East Branch Dam Safety Initiative

STATUS REPORT
August 25, 2009

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 is considered to have confirmed and unconfirmed, potentially unsafe issues which merit further analysis and evaluation. An interim water control plan consisting of a reduced operating pool was implemented in February 2008, as a reasonable and prudent measure. This allowed the District to provide immediate and substantial interim risk reduction while limiting negative impacts on project purposes, such as flood damage reduction. Even though the District has implemented interim measures to reduce risk, these measures cannot serve as long-term remediation. During the Summer of 2008 Draper, Utah-based Willowstick Technologies Inc. conducted a geophysical survey to indicate possible seepage paths through and under the dam. The survey was conducted at the right abutment portion of the dam, which is an area of great concern. Results indicate that seepage is generally consistent with known conditions and supports the need to pursue long-term repairs. In addition, seepage mapping suggests the presence of several possible seepage paths not previously recognized. These locations are not believed to pose an imminent risk to dam stability and were checked by drilling and sampling. Drilling and sampling was initiated in October 2008 and completed in June 2009. The data gathered is being used to develop long term risk reduction measures. The results of the drilling and sampling are being used to develop long-term repair alternatives. A Dam Safety Modification Study is being prepared to evaluate combinations of risk reduction measures to optimize risk reduction and cost, and recommend a plan for approval. The study will define the scope, cost and schedule of the approved long-term risk reduction plan.

COMPLETED MILESTONES

2008

- July - Received Willowstick Seepage Flow Path Mapping Final Report
- August - Emergency Telephone Exercise Conducted
  - Control Tower Maintenance Work Completed
  - Lighting and Material Storage Contract Awarded
- September - Drilling and Sampling Contract Awarded
  - Advisory Panel Contract Awarded
- October - Number 4 Intake Extension Installed
- December - In-Progress Drilling Status Report Completed

2009

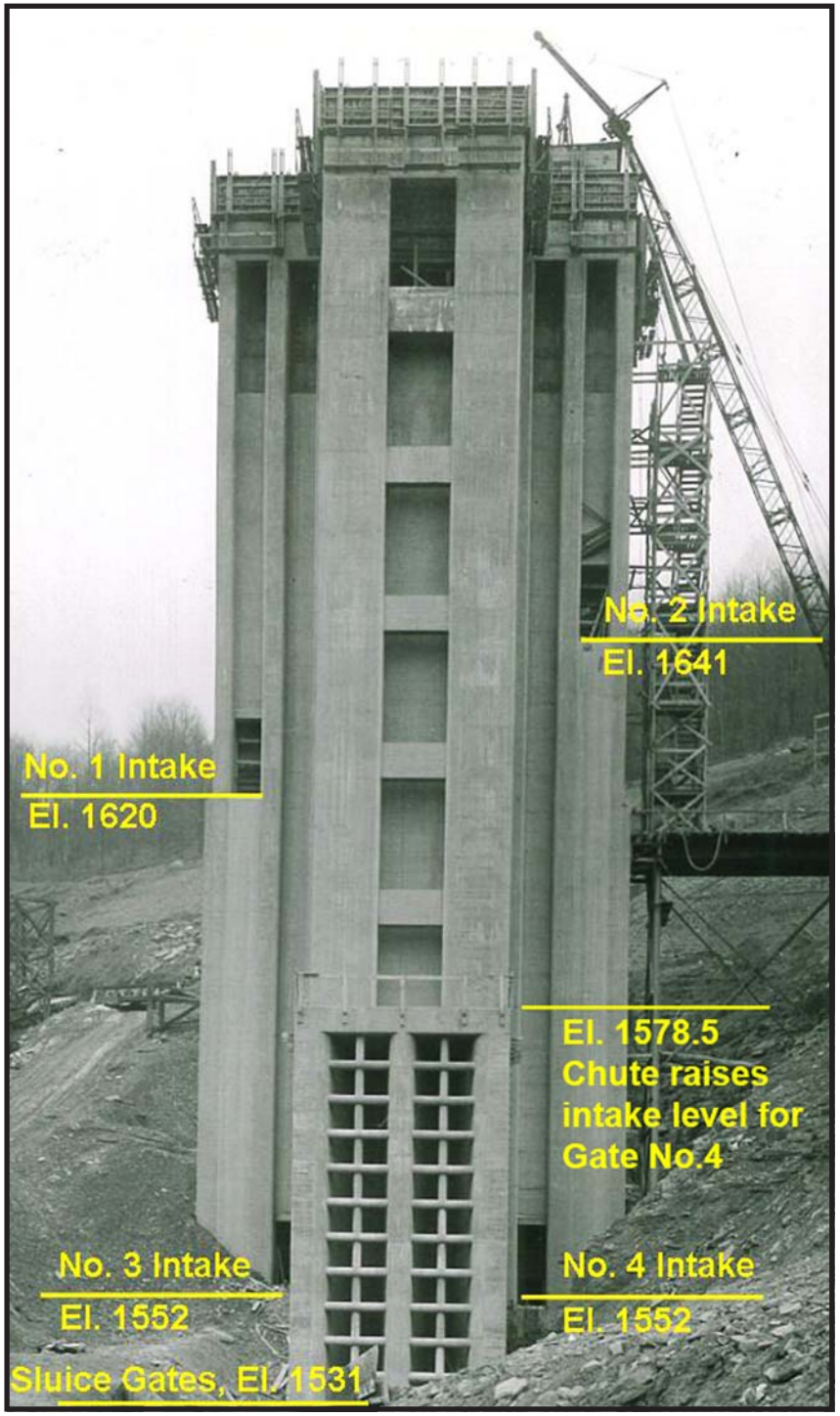
- February – Study Management Plan Approved
  - Water Temperature Model Completed
- March - Preliminary Risk Reduction Measures Identified
- June – Installation of Lighting and Storage Bins Completed
  - Finding of No Significant Impact for Interim Water Control Plans, Environmental Assessment Signed

