

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

Project Title:

ENRTF ID: 075-D

Heron Lake Sediment and Phosphorus Reduction Implementation Projects

Topic Area: D. Land Acquisition & Restoration

Total Project Budget: \$ 122,000

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

Other Non-State Funds: \$ 59,500

Summary:

This successful project would install five water quality improvement projects to reduce sediment and phosphorus to Heron Lake, monitor three streams, distribute one newsletter, and host a field day.

Name: Jan Voit

Sponsoring Organization: Heron Lake Watershed District

Address: 1008 3rd Ave, PO Box 345
Heron Lake MN 56137

Telephone Number: (507) 793-2462

Email hlwd@roundlk.net

Web Address http://www.hlwdonline.org/hlwd/

Location

Region: SW

County Name: Jackson, Murray, Nobles

City / Township: City of Heron Lake, Heron Lake in West Heron Lake Township, Alba Township, Fenton To

<input type="checkbox"/> Funding Priorities	<input type="checkbox"/> Multiple Benefits	<input type="checkbox"/> Outcomes	<input type="checkbox"/> Knowledge Base
<input type="checkbox"/> Extent of Impact	<input type="checkbox"/> Innovation	<input type="checkbox"/> Scientific/Tech Basis	<input type="checkbox"/> Urgency
<input type="checkbox"/> Capacity Readiness	<input type="checkbox"/> Leverage	<input type="checkbox"/> Employment	<input type="checkbox"/> TOTAL <input type="checkbox"/> %

PROJECT TITLE: Heron Lake Sediment and Phosphorus Reduction Implementation Projects

I. PROJECT STATEMENT

1. The Heron Lake watershed, approximately 472 square miles, within portions of Nobles, Jackson, Murray, and Cottonwood Counties in southwestern Minnesota, is in dire need of water quality improvement for the benefit of public health, welfare, recreation, and the enhancement of wildlife habitat. Once known as the “Chesapeake Bay of the West,” Heron Lake and its watershed had clean water, fertile soil, lush vegetation, and abundant wildlife. At the turn of the century, market hunting was common because waterfowl was plentiful. As the landscape changed, wetlands were drained, streams were channelized, sod was broken for farming, and the waters became polluted. Currently, these lakes face severe algae blooms, loss of rooted aquatic vegetation, fewer migratory waterfowl, rough fish impacts, reduced water clarity, and flooding, similar to other rural, agricultural areas. Point and nonpoint source pollution, intensive tillage, non-compliant septic systems, feedlots, and urban stormwater runoff must be addressed to reduce sediment and phosphorus loading in North Heron Lake and South Heron Lake. The highly competitive requests for Clean Water Partnership and Clean Water Assistance grants have left the Heron Lake Watershed District (HLWD) in short supply of the funds needed to complete these unique and incredibly necessary projects. This proposal involves the HLWD working cooperatively with agency partners and private citizens to complete extensive projects for the protection and enhancement of water quality and wildlife as part of the effort to reestablish what was lost.
2. The overall goal of this project is improved water quality, which is the HLWD’s number one priority.
Project Outcome 1: Implement projects to protect and enhance water quality.
Project Outcome 2: Collect and analyze water sample data and compare to data gathered since 1996.
Project Outcome 3: Disseminate results to agency staff, private partners, and the general public through a newsletter and field day.
3. Goals to improve water quality will be achieved through the installation of two streambank stabilization projects, three water and sediment control basins, and one bioretention basin that would reduce sediment and phosphorus to Heron Lake by 295 tons per year and 288 pounds per year, respectively.

II. DESCRIPTION OF PROJECT ACTIVITIES

Activity 1: Implement and oversee two streambank stabilization projects, three water and sediment control basins, and one bioretention basin. **Budget: \$93,000**

Locations have been secured for the installation of two streambank stabilization projects, three water and sediment control basins, and one bioretention basin, prioritized by the need for sediment reduction. These locations address sensitive shoreline on lakes and streams and will demonstrate innovative treatments that can enhance and protect the quality of privately-owned and publically-owned areas. Landowners will provide 25% of the project costs in order to receive grant funds. This secures their commitment to land use change. The land use changes provide water quality benefits for Minnesota waters. Effectiveness will be measured through sediment and phosphorus reduction. It is estimated that these endeavors will decrease the amount of sediment and phosphorus entering Heron Lake by 295 tons and 288 pounds per year, respectively. Work will be done by contracted project construction, the HLWD technician, and two HLWD summer interns.

