US Army Corps of Engineers®

GREAT LAKES & OHIO RIVER DIVISION

Ohio River System Fact Sheets

APRIL 2020

TABLE OF CONTENTS

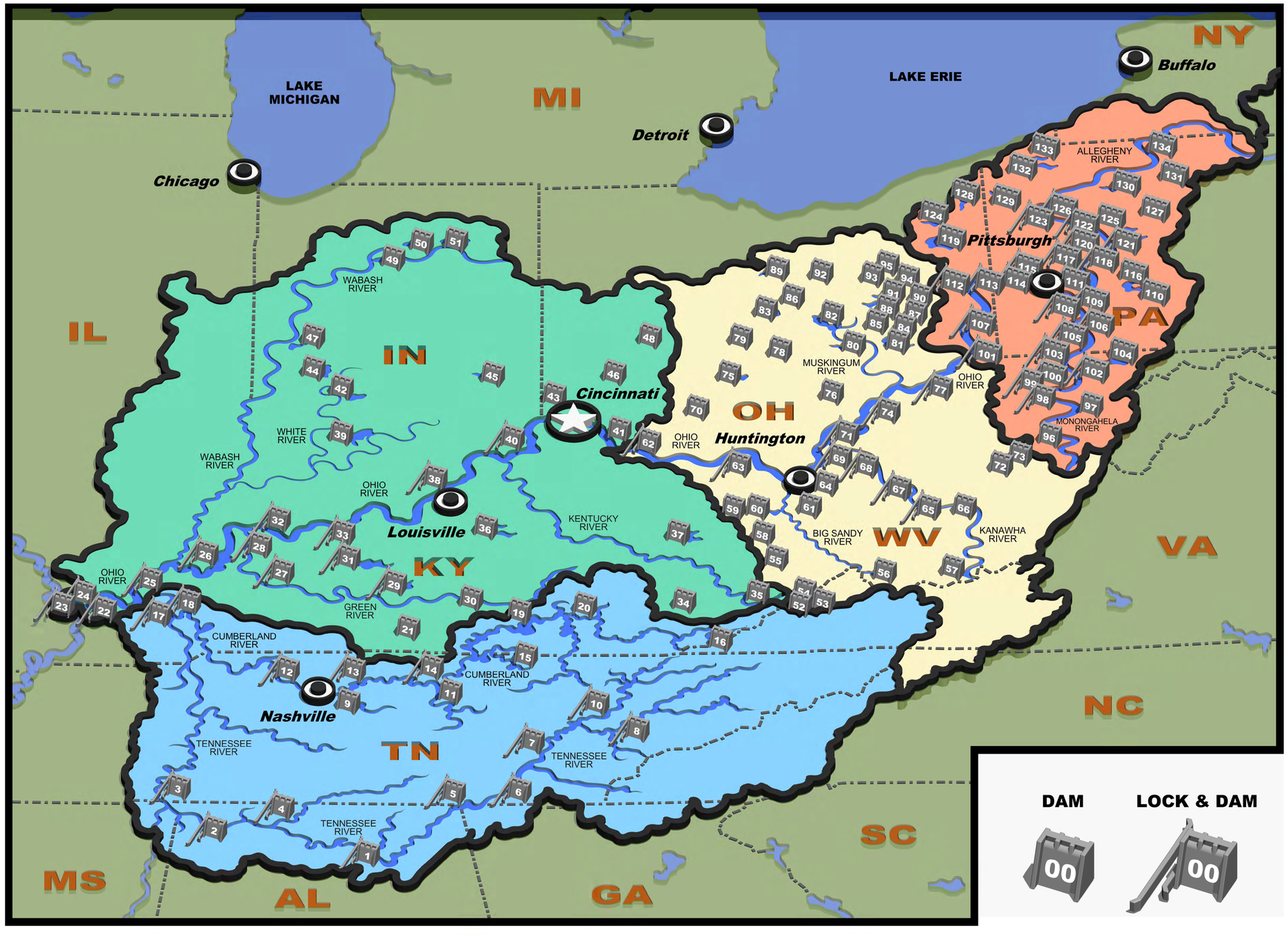
HUNTINGTON DISTRICT

LOUISVILLE DISTRICT

NASHVILLE DISTRICT

PITTSBURGH DISTRICT

Great Lakes and Ohio River Division
Ohio River Basin Projects



PROJECT NAME AND LOCATION

Nashville District

1 Guntersville L/D
2 Wilson L/D
3 Pickwick Landing L/D
4 Wheeler L/D
5 Nickajack L/D
6 Chickamauga L/D
7 Watts Bar L/D
8 Fort Loudoun L/D
9 J Percy Priest
10 Melton Hill L/D
11 Center Hill
12 Cheatham L/D
13 Old Hickory L/D
14 Cordell Hull L/D
15 Dale Hollow
16 Martin's Fork
17 Kentucky L/D
18 Barkley L/D
19 Wolf Creek - Lake C.
20 Laurel River Lake

Louisville District

21 Barren River
22 52 L/D
23 Olmstead L/D
24 53 L/D
25 Smithland L/D
26 John T Myers L/D
27 Green River L/D 2
28 Green River L/D 1
29 Nolin
30 Green River
31 Rough River
32 Newburgh L/D
33 Cannelton L/D
34 Buckhorn
35 Carr Creek
36 Taylorsville
37 Cave Run
38 McAlpine L/D
39 Patoka
40 Markland L/D
41 William H Harsha
42 Monroe
43 West Fork
44 Cagles Mill
45 Brookville
46 Caeser Creek
47 C M Harden
48 C J Brown
49 Mississinewa
50 Salamonie
51 J Edward Rousch

Huntington District

52 North Fork - Pound R.
53 John W Flannagan
54 Fishtrap
55 Dewey
56 R D Bailey
57 Bluestone
58 Paintsville
59 Grayson
60 Yatesville
61 East Lynn
62 Meldahl L/D
63 Greenup L/D
64 Beech Fork
65 London L/D
66 Summersville
67 Marmet L/D
68 Winfield L/D
69 R C Byrd L/D
70 Paint Creek
71 Racline L/D
72 Sutton
73 Burnsville
74 Belleville L/D
75 Deer Creek
76 Tom Jenkins
77 Willow Island L/D
78 Alum Creek
79 Delaware
80 Dillon
81 Senecaville
82 Mohawk
83 North Branch Kokosing
84 Piedmont
85 Wills Creek
86 Pleasant Hill
87 Tappan
88 Clendening
89 Charles Mill
90 Leesville
91 Dover
92 Mohicanville
93 Beach City
94 Atwood
95 Bolivar

Pittsburgh District

96 Stonewall Jackson
97 Tygart
98 Opekiska L/D
99 Hildebrand L/D
100 Morgantown L/D
101 Hannibal L/D
102 Point Marion L/D
103 Grays Landing L/D
104 Youghiogheny R. L.
105 Maxwell L/D
106 Monongahela R. L/D 4 (Charleroi)
107 Pike Island L/D
108 Monongahela R. L/D 3 (Elizabeth)
109 Braddock L/D
110 Loyalhanna Lake
111 Allegheny R. L/D 2
112 New Cumberland L/D
113 Montgomery L/D
114 Dashields L/D
115 Emsworth L/D
116 Conemaugh R. L.
117 C.W. Bill Young L/D
118 Allegheny R. L/D 4
119 Berlin Lake
120 Allegheny R. L/D 5
121 Allegheny R. L/D 6
122 Allegheny R. L/D 7
123 Allegheny R. L/D 8
124 M.J. Kirwan D. & R.
125 Crooked Creek Lake
126 Allegheny R. L/D 9
127 Mahoning Creek Lake
128 Mosquito Creek Lake
129 Shenango River Lake
130 Tionesta Lake
131 East Branch Clarion R. Lake
132 Woodcock Creek Lake
133 Union City Dam
134 Kinzua Dam & Allegheny Reservoir

HUNTINGTON DISTRICT

US Army Corps of Engineers

Alum Creek

Scioto River, OH

GREAT LAKES & OHIO RIVER DIVISION

Project Features

- Authorization: Section 203 of Flood Control Act of 1962.
- Primary project purposes are flood risk reduction, water supply for the Columbus metropolitan area, fish and wildlife and recreation.
- Dam was completed in August 1974 and serves a drainage area of 123 square miles.
- The lake is impounded by a rolled earthfill dam, 93 ft. tall and 10,200 ft. long with a gated concrete spillway.
- The spillway is gated concrete in the channel section of the dam with three tainter gates supported by 8 ft. piers.
- A 60-inch diameter low flow conduit discharges to the stilling basin and a 60-inch diameter water supply pipe extends to downstream pumping facilities.
- There are four day use recreation areas at the project as well as a Visitor Center.
- Alum Creek State Park comprises most of the recreational facilities on the project.

Regional Importance

- The project averages 3.2 million visitors annually, contributing $95 million to the local economy, supporting 1,004 jobs. This represents a sizable component of the economy in the local community.

- Supplies 35 million gallons of water a day to the Columbus metropolitan area with a National Economic Benefit of $38.5 million.

- The project hosts Alum Creek State Park which includes a 3,000 ft. beach, 297 site campground and two boat marinas.

- The project has prevented over $260 million in flood damages through FY 2019.

- Natural and recreational resources at this project provide social, economic and environmental benefits. Project personnel conducted 59 recreational programs in FY19 that help strengthen family ties and friendships; provide opportunities for children to develop personal skills, social values, and self esteem; and increase water safety.

Consequences of Not Maintaining the Project

- Failure to adequately fund the flood risk management mission at this facility would result in the project's inability to adequately execute the flood risk management mission as authorized by Congress. The consequences could range in severity depending upon the condition of the project, but would ultimately lead to a failure of the structure and a subsequent life safety concern for those in the affected downstream areas.

- Closure of recreational facilities will result in degradation of facilities, negative public reaction and potential Congressional inquiries.

U.S. Army Corps of Engineers Fiscal Year (FY) Project Apprropriations and President's Budget ($1,000)

	FY19 O&M Appropriation			FY20 O&M Appropriation			FY21 O&M President's Budget		
Business Line	Operation	Maintenance	Total	Operation	Maintenance	Total	Operation	Maintenance	Total
Flood Risk Management	$584	$1,215	$1,799	$1,057	$400	$1,457	$1,019	$442	$1,461
Recreation	$134	$114	$248	$209	$62	$271	$220		$220
Environmental Stewardship		$78	$78	$103	$77	$180	$30	$100	$130
Water Supply	$91	$20	$111	$97	$20	$117	$100	$20	$120
Total	$809	$1,427	**$2,236**	$1,466	$559	**$2,025**	$1,369	$562	**$1,931**

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

Business Line	FY21 Funding Requests for Maintenance ($1,000) Total	Packages $	Maintenenace Needs
Flood Risk Management	$5,552	$300	Clean Foundation Drains
		$545	Concrete Spalling Repair
		$55	Gage Removal
		$167	Maintenance for Flood Risk Management
		$3,190	Paint and Repair Alum Creek's Tainter Gates
		$580	Repair and paint three sluice gate, and tunnel liners (metal portion).
		$75	Repair Toe Drain
		$435	Replace Guardrail on spillway bridge to meet new safety standards
		$205	Replace Tainter Gate Cables
Water Supply	$443	$18	Maintenance for Recreation - Maintenance of Visitor Centers
		$64	Maintenance of Recreation Features
		$97	Volunteer Campsite
		$97	Replace deteriorating playground
		$167	Replace public restroom

Additional Information

- Fee Lands: 8,488 acres
- Flowage Easement Lands: 254 acres
- Project Boundary Line Marked: 44 miles

Congressional Interests

Senator Robert Portman, R-OH
Senator Sherrod Brown, D-OH
Congressman Troy Balderson, R-OH-12

US Army Corps of Engineers

Beech Fork Lake

Beech Fork Branch of Twelvepole Creek, WV

GREAT LAKES & OHIO RIVER DIVISION

Project Features

• Authorization: Section 203 of Flood Control Act of 1962.

• Primary project purposes are flood risk management, recreation, and fish and wildlife.

• The dam was completed in 1977 and serves a drainage area of 78 square miles.

• The lake is impounded by a rolled earth-fill dam, 86 ft. high and 1,080 ft. long.

• The spillway is an uncontrolled 313 ft. concrete lined raceway and stilling basin.

• The intake structure has two gated sluices discharging through a split circle conduit 720 ft. long into a stilling basin. The intake structure also has a dual selective withdrawal system controlled by a hydraulically operated gate.

Regional Importance

• The project averages 751 thousand visitors annually contributing $23 million to the local economy, supporting 244 jobs.

• The project has prevented over $65 million in flood damages through FY 2019.

• The project was selected hosts the Beech Fork Lake State Park, which includes 275 campsites, 6 cabins and a swimming pool.

• Natural and recreational resources at this project provide social, economic and environmental benefits. Project personnel conducted 23 recreational programs in FY19 that help strengthen family ties and friendships; provide opportunities for children to develop personal skills, social values, and self esteem; and increase water safety.

Consequences of Not Maintaining the Project

• Failure to adequately fund the flood damage reduction mission at this facility would result in the project's inability to adequately execute the flood damage reduction mission as authorized by congress. The consequences could range in severity depending upon the condition of the project, but would ultimately lead to a failure of the structure and a subsequent life safety concern for those in the affected downstream areas.

• Closure of recreational facilities will result in degradation of facilities, negative public reaction and potential Congressional inquiries.

U.S. Army Corps of Engineers Fiscal Year (FY) Project Apprropriations and President's Budget ($1,000)

	FY19 O&M Appropriation			FY20 O&M Appropriation			FY21 O&M President's Budget		
Business Line	Operation	Maintenance	Total	Operation	Maintenance	Total	Operation	Maintenance	Total
Flood Risk Management	$944	$446	$1,390	$847	$409	$1,256	$962	$315	$1,277
Recreation	$343	$50	$393	$249		$249	$175	$5	$180
Environmental Stewardship		$59	$59	$150	$76	$226	$167	$47	$214
Total	$1,287	$555	**$1,842**	$1,246	$485	**$1,731**	$1,304	$367	**$1,671**

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

	FY21 Funding Requests for Maintenance ($1,000)		
Business Line	Total	Packages $	Maintenenace Needs
Flood Risk Management	$502	$235	Automate and Install Piezometers Along Conduit
		$217	Maintenance for Flood Risk Management
		$50	Replace Inclinometers
Recreation	$270	$110	Beech Fork - Walkway repairs
		$83	Beech Fork Lake - Construct Picnic Shelter at Swim Beach
		$77	Beech Fork Lake - Resurface Below Dam

Additional Information

- Fee Lands: 12,608 acres
- Flowage Easement Lands: 149 acres
- Project Boundary Line Marked: 43 miles

Congressional Interests

Senator Joe Manchin III, D-WV
Senator Shelley Moore Capito, R-WV
Congressman Carol Miller, R-WV-03

US Army Corps of Engineers

Bluestone Lake

New River, WV

GREAT LAKES & OHIO RIVER DIVISION

Project Features

• Authorization: Section 5 of the Flood Control Act of 1936, amended by section 4 of the FCA of 1938.
• Primary project purposes are flood risk management, fish and wildlife enhancement, recreation, and low flow augmentation.
• The dam was completed in December 1947 and serves a drainage area of 4,603 square miles.
• The lake is impounded by a concrete gravity dam that is 165 ft. tall and 2,048 ft. long.
• The gated spillway is located in the channel section of the dam and is 790 ft. There are twenty-one 30 x 31 ft. lift gates supported by 8 ft. wide piers. There are sixteen 5 ft. 8 in. x 10 ft. sluice gates through the spillway section discharging into the stilling basin,which is formed by a 23 ft. high weir that is 364 feet downstream from the axis of the dam.
• Extensive Dam Safety Assurance Program work is ongoing.
• There are twelve recreation areas including Bluestone State Park.
•Project boundary extends into Virginia and North Carolina.

Consequences of Not Maintaining the Project

• Failure to adequately fund the flood damage reduction mission at this facility would result in the project's inability to adequately execute the flood damage reduction mission as authorized by congress. The consequences could range in severity depending upon the condition of the project, but would ultimately lead to a failure of the structure and a subsequent life safety concern for those in the affected downstream areas.

• Closure of recreational facilities will result in degradation of facilities, negative public reaction and potential Congressional inquiries.

Regional Importance

• The project averages 1.5 million visitors annually, contributing $45 million to the local economy, supporting 462 jobs.

• The project has prevented over $2.5 billion in flood damages through FY 2019.

• The project hosts Bluestone State Park which includes 26 cabins for rent, four separate camping areas, and multiple hiking trails.

• Bluestone Lake is West Virginia's third largest body of water.

• Natural and recreational resources at this project provide social, economic and environmental benefits. Project personnel conducted 6 recreational programs in FY19 that help strengthen family ties and friendships; provide opportunities for children to develop personal skills, social values, and self esteem; and increase water safety.

U.S. Army Corps of Engineers Fiscal Year (FY) Project Apprropriations and President's Budget ($1,000)

	FY19 O&M Appropriation			FY20 O&M Appropriation			FY21 O&M President's Budget		
Business Line	Operation	Maintenance	Total	Operation	Maintenance	Total	Operation	Maintenance	Total
Flood Risk Management	$883	$3,565	$4,448	$1,091	$608	$1,699	$1,124	$612	$1,736
Recreation	$261		$261	$256	$46	$302	$155		$155
Environmental Stewardship		$154	$154	$170	$115	$285	$190	$224	$414
Total	$1,144	$3,719	**$4,863**	$1,517	$769	**$2,286**	$1,469	$836	**$2,305**

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

	FY21 Funding Requests for Maintenance ($1,000)		
Business Line	Total	Packages $	Maintenenace Needs
Flood Risk Management	$205	$47	Gage Removal
		$158	Maintenance for Flood Risk Management
Recreation	$80	$80	Maintenance of Recreation Features

Additional Information

- Fee Lands: 21,931 acres
- Flowage Easement Lands: 546 acres
- Project Boundary Line Marked: 111 miles

Congressional Interests

Senator Joe Manchin III, D-WV
Senator Shelley Moore Capito, R-WV
Congressman Carol Miller, R-WV-03

US Army Corps of Engineers

Burnsville Lake

Little Kanawha River, WV

GREAT LAKES & OHIO RIVER DIVISION

Project Features

• Authorization: Section 4 of Flood Control Act of 1938.

• Primary project purposes are recreation, flood risk management, fish and wildlife, and water quality control.

• Dam was completed in January 1976 and serves a drainage area of 165 square miles.

• The lake is impounded by rock-fill embankment and impervious core dam, 89 ft. high and 1,400 ft. long.

• The concrete ogee spillway is controlled by three 42 x 35 ft. crest gates which flows into a 240 ft. long raceway and stilling basin.

• There are ten recreation areas at the project including day use areas and a Corps operated campground.

• Bulltown Historic Area and Weston/Gauley Turnpike are listed on the National Register of Historic Places.

Consequences of Not Maintaining the Project

• Failure to adequately fund the flood damage reduction mission at this facility would result in the project's inability to adequately execute the flood damage reduction mission as authorized by congress. The consequences could range in severity depending upon the condition of the project, but would ultimately lead to a failure of the structure and a subsequent life safety concern for those in the affected downstream areas.

• Closure of recreational facilities will result in degradation of facilities, negative public reaction and potential Congressional inquiries.

Regional Importance

• The project averages 866 thousand visitors annually, contributing $24.9 million to the local economy, supporting 265 jobs. This represents a sizable component of the economy in the local community.

• The project has prevented over $192 million in flood damages through FY 2019.

• Natural and recreational resources at this project provide social, economic and environmental benefits. Project personnel conducted 440 recreational programs in FY19 that help strengthen family ties and friendships; provide opportunities for children to develop personal skills, social values, and self esteem; and increase water safety.

• The project operates a historic area that is listed on the National Registry of Historic Places. The area includes structures dating back to mid to late 1800's, a Civil War Battlefield, a turn-of-the-century farmstead, and a section of the historic Weston and Gauley Bridge Turnpike.

• Bulltown Campground is one of the most heavily utilized campgrounds in the Huntington District.

U.S. Army Corps of Engineers Fiscal Year (FY) Project Apprropriations and President's Budget ($1,000)

	FY19 O&M Appropriation			FY20 O&M Appropriation			FY21 O&M President's Budget		
Business Line	Operation	Maintenance	Total	Operation	Maintenance	Total	Operation	Maintenance	Total
Flood Risk Management	$888	$1,088	$1,976	$932	$570	$1,502	$1,149	$456	$1,605
Recreation	$1,073		$1,073	$896	$52	$948	$880		$880
Environmental Stewardship	$81	$110	$191	$262	$53	$315	$237	$155	$392
Total	$2,042	$1,198	**$3,240**	$2,090	$675	**$2,765**	$2,266	$611	**$2,877**

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

Business Line	FY21 Funding Requests for Maintenance ($1,000) Total	Packages $	Maintenenace Needs
Flood Risk Management	$441	$75	Install Piezometers
		$116	Maintenance for Flood Risk Management
		$175	MCC Replacement
		$50	Sedimentation survey
		$25	Standby Generator Components
Recreation	$919	$65	Dredge launch ramps
		$150	Impact Materials for Campsites, Bulltown Campground
		$60	Impact Materials for Campsites, Riffle Run Campground
		$273	Pave campground
		$65	Replace Patrol Boat
		$150	Upgrade Bulltown Campground
		$156	Maintenance of Recreation Features

Additional Information

- Fee Lands: 13,219 acres
- Flowage Easement Lands: 98 acres
- Project Boundary Line Marked: 31 miles

Congressional Interests

Senator Joe Manchin III, D-WV
Senator Shelley Moore Capito, R-WV
Congressman Alex Mooney, R-WV-02

US Army Corps of Engineers

Deer Creek Lake

Scioto River, OH

GREAT LAKES & OHIO RIVER DIVISION

Project Features

• Authorization: Section 4 of the Flood Control Act of 1938

• Primary project purposes are flood risk reduction, fish and wildlife enhancement, recreation, and low water augmentation.
• Dam was completed in 1968 and serves a drainage area of 277 square miles.
• The lake is impounded by a rolled earth-fill dam, 93 ft. tall and 3,800ft. long with a gated concrete spillway.
• The spillway is controlled by three tainter gates in the channel section of the dam. The outlet works consist of five sluices at invert elevation 772 and one low flow sluice at elevation 786.
• Other structures include a rolled homogeneous earthen dike 3.8 miles southwest of the dam.
• There are three recreation areas at the project including one Corps of Engineers managed day use area.
• Deer Creek State Park comprises the majority of recreational facilities at the project.

Regional Importance

• The project averages 3.2 million visitors annually, contributing $92 million to the local economy, supporting 1,041 jobs. This represents a sizable component of the economy in the local community.

• The project hosts Deer Creek State Park which includes 232 electric campsites, 25 cabins, 2 camper cabins, group and equestrian camps, and a 110 room lodge with indoor and outdoor pools, a restaurant and meeting rooms

• The project has prevented over $50 million in flood damages in FY 2019 with a total of $170 million in flood damages prevented since construction of the project.

• Natural and recreational resources at this project provide social, economic and environmental benefits. Project personnel conducted 64 recreational programs in FY19 that help strengthen family ties and friendships; provide opportunities for children to develop personal skills, social values, and self esteem; and increase water safety.

Consequences of Not Maintaining the Project

• Failure to adequately fund the flood damage reduction mission at this facility would result in the project's inability to adequately execute the flood damage reduction mission as authorized by congress. The consequences could range in severity depending upon the condition of the project, but would ultimately lead to a failure of the structure and a subsequent life safety concern for those in the affected downstream areas.

• Closure of recreational facilities will result in degradation of facilities, negative public reaction and potential Congressional inquiries.

U.S. Army Corps of Engineers Fiscal Year (FY) Project Apprropriations and President's Budget ($1,000)

	FY19 O&M Appropriation			FY20 O&M Appropriation			FY21 O&M President's Budget		
Business Line	Operation	Maintenance	Total	Operation	Maintenance	Total	Operation	Maintenance	Total
Flood Risk Management	$876	$362	$1,238	$949	$1,985	$2,934	$1,025	$337	$1,362
Recreation	$266	$106	$372	$230	$38	$268	$190		$190
Environmental Stewardship		$54	$54	$155	$60	$215	$167	$140	$307
Total	$1,142	$522	**$1,664**	$1,334	$2,083	**$3,417**	$1,382	$477	**$1,859**

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

Business Line	FY21 Funding Requests for Maintenance ($1,000) Total	Packages $	Maintenenace Needs
Flood Risk Management	$7,277	$400	Concrete Spalling Repair
		$125	Install Piezometers
		$60	Install Piezometers - New Holland Dike
		$20	Install Surface Displacement Monuments
		$77	Maintenance for Flood Risk Management
		$4,440	Repair and Painting Of Tainter Gates
		$1,065	Replace Service Bridge Deck
		$115	Replace storage building
		$175	Replacement Bulkhead Hatch Cover
		$800	Replacement of Emergency Generator
Recreation	$54	$54	Maintenance of Recreation Features

Additional Information

- Fee Lands: 7,223 acres
- Flowage Easement Lands: 352 acres
- Project Boundary Line Marked: 29 miles

Congressional Interests

Senator Sherrod Brown, D-OH
Senator Robert Portman, R-OH
Congressman Steve Stivers, R-OH-15

US Army Corps of Engineers

Delaware Lake

Olentangy River, OH

GREAT LAKES & OHIO RIVER DIVISION

Project Features

• Authorization: Section 4 of Flood Control Act of 1938.

• Primary project purposes are flood risk reduction, fish and wildlife, low flow augmentation and recreation.
• Dam was completed in July 1948 and serves a drainage area of 386 square miles.
• The lake is impounded by a rolled earth-fill dam, 92 ft. tall and 18,600 ft. long.
• The spillway is gated concrete in the channel section of the dam with six tainter gates supported by 8 ft. piers and operated by individual electric hoists.
• Outlet works consist of five gated sluices through the spillway section, discharging into a stilling basin. Each sluice is provided with one slide gate hydraulically operated from a gallery within the dam.
• Other structures include Waldo Levee which has two pump stations.
• There are four day use recreation areas at the project.
• Delaware State Park comprises most of the recreational facilities on the project.

Consequences of Not Maintaining the Project

• Failure to adequately fund the flood damage reduction mission at this facility would result in the project's inability to adequately execute the flood damage reduction mission as authorized by congress. The consequences could range in severity depending upon the condition of the project, but would ultimately lead to a failure of the structure and a subsequent life safety concern for those in the affected downstream areas.

• Closure of recreational facilities will result in degradation of facilities, negative public reaction and potential Congressional inquiries.

Regional Importance

• The project averages 873 thousand visitors annually, contributing $25.6 million to the local economy, supporting 278 jobs. This represents a sizable component of the economy in the local community.

• The project hosts Delaware State Park which has 211 campsites, 3 yurts, a swimming beach and hiking trails.

• Delaware Lake serves as the Gateway to the Olentangy River which is Ohio's second designated Scenic River.

• Waldo Levee protects the village of Waldo, OH which is located 9 miles upstream from the dam.

• The project prevented $79 million in flood damages in FY 2019 with an accumulative total of $293 million in flood damages prevented since construction of the project.

• Natural and recreational resources at this project provide social, economic and environmental benefits. Project personnel conducted 36 recreational programs in FY19 that help strengthen family ties and friendships; provide opportunities for children to develop personal skills, social values, and self esteem; and increase water safety.

U.S. Army Corps of Engineers Fiscal Year (FY) Project Apprropriations and President's Budget ($1,000)

	FY19 O&M Appropriation			FY20 O&M Appropriation			FY21 O&M President's Budget		
Business Line	Operation	Maintenance	Total	Operation	Maintenance	Total	Operation	Maintenance	Total
Flood Risk Management	$798	$1,324	$2,122	$995	$520	$1,515	$980	$1,672	$2,652
Recreation	$167	$50	$217	$146	$56	$202	$160		$160
Environmental Stewardship		$54	$54		$60	$60	$430	$83	$513
Total	$965	$1,428	**$2,393**	$1,141	$636	**$1,777**	$1,570	$1,755	**$3,325**

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

	FY21 Funding Requests for Maintenance ($1,000)		
Business Line	Total	Packages $	Maintenenace Needs
Flood Risk Management	$5,921	$545	Concrete Spalling Repair
		$77	Encroaching Vegetation Removal
		$42	Install septic system & contruct restroom at shop
		$117	Machine Guarding
		$83	Maintenance for Flood Risk Management
		$242	Paint and repair Misc Metals on Bridge
		$125	Replace Patrol Boat
		$4,000	Restore Bridge to Designed Capacity
		$690	Tainter Gates Repair, Cleaning, and Painting
Recreation		$85	Upgrade recreation area restroom
		$55	Maintenance of Recreation Features

Additional Information

- Fee Lands: 7,703 acres
- Flowage Easement Lands: 2,428 acres
- Project Boundary Line Marked: 30 miles

Congressional Interests

Senator Sherrod Brown D-OH
Senator Robert Portman R-OH
Congressman Troy Balderson R-OH-12

US Army Corps of Engineers

Dewey Lake

Big Sandy River, KY

GREAT LAKES & OHIO RIVER DIVISION

Project Features

• Authorization: Section 4 of Flood Control Act of 1938.

• Primary project purposes are flood risk reduction, fish and wildlife enhancement and recreation.
• Dam was completed in July 1949 and serves a drainage area of 206 square miles.
• The lake is impounded by a rolled earthfill dam, 118 ft. tall and 913 ft. long with an uncontrolled saddled spillway located at the left abutment of the dam.
• Outlet works include an intake structure with three gated sluices that discharge through a horseshoe tunnel in the left abutment into a stilling basin.
• Minimum pool is maintained by a wood bulkhead gravity weir which is located in front of the middle gate.
• Other structures include Brandykeg Dike, four miles south of the dam.
• The project has 11 recreation areas including Jenny Wiley State Park.

Regional Importance

• The project averages 1.1 million visitors annually, contributing $30.5 million to the local economy, supporting 333 jobs. This represents a sizable component of the economy in the local community.

• The project hosts Jenny Wiley State Park which offers campsites, cabins, and a 49-room lodge with outdoor pool, meeting room and restaurant.

• The project prevented over $25 million in flood damages in FY 2019 with an accumulative total of $166 million in flood damages prevented since the construction of the project.

• Natural and recreational resources at this project provide social, economic and environmental benefits. Project personnel conducted 13 recreational programs in FY19 that help strengthen family ties and friendships; provide opportunities for children to develop personal skills, social values, and self esteem; and increase water safety.

Consequences of Not Maintaining the Project

• Failure to adequately fund the flood damage reduction mission at this facility would result in the project's inability to adequately execute the flood damage reduction mission as authorized by congress. The consequences could range in severity depending upon the condition of the project, but would ultimately lead to a failure of the structure and a subsequent life safety concern for those in the affected downstream areas.

• Closure of recreational facilities will result in degradation of facilities, negative public reaction and potential Congressional inquiries.

U.S. Army Corps of Engineers Fiscal Year (FY) Project Apprropriations and President's Budget ($1,000)

	FY19 O&M Appropriation			FY20 O&M Appropriation			FY21 O&M President's Budget		
Business Line	Operation	Maintenance	Total	Operation	Maintenance	Total	Operation	Maintenance	Total
Flood Risk Management	$988	$2,458	$3,446	$891	$640	$1,531	$1,100	$740	$1,840
Recreation	$280		$280	$284	$30	$314	$200		$200
Environmental Stewardship		$54	$54	$71	$70	$141	$10	$65	$75
Total	$1,268	$2,512	**$3,780**	$1,246	$740	**$1,986**	$1,310	$805	**$2,115**

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

	FY21 Funding Requests for Maintenance ($1,000)		
Business Line	Total	Packages $	Maintenenace Needs
Flood Risk Management	$1,112	$20	Install Spillway Drains
		$1,092	Sandblast and paint steel truss and repair/replace curb and railing on intake structure bridge

Additional Information

- Fee Lands: 12,437 acres
- Flowage Easement Lands: 1,165 acres
- Project Boundary Line Marked: 47 miles

Congressional Interests

Senator Mitch McConnell, R-KY
Senator Rand Paul, R-KY
Congressman Hal Rogers, R-KY-05

US Army Corps of Engineers

Dillon Lake

Licking River, OH

GREAT LAKES & OHIO RIVER DIVISION

Project Features

• Authorization: Section 4 of the Flood Control Act of 1938.

• Primary project purposes are flood risk reduction, low flow augmentation and recreation.
• Dam was completed in July 1959 and serves a drainage area of 748 square miles.
• The lake is impounded by a rolled earthfill impervious core dam, 118 ft. tall and 1,400 ft. long with an uncontrolled, partial concrete lined spillway near the left abutment of the dam.
• The outlet works include an intake structure with thee sluice gates that discharge through a conduit into a stilling basin. Two conduits located around the gates of the outer sluices are used to maintain minimum pool.
• Other structures include two earthfill dikes.
• There are four day use recreation areas at the project.
• Dillon Lake State Park comprises most of the recreational facilities on the project.

Consequences of Not Maintaining the Project

• Failure to adequately fund the flood damage reduction mission at this facility would result in the project's inability to adequately execute the flood damage reduction mission as authorized by congress. The consequences could range in severity depending upon the condition of the project, but would ultimately lead to a failure of the structure and a subsequent life safety concern for those in the affected downstream areas.

• Closure of recreational facilities will result in degradation of facilities, negative public reaction and potential Congressional inquiries.

Regional Importance

• The project averages 1.3 million visitors annually, contributing $37 million to the local economy, supporting 416 jobs. This represents a sizable component of the economy in the local community.

• The project hosts Dillon Lake State Park which includes a 195 site campground, 29 cabins, picnic shelters, hiking, biking and equestrian trails.

• The project has prevented over $41 million in flood damages in FY 2019 with a accumulative total of $1 billion in damages prevented since construction of the project.

• Natural and recreational resources at this project provide social, economic and environmental benefits. Project personnel conducted 45 recreational programs in FY 2019 that help strengthen family ties and friendships; provide opportunities for children to develop personal skills, social values, and self esteem; and increase water safety.

U.S. Army Corps of Engineers Fiscal Year (FY) Project Apprropriations and President's Budget ($1,000)

	FY19 O&M Appropriation			FY20 O&M Appropriation			FY21 O&M President's Budget		
Business Line	Operation	Maintenance	Total	Operation	Maintenance	Total	Operation	Maintenance	Total
Flood Risk Management	$887	$416	$1,303	$879	$903	$1,782	$1,008	$1,996	$3,004
Recreation	$97	$41	$138	$164	$18	$182	$160		$160
Environmental Stewardship		$54	$54	$173	$67	$240	$202	$73	$275
Total	$984	$511	**$1,495**	$1,216	$988	**$2,204**	$1,370	$2,069	**$3,439**

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

	FY21 Funding Requests for Maintenance ($1,000)		
Business Line	Total	Packages $	Maintenenace Needs
Flood Risk Management	$2,280	$87	Compose and publish an Operations and Maintenance Manual for Pleasant Valley Dike
		$87	Compose and publish an Operatrions and Maintenance Manual for Rail Road Closure
		$117	Dillon, Gabion Mesh On Outflow
		$47	Gage Removal
		$132	Light-emitting diode Parking lot / building lighting
		$83	Maintenance for Flood Risk Management
		$582	Repair and paint three sluice gate, and tunnel liners (metal portion).
		$360	Repair deteriorated concrete dam embankment railroad closure sill
		$500	Replacement of Corrugated Metal Pipe
		$85	Sedimentation survey
		$100	Study Low Areas in Reservoir Rim
		$100	Verify Subsurface Conditions - Pleasant Valley Dike
Recreation	$112	$55	Maintenance of Recreation Features
		$57	Install Volunteer Campsite

Additional Information

- Fee Lands: 7,797 acres
- Flowage Easement Lands: 5,282 acres
- Project Boundary Line Marked: 60 miles

Congressional Interests

Senator Sherrod Brown, D-OH
Senator Robert Portman, R-OH
Congressman Troy Balderson, R-OH-12
Congressman Bill Johnson, R-OH-06

US Army Corps of Engineers

East Lynn Lake

East Fork of Twelvepole Creek

GREAT LAKES & OHIO RIVER DIVISION

Project Features

• Authorization: Section 4 of the Flood Control Act of 1938.

• Primary project purposes are flood risk reduction, water quality, fish and wildlife enhancement and recreation.
• Dam was completed in April 1971 and serves a drainage area of 133 square miles.
• The lake is impounded by a rolled earthfill dam, 113 ft. tall and 652 ft. long with an uncontrolled saddle spillway.
• Outlet works include an intake structure with a concrete lined circular tunnel, outlet monolith, and transition with three hydraulically operated slide gates. The low flow system has two inlets and are discharged by a hydraulically operated gate valve.
• There are eight recreation areas at the project, including a Corps of Engineers managed campground.
• Hatfield McCoy Trail proposal under consideration.
• BLM awarded a lease to mine coal within project boundaries

Consequences of Not Maintaining the Project

• Failure to adequately fund the flood damage reduction mission at this facility would result in the project's inability to adequately execute the flood damage reduction mission as authorized by congress. The consequences could range in severity depending upon the condition of the project, but would ultimately lead to a failure of the structure and a subsequent life safety concern for those in the affected downstream areas.

• Closure of recreational facilities will result in degradation of facilities, negative public reaction and potential Congressional inquiries.

Regional Importance

• The project averages 429 thousand visitors annually, contributing $11 million to the local economy, supporting 122 jobs. This represents a sizable component of the economy in the local community.

• East Fork Campground, managed by the Corps, includes 165 campsites, a swimming beach and hiking trails.

• The project prevented over $35 million in flood damages in FY 2019 with an accumulative total of $150 million in damages prevented since construction of the project.

• Natural and recreational resources at this project provide social, economic and environmental benefits. Project personnel conducted recreational programs in FY19 that help strengthen family ties and friendships; provide opportunities for children to develop personal skills, social values, and self esteem; and increase water safety.

U.S. Army Corps of Engineers Fiscal Year (FY) Project Apprropriations and President's Budget ($1,000)

	FY19 O&M Appropriation			FY20 O&M Appropriation			FY21 O&M President's Budget		
Business Line	Operation	Maintenance	Total	Operation	Maintenance	Total	Operation	Maintenance	Total
Flood Risk Management	$1,026	$566	$1,592	$1,058	$835	$1,893	$1,389	$379	$1,768
Recreation	$507		$507	$480		$480	$712		$712
Environmental Stewardship		$84	$84	$221	$50	$271	$160	$20	$180
Total	$1,533	$650	**$2,183**	$1,759	$885	**$2,644**	$2,261	$399	**$2,660**

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

	FY21 Funding Requests for Maintenance ($1,000)		
Business Line	Total	Packages $	Maintenenace Needs
Flood Risk Management	$316	$55	Gage Removal
		$261	Maintenance for Flood Risk Management
Recreation	$1,589	$341	Upgrade Electrical Pedestals in Areas 1, 2, and 4 of East Fork Campground to 50 Amp Service
		$1,028	Pave East Fork Recreation Area
		$220	East Lynn Lake - Replace East Fork Launch Ramp restroom with a Pre-Fab
Environmental Stewardship	$30	$30	Wildlife Habitat Management, Maintenance for Environmental Stewardship

Additional Information

- Fee Lands: 24,821 acres
- Flowage Easement Lands: 26 acres
- Project Boundary Line Marked: 57 miles

Congressional Interests

Senator Joe Manchin III, D-WV
Senator Shelley Moore Capito, R-WV
Congressman Carol Miller, R-WV-03

US Army Corps of Engineers

Fishtrap Lake

Big Sandy River, KY

GREAT LAKES & OHIO RIVER DIVISION

Project Features

• Authorization: Section 4 of Flood Control Act of 1938.

• Primary project purposes are flood risk reduction, fish and wildlife enhancement, water quality and recreation.

• Dam was completed in February 1969 and serves a drainage area of 392 square miles.

• The lake is impounded by a rolled rock impervious core dam , 195 ft. tall and 1,100 ft. long with a spillway controlled by four gates in the left abutment of the dam.

• Outlet works include an intake structure with three conduits controlled by slide gates and discharges into a horseshoe tunnel. Outlet works are provided with three low flow intakes, all of which discharge into a common well which discharges into a low flow conduit. Low flow discharge is controlled by a hydraulically operated slide gate.

• The project has 9 recreation areas, 5 of which are Corps managed.

Regional Importance

• The project averages 545 thousand visitors annually, contributing $15.6 million to the local economy, supporting 163 jobs. This represents a sizable component of the economy in the local community.

• The project hosts Fishtrap Lake State Park which offers several picnic areas, a playground and a marina.

• The project prevented a accumulative total of over $926 million in flood damages since the construction of the project.

• Natural and recreational resources at this project provide social, economic and environmental benefits. Project personnel conducted 15 recreational programs in FY19 that help strengthen family ties and friendships; provide opportunities for children to develop personal skills, social values, and self esteem; and increase water safety.

Consequences of Not Maintaining the Project

• Failure to adequately fund the flood damage reduction mission at this facility would result in the project's inability to adequately execute the flood damage reduction mission as authorized by congress. The consequences could range in severity depending upon the condition of the project, but would ultimately lead to a failure of the structure and a subsequent life safety concern for those in the affected downstream areas.

• Closure of recreational facilities will result in degradation of facilities, negative public reaction and potential Congressional inquiries.

U.S. Army Corps of Engineers Fiscal Year (FY) Project Apprropriations and President's Budget ($1,000)

	FY19 O&M Appropriation			FY20 O&M Appropriation			FY21 O&M President's Budget		
Business Line	Operation	Maintenance	Total	Operation	Maintenance	Total	Operation	Maintenance	Total
Flood Risk Management	$1,026	$600	$1,626	$1,059	$1,306	$2,365	$1,209	$676	$1,885
Recreation	$178		$178	$291		$291	$400		$400
Environmental Stewardship		$54	$54		$651	$651	$18	$45	$63
Total	$1,204	$654	**$1,858**	$1,350	$1,957	**$3,307**	$1,627	$721	**$2,348**

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

	FY21 Funding Requests for Maintenance ($1,000)		
Business Line	Total	Packages $	Maintenenace Needs
Flood Risk Management	$1,077	$94	Fishtrap Lake - Design and build new mattress bulkhead
		$603	Fishtrap Lake - Repair spalling concrete on tainter gate abutments
		$110	Fishtrap Lake - Replace Windows in Control Structure
		$60	Install Piezometers
		$85	Sedimentation survey
		$125	Remove Drift and Debris - Fishtrap
Recreation	$1,335	$621	Fishtrap Lake - Resurface/Pave Asphalt at Project Recreation Areas
		$549	Fishtrap Lake - Relocate the Marina to a tributary location
		$165	Fishtrap Lake - Install water and electric to remaining camp sites at Grapevine Campground

Additional Information

- Fee Lands: 15,786 acres
- Flowage Easement Lands: 203 acres
- Project Boundary Line Marked: 43 miles

Congressional Interests

Senator Mitch McConnell, R-KY
Senator Rand Paul, R-KY
Congressman Hal Rogers, R-KY-05

US Army Corps of Engineers

Grayson Lake

Little Sandy River, KY

GREAT LAKES & OHIO RIVER DIVISION

Project Features

• Authorization: Section 203 of Flood Act of 1960.

• Primary project purposes are flood risk management, water quality, water supply and recreation.

• Dam was completed in January 1968 and serves a drainage area of 196 square miles.

• The lake is impounded by an earth and random rock-fill dam, 120 ft. tall and 1,460 ft. long with an uncontrolled, broad-crested saddle spillway located at the left abutment of the dam.

• Outlet works include an intake structure with three sluices controlled by hydraulically operated slide gates and discharges through a circular tunnel through the left abutment of the dam. The low flow system has two inlets with discharge controlled by a hydraulically operated gate valve.

• The project has 6 recreation areas including Grayson Lake State Park.

Consequences of Not Maintaining the Project

• Failure to adequately fund the flood damage reduction mission at this facility would result in the project's inability to adequately execute the flood damage reduction mission as authorized by congress. The consequences could range in severity depending upon the condition of the project, but would ultimately lead to a failure of the structure and a subsequent life safety concern for those in the affected downstream areas.

• Closure of recreational facilities will result in degradation of facilities, negative public reaction and potential Congressional inquiries.

Regional Importance

• The project averages 615 thousand visitors contributing $17.8 million to the local economy, supporting 197 jobs. This represents a sizable component of the economy in the local community.

• The project hosts Grayson Lake State Park which offers 71 campsites, many miles of hiking trails, and a highly rated public golf course.

• Supplies 7.5 million gallons of municipal water a day to 10,000 citizens in Carter and Elliott Counties, KY.

• The project prevented over $4.6 million in flood damages in FY 2019 with an accumulative total of $170 million in flood damages prevented since the construction of the project.

• Natural and recreational resources at this project provide social, economic and environmental benefits. Project personnel conducted 25 recreational programs in FY19 that help strengthen family ties and friendships; provide opportunities for children to develop personal skills, social values, and self esteem; and increase water safety.

U.S. Army Corps of Engineers Fiscal Year (FY) Project Apprropriations and President's Budget ($1,000)

	FY19 O&M Appropriation			FY20 O&M Appropriation			FY21 O&M President's Budget		
Business Line	Operation	Maintenance	Total	Operation	Maintenance	Total	Operation	Maintenance	Total
Flood Risk Management	$783	$294	$1,077	$821	$572	$1,393	$1,017	$366	$1,383
Recreation	$48		$48	$214		$214	$150		$150
Environmental Stewardship		$54	$54	$37		$37	$24	$300	$324
Water Supply	$16	$16	$32	$275	$16	$291	$25	$16	$41
Total	$847	$364	**$1,211**	$1,347	$588	**$1,935**	$1,216	$682	**$1,898**

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

	FY21 Funding Requests for Maintenance ($1,000)		
Business Line	Total	Packages $	Maintenenace Needs
Flood Risk Management	$425	$260	Maintenance for Flood Risk Management
		$165	Replace 1987 5-ton dumptruck-Grayson Lake
Recreation	$872	$66	Courtesy boat dock - Grayson Lake
		$806	Grayson Lake - Resurface roadways in recreation areas and pave gravel parking areas

Additional Information

- Fee Lands: 16,934 acres
- Flowage Easement Lands: 151 acres
- Project Boundary Line Marked: 147 miles

Congressional Interests

Senator Mitch McConnell, R-KY
Senator Rand Paul, R-KY
Congressman Hal Rogers, R-KY-05

US Army Corps of Engineers

John W. Flannagan Dam and Reservoir

Pound River, VA

GREAT LAKES & OHIO RIVER DIVISION

Project Features

• Authorization: Section 4 of Flood Control Act of 1938.

• Primary project purposes are flood risk reduction, water supply, low-flow augmentation, fish and wildlife enhancement, recreation and water quality.

• Dam was completed in December 1963 and serves a drainage area of 221 square miles.

• The lake is impounded by a rolled earthfill dam, 250 ft. tall and 916 ft. long with a controlled spillway with six tainter gates located 0.3 miles south of the dam.

• Outlet works include an intake structure with two water passages controlled by slide gates discharging into a horseshoe tunnel through the left abutment of the dam. The low flow system has three bypass conduits with valve control inlets.

• The project has 15 recreation areas including Corps managed day use areas and a campground.

Consequences of Not Maintaining the Project

• Failure to adequately fund the flood damage reduction mission at this facility would result in the project's inability to adequately execute the flood damage reduction mission as authorized by congress. The consequences could range in severity depending upon the condition of the project, but would ultimately lead to a failure of the structure and a subsequent life safety concern for those in the affected downstream areas.

• Closure of recreational facilities will result in degradation of facilities, negative public reaction and potential Congressional inquiries.

Regional Importance

• The project averages 376 thousand visitors contributing $11 million to the local economy, supporting 117 jobs. This represents a sizable component of the economy in the local community.

• Supplies 10 million gallons of municipal water a day to 30,000 citizens in Dickenson, Wise, Russell, Tazwell and Buchanan counties, VA.

• The project prevented over $524 million in flood damages since the construction of the project.

• Natural and recreational resources at this project provide social, economic and environmental benefits. Project personnel conducted 23 recreational programs in FY19 that help strengthen family ties and friendships; provide opportunities for children to develop personal skills, social values, and self esteem; and increase water safety.

U.S. Army Corps of Engineers Fiscal Year (FY) Project Apprropriations and President's Budget ($1,000)

	FY19 O&M Appropriation			FY20 O&M Appropriation			FY21 O&M President's Budget		
Business Line	Operation	Maintenance	Total	Operation	Maintenance	Total	Operation	Maintenance	Total
Flood Risk Management	$869	$1,741	$2,610	$1,137	$663	$1,800	$1,021	$594	$1,615
Recreation	$171		$171	$390		$390	$665		$665
Environmental Stewardship		$74	$74	$150	$55	$205	$160	$45	$205
Water Supply	$17	$16	$33	$22	$16	$38	$22	$16	$38
Total	$1,057	$1,831	**$2,888**	$1,699	$734	**$2,433**	$1,868	$655	**$2,523**

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

	FY21 Funding Requests for Maintenance ($1,000)		
Business Line	Total	Packages $	Maintenenace Needs
Flood Risk Management	$4,090	$60	ADAS Piezometers
		$15	Install Seismograph
		$30	Install Weir
		$3,750	John W Flannagan Dam & Reservoir - Repair Slip behind Project Office
		$50	Repair and Install New Electrical Conduit at Spillway Bridge
		$85	Sedimentation survey
		$100	Water Quality Gate #3 Cavitation Repair
Environmental Stewardship	$25	$25	Forest Management, Maintenance for Environmental Stewardship

Additional Information

- Fee Lands: 7,509 acres
- Flowage Easement Lands: 92 acres
- Project Boundary Line Marked: 64 miles

Congressional Interests

Senator Tim Kaine, D-VA
Senator Mark Warner, D-VA
Congressman Morgan Griffith, R-VA-09

US Army Corps of Engineers

North Branch of Kokosing River Lake

Kokosing River, OH

GREAT LAKES & OHIO RIVER DIVISION

Project Features

• Authorization: Section 203 of Flood Control Act of 1962.

• Primary project purposes are flood risk reduction, fish and wildlife and recreation.
• Dam was completed in May 1972 and serves a drainage area of 44.5 square miles.
• The lake is impounded by a earth-fill dam, 70.5 ft. tall and 1,400 ft. long with an uncontrolled spillway.
• Outlet works consist of 560 ft. long, 3.5 x 6.75 ft. reinforced concrete rectangular conduit.
• The majority of the project property is leased by ODNR for fish and wildlife management. ONDR manages the lake and 959 acres of public hunting area.
• Recreation facilities include three day use areas, two of which are managed by the Corps of Engineers.
• Kokosing Lake Campground is located on the banks of Kokosing Lake and is leased by the Muskingum Watershed Conservancy District.

Regional Importance

• The project averages 127 thousand visitors annually, contributing $3.9 million to the local economy, supporting 43 jobs.

• The project hosts Kokosing Lake Campground which includes 46 campsites, restrooms and a shower facility.

• Natural and recreational resources at this project provide social, economic and environmental benefits. Project personnel conducted recreational programs in FY19 that help strengthen family ties and friendships; provide opportunities for children to develop personal skills, social values, and self esteem; and increase water safety.

Consequences of Not Maintaining the Project

• Failure to adequately fund the flood damage reduction mission at this facility would result in the project's inability to adequately execute the flood damage reduction mission as authorized by congress. The consequences could range in severity depending upon the condition of the project, but would ultimately lead to a failure of the structure and a subsequent life safety concern for those in the affected downstream areas.

• Closure of recreational facilities will result in degradation of facilities, negative public reaction and potential Congressional inquiries.

U.S. Army Corps of Engineers Fiscal Year (FY) Project Apprropriations and President's Budget ($1,000)

	FY19 O&M Appropriation			FY20 O&M Appropriation			FY21 O&M President's Budget		
Business Line	Operation	Maintenance	Total	Operation	Maintenance	Total	Operation	Maintenance	Total
Flood Risk Management	$395	$143	$538	$358	$188	$546	$344	$177	$521
Recreation	$8	$5	$13	$23	$7	$30	$15		$15
Environmental Stewardship		$5	$5	$150	$5	$155	$100	$5	$105
Total	$403	$153	**$556**	$531	$200	**$731**	$459	$182	**$641**

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

	FY21 Funding Requests for Maintenance ($1,000)		
Business Line	Total	Packages $	Maintenenace Needs
Flood Risk Management	$945	$75	Clean Relief Wells
		$70	Instrumentation
		$50	Lidar Scan
		$750	Replace non-functional relief wells

Additional Information

- Fee Lands: 1,212 acres
- Flowage Easement Lands: 496 acres
- Project Boundary Line Marked: 6 miles

Congressional Interests

Senator Sherrod Brown, D-OH
Senator Robert Portman, R-OH
Congressman Bob Gibbs, R-OH-07

US Army Corps of Engineers

North Fork of Pound River Lake

Pound River, VA

GREAT LAKES & OHIO RIVER DIVISION

Project Features

• Authorization: Section 4 of Flood Control Act of 1938.

• Primary project purposes are flood risk reduction, water supply, fish and wildlife enhancement, and recreation.

• Dam was completed in January 1966 and serves a drainage area of 17.2 square miles.

• The lake is impounded by a rock-fill dam with an impervious core, 122 ft. tall and 600 ft. long with an uncontrolled saddle spillway.

• Outlet works include an intake structure with three sluice gates that discharge through a horseshoe tunnel through the right abutment of the dam. A duel selective withdrawal system bypasses the main gates.

• The project has one Corps managed day use area.

• Ownership of the land surrounding the lake was transfered to the U.S. Forest Service in 1983.

Consequences of Not Maintaining the Project

• Failure to adequately fund the flood damage reduction mission at this facility would result in the project's inability to adequately execute the flood damage reduction mission as authorized by congress. The consequences could range in severity depending upon the condition of the project, but would ultimately lead to a failure of the structure and a subsequent life safety concern for those in the affected downstream areas.

• Closure of recreational facilities will result in degradation of facilities, negative public reaction and potential Congressional inquiries.

Regional Importance

• The project averages 99 thousand visitors contributing $2.7 million to the local economy, supporting 29 jobs. This represents a sizable component of the economy in the local community.

• Supplies 300 thousand gallons of municipal water a day to the residents of Pound, VA with a National Economic Benefit of $330 thousand

• The project prevented over $39 million in flood damages since the construction of the project.

U.S. Army Corps of Engineers Fiscal Year (FY) Project Apprropriations and President's Budget ($1,000)

	FY19 O&M Appropriation			FY20 O&M Appropriation			FY21 O&M President's Budget		
Business Line	Operation	Maintenance	Total	Operation	Maintenance	Total	Operation	Maintenance	Total
Flood Risk Management	$488	$311	$799	$405	$184	$589	$642	$187	$829
Recreation	$15		$15	$38		$38	$10		$10
Environmental Stewardship		$5	$5	$100	$5	$105	$100	$10	$110
Water Supply	$15	$14	$29	$19	$14	$33	$19	$14	$33
Total	$518	$330	**$848**	$562	$203	**$765**	$771	$211	**$982**

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

	FY21 Funding Requests for Maintenance ($1,000)		
Business Line	Total	Packages $	Maintenenace Needs
Flood Risk Management	$600	$550	North Fork of Pound - Correct spillway elevation
		$50	Sedimentation survey

Additional Information

- Fee Lands: 90 acres
- Flowage Easement Lands: 0.1 acres
- Project Boundary Line Marked: 2 miles

Congressional Interests

Senator Tim Kaine, D-VA
Senator Mark Warner, D-VA
Congressman Morgan Griffith, R-VA-09

US Army Corps of Engineers

Paint Creek Lake

Paint Creek, OH

GREAT LAKES & OHIO RIVER DIVISION

Project Features

• Authorization: Section 4 of Flood Control Act of 1938.

• Primary project purposes are flood risk reduction, water supply, low-flow augmentation, fish and wildlife enhancement, recreation and water quality improvement.
• Dam was completed in July 1973 and serves a drainage area of 576 square miles.
• The lake is impounded by an earth and rock-fill embankment dam, 118 ft. tall and 700 ft. long with a controlled spillway with three tainter gates supported by 10 ft. piers.
• Outlet works include an intake structure with two hydraulic tractor gates which discharge through a circular tunnel into a jump-type stilling basin. The low flow system has two inlets with discharge controlled by a single slide gate.
• Other structures include one random earth and rock-fill dike at the right abutment of the spillway, a random earth and rock-fill levee located 7 miles northwest of the dam, and Little Pond Dam.
• The project has 3 recreation areas.

Consequences of Not Maintaining the Project

• Failure to adequately fund the flood damage reduction mission at this facility would result in the project's inability to adequately execute the flood damage reduction mission as authorized by congress. The consequences could range in severity depending upon the condition of the project, but would ultimately lead to a failure of the structure and a subsequent life safety concern for those in the affected downstream areas.

• Closure of recreational facilities will result in degradation of facilities, negative public reaction and potential Congressional inquiries.

Regional Importance

• The project averages 955 thousand visitors contributing $27.6 million to the local economy, supporting 304 jobs. This represents a sizable component of the economy in the local community.

• The project prevented over $54 million in flood damages in FY 2019 with a accumulative total of $243 million in flood damages prevented since the construction of the project.

• A levee 7 miles northwest of the dam protects the city of Greenfield, OH waste water treatment plant.

• The project has the ability to supply 4 million gallons of water per day with a National Economic Benefit of $4.4 million.

• A preliminary permit has been issued for hydropower development at Paint Creek Lake. The proposed project would include two turbines with a total capacity of 2,140 kilowatts.

• Natural and recreational resources at this project provide social, economic and environmental benefits. Project personnel conducted 7 recreational programs in FY19 that help strengthen family ties and friendships; provide opportunities for children to develop personal skills, social values, and self esteem; and increase water safety.

