

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



October 2017 Shoreline Survey Transect Path



Purple Loosestrife in Bloom

Project Initiated by:
The Big Wood Lake Association



EWM Scan (Berg 2007)



Perfect Calm Near Spirit Creek Inlet 10/5/17

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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.

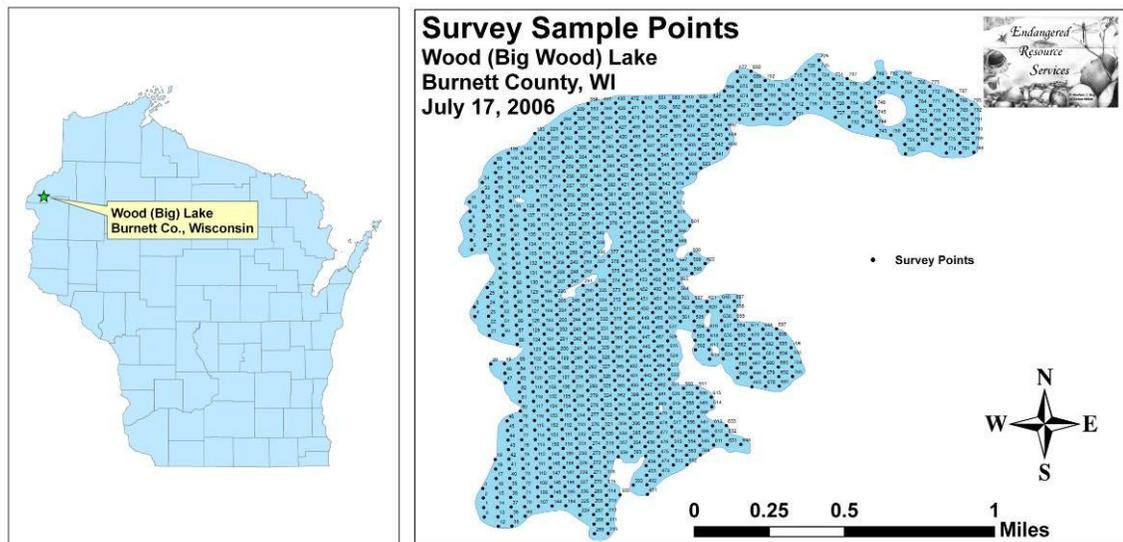


Figure 1: Wood Lake, Burnett Co., WI and Point Intercept Points 2006

METHODS:

During the 2017 aquatic macrophyte growing season (June-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 June 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 2). 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.

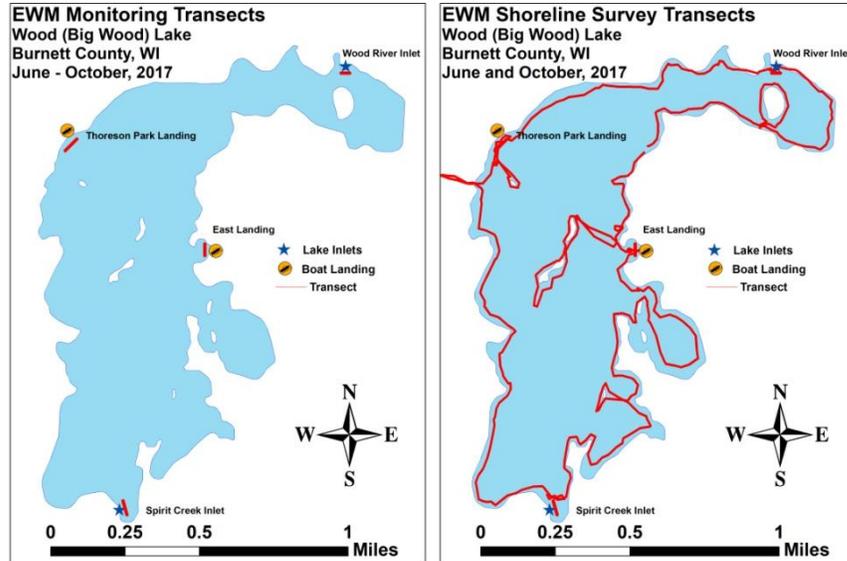


Figure 2: Boat Landing, Inlet and Shoreline AIS Survey Transects

RESULTS AND DISCUSSION:

We completed landing transect surveys on June 4th, July 2nd, August 4th, September 5th, and October 5th. We also did whole shoreline surveys on June 4th and October 5th. **We did NOT find EWM anywhere in Big Wood Lake.** However, in 2017 the lake supported a very high population of the similar looking native species 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 whereas EWM has none (Figure 4).



Eurasian water-milfoil

Northern water-milfoil

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



Figure 4: Overwintering Turions on Dying Northern Water-milfoil

Purple loosestrife (*Lythrum salicaria*), another exotic invasive plant, continues to be scattered in wetlands adjacent to and along the immediate shoreline of the lake. Although it prefers mucky soils and is most common among the Cattails (*Typha* spp.) and Northern wild rice (*Zizania palustris*) near the Spirit Creek Inlet, we also encountered scattered plants throughout the midlake shoreline. The 10's of PL plants growing in a monotypic stand on the south end of the north wooded island midlake were again present. Although, the *Galerucella* beetles raised by Grantsburg High School students in 2015 have survived two winters and were visible on plants throughout the summers of 2016 and 2017, their surviving numbers appeared to be quite low in 2017. Consequently, unlike in 2016 (Figure 5), they did **NOT** do an effective job of eating PL plants down to a level that would prevent them from flowering.



**Figure 5: Purple Loosestrife on South End of North Midlake Island
Showing Galerucella Beetle Herbivory 10/6/16**

CONSIDERATIONS FOR FUTURE MANAGEMENT:

With Eurasian water-milfoil growing in nearby Round, 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 Alex Smith/Pamela Toshner, Regional Lakes Management Coordinators 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.

In August, we discussed the Purple Loosestrife situation with Gene Soderbeck, WLA president as, due to time constraints, we were unable to remove the majority of flowering plants as we had in the past. It was decided at the WLA's fall board meeting that the association will contract with Grantsburg High School students in the summer of 2018 to manually remove as many PL plants as possible from the lake. Future management needs beyond 2018 will then be discussed at the fall 2018 board meeting.