Kanawha River Navigation
Contextual Study and National Register Nomination

Top: *Winfield dam under construction (U.S. Engineer Office, Huntington, W.Va., 1936);* ***Bottom:*** *Winfield Locks and Dam during expansion of locks. (John Nicely, ca. 1998)*

Background

In the 1990s the U.S. Army Corps of Engineers increased the size of the lock chambers on the Ohio River to accommodate larger barges and longer tows. Since then, preparations have begun to systematically upgrade the locks of the Ohio's major tributaries. As part of this larger project, the Army Corps of Engineers hired the Institute for the History of Technology and Industrial Archaeology to prepare a history of navigation on the Kanawha River in West Virginia.

Scope

The focus of the study was to provide a comprehensive history of navigation on the Kanawha River and to prepare a Multiple Property National Register Nomination for the London, Marmet, and Winfield locks and dams on the Kanawha River and the Gallipolis (Robert C. Byrd) Locks and Dam on the Ohio River. Gallipolis is part of the Kanawha navigation because it forms the navigation pool to Winfield.

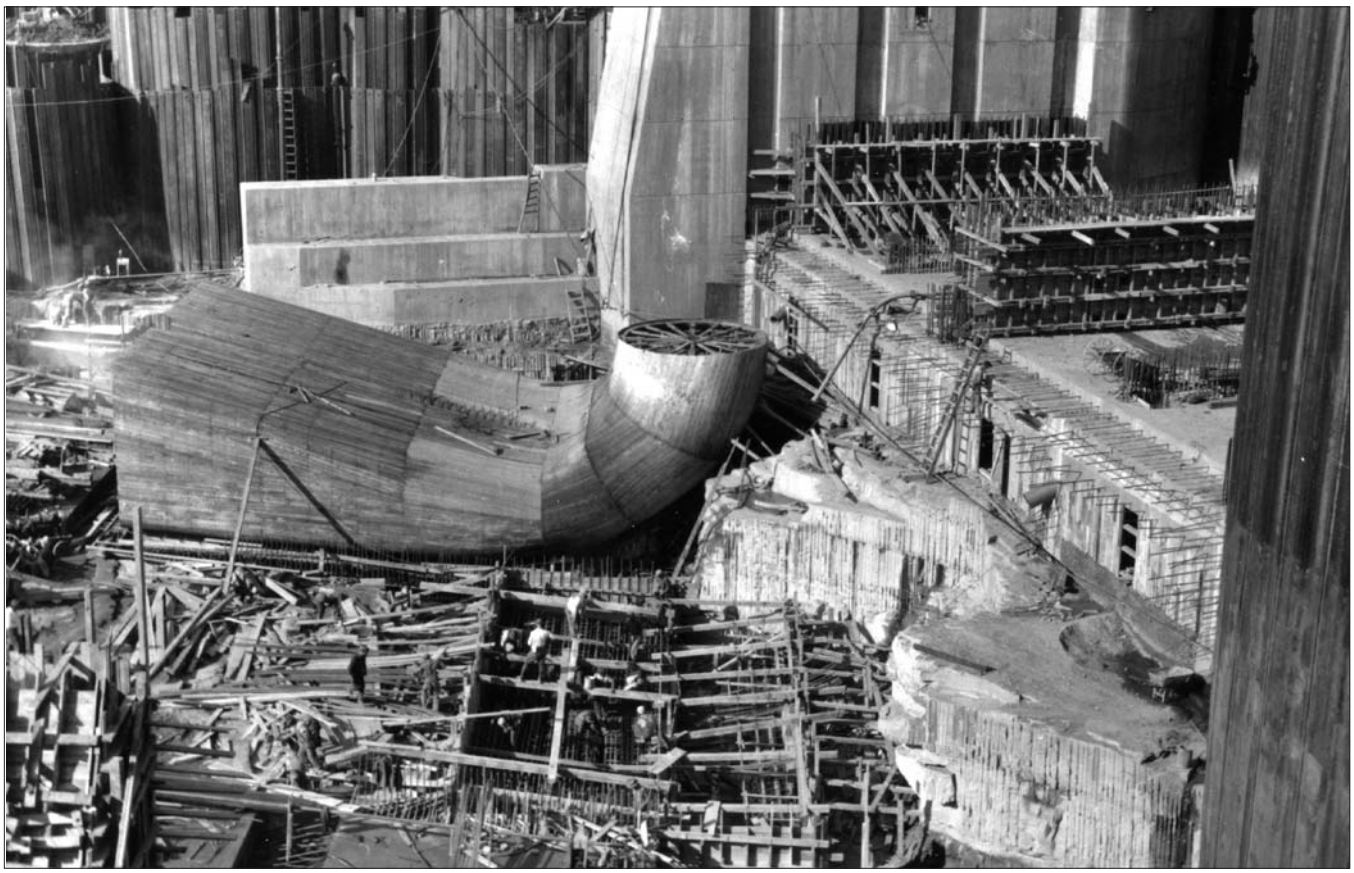
The final report consists of two parts. Part one discusses early transportation in the Kanawha Valley and its importance to industry and westward expansion. It also includes a history of early navigation dam types such as the Boule Gate, Camere Curtain Dam, Thenard Shutter Dam, Chanoine Wicket Dam, and other movable dams used around the world.

