

# Lessard-Sams Outdoor Heritage Council

## Laws of Minnesota 2012 Final Report



**Date:** November 12, 2015

**Program or Project Title:** Grand Marais Creek Outlet Restoration

**Funds Recommended:** \$2,320,000

**Manager's Name:** Myron Jesme

**Organization:** Red Lake Watershed District

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

**Appropriation Language:** \$2,320,000 in the second year is to the commissioner of natural resources for an agreement with the Red Lake Watershed District to restore and enhance stream and related habitat in Grand Marais Creek. A list of proposed restorations and enhancements must be provided as part of the required accomplishment plan.

**County Locations:** Polk

**Regions in which work will take place:**

- Prairie

**Activity types:**

- Restore

**Priority resources addressed by activity:**

- Wetlands
- Prairie
- Habitat

### Abstract:

Directly restore six miles of stream habitat, the hydrologic conditions needed to support 400 acres of habitat corridor, and effectively reconnect more than 20 miles of the Grand Marais Creek.

### Design and scope of work:

The project design and scope included the restoration of six miles of natural channel based on sound scientific principles of natural channel design, hydrology, and fluvial geomorphology, restoration of stream hydrology managing a range of stream flows through the design and construction of a flow diversion structure that will operate in a manner to sustain aquatic habitat conditions in the channel, reestablishment of nearly 400 acres of riparian corridor habitat and generally serving as a 50 yr. frequency channel floodplain, and restoration of adjacent upland upland which was abandoned and mostly farmed for the past 50+ years, and providing for public roadway and recreational/agricultural channel crossings as fish passage friendly.

The project restored permanent and seasonal spawning and juvenile habitat to a variety of fish species, including northern pike and channel catfish. Additional project benefits included restoration of permanent and seasonal habitats for many aquatic and terrestrial plant and upland animal species that depend on healthy riparian corridor habitat (already acquired through RIM). The restored channel corridor provides a more functional, reliable connection between the Red River and more than 20 miles of upstream riverine and wetland habitats in Grand Marais Creek.

The watershed district initiates projects based on priority problems identified in the watershed district plan (<http://www.redlakewatershed.org/planupdate.html>). This project addressed and fulfilled a much larger scope of work in the entire Grand Marais Creek sub-watershed. The entire scope of work will result in reduced flood damages, enhancement of natural resources and improvement of water quality. This stream habitat restoration project has completed a comprehensive watershed-based approach to managing water and habitat in the Grand Marais Creek watershed that has included strategic storage of 5,400 ac-feet and almost 1,100 acres of wetland and grassland restoration. Throughout the sub-watershed, targeted channel stabilization projects, buffer strip installation and erosion reduction projects at the outlet have now been completed.

The Red Lake Watershed District and their partners secured CWLF through the BWSR to stabilize the existing Grand Marais Outlet Channel corridor/legal drainage system. This project was substantially completed in late 2013. Due to short timeframe for seeding native prairie grass and incimate weather in 2014 final seeding was completed in 2015 .

The completion of the Grand Marais Creek Outlet Restoration and Stabilization Projects is the result of careful planning and engineering by an interdisciplinary project team of resource professionals and local landowners dedicated to reducing flood damages and enhancing natural resources in the Grand Marais Creek sub-watershed within Red River watershed.

### **Which LSOHC state-wide priorities are addressed in this proposal:**

- Address conservation opportunities that will be lost if not immediately acted on
- Are able to leverage effort and/or other funds to supplement any OHF appropriation
- 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
- 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 proposal:**

#### **Prairie:**

- Protect, enhance, or restore existing wetland/upland complexes, or convert agricultural lands to new wetland/upland habitat complexes
- Protect, enhance, and restore remnant native prairie, Big Woods forests, and oak savanna
- Convert agricultural land to wetland/upland to protect, enhance, or restore existing habitat complexes, such as WMAs
- Protect expiring CRP lands
- Protect, enhance, and restore migratory habitat for waterfowl and related species, so as to increase migratory and breeding success

### **Relationship to other funds:**

- Clean Water Fund

Similar to other stream, wetland and prairie restorations, this restoration project is primarily a habitat restoration project with incidental clean water benefits. Grand Marais Creek is listed as impaired water (303d list). The DNR, BWSR and MPCA have been members of the watershed based project team that helped develop this project. The watershed district secured a Clean Water Legacy Grant through BWSR, which addressed water quality issues in the project area by completing a project known to the public as Grand Marais Creek Cut Channel Stabilization Project, RLWD Project 60FF. This project was completed during the 2012 construction season. RIM funding along with local cost share from Red Lake Watershed District and Polk County Ditch Authority was used to acquire most of the land needed for this channel stabilization/water quality project.

