

Lessard-Sams Outdoor Heritage Council

Laws of Minnesota 2016 Accomplishment Plan



Date: December 15, 2015

Program or Project Title: Minnesota Trout Unlimited Coldwater Fish Habitat Enhancement, Phase 8

Funds Recommended: \$ 2,632,000

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Legislative Citation:

Appropriation Language:

County Locations: Beltrami, Benton, Fillmore, Lake, Scott, St. Louis, Wabasha, and Winona.

Regions in which work will take place:

- Forest / Prairie Transition
- Metro / Urban
- Northern Forest
- Southeast Forest

Activity types:

- Enhance

Priority resources addressed by activity:

- Habitat

Abstract:

Minnesota Trout Unlimited volunteers and partners will enhance habitat for fish and wildlife in and along priority coldwater streams located on existing Aquatic Management Areas and existing public lands statewide, accelerating efforts to reduce the backlog of degraded public resources.

Design and scope of work:

Addressing degraded habitat on exiting public easements, public lands and in public waters.

Minnesota's remaining coldwater streams are under increasing threats. While they are often the highest quality aquatic systems remaining in the state, and prized by both anglers and the general public because of this, many have badly degraded habitat. Given their relatively scarcity, being just six percent of total stream and river miles, this is a conservation issue of statewide importance that requires accelerated investment in projects which enhance or restore this habitat.

Minnesota Trout Unlimited ("MNTU") proposes to improve degraded habitat on numerous priority streams located on existing Aquatic Management Areas and other permanently protected land and in public waters around the state. Our members have demonstrated the capacity to complete these projects with Fiscal Year 2017 funding from the Outdoor Heritage Fund ("OHF"). MNTU respectfully proposes to partner with the Lessard-Sams Outdoor Heritage Council and the citizens of Minnesota to enhance habitat in and along

the following public waters (in these counties):

1. Keene Creek (St. Louis)
2. Miller Creek (St. Louis)
3. Stewart River (Lake)
4. Clearwater River (Beltrami)
5. Little Rock Creek (Benton)
6. Eagle Creek (Scott)
7. West Indian Creek (Wabasha)
8. Wisel Creek (Fillmore)
9. Money Creek (Winona)
10. Numerous other streams (prioritized list)

Individual project descriptions are provided in an attachment.

Goals and scope of work.

The goals of each project are to increase the carrying capacity and trout population of the stream, increase angling access and participation, improve water quality and provide other benefits to aquatic and terrestrial wildlife. FY 2017 funded projects will use methods similar to those used on successful projects recently completed by MNTU chapters. MNTU will leverage our experience to optimize project design and implementation.

In consultation with professionals within the Minnesota Department of Natural Resources ("MNDNR"), MNTU will use the best available stream restoration and coldwater aquatic science to select specific habitat improvement methods for each stream that reflect the distinct characteristics of the watershed and ecological region, address the specific limiting factors (e.g. spawning substrate, adult cover, invertebrate production, etc.), and account for the land use practices.

Objectives: Each project will accomplish one or more of these objectives: (a) increase adult trout abundance, (b) reduce stream bank erosion and associated sedimentation downstream, (c) reconnect streams to their floodplains to reduce negative impacts from severe flooding, (d) increase natural reproduction of trout and other aquatic organisms, (e) increase habitat for invertebrates and non-game species, (f) improve connectivity of habitat along aquatic and riparian (terrestrial) corridors, (g) improve angler access and participation, and (h) protect productive trout waters from invasive species.

Methods: Habitat enhancement methods typically include: (1) sloping stream banks back to both remove streamside sediments that have previously been transported from uplands areas and better reconnect the stream to its floodplain, (2) removing shallow rooted woody vegetation (invasive box elder, buckthorn, etc.) to enable removal of accumulated sediments, reduce competition with desirable plant and grass species, and allow beneficial energy inputs (sunlight) to reach the streams, (3) stabilizing eroding stream banks, (4) installing overhead bank and other in-stream cover for trout, (5) utilizing soil erosion prevention measures, (6) seeding exposed banks and taking steps to firmly establish vegetation (including using native prairie grasses where appropriate and feasible), (7) improving angling accessibility, (8) fencing riparian corridors where appropriate to facilitate managed grazing and prevent damage from over-grazing, (9) restoring large cover logs to the channels of Northern forested streams to increase deep pool habitat, and (10) planting long lived trees along Northern forested streams to shade and cool the water, and provide a source of future cover logs.

