# Lessard-Sams Outdoor Heritage Council

Minnesota Trout Unlimited Coldwater Fish Habitat Enhancement, Phase 8

Laws of Minnesota 2016 Final Report

## General Information

**Date:** 09/07/2023

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

**Funds Recommended:** $1,975,000

**Legislative Citation:** ML 2016, Ch. 172, Art. 1, Sec. 2, Subd. 5(e )

**Appropriation Language:** $1,975,000 the second year is to the commissioner of natural resources for an agreement with Minnesota Trout Unlimited to restore or enhance habitat for trout and other species in and along cold water rivers, lakes, and streams in Minnesota. A list of proposed restorations and enhancements must be provided as part of the required accomplishment plan.

### Manager Information

**Manager's Name:** John Lenczewski
**Title:**
**Organization:** Minnesota Trout Unlimited
**Address:** P O Box 845
**City:** Chanhassen, MN 55317
**Email:** jlenczewski@comcast.net
**Office Number:**
**Mobile Number:** 612-670-1629
**Fax Number:**
**Website:** www.mntu.org

### Location Information

**County Location(s):** St. Louis, Scott, Wabasha and Fillmore.

**Eco regions in which work will take place:**

- Northern Forest
- Metro / Urban
- Southeast Forest

**Activity types:**

- 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 9 miles of coldwater streams around the state. We met our target for acres of enhanced habitat, by adapting to challenging conditions caused by the pandemic.

## Process & Methods

We enhanced habitat on seven different streams. 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 Keene Creek in Duluth, West Indian Creek near Plainview, and Wisel Creek south of Rushford. These projects required extensive grading and modification of stream channel patterns to create habitat-filled, stable channels and restored floodplains. The increased pool habitat created on Keene Creek is crucial to survival of native brook trout populations in northern Minnesota during critical low-water periods in late summer and winter.

The COVID-19 pandemic disrupted labor availability and prevented implementation of smaller scale projects around the state. However, we adapted and pivoted to other good habitat enhancement opportunities that could be completed with less DNR involvement and without crews using hand labor. Most of these opportunities were in southeast Minnesota.

In southeast Minnesota, we completed projects along approximately 6 miles of Diamond Creek, East Indian Creek and Trout Run Creek. These project sites had very 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 allowed native grasses and forbs, which better secure soils, to become reestablished and let beneficial sunlight reach the stream beds and boost stream productivity. Similarly, near Savage, Minnesota TU volunteers spent several Saturdays cutting buckthorn from 5 acres along Eagle Creek and facilitated prairie plantings along the riparian corridor.

By working with partners and tailoring the habitat enhancement methods to each project site we have maximized long term benefits to the wild trout populations at the lowest possible cost.

## 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. For example, the Wisel Creek project created habitat for four bird species which are species of special concern (see attachment for details). 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. The local Soil & Water Conservation District was a key partner on the Keene Creek project in northeast Minnesota. We partnered with MNDNR Forestry Division on Diamond Creek (Fillmore County) to enhance in-stream and riparian habitat, but also improved forest health. 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, but we adapted our work and completed other quality habitat projects and met our acreage targets. COVID-19 impacted projects in many ways. 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 more than two years 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. Since work along streams in southeast Minnesota can be accomplished with machinery rather than hand labor, we accelerated work there and enhanced habitat on a similar number of acres.

