

Environment and Natural Resources Trust Fund
2014 Request for Proposals (RFP)

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Project Title:

Improving St. Croix River Basin Water Quality

Category: B. Water Resources

Total Project Budget: \$ 304,000

Proposed Project Time Period for the Funding Requested: 2.5 Years, July 2014 - December 2016

Other Non-State Funds: \$ 0

Summary:

This project will improve water quality in the St. Croix River Basin by educating and empowering farmers to change farming practices to focus on soil health, grazing and cover crops.

Name: John Mesko

Sponsoring Organization: Sustainable Farming Association of MN

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Location

Region: Statewide

County Name: Aitkin, Anoka, Carlton, Chisago, Itasca, Kanabec, Mille Lacs, Pine, Washington

City / Township:

MP: 0613-2-202-proposa

Budget: 0613-2-202-bud

Qual: 0613-2-202-qualifi

Map: 0613-2-202-map-st

Resolution: 0613-2-20

List:

	_____	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)
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I. PROJECT STATEMENT

WHY – Modern farming practices, particularly row crop farming, often lead to negative water quality outcomes. Reducing tillage, fertilizer and chemical inputs will improve water quality. Encouraging farmers to make these changes to their production practices requires education and demonstration. Additionally, it is widely understood that farmers lead other farmers in changing production practices and even perceptions on the environment. Therefore, adding a farmer-to-farmer networking component to farmer education greatly increases positive outcomes and the adoption of new practices.

The USDA's Natural Resource Conservation Service is actively addressing water quality concerns in the Midwest through offering payments to farmers for changing practices through the Conservation Stewardship Program. Currently, very few farmers in the St. Croix River Basin are taking advantage of these payments, and as a consequence, water quality improvement goals are not being met.

The Sustainable Farming Association is leading the development of education, demonstration models designed to encourage and empower farmers to focus on soil health, and hence, water quality, while at the same time reducing input costs, improving the bottom line and spreading risk.

GOALS –The **OUTCOMES** of this project are:

- A 20% reduction in Phosphorus levels in the Lower St. Croix River and Lake St. Croix by 2020, thus, improving water quality in the St. Croix River Basin
- A network of 100 trained farmers demonstrating the benefits of managing crop production for soil health both in terms of crop yields and environmental quality.
- Enjoin the work of USDA's Natural Resources Conservation Service (NRCS) with farmers and the goals of LCCMR in preserving and protecting Minnesota resources.

HOW – The project will train farmers in the practice of soil health building, through education, demonstration and networking with other successful farmers. We will monitor soil and water quality using existing models used for watershed assessment. This will be a collaborative with the WI St. Croix farmers and 'Stimulating Adoption of Soil Health Building Practices for Farm Sustainability' in MN, both projects proposed to kick off in 2013, with federal Conservation Innovation Grant and matching state funds (WIDNR and BWSR/RRBC, respectively).

II. DESCRIPTION OF PROJECT ACTIVITIES

Activity 1: Soil Health Education/Demonstration

Budget: \$ 184,000___

Through our regional farmer network, we'll identify and recruit leading farmers representing approximately 10% of farmland in the St. Croix River Basin. We anticipate there being about 100 farmers in this group. These are our "Top 10%" farmers. In both classroom and on-farm settings, we will train these and other farmers on the science and economics of building soil health in addition to crop yield, as an outcome of row crop production. Through the Soil Health Classic Conference and Annual Soil Health Videoconference, and in collaboration with the Grazing Lands Conservation Association, we will train these leading farmers to become mentors for other farmers in this new understanding of production practices. Mentors will assist mentees with soil quality testing, organic matter baseline, the soil restoration transition timeframe, working with their county USDA staff, and using USDA conservation contracts and other tools for technical and financial assistance with the intent of maximizing the implementation of soil health building



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activities on farms in the St. Croix River Basin. To continue the work, and expand on the positive outcomes of the project, we will establish a St. Croix River Basin Farmer Council, which will set long range goals for the region's water and soil quality.

Outcome	Completion Date
Top ten % farmers connected to project	Spring-summer 2014
Top ten % implementation of practices on farms	Spring 2015 and spring 2016
Spring workshop	Spring 2015 and spring 2016
Top 10% mentor training at Soil Health Classic	Fall 2015 and fall 2016
Farmer council sets five-year goals	Winter 2016 and winter 2017

Activity 2: Soil and Watershed Evaluation

Budget: \$ _120,000_

The MN-wide project will provide the St. Croix Basin reference farm soil condition index (benchmark for comparing to other farms). This project will perform soil quality monitoring on 100 participating farmer's fields from different production systems. The St. Croix River Watershed Model will be evaluated for it's ability to accurately monitor farm soils.

