



**Environment and Natural Resources Trust Fund (ENRTF)
M.L. 2011 Work Plan**

Date of Status Update:

Date of Next Status Update: 1/1/2012

Date of Work Plan Approval: 6/23/2011

Project Completion Date: 6/30/2013

Is this an amendment request? _____

Project Title: Completion of Statewide Digital Soil Survey

Project Manager: Greg Larson

Affiliation: Board of Water and Soil Resources

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Location:

Counties Impacted: Statewide

Ecological Section Impacted: Lake Agassiz Aspen Parklands (223N), Minnesota and Northeast Iowa Morainal (222M), North Central Glaciated Plains (251B), Northern Minnesota and Ontario Peatlands (212M), Northern Minnesota Drift and lake Plains (212N), Northern Superior Uplands (212L), Paleozoic Plateau (222L), Red River Valley (251A), Southern Superior Uplands (212J), Western Superior Uplands (212K)

Total ENRTF Project Budget:	ENRTF Appropriation \$:	500,000
	Amount Spent \$:	<u>0</u>
	Balance \$:	500,000

Legal Citation: M.L. 2011, First Special Session, Chp. 2, Art.3, Sec. 2, Subd. 03c

Appropriation Language:

\$250,000 the first year and \$250,000 the second year are from the trust fund to the Board of Water and Soil Resources to accelerate the completion of county soil survey mapping and Web-based data delivery. The soil surveys must be done on a cost-share basis with local and federal funds.

I. PROJECT TITLE: Completion of a Statewide Digital Soil Survey

II. PROJECT SUMMARY:

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 governments to map, digitize, and web-deliver soils data. Through this partnership 87 of 91 soil survey areas have been completed. Soil survey operations are underway in Crow Wing, Cook and Lake 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. In addition to completing the soil survey in Crow Wing, Lake and Cook Counties, this project addresses gaps in soil survey coverage. These lands, about 3.6 million acres, are primarily in Koochiching, Lake, Cook and St. Louis Counties. About 340,000 acres of gaps will be mapped with ENRTF funds and the remaining acreage will be addressed through a partnership with NRCS and the US Forest Service. At the end of this final mapping phase (NRCS contributions extend to 2016) Pine County will be the only unmapped area in Minnesota. NRCS intends to resume mapping activities in Pine County in 2014, funded entirely by the NRCS. A completion date for Pine County is unknown. In summary, completion of a statewide digital soil survey will be achieved by supporting a Crow Wing County government agreement with NRCS, augmenting current NRCS soil survey staff with additional soil scientists, and partnering with the US Forest Service to address 'gaps' in soil survey information.

III. PROJECT STATUS UPDATES:

Project Status as of January 2012:

Project Status as of September 2012:

Project Status as of March 2013:

IV. PROJECT ACTIVITIES AND OUTCOMES:

ACTIVITY 1: Support Crow Wing County effort with UDSA NRCS

Description:

Complete mapping, interpretations, documentation and digitizing soil survey data. A total of 340,000 acres will be addressed in Crow Wing County. ENRTF funds will be used to address 60,000 acres and the remaining acreage will be addressed with NRCS funds. Mapping Crow Wing County will be complete in June 2013 and we do not expect to seek future funding.

Summary Budget Information for Activity 1:

ENRTF Budget: \$ 75,000
Amount Spent: \$ 0
Balance: \$ 75,000

Activity Completion Date:

Outcome	Completion Date	Budget
1. Field work – map 60,000 acres in Crow Wing county	October 2012	\$60,000
2. Data entry, analysis, reformulation and digitizing of data	May 2013	\$15,000

collected in outcome 1 above.		
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ACTIVITY 2: Support NRCS in delivering a seamless soil database

Description:

Fix 'gaps' in coverage with additional soil scientists. Tasks include mapping, interpretations, correlation, documentation and digitizing. 3.6 million acres of 'gaps' exist in northeastern Minnesota. ENRTF funds will address about 340,000 acres soil coverage gaps in Koochiching, St. Louis, Lake and Cook counties –mostly non-federal lands. NRCS funds will address about 2 million acres by June 2013. After July 2013, the remaining 1.3 million acres in Voyageurs National Park and the Boundary Waters Canoe Area Wilderness will be addressed with NRCS funds. At this point mapping of all lands in Minnesota (with the exception of Pine County) will be complete and we do not expect to seek future funding.

Summary Budget Information for Activity 2:

ENRTF Budget: \$ 425,000
Amount Spent: \$ 0
Balance: \$ 425,000

Activity Completion Date:

Outcome	Completion Date	Budget
1. Field work – map 111,000 in Lake and Cook County outside Superior National Forest boundary	June 2013	\$110,000
2. Data analysis, reformulation and digitizing data from outcome 1 above.	June 2013	\$25,000
3. Field work – map 230,000 in Lake, Cook and St. Louis Counties inside the Superior National Forest boundary	June 2013	\$230,000
4. Data analysis, reformulation and digitizing data from outcome 3 above.	June 2013	\$60,000

Activity Status as of January 2012:

Activity Status as of September 2012:

Activity Status as of March 2013:

Final Report Summary:

V. DISSEMINATION:

Description:

Digital soils maps and soil interpretations will be published on Web Soil Survey. (<http://websoilsurvey.nrcs.usda.gov/app/HomePage.htm>) Web Soil Survey (WSS) provides soil data and information produced by the National Cooperative Soil Survey. It is operated by the Natural Resources Conservation Service (NRCS) and provides access to the largest natural resource information system in the world. The site is updated and maintained online as the single authoritative source of soil survey information

