

Lessard-Sams Outdoor Heritage Council

Laws of Minnesota 2012 Accomplishment Plan



Date: April 17, 2017

Program or Project Title: Coldwater Fish Habitat Enhancement , Phase IV

Funds Recommended: \$ 2,120,000

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Legislative Citation: ML 2012, Ch. 264, Art. 1, Sec. 2, Subd. 5(e)

Appropriation Language: \$2,120,000 in the second year is to the commissioner of natural resources for an agreement with Minnesota Trout Unlimited to restore and enhance coldwater fish lake, river, and stream habitats in Minnesota. A list of proposed restorations and enhancements must be provided as part of the required accomplishment plan.

County Locations: Cook, Dakota, Fillmore, Goodhue, Lake, Olmsted, Wabasha, and Winona.

Regions in which work will take place:

- Metro / Urban
- Northern Forest
- Southeast Forest

Activity types:

- Enhance

Priority resources addressed by activity:

- Habitat

Abstract:

Minnesota Trout Unlimited will enhance in-stream and riparian fish and wildlife habitat in coldwater streams, rivers and lakes located in existing Aquatic Management Areas and other public lands.

Design and scope of work:

The FY2013 projects will use methods similar to those used on projects completed by MNTU chapters in the past several years. The specific fish habitat enhancement methods used on each stream will vary depending upon the distinct natural resource characteristics of each watershed and ecological region, the limiting factors identified for each stream, the variations in the type and magnitude of poor land uses practices within each watershed, consultation with the Minnesota Department of Natural Resources ("MNDNR"), and MNTU members' first-hand knowledge of the watersheds and habitat enhancement techniques.

Purposes: Each project will be designed and completed using techniques selected to accomplish one or more of the following purposes: (a) reduce stream bank erosion and associated sedimentation downstream, (b) reconnect streams to their floodplains to reduce negative resource impacts from severe flooding, (c) increase natural reproduction of trout and other aquatic organisms, (d) maintain or increase adult trout abundance, (e) increase habitat and biodiversity for both invertebrates and other non-game species, (f) be long lasting with minimal

maintenance required, (g) improve angler access and participation, (h) improve lake productivity for trout species, and (i) protect productive trout waters from undesirable invasive species.

Habitat enhancement methods used may include one or more of the following techniques: (1) sloping back stream banks to both remove accumulated sediments eroded from uplands areas and better reconnect the stream to its floodplain, (2) removing undesirable woody vegetation (invasive box elder, buckthorn, etc.) from riparian corridors 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 using vegetation and/or rock, (4) selectively installing overhead and other in-stream cover for trout, (5) installing soil erosion prevention measures (6) mulching and seeding exposed stream banks (including with native prairie plant species where appropriate and feasible), (7) improving or maintaining stream access roads and stream crossings, (8) fencing grassy riparian corridors, including in such a way as to facilitate managed grazing, in order to prevent damage from over grazing, (9) placing large logs in Northern forested streams to restore cover logs removed a half century or more ago, and (10) in Northern forested watersheds with little cold groundwater, planting desirable trees in riparian areas to provide shade for the stream channel and help cool the water.

Agricultural area example: Many streams in the agricultural areas of southern and central Minnesota have been negatively impacted by many decades of poor land management practices. How and why the various habitat enhancement actions are typically taken in these regions is best illustrated by the following example:

Erosion has led to wider, shallower and warmer streams, as well as excessive streamside sediments which regularly erode, covering food production and trout reproduction areas. In many cases shallow rooted invasive trees have taken over the riparian corridors, out competing native vegetation which better secures soils, and reducing energy inputs to the stream ecosystem. To remedy this, a typical enhancement project will involve several steps. First, invasive trees are removed from the riparian zone and steep, eroding banks are graded by machinery to remove excess sediments deposited here from upland areas. Importantly, this reconnects the stream to its floodplain. Since many of these agricultural watersheds still experience periodic severe flooding, select portions of the stream banks are then reinforced with indigenous rock. In lower gradient watersheds, or watersheds where flows are more stable, little or no rock is used. After enhancement work is completed the streams flow faster and become deeper, keeping them cooler and providing natural overhead cover through depth and the scouring of sediments deposited by decades of erosion.

