

East Branch Dam Safety Modification Project

PUBLIC INFORMATION MEETING
April 20, 2016

Johnsonburg, PA

*US Army Corps of Engineers,
Pittsburgh District*



Meeting Agenda

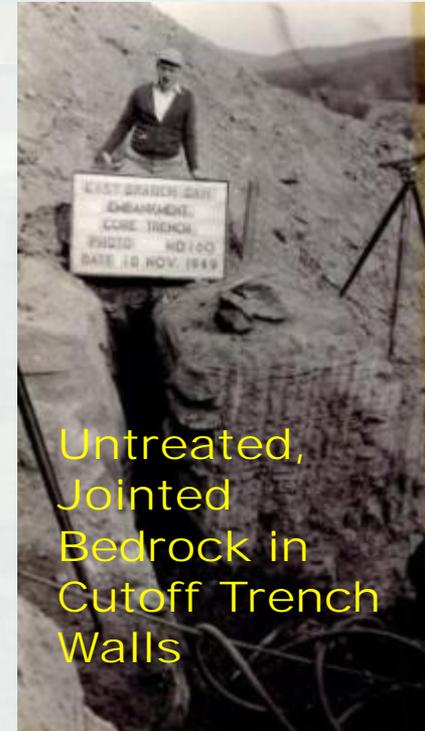
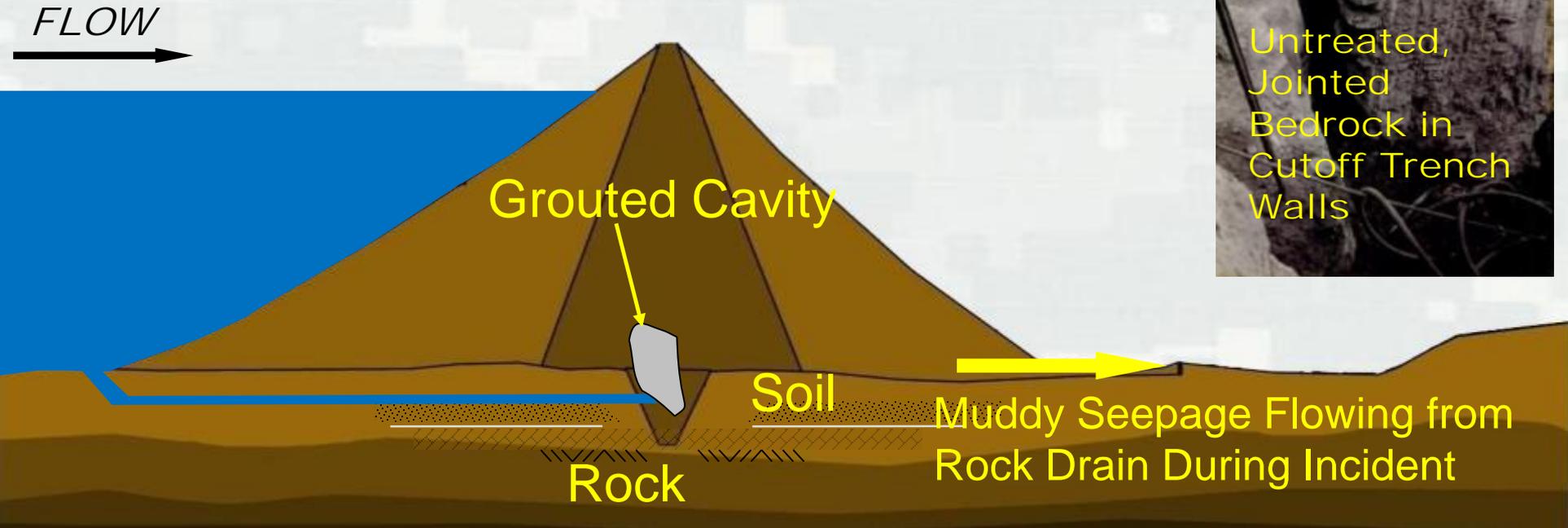
- **Opening Remarks** – District Commander, Colonel Bernard R. Lindstrom
 - **What's Done** – Mike Rattay, Project Manager
 - **Construction Update** – Kim Warner, East Branch Resident Engineer
 - **Emergency Management**– Mike McAllister, Elk County Emergency Services Director & Jim Christ, Readiness Office
 - **East Branch Lake Facilities** – Autumn Rodden, East Branch Lake Resource Manager
 - **Questions**



WHAT'S DONE

1957 Emergency Repair

Dam failure averted in 1957,
but risk for re-initiation of
internal erosion remains.



