

# Kentucky Congressional District 5

Energy Resilience  
Conservation  
Investment Program

Ohio River Locks  
and Dams  
Master Plan

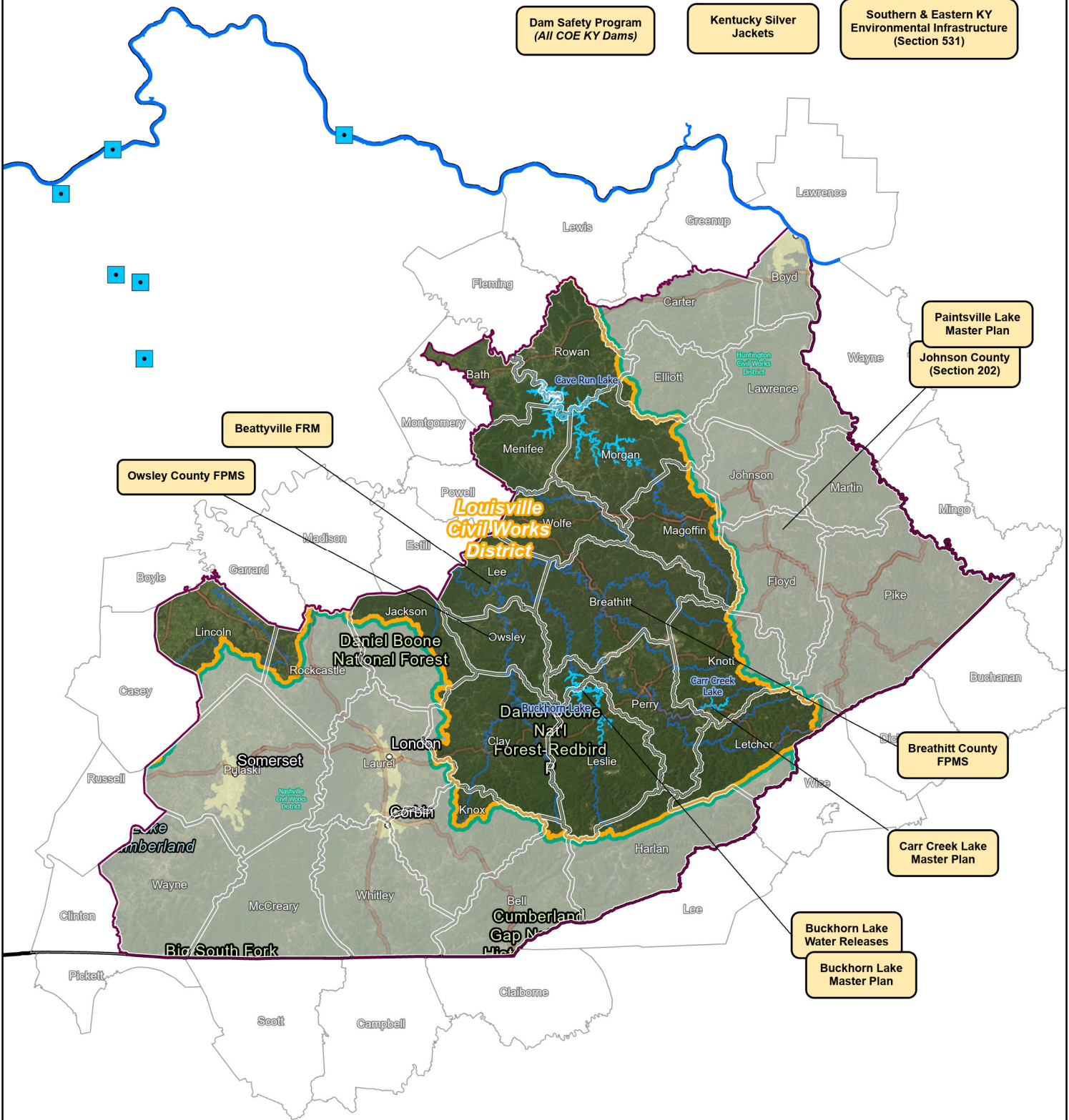
Kentucky EAP Process

Eastern KY Flooding

Dam Safety Program  
(All COE KY Dams)

Kentucky Silver  
Jackets

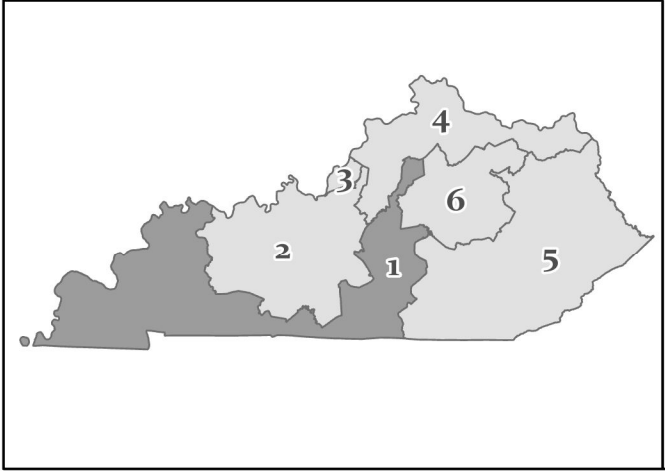
Southern & Eastern KY  
Environmental Infrastructure  
(Section 531)



## Legend

- Louisville District Boundary
- Adjacent District Boundary
- Lock & Dam
- Levee / Floodwall
- Major Stream

- Ohio River
- LRL Reservoir
- Kentucky
- County Boundary
- Congressional District Boundary
- City
- Civil Project
- Military Project



Energy Resilience Conservation Investment Program

Location and Description:

ERCIP projects are located at various Military Installations to include but not limited to: Fort Bliss, Fort Liberty, Fort Buchanan, Fort Cavazos, Fort Riley, Fort Sill, Fort Stewart, Lake City Army Ammunition Plant, Aberdeen Proving Ground, Anniston Army Depot, Joint Base Lewis-McChord, Camp Arijfan, Rock Island Arsenal, White Sands Missile Range, USAG Ansbach, Camp Buehring and Tooele Army Depot.

ERCIP is a subset of the Defense-Wide MILCON Program specifically intended to fund projects that improve energy and water resilience, contribute to mission assurance, save energy, and reduce DoD’s energy costs. ERCIP accomplishes this through construction of new, high-efficiency energy systems and technologies or through modernizing existing energy systems.

Authorization:

Authority for the ERCIP program is established by 10 USC § 2914

FY24 Activities:

Design, procurement, and construction management activities for projects in the ERCIP program.

