Lessard-Sams Outdoor Heritage Council
Laws of Minnesota 2013 Final Report

Date: July 07, 2020

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

Funds Recommended: $2,470,000

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Legislative Citation: ML 2013, Ch. 137, Art. 1, Sec. 2, Subd. 5(g)

Appropriation Language: $2,470,000 in the first year is to the commissioner of natural resources for an agreement with Minnesota Trout Unlimited to restore and enhance coldwater river and stream habitats in Minnesota. A list of proposed land restorations and enhancements must be provided as part of the required accomplishment plan.

County Locations: Carlton, Cook, Dakota, Fillmore, Lake, Olmsted, St. Louis, and Winona.

Eco regions in which work was completed:

- Northern Forest
- Southeast Forest
- Prairie
- Metro / Urban

Activity types:

- Enhance

Priority resources addressed by activity:

- Habitat

Summary of Accomplishments:

Minnesota Trout Unlimited enhanced in-stream and riparian habitat for trout and other wildlife along more than 11 miles of coldwater streams across the state. We far exceeded our original targets, enhancing habitat on 135 acres rather than 78. We completed 16 separate stream habitat projects. Leveraging other funding and efficiently contracting projects allowed us to add habitat projects and adjust to changing conditions.

Process & Methods:

Using FY2014 funding from the Outdoor Heritage Fund ("OHF"), Minnesota Trout Unlimited (MNTU) completed sixteen projects enhancing fish habitat in and along the following public waters (in these counties):

1. Spruce Creek (Cook);
2. Split Rock River (Lake);
3. Miller Creek (St. Louis);
4. Coffee Creek (St. Louis);

5. Garvin Brook (Winona);
6. Trout Brook (Dakota);
7. Blackhoof River (Carlton);
8. Rush Creek (Winona);
9. Mill Creek (Olmsted & Fillmore);
10. Newburg Creek (Fillmore);
11. Willow Creek (Fillmore).;
12. Cedar Valley Creek (Winona);
13. Pickwick Creek (Winona);
14. Trout Run Creek (Winona).

These projects were completed used methods similar to those used on projects completed by MNTU chapters in the past several years and also incorporated new research to improve project designs and fish and wildlife benefits.

The specific methods used on each stream varied depending upon the distinct natural resource characteristics of each watershed and ecological region, the limiting factors identified for each stream, and the variations in the type and magnitude of poor land uses practices within each watershed. Methods were tailored accordingly, using the best available science, in close consultation with resource professionals within the Minnesota Department of Natural Resources (MNDNR).

Purposes: Each project was designed and completed using techniques selected to accomplish one or more of the following purposes: (a) increase or maintain adult trout abundance; (b) reduce stream bank erosion and associated sedimentation downstream; (c) reconnect streams to their floodplains to reduce negative resource impacts from severe flooding; (d) increase natural reproduction of trout and other aquatic organisms; (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; and (h) protect productive trout waters from invasive species.

Habitat enhancement methods: Methods used on each project included 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 to reduce erosion; (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, help cool the water, and provide a source of future cover logs.

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. The projects in southeast Minnesota used the following approach to address this:

Erosion has led to wider, shallower and warmer streams, as well as excessive stream side 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 or hardwoods 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 or tree trunks 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 grasses and forbes are planted along the stream corridors, although often mixed with fast sprouting annual grains to anchor soils the first year. Unusual conditions in 2019 caused severe flooding in southeast MN which demonstrated that, due to the unique soils in southeast valley floors,

more indigenous rock was needed on the toes of the stream banks on some projects. These changes were made where needed, while staying within original budget.

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.

Explain Partners, Supporters, & Opposition:

The DNR Fisheries Section was an important partner on every project. We also partnered with the City of Chatfield, City of Duluth, the Federal government and National Fish & Wildlife Foundation, Carlton County, Dakota County, and others to leverage and an additional $543,900 which was expended on these Fy2014 projects. This allowed us to enhance 57 more acres of habitat than originally proposed (for a total of 135, rather than 78), and to deal with drastically changed conditions caused by severe flooding and some unfortunate timing. Partners helped us improve designs and project durability, and offered encouragement as we upgraded SE MN projects. We received much support and encouragement from anglers, members, partners and average citizens.