U.S. Army Corps of Engineers Fiscal Year (FY) Project Apprropriations and President's Budget ($1,000)

	FY19 O&M Appropriation			FY20 O&M Appropriation			FY21 O&M President's Budget		
Business Line	Operation	Maintenance	Total	Operation	Maintenance	Total	Operation	Maintenance	Total
Flood Risk Management	$904	$406	$1,310	$1,021	$1,494	$2,515	$877	$873	$1,750
Recreation	$102	$44	$146	$185	$18	$203	$172		$172
Environmental Stewardship		$54	$54	$180	$80	$260	$167	$87	$254
Water Supply	$7	$6	$13	$14	$6	$20	$15	$6	$21
Total	$1,013	$510	**$1,523**	$1,400	$1,598	**$2,998**	$1,231	$966	**$2,197**

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

	FY21 Funding Requests for Maintenance ($1,000)		
Business Line	Total	Packages $	Maintenenace Needs
Flood Risk Management	$3,251	$15	Purchase of a Boom Lift
		$55	Gage Removal
		$376	Greenfield Leeve Seperate Releif Well and sewage conduit
		$89	Maintenance for Flood Risk Management
		$580	Repair and paint three sluice gate, and tunnel liners (metal portion).
		$870	Repair Concrete Under Tainter Gate Machinery and Trunion Arms
		$21	Replacement Mule/ATV
		$85	Sedimentation survey
		$570	Service Bridge Repair, Sandblast, and Paint Bridge Members
		$590	Spilllway Bridge Repair, Sandblast, and Paint Bridge Members
Recreation	$438	$160	Widen Access Road to Fishing Pier
		$222	Replace restroom
		$56	Maintenance of Recreation Features

Additional Information

- Fee Lands: 9,614 acres
- Flowage Easement Lands: 568 acres
- Project Boundary Line Marked: 53 miles

Congressional Interests

Senator Sherrod Brown, D-OH
Senator Robert Portman, R-OH
Congressman Brad Wenstrup, R-OH-02

US Army Corps of Engineers

Paintsville Lake

Paint Creek, KY

GREAT LAKES & OHIO RIVER DIVISION

Project Features

• Authorization: Section 204 of Flood Control Act of 1965.

• Primary project purposes are flood risk reduction, water supply, low-flow augmentation, fish and wildlife enhancement, and recreation.

• Dam was completed in 1983 and serves a drainage area of 92.5 square miles.

• The lake is impounded by a rock-fill dam with an impervious core, 160 ft. tall and 1,600 ft. long with an uncontrolled broad-crested spillway.

• Outlet works include an intake structure with three gated sluices discharging into a stilling basin. Two selective withdrawal wells have 10 inlets at five different elevations. The discharge for the selective withdrawal wells are controlled by a slide gate and a 10 inch bypass in each well.

• The project has 8 recreation areas including Paintsville Lake State Park and an historic area listed on the National Registry of Historic Places.

Consequences of Not Maintaining the Project

• Failure to adequately fund the flood damage reduction mission at this facility would result in the project's inability to adequately execute the flood damage reduction mission as authorized by congress. The consequences could range in severity depending upon the condition of the project, but would ultimately lead to a failure of the structure and a subsequent life safety concern for those in the affected downstream areas.

• Closure of recreational facilities will result in degradation of facilities, negative public reaction and potential Congressional inquiries.

Regional Importance

• The project averages 1 million visitors contributing $31.5 million to the local economy, supporting 340 jobs. This represents a sizable component of the economy in the local community.

• The project has the ability to supply 6 million gallons of water per day with a National Economic Benefit of $6.6 million.

• The project prevented over $106 million in flood damages in FY 2019 with a accumulative total of $144 million in flood damages prevented since the construction of the project.

• Natural and recreational resources at this project provide social, economic and environmental benefits. Project personnel conducted 10 recreational programs in FY19 that help strengthen family ties and friendships; provide opportunities for children to develop personal skills, social values, and self esteem; and increase water safety.

U.S. Army Corps of Engineers Fiscal Year (FY) Project Apprropriations and President's Budget ($1,000)

	FY19 O&M Appropriation			FY20 O&M Appropriation			FY21 O&M President's Budget		
Business Line	Operation	Maintenance	Total	Operation	Maintenance	Total	Operation	Maintenance	Total
Flood Risk Management	$848	$290	$1,138	$733	$407	$1,140	$1,011	$434	$1,445
Recreation	$51		$51	$119		$119	$30		$30
Environmental Stewardship		$54	$54	$300	$501	$801	$10	$32	$42
Water Supply	$20	$19	$39	$24	$19	$43	$24	$19	$43
Total	$919	$363	**$1,282**	$1,176	$927	**$2,103**	$1,075	$485	**$1,560**

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

	FY21 Funding Requests for Maintenance ($1,000)		
Business Line	Total	Packages $	Maintenenace Needs
Flood Risk Management	$690	$20	Automate Weir
		$55	Gage Removal
		$75	Paintsville Lake - Provide paved access to below dam outlets
		$100	Paintsville Lake - Replace 1978 450 dozer
		$330	Repave maintenance building parking lot
		$85	Sedimentation survey
		$25	Toe Drain Inspection

Additional Information

- Fee Lands: 12,981 acres
- Flowage Easement Lands: 106 acres
- Project Boundary Line Marked: 55 miles

Congressional Interests

Senator Mitch McConnell, R-KY
Senator Rand Paul, R-KY
Congressman Hal Rogers, R-KY-05

US Army Corps of Engineers

RD Bailey Lake

Guyandotte River, WV

GREAT LAKES & OHIO RIVER DIVISION

Project Features

• Authorization: 203 of Flood Control Act of 1962.
• Primary project purposes are flood risk management, water quality and recreation.
• The dam was completed in 1980 and serves a drainage area of 540 square miles.
• The lake is impounded by a rock and random-fill dam with a concrete face and an uncontrolled broad-crested saddle spillway.
• The outlet works include an intake structure with two sluices controlled by hydraulically operated slide gates which discharge through a circular tunnel through the left abutment of the dam. Five intake gates at four different elevations discharge into a sluice for selective withdrawal.
• The project operates its own water treatment system within the public recreation areas due to the remote and rugged terrain of the project.
• There are eight recreation areas including a Corps operated campground and day use areas. The project no longer has a marina concessionaire.

Regional Importance

• The project averages 482 thousand visitors annually, contributing $14.2 million to the local economy, supporting 2,145 jobs.

• The project prevented over $7.3 million in flood damages in FY 2019 with an accumulative total of $431 million in damages prevented since the construction of the project.

• Natural and recreational resources at this project provide social, economic and environmental benefits. Project personnel conducted 7 recreational programs in FY19 that help strengthen family ties and friendships; provide opportunities for children to develop personal skills, social values, and self esteem; and increase water safety.

Consequences of Not Maintaining the Project

• Failure to adequately fund the flood damage reduction mission at this facility would result in the project's inability to adequately execute the flood damage reduction mission as authorized by congress. The consequences could range in severity depending upon the condition of the project, but would ultimately lead to a failure of the structure and a subsequent life safety concern for those in the affected downstream areas.

• Closure of recreational facilities will result in degradation of facilities, negative public reaction and potential Congressional inquiries.

U.S. Army Corps of Engineers Fiscal Year (FY) Project Apprropriations and President's Budget ($1,000)

	FY19 O&M Appropriation			FY20 O&M Appropriation			FY21 O&M President's Budget		
Business Line	Operation	Maintenance	Total	Operation	Maintenance	Total	Operation	Maintenance	Total
Flood Risk Management	$1,044	$348	$1,392	$1,306	$784	$2,090	$1,206	$627	$1,833
Recreation	$365		$365	$254	$65	$319	$505		$505
Environmental Stewardship		$54	$54		$128	$128	$10	$142	$152
Total	$1,409	$402	**$1,811**	$1,560	$977	**$2,537**	$1,721		**$2,490**

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

Business Line	FY21 Funding Requests for Maintenance ($1,000) Total	Packages $	Maintenenace Needs
Flood Risk Management	$673	$20	Evaluate Inclinometers
		$30	Improve spillway access
		$40	Lidar Scan
		$126	Maintenance for Flood Risk Management
		$60	Repair cavitation of sluice gates
		$125	Upgrade all security lighting on the Dam, Intake Structure, Maintenance Building, Visitor Center
		$175	Replace LFC Gate
		$85	Sedimentation survey
		$12	Seismograph Power Source
Recreation	$1,713	$168	Maintenance of Recreation Features
		$1,119	Sandblast and paint Guyandotte bridge in campground
		$426	Spot Pave campground access road

Additional Information

- Fee Lands: 18,654 acres
- Flowage Easement Lands: 138 acres
- Project Boundary Line Marked: 69 miles

Congressional Interests

Senator Joe Manchin III, D-WV
Senator Shelley Moore Capito, R-WV
Congressman Carol Miller, R-WV-03

US Army Corps of Engineers

Summersville Lake

Kanawha River, WV

GREAT LAKES & OHIO RIVER DIVISION

Project Features

• Authorization: Section 4 of Flood Control Act of 1938.
• Primary project purposes are flood risk management, fish and wildlife enhancement, water quality, recreation, and low flow augmentation.
• The dam was completed in 1966 and serves a drainage area of 803 square miles.
• The lake is impounded by a rock-fill dam with a central impervious core, 390 ft. tall and 1,780 ft. wide, with an uncontrolled saddle spillway.
• Outlet works are located in the right abutment of the dam through a circular tunnel which splits into three conduits. Flow is controlled by fixed cone diversion valves. Low flow is controlled through a 3 ft. conduit with a fixed cone dispersion valve. Conduits and the tunnel can be closed and dewatered with butterfly valves and two sloped sliding gates.
• Other structures include two dikes on the west rim of the reservoir.
• Hydroelectric plant operated on the project.
• There are nine recreation areas including a campground with 376 sites and a marina with 473 slips.

Consequences of Not Maintaining the Project

• Failure to adequately fund the flood damage reduction mission at this facility would result in the project's inability to adequately execute the flood damage reduction mission as authorized by congress. The consequences could range in severity depending upon the condition of the project, but would ultimately lead to a failure of the structure and a subsequent life safety concern for those in the affected downstream areas.

• Closure of recreational facilities will result in degradation of facilities, negative public reaction and potential Congressional inquiries.

Regional Importance

• The project averages 996 thousand visitors annually, contributing $31.2 million to the local economy, supporting 328 jobs.

• The project prevented over $10 million in flood damages in FY 2019 with a cumulative total of $1 billion in flood damages prevented since the construction of the project.

• The city of Summersville and Gauley River Power Partners operate a hydroelectric plant at the project. The plant includes two turbines with a capacity of 80 Megawatts.

• The project has the ability to supply 4 million gallons of water a day with a National Economic Benefit of $4.4 million.

• Natural and recreational resources at this project provide social, economic and environmental benefits. Project personnel conducted 16 recreational programs in FY19 that help strengthen family ties and friendships; provide opportunities for children to develop personal skills, social values, and self esteem; and increase water safety.

U.S. Army Corps of Engineers Fiscal Year (FY) Project Apprropriations and President's Budget ($1,000)

	FY19 O&M Appropriation			FY20 O&M Appropriation			FY21 O&M President's Budget		
Business Line	Operation	Maintenance	Total	Operation	Maintenance	Total	Operation	Maintenance	Total
Flood Risk Management	$921	$404	$1,325	$817	$710	$1,527	$1,110	$424	$1,534
Recreation	$860	$157	$1,017	$874	$17	$891	$1,532		$1,532
Environmental Stewardship	$150	$54	$204		$113	$113	$10	$142	$152
Water Supply	$17	$16	$33	$23	$17	$40	$23	$17	$40
Total	$1,948	$631	**$2,579**	$1,714	$857	**$2,571**	$2,675	$583	**$3,258**

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

	FY21 Funding Requests for Maintenance ($1,000)		
Business Line	Total	Packages $	Maintenenace Needs
Flood Risk Management	$661	$55	Gage Removal
		$140	Intake Gate Knife Valves Replacement
		$116	Maintenance for Flood Risk Management
		$185	Piezometer Replacement
		$85	Replace Outlet Structure Roof
		$80	Spillway Tree Removal, Grading & Leveling
Recreation	$963	$150	Erosion repair of shoreline at Battle Run and Long Point
		$156	Maintenance of Recreation Features
		$657	Repair of deteriorated areas and repaving of Battle Run, Long Point and Salmon Run recreation areas

Additional Information

- Fee Lands: 9,346 acres
- Flowage Easement Lands: 443 acres
- Project Boundary Line Marked: 45 miles

Congressional Interests

Senator Joe Manchin III, D-WV
Senator Shelley Moore Capito, R-WV
Congressman Carol Miller, R-WV-03

US Army Corps of Engineers

Sutton Lake

Kanawha River, WV

GREAT LAKES & OHIO RIVER DIVISION

Project Features

• Authorization: section 4 of Flood Control Act of 1938.
• Primary project purposes are flood damage reduction, low flow augmentation and recreation.
• The dam was completed in June 1960 and serves a drainage area of 537 square miles.
• The lake is impounded by a concrete gravity dam, 210 ft. high and 1,178 ft. long, with a gated spillway located in the channel section of the dam. Spillway has a 50 ft. radius bucket and six tainter gates, hydraulically operated from a gallery in the dam, supported by 8 ft. piers.
• The outlet works include five gated sluices and a valve controlled sluice for low flow control, all located through the spillway section and discharging into the spillway bucket.
• Proposed hydropower plant which would include 2-3 turbines with a capacity of 12,000 kilowatts.
• There are nine recreation areas including two Corps operated campgrounds, day use areas, and a privately operated marina.

Regional Importance

• The project averages 451 thousand visitors annually, contributing $13.1 million to the local economy, supporting 142 jobs which represents a sizable component of the economy in the local community.

• The project prevented over $11.9 million in flood damages in FY 2019 with an accumulative total of $600 million in damages prevented since the construction of the project.

• Natural and recreational resources at this project provide social, economic and environmental benefits. Project personnel conducted 44 recreational programs in FY19 that help strengthen family ties and friendships; provide opportunities for children to develop personal skills, social values, and self esteem; and increase water safety.

Consequences of Not Maintaining the Project

• Failure to adequately fund the flood damage reduction mission at this facility would result in the project's inability to adequately execute the flood damage reduction mission as authorized by congress. The consequences could range in severity depending upon the condition of the project, but would ultimately lead to a failure of the structure and a subsequent life safety concern for those in the affected downstream areas.

• Closure of recreational facilities will result in degradation of facilities, negative public reaction and potential Congressional inquiries.

U.S. Army Corps of Engineers Fiscal Year (FY) Project Apprropriations and President's Budget ($1,000)

	FY19 O&M Appropriation			FY20 O&M Appropriation			FY21 O&M President's Budget		
Business Line	Operation	Maintenance	Total	Operation	Maintenance	Total	Operation	Maintenance	Total
Flood Risk Management	$1,037	$661	$1,698	$1,227	$791	$2,018	$1,165	$493	$1,658
Recreation	$770		$770	$674		$674	$720		$720
Environmental Stewardship		$54	$54	$150	$138	$288	$160	$142	$302
Total	$1,807	$715	**$2,522**	$2,051	$929	**$2,980**	$2,045	$635	**$2,680**

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

Business Line	FY21 Funding Requests for Maintenance ($1,000) Total	Packages $	Maintenenace Needs
Flood Risk Management	$747	$55	Gage Removal
		$200	Inspection of Tainter Gate Welds
		$147	Maintenance for Flood Risk Management
		$25	Repair Erosion of Downstream Culvert Pipe
		$25	Replace Boiler Furnace in Dam
		$20	Replace Damsite Street Lights
		$145	Replace Project Dozer
		$20	Replace Ranger Patrol Boat Engine
		$35	Replace Windows in Dam Tower
		$75	Verify Soundings of Downstream Tailwater Area to Verify Passive Wedge of the Roller Bucket
Recreation	$631	$137	Maintenance of Recreation Features
		$494	Pave Freeman campground roads

Additional Information

- Fee Lands: 13,154 acres
- Flowage Easement Lands: 208 acres
- Project Boundary Line Marked: 64 miles

Congressional Interests

Senator Joe Manchin III, D-WV
Senator Shelley Moore Capito, R-WV
Congressman Alex Mooney, R-WV-02

US Army Corps of Engineers

Tom Jenkins Dam

Hocking River, OH

GREAT LAKES & OHIO RIVER DIVISION

Project Features

• Authorization: Section 10 of Flood Control Act of 1944.

• Primary project purposes are flood damage reduction, water supply and recreation.

• The dam was completed in February 1950 and serves a drainage area of 32.8 square miles.

• The lake is impounded by a rolled earth dam, 84 ft. tall and 560 ft. long, with an uncontrolled saddle spillway near the left abutment of the dam.

• The outlet works include three sluice gates that discharge through a horseshoe tunnel through the left abutment of the dam into a stilling basin.

• There is one Corps managed recreation area.

• OH DNR Burr Oak Lake and State Park exist due to the Tom Jenkins Dam.

Consequences of Not Maintaining the Project

• Failure to adequately fund the flood damage reduction mission at this facility would result in the project's inability to adequately execute the flood damage reduction mission as authorized by congress. The consequences could range in severity depending upon the condition of the project, but would ultimately lead to a failure of the structure and a subsequent life safety concern for those in the affected downstream areas.

• Closure of recreational facilities will result in degradation of facilities, negative public reaction and potential Congressional inquiries.

Regional Importance

• The project averages 285 thousand visitors annually, contributing $7.9 million to the local economy, supporting 87 jobs which represents a sizable component of the economy in the local community.

• The project prevented over $265 thousand in flood damages in FY 2019 with an accumulative total of $34 million in damages prevented since the construction of the project.

• The project has the ability to supply 8 million gallons of water a day with a National Economic Benefit of $8.8 million.

• Burr Oak State Park contains a lodge, campground, marina, swim beach, cottages and associated recreation and wilderness resources that would otherwise not exist if not for Tom Jenkins Dam.

• Natural and recreational resources at this project provide social, economic and environmental benefits. Project personnel conducted recreational programs in FY19 that help strengthen family ties and friendships; provide opportunities for children to develop personal skills, social values, and self esteem; and increase water safety.

U.S. Army Corps of Engineers Fiscal Year (FY) Project Apprropriations and President's Budget ($1,000)

	FY19 O&M Appropriation			FY20 O&M Appropriation			FY21 O&M President's Budget		
Business Line	Operation	Maintenance	Total	Operation	Maintenance	Total	Operation	Maintenance	Total
Flood Risk Management	$568	$229	$797	$754	$382	$1,136	$515	$585	$1,100
Recreation	$5	$5	$10	$75		$75	$40		$40
Environmental Stewardship		$5	$5	$150	$74	$224	$75	$80	$155
Water Supply	$7	$6	$13	$14	$6	$20	$10	$11	$21
Total	$580	$245	**$825**	$993	$462	**$1,455**	$640	$676	**$1,316**

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

	FY21 Funding Requests for Maintenance ($1,000)		
Business Line	Total	Packages $	Maintenenace Needs
Flood Risk Management	$1,259	$330	Clean, Repair, and Paint Sluice Gates
		$145	Concrete Spalling Repair
		$50	Install Piezometers and Wells
		$92	Maintenance for Flood Risk Management
		$132	Parking lot / building lighting
		$425	Repairing and repaving the access roads and parking lots
		$85	Sedimentation survey
Recreation	$35	$35	Maintenance of Recreation Features

Additional Information

- Fee Lands: 100 acres
- Flowage Easement Lands: 1,639 acres
- Project Boundary Line Marked: 2 miles

Congressional Interests

Senator Sherrod Brown, D-OH
Senator Robert Portman, R-OH
Congressman Steve Stivers, R-OH-15

US Army Corps of Engineers

Yatesville Lake

Big Sandy River, KY

GREAT LAKES & OHIO RIVER DIVISION

Project Features

• Authorization: section 204 of Flood Control Act of 1965.

• Primary project purposes are flood damage reduction, low flow augmentation, water quality and recreation.

• The dam was completed in 1988 and serves a drainage area of 208 square miles.

• The lake is impounded by a rock-fill dam with a central impervious core, founded on in-situ overburden, 105 ft. tall and 760 ft. long, with an uncontrolled broad-crested spillway.

• The outlet works include an intake structure with gated sluices discharging into a stilling basin. Two selective withdrawal systems have a total of ten intakes. Discharge is controlled by a slide gate and by-pass in each well.

• Proposed hydropower plant which would include 2-3 turbines with a capacity of 12,000 kilowatts.

• There are six recreation areas including two Corps managed day use areas.

Consequences of Not Maintaining the Project

• Failure to adequately fund the flood damage reduction mission at this facility would result in the project's inability to adequately execute the flood damage reduction mission as authorized by congress. The consequences could range in severity depending upon the condition of the project, but would ultimately lead to a failure of the structure and a subsequent life safety concern for those in the affected downstream areas.

• Closure of recreational facilities will result in degradation of facilities, negative public reaction and potential Congressional inquiries.

Regional Importance

• The project averages 339 thousand visitors annually, contributing $10.8 million to the local economy, supporting 115 jobs which represents a sizable component of the economy in the local community.

• The project prevented over $3.3 million in flood damages in FY 2019 with an accumulative total of $36.2 million in damages prevented since the construction of the project.

• The project hosts a 70 site campground, marina, and swimming area.

• Natural and recreational resources at this project provide social, economic and environmental benefits. Project personnel conducted 19 recreational programs in FY19 that help strengthen family ties and friendships; provide opportunities for children to develop personal skills, social values, and self esteem; and increase water safety.

U.S. Army Corps of Engineers Fiscal Year (FY) Project Apprropriations and President's Budget ($1,000)

	FY19 O&M Appropriation			FY20 O&M Appropriation			FY21 O&M President's Budget		
Business Line	Operation	Maintenance	Total	Operation	Maintenance	Total	Operation	Maintenance	Total
Flood Risk Management	$969	$608	$1,577	$801	$722	$1,523	$882	$441	$1,323
Recreation	$58		$58	$115		$115	$25		$25
Environmental Stewardship		$54	$54		$51	$51	$10	$51	$61
Water Supply	$200		$200			$0			$0
Total	$1,227	$662	**$1,889**		$773	**$1,689**	$917	$492	**$1,409**

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

Business Line	FY21 Funding Requests for Maintenance ($1,000) Total	Packages $	Maintenace Needs
Flood Risk Management	$1,118	$165	Clean and paint selective withdrawal gates
		$55	Gage Removal
		$8	Maintenance for Flood Risk Management
		$100	Replace toe drain
		$20	Video Inspect Toe Drain
		$770	Yatesville Lake - Resurface and restripe roadways in operations area

Additional Information

- Fee Lands: 13,119 acres
- Flowage Easement Lands: 6 acres
- Project Boundary Line Marked: 75 miles

Congressional Interests

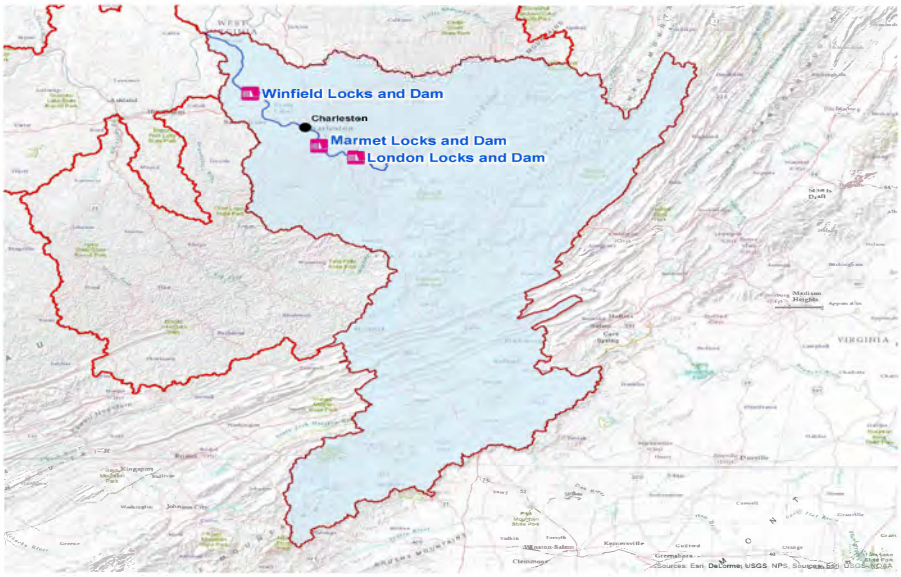
Senator Mitch McConnell, R-KY
Senator Rand Paul, R-KY
Congressman Hal Roger, R-KY-05

US Army Corps of Engineers

Kanawha River Locks

Huntington District

GREAT LAKES & OHIO RIVER DIVISION

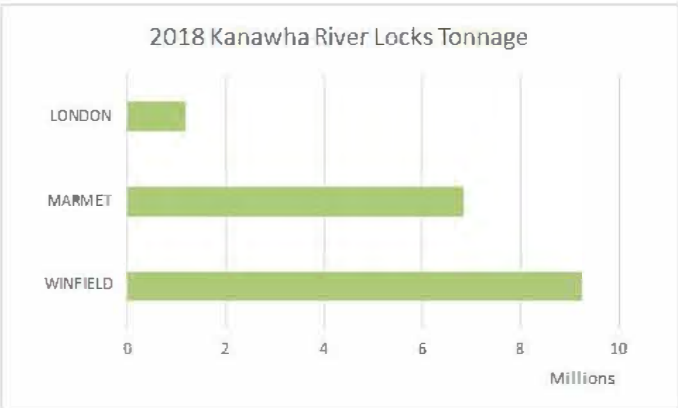


Basin Characteristics

• The Kanawha River, a tributary of the Ohio River, is approximately 97 miles long, making it West Virginia's largest inland waterway.

• The Kanawha River is formed at Gauley Bridge, WV by the confluence of the New River and the Gauley River, joining the Ohio River at Point Pleasant, WV.

• The Kanahwa River has three projects with non-navigable dams. Winfield and Marmet L&Ds have a main lock and twin auxiliary chambers, while London L&D has two lock chambers that can be used interchangeably.



Regional Importance

• The Kanawha River is part of the nation's Inland Waterway System. These interconnected river routes cover 11,000 miles and serve to strategically link geographic areas, major markets, suppliers of raw materials, processors and consumers.

• All three Locks and Dams have out-sourced hydropower plants operated by American Electric Power (AEP).

• Because one barge can transport as much cargo as 15 rail cars and 60 tractor-trailers, waterway transportation benefits the environment. It reduces fuel consumption and emissions, and makes roads safer by keeping more trucks off the highway.

• Every year the locks provide passage for approximately 16 million tons of goods. Coal is the dominate commodity being transported with lesser amounts of aggregates, petroleum, steel, and grain.

• The Kanawha River is also a great resource of recreation in the area, averaging 290 thousand visitors annually, contributing $8.4 million in visitor spending, supporting 88 jobs.

U.S. Army Corps of Engineers Fiscal Year (FY) Project Apprropriations and President's Budget ($1,000)

	FY19 O&M Appropriation			FY20 O&M Appropriation			FY21 O&M President's Budget		
Business Line	Operation	Maintenance	Total	Operation	Maintenance	Total	Operation	Maintenance	Total
Navigation	$5,764	$4,156	$9,920	$8,497	$9,600	$18,097	$7,061	$3,831	$10,892
Recreation	$29		$29	$79		$79	$50		$50
Environmental Stewardship		$30	$30		$30	$30		$40	$40
Total	$5,793	$4,186	**$9,979**	$8,576	$9,630	**$18,206**	$7,111	$3,871	**$10,982**

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

	FY21 Funding Requests for Maintenance ($1,000)		
Business Line	Total	Packages $	Maintenace Needs
Navigation	$45,805	$30	Bathymetric Survey - London Locks & Dam
		$705	Critical Spare Parts - Kanawha River Locks & Dam
		$132	Develop Plans & Specs to Repair Maintenance Bulkheads - Marmet Locks & Dam
		$1,600	Dewater and Inspect Auxiliary Chambers - Marmet Locks & Dam
		$185	Evaluate Facility Security System - Kanawha River Locks & Dam
		$204	Fabricate Needle Dam Storage Stand - Marmet Locks & Dam
		$297	Inspect Roller Gate 4 - Winfield Locks & Dam
		$50	Install Piezometers - Winfield Locks & Dam
		$50	Install Piezometers at London
		$142	Machine Spare Hydraulic Cylinder threads - Winfield Locks & Dam
		$1,444	Maintenance for Navigation
		$1,049	Marmet L&D Plans & Specs for Service Bridge Replacement
		$1,310	Modify Auxiliary Lock Wall Ladders - Marmet Locks & Dam
		$1,310	Modify Auxiliary Lock Wall Ladders - Winfield Locks & Dam
		$98	Repair End Shield and composite side seals Phase 1 of 2 - Marmet Locks & Dam
		$738	Repair End Shield and composite side seals Phase 1 of 2 - Marmet Locks & Dam
		$2,400	Repair Roller Gates 3, 4 and 5 - Winfield Locks & Dam
		$220	Replace Auxiliary Lock and Dam Power & Control Cabling Phase 1 of 4 - Winfield Locks and Dam
		$243	Replace Contact Blocks on Downstream Quoin Blocks - Auxiliary Locks - Winfield Locks & Dam
		$2,377	Replace Guard Rails on Roller Gates 1&2 - Winfield Locks & Dam
		$900	Replace Main Chamber Miter Gate Anchorage - Marmet Locks & Dam
		$900	Replace Main Chamber Miter Gate Anchorage - Marmet Locks & Dam
		$1,013	Replace Operating Programmable Logic Controls (PLC) - Winfield Locks & Dam
		$1,515	Replace Operation Building & Pierhouse Roofs - Marmet Locks & Dam
		$1,515	Replace Operations Building and Pierhouse Roofs - London Locks & Dam
		$314	Replace Roofs at Lock Operations Building and Pierhouse - Winfield Locks & Dam
		$491	Replace Top Anchorage - Marmet Locks & Dam
		$362	Temporary Repair to Service Bridge - Marmet Locks & Dam
		$6,901	Winfield L&D- Fabrication of Standard Roller Gate (Gate 1) (1 of 2)
		$8,765	Winfield L&D - Fabrication of Flap Roller Gate (1 of 2)
		$6,901	Winfield L&D - Fabrication of Standard Roller Gate 3 (1 of 2)
		$1,485	Winfield L&D - Major Rehab Report (2 of 2)
		$159	Test Trunnion Anchor Rod Testing - Winfield Locks & Dam

US Army Corps of Engineers

London Locks and Dam

Kanawha River, WV

GREAT LAKES & OHIO RIVER DIVISION

Project Features

• Authorization: River and Harbors Acts of 1930 and 1935.

• Primary project purposes are navigation and recreation.

• The project was placed in operation in September 1933.

• The project has a non-navigable gated dam, 557 ft. long with five roller gates, spanning 100 ft. between piers, one 56 x 400 ft. lock chamber and a 56 x 360 ft. lock chamber with miter gates.

• American Electric Power (AEP) operates a hydroelectric plant that has two turbines with total capacity of 14,400 kilowatts.

• Lock is staffed 24 hours a day, 7 days a week.

• The project has two recreation areas.

Regional Importance

• The project averages 429 visitors annually, contributing $12 thousand to the local economy.

• In calendar year 2018, the volume of cargo transported exceeded 969 thousand tons of commodities. The most common commodities locking through are coal, petroleum products, gravel, rock, cement scrap metal and chemicals.

• The minimum fill time for each lock is approximately 4 minutes.

• It takes approximately 45 minutes for a commercial tugboat with a 9 barge tow and approximately 30 minutes for a pleasure craft to lock through.

Consequences of Not Maintaining the Project

• Failure to maintain the project could result in a halt in the movement of commercial navigation. That stoppage would result in loss of rate savings to the shippers and delayed orders for essential commodities including fuel for power plants and raw materials for major industries. In addition to the loss of the navigation purpose, pool loss could jeopardize water supply for municipal and industrial users, loss of electrical energy produced by hydropower plants at the dams, and loss of habitat for aquatic species. Such a pool loss would affect both recreation users and water quality should there be a prolonged loss.

Additional Information

- 2019 tonnage (in thousands) : 9694

- Current Miter Gate In Service Date:
  Main: 1994 Auxiliary: 1994

- Projected Year Lock Miter Gates Reach "F" Condition:

Main: 2072
Auxiliary: 2110

- Projected Miter Gate Replacement:

Main: 2075
Auxiliary: 2110

- Fee Lands: 14 acres

- Flowage Easement Lands: 189 acres

- Project Boundary Line Marked: 1.2 miles

Congressional Interests

Senator Joe Manchin III D-WV
Senator Shelley Moore Capito R-WV
Congressman Alex Mooney R-WV-02

US Army Corps of Engineers

Marmet Locks and Dam

Kanawha River, WV

GREAT LAKES & OHIO RIVER DIVISION

Project Features

• Authorization: River and Harbors Acts of 1930 and 1935.

• Primary project purposes are navigation and recreation.

• The project was placed in operation in August 1933 and a new lock become operational in 2008 and completed in 2009.

• The project has a non-navigable gated dam, 557 ft. long with five roller gates, spanning 100 ft. between piers. It has 56 x 360 ft. twin auxiliary locks and a newly constructed main lock that is 110 x 800 ft. with miter gates.

• American Electric Power (AEP) operates a hydroelectric plant that has three turbines with total capacity of 14,400 kilowatts.

• Lock is staffed 24 hours a day, 7 days a week.

• The project has three recreation areas.

Consequences of Not Maintaining the Project

• Failure to maintain the project could result in a halt in the movement of commercial navigation. That stoppage would result in loss of rate savings to the shippers and delayed orders for essential commodities including fuel for power plants and raw materials for major industries. In addition to the loss of the navigation purpose, pool loss could jeopardize water supply for municipal and industrial users, loss of electrical energy produced by hydropower plants at the dams, and loss of habitat for aquatic species. Such a pool loss would affect both recreation users and water quality should there be a prolonged loss.

Regional Importance

• The project averages 62 thousand visitors annually, contributing $1.7 million to the local economy, supporting 18 jobs.

• In calendar year 2018, the volume of cargo transported exceeded 5.3 million tons, with an estimated value of $318.1 million in commodities. The most common commodities locking through are coal, petroleum products, gravel, rock, cement, scrap metal and chemicals.

• The minimum fill time for the main lock is 6 minutes and 4 minutes for the auxiliary locks.

• It takes approximately 45 minutes for a commercial tugboat with a 9 barge tow and approximately 30 minutes for a pleasure craft to lock through.

Additional Information

- 2019 tonnage (in thousands): 6267

- Current Miter Gate In Service Date:
  Main: 2007 Auxiliary: 1959

- Projected Year Lock Miter Gates Reach "F" Condition:
  Main: 2079 Auxiliary: 2105

- Projected Miter Gate Replacement:
  Main: 2071 Auxiliary: 2106

- Fee Lands: 21 acres

- Flowage Easement Lands: 388 acres

- Project Boundary Line Marked: 1.7 miles

- Service bridge on the dam is currently rated "F." This has resulted in the project no longer having the ability to set bulkheads on the dam.

Congressional Interests

Senator Joe Manchin III, D-WV
Senator Shelley Moore Capito, R-WV
Congressman Alex Mooney, R-WV-02

US Army Corps of Engineers

Winfield Locks and Dam

Kanawha River, WV

GREAT LAKES & OHIO RIVER DIVISION

Project Features

• Authorization: River and Harbors Acts of 1930 and 1935.

• Primary project purposes are navigation and recreation.

• The project was placed in operation in September 1935 and an additional lock was added November 1997.

• The project has a non-navigable gated dam, 676 ft. long with six roller gates, spanning 100 ft. between piers, a 110 ft. tainter gate, 56 x 360 ft. twin auxiliary locks, and a 110 x 800 ft. main lock.

• American Electric Power (AEP) operates a hydroelectric plant that has three turbines with total capacity of 14,760 kilowatts.

• Lock is staffed 24 hours a day, 7 days a week.

• The project has four recreation areas.

Consequences of Not Maintaining the Project

• Failure to maintain the project could result in a halt in the movement of commercial navigation. That stoppage would result in loss of rate savings to the shippers and delayed orders for essential commodities including fuel for power plants and raw materials for major industries. In addition to the loss of the navigation purpose, pool loss would jeopardize all municipal water supply intakes and all water intakes for industrial users, loss of electrical energy produced by hydropower plants at the dam, and loss of habitat for aquatic species. Such a pool loss would affect both recreation users and water quality should there be a prolonged loss.

Regional Importance

• The project averages 227 thousand visitors annually, contributing $6.7 million to the local economy, supporting 70 jobs.

• In calendar year 2018, the volume of cargo transported exceeded 7.7 million tons, with as estimated value of $848 million in commodities. The most common commodities to lock through are coal, petroleum products, gravel, rock, cement, scrap metal and chemicals.

• Natural and recreational resources at this project provide social, economic and environmental benefits. Project personnel conducted 1 recreational program in FY19 that help strengthen family ties and friendships; provide opportunities for children to develop personal skills, social values, and self esteem; and increase water safety.

• The minimum fill time for the main lock is 6 minutes and 4 minutes for the auxiliary locks.

• It takes approximately 45 minutes for a commercial tugboat with a 9 barge tow and approximately 30 minutes for a pleasure craft to lock through.

Additional Information

- 2019 tonnage (in thousands) : 9309

- Current Miter Gate In Service Date: Main: 2000 Auxiliary: 2000

- Projected Year Lock Miter Gates Reach "F" Condition: Main: 2093 Auxiliary: 2116

- Projected Miter Gate Replacement: Main: 2100 Auxiliary: 2117

- Fee Lands: 21 acres

- Flowage Easement Lands: 388 acres

- Project Boundary Line Marked: 2.3 miles

- All roller gates are currently rated in an "F" condition.

Congressional Interests

Senator Joe Manchin III D-WV
Senator Shelley Moore Capito R-WV
Congressman Alex Mooney R-WV-02

US Army Corps of Engineers

Muskingum River Lakes, OH

GREAT LAKES & OHIO RIVER DIVISION

Huntington District

Basin Characteristics

• The original system of 14 reservoir projects was constructed in 1938 in cooperation with the Muskingum Watershed Conservancy District (MWCD).

• The MWCD partners with the Corps of Engineers in the operation of the system of dams and reservoirs in the watershed that covers approximately 20% of the State of Ohio.

• Operation and maintenance of the dam structures is the responsibility of the Corps of Engineers, while the MWCD manages most of the reservoir areas behind the dams which include 16,000 acres of water surface and 38,000 acres of land for public use.

• The system is divided into three sub watershed regions: The Walhonding River Watershed in the northwest area, the Tuscarawas River Watershed in the northeast area, and the Lower Muskingum River region in the southern area.

Regional Importance

• Collectively, the Muskingum Area projects average 7.6 million visitors annually, contributing $223 million to the local economy, supporting 2,553 jobs which represents a sizable component of the economy in the local communities.

• The projects prevented over $305 million in flood damages in FY 2019 with a cumulative total of $6.1 billion in flood damages prevented since the construction of the projects.

• Natural and recreational resources at this project provide social, economic and environmental benefits. Project personnel conducted 43 recreational programs in FY19 that help strengthen family ties and friendships; provide opportunities for children to develop personal skills, social values, and self esteem; and increase water safety.

U.S. Army Corps of Engineers Fiscal Year (FY) Project Apprropriations and President's Budget ($1,000)

	FY19 O&M Appropriation			FY20 O&M Appropriation			FY21 O&M President's Budget		
Business Line	Operation	Maintenance	Total	Operation	Maintenance	Total	Operation	Maintenance	Total
Flood Risk Management	$6,990	$9,695	$16,685	$6,551	$5,283	$11,834	$6,944	$5,235	$12,179
Recreation	$273	$61	$334	$313	$35	$348	$218		$218
Environmental Stewardship		$108	$108	$150	$127	$277	$267	$127	$394
Total	$7,263	$9,864	**$17,127**	$7,014	$5,445	**$12,459**	$7,429	$5,362	**$12,791**

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

	FY21 Funding Requests for Maintenance ($1,000)		
Business Line	Total	Packages $	Maintenenace Needs
Flood Risk Management	$50	$50	Relief well Cleanings

US Army Corps of Engineers

Atwood Lake

Muskingum River Lakes, OH

GREAT LAKES & OHIO RIVER DIVISION

Project Features

• Authorization: Section 4 of the Flood Control Act of 1938, as amended by Section 4 of the Flood Control Act of 1939.
• One of the original system of 14 reservoir projects constructed in 1938 in cooperation with the Muskingum Watershed Conservancy District.
• Project purposes served are flood damage reduction, recreation and fish and wildlife.
• The dam was completed in September 1936 and serves a drainage area of 70 square miles.
• The dam is a rolled earth-fill with an impervious core, 65 ft. tall, 3,700 ft. long and 30 ft. wide at the base.
• The intake structure contains three gated conduits through the south abutment of the dam and a stilling basin.
• To maintain a minimum pool, a 1.5 ft. diameter siphon is located in each of the two outer conduits, in front of the floodgates, and discharges into the middle conduit below the gate.
• Recreational facilities include a day use area.

Consequences of Not Maintaining the Project

• Failure to adequately fund the flood damage reduction mission at this facility would result in the project's inability to adequately execute the flood damage reduction mission as authorized by congress. The consequences could range in severity depending upon the condition of the project, but would ultimately lead to a failure of the structure and a subsequent life safety concern for those in the affected downstream areas.

• Closure of recreational facilities will result in degradation of facilities, negative public reaction and potential Congressional inquiries.

Regional Importance

• The project averages 949 thousand visitors annually, contributing $28 million to the local economy, supporting 320 jobs. This represents a sizable component of the economy in the local community.

• The Muskingum Watershed Conservancy District makes a direct contribution to the region's economy by employing 85 people year round, and typically more than 300 people to meet summer season needs.

• As a system, the Corps dams in the Muskingum area prevented over $305 million in flood damages in FY 2019 with an accumulative total of $6.1 billion damages prevented since the construction of each project in the system.

• Natural and recreational resources at this project provide social, economic and environmental benefits. Project personnel conducted 25 recreational programs in FY19 that help strengthen family ties and friendships; provide opportunities for children to develop personal skills, social values, and self esteem; and increase water safety.

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

Business Line	FY21 Funding Requests for Maintenance ($1,000) Total	Packages $	Maintenace Needs
Flood Risk Management	$493	$143	Atwood Replace Control Tower Roof
		$250	Replace Left Abutment Seepage Drain and Weir - Atwood
		$50	Spillway Concrete Slab Joint Repair - Atwood
		$50	Spillway Stone Slope Protection - Atwood

Additional Information

- Fee Lands: 109 acres
- Flowage Easement Lands: 5,148 acres
- Project Boundary Line Marked: 3 miles

Congressional Interests

Senator Sherrod Brown, D-OH
Senator Robert Portman, R-OH
Congressman Bill Johnson, R-OH-06
Congressman Bob Gibbs, R-OH-07

US Army Corps of Engineers

Beach City Lake

Sugar Creek of Tuscarawas River, OH

GREAT LAKES & OHIO RIVER DIVISION

Project Features

• One of the original system of 14 reservoir projects constructed in 1938 in cooperation with the Muskingum Watershed Conservancy District.
• Project purposes served are flood damage reduction, recreation and fish and wildlife.
• The dam was completed in 1936 and serves a drainage area of 300 square miles.
• The dam is rolled earth-fill with an impervious core, 64 ft. tall. 5,600 ft. long and 35 ft. wide at the top and 370 ft. wide at the base.
• The spillway is an uncontrolled saddle at the right abutment of the dam. The intake structure contains six gated sluices discharging through twin semi-circular concrete conduits through the right abutment into a stilling basin.
• Minimum pool is maintained with a control weir with two stop log gates.
• Project includes three rolled earth-fill levees and a pump station to protect Brewster, OH, as well as a small industrial levee to protect Industrial Silica Co. at Dundee, OH.

Regional Importance

• The project averages 144 thousand visitors annually, contributing $4 million to the local economy, supporting 45 jobs. This represents a sizable component of the economy in the local community.

•The Muskingum Watershed Conservancy District makes a direct contribution to the region's economy by employing 85 people year round, and typically more than 300 people to meet summer season needs.

• As a system, the Corps dams in the Muskingum area prevented over $305 million in flood damages in FY 2019 with an accumulative total of $6.1 billion damages prevented since the construction of each project in the system.

•Natural and recreational resources at this project provide social, economic and environmental benefits. Project personnel conducted 2 recreational programs in FY19 that help strengthen family ties and friendships; provide opportunities for children to develop personal skills, social values, and self esteem; and increase water safety.

Consequences of Not Maintaining the Project

• Failure to adequately fund the flood damage reduction mission at this facility would result in the project's inability to adequately execute the flood damage reduction mission as authorized by congress. The consequences could range in severity depending upon the condition of the project, but would ultimately lead to a failure of the structure and a subsequent life safety concern for those in the affected downstream areas.

• Closure of recreational facilities will result in degradation of facilities, negative public reaction and potential Congressional inquiries.

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

Business Line	FY21 Funding Requests for Maintenance ($1,000) Total	Packages $	Maintenace Needs
Flood Risk Management	$2,974	$2,974	Beach City Bulkhead Slots

Additional Information

- Fee Lands: 299 acres
- Flowage Easement Lands: 7,818 acres
- Project Boundary Line Marked: 4 miles

Congressional Interests

Senator Sherrod Brown, D-OH
Senator Robert Portman, R-OH
Congressman Bob Gibbs, R-OH-07

US Army Corps of Engineers

Bolivar Dam

Tuscarawas River, OH

GREAT LAKES & OHIO RIVER DIVISION

Project Features

• Authorization: Section 4 of the Flood Control Act of 1938, as amended by Section 4 of the Flood Control Act of 1939.
• One of the original system of 14 reservoir projects constructed in 1938 in cooperation with the Muskingum Watershed Conservancy District.
• Project purposes served are flood damage reduction, recreation and fish and wildlife.
• The dam was completed in September 1938 and serves a drainage area of 504 square miles.
• The dam is rolled earth-fill with an impervious core, 87 ft. tall, 6,300 ft. long. The spillway is an uncontrolled saddle at the south abutment of the dam.
• The intake structure contains six 7 x 15 ft. gated sluices discharging through two 16 x 16 ft. horseshoe tunnels into a stilling basin.
• Other structures include Magnolia Levee which protects the town of Magnolia, and two small industrial levees protecting Sparta Ceramic Co and U.S. Quarry Tile Co.

Regional Importance

• The project averages 179 thousand visitors annually, contributing $5 million to the local economy, supporting 56 jobs. This represents a sizable component of the economy in the local community.

•The Muskingum Watershed Conservancy District makes a direct contribution to the region's economy by employing 85 people year round, and typically more than 300 people to meet summer season needs.

• As a system, the Corps dams in the Muskingum area prevented over $305 million in flood damages in FY 2019 with an accumulative total of $6.1 billion damages prevented since the construction of each project in the system.

•Natural and recreational resources at this project provide social, economic and environmental benefits. Project personnel conducted 10 recreational programs in FY19 that help strengthen family ties and friendships; provide opportunities for children to develop personal skills, social values, and self esteem; and increase water safety.

Consequences of Not Maintaining the Project

• Failure to adequately fund the flood damage reduction mission at this facility would result in the project's inability to adequately execute the flood damage reduction mission as authorized by congress. The consequences could range in severity depending upon the condition of the project, but would ultimately lead to a failure of the structure and a subsequent life safety concern for those in the affected downstream areas.

• Closure of recreational facilities will result in degradation of facilities, negative public reaction and potential Congressional inquiries.

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

Business Line	FY21 Funding Requests for Maintenance ($1,000) Total	Packages $	Maintenenace Needs
Flood Risk Management	$30	$30	Relief Well Maintenance - Bolivar Dam

Additional Information

- Fee Lands: 713 acres
- Flowage Easement Lands: 8,282 acres
- Project Boundary Line Marked: 4 miles

Congressional Interests

Senator Sherrod Brown, D-OH
Senator Robert Portman, R-OH
Congressman Bob Gibbs, R-OH-07

US Army Corps of Engineers

Charles Mill Lake

Muskingum River, OH

GREAT LAKES & OHIO RIVER DIVISION

Project Features

• Authorization: Section 4 of the Flood Control Act of 1938, as amended by Section 4 of the Flood Control Act of 1939.
• One of the original system of 14 reservoir projects constructed in 1938 in cooperation with the Muskingum Watershed Conservancy District.
• Project purposes served are flood damage reduction, recreation and fish and wildlife.
• The dam was completed in August 1936 and serves a drainage area of 215 square miles.
• The dam is a rolled earth-fill with an impervious core, 48 ft. tall and 1,390 ft. long.
• The spillway consists of two uncontrolled concrete overflow sections at the right abutment. The primary spillway has five gated sluices that discharge into a stilling basin. The secondary spillway discharges between the primary spillway and right abutment of the dam.
• Minimum pool is maintained by a control weir with stop gates in front of the sluices and one gated bypass conduit around the control weir.
• Corps of Engineers facilities include a day use area.

Consequences of Not Maintaining the Project

• Failure to adequately fund the flood damage reduction mission at this facility would result in the project's inability to adequately execute the flood damage reduction mission as authorized by congress. The consequences could range in severity depending upon the condition of the project, but would ultimately lead to a failure of the structure and a subsequent life safety concern for those in the affected downstream areas.

• Closure of recreational facilities will result in degradation of facilities, negative public reaction and potential Congressional inquiries.

Regional Importance

• The project averages 1.1 million visitors annually, contributing $333 million to the local economy, supporting 371 jobs. This represents a sizable component of the economy in the local community.

• The Muskingum Watershed Conservancy District makes a direct contribution to the region's economy by employing 85 people year round, and typically more than 300 people to meet summer season needs.

• As a system, the Corps dams in the Muskingum area prevented over $305 million in flood damages in FY 2019 with an accumulative total of $6.1 billion damages prevented since the construction of each project in the system.

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

Business Line	FY21 Funding Requests for Maintenance ($1,000) Total	Packages $	Maintenace Needs
Flood Risk Management	$105	$105	Plans and Specifications for Concrete Repairs at Charles Mill Lake.

Additional Information

- Fee Lands: 111 acres
- Flowage Easement Lands: 8,320 acres
- Project Boundary Line Marked: 4 miles

Congressional Interests

Senator Sherrod Brown, D-OH
Senator Robert Portman, R-OH
Congressman Bob Gibbs, R-OH-07

US Army Corps of Engineers

Clendening Lake

Muskingum River, OH

GREAT LAKES & OHIO RIVER DIVISION

Project Features

• Authorization: Section 4 of the Flood Control Act of 1938, as amended by Section 4 of the Flood Control Act of 1939.
• One of the original system of 14 reservoir projects constructed in 1938 in cooperation with the Muskingum Watershed Conservancy District.
• Project purposes served are flood damage reduction, recreation and fish and wildlife.
•The dam was completed in June 1936 and serves a drainage area of 69 square miles.
• The dam is a rolled earth-fill with an impervious core, 64 ft. tall and 950 ft. long.
• The spillway is an uncontrolled saddle at the west abutment of the dam. The intake structure contains three gated sluices discharging through a horseshoe tunnel near the west abutment into a stilling basin.
• To maintain a minimum pool, a 1.5 diameter siphon is located in each of the outer conduits, in front of the gates, and discharges into the middle sluice below the gate.
• Corps of Engineers facilities include a day use area.

Regional Importance

• The project averages 47 thousand visitors annually, contributing $1.4 million to the local economy, supporting 17 jobs. This represents a sizable component of the economy in the local community.

• The Muskingum Watershed Conservancy District makes a direct contribution to the region's economy by employing 85 people year round, and typically more than 300 people to meet summer season needs.

• As a system, the Corps dams in the Muskingum area prevented over $305 million in flood damages in FY 2019 with an accumulative total of $6.1 billion damages prevented since the construction of each project in the system.

Consequences of Not Maintaining the Project

• Failure to adequately fund the flood damage reduction mission at this facility would result in the project's inability to adequately execute the flood damage reduction mission as authorized by congress. The consequences could range in severity depending upon the condition of the project, but would ultimately lead to a failure of the structure and a subsequent life safety concern for those in the affected downstream areas.

• Closure of recreational facilities will result in degradation of facilities, negative public reaction and potential Congressional inquiries.

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

Business Line	FY21 Funding Requests for Maintenance ($1,000) Total	Packages $	Maintenenace Needs
Flood Risk Management	$902	$902	Cleaning and painting of Sluice gates at Clendening and regrout sluice gate frames
		$404	Cleaning and painting of Sluice gates at Piedmont
		$529	Cleaning and painting of Sluice gates at Senecaville
		$1,060	Clendening repair conduit tunnel outlet and transition area at Clendening.
		$1,905	Clendening Replace Service Bridge.
		$1,905	Clendening Replace Spillway Bridge.

Additional Information

- Fee Lands: 87 acres
- Flowage Easement Lands: 7,214 acres
- Project Boundary Line Marked: 10 miles

Congressional Interests

Senator Sherrod Brown, D-OH
Senator Robert Portman, R-OH
Congressman Bill Johnson, R-OH-06

US Army Corps of Engineers

Dover Dam

Muskingum River, OH

GREAT LAKES & OHIO RIVER DIVISION

Project Features

• Authorization: Section 4 of the Flood Control Act of 1938, as amended by Section 4 of the Flood Control Act of 1939.
• One of the original system of 14 reservoir projects constructed in 1938 in cooperation with the Muskingum Watershed Conservancy District.
• Project purposes served are flood damage reduction, recreation and fish and wildlife.
• The dam was completed in November 1938 and serves a drainage area of 1.405 square miles.
• The dam is concrete gravity, 83 ft. tall and 824 ft. long.
• Other structures include levees at Zoar and Somerdale and three industrial levees protecting Corundite Refractories, Inc. at Zoar, Fairfield Brick Co. at Zoarville, and Norton Chemical Corp at Mineral City.
• Corps recreational facilities include a day use area.

Regional Importance

• The project averages 48 thousand visitors annually, contributing $1.3 million to the local economy, supporting 12 jobs.

• The Muskingum Watershed Conservancy District makes a direct contribution to the region's economy by employing 85 people year round, and typically more than 300 people to meet summer season needs.

• As a system, the Corps dams in the Muskingum area prevented over $305 million in flood damages in FY 2019 with an accumulative total of $6.1 billion damages prevented since the construction of each project in the system.

• The dam was classified as a Dam Safety Action Class 2, which means that "failure could begin during normal operations or be initiated as the consequence of an event. The likelihood of failure from one of these occurrences, prior to remediation, is too high to assure public safety, or, the combination of life or economic consequences with probability of failure is very high." Construction to rehabilitate the dam was completed in FY 2015.

Consequences of Not Maintaining the Project

• Failure to adequately fund the flood damage reduction mission at this facility would result in the project's inability to adequately execute the flood damage reduction mission as authorized by congress. The consequences could range in severity depending upon the condition of the project, but would ultimately lead to a failure of the structure and a subsequent life safety concern for those in the affected downstream areas.

• Closure of recreational facilities will result in degradation of facilities, negative public reaction and potential Congressional inquiries.

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

Business Line	FY21 Funding Requests for Maintenance ($1,000) Total	Packages $	Maintenenace Needs
Flood Risk Management	$2,770	$298	2nd Street Culvert Construction - Zoar Levee. Package 2 of 2.
		$131	2nd Street Culvert Design - Zoar Levee. Package 1 of 2
		$336	Pump Rehabilitation Const. - Zoar Levee
		$30	Replace Crest Elevation to Design Level - Magnolia Levee
		$25	Video Inspect Conduit-CMB-Pavonia Levee
		$350	Zoar Levee - Relief Well Replacement - Package 2 of 3
		$1,600	Zoar Levee - Relief Well Replacement - Package 3 of 3

Additional Information

- Fee Lands: 231 acres
- Flowage Easement Lands: 14,340 acres
- Project Boundary Line Marked: 7 miles

Congressional Interests

Senator Sherrod Brown, D-OH
Senator Robert Portman, R-OH
Congressman Bob Gibbs, R-OH-07

US Army Corps of Engineers

Leesville Lake

Tuscarawas River, OH

GREAT LAKES & OHIO RIVER DIVISION

Project Features

• Authorization: Section 4 of the Flood Control Act of 1938, as amended by Section 4 of the Flood Control Act of 1939.
• One of the original system of 14 reservoir projects constructed in 1938 in cooperation with the Muskingum Watershed Conservancy District.
• Project purposes served are flood damage reduction, recreation and fish and wildlife.
• The dam was completed in October 1936 and serves a drainage area of 48 square miles.
• The dam is rolled earth-fill with an impervious core, 74 ft. tall, 1,695 ft. long with an uncontrolled concrete-lined saddle spillway.
• The intake structure contains three gated sluices discharging through a horseshoe tunnel through the right abutment into a stilling basin.
• To maintain minimum pool, 1.5 ft. diameter siphons are located in front of the gates of the two outer sluices and discharge into the center sluice.
• There are no Corps operated recreation areas at this project.

Consequences of Not Maintaining the Project

• Failure to adequately fund the flood damage reduction mission at this facility would result in the project's inability to adequately execute the flood damage reduction mission as authorized by congress. The consequences could range in severity depending upon the condition of the project, but would ultimately lead to a failure of the structure and a subsequent life safety concern for those in the affected downstream areas.

Regional Importance

• The Muskingum Watershed Conservancy District makes a direct contribution to the region's economy by employing 85 people year round, and typically more than 300 people to meet summer season needs.

• As a system, the Corps dams in the Muskingum area prevented over $305 million in flood damages in FY 2019 with an accumulative total of $6.1 billion damages prevented since the construction of each project in the system.

• The Muskingum Watershed Conservancy District lakes and facilities are estimated to attract approximately 5.5 million visitors to the area each year.

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

Business Line	FY21 Funding Requests for Maintenance ($1,000) Total	Packages $	Maintenace Needs
Flood Risk Management	$315	$315	Rehab Relief Wells - Leesville

Additional Information

- Fee Lands: 161 acres
- Flowage Easement Lands: 4,001 acres
- Project Boundary Line Marked: 0 miles

Congressional Interests

Senator Sherrod Brown, D-OH
Senator Robert Portman, R-OH
Congressman Bill Johnson, R-OH-6

US Army Corps of Engineers

Mohawk Dam

Muskingum River, OH

GREAT LAKES & OHIO RIVER DIVISION

Project Features

• Authorization: Section 4 of the Flood Control Act of 1938, as amended by Section 4 of the Flood Control Act of 1939.
• One of the original system of 14 reservoir projects constructed in 1938 in cooperation with the Muskingum Watershed Conservancy District.
• Project purposes served are flood damage reduction, recreation and fish and wildlife.
•The dam was completed in September 1936 and serves a drainage area of 821 square miles.
• The dam is a gravel and rock-fill with an impervious core, 111 ft. tall, 2,330 ft. long with an uncontrolled saddle spillway at the left abutment of the dam.
• The intake structure contains six caterpillar type gates discharging through two horseshoe tunnels through the left abutment of the dam into a stilling basin.
• Corps of Engineers facilities include a day use area and a camping area, both of which are out-granted.

