

**Environment and Natural Resources Trust Fund
2010 Request for Proposals (RFP)**

LCCMR ID: 149-E2

Project Title:

Developing Lake Protection Strategies Using Resource Assessment Metrics

LCCMR 2010 Funding Priority:

E. Natural Resource Conservation Planning and Implementation

Total Project Budget: \$ \$1,866,500

Proposed Project Time Period for the Funding Requested: 3 years, 2010 - 2013

Other Non-State Funds: \$ \$87,500

Summary:

This project will advance development of strategic water quality protection by using lake data and watershed characteristics to construct a set of metrics that identifies possible threats to water quality.

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Sponsoring Organization: Board of Water and Soil Resources

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Location:

Region: NW, NE, Central

County Name: Aitkin, Becker, Beltrami, Carlton, Cass, Clearwater, Crow Wing, Douglas, Hubbard, Itasca, Kandiyohi, Mille Lacs, Morrison, Otter Tail, St. Louis, Stearns, Todd, Wright

City / Township:

_____ Knowledge Base	_____ Broad App.	_____ Innovation
_____ Leverage	_____ Outcomes	
_____ Partnerships	_____ Urgency	_____ TOTAL

MAIN PROPOSAL

PROJECT TITLE: Developing Lake Protection Strategies Using Resource Assessment Metrics

I. PROJECT STATEMENT

Lakes that are not impaired need specific protection strategies that take into account the varied mix of watershed size and defining characteristics including forested acreage, public/private ownership, land cover/land use and population trends. Targeting conservation activities and working with lake associations that have a vested interest in these lakes will produce a comprehensive suite of lake and watershed management strategies resulting in long-term water quality protection.

The goal of this project is to provide for long term protection of high quality lake resources through more effective conservation planning and implementation. This will be accomplished by implementing a cost effective analytical framework that uses available water quality data and watershed characteristics to develop water quality protection strategies tailored to individual lake watersheds. Those strategies will be incorporated into lake management plans, County Local Water Management Plans and larger watershed plans. The information will also provide value to lake associations interested in achieving Star Lake status. The TMDL program uses extensive water quality monitoring and modeling to develop an implementation plan expected to result in water quality improvements. In contrast, this project will gather and analyze available information and incorporate that information into a set of metrics that identifies potential threats to long-term water quality, proposes a suite of protection strategies and begins implementation of those strategies.

New SWCD staff employed through this project as regional resource professionals with skills in lake and watershed management are a critical component of success. They will facilitate gathering the available watershed and water quality information into a comprehensive document, act as a resource for lake and watershed planning, and assist with implementing conservation activities. Local water managers are familiar with sharing technical services through the existing framework of SWCD Technical Service areas. (See attached map)

Up to 350 non-impaired lakes greater than 500 acres in size in approximately 15 Counties will be targeted using the template process successfully piloted in 3 Central Minnesota Counties. This lake size yields a manageable project cohort and mirrors the lake size that the MPCA will monitor for water quality over the next 10 years as part of their integrated watershed management framework. The main focus of this project is on water quality protection. However, an additional benefit is that the information gathered will be of value should future monitoring indicate that a particular lake is impaired.

Successful completion of this project will advance the development of strategic water quality protection in Minnesota's lake rich counties and enhance the ability of lake associations and resource managers to work in partnership for long term protection of those valuable resources.

II. DESCRIPTION OF PROJECT RESULTS

Result 1: Lake Basin/Watershed Technical Analysis **Budget:** \$ 533,700

Gather available water quality, lake basin and watershed data to determine water quality trends and develop a suite of metrics that identify the potential threats to long-term water quality on up to 350 lakes in 15 Minnesota Counties. Information produced includes a lake assessment, watershed assessment, metric reference document including explanation of terminology and relevance and a qualitative analysis of the metrics identified. Four regional lake management specialists will work with lake associations and assist with the data collection and analysis.

Completion Date
April 30, 2012

Deliverable

A comprehensive set of lake and watershed information for up to 350 lakes incorporated into a suite of metrics that allows resource managers, particularly local officials and citizens groups to qualitatively assess the potential threats to long term water quality and identify protection strategies tailored to lake and watershed conditions.

Result 2: Creating /improving lake management plans **Budget:** \$ 300,000

Completion Date

Deliverable

February 1, 2013

Targeted lake and watershed management activities incorporated into plans for up to 50 lake associations using Star Lake criteria as a template. Lake plans will also be incorporated into watershed and local watershed management plans. Lake Plan development will be led by Minnesota Waters and the Central Minnesota Initiative Foundation using established procedures.

Result 3: Strategic Implementation of BMPs **Budget:** \$ 1,032,800

Completion Date

Deliverable

June 1, 2013

BMPs identified through the data analysis and planning phases of this project will be installed using established methods of technical and financial assistance. Four regional lake management staff will assist with planning, design and installation of activities. Shoreland practices such as revegetation and stormwater management will combine with watershed practices including erosion control and buffer strips.

