Lessard-Sams Outdoor Heritage Council

Minnesota Trout Unlimited Coldwater Fish Habitat Enhancement and Restoration, Phase 12

Laws of Minnesota 2020 Accomplishment Plan

General Information

Date: 07/25/2024

Project Title: Minnesota Trout Unlimited Coldwater Fish Habitat Enhancement and Restoration, Phase 12

Funds Recommended: $1,474,000

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

Appropriation Language: $1,474,000 the second year is to the commissioner of natural resources for an agreement with Trout Unlimited to restore and enhance habitat for trout and other species in and along coldwater rivers, lakes, and streams in Minnesota. A list of proposed land acquisitions, restorations, and enhancements must be provided as part of the required accomplishment plan.

Manager Information

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Location Information

County Location(s): Houston, Winona, Cook, Lake, Fillmore, Olmsted, Hubbard, St. Louis and Wabasha.

Eco regions in which work will take place:

- Northern Forest
- Forest / Prairie Transition
- Southeast Forest

Activity types:

- Enhance

Priority resources addressed by activity:

- Forest
- Habitat

Narrative

Abstract

Minnesota Trout Unlimited will enhance and restore habitat for fish and wildlife in and along priority coldwater streams located on existing conservation easements and public lands around the state. Trout streams are a relatively scarce resource and increasing threats to them require accelerating habitat work to reduce the backlog of degraded stream reaches. Outcomes will be maximized by improving the connectivity of habitat and fish and wildlife populations. Timely maintenance on old projects will ensure habitat outcomes continue for many years.

Design and Scope of Work

Just six percent of Minnesota's streams are capable of supporting any trout, and many have degraded habitat which severely limits their productivity. Even where riparian corridors protect streams from future harm, past habitat degradation cannot be reversed without active enhancement or restoration. Minnesota Trout Unlimited ("MNTU") proposes to directly enhance or restore degraded habitat on priority streams with existing protections under the Aquatic Management Area system or public ownership. We propose to restore or enhance habitat in and along these public waters (and counties):

1. Split Rock River (Lake);

2. Baptism River (Lake);

3. Manitou River (Lake);

4. Cook County Trout Stream Pilot (Cook);

5. Southeast MN streams (numerous counties);

6. Numerous streams on prioritized maintenance list (statewide).

If contracting efficiencies or leveraged funding permits us to we will extend project lengths or work on additional streams.

Individual project descriptions and other detail is provided in an attachment.

Goals and scope of work.

The goals of projects 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. 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 the stream to its 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 riparian forests as appropriate, (h) improve angler access and participation, and (i) protect productive trout waters from invasive species. The scope of work and methods utilized vary by project and are discussed in the individual project descriptions provided in the attachment.

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' knowledge of 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, engage landowners in conservation, foster partnerships, and increase public support for OHF projects.

Stakeholder support.

We continue receiving strong support from landowners, rural communities, and local civic and sporting organizations. We will continue gathering local input and developing partnerships in the planning and implementation stages. Landowners typically become very enthusiastic partners.

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 projects will restore or enhance degraded habitat for fish and wildlife in and along coldwater streams and rivers which historically supported naturally reproducing trout or steelhead populations highly valued by generations of anglers. While trout are the apex predator and key indicator species in coldwater systems, a host of rare aquatic species are uniquely associated with these systems. Well-functioning coldwater aquatic ecosystem are far fewer in number than the 6% of Minnesota's total stream and river miles which theoretically can still support trout. Even many streams considered to be the best remaining trout streams have badly degraded segments which disrupt connectivity and have significant impacts on the productivity and long-term resilience and sustainability of the overall trout population. Streams face growing threats from warming temperatures, increased frequency of severe flooding, and rising demand for groundwater extraction from the aquifers which supply vitally important cold water inputs. The proposed projects are focused on streams and stream segments which will benefit from improved connectivity and help ensure Minnesota retains at least some high quality coldwater fisheries for future generations. A portion of an appropriation would be used to maintain or repair past projects to ensure continuing habitat benefits.