Outcome	Completion Date
1. Stabilize 1,050 feet of streambank through the installation of two streambank stabilization projects to reduce sediment loads to streams and to prevent loss of streambank vegetation and fish and wildlife habitat.	August 31, 2013
2. Install three water and sediment control basins, approximately 2,400 feet, to trap overland runoff and reduce gully erosion by controlling flow and releasing water slowly to drainage area.	November 30, 2013

3. Install one bioretention basin, 1.4 acres in size, allowing for 5.7 acre-feet of potential storage and slowing infiltration to receiving waters.	November 30, 2013
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Activity 2: Provide water quality monitoring and continuous site preservation. **Budget: \$ 26,000**
 Collect 20 water samples at three different sites, spring through fall each year and analyze the data to determine the effectiveness of installed projects. Work will be done by the HLWD technician, HLWD resource technician, and two HLWD summer interns.

Outcome	Completion Date
1. Take event based water samples for close to 200 samples during the grant period. The goal of the monitoring effort is to obtain sufficient accurate data to provide valuable information to the public regarding project effectiveness.	July 1, 2013 to June 30, 2016
2. Analyze water samples for total suspended solids, suspended volatile solids, turbidity, e.coli, dissolved orthophosphorus, nitrate-nitrite nitrogen, total kjeldahl nitrogen, ammonia nitrogen, and total phosphorus. Dissolved oxygen, pH, and temperature will also be measured with each collection.	June 30, 2016

Activity 3: Provide effectiveness information to public through outreach and education. **Budget: \$ 3,000**
 HLWD staff will analyze monitoring data and prepare results. A newsletter will be drafted to publicize project data and the field day, which will be distributed to 3,500 watershed residents, agency personnel, and legislators. One field day will provide a project summary and information needed for future initiation of restoration endeavors. Work will be done by the HLWD technician, HLWD resource technician, and HLWD administrator.

Outcome	Completion Date
1. Analysis of water quality data will be used to determine project effectiveness.	June 30, 2016
2. Publicize project data and detailed information regarding project installation and practice requirements for future restoration endeavors through a field day and newsletter distributed to 3,500 watershed residents, agency personnel, and legislators.	April 30, 2016
3. Plan and host one field day traveling to three different project sites reaching 50 people.	June 15, 2016

III. PROJECT STRATEGY

A. Project Team/Partners

Brian Nyborg, Jackson SWCD, Ed Lenz, Nobles SWCD, Howard Konkol, Murray SWCD, and Russ Hoogendorn, Southwest Prairie Technical Service Area (SWP TSA) will provide technical assistance. Ross Behrends, HLWD Watershed Technician, Margaret Peeters, HLWD Resource Technician, and HLWD summer interns will assist with project installation and water quality monitoring. Jan Voit, HLWD Administrator will receive the funds and administer the grant.

B. Timeline Requirements

From July 1, 2013 to June 30, 2015. Site monitoring and preservation, as well as water quality monitoring efforts, will continue after completion of the grant period.

C. Long-Term Strategy and Future Funding Needs

This proposal is consistent with goals and objectives described in the HLWD Watershed Management Plan. Project partners have worked together on 34 grant-funded efforts over the last 16 years. In addition to the use of HLWD general operating funds, continual efforts will be made to seek grant funds to provide educational opportunities and financial assistance as methods for sustainable agricultural practices that would help to address the phosphorus impairment in Heron Lake. **Without LCCMR funds, project constructions, field day, and newsletter described in this proposal will not be undertaken.**

