



## Lessard-Sams Outdoor Heritage Council

Protecting Coldwater Fisheries on Minnesota's North Shore  
Laws of Minnesota 2020 Accomplishment Plan

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### General Information

**Date:** 11/01/2023

**Project Title:** Protecting Coldwater Fisheries on Minnesota's North Shore

**Funds Recommended:** \$1,809,000

**Legislative Citation:** ML 2020, Ch. 104, Art. 1, Sec. 2, subd 5(a)

**Appropriation Language:** \$1,809,000 the second year is to the commissioner of natural resources for an agreement with Minnesota Land Trust to acquire permanent conservation easements and to restore and enhance wildlife habitat in priority coldwater tributaries to Lake Superior. Of this amount, up to \$144,000 is to establish a monitoring and enforcement fund as approved in the accomplishment plan and subject to Minnesota Statutes, section 97A.056, subdivision 17. A list of proposed conservation easement acquisitions, restorations, and enhancements must be provided as part of the required accomplishment plan.

**Additional Legislative Changes:** ML 2023, Ch. 40, Article 1, Sections 2, subd 10 Carryforwards, (e) The availability of the appropriation for Laws 2020, chapter 104, article 1, section 2, subdivision 5, paragraph (a), Protecting Coldwater Fisheries on Minnesota's North Shore, is extended to June 30, 2025.

### Manager Information

**Manager's Name:** Wayne Ostlie

**Title:** Director of Land Protection

**Organization:** Minnesota Land Trust

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### Location Information

**County Location(s):** Lake, St. Louis and Cook.

**Eco regions in which work will take place:**

- Northern Forest

**Activity types:**

- Protect in Easement
- Restore
- Enhance

**Priority resources addressed by activity:**

- Wetlands
- Forest
- Habitat

## Narrative

### Abstract

The magnitude, timing, and frequency of flow are key attributes governing the structure of native fish and aquatic communities. Through targeted protection and restoration projects, the Minnesota Land Trust will conserve these attributes and ensure resiliency of priority coldwater tributaries to Lake Superior. The Land Trust will protect 288 acres and 1 mile of shoreline and restore 70 acres of habitat by targeting high quality, priority parcels that will protect habitats for coldwater species such as trout and cisco, but will also provide habitat for a number of wildlife species such as American Woodcock and Golden-winged Warbler.

### Design and Scope of Work

Lake Superior and its tributaries in Minnesota have some of the most important cold-water trout habitat in the State, supporting native brook trout and naturalized populations of salmon, steelhead, and brown trout. This cold-water fishery is vulnerable to climate and landcover change as it is mostly surface water fed. Combined, these factors may result in water temperature increases and flow regime changes that threaten support of cold-water fish species such as trout and salmon.

Protection of shaded shorelines and headwaters wetlands within these tributary streams and rivers are critical for maintaining the coldwater resources and flow regimes that support this fishery. The magnitude, timing, frequency of flow are key attributes governing the structure of native fish and aquatic communities. For example, along the North Shore, stream discharge and water temperature are the major signals influencing the timing of the juvenile steelhead migration. Significant alterations to natural patterns of hydrology impact the suitability of those systems for native aquatic biodiversity.

The Ecological Limits of Hydrologic Alteration (ELOHA) 2016 study assessed management criteria to sustain healthy aquatic ecosystems in a changing climate. This study found that the combination of climate change and land use changes can be expected to result in increased intensity of storm events, increased runoff and increased erosion, which will in turn drive a series of cascading impacts to streams, including higher temperatures, reduced dissolved oxygen, increased primary production rates, and increased biological oxygen demand. These changes will negatively impact fish and other organisms in the stream. Similar impacts are expected in deep, cold lakes that support trout, cisco and other coldwater species.

The ELOHA study recommends management actions that focus on protecting baseflows. This includes: 1) Protection of wetlands, vernal pools and floodplains that slowly release water into the system; 2) Management and maintenance of riparian zones, forest cover/shade and 3) Promotion and restoration of connectivity.

We propose to strategically procure conservation easements and undertake targeted restoration efforts within high-quality watersheds. We will work in line with the methodology developed by the ELOHA program to identify priority watersheds and target properties to protect both water temperature as well as flow regimes. Conservation easements secured under this program will be perpetual and drafted to prevent the fragmentation and destruction of existing habitat. These easements will ensure that the sensitive shoreline and headwaters habitat will remain ecologically viable and productive for fish, game and wildlife by prohibiting land uses that negatively impact the important habitat values and requiring habitat management plans to maximize the benefits of shoreland and associated forested uplands.