FY25 Planned Activities:

Design, procurement, and construction management activities for projects in the ERCIP program.

FY26 Planned Activities:

Design, procurement, and construction management activities for projects in the ERCIP program.

Issues and Other Information:

Real property transfer/conveyance rules conflict with installation contracts with privatized utilities.

Summarized Financial Data:

LRL Current Military Program	
Estimated Federal Cost	\$1,197,645,000

Project	Description	Installation	PN	FY	PA
1	Construct Microgrid Controls, 690 kW PV, 275kW GEN, 570 kWh BESS	PR010 - Juana Diaz, Puerto Rico	95004	2022	\$ 12,190,000
2	Construct Microgrid Control System, 460 kW PV, 275kW GEN, 660 kWh BESS	PR013 – Ramey; Puerto Rico	95005	2022	\$ 10,120,000
3	Fort Liberty Emergency Water System	Fort Liberty	97484	2022	\$ 7,705,000
4	Install Microgrid, 750 kWPV Array, 750 kWh BESS, and 680k Generator Set	Conroe ASF	93347	2023	\$ 9,600,000
5	Camp Arijfan ERCIP Power Generation and Microgrid	Camp Arifjan, Kuwait	94849	2023	\$ 26,850,000
6	Ft. Riley ERCIP Power Generation and Microgrid	Fort Riley	98161	2023	\$ 25,780,000
7	Ft. Stewart HAAF ERCIP Power Generation and Microgrid	Fort Stewart HAAF	98162	2023	\$ 25,400,000
8	Ft. Cavazos Power Generation and Microgrid	Fort Cavazos (Hood)	99143	2023	\$ 31,500,000
9	Camp Ruehring FY24 Microgrid	Camp Buehring, KW	94933	2024	\$ 18,850,000
10	Ft. Liberty Camp MacKall FY24 Microgrid	Ft Liberty (Bragg) - Camp MacKall	98901	2024	\$ 10,500,000
11	Microgrid and Backup Power	Fort Buchanan	99144	2024	\$ 56,000,000
12	JBLM DES FY24 Microgrid	Joint Base Lewis-McChord	99146	2024	\$ 49,850,000
13	Lake City FY24 Microgrid CHP	Lake City Army Ammo Plant	99147	2024	\$ 80,100,000
14	Ft. Cavazos FY24 Microgrid	Fort Cavazos (Hood)	99288	2024	\$ 18,250,000
15	Ft. Sill FY24 Microgrid	Fort Sill	101861	2024	\$ 76,650,000
16	Critical Water Storage	Fort Liberty	98977	2025	\$ 25,000,000
17	Anniston Army Depot (ANAD) Power Generation and Microgrid	Anniston Army Depot	100945	2025	\$ 54,000,000
18	Rock Island Arsenal Power Generation and Microgrid	Rock Island Arsenal	100946	2025	\$ 67,500,000
19	JBLM FY25 Grey Army Airfield (GAAF)	Joint Base Lewis-McChord	100947	2025	\$ 38,300,000
20	Aberdeen Proving Grounds (APG) 2MW Microgrid	Aberdeen Proving Ground	100949	2025	\$ 29,400,000
21	Power Generation and Microgrid	White Sands Missile Range	80635	2026	\$ 38,000,000
22	Water Distribution Lines, Potable Industrial Area	Hawthorne Army Depot	86677	2026	\$ 5,000,000
23	Install Microgrid, 575 kW PV, 300kW/1200kW Bat Energy Stor System (BESS), and Two 200kW Elec Turb	Ft. Sheridan	94042	2026	\$ 5,600,000
24	Install Microgrid, 450kW PV, and 500kW/2000kWh Bat Energy Storage Sys (BESS)	Belgium	95066	2026	\$ 17,000,000
25	Power Generation and Microgrid	Camp Buehring, KW	96153	2026	\$ 21,300,000
26	Main Potable Water Lines for Resilience	Tooele Army Depot	98650	2026	\$ 18,500,000
27	Construct Potable Water Purification System at Las Casas Lake	Fort Buchanan	98709	2026	\$ 17,500,000
28	Install Microgrid, 4MW PV, 2MW/8MWh Bat Energy Stor Sys (BESS), and 2MW Generator	Ft. Liberty (Bragg)	100873	2026	\$ 38,000,000
29	Install Microgrid, 1MW PV, 500kW/3MWh Bat Energy Stor Sys (BESS), and 500kW Generator	Joint Base Lewis-McChord	101472	2026	\$ 39,000,000
30	Install Microgrid with PV, Battery Energy Storage System (BESS), and Generation	USAG Ansbach (Katterbach), Germany	102238	2026	\$ 26,000,000
31	Install Microgrid, PV, Battery Energy Storage System, and Generation	USAG Ansbach (Storck Barracks), Germany	102287	2026	\$ 27,000,000
32	Install 12 MW of Ground-Mounted Solar PV and 4MW/4MWh Bat Energy Stor Sys (BESS)	Ft. Sill	102300	2026	\$ 29,000,000
33	Install Microgrid, 500kW PV, 1MW/2MWh Bat Energy Stor Sys (BESS), and 2MW Generator	Ft. Liberty (Bragg)	102321	2026	\$ 15,500,000
34	Install Microgrid, 2.5 MW PV, 5 MWh Battery Energy Storage System (BESS)	Parks RFTA	102712	2026	\$ 37,000,000
35	Install 2.4 MW PV and 10 MWh Battery Energy Storage System	Camp Roberts Enclave	102945	2026	\$ 60,000,000
36	Power Generation and Microgrid	Ft. Carson	102984	2026	\$ 58,000,000
37	Redstone Electric Power, Microgrid	Redstone Arsenal	103043	2026	\$ 33,000,000
38	Install 1750 kW of Natural Gas Generators and Microgrid	Fort Bliss	93031	2026	\$ 7,100,000
39	DPTMS Simulation Training Campus Microgrid	Fort Bliss	98799	2026	\$ 8,600,000
40	5 MW NG Generator - Resiliency, McGregor / Westbrook Ranges	Fort Bliss	98991	2026	\$ 12,000,000
41	5 MW NG Generator - Resiliency, East Bliss Substation	Fort Bliss	99008	2026	\$ 11,000,000

## **Dam Safety, Kentucky**

### **Kentucky Dams - Special Studies**



*Barren Lake Dam, KY*

#### **Current Phase:** Study

**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)

#### **Study and Program Information:**

During normal operations, these dams are routinely inspected daily, weekly, and monthly by USACE 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 USACE 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.

