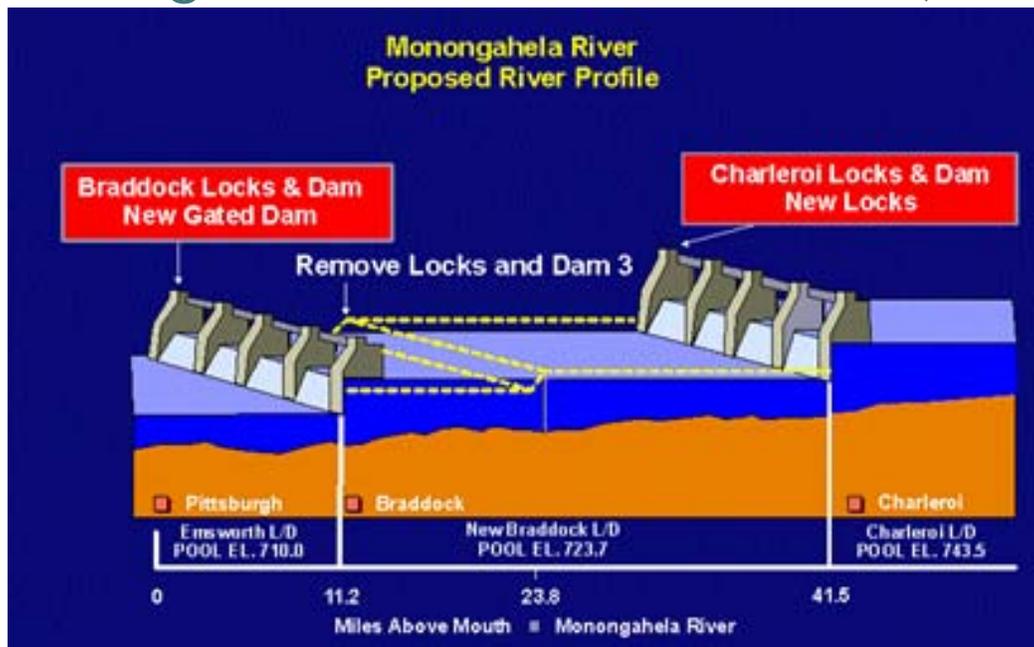




## Lower Monongahela River Locks & Dams 2, 3 & 4



### Location

On the Monongahela River upstream from Pittsburgh, Pa. Locks and Dam 2, Mile 11.2; Locks and Dam 3, Mile 23.8; Locks and Dam 4, Mile 41.5.

### Existing Structures

Locks and Dam 2 was built in 1906, with a new main 110' x 720' lock and 56' x 360' auxiliary constructed in 1950. The new Braddock Dam was completed in 2004. Locks and Dam 3 was built in 1907 with a 56' x 720' main chamber and a 56' x 360' auxiliary. Locks and Dam 4 was completed in 1932 with a 56' x 720' main chamber and a 56' x 360' auxiliary; a new dam was built in 1967 at L/D 4.

### Annual Tonnage and Projected Traffic Growth

In 2001, 22.2 million tons of commerce worth more than \$1.6 billion transited one or more of these locks. 86% of this traffic was coal. Other important commodities included petroleum products, iron, steel and aggregates. Traffic growth forecast is 24.3 million to 31.4 million tons by 2020.

### Summary of Problems

The dam at L/D 3 has a fixed-crest. It is approaching 100 years of service and its deteriorated condition is a serious concern. Major rehabilitation of the locks at L/D 2 will be needed in about 25 years. L/D 3's locks are the same condition and age as the dam. The condition and size of the locks at L/D 4 are also a concern.

### Corps of Engineers Actions

The dam at L/D 2 has been replaced by a gated dam, built using an innovative in-the-wet method of fabricating segments off-site and floating them in place. The project has been renamed Braddock Locks and Dam. L/D 3 will be removed. Twin 84' x 720' locks will be built at L/D 4 (to be renamed Charleroi Locks and Dam). Construction on this two-for-three replacement project began in 1994 and is scheduled for completion in 2019, at a total cost of \$750 million. There is \$70.3 million for this project in the FY 2008 Corps Civil Works Budget.

