

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

LCCMR ID: 027-A3

Project Title:

Intra-Lake Zoning to Protect Sensitive Lakeshores

LCCMR 2010 Funding Priority:

A. Water Resources

Total Project Budget: \$ \$680,000

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

Other Non-State Funds: \$ \$0

Summary:

To continue efforts to protect high-value lake ecosystems in Minnesota, biological surveys to identify sensitive lakeshores and delivery of interpretive products will be accelerated in collaboration with Itasca County.

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Sponsoring Organization: DNR

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Web Address: http://www.dnr.state.mn.us/eco/sli/index.html

Location:

Region: NE

County Name: Itasca

City / Township:

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

MAIN PROPOSAL

PROJECT TITLE: *INTRA-LAKE ZONING TO PROTECT SENSITIVE LAKESHORES*

To continue efforts to protect high-value lake ecosystems in Minnesota, biological surveys to identify sensitive lakeshores and delivery of interpretive products will be accelerated in collaboration with Itasca County.

I. PROJECT STATEMENT

The major impetus for the continuation of this initiative is the need to better protect and manage functional lake ecosystems in Minnesota. There has been a significant change in the pattern of development taking place on Minnesota lakes, and the Minnesota State Demographic Center has projected growth in many of the lake-rich counties to exceed 35 percent in the next 25 years. There is widespread concern about the consequences of poorly planned development on water quality and fish and wildlife habitat. Given the increased demands for water and shoreland, continued habitat fragmentation, loss of species diversity, and exotic species expansion, protection of ecological processes and component organisms of lakeshores is critical.

Data on the distribution and ecology of rare plants and animals, native plant communities, and vulnerable lakeshores are needed to prioritize actions to conserve and manage lake ecosystems. The recent passage of the *Clean Water, Wildlife, Cultural Heritage and Natural Areas Amendment* will accelerate the demand for information on critical areas, like lakeshores. As Minnesota assesses the status of its natural resources, develops plans for priority resources, and invests millions of dollars, information that will help target investment decisions along lakeshores will be vital. This project's intent is to continue to develop and deliver information specifically for that need. This initiative has:

- ***Developed objective, science-based criteria to identify sensitive lakeshores on large lakes from detailed on-site biological surveys, and will develop an ecological model to predict sensitive lakeshore areas based on readily available geographical information;***
- ***Completed detailed biological surveys and identified sensitive areas on 11 Cass County lakes, and by July 2011 will deliver interpretive products for 4% of Minnesota's large lakes;***
- ***Developed shoreland conservation ordinances that will provide greater protection of sensitive shoreland; and***
- ***Worked with state regulators to provide additional safeguards for sensitive shoreland, including the recently promulgated Minnesota Rules, part 6280.0250 [Standards for Aquatic Plant Management Permit Issuance] and proposed rules for thresholds for environmental review within sensitive shoreland areas [proposed amendments to Minnesota Rules, chapter 4410].***

The primary focus of this three-year continuation proposal would be to accelerate surveys in northern Minnesota and to develop interpretive products for shoreland property owners, state and local governments, regional planning efforts, and use in identifying areas for shoreland reclassification and priority areas for potential purchase or conservation easement.

II. DESCRIPTION OF PROJECT RESULTS

Result 1: *Biological Assessment of Itasca County Lakes*

Budget: \$475,000

Sensitive lakeshore surveys will target about 20 high priority lakes in northern Minnesota using Minnesota's Sensitive Lakeshore Survey Protocol. Detailed on-site biological survey work will be completed on selected lakes, and the value of the shoreline with regard to aquatic habitat and vulnerability to development will be objectively assessed. Selection of survey lakes by Itasca County will be based on lake size, amount of undeveloped private parcels, and development potential.

Deliverable

1. 3 – 8 lakes surveyed
2. 6 – 12 lakes surveyed
3. Sensitive areas identified for all selected lakes

Completion Date

June 2011
June 2012
June 2013

Result 2: *Guidance for Conservation and Management*

Budget: \$80,000

By working cooperatively with lake associations and other groups to develop products and technical assistance, improve capacity of project outputs to effectively inform state and local government decisions that impact the conservation and management of lake ecosystems. Work with Itasca County to update zoning and ordinances to provide additional protection to sensitive shorelands.

Deliverable

1. Technical assistance to local governments
2. Work with lake associations, riparian property owners, and others to deliver targeted conservation and restoration efforts to sensitive lakeshores
3. Engage in local and regional planning efforts with partners

Completion Date

June 2013
June 2013
June 2013

Result 3: *Develop a System for Sharing Extensive Biological Data*

Budget: \$125,000

Enhance the management of data to facilitate efficient distribution of information to individuals, organizations, local governments, and agencies with diverse natural resources goals.