2009 UPCOMING MILESTONES

- Summer - Complete Geotechnical Report
- Fall - Draft Dam Safety Modification Study Complete
  - Conduct an In Progress Review of Recommended Long-Term Risk Reduction Plan
  - Conduct Table-Top Dam Safety Exercise with Emergency Responders
  - Conditions Permit Extend Federal Boat Launch

INTERIM RISK REDUCTION MEASURES

- Cross-training of Corps personnel from other lake projects was completed in March 2008.
- 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.
- An extension to the Control Tower Number 4 intake was installed in 2008.
- On-Site equipment and supplies were delivered in 2008.



Control Tower During Construction

ON-GOING INVESTIGATIONS

NEPA AND WATER QUALITY:

The District completed an Environmental Assessment and signed a Finding of No Significant Impact, in compliance with the National Environmental Policy Act (NEPA), to assess environmental, cultural, and economic impacts related to implementation of the East Branch Dam interim water control plan.

March thru November real-time water temperature monitoring at the dam outflow. (Water temperature information available on the Dam Outflow Information link at www.lrp.usace.army.mil/rec/lakes/eastbran.htm.)

Real-time lake water temperature profile monitoring at a location near the dam intake tower.

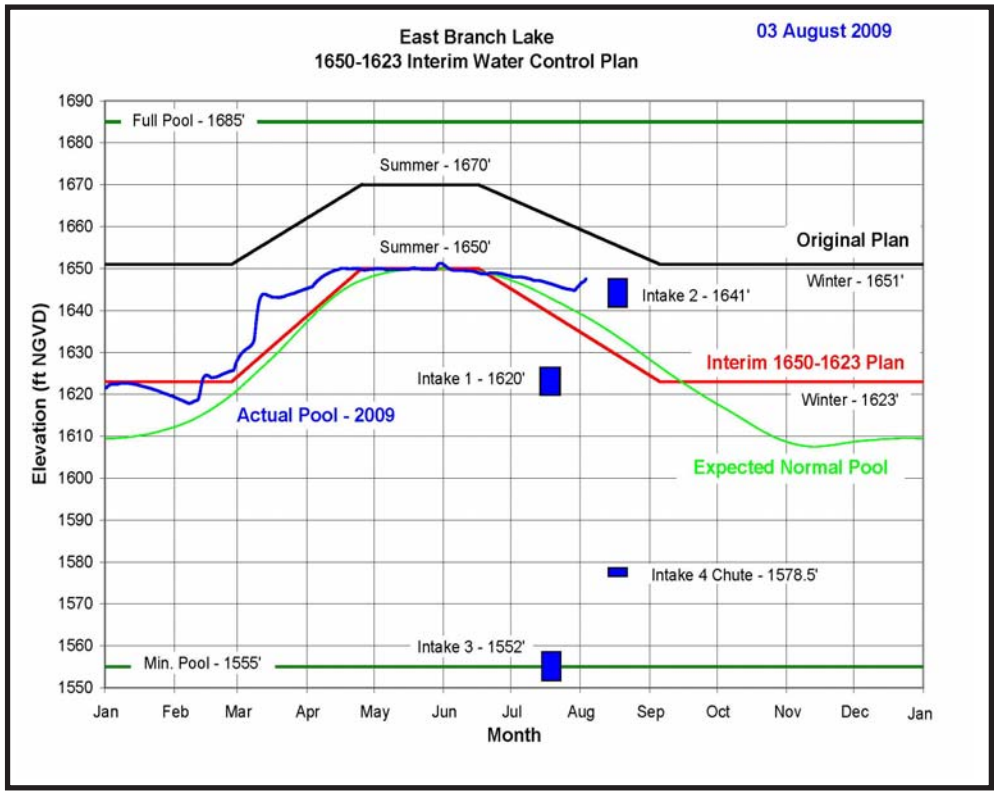
On-going twice monthly water quality analyses at the dam outflow.

