

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

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**Project Title:**

**ENRTF ID: 107-F**

Protecting Minnesota's Soils: The Year of Soil Quality

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**Topic Area:** F. Outreach/Education/Training

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**Total Project Budget:** \$ 200,000

**Proposed Project Time Period for the Funding Requested:** 1 yr. July 2013 - June 2014

**Other Non-State Funds:** \$ 319,000

**Summary:**

This project promotes conservation practices to improve soil quality, underscores soil's fundamental role in achieving water quality goals, and builds an appreciation for Minnesota's soil resource.

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**Name:** Megan Lennon

**Sponsoring Organization:** Board of Water and Soil Resources

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**Location**

**Region:** Statewide

**County Name:** Statewide

**City / Township:**

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

**PROJECT TITLE: Protecting Minnesota Soils: The Year of Soil Quality**

**I. PROJECT STATEMENT**

Humans rely on soil to sustain life through production of food, fuel and fiber, and maintaining clean water. Yet soils are a natural resource often misunderstood, affecting both economics and water quality. This project champions activities to improve soil quality, underscores soil’s fundamental role in achieving water quality goals and builds an appreciation for Minnesota’s soil resource. This project focuses on enhancing and maintaining soil quality of all lands in Minnesota. The target audience includes agricultural producers, foresters, students, gardeners, landscape professionals, and horticulturalists. The goals of *Protecting Minnesota Soils: The Year of Soil Quality* are to:

- Build upon and augment the University of Minnesota Department of Soil, Water and Climate’s centennial celebration (which includes the traveling Smithsonian exhibit *Dig It!* coming to Minnesota) and the USDA NRCS’s *Soil Health Initiative for 2012*
- Provide training (“train the trainers”) to conservation professionals on the multiple benefits of soil quality, including meeting nutrient and turbidity Total Maximum Daily Load (TMDL) goals
- Increase the public’s awareness of soil quality issues through education and outreach
- Assist Minnesota citizens to become better stewards of the soil resource

Soil quality is the capacity of a soil to sustain plant and animal productivity, control water flow, nutrient cycling, and to serve as a filter to groundwater and surface waters. Soil is part of a complex, intricate natural system that provides ecological functions and services in addition to economic products. Soils impact agronomic and forest productivity, plant and animal biodiversity, ecosystem health, air quality, outdoor leisure activities, and water quality. Most soils in Minnesota developed in the time frame of hundreds to thousands of years. Because soils develop at such a slow pace, even moderate rates of erosion are considered irreversible in our lifetime. Threats to soil quality and resource sustainability that impact future land use and water quality include erosion, sedimentation, contamination, compaction and degradation. This education and outreach project is crucial because it cultivates a respect for the soil resource that great societies depend upon.

**II. DESCRIPTION OF PROJECT ACTIVITIES**

**Activity 1:** Train the Trainer - Soil Quality Training for Professional and Technical Staff **Budget:** \$60,000

Improving soil quality and sustaining the soil resource is best achieved through better land management choices and implementation of soil quality Best Management Practices (BMPs), such as conservation tillage and cover cropping. This activity refines the technical skills of conservation professionals so they can better guide landowners in conserving the soil resource. This will result in long-term sustainability of soils and water quality as well as future demands on limited resources.

Outcome	Completion Date
1. Build- upon NRCS training for conservation professionals, and “train the trainers” <ul style="list-style-type: none"><li>• Provide training for conservation technicians in Minnesota’s 90 SWCDs and 46 Watershed Districts</li></ul>	June 2014

**Activity 2: Soil Quality Education, Promotion and Outreach****Budget:** \$120,000

Provide educational opportunities for agricultural producers, foresters, students, gardeners and horticulturalists. Education events include seminars, webinars, field days, demonstration days, and hands-on activities for youth. Social media and a traditional (via print and email) media campaign publicize and promote educational opportunities and stimulate interest in Minnesota’s soil resource. BWSR will track activity via website hits, curriculum evaluation and follow-up surveys.

Outcome	Completion Date
1. Develop a program to recognize exceptional soil stewards throughout Minnesota	Spring 2014
2. Complement the USDA NRCS and University of Minnesota soil promotion activities <ul style="list-style-type: none"> <li>• Urban farming and Master Gardeners</li> <li>• Field days demonstrating erosion simulation and residue management</li> <li>• Forest management for soil quality and water quality</li> <li>• Augment Smithsonian <i>Dig It!</i> with ‘Meet a Soil Scientist’ day</li> </ul>	June 2014
3. Develop educational materials addressing the economic benefits of soil quality	Spring 2014

**Activity 3: Co-Benefits: Soil Quality and Water Quality** **Budget:** \$ 20,000

Develop outreach materials for Local Government Units (LGUs) to market the co-benefits of conservation practices. Most conservation practices benefit both the soil and water resource and promoting the cost benefit advantage will encourage conservation practice adoption. Basic training for LGUs will improve their technical and economic messaging to clientele.