Deliverable

1. Information system development, including data maintenance and additional quality control
2. Integration and linkages to related DNR databases and procedures
3. Preparation and delivery of biological collections and journal articles

Completion Date

June 2013
June 2013
June 2013

III. PROJECT STRATEGY

A. Project Team/Partners

DNR Team [other state funding]:

Paul Radomski, Project Manager; Donna Perleberg, Aquatic Plant Ecologist; Pam Perry, Nongame Wildlife Lake Specialist; Kristin Thompson, Nongame Wildlife Lake Specialist; and Kevin Woizeschke, Nongame Wildlife

Partners:

Itasca County, Environmental Services Department, Don Dewey, Director; Leech Lake Reservation, Division of Resources Management (LLRDRM), John Ringle; and U.S.F.S., Chippewa National Forest, Fish and Wildlife Program, Todd Tisler, Program Manager.

B. Timeline Requirements

This is a three-year project ending on June 30, 2013.

C. Long-Term Strategy

This project is a continuation of the LCCMR funded project on 'Intra-Lake Zoning to Protect Sensitive Lakeshores' (MN Laws 2008, Chapter 367, Section 2, Subd. 4e).

Project Budget

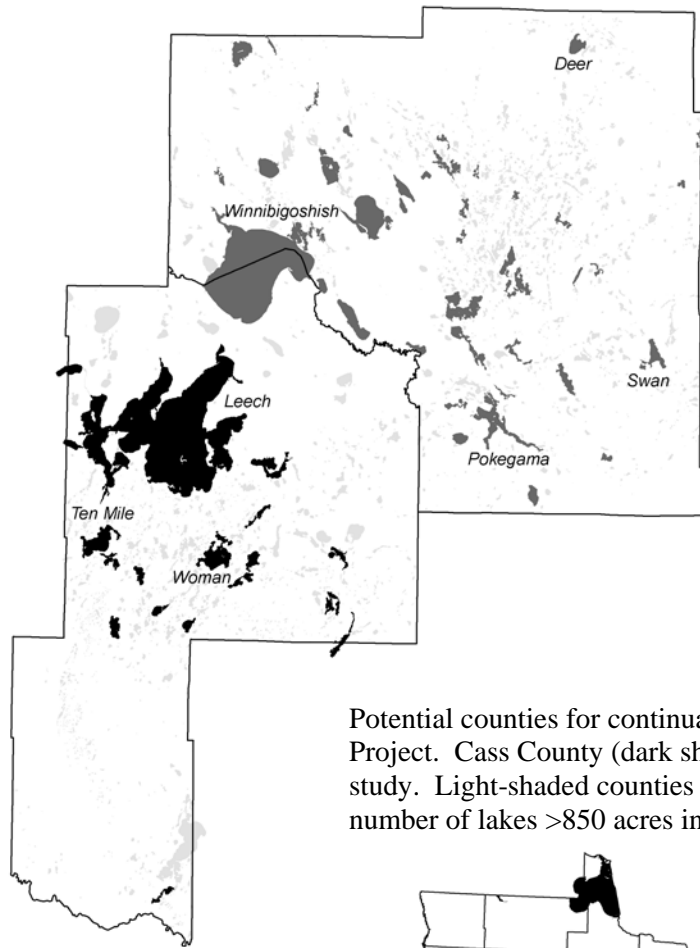
IV. TOTAL PROJECT REQUEST BUDGET (3 years)

BUDGET ITEM	AMOUNT
Personnel:	\$ -
Unclassified Aquatic Botanist	\$ 135,000
Unclassified Aquatic Biologist	\$ 135,000
Unclassified Ornithologist / Herpetologist	\$ 135,000
Unclassified GIS Specialist	\$ 150,000
Interns, student workers, or temporary specialists (3 per year)	\$ 60,000
Contracts:	\$ -
	\$ -
Equipment/Tools/Supplies:	\$ -
Fleet	\$ 25,000
Field equipment, including seines and trapnets	\$ 30,000
Supplies	\$ 5,000
Acquisition (Fee Title or Permanent Easements):	\$ -
Travel:	\$ -
Additional Budget Items: Printing of reports and articles (these materials will also be available on the project's website)	\$ 5,000
TOTAL PROJECT BUDGET REQUEST TO LCCMR	\$ 680,000

