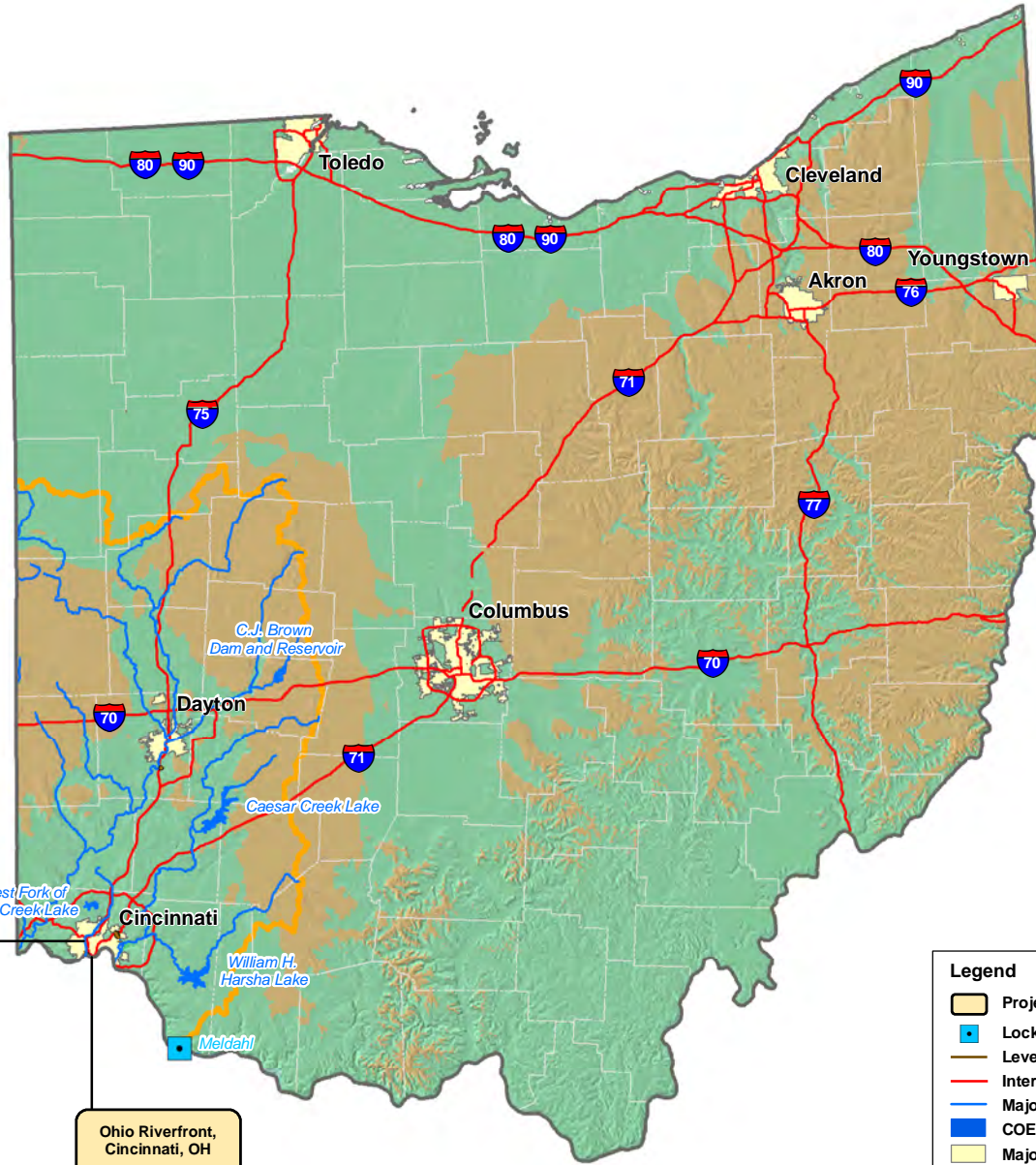


State of Ohio



Dam Safety Program
All COE OH Dams

Environmental Infrastructure, OH
(Section 594)

Olmsted Locks & Dam

Mill Creek, OH
Flood Damage Reduction

Ohio Riverfront,
Cincinnati, OH

Legend

- Project Name
- Locks & Dams
- Levees / Floodwalls
- Interstate Highways
- Major Streams
- COE Reservoirs
- Major Cities
- County Boundary
- Louisville District Civil Works Boundary





Olmsted Locks and Dam Project

February 2016

U.S. ARMY CORPS OF ENGINEERS

BUILDING STRONG®

Official Title: Locks and Dam 52 and 53 Replacement Project (Olmsted Locks and Dam), IL and KY

Location: The project is located in Olmsted, IL near Ohio River Mile 964.4.

