Environment and Natural Resources Trust Fund
2019 Request for Proposals (RFP)

Project Title: **ENRTF ID: 205-F**

Restoring the Upper Mississippi River at Lake Pepin

Category: F. Methods to Protect, Restore, and Enhance Land, Water, and Habitat

Sub-Category:

Total Project Budget: $ 525,000

Proposed Project Time Period for the Funding Requested: June 30, 2022 (3 yrs)

Summary:

Leveraging $15 million federal dollars to implement a program to improve Lake Pepins gamefish and waterfowl production by restoring 100 acres of terrestrial habitat and 1,000 acres of aquatic habitat.

Name: Rylee Main

Sponsoring Organization: Lake Pepin Legacy Alliance

Title: Executive Director

Department:

Address: P.O. Box 392

Red Wing MN 55066

Telephone Number: (630) 806-9909

Email rylee.main@lakepepinlegacyalliance.com

Web Address www.lakepepinlegacyalliance.org

Location

Region: Southeast

County Name: Goodhue

City / Township: Red Wing

Alternate Text for Visual:

Head of Lake Pepin / Pierce County Islands Backwater Complex Conceptual Features

_____ Funding Priorities	_____ Multiple Benefits	_____ Outcomes	_____ Knowledge Base
_____ Extent of Impact	_____ Innovation	_____ Scientific/Tech Basis	_____ Urgency
_____ Capacity Readiness	_____ Leverage	_____ TOTAL	_____%
____ If under $200,000, waive presentation?			

PROJECT TITLE: Restoring the Upper Mississippi River at Lake Pepin: Phase 1

I. PROJECT STATEMENT

This project leverages $15 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 terrestrial habitat and up to 1,000 acres of aquatic and wetland habitat at the upper end of Lake Pepin. The project will also serve as a pilot to demonstrate benefits and gain buy-in for future project phases in both Minnesota and Wisconsin. 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, 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. 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. Lake Pepin Legacy Alliance is coordinating and administering the 35% non-federal cost-share funds for project partners. This request comprises 3% of the total project budget, and 11% of the non-federal match. While we realize the long-term sustainability of this project is dependent on continuing upstream sediment source reductions, 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.

II. PROJECT ACTIVITIES AND OUTCOMES

Activity 1: Aquatic and Terrestrial Habitat Restoration

Description: The US Army Corps of Engineers will construct islands within the project area at low elevation, oriented to minimize flood impacts. These islands will protect existing aquatic vegetation beds, improve conditions for the growth of aquatic vegetation in other shallow areas, and increase terrestrial habitat availability to wildlife. Dynamic shorelines with a transition zone (i.e. an above water beach) will be created to provide habitat more suitable for shorebirds. 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. (*See Long Term Implementation and Funding for Monitoring and Evaluation*)

ENRTF BUDGET:

Activity 1: Aquatic and Terrestrial Habitat Restoration $500,000

Outcome	Completion Date
1. Riparian Island Creation and Restoration (nesting habitat) (100 acres)	*6/30/2022*
2. Back water enhancement (spawning/overwinter habitat) (1,000 acres)	*6/30/2022*
3. Wetland restoration (migratory stopover habitat) (10 acres)	*6/30/2022*

Activity 2: **Plan for Supplemental Restoration**

Description: Using existing state and federal reports designed to guide planning for Pool 4 of the Upper Mississippi River, the Lake Pepin Legacy Alliance will develop a 10 to 15-year plan for this stretch of the river. Incorporating stakeholder input, the plan will focus on water quality, habitat, sediment management, and

recreation. This document will serve to direct future priorities and fundraising to maintain Lake Pepin's functioning as a premier recreational, cultural, and natural resource for the Upper Midwest.

ENRTF BUDGET: **$500,000**

Activity 2: Plan for Supplemental Restoration $25,000

Outcome	Completion Date
1. Ecological Master Plan for Lake Pepin	*6/30/2021*

III. PROJECT PARTNERS:

A. Partners receiving ENRTF funding

Name	Title	Affiliation	Role
Tom Novak	Project Manager / Architect	USACE	Design and construction contracting operations.