#### **Summarized Financial Data:**

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

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 USACE 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 needs 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.

#### **Congressional Interests:**

SEN Mitch McConnell (KY)  
SEN Rand Paul (KY)

**Individual Project Status:**

**Barren Lake Dam, KY**

- \* SPRA (Screening for Portfolio Risk Analysis): 2007
- \* 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
- \* FY2024 Planned Activities: Routine O&M surveillance and monitoring program.

**Buckhorn Lake Dam, KY**

- \* 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).
- \* FY2024 Planned Activities: Routine O&M surveillance and monitoring program.

**Carr Creek Lake Dam, KY**

- \* 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
- \* FY2024 Planned Activities: Routine O&M surveillance and monitoring program.

**Cave Run Lake Dam, KY**

- \* SPRA (Screening for Portfolio Risk Analysis): 2009
- \* DSAC (Dam Safety Action Classification) Rating: Class 4
- \* IRRMP (Interim Risk Reduction Measures Plan): Completed 27 July 2010
- \* IES (Issue Evaluation Study): Not required since it is a DSAC 4.
- \* FY2024 Planned Activities: Routine O&M surveillance and monitoring program.

### **Green River Lake Dam, KY**

- \* 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
- \* Note: The findings from the previous Phase 2 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. Remedial construction is not warranted at this time. This structure has been reprioritized in the risk study queue. The DSAC rating was subsequently revised to a 4 in 2017 after a Periodic Assessment.
- \* FY2024 Planned Activities: Routine O&M surveillance and monitoring program.

### **Nolin Lake Dam, KY**

- \* 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
- \* IES (Issue Evaluation Study): The findings of the Phase 2 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. Remedial construction is not warranted at this time. This structure has been reprioritized in the risk study queue.
- \* FY2024 Planned Activities: Routine O&M surveillance and monitoring program.

### **Rough River Lake Dam, KY (See detailed Fact Sheet for additional information)**

- \* 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. The Project Delivery Team (PDT) reevaluated design features as part of a Supplement to the previously approved DSMR. ASA(CW) endorsed the Supplemental DSMR on 20 October 2021.
- \* 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.
- \* FY 2024 Planned Activities: The project design is complete. Additional funds are needed to advertise and award the contract. Once it is determined that additional funds will be available, the Plans and Specifications will need to undergo an updated BCOES certification and the package will be prepared for advertisement. These activities can be completed in FY24 with funds currently on hand.



**Taylorsville Lake Dam, KY**

- \* 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
- \* FY2024 Planned Activities: Routine O&M surveillance and monitoring program

## Ohio River Locks and Dams Master Plan



*Robert C. Byrd Locks and Dam*

### Current Phase:

Regional Master Plan Update

### Location and Description:

The Regional Master Plan consists of the six locks and dams along the Ohio River including areas in West Virginia, Kentucky, and Ohio. The locations are listed below from east to west.

Willow Island Locks and Dam is located on the Ohio River, 161.7 miles downstream from Pittsburgh, PA, and 3.4 miles upstream from Waverly, WV.

Belleville Locks and Dam is located on the Ohio River at mile 204. Belleville Locks sit 203.9 miles below Pittsburgh, PA, and 0.5 miles below Belleville, WV.

Racine Locks and Dam is located on the Ohio River, 237.5 miles below Pittsburgh, PA and 1.5 miles downstream from Letart Falls, OH.

Robert C. Byrd Locks and Dam is located on the Ohio River, 279.2 miles below Pittsburgh, PA, and 9 miles below the City of Gallipolis, OH.

Greenup Locks and Dam is located on the Ohio River, 341.0 miles below Pittsburgh, PA, and 5.0 miles below Greenup, KY.

Meldahl Locks and Dam is located at mile 436 of the Ohio River in Felicity, Ohio. It is 436.2 miles below Pittsburgh, PA, and 1.7 miles below Chilo, OH.

The purpose of the locks and dams is to create a series of steps which river tows and other boats either climb or descend as they travel upstream or downstream. Additionally, the locks and dams provide the opportunity for public recreation and wildlife and vegetative habitats. Belleville and Greenup are also equipped with privately-owned hydroelectric plants.

### Summarized Financial Data:

	<u>Master Plan</u>
Estimated Federal Cost	\$610,000
Estimated Non-Federal Cost	\$0
Total Estimated Project Cost	\$610,000
Allocation thru FY23 (Federal)	\$530,000
Balance to Complete after FY23	\$80,000
FY24 Capability (FED)	\$80,000
FY25 President's Budget	N/A

### Authorization:

River and Harbor Act of 3 March 1909, Sixtieth Congress, 2nd Session. Flood Control Act of 1944 and amendments.

### FY23 Activities:

Louisville District, in coordination with Huntington District, reformatted the initial draft Master Plan to fit the description of "integrated" vs "stand alone" Environmental Assessment.

### FY24 Planned Activities:

The District quality control reviews are planned prior to public release and review of the draft report. Once public and agency review of the draft report is complete, the Districts will address public comments and finalize the report. The Master Plan update is scheduled for completion in July 2024.

### Issues and Other Information:

The Louisville District is executing the Master Plan update on behalf of the Huntington District.

### Congressional Interest:

Greenup – Mitch McConnell (KY), Rand Paul (KY), Sherrod Brown (OH), J.D. Vance, (OH), Thomas Massie (KY-4), Hal Rogers (KY-5), Bill Johnson (OH-6)

Meldahl – Sherrod Brown (OH), J.D. Vance, (OH), Mitch McConnell (KY), Rand Paul (KY), Brad Wenstrup (OH-2), Thomas Massie (KY-4)

RC Byrd – Joe Manchin (WV), Shelley Moore Capito (WV), Sherrod Brown (OH), J.D. Vance, (OH), Carol Miller (WV-1), Bill Johnson (OH-6)

Willow Island – Sherrod Brown (OH), J.D. Vance, (OH), Joe Manchin (WV), Shelley Moore Capito (WV), Bill Johnson (OH-6), Carol Miller (WV-1)

Racine – Joe Manchin (WV), Shelley Moore Capito (WV), Sherrod Brown (OH), J.D. Vance, (OH), Bill Johnson (OH-6), Carol Miller (WV-1)

Belleville – Joe Manchin (WV), Shelley Moore Capito (WV), Sherrod Brown (OH), J.D. Vance, (OH), Carol Miller (WV-1), Alexander Mooney (WV-2), Bill Johnson (OH-6)



## Kentucky Silver Jackets Program



### Current Phase:

Active

### Location and Description:

Projects are located throughout the Commonwealth of Kentucky.

