

MAHONING RIVER BASIN WATER MANAGEMENT UPDATE

COL Andrew 'Coby' Short
Commander, Pittsburgh District

Prepared by United States Army Corps of Engineers Pittsburgh District

29 JAN 2019

"The views, opinions and findings contained in this report are those of the authors(s) and should not be construed as an official Department of the Army position, policy or decision, unless so designated by other official documentation."

The overall classification of this brief is:

UNCLASSIFIED

UNCLASSIFIED



US Army Corps
of Engineers®



PURPOSE

To provide an update to the public regarding funding and future timelines with respect to the Mahoning River Basin Water Management Update.

To provide an opportunity for the public to express their interests and concerns as we undertake this update.

INTENT

To optimize the operations at our three flood risk management dams in the Mahoning River Basin to better balance the needs of the people who live in and visit this region.

AGENDA

7:00 p.m. Opening Remarks & Presentation

7:30 p.m. Discussion

8:30 p.m. Closing Comments



US Army Corps
of Engineers®





Mahoning River Basin

1,132 square miles

Counties: Ashtabula, Geauga, Trumbull, Portage, Mahoning, Stark, and Columbiana in Ohio, and Lawrence in Pennsylvania.

Pittsburgh District manages 37.7% of the Mahoning River Basin with its three multi-purpose reservoir projects

