

Early-Spring Curlyleaf Pondweed Delineation

Crooked Lake (# 02-0084)

Anoka County, MN

Surveyed April 6, 2020



Survey, Analysis, and Reporting by:

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



Certified Lake Manager
www.NALMS.org

Purpose of Survey

This early-spring survey was designed to locate and delineate areas of curlyleaf pondweed (CLP) throughout Crooked Lake (#02-0084) to identify areas of CLP that may be considered for treatment in 2020. This information will help to guide CLP management in Crooked Lake, and is required as a part of the DNR permitting process.

Survey Method

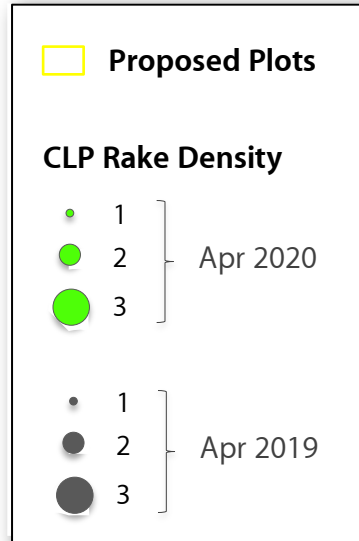
Delineation Survey

Freshwater Scientific Services surveyed the vegetated portion of Crooked Lake on April 6, 2020, with a focus on those areas where CLP was found in 2019. During this survey, we navigated a meandering search path through the search area while using a combination of surface observations, sonar readings, and rake tosses to locate and delineate areas of CLP growth. When we encountered CLP, we marked the location, recorded the water depth, and rated the density of the growth using visual and rake density scores as described in the table below.

Score	Visual	Rake
1	Light / Solitary plants	1-2 stems
2	Moderate / Scattered dense patches	3 to 9 stems
3	Dense / Uniform dense growth	10+ stems

For rake samples, we dragged a sampling rake over approximately 10 square feet of lake bottom and recorded the CLP density based upon the number of plants retrieved on the rake (stem count). The recorded water depths and density scores were linked to the appropriate GPS locations and then mapped using desktop GIS software.

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Surveyed: Apr 6, 2020
Methods: Visual, Sonar, Rake
Surveyor: JA Johnson



Map produced for the
Crooked Lake Area Association by:



15771 Creekside Lane
Osseo, MN 55369
fixmylake.com
(651) 336-8696

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 **Management Plots**

Plot	Area (acres)	Mean Depth (ft)	Mean EWM Density (1-3)
1	1.9	4.3	1.3
2	1.5	3.0	2.0
3	2.5	3.1	1.5

Total 5.9

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Online Resources & Contacts

Minnesota Administrative Rules for Aquatic Plant Management

<https://www.revisor.mn.gov/rules/?id=6280>

Minnesota DNR – Aquatic Plant Management Regulations & Permit Application Forms

<http://www.dnr.state.mn.us/apm/index.html>

Keegan Lund

Invasive Species Specialist

Minnesota DNR

keegan.lund@state.mn.us

(651) 259-5828

Wendy Crowell

ALS Management Coordinator

Minnesota DNR

wendy.crowell@state.mn.us

(651) 259-5085