Regional Importance

• The project averages 8 thousand visitors contributing $244 thousand to the local economy, supporting 3 jobs.

• The Muskingum Watershed Conservancy District makes a direct contribution to the region's economy by employing 85 people year round, and typically more than 300 people to meet summer season needs.

• As a system, the Corps dams in the Muskingum area prevented over $305 million in flood damages in FY 2019 with an accumulative total of $6.1 billion damages prevented since the construction of each project in the system.

Consequences of Not Maintaining the Project

• Failure to adequately fund the flood damage reduction mission at this facility would result in the project's inability to adequately execute the flood damage reduction mission as authorized by congress. The consequences could range in severity depending upon the condition of the project, but would ultimately lead to a failure of the structure and a subsequent life safety concern for those in the affected downstream areas.

• Closure of recreational facilities will result in degradation of facilities, negative public reaction and potential Congressional inquiries.

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

Business Line	FY21 Funding Requests for Maintenance ($1,000) Total	Packages $	Maintenace Needs
Flood Risk Management	$1,001	$484	Mohawk Gates and guides rehab.
		$412	Mohawk Service Bridge Repair -Abutments
		$105	Plans and Specifications for Concrete Repairs on the stilling basin and wall center pier, Mohawk Dam

Additional Information

- Fee Lands: 251 acres
- Flowage Easement Lands: 13,773 acres
- Project Boundary Line Marked: 4 miles

Congressional Interests

Senator Sherrod Brown, D-OH
Senator Robert Portman, R-OH
Congressman Bob Gibbs, R-OH-07

US Army Corps of Engineers

Mohicanville Dam

Muskingum River, OH

GREAT LAKES & OHIO RIVER DIVISION

Project Features

• Authorization: Section 4 of the Flood Control Act of 1938, as amended by Section 4 of the Flood Control Act of 1939.
• One of the original system of 14 reservoir projects constructed in 1938 in cooperation with the Muskingum Watershed Conservancy District.
• Project purposes served are flood damage reduction, recreation and fish and wildlife.
• The dam was completed in 1936 and serves a drainage area of 271 square miles.
• The dam is rolled earth-fill with an impervious core, 46 ft. tall, 1,220 ft. long.
• Mohicanville is a dry dam.
• The spillway is an uncontrolled concrete overflow section at the left abutment of the dam. The intake structure contains three gated sluices, with broome-type gates discharging into a stilling basin.
• Other structures include two rolled earth-fill dikes with impervious cores, both located southeast of the dam.
• Corps of Engineers facilities include a day use area.

Consequences of Not Maintaining the Project

• Failure to adequately fund the flood damage reduction mission at this facility would result in the project's inability to adequately execute the flood damage reduction mission as authorized by congress. The consequences could range in severity depending upon the condition of the project, but would ultimately lead to a failure of the structure and a subsequent life safety concern for those in the affected downstream areas.

• Closure of recreational facilities will result in degradation of facilities, negative public reaction and potential Congressional inquiries.

Regional Importance

• The project averages 25 thousand visitors contributing $694 thousand to the local economy, supporting 8 jobs.

• The Muskingum Watershed Conservancy District makes a direct contribution to the region's economy by employing 85 people year round, and typically more than 300 people to meet summer season needs.

• As a system, the Corps dams in the Muskingum area prevented over $305 million in flood damages in FY 2019 with an accumulative total of $6.1 billion damages prevented since the construction of each project in the system.

Additional Information

- Fee Lands: 95 acres
- Flowage Easement Lands: 13,678 acres
- Project Boundary Line Marked: 3 miles

Congressional Interests

Senator Sherrod Brown D-OH
Senator Robert Portman R-OH
Congressman Bob Gibbs R-OH-07

US Army Corps of Engineers

Piedmont Lake

Tuscarawas River, OH

GREAT LAKES & OHIO RIVER DIVISION

Project Features

• One of the original system of 14 reservoir projects constructed in 1938 in cooperation with the Muskingum Watershed Conservancy District.
• Project purposes served are flood damage reduction, recreation and fish and wildlife.
• The dam was completed in May 1937 and serves a drainage area of 86 square miles.
• The dam is rolled earth-fill, 56 ft. tall. 1,750 ft. long.
• The spillway is an uncontrolled saddle beyond the left abutment. The intake structure contains four gated sluices discharging through a horseshoe tunnel near the left abutment of the stilling basin.
• To maintain minimum pool, siphons are located in front of gates 3 and 4 and discharge below gate 4.
• There are no Corps operated recreational facilities at this project.

Regional Importance

• The project averages 144 thousand visitors contributing $4 million to the local economy, supporting 45 jobs. This represents a sizable component of the economy in the local community.

• The Muskingum Watershed Conservancy District makes a direct contribution to the region's economy by employing 85 people year round, and typically more than 300 people to meet summer season needs.

• As a system, the Corps dams in the Muskingum area prevented over $305 million in flood damages in FY 2019 with an accumulative total of $6.1 billion damages prevented since the construction of each project in the system.

Consequences of Not Maintaining the Project

• Failure to adequately fund the flood damage reduction mission at this facility would result in the project's inability to adequately execute the flood damage reduction mission as authorized by congress. The consequences could range in severity depending upon the condition of the project, but would ultimately lead to a failure of the structure and a subsequent life safety concern for those in the affected downstream areas.

Additional Information

- Fee Lands: 111 acres
- Flowage Easement Lands: 6,615 acres
- Project Boundary Line Marked: 0 miles

Congressional Interests

Senator Sherrod Brown, D-OH
Senator Robert Portman, R-OH
Congressman - Bill Johnson, R-OH-6

US Army Corps of Engineers

Pleasant Hill Lake

Muskingum River, OH

GREAT LAKES & OHIO RIVER DIVISION

Project Features

• Authorization: Section 4 of the Flood Control Act of 1938, as amended by Section 4 of the Flood Control Act of 1939.
• One of the original system of 14 reservoir projects constructed in 1938 in cooperation with the Muskingum Watershed Conservancy District.
• Project purposes served are flood damage reduction, recreation and fish and wildlife.
• The dam was completed in May 1937 and serves a drainage area of 197 square miles.
• The dam is a rolled earth-fill with an impervious core, 113 ft. tall and 775 ft. long.
• The spillway is a morning glory type shaft that discharges into a tunnel through the right abutment of the dam. A second uncontrolled saddle spillway is 1.5 miles north of the dam. The intake structure contains two gated sluices discharging into the tunnel from the morning glory spillway into a stilling basin.
• To maintain minimum pool and to provide automatic discharge, 3 sets of orifices are provided at minimum pool elevation.
• Corps of Engineers facilities include a day use area.

Consequences of Not Maintaining the Project

• Failure to adequately fund the flood damage reduction mission at this facility would result in the project's inability to adequately execute the flood damage reduction mission as authorized by congress. The consequences could range in severity depending upon the condition of the project, but would ultimately lead to a failure of the structure and a subsequent life safety concern for those in the affected downstream areas.

• Closure of recreational facilities will result in degradation of facilities, negative public reaction and potential Congressional inquiries.

Regional Importance

• The project averages 652 thousand visitors annually, contributing $18 million to the local economy, supporting 210 jobs. This represents a sizable component of the economy in the local community.

• The Muskingum Watershed Conservancy District makes a direct contribution to the region's economy by employing 85 people year round, and typically more than 300 people to meet summer season needs.

• As a system, the Corps dams in the Muskingum area prevented over $305 million in flood damages in FY 2019 with an accumulative total of $6.1 billion damages prevented since the construction of each project in the system.

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

Business Line	FY21 Funding Requests for Maintenance ($1,000) Total	Packages $	Maintenace Needs
Flood Risk Management	$1,865	$20	Automate Piezometers - Pleasant Hill
		$155	Plans and Specifications for Concrete Repairs at Pleasant Hill Lake.
		$105	Plans and Specifications for Morning Glory Spillway Bank Stabilization at Pleasant Hill Lake.
		$105	Plans and Specifications to Repair the conduit tunnel outlet and transition area at Piedmont Lake.
		$412	Pleasant Hill Lake Bridge Pier Replacement
		$192	Pleasant Hill Lake Bulkhead Rehabilitation.
		$876	Pleasant Hill Lake Service Bridge Clean and Paint structure

Additional Information

- Fee Lands: 64 acres
- Flowage Easement Lands: 4,236 acres
- Project Boundary Line Marked: 5 miles

Congressional Interests

Senator Sherrod Brown D-OH
Senator Robert Portman R-OH
Congressman Bob Gibbs R-OH-7

US Army Corps of Engineers

Senecaville Lake

Muskingum River, OH

GREAT LAKES & OHIO RIVER DIVISION

Project Features

• Authorization: Section 4 of the Flood Control Act of 1938, as amended by Section 4 of the Flood Control Act of 1939.
• One of the original system of 14 reservoir projects constructed in 1938 in cooperation with the Muskingum Watershed Conservancy District.
• Project purposes served are flood damage reduction, recreation and fish and wildlife.
• The dam was completed in September 1936 and serves a drainage area of 118 square miles.
• The dam is a rolled earth-fill with an impervious core, 45 ft. tall and 2,350 ft. long.
• The spillway is an uncontrolled concrete overflow in the center portion of the dam. The intake structure is located in the center of the spillway section and contains two gated sluices. The intake structure is flanked by two overflow sections, each controlled by a tainter gate. The closed tainter gates form a portion of the spillway crest length.
• Recreational facilities include two out-granted day use areas.

Consequences of Not Maintaining the Project

• Failure to adequately fund the flood damage reduction mission at this facility would result in the project's inability to adequately execute the flood damage reduction mission as authorized by congress. The consequences could range in severity depending upon the condition of the project, but would ultimately lead to a failure of the structure and a subsequent life safety concern for those in the affected downstream areas.

• Closure of recreational facilities will result in degradation of facilities, negative public reaction and potential Congressional inquiries.

Regional Importance

• The project averages 1.7 million visitors annually, contributing $50 million to the local economy, supporting 608 jobs. This represents a sizable component of the economy in the local community.

• The Muskingum Watershed Conservancy District makes a direct contribution to the region's economy by employing 85 people year round, and typically more than 300 people to meet summer season needs.

• As a system, the Corps dams in the Muskingum area prevented over $305 million in flood damages in FY 2019 with an accumulative total of $6.1 billion damages prevented since the construction of each project in the system.

Additional Information

- Fee Lands: 138 acres
- Flowage Easement Lands: 11,554 acres
- Project Boundary Line Marked: 10 miles

Congressional Interests

Senator Sherrod Brown D-OH
Senator Robert Portman R-OH
Congressman Bill Johnson R-OH-06

US Army Corps of Engineers

Tappan Lake

Muskingum River, OH

GREAT LAKES & OHIO RIVER DIVISION

Project Features

• Authorization: Section 4 of the Flood Control Act of 1938, as amended by Section 4 of the Flood Control Act of 1939.
• One of the original system of 14 reservoir projects constructed in 1938 in cooperation with the Muskingum Watershed Conservancy District.
• Project purposes served are flood damage reduction, recreation and fish and wildlife.
•The dam was completed in October 1936 and serves a drainage area of 71 square miles.
• The dam is a rolled earth-fill with an impervious core, 52 ft. tall and 1,550 ft. long.
• The spillway is an uncontrolled saddle near the left abutment. The intake structure has three gated sluices discharging into a concrete horseshoe tunnel and stilling basin.
• To maintain pool, 1.5 ft. diameter siphons are located in front of gates 1 and 3 and discharge below gate 2.
• Recreational facilities include a day use area.

Regional Importance

• The project averages 1.2 million visitors annually, contributing $37 million to the local economy, supporting 422 jobs. This represents a sizable component of the economy in the local community.

• The Muskingum Watershed Conservancy District makes a direct contribution to the region's economy by employing 85 people year round, and typically more than 300 people to meet summer season needs.

• As a system, the Corps dams in the Muskingum area prevented over $305 million in flood damages in FY 2019 with an accumulative total of $6.1 billion damages prevented since the construction of each project in the system.

• Natural and recreational resources at this project provide social, economic and environmental benefits.

Conseguences of Not Maintaining the Project

• Failure to adequately fund the flood damage reduction mission at this facility would result in the project's inability to adequately execute the flood damage reduction mission as authorized by congress. The consequences could range in severity depending upon the condition of the project, but would ultimately lead to a failure of the structure and a subsequent life safety concern for those in the affected downstream areas.

• Closure of recreational facilities will result in degradation of facilities, negative public reaction and potential Congressional inquiries.

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

Business Line	FY21 Funding Requests for Maintenance ($1,000) Total	Packages $	Maintenace Needs
Flood Risk Management	$497	$497	Sandblast and panting of the discharge gates at Tappan

Additional Information

- Fee Lands: 91 acres
- Flowage Easement Lands: 7,983 acres
- Project Boundary Line Marked: 5 miles

Congressional Interests

Senator Sherrod Brown, D-OH
Senator Robert Portman, R-OH
Congressman - Bill Johnson, R-OH-6

US Army Corps of Engineers

Wills Creek Lake

Muskingum River, OH

GREAT LAKES & OHIO RIVER DIVISION

Project Features

• Authorization: Section 4 of the Flood Control Act of 1938, as amended by Section 4 of the Flood Control Act of 1939.
• One of the original system of 14 reservoir projects constructed in 1938 in cooperation with the Muskingum Watershed Conservancy District.
• Project purposes served are flood damage reduction, recreation and fish and wildlife.
• The dam was completed in June 1936 and serves a drainage area of 724 square miles.
• The dam is a rolled earth-fill with an impervious core, 87 ft. tall and1,950 ft. long.
• The spillway is an uncontrolled saddle at the right abutment of the dam. The intake structure has two semi-circular arch conduits controlled by six caterpillar gates and a control weir with two stop log gates for maintaining minimum pool and a stilling basin.
• Recreational facilities include a day use area.

Regional Importance

• The project averages 58 thousand visitors annually, contributing $1.6 million to the local economy, supporting 19 jobs. This represents a sizable component of the economy in the local community.

•The Muskingum Watershed Conservancy District makes a direct contribution to the region's economy by employing 85 people year round, and typically more than 300 people to meet summer season needs.

• As a system, the Corps dams in the Muskingum area prevented over $305 million in flood damages in FY 2019 with an accumulative total of $6.1 billion damages prevented since the construction of each project in the system.

•Natural and recreational resources at this project provide social, economic and environmental benefits. Project personnel conducted 6 recreational programs in FY19 that help strengthen family ties and friendships; provide opportunities for children to develop personal skills, social values, and self esteem; and increase water safety.

Consequences of Not Maintaining the Project

• Failure to adequately fund the flood damage reduction mission at this facility would result in the project's inability to adequately execute the flood damage reduction mission as authorized by congress. The consequences could range in severity depending upon the condition of the project, but would ultimately lead to a failure of the structure and a subsequent life safety concern for those in the affected downstream areas.

• Closure of recreational facilities will result in degradation of facilities, negative public reaction and potential Congressional inquiries.

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

Business Line	FY21 Funding Requests for Maintenance ($1,000) Total	Package $	Maintenenace Needs
Flood Risk Management	$500	$500	WCL Sandblast and painting of the Sluice gates at Wills Creek Lake.

Additional Information

- Fee Lands: 131 acres
- Flowage Easement Lands: 20,252 acres
- Project Boundary Line Marked: 3 miles

Congressional Interests

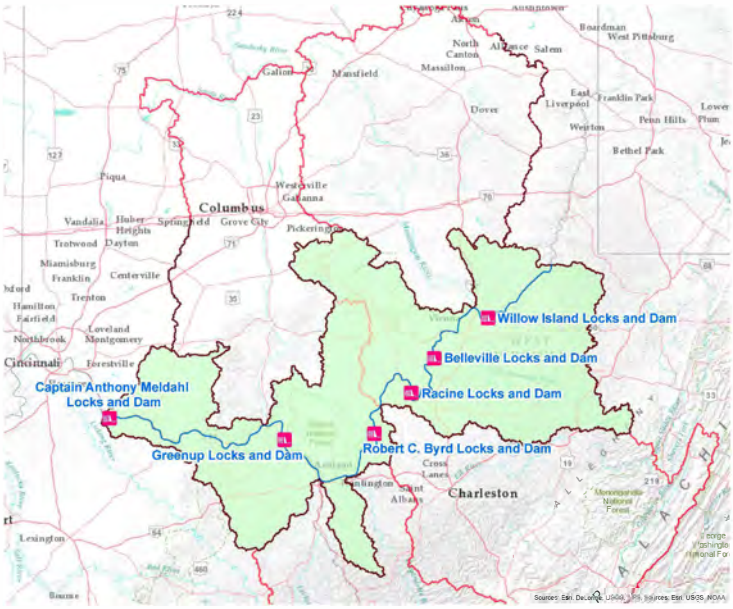
Senator Sherrod Brown, D-OH
Senator Robert Portman, R-OH
Congressman Bill Johnson, R-OH-06
Congressman Bob Gibbs, R-OH-07

US Army Corps of Engineers

Ohio River Locks

Huntington District

GREAT LAKES & OHIO RIVER DIVISION

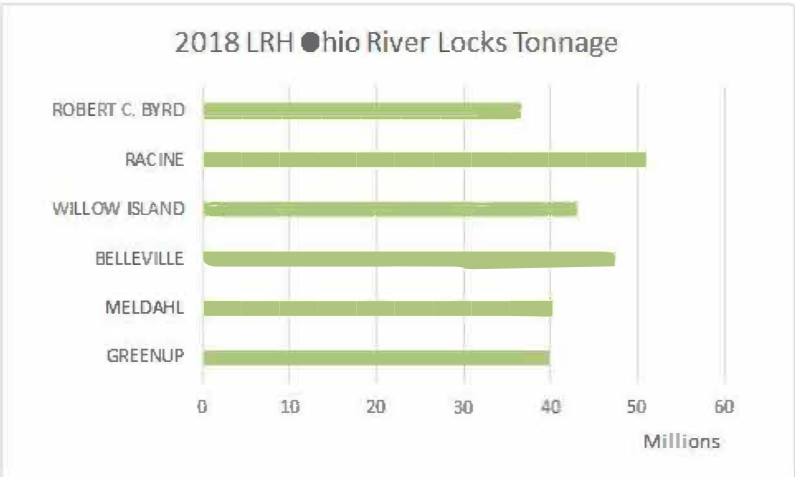


Basin Characteristics

• The Ohio River Basin consists of 204,430 square miles covering parts of 15 states.

• Of the 21 locks and dams on the Ohio River, the Huntington District manages 6 Locks and Dams which form a "staircase" along the Ohio River allowing barge traffic to move commodities throughout the Ohio River Basin and on into the Mississippi River system.

• The Huntington District portion of the Ohio River encompasses 311 of the 981 miles of river, beginning downstream of Pittsburgh, PA and ending at Meldahl Lock and Dam, located 45 miles upstream of Cincinnati, OH.



Regional Importance

• The Ohio River is part of the nation's Inland Waterway System. These interconnected river routes cover 11,000 miles and serve to strategically link geographic areas, major markets, suppliers of raw materials, processors and consumers.

• All 6 Locks and Dams have out-sourced hydropower plants in operation except the RC Byrd facility which is currently permitted and being studied for a hydropower plant.

• Because one barge can transport as much cargo as 15 rail cars and 60 tractor-trailers, waterway transportation benefits the environment. It reduces fuel consumption and emissions, and makes roads safer by keeping more trucks off the highway.

• Every year the locks provide passage for over 70 million tons of goods. Coal is the dominate commodity being transported with lesser amounts of aggregates, petroleum, steel, and grain.

• The Ohio River is also a great resource of recreation in the area, averaging 846 thousand visitors annually, contributing $28.2 million in visitor spending, supporting 296 jobs.

U.S. Army Corps of Engineers Fiscal Year (FY) Project Apprropriations and President's Budget ($1,000)

	FY19 O&M Appropriation			FY20 O&M Appropriation			FY21 O&M President's Budget		
Business Line	Operation	Maintenance	Total	Operation	Maintenance	Total	Operation	Maintenance	Total
Navigation	$14,749	$11,651	$26,400	$12,542	$16,940	$29,482	$14,418	$9,695	$24,113
Recreation	$320		$320	$317	$5	$322	$48		$48
Environmental Stewardship	$20	$95	$115		$30	$30	$150	$50	$200
Total	$15,089	$11,746	**$26,835**	$12,859	$16,975	**$29,834**	$14,616	$9,745	**$24,361**

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

	FY21 Funding Requests for Maintenance ($1,000)		
Business Line	Total	Packages $	Maintenenace Needs
Navigation	$5,824	$1,180	Maintenance for Navigation - Locks (1 of 3)
		$3,161	Maintenance for Navigation - Locks (2 of 3)
		$1,483	Maintenance for Navigation - Locks (3 of 3)

Locks and Dams No.	Miles Below Pitts.					
Willow Island	161.7	Main	110 x1,200	1,017	602.0	1972
		Auxiliary	110 x 600			
Belleville	203.9	Main	110 x1,200	1,017	582.0	1965
		Auxiliary	110 x 600			
Racine	237.5	Main	110 x1,200	1,017	560.0	1967
		Auxiliary	110 x 600			
R.C. Byrd	279.2	Main	110 x1,200	1,116	538.0	1991
		Auxiliary	110 x 600			
Greenup	341	Main	110 x 1,200	1,042	515.0	1962
		Auxiliary	110 x 600			
Meldahl	436.2	Main	110 x 1,200	1,384	485.0	1964
		Auxiliary	10 x 600			

US Army Corps of Engineers

Belleville Locks and Dam

Ohio River, OH

GREAT LAKES & OHIO RIVER DIVISION

Project Features

• Authorization: River and Harbors Acts of 1909 and 1935.
• Primary project purposes are navigation and recreation.
• The project was placed in operation in October 1965.
• The project has a non-navigable, high-lift, gated dam, 1,206 ft. long with a 189 ft. fixed weir with 130 ft. open crest. Eight tainter gates with a clear span of 110 ft. between 15 ft. intermediate piers and 16 ft. end piers and a 1,899 ft. fixed pier. There are two parallel locks measuring 110 x 1,200 ft, and an auxiliary lock measuring 110 x 600 ft, with miter service gates and bulkhead emergency closure.
• American Electric Power (AEP) operates a hydroelectric plant on the West Virginia abutment that has two turbines with total capacity of 42,000 kilowatts.
• Lock is staffed 24 hours a day, 7 days a week.
• The project has seven recreation areas.

Consequences of Not Maintaining the Project

• Failure to maintain the project could result in a halt in the movement of commercial navigation. That stoppage would result in loss of rate savings to the shippers and delayed orders for essential commodities including fuel for power plants and raw materials for major industries. In addition to the loss of the navigation purpose, pool loss could jeopardize water supply for municipal and industrial users, loss of electrical energy produced by hydropower plants at the dams, and loss of habitat for aquatic species. Such a pool loss could affect both recreation users and water quality should there be a prolonged loss.

Regional Importance

• The project averages 178 thousand visitors annually, contributing $5.6 million to the local economy, supporting 58 jobs.

• In calendar year 2018, the volume of cargo transported exceeded 41.6 million tons, with an estimated value of $5.8 billion in commodities. The most common commodities locking through are coal, petroleum products, gravel, rock, cement, scrap metal and chemicals.

• Natural and recreational resources at this project provide social, economic and environmental benefits.

• There are 6 major industries that withdraw water from this pool.

• The minimum fill time for the main lock is 9 minutes and 4.5 minutes for the auxiliary lock.

• It takes approximately 45 minutes for a commercial tugboat with a 15 barge tow and approximately 30 minutes for a pleasure craft to lock through.

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

Business Line	FY21 Funding Requests for Maintenance ($1,000) Total	Packages $	Maintenenace Needs
Navigation	$19,915	$506	480V Feeder Replacement for Lock and Dam - Belleville Locks & Dam
		$150	Belleville Lock And Dam- Bulkhead Crane Rail Rehab
		$2,010	Belleville Lock And Dam- Install Culvert Valve Intake Screens
		$75	Belleville Lock And Dam- Rehab Dam Machinery Buildings
		$244	Belleville Lock And Dam- Locating and removing underground storage tanks
		$725	Belleville Lock And Dam- Replace Handrailing & Safety Rail on Lockwalls
		$115	Belleville Lock And Dam- Upgrade the Upstream Harbor Area
		$1,954	Implementation of Dam Gate Trunnion Rod Testing - Belleville Locks & Dam
		$2,500	Main Chamber Dewater Upstream Miter Gates - Belleville Locks & Dam
		$270	Rehab Lock Chamber Culvert Valve Bulkheads - Belleville Locks & Dam
		$1,700	Repair Bulkhead Crane and Replacement of the intake screens - Belleville Locks & Dam
		$1,800	Repair Filling and Empting System - Belleville Locks & Dam
		$243	Upgrade Dam Gate Controller - Belleville Locks & Dam
		$7,270	Belleville Lock And Dam- Rehab Hydraulic System and Install Individual HPU on Main Chamber
		$353	Belleville Lock And Dam- Rehab trash guards on 24 Floating Mooring Bits in Auxiliary & Main Chambers

Additional Information

- 2019 tonnage (in thousands) : 49,185
- Current Miter Gate In Service Date:
  Main: 1965 Auxiliary: 1965
- Projected Year Lock Miter Gates Reach "F" Condition:
  Main: 2020 Auxiliary: 2025
- Projected Miter Gate Replacement:
  Main: 2025 Auxiliary: 2035
- Fee Lands: 321 acres
- Flowage Easement Lands: 3,569 acres
- Project Boundary Line Marked: 9 miles

Congressional Interests

Senator Sherrod Brown D-OH
Senator Robert Portman R-OH
Congressman Bill Johnson R-OH-06
Senator Joe Manchin, D-WV
Senator Shelley Moore Capito, R-WV
Congressman David McKinley, R-WV-1

US Army Corps of Engineers

Captain Anthony Meldahl Locks and Dam

Ohio River, OH

GREAT LAKES & OHIO RIVER DIVISION

Project Features

• Authorization: River and Harbors Acts of 1909 and 1935.
• Primary project purposes are navigation and recreation.
• The project was placed in operation in November 1962.
• The project includes a non-navigable, high-lift, 1,756 ft. long gated dam including a 372 ft. fixed weir with a 310 ft. open crest. Twelve tainter gates span 100 ft. between 14 ft. intermediate piers and 15 ft. end piers. The dam has two types of gates, submergible and non-submergible ogee sill units. There are two parallel locks. The main lock is 110 x 1,200 ft. and the auxiliary lock is 110 x 600 ft., both with miter service gates and vertical-lift emergency gates.
• American Municipal Power (AMP) operates a hydropower electric plant on the Kentucky abutment of the dam. The plant includes three turbines with a total capacity of 105,000 kilowatts. Commercial operation of the hydropower plant began in April 2016.
• The project has 9 day recreation areas including day use and camping.

Consequences of Not Maintaining the Project

• Failure to maintain the project could result in a halt in the movement of commercial navigation. That stoppage would result in loss of rate savings to the shippers and delayed orders for essential commodities including fuel for power plants and raw materials for major industries. In addition to the loss of the navigation purpose, pool loss could jeopardize water supply for municipal and industrial users, loss of electrical energy produced by hydropower plants at the dams, and loss of habitat for aquatic species. Such a pool loss could affect both recreation users and water quality should there be a prolonged loss.

Regional Importance

• The project averages 129 thousand visitors annually, contributing $4.5 million to the local economy, supporting 49 jobs.

• In calendar year 2018, the volume of cargo transported exceeded 37 million tons for an estimated value of $7.9 billion in commodities. The most common cargo locking though are coal, petroleum products, gravel, rock, cement, scrap metal and chemicals.

• Natural and recreational resources at this project provide social, economic and environmental benefits. Project personnel conducted 2 recreational programs in FY19 that help strengthen family ties and friendships; provide opportunities for children to develop personal skills, social values, and self esteem; and increase water safety.

• There are 5 major industries withdrawing water from this pool.

• The minimum fill time for the main lock is 9 minutes and 4.5 minutes for the auxiliary lock.

• It takes approximately 45 minutes for a commercial tugboat with a 15 barge tow and approximately 30 minutes for a pleasure craft to lock through.

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

Business Line	FY21 Funding Requests for Maintenance ($1,000) Total	Packages $	Maintenace Needs
Navigation	$22,364	$240	Complete Miter Gate Screening Assessment - Meldahl Locks & Dam (2 of 3)
		$500	Complete Miter Gate Standard Design - Meldahl Locks & Dam (3 of 3)
		$3,003	Implementation of Dam Gate Trunnion Rod Testing - Meldahl Locks & Dam
		$104	Meldahl Lock And Dam- Critical Waterway Signage
		$200	Meldahl Lock And Dam- Friction Analysis of Dam Tainter Gates
		$705	Meldahl Lock And Dam- Install Culvert Valve Intake Screens
		$428	Meldahl Lock And Dam- Locating and removing underground storage tanks
		$75	Meldahl Lock And Dam- Plans & Specs Repairs to Conduits, Cable Trays, & Cable Supports
		$354	Meldahl Lock And Dam- Rehab Emergency Bulkhead Crane Machinery and Conductor Rail System
		$494	Meldahl Lock And Dam- Repair Primary Chamber Wall Armor
		$373	Meldahl Lock And Dam- Replace Dam Piers Panelboards
		$10,720	Meldahl Lock And Dam- Replace Downstream Main Chamber Miter Gate
		$428	Meldahl Lock And Dam- Replace Emergency Gate Wire Rope, Controls and Load Cells
		$725	Meldahl Lock And Dam- Replace Handrailing & Safety Rail on Lockwalls
		$75	Upgrade Motor Control Center - Meldahl Locks & Dam
		$3,500	Repair Main Chamber Filling and Emptying System - Meldahl Locks & Dam
		$275	Rehab Lock Chamber Culvert Valve Bulkheads - Meldahl Locks & Dam
		$165	Rehab Dam Tainter Gate - Meldahl Locks & Dam
Recreation	$228	$228	Meldahl L&D - Replace Restroom in Day Use Area

Additional Information

- 2019 tonnage (in thousands) : 39,232

- Current Miter Gate In Service Date:
Main: Downstream: 1962 Upstream: 2017
Auxiliary: Downstream:1962 Upstream: 2012

- Projected Year Lock Miter Gates Reach "F" Condition:
Main: Downstream: 2017 Upstream: 2060
Auxiliary Downstream: 2020 Upstream: 2070

- Projected Miter Gate Replacement:
Main: Downstream: 2020 Upstream: 2087
Auxiliary: Downstream: 2032 Upstream: 2082

- Fee Lands: 510 acres

- Flowage Easement Lands: 6,056 acres

Congressional Interests

Senator Sherrod Brown D-OH
Senator Robert Portman R-OH
Senator Mitch McConnell R-KY
Senator Rand Paul R-KY
Congressman Thomas Massie R-KY-04
Congressman Brad Wenstrup R-OH-02

US Army Corps of Engineers

Greenup Locks and Dam

Ohio River, KY and OH

GREAT LAKES & OHIO RIVER DIVISION

Project Features

• Authorization: River and Harbors Acts of 1909 and 1935.
• Primary project purposes are navigation and recreation.
• The project was placed in operation in November 1959.
• The project has a non-navigable, high lift, 1,287 ft. long gated dam, including a 245 ft. fixed weir with a 223 ft. open crest. Nine tainter gates with a clear span of 100 ft. between 14 ft. intermediate piers and 15 ft. end piers. There are two types of gates, submergible and non-submergible ogee sill units. There are two parallel locks, the main lock is 110 x 1,200 ft. and the auxiliary lock is 110 x 600 ft. with miter gates and vertical-lift emergency gates.
• The City of Hamilton, OH operates a hydroelectric plant on the Ohio abutment that has three turbines with total capacity of 70,000 kilowatts.
• Lock is staffed 24 hours a day, 7 days a week.
• The project has 11 day use recreation areas.

Consequences of Not Maintaining the Project

• Failure to maintain the project could result in a halt in the movement of commercial navigation. That stoppage would result in loss of rate savings to the shippers and delayed orders for essential commodities including fuel for power plants and raw materials for major industries. In addition to the loss of the navigation purpose, pool loss could jeopardize water supply for municipal and industrial users, loss of electrical energy produced by hydropower plants at the dams, and loss of habitat for aquatic species. Such a pool loss could affect both recreation users and water quality should there be a prolonged loss.

Regional Importance

• The project averages 460 thousand visitors annually, contributing $15.5 million to the local economy, supporting 162 jobs.

• In calendar year 2018, the volume of cargo transported exceeded 38.5 million tons, with an estimated value of $8.1 billion. The most common cargo locking though are coal, petroleum products, gravel, rock, cement, scrap metal and chemicals.

• Natural and recreational resources at this project provide social, economic and environmental benefits. Project personnel conducted 3 recreational programs in FY19 that help strengthen family ties and friendships; provide opportunities for children to develop personal skills, social values, and self esteem; and increase water safety.

• There are 14 major industries withdrawing water from this pool.

• The minimum fill time for the main lock is 9 minutes and 4.5 minutes for the auxiliary lock.

• It takes approximately 45 minutes for a commercial tugboat with a 15 barge tow and approximately 30 minutes for a pleasure craft to lock through.

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

Business Line	FY21 Funding Requests for Maintenance ($1,000) Total	Packages $	Maintenace Needs
Navigation	$23,287	$8,500	Dewater and Repair Auxiliary Chamber - Greenup Locks & Dam
		$2,300	Dewater Main Chamber Upper Miter Gates - Greenup Locks & Dam
		$75	Greenup Lock And Dam- Infiltration Repairs in Crossovers
		$104	Greenup Lock And Dam- Critical Waterway Signage
		$200	Greenup Lock And Dam- Friction Analysis of Dam Tainter Gates
		$336	Greenup Lock And Dam- Locating and removing underground storage tanks
		$528	Greenup Lock And Dam- Middle Wall Upstream Bullnose Armor Damage
		$150	Greenup Lock And Dam- New 20 Ton Project Crane Barge
		$100	Greenup Lock And Dam- Repairs to Conduits, Cable Trays & Cable Supports
		$716	Greenup Lock And Dam- Repairs to Upstream Guard Wall Bullnose Monolith
		$348	Greenup Lock And Dam- Replace Dam Gates Cathodic Protection
		$2,590	Greenup Lock And Dam- Replace Dam Lineshafts and Gearboxes
		$725	Greenup Lock And Dam- Replace Handrailing & Safety Rail on Lockwalls
		$75	Greenup Lock And Dam- Shoreline Erosion Protection
		$440	Implementation of Dam Gate Trunnion Rod Testing - Greenup Locks & Dam
		$270	Rehab Lock Chamber Culvert Valve Bulkheads - Greenup Locks & Dam
		$4,600	Repairs to Miter Gate Machinery Filling and Emptying System - Greenup Locks & Dam
		$1,000	Replace Dam Bulkhead Crane Wire Rope - Greenup Locks & Dam
		$55	Replace Air Compressors for Main and Auxiliary Chambers - Greenup Locks & Dam
		$75	Rehab Floating Mooring Facility - Project Harbor Area - Greenup Locks & Dam
		$100	Greenup Lock And Dam- Replace Motor Control Center

Additional Information

- 2019 tonnage (in thousands) : 40,150

- Current Miter Gate In Service Date:
  Main: 2016 Auxiliary: 1959

- Projected Year Lock Miter Gates Reach "F" Condition:

Main: Upstream: 2067 Downstream: 2060
Auxiliary Upstream: 2019 Downstream: 2020

- Projected Miter Gate Replacement:

Main: 2071
Auxiliary: Downstream: 2029 Upstream: 2028

- Fee Lands: 318 acres

- Flowage Easement Lands: 2,942 acres

- Project Boundary Line Marked: 14 miles

Congressional Interests

Senator Sherrod Brown D-OH
Senator Robert Portman R-OH
Senator Mitch McConnell R-KY
Senator Rand Paul R-KY
Congressman Thomas Massie R-KY-04
Congressman Bill Johnson R-OH-06

US Army Corps of Engineers

Racine Locks and Dam

Ohio River, OH and WV

GREAT LAKES & OHIO RIVER DIVISION

Project Features

• Authorization: River and Harbors Acts of 1909 and 1935.

• Primary project purposes are navigation and recreation.

• The project was placed in operation in December 1967.

• The project has a non-navigable, high lift, 1,173 ft. long gated dam with eight tainter gates with a clear span of 110 ft. between 15 ft. intermediate piers and 16 ft. end piers. There are two parallel locks. The main lock is 110 x 1,200 ft. and the auxiliary lock is 110 x 600 ft with miter service gates and vertical-lift emergency gates.

• American Electric Power Company (AEP) owns and operates a hydroelectric plant on the Ohio abutment of the dam that has two 24,000 KW bulb-type Kaplan turbines operating 24 hours a day as run of river conditions permit.

• Lock is staffed 24 hours a day, 7 days a week.

• The project has 2 day use recreation areas.

Consequences of Not Maintaining the Project

• Failure to maintain the project could result in a halt in the movement of commercial navigation. That stoppage would result in loss of rate savings to the shippers and delayed orders for essential commodities including fuel for power plants and raw materials for major industries. In addition to the loss of the navigation purpose, pool loss could jeopardize water supply for municipal and industrial users, loss of electrical energy produced by hydropower plants at the dams, and loss of habitat for aquatic species. Such a pool loss could affect both recreation users and water quality should there be a prolonged loss.

Regional Importance

• The project averages 20 thousand visitors annually, contributing $714 thousand to the local economy, supporting 4 jobs.

• In calendar year 2018, the volume of cargo transported exceeded 42 million tons for an estimated value of $5.9 billion in commodities. The most common cargo locking though are coal, petroleum products, gravel, rock, cement, scrap metal and chemicals.

• Natural and recreational resources at this project provide social, economic and environmental benefits. Project personnel conducted recreational programs in FY19 that help strengthen family ties and friendships; provide opportunities for children to develop personal skills, social values, and self esteem; and increase water safety.

• There are 2 major industries withdrawing water from this pool.

• The minimum fill time for the main lock is 9 minutes and 4.5 minutes for the auxiliary lock.

• It takes approximately 45 minutes for a commercial tugboat with a 15 barge tow and approximately 30 minutes for a pleasure craft to lock through.

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

Business Line	FY21 Funding Requests for Maintenance ($1,000) Total	Packages $	Maintenenace Needs
Navigation	$26,766	$7,700	Dewater Auxiliary Chamber Miter Gates - Racine Locks & Dam
		$1,156	Implementation of Dam Gate Trunnion Rod Testing - Racine Locks & Dam
		$75	Racine Lock And Dam- Infiltration Repairs in Crossovers
		$2,010	Racine Lock And Dam- Install Culvert Valve Intake Screens
		$336	Racine Lock And Dam- Locating & Removing Underground Storage Tanks
		$68	Racine Lock And Dam- Rehab Project Workboat
		$485	Racine Lock And Dam- Repair Low Voltage Feeder
		$140	Racine Lock And Dam- Replace Emergency Gate Controls and Load Cells
		$4,896	Racine Lock And Dam- Replace Entrance Access Bridge
		$725	Racine Lock And Dam- Replace Handrailing & Safety Rail on Lockwalls
		$75	Rehab Dam Tainter Gate Gearboxes and Lineshafts - Racine Locks & Dam
		$6,700	Repair and Rehab Miter Gate and Emergency Gate - Racine Locks & Dam
		$2,400	Replace Dam Tainter Gates Side Seals - Racine Locks & Dam

Additional Information

- 2019 tonnage (in thousands) : 51,103
- Current Miter Gate In Service Date: 1967
- Projected Year Lock Miter Gates Reach "F" Condition:
  Main: Downstream: 2022 Upstream: 2022
  Auxiliary: Downstream: 2025 Upstream: 2026
- Projected Miter Gate Replacement:
  Main : Downstream: 2021 Upstream: 2025
  Auxiliary: Downstream: 2035 Upstream: 2036
- Fee Lands: 408 acres
- Flowage Easement Lands: 1,683 acres
- Project Boundary Line Marked: 18 miles

Congressional Interests

Senator Joe Manchin III D-WV
Senator Shelley Moore Capito R-WV
Senator Sherrod Brown D-OH
Senator Robert Portman R-OH
Congressman Carol Miller R-WV-03
Congressman Bill Johnson R-OH-06

US Army Corps of Engineers

Robert C. Byrd Locks and Dam

Ohio River, OH

GREAT LAKES & OHIO RIVER DIVISION

Project Features

• Authorization: River and Harbors Acts of 1909 and 1935.

• Primary project purposes are navigation and recreation.

• The project was placed in operation in August 1937 as Gallipolis Locks and Dam. The name was changed to R. C. Byrd Locks and Dam in 1991 with the construction of two new locks.

• The project includes a non-navigable, high-lift, 1,132 ft. long gated dam. Eight roller gates span 125.5 ft. between 16 ft. piers. There are two parallel locks. The main lock is 110 x 1,200 ft. and the auxiliary lock is 110 x 600 ft., both with miter service gates.

• American Municipal Power (AMP) currently holds a preliminary permit for hydropower development on the Ohio abutment of the dam. The proposed project with include two turbines with a total capacity of 48,000 kilowatts.

• The project has 4 day use recreation areas.

Consequences of Not Maintaining the Project

• Failure to maintain the project could result in a halt in the movement of commercial navigation. That stoppage would result in loss of rate savings to the shippers and delayed orders for essential commodities including fuel for power plants and raw materials for major industries. In addition to the loss of the navigation purpose, pool loss could jeopardize water supply for municipal and industrial users, loss of electrical energy produced by hydropower plants at the dams, and loss of habitat for aquatic species. Such a pool loss could affect both recreation users and water quality should there be a prolonged loss.

Regional Importance

• The project averages 6 thousand visitors annually, contributing $187 thousand to the local economy, supporting 2 jobs.

• In calendar year 2018, the volume of cargo transported exceeded 34.4 million tons, valued at over $6.0 billion in commodities. The most common cargo locking though are coal, petroleum products, gravel, rock, cement, scrap metal and chemicals.

• Natural and recreational resources at this project provide social, economic and environmental benefits. Project personnel conducted 6 recreational programs in FY19 that help strengthen family ties and friendships; provide opportunities for children to develop personal skills, social values, and self esteem; and increase water safety.

• There are 4 major industries withdrawing water from this pool.

• The minimum fill time for the main lock is 9 minutes and 4.5 minutes for the auxiliary lock.

• It takes approximately 45 minutes for a commercial tugboat with a 15 barge tow and approximately 30 minutes for a pleasure craft to lock through.

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

Business Line	FY21 Funding Requests for Maintenance ($1,000) Total	Packages $	Maintenace Needs
Navigation	$3,288	$50	Abutment Cell Settlement Investigation - Robert C. Byrd Locks & Dam
		$633	RC Byrd Lock And Dam- Installation of Security System to include CCTV/EES
		$244	RC Byrd Lock And Dam- Locating and removing underground storage tanks
		$236	RC Byrd Lock And Dam- Project Operations Building Rehab
		$1,465	RC Byrd Lock And Dam- Replace Trash Boom for Lock Intakes
		$270	Rehab Lock Chamber Culvert Valve Bulkheads - Robert C. Byrd Locks & Dam
		$150	Repair Access Road Bridge - Robert C. Byrd Locks & Dam
		$240	Replace Air Compressors - Robert C Byrd Locks & Dam

Additional Information

- 2019 tonnage (in thousands) : 39,619
- Current Miter Gate In Service Date:
  Main: 1993 Auxiliary: 1959
- Projected Year Lock Miter Gates Reach "F" Condition:

Main: Upstream: 2019 Downstream: 2019
Auxiliary: Upstream: 2025 Downstream: 2025

- Projected Miter Gate Replacement:
  Main: 2050, Auxiliary: 2027
- Fee Lands: 1,347 acres
- Flowage Easement Lands: 1,798 acres
- Project Boundary Line Marked: 14 miles

Congressional Interests

Senator Joe Manchin III D-WV
Senator Shelley Moore Capito R-WV
Senator Sherrod Brown D-OH
Senator Robert Portman R-OH
Congressman Carol Miller R-WV-03
Congressman Bill Johnson R-OH-06

US Army Corps of Engineers

Willow Island Locks and Dam

Ohio River, OH

GREAT LAKES & OHIO RIVER DIVISION

Project Features

• Authorization: River and Harbors Acts of 1909 and 1935.

• Primary project purposes are navigation and recreation.

• The project was placed in operation in January 1972.

• The project includes a non-navigable, high-lift, 1,128 ft. dam including 111 ft. fixed weir with an 84 ft. open crest. The dam has eight tainter gates spanning 110 ft. between piers. There are two parallel locks. The main lock is 110 x 1,200 ft. and the auxiliary lock is 110 x 600 ft., both with miter service gates and vertical-lift emergency gates.

• American Municipal Power (AMP) operates a hydropower electric plant on the West Virginia abutment of the dam. The plant includes two turbines with a total capacity of 35,000 KW. Commercial operation of the hydropower plant started in February 2016.

• The project has 3 day use recreation areas.

Consequences of Not Maintaining the Project

• Failure to maintain the project could result in a halt in the movement of commercial navigation. That stoppage would result in loss of rate savings to the shippers and delayed orders for essential commodities including fuel for power plants and raw materials for major industries. In addition to the loss of the navigation purpose, pool loss could jeopardize water supply for municipal and industrial users, loss of electrical energy produced by hydropower plants at the dams, and loss of habitat for aquatic species. Such a pool loss could affect both recreation users and water quality should there be a prolonged loss.

Regional Importance

• The project averages 52 thousand visitors annually, contributing $1.6 million to the local economy, supporting 18 jobs.

• In calendar year 2018, the volume of cargo transported exceeded 7.7 million tons, with an estimated value of $848 million in commodities. The most common cargo locking through are coal, petroleum products, gravel, rock, cement, scrap metal and chemicals.

• Natural and recreational resources at this project provide social, economic and environmental benefits.

• There are 6 major industries withdrawing water from this pool.

• The minimum fill time for the main lock is 9 minutes and 4.5 minutes for the auxiliary lock.

• It takes approximately 45 minutes for a commercial tugboat with a 15 barge tow and approximately 30 minutes for a pleasure craft to lock through.

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

Business Line	FY21 Funding Requests for Maintenance ($1,000) Total	Packages $	Maintenenace Needs
Navigation	$8,825	$411	Implementation of Dam Gate Trunnion Rod Testing - Willow Island Locks & Dam
		$380	Install Hydraulic Latching Devices on All Miter Gates - Willow Island Locks & Dam
		$270	Rehab Lock Chamber Culvert Valve Bulkheads - Willow Island Locks & Dam
		$75	Replace 480V Main Feeder - Willow Island Locks & Dam
		$6	Update IRRMP for Willow Island L&D
		$208	Willow Island Lock And Dam- Critical Waterway Signage
		$2,010	Willow Island Lock And Dam- Install Culvert Valve Intake Screens
		$244	Willow Island Lock And Dam- Investigation and Removal of Underground Storage Tanks
		$343	Willow Island Lock And Dam- Repair Upper Riverwall Lock Wall Bullnose
		$165	Willow Island Lock And Dam- Repairs for Dam Stilling Basin Apron Scour
		$3,815	Willow Island Lock And Dam- Repairs to the Dam Service Bridge
		$898	Willow Island Lock And Dam- Replace Handrailing & Safety Rail on Lockwalls

Additional Information

- 2019 tonnage (in thousands) : 44,183
- Current Miter Gate In Service Date: 1972
- Projected Year Lock Miter Gates Reach "F" Condition:

Main: Upstream: 2022 Downstream: 2022
Auxiliary: Upstream: 2021 Downstream: 2024

- Projected Miter Gate Replacement:

Main: Downstream: 2040 Upstream: 2040
Auxiliary: Downstream: 2030 Upstream: 2026

- Fee Lands: 142 acres
- Flowage Easement Lands: 1,607 acres
- Project Boundary Line Marked: 5.6 miles

Congressional Interests

Senator Joe Manchin III D-WV
Senator Shelley Moore Capito R-WV
Senator Sherrod Brown D-OH
Senator Robert Portman R-OH
Congressman Davis McKinley R-WV-01
Congressman Bill Johnson R-OH-06

LOUISVILLE DISTRICT

US Army Corps of Engineers

Barren River Lake

Barren River, KY

GREAT LAKES & OHIO RIVER DIVISION

Project Features

- Authorization: Flood Control Act of 1938.
- Barren River Lake is situated in the rural, rolling hills of Allen, Barren and Monroe counties in South Central Kentucky. The dam is located 12 miles east of Scottsville, KY and 15 miles southwest of Glasgow, KY on State Highway 252.
- Primary project purposes are flood risk reduction, water supply, fish and wildlife and recreation.
- Construction began on the dam in March 1960 and the lake became operational in October 1964. Barren River Lake covers 20,150 acres at maximum flood control pool and 10,000 acres at normal summer pool. The drainage area above the dam is 940 square miles, and since its completion has prevented more than 8 times its original construction cost in flood damages.
- There are four campgrounds and four day use areas managed by the Corps of Engineers at Barren River Lake as well as four commercial marinas operated under concessionaire lease.

Consequences of Not Maintaining the Project

- Failure to adequately fund the flood risk management mission at this facility would result in the project's inability to adequately execute the flood risk management mission as authorized by congress. The consequences could range in severity depending upon the condition of the project, but would ultimately lead to a failure of the structure and a subsequent life safety concern for those in the affected downstream areas.

- Closure of recreational facilities will result in degradation of facilities, negative public reaction and potential Congressional inquiries.

Regional Importance

- The project averages 1.24 million visitors annually, contributing $31.99 million to the local economy. This represents a sizable component of the economy in the local community.

- 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 project has prevented over $216 million in cumulative flood damages through FY 2019.

- 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.

U.S. Army Corps of Engineers Fiscal Year (FY) Project Apprropriations and President's Budget ($1,000)

	FY19 O&M Appropriation			FY20 O&M Appropriation			FY21 O&M President's Budget		
Business Line	Operation	Maintenance	Total	Operation	Maintenance	Total	Operation	Maintenance	Total
Flood Risk Management	$1,527	$772	$2,299	$1,671	$454	$2,125	$1,874	$285	$2,159
Recreation	$702		$702	$641	$618	$1,259	$666		$666
Environmental Stewardship	$218	$392	$610	$537	$155	$692	$219	$94	$313
Water Supply	$11		$11	$11		$11	$11		$11
Total	$2,458	$1,164	**$3,622**	$2,860	$1,227	**$4,087**	$2,770	$379	**$3,149**

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

	FY21 Funding Requests for Maintenance ($1,000)		
Business Line	Total	Packages $	Maintenace Needs
Flood Risk Management	$159	$159	Maintenance for Flood Risk Management
Recreation	$1,172	$95	Barren River Lake- Demo sewage treatment plants at The Narrows & Baileys Point Rec Areas
		$240	Barren River Lake- Exterior renovation of two showerhouses and one restroom at The Narrows Rec Area
		$244	Barren River Lake- Exterior renovation of two showerhouses at Baileys Point Campground.
		$390	Barren River Lake- Renovate 100 Campsites at Baileys Point campground.
		$96	Repair boat ramps at The Narrows, Browns Ford and Baileys Point
		$107	Upgrade electric main electric wiring at Narrows Campground

Additional Information

- Fee Lands: 20,106 acres
- Flowage Easement Lands: 4,561 acres
- Project Boundary Line Marked: 296 miles

Congressional Interests

Senator Mitch McConnell, R-KY
Senator Rand Paul, R-KY
Congressman James Comer, R-KY-1
Congressman Brett Gutherie, R-KY-2

US Army Corps of Engineers

Brookville Lake

East Fork of the Whitewater River, IN

GREAT LAKES & OHIO RIVER DIVISION

Project Features

- Authorization: Flood Control Act of 1938.

- Primary project purposes are flood damage reduction, fish and wildlife, and recreation.

- The lake is located in Franklin and Union counties on the East Fork of the Whitewater River. The dam is about one-half mile above Brookville, Indiana, and 36 miles northwest of Cincinnati, Ohio.
- Brookville Lake exists as a cooperative management effort between the Corps of Engineers and the Indiana Department of Natural Resources.
- The earthen dam was constructed in 1974 with a height of 181 feet and length of 2,800 feet long at its crest. The dam impounds the East Fork Of Whitewater River for flood control and storm water management.
- The riverine reservoir it creates, has a normal water surface of 8.2 square miles, a maximum capacity of 359,600 acre-feet, and normal storage of 184,900 acre-feet.
- Recreation includes boating, camping, fishing, golfing, hiking, hunting, and swimming.
- Two State Recreation Areas are Mounds and Quakertown. Nearby is Whitewater Memorial State Park.

Consequences of Not Maintaining the Project

- Failure to adequately fund the flood risk management mission at this facility would result in the project's inability to adequately execute the flood risk management mission as authorized by congress. The consequences could range in severity depending upon the condition of the project, but would ultimately lead to a failure of the structure and a subsequent life safety concern for those in the affected downstream areas.

- Closure of recreational facilities will result in degradation of facilities, negative public reaction and potential Congressional inquiries.

Regional Importance

- The 5,260 acre lake provides flood reduction and a whole lot more. The Brookville region offers many opportunities to enjoy wildlife or recreate in the great outdoors. The project averages 883 thousand visitors annually, contributing $18.8 million to the local economy. This represents a sizable component of the economy in the local community.

- The project has prevented over $72.42 million in cumulative flood damages through FY 2019.

U.S. Army Corps of Engineers Fiscal Year (FY) Project Apprropriations and President's Budget ($1,000)

	FY19 O&M Appropriation			FY20 O&M Appropriation			FY21 O&M President's Budget		
Business Line	Operation	Maintenance	Total	Operation	Maintenance	Total	Operation	Maintenance	Total
Flood Risk Management	$948	$387	$1,335	$958	$4,188	$5,146	$1,073	$238	$1,311
Recreation	$90		$90	$87		$87	$94		$94
Environmental Stewardship	$310	$70	$380	$35	$308	$343	$34	$284	$318
Water Supply	$8		$8	$8		$8	$8		$8
Total	$1,356	$457	**$1,813**	$1,088	$4,496	**$5,584**	$1,209	$522	**$1,731**

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

	FY21 Funding Requests for Maintenance ($1,000)		
Business Line	Total	Packages $	Maintenenace Needs
Flood Risk Management	$161	$46	Maintenance for Flood Risk Management
		$85	Parking lot upgrade
		$30	Removal of Radio Tower at Project Office
Recreation	$116	$51	Maintenance for Recreation
		$65	Overlook Picnic Shelter - Floor Decking, Handrail, and Retaining Wall Replacement
Environmental Stewardship	$47	$47	Wildlife Habitat Management, Maintenance for Environmental Stewardship

Additional Information

- Fee Lands: 16,957 acres
- Flowage Easement Lands: 380 acres
- Project Boundary Line Marked: 80 miles

Congressional Interests

Senator Todd Young, R-IN
Senator Mike Braun, R-IN
Congressman Greg Pence, R-IN-6

US Army Corps of Engineers

Buckhorn Lake

Middle Fork of the Kentucky River, KY

GREAT LAKES & OHIO RIVER DIVISION

Project Features

- Authorization: Flood Control Act of 1938.
- Primary project purposes are flood damage reduction, fish and wildlife, and recreation.
- 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, Ky., about 100 miles southeast of Lexington and 30 miles west of Hazard.
- Buckhorn Dam is an earthen dam, 160 feet high and 1,020 feet in length at its crest, with a maximum capacity of 167,900 acre-feet and normal storage of 32,100 acre feet.
- The riverine reservoir it creates, has a normal water surface of 8.2 square miles, a maximum capacity of 359,600 acre-feet, and normal storage of 184,900 acre-feet.
- At Buckhorn Lake you can camp or picnic at one of four Corps operated recreation areas; fish, boat, swim or ski on Buckhorn Lake; hunt in the Buckhorn Lake Wildlife Management Area or Daniel Boone National Forest; walk numerous trails; or enjoy a weekend getaway at the Buckhorn Lake State Resort Park.

Consequences of Not Maintaining the Project

- Failure to adequately fund the flood risk management mission at this facility would result in the project's inability to adequately execute the flood risk management mission as authorized by congress. The consequences could range in severity depending upon the condition of the project, but would ultimately lead to a failure of the structure and a subsequent life safety concern for those in the affected downstream areas.

- Closure of recreational facilities will result in degradation of facilities, negative public reaction and potential Congressional inquiries.

Regional Importance

- The 1,230 acre Buckhorn Lake and surrounding area offers a wide variety of outdoor recreation opportunities. The Corps, in cooperation with the Commonwealth of Kentucky manages the land and water for wildlife, fisheries and recreation. The project averages 203 thousand visitors annually, contributing $2.9 million to the local economy. This represents a sizable component of the economy in the local community.

- Buckhorn Lake is home to a sizable population of muskie, making it an attractive destination for fishermen.

- The project has prevented over $82.95 million in cumulative flood damages through FY 2019.