Additional Comments:

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

Exceptionally rainy years during the grant period slowed construction and required more re-seeding and maintenance. Two-year extended vegetation management and maintenance ("warranty") provisions in our contracts addressed this. An unusual combination of factors in spring 2019 led to severe flooding in southeast MN which revealed the need for additional enhancements.

We had three experts (75+ years' experience) in Driftless region habitat project work examine and critique each feature throughout the length of the Rush Creek project, along with the project's designer. Successes and failures were discussed, and improvements explained. The design was revised and our project designer educated so that he could then apply the lessons to other projects. Design changes included greater amounts of floodplain excavation, more use of indigenous rock at the toes of slopes, and adding "cross vanes" to direct flow. Southeast MN projects were upgraded accordingly, and all work completed within the original budget.

Other Funds Received:

- Not Listed

How were the funds used to advanced the program:

Not Listed

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

Each enhancement project was designed for long-term ecological and hydraulic stability. Once riparian vegetation becomes well established, no significant maintenance is usually required in order to sustain the habitat outcomes for several decades. Reconnected floodplains allow floodwater to quickly spread out and dissipate energy, reducing the destructive impact of floods. Flood waters typically flatten stream side vegetation temporarily and do not damage the in-stream structures. However, vegetation capable of holding soils well during floods can take 3 years, or longer (especially) in the thin mineral soils of northeast MN. For this reason, our construction contracts have evolved to provide for inspection, maintenance and repair in the second and third years. Design modifications and subsequent repairs/upgrades were made on southeast MN projects in 2019 which should increase durability.

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, Trout Unlimited members, or landowners as appropriate. If there are significant maintenance needs on a project, potential sources of funding and volunteer labor include Trout Unlimited, MNDNR maintenance funding, and other grant funds and organizations. Trout Unlimited volunteers will help provide long-term monitoring and periodic labor.

Outcomes:

The original accomplishment plan stated the program would

Programs in the northern forest region:

- Improved aquatic habitat indicators

How will the outcomes be measured and evaluated?

Improved aquatic habitat indicators can be measured through periodic fish population surveys conducted by the MNDNR. Because environmental factors such as spring flooding influence populations region-wide, periodic surveys (including index stations) may be needed to demonstrate the population increases.

The percentage of exposed coarse substrates, such as gravel and cobble (versus sand and silt), can also be used measure improved aquatic habitat. These coarser substrates provide habitat for aquatic insects, small fish and early life stages of trout. Numerous studies have established the link between increased amounts of exposed gravel and cobble and increased aquatic health, including increased trout numbers.

Programs in metropolitan urbanizing region:

- Improved aquatic habitat indicators

How will the outcomes be measured and evaluated?

Improved aquatic habitat indicators can be measured through periodic fish population surveys conducted by the MNDNR. Because environmental factors such as spring flooding influence populations region-wide, periodic surveys (including index stations) may be needed to demonstrate the population increases.

The percentage of exposed coarse substrates, such as gravel and cobble (versus sand and silt), can also be used measure improved aquatic habitat. These coarser substrates provide habitat for aquatic insects, small fish and early life stages of trout. Numerous studies have established the link between increased amounts of exposed gravel and cobble and increased aquatic health, including increased trout numbers.

Programs in southeast forest region:

- Improved aquatic habitat indicators

How will the outcomes be measured and evaluated?

Improved aquatic habitat indicators can be measured through periodic fish population surveys conducted by the MNDNR. Because environmental factors such as spring flooding influence populations region-wide, periodic surveys (including index stations) may be needed to demonstrate the population increases.

The percentage of exposed coarse substrates, such as gravel and cobble (versus sand and silt), can also be used measure improved aquatic habitat. These coarser substrates provide habitat for aquatic insects, small fish and early life stages of trout. Numerous studies have established the link between increased amounts of exposed gravel and cobble and increased aquatic health, including increased trout numbers.

