

City of Farmington Schmitz-Maki Ice Arena Stormwater Retrofit



Before

Project:

A 625 square foot bioretention cell provides water quality treatment for the runoff from approximately 0.50 acres of existing parking lot.

Practice:

Stormwater Retrofit (Bioretention)

Benefits:

Runoff volume reduction

Reduction in sediment and phosphorus

Partners:

Minnesota Board of Water and Soil Resources

City of Farmington

Vermillion River Watershed JPO

Watershed:

Vermillion River



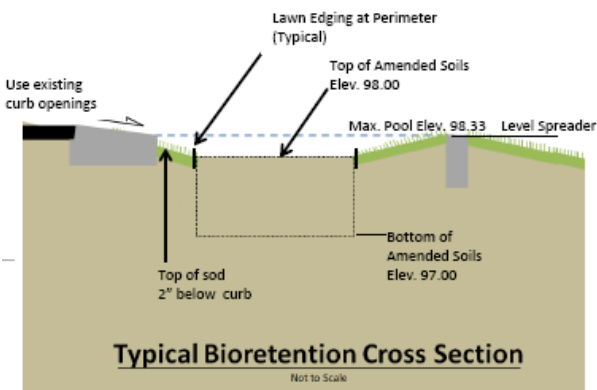
After

Funding:

| | |
|------------------------|---------|
| Total project cost | \$6,422 |
| State Clean Water Fund | \$4,056 |
| Landowner | \$2,366 |

Location:

Farmington
Minnesota



Construction 2010



Clean Water Fund:
Protecting and restoring
Minnesota's waters
for generations to come.

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The project retrofits stormwater best management practices to an older public facility that was constructed without provisions to treat stormwater runoff.



The existing facility released untreated stormwater runoff carrying sediment, nutrients, metals and increased thermal loads into the Vermillion river, a designated trout stream.



Box elder trees, stumps and other undesirable woody debris was removed to create a location for a bioretention cell along the flow path between the parking lot and the riverbank.



Imported granular materials formed a perimeter berm. Coarse washed sand was mixed into the existing soils to create a planting bed. Turf sod stabilized the area to reduce erosion.



The vegetated inlet swale and bioretention cell help filter runoff to reduce pollutant loads. High flows bypass the main cell and are routed over a weir structure armored with rip rap.



Due to poorly drained soils, the cell's pool depth is limited to 4 inches or less. Perimeter sod, lawn edging, a layer of shredded wood mulch, and a native shrub planting complete the cell.