



Clarksville/Carroll Island Complex Side Channel Restoration

Upper Mississippi River, Lower Impounded, Pool 25, River Miles 273 -266 Calhoun County, Illinois

Navigation Ecosystem Sustainability Program, St. Louis District

US Army Corps of Engineers

Location. The study area includes approximately 950 acres of side channel habitat along the Illinois bank between river miles 273-266L from Clarksville Island to Carroll Island.

Land Ownership. The proposed work would be 100% aquatic and below the ordinary high water; therefore, no landowners identified.

Resource Problem. Side channels are important aquatic habitat for many native species including UMR riverine fishes and freshwater mussels. Historically, the study area had freshwater mussel beds, but these beds have been impacted through time due to degraded side channel conditions (e.g., increased siltation, sediment homogenization). Restoring side channels to promote freshwater mussel habitat has been identified by the River Resources Action Team as a resource need within the Lower Impounded Reach of the Mississippi River. Carroll Chute is known to have an abundant freshwater mussel population which could provide a source population to restore freshwater mussels within the study area.

NESP Project Types. The project could consist of the following NESP project types: side channel restoration and dike alteration.

Project Objectives. The project seeks to restore side channel habitat within the Clarksville/Carroll Island Complex. The preliminary project objectives include:

- Restore side channel connectivity and flow to benefit native riverine fish and wildlife; and
- Improve side channel habitat, including substrate stability, to benefit native freshwater mussels.

Potential Measures. The following are potential measures that could be combined into an implementable alternative that may be in the federal interest, address the identified problems, and achieve project objectives.

- Dike alteration (including but not limited to removal, lowering, degrading, raising, extending, or notching)
- River training structures
- Rock-gravel substrate enhancement
- Gradual slope revetment
- Beneficial use of dredge material
- Natural and nature based features

As part of the feasibility study, a full range of measures and alternative formulation strategies would be developed and evaluated.

Implementation Considerations. The project has been endorsed by the River Resources Action Team Exec on July 30, 2021. The following data needs have been identified: freshwater mussel (including substrate) survey and bathymetric and flow survey, pre- and post-construction fish monitoring.

Financial Information (Estimate). The estimated Total Project Cost is approximately \$7-10M, to include an estimated \$150,000 for monitoring and \$250,000 for adaptive management. Project measures would require minimal operation and maintenance (O&M) costs. Project features would all be located below the ordinary high water mark, therefore the construction and OMRR&R of this project would be 100% Federally funded, and a non-federal sponsor would not be required.