

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

Project Title:

ENRTF ID: 159-I

Whitewater Watershed Performance-Based Farm Environmental Management Program

Topic Area: I. Water Resources

Total Project Budget: \$ 343,500

Proposed Project Time Period for the Funding Requested: 4 yrs. July 2013 - June 2017

Other Non-State Funds: \$ 0

Summary:

An environmental performance-based incentive program led by farmers to improve the water quality in the Whitewater Watershed where all three branches are impaired for nitrates, turbidity and fecal coliform.

Name: Natalie Siderius

Sponsoring Organization: Whitewater River Watershed Project

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Lewiston MN 55952

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Web Address: http://www.whitewaterwatershed.org

Location

Region: SE

County Name: Olmsted, Winona

City / Township:

_____ 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: Whitewater Watershed Performance-Based Farm Environmental Management Program

I. PROJECT STATEMENT

All of the Whitewater River's three main branches are on the draft 303(d) list for impairments for **nitrates, turbidity and fecal coliform**. This program of environmental improvement performance based incentives focuses on the agricultural, 45,000 acre Middle and Logan Branches of the Whitewater River.

The Whitewater Joint Powers Board (WJPB) with the support of MPCA staff and ARRA grant funding formed the Farmer-led Council as a Minnesota pilot project to **“work proactively to protect and improve the waters of the Whitewater River Watershed through education, public awareness, innovation and the implementation of a wide variety of conservation practices that work for individual farmers and farm operations resulting in the removal of all Whitewater River segments from the EPA list of impaired waters under Section 303(d) of the Clean Water Act. The Council believes that it is those that live in the watershed that are best able to protect and improve water quality.”** The WJPB staff actively recruited farmers to serve on the **thirty member Council**. The Council has adopted a purpose statement, by-laws, and goals and is advisory to the WJPB. The Council will select the activities and practices used in the incentive program with final approval from the WJPB.

The WJPB supports the work the Farmer-led Council (Council) has done to:

- create a network of engaged citizens that disseminates information rapidly neighbor to neighbor;
- promote conservation practices and improve their own farm operations; and,
- shoulder responsibility for water quality in the Whitewater Watershed.

In rural areas, water quality improvements largely occur through small incremental (farm by farm) changes in land use management. Government alone cannot address the water quality problems that exist in the Whitewater and other watersheds. Further, government agencies often have difficulty connecting with land owners to get conservation practices implemented on the ground. When farmers take the lead, work to educate themselves and one another, commit to environmental improvement, and are empowered, they can collectively address water quality concerns and promote positive change.

The WJPB and Council know that a grass-roots initiated performance-based management program will encourage conservation measures resulting in environmental improvement by tying farmer's incentive payments to environmental performance. The backbone of this program is the agronomic testing used to evaluate effectiveness of each farm operator's nutrient management and soil management practices. Fields are assessed using performance indexes such as P-index, Soil Conditioning Index (SCI) and cornstalk nitrate test. **Incentives are paid when indices improve indicating that soil and nutrient loss have decreased.** Strengths of this program include flexibility, empowerment, and feedback. As new, environmentally-friendly farming practices are implemented, increased profit through reduced overhead costs will reinforce sustainable farming practices. Further, social capital and a land ethic will be built in the watershed.

This program is being modeled on the highly successful Watershed Programs in Iowa. As a direct result of implementing performance-based farm and environmental management program, Lime Creek Watershed reduced nitrates 19%, Coffee Creek Family Biotic Index improved from fairly poor to good. Early success in the Whitewater Watershed with our Farmer-led Council has spurred interest in a similar approach in the Root, Zumbro and Cannon Watersheds as well as other branches of the Whitewater.

