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

Project Title:	ENRTF ID: 083-B
Integrating Targeted Watershed Planning Tools with Citizen	Involvement
Category: B. Water Resources	
Total Project Budget: \$ 169,108	
Proposed Project Time Period for the Funding Requested:	years, July 2016 to June 2019
Summary:	
To demonstrate targeted subwatershed conservation planning and improvements in one of the most degraded watersheds in the state	
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Location	
Region: Statewide	
County Name: Statewide	
City / Township:	
Alternate Text for Visual:	
Targeted watershed planning and citizen engagement framework: modeling tools and prioritize subwatersheds; 2. Develop pollution r subwatersheds; 3. Citizens and local partners develop and implem	eduction strategies in five priority
Funding Priorities Multiple Benefits Outco	omes Knowledge Base
Extent of Impact Innovation Scientific/Ted	ch Basis Urgency
Capacity Readiness Leverage	TOTAL%

Page 1 of 6 07/15/2015 ENRTF ID: 083-B



# Environment and Natural Resources Trust Fund (ENRTF) 2016 Main Proposal

Project Title: Integrating targeted watershed planning tools with citizen involvement

B PROJECT TITLE: Integrating targeted watershed planning tools with citizen involvement

#### I. PROJECT STATEMENT

The Le Sueur River Watershed continues to be one of the leading contributors of pollutant loads in the Upper Mississippi River Basin. Statewide, there is a need to better target pollution reduction in these high-loading agricultural watersheds. This project will clarify the most effective targeting tools, foster better coordination among public agencies, demonstrate targeted subwatershed conservation planning, and harness the energy of a citizen group to facilitate improvements in one of the most degraded watersheds in the state. National, state and local researchers have identified altered flow regime in the Le Sueur as a major stressor causing accelerated erosion in rivers and streams (Wilcock; MPCA Watershed Restoration and Protection Strategy [WRAPS]). These researchers and a locally-led citizen group, Le Sueur River Watershed Network (<a href="Lesueurriver.org">Lesueurriver.org</a>) concur that the solution lies in re-creating more storage, retention, and infiltration in the watershed in order to hold back water that is destabilizing these systems and contributing to water quality problems.

Many targeting tools are being developed and piloted in different locations across the state. This project will summarize conservation planning tools in a handbook that Local Government Units (LGUs) can use to determine what tool, or combination of tools, will help them more successfully target implementation. This is a logical next step to build upon and integrate data generated by MPCA's WRAPS and Total Maximum Daily Load (TMDL) reports. We will work with the existing joint powers board, Greater Blue Earth River Basin Alliance (GBERBA), local partners and a citizen-led watershed group, Le Sueur River Watershed Network, to support better coordination and communication, and to target implementation in five priority subwatersheds in the Le Sueur River Watershed.

### **II. PROJECT ACTIVITIES AND OUTCOMES**

Activity 1: Research, summarize and disseminate information on prioritization tools

Many of the targeted conservation planning models and calculators are anticipated to be available in the next year (e.g. Agricultural Conservation Planning Framework; Prioritize, Target, and Measure Application; linking water storage; Nitrogen BMP and Phosphorus BMP tools; etc.). LGU's in rural watersheds may not have the staff, technology, and/or time to experiment with these diverse conservation prioritization programs. We will inventory tools, along with their intended use, necessary input data, technology requirements, and outputs. We will create a handbook and educate LGUs on the latest prioritization tools (for use regionally and/or statewide).

Outcome	<b>Completion Date</b>	
1. Inventory of available GIS prioritization and planning tools and reduction calculators	June 2017	
2. Compile data pertinent to running tools and calculators in Le Sueur River watershed	June 2017	
3. A summary handbook for LGUs using precision technologies (GIS frameworks and	June 2018	
models) in conservation planning.		
4. Educate LGUs on the latest prioritization tools (regionally and statewide)	June 2019	

**Activity 2:** Develop targeted pollution reduction strategies in five Le Sueur River Subwatersheds **Budget: \$42,277** Use the latest modeling tools to develop targeted pollution reduction strategies in five (5) priority subwatersheds. Collect, compile, and disseminate GIS, resource and water quality data about subwatersheds. Work with local partners and citizens to create subwatershed priorities and strategies. Assist local partners to prioritize projects and craft shovel-ready list within these subwatersheds.

Outcome	<b>Completion Date</b>
1. Modeled conservation planning scenario maps for five (5) subwatersheds using the	June 2019
latest modeling tools (including targeted conservation opportunity areas for BMPs,	
estimated pollution reductions)	

1



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2. Citizens, local and state partners work together to create pollution reduction strategies	June 2019
for subwatersheds	
3. Results shared regionally (LGUs and GBERBA) and statewide at conferences, meetings	June 2019
and workshops	

Budget: \$84,554

#### **Activity 3: Citizen Engagement and Outreach**

Engage citizens and local managers within targeted subsheds to clarify and promote BMPs that support pollution reduction strategies. We will use subwatershed data to explain historical, current conditions, impairments and modeled information to more clearly illustrate conservation opportunity areas based on citizen concerns. Le Sueur River Watershed Network citizens and local staff will develop and share pollution reduction strategies within each subwatershed through a series of interconnected small and large group meetings, field days, and one-on-one meetings. Landowners will reach out to neighbors to increase peer-to-peer networking to implement BMPs that support reduction strategies.

