Capital Improvement Project
Lakeville: Firelight Way Hydrodynamic Separator



Figure 1. A construction crew installs a hydrodynamic separator under Firelight Way in Lakeville.

In early 2024, the City of Lakeville ran a feasibility study to evaluate best management practices (BMPs) in urbanized areas to reduce total suspended solids (TSS) loading from local stormwater runoff in the North Creek tributary of the Vermillion River. Then during the 2024 Watershed-Based Implementation Funding (WBIF) process, the Vermillion River Watershed Joint Powers Organization (VRWJPO), in partnership with the City, proposed installing a hydrodynamic separator (HDS) on Firelight Way east of Greenridge Park. The project was completed in June of 2026, one of several the VRWJPO has implemented in recent years.

An HDS is a stormwater device that uses cyclonic forces to remove pollutants in stormwater runoff, namely TSS. It is connected to the existing storm sewer system and could remove an average of 1,868 lbs. of TSS per year from stormwater. This aligns with the VRWJPO's goals to restore North Creek, which has several reaches listed on the Minnesota Impaired Waters List.

The Firelight Way HDS project was 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).

9/2026

Partners:

- VRWJPO
- City of Lakeville
- Dakota County
- BWSR

Installation: June 2026

Location: Lakeville

Subwatershed: North Creek

Costs and Contributions:

- 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.
- Stormwater from this area outlets to North Creek and eventually the Vermillion River Mainstem further downstream. Improved treatment can address impairments in areas beyond the North Creek subwatershed.



Figure 2. Firelight Way during construction of the HDS.

A grant from the Minnesota 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 BWSR website.

Vermillion River Watershed Joint Powers Organization

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