Mosquito Creek Dam: \$23 million FY 2018

Michael J. Kirwan Dam: \$76.9 million FY 2018

Berlin Dam: \$218 million FY 2018



US Army Corps of Engineers®



Mahoning River Basin Flood of Record: March 23, 1913

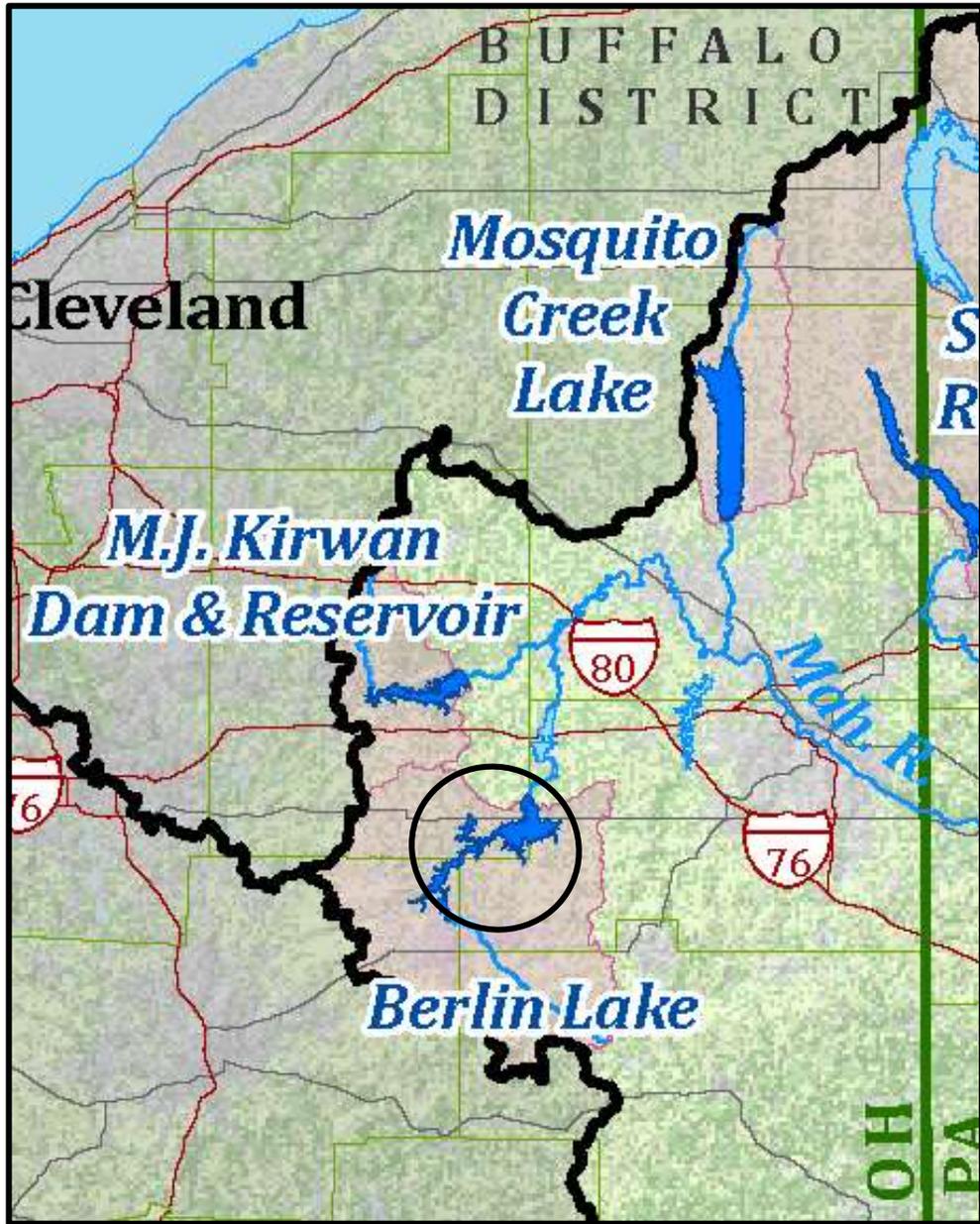


Berlin and Mosquito Creek dams authorized by the Flood Control Act of 1938.
 M.J. Kirwan Dam authorized by Flood Control Act of 1958.



US Army Corps of Engineers®





Berlin Reservoir Basin

249 square miles – 22% of the Mahoning Basin

Berlin Dam, completed 1943

- Flood Control
- Low-Flow Augmentation
- Water Quality
- Water Supply
- Fish and Wildlife Enhancement –
 - Fish and Wildlife Coordination Act 1958 (PL 85-624)
- Recreation
 - Flood Control Act 1944 (PL 78-534)



