



Cason & Associates, LLC

Professional Resources for Management of Lakes, Ponds, Rivers and Wetlands

MEMORANDUM

TO: **Maiden Lake Association**

DATE: **November 29, 2010**

SUBJECT: **Results of the October 12, 2010 exotic species mapping survey**

A survey was conducted on Maiden Lake on October 12, 2010 to assess the abundance and distribution of Eurasian watermilfoil (*Myriophyllum spicatum*) as well as any other exotic species. Surface observations were used to determine the locations, and rake-tows were used to verify plant identification. Shoreline features were used to plot the areas on a map, and GPS coordinates were recorded at each location. Modified acreage grid analysis was used to determine the area of each plant bed. Weather conditions were favorable for viewing milfoil during the survey.

Recent Management Activities

In 2008, Eurasian watermilfoil was identified near the boat launch in Mosquito Bay of Maiden Lake for the first time. Since its discovery, there has been much effort put forth to stop the milfoil from spreading. On June 2, 2009 a treatment was done targeting 1 acre of milfoil around the boat landing in Mosquito Bay. During this treatment additional milfoil was discovered, and a follow-up treatment of one-half acre occurred on June 9, 2009. No other treatments have occurred since the spring of 2009. A plant survey in August of 2009 found a single plant growing in the northwestern part of the lake, which was hand-pulled immediately. It was the first time Eurasian watermilfoil was found outside Mosquito Bay.

Due to the sparse nature of Eurasian watermilfoil in Maiden Lake, members of the Association have been successfully hand-pulling milfoil. This has been an effective tool in keeping the milfoil at very low abundance in Maiden Lake.

Survey Results

During the October 12, 2010 survey, Eurasian watermilfoil was found only in the northwest corner at the same location where it had previously been (**Figure 1**). Since there were only a couple of plants in this location, they were immediately hand-pulled during the survey. For the first time since its introduction, no Eurasian watermilfoil was identified around the boat landing in Mosquito Bay. Also, no other exotic species were identified during the survey.

Conclusions and Recommendations

Efforts to monitor, treat and hand-pull Eurasian watermilfoil have been successful at all but eliminating this exotic species from Maiden Lake. However, it is important for members of the lake association to maintain their proactive approach. Milfoil was introduced to Maiden Lake once and it could be reintroduced or additional surviving plants may appear. It is important to continue to stay proactive in order to keep the plant from spreading throughout the lake.

