

M.L. 2011 Project Abstract
For the Period Ending June 30, 2014

PROJECT TITLE: Itasca County Sensitive Lakeshore Identification

PROJECT MANAGER: Jim Gustafson
AFFILIATION: Itasca SWCD District Manager
MAILING ADDRESS: 1889 E. Hwy 2
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WEBSITE: www.itascaswcd.org
FUNDING SOURCE: Environment and Natural Resources Trust Fund
LEGAL CITATION: *M.L. 2011, First Special Session, Chp. 2, Art. 3, Sec. 2, 05a*

APPROPRIATION AMOUNT: \$ 160,000

Overall Project Outcome and Results

The impetus for this project was the need to better protect and manage functional lake ecosystems in Minnesota. 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 and loss of species diversity, protection of sensitive 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. As Minnesota assesses the status of its natural resources, develops plans for priority resources, and invests millions of dollars in resource protection efforts, information that helps target conservation decisions along lakeshores will be vital. This project delivered information specifically for that need.

The project identified priority areas in Itasca County for shoreland reclassification and potential purchase or conservation easement, as well as provided interpretive products to shoreland property owners and state and local governments.

Sensitive lakeshore assessments were completed on 51 Itasca County lakes. In total, 170 miles of shoreline and nearly 32,000 acres of shoreland were identified as highly sensitive lakeshore. Project partners conducted Sensitive Shoreline presentations to the Itasca Coalition of Lake Associations and individual Lake Associations. The project completed approximately 200 onsite shoreland property evaluations, and for those property owners it provided technical guidance/services for re-establishment of native vegetative buffers and shoreline erosion stabilization projects. Shoreline activities were also reviewed for ordinance compliance. The Itasca County Comprehensive Land Use Plan was updated to advance proactive protection of sensitive lakeshores, and information was developed that will be considered as the Itasca County Zoning Ordinances are updated.

Project Results Use and Dissemination

Information from this study was presented to several Lake Associations of targeted lakes and the information was made available on the Itasca SWCD and DNR's websites. Itasca SWCD will use this information Itasca County will take the information under consideration in prioritizing future activities on targeted lakes and as they commence their next zoning ordinance update planned for 2015 and for any future planned development or requested variances on identified sensitive shorelines .



Environment and Natural Resources Trust Fund (ENRTF) M.L. 2011 Work Plan

Date of Status Update: 7/22/2014 (Final Report)

Date of Next Status Update:

Date of Work Plan Approval: 6/23/2011

Project Completion Date: 6/30/2014

Is this an amendment request? N

Project Title: Itasca County Sensitive Lakeshore Identification

Project Manager: Jim Gustafson

Affiliation: Itasca County Soil and Water Conservation District

Address: 1889 E Highway 2

City: Grand Rapids **State:** MN **Zipcode:** 55744

Telephone Number: (218) 326-0017

Email Address: jim.gustafson@itascaswcd.org

Web Address: <http://www.itascaswcd.org>

Location:

Counties Impacted: Itasca

Ecological Section Impacted: Northern Minnesota Drift and lake Plains (212N)

Total ENRTF Project Budget:

ENRTF Appropriation \$: 160,000

Amount Spent \$: **144,457**

Balance \$: 15,543

Legal Citation: M.L. 2011, First Special Session, Chp. 2, Art.3, Sec. 2, Subd. 05a

Appropriation Language:

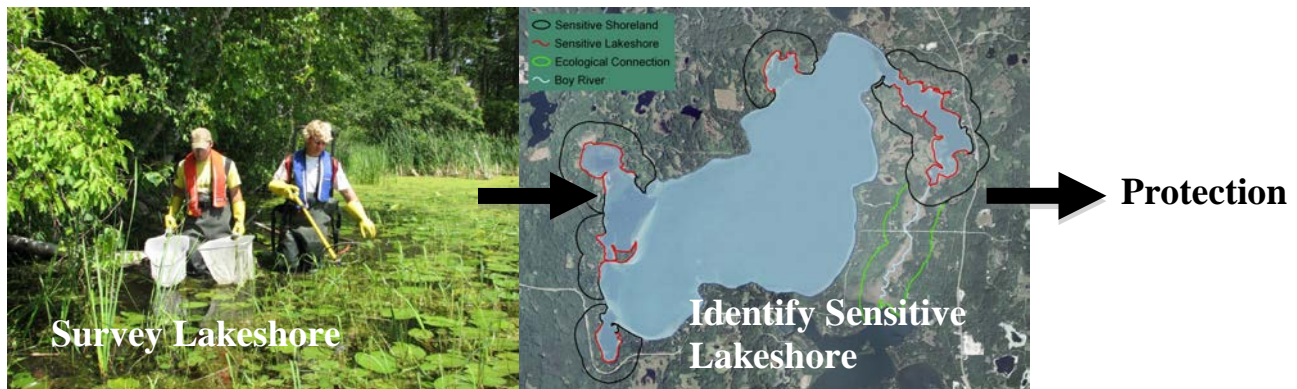
\$80,000 the first year and \$80,000 the second year are from the trust fund to the commissioner of natural resources for an agreement with Itasca County Soil and Water Conservation District to identify sensitive lakeshore and restorable shoreline in Itasca County. Up to \$130,000 may be retained by the Department of Natural Resources at the request of Itasca County to provide technical assistance.

