



New twists on Twin Cities paddling route built to improve water quality

Middle Rice Creek remeander is one element of \$7 million plan for nutrient-impaired Long Lake; Clean Water Fund tax dollars are in play



VIDEO:
Experimental invasive carp management on Rice Creek

NEW BRIGHTON — A Twin Cities paddling route got a lot more sinuous, a bit longer and somewhat wilder this season when a previously straightened segment was channeled into a remeandered stream.

“You get more of a good thing. You’re on a beautiful creek on a beautiful stretch,” said Anoka County Parks’ recreation program coordinator Todd Murawski, who led two late-summer paddles through the reach.

The 0.83-mile-long Middle Rice Creek restoration doubled the length of the segment, which flows through Ramsey County’s



Matt Kocian, a lake and stream specialist with Rice Creek Watershed District, visited a remeandered segment of Middle Rice Creek on April 30 when water levels were high. **Photo Credit:** Ann Wessel, BWSR

124-acre Rice Creek North Regional Trail Corridor just east of Interstate 35W. Engineers designed the curves and rocks to reduce erosion and

sediment-loading.

Sediment can carry phosphorus and nutrients that spur algae growth and turn lakes green.

Top: A Rice Creek Watershed District trail camera captured paddlers July 20 in a remeandered segment of Middle Rice Creek, which parallels the former streambed. The remeandering is part of the watershed’s \$7 million, four-part plan to improve water quality in nutrient-impaired Long Lake. A Clean Water Fund grant from the Minnesota Board of Water and Soil Resources is in play. **Photo Courtesy Rice Creek Watershed District**



A Rice Creek Watershed District trail camera captured paddlers using the original, previously straightened stream while the remeandered segment of Middle Rice Creek, at left, was being constructed. **Photo Courtesy Rice Creek Watershed District**

The \$870,000 restoration is part of Rice Creek Watershed District’s \$7 million effort to improve water quality in nutrient-impaired Long Lake. The creek flows through the former Twin Cities Army Ammunition Plant property.

The four-part Long Lake Targeted Watershed Demonstration Project draws from \$3 million in Clean Water Funds from the Minnesota Board of Water and Soil Resources.

Other project elements address phosphorus and nutrient-loading from the 100,000 acres that flow into Long Lake. They include invasive carp management; \$2.7 million in water-quality improvements at New Brighton’s Hansen Park, including a \$500,000 iron-enhanced sand filter that went online this summer; and Mirror Lake stormwater retrofits in Saint Anthony Village.

A bit of replanting in August

Constructed elements

A remeandered stream is meant to mimic the real thing. Consulting engineer Emmons & Oliver Resources of Oakdale and contractor Veit of Minneapolis employed the following elements in the Middle Rice Creek project.

CROSSINGS: Rock stabilizes the streambed where the channel segues from old to new, and provides grade control.

SOIL ENCAPSULATED

FABRIC LIFTS: A heavy-duty woven fabric can be backfilled with soil and seeds, and layered to stabilize the bank while allowing plants to grow. AKA fabric lifts, they’re also used in transition zones.

ROOT WADS: Trees anchored into the banks slow water’s flow, prevent erosion and create a more complex habitat.

completed work on Middle Rice Creek, which is poised to come in under budget.

RCWD’s lake and stream specialist Matt Kocian explained the two-phase remeandering.

After contractors excavate a new channel, they typically give native sedges, grasses and wildflowers time to establish before rerouting

the existing stream. The new channel sat empty for nearly two years because a warm winter construction season delayed work. Clay plugs were removed in March, releasing water into the constructed channel.

“In retrospect, I think it probably added some security for the channel in terms of allowing it to stabilize that much more,”

Kocian said. The plantings withstood this summer’s high flows.

With tall, erosion-prone banks, the old channel — straightened pre-1900 — was the highest sediment-contributor along the creek. Eventually, it will melt into the landscape.

Now, a winding corridor cuts velocity, keeps water from carving into the banks and allows sediment to settle. Deep-rooted native species replace invasive reed canary grass. The habitat is more likely to attract great blue herons, egrets and turtles.

Improving in-stream habitat was a secondary goal. Middle Rice Creek shows impaired biota — a negative change in the numbers and types of aquatic life such as fish and invertebrates.

“The habitat in the channel and adjacent wetland habitats and connected



A stream remeandering, shown at top left on April 30, added nearly a half-mile to Middle Rice Creek, which will help to reduce erosion and sediment-loading. It's part of Rice Creek Watershed District's \$7 million Long Lake Targeted Watershed Demonstration Project. **Photo Credit:** Ann Wessel, BWSR

floodplains are much more diverse. It should support diverse wildlife," Kocian said of the remeandering.

Because the stream runs through a county park, the watershed district had more land to work with here compared with most Twin Cities sites.

"This was a pretty unique opportunity, especially in

the metro area, to take a straightened channel and restore it to a more meandering path," Kocian said.

Those added curves not only slow the water but also transform what was a straight-line float into a more leisurely and scenic paddle that requires maneuvering around the bends.

In mid-August, Murawski's group of paddlers counted 75 green herons during a 6.5-hour, 9.5-mile paddle that passed through the remeandered segment.

There, green herons perched on bank-stabilizing root wads and in trees. Murawski said he expected green herons, great blue herons and egrets — but he was surprised by

“

It's always been beautiful. But now that they've remeandered it, the whole idea is to slow the creek down. ... You get more of a good thing. You're on a beautiful creek on a beautiful stretch. ... Along with slowing the water down, it takes more time to paddle.

”

— Todd Murawski, Anoka County Parks' recreation program coordinator

their abundance.

"They made a good thing better. It was always a beautiful (stretch) to paddle. But now there's more wildlife. The vegetation is more diverse. You get a little bit more of the creek," Murawski said.



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. www.bwsr.state.mn.us.