U.S. Army Corps of Engineers Fiscal Year (FY) Project Apprropriations and President's Budget ($1,000)

	FY19 O&M Appropriation			FY20 O&M Appropriation			FY21 O&M President's Budget		
Business Line	Operation	Maintenance	Total	Operation	Maintenance	Total	Operation	Maintenance	Total
Flood Risk Management	$857	$309	$1,166	$1,070	$607	$1,677	$1,000	$374	$1,374
Recreation	$416	$45	$461	$424	$8	$432	$374		$374
Environmental Stewardship	$354	$98	$452	$140	$175	$315	$104	$192	$296
~~Water Supply~~			~~$0~~			~~$0~~			~~$0~~
Total	$1,627	$452	**$2,079**	$1,634	$790	**$2,424**	$1,478	$566	**$2,044**

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

Business Line	FY21 Funding Requests for Maintenance ($1,000) Total	Packages $	Maintenenace Needs
Flood Risk Management	$1,243	$280	Emergency Spillway Abutments Repairs
		$3	Maintenance for Flood Risk Management
		$50	Paint Walls and Ceilings of Control Tower Level A & B.
		$900	Repairs to Buckhorn Dam Boat Ramp, access road drainage ditch and shotcrete high wall
		$10	Boundary and Flowage Easement Maintenance Activities for Flood Risk Mgmt
Recreation	$358	$100	Resurface the Buckhorn Tailwater Rec Area Parking Lot & restripe all parking spaces in the Buckhorn Dam Area.
		$23	Maintenance of Recreation Features
		$85	Repair & Blacktop Trace Branch Rec Area Parking Lot
		$150	Replace Leatherwood Pit Toilet

Additional Information

- Fee Lands: 14,961 acres
- Flowage Easement Lands: 915 acres
- Project Boundary Line Marked: 121 miles

Congressional Interests

Senator Mitch McConnell, R-KY
Senator Rand Paul, R-KY
Congressman Hal Rogers, R-KY-5

US Army Corps of Engineers

Caesar Creek Lake

Waynesville, OH

GREAT LAKES & OHIO RIVER DIVISION

Project Features

- Authorization: Flood Control Act of 1938.
- Primary project purposes are flood risk reduction, fish and wildlife and recreation.
- The lake is located in Warren, Clinton and Greene counties in southwestern Ohio. The dam is three miles above the mouth of Caesar Creek, a tributary of the Little Miami River.
- The dam is an earth and rock fill dam 165 feet high and 2,750 feet long. The watershed above the dam has an area of 237 square miles. Construction started in 1971 and was finished in 1978.
- Caesar Creek exists as a cooperative management effort among the Corps of Engineers and the Ohio Department of Natural Resources - Divisions of Parks and Recreation, Wildlife, and Natural Areas and Preserves. In addition, one private non-profit organization, the Pioneer Village Association, plays an important role at the park.
- Caesar Creek has one of two Class "A" Visitor centers in the Great Lakes and Ohio River Division.
- The Corps manages 3 areas around the dam on approximately 1,500 acres. ODNR manages major recreation facilities under a state park lease.

Consequences of Not Maintaining the Project

- Failure to adequately fund the flood risk management mission at this facility would result in the project's inability to adequately execute the flood risk management mission as authorized by congress. The consequences could range in severity depending upon the condition of the project, but would ultimately lead to a failure of the structure and a subsequent life safety concern for those in the affected downstream areas.

- Closure of recreational facilities will result in degradation of facilities, negative public reaction and potential Congressional inquiries.

Regional Importance

- The 2,830-acre lake provides flood reduction and a whole lot more. The Caesar Creek Region offers many opportunities to enjoy wildlife or recreate in the great outdoors. The project averages 711 thousand visitors annually, contributing $8.1 million to the local economy. This represents a sizable component of the economy in the local community.

- The project has prevented over $377.8 million in cumulative flood damages through FY 2019.

U.S. Army Corps of Engineers Fiscal Year (FY) Project Apprropriations and President's Budget ($1,000)

	FY19 O&M Appropriation			FY20 O&M Appropriation			FY21 O&M President's Budget		
Business Line	Operation	Maintenance	Total	Operation	Maintenance	Total	Operation	Maintenance	Total
Flood Risk Management	$1,348	$435	$1,783	$1,590	$940	$2,530	$1,444	$406	$1,850
Recreation	$229		$229	$251		$251	$256		$256
Environmental Stewardship	$48	$77	$125	$23	$125	$148	$56	$80	$136
Water Supply	$8		$8	$8		$8	$8		$8
Total	$1,633	$512	**$2,145**	$1,872	$1,065	**$2,937**	$1,764	$486	**$2,250**

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

Business Line	FY21 Funding Requests for Maintenance ($1,000) Total	Packages $	Maintenenace Needs
Flood Risk Management	$1,665	$350	Design and Install Replacement Dam Toe Drainage System
		$58	Install Emergency Generator
		$69	Maintenance for Flood Risk Management
		$10	Boundary and Flowage Easement Maintenance Activities for Flood Risk Mgmt
		$30	Removal of Radio Tower at Project Office
		$115	Replace outdated water line
		$400	Seal Raw Water Intakes at Control Tower
		$325	Stablize and Repair VC office slide
		$308	Tower bridge painting & repairs
Recreation	$149	$57	Expand Flat Fork Recreation Area Parking Area
		$65	Maintenance for Recreation
		$27	Maintenance for Recreation - Maintenance of Visitor Centers
Environmental Stewardship	$30	$30	Wildlife Habitat Management, Maintenance for Environmental Stewardship

Additional Information

- Fee Lands: 10,550 acres
- Flowage Easement Lands: 1,350 acres
- Project Boundary Line Marked: 46 miles

Congressional Interests

Senator Sherrod Brown, D-OH
Senator Rob Portman, R-OH
Congressman Steve Chabot, R-OH-1
Congressman Mike Turner, R-OH-10
Congressman Steve Stivers, R-OH-15

US Army Corps of Engineers

Cagles Mill Lake

Poland, IN

GREAT LAKES & OHIO RIVER DIVISION

Project Features

- Authorization: Flood Control Act of 1938.

- Primary project purposes are flood damage reduction, fish and wildlife, and recreation.

- Cagles Mill was the first authorized lake project in the Louisville Engineer District. The project features an earthen embankment dam completed in 1953 which impounds a maximum capacity of 228,120 acre-feet, and normal storage of 27,112 acre-feet.

- The dam is located on Mill Creek 2.8 miles above its mouth approximately midway between Indianapolis and Terra Haute.

- The Corps has entered into a partnership with the Indiana Department of Natural Resources through a long term lease agreement to operate and manage 7,104 acres of land and water for recreation and fish and wildlife purposes.

- The features the largest waterfall in Indiana, a rock cut showing a number of geologic ages. native hardwood trees and anearby covered bridge.

Consequences of Not Maintaining the Project

- Failure to adequately fund the flood risk management mission at this facility would result in the project's inability to adequately execute the flood risk management mission as authorized by congress. The consequences could range in severity depending upon the condition of the project, but would ultimately lead to a failure of the structure and a subsequent life safety concern for those in the affected downstream areas.

- Closure of recreational facilities will result in degradation of facilities, negative public reaction and potential Congressional inquiries.

Regional Importance

- The project averages 339 thousand visitors annually, contributing $6.6 million dollars to the local economy. This represents a sizable component of the economy in the local community.

- The project has prevented over $387.97 million dollars in cumulative flood damages through FY 2019.

U.S. Army Corps of Engineers Fiscal Year (FY) Project Apprropriations and President's Budget ($1,000)

	FY19 O&M Appropriation			FY20 O&M Appropriation			FY21 O&M President's Budget		
Business Line	Operation	Maintenance	Total	Operation	Maintenance	Total	Operation	Maintenance	Total
Flood Risk Management	$944	$97	$1,041	$979	$116	$1,095	$1,213	$107	$1,320
Recreation	$28		$28	$47		$47	$45		$45
Environmental Stewardship	$100	$26	$126	$48	$28	$76	$45	$75	$120
Total	$1,072	$123	**$1,195**	$1,074	$144	**$1,218**	$1,303	$182	**$1,485**

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

	FY21 Funding Requests for Maintenance ($1,000)		
Business Line	Total	Packages $	Maintenenace Needs
Flood Risk Management	$48	$25	Conduct Sedimentation Range Survey at Cagles Mill Lake
		$23	Maintenance for Flood Risk Management
Environmental Stewardship	$28	$28	Endangered insect survey

Additional Information

- Fee Lands: 7,259 acres
- Flowage Easement Lands: 9 acres
- Project Boundary Line Marked: 72 miles

Congressional Interests

Senator Mike Braun, R-IN
Senator Todd Young, R-IN
Congressman James Baird, R-IN-4
Congressman Larry Bucshon, R-IN-8

US Army Corps of Engineers

Carr Creek Lake

Sassafras, KY

GREAT LAKES & OHIO RIVER DIVISION

Project Features

- Authorization: Flood Control Act of 1938.

- Primary project purposes are flood risk reduction, water supply, fish and wildlife and recreation.

- Carr Creek Lake, located east of Hazard, Kentucky, along Kentucky Route 15 in Knott County, is a 710 acres reservoir completed in 1976. Carr Creek Lake's earth and rock fill dam is 130 ft tall and 720 ft long, and the dam is located 8.8 mi above the mouth of Carr Fork River, a tributary of the North Fork Kentucky River.
- The Corps, in cooperation with the Commonwealth of Kentucky, manage the land and water resources for wildlife, fisheries, and recreation.
- There are two campgrounds, a developed swimming area, eight picnic shelters, and two hiking trails at Carr Creek Lake, as well as a commercial marina operated under concessionaire lease.

Regional Importance

- The lake offers boating, fishing, swimming, and other recreational activities to the general public. The project averages 611 thousand visitors annually, contributing $11.11 million dollars to the local economy. This represents a sizable component of the economy in the local community.

- 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 project has prevented over $110.5 million dollars in cumulative flood damages through FY 2019.

- 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.

Consequences of Not Maintaining the Project

- Failure to adequately fund the flood risk management mission at this facility would result in the project's inability to adequately execute the flood risk management mission as authorized by congress. The consequences could range in severity depending upon the condition of the project, but would ultimately lead to a failure of the structure and a subsequent life safety concern for those in the affected downstream areas.

- Closure of recreational facilities will result in degradation of facilities, negative public reaction and potential Congressional inquiries.

U.S. Army Corps of Engineers Fiscal Year (FY) Project Apprropriations and President's Budget ($1,000)

	FY19 O&M Appropriation			FY20 O&M Appropriation			FY21 O&M President's Budget		
Business Line	Operation	Maintenance	Total	Operation	Maintenance	Total	Operation	Maintenance	Total
Flood Risk Management	$679	$321	$1,000	$939	$680	$1,619	$974	$265	$1,239
Recreation	$593		$593	$513	$14	$527	$577		$577
Environmental Stewardship	$119	$109	$228	$116	$196	$312	$330	$166	$496
Water Supply	$48		$48	$8		$8	$8		$8
Total	$1,439	$430	**$1,869**	$1,576	$890	**$2,466**	$1,889	$431	**$2,320**

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

	FY21 Funding Requests for Maintenance ($1,000)		
Business Line	Total	Packages $	Maintenenace Needs
Flood Risk Management	$329	$180	Dam Safety for Flood Risk Mgmt - Piezometer Installation
		$34	Maintenance for Flood Risk Management
		$10	Boundary and Flowage Easement Maintenance Activities for Flood Risk Mgmt
		$40	Resurface and extend asphalt at maintenance compound.
		$65	Replacement of project patrol boat
Recreation	$1,090	$15	Maintenance of Recreation Features
		$75	Replacement of Playground in Littcarr Campground
		$400	Replacement of Irishman Area waste water treatment plant.
		$150	Waterline replacement at Littcarr recreation area
		$200	Sewage line replacement at Littcarr Campground
		$250	Sewage system replacement at Marina Recreation Area
Environmental Stewardship	$50	$50	Wildlife Habitat Management, Maintenance for Environmental Stewardship

Additional Information

- Fee Lands: 3,871 acres
- Flowage Easement Lands: 35 acres
- Project Boundary Line Marked: 43 miles

Congressional Interests

Senator Mitch McConnell, R-KY
Senator Rand Paul, R-KY
Congressman Hal Rogers, R-KY-5

US Army Corps of Engineers

Cave Run Lake

Morehead, KY

GREAT LAKES & OHIO RIVER DIVISION

Project Features

- Authorization: Flood Control Act of 1938.
- Primary project purposes are flood risk reduction, water supply, fish and wildlife and recreation.
- Cave Run Lake, located south of Morehead, is an 8,270 acre reservoir in northeastern Kentucky. Construction of the 148 ft tall, half-mile long dam began in 1965 and was completed in 1974. Cave Run Lake is in the northern part of the Daniel Boone National Forest in Rowan, Morgan, Menifee, and Bath counties.
- The Corps operates and maintains the dam and three day use recreation areas near the dam. The remaining lands and recreation areas are managed under the jurisdiction of the Cumberland District of the U.S. Forest Service.

Regional Importance

- Cave Run Lake provides flood protection to the lower Licking River valley, supplies water to the area's communities, improves the Licking River's water flow conditions, and offers a habitat for various species of fish and wildlife.

- The lake offers boating, fishing, swimming, and other recreational activities to the general public. The project averages 221 thousand visitors annually, contributing $2.4 million dollars to the local economy. This represents a sizable component of the economy in the local community.

- 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 project has prevented over $365.65 million dollars in cumulative flood damages through FY 2019.

Consequences of Not Maintaining the Project

- Failure to adequately fund the flood risk management mission at this facility would result in the project's inability to adequately execute the flood risk management mission as authorized by congress. The consequences could range in severity depending upon the condition of the project, but would ultimately lead to a failure of the structure and a subsequent life safety concern for those in the affected downstream areas.

- Closure of recreational facilities will result in degradation of facilities, negative public reaction and potential Congressional inquiries.

U.S. Army Corps of Engineers Fiscal Year (FY) Project Apprropriations and President's Budget ($1,000)

	FY19 O&M Appropriation			FY20 O&M Appropriation			FY21 O&M President's Budget		
Business Line	Operation	Maintenance	Total	Operation	Maintenance	Total	Operation	Maintenance	Total
Flood Risk Management	$735	$182	$917	$827	$237	$1,064	$816	$188	$1,004
Recreation	$165		$165	$163		$163	$160		$160
Environmental Stewardship	$45	$17	$62	$295	$18	$313	$84		$84
Water Supply	$11		$11	$11		$11	$11		$11
Total	$956	$199	**$1,155**	$1,296	$255	**$1,551**	$1,071	$188	**$1,259**

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

Business Line	FY21 Funding Requests for Maintenance ($1,000) Total	Packages $	Maintenenace Needs
Flood Risk Management	$222	$45	Paint Radio Tower
		$110	Resurface Project Office & North Access Road Approaches
		$37	Maintenance for Flood Risk Management
		$30	Boundary and Flowage Easement Maintenance Activities for Flood Risk Mgmt
Recreation	$180	$90	Replacement of Aging Play System located in the Tailwater Recreation Area
		$90	Resurface of roadways in Tailwater Recreation Areas
Environmental Stewardship	$90	$60	Removal of Underground Fuel Storage Tank
		$30	Wildlife Habitat Management, Maintenance for Environmental Stewardship

Additional Information

- Fee Lands: 392 acres
- Flowage Easement Lands: 22,132 acres
- Project Boundary Line Marked: 3 miles

Congressional Interests

Senator Mitch McConnell, R-KY
Senator Rand Paul, R-KY
Congressman Hal Rogers, R-KY-5
Congressman Andy Barr, R-KY-6

US Army Corps of Engineers

C.J. Brown Dam and Reservoir

Springfield, OH

GREAT LAKES & OHIO RIVER DIVISION

Project Features

- Authorization: Flood Control Act of 1938.
- Primary project purposes are flood risk reduction, fish and wildlife and recreation.
- The dam was built across Buck Creek to control flooding in the Ohio River basin. It is made of rock fill with a sand and gravel core. It measures 6,620 feet across and 72 high and has a drainage area of 83 square miles.
- C.J. Brown lake is located near Springfield in west central Ohio, less than a day's drive from Indianapolis, Cleveland, Louisville or Toledo.
- C. J. Brown exists as a cooperative management effort between the Corps of Engineers and the Ohio Department of Natural Resources - Divisions of Parks and Recreation and Natural Areas and Preserves. In addition, one private non-profit organization, George Rogers Clark Historical Association, plays an important role at the park.
- Buck Creek State Park is open for year-round recreation and includes 25 cottages available to rent, 89 electric and 22 rustic campsites, and picnic areas through out at the park. A swimming area is open during the summer months. Trails that are open to hiking, horse-back riding and snowmobiles measure 7.5 miles in length.

Consequences of Not Maintaining the Project

- Failure to adequately fund the flood risk management mission at this facility would result in the project's inability to adequately execute the flood risk management mission as authorized by congress. The consequences could range in severity depending upon the condition of the project, but would ultimately lead to a failure of the structure and a subsequent life safety concern for those in the affected downstream areas.

- Closure of recreational facilities will result in degradation of facilities, negative public reaction and potential Congressional inquiries.

Regional Importance

- The 2,120 acre lake provides flood reduction and a whole lot more. The C. J. Brown Region offers many opportunities to enjoy wildlife or recreate in the great outdoors. The project averages 618 thousand visitors annually, contributing approximately $5.31 million to the local economy annually. This represents a sizable component of the economy in the local community.

- The project has prevented over $23.33 million in cumulative flood damages through FY 2019.

U.S. Army Corps of Engineers Fiscal Year (FY) Project Apprropriations and President's Budget ($1,000)

	FY19 O&M Appropriation			FY20 O&M Appropriation			FY21 O&M President's Budget		
Business Line	Operation	Maintenance	Total	Operation	Maintenance	Total	Operation	Maintenance	Total
Flood Risk Management	$843	$150	$993	$1,054	$186	$1,240	$1,146	$155	$1,301
Recreation	$165	$6	$171	$138		$138	$148		$148
Environmental Stewardship	$41	$63	$104	$16	$87	$103	$69	$47	$116
Total	$1,049	$219	**$1,268**	$1,208	$273	**$1,481**	$1,363	$202	**$1,565**

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

Business Line	FY21 Funding Requests for Maintenance ($1,000) Total	Packages $	Maintenenace Needs
Flood Risk Management	$838	$504	Decommission of Low Head Dam
		$95	End of Life Cycle Replacement of Electronic Security System Components.
		$70	Generator Replacement and Uprgade in Control Tower
		$159	Maintenance for Flood Risk Management
		$10	Boundary and Flowage Easement Maintenance Activities for Flood Risk Mgmt
Recreation	$204	$89	Maintenance for Recreation
		$15	New Roof for Prairie View Shelter
		$50	Prairie View Restroom Uprgade
		$50	Replacement of Prairie View Playground
Environmental Stewardship	$30	$30	Wildlife Habitat Management, Maintenance for Environmental Stewardship

Additional Information

- Fee Lands: 4,076 acres
- Flowage Easement Lands: 177 acres
- Project Boundary Line Marked: 13 miles

Congressional Interests

Senator Sherrod Brown, D-OH
Senator Rob Portman, R-OH
Congressman Warren Davidson, R-OH-8

US Army Corps of Engineers

Cecil M. Harden Lake

Rockville, IN

GREAT LAKES & OHIO RIVER DIVISION

Project Features

- Authorization: Flood Control Act of 1938.

- The 2,110 acre lake provides flood reduction downstream from the dam, primarily in the Big Raccoon Creek and Lower Wabash River watersheds. The lake has 216 square miles of drainage area, beginning in Boone County, Indiana. Cecil M. Harden Lake also offers water-related recreation and the enhancement of fish and wildlife.

- Cecil M. Harden Lake (also known as Raccoon Lake), located in west central Indiana, lies predominantly in Parke County and extends into Putnam County. The dam is on Big Raccoon Creek 33 miles upstream of its juncture with the Wabash River. It is approximately 25 miles northeast of Terre Haute, 50 miles west of Indianapolis, and 15 miles north of Brazil.

- Cecil M. Harden Lake exists as a cooperative management effort between the Corps of Engineers and the Indiana Dept. of Natural Resources and includes the Raccoon State Recreation Area and the Historic Mansfield Roller Mill.

Consequences of Not Maintaining the Project

- Failure to adequately fund the flood risk management mission at this facility would result in the project's inability to adequately execute the flood risk management mission as authorized by congress. The consequences could range in severity depending upon the condition of the project, but would ultimately lead to a failure of the structure and a subsequent life safety concern for those in the affected downstream areas.

- Closure of recreational facilities will result in degradation of facilities, negative public reaction and potential Congressional inquiries.

Regional Importance

- The project averages 371 thousand visitors annually, contributing $4.87 million to the local economy. This represents a sizable component of the economy in the local community.

- The project has prevented over $196.87 million in cumulative flood damages through FY 2019.

U.S. Army Corps of Engineers Fiscal Year (FY) Project Apprropriations and President's Budget ($1,000)

	FY19 O&M Appropriation			FY20 O&M Appropriation			FY21 O&M President's Budget		
Business Line	Operation	Maintenance	Total	Operation	Maintenance	Total	Operation	Maintenance	Total
Flood Risk Management	$986	$124	$1,110	$926	$153	$1,079	$1,264	$50	$1,314
Recreation	$36		$36	$52		$52	$40		$40
Environmental Stewardship	$79	$18	$97	$54	$18	$72	$62	$20	$82
Total	$1,101	$142	**$1,243**	$1,032	$171	**$1,203**	$1,366	$70	**$1,436**

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

	FY21 Funding Requests for Maintenance ($1,000)		
Business Line	Total	Packages $	Maintenenace Needs
Flood Risk Management	$137	$127	Maintenance for Flood Risk Management
		$10	Boundary and Flowage Easement Maintenance Activities for Flood Risk Mgmt

Additional Information

- Fee Lands: 4,093 acres
- Flowage Easement Lands: 1,169 acres
- Project Boundary Line Marked: 47 miles

Congressional Interests

Senator Mike Braun, R-IN
Senator Todd Young, R-IN
Congressman Larry Bucshon, R-IN-8

US Army Corps of Engineers

Green River Lake

Campbellsville, KY

GREAT LAKES & OHIO RIVER DIVISION

Project Features

- Authorization: Flood Control Act of 1938.
- Primary project purposes are flood risk reduction, water supply, fish and wildlife, and recreation.
- Green River Lake is a 8,210-acre reservoir in Adair, Taylor, and Casey counties in the section of Kentucky known as the Highland Rim. The lake was developed in 1969 by impounding the Green River. The dam is an 11-mile drive equidistant from the cities of Campbellsville and Columbia. The lake is located 90 miles southeast of Louisville.
- The earthen dam stands 141 feet high, with a length of 2,350 feet at its crest. Its riverine reservoir has a normal surface area of 12.8 square miles, a maximum capacity of 723,200 acre-feet, and normal storage of 244,100 acre-feet.
- The Corps, in cooperation with the Commonwealth of Kentucky, manages the land and water for wildlife, fisheries, and recreation.

Regional Importance

- Green River Lake provides flood protection to the lower Green River valley, supplies water to the area's communities, improves the Green River's water flow conditions, and offers a habitat for various species of fish and wildlife.

- The lake offers boating, fishing, swimming, and other recreational activities to the general public. The project averages 840 thousand visitors annually, contributing $9.2 million dollars to the local economy. This represents a sizable component of the economy in the local community.

- The project has prevented over $195.87 million dollars in cumulative flood damages through FY 19.

Consequences of Not Maintaining the Project

- Failure to adequately fund the flood risk management mission at this facility would result in the project's inability to adequately execute the flood risk management mission as authorized by congress. The consequences could range in severity depending upon the condition of the project, but would ultimately lead to a failure of the structure and a subsequent life safety concern for those in the affected downstream areas.

- Closure of recreational facilities will result in degradation of facilities, negative public reaction and potential Congressional inquiries.

U.S. Army Corps of Engineers Fiscal Year (FY) Project Apprropriations and President's Budget ($1,000)

	FY19 O&M Appropriation			FY20 O&M Appropriation			FY21 O&M President's Budget		
Business Line	Operation	Maintenance	Total	Operation	Maintenance	Total	Operation	Maintenance	Total
Flood Risk Management	$1,647	$2,204	$3,851	$1,789	$801	$2,590	$1,978	$349	$2,327
Recreation	$653		$653	$635		$635	$695		$695
Environmental Stewardship	$230	$104	$334	$92	$127	$219	$134	$92	$226
Water Supply	$11		$11	$11		$11	$11		$11
Total	$2,541	$2,308	**$4,849**	$2,527	$928	**$3,455**	$2,818	$441	**$3,259**

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

Business Line	FY21 Funding Requests for Maintenance ($1,000) Total	Packages $	Maintenenace Needs
Flood Risk Management	$4,399	$200	Construct a service road
		$1,325	Rip rap upstream slope of dam and dike
		$180	Dam Safety for Flood Risk Mgmt - Piezometer Installation
		$123	Maintenance for Flood Risk Management
		$100	Purchase Patrol Boat
		$20	Boundary and Flowage Easement Maintenance Activities for Flood Risk Mgmt
		$330	Remove existing slush grout and add riprap
		$2,121	Rip rap downstream slope of dam.
Recreation	$2,350	$325	Construct 20-site Campground at Wilson Creek Recreation Area
		$265	Construct ADA Showerhouse at Pikes Ridge Campground
		$800	Construct Educational Displays in the Visitor Center
		$400	Modernize and Upgrade Pikes Ridge Campground
		$350	Repave Roads in Smith Ridge Recreation Area
		$100	Replace Waterlines at Holmes Bend Campground
		$110	Maintenance of Recreation Features
Environmental Stewardship	$69	$35	Increase Pollinator Habitat
		$34	Wildlife Habitat Management, Maintenance for Environmental Stewardship

Additional Information

- Fee Lands: 32,178 acres
- Flowage Easement Lands: 1,665 acres
- Project Boundary Line Marked: 155 miles

Congressional Interests

Senator Mitch McConnell, R-KY
Senator Rand Paul, R-KY
Congressman James Comer, R-KY-1

US Army Corps of Engineers

J. Edward Roush Lake

Huntington, IN

GREAT LAKES & OHIO RIVER DIVISION

Project Features

- Authorization: Flood Control Act of 1938.
- Primary project purposes are flood damage reduction, fish and wildlife, and recreation.
- The project area lies in Huntington and Wells counties IN, 20 miles southeast Ft. Wayne.
- The J. Edward Roush Lake Dam was completed in 1968 for flood control and recreation. At 91 feet high and 6,500 feet in length at its crest, its maximum capacity is 153,100 acre-feet and normal capacity is 12,500 acre-feet.
- The Indiana Department of Natural Resources (DNR), in partnership with the U.S. Army Corps of Engineers, manages public land at Roush Lake, along with that of seven other lakes in the state, including nearby Salamonie and Mississinewa lakes. The latter two, along with Roush, are known as the Upper Wabash Reservoirs. Under a lease with the Corps, the DNR operates and maintains the recreational facilities and wildlife areas at these properties. The Corps manages the dams and some recreational facilities immediately around the dams. The Corps also monitors and controls lake water levels.

Consequences of Not Maintaining the Project

- Failure to adequately fund the flood risk management mission at this facility would result in the project's inability to adequately execute the flood risk management mission as authorized by congress. The consequences could range in severity depending upon the condition of the project, but would ultimately lead to a failure of the structure and a subsequent life safety concern for those in the affected downstream areas.

- Closure of recreational facilities will result in degradation of facilities, negative public reaction and potential Congressional inquiries.

Regional Importance

- The 900 acre J. Edward Roush Lake and surrounding area offers a wide variety of outdoor recreation opportunities. The project averages 218 thousand visitors annually, contributing $3.55 million dollars to the local economy. This represents a sizable component of the economy in the local community.

- J. Edward Roush Lake provides flood protection to the Wabash River valley, improves the Wabash River's water flow conditions, offers a habitat for various species of fish and wildlife, and provides surrounding communities with diverse outdoor recreation opportunities. The project has prevented over $425 million dollars in cumulative flood damages through FY 2019.

U.S. Army Corps of Engineers Fiscal Year (FY) Project Apprropriations and President's Budget ($1,000)

	FY19 O&M Appropriation			FY20 O&M Appropriation			FY21 O&M President's Budget		
Business Line	Operation	Maintenance	Total	Operation	Maintenance	Total	Operation	Maintenance	Total
Flood Risk Management	$1,006	$187	$1,193	$1,053	$364	$1,417	$1,126	$774	$1,900
Recreation	$48	$10	$58	$60	$10	$70	$55		$55
Environmental Stewardship	$71	$53	$124	$346	$38	$384	$35	$108	$143
Total	$1,125	$250	**$1,375**	$1,459	$412	**$1,871**	$1,216	$882	**$2,098**

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

Business Line	FY21 Funding Requests for Maintenance ($1,000) Total	Packages $	Maintenenace Needs
Flood Risk Management	$408	$150	Grout Repairs on J. E. Roush Dam
		$3	Maintenance for Flood Risk Management
		$30	Boundary and Flowage Easement Maintenance Activities for Flood Risk Mgmt
		$225	Replace Waterlines
Recreation	$225	$225	Replace Waterborne Restroom with Vault Restroom

Additional Information

- Fee Lands: 8,628 acres
- Flowage Easement Lands: 4,133 acres
- Project Boundary Line Marked: 43 miles

Congressional Interests

Senator Mike Braun, R-IN
Senator Todd Young, R-IN
Congressman Jim Banks, R-IN-3

US Army Corps of Engineers

Mississinewa Lake

Peru, IN

GREAT LAKES & OHIO RIVER DIVISION

Project Features

- Authorization: Flood Control Act of 1938.
- Primary project purposes are flood damage reduction, fish and wildlife, and recreation.
- Mississinewa Lake Dam is a dam in Miami County, Indiana, just outside the town of Peru, in the north central part of the state.
- The earthen embankment dam was constructed from 1962 to 1967. The dam has a height of 140 feet, and length 8,000 feet at its crest. It impounds the Mississinewa River for flood risk reduction.
- The reservoir it creates, Mississinewa Lake, has a normal water surface of five square miles, has a maximum capacity of 368,400 acre-feet, and a normal capacity of 75,200 acre-feet.
- The lake exists as a cooperative management effort between the Corps of Engineers and the Indiana Department of Natural Resources. Recreation includes fishing, boating, and swimming. Nearby recreation areas include the Miami State Recreation Area, the Red Bridge State Recreation Area, the Pearson Mill State Recreation Area, and the Frances Slocum State Recreation Area.

Consequences of Not Maintaining the Project

- Failure to adequately fund the flood risk management mission at this facility would result in the project's inability to adequately execute the flood risk management mission as authorized by congress. The consequences could range in severity depending upon the condition of the project, but would ultimately lead to a failure of the structure and a subsequent life safety concern for those in the affected downstream areas.

- Closure of recreational facilities will result in degradation of facilities, negative public reaction and potential Congressional inquiries.

Regional Importance

- The 3,180 acre Mississinewa Lake and surrounding area offers a wide variety of outdoor recreation opportunities. The project averages 676 thousand visitors annually, contributing $8.26 million dollars to the local economy. This represents a sizable component of the economy in the local community.

- Mississinewa Lake provides flood protection to the Wabash River valley, supplies water to the area's communities, improves the Wabash River's water flow conditions, and offers a habitat for various species of fish and wildlife. The project has prevented over $644.64 million dollars in cumulative flood damages through FY 2019.

U.S. Army Corps of Engineers Fiscal Year (FY) Project Apprropriations and President's Budget ($1,000)

	FY19 O&M Appropriation			FY20 O&M Appropriation			FY21 O&M President's Budget		
Business Line	Operation	Maintenance	Total	Operation	Maintenance	Total	Operation	Maintenance	Total
Flood Risk Management	$899	$194	$1,093	$1,011	$794	$1,805	$1,139	$1,331	$2,470
Recreation	$44	$10	$54	$67	$10	$77	$58		$58
Environmental Stewardship	$74	$53	$127	$360	$61	$421	$60	$331	$391
Total	$1,017	$257	**$1,274**	$1,438	$865	**$2,303**	$1,257	$1,662	**$2,919**

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

	FY21 Funding Requests for Maintenance ($1,000)		
Business Line	Total	Packages $	Maintenenace Needs
Flood Risk Management	$607	$50	End of Life Cycle Replacement of Electronic Security System Components.
		$529	Paint Service Bridge to Control Tower
		$8	Maintenance for Flood Risk Management
		$20	Boundary and Flowage Easement Maintenance Activities for Flood Risk Mgmt
Recreation	$100	$100	Waterlines

Additional Information

- Fee Lands: 15,072 acres
- Flowage Easement Lands: 3,425 acres
- Project Boundary Line Marked: 78 miles

Congressional Interests

Senator Mike Braun, R-IN
Senator Todd Young, R-IN
Congresswoman Jackie Walorski, R-IN-2
Congresswoman Susan Brooks, R-IN-5

US Army Corps of Engineers

Monroe Lake

Bloomington, IN

GREAT LAKES & OHIO RIVER DIVISION

Project Features

- Authorization: Flood Control Act of 1938.
- Primary project purposes are flood damage reduction, water supply, fish and wildlife, and recreation.
- Lake Monroe is a reservoir located about 10 miles southeast of Bloomington, Indiana. The lake is the largest entirely situated in Indiana with 10,750 acres of water surface area spread over the counties of Monroe and Brown. Capacity varies from 237,000 acre-ft to 347,000 acre-ft depending on water level.
- Construction on the lake began in 1960 and was finished in 1965.
- Monroe Lake exists as a cooperative management effort between the Corps of Engineers and the Indiana Department of Natural Resources. The Corps manages areas around the dam and IDNR manages major recreation facilities under a state park lease. The U.S. Forest Service has one recreation area and owns the adjacent lake shoreline within the Hoosier National Forest.
- Ransburg Scout Reservation, a large Boy Scout camp comprising over 624 acres, is situated along the eastern shore.

Consequences of Not Maintaining the Project

- Failure to adequately fund the flood risk management mission at this facility would result in the project's inability to adequately execute the flood risk management mission as authorized by congress. The consequences could range in severity depending upon the condition of the project, but would ultimately lead to a failure of the structure and a subsequent life safety concern for those in the affected downstream areas.

- Closure of recreational facilities will result in degradation of facilities, negative public reaction and potential Congressional inquiries.

Regional Importance

- Monroe Lake and surrounding area provides abundant fishing throughout the year, and recreational opportunities such as boating and water skiing attract visitors from throughout Indiana and the Midwest. The project averages 991.9 thousand visitors annually, contributing $11.45 million dollars to the local economy. This represents a sizable component of the economy in the local community.

- Monroe Lake provides flood protection to the Wabash River valley, supplies water to the area's communities, improves the Wabash River's water flow conditions, and offers a habitat for various species of fish and wildlife. The project has prevented over $111 million dollars in cumulative flood damages through FY 2019.

U.S. Army Corps of Engineers Fiscal Year (FY) Project Apprropriations and President's Budget ($1,000)

	FY19 O&M Appropriation			FY20 O&M Appropriation			FY21 O&M President's Budget		
Business Line	Operation	Maintenance	Total	Operation	Maintenance	Total	Operation	Maintenance	Total
Flood Risk Management	$970	$167	$1,137	$990	$100	$1,090	$1,093	$111	$1,204
Recreation	$70		$70	$70		$70	$52		$52
Environmental Stewardship	$100	$59	$159	$123	$51	$174	$73	$41	$114
Water Supply	$8		$8	$8		$8	$8		$8
Total	$1,148	$226	**$1,374**	$1,191	$151	**$1,342**	$1,226	$152	**$1,378**

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

	FY21 Funding Requests for Maintenance ($1,000)		
Business Line	Total	Packages $	Maintenenace Needs
Flood Risk Management	$38	$25	Conduct Sedimentation Range Survey at Monroe Lake
		$3	Maintenance for Flood Risk Management
		$10	Boundary and Flowage Easement Maintenance Activities for Flood Risk Mgmt

Additional Information

- Fee Lands: 25,121 acres
- Flowage Easement Lands: 1,246 acres
- Project Boundary Line Marked: 210 miles

Congressional Interests

Senator Mike Braun, R-IN
Senator Todd Young, R-IN
Congressman Trey Hollingsworth, R-IN-9

US Army Corps of Engineers

Nolin River Lake

Bee Springs, KY

GREAT LAKES & OHIO RIVER DIVISION

Project Features

- Authorization: Flood Control Act of 1938.
- Primary project purposes are flood risk reduction, water supply, fish and wildlife and recreation.
- Nolin River Lake is a reservoir in Edmonson, Grayson, and Hart counties in Kentucky. The lake varies from 2,890 acres in the winter to 5,795 acres in the summer.
- Construction of the operating tower and outlet works began in January 1959 and was completed in July 1961. Construction of the dam and spillway began in June 1961 and the reservoir was placed in complete operation on March 4th, 1963.
- The Corps, in cooperation with the Commonwealth of Kentucky, manages the land and water for wildlife, fisheries, and recreation. The Corps manages the major recreation areas including approximately 350 campsites, and Kentucky manages a state park lease and a fish and wildlife management area license.
- The lake's staff administers a shoreline management program with over 1,500 shoreline use permits.

Consequences of Not Maintaining the Project

- Failure to adequately fund the flood risk management mission at this facility would result in the project's inability to adequately execute the flood risk management mission as authorized by congress. The consequences could range in severity depending upon the condition of the project, but would ultimately lead to a failure of the structure and a subsequent life safety concern for those in the affected downstream areas.

- Closure of recreational facilities will result in degradation of facilities, negative public reaction and potential Congressional inquiries.

Regional Importance

- Nolin River Lake provides flood protection to the Nolin and Green River valleys, supplies water to the area's communities, improves downstream water flow conditions, and offers a habitat for various species of fish and wildlife.

- The lake offers boating, fishing, swimming, and other recreational activities to the general public. The project averages 1.49 million visitors annually, contributing $26.48 million dollars to the local economy. This represents a sizable component of the economy in the local community.

- The project has prevented over $140.46 million dollars in cumulative flood damages through FY 19.

U.S. Army Corps of Engineers Fiscal Year (FY) Project Apprropriations and President's Budget ($1,000)

	FY19 O&M Appropriation			FY20 O&M Appropriation			FY21 O&M President's Budget		
Business Line	Operation	Maintenance	Total	Operation	Maintenance	Total	Operation	Maintenance	Total
Flood Risk Management	$1,457	$123	$1,580	$1,457	$376	$1,833	$1,609	$393	$2,002
Recreation	$711		$711	$628	$30	$658	$639		$639
Environmental Stewardship	$470	$84	$554	$594	$144	$738	$330	$194	$524
Water Supply	$8		$8	$8		$8	$8		$8
Total	$2,646	$207	**$2,853**	$2,687	$550	**$3,237**	$2,586	$587	**$3,173**

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

	FY21 Funding Requests for Maintenance ($1,000)		
Business Line	Total	Packages $	Maintenenace Needs
Flood Risk Management	$333	$250	Dam Safety for Flood Risk Mgmt - Piezometer Installation
		$3	Maintenance for Flood Risk Management
		$80	Boundary and Flowage Easement Maintenance Activities for Flood Risk Mgmt
Recreation	$515	$40	Create Trails - Dam area, Overlook, Tailwater
		$80	Maintenance of Recreation Features
		$200	Iberia and Wax Rec Areas Paving
		$60	Showerhouse Renovation - Wax Campground
		$100	Moutardier Paving
		$35	Wax Rec Area Drainage Ditch Repair
Environmental Stewardship	$50	$25	Invasive Species Survey
		$25	Shoreline Restoration

Additional Information

- Fee Lands: 13,404 acres
- Flowage Easement Lands: 4,546 acres
- Project Boundary Line Marked: 221 miles

Congressional Interests

Senator Mitch McConnell, R-KY
Senator Rand Paul, R-KY
Congressman Brett Guthrie, R-KY-2

US Army Corps of Engineers

Patoka Lake

Dubois, IN

GREAT LAKES & OHIO RIVER DIVISION

Project Features

- Authorization: Flood Control Act of 1965.
- Primary project purposes are flood damage reduction, fish and wildlife, and recreation.
- Patoka Lake is the second-largest reservoir in the U.S. state of Indiana (after Lake Monroe) and is spread across Dubois, Crawford, and Orange counties in southern Indiana.
- The lake was created by damming the Patoka River about 118.3 miles above its mouth with a 145-feet-high rockfill earthen dam. The lake is fed by several smaller tributaries including Allen Creek, Paint Creek, and Ritter Creek.
- Created as a joint effort between the US Army Corps of Engineers and the Indiana Department of Natural Resources, the lake is one of eight such reservoirs built in the state to provide a secure water supply and as a method of flood control. The lake covers 8,800 surface acres of water.

Regional Importance

- Patoka Lake and surrounding area offers a wide variety of outdoor recreation opportunities. The project averages 460 thousand visitors annually, contributing $6.61 million dollars to the local economy. This represents a sizable component of the economy in the local community.
- Patoka Lake provides flood protection to the Patoka River valley, supplies water to the area's communities, improves the Patoka River's water flow conditions, and offers a habitat for various species of fish and wildlife. The project has prevented over $297.52 million dollars in cumulative flood damages through FY 2019.

Consequences of Not Maintaining the Project

- Failure to adequately fund the flood risk management mission at this facility would result in the project's inability to adequately execute the flood risk management mission as authorized by congress. The consequences could range in severity depending upon the condition of the project, but would ultimately lead to a failure of the structure and a subsequent life safety concern for those in the affected downstream areas.
- Closure of recreational facilities will result in degradation of facilities, negative public reaction and potential Congressional inquiries.

U.S. Army Corps of Engineers Fiscal Year (FY) Project Apprropriations and President's Budget ($1,000)

	FY19 O&M Appropriation			FY20 O&M Appropriation			FY21 O&M President's Budget		
Business Line	Operation	Maintenance	Total	Operation	Maintenance	Total	Operation	Maintenance	Total
Flood Risk Management	$1,063	$293	$1,356	$931	$78	$1,009	$1,001	$38	$1,039
Recreation	$20		$20	$65		$65	$49		$49
Environmental Stewardship	$78	$36	$114	$93	$36	$129	$53	$38	$91
Water Supply	$8		$8	$8		$8	$8		$8
Total	$1,169	$329	**$1,498**	$1,097	$114	**$1,211**	$1,111	$76	**$1,187**

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

	FY21 Funding Requests for Maintenance ($1,000)		
Business Line	Total	Packages $	Maintenenace Needs
Flood Risk Management	$155	$10	Boundary and Flowage Easement Maintenance Activities for Flood Risk Mgmt
		$25	Replace Heating System
		$120	Maintenance for Flood Risk Management

Additional Information

- Fee Lands: 26,321 acres
- Flowage Easement Lands: 230 acres
- Project Boundary Line Marked: 120 miles

Congressional Interests

Senator John Donnelly, D-IN
Senator Todd Young, R-IN
Congressman Trey Hollingsworth, R-IN-9
Congressman Larry Bucshon, R-IN-8

US Army Corps of Engineers

Rough River Lake

Falls of Rough, KY

GREAT LAKES & OHIO RIVER DIVISION

Project Features

- Authorization: Flood Control Act of 1938.
- Primary project purposes are flood risk reduction, water supply, fish and wildlife and recreation.
- Rough River Lake is a 5,100-acre reservoir in Breckinridge, Grayson, and Hardin counties in Kentucky about 95 miles southwest of Louisville.
- Rough River Lake Dam, completed in 1959, is a 132-foot-high earthen embankment dam impounding a maximum capacity of 334,400 acre-feet.
- The Corps, in cooperation with the Commonwealth of Kentucky, manages the land and water for wildlife, fisheries, and recreation. The Corps manages the major recreation areas including approximately 370 campsites, and Kentucky manages a state park lease and a fish and wildlife management area license.
- The lake's staff administers a shoreline management program with over 3,989 shoreline use permits.

Regional Importance

- Rough River Lake provides flood protection to the Rough River valley, supplies water to the area's communities, improves downstream water flow conditions, and offers a habitat for various species of fish and wildlife.

- The lake offers boating, fishing, swimming, and other recreational activities to the general public. The project averages 1.779 million visitors annually, contributing $31 million dollars to the local economy. This represents a sizable component of the economy in the local community.

- The project has prevented over $293.4 million dollars in cumulative flood damages through FY 19.

Consequences of Not Maintaining the Project

- Failure to adequately fund the flood risk management mission at this facility would result in the project's inability to adequately execute the flood risk management mission as authorized by congress. The consequences could range in severity depending upon the condition of the project, but would ultimately lead to a failure of the structure and a subsequent life safety concern for those in the affected downstream areas.

- Closure of recreational facilities will result in degradation of facilities, negative public reaction and potential Congressional inquiries.

U.S. Army Corps of Engineers Fiscal Year (FY) Project Apprropriations and President's Budget ($1,000)

	FY19 O&M Appropriation			FY20 O&M Appropriation			FY21 O&M President's Budget		
Business Line	Operation	Maintenance	Total	Operation	Maintenance	Total	Operation	Maintenance	Total
Flood Risk Management	$1,615	$718	$2,333	$1,774	$262	$2,036	$1,980	$159	$2,139
Recreation	$681		$681	$668	$30	$698	$642		$642
Environmental Stewardship	$254	$182	$436	$299	$360	$659	$299	$360	$659
Water Supply	$11		$11	$11		$11	$11		$11
Total	$2,561	$900	**$3,461**	$2,752	$652	**$3,404**	$2,932	$519	**$3,451**

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

Business Line	FY21 Funding Requests for Maintenance ($1,000) Total	Packages $	Maintenenace Needs
Flood Risk Management	$50	$25	Conduct Sedimentation Range Survey at Rough River Lake
		$3	Maintenance for Flood Risk Management
		$22	Boundary and Flowage Easement Maintenance Activities for Flood Risk Mgmt
Recreation	$1,843	$90	Cave Creek and North Fork Campgrounds - Repairing drop-offs along road edges.
		$95	Maintenance of Recreation Features
		$263	Public Road Raising of a 24 ft X 100 ft section of roadway within the Axtel Campground
		$350	Replacement of 1 shower house and removal of 2 flush facilities in North Fork Campground
		$980	Replacement of three shower houses and removal of one flush facility in Axtel campground
		$65	Replace Structurally Failing Restroom at North Fork Day Use Area Boat Ramp

Additional Information

- Fee Lands: 9,312 acres
- Flowage Easement Lands: 4,526 acres
- Project Boundary Line Marked: 266 miles

Congressional Interests

Senator Mitch McConnell, R-KY
Senator Rand Paul, R-KY
Congressman James Comer, R-KY-1
Congressman Brett Gutherie, R-KY-2

US Army Corps of Engineers

Salamonie Lake

Lagro, IN

GREAT LAKES & OHIO RIVER DIVISION

Project Features

- Authorization: Flood Control Act of 1938.
- Primary project purposes are flood damage reduction, fish and wildlife, and recreation.
- Salamonie Dam is a dam in Wabash County, Indiana. The earthen and rockfill dam was constructed in 1965 and has a height of 133 feet and length of 6,100 feet at its crest. It impounds the Salamonie River for flood control.
- The reservoir it creates, Salamonie Lake, has a normal water surface of 2,665 acres and a maximum capacity of 263,600 acre-feet; the total project encompasses 11,958 acres of land and water.
- The lake exists as a cooperative management effort between the Corps of Engineers and the Indiana Department of Natural Resources. Recreation includes boating, swimming and fishing for white crappie, channel catfish, white bass, and walleye. The state also operates the adjacent Salamonie River State Forest, Mt. Hope State Recreation Area, Dora New Holland State Recreation Area, Lost Bridge State Recreation Area, and Mt. Etna State Recreation Area.

Consequences of Not Maintaining the Project

- Failure to adequately fund the flood risk management mission at this facility would result in the project's inability to adequately execute the flood risk management mission as authorized by congress. The consequences could range in severity depending upon the condition of the project, but would ultimately lead to a failure of the structure and a subsequent life safety concern for those in the affected downstream areas.

- Closure of recreational facilities will result in degradation of facilities, negative public reaction and potential Congressional inquiries.

Regional Importance

- Salamonie Lake and surrounding area offers a wide variety of outdoor recreation opportunities. The project averages over 522 thousand visitors annually, contributing $6.88 million dollars to the local economy. This represents a sizable component of the economy in the local community.

- The lake operates primarily as a unit with J. Edward Roush and Mississinewa lakes to provide flood protection to the Upper Wabash River valley. It also supplies water to the area's communities, improves the Wabash River's water flow conditions, and offers a habitat for various species of fish and wildlife. The project has prevented over $531 million dollars in cumulative flood damages through FY 2019.

U.S. Army Corps of Engineers Fiscal Year (FY) Project Apprropriations and President's Budget ($1,000)

	FY19 O&M Appropriation			FY20 O&M Appropriation			FY21 O&M President's Budget		
Business Line	Operation	Maintenance	Total	Operation	Maintenance	Total	Operation	Maintenance	Total
Flood Risk Management	$1,041	$105	$1,146	$947	$3,545	$4,492	$1,084	$2,145	$3,229
Recreation	$37	$10	$47	$74	$10	$84	$56		$56
Environmental Stewardship	$67	$53	$120	$349	$36	$385	$147	$75	$222
Total	$1,145	$168	**$1,313**	$1,370	$3,591	**$4,961**	$1,287	$2,220	**$3,507**

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

	FY21 Funding Requests for Maintenance ($1,000)		
Business Line	Total	Packages $	Maintenenace Needs
Flood Risk Management	$4,362	$1,500	Bank Stabalization Tract #1302
		$150	Guardrail replacement
		$3	Maintenance for Flood Risk Management
		$529	Paint Service Bridge to Control Tower
		$500	Repair Toe Drains, Gutters, and Scour Hole - Phase 2 of 4
		$580	Replace 20 Ton Hoist in Control Tower
		$350	Replacement of project HVAC systems
		$750	Repair Retreat Channel Sides, Right Bank, and Access Stairs - Phase 4 of 4

Additional Information

- Fee Lands: 11,958 acres
- Flowage Easement Lands: 3,064 acres
- Project Boundary Line Marked: 66 miles

Congressional Interests

Senator John Donnelly, D-IN
Senator Todd Young, R-IN
Congressman Jim Banks, R-IN-3
Congresswoman Jackie Walorski, R-IN-2

US Army Corps of Engineers

Taylorsville Lake

Taylorsville, KY

GREAT LAKES & OHIO RIVER DIVISION

Project Features

- Authorization: Flood Control Act of 1938.
- Primary project purposes are flood risk reduction, fish and wildlife and recreation.
- Taylorsville Lake is a 3,050 acre reservoir located on the Salt River mainly in Spencer County, Kentucky. Construction of the dam started in 1974, with impoundment in January 1983.
- Taylorsville Lake Dam is an earthen embankment structure 162 feet high and 1,280 feet long at its crest. Its reservoir has a maximum capacity of 291,670 acre-feet.
- The Corps, in cooperation with the Commonwealth of Kentucky, manages the land and water for wildlife, fisheries, and recreation. The Corps manages areas around the dam. Kentucky's Taylorsville Lake State Park is located on the lake's northern shore and is operated under a state park lease. The KY Dept. of Fish and Wildlife Resources also manage lands and waters under a wildlife management area lease.
- There is one commercial marina on Taylorsville Lake and one commercial resort with cabins that can be rented.

Consequences of Not Maintaining the Project

- Failure to adequately fund the flood risk management mission at this facility would result in the project's inability to adequately execute the flood risk management mission as authorized by congress. The consequences could range in severity depending upon the condition of the project, but would ultimately lead to a failure of the structure and a subsequent life safety concern for those in the affected downstream areas.

- Closure of recreational facilities will result in degradation of facilities, negative public reaction and potential Congressional inquiries.

Regional Importance

- Taylorsville Lake provides flood protection to the Salt River valley, improves downstream water flow conditions, and offers a habitat for various species of fish and wildlife.

- The lake offers boating, fishing, swimming, and other recreational activities to the general public. The project averages 372 thousand visitors annually, contributing $7 million dollars to the local economy. This represents a sizable component of the economy in the local community.

- The project has prevented over $129 million dollars in cumulative flood damages through FY 19.

U.S. Army Corps of Engineers Fiscal Year (FY) Project Apprropriations and President's Budget ($1,000)

	FY19 O&M Appropriation			FY20 O&M Appropriation			FY21 O&M President's Budget		
Business Line	Operation	Maintenance	Total	Operation	Maintenance	Total	Operation	Maintenance	Total
Flood Risk Management	$801	$138	$939	$818	$141	$959	$857	$443	$1,300
Recreation	$80		$80	$82		$82	$78		$78
Environmental Stewardship	$75	$54	$129	$90	$35	$125	$272	$210	$482
Total	$956	$192	**$1,148**	$990	$176	**$1,166**	$1,207	$653	**$1,860**

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

Business Line	FY21 Funding Requests for Maintenance ($1,000) Total	Packages $	Maintenenace Needs
Flood Risk Management	$188	$150	Dam Safety for Flood Risk Mgmt - Piezometer Installation
		$3	Maintenance for Flood Risk Management
		$10	Boundary and Flowage Easement Maintenance Activities for Flood Risk Mgmt
		$25	Sedimentation Range survey
Recreation	$6	$6	Maintenance of Recreation Features

Additional Information

- Fee Lands: 15,143 acres
- Flowage Easement Lands: 508 acres
- Project Boundary Line Marked: 102 miles

Congressional Interests

Senator Mitch McConnell, R-KY
Senator Rand Paul, R-KY
Congressman Brett Guthrie, R-KY-2
Congressman Thomas Massie, R-KY-4
Congressman Andy Barr, R-KY-6

US Army Corps of Engineers

West Fork Lake

Cincinnati, OH

GREAT LAKES & OHIO RIVER DIVISION

Project Features

- Authorization: Flood Control Act of 1946.
- Primary project purposes are flood risk reduction, fish and wildlife and recreation.
- West Fork Lake (better known locally as Winton Woods Lake) was authorized under the Flood Control Act of 1946. The Louisville District of the U.S. Army Corps of Engineers designed, built, and operates the project to reduce flood damages downstream from the dam. The dam is 6.5 miles above the confluence with Mill Creek.
- West Fork Lake is a great way to experience nature in the middle of Cincinnati. The 183 acre lake provides flood reduction and a whole lot more. West Fork Lake exists as a cooperative management effort between the Corps of Engineers and the Great Parks of Hamilton County, and offers a wide variety of recreational facilities. At West Fork Lake visitors can enjoy boating, camping, fishing, golfing/frisbee golfing, hiking/biking, and horseback riding stables.
- The Corps manages the areas around the dam and the Great Parks of Hamilton County manages major recreation facilities under a public park and recreation lease.

Regional Importance

- The West Fork reservoir offers many opportunities to enjoy wildlife or recreate in the great outdoors. The project averages 747 thousand visitors annually, contributing $10.8 million dollars to the local economy. This represents a sizable component of the economy in the local community.

- The project has prevented over $129.87 million dollars in accumulative flood damages through FY 2019.

Consequences of Not Maintaining the Project

- Failure to adequately fund the flood risk management mission at this facility would result in the project's inability to adequately execute the flood risk management mission as authorized by congress. The consequences could range in severity depending upon the condition of the project, but would ultimately lead to a failure of the structure and a subsequent life safety concern for those in the affected downstream areas.

- Closure of recreational facilities will result in degradation of facilities, negative public reaction and potential Congressional inquiries.

U.S. Army Corps of Engineers Fiscal Year (FY) Project Apprropriations and President's Budget ($1,000)

	FY19 O&M Appropriation			FY20 O&M Appropriation			FY21 O&M President's Budget		
Business Line	Operation	Maintenance	Total	Operation	Maintenance	Total	Operation	Maintenance	Total
Flood Risk Management	$697	$1,593	$2,290	$805	$305	$1,110	$729	$160	$889
Recreation	$16		$16	$36		$36	$45		$45
Environmental Stewardship	$47	$59	$106	$22	$34	$56	$23	$26	$49
Total	$760	$1,652	**$2,412**	$863	$339	**$1,202**	$797	$186	**$983**

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

Business Line	FY21 Funding Requests for Maintenance ($1,000) Total	Packages $	Maintenenace Needs
Flood Risk Management	$726	$50	End of Life Cycle Replacement of Electronic Security System Components.
		$80	Installation of an Equipment Storage Structure (Pole Barn)
		$61	Maintenance for Flood Risk Management
		$10	Boundary and Flowage Easement Maintenance Activities for Flood Risk Mgmt
		$105	Remove Rock from Spillway Bucket
		$20	Replacement Lighting at Control Tower Retrofitting to LED
		$400	Repair/Replace Float Well Flushing Valve (Raw Water Intake at Control Tower)
Recreation	$32	$32	Maintenance for Recreation

Additional Information

- Fee Lands: 1,345 acres
- Flowage Easement Lands: 41 acres
- Project Boundary Line Marked: 13 miles

Congressional Interests

Senator Sherrod Brown, D-OH
Senator Rob Portman, R-OH
Congressman Steve Chabot, R-OH-1
Congressman Brad Wenstrup, R-OH-2

US Army Corps of Engineers

William H. Harsha Lake

Batavia, OH

GREAT LAKES & OHIO RIVER DIVISION

Project Features

- Authorization: Flood Control Act of 1938.
- Primary project purposes are flood risk reduction, fish and wildlife and recreation.
- William H. Harsha Lake (also known as East Fork) situated in Clermont County in southwestern Ohio, about 25 miles east of Cincinnati. The large earthen dam and smaller saddle dams are about four miles south of Batavia, Ohio, on the East Fork of the Little Miami River.
- William H. Harsha exists as a cooperative management effort between the Corps of Engineers and the Ohio Department of Natural Resources - Divisions of Parks and Recreation, Watercraft, and Wildlife. A variety of other partnerships play important roles in the management of the 10,000 plus acres of public lands at William H. Harsha Lake.
- The Corps manages the areas around the dam and the ODNR manages major recreation facilities under a state park lease.

Regional Importance

- The 2,160 acre William H. Harsha reservoir and East Fork State Park offer outstanding boating, hiking, hunting, fishing, camping and other outdoor recreation activities. The state park is home to many junior and collegiate rowing races, including the US Rowing Youth National Championships. The project averages 661 thousand visitors annually, contributing $8.4 million dollars to the local economy. This represents a sizable component of the economy in the local community.

- The project has prevented over $136 million dollars in cumulative flood damages through FY 2019.

Consequences of Not Maintaining the Project

- Failure to adequately fund the flood risk management mission at this facility would result in the project's inability to adequately execute the flood risk management mission as authorized by congress. The consequences could range in severity depending upon the condition of the project, but would ultimately lead to a failure of the structure and a subsequent life safety concern for those in the affected downstream areas.

- Closure of recreational facilities will result in degradation of facilities, negative public reaction and potential Congressional inquiries.