2012-2013 Detailed Project Budget

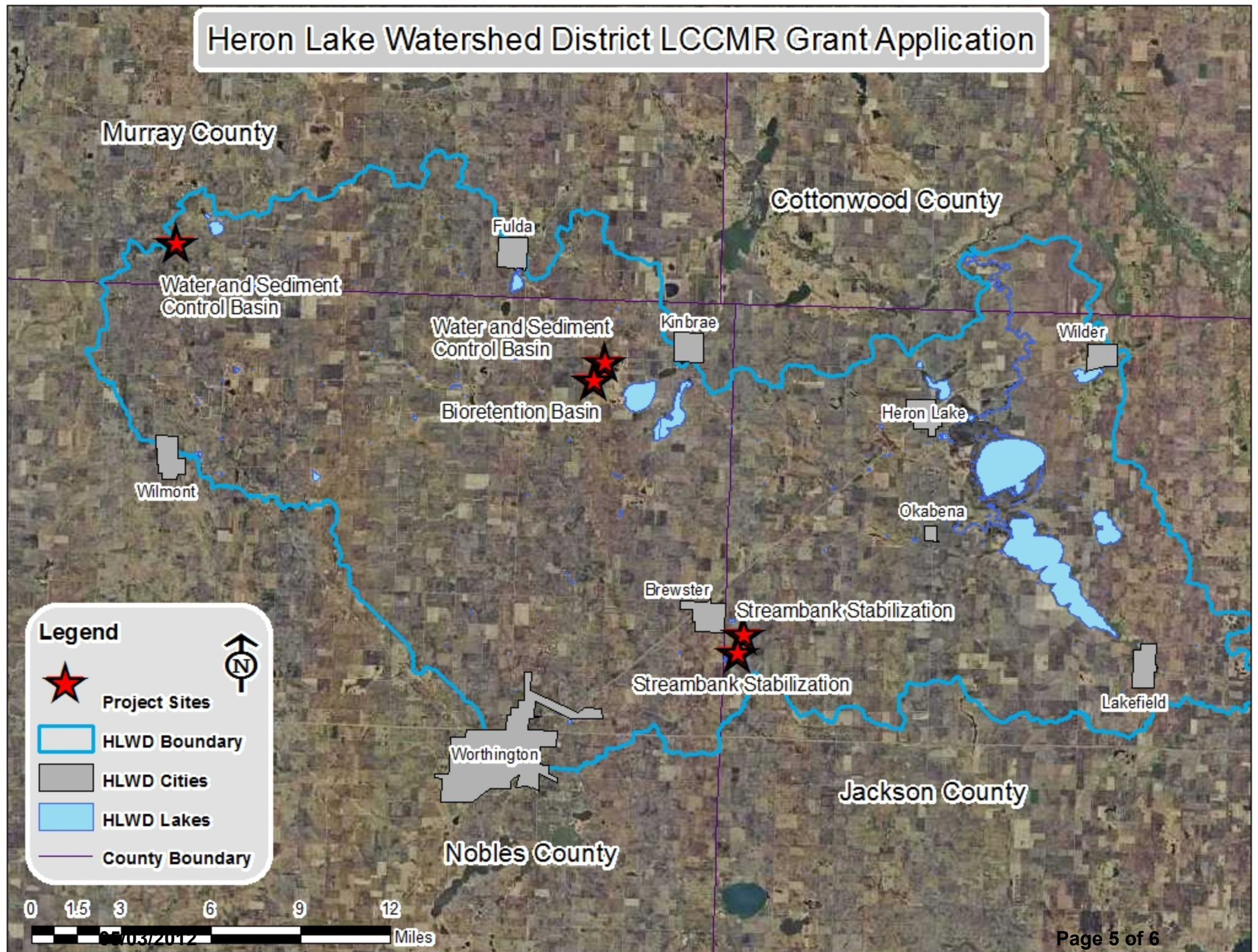
IV. TOTAL ENRTF REQUEST BUDGET III years

<u>BUDGET ITEM</u>	<u>AMOUNT</u>
Contracts: Project construction costs: Materials (\$35,000), Earthwork (\$46,000), Stabilization (\$3,000), Technical Assistance (9,000), Total \$93,000	\$ 93,000
Additional Budget Items: Laboratory Analysis (200 samples * \$130/sample = \$26,000), Newsletter (3,500 * \$0.60/newsletter = \$2,100), Education materials: informational brochure; and meeting packets (\$900), Total \$29,000	\$ 29,000
TOTAL ENVIRONMENT AND NATURAL RESOURCES TRUST FUND \$ REQUEST =	\$ 122,000

