



Capital Improvement Project

Lakeville: North Creek Foxborough Park TSS Reduction



Figure 1. The completed dry pond and wet sedimentation forebay with rock gabion wall, November 2024.

Much of the area draining to the North Creek tributary of the Vermillion River was developed before stormwater requirements were implemented. Hence, many neighborhoods don't have stormwater treatment practices that decrease flow rates or improve water quality. A large portion of the untreated stormwater runoff in the 220-acre subwatershed drains directly into North Creek. This was one of the reasons North Creek was placed on the Minnesota Pollution Control Agency's Impaired Waters list in 2022. North Creek is also the third-highest priority subwatershed (out of eight) for improvements in the 2016-2025 Vermillion River Watershed Management Plan. This location in Lakeville's Foxborough Park had the highest estimated pollutant loading area of all those evaluated along this reach of North Creek.

To address impairments, the Vermillion River Watershed Joint Powers Organization (VRWJPO), Dakota County, and the City of Lakeville constructed a dry pond with a wet sedimentation forebay in Foxborough park to prevent untreated runoff with total suspended solids (TSS) and total phosphorus (TP) from reaching North Creek. The forebay has a permanent pool to trap sand, debris, and sediment. A rock gabion wall and sand filter bench were constructed to trap smaller pollutants and remove phosphorous. The project was completed alongside North Creek channel improvements to reduce TSS, also supported by a Clean Water Fund competitive grant from the Minnesota Board of Water & Soil Resources (BWSR). This should result in a healthier North Creek and Vermillion River, a regionally significant resource for recreation and public use.

Partners

- VRWJPO
- City of Lakeville
- Dakota County
- BWSR

Installation

- 2024

Location

- Lakeville

Subwatershed

- North Creek

Costs and Contributions

- VRWJPO: \$5,036 for in-kind grant administration/coordination.
\$28,875 cash match for construction
- Dakota County: \$28,875 cash match for construction
- City of Lakeville: \$28,875 cash match for engineering, permitting, and construction management
- BWSR: \$346,500 in competitive Clean Water Fund for engineering and project construction

Benefits:

- It is estimated that the project will reduce TSS loading by 18.4 tons/year and TP by 31.8 pounds/year.
- By improving this reach of North Creek, downstream reaches of North Creek and the Vermillion River will benefit from reduced impacts of TSS on in-stream habitats, which should result in healthier biological communities.
- Stormwater retention will provide flow rate control to historical conditions for flood relief benefits to the area.



Figure 2. Pipe outlet into North Creek from project site.

A grant from the Clean Water Fund, one of four funds established by the Clean Water, Land & Legacy Amendment, supports this project. [Clean Water Stories](#) can be found on the Minnesota Board of Water and Soil Resources website.

