



US Army Corps of Engineers®

PROJECT FACT SHEET

Picayune Chute-Devil's Island

Upper Mississippi River, Unimpounded, River Miles 61-55

Union and Alexander counties, Illinois

Navigation Ecosystem Sustainability Program, St. Louis District

Location. Picayune Chute-Devil's Island complex is located along the left descending bank between river miles 61-55 about 1 mile north of McClure, Illinois. The area is approximately 2,741 acres of forested island and backwater, and 335 acres of side channel habitats.

Land Ownership. The study area is owned and managed by the Illinois Department of Natural Resources.

Resource Problem. Several river training structures intersect the side channel limiting fish access to and through Picayune Chute and contribute to severe aquatic habitat degradation. Existing structures in various levels of degradation include: wing dike above the inlet and a notched closing structure across the outlet, three remnant wooden pile dikes, an abandoned and severely degraded low water crossing spanning the side channel, a notched rock closing structure, and a notched spur dike. The inlet becomes isolated from the Mississippi River by a large sand plug (an extension of the island) at river stages below +8.5 Low Water Reference Plane. The riparian corridor along the left bank of the side channel (approximately 1.3 miles in length) has been lost or degraded resulting in severe bankline erosion.



Devil's Island Wildlife Management Area includes bottomland hardwood forests, backwaters, and abandoned agricultural fields. The island suffers from severe seasonal flooding. The island's topographic diversity has degraded over time along with forest structural diversity and interior

wetlands and backwaters. Active wetland management of the site is severely restricted due to no road access spanning Picayune Chute.

The Corps has previously completed small-scale dike notching of existing structures within Picayune Chute, but a more comprehensive study is needed to restore ecosystem structure and function within the Picayune Chute-Devil's Island complex.

NESP Project Type. Side channel restoration, dike alteration, backwater restoration, island and shoreline protection, floodplain restoration, and topographic diversity

Project Objective(s). The project seeks to restore lost and degraded riparian, island, and aquatic habitats. The preliminary project objectives include:

- Improve fish access and side channel connectivity of Picayune Chute
- Reduce bankline erosion within Picayune Chute
- Improve forest structural diversity and complexity within Devil's Island and the riparian corridor
- Improve topographic diversity within Devil's Island
- Improve wetland and backwater habitats within Devil's Island

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 the project objective.

- Dike alteration (including but not limited to removal, lowering, degrading, raising, extending, or notching)
- Timber stand improvement
- Tree planting
- Ridge & swale restoration
- Environmental dredging

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: hydraulic modeling, LiDAR of island, forestry, and biological surveys.

Financial Information (Estimate). The estimated Total Project Cost is approximately \$15-25M, including an estimated \$200,000 for monitoring and \$500,000 for adaptive management. Project measures would require minimal operation and maintenance (O&M) costs.

Projects measures located on Devil's Island:
Measures on Devil's Island would be located on non-Federal lands; therefore, construction of the project would be 65/35 Corps/Non-Federal Sponsor cost-share. Illinois Department of Natural Resources would be responsible for 100% OMRR&R responsibilities.

Project measures located within Picayune Chute:
Measures located within Picayune Chute would be located below the ordinary high-water mark or a connected backwater; therefore, the construction of this project would be 100% Federal but could require a non-Federal sponsor to perform OMRR&R responsibilities, depending on the selected measures.