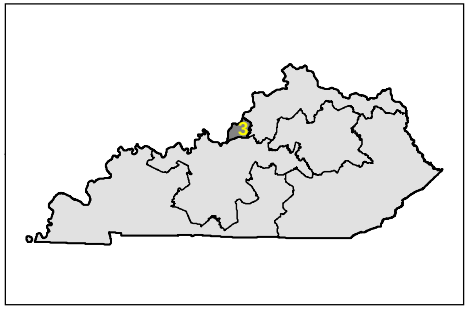
Congressional District: KY 03



Location Map

Metro Louisville, KY Pumping Station Reconstruction Study

Beargrass Creek Trail

Portland Wharf Park (Section 14)

Louisville, KY Blueways PAS

Dam Safety Program *(All COE KY Dams)*

Olmsted Locks & Dam

McAlpine

Jefferson

71 265 264 264 64 65 265 265

Legend

- Project Name
- Locks & Dams
- Levee / Floodwall
- Interstate Highways
- Major Streams
- Congressional District
- County Boundary

US Army Corps of Engineers Louisville District

Portland Wharf, Louisville, Kentucky

March 2016

U.S. ARMY CORPS OF ENGINEERS **BUILDING STRONG®**

Official Title: Ohio River, Portland Wharf Park & Louisville Riverwalk Section 14 Emergency Streambank Stabilization Project

Authorization: Section 14 of the 1946 Flood Control Act, as amended.

Project Phase: Design & Implementation (D&I)

Summarized Financial Data:

Estimated Federal Cost	$1,678,000
Estimated Non-Federal Cost	$904,000
Total Estimated Project Cost	$2,582,000
Allocation thru FY15	$222,000
FY16 President's Budget	$0
FY16 Allocation to Date	$206,700
FY17 President's Budget	$0
Balance to Complete D&I	$1,249,300

Project Location: The project area is located in Jefferson County, Kentucky along the left descending bank of the Ohio River approximately two miles west of the Louisville Central Business District. The project is located in the 3rd Congressional District.

Project Description: There are two areas threatened by erosion within the study area: Portland Wharf Park and a segment of the Louisville River walk adjacent to Shawnee Golf Course. Portland Wharf was the historic riverboat landing for the City of Portland founded in 1811. The Wharf is part of an archaeological site known as "Portland Proper". Portland Proper is listed on the National Register of Historic Places (NRHP) and its limits encompass the entirety of the Portland Wharf Park.

Based on the alternatives considered, full bank build out using riprap with live stakings comprised of native species at the top of bank has proven to be the least cost alternative and least impactful to cultural and environmental resources for stabilizing these two sections of river bank. The estimated cost of the project is $2.5M.

Project Status: Active

Non-Federal Sponsor: Louisville/ Jefferson County Metro Government

Where We Are Now: The Feasibility Report was approved in June 2015 and the Project Partnership Agreement was executed in September 2015. Final design is currently underway.

Issues and Other Information: None

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Map

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.

