

Lessard-Sams Outdoor Heritage Council

Laws of Minnesota 2014 Accomplishment Plan

Date: October 23, 2013

Program or Project Title: Minnesota Trout Unlimited Coldwater Fish Habitat Enhancement & Restoration

Funds Recommended: \$ 1,900,000

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Legislative Citation:

Appropriation Language:

County Locations: Becker, Carlton, Cook, Dakota, Fillmore, Goodhue, Lake, and Wabasha.

Ecological Planning Regions:

- Metro / Urban
- Northern Forest
- Southeast Forest

Activity Type:

- Enhance

Priority Resources Addressed by Activity:

- Habitat

Abstract:

Minnesota Trout Unlimited and its volunteers, chapters and partners will directly enhance habitat for fish, game and wildlife in and along twelve coldwater streams located on existing Aquatic Management Areas and other existing public lands around the state.

Design and Scope of Work:

The problem being addressed.

Minnesota's remaining coldwater streams are popular with anglers and valued by citizens because, while they represent just six percent of our total miles of streams and rivers, they are the highest quality aquatic systems remaining. Degraded habitat in and along coldwater streams is, therefore, 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 twelve or more priority streams located on existing AMAs and public land around the state. Our members have demonstrated the capacity to

complete these projects with Fiscal Year 2015 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. Spring Creek (Goodhue)
2. Vermillion River (Dakota)
3. East Indian Creek (Wabasha)
4. Lynch Creek (Fillmore)
5. Spring Valley Creek (Fillmore)
6. Trout Run Creek (Fillmore)
7. Blackhoof River (Carlton)
8. French River (St. Louis)
9. Kadunce River (Cook)
10. Little Devil Track River (Cook)
11. Stewart River (Lake)
12. Straight River (Becker)

Individual project descriptions are provided in an attachment. Construction efficiencies and leveraged funding may permit additional work on Cold Spring Brook (Wabasha) and/or Lost Creek (Fillmore).

Goals and scope of work.

The goal of each project is 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 2015 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: Projects will accomplish 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. Some projects build upon previous work in neighboring segments to collectively boost the overall fishery, while others are the first project on a stream and can significantly boost spawning success by providing scarce cover for adult trout and improved spawning habitat. Some projects are in locales with limited opportunities for quality coldwater angling. 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 local residents in conservation, foster partnerships, and increase public support for OHF projects.

Urgent conservation opportunities.

The targeted stream segments are no longer providing habitat or 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. Without immediate action, Minnesota will lose these myriad benefits, as well as the substantial economic benefits the projects generate.

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.

Budget numbers are estimates only. Through construction efficiencies and leveraging substantial federal and private monies we expect to lengthen projects and even improve additional streams.

Planning:

MN State-wide Conservation Plan Priorities:

- 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

Plans Addressed:

- Driftless Area Restoration Effort
- Long Range Plan for Fisheries Management
- National Fish Habitat Action Plan
- Outdoor Heritage Fund: A 25 Year Framework
- State Comprehensive Outdoor Recreation Plan
- Strategic Plan for Coldwater Resources Management in Southeastern Minnesota
- Tomorrow's Habitat for the Wild and Rare

- Asian Carp Action Plan

LSOHC Statewide Priorities:

- Address Minnesota landscapes that have historical value to fish and wildlife, 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 long-term or permanent solutions to aquatic invasive species
- Are ongoing, successful, transparent and accountable programs addressing actions and targets of one or more of the ecological sections
- Attempts to ensure conservation benefits are broadly distributed across the LSOHC sections
- Ensures activities for "protecting, restoring and enhancing" are coordinated among agencies, non profits and others while doing this important work; provides the most cost-effective use of financial resources; and where possible takes into consideration the value of local outreach, education, and community engagement to sustain project outcomes
- Leverage effort and/or other funds to supplement any OHF appropriation
- 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 permanently protected land
- 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

LSOHC Metro Urban Section Priorities:

- Enhance and restore coldwater fisheries systems

LSOHC Northern Forest Section Priorities:

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

LSOHC Southeast Forest Section Priorities:

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

Relationship to Other Constitutional Funds:

- No Relationships Listed

Accelerates or Supplements Current Efforts:

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. While our members and chapters have been planning, fundraising for and executing quality fish habitat restoration and enhancement projects around Minnesota for four decades, our partnership with the L-SOHC has dramatically increased the amount of degraded habitat we are restoring and enhancing for all Minnesotans.

While members play vital roles in planning, designing, overseeing, directing and providing manual labor on what are essentially construction projects, we must hire excavation contractors and purchase rock, lumber and other materials put into the project sites. 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. 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 have developed, and continue expanding, a pool of qualified external contractors and consultants to assist with critical tasks.

