Lessard-Sams Outdoor Heritage Council
Laws of Minnesota 2018 Accomplishment Plan

Date: June 28, 2018

Program or Project Title: Lower Mississippi River Habitat Partnership (Phase IV)-Upper Pool 9 Backwater Enhancement and Fl Forest Restoration

Funds Recommended: $ 1,555,000

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Legislative Citation: ML 2018, Ch. 208, Art. 1, Sec. 2, subd 5(i)

Appropriation Language: $1,555,000 the second year is to the commissioner of natural resources to restore and enhance aquatic and forest habitats in the lower Mississippi River watershed, upper Pool 9 backwater. A list of proposed restorations and enhancements must be provided as part of the required accomplishment plan.

County Locations: Houston

Regions in which work will take place:

- Southeast Forest

Activity types:

- Enhance
- Restore

Priority resources addressed by activity:

- Forest
- Habitat

Abstract:

This proposal seeks to enhance and restore 35 acres of fish and wildlife habitat on the lower Mississippi River in Houston County benefiting bluegill, crappie, bass, deer and Blue-winged and Prothonotary warblers. Sedimentation in Upper Mississippi River (UMR) backwaters and declining UMR floodplain forests are a concern to resource managers, anglers, hunters and recreational users. This proposal includes dredging accumulated sediments from a 15 acre backwater in upper Pool 9 and utilizing that material to bury invasive Reed Canary Grass and enhance topographical diversity on 20 acres of Mississippi River floodplain in support of tree planting and floodplain forest restoration.

Design and scope of work:

Aquatic habitat in backwaters of the UMR are filling due to sedimentation from tributary inputs, altered hydrology and island erosion. Backwaters that historically provided deep water habitat and refuge to fish, reptiles and amphibians have decreased in quantity and quality throughout the UMR. The 15 acre aquatic area in upper Pool 9 to be enhanced by dredging will benefit bluegill, crappie and bass populations. Additionally, the area to be dredged is located in a protected bay adjacent to a public access and will increase year-round angling opportunities for multiple fish species. This is a unique project in that dredged material (silts and clays) will be used beneficially to enhance topographic diversity in support of floodplain forest restoration.

Much of the existing floodplain forest in the Upper Pool 9 project area has been declining in coverage over the past several decades. Flat topography, higher groundwater levels caused by impoundment, increased frequency and duration of inundation, and reduced creation of new islands and shoreline have decreased the amount of terrestrial land cover suitable for sustaining forested communities in this area and throughout the UMR floodplain. Furthermore, increased competition from Reed Canary Grass (RCG), an aggressively invasive species whose occurrence is widespread throughout the project area, has adversely affected forest regeneration and altered the natural succession of open areas to forest. Placement of dredged material on a 20 acre area consisting of a monotypic stand of RCG will bury the invasive RCG, increase floodplain elevations by 2 - 3 feet and provide a clean medium for tree planting and direct seeding to restore the floodplain forest community, benefiting SGCN neo-tropical migrant bird species such as Prothonotary and Cerulean warblers.

This project directly addresses the systemic issues of floodplain forest loss and habitat fragmentation, and is a priority action item in the U.S. Army Corps of Engineers (USACE) UMR Systemic Forest Management Plan. It incorporates a variety of floodplain forest restoration components such as: increasing tree species diversity; reintroduction of a hard mast component in floodplain forest communities; improving wildlife habitat; incorporation of innovative restoration measures such as the utilization of dredge materials for the purpose of increasing topographic diversity; and invasive species control and management. In addition, the project lends itself to the adaptive management process by incorporating a variety of restoration measures as well as post-project monitoring to measure their effectiveness, thereby informing future floodplain forest restoration efforts. As stated in the report "Ecological Status and Trends of the Upper Mississippi River System 1998" (USGS 1999), "The ecosystem as a whole benefits from floodplain forests. Besides serving as a rich habitat for wildlife and fish during floods; the forests reduce soil erosion, improve water quality and provide a scenic and recreational landscape."