III. PROJECT STRATEGY**A. Project Team/Partners**

BWSR- Lead agency and fiscal agent

Minnesota Waters- Lake management planning and lake association recruitment

Central Minnesota Initiative Foundation- Lake management planning and potential financial assistance through the Healthy Lakes and Rivers Program

SWCDs-technical and financial resources and employing regional lake management staff

Star Lake Board-Identifying criteria for Star Lake status

B. Timeline Requirements

Hiring regional technical staff can begin immediately upon project establishment. Employment continues throughout the 3 year duration of the project.

Data collection and analysis begins immediately upon project establishment. Completed within 2 years Lake Management Planning requires working with volunteer organizations and begins once staff are in place and data collection and analysis is started. The volunteer organizations will likely start at different knowledge levels and some may require up to 3 years to complete high quality plans.

Implementation of identified protection strategies can begin upon completion of lake plans. Maximizing available field seasons may require up to 3 years for completion of this step.

C. Long-Term Strategy

This project follows up on a successful BWSR pilot program utilizing Clean Water Legacy funds. By concentrating on lakes over 500 acres in size, this project identifies a manageable cohort of lakes that can be analyzed in this manner. Limited financial resources require targeting activities and resources for long-term protection. Incorporating the lake management plans and County Local Water Management Plans can serve as the basis for implementing protection activities using future resources such as the Clean Water Fund or other funding mechanisms where a linkage to local water management plans is required.

Successful completion of this project can serve as a template for identifying protection strategies for smaller lakes in the future, through the Clean Water Fund or other funding sources.

Project Budget

IV. TOTAL PROJECT REQUEST BUDGET for 3 years

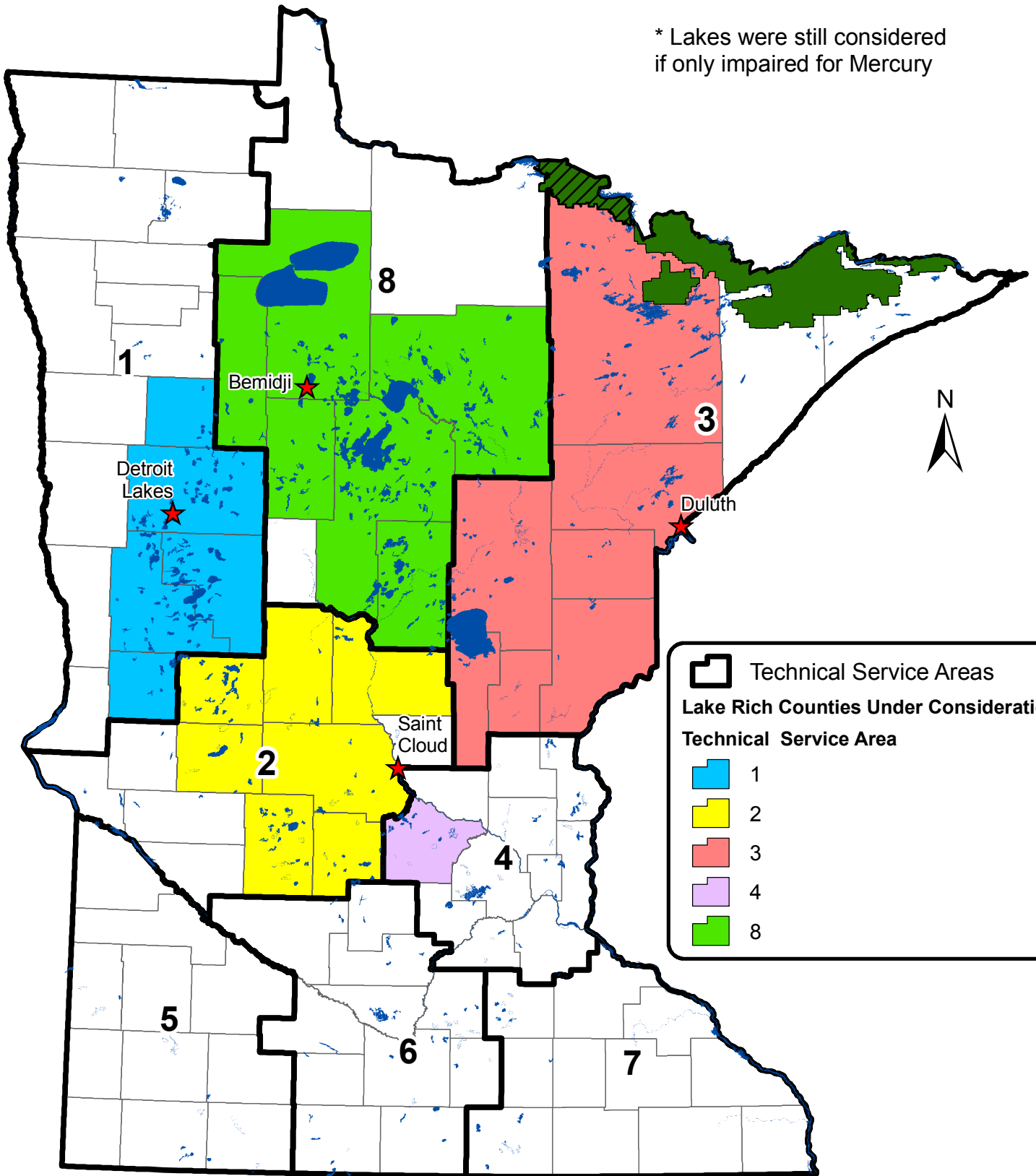
<u>BUDGET ITEM</u>	<u>AMOUNT</u>
Personnel: Four lake and watershed management professionals will be hired at 100 % full time employment for the 3-year duration of the project and located in four regional SWCD technical centers to coordinate information collection, data analysis, planning and technical assistance. 78% salary; 22% fringe and benefits	\$ 780,000
Contracts: One or more firms will be sought to develop lake and watershed analysis information and documentation including GIS and water quality analysis, gathering water quality data from various sources and data analysis on up to 350 lakes. Estimated cost is \$ 1,000 per lake	\$ 262,500
The Central Minnesota Initiative Foundation and Minnesota Waters have extensive experience with building lake association capacity and assisting them with developing and implementing lake management plans. These organizations will assist up to 50 lake associations with developing or improving lake management plans and strategies using Star Lake criteria as a template.	\$ 300,000
Equipment/Tools/Supplies: Computers and Miscellaneous supplies to support 4 new SWCD technical staff positions for 3 years	\$ 12,000
Travel: Instate travel from regional work centers to meet with lake associations and landowners within the project area for BMP development, design and installation. Costs are for mileage and meals for 4 staff for 3 years. Prevailing IRS mileage and meal reimbursement rates will be used.	\$ 12,000
Additional Budget Items: Implementation activities and conservation alternatives identified through the lake and watershed planning process. Funds will be available only to those lake watersheds that develop a plan in conjunction with the Local Water Management Plan that mirrors Star Lake criteria. Lake adjacent activities including shoreline revegetation and stabilization, rain gardens and runoff control activities are some examples. Watershed actions could include erosion control, buffer strip installation, feedlot and pasture management activities among other established actions.	\$ 500,000
TOTAL PROJECT BUDGET REQUEST TO LCCMR	\$ 1,866,500