Outcomes from this project include: 1) healthy populations of trout and other fish species, and other species in greatest conservation need; 2) maintenance of water quality within targeted aquatic resources; 3) increased participation of private landowners in natural habitat protection and restoration projects; and 4) enhancement of prior state and local investments made in shoreland and forest conservation in the region. The Land Trust will strategically target complexes where these outcomes may be maximized.

### **How does the plan address habitats that have significant value for wildlife species of greatest conservation need, and/or threatened or endangered species, and list targeted species?**

The natural shoreland around Lake Superior's lakes and rivers comprises one of the most biologically important systems in the state for fish, game and wildlife and is also one of its most threatened. This program will preserve critical shoreland habitats and protect headwaters of some of the most sensitive lakes, streams and rivers that flow into Lake Superior - important components of the state's natural heritage - essential to maintaining healthy populations of the region's fish and wildlife populations (trout and other fish, waterfowl, and other Species in Greatest Conservation Need) and maintaining water quality of aquatic resources. Some SGCNs that would benefit include American Woodcock, Olive-sided Flycatcher, Golden-winged Warbler, Winter Wren, Black-backed Woodpecker and Cisco. Numerous plans have identified the protection of these habitats as a conservation priority for Minnesota, including the Minnesota Wildlife Action Plan, DNR's Aquatic Management Area program, the State Conservation and Preservation Plan, Minnesota DNR Strategic Conservation Agenda, and Outdoor Heritage Fund: A 25 Year Framework. The central goal of this program is to protect and restore high quality habitat by securing permanent conservation easements in strategic locations within priority watersheds of coldwater streams.

### **Describe how the plan uses science-based targeting that leverages or expands corridors and complexes, reduces fragmentation or protects areas identified in the MN County Biological Survey:**

The ELOHA study states that populations of coldwater fish species face limiting factors due to the area's bedrock geology including warm water temperatures, lack of suitable spawning and nursery habitat, and reduced stream connectivity. These factors coupled with low base flows and high storm flows makes these streams and the fish and other aquatic life that live there vulnerable to changes in flow as a result of climate change. The ELOHA study looks

at stream vulnerability, and identifies management actions that can be taken to maintain and enhance the natural resilience of streams.

A key recommendation of the study is to mitigate impacts on baseflow and water temperatures through protection of wetlands, vernal pools, riparian areas and forest cover. This program will use the insights from the ELOHA study and other data to develop an analysis and scoring and ranking methodology to identify priority watersheds and a targeted list of critical private lands for protection.

Habitat management plans developed with each easement and restoration projects completed through this program will promote climate change resilient forests and shaded riparian areas.

Established conservation plans such as the Minnesota Land Trust's Conservation Agenda 2017-2027, State Conservation and Preservation Plan, Minnesota DNR's Strategic Conservation Agenda, Minnesota's Wildlife Action Plan 2015-2025, and Outdoor Heritage Fund: A 25 Year Framework will be used to identify priority areas for work and combined with GIS analysis will identify potential project areas that fill in gaps or leverage existing land protection. Criteria used will incorporate site specific assessment of parcel quality, landscape context, return on investment, and urgency. The program will emphasize protecting shoreland habitat on coldwater lakes, streams and rivers, headwater wetlands, and spawning areas

### **Which two sections of the Minnesota Statewide Conservation and Preservation Plan are most applicable to this project?**

- H2 Protect critical shoreland of streams and lakes
- H5 Restore land, wetlands and wetland-associated watersheds

### **Which two other plans are addressed in this program?**

- Minnesota's Wildlife Action Plan 2015-2025
- Outdoor Heritage Fund: A 25 Year Framework

### **Which LSOHC section priorities are addressed in this program?**

#### **Northern Forest**

- Protect shoreland and restore or enhance critical habitat on wild rice lakes, shallow lakes, cold water lakes, streams and rivers, and spawning areas

## Outcomes

### **Programs in the northern forest region:**

- Increased availability and improved condition of riparian forests and other habitat corridors ~ *This program will permanently protect approximately 1,080 acres of strategic northern forest region habitats and approximately 3 miles of undeveloped shoreline. In addition approximately 200 acres will be restored. Measure: Acres and feet of shoreline protected.*

**Does this program include leveraged funding?**

Yes

**Explain the leverage:**

The Land Trust encourages landowners to fully or partially donate the value of conservation easements. MLT also has private funding available to work in this landscape. The leverage portion of the easement acquisition line item is a conservative estimate of value we expect to see donated to the Land Trust.

