

Little Sand Lake Healthy Lake Monitoring Tasks

Ver. 7/7/21

Type of Monitoring	Purpose of Monitoring	Frequency of Monitoring	Location of Monitoring	Report or send results to:	VOLUNTEERS who currently do this monitoring*
<p>Dissolved Oxygen (DO) Water Temperature Testing</p> <p>We have a water monitor instrument that we share with Big Sand Lake. We usually have the instrument calibrated every winter and share the cost of that with BSL.</p>	<p>Warming weather & poor land-use practices threaten our cold & cool water fish species. Tullibee/Cisco are cold water species that walleye & northern pike eat. Amount of DO/water temp can affect Cisco populations.</p>	<p>May - September</p> <p>DNR recommends minimum of 1x/month; 2X in August (usually hottest month).</p> <p>Goal is 2X/month</p> <p>This should be done in September at least one time.</p>	<p>Deepest part of the lake. About straight west of public access.</p> <p>Identify location with waypoint.</p>	<p>Local Fisheries, DNR</p> <p>Calub Shavlik Acting Area Supervisor MN DNR – Fisheries 301 S Grove Ave Park Rapids, MN 56470 218-732-4153 ext 223 Calub.shavlik@state.mn.us.</p>	<p>Larry Odegard Mark Doda Wayne Swanson</p> <p><i>*Looking for more volunteers to learn the monitoring and join the volunteer team..</i></p>
<p>Secchi Disc Reading</p> <p>We have a white disc connected to a rope that has a depth gauge.</p>	<p>Monitor clarity of lake water.</p>	<p>May – September</p> <p>Same time as DO₂ testing</p>	<p>Measure water in deepest part of lake (between Bexell’s and public launch). Do in EXACT same spot every time.</p>	<p>Sent to DNR with DO₂ data (See above)</p>	<p>Larry Odegard Mark Doda Wayne Swanson</p>
<p>Secchi Disc Reading for MPCA/CLMP**</p> <p>(Same instrument as above)</p>	<p>Monitor clarity of lake water.</p>	<p>May – September</p> <p>Recommended: 1X/week. Record data on MPCA/CLMP record-keeping data sheet and send data in at the end of the season.</p>	<p>Same as above</p>	<p>**Minnesota Pollution Control Agency/Citizen Lake Monitoring Program Shannon Martin, CLM Specialist Environmental Analysis and Outcomes Division MPCA clmp.pca@state.mn.us 651-296-6300</p>	<p>Larry Odegard Mark Doda Wayne Swanson</p>
<p>Lake Chemicals Test</p> <p>Coolers and water sampling tubes are received from RMB labs in early May.</p>	<p>Monitor levels of phosphorus, chlorophyll-a and water transparency (secchi depth) in the lake water.</p>	<p>May – September</p> <p>Usually 1X/month</p> <p>Schedule is established by HC COLA</p>	<p>Deepest part of lake (between Bexell’s and public launch).</p> <p>Do in EXACT same spot every time.</p>	<p>Samples are collected and taken to HC COLA collection site. HC COLA then takes all samples from Hubbard County lakes to RMB Labs for chemical analysis of lake water. RMB Labs link: RMBEL - RMB Environmental Laboratories, Inc</p>	<p>Larry Odegard Mark Doda</p>

<p>Veliger (baby zebra mussel) Testing</p> <p><i>We use a net that was purchased for Little Sand Lake by MaryJo Groehler. (NEVER allow it to be turned in to COLA. We own it.)</i></p>	<p>Gather water samples to monitor for zebra mussels.</p> <p>A video about how to conduct this test is available on the RMB Labs website: Zebra-Mussel-Veliger-Monitoring-Procedure05132020.pdf (rmbel.info) .</p>	<p>May – September</p> <p>(This is usually done in conjunction with COLA’s water sampling. 2 samples collected and sent in with the water samples to RMB Lab. Approx. dates July 1 and 15th.)</p>	<p>Sampling done near river inlet by Zorbaz, south of public access, and at the river outlet. (could mark with waypoint)</p>	<p>HC COLA collects water samples and brings them to RMB labs in Detroit Lakes</p>	<p>Larry Odegard Mark Doda Wayne Swanson</p>
<p>Vegetation Sampling</p> <p>Use a rake-type device to drop to the bottom of the lake to bring up/gather vegetation.</p>	<p>Checking vegetation at bottom of lake at specified locations.</p> <p>Monitoring for AIS.</p>	<p>3X/season: mid-June, mid-July, mid-August</p>	<ul style="list-style-type: none"> -Public access -Zorbaz -Little Sand Villas (formerly North Star Resort) -Loonies -Near Rossman’s -Near Hallstrom’s 	<p>Report to DNR if suspicious plant or invertebrate is found.</p> <p>Contact Nicole Kovar, MN DNR Northwest Region Invasive Species Specialist Ph: 218-616-8102 or nicole.kovar@state.mn.us</p>	<p>Glenn Gapp Ray Carlson Marshall Howe??</p>
<p>Water-Level Gauge</p> <p>A water gauge is set up in a specific area (currently at the Howe-McMillen lakeshore)</p>	<p>Monitor water level</p>	<p>May – September 1X/weekly (Sundays)</p>	<p>Currently gauge is set up at the Howe/McMillen lakeshore. (Hallstrom’s have agreed to take this duty from Howe/McMillen when a transition is most appropriate)</p>	<p>Data is submitted in an excel file at the end of each month to: sandy.fetch@state.mn.us. Across the top of each file, the exact location of the lake in the state as is reiterated as: Little Sand Lake, Hubbard County, ID# 29015000</p>	<p>Janet Mcmillen Marshall Howe</p> <p>Hallstrom’s to take over...</p>
<p>Ice In/Ice Out</p>	<p>Monitor date lake is completely frozen over in fall/winter (Ice-In or Ice-Over) and is completely free of ice in spring (Ice Out).</p>	<p>November-ish March/April-ish</p> <p>Record data on MPCA/CLMP record-keeping data sheet and send data in at the end of the season. (Same data sheet used to record secchi disc readings for MPCA/CLMP.)</p>		<p>**Minnesota Pollution Control Agency/Citizen Lake Monitoring Program Shannon Martin, CLM Specialist Environmental Analysis and Outcomes Division MPCA clmp.pca@state.mn.us 651-296-6300</p>	<p>Wayne Swanson.</p> <p>Would be good to have other “ice-watchers” on the large side of the lake.</p> <p>Citizen watchers have recorded this info on the Little Sand Facebook page, which has also been helpful.</p>

