



Kahle Lake Dam Rehabilitation Project

April 8 2021

Mission: To protect, conserve, and enhance the Commonwealth's aquatic resources and provide fishing and boating opportunities



Introduction

- Proposed Dam Upgrades
- Design, Permitting and Construction
- Local Initiatives
- Fishery Restoration
- Questions

Proposed Dam Upgrades

Auxiliary Spillway:

- Construct new reinforced concrete auxiliary spillway weir to address hydraulic capacity and structural inadequacies
- New spillway will meet all current dam safety regulations



DROP BOX SPILLWAY, GLADE RUN LAKE



LABYRINTH SPILLWAY, OPOSSUM LAKE

Proposed Dam Upgrades

Dam Embankment:

- Upgrade internal embankment seepage drains to improve collection and embankment stability
- Flatten downstream dam embankment slope to improve stability and maintainability
- Install seepage monitoring and collection devices for long term monitoring of embankment health



Design and Construction

Estimated Project Cost:

- Engineering (Design): \$1.52 Million
- Construction: \$6.00 Million
- Total Project: \$7.52 Million



Design and Construction

Project Processes: Design:

- Michael Baker International Inc. is the selected design consultant
- Design work is expected to commence in the spring of 2021
- Design process is expected to take 10 months concluding with the permit submission to DEP Division of Dam Safety

Design and Construction

Project Processes: Permitting

Necessary permits include:

- Dam Construction Permit (DEP Central Office)
 - Includes possible wetland mitigation and historic/archeological considerations
- Soil Erosion & Sediment Pollution Control Permit (County Conservation District)
- Expected to take 12 to 15 months until approval



Design and Construction

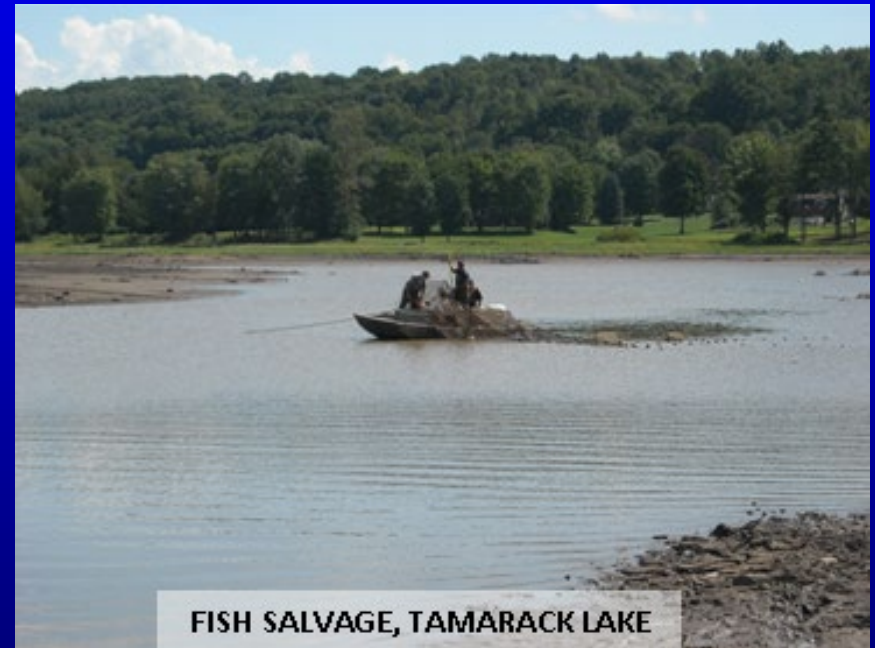
Project Processes: Bidding

- DGS will advertise for the Construction Contractor through PA e-marketplace:
(<http://www.emarketplace.state.pa.us/>)
- Expected to take 4 to 6 months from advertisement to notice to proceed

Design and Construction

Project Processes: Reservoir Drawdown/Fish Salvage

- The reservoir will be drained for construction to mitigate failure risks during construction
- Prior to fully draining the lake the fish within the reservoir will be salvaged and relocated to a nearby public reservoir



Design and Construction

Project Processes: Construction

Construction duration:

12 to 18 months, preliminarily estimate, expected to be revised as the design processes



Design and Construction

Project Processes: Reservoir Refilling

- The reservoir will be refilled at a controlled rate of approximately 1 foot per week.
- This will allow engineering staff to monitor the dam embankment and spillway as the depth of water is gradually increased.
- Expected to take 4 to 6 months assuming the weather cooperates.

Design and Construction

Anticipated Schedule:

Start Engineering	April 2021
Permit Submittal	December 2021
Permit Approval	January 2023
Bid Advertisement (construction)	March 2023
Complete Construction	January 2025

Local Initiatives

On past projects local organizations (such as a local environmental conservancy, municipality and county) have stepped up to fund and construct various improvements to enhance the recreational activities at the various lakes. These improvements range from fishing piers to fish habitat work.



Local Initiatives

Fishing and Boating enhancement:

Example: Fishing piers and docks improvements

- The PFBC will partner with a local private organization or the municipality or county
- **The partner takes on the project development with some assistance from the PFBC**
- The PFBC will obtain the permit(s) and maintain the enhancements



Local Initiatives

Example: Glade Run Lake

The Glade Run Lake Conservancy projects:

- Raised the funding for approximately 95% of their projects
- Constructed an ADA compliant fishing pier
- Excavated a channel in the upper end of the lake to provide additional boating opportunities and improve fish habitat
- Continuing Fish Habitat improvement efforts



Local Initiatives

Photo of floating fishing pier:



Local Initiatives

Photo of Handicap kayak dock:



Local Initiatives

Fish Habitat Projects

- Typically done cooperatively through the (CHIP) program
- These projects range from fish habitat structures to shoreline improvements

Local Initiatives



Habitat Photos



Local Initiatives

Other Projects:

Example: Trails, pavilions, restrooms

- Requires an agreement with the PFBC
- Larger projects typically require a partnership with the municipality or county

Local Initiatives

Contacts:

Fish Habitat Projects: Ben Page | bepage@pa.gov

All other projects: Jerry Woomer | gwoomer@pa.gov



Fishery Restoration

At the conclusion of the dam rehabilitation project the objective to reestablish fishing opportunities will become paramount.

- Initial stockings will consist of fingerlings
- A restocking plan will be drafted and implemented
- Specific species are yet to be determined
- Fishing will be “*catch and release*” until fish communities become self-sustaining and acceptable for angler harvest
- As determined by the AFM, the lake will then be designated for a program that would allow harvest

Questions?