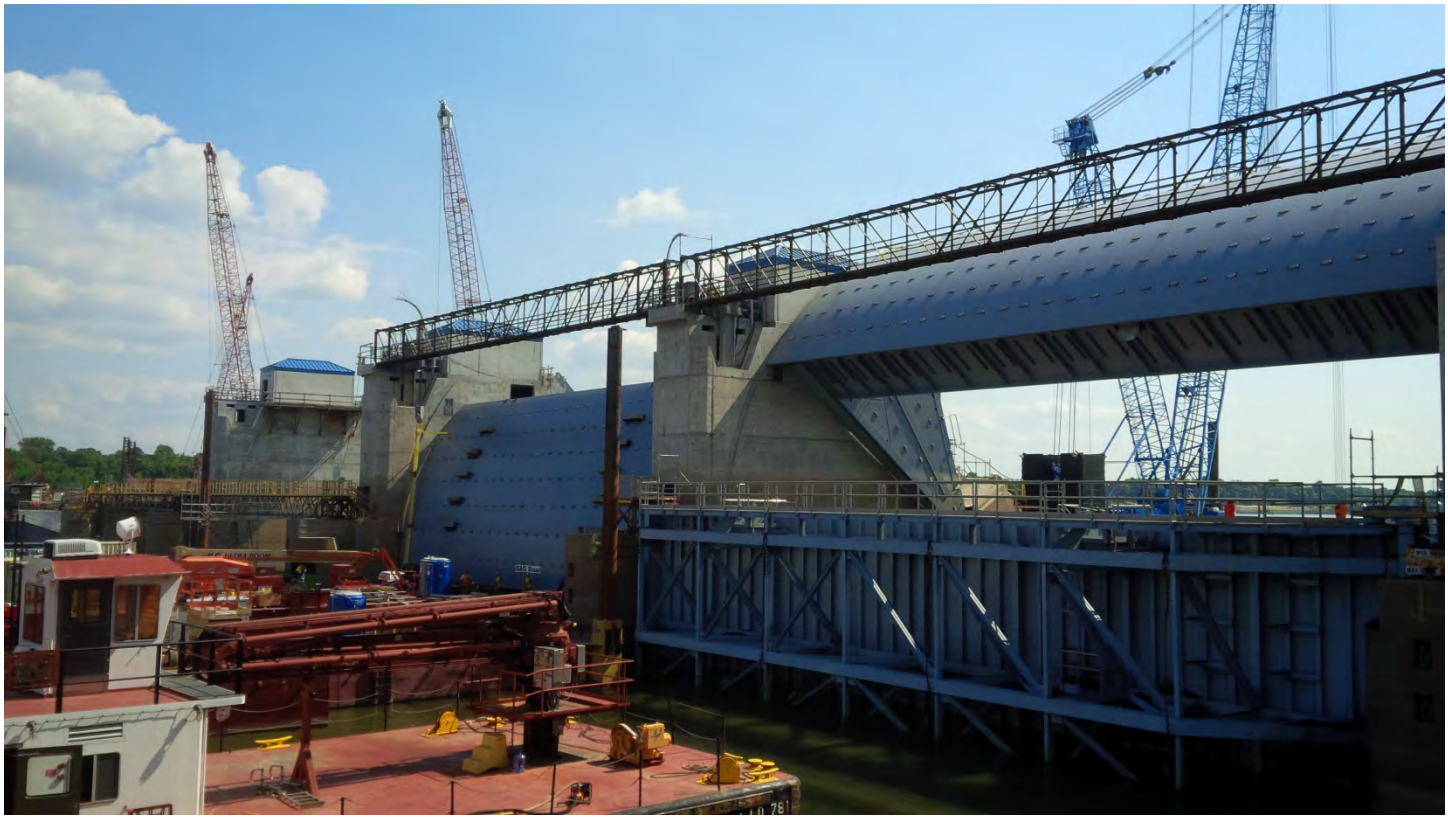
Summarized Financial Data

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.

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

METRO LOUISVILLE, KY, FLOOD PROTECTION SYSTEM

March 2016

U.S. ARMY CORPS OF ENGINEERS **BUILDING STRONG®**

Official Title: Metro Louisville, KY, Flood Protection Project Reconstruction Study

Authorization: Section 4044 of the Water Resources Development Act (WRDA) of 2007, Public Law 110-114

Project Phase: Feasibility Study

Summarized Financial Data:

Estimated Federal Cost	$1,000,000
Estimated Non-Federal Cost	$1,000,000
Total Estimated Project Cost	$2,000,000
Allocation thru FY15	$0
FY16 President's Budget	$0
FY16 Allocation	$0
FY17 President's Budget	$0
Balance to Complete Project	$1,000,000

Project Location: The Metro Louisville, Kentucky Local Flood Protection Project is located in Jefferson County, Kentucky, on the left bank of the Ohio River.