Outcome	<b>Completion Date</b>
1. Outreach materials such as subwatershed resource profiles, targeted conservation	June 2019
opportunity areas, and BMP implementation strategies	
2. Host watershed meetings to explain background issues, describe benefits of targeting	June 2019
and facilitate conversations that clarify goals and conservation opportunities among local	
staff and landowners:	
- Le Sueur River watershed-wide (3 per year = 9 meetings; ~700 people)	
- Selected subwatersheds (3 per each of 5 subwatersheds = 15 meetings; ~400 people)	
- Ground truthing to support GIS modeling results (10 trips per year = 30 trips)	
- Field days in each of the subwatersheds demonstrating targeted conservation planning	
and examples of effective BMPs in agricultural watersheds (6 field days; ~600 people)	
3. Citizens and local partners network with subwatershed neighbors to identify	June 2019
opportunities (e.g. shovel-ready list of BMPs) and promote implementation strategies	

### **III. PROJECT STRATEGY**

### A. Project Team/Partners

Supported by this Project: Water Resources Center, Minnesota State University, Mankato staff and student Supported by Other Projects & Staff Time: Le Sueur River Watershed Network (citizen-led group); Greater Blue Earth River Basin Alliance (Joint Powers Board of 11 counties in the Le Sueur, Blue Earth and Watonwan River watersheds); Blue Earth County/SWCD, Freeborn County/SWCD, Waseca County, Steele County/SWCD, Faribault County/SWCD

# **B. Project Impact and Long-Term Strategy**

The project will help to inform a longer-term strategy to reduce pollutant loads in high-loading watersheds in the state. Over time the aim is to reduce the number and types of impairments and to improve water quality. Clarifying the many targeting tools available and creating a framework for using them will help local watershed professionals (e.g. watershed organizations, counties, soil and water conservation districts, etc.) better understand the tools and target their efforts. Citizens will have a clearer idea what conservation opportunities are within their subwatershed and which are the most effective and cost-efficient BMPs. This local consultative process with landowners based on targeted opportunity areas is a promising route to achieve pollutant reduction goals identified in the Le Sueur River Watershed Restoration and Protection Strategy.

### C. Timeline Requirements

This project will require 36 months to complete and be underway from July 2016-June 2019.

2

# **2016 Detailed Project Budget**

Project Title: Integrating Targeted Watershed Planning Tools With Citizen Involvement

# IV. TOTAL ENRTF REQUEST BUDGET - Three (3) years

BUDGET ITEM		<u>AMOUNT</u>
Water Resources Center (WRC) Assistant Director		
Planning, coordination, reporting, administration, and educational outreach	\$	36,000
30% FTE for 3 yrs; Salary=88%, Benefits= 12%		
Staff - Watershed analysis and civic engagement	\$	93,277
50% FTE for 3 yrs; Salary=64%, Benefits= 36%	٧	33,211
Staff - GIS Watershed Analysis and Modeling	\$	20,550
25% FTE for 2 yrs; Salary= 64%, Benefits= 36%	٧	20,330
Student Intern (during academic year)	\$	7,056
31% FTE for 2 academic yrs; Salary=100%, Benefits= 0%	٧	7,030
Education and Outreach:	\$	8,650
9 large group meetings (3/year)		
9 room rentals @100= \$900; advertising- postage/printing and mailing (150/meeting=\$1,350); 15		
Subwatershed meetings supplies -\$4000; Printing meeting materials - \$900; printing booklets for		
major and minor watersheds - \$1500		
Travel: \$55/day of state vehicle	\$	3,575
Meetings with citizen and local resource managers - 40 trips=\$2200.00.		
Field verification of GIS - 10 trips=\$550.		
Meetings and field days @ 15 trips= \$825.		
TOTAL ENVIRONMENT AND NATURAL RESOURCES TRUST FUND \$ REQUEST =	\$	169,108

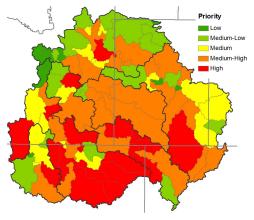
## V. OTHER FUNDS

VI O III EKI ONDO			
SOURCE OF FUNDS	OS AMOUNT		<u>Status</u>
Other Non-State \$ To Be Applied To Project During Project Period: Le Sueur River Watershed	\$	82,491	Secured
Targeted Conservation Practices			
Other State \$ To Be Applied To Project During Project Period: MSU Administration - Grant	\$	6,000	Secured
administration and other resources			
In-kind Services To Be Applied To Project During Project Period: Local, state and federal staff		TBD	Secured
time and Le Sueur River Watershed Network and citizen steering committee			
Remaining \$ From Current ENRTF Appropriation:		N/A	N/A