I. PROJECT TITLE: Itasca County Sensitive Lakeshore Identification

Appropriation Language: \$80,000 the first year and \$80,000 the second year are from the trust fund to the commissioner of natural resources for an agreement with Itasca County Soil and Water Conservation District to identify sensitive lakeshore and restorable shoreline in Itasca County. Up to \$130,000 may be retained by the Department of Natural Resources at the request of Itasca County to provide technical assistance.

II. PROJECT SUMMARY:

The major impetus for this initiative is the need to better protect and manage functional lake ecosystems in Minnesota. 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 sensitive 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. As Minnesota assesses the status of its natural resources, develops plans for priority resources, and invests millions of dollars in resource protection efforts, information that helps target conservation decisions along lakeshores will be vital. This project's intent is to deliver information specifically for that need. This county/state initiative already has:

- Developed objective, **science-based** criteria to identify sensitive lakeshores on large lakes using detailed on-site biological surveys and use of an ecological model;
- Completed detailed **biological surveys** and **identified sensitive areas** on 16 Cass County lakes, and by July 2011 will deliver interpretive products for 4% of Minnesota's largest lakes;
- Identified shoreland for **conservation easement and purchase**;
- Developed shoreland **conservation ordinances** that will provide greater protection of sensitive shoreland;
- Worked with state regulators to provide **additional safeguards** for sensitive lakeshore, including the recently promulgated Minnesota Rules, part 6280.0250 [Standards for Aquatic Plant Management Permit Issuance]; and
- Initiated a project to **restore shorelines** to more natural conditions in the Cass County lakes that sensitive lakeshore were identified [will use federal funds via a State Wildlife Grant].

The primary focus of this project is to identify priority areas in northern Minnesota for shoreland reclassification and potential purchase or conservation easement, as well as provide interpretive products to shoreland property owners and state and local governments, and assist with regional planning efforts.

III. PROJECT STATUS UPDATES:

Project Status as of March 2012: Survey lakes were selected by use of a public consultation process. For assistance with loon nesting surveys, citizen volunteers were sought.

Project Status as of November 2012: Completed sensitive lakeshore assessments on five lakes. Loon nesting surveys were completed on 18 lakes.

Project Status as of March 2013: GIS analysis was completed to identify sensitive lakeshore on assessed lakes.

Project Status as of November 2013: Completed sensitive lakeshore assessments on six lakes. Loon nesting surveys were completed on 9 lakes during the spring field season (completing a total of 31 lakes sampled). All field sampling was completed for this project. Work with Lake Associations, private individuals and other agencies has begun to identify and restore/protect sensitive shorelines.

Final Report Summary: Sensitive lakeshore assessments were completed on 51 lakes. In total, 170 miles of shoreline and nearly 32,000 acres of shoreland were identified as sensitive. Have conducted Sensitive Shoreline presentations to the Itasca Coalition of Lake Associations, and individual lake Associations. Have conducted over approximately 200 onsite evaluations, providing technical services for establishment of native vegetative buffers, and shoreline erosion stabilization projects. Shoreline activities were reviewed for ordinance compliance

Final report Summary from abstract – 9-29-2014

The impetus for this project was the need to better protect and manage functional lake ecosystems in Minnesota. 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 and loss of species diversity, protection of sensitive 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. As Minnesota assesses the status of its natural resources, develops plans for priority resources, and invests millions of dollars in resource protection efforts, information that helps target conservation decisions along lakeshores will be vital. This project delivered information specifically for that need.

