

**Environment and Natural Resources Trust Fund
2011-2012 Request for Proposals (RFP)**

LCCMR ID: 051-B

Project Title: Elm Creek Stream Bank Stabilization Project

Category: B. Water Resources

Total Project Budget: \$ \$200,000

Proposed Project Time Period for the Funding Requested: 1 yr, July 2011 - June 2012

Other Non-State Funds: \$ 200,000

Summary:

This project will stabilize an eroding reach of Elm Creek by grading the channel cross section, rip-rapping the bank toe, and vegetating eroded banks to improve stream ecological habitat.

Name: John Barten

Sponsoring Organization: Three Rivers Park District

Address: 12615 County Rd 9
Plymouth MN 55441

Telephone Number: 763-694-7841

Email: jbarten@threeriversparkdistrict.org

Web Address: _____

Location

Region: Metro

Ecological Section: Minnesota and NE Iowa Morainal (222M)

County Name: Hennepin

City / Township: Dayton

_____ Funding Priorities	_____ Multiple Benefits	_____ Outcomes	_____ Knowledge Base
_____ Extent of Impact	_____ Innovation	_____ Scientific/Tech Basis	_____ Urgency
_____ Capacity Readiness	_____ Leverage	_____ Employment	_____ TOTAL _____%

2011-2012 MAIN PROPOSAL

PROJECT TITLE: Elm Creek Stream Bank Stabilization Project

I. PROJECT STATEMENT

Urban development in the Elm Creek watershed is causing increasing flow rates in stream channel. The increased flow rates are in turn causing bank erosion, loss of trees, and threatening roads, bridges, trails and private property in the stream corridor. A 2007 Study by Three Rivers Park District and the Elm Creek Watershed Management Commission identified a reach of Elm Creek south of the Eastman Nature Center currently experiencing severe erosion. The study revealed that existing channel has a bankfull flow capacity of 87 cfs, but must pass a 1-year rain event volume of 283 cfs. The study developed a preliminary design to stabilize the stream segment. The design includes reshaping the stream cross-section to increase the flow capacity, rip-rapping the toe of the bank to prevent scouring, and vegetating the eroded stream banks.

The goals of the project:

- Stabilize the Elm Creek stream channel to minimize tree loss and protect infrastructure
- Reduce channel erosion to improve the stream ecosystem and protect the quality of downstream lakes and wetlands.

Project outcomes:

- Improved water quality of Hayden Lake and the Champiln Mill Pond
- Improved fish and wildlife habitat in Elm Creek
- Reduced erosion of the Elm Creek stream channel
- Reduced tree loss in the Elm Creek floodplain adjacent to the Eastman Nature Center
- Reduced infrastructure maintenance costs

The project will achieve the stated goal by creating a stable channel configuration in Elm Creek. The preliminary design indicates that the channel needs to be widened and deepened to increase the capacity. In addition, the meander pattern of the channel will be altered to conform to a hydrologic design that will pass the required flows without eroding. Following reshaping of the channel, the toe of the banks will be hard armored and all disturbed soil will be planted with native vegetation.

II. DESCRIPTION OF PROJECT ACTIVITIES

Activity 1: Complete Project Design **Budget:** \$ 50,000

Three Rivers Park District will retain a consulting firm to complete the final design of the channel stabilization project, prepare bids and specifications, advertise and award bids for project construction.

Outcome	Completion Date
1. Complete final design of project	July 15, 2011
2. Prepare bids and specifications for construction	Aug 1, 2011
3. Award bids for construction	August 30, 2011

Activity 2: Construct stream stabilization work **Budget:** \$ 350,000

The Elm Creek stream channel will be regarded to conform to the design shape to pass the critical flows. Fallen trees currently blocking flow in the stream will be removed. The toe of critical bank slopes will be hard armored with rip-rap, and exposed bank slopes will be planted with native vegetation.