B. Partners NOT receiving ENRTF funding

Name	Title	Affiliation	Role
Kurt Rasmussen	Water Resources Management Specialist	WDNR	Non-federal sponsor and permitting agency. Monitoring & Maintenance.
Megan Moore	Field Station Team Leader; Long-Term Resource Monitoring Program	MN DNR	Long-term resource monitoring.
Tim Schlagenhaft	Upper Mississippi River Program Manager	Audubon Minnesota	Expertise on bird habitat and floodplain forest restoration.
Brian Glenzinski	Regional Biologist	Ducks Unlimited	Expertise on waterfowl habitat.

IV. LONG-TERM- IMPLEMENTATION AND FUNDING:

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 of constructed features will be minimal. WDNR – the non-federal sponsor and landowner – will be responsible for any maintenance needed.

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.

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 had been reached. Additionally, this project area is regularly sampled as part of the U.S. Geological Survey's Long-Term Resource Monitoring Program, implemented by the Minnesota Department of Natural Resources. This data will provide an opportunity to measure resource improvements beyond the 10-year maximum monitoring period for water quality, vegetation, and fish.

This project is only one of many projects that have been identified to improve fish and wildlife habitat in and around Lake Pepin. Given the significant presence of the Corps' Navigation program and the US Fish and Wildlife refuge, we anticipate the availability of federal funds to support a long-term vision for Lake Pepin focused on water quality, habitat, sediment management, and recreation.

V. TIME LINE REQUIREMENTS:

Start Date: May 2020; End Date: June 2022; Timeline: 3 years

2019 Proposal Budget Spreadsheet

Project Title: Restoring Lake Pepin within the Upper Mississippi River system

IV. TOTAL ENRTF REQUEST BUDGET 3 years

BUDGET ITEM (See "Guidance on Allowable Expenses")	**AMOUNT**
Personnel:	
Rylee Main, LPLA Executive Director, Planning for Supplemental Restoration; 18% of full-time employment. 90% towards salary, 10% towards benefits, 2 years, 1 person. *LPLA is a 2-person organization. Rylee is the Executive Director, but she also functions as project manager.	$ 22,500
Professional/Technical/Service Contracts: provided:	
U.S. Army Corps of Engineers: Upper Lake Pepin aquatic and wetland habitat restoration; Island creation and enhancement, shoreline stablization, forest enhancement.	$ 500,000
Equipment/Tools/Supplies:	$ -
Acquisition (Fee Title or Permanent Easements):	N/A
Travel: Roughly 2,250 miles per year for two years to develop an ecological Master Plan for Lake Pepin. Travel will include site visits, professional interviews and stakeholder meetings, covering approximately 20 travel days per year.	$ 2,500
Additional Budget Items:	$ -
TOTAL ENVIRONMENT AND NATURAL RESOURCES TRUST FUND $ REQUEST =	$ 525,000

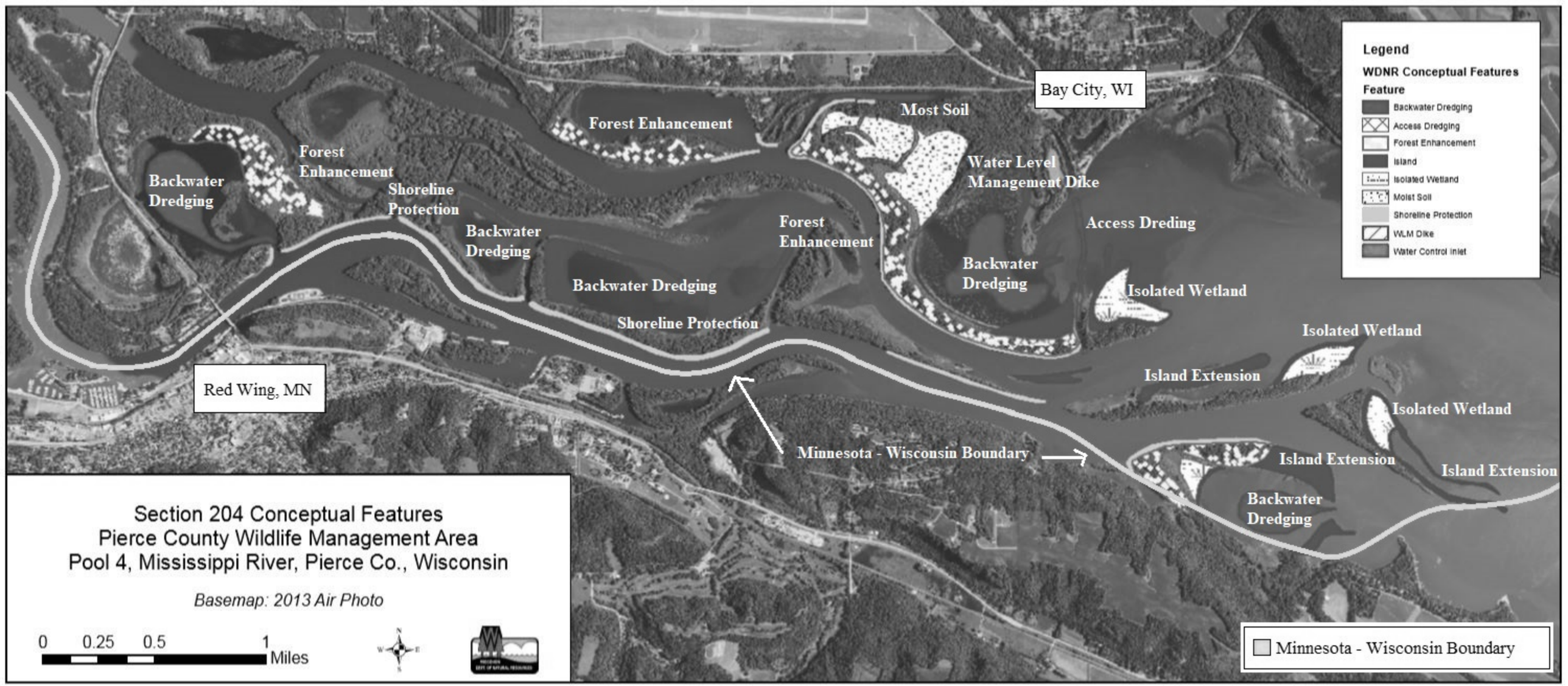
V. OTHER FUNDS *(This entire section must be filled out. Do not delete rows. Indicate "N/A" if row is not applicable.)*

