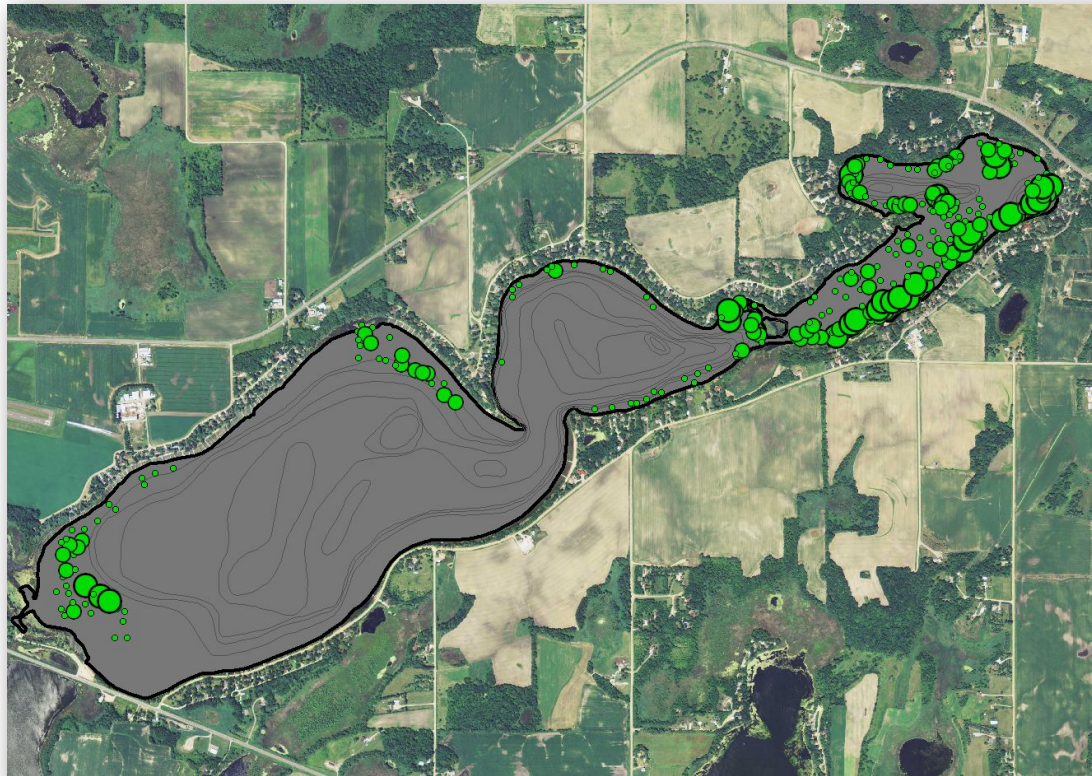


Eurasian Watermilfoil in Maple Lake

(WBIC# 86-0134-00 and 86-0134-01)

Wright County, MN

Spring Delineation Survey – May 8, 2015



Survey, Analysis, and Reporting by:

James A. Johnson – *Aquatic Ecologist, Freshwater Scientific Services, LLC*



Certified Lake Manager
www.NALMS.org

Prepared for PLM Lake & Land Management Corp. – May 2015

Survey & Analysis Methods

Spring Delineation Survey

Freshwater Scientific Services, LLC completed delineation survey for EWM in Maple Lake (#86-0134-00) on May 8, 2015. During this survey, we navigated a meandering transect over designated portions of the lake where EWM had been found in past years (search areas designated by PLM Lake and Land Management). While navigating this transect, we used a combination of surface observations (using polarized sunglasses), rake tosses, sonar readings, and an underwater video camera to locate and delineate areas of EWM growth. Sonar and visual assessments were conducted continuously, with subsequent rake tosses to assess EWM abundance at ~1200 locations. At each of these rake locations, we dragged a double-headed sampling rake over approximately 10 square feet of lake bottom and recorded the EWM abundance based upon the number of EWM plants (stem count) retrieved on the rake (rake density rating; 1 to 3 scale as described below). We used a hand-held Garmin GPS unit (GPS-MAP78) to record sites with EWM, and documented water depth, EWM height, and EWM density rating.