These actions directly enhance physical habitat, and typically increase overall trout abundance, the number of larger trout, and levels of successful natural reproduction. Additional benefits, typically extending many miles downstream from the project, include reduced erosion and sedimentation, cooler water temperatures, improved water quality, and increased connectivity of aquatic and riparian habitat corridors.

How priorities were set.

MNTU focuses on those watersheds likely to continue to support viable, fishable populations of naturally reproducing trout and steelhead fifty years and more from now. Work is done only where degraded habitat is a limiting factor for a quality, sustainable fishery. Priority locations are determined using MNTU members' extensive knowledge of the watersheds, MNDNR management plans and surveys, other habitat and conservation planning efforts, consultations with MNDNR professionals, and science based criteria. All things being equal, we consider the potential to draw new anglers outdoors, increase public awareness of the threats facing coldwater fisheries and watersheds, engage landowners and residents in conservation, foster partnerships, and increase public support for OHF projects.

Urgent conservation opportunities.

The targeted stream segments are currently providing limited habitat and clean water benefits, angling opportunities, or other enticements which increase outdoor recreation and encourage public appreciation and stewardship of aquatic ecosystems. By creating productive fisheries in visible and accessible areas, these projects will increase citizens' use of our coldwater ecosystems, tangibly re-connect Minnesotans to the land and water, foster understanding of threats to them, and motivate citizens to advocate for

watershed and water quality improvements.

Stakeholder support.

We continue to receive strong support for these projects from landowners, rural communities (especially since most funding pays local contractors and suppliers for direct construction expenses), and local civic and sporting organizations. We will continue to gather local input and develop partnerships in the planning and implementation stages. Landowners typically become very enthusiastic partners, working side-by-side with TU volunteers, donating materials, and helping secure additional conservation funding.

All outputs in acres and stream miles will be achieved within the overall budget, although individual project budgets and budget numbers by category are estimates only. One of the three Southeast MN projects has been reduced due to reduced budget, but outputs and parcels remain on tables for now. Construction efficiencies and leveraging other funds will likely permit us to lengthen work on listed streams and add habitat projects on additional streams. Leverage amounts are hopeful estimates only.

Crops:

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

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 projects will restore degraded habitat in and along streams and rivers which historically supported naturally reproducing trout and steelhead populations enjoyed by generations of anglers. In the process, corridors of habitat will be reestablished for numerous other aquatic, terrestrial and avian wildlife species.

What is the nature of urgency and why it is necessary to spend public money for this work as soon as possible:

These degraded streams are no longer providing habitat, clean water benefits or recreational opportunities. In several cases critical spawning and nursery habitat was destroyed or blocked by flooding. If not restored soon the loss of many consecutive year classes could destroy the entire population of some key rivers or streams.

Describe the science based planning and evaluation model used:

MNTU reviews MNDNR watershed specific fisheries management plans and other conservation planning efforts, consults with MNDNR managers, and applies ranking criteria developed by the MNDNR. Projects must also have the potential to increase the carrying capacity (fish numbers), the streams have natural reproduction, and the public have access to them.

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

- H3 Improve connectivity and access to recreation
- H6 Protect and restore critical in-water habitat of lakes and streams

Which other plans are addressed in this proposal:

- Long Range Plan for Fisheries Management
- Strategic Plan for Coldwater Resources Management in Southeastern Minnesota

Which LSOHC section priorities are addressed in this proposal:

Forest / Prairie Transition:

- Protect, enhance, and restore wild rice wetlands, shallow lakes, wetland/grassland complexes, aspen parklands, and shoreland that provide critical habitat for game and nongame wildlife

Metro / Urban:

- Enhance and restore coldwater fisheries systems

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

Southeast Forest:

- Protect, enhance, and restore habitat for fish, game, and nongame wildlife in rivers, cold-water streams, and associated upland habitat

Relationship to other funds:

- Not Listed

How does this proposal accelerate or supplement your current efforts in this area:

While our members and chapters have been planning, fundraising for and executing quality fish habitat restoration and enhancement projects around Minnesota for four decades, the availability of funds to hire heavy equipment operators and purchase materials remains the limiting factor in the amount of habitat work we can complete. Each discrete project is an additional “stand alone” project which supplements the amount of habitat work which MNTU chapters have traditionally been able to complete. Our partnership with the L-SOHC and taxpayers has dramatically increased the amount of degraded habitat we are restoring and enhancing for all Minnesotans. This funding will allow us to accelerate work on the backlog of degraded habitat found on existing public lands and easements.

