
Upper Mississippi River System Environmental Management Program

Fact Sheet

SALT LAKE/FORT CHARTRES SIDE CHANNEL RESTORATION

Mississippi River, Illinois

Location: The Salt Lake/Fort Chartres Side Channel is located along the Illinois bank of the Mississippi River between UMR RM 134 – 132. There are approximately 30 side channels remaining along the Middle Mississippi River (MMR) between Mel Price Locks and Dam UMR RM 200.8 and the confluence with the Ohio River at UMR RM 0.0. Side channel restorations along the Mississippi River are proposed to restore aquatic and wildlife habitat.

Resource Problem: Side channels are a critical component of the Mississippi River, and those that remain in the MMR are in various stages of degradation. Most have been degraded by a variety of factors including: reduced flow, uniform bottom depths, lost connectivity to the river and adjacent wetlands, a loss of aquatic habitat structure, a loss of hard mast tree production, increased sedimentation, and a loss of overall habitat diversity. These degradational processes are anticipated to continue in the future, and will eliminate a critically important habitat component of the riverine ecosystem. Today river engineers and biologists have the expertise to describe, verify and modify side channel conditions prior to and following side channel restoration. The opportunity exists to apply this knowledge to the side channels. The existing conditions of side channels and the proposed actions required for restoration are documented in the District's "Middle Mississippi River Side Channels Plan" (MMRSCP).

Project: The proposed restoration features will be based on input from the UMRS-EMP Habitat Needs Assessment (HNA) and the optimized hydraulic configuration of the side channel using MVS micro-modeling methodology. The project may include a variety of the following features:

- a. Placement of rock weirs.
- b. Alternating hard points (stone, wood or both) to increase sinusoidal flow patterns through side channel.
- c. Modify existing rock closure structures.
- d. Selective dredging to remove large sand deposits.
- e. Create ridges using side channel dredged material
- f. Creation of interior swales using natural hydraulic processes to move sediments.
- g. Improve secondary channels.
- h. Structural improvements or dredging.
- i. Dredging at channel's lower end to improve channel's connectivity with the open river.
- j. Potential expansion into a regional wetlands complex including other nearby side channel wetlands and wetland habitats (specific improvements to be based on micro modeling.
- k. Notch dikes within side channel to increase connectivity.

Project Outputs: The proposed project is anticipated to produce a variety of the following outputs:

- a. Reduced bedload and increased side channel flows.
- b. Increased depth diversity.
- c. Increased channel longevity.
- d. Improved aerated soil conditions for establishment of planted hardwood trees.
- e. Improved conditions for fish ingress/egress to side channel.
- f. Improved overall wetland habitat complex.
- g. Increase habitat diversity.
- h. Endangered species habitat improvement.

Financial Data: The estimated costs for the general design work and construction of the side channel project are \$2,000,000. The annual OMRR cost for the side channel is estimated to be \$10,000. In accordance with Section 906(e) of the 1986 Water Resources Development Act, the project's first costs would be 100% federal. If future analysis indicates a need for side channel restoration work related to adjoining lands, the additional first costs would be 65% federal and 35% non-federal. Cost sharing would be assigned on a feature by feature basis. Areas may be targeted by FWS for land acquisition, and if the area is acquired, FWS would become the primary sponsor.

Supplemental Data: Various assumptions are inherent to this proposal:

All high and medium priority side channels identified in the MMRSCP warrant restoration. Individual side channels may be proposed and worked simultaneously to one another for improved construction efficiency. Each side channel can best be "fast-tracked" by micro modeling, funding, and constructing each side channel independently. The Salt Lake/Fort Chartres Side Channel project will generate a PDA document, and the total estimated project costs are expected to be less than \$2 million and therefore can be approved at the Division level.

Studies started and to be conducted over the next few years will be used to determine the need for side channel restoration work for the benefit of endangered species. Thus, in the future there may be benefits of this work for endangered species, but the degree of benefit remains undetermined at this time.

The project may require the acquisition of a narrow buffer strip of land adjacent to the side channel. This buffer area is in private ownership. Lands would be acquired by the Illinois Department of Natural Resources (IDNR), except for endangered species related work (which has no sponsor), in which case the lands may be acquired by the St. Louis District. Project lands (if needed) will be acquired on a "willing seller" basis only. This is consistent with the policy of IDNR and the FWS. The sponsors are confident that this will not be a major impediment to the project's overall implementation. If side channel improvements prove successful, then consideration will be given to preparing fact sheets that combine multiple side channel projects into multiple Phase fact sheets.

A 25-year project life is assumed for the side channel work, and no post-construction maintenance dredging will occur. The project's economics justification via Incremental Cost Analysis (ICA) would take into account any declining habitat value resulting from subsequent river sedimentation effects.

PLACE MAP HERE