Second, overhead cover habitat is created. Bank degradation and the removal of native prairie have dramatically decreased protective overhead cover in the riparian zone. Two methods are used to remedy this situation: increasing the stream's depth, which alone provides natural cover to trout, and installing overhead cover structures in select stream banks. Wooden structures are often installed into banks in hydraulically suitable locations and reinforced with rock as a way to restore or recreate the undercut banks which had existed before settlement and agricultural land use altered the more stable flows which had gradually created and maintained them.

Finally, vegetation is reestablished in the re-graded riparian corridor to further stabilize banks and act as buffer strips to improve water quality. Depending upon the specific site conditions, landowner cooperation, and agricultural use, native prairie grasses may be planted along the stream corridors, although often mixed with fast sprouting annual grains to anchor soils the first year.

Taken together, these actions directly enhance physical habitat, and typically increase overall trout abundance, population structure, the number of larger trout, and levels of successful natural reproduction. In addition to the benefits to anglers of increased trout habitat and trout abundance, project benefits extending well downstream include reduced erosion and sedimentation, cooler water temperatures, improved water quality and numerous benefits to aquatic and terrestrial wildlife populations.

Individual Project Descriptions:

1. Cook County Brook Trout stream (Cook).

Habitat for native brook trout will be enhanced in a 1,500 foot reach of a Cook County stream on existing public land or on an existing AMA easement. No acquisition will be involved. Minnesota Trout Unlimited will work with the MNDNR to identifying a top priority stream segment for enhancement work.

The project will use significant volunteer labor provided by MNTU members, as well as members of other local angling and conservation groups. Using hand labor we will likely revitalize and replace failing wood or wood & rock habitat structures originally installed as long as 60 years ago. New structures may be added and placed so as to provide the deep water cover that the brook trout need. Rock located on and near the site may be added to structures to ensure that they direct both high and low stream flows appropriately

Project planning and initial survey work will begin following a July 2012 appropriation, with fieldwork in summer 2013 or 2014. Planning and permitting steps include working with MNDNR to identify the most appropriate, highest priority stream reach, walking prospective sites and scoping work, working with land managers or owners, and securing additional partners. The MNDNR Fisheries office in Grand Marais, MN is our primary project partner. Additional partners may include local conservation and sporting groups, local residents, the US Forest Service, the USFWS, and others.

2. Kimball, Mink & Boys Lakes (Cook).

The lake habitat and trout fishery in these three lakes has been compromised by the unintended, undesirable invasion of non-game fish. This project consists of two separate components targeted at restoring/enhancing the habitat and protecting it from future degradation. All three interconnected lakes will be reclaimed to restore the previously productive lake habitat conditions for brook, brown and rainbow trout. After consultation with the MNDNR, MNTU will contract with a qualified contractor specializing in lake reclamation projects such as this. Work will take place in late September and early October at the direction of the MNDNR. The reclamation should be completed by freeze up. The timing of delivery of the grant agreement and pace of permitting will dictate which year (2012, 2013 or 2014) the work can be undertaken in.

A physical barrier against future invasions via Kimball Creek will also be installed at the outfall of Kimball Lake. It will involve the use of several large logs, lots of large rock, and physical labor. The work will be take place under the direction of MNDNR personnel.

3. Garvin Brook (Winona).

The project will begin on the edge of Farmers Park and extend downstream approximately 2,700 feet through State or County land. It is intended to increase the health and resilience of the Garvin Brook fishery and watershed by improving the in-stream habitat and surrounding forest habitat. This enhancement project will narrow the stream channel, remove accumulated sediment as needed, reslope and stabilize stream banks, and install overhead cover (including depth cover) for naturally reproducing trout. Damaged trees, invasive trees and other invasive plants will be removed along the riparian corridor and native vegetation re-established. Several of the methods described in the "Agricultural area example" above will be used. Volunteers from the Win-Cres Chapter of Trout Unlimited will work closely with MNDNR Forestry personnel, the local Conservation Corps Minnesota crew, and others to remove invasive plant species.