May thru October East Branch Clarion River Lake limnological survey conducted.

Developing a NEPA document for long term risk reduction alternative plans.

DRILLING:

Drilling and sampling soil and rock was completed in July 2009. The goals of the drilling were to further explore possible seepage paths indicated by the Seepage Flow Path Mapping, to gain a better understanding of ground water conditions in the hillside on the right side of the dam and to provide data that will be used to develop measures for long-term risk reduction. Soil and rock within the dam, its foundation, the right abutment and specifically the area repaired after the 1957 serious seepage/internal erosion event have been sampled and subjected to field and laboratory testing to determine the physical properties of the soil and rock and condition of the 1957 repair. Existing piezometers (instruments to measure groundwater pressure) were tested and the results are being analyzed to determine if upgrades are needed. Additional piezometers have been installed to improve monitoring and further define seepage conditions. Interpretation and documentation of the information gathered is underway.



RESERVOIR OPERATION

The Corps will continue to operate the reservoir pool level consistent with the approved interim water control plan, displayed above. No further changes in reservoir operations are anticipated at this time. The weather this summer has allowed the lake to stay 9' higher than last year. If the watershed receives significant rainfall this summer, we will allow the lake to rise back to between 1649.5 ft and 1650.0 ft.

The lake will then begin a slow fall toward winter pool. The federal government boat launching fee will be waived again this recreation season. The boat launch and small courtesy dock are available for use. A public notice will be issued prior to when the boat launch will no longer be available for use.

DAM SAFETY MODIFICATION STUDY

The Dam Safety Modification Study will evaluate combinations of measures to optimize risk reduction and cost and recommend an alternative plan for approval by Headquarters, U.S. Army Corps of Engineers. Once approved, the Study will define the scope, cost and schedule of the approved long-term risk reduction plan. Following approval and funding, work will begin on implementing the plan. The District has retained a panel of independent experts who will advise our approach, review our results, and make recommendations at major milestones during the investigation and study process. The evaluation of risk reduction measures and alternative plans is in progress.

COMMUNICATION

The Pittsburgh District continues to communicate and partner with various private, local, state, and federal entities as well as our Corps of Engineer's Division and Headquarters Offices. In addition, stakeholder briefings, dam tours and public meetings will be scheduled as necessary. The district has implemented the following web updates to its East Branch Dam Safety Initiative site:

- Rumor Control Button which allows interested parties to submit a query to the Corps on an item of concern or discussion with a follow-up answer.
- Link to the United States Geological Survey outflow information for East Branch Lake.

UPCOMING EVENTS

- October 7, 2009 – Semi Annual Stakeholder Briefing
- Fall 2009 – Public Meeting
  - In-Progress Review of the long term risk reduction plan with Corps of Engineers Headquarters and Division Offices

For more information, please contact the following:

Gary Froelich, East Branch Park Manager **(814) 965-2065**
Jeff Hawk, Public Affairs Officer **(412) 395-7501**

Email: Eastbranch@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 www.lrp.usace.army.mil/rec/lakes/EBRumors.htm
You can also visit www.lrp.usace.army.mil/rec/lakes/ebdam_safety.htm