

# **Trust Fund 2008 Work Program and Trust Fund 2009 Work Program**

**Date of Report:** May 7, 2009  
**Date of Next Status Report:** June 2009  
**M.L. 2008**      **M.L. 2009**  
**Date of Work program Approval:** June 10, 2008      June xx, 2009  
**Project Completion Date:** June, 30 2010      June 30, 2011

## **I. PROJECT TITLE:      Soil Survey**

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**Location:** Crow Wing, Pine, Isanti, Koochiching, Lake, Cook and Saint Louis. Web-based delivery has statewide applicability.  
 (Refer to the map.)

<b>Total Trust Fund Project Budget:</b>	<b>M.L. 2008</b>	<b>M.L. 2009</b>	<b>Total</b>
<b>Trust Fund Appropriation:</b>	<b>\$400,000</b>	<b>\$400,000</b>	<b>\$800,000</b>
<b>Minus Amount Spent:</b>	<b>\$68,640</b>	<b>\$0</b>	<b>\$68,640</b>
<b>Equal Balance:</b>	<b>\$331,360</b>	<b>\$400,000</b>	<b>\$731,360</b>

## **Legal Citation:**

**M.L. 2008, Chap. 367. Sec. 20, Subd. 5(b)**

## **2008 Appropriation Language:**

\$400,000 is from the trust fund to the Board of Water and Soil Resources for soil survey mapping and interpretation efforts in areas of the state, including Crow Wing, Pine, Cook, Lake, and Isanti Counties, and to accelerate the delivery of soils data through the Internet as a Web-based soil survey. The new soil surveys must be done on a cost-share basis with local and federal funds.

**Legal Citation: M.L. 2009, Chap. 143, Sec. 2, Subd. 3c**

## **2009 Appropriation Language:**

\$400,000 is from the trust fund to the Board of Water and Soil Resources to accelerate the county soil survey and mapping and Web-based data delivery. This appropriation represents a continuing effort to complete the mapping. The soil surveys must be done on a cost-share basis with local and federal funds.

## **II. 2008 PROJECT SUMMARY AND RESULTS:**

### M.L. 2008

This project will accelerate the completion of soil mapping by complementing efforts underway by the USDA Natural Resources Conservation Service. Specifically, this project will produce detailed soil survey information for Crow Wing, Pine, Isanti and four additional Counties. Delivery of data will be Web-based. Efficiencies will be achieved by utilizing recently retired NRCS soil scientists and by detailing, to Minnesota, NRCS soil scientists employed in other states. Several soil scientists will be similarly employed and will map an additional 40,000 acres (Amendment Approved 07/25/08). The utility of soils data will be improved by reinterpreting older data and developing new interpretations such as cropland and forest productivity indices.

### M.L. 2009

This project will continue to accelerate the completion of soil mapping and digitization by complementing efforts underway by the USDA Natural Resources Conservation Service. Specifically, this project will eventually produce detailed soil survey information for Crow Wing, Pine, Lake, Cook and (the Crane Lake subset of) Saint Louis Counties. Delivery of data will be Web-based. Efficiencies will be achieved by utilizing retired NRCS soil scientists and by detailing, to Minnesota, NRCS soil scientists employed in other states. Several soil scientists will be similarly employed and will map an additional 50,000 acres.

## **III. PROGRESS SUMMARY AS OF March 11, 2009:**

M.L. 2008: The project is transitioning from 07 funding to (this) 08 funding. Specifically, the NRCS is accelerating activities in Pine and Koochiching Counties by increasing staff, both in-state and detailees. The University of Minnesota and the NRCS have completed cropland productivity indices (funded primarily with 07) and are completing forest land productivity indices. Funding has been received from the NRCS, and the soils data project involving historic samples, is proceeding on schedule.

### M.L. 2009:

N/A

## **IV. OUTLINE OF PROJECT RESULTS:**

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 to map the soils of this state. During the last three years, soils data have become available through the Internet (Web Soil Survey). Before soils data can be delivered through the Internet, soils must be mapped and digitized. Progress is being made to complete this task. (Lake and Cook, the last two counties, have signed agreements with NRCS to complete their soil survey.) However, the NRCS estimates that at current staffing levels, ten or more years are needed to complete the state. This proposal will accelerate the completion and includes funding to continue county government support for soil mapping and digitizing, accelerate soil mapping and update

and reinterpret older soils data. To accomplish these tasks, efficient and timely use will be made of former and current NRCS soil scientists. Soils data, some of it older, will be updated for modern interpretations and delivered through the Web Soil Survey.