II. DESCRIPTION OF PROJECT ACTIVITIES

Activity 1: Environmental Performance Incentive Program

Budget: \$310,000

Enroll farm operators in the performance-based incentive program including Soil Conditioning Index, Phosphorus Index, and Corn Stalk Nitrate Analysis. Indices are calculated each year and show farmers whether their land use practices are effective in reducing erosion, and nutrient loss from fields. Incentive payments are small ranging from \$50 for manure analysis to \$400 for farm average corn stalk nitrogen analysis less than 1700 ppm. **Payments are dependent on improved index scores or completion of an activity such as manure spreader calibration**

Outcome	Completion Date
1. Sixty percent of farmers (140) in Middle and Logan branch participating	September, 2015
2. Improvement in SCI and P Indices and Stalk Nitrate Scores	May, 2016
3. Statistically significant improvement in water quality in Middle & Logan Branch	February, 2017

Activity 2: Stream Monitoring for Fecal Coliform, Nitrates, and Turbidity Budget: \$13,000

The existing sampling sites in the Middle and Logan Branches would be utilized to continue monitoring to provide annual feedback to farmers on water quality.

Outcome	Completion Date
1. Fecal Coliform, Nitrate and Turbidity Data Collected	September, 2014
2. Fecal Coliform, Nitrate and Turbidity Data Collected	September, 2015
3. Fecal Coliform, Nitrate and Turbidity Data Collected	September, 2016
4. Statistical Analysis of data from all three years	February, 2017

Activity 3: Field Days, Council Meetings, Outreach and Education Budget: \$3,000

Educational activities to ensure citizens are informed, participating, and empowered. Six field days/events will be held over the course of the grant on Council chosen topics such as nutrient management; conservation practices; corn stalk nitrate testing; and, grazing/pasture management.

Outcome	Completion Date
1. Informed, engaged citizenry determined by surveys at events & field days.	September, 2016

III. PROJECT STRATEGY

A. Project Team/Partners

The WJPB staff will continue administrative support to the Council through implementation and project planning of the incentive program. Project staff: Natalie Siderius, Project Coordinator, a former planning director and consultant for 25 years; and, Jerry Hildebrandt, Conservationist, a retired SCS and MPCA employee with over 40 years of experience; Soils & GIS Technician to calculate agronomic indices, prepare field maps, and recommend conservation practice to farmers.

B. Timeline Requirements: July 2013 – June 2017; same process for 3 full field seasons. Since analysis is done and payments are made at the end of a growing season, we require four years to complete the project. The growing season and the State’s fiscal year do not coincide.

January – May: Council determines the program incentives. WJPB approves. Farmers enroll (1 pg. form).

May - August: Soil technician establishes a GIS-based database and maps to track agronomic indexes and appropriate land use information for each enrolled field.

June - September: Educational field days/events held to promote best management practices.

August - February: Soil technician enters farmer’s data into database, runs agronomic indexes, creates maps and meets with participating farm operators to provide maps and feedback on practices.

C. Long-Term Strategy and Future Funding Needs

Four years of funding will build the capacity to improve conservation practices by creating the social structure of engaged, committed farmers that get the projects on the land. Continued funding may be needed. Other watersheds may form councils and may need incentive support in the future. Our goal is to create a grassroots model for long-term water quality improvement and protection in Minnesota.

