

**Summary of Boat and Dive Monitoring at Boat Landings for
Eurasian Water Milfoil (*Myriophyllum spicatum*) on
Pipe Lake (WBIC: 2490500) and North Pipe Lake (WBIC: 2485700)
Polk County, Wisconsin - Summer 2010**



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



(EWM Scan - Berg, 2007)

Landing Monitoring Conducted by and Report Prepared by:
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TABLE OF CONTENTS

	Page
INTRODUCTION	1
METHODS	1
RESULTS AND DISCUSSION.....	2
FUTURE MANAGEMENT CONSIDERATIONS.....	3

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, Duck 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.

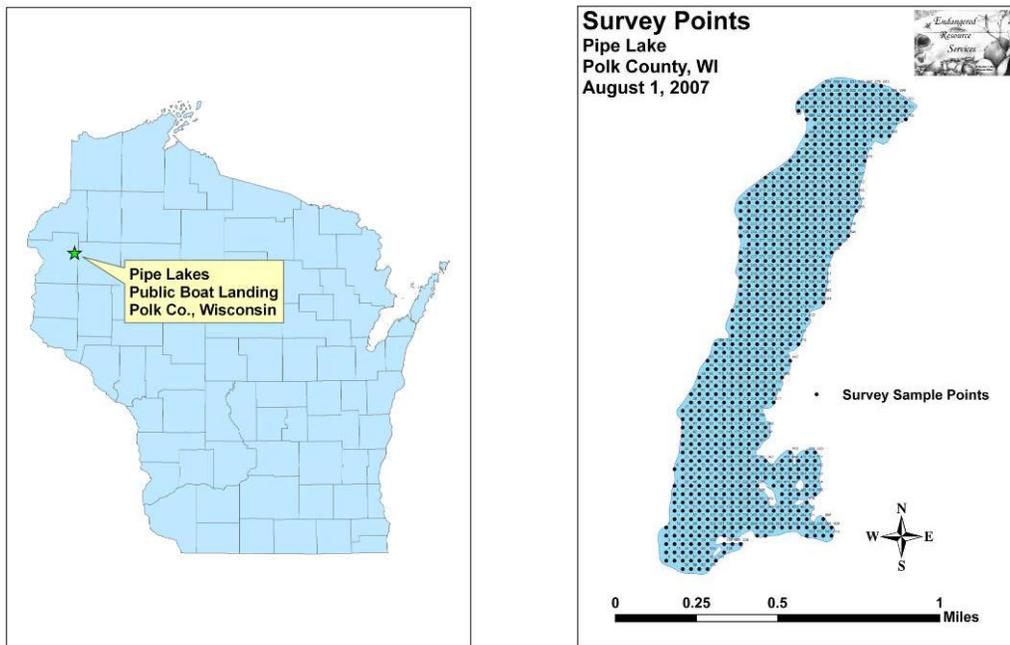


Figure 1: Pipe Lakes, Polk Co., WI and Point Intercept Points 2007

METHODS:

During the five months from the June-October 2010, we conducted landing inspections at least 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.