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

- N/A

## 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 | $75,000 | $150,000 | $151,300 | - | - | - | $75,000 | $151,300 |
| Contracts | $783,000 | $923,000 | $872,300 | $58,000 | $100,000 | NRCS | $841,000 | $972,300 |
| Fee Acquisition w/ PILT | - | - | - | - | - | - | - | - |
| Fee Acquisition w/o PILT | - | - | - | - | - | - | - | - |
| Easement Acquisition | - | - | - | - | - | - | - | - |
| Easement Stewardship | - | - | - | - | - | - | - | - |
| Travel | $5,000 | $8,000 | $7,200 | - | - | - | $5,000 | $7,200 |
| Professional Services | $437,000 | $237,000 | $234,000 | - | - | - | $437,000 | $234,000 |
| Direct Support Services | $15,000 | $15,000 | $15,000 | $15,000 | $42,400 | TU | $30,000 | $57,400 |
| DNR Land Acquisition Costs | - | - | - | - | - | - | - | - |
| Capital Equipment | - | - | - | - | - | - | - | - |
| Other Equipment/Tools | $20,000 | $2,000 | - | - | - | - | $20,000 | - |
| Supplies/Materials | $640,000 | $640,000 | $605,300 | $58,000 | $100,000 | NRCS | $698,000 | $705,300 |
| DNR IDP | - | - | - | - | - | - | - | - |
| **Grand Total** | **$1,975,000** | **$1,975,000** | **$1,885,100** | **$131,000** | **$242,400** | **-** | **$2,106,000** | **$2,127,500** |

## Personnel

| Position | Annual FTE | Years Working | Amount Spent | Leverage | Leverage Source | Total |
|---|---|---|---|---|---|---|
| Program staff | - | - | $96,000 | - | - | $96,000 |
| Program manager | 0.4 | 2.0 | $44,300 | - | - | $44,300 |
| Watershed coordinator | 0.1 | 2.0 | $11,000 | - | - | $11,000 |

## 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. Trout Unlimited donated the other portion.

**Explain any budget challenges or successes:**
We succeeded in securing good prices from contractor, which allowed us to meet our acreage targets. If the winter of 2022-23 had not been so mild we would have be able to utilize the remaining 4% of the grant to enhance more acres in southeast Minnesota.

**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 | 0 | 0 | 0 | 0 |
| Enhance | 0 | 0 | 0 | 0 | 0 | 0 | 123 | 123 | 123 | 123 |
| **Total** | **0** | **0** | **0** | **0** | **0** | **0** | **123** | **123** | **123** | **123** |

## 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 | - | - | - | - | - | - | - | - | - | - |
| Enhance | - | - | - | - | - | - | $1,975,000 | $1,885,100 | $1,975,000 | $1,885,100 |
| **Total** | **-** | **-** | **-** | **-** | **-** | **-** | **$1,975,000** | **$1,885,100** | **$1,975,000** | **$1,885,100** |

## 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 | 0 | 0 | 0 | 0 |
| Enhance | 2 | 5 | 4 | 0 | 83 | 115 | 0 | 0 | 34 | 3 | 123 | 123 |
| **Total** | **2** | **5** | **4** | **0** | **83** | **115** | **0** | **0** | **34** | **3** | **123** | **123** |

## 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 | - | - | - | - | - | - | - | - | - | - | - | - |
| Enhance | $65,000 | $14,800 | $70,000 | - | $1,085,000 | $1,504,200 | - | - | $755,000 | $366,100 | $1,975,000 | $1,885,100 |
| **Total** | **$65,000** | **$14,800** | **$70,000** | **-** | **$1,085,000** | **$1,504,200** | **-** | **-** | **$755,000** | **$366,100** | **$1,975,000** | **$1,885,100** |

## Target Lake/Stream/River Feet or Miles

9

# Outcomes

## Programs in forest-prairie transition region:

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

## Programs in metropolitan urbanizing 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 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 ~ *Enhancement of in-stream and riparian corridor habitat creates miles of connected habitat. Outcomes are further measured through surveys of fish and aquatic invertebrates. Abundance, size structure and species diversity are considered.*