<p>Loon Monitoring</p>	<p>Historical and General Interest. Watch over summer:</p> <ul style="list-style-type: none"> • #Nests • #Baby Loons/nest in spring (May-June) • #Baby Loons/nest end of summer (September) 	<p>Observe over the summer <i>NOTE: HC COLA has a loon-monitoring opportunity going on now (see June 2021 HC COLA newsletter.) This year only 13 Hubbard County lakes have LoonWatcher Survey volunteers. If you would like to volunteer, please contact Andrew Herberg, MN DNR Nongame Wildlife Specialist at andrew.herberg@state.mn.us . See Loon Watcher Letter 2021 (state.mn.us)</i></p>	<p>Across the lake. We usually have 4 nesting couples on Little Sand</p>	<p>HC COLA and/or andrew.herberg@state.mn.us</p>	<p>Steve Trutna will follow up with Hochsprung's and Peter's and HC COLA. Trutna's will be loon-watcher volunteers.</p>
<p>Monitoring for adult zebra mussels with Settlement Samplers or PVC Tubes.</p> <p>Notify DNR if your lake association has a Settlement Sampler at public access. (Via HC COLA)</p>	<p>Early detection of zebra mussels.</p>	<p>Identify "Citizen Watch Volunteers" on Little Sand.</p> <p>Check monitoring device weekly starting in July/August.</p>	<p>Suspend device:</p> <ul style="list-style-type: none"> • On shaded side of dock one foot off bottom. • Place monitoring devices on all sides of lake. 	<p>HC COLA, DNR Participate in HC COLA's "Eyes on the Water" survey. Eyes on the water link: http://hubbardcolamn.org/eyes-on-the-water---early-detection.html Contact Nicole Kovar, MN DNR Northwest Region Invasive Species Specialist Ph: 218-616-8102 or nicole.kovar@state.mn.us</p>	<p>Wayne Swanson has mounted and monitored Settlement Sampler at public access. These people answered survey last year (2020): Dirk Smutzler, Rod Westrum, Wayne Swanson, Larry Bexell, Glen Gapp, John Kisser, Steve Trutna. Public access: Wayne Swanson</p>
<p><i>The following project was done in 2005 & 2006. Little Sand has not done this since that time, as this is exhaustive and time consuming; however, the LSLAA Board does want to emphasize the value vegetation along the shoreline has in maintaining the pristine and clear nature of our lake.</i></p>					
<p>Lake Vegetation Mapping</p> <p>In 2005 & 2006 Little Sand conducted the following mapping projects in conjunction with Park Rapids DNR Fisheries & Wildlife office.</p> <ul style="list-style-type: none"> • Emergent vegetation • Submerged vegetation (Point Intercept Lake Vegetation Survey) 	<p>Vegetation mapping benefits:</p> <ul style="list-style-type: none"> • Demonstrate beneficial role that bulrushes, cattails, water lilies play in the ecology of the lake. • Encourages lakeshore owners to preserve their lakeshore in the natural state. <p>Provides a benchmark for ongoing monitoring of the health of the lake.</p>	<p>Conduct vegetation mapping every 5 years. This was an extensive project and has not been done since the initial project.</p> <p>This is different than the current vegetation monitoring for AIS.</p>	<p>This was a lake-wide project done over 2 years.</p> <p>The Point Intercept Survey was conducted at 180 waypoints all around the lake.</p>	<p>This project was done in conjunction with the DNR Fisheries and Wildlife Office.</p>	<p>Last done by: Vern Thompson¹ Jim Thompson¹ Dan Kittilson</p> <p>Currently, not being done except for the focused AIS search for invasive aquatic plants.</p> <p>LSLAA Board is checking to see if DNR is now doing this type of monitoring with use of current technology, such as drones.</p> <p>¹deceased</p>