

# OHIO RIVER SHORELINE, PADUCAH, KENTUCKY, (PADUCAH, KENTUCKY LFPP) RECONSTRUCTION PROJECT

22 June 2011



**ABSTRACT:** The purpose of the Project is to minimize the risk of loss of life and damages to public and private infrastructure to Paducah, Kentucky, from flooding by the Ohio River through reconstruction of an existing Corps of Engineers floodwall and levee system. The city of Paducah is the non-Federal sponsor.

Much of downtown Paducah lies within the 100-year floodplain. Construction of the existing local flood protection project started in August 1939 and was completed in July 1949. In May 2011, the City experienced a record flood event (the largest flood event since construction was completed in 1949), in which the Ohio River reached a flood stage of 55.0 feet. During this event, the project prevented more than \$1.2 Billion in potential damages from catastrophic flooding to developed areas, including residences of over 20,000 people.

The existing project has been locally operated and consistently well maintained by the City for more than 60 years. Many of the original major components are still in use well beyond their normal expected service life. As system components continue to age, without reconstruction, the risk of project failure continues to increase. As all parts of the integral system continue to degrade with time, the chances of multiple failures occurring at the same time continue to increase. Due to the age of the pumping plant equipment (pumps, motors, and electrical components) the condition of these system components is deteriorating. There are also many system components that don't meet current design, OSHA or Corps safety requirements. Reconstruction is necessary to insure that the project provides its authorized level of protection, minimizing the life safety risk to the community it protects and preventing flood damage to numerous

homes and commercial businesses. The community needs Corps of Engineers assistance to assure that the project will continue to perform as originally authorized by Congress in 1938. Section 5077 of the Water Resources Development Act (WRDA) 2007 (Public Law 110-114) provides authority to evaluate the feasibility of reconstructing the existing local protection project in the city of Paducah, KY, and to carry out the project at a total cost of \$3,000,000, subject to a finding that the project is feasible.

The feasibility study evaluated the extent of Federal interest in reconstruction of the existing floodwall and levee system, construction of new facilities that are required under the present regulations that govern levees and floodwalls, and construction of a new pump plant to prevent interior flooding. In accordance with the Reconstruction Guidance Memorandum issued in August 2005, and taking into consideration the non-Federal Sponsor's interests, two alternatives were considered: 1) No Action; and 2) Reconstruction. The recommended plan consists of reconstruction of the project which will include rehabilitation of pump plants and pipes associated with passing interior drainage through the protective works, along with repairs to component features of the levees and floodwalls. One new additional pump station is also recommended.

NEPA compliance for this proposed action is covered by a categorical exclusion for activities at completed Corps projects, but the feasibility study included full consultation with various resource agencies and compliance is complete for endangered species, cultural resources, fish and wildlife, the Clean Water Act, and other environmental laws and regulations.

The city of Paducah has already completed portions of the reconstruction project as work in-kind contributions under the authority of Section 221(a) of the Flood Control Act of 1970, as amended by Section 2003 of WRDA 2007. The City executed a Memorandum of Understanding with the Department of Army on 17 November 2008, and performed the work between November 2008 and January 2010.

The primary features of the Recommended Plan include:

- a. Rehabilitation of Pumps, Motors, Motor Control Systems, Major Pump Plant
- b. Components, and other miscellaneous items at each of the 12 Existing Pumping Plants.
- c. Construction of a New Pumping Plant at Station 111+67A
- d. Slip-lining 37 Existing Deteriorated Corrugated Metal Pipes \*
- e. Bank Protection \*

\* Non-Federal Sponsor has completed this work

Additional authorization from Congress is required because the cost to implement the Recommended Plan exceeds the \$3,000,000 authorized in WRDA 2007. The estimated total cost for the Recommended Plan is \$18,728,000 (October 2010 price level), for which the Federal share is approximately \$12,173,200 and the non-Federal share is approximately \$6,554,800. The city of Paducah will continue to be responsible for operation, maintenance, repair, rehabilitation, and replacement of the project at non-Federal expense, at an estimated annual cost of \$623,000. Average annual flood risk reduction benefits are estimated at \$6,917,000. The Recommended Plan has an overall benefit-to-cost ratio of 4.3.

**REPORT DOCUMENTATION:** Pertinent documentation on the project, the results of the CWRB, and subsequent Washington-Level Review Actions, are linked below:

- [CWRB Agenda](#)
- [Project Summary](#)
- [CWRB Briefing Slides](#)
- [CWRB Lessons Learned](#)
- CWRB Meeting Record
- State & Agency Review Comment Letters
- Documentation of Review Findings
- Signed Chief of Engineers Report
- Advance Copy of Congressional Committees
- ASA (CW) Memo to OMB
- OMB Response
- ASA (CW) Transmittal to Congress
- Signed Finding of No Significant Impact
- Authorization

**ADDITIONAL INFORMATION:**

[Great Lakes and Ohio River Division](#)

[Louisville District – Ohio River Shoreline, Paducah, KY \(Paducah, Kentucky LFPP\) Reconstruction Project](#)