



Lessard-Sams Outdoor Heritage Council

Laws of Minnesota 2019 Accomplishment Plan

Date: January 07, 2019

Program or Project Title: Restoring the Upper Mississippi River at Lake Pepin: Phase 1

Funds Recommended: \$ 750,000

Manager's Name: Rylee Main

Title: Executive Director

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Legislative Citation:

Appropriation Language:

County Locations: Goodhue

Eco regions in which work will take place:

- Southeast Forest

Activity types:

- Enhance
- Restore

Priority resources addressed by activity:

- Forest
- Habitat
- Wetlands

Abstract:

This project leverages more than \$10 million in federal funds to begin implementation of a system-wide effort to improve game fish and waterfowl production in the Upper Mississippi River by improving 100 acres of floodplain forest and up to 1,000 acres of aquatic and wetland habitat at the upper end of Lake Pepin. Local partners are working with the U.S. Army Corps of Engineers to mitigate habitat degradation caused by turbidity and excess sediment accumulating at the head of the lake. Project construction is anticipated to begin in 2020.

Design and scope of work:

The Upper Mississippi River is impaired for turbidity (fine sediments) from the confluence with the Minnesota River to Lake Pepin. Continued deposition of these Minnesota sourced suspended solids has resulted in a lack of aquatic vegetation, poor invertebrate production, and reduced abundance of fish and wildlife. Deep protected aquatic areas that would serve as habitat for bluegill and other species, including walleye and sauger, is lacking in both the backwaters and within large open water areas of upper Lake Pepin. Working through the U.S. Army Corps of Engineers' Beneficial Use of Dredge Material Program, the Corps will create/enhance islands and isolated wetlands, protect banks, and create deeper water in protected areas. The expected outcomes of these features include an increase in the habitat sustainability index for ducks by at least 0.25, an increase in the average annual habitat units by a net gain of

250, restored floodplain and wetland plant communities, enhanced public access, decreased suspended solid concentrations, and more natural sediment transport and deposition.

Priorities for the upper end of Lake Pepin have been established as part of a collaborative effort among state and federal agencies in the 5-state region of the Upper Mississippi River. More localized habitat objectives correspond to the Pierce County Islands Wildlife Management Plan, approved by the Wisconsin Department of Natural Resources. Though the state line at the upper end of Lake Pepin is adjacent the Minnesota shoreline, and thus the initial project is located in Wisconsin, the benefits of productive fish and wildlife habitats accrue equally to citizens of both Minnesota and Wisconsin. The Minnesota DNR will remain highly involved in the planning and monitoring phases.

We recognize that the threshold in which habitat restoration at the head of Lake Pepin becomes cost-prohibitive is fast approaching. The current fishery is still robust, but there are concerns productivity is decreasing as sediment and turbidity impacts have long-term effects. This project is expected to restore productivity to historic levels for the next 50 years.

We realize the long-term sustainability of this project is dependent on continuing upstream sediment source reductions, however, not beginning the restoration of Lake Pepin will seriously impair Minnesotans' ability to enjoy fishing, hunting, and boating in this singularly unique reach of the Mississippi River.

Lake Pepin Legacy Alliance is coordinating and administering the 35% non-federal cost-share funds for project partners, while the Wisconsin Department of Natural Resources remains the official non-federal sponsor. Support for the project is widespread, with on-going involvement from the Minnesota Department of Natural Resources, Audubon MN, Ducks Unlimited, and local municipalities, alongside support from the National Wildlife Federation, the Minnesota Conservation Federation, the Red Wing Wildlife League, the Frontenac Sportsmen Club, and the Lake City Sportsmen Club.

How does the request address MN habitats that have: historical value to fish and wildlife, wildlife species of greatest conservation need, MN County Biological Survey data, and/or rare, threatened and endangered species inventories:

Game fish found in Lake Pepin include northern pike, walleye, sauger, yellow perch, white bass, and a variety of centrarchids. Centrarchid overwintering habitat for backwater fish (bluegill, largemouth bass, crappie, etc.) has declined at the upper end of Lake Pepin due to sedimentation and island dissection. Historically, centrarchid overwintering habitat was present in the two primary project areas included in this proposal: Wacouta Bay, and the Bay City area. Now, most of the backwater areas that have adequate depth to provide over winter fish habitat, also have flow that makes it unsuitable for overwintering centrarchids.