Untreated,
Jointed
Bedrock in
Cutoff Trench
Walls

WHAT'S DONE

- **1957 to 2008** – Monitor Dam
- **2008 to 2019** - Interim Risk Reduction
- **2008 to 2010** – Dam Safety Study
- **2010 to 2014** – Preconstruction, Engineering & Design
- **2011** - Initiate Construction



BUILDING STRONG®

WHAT'S DONE

Site Development Construction Contracts



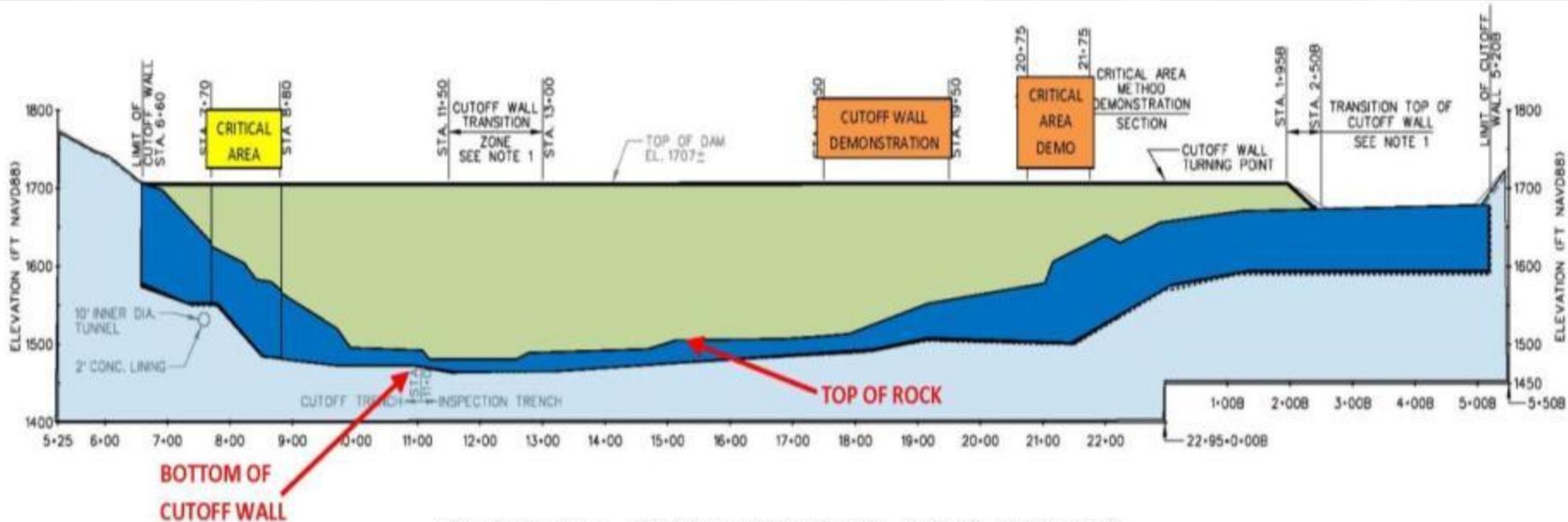
WHAT'S DONE Instrumentation

- 2012 – Nine new Piezometers Installed
- 2013 – Data Loggers Installation
- 2013 - 2014 – Automated Data Acquisition and communications for Critical Instruments



WHAT'S DONE

Cutoff Wall Design



CUTOFF WALL PROFILE PROJECTION ALONG BASELINES

STA. 5+25 TO 22+95 AND STA. 0+00B TO 5+50B

(FACING UPSTREAM)
SCALE: 1"=100'

- | | |
|---|--|
|  Bedrock |  Critical Area (Special Precautions in Soil and Rock) |
|  Cutoff Wall Excavation (Soil) |  Demonstration Sections |
|  Cutoff Wall Excavation (Rock) | |

WHAT'S DONE

Cutoff Wall Contract Award

- **26 Aug 2014** – Award made to Layne Christensen Company
 - Amount: \$132,504,348
- **17 Sep 2014** – Notice To Proceed
 - 1740 day Period of Performance
- **16 Sep 2015** – Contract Novation to Keller Walls, Inc.
- **04 Feb 2016** – Contractor's Name Change to Bencor Global, Inc



WHAT'S DONE

Cutoff Wall Contract Status Update

DATE	CONTRACT % COMPLETE	CONTRACT EARLY FINISH	CONTRACT COST
17 Sep 2014 NTP	0	23-Jun-19	\$132,504,348
14 Oct 2015 Public Meeting	11%	23-Jun-19	\$132,953,001
20 Apr 2016 Public Meeting	26%	30-Jun-19	\$135,511,185



Bencor Global Inc.

