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

Project Title: **ENRTF ID: 190-F**

Working Conservation Lands for Grazing, Harvest, and Habitat

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

Total Project Budget: $ 315,000

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

Summary:

The project will improve water quality, pollinator habitat, and other ecosystem services by establishing perennially-rooted crops on conservation lands for managed grazing, biomass, livestock feed, and emerging food products.

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Sponsoring Organization: Board of Water and Soil Resources

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Location

Region: Central, Northwest, Southwest, Southeast

County Name: Becker, Beltrami, Benton, Big Stone, Blue Earth, Brown, Cass, Chippewa, Clay, Clearwater, Cottonwood, Crow Wing, Dodge, Douglas, Faribault, Fillmore, Freeborn, Goodhue, Grant, Houston, Hubbard, Jackson, Kandiyohi, Kittson, Lac qui Parle, Lake of the Woods

City / Township:

Alternate Text for Visual:

overview of project focus areas and examples of perennially-rooted crops suitable for buffers and other conservation lands.

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

PROJECT TITLE: ***Working Conservation Lands for Grazing, Harvest and Habitat***

I. PROJECT STATEMENT

Overall Project Goal: A key challenge for improving water quality in Minnesota is how to increase the 'conservation footprint' on the landscape without taking additional land out of production. This project aims to benefit water quality, pollinator habitat, and other ecosystem services by demonstrating the feasibility and benefits of planting conservation lands, including riparian buffers, with perennially-rooted crops suitable for managed grazing, harvesting for biomass, livestock feed, or emerging food products (e.g., elderberries, Kernza wheat).

Buffers enrolled in conservation programs are required to establish vegetation using native plant species. Buffers not enrolled in conservation programs can be planted in any type of perennial vegetation the landowner chooses, other than invasive species and state noxious weeds. A key question remains: how might conservation and production coexist on buffers?

This project begins to answer this question by 1) identifying geographically distributed watersheds with water quality impairments, potential for perennial cultivation, and a high level of landowner interest, while identifying perennial crops most suitable for each watershed; 2) working with landowners to establish demonstration sites; and 3) conducting technical training and outreach, and assessing and publicizing the outcomes of these activities.

The project builds upon the development of a feasibility study for a Working Lands Watershed Restoration Program to incentivize establishment of perennial crops to improve water quality, scheduled for completion in February 2018. This project will leverage the results of that study by beginning to install recommended perennial crops in identified watersheds. It also provides another alternative for buffer management.

II. PROJECT ACTIVITIES AND OUTCOMES

Activity 1: Identify and select watersheds and appropriate perennial crops for pilot program **Budget: $20,000**

Identify minor (HUC-12) watersheds where perennial cultivation is expected to result in substantial water quality improvements and where landowner interest is high. Selection will draw on the criteria and assessments developed for the Working Lands Watershed Restoration Program and for the Watershed Subcommittee of the NRCS State Technical Committee National Water Quality Initiative Program. Geographic distribution across a broad range of agricultural landscapes, from southeast to northwest Minnesota, will be emphasized. Major watersheds (HUC-8) already identified as good candidates include (but are not limited to) the Buffalo-Red River, the Root River, and the Yellow Medicine River watersheds. Identify perennial crops determined to be suitable for the pilot watersheds, while also having the greatest combination of environmental sustainability and marketability, drawing on research by project partners.

Outcomes	Completion Date
1. At least 3 major (HUC-8) watersheds and at least two subwatersheds within each (6 total subwatersheds) are identified.	Fall 2018
2. Local partners (SWCDs, watershed districts, etc.) are identified within each major watershed.	Fall 2018
3. Identify appropriate crops for each major watershed, in collaboration with local partners, Forever Green, and the Agricultural Utilization Research Institute.	Winter 2019

Activity 2: Establish demonstration sites in three pilot watersheds **Budget: $140,000**

Work with landowners and conservation partners in the selected watersheds to establish demonstration sites that will measure and demonstrate the effectiveness of these crops and of managed grazing practices in reducing soil erosion and runoff, improving water quality, and providing pollinator and wildlife habitat. BWSR's pilot buffer and biomass seed mixes could be tested in these plots, along with other identified crops. We

anticipate that crops will include emerging food crops such as hazelnuts, perennial wheatgrass (Kernza) and elderberries, as well as perennial plants used for biomass or animal feed, such as switchgrass and alfalfa.

