

**Environment and Natural Resources Trust Fund
2016 Request for Proposals (RFP)**

Project Title:

ENRTF ID: 042-B

Morrison County Performance Drainage and Hydrology Management

Category: B. Water Resources

Total Project Budget: \$ 261,000

Proposed Project Time Period for the Funding Requested: 3 years, July 2016 to June 2019

Summary:

Morrison County will conduct an assessment of drainage infrastructure; develop hydrology restoration priorities and a county-wide performance drainage ordinance to stem the negative impacts of rapid land use changes that impact hydrology.

Name: Helen McLennan

Sponsoring Organization: Morrison SWCD

Address: 16776 Heron Road
Little Falls MN 56345

Telephone Number: (320) 616-2479

Email helen.mclennan@mn.nacdn.net

Web Address _____

Location

Region: Central

County Name: Morrison

City / Township:

Alternate Text for Visual:

The map exhibit represents Morrison County and major drainage in blue, with orange ground water vulnerable areas adjacent to the minor waterways

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



Environment and Natural Resources Trust Fund (ENRTF)

2016 Main Proposal

Project Title:

PROJECT TITLE: Morrison County Performance Drainage and Hydrology Management

PROJECT STATEMENT: Morrison County like other agricultural counties has experienced a vast increase in drainage. Thousands of acres are being tiled with no approval or oversight, and the water moving across the landscape has altered drainage capacity of county and township roads, as well as creating major conflict between neighbors, road authorities, with the impacts of standing water on agricultural fields and topping public roads. The land conversion from perennial cover and proliferation of pattern tile drainage systems have impacted the local hydrology in Morrison Co. faster and often more negatively than local units of government can address.

The county board has expressed a willingness to approve an ordinance making land use conversions and tiling a permitted activity. Township boards have expressed their support for such an ordinance.

This issue is compounded with producers farming into road right of ways. There are no records for private drainage elevations and townships make road decisions on culverts without having the expertise to deal with the hydrology necessary to move water efficiently. An end result is chaos. The SWCD does not have adequate staff and or information to assist in these conflicts. We want to take the lead in managing drainage, county wide. First we would inventory every ditch that can be found, find the elevations of every culvert and build a data base. A drainage technician with hydrology background would be hired to collect all of the information and then we would analyze with the road authorities where the problems exist and prioritize the workload. From that analysis, the hydrology technician would help design control structures on drainage systems, (both tiling and ditches), assist road authorities with drainage designs, and also oversee tiling designs to assure tile systems are more efficient and do not negatively impact roads, neighboring properties, or impact surface waters with nutrient loads.

To meet this capacity, involves the hiring of qualified staff and provide the person with transportation and the essential equipment needed. While stationed with the SWCD, the staff would work with County and Township road authorities.

Tile set for installation



Two-stage ditch hydrology/nutrient mitigation





II. PROJECT ACTIVITIES AND OUTCOMES

Activity 1: Culvert assessment, hydrology modeling, project prioritization **Budget: \$261,000**

Outcome	Completion Date
1. Morrison SWCD will hire a staff hydrologist	3-years
2. Morrison SWCD will conduct culvert inventory and model hydrology scenarios within the sensitive watersheds first, then county-wide	3-years
3. Morrison SWCD will prioritize and cost out restoration projects related to assessment	3-years

Activity 2: Morrison County will develop a performance drainage ordinance **Budget: In-Kind**

Outcome	Completion Date
1. Morrison SWCD will coordinate the Water Plan Task Force and County Commissions to develop a performance drainage ordinance	3-years
2. Morrison SWCD will as a function of Water Plan priorities develop a buffer ordinance	3-years
3. Civic engagement throughout ordinance development, press release, county website	3-years

III. PROJECT STRATEGY

A. Project Team/Partners

- | | |
|-----------------------------------|------------------------------------|
| -Morrison County Commissioners | -MDNR Wildlife and Fisheries |
| -MN Dept. of Agriculture | -Township road authorities |
| -Morrison Water Plan Task Force | -Board of Water and Soil Resources |
| -Producers and stakeholder groups | -The Nature Conservancy |

