

**Environment and Natural Resources Trust Fund  
2011-2012 Request for Proposals (RFP)**

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**LCCMR ID: 007-A1**

**Project Title:** The completion of a Statewide Digital Soil Survey

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**Category:** A1. Natural Resource Data and Information: Collection

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**Total Project Budget:** \$ 500,000

**Proposed Project Time Period for the Funding Requested:** 2 yrs, July 2011 - June 2013

**Other Non-State Funds:** \$ 2,875,000

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**Summary:**

This is the last proposal to map and digitize Minnesota soils. Three project areas are emphasized, and gaps in seamless data coverage are addressed.

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

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**Location**

**Region:** Statewide

**Ecological Section:** Statewide, Western Superior Uplands (212K), Northern Superior Uplands (212L), No. Minnesota Drift and Lake Plains (212N)

**County Name:** Statewide, Cook, Crow Wing, Lake

**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 _____%

# 2011-2012 MAIN PROPOSAL

**PROJECT TITLE: The Completion of a Statewide Digital Soil Survey**

## I. PROJECT STATEMENT

This is the last in a series of proposals to map and digitize Minnesota Soils. Soil surveys contain information essential to the management of natural resources. Many of the technical specifications for the protection and restoration of soil, water, wetlands and habitats require the consideration of soils data. For many years the State of Minnesota has supported the efforts of the USDA Natural Resources Conservation Service (NRCS) and county government to map, digitize, and web-deliver soils data. Through this partnership 85 of 91 soil survey areas have been completed and Koochiching and St. Louis Counties will be complete in May 2010 (refer to the map, which is attached). Soil survey operations are underway in Crow Wing, Cook, Lake and Pine Counties. It is ideal to have 'seamless' soil data coverage regardless of land ownership (County, State, Federal or private). However, gaps exist in soil survey coverage due to land ownership issues. With the completion of the 'once over' soil survey, priority can now be given to address areas with missing digital soils information. So, in addition to completing the soil survey in Crow Wing, Lake and Cook Counties, this project will address gaps in soil survey coverage. These lands, about 3.3 M acres, are primarily in Koochiching, Lake, Cook and St. Louis Counties. They will be addressed through a partnership with NRCS, the USDA Forest Service, and the National Park Service. In summary, completion of a statewide digital soil survey will be achieved by supporting a Crow Wing County government agreement with USDA NRCS, augmenting current NRCS soil survey staff with additional soil scientists, and partnering with the US Forest Service and National Park Service to address 'gaps' in soil survey information. Activities will continue in Pine County at a slower pace, funded entirely by the USDA NRCS.

## II. DESCRIPTION OF PROJECT ACTIVITIES

**Activity 1:** Support Crow Wing County effort with UDSA NRCS **Budget:** \$75,000

Complete mapping, interpretations, documentation and digitizing soil survey data.

<b>Outcome</b>	<b>Completion Date</b>
1. Address 150,000 acres	June 30, 2013

**Activity 2:** Support USDA NRCS in delivering a seamless soil database **Budget:** \$425,000

Fix 'gaps' in coverage with additional soil scientists. Tasks include mapping, interpretations, correlation, documentation and digitizing.

<b>Outcome</b>	<b>Completion Date</b>
1. Address soil coverage gaps in Koochiching, St. Louis, Lake and Cook counties –mostly federal lands (3.3 million acres)	June 30, 2013

### **III. PROJECT STRATEGY**

#### **A. Project Team/Partners**

The project team is Caryl Radatz, State Soil Scientist, USDA NRCS and Megan Lennon, Soil Scientist, BWSR. Caryl Radatz manages all aspects of the USDA Soil Survey Program and Megan Lennon is project manager for LCCMR funds and is the state contact with participating counties and agencies.

#### **B. Timeline Requirements**

These funds are sought for a two-year period beginning July 1, 2011.

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

This proposal supports the Crow Wing County government agreement with USDA and provides additional funding to USDA to achieve seamless coverage of digital soil surveys. Specifically, this proposal provides funding to NRCS to pay for NRCS soil scientists detailed to Minnesota to assist local soil survey crews. Assuming staffing levels for ongoing soil surveys remain stable and the NRCS is able to secure detailees, we anticipate completing web delivery of soil survey data by late 2013. Soil surveys should be web available for the following soil survey areas (indicated year): Cook (2013), Crow Wing (2013), Koochiching (2010), Lake (2013), Pine (unknown), and Saint Louis Crane Lake (2010). This is the last proposal seeking funds to map and digitize lands in Minnesota. Upon completion of this proposal, digital soil survey coverage will exist for all lands in Minnesota, with the possible exception of Pine County.

