

# Lessard-Sams Outdoor Heritage Council

## Laws of Minnesota 2020 Accomplishment Plan



**Date:** December 13, 2019

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

**Funds Recommended:** \$ 2,110,000

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**Legislative Citation:** ML 2020, Ch. X, Art. 1, Sec. 2, subd XX

**Appropriation Language:**

**County Locations:** Not Listed

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

- Northern Forest

**Activity types:**

- Enhance
- Protect in Easement
- Restore

**Priority resources addressed by activity:**

- Forest
- Habitat
- Wetlands

### 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 336 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 request address MN habitats that have: historical value to fish and wildlife, wildlife species of greatest conservation need, MN County Biological Survey data, and/or rare, threatened and endangered species inventories:**

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 the science based planning and evaluation model used:**

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 sections of the Minnesota Statewide Conservation and Preservation Plan are applicable to this program:

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

## Which 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

## Relationship to other funds:

- Not Listed

## Does this program include leverage in funds:

Yes

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, Any state agency or organization requesting a direct appropriation from the OHF must inform the LSOHC at the time of the request for funding is made, 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.

## Describe the source and amount of non-OHF money spent for this work in the past:

Not Listed

## 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.

## Explain the things you will do in the future 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:

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

Will there be planting of corn or any crop on OHF land purchased or restored in this program - **No**

Will the eased land be open for public use - **No**

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.**

Are there currently trails or roads on any of the acquisitions on the parcel list - **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.

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

Is the activity on permanently protected land per 97A.056, subd 13(f), tribal lands, and/or public waters per MS 103G.005, Subd. 15 - **Yes (Permanently Protected Conservation Easements/County/Municipal, Public Waters)**

## Accomplishment Timeline:

Activity	Approximate Date Completed
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:** 11/1/2027

## Federal Funding:

Do you anticipate federal funds as a match for this program - **No**

## 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.*

# Budget Spreadsheet

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

**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.

**Total Amount of Request: \$ 2110000**

## Budget and Cash Leverage

Budget Name	LSOHC Request	Anticipated Leverage	Leverage Source	Total
Personnel	\$188,500	\$0		\$188,500
Contracts	\$89,500	\$0		\$89,500
Fee Acquisition w/ PILT	\$0	\$0		\$0
Fee Acquisition w/o PILT	\$0	\$0		\$0
Easement Acquisition	\$1,435,000	\$280,000	Private Landowners and other private sources	\$1,715,000
Easement Stewardship	\$192,000	\$0		\$192,000
Travel	\$8,100	\$0		\$8,100
Professional Services	\$144,000	\$0		\$144,000
Direct Support Services	\$50,900	\$0		\$50,900
DNR Land Acquisition Costs	\$0	\$0		\$0
Capital Equipment	\$0	\$0		\$0
Other Equipment/Tools	\$0	\$0		\$0
Supplies/Materials	\$2,000	\$0		\$2,000
DNR IDP	\$0	\$0		\$0
<b>Total</b>	<b>\$2,110,000</b>	<b>\$280,000</b>		<b>\$2,390,000</b>

## Personnel

Position	FTE	Over # of years	LSOHC Request	Anticipated Leverage	Leverage Source	Total
MLT Protection Staff	0.38	3.00	\$107,500	\$0		\$107,500
MLT Restoration Staff	0.28	3.00	\$81,000	\$0		\$81,000
<b>Total</b>	<b>0.66</b>	<b>6.00</b>	<b>\$188,500</b>	<b>\$0</b>		<b>\$188,500</b>

Amount of Request: \$2,110,000

Amount of Leverage: \$280,000

Leverage as a percent of the Request: 13.27%

DSS + Personnel: \$239,400

As a % of the total request: 11.35%

**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.

**What is included in the contacts 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.

**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.

**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.

**What is the 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.

## Output Tables

**Table 1a. Acres by Resource Type**

Type	Wetlands	Prairies	Forest	Habitats	Total
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	336	336
Enhance	0	0	0	0	0
Total	0	0	0	406	406

**Table 2. Total Funding by Resource Type**

Type	Wetlands	Prairies	Forest	Habitats	Total
Restore	\$0	\$0	\$0	\$145,000	\$145,000
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	\$1,965,000	\$1,965,000
Enhance	\$0	\$0	\$0	\$0	\$0
Total	\$0	\$0	\$0	\$2,110,000	\$2,110,000

**Table 3. Acres within each Ecological Section**

Type	Metro Urban	ForestPrairie	SEForest	Prairie	N Forest	Total
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	336	336
Enhance	0	0	0	0	0	0
Total	0	0	0	0	406	406

**Table 4. Total Funding within each Ecological Section**

Type	Metro Urban	ForestPrairie	SEForest	Prairie	N Forest	Total
Restore	\$0	\$0	\$0	\$0	\$145,000	\$145,000
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	\$1,965,000	\$1,965,000
Enhance	\$0	\$0	\$0	\$0	\$0	\$0
Total	\$0	\$0	\$0	\$0	\$2,110,000	\$2,110,000