Project Description: The project consists of a levee and floodwall system, with numerous pumping stations for maintaining interior drainage in times of flooding. The project was constructed between March 1947 and March 1956, and was assigned to local interests in February 1957. The project affords protection for loss of life and property damage to the City of Louisville against an Ohio River flood equal to the maximum flood of record (January 1937). The project is operated and maintained by the Louisville and Jefferson County Metropolitan Sewer District (MSD). The feasibility study will consist of an investigation of the rehabilitation work needed for the repair/replacement of aging project features including floodwalls, and pumping station equipment constructed as a part of the project which was originally authorized by Section 4 of the Flood Control Act of June 28, 1938 (52 Stat. 1217).

Project Status: An Initial Appraisal was completed in 2008. At that time the preliminary estimate of rehabilitation cost was $108 million for major rehabilitation of the pumping stations and equipment, only. MSD is finalizing a Capital Improvements Plan which will include the estimated rehab costs for the flood protection system, including, but not limited to the pumping stations.

Non-Federal Sponsor: The Louisville and Jefferson County Metropolitan Sewer District.

Where We Are Now: Awaiting funds to initiate a cost shared feasibility study.

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Map

Issues and Other Information: The Initial Appraisal study was undertaken under the authority of Section 216 of the 1970 Flood Control Act, which authorizes the Corps of Engineers to review operations of completed projects, when found advisable due to changed physical, economic, or environmental conditions. This study examined ten pumping stations over 50 years old and determined that federal involvement in a detailed study to reconstruct or replace the pumping stations is warranted. The feasibility study authority contained in Section 4044 of the Water Resources Development Act of 2007 did not limit the study to the pumping stations, but authorized the investigation of measures to address the rehabilitation of the project. Project features including the pumping stations have been in service for sixty years, and although well maintained, pose a risk to system reliability. In 2004, MSD commissioned a study of the pumping stations in an effort to determine potential problems and prioritize resources to aid in resolution of these problems. The pump motors in these stations are all the originals. The motor insulation is, given its age, expected to be cotton, asbestos, or a combination thereof. This insulation has exceeded its predictable useful life. The motor control switchgear is the original, 1950's vintage switchgear. Included are oil circuit breakers, protective relaying, potential transformers, current transformers, meters, and wiring. This equipment has also exceeded its life expectancy and has become increasingly difficult to service due to a scarcity of parts. The existing switchgear operation relies on a multitude of mechanical movements of numerous parts to perform its functions. Due to its age, replacement of broken or worn out parts sometimes results in nationwide searches for expensive, rare, used parts. As years pass, obsolescence is getting progressively worse and chances of equipment failure are increasing, especially when placed under heavy loads.

Increased development in the watersheds upstream and in the project area combined with the current reality of larger, more frequent severe weather resulted in a need to evaluate and determine the existing flood protection system's capacity to manage the increased flood runoff. The area protected by the Louisville flood protection system, includes a major medical complex in downtown Louisville, which is also the location of University Hospital, the region's major trauma center. The Fifth Street pumps protect the downtown entertainment district as well as the national headquarters for Humana. Also included within the line of protection are the University of Louisville main campus as well as Old Louisville, the nation's largest Victorian neighborhood, and a National Register District.