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:

In selecting project sites, MNTU reviews MNDNR watershed specific fisheries management plans and other conservation planning efforts, consults with MNDNR professionals, and applies ranking criteria developed by the MNDNR. Projects must have the potential to increase the carrying capacity (fish numbers), the streams have natural reproduction, and the public have access to them. Improving the connectivity of good aquatic and riparian habitat is an important consideration and the projects are selected to expand or connect gaps in these corridors. We are increasingly targeting stream segments which build off earlier habitat or protection work in the same stream or connected watershed.

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

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

Which two other plans are addressed in this program?

- Driftless Area Restoration Effort
- Strategic Plan for Coldwater Resources Management in Southeastern Minnesota

Which LSOHC section priorities are addressed in this program?

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

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

Outcomes

Programs in forest-prairie transition region:

- Other ~

Programs in the northern forest region:

- Improved aquatic habitat indicators ~ *Measured through surveys of fish, macro invertebrates and/or exposed substrates. Abundance, size structure and species diversity are considered.*

Programs in southeast forest region:

- Rivers, streams, and surrounding vegetation provide corridors of habitat ~ *Enhancement of in-stream and riparian corridor habitat creates miles of connected habitat. Outcomes in aquatic life are measured through*

surveys of fish, macro invertebrates and/or exposed substrates. Abundance, size structure and species diversity are considered.

Does this program include leveraged funding?

Yes

Explain the leverage:

We will leverage private funding of Trout Unlimited ("TU"), which TU will contribute to cover a majority of its direct support service costs. TU members and chapters will donate in-kind labor/services. Several partners (MNDNR, SWCD offices, etc.) will likely contribute significant amounts of time and/or dollars assisting on several projects. We also hope to leverage substantial federal or other funding, including for fish passage/culvert replacement work in the Lake Superior basin.

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.

The request is not supplanting or a substitution for previous funding. The work proposed for funding is for new or additional work.

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. Construction contracts include maintenance/warranty provisions to ensure habitat work is well established. After this period and once riparian vegetation well established, major maintenance work is not typically required in order to sustain the habitat outcomes for 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 common following completion of a southeast Minnesota project, are typically 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.

Actions to Maintain Project Outcomes

Year	Source of Funds	Step 1	Step 2	Step 3
One year after the grant ends	MNTU volunteers or part of agency staff visits.	Inspect structural elements and vegetation.	If needed, alert DNR and develop action plans.	Conduct maintenance with volunteers and/or contractors if DNR does not.
Every 3 years thereafter	MNTU volunteers and/or agency.	Inpsect structural elements and vegetation.	If needed, develop action plan with DNR.	Perform or assit DNR with maintenance if needed.

Activity Details

Requirements

If funded, this program 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 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?

- AMA
- Public Waters
- State Forests
- Other : State Park

Land Use

Will there be planting of any crop on OHF land purchased or restored in this program, either by the proposer or the end owner of the property, outside of the initial restoration of the land?
No

Timeline

Activity Name	Estimated Completion Date
Beginning planning, design and implementation of habitat enhancements	July 2020
Complete implementation of habitat enhancements, including tree and vegetation work	June 2025

Date of Final Report Submission: 11/01/2025

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	$140,000	-	-	$140,000
Contracts	$769,000	$100,000	USFS, USFWS, and other partners	$869,000
Fee Acquisition w/ PILT	-	-	-	-
Fee Acquisition w/o PILT	-	-	-	-
Easement Acquisition	-	-	-	-
Easement Stewardship	-	-	-	-
Travel	$10,000	-	-	$10,000
Professional Services	$160,000	-	-	$160,000
Direct Support Services	$25,000	$25,000	Trout Unlimited	$50,000
DNR Land Acquisition Costs	-	-	-	-
Capital Equipment	-	-	-	-
Other Equipment/Tools	$3,000	-	-	$3,000
Supplies/Materials	$367,000	$100,000	USFS, USFWS, and other partners	$467,000
DNR IDP	-	-	-	-
Grand Total	**$1,474,000**	**$225,000**	**-**	**$1,699,000**

Personnel

Position	Annual FTE	Years Working	Funding Request	Leverage	Leverage Source	Total
Habitat Enhancement staff	0.4	5.0	$140,000	-	-	$140,000

Amount of Request: $1,474,000
Amount of Leverage: $225,000
Leverage as a percent of the Request: 15.26%
DSS + Personnel: $165,000
As a % of the total request: 11.19%
Easement Stewardship: -
As a % of the Easement Acquisition: -

How will this program accommodate the reduced appropriation recommendation from the original proposed requested amount?
Reduce the length and number of streams to be enhanced.