V. OTHER FUNDS

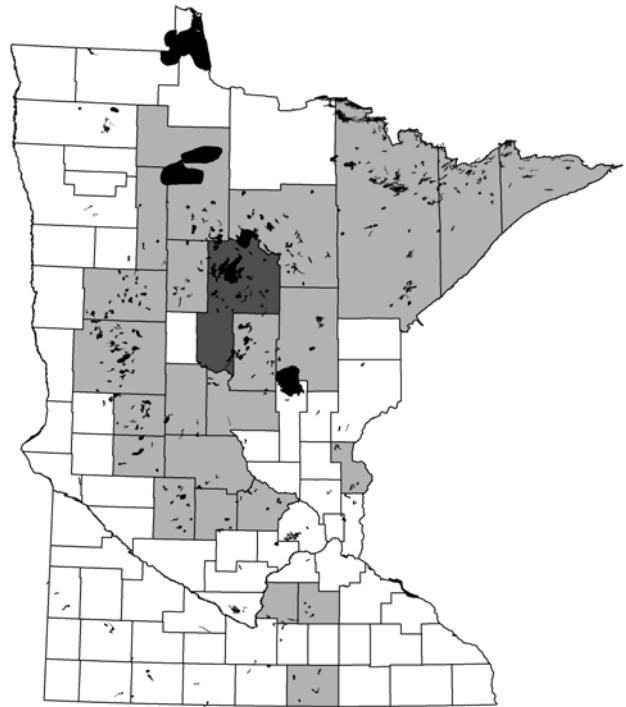
SOURCE OF FUNDS	AMOUNT	Status
Other Non-State \$ Being Applied to Project During Project Period:	\$ -	
Other State \$ Being Applied to Project During Project Period: Federal funding via State Wildlife Grant (per year)	\$ 100,000	Pending
Game & Fish (per year)	\$ 35,000	Pending
State (Nongame funds; per year)	\$ 20,000	Pending
State (Heritage funds; per year)	\$ 10,000	Pending
In-kind Services During Project Period:	\$ -	
Remaining \$ from Current Trust Fund Appropriation (if applicable):	\$ -	
Funding History: Federal funding (State Wildlife Grants)	\$ 325,000	
State (Heritage and Game & Fish funds)	\$ 300,000	
State funding: LCCMR \$110,000 (2007; MN Laws 2007, Chapter 30, Section 2, Subd. 5h) and \$125,000 (2008; MN Laws 2008, Chapter 367, Section 2, Subd. 4e)	\$ 235,000	

Intra-Lake Zoning to Protect Sensitive Lakeshores study lakes and potential study lakes. Shaded lakes in Cass County (N = 17) are part of ongoing study; shaded lakes in Itasca County (N = 45) are potential study lakes.



Potential counties for continuation of Intra-Lake Zoning Project. Cass County (dark shaded) is part of ongoing study. Light-shaded counties (N = 23) have the greatest number of lakes >850 acres in size.

Example of product: Ten Mile Lake with identified Sensitive Shoreline (dark line) and Potential Resource Protection Districts (diagonal hatch).



Project Manager Qualifications & Organization Description

Organization Description: State Agency, Minnesota Department of Natural Resources.
DNR Mission Statement: Our mission is to work with citizens to conserve and manage the state's natural resources, to provide outdoor recreation opportunities, and to provide for commercial uses of natural resources in a way that creates a sustainable quality of life.

Project Manager: Paul Radomski

Paul Radomski is a research scientist with the Minnesota Department of Natural Resources. He has worked for the DNR for over 20 years, and he has extensive experience managing innovative projects. He currently serves as the science advisor to Minnesota's Shoreland Rules Update Project.

Education:

University of Wisconsin-Stevens Point, M.S., Aquatic Biology and Fisheries, 1983-1986
University of Wisconsin-Stevens Point, B.S., Limnology, 1979-1983

Recent Employment:

Project Consultant – Senior, Shoreland Rules Update Project 2008-present. Alternative Shoreland Management Standards Project, 2005-2006. Responsible for development of modernized state shoreland development standards. Provide scientific and technical expertise to Department staff, Advisory Committee members, and the public. Currently project manager for the LCCMR-funded project on intra-lake zoning to protect sensitive lakeshores.

Research Scientist 2, Minnesota Department of Natural Resources, Brainerd, 2000-2005. Responsible for performing independent research. Review research work, correlate complex technical findings, interpret theories and reports, disseminate advanced technical expertise on statistics, biology and research techniques, publish in peer reviewed journals, instruct and train employees in research procedures, and perform supervisory and administrative functions. Skills include: knowledge of fish ecology, invertebrate biology, chemistry, physics, aquatic plant management, applied and theoretical statistics, scientific research techniques, system analysis and simulation, and computer programming. Demonstrated oral and written communication abilities and leadership and public relation skills.