

Welcome

to the

Mahoning River Basin Water Management Study

Public Scoping Meeting

The Pittsburgh District plans to study reservoir operations on the Mahoning River Basin which includes the Berlin, Michael J. Kirwan, and Mosquito reservoirs.

WE WANT TO HEAR FROM YOU!

Today you can:

- Learn about how the U.S. Army Corps of Engineers plans to study reservoir operations in the Mahoning River Basin
- Provide information that could inform the study
- Provide comments or concerns for consideration in the study
- Ask questions of our staff

Provide comments by:

- Visiting our table stations
- Completing a comment form
- Have a great thought after the meeting? Send us a letter or email.

For more information or to provide comments on the Mahoning River Basin Water Management Study:

- Send mail to LRP Public Affairs, USACE Pittsburgh District, 1000 Liberty Avenue, Pittsburgh, PA 15222
- Or Email CELRP-PA@usace.army.mil





Project Background



QUESTIONS TO CONSIDER WHEN PROVIDING INPUT TO USACE

- How do reservoir operations of the Mahoning River Basin impact you or resources that are important to you?
- What are some of the challenges that you see with current system operations?
- What opportunities are there for improving system operations?
- What data/information do you have available that you can provide?
- What changes do you anticipate seeing in the watershed?

WAYS TO COMMENT

By Comment Card:
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For over 50 years, the US Army Corps of Engineers (USACE) has managed operations at Berlin, Michael J. Kirwan, and Mosquito Creek Reservoirs serving the Mahoning River Basin in Northeast Ohio. Together the dams are authorized for the following purposes, flood control, water quality, industrial and municipal water supply, low-flow augmentation, fish and wildlife, and recreation.

This project will update the Water Control Manuals for each of the three reservoirs. The updates will allow USACE to complete a comprehensive analysis of reservoir operations in conjunction with updated hydrologic and hydraulic data to determine if there is a need to achieve a better balance between the region's water resource needs and the authorized purposes of each project.

Should the analysis determine there is a need, then the Corps will develop various operating scenarios to determine the benefits and potential environmental impacts of the operating scenarios to the Mahoning River Basin.

Authorized Project Purposes

Dam & Reservoir	Flood Control (Primary)	Water Quality (Primary)	Water Supply (Primary)	Low-Flow Augmentation (Primary)	Fish & Wildlife (General)	Recreation (General)
Berlin	X	X	X	X	X	X
MJ Kirwan	X	X	X	X	X	X
Mosquito	X	X	X	X	X	X

Purpose and Need

The purpose and need is continued operations and maintenance of the Mahoning River Basin system in accordance with the authorized project purposes.





Reservoir Operations



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What is our study focusing on?

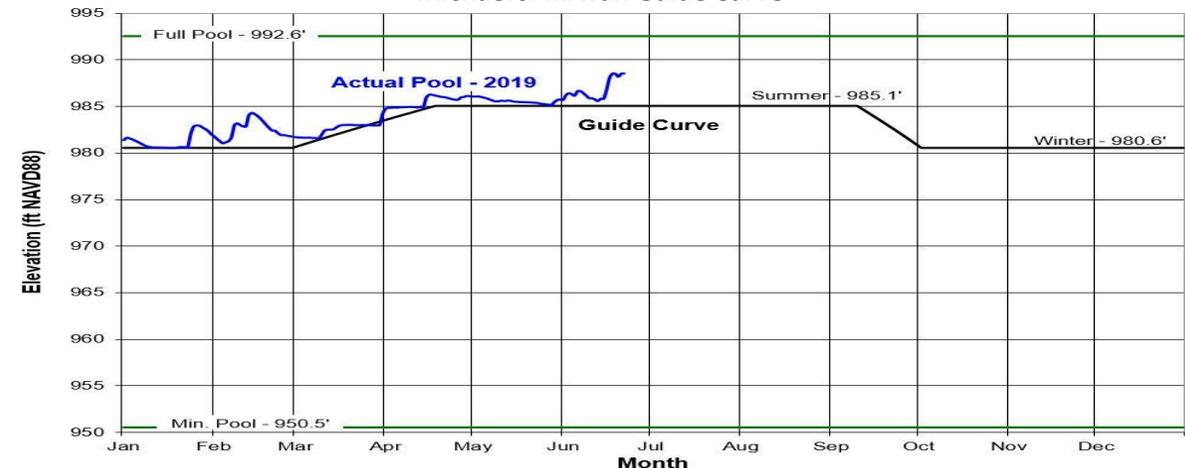
- The study focuses on the comprehensive analysis of existing reservoir operations to determine if there is a need to better balance the region's water resource needs and the authorized purposes of each project.
- USACE developed a water control plan for the operation of each of the dams within the basin to reflect the balancing of project purposes and operating the dam.
- USACE releases outflow from its reservoirs to meet a variety of purposes, including water quality, low-flow augmentation, water supply, and fish and wildlife needs.
- Typical seasonal operations are depicted on the guide curve, which outlines the water surface elevations maintained by USACE throughout the year. Each reservoir has its own specific water control plan.