Silver Jackets teams in states across the United States bring together multiple state, federal, and sometimes tribal and local agencies to learn from one another in reducing flood risk and other natural disasters. By applying their shared knowledge, the teams enhance response and recovery efforts when such events do occur. While some states do not use the "Silver Jackets" name, there are a growing number of states applying the Silver Jackets approach – the ultimate goal is a state-led interagency team in every state. No single agency has all the answers but leveraging multiple programs and perspectives can provide a cohesive solution.

Although each state Silver Jackets team is unique, common agency participants include state agencies with mission areas of hazard mitigation, emergency management, floodplain management, natural resources management or conservation, etc. Federal participation typically includes the U.S. Army Corps of Engineers and the Federal Emergency Management Agency and often others such as the National Weather Service and the U.S. Geological Survey.

### Authorization:

USACE Flood Risk Management Program

### Current Kentucky Silver Jackets FPMS Efforts:

- Kentucky Emergency Action Plan Template Process – This project is developing a template process that the Commonwealth of Kentucky will share with non-

residential facilities located in a floodplain. These facilities can then use this template process to develop emergency action plans to reduce flood risk at their facilities. Two private sector businesses with manufacturing facilities in the floodplain will be assisting USACE with this effort.

- Kentucky Flooding & Flood Tools Outreach Campaign – This \$87.5K study will develop a series of workshops across the Commonwealth to better educate county judge executives, county magistrates, county surveyors, emergency/floodplain managers, and soil and water conservation personnel about flooding causes, available flood risk reduction tools, and potential mitigation best practices. These workshops will focus on flash, riverine, and stormwater flooding; climate change impacts, flood related regulations/best practices, and available FRM data and tools.
- Kentucky Stream & Lake Gage Prioritization Study – This \$60K effort will develop a plan and strategy to optimize/prioritize stream and lake gage placement in Kentucky based on multiple factors and working with multiple partners. This effort would in turn lead to better stream and lake data, increased awareness, and reductions in flood risk across Kentucky.

### Non-Federal Sponsors:

- Kentucky Division of Water
- Kentucky Emergency Management
- Kentucky Department for Local Government
- Kentucky Geological Service
- Kentucky Transportation Cabinet
- Kentucky Association of Mitigation Managers
- Multiple Local Governments and Agencies

### Federal Sponsors:

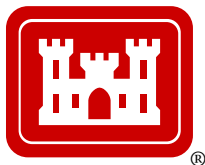
- U.S. Army Corps of Engineers (USACE)
- Federal Emergency Management Agency (FEMA)
- Natural Resources Conservation Service (NRCS)
- U.S. Geological Survey (USGS)
- National Weather Service (NWS)
- Environmental Protection Agency (EPA)
- Tennessee Valley Authority (TVA)

### Activities for FY 2024:

Continue to coordinate with state and federal agencies across the Commonwealth in order to better reduce flood risks in Kentucky. The Kentucky Silver Jackets team has been instrumental in coordinating resources, data, and information in response and recovery efforts for the flooding that ravaged Eastern Kentucky in July of 2022.

### Issues and Other Information:

None



# Emergency Action Plan Template Kentucky

U.S. ARMY CORPS OF ENGINEERS

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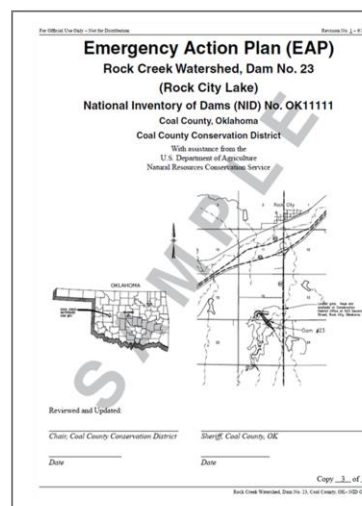
**AUTHORIZATION:** Section 206 of the Flood Control Act of 1960 (86-645)

**PROJECT SPONSOR:** Kentucky Emergency Management (KYEM)

**LOCATION:** Industries in the Commonwealth of Kentucky



Buffalo Trace Distillery on the Kentucky River



Congressional Member Interest	Key Stakeholder Interest
SEN Mitch McConnell (KY)	National Weather Service
SEN Rand Paul (KY)	U.S. Geological Services
REP Thomas Massie (KY-4)	Kentucky Division of Water
REP Andy Barr (KY-6)	Environmental Protection Agency
REP Brett Guthrie (KY-2)	Beam Suntory

## PROJECT DESCRIPTION AND BACKGROUND:

Because of recent repeated flooding impacting one of Kentucky's largest industries, the Kentucky Silver Jackets Team would like to develop a Flooding Related Emergency Action Plan (EAP) Template Process for the Commonwealth to provide to industries and non-residential facilities located in or near the floodplain.

In many cases, non-residential facilities have inadequate flood warning and lack the knowledge and expertise on how to obtain flood warning related information or how to adequately use that information to mitigate, respond to or operate during flooding. The district has identified pilot facilities to partner within this effort: the Buffalo Trace Distillery, the Jim Beam Distillery located along the Kentucky River, and Jim Beam's Clermont, Kentucky distillery.

**As of: 03/20/2023**

U.S. Army Corps of Engineers – Great Lakes and Ohio River Division  
600 Dr. Martin Luther King Jr. Place Louisville, KY 40202  
<http://www.lrd.usace.army.mil>

Bourbon distillation is one of the fastest growing industries in Kentucky due to its economic impact, job creation, and tax revenue. These historic facilities were built in the floodplain because their operations require large quantities of water. Due to their historic nature, relocation is not a viable option.

**BUDGET INFORMATION:**

Authorized Total Project Cost	\$145,000
Non-Federal Sponsor Cost	\$0
Federal Cost	\$145,000
Funding Received to Date	\$22,500

**CURRENT STATUS:**

The Louisville District started the project with a kickoff meeting in December 2022. This effort will develop a Template Process that will assist the Commonwealth in helping non-residential facilities and structures to develop or update flood related EAPs to be more resilient as floods occur.

An EAP template will allow the Commonwealth to assist manufacturers in this industry, other industries, and non-residential facilities in developing their own EAP, further decreasing flood risk, and associated economic impacts due to flooding. One of the key topics at the 2022 Annual Bourbon Industry Conference was the need for distilleries to develop and/or improve EAPs for their facilities. In addition, the Commonwealth will host virtual workshops to interested facilities to help disseminate information on the process and can work with the Kentucky Association of Manufacturing and other statewide non-residential organizations to further disseminate the information.