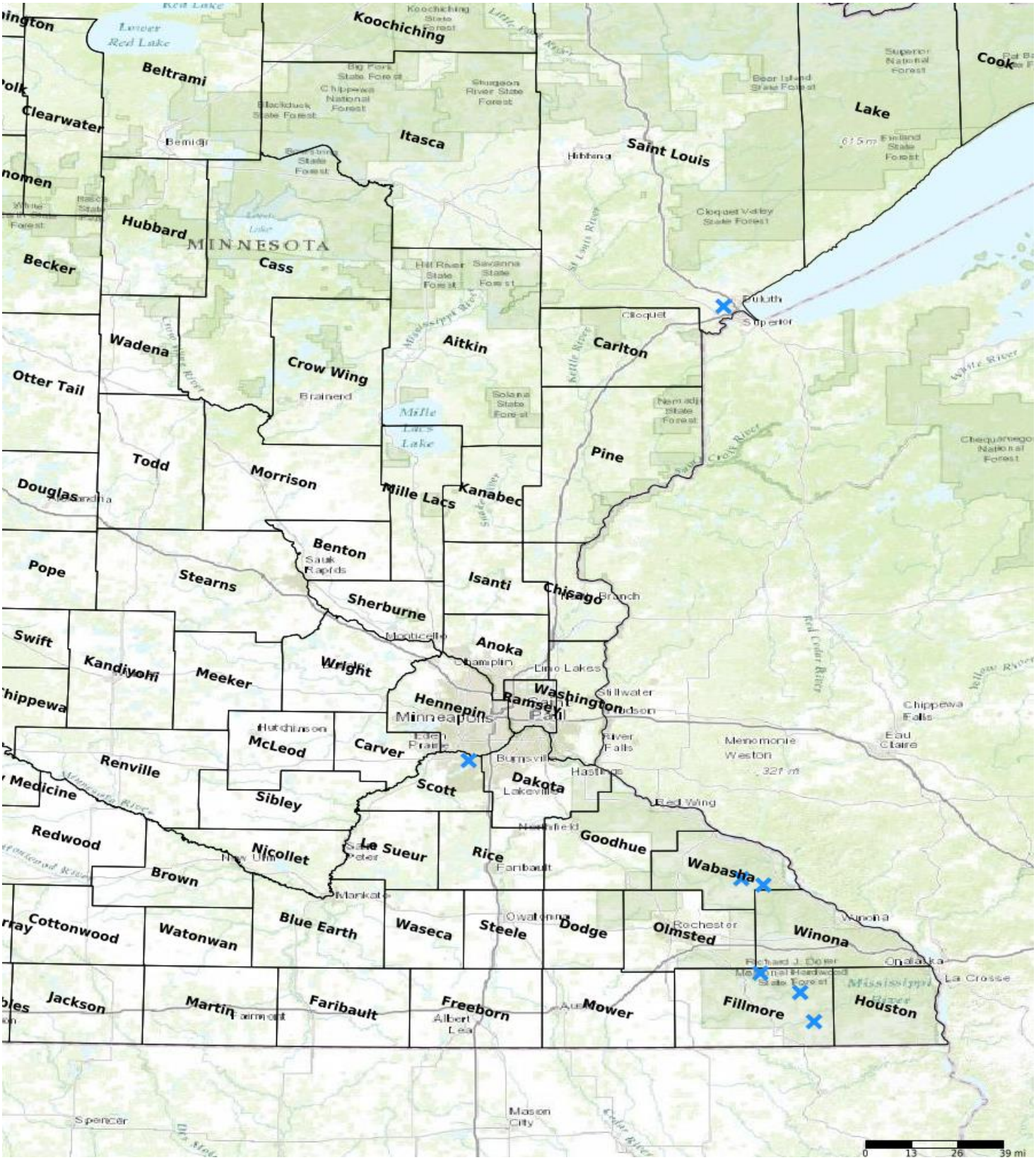
## Parcels

**Sign-up Criteria?**
No

### Restore / Enhance Parcels

| Name | County | TRDS | Acres | Est Cost | Existing Protection |
|---|---|---|---|---|---|
| Trout Run Creek | Fillmore | 10410208 | 30 | $162,600 | Yes |
| Diamond Creek (incl. So Fk) | Fillmore | 10309211 | 24 | $91,300 | Yes |
| Wisel Creek | Fillmore | 10208229 | 16 | $411,500 | Yes |
| Eagle Creek | Scott | 11521218 | 5 | $14,800 | Yes |
| Keene Creek | St. Louis | 05015236 | 3 | $366,100 | Yes |
| West Indian Creek | Wabasha | 10911216 | 13 | $685,100 | Yes |
| East Indian Creek | Wabasha | 10910229 | 32 | $153,700 | Yes |

# Parcel Map




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