Typical Seasonal Operations

Season	Timing	Operation
Filling Period	March through Mid-April	Filling period is March through mid-April. Reservoir is filled gradually and typically reaches summer pool by mid-April.
Summer Pool	Mid-April through early Sept.	Reservoir is filled to summer pool to provide for authorized uses. In order to provide for the authorized uses, the lake may fall below summer pool.
Draw-Down Period	Early Sept. through Beginning Oct.	In late summer, reservoir is gradually drawn-down to regain capacity for flood risk management.
Winter Pool	Oct. through Feb.	Reservoir is maintained at winter pool elevation to provide storage capacity for flood risk management.

The primary consideration for seasonal operation of the dams is flood risk management.

Michael J. Kirwan Guide Curve





Water Quality and Fish & Wildlife



Berlin



MJ Kirwan



Mosquito

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What is our study focusing on?

- The goal of this study is to assess the impacts of the current reservoir operations on water quality and fish and wildlife in our reservoirs and also downstream river reaches and to identify opportunities for improvement.
- This will be accomplished by gathering and analyzing regional water quality and fisheries data and building a complex basin-wide water quality model to assess operational scenarios.

Objectives of Reservoir Operations for Downstream Water Quality

- Dilution of downstream thermal, industrial, and domestic wastes in the lower Mahoning River while enhancing aquatic ecosystems for fish and wildlife
- Reservoir system operation a required to meet minimum USEPA flow requirements for the Mahoning River at Leavittsburg and Youngstown, Ohio
- Minimum flow at Leavittsburg varies from 145 cfs (winter) to 310 cfs (summer)
- Minimum flow at Youngstown varies from 225 cfs (winter) to 480 cfs (summer)

Benefits of Reservoir Operations for Downstream Water Quality

- Guarantees minimum low flow to sustain water quality standards and aquatic ecosystems for fish and wildlife
- Releases have created a low flow condition along the Mahoning River downstream of the reservoirs that is significantly higher than a natural flow condition
- Positive effects of releases are evident throughout the entire length of the Mahoning and Beaver Rivers as well as the upper Ohio River

Basin Concerns & Interests

- Sustaining water quality
- Enhancing aquatic ecosystems for fish and wildlife
- Mitigating harmful algae blooms
- Controlling invasive species

Project Authorities

- Flood Control
- Water Quality
- Water Supply
- Low-Flow Augmentation
- Fish & Wildlife
- Recreation



Berlin Lake – Excessive Productivity



Mosquito Creek – Excessive Productivity



Mahoning River – Downstream



Recreation



Berlin



MJ Kirwan



Mosquito

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What is our study focusing on?

- The study focuses on the development of watershed and water quality models to analyze the effects that current and future reservoir operations have on the watershed.
- If the model results coupled with the input we receive from resource agencies and the public indicate that different reservoir operations may be needed to meet current and future resource needs, the models can be used to explore other reservoir operation scenarios.
- USACE would use these scenarios to identify scenarios which allow the authorized purposes and resource requirements are met while also optimizing for recreational interests and other interests identified through the public scoping process.

Available Recreation Activities

- Boating
- Fishing
- Camping
- Hiking
- Biking
- Water Sports
- Wildlife Viewing
- Picnicking
- Environmental Education
- Horseback Riding



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HOW TO COMMENT

- 1) Select a numbered sticky dot.
- 2) Place the dot on the map that most closely is associated with the area you'd like to comment on. If your comment is about the entire watershed, stick your dot near the edge of the map.
- 3) On your comment card, write the number written on your dot next to your related written comment.
- 4) Turn in your comment card before you leave the meeting (or mail or email your comment card).

