

2 area lakes get high marks

Big Watab, Big Fish lakes' quality high; Sand Lake murky

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Water quality test results are back on six Stearns County lakes: Two are in good shape, three are so-so and one is especially cloudy.

As part of the Stearns County Lake Monitoring Project, six lakes in the county were examined in the recently issued report: Big Watab, Big Fish, North Browns, Eden, Maria and Sand. All six were comprehensively monitored, which included measuring each of the lake's dissolved oxygen, phosphorus, chlorophyll and temperatures.

Big Watab and Big Fish lakes

have water that's about as clear and low-nutrient as it gets for Stearns County. Both lakes were also in the upper 90th to 95th percentile for water quality in their ecoregion, or an area with similar types of land, water and plants.

"They represent some of the clearest, lowest nutrient lakes in the ecoregion," the report said. Carlson's TSI scale, which is a scale researchers use to classify lakes' water quality, was used to rank the six lakes. The scale is based on how much algae and phosphorus are in the water.

Lakes low in nutrients, such as phosphorus and chlorophyll, are easy for fish and plants to live in because they don't have to compete for oxygen in the water. Too much algae in lakes gives them a pea-soup green color, making

them unlikely choices for boating, swimming or skiing.

Eutrophic lakes were North Browns, Eden and Maria. Eutrophic lakes are aging faster than necessary and are nutrient rich. The three lakes ranked between the 40th and 50th percentile, which is typical for the ecoregion, the report said.

"Hopefully, land use practices within the watersheds of these lakes will result in no net change or an improvement of the TSI values in the future," the report said.

Sand Lake was the only lake found to be hypereutrophic, or unusually green and cloudy. The lake was found to be between the 15th and 20th percentile, or the lower end of the scale for the region — mainly because the lake is shallow compared to the

others studied.

The report, which was created by St. Cloud State University professors Neal Voelz and Charles Rose and graduate student Sharon Doucette, is the first snapshot of the quality of Stearns County lakes.

"It's so that in the future we have some good numbers to compare others against," Rose said.

Researchers studied the lakes throughout the summer to create the report. It's a collaborative effort between the Stearns County Soil and Water Conservation District and the county's Department of Environmental Services that cost the county only \$13,500, most of which came from state grant money.

A total of 30 lakes are part of the program, Voelz said. The

Lake quality in Stearns County

A report by the Stearns County Lake Monitoring Project examined six county lakes, including measuring each of the lake's dissolved oxygen, phosphorus, chlorophyll and temperatures.

Stearns County Lakes	Average TSI	Ecoregion percentile	Trophic state
Big Watab	41	90-95	Mesotrophic
Big Fish	44	90-95	Mesotrophic
North Browns	59	40-45	Eutrophic
Eden	60	40-50	Eutrophic
Maria	61	40-50	Eutrophic
Sand	71	15-20	Hypereutrophic

Definitions

Average TSI — Scale that researchers use to classify lakes' water quality. The scale is based on how much algae and phosphorus are in the water.

Ecoregion percentile — how a lake ranks compared with an area with similar types of land, water and plants.

Mesotrophic — clear lakes with low nutrients.

Eutrophic — lakes that aging faster than necessary and are nutrient rich.

Hypereutrophic — unusually green and cloudy water in the lakes.

other 24 lakes that are part of the five-year study had their clarity monitored by volunteers. Volunteers used Secchi disks, which are 8-inch disks that are

lowered into the water until the disks' white color can no longer be seen. Five different lakes will be comprehensively monitored next year, Voelz said.