### **How will you sustain and/or maintain this work after the Outdoor Heritage Funds are expended:**

The Red Lake Watershed District is committed to assure that the Grand Marais Creek Outlet Restoration Project goals and objectives are adhered to. We are working with our consultants to develop a yearly maintenance schedule which will likely include weed management of Native Prairie grass areas, assure stream restoration allows for required conveyance of flows, continue to collect water quality datum, work with DNR fisheries and Wildlife on an as need basis to measure progress of health, diversity, growth and stability of fishery and game/nongame wildlife habitat and to assure all perpetual upland and wetland habitat is protected. The District will also work with local road authorities and landowners to assure public and private crossings are inspected and maintained as needed. Also due to frequent flooding of the Red River of the North, it is assumed that frequent debris removal within the channel will have to take place throughout the project. Native Prairie habitat can be very expensive to establish and early weed control is important. It is

assumed the District will spend upwards of \$8,000 per year on weed management alone for the first two or three years until native grasses are established. The RLWD will work with BWSR and NRCS vegetation experts to develop sound and practical maintenance activities.

## **Outcomes:**

### **Programs in prairie region:**

- Short-term/Intermediate Results: Restore 6 miles of Grand Marais Creek Stream Corridor Habitat including aquatic, riparian, floodplain and upland habitats. Protect aquatic, riparian, and upland areas for the proliferation of fish, game and other wildlife. Restoration of original hydrology and floodplain characteristics for sustainability. Increased public awareness of habitat issues. Long-term Results: Healthy, terrestrial and aquatic habitat/ecosystems for fish, game, and other wildlife species Prolific fish, game and other wildlife populations. Perpetual stability of habitat for fish, game, and other wildlife species providing for conservations benefits within an intensely farmed area. Healthy Watersheds. Improved land management practices coordinating agriculture and wildlife interests.

### **How will they be measured and evaluated?**

MnDNR will assist in initial annual site inspections with the RLWD reviewing landscape, habitat, and species diversity and population. MnDNR fisheries will conduct field reviews of fish species diversity, population and habitat to evaluate changes.

Channel conveyance and physical infrastructure will be inspected and documented by the RLWD.

Local interests and opinions of adjacent landowners will be discussed and documented by the RLWD.

Measurement will be established by evaluating documented trends resulting from the initial annual inspections and comparing to pre project conditions as documented in the Final Engineers Report. Resulting trends will be compared to the identified project outcomes.

# 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: \$2,320,000

## Budget and Cash Leverage

BudgetName	Request	Spent	Cash Leverage (anticipated)	Cash Leverage (received)	Leverage Source	Total (original)	Total (final)
Personnel	\$0	\$0	\$0	\$0		\$0	\$0
Contracts	\$2,320,000	\$2,320,000	\$1,617,000	\$1,661,500	State/Other Govt	\$3,937,000	\$3,981,500
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	\$663,000	\$648,800	State/Other Govt	\$663,000	\$648,800
Easement Stewardship	\$0	\$0	\$0	\$0		\$0	\$0
Travel	\$0	\$0	\$0	\$0		\$0	\$0
Professional Services	\$0	\$0	\$800,000	\$1,552,800	State/Other Govt	\$800,000	\$1,552,800
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	\$0	\$0	\$0	\$0		\$0	\$0
Supplies/Materials	\$0	\$0	\$0	\$0		\$0	\$0
DNR IDP	\$0	\$0	\$0	\$0		\$0	\$0
Total	\$2,320,000	\$2,320,000	\$3,080,000	\$3,863,100		\$5,400,000	\$6,183,100

## 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	131	117	87	193	110	0	72	72	400	382
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	0	0	0	0
Total	131	117	87	193	110	0	72	72	400	382

