

**Environment and Natural Resources Trust Fund
2018 Request for Proposals (RFP)**

Project Title:

ENRTF ID: 196-F

Okabena Creek Water Quality and Flood Protection Demonstration

Category: F. Methods to Protect or Restore Land, Water, and Habitat

Total Project Budget: \$ 720,565

Proposed Project Time Period for the Funding Requested: 3 years, July 2018 to June 2021

Summary:

HLWD is partnering with agricultural landowners to create a pond and two-stage ditch, both of which would include the establishment of native prairie, pollinator habitat, and protection in perpetuity.

Name: Jan Voit

Sponsoring Organization: Heron Lake Watershed District

Address: 1008 3rd Avenue, P.O. Box 345
Heron Lake MN 56137

Telephone Number: (507) 793-2462

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Web Address www.hlwdonline.org

Location

Region: Southwest

County Name: Jackson

City / Township: Alba, Ewington, West Heron Lake Township

Alternate Text for Visual:

Okabena Creek Watershed Water Quality and Flood Protection Demonstration Project Area

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



PROJECT TITLE: Okabena Creek Water Quality and Flood Protection Demonstration

I. PROJECT STATEMENT

The Heron Lake Watershed District (HLWD) is currently working with a variety of local partners, including agricultural landowners, to install practices aimed at improving water quality, limiting soil erosion, enhancing wildlife and pollinator habitat, and reducing the effects of flooding, all key components of the HLWD Watershed Management Plan. To further these larger goals of reducing peak flows and filtering water before it reaches Okabena Creek, we are proposing the creation of a seven-acre pond and the construction of a two-stage ditch system, both of which would include restoration practices such as the establishment of native grasses, pollinator habitat, and protection in perpetuity through conservation easements. In addition, these projects will serve as an outreach tool, with the inclusion of site visits, informational handouts, signage, and water quality monitoring.

Historically, the Heron Lake watershed was predominantly wetland prairie with saturated, organically rich soils, the latter of which has made the region fertile ground for agricultural production and the former necessitating the extensive tile drainage system in order to utilize the land for farming. Unfortunately, this conversion of land has had drastic impacts on the watershed's rivers, lakes, and streams, with approximately 50 percent of the HLWD's land susceptible to erosion and a growing number listed as impaired for excessive nutrients, bacteria, and turbidity. The proposed projects seek to address these concerns as part of the HLWD's larger, comprehensive watershed management plan. For example, the proposed pond will store approximately 82.5 acre-feet and provide critical habitat for migrating waterfowl, a primary function of the Prairie Pothole Wetland Complex. In addition, the two-stage ditch will function as a partially restored floodplain, slowing the flow of water during periods of heavy precipitation and reducing erosion, flooding, and excess nutrients making their way to downstream lakes and rivers, while also providing important native vegetation and pollinator habitat.

II. PROJECT ACTIVITIES AND OUTCOMES

Activity 1: Land Acquisition for Two-Stage Ditch and Pond

Budget: \$78,065

This phase of the project includes working with landowners to protect in perpetuity through a purchased easement the five acres for the two-stage ditch and the seven-acre pond site. Both of these easements will be held and monitored by the HLWD. These sites were selected because of growing landowner concerns surrounding recent flooding within the project boundary.

Outcome	Completion Date
1. Acquire land through a purchased easement for 7-acre pond; parcels to be included in the easement: Parcel ID: 01.036.0500, Parcel ID: 01.036.0400	8-31-2018
2. Acquire land through a purchased easement for the 5-acre two-stage ditch; parcels to be included: Parcel ID: 01.035.0100, Parcel ID: 01.035.0500, Parcel ID: 01.035.0400, Parcel ID: 07.002.0100	8-31-2018

Activity 2: Design and Construction of a Two-stage Ditch, Pond, and Pollinator Habitat

Budget: \$582,500

Currently, the proposed project area is used for planting row crops. However, this area has experienced increased flooding. HLWD is seeking funding to help landowners address this challenge in a way that achieves multiple benefits that are not currently supported through traditional agriculture funding programs' cost/benefit analysis. The two-stage ditch and pond will support current landowner-funded efforts to increase storage capacity, while ENRTF funds will be used to help restore native prairie and pollinator habitat and improve water quality.



