

Project Factsheet for: Mississippi River Maintenance Dredging (Operations & Maintenance)

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Project Location Information

Location: Upper Mississippi River from Lock 11 to Lock 22

State(s): IA, IL, MN, MO, WI

Congressional District(s): IA-1, IA-2, IA-3, IA-4, IA-5, IL-11, IL-13, IL-14, IL-15, IL-16, IL-17, IL-18, IL-19, IL-2, IL-3, MN-1, MN-7, MO-6, MO-9, WI-1, WI-2, WI-3, WI-5, WI-6

Status

Project in operation.

Description

In order to maintain the 9-foot navigation channel, maintenance dredging is performed at various locations in the reach of the Upper Mississippi River in the Rock Island District. The affected reach of the Mississippi River extends approximately 314 river miles (RM) from Lock and Dam (L/D) 10 at Guttenberg, Iowa, to L/D 22 just downstream from Saverton, Missouri. It is divided into 12 pools by navigation dams. The present navigation system was initiated when Congress passed the River and Harbor Act of 3 July 1930, which authorized funds for its development. This legislation provided for a navigation channel, 9 feet deep and 400 feet wide, to be established by constructing a series of L/Ds and maintained by dredging.

The 9-foot navigation channel project in the Rock Island District is composed of 12 L/Ds. Upstream of each dam and extending to the next dam is a slackwater navigation pool. Wing dams, closing dams, and revetment works are other physical structures that are an integral part of the channel project. Aside from routine physical maintenance on these structures, annual dredging is required at various locations in the main channel.

Annual maintenance dredging of the Upper Mississippi River 9-foot Channel Project is generally required at 10 to 15 sites, and the volume of material dredged is approximately 400,000 cubic yards per year. Due to the large sediment load carried by the waterway and continually changing flows, specific dredging locations and quantities to be dredged vary from year-to-year.

The dredged material is usually removed from the navigation channel by the hydraulic cutterhead dredge Goetz and discharged to placement sites by floating pipeline. The Goetz is a 20-inch hydraulic dredge owned and operated by the St. Paul District. Under optimum conditions, the dredge can pump as much as 1,300 cubic yards per hour as far as 1,650 feet and up to 800 feet inland. Booster pumps are sometimes used in combination with the Goetz to pump material up to approximately 10,000 feet.

Dredged material is usually placed along the shoreline or in upland sites located in close proximity to the dredging site, or in the thalweg. Depending on location, dredged material is placed in the following manner:

- a. Shoreline - material is placed linearly along the shoreline to rejuvenate recreational beaches that have diminished because of erosion.
- b. Upland - material is placed out of the river in bottomland forest, industrial sites, on levees, or in beneficial use sites.
- c. Thalweg - material is placed into deep portions of the river channel where it becomes incorporated with the bed load sediment.

Prior to the discharge of any dredged material, representatives of the Corps of Engineers and the On-Site Inspection Team (OSIT) meet to determine the preferred placement site for the dredged material. The OSIT is composed of representatives of the appropriate Federal and State agencies. The U.S. Department of the Interior, U.S. Fish and Wildlife Service, along with representatives of Iowa, Illinois, Missouri, and Wisconsin, participate in the OSIT. At the end of each dredging season, the OSIT inspects each placement site and makes recommendations to the Corps of Engineers for future maintenance dredging events. In addition, the OSIT prepares a Post Placement Evaluation Report and submits this information to each involved State agency for review.

Coordination with Other Federal and State Agencies: Channel maintenance activities typically require coordination with the following agencies:

- U.S. Coast Guard Eighth District - New Orleans, Louisiana
- U.S. Environmental Protection Agency, Region V - Chicago, Illinois
- U.S. Environmental Protection Agency, Region VII - Kansas City, Missouri
- U.S. Department of the Interior, Fish and Wildlife Service - Rock Island, Illinois
- Illinois Environmental Protection Agency - Springfield, Illinois
- Illinois Department of Natural Resources - Springfield, Illinois
- Iowa Department of Natural Resources - Des Moines, Iowa
- Missouri Department of Natural Resources - Jefferson City, Missouri
- Wisconsin Department of Natural Resources - La Crosse, Wisconsin

Authority

OM - Operations and Maintenance -- River and Harbor Act of 1930

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