2012-2013 Detailed Project Budget

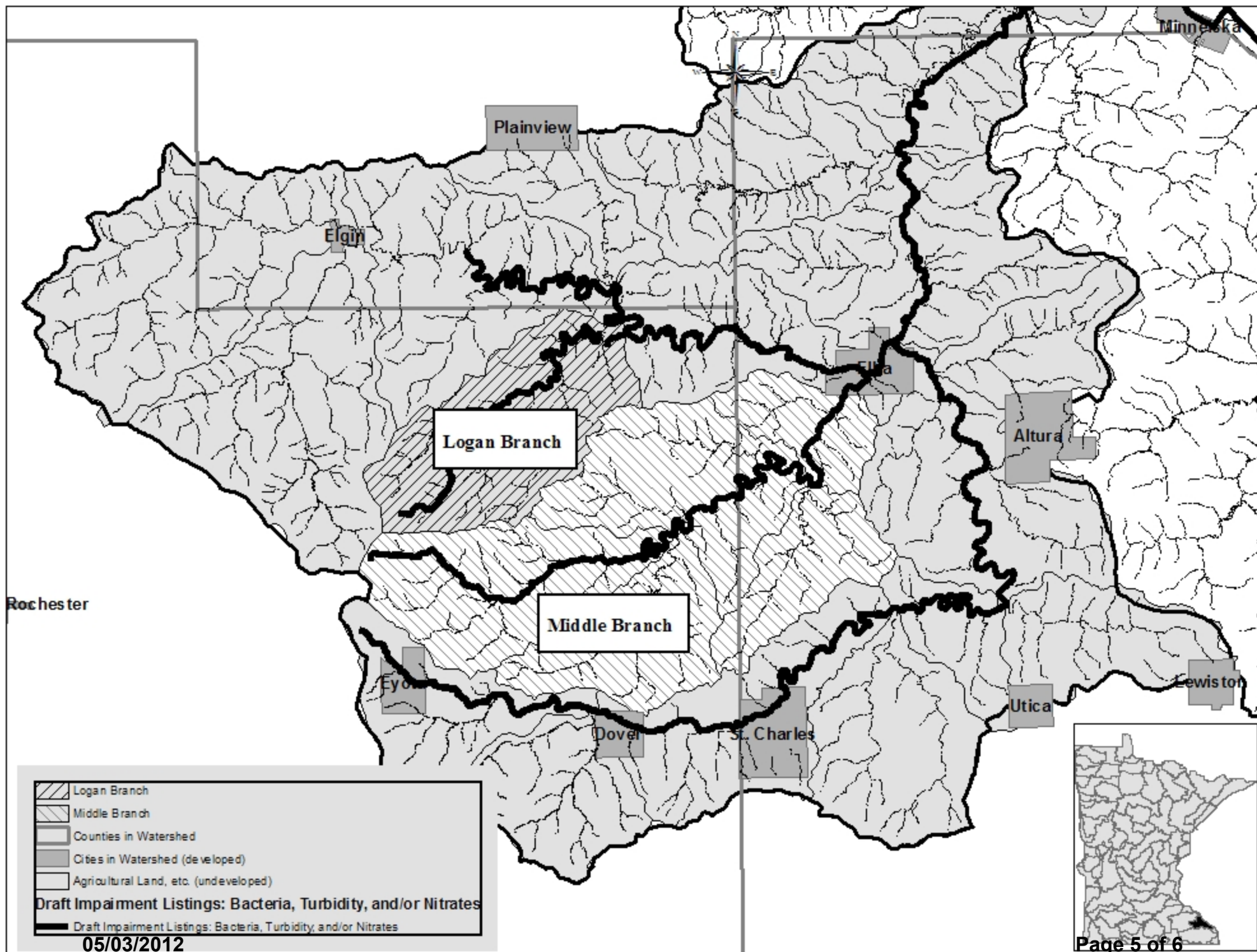
IV. TOTAL ENRTF REQUEST BUDGET Four(4) years/3 full field seasons

<u>BUDGET ITEM</u>	<u>AMOUNT</u>	
Personnel:		
1 Grant & Project Implementation Coordinator (0.15 FTE * 4 yrs = 1248 Hours @ \$24/hr. (Whitewater Watershed Staff are paid out of projects.))	\$	30,000
Contracts:		
1 Soils/GIS/Conservation Technician (0.375 FTE * 4 yrs = 3120 Hours @ \$32	\$	100,000
Incentives Program (3 Full Field Seasons @ \$60,000/season)	\$	180,000
Stream Monitoring: WSU WRC student samplers (210 hours @ \$12/hour)	\$	2,500
Stream Monitoring: Laboratory (210 samples @ \$50/sample for two tests,	\$	10,500
Equipment/Tools/Supplies:		
Mailing: Agendas, Notices, Event Flyers (30 agendas; 6 events, 10 notices @ 230 pieces/ mailing @ \$0.45/piece)	\$	5,000
Printing (10580 pieces @ \$ 0.35/ color copy)	\$	4,000
Travel: Mileage (5000 miles/yr * 3 yrs. * \$0.55/mile)	\$	8,500
Additional Budget Items:		
Field Days/Events (6 events @ \$450/event)	\$	3,000
TOTAL ENVIRONMENT AND NATURAL RESOURCES TRUST FUND \$ REQUEST =	\$	343,500