# Lower Monongahela River Locks and Dams 2, 3 & 4, Penn.

## Project Description

The Lower Monongahela River Project is located in southwestern Pennsylvania and was authorized for construction by the Water Resources Development Act (WRDA) of 1992 to address the deteriorated condition of navigation facilities along the Lower Monongahela River. Specific concerns were the very real risks of navigation system failure related to the poor structural condition of Dam 2, Locks & Dam 3, and Locks 4 on the Monongahela River. Although Braddock Dam was completed in July 2004, the condition and sustained operability of Locks and Dam 3, and Locks 4 remains a significant concern. Locks and Dam 3 was built in 1907. It is among the oldest structures operating in our inland navigation system, and the most structurally deficient navigation facility on the Monongahela River. Under the “two-for-three” replacement plan, this 97 year old Locks and Dam will be removed from the inland waterway system as soon as the 70-year old, undersized Locks 4, are replaced with larger and modernized lock facilities, and Pools 2 and 3 can be adjusted and regulated as one navigation pool by the new gated Braddock Dam.

## Transportation Importance To The System

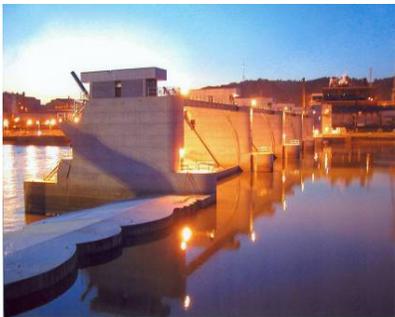
This strategic reach of the Monongahela River is critical to the export of bituminous coal out of the Northern Appalachian coal-fields of southwestern Pennsylvania and northwestern West Virginia, and for the import of fuels and other bulk commodities into the region. The Lower Monongahela River System links the country’s largest metallurgical coke plant and the country’s most productive underground coal mine with the Ohio River and other ports further south. Traffic through the Lower Monongahela River System is projected to increase from the actual 22.6 million tons logged in 2000, to between 24.3 and 31.4 million tons in 2020.

## Project Funding History

The project is cost-shared 50/50 with the Inland Waterway Trust Fund. Total Project Cost is \$750 million. Approximately \$343 million has been expended through FY 2006, leaving a balance of \$407 million to complete the project. The FY 2006 appropriation was \$50,800,000. A significant portion of the FY06 appropriation was used to continue construction at Charleroi Locks and Pool 2 relocations. The Pittsburgh District has plans to maintain momentum on construction of the new Charleroi Locks which requires significant funding in the near term. Due to previous annual funding projections of \$30 million, the replacement plan was forced into a very inefficient and protracted construction schedule, putting extended demands on the continued use of Locks and Dam 3 and Locks 4. These navigation facilities have already outlived their design life, and their respective removal and replacement is critical to keeping the Lower Monongahela River system a reliable and efficient component of the Inland Waterway Navigation System. FY06 funding at \$50.8M and the FY07 President’s Budget at \$62.7M allows the District to begin constructing this project more efficiently and effectively. There is \$70.3 million in the FY 08 Budget. Continued efficient funding could improve the completion date from 2019 to 2016.

## Optimum Funding Needs

The challenge is to maintain an efficient funding schedule for the Lower Monongahela River Project through 2016 and to keep existing L/D 3 and Lock 4 safely operating until they can be removed. The Lower Monongahela River Project has already slipped its completion date by 15 years (to 2019) resulting in \$1.2 billion in transportation benefits foregone. The project will not be able to regain the previous schedule (2013 completion) even if higher levels of funding are available, but the project could regain 3 years with efficient funding and minimize expenditures to keep L/D3 and Lock 4 safely operating. The optimum funding needs through 2011 are shown in the table below. These needs would fund work on this project at the capability level and assume that construction contracts over \$10M will use either the continuing contracts clause or incremental funding.



New Braddock Dam



Charleroi Locks Concrete Batch Plant

Year	Optimum Funding Levels
08	\$70.3M
09	\$63.3M
10	\$59.2M
11	\$94.9M
12	\$64.8M

February 2007

801 North Quincy Street, Suite 200, Arlington, VA 22203  
(703) 373-2261 • [www.waterwayscouncil.org](http://www.waterwayscouncil.org)