**Per MS 97A.056, Subd. 24, Please explain whether the request is supplanting or is a substitution for any previous funding that was not from a legacy fund and was used for the same purpose.**

This request is not supplanting or substituting for any previous funding. This is entirely new work.

**How will you sustain and/or maintain this work after the Outdoor Heritage Funds are expended?**

The land protected through conservation easements will be sustained through the best standards and practices for conservation easement stewardship. The Minnesota Land Trust is a nationally-accredited and insured land trust with a very successful stewardship program that includes annual property monitoring, effective records management, addressing inquiries and interpretations, tracking changes in ownership, investigating potential violations and defending the easement in case of a true violation. Funding for these easement stewardship activities is included in the project budget.

In addition, the Land Trust prepares for each landowner a habitat management plan that provides recommendations for use in ecologically managing the property over time. The Land Trust actively encourages landowners to manage their properties in line with the conservation easement, and works with landowners to address any financial or informational obstacles that stand in the way of them doing so.

**Actions to Maintain Project Outcomes**

Year	Source of Funds	Step 1	Step 2	Step 3
2023	MLT Long-Term Stewardship and Easement Fund	Annual monitoring of property in perpetuity	Enforcement as necessary	-
2025	Private landowners, Other Sources	Annual monitoring	Restoration improvements if necessary	-

**Activity Details**

**Requirements**

**If funded, this program will meet all applicable criteria set forth in MS 97A.056?**

Yes

**Is the land you plan to acquire (easement) free of any other permanent protection?**

Yes

**Who will manage the easement?**

Minnesota Land Trust.

**Who will be the easement holder?**

Minnesota Land Trust.

**What is the anticipated number of easements (range is fine) you plan to accomplish with this appropriation?**

We expect to complete 4-8 easements depending on size and cost of the projects.

**Will restoration and enhancement work follow best management practices including MS 84.973 Pollinator Habitat Program?**

Yes

**Is the restoration and enhancement activity on permanently protected land per 97A.056, Subd 13(f), tribal lands, and/or public waters per MS 103G.005, Subd. 15 or on lands to be acquired in this program?**

Yes

**Where does the activity take place?**

- Permanently Protected Conservation Easements
- County/Municipal
- Public Waters

**Land Use**

**Will there be planting of any crop on OHF land purchased or restored in this program?**

No

**Will the eased land be open for public use?**

No

**Are there currently trails or roads on any of the proposed acquisitions?**

Yes

**Describe the types of trails or roads and the allowable uses:**

Most conservation easements are established on private lands, many of which have driveways, field roads and trails located on them. Often, these established trails and roads are permitted in the terms of the easement and can be maintained for personal use if their use does not significantly impact the conservation values of the property. Creation of new roads/trails or expansion of existing ones is typically not allowed.

**Will the trails or roads remain and uses continue to be allowed after OHF acquisition?**

Yes

**How will maintenance and monitoring be accomplished?**

Existing trails and roads are identified in the project baseline report and will be monitored annually as part of the Land Trust's stewardship and enforcement protocols. Maintenance of permitted roads/trails in line with the terms of the easement will be the responsibility of the landowner.

**Will new trails or roads be developed or improved as a result of the OHF acquisition?**

No

**Will the acquired parcels be restored or enhanced within this appropriation?**

Yes

Restoration and enhancement may be completed on some parcels, depending on the the need and condition of each parcel. We have incorporated into the accomplishment plan budget funding for approximately 70 acres of restoration.