Members play vital roles in planning, designing, overseeing, directing and providing manual labor on what are essentially construction projects, but we must hire excavation contractors and purchase rock, lumber and other materials put into the project sites. The knowledge, passion and commitment of our volunteers continue to increase, as does their successful acceleration of the pace of habitat improvement. To ensure we finish what we start, we continue developing a pool of qualified external contractors and consultants to assist with critical tasks.

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

Appropriation Year	Source	Amount
n/a	n/a - the proposed projects are all new stand alone projects	0

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

MNTU’s coldwater aquatic habitat restoration and enhancement projects are designed for long-term ecological and hydraulic stability. Once in-stream work is completed and riparian vegetation well established, no significant maintenance is usually required in order to sustain the habitat outcomes for several decades. Reconnected floodplains allow floodwater to quickly spread out and dissipate energy, reducing the destructive impact of a flood. Flood waters typically flatten streamside vegetation temporarily and do not damage the in-stream structures. The tenfold increase in trout populations and threefold increase in large trout which are not uncommon following completion of a southeast Minnesota project, are gains which are sustainable through natural reproduction.

We anticipate that long-term monitoring of the integrity of the improvements will be done in conjunction with routine inspections and biological monitoring conducted by local MNDNR staff, MNTU members, or landowners as appropriate. This monitoring will not require separate OHF or other constitutional funding. In the event that there are other maintenance costs, potential sources of funding and volunteer labor include MNTU, MNDNR AMA maintenance funding, and other grant funds and organizations. MNTU volunteers will help provide long-term monitoring and periodic labor.

Explain the things you will do in the future to maintain project outcomes:

Year	Source of Funds	Step 1	Step 2	Step 3
periodic-every 5 years	MNDNR, AMA, MNTU, other	inspection	consultation with MNDNR	assist MNDNR with maintenance or seeking other funding

Activity Details:

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

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 (AMA, County/Municipal, Public Waters, State Forests)**

Accomplishment Timeline:

Activity	Approximate Date Completed
Begin project planning, design and permitting work following a July 2016 appropriation.	Begin July 2016
Begin habitat enhancements during 2017 fieldwork season following completion of design work, permitting approvals, and contracting.	2017 fieldwork season
Complete riparian and in-stream habitat enhancements.	By October 2019
Cutting, burning, and/or spot spraying of vegetatuion to ensure native grasses and other appropriate vegetation becomes well established.	Through summers of 2019 & 2020
Tree plantings in riparian corridors, typically in May-June, following completion of in-stream work.	By July 2020

Date of Final Report Submission: 11/1/2021

Federal Funding:

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

Outcomes:

Programs in the northern forest region:

- Improved aquatic habitat indicators *Through surveys of fish, macro invertebrates and/or stream substrates.*

Programs in forest-prairie transition region:

- Improved aquatic habitat vegetation *Through surveys of fish, macro invertebrates and/or stream substrates.*

Programs in metropolitan urbanizing region:

- Improved aquatic habitat indicators *Through surveys of fish, macro invertebrates and/or stream substrates.*

Programs in southeast forest region:

- Rivers, streams, and surrounding vegetation provide corridors of habitat *Through surveys of fish, macro invertebrates and/or stream substrates.*

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 Miller Creek project was dropped and the scope of the Clearwater River project was reduced. One of the three southeast MN projects (Money, West Indian and Wisel Creeks) also will be dropped or drastically scaled back.

