

Saving Lake Ida starts with sampling



The Minnesota Department of Natural Resources' Lake Ida Aquatic Management Area lies between Douglas County Ditch 23 and Lake Ida. Phosphorus levels are higher in the water flowing out of the wetland than they are at the point where the ditch flows in. Wetlands typically filter out sediment and pollutants. **Photo Credit:** Ann Wessel, BWSR

With Clean Water Funds, Douglas SWCD aims to preserve cold, deep tullibee-supporting lake

ALEXANDRIA – One of the largest, deepest and cleanest lakes in Douglas County, Lake Ida is in danger of turning green.

Situated in the glacial hills northwest of Alexandria, Lake Ida is unique among the county's 400-some lakes. It's cold enough to support tullibee – fish that feed walleye and northerns. Its irregular shoreline supports 839 parcels. With an estimated market value of nearly \$245 million, their combined tax capacity exceeds \$2.3 million.

R. Dean Beck, Minnesota Department of Natural Resources' (DNR) area fisheries supervisor,

explained what sets Ida apart: "No. 1 is the size of the lake and the depth of the lake. On top of that, for this area of Central Minnesota, it's just got exceptional water clarity. It's significant to recreational users. It's got a lot of development on it."

The Douglas Soil & Water Conservation District (SWCD) in fall 2017 launched an investigation into what's causing phosphorus loading. Lake Ida is at risk for excess phosphorus, which feeds the algae that turns lakes green.

With a \$227,430 Clean Water Fund grant from the

Minnesota Board of Water and Soil Resources (BWSR), the SWCD hired Barr Engineering to identify and prioritize problem spots, and propose solutions.

Since May 3, Douglas SWCD water planner Danielle Anderson has collected water samples every week to 10 days from three sites on County Ditch 23. She measures dissolved oxygen, velocity, temperature, water level, conductivity and pH.

RMB Environmental Labs analyzes samples and tests

for a number of things including nitrogen.

The entire 3,375-acre County Ditch 23 watershed drains into Lake Ida by way of the ditch, which starts west of Garfield and runs 62,340 feet through tile. The last 8,500-foot-long segment runs above ground, all of it buffered. Just before it reaches the lake, the ditch meanders for 2,400 feet through a 40-acre wetland that includes the 35-acre, DNR-owned Lake Ida Aquatic Management Area (AMA).

The AMA was established in 1968 as a potential northern pike spawning habitat, but was never used for that purpose. The DNR has since moved away from promoting northerns, which prey on walleye.



Wetlands typically absorb nutrients and sediment by slowing the flow of water, which allows those pollutants to settle out.

But a few years ago, Ida Lake Association monitoring results showed water from the ditch was cleaner going into the wetland than it was coming out. That can happen when a wetland has absorbed so much of the nutrients and sediment that it starts releasing them.

The Ida Lake Association brought its data to the SWCD. Recent SWCD testing showed the wetland's dissolved oxygen levels were half that of sites elsewhere in the system.

"We're hoping to preserve things, not to let it go downhill the way some places have," Dick Sudmeier, lake association president, said during a fall 2017 site visit.

"It's a beautiful lake. It's clean and has good fishing and recreation, and a lot of people like me have bought houses on it with the intention of spending the rest of their life on a beautiful lake," Sudmeier said.

Working with Alexandria-based engineering firm



Lake Ida's size, depth and clarity are among the factors that make it unique among Douglas County's 400-some lakes. More than 830 parcels touch the shore of this lake northwest of Alexandria.

Widseth Smith Nolting, Barr Engineering will propose ways to cut phosphorus and sediment loading within the watershed, ways to manipulate water levels in the ditch, and ways to optimize treatment capacity in the wetland.

Any ditch modifications would require approval of the Douglas County Board of Commissioners, which serves as the ditch authority. Any changes to the AMA would require approval from the DNR commissioner.

"We continue to look at improving the runoff from the lands. This project

also doesn't single out the County Ditch 23 watershed. We are looking at the rest of the lakeshed to identify potential problem areas that could be addressed," said Tom Anderson, Douglas County's drainage and agricultural inspector.

Proposals derived from the study likely will involve the residents ringing the lake, the DNR that controls the adjacent wetland, and the farmers whose land drains into the ditch.

Once the SWCD receives the engineer's recommendations, staff will meet with private landowners to discuss best

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management practices — an expected 15 to 20 smaller projects meant to augment recommendations for the ditch and wetland.

Meanwhile, a culvert inventory is complete. Barr Engineering took sediment cores from the wetland and awaits data. SWCD monitoring will continue into the fall to study the effect of Garfield's wastewater discharge.