Programs in prairie region:

- Improved condition of habitat on public lands

How will the outcomes be measured and evaluated?

The one project originally proposed for this region could not be built due to changed circumstances. The amount originally planned for this project was used in southeast forest region pursuant to a work plan amendment.

Budget Spreadsheet

Final Budget line item reallocations are allowed up to 10% and do not need require an amendment to the Accomplishment Plan

Total Amount: $2,470,000

Budget and Cash Leverage

Budget Name	Request	Spent	Cash Leverage (anticipated)	Cash Leverage (received)	Leverage Source	Total (original)	Total (final)
Personnel	$100,000	$76,300	$0	$0		$100,000	$76,300
Contracts	$998,000	$1,152,700	$0	$317,400	Federal; City of Duluth, City of Chatfield, Carlton County; TU	$998,000	$1,470,100
Fee Acquisition w/ PILT	$0	$0	$0	$0		$0	$0
Fee Acquisition w/o PILT	$0	$0	$0	$0		$0	$0
Easement Acquisition	$0	$0	$0	$0		$0	$0
Easement Stewardship	$0	$0	$0	$0		$0	$0
Travel	$20,000	$700	$0	$0		$20,000	$700
Professional Services	$675,000	$396,600	$0	$15,000	City Of Chatfield; City of Duluth	$675,000	$411,600
Direct Support Services	$0	$0	$0	$0		$0	$0
DNR Land Acquisition Costs	$0	$0	$0	$0		$0	$0
Capital Equipment	$0	$0	$0	$0		$0	$0
Other Equipment/Tools	$2,000	$2,200	$0	$0		$2,000	$2,200
Supplies/Materials	$675,000	$841,500	$0	$211,500	Federal; City of Duluth; MNDNR; Carlton County; TU	$675,000	$1,053,000
DNR IDP	$0	$0	$0	$0		$0	$0
Total	$2,470,000	$2,470,000	$0	$543,900		$2,470,000	$3,013,900

Personnel

Position	FTE	Over # of years	Spent	Cash Leverage	Leverage Source	Total
program administrator	0.40	2.00	$60,500	$0		$60,500
waterhsed director	0.10	2.00	$12,700	$0		$12,700
program assistant	0.25	2.00	$3,100	$0		$3,100
Total	0.75	6.00	$76,300	$0		$76,300

Explain any budget challenges or successes:

We secured federal funding for the Blackhoof River and Trout Run Creek projects, allowing us to complete more, and larger scale, work! But this required frustrating delays implementing a major channel stabilization/habitat project on the Blackhoof and, together with very wet 2018 and 2019 construction seasons, required construction on Trout Run Creek through fall 2019. This in turn delayed the close out of the grant.

The flexibility and patience of LSOHC staff to allow us to change work plans, work sites, and internal budget category targets was essential to enabling us to successfully maximize habitat outcomes.

All revenues received by the recipient that have been generated from activities on land with money from the OHF:

Total Revenue: $0

Revenue Spent: $0

Revenue Balance: $0

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

Output Tables

Table 1a. Acres by Resource Type

Type	Wetlands (original)	Wetlands (final)	Prairies (original)	Prairies (final)	Forest (original)	Forest (final)	Habitats (original)	Habitats (final)	Total (original)	Total (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	78	135	78	135
Total	0	0	0	0	0	0	78	135	78	135

Table 2. Total Funding by Resource Type

Type	Wetlands (original)	Wetlands (final)	Prairies (original)	Prairies (final)	Forest (original)	Forest (final)	Habitats (original)	Habitats (final)	Total (original)	Total (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	$2,470,000	$2,470,000	$2,470,000	$2,470,000
Total	$0	$0	$0	$0	$0	$0	$2,470,000	$2,470,000	$2,470,000	$2,470,000