Describe and explain leverage source and confirmation of funds:
Leverage estimates are estimates only. We hope to secure approximately $200,000 from federal sources to assist with the fish passage barrier removal/culvert replacement work in northeast Minnesota.

Contracts

What is included in the contracts line?
This is for contracted services, including heavy equipment use and labor, on enhancement projects.

Travel

Does the amount in the travel line include equipment/vehicle rental?
No

Explain the amount in the travel line outside of traditional travel costs of mileage, food, and lodging
None

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?
The Direct Support Services requested represents a portion of Trout Unlimited's federal rate, which is approved annually. The requested amount likely represents approximately one third of what we would be eligible to claim based upon DNR approval under an earlier grant agreement. Trout Unlimited is donating the other portion.

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	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	188	188
Total	**0**	**0**	**0**	**188**	**188**

Total Requested Funding by Resource Type (Table 2)

Type	Wetland	Prairie	Forest	Habitat	Total Funding
Restore	-	-	-	-	-
Protect in Fee with State PILT Liability	-	-	-	-	-
Protect in Fee w/o State PILT Liability	-	-	-	-	-
Protect in Easement	-	-	-	-	-
Enhance	-	-	-	$1,474,000	$1,474,000
Total	**-**	**-**	**-**	**$1,474,000**	**$1,474,000**

Acres within each Ecological Section (Table 3)

Type	Metro/Urban	Forest/Prairie	SE Forest	Prairie	N. Forest	Total Acres
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	0	0	90	0	98	188
Total	**0**	**0**	**90**	**0**	**98**	**188**

Total Requested Funding within each Ecological Section (Table 4)

Type	Metro/Urban	Forest/Prairie	SE Forest	Prairie	N. Forest	Total Funding
Restore	-	-	-	-	-	-
Protect in Fee with State PILT Liability	-	-	-	-	-	-
Protect in Fee w/o State PILT Liability	-	-	-	-	-	-
Protect in Easement	-	-	-	-	-	-
Enhance	-	-	$468,000	-	$1,006,000	$1,474,000
Total	**-**	**-**	**$468,000**	**-**	**$1,006,000**	**$1,474,000**

Average Cost per Acre by Resource Type (Table 5)

Type	Wetland	Prairie	Forest	Habitat
Restore	-	-	-	-
Protect in Fee with State PILT Liability	-	-	-	-
Protect in Fee w/o State PILT Liability	-	-	-	-
Protect in Easement	-	-	-	-
Enhance	-	-	-	$7,840

Average Cost per Acre by Ecological Section (Table 6)

Type	Metro/Urban	Forest/Prairie	SE Forest	Prairie	N. Forest
Restore	-	-	-	-	-
Protect in Fee with State PILT Liability	-	-	-	-	-

Protect in Fee w/o State PILT Liability	-	-	-	-	-
Protect in Easement	-	-	-	-	-
Enhance	-	-	$5,200	-	$10,265