Pre-project survey work, project design and permitting will begin in 2012, following a July 2012 appropriation and grant agreement. Fieldwork may commence the following summer fieldwork season (2013) or in 2014 depending upon the pace of survey, design and permitting work. Project partners include Win-Cres Chapter TU, other TU chapters and members, MNDNR Fisheries - Lanesboro Area Office, MNDNR Forestry, Winona State University - Water Resources Center, St Mary's University -Biology Dept., and local residents.

4. Rush - Pine Watershed (Winona).

One to two miles of in-stream and riparian fish and wildlife habitat enhancement work will be completed in this trout stream complex, depending upon the number of private landowners along Pine Creek and Rush Creek who successfully sign up for federal cost sharing dollars. MNTU hopes to secure up to \$200,000 in farm bill dollars through the NRCS for materials costs and heavy equipment work.

The project site will likely be on the last mile or more of Pine Creek on a severely degraded segment of stream containing highly eroding stream banks. Habitat will be enhanced using several of the methods previously described in the "Agricultural area example" above. Work will include sloping and stabilizing stream banks, installing overhead cover for trout, installing erosion control measures, and mulching and seeding of exposed stream banks, including with native plant species if appropriate and feasible. If habitat enhancements are completed on

the lower reaches of Pine Creek to its confluence with Rush Creek with earlier projects and funding, we may shift work to a section of Rush Creek. Both the Win-Cres and Hiawatha Chapters of Trout Unlimited will assist with these projects, and MNDNR is a key partner.

5. Hay Creek (Goodhue).

Hay Creek remains a top priority of the Twin Cities Chapter of TU given its close proximity, extensive public access and increasingly productive, fishable water. Building upon ongoing efforts to restore and enhance this watershed, the proposed project site(s) will be near or adjacent to Trout Unlimited habitat enhancement projects completed, or soon to be completed, here.

The habitat work proposed will be very similar to recent projects by the Twin Cities Chapter of TU in the upper Hay Creek watershed. Many of the methods described in the "Agricultural area example" above will be used. Work along approximately 5,000 feet of stream will include sloping and stabilizing stream banks, installing overhead cover for trout, and creating depth cover for naturally reproducing wild brown trout. Pre-project survey work, project design and permitting will begin in 2012, following a July 2012 appropriation. Fieldwork will commence in 2013. Trout Unlimited members will again donate substantial amounts of time and energy.

6. South Creek - Vermillion River (Dakota).

This project involves establishing protective vegetative buffers in streams corridors both to protect trout and aquatic habitat and to create wildlife habitat in perpetually protected corridors. The Vermillion River Watershed Joint Powers Organization and the City of Lakeville will be financial and technical partners on this project component. These partners together will contribute approximately one-half the costs. These partners have already identified more than 20 separate riparian parcels located along South Creek at its tributaries. Vegetative buffers will be established in riparian corridors to provide long term protection of the trout fishery throughout the length of South Creek.

Most of the riparian areas identified are currently in a form that serves as poor wildlife habitat. They range from turf grass, to intact buffers with slightly degraded habitat (i.e. restorations were begun but not completed so that invasive species have started taking hold), to buffers with severely degraded habitat (e.g., overgrown with noxious or invasive species such as reed canary grass and buckthorn). We will hire one or more qualified prairie/grassland restoration specialists to properly establish vegetation in these protected riparian areas which will serve as wildlife habitat corridors as well as protecting coldwater fisheries habitat. MNTU and its partners hope to enhance or restore approximately 144 acres of wildlife habitat by leveraging non OHF funds. It may take three growing seasons (2013 to 2015) to fully establish the vegetation.

7. North Shore steelhead river(s) (Lake; St. Louis).

These two projects will enhance or restore habitat in important nursery and spawning areas of one or more major North Shore steelhead rivers.

7A. In-stream cover habitat for juvenile steelhead The lack of large logs (large woody debris or "LWD") which provide cover, especially critical overwintering cover, for juvenile steelhead and other migratory trout and salmon is a significant problem on most North Shore streams. This project will increase the amount of cover by restoring large logs to the stream channel in a key nursery stretch accessible to wild spawning steelhead. Depending upon the specific site conditions, large boulders may additionally, or alternatively, be used. In-stream habitat will be significantly enhanced along approximately 2,000 feet of river. Disturbed areas will be planted with trees and native riparian plant species.

