

**Environment and Natural Resources Trust Fund
2012-2013 Request for Proposals (RFP)**

Project Title:

ENRTF ID: 047-C1

Shallow Lake Carp Exclusion: Shell Rock Watershed

Topic Area: C1. Invasive Species - Aquatic

Total Project Budget: \$ 1,131,750

Proposed Project Time Period for the Funding Requested: 3 yrs. July 2013 - June 2016

Other Non-State Funds: \$ 0

Summary:

Our project will install two fish barriers: Shell Rock River and Goose Lake to exclude carp species that destroy aquatic vegetation and stir-up phosphorous-rich sediments that cause water quality impairments.

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Sponsoring Organization: Shell Rock River Watershed District

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Location

Region: SE

County Name: Freeborn

City / Township: Albert Lea

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



Environment and Natural Resources Trust Fund (ENRTF) 2012-2013 Main Proposal

PROJECT TITLE:

Shallow Lake Carp Exclusion: Shell Rock River Watershed

I. PROJECT STATEMENT

Our project will install two (2) fish barriers: 1) headwaters of the Shell Rock River, and 2) at Goose Lake to exclude carp and other rough fish that destroy aquatic vegetation and stir-up phosphorous rich sediments that cause algal blooms and water quality impairments. The project will allow for effective carp control that will improve water quality of impaired waters and substantially improve: aquatic vegetation, fish habitat and spawning and habitat for waterfowl and other wildlife.

Background

The Shell Rock River Watershed District (SRRWD) Clean Water Initiative encompasses 246 square miles in Freeborn County and includes 11 lakes that drain to the Shell Rock River which flow into the Cedar River. Annual water quality and fish population assessments since 2004 have shown many of the lakes and waterways have water quality impairments due to high turbidity and internal loading of phosphorous largely caused by carp. This results in reduced light penetration and lack of rooted aquatic vegetation which cause algal blooms responsible for oxygen depletion. In addition the invasive fish population has adverse effects on lake shoreline and littoral habitat which destroy hydrophytic vegetation, game fish spawning habitat, waterfowl habitat, mammal and invertebrate populations.

Our fish barrier program in 2008 and 2009 included installation of four (4) fish barriers, located on Mud Lake, White Lake, Wedge Creek and Fountain Lake. In cooperation with the MN DNR, SRRWD treated Mud Lake, Pickerel Lake and drainage ditches within this drainage system with Rotenone in 2009 to eliminate invasive rough fish populations. In 2010 the MN DNR stocked Pickerel Lake with desirable fish (Northern fry, adult bluegills and adult yellow perch) from neighboring lakes. Mud and Pickerel Lake restoration efforts have resulted in return of desirable aquatic plant species and wildlife such as muskrats, ducks and shorebirds. Water quality assessments conducted in 2011 have resulted in a 60% reduction of phosphorous loads into Fountain Lake and 85% reduction in Pickerel Lake. Water clarity monitoring has improved from 1.0 feet to 4.4 feet.

Goals and Outcomes

The anticipated goals are to restore and enhance water quality, improve water clarity, rooted aquatic vegetation, desirable fish populations and wildlife habitat. This will increase and enhance the community use of this important recreational resource. Outcomes include 1) installation of two fish barriers that will prevent carp populations from re-entering Albert Lea Lake and fish passage between Goose Lake and Fountain Lake, 2) eradicate the existing rough fish populations in Goose Lake and 3) re-introduce game fish (bluegill, perch and northern pike). Water quality improvements, habitat restoration and enhancements are anticipated as soon as the carp are eradicated. Visible and measurable effects are anticipated within two to three years.

II. DESCRIPTION OF PROJECT ACTIVITIES

The project proposes to control carp by preventing the mass migration and re-colonization into our upstream shallow lakes by installing two fish barriers. The SRRWD project would install electrical fish barriers at the inlet of Goose Lake and the headwaters of the Shell Rock River. The project will complement similar fish barriers installed in 2008 and 2009.

Activity 1: Shell Rock River Fish Barrier

Budget: \$1,006,000

The Shell Rock River fish barrier will require topographic survey of existing conditions for design specifications and engineering plans, state, federal and county permit prior to construction for project. Pre/post fish surveys completed to identify fish species populations. Monitoring/maintenance will occur during and after construction to assure all requirements are followed as specified in acquired permits.

Outcome	Completion Date
<i>1. Complete design, surveying and engineering plans for fish barrier.</i>	<i>July 1, 2014</i>
<i>2. Acquire state, federal and county required grading and environmental permits.</i>	<i>March 1, 2015</i>
<i>3. Construction of fish barrier.</i>	<i>April 1, 2015</i>
<i>4. Monitoring and Maintenance of fish barrier.</i>	<i>Annual Monitoring</i>
<i>5. Fish Surveys (Cost not included in budget request).</i>	<i>Annual Monitoring</i>

Activity 2: Goose Lake Fish Barrier

Budget: \$540,000

The Goose Lake fish barrier will require topographic survey of existing conditions for design specifications and engineering plans, state, federal and county permit prior to construction for project. Rotenone treatments will be applied to project area after construction of the fish barrier. Pre/post fish surveys completed to identify fish species populations. Monitoring/maintenance will occur during and after construction to assure all requirements are followed as specified in acquired permits.