EWM Rake Density Rating

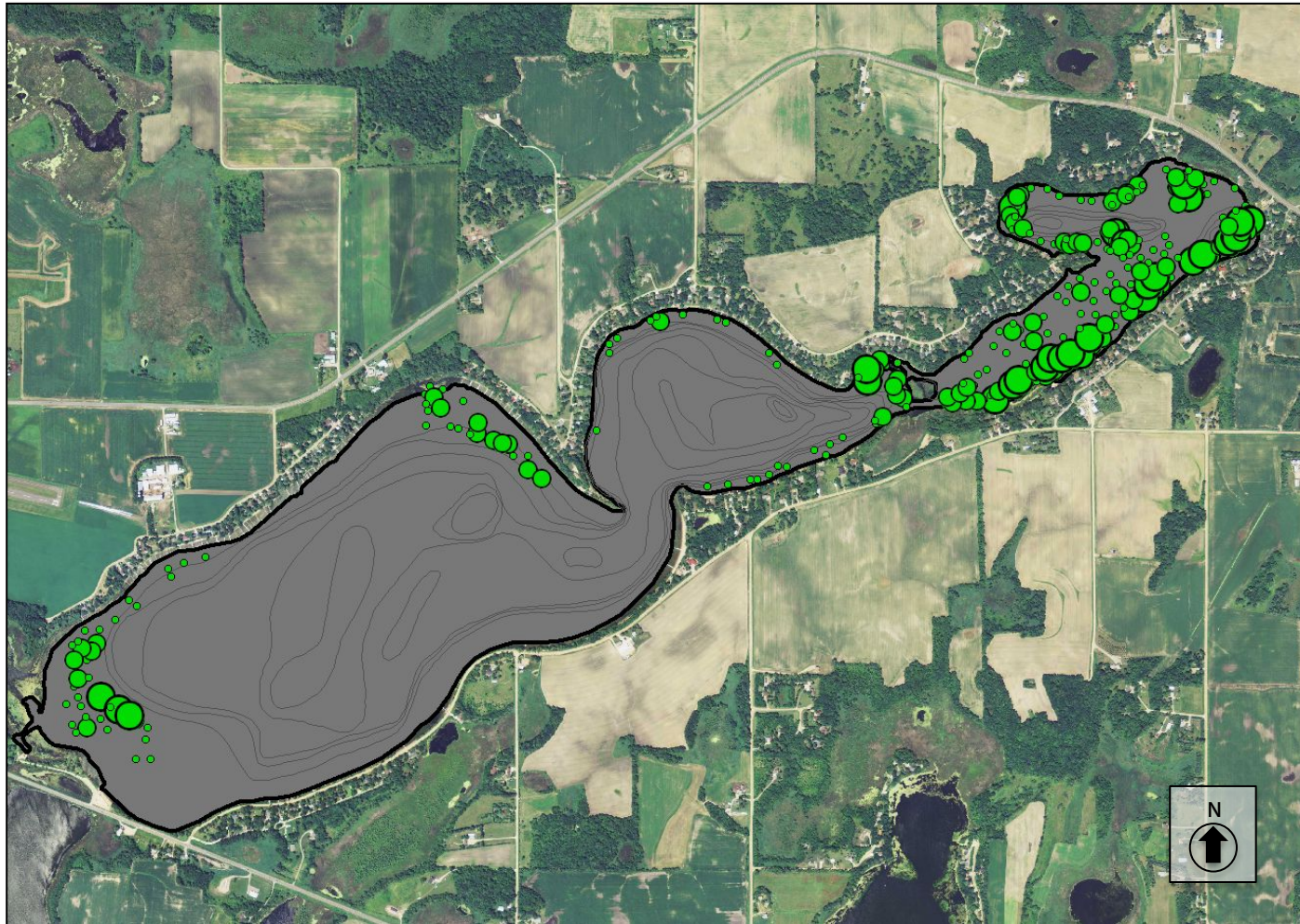
1 = 1 to 2 stems per rake toss

2 = 3 to 9

3 = 10 +

We entered the recorded locations, water depths, EWM plant heights, and density ratings into desktop GIS software and projected results over aerial imagery of the lake. We then delineated beds of EWM growth (designated as light growth or denser growth) in the surveyed areas, and calculated the areas of the denser plots.