Environment and Natural Resources Trust Fund (ENRTF)

2018 Main Proposal

Project Title: Okabena Creek Water Quality and Flood Protection Demonstration

Outcome	Completion Date
1. Publicly bid both of the projects for construction	7-31-2018
3. Design and construction of five-acre two-stage ditch (4,550 linear feet): Excavation and seeding with a mix of native prairie plant species, such as MnDOT 34-261	10-31-2019
3. Design and construction of seven-acre pond (82.5 acre-feet of storage capacity): Excavation, control structure, and native prairie and pollinator species (see above mix)	10-31-2019

Activity 3: Community Outreach, Water Quality Monitoring and Long-Term Maintenance **Budget: \$60,000**

In order to establish a constituency of support for these practices, we will provide educational outreach opportunities such as visits to the project locations, informational handouts, signage at the sites, water quality and flood storage capacity monitoring, and long-term maintenance of the site by HLWD as outlined in the easement agreement. A report quantifying those results will be completed and distributed to state agencies, landowners, and regional drainage authorities.

Outcome	Completion Date
1. Create outreach materials	7-31-2019
2. Monitor the water quality and storage prior to project implementation and once per month for one year (May-October) at four locations post construction; upstream of the improvement, within the site, at the outlet, and downstream	11-30-2020
3. Present findings and hold a field day event at the sites with a tour of the project	6-30-2021
4. Report on the monitoring data to be distributed	6-30-2021
5. HLWD will monitor the easement annually to ensure compliance and functionality of the improvements.	ongoing

III. PROJECT STRATEGY

A. Project Team/Partners

Project Partners Receiving Funds:

- Project Sponsor: HLWD, Jan Voit, District Administrator (\$642,500) – review and approval of project, hold and monitor easement, act as funding agent for planning and implementation
- Landowners, providing parcels for easement (\$78,065) – Jason Burns, Bradley Baumgard, Howard and Beverly Damm, Shauna Burns, Imhoff Family Trust, and Nila Ann Pederson

Project Partners Not Receiving Fund:

- Minnesota Department of Natural Resources, Jim Sehl, EWR Assistant Regional Manager-provide technical review of project

B. Project Impact and Long-Term Strategy

This project is part of larger efforts to restore Okabena Creek and South Heron Lake, whereby implementing the practices outlined above will have measurable improvements in the amount of nitrates entering Okabena Creek and lessening the impacts of flooding along the creek, while also enhancing habitat for aquatic species, waterfowl, and pollinators. The project will have a lasting impact, as the project area will be permanently protected and maintained through an agreement with the HLWD.

C. Timeline Requirements

All phases of the proposed project will be completed within three-years, with the exception of the monitoring and maintenance required by the easements. However, this effort is part of a larger, comprehensive plan to restore the Heron Lake watershed and protect communities from flooding.

2018 Detailed Project Budget

Project Title: Okabena Creek Water Quality and Flood Mitigation Demonstration

IV. TOTAL ENRTF REQUEST BUDGET 3 years

BUDGET ITEM	AMOUNT
Personnel:	
All Heron Lake Watershed District personnel time is in-kind (see below)	N/A
Professional/Technical/Service Contracts:	
Construction company TBD: excavation of soils for pond & 2-stage ditch, outlet structure	\$ 582,500
Lab, TBD: Take 24 samples - prior to installation and once/month May-October in 2021 at the four sites	\$ 10,000
Equipment/Tools/Supplies:	
Community Education and Outreach Materials	\$ 10,000
Install four monitoring structures; upstream of the improvement, within the site, at the outlet, and downstream	\$ 40,000
Acquisition (Fee Title or Permanent Easements):	
6 Parcels in conservation easements, totaling approximately 13 acres to be held by Jackson County Ditch No. 3 of Heron Lake Watershed District	\$ 78,065
TOTAL ENVIRONMENT AND NATURAL RESOURCES TRUST FUND \$ REQUEST =	\$ 720,565