Target Lake/Stream/River Feet or Miles

15 miles

Parcels

Parcel Information

Sign-up Criteria?
No

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

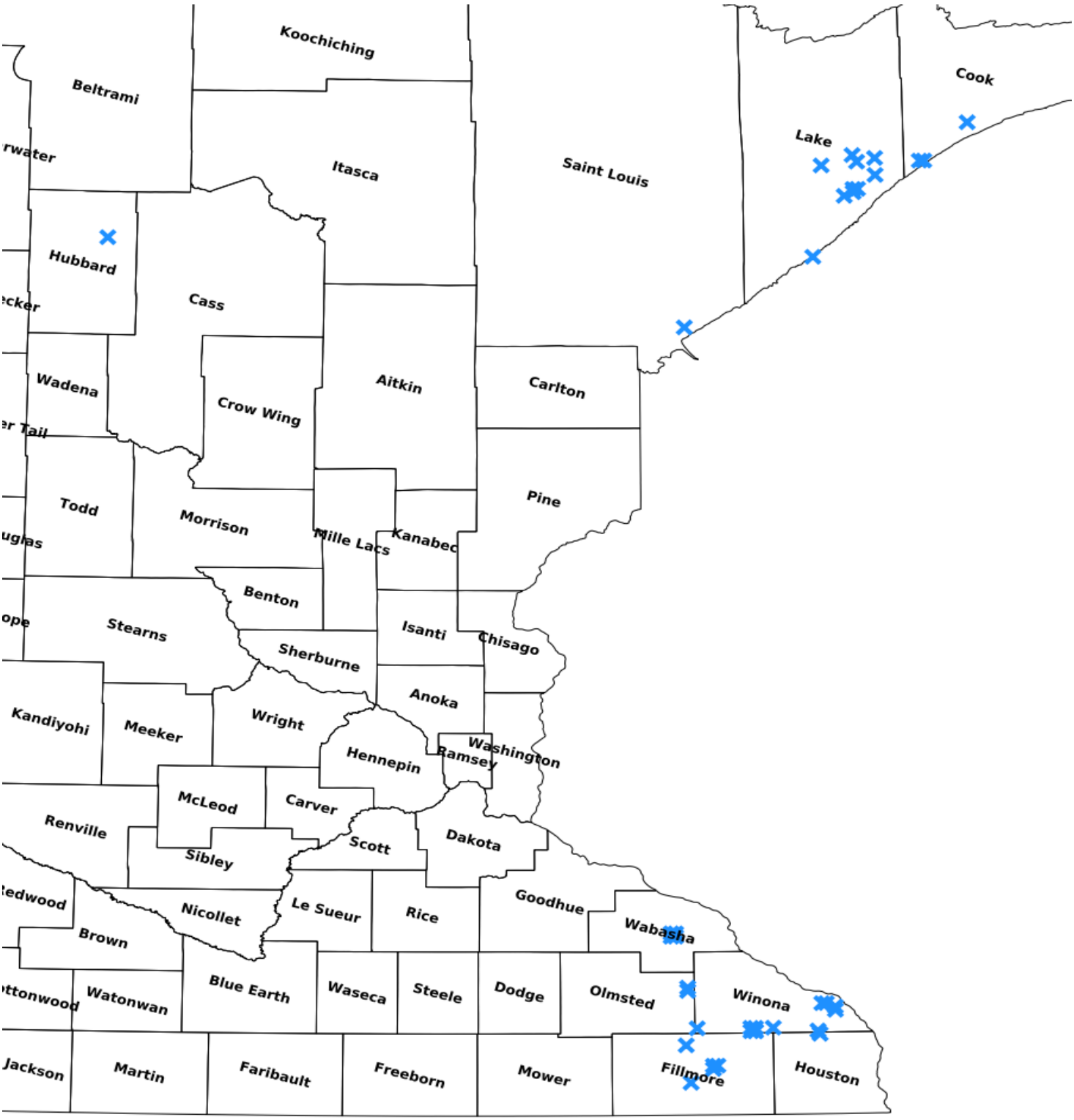
Restore / Enhance Parcels

Name	County	TRDS	Acres	Est Cost	Existing Protection	Description
Fredenberg Creek	Cook	05805202	0	$0	Yes	Replace culverts which act as trout barriers.
Cook County Pilot Stream	Cook	06003209	5	$0	Yes	Pilot using loggers to place large cover logs in stream channel to create better brook trout habitat.
Fredenberg Creek	Cook	05805203	0	$0	Yes	Replace culverts which act as trout barriers.
Duschee creek	Fillmore	10310223	0	$0	Yes	Maintnenance and additional enhancements on older projects to ensure contunued habitat benefits for years to come.
Duschee creek	Fillmore	10310224	0	$0	Yes	Maintnenance and additional enhancements on older projects to ensure contunued habitat benefits for years to come.
Duschee creek	Fillmore	10310226	0	$0	Yes	Maintnenance and additional enhancements on older projects to ensure contunued habitat benefits for years to come.
Rice Creek	Fillmore	10411223	0	$0	Yes	Enhance habitat on productive stream along Hwy 52 a short dirve from Rochester
Willow Creek	Fillmore	10211213	0	$0	Yes	Maintnenance and additional enhancements on older projects to ensure contunued habitat benefits for years to come.
Looney Creek	Houston	10406202	0	$0	Yes	Maintenance and added habitat to increase productivity
Statewide maintenance (prioritized)	Hubbard	14333212	36	$0	Yes	Habitat enhancement via management of riparian trees.
Baptism River	Lake	05707218	0	$0	Yes	Replace culverts which act as trout barriers.
Baptism River	Lake	05707219	0	$0	Yes	Replace culverts which act as trout barriers.
Baptism River	Lake	05708226	0	$0	Yes	Replace culverts which act as trout barriers.

Manitou River	Lake	05807205	0	$0	Yes	Replace culverts which act as trout barriers.
Manitou River	Lake	05907230	0	$0	Yes	Replace culverts which act as trout barriers.
Baptism River	Lake	05809212	60	$0	Yes	Replace up to 5 culverts which act as trout barriers.
Baptism River	Lake	05707217	0	$0	Yes	Replace culverts which act as trout barriers.
Manitou River	Lake	05907236	10	$0	Yes	Plant degraded riparian corridors to long-lived tree species for shading and long term trout habitat benefits.