Table 3. Acres within each Ecological Section

Type	Metro Urban (original)	Metro Urban (final)	Forest Prairie (original)	Forest Prairie (final)	SE Forest (original)	SE Forest (final)	Prairie (original)	Prairie (final)	N Forest (original)	N Forest (final)	Total (original)	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	7	7	0	0	44	78	11	0	16	50	78	135
Total	7	7	0	0	44	78	11	0	16	50	78	135

Table 4. Total Funding within each Ecological Section

Type	Metro Urban (original)	Metro Urban (final)	Forest Prairie (original)	Forest Prairie (final)	SE Forest (original)	SE Forest (final)	Prairie (original)	Prairie (final)	N Forest (original)	N Forest (final)	Total (original)	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	$255,000	$287,600	$0	$0	$1,640,000	$1,825,000	$285,000	$0	$290,000	$357,400	$2,470,000	$2,470,000
Total	$255,000	$287,600	$0	$0	$1,640,000	$1,825,000	$285,000	$0	$290,000	$357,400	$2,470,000	$2,470,000

Automatic system calculation / not entered by managers

Target Lake/Stream/River Feet or Miles (original)

7

Target Lake/Stream/River Feet or Miles (final)

11.2 miles

Explain the success/shortage of acre goals:

We exceeded our acreage and stream length targets by 70% and 60% respectively! This was due to contracting efficiencies, good budget management and collaborations with partners. However, this would not have been possible without the flexibility and patience of LSOHC staff to allow us to change work plans to capture leverage, shift work sites, and adjust internal budget category targets. This flexibility is essential to enabling us to maximize habitat outcomes.

Parcel List

Section 1 - Restore / Enhance Parcel List

Carlton

Name	TRDS	Acres	Total Cost	Existing Protection?	Description
Blackhoof River	04717222	38	$263,900	Yes	Enhance habitat for steelhead, brook trout and brown trout.

Cook

Name	TRDS	Acres	Total Cost	Existing Protection?	Description
Spruce Creek	06002210	3	$18,400	Yes	Enhance habitat for native, wild brook trout in 1,200 reach.

Dakota

Name	TRDS	Acres	Total Cost	Existing Protection?	Description
Trout Brook	11317235	7	$287,600	Yes	Enhance habitat for native brook trout in accessible county park.

Fillmore

Name	TRDS	Acres	Total Cost	Existing Protection?	Description
Mill Creek	10411206	3	$69,100	Yes	Enhance trout habitat in stretch located in Chatfield city park.
Newburg Creek	10108205	5	$192,300	Yes	Enhance habitat for brook trout as well as brown trout.
Willow Creek	10211201	7	$126,200	Yes	Enhance habitat for wild brown trout in 2,950 foot reach.

Lake

Name	TRDS	Acres	Total Cost	Existing Protection?	Description
Split Rock River	05509216	4	$15,100	Yes	Enhance habitat along 1,900 reach for native brook trout.

Olmsted

Name	TRDS	Acres	Total Cost	Existing Protection?	Description
Mill Creek	10512225	12	$372,700	Yes	Enhance 5,200 foot segment for wild brown trout to connect 3.5 miles of contiguous habitat improvement.

St. Louis

Name	TRDS	Acres	Total Cost	Existing Protection?	Description
Coffee Creek	04915229	2	$50,600	Yes	Enhance and reconnect native brook trout habitat by daylighting buried section.
Miller Creek	04915229	3	$9,400	Yes	Enhacne habitat in 1,300 reach damageb by flood, for wild broook trout.

Winona

Name	TRDS	Acres	Total Cost	Existing Protection?	Description
Cedar Valley Creek	10606232	2	$48,300	Yes	Enhance habtiat for wild brown trout.
Garvin Brook	10608204	1	$28,800	Yes	Enhance habitat for wild brown trout.
Garvin Brook	10608205	7	$125,200	Yes	Enhance habitat for wild brook and brown trout
Pickwick Creek	10606226	11	$66,400	Yes	Enhance trout habitat in 4,750 foot reach.
Rush Creek	10508229	17	$508,700	Yes	Enhance habitat in 1.4 mile reach for wild brown trout.
Trout Run Creek	10210231	13	$287,300	Yes	Enhance habitat for wild brown trout in 5,600 foot reach.

