Typical lock and dam miter gates. 2011 photo at Lock and Dam 10, Guttenberg, Iowa.

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Purpose
Locks and Dams (LD) 2 through 10 have used the same miter gates since their construction in the 1930s. Over time, the gates have been damaged and distressed, which has led to serviceability and safety issues. This project will replace the gates and the anchorages system, increasing navigational longevity and operational readiness while decreasing repair costs and downtime due to maintenance or failure.

Description
In order to allow watercraft to pass through stretches of river of various depths, Congress authorized a series of locks and dams along the Mississippi River. An integral part of those locks are miter gates.

Miter gates are comprised of two leaves that provide a closure at one end of a lock at a “miter” or angle. Each lock has a set upstream and downstream. In addition to other systems, these gates allow water levels within the lock to go up and down.

Status
Two U.S. Army Corps of Engineers districts — St. Paul (MVP) and Rock Island (MVR) — have been working collaborative on the design of new miter gates for the Upper Mississippi Navigation projects. Each gate has different design requirements due to differences in height and weight and site conditions.

The Lock and Dam 2 miter gates were awarded in fiscal year 2015, and fabrication was completed in 2017. New anchorages have been designed and awarded in 2019. MVP plans to install the new Lock and Dam 2 anchorages and gates in 2021.

In fall 2018, the Corps awarded a fabrication contract for gates at Locks and Dams 5A, 8 and 10. Fabrication of these gates began in fiscal year 2019 with installations planned for fiscal years 2022, 2022 and 2023 (Locks 8, 5A and 10, respectively).

The design of new anchorages for Locks and Dams 5A, 8, and 10 will be conducted in fiscal years 2020–2021 prior to gate installation. Additional future projects will be scheduled when funding is available.

Authority
Congress authorized the Upper Mississippi River 9-Foot Channel Navigation Project as part of the Rivers and Harbors Act approved July 3, 1930.

Funding
Miter gate replacement design and construction at the locks and dams are accomplished with 100 percent federal funds.

FY 2019:
- Design for LD2 Anchorages $1.2 million
- Fabrication for LD2 Anchorages $3.6 million

FY 2020:
- Begin Design Gates at LD6, 7, and 9 $600,000
- Design for LDs 5A, 8, & 10 Anchorages $1.2 million