The goal of the project is to directly increase the amount of deep pool habitat and overhead cover using large woody debris and rock veining. Large logs with intact root wads will be placed in the stream as will large boulders. This will create direct cover for fish and wildlife, encourage channel complexity through scour and deposition, provide refugia for fish during flood events, and can reduce the erosive power of storm flows.

The precise project site will be carefully selected with MNDNR fisheries biologists and managers, but will be located in one of the important steelhead rivers in western St. Louis County or eastern Lake County. Site selection, initial survey work, site planning, design and permitting will begin following a July 2012 appropriation. Installation of woody cover, rock veining, and other fish habitat enhancement work will begin in 2013 or 2014. Tree planting and project wrap-up will take place the spring following in-stream work. This will be a collaborative effort between Minnesota Trout Unlimited and the MNDNR. Trout Unlimited members will volunteer substantial time and labor, along with

volunteers from the Lake Superior Steelhead Association and other conservation groups.

7B. Riparian tree planting

A second project will restore long lived tree species to approximately one mile of riparian corridor along one or more North Shore steelhead rivers. By planting a mix of larger potted and bare root trees the project should quickly begin providing shade and help reduce summer water temperatures.

This project will increase shade cover by planting a mixture of long lived tree species, both coniferous and deciduous, within the riparian corridor. Matting will be used to keep weed growth down, and trees caged to inhibit deer browsing losses.

Site selection, initial survey work, site planning, design and permitting will begin in 2012, following a July 2012 appropriation. Tree planting will take place in May and/or June in 2013 or 2014. This will be a collaborative effort between Minnesota Trout Unlimited and the MNDNR. Trout Unlimited members will volunteer substantial time and labor, along with volunteers from the LSSA and other conservation groups. We hope to engage local residents in the project and encourage interest and involvement in broader watershed protection efforts.

Hiawatha Chapter Projects:

8. East Indian Creek (Wabasha),
9. Mill Creek (Olmsted),
10. Camp Creek (Fillmore),

Habitat for naturally reproducing trout populations will be enhanced on each of three southeast Minnesota streams using the methods previously described in the "Agricultural area example" above. A total of approximately 2.5 miles of in-stream habitat and stream banks will be enhanced beginning in the 2013 field work season. By leveraging additional funds we hope to complete additional mileage with no additional OHF dollars. Pre-project survey, design and project permitting work will begin in 2012, following a July 2012 appropriation. All projects will consist of sloping and stabilizing stream banks, installing overhead cover for trout, installing erosion prevention measures, and re-vegetating exposed stream banks, including with native prairie species, where appropriate and feasible.

All three projects are designed to reduce stream bank erosion and associated sedimentation downstream, reconnect the streams to their floodplains, increase cover (including wintering cover for large trout), increase trout abundance, increase natural reproduction of trout and other aquatic organisms, increase habitat and biodiversity for both invertebrates and other non-game species, increase energy inputs via beneficial sunlight, and increase quality trout angling opportunities.

*The budget estimates for each category are very rough estimates only. The relative amount of excavation equipment work (contracts) versus rock costs (supplies/materials) varies by project site conditions and is very hard to estimate before final design. The projects will be completed within the overall budget estimates, despite the various budget categories being higher or lower than estimated at this time. Some in-state travel expenses (mileage) currently anticipated to be paid under the contract category to consultants could be reimbursed to employees if the tasks requiring this travel are performed by employees versus consultants. Funds expended under the "contracts" category are for contracted excavation, implementation oversight and project management services, and some contracted labor, for in-stream and riparian habitat work, including tree removal, excavation of streamside sediments, grading of stream banks, placement of rock and wooden habitat structures, seeding riparian corridors to grasses, planting trees, removing and/or installing fencing, application of chemicals for removal or control of

invasive fish and plant species, mowing and controlled burning to establish and/or maintain grassy riparian corridors and other activities identified in the funding request.