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.

Completed Parcel: Blackhoof River

# of Total Acres:	38
County:	Carlton
Township:	047
Range:	17
Direction:	2
Section:	22
# of Acres: Wetlands/Upland:	
# of Acres: Forest:	
# of Acres: Prairie/Grassland:	
Amount of Shorline:	16800 (Linear Feet)
Name of Adjacent Body of Water (if applicable):	Blackhoof River
Has there been signage erected at the site:	Yes
Total cost of Restoration/Enhancement:	$263,900

Completed Parcel: Cedar Valley Creek

# of Total Acres:	2
County:	Winona
Township:	106
Range:	06
Direction:	2
Section:	32
# of Acres: Wetlands/Upland:	
# of Acres: Forest:	
# of Acres: Prairie/Grassland:	
Amount of Shorline:	1075 (Linear Feet)
Name of Adjacent Body of Water (if applicable):	Cedar Valley Creek
Has there been signage erected at the site:	Yes
Total cost of Restoration/Enhancement:	$48,300

Completed Parcel: Coffee Creek

# of Total Acres:	2
County:	St. Louis
Township:	049
Range:	15
Direction:	2
Section:	29
# of Acres: Wetlands/Upland:	
# of Acres: Forest:	
# of Acres: Prairie/Grassland:	
Amount of Shorline:	500 (Linear Feet)
Name of Adjacent Body of Water (if applicable):	Coffee Creek
Has there been signage erected at the site:	Yes
Total cost of Restoration/Enhancement:	$50,600

Completed Parcel: Garvin Brook

# of Total Acres:	7
County:	Winona
Township:	106
Range:	08
Direction:	2
Section:	05
# of Acres: Wetlands/Upland:	
# of Acres: Forest:	
# of Acres: Prairie/Grassland:	
Amount of Shorline:	2910 (Linear Feet)
Name of Adjacent Body of Water (if applicable):	Garvin Brook
Has there been signage erected at the site:	Yes
Total cost of Restoration/Enhancement:	$125,200

Completed Parcel: Garvin Brook

# of Total Acres:	1
County:	Winona
Township:	106
Range:	08
Direction:	2
Section:	04
# of Acres: Wetlands/Upland:	
# of Acres: Forest:	
# of Acres: Prairie/Grassland:	
Amount of Shorline:	700 (Linear Feet)
Name of Adjacent Body of Water (if applicable):	Garvin Brook
Has there been signage erected at the site:	Yes
Total cost of Restoration/Enhancement:	$28,800

Completed Parcel: Mill Creek

# of Total Acres:	3
County:	Fillmore
Township:	104
Range:	11
Direction:	2
Section:	06
# of Acres: Wetlands/Upland:	
# of Acres: Forest:	
# of Acres: Prairie/Grassland:	
Amount of Shorline:	1200 (Linear Feet)
Name of Adjacent Body of Water (if applicable):	Mill Creek
Has there been signage erected at the site:	Yes
Total cost of Restoration/Enhancement:	$69,100

Completed Parcel: Mill Creek

# of Total Acres:	12
County:	Olmsted
Township:	105
Range:	12
Direction:	2
Section:	25
# of Acres: Wetlands/Upland:	
# of Acres: Forest:	
# of Acres: Prairie/Grassland:	
Amount of Shorline:	5200 (Linear Feet)
Name of Adjacent Body of Water (if applicable):	Mill Creek
Has there been signage erected at the site:	Yes
Total cost of Restoration/Enhancement:	$372,700

Completed Parcel: Miller Creek

# of Total Acres:	3
County:	St. Louis
Township:	049
Range:	15
Direction:	2
Section:	29
# of Acres: Wetlands/Upland:	
# of Acres: Forest:	
# of Acres: Prairie/Grassland:	
Amount of Shorline:	1300 (Linear Feet)
Name of Adjacent Body of Water (if applicable):	Miller Creek
Has there been signage erected at the site:	Yes
Total cost of Restoration/Enhancement:	$9,400