Outcome	Completion Date
1. Remove fallen trees from stream channel	Sept 30, 2011
2. Grade stream cross-section to increase capacity	Oct 20, 2011
3. Hard armor bank toe slopes with rip-rap	Oct 30, 2011
4 .Plant disturbed stream banks with native woodland grasses and forbs	June 1, 2012

III. PROJECT STRATEGY

A. Project Team/Partners

The project team will include the following:

John M. Barten, Director of Natural Resources Management
Three Rivers Park District - Project Manager

Randy Lehr, Senior Manger of Water Resources
Three Rivers Park District – Water quality modeling and design review

Erik Nelson, Civil and Stormwater Engineer
Three Rivers Park District - Project design oversight and construction supervision

Arla Carmichael, Horticulture Supervisor
Three Rivers Park District - Coordination of plant selection, installation and maintenance

In addition to the Three Rivers Park District project team, the Park District will retain an engineering firm to prepare bids and specifications and will retain a contractor to perform the actual grading and rip-rap installation. These firms will be selected by competitive bids, based on their experience with similar projects. The majority of project funds will be used for contracts with these firms.

B. Timeline Requirements

Three Rivers Park District anticipates being able to complete the project within the grant funding cycle. Final design and preparation of bids and specifications can commence immediately following notice of the grant award and approval of a grant agreement. This process will take approximately four months and would be completed prior to the 2011 construction season. Stream grading, rip-rap installation and planting of disturbed banks are expected to take approximately two months, allowing for project completion in the fall of 2011.

C. Long-Term Strategy and Future Funding Needs

Although this is a stand-alone project, there are additional reaches of the Elm Creek stream channel that are experiencing significant erosion issues. Stream stabilization will also be necessary along these reaches. However, completion of this project will not affect or be affected by future stabilization work.

2011-2012 Detailed Project Budget

IV. TOTAL TRUST FUND REQUEST BUDGET

1 years

BUDGET ITEM <i>(See list of Eligible & Non-Eligible Costs, p. 13)</i>	AMOUNT
Personnel:	N/A
Contracts: Contractor to grade stream channel and install rip-rap. Contractor with stream stabilization experience will be required	\$ 200,000
Equipment/Tools/Supplies:	N/A
Acquisition (Fee Title or Permanent Easements):	N/A
Travel:	N/A
Additional Budget Items:	N/A
TOTAL ENVIRONMENT & NATURAL RESOURCES TRUST FUND \$ REQUEST	\$ 200,000

V. OTHER FUNDS

SOURCE OF FUNDS	AMOUNT	Status
Other Non-State \$ Being Applied to Project During Project Period: Three Rivers Park District has matching funds budgeted for this project.	\$ 200,000	Secure
Other State \$ Being Applied to Project During Project Period:	\$ -	
In-kind Services During Project Period: Three Rivers Park District staff support for project	\$ 10,000	Secure
Remaining \$ from Current ENRTF Appropriation (if applicable):	\$ -	
Funding History:	\$ -	

ELM CREEK PARK RESERVE



S DIAMOND LAKE RD

ZANZIBAR LN

PINEVIEW LN

FRENCH LAKE RD

TILDEN AVE

HAYDEN LAKE RD

HAYDEN LK RD

121
FERNBROOK LN

ELM CREEK RD

202

Eroded stream reach.