Floodplain forest restoration in this location will allow for direct comparison with other floodplain forest restoration techniques being utilized in adjacent parcels by partner organizations and agencies. Those partners include MN Audubon, U.S. Fish and Wildlife Service (USFWS), and the USACE.

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:

Enhancement of 15 acres of aquatic backwater habitat will improve conditions for SGCN fishes including: Pirate Perch, Bluntnose Darter, Warmouth, Pugnose Minnow, Pallid Shiner, and Weed Shiner. Floodplain forest restoration in this location will add 20 acres of floodplain forest and reduce fragmentation of the existing floodplain forest community. This will restore a large block of floodplain forest and meet the needs of area-sensitive bird species, including Red shouldered hawks, Cerulean warblers, Acadian flycatchers, Prothonotary warblers, veerys, wood thrushes, Pileated woodpeckers, and Eastern wood peewees (Knutson et al. 1996). A Federally listed mammal that will benefit from this restoration is the Northern long-eared bat. The forest component of the UMR provides critical migration and nesting habitat for a number of rare and declining species in addition to federal and state-listed threatened and endangered species. Additional bird species such as Bald eagles, Great blue herons, Great egrets, and Cerulean warblers favor taller trees such as cottonwood and swamp white oak for roosting and nesting habitat and large blocks of contiguous closed canopy forests are required to maintain viable populations. (Urich et al. 2002). Blue-winged warblers will also immediately benefit from the project as they utilize younger aged stands of floodplain forests. Studies have shown that only a minor amount of natural cottonwood and oak regeneration is occurring on the floodplain (Yin et al. 1997; USGS 1999). Without direct management promoting growth of these trees, tall tree habitat will continue to diminish. If current low levels of natural regeneration are not reversed, floodplain forests may become even more fragmented and therefore less suitable for many forest-dependent species.

Describe the science based planning and evaluation model used:

This project proposal utilizes the expertise, advice and recommendations provided by State (MN, WI, IA), Federal (USFWS, U.S.Geological Survey (USGS), USACE), Academic (UW-LaCrosse), and NGO (Audubon Society, The Nature Conservancy) resource managers and researchers that have collectively identified this area of upper Pool 9 as a priority location for aquatic habitat enhancement and floodplain forest restoration to benefit fish and wildlife populations. Numerous multi-agency planning efforts over the past 15 years have provided a strong scientific basis for a project in this location to improve backwater habitat, expand floodplain forest corridors and reduce fragmentation.

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

- H5 Restore land, wetlands and wetland-associated watersheds
- H6 Protect and restore critical in-water habitat of lakes and streams

Which other plans are addressed in this program:

- Minnesota DNR Strategic Conservation Agenda
- USACE UMRS Systemic Forest Management Plan

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:

- USFWS Upper Mississippi River National Wildlife and Fish Refuge (UMRNWFR) Maint. Funds USACE Environmental Section - Natural Resource Stewardship Fund

Describe the relationship of the funds:

Funds from these two sources will be used to provide technical expertise, technical support and future maintenance of the floodplain forest restoration portion of this project.

How does this program include leverage in funds or other effort to supplement any OHF appropriation:

Technical expertise in floodplain forest restoration techniques and invasive species control and application of those techniques will be provided by both the USFWS and USACE. USFWS Refuge maintenance funds will be used to manage and maintain the floodplain forest restoration portion of this project. There is also the real possibility that this LSOH investment will attract Federal funds from either the Upper Mississippi River Restoration (UMRR) Program or Navigation and Ecosystem Restoration Program (NESP) to expand aquatic and floodplain forest restoration efforts in this area of upper Pool 9.

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:

This request is not supplanting or a substitution for any previous funding for the same purpose.

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

Not Listed

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

The design and location of the aquatic backwater enhancement was carefully chosen to minimize the need for future dredging and maintenance of this portion of the project. The floodplain forest restoration portion of this project will occur on USFWS Refuge lands and will be managed and maintained by the USFWS-UMRNWFR.

