



UPPER OHIO NAVIGATION PROJECT

U.S. ARMY CORPS OF ENGINEERS

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Official Title: Upper Ohio Navigation Project, Pennsylvania

Location: The project is located at Emsworth (Ohio River Mile 6.2), Dashields (Ohio River Mile 13.3), and Montgomery (Ohio River Mile 31.7) Locks and Dams, along the Upper Ohio River near Pittsburgh, PA.

Purpose: The authorized project's purpose is to provide safe, reliable, and efficient navigation through some of the oldest locks on the Ohio River by replacing each auxiliary 56' x 360' lock at Emsworth, Dashields, and Montgomery with a new 110' x 600' lock to serve as the new main lock chamber.

Project Description and Background: The Upper Ohio River Navigation Project addresses lock condition and capacity issues at Emsworth, Dashields, and Montgomery Locks and Dams on the Ohio River in Pennsylvania. All three facilities were constructed between 1919 and 1936, and each underwent a major rehabilitation in the 1980s to extend their useful life another 25 years. The Chief's Report recommends replacement of each auxiliary lock with construction of one new lock chamber (110' wide by 600' long) at each facility riverward of the existing main lock chamber. This new lock chamber would serve as the main lock chamber. The Chief's Report was signed on September 12, 2016, and the project was authorized in the 2016 Water Infrastructure Improvements for the Nation Act.

The Total Project Cost is \$1.8 billion, fully funded, at the October 2020 price level. The project's benefit to cost ratio (BCR) is 2.4 to 1 at the 2.75% discount rate and 1.6 to 1 at the 7% OMB discount rate.

Current Status and Outstanding Issues:

The U.S. Army Corps of Engineers' (USACE) Inland Navigation Design Center (INDC) has initiated engineering efforts for the project, completing pre-design investigations at Montgomery Locks and Dam, as well as initiating designs for the Montgomery Lock. Physical modeling of the new lock chamber is underway at USACE's Engineer Research and Development Center (ERDC).

This project is condition driven, therefore, a delay in project execution increases the risk that navigation on the Upper Ohio River will be shutdown (middle wall failure) or cause significant delays (land wall failure). Each of the Upper Ohio facilities is at risk for failure; however, the risk at Montgomery Locks is the most critical, reaching a probability of unreliable performance of approximately 50% in 2028. Dashields and Emsworth Locks will reach a similar probability of failure in 2031 and 2035, respectively. A major

structural failure at any of these locks could take multiple years to repair, closing the river to navigation and lost benefits.

Sponsor: Construction will be funded 50/50 with the General Treasury and Inland Waterways Trust Fund.

Study Authority: Resolutions by the Committee on Public Works [and Transportation] May 16, 1955, and March 11, 1982. Additional authorization provided via PL 91-611, Section 216, 1970.

Construction Authority: Water Resources Development Act, December 16, 2016.



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DASHIELDS



MONTGOMERY