

Eurasian Watermilfoil in Crooked Lake

(WBIC# 02-0084-00)

Anoka County, MN

Spring Delineation Survey – May 19, 2015



Survey, Analysis, and Reporting by:

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Prepared for Crooked Lake Area Association – May 2015

Survey & Analysis Methods

Spring Delineation Survey

Freshwater Scientific Services, LLC completed delineation survey for EWM in Crooked Lake, (#02-0084-00) on May 19, 2015. During this survey, we navigated a meandering transect over the littoral portion of the lake (≤ 15 ft). 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 each of these rake locations, we dragged a sampling rake over approximately 10 square feet of lake bottom and recorded the EWM density based upon the number of curlyleaf plants (stem count) retrieved on the rake. We used a hand-held Garmin GPS unit (GPS-MAP78) to record each of the sampled locations, and documented water depth, EWM plant height, and EWM abundance (rake density rating; 1 to 3 scale as described below).

Rake Density Rating

1 = 1 to 2 EWM stems per rake toss

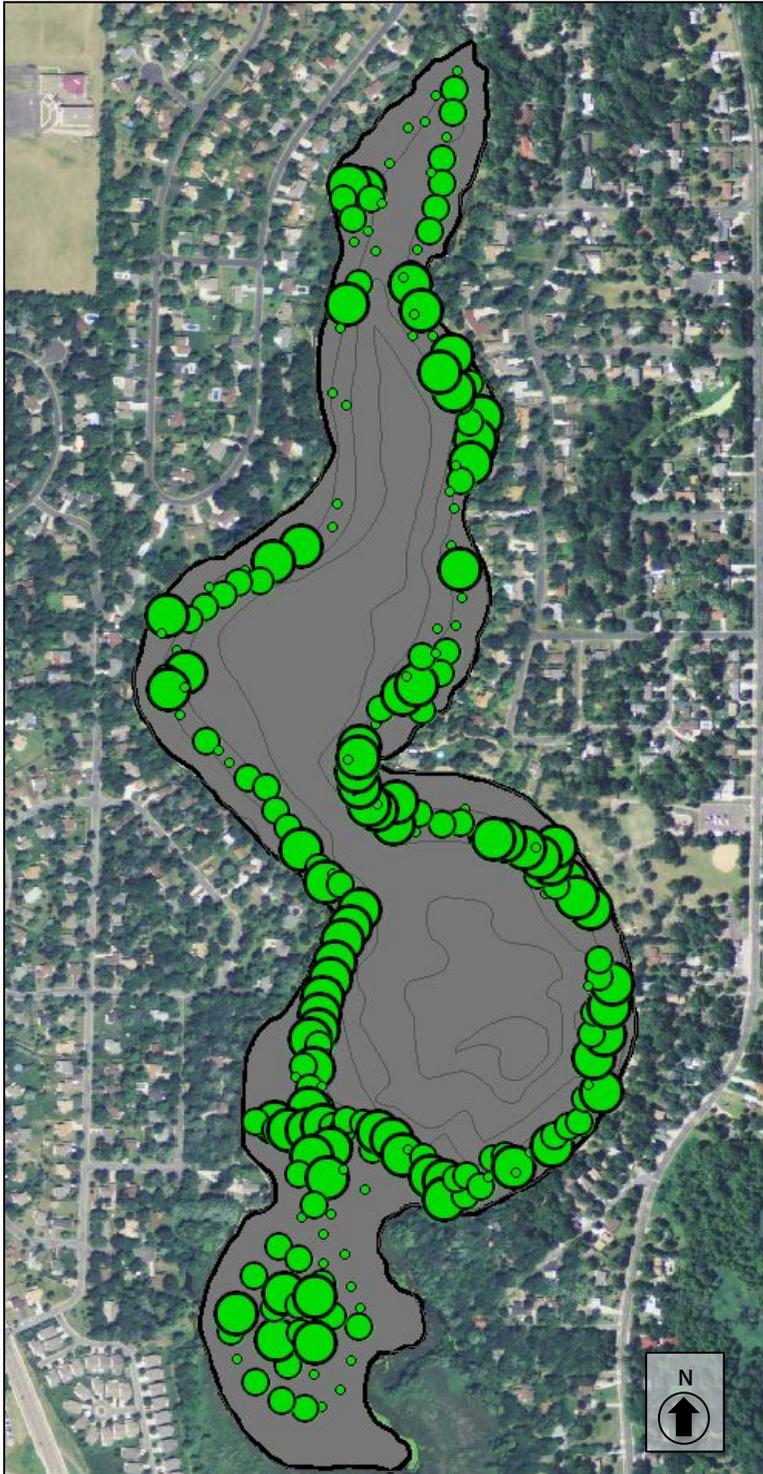
2 = 3 to 9

3 = 10 +

We entered the recorded locations, water depths, EWM plant heights, and rake densities into desktop GIS software and projected results over aerial imagery of the lake. We then delineated beds of EWM growth in the surveyed areas, and calculated the area, and mean EWM density within each of the delineated beds (using point data).