Sustainability and Maintenance:

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 at least several decades. The sloped streambanks allow floodwaters to quickly spread out into the re-connected floodplain and dissipate energy, reducing the destructive impact of a flood. Flood waters typically flatten grasses temporarily and do not damage the in-stream structures and undercut banks. A tenfold increase in trout populations and three fold increase in large trout are common following completion of a southeast Minnesota project, and these gains 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 provide long-term monitoring and periodic labor.

Permanent Protection:

Is the activity on permanently protected land and/or public waters per MS 103G.005, Subd. 15? - Yes (WMA, AMA, County/Municipal, Public Waters, State Forests, National Forests)

Accomplishment Timeline

Activity	Approximate Date Completed
Begin project planning, design, and permitting work following a July 2014 appropriation	begin July 2014
Begin habitat enhancements during 2015 fieldwork season, following completion of design, permits and contracting.	2015 fieldwork season
Complete riparian and in-stream habitat enhancements.	October 2017
Cutting, burning and/or spot spraying vegetation to ensure grasses become well established.	Summers 2017 & 2018
Tree painting in riparian corridors of northern project sites in May-June following in-stream work	By June 2017

Outcomes

Programs in the northern forest region:

- Improved aquatic habitat indicators *Fish, macro invertebrate and/or substrate surveys*

Programs in metropolitan urbanizing region:

- A network of natural land and riparian habitats will connect corridors for wildlife and species in greatest conservation need *Connection to adjoining parcels*
- Improved aquatic habitat indicators *Fish, macro invertebrate and/or substrate surveys*

Programs in southeast forest region:

- Rivers, streams, and surrounding vegetation provide corridors of habitat *Fish, macro invertebrate and/or substrate surveys*

Budget Spreadsheet

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

Total Amount of Request: \$ 1900000

Budget and Cash Leverage

Budget Name	LSOHC Request	Anticipated Leverage	Leverage Source	Total
Personnel	\$90,000	\$0		\$90,000
Contracts	\$975,000	\$70,000	SWCDs; watershed JPO	\$1,045,000
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	\$20,000	\$0		\$20,000
Professional Services	\$314,000	\$100,000	SWCDs; watershed JPO	\$414,000
Direct Support Services	\$0	\$0		\$0
DNR Land Acquisition Costs	\$0	\$0		\$0
Capital Equipment	\$0	\$0		\$0
Other Equipment/Tools	\$0	\$0		\$0
Supplies/Materials	\$501,000	\$30,000	SWCDs; watershed JPO	\$531,000
DNR IDP	\$0	\$0		\$0
Total	\$1,900,000	\$200,000		\$2,100,000

Personnel

Position	FTE	Over # of years	LSOHC Request	Anticipated Leverage	Leverage Source	Total
Program manager	0.40	2.00	\$55,000	\$0		\$55,000
Watershed director	0.10	2.00	\$10,000	\$0		\$10,000
Program assistant	0.25	2.00	\$25,000	\$0		\$25,000
Total	0.75	6.00	\$90,000	\$0		\$90,000

Output Tables

Table 1. 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	109	109
Total	0	0	0	109	109

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	\$1,900,000	\$1,900,000
Total	\$0	\$0	\$0	\$1,900,000	\$1,900,000

Table 3. Acres within each Ecological Section

Type	Metro Urban	Forest Prairie	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	23	0	48	0	38	109
Total	23	0	48	0	38	109

Table 4. Total Requested Funding within each Ecological Section

Type	Metro Urban	Forest Prairie	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	\$210,000	\$0	\$1,100,000	\$0	\$590,000	\$1,900,000
Total	\$210,000	\$0	\$1,100,000	\$0	\$590,000	\$1,900,000

Table 5. Target Lake/Stream/River Miles

8 miles

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

Becker

Name	TRDS	Acres	Est Cost	Existing Protection?
Straight River	14036233	6	\$0	Yes

Carlton

Name	TRDS	Acres	Est Cost	Existing Protection?
Blackhoof River	04717222	6	\$0	Yes

Cook

Name	TRDS	Acres	Est Cost	Existing Protection?
Kadunce River	06102102	3	\$0	Yes
Little Devil Track River	06101107	3	\$0	yes

Dakota

Name	TRDS	Acres	Est Cost	Existing Protection?
Vermillion River	11420236	23	\$0	Yes

Fillmore

Name	TRDS	Acres	Est Cost	Existing Protection?
Lynch Creek	10411211	8	\$0	Yes
Spring Valley Creek	10312218	12	\$0	Yes
Trout Run Creek	10410204	9	\$0	Yes

Goodhue

Name	TRDS	Acres	Est Cost	Existing Protection?
Spring Creek	11215207	7	\$0	yes

Lake

Name	TRDS	Acres	Est Cost	Existing Protection?
French River	05112207	3	\$0	Yes
Stewart River	05310219	17	\$0	Yes

Wabasha

Name	TRDS	Acres	Est Cost	Existing Protection?
East Indian Creek	10909221	12	\$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.