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 cost of conservation practices at \$1,000/farmer * 140 farmers	\$ 140,000	Pending
Other State \$ Being Applied to Project During Project Period: MPCA grant for Civic Engagement and Strategic Planning for the Mississippi - Winona Watershed which includes the Whitewater Watershed. (No match required.)	\$ 158,000	Secured
In-kind Services During Project Period: Landowners Time, Labor, Costs of Installation, event participation, Council Meetings. In addition, since the WJPB is a joint powers board, the 3 counties provide a great deal of assistance involving staff time and GIS	\$ 95,600	Pending
Remaining \$ from Current ENRTF Appropriation (if applicable):	N/A	
Funding History: ARRA Grant through MPCA for establishment of Council and civic engagement activities - \$115,000 (spent 2011); CWP bacteria reduction continuation grant through MPCA \$214,000 (obligated through June, 2013) with in-kind match from Wabasha, Olmsted & Winona Counties, SWCDs and NRCS of over \$214,000	\$ 329,000	Spent & Obligated

Whitewater Watershed 2010 Draft Impairment Listings



Whitewater Watershed

Brief History

The Whitewater Watershed Project was formed in 1987 to improve the watershed's sedimentation, water quality, flooding, and habitat. A Joint Powers Board (JPB) of Soil and Water Conservation Districts and County Commissioners from Wabasha, Olmsted and Winona Counties, have been working together towards this goal. Over the years it's been invaluable to have the commitment of local elected officials, with many of the board members living and farming in the watershed.

The Whitewater River lies in southeast Minnesota and flows through Whitewater State Park and Whitewater Wildlife Management Area before emptying into the Mississippi River at Weaver Bottoms, a 4,000 acre backwater. The watershed is rural in character.

The primary objective of this watershed project is to put conservation on the land. Implementation activities are being used in the context of helping to promote and accelerate land and water conservation measures. In addition, as the river's waters have been identified as impaired for fecal coliform, nitrates and turbidity, bacteria reduction, and nitrogen best management practices have become a recent priority focus. The Project staff work closely with the SWCD and NRCS staff of each of the Counties.

Natalie Siderius, Whitewater River Watershed Project Coordinator & Winona County Water Planner.

Natalie Siderius was hired in March 2011 as Winona County Water Plan Coordinator and Whitewater Watershed Project Coordinator. Natalie's planning career began in Oregon as an assistant planner with the Marion County Planning Department. She was Planning Director for Laramie/Albany County, Wyoming prior to moving to Minnesota. She established her own planning consultant business and has coordinated and conducted City and County planning and civic projects including the City of Winona's 1995 Comprehensive Plan; Winona County's Comprehensive Plan 2000 (including establishment of GIS in Winona County and a GIS planning model); and, Winona County's first Hazard Mitigation Plan. In addition, she worked with Winona County on an erosion control ordinance and has performed various grant writing and project administration duties.

M.S. Natural Resource Geography, Oregon State University
B.S. Earth Science, Montana State University

Jerry Hildebrandt, Whitewater Watershed Conservationist (part-time)

Jerome Hildebrandt was hired in September, 2010, as the full-time Outreach Coordinator to direct and implement the majority of the farmer-led council outreach tasks. With a background as District Conservationist for over 30 years, chiefly with the Olmstead Council Soil and Water Conservation District, and as a former Pollution Control Specialist/Feedlot Officer with the Minnesota Pollution Control Agency, Mr. Hildebrandt has a great deal of relevant experience engaging citizens, especially farmers, in community-focused natural resources management. As the Watershed Project's Conservationist, Jerome acts as a community liaison, communicating technical information to the public and bringing public input to watershed and TMDL planning activities. Mr. Hildebrandt served as Outreach Coordinator from September 2010 through March 2011. His title then changed to Conservationist as he began working under the Clean Water Partnership Grant. He works directly with Council members.