**Timeline**

Activity Name	Estimated Completion Date
Acquire conservation easements: 1) identify priority landowners; 2) negotiate, draft and complete easements; 3) dedicate funds for stewardship	June 30, 2023
Restoration and enhancement projects completed: 1) develop plans; 2) complete work; 3) monitor establishment; 4) re-establish if necessary	June 30, 2027

**Date of Final Report Submission:** 11/01/2027

**Availability of Appropriation:** Subd. 7. Availability of Appropriation

Money appropriated in this section may not be spent on activities unless they are directly related to and necessary for a specific appropriation and are specified in the accomplishment plan approved by the Lessard-Sams Outdoor Heritage Council. Money appropriated in this section must not be spent on indirect costs or other institutional overhead charges that are not directly related to and necessary for a specific appropriation. Unless otherwise provided, the amounts in this section are available until June 30, 2023. For acquisition of real property, the amounts in this section are available until June 30, 2024, if a binding agreement with a landowner or purchase agreement is entered into by June 30, 2023, and closed no later than June 30, 2024. Funds for restoration or enhancement are available until June 30, 2025, or five years after acquisition, whichever is later, in order to complete initial restoration or enhancement work. If a project receives at least 15 percent of its funding from federal funds, the time of the appropriation may be extended to equal the availability of federal funding to a maximum of six years if the federal funding was confirmed and included in the original approved draft accomplishment plan. Funds appropriated for fee title acquisition of land may be used to restore, enhance, and provide for public use of the land acquired with the appropriation. Public-use facilities must have a minimal impact on habitat in acquired lands.

**Budget**

Budget reallocations up to 10% do not require an amendment to the Accomplishment Plan.

**Totals**

Item	Funding Request	Leverage	Leverage Source	Total
Personnel	\$280,000	-	-	\$280,000
Contracts	\$83,500	-	-	\$83,500
Fee Acquisition w/ PILT	-	-	-	-
Fee Acquisition w/o PILT	-	-	-	-
Easement Acquisition	\$1,075,000	\$240,000	Private Landowners and other private sources	\$1,315,000
Easement Stewardship	\$144,000	-	-	\$144,000
Travel	\$7,600	-	-	\$7,600
Professional Services	\$131,000	-	-	\$131,000
Direct Support Services	\$75,900	-	-	\$75,900
DNR Land Acquisition Costs	\$10,000	-	-	\$10,000
Capital Equipment	-	-	-	-
Other Equipment/Tools	-	-	-	-
Supplies/Materials	\$2,000	-	-	\$2,000
DNR IDP	-	-	-	-
<b>Grand Total</b>	<b>\$1,809,000</b>	<b>\$240,000</b>	-	<b>\$2,049,000</b>

**Personnel**

Position	Annual FTE	Years Working	Funding Request	Leverage	Leverage Source	Total
MLT Protection Staff	0.4	5.0	\$199,000	-	-	\$199,000
MLT Restoration Staff	0.28	3.0	\$81,000	-	-	\$81,000

**Amount of Request:** \$1,809,000

**Amount of Leverage:** \$240,000

**Leverage as a percent of the Request:** 13.27%

**DSS + Personnel:** \$355,900

**As a % of the total request:** 19.67%

**Easement Stewardship:** \$144,000

**As a % of the Easement Acquisition:** 13.4%

**How will this program accommodate the reduced appropriation recommendation from the original proposed requested amount?**

The number of easements, acres and restorations will be scaled from the original proposal.

**Describe and explain leverage source and confirmation of funds:**

The Land Trust encourages landowners to fully or partially donate the value of conservation easements. MLT also



has private money available to work in this landscape. The leverage portion of the easement acquisition line item is a conservative estimate of value we expect to see donated to the Land Trust.

## Contracts

### What is included in the contracts line?

Restoration and enhancement activities account for \$41,500 of the contract line amount. Additional funds in the contract line are for the writing of habitat management plans via qualified vendors.

## Easement Stewardship

### What is the number of easements anticipated, cost per easement for stewardship, and explain how that amount is calculated?

The average cost per easement to fund the Minnesota Land Trust's perpetual monitoring and enforcement obligations is \$24,000. This figure is derived from MLT's detailed stewardship funding "cost analysis" which is consistent with Land Trust Accreditation standards. MLT shares periodic updates to this cost analysis with LSOHC staff.

## Travel

### Does the amount in the travel line include equipment/vehicle rental?

Yes

### Explain the amount in the travel line outside of traditional travel costs of mileage, food, and lodging

Land Trust staff regularly rent vehicles for grant-related purposes, which is a significant cost savings over use of personal vehicles.

### I understand and agree that lodging, meals, and mileage must comply with the current MMB Commissioner Plan:

No

## Direct Support Services

### How did you determine which portions of the Direct Support Services of your shared support services is direct to this program?

