Lessard-Sams Outdoor Heritage Council

Minnesota Trout Unlimited Coldwater Fish Habitat Enhancement and Restoration, Phase 10
Laws of Minnesota 2018 Final Report

General Information

Date: 09/07/2023

Project Title: Minnesota Trout Unlimited Coldwater Fish Habitat Enhancement and Restoration, Phase 10

Funds Recommended: $2,291,000

Legislative Citation: ML 2018, Ch. 208, Art. 1, Sec. 2, subd 5(h)

Appropriation Language: $2,291,000 the second year is to the commissioner of natural resources for an agreement with Minnesota Trout Unlimited to acquire permanent conservation stream easements using the payment method prescribed in Minnesota Statutes, section 84.0272, subdivision 2, and to restore and enhance habitat for trout and other species in and along coldwater rivers, lakes, and streams in Minnesota. Up to $20,000 is for establishing a monitoring and enforcement fund as approved in the accomplishment plan and subject to Minnesota Statutes, section 97A.056, subdivision 17. A list of proposed land acquisitions and restorations and enhancements must be provided as part of the required accomplishment plan.

Manager Information

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Location Information

County Location(s): Winona, Houston, Fillmore, Olmsted and Goodhue.

Eco regions in which work will take place:

- Southeast Forest

Activity types:

- Protect in Easement
- Restore

- Enhance

Priority resources addressed by activity:

- Habitat

Narrative

Summary of Accomplishments

Minnesota Trout Unlimited and its partners, chapters, and volunteers enhanced habitat for trout, as well as other fish, game and wildlife, in or along more than 9 miles of coldwater streams around the state. We adapting to challenging conditions caused by the pandemic by shifting budget from small projects using hand labor (which was largely unavailable for the past 3 years) to very large scale projects utilizing heavy machinery and extensive habitat materials.

Process & Methods

We enhanced habitat on 11 different stream reaches. The scope of work varied to match the site conditions, watershed characteristics, and address the specific population limiting factors.

Severely degraded or unstable stream sections received comprehensive, large-scale habitat enhancements to restore stream function and in-stream trout habitat. These included intensive projects on the South Branch Whitewater River near St. Charles, Wisel Creek near Harmony, Pine Creek near Nodine, Hay Creek near Red Wing, Beaver Creek west of Caledonia, and Winnebago Creek southeast of Caledonia. These projects required extensive grading and modification of stream channel patterns to create habitat-filled, stable channels and restored floodplains.

The COVID-19 pandemic disrupted labor availability and prevented implementation of smaller scale projects around the state. We adapted by shifting resources to larger scale projects in southeast Minnesota. Comprehensive habitat enhancement could be, and was, completed on these streams because they required less DNR involvement and did not rely on extensive hand labor. We had originally planned to complete several with later phases of funding, but we accelerated implementation of them to ensure that all Phase 10 funding would be utilized creating high quality habitat within the grant period.

In southeast Minnesota, we also completed 4 miles of work along Badger Creek, Gribben Creek, Mill Creek, and the South Fork of the Root River. These project sites had cold water temperatures and decent in-stream habitat but suffered from the negative effects of dense corridors of buckthorn, boxelder and other invasives. Here significant habitat gains were realized by removing these invasive trees and shrubs, which do a poor job holding streambanks. We removed invasive trees and shrubs and seeded corridors with grasses and forbs. This allows native grasses and forbs, which better secure soils, to become reestablished and lets beneficial sunlight reach the stream beds and boost stream productivity.

Although we could not implement the small-scale projects in the northern forested areas due to labor disruptions, by pivoting to southeast Minnesota we completed more large-scale projects than originally planned.

How did the program address habitats of significant value for wildlife species of greatest conservation need, threatened or endangered species, and/or list targeted species?

The projects enhanced degraded habitat for fish and wildlife in and along 9 miles of coldwater streams and rivers which historically supported naturally reproducing trout populations that are highly valued by anglers. While

trout are the apex predator and key indicator species in coldwater systems, a host of rare aquatic and riparian species uniquely associated with these systems also benefited from the habitat work. The enhanced habitat will also provide great recreational opportunities for anglers and citizens.

How did the program use science-based targeting that leveraged or expanded corridors and complexes, reduced fragmentation, or protected areas in the MN County Biological Survey.

MNTU reviews DNR watershed specific fisheries management plans and other conservation planning efforts, consults with DNR area managers, and applies ranking criteria developed by the DNR. Projects must have the potential to increase the carrying capacity (fish numbers), the streams must have natural reproduction, and the sites must be accessible by the public. Improving the connectivity of good aquatic and riparian habitat is an important consideration. The projects selected expanded or connected gaps in these riparian corridors, reducing fragmentation.

