted annually until the next full point-intercept survey. At that time, this, and the rest of the items in the lake's APMP, will be reexamined.

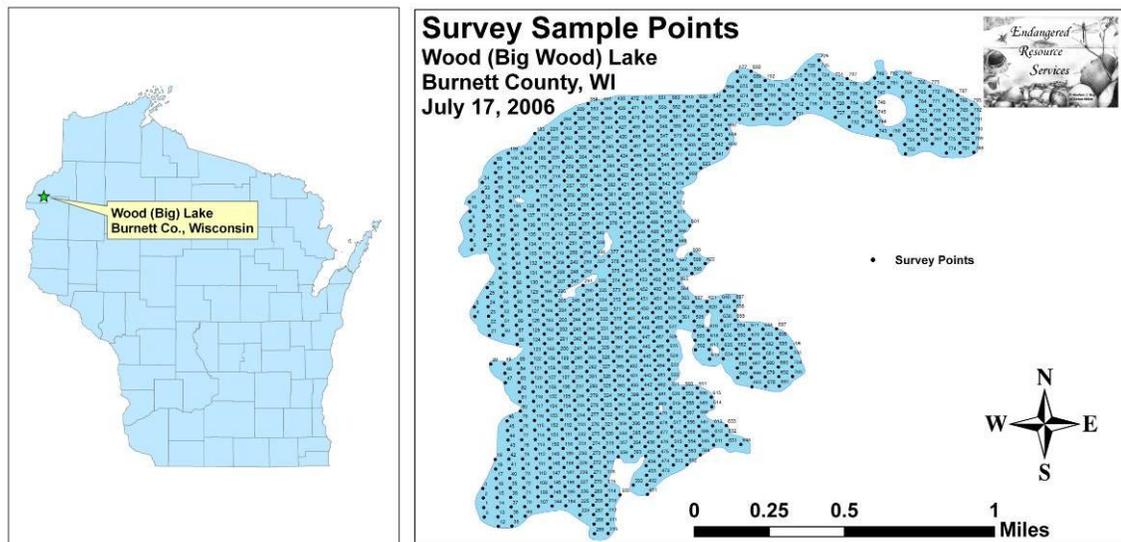


Figure 1: Wood Lake, Burnett Co., WI and Point Intercept Points 2006

METHODS:

During the aquatic macrophyte growing season (May-October), we conducted five landing inspections at the Thoreson Park and east boat landings, and at the Wood River and Spirit Creek Inlets (Figure 2). Using three 100-150m parallel transects approximately 15, 30 and 45m from shore; we motored at idle speed looking for any evidence of EWM's characteristic red growth top. Once we had finished the three transects, we returned to our starting point using a stitch pattern that crossed back and forth over all three lines to look for any plants we may have missed between the transects. During the August and October surveys, we also conducted a boat survey along the shoreline of the entire lake to look for EWM in the zone of growth it would most likely be found in (Figure 3). We especially focused on the north and west shores as these are places that floating fragments would likely get blown to by prevailing winds before settling to the lake bottom.

