



2019 South Creek Restoration at Hamburg Avenue



Overview

Through a partnership with the Vermillion River Watershed Joint Powers Organization (VRWJPO), the City restored approximately 1,400 linear feet of the Department of Natural Resources (DNR) designated trout stream near the intersection of Hamburg Ave and Lakeville Blvd. In addition, six acres of previously cropped agricultural land was converted to native vegetation to provide an enhanced stream buffer. Restoration and stabilization was achieved using bioengineering, limiting the need to obtain materials from offsite.



Practices

- ◆ Stream restoration
- ◆ Water quality enhancement
- ◆ Fisheries protection
- ◆ Habitat creation

Benefits

- ◆ Nonpoint pollution reduction (sediment and phosphorus)
- ◆ Promotion of trout populations
- ◆ Promotion of pollinator habitat
- ◆ Restoration of an impaired water

Partners

- ◆ VRWJPO
- ◆ MN DNR

Contractor

- ◆ Wenck Engineering
- ◆ Sunram Construction

Timeline

- ◆ Construction initiation— August
- ◆ Final stabilization— September

Project made possible with funding assistance from Minnesota's Clean Water Fund



Funding

City of Lakeville: \$38,950
Grant funding: \$282,000

Project Cost: \$320,950



(Left and Right) High flows under the Hamburg Ave culvert eroded and overwidened the channel. Brush mattresses, sourced onsite, were installed and seeded to stabilize the channel and provide fish habitat.



(Below) Root wads and tree pins stabilize previously eroding channel banks.

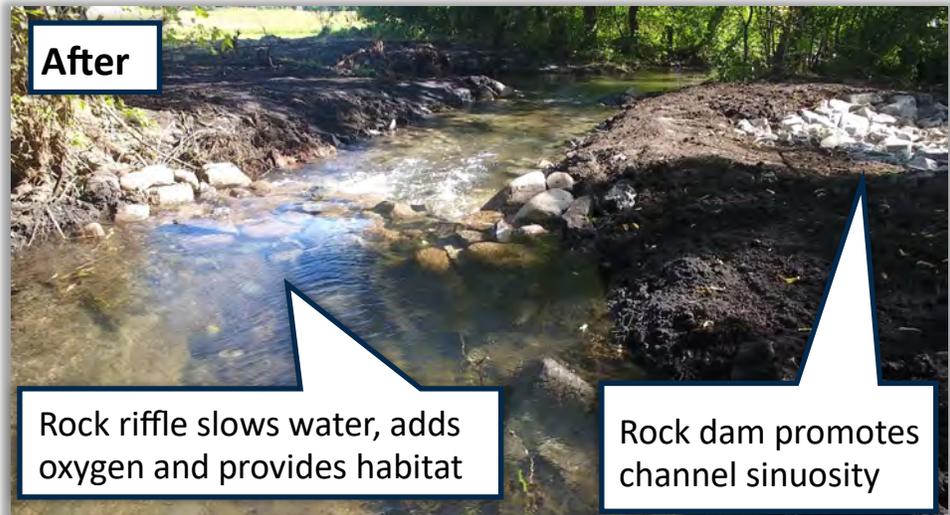
(Above) Tree pins positioned in the channel slow water, direct flow and provide fish habitat. Rip rap installed in the drainageway that enters that discharges to the stream settles sediment from the water column.



Before

Channel bypass facilitates erosion

(Left) Prior to the restoration, debris had obstructed the natural stream flow path and the channel did not have fixed, stabilized banks.
(Below) A rock dam was installed to return the channel to a more natural flow path and provide additional trout spawning habitat.



After

Rock riffle slows water, adds oxygen and provides habitat

Rock dam promotes channel sinuosity