DEPARTMENT OF NATURAL RESOURCES

Memo

Date: 10/11/2022

To: Lessard-Sams Outdoor Heritage Council

From: Neil Rude, Mississippi River Habitat Specialist

Subject: Extension Request, Lower Mississippi River Habitat Partnership (Phase IV)-Upper Pool 9 Backwater Enhancement and Floodplain Forest Restoration, ML18-5(i)

Project Background

The Lower Mississippi River Habitat Partnership (Phase IV)-Upper Pool 9 Backwater Enhancement and Floodplain Forest Restoration project will enhance deep lentic backwater habitats for aquatic organisms (5 acres), and restore floodplain forest habitat (5 acres). Backwater enhancement will be achieved by dredging to create deep lentic habitat (> 7ft) in a shallow area (< 3ft) that has slowly filled with sediment since the installation of the locks and dams in the late 1930s. The enhanced backwater will provide year round habitat for fishes, and also new angling and recreation location for the public. Floodplain forest restoration will be achieved by beneficially using dredged material from the backwater to increase elevation of adjacent floodplain forest land with high (> 50%) current tree mortality. Increasing elevation (3-3.5 ft) will reduce the inundation frequency and duration and create forest habitat with less than 30 days of inundation, which will support a variety of floodplain forest species (e.g., swamp white oak); restored forest habitat will also provide benefits to numerous wildlife species.

This project has experienced numerous delays due to minor changes in project location, avoiding impacts to sensitive species, and information recently obtained related to coordination with the U.S. Army Corps' Upper Mississippi River Restoration (UMRR) Habitat and Rehabilitation Project (HREP). The UMRR-HREP is a floodplain forest focused project with backwater enhancements ($33 million estimated cost), and coordinating construction periods with this project will reduce future costs for the LSOHC project because of use of an access road created by the UMRR-HREP project. We have made continual progress with this large project, but a request for an extension in funding is needed to complete the project to coincide with the UMRR-HREP construction time period.

Cost estimates for the project are within the amount budgeted, and we fully expect to complete habitat restoration/enhancement pending funding extension (see below); cost estimates were provided by US Army Corps engineers and staff. Project spending to-date is commensurate with progress made.

Project Progress:

- The project's aquatic dredging and floodplain forest elevation will not trigger flood stage impacts; certified HEC-RAS no-rise model conducted by MN DNR floodplain engineers.
- NHIS submitted (May 2022), and awaiting report, but currently coordinating with non-game staff to reduce/avoid impacts to sensitive species.
- EAW draft nearing completion (awaiting final NHIS report) and finalized project access location/route (see below).
- Forest modeling indicates floodplain forest elevation increase will support numerous floodplain species including hardwoods (e.g., swamp white oak, hackberry); US Army Corps foresters expect natural regeneration to occur at elevations created, and agreed to plant the location if natural regeneration does not occur.
- Dredging location designs and depths have been calculated for appropriate material balance for elevation increase of floodplain forest.
- Synergy with UMRR-HREP project; engineering/design, modeling, project feature cost estimates, project infrastructure.
- Full project support from partner agencies (US Army Corps, Upper Mississippi National Wildlife and Fish Refuge, WI DNR, IA DNR). Both these projects together create a larger complex of aquatic and floodplain forest habitat that will be more beneficial than either project on its own.

Project Delays and Challenges:

- Changes to the floodplain forest restoration location: the original location was deemed too far from the dredging location because of the high cost to transport dredged material (Summer 2020). Therefore, a new location was found adjacent to the proposed dredging location and floodplain forest data and models indicated the location was suitable for restoring floodplain forest and was supported by all agencies (Summer 2021). As included in recent progress reports, the new location allows for ~5 acres of aquatic habitat enhancement, and ~5 acres of floodplain forest restoration, to avoid adverse flood stage impacts at other proposed locations; a project amendment will be submitted as part of the extension process to reflect the acreage changes.
- Access dredging was planned for transport of dredging equipment from a nearby boat ramp (Millstone Landing) into the project location for construction of both the LSOHC project and UMRR-HREP. However, a mussel survey in the area as part of the UMRR-HREP planning process indicated significant mussel populations (including state and federal listed species) in and around the proposed access channel route (Fall 2021), which necessitated a new access route. No access dredging through mussel beds was fully supported by all agencies (Spring 2022).
- Construction of an overland access road to load equipment was proposed by the UMRR-HREP team to enter into the project site without impacting mussel populations (Summer 2022); the estimated cost of the temporary access road and landing is $968,000. It was agreed that the LSOHC project could use the road to access and load equipment for the project.
- Construction of the UMRR-HREP project (temporary access road) is not scheduled until FY26, which was delayed from original timeline of FY25 (Fall 2022).
- No other viable access routes or techniques for entering the LSOHC project area appear to exist, therefore, use of the UMRR-HREP road is the only access option.
- SHPO survey has been delayed because of US Army Corps ownership of floodplain forest elevation increase location. They must conduct the SHPO review. Initial conversations with US Army Corps

archaeologist indicated that cultural resources were not expected to be impacted, but they are doing their required diligence.

- Real estate agreement with US Army Corps is required to construct on US Army Corps property; a temporary agreement to allow MN DNR to manage the lands during construction period will be utilized to allow construction, but the project timeline for construction needs to be in place first (pending funding extension request).

Suggested Motion

Motion by Councilmember X to approve/deny the legislative extension of appropriation availability for

ML 2018 5(i), Lower Mississippi River Habitat Partnership (Phase IV)-Upper Pool 9 Backwater Enhancement and Floodplain Forest Restoration until June 30, 2027, to be included in the ML 2023 OHF recommendations bill.

Summary of Request

- The project received $1.555 million in funding from the council for ML18 (see subpart 5i).
- As indicated in the previous sections and the August 2022 status update, there has been numerous project delays and hurdles to overcome with this unique project.
- Access into the project site is the largest hurdle and presents the biggest challenge to overcome, however, the UMRR-HREP road will provide the access needed to complete the project. Information obtained in the past few months make it clear the project's success hinges on using the UMRR-HREP road for access, as no other alternatives appear to exist, and road construction using LSOHC funds is not feasible. Therefore, we would like to request an additional 4 year extension of our current LSOHC grant that is set to expire June 2023 to coincide with the UMRR-HREP construction period. A 3 year extension may be sufficient, but doesn't allow for any construction delays due to potential high water years, which could be problematic for construction.
- The $1.555 million funds for the project is sufficient for completing the aquatic habitat dredging and floodplain forest elevation increase. US Army Corps estimate cost for dredging and elevation enhancement on the UMRR-HREP project to be $200,000 per acre of area dredged/elevated (5 acres of dredge, and 5 acres of elevation = $1 million). The additional ~$500,000 would be used for engineering costs, and transport of granular (sand) material from a nearby US Army Corps owned dredged material placement site in Brownsville, MN (or Lansing, IA) to achieve the ideal mixture of fine and granular material for floodplain forest soil characteristics.

Project Spending to Date

Project Fund Allocation	Restoration/Enhancement	Acquisition/Easement	Professional Services
Planned	$1,555,000	$0	$30,000
Spent to date	$0	$0	$5,100