East Branch Dam Safety Initiative

STATUS REPORT
November 2016

US Army Corps of Engineers ®
Pittsburgh District

SUMMARY

The primary objective of our Dam Safety Program is to maintain public safety by ensuring the dams we own and operate are safe and risks to the public are minimized. East Branch Dam has confirmed dam safety issues related to internal erosion similar to the serious internal erosion episode in 1957 that required lowering the lake to make repairs. Based on the results of a risk-informed screening of the dam, in February 2008, the Corps began 24-hr staffing at the dam, lowered the lake level, and implemented an interim reservoir operations plan as reasonable and prudent measures. This allowed the district to provide immediate and substantial interim risk reduction while limiting negative impacts on authorized project purposes.

A Dam Safety Modification Study was completed and approved by Headquarters, U.S. Army Corps of Engineers in October 2010. The approved long-term risk reduction plan for East Branch Dam consists of constructing a full length and depth concrete cutoff wall within the existing dam embankment and foundation. The total cost of the project, last reported to congress in 2015, is $248 million.

The cutoff wall construction contract was awarded in August 2014. The contract is scheduled to be complete no earlier then June 2019.

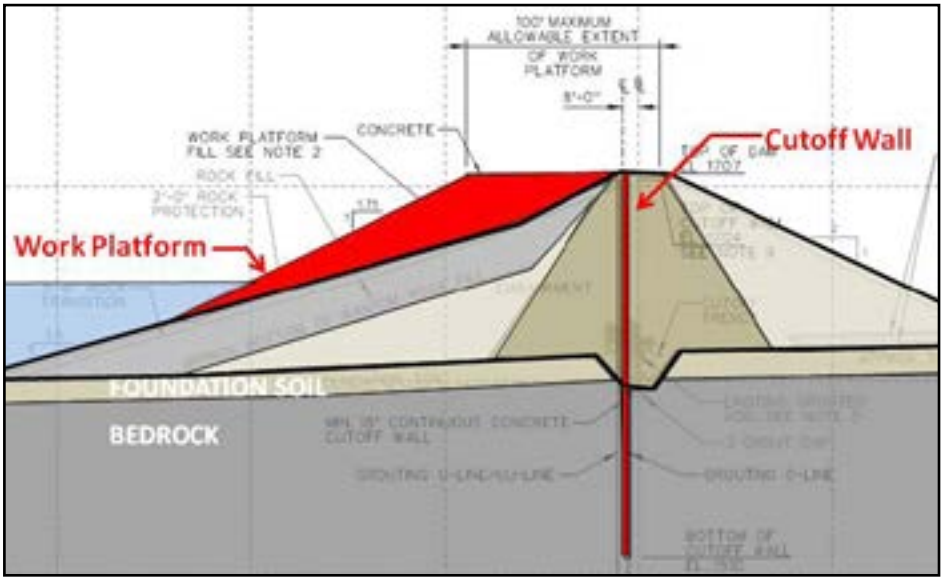
Returning the lake back to pre-2008 levels is dependent on successful completion of the cutoff wall and completion of a post implementation evaluation.

DAM SAFETY MODIFICATION PROJECT

Since approval to initiate construction was received in August 2011, three construction contracts have been completed. In December 2012, a site development contract for replacing the access road and preparing office and material laydown areas was completed. In July 2013, the resident engineer office building contract was completed. In December 2013, a contract for providing additional guiderail along the access road was completed.

In 2012, additional instrumentation to monitor the condition of the dam was installed as well as data loggers to automate the instrumentation readings. In September 2013, a contract to provide the near real-time processing and downloading of the instrumentation readings was awarded and was completed in February 2015.

The cutoff wall construction contract was awarded on Aug. 26, 2014 for $132,504,348. The cutoff wall contract period of performance is four years and nine months. Construction initiated in February 2015. The current scheduled contract early finish completion date is June 30, 2019.