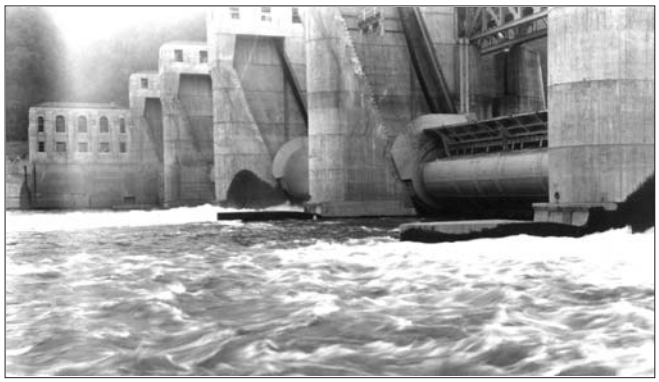
Part two looks at the Ohio River improvement during the 1930s that facilitated greater freight traffic that, in turn, necessitated upgrading the Kanawha River navigation. The river's old wicket systems became obsolete when the Corps deepened the Ohio River from a 6' to a 9' channel and also the Kanawha to handle the larger tows. A section of part two looks at the development and use of roller dams in Europe and experiments conducted with them in the United States. The report established that the Kanawha River was the only river in the United States to be completely dammed with roller gates.

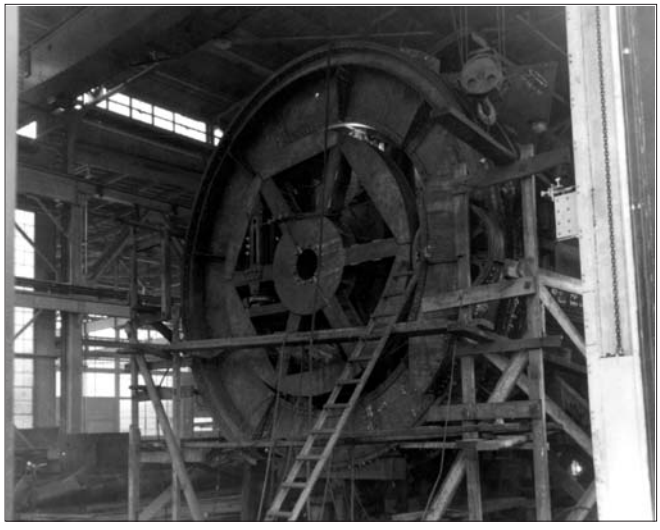
Results

The Institute completed this comprehensive report on the history of river transportation in the Kanawha Valley and a Multiple-Property National Register Nomination for the locks and dams in the navigation system. In 2000 the University of Pittsburgh Press published *The Great Kanawha Navigation,* authored by Emory L. Kemp.