V. OTHER FUNDS

<u>SOURCE OF FUNDS</u>	<u>AMOUNT</u>	<u>Status</u>
Other Non-State \$ Being Applied to Project During Project Period: Local funds and lake association contributions toward the completion of the Lake Basin\Watershed Technical Analysis	\$ 87,500	<i>Pending</i>
Other State \$ Being Applied to Project During Project Period: In-kind BWSR staff time to manage project, provide reporting and contract oversight for the duration of the project.	\$ 30,000	<i>Secured</i>
In-kind Services During Project Period: The Central Minnesota Initiative Foundation will provide staff and technical resources and their expertise in lake management planning and civic engagement	\$ 75,000	<i>Secured</i>
Funding History: A BWSR Pilot Protection Project funded through the 2008 Clean Water Legacy appropriation developed a template to be used as a model for this application. The pilot project resulted in lake-specific information documents that were included in the Comprehensive Local Water Management Plans Cass, Crow Wing and Aitkin Counties and included 45 lakes over 1,000 acres in size.	\$ 75,000	

Non-Impaired Lakes 500 Acres or Larger *

* Lakes were still considered if only impaired for Mercury



Technical Service Areas

Lake Rich Counties Under Consideration:

Technical Service Area

	1
	2
	3
	4
	8

	SWCD Regional Technical Service Area Office Locations
	Voyaguers National Park
	Boundary Waters Canoe Area Boundary
	Non-Impaired Lakes 500 Acres or Larger **

** Data source:
PCA 2008 impaired
waters list



April 2009

Developing Lake Protection Strategies Using Resource Assessment Metrics

BWSR

Project Manager Qualifications:

The project manager for the grant will be Jeff Hrubes, BWSR Regional Clean Water Specialist, located in the Brainerd BWSR office. Jeff has almost 20 years experience in working with watershed protection programs as a local Clean Water Partnership (CWP) Coordinator, MPCA project manager for CWP, 319 and TMDL projects and BWSR Board Conservationist implementing BWSR programs including Local Water Management Plans. Jeff is the lead BWSR field employee for BWSR's Northern Region coordinating the Clean Water Legacy program.

Organization Description:

The MN Board of Water and Soil Resources (BWSR) will serve as the lead state agency for this grant. The BWSR has worked to develop a conservation delivery system that utilizes local technical staff connections at SWCDs, Counties and Watershed Districts to implement soil and water conservation practices on private lands in MN. The BWSR has historically provided similar grant funds to SWCDs to implement this type of work. The existing process to provide financial and administrative oversight will be used in this project.