

## Lessard-Sams Outdoor Heritage Council

**MEMO:** Agenda Item #5

**DATE:** September 29, 2016

**SUBJECT:** Accomplishment Plan Amendment  
ML 2012, Ch. 264, Art. 1, Sec. 2, Subd. 5(h), Protect Aquatic Habitat from Invasive Carp

**PRESENTER:** Nick Frohnauer, Invasive Fish Coordinator, DNR

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### Suggested Motion:

Motion to approve the following extension of time and language change to be included in the ML 2017 appropriation law. Staff will work with legal counsel on exact language for inclusion.

ML 2017, XX, Ch. X, Art. X, Sec. X amended to read: \$7,500,000 in the second year is to the commissioner of natural resources for design, construction, including acquisition, operation, and evaluation of structural deterrents for invasive carp to protect Minnesota's aquatic habitat. Use of this money requires a one-to-one match for projects on construction of state boundary waters. A match is not required for design and feasibility studies. The availability of the appropriation in ML 2012, Ch. 264, Art. 1, Sec. 2, Subd 5, paragraph (h) for Protect Aquatic Habitat from Invasive Carp is extended to June 30, 2019.

### Background:

Considerable progress has been made on this program. The August 1, 2016 Status Update shows \$3,567,100 (48%) has been spent to date.

The project manager is requesting an accomplishment plan amendment of 1) an appropriation extension of time due to inclement weather, unforeseen delays and partners on the project requesting an extension to match additional funding received, and 2) removal of the match requirement for the feasibility study. The match was originally intended for the capital portion of the program on shared waters.

*Original Appropriation Law: \$7,500,000 in the second year is to the commissioner of natural resources to design, construct, operate, and evaluate structural deterrents for Asian carp to protect Minnesota's aquatic habitat. Use of this money requires a one-to-one match for projects on state boundary waters.*

*First Amendment: ML 2015, First Special Session, Ch. 2, Art. 1, Sec. 7 amended to read: \$7,500,000 in the second year is to the commissioner of natural resources for design, construction, including acquisition, operation, and evaluation of structural deterrents for invasive carp to protect Minnesota's aquatic habitat. Use of this money requires a one-to-one match for projects on state boundary waters.*



# Lessard-Sams Outdoor Heritage Council

## Laws of Minnesota 2012 Accomplishment Plan



**Date:** September 21, 2016

**Program or Project Title:** Protect Aquatic Habitat from Invasive Carp

**Funds Recommended:** \$ 7,500,000

**Manager's Name:** Nick Frohnauer  
**Title:** Invasive Fish Coordinator  
**Organization:** DNR  
**Address:** Box 25  
**Address 2:** 500 Lafayette Rd  
**City:** St. Paul, 55155  
**Office Number:** 651-259-5670  
**Email:** nick.frohnauer@state.mn.us

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

**Appropriation Language:** \$7,500,000 in the second year is to the commissioner of natural resources to design, construct, operate, and evaluate structural deterrents for Asian carp to protect Minnesotas aquatic habitat. Use of this money requires a one-to-one match for projects on state boundary waters. ML 2015, First Special Session, Ch. 2, Art. 1, Sec. 7 amended to read: \$7,500,000 in the second year is to the commissioner of natural resources for design, construction, including acquisition, operation, and evaluation of structural deterrents for invasive carp to protect Minnesotas aquatic habitat. Use of this money requires a one-to-one match for projects on state boundary waters.

**Explanation of Amendment Change:** Extend allocation for one more year. Primary - Invasive carp barriers in the Minnesota River watershed are slated to be completed within the original time frame but managers warn that inclement weather or other unforeseen delays may prevent completion by June 30, 2017. Secondary - Project managers for work being conducted at the University of Minnesota - Twin Cities and Minnesota State University - Mankato have both inquired about time extensions. Both entities have secured additional funding (non-OHF) to complete project activities after June 30, 2017.

Remove the 50% match requirement for border water projects. Dr. Sorensen has proposed barrier projects at Locks and Dams on the Mississippi River bordering Wisconsin. If a proposal is pursued, the first step for the DNR is to conduct a feasibility study to estimate effectiveness, design/build costs, annual operating costs, and annual maintenance costs. We request removing the required match to complete a feasibility study if one is deemed necessary.