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

Year	Source of Funds	Step 1	Step 2	Step 3
2023	Federal	Write a mgmt. plan for the forest restoration portion of this project		
2024 and beyond	Federal	Implement the mgmt. and maintenace activities recommended in the mgmt. plan		

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 (Refuge Lands, Public Waters)**

Accomplishment Timeline:

Activity	Approximate Date Completed
Backwater dredging and upland placement of material	09/30/2021
Placement site prep and tree planting	06/30/2022

Date of Final Report Submission: 11/1/2023

Federal Funding:

Do you anticipate federal funds as a match for this program - **No**

Outcomes:

Programs in southeast forest region:

- Healthier populations of endangered, threatened, and special concern species as well as more common species *Annual Fisheries surveys have been conducted by MN DNR in backwaters of upper Pool 9 since 1993, and continued monitoring will provide an opportunity to evaluate the effectiveness of the 15 acre aquatic enhancement portion of this project. USFWS and USACE personnel will monitor and evaluate the success of the techniques used to restore 20 acres of floodplain forest.*

Budget Spreadsheet

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

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

Not Listed

Total Amount of Request: $ 1555000

Budget and Cash Leverage

Budget Name	LSOHC Request	Anticipated Leverage	Leverage Source	Total
Personnel	$0	$0		$0
Contracts	$1,500,000	$0		$1,500,000
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	$30,000	$0		$30,000
Direct Support Services	$22,400	$0		$22,400
DNR Land Acquisition Costs	$0	$0		$0
Capital Equipment	$0	$0		$0
Other Equipment/Tools	$0	$0		$0
Supplies/Materials	$2,600	$0		$2,600
DNR IDP	$0	$0		$0
Total	$1,555,000	$0		$1,555,000

Amount of Request:	$1,555,000
Amount of Leverage:	$0
Leverage as a percent of the Request:	0.00%
DSS + Personnel:	$22,400
As a % of the total request:	1.44%

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

MN DNR Direct and Necessary Cost Calculator

Does the amount in the contract line include R/E work?

Yes, 100%

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	0	0	20	0	20
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	15	15
Total	0	0	20	15	35

Table 2. Total Funding by Resource Type

Type	Wetlands	Prairies	Forest	Habitats	Total
Restore	$0	$0	$313,100	$0	$313,100
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	$1,241,900	$1,241,900
Total	$0	$0	$313,100	$1,241,900	$1,555,000

Table 3. Acres within each Ecological Section

Type	Metro Urban	Forest Prairie	SE Forest	Prairie	N Forest	Total
Restore	0	0	20	0	0	20
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	15	0	0	15
Total	0	0	35	0	0	35

Table 4. Total Funding within each Ecological Section

Type	Metro Urban	Forest Prairie	SE Forest	Prairie	N Forest	Total
Restore	$0	$0	$313,100	$0	$0	$313,100
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	$1,241,900	$0	$0	$1,241,900
Total	$0	$0	$1,555,000	$0	$0	$1,555,000

Table 5. Average Cost per Acre by Resource Type

Type	Wetlands	Prairies	Forest	Habitats
Restore	$0	$0	$15655	$0
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	$0	$82793

Table 6. Average Cost per Acre by Ecological Section

Type	Metro/Urban	Forest/Prairie	SE Forest	Prairie	Northern Forest
Restore	$0	$0	$15655	$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	$82793	$0	$0

Target Lake/Stream/River Feet or Miles

0

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

Houston

Name	TRDS	Acres	Est Cost	Existing Protection?
Upper Ice Haul Slough	10104223	15	$1,210,000	Yes
Whalen Tract	10104235	20	$303,000	Yes

Section 2 - Protect Parcel List

No parcels with an activity type protect.

