Figure 1. Location of Deep Lake (red) in Ramsey County within VLAWMO borders.
Deep Lake Depth Survey

May 10, 2018

Methods:
A Lowrance HDS-5 Insight Global Positioning System (GPS)-enabled depth finder was used to collect bathymetry and other data on Deep Lake on May 10, 2018. The lake was transected at a maximum distance of 40 meters between transects at a speed of less than 5 miles per hour. A measuring device was used to spot check depth accuracy. Sonar log data was processed using the Contour Innovations, LLC, BioBase system and adjusted by 0.5 feet to account for the depth of the transducer in the water. Field measurements were consistent with transducer readings.

Results:
The data points were exported from BioBase and interpolated using ArcGIS software, where contour lines were generated. Results include a bathymetry map featuring depth in one-foot intervals, a bottom composition map, and a biovolume map. Contour lines will be sent with this report as a shapefile. The deepest point of this lake was recorded at 6.8 feet. The survey showed a water volume of 185 acre-feet.

More robust interactive map data, including sonar log trip replays, can be viewed on the ciBioBase website: www.cibiobase.com.
Figure 2. Bathymetry of Deep Lake with 1-ft contours. Sonar readings from May 10, 2018
Figure 3. Bottom Hardness of Deep Lake with 1-ft contours
Figure 4. Biovolume of Deep Lake with 1-ft contours