



Pickerel Lake focus forges partnerships

Shell Rock River Watershed District’s targeted Clean Water Fund work made a Pheasants Forever-backed, USFWS-owned prairie and wetland habitat restoration possible. That 245-acre site supports wildlife and filters sediment, which helps to improve water quality.

A drone image from spring 2020 captured part of what is now the 245-acre Pickerel Lake Waterfowl Production Area in Freeborn County. Clean Water Funds from BWSR, part of a Targeted Watershed Program grant awarded to the Shell Rock River Watershed District to support water quality improvements to nutrient-impaired Pickerel Lake, seen here at left, made the project possible. The collaboration involved the U.S. Fish & Wildlife Service, which now owns the WPA, and Pheasants Forever, which purchased the land.

Photo Courtesy SRRWD

ALBERT LEA —The Shell Rock River Watershed District’s final push to remove Pickerel Lake from the impaired waters list brought improvements that extend to the Mississippi River, and forged partnerships that completed a 245-acre prairie and wetland habitat restoration.

Six years after the Minnesota Board of Water and Soil Resources awarded the SRRWD an \$825,610 Targeted Watershed Program Clean Water Fund grant focused on nutrient-impaired Pickerel Lake, this spring, water filled the reconstructed wetlands. Elsewhere in the 5,120-acre watershed, erosion control and water storage projects were working



Phillips

as designed. The 2016 grant supported efforts to attain the final 10% phosphorus reduction required to meet state water quality standards.

The 620-acre lake just south of Albert Lea is prone to algae blooms. One pound of phosphorus can produce 500 pounds of algae.

The last grant-supported projects finished in late 2021.

VIDEO: [On a tour of a couple of the targeted watershed project sites in August 2021, the SRRWD’s Courtney Phillips explains some of their benefits.](#)

“One of the main reasons that we targeted Pickerel Lake is because it’s a headwaters location for us,” said SRRWD Program and Project Manager Courtney Phillips. “We’re the headwaters location for the Cedar River, and that ultimately goes to the Mississippi down in Iowa. So we want to be able to target and clean our water from the source.”

The largest single element of that \$1.04 million effort in terms of size and scope, the 245-acre restoration built upon a Pheasants Forever and U.S. Fish & Wildlife Service project.

Pheasants Forever purchased the land for \$1.79 million in 2017 with Outdoor Heritage Funds, and then donated the land to the USFWS. The U.S. Fish & Wildlife Service created the new Pickerel Lake Waterfowl Production Area. The SRRWD partnership and Clean Water Fund infusion made it possible to restore drained wetlands and convert what was marginal cropland to upland habitat.

Work started in 2019 and finished in spring 2020.

The SRRWD supervised the wetland restorations, and covered about \$294,100 in engineering and construction costs. USFWS staff contributed nearly \$124,400 in labor to seed the site.

USFWS staff will maintain the Pickerel Lake WPA, which was established Aug. 30, 2021.

“It’s going to accentuate (the value of) the adjacent lake, not just from a water-quality standpoint but also wildlife production — specifically, waterfowl. It (will provide) really important breeding areas for waterfowl,” said Windom-based USFWS



Pickerel Lake (top) seen from a public access in August 2021 is now bordered by a WPA with 30-plus wetlands (center) and restored upland prairie habitat (bottom). Photo Credits: Ann Wessel, BWSR

District Manager Todd Luke, who has since accepted a position with the agency in North Dakota.

The wetlands — and more than 75 deep-rooted tallgrass prairie species growing in the surrounding uplands — filter pollutant-carrying runoff and reduce erosion by stabilizing the soil. Pheasants Forever developed a seed mix harvested from native prairies and obtained from vendors. As closely as possible, the mix reflects species that would have flourished before European settlement.

“Adding all those nectar plants is going to be a tremendous value to boosting native pollinators,

which are going to trigger benefits down the food web,” Luke said.

The WPA borders the southwest shore of Pickerel Lake.

Alex Nelson, Pheasants Forever’s Spicer-based Minnesota restoration manager, said the site’s lakeshore, number of restorable wetlands, and proximity to other restorations within a heavily agricultural area near a city met several conservation objectives.

“We don’t want the postage-stamp, small 40-acre easement in the middle of nowhere. We’re trying to

Expected Species in WPA Habitat

Todd Luke of the U.S. Fish & Wildlife Service listed some of the species the 245-acre restoration might attract: Mallards, blue-winged teal, American bitterns, Virginia rails, pheasants, turkeys, grasshopper sparrows, Henslow’s sparrows, bobolinks, Eastern meadowlarks, marsh wrens, marsh hawks, red-winged blackbirds, yellow-headed blackbirds, dickcissels, goldfinches, white-tailed deer, red fox, gray fox, raccoons, badgers, rabbits and ground squirrels

build on complexes, kind of create that functioning prairie within the ag landscape,” Nelson said. “Good habitat means a lot more than just grass in the ground. It’s clean water and public (hunting) access. ... Complexes are important.”

Together, estimates show the BWSR grant-supported projects will keep about 20,790 pounds of nitrogen, 110 tons of sediment and 358 pounds of phosphorus out of the lake each year, and save 84 tons of topsoil annually. Those projects included a 45-acre upland and wetland restoration with 2,000 feet of grassed waterways directly upstream, a 3,000-foot-long two-stage ditch, a 1,200-foot-long streambank restoration, and a reconstructed ditch outlet.

“We can get a lot more done when we partner and work together instead of everybody doing their own thing. This is a prime example of that,” Nelson said.