Northern pike, crappie, and largemouth bass are all strongly associated with large, near shore strands of aquatic plants. High suspended solid concentrations continue to limit light penetration and rooting capability of submersed vegetation. These conditions have had the greatest influence on aquatic habitat in the upper portion of Lake Pepin, Wacouta Bay, and the Bay City Flats. This project proposes to restore submerged, emergent, and floating vegetation where it has been lost. The Corps of Engineers will construct islands to protect existing aquatic vegetation beds and improve conditions for the growth of aquatic vegetation in other shallow areas. When combined with the construction of islands, backwater dredging will incrementally improve centrarchid habitat in the project area. Increased availability of deeper water combined with reduced velocities will greatly improve wintertime habitat conditions.

Wetland restoration and riparian island creation will increase nesting habitat and migratory stopover habitat. Restoring islands, establishing native grassland and oak savanna, and restoring depth diversity will help bird species like Wood Ducks, Cerulean Warblers, Prothonotary warblers, Louisiana Waterthrush, and many others. Lake Pepin provides critical stopover habitat for the common merganser and has been designated a globally important bird area.

Three protected wildlife species are found in this project area: the bald eagle, the Blanding's turtle, and the wood turtle. This project will improve habitat for the Blanding's turtle and the wood turtle, and ensure a robust fishery for overwintering eagle roosts in the project area.

Describe the science based planning and evaluation model used:

Lake Pepin represents a significant corridor of open space and habitat for both aquatic and terrestrial plants and animals. The upper end of Lake Pepin contains channels and backwaters that provide critical spawning areas for important sport fish species such as sauger and walleye, which use Lake Pepin most of the year. Lake Pepin is part of the U.S. Geological Survey's Long-Term Resource Monitoring Program, which exists to support decision makers with the information needed to maintain the Upper Mississippi River system as a viable multiple-use river ecosystem. Utilizing information collected at the Lake City Field Station, desired future habitat conditions for the upper end of Lake Pepin have been established.

This proposed project is located within the Pierce County Wildlife Area, which is the only publicly managed waterfowl area and refuge along this section of the Mississippi River and contributes to one of the largest contiguous stretches of floodplain forest habitat in the Midwest. Recommendations for the Pierce County Island wetland complex have been identified and endorsed by the Fish and Wildlife Workgroup and the River Resources Forum - representing the five-state region of the Upper Mississippi River. These recommendations include: increasing the coverage of emergent vegetation by 40 percent, stabilizing several miles of eroding shoreline, increasing water depths in select backwater sites, improving the quality of terrestrial habitat, and constructing islands. The recommendations are designed to offset the impacts of sedimentation, improve habitat for migratory waterfowl and shorebirds, and improve conditions for aquatic species.

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

- H4 Restore and protect shallow lakes
- H6 Protect and restore critical in-water habitat of lakes and streams

Which other plans are addressed in this program:

- Ducks Unlimited Living Lakes Initiative
- National Audubon Society Top 20 Common Birds in Decline

Which LSOHC section priorities are addressed in this program:

Southeast Forest:

- Protect, enhance, and restore habitat for fish, game, and nongame wildlife in rivers, cold-water streams, and associated upland habitat

Relationship to other funds:

- Not Listed

Does this program include leverage in funds:

Yes

Federal funds for this project come from a variety of sources within the Corps of Engineers’ programs. The current project budget anticipates the need for \$4.7 million in non-federal funds, to leverage \$8.9 million from the Corps Beneficial Use of Dredged Materials program. This request of \$750,000 will leverage \$1.4 million from that program. If sufficient funds are secured through the Beneficial Use program, the Corps is able to spend an additional \$6 million from their operations and maintenance funds to transport needed materials, bringing the total project budget up to \$19.6 million.

A proposal for this project is also being considered by the Corps for inclusion in a pilot program, which would expand the scope of the project and allocate an additional \$5 million in federal funds to achieve habitat and public access objectives.