Purpose: Construct the new Olmsted Locks and Dam to replace Ohio River Locks and Dams 52 & 53. Demolish Locks and Dams 52 & 53 once Olmsted is operational.

Project Description and Background: The project consists of two 110' X 1200' locks adjacent to the Illinois bank, and a dam comprised of five tainter gates, 1400' of boat-operated wickets and a fixed weir. The proposed replacement structure will eliminate Ohio River Locks & Dams 52 & 53. Locks & Dams 52 & 53 were completed in 1929 and the temporary 1,200' long lock chambers were added in 1969 at Locks & Dam 52 and 1979 at Locks & Dam 53. The antiquated design and age of these structures make it impossible to meet current traffic demands without significant delays. The existing structures have deteriorated structurally and are overstressed during normal operating conditions. The temporary locks at Locks & Dam 52 & 53 have significantly passed their 15-year design life.

This strategic reach of the Ohio River provides a connection between the Mississippi River, Tennessee River and Cumberland River. More tonnage passes this point than any other place in America's inland navigation system. In 2011, 91 million tons (Locks & Dam 52), traversed this portion of the Ohio River. 25% of all coal shipped on the inland waterways transits Locks & Dam 52, destined for many of the 50 power plants located on the Ohio River System or the 17 power plants located in eight states on the Upper or Lower Mississippi River.

Project Status: The two 110' X 1200' locks and approach walls are complete. The fixed weir on the Kentucky bank is complete. As of 01 February 2016, all eighteen dam tainter gate shells are set and tainter gate #1 and #2 are erected. In the navigable pass section, eight of twelve paving blocks, the right boat abutment, and six of twelve navigable pass shells have been set in the river. Foundation pile driving operations for the navigable pass are underway. Current schedule is to be dam operational in October 2018 and project complete in March 2022.

Summarized Financial Data

2012 PACR	\$3,099,000,000
2014 Total Estimated Project Cost (NWW certified)	\$3,098,573,000
Estimated Federal Cost	\$2,047,852,000
Estimated Inland Waterways Trust Fund Cost	\$1,050,721,000
Allocation thru FY16 including ARRA allocation thru 30 Sept 15	\$2,227,402,000
FY 16 Budget/Capability	\$180,000,000/\$268,000,000
FY 17 Budget	\$225,000,000
Benefit to Cost Ratio (at 7%)	3.4
Non-Federal Sponsor	N/A

The Olmsted Locks & Dam project was authorized by Section 3(a)(6) of the Water Resources Development Act (WRDA) of 1988. The project authorization was increased on 17 October 2013 as part of a Continuing Appropriations Act, 2014 for \$2,918,000,000. The project was cost shared 50/50 with the Inland Waterways Trust Fund (IWTF) through FY2013. The FY2014 Omnibus Appropriation Act changed the split of IWTF and federal cost share to 25/75 for FY2014 only. Water Resources Reform and Development Act of 2014 changed the IWTF and federal cost share to 15/85 beginning 1 October 2014.