U.S. Army Corps of Engineers Fiscal Year (FY) Project Apprropriations and President's Budget ($1,000)

	FY19 O&M Appropriation			FY20 O&M Appropriation			FY21 O&M President's Budget		
Business Line	Operation	Maintenance	Total	Operation	Maintenance	Total	Operation	Maintenance	Total
Flood Risk Management	$1,322	$1,040	$2,362	$1,099	$882	$1,981	$1,088	$393	$1,481
Recreation	$134		$134	$178		$178	$147		$147
Environmental Stewardship	$109	$46	$155	$364	$64	$428	$76	$40	$116
Water Supply	$8		$8	$8		$8	$8		$8
Total	$1,573	$1,086	**$2,659**	$1,649	$946	**$2,595**	$1,319	$433	**$1,752**

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

	FY21 Funding Requests for Maintenance ($1,000)		
Business Line	Total	Packages $	Maintenenace Needs
Flood Risk Management	$432	$320	Bridge Painting and Rocker Replacement
		$62	Maintenance for Flood Risk Management
		$50	Removal of Radio Tower at Project Office
Recreation	$55	$55	Maintenance for Recreation
Environmental Stewardship	$28	$28	Maintenance for Environmental Stewardship

Additional Information

- Fee Lands: 10,566 acres
- Flowage Easement Lands: 125 acres
- Project Boundary Line Marked: 33 miles

Congressional Interests

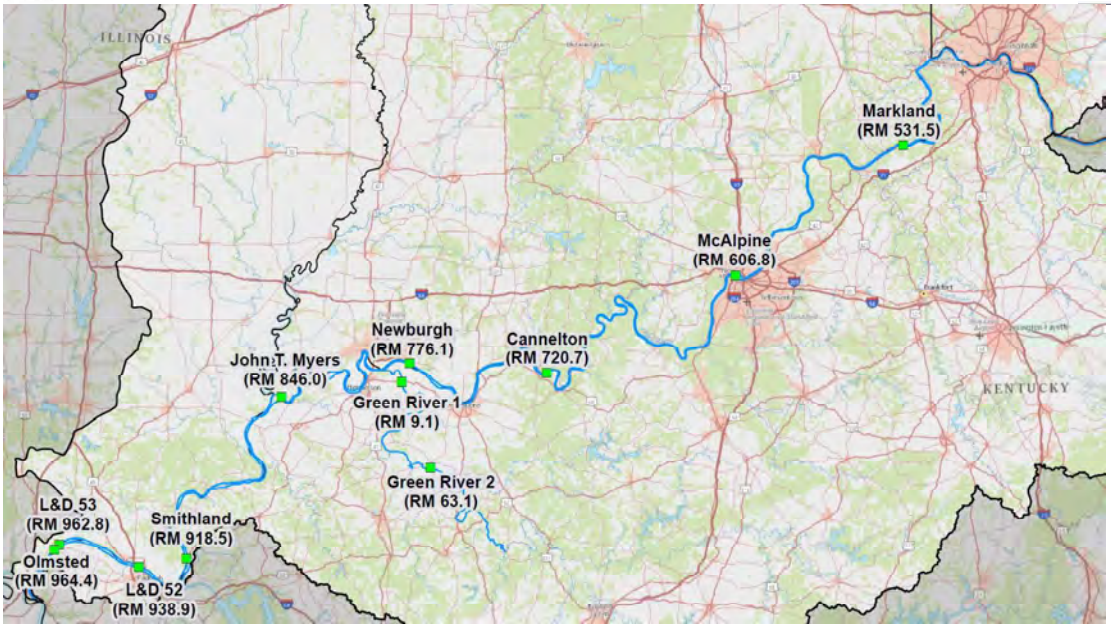
Senator Sherrod Brown, D-OH
Senator Rob Portman, R-OH
Congressman Brad Wenstrup, R-OH-2

US Army Corps of Engineers

Ohio River Locks and Dams

Louisville District

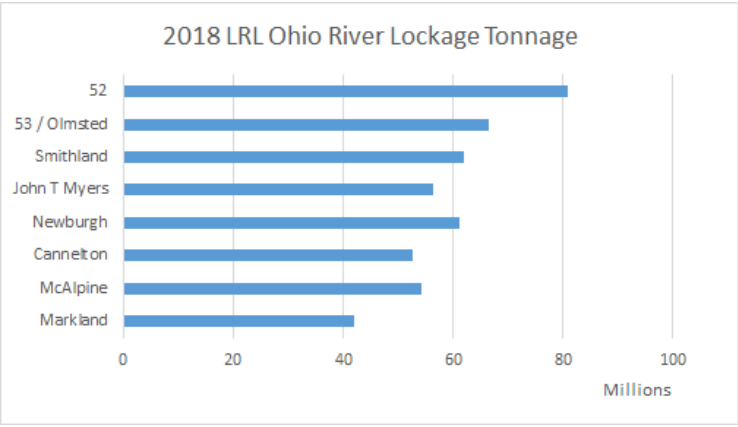
GREAT LAKES & OHIO RIVER DIVISION



Basin Characteristics

• The Ohio River system within the Louisville District is managed through a series of 8 locks and dams owned and operated by the U.S. Army Corps of Engineers. The breadth of the Louisville District portion of the Ohio River begins at downstream side of Meldahl Locks and Dam in Felicity, OH at River Mile 438 to Cairo, IL at River Mile 980.

• Completed in 1929 Locks and Dam 52 & 53 are remnants of the original Ohio River Navigation system. These two locks will be replaced by Olmsted Locks and Dam.



Regional Importance

• The Ohio River is part of the nation's Inland Waterway System. These interconnected river routes serve to strategically link geographic areas, major markets, suppliers of raw materials, processors and consumers.

• Navigation has contributed greatly to the economic and industrial development of the Ohio River Valley as a whole. The economies of PA, WV, OH, IN, KY, IL and beyond would not be as dynamic as they are today, were it not for the Ohio River.

• Because one barge can transport as much cargo as 15 rail cars and 60 tractor-trailers, waterway transportation benefits the environment. It reduces fuel consumption and emissions, and makes roads safer by keeping more trucks off the highway.

• Every year the locks provide passage for over 66.7 million tons of goods including grain, steel, chemicals, petroleum, and even products for our nation's defense.

U.S. Army Corps of Engineers Fiscal Year (FY) Project Apprropriations and President's Budget ($1,000)

	FY19 O&M Appropriation			FY20 O&M Appropriation			FY21 O&M President's Budget		
Business Line	Operation	Maintenance	Total	Operation	Maintenance	Total	Operation	Maintenance	Total
Navigation	$18,429	$28,827	$47,256	$12,819	$55,638	$68,457	$13,402	$37,107	$50,509
Recreation			$0			$0			$0
Environmental Stewardship	$75		$75	$42	$26	$68	$42	$26	$68
Total	$18,504	$28,827	**$47,331**	$12,861	$55,664	**$68,525**	$13,444	$37,133	**$50,577**

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

	FY21 Funding Requests for Maintenance ($1,000)		
Business Line	Total	Packages $	Maintenenace Needs
Navigation	$1,991	$120	Boundary Monumentation and Rectification for Navigation
		$876	Maintenance for Navigation
		$995	Fabricate Floating Mooring Bitt Dewatering Box

Locks and Dams	River Mile	Lock Dimensions in Feet		Crest of Dam	Upper Pool Elev.	Put Into Operation
Markland	531.5	Main:	110 x 1,200	Gated	455.0	1959
		Auxiliary:	110 x 600			
McAlpine	604.5	Main:	110 x 1,200	Gated	420.0	1920
		Auxiliary:	110 x 1,200			
Cannelton	720.7	Main:	110 x 1,200	Gated	383.0	1967
		Auxiliary:	110 x 600			
Newburgh	776.1	Main:	110 x 1,200	Gated	358.0	1975
		Auxiliary:	110 x 600			
J.T. Myers	846	Main:	110 x 1,200	Gated	342.0	1977
		Auxiliary:	110 x 600			
Smithland	918.5	Main:	110 x 1,200	Gated	324.0	1980
		Auxiliary:	110 x 1,200			
Olmsted	963	Main:	110 x 1,200	Wicket and Fixed Weir	302.0	2018
		Auxiliary:	110 x 1,200			

US Army Corps of Engineers

Cannelton Locks and Dam

Ohio River, Cannelton, IN

GREAT LAKES & OHIO RIVER DIVISION

Project Features

- The project was approved as a replacement for existing Locks and Dam 43,44, and 45 on 27 January 1960 by the Secretary of the Army under authority of Section 6 of the Rivers and Harbor Act approved 3 March 1909, amended.

- High lift navigation dam with two locks.

- The dam is a non-navigable gated crest type structure, length, 1,395'. There is a low concrete weir, length 195' and a 464' quarry stone fill and sheet pile cutoff wall terminating on the Kentucky shore. The gated section has 12 tainer gates supported by concrete piers. The gates are 100' long and 42' hight, with an operating radius of 64'.

- Two adjacent parallel lock chambers are located along the Indiana shore, the main lock chamber having clear dimensions of 110' x 1,200' and the auxiliary lock 110' x 600'.

- Normal upper pool elevations is 383.0' mean sea level; normal lower pool elevation is 358.0' mean sea level.

Regional Importance

- The project completion in 1983 provided boat ramps at eight access sites around the area.

- Operating under license granted by the Federal Energy Regulatory Commission, AMP, generates approximately 84 MW servicing about 50,000 homes using 3 hydro-power generator units.

- Average 3 year tonnage 52,868,678

Consequences of Not Maintaining the Project

- Failure to provide adequate funding to maintain this facility will have significant effects to the local and regional economy including: increased transportation costs and delays in the shipment of raw materials.

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

Business Line	FY21 Funding Requests for Maintenance ($1,000) Total	Packages $	Maintenenace Needs
Navigation	$17,982	$100	Replace Tainter Gate Encoders at Cannelton Locks and Dam
		$180	Repave Maintenance Shop Parking Lot at Cannelton Locks and Dam
		$220	Repair Fixed Weir Cells at Cannelton Locks and Dam
		$6,030	Repair Dam Stilling Basins at Cannelton Locks and Dam
		$3,000	Repair Dam Service Bridge at Cannelton Locks and Dam
		$102	Life Safety Signs for Cannelton Lock and Dam
		$690	Repair and Replace Lock Controls at Cannelton Locks and Dam
		$1,320	Install Guard Cell at Cannelton Locks and Dam
		$1,100	Inspect Tainter Gate Wire Rope at Cannelton Locks and Dam
		$1,000	Replace Dam Tainter Gate Skin Sheets at Cannelton Locks and Dam
		$4,240	Repair Culvert Valves at Cannelton Locks and Dam

Additional Information

- 2019 tonnage (in thousands) : 51,783
- National Rank (2018): 8

Current Miter Gate In Service Date: 1973

- Projected Year Lock Miter Gates Reach "F" Condition:

Main: Downstream: 2017 Upstream: 2017
Auxiliary: Downstream: 2025 Upstream: 2025

- Projected Miter Gate Replacement:

Main : Downstream: 2018 Upstream: 2018
Auxiliary: Downstream: 2032 Upstream: 2032

- Fee Lands: 743 acres
- Flowage Easement Lands: 3,573 acres
- Project Boundary Line Marked: 0

Congressional Interests

Senator Mike Braun, R-IN
Senator Todd Young, R-IN
Congressman Larry Bucshon, M.D., R-IN-8
Senator Mitch McConnell, R-KY
Senator Rand Paul, R-KY
Congressman Brett Gutherie, R-KY-2

US Army Corps of Engineers

Green River Locks and Dam No. 1

Green River, Spottsville, KY

GREAT LAKES & OHIO RIVER DIVISION

Project Features

- The project was authorized by the River and Harbor Act of September 1954 as a replacement for the existing lock and dam to improve the navigable depth of the river.

- Low lift navigation dam with one locks.

- The dam consists of a concrete-filled sheet pile cell overflow section 610 feet long and a non-overflow, solid concrete left abutment 150 feet long.

- One chamber is located on the Indiana side with clear dimensions of 84' x 600'.

- Normal upper pool elevation is 341.2' NAVD88; normal lower pool elevation is 349.0' NAVD88; normal lift 7.8'.

Consequences of Not Maintaining the Project

- Failure to provide adequate funding to maintain this facility will have significant effects to the local and regional economy including: increased transportation costs and delays in the shipment of raw materials.

- The rivers of this country have long been recognized as vital links in a transportation network. Not maintaining the project would have a negative impact on the commerce of the Nation.

Regional Importance

- Reduction of annual channel maintenance dredging formerly required in low lift pools.

- The deeper, wider and more stable pool formed by Green River Lock 1 permits more efficient operations of towboats and enhances the efficiency of terminal operations in the area.

- Average 3 year tonnage 4,679,744

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

Business Line	FY21 Funding Requests for Maintenance ($1,000) Total	Package $	Maintenenace Needs
Navigation	$10,918	$55	Replace Roofs at Green River Lock and Dam 1
		$3,840	Replace Pier Protection at Spottsville Rail Road Bridge
		$385	Replace Lock Wall Handrail at Green River Lock 1
		$3,850	Repair Miter Gates at Green River Lock 1
		$690	Repair Lock Wall Concrete at Green River Lock and Dam 1
		$1,811	Rebuild Miter Gate Machinery at Green River Lock and Dam 1
		$287	Maintenance for Navigation

Additional Information

- 2019 tonnage (in thousands) : 3,632

Current Miter Gate In Service Date: 1956

- Projected Year Lock Miter Gates Reach "F" Condition:

Downstream: 2031 Upstream: 2031

- Projected Miter Gate Replacement:

Downstream: 2038 Upstream: 2038

- Fee Lands: 31.8 acres
- Flowage Easement Lands: 14.1 acres
- Project Boundary Line Marked: 0

Congressional Interests

Senator Mitch McConnell, R-KY
Senator Rand Paul, R-KY
Congressman James Comer R-KY-1

US Army Corps of Engineers

Green River Locks and Dam No. 2

Green River, Calhoun, KY

GREAT LAKES & OHIO RIVER DIVISION

Project Features

- The project was authorized by the River and Harbor Act of September 1954 as a replacement for the existing lock and dam to improve the navigable depth of the river.

- Low lift navigation dam with one locks.

- The dam consists of a concrete-filled sheet pile cell overflow section 497 feet long.

- One chamber is located on the Indiana side with clear dimensions of 84' x 600'.

- Normal upper pool elevation is 363.3.0' NAVD88; normal lower pool elevation is 349.0' NAVD88; normal lift 14.2'.

Consequences of Not Maintaining the Project

- Failure to provide adequate funding to maintain this facility will have significant effects to the local and regional economy including: increased transportation costs and delays in the shipment of raw materials.

- The rivers of this country have long been recognized as vital links in a transportation network. Not maintaining the project would have a negative impact on the commerce of the Nation.

Regional Importance

- Reduction of annual channel maintenance dredging formerly required in low lift pools.

- The deeper, wider and more stable pool formed by Green River Lock 2 permits more efficient operations of towboats and enhances the efficiency of terminal operations in the area.

- Average 3 year tonnage 1,997,803

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

Business Line	FY21 Funding Requests for Maintenance ($1,000) Total	Package $	Maintenenace Needs
Navigation	$7,792	$286	Maintenance for Navigation
		$1,811	Rebuild Miter Gate Machinery at Green River Lock and Dam 2
		$220	Repair Lock Wall Concrete at Green River Lock and Dam 2
		$5,090	Repair Miter Gates at Green River Lock 2
		$385	Replace Lock Wall Handrail at Green River Lock 2

Additional Information

- 2019 tonnage (in thousands) : 986

Current Miter Gate In Service Date: 1956

- Projected Year Lock Miter Gates Reach "F" Condition:

Downstream: 2029 Upstream: 2034

- Projected Miter Gate Replacement:

Downstream: 2039 Upstream: 2044

- Fee Lands: 32.8 acres
- Flowage Easement Lands: 12.3 acres
- Project Boundary Line Marked: 0

Congressional Interests

Senator Mitch McConnell, R-KY
Senator Rand Paul, R-KY
Congressman James Comer R-KY-1

US Army Corps of Engineers

John T. Myers Locks and Dam

Ohio River, Mount Vernon, IN

GREAT LAKES & OHIO RIVER DIVISION

Project Features

- The project was authroized as a replacement for Locks and Dam 47, 48, and 49 on 17 September 1958 by the Secretary of the Army.

- High lift navigation dam with two locks.

- The dam consists of a gated section 1,256' long, a fixed weir section, 2,239' long and a short, quarry stone fill and sheet pile cutoff terminating on the Kentucky shore. The gates section has ten tainter gates, each gate is 110' long x 32' high.

- Two adjacent parallel lock chambers are located on the Indiana side. The main chambers with clear dimensions of 110' x 1,200' and an auxiliary lock of 110' x 600'.

- Normal upper pool elevation is 342.0' 0hio River Datum (0RD); normal lower pool elevation is 324.0' 0hio River Datum (0RD); normal lift 22.0'

Regional Importance

- Reduction of annual channel maintenance dredging formerly required in low lift pools.

- The deeper, wider and more stable pool formed by the John T. Myers Locks and Dams permits more efficient operations of towboats and enhances the efficiency of terminal operations in the area.

- The facility has an area that is dedicated to public use for picnics.

- Average 3 year tonnage 51,437,187

Consequences of Not Maintaining the Project

- Failure to provide adequate funding to maintain this facility will have significant effects to the local and regional economy including: increased transportation costs and delays in the shipment of raw materials.

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

Business Line	FY21 Funding Requests for Maintenance ($1,000) Total	Packages $	Maintenenace Needs
Navigation	$16,386	$500	Design New Miter Gates for John T Myers Locks and Dam, Primary Chamber
		$236	Life Safety Signs for JT Myers Lock and Dam
		$690	Repair Dam Emergency Bulkheads at John T Myers Locks and Dam
		$4,000	Repair Dam Trunnion Pins at John T Myers Locks and Dam
		$690	Replace and Repair Lock and Dam Control System at John T Myers Locks and Dam
		$2,580	Replace Deteriorating Framing on the Tainter Gates at John T Myers Locks and Dam
		$260	Replace Hydraulic Cylinder on Culvert Valve at John T. Myers Locks and Dam
		$600	Replace Motor Control Center at JT Myers Locks and Dam
		$1,790	Replace Tainter Gate Cable Connections at John T Myers Locks and Dam
		$5,040	Replace Project Workboat at John T Myers Locks and Dam

Additional Information

- 2019 tonnage (in thousands) : 54,394
- National Rank (2018): 9

Current Miter Gate In Service Date: 1972

- Projected Year Lock Miter Gates Reach "F" Condition:

Main: Downstream: 2018 Upstream: 2018
Auxiliary: Downstream: 2023 Upstream: 2023

- Projected Miter Gate Replacement:

Main : Downstream: 2019 Upstream: 2019
Auxiliary: Downstream: 2029 Upstream: 2029

- Fee Lands: 7,900 acres
- Flowage Easement Lands: 3,708 acres
- Project Boundary Line Marked: 0

Congressional Interests

Senator Mike Braun, R-IN
Senator Todd Young, R-IN
Congressman Larry Bucshon, M.D., R-IN-8
Senator Mitch McConnell, R-KY
Senator Rand Paul, R-KY
Congressman James Comer R-KY-1

US Army Corps of Engineers

Markland Locks and Dam

Ohio River, Florence, IN

GREAT LAKES & OHIO RIVER DIVISION

Project Features

- Project approved by the Secretary of the Army on 11 March 1953 under the authority of the Section 6 of the River and Harbor Act approved 3 March 1909, as replacement for five obsolete locks and dams.

- High lift navigation dam with two locks.

- The Dam is a non-navigable gated-crest type structure, length 1,395 feet consisting of 12 tainter gates.

- Each gate is 100 feet long and 42 feet high, with operating hands radius of 64 feet. In 1977, the five submergible gates were converted to non-submergible, making all 12 gates non-submergible.

- Two adjacent parallel lock chambers are located along the Kentucky shore, the main lock chamber having clear dimensions of 110' x 1,200' and the auxiliary lock 110' x 600'.

- Normal upper pool elevation is 455.0 feet mean sea level; normal lower pool elevation is 420.0 feet Ohio River Datum (ORD); and normal life is 35.0 feet.

Consequences of Not Maintaining the Project

- Failure to provide adequate funding to maintain this facility will have significant effects to the local and regional economy including: increased transportation costs and delays in the shipment of raw materials.

- Failure to maintain the project will result in loss of access of Indiana State Highway 156 and U.S. Highway 42 in Kentucky.

Regional Importance

- Under license granted by the Federal Power Commission, the Public Service Company of Indiana has completed construction of a run-of-river hydroelectric power plant at Markland Dam. Capacity of the plant is 81,000 kva. Operation of the plant is fully compatible with other purposes of the Markland project.

- Indiana State Highway 156 and U.S. Highway 42 in Kentucky are connected by the bridge over Markland Dam, which was completed in August 1978.

- Average 3 year tonnage 40,515,556

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

Business Line	FY21 Funding Requests for Maintenance ($1,000) Total	Packages$	Maintenenace Needs
Navigation	$39,613	$3,000	Sandblast and Paint Dam Emergency Bulkheads at Markland Locks and Dam
		$3,000	Resurface Highway Bridge Deck at Markland Locks and Dam
		$2,832	Replace Handrail and Machinery Guards on Dam at Markland Locks and Dam
		$4,500	Replace Dam Emergency Bulkheads at Markland Locks and Dam
		$6,325	Repair Upstream Miter Gate at Markland Locks and Dam, Auxiliary Chamber
		$818	Repair Primary Chamber Emergency Gate at Markland Locks and Dam
		$3,800	Repair Mooring Bitt Tracks at Markland Locks and Dam, Primary Chamber
		$3,500	Repair Failed Line Shaft Supports at Markland Locks and Dam
		$6,325	Repair Downstream Miter Gate at Markland Locks and Dam, Auxiliary Chamber
		$213	Repair Crack in Wall Monolith at Markland Lock & Dam.
		$200	Hydraulic Lock Control Repairs at Markland Locks and Dam
		$5,040	Replace Project Workboat at Markland Locks and Dam
		$60	Life Safety Signs for Markland Lock and Dam

Additional Information

- 2019 tonnage (in thousands) : 41,908
- National Rank (2018): 11
- Current Miter Gate In Service Date: 1972
- Projected Year Lock Miter Gates Reach "F" Condition:

Main: Downstream: 2012 Upstream: 2012
Auxiliary: Downstream: 2023 Upstream: 2023

- Projected Miter Gate Replacement:

Main : Downstream: 2080 Upstream: 2081
Auxiliary: Downstream: 2031 Upstream: 2029

- Fee Lands: 631 acres
- Flowage Easement Lands: 11,444 acres
- Project Boundary Line Marked: 0

Congressional Interests

Senator Mike Braun, D-IN
Senator Todd Young, R-IN
Congressman Greg Pence, R-IN-6
Senator Mitch McConnell, R-KY
Senator Rand Paul, R-KY
Congressman Thomas Massie, R-KY-4

US Army Corps of Engineers

McAlpine Locks and Dam

Louisville, KY

GREAT LAKES & OHIO RIVER DIVISION

Project Features

- Original authority for the project was obtained under Section 6 of the River and Harbor Act of 1909. Authorization for the existing 1,200' lock and the fixed and operating dam was obtained in the River and Harbor Act of 1958. Authorization for the additional 1,200' lock was obtained in the Water and Resource Development Act of 1990.

- High lift navigation dam with two locks and a non-Federal hydroelectric facility

- Two adjacent parallel lock chamber are located along the Kentucky shore. Both chambers have a clear dimension of 1,200' x 110'.

- The dam is a non-navigable gate controlled structure. It consists of fixed weir and pier sections, with crest rising from elevation 422 at the lower end to elevation 423 at the cross river leg.

- Normal upper pool elevation is 420.0 feet mean sea level. The normal lower pool is 383.0 mean sea level.

Consequences of Not Maintaining the Project

- Failure to provide adequate funding to maintain this facility will have significant effects to the local and regional economy including: increased transportation costs and delays to the shipment of raw materials.

- Closure of the pollinator planting on 1.5 acres of improved habitat will negatively effect bees, butterflies and other pollinators.

- Failure to maintain the project will result in loss of access to the fossil beds located at the Falls of the Ohio.

Regional Importance

- All federal lands relating to the McAlpine project have been designated as Wildlife Conservation Area under direct control of the U.S. Army Corps of Engineers.

- Operating under license granted by the Federal Energy Regulatory Commission, the Louisville Gas and Electric Company generates approximately 108,000 KVA by run-of-river.

- Authorized under the Energy and Water Development Act of 1986, the Louisville Belvedere Connector project, located at the mouth of the Louisville waterfront and Canal River Mile 604, provides handicapped and pedestrian access between the Louisville waterfront and the downtown Belvedere Plaza.

- Average 3 year tonnage 53,480,910

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

Business Line	FY21 Funding Requests for Maintenance ($1,000) Total	Packages $	Maintenenace Needs
Navigation	$4,535	$200	Life Safety Signs for McAlpine Lock and Dam
		$166	Repair Hydraulic Piping at McAlpine Locks and Dam
		$394	Repair Lower Dam Bulkhead Crane at McAlpine Locks and Dam
		$1,851	Repair North Chamber Emergency Gate at McAlpine Locks and Dam
		$850	Repair Structual Damage to Tainter Gate at McAlpine Locks and Dam
		$150	Replace Wire Rope on Culvert Valves at McAlpine Locks and Dam, South Chamber
		$924	Replace Wire Rope on Tainter Gate 9 at McAlpine Locks and Dam

Additional Information

- 2019 tonnage (in thousands) : 55,198
- National Rank (2018): 7

Current Miter Gate In Service Date: 1974

- Projected Year Lock Miter Gates Reach "F" Condition:

Main: Downstream: 2061 Upstream: 2061
Auxiliary: Downstream: 2014 Upstream: 2014

- Projected Miter Gate Replacement:

Main : Downstream: 2062 Upstream: 2062
Auxiliary: Downstream: 2016 Upstream: 2016

- Fee Lands: 389 acres
- Flowage Easement Lands: 12,220 acres
- Project Boundary Line Marked: 0

Congressional Interests

Senator Mike Braun, R-IN
Senator Todd Young, R-IN
Congressman Trey Hollingsworth, R-IN-9
Senator Mitch McConnell, R-KY
Senator Rand Paul, R-KY
Congressman John Yarmuth, D-KY-3

US Army Corps of Engineers

Newburgh Locks and Dam

Ohio River, Newburgh, IN

GREAT LAKES & OHIO RIVER DIVISION

Project Features

• The project was authorized as a replacement for existing Locks and Dams 46 and 47 on 24 April 1962 by the Secretary of the Army. The Water Resource Development Act of 1974 modified the project to include bank protection along the Ohio River at Newburgh, Indiana.

• High lift navigation dam with two locks.

• The dam consists of a gated section 1,140' long, a fixed weir section 1,300' long, and a sheet pile cell connection to the left bank. The gated section has nine tainer gates, each gate being 110' wide and 32' high.

• Two adjacent parallel lock chambers are located along the Indiana side. The main lock chamber having clear dimensions of 110' x 1,200' and the auxiliary lock 110' x 600'. When the lock is closed due to high water, navigations may pass over the fixed weir.

• Normal upper pool elevation is 358.0' Ohio River Datum (ORD) ; normal lower pool elevation is 342.0' Ohio River Datum (ORD).

Consequences of Not Maintaining the Project

• Failure to provide adequate funding to maintain this facility will have significant effects to the local and regional economy including: increased transportation costs and delays in the shipment of raw materials.

• The rivers of this country have long been recognized as vital links in a transportation network. Not maintaining the project would have a negative impact on the commerce of the Nation.

Regional Importance

• Reduction of annual channel maintenance dredging formerly required in low lift pools.

• The deeper, wider and more stable pool formed by the Newburgh Locks and Dams permits more efficient operations of towboats and enhances the efficiency of terminal operations in the area.

• The lock provides several amenities for public usage to include boat ramps, picnic areas, walking trails, and a playground.

• Average 3 year tonnage 60,286,959

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

Business Line	FY21 Funding Requests for Maintenance ($1,000) Total	Packages $	Maintenenace Needs
Navigation	$4,535	$200	Life Safety Signs for McAlpine Lock and Dam
		$166	Repair Hydraulic Piping at McAlpine Locks and Dam
		$394	Repair Lower Dam Bulkhead Crane at McAlpine Locks and Dam
		$1,851	Repair North Chamber Emergency Gate at McAlpine Locks and Dam
		$850	Repair Structual Damage to Tainter Gate at McAlpine Locks and Dam
		$150	Replace Wire Rope on Culvert Valves at McAlpine Locks and Dam, South Chamber
		$924	Replace Wire Rope on Tainter Gate 9 at McAlpine Locks and Dam

Additional Information

- 2019 tonnage (in thousands) : 55,198
- National Rank (2018): 7

Current Miter Gate In Service Date: 1974

- Projected Year Lock Miter Gates Reach "F" Condition:

Main: Downstream: 2061 Upstream: 2061
Auxiliary: Downstream: 2014 Upstream: 2014

- Projected Miter Gate Replacement:

Main : Downstream: 2062 Upstream: 2062
Auxiliary: Downstream: 2016 Upstream: 2016

- Fee Lands: 389 acres
- Flowage Easement Lands: 12,220 acres
- Project Boundary Line Marked: 0

Congressional Interests

Senator Mike Braun, R-IN
Senator Todd Young, R-IN
Congressman Trey Hollingsworth, R-IN-9
Senator Mitch McConnell, R-KY
Senator Rand Paul, R-KY
Congressman John Yarmuth, D-KY-3

US Army Corps of Engineers

Olmsted Locks and Dam

Olmsted, IL

GREAT LAKES & OHIO RIVER DIVISION

Project Features

- Congress authorized this project in the Water Resources Development Act of 1988.

- The project consists of twin 110' x 1,200' lock chambers located near the Illinois shoreline.

- The dam consists of a 1,400' long navigable pass with 140 movable wickets that will be raised to sustain pool for navigation purposes. The pool elevation will be maintained by 5 tainter gates, each gate is 110' wide and 37' high.

- Approximately 60% of the year, during high water, tows will bypass the locks and go over the top of the movable portion of the dam.

- To insure adequate navigable depth, the hinged pool will maintain elevation 300 at the Paducah gage and elevation 302 at the Smithland L&D.

- The length of the Olmsted pool is approximately 46.1 miles.

Consequences of Not Maintaining the Project

- Failure to provide adequate funding to maintain this facility will have significant effects to the local and regional economy including: increased transportation costs and delays in the shipment of raw materials.

- The rivers of this country have long been recognized as vital links in a transportation network. Not maintaining the project would have a negative impact on the commerce of the Nation.

Regional Importance

- Reduction of annual channel maintenance dredging formerly required in low lift pools.

- The deeper, wider and more stable pool formed by the Olmsted permits more efficient operations of towboats and enhances the efficiency of terminal operations in the area.

- Olmsted replaced the failing Locks and Dams 52 and 53 in 2018.

- *Average 3 year tonnage 65,640,071
  *LD 53 / Olmsted

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

Business Line	FY21 Funding Requests for Maintenance ($1,000) Total	Packages $	Maintenenace Needs
Navigation	$700	$700	Drydock of Washdown Barge for Olmsted Locks and Dam

Additional Information

- 2019 tonnage (in thousands) : 73,107

- Olmsted was placed in operation in 2018 and all major maintenance was performed prior to becoming operational.

Congressional Interests

Senator Dick Durbin, D-IL
Senator Tammy Duckworth, D-IL
Congressman Mike Bost, R-IL-12
Senator Mitch McConnell, R-KY
Senator Rand Paul, R-KY
Congressman James Comer, R-KY-1

US Army Corps of Engineers

Smithland Locks and Dam

Ohio River, Brookport, IL

GREAT LAKES & OHIO RIVER DIVISION

Project Features

- The project was authorized on 8 December 1965 as a replacement for Locks and Dams 50 and 51, under authority of Section 6 of the River and Harbor Act of 3 March 1909.

- High lift navigation dam with two locks.

- The dam consists of a gates section 1,390' long and a fixed weir section 1,572' long, extending to the Kentucky bank. The gate section contains 11 tainter gates, 110 feet in width.

- Two adjacent parallel lock chambers are located along the Illinois side of Dog Island.

- Both chambers have clear chamber dimensions of 110' x 1,200'.

- Normal upper pool elevation is 324.0' Ohio River Datum (ORD); normal lower pool elevation is 302.0' Ohio River Datum (ORD); and normal lift is 22.0'

Consequences of Not Maintaining the Project

- Failure to provide adequate funding to maintain this facility will have significant effects to the local and regional economy including: increased transportation costs and delays in the shipment of raw materials.

- The rivers of this country have long been recognized as vital links in a transportation network. Not maintaining the project would have a negative impact on the commerce of the Nation.

Regional Importance

- Reduction of annual channel maintenance dredging formerly required in low lift pools.

- The deeper, wider and more stable pool formed by the Smithland Locks and Dams permits more efficient operations of towboats and enhances the efficiency of terminal operations in the area.

- Operating under license granted by the Federal Energy Regulatory Commission, AMP, generates approximately 75 MW servicing about 40,000 homes using 3 hydro-power generator units.

- Average 3 year tonnage 58,273,022

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

Business Line	FY21 Funding Requests for Maintenance ($1,000) Total	Packages $	Maintenenace Needs
Navigation	$22,460	$520	Install Replacement Miter Gate and Culvert Valve Cylinders at Smithland Locks and Dam
		$236	Life Safety Signs for Smithland Lock and Dam
		$1,688	Perform Inspection Dewatering at Smithland Locks and Dam, Land Chamber
		$300	Remove Navigation Hazards Below Smithland Dam
		$3,480	Repair Structural Damage to Tainter Gate 2 at Smithland Locks and Dam
		$3,000	Repair Structural Damage to Tainter Gates 1 and 3 at Smithland Locks and Dam
		$3,600	Repair Structural Damage to Tainter Gates 4 and 5 at Smithland Locks and Dam
		$690	Replace and Repair Lock Control System at Smithland Locks and Dam
		$2,500	Replace Dam Handrail at Smithland Locks and Dam
		$1,320	Replace Federal Mooring Cell at Smithland Lock & Dam
		$3,336	Replace Intake Screens at Smithland Locks and Dam
		$1,790	Replace Tainter Gate Cable Connections at Smithland Locks and Dam

Additional Information

- 2019 tonnage (in thousands) : 56,997
- National Rank: 4

Current Miter Gate In Service Date: 1979

- Projected Year Lock Miter Gates Reach "F" Condition:

Main: Downstream: 2020 Upstream: 2020
Auxiliary: Downstream: 2020 Upstream: 2020

- Projected Miter Gate Replacement:

Main : Downstream: 2023 Upstream: 2023
Auxiliary: Downstream: 2023 Upstream: 2023

- Fee Lands: 301 acres
- Flowage Easement Lands: 2,735 acres
- Project Boundary Line Marked: 0

Congressional Interests

Senator Dick Durbin, D-IL
Senator Tammy Duckworth, D-IL
Congressman John Shimkus, R-IL-15
Senator Mitch McConnell, R-KY
Senator Rand Paul, R-KY
Congressman James Comer, R-KY-1

NASHVILLE DISTRICT

Center Hill Lake

Caney Fork River, TN

Project Features

- Flood Control Act of 1938 and the Rivers and Harbors Act of 1946. Primary authorized purposed are flood control, production of hydroelectric power, recreation, water supply, and environmental stewardship
- Center Hill Dam is located 26.6 miles up the Caney Fork River in DeKalb County, approximately 60 miles east of Nashville, Tennessee.
- The dam stands at a maximum height of 250' above the bed of the river and has a total crest length of 2,160'. The dam impounds Center Hill Lake, a reservoir able to contain and store a maximum of 2,092,000 acre-feet of water. A smaller, 770-foot long earthen dam blocks a natural saddle in the rim of the lake just upstream from the main dam.
- The hydropower plant operates three, main Francis turbine-generator units having a combined rated capacity of 135,000 kilowatts (kW). These units are being rehabbed with aerating Francis turbines with a capacity of 156,000 kilowatts which incorporates the 15% overload capability of the original units.
- Center Hill has 3 campgrounds, 5 day use recreation areas, 9 commercial marinas, 2 State Parks, 2 State Natural Areas and 4 additional water access points.

Consequences of Not Maintaining the Project

- Failure to provide adequate funding to maintain this facility will have significant effects on to the local and regional economy including: reduced electrical power production capabilities and increase potential for flooding along the Cumberland River.
- Closure of recreation areas will result in degradation of facilities, negative public recreation and potential Congressional inquiries

Regional Importance

- Center Hill Hydropower Plant, which produces approximately 321 million kilowatt hours of electricity annually, has the capacity to provide power quickly in order to meet peak power demands. Center Hill hydropower is renewable, reliable, clean, and efficient power. Hydroelectric power generation saves valuable fossil fuels for future generations.
- Center Hill Dam has prevented over $1.058B in flood damages since becoming fully operational.
- The Center Hill Lake Resource Manager's Office is responsible for environmental stewardship of over 38,000 acres of water and land, thus protecting valuable natural resources and ensuring proper use of public property.
- The lake also hosts over 1 million visitors annual with outdoor recreational opportunities bringing $35 million in visitor spending within 30 miles of the lake.

U.S. Army Corps of Engineers Fiscal Year (FY) Project Apprropriations and President's Budget ($1,000)

	FY19 O&M Appropriation			FY20 O&M Appropriation			FY21 O&M President's Budget		
Business Line	Operation	Maintenance	Total	Operation	Maintenance	Total	Operation	Maintenance	Total
Hydropower	$2,371	$566	$2,937	$2,513	$600	$3,113	$3,045	$101	$3,146
Joint	$2,177	$591	$2,768	$2,018	$445	$2,463	$2,130	$213	$2,343
Recreation	$1,556		$1,556	$1,537		$1,537	$1,571		$1,571
Environmental Stewardship	$231	$185	$416	$196	$226	$422	$189	$226	$415
Water Supply	$42		$42	$42		$42	$44		$44
Total	$4,006	$776	**$7,719**	$3,793	$671	**$7,577**	$3,934	$439	**$7,519**

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

Business Line	FY21 Funding Requests for Maintenance ($1,000) Total	Packages $	Maintenenace Needs
Hydropower	$150	$150	Refurbish Governors
		$450	Repair Power Plant Roof
Joint	$3,415	$100	Cumberland River System Assessment Study
		$3,300	Phase 1 Repair & Provide Protective Coating to Spillway Gates
		$15	Joint Activities for Dam Safety-Instrumentation, Data Collection, Analysis, FERC #537
Recreation	$1,858	$160	Repair Three Designated Beach Swim Lines and Depth Markers .
		$205	Replace Restroom - Hurricane Bridge Recreation Area
		$1,315	Riverbank Stabilization - Long Branch Recreation Area Campground
		$178	Roadway Repairs - Hurricane Bridge Recreation Area
		$260	Maintenance of Recreation Features
		$10	Maintenance of Recreation Features not associated with PSAs

Additional Information

- Fee Lands: 38,551 acre
- Flowage Easement Lands: 528 acre
- Project Boundary Line Marked: 330 mile
- FY 19 Use Fee Revenues: $373,39

Congressional Interests

Representative Scott DesJarlais, R-TN-4
Representative John Rose, R-TN-6
Senator Lamar Alexander, R-TN
Senator Diane Black, R-TN

Cheatham Lock and Dam

Cumberland River, Ashland City, TN

Project Features

- Authorization: Cheatham Lock and Dam Project was authorized by the Rivers and Harbor Act, approved 24 July, 1946. Inclusion of hydroelectric capability was approved on 19 June 1952. Primary authorized purposes are navigation, production of hydroelectric power, recreation, water supply and environmental stewardship.
- Cheatham Dam is located at mile 148.7 on the Cumberland River, approximately 41 river miles downstream from Nashville, Tennessee
- The project was complete for full beneficial use in November of 1960.
- Cheatham Dam is a concrete gravity type spillway extending 495 feet across with a 75 foot trapezoidal spillway crest controlled by seven tainter gates, 27 feet high by 60 feet wide. The lock chamber is 800' x 110', and provides a normal lift of 26'.
- Cheatham Dam has three hydroelectric power generators. Each unit contains a generator and a Kaplan turbine which weighs 175 tons and is capable of production 20,000 horsepower with 22 foot of head. Total potential output of all three units is 36 megawatts
- There are 9 Corps managed recreation areas on Cheatham Lake

Consequences of Not Maintaining the Project

- Failure to provide adequate funding to maintain this facility will have significant effects to the local and regional economy including: increased transportation costs and delays to the shipment of raw materials; and reduced electrical power production capabilities
- Closure of recreation areas will result in degradation of facilities, negative public reaction and potential Congressional inquiries.

Regional Importance

- Cheatham Lock passed over 11.1 million tons of cargo in 2019 valued at over $2B of commodities and providing a transportation rate savings of $154.6M. Commodities transported along the Cumberland River consist of coal, petroleum, crude materials, manufactured goods, farm products, chemicals and machinery. The lock is open 24 hours a day, 7 days a week.
- The estimated average annual energy output of the hydroelectric power plant is 186,000,000 kilowatt-hours. This production is enough to power an estimated 12,500 homes annually.
- There are 9 Corps operated recreation areas (including two campgrounds), and three water access points. The lake receives approximately 1.4 million visits annually with $44.5 million in visitor trip sales revenue created within 30 miles of the project.
- The reservoir supplies numerous municipal commercial water users.

U.S. Army Corps of Engineers Fiscal Year (FY) Project Apprropriations and President's Budget ($1,000)

	FY19 O&M Appropriation			FY20 O&M Appropriation			FY21 O&M President's Budget		
Business Line	Operation	Maintenance	Total	Operation	Maintenance	Total	Operation	Maintenance	Total
Hydropower	$2,156	$913	$3,069	$2,285	$968	$3,253	$185	$2,920	$3,105
Navigation	$2,242	$402	$2,644	$2,287	$404	$2,691	$2,333	$3,112	$5,445
Joint	$1,140	$334	$1,474	$1,103	$90	$1,193	$1,106	$93	$1,199
Recreation	$910		$910	$885		$885	$900		$900
Environmental Stewardship	$215	$50	$265	$170	$58	$228	$186	$44	$230
Water Supply	$22		$22	$22		$22	$23		$23
Total	$4,529	$786	**$8,384**	$4,467	$552	**$8,272**	$4,548	$3,249	**$10,902**

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

	FY21 Funding Requests for Maintenance ($1,000)		
Business Line	Total	Packages $	Maintenace Needs
Hydropower	$140	$140	Refurbish Governors
Navigation	$65	$35	Standardization of Lock Lighting
		$30	Standardization of Paint & Coatings
Joint	$83	$83	Cumberland River System Assessment Study
Recreation	$365	$37	Boat Ramp Repairs
		$28	Correct Storm water Drainage Problems - Lock A Campground
		$300	Improve Bank Fishing Accessibility - Tailwater Left Bank
Environmental Stewardship	$30	$30	Update Historical Properties Plan

Additional Information

- FY19 Lock Tonnage: 11,146,01
- FY 18 National Rank: 5
- Current Miter Gate In Service Date: 195
- Projected Year Lock Miter Gates Reac
  "F" Condition:
  Downstream: 2017 Upstream: 2022
- Projected Miter Gate Replacement
  Downstream: 2024 Upstream: 2029
- Fee Lands: 5,717 acre
- Flowage Easement Lands: 1,208 acre
- Project Boundary Line Marked: 105 mile
- FY 19 Use Fee Revenues: $186,9 4

Congressional Interests

Representative Jim Cooper, D-TN-5
Representative John Rose, R-TN-6
Senator Lamar Alexander, R-TN
Senator Marsha Blackburn, R-TN

US Army Corps of Engineers

Cordell Hull Lock and Dam

Cumberland River, Carthage, TN

GREAT LAKES & OHIO RIVER DIVISION

Project Features

- Authorization: Cordell Hull Lock, Dam, and Lake Project was authorized by the Rivers and Harbors Act of 1946 and the Flood Control Act of 1938. Primary authorized purposes are navigation, production of hydroelectric power, recreation, and environmental stewardship.
- Cordell Hull Lock and Dam is located on mile 313.5 of the Cumberland River in Smith County, Tennessee, approximately 50 miles east of Nashville, Tennessee.
- Cordell Hull is a concrete-gravity and earthfill dam that stands at a maximum height of 93' above the bed of the river and has a total crest length of 1,306'. The lock chamber is 400' x 84', and provides a normal lift of 59'.
- Cordell Hull Dam has three Kaplan turbine hydroelectric power generators, having a combined rated capacity of 99,900 kilowatts (kW). Estimated annual energy output is 350,000,000 kW
- There are 10 Corps managed recreation areas and 9 water access points on Cordell Hull Lake.

Consequences of Not Maintaining the Project

- Failure to provide adequate funding to maintain this facility will have significant effects to the local and regional economy including: increased transportation costs and delays to the shipment of raw materials; and reduced electrical power production capabilities
- Closure of recreation areas will result in degradation of facilities, negative public reaction and potential Congressional inquiries.

Regional Importance

- Cordell Hull Power Plant, which produces approximately 398 million kilowatt hours of electricity annually, has the capacity to provide power quickly in order to meet peak power demands. Cordell Hull hydropower is renewable, reliable, clean, and efficient power. Hydroelectric power generation saves valuable fossil fuels for future generations.
- Over 677,000 visit the 2 campgrounds , 7 day use recreation areas, 15.25 miles of hiking trails, 22 miles of horseback riding trails, and 2 commercial marinas , bringing $20 million in visitor spending within 30 miles of the lake. The land surrounding the lake also includes several large wildlife management areas managed by the State of Tennessee, providing some of the best public hunting opportunities in the state.
- The Cordell Hull Lake Resource Manager's Office is responsible for the environmental stewardship of over 27,000 acres of water and land, thus protecting valuable natural resources and ensuring proper use of public property.

U.S. Army Corps of Engineers Fiscal Year (FY) Project Apprropriations and President's Budget ($1,000)

	FY19 O&M Appropriation			FY20 O&M Appropriation			FY21 O&M President's Budget		
Business Line	Operation	Maintenance	Total	Operation	Maintenance	Total	Operation	Maintenance	Total
Hydropower	$2,630	$923	$3,553	$2,788	$661	$3,449	$2,486	$895	$3,381
Navigation	$508	$50	$558	$519	$51	$570	$532	$52	$584
Joint	$1,611	$229	$1,840	$1,734	$234	$1,968	$1,637	$241	$1,878
Recreation	$1,805	$228	$2,033	$1,789		$1,789	$1,750		$1,750
Environmental Stewardship	$349	$223	$572	$95	$173	$268	$99	$275	$374
Water Supply	$15		$15	$15		$15	$16		$16
Total	$4,288	$730	**$8,571**	$4,152	$458	**$8,059**	$4,034	$568	**$7,983**

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

	FY21 Funding Requests for Maintenance ($1,000)		
Business Line	Total	Packages $	Maintenace Needs
Hydropower	$11,213	$250	Refurbish Governors
		$848	Rehab Powerhouse Elevator
		$8,000	Repair Blade Trunnion, Repack and Re-wind the Generator.
		$1,600	Repair Generator Cooling Water Piping and Coolers
		$515	Replace Diesel Station Service Generator
Joint	$1,463	$103	Cumberland River System Assessment Study
		$150	Install Dam Embankment Monitoring Instrumentation/Investigate Leak at Dam and Lock Interface
		$1,210	Right Bank Bluff Stabilization
Recreation	$741	$254	Maintenance of Recreation Areas and Facilities
		$260	Maintenance of Recreation Features
		$217	Replace primary electric - Salt Lick Campground.
		$10	Maintenance of Recreation Features not assiciated with PSA's
Environmental Stewardship	$230	$150	Management of Natural Resources for ES
		$75	Management of Natural Resources for ES (Forest/Vegetation)
		$5	Fisheries Management, Operations for Environmental Stewardship

Additional Information

- FY19 Lock Tonnage: 0
- National Rank: N/A
- Current Miter Gate In Service Date: 1973
- Projected Year Lock Miter Gates Reach "F" Condition:
  Downstream: 2026 Upstream: 2026
- Projected Miter Gate Replacement:
  Downstream: 2038 Upstream: 2038
- Fee Lands: 25,619 acres
- Flowage Easement Lands: 449 acres
- Project Boundary Line Marked: 410 miles
- FY 19 Use Fee Revenues: $659,249

Congressional Interests

Representative John Rose, R-TN-6
Senator Lamar Alexander, R-TN
Senator Marsha Blackburn, R-TN

US Army Corps of Engineers

Dale Hollow Lake

Obey River, Celina, TN

GREAT LAKES & OHIO RIVER DIVISION

Project Features

- Authorization: Flood Control Act of 1938 and the Rivers and Harbor Act of 1946. Primary authorized purposes are flood control, production of hydroelectric power, recreation, water supply, and environmental stewardship.
- Dale Hollow Dam is located approximately 3 miles east of Celina, Tennessee on the Obey River, 7.3 miles able its confluence with the Cumberland River.
- The dam stands at a maximum height of 200' above the bed of the river and has a total crest length of 1,717' The dam impounds Dale Hollow Lake, a reservoir able to store a maximum of 1,706,000 acres feet of water. The dam provides 353,000 acre feet of flood storage capacity for a 935 square mile drainage basin.
- The hydroelectric power plant operates three, main Francis turbine-generator units having a combined rated capacity of 54,000 kilowatts.
- Dale Hollow Lake reaches 61 miles upstream from Dale Hollow Dam. There are 620 miles of shoreline, 27,700 acres of water and 24,842 acres of land at normal summer pool (elev 651).

Consequences of Not Maintaining the Project

- Failure to provide adequate funding to maintain this facility will have significant effects to the local and regional economy including: increased transportation costs and delays to the shipment of raw materials; and reduced electrical power production capabilities
- Closure of recreation areas will result in degradation of facilities, negative public reaction and potential Congressional inquiries.

Regional Importance

- Over 890,000 people visit the lake's 10 Corps managed recreation areas (including 4 campgrounds) 3 swimming beaches, 34 primitive camping locations (80 sites), hiking trails, 15 commercial marinas, and a State Park. Dale Hollow Lake is a regional tourist vacation destination attracting a significant number of visitors from Ohio and Indiana in addition to hosing local Tennessee and Kentucky visitors.
- Dale Hollow Power Plant, which produces approximately 127 million kilowatt hours of electricity annual, has the capacity to provide power quickly in order to meet peak power demands. Dale Hollow hydropower is renewable, reliable, clean and efficient power. Hydroelectric power generation saves valuable fossil fuels for future generations.
- The dam prevented over $550M in flood damages since becoming fully operational.
- 890,000 visits resulted in $35M in visitor spending within 30 miles of Dale Hollow Lake.
- Reservoir supplies numerous municipal and commercial water users.

U.S. Army Corps of Engineers Fiscal Year (FY) Project Apprropriations and President's Budget ($1,000)

	FY19 O&M Appropriation			FY20 O&M Appropriation			FY21 O&M President's Budget		
Business Line	Operation	Maintenance	Total	Operation	Maintenance	Total	Operation	Maintenance	Total
Hydropower	$2,728	$649	$3,377	$2,892	$688	$3,580	$2,915	$693	$3,608
Joint	$1,676	$249	$1,925	$1,616	$190	$1,806	$1,650	$408	$2,058
Recreation	$1,727		$1,727	$1,704		$1,704	$1,750		$1,750
Environmental Stewardship	$454	$310	$764	$217	$314	$531	$222	$214	$436
Water Supply	$35		$35	$35		$35	$37		$37
Total	$3,892	$559	**$7,828**	$3,572	$504	**$7,656**	$3,659	$622	**$7,889**

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

Business Line	FY21 Funding Requests for Maintenance ($1,000) Total	Packages $	Maintenenace Needs
Hydropower	$2,208	$208	Refurbish Governors
		$2,000	Station Service Generator Rehab
Joint	$7,853	$103	Cumberland River System Assessment Study
		$4,200	Replace Spillway Gate Machinery & Controls
		$250	Repair Spillway Bridge deck
		$3,300	Phase 1 Repair & Provide Protective Coating to Spillway Gates
Recreation	$1,989	$150	Replace Campground Entrance Station - Willow Grove
		$1,400	Replace Sewer Infrastructure Outfall #3 - Obey River Campground
		$175	Design Acquisition for Replacment of Sewer Outfalls 001 & 002 with New Sewer System at Obey River Campground
		$264	Maintenance of Recreation Features
		$10	Maintenance of Recreation Features not associated with PSAs
Environmental Stewardship	$50	$50	Archaeological and cultural resource GIS database inventory

Additional Information

- Fee Lands: 52,449 acre
- Flowage Easement Lands: 102 acre
- Project Boundary Line Marked: 360 mile
- FY 19 Use Fee Revenues: $847,49

Congressional Interests

Representative Scott DesJarlais, R-TN-4
Representative John Rose, R-TN-6
Senator Lamar Alexander, R-TN
Senator Marsha Blackburn, R-TN
Representative James Comer, R-KY-1
Senator Rand Paul, R-KY
Senator Mitch McConnell, R-KY

US Army Corps of Engineers

J. Percy Priest Lake

Stones River, Nashville, TN

GREAT LAKES & OHIO RIVER DIVISION

Project Features

- Authorization: The J. Percy Priest Project was authorized by the Flood Control Act of 1946 under the title “Stewarts Ferry Reservoir”
- J. Percy Priest is a tributary, multi-purpose project that provides flood damage reduction, hydroelectric power, recreation, environmental stewardship, and water supply.
- The project is located at mile 6.8 on the Stones River which flows into the Cumberland River at mile 205.8, approximately 15 miles upstream of downtown Nashville, TN
- Construction of the J. Percy Priest Dam Project began in June of 1963 and was completed in 1968.
- At normal pool elevation, which is 490 feet above mean sea level, the lake has 14,200 surface acres of water.
- The dam is 2,716 feet long and 130 feet high and consists of concrete-gravity power plant and spillway section along with a rolled earth embankment.
- The 235 foot spillway section consists of four tainter gates with a capable discharge capacity of 187,320 cubic feet per second. Each tainter gate is 45 feet wide by 41 feet tall and weigh 152,565 pounds.
- There are 9 Corps operated recreation areas (including 3 campgrounds), 5 marinas, a state park, a water park, and two group camps on J. Percy Priest Lake.

Consequences of Not Maintaining the Project

- Failure to provide adequate funding to maintain this facility will have significant effects to the local and regional economy including: increased transportation costs and delays to the shipment of raw materials; and reduced electrical power production capabilities
- Closure of recreation areas will result in degradation of facilities, negative public reaction and potential Congressional inquiries.

Regional Importance

- J. Percy Priest Lake was one of the first lakes to have recreation designated as an authorized project purpose. It receives approximately 3.9 million visits annually with $105M in visitor spending created within 30 miles of the lake.
- One fixed blade power generating unit is housed in the power house section of the dam. The unit is capable of producing 28 megawatts. The estimated average annual energy output is 56,000,000 kilowatt-hours. This production is enough to power an estimated 3,500 homes annually.
- The Tennessee Wildlife Resources Agency manages over 10,000 acres of land for consumptive and non-consumptive use of wildlife. Two wildlife management areas on the lake offer outstanding public hunting opportunities.
- J. Percy Priest Dam has prevented over $778M in flood damages since becoming fully operational.

U.S. Army Corps of Engineers Fiscal Year (FY) Project Apprropriations and President's Budget ($1,000)

	FY19 O&M Appropriation			FY20 O&M Appropriation			FY21 O&M President's Budget		
Business Line	Operation	Maintenance	Total	Operation	Maintenance	Total	Operation	Maintenance	Total
Hydropower	$698	$152	$850	$740	$563	$1,303	$813	$164	$977
Joint	$1,794	$553	$2,347	$1,577	$453	$2,030	$1,690	$208	$1,898
Recreation	$2,148		$2,148	$2,125	$2,245	$4,370	$2,100		$2,100
Environmental Stewardship	$149	$54	$203	$107	$197	$304	$346	$127	$473
Water Supply	$75		$75	$75		$75	$78		$78
Total	$4,166	$607	**$5,623**	$3,884	$2,895	**$8,082**	$4,214	$335	**$5,526**

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

	FY21 Funding Requests for Maintenance ($1,000)		
Business Line	Total	Packages $	Maintenace Needs
Hydropower	$60	$60	Refurbish Governors
Joint	$1,025	$62	Cumberland River System Assessment Study
		$700	Replace Spillway Gate Chains
		$263	Maintenance excld. Dredging, FERC #541,#542, #543, #544 and #545
Recreation	$610	$340	Replace Failing Sewer Infrastructure - Seven Points Day Use
		$260	Maintenance of Recreation Features
		$10	Maintenance of Recreation Features not associated with PSAs
Environmental Stewardship	$10	$10	Develop Cultural Resources Management Plan

Additional Information

- Fee Lands: 18,854 acre
- Flowage Easement Lands: 537 acre
- Project Boundary Line Marked: 159 mile
- FY 19 Use Fee Revenues: $662,18

Congressional Interests

Representative Jim Cooper, D-TN-5
Representative John Rose, R-TN-6
Senator Lamar Alexander, R-TN
Senator Marsha Blackburn, R-TN
Representative Scott DesJarlais, R-TN-4

Barkley Dam and Lake Barkley

Cumberland River, KY and TN

Project Features

- Authorization: Flood Control Act of 1938 and the Rivers and Harbor Act of 1946. Primary authorized purposes are navigation, flood control, and production of hydroelectric power.
- Barkley Dam is located 30.6 river miles from where the Cumberland River joins the Ohio River at Smithland, KY. The nearest community to the dam is Grand Rivers, KY.
- Barkley Dam is a concrete gravity and earth fill structure that measures 10,180 feet. The hydropower plant section of the dam contains four generating units capable of producing 130,000 kilowatts. The spillway section contains 12 tainter gates with a maximum discharge capacity of 520,000 cubic feet per second. The single lock chamber measures 800'x110'.
- The Barkley pool covers 57,000 acres along a 110 mile stretch of the Cumberland River through parts of KY and TN and is surrounded by 1,004 miles of shoreline.
- There are 14 Corps managed recreation areas (including 4 campgrounds) and 12 Corps managed launching areas at Lake Barkley.