Baptism River	Lake	05807225	0	$0	Yes	Replace culverts which act as trout barriers.
Split Rock River	Lake	05409227	6	$0	Yes	Enhance habitat for wild brook trout and steelhead
Middle Branch Whitewater River	Olmsted	10711235	0	$0	Yes	Maintnenance and additional enhancements on older projects to ensure contunued habitat benefits for years to come.
Southeast Maintenance and Additional Enhancements	Olmsted	10711226	59	$0	Yes	Maintnenance and additional enhancements on older projects to ensure contunued habitat benefits for years to come.
Tischer Creek	St. Louis	05014202	0	$0	Yes	Replace barrier for native brook trout in Duluth
West Indian Creek	Wabasha	10911208	0	$0	Yes	Maintenance and added habitat to increase productivity
West Indian Creek	Wabasha	10911205	0	$0	Yes	Maintenance and added habitat to increase productivity
West Indian Creek	Wabasha	10911206	0	$0	Yes	Maintenance and added habitat to increase productivity
West Indian Creek	Wabasha	10911207	0	$0	Yes	Maintenance and added habitat to increase productivity
Trout Run Creek	Winona	10510230	0	$0	Yes	Maintenance and added habitat to increase productivity
Pickwick Creek	Winona	10606224	0	$0	Yes	Maintenance and added habitat to increase productivity
Pickwick Creek	Winona	10606223	0	$0	Yes	Maintenance and added habitat to increase productivity
Pine Creek	Winona	10508231	0	$0	Yes	Maintenance and added habitat to increase productivity
Rush Creek	Winona	10508229	0	$0	Yes	Maintenance and added habitat to increase productivity
Rush Creek	Winona	10508232	0	$0	Yes	Maintenance and added habitat to increase productivity
Pine Creek	Winona	10508230	0	$0	Yes	Maintenance and added

						habitat to increase productivity
Pine Creek	Winona	10508225	0	$0	Yes	Maintenance and added habitat to increase productivity
Little Pickwick Creek	Winona	10605229	0	$0	Yes	Maintenance and added habitat to increase productivity
Little Pickwick Creek	Winona	10605232	0	$0	Yes	Maintenance and added habitat to increase productivity
Looney Creek	Winona	10506234	0	$0	Yes	Maintenance and added habitat to increase productivity
Pine Creek	Winona	10508232	0	$0	Yes	Maintenance and added habitat to increase productivity

Parcel Map



- Protect in Easement
- Protect in Fee with PILT
- Protect in Fee W/O PILT
- Restore
- Enhance
- Other