Outcome	Completion Date
1. Develop outreach material for LGUs	January 2014
2. Training for LGUs on marketing conservation for co-benefits	June 2014

**III. PROJECT STRATEGY****A. Project Team/Partners**

Megan Lennon, Project Manager, and Julie Blackburn, BWSR - unpaid  
 Dr. Carl Rosen, Head, University of MN Department of Soil, Water and Climate - unpaid  
 Dr. Deborah Allan, Professor, University of Minnesota, Department of Soil, Water and Climate - unpaid  
 Caryl Radatz, State Soil Scientist, USDA NRCS - unpaid

**B. Timeline Requirements**

Funding is requested for one year with a project end date of June 30<sup>th</sup> 2014.

**C. Long-Term Strategy and Future Funding Needs**

*Protecting Minnesota Soils: The Year of Soil Quality* builds upon efforts by the USDA Natural Resources Conservation Service commenced in 2012 and the University of Minnesota’s Department of Soil, Water and Climate celebrating the department’s centennial anniversary (1913). We do not anticipate requesting additional Environment and Natural Resources Trust Fund dollars. Outreach and educational materials will be available on the BWSR website for future use.

## 2012-2013 Detailed Project Budget

Title: Protecting Minnesota Soils - The Year of Soil Quality

### IV. TOTAL ENRTF REQUEST BUDGET 1 year

<u>BUDGET ITEM</u>	<u>AMOUNT</u>
<b>Personnel:</b> 1/2 cost of Project Coordinator (to be hired) to manage day-to-day planning and implementation of training, education and outreach as well coordinate efforts between BWSR, the U of M and NRCS. 1 person in this position, fulltime 7/2013 - 6/2014, unclassified temporary, 75% salary, 25% fringe.	\$ 41,500
<b>Contracts:</b> <u>NRCS</u> (\$20,000) • develop training curriculum and conduct training and outreach events throughout the State  <u>U of M</u> (\$94,000) • develop training curriculum and conduct training and outreach events throughout State • research and develop education material on economic benefits of soil quality  <u>TBD Graphic Designer</u> (\$10,000) • image development and design consultation, document design and layout	\$ 124,000
<b>Equipment/Tools/Supplies:</b> • Training and Education materials (\$15,000) • Training, education and outreach event logistics (\$1,000) • Stewardship program signage (\$5,000)	\$ 21,000
<b>Travel:</b> Travel for an estimated 40 training/education/outreach events located throughout Minnesota. Locations To Be Determined. Total includes estimated mileage and lodging for BWSR staff.	\$ 13,500
<b>TOTAL ENVIRONMENT AND NATURAL RESOURCES TRUST FUND \$ REQUEST =</b>	\$ 200,000

### V. OTHER FUNDS

<u>SOURCE OF FUNDS</u>	<u>AMOUNT</u>	<u>Status</u>
<b>State \$ Being Applied to Project During Project Period:</b> 1/2 cost of Project coordinator (to be hired) to manage day-to-day planning and implementation of training, education and outreach as well coordinate efforts between BWSR, the U of M and NRCS. 1 person in this position, fulltime 7/2013 - 6/2014, unclassified temporary, 75% salary, 25% fringe. Paid from BWSR budget.	\$ 41,500	secured
<b>Other Non-State \$ Being Applied to Project During Project Period:</b> University of Minnesota Centennial Celebration and Smithsonian <i>Dig It!</i> Exhibit	\$ 111,000	\$62,000 pending, \$49,000 secured
NRCS Soil Health Initiative 2012	\$ 270,000	secured
<b>Funding History:</b> The State of Minnesota and its Federal, local and University of Minnesota partners invested millions of dollars in a statewide soil survey since 1997. • ENRTF - \$3,581,000 • Minnesota counties - \$2,923,037 • NRCS - \$6,002,000 • In-Kind Contributions (BWSR, NRCS or U of M) - \$642,000	\$13,148,037	spent
<b>In-kind Services During Project Period:</b> • %5 Dr. Carl Rosen's time • 5% Dr. Deborah Allan's time	\$ 7,500	secured

