

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

LCCMR ID: A05

Project Title: Updating the National Wetlands Inventory in Minnesota

Total Project Budget: \$ \$1,920,220

Proposed Project Time Period for the Funding Requested: July 2009 - June 2012 (3 yrs)

Other Non-State Funds: \$

First Name: Doug

Last Name: Norris

Sponsoring Organization: DNR

Address: 500 Lafayette Road, Box 25
St. Paul MN 55155

Telephone Number: 651-259-5125

Email: doug.norris@dnr.state.mn.us

Fax: 651-296-1811

Web Address: www.dnr.state.mn.us

Region:	County Name:	City / Township:
Northeast, Central, Metro	Anoka, Carver, Chisago, Cook, Dakota, Goodhue, Hen	

Summary: Wetland mapping standards will be established for all state ecoregions. Updated wetland maps will be finished for 13 counties encompassing the metro area and Cook, Lake and St. Louis counties.

Main Proposal: 0808-1-013-proposal-2009 LCCMR_main_proposal-v2.doc

Project Budget: 0808-1-013-budget-2009_LCCMR Proposal Project Budget.xls

Qualifications: 0808-1-013-qualifications-Project Manager Qualifications_Norris.doc

Map: 0808-1-013-maps-2009 Proposal Map.doc

MAIN PROPOSAL

PROJECT TITLE: Updating the National Wetlands Inventory (NWI) for Minnesota

I. PROJECT STATEMENT

This is a continuation of the NWI Update project originally recommended for funding by the LCCMR beginning in FY08 [M.L. 2008 Chap. 367, Sec. 2, Subd. 5(a)]. This project is needed because the original NWI is severely out of date and, in some areas of the state, was not very accurate to begin with. Wetland inventories are an essential tool for effective wetland management, protection, and restoration. Such inventories provide baseline information for assessing the effectiveness of wetland policies and management actions. The overall goal of this project is to produce updated wetland maps for the entire state, showing all currently existing wetlands that meet the wetland definition criteria established in M.S. 103G.005, Subd. 19 (a), as well as other surface waters, including lakes and streams. The goal for this specific proposal is to produce updated wetland maps for 13 counties encompassing the metro area and three counties in northeast Minnesota (see figure). Subsequent LCCMR proposals will seek funding to update the NWI in other regions. The University of Minnesota will develop mapping standards and methods aimed at producing the most accurate maps for the least cost. The actual wetland mapping will be conducted by contractors. All wetland map data will be available free of charge to the public.

II. DESCRIPTION OF PROJECT RESULTS

Result 1: Methods Development Budget: \$107,261

Continue and complete the analysis of wetland mapping methods and technologies in order to identify the most accurate and cost effective techniques for use in wetland map production. Our 2008 LCCMR proposal requested funding for a three-year methods analysis and development effort, including pilot mapping projects in at least three distinct ecoregions of the state. We received funding for two years and two pilot areas. For this (2009) proposal, we are requesting funding to continue the methods development in a third pilot area. This component of the project is being conducted by the University of Minnesota's Dept. of Forestry Resources, Remote Sensing and Geospatial Analysis Laboratory.

Deliverable

1. Updated wetland inventory data for pilot areas
2. Final mapping protocols for all areas

Completion Date

July 2011
July 2011

Result 2: Updated Wetland Maps for Greater 13-County Metro Area Budget: \$226,088

Produce updated wetland maps for 13 counties encompassing the Twin Cities metro area (see figure). This area is a high priority for updating because land use changes have rendered the original maps inaccurate and because of continuing development pressure. The map production will be conducted by private, academic or government contractors and will consist of additional image acquisition (if necessary), digital photo-interpretation and ground truthing for quality control. Completed digital map data will be available to the public through several websites, including the DNR and the U.S. Fish and Wildlife Service.

Deliverable

1. Updated digital wetland inventory maps on-line

Completion Date

July 2011

Result 3: Updated Wetland Maps for Northeast Minnesota Budget: \$1,586,871

Produce updated wetland maps for Cook, Lake and St. Louis Counties. This area is a high priority for mapping because the original NWI maps were not very accurate and because of mining and

recreational development pressure. Mapping in this area will be more expensive than in the metro region because there isn't as much remote imagery already available and because interpretation of the imagery in forested areas takes more time. The map production will be conducted by private, academic or government contractors and will consist of additional image acquisition (if necessary), digital photo-interpretation and ground truthing for quality control. Completed digital map data will be available to the public through several websites, including the DNR and the U.S. Fish and Wildlife Service.

Deliverable

1. Updated digital wetland inventory maps on-line

Completion Date

July 2012

III. PROJECT STRATEGY AND TIMELINE

A. Project Partners

Funded partners (Env. Trust Fund): Minnesota DNR (\$1,820,220) and University of Minnesota (\$100,000).

Other collaborators providing in-kind services: U.S. Fish and Wildlife Service, Board of Water and Soil Resources, Minnesota Pollution Control Agency, Land Management Information Center, Metropolitan Council, and Ducks Unlimited.

B. Project Impact

The benefits of this project will be focused on 13-counties encompassing the metro area and in Cook, Lake and St. Louis Counties. Updated, accurate wetland maps for these areas will allow for better land use planning, watershed management, fish, wildlife and native plant management, environmental assessment and wetland permitting. In turn, this will benefit all Minnesotans that engage in outdoor recreation and will also benefit the regulated community through more efficient planning and regulation.