**County Locations:** Blue Earth, Cottonwood, Hennepin, Jackson, Nicollet, Renville, and Swift.

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

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

**Activity types:**

- Enhance
- Barrier design, construction, operation, and evaluation

**Priority resources addressed by activity:**

- Forest
- Habitat
- Prairie

- Wetlands

## Abstract:

Funding will be used to design, install and evaluate deterrent barriers in Minnesota and to cost share barriers in northwest Iowa to limit or slow the movement of Invasive carp.

## Design and scope of work:

### Update:

The MN DNR believed that the best approach to keep Invasive carp out of the upper Mississippi River watershed was to close the Upper St. Anthony Falls Lock. The lock is administered by the USACE and required an act of Congress to shut down. Minnesota senators and representatives successfully added an amendment to the Water Resources Reform and Development Act (WRRDA) that called for Upper St. Anthony Falls lock closure within one year of passage of the bill. The bill passed both chambers of the federal legislature and was signed into law by President Obama on June 10, 2014.

With passage of the WRRDA bill, construction of a Lock and Dam 1 barrier will not be necessary. Due to the timing of passage of the bill, there would be no cost savings by terminating the design contract for the electrical barrier at Lock and Dam 1. Also, by completing the design, the MN DNR will have a better understanding of the costs, potential effectiveness, and safety concerns associated with this technology. A completed design is expected by November 2014.

A majority of the M.L. 2012 funding allocation was allotted towards construction of the Lock and Dam 1 barrier. With construction no longer proceeding, these funds have been freed up for reallocation. The lock closure was a major accomplishment that will help protect valuable resources in northern Minnesota, but Invasive carp still threaten the Minnesota River watershed and a portion of the St. Croix River.

Upper St. Anthony Falls lock closure will provide maximum upstream protection. A large scale sampling evaluation is needed to provide baseline data as we move forward with lock closure. Reallocated funding is being requested to carry out an intensive sampling exercise.

Fish monitoring activities have begun as part of the evaluation process for proposed barriers at Lock and Dams. A telemetry study using a variety of species (excluding Invasive carp) is being conducted by DNR Section of Fisheries. Electronic receivers are in place to detect fish movement in the Mississippi River, lower Minnesota River, and lower St. Croix River. The Minnesota DNR worked with the U.S. Fish and Wildlife Service to place additional receivers in the Minnesota portion of the Mississippi River in spring/summer of 2014. Minnesota's network of receivers is now connected to a network in Missouri. With the expansion, the project not only contributes to the evaluation of potential barrier impacts but also will be providing information on Invasive carp movements as carp are tagged in the Iowa and Missouri portions of the Mississippi River. Reallocated funding will be used to extend this project.

Waters in the southwest corner of Minnesota are vulnerable to Invasive carp expansion from the Missouri River. MN DNR fisheries identified locations to prevent Invasive carp from entering Minnesota waters and from entering the Mississippi and Minnesota river tributaries through watershed breaches. These projects employed a variety of solutions including electric barriers, increasing levee/road elevations, grates, and ditch plugging. As of June 2014: five projects have been completed, two projects are not completed but preventing carp movement, and one project is on hold due to a funding shortage. Reallocated funding will be used to complete this work.

The scope of a feasibility study for barriers on the Minnesota and St. Croix Rivers changed after the release of the independent contractors report for barrier options for Lock and Dam #1. The feasibility for barriers on these rivers has now been narrowed to electrical based systems. The high level of recreational use on the St. Croix River combined with safety concerns of electrical barriers and the required cooperation from Wisconsin, which has expressed limited to no interest in constructing a barrier, has precluded pursuing a barrier on the St. Croix River from consideration at this time. The focus is now on the Minnesota River. The MN DNR has worked with the Water Resource Center at Minnesota State Mankato to develop a project proposal to study/evaluate barrier feasibility on the Minnesota River. Reallocated funding will be used to proceed with this project.

The susceptible portion of the St. Croix River is not conducive to electrical barriers due to the high level of recreational use on the river combined with safety concerns and the required cooperation from Wisconsin, which has expressed limited to no interest in constructing a barrier. The best alternative is exploring deterrent technologies in lock(s) below the confluence with the Mississippi River. The Minnesota Aquatic Invasive Species Research Center has received funding to begin work in Lock and Dam 8; installing acoustic speakers at the lock and model flow through the tainter gates. Reallocated funding will be used to evaluate the deterrent technology on both Invasive carp and native species and if necessary, enhancing the project to increase effectiveness on Invasive carp and reducing the impacts on native aquatic communities.