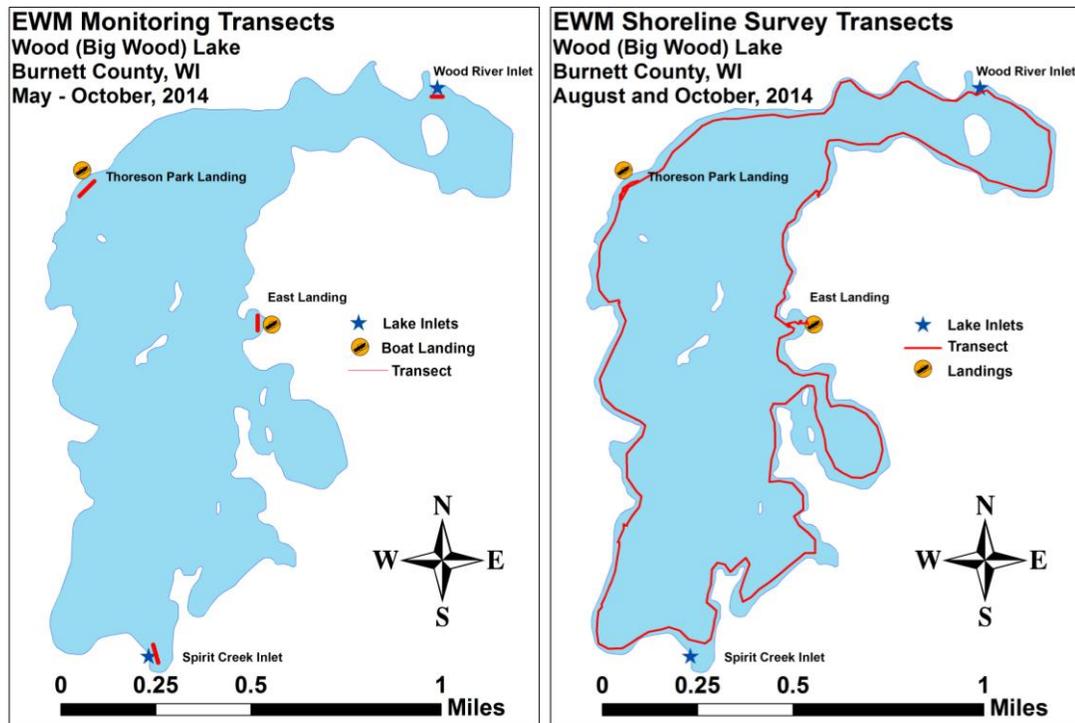


Figure 2: 2014 Boat Landing, Inlet and Shoreline AIS Survey

RESULTS AND DISCUSSION:

Due to a miscommunication about if/when surveys would be conducted in 2014, we initially did landing transect surveys on May 17th and June 7th, missed July's survey, and then returned to the lake on August 22nd, September 16th, and October 16th. We also did whole shoreline surveys on August 22nd and October 16th. We did NOT find EWM anywhere in Big Wood Lake. However, the lake continues to have moderate amounts of the very similar looking native Northern water milfoil (*Myriophyllum sibiricum*). NWM is widely distributed throughout Big Wood in all habitats, but does best over sandy and organic muck. Despite its superficial resemblance to EWM, Northern water milfoil can be told apart by its leaflets numbering <24 whereas EWM normally has >26 (Figure 3). EWM also tends to have a bright red growth tip on the top of the plant whereas NWM has a bright lime green growth tip. In the fall, NWM also forms winter buds on the tips of shoots where as EWM has none. These buds were readily visible during the October survey.

Purple loosestrife (*Lythrum salicaria*), another exotic invasive plant, continues to expand in wetlands adjacent to the lake and around the lakeshore. We found numerous plants among the Cattails (*Typha* spp.) and Northern wild rice (*Zizania palustris*) near the Spirit Creek Inlet. We also found scattered plants along shorelines adjacent to the inlet on the southern tip of the lake. Unfortunately, these plants were in areas that were inaccessible by boat or foot, and they would have been too numerous to easily hand remove anyway. A small patch of 10's of plants growing in a monotypic stand on the south end of the north wooded island midlake was also identified. In this instance, we noted that imported Galerucella beetles, an effective biocontrol being utilized to manage Purple loosestrife in the county, had already discovered the plants and were busy eating/reproducing (Figure 4).



Eurasian water milfoil



Northern water milfoil

Figure 3: EWM and Northern Water Milfoil Identification (Berg 2007)



Figure 4: Purple Loosestrife Plants and Galerucella Beetle Herbivory

CONSIDERATIONS FOR FUTURE MANAGEMENT:

With EWM now growing in nearby Round Lake and Long Trade, Big Trade, and Little Trade Lakes, we continue to recommend that landing inspections occur on a regular basis into the foreseeable future. Early detection of EWM provides the best chance to economically contain the plant once an infestation has occurred. We also encourage any lake resident or boater that discovers a plant they even suspect may be EWM to immediately contact Matthew Berg, ERS, LLC Research Biologist at 715-338-7502 and/or Pamela Toshner, Regional Lakes Management Coordinator in the Spooner DNR office at 715-635-4073 for identification confirmation. If possible, a specimen, a jpg, and accompanying GPS coordinates of the location should be included.

Although Galerucella beetles are already present, as previously discussed with Brad Morris (Burnett County Aquatic Invasive Species Coordinator) and Gene Soderbeck (Wood Lake Association President), raising and releasing more of them is likely the best way to keep the Purple loosestrife population around the lake from getting out of control. Plans to raise additional beetles at Grantsburg High School are already in the works, and it is expected that several 1,000 additional beetles will be released near the Spirit Creek Inlet in spring/early summer 2015.