



Capital Improvement Project Lakeville: South Creek at Hamburg Avenue Stream Restoration



Stream restoration included installing numerous in-stream habitat features, narrowing portions of the channel that are over-widened, stabilizing the bank, and improving riparian conditions to limit sedimentation and improve wildlife habitat.

Vermillion River Watershed Joint Powers Organization

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Restoring a trout stream

South Creek, a tributary to the Vermillion River, is a Department of Natural Resources (DNR)-designated trout stream. This reach of South Creek, downstream of Hamburg Avenue in Lakeville, MN, is approximately 1,400 feet long; a small tributary joins at the end of the reach.

Based on studies conducted by the Vermillion River Watershed Joint Powers Organization (VRWJPO) and the Minnesota Pollution Control Agency, this reach of South Creek is an impaired water. The fish and macroinvertebrate communities are impaired due to stressors in the watershed. Those stressors were identified as turbidity, lack of dissolved oxygen, excessive water temperature, and habitat alteration.

This habitat restoration project directly addressed the turbidity, dissolved oxygen, and habitat alteration stressors, and indirectly addressed the temperature stressor.

The City acquired this parcel in 2018 to protect the riparian area and work to develop the Lake Marion Greenway, a protected and publicly owned corridor between the Cities of Lakeville and Farmington that provides for habitat, benefits to water quality, transportation (trail), and recreation. Once acquired, the VRWJPO applied for a Conservation Partners Legacy Grant through the Minnesota Department of Natural Resources was applied for and awarded to help offset the costs of the restoration project.

Problems:

- Portions of the reach were shallow and over-widened.
- Creek bed substrate provided limited spawning habitat.
- Some of the stream banks were unstable.
- Turbidity, lack of dissolved oxygen, habitat alteration, and excessive stream temperature contributing to fish and macroinvertebrate impairment.

Actions:

- Narrow stream sections with bank stabilization and bioengineering.
- Remove stream blocking trees
- Install rock and woody habitat features
- Install riffles for re-aeration
- Establish native vegetation within the riparian area

Benefits:

- Improved quantity and diversity of habitats provide cover for aquatic biota.
- Narrowing of the channel moves sediment through this stream reach, resulting in deeper pools, better substrate, adequate cover, and more areas to spawn.
- Addition of features to promote aeration and improve dissolved oxygen concentrations.
- Improved riparian habitat conditions provide for better bank stability, more wildlife habitat, less sediment loading, and mitigated water temperature.
- Expansion and enhancement of a publicly accessible corridor along South Creek.

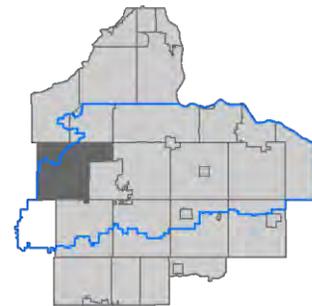
Costs and contributions:

- Vermillion River Watershed Joint Powers Organization: In-kind grant administration and construction oversight.
- City of Lakeville: Estimated \$38,950 cash match and in-kind construction oversight.
- Minnesota Department of Natural Resources Conservation Partners Legacy Grant: Estimated \$197,260.



A project completed cooperatively by:

- Vermillion River Watershed Joint Powers Organization
- City of Lakeville



A grant from the Clean Water Fund, one of four funds established by the Clean Water, Land & Legacy Amendment, supported this project.