Completed Parcel: Newburg Creek

# of Total Acres:	5
County:	Fillmore
Township:	101
Range:	08
Direction:	2
Section:	05
# of Acres: Wetlands/Upland:	
# of Acres: Forest:	
# of Acres: Prairie/Grassland:	
Amount of Shorline:	2400 (Linear Feet)
Name of Adjacent Body of Water (if applicable):	Newburg Creek
Has there been signage erected at the site:	Yes
Total cost of Restoration/Enhancement:	$192,300

Completed Parcel: Pickwick Creek

# of Total Acres:	11
County:	Winona
Township:	106
Range:	06
Direction:	2
Section:	26
# of Acres: Wetlands/Upland:	
# of Acres: Forest:	
# of Acres: Prairie/Grassland:	
Amount of Shorline:	4750 (Linear Feet)
Name of Adjacent Body of Water (if applicable):	Pickwick Creek
Has there been signage erected at the site:	Yes
Total cost of Restoration/Enhancement:	$66,400

Completed Parcel: Rush Creek

# of Total Acres:	17
County:	Winona
Township:	105
Range:	08
Direction:	2
Section:	29
# of Acres: Wetlands/Upland:	
# of Acres: Forest:	
# of Acres: Prairie/Grassland:	
Amount of Shorline:	7400 (Linear Feet)
Name of Adjacent Body of Water (if applicable):	Rush Creek
Has there been signage erected at the site:	Yes
Total cost of Restoration/Enhancement:	$508,700

Completed Parcel: Split Rock River

# of Total Acres:	4
County:	Lake
Township:	055
Range:	09
Direction:	2
Section:	16
# of Acres: Wetlands/Upland:	
# of Acres: Forest:	
# of Acres: Prairie/Grassland:	
Amount of Shorline:	1900 (Linear Feet)
Name of Adjacent Body of Water (if applicable):	Split Rock River
Has there been signage erected at the site:	Yes
Total cost of Restoration/Enhancement:	$15,100

Completed Parcel: Spruce Creek

# of Total Acres:	3
County:	Cook
Township:	060
Range:	02
Direction:	2
Section:	10
# of Acres: Wetlands/Upland:	
# of Acres: Forest:	
# of Acres: Prairie/Grassland:	
Amount of Shorline:	1200 (Linear Feet)
Name of Adjacent Body of Water (if applicable):	Spruce Creek
Has there been signage erected at the site:	Yes
Total cost of Restoration/Enhancement:	$18,400

Completed Parcel: Trout Brook

# of Total Acres:	7
County:	Dakota
Township:	113
Range:	17
Direction:	2
Section:	35
# of Acres: Wetlands/Upland:	
# of Acres: Forest:	
# of Acres: Prairie/Grassland:	
Amount of Shorline:	3200 (Linear Feet)
Name of Adjacent Body of Water (if applicable):	Trout Brook
Has there been signage erected at the site:	Yes
Total cost of Restoration/Enhancement:	$287,600

