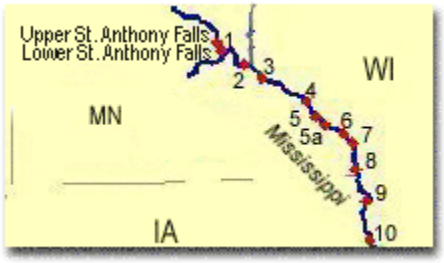
US Army Corps of Engineers
St. Paul District

Upper Mississippi River Water Level Management Program

Location/Description



Construction of a series of locks and dams on the Upper Mississippi River created the 9-foot navigation channel. Over the decades, the lock and dam system has, in general, reduced the habitat diversity and resulted in a loss of aquatic vegetation on the impounded portion of the Upper Mississippi River System (UMRS).

River resource management agencies and the public have expressed a growing interest in summer drawdowns of the navigation pools to promote growth of aquatic vegetation. A drawdown of Pool 8 was implemented during the summers of 2001 and 2002. Monitoring results indicate that the drawdowns were very successful in establishing aquatic vegetation. After 3 years of planning, the St. Paul District, in cooperation with the Water Level Management Task Force of the River Resources Forum, implemented a drawdown of Pool 5 in 2005.

Status

The Pool 5 drawdown was a maximum of 1.5 feet at the dam, with a maximum drawdown of 1.0 foot at the primary control point (Alma gage). It began on June 13 and ended on September 30, 2005. It had a very positive vegetative response and encountered no major problems. Some concerns were reported regarding navigation and recreational access. Mussel mortality was observed and is being evaluated. The planning and implementation was accomplished with Operation & Maintenance (O&M) funds. An extensive monitoring effort used funds from the Navigation and Ecosystem Sustainability Program (NESP). A second year drawdown in Pool 5 began on June 12, 2006, but was terminated on July 9 as a result of main channel conditions and low river flows. Monitoring for vegetative response and mussel impacts continued through the summer. Final reports on vegetation response and a pool-wide mussel population estimate were received in early 2007.

NESP funds are being used to plan future drawdowns; these drawdowns are contingent on NESP authorization and funding. A small-scale drawdown of Pool 6 in 2008 is also under consideration using O&M funding and authority.

The St. Paul District water level management program was named one of the 2007 Seven Wonders of Engineering by the Minnesota Society of Professional Engineers.

Authority

The Rivers and Harbors Act of 1930, which authorized the 9-foot navigation channel on the Upper Mississippi River, provides the authority for this work under O&M.

Authorization and funding of NESP would provide additional opportunities for pool drawdowns.

Fiscal

Program Management (O&M)
Total estimated cost $100,000