No matter where you live, what your occupation, what you eat,  
*Soil quality is CRITICAL to sustaining your quality of life*

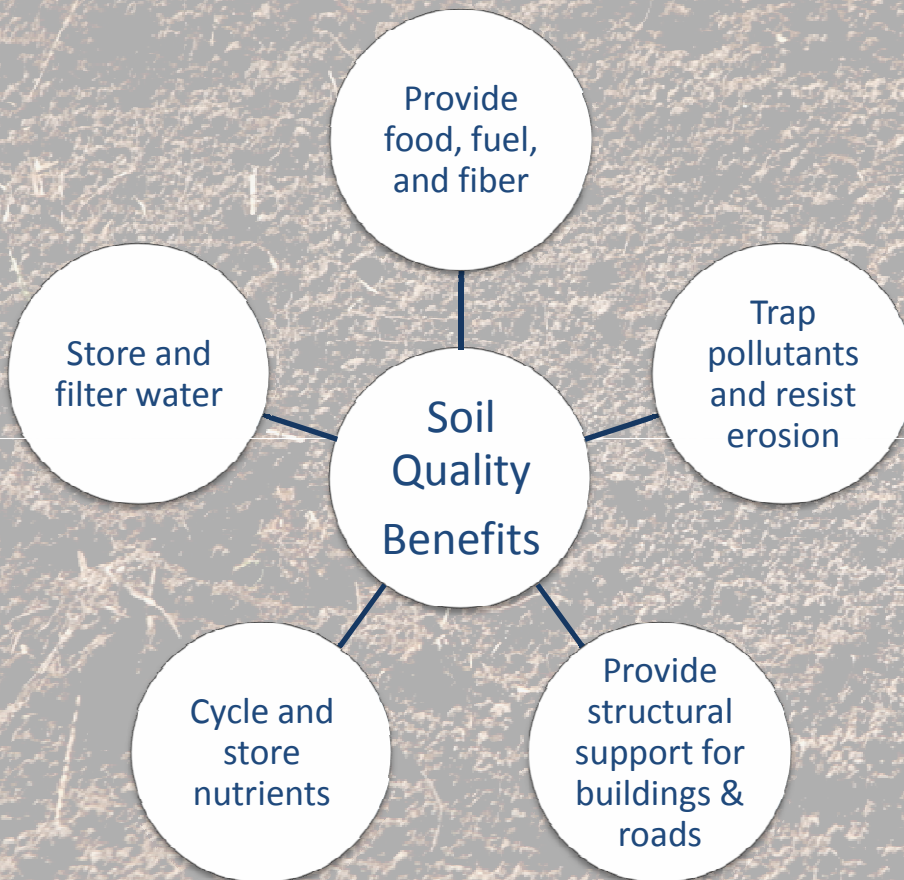
## ***Protecting Minnesota Soils - The Year of Soil Quality will:***

- **Train** and **educate** on soil quality
- **Develop** citizens as soil resource stewards
- **Heighten** awareness of soil quality issues
- **Partner** with the U of M and USDA NRCS
- **Result** in a better environment
- **Increase** conservation outcomes

### **Connecting Minnesotans to the soils that sustain them**

Conservationists  
Foresters  
Students  
Gardeners  
Wildlife enthusiasts

Urban farmers  
Horticulturists  
Developers  
Landscape professionals



**LCCMR Proposal 2012 Protecting Minnesota Soils – The Year of Soil Quality**

**Project Manager Qualification and Organization Description**

**Project Manager:** Megan Lennon

**Current Position:** State Soils Specialist, Minnesota Board of Water and Soil Resources

**Education:**

- BS: University of Minnesota – Twin Cities  
Major: Environmental Science
- MS: University of Minnesota – Twin Cities  
Major: Soil Science

**Experience:**

- Project Manager for ENTRF funded projects *Completion of a Statewide Soil Survey* and *Measuring Conservation Practice Outcomes*
- MS research in carbon sequestration in Minnesota soils
- Co-instructor for soils component of Wetland Delineators Certification Program
- Conduct field investigations and wetland delineations as part of day to day BWSR operations

**Other:**

- Professional Soil Scientist (License # 49298)

**Organization Description:**

The mission of the Board of Water and Soil Resources is to: “Improve and protect Minnesota's water and soil resources by working in partnership with local organizations and private landowners”. This project will support BWSR’s mission by providing education and outreach on maintain and improving soil quality in Minnesota. Therefore, BWSR is well positioned to lead this project.