



Shoring up support to protect Blue Lake

As Isanti SWCD targets water quality, the lake improvement district, townships and property owners are on board with BWSR Clean Water Fund-backed conservation projects designed to curb phosphorus and sediment

One of the Top 3 recreational lakes in Isanti County, Blue Lake is fighting to preserve its water quality.

A popular fishing, boating and swimming spot under increasing development pressure from northern Twin Cities suburbs, Blue Lake was starting to produce more algae. Monitoring in 2016 showed the lake failed to meet state water quality standards because of slightly elevated phosphorous and chlorophyll-a levels.

Blue Lake isn't on the Minnesota Pollution Control Agency's impaired waters list yet. Lakeshore property owners and Isanti Soil & Water Conservation District staff aren't waiting for that to happen before pursuing water quality improvements.

"It has relatively good water quality. That's one of the reasons that we're putting a lot of focus on protecting the lake right now," said Isanti SWCD Manager Tiffany Determan.

Bob Nelson of Andover caught panfish in late August off the Blue Lake fishing pier at a Stanford Township park. "It's close by and I like the lake," Nelson said. Blue Lake also draws boaters and swimmers to the park and adjacent Minnesota Department of Natural Resources boat launch. Photo Credits: Ann Wessel, BWSR



Above: An Isanti SWCD project at the Stanford Township park on Blue Lake includes a sediment-filtering rain garden just off the parking lot. The fishing pier was a separate township project and not part of the grant.
Left, from top: Isanti SWCD Manager Tiffany Determan stood on permeable steps that replaced a dirt path to the lake from the parking lot. Shoreline stabilization incorporated coir logs made of coconut fiber. The work fixed a gully. A rock retaining wall built for erosion control doubles as a seating area.

With a \$251,000 Clean Water Fund grant from the Minnesota Board of Water and Soil Resources, Isanti SWCD staff in 2018 started work on conservation projects that target runoff and phosphorus. The \$314,500 effort includes matching funds from the Blue Lake Improvement District (LID), two townships, and private landowners.

The grant runs through 2020.

This season, Isanti SWCD staff will resume work with private landowners at high-priority sites. Additionally, three wetland restoration options are under consideration. Surrounding wetlands are connected to the 251-acre, spring-fed lake.

Last season's Blue Lake projects included a \$50,000 shoreline restoration at a Stanford Township park

adjacent to a Minnesota Department of Natural Resources boat access. Stanford and Spencer Brook townships also completed stormwater reduction projects benefitting Blue Lake.

Stanford Township Board members already were discussing a shoreline stabilization when the Clean Water Fund grant became available.

The township park project stabilized 110 feet of shoreline and hillside, which will curb how much pollutant-carrying sediment enters the lake. Contractors used coconut-fiber logs at the water's edge, back-fill at the base of the hill, and a 2-foot-tall stone retaining wall that doubles as seating. Nearly 250 plants — including native grasses, sedges and shrubs — grow in a hilltop rain garden

and on the hillside. The gully is gone. Permeable stairs keep swimmers, picnickers and boaters off the hill.

The lake attracts Twin Cities anglers who pursue bass, walleye, northerns and panfish.

"Blue Lake has a little bit of everything," said Wayne Anderson, a Stanford Township board member, small-business owner and part-time farmer.

Anderson, who raises beef cattle on the 100-year-old family farm where he grew up, is among a dwindling number of livestock producers in the township. Land use in the 7,200-acre watershed mirrors





that of Isanti County — 25 percent agricultural, 25 percent forested, 50 percent residential or ripe for development.

“It’s becoming more populated. There still are farms, but they’re becoming smaller and smaller as development moves in,” Anderson said.

Meanwhile, the township park is becoming more popular.

“Opening day of fishing, there’ll be cars and trucks parked all the way out to the main highway almost a half-mile out. It gets very busy. On major weekends and holidays it’s over-full,” Anderson said.

A new fishing pier, which isn’t part of the grant, is drawing more kids to the park.

Directly across the lake, Marvin Paulson was working on his shoreline restoration last August. He was the first landowner to sign up when the grant became available. Paulson idled his rented skid



Marvin Paulson reflected on the changes he hopes to see on his Blue Lake property 10 years from now: “We’ll have wonderful plantings that will have grown. It’ll take less time to mow the yard. ... And the quality of the water should improve.” **From left:** Paulson was digging a filtration trench himself. A rain garden will help to slow the runoff that crosses his land and allow some of the sediment to settle out.

loader to explain why.