Outcome	Completion Date
Soil and water quality monitoring – Baseline established	Summer 2015
Soil and water quality – 8% reduction in P levels	Summer 2016
Soil and water quality – 12% reduction in P levels	Summer 2017
Waterhshed model evaluation	Spring 2016
Soil and Watershed Evaluation Report	Fall 2017

III. PROJECT STRATEGY

A. Project Team/Partners

Sustainable Farming Association of Minnesota (SFA); Grazing Lands Conservation Association (GLCA); St. Croix Research Station of Minnesota Science Museum

B. Timeline Requirements

The project will be completed in 30 months. We need 30 months, because the first growing season, 2014, will be used to identify key farmers and establish on farm demonstration sites. The second season 2015, we will use those sites to train other farmers, and the third season, 2016, we will monitor the impact of the farming practices on water quality.

C. Long-Term Strategy and Future Funding Needs

This project directly addresses LCCMR funding priority *F. Methods to Protect, Restore, and Enhance Land, Water, and Habitat*. It provides innovative technical assistance for agricultural lands to improve water quality.

In the long term, findings and solutions developed will be spread throughout Minnesota via the Farmer-to-Farmer Network™ of SFA as well as Grazing Lands Conservation Association through our continued farmer education and outreach. Additionally, the results around increased profitability is expected to drive interest in the project to other participants and subsequent funding.