Consequences of Not Maintaining the Project

- Failure to provide adequate funding to maintain this facility will have significant effects to the local and regional economy including: increased transportation costs and delays to the shipment of raw materials; and reduced electrical power production capabilities
- Closure of recreation areas will result in degradation of facilities, negative public reaction and potential Congressional inquiries.

Regional Importance

- Barkley Lock passes over 2,260 government, commercial, and recreational vessels each year, carrying over 11.5 million tons of cargo consisting of coal, petroleum, crude materials, manufactured goods, farm products, chemicals, machinery, and other commodities.
- Barkley Canal is a 1.75 mile long excavated channel between Kentucky Lake and Lake Barkley. The canal provides a navigable channel between the two river systems allowing access to the Ohio River and the Tennessee Tombigbee Waterway.
- The four generators inside Barkley Dam's hydropower plan generate an average of 578,000,000 kilowatt hours per year. This production is enough electricity to power an estimated 112,000 homes annually.
- The dam has prevented over $284M in flood damages since becoming fully operations.
- 4.1M visits resulted in $153M in visitor spending and 1,338 jobs within 30 miles of Lake Barkley
- The reservoir supplies numerous municipal and commercial water users.

U.S. Army Corps of Engineers Fiscal Year (FY) Project Apprropriations and President's Budget ($1,000)

	FY19 O&M Appropriation			FY20 O&M Appropriation			FY21 O&M President's Budget		
Business Line	Operation	Maintenance	Total	Operation	Maintenance	Total	Operation	Maintenance	Total
Hydropower	$2,878	$3,977	$6,855	$2,050	$715	$2,765	$2,775	$2,321	$5,096
Navigation	$2,105	$3,982	$6,087	$2,148	$411	$2,559	$2,191	$419	$2,610
Joint	$1,843	$246	$2,089	$1,889	$8,204	$10,093	$2,224	$1,059	$3,283
Recreation	$1,670		$1,670	$1,652	$344	$1,996	$1,630		$1,630
Environmental Stewardship	$676	$199	$875	$686	$231	$917	$656	$258	$914
Water Supply	$55		$55	$55		$55	$26		$26
Total	$6,349	$4,427	**$17,631**	$6,430	$9,190	**$18,385**	$6,727	$1,736	**$13,559**

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

	FY21 Funding Requests for Maintenance ($1,000)		
Business Line	Total	Packages $	Maintenace Needs
Hydropower	$3,305	$200	Rehab/refurbish control room
		$360	Refurbish Governors
		$1,995	Rehab of HVAC
		$750	Replace Station and Unwatering Valves
Navigation	$815	$30	Standardization of Material Selection and Guidance
		$35	Standardization Tow Haulage Units
		$750	Upper and Lower Miter Gate Strut Arm Replacement
Joint	$12,865	$200	Cumberland River System Assessment Study
		$665	Dam Site Water Supply Line Replacement
		$700	Remediate Dam Site Drainage- Right Bank Toe Drain
		$7,950	Replace Intake & Spillway Crane - PKGE 1 of 2
		$2,800	Spillway Gates Mech/Elec Rehab. Phase 1
		$550	Spillway Emergency/Maintenance Bulkhead Section 4
Recreation	$1,455	$60	Replace Sewerline - Old Kuttawa Recreation Area
		$325	Restroom Replacement - Linton Recreation Area
		$260	Maintenance of Recreation Features
		$10	Maintenance of Recreation Features not associated with PSAs
		$400	Shower House Replacement - Hurricane Creek Recreation Area
		$400	Shower House Replacement - Eureka Recreation Area
Environmental Stewardship	$25	$25	Operational Management Plan (OMP) Update

Additional Information

- FY19 Lock Tonnage: 11,523,10
- FY18 National Rank: 9
- Current Miter Gate In Service Date: 196
- Projected Year Lock Miter Gates Reach "F" Condition: 202
- Projected Miter Gate Replacement
  Downstream: 2035 Upstream: 2037
- Fee Lands: 18,932 acre
- Flowage Easement Lands: 32,236 acre
- Project Boundary Line Marked: 375 mile
- FY 19 Use Fee Revenues: $491,74

Congressional Interests

Representative James Comer, R-KY-1
Senator Mitch McConnell, R-KY
Senator Rand Paul, R-KY
Representative Mark Green, R-TN-7
Senator Lamar Alexander, R-TN
Senator Marsha Blackburn, R-TN

Wolf Creek – Lake Cumberland

Jamestown, KY

Project Features

- Authorization: Wolf Creek Dam was authorized by the Flood Control Act of 1938 and the Rivers and Harbors Act of 1946.
- Wolf Creek Dam is located on the Cumberland River at mile 460.9 about 10 miles southwest of Jamestown, KY.
- Lake Cumberland is a tributary, multi-purpose project that provides flood damage reduction, hydroelectric power, recreation, environmental stewardship and water supply.
- Wolf Creek Dam is the 25th largest dam in the United States. The reservoir ranks 9th in the U.S. in size, with a capacity of 6,100,000 acre feet of water, enough to cover the entire commonwealth of Kentucky in 3 inches of water. The main lake is 101 miles long and over 1 mile across at its widest point.
- Wolf Creek Dam has six hydropower generators, each capable of producing 45,000 kilowatts.
- Lake Cumberland is home to 8 Corps managed recreation areas including 5 campgrounds. There are also 9 commercial marinas and 4 state or municipal parks operated under lease.

Consequences of Not Maintaining the Project

- Failure to provide adequate funding to maintain this facility will have significant effects to the local and regional economy including: increased transportation costs and delays to the shipment of raw materials; and reduced electrical power production capabilities
- Closure of recreation areas will result in degradation of facilities, negative public reaction and potential Congressional inquiries.

Regional Importance

- Lake Cumberland receives approximately 2.17 million visits annually with $86M in visitor trip spending created within 30 miles of the project. This represents a sizable component of the economy in the local community.
- Six hydropower generating units are housed in the power house section of the dam with an average annual output of 940 million kilowatt hours.
- Wolf Creek Dam has prevented over $3.18B in cumulative flood damages prevented since becoming fully operational.
- Natural and recreational resources at this project provide social, economic, and environmental benefits. 755 jobs within a 30 mile radius are a result of Lake Cumberland's presence in the community.
- Lake Cumberland provides communities with a clean and dependable water supply.

U.S. Army Corps of Engineers Fiscal Year (FY) Project Apprropriations and President's Budget ($1,000)

	FY19 O&M Appropriation			FY20 O&M Appropriation			FY21 O&M President's Budget		
Business Line	Operation	Maintenance	Total	Operation	Maintenance	Total	Operation	Maintenance	Total
Hydropower	$4,195	$997	$5,192	$4,472	$1,056	$5,528	$4,455	$1,064	$5,519
Joint	$2,398	$302	$2,700	$2,117	$571	$2,688	$2,125	$593	$2,718
Recreation	$1,664		$1,664	$1,636		$1,636	$1,710		$1,710
Environmental Stewardship	$387	$300	$687	$336	$309	$645	$345	$310	$655
Water Supply	$70		$70	$150		$150	$157		$157
Total	$4,519	$602	**$10,313**	$4,239	$880	**$10,647**	$4,337	$903	**$10,759**

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

Business Line	FY21 Funding Requests for Maintenance ($1,000) Total	Packages $	Maintenace Needs
Hydropower	$1,347	$600	Refurbish Governors
		$747	Replace Station Service Governor
Joint	$5,050	$200	Cumberland River System Assessment Study
		$1,200	Purchase of a Debris Removal System
		$3,300	Remediate Spillway Gates and Bridge Superstructure
		$350	Probable Maximum Flood Update
Recreation	$656	$1	Maintenance of Recreation Features not associated with PSAs
		$81	Road Repair - Waitsboro Campground
		$354	Waterline Replacement - Waitsboro Recreation Area
		$220	Maintenance of Recreation Features

Additional Information

- Fee Lands: 89,734 acres
- Flowage Easement Lands: 5,796 acres
- Project Boundary Line Marked: 871 miles
- FY 19 Use Fee Revenues: $527,181

Congressional Interests

Representative Hal Rogers,R-KY-5
Senator Mitch McConnell, R-KY
Senator Rand Paul, R-KY
Representative James Comer, R-KY-1

US Army Corps of Engineers

Laurel River Lake

Corbin, KY

GREAT LAKES & OHIO RIVER DIVISION

Project Features

- Authorization: Laurel River Dam was authorized by the Flood Control Act of 1960.
- Construction of the project began in 1973 and the lake was impounded in December 1978.
- Laurel River Lake is a tributary, multi-purpose project that provides hydroelectric power production, recreation, environmental stewardship and water supply.
- The dam is located on the Laurel River, 2.3 miles able the confluence with the Cumberland River in the scenic mountain terrain west of Corbin, KY.
- The dam consists of a 1,420 foot long concrete gravity and earth fill dam with a flood control pool of 250,600 acre-feet of water. The project has a watershed of approximately 282 square miles.
- The U.S. Army Corps of Engineers and the U.S. Forest Service cooperate on developing recreational facilities around the reservoir. The U.S. Forest Service administers the lake and surrounding shoreline as the Daniel Boone National Forest. The U.S. Army Corps of Engineers oversees the operation of the lake's dam and nearby recreation facilities, including a picnic area and a swimming beach at the spillway.

Consequences of Not Maintaining the Project

- Failure to provide adequate funding to maintain this facility will have significant effects to the local and regional economy including: increased transportation costs and delays to the shipment of raw materials; and reduced electrical power production capabilities
- Closure of recreation areas will result in degradation of facilities, negative public reaction and potential Congressional inquiries.

Regional Importance

- Laurel River Lake, with its cliff-lined shores and quiet coves, is a favorite destination. The lake provides a variety of outdoor recreational opportunities for thousands of visitors each year. Because of the temperature climate and relatively long recreation season, visitors have numerous activities from which to choose, including: fishing, camping, picnicking, boating, canoeing, hiking, horseback riding, diving, and relaxing at one of the deepest and cleanest lakes in Kentucky. The 5,600 acre lake averages 451,000 visitors per year, generating $9.2 million dollars of visitor spending within 30 miles of the project.
- Hydropower operations at Laurel River Lake differ from those at other projects along the Cumberland River System. East Kentucky Power receives all the hydropower generated at Laurel and they determine when to run the unit. The Corps doesn't know until after the fact and has limited control over scheduling releases at Laurel. SEPA (Southeastern Power Authority) is the Corps' main contact concerning generations at Laurel.
- Average annual energy output is 75 million kilowatt hours.

U.S. Army Corps of Engineers Fiscal Year (FY) Project Apprropriations and President's Budget ($1,000)

	FY19 O&M Appropriation			FY20 O&M Appropriation			FY21 O&M President's Budget		
Business Line	Operation	Maintenance	Total	Operation	Maintenance	Total	Operation	Maintenance	Total
Hydropower	$1,111	$251	$1,362	$1,178	$266	$1,444	$1,186	$268	$1,454
Joint	$648	$37	$685	$586	$108	$694	$612	$111	$723
Recreation	$198		$198	$176		$176	$193		$193
Environmental Stewardship	$33	$23	$56	$30	$25	$55	$40	$17	$57
Water Supply	$42		$42	$72		$72	$144		$144
Total	$921	$60	**$2,343**	$864	$133	**$2,441**	$989	$128	**$2,571**

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

Business Line	FY21 Funding Requests for Maintenance ($1,000) Total	Packages $	Maintenace Needs
Hydropower	$3,070	$100	Refurbish Governors
		$2,970	Replace Oil Circuit Breakers
Joint	$100	$100	Instrumentation Evaluation
Recreation	$55	$50	Maintenance of Recreation Features
		$5	Maintenance of Recreation Features not associated with PSAs

Additional Information

- Fee Lands: 676 acre
- Flowage Easement Lands: 6,438 acre
- Project Boundary Line Marked: 6 mile
- FY19 Use Fee Revenues: $3,47

Congressional Interests

Congressman Hal Rogers,R-KY-5
Senator Mitch McConnell, R-KY
Senator Rand Paul, R-KY

Martins Fork Dam

Martins Fork of the Cumberland River,
Harlan, KY

US Army Corps of Engineers

GREAT LAKES & OHIO RIVER DIVISION

Project Features

- Authorization: Martins Fork Dam was authorized by the Flood Control Act of October 1965.
- Construction of the project began in December 1973 and the lake was impounded in December 1978.
- Martins Fork is a tributary, multi-purpose project that provides flood damage reduction, recreation, environmental stewardship and water supply.
- The dam is located at river mile 15.6 on Martins Fork of the Cumberland River in scenic mountain terrain, 13 miles southeast of Harlan, KY.
- The dam consists of a 504 foot long concrete gravity and earth fill dam with a flood control pool of 21,000 acre feet of water. The project has a watershed of approximately 55 square miles.
- Recreation at Martins Fork was authorized under PL 89-72, which prohibits the project from providing recreation opportunities without a non-Federal cost sharing partner. Thirty-five acres are leased to a local partner, the Harlan County Fiscal Court as a public recreation area.

Consequences of Not Maintaining the Project

- Failure to provide adequate funding to maintain this facility will have significant effects to the local and regional economy including: increased transportation costs and delays to the shipment of raw materials; and reduced electrical power production capabilities
- Closure of recreation areas will result in degradation of facilities, negative public reaction and potential Congressional inquiries.

Regional Importance

- The 340 acre lake is limited to 10 horsepower boat motors or trolling motor on larger boats.
- The lake averages 39,000 visitors per year, providing $814,000 in visitor spending within a 30 mile radius to enhance the local economy.
- Martins Fork Lake offers numerous recreational opportunities throughout the year. During the summer months, swimming and boating are popular on the lake with a designated swimming area and beach. Other opportunities include 2 basketball courts and a volleyball court. Visitors also enjoy the Cumberland Shadow Trail, which follows the ridge lines behind the lake and is approximately 5 miles long. During the cooler months, the undeveloped areas of the lake offer great hunting and opportunities and the lake offers year-round fishing. The Cumberland Shadow Trail provides picturesque views of the fall foliage.
- Martins Fork Dam has prevented over 2 million dollars of flood damages since becoming fully operational.

U.S. Army Corps of Engineers Fiscal Year (FY) Project Apprropriations and President's Budget ($1,000)

	FY19 O&M Appropriation			FY20 O&M Appropriation			FY21 O&M President's Budget		
Business Line	Operation	Maintenance	Total	Operation	Maintenance	Total	Operation	Maintenance	Total
Flood Risk Management	$1,148	$200	$1,348	$991	$256	$1,247	$1,015	$265	$1,280
Recreation	$18		$18	$19		$19	$30		$30
Environmental Stewardship	$153	$176	$329	$250	$216	$466	$267	$62	$329
Water Supply	$2		$2	$2		$2	$3		$3
Total	$173	$176	**$1,697**	$271	$216	**$1,734**	$300	$62	**$1,642**

Additional Information

- Fee Lands: 1,39
- Flowage Easement Lands: 52 acre
- Project Boundary Line Marked: 17 mile

Congressional Interests

Congressman Hal Rogers,R-KY-5
Senator Mitch McConnell, R-KY
Senator Rand Paul, R-KY

Old Hickory Lake

Cumberland River, Hendersonville, TN

Project Features

- Authorization: Old Hickory Lock and Dam Project was authorized by the Flood Control Act of 1938 and Rivers and Harbor Act of 1946. Construction of the project began in January 1952 and was completed with the lake being impounded in 1954. Full beneficial use began in 1957, when the placement of the final hydroelectric power unit.
- Old Hickory is a multipurpose project that provides navigation, hydroelectric power, recreation, environmental stewardship and water supply.
- Located at mile 216.2 on the Cumberland River, approximately 25 river miles upstream of Nashville, TN.
- Old Hickory Lock is one of four locks located on the 300 plus navigable miles of the Cumberland River. The single chamber measures 84' x 400' with a normal lift of 60'.
- Old Hickory Dam consists of a 3,750 foot long and 98 foot high concrete gravity power plan and spillway section and a rolled earthen embankment. The 355 foot long spillway has 6 tainter gates, each weighing 172k pounds.
- Four hydroelectric power generating units with Kaplan turbines are housed in the power plant and capable of producing 25 Mw each.
- There are 13 Corps operated recreation areas (including two campgrounds), eight non-Corps operated recreation areas, 11 marinas and 24 launching access points.

Consequences of Not Maintaining the Project

- Failure to provide adequate funding to maintain this facility will have significant effects to the local and regional economy including: increased transportation costs and delays to the shipment of raw materials; and reduced electrical power production capabilities
- Closure of recreation areas will result in degradation of facilities, negative public reaction and potential Congressional inquiries.

Regional Importance

- The lock chamber requires 14,515,200 gallons of water per lockage with a minimum fill time of 12.6 minutes. It takes approximately two hours for a commercial tugboat with a four-barge two, and 30 minutes for a pleasure craft to lock through.
- Approximately 3 million tons of cargo per year are locked through Old Hickory. Coal, sand, and gravel are the most common cargo. The lock is open 20/7 at no charge.
- Recent estimated average annual energy output of hydroelectric power plant is 470,000,000 kilowatt-hours. Enough to power an estimated 29,000 homes annually.
- Old Hickory Lake receives approximately 6.8M visits annually with $215M in visitor trip sales revenue created within 30 miles of the project.
- To ensure the proper long-range management of public resources, Old Hickory Lake has implemented a shoreline management plan that allocates the shoreline to the following: Prohibited Access Areas, Public Recreation Area, Protected Shoreline Areas, and Limited Development Areas. Lake staff administers approximately 3,000 shoreline use permits with adjacent property owners.

U.S. Army Corps of Engineers Fiscal Year (FY) Project Apprropriations and President's Budget ($1,000)

	FY19 O&M Appropriation			FY20 O&M Appropriation			FY21 O&M President's Budget		
Business Line	Operation	Maintenance	Total	Operation	Maintenance	Total	Operation	Maintenance	Total
Hydropower	$2,548	$900	$3,448	$2,786	$636	$3,422	$2,422	$2,856	$5,278
Navigation	$2,312	$410	$2,722	$2,359	$4,688	$7,047	$2,407	$445	$2,852
Joint	$2,120	$293	$2,413	$2,043	$302	$2,345	$2,023	$311	$2,334
Recreation	$1,906	$184	$2,090	$1,880	$45	$1,925	$1,883		$1,883
Environmental Stewardship	$602	$186	$788	$581	$205	$786	$606	$369	$975
Water Supply	$30		$30	$30		$30	$31		$31
Total	$6,970	$1,073	**$11,491**	$6,893	$5,240	**$15,555**	$6,950	$1,125	**$13,353**

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

Business Line	FY21 Funding Requests for Maintenance ($1,000) Total	Packages $	Maintenenace Needs
Hydropower	$9,867	$990	HVAC System Replacement
		$2,000	Phase 2 Plans & Specs for 69kv Switchyard Control Rehab
		$2,400	Phase 3 Plans & Specs for 69kv Switchyard Control Rehab
		$4,300	Phase 3 Plans & Specs for 69kv Switchyard Control Rehab
		$177	Refurbish Governors
Joint	$1,603	$103	Cumberland River System Assessment Study
		$1,500	SUS20 - Sustainability Upgrades to Waste Water Treatment Plant - Left Bank Area
Recreation	$342	$72	Shower House #2 Improvements - Cedar Creek Rec Area
		$260	Maintenance of Recreation Features
		$10	Maintenance of Recreation Features not associated with PSAs
Water Supply	$31	$31	Cumberland River Water Availability Study

Additional Information

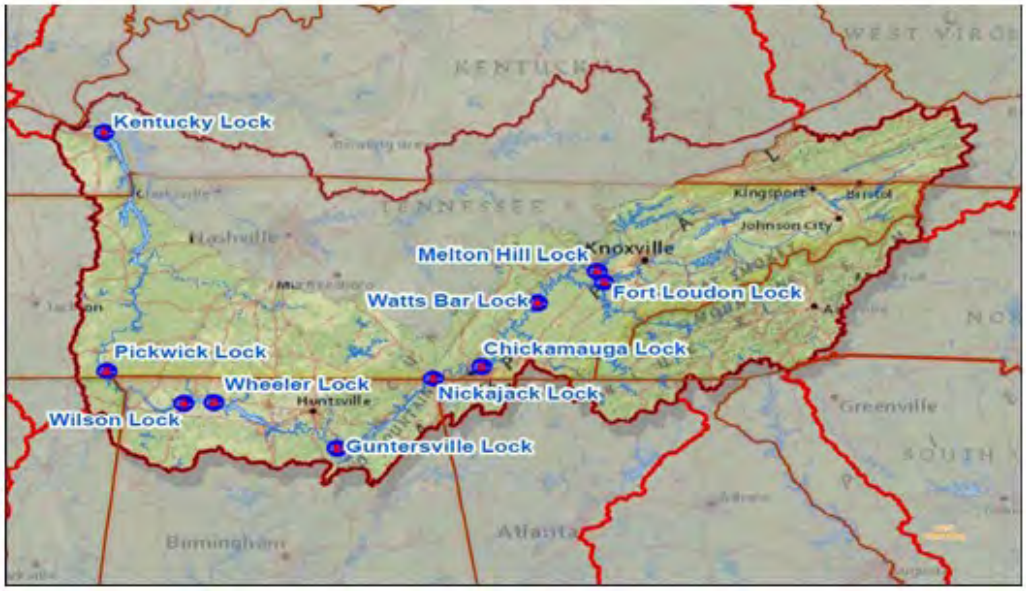
- FY19 Lock Tonnage: 2,944,22
- FY18 National Rank: 12
- Current Miter Gate In Service Date: 195
- Projected Year Lock Miter Gates Reac "F" Condition: Downstream: 2017 Upstream: 2022
- Projected Miter Gate Replacement Downstream: 2025 Upstream: 2030
- Fee Lands: 25,802 acre
- Flowage Easement Lands: 3,651 acre
- Project Boundary Line Marked: 390 mile
- FY 19 Use Fee Revenues: $479,56

Congressional Interests

Representative Jim Cooper, D-TN-5
Representative John Rose, R-TN-6
Senator Lamar Alexander R-TN
Senator Marsha Blackburn R-TN

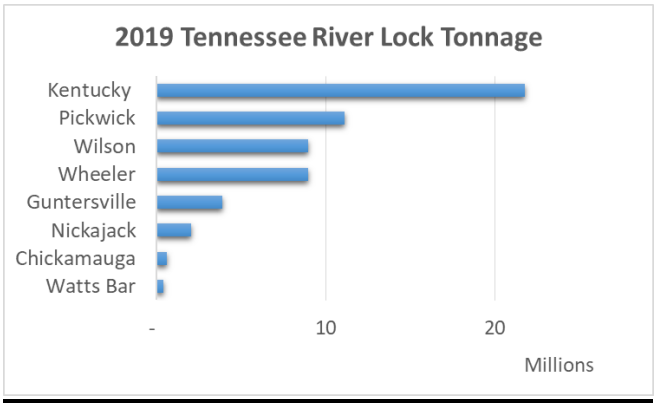
Tennessee River Locks

Nashville District



Basin Characteristics

- The Tennessee River system today is managed through a series of 10 locks and dams owned by TVA and managed by USACE
- The Tennessee River Basin consists of approximately 40,910 square miles and drains portions of 3 states. The Tennessee River Basin contains 650 miles of commercial channel flowing from Knoxville, TN to its confluence with the Ohio River in Paducah, KY
- Nine main river dams on the Tennessee and Melton Hill on the Clinch River form a "staircase" of quiet, pooled water and controlled current – a continuous series of reservoirs that stretches along the entire length of the Tennessee River. From its beginning, the river drops a total of 513 feet of elevation before it joins the Ohio River.



Regional Importance

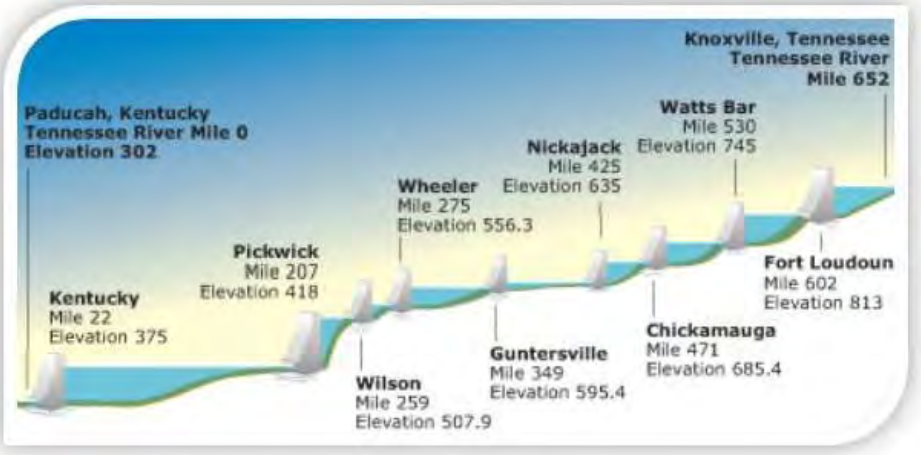
- The largest tributary of the Ohio River, the Tennessee is part of the nation's inland Waterway System. These interconnected river routes cover 11,000 miles and serve to strategically link geographic areas, major markets, suppliers of raw materials, processors and consumers
- Navigation has contributed greatly to the economic and industrial development of the Tennessee Valley as a whole. The economies of Decatur and Chattanooga would not be as dynamic as they are today, were it not for the Tennessee River
- Because one barge can transport as much cargo as 15 rail cars and 60 tractor-trailers, waterway transportation benefits the environment. It reduces fuel consumption and emissions, and makes roads safer by keeping more trucks off the highway
- Every year the locks provide passage for over 57 million tons of goods, including grain, steel, chemicals, petroleum, and even products for our nation's defense.
- The Tennessee River is also a great source for recreation with a total of 6,739 recreational craft locked through each year in the system.

U.S. Army Corps of Engineers Fiscal Year (FY) Project Apprropriations and President's Budget ($1,000)

	FY19 O&M Appropriation			FY20 O&M Appropriation			FY21 O&M President's Budget		
Business Line	Operation	Maintenance	Total	Operation	Maintenance	Total	Operation	Maintenance	Total
Navigation	$17,421	$11,784	$29,205	$17,811	$5,981	$23,792	$18,499	$3,881	$22,380
Total	$17,421	$11,784	**$29,205**	$17,811	$5,981	**$23,792**	$18,499	$3,881	**$22,380**

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

	FY21 Funding Requests for Maintenance ($1,000)		
Business Line	Total	Packages $	Maintenace Needs
Navigation	$2,580	$1,700	Chickamauga L&D - Downstream Miter Gate Repairs
		$45	Standardization Efforts of Stop Logs
		$835	Wilson Lock - Miter Gate Repair Stop Log Liner & Strut Arms & Springs Replacement
		$2,420	Watts Bar L&D - Repair Downstream Lock Gates



Chickamauga Lock

Tennessee River, Chattanooga, TN

Project Features

- Chickamauga Lock is located at Tennessee River Mile 471 only 6.9 miles above Chattanooga, Tennessee. It is 58.9 river miles downstream of Watts Bark Lock and 46.3 miles upriver from Nickajack Lock.
- TVA commenced preliminary investigation for the Chickamauga project during May 1935, and the Board of Directors authorized its construction on December 31, 1935. Construction of the Chickamauga project started in January 13, 1936 and was opened to navigation in 1940.
- The name Chickamauga came from the Chickamauga Indians, a tribe who had separated from the main body of the Cherokee Indians.
- Chickamauga Lock's chamber is 360' long by 60' wide. This is large enough to accommodate one modern barge at a time and it takes around 1 hour to lock a single barge.
- The phenomenon of concrete growth was observed soon after initial construction and is caused by a reaction between the alkali in the cement and the rock aggregate.
- A new lock is required because of structural deficiencies of the existing lock resulting from physical expansion of the concrete structure due to concrete growth.

Consequences of Not Maintaining the Project

- Failure to maintain the project could result in a halt in the movement of commercial navigation. That stoppage would result in loss of rate savings to the shippers and delayed orders for more essential commodities and raw materials.
- Closure of the existing lock at Chickamauga prior to completion of the new lock would eliminate access to three locks and 38 river miles upstream of the dam.

Regional Importance

- Many industries and municipalities, such as the DOE Oak Ridge Nuclear Laboratories, TVA Watts Bar and Sequoyah Nuclear Power Plants and Kingston Steam Plant, the City of Knoxville, TN, Olin-Lonza Corporation, and many more businesses rely on Chickamauga Lock.
- Currently around 600,000 tons of cargo valued at over $172M pass through this lock each year.
- Chickamauga Lock has the most recreational traffic on the Tennessee River, nearly 3 times more recreational lockages than any other lock on the Tennessee River in 2019

New Lock Construction

- The new lock will be 600' long and 110' wide. This will greatly decrease wait times at Chickamauga Lock.
- The new lock will be able to accommodate up to 9 barges
- The current expected completion date is 2024.

Additional Information

- FY19 Lock Tonnage: 604,716
- FY18 National Rank: 141
- Current Miter Gate In Service Date: 1940
- Projected Year Lock Miter Gates Reach “F” Condition: 2021
- Projected Miter Gate Replacement: 2029

Congressional Interests

Representative Chuck Fleischmann, R-TN-3
Senator Lamar Alexander, R-TN
Senator Marsha Blackburn, R-TN

Fort Loudoun Lock

Tennessee River, Lenoir City, TN

Project Features

- Fort Loudoun Lock is located 72.4 river miles upstream from Watts Bar Lock at Tennessee River Mile 602.3, which is 55 river miles downstream from the City of Knoxville, TN. Fort Loudon Lock is the uppermost of 9 navigation locks on the Tennessee River.
- Authorization: Fort Loudoun Lock and Dam was taken on as an appropriation by Congress on April 18th, 1940 and later authorized by the TVA board of Directors on July 3rd, 1940. The project was completed ahead of schedule on August 2nd, 1943 as WWII created a sense of urgency to finish the dam earlier than originally planned in 1944.
- Fort Loudoun Dam is equipped with a navigation lock measuring 360' long x 60' wide with a maximum lift of roughly 73'.
- Like all lock facilities on the Tennessee River, Fort Loudoun Lock is owned by the Tennessee Valley Authority and operated by the U.S. Army Corps of Engineers.

Consequences of Not Maintaining the Project

- Failure to maintain the project could result in a halt in the movement of commercial navigation. That stoppage would result in loss of rate savings to the shippers and delayed orders for more essential commodities and raw materials.

Regional Importance

- Fort Loudon Lock provides about 1,200 lockages with roughly 307,000 tons of bulk commodities locked through each year. The commodities transported through Fort Loudoun Lock include petroleum, crude materials, manufactured goods, farm products, chemicals, machinery, and other commodities.
- Fort Loudoun Lock is the final upstream lock that allows crucial cargo to be delivered to several Knoxville, TN area stakeholders in a timely manner
- The project was originally described as "the next logical step in the unified development of the Tennessee River and its tributaries." This statement still holds true to this day.
- This reservoir supplies numerous municipal commercial water users.

Additional Information

- FY19 Lock Tonnage: 307,673
- FY18 National Rank: 144
- Current Miter Gate In Service Date: 1943
- Projected Year Lock Miter Gates Reach “F” Condition: 2024
- Projected Miter Gate Replacement: 2034

Congressional Interests

Representative Tim Burchett, R-TN-2
Senator Lamar Alexander, R-TN
Senator Marsha Blackburn, R-TN

Guntersville Lock

Tennessee River, Grant, AL

Project Features

- Guntersville Lock is located 75.7 river miles downstream from Nickajack Lock and 74.1 river miles upstream from Wheeler Lock. The nearest community to the dam is Grant, AL.
- Authorization: Authorized by the TVA Board of Directors, November 19th, 1934, the Flood Control Act of 1938 and the Rivers and Harbor act of 1946. Primary authorized purposes are navigation, flood control, and production of hydroelectric power.
- Guntersville Dam is a concrete gravity dam that measures 3,979 feet. The power plant section of the dam contains four generating units capable of producing 124 megawatts. The spillway section contains 18 tainter gates. The project has two lock chambers measuring 600' x 110' and 360' x 60'.
- The Guntersville pool covers 890 miles of shoreline and 67,900 acres of water surface along a 75 mile stretch of the Tennessee River through parts of Alabama and Tennessee. Guntersville Lake is fed by releases from TVA's Nickajack Dam system, in addition to unregulated flows from various smaller tributaries.
- Like all lock facilities on the Tennessee River, Guntersville Lock is owned by the Tennessee Valley Authority and operated by the U.S. Army Corps of Engineers.

Consequences of Not Maintaining the Project

- Failure to provide adequate funding to maintain this facility will have significant effects to the local and regional economy including: increase transportation costs and delays to the shipment of raw materials; reduced power production capabilities; and also a significant impact to the economy throughout Alabama and Tennessee due to the shipping of goods that rely on the Tennessee River to the Port of Guntersville.

Regional Importance

- Guntersville Lock passes over 1,500 government, commercial, and recreational vessels each year, carrying 3.9 million tons of cargo to the heart of the nation with major importance to the Tennessee Valley and the Port of Guntersville as well as the Port of Chattanooga. Cargo consists of coal, petroleum, crude materials, manufactured goods, farm products, chemicals, machinery, and other commodities.

Additional Information

- FY19 Lock Tonnage: 3,887,592
- FY18 National Rank: 114
- Current Miter Gate In Service Date: 1965
- Projected Year Lock Miter Gates Reach “F” Condition: Main – 2023, Auxiliary - 2027
- Projected Miter Gate Replacement: Main – 2033, Auxiliary - 2041

Congressional Interests

Representative Robert Aderholt, R-AL-4
Senator Richard Shelby, R-AL
Senator Doug Jones, D-AL

US Army Corps of Engineers

Kentucky Lock

Tennessee River, Grand Rivers, KY

GREAT LAKES & OHIO RIVER DIVISION

Project Features

- Kentucky Lock is located at Tennessee River Mile 22.4 upstream of the confluence of the Tennessee and Ohio Rivers. It is 184.3 river miles downstream of Pickwick Lock in Savannah, TN.
- Kentucky Lock is the lower gateway to over 700 miles of navigable waters in the Tennessee River Basin.
- Kentucky Lake, formed by Kentucky Dam is the largest man-made lake east of the Mississippi River.
- Being a Tennessee Valley Authority project, construction started in 1938 and Kentucky Lock was put into permanent operation in September 1944.
- The lock chamber is 600' x 110' which allows 9 jumbo hopper barges at one time, much less than standard tow sizes today.
- A new lock is required because of the bottleneck caused by the small chamber and number of users that double lockages create. In recent years, the average delay per tow has ranged from 8 to 10 hours to use the existing chamber.

Consequences of Not Maintaining the Project

- Failure to maintain the project could result in a halt in the movement of commercial navigation. That stoppage would result in loss of rate savings to the shippers and delayed orders for more essential commodities and raw materials.
- Lack of maintenance has and will continue to increase the average delays for tows transiting the lock. The associated significant additional costs are passed on to the customers, and ultimately to the Nation's economy.

Regional Importance

- In coordination with its sister lock (Barkley Lock) these two Corps operated projects serve as navigation's "Gateway to the South". Ports south of the Ohio River Basin are heavily dependent on cargo that passes through the locks chamber daily.
- Currently around 21.8 million tons of cargo valued at over $628B pass through this system each year.
- Kentucky Lock is identified as one of the most utilized navigation locks in the Lakes and Rivers Division.

New Lock Construction

- The new lock will be 1,200' x 110'. This will take wait times in excess of 10 hours to 0 hours.
- The new lock will be able to accommodate up to 15 barges and the boat.
- It is the 3rd highest priority lock project in the U.S.
- With efficient funding, the expected completion date is 2024 at a price of $1.25B at a FY18 price level.
- The project has a benefit-to-cost ration of 1.2 at a 7% discount rate and a remaining-benefit-to-remaining-cost ratio of 1.9.

Additional Information

- FY 2019 Lock Tonnage: 21,757,463
- Recent traffic forecasts have indicated that tonnage levels are expected to increase into the foreseeable future.

Congressional Interests

Representative James Comer, R-KY-1
Senator Mitch McConnell, R-KY
Senator Rand Paul, R-KY

Melton Hill Lock

Clinch River, Oak Ridge, TN

Project Features

- Melton Hill Lock is located 23 river miles upstream of the mouth of the Clinch River entering the main stem of the Tennessee River at mile 568.
- Authorization: TVA first proposed the Melton Hill project to Congress in 1957. President Dwight D. Eisenhower signed the funding bill into law on September 2nd, 1960, and TVA began construction on September 6th, 1960.
- Melton Hill Dam is a concrete gravity and earthen fill structure measuring 1,020 feet long, 103 feet high, and creates a pool of 5,470 acres of water surface. The power plant section of the dam contains two generating units capable of producing 79 megawatts. The spillway section contains 3 spillway with an average maximum discharge of 118,000 cfs. Melton Hill Dam is equipped with a navigation lock measuring 400' x 75' with a maximum lift of roughly 65'.
- The construction of Melton Hill Lock & Dam was completed on May 1st, 1963. The navigation lock itself was placed in service on June 10th, 1963.
- Like all lock facilities on the Tennessee River, Guntersville Lock is owned by the Tennessee Valley Authority and operated by the U.S. Army Corps of Engineers.

Consequences of Not Maintaining the Project

- Failure to provide adequate funding to maintain this facility will have certain effect to the local and regional economy resulting from lack of barge transportation access to industrial plants in Clinton, TN. Railroad rates in the region would increase as a result as well.

Regional Importance

- Melton Hill Lock is not currently staffed, so commercial and recreational interests are locking through by appointment only.
- Local recreational interests remain a focal point for engagement at the District level.
- Melton Hill Lock provides critical barge access to the Department of Energy, Y-12 Security Complex providing for delivery of goods and materials too large in size for other modes of transportation.

Additional Information

- FY19 Lock Tonnage: 0
- FY18 National Rank: 163
- Current Miter Gate In Service Date: 1965
- Projected Year Lock Miter Gates Reach “F” Condition: Main – 2023, Auxiliary - 2027
- Projected Miter Gate Replacement: Main – 2033, Auxiliary – 2041

Congressional Interests

Representative Chuck Fleischmann, R-TN-3
Senator Lamar Alexander, R-TN
Senator Marsha Blackburn, R-TN

Nickajack Lock

Tennessee River, Jasper, TN

Project Features

- Nickajack Lock is located 46.3 river miles downstream from the Chickamauga Lock and 75.7 river miles upstream from Guntersville Lock. This stretch of the river marks a region where the river begins to exit the once treacherous Tennessee River Gorge. Nickajack is 424 miles above the mouth of the Tennessee River. The nearest community to the dam is Jasper, TN.
- Authorization: The Nickajack Dam project was authorized January 9th, 1964. Construction began April 1st, 1964 and was completed December 14th, 1967. Primary authorized purposes are navigation, flood control, and production of hydroelectric power.
- Nickajack Dam is a concrete gravity and earth fill structure that measures 3,737 feet long and 81 feet high and holds a pool of 10,370 surface acres of water. The power plant section of the dam contains four generating units capable of producing 104 megawatts. The spillway section contains 10 spillway bays with a maximum discharge capacity of 360,000 cubic feet per second. The single lock chamber measures 600' x 110'.
- Like all lock facilities on the Tennessee River, Fort Loudoun Lock is owned by the Tennessee Valley Authority and operated by the U.S. Army Corps of Engineers.

Consequences of Not Maintaining the Project

- Failure to maintain the project would have significant effect to the local and regional economy including: increase transportation costs and delays to the shipment of raw materials; reduced power production capabilities; and increased potential for flooding below Nickajack to the Ohio and Mississippi Rivers.

Regional Importance

- Nickajack Lock completed 763 recreational lockages, 361 commercial towboats with barges, 15 light commercial towboats for a total of 1,124 vessels. Tonnage for 2019 was 2.0 million tons. Cargo consists of coal, petroleum, crude materials, manufactured goods, farm products, chemicals, machinery, and other commodities.
- Nickajack is the last 600' x 110' lock downstream of Chattanooga, Tennessee. This allows it to pass crucial cargo to several Chattanooga area stakeholders in a timely manner.
- The Nickajack Reservoir supplies numerous municipal commercial water users.

Additional Information

- FY19 Lock Tonnage: 2,005,405
- FY18 National Rank: 126
- Current Miter Gate In Service Date: 1967
- Projected Year Lock Miter Gates Reach “F” Condition: 2024
- Projected Miter Gate Replacement: 2035

Congressional Interests

Representative Scott DesJarlais, R-TN-3
Senator Lamar Alexander, R-TN
Senator Marsha Blackburn, R-TN

US Army Corps of Engineers

Pickwick Lock

Tennessee River, Savannah, TN

GREAT LAKES & OHIO RIVER DIVISION

Project Features

- Pickwick Lock is located 52 river miles downstream from the Wilson Lock and 185 river miles upstream from Kentucky Lock. The nearest community to the dam is Savannah, TN.
- Authorization: Pickwick was authorized by the TVA Board of Directors, November 19th, 1934, the Flood Control Act of 1938, and the Rivers and Harbor Act of 1946. Primary authorized purposes are navigation, flood control, and production of hydroelectric power.
- Pickwick Dam is a concrete gravity and earth fill structure that measures 7,715 feet. The power plant section of the dam contains six generating units capable of producing 240,240 kilowatts. The spillway section contains 22 fixed wheel lift gates with a maximum discharge capacity of 650,000 cubic feet per second. The project has two lock chambers measuring 1000' x 110' and 600' x 110'.
- The Pickwick pool covers 42,700 acres along a 53 mile stretch of the Tennessee River through parts of Alabama, Mississippi, and Tennessee. Pickwick Lake is fed by releases from TVA's Wilson Dam, and smaller TVA dams on the Bear Creek system in addition to unregulated flows from the 1,777 square miles of local drainage.

Consequences of Not Maintaining the Project

- Failure to provide adequate funding to maintain this facility will have significant effect to the local and regional economy including: increased transportation costs and delays to the shipment of raw materials; reduced power production capabilities; and also a significant impact to the economy throughout Alabama and Mississippi due to the shipping of goods that rely on the Tennessee Tombigbee Waterway to the Port of Mobile.

Regional Importance

- Pickwick Lock passes over 2,400 government, commercial, and recreational vessels each year, carrying over 11 million tons of cargo to the heart of the nation with major importance to the Tennessee Valley and to Port of Mobile as well as Birmingham, Tuscaloosa, and Montgomery, Alabama. Cargo consists of coal, petroleum, crude materials, manufactured goods, farm products, chemicals, machinery, and other commodities.

Additional Information

- FY19 Lock Tonnage: 11,091,609
- FY18 National Rank: 58
- Current Miter Gate In Service Date: 1984
- Projected Year Lock Miter Gates Reach “F” Condition: Main – Upstream: 2041, Downstream: 2014. Auxiliary – Upstream: 2029, Downstream: 2029
- Projected Miter Gate Replacement: Main – Upstream: 2050, Downstream: 2050. Auxiliary – Upstream: 2042, Downstream: 2042

Congressional Interests

Representative Mark Green, R-TN-7
Senator Lamar Alexander, R-TN
Senator Marsha Blackburn, R-TN

Watts Bar Lock

Tennessee River, Decatur, TN

Project Features

- Watts Bar Lock is located in Decatur, TN at Tennessee River Mile 529.9, which is 58.9 river miles upstream from Chickamauga Lock in Chattanooga, TN and 72.4 river miles downstream from Fort Loudoun Lock in Lenoir City, TN.
- Authorization: Watts Bar Lock and Dam was taken on as an appropriation by Congress on March 16th, 1939 and later authorized by the TVA Board of Directors on May 3rd, 1939.
- Watts Bar Dam is a concrete gravity and earth fill structure that measures 2,960' long, 112' high and impounds the 39,090 acre Watts bar Lake. The power plant section of the dam contains five generating units capable of producing 172.5 megawatts. The spillway section contains 20 spillway bays with a maximum discharge capacity of 560,000 cfs with the headwater elevation at 745 feet above sea level. Watts Bar Dam is equipped with a navigation lock measuring 360' x 60' with a maximum lift of roughly 70' with normal lift of 58'. There is space available for a future 600'x110; lock east of the present lock.
- Like all lock facilities on the Tennessee River, Watts Bar Lock is owned by the Tennessee Valley Authority and operated by the U.S. Army Corps of Engineers.

Consequences of Not Maintaining the Project

- Failure to provide adequate funding to maintain this facility will have significant effect to the local and regional economy including: increased transportation costs and delays to the shipment of raw materials; reduced power production capabilities; and increased potential for flooding downstream in populated areas.

Regional Importance

- Watts Bar Lock averages about 775 recreational lockages per year and roughly 380,000 tons of bulk commodities locked through each year. The commodities transported through Watts Bark Lock include coal, petroleum, crude materials, manufactured goods, farm products, chemicals, machinery, and other commodities.
- Before TVA create Watts Bar Reservoir above Chattanooga, TN, the city had one of the most serious flooding problems in the nation. Now the river that often threatened the city contributes to its economy and is a major artery for commercial barge traffic.
- The Reservoir supplies numerous municipal and commercial water users.

Additional Information

- FY19 Lock Tonnage: 387,402
- FY18 National Rank: 140
- Current Miter Gate In Service Date: 1942
- Projected Year Lock Miter Gates Reach “F” Condition: 2024
- Projected Miter Gate Replacement: Downstream – 2034, Upstream – 2034.

Congressional Interests

Representative Scott DesJarlais, R-TN-4
Senator Lamar Alexander, R-TN
Senator Marsha Blackburn, R-TN

US Army Corps of Engineers

Wheeler Lock

Tennessee River, Rogersville, AL

GREAT LAKES & OHIO RIVER DIVISION

Project Features

- Wheeler Lock is located 74.1 river miles downstream from Guntersville Lock and 15.5 river miles upstream from Wilson Lock. The nearest community to the dam is Rogersville, AL.
- Authorization: Wheeler was authorized by the TVA Board of Directors, November 19th, 1934, and the Flood Control Act of 1938, and the Rivers and Harbor Act of 1946. Primary authorized purposes are navigation, flood control, and production of hydroelectric power.
- Wheeler Dam is a concrete gravity dam that measures 6,342 feet. The power plant section of the dam contains eleven generating units capable of producing 361 megawatts. The spillway section contains 60 tainter gates with a maximum discharge capacity of 650,000 cubic feet per second. The project has two lock chambers measuring 600'x110' and 400'x60'.
- The Wheeler pool covers 1,027 miles of shoreline and 67,070 acres of water surface along a 74.1 mile stretch of the Tennessee River through parts of Alabama. Wheeler Lake is fed by releases from TVA's Guntersville Dam, and various smaller tributaries.

Consequences of Not Maintaining the Project

- Failure to provide adequate funding to maintain this facility will have significant effect to the local and regional economy as well as the nation's defense capabilities including: increase transportation costs and delays to the shipment of raw materials; reduced power production capabilities; and also a significant impact to the economy throughout Alabama due to the shipping of goods that rely on the Port of Decatur, Port of Guntersville, and the Port of Chattanooga.

Regional Importance

- Wheeler Lock passes over 2,300 government, commercial, and recreational vessels each year, carrying 8.9 million tons of cargo to the heart of the nation with major importance to the Tennessee Valley, while also serving the Port of Decatur, Port of Guntersville, and Port of Chattanooga. Cargo consists of coal, petroleum, crude materials, manufactured goods, farm products, chemicals, machinery, various components for the aerospace industry, and other commodities.

Additional Information

- FY19 Lock Tonnage: 8,965,883
- FY18 National Rank: 65
- Current Miter Gate In Service Date: 1963
- Projected Year Lock Miter Gates Reach “F” Condition:

Main: Downstream: 2023 Upstream: 2023
Auxiliary: Downstream: 2028 Upstream: 2028

- Projected Miter Gate Replacement:

Main: Downstream: 2032 Upstream: 2032
Auxiliary: Downstream: 2042 Upstream: 2042

Congressional Interests

Representative Mo Brooks, R-AL-5
Senator Doug Jones, D-AL
Senator Richard Shelby, R-AL

Wilson Lock

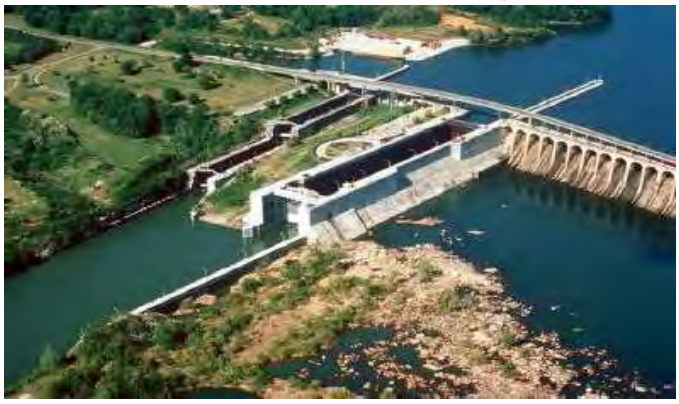
Tennessee River, Florence, AL

Project Features

- Wilson Lock is located 15.5 river miles downstream from Wheeler Lock and 52.7 river miles upstream from Pickwick Lock. The nearest community to the dam is Florence, AL.
- Authorization: Wilson Lock and Dam was authorized by the TVA Board of Directors, November 19th, 1934, the Flood Control Act of 1938, and the Rivers and Harbor Act of 1946. Primary authorized purposes are navigation, flood control, and production of hydroelectric power.
- Wilson Dam is a concrete gravity dam that measures 4,541 feet. The power plant section of the dam contains twenty-one generating units capable of producing 663 megawatts. The spillway section contains 50 tainter gates. The project has three lock chambers, one measuring 600'x110' and two 300'x60'.
- The Wilson pool covers 166 miles of shoreline and 15,500 acres of water surface along a 15.5 mile stretch for the Tennessee River through parts of Alabama. Wilson Lake is fed by releases from TVA's Wheeler Dam, and various smaller tributaries.
- Like all lock facilities on the Tennessee River, Wilson Lock is owned by the Tennessee Valley Authority and operated by the U.S. Army Corps of Engineers.

Consequences of Not Maintaining the Project

- Failure to provide adequate funding to maintain this facility will have significant effects to the local and regional economy as well as the nation's defense capabilities including: increased transportation costs and delays to the shipment of raw materials; reduced power production capabilities; and also a significant impact to the economy throughout Alabama due to the shipping of goods that rely on the Port of Florence, Port of Decatur, Port of Guntersville, and the Port of Chattanooga.



Regional Importance

- Wilson Lock passes over 2,300 government, commercial, and recreational vessels each year, carrying 8.9 million tons of cargo to the heart of the nation with major importance to the Tennessee Valley, while also serving the Port of Florence, Port of Decatur, Port of Guntersville, and Port of Chattanooga. Cargo consists of coal, petroleum, crude materials, manufactured goods, farm products, chemicals, machinery, various components for the aerospace industry, and other commodities.

Additional Information

- FY19 Lock Tonnage: 8,974,576
- FY18 National Rank: 64
- Current Miter Gate In Service Date: 1969
- Projected Year Lock Miter Gates Reach “F” Condition:

Main: Downstream: 2032 Upstream:*
Auxiliary: Downstream: 2028 Upstream: 2028

- Projected Miter Gate Replacement:

Main: Downstream: 2034 Upstream:*
Auxiliary: Downstream: 2041 Upstream: 2041

- District implements a spare gate program for gates. A supply of spare gate leaves are maintained and used to change out existing gate leaves when they near the end of expected service life.

Congressional Interests

Representative Mo Brooks, R-AL-5
Senator Doug Jones, D-AL
Senator Richard Shelby, R-AL

PITTSBURGH DISTRICT

Berlin Lake

Berlin Center, OH

Project Features

• Authorization: Flood Control Act of 28 June 1938 (P.L. 75-761).

• Primary project purposes are flood damage reduction, recreation, fish and wildlife enhancement, and low water augmentation.

• Dam was completed in March 1943 and serves a drainage area of 249 square miles.

• The dam is a partially controlled concrete gravity type dam with with a center spillway flanked by rolled earth filled abutments.

• T dam is 96 ft. tall and 5,750 ft. long. With the maximum width at the base of 73 feet.

• The outlet works on the dam are three sluice gates and four controlled section tainter gates.

• There are 7 recreation areas at the project which include 135 picnic sites, 339 camping sites, 5 boat ramps and 7 playgrounds. Berlin Lake provides 3 trails for public use, offering a combined 7.8 miles of hiking opportunities.

Consequences of Not Maintaining the Project

• Failure to adequately fund the flood risk management mission at this facility would result in the project's inability to adequately execute the flood risk management mission as authorized by congress. The consequences could range in severity depending upon the condition of the project, but would ultimately lead to a failure of the structure and a subsequent life safety concern for those in the affected downstream areas.

• Closure of recreational facilities will result in degradation of facilities, negative public reaction and potential Congressional inquiries.

Regional Importance

• The project averages 722 thousand visitors annually. This visitation results in $32 million in visitor spending, $23 million in sales, 271 jobs resulting in $7.7 million in labor income to the local economy. This represents a sizable component of the economy in the local community.

• The project has prevented over $5.2 billion in flood damages since its completion in 1943.

• Berlin Lake provides downstream communities with a clean and dependable water supply and has helped to alleviate pollution problems throughout the Mahoning River Valley. Additionally, Deer Creek Dam, which was built by the city of Alliance, OH, under agreement with the Dept. of the Army, provides a reservoir for domestic water supply to their community of approximately 22,000 residents.

• The Ohio Department of Natural Resources manages over 6,800 acres of project lands for public hunting and wildlife management purposes.

• Berlin Lake is one of the very few lakes in the area in which natural reproduction of the walleye fish population occurs. Fishermen also enjoy fishing for largemouth and smallmouth bass, muskie, crappie and bluegill.

U.S. Army Corps of Engineers Fiscal Year (FY) Project Apprropriations and President's Budget ($1,000)

	FY19 O&M Appropriation			FY20 O&M Appropriation			FY21 O&M President's Budget		
Business Line	Operation	Maintenance	Total	Operation	Maintenance	Total	Operation	Maintenance	Total
Flood Risk Management	$1,271	$1,018	$2,289	$1,368	$644	$2,012	$2,563	$616	$3,179
Recreation	$664		$664	$705	$600	$1,305	$713		$713
Environmental Stewardship	$138		$138	$32	$37	$69	$81	$96	$177
Water Supply	$8		$8	$8		$8	$8		$8
Total	$2,081	$1,018	**$3,099**	$2,113	$1,281	**$3,394**	$3,365	$712	**$4,077**

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

	FY21 Funding Requests for Maintenance ($1,000)		
Business Line	Total	Packages $	Maintenenace Needs
Flood Risk Management	$40	$25	Maintenance for Flood Risk Management
		$15	Resolution of Encroachments
Recreation	$1,825	$50	ADA accessible restrooms and shower houses
		$175	Hazardous tree removal
		$600	Replace Mill Run Campground Sewage Ejector Stations - Package 2 of 3
		$600	Replace Mill Run Campground Sewage Ejector Stations - Package 3 of 3
		$200	Renovate dam day use area
		$200	Sewer Line Repair

Additional Information

- Fee Lands: 6,941 acres
- Flowage Easement Lands: 1,117 acres

Congressional Interests

Senator - Sherrod Brown, D-OH
Senator - Robert Portman, R-OH
Representative - Tim Ryan, D-OH-13
Representative - Bill Johnson, R-OH-6

Conemaugh River Lake

Saltsburg, PA

Project Features

• Authorization: Flood Control Acts of 1936 (P.L. 74-738) and 1938 (P.L. 75-761)

• Primary project purposes are flood damage reduction, fish and wildlife enhancement, recreation, and low water augmentation.

• Dam was completed in 1952 and serves a drainage area of 1,35 square miles.

• The dam is a concrete gravity type dam with with a gated spillway comprising fourteen spillway crest gates and thirteen low level gated conduits extending through the dam.

• The dam is 137 ft. tall and 1,265 ft. long. With the maximum width at the base of 128 feet. The outlet works on the dam contain 13-5.67' X 10' sluice gates and 14-30' X 30' crest gates.

• There are 5 recreation areas at the project which include an information center,17 picnic sites, 2 boat ramps and 3 playgrounds. There are also 12 trails offering a combined 20 trail miles.

Consequences of Not Maintaining the Project

• Failure to adequately fund the flood risk management mission at this facility would result in the project's inability to adequately execute the flood risk management mission as authorized by congress. The consequences could range in severity depending upon the condition of the project, but would ultimately lead to a failure of the structure and a subsequent life safety concern for those in the affected downstream areas.

• Closure of recreational facilities will result in degradation of facilities, negative public reaction and potential Congressional inquiries.

Regional Importance

• The project averages 212 thousand visitors annually. This visitation results in $4.4 million in visitor spending, $2.8 million in sales, 46 jobs resulting in $1.2 million in labor income to the local economy. This represents a sizable component of the economy in the local community.

• The project has prevented over $7.4 billion in flood damages since 1952.

• Located at the tailwaters of the dam is a canoe launch utilized by those taking paddling trips downriver to Saltsburg and beyond.

• Adjacent to the Dam Recreation Area, runs the historical West Penn Trail and the Tunnel View Historic Site. The riverside trail includes a walk along the Main Line Canal that once connected Philadelphia to Pittsburgh (1834-1854).
• Up river from the dam, 6,756 acres of reservoir land is leased to the Pennsylvania Game Commission for use as public hunting ground.

U.S. Army Corps of Engineers Fiscal Year (FY) Project Apprropriations and President's Budget ($1,000)

	FY19 O&M Appropriation			FY20 O&M Appropriation			FY21 O&M President's Budget		
Business Line	Operation	Maintenance	Total	Operation	Maintenance	Total	Operation	Maintenance	Total
Flood Risk Management	$926	$646	$1,572	$1,418	$309	$1,727	$1,219	$186	$1,405
Recreation	$20		$20	$82		$82	$87		$87
Environmental Stewardship	$112		$112	$42	$36	$78	$124	$58	$182
Total	$1,058	$646	**$1,704**	$1,542	$345	**$1,887**	$1,430	$244	**$1,674**

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

	FY21 Funding Requests for Maintenance ($1,000)		
Business Line	Total	Packages $	Maintenenace Needs
Flood Risk Management	$66	$50	Remove lead paint/recoat handrails and supports on dam bridge-Conemaugh
		$16	Resolution of Encroachments
Recreation	$175	$155	Replace Water System with Public Water Supply
		$20	Maintenance of Recreation Features

Additional Information

- Fee Lands: 7,635 acres
- Flowage Easement Lands: 519 acres

Congressional Interests

Senator: Bob Casey, Jr., D-PA,
Senator: Pat Toomey, R-PA
Representative: John Joyce, R-PA-13
Representative: Glenn Thompson, R-PA-15

Crooked Creek Lake

Ford City, PA

Project Features

• Authorization: Flood Control Acts of 22 June 1936 (P.L. 74-738) and amended in1938 (P.L.75-761).