V. OTHER FUNDS

<u>SOURCE OF FUNDS</u>	<u>AMOUNT</u>	<u>Status</u>
Other Non-State \$ Being Applied to Project During Project Period: Landowner Match (\$26,500), and HLWD will pay the DNR for flow measurements (\$33,000), Total \$59,500	\$ 59,500	<i>Secured</i>
In-kind Services During Project Period: HLWD Personnel: Administrator (\$8,000), Watershed Technician (\$7,500), Resource Technician (\$5,000), Intern I (\$7,000), Intern II (\$7,000) Travel to sites (\$2,500) Total \$37,000	\$ 37,000	
Funding History: From 1996 through 2011, the HLWD has successfully secured \$154,500 in grant funds, matched with \$50,300 in HLWD funds, to implement 20 bioretention basins, 3.5 acres of streambank stabilization, and 49 water and sediment control basins. The ENRTF request will accelerate additional implementation as described in this RFP.	\$ 204,800	

Heron Lake Watershed District LCCMR Grant Application



Jan Voit

District Administrator

Heron Lake Watershed District

1008 3rd Ave., PO Box 345

Heron Lake, MN 56137

Tel: (507) 793-2462 FAX: (507) 793-2253 email: hlwd@roundlk.net

EDUCATION

High School Diploma Heron Lake-Okabena High School (1982)

Legal Secretary Jackson Area Vocational Technical Institute (1984)

PROFESSIONAL EXPERIENCE

Administrative Assistant, Heron Lake Watershed District (1982 – 1998)

District Administrator, Heron Lake Watershed District (1998 – present)

WORK EXPERIENCE

Ms. Voit's work experience includes grant writing and administration, meetings with and presentations to government officials and agency personnel, plan writing, staff oversight, and general office duties.

AWARDS AND HONORS

2011 North Heron Lake Game Producers Association Person of the Year

2007 Watershed District of the Year from the Minnesota Department of Natural Resources

2007 Governor's MnGREAT Award (Minnesota Government Reaching Environmental Achievements Together) for Pollution Prevention

2006 Environmental Education Award from the Minnesota Environmental Initiative

2002 Program of the Year Award from the Minnesota Associations of Watershed Districts

CURRENT GRANTS ADMINISTERED

- Alternative Tile Intake Cost-share Program: The goal of this project is to reduce sediment and phosphorus entering open tile intakes by replacement with subsurface intakes.
- Conservation Tillage Demonstration Plot: The goal of this project is to build awareness with landowners and operators through a field-scale demonstration plot so that conservation tillage practices are adopted to improve water quality in the Heron Lake watershed.
- Heron Lake Sediment Reduction Demonstration Project: The goal of this project is to increase landowner awareness of unique streambank stabilization structures, cedar revetments and J-hook weirs, through two demonstration sites and to promote the structures through printed media, tours, meetings, and a website.
- West Fork Des Moines River Total Maximum Daily Load Implementation Project: The goal of this project is to enhance partnerships between Murray, Nobles, Jackson, and Cottonwood Counties and the HLWD through the continued employment of a watershed coordinator to assist with obtaining feedlot information through onsite inspections and project promotion.
- Fulda Phosphorus Reduction Initiative: The goal of this project is to instill a sense of personal responsibility for the two lakes in the Fulda area by engaging students, 4-H members, Master Gardeners, landscapers, and the general public in the awareness of effect of water pollution to the Fulda Lakes through unique educational displays, hands-on opportunities, and various printed media.
- Jack and Okabena Creek Sediment Reduction Project: The goal of this project is to increase landowner awareness of J-hook weirs, unique streambank stabilization structures, through installation at one site on Jack Creek and one site on Okabena Creek and increase public awareness and ownership of water quality problems through printed media and a mailing.
- Cover Crop Demonstration Project: This project will allow one farmer resident of the Heron Lake Watershed District to establish 37 acres of cereal rye, purple top turnips, and tillage radish cover crop to reduce erosion, increase water infiltration to prevent runoff, bring leached nitrogen back to the root zone for next year's crop, increase organic matter, and provide wildlife habitat cover.