The project identified priority areas in Itasca County for shoreland reclassification and potential purchase or conservation easement, as well as provided interpretive products to shoreland property owners and state and local governments.

Sensitive lakeshore assessments were completed on 51 Itasca County lakes. In total, 170 miles of shoreline and nearly 32,000 acres of shoreland were identified as highly sensitive lakeshore. Project partners conducted Sensitive Shoreline presentations to the Itasca Coalition of Lake Associations and individual Lake Associations. The project completed approximately 200 onsite shoreland property evaluations, and for those property owners it provided technical guidance/services for re-establishment of native vegetative buffers and shoreline erosion stabilization projects. Shoreline activities were also reviewed for ordinance compliance. The Itasca County Comprehensive Land Use Plan was updated to advance proactive protection of sensitive lakeshores, and information was developed that will be considered as the Itasca County Zoning Ordinances are updated.

IV. PROJECT ACTIVITIES AND OUTCOMES:

ACTIVITY 1: Assessment of at least 20 Itasca County Lakes

Description: Sensitive lakeshore assessments will target a minimum of 20 high priority lakes in northern Minnesota selected by Itasca County. Two approaches from Minnesota's Sensitive Lakeshore Survey Protocol will be used. First, detailed on-site biological survey work will be completed on a few selected lakes. Second, **a new, fast, more efficient method** based on the protocol's Rapid Assessment Model will be used to identify sensitive lakeshores on the remaining high priority lakes. Itasca County can then use this model on any of their moderate to large lakes.

Summary Budget Information for Activity 1:

ENRTF Budget: \$130,000
Amount Spent: \$114,457
Balance: \$15,543

Activity Completion Date:

Outcome	Completion Date	Budget
<i>1. Loon Nesting Surveys will be enhanced and completed on selected lakes</i>	Nov 2014	\$10,000
<i>2. Aquatic Animal and Plant Surveys completed on selected lakes</i>	June 2014	\$70,000
<i>3. Compile available geomorphic GIS data and loon nesting data for use with the Rapid Assessment Model</i>	Feb 2013	\$10,000
<i>4. Identify sensitive lakeshores for all high priority lakes selected</i>	June 2014	\$40,000

Activity Status as of March 2012: On August 10, 2011, project partners met with Itasca County officials, Itasca Water Legacy Partnership members, lake association representatives, and county residents. An objective system was developed and used to select the lakes for extensive plant and animal surveys. Three waterbodies were selected, and included Bass Lake (31-576), Turtle Lake (31-725), and Sand Lake (31-826; and associated lakes: Portage (31-842), Birds Eye (31-834), and Little Sand (31-853). Sensitive lakeshores on at least 20 lakes greater than 500 acres will be identified with the Rapid Assessment Model. For assistance with loon nesting surveys, citizen volunteers were sought at the Itasca County Fair and through discussions with lake associations and the Itasca Water Legacy Partnership.

Activity Status as of November 2012: We completed sensitive lakeshore assessments on five lakes (Bass, 31-576; Sand Lake, 31-826; Portage, 31-842; Birds Eye, 31-834; and Little Sand, 31-853). Aquatic plant, frog, and fish surveys were completed on these waters. Loon nesting surveys were completed on 18 lakes.

Activity Status as of March 2013: GIS analysis was completed to identify sensitive lakeshore on assessed lakes.

Activity Status as of November 2013: Completed all field sampling required for the project (the last lake, Turtle Lake 31-725, was sampled during this period for plants, fish, frogs, and loons; 9 additional lakes were surveyed for loon nesting). A total of six lakes were intensively and extensively sampled, and a total of 31 lakes were surveyed for loon nesting.

Final Report Summary: Sensitive lakeshore assessments were completed on 51 lakes. Six lakes were extensively surveyed for aquatic plants and animals to determine sensitivity. Surveyors mapped 985 acres of bulrush, and over 700 acres of other emergent and floating-leaf plant stands. Seven unique or rare plant species were documented. Biologists recorded two fish species in greatest conservation need (pugnose shiners and longear sunfish). Mink and green frogs were documented at all six lakes and abundance was estimated. On these 6 lakes, 31 miles of shoreline and over 4,200 acres of shoreland were identified as sensitive. Twenty-four lakes were surveyed for nesting loons, and surveyors recorded 50 active loon nesting areas. The vast majority of these nests were natural nests; only two active nesting platforms were located during the surveys, both on Pokegama Lake. The greatest density of loon nesting areas was approximately 0.2 loon nests per shoreline mile (6 nests on Wabana Lake, 13 nests on Pokegama Lake, and 3 nests on Blackwater/Jay Gould Lake). The Rapid Assessment Model from Minnesota's Sensitive Lakeshore Survey Protocol was applied to 45 lakes to identify sensitive lakeshore, and nearly 140 miles of shoreline and 28,000 acres of shoreland were identified as sensitive.