**Table 5. Average Cost per Acre by Resource Type**

Type	Wetlands	Prairies	Forest	Habitats
Restore	\$0	\$0	\$0	\$2071
Protect in Fee with State PILT Liability	\$0	\$0	\$0	\$0
Protect in Fee W/O State PILT Liability	\$0	\$0	\$0	\$0
Protect in Easement	\$0	\$0	\$0	\$5848
Enhance	\$0	\$0	\$0	\$0



**Table 6. Average Cost per Acre by Ecological Section**

Type	Metro/Urban	Forest/Prairie	SE Forest	Prairie	Northern Forest
Restore	\$0	\$0	\$0	\$0	\$20 71
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	\$0	\$5848
Enhance	\$0	\$0	\$0	\$0	\$0

*Automatic system calculation / not entered by managers*

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

1 mile

# Parcel List

*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.*

## Section 1 - Restore / Enhance Parcel List

No parcels with an activity type restore or enhance.

## Section 2 - Protect Parcel List

No parcels with an activity type protect.

## Section 2a - Protect Parcel with Bldgs

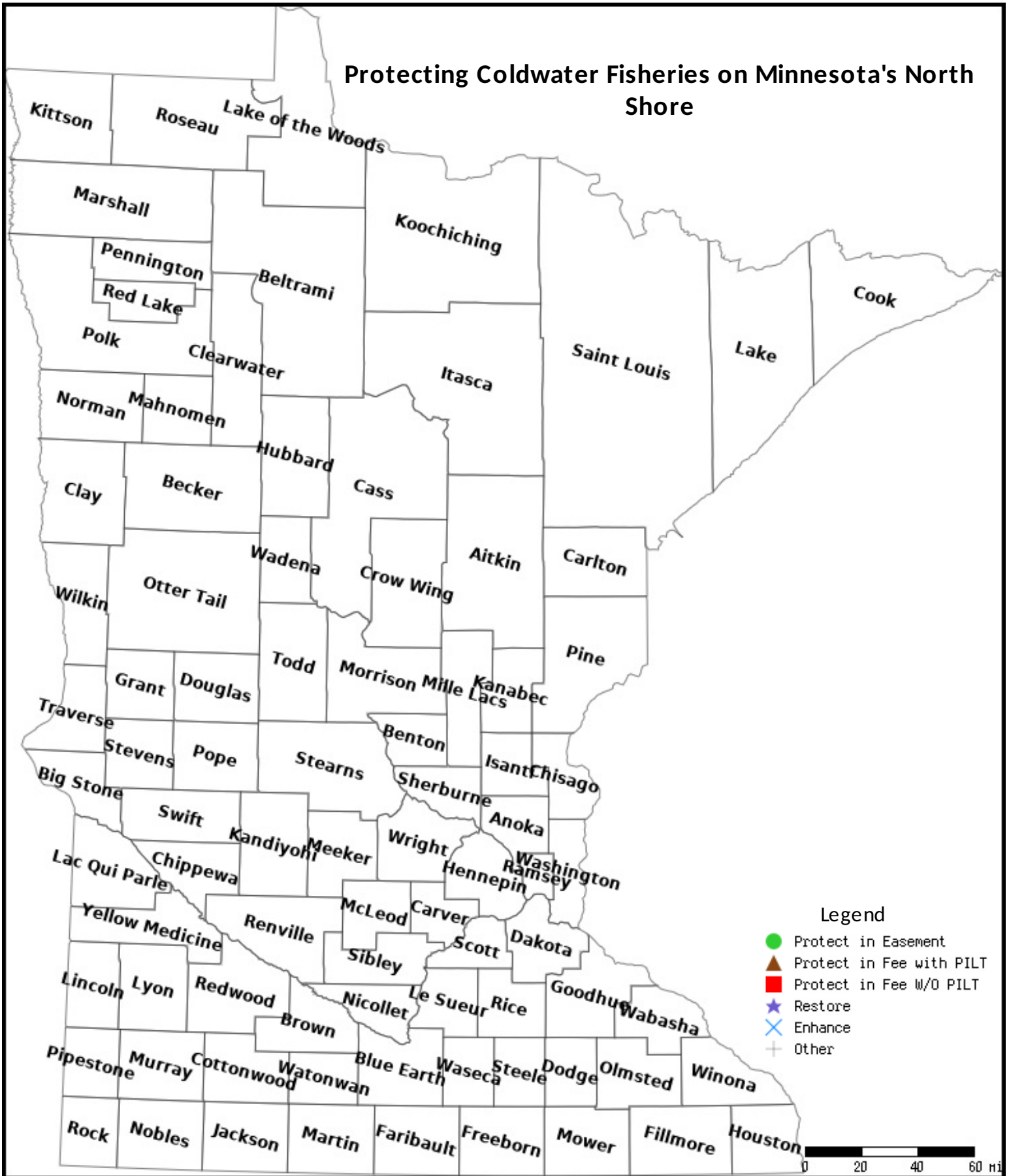
No parcels with an activity type protect and has buildings.

## Section 3 - Other Parcel Activity

No parcels with an other activity type.

# Parcel Map

## Protecting Coldwater Fisheries on Minnesota's North Shore



Data Generated From Parcel List