Frisco, TX

- **Tim Myers**
 - Director of Operations
- **Jeff Garon**
 - Project Manager



CONSTRUCTION UPDATE



CONSTRUCTION UPDATE

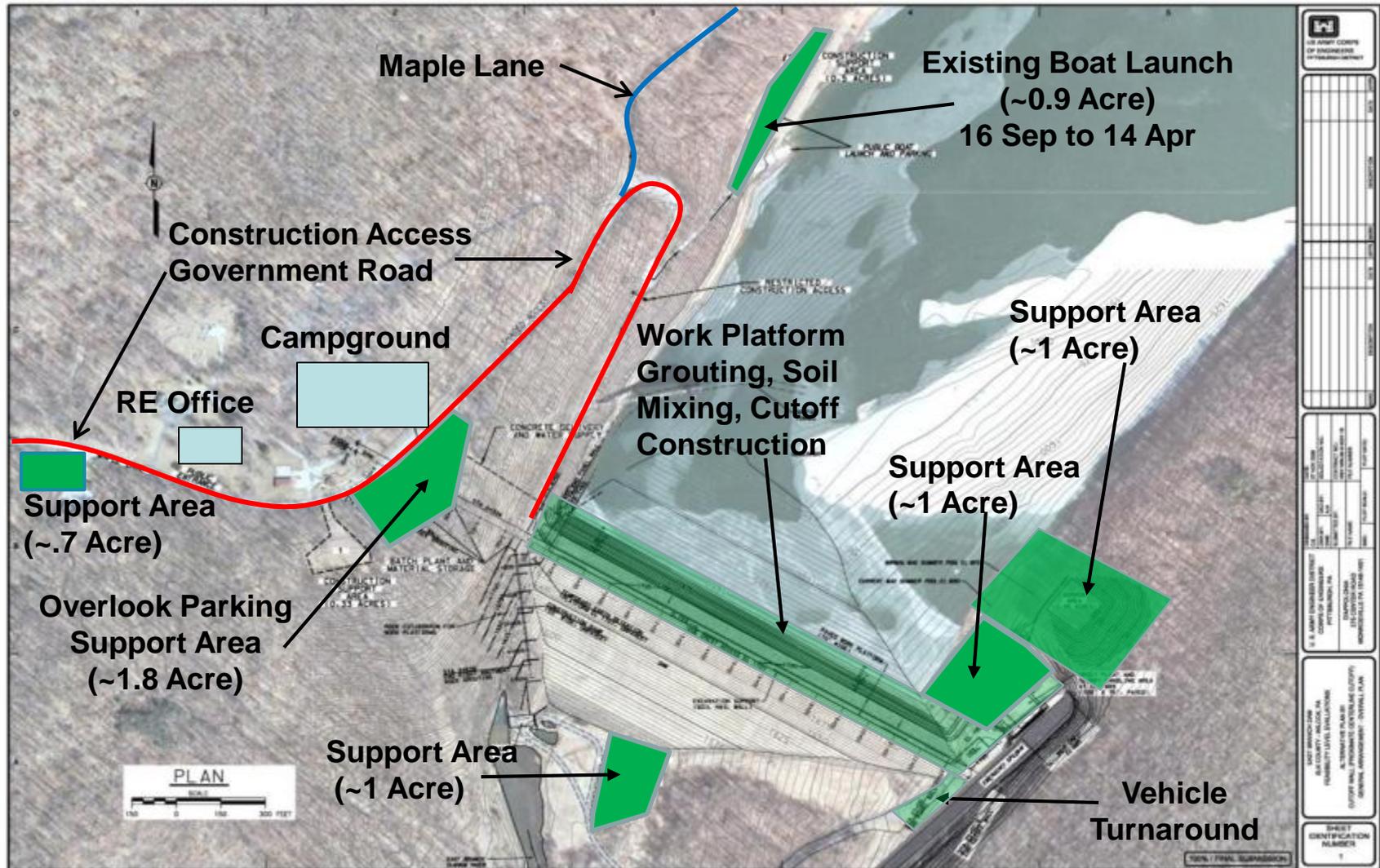
Dam Safety Monitoring & Exercises

- **Instrumentation**
 - Automated & manual readings
- **Visual Inspection**
 - Continued 24-hour government presence
- **USACE & Contractor Emergency Action Plans**
- **Joint Instrumentation Monitoring Plan**
- **Data Management System**