Explain Partners, Supporters, & Opposition

The MNDNR provided valuable input and support on every project, and were a major partner on several. We partnered with MNDNR Wildlife Section and Forestry Division on the South Fork of the Root River, Gribben Creek, and Badger Creek projects to enhance in-stream and riparian habitat, but also improved forest health. We also partnered with MNDNR Wildlife Section to improve habitat in a large riparian WMA along the South Fork of the Root River. We encountered no opposition to these projects, but frequently encountered anglers who were very happy with the results.

Exceptional challenges, expectations, failures, opportunities, or unique aspects of program

The COVID-19 pandemic caused major disruptions: contractors had difficulty with employee travel, completing hand labor, and obtaining supplies of rock, materials, and replacement parts for equipment break downs. Restrictions on employees of the DNR and other partners hampered planning, design, and permitting. In northern Minnesota, work crews were largely unavailable for manual work and treatment of riparian vegetation. The cascading effects of COVID-19 disruptions, including in supply chains, limited our ability to secure alternative sources of labor, trees, and caging materials essential for northern Minnesota projects for three years. However, since work along streams in southeast Minnesota could be accomplished with heavy machinery rather than hand labor, we accelerated habitat work there. These larger scale projects cost significantly more per acre than the smaller projects using hand labor that we originally proposed. As a result we completed fewer acres overall than originally targeted, but more acres of large-scale habitat enhancement.

What other dedicated funds may collaborate with or contribute to this program?

- Clean Water Fund
- Parks and Trails Fund

How were the funds used to advance the program?

What is the plan to sustain and/or maintain this work after the Outdoor Heritage Funds are expended?

Construction contracts included 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 to sustain the habitat outcomes for many years. However, we anticipate that long-term monitoring of the integrity

of the improvements will be done every three years in conjunction with routine inspections and biological monitoring conducted by local MNDNR staff and MNTU members as appropriate.

Actions to Maintain Project Outcomes

Year	Source of Funds	Step 1	Step 2	Step 3
1 to 3 years after the grant ends	MNDNR base and MNTU volunteers	Inspect structural elements and vegetation.	If needed, develop action plan with DNR.	Conduct maintenance with volunteers.
Every 3 years thereafter	MNDNR base and MNTU volunteers	Inspect structural elements and vegetation.	If needed, develop action plan with DNR.	Perform or assist DNR with maintenance if needed.

Budget

Totals

Item	Requested	AP Amount	Spent	Leverage	Received Leverage	Leverage Source	Original Total	Final Total
Personnel	$90,000	$180,000	$116,100	-	-	-	$90,000	$116,100
Contracts	$981,000	$881,000	$947,600	$350,000	$103,800	NRCS, DNR	$1,331,000	$1,051,400
Fee Acquisition w/ PILT	-	-	-	-	-	-	-	-
Fee Acquisition w/o PILT	-	-	-	-	-	-	-	-
Easement Acquisition	$190,000	$190,000	-	-	-	-	$190,000	-
Easement Stewardship	$20,000	$20,000	-	-	-	-	$20,000	-
Travel	$10,000	$20,000	$5,200	-	-	-	$10,000	$5,200
Professional Services	$340,000	$340,000	$246,500	-	-	-	$340,000	$246,500
Direct Support Services	$24,000	$24,000	$24,000	$24,000	$27,000	TU	$48,000	$51,000
DNR Land Acquisition Costs	-	-	-	-	-	-	-	-
Capital Equipment	-	-	-	-	-	-	-	-
Other Equipment/Tools	$20,000	$20,000	-	-	-	-	$20,000	-
Supplies/Materials	$616,000	$616,000	$673,600	$500,000	$100,000	NRCS, DNR	$1,116,000	$773,600
DNR IDP	-	-	-	-	-	-	-	-
Grand Total	**$2,291,000**	**$2,291,000**	**$2,013,000**	**$874,000**	**$230,800**	**-**	**$3,165,000**	**$2,243,800**

Personnel

Position	Annual FTE	Years Working	Amount Spent	Leverage	Leverage Source	Total
Program manager	0.4	3.0	$23,700	-	-	$23,700
Watershed coordinator	0.1	3.0	$8,000	-	-	$8,000
Enhancement program staff	0.25	3.0	$84,400	-	-	$84,400
Field work interns	0.2	3.0	-	-	-	-

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 is based upon staffing costs only, including personnel, travel of personnel, and professional services (performing work that TU staff would otherwise have to do). The Direct Support Services requested represents a portion of Trout Unlimited's federal rate, which is approved annually. Trout Unlimited donated the other portion.