B. Project Impact and Long-Term Strategy

Short-term this project will develop both a usable assessment inventory of the county conveyance system with a ranked prioritization and cost matrix to inform county and township infrastructure investment for restoration and maintenance. Long-term, using the policy strategy via the local county water plan, Morrison County will be able to permit and monitor performance drainage construction and impacts as a part of the hydrologic system, minor watershed by minor watershed rather than site by site or non-permitted drainage construction as exists today. This change in water management policy will link producers and land owners to farm bill and state Legacy program funds with their corresponding technical service providers for implementation and design. The strategies used in this project to improve water hydrology, quality, ground water recharge and ultimately source water protection have long reaching service values to all downstream water users. This program is scalable to be delivered at the minor watershed level with implementation strategies that fit into the local county water plan, MPCA Watershed Restoration and Protection Plans and future BWSR One Water One Plan initiatives.

C. Timeline Requirements

This project will be implemented within the three-year time frame applied for. Morrison SWCD will convene and coordinate the above partners to form a technical committee intended to work with the assessment and analysis work described to develop restoration project priorities and guidance language for a controlled drainage ordinance. Starting in 2015 the Morrison County SWCD will also coordinate the Water Plan Task Force to update the current county water plan. This public planning process will be the vehicle by which a performance drainage ordinance will be developed and moved on for County Board approval as some point during the scope of the 3-year project.