SOURCE OF FUNDS	**AMOUNT**	**Status**
Other Non-State $ To Be Applied To Project During Project Period:		
U.S. Army Corps of Engineers (Operation & Maintenance) - Excavation and Transportation of Material	$ 6,000,000	*Secured*
U.S. Army Corps of Engineers (Section 204) - Federal Cost-Share	$ 8,857,000	*Secured*
U.S. Army Corps of Engineers - Section 1122 Pilot Program (If approved, would reduce federal cost-share to $5.5 million and non-federal cost-share to $3 million)	$ 5,000,000	*Pending*
City of Red Wing, MN	$ 100,000	*Secured*
Lake City, MN	$ 100,000	*Pending*
Other Local Municipalities	$ 50,000	*Pending*
Ducks Unlimited	$ 400,000	*Pending*
Other Private Funds	$ 1,500,000	*Pending*
Other State $ To Be Applied To Project During Project Period:		
Lessard Sams Outdoor Heritage Fund	$ 500,000	*Pending*
Wisconsin Department of Natural Resources	$ 500,000	*Pending*
In-kind Services To Be Applied To Project During Project Period:	TBD	
Past and Current ENRTF Appropriation:	$ -	NA
Other Funding History: U.S. Army Corps of Engineers, Project Feasibility Study	$ 450,000	*Secured*

Attachment C:
Environment and Natural Resources Trust Fund
M.L. 2019 Restoration Parcel List Spreadsheet
Project Title: Restoring the Upper Mississippi River at Lake Pepin: Phase 1
Legal Citation:
Project Manager: Rylee Main
Organization: Lake Pepin Legacy Alliance
College/Department/Division:
M.L. 2019 ENRTF Appropriation: $525,000
Project Length and Completion Date: 3 years, June 30, 2022
Todays's Date: April 6th, 2018