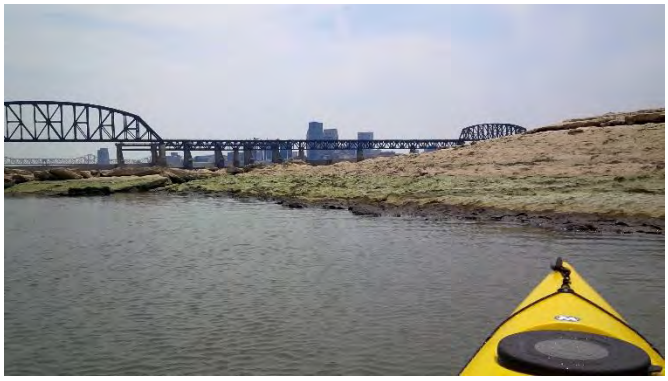
Louisville KY Blueways PAS

March 2016

U.S. ARMY CORPS OF ENGINEERS **BUILDING STRONG®**

Official Title: Louisville, KY Blueways, Planning Assistance to States Study (PAS)

Authorization: Section 22(a) (1) of the Water Resources Development Act of 1974 (Public Law 93-251), as amended



Project Phase: Study

Summarized Financial Data:

Estimated Federal Cost	$70,000
Estimated Non-Federal Cost	$70,000
Total Estimated Project Cost	$140,000
Allocation thru FY15	$70,000
FY16 President's Budget	$0
FY16 Allocation	$0
FY17 President's Budget	$0
Balance to Complete	$0
	$0

Project Location: The study area is located in Jefferson County, Kentucky (3rd Congressional District).

Project Description: The purpose of this Planning Assistance to States (PAS) project is to investigate the critical issues associated with creation of specific infrastructure along the Ohio River (lower pool) from the McAlpine Locks and Dam downstream to the end of Chickasaw Park, including: 1) boat access to the Ohio River; 2) canoe/kayak access to the Ohio River; 3) restoration of an existing pond for safe fishing and flat water canoe instruction; and 4) soft surface trail improvements along the Ohio River.

Project Status: Active

Non-Federal Sponsor: Louisville/Jefferson County Metro Government

Where We Are Now: Study is underway with completion scheduled for February 2016.

Issues and Other Information: None.

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Map

DAM SAFETY, KENTUCKY

February 2016

U.S. ARMY CORPS OF ENGINEERS **BUILDING STRONG®**

Official Title: Corps of Engineers Dam Safety Program; Kentucky Dams - Dam Safety Portfolio Risk Management

Project Phase: Routine Dam Safety Inspection and Assessment / Risk Studies

Summarized Financial Data: The Dam Safety Risk 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: Barren Lake Dam, Buckhorn Lake Dam, Carr Creek Lake Dam, Cave Run Lake Dam, Green River Lake Dam, Nolin Lake Dam, Rough River Lake Dam, and Taylorsville 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 2 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.

Project Location: Barren Lake Dam, KY

Project Status:

* SPRA (Screening for Portfolio Risk Analysis): 2007
* DSAC (Dam Safety Action Classification) Rating: Class 3
* IRRMP (Interim Risk Reduction Measures Plan): Completed 6 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.

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Map

Project Location: Buckhorn Lake Dam, KY

Project Status:

* SPRA (Screening for Portfolio Risk Analysis): 2008
* DSAC (Dam Safety Action Classification) Rating: Class 3
* IRRMP (Interim Risk Reduction Measures Plan): Completed 15 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.

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Map

Project Location: Carr Creek Lake Dam, KY

Project Status:

* SPRA (Screening for Portfolio Risk Analysis): 2008
* 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.

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Map

Project Location: Cave Run Lake Dam, KY

Project Status:

* SPRA (Screening for Portfolio Risk Analysis): 2009
* DSAC (Dam Safety Action Classification) Rating: Class 3
* IRRMP (Interim Risk Reduction Measures Plan): Completed 27 July 2010
* 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.

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Map

Project Location: Green River Lake Dam, KY

Project Status:

* SPRA (Screening for Portfolio Risk Analysis): 2006
* DSAC (Dam Safety Action Classification) Rating: Class 3
* IRRMP (Interim Risk Reduction Measures Plan): Completed 9 April 2008
* The findings of the Phase 2 Issue Evaluation Study (IES) risk analysis were presented to the Risk Management Center (RMC) in November 2011 and to the Dam Senior Oversight Group (DSOG) in February 2012. The RMC and DSOG agreed with the report recommendation that the project be reclassified to a DSAC 3 based on the results of the risk analysis. Other recommendations were to install additional instrumentation on the right abutment of dike and to update the current IRRMs.