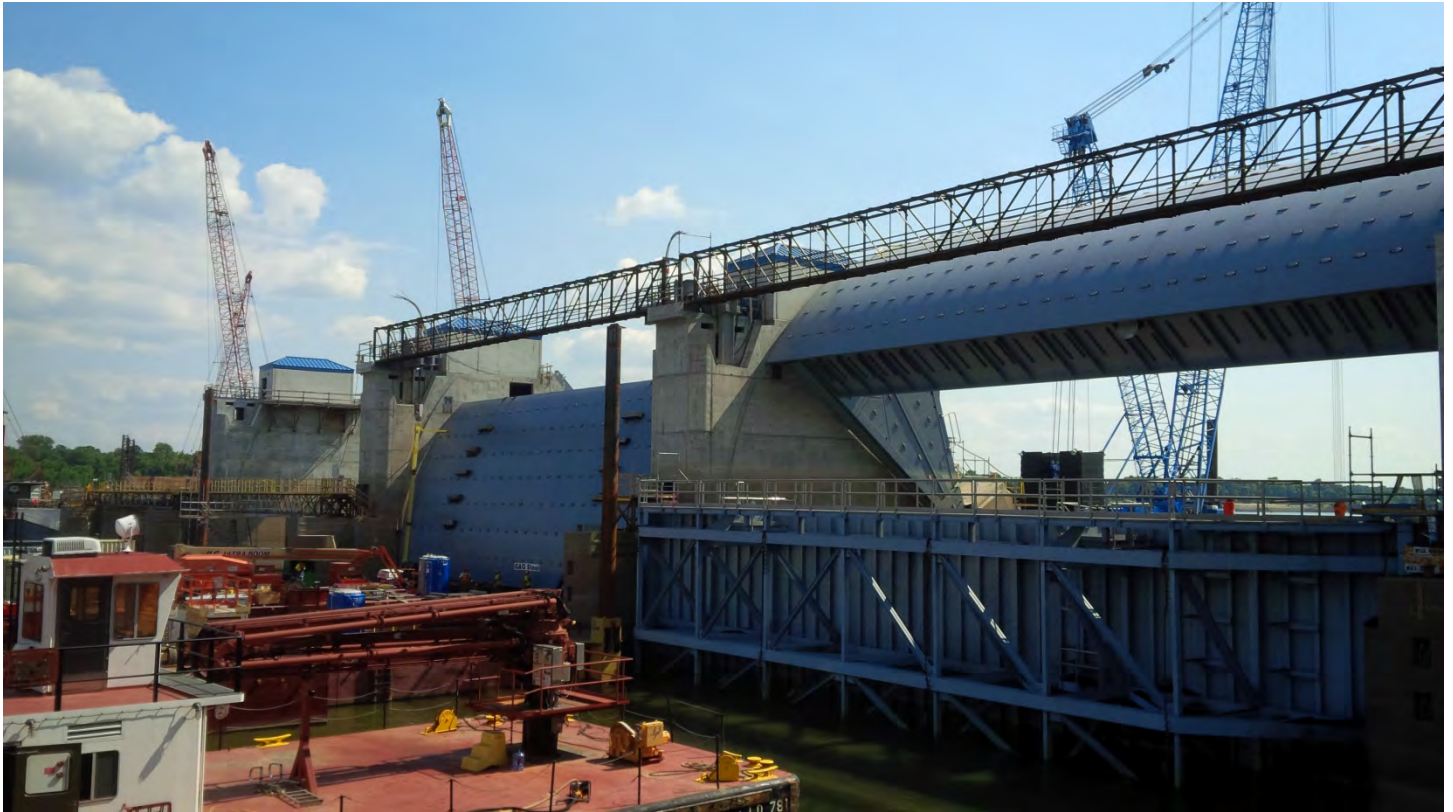
U.S. ARMY CORPS OF ENGINEERS – LOUISVILLE DISTRICT

P.O. Box 59, Louisville, KY 40201-0059

www.lrl.usace.army.mil

As of 01 February 2016, \$2,123,787,491 has been expended on the project. The annual average benefits from the Olmsted project are approximately \$640M.

Upcoming Actions: The Government and navigation industry stakeholders are exposed to significant increased economic risk given the failing condition of Locks & Dams 52 & 53. Accordingly, efficient completion of the Olmsted project construction is the only sustainable mitigation measure available. Continued capability funding is required to meet a dam operational date of October 2018. Without annual capability level funding in place, the dam operational date will likely slip one or more years reverting to the less than optimum operational timeframe of September 2020 contemplated in the PACR forgoing approximately \$1.28B in benefits.