** "Anticipated cash leverage" figures in the budget spreadsheet are estimates only of funding which MNTU will pursue. These figures do not include volunteer labor.

Cook County stream location not finalized; a high priority stream will be determined in consultation with the MNDNR. North Shore stream location not finalized; a high priority stream will be determined in consultation with the MNDNR.

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

- H2 Protect critical shoreland of streams and lakes
- H3 Improve connectivity and access to recreation
- H6 Protect and restore critical in-water habitat of lakes and streams
- H7 Keep water on the landscape

Which other plans are addressed in this program:

- Driftless Area Restoration Effort
- Long Range Plan for Fisheries Management
- State Comprehensive Outdoor Recreation Plan
- Strategic Plan for Coldwater Resources Management in Southeastern Minnesota
- Tomorrow's Habitat for the Wild and Rare
- U.S. Fish and Wildlife Service Strategic Habitat Conservation Model
- Minnesota's Nonpoint Source Management Program Plan 2008

Which LSOHC state-wide priorities are addressed in this program:

- Address conservation opportunities that will be lost if not immediately acted on
- Address wildlife species of greatest conservation need, Minnesota County Biological Survey data, and rare, threatened and endangered species inventories in land and water decisions, as well as permanent solutions to aquatic invasive species
- Allow public access. This comes into play when all other things about the request are approximately equal
- Are able to leverage effort and/or other funds to supplement any OHF appropriation
- Are ongoing, successful, transparent and accountable programs addressing actions and targets of one or more of the ecological sections
- Ensures activities for "protecting, restoring and enhancing" are coordinated among agencies, non profits and others while doing this important work
- Produce multiple enduring conservation benefits
- Provide Minnesotans with greater public access to outdoor environments with hunting, fishing and other outdoor recreation opportunities
- Restore or enhance habitat on state-owned WMAs, AMAs, SNAs, and state forests
- Target unique Minnesota landscapes that have historical value to fish and wildlife
- Use a science-based strategic planning and evaluation model to guide protection, restoration and enhancement, similar to the United States Fish and Wildlife Service's Strategic Habitat Conservation model

Which LSOHC section priorities are addressed in this program:

Metro / Urban:

- Protect habitat corridors, with emphasis on the Minnesota, Mississippi, and St. Croix rivers (bluff to floodplain)
- 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

Describe the relationship of the funds:

Not Listed

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

Funds appropriated for this program will supplement the cash and in-kind resources typically raised by MNTU and its chapters to support similar projects. This additional habitat enhancement work represents a significant increase in the amount of local projects over several years ago, but our local members have increased their volunteer labor and the projects are within the range of habitat projects managed by Trout Unlimited as an organization.

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 longterm ecological and hydraulic stability. Once the in-stream projects are completed and riparian vegetation reestablished, we do not anticipate that there will be any significant maintenance required in order to sustain the habitat outcomes for at least several decades. 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 unlikely 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. Vegetation should be well established before the end of the funding period, and require minimal human intervention thereafter. Trout Unlimited volunteers will provide long-term monitoring and periodic labor as needed.

Activity Details:

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

Is the activity on permanently protected land per 97A.056, subd 13(f) and/or public waters per MS 103G.005, Subd. 15 - **Yes (AMA, Public Waters, State Forests, National forest)**

Accomplishment Timeline:

Activity	Approximate Date Completed
On all projects planning, survey, project design, and permitting work will begin in 2012 following receipt of the grant agreement.	Begin Fall 2012
Unless where noted in the narrative, fieldwork will begin on projects in summer 2013 - Begin habitat enhancements	2013 fieldwork season
Complete riparian and in-stream habitat enhancements, unless as noted in the narrative. - Complete riparian and instream habit enhancements	June 2017
Continue management of vegetation in riparian corridors of streams in Metropolitan Urbanizing Area and Southeast Forest Sections - Complete measures necessary to firmly establish desirable vegetation in riparian corridors	June 2017

Date of Final Report Submission: 11/1/2017

Federal Funding:

Do you anticipate federal funds as a match for this program - **Not Listed**

Outcomes:

Programs in the northern forest region:

- Increased angling opportunities along approximately 7 miles of public water which will draw increased use and enjoyment by anglers.