Outcome	Completion Date
<i>1. Complete design, surveying and engineering plans for fish barrier.</i>	<i>July 1, 2014</i>
<i>2. Acquire state and county required grading and environmental permits.</i>	<i>March 1, 2015</i>
<i>3. Construction of fish barrier.</i>	<i>July 2015</i>
<i>4. Rotenone Lake Treatment (Cost will not be included in budget request).</i>	<i>October 1, 2015</i>
<i>5. Re-introduce game fish populations (Cost not include in budget request)</i>	<i>April 1, 2016</i>
<i>6. Fish Surveys (Cost not included in budget request).</i>	<i>Annual Monitoring</i>
<i>7. Monitoring and Maintenance of fish barrier.</i>	<i>Annual Monitoring</i>

III. PROJECT STRATEGY

A. Project Team/Partners

The Shell Rock River Watershed District will be the fiscal agent receiving funds for the project. The following agencies will assist by providing technical input; Minnesota Department of Natural Resources, Freeborn County, MPCA, US Army Corps of Engineers, US Fish and Wildlife Service and the City of Albert Lea. Outside Services required to complete the project include; environmental, GIS, surveying, engineering and construction.

B. Timeline Requirements

The goal for timeline requirements of the project is approximately 3 years. Proposed project will be incorporated into SRRWD periodic monitoring, maintenance and fish surveys program.

C. Long-Term Strategy and Future Funding Needs

The fish barrier project has been identified as a high priority in the SRRWD Management Plan, a plan developed with public participation subject to public review and approval by the SRRWD Board. A long-term monitoring/maintenance plan will be implemented for this project in conjunction with previous constructed fish barriers to assure all constructed fish barriers are adequately functioning as designed for the project. Future funding requests will be required for construction of fish barriers identified in the SRRWD Management Plan.