**Result 1: “Support county government efforts to complete the soil survey for the state”.** Crow Wing, Pine, Cook and Lake Counties are the final counties in the plan to complete a soil survey for the State. For Crow Wing and Pine Counties, the cost of completing the soil survey is borne by the USDA, state and county in (approximately) a 70/20/10 distribution, respectively. (Contributions to soil survey costs in Isanti and the survey areas in the NE are varied and include LCMR, USDA and county cost-sharing arrangements.) Result 1 will generate about \$100,000 per year of local cost-share in the form of cash, office space and soil survey-related equipment and products.

**Summary Budget Information for Result 1:**

	<b>M.L. 2008</b>	<b>M.L. 2009</b>	<b>Total</b>
<b>Trust Fund Budget:</b>	<b>\$150,000</b>	<b>\$225,000</b>	<b>\$375,000</b>
<b>Amount Spent:</b>	<b>\$18,750</b>	<b>\$0</b>	<b>\$18,750</b>
<b>Balance:</b>	<b>\$131,250</b>	<b>\$225,000</b>	<b>\$356,250</b>

<b>Deliverable</b>	<b>Completion Date</b>	<b>Budget</b>	<b>Status</b>
1. 2008: About 70,000 acres will be addressed in Crow Wing County by existing NRCS staff. The NRCS has now fully staffed this survey with three soil scientists.	June 30, 2010	\$75,000	On-going
2. 2008: About 15,000 acres per year will be addressed in Pine County by existing NRCS staff. The NRCS intends to add two or more soil scientists to this survey.	June 30, 2010	\$75,000	On-going. \$18,750 spent
3. 2009: About 150,000 acres will be addressed in Crow Wing County by existing NRCS staff.	June 30, 2011	\$75,000	To continue after 7/1/09
4. 2009: About 100,000 acres will be addressed in Pine County by existing NRCS staff.	June 30, 2011	\$75,000	To continue after 7/1/09
5. 2009: About 10,000 acres will be addressed in Lake County by existing NRCS staff. The NRCS currently has one soil scientist assigned to this survey.	June 30, 2011	\$37,500	To start after 7/1/09

6. 2009: About 10,000 acres will be addressed in Cook County by existing NRCS staff. The NRCS currently has one soil scientist assigned to this survey.	June 30, 2011	\$37,500	To start after 7/1/09
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**Result Completion Date:**

M.L. 2008: June 30, 2010. The proposed allocation is \$75,000 each to Crow Wing and Pine Counties for both 2008 and 2009. These funds will be used by the counties to support their agreement with the USDA NRCS.

M.L. 2009: June 30, 2011. The proposed allocation is \$75,000 each to Crow Wing and Pine Counties and \$37,500 each to Lake and Cook Counties for 2009. These funds will be used by the counties to support their agreement with the USDA NRCS.

**Result Status as of March 11, 2009:** Since July 2008, priority has been to utilize funds remaining from the previous (2007) LCCMR appropriation. Those funds are nearly expended and the results were reported in that update report. For the balance of the fiscal year, attention will shift to using funds from the 2008 appropriation. After a one year slowdown (2007), the Pine County soil survey is back on track. The \$18,750 spent was a quarterly payment to reimburse Pine County for its ongoing commitment to the NRCS.

**Result Status as of July 2009**

**Result Status as of January 2010**

**Result Status as of June 30, 2010**

**Result Status as of January 2011**

**Final Report Summary**

**Result 2: “ Increase soil mapping in Pine and other counties.**  Experience has shown that soil mapping can be accelerated by augmenting existing NRCS staff with experienced soil scientists familiar with NRCS mapping procedures and the soil landscape. For 2008, an additional 40,000 acres will be addressed by current NRCS soil scientists (detailees) brought to Minnesota on work assignments (Amendment Approved 07/25/08). For 2009, an additional 50,000 acres will be addressed.

**Summary Budget Information for Result 2:**

	M.L. 2008	M.L. 2009	Total
Trust Fund Budget:	\$100,000	\$175,000	\$275,000
Amount Spent:	\$49,890	\$0	\$49,890
Balance:	\$50,110	\$175,000	\$225,110

<b>Deliverable</b>	<b>Completion Date</b>	<b>Budget</b>	<b>Status</b>
1. M.L. 2008: (Amendment Approved 07/25/08) 40,000 acres addressed in several project areas including Pine, Saint Louis (Crane Lake) Lake, Cook and Koochiching. This deliverable will be completed by June 30, 2010. (Note: "New" surveys -Lake and Cook- received only federal funds.)	June 30, 2010	\$100,000	On-going. \$49,890 spent
2. M.L. 2009: 50,000 acres addressed in several project areas including Pine, Saint Louis (Crane Lake), Koochiching, Lake and Cook Counties. This deliverable will be completed by June 30, 2011.	June 30, 2011	\$175,000	To start after 7/1/09

**Result Completion Date:**

M.L. 2008: June 30, 2010

M.L. 2009: June 30, 2011

**Result Status as of March 11, 2009:**

M.L. 2008: The NRCS is again using detailees to accelerate soil survey activities, particularly in Koochiching County. Accomplishments of those staff will be reported in the next update report.