Where We Are Now: Remedial construction is not warranted at this time and the dam was re-classified to a DSAC 3. This structure has been reprioritized in the risk study queue.

Project Location: Nolin Lake Dam, KY

Project Status:

* SPRA (Screening for Portfolio Risk Analysis): 2006
* DSAC (Dam Safety Action Classification) Rating: Class 3
* IRRMP (Interim Risk Reduction Measures Plan): Completed 8 April 2008
* The findings of the Phase 2 Issue Evaluation Study (IES) risk analysis were presented to the Risk Management Center (RMC) in November 2011 and to the Dam Senior Oversight Group (DSOG) in February 2012. The RMC and DSOG agreed with the report recommendation that the project be reclassified to a DSAC 3 based on the results of the risk analysis. Other recommendations were to install additional instrumentation in right and left abutments, and to update the current IRRMs.

Where We Are Now: Remedial construction is not warranted at this time and the dam was re-classified to a DSAC 3. This structure has been reprioritized in the risk study queue.

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Map

Project Location: Rough River Lake Dam, KY (See detailed Fact Sheet for additional information)

Project Status:
* DSAC (Dam Safety Action Classification) Rating: Class 2
* IRRMP (Interim Risk Reduction Measures Plan): Completed 15 April 2008
* A Dam Safety Modification Report (DSMR) was completed in July 2012. The DSMR addressed unacceptable foundation conditions and associated seepage and identified a need for major rehabilitation in order to remove uncertainty and lower project risk.
* There is no emergency or imminent threat. However, failure of this dam from seepage/piping would result in catastrophic effects downstream including loss of life and significant economic losses.

Where We Are Now?
FY 2014: The first construction contract (Phase 1A) was awarded in March 2014 and completed in September 2015. This contract relocated KY State Hwy 79, which crosses the dam, to the upper slope of the dam.
FY 2015: The second construction contract (Phase 1B) was awarded in May 2015 and consists of exploratory drilling and grouting.
FY 2016: Construction work continues with exploratory drilling and grouting with a scheduled completion date of June 2016. Depending on the results of the grouting, a decision will be made on whether to construct a full depth concrete cutoff wall.

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Map

Project Location: Taylorsville Lake Dam, KY

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.

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Map

BEARGRASS CREEK GREENWAY, LOUISVILLE, KY

March 2016

U.S. ARMY CORPS OF ENGINEERS

BUILDING STRONG®

Official Title: Connection of the Beargrass Creek and Butchertown Greenways – Planning Assistance to States

Authorization: Section 22(a) (1) of the Water Resources Development Act of 1974 (Public Law 93-251), as amended

Project Phase: Study

Summarized Financial Data:

Estimated Federal Cost	$75,000
Estimated Non-Federal Cost	$75,000
Total Estimated Project Cost	$150,000
Allocation thru FY15	$75,000
FY 15 President's Budget	$0
FY 16 Allocation	$0
FY17 President's Budget	$0
Balance to Complete	$0

Project Location: The study area is located in Jefferson County, Kentucky (3rd Congressional District).

Project Description: The master planning effort will evaluate alternatives and develop a rough order of magnitude cost estimate for an off-road, shared-use path connection between the western end point of the Beargrass Creek Greenway at Irish Hill and the eastern end point of the Butchertown Greenway; recommend updates to trail amenities along the existing and potential shared use path from Grinstead Drive at Lexington Road to River Road; and recommend ecosystem restoration opportunities for Beargrass Creek.

Project Status: Active

Non-Federal Sponsors: Louisville Metro Parks.

Where We Are Now: Study is Underway with an expected completion date in December 2016.

Issues and Other Information: None

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