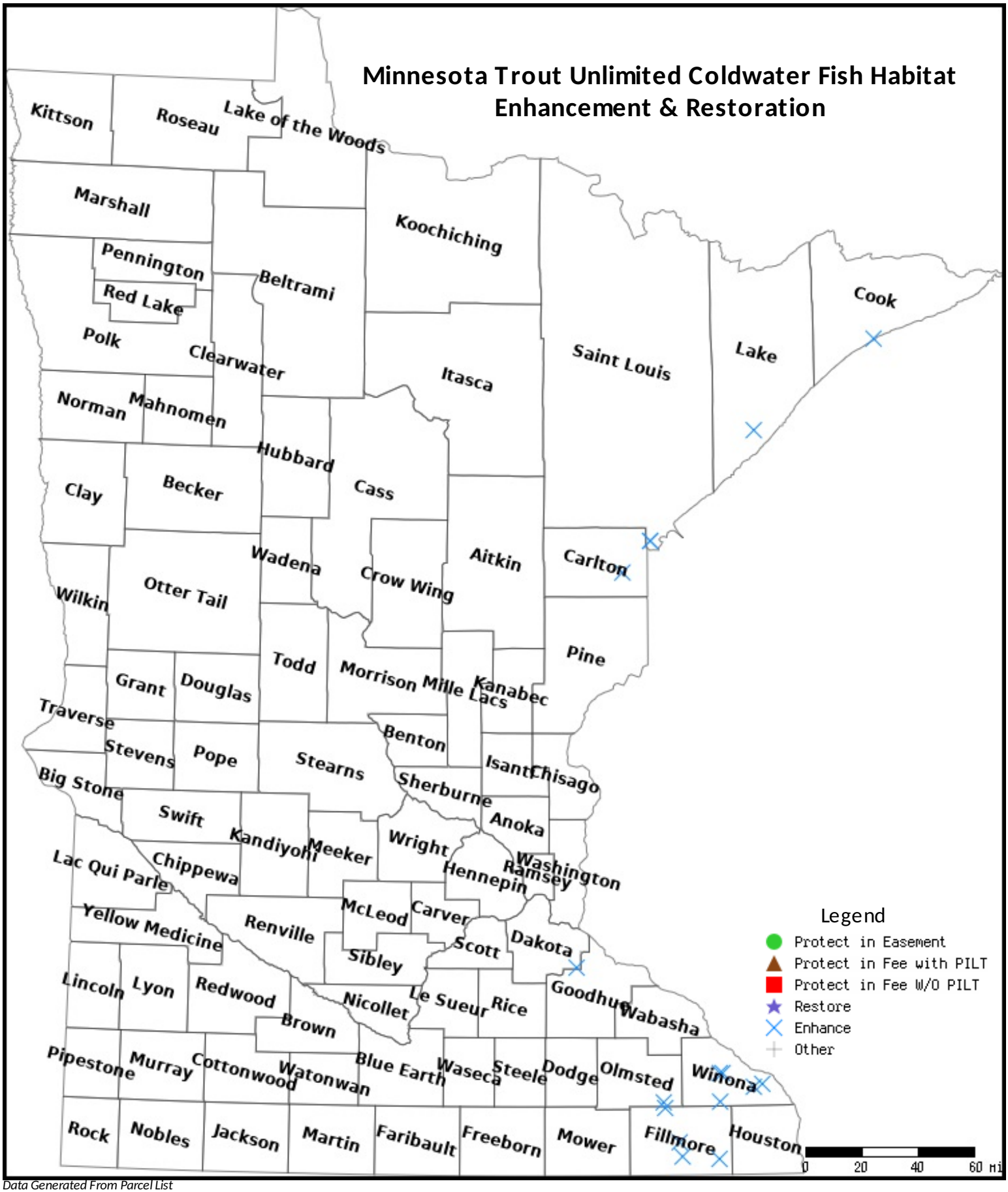
Completed Parcel: Trout Run Creek

# of Total Acres:	13
County:	Winona
Township:	102
Range:	10
Direction:	2
Section:	31
# of Acres: Wetlands/Upland:	
# of Acres: Forest:	
# of Acres: Prairie/Grassland:	
Amount of Shorline:	5600 (Linear Feet)
Name of Adjacent Body of Water (if applicable):	Trout Run Creek
Has there been signage erected at the site:	Yes
Total cost of Restoration/Enhancement:	$287,300

Completed Parcel: Willow Creek

# of Total Acres:	7
County:	Fillmore
Township:	102
Range:	11
Direction:	2
Section:	01
# of Acres: Wetlands/Upland:	
# of Acres: Forest:	
# of Acres: Prairie/Grassland:	
Amount of Shorline:	2950 (Linear Feet)
Name of Adjacent Body of Water (if applicable):	Willow Creek
Has there been signage erected at the site:	Yes
Total cost of Restoration/Enhancement:	$126,200

Parcel Map



Data Generated From Parcel List