#	Acquisition or Restoration Parcel Name	Geographic Coordinates (preferably from the center of the parcel) Format: [Deg.]° [Min.]' [Sec.]" [Hemis.] Latitude	Longitude	Estimated Cost	Estimated Annual PILT Liabilities	County	Site Significance (please include what ecosystem (e.g., prairie, forest, wetland, savanna) is represented as well as the ecological significance, site importance, conservation value, and public benefits)	Activity Description (e.g. fee title acquisition, conservation easement acquisition, site preparation, restoration)	# of Acres	# of Shoreline Miles	Type of Landowner (private individual or trust, non-profit organization, for-profit entity)	Proposed Fee Title or Easement Holder (if applicable)	Status of work (e.g. engaged in landowner negotiations, no longer in consideration, restoration activities underway)
1	Pierce County Islands Wildlife Area (PCI WA)	44° 34' 24.1824'' N	92° 28' 22.98'' W	$19,600,000	$ -	Pierce County, WI	Ecological opportunities include management of floodplain forest, native grassland and oak savanna maintenance/restoration, large river protection, and management/protection of wildlife, fish, reptiles, and invertebrates associated with these habitats. The PCI WA is located within the floodplain forest of the Mississippi River, and contributes to one of the largest contiguous stretches of floodplain forest habitat in the midwest. The ecosystem provides habitat for 260 fish species, 45 amphibian and reptile species, 57 mammal species, and 37 species of freshwater mussels. Recreationally, the property is managed to provide opportunities for public hunting, trapping, and wildlife observation.	Restoration	100	10	Public	N/A	A feasibility study is currently being completed for this project.
2													
3													
4													
5													
6													
7													
8													
9													
10													

NOTES:



Section 204 Conceptual Features
Pierce County Wildlife Management Area
Pool 4, Mississippi River, Pierce Co., Wisconsin

Basemap: 2013 Air Photo

0 0.25 0.5 1 Miles

Restoring the Upper Mississippi River at Lake Pepin: Phase 1

Benefits to Minnesota
Improved fish and wildlife production
Improved access to adjacent communities (Wacouta Bay, MN and Bay City, WI)
Improved boat safety
Demonstration for future MN-based projects
Ecological Master Plan for future MN-based projects

Project Components	Secured Investments
18-Month Feasibility Study	U.S. Army Corps of Engineers: $450,000
Material Excavation & Transportation	U.S. Army Corps of Engineers: $6 - $11 million
Terrestrial & Aquatic Habitat Improvements	U.S. Army Corps of Engineers: $5.5 - $8.7 million City of Red Wing: $100,000

Attachment D. Additional Work Plan Information for Acquisition, Easements, and Restoration

Restoration

1. Provide a statement confirming that all restoration activities completed with these funds will occur on land permanently protected by a conservation easement or public ownership.

The Upper Lake Pepin aquatic and wetland habitat restoration project is proposed to take place within the Pierce County Islands Wildlife Area, owned and managed by the Wisconsin Department of Natural Resources. Wildlife Areas (Was) are acquired and managed under the authority of Section 23.09(2)(d)3, Wisconsin Statutes, and Chapter NR 1.51, Wisconsin Administrative Code. This property is open to the public for hunting, trapping, wildlife observation, and other nature-based outdoor recreation, and receives significant fishing, boating, and hunting use.

2. Summarize the components and expected outcomes of restoration and management plans for the parcels to be restored by your organization, how these plans are kept on file by your organization, and overall strategies for long-term plan implementation.

All restoration activities completed will comply with the goals and objectives of the Pierce County Islands Wildlife Area Master Plan, which is available for public review on the WDNR website:
http://dnr.wi.gov/topic/Lands/MasterPlanning/MPComplete.html

The purpose of this project is to protect, restore and create Mississippi River backwater habitat. The objectives of the project are to:

a) Improve and protect aquatic habitat – Create depth and habitat diversity in backwaters. Increase acreage of aquatic vegetation through wind and wave reduction. Incorporate structural habitat features such as islands to protect and improve fisheries.
b) Improve the quantity and quality of habitat for migratory bird species – Create suitable habitat for birds such as dabbling ducks and neotropical migrants through the enhancement and creation of a wide variety of plant communities.
c) Increase the quantity and quality of floodplain forest habitat – Protect and enhance existing floodplain forest habitat and create new floodplain forest habitat in conjunction with island creation.

Monitoring data will be collected and maintained by the Wisconsin Department of Natural Resources and the USGS Long-Term Resource Monitoring Program. Evaluation upon the completion of this project will inform any needed maintenance over the 50-year project lifespan, as required under the USACE Beneficial Use of Dredged Material program. Evaluation will also inform long-term planning for future projects, with continued collaboration between the Lake Pepin Legacy Alliance, Minnesota and Wisconsin Department of Natural Resources, and other stakeholders.

3. Describe how restoration efforts will utilize and follow the Board of Soil and Water Resources "Native Vegetation Establishment and Enhancement Guidelines" in order to ensure ecological integrity and pollinator enhancement.