0.5 Miles

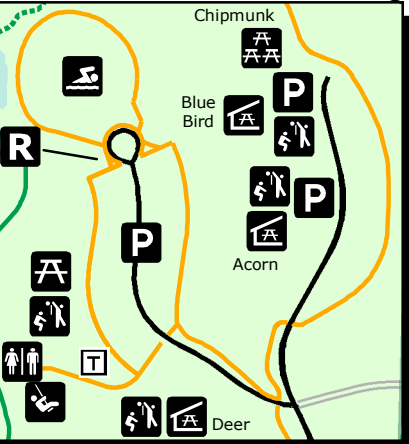
81
TERRITORIAL RD

ZACHARY LN

81
ELM CREEK BLVD N

Operations Center
PARK ENTRANCE

Medicine Lake Regional Trail



Legend

Hiking Trails - 56.75 mi
Bike Trails - 20 mi
Dog Trails - 20 mi

- Archery Range
- Camper Cabins
- Concessions
- Disc Golf
- Dog Off-leash Area
- Eastman Nature Center
- Group Camp
- Horse Camping
- Parking
- Picnic Area
- Play Area
- Rentals
- Reservation Picnic Area
- Reservation Picnic Area - Sheltered
- Rest Area/Bench
- Restrooms
- Swimming
- Toilet
- Visitor Center/Information
- Volleyball
- Paved Hiking/Bike/Dog Trail - 20 mi
- Unpaved Hiking Trail - 5 mi
- Unpaved Hiking/Horse Trail - 20.8 mi
- Unpaved Hiking/Mountain Bike Trail - 7.7 mi
- Service Road
- Road
- Lake
- Private Property
- Park Boundary



**John M. Barten, Director of Natural Resources Management, Three Rivers Park District
12615 County Road 9, Plymouth, MN 55441
763/694-7841**

Education

B.S. 1974. Biology and Chemistry, St. Cloud State University, St. Cloud, Minnesota.

M.A. 1979. Aquatic Biology, St. Cloud State University, St. Cloud, Minnesota. Thesis: Nutrient and Hydrologic Budgets of Two Central Minnesota Lakes.

Grant Management and Research Experience

Prepared applications and administered grants to implement monitoring and water management programs.

- Project Manager for two (\$358,682 and \$79,000) EPA Section 304 Clean Lakes Grants in Waseca, MN (1980 and 1987).
- Project Manager for \$10,000 golf course seepage study funded by the Minnesota Golf Course Superintendents Association (1990-1991).
- Project Manager for \$21,000 DNR CORE grant to develop an aeration system for Loon Lake, Waseca, MN
- Project Manager for \$37,000 Metro Council Grant to study Eurasian water milfoil control strategies (1992).
- Project Manager for \$100,000 LCMR funded project to determine the movement of pesticides, herbicides, and fertilizer nutrients from golf courses.
- Project Manager for DNR funded study to determine impact of lawn fertilization on runoff water quality.
- Project Manager and Principal Investigator for two EPA EMPACT Grants totaling \$900,000, to develop real-time data presentation protocols for lakes.

Organizational Description:

Three Rivers Park District is a natural resources-based park system located in the suburban Minneapolis/St. Paul metro area of Minnesota that manages nearly 27,000 acres of park reserves, regional parks, regional trails and special-use facilities. As an independent, special park district established by the Minnesota Legislature in 1957, the Park District is charged with the responsibilities of acquisition, development and maintenance of large park reserves, regional parks and regional trails for the benefit and use of the citizens of the metropolitan area and the State of Minnesota. Three Rivers Park District is governed by an independent, seven-member Board of Commissioners. Five members of the Board are elected from districts in suburban Hennepin County, and two members are appointed by the Hennepin County Board of Commissioners. Each of the Park District's facilities is located within watersheds that flow into three rivers: the **Mississippi, Minnesota and Crow**.

The mission of Three Rivers Park District is to promote environmental stewardship through recreation and education in a natural resources-based park system. Three Rivers' policy for planning and management of natural resources has distinguished it from other park and recreation agencies in Minnesota. The policy specifies that no more than 20 percent of a park reserve may be developed for active use, and that at least 80 percent of a park reserve shall be restored to and retained in a natural state. As a result, the Park District has been actively involved in the preservation and restoration of wildlife and plant species. Once-rare osprey, bald eagles, sandhill cranes and trumpeter swans are now nesting in the park reserves. Woodland and prairie restorations have been accomplished using native wildflowers, shrubs and trees produced from seed collected in the park reserves.

Park visitors are offered abundant opportunities to view and learn about these natural resources. Careful routing of bike, hike and ski trails provides intimate views of woodlands, wetlands and prairie, as well as the wildlife that inhabit them. Outdoor education staff offer an array of programs that foster a better understanding of our environment.