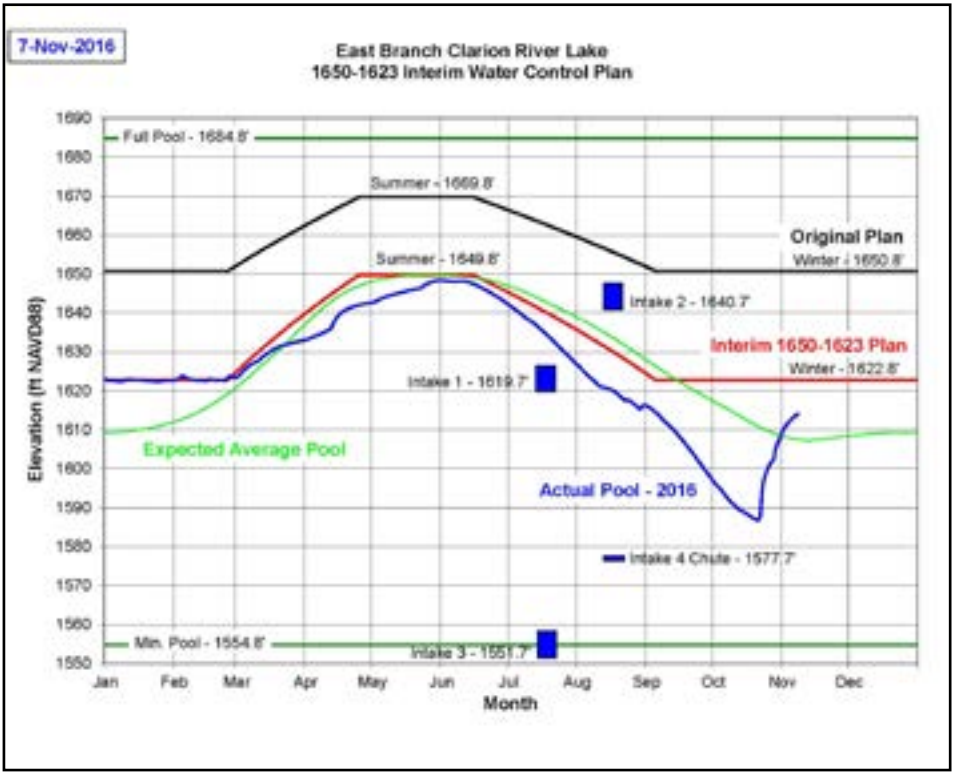
UPDATED

RESERVOIR OPERATION

The district is currently operating East Branch Dam and Reservoir under a lowered pool to reduce risk as part of the Dam Safety Initiative. The dam is continuing to provide additional water to maintain downstream water quality and temperature.

As of Nov. 7, East Branch Lake is near 1614.1 feet. To obtain the latest lake level and outflow information, please visit: www.lrp.usace.army.mil/Missions/WaterManagement/ReservoirForecast.aspx

An annual review of how the Corps will operate the reservoir pool was conducted in March 2016. The district recommended to maintain its current interim water control plan and other ongoing interim risk reduction measures.



INTERIM RISK REDUCTION MEASURES

• The lake has been staffed 24 hours a day, seven days a week since March 2008.

• Maintenance of the existing sluice gates and machinery was completed in 2008 to improve reliability.

• Control Tower Number 4 intake extension was installed in 2008.

• On-site equipment and supplies were delivered in 2008.

• Monthly inspections of the downstream face of the embankment have been performed since May 2012.

• Continue to conduct annual surveys to look for deformations such as surface settlement at the dam crest.

• Installed eleven additional piezometers and two inclinometers in advance of construction which we are also reading as part of the Interim Risk Reduction Measures.

• Weir gage readings have been automated at two key locations.

• Spillway drain inspection every two years, most recently July 2014.

• The 2016 annual dam safety refresher training was completed in April.

• Cleanout and inspection of weir ponds every two years.

NEPA AND WATER QUALITY

•Completed an Environmental Assessments to analyze environmental, cultural, and economic impacts related to implementation of the East Branch Dam interim water control plan and the Dam Safety Study's risk reduction alternatives and signed Finding of No Significant Impact (FONSI) documents.

• Continue to monitor real-time water temperature at the dam outflow from March through November. (Water temperature information available on the Dam Outflow Information link at http://www.lrp.usace.army.mil/Missions/Recreation/Lakes/EastBranchClarionRiverLake.aspx)

• Continue to monitor real-time lake water temperature profile at a location near the dam intake tower.

• Conduct water quality analyses at the dam outflow twice monthly.

• Conduct East Branch Clarion River Lake aquatic ecology survey from May through October.

• Installed an automated water quality monitor at the outflow in 2013.

• Conduct East Branch Clarion River Lake aquatic ecology survey from May through October.

One of East Branch Dam's authorized purposes is to provide additional water flows to maintain downstream water quality to offset industrial and sanitary discharges. The Corps does this by opening the control tower's water intakes at different levels and temperature elevations. This water mixes in the outflow to achieve the required volume and temperature. To ensure this requirement was met during lower water levels, the Corps fabricated an extension that allows intake water from an additional lower elevation where cool water is available.

UPDATED

TO DO LIST

2008

- ✓ Control Tower Maintenance Work
- ✓ Number 4 Intake Extension Installation

2009

- ✓ Installation of Lighting and Storage Bins
- ✓ Completed Extension of the Federal Boat Launch Ramp

2010

- ✓ Inundation Mapping Completed
- ✓ Dam Safety Modification Study Approved

2011

- ✓ Received Assistant Secretary of the Army for Civil Works concurrence for construction

2012

- ✓ Awarded contract to install instrumentation to monitor the embankment during construction

2013

- ✓ Awarded contract to automate instrumentation
- ✓ Advertised cutoff wall contract

2014

- ✓ Award cutoff wall contract

2015

- ✓ Complete instrumentation automation contract
- ✓ Conduct Table Top Exercise with Elk County
- ✓ Awarded Independent External Peer Review contract for construction

2016

- ✓ Complete Work Platform
- Initiate foundation and slurry control grouting

2017

- Initiate Cutoff Wall and Critical Area demonstration sections
- Conduct exercise with Elk County and local emergency responders

Drilling and grouting operations were initiated in January 2016. Grouting of the embankment foundation is required prior to cutoff wall excavation which is scheduled to initiate in March 2017.

For more information, please contact the following:

Autumn Rodden, East Branch Park Manager **(814) 965-2065**

Kim Warner, East Branch Construction Office **(814)965-4750**

Jeff Hawk, Public Affairs Office **(412) 395-7500**

Email: CELRP-PA@usace.army.mil
Website: www.lrp.usace.army.mil

The East Branch Dam Safety Initiative Team has created a Rumor Control Website to ensure that proper information is being disseminated.

Visit: http://www.lrp.usace.army.mil/Missions/Planning,ProgramsProjectManagement/HotProjects/EastBranchDamRepair/EBRumorControl.aspx

Also visit: http://www.lrp.usace.army.mil/Missions/Planning,ProgramsProjectManagement/HotProjects/EastBranchDamRepair.aspx