Outcomes	Completion Date
1. Establish crop advisors in selected watersheds and begin recruiting landowners	Spring 2019
2. Targeted projects identified and implementation begins	Spring 2019
3. Targeted buffer projects (years 1, 2, and 3) implementation completed	Fall 2021

Activity 3: Technical Training, Outreach, and Assessment; Sharing Results **Budget: $155,000**

Provide technical training, education and outreach to landowners in the pilot watersheds through a series of workshops and field days on perennial and forage crop selection, management, harvesting and processing. BWSR, SWCD, NRCS and Extension staff will lead tours of demonstration sites and facilitate discussions on species selection, establishment success, actual and potential market opportunities, and benefits to soil health and water quality.

Assess project results and level of interest in sample watersheds. Assess transferability to other watersheds with similar landscape characteristics. Identify existing and potential term easement, cost-share, or water quality trading programs that could help 'bridge the gap' between the revenues that can be realized from perennial crops and those of conventional row crops.

Outcomes	Completion Date
1. Conduct 6 winter workshops during years 1, 2 and 3; 6 field days during years 2 and 3	Spring 2021
2. Prepare assessment report and publicize results via BWSR's website and publications.	June 2021

III. PROJECT STRATEGY

A. Project Team/Partners

- Center for Integrated Natural Resource and Ag. Management (CINRAM), U of M: Receiving funding--Assist with crop identification, Extension staff liaison, training materials and assessment report.
- NRCS Staff – St. Paul and Regional: Contributing – Assist with guidance and training efforts and at the local level work with landowners, identify federal funding sources such as EQIP to supplement project.
- MN Association of Soil and Water Conservation Districts: Contributing – Act as liaison to SWCDs in selected watersheds.
- SWCD Staff in selected watersheds: Receiving – Outreach and assistance to landowners; training and field days.
- BWSR staff: Contributing in-kind – Grant oversight, assist with training, review documentation created through project.
- MN Department of Agriculture: Contributing – advise and coordinate with related programs
- MN Cattlemens Association: Contributing – advise and act as liaison to producers in selected watersheds

B. Project Impact and Long-Term Strategy

This project will help to demonstrate that many of the same practices that improve water quality and provide ecosystem services, such as soil health and pollinator habitat, can also provide harvestable crops and grazing opportunities. Giving farmers additional incentives for conservation practices as well as additional options for managing buffers and other conservation lands can move us closer to reconciling the perceived conflicting goals of clean water and a healthy agricultural economy.

C. Timeline Requirements (July 2018 to June 2021): 3 years; three field seasons (spring of 2019, 2020, 2021. Since agro-forestry crops take more than 3 years to mature, we intend to seek continued funding to see those crops through to maturity and harvest.

2018 Detailed Project Budget

Project Title: Working Conservation Lands for Grazing, Harvest and Habitat

IV. TOTAL ENRTF REQUEST BUDGET - 3 years

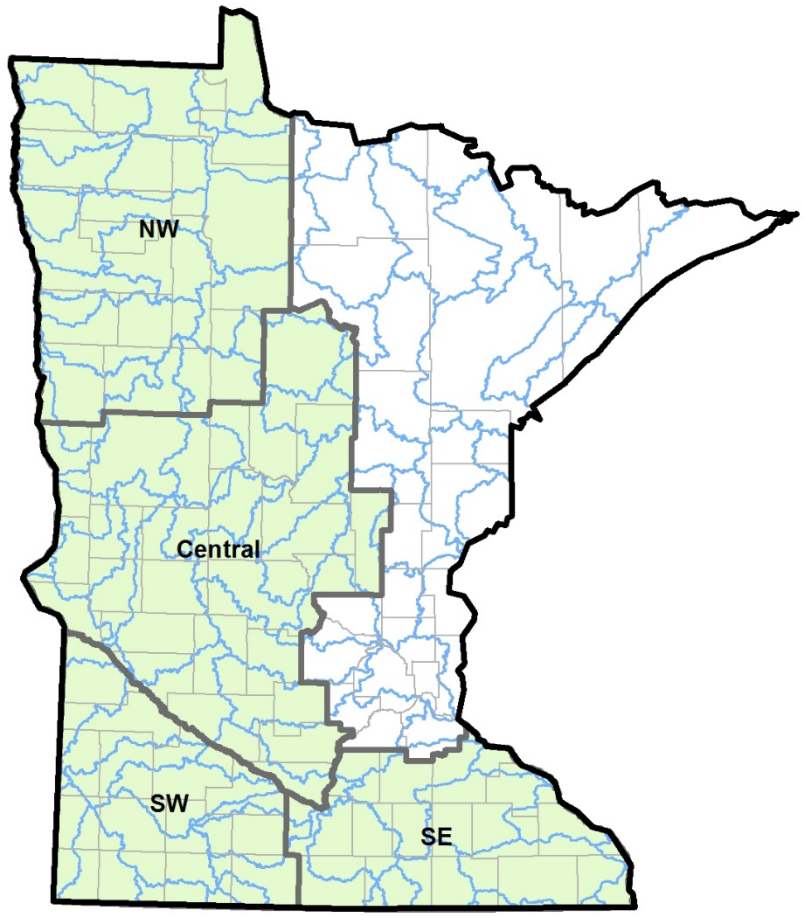
BUDGET ITEM	AMOUNT
Personnel: Conservation Projects Staff, BWSR: Research, outreach, communications, assessment. (20% FTE /yr for 3 yrs. - note: unclassified employee)	$ 75,000
Contracts: University of Minnesota, Center for Integrated Natural Resource and Agricultural Management (CINRAM): Assist with crop identification through Forever Green program, development of training materials, and final assessment report. Monitor sites and collect and store initial data on those sites. Identify and recruit trainers for field days and workshops, drawing from University and local expertise.	$ 90,000
Contracts: Soil and Water Conservation Districts in selected watersheds. Outreach to landowners, identify project sites, negotiate contracts and provide technical assistance for landowners, assist in organizing field days and workshops and in evaluating results.	$ 150,000
TOTAL ENVIRONMENT AND NATURAL RESOURCES TRUST FUND $ REQUEST =	$ 315,000

