Douglas Township Trout Brook Streambank Stabilization

Project: This project stabilized 6,000 square feet of active streambank erosion at three locations to prevent approximately 28 tons of sediment per year from entering Trout Brook near where it joins with the Cannon River. Trout Brook is a designated trout stream. The Cannon River is protected as a Wild and Scenic River. Both Trout Brook and the Cannon River have turbidity impairments.

Practice: Streambank and Shoreline Protection

Benefits: Reduced Erosion

Partners: North Cannon River WMO Dakota County Minnesota Board of Water and Soil Resources Department of Natural Resources Trout Unlimited

Watershed: Cannon River

Construction 2011

Funding: Total project cost $47,246 Clean Water Fund $34,128 Project Partners $13,118

Location: Douglas Township Minnesota

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

Dakota County Soil and Water Conservation District
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The insitu soil was replaced with 70% coarse washed sand and 30% leaf litter compost mixture. All equipment operated from outside of the cell to avoid construction compaction. A 4” gate valve allows for management of the flow rate and volume of treated stormwater discharged through the subdrain system into an existing catch basin.

The permeability of the underlying soil within the cell was improved by loosening with a toothed bucket and mixing with Mix B soil. Loose soils were replaced with compacted fill. Paint markings show where an excavated core trench will be keyed into the banks and along the toe of the slope.

Three areas of active streambank erosion were stabilized along the north bank of Trout Brook near where it joins with the Cannon River. All three areas were stabilized with soil filled rip rap using the same construction method.

The geotextile filter fabric covering the compacted slope and core trench was buried along the top of the slope to prevent sliding as the rip rap was placed.

Placed limestone rip rap filled the core trench and the underlying filter fabric folded back over the top to construct a weighted toe that resists undermining.

An 18 inch depth of rip rap covered the filter fabric and was backfilled with topsoil and hydromulch seeded with native grasses and wildflowers.