



US Army Corps
of Engineers
St. Paul District

Information Paper

Mississippi River: Lock and Dam 9 Winter Maintenance, Lynxville, Wisconsin



Many activities are shown in process during a typical Lock and Dam winter maintenance project.

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Location/Description

Lock and Dam 9 is located near the community of Lynxville, Wisconsin. The U.S. Army Corps of Engineers completed the facility in 1937 as part of the overall 9-foot channel navigation project and it began operation in the same year.

Lock and Dam 9 was last dewatered in 1993. The St. Paul District locks have been dewatered approximately every 20 years.

On average, more than 12.6 million tons of cargo and 4,300 recreational craft pass through the dock annually. The difference between upper and lower pools during normal conditions is nine feet. The dam consists of five roller gates and eight Tainter gates. The dam is a concrete and steel structure 811 feet long and an earth embankment 9,800 feet long. The grouted overflow spillway is 1,350 feet long.

The lock chamber is 110-feet wide by 600-feet long. The lock chamber is dewatered to perform maintenance on the miter gates and bubbler system and repair damaged concrete on the walls. The work is performed during the traffic closure period to avoid impacts to users of the navigation system.

To stop the water from flowing into the chamber, bulkheads are placed upstream and downstream of the chamber. Once the water is pumped from the chamber, the miter gates, bubbler system and concrete are inspected. The miter gates are sandblasted and painted, and equipment is replaced as needed. Concrete repairs are made on the walls and floor as needed. The bubbler system is removed and replaced with stainless steel.

The Corps maintenance and repair crew performs the work during the dewatering which includes sandblasting, painting, welding, carpentry and equipment operation. They place the sill beam and bulkheads, dewater the chamber, perform the inspections and repairs on the miter gates, sandblast and paint the miter gates, remove and replace the bubbler system and repair damaged concrete.

Status

The lock closed to traffic in early December 2015 and reopened in March 2016. The completion of this project marked the end of the Winter Maintenance Program cycle for which each of the St. Paul District's 13 locks were dewatered and maintenance performed.

Authority

The project was authorized as part of the Rivers and Harbors Act approved July 3, 1930.

Fiscal

Project design and construction costs are 100 percent Federal.

Total Cost: \$3.2 million