**Project POC:**

John Bock

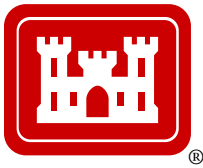
Deputy District Engineer

[john.r.bock@usace.army.mil](mailto:john.r.bock@usace.army.mil)

(502) 315-6104

**As of: 03/20/2023**

U.S. Army Corps of Engineers – Great Lakes and Ohio River Division  
600 Dr. Martin Luther King Jr. Place Louisville, KY 40202  
<http://www.lrd.usace.army.mil>



# Eastern KY Flooding, Planning Assistance To States (PAS)

U.S. ARMY CORPS OF ENGINEERS

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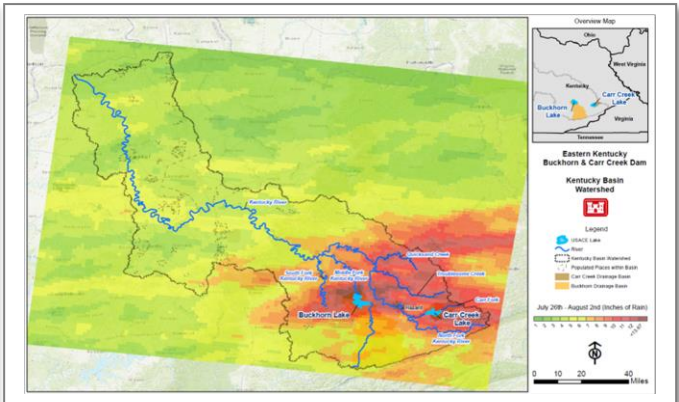
**AUTHORIZATION:** Planning Assistance to States (PAS) Section 22 of the Water Resources Development Act (WRDA) of 1974 (Public Law 93-251), as amended

**PROJECT SPONSOR:** Commonwealth of Kentucky Division of Water

**LOCATION:** Eastern, Kentucky



Image of flooding in Jackson, KY from July 2022.



Rainfall intensity map from July 2022 storms.

Congressional Member Interest	Key Stakeholder Interest
SEN Mitch McConnell (KY)	Affected counties and communities
SEN Rand Paul (KY)	Commonwealth of Kentucky
REP Hal Rogers (KY-5)	

**PROJECT DESCRIPTION AND BACKGROUND:** The project is located within Eastern Kentucky, and will encompass numerous counties including Breathitt, Clay, Estill, Harlan, Knott, Lee, Leslie, Letcher, Owsley, Perry, and Wolfe Counties.

The study will focus on the flooding that ravaged Eastern Kentucky in March of 2021 and July of 2023. The study will examine the hydrology and hydraulics associated with these flood events in the North Fork of the Kentucky River and its tributaries to develop possible flood mitigation strategies and improve flood warning systems & emergency evacuation procedures when applicable. The study will also look to capture, and model observed flood data in response to Eastern Kentucky flood events, and potential development of inundation mapping capability to support responses to future flood events.

As of: 03/20/2023

U.S. Army Corps of Engineers – Great Lakes and Ohio River Division  
600 Dr. Martin Luther King Jr. Place Louisville, KY 40202  
<http://www.lrd.usace.army.mil>

**BUDGET INFORMATION:**

Authorized Total Project Cost	\$1,000,000 (estimate)
Non-Federal Sponsor Cost	\$500,000 (estimate)
Federal Cost	\$500,000 (estimate)
Funding Received to Date	\$0

**CURRENT STATUS:** The Louisville District and the Commonwealth of Kentucky are negotiating the final scope of work and will look to begin work on the study in FY 23. The Commonwealth of Kentucky will be utilizing in-kind resources as their cost share. The Water Resources Development Act of 2022 contained authorities in Section 8103 and Section 8201 in response to the flooding in Eastern Kentucky, but no funding has been appropriated yet.

**Project POC:**

John Bock

Deputy District Engineer

[john.r.bock@usace.army.mil](mailto:john.r.bock@usace.army.mil)

(502) 315-6104

**As of: 03/20/2023**

U.S. Army Corps of Engineers – Great Lakes and Ohio River Division  
600 Dr. Martin Luther King Jr. Place Louisville, KY 40202  
<http://www.lrd.usace.army.mil>



## Southern and Eastern Kentucky Environmental Infrastructure Program



**Current Phase:** Varies per project.

### **Location and Description:**

Southern and Eastern Kentucky.

The Section 531 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 Nashville, Huntington, and Louisville Districts, as determined by the location of the projects. Prior to design and/or construction of a Section 531 project, the Corps and the non-Federal sponsor enter into a Project Partnership Agreement (PPA) outlining the project scope, cost, and responsibilities for implementation.

### **Authorization:**

Section 531 of the Water Resources Development Act of 1996 (Public Law 104-303), as amended.

### **Summarized Financial Data:**

Authorized Program Limit	\$40,000,000
FY 23 Allocation	\$1,000,000

### **Louisville District Section 531 Projects:**

- City of Hyden, Leslie County – The project entails design and construction of approximately three miles of sewer force main and 50 grinder pumps to fifty households in the City of Hyden. This project will mitigate environmental contamination by replacing the 25 failing septic systems and 14 straight pipe sewer systems within the project area. Total project cost is estimated at \$766,667. PPA executed on March 23, 2018. EA/FONSI signed in October 2020. Plans and Specs were approved by the District in July 2023 and Ready to Advertise is scheduled for March 2024.
- Roxana, Letcher County – The project consists of design and construction of approximately 50,000 linear feet of 10-inch through a 3-inch water

transmission main along with elevated storage tank and booster pump station to support the construction and operation of an 800-acre Federal correctional facility in Roxana, Kentucky. The extension would provide access to potable water to approximately 100 households. Total project cost is estimated at \$1,433,333. PPA executed on March 21, 2018. EA/FONSI signed in February 2019. Currently waiting on OSMRE for their Environmental reviews before this can go to bid.

