



WATERWAYS
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Markland Locks & Dams



Waterways Council, Inc. is the national public policy organization advocating a modern and well-maintained national system of ports and inland waterways.



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<i>Location</i>	Ohio River Mile 531.5, near Warsaw, Kentucky.
<i>Existing Structures</i>	110' x 1200' lock completed in 1959; 110' x 600' auxiliary lock constructed in 1959.
<i>Annual Tonnage and Projected Traffic Growth</i>	In 2008, 55.6 million tons of commerce worth \$9.8 billion transited Markland Locks, of which 51% was coal. Other important commodities included petroleum products, iron/steel, chemicals, and aggregates. Projected Traffic Growth is 68.8 million tons by 2030. (source: <i>Ohio River Main Stem Systems Study – Interim Feasibility Report</i>)
<i>Summary of Problems</i>	Future traffic growth, age and deterioration of the present facilities are just some of the problems. Failure of the main chamber miter gate occurred in 2009.
<i>Corps of Engineers Actions</i>	Miter gate repair will proceed and the scheduling of future inspections will be evaluated.

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Markland Locks and Dam

Project Description

Markland Locks and Dam is located on the Ohio River at river mile 531.5, approximately 3.5 miles downstream from Warsaw, Kentucky. The project consists of a non-navigable gated dam with 12 tainter gates, main lock chamber 110-feet wide by 1,200-feet long, and an auxiliary lock chamber 110-feet wide by 600-feet long. Two proposed work projects for this site are described below.

Transportation Importance to the System

Markland Locks and Dam processed an average of 55.6 million tons of waterborne commerce annually in 2008. Coal was the principal commodity at Markland representing 51% of the total. Electric utilities move coal from mines in Wyoming, Kentucky, Pennsylvania, and West Virginia to power plants serving the southeastern and Midwestern regions of the country. Iron and steel related commodities represent the second biggest commodity. Steel companies use Markland in transporting iron ore to steel mills in Kentucky and West Virginia, and aluminum companies move aluminum ores to smelters in Ohio and West Virginia.

Project Performance

Current level of performance is rated as D, based primarily upon risk of failure due to unreliability of miter gates. Improvements to target level of A will occur after the new main chamber miter gates are installed. Failure of the main chamber miter gate occurred in 2009.

Risk & Reliability, Economic Impacts of Unscheduled Lock Outages

The condition of two components at Markland, the main chamber miter gates and the emergency bulkheads, expose navigation users to severe interruption of service and are in need of replacement. The unexpected failure of the main chamber miter gates in the fall of 2009 resulted in significant delays which continued over a 5 month period. The broken gates were repaired and replaced. New gates are scheduled to be installed in 2011. \$5.4 million was requested in FY 11 to complete the project.