



## Capital Improvement Project

# Hastings: Hastings Industrial Park Ravine Stabilization and Restoration



After

The Industrial Park Ravine in the City of Hastings was re-graded and stabilized using a turf reinforcement mat. A pond was constructed at the top of the ravine to control the flow rate in the ravine and provide settling of runoff sediment.

The project was completed cooperatively by the:

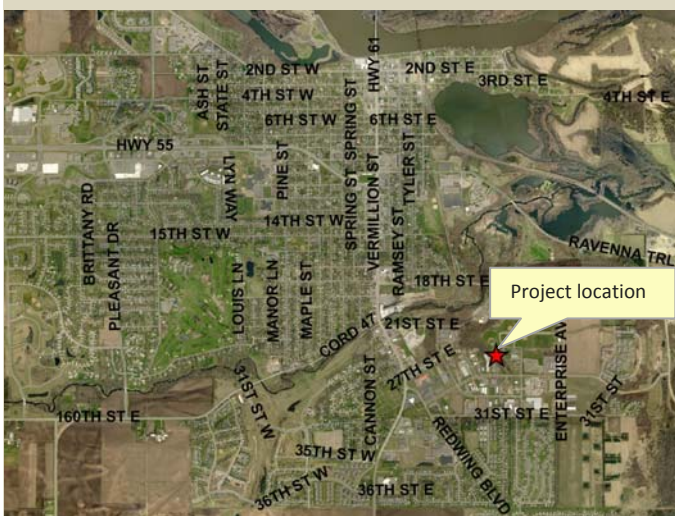
- City of Hastings
- Dakota County Soil and Water Conservation District
- Vermillion River Watershed Joint Powers Organization

## Reducing Sediment from Entering the Vermillion River

Stormwater flow caused significant erosion, ten to 12 feet deep in places, in the 2,200-foot long ravine adjacent to Spiral Boulevard in Hastings. Sediment- and nutrient-laden waters drained into the Vermillion River. That reach of the Vermillion River is currently impaired for turbidity (cloudiness).

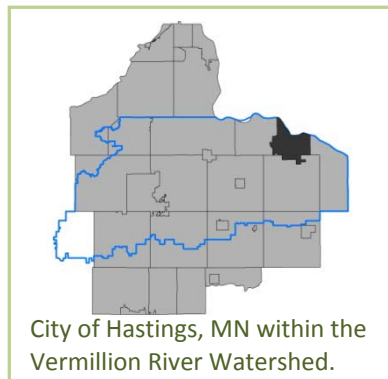
Cost-share funding from the Vermillion River Watershed Joint Powers Organization enabled the City of Hastings to re-grade and stabilize the ravine, prevent further erosion, build a treatment pond, and reduce sediment from entering the Vermillion River. The ravine was stabilized with a turf reinforcement mat to prevent erosion and promote the growth of grass and other vegetation in the ravine.

The project will reduce the amount of sediment entering the Vermillion River and will help address the turbidity impairment.



Before





**Vermillion River Watershed  
Joint Powers Organization**  
14955 Galaxie Avenue  
Apple Valley, MN 55124  
[www.dakotacounty.us](http://www.dakotacounty.us)  
952-891-7000

The Vermillion River is a vital natural resource that is important to public health and recreation, as well as preserving unique wildlife habitats. It flows from New Market Township in Scott County, through residential and agricultural areas in central Dakota County, and cascades into a 100-foot ravine before it enters the Mississippi River near the Cities of Hastings and Red Wing, Minnesota. Throughout its journey, the river reflects urban and rural life within its 335-square mile watershed.

## Problem:

- Stormwater flow caused erosion in the ravine adjacent to Spiral Boulevard
- Large amounts of sediment have been delivered by the eroding ravine to the Vermillion River
- Approximately 230 acres of a mostly developed watershed has drained to the ravine with minimal water quality treatment
- The ravine drains to a reach of the Vermillion River where a turbidity impairment exists

## Actions:

- Re-grade and stabilize approximately 2,200 feet of highly eroded ravine draining to the Vermillion River
- Install turf reinforcement mat to prevent further erosion and promote vegetation growth
- Install pond at the top of the ravine to control flow rate and allow settling of runoff sediment

## Benefits:

- Addresses turbidity impairment in Vermillion River
- New bike trail parallels ravine and allows for public viewing and enjoyment
- Allows for education, outreach, and stewardship

## Costs and contributions:

- City of Hastings: \$284,065 – engineering and labor
- Vermillion River Watershed Joint Powers Organization: \$125,000 – cost share
- Dakota County Soil and Water Conservation District: design and construction technical assistance



**Project completed November 2009**