Total Amount of Request: \$ 2632000

Budget and Cash Leverage

BudgetName	LSOHC Request	Anticipated Leverage	Leverage Source	Total
Personnel	\$90,000	\$0		\$90,000
Contracts	\$1,202,000	\$250,000	NRCS; USFWS;NFWF	\$1,452,000
Fee Acquisition w/ PILT	\$0	\$0		\$0
Fee Acquisition w/o PILT	\$0	\$0		\$0
Easement Acquisition	\$0	\$0		\$0
Easement Stewardship	\$0	\$0		\$0
Travel	\$5,000	\$0		\$5,000
Professional Services	\$475,000	\$0		\$475,000
Direct Support Services	\$0	\$0		\$0
DNR Land Acquisition Costs	\$0	\$0		\$0
Capital Equipment	\$0	\$0		\$0
Other Equipment/Tools	\$10,000	\$0		\$10,000
Supplies/Materials	\$850,000	\$266,000	NRCS: USFWS; NFWF	\$1,116,000
DNR IDP	\$0	\$0		\$0
Total	\$2,632,000	\$516,000		\$3,148,000

Personnel

Position	FTE	Over # of years	LSOHC Request	Anticipated Leverage	Leverage Source	Total
Program manager	0.40	2.00	\$50,000	\$0		\$50,000
Watershed coordinator	0.10	2.00	\$10,000	\$0		\$10,000
Program asisstant	0.25	2.00	\$30,000	\$0		\$30,000
Total	0.75	6.00	\$90,000	\$0		\$90,000

Amount of Request: \$2,632,000

Amount of Leverage: \$516,000

Leverage as a percent of the Request: 19.60%

Output Tables

Table 1a. Acres by Resource Type

Type	Wetlands	Prairies	Forest	Habitats	Total
Restore	0	0	0	0	0
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	0
Enhance	0	0	0	132	132
Total	0	0	0	132	132

Table 2. Total Requested Funding by Resource Type

Type	Wetlands	Prairies	Forest	Habitats	Total
Restore	\$0	\$0	\$0	\$0	\$0
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	\$0
Enhance	\$0	\$0	\$0	\$2,632,000	\$2,632,000
Total	\$0	\$0	\$0	\$2,632,000	\$2,632,000

Table 3. Acres within each Ecological Section

Type	Metro Urban	ForestPrairie	SE Forest	Prairie	N Forest	Total
Restore	0	0	0	0	0	0
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	0	0
Enhance	2	4	83	0	43	132
Total	2	4	83	0	43	132

Table 4. Total Requested Funding within each Ecological Section

Type	Metro Urban	ForestPrairie	SE Forest	Prairie	N Forest	Total
Restore	\$0	\$0	\$0	\$0	\$0	\$0
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	\$0	\$0
Enhance	\$65,000	\$70,000	\$1,332,000	\$0	\$1,165,000	\$2,632,000
Total	\$65,000	\$70,000	\$1,332,000	\$0	\$1,165,000	\$2,632,000

Table 5. Average Cost per Acre by Resource Type

Type	Wetlands	Prairies	Forest	Habitats
Restore	\$0	\$0	\$0	\$0
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	\$0
Enhance	\$0	\$0	\$0	\$19939

Table 6. Average Cost per Acre by Ecological Section

Type	Metro/Urban	Forest/Prairie	SE Forest	Prairie	Northern Forest
Restore	\$0	\$0	\$0	\$0	\$0
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	\$0
Enhance	\$32500	\$17500	\$16048	\$0	\$27093

Target Lake/Stream/River Feet or Miles

10

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

Beltrami

Name	TRDS	Acres	Est Cost	Existing Protection?
Clearwater River	14835231	1	\$0	Yes

Benton

Name	TRDS	Acres	Est Cost	Existing Protection?
Little Rock Creek	03831210	4	\$0	Yes

Fillmore

Name	TRDS	Acres	Est Cost	Existing Protection?
Wisel Creek	10208232	0	\$0	Yes

Lake

Name	TRDS	Acres	Est Cost	Existing Protection?
Stewart River	05310219	29	\$0	Yes

Scott

Name	TRDS	Acres	Est Cost	Existing Protection?
Eagle Creek	11521218	2	\$0	Yes

St. Louis

Name	TRDS	Acres	Est Cost	Existing Protection?
Keene Creek	05015236	4	\$0	Yes
Miller Creek	05014218	9	\$0	Yes

Wabasha

Name	TRDS	Acres	Est Cost	Existing Protection?
West Indian Creek	10911216	72	\$0	Yes

Winona

Name	TRDS	Acres	Est Cost	Existing Protection?
Money Creek	10507209	11	\$0	Yes

Section 2 - Protect Parcel List

No parcels with an activity type protect.

