



US Army Corps
of Engineers
Rock Island District

Information Paper

R3. Pool 18 Growing Season Drawdown

Upper Mississippi River System - Navigation and Ecosystem Sustainability Program

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Location/Description

The program area comprises the Upper Mississippi River System, as defined by Congress in the Water Resources Development Act of 1986 (WRDA 1986), which includes the Upper Mississippi River from Minneapolis, Minnesota, to Cairo, Illinois; the Illinois Waterway from Chicago to Grafton, Illinois; and navigable portions of the Minnesota, St. Croix, Black and Kaskaskia Rivers. This multi-use resource supports an extensive navigation system (made up of 1200 miles of 9 foot channel and 37 lock and dam sites), a diverse ecosystem (2.7 million acres of habitat supporting hundreds of fish and wildlife species), floodplain agriculture, recreation and tourism. Based on the recommendation of the recently completed UMR-IWW System Navigation Feasibility Study that examined system needs over the next 50 years, the Navigation and Ecosystem Sustainability Program (NESP) was implemented to achieve the dual purposes of UMRS ecosystem restoration and navigation improvements. The Pool 18 Water Level Management Project is one of 23 initial NESP ecological component projects being implemented under this new UMRS program.

Lock and Dam 18 is located near Gladstone, IL, approximately 6.5 miles north of Burlington, Iowa. Pool 18 extends from river mile 410.5 upstream 26.6 river miles to New Boston, IL, and includes portions of Louisa and Des Moines Counties in Iowa and Mercer and Henderson Counties in Illinois. The bluff-to-bluff extent of the river reach covers approximately 135,000 acres.

One major (Iowa River) and several minor tributaries join the Mississippi River along Pool 18. The Iowa River enters the Mississippi River near the upstream end of the pool, 3.1 miles downstream of Lock & Dam 17.

A reduction in the navigation pool level (drawdown) during the summer growing season would result in the exposure of substrate allowing for the compaction and oxidation of sediments (to increase water clarity and nutrient assimilation, respectively) and the extension of the photic zone through improved water clarity to increase the production, extent, and diversity of aquatic plants.

An increase in the abundance of emergent and submersed aquatic plants would improve habitat conditions and provide a valuable source of food for a variety of organisms including young-of-year and small fish, migratory birds, wading birds, furbearers, reptiles, and amphibians. Upon reflooding, the flooded vegetation would provide valuable habitat for small fish and spawning habitat for fish the following spring. Further, an increase in the abundance of emergent and submersed aquatic plants would help to dissipate wind energy, resulting in less sediment resuspension in the near-shore zone.

Problem Statement

Historically, the Corps of Engineers has regulated the river for the single, Congressionally authorized, project purpose of maintaining a safe and reliable navigation channel. Through the Water Level Management effort, we are examining opportunities to modify the current methods of river regulation to improve conditions of the river ecosystem.

Current Status

The study team is working to complete the Draft Project Implementation Report, describing the recommended implementation of the Pool 18 drawdown, and to coordinate suitable locations for the disposal of advanced maintenance dredging needed to maintain the navigation channel during the drawdown. Once complete, the draft report will undergo Independent Technical Review and an internal policy review in preparation for releasing the report to the public for comment in late spring or early summer of 2008.

Authority

The Water Resources Development Act of 2007, TITLE VIII Upper Mississippi River and Illinois Waterway System, authorized the project.