US Army Corps of Engineers®





Mosquito Creek Reservoir

Basin | 97.4 square miles – 8.6% of Mahoning Basin

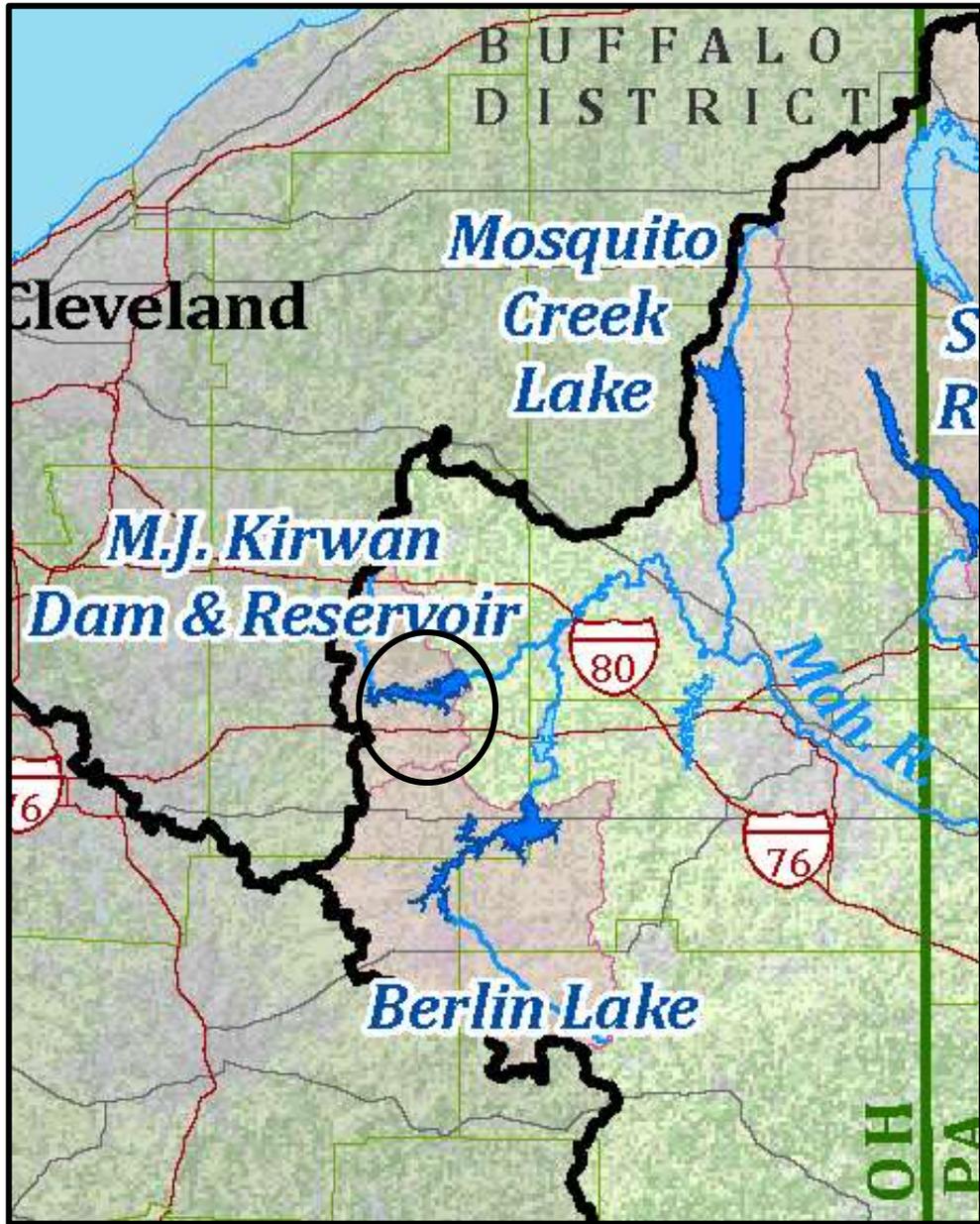
Mosquito Creek Dam, built 1944

- Flood Control
- Low-Flow Augmentation
- Water Quality
- Water Supply
- Fish and Wildlife enhancement
 - Fish and Wildlife Coordination Act 1958 (PL 85-624)
- Recreation
 - Flood Control Act 1944 (PL 78-534)



US Army Corps
of Engineers®





M.J. Kirwan Reservoir Basin |

80.5 square miles – 7% of the Mahoning Basin

Michael J. Kirwan Dam & Reservoir, built 1966

- Flood Control
- Low-Flow Augmentation
- Water Quality
- Water Supply
- Fish and Wildlife enhancement
 - Fish and Wildlife Coordination Act 1958 (PL 85-624)
- Recreation
 - Flood Control Act 1944 (PL 78-534)



US Army Corps of Engineers®



MAHONING RIVER BASIN WATER CONTROL MANUAL UPDATES

Fiscal Year 2019 Appropriations

- \$1.05 million

Purpose

- Optimize reservoir operations
- Update and Optimize Gate Operations Current Conditions
- Balancing the Corps' authorized project purposes

Timeframe 24 to 36 months



Mosquito

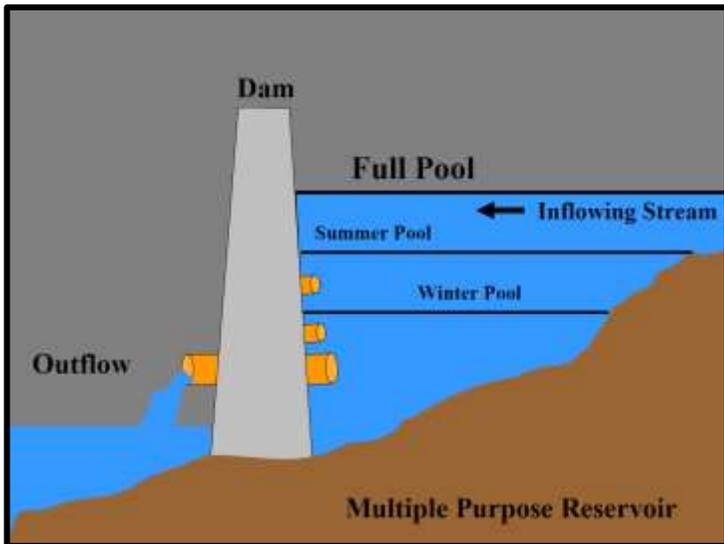
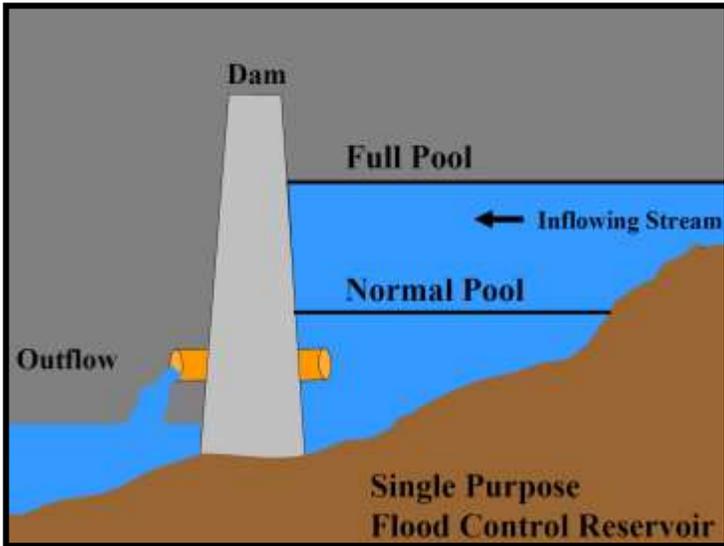