Section 2a - Protect Parcel with Bldgs

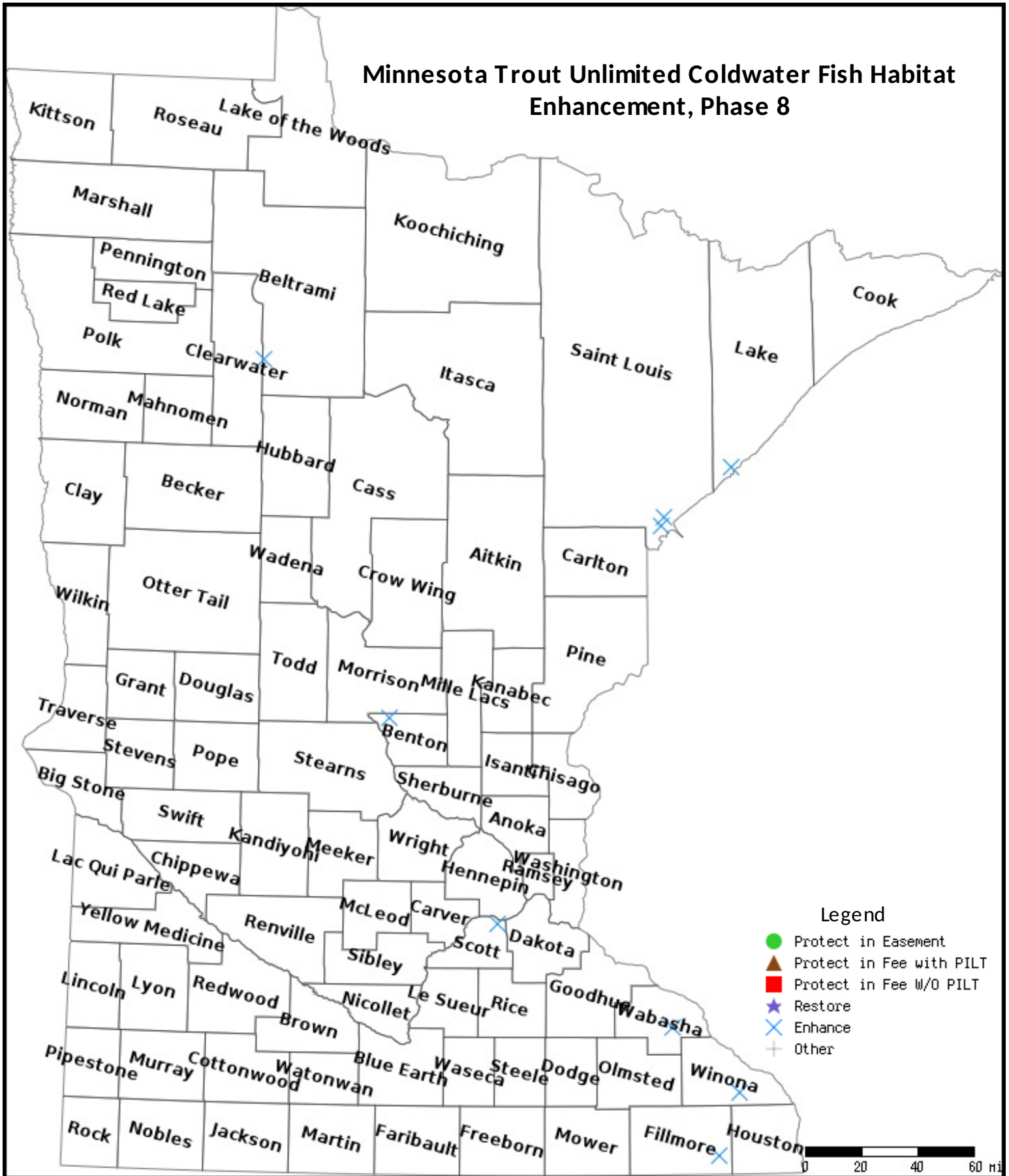
No parcels with an activity type protect and has buildings.

Section 3 - Other Parcel Activity

No parcels with an other activity type.

Parcel Map

Minnesota Trout Unlimited Coldwater Fish Habitat Enhancement, Phase 8



Data Generated From Parcel List