**Table 1b. How many of these Prairie acres are Native Prairie?**

Type	Native Prairie (original)	Native Prairie (final)
Restore	0	193
Protect in Fee with State PILT Liability	0	0
Protect in Fee W/O State PILT Liability	0	0
Protect in Easement	0	0
Enhance	0	0
Total	0	0

**Table 2. Total Requested 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	\$194,000	\$173,300	\$67,000	\$167,700	\$80,000	\$0	\$1,979,000	\$1,979,000	\$2,320,000	\$2,320,000
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	\$0	\$0	\$0	\$0
Total	\$194,000	\$173,300	\$67,000	\$167,700	\$80,000	\$0	\$1,979,000	\$1,979,000	\$2,320,000	\$2,320,000

**Table 3. Acres within each Ecological Section**

Type	Metro Urban (original)	Metro Urban (final)	ForestPrairie (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	400	382	0	0	400	382
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	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	400	382	0	0	400	382

**Table 4. Total Requested Funding within each Ecological Section**

Type	Metro Urban (original)	Metro Urban (final)	ForestPrairie (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	\$2,320,000	\$2,320,000	\$0	\$0	\$2,320,000	\$2,320,000
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	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total	\$0	\$0	\$0	\$0	\$0	\$0	\$2,320,000	\$2,320,000	\$0	\$0	\$2,320,000	\$2,320,000

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

6

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

6

## Parcel List

### Section 1 - Restore / Enhance Parcel List

Polk

Name	TRDS	Acres	Total Cost	Existing Protection?	Description
Anderson	15350226	4	\$6,000	No	Wetland
Grand Marais Channel	15350222	72	\$1,926,000	Yes	Habitat for Fish, Game, Wildlife
Gulbranson	15350215	3	\$4,000	No	Prairie
Gulbranson	15350222	21	\$24,000	No	Wetland
Gulbranson	15350222	37	\$31,000	No	Prairie
Loeck	15350223	20	\$86,300	No	Wetland
Loeck	15350223	35	\$26,500	No	Prairie
Mack	15350222	2	\$45,000	No	Wetland
Mack	15350222	106	\$80,000	No	Prairie
Millette	15350223	5	\$10,500	No	Wetland
Nelson	15350215	9	\$4,000	No	Prairie
Nelson	15350223	31	\$30,000	No	Wetland
Pape	15350223	12	\$17,500	No	Wetland
Thompson	15350223	22	\$24,000	No	Wetland

### 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: Anderson

# of Total Acres:	4
County:	Polk
Township:	153
Range:	50
Direction:	2
Section:	26
# of Acres: Wetlands/Upland:	4
# of Acres: Forest:	
# of Acres: Prairie/Grassland:	
Amount of Shoreline:	
Name of Adjacent Body of Water (if applicable):	
Has there been signage erected at the site:	
Total cost of Restoration/Enhancement:	\$0



# Completed Parcel: Grand Marais Channel

# of Total Acres:	72
County:	Polk
Township:	153
Range:	50
Direction:	2
Section:	22
# of Acres: Wetlands/Upland:	
# of Acres: Forest:	
# of Acres: Prairie/Grassland:	
Amount of Shoreline:	
Name of Adjacent Body of Water (if applicable):	
Has there been signage erected at the site:	
Total cost of Restoration/Enhancement:	\$0

## Completed Parcel: Gulbranson

# of Total Acres:	3
County:	Polk
Township:	153
Range:	50
Direction:	2
Section:	15
# of Acres: Wetlands/Upland:	
# of Acres: Forest:	
# of Acres: Prairie/Grassland:	3
Amount of Shoreline:	
Name of Adjacent Body of Water (if applicable):	
Has there been signage erected at the site:	
Total cost of Restoration/Enhancement:	\$0

## Completed Parcel: Gulbranson

# of Total Acres:	37
County:	Polk
Township:	153
Range:	50
Direction:	2
Section:	22
# of Acres: Wetlands/Upland:	
# of Acres: Forest:	
# of Acres: Prairie/Grassland:	37
Amount of Shoreline:	
Name of Adjacent Body of Water (if applicable):	
Has there been signage erected at the site:	
Total cost of Restoration/Enhancement:	\$0