Programs in metropolitan urbanizing region:

- Increased natural reproduction of trout. Increases in the overall trout population in project reaches.

Programs in southeast forest region:

- Reduction in stream bank erosion in project reaches and reduced sedimentation downstream. Reduced negative resource impacts from flooding.

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

Not Listed

Total Amount of Request: \$ 2120000

Budget and Cash Leverage

Budget Name	LSOHC Request	Anticipated Leverage	Leverage Source	Total
Personnel	\$105,000	\$0		\$105,000
Contracts	\$998,500	\$0		\$998,500
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	\$3,000	\$0		\$3,000
Professional Services	\$348,500	\$0		\$348,500
Direct Support Services	\$0	\$0		\$0
DNR Land Acquisition Costs	\$0	\$0		\$0
Capital Equipment	\$1,200	\$0		\$1,200
Other Equipment/Tools	\$2,000	\$0		\$2,000
Supplies/Materials	\$621,800	\$0		\$621,800
DNR IDP	\$40,000	\$0		\$40,000
Total	\$2,120,000	\$0		\$2,120,000

Personnel

Position	FTE	Over # of years	LSOHC Request	Anticipated Leverage	Leverage Source	Total
Manager of Programs	0.40	0.00	\$60,000	\$0		\$60,000
Program assistant	0.20	0.00	\$30,000	\$0		\$30,000
Watershed director	0.10	0.00	\$15,000	\$0		\$15,000
Total	0.70	0.00	\$105,000	\$0		\$105,000

Capital Equipment

Item Name	LSOHC Request	Anticipated Leverage	Leverage Source	Total
Auto mated pump and dispenser of detoxification chemicals for lakes	\$1,200	\$0		\$1,200
Total	\$1,200	\$0		\$1,200

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	388	388
Total	0	0	0	388	388

Table 2. Total 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	\$2,120,000	\$2,120,000
Total	\$0	\$0	\$0	\$2,120,000	\$2,120,000

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	144	0	65	0	179	388
Total	144	0	65	0	179	388

Table 4. Total 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	\$40,000	\$0	\$1,898,000	\$0	\$182,000	\$2,120,000
Total	\$40,000	\$0	\$1,898,000	\$0	\$182,000	\$2,120,000

Target Lake/Stream/River Feet or Miles

6.8

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

Cook

Name	TRDS	Acres	Est Cost	Existing Protection?
North Shady Lake	06402221	35	\$0	
Trout Lakes	06202205	0	\$0	Yes
Trout Lakes	06202207	0	\$0	Yes
Trout Lakes	06202208	0	\$0	Yes
Trout Lakes	06202217	0	\$0	Yes

Dakota

Name	TRDS	Acres	Est Cost	Existing Protection?
South Creek-Vermillion	11420233	0	\$0	Yes

Fillmore

Name	TRDS	Acres	Est Cost	Existing Protection?
Camp Creek	10210205	0	\$0	Yes

Goodhue

Name	TRDS	Acres	Est Cost	Existing Protection?
Hay Creek	11215223	0	\$0	Yes
Hay Creek	11215224	0	\$0	Yes

Lake

Name	TRDS	Acres	Est Cost	Existing Protection?
Beetle Lake	06009207	26	\$0	
Redskin Lake	06008235	43	\$0	

Olmsted

Name	TRDS	Acres	Est Cost	Existing Protection?
Mill Creek	10512225	0	\$0	Yes

Wabasha

Name	TRDS	Acres	Est Cost	Existing Protection?
East Indian Creek	10910228	0	\$0	Yes

Winona

Name	TRDS	Acres	Est Cost	Existing Protection?
Garvin Brook	10608204	0	\$0	Yes
Garvin Brook	10608205	0	\$0	Yes
Garvin Brook	10608208	0	\$0	Yes
Pine Creek	10508232	0	\$0	Yes
Pine Creek	10508233	0	\$0	Yes

Section 2 - Protect Parcel List

No parcels with an activity type protect.