2012-2013 Detailed Project Budget

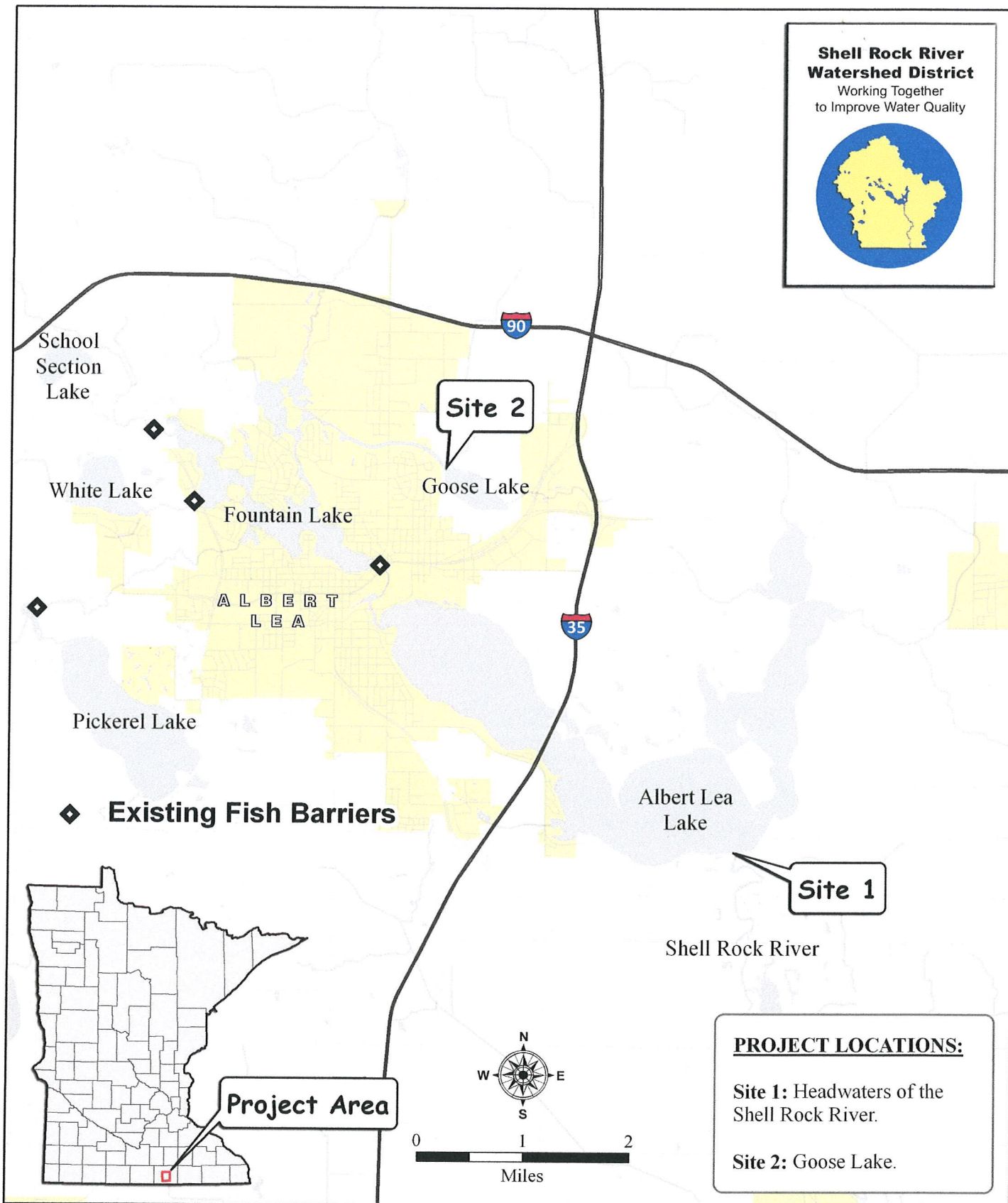
IV. TOTAL ENRTF REQUEST BUDGET 3 Years

<u>BUDGET ITEM</u>	<u>AMOUNT</u>
Personnel:	
Contracts:	
Engineering Services - Consultant	\$ 220,000
Surveying Services - Consultant	\$ 15,000
Geotechnical Services - Consultant	\$ 25,000
Environmental Services - Consultant	\$ 8,000
Construction Services - Contractor	\$ 230,000
Equipment/Tools/Supplies:	
Erosion Control Materials (Silt Fence, Construcion Entrance, Erosion Blanket)	\$ 12,000
Turf Grass Mn/DOT 260	\$ 3,000
Rip Rap and Filter Rock	\$ 64,000
Fish Barrier Construction Materials (Concrete, Sheet Pilings, Whallers)	\$ 399,750
Electric Fish Barrier Building,Monitoring System and Saftey Materials	\$ 155,000
Acquisition (Fee Title or Permanent Easements):	
Travel:	
Additional Budget Items:	
TOTAL ENVIRONMENT AND NATURAL RESOURCES TRUST FUND \$ REQUEST =	\$ 1,131,750

V. OTHER FUNDS

<u>SOURCE OF FUNDS</u>	<u>AMOUNT</u>	<u>Status</u>
Other Non-State \$ Being Applied to Project During Project Period:		
Shell Rock River Watershed District: Sales Tax Dollars	\$ 377,250	<i>Secured</i>
Other State \$ Being Applied to Project During Project Period:		
In-kind Services During Project Period:		
Shell Rock River Watershed District: Construction Monitoring Services	\$ 15,000	
Shell Rock River Watershed District: Project Management Services	\$ 12,000	
Shell Rock River Watershed District: Administrative Services	\$ 10,000	
Remaining \$ from Current ENRTF Appropriation (if applicable):		
Funding History:		

Shallow Carp Exclusion: Shell Rock River Watershed



SRRWD Project Manager Qualifications and Organization Description

SRRWD Watershed Conservationist/Project Manager – Andy Henschel

Shell Rock River Watershed District (2007 to Present):

- Watershed Technician
- Project Manager for all watershed district projects, previous projects include: Flood Mitigation Project – South Industrial Park, 3 electrical fish barriers, Pollution Prevention Program /Onsite Sewer Compliance and water monitoring programs.

Freeborn County Watershed Field Technician (2001 – 2007):

- Performed county inspections and enforced County septic ordinances, worked with small communities on wastewater treatment projects, established County water monitoring program. Aided in re-writing the Freeborn County Water Plan

Education:

- B.S. in Environmental Science and Geography.
- Minor in Biology with a GIS Specialty.
- Erosion/Sediment Control Specialist

Organizational Description

Shell Rock River Watershed District – was established on June 25, 2003 by citizen petition. In 2004, the District finalized the SRRWD Water Management Plan, to address all water quality issues. The District covers about 246 square miles, within Freeborn County. The District has 7 Board Managers and 5 employees.

The District is blessed with 12 Lakes and is located in the Western Corn Belt Region of Southern Minnesota. Albert Lea Lake is the first lake you see when traveling north, on Interstate 35, into Minnesota. All water within the District drains to a common point – the Shell Rock River. The Shell Rock River flows into the Cedar in Iowa and finally the Mississippi Rivers.

The District has been aggressively working to solve problems that have resulted in 3 lakes and the Shell Rock River to be listed on the MPCA's impaired waters list. Accomplishments include: implementing filter strip program, Pollution Prevention Program /Onsite Sewer Compliance, wetland reclamation, water retention areas, 3 electric fish barriers, urban and rural BMPs, and many other projects that address water quality issues.

The mission of the Shell Rock River Watershed District (SRRWD) is to implement reasonable and necessary improvements to the water-related and other natural resources of the District. The Board of Manager oversees many efforts to conserve, protect and manage water resources of the watershed. The SRRWD works closely with the City of Albert Lea, Freeborn County, Farm Service Agency, state agencies, and active citizen volunteers to improve water quality.