

2009 Project Abstract

For the Period Ending June 30, 2011

PROJECT TITLE: Minnesota Drainage Law Analysis and Evaluation

PROJECT MANAGER: Louis Smith

AFFILIATION: Smith Partners, PLLP

MAILING ADDRESS: 400 Second Avenue South, Suite 1200

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WEBSITE: www.smithpartners.com

FUNDING SOURCE: Environment and Natural Resources Trust Fund

LEGAL CITATION: ML 2009, Chap. 143, Sec. 2, Subd. 5f.

APPROPRIATION AMOUNT: \$87,000

Overall Project Outcome and Results

The Environment and Natural Resources Trust Fund enabled this study to analyze Minnesota drainage laws and related economic and environmental considerations, and to explore alternative strategies that would best protect both the state's surface waters and the rights of property owners to make beneficial use of their land through drainage. This study presents an overview of the drainage code and related water resource laws; identifies critical issues where potential conflicts between the drainage code and other laws create barriers to successful resource protection; and identifies three prototypical demonstration scenarios (Red River Valley, Minnesota River Valley, and Developing Watershed) to inform the study's analysis of these critical issues.

A study advisory committee composed of individuals from diverse backgrounds and expertise met nine times, from December 2009 through May 2011. We also presented this study to the Minnesota Association of Watershed Districts annual meeting in 2009 and 2010; three times to the Board of Soil and Water Resources Drainage Work Group; and to the Red River Watershed Management Board in June 2011.

Key recommendations include:

- Give drainage authorities more tools and resources for watershed-based planning.
- Give drainage authorities more tools and resources to implement projects with integrated drainage, flood control, conservation and water quality benefits.
- Better integrate effects on wetlands and water quality into drainage authority decisions about drainage system work.
- Provide drainage authorities with more clarity in legal authority to address drainage system alignment, grade, cross section, and hydraulic capacity of bridges and culverts for multipurpose design of drainage system establishment, improvement, or repair.
- Extend the authority to establish a locally based wetland regulatory framework under a comprehensive wetland protection and management plan (CWPMP) to public water wetlands.
- Foster reliability of CWPMP outcomes through coordination of local land use authority and wetland regulatory authority.

The policy recommendations include both pertinent findings, specific recommended actions, and draft legislation.

Project Results Use and Dissemination

This project will be presented at the University of Minnesota Water Resources Conference on October 18-19, 2011, the Annual conference of the Minnesota Association of Watershed Districts on December 2, 2011, and at the Annual Convention for the Minnesota Association of Soil and Water Conservation Districts on December 6, 2011.

Environment and Natural Resources Trust Fund 2009 Work Program Final Report

Date of Report: August 15, 2011
Date of Next Progress Report: Final Report
Date of Work Program Approval: June 16, 2009
Project Completion Date: June 30, 2011

I. PROJECT TITLE: Minnesota Drainage Law Analysis and Evaluation

Project Manager: Louis Smith
Affiliation: Smith Partners, PLLP
Mailing Address: 400 Second Avenue South, Suite 1200
City / State / Zip: Minneapolis, MN 55401
Telephone Number: 612-344-1400
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FAX Number: 612-344-1550
Web Site Address: www.smithpartners.com

Location: Minneapolis, for state-wide application.

Total Trust Fund Project Budget:	Trust Fund Appropriation	\$87,000
	Minus Amount Spent:	\$87,000
	Equal Balance:	\$ 0

Legal Citation: ML 2009, Chap. 143, Sec. 2, Subd. 5f.

Appropriation Language:

\$87,000 is from the trust fund to the commissioner of natural resources for an agreement with Smith Partners PLLP to identify and analyze legal and policy issues where the drainage code conflicts with other laws impacting protection of public waters and wetlands.

II. and III. FINAL PROJECT SUMMARY:

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IV. OUTLINE OF PROJECT RESULTS:

Result 1: Legal Analysis

Description: Provide an overview of the drainage code and related state and federal laws concerning wetland conservation, protection of public waters, and water quality. Identify and analyze critical legal and policy issues where the drainage code and potential conflicts with other laws create barriers to successful resource protection.