Section 2a - Protect Parcel with Bldgs

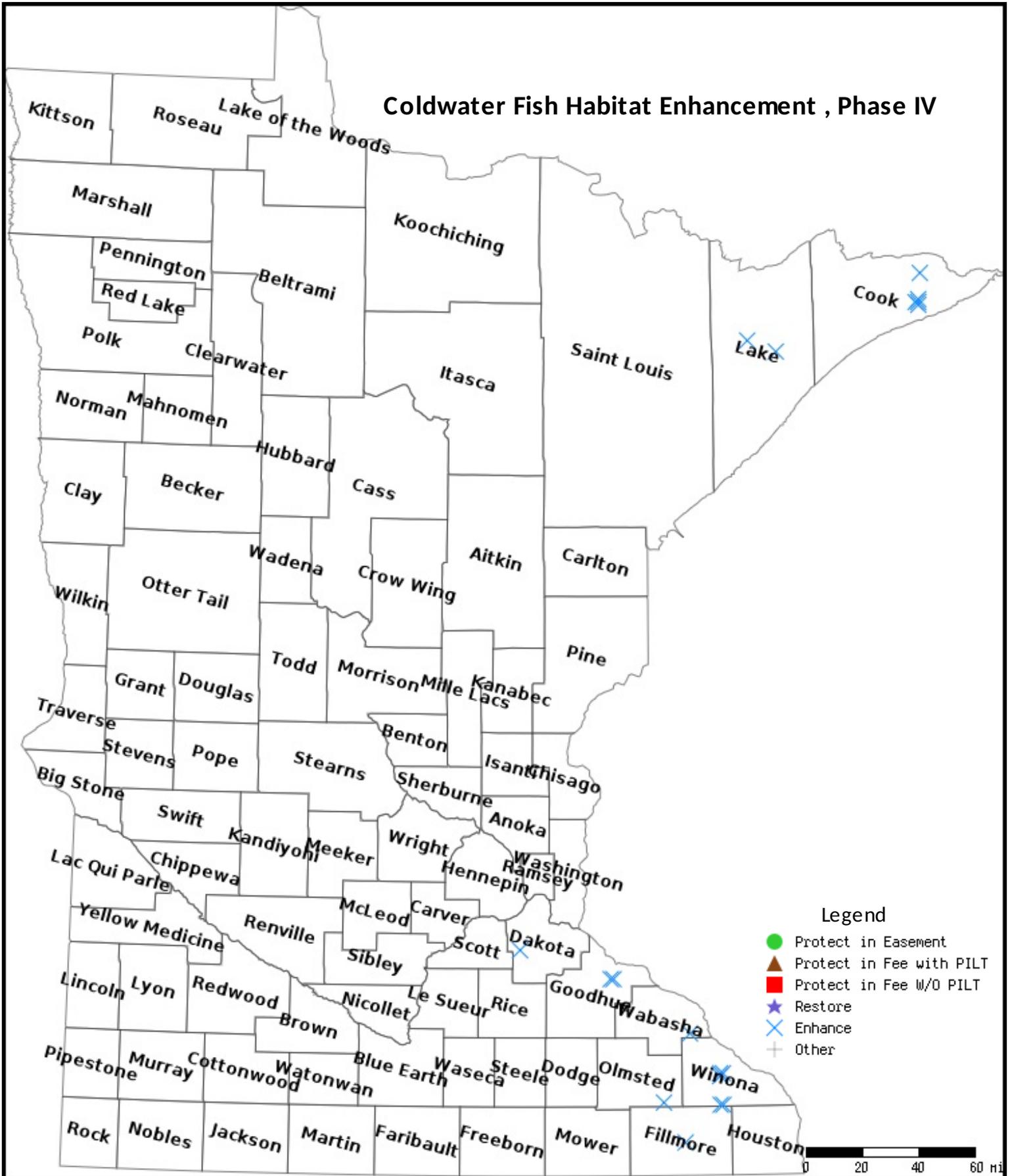
No parcels with an activity type protect and has buildings.

Section 3 - Other Parcel Activity

No parcels with an other activity type.

Parcel Map

Coldwater Fish Habitat Enhancement , Phase IV



Data Generated From Parcel List