Per MS 97A.056, Subd. 24, Any state agency or organization requesting a direct appropriation from the OHF must inform the LSOHC at the time of the request for funding is made, whether the request is supplanting or is a substitution for any previous funding that was not from a legacy fund and was used for the same purpose:

N/A

Describe the source and amount of non-OHF money spent for this work in the past:

Appropriation Year	Source	Amount
2017	U.S. Army Corps of Engineers	\$450,000

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

The construction features outlined in this project are designed to be dynamic and intended to emulate natural river processes. Therefore, we expect operation and maintenance to be minimal. The Wisconsin DNR – the non-federal sponsor and landowner – will be responsible for any maintenance needed over a 50-year timeframe. A monitoring and adaptive management plan will be developed and included as part of the final project report, following the completion of the feasibility study. Typically, monitoring and adaptive management tasks extend up to 10 years following project completion, and close-out of the project would occur when the level of success of the project is determined adequate or when the maximum 10-year monitoring period has been reached. The plan is still conceptual but based on the current prioritized areas we anticipate that all of the project features will be on public property managed for wildlife or in public waters. The conceptual project/island features to be constructed will be attached to property public owned within the Wildlife Management Area. It is my understanding that all of the new features will be owned and managed as part of the WDNR Pierce County Islands Wildlife Area.

Explain the things you will do in the future to maintain project outcomes:

Year	Source of Funds	Step 1	Step 2	Step 3
2019	U.S. Army Corps of Engineers	Complete Monitoring and Adaptive Management Plan	Approve Final Report	
2022 - 2032	Wisconsin Department of Natural Resources	Monitor Project Area & Assess Conditions / Benefits		
2022 - 2032	Wisconsin Department of Natural Resources	Maintenance of constructed features, if needed.		

Activity Details:

If funded, this program will meet all applicable criteria set forth in MS 97A.056 - **Yes**

Will there be planting of corn or any crop on OHF land purchased or restored in this program - **No**

Will restoration and enhancement work follow best management practices including MS 84.973 Pollinator Habitat Program - **Yes**

Is the activity on permanently protected land per 97A.056, subd 13(f), tribal lands, and/or public waters per MS 103G.005, Subd. 15 - **Yes (WMA, Public Waters)**

Accomplishment Timeline:

Activity	Approximate Date Completed
Riparian island creation and restoration (nesting habitat) (100 acres)	6/30/2022
Backwater enhancement (spawning / overwinter habitat) (1,000 acres)	6/30/2022
Wetland restoration (migratory stopover habitat) (10 acres)	6/30/2022

Date of Final Report Submission: 11/30/2022

Federal Funding:

Do you anticipate federal funds as a match for this program - **Yes**

Are the funds confirmed - **No**

What is the approximate date you anticipate receiving confirmation of the federal funds - **06/01/2019**

Outcomes:

Programs in southeast forest region:

- Large corridors and complexes of biologically diverse wildlife habitat typical of the unglaciated region are restored and protected. Lake Pepin represents a significant corridor of open space and habitat for both aquatic and terrestrial plants and animals. In addition to the monitoring and adaptive management plan established as part of the final report within the feasibility study, the project area will be regularly sampled as part of the U.S. Geological Survey's Long-Term Resource Monitoring Program. The aforementioned indicator species will be used as a measure of success for bottomland hardwood forest restoration, wetland restoration, overwintering habitat, and water clarity and aquatic vegetation.

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

N/A

Total Amount of Request: \$ 750000

Budget and Cash Leverage

Budget Name	LSOHC Request	Anticipated Leverage	Leverage Source	Total
Personnel	\$0	\$0		\$0
Contracts	\$0	\$0		\$0
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	\$0	\$0		\$0
Direct Support Services	\$0	\$0		\$0
DNR Land Acquisition Costs	\$0	\$0		\$0
Capital Equipment	\$0	\$0		\$0
Other Equipment/Tools	\$0	\$0		\$0
Supplies/Materials	\$750,000	\$1,400,000	U.S. Army Corps of Engineers	\$2,150,000
DNR IDP	\$0	\$0		\$0
Total	\$750,000	\$1,400,000		\$2,150,000

Amount of Request: \$750,000

Amount of Leverage: \$1,400,000

Leverage as a percent of the Request: 186.67%

DSS + Personnel: \$0

As a % of the total request: 0.00%

Describe and explain leverage source and confirmation of funds:

Not Listed

Output Tables

Table 1a. Acres by Resource Type

Type	Wetlands	Prairies	Forest	Habitats	Total
Restore	50	0	50	750	850
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	50	250	300
Total	50	0	100	1,000	1,150