## 2011-2012 Detailed Project Budget

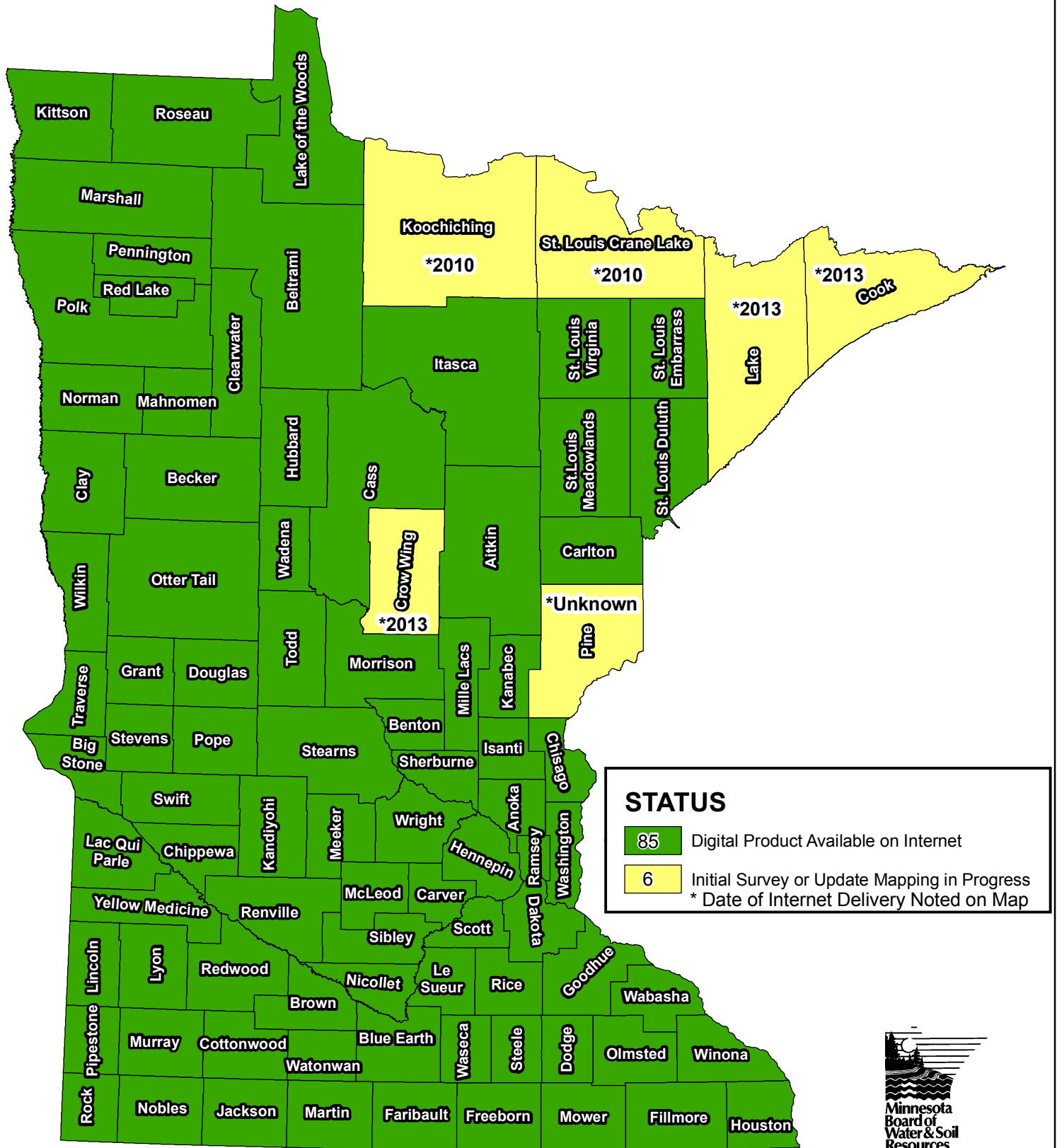
### IV. TOTAL TRUST FUND REQUEST BUDGET 2 years

<u>BUDGET ITEM</u>	<u>AMOUNT</u>
<b>Contracts:</b> Activity 1: Support the completion of the Crow Wing County digital soil survey	\$ 75,000
<b>Contracts:</b> Activity 2: Contribute to NRCS completion of soil mapping and digitizing the State (Cost estimate=\$1.00 per acre)	\$ 425,000
<b>TOTAL ENVIRONMENT &amp; NATURAL RESOURCES TRUST FUND \$ REQUEST</b>	<b>\$ 500,000</b>

### V. OTHER FUNDS

<u>SOURCE OF FUNDS</u>	<u>AMOUNT</u>	<u>Status</u>
<b>Other Non-State \$ Being Applied to Project During Project Period:</b> NRCS mapping and digitizing 2,875,000 acres remaining in the arrowhead region (excluding the 425,000 acres addressed by Activity 2) at a cost of \$1/acre.	\$ 2,875,000	Secured
<b>Other State \$ Being Applied to Project During Project Period:</b> BWSR staff support, 1/4 FTE	\$ 22,000	Secured
<b>In-kind Services During Project Period:</b> Office space, LIDAR data and administrative services provided by Crow Wing County (\$25,000). Cook and Lake Counties: Assistance with the contracting of soil scientists and administrative services (\$10,000 each).	\$45,000	Secured
<b>Remaining \$ from Current ENRTF Appropriation (if applicable):</b>	\$ -	
<b>Funding History:</b>	\$ -	

# Status of Minnesota Digital Soil Surveys and Their Internet Delivery



January, 2010

NRCS Web Soil Survey:  
<http://websoilsurvey.nrcs.usda.gov/app/>

**Project Manager Qualification and Organization Description**

**Project Manager:** Megan Lennon

**Current Position:** State Soils Specialist, 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:**

- 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 In-training (#130894)

**Organization Description:**

The Board of Water and Soil Resources (BWSR) is a State agency.