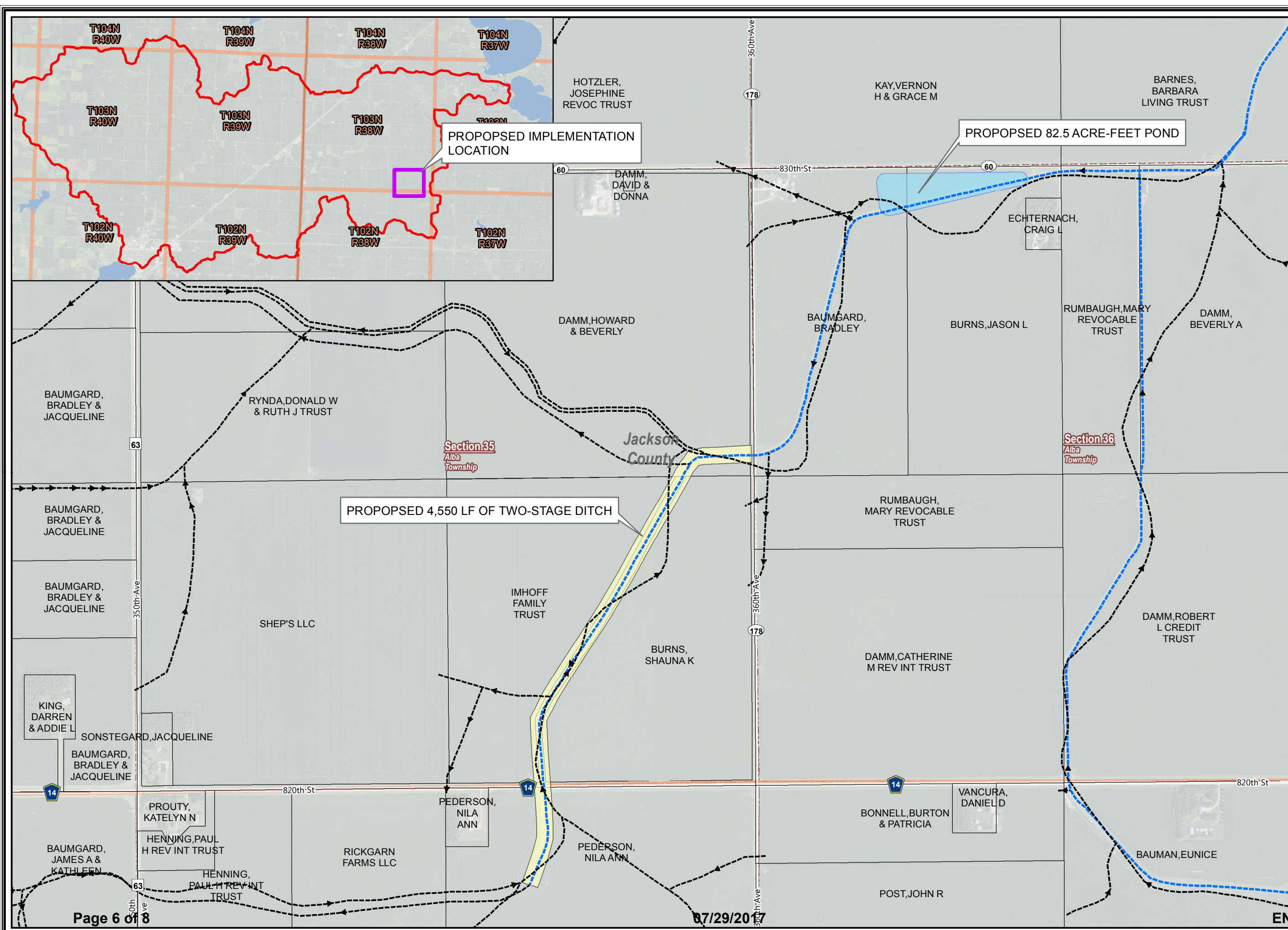
V. OTHER FUNDS

SOURCE OF FUNDS	AMOUNT	Status
Other Non-State \$ To Be Applied To Project During Project Period:	N/A	
Other State \$ To Be Applied To Project During Project Period:	N/A	
In-kind Services To Be Applied To Project During Project Period: These services include 2% for administration of the grant (\$15,460) as well as travel and staff time for conducting the water quality monitoring (\$11,594).	\$ 27,054	secured
Past and Current ENRTF Appropriation: Sediment and Phosphorus Reduction Implementation Projects; LEGAL CITATION: M.L. 2013, Chp. 52, Sec. 2, Subd. 05c	\$ 122,000	secured
Other Funding History: Contract with engineering company: Design, Survey and Construction Staking/Administration (landowner funded)	\$ 56,000	secured

Environment and Natural Resources Trust Fund**2018 Proposed Acquisition/Restoration List****Project Title:** Okabena Creek Water Quality and Flood Mitigation Demonstration**Project Manager Name:** Jan Voit**Organization:** Heron Lake Watershed District (HLWD)**ENRTF \$ Request:** \$ 78,065