C. Time

This proposal is a continuation of the previously funded project to update the NWI statewide, which began in July 2008. This phase of the project will begin in July 2009 and conclude in June 2012. Updated wetland mapping for the entire state is scheduled to be completed in 2015, pending additional funding (see attached timeline)

D. Long-Term Strategy

In 2006, a group of state and federal agencies published, "A Comprehensive Wetland Assessment, Monitoring and Mapping Strategy for Minnesota."¹ This strategy identified a clear need to conduct a statewide update of the NWI. We propose to approach this task in four phases, focusing on various geographic regions of the state. The first phase of the project (already funded) is currently laying the groundwork for the actual map production by assessing current mapping methods, identifying user needs, developing mapping standards and acquiring some of the remote imagery needed to produce updated maps. This proposal would begin the actual mapping updates, focusing on 13 counties encompassing the Twin Cities the metro area and on the Arrowhead region. These areas were selected as highest priority because 1) the existing maps are most out of date due to land use changes or were not very accurate to begin with; 2) they have high development pressure and resource management needs; and 3) for the metro area, there is considerable recent remote imagery that will facilitate map updates. The third phase of the project will address central and western Minnesota and the final phase will focus on the southern portion of the state. The exact boundaries of these geographic regions have not been determined. The overall cost of updating the NWI statewide is expected to be \$5 – 7 million. We anticipate submitting future LCCMR proposals on a biennial basis and will continue to explore other sources of funding. See the attached timeline for the project.

¹ Available at: http://files.dnr.state.mn.us/eco/wetlands/wetland_monitoring.pdf

Project Budget

IV. TOTAL PROJECT REQUEST BUDGET

BUDGET ITEM (See list of Eligible & Non-Eligible Costs, p. 17)	AMOUNT	% FTE
Personnel:		
MnDNR Project Coordinator, 2 yrs, beginning 07/2010 (08-09 already funded under previous Env. Trust Fund grant)	\$ 145,220	65%
	\$ -	%
Contracts:	\$ -	
University of Minnesota, Dept. of Forestry Resources, Remote Sensing and Geospatial Analysis Laboratory -- for analysis of current remote sensing and wetland mapping technologies and development of mapping protocols	\$ 100,000	
Technical services contract for imagery acquisition, photointerpretation, QA/QC and digital wetland mapping in selected counties of Minnesota	\$ 1,665,000	
Equipment/Tools: N/A	\$ -	
Acquisition (Including Easements): N/A	\$ -	
Restoration: N/A	\$ -	
Other:	\$ -	
Travel for DNR Project Coordinator In-state mileage and lodging	\$ 6,000	
Out-of-state - 2 scientific conferences/year (e.g. Society of Wetland Scientists, or Association of State Wetland Mgrs.) to give presentations our project and learn from others engaged in wetland mapping projects	\$ 4,000	
TOTAL PROJECT BUDGET REQUEST TO LCCMR	\$ 1,920,220	

V. OTHER FUNDS

SOURCE OF FUNDS	AMOUNT	Status
Remaining \$ From Previous Trust Fund Appropriation (if applicable):	\$550,000 (M.L. 2008 Chap. 367, Sec. 2 Subd. 5(a))	<i>Unspent or Not Legally Obligated</i>
Other Non-State \$ Being Leveraged During Project Period:	\$ -	<i>Secured or Pending</i>
Other State \$ Being Spent During Project Period:	\$ -	<i>Secured or Pending</i>
In-kind Services During Project Period: DNR Wetlands Program Coordinator staff time	\$ 9,500	
Past Spending:	\$ -	

Project Manager Qualifications

Project Manager: Doug Norris

Education:

B.S., Wildlife Science, Purdue University, 1978

M.S., Fisheries and Wildlife, University of Missouri, 1982

Current Position: Wetlands Program Coordinator, Minnesota Department of Natural Resources, Ecological Resources Division (since 1991).

Applicable Experience: Sought and obtained funding from the USEPA (State Wetlands Program Development Grants) for several projects, including development of the *Minnesota Wetlands Conservation Plan* (1997, <http://files.dnr.state.mn.us/eco/wetlands/wetland.pdf>), *Wetland Guidance for the Anoka Sandplain* (2000), and the *Comprehensive Wetland Assessment, Monitoring and Mapping Strategy for Minnesota* (2006, http://files.dnr.state.mn.us/eco/wetlands/wetland_monitoring.pdf). Responsibilities included preparing grant applications, hiring staff, managing budgets, coordination with project partners, and overseeing development of final products. Currently managing a long-term project to assess statewide trends in wetlands quantity and quality.

Other experience includes participation in development of state and federal wetland laws, regulations and policies, assisting in developing wetland technical resources such as the *Minnesota Routine Assessment Method for Evaluating Wetland Functions and Values* (<http://www.bwsr.state.mn.us/wetlands/mnram/index.html>), and providing technical assistance to landowners, local governments and DNR staff on wetland ecology and the application of wetland regulations.

Counties Proposed for NWI Updates
2009 LCCMR Proposal

