• Part of a System
• ODNR Projects
  = $73.6 Million
Improvements
West Reservoir - $6.3 Million (Completed)
Improvements
Tuscarawas Diversion Dam
$3.9 Million
(Completed)
Improvements
Long Lake Floodgates
$3.9 Million (Completed)
Improvements
East Reservoir
$29.6 Million
(Construction Underway)
Improvements

North Reservoir (Design Underway)
~ $26 Million
Lake Operations to Remain the Same

Unless dam safety requires adjustments
Public Access

Public access won’t be encouraged
Access to Docks
Contact Angela DelBrocco
ODNR to Work with Individual Property Owners: Acquisition, Existing Improvements
Schedule: 2020 Completion
Project Information
Background

- Class I – High hazard dam
- Design storm is PMF
- 12.7 ft. maximum height
- Two dam embankments
- West end low spot originally a third embankment
- Severe spillway discharge capacity deficiency
- Dam overtops by 2.4 ft. during PMF
Existing Features

- West End Low Spot
- Long Lake
- West Embankment
- East Embankment
- Spillway
- 12” Dia. Outlet
Dam Safety Issues

- Design Storm* overtops embankments by 2.4 feet for 30 hours
- Deteriorated spillway
- Seepage around outlet at east embankment (Interim Risk Reduction Measure* recommended)
Effects of a Design Flood

12" Lake Drain
East Embankment
West Embankment
Consequences of Failure: At Risk

- About 4,000 people
- Approximately 2,000 critical structures
- Minimum: $3.2 million (sunny day breach)
- Up to $500 million in building-related damages (design storm breach)
Proposed Improvement Design
Design Constraints

- Minimize impacts
- Affect as few as possible
- Construct at normal pool level unless safety a concern
- Minimize disruptions on Portage Lakes Drive
Design Constraints (cont.)

- No changes to the topography
- Need hard surfaces for overtopping
- Extend hard surfaces to level of Design Storm
Proposed Design
Proposed Design

10/16/18

NORTH RESERVOIR DAM IMPROVEMENTS

- Proposed Design:
  - Soil-Cement Gravity Section
  - State Property Line
  - PARAPET WALL
  - CONCRETE CAP
  - SOIL-CEMENT CUTOFF WALL
  - EXISTING LAKE BED
  - RIP RAP
  - TOP OF DAM
  - Soil-Cover, Topsoil, and Grass
  - State Property Line

Ohio Department of Natural Resources
TETRA TECH
Dam Rendering
(50% Design)
Our Commitment
A Single Point of Contact for Questions

Angela DelBrocco, MurphyEpson
(614) 221-2885 x18
adelbrocco@murphyepson.com
Commitment to Minimize Impacts

- However, property acquisition and easements will be needed.

- Lake operations will remain the same unless safety becomes a concern.
Commitment to Minimize Impacts (cont.)

- Public access to the new dam structure won’t be encouraged (ODNR working on details)

- ODNR also working on details regarding dock access
West Half of Project
Next Steps in the Process
Next Steps with Property Owners

- ODNR to provide survey plats to property owners
- Initial individual meetings with property owners
- Tetra Tech to complete design work
- Follow-up meetings with property owners
- Meeting with CM prior to construction
Schedule for 2018

- Begin IRRM at east embankment this winter
  - Fill placement in the lake and downstream of embankment
  - Replace existing 12” dia. outlet
- Individual property owner meetings
- Complete final engineering
- Coordinate with permitting agencies
Schedule for 2019

- Provide temporary dock access for residents
- CM begins coordination with the residents and the public
- Begin construction spring 2019
- More information to follow
Permitting Process

- 401/404 permit application submitted to Ohio EPA and Corps of Engineers
  - 401 permit is for water quality issues (Ohio EPA)
  - 404 permit is for placing fill in the ‘Waters of the United States’ (Corps of Engineers)
  - State Historic Preservation Office (SHPO) is part of the 404 permit application
Permitting Process (cont.)

- Army Corps of Engineers will announce public comment period
- Ohio EPA will likely advertise and hold a public meeting
Where to Direct Your Questions

- Questions about the project design/operations: ODNR
- Questions about permits: Ohio EPA, Army Corps
Stay Informed

- Sign up for the E-newsletter
- Website: http://bit.ly/ODNRnorth
- Public briefings as needed
- Direct questions about construction/operation to Angela
- Construction communication
Contacts

ODNR – North Reservoir web page

Angela DelBrocco, MurphyEpson
(614) 221-2885 x18
adelbrocco@murphyepson.com
Thank you!
Existing Features

East embankment

West embankment

Deteriorated spillway

West embankment