“The timing was just right. We wanted to improve our lot, we wanted to improve

the quality of the water, and this gives us an opportunity to do that,” Paulson said.

A retired systems programmer,

Paulson and his wife, Mary, moved to the property in 2003. He’d spent time at his parents’ cabin on an adjacent lot since the 1960s. He eventually purchased that land and built a house.

Paulson had rented the skid loader to dig a filtration trench. Wooden stakes marked rain garden plantings in newly worked soil. A buffer will help to slow runoff.

“This way, there will be less to mow and it’ll help the water get purified before it gets to the lake,” Paulson said, adding that he had noticed more algae in recent years. “It just seems to be better to make the water clean before it gets into the lake.”

Since the SWCD widened its focus in 2013, Determan said lakeshore and residential landowners’ response has been overwhelming. While grants aren’t available for every project, Determan said staff can offer technical

assistance or suggestions.

The Blue LID also formed in 2013. Its taxing authority provided resources to continue decades of invasive species monitoring and control. The LID contributed a \$33,000 match toward the Isanti SWCD project. Its members help with lake monitoring, education and outreach.

“Clearly, people working together is the crucial part of this, feeling that they’re accomplishing the goals of improving their water quality and the quality in general of the lake,” said Bill Yueill, chairman of the 140-member Blue LID.

Yueill, a retired Presbyterian minister, and his wife, Lynn, bought a lot from friends and built a house on the southeast corner of Blue Lake 16 years ago. They had been visiting friends on Blue Lake since the late 1970s, when they lived in Minneapolis.

“It’s been a fine place to retire and still be close to Minneapolis and the amenities there,” Yueill said.

Like Paulson, Yueill has noticed increased algae growth.

“There’s a balance, and some weeds are really good. The fish love them, and they are part of the ecology at the lake,” Yueill said. “If (the algae) keeps going (it could) cease to be a lake for fishing and boating and swimming.”



During a late-August site visit with BWSR Board Conservationist Jason Weinerman, Isanti SWCD Manager Tiffany Determan talked to lakeshore property owner Marvin Paulson, right, about the work he was doing to slow runoff across his land. Paulson had been visiting his parents’ cabin on Blue Lake since 1960. He and his wife, Mary, bought the adjacent lot and in 2003 moved into the house they built on the property. Isanti SWCD staff and township officials said Blue Lake is seeing increasing development pressure from the northern Twin Cities suburbs.

Blue Lake Project Details

GRANT MATCHES: Cash and in-kind grant matches include \$33,000 from the Blue Lake Improvement District, \$14,215 from Stanford Township, \$8,180 from Spencer Brook Township, and \$8,230 from private landowners.

LAKE STATS: Blue Lake is really two connected lakes. Little Blue on the north is classified as a shallow lake, with a 10-foot maximum depth and more aquatic plants. Big Blue is classified as a deep lake, with a maximum depth of 30 feet. Both township boat accesses are on Big Blue Lake.

MONITORING: Ten times a season, SWCD staff and LID volunteers collect data including phosphorus, chlorophyll-a and Secchi disk readings. Phosphorus feeds the algae that turns lakes green. Chlorophyll-a

is an algal growth indicator. Secchi disk readings measure clarity.

RESULTS: In 2016 phosphorus failed to meet the state water-quality standard by 2 micrograms per liter. Chlorophyll-a failed to meet the standard by 4 micrograms per liter. Secchi disk readings met the standard. The 2018 readings met water-quality standards — partly because of two factors that reduced runoff. Most of the rain fell during the growing season, when it was absorbed more quickly. And no single rainfall exceeded 2 inches. Water quality fluctuates from year to year. Blue Lake’s readings have remained borderline, but trending toward poor water quality over the past few years.

“
(The Isanti SWCD collaboration) was able to focus the issues and bring some science to them, rather than rumors and guesses.

— Bill Yueill,
Blue Lake Improvement District chairman

Ten years from now, Anderson said he would like to see runoff controlled and Blue Lake’s water quality maintained if not improved.

“For future generations, we owe it to them to leave it as it was,” Anderson said. “It’s our responsibility to not degrade our environment at all. I guess we don’t have that right. We are required to leave it as we got it.”



The Minnesota Board of Water and Soil Resources’ mission is to improve and protect Minnesota’s water and soil resources by working in partnership with local organizations and private landowners. Website: www.bwsr.state.mn.us.