

**Environment and Natural Resources Trust Fund
2009 Phase 1 Request for Proposals (RFP)**

LCCMR ID: A03

Project Title: Soil Survey

Total Project Budget: \$ \$400,000

Proposed Project Time Period for the Funding Requested: July 2009 - June 2011 (2 yrs)

Other Non-State Funds: \$ 4,193,600

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Sponsoring Organization: BWSR

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Region:	County Name:	City / Township:
Northeast, Central	Cook, Crow Wing, Isanti, Koochiching, Lake, Pine,	

Summary: Soil survey completion and their delivery through the Internet (Web Soil Survey) are accelerated. Eight project areas are emphasized and soils data is updated and re-interpreted for modern applications.

Main Proposal: 0808-1-001-proposal-Final 2008 WP.xls

Project Budget: 0808-1-001-budget-Final 2008 WP.xls

Qualifications: 0808-1-001-qualifications-Final 2008 WP.xls

MAIN PROPOSAL

PROJECT TITLE: Soil Survey

I. PROJECT STATEMENT

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 and county government to map, digitize and WEB-deliver soils data. Through this partnership eighty three (83) of ninety one (91) soil survey areas have been completed. Soil survey operations are underway in Crow Wing, Pine, Koochiching, and the Crane Lake and Meadowlands subsets of Saint Louis County. (The Meadowlands subset will be completed and posted on the WEB by mid-2009.) Two of the three remaining project areas, Cook and Lake Counties, have recently agreed to partner with the USDA Natural Resources Conservation Service to complete the soil survey for their counties. Accelerated activity in Isanti County is also expected to begin during 2009. This proposal includes funding to continue the support of county government agreements with USDA (Results 1-4) and proposes to accelerate the completion by providing funding to NRCS to augment existing staff with additional soil scientists (Result 5). In Results 1 and 3, one-half shares are provided to Lake and Cook Counties to reflect the large extent of federal land. In these counties, the USDA Forest Service has mapped most of the Federal Land. The NRCS --and this project-- will concentrate on the remaining non-federal land.

II. DESCRIPTION OF PROJECT RESULTS

Result 1: Support the Cook County effort with USDA Budget: \$ 37,500
Deliverable Completion Date: Two years for this phase of a multi-year project

1. Accelerate soil survey operations, including subsurface investigations and development of a soil mapping legend.

Result 2: Support the Crow Wing County effort with USDA Budget: \$75,000
Deliverable Completion Date: Two years for this phase of a multi-year project

1. Address about 150,000 acres, including mapping, interpretations, documentation and digitizing. [This survey has three NRCS staff.]

Result 3: Support the Lake County effort with USDA Budget: \$37,500
Deliverable Completion Date: Two years for this phase of a multi-year project

1. Accelerate soil survey operations, including subsurface investigations and development of a mapping legend.

Result 4: Support the Pine County effort with USDA Budget: \$75,000
Deliverable Completion Date: Two years for this phase of a multi-year project

1. Address about 100,000 acres, including mapping, interpretations, documentation and digitizing. [This survey has two NRCS staff.]

Result 5: Accelerate soil survey with additional soil scientists Budget: \$175,000
Deliverable Completion Date: Two years for this phase of a multi-year project

1. Address about 40,000 acres, mostly mapping.

III. PROJECT STRATEGY AND TIMELINE

A. Project Partners

The project team is Joe McCloskey, State Soil Scientist, USDA NRCS and Greg Larson, State Soil Specialist, BWSR. Joe McCloskey manages all aspects of the USDA Soil Survey Program and Greg Larson is project manager for LCCMR funds and is the state contact with the participating counties.

B. Project Impact

As stated in the project statement, soils data is heavily utilized. Interpretations, such as productivity indices for forest and cropland, are spurring even heavier use. To meet this demand, the eight remaining survey areas must be completed as soon as possible. As soils data becomes available in the eight project areas it is generally available to the public in digital or hard copy format.

C. Time

These funds are sought for a two-year period beginning July 1, 2009. The Results are two year phases of a multi-year effort.

