Capital Improvement Project
Lakeville: Firelight Way Total Suspended Solids (TSS) Reduction



Figure 1. Screenshot of a map of the Greenridge Park area in Lakeville. The red dot indicates the approximate location of a planned hydrodynamic separator.

In early 2024, the City of Lakeville (City) undertook a feasibility study to evaluate potential best management practices (BMPs) in urbanized areas as part of its work to reduce pollutant loads, namely total suspended solids (TSS), to the North Creek tributary of the Vermillion River. This aligns with the Vermillion River Watershed Joint Powers Organization's (VRWJPO) goals to improve North Creek, which has several reaches listed on the Minnesota Pollution Control Agency's Impaired Waters List.

During the 2024 Watershed-Based Implementation Funding (WBIF) planning process, the VRWJPO, in partnership with the City, proposed installing a hydrodynamic separator (HDS) on Firelight Way east of Greenridge Park to reduce sediment transport in stormwater runoff from surrounding urbanized areas. An HDS is a stormwater device that uses cyclonic forces to remove pollutants in stormwater runoff, namely TSS. It will be connected to the existing storm sewer system and can remove an average of 1,868 lbs. of TSS per year from stormwater. VRWJPO has installed these types of devices at multiple project sites in recent years, including several in Lakeville.

The Firelight Way HDS project will be funded in part by a WBIF grant, money distributed to the Vermillion River Watershed from the Minnesota Clean Water Fund by the Minnesota Board of Water & Soil Resources (BWSR).

3/2026

Partners:

- VRWJPO
- City of Lakeville
- Dakota County
- BWSR

Installation (anticipated): June 2026

Location: Lakeville

Subwatershed: North Creek

Costs and Contributions (anticipated):

- VRWJPO: $10,000
- City of Lakeville: $91,710
- Dakota County: $10,000
- BWSR: $184,300 in Watershed-Based Implementation Funding

Benefits:

- The HDS is estimated to remove an average of 1,868 lbs./year of TSS from stormwater entering North Creek.
- As stormwater from this area outlets to North Creek and eventually the Vermillion River, treatment can help address impairments in both water bodies.



Figure 2. An example of a hydrodynamic separator being installed.

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.

Vermillion River Watershed Joint Powers Organization
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