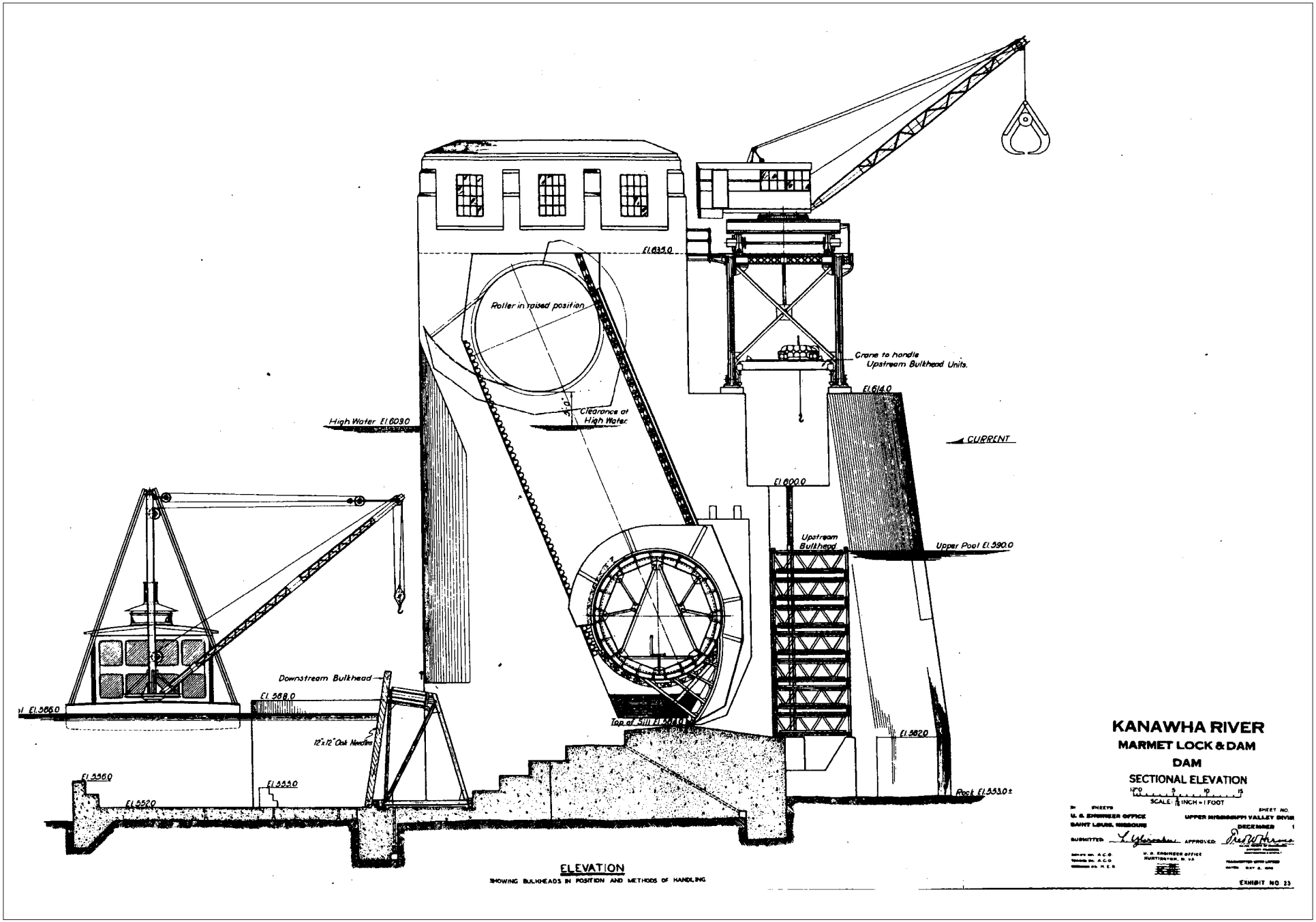
Principal Investigators: Emory L. Kemp and Larry N. Sypolt