The uncertainty associated with a barrier (effectiveness, timeline, cost, native community impacts, and constructability) on the

Minnesota River is high. Given this scenario, DNR Fisheries has identified high value aquatic resources that could be protected at locations in tributaries. These projects will employ electric barrier technology to prevent fish movement upstream. DNR fisheries have prioritized locations and reallocated funds will be used to design and construct these projects.

### Which sections of the Minnesota Statewide Conservation and Preservation Plan are applicable to this program:

- H6 Protect and restore critical in-water habitat of lakes and streams

### Which other plans are addressed in this program:

- Minnesota's State Management Plan for Invasive Species, Minnesota's Asian Carp Prevention Plan

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

- Not Listed

### Which LSOHC section priorities are addressed in this program:

#### Forest / Prairie Transition:

- Not Listed

#### Metro / Urban:

- Not Listed

#### Northern Forest:

- Not Listed

#### Prairie:

- Not Listed

#### Southeast Forest:

- Not Listed

### Relationship to other funds:

- Clean Water Fund

#### Describe the relationship of the funds:

A one-to-one match is required for any funds that would be used for barriers in IA. Any costs related to operation and maintenance of these barriers would be the responsibility of the state of Iowa.

### How does this program accelerate or supplement your current efforts in this area:

Traditional sources of funding are not available to construct a deterrent barrier. Without Outdoor Heritage funding this project is not likely to be completed.

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

Intention would be to maintain and operate barriers as long as necessary to minimize impacts from Asian carp.

### Activity Details:

Will there be planting of corn or any crop on OHF land purchased or restored in this program - **Not Listed**

Is the activity on permanently protected land per 97A.056, subd 13(f) and/or public waters per MS 103G.005, Subd. 15 - **Yes (no)**

**Barrier design, construction, operation, and evaluation**

Activity 1 Complete design and specifications and all permit requirements for a "sweeping" electrical barrier at Lock and Dam 1. Smith Root Inc was contracted to design the barrier in May 2013. 100% design specifications are scheduled to be delivered to MN DNR in July 2014. Construction has been canceled due to Upper St. Anthony Falls Lock closure.

Activity 2 Complete design and specifications, acquire permits, and construct deterrent barriers in Minnesota's portion of the Missouri River watershed. Six projects have been completed. One project has been designed but does not currently have enough funding for construction.

Activity 3 Develop cost share agreement with State of Iowa to construct barrier at Lower Gar Outlet. This project has been completed and was operational in May 2013.

Activity 4 Complete evaluation/study on feasibility of barriers in the Minnesota River watershed. The Minnesota River is a free flowing system whose watershed covers much of southern Minnesota. Increasing the understanding of this system will help evaluate the suitability of deterrent barriers on the Minnesota River and its tributaries. Additionally, it will help prioritize potential locations.

Activity 5 Implement and evaluate deterrent barriers at Lock and Dams. The susceptible portion of the St. Croix River is not conducive to electrical barriers due to the high level of recreational use on the river combined with safety concerns and the required cooperation from Wisconsin, which has expressed limited to no interest in constructing a barrier. The best alternative is exploring deterrent technologies in lock(s) below the confluence with the Mississippi River. The Minnesota Aquatic Invasive Species Research Center has received funding to begin work in Lock and Dam 8. Additionally, MN DNR fisheries is conducting a telemetry study to evaluate fish movement in the St. Croix River, lower Minnesota River, and the Mississippi River from Hastings to above Lock and Dam 1. This activity will focus on evaluating the deterrent technology on both Invasive carp and native species and if necessary, enhancing the project to increase effectiveness.

Activity 6 Complete design and specifications, acquire permits and construct deterrent barriers in the Minnesota River watershed. MN DNR fisheries has identified and prioritized smaller scale deterrent projects in high value sub watersheds of the Minnesota River.