Tainter Gates #1 and #2



DAM SAFETY, OHIO

February 2016

U.S. ARMY CORPS OF ENGINEERS

BUILDING STRONG®

Official Title: Dam Safety and Seepage/Stability Correction Program; Ohio Dams - Dam Safety Special Studies

Project Phase: Study

Summarized Financial Data: The Dam Safety Special Studies are part of a national program with funds distributed by the Corps of Engineers (COE) Headquarters Dam Safety Office on a priority basis

Project Location: Caesar Creek Lake Dam, C.J. Brown Lake Dam, W.H. Harsha Lake Dam, and West Fork Lake Dam (See next pages for site specific information)

Non-Federal Sponsor: N/A

Study and Program Information: During normal operations, these dams are routinely inspected daily, weekly, and monthly by COE operations staff and annually by Louisville District dam safety staff. The dam also receives a comprehensive inspection every five years by a multi-discipline team of Louisville District engineers.

The COE has instituted a “risk informed” dam safety program. The initial step was conducting a Screening Portfolio Risk Assessment (SPRA). A team of engineers conducted a screening level review of the dam’s construction, performance history, and instrumentation to evaluate current dam behavior, as well as economic consequences and the population at risk of potential dam failure. After the initial screening, the risk is re-evaluated every ten years as part of a routine Periodic Assessment (PA) in conjunction with the 5 year comprehensive site inspection. The findings are reviewed by the Dam Senior Oversight Group (DSOG) and a Dam Safety Action Classification (DSAC) rating is assigned based upon confirmed or unconfirmed dam safety issues and the combination of life or economic consequences should failure occur. The DSAC ratings are used to prioritize further study to confirm the proposed dam safety issues. If the DSAC rating is 1 through 3, an Interim Risk Reduction Measures (IRRM) Plan is established while further investigations are conducted and/or remedial actions are implemented as necessary.

The first study phase is an Issue Evaluation Study (IES) which confirms the dam safety issue. Should more information be necessary to confirm the issues, an IES Phase II study may be undertaken to gather the necessary data to reduce the uncertainty. The results of these studies are presented to the COE Risk Management Center (RMC) and the DSOG. The results may indicate the need to progress to the next phase of study or reduce the DSAC rating for the dam. If the case is made that the dam is in need of remedial construction then the project moves to the Dam Safety Modification Report (DSMR). The DSMR report analyzes potential remedial construction elements to determine the best “fix” to reduce the overall project risk. These studies and remedial construction are prioritized based upon the relative risk estimates at each stage to best make use of the available funding and resources.

U.S. ARMY CORPS OF ENGINEERS – LOUISVILLE DISTRICT

P.O. Box 59, Louisville, KY 40201-0059

www.lrl.usace.army.mil

Project Location: Caesar Creek Lake Dam, OH



Project Status:

- * SPRA (Screening for Portfolio Risk Analysis): 2008
- * DSAC (Dam Safety Action Classification) Rating: Class 3
- * IRRMP (Interim Risk Reduction Measures Plan): Completed 9 April 2009
- * IES (Issue Evaluation Study): In the queue for study. The IES Report will address concerns with unacceptable foundation conditions and associated seepage in order to remove uncertainty and lower project risk. This will determine if the work needs to continue to complete a full Dam Safety Modification Report (DSMR).

Where We Are Now: Routine O&M surveillance and monitoring program.

Project Location: C.J. Brown Lake Dam, OH



Project Status:

- * SPRA (Screening for Portfolio Risk Analysis): 2006
- * DSAC (Dam Safety Action Classification) Rating: Class 4
- * IRRMP (Interim Risk Reduction Measures Plan): N/A since it is DSAC 4
- * IES (Issue Evaluation Study): Not required since it is a DSAC 4

Where We Are Now: Routine O&M surveillance and monitoring program.

Project Location: W.H. Harsha Lake Dam, OH



Project Status:

- * SPRA (Screening for Portfolio Risk Analysis): 2009
- * DSAC (Dam Safety Action Classification) Rating: Class 4
- * IRRMP (Interim Risk Reduction Measures Plan): N/A since it is DSAC 4
- * IES (Issue Evaluation Study): Not required since it is a DSAC 4

Where We Are Now: Routine O&M surveillance and monitoring program.