Summary Budget Information for Result 1:

Trust Fund Budget:	\$18,020
Amount Spent:	\$18,020
Balance:	\$ 0

Deliverable	Completion Date	Budget
1. Survey of drainage code and related laws	October 2009	\$5,440
2. Problem Statement and Critical Issues Identification	October 2009	\$2,040
3. Critical Issues Analysis (Preliminary)	March 2010	\$3,400
4. Critical Issues Analysis (Final)	November 2010	\$7,140

Final Report Summary: June 30, 2011:

This study began with an overview of the drainage code and related water resource laws, specifically tracing the authority to establish and maintain public drainage systems, the evolution of public interest in waters, federal regulation of fill in wetlands, and the allocation of costs to conserve wetlands.

The survey of legal history suggests several ways in which the legal framework to reconcile public interests in drainage and conservation may not be optimal.

First, we are still working largely with a framework enacted in 1883. At that time, the circumstances for which drainage systems needed to account were relatively simple. It could be assumed that stakeholders, fairly uniformly, would consider drainage to be beneficial. Accordingly, feasibility and cost were pretty much the only relevant questions. In addition, drainage and conveyance needs were defined almost exclusively by agricultural land use, and not by urban stormwater management needs or conservation management regimes. The evolution of our land uses, the continued drainage needs and advancement of drainage practices, and current legislative judgments on natural resources conservation all are factors that might recommend adjusting the legal framework.

Second, the present laws governing public drainage and wetland/water quality protection are the result of legislative actions accumulated over the course of more than a century. As a result, the legal framework is not perfectly joined, addresses some aspects in piecemeal fashion, and contains unresolved ambiguities.

Finally, the laws reflect basically two means to mediate drainage and wetland conservation interests. Either (a) the drainage authority establishes an uneasy compromise, in which neither interest is fully realized; or (b) the public at large pays to reserve, for conservation, lands that otherwise could benefit both private and public interests through productive use. It is in the interest of all concerned to identify alternative outcomes.

With this legal survey and understanding of the shortcomings of the current legal framework, the study turned to identify critical issues where potential conflicts between the drainage code and other laws create barriers to successful resource protection. The study advisory committee assisted in identifying five critical issues: 1) implementation of conservation drainage measures in public drainage systems; 2) subwatershed-based planning; 3) updating definitions and use of terms “benefits” and “damages” in the Drainage Code; 4) ensuring that regulatory requirements are clear, consistent, and appropriate; and 5) anticipating the evolution of the Total Maximum Daily Load (TMDL) Program.

Result 2: Demonstration Scenarios

Description: Drainage- resource protection conflicts arise in particular land use settings. We will identify three prototypical scenarios and analyze the economic impacts of various restoration/development/conservation alternatives to inform the critical issues analysis.

Summary Budget Information for Result 2: **Trust Fund Budget:** **\$36,780**
Amount Spent: **\$36,780**
Balance: **\$0**

Deliverable	Completion Date	Budget
1. Identify 3 scenarios with Advisory Committee, e.g. metro suburban, agricultural, and lakeshore development.	November 2009	\$ 1,700
2. Build case studies of 3 scenarios.	March 2010	\$19,640
3. Analyze development, resource conservation/restoration, costs and benefits.	June 2010	\$ 8,500
4. Analyze legal barriers, strategic alternatives in 3 scenarios.	August 2010	\$ 6,940

Final Report Summary: June 30, 2011

With intensive involvement of the study advisory committee, we identified three prototypical demonstration scenarios to explore the critical issues further: a) rural agricultural drainage system improvements set in the Red River Valley; b) rural agricultural drainage system repairs and improvements set in the context of impaired waters and TMDLs in the Minnesota River Valley; and c) developing watershed and wetland issues in the metro area. Three engineering firms, Houston Engineering, I & S Group, and EOR, each with particular experience in these settings, then provided technical review of the scenarios in order to assure that they were appropriately representative of the critical issues as they arise in these landscapes.