CONSTRUCTION UPDATE

Contractor Work Area Utilization



CONSTRUCTION UPDATE

Increased Traffic



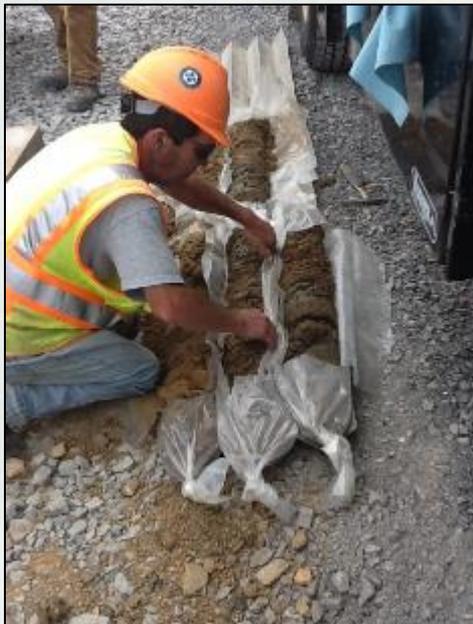
- Amount of traffic is dependent upon construction activity.
- Road Permits & Bonds will be in accordance with PennDOT and local requirements.
- As of 01 April: 13,912 Trucks for a total of 330,310 tons of stone delivered to the dam.



CONSTRUCTION UPDATE

Exploratory Holes / Drilling & Grouting

- Embankment
- Rock



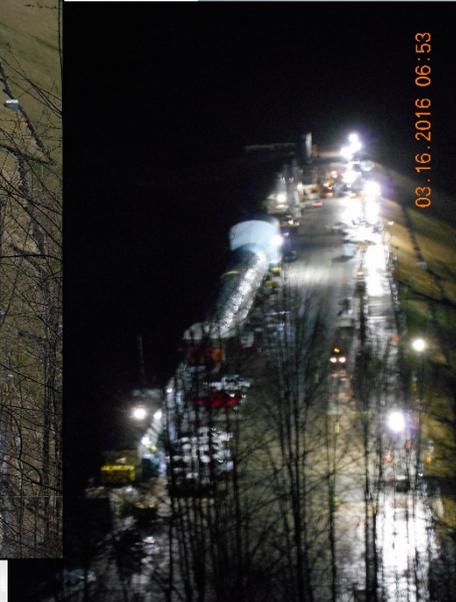
CONSTRUCTION UPDATE

Rock Drills



CONSTRUCTION UPDATE

Platform Work



Bencor is working 2 shifts,
6 days per week.



CONSTRUCTION UPDATE

Platform Work



Silos for Material Storage



CONSTRUCTION UPDATE

WHAT'S
NEXT?



- Complete Slurry Ponds and Finish Platform Slab.
- Complete Exploratory, Drilling & Grouting Operations.
- Begin Cutoff Wall Test Sections



CONSTRUCTION UPDATE

CUTOFF WALL TEST SECTIONS



Hydromill & Secant Pile Wall Test Sections



ECONOMIC IMPACTS

POSITIVES!

- Upgraded facilities at East Branch.
- Local hiring.
- Use of Local Contractors & Suppliers.
- Housing Rentals, Hotels.
- Restaurants, grocery, gas stations, etc.
- Fuel & oil, machine parts, equipment rentals.
- Road Repairs on SR 1001 and 1004.
- East Branch Lake still contributes to flood protection, fisheries and water quality benefits while under repair.
- Once complete, the Lake will continue serving the region in public safety, flood protection, recreation, and water quality for generations to come.