**Accomplishment Timeline:**

Activity	Approximate Date Completed
Complete design and specifications and all permit requirements for a sweeping electrical barrier at Lock and Dam 1.	11/30/2014
Complete design and specifications, acquire permits, and construct deterrent barriers in Minnesota's portion of the Missouri River watershed.	6/30/2015
Develop cost share agreement with State of Iowa to construct barrier at Lower Gar Outlet.	5/1/2013
Complete evaluation/study on feasibility of barriers in the Minnesota River watershed.	<del>12/30/2017</del> 6/30/2018
Implement and evaluate deterrent barriers at Lock and Dams.	6/30/2018
Complete design and specifications, acquire permits and construct deterrent barriers in the Minnesota River watershed.	<del>12/30/2015</del> 9/30/2018

**Date of Final Report Submission:** 12/30/2017

**Federal Funding:**

Do you anticipate federal funds as a match for this program - **Not Listed**

**Outcomes:**

**Programs in the northern forest region:**

- Asian carp have less impact on native species and ecosystems. Fishing and boating will not be negatively affected.

**Programs in forest-prairie transition region:**

- Asian carp have less impact on native species and ecosystems. Fishing and boating will not be negatively affected.

**Programs in metropolitan urbanizing region:**

- Asian carp have less impact on native species and ecosystems. Fishing and boating will not be negatively affected.

**Programs in southeast forest region:**

- Asian carp have less impact on native species and ecosystems. Fishing and boating will not be negatively affected.

**Programs in prairie region:**

- Asian carp have less impact on native species and ecosystems. Fishing and boating will not be negatively affected.

# Budget Spreadsheet

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

**How will this program accommodate the reduced appropriation recommendation from the original proposed requested amount**

Not Listed

**Total Amount of Request: \$ 7500000**

## Budget and Cash Leverage

Budget Name	LSOHC Request	Anticipated Leverage	Leverage Source	Total
Personnel	\$60,000	\$0		\$60,000
Contracts	\$6,971,000	\$0		\$6,971,000
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	\$0	\$0		\$0
Professional Services	\$261,000	\$0		\$261,000
Direct Support Services	\$98,000	\$0		\$98,000
DNR Land Acquisition Costs	\$0	\$0		\$0
Capital Equipment	\$0	\$0		\$0
Other Equipment/Tools	\$110,000	\$0		\$110,000
Supplies/Materials	\$0	\$0		\$0
DNR IDP	\$0	\$0		\$0
Total	\$7,500,000	\$0		\$7,500,000

## Personnel

Position	FTE	Over # of years	LSOHC Request	Anticipated Leverage	Leverage Source	Total
Fisheries Specialist	1.00	1.00	\$60,000	\$0		\$60,000
Total	1.00	1.00	\$60,000	\$0		\$60,000

**How did you determine which portions of the Direct Support Services of your shared support services is direct to this program:**

Not Listed



## Output Tables

**Table 1a. 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	0	0
Total	0	0	0	0	0

**Table 2. Total 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	\$7,500,000	\$7,500,000
Total	\$0	\$0	\$0	\$7,500,000	\$7,500,000

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

Type	Metro Urban	ForestPrairie	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	0	0	0	0	0	0
Total	0	0	0	0	0	0

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

Type	Metro Urban	ForestPrairie	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	\$1,000,000	\$2,500,000	\$0	\$3,000,000	\$1,000,000	\$7,500,000
Total	\$1,000,000	\$2,500,000	\$0	\$3,000,000	\$1,000,000	\$7,500,000

**Target Lake/Stream/River Feet or Miles**

Mississippi, St. Croix, and Minnesota rivers and their tributaries

## 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

#### Blue Earth

Name	TRDS	Acres	Est Cost	Existing Protection?
Eagle Lake protection barrier	10825229	0	\$500,000	
Elysian Lake protection barrier	10725213	0	\$500,000	
Madison Lake protection barrier	10825215	0	\$500,000	

#### Cottonwood

Name	TRDS	Acres	Est Cost	Existing Protection?
Site 10	10638226	0	\$60,000	
Site 10: Cottonwood River breach	10638226	0	\$3,000	No

#### Hennepin

Name	TRDS	Acres	Est Cost	Existing Protection?
Lock and Dam #1 lock chamber	02823217	0	\$985,500	No
Lock and Dam # 1 lock chamber	02823217	0	\$1,141,900	No

#### Jackson

Name	TRDS	Acres	Est Cost	Existing Protection?
Milbrath Dike	10237204	0	\$57,000	Partial
Site 1A: Okabena Breach	10238207	0	\$30,000	Partial
Site 1C: Okabena Breach	10238205	0	\$400,000	No
Site 3	10238207	0	\$30,000	
Site 6: Indian/Iowa	10137228	0	\$400,000	No
Site 1A: Okabena Breach	10238207	0	\$3,800	No
Site 1C: Okabena Electric Barrier	10238205	0	\$488,100	No
Site 2: Milbrath Dike	10237204	0	\$57,100	Partial
Site 3: Tile line caps	10238207	0	\$8,700	No
Site 4: Herlein-Boote WMA	10241212	0	\$200,000 104,400	No
Site 5: Lower Gar Lake outlet	10136236	0	\$261,000	No
Site 6C: Indian/Iowa	10137228	0	\$354,000	No