Explain any budget challenges or successes:

Although prices increased in the economy during the last 3 years, we continued to secure good prices for construction and professional services. This was due to our maintaining competitive bidding processes. When crews providing hand labor became unavailable due to pandemic disruptions, we shifted funding to larger scale projects that utilize heavy equipment. These larger scale projects cost significantly more per acre than smaller scale projects using hand labor. As a result we completed fewer acres than originally targeted. But we completed more acres of large-scale habitat work than proposed. The dollars earmarked for protection efforts were not spent.

Total Revenue: $0

Revenue Spent: $0

Revenue Balance: $0

Of the money disclosed above, what are the appropriate uses of the money:

- E. This is not applicable as there was no revenue generated.

Output Tables

Acres by Resource Type (Table 1)

Type	Wetland (AP)	Wetland (Final)	Prairie (AP)	Prairie (Final)	Forest (AP)	Forest (Final)	Habitat (AP)	Habitat (Final)	Total Acres (AP)	Total Acres (Final)
Restore	0	0	0	0	0	0	0	0	0	0
Protect in Fee with State PILT Liability	0	0	0	0	0	0	0	0	0	0
Protect in Fee w/o State PILT Liability	0	0	0	0	0	0	0	0	0	0
Protect in Easement	0	0	0	0	0	0	73	0	73	0
Enhance	0	0	0	0	0	0	167	119	167	119
Total	**0**	**0**	**0**	**0**	**0**	**0**	**240**	**119**	**240**	**119**

Total Requested Funding by Resource Type (Table 2)

Type	Wetland (AP)	Wetland (Final)	Prairie (AP)	Prairie (Final)	Forest (AP)	Forest (Final)	Habitat (AP)	Habitat (Final)	Total Funding (AP)	Total Funding (Final)
Restore	-	-	-	-	-	-	-	-	-	-
Protect in Fee with State PILT Liability	-	-	-	-	-	-	-	-	-	-
Protect in Fee w/o State PILT Liability	-	-	-	-	-	-	-	-	-	-
Protect in Easement	-	-	-	-	-	-	$278,000	-	$278,000	-
Enhance	-	-	-	-	-	-	$2,013,000	$2,013,000	$2,013,000	$2,013,000
Total	**-**	**-**	**-**	**-**	**-**	**-**	**$2,291,000**	**$2,013,000**	**$2,291,000**	**$2,013,000**

Acres within each Ecological Section (Table 3)

Type	Metro / Urban (AP)	Metro / Urban (Final)	Forest / Prairie (AP)	Forest / Prairie (Final)	SE Forest (AP)	SE Forest (Final)	Prairie (AP)	Prairie (Final)	N. Forest (AP)	N. Forest (Final)	Total (AP)	Total (Final)
Restore	0	0	0	0	0	0	0	0	0	0	0	0
Protect in Fee with State PILT Liability	0	0	0	0	0	0	0	0	0	0	0	0
Protect in Fee w/o State PILT Liability	0	0	0	0	0	0	0	0	0	0	0	0
Protect in Easement	0	0	0	0	0	0	0	0	73	0	73	0
Enhance	9	0	0	0	94	119	0	0	64	0	167	119
Total	**9**	**0**	**0**	**0**	**94**	**119**	**0**	**0**	**137**	**0**	**240**	**119**

Total Requested Funding within each Ecological Section (Table 4)

Type	Metro/ Urban (AP)	Metro / Urban (Final)	Forest / Prairie (AP)	Forest / Prairie (Final)	SE Forest (AP)	SE Forest (Final)	Prairie (AP)	Prairie (Final)	N. Forest (AP)	N. Forest (Final)	Total (AP)	Total (Final)
Restore	-	-	-	-	-	-	-	-	-	-	-	-
Protect in Fee with State PILT Liability	-	-	-	-	-	-	-	-	-	-	-	-
Protect in Fee w/o State PILT Liability	-	-	-	-	-	-	-	-	-	-	-	-
Protect in Easement	-	-	-	-	-	-	-	-	$278,000	-	$278,000	-
Enhance	$398,000	-	-	-	$1,114,000	$2,013,000	-	-	$501,000	-	$2,013,000	$2,013,000
Total	**$398,000**	**-**	**-**	**-**	**$1,114,000**	**$2,013,000**	**-**	**-**	**$779,000**	**-**	**$2,291,000**	**$2,013,000**

Target Lake/Stream/River Feet or Miles

9.4

Outcomes

Programs in metropolitan urbanizing region:

- Improved aquatic habitat indicators ~

Programs in the northern forest region:

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

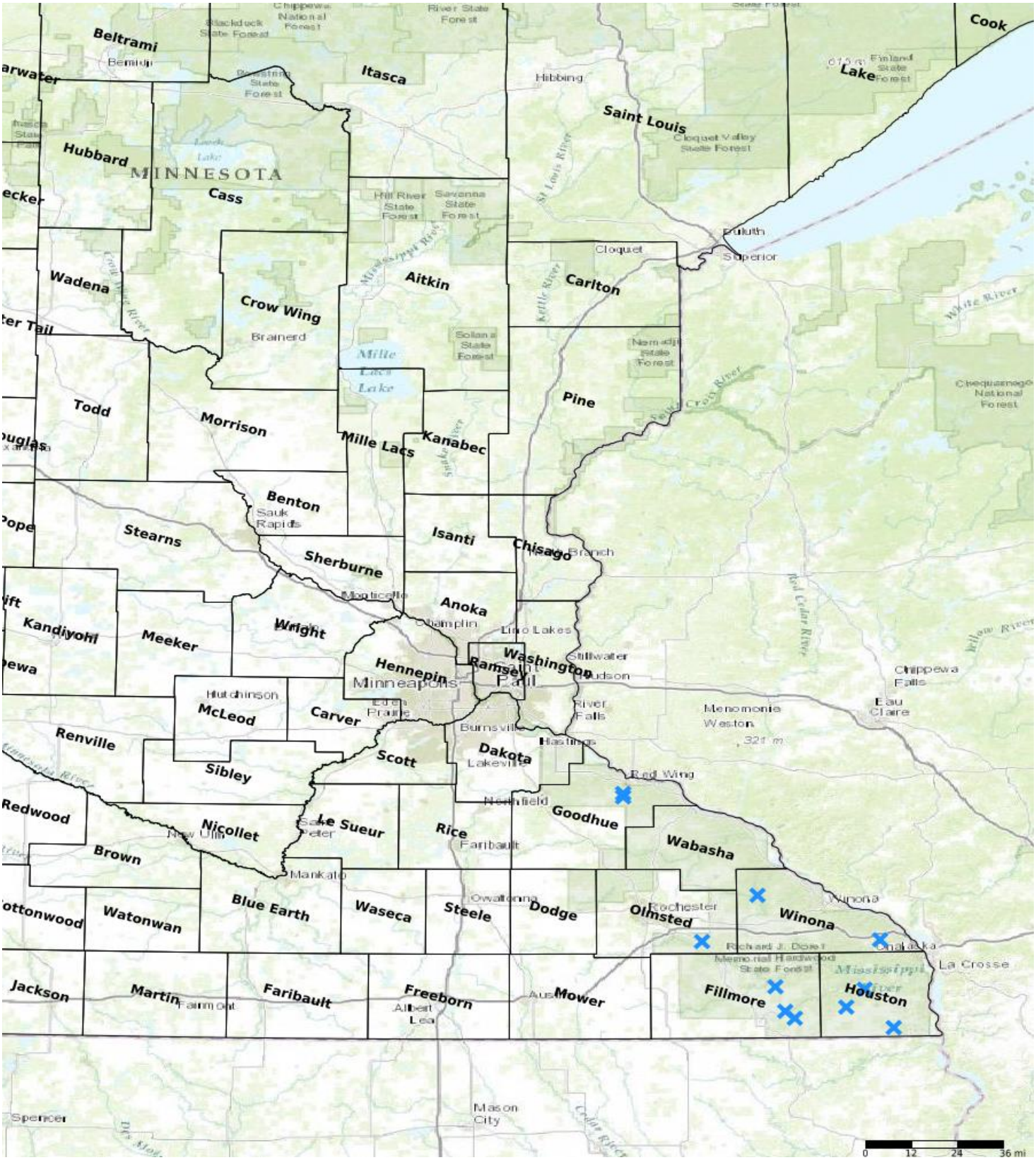
Parcels

Sign-up Criteria?
No

Restore / Enhance Parcels

Name	County	TRDS	Acres	Est Cost	Existing Protection
Wisel Creek	Fillmore	10108206	9	$395,100	Yes
So Fork Root River	Fillmore	10209226	28	$107,700	Yes
Gribben Creek	Fillmore	10309221	13	$65,700	Yes
Hay Creek	Goodhue	11215213	2	$92,100	Yes
Hay Creek	Goodhue	11215224	9	$90,600	Yes
Winnebago Creek	Houston	10105222	11	$541,800	Yes
Beaver Creek	Houston	10207224	6	$235,300	Yes
Badger Creek	Houston	10306227	9	$51,000	Yes
Mill Creek	Olmsted	10512214	5	$13,300	Yes
So. Branch Whitewater River	Winona	10710211	9	$186,500	Yes
Pine Cr. (New Hartford Cr.)	Winona	10505218	18	$233,900	Yes

Parcel Map



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