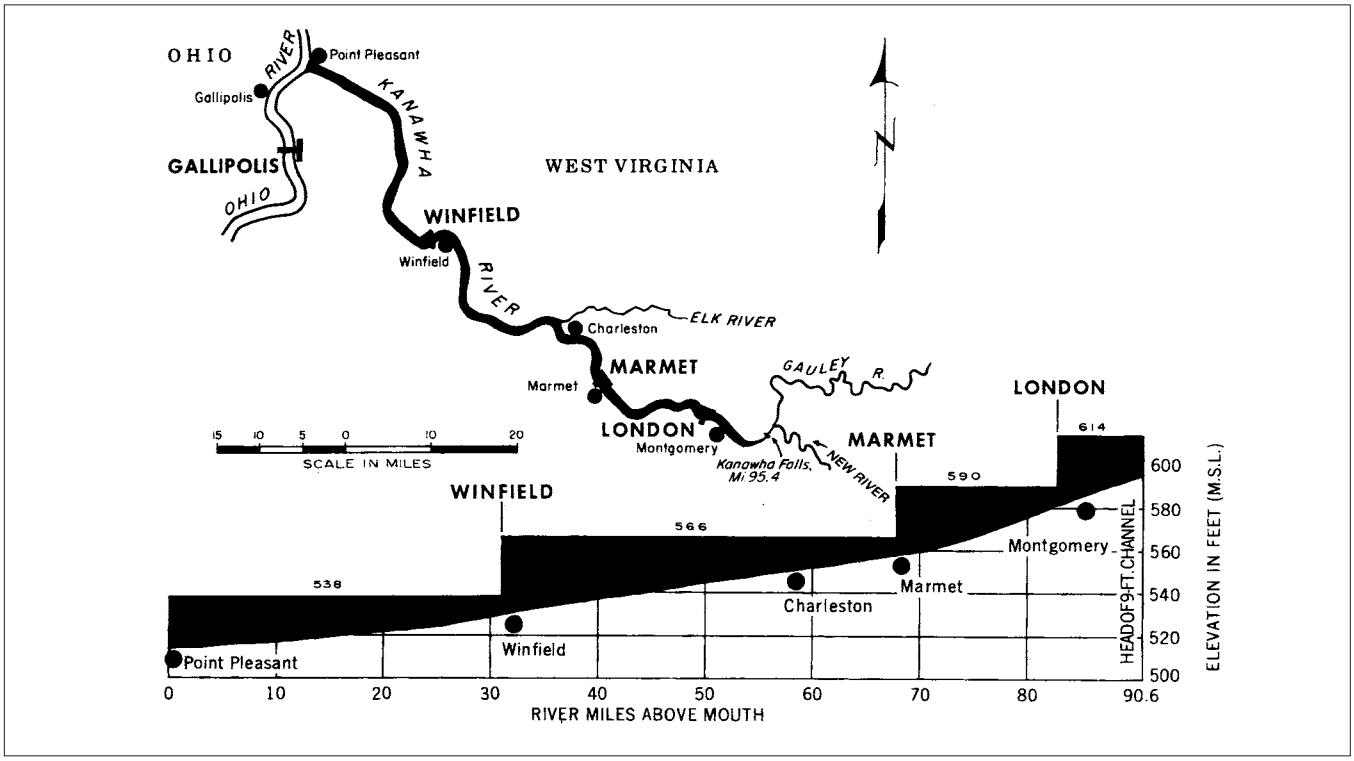


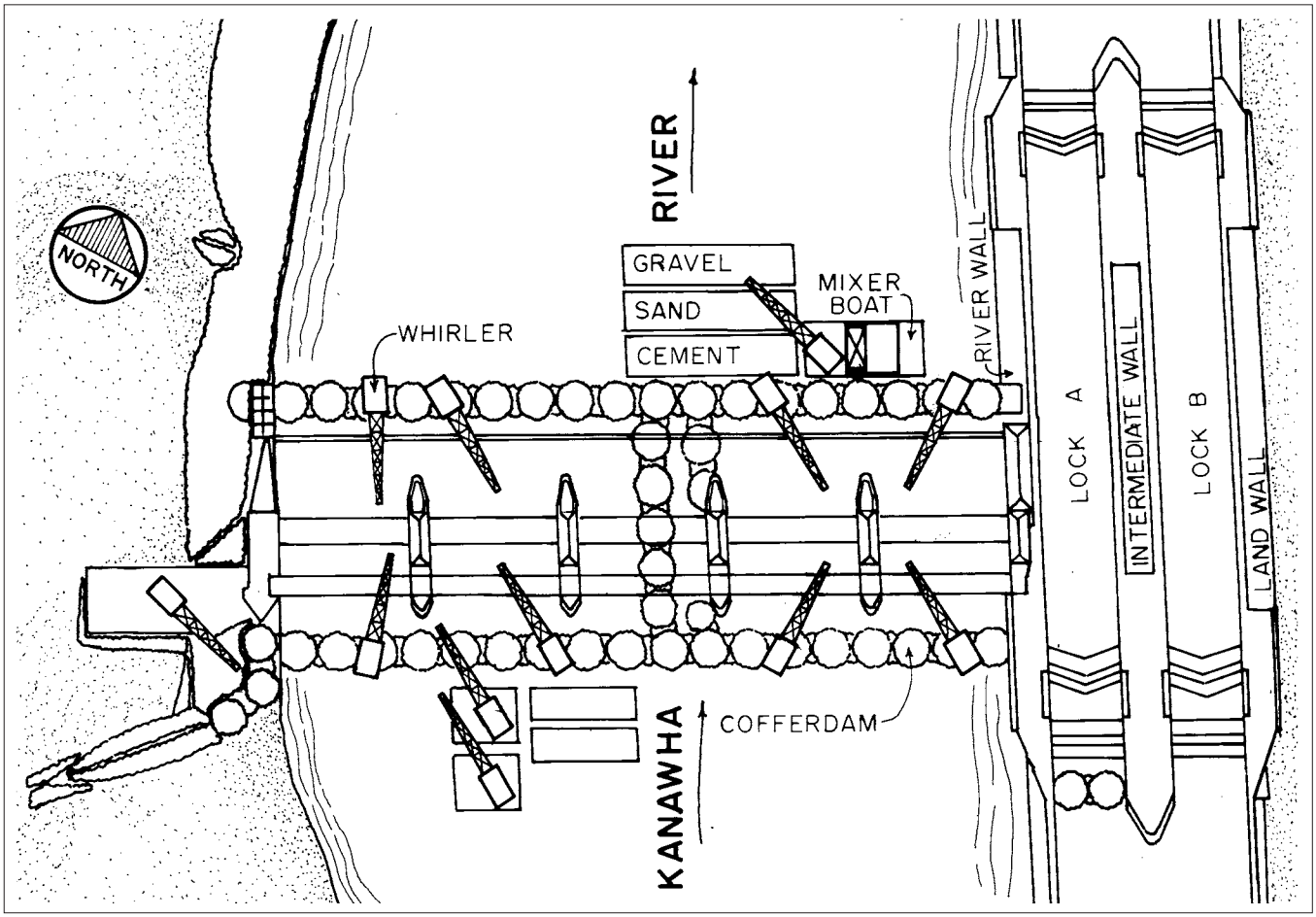


Clockwise from top: *1936 construction of draft tubes at Winfield locks and dam; Marmet locks and dam roller gates in operation. (U.S. Engineering Office, Huntington, W. Va.); Interior view of a roller gate. (U.S. Army Corps of Engineers); construction of flap roller gate at Dravo Company, 1933. (U.S. Engineering Office, Pittsburgh District)*



1933 sectional elevation of typical pier of Marmet locks and dam. (U.S. Engineer Office, Huntington, W. Va.)





Top: *Kanawha River Navigation System general plan and profile. (U.S. Army Corps of Engineer Office, Huntington District, W.Va.)*
Bottom: *Plan view of a high lift roller-gated dam under construction. (Kevin McClung, IHTIA)*