Dr. Steve Taff, professor of applied economics at the University of Minnesota, provided an economic assessment of scenarios A and B, specifically to assign total economic values to the agronomic and environment services affected by these hypothetical drainage improvement projects.

Having built these demonstration scenarios and completed the technical and economic assessment, the study turned to identifying policy recommendations that these scenarios suggested.

Result 3: Legislative Recommendations

Description: Building on the critical issues analysis from the three demonstration scenarios, develop legislative recommendations.

Summary Budget Information for Result 3:

Trust Fund Budget:	\$11,650
Amount Spent:	\$11,650
Balance:	\$0

Deliverable	Completion Date	Budget
1. Initial draft of legislative recommendations for Advisory Committee review	September 2010	\$5,400
2. Revised draft recommendations based on Advisory Committee review.	October 2010	\$2,140
3. Presentation of draft recommendations to 3 regional forums.	November 2010	\$2,040
4. Final recommendations.	June 2011	\$2,070

Final Report Summary: June 30, 2011:

The study advisory committee and discussion from regional forums provided critical input for the development of the study's policy recommendations. We presented this study to the Minnesota Association of Watershed Districts annual meeting in 2009 and 2010; three times to the Drainage Work Group; and to the Red River Watershed Management Board in June 2011.

Our recommendations may be summarized as follows:

- Give drainage authorities more tools and resources for watershed-based planning.
- Give drainage authorities more tools and resources to implement projects with integrated drainage, flood control, conservation and water quality benefits.
- Better integrate effects on wetlands and water quality into drainage authority decisions about drainage system work.
- Provide drainage authorities with more clarity in legal authority to address drainage system alignment, grade, cross section, and hydraulic capacity of bridges and culverts for multipurpose design of drainage system establishment, improvement, or repair.
- Extend the authority to establish a locally based wetland regulatory framework under a CWPMP to public water wetlands.
- Create replacement alternatives within a CWPMP for a landowner causing wetland impact who may not have a high-valued replacement option on site.
- Coordinate USACE Section 404 jurisdiction with a watershed-based CWPMP or other implementing framework.

- Integrate MnDOT right-of-way, other state-managed lands and local road authority activities within a CWPMP framework.
- Foster reliability of CWPMP outcomes through coordination of local land use authority and wetland regulatory authority.

Our policy recommendations are presented in detail at Section V of the report, and include both pertinent findings and specific recommended actions. More detailed draft legislation to implement these recommendations is included at Appendix A

Result 4: Advisory Committee Facilitation

Description: Recruit and convene Advisory Committee.

Summary Budget Information for Result 4:

Trust Fund Budget:	\$ 20,550
Amount Spent:	\$ 20,550
Balance:	\$ 0

Deliverable	Completion Date	Budget
1. Identify key stakeholders and recruit advisory committee.	October 2009	\$ 2,440
2. Convene and facilitate six (6) meetings of Advisory Committee.	June 2011	\$15,240
3. Present Draft Recommendations and report for Advisory Committee review and comment.	June 2011	\$ 2,870

Final Report Summary: June 30, 2011: We established the advisory committee and convened nine meetings on the following dates:

<u>Meeting</u>	<u>Date</u>	<u>Agenda</u>
1	12-14-09	Problem Statement; Critical Issues Identification
2	7-21-10	Legal Review; Critical Issues Analysis
3	9-9-10	Scenario A Development
4	10-14-10	Scenario B, Scenario C Development
5	11-30-10	Scenario B Development; Scenario C Policy Issues
6	2-18-11	Scenario C, Analysis
7	3-31-11	Scenario B, Preliminary Economic Analysis
8	5-6-11	Scenario B, Economic Analysis; Scenario A
9	5-26-11	Draft Recommendations

V. TOTAL TRUST FUND PROJECT BUDGET:

Personnel: \$ 65,000

Contracts: \$21,000

Equipment/Tools/Supplies:

Acquisition, including easements: \$

Travel: \$

Other: \$1,000

TOTAL TRUST FUND PROJECT BUDGET: \$87,000

Explanation of Capital Expenditures Greater Than \$3,500: None.