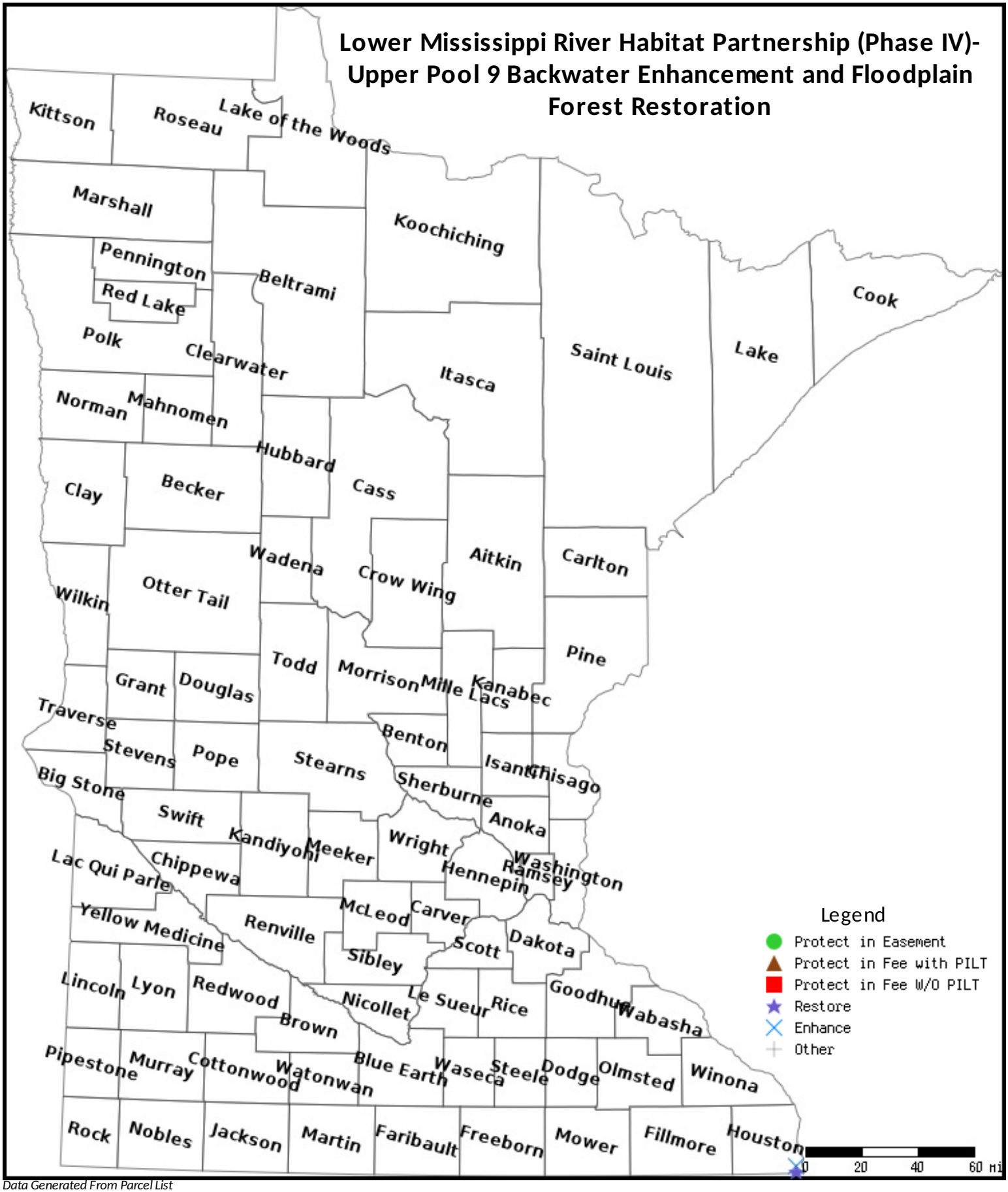
Section 2a - Protect Parcel with Bldgs

No parcels with an activity type protect and has buildings.

Section 3 - Other Parcel Activity

No parcels with an other activity type.

Parcel Map



Data Generated From Parcel List