



# Shingle Creek’s linked restorations augment habitat, curb bank erosion

Within the confines of an urban stormwater system that drains to the Mississippi River, Shingle Creek WMC’s Clean Water Fund-backed habitat and water quality work focuses on stretches within Brooklyn Park, Brooklyn Center

Stream restoration work slated to begin this spring on the second of two adjoining Shingle Creek Watershed Management Commission



**CLEAN WATER LAND & LEGACY AMENDMENT**

Clean Water Fund grants BWSR awarded Shingle Creek WMC in 2014 and 2021 support two segments of connected stream restorations.

projects will bring the nine-city WMC one step closer to meeting water-quality standards.

Together, the Clean Water Fund-backed projects known as Connections I and Connections II will restore about two-thirds of a mile of Shingle Creek in Brooklyn Park and



**From top:** By late summer 2016, native plants grew along Shingle Creek WMC’s Connections I stream restoration. Erosion control fabric covered native vegetation planted in spring 2016. A dense tree canopy appears along a segment of the planned Connections II project. **Photo Credits:** Shingle Creek WMC

Brooklyn Center. The 11-mile-long creek drains stormwater from 44.5 square miles. The two Clean Water Fund grants address impairments for bacteria, dissolved oxygen and macroinvertebrates.



**Spector**

“Because it’s now part of a storm sewer system, essentially, we can never really return it to the narrow, winding prairie stream that it was before European settlement. But we can try to add back some elements that will help improve the stream and its ability to



In Brooklyn Park, a trail connection and amphitheater-style overlook were constructed in conjunction with the Shingle Creek WMC stream restoration. **Photo Credit:** Brooklyn Park

support aquatic life,” said project coordinator Diane Spector of the engineering consultant firm Stantec.

“The purpose of doing the project was to add back some habitat that had been lost, to help improve its ability to hold dissolved oxygen, and basically to restore some natural functions,” Spector said.

Over time — aerial photos show by the 1930s segments of the stream were straightened — Spector said Shingle Creek became a flat, sandy bottomed channel hemmed by deeply shaded banks and prone to stagnation when water levels were low.

A \$200,000 Clean Water Fund grant the Minnesota Board of Water and Soil Resources awarded to Shingle Creek WMC in 2014 supported the first ecological restoration known as Connections I. That \$275,880 project centered on 1,400 feet of Shingle Creek in Brooklyn Park, starting at Brooklyn Boulevard near Park Center High School and ending at Brookdale Park to the east.

“Getting a Clean Water Fund grant allows us to do more projects, and do more on the project.”

— Andy Polzin, chairman, Shingle Creek WMC



Contractors planted deep-rooted native species to stabilize the banks, and thinned the trees to allow those plants to grow. Rocks placed within the creek improved aeration and habitat. A fish ladder replaced a 3-foot drop structure. A bit of re-meandering slowed velocity and further improved habitat.

“It looks more natural,” Spector said of the results.

Work finished in spring 2016. The WMC obtained \$69,000 in capital improvement funds through a Hennepin County-certified levy shared by the nine member cities. The cities of Brooklyn Center and Brooklyn Park covered the balance.

The project cost less than the original \$300,000 estimate because it was completed in conjunction

with a Brooklyn Park trail and park improvement.

A \$328,000 Clean Water Fund grant BWSR awarded in 2021 supports the second, 1,750-foot-long ecological restoration set to begin this spring. That project, which starts at Brooklyn Boulevard and extends upstream to the north and west, will thin trees, establish native plant streambank buffers, repair erosion and enhance habitat. Because it runs through private property, there is less opportunity for re-meandering.

The two restorations combined will keep an estimated 31 tons of sediment and 6 pounds of phosphorus out of the stream each year. Sediment carries pollutants and degrades streambed habitat. One pound of phosphorus can create 500

## Projects’ Details

**MEMBER CITIES:** Brooklyn Center, Brooklyn Park, Crystal, Maple Grove, Minneapolis, New Hope, Osseo, Plymouth, Robbinsdale

**MONITORING:** The stream monitoring data Park Center High School students have collected since the 1990s through Hennepin County’s RiverWatch program will give the Shingle Creek WMC a baseline to compare the restorations’ effect on macroinvertebrates.

**CHALLENGE:** The pool immediately downstream from the 3-foot drop structure was much deeper than expected, so more rock was required to fill it and build the fish ladder.

pounds of algae.

“What happens anywhere on the stream is an improvement for elsewhere on the stream,” Spector said.

“As we’re stabilizing the streambanks, we’re reducing the amount of sediment and nutrients which are being eroded from the streambank and being washed downstream,” Spector said. “One of our objectives is to improve aquatic life within the stream along its entire 11-mile length. As we’re doing these restoration projects a bit at a time, we’re slowly providing more habitat and more places that can better support aquatic life so that they may be able to better tolerate the areas where maybe we haven’t gotten to yet.”

Fish enter the creek from connected lakes. Improved

stream habitat would most likely result in more minnows and aquatic insects. In Minneapolis, a 9-foot drop structure known as Webber Park Falls prevents Mississippi River fish from entering the creek.

“We’re trying to look for projects where we can clean things up before it gets farther downstream,” said Brooklyn Park Water Resources Engineer Mitch Robinson, who serves on the committee that advises the WMC.

“The stream restoration projects are a good way — a pretty cost-effective way, we’ve found — for improving water quality (in terms of) phosphorus- and TSS- (total suspended solids) loading from these eroding streambanks,” Robinson said.

While the Connections I and Connections II projects focused on improving water quality and habitat, the WMC also considered adjacent landowners’ concerns about thinning the trees — which, in some cases, screened a less-than-desirable view.

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In some spots, the WMC replaced trees with new plantings set farther back from the stream. Once the project was underway, some landowners realized the trees blocked a desirable view. Some requested tree removal.

“One of the big challenges with stream restorations is there is a period when they look really bad,” said Shingle Creek WMC Chairman Andy Polzin, who represents Plymouth on the nine-member commission.

Until work finishes, banks stabilize and plants grow, Polzin said it can sometimes be difficult to help people understand how appealing restorations will look.

Just upstream in Brooklyn Park’s Village Creek Redevelopment, Spector described Shingle Creek as the “star of the area.” The creek became the focus of that redevelopment, which began about 20 years ago as a result of the city’s master planning work with Hennepin Community Works. Spector said the city of Brooklyn Park’s work on Village Creek was the impetus for the current Clean Water Fund-backed restorations.

The Connections sites’ linked walking trails and a new viewing area make it easier for people to see the progress, learn about the WMC’s work and get close

to the water.

“The more we do and the better we do at education and outreach, the more people understand the creek and the mission of the city and the watershed and improving water quality. It gives them a chance to connect to surface water, which a lot of people really don’t have an opportunity to do,” Polzin said.

Next, Spector said the WMC is pursuing funding for a Connections III restoration that would end downstream at Xerxes Avenue.



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