



# Cason & Associates, LLC

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

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## MEMORANDUM

TO: Maiden Lake Association

DATE: June 4, 2010

SUBJECT: **Results of the Maiden Lake exotic species survey conducted on May 20, 2010**

### **Recent Management Activity:**

In June 2009, Maiden Lake was surveyed for exotic species and approximately 1.5 acres of Eurasian watermilfoil (*Myriophyllum spicatum*) was treated with granular 2,4-D in Mosquito Bay. During a full point-intercept survey of Maiden Lake in August 2009, Eurasian watermilfoil was located at a second location on the far east end of the lake. The plant found at this location was hand-pulled. Lake volunteers have been diligently monitoring the two know milfoil areas and hand-pulling isolated plants.

### **Methods**

On May 20, 2010 a survey of Maiden Lake was conducted to determine the extent and abundance of Eurasian watermilfoil. Surface observations and rake tows were used to locate the milfoil. The entire shoreline of the lake was surveyed. Locations where the plant was found were recorded on a depth map using land features as references. GPS coordinates were also recorded at each location.

### **Results**

Eurasian watermilfoil was again found at the two locations where it had been previously found (**Figure 1**). However, only a small number of plants were found. The amount of milfoil identified did not warrant additional treatment. Instead, floating markers were left at both locations. Lake volunteers hand-pulled the plants at both locations soon after the survey.

### **Conclusions and Recommendations:**

Efforts to monitor, treat and hand-pull milfoil have been successful at all but eliminating it from Maiden Lake. However, it is important for members of the lake association not to let their guards down. Milfoil reached Maiden Lake once, it could be reintroduced or additional surviving plants could be found. It is important to continue to stay proactive in order to keep the plant from spreading throughout the lake. It is recommended that annual surveys be completed to determine the extent of the plant and to identify any new infestations before they become well established.

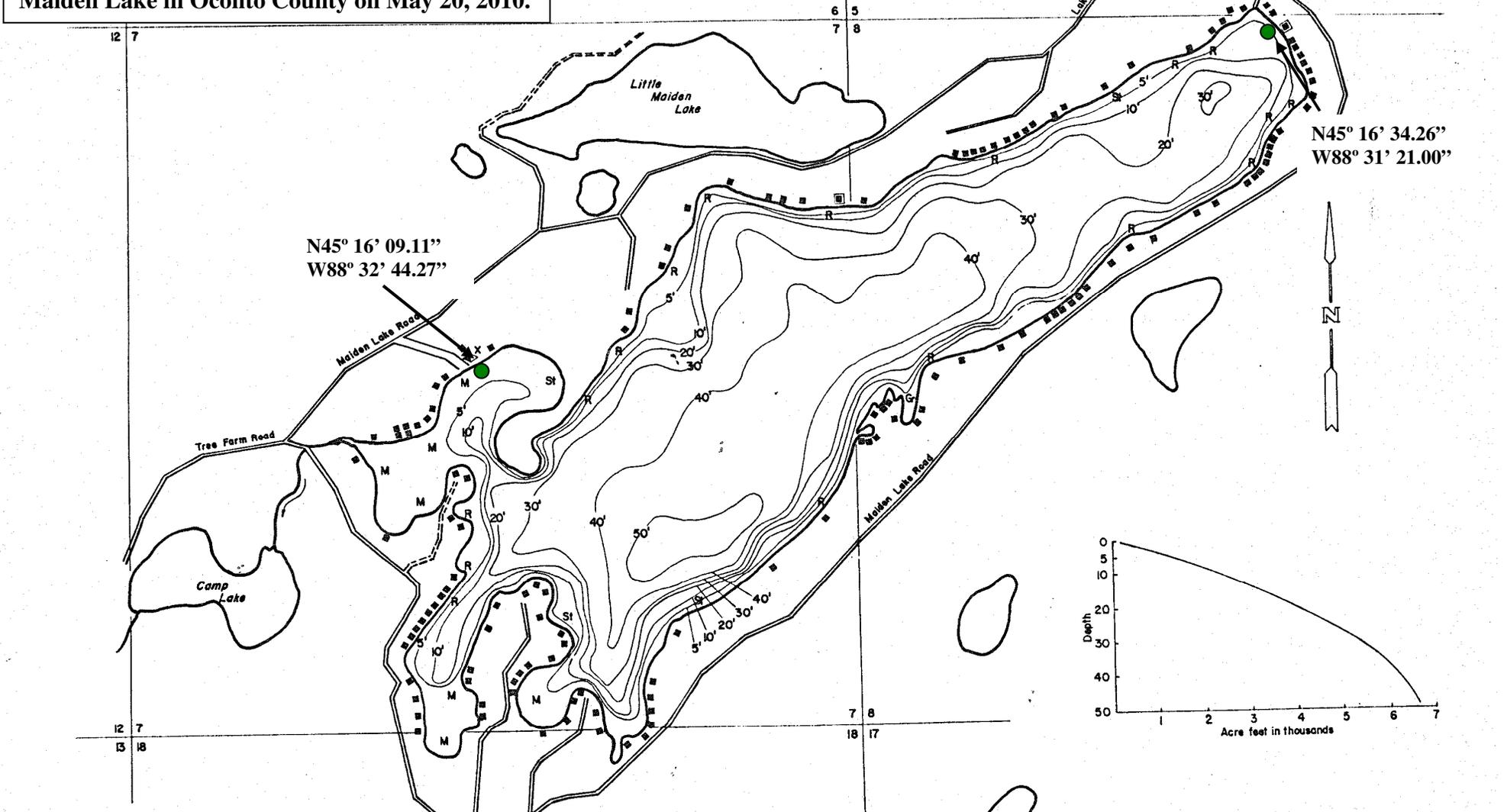
It is recommended that a second exotic species mapping survey be conducted this year; in fall at the end of the aquatic plant growing season. In the mean time, lake volunteers should also be on the lookout for Eurasian watermilfoil and other exotic plants. Rooted plants and fragments of Eurasian watermilfoil should be removed from the lake. Because northern watermilfoil, a native plant species, is present in Maiden Lake, care should be taken to properly identify the plants before extensive hand-pulling takes place. Association members should properly educate volunteers on the characteristics that differentiate the two species.

Brad Roost, Limnologist  
Cason & Associates, LLC

LAKE SURVEY MAP

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

Figure 1. Locations of Eurasian watermilfoil on Maiden Lake in Oconto County on May 20, 2010.



EQUIPMENT	RECORDING SONAR	MAPPED	JUNE 1978	MONTH LAKE BOTTOM	YEAR SYMBOLS
(B) Brush	..... Steep slope	P. Peat	B Boulders		
(PW) Partially wooded	..... Indefinite shoreline	Mk. Muck	Stumps & Snags		
(W) Wooded	..... Marsh	C. Clay	Rock danger to navigation		
(C) Cleared	..... Spring	M. Marl	T Submergent vegetation		
(P) Pastured	..... Intermittent stream	Sd. Sand	I Emergent vegetation		
(A) Agricultural	..... Permanent inlet	Gr. Gravel	F Floating vegetation		
B.M. Bench Mark	..... Permanent outlet	R. Rubble	Brush shelters		
■ Dwelling	..... Dam	Bc Bedrock			
■ 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	ABUNDANCE		
	Abundant	Common	Present
Muskie			X
N Pike			X
Walleye	X		
L.M. Bass	X		
S.M. Bass	X		
Panfish	X		
Trout			

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.