Maple Lake (#86-0134-00)
Spring Delineation of Eurasian Watermilfoil: May 8, 2015



Eurasian Watermilfoil
Rake Density Rating (0-3)

- 1
- 2
- 3

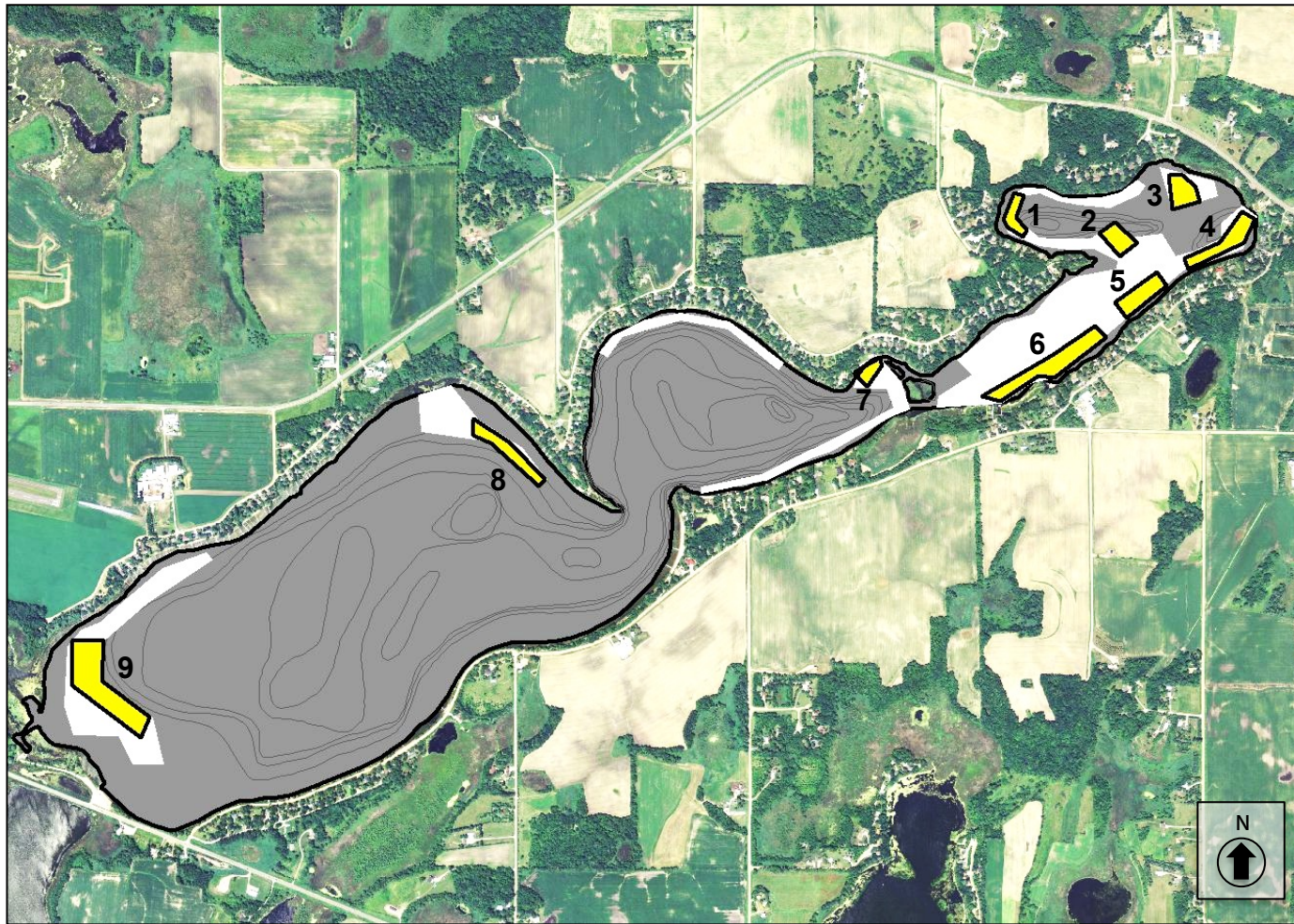
Surveyed: May 8, 2015
Surveyor: J.A. Johnson
Affiliation: Freshwater Sci. Serv.
Methods: Rake, Sonar, Camera
Analyses by: J.A. Johnson



Map created for PLM Lake & Land Mgmt by:

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Maple Grove, MN 55311
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(651) 336-8696

Maple Lake (#86-0134-00)
Spring Delineation of Eurasian Watermilfoil: May 8, 2015



Eurasian Watermilfoil

- Light EWM
- Denser EWM

Plot	Area (acres)
1	1.5
2	1.8
3	2.1
4	3.3
5	2.7
6	5.7
7	1.0
8	3.0
9	8.3

Total 29.4

Surveyed: May 8, 2015
 Surveyor: J.A. Johnson
 Affiliation: Freshwater Sci. Serv.
 Methods: Rake, Sonar, Camera
 Analyses by: J.A. Johnson



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