In a process that was approved by the DNR on March 17, 2017, Minnesota Land Trust determined our direct support services rate to include all of the allowable direct and necessary expenditures that are not captured in other line items in the budget, which is similar to the Land Trust's proposed federal indirect rate. We will apply this DNR-approved rate only to personnel expenses to determine the total amount of direct support services.

## Federal Funds

### Do you anticipate federal funds as a match for this program?

No

Output Tables**Acres by Resource Type (Table 1)**

Type	Wetland	Prairie	Forest	Habitat	Total Acres
Restore	0	0	0	70	70
Protect in Fee with State PILT Liability	0	0	0	0	0
Protect in Fee w/o State PILT Liability	0	0	0	0	0
Protect in Easement	0	0	0	368	368
Enhance	0	0	0	0	0
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>438</b>	<b>438</b>

**Total Requested Funding by Resource Type (Table 2)**

Type	Wetland	Prairie	Forest	Habitat	Total Funding
Restore	-	-	-	\$145,000	\$145,000
Protect in Fee with State PILT Liability	-	-	-	-	-
Protect in Fee w/o State PILT Liability	-	-	-	-	-
Protect in Easement	-	-	-	\$1,664,000	\$1,664,000
Enhance	-	-	-	-	-
<b>Total</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>\$1,809,000</b>	<b>\$1,809,000</b>

**Acres within each Ecological Section (Table 3)**

Type	Metro/Urban	Forest/Prairie	SE Forest	Prairie	N. Forest	Total Acres
Restore	0	0	0	0	70	70
Protect in Fee with State PILT Liability	0	0	0	0	0	0
Protect in Fee w/o State PILT Liability	0	0	0	0	0	0
Protect in Easement	0	0	0	0	368	368
Enhance	0	0	0	0	0	0
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>438</b>	<b>438</b>

**Total Requested Funding within each Ecological Section (Table 4)**

Type	Metro/Urban	Forest/Prairie	SE Forest	Prairie	N. Forest	Total Funding
Restore	-	-	-	-	\$145,000	\$145,000
Protect in Fee with State PILT Liability	-	-	-	-	-	-
Protect in Fee w/o State PILT Liability	-	-	-	-	-	-
Protect in Easement	-	-	-	-	\$1,664,000	\$1,664,000
Enhance	-	-	-	-	-	-
<b>Total</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>\$1,809,000</b>	<b>\$1,809,000</b>

**Average Cost per Acre by Resource Type (Table 5)**

Type	Wetland	Prairie	Forest	Habitat
Restore	-	-	-	\$2,071
Protect in Fee with State PILT Liability	-	-	-	-
Protect in Fee w/o State PILT Liability	-	-	-	-
Protect in Easement	-	-	-	\$4,521
Enhance	-	-	-	-

**Average Cost per Acre by Ecological Section (Table 6)**

Type	Metro/Urban	Forest/Prairie	SE Forest	Prairie	N. Forest
Restore	-	-	-	-	\$2,071
Protect in Fee with State PILT Liability	-	-	-	-	-

Protect in Fee w/o State PILT Liability	-	-	-	-	-
Protect in Easement	-	-	-	-	\$4,521
Enhance	-	-	-	-	-

**Target Lake/Stream/River Feet or Miles**

1 mile

## Parcels

*For restoration and enhancement programs ONLY: Managers may add, delete, and substitute projects on this parcel list based upon need, readiness, cost, opportunity, and/or urgency so long as the substitute parcel/project forwards the constitutional objectives of this program in the Project Scope table of this accomplishment plan. The final accomplishment plan report will include the final parcel list.*

### Parcel Information

#### Sign-up Criteria?

[Yes - Sign up criteria is attached](#)