#### Nicollet

Name	TRDS	Acres	Est Cost	Existing Protection?
Evaluate barrier sites	10827212	0	\$200,000	No

#### Renville

Name	TRDS	Acres	Est Cost	Existing Protection?
Chetamba Creek Barrier	11638209	0	\$500,000	

#### Swift

Name	TRDS	Acres	Est Cost	Existing Protection?
Shakopee Creek Barrier	12025220	0	\$500,000	

### 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: Lock and Dam # 1 lock chamber

# of Total Acres:	0
County:	Hennepin
Township:	028
Range:	23
Direction:	2
Section:	17
# of Acres: Wetlands/Upland:	
# of Acres: Forest:	
# of Acres: Prairie/Grassland:	
Amount of Shoreline:	(Linear Feet)
Name of Adjacent Body of Water (if applicable):	
Has there been signage erected at the site:	

## Completed Parcel: Site 10: Cottonwood River breach

# of Total Acres:	0
County:	Cottonwood
Township:	106
Range:	38
Direction:	2
Section:	26
# of Acres: Wetlands/Upland:	
# of Acres: Forest:	
# of Acres: Prairie/Grassland:	
Amount of Shoreline:	(Linear Feet)
Name of Adjacent Body of Water (if applicable):	
Has there been signage erected at the site:	

## Completed Parcel: Site 1A: Okabena Breach

# of Total Acres:	0
County:	Jackson
Township:	102
Range:	38
Direction:	2
Section:	07
# of Acres: Wetlands/Upland:	
# of Acres: Forest:	
# of Acres: Prairie/Grassland:	
Amount of Shoreline:	(Linear Feet)
Name of Adjacent Body of Water (if applicable):	
Has there been signage erected at the site:	

## Completed Parcel: Site 1C: Okabena Electric Barrier

# of Total Acres:	0
County:	Jackson
Township:	102
Range:	38
Direction:	2
Section:	05
# of Acres: Wetlands/Upland:	
# of Acres: Forest:	
# of Acres: Prairie/Grassland:	
Amount of Shoreline:	(Linear Feet)
Name of Adjacent Body of Water (if applicable):	
Has there been signage erected at the site:	

## Completed Parcel: Site 2:Milbrath Dike

# of Total Acres:	0
County:	Jackson
Township:	102
Range:	37
Direction:	2
Section:	04
# of Acres: Wetlands/Upland:	
# of Acres: Forest:	
# of Acres: Prairie/Grassland:	
Amount of Shoreline:	(Linear Feet)
Name of Adjacent Body of Water (if applicable):	
Has there been signage erected at the site:	



## Completed Parcel: Site 3: Tile line caps

# of Total Acres:	0
County:	Jackson
Township:	102
Range:	38
Direction:	2
Section:	07
# of Acres: Wetlands/Upland:	
# of Acres: Forest:	
# of Acres: Prairie/Grassland:	
Amount of Shoreline:	(Linear Feet)
Name of Adjacent Body of Water (if applicable):	
Has there been signage erected at the site:	

## Completed Parcel: Site 4: Herlein-Boote WMA

# of Total Acres:	0
County:	Jackson
Township:	102
Range:	41
Direction:	2
Section:	12
# of Acres: Wetlands/Upland:	
# of Acres: Forest:	
# of Acres: Prairie/Grassland:	
Amount of Shoreline:	(Linear Feet)
Name of Adjacent Body of Water (if applicable):	
Has there been signage erected at the site:	