ACTIVITY 2: Identify Restorable Shorelines and Guide Conservation

Description: By working cooperatively with lake associations and other groups to identify restorable shorelines, improve capacity of project outputs to effectively inform state and local government decisions that impact the conservation and management of lake ecosystems. Itasca County Environmental Services will engage in updating zoning and ordinances to provide higher standards for new developments and additional protection to sensitive shoreland.

Summary Budget Information for Activity 2:

ENRTF Budget: \$30,000
Amount Spent: \$30,000
Balance: \$ 0

Activity Completion Date:

Outcome	Completion Date	Budget
<i>1. Restorable shoreline identified for selected lakes</i>	June 2014	\$8,000
<i>2. Work with lake associations, riparian property owners, and others to deliver targeted conservation and restoration efforts to sensitive lakeshores</i>	June 2014	\$8,000
<i>3. Engage in land use planning and zoning</i>	June 2014	\$14,000

Activity Status as of March 2012: No work on this activity has yet occurred.

Activity Status as of November 2012:

Activity Status as of March 2013: SWCD has worked with the Environmental Services to revise the Itasca County Comprehensive Land Use Plan.

Activity Status as of November 2013: Work with Lake Associations, private individuals and other agencies has begun to identify and restore/protect sensitive shorelines.

Final Report Summary: Have conducted Sensitive Shoreline presentations to the Itasca Coalition of Lake Associations, and individual lake Associations. Have conducted over 200 onsite evaluations, identifying sensitive shorelines and providing technical services for establishment of native vegetative buffers, and shoreline erosion stabilization projects. Shoreline activities were reviewed for ordinance compliance, 103 sensitive shoreland sites were reviewed in 2013-14 with alteration permits issued. 12 sites were evaluated by the Planning Commission for variance requests related to activities adjacent to shorelines. Itasca County's Comprehensive Land Use Plan was updated which will be the basis for upcoming ordinance revision.

V. DISSEMINATION:

Description: Sensitive Lakeshore reports for public dissemination will be produced for lakes surveyed, and these reports will be posted on the DNR website. Public presentations will be made explaining the details of these reports. Itasca County will hold public hearings on shoreland reclassifications, and all required processes for public input, review and comment will be adhered to, including the rights afforded to challenge such ordinance and zoning district changes.

Status as of March 2012: No work as yet occurred on this Activity

Status as of November 2012:

Status as of March 2013:

Status as of November 2013: Sand Lake report has been completed and posted on the Itasca SWCD website at www.itascaswcd.org

Final Report Summary: Sensitive Lakeshore reports describe the results of the biological surveys and provide maps of identified sensitive lakeshore. These reports were distributed to Itasca County as well as to interested lake associations, organizations, and individuals. They are also available online at: <http://www.dnr.state.mn.us/eco/sli>

Public presentations explaining the sensitive area identification process and results were given to the lake associations and other organizations in Itasca County.

Information from this study was presented to several Lake Associations of targeted lakes and the information was made available on the Itasca SWCD and DNR's websites. Itasca SWCD will use this information Itasca County will take the information under consideration in prioritizing future activities on targeted lakes and as they commence their next zoning ordinance update planned for 2015 and for any future planned development or requested variances on identified sensitive shorelines .

VI. PROJECT BUDGET SUMMARY:

A. ENRTF Budget:

Budget Category	\$ Amount	Explanation
Personnel: DNR	\$118,000	0.9 FTE Wildlife Biologist 0.1 FTE Botanist (DNR)
Personnel: Itasca Co. SWCD	\$16,000	0.2 FTE SWCD staff
Personnel: Itasca Co. Env. Serv.	\$14,000	0.2 FTE Itasca C. Environ. Serv. staff
Equipment/Tools/Supplies: DNR	\$2,000	Biological sampling equipment and supplies (e.g., nets, GPS units, supplies for voucher specimens)
Travel Expenses in MN: DNR	\$10,000	Lodging expenses for Biological Survey crew and fleet expenses (DNR)
TOTAL ENRTF BUDGET:	\$160,000	

Up to \$130,000 will be retained by the DNR and Itasca County will use the remainder for staff time.