M.L. 2009: N/A

**Result Status as of July 2009**

**Result Status as of January 2010**

**Result Status as of June 30, 2010**

**Result Status as of January 2011**

**Final Report Summary**

**Result 3: "Accelerate data collection, availability and interpretation."**

By providing additional personnel (including professional/technical contracts) to update and interpret soils data, modern interpretations will be developed, some from older data (Amendment Approved 07/25/08). All data will be available for delivery on the Internet (Web Soil Survey). The USDA NRCS has committed \$8,000 cash and an equal amount of in-kind services to this effort.

**Summary Budget Information for Result 3:**

	<b>M.L. 2008</b>	<b>M.L. 2009</b>	<b>Total</b>
<b>Trust Fund Budget:</b>	<b>\$150,000</b>	<b>\$0</b>	<b>\$150,000</b>
<b>Amount Spent:</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<b>Balance:</b>	<b>\$150,000</b>	<b>\$0</b>	<b>\$150,000</b>

<b>Deliverable</b>	<b>Completion Date</b>	<b>Budget</b>	<b>Status</b>
1. M.L. 2008: A county-based soil productivity index for agricultural crops and forests will be developed for statewide use by June 1, 2009 (Amendment Approved 07/25/08). This project will be done in consultation with the NRCS who is responsible for posting the product on the WEB Soil Survey.	June 1, 2009	No 2008 funds were used for this deliverable. 2007 funds were used.	Will be summarized in 2007 final report due in July 2009
2. M.L.2008: Data from several hundred lab samples dating back to the 1980's will be interpreted and made Web-available.	June 30, 2010	150,000	On-going

**Result Completion Date:** M.L. 2008: Deliverables 1 and 2 will be done by June 1, 2009 and June 30, 2010, respectively (Amendment Approved 07/25/08). For budget purposes, the budget for the entire Result is allocated among all deliverables.

**Result Status as of March 11, 2009:** Deliverable 1. (Soil productivity indices) are mostly done (funded with 2007 LCCMR appropriations) so attention has been given to the interpretation of historic data (deliverable 2). To that end, the UM has been working with USDA NRCS staff on database matters and will likely hire student workers to do the majority of data entry.

**Result Status as of July 2009**

**Result Status as of January 2010**

**Result Status as of June 30, 2010**

**Result Status as of January 2011**

**Final Report Summary**

**V. Total Trust Fund Project Budget:**

M.L. 2008

**Staff or Contract Services: \$ 400,000.** \$150,000 --\$75,000 each for contracts with Crow Wing and Pine Counties—for ongoing soil survey activities [result 1]; \$100,000 contract with USDA-NRCS to increase soil mapping and data availability [result 2] (Amendment Approved 07/25/08); \$150,000 contract with the UM to accelerate data collection, availability and interpretation [result 3](Amendment Approved 07/25/08).

**Equipment: \$** None anticipated to be procured with LCCMR funds.

**Development: \$** N/A

**Restoration: \$** N/A

**Acquisition, including easements: \$** N/A

**TOTAL 2008 TRUST FUND PROJECT BUDGET: \$ 400,000**

M.L. 2009

**Contracts: \$400,000** USDA NRCS \$175,000; Counties \$225,000: Crow Wing and Pine Counties, \$75,000 each; Lake and Cook Counties, \$37,500 each.

**Equipment/Tools/Supplies:** N/A

**Acquisition, including Easements:** N/A

**Travel:** N/A

**Other:** N/A

**TOTAL 2009 TRUST FUND PROJECT BUDGET: \$400,000**

## **VI. OTHER FUNDS & PARTNERS/ PROJECT STRATEGY:**

### **A. Project Partners:**

M.L. 2008

The project team includes Joe McCloskey, State Soil Scientist, USDA NRCS; Greg Larson, State Soil Specialist, BWSR, and Professor Ed Nater, UM Department of Soil, Water and Climate. The NRCS will receive \$100,000 (Amendment Approved 07/25/08) and the UM will receive \$150,000 (Amendment Approved 07/25/08).

M.L. 2009

The project team includes Joe McCloskey, State Soil Scientist, USDA NRCS and Greg Larson, State Soil Specialist, BWSR. The NRCS will receive \$175,000.

### **B. Other Funds Proposed to be Spent during 2008 and 2009:**

Each year, the Minnesota Office of the NRCS has or will commit(s) about \$2.5 Million to their soils program, with about \$2.0 Million spent on completing soil mapping and digitizing activities in the remaining project areas. The Board of Water and Soil Resources provides in-kind contributions of about \$20,000 annually.