EMERGENCY MANAGEMENT



EMERGENCY MANAGEMENT

- **Activities since last public meeting:**
- 21 Jan – USACE - Presentation to Elk County Commissioner's.
- 4 Feb – USACE - Discussions with DOMTAR Corp. regarding impact of Dam Failure to Johnsonburg facility.
- 6 Feb – Elk County - Johnsonburg Press newspaper article on Emergency Management presentation on the status of East Branch Lake Dam construction project.
- 18 Feb - East Branch Lake Dam – Dam Safety Fact Sheet finalized for distribution to public.
- 28 Feb – Elk County - Discussions with Sen Toomey's staff on the need for East Branch NWS Warning Systems funding.
- 28 Feb – Elk County - PENN DOT and Pennsylvania State Police meeting's conducted.

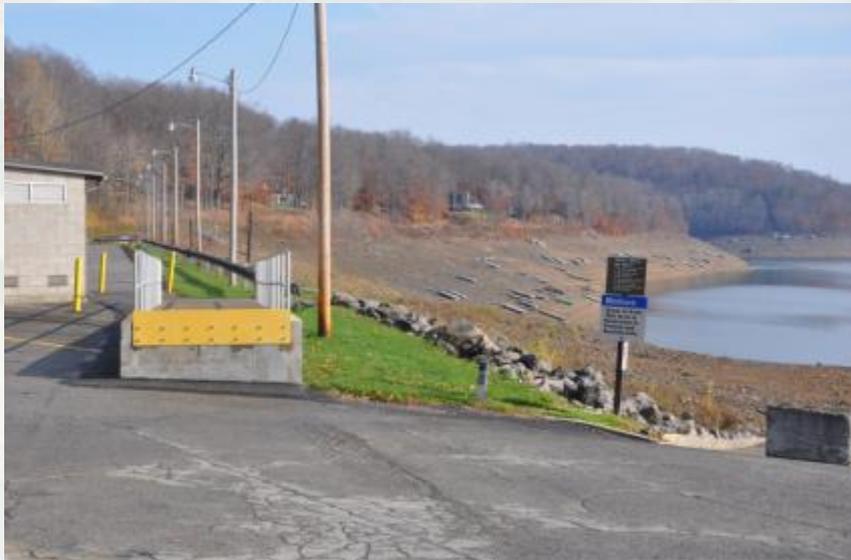


EMERGENCY MANAGEMENT

- **Future Activities:**
- Warning Notification Systems determination: Sirens; NWS Warning Radio; and or telephone notification system.
- Planning meeting with Jones, Johnsonburg, and Ridgway Emergency Managers.
- Creation of County and Twp. Emergency Action Plans for Dam Failure Emergency Notification and Evacuation.
- Exercising of above Emergency Action Plans.