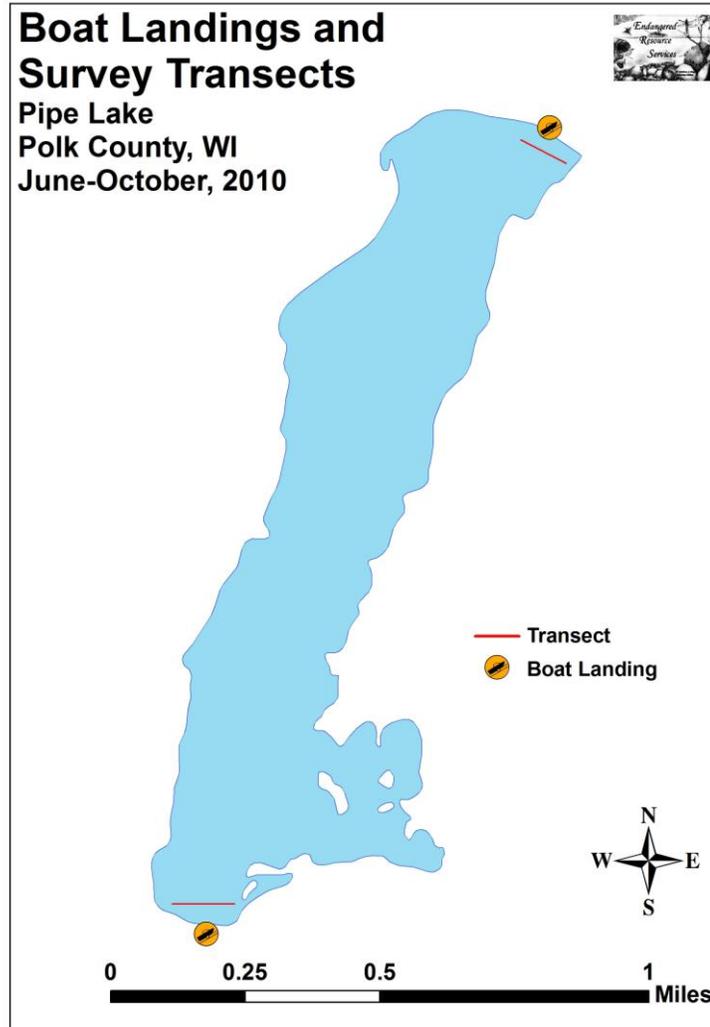


Figure 2: Boat Landings and EWM Survey Transects 2010

Following the boat inspection, we surveyed using SCUBA gear, and compass 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 2010, we conducted six transect surveys on June 6th, July 8th, July 28th, August 24th, September 7th and October 2th, and shoreline surveys on June 6th and October 2nd. We did not find EWM or any other aquatic invasive species in or adjacent to Pipe Lake. Water clarity started the summer as usual, but fell as the summer went on making for more challenging search conditions. During the August survey, I was accompanied by six other student divers and we did some training after searching the landing area (as this was a student trip, we worked as volunteers and did not charge the

lake for our time). Underwater visibility was down to no more than four ft. so we did double the normal number of transects to compensate. By October, however, clarity appeared to have returned to its late spring range of 10+ft.

Water levels at Pipe have fallen dramatically since 2007, but a summer of rain has brought the water back up at least a foot. This influx of water is the likeliest reason for the loss of clarity we observed. One benefit of the higher water level was we were able make it into North Pipe Lake during our final visit of the year. Because of this, we extended our shoreline transect survey to include both lakes on the October 2nd visit (Figure 3).