### **C. Spending History:**

The LCMR contributed \$500,000 funding for the biennium ending June 30, 2007. Crow Wing County has contributed about \$30,000 annually. Pine County has contributed about \$25,000 annually.

### **D. Time for 2008 and 2009 funds:**

2008 funds are for the biennium beginning July 1, 2008.

2009 funds are for the biennium beginning July 1, 2009.

### **E. Project Impact and Long-term Strategy:**

As stated previously, soils data are critical to the use and management of soils and other natural resources. Work remains in eight survey areas (of 91) before WEB-published soil survey is available statewide. A county by county assessment of the completion schedule is provided, followed by a table that summarizes which year(s) of LCCMR funding was used.

Saint Louis County (Meadowlands subset): WEB-publication is anticipated by July, 2009.

Koochiching: 80,000 acres remain. WEB-publication is anticipated during the first quarter of 2010.

Isanti: WEB-publication is anticipated during the last quarter of 2009. Work is being done by the NRCS without state or local funding.

Saint Louis County (Crane Lake subset): 80,000 acres remain. WEB-publication is anticipated during 2010.

Pine County: Work is on schedule to complete the entire county by late 2014. WEB-publication of specific geomorphic areas will be done incrementally beginning in 2010.

Crow Wing County: Work is on schedule to complete the entire county by late 2014. WEB-publication of specific geomorphic areas will be done incrementally beginning in 2009.

Lake County: Work is beginning to complete the entire county by late 2014. Much of the county is part of the Superior National Forest. Soils mapping therein has been completed by the US Forest Service.

Cook County: Work is beginning to complete the entire county by late 2014. Much of the county is part of the Superior National Forest. Soils mapping therein has been completed by the US Forest Service.

Survey Area	LCCMR 07	LCCMR 08	LCCMR 09
Saint Louis (Meadowlands)	X		
Koochiching	X	X	X
Isanti			
Saint Louis (Crane Lake)	X	X	X
Pine County		X	X
Crow Wing County	X	X	X
Lake County			X
Cook County			X

**VII. DISSEMINATION:** As the projects described herein are developed and approved by the NRCS, they may be used without restriction.

**VIII. REPORTING REQUIREMENTS:** Periodic work program progress reports will be submitted not later than January 2009; June 30, 2009; January 2010, June 30, 2010, and January 2011. A final work program report and associated products for the 2008 appropriation will be submitted between June 30 and August 1, 2010 as requested by the LCCMR and a final work program report and associated products for the 2009 appropriation will be submitted no later than August 1, 2011.

**IX. RESEARCH PROJECTS:** Not applicable.



Attachment A: Budget Detail for 2008 Projects		7-May-09									
Project Title: Soil Survey											
Project Manager Name: Greg Larson											
Trust Fund Appropriation: \$ 400,000											
2008 Trust Fund Budget	<u>Result 1 Budget:</u>	Amount Spent (date)	Balance (0309)	Revised Result 2 Budget 07/25/08	Amount Spent (date)	Balance (0309)	Revised Result 3 Budget	Amount Spent (date)	Balance (0309)	TOTAL BUDGET	TOTAL BALANCE
	Maintain current level of support to the Crow Wing and Pine County Soil Surveys.			Increase soil mapping in Pine and other counties			Accelerate data collection, availability and interpretation				
BUDGET ITEM											
Contracts											
USDA/NRCS for soil scientists				100,000	49,890	50,110				100,000	50,110
Crow Wing County for program support	75,000	0	75,000							75,000	75,000
Pine County for program support	75,000	18,750	56,250							75,000	56,250
University of Minnesota for data interpretation							150,000	0	150,000	150,000	150,000
COLUMN TOTAL	\$150,000	\$18,750	\$131,250	\$100,000	\$49,890	\$50,110	\$150,000	\$0	\$150,000	\$400,000	\$331,360

Attachment A: Budget Detail for 2009 Projects May 7,2009								
Project Title: Soil Survey								
Project Manager Name: Greg Larson								
Trust Fund Appropriation: \$400,000								
2009 Trust Fund Budget	<u>Result 1 Budget:</u>	Amount Spent (date)	Balance (5/7/09)	<u>Result 2 Budget:</u>	Amount Spent (date)	Balance (5/7/09)	TOTAL BUDGET	TOTAL BALANCE
	County Support			Increase soil mapping				
BUDGET ITEM								
Contracts								
Cook County	37,500		37,500				37,500	37,500
Crow Wing County	75,000		75,000				75,000	75,000
Lake County	37,500		37,500				37,500	37,500
Pine County	75,000		75,000				75,000	75,000
USDA NRCS				175,000		175,000	175,000	175,000
COLUMN TOTAL	\$225,000	\$0	\$225,000	\$175,000	\$0	\$175,000	\$400,000	\$400,000