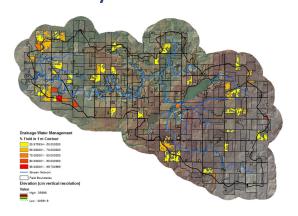
Page 4 of 6 07/15/2015 ENRTF ID: 083-B

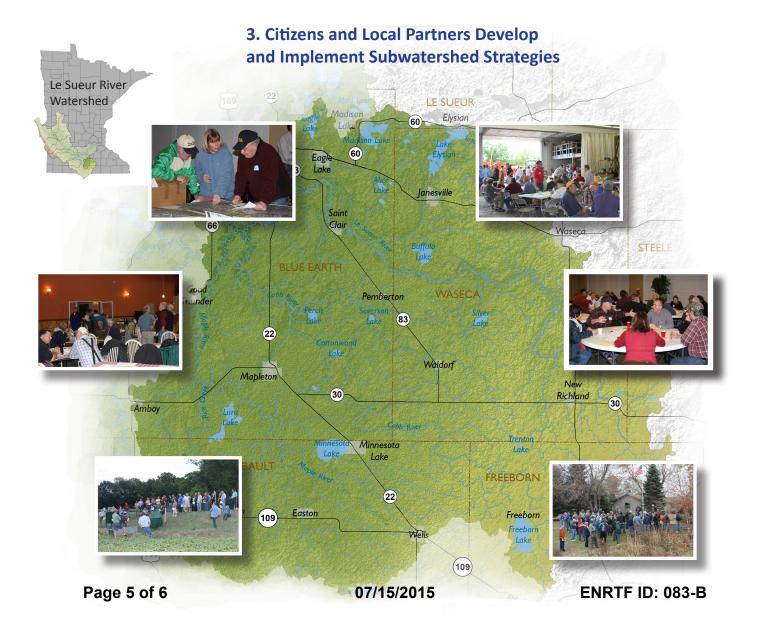
# Targeted Watershed Planning & Citizen Engagement

# **1. Inventory GIS Prioritization and Modeling Tools and Prioritize Subwatersheds**



# 2. Develop Pollution Reduction Strategies in Five Priority Subwatersheds





# PROJECT TITLE: Integrating targeted watershed planning tools with citizen involvement Project Manager Qualifications and Organization Description

### **Kimberly Musser, Project Manager**

As Assistant Director of the Water Resources Center, Minnesota State University, Mankato, (WRC MSU-M), Kimberly Musser has coordinated a wide variety of Minnesota River Basin centered projects. She has served as project manager for the <u>Le Sueur River Civic Engagement Project</u>, Watonwan Civic Engagement Project, Southwest Minnesota Civic Engagement Cohort on Water Quality, <u>Minnesota Nutrient Planning Portal</u>, Minnesota Nutrient Reduction Strategy - Pilot Projects, <u>Minnesota River Basin Trends Report</u>, <u>State of the Minnesota River Water Quality Monitoring Reports</u>, <u>Minnesota River Experts</u>: <u>An Educational Field Trip Online</u>, <u>Minnesota River Basin Data Center</u> website update and expansion, among many others. These projects have all centered on summarizing data and providing information to diverse audiences about the Minnesota River and its tributaries.

Kimberly brings over a decade of project management experience to the project. Additionally, she has developed and taught a dozen courses MSU-M in the Geography and Urban and Regional Planning departments. She holds a Master's degree in Community and Regional Planning from the University of Oregon and an undergraduate degree in Geography from the University of California at Berkeley.

### Water Resources Center, Minnesota State University, Mankato (WRC, MSU-M)

In 1987 the WRC was created to serve as a regional center for gathering, interpreting, and distributing data of environmental significance. Faculty and students accomplish these tasks through applied research, educational programming, technical assistance, and water resource planning. In addition, we have GIS staff with the capacity to create sophisticated GIS analysis and maps and 3-dimensional landscape visualization. Using the latest data, the WRC works with citizens within the Minnesota River Basin to enhance the quality of regional lakes, rivers, wetlands, and groundwater.

Since its beginning, the WRC has participated in over 100 research, educational, and planning projects involving partnerships with dozens of public and private organizations. These projects range from groundwater, lake assessment, and TMDL studies to citizen engagement and water quality workshops, to the development of watershed-based plans for surface water quality protection. Our stability since 1987 stands as a testament to the objective and quality products we produce. Long-term partnerships with counties, nonprofit organizations, and state agencies have resulted in many important and farreaching land and water resource initiatives. We have a dedicated staff and look forward to enhancing the public's understanding and connection with water resources in the region.

Page 6 of 6 07/15/2015 ENRTF ID: 083-B