# Summary of Dive Monitoring at Boat Landings for Eurasian Water Milfoil (*Myriophyllum spicatum*) on Pipe Lake (WBIC: 2490500) Polk County, Wisconsin - Summer 2008

(Koshere, 2007)

Project Initiated by:
Dick Hollar; Pipe Lakes Protection and Rehabilitation District

(Koshere, 2007)

(EWM Scan - Berg, 2007)

Landing Monitoring Conducted by and Report Prepared by:
Endangered Resource Services, LLC
Matthew S. Berg, Research Biologist
St. Croix Falls, Wisconsin
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## INTRODUCTION:

During the summer of 2007, an extensive point intercept plant survey found there was no Eurasian water milfoil (*Myriophyllum spicatum*) in the Pipe Lakes (Figure 1). As part of completing an Aquatic Plant Management Plan (APMP), the Pipe Lakes Protection and Rehabilitation District, Cedar Corp. and ERS, LLC decided that monthly transect surveys at the lakes' boat landings would be a prudent measure considering the increasing number of neighboring lakes that EWM has invaded (Horseshoe, Echo, Beaver Dam, Lower Vermillion, etc.). 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 lakes' APMP will be reexamined.

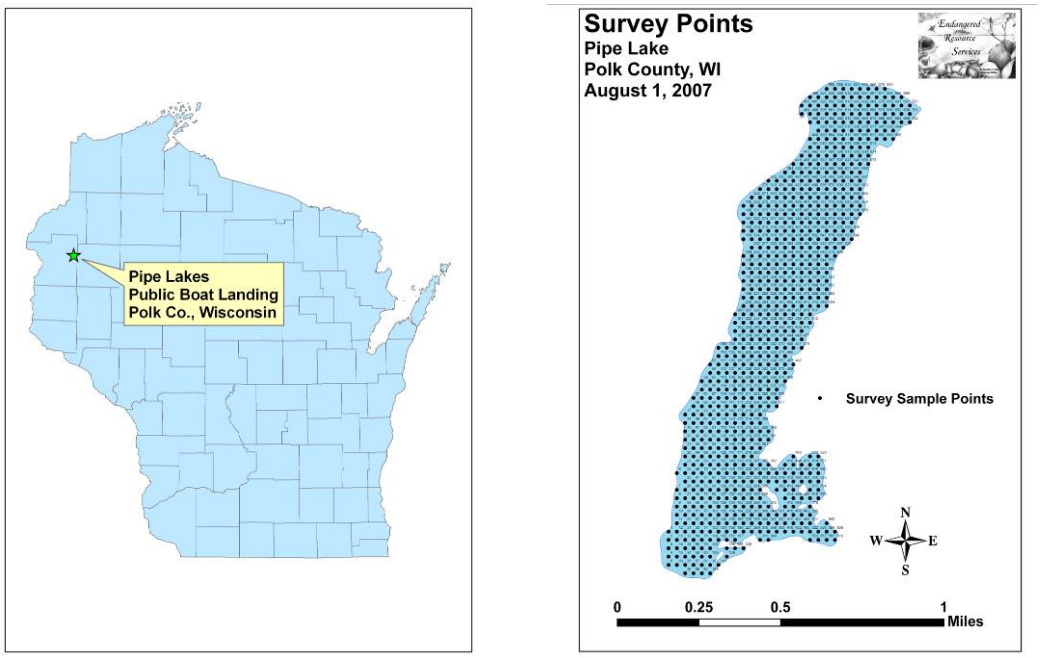


**Figure 1: Pipe Lakes, Polk Co., WI and Point Intercept Points 2007**

## METHODS:

During the five months from the June-October 2008, we conducted landing inspections once a month at the north boat landing and the "unofficial" south landing on Pipe Lake (Figure 2). If conditions allowed (not raining and/or no people present swimming in area), we initially conducted a boat survey of the area. 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.