## Completed Parcel: Gulbranson

# of Total Acres:	21
County:	Polk
Township:	153
Range:	50
Direction:	2
Section:	22
# of Acres: Wetlands/Upland:	21
# of Acres: Forest:	
# of Acres: Prairie/Grassland:	
Amount of Shoreline:	
Name of Adjacent Body of Water (if applicable):	
Has there been signage erected at the site:	
Total cost of Restoration/Enhancement:	\$0

## Completed Parcel: Loeck

# of Total Acres:	20
County:	Polk
Township:	153
Range:	50
Direction:	2
Section:	23
# of Acres: Wetlands/Upland:	20
# of Acres: Forest:	
# of Acres: Prairie/Grassland:	
Amount of Shoreline:	
Name of Adjacent Body of Water (if applicable):	
Has there been signage erected at the site:	
Total cost of Restoration/Enhancement:	\$0

## Completed Parcel: Loeck

# of Total Acres:	35
County:	Polk
Township:	153
Range:	50
Direction:	2
Section:	23
# of Acres: Wetlands/Upland:	
# of Acres: Forest:	
# of Acres: Prairie/Grassland:	35
Amount of Shoreline:	
Name of Adjacent Body of Water (if applicable):	
Has there been signage erected at the site:	
Total cost of Restoration/Enhancement:	\$0

## Completed Parcel: Mack

# of Total Acres:	2
County:	Polk
Township:	153
Range:	50
Direction:	2
Section:	22
# of Acres: Wetlands/Upland:	2
# of Acres: Forest:	
# of Acres: Prairie/Grassland:	
Amount of Shoreline:	
Name of Adjacent Body of Water (if applicable):	
Has there been signage erected at the site:	
Total cost of Restoration/Enhancement:	\$0

## Completed Parcel: Mack

# of Total Acres:	106
County:	Polk
Township:	153
Range:	50
Direction:	2
Section:	22
# of Acres: Wetlands/Upland:	
# of Acres: Forest:	
# of Acres: Prairie/Grassland:	106
Amount of Shoreline:	
Name of Adjacent Body of Water (if applicable):	
Has there been signage erected at the site:	
Total cost of Restoration/Enhancement:	\$0



# Completed Parcel: Millette

# of Total Acres:	5
County:	Polk
Township:	153
Range:	50
Direction:	2
Section:	23
# of Acres: Wetlands/Upland:	5
# of Acres: Forest:	
# of Acres: Prairie/Grassland:	
Amount of Shoreline:	
Name of Adjacent Body of Water (if applicable):	
Has there been signage erected at the site:	
Total cost of Restoration/Enhancement:	\$0

## Completed Parcel: Nelson

# of Total Acres:	9
County:	Polk
Township:	153
Range:	50
Direction:	2
Section:	15
# of Acres: Wetlands/Upland:	
# of Acres: Forest:	
# of Acres: Prairie/Grassland:	9
Amount of Shoreline:	
Name of Adjacent Body of Water (if applicable):	
Has there been signage erected at the site:	
Total cost of Restoration/Enhancement:	\$0

## Completed Parcel: Nelson

# of Total Acres:	31
County:	Polk
Township:	153
Range:	50
Direction:	2
Section:	23
# of Acres: Wetlands/Upland:	31
# of Acres: Forest:	
# of Acres: Prairie/Grassland:	
Amount of Shoreline:	
Name of Adjacent Body of Water (if applicable):	
Has there been signage erected at the site:	
Total cost of Restoration/Enhancement:	\$0