Project Location: West Fork Lake Dam, OH



Project Status:

- * SPRA (Screening for Portfolio Risk Analysis): 2008
- * DSAC (Dam Safety Action Classification) Rating: Class 3
- * IRRMP (Interim Risk Reduction Measures Plan): Completed 17 April 2009
- * IES (Issue Evaluation Study): Not started. The IES Report will address concerns with unacceptable foundation conditions and associated seepage in order to remove uncertainty and lower project risk. This will determine if the work needs to continue to complete a full Dam Safety Modification Report (DSMR).

Where We Are Now: Routine O&M surveillance and monitoring program.

MILL CREEK, OHIO

February 2016

Official Title: Mill Creek, Ohio Flood Damage Reduction Project

Authorization: Flood Control Act of 1970 (PL 91-611)

Project Phase: Construction

Summarized Financial Data:

Estimated Federal Cost	\$163,000,000
Estimated Non-Federal Cost	\$51,210,000
Total Estimated Project Cost	\$214,210,000
Allocation thru FY15	\$119,447,000
Balance to Complete after FY15	TBD
FY16 President's Budget	\$0
FY16 Allocation	\$0
FY17 President's Budget	TBD

Project Location: The project is located along a 17.5-mile length of Mill Creek and a ¾ mile length of East Fork in Hamilton County, Ohio.

Project Description: The authorized flood damage reduction project includes 17.5 miles of channel improvement, 2 miles of levees, 3 pumping plants, modification of highway and railroad bridges, and the addition of 2 pumping units at the existing Mill Creek barrier dam. Remedial repairs need to be performed at previously completed sections 1, 2, and 4A in order to turn these sections over to the Non-Federal Sponsor for operation and maintenance.



Channel Work completed in Section 3 in 2004 using bio-engineering techniques

U.S. ARMY CORPS OF ENGINEERS – LOUISVILLE DISTRICT
P.O. Box 59, Louisville, KY 40201-0059
www.lrl.usace.army.mil

Project Status: The plans and specifications for the remedial repairs at previously completed sections 1, 2, and 4A have been completed. The construction contract for Section 4A was awarded in September 2015 and the contractor initiated work in January 2016. Construction of the remedial repairs for Sections 1 and 2 will be performed after the Sponsor has acquired all necessary real estate interests. Construction of these repairs will allow the Corps to turn these sections over to the Non-Federal Sponsor for operation and maintenance.

Non-Federal Sponsor: Millcreek Valley Conservancy District (MVCD)

Where We Are Now: The Corps is coordinating with the Sponsor regarding the real estate acquisition for Sections 1 and 2. The Sponsor requires additional non-federal funds for the real estate acquisition and is developing a funding plan to try to obtain these funds. Upon receipt of additional non-federal funds, the Sponsor will acquire the necessary real estate interests for Sections 1 and 2. Once the remedial repairs are completed, these sections will be turned over to the Non-Federal Sponsor for operation and maintenance.

Issues and Other Information: In September 2010, approximately 50' of the east concrete channel wall in Section 4A was undermined in the vicinity of Station 1348 due to failure of a corrugated metal outfall on the Smuckers' property. The bottom of the pipe completely eroded away in some places and continued to undermine the channel wall. The Corps of Engineers met with Metropolitan Sewer District (MSD) at the site and MSD subsequently met with Smuckers personnel. The Corps of Engineers provided recommended guidance (fill the inlet, pipe, and void area with flowable fill) and Smuckers agreed to have an onsite contractor perform the work.

This is one of the 3 sections (1, 2, and 4A) where the Corps of Engineers completed construction years ago but the sections were not turned over to the Non-Federal Sponsor for operation and maintenance. This is just an example of problems that will continue to be encountered until these sections have remedial repairs completed and the sections are turned over. The Corps of Engineers has an agreement with the Non-Federal Sponsor that we would bring these previously constructed sections back to the same condition as when construction was just finished, and then turn over to the Non-Federal Sponsor for O&M.

Background: The project was authorized by the 1970 Flood Control Act and was not subject to the cost sharing provisions of the Water Resources Development Act (WRDA) of 1986 (PL 99-662). Project construction was suspended in 1991 at the direction of the Assistant Secretary of the Army for Civil Works (ASA-CW), with four of the ten project sections completed and two others partially completed. In August 1998, two agreements were executed. The Contributed Funds Agreement, between the Corps of Engineers, the Non-Federal Sponsor, and other local interests, provided for voluntary local contributions to the preparation of a General Reevaluation Report (GRR). The second agreement, between the Corps of Engineers and the Non-Federal Sponsor, provided for the turnover of the completed project sections once the sections were restored by the Corps of Engineers to the original design standards.

