



**Clockwise from right:** During a tour of St. Peter's Broadway Water Treatment Facility, city and Nicollet SWCD staff peered into the detention tank, where water is filtered through 15-inch layers of anthracite coal, green sand and support gravel to remove iron and manganese. Well No. 11, in the foreground, draws from the Jordan Aquifer. At 233 feet deep, it is the shallowest of the wells that supply the facility. The other wells at this site are nearly 500 feet and nearly 800 feet deep. St. Peter Water Resources Superintendent Curtis Thompson, left, and Nicollet SWCD technician Blake Honetschlager showed one of the farmable water and sediment control basins in Mark and Richard Wettergren's field on the northern edge of the city's Drinking Water Supply Management Area. Part of the Nicollet SWCD's Clean Water Fund-supported nitrate-reduction work with landowners and the city, the water and sediment control basin, one in a series of three in this 112-acre field, will also curb erosion. A sign identifies St. Peter's 4,500-acre DWSMA.

# Field to faucet: Nitrate reduction targets St. Peter's drinking water



YOUR Clean Water Fund AT WORK

**VIDEO:** ["Nicollet SWCD: Focus on Nitrate Reduction"](#)

**BLOG:** ["Photo Tour: Scenes From St. Peter Broadway Water Treatment Facility"](#)

**S** T. PETER — In a corn field within St. Peter's 4,500-acre Drinking Water Supply Management Area (DWSMA), three water and sediment control basins slow runoff bound for a small pond that feeds the Jordan Aquifer.

The structures are part of the Nicollet Soil & Water Conservation District's (SWCD) nitrate-reduction work with landowners and the city, supported by a Minnesota Board of Water and Soil Resources (BWSR) competitive Clean Water Fund grant earmarked for drinking water protection.

At 300 feet deep, the Jordan is the shallowest of the three aquifers that supply St. Peter's 12,000-some residents with drinking water. It also contains the highest nitrate levels, exceeding the U.S. Environmental Protection Agency's 10



**“Any water we can store on top of the hill, treat it, let it infiltrate slower down to the aquifer is going to help us.”**

— Curtis Thompson, St. Peter water resources superintendent

parts per million (ppm) drinking water standard.

The city blends water from three different aquifers; reverse osmosis reduces nitrate levels to 1 ppm. The [Minnesota Department of Health](#) links nitrates to health concerns including blue baby syndrome.

**Photo Credits:** Ann Wessel, BWSR

Drawing \$238,480 from the Clean Water Fund grant BWSR awarded to the Nicollet SWCD in 2021, SWCD staff worked with two landowners to install a total of 11 basins that treat about 68 acres. With grant support, those landowners plus four more enrolled 17 fields — just over 890 acres total — into three-year nutrient management plans, which run through 2025.

Sandy, coarse soils within St. Peter's DWSMA mean water infiltrates quickly.

"By trapping the water or slowing the water down farther out ... in the watershed, we're able to increase the travel time for nitrogen to reach our source wells," said Blake Honetschlager, the Nicollet SWCD technician who worked with landowners and city staff. "You have more volume of water so you're not delivering a high concentration of pollutant closest to the well."

The city of St. Peter provided \$63,240 in matching funds.

"Those Clean Water Funds are integral to be able to do these projects. Without them, it's very tough. Especially when we are trying to get money together to do projects outside of city limits, it's hard making that link. Even though work done there directly correlates, it's still outside of our jurisdiction," said Curtis Thompson, St. Peter water resources superintendent.

The grant-backed work aims to reduce nitrates at the source. That, in turn, would reduce the city's treatment costs.

"St. Peter is unique because



**From left:** St. Peter Water Foreman Chris Voeltz prepared to lead a tour of the Broadway Water Treatment Facility on May 14, 2025, with St. Peter Water Resources Superintendent Curtis Thompson, Nicollet SWCD technician Blake Honetschlager and Nicollet SWCD Manager Kevin Ostermann.

the water that comes down through these ditch systems, it doesn't flow into a river or a lake or another water system. It flows directly in to recharge groundwater," Honetschlager said. "The concentration of nitrogen in that water then goes directly into the Jordan (Aquifer) source well."

The water and sediment control basins slow runoff and allow soil and the nutrients it carries to settle, helping to keep nitrates out of the drinking water supply. The structures benefit farmers by curbing soil erosion.

Nutrient management reduces the potential for nitrates and other pollutants to leach into the groundwater. It also can save farmers money by getting the right amount of nitrogen fertilizer to crops at the right time. Farmers may choose to continue nutrient management on their own.

In late May, the corn was starting to emerge in the 112-acre field on the northern edge of the DWSMA where Mankato-based Deegan Construction

installed the three water and sediment control basins in fall 2023. Mark Wettergren and his brother, Richard, own the land, which they've rented to another Nicollet County producer since Mark retired from his rural mail carrier job and from farming in fall 2023.

"It wasn't a terrible erosion problem. But when (Honetschlager) explained the process and what they were trying to do — and they really weren't going to take any farmland away — that's when Richard and I jumped on board," Wettergren said.

Two of the three earthen berms are farmable. All were designed to temporarily hold back water. Wettergren said precision-farming techniques solved his concerns about maneuvering over and around the berms.

"Any time you can help with that (drinking water protection) I'm all on board for that. If we can help for future generations, that's great," Wettergren said. "It was nice to see the money available to do that. It just

seemed like the right thing to do."

Clean Water Funds plus the city's match covered 100% of landowners' costs to install the structures.

The water and sediment control basins installed on the Wettergrens' land also help to handle the increased volume of water that has accompanied increasingly frequent heavy rains and changes in farming practices.

"We're getting our 100-year floods every 10 years," Thompson said.

The water and sediment control basins installed elsewhere in the DWSMA drain to Nicollet County Ditch 33.

"The runoff coming from the ditch systems is typically higher in concentrations of nitrogen, so the ability to slow that water down prior to getting into that ditch system allows us to get some of that nitrogen to drop out or get into groundwater further away from our source well," Honetschlager said.

Grant-supported work throughout the DWSMA is estimated to reduce sediment by 100 tons a year, nitrogen by 2,500 pounds a year, and phosphorus by 200 pounds a year.

Now, the Nicollet SWCD and nine other partners are writing the Middle Minnesota River-Mankato One Watershed, One Plan, which Honetschlager said will address nitrogen reduction via best management practices.



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