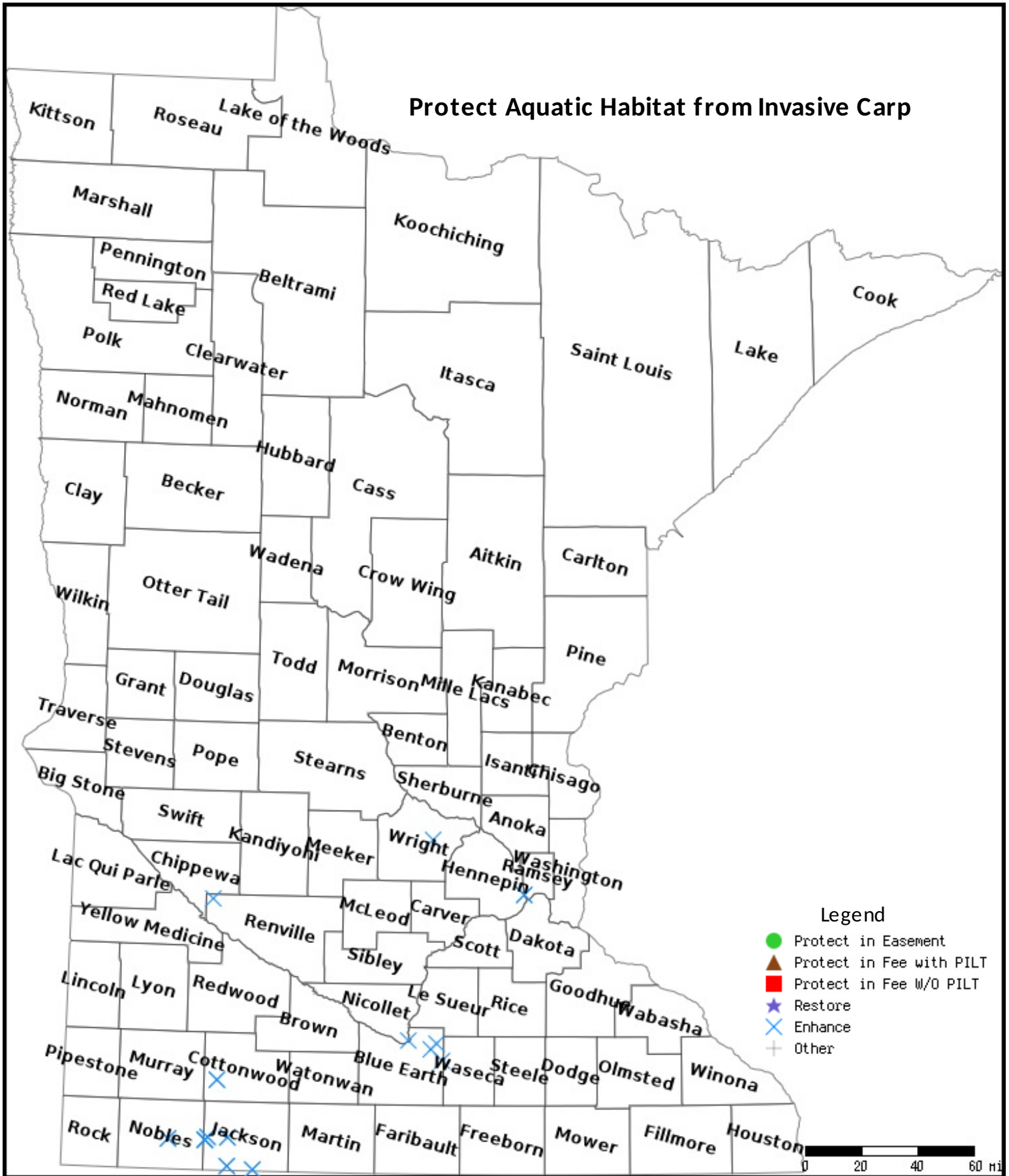
## Completed Parcel: Site 5: Lower Gar Lake outlet

# of Total Acres:	0
County:	Jackson
Township:	101
Range:	36
Direction:	2
Section:	36
# of Acres: Wetlands/Upland:	
# of Acres: Forest:	
# of Acres: Prairie/Grassland:	
Amount of Shoreline:	(Linear Feet)
Name of Adjacent Body of Water (if applicable):	
Has there been signage erected at the site:	

## Completed Parcel: Site 6C: Indian/Iowa

# of Total Acres:	0
County:	Jackson
Township:	101
Range:	37
Direction:	2
Section:	28
# of Acres: Wetlands/Upland:	
# of Acres: Forest:	
# of Acres: Prairie/Grassland:	
Amount of Shoreline:	(Linear Feet)
Name of Adjacent Body of Water (if applicable):	
Has there been signage erected at the site:	

# Parcel Map



Data Generated From Parcel List