D. Long-Term Strategy

This proposal supports county government agreements with USDA, some of which were signed because of LCCMR funding, and provides additional soil scientists to accelerate the completion of soil surveys. It must be noted that due to the retirement of many NRCS soil scientists and a decline in soil science graduates, soil scientists with knowledge of USDA soil mapping protocols are in very short supply both in Minnesota and nationally. This proposal provides funding to NRCS to pay for NRCS soil scientists detailed to Minnesota to assist local soil survey crews. The current level of funding will sustain ongoing soil survey operations and provide appropriate acceleration given the aforementioned shortage of soil scientists. Assuming staffing levels for ongoing soil surveys remain stable and the NRCS is able to secure detailees, soil surveys should be completed and WEB-delivered in the following soil survey areas during the (indicated year). Cook (2014), Crow Wing (2014), Isanti (2009), Koochiching (2010), Lake (2014), Pine (2014), Saint Louis Crane Lake (2010) and Saint Louis Meadowlands (2009). To these ends, LCCMR funds will be sought through 2014. The amount of funding requested each cycle will likely not exceed \$400,000 and will decrease as counties are completed.

Project Budget

IV. TOTAL PROJECT REQUEST BUDGET

<u>BUDGET ITEM</u>	<u>AMOUNT</u>	<u>% FTE</u>
Contracts:	\$ -	
Result 1 Cook County to support USDA Agreement	\$ 37,500	
Result 2 Crow Wing County to support USDA Agreement	\$ 75,000	
Result 3 Lake County to support USDA Agreement	\$ 37,500	
Result 4 Pine County to support USDA Agreement	\$ 75,000	
Result 5 USDA NRCS for Soil Scientists	\$ 175,000	
TOTAL PROJECT BUDGET REQUEST TO LCCMR	\$ 400,000	

V. OTHER FUNDS

<u>SOURCE OF FUNDS</u>	<u>AMOUNT</u>	<u>Status</u>
Remaining \$ From Previous Trust Fund Appropriation (if applicable):	\$445,775 (\$45,775 from 07 and \$400,000 from 08)	<i>Unspent</i>
Other Non-State \$ Being Leveraged During Project Period:(2 years)	\$4,070,000 (USDA NRCS 4.0M secured; Pine County \$20,000; Crow Wing County \$50,000 (pending))	
Other State \$ Being Spent During Project Period:	n/a	
In-kind Services During Project Period:(2 years)	\$123,600 (BWSR \$40,000 staff support 1/4 FTE; Lake County\$20,000; Cook County \$13,600; Pine County \$30,000; Crow Wing County \$20,000 (all county ikind for office space and related; Crow Wing LIDAR))	
Past Spending:(Prior two years)	\$4,010,000 (NRCS 3.5M;LCCMR 400,000; Counties 70,000; BWSR 40,000)	

Project Manager Qualifications and Organization Description

Project Manager: Greg Larson

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

Education:

- BS: University of Wisconsin at Stevens Point
 - Major: Water Resources and Natural Resources Management
 - Minor: Soil Science
- MS: University of Minnesota at Twin Cities
 - Major: Soil Science
 - Minor: Forest Hydrology

Experience:

- 32 years experience with state government: the Minnesota Board of Water and Soil Resources (BWSR) and its predecessor the Soil and Water Conservation Board. Three years experience with county government. Duties have included natural resources management, field-based technical work, program development, supervision of staff and development and management of budgets.
- While employed by the State of Minnesota, major projects have included:
 - Development and implementation of the Reinvest in Minnesota (RIM) Conservation Reserve Program and Conservation Reserve Enhancement Program (CREP) programs.
 - Development and implementation of the Wetland Conservation Act (WCA).
 - Development and implementation of the State Cost-Share Program for erosion and sediment control.
 - Development and implementation of the Local Water Planning Grants program.
- Was the agency representative on the Minnesota Cooperative Soil Survey Technical Committee during the LCMR-funded soil survey acceleration effort of the 1980's.
- Have managed a number of LCMR projects, both as project manager and as "pass-through" agency contact.

Other:

- A licensed Professional Soil Scientist in Minnesota (#30037) and Wisconsin (# 82-112).

Organization Description:

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