Status as of January 2012:

Status as of September 2012:

Status as of March 2013:

Final Report Summary:

VI. PROJECT BUDGET SUMMARY:

A. ENRTF Budget:

Budget Category	\$ Amount	Explanation
Professional/Technical Contracts:	\$ 500,000	Contract 1: \$75,000 to Crow Wing County to support a contribution agreement with NRCS to map 60,000 acres and analyze and digitize data. Contract 2: \$425,000 to Minnesota office of the Federal NRCS to contract with additional soil scientists and detailees. Contract soil scientists and detailees will map, interpret, correlate, documentation and digitize 340,000 acres of 'coverage gaps' in northeastern Minnesota.
TOTAL ENRTF BUDGET:	\$ 500,000	

Explanation of Use of Classified Staff: N/A

Explanation of Capital Expenditures Greater Than \$3,500: N/A

Number of Full-time Equivalent (FTE) funded with this ENRTF appropriation: N/A

B. Other Funds:

Source of Funds	\$ Amount Proposed	\$ Amount Spent	Use of Other Funds
Non-state			
NRCS	\$ 1,785,000	\$	NRCS mapping, interpretations, correlation and digitizing 1,785,000 acres remaining in the arrowhead (excluding the BWCAW) at a cost of \$1 per acre.
Crow Wing County	\$ 25,000	\$	Office space, LIDAR data and administrative services provided by Crow Wing County as in-kind services during project period.
State			
BWSR staff support, ¼ FTE	\$ 22,000	\$	Project management and contract development.
TOTAL OTHER FUNDS:	\$ 1,832,000	\$	

VII. PROJECT STRATEGY:

A. Project Partners:

The project team is Caryl Radatz, State Soil Scientist, NRCS and Megan Lennon, Soil Scientist, BWSR. The NRCS will receive a total of \$425,000. Caryl Radatz manages all aspects of the Soil Survey Program and Megan Lennon is project manager for LCCMR funds and is the state contact with participating counties and agencies.

B. Project Impact and Long-term Strategy:

This proposal supports the Crow Wing County government agreement with NRCS and provides additional funding to NRCS 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), Lake (2013), and Pine (unknown). 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 exception of Pine County, the Boundary Waters Canoe Area and Wilderness (BWCAW) and Voyageurs National Park. Mapping of Voyageurs National Park will begin in 2013 and is paid for through a partnership between NRCS and the National Park Service. Mapping of the BWCAW will begin after June 30, 2013 and paid for with NRCS funds. Digital soil survey products for Voyageurs National Park and the Boundary Waters Canoe Area Wilderness will be available in 2016.

C. Spending History:

Funding Source	M.L. 1997	M.L. 1999	M.L. 2001	M.L. 2003	M.L. 2005 or FY 2006-07	M.L. 2007 or FY 2008	M.L. 2008 or FY 2009	M.L. 2009 or FY 2010	M.L. 2010 or FY 2011	Total
ENRTF	\$145,000 Subd. 10(f)	\$500,000 Subd. 10(c)	\$500,000 Subd. 7(c)	\$236,000 Subd. 8(b)	\$500,000 Subd. 8(b)	\$400,000 Subd. 6(b)	\$400,000 Subd. 5(b)	\$400,000 Subd. 3(c)	\$500,000	\$3,581,000
Cost share funds – cooperating counties	\$30,000	\$196,799	\$293,248	\$219,990	\$113,000	\$45,000	\$1,000,000	\$1,000,000	\$25,000	\$2,923,037
NRCS					\$917,000	\$1,300,000	\$1,000,000	\$1,000,000	\$1,785,000	\$ 6,002,000
In-Kind Contributions (BWSR, NRCS and/or U of M)*	\$ 40,000	\$40,000	\$180,000	\$240,000	\$60,000	\$20,000	\$20,000	\$20,000	\$22,000	\$ 642,000

*estimated

VIII. ACQUISITION/RESTORATION LIST: N/A

IX. MAP(S): N/A

X. RESEARCH ADDENDUM: N/A

XI. REPORTING REQUIREMENTS:

Periodic work plan status update reports will be submitted not later than January 2012, September 2012, and March 2013. A final report and associated products will be submitted between June 30 and August 1, 2013 as requested by the LCCMR.

Attachment A: Budget Detail for M.L. 2011 (FY 2012-13) Environment and Natural Resources Trust Fund Projects

Project Title: Completion of a Statewide Digital Soil Survey								
Legal Citation:								
Project Manager: Megan Lennon								
M.L. 2011 (FY 2012-13) ENRTF Appropriation: \$ 500,000								
Project Length and Completion Date: 2 years, June 30, 2013								
Date of Update: May 2011								
ENVIRONMENT AND NATURAL RESOURCES TRUST FUND BUDGET	Activity 1 Budget	Amount Spent	Balance	Activity 2 Budget	Amount Spent	Balance	TOTAL BUDGET	TOTAL BALANCE
BUDGET ITEM	Support Crow Wing County effort with USDA NRCS			Support USDA NRCS in delivering a seamless soil database				
Professional/Technical Contracts							500,000	500,000
Crow Wing County: \$75,000 to support a contribution agreement with NRCS to map 60,000 acres and analyze and digitize data.	75,000	0	75,000				75,000	75,000
NRCS: suport for existing soil scientists and detailees for mapping, data interpretation, data entry and analysis, data reformulation and correction, and digitizing gaps in soil survey coverage.				425,000	0	425,000	425,000	425,000
COLUMN TOTAL	\$75,000	\$0	\$75,000	\$425,000	\$0	\$425,000	\$500,000	\$500,000