2014 Detailed Project Budget

Project Title: Improving St. Croix River Basin Water Quality

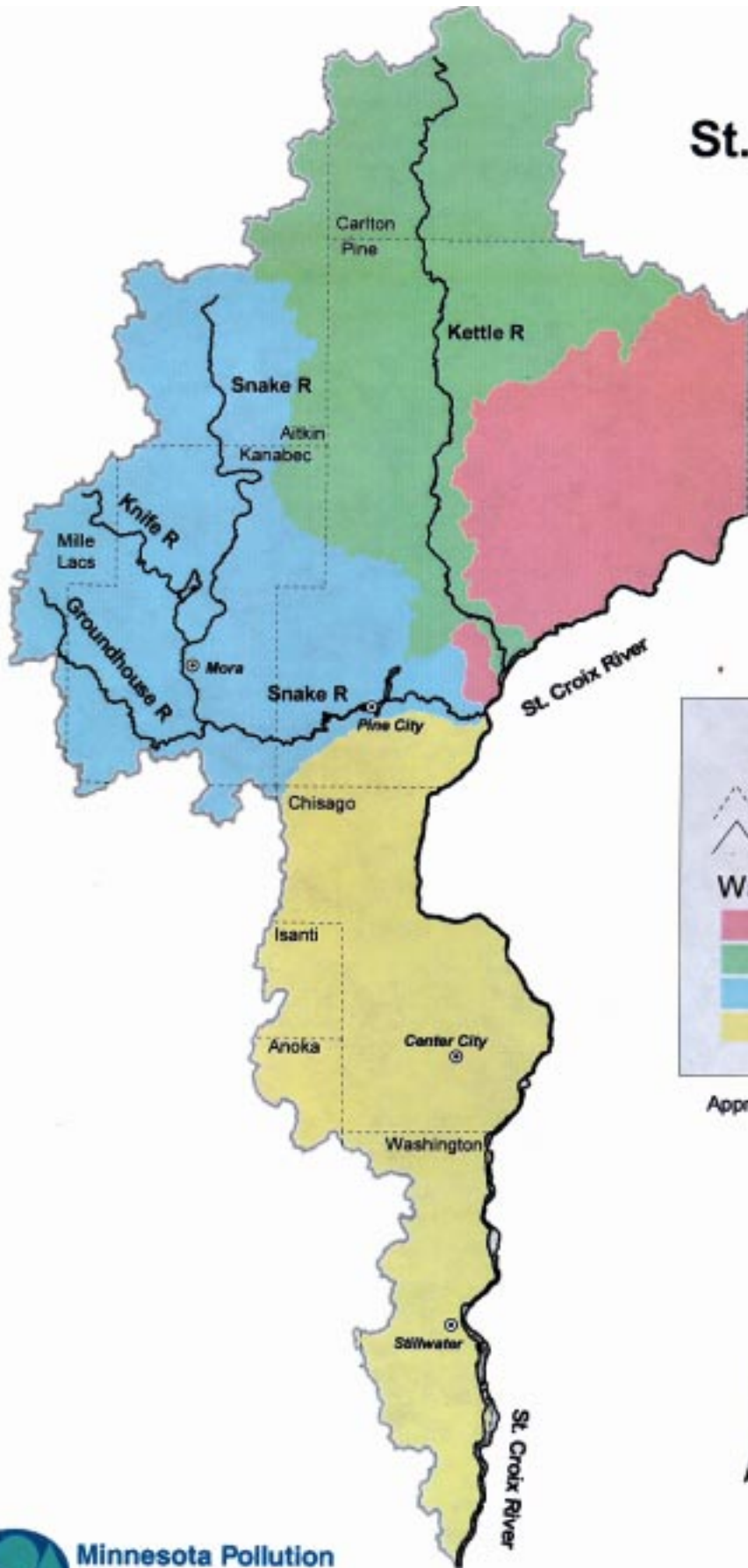
IV. TOTAL ENRTF REQUEST BUDGET 2 years

<u>BUDGET ITEM</u> (See "Guidance on Allowable Expenses", p. 13)	<u>AMOUNT</u>
Personnel: John Mesko, Project Director, 10% time = \$6500/yr. = \$13,000, inclusive of benefits. (John's time and salary is divided among various grant-funded projects. The funds indicated here will compensate him for his time on this project, leading, keeping project on pace, coordinating, collaborating with other organizations, seeking ways to further distribute results, hiring contractors, reporting results, invoicing, etc...) Network Coordinator, To be hired - Full Time, \$50,000/yr. = \$100,000. Inclusive of benefits. Coordination of demonstration sites, educational field days and workshop trainings. Develop and deliver educational content regarding soil health, cover crops, grazing, Coordination of soil health, grazing and cover crop expert speakers, project evaluation, Establish St. Croix River Basin Farmer Council, overall day-to-day management of the project on the ground.	\$ 113,000
Contracts: <i>Communications Coordinator - RFP - Website development, newsletters, outreach \$10,000 for 2 years.</i> <i>Grazing Lands Conservation Association - Identification, Coordination and Mentrorship training of Top 10% of farmers. \$60,000 for 2 years.</i> <i>Water and soil monitoring and modeling of impact: Contractor RFP - \$100,000 for 2 years</i>	\$ 170,000
Equipment/Tools/Supplies: <i>Monitoring equipment for soil and water evaluation. 10 Soil and water quality monitoring kits at \$1,500 each, for collecting evauation data.</i>	\$15,000
Acquisition (Fee Title or Permanent Easements):	\$ -
Travel: <i>Travel for project staff to meetings, farms, monitoring sites, Soil Health Conference. 2 years. 25 annual trips, averaging ~200 miles per trip per person among all project staff to meetings, site visits, trainings, workshops, field days, conferences. 55 trips total, 198 miles average RT = 10,890 miles * \$0.55 per mile ~ \$6000</i>	\$ 6,000
Additional Budget Items: <i>In this column, list any additional budget items that do not fit above categories. List by item(s) or item type(s) and explain how number was reached. One row per tvpne/category.</i>	\$ -
TOTAL ENVIRONMENT AND NATURAL RESOURCES TRUST FUND \$ REQUEST =	\$ 304,000

V. OTHER FUNDS

<u>SOURCE OF FUNDS</u>	<u>AMOUNT</u>	<u>Status</u>
Other Non-State \$ Being Applied to Project During Project Period:	None	
Other State \$ Being Applied to Project During Project Period:	None	
In-kind Services During Project Period: Accounting Services for this project, billing, invoicing etc. Will be covered by SFAs existing accounting contract	\$ 1,800	<i>Secured</i>
Remaining \$ from Current ENRTF Appropriation (if applicable):	None	
Funding History:	None	

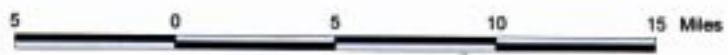
St. Croix River Basin



⊙ County Seat
--- County Boundary
— Major River

Watersheds:
■ St. Croix River (Upper)
■ Kettle River
■ Snake River
■ St. Croix River (Stillwater)

Approximate Basin Area: 3,700 sq. miles



Project Manager Qualifications

John Mesko, Executive Director of Sustainable Farming Association of MN
John has led several project for SFA related to farmer education and networking. As a former Extension Educator with BS and MS degrees in Agriculture, and as a successful, soil health focused farmer himself, John is qualified to lead a project such as this where one of the key outcomes is the leadership development of farmers in relating to each other the value of changed farming practices.

Organization Description

Sustainable Farming Association of MN is a Farmer-to-Farmer Network™ with over 20 years of experience in leading farmers in ways that encourage mutual learning and understanding. With 9 regional chapters throughout the state, SFA is connecting all types of farmers, and finding solutions to agriculture's sustainability issues.

The Sustainable Farming Association of Minnesota supports the development and enhancement of sustainable farming systems through farmer-to-farmer networking, innovation, demonstration, and education.