• Primary project purposes are flood damage reduction, recreation, fish and wildlife enhancement, and low water augmentation.

• Dam was completed in May 1951 and serves a drainage area of 277square miles.

• The dam is a rolled earth fill, impervious core with an uncontrolled saddle spillway with concrete floor and sides.

• The dam is 143 ft. tall and 1,480 ft. long.

• The outlet works on the dam is a 15'-6" in diameter and 1,320 ' long. Discharge is through three vertical lift gates, and two gate valves.

• There are 7 recreation areas at the project which include 6 picnic sites, 45 camping sites, 1 boat ramp and 5 playgrounds. There are also 8 trails, with a combination of 148.5 miles of trail available for public use.

Consequences of Not Maintaining the Project

• Failure to adequately fund the flood risk management mission at this facility would result in the project's inability to adequately execute the flood risk management mission as authorized by congress. The consequences could range in severity depending upon the condition of the project, but would ultimately lead to a failure of the structure and a subsequent life safety concern for those in the affected downstream areas.

• Closure of recreational facilities will result in degradation of facilities, negative public reaction and potential Congressional inquiries.

Regional Importance

• The project averages 203 thousand visitors annually. This visitation results in $4.5 million in visitor spending, $2.9 million in sales, 47 jobs resulting in $1.3 million in labor income to the local economy, all within 30 miles of the project. This represents a sizable component of the economy in the local community.

• The project has prevented over $2.4 billion in flood damages since its completion in 1940.

• The Outdoor Discovery Center at Crooked Creek Lake is operated by the Armstrong County for Community Learning. This facility is utilized by groups interested in the environment and also a place for groups to hold meetings.

U.S. Army Corps of Engineers Fiscal Year (FY) Project Apprropriations and President's Budget ($1,000)

	FY19 O&M Appropriation			FY20 O&M Appropriation			FY21 O&M President's Budget		
Business Line	Operation	Maintenance	Total	Operation	Maintenance	Total	Operation	Maintenance	Total
Flood Risk Management	$1,064	$1,340	$2,404	$1,121	$1,894	$3,015	$1,178	$3,499	$4,677
Recreation	$385		$385	$408		$408	$377		$377
Environmental Stewardship	$166		$166	$115	$31	$146	$43	$29	$72
Total	$1,615	$1,340	**$2,955**	$1,644	$1,925	**$3,569**	$1,598	$3,528	**$5,126**

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

	FY21 Funding Requests for Maintenance ($1,000)		
Business Line	Total	Packages $	Maintenenace Needs
Recreation	$407	$120	Pave/Resurface Tunnelville Road
		$30	Paving Independence Parking Area
		$237	Replace Guide Railing and Posts throughout Main Day Use Areas
		$20	Install Elecrtrical Hook-ups in Campground

Additional Information

- Fee Lands: 2,561 acres
- Flowage Easement Lands: 100 acres

Congressional Interests

Senator Bob Casey, Jr., D-PA
Senator Pat Toomey, R-PA
Representative Glenn Thompson, R-PA-15

East Branch Clarion River Lake

Wilcox, PA

Project Features

• Authorization: Flood Control Acts of 1938 (P.L. 75-761) and 1944 (P.L. 78-534).

• Primary project purposes are flood damage reduction, recreation, fish and wildlife enhancement, and low water augmentation.

• The dam was completed in March 1952 and serves a drainage area of 72.4 square miles.

• The dam is a rolled earth fill, impervious core type dam with with an uncontrolled, concrete side channel spillway, with ogee weir and dispersal bucket spillway.

• The dam is 184 ft. tall and 1,725 ft. long. With the maximum width at the base of 1,115 feet.

• The outlet works on the dam are two service gates and one sluice gate.

• There are 7 recreation areas at the project which include 41 camping sites, 1 picnic site, 1 boat ramp and 1 playground. There are also 3 trails offering a combined 1.5 miles of hiking trail.

Consequences of Not Maintaining the Project

• Failure to adequately fund the flood risk management mission at this facility would result in the project's inability to adequately execute the flood risk management mission as authorized by congress. The consequences could range in severity depending upon the condition of the project, but would ultimately lead to a failure of the structure and a subsequent life safety concern for those in the affected downstream areas.

• Closure of recreational facilities will result in degradation of facilities, negative public reaction and potential Congressional inquiries.

Regional Importance

• The project averages 98 thousand visitors annually. This visitation results in $2.5 million in visitor spending, $1.6 million in sales, 25 jobs resulting in $550 thousand in labor income to the local economy, all within 30 miles of the project. This represents a sizable component of the economy in the local community.

• The project has prevented over $440 million in flood damages since its completion in 1952.

• East Branch Lake is surrounded by Elk State Park, Elk State Forest and PA State Game Lands to further enhance the idyllic setting of your visits.

• Natural and recreational resources at this project provide social, economic and environmental benefits. Project personnel conduct recreational programs that help strengthen family ties and friendships; provide opportunities for children to develop personal skills, social values, and self esteem; and increase water safety.

U.S. Army Corps of Engineers Fiscal Year (FY) Project Apprropriations and President's Budget ($1,000)

	FY19 O&M Appropriation			FY20 O&M Appropriation			FY21 O&M President's Budget		
Business Line	Operation	Maintenance	Total	Operation	Maintenance	Total	Operation	Maintenance	Total
Flood Risk Management	$878	$4,883	$5,761	$1,002	$1,488	$2,490	$1,113	$302	$1,415
Recreation	$101	$16	$117	$157		$157	$223		$223
Environmental Stewardship	$14		$14	$20	$16	$36	$33	$21	$54
Water Supply			$0			$0			$0
Total	$993	$4,899	**$5,892**	$1,179	$1,504	**$2,683**	$1,369	$323	**$1,692**

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

	FY21 Funding Requests for Maintenance ($1,000)		
Business Line	Total	Packages $	Maintenenace Needs
Recreation	$220	$100	Replace Culvert
		$100	Replace Guard Rail to Boat Launch
		$20	Replace Playground Equipment

Additional Information

- Fee Lands: 287 acres
- Flowage Easement Lands: 2,357 acres

Congressional Interests

Senator Bob Casey, Jr., D-PA
Senator Pat Toomey, R-PA
Representative Glenn Thompson, R-PA-15

Kinzua Dam and Allegheny Reservoir

Warren, PA

Project Features

• Authorization: Flood Control Acts of 1936 and 1938 (P.L. 75-761) and 1944 (P.L. 78-534).

• Primary project purposes are flood damage reduction, hydroelectric power, recreation, fish and wildlife enhancement, and low water augmentation.

• The dam was completed in 1965 and serves a drainage area of 2,180 square miles.

• The dam is a concrete and earth embankment type dam with two hydroelectric penstocks which are operated by First Energy Corporation.

• The dam consists of a 179 ft. tall and 778.5 ft. long concrete section and 1,098.5 ft. long earth embankment. With the total maximum width at the base of 1,245 feet. The outlet works on the dam has eight sluices and two hydroelectric penstocks.

• There are 6 recreation areas at the project which include 70 camping sites, 10 picnic sites, 3 boat ramps and 2 playgrounds. There are also 4 trails offering a combined 3 miles of hiking trails.

Consequences of Not Maintaining the Project

• Failure to adequately fund the flood risk management mission at this facility would result in the project's inability to adequately execute the flood risk management mission as authorized by congress. The consequences could range in severity depending upon the condition of the project, but would ultimately lead to a failure of the structure and a subsequent life safety concern for those in the affected downstream areas.

• Closure of recreational facilities will result in degradation of facilities, negative public reaction and potential Congressional inquiries.

Regional Importance

• The project averages 123 thousand visitors annually. This visitation results in $3.1 million in visitor spending, $2 million in sales, 29 jobs resulting in over $730 thousand in labor income to the local economy, all within 30 miles of the project.

• The project has prevented over $3.5 billion in flood damages since its completion in 1965.

• Kinzua Dam and Allegheny Reservoir is located in Warren and McKean Counties in PA, and Cattaraugus County and the Seneca Nation of Indians in NY.

• Totally surrounded by forest, Kinzua Dam and Allegheny Reservoir is at the heart of one of the largest and most popular outdoor recreation complexes in NE United States. Natural and recreational resources at this project provide social, economic and environmental benefits.

• Another benefit provided by Kinzua is hydroelectric power generation. Seneca Power Station, operated by First Energy Corp. provides 400,000 kilowatts/hour at peak. This services approximately 266,400 homes per year at full capacity.

U.S. Army Corps of Engineers Fiscal Year (FY) Project Apprropriations and President's Budget ($1,000)

	FY19 O&M Appropriation			FY20 O&M Appropriation			FY21 O&M President's Budget		
Business Line	Operation	Maintenance	Total	Operation	Maintenance	Total	Operation	Maintenance	Total
Flood Risk Management	$934	$395	$1,329	$1,099	$234	$1,333	$1,540	$927	$2,467
Recreation	$158	$9	$167	$184		$184	$220		$220
Environmental Stewardship	$55		$55	$40	$51	$91	$50	$31	$81
Total	$1,147	$404	**$1,551**	$1,323	$285	**$1,608**	$1,810	$958	**$2,768**

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

	FY21 Funding Requests for Maintenance ($1,000)		
Business Line	Total	Packages $	Maintenenace Needs
Flood Risk Management	$366	$341	In Depth Trunnion Anchorage Evaluation - Kinzua
		$25	Maintenance for Flood Risk Management
Recreation	$273	$100	Construct New Access Road to Boat Ramp - Kinzua
		$54	Construct New ADA-Accessible Parking Lot near Wildlife Viewing Area
		$50	Maintenance of Recreation Features
		$69	Rehab Fishing Platform

Additional Information

- Fee Lands: 4,836 acres
- Flowage Easement Lands: 10,310 acres

Congressional Interests

Senator Bob Casey, Jr., D-PA
Senator Pat Toomey, R-PA
Senator Chuck Schumer, D-NY
Senator Kirsten Gillibrand, D-NY
Representative Tom Reed II, R-NY-23
Representative Glenn Thompson, R-PA-15

Loyalhanna Lake

Saltsburg, PA

Project Features

• Authorization: Flood Control Acts of 1938 (P.L. 75-761) and 1944 (P.L. 78-534).

• Primary project purposes are flood damage reduction, hydroelectric power, recreation, fish and wildlife enhancement, and low water augmentation.

• The dam was completed in 1951 and serves a drainage area of 290 square miles.

• The dam is a concrete gravity type with gate controlled center spillway and adjoining earth embankment on left bank.

• The dam is 114 ft. tall and total 960 ft. long. With the total maximum width at the base of 88 feet.

• The outlet works on the dam are four controlled sluices, one valve controlled sluice and five crest gates.

• There are 5 recreation areas at the project which include 45 camping sites, 4 picnic sites, 1 boat ramp and 2 playgrounds. There are also 2 trails offering a combined .8 miles of hiking trails.

Consequences of Not Maintaining the Project

• Failure to adequately fund the flood risk management mission at this facility would result in the project's inability to adequately execute the flood risk management mission as authorized by congress. The consequences could range in severity depending upon the condition of the project, but would ultimately lead to a failure of the structure and a subsequent life safety concern for those in the affected downstream areas.

• Closure of recreational facilities will result in degradation of facilities, negative public reaction and potential Congressional inquiries.

Regional Importance

• The project averages 310 thousand visitors annually. This visitation results in $6.4 million in visitor spending, $4 million in sales, 66 jobs resulting in $1.8 million in labor income to the local economy, all within 30 miles of the project. This represents a sizable component of the economy in the local community.

• The project has prevented over $2.7 billion in flood damages since its completion in 1951.

• An important link in a system of flood control projects, Loyalhanna provides flood protection for the lower Loyalhanna Creek and Kiskiminetas River valleys and the lower Allegheny and upper Ohio Rivers.

• A unique feature at Loyalhanna is the opportunity to venture along the Black Willow Water Trail. This trail is a self-guided boating trail with designated stations marking many natural and man-made features.

• PA Game Commission leases 3,200 acres of project lands for wildlife management purposes and public hunting. Hunters will discover that the lake's surrounding area holds a variety of game, such as deer, rabbit and squirrel and many types of game birds. Several parking lots have also been developed to provide access to hunting areas.

U.S. Army Corps of Engineers Fiscal Year (FY) Project Apprropriations and President's Budget ($1,000)

	FY19 O&M Appropriation			FY20 O&M Appropriation			FY21 O&M President's Budget		
Business Line	Operation	Maintenance	Total	Operation	Maintenance	Total	Operation	Maintenance	Total
Flood Risk Management	$1,171	$281	$1,452	$1,365	$4,461	$5,826	$1,520	$232	$1,752
Recreation	$25		$25	$174	$7	$181	$163		$163
Environmental Stewardship	$53		$53	$88	$35	$123	$75	$32	$107
Total	$1,249	$281	**$1,530**	$1,627	$4,503	**$6,130**	$1,758	$264	**$2,022**

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

	FY21 Funding Requests for Maintenance ($1,000)		
Business Line	Total	Packages $	Maintenenace Needs
Recreation	$165	$30	Maintenance of Recreation Features
		$95	Pave Bush Recreation Area Interior Roadways
		$40	Repair Bush Recreation Area Boat Ramp - Loyalhanna

Additional Information

- Fee Lands: 3,634 acres
- Flowage Easement Lands: 87 acres

Congressional Interests

Senator Bob Casey, Jr., D-PA
Senator Pat Toomey, R-PA
Representative Guy Reschenthaler, R-PA-14

Mahoning Creek Lake

New Bethlehem, PA

Project Features

• Authorization: Flood Control Acts of 1936 and 1938 (P.L. 75-761) and 1944 (P.L. 78-534).

• Primary project purposes are flood damage reduction, hydroelectric power, recreation, fish and wildlife enhancement, and low water augmentation.

• The concrete gravity dam with gate controlled center spillway was completed in 1941 and serves a drainage area of 340 square miles.

•The dam is 162 ft. tall and 926 ft. long concrete section and 1,098.5 ft. long. With the total maximum width at the base of 154 feet.

• The outlet works on the dam are one ball valve conduit, three sluice gates and one ring jet valve.

• There are 5 recreation areas at the project which include 53 outgranted camping sites, 4 picnic sites, 2 boat ramps and 4 playgrounds. There are also 7 trails offering a combined 3 miles of hiking trails.

Consequences of Not Maintaining the Project

• Failure to adequately fund the flood risk management mission at this facility would result in the project's inability to adequately execute the flood risk management mission as authorized by congress. The consequences could range in severity depending upon the condition of the project, but would ultimately lead to a failure of the structure and a subsequent life safety concern for those in the affected downstream areas.

• Closure of recreational facilities will result in degradation of facilities, negative public reaction and potential Congressional inquiries.

Regional Importance

• The project averages 53 thousand visitors annually. This visitation results in $1.4 million in visitor spending, $860 thousand in sales, 14 jobs resulting in over $347 thousand in labor income to the local economy, all within 30 miles of the project.

• The project has prevented over $2.8 billion in flood damages since its completion in 1941.

• Mahoning Creek Lake serves as a key link in a system of flood control for the Allegheny and Upper Ohio Rivers.

• Armstrong County leases 28 acres from the Corps to operate the Milton Loop Campground.

• The PA Fish and Boat Commission leases the main body of the lake and its adjoining lands including the Milton Loop Boat Launch and Sportsman's Area.

• The PA Game Commission leases 1,280 acres of lake lands in Indianan County for wildlife management and public hunting.

U.S. Army Corps of Engineers Fiscal Year (FY) Project Apprropriations and President's Budget ($1,000)

	FY19 O&M Appropriation			FY20 O&M Appropriation			FY21 O&M President's Budget		
Business Line	Operation	Maintenance	Total	Operation	Maintenance	Total	Operation	Maintenance	Total
Flood Risk Management	$954	$462	$1,416	$1,036	$253	$1,289	$1,140	$378	$1,518
Recreation	$20	$5	$25	$79		$79	$76		$76
Environmental Stewardship	$11	$5	$16	$37	$30	$67	$70	$27	$97
Total	$985	$472	**$1,457**	$1,152	$283	**$1,435**	$1,286	$405	**$1,691**

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

	FY21 Funding Requests for Maintenance ($1,000)		
Business Line	Total	Packages $	Maintenenace Needs
Flood Risk Management	$9,025	$25	Maintenance for Flood Risk Management
		$9,000	Replace Service Bridge & Civil Site Development (Design-Build) - Mahoning
Recreation	$235	$10	Maintenance of Recreation Features
		$225	Repave Roadways

Additional Information

- Fee Lands: 2,499 acres
- Flowage Easement Lands: 84 acres

Congressional Interests

Senator Bob Casey, Jr., D-PA
Senator Pat Toomey, R-PA
Representative Glenn Thompson, R-PA-15

Michael J. Kirwan Dam & Reservoir

Wayland, OH

Project Features

• Authorization: Flood Control Act of 1958 (P.L. 85-500).

• Primary project purposes are flood damage reduction, recreation, fish and wildlife enhancement, and low water augmentation.

• The dam was completed in 1965 and serves a drainage area of 80.5 square miles.

• This is a rolled earth filled embankment dam with a 83 ft. tall and 9,900 ft. long concrete section and a total maximum base width of 800 feet.

• The outlet works on the dam consist of three gates and three barrel conduits.

• There are 8 recreation areas at the project which include 198 outgranted camping sites, a group area with 80 camping sites, 2 group picnic areas with 7 picnic shelters and 10 individual picnic sites, 5 boat ramps and 2 playgrounds. There are also 7 trails offering a combined 3 miles of public hiking trails.

Consequences of Not Maintaining the Project

• Failure to adequately fund the flood risk management mission at this facility would result in the project's inability to adequately execute the flood risk management mission as authorized by congress. The consequences could range in severity depending upon the condition of the project, but would ultimately lead to a failure of the structure and a subsequent life safety concern for those in the affected downstream areas.

• Closure of recreational facilities will result in degradation of facilities, negative public reaction and potential Congressional inquiries.

Regional Importance

• The project averages 330 thousand visitors annually. This visitation results in $13.7 million in visitor spending, $10 million in sales, 123 jobs resulting in over $3.4 million in labor income to the local economy, all within 30 miles of the project. This represents a sizable component of the economy in the local community.

• The project has prevented over $1.8 billion in flood damages since its completion in 1965.

• MJ Kirwan Reservoir provides flood damage reduction for the Mahoning River Valley and the Beaver and upper Ohio Rivers.

• The Ohio Department of Natural Resources leases USACE property for their West Branch State Park. Visitors to the park will find numerous, facilities available for fishing, hiking, picnicking, camping, boating. There are also several miles of mountain biking trails, snow mobile trails and cross-country skiing. There is also a horse camp with horse trails, these are available by permit only.

• West Branch State Park operates a 700-foot beach that provides a view of MJ Kirwan Dam.

• There is a commercial marina with 315 boat slips, boat rentals and gas pumps.

U.S. Army Corps of Engineers Fiscal Year (FY) Project Apprropriations and President's Budget ($1,000)

	FY19 O&M Appropriation			FY20 O&M Appropriation			FY21 O&M President's Budget		
Business Line	Operation	Maintenance	Total	Operation	Maintenance	Total	Operation	Maintenance	Total
Flood Risk Management	$970	$372	$1,342	$1,012	$359	$1,371	$1,278	$259	$1,537
Recreation	$67	$7	$74	$77		$77	$68		$68
Environmental Stewardship	$46	$5	$51	$23	$47	$70	$88	$51	$139
Total	$1,083	$384	**$1,467**	$1,112	$406	**$1,518**	$1,434	$310	**$1,744**

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

	FY21 Funding Requests for Maintenance ($1,000)		
Business Line	Total	Packages $	Maintenenace Needs
Flood Risk Management	$40	$20	Create plan of wet area and slide locations - Michael J Kirwan
		$20	Investigate Downstream Embankment - Michael J Kirwan
Recreation	$220	$15	Maintenance of Recreation Features
		$50	Resurface Parking Lot at Kestrel Way
		$15	Rehab Information Center
		$90	Replace Guardrails on Kestrel Way Road
		$50	Resurface Parking Lot at Information Center

Additional Information

- Fee Lands: 6,269 acres
- Flowage Easement Lands: 33 acres

Congressional Interests

Senator Sherrod Brown, D-OH
Senator Rob Portman, R-OH
Representative Tim Ryan, D-OH-13
Representative Anthony Gonzalez, R-OH-16

Mosquito Creek Lake

Cortland, OH

Project Features

• Authorization: Flood Control Act of 1938 (P.L. 75-761).

• Primary project purposes are flood damage reduction, recreation, fish and wildlife enhancement, and low water augmentation.

• The dam was completed in 1944 and serves a drainage area of 97 square miles.

• This is a rolled earth filled embankment dam. that is 47 ft. tall and 5,650 ft. long. With the total maximum width at the base of 430 feet.

• The outlet works on the dam consists of two conduits, four sluice gates and two gate valves.

• There are 8 recreation areas at the project which include 234 outgranted camping sites, one group camping area, one group picnic area, 10 individual picnic sites, 11 boat ramps, 14 courtesy docks and 4 playgrounds. There are 46 miles of hiking opportunities on 7 trails.

Consequences of Not Maintaining the Project

• Failure to adequately fund the flood risk management mission at this facility would result in the project's inability to adequately execute the flood risk management mission as authorized by congress. The consequences could range in severity depending upon the condition of the project, but would ultimately lead to a failure of the structure and a subsequent life safety concern for those in the affected downstream areas.

• Closure of recreational facilities will result in degradation of facilities, negative public reaction and potential Congressional inquiries.

Regional Importance

• The project averages over 846 thousand visitors annually. This visitation results in $34 million in visitor spending, $19.4 million in sales, 294 jobs resulting in $8 million in labor income to the local economy, all within 30 miles of the project. This represents a sizable component of the economy in the local community.

• The project has prevented over $1.2 billion in flood damages since its completion in 1965.

• A unique feature to Mosquito Creek Lake is its use of a natural spillway. If the lake rises to 904.18 feet above sea level, the flow will reverse direction. The excess water will travel through the Grand River tributary and proceed north into Lake Erie.

• The Ohio Department of Natural Resources leases USACE property for their Mosquito State Park and Wildlife Area. Visitors to the park will find numerous facilities available for fishing, hiking, picnicking, camping, and boating.

• The lake provides fishing, boating, swimming, and hiking in the summer and in the winter there is cross-country skiing, ice fishing, snowmobiling and winter hiking.

U.S. Army Corps of Engineers Fiscal Year (FY) Project Apprropriations and President's Budget ($1,000)

	FY19 O&M Appropriation			FY20 O&M Appropriation			FY21 O&M President's Budget		
Business Line	Operation	Maintenance	Total	Operation	Maintenance	Total	Operation	Maintenance	Total
Flood Risk Management	$914	$657	$1,571	$881	$334	$1,215	$1,260	$241	$1,501
Recreation	$123	$26	$149	$153	$5	$158	$123		$123
Environmental Stewardship	$119	$10	$129	$61	$20	$81	$289	$48	$337
Water Supply	$8		$8	$8		$8	$8		$8
Total	$1,164	$693	**$1,857**	$1,103	$359	**$1,462**	$1,680	$289	**$1,969**

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

	FY21 Funding Requests for Maintenance ($1,000)		
Business Line	Total	Packages $	Maintenenace Needs
Flood Risk Management	$3,125	$75	Clear Vegetation and Establish Drainage Channels
		$3,050	Extend Rip Rap on dam face - Mosquito Creek Lake (IRRM work package)
Recreation	$50	$40	Tailwater Dam Site Restroom Roof Rehabilitation
		$10	Replace Courtesy Dock at Route 305 Boat Launch Ramp

Additional Information

- Fee Lands: 11,191 acres
- Flowage Easement Lands: 306 acres
- Project Boundary Line Marked: 49 miles

Congressional Interests

Senator Sherrod Brown, D-OH
Senator Rob Portman R-OH
Representative Tim Ryan, D-OH-13
Representative David Joyce, R-OH-14

Shenango River Lake

Hermitage, PA

Project Features

• Authorization: Flood Control Act of 1938 (P.L. 75-761).

• Primary project purposes are flood damage reduction, recreation, fish and wildlife enhancement, and low water augmentation.

• The dam was completed in 1965 and serves a drainage area of 589 square miles in both OH and PA.

• This is a concrete gravity type dam. The dam is 67.7 ft. tall and 720 ft. long. With the total maximum width at the base of 66 feet. The outlet works on the dam are seven sluice gates.

• There are 9 recreation areas at the project and 1 campground with 330 camping sites. There are 35 individual picnic sites, ten of them are group picnic shelters, two of these are outgranted. 11 boat ramps; there is an outgranted marina with 195 wet slips with four courtesy docks. There are a total of nine playgrounds with one of them being outgranted. There are also five trails offering a combined 16 miles of public hiking opportunities.

Consequences of Not Maintaining the Project

• Failure to adequately fund the flood risk management mission at this facility would result in the project's inability to adequately execute the flood risk management mission as authorized by congress. The consequences could range in severity depending upon the condition of the project, but would ultimately lead to a failure of the structure and a subsequent life safety concern for those in the affected downstream areas.

• Closure of recreational facilities will result in degradation of facilities, negative public reaction and potential Congressional inquiries.

Regional Importance

• The project averages 591 thousand visitors annually. This visitation results in $17.3million in visitor spending, $11 million in sales, 172 jobs resulting in $4.3 million in labor income to the local economy, all within 30 miles of the project. This represents a sizable component of the economy in the local community.

• The project has prevented over $448 million in flood damages since its completion in 1965.

• Visitors enjoy exploring the remnants of the Erie Extension Canal. Portions of the canal's towpath are maintained for hiking and are part of the Shenango Trail. Shenango also has and ATV trail.

• Shenango also has an 18-hole Disc Golf course that many enthusiasts enjoy.

• The Ohio Department of Wildlife manages 4,800 acres of land for wildlife management. PA game Commission manages 3,150 acres of lake and land for wildlife purposes, including a waterfowl propagation area.

• The lake provides fishing, boating, swimming, and hiking in the summer and in the winter there is cross-country skiing, ice fishing, snowmobiling and winter hiking.

U.S. Army Corps of Engineers Fiscal Year (FY) Project Apprropriations and President's Budget ($1,000)

	FY19 O&M Appropriation			FY20 O&M Appropriation			FY21 O&M President's Budget		
Business Line	Operation	Maintenance	Total	Operation	Maintenance	Total	Operation	Maintenance	Total
Flood Risk Management	$1,269	$711	$1,980	$1,341	$454	$1,795	$1,659	$442	$2,101
Recreation	$942	$10	$952	$972		$972	$864		$864
Environmental Stewardship	$149		$149	$47	$54	$101	$111	$96	$207
Total	$2,360	$721	**$3,081**	$2,360	$508	**$2,868**	$2,634	$538	**$3,172**

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

Business Line	FY21 Funding Requests for Maintenance ($1,000) Total	Packages $	Maintenace Needs
Flood Risk Management	$25	$25	Maintenance for Flood Risk Management
Recreation	$487	$30	Install Electrical Pedestals at 34 Campsites in the New Duck Loop
		$270	Rehab Interior Piping in Elevated Water Tank in the Shenango Recreation Area
		$50	Repair Sewage Treatment System at Chestnut Run Swim Beach
		$12	Replace Electrical Control Panel Shenango Recreation Area WW Treatment Plant
		$125	Repair and Stabilize Campground Shoreline

Additional Information

- Fee Lands: 14,420 acres
- Flowage Easement Lands: 508 acres

Congressional Interests

Senator Bob Casey, Jr., D-PA
Senator Pat Toomey, R-PA
Representative Mike Kelly, R-PA-16

Stonewall Jackson Lake

Weston, WV

Project Features

• Authorization: Flood Control Act of 1966 (P.L. 89-789).

• Primary project purposes are flood damage reduction, recreation, fish and wildlife enhancement, and low water augmentation.

• The dam was completed in 1990 and serves a drainage area of 101.8 square miles.

• This is a concrete gravity type dam with and uncontrolled center spillway. The dam is 95 ft. tall and 620 ft. long. With the total maximum width at the base of 113 feet. The outlet works on the dam are three flood control sluice gates and two water quality control structures.

• Cor facilities include an administration building with a visitor center and public restrooms, on outdoor plaza and walkways for viewing the dam, fishing access to the tailwater area, a hiking trail, and visitor parking areas.

Consequences of Not Maintaining the Project

• Failure to adequately fund the flood risk management mission at this facility would result in the project's inability to adequately execute the flood risk management mission as authorized by congress. The consequences could range in severity depending upon the condition of the project, but would ultimately lead to a failure of the structure and a subsequent life safety concern for those in the affected downstream areas.

• Closure of recreational facilities will result in degradation of facilities, negative public reaction and potential Congressional inquiries.

Regional Importance

• The project averages 100 thousand visitors annually. This visitation results in $3.2 million in visitor spending, $1.8 million in sales, 30 jobs resulting in over $787 thousand in labor income to the local economy, all within 30 miles of the project.

• The project has prevented over $563 million in flood damages since its completion in 1990.

• Stonewall Jackson lake provides an ideal setting for pleasure and relaxation. Boating, fishing, hunting, hiking and camping are just a few of the many recreation opportunities available.

• WV DNR operates the Stonewall Jackson State Park Resort with 191 rooms, 11 cabins and a campground with 45 sites.

• The lake provides fishing, boating, swimming, and hiking in the summer and in the winter there is cross-country skiing, ice fishing, and winter hiking.

• Stonewall State Park Resort also includes a Arnold Palmer signature 18-hole championship golf course available to the public.

U.S. Army Corps of Engineers Fiscal Year (FY) Project Apprropriations and President's Budget ($1,000)

	FY19 O&M Appropriation			FY20 O&M Appropriation			FY21 O&M President's Budget		
Business Line	Operation	Maintenance	Total	Operation	Maintenance	Total	Operation	Maintenance	Total
Flood Risk Management	$968	$232	$1,200	$1,115	$234	$1,349	$1,204	$332	$1,536
Recreation	$13		$13	$77		$77	$75		$75
Environmental Stewardship	$278	$6	$284	$22	$39	$61	$86	$36	$122
Water Supply	$8		$8	$8		$8	$8		$8
Total	$1,267	$238	**$1,505**	$1,222	$273	**$1,495**	$1,373	$368	**$1,741**

Additional Information

- Fee Lands: 20,451 acres
- Flowage Easement Lands: 707 acres

Congressional Interests

Senator Joe Manchin III, D-WV
Senator Shelley Moore Capito, R-WV
Representative Alex Mooney, R-WV-2

Tionesta Lake

Tionesta, PA

Project Features

• Authorization: Flood Control Acts of 1936 (P.L. 74-738) and 1938 (P.L. 75-761).

• Primary project purposes are flood damage reduction, recreation, fish and wildlife enhancement, and low water augmentation.

• The dam was completed in 1940 and serves a drainage area of 478 square miles.

• This is a compact earth-filled and rock-fill type dam. The dam is 154 ft. tall and 1050 ft. long. With the total maximum width at the base of 1080 feet. The outlet works on the dam are three vertical lift gates, two gate valves and a concrete lined tunnel.

• The are nine recreation areas at Tionesta, one is operated by the PA Fish & Boat Commission and the other by the Borough of Tionesta. Corps facilities include an administration building with a visitor center and public restrooms, walkways for viewing the dam, fishing and boating access areas, a hiking trail, and visitor parking areas. Tionesta operates three campgrounds with a total of 197 sites, including a group camp site. One of the camping areas is boat in only.

Consequences of Not Maintaining the Project

• Failure to adequately fund the flood risk management mission at this facility would result in the project's inability to adequately execute the flood risk management mission as authorized by congress. The consequences could range in severity depending upon the condition of the project, but would ultimately lead to a failure of the structure and a subsequent life safety concern for those in the affected downstream areas.

• Closure of recreational facilities will result in degradation of facilities, negative public reaction and potential Congressional inquiries.

Regional Importance

• The project averages 176 thousand visitors annually. This visitation results in $3.3 million in visitor spending, $2.2 million in sales, 34 jobs resulting in $802 thousand in labor income to the local economy, all within 30 miles of the project.

• The project has prevented over $2.8 billion in flood damages since its completion in 1940.

• Tionesta Lake provides an ideal setting for pleasure and relaxation. Boating, fishing, hunting, hiking and camping are just a few of the many recreation opportunities available.

• PA Fish and Boat Commission operates the Nebraska Access Area with a boat ramp and PA Game Commission operates State Game Lands at Tionesta. The Allegheny National Forest also surrounds Tionesta Lake and Tionesta Creek.

• The lake provides fishing, boating, swimming, and hiking in the summer and in the winter there is cross-country skiing, ice fishing, and winter hiking.

• Tionesta's flood control capabilities were dramatically demonstrated during the 1972 Tropical Storm Agnes when more than $62 million in damages were prevented by the dam alone.

U.S. Army Corps of Engineers Fiscal Year (FY) Project Apprropriations and President's Budget ($1,000)

	FY19 O&M Appropriation			FY20 O&M Appropriation			FY21 O&M President's Budget		
Business Line	Operation	Maintenance	Total	Operation	Maintenance	Total	Operation	Maintenance	Total
Flood Risk Management	$1,497	$643	$2,140	$1,460	$4,831	$6,291	$1,550	$3,338	$4,888
Recreation	$484		$484	$620		$620	$577		$577
Environmental Stewardship	$75		$75	$51	$33	$84	$86	$80	$166
Total	$2,056	$643	**$2,699**	$2,131	$4,864	**$6,995**	$2,213	$3,418	**$5,631**

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

Business Line	FY21 Funding Requests for Maintenance ($1,000) Total	Packages $	Maintenace Needs
Flood Risk Management	$110	$25	Install Fencing Around Potable Water Wells
		$85	Replace Dam Access Road Guide Rail
Recreation	$423	$40	Construct Multipurpose Pavilion at Damsite
		$35	Maintenance of Recreation Features
		$25	Playground Unit at Tionesta Recreation Area Campground
		$323	Rehab interior Piping and Repaint Elevated Water Tank

Additional Information

- Fee Lands: 3,144 acres
- Flowage Easement Lands: 13 acres
- Project Boundary Line Marked: 35 miles

Congressional Interests

- Senator Bob Casey, Jr., D-PA
- Senator Pat Toomey, R- PA
- Representative Glenn Thompson, R-PA-15

Tygart Lake

Grafton, WV

Project Features

• Authorization: Rivers and Harbors Act of 1935 (P.L. 74-409).

• Primary project purposes are flood damage reduction, recreation, fish and wildlife enhancement, and low water augmentation.

• The dam was completed in 1938 and serves a drainage area of 1,184 square miles.

• This is type of dam is a concrete gravity with an uncontrolled spillway. The dam is 230 ft. tall and 1921 ft. long. With the total maximum width at the base of 207 feet. The outlet works on the dam are eight controlled sluice gates and two ring jet valve controlled sluices.

• T day use area at Tygart Dam features an overlook of the dam, a visitor center, picnic sites with grills and a reserveable pavilion. Park Rangers provide weekly dam tours during the summer and scheduled group tours year round.

Regional Importance

• The project averages 288 thousand visitors annually. This visitation results in $12.4 million in visitor spending, $6.5 million in sales, 103 jobs resulting in over $2.7 million in labor income to the local economy, all within 30 miles of the project. This represents a sizable component of the economy in the local community.

• The project has prevented over $5.5 billion in flood damages since its completion in 1938.

• Tygart Lake provides an ideal setting for pleasure and relaxation. Boating, fishing, hunting, hiking and camping are just a few of the many recreation opportunities available.

• The Corps leases areas of Tygart Lake to the West Virginia Division of Natural Resources as part of Tygart Lake State Park and Pleasant Creek Wildlife Management Area. Those seeking overnight accommodations have a choice between lodge or cabin facilities available at Tygart Lake State Park. For those desiring a more rustic experience campgrounds are available at both the State Park and the Pleasant Creek Wildlife Management Area.

Consequences of Not Maintaining the Project

• Failure to adequately fund the flood risk management mission at this facility would result in the project's inability to adequately execute the flood risk management mission as authorized by congress. The consequences could range in severity depending upon the condition of the project, but would ultimately lead to a failure of the structure and a subsequent life safety concern for those in the affected downstream areas.

• Closure of recreational facilities will result in degradation of facilities, negative public reaction and potential Congressional inquiries.

U.S. Army Corps of Engineers Fiscal Year (FY) Project Apprropriations and President's Budget ($1,000)

	FY19 O&M Appropriation			FY20 O&M Appropriation			FY21 O&M President's Budget		
Business Line	Operation	Maintenance	Total	Operation	Maintenance	Total	Operation	Maintenance	Total
Flood Risk Management	$1,191	$418	$1,609	$1,444	$394	$1,838	$1,316	$213	$1,529
Recreation	$10		$10	$80		$80	$67		$67
Environmental Stewardship	$60	$6	$66	$28	$27	$55	$86	$33	$119
Water Supply	$8		$8	$8		$8	$8		$8
Total	$1,269	$424	**$1,693**	$1,560	$421	**$1,981**	$1,477	$246	**$1,723**

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

	FY21 Funding Requests for Maintenance ($1,000)		
Business Line	Total	Packages $	Maintenenace Needs
Flood Risk Management	$25	$25	Maintenance for Flood Risk Management
Recreation	$161	$120	Rehab Overlook Area
		$41	Maintenance of Recreation Features

Additional Information

- Fee Lands: 2,701 acres
- Flowage Easement Lands: 1,034 acres

Congressional Interests

- Senator: Joe Manchin III, D-WV
- Senator: Shelley Moore Capito, R-WV
- Representative David McKinley, R-WV-01

Union City Dam

Waterford, PA

Project Features

• Authorization: Rivers and Harbors Act of 1962 (P.L. 87-4).

• Primary project purposes are flood damage reduction, recreation, fish and wildlife enhancement.

• The dam was completed in 1971 and serves a drainage area of 222 square miles.

• This dam is a rolled earth embankment type with an uncontrolled side-channel spillway at the right abutment of the dam. The dam is 88 ft. tall and 1430 ft. long. With the total maximum width at the base of 560 feet. The outlet works on the dam is an uncontrolled concrete conduit at the base of the dam.

• T day use area at Union City Dam features picnic sites with grills, access to walk and/or drive across the dam, and fishing below the dam.

• T dam functions as an uncontrolled detention structure that automatically stores and releases water during periods of peak flow. The conduit permits normal flows of French Creek to pass through unimpeded.

Consequences of Not Maintaining the Project

• Failure to adequately fund the flood risk management mission at this facility would result in the project's inability to adequately execute the flood risk management mission as authorized by congress. The consequences could range in severity depending upon the condition of the project, but would ultimately lead to a failure of the structure and a subsequent life safety concern for those in the affected downstream areas.

• Closure of recreational facilities will result in degradation of facilities, negative public reaction and potential Congressional inquiries.

Regional Importance

• The project averages 21 thousand visitors annually. This visitation results in $354 thousand in visitor spending, $210 thousand in sales, 4 jobs resulting in over $87 thousand in labor income to the local economy, all within 30 miles of the project.

• The project has prevented over $235 million in flood damages since its completion in 1971.

• Union City Dam provides visitors with the chance to enjoy a number outdoor recreational opportunities. The different types of habitat and ecosystems that can be found at the reservoir provide hikers, bird watchers and naturalists with a variety of flora and fauna to discover and enjoy.

• Fisherman are drawn to the project to test their skills against northern pike, walleye and muskie. There is also an abundance of smallmouth bass and panfish in the creek and trout in the many feeder streams.

• Hunting is also a popular activity at Union City Dam. Deer, turkey, small game, and waterfowl are plentiful and provide hunters with exciting opportunities and experiences.

U.S. Army Corps of Engineers Fiscal Year (FY) Project Apprropriations and President's Budget ($1,000)

	FY19 O&M Appropriation			FY20 O&M Appropriation			FY21 O&M President's Budget		
Business Line	Operation	Maintenance	Total	Operation	Maintenance	Total	Operation	Maintenance	Total
Flood Risk Management	$474	$116	$590	$396	$97	$493	$433	$78	$511
Recreation	$17		$17	$40		$40	$34		$34
Environmental Stewardship	$5		$5	$5	$8	$13	$155	$25	$180
Total	$496	$116	**$612**	$441	$105	**$546**	$622	$103	**$725**

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

	FY21 Funding Requests for Maintenance ($1,000)		
Business Line	Total	Packages $	Maintenenace Needs
Recreation	$10	$10	Maintenance of Recreation Features

Additional Information

- Fee Lands: 161 acres
- Flowage Easement Lands: 2,410 acres

Congressional Interests

Senator Bob Casey, Jr. D-PA
Senator Pat Toomey, R-PA
Representative Mike Kelly R-PA-16

Woodcock Creek Lake

Saegertown, PA

Project Features

• Authorization: Rivers and Harbors Act of 1962 (P.L. 87-4).

• Primary project purposes are flood damage reduction, recreation.

• The dam was completed in 1973 and serves a drainage area of 45.7 square miles.

• This dam is a rolled earth embankment type with an impervious core and an uncontrolled saddle type with sidehill spillway. The dam is 90 ft. tall and 4650 ft. long. The outlet works on the dam is an arched concrete conduit. The discharge is regulated with two slide gates and two multi-level outlets for water quality control.

• The are 7 recreation areas at Woodcock Creek Lake. The combination of these recreation areas and sites are managed by both the Corps and Crawford County. There are 6 hiking trails with 7 miles of trails. The walk across the top of the dam and the parking lot equals one mile, this makes this walk convenient and popular among walkers and runners. There are 16 picnic sites, an interpretive center, and a disc golf course.

Consequences of Not Maintaining the Project

• Failure to adequately fund the flood risk management mission at this facility would result in the project's inability to adequately execute the flood risk management mission as authorized by congress. The consequences could range in severity depending upon the condition of the project, but would ultimately lead to a failure of the structure and a subsequent life safety concern for those in the affected downstream areas.

• Closure of recreational facilities will result in degradation of facilities, negative public reaction and potential Congressional inquiries.

Regional Importance

• The project averages 243 thousand visitors annually. This visitation results in $4.4 million in visitor spending, $2.9 million in sales, 46 jobs resulting in $1.1 million in labor income to the local economy, all within 30 miles of the project. This represents a sizable component of the economy in the local community.

• The project has prevented over $74 million in flood damages since its completion in 1973.

• Woodcock Creek Lake provides visitors with the chance to enjoy a number outdoor recreational opportunities. The different types of habitat and ecosystems that can be found at the reservoir provide hikers, bird watchers and naturalists with a variety of flora and fauna to discover and enjoy.

• Many exceptional facilities are provided by the US Army Corps of Engineers, Crawford County and the Crawford County Conservation District. A spacious campground, developed swim beach, picnic areas, and a six lane boat launch are located in the Colonel Crawford Park Area.

• Hunting and fishing are popular activities at Woodcock Creek Lake. PA Game Commission leases adjoining state game lands that are open to the public for hunting.

U.S. Army Corps of Engineers Fiscal Year (FY) Project Apprropriations and President's Budget ($1,000)

	FY19 O&M Appropriation			FY20 O&M Appropriation			FY21 O&M President's Budget		
Business Line	Operation	Maintenance	Total	Operation	Maintenance	Total	Operation	Maintenance	Total
Flood Risk Management	$740	$321	$1,061	$756	$165	$921	$755	$190	$945
Recreation	$60		$60	$282		$282	$200		$200
Environmental Stewardship	$36		$36	$15	$16	$31	$55	$41	$96
Total	$836	$321	**$1,157**	$1,053	$181	**$1,234**	$1,010	$231	**$1,241**

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

	FY21 Funding Requests for Maintenance ($1,000)		
Business Line	Total	Packages $	Maintenenace Needs
Recreation	$335	$25	Rehab Bridge at Bossard Run Creek Nature Trail
		$50	Maintenance of Recreation Features
		$180	Replace Water System Holding Tank at Overlook
		$70	Repave Parking Lot and Driveway for Fishing Access
		$10	Replace Sewage Lift Station

Additional Information

- Fee Lands: 1,732 acres
- Flowage Easement Lands: 1 acre

Congressional Interests

Senator Bob Casey, Jr., D-PA
Senator: Pat Toomey, R-PA
Representative Mike Kelly, R-PA-16

Youghiogheny River Lake

Confluence, PA

US Army Corps of Engineers

GREAT LAKES & OHIO RIVER DIVISION

Project Features

• Authorization: Flood Control Act of 1938 (P.L. 75-761).

• Primary project purposes are flood damage reduction, hydropower, recreation, fish and wildlife enhancement, and low water augmentation.
• The dam was completed in 1943 and serves a drainage area of 434 square miles.
• This dam is a rolled earth embankment type with an impervious core and an uncontrolled side channel spillway. The dam is 184 ft. tall and 1,610 ft. long. The outlet works on the dam are three vertical lift gates and a concrete lined tunnel.
• The are 7 recreation areas at Youghiogheny River Lake. The combination of these recreation areas and sites are managed by both the Corps, the PA Fish and Boat Commission and private entities. There are 19 picnic sites around the lake. There are also 4 group picnic areas with 35 picnic sites and one picnic shelter. There are 13 boat ramps operated by the Corps and other agencies and private owners. There is also a privately operated marina with 316 wet slips.

Consequences of Not Maintaining the Project

• Failure to adequately fund the flood risk management mission at this facility would result in the project's inability to adequately execute the flood risk management mission as authorized by congress. The consequences could range in severity depending upon the condition of the project, but would ultimately lead to a failure of the structure and a subsequent life safety concern for those in the affected downstream areas.

• Closure of recreational facilities will result in degradation of facilities, negative public reaction and potential Congressional inquiries.

Regional Importance

• The project averages 640 thousand visitors annually. This visitation results in $31.3 million in visitor spending, $16.5 million in sales, 262 jobs resulting in $6.8 million in labor income to the local economy, all within 30 miles of the project. This represents a sizable component of the economy in the local community.

• The project has prevented over $2.5 billion in flood damages since its completion in 1943.

• Youghiogheny River Lake provides visitors with the chance to enjoy a number outdoor recreational opportunities. Boaters enjoy the 16 mile long lake with its various channels. For those who prefer the non-motorized boating there is plenty to offer. The outflow area to approximately 20 miles downstream is one of the more popular rafting and canoeing rivers in the eastern US. This stretch of river below the dam is renowned for its whitewater and is often the scene of national kayaking competitions.

• Whitewater activities that depend on project operations, recreational fishing, and boating at the project are specifically authorized project purposes.

U.S. Army Corps of Engineers Fiscal Year (FY) Project Apprropriations and President's Budget ($1,000)

	FY19 O&M Appropriation			FY20 O&M Appropriation			FY21 O&M President's Budget		
Business Line	Operation	Maintenance	Total	Operation	Maintenance	Total	Operation	Maintenance	Total
Flood Risk Management	$1,663	$512	$2,175	$1,936	$510	$2,446	$1,652	$449	$2,101
Recreation	$417		$417	$492	$50	$542	$495		$495
Environmental Stewardship	$223	$5	$228	$282	$51	$333	$169	$96	$265
Water Supply	$8		$8	$8		$8	$8		$8
Total	$2,311	$517	**$2,828**	$2,718	$611	**$3,329**	$2,324	$545	**$2,869**

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

	FY21 Funding Requests for Maintenance ($1,000)		
Business Line	Total	Packages $	Maintenenace Needs
Flood Risk Management	$940	$30	Re-drill horizontal drains in spillway - Youghiogheny
		$770	Re-establish or replace rock fill on the embankment - Youghiogheny
		$40	Remove Talus and Stored Material from Spillway - Youghiogheny
		$100	Repair Deteriorated Spillway Concrete - Youghiogheny
Recreation	$450	$100	Outflow Campground Electrical System Replacement
		$150	Repave Road at Outflow Campground
		$200	Repave Parking Lot and Boat Launch Ramp at Somefield North
Environmental Stewardship	$20	$20	Youghiogheny Bottom Land Habitat Treatment

Additional Information

- Fee Lands: 3,914 acres
- Flowage Easement Lands: 1 acre

Congressional Interests

Senator Bob Casey, Jr., D-PA
Senator Pat Toomey, R-PA
Representative John Joyce, R-PA-13
Representative Guy Reschenthaler, R-PA-14
Senator Benjamin Cardin, D-MD
Senator Chris Van Hollen, Jr. D-MD
Representative David Trone, D-MD-06

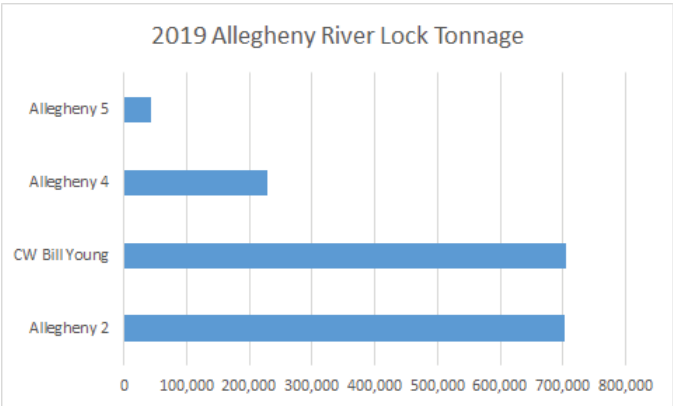
Allegheny River Locks and Dams

Pittsburgh District

Basin Characteristics

• The Allegheny River system today consists of the navigable portion of the Allegheny River which extends approximately 70 miles from the Point in Pittsburgh, PA to East Brady, PA. There are 9 locks and dams on this section of river.

• The current status on the Allegheny: Lock 2 and Lock 3 are operated 24 hours and Lock 4 16 hours a day/365 days a year and are classified as high-use locks. Lock 5 is operated 8 hours a day/365 days a year. At Locks 6, 7, 8 and 9, commercial lockages are by appointment only.



Regional Importance

• Navigation structures on the Allegheny are necessary to make inland waterways viable for year-round navigation that allows for the transportation of an average of 2,374,000 tons/year, and provides a consistent source of water for communities in the region.

• Navigation has contributed greatly to the economic and industrial development of the region in the northern tier of PA. These locks and dams provide access to one of the largest specialty steel companies in the country and provide for four hydropower facilities.

• Because one barge can transport as much cargo as 15 rail cars and 60 tractor-trailers, waterway transportation benefits the environment. It reduces fuel consumption and emissions, and makes roads safer by keeping more trucks off the highway.

• Every year the locks provide passage for over 2 million tons of goods including grain, steel, chemicals, petroleum, and even products for our nation's defense.

• The Allegheny River is also a great resource to recreation in the area, a total of 10,000 recreational crafts locked though each year in the system

U.S. Army Corps of Engineers Fiscal Year (FY) Project Apprropriations and President's Budget ($1,000)

	FY19 O&M Appropriation			FY20 O&M Appropriation			FY21 O&M President's Budget		
Business Line	Operation	Maintenance	Total	Operation	Maintenance	Total	Operation	Maintenance	Total
Navigation	$4,812	$3,051	$7,863	$5,049	$2,498	$7,547	$4,892	$3,352	$8,244
Total	$4,812	$3,051	**$7,863**	$5,049	$2,498	**$7,547**	$4,892	$3,352	**$8,244**

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

Business Line	FY21 Funding Requests for Maintenance ($1,000) Total	Packages $	Maintenace Needs
Navigation	$14,992	$448	Repair Interlocks - Allegheny River Lock 6
		$112	Repair Interlocks - Allegheny River Lock and Dam 2
		$8,109	Repair Land Chamber Wall Concrete - CW Bill Young Lock
		$1,088	Repair Upper Guidewall Walkway - Allegheny River Lock 2
		$615	Replace Control System - Allegheny River Lock 5
		$472	Replace Mooring Facility for Workboat - CW Bill Young Lock
		$330	Fixed Crest Dam Sign Installation - Allegheny River
		$250	Facility Physical/Cyber Security Maintenance and Replacement for Navigation
		$170	Fabricate and Install Waterway Safety Signs - Allegheny Lock 2
		$500	Replace Security System - Allegheny Lock 2
		$500	Replace Security System - Allegheny Lock 5
		$500	Replace Security System - Allegheny Lock 6
		$500	Replace Security System - Allegheny Lock 7
		$500	Replace Security System - Allegheny Lock 8
		$500	Replace Security System - Allegheny Lock 9
		$398	CW Bill Young Lock and Dam Interlocks Plans and Specifications

Allegheny 2 Lock and Dam

Allegheny River, PA

Project Features

• Authorization: Rivers and Harbors Act of 1935.

• Construction of Allegheny 2 Lock and Dam began in 1932, and was completed in 1934. It was opened for navigation on 10 October 1934.

• Primary project purpose is navigation.

• The project has a non-navigable, 1,393-foot long fixed-crest dam and a single 360ft x 56ft lock chamber which provides an 11-foot vertical lift.

• Lock is staffed 24 hours a day, 7 days a week.

• The project has one day use recreation area.

Regional Importance

• In 2019, over 700 thousand tons of cargo, over 600 commercial vessels, and over 1900 recreational vessels locked through the project. (This facility was under construction part of this year)

• Cargo consists of coal, petroleum, chemicals, crude materials, manufactured goods, farm products, manufactured machinery, and other commodities.

• The principal commodity at Lock 2 is coal, which is transported into the C.W. Bill Young pool for power generation.

• The transportation savings associated with this facility is approximately $16M a year.

• Singles up and down lock time is approximately 52 minutes.

Consequences of Not Maintaining the Project

• Failure to maintain the project could halt the movement of commercial navigation. That stoppage would result in loss of rate savings to shippers, and delay orders for essential commodities; including fuel for power plants, and raw materials for major industries.

• In addition to the loss of navigation purpose, pool loss could jeopardize water supply for municipal and industrial users and could lead to the loss of habitat for aquatic species. Such a pool loss could affect both recreation users and water quality, should there be a prolonged loss.

Additional Information

- 2019 lock tonnage (in thousands) 703
- National Rank: 140
- Current Miter Gate In Service Date:
  Main: 1962 Auxiliary: 1962
- Projected Year Lock Miter Gates Reach "F" Condition: 2036
- Projected Miter Gate Replacement:
  Downstream: 2040 Upstream: 2040
- Fee Lands: 5.9 acres
- Flowage Easement Lands: 0 acres

Congressional Interests

Senator Bob Casey Jr., D-PA
Senator Pat Toomey, R-PA
Representative Conor Lamb, D-PA-17
Representative Michael Doyle Jr., D-PA-18

Allegheny 3 Lock and Dam
(C.W. Bill Young)

Allegheny River, PA

Project Features

• Authorization: Rivers and Harbors Act of 1935.

• Construction of C. W. Bill Young Lock and Dam began in 1932, and was completed in 1934. It was opened for Navigation on 10 October 1934.

• Primary project purpose is navigation.

• The project has a non-navigable, 1,435.75-foot long fixed-crest, and a single 360ft x 56ft lock chamber, which provides an 11-foot vertical lift.

• Lock is staffed 24 hours a day, 7 days a week.

Regional Importance

• In calendar year 2019, the volume of cargo transported exceeded 700 thousand tons

• In 2019, there were 696 commercial vessels and 1,351 recreational vessels locked through Lock and Dam 3 on the Allegheny.

• Cargo consists of coal, petroleum, chemicals, crude materials, manufactured goods, farm products, manufactured machinery, and other commodities.

• The principal commodity at C.W. Bill Young is coal, which is transported upstream for power generation.

• Construction and supply companies utilize this facility to move raw materials throughout the region.

• The transportation savings associated with this facility is approximately $16M a year.

• Singles up and down lock time is approximately 56 minutes.

Consequences of Not Maintaining the Project

• Failure to maintain the project could halt the movement of commercial navigation. That stoppage would result in loss of rate savings to shippers, and delay orders for essential commodities; including fuel for power plants, and raw materials for major industries.

• In addition to the loss of navigation purpose, pool loss could jeopardize water supply for municipal and industrial users, and could lead to the loss of habitat for aquatic species. Such a pool loss could affect both recreation users and water quality, should there be a prolonged loss.

Additional Information

- 2019 lock tonnage (in thousands) 704
- National Rank: 140
- Current Miter Gate In Service Date: 1991
- Projected Year Lock Miter Gates Reach "F" Condition: 2028
- Projected Miter Gate Replacement: Downstream: 2034 Upstream: 2034
- Fee Lands: 5.4 acres
- Flowage Easement Lands: 16 acres

Congressional Interests

Senator Bob Casey Jr., D-PA
Senator Pat Toomey, R-PA
Representative Conor Lamb, D-PA-17
Representative Michael Doyle, Jr. D-PA-18

Allegheny 4 Lock and Dam

Allegheny River, PA

Project Features

• Authorization: Rivers and Harbors Act of 1912.

• Construction of Allegheny 4 Lock and Dam began in 1920, and was completed in 1927. Operations began on 6 September 1927.

• Primary project purpose is navigation.

• The project has a non-navigable, 876-foot long fixed-crest and a single 360ft x 56ft lock chamber which provides an 11-foot vertical lift.

• Lock is staffed 10 hours a day, 7 days a week.

Regional Importance

• In calendar year 2019, the volume of cargo transported exceeded 229 thousand tons

• In 2019, there were 329 commercial vessels and 904 recreation vessels locked through Lock and Dam 4 on the Allegheny River.

• Cargo consists of coal, petroleum, chemicals, crude materials, manufactured goods, farm products, manufactured machinery, and other commodities.

• The principal commodity at Lock 4 includes crude materials such as stone, sand, gravel, and cement.

• Construction and supply companies use this facility to move raw materials throughout the region.

