

RUM RIVER CENTRAL REGIONAL PARK RIVERBANK STABILIZATION



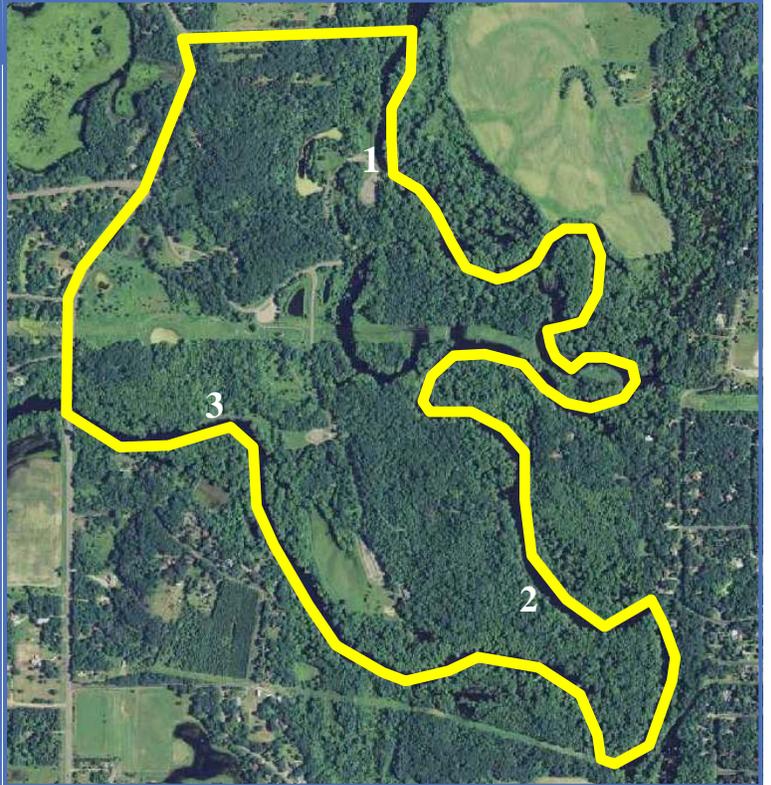
Riverbank
Stabilization



Project Summary

The Rum River Central Regional Park is located in the northeastern most corner of the City of Ramsey, at the intersection of the Cities of Nowthen, Oak Grove, Andover and Ramsey. The park consists of 460 acres of passive recreation including a network of paved and natural surface trails for walking, biking, and horseback riding. There is a canoe landing, several parking areas and a picnic shelter and playground in one portion of the park.

Anoka County Parks and Recreation Department first approached the Anoka Conservation District about correcting riverbank erosion in the park in 1999. ACD arranged for several funding sources to design and install the projects to stabilize three separate sites. In all, approximately 1250 linear feet of riverbank was stabilized utilizing a variety of techniques including rock vanes, rip rap, root wads and buffer plantings. Annual TSS and TP reductions are estimated at 548,000 lbs and 370 lbs respectively. Total project cost was \$144,707.83 including engineering services.



Project Specs

Sites Stabilized3
 Linear Feet Stabilized1,250
 Date Installed June-Aug. 2003
 TSS Reduction (lbs/yr) 584,000
 TP Reduction (lbs/yr)..... 370

Project Expenses

Design/Bidding..... \$10,000.00
 Other Eng. Serv.....\$8,500.00
 Construction Oversight.....\$4,350.00
 Construction\$110,651.82
 Promotion/Admin \$10,500.47
 Maintenance\$5,055.54
 Total..... \$144,707.83

Project Funding

Anoka Parks (cash)..... \$8,700.00
 Anoka Parks (in-kind)\$7,761.71
 Anoka SWCD (in-kind) \$4,797.37
 DNR SHP \$30,000.00
 Great River Greening..... \$10,000.00
 Met Council\$2,000.00
 Met Council (LRP)\$805.00
 NPEAP \$18,500.00
 State Cost Share \$16,892.75
 NRCS (LRP).....\$1,210.00
 Federal 319 \$30,441.00
 Total\$144,707.83



<u>ID</u>	<u>Total Cost (\$)</u>	<u>Length (ft)</u>	<u>Eroding Face (ft)</u>	<u>Lateral Recession Rate (ft/yr)</u>	<u>TSS Reductions</u> lbs/yr	<u>TP Reductions</u> lbs/yr
1	\$ 38,122.49	350	6.0	0.30	63,000	42.5
2	\$ 18,581.78	200	10.0	0.50	100,000	67.5
3	\$ 53,947.55	700	11.0	0.50	385,000	260.0
Other	\$ 34,056.01					
Annual Project Total					548,000 lbs	370.02 lbs
10 Yr Project Total					5,480,000 lbs	3,700.20 lbs
Benefit / \$100 Spent (10 years)					3,786.94 lbs	2.56 lbs
10 Yr Cost/Unit					\$0.03/lb	\$39.11/lb

Project Partners

Project design bidding and construction management: BWSR Non-Point Engineering Assistance Program.

Construction funding: Anoka County Park Department, Great River Greening, MN DNR Shoreland Habitat Protection Program, Met Council Metro Environmental Partnership, State Cost Share, US EPA 319.