- Mount Vernon, Rock Castle County – The project will consist of the design and construction of improvements to the public drinking water plant. Currently the public water is very unpalatable, and the improvements will directly increase the quality of life for residents. Total project cost is estimated at \$1,000,000. PPA executed on February 25, 2019. EA/FONSI signed in December 2020. Bids received in August of 2023 showed the estimate tripled in amount from original estimate. The sponsor will submit an application in Spring of 2024 for additional funding to help complete the project.
- City of Hazard, Perry County – The project will consist of the design and construction of improvements to the Buckhorn Dam Tailwater Channel Raw Water Intake Structure. Currently the public water is very unpalatable, and the improvement will directly increase the quality of life for residents. Total project cost is estimated at \$1,433,333. The PPA was signed in December 2022. The EA/FONSI has been through public review and currently in ATR review.
- Troublesome Creek Environmental Authority, Perry County – The project will consist of the design and construction of improvement of the Sewer Collection Project Phase III. Total project cost is estimated at \$623,333. The PPA is schedule to be executed in December 2023.
- Leeco Road, Leslie County sanitary sewer extension. The proposed project will include several miles of two- and four-inch force main, with a main pump station at the campground, and 40 individual grinders for 40 homes along the proposed line. The proposed project will eliminate failing septic tanks located within the drainage of the existing Hyden-Leslie County Water Treatment Plant source water of the Middle Fork of the Kentucky River. PPA execution is expected in the 2<sup>nd</sup> quarter of FY 24. The total project cost received is \$1,333,333.
- City of Jackson, Breathitt County – This project will increase water storage in the current system and increase the system pressure in this area of the city's service area. It will replace an aging in-ground pump station and tank both located at King's Ridge. This project will serve a new housing development site for flood victims affected by the July 2022 Flood in



eastern Kentucky. The Kickoff meeting was in August 2023. The Total project cost is \$1,333.333.

**Congressional Interest:**

SEN Mitch McConnell (KY)

SEN Rand Paul (KY)

REP Harold (Hal) Rogers (KY)

**Issues and Other Information:**

None.

## Paintsville Lake, Kentucky Master Plan Update



*Paintsville Lake*

### **Current Phase:**

Master Plan Update

### **Location and Description:**

Paintsville Lake is approximately five miles northwest of Paintsville, KY in Johnson and Morgan Counties in eastern Kentucky. Paintsville Lake was built on Paint Creek, approximately seven miles upstream from the confluence of the creek with the Levisa Fork.

The Huntington District, Corps of Engineers designed, constructed, and operates the project for the purposes of flood risk management, water supply, low-flow augmentation, fish and wildlife enhancement, and recreation. The dam was completed in 1983 and serves a drainage area of 92.5 square miles.

The project has eight recreation areas including Paintsville Lake State Park and a 27-acre 1850's working farm that includes a historic home listed on the National Registry of Historic Places. It averages one million visitors a year, contributing \$31.5 million to the local economy and supporting 340 jobs.

The Master Plan update will provide guidance for the preservation, conservation, restoration, maintenance, management, and development of project lands, waters and associated resources located at Paintsville Lake.

### **Summarized Financial Data:**

	<b><u>Master Plan</u></b>
Estimated Federal Cost	\$300,000
Estimated Non-Federal Cost	\$0
Total Estimated Project Cost	\$300,000
Allocation thru FY23 (Federal)	\$300,000
Balance to Complete after FY23	\$0
FY24 Capability (FED)	\$0
FY25 President's Budget	N/A

### **Authorization:**

Flood Control Act approved 22 June 1936 (Public Law No. 738, 74<sup>th</sup> Congress, 1<sup>st</sup> Session) and Flood Control Act approved 28 June 1938 (Public Law No. 761, 75<sup>th</sup> Congress, 3<sup>rd</sup> Session)

### **FY23 Activities:**

Louisville District, in coordination with the Huntington District, completed the draft Master Plan and integrated Environmental Assessment. All internal reviews were completed.

### **FY24 Planned Activities:**

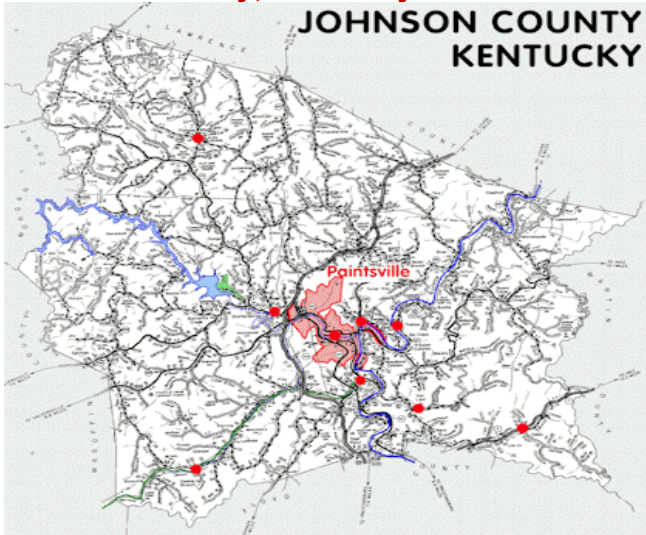
Final stakeholder and public reviews are scheduled prior to finalization of the Master Plan and integrated Environmental Assessment. The Master Plan is scheduled for completion in January 2024.

### **Issues and Other Information:**

The Louisville District is executing the Master Plan update on behalf of the Huntington District.

### **Congressional Interest:**

SEN Mitch McConnell (KY)  
SEN Rand Paul (KY)  
REP Harold Rogers (KY-5)

**Johnson County, Kentucky Section 202***Paintsville and Johnson County, Kentucky***Current Phase:**

Design and Construction

**Location and Description:**

Johnson County is located approximately three hours east of Louisville, Kentucky and is home to over 20,000 residents. The City of Paintsville is the County Seat, with a population of just over 3,000 residents, and is flood prone as a result of backwater from the Levisa Fork of the Big Sandy River as well as headwater flooding from Paint Creek. This Flood Risk Management (FRM) project will evaluate and implement structural solutions to protect the City of Paintsville as well as develop a non-structural solution. Implementation of the project will be done in three phases.

**Authorization:** Section 202 of the 1981 Energy and Water Development Appropriations Act (PL 96-367; 94 STAT. 1339), as amended.

**Summarized Financial Data:**

Estimated Federal Cost	\$118,000,000
Estimated Non-Federal Cost	\$0
Total Estimated Project Cost	\$118,000,000
Allocation thru FY23 (Federal)	\$22,482,399
Balance to Complete after FY23	\$95,517,601
FY24 Capability (FED)	\$10,000,000
FY25 President's Budget	N/A

**FY23 Activities:**

The A/E continued with design activities related to Phase I (FWEEP). The Phase II East-West contractor started construction activities related to the floodwall on the West site. The Non-Federal Sponsor continued acquiring Lands, Easements, Rights-of-Way, Relocations, and Disposal Areas (LERRDS) for Phase III. Phase III design progressed to 90% complete and an Agency Technical Review was initiated.

**FY24 Planned Activities:**

Phase I – Completion of design and LERRDS Certification.

[Flood Warning Emergency Evacuation Plan]

Phase II – Continue construction on the West site and initiate construction on the East site.