Explanation of Use of Classified Staff: DNR staff are unclassified.

Explanation of Capital Expenditures Greater Than \$3,500: N/A

Number of Full-time Equivalent (FTE) funded with this ENRTF appropriation: 1.4 per year

B. Other Funds:

Source of Funds	\$ Amount Proposed	\$ Amount Spent	Use of Other Funds
Non-state			
	\$	\$	
State			
Game & Fish Fund	\$30,000	\$	Personnel and supplies for biological surveys
Nongame Funds	\$20,000	\$	Personnel and supplies for biological surveys
Heritage Funds	\$50,000	\$	Personnel and supplies for biological surveys
Water Rec Funds	\$40,000		Personnel and supplies for

			biological surveys
TOTAL OTHER FUNDS:	\$140,000	\$	

VII. PROJECT STRATEGY:

A. Project Partners: Itasca County, Environmental Services Department, Don Dewey, Administrator; Itasca County, Soil and Water Conservation District, Jim Gustafson, Manager; DNR, Ecological and Water Resources, Paul Radomski, Scientist.

B. Project Impact and Long-term Strategy: 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. As Minnesota assesses the status of its natural resources, develops plans for priority resources, and invests millions of dollars in resource protection efforts, information that helps target conservation decisions along lakeshores will be vital. This project delivers information specifically for that need.

This project is related to the LCCMR funded project on ‘Intra-Lake Zoning to Protect Sensitive Lakeshores’ [ML 2007, Chap. 30, Sec. 2, Subd. 5(h) and MN Laws 2008, Chapter 367, Section 2, Subd. 4(e)]. Similar work in Crow Wing County has been initiated with a State Wildlife Grant (federal funds). Over the long-term, a mix of funding sources will be explored to conduct future sensitive lakeshore assessments in lake-rich counties around the state.

C. Spending History:

Funding Source	M.L. 2005 or FY 2006-07	M.L. 2007 or FY 2008	M.L. 2008 or FY 2009	M.L. 2009 or FY 2010	M.L. 2010 or FY 2011
ENRTF		\$110,000 Subd. 5(h)	\$125,000 Subd. 4(e)		
Federal – State Wildlife Grants			\$500,000		
State – Heritage, Game & Fish			\$500,000		

VIII. ACQUISITION/RESTORATION LIST: N/A

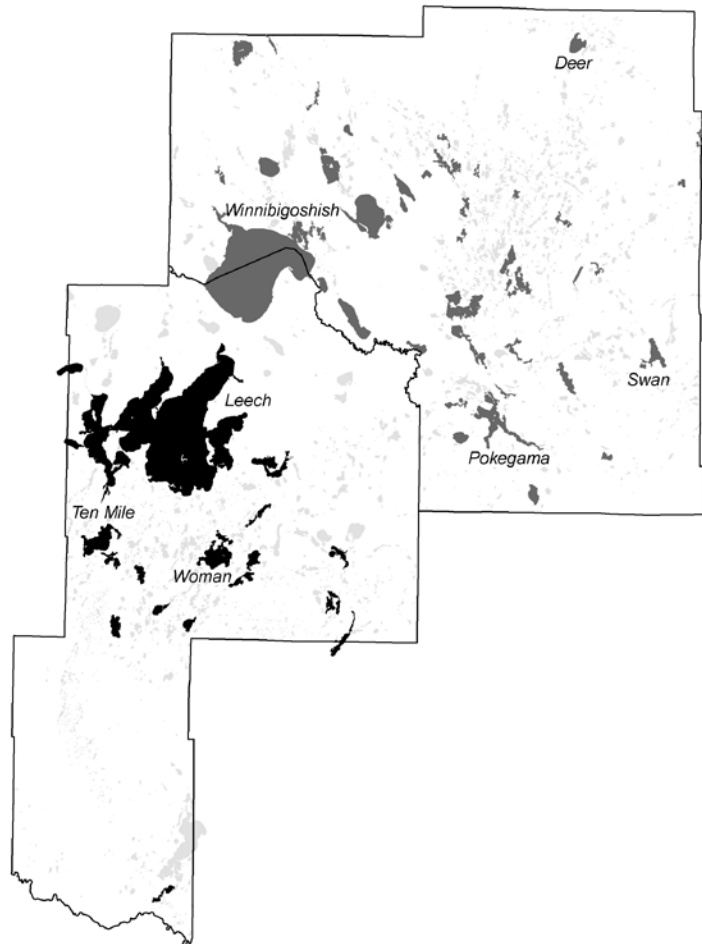
IX. MAP(S): attached.