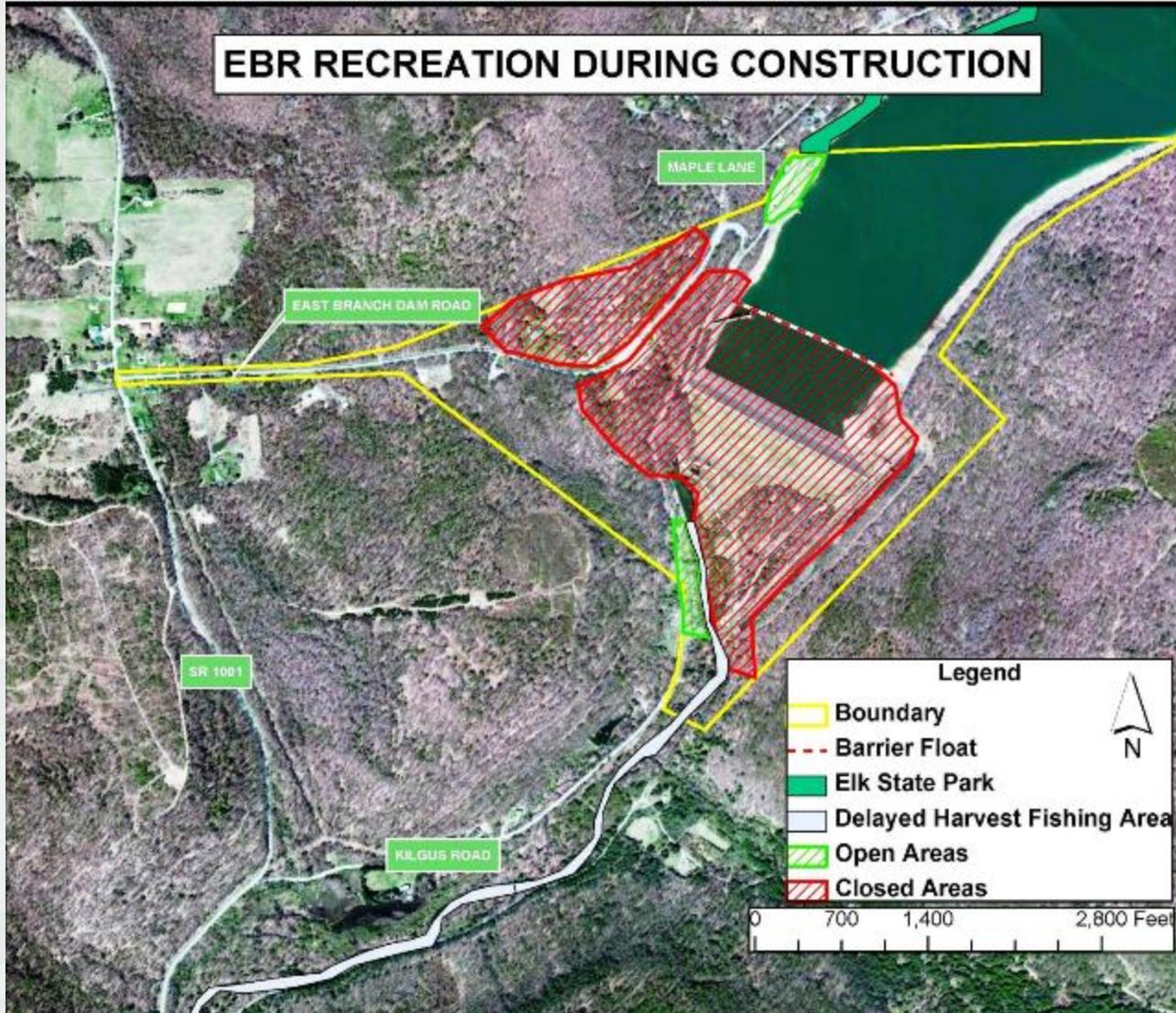
EAST BRANCH LAKE FACILITIES



- 41 Site Campground
 - ▶ Closed for Construction
 - ▶ Electrical Upgrades coming soon!!
- Overlook Day Use Area
 - ▶ Closed for Construction
- Boat Launch & Parking Lot
 - ▶ OPEN!!!!!!!!!!!!!!
- Kilgus Road Canoe/Kayak Launch
 - ▶ Open year-round
- Instanter Boat Launch
Elk State Park
 - ▶ waiting on pool to rise
- No public access across the dam.

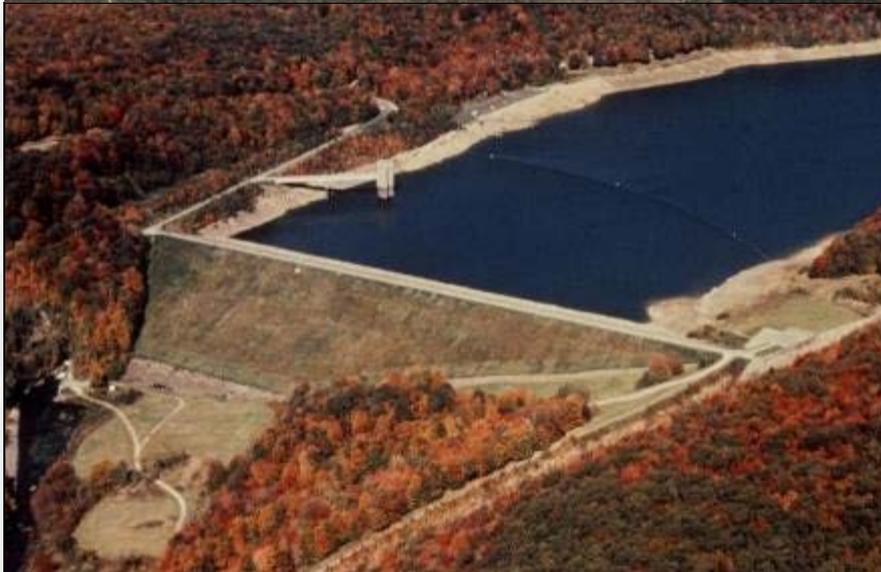


EAST BRANCH LAKE FACILITIES



EAST BRANCH LAKE FACILITIES