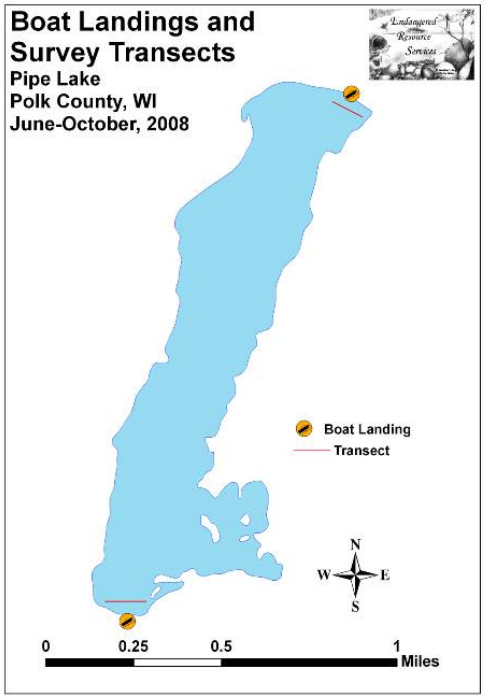


**Figure 2: Boat Landings and EWM Survey Transects 2008**

Following the boat inspection, we surveyed using SCUBA gear, compass and an underwater vehicle along those same transects with the return to start again using a stitch pattern to maximize coverage of the area. Because Pipe Lake is essentially an elongated bowl and it was easy to do, on the first and final surveys of the year, we 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.

## RESULTS AND DISCUSSION:

During the summer of 2008, we conducted transect surveys on June 5th, July 5th, August 3rd, September 1st and October 5th, and shoreline surveys on June 5th and October 5th. We did not find EWM or any other aquatic invasive species in or adjacent to Pipe Lake. Water clarity was consistently 10+ feet making for very good visibility for both boat and SCUBA surveys. Water levels at Pipe had returned to normal following the drought conditions of 2007, and aquatic plants had recolonized many areas that were previously out of water. We noticed this apparently led some property owners to aggressively remove both submergent and emergent native vegetation from their section of the lake and shoreline. As mentioned in last year's point intercept report, we strongly recommend owners refrain from doing this, especially near the landing. This bare substrate creates an ideal opportunity for an exotic species to become established and subsequently spread throughout the lakes.

The only species we found in Pipe Lake that looks similar to EWM is Farwell's water milfoil. Its range is restricted to the sheltered bays in the southeast corner of Pipe Lake where it forms a small number of underwater beds in shallow water over thick organic muck. It can be told from EWM by its normal number of leaflets numbering <14 whereas EWM normally has >26 leaflets (Figure 3). EWM also has an emergent flower stalk where Farwell's flowers are scattered along the stem and look like tiny nuts.

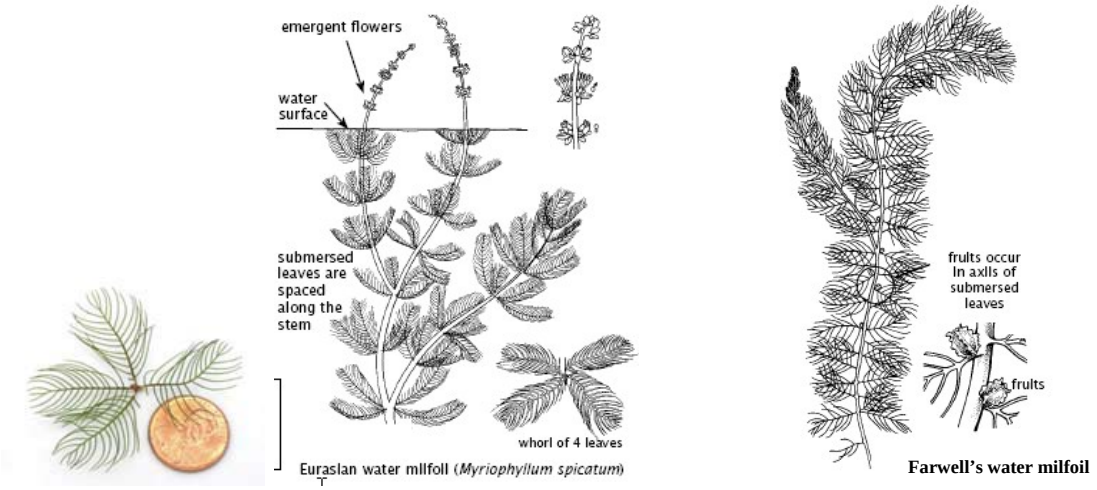


**Figure 3: EWM and Farwell's Water Milfoil Identification**
**(Hill et al. in Maine's Field Guide to Aquatic Invasive Species and Crow and Hellquist 2006)**

## CONSIDERATIONS FOR FUTURE MANAGEMENT:

With the discovery of EWM growing around the landing at another local lake in the summer of 2008 (Lower Lake Vermillion), we continue to recommend that landing inspections continue to occur into the foreseeable future. Early detection of EWM provides the best chance to contain and possibly eliminate the plant from a lake 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, and a GPS coordinate of the location of the specimen should be included.