**Explain the process used to identify, prioritize, and select the parcels on your list:**

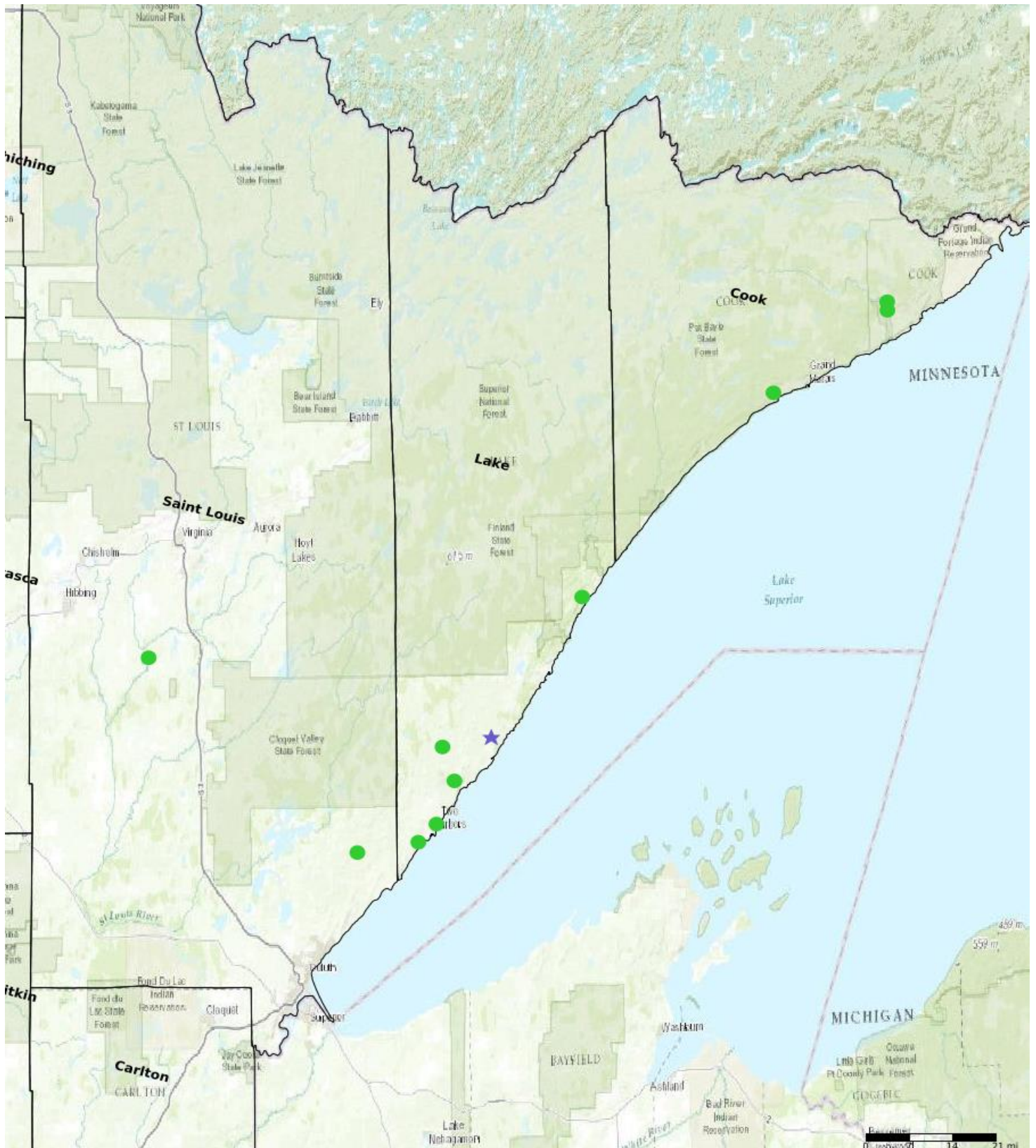
### Restore / Enhance Parcels

Name	County	TRDS	Acres	Est Cost	Existing Protection
Skunk Creek	Lake	05409210	70	\$145,000	Yes

### Easement Parcels

Name	County	TRDS	Acres	Est Cost	Existing Protection
Flute Reed River 1	Cook	06203103	40	\$125,000	No
Grand Marais 1	Cook	06101228	79	\$65,000	No
Flute Reed River 2	Cook	06203110	160	\$250,000	No
Lake Superior Little Marais 1	Lake	05706219	90	\$70,000	No
Lake Superior Two Harbors 2	Lake	05211210	13	\$0	No
Encampment River (Welsh)	Lake	05310203	39	\$5,000	No
Encampment River 1	Lake	05410217	160	\$140,000	No
Lake Superior Two Harbors	Lake	05310131	60	\$1,000,000	No
Sax-Zim (Wallace-Loiselle)	St. Louis	05618220	117	\$5,000	No
Sucker River 1	St. Louis	05213213	120	\$110,000	No

### Parcel Map



- Protect in Easement
- ▲ Protect in Fee with PILT
- Protect in Fee W/O PILT
- ★ Restore
- ✕ Enhance
- ⊕ Other