• The transportation savings associated with this facility is approximately $5M a year.

• Singles up and down lock time is approximately 40 minutes.

Consequences of Not Maintaining the Project

• Failure to maintain the project could halt the movement of commercial navigation. That stoppage would result in loss of rate savings to shippers and delay orders for essential commodities; including fuel for power plants, and raw materials for major industries.

• In addition to the loss of navigation purpose, pool loss could jeopardize water supply for municipal and industrial users, and could lead to the loss of habitat for aquatic species. Such a pool loss could affect both recreation users and water quality, should there be a prolonged loss.

Additional Information

- 2019 lock tonnage (in thousands) 229
- National Rank: 152
- Current Miter Gate In Service Date: 1996
- Projected Year Lock Miter Gates Reach "F" Condition: 2052
- Projected Miter Gate Replacement: Downstream: 2059 Upstream: 2059
- Fee Lands: 10.5 acres
- Flowage Easement Lands: 5.3 acres

Congressional Interests

Senator Bob Casey Jr., D-PA
Senator Pat Toomey, R-PA
Representative Conor Lamb, D-PA-17
Representative Guy Reschenthaler, R-PA-14

Allegheny 5 Lock and Dam

Allegheny River, PA

Project Features

• Authorization: Rivers and Harbors Act of 1912.

• Construction of Allegheny 5 Lock and Dam began in 1920, and was completed in 1927. It became operational on 20 October 1927.

• Primary project purpose is navigation.

• The project has a non-navigable, 632-foot long fixed-crest dam and a single 360ft. x 56ft. lock chamber which provides an 11.8-foot vertical lift.

• Sithe Energies operates a hydropower facility on the abutment that has two turbines rated at 4.75 MW each. The combined discharge capacity of both units is approximately 12,000 cfs.

• Lock is staffed 16 hours a day, 7 days a week.

Consequences of Not Maintaining the Project

• Failure to maintain the project could halt the movement of commercial navigation. That stoppage would result in loss of rate savings to shippers, and delay orders for essential commodities; including fuel for power plants, and raw materials for major industries.
• In addition to the loss of navigation purpose, pool loss could jeopardize water supply for municipal and industrial users, loss of electrical energy produced by hydropower plants at the dams, and lead to the loss of habitat for aquatic species. Such a pool loss could affect both recreation users and water quality, should there be a prolonged loss.

Regional Importance

• In calendar year 2019, the volume of cargo transported exceeded 43 thousand tons.

• In 2019, there were 91 commercial vessels and 467 recreation vessels locked through Lock and Dam 5 on the Allegheny River.

• Cargo consists of coal, petroleum, chemicals, crude materials, manufactured goods, farm products, manufactured machinery, and other commodities.

• The principal commodity at Lock 5 is crude material such as stone, sand, gravel, and cement.

• Construction and supply companies use this facility to move raw materials throughout the region.

• The transportation savings associated with this facility is approximately $1.5M a year.

• Singles up and down lock time is approximately 37 minutes.

• The facility has a 9.5MW hydropower facility.

Additional Information

- 2019 lock tonnage (in thousands) 43
- National Rank: 158
- Current Miter Gate In Service Date: 2000
- Projected Year Lock Miter Gates Reach "F" Condition: 2055
- Projected Miter Gate Replacement: Downstream: 2063 Upstream: 2063
- Fee Lands: 6.3 acres
- Flowage Easement Lands: 0 acres

Congressional Interests

Senator Bob Casey Jr., D-PA
Senator Pat Toomey, R-PA
Representative Glenn Thompson, R-PA-15

Allegheny 6 Lock and Dam

Allegheny River, PA

Project Features

• Authorization: Rivers and Harbors Act of 1912.

• Construction of Allegheny 6 Lock and Dam began in 1927, and was completed in 1928. It became operational on 10 October 1928.

• Primary project purpose is navigation.

• The project has a non-navigable, 992-foot long fixed-crest dam, and a single 360ft. x 56ft. lock chamber, which provides a 12.2-foot vertical lift.

• Sithe Energies operates a hydropower facility on the abutment that has two turbines rated at 4.75 MW each. The combined discharge capacity of both units is approximately 12,000 cfs.

• The lock is an IMTS level 6 facility offering commercial lockages by appointment only.

Consequences of Not Maintaining the Project

• Failure to maintain the project could halt the movement of commercial navigation. That stoppage would result in loss of rate savings to shippers, and delay orders for essential commodities; including fuel for power plants, and raw materials for major industries.

• In addition to the loss of navigation purpose, pool loss could jeopardize water supply for municipal and industrial users, loss of electrical energy produced by hydropower plants at the dams, and lead to the loss of habitat for aquatic species. Such a pool loss could affect both recreation users and water quality, should there be a prolonged loss.

Regional Importance

• In 2019, 13 thousand tons of cargo were locked through. Cargo consists of coal, petroleum, chemicals, crude materials, manufactured goods, farm products, manufactured machinery, and other commodities.

• In 2019, there were 23 commercial vessels and 228 recreation vessels locked through Lock and Dam 6 on the Allegheny River.

• The principal commodity at Lock 6 is crude materials such as stone, sand, gravel, and cement.

• Construction and supply companies use this facility to move raw materials throughout the region.

• Singles up and down lock time is approximately 36 minutes.

• The facility has a 9.5MW hydropower facility.

Additional Information

- 2019 lock tonnage (Thousands) 13
- National Rank: 160
- Current Miter Gate In Service Date: 1992
- Projected Year Lock Miter Gates Reach "F" Condition: 2052
- Projected Miter Gate Replacement: Downstream: 2064 Upstream: 2064
- Fee Lands: 7.2 acres
- Flowage Easement Lands: 41.9 acres

Congressional Interests

Senator Bob Casey Jr., D-PA
Senator Pat Toomey, R-PA
Representative Glenn Thompson, R-PA-15

Allegheny 7 Lock and Dam

Allegheny River, PA

Project Features

• Authorization: Rivers and Harbors Act of 1912.

• Primary project purpose is navigation.

• Construction on Allegheny 7 Lock and Dam began in 1928, and was completed in 1931. Operations began on 10 November 1930.

• The project has a non-navigable, 916-foot long fixed-crest dam, and a single 360ft. x 56ft. lock chamber, which provides a 13-foot vertical lift.

• The lock is an IMTS level 6 facility offering commercial lockages by appointment only.

Regional Importance

• In 2019, 3 thousand tons of cargo locked through the facility. Cargo consists of coal, petroleum, chemicals, crude materials, manufactured goods, farm products, manufactured machinery, and other commodities.

• In 2019, there were 10 commercial vessels, and 324 recreation vessels locked through Lock and Dam 7 on the Allegheny River.

• The principal commodity at Lock 7 is crude material; such as stone, sand, gravel, and cement.

• Construction and supply companies use this facility to move raw materials throughout the region.

• Singles up and down lock time is approximately 37 minutes.

Consequences of Not Maintaining the Project

• Failure to maintain the project could halt the movement of commercial navigation. That stoppage would result in loss of rate savings to shippers, and delay orders for essential commodities; including fuel for power plants, and raw materials for major industries.

• In addition to the loss of navigation purpose, pool loss could jeopardize water supply for municipal and industrial users, and could lead to the loss of habitat for aquatic species. Such a pool loss could affect both recreation users and water quality, should there be a prolonged loss.

Additional Information

- 2019 lock tonnage (Thousands) 3
- National Rank: 160
- Current Miter Gate In Service Date: 1994
- Projected Year Lock Miter Gates Reach "F" Condition: 2055
- Projected Miter Gate Replacement: Downstream: 2067 Upstream: 2067
- Fee Lands: 2.6 acres
- Flowage Easement Lands: 0 acres

Congressional Interests

Senator Bob Casey Jr., D-PA
Senator Pat Toomey, R-PA
Representative Glenn Thompson, R-PA-15

Allegheny 8 Lock and Dam

Allegheny River, PA

Project Features

• Authorization: Rivers and Harbors Act of 1912, and 1935.

• Construction began on Allegheny 8 Lock and Dam in 1929, and was completed in 1931. Operations began on 21 May 1931.

• Primary project purpose is navigation.

• The project has a non-navigable, 916-foot long fixed-crest dam, and a single 360ft. x 56ft. lock chamber, which provides a 17.9-foot vertical lift.

• Sithe Energies operates a hydropower facility on the abutment that has two turbines rated at 6.8 MW each. The combined discharge capacity of both units is approximately 12,000 cfs.

• The lock is an IMTS level 6 facility offering commercial lockages by appointment only.

Regional Importance

• Singles up and down lock time is approximately 23 minutes.

• In 2019, there were 341 recreation vessels locked through Lock and Dam 8 on the Allegheny River.

• The facility has a 13.6MW hydropower facility.

Consequences of Not Maintaining the Project

• Failure to provide adequate funding to maintain this facility will have little or no effect to commercial transportation costs associated with this facility.

• Failure of the dam or a lock component which results in the loss of pool will halt operation of a 13.6MW hydropower facility and will likely impact municipal and commercial water supplies until an emergency repair can be achieved.

Additional Information

- 2019 lock tonnage: none
- National Rank: N/A
- Current Miter Gate In Service Date: 1994
- Projected Year Lock Miter Gates Reach "F" Condition: 2060
- Projected Miter Gate Replacement: Downstream: 2073 Upstream: 2073
- Fee Lands: 7.9 acres
- Flowage Easement Lands: 73.2 acres

Congressional Interests

Senator Bob Casey Jr., D-PA
Senator Pat Toomey, R-PA
Representative Glenn Thompson, R-PA-15

Allegheny 9 Lock and Dam

Allegheny River, PA

Project Features

• Authorization: Rivers and Harbors Act of 1935.

• Primary project purpose is navigation.

• Construction of Allegheny 9 Lock and Dam began in 1935, and was completed in 1938. Operations began on 6 October 1938.

• The project has a non-navigable, 918-foot long fixed-crest dam, and a single 360-ft. x 56-ft. lock chamber, which provides a 22-foot vertical lift.

• Sithe Energies operates a hydropower facility on the abutment that has two turbines rated at 9.0 MW each. The combined discharge capacity of both units is approximately 19,700 cfs.

• The lock is an IMTS level 6 facility offering commercial lockages by appointment only.

Regional Importance

• Singles up and down lock time is approximately 20 minutes up and down.

• In 2019 there were 274 Recreational Vessels locked at Lock 9.

• T facility has a 18MW hydropower facility.

Consequences of Not Maintaining the Project

• Failure to provide adequate funding to maintain this facility will have little or no effect to commercial transportation costs associated with this facility.

• Failure of the dam or a lock component which results in the loss of pool will halt operation of a 18MW hydropower facility; and will likely impact municipal and commercial water supplies until an emergency repair can be achieved.

Additional Information

- 2019 lock tonnage: none
- National Rank: N/A
- Current Miter Gate In Service Date: 1992
- Projected Year Lock Miter Gates Reach "F" Condition: 2060
- Projected Miter Gate Replacement: Downstream: 2073 Upstream: 2073
- Fee Lands: 28.8 acres
- Flowage Easement Lands: 9.2 acres

Congressional Interests

Senator Bob Casey Jr., D-PA
Senator Pat Toomey, R-PA
Representative Glenn Thompson, R-PA-15

Monongahela River Locks and Dams

Pittsburgh District

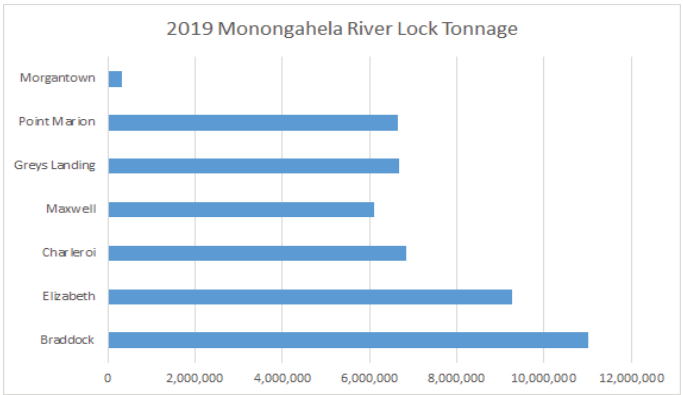
Basin Characteristics

• The Monongahela River system today is managed through a series of 9 locks and dams over 128.7 miles of navigable waters just above Fairmont, WV to the Point at Pittsburgh. The locks and dams are owned and operated by the US Army Corps of Engineers .

• The Monongahela and Allegheny Rivers combine at the Point in Pittsburgh, PA to begin the Ohio River.

• The three rivers that make up the Port of Pittsburgh are used to carry raw materials, bulk and manufactured goods for many industries in the region.

• The Port of Pittsburgh is the 2nd busiest inland port and the 22nd busiest port of any kind in the nation.



Regional Importance

• The Monongahela River is a tributary of the Ohio River, the Monongahela is part of the nation's Inland Waterway System. These interconnected river routes serve to strategically link geographic areas, major markets, suppliers of raw materials, processors and consumers.

• Navigation has contributed greatly to the economic and industrial development of the Monongahela River Valley as a whole. The economies of Northern WV and SW Pennsylvania and beyond would not be as dynamic as they are today, were it not for the Monongahela River. There is an average of 46.8 million tons of goods and commodities per year.

• Because one barge can transport as much cargo as 15 rail cars and 60 tractor-trailers, waterway transportation benefits the environment. It reduces fuel consumption and emissions, and makes roads safer by keeping more trucks off the highway.

• About 80% of the "coking coal" used in the entire US for steel production comes from a single coking plant on the Lower Monongahela and is fed with Monongahela river coal.

U.S. Army Corps of Engineers Fiscal Year (FY) Project Apprropriations and President's Budget ($1,000)

	FY19 O&M Appropriation			FY20 O&M Appropriation			FY21 O&M President's Budget		
Business Line	Operation	Maintenance	Total	Operation	Maintenance	Total	Operation	Maintenance	Total
Navigation	$9,439	$5,744	$15,183	$12,201	$9,710	$21,911	$11,695	$6,455	$18,150
Total	$9,439	$5,744	**$15,183**	$12,201	$9,710	**$21,911**	$11,695	$6,455	**$18,150**

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

Business Line	FY21 Funding Requests for Maintenance ($1,000) Total	Packages $	Maintenenace Needs
Navigation	$5,790	$400	Facility Physical/Cyber Security Maintenance and Replacement for Navigation
		$300	Fixed Crest Dam Sign Installation - Monongahela River
		$388	Repair Bulkhead Latching - Charleroi Lock and Dam
		$112	Repair Interlocks - Hildebrand Lock and Dam
		$112	Repair Interlocks - Maxwell Lock and Dam (LOS 1-3)
		$112	Repair Interlocks - Morgantown Lock and Dam
		$112	Repair Interlocks - Opekiska Lock and Dam
		$2,337	Repair Main Chamber Sector Gears - Braddock Lock and Dam
		$344	Replace Braddock Lock and Dam Gate Cylinders
		$750	Replace Elevator and Components - Braddock Lock and Dam
		$73	Replace Scour Protection for Dam Stilling Basin - Braddock Lock and Dam
		$750	Replace Security System - Grays Landing Lock and Dam

Braddock Locks and Dam

Braddock, PA

Project Features

• Authorization: Rivers and Harbors Act dated 13 June 1902. Lock improvements and new gated dam authorized by Water Resources Development Act of 1992.

• Braddock Locks and Dam was constructed from 1904-1906. It underwent a reconstruction that ended in 1953, and more recently, had its fixed-crest dam replaced with a gated dam.

• The locks and dam has a combined length o 761.7-feet. It also has an uncontrolled spillway with two sections, one 117.5-feet in length and the other 93.8-feet. The controlled spillway is compromised of four tainter gates, all 110-feet in length, three non-overflow, and one water quality gate.

•There are two locks at Braddock, the lan side lock is 110ft. x 720ft., and the river side lock is 56ft. x 360ft., which provides a 8.7 foot vertical lift.

• A channel depth of 9-ft. and width o 300-ft. is required for navigation. Mainten dredging is performed as needed.

Consequences of Not Maintaining the Project

• Failure to maintain the project could halt the movement of commercial navigation. That stoppage would result in loss of rate savings to shippers, and delay orders for essential commodities; including fuel for power plants, and raw materials for major industries.
• In addition to the loss of navigation purpose, pool loss could jeopardize water supply for municipal and industrial users, and could lead to the loss of habitat for aquatic species. Such a pool loss could affect both recreation users and water quality, should there be a prolonged loss.

Regional Importance

• Annually, there are 11M tons of cargo, over 2,900 commercial vessels, and 600 recreational vessels locked through the project. Cargo consists mainly of coal, but other commodities include petroleum, iron/steel, grains, manufactured goods, farm products, chemicals, ores/minerals, and other commodities.

• Electric utilities move coal from mines in Pennsylvania and Ohio to power plants serving the mid-Atlantic, Southeastern, and Midwestern regions of the country. Steel companies move coal from West Virginia and Kentucky to coking facilities above Braddock.

• Construction companies move stone, sand, gravel, and cement into the region through Braddock Locks and Dam. These and other shippers that rely on Braddock, realized average annual transportation cost savings in excess of $209M.

• Failure to maintain this facility would have significant detrimental effects to the local and regional economy. The absence of Braddock Locks and Dam would result in increased transportation costs, and delays to the movement of goods throughout the region.

Additional Information

- 2019 lock tonnage (in thousands) 11,005
- National Rank: 56
- Current Miter Gate In Service Date: 1994
- Projected Year Lock Miter Gates Reach "F" Condition:
  Main: 2024
  Auxiliary: Downstream 2042, Upstream 2041
- Projected Miter Gate Replacement:
  Main: Downstream: 2032 Upstream: 2032
  Auxiliary: Downstream 2052 Upstream 2051
- Fee Lands: 4.0 acres
- Flowage Easement Lands: 0.17 acres

Congressional Interests

Senator Bob Casey Jr., D-PA
Senator Pat Toomey, R-PA
Representative Michael Doyle Jr., D-PA-18

Locks and Dam 4 (Charleroi)

Belle Vernon, PA

Project Features

• Authorization: Rivers and Harbors Act dated 3 March 1909. Authorized for reconstruction at present site under the Rivers and Harbors Act dated 3 July 1930.

• Locks and Dam 4 was constructed from 1931-1932, and rehabilitation was completed in 1967. This reconstruction of the dam converted it from a fixed-crest to a gated dam, and raised the pool level 6-feet. Coupled with the construction of the Maxwell Locks and Dam project, the pool raise eliminated the need for old Lock and Dam 5 at Brownsville. Construction of a new lock chamber is ongoing.

• The dam is comprised of an uncontrolled spillway fixed weir, 43-ft. long, and a controlled spillway comprised of five gated sections each 84-ft. long.

• A channel depth of 9-ft. and width of 300-ft. is required for navigation. Maintenance dredging of the channel is performed as needed.

Consequences of Not Maintaining the Project

• Failure to maintain the project could halt the movement of commercial navigation. That stoppage would result in loss of rate savings to shippers, and delay orders for essential commodities; including fuel for power plants, and raw materials for major industries.

• In addition to the loss of navigation purpose, pool loss could jeopardize water supply for municipal and industrial users and could lead to the loss of habitat for aquatic species. Such a pool loss could affect both recreation users and water quality, should there be a prolonged loss.

Regional Importance

• Annually, there are 6M tons of cargo, over 3,900 commercial vessels, and 394 recreational vessels locked through the project. Cargo consists mainly of coal, but other commodities include; petroleum, iron/steel, grains, manufactured goods, farm products, chemicals, ores/minerals, and other commodities.

• Electric utilities move coal from mines in Pennsylvania and Ohio to power plants serving the mid-Atlantic, Southeastern and Midwestern regions of the country. Steel companies move coal from West Virginia and Kentucky to coking facilities above Locks and Dam 4.

• Construction companies move stone, sand, gravel, and cement into the region through Locks and Dam 4. These and other shippers that rely on Locks and Dam 4 realized an average annual transportation cost savings in excess of $107M.

Additional Information

- 2019 lock tonnage (in thousands) 6,848
- National Rank: 85
- Current Miter Gate In Service Date: 2005
- Projected Year Lock Miter Gates Reach "F" Condition: 2059
- Projected Miter Gate Replacement: Downstream: 2061 Upstream: 2061
- Fee Lands: 1.06 acres
- Flowage Easement Lands: 59.76 acres

Congressional Interests

Senator Bob Casey Jr., D-PA
Senator Pat Toomey, R-PA
Representative Guy Reschenthaler, R-PA-14

Locks and Dam 3 (Elizabeth)

Elizabeth, PA

Project Features

• Authorization: Rivers and Harbors Act dated 3 March 1905. Land chamber lengthening to 720 was authorized by Water Resources Development Act dated 22 September 1992.

• Locks and Dam 3 was constructed from 1905-1907 and rehabilitation was completed in 1980.

• The facility is comprised of a 670-ft fixed-crest dam, a 720-ft. X 56-ft. land side lock, and a 360-ft X 56-ft river side lock which provide for a 8.2-ft vertical lift.

• A channel depth of 9-ft. and width of 300-ft is required for navigation. Maintenance dredging is performed, as needed.

Consequences of Not Maintaining the Project

• Locks and Dam 3 is part of the Lower Mon Project which has modernized Braddock Locks and Dam, and is in the process of modernizing Lock and Dam 4, Charleroi, and will eventually remove Lock and Dam 3, Elizabeth.

Regional Importance

• Annually, there are 9.2M tons of cargo, over 4,900 commercial vessels, and 715 recreational vessels locked through the project. Cargo consists mainly of coal, but other commodities include petroleum, iron/steel, grains, manufactured goods, farm products, chemicals, ores/minerals, and other commodities.

• Electric utilities move coal from mines in Pennsylvania and Ohio to power plants serving the mid-Atlantic, Southeastern and Midwestern regions of the country. Steel companies move coal from West Virginia and Kentucky to coking facilities above Locks and Dam 3.

• Construction companies move stone, sand and gravel, and cement into the region through Locks and Dam 3. These and other shippers that rely on Locks and Dam 3 realized an average annual transportation cost savings in excess of $150M.

Additional Information

- 2019 lock tonnage (in thousands) 9,280
- National Rank: 65
- Current Miter Gate In Service Date: 1998
- Projected Year Lock Miter Gates Reach "F" Condition: 2019
- Projected Miter Gate Replacement: Downstream: 2021 Upstream: 2021
- Fee Lands: 1.67 acres
- Flowage Easement Lands: 14.07 acres

Congressional Interests

Senator Bob Casey Jr., D-PA
Senator Pat Toomey, R-PA
Representative Mike Doyle, D-PA-18

Grays Landing Lock and Dam

Masontown, PA

Project Features

• Authorization: Supplemental Appropriation Act of 1985 for Engineering and Design and Land Acquisition, and Water Resources Development Act of 1986, 99th Congress dated 13 November 1986 Public Law 99-662 for construction.

• Grays Landing Lock and Dam, on the Monongahela River, was constructed from 1986-1995. It is comprised of a 576-ft. fixed-crest dam and a 84-ft. X 720-ft. lock which provides for a 15-ft. vertical lift.

• A channel depth of 9-ft. and width of 300-ft. i required for navigation. Maintenance dredging is performed as needed.

Regional Importance

• Annually, there are 6M tons of cargo, over 1,800 commercial vessels, and 452 recreational vessels locked through the project. Cargo consists mainly of coal but other commodities include petroleum, iron/steel, grains, manufactured goods, farm products, chemicals, ores/minerals, and other commodities.

• Electric utilities move coal from mines in Pennsylvania and Ohio to power plants serving the mid-Atlantic, Southeastern and Midwestern regions of the country. Steel companies move coal from West Virginia and Kentucky to coking facilities above Grays Landing Lock and Dam.

• Construction companies move stone, sand and gravel, and cement into the region through these locks. These, and other shippers that rely on Grays Landing Lock and Dam, realized an average annual transportation cost savings in excess of $23M.

Consequences of Not Maintaining the Project

• Failure to maintain the project could halt the movement of commercial navigation. That stoppage would result in loss of rate savings to shippers, and delay orders for essential commodities; including fuel for power plants, and raw materials for major industries.

• In addition to the loss of navigation purpose, pool loss could jeopardize water supply for municipal and industrial users, and could lead to the loss of habitat for aquatic species. Such a pool loss could affect both recreation users and water quality, should there be a prolonged loss.

Additional Information

- 2019 lock tonnage (in thousands) 6,671
- National Rank: 128
- Current Miter Gate In Service Date: 1993
- Projected Year Lock Miter Gates Reach "F" Condition: 2082
- Projected Miter Gate Replacement: 2090
- Fee Lands: 80.93 acres
- Flowage Easement Lands: 515.58 acres

Congressional Interests

Senator Bob Casey Jr., D-PA
Senator Pat Toomey, R-PA
Representative Guy Reschenthaler, R-PA-14

Hildebrand Lock and Dam

Morgantown, WV

Project Features

• Authorization: Rivers and Harbors Act dated 17 May 1950.

• Hildebrand Lock and Dam was constructed from 1923-1926 on the Monongahela River. The dam was reconstructed from 1956-1960.

•The facility is comprised of a 530-ft. gate dam, comprised of two fixed-weir sections, one at each end of the dam, each 50-ft. in length. There is a controlled spillway comprised of 6 gated sections, each 60-ft. in length. There is a 84-ft. X 600-ft. lock chamber. Both the dam and the lock provide a 21-ft. vertical lift.

• A channel depth of 9-ft. and width of 300-ft is required for navigation. Maintenance dredging is performed as needed.

Regional Importance

• Annually, there are 4 thousand tons of cargo, 3 commercial vessels, and 175 recreational vessels locked through the project. Cargo consists of coal, petroleum, chemicals, crude materials, manufactured goods, manufactured machinery, and other commodities.

• Electric utilities move coal from mines in Pennsylvania and Ohio to power plants serving the mid-Atlantic, Southeastern and Midwestern regions of the US. Steel companies move coal from West Virginia to coking facilities on the Monongahela River. The transportation savings associated with this facility average $36,749.

Consequences of Not Maintaining the Project

• Failure to maintain the project could halt the movement of commercial navigation. That stoppage would result in loss of rate savings to shippers, and delay orders for essential commodities; including fuel for power plants, and raw materials for major industries.
• In addition to the loss of navigation purpose, pool loss could jeopardize water supply for municipal and industrial users, and could lead to the loss of habitat for aquatic species. Such a pool loss could affect both recreation users and water quality, should there be a prolonged loss.

Additional Information

- 2019 lock tonnage 4,554
- National Rank: N/A
- Current Miter Gate In Service Date: 1959
- Projected Year Lock Miter Gates Reach "F" Condition: 2021
- Projected Miter Gate Replacement: Downstream: 2034 Upstream: 2034
- Fee Lands: 24.52 acres
- Flowage Easement Lands: 24.52 acres

Congressional Interests

Senator Joe Manchin, D-WV
Senator Shelley Moore Capito, R-WV
Congressman David McKinley, R-WV-01

Maxwell Locks and Dam

East Millsboro, PA

Project Features

• Authorization: Rivers and Harbors Act dated 3 March 1909.

• Maxwell Locks and Dam was constructed from 1960 to 1965. It is comprised of a 460-ft. gated dam, an 84-ft. x 720-ft. land side lock, and an 84-ft. x 720-ft. river side lock, which provides for a 19.5-ft. vertical lift. The dam has an overall length of 460-ft. The spillway is comprised of 5 gated sections, each 84-ft. in length.

• A channel depth of 9-ft. and width of 300-ft. i required for navigation. Maintenance dredging is performed as needed.

Regional Importance

• Annually, there are 6M tons of cargo, over 2,000 commercial vessels, and 1,000 recreational vessels locked through the project. Cargo consists mainly of coal, but other commodities include petroleum, iron/steel, grains, manufactured goods, farm products, chemicals, ores/minerals, and other commodities.

• Electric utilities move coal from mines in Pennsylvania and Ohio to power plants serving the Mid-Atlantic, Southeastern and Midwestern regions of the country. Steel companies move coal from West Virginia and Kentucky to coking facilities above Maxwell Locks and Dam.

• Construction companies move stone, sand, gravel, and cement into the region through Maxwell Locks. These, and other shippers that rely on Maxwell Locks and Dam, realized an average annual transportation cost saving in excess of $85M.

Consequences of Not Maintaining the Project

• Failure to maintain the project could halt the movement of commercial navigation. That stoppage would result in loss of rate savings to shippers, and delay orders for essential commodities, including fuel for power plants and raw materials for major industries.

• In addition to the loss of navigation purpose, pool loss could jeopardize water supply for municipal and industrial users, and could lead to the loss of habitat for aquatic species. Such a pool loss could affect both recreation users and water quality, should there be a prolonged loss.

Additional Information

- 2019 lock tonnage (in thousands) 6,093
- National Rank: 90
- Current Miter Gate In Service Date: 1964
- Projected Year Lock Miter Gates Reach "F" Condition: 2023
- Projected Miter Gate Replacement: Downstream: 2031 Upstream: 2031
- Fee Lands: 47.77 acres
- Flowage Easement Lands: 98.05 acres

Congressional Interests

Senator - Bob Casey Jr., D-PA
Senator - Pat Toomey, R-PA
Representative - Guy Reschenthaler, R-PA-14

Morgantown Lock and Dam

Morgantown, WV

Project Features

• Authorization: Rivers and Harbors Act dated 3 March 1909.

• Morgantown Lock and Dam was constructed from 1948 to 1950 and placed into operation in July 1950.

•The facility is comprised of a 410-ft. gate dam and a 84-ft. x 600-ft. lock which provides for a 17-ft. vertical lift. The overall length of the dam is 530-ft. An uncontrolled spillway is comprised of two fixed-weir sections, one at each end of the dam, and each 50-ft. in length. The controlled spillway is comprised of 6 gated sections, each 60-ft. in length.

• A channel depth of 9-ft. and width of 300-ft is required for navigation. Maintenance dredging is performed as needed.

Regional Importance

• Annually, there are 322 thousand tons of cargo, over 470 commercial vessels, and 198 recreational vessels locked through the project. Cargo consists of coal, petroleum, chemicals, crude materials, manufactured goods, manufactured machinery, and other commodities.

• Construction and supply companies use this facility to move raw materials throughout the region. The transportation savings associated with this facility averaged $941 thousand annually.

Consequences of Not Maintaining the Project

• Failure to maintain the project could halt the movement of commercial navigation. That stoppage would result in loss of rate savings to shippers, and delay orders for essential commodities, including fuel for power plants, and raw materials for major industries.

• In addition to the loss of navigation purpose, pool loss could jeopardize water supply for municipal and industrial users, and could lead to the loss of habitat for aquatic species. Such a pool loss could affect both recreation users and water quality, should there be a prolonged loss.

Additional Information

- 2019 Lock Tonnage (in thousands): 322
- National Rank: 157
- Current Miter Gate In Service Date: 1950
- Projected Year Lock Miter Gates Reach "F" Condition: 2024
- Projected Miter Gate Replacement: Downstream: 2035 Upstream: 2035
- Fee Lands: 27.45 acres
- Flowage Easement Lands: 84.05 acres

Congressional Interests

Senator - Joe Manchin, D-WV
Senator - Shelley Moore Capito, R-WV
Representative - David McKinley, R-WV-1

Opekiska Lock and Dam

Fairmont, WV

Project Features

• Authorization: Rivers and Harbors Act dated 17 May 1950.

• Opekiska Lock and Dam was constructed on the Monongahela River from 1961-1964.

•The facility is comprised of a 366-ft. gate dam comprised of 4 gated sections, each 84-ft. in length. There is a 84-ft. X 600-ft. lock, both the dam and the lock provide a 22-ft. vertical lift.

• A channel depth of 9-ft. and width of 300-ft is required for navigation. Maintenance dredging is performed as needed.

• Opekiska is a Level of Service 6 lock operating by commercial appointment.

Regional Importance

• Annually there are 267 recreational vessels locked through the project. On average 2,500 tons of cargo are locked through.

Consequences of Not Maintaining the Project

• Failure to maintain the project could halt the movement of commercial navigation. That stoppage would result in loss of rate savings to shippers, and delay orders for essential commodities, including fuel for power plants and raw materials for major industries.

• In addition to the loss of navigation purpose, pool loss could jeopardize water supply for municipal and industrial users, and could lead to the loss of habitat for aquatic species. Such a pool loss could affect both recreation users and water quality, should there be a prolonged loss.

Additional Information

- 2019 lock tonnage (in thousands) 2.5
- National Rank: N/A
- Current Miter Gate In Service Date: 1964
- Projected Year Lock Miter Gates Reach "F" Condition: 2022
- Projected Miter Gate Replacement: Downstream: 2034 Upstream: 2034
- Fee Lands: 247.39 acres
- Flowage Easement Lands: 142.29 acres

Congressional Interests

Senator Joe Manchin, D-WV
Senator Shelley Moore Capito, R-WV
Representative David McKinley, R-WV-01

Point Marion Lock and Dam

Dilliner, PA

Project Features

• Authorization: Alteration of the dam, to provide a movable crest was authorized under the Rivers and Harbors Act, dated 17 May 1950. Supplemental Appropriation Act of 1985 for Engineering and Design and Land Acquisition, and Water Resources Development Act of 1986, 99th Congress dated 13 November 1986, Public Law 99-662 for construction of a new lock.

• Point Marion Lock and Dam was originally constructed from 1923-1926 on the Monongahela River. The dam was reconstructed from 1958-1959. A new lock chamber was completed in 1994. The facility is comprised of a 667-ft. gated dam and a 84-ft. x 720-ft. lock which provides for a 19-vertical lift.

• A channel depth of 9-ft. and width of 300-ft is required for navigation. Maintenance dredging is performed as needed.

Consequences of Not Maintaining the Project

• Failure to maintain the project could halt the movement of commercial navigation. That stoppage would result in loss of rate savings to shippers, and delay orders for essential commodities, including fuel for power plants, and raw materials for major industries.

• In addition to the loss of navigation purpose, pool loss could jeopardize water supply for municipal and industrial users, and could lead to the loss of habitat for aquatic species. Such a pool loss could affect both recreation users and water quality, should there be a prolonged loss.

Regional Importance

• Annually there are 6M tons of cargo, over 1,800 commercial vessels, and 279 recreational vessels locked through the project. Cargo consists mainly of coal, but other commodities include petroleum, iron/steel, grains, manufactured goods, farm products, chemicals, ores/minerals, and other commodities.

• Electric utilities move coal from mines in Pennsylvania and Ohio to power plants serving the Mid-Atlantic, Southeastern, and Midwestern regions of the country. Steel companies move coal from West Virginia and Kentucky to coking facilities above Point Marion Lock and Dam.

• Construction companies move stone, sand and gravel, and cement into the region through these locks. These, and other shippers that rely on Point Marion Lock and Dam, realized an average annual transportation cost savings in excess of $23M.

Additional Information

- 2019 lock tonnage (in thousands) 6,641
- National Rank: 56
- Current Miter Gate In Service Date: 1994
- Projected Year Lock Miter Gates Reach "F" Condition: 2083
- Projected Miter Gate Replacement: 2091
- Fee Lands: 94.9 acres
- Flowage Easement Lands: 714.94 acres

Congressional Interests

Senator Bob Casey Jr., D-PA
Senator Pat Toomey, R-PA
Senator Joe Manchin, D-WV
Representative Guy Reschenthaler, R-PA-14
Senator Shelley Moore Capito, R-WV
Representative David McKinley, R-WV-01

Ohio River Locks and Dams

Pittsburgh District

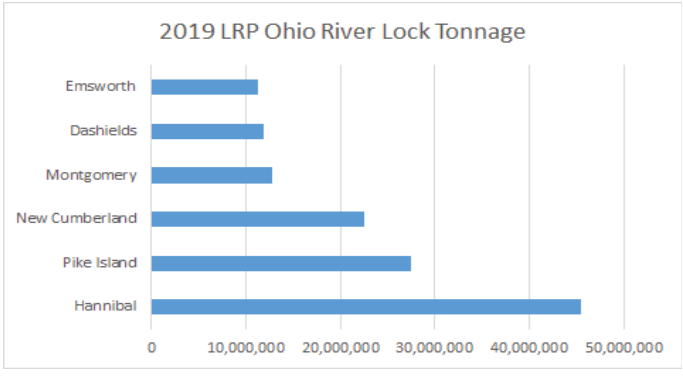
Basin Characteristics

- The Ohio River system within the Pittsburgh District is managed through a series of 6 locks and dams owned and operated by the U.S. Army Corps of Engineers. This stretch of the Ohio River begins at The Point at Pittsburgh to Hannibal Locks and Dam at Hannibal, OH.

- Dedicated in 1885, Davis Island Lock and Dam was the first of 53 Ohio River locks and dams, built over a 44 year period, descending from Pittsburgh to Cairo, IL.

- The Monongahela and Allegheny Rivers combine at the Point in Pittsburgh, PA to begin the Ohio River.

- The Port of Pittsburgh is the 2nd busiest inland port and the 22nd busiest port of any kind in the nation.



Regional Importance

- The Ohio River is part of the nation's Inland Waterway System. These interconnected river routes serve to strategically link geographic areas, major markets, suppliers of raw materials, processors and consumers.

- Navigation has contributed greatly to the economic and industrial development of the Ohio River Valley as a whole. The economies of PA, WV, OH, IN, KY, IL and beyond would not be as dynamic as they are today, were it not for the Ohio River.

- Because one barge can transport as much cargo as 15 rail cars and 60 tractor-trailers, waterway transportation benefits the environment. It reduces fuel consumption and emissions, and makes roads safer by keeping more trucks off the highway.

- Every year the locks provide passage for over 131 million tons of goods including grain, steel, chemicals, petroleum, and even products for our nation's defense.

U.S. Army Corps of Engineers Fiscal Year (FY) Project Apprropriations and President's Budget ($1,000)

	FY19 O&M Appropriation			FY20 O&M Appropriation			FY21 O&M President's Budget		
Business Line	Operation	Maintenance	Total	Operation	Maintenance	Total	Operation	Maintenance	Total
Navigation	$9,439	$5,744	$15,183	$12,201	$9,710	$21,911	$11,695	$6,455	$18,150
Total	$9,439	$5,744	**$15,183**	$12,201	$9,710	**$21,911**	$11,695	$6,455	**$18,150**

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

Business Line	FY21 Funding Requests for Maintenance ($1,000) Total	Packages $	Maintenenace Needs
Navigation	$5,790	$400	Facility Physical/Cyber Security Maintenance and Replacement for Navigation
		$300	Fixed Crest Dam Sign Installation - Monongahela River
		$388	Repair Bulkhead Latching - Charleroi Lock and Dam
		$112	Repair Interlocks - Hildebrand Lock and Dam
		$112	Repair Interlocks - Maxwell Lock and Dam (LOS 1-3)
		$112	Repair Interlocks - Morgantown Lock and Dam
		$112	Repair Interlocks - Opekiska Lock and Dam
		$2,337	Repair Main Chamber Sector Gears - Braddock Lock and Dam
		$344	Replace Braddock Lock and Dam Gate Cylinders
		$750	Replace Elevator and Components - Braddock Lock and Dam
		$73	Replace Scour Protection for Dam Stilling Basin - Braddock Lock and Dam
		$750	Replace Security System - Grays Landing Lock and Dam

Dashields Locks and Dam

Coraopolis, PA

Project Features

• Authorization: Rivers and Harbors Act dated 18 July 1918.

• Dashields Locks and Dam was constructed from 1927-1929, and began operation in August of 1929. A rehabilitation was completed in December 1990.

• The project consists of a 1,585-ft. fixed-cres dam, a 110-ft. x 600-ft. land side lock, and a 56-ft. x 360-ft. river side lock, which provide a 10-ft. vertical lift.

• A channel depth of 9-ft. and width of 300-ft is required for navigation. Maintenance dredging is performed as needed.

Regional Importance

• In 2019, over 11M tons of cargo, over 3,000 commercial vessels, and over 700 recreational vessels locked through the project. Cargo consists mainly of coal, but other commodities include petroleum, iron/steel, grains, manufactured good, farm products, chemicals, ores/minerals, and other commodities.

• Electric utilities move coal from mines in Pennsylvania and Ohio to power plants serving the Mid-Atlantic, Southeastern, and Midwestern regions of the country. Steel companies move coal from West Virginia and Kentucky to coking facilities above Dashields.

• Construction companies move stone, sand, gravel, and cement into the Pittsburgh area through Dashields. These, and other shippers that rely on Dashields, realized average annual transportation cost savings in excess of $281M.

Consequences of Not Maintaining the Project

• Failure to maintain the project could halt the movement of commercial navigation. That stoppage would result in loss of rate savings shippers, and delay orders for essential commodities, including fuel for power plants, and raw materials for major industries.

• In addition to the loss of navigation purpose, pool loss could jeopardize water supply for municipal and industrial users; and could lead to the loss of habitat for aquatic species. Such a pool loss could affect both recreation users and water quality, should there be a prolonged loss.

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

Business Line	FY21 Funding Requests for Maintenance ($1,000) Total	Packages $	Maintenenace Needs
Navigation	$12,193	$75	Repair Pedestrian-Access Bridge Masonry Abutment - Dashields Lock and Dam
		$5,000	Repair Dam Abutment Concrete and Replace Fence - Dashields Lock and Dam
		$1,562	Replace Upstream Mooring Cell 2 - Dashields Lock and Dam
		$200	Repair Tow Haulage - Dashields Lock and Dam
		$5,356	Replace Tow Haulage System - Dashields Lock and Dam

Additional Information

- 2019 lock tonnage (in thousands) 11,966
- National Rank (tons): 51
- Current Miter Gates In Service Date: 1986
- Projected Year Lock Miter Gates Reach "F" Condition: Main: 2054 Auxiliary: 2039
- Projected Miter Gate Replacement:
  Main: Downstream: 2061 Upstream: 2061
  Auxiliary: Downstream: 2050 Upstream: 2050
- Fee Lands: 9.3 acres
- Flowage Easement Lands: 8.65 acres

Congressional Interests

Senator Bob Casey Jr., D-PA
Senator Pat Toomey, R-PA
Representative Conor Lamb,, D-PA-17

Emsworth Locks and Dam

Pittsburgh, PA

Project Features

• Authorization: Flood Control Act of 18 July 1918. Primary project purpose is navigation.

• The Emsworth Locks and Dam was originally constructed from 1919-1922. The structural components of the project are the oldest of any project on the Ohio River. It has been operated and maintained since 1 September 1921. The dam was reconstructed from 1935-1938 to provide gated crests, and to raise Emsworth Pool by 7-feet. Major rehabilitation was completed on November 1984.

• The project consists of a main loc chamber 110-ft. x 600-ft., with an auxiliary lock chamber 56-ft. x 360-ft.

• The overall length of the main channel dam river wall to abutment is 967.42-feet. The uncontrolled spillway length is 34.42-ft., fixed weir adjacent to the river wall. The controlled spillway has 8 gated sections, each 100-feet in length, and one Sidney gate.

• The vertical lift is 18-feet, from lower pool el 692.0 to upper pool el. 710.0.

Consequences of Not Maintaining the Project

• Failure to maintain the project could halt the movement of commercial navigation. That stoppage would result in loss of rate savings to shippers, and delay orders for essential commodities, including fuel for power plants, and raw materials for major industries.
• In addition, pool loss could jeopardize water supply for municipal and industrial users, loss of electrical energy produced by hydropower plants at the dams, and loss of habitat for aquatic species. Such a pool loss could affect both recreation users and water quality, should there be a prolonged loss.

Regional Importance

• In 2019, 11M tons of cargo, over 3,000 commercial vessels, and over1,800 recreational vessels locked through the project. Cargo consists mainly of coal, but other commodities include petroleum, iron/steel, grains, chemicals, ores/minerals, and other commodities.

• Electric utilities move coal from mines in Pennsylvania and Ohio to power plants serving the Mid-Atlantic, Southeastern, and Midwestern regions of the country. Steel companies move coal from West Virginia and Kentucky to coking facilities above Emsworth.

• Construction companies move stone, sand, gravel, and cement into the Pittsburgh area through Emsworth. These, and other shippers that rely on Emsworth, realized average annual transportation cost savings in excess of $264M.

• Two major facilities who depend on river transportation - US Steel Clairton Works, the largest coke plant in the US, and the Bailey/Enlow Fork Complex, owned by Consol Energy, the largest underground coal mine in the US.

• The economic impact of Emsworth provides approximately 11,700 jobs, with a range from $1.5M to $2.2M per day.

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

Business Line	FY21 Funding Requests for Maintenance ($1,000) Total	Packages $	Maintenenace Needs
Navigation	$19,442	$451	Construct New Workboat Mooring Facility - Emsworth Lock and Dam
		$524	Repair Service Bridge Concrete Deck - Emsworth Lock and Dam
		$200	Repair Tow Haulage - Emsworth Lock and Dam
		$600	Replace Conductor Rails - Emsworth Lock and Dam
		$6,944	Replace Hydraulic System for Main and Auxiliary Chambers - Emsworth Lock and Dam
		$5,356	Replace Tow Haulage System - Emsworth Lock and Dam
		$5,367	Stabilize Land Wall Phase 1 - Emsworth Lock and Dam

Additional Information

- 2019 lock tonnage (in thousands) 11,005.25
- National Rank (tons): 54
- Current Miter Gates In Service Date: 1986
- Projected Year Lock Miter Gates Reach "F" Condition:

Main: Downstream: 2026 Upstream: 2024
Auxiliary Downstream: 2043 Upstream: 2043

- Projected Miter Gate Replacement:
  Main Downstream: 2033 Upstream: 2031
  Auxiliary: 2052
- Fee Lands: 16.26 acres
- Flowage Easement Lands: 2.71 acres

Congressional Interests

Senator Bob Casey Jr., D-PA
Senator Pat Toomey, R-PA
Representative Michael Doyle Jr., D-PA-14

US Army Corps of Engineers

Hannibal Locks and Dam

Hannibal, OH

GREAT LAKES & OHIO RIVER DIVISION

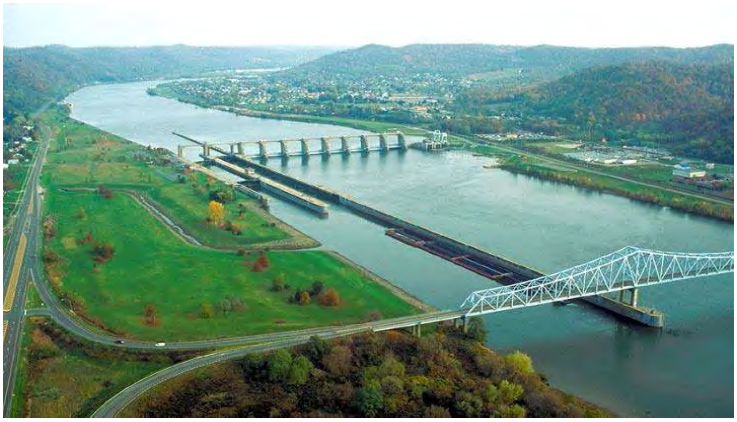
Project Features

• Authorization: Rivers and Harbors Act dated 3 March 1909.

• Construction on Hannibal Locks and Dam began in 1967, and was completed in 1971. It began operation in November 1971.

• The overall length of Hannibal Dam is 1,098-feet. There is a fixed weir section adjacent to the abutment that is 79-feet in length. There are 8 gated sections, each 110-feet in length. There is a 110-foot X 600-foot land side lock, and a 110-foot X 1,200-foot river side lock. There is a 20.5-foot vertical lift that is also used to operate a 34 MW privately owned and operated hydropower facility.

• A channel depth of 9-ft. and width of 300-ft. is required for navigation. Maintenance channel dredging is performed annually.



Regional Importance

• Annually there are 42.2M tons of cargo, over 4,800 commercial vessels, and 300 recreational vessels locked through the project. Cargo consists mainly of coal, but other commodities include petroleum, iron/steel, grains, manufactured goods, farm products, chemicals, ores/minerals, and other commodities.

• Electric utilities move coal from mines in Pennsylvania and Ohio to power plants serving the Mid-Atlantic, Southeastern, and Midwestern regions of the country. Steel companies move coal from West Virginia and Kentucky to coking facilities above Hannibal. Construction companies move stone, sand, gravel, and cement into the Pittsburgh area through Hannibal Dam. These, and other shippers that rely on Hannibal, realized average annual transportation cost savings in excess of $596M.

Consequences of Not Maintaining the Project

• Failure to maintain the project could halt the movement of commercial navigation. That stoppage would result in loss of rate savings to shippers, and delay orders for essential commodities, including fuel for power plants, and raw materials for major industries.

• In addition to the loss of navigation purpose, pool loss could jeopardize water supply for municipal and industrial users, and could lead to the loss of habitat for aquatic species. Such a pool loss could affect both recreation users and water quality, should there be a prolonged loss.

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

Business Line	FY21 Funding Requests for Maintenance ($1,000) Total	Packages $	Maintenenace Needs
Navigation	$2,675	$1,325	Replace Auxiliary Crane - Hannibal Lock and Dam
		$750	Replace Elevator and Components - Hannibal Lock and Dam
		$600	Replace Lock Lighting with High Mast Lights - Hannibal Lock and Dam

Additional Information

- 2019 lock tonnage (in thousands) 46,451
- National Rank (tons): 17
- Current Miter Gates In Service Date: 1972
- Projected Year Lock Miter Gates Reach "F" Condition: Main: 2051 Auxiliary: 2085
- Projected Miter Gate Replacement:

Main: 2056

Auxiliary Downstream: 2088 Upstream: 2087

- Fee Lands: 167.7 acres
- Flowage Easement Lands: 1,720.8 acres

Congressional Interests

Senator Sherrod Brown, D-OH
Senator Robert Portman, R-OH
Senator Joe Manchin, D-WV
Senator Shelley Moore Capito, R-WV
Representative Bill Johnson, R-OH-6
Representative David McKinley, R-WV-01

Montgomery Locks and Dam

Monaca, PA

Project Features

• Authorization: Rivers and Harbors Act dated 18 July 1918.

• Construction of Montgomery Locks and Dam began in 1932, and was completed in 1936. It began operation in June 1936.

• The project consists of a 1,379-ft. gate dam, a 110-ft. x 600-ft. land side lock, and a 56-ft. x 360-ft. river side lock, which provide a 17.5-ft. vertical lift. There are 2 fixed weir sections on each end and 10 gated sections, each 100-feet in length.

• A channel depth of 9-ft. and width of 300-ft is required for navigation. Maintenance dredging is performed as needed.

Regional Importance

• In 2019, 12M tons of cargo, 3,999 commercial vessels, and 300 recreational vessels locked through the project. Cargo consists mainly of coal, but other commodities include petroleum, iron/steel, grains, manufactured goods, farm products, chemicals, ores/minerals, and other commodities.

• Electric utilities move coal from mines in Pennsylvania and Ohio to power plants serving the Mid-Atlantic, Southeastern, and Midwestern regions of the country. Steel companies move coal from West Virginia and Kentucky to coking facilities above Montgomery.

• Construction companies move stone, sand, gravel, and cement into the Pittsburgh area through Montgomery. These, and other shippers that rely on Montgomery, realized average annual transportation cost savings in excess of $311M.

Consequences of Not Maintaining the Project

• Failure to maintain the project could halt the movement of commercial navigation. That stoppage would result in loss of rate savings to shippers, and delay orders for essential commodities, including fuel for power plants, and raw materials for major industries.

• In addition to the loss of navigation purpose, pool loss could jeopardize water supply for municipal and industrial users; and could lead to the loss of habitat for aquatic species. Such a pool loss could affect both recreation users and water quality, should there be a prolonged loss.

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

Business Line	FY21 Funding Requests for Maintenance ($1,000) Total	Packages $	Maintenenace Needs
Navigation	$13,218	$615	Replace Centralized Programmable Logic Controls Control Panel - Montgomery L&D
		$3,247	Replace Dam Bulkheads - Montgomery Lock and Dam
		$4,000	Replace Scour Protection for Dam Stilling Basin - Montgomery Lock and Dam
		$5,356	Replace Tow Haulage System - Montgomery Lock and Dam

Additional Information

- 2019 lock tonnage (in thousands) 12,810
- National Rank (tons): 46
- Current Miter Gates In Service Date: 1989
- Projected Year Lock Miter Gates Reach "F" Condition: Main: 2059 Auxiliary: 2039
- Projected Miter Gate Replacement: Main: 2066 Auxiliary: 2050
- Fee Lands: 6.11 acres
- Flowage Easement Lands: 80.7 acres

Congressional Interests

Senator Bob Casey Jr., D-PA
Senator Pat Toomey, R-PA
Representative Conor Lamb, R-PA-17

New Cumberland Locks and Dam

Stratton, OH

Project Features

• Authorization: Rivers and Harbors Act dated 3 March 1909.

• Construction of New Cumberland Locks and Dam began in 1955, and was completed in1963. It began operation in November 1959.

• The project consists of a 1,315-ft. gate dam, a 110-ft. x 600-ft. land side lock, and a 110-ft. x 1,200-ft. river side lock, which pro for a 20.5-foot vertical lift. There are 11 gated sections, each 100-feet in length.

• A channel depth of 9-ft. and width of 300-ft is required for navigation. Maintenance dredging is performed as needed.

Regional Importance

• In 2019, 22M tons of cargo, over 3,000 commercial vessels, and 490 recreational vessels locked through the project. Cargo consists mainly of coal, but other commodities include petroleum, iron/steel, grains, manufactured goods, farm products, chemicals, ores/minerals, and other commodities.

• Electric utilities move coal from mines in Pennsylvania and Ohio to power plants serving the Mid-Atlantic, Southeastern, and Midwestern regions of the country. Steel companies move coal from West Virginia and Kentucky to coking facilities above New Cumberland.

• Construction companies move stone, sand, gravel, and cement into the Pittsburgh area through New Cumberland. These, and other shippers that rely on New Cumberland, realized average annual transportation cost savings in excess of $526M.

Consequences of Not Maintaining the Project

• Failure to maintain the project could halt the movement of commercial navigation. That stoppage would result in loss of rate savings to shippers, and delay orders for essential commodities, including fuel for power plants and raw materials for major industries.

• In addition to the loss of navigation purpose, pool loss could jeopardize water supply for municipal and industrial users; and could lead to the loss of habitat for aquatic species. Such a pool loss could affect both recreation users and water quality, should there be a prolonged loss.

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

Business Line	FY21 Funding Requests for Maintenance ($1,000) Total	Packages $	Maintenenace Needs
Navigation	$5,100	$5,100	Replace Auxiliary Chamber 4-Corner System - New Cumberland Lock and Dam

Additional Information

- 2019 lock tonnage (in thousands) 22,492
- National Rank (tons): 27
- Current Miter Gates In Service Date:
  Main: 2002 Auxiliary: 1959
- Projected Year Lock Miter Gates Reach "F" Condition:

Main: 2085
Auxiliary Downstream: 2017 Upstream: 2016

- Projected Miter Gate Replacement:

Main: 2091
Auxiliary Downstream: 2026 Upstream: 2024

- Fee Lands: 35.35 acres
- Flowage Easement Lands: 368.94 acres

Congressional Interests

Senator Sherrod Brown, D-OH
Senator Robert Portman, R-OH
Senator Joe Manchin, D-WV
Senator Shelley Moore Capito, R-WV
Representative Bill Johnson, R-OH-06
Representative David McKinley, R-WV-10

Pike Island Locks and Dam

Wheeling, WV

Project Features

• Authorization: Rivers and Harbors Act dated 3 March 1909.

• Pike Island Locks and Dam were constructed 1959-1965. The lock began operation in November 1963 and construction of the dam was completed in 1965.

• The overall length of Pike Island Dam i 1,306-ft. There is a fixed weir section adjacent to the abutment that is 196-ft. in length. There are 9 gated sections, each 110-ft. in length. There is a 110-ft. x 600-ft. land side lock, and a 110-ft. x 1,200-ft. river side lock, which provide for a 21-ft. vertical lift.

• A channel depth of 9-ft. and width of 300-ft is required for navigation. Maintenance dredging is performed as needed.

Regional Importance

• In 2019, over 27M tons of cargo, over 4,100 commercial vessels, and 591 recreational vessels locked through the project. Cargo consists mainly of coal, but other commodities include petroleum, iron/steel, grains, manufactured goods, farm products, chemicals, ores/minerals, and other commodities.

• Electric utilities move coal from mines in Pennsylvania and Ohio to power plants serving the Mid-Atlantic, Southeastern, and Midwestern regions of the country. Steel companies move coal from West Virginia and Kentucky to coking facilities above Pike Island.

• Construction companies move stone, sand, gravel, and cement into the Pittsburgh area through Pike Island Locks and Dam. These and other shippers that rely on Pike Island, realized average annual transportation cost savings in excess of $577M.

Consequences of Not Maintaining the Project

• Failure to maintain the project could halt the movement of commercial navigation. That stoppage would result in loss of rate savings to shippers, and delay orders for essential commodities, including fuel for power plants and raw materials for major industries.

• In addition to the loss of navigation purpose, pool loss could jeopardize water supply for municipal and industrial users; and could lead to the loss of habitat for aquatic species. Such a pool loss could affect both recreation users and water quality, should there be a prolonged loss.

In addition to annual appropriations, this project currently has the following maintenance needs in order operate at an optimum level of service and reliability.

Business Line	FY21 Funding Requests for Maintenance ($1,000) Total	Packages $	Maintenenace Needs
Navigation	$7,372	$750	Replace Elevator and Components - Pike Island Lock and Dam
		$6,622	Replace Hydraulic System - Pike Island Lock and Dam

Additional Information

- 2019 lock tonnage (in thousands) 27,567
- National Rank (tons): 22
- Current Miter Gates In Service Date: Main: 2011 Auxiliary: 1963
- Projected Year Lock Miter Gates Reach "F" Condition: Main 2084 Auxiliary: 2071
- Projected Miter Gate Replacement: Main: 2089 Auxiliary: 2073
- Fee Lands: 129.67 acres
- Flowage Easement Lands: 580.66 acres

Congressional Interests

Senator Sherrod Brown, D-OH
Senator Robert Portman, R-OH
Senator Joe Manchin, D-WV
Senator Shelley Moore Capito, R-WV
Representative Bill Johnson, R-OH-06
Representative David McKinley, R-WV-01