

# SWCD, city, BSU partnership aims to protect Lake Bemidji



*Bemidji State University's Sustainability Office drew from Enbridge funding available via the Beltrami SWCD to install a rain garden paralleling Minnesota Highway 197. In this view of campus, the site is seen to the left of the highway just beyond the baseball field and parking lot. BSU's contribution to the rain garden and to a stormwater basin project on campus came from the Sustainability Office budget, which is supported in part by student fees.*  
**Photo Credit:** BSU



**YOUR Clean Water Fund AT WORK**

**BWSR awarded the Beltrami SWCD a \$228,300 Clean Water Fund grant in 2023 to support a stormwater project that protects the water quality of Lake Bemidji.**

**B**EMIDJI — A partnership among the Beltrami Soil & Water Conservation District (SWCD), Bemidji State University (BSU) and the city of Bemidji is propelling efforts to treat and reduce stormwater runoff from a 92-acre watershed that flows directly into Lake Bemidji.

The project, which could begin as early as this spring, would protect Lake Bemidji's water quality. The 6,580-acre recreational lake drives tourism, shapes the campus and flows to the Mississippi River — a source of drinking water for downstream communities including the Twin Cities.

In its comprehensive watershed management plan, the Mississippi River Headwaters watershed planning partnership names Lake Bemidji among eight priority water bodies. The watershed contains about

**“ We do not operate within a bubble. We need to work to build campus community resilience. ... (We) feel it's important to be an ambassador for this work with our neighbors. ”**

— Jordan Lutz, BSU sustainability project manager



**Bergstrom**

impaired. It faces increasing pressures from urban development, outdated stormwater infrastructure and nutrient-loading.

1,000 lakes. The ranking considered development around each lake, potential projects' cost-benefit ratio, and lakes of special concern. Lake Bemidji is considered at risk of becoming

Situated under BSU's intramural ballfields, the new basin would allow sediment and the pollutants it carries to settle out before the treated water enters Lake Bemidji. The project would treat the watershed — which is composed of commercial, institutional and residential properties — and would help to alleviate flooding.

The Minnesota Board of Water and Soil Resources (BWSR) awarded the Beltrami SWCD a \$228,300 competitive Clean Water Fund grant in 2023 to support the work, which would keep an estimated 58 pounds of phosphorus and 22,841 pounds of total suspended solids out of the lake each year. One pound of phosphorus can feed up to 500 pounds of algae.

The SWCD also will tap Watershed-Based Implementation Funding (WBIF) — noncompetitive Clean Water Funds that BWSR awarded to the Mississippi River Headwaters watershed planning partnership.

“Without those funds we wouldn't have a project,” Beltrami SWCD clean water specialist Katelyn Bergstrom said of the WBIF, which is funded by the Clean Water Fund. “This is a really great project that's (going to) have a lot of benefits to the city of Bemidji, Lake Bemidji, (and) the One Watershed, One Plan goals.”

Bergstrom coordinated the land-use agreements and permitting for the



*BSU staff, students and community volunteers planted native vegetation along Minnesota Highway 197 in June 2024 in Bemidji. BSU grad students designed the project. Photo Credit: Erika Bailey-Johnson*

project. The SWCD also secured funding, and led planning and coordination with the city, university and consulting engineer.

The planned subsurface stormwater treatment system will help the watershed partnership — comprised of Beltrami, Cass, Clearwater, Hubbard and Itasca counties and SWCDs — accomplish 25% of its 224-pounds-a-year phosphorus reduction goal for Lake Bemidji.

The SWCD also made \$68,000 in Enbridge funds available to the BSU Sustainability Office for two related projects on campus — a stormwater retention basin on the site of a solar array, and a rain garden bordering Minnesota Highway 197. Both were completed last year. Both will filter stormwater.

Twenty-seven asphalt parking spaces in the Oak Hall lot were removed to

make way for the basin, which is designed to handle about 25% of the stormwater runoff from the 143,700-square-foot lot. With 455 parking spaces, Oak Hall remains the largest lot on campus. The project included curb-and-gutter work and a native seed mix planted under the solar array.

The rain garden is sloped to channel snowmelt from the John S. Glas Fieldhouse parking lot away from Minnesota Highway 197, which is prone to flooding. BSU graduate students — including Bergstrom, who attended BSU at the time — designed the rain garden. Sustainability Office student workers and community volunteers helped to plant and maintain the garden.

“It would be considered the welcome mat, or one of our first touchpoints with anybody who's just driving through the city

of Bemidji,” Jordan Lutz, BSU sustainability project manager, said of the site, adding that it will take a few years for the plants to become established.

“Finding a workable strategy was very exciting for us, and we hope that we can be that example for our neighbors — to better understand ways in which we can accomplish multiple outcomes supporting pollinators, better managing stormwater, and finding ways to pull us into that outdoor space,” Lutz said.

“One of the pieces that we stressed with the students working on this project was the opportunity to (dig) in the dirt,” he said. “Getting outdoors and supporting a project like this can have a lot of personal individual benefits as well.”

Under an agreement with the SWCD, BSU will monitor and maintain the stormwater retention basin and the rain garden for 10 years.

“Both ... projects will be a really great way to show residents of the city of Bemidji (the) projects that we can do,” Bergstrom said, adding that community groups have asked about planting pollinator habitat and installing rain gardens after seeing the BSU projects.

---

BWSR staff members write and produce Snapshots, a monthly newsletter highlighting the work of the agency and its partners.