Visioning sessions were held in December 2000. A "Bridging Document" was prepared following these sessions to: summarize the outcome of these sessions, provide a recommendation of how the Corps of Engineers could proceed with the GRR, and to address how this would relate to cost sharing of the remainder of the GRR. This document was forwarded to higher Corps authority for approval in June 2001. In November 2001, guidance was received from higher authority which differed from the recommendations in the Bridging Document. The main differences were that the study must consider appropriate structural and nonstructural alternatives in addition to evaluation of a tunnel, and the sponsor was required to provide 25% of the total study cost. Concerns about the imposed cost sharing requirement were raised by the local stakeholders and their congressional delegation. Revised guidance on continuation of the GRR was received in April 2002. This guidance stated that all work on the GRR in FY02 and FY03 would be at full federal cost. Work on the GRR was initiated in April 2002 and was completed in March 2005.

Construction on the Section 3 Punch List/ Maintenance Work Contract was awarded in February 2003 and completed in May 2004. Section 3 was turned over to the Non-Federal Sponsor for Operation and Maintenance in October 2004. The Flood Warning System (FWS) was approved in December 2003 at 100% federal funding. The installation of the FWS was completed in September 2004.



Wall Failure in Section 4A due to failure of a corrugated metal pipe



Wall Failure in Section 4A due to failure of a corrugated metal pipe

ENVIRONMENTAL INFRASTRUCTURE, OH SEC 594

March 2016

Official Title: Ohio Environmental Infrastructure Program

Authorization: Section 594 of the Water Resources Development Act of 1999 (Public Law 106-53), as amended.

Project Phase: Design and Construction

Summarized Financial Data:

Authorized Program Limit	\$240,000,000
FY16 Allocation	\$7,000,000
Appropriations through FY 16	\$132,900,000



Project Description: The Section 594 program is cost shared with a non-Federal sponsor, and requires a local match of 25%. The Huntington District Corps of Engineers is the overall program manager, with responsibility for project implementation assigned to the Pittsburgh, Huntington, and Louisville Districts, as determined by the location of the projects. Prior to design and/or construction of a Section 594 project, the Corps and the non-Federal sponsor enter into a Project Partnership Agreement outlining the project scope, cost, and responsibilities for implementation.

Project Status: Varies depending on each project.

Non-Federal Sponsor: Dependent on projects.

Status: Below is a listing and brief description of the ongoing Section 594 projects currently underway by the Louisville District:

- Tech Town, OH, Sewer Infrastructure Project - Design and construction of new and replacement sewer, water, and drainage systems in downtown Dayton, Ohio at a cost of \$4,391,467. The infrastructure will support a high tech industrial site as part of Dayton's effort to revitalize downtown Dayton and the waterfront.
- Yellow Springs, OH, McGregor Center for Business and Education Park - The Village of Yellow Springs is developing a park that will house the McGregor campus of Antioch University and a commerce park of spin-off businesses. The project will consist of the design and construction of water supply, wastewater, and surface water protection facilities for the park at an estimated cost of \$596,000. Discussions are underway with the Village regarding reducing the scope of the original project.
- University of Dayton, Brown and Stewart Streets Project, OH - The University of Dayton has purchased a tract of land on its western border and is developing it for expansion of university facilities. The project consists of the design and construction of the water supply, wastewater, and surface drainage facilities for the proposed development at an estimated cost of \$6,576,000.
- Springfield, OH, Airport - Design and construct a sanitary sewer from the Springfield Airport to the Southern Interceptor Sewer, a water pressure booster station for fire protection at the airport, and upgrades to sanitary sewers and a sanitary sewer lift station in the airport area at an estimated cost of \$5,071,724.
- Trotwood, OH - The City of Trotwood is participating in the redevelopment of a vacant retail center. As part of the project, the city intends to relocate and redesign a stream to improve the water quality of the drainage from the site. The project consists of the design and construction of the relocated waterway. The estimated cost of the project is \$992,000.