The SRRWD will transfer



The SRRWD will transfer the 45-acre site it purchased for \$273,000 with Outdoor Heritage Funds in June 2018 to the DNR, which will add the restored wetland to the Upper Twin Lake WMA. **Photos Courtesy SRRWD**

the 45-acre site it purchased for \$273,000 with Outdoor Heritage Funds in June 2018 to the Minnesota Department of Natural Resources, which will add it to the [Upper Twin Lake Wildlife Management Area](#). The transfer was expected to be finalized in summer 2022.

“It’s excellent wildlife habitat. The restoration effort they put into the wetlands as well as the upland cover is going to be a huge addition,” said Jeanine Vorland, Owatonna-based DNR area wildlife manager. “Beyond that, there’s certainly going to be hydrologic and water-quality benefits to Pickerel Lake.”

Because it’s a shallow lake — 6 feet at its deepest — Pickerel Lake is more sensitive to nutrients, and its sediments are more easily stirred by wind or bottom-churning carp. The SRRWD’s earlier work with the DNR to remove rough fish improved water clarity and reduced nutrient levels.

“It makes any management action more sustainable when we have targeted restorations and protections in the lake’s watershed,” Vorland said.



The two-stage ditch constructed as part of the Shell Rock River Watershed District’s Clean Water Fund grant-focused work targeting Pickerel Lake worked as designed after a 5-inch rain. The “steps” are under water.

“The water quality helps improve the habitat and the habitat helps improve the water quality.”

Erosion control measures help to improve water quality by curbing sediment and the pollutants it carries. The restored wetlands and prairie plantings help to store water on the landscape, and to stabilize erosion-prone soil.

“These projects are critical for Pickerel Lake’s water quality,” Phillips said.

“The great thing about these targeted watershed projects is we really worked (with) landowners that are going to be able to keep

these projects perpetually,” Phillips said of the federal WPA and the planned state WMA addition. “Those are all perpetual-type projects that we will see for future generations.”



BWSR

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

Targeted Watershed Project Specifics

PARTNERS: The Shell Rock River Watershed District worked with landowners, the Freeborn County Ditch Authority, the Minnesota Department of Natural Resources, Pheasants Forever and the U.S. Fish & Wildlife Service on BWSR Clean Water Fund grant-supported projects. Pheasants Forever worked with Outdoor Heritage Funds and cooperated with the local chapter to acquire the 245-acre parcel.

MONITORING: Shell Rock River Watershed District staff collect Secchi disk readings and water samples twice a month. Minnesota Pollution Control Agency shallow-lake standards are 2.3 feet clarity, 90 micrograms per liter (ug/L) for phosphorus and 30 ug/L for Chlorophyll-a. Minnesota’s two-part water quality standard requires phosphorus levels to be at or below a certain level. Additionally, either Secchi disk or Chlorophyll-a readings (an indication of algal growth) must meet the standard. Pickerel Lake’s 2015 through 2019 Secchi disk readings surpassed the standard for clarity. Its 2020 and 2021 readings did not. In 2021, phosphorus and Chlorophyll-a readings did not meet state standards.

The SRRWD’s goal is to see continued improvements in water clarity trends. Water quality always fluctuates. Factors that cause variations in monitoring results include drought and heavy rains. The time of day and time in the growing season influence individual sample results.

New outlet cuts erosion and armors ditch banks

Bryan Fisher is eager to see water quality improve. The 10 acres he co-owns with two siblings includes 1,000 feet of Pickerel Lake shoreline. He hunts and camps there, but algae blooms and murky water have kept him from putting the dock out for the past 15 years.

“I’m hoping that Pickerel Lake continues to be cleaner and cleaner,” said Fisher, 46, who lives on a lake in Maplewood.

Fisher cooperated with the Shell Rock River Watershed District, another property owner and a renter to allow the judicial ditch outlet reconstruction, which fixed head-cutting that unleashed sediment into Pickerel Lake and threatened to consume the access to his land.

“We would have lost roads on both ends of our property,” Fisher said. “(The erosion was) creeping up over the past 20 years.”

Clean Water Funds from the Minnesota Board of Water and Soil Resources and matching dollars covered the \$47,680 cost to install a modified rock weir and 300 feet of riprap. The project at the Judicial Ditch 9 outlet is designed to curb the head-



Top: A modified rock weir armored with rock and underlain with erosion-control materials is designed to hold water, curb erosion and stabilize the banks of Judicial Ditch 9. Before the Clean Water Fund-backed project was installed, erosion carved a 50-foot-long, 8-foot-wide gully to Pickerel Lake. **Above:** The erosion that caused head-cutting and deposited tons of soil into Pickerel Lake also threatened access to landowners’ property. **Photos Courtesy SRRWD**

cutting that deposited tons of soil into Pickerel Lake.

In addition to the two restorations, other elements of Clean Water Fund-supported work targeting Pickerel Lake included the following.

Two-stage ditch: The 3,000-foot-long project south of Albert Lea and east of Highway 69 allows for

temporary water storage and curbs nutrient-loading to Pickerel Lake.

Waterways: The final, \$25,220 piece of the project, 2,000 feet of waterways were constructed upstream from the 45-acre restoration, where native upland species surround 15 acres of restored wetlands. An easement with a

“ Courtney was fabulous. She helped us get permissions, she helped us with the whole thing. I was impressed with their efficiency, the quality of work. It appears to have stopped the erosion. ”

— landowner
Bryan Fisher, on working with the Shell Rock River Watershed District

neighboring landowner allows temporary water storage during heavy rains.

Streambank restoration: A 1,000-foot-long restoration on an unnamed stream armored eroding slopes, added riprap, removed invasive plants and seeded native species.