VI. PROJECT STRATEGY:

A. Project Partners:

Smith Partners attorneys (Louis Smith, Charles Holtman and Michael Welch) will provide the legal analysis, project management, and advisory committee facilitation, with support from the firm's planner and partnership manager, Faith Cable. Once the three demonstration scenarios are selected, land development specialists will be retained to analyze the costs and benefits of alternatives.

B. Project Impact and Long-term Strategy:

This project has statewide impact, especially where there are existing drainage systems.

C. Other Funds Proposed to be Spent during the Project Period:

D. Spending History:

VII. DISSEMINATION:

VIII. REPORTING REQUIREMENTS: Periodic work program progress reports will be submitted not later than December 31, 2009; June 30, 2010; December 31, 2010; June 30, 2011. A final work program report and associated products will be submitted between June 30 and August 1, 2011 as requested by the LCCMR.

IX. RESEARCH PROJECTS:

APPENDIX

PROJECT ADVISORY COMMITTEE

<u>Name</u>	<u>Affiliation</u>
Ray Bohn	Minnesota Association of Watershed Districts
Gary Botzek	Minnesota Conservation Federation
Mark Dittrich	Minnesota Department of Agriculture
Les Everett	University of Minnesota Water Resources Center
Warren Formo	Minnesota Agriculture Water Resources Coalition
Annalee Garletz	Minnesota Association of Counties
Ron Harnack	Red River Watershed Management Board
Al Kean	Minnesota Board of Water and Soil Resources
Rick Moore	MSU-Mankato Water Resources Center
Lance Ness	Minnesota Fish & Wildlife Legislative Alliance
Ron Ringquist	Minnesota Viewers Association
Doug Thomas	Comfort Lake Forest Lake Watershed District
Henry Van Offelen	Minnesota Center for Environmental Advocacy

Attachment A: Final Budget Detail for 2009 Projects															
Project Title: Minnesota Drainage Law Analysis and Evaluation															
Project Manager Name: Louis N. Smith															
Trust Fund Appropriation: \$ 87,000															
1) See list of non-eligible expenses, do not include any of these items in your budget sheet															
2) Remove any budget item lines not applicable															
2009 Trust Fund Budget	Result 1 Budget:	Amount Spent (date)	Balance (6-30-11)	Result 2 Budget:	Amount Spent (date)	Balance (6-30-11)	Result 3 Budget:	Amount Spent (date)	Balance (6-30-11)	Result 4 Budget:	Amount Spent (date)	Balance (6-30-11)	TOTAL BUDGET	TOTAL BALANCE	
	Legal Analysis			Demonstration Scenarios			Legislative Recommendations			Advisory Committee Facilitation					
BUDGET ITEM															
PERSONNEL: wages and benefits (List individual names, amount budgeted and %FTE; add rows as needed)															
	Attorneys & Planner	\$18,020	18,020	0	15,780	17,174	-1,394	11,650	11,996	-346	19,550	19,550	0	65,000	-1,740
	• Louis Smith														
	• Chuck Holtman														
	• Michael Welch														
	• Faith Cable (Planner)														
	*All less than 10% FTE														
Contracts															
	Professional/technical (with whom?, for what?)			21,000	19,606	1,394							21,000	1,394	
	Other contracts (with whom?, for what?) list out: personnel, equipment, etc.														
Other direct operating costs (for what? – be specific)															
Non-capital Equipment / Tools (what equipment? Give a general description and cost)															
Office equipment & computers - NOT ALLOWED unless unique to the project															
Capital equipment over \$3,500 (list specific items)															
Land acquisition															
Easement acquisition															
Professional Services for Acq.															
	Printing										550	513	37	550	37
	Supplies (list specific categories)														
	Travel expenses in Minnesota										450	141	309	450	309
	Travel outside Minnesota (where?, for what purpose?)														
	Other (Describe the activity and cost) be specific-														
COLUMN TOTAL		\$18,020	\$18,020	\$0	\$36,780	\$36,780	\$0	\$11,650	\$11,996	-\$346	\$20,550	\$20,204	\$346	\$87,000	\$0