Project planting: Met Council and USDA Natural Resources Conservation Service Landscape Restoration Program staffing grants, Anoka Conservation District, Anoka County Parks Department.

Project coordination and grant administration: Anoka Conservation District

Long term maintenance: Anoka County Parks Department

July 2006, 3 years after installation

Site 1 ▶



Site 2 ◀

Site 3 ▶



Site 1

Pre-Project

Site 1 consisted of approximately 350 feet of eroding riverbank within ten feet of a bituminous trail and twenty feet of a road. A combination of submerged rock vanes, erosion fabric and a native plant buffer was selected to address the erosion problem.

March 2002 ►



Installed

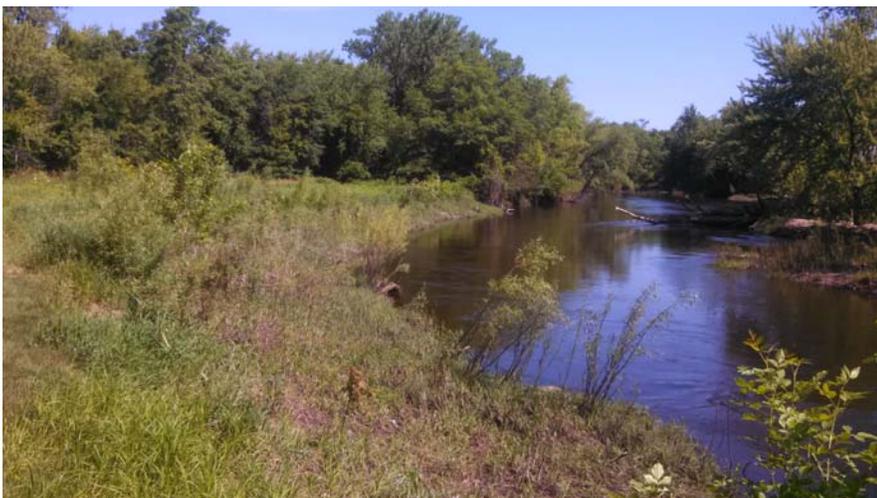
Two submerged rock vanes were installed and the site was graded. Following grading, one root wad was installed. CF7 erosion fabric was installed on the bank below bankfull and straw erosion blanket was installed above bank full. Areas below bankfull were planted with native plugs at 18 inch intervals while areas above bankfull were seeded with a native seed mix and planted with native plugs at 36 inch intervals.

◀ September 2003

Established

Three years after project installation, the slopes are well vegetated. Root wad deteriorated.

July 2006 ►



Inspected

Several years following installation. Very little of root wad remaining on downstream end of project. Severe blow out just downstream of project follow sustained high water in spring.

◀ July 2014

Site 2

Pre-Project

Site 2 consisted of approximately 200 feet of eroding riverbank within five feet of a bituminous trail. A combination of root wads, minimal rock, erosion fabric and a native plant buffer was selected to address the erosion problem.

July 2002 ►



Installed

High water delayed grading and project installation at site 2. However, after grading occurred, root wads and minimal rock were installed along with erosion control fabric and a native buffer. Areas below bankfull were planted with native plugs at 18 inch intervals while areas above bankfull were seeded with a native seed mix and planted with native plugs at 36 inch intervals.

◀ September 2003

Established

Four years after project installation, the slope is well vegetated. Root wad heavily degraded.

May 2007 ►



Maintained

In 2008 the toe of the slope was fortified with some cedar tree revetment.

◀ October 2008

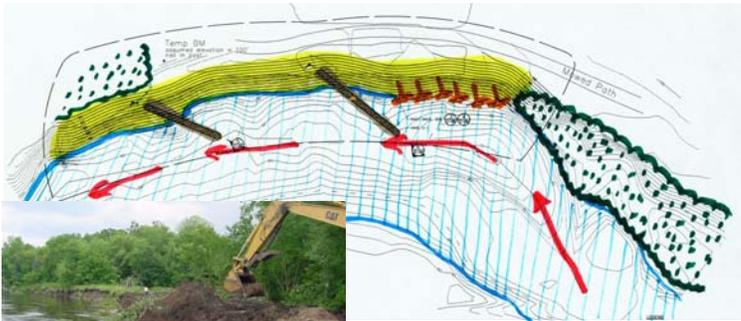


Site 3

Pre-Project

Site 3 consisted of approximately 700 feet of eroding riverbank within twenty feet of a grass horse trail. A combination of root wads, submerged rock vanes, minimal toe reinforcement with rock, erosion fabric and a native plant buffer was selected to address the erosion problem.

March 2002 ▶



Installed

Two submerged rock vanes were installed along with six root wads. After grading, erosion control fabric and native buffer were installed. Areas below bankfull were planted with native plugs at 18 inch intervals while areas above bankfull were seeded with a native seed mix and planted with native plugs at 36 inch intervals.

◀ September 2003



Established

Four years after project installation, the slope is well vegetated. Root wads heavily degraded.

July 2006 ▶



Maintained

In 2008 the toe of the slope was fortified with some cedar tree revetment in the area of the root wads.

◀ October 2008