Crooked Lake (#02-0084-00)

Spring Delineation of Eurasian Watermilfoil: May 19, 2015



Eurasian Watermilfoil

Rake Density Rating (0-3)

- 1
- 2
- 3

Surveyed: May 19, 2015
Surveyor: J.A. Johnson
Affiliation: Freshwater Scientific Services, LLC
Methods: Visual, Rake, Sonar, Camera
Analyses by: J.A. Johnson

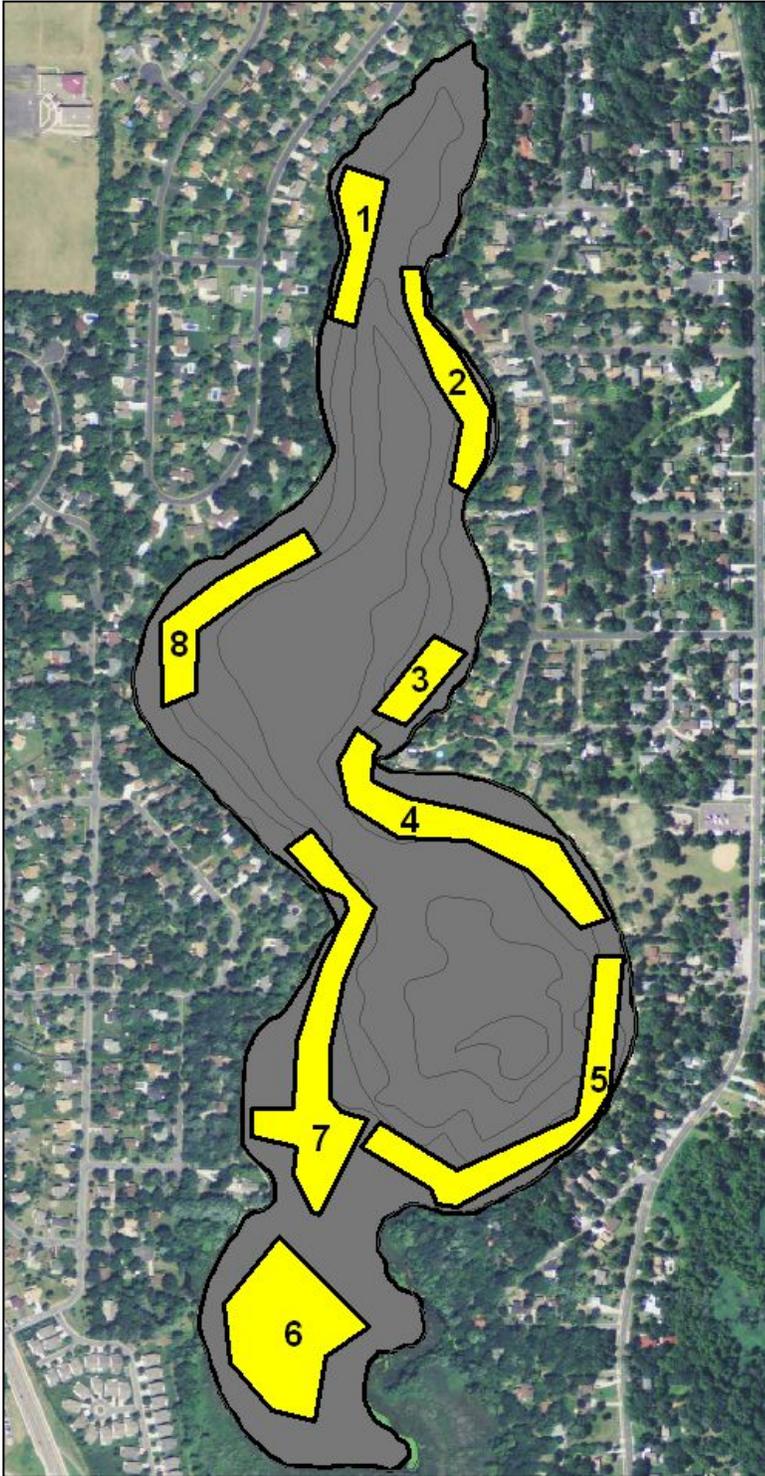


Map produced for Crooked Lake Area Association by:

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Crooked Lake (#02-0084-00)

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Eurasian Watermilfoil

 Proposed Treatment Plots
(areas of denser EWM growth)

Plot	Area (acres)	Avg EWM Density (0-3)
1	1.7	1.8
2	2.2	2.2
3	1.2	1.9
4	4.1	2.1
5	4.1	2.1
6	5.2	2.1
7	5.3	2.1
8	2.5	2.0

Total 25.3

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