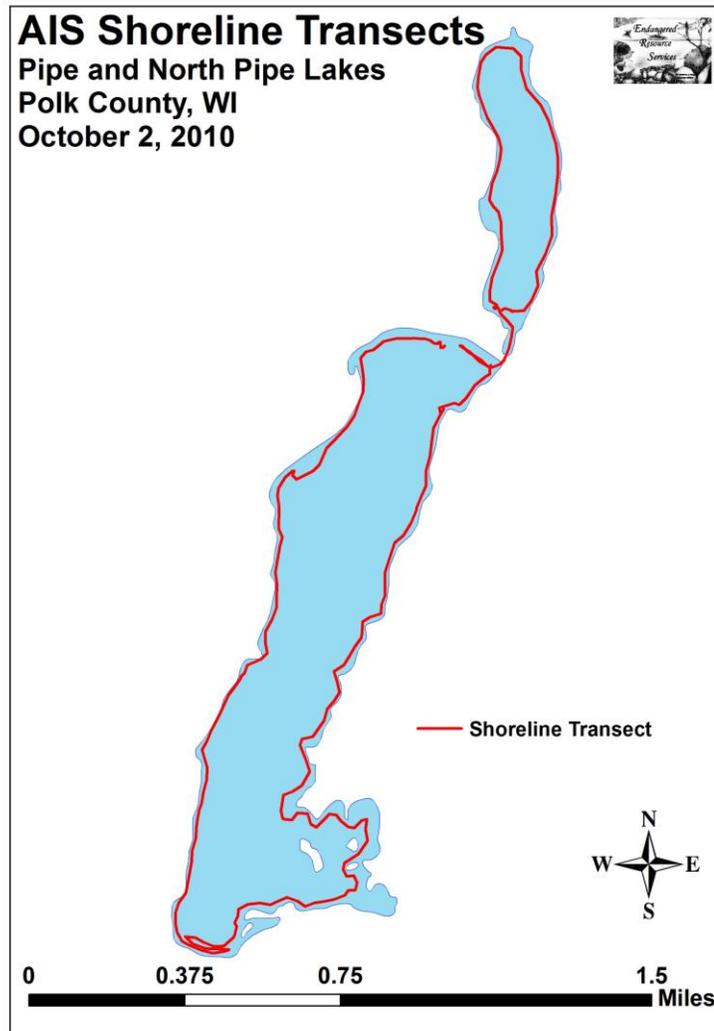


Figure 3: October Shoreline AIS Survey 2010

We again found Farwell's water milfoil in the sheltered bays in the southeast corner of Pipe Lake where it forms a small number of dense underwater beds in shallow water over thick organic muck. The only plant in the Pipe Lakes that looks like EWM can be told from it by its normal number of leaflets numbering <16 whereas EWM normally has >26 leaflets (Figure 4). EWM also has an emergent flower stalk where Farwell's flowers are scattered along the stem and look like tiny nuts.

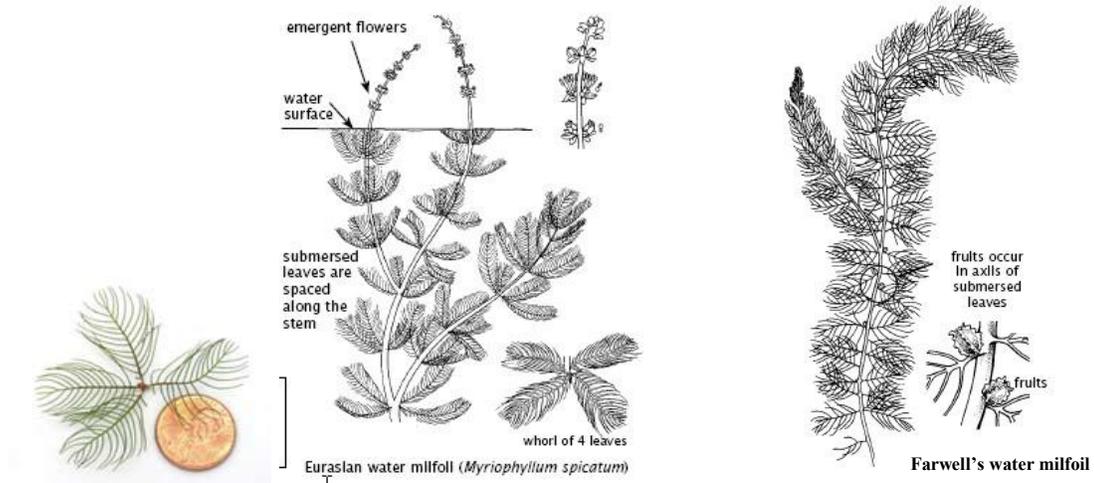


Figure 4: EWM and Farwell's Water Milfoil Identification
 (Hill et al. in Maine's Field Guide to Aquatic Invasive Species and Crow and Hellquist 2006)

CONSIDERATIONS FOR FUTURE MANAGEMENT:

During our visits to the Pipe Lake, we were again impressed with the AIS knowledge of land owners and boaters in general and Clean Boats/Clean Waters volunteers in particular. The lake association's commitment to educating the people who use the lake continues to be a model for lakes in the area. We 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. A fresh specimen, jpg photograph and GPS coordinates of where the specimen was obtained would aid in the identification of any suspect plant.