U.S. ARMY CORPS OF ENGINEERS – LOUISVILLE DISTRICT

P.O. Box 59, Louisville, KY 40201-0059

www.lrl.usace.army.mil

- Clark State College, OH - The Clark State Community College Water and Sewer Project consists of four separable elements, the Disaster Remediation Training House Project, the Leffel Lane Campus Water Pressure Improvement Project, the Leffel Lane Campus Storm Sewer and Water Line Relocation Project, and the Clark State Community College Creative Arts and Conference Center Project. A total of 1,934 linear feet of water line, 1,040 linear feet of sanitary sewer and 1,920 linear feet of storm sewer will be installed as well as a booster pump station. The estimated cost of these elements is \$1,333,333.
- Fairview Commons, OH – The project consists of the design and construction of water supply/drainage lines and storm water control measures associated with the development of the Fairview Commons fitness park on the former site of the Fairview Elementary School. The project cost is estimated at \$400,000.
- City of Blanchester, OH – The project consists of design and construction of a water main to replace a 1920's era water main in the center of the business district. The project cost is estimated at \$266,667.

Issues and Other Information: None



CINCINNATI RIVERFRONT, OH

March 2016

U.S. ARMY CORPS OF ENGINEERS

BUILDING STRONG®

Official Title: Ohio Riverfront Project,
Cincinnati, Ohio

Authorization: Section 5116 of the Water
Resources Development Act (WRDA) of 2007,
Public Law 110-114

Project Phase: Construction

Summarized Financial Data:

Estimated Federal Cost	\$15,000,000
Estimated Non-Federal Cost	\$15,000,000
Total Estimated Project Cost	\$30,000,000
Allocation thru FY15	\$14,990,960
Balance to Complete after FY15	\$0
FY16 President's Budget	\$0
FY16 Allocation	\$0
FY17 President's Budget	\$0



Project Location: The project is located in Cincinnati, Ohio along Ohio River Mile 470.0.

Project Description: The project area includes continuous pedestrian walkways along the river, informal grass terraces, festival areas, a great lawn, landscaping, lighting, and water features. The 905(b) Analysis (Corps of Engineers Reconnaissance Report) defined and evaluated this area as well as areas both to the east and west. The project objective is to enhance public use of and access to the recreational and environmental amenities of the Ohio River, and other riverfront parks including the Theodore M. Berry International Friendship Park, the Public Landing, and Bicentennial Commons.

Project Status: The Corps of Engineers (COE) Louisville District completed the Decision Document and the Project Partnership Agreement (PPA) and submitted both to the COE Division office for approval in FY09. The Decision Document was approved on 9 October 2009. The PPA was approved by the COE Division office and submitted for Washington level review and approval on 15 October 2009. The PPA was approved by the ASA(CW) in February 2010 and executed the same month. Preparation of the plans and specifications for Phases 1 and 2 also continued in FY09. FY09 carry-over funds in the amount of \$2,884,777 and FY10 funds were used in FY10 to complete plans and specifications for Phase 2 and to award construction contracts for Phases 1 and 2 of the project. The construction contract for the first phase was awarded on 21 May 2010. Award of the Phase 2 construction contract occurred on 15 July 2010. FY11 funds were used for construction of both phases. Phases 1 and 2 were completed in the Spring of 2012. Federal funds, in the amount of \$4,500,000, were received in the FY14 Work Plan and were sufficient to complete the project as authorized. These funds were used to design and construct the last phase of the project (Phase 3). Plans and specifications for Phase 3 were completed in August 2014. The construction contract was awarded in September of 2014 and completed in October 2015.

Non-Federal Sponsor: City of Cincinnati, Ohio

Where We Are Now: This project is currently in our Close Out Phase in which we ensure the proper cost sharing amounts are accurate and complete.

U.S. ARMY CORPS OF ENGINEERS – LOUISVILLE DISTRICT

P.O. Box 59, Louisville, KY 40201-0059

www.lrl.usace.army.mil

Issues and Other Information: The City of Cincinnati requested expediting this project due to other commitments for the area. The PPA allowed for the Non-Federal sponsor (City of Cincinnati) to accelerate their cash contribution for the project in order to proceed in the most efficient manner.



November 2011