Table 2. Total Funding by Resource Type

Type	Wetlands	Prairies	Forest	Habitats	Total
Restore	\$34,000	\$0	\$32,500	\$485,500	\$552,000
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	\$32,500	\$165,500	\$198,000
Total	\$34,000	\$0	\$65,000	\$651,000	\$750,000

Table 3. Acres within each Ecological Section

Type	Metro Urban	ForestPrairie	SEForest	Prairie	N Forest	Total
Restore	0	0	850	0	0	850
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	300	0	0	300
Total	0	0	1,150	0	0	1,150

Table 4. Total Funding within each Ecological Section

Type	Metro Urban	ForestPrairie	SEForest	Prairie	N Forest	Total
Restore	\$0	\$0	\$552,000	\$0	\$0	\$552,000
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	\$198,000	\$0	\$0	\$198,000
Total	\$0	\$0	\$750,000	\$0	\$0	\$750,000

Table 5. Average Cost per Acre by Resource Type

Type	Wetlands	Prairies	Forest	Habitats
Restore	\$680	\$0	\$650	\$647
Protect in Fee with State PILT Liability	\$0	\$0	\$0	\$0
Protect in Fee W/O State PILT Liability	\$0	\$0	\$0	\$0
Protect in Easement	\$0	\$0	\$0	\$0
Enhance	\$0	\$0	\$650	\$662

Table 6. Average Cost per Acre by Ecological Section

Type	Metro/Urban	Forest/Prairie	SE Forest	Prairie	Northern Forest
Restore	\$0	\$0	\$649	\$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	\$660	\$0	\$0

Automatic system calculation / not entered by managers

Target Lake/Stream/River Feet or Miles

12 River Miles

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

Goodhue

Name	T RDS	Acres	Est Cost	Existing Protection?
Wacouta Bay	11314236	100	\$750,000	Yes

Section 2 - Protect Parcel List

No parcels with an activity type protect.

Section 2a - Protect Parcel with Bldgs

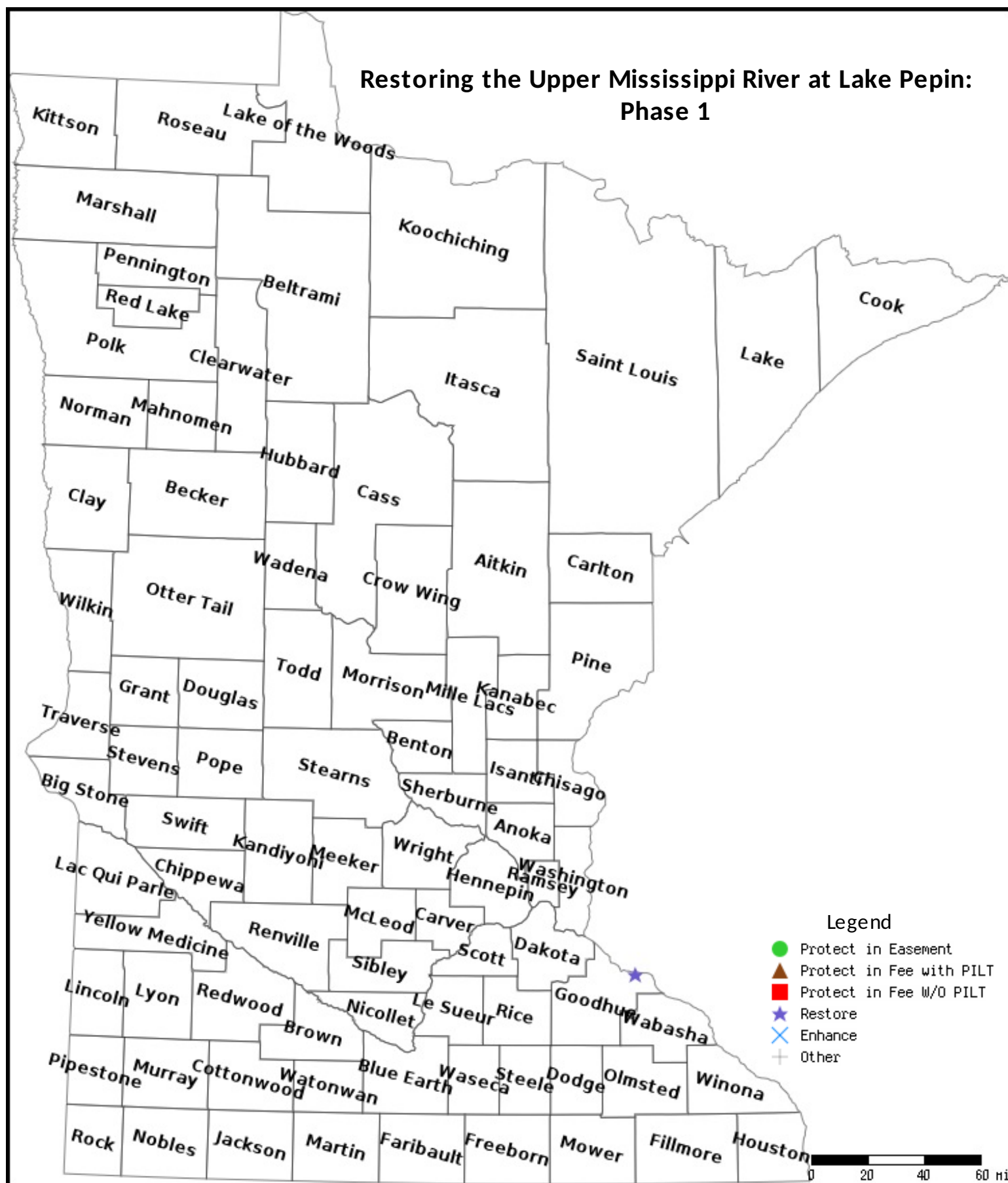
No parcels with an activity type protect and has buildings.