[Levees/floodwalls at the courthouse/jail, King's Addition neighborhood, and borrow area]

Phase III – Finalize design efforts and continue LERRDS acquisition.

[Levee/floodwall system located on the North and South sides of Paint Creek]

**Congressional Interest:**

SEN Mitch McConnell (KY)

SEN Rand Paul (KY)

REP Harold (Hal) Rogers (KY-5)

## Kentucky River, Beattyville, KY General Investigation



*Beattyville Ky Flood March 2021.*

### Current Phase:

Study Phase (Feasibility)

### Location and Description:

Beattyville, Kentucky (Lee County) sits at the confluence of the North and South Forks to the Kentucky River. Three tributaries to the Kentucky River flow through the City of Beattyville, most notably Silver and Crystal Creeks; however, flooding impacts in Beattyville primarily result from backwater flooding of the Kentucky River.

This study will follow a single-phase feasibility study process. The study will examine a full array of Flood Risk Management (FRM) alternatives, consistent with agency policy, to comprehensively consider plans that will maximize National Economic Development (NED) benefits, Regional Economic Development (RED) benefits, and Environmental Quality (EQ) benefits as well as Other Social Effects (OSE).

### Non-Federal Sponsor:

Lee County, Kentucky

### Authorization:

P.L. 76-396 and P.L. 117-103

### Summarized Financial Data:

Estimated Federal Cost	\$1,250,000
Estimated Non-Federal Cost	\$1,250,000
Total Estimated Project Cost	\$2,500,000
Allocation thru FY23 (Federal)	\$1,250,000
Balance to Complete after FY23	\$0
FY24 Capability (FED)	\$0
FY25 President's Budget	N/A

### Feasibility

### FY23 Activities:

The Feasibility Cost Share Agreement (FCSA) was executed in January 2023 initiating the study. A Planning charrette was held in Beattyville in April 2023. Representatives from the City and other agencies attended the meeting. The Alternatives Milestone Meeting (AMM) was held in September of 2023.

### FY24 Planned Activities:

The PDT will continue evaluating alternatives leading up to the Tentatively Selected Plan (TSP) milestone, which is currently scheduled for May 2024. Both structural and non-structural alternatives are being considered. After the TSP the PDT will work on the activities leading up to the Agency Decision Meeting (ADM) scheduled for the 1<sup>st</sup> Quarter of FY25.

### Issues and Other Information:

There may be the need to apply for a National Economic Development (NED) waiver. A decision will be made sometime during the alternative evaluation process prior to the TSP. If determined to be necessary, the District will move forward with the request.

### Congressional Interest:

SEN Mitch McConnell (KY)  
SEN Rand Paul (KY)  
REP Hal Rogers (KY-5)



## Owsley County, Kentucky Flood Plain Management Services (FPMS)



30-East Bridge, Booneville, Owsley County, Kentucky

### **Current Phase:**

Study

### **Location and Description:**

Owsley County is in the Eastern Coalfield region of Kentucky. The county population is approximately 4,051. Owsley County experiences periodic flooding, with the most recent damaging floods occurring in the Spring of 2021. Dozens of homes and businesses were damaged.

This Flood Plain Management Services (FPMS) study will develop and refine a hydraulic model using HEC-RAS to determine floodplain extents at various stream/river stages. It will also look at various alternatives to reduce flood risk along the South Fork of the Kentucky River, including an analysis of the 30-East bridge in Booneville, Kentucky, which local officials believe contributed to flooding in 2009 and 2021. All alternatives, data analysis, and details of plan formulation will be provided through a report to the Non-Federal Sponsor.

### **Authorization:**

Section 206 of the 1960 Flood Control Act (Public Law 86-645), as amended.

### **Sponsor:**

Town of Booneville, Kentucky

### **Summarized Financial Data:**

Estimated Federal Cost	\$130,000
Estimated Non-Federal Cost	\$0
Total Estimated Project Cost	\$130,000
Allocation thru FY23 (Federal)	\$130,000
Balance to Complete after FY23	\$0
FY24 Capability (FED)	\$0
FY25 President's Budget	N/A

### **Study**

### **FY23 Activities:**

Louisville District held a kickoff meeting in January 2023. Modeling work and development of the final report were initiated.

### **FY24 Planned Activities:**

Complete the final report and provide it to the Non-Federal Sponsor. Close-out the project.

### **Issues and Other Information:**

No issues at this time.

### **Congressional Interest:**

SEN Mitch McConnell (KY)  
SEN Rand Paul (KY)  
REP Harold (Hal) Rogers (KY-5)

## Breathitt County, Kentucky Flood Plain Management Services



*City of Jackson, Breathitt County, KY*

### **Current Phase:**

Study

### **Location and Description:**

The study focuses on the headwaters of the North Fork Kentucky River watershed in Breathitt County, Kentucky. This study will provide flood modeling and inundation maps to identify and describe flooding extents to inform precautionary and defensive options that Breathitt County could employ to help reduce harmful impacts of flooding.

### **Authorization:**

The Flood Plain Management Services (FPMS) Program is authorized by Section 206 of the 1960 Flood Control Act (Public Law 86-645), as amended.

### **Sponsor:**

Breathitt County, Kentucky.

### **FY23 Activities:**

The Project Delivery Team (PDT) completed the existing conditions hydrologic analysis and initiated hydraulic modeling and mapping of the floodplain extents.

### **Summarized Financial Data:**

	<b><u>Study</u></b>
Estimated Federal Cost	\$130,000
Estimated Non-Federal Cost	\$0
Total Estimated Project Cost	\$130,000
Allocation thru FY23 (Federal)	\$130,000
Balance to Complete after FY23	\$0
FY24 Capability (FED)	\$0
FY25 President's Budget	N/A

### **FY24 Planned Activities:**

The PDT will complete inundation maps and propose potential options to address flooding concerns in Breathitt County, KY. The final report is scheduled for completion in the 2<sup>nd</sup> Quarter of FY24.

### **Issues and Other Information:**

Coordination with the Non-Federal Sponsor was prolonged due to the July 2022 flood event.

### **Congressional Interest:**

SEN Mitch McConnell (KY)  
SEN Rand Paul (KY)  
REP Harold (Hal) Rogers (KY-5)



## Carr Creek Lake, Kentucky Master Plan Update



*Carr Creek Lake Dam – Sassafras, Kentucky*

### **Current Phase:**

Master Plan Update

### **Location and Description:**

Carr Creek Lake is located in the mountainous region of southeastern Kentucky, about 16 miles from Hazard, KY and 18 miles from Whitesburg, KY. The dam is located 8.8 miles above the mouth of Carr Fork, a tributary of the North Fork of the Kentucky River.

