

2013 POINT INTERCEPT SURVEY: THOLE LAKE, SCOTT COUNTY

Inspection by the Scott Watershed Management Organization

Scott County, MN

Lake: Thole

DOW Number: 70-0120-00

County: Scott

Date of inspection: September 5, 2013

Type of inspection: Aquatic vegetation

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Date of report: October 2013

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Summary: An aquatic vegetation survey of Thole Lake (70012000) was completed on September 5, 2013. The survey was completed only in the area that was treated for curlyleaf pondweed. Plants were present throughout the lake to a maximum depth of 7.0 feet. Aquatic vegetation was present in 100% of the sites surveyed within the vegetation zone (shore to 7 feet in depth). In the littoral zone of the lake (defined as the portion of the lake that is less than 15 feet in depth, 100% of points sampled had submersed vegetation present. Also within the littoral zone, 100% percent of sample points were comprised of native submersed vegetation. Five submersed plant taxa were found in the vegetation zone: coontail (*Ceratophyllum demersum* - 100.0% occurrence), White water lily (*Nymphaea odorata* – 14.3%), Filamentous algae (42.9%) and Duckweed (*Lemna spp.* – 14.3%). Also present was the non-native invasive submersed plant; curly-leaf pondweed (*Potamogeton crispus*) (28.6%).

Introduction:

An aquatic vegetation point intercept survey was conducted in 16 acres of Thole Lake near Shakopee in Scott County. The purpose of the survey was to identify the general abundance and distribution of native and invasive aquatic plants throughout the treatment area of the lake. Also, the survey aimed to monitor the plant communities of Thole Lake in response to a small-scale herbicide treatment aimed at controlling curly-leaf pondweed (CLP). The whole lake has a littoral area of 105 acres and rooted plants were found to a maximum depth of 7.0 feet in the treatment area. In addition to CLP, four native plant taxa were found in Thole Lake.

Methods:

Survey points were placed 100 meters apart. This spacing allowed for placement of 7 points on the lake within the 16 acre treatment area, all of which were sampled in approximately 1.5 hours. Of those points, 7 fell in the littoral zone of the lake. Only the points in the littoral zone were used in statistical analysis of the submerged plant community. Point placement and sampling methods followed the protocol of Madsen 1999. All plants recovered on the rake were recorded on a plant density scale of 0-4; however, analysis of plant densities in the lake utilized a presence/absence method (Perleberg et. al. 2012). I did not turn tracking on the GPS because the volunteer was not used to reading a GPS while driving, so I figured the route would not be a clear one.

Results:

Of all points sampled, 7 had submersed native plants present; 7 sample points had a submersed plant of any kind present (includes CLP). CLP was found at 2 points. Table 1 shows the percent occurrence for all plants found in this survey. Because this survey was a smaller sample than previous surveys, it doesn't make sense to compare previous surveys to this year's survey.

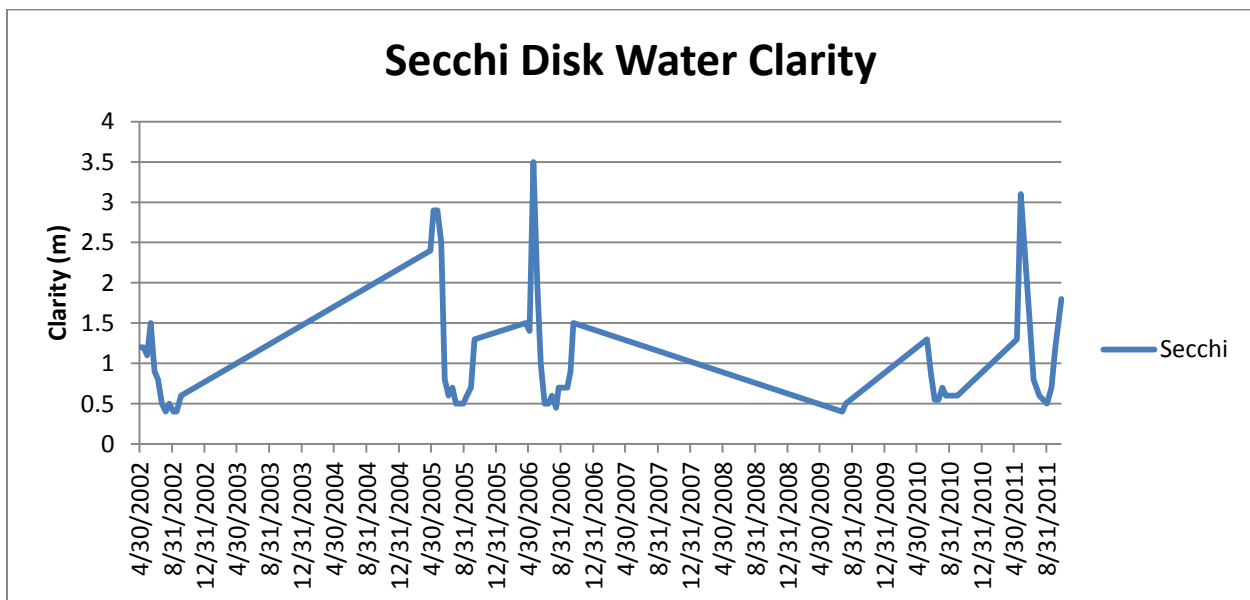


Figure 1: 2002-2011 Secchi disk water clarity data for Thole Lake, Scott County [DOW 70012000]. Provided by MPCA.



**Figure 1: 2013 Treatment and sampling area Thole Lake, Scott County.
DOW# 70-012000 - Point Intercept 100 meter spacing**