X. RESEARCH ADDENDUM: N/A

XI. REPORTING REQUIREMENTS:

Periodic work plan status update reports will be submitted not later than March 2012, November 2012, March 2013, and November 2013. A final report and associated products will be submitted between June 30 and August 1, 2014 as requested by the LCCMR.

Sensitive Lakeshore Identification past study lakes and potential Itasca County study lakes. The 17 lakes in Cass County (shaded) are part of recently completed LCCMR-funded study; shaded lakes in Itasca County are potential study lakes.

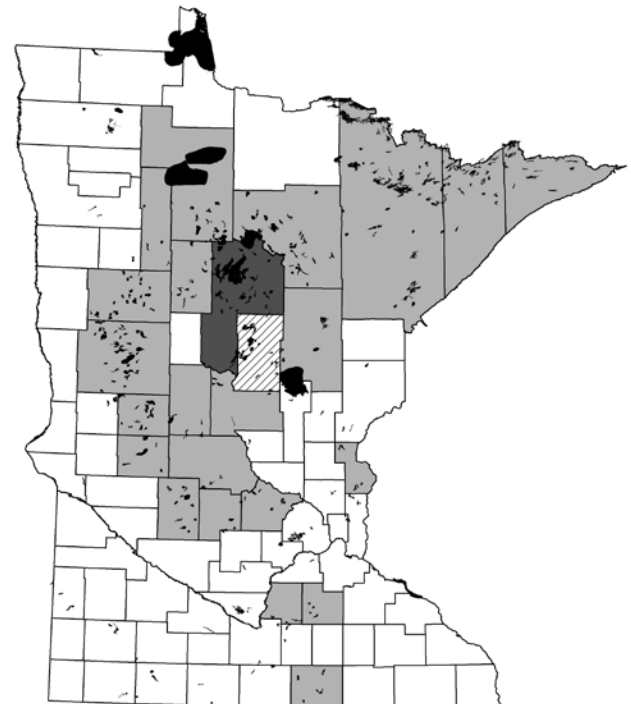


Itasca County Large Lakes:

Number = 45
 Shoreline in Private Ownership = 70%
 Private Shoreline Miles = 420
 Total Lake Acreage = 76,000

Potential counties for sensitive lakeshore assessments and protection. Cass County (dark shaded) is part of recently completed study. Crow Wing County (diagonal hatch) surveys are ongoing. Light-shaded counties have the greatest number of lakes >850 acres in size.

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



Attachment A: Budget Detail for M.L. 2011 (FY 2012-13) Environment and Natural Resources Trust Fund Projects								
Project Title: <i>Itasca County Sensitive Lakeshore Identification</i>								
Legal Citation: <i>M.L. 2011, First Special Session, Chp. 2, Art. 3, Sec. 2, 05a</i>								
Project Manager: <i>Jim Gustafson</i>								
M.L. 2011 (FY 2012-13) ENRTF Appropriation: \$160,000								
Project Length and Completion Date: <i>2 years, June 2013- 3 years, June 2014</i>								
Date of Update: <i>July 22, 2014</i>								
ENVIRONMENT AND NATURAL RESOURCES TRUST FUND BUDGET	Activity 1 Budget	Amount Spent	Balance	Activity 2 Budget	Amount Spent	Balance	TOTAL BUDGET	TOTAL BALANCE
BUDGET ITEM	<i>Assessment of at least 20 Itasca County</i>			<i>Identify Restorable Shorelines and Guide</i>				
Personnel (Wages and Benefits)								
0.9 FTE Wildlife Biologist (DNR)	98,000	104,745	13,255				118,000	13,255
0.1 FTE Botanist (DNR)	20,000							
Itasca County SWCD staff (0.2 FTE)				16,000	16,000	0	16,000	0
Itasca County Environmental Services staff (0.2 FTE)				14,000	14,000	0	14,000	0
Equipment/Tools/Supplies	2,000	1,697	303				2,000	303
Biological supplies, such as nets and other field equipment								
Travel expenses in Minnesota	10,000	8,015	1,985				10,000	1,985
Lodging for Biological Survey crew and fleet expenses (DNR)								
COLUMN TOTAL	\$130,000	\$114,457	\$15,543	\$30,000	\$30,000	\$0	\$160,000	\$15,543