The Louisville District, Corps of Engineers designed, constructed, and operates the project. The project serves as one unit of the comprehensive plan for the Ohio River Basin to reduce the flood stages downstream from the dam. The lake provides water supply storage and operates to increase natural low-flow conditions downstream of the dam in the interest of water quality control. Also, the lake offers boating, fishing, swimming, and other recreational activities to the general public. During the Fall and Winter months, the lake is kept at a relatively low level, referred to as winter pool. Should heavy rains occur, surface water runoff is stored in the lake until the swollen streams and rivers below the dam have receded and can handle the release of the stored water without damage to lives and property.

The Master Plan update will provide guidance for the preservation, conservation, restoration, maintenance, management, and development of project lands, waters and associated resources located at Carr Creek Lake.

### **Summarized Financial Data:**

	<b><u>Master Plan</u></b>
Estimated Federal Cost	\$262,350
Estimated Non-Federal Cost	\$0
Total Estimated Project Cost	\$262,350
Allocation thru FY23 (Federal)	\$262,350
Balance to Complete after FY23	\$0
FY24 Capability (FED)	\$0
FY25 President's Budget	N/A

### **Authorization:**

Flood Control Act approved 28 June 1938 (Public Law No. 526, 79<sup>th</sup> Congress, 2nd Session)

### **FY23 Activities:**

The Louisville District completed the Master Plan and integrated Environmental Assessment update.

### **FY24 Planned Activities:**

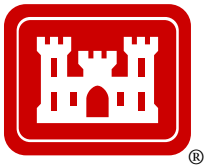
Print and distribute copies of the final updated Master Plan.

### **Issues and Other Information:**

None

### **Congressional Interest:**

SEN Mitch McConnell (KY)  
SEN Rand Paul (KY)  
REP Thomas Massie (KY-4)  
REP Harold (Hal) Rogers (KY-5)



# Buckhorn Lake, Kentucky – Winter Pool Elevation Raise

U.S. ARMY CORPS OF ENGINEERS

BUILDING STRONG®

**AUTHORIZATION:** Flood Control Act of 1938 (Public Law 761, 75<sup>th</sup> Congress)

**PROJECT SPONSOR:** Kentucky River Area Development District

**LOCATION:** Buckhorn, Kentucky



*Buckhorn Lake – Buckhorn, Kentucky*

Congressional Member Interest	Key Stakeholder Interest
SEN Mitch McConnell (KY)	Kentucky River Area Development District
SEN Rand Paul (KY)	
REP Harold (Hal) Rogers (KY-5)	

**PROJECT DESCRIPTION AND BACKGROUND:** Buckhorn Lake, Kentucky was authorized by the Flood Control Act of 1938 (Public Law 761, 75<sup>th</sup> Congress). The 1,230-acre lake is located in Leslie and Perry counties, in the mountainous region of southeastern Kentucky, about 15 miles northwest of Hazard, Kentucky and 18 miles from Whitesburg, Kentucky. The dam site is located 43.3 miles above the mouth of the Middle Fork of the Kentucky River and 0.5 miles upstream of Buckhorn, Kentucky. The lake operates as a unit of the general plan for the Ohio River Basin to impact reductions in flood stages at all points downstream from the lake. The area receiving the most protection is the valley of the Middle Fork of the Kentucky River below the dam. Additional project purposes are water quality and recreation.

**As of: 03/28/2023**

U.S. Army Corps of Engineers – Great Lakes and Ohio River Division  
600 Dr. Martin Luther King Jr. Place Louisville, KY 40202  
<http://www.lrd.usace.army.mil>

**BUDGET INFORMATION:**

Authorized Total Project Cost	TBD
Non-Federal Sponsor Cost	TBD
Federal Cost	TBD
Funding Received to Date	\$0

**CURRENT STATUS:** The Louisville District received a request from the Kentucky River Area Development District to study and assess raising Buckhorn Lake's winter pool elevation by 10 feet. This request was submitted in 2003. The Kentucky River Area Development District believes that increasing the winter pool elevation by 10 feet would greatly increase tourism and recreation use at the project site. This study would examine the impacts (structural, functional, and environmental) on all other project features at Buckhorn Lake if the winter pool elevation were increased by 10 feet.

FY22 Activities: Funds were not available.

**Project POC:**

John Bock

Deputy District Engineer

[john.r.bock@usace.army.mil](mailto:john.r.bock@usace.army.mil)

(502) 315-6104

**As of: 03/28/2023**

## Buckhorn Lake, Kentucky Master Plan Update



*Buckhorn Lake Dam*

### **Current Phase:**

Master Plan Update

### **Location and Description:**

Buckhorn Lake is situated in Leslie and Perry counties on the Middle Fork of the Kentucky River in the foothills of the Cumberland Plateau, offering the scenic beauty of the Appalachian Mountain Range. The dam is located near the small community of Buckhorn, Kentucky, about 100 miles southeast of Lexington, KY and 30 miles west of Hazard, KY.

The Louisville District, Corps of Engineers designed, constructed, and operates the project to reduce flood damages downstream from the dam. The lake also provides water supply and serves to augment low-flow conditions downstream in the interest of water quality control. In addition, the lake provides varied recreational opportunities.

The Master Plan update will provide guidance for the preservation, conservation, restoration, maintenance, management, and development of project lands, waters and associated resources located at Buckhorn Lake.

### **Summarized Financial Data:**

	<b><u>Master Plan</u></b>
Estimated Federal Cost	\$262,350
Estimated Non-Federal Cost	\$0
Total Estimated Project Cost	\$262,350
Allocation thru FY23 (Federal)	\$262,350
Balance to Complete after FY23	\$0
FY24 Capability (FED)	\$0
FY25 President's Budget	N/A

### **Authorization:**

Flood Control Act approved 28 June 1938 (Public Law No. 761, 75<sup>th</sup> Congress, 3<sup>rd</sup> Session)

### **FY23 Activities:**

The Louisville District completed the Master Plan and integrated Environmental Assessment update, including internal reviews and a 30-day public review.

### **FY24 Planned Activities:**

Adoption of the updated Master Plan is pending final Louisville District leadership review and signatures. Print and distribute copies of the final updated Master Plan.

### **Issues and Other Information:**

None

### **Congressional Interest:**

SEN Mitch McConnell (KY)  
SEN Rand Paul (KY)  
Rep. Harold (Hal) Rogers (KY-05)