#	Acquisition or Restoration Parcel Name	Geographic Coordinates Format: [Deg.]° [Min.]' [Sec.]" [Hemis.]		Estimated Cost	County	Ecological Significance	Activity Description	# of Acres	# of Shoreline Miles	Type of Landowner	Proposed Fee Title or Easement Holder (if applicable)
		Latitude	Longitude								
1	Jason Burns	43° 41' 6.44" N	95° 20' 53.58" W	\$ 32,435.00	Jackson	Farm Land/Low Land	Pond	4.99		Private	HLWD
2	Bradley Baumgard	43° 41' 6.44" N	95° 21' 10.98" W	\$ 13,455.00	Jackson	Farm Land/Low Land	Pond	2.07		Private	HLWD
3	Howard & Beverly Damm	43° 41' 6.44" N	95° 21' 38.51" W	\$ 2,990.00	Jackson	Farm Land/Low Land	2-Stage Ditch	0.46		Private	HLWD
4	Shauna Burns	43° 40' 39.18" N	95° 21' 27.96" W	\$ 12,805.00	Jackson	Farm Land/Low Land	2-Stage Ditch	1.97		Private	HLWD
5	Imhoff Family Trust	43° 40' 41.95" N	95° 21' 48.16" W	\$ 12,805.00	Jackson	Farm Land/Low Land	2-Stage Ditch	1.97		Private	HLWD
6	Nila Ann Pederson	43° 40' 13.31" N	95° 21' 38.37" W	\$ 3,575.00	Jackson	Farm Land/Low Land	2-Stage Ditch	0.55		Private	HLWD

NOTES:



**Okabena Creek
Creek Water
Quality and
Flood Protection
Demonstration**

Jackson County, MN

- Legend**
- Facility Status, Facility Type**
- Existing, Main Tile
 - Existing, Open Ditch
 - Proposed, Main Tile
 - Proposed, Open Ditch
 - Abandoned, Main Tile
 - Abandoned, Open Ditch
 - Okabena Creek Watershed
 - Parcels
 - Proposed Pond
 - Two Stage Ditch

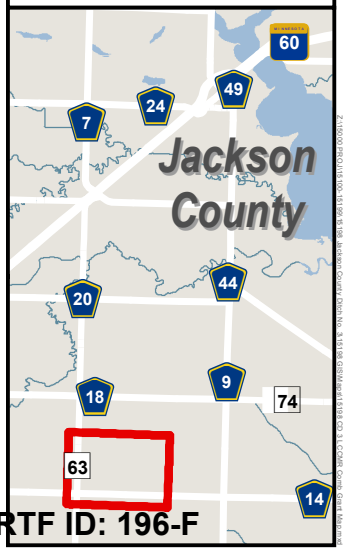
PN: 13-15198

Source

Orthophotograph (MnGeo WMS, 2015)
Tile/Ditch (Jackson County, 2016)
Parcels (Jackson County, 9/27/2016)
Lakes (MN DNR, July, 2008)
Major Stream (MN DNR, July 2008)
Counties (MN DNR, July 2013)
PLSS (MnGeo/USGS)



0 175 350 700 Feet
1 inch = 750 feet



Jan Voit

District Administrator

Heron Lake Watershed District

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Heron Lake, MN 56137

Tel: (507) 793-2462 FAX: none email: jan.voit@mysmbms.com

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

2013 Project of the Year Award from the Minnesota Association of Watershed Districts

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

- Heron Lake Phosphorus Reduction Project 2: The goal of this project is to reduce the amount of phosphorus and fecal coliform bacteria entering Heron Lake by replacing 30 septic systems over the three-year program.
- Heron Lake Third Crop Phosphorus Reduction Effort: The goal of this project is to engage farmers that will implement cover crops for water quality improvement as well as their own farm's sustainability by establishing 200 acres of cover crops annually during the three-year grant period.
- West Fork Des Moines River (WFDNR) Major Watershed Project Phase 2: The primary goal of this project is to develop a comprehensive Watershed Restoration and Protection Strategies (WRAPS) Report to be used on the local level. Achieving this goal will require sound working relationships between local government units, watershed citizens, and state government. Gathering input from these groups will be critical in drafting a WRAPS report that can be utilized by local decision-makers. Working groups will be convened to become informed of the watershed management process and to assist watershed professionals in engaging the public and producing the WRAPS report.
- Soil Health Research in Southwest Minnesota: Through this grant effort, research is being conducted through the Haney Soil Test and Soil Nitrate Test on cover crop fields. A field day will be held at the end of the grant.
- WFDNR Targeting and Prioritizing Endeavor: In this grant, the HLWD will build upon the terrain analysis products developed by Southwest Prairie Technical Service Area 5 and extend the data products to include best management practices (BMP) suitability, BMP effectiveness, and BMP value datasets. The outcome of this project will be Geographic Information Systems (GIS) datasets, summary maps, and a technical memorandum describing the suitability for BMP placement, the effect of implementation on priority resources, and the measurable cost-effectiveness of pursuing opportunities to implement BMPs. All of these methods are complimentary to implementation, restoration, and protection strategies identified within the WRAPS process and will aid local civic engagement efforts.
- Increasing Soil Health and Infiltration with Cover Crops: This grant will help measure the benefits of cover crops focusing on increasing soil health and infiltration by using the Haney Soil Test and infiltration test. A field day will be held at the end of the grant period.