2016 Detailed Project Budget

Project Title: Morrison County Performance Drainage & Hydrology Management

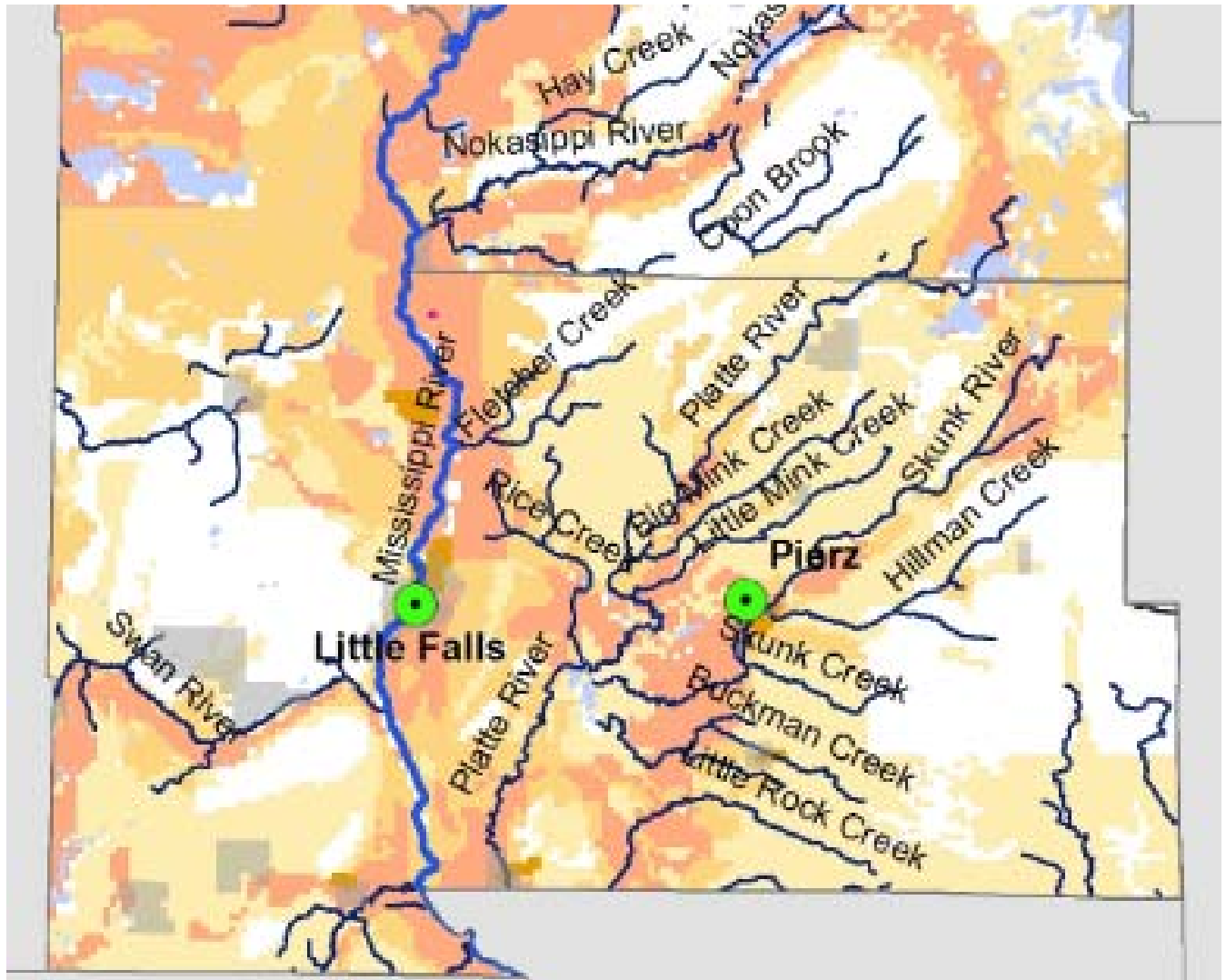
IV. TOTAL ENRTF REQUEST BUDGET years

<u>BUDGET ITEM</u>	<u>AMOUNT</u>
Personnel: 1. SWCD Manager - financial management of grant, supervision of staff hiring, reporting to LCCMR, working with County and Twp to develop a new drainage ordinance, purchasing necessary equipment, and conducting the outreach with producers and partners.	
Professional Hydrologist or hydrologist technician to conduct and create the inventory and researching LIDAR where feasible and develop the data base of ditch elevations and culvert elevations not available on LIDAR. Direct assistance to landowners and road authorities in design oversight, control structure design, and drainage management (salary/benefits)	\$ 175,000
Equipment/Tools/Supplies: Trimble survey laser equipment/software/vehicle/laptop	\$ 75,000
Travel: fuel/vehicle maintenance	\$ 11,000
TOTAL ENVIRONMENT AND NATURAL RESOURCES TRUST FUND \$ REQUEST =	\$ 261,000

V. OTHER FUNDS

<u>SOURCE OF FUNDS</u>	<u>AMOUNT</u>	<u>Status</u>
Other Non-State \$ To Be Applied To Project During Project Period: Landowner contributions for erosion project, \$20,000: County contribution to erosion project \$20,000, EQIP and CSP and CRP	\$60,000	<i>pending</i>
Other State \$ To Be Applied To Project During Project Period: <i>Clean Water Partnership Funds for a bridge stabilization and toe wood project on the Platte River. Buffer Inventory BWSR funds.</i>	\$128,000	<i>\$60,000 awarded already, other</i>
In-kind Services To Be Applied To Project During Project Period: <i>County Board ordinance development on tiling, public hearings, LWP task force meetings, technical assistance by multiple agencies.</i>	\$ 20,000	<i>pending</i>
Funding History: Have not applied for LCCMR funding, but have applied through CWF and other entities with no success. Have received grant funds for other projects many times and have fulfilled every grant ever received.	\$ -	
Remaining \$ From Current ENRTF Appropriation:	\$ -	

Morrison County Drainage Project Area




Legend

 Huc12 watersheds

Groundwater Vulnerability

 Medium Susceptibility

 High Susceptibility

 Highest Susceptibility

 SWP/DWSMA



MORRISON SOIL AND WATER CONSERVATION DISTRICT

16776 Heron Road
Little Falls, Minnesota 56345
(320) 616-2479 * www.morrisonswcd.org

Morrison SWCD is now 55 years in business. Led by an elected by a five member Board of Supervisors the District has four full time staff. Their mission statement is "to provide leadership and direct assistance for conservation management of soil and water. Their primary programs are the MN Wetland Conservation Act, Administration of the Morrison County Local Water Plan, supervising designed structures and practices for erosion control, administering over 140 easements through the Army Compatible Use Buffer Program, and assisting the county as their environmental advisor for all land use permits, which includes conducting environmental reviews on all feedlots and shore land impacts.