Michael J. Kirwan

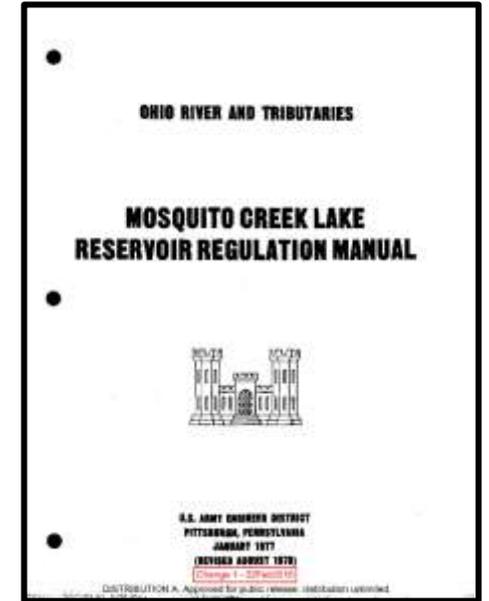


Berlin

WHAT IS A WATER CONTROL MANUAL?



- Single Purpose Reservoirs
 - Standard Pool Elevation to Maximize its purpose
- Multi-Purpose Reservoirs
 - Multiple Pool Levels to create multiple pool levels
- Water Control Manual Dictates the Gate operations to reach the appropriate pool levels
- Based on
 - Design criteria of the dam (Purposes)
 - Climate & Weather Patterns
 - Run-off calculations



WATER CONTROL MANUAL UPDATE PROCESS

INPUTS: 12-18 MONTHS

- Hydraulic & Hydrologic Modeling
- Water Quality Modeling
- Sedimentation Surveys
- Climate Change Impacts
- Changes in watershed characteristics
- Changes in development, industry, population and other demographics
- Engage users, stakeholders and partners

OUTPUTS: 12-18 MONTHS

- Updated Water Control Manuals
- Verification or Revision to Water Control Plans
- If proposed revisions are recommended, an environmental assessment is required by the National Environmental Policy Act
- Any revisions to the WCP's shall not impact the authorized purposes of the projects



US Army Corps
of Engineers®



BASIN CONCERNS & INTERESTS

- Reducing the risk of flooding
- Sustaining water quality
- Enhancing aquatic ecosystems for fish and wildlife
- Mitigating harmful algae blooms
- Controlling invasive species
- Balancing recreational interests
- Removal of low-head dams



US Army Corps of Engineers®



U.S. ARMY

UPCOMING PROJECTS & EVENTS

❑ Mosquito

- Mosquito 75th Anniversary Event – 15 June 2019
- Harmful Algae Bloom Water Quality Testing
- Invasive Species Management
- Wildlife Population Surveys
- Trumbull County Beekeepers Association Partnership
- Mosquito Creek Waterways trail
- Expansion of the Birdie Disc Golf Course
- Stilling Basin Joint Sealing
- Extended Upstream Rip-Rap to Dam Crest

❑ Michael J. Kirwan

- Emergency Action Plan Update
- Control Tower Roof Repair
- Electrical Service to Control Tower Replacement
- Debris Clean out of Emergency Spillway

❑ Berlin

- Water Treatment System Repair
- Sewer Line Repair at Campground
- New Signs
- Tree Pruning
- Vegetation Management
- Wildlife Population Surveys
- Roofing and Flooring in Bathhouses/Restrooms

❑ Mahoning River

- Low-head Dam Removal
- Continuous Water Quality Testing



US Army Corps
of Engineers®



THE WAY FORWARD

- Public meetings in individual watersheds commencing this spring to gather input.
- Continued public and stakeholder engagement.

HOW TO ENGAGE

- Facebook: Pittsburgh District, Berlin, M.J. Kirwan, Mosquito Creek
- Phone: 412.395.7500/01/02
- Email: CELRP-PA@usace.army.mil
- Mailing List
- Public Meetinigs
- Comment Cards / Postal Mail

www.lrp.usace.army.mil



US Army Corps
of Engineers ®



DISCUSSION

We are video recording tonight's meeting.

Please come to one of the two microphone stations to ask a question.

Please ask one question and a follow up, if desired; then allow for another person's turn.

Please keep your questions relevant to the Water Management Update and general topics.

Please fill out a comment card and hand to a Corps employee if you'd like us to read it.

Please leave the auditorium should you need to take a phone call.

Please be courteous to speakers.

Please keep side conversations to a minimum.



US Army Corps
of Engineers®





UNCLASSIFIED



US Army Corps of Engineers®