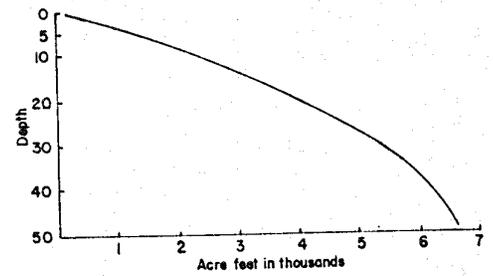
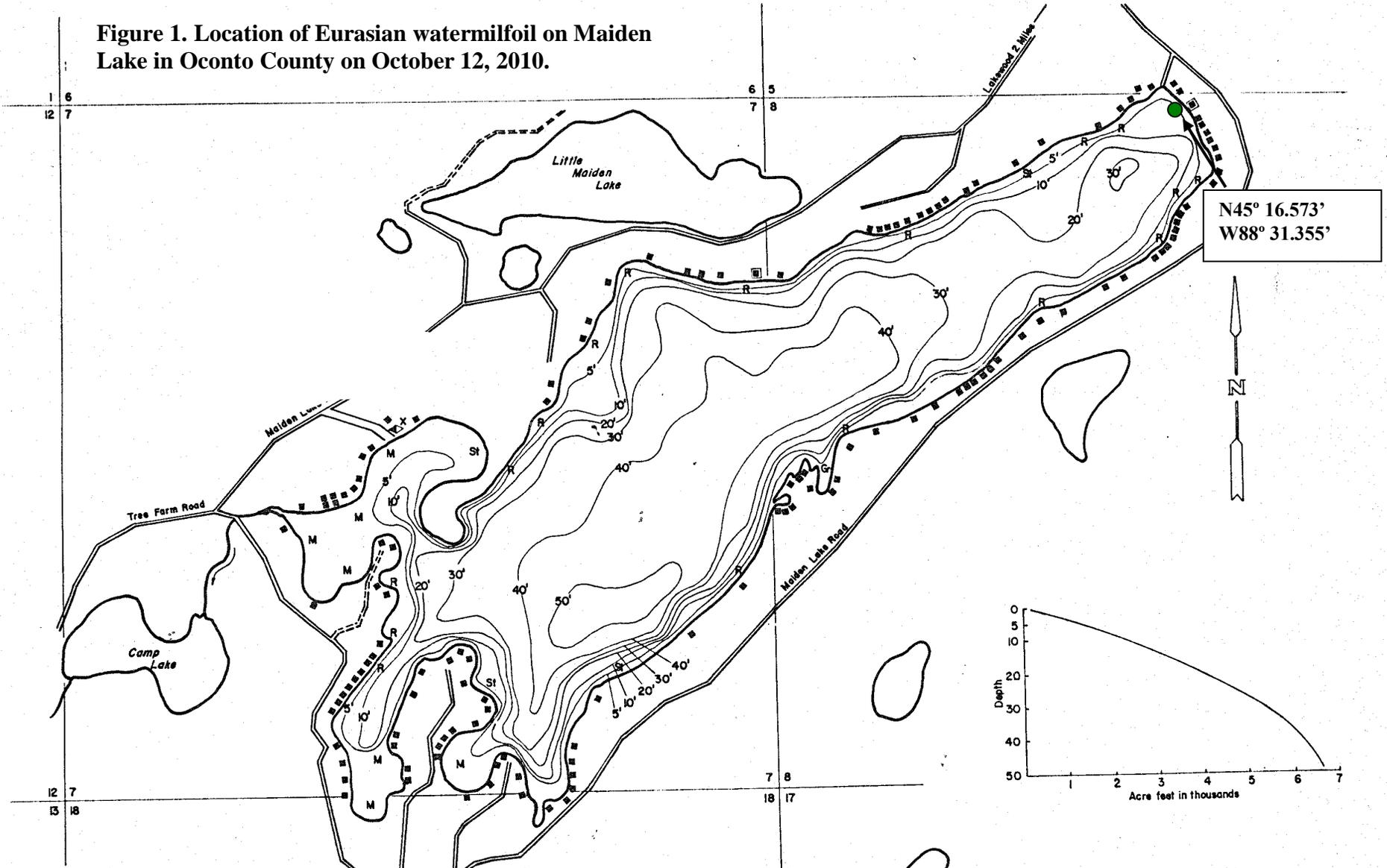
Lake volunteers should be on the lookout for Eurasian watermilfoil and other exotic species. Rooted plants and fragments of Eurasian watermilfoil should be removed from the lake as soon as possible. Because northern watermilfoil, a native plant species that looks very similar to EWM, is present in Maiden Lake, care should be taken to properly identify the plants before extensive hand-pulling takes place. Association members are encouraged to properly educate volunteers on the characteristics that differentiate the two species.

It is recommended that annual surveys be completed to determine the extent of the plant and to identify any new locations before they become well established. No treatment is recommended at this time, and continued hand-pulling of the plant is the recommended management approach.

LAKE SURVEY MAP

MAIDEN LAKE
OCONTO COUNTY
SEC. 5-7-8-18 T. 32 N. R. 16 E.W.

Figure 1. Location of Eurasian watermilfoil on Maiden Lake in Oconto County on October 12, 2010.



EQUIPMENT	RECORDING SONAR	MAPPED	JUNE	1978
		MONTH	YEAR	
TOPOGRAPHIC SYMBOLS				
(B) Brush		Slope	P. Peat	B Boulders
(PW) Partially wooded	-----	Indefinite shoreline	Mk Muck	St Stumps & Snags
(W) Wooded	-----	Marsh	C	Navigation
(C) Cleared	-----	Spring		
(P) Pastured	-----	Intermittent stream		
(A) Agricultural	-----	Permanent inlet		
B.M. Bench Mark	-----	Permanent outlet		
■ Dwelling	-----	Dam		
■ Resort	-----	D.N.R. State owned land		
■ Camp	-----			

500' 0 500' 1000' 1500' 2000'
SCALE
◊ Access ◄ Access with Parking ◄ Boat Livery
Drawn by: W. Berwig
Field work by: J. O'Brien-R. Thrun

SPECIES OF FISH	Abundant	Common	Present
Muskie			
N. Pike			X
Walleye			X
L. M. Bass			X
S. M. Bass			X
Pontfish	X		
Trotl			

WATER AREA 269 ACRES
UNDER 5 FT. 19 %
OVER 20 FT. 39 %
MAX. DEPTH 52 FEET.
TOTAL ALK. 90.3 P.P.M.
VOLUME 6545.5 ACRE FT.
MAIN SHORELINE 5.6 MI.
ISLAND SHORELINE MI.