



Capital Improvement Project

Lakeville: 205th Street Channel Stabilization



After

The 205th Street channel in the City of Lakeville was re-graded, stabilized using erosion-control features, and planted with native species.

The project was completed cooperatively by the:

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

Protecting Lake Marion

Stormwater flow caused erosion and bank failure, and carved a six to eight foot deep ravine in the 600-foot long drainage channel at 205th Street in Lakeville. Sediment- and nutrient-laden waters drained into Lake Marion and created several water quality issues, such as cloudy water, algae blooms, and low dissolved oxygen.

Cost-share funding from the Vermillion River Watershed Joint Powers Organization enabled the City of Lakeville to stabilize the channel, prevent erosion, and reduce sediment and nutrients running into Lake Marion. The bottom of the channel was lined with rocks to slow the water flow, and the sides were stabilized with native plants, rocks, and special erosion control fabric.

The water quality improvements in Lake Marion will enhance year-round fishing and recreation.



Before



City of Lakeville, MN within the Vermillion River Watershed.



**Vermillion River Watershed
Joint Powers Organization**

14955 Galaxie Avenue
Apple Valley, MN 55124
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 causes erosion in the channel at 205th Street
- The channel drains sediment and nutrients into Lake Marion
- The moving water carves into the channel that is already six to eight feet deep

Actions:

- Grade and restore approximately 600 feet of highly eroded ravine draining to Lake Marion
- Re-establish natural channel shape and floodplain
- Stabilize and armor eroded slopes and channel so that it is able to convey high flows from the 531-acre watershed

Benefits:

- Reduces water quality problems such as cloudiness, algae blooms, and low dissolved oxygen by reducing erosion and pollution into Lake Marion
- Enhances wildlife habitat
- Improves aesthetics
- Reduces chance for accidents near steep bank
- Allows for education, outreach, and stewardship

Costs and contributions:

- City of Lakeville: \$169,978 – engineering and labor
- Vermillion River Watershed Joint Powers Organization: \$84,989 – 50 percent of total project cost
- Dakota County Soil and Water Conservation District: design and construction technical assistance



Project completed May 2009