The Minnesota Board of Soil and Water Resources "Native Vegetation Establishment and Enhancement Guidelines" will be used as a key reference document for all components of vegetation restoration associated with this project. Vegetation restoration activities may include, but are not limited to, the following: vegetation establishment on constructed backwater islands, berms, and low-lying land masses, invasive vegetation control and treatment, and floodplain forest restoration.

4. Describe how the long-term maintenance and management needs of the parcel being restored with these funds will be met and financed into the future.

Under the requirements of the USACE Beneficial Use of Dredged Material program (CAP Section 204), the features created and restored under this project will be managed and maintained to provide maximum benefits of the

restoration for up to 50 years. Funding for this management and maintenance will be financed through the WDNR as part of the requirements in Section 23.09(2)(d)3 Wisconsin Statutes, and NR 1.51, Wisconsin Administrative Code authorizing the management of Wildlife Areas.

5. Describe how consideration will be given to contracting with Conservation Corps of Minnesota for any restoration activities.

Restoration activities of the project will be prioritized based on the cost-effectiveness of each activity. The Conservation Corps of Minnesota will be considered for contracting in all activities for which they have the capacity to complete, including but not limited to: tree planting, invasive plant treatment and removal, Timber Stand Improvement, and erosion control.

6. Provide a statement indicating that evaluations will be completed on parcels where activities were implemented both 1) initially after activity completion and 2) three years later as a follow-up. Evaluations should analyze improvements to the parcel and whether goals have been met, identify any problems with the implementation, and identify any findings that can be used to improve implementation of future restoration efforts at the site or elsewhere.

A monitoring and adaptive management plan will be developed and included as a 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. Site-specific monitoring will be conducted by the WDNR immediately following project completion to evaluate erosion, along with periodic monitoring to evaluate impacts on ducks, reptiles, amphibians, and vegetation. Multiple sites within the project area are regularly sampled as part of the U.S. Geological Survey's Long-Term Resource Monitoring Program. This data will provide an opportunity to measure resource improvements beyond the 10-year maximum monitoring period for water quality, vegetation and fish.

Project Manager Qualifications:
Rylee Main, Executive Director

Rylee is the Executive Director of the Lake Pepin Legacy Alliance (LPLA), a 2-person non-profit organization with a strong board of directors representing communities around the lake in Minnesota and Wisconsin. With limited staff, Rylee functions in multiple roles for the organization, including as LPLA's project manager for the proposed restoration project at the head of Lake Pepin. This involves coordinating and administering the 35% non-federal cost-share funds, as well as project planning, soliciting stakeholder input, and engaging project partners.

Rylee received her Master's Degree in Public Policy from the Hubert H. Humphrey School of Public Affairs, with a concentration in science, technology, and environmental policy, and a focus on water resources in Minnesota. In 2017, she was appointed by Governor Mark Dayton to serve on Minnesota's Clean Water Council, representing environmental organizations. She currently serves as chair of the Minnesota Environmental Fund and formerly served as Treasurer for the Minnesota Conservation Federation.

Leading this project since its inception, Rylee has been working collaboratively with the U.S. Army Corps of Engineers, Minnesota and Wisconsin Departments of Natural Resources, Audubon MN, and other partners over the last 4 years. These efforts led to approval by the Corps to fund a $450,000 feasibility study for the project area as part of their Beneficial Use of Dredged Material Program.

Throughout the initial research and planning stages, and the on-going feasibility stages of this project, Rylee has secured written support for the project from 9 local municipalities (cities and counties), U.S. Representative Jason Lewis (MN), U.S. Representative Ron Kind (WI), the Upper Mississippi River Basin Association, and an array of other organizations including local sportsmen clubs.

Rylee is well positioned to lead the project to fruition and develop a plan for system-wide improvements within this reach of the Mississippi River.

Organization Description:

The Lake Pepin Legacy Alliance is a citizen-driven non-profit organization which brings together education, science, and collaborative action to sustain Lake Pepin's ecosystem for the long-term, including reduction and remediation of siltation from upstream. We promote clean water, wildlife, and recreational and commercial navigation.

Our goals are to:

1) Monitor habitat and water quality conditions at the upper end of Lake Pepin, as well as sediment reductions from the Minnesota River.
2) Educate and unite the Lake Pepin communities by amplifying and empowering local voices.
3) Restore Lake Pepin by improving ecosystems, boater safety, and navigational access for recreational and commercial vessels.
4) Protect Lake Pepin by mitigating sediment input from upstream sources, primarily the Minnesota River.