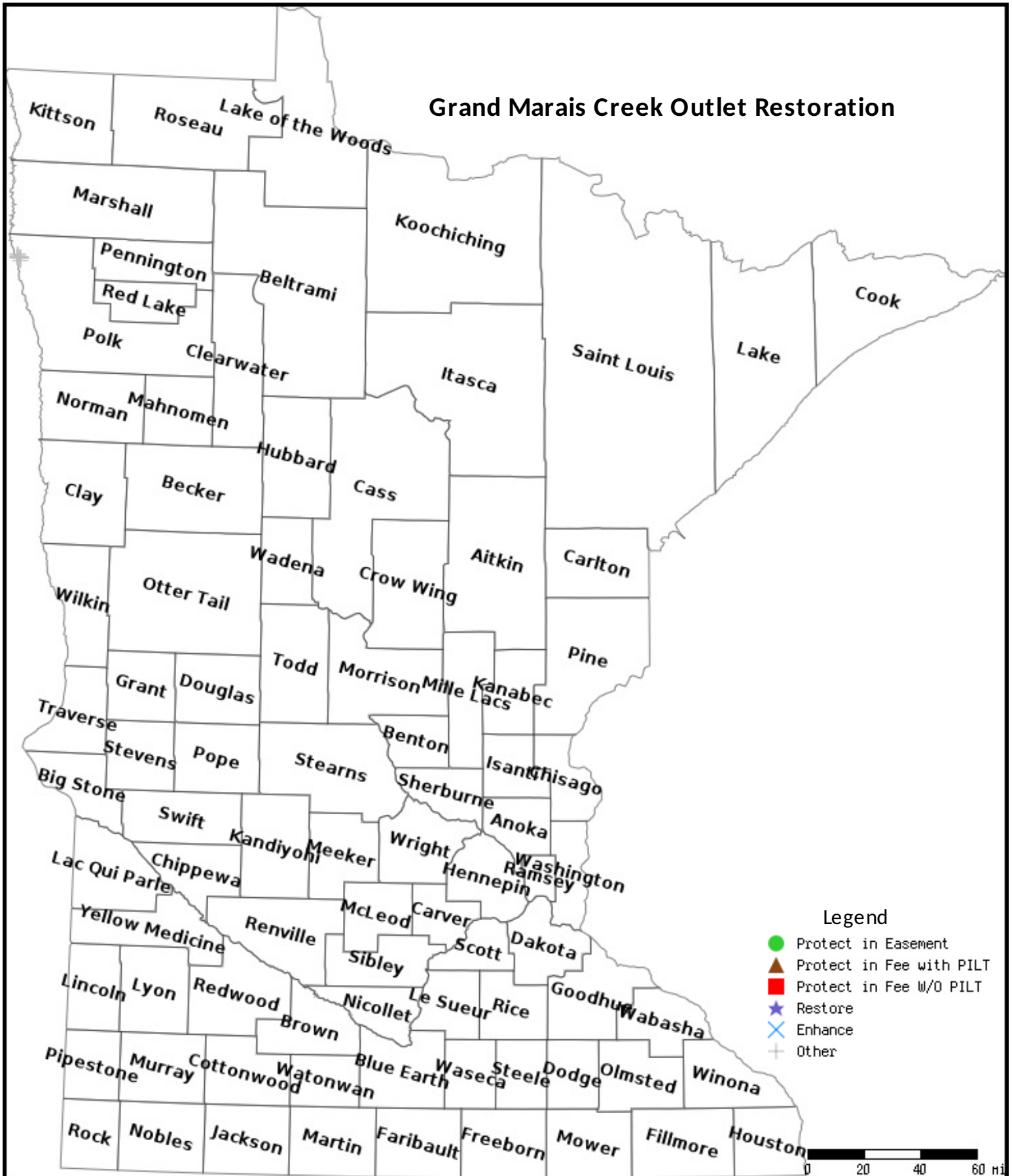
## Completed Parcel: Pape

# of Total Acres:	12
County:	Polk
Township:	153
Range:	50
Direction:	2
Section:	23
# of Acres: Wetlands/Upland:	12
# of Acres: Forest:	
# of Acres: Prairie/Grassland:	
Amount of Shoreline:	
Name of Adjacent Body of Water (if applicable):	
Has there been signage erected at the site:	
Total cost of Restoration/Enhancement:	\$0

## Completed Parcel: Thompson

# of Total Acres:	22
County:	Polk
Township:	153
Range:	50
Direction:	2
Section:	23
# of Acres: Wetlands/Upland:	22
# of Acres: Forest:	
# of Acres: Prairie/Grassland:	
Amount of Shoreline:	
Name of Adjacent Body of Water (if applicable):	
Has there been signage erected at the site:	
Total cost of Restoration/Enhancement:	\$0

# Parcel Map



Data Generated From Parcel List