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: BWSR staff time for project management, reporting and coordination (15% Project Implemenation, 5% Vegetation Specialist, 2% Project Manager / yr. for 3 yrs.) (salary, benefits, other OH).	$ 89,000	*Pending Project Approval*
Past and Current ENRTF Appropriation: *N/A*	$ -	
Other Funding History: BWSR received an appropriation of $479,000 from the Legislature in 2016 to develop a working lands watershed restoration program to incentivize establishment of perennial crops (Laws 2016, c. 189, s. 4). The legislation directs BWSR to develop "a process for selecting pilot watersheds that are expected to result in the greatest water quality improvements and exhibit readiness to participate in the program." The pilot watersheds to be selected are likely to also be appropriate locations for the demonstration sites proposed for this project. BWSR anticipates having unexpended funds at the conclusion of the working lands project and will explore the possibility of extending project funding for this purpose.	$ 479,000	*Appropriat-ed*

Working Conservation Lands for Grazing, Harvest and Habitat

Areas of project focus: NW, Central, SW, SE



Perennially-rooted crops suitable for buffers and other conservation lands


Elderberries


Mixed perennials


Switchgrass


Kernza wheat

07/29/2017

2018 LCCMR - Project Manager Qualifications and Organization Description

Project Title: Working Conservation Lands for Grazing, Harvest and Habitat

Sponsoring Organization: Board of Water and Soil Resources

Project Manager Qualifications:

Suzanne Rhees, AICP, is Conservation Projects Coordinator for the Board of Water and Soil Resources (BWSR). In that capacity, she is managing the Working Lands Watershed Restoration Program, a feasibility study and implementation plan directed by the Minnesota Legislature on incentivizing the establishment and maintenance of perennial crops for the purpose of improving water quality. As part of that process, BWSR is assessing pilot watersheds that are expected to result in the greatest water quality improvements and exhibit readiness to participate in the program. The selected watersheds (to be determined in mid-2017) are likely to be appropriate locations for the demonstration

Before coming to BWSR, Ms. Rhees' experience included practice as a planning consultant and project manager in the areas of land use and resource protection, with an emphasis on green infrastructure and farmland preservation. At the DNR, she managed projects examining the effects of groundwater use on streams, lakes, and wetlands, led agency participation in the EQB *Water Policy Plan, Beyond the Status Quo,* and participated in rulemaking for the Mississippi River Corridor Critical Area, among other projects.

Ms. Rhees is also well-versed in Minnesota's system of water management and land use regulation. She coordinated the MPCA's *Water Governance Evaluation* (2013), a report to the Legislature evaluating the history and status of water management in Minnesota and recommending strategies to streamline the system.

Organization Description:

The Minnesota Board of Water and Soil Resources consists of 20 members, including local government representatives that deliver BWSR programs, state agencies, and citizens. The board sets a policy agenda designed to enhance service delivery though the use of local government. Board members, including the board chair, are appointed by the governor to four-year terms.

The board is the state's administrative agency for 89 soil and water conservation districts, 46 watershed districts, 23 metropolitan watershed management organizations, and 80 county water managers.

The BWSR mission is to improve and protect Minnesota's water and soil resources by working in partnership with local organizations and private landowners. Core functions include implementing the state's soil and water conservation policy, comprehensive local water management, and the Wetland Conservation Act as it relates to private land in Minnesota.

Because of our long-standing relationships with soil and water conservation districts and private landowners, and our role as the chief implementing agency of the buffer law, BWSR is well positioned to lead this project.