



## Capital Improvement Project Lakeville: South Creek Temperature Reduction



South Creek flowing out of Stormwater Basin

Separating South Creek from the stormwater basin will result in significantly cooler temperatures, increased dissolved oxygen, and less sediment-laden water in South Creek, helping to improve water quality.

### Vermillion River Watershed Joint Powers Organization

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### Protecting South Creek

Trout streams require cold water to support the specific fish and macroinvertebrate populations that exist within them. South Creek is one of the coldest portions of trout stream within the Vermillion River Watershed, producing some of the largest, trophy-sized brown trout and a significant amount of young-of-year fish.

Previous studies in the watershed have shown that stormwater basins directly connected to or within a close proximity to the Vermillion River and its tributaries are prone to having warm water temperatures as a result of exposure to solar radiation. Eliminating these basin connections or attempting to reduce the amount of time they discharge to trout streams during these periods is vital to keeping stress or mortality of fish and macroinvertebrates to a minimum.

South Creek currently flows through a large stormwater basin near Holyoke Avenue and 210th St. in Lakeville. The VRWJPO and City of Lakeville will construct a new channel for the creek to separate it from the basin. This will result in significantly cooler temperatures, increased dissolved oxygen, and less sediment-laden water in South Creek.

Through this project, progress will be made towards addressing fish and macroinvertebrate stressors in South Creek and the Vermillion River. This project will also help address the total suspended solids (TSS) Total Maximum Daily Load (TMDL) reductions for the Vermillion River.

### Problem:

- South Creek currently flows through a stormwater basin, which results in significantly higher temperatures, lower dissolved oxygen, and sediment laden water

### Actions:

- A new South Creek channel will be created and stabilized to separate it from the existing stormwater basin

### Benefits:

- Reduce temperatures in South Creek by up to 17° F and increase dissolved oxygen by up to 2 mg/L
- Reduced TSS delivered to South Creek
- macroinvertebrate communities within South Creek
- Improved conditions for brown trout and other coldwater or sensitive species within South Creek and the Vermillion River

### Costs and contributions:

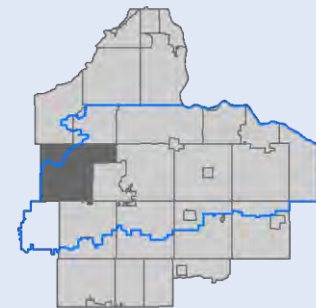
- Vermillion River Watershed Joint Powers Organization: \$35,066 in cash match
- City of Lakeville: \$35,066 in cash match
- Clean Water Fund: \$153,868 grant



The new South Creek channel

A project completed cooperatively by:

- Vermillion River Watershed Joint Powers Organization
- City of Lakeville
- Clean Water Fund Grant



City of Lakeville, MN  
off Holyoke Ave. south  
of 210<sup>th</sup> St. W.

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