Section 3 - Other Parcel Activity

No parcels with an other activity type.

Parcel Map

Restoring the Upper Mississippi River at Lake Pepin: Phase 1



Data Generated From Parcel List

Lessard-Sams Outdoor Heritage Council

Comparison Report

Program Title: 2019 - Restoring the Upper Mississippi River at Lake Pepin: Phase 1
Organization: Lake Pepin Legacy Alliance
Manager: Rylee Main

Budget

Requested Amount: \$750,000
 Appropriated Amount: \$750,000
 Percentage: 100.00%

	Total Requested		Total Appropriated		Percentage of Request	
Budget Item	LSOHC Request	Anticipated Leverage	Appropriated Amount	Anticipated Leverage	Percentage of Request	Percentage of Leverage
Personnel	\$0	\$0	\$0	\$0	-	-
Contracts	\$0	\$0	\$0	\$0	-	-
Fee Acquisition w/ PILT	\$0	\$0	\$0	\$0	-	-
Fee Acquisition w/o PILT	\$0	\$0	\$0	\$0	-	-
Easement Acquisition	\$0	\$0	\$0	\$0	-	-
Easement Stewardship	\$0	\$0	\$0	\$0	-	-
Travel	\$0	\$0	\$0	\$0	-	-
Professional Services	\$750,000	\$1,400,000	\$0	\$0	0.00%	0.00%
Direct Support Services	\$0	\$0	\$0	\$0	-	-
DNR Land Acquisition Costs	\$0	\$0	\$0	\$0	-	-
Capital Equipment	\$0	\$0	\$0	\$0	-	-
Other Equipment/Tools	\$0	\$0	\$0	\$0	-	-
Supplies/Materials	\$0	\$0	\$750,000	\$1,400,000	-	-
DNR IDP	\$0	\$0	\$0	\$0	-	-
Total	\$750,000	\$1,400,000	\$750,000	\$1,400,000	100.00%	100.00%

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

N/A

Output

Table 1a. Acres by Resource Type

Type	Total Proposed	Total in AP	Percentage of Proposed
Restore	850	850	100.00%
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	300	300	100.00%

Table 2. Total Funding by Resource Type

Type	Total Proposed	Total in AP	Percentage of Proposed
Restore	552,000	552,000	100.00%
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	198,000	198,000	100.00%

Table 3. Acres within each Ecological Section

Type	Total Proposed	Total in AP	Percentage of Proposed
Restore	850	850	100.00%
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	300	300	100.00%

Table 4. Total Funding within each Ecological Section

Type	Total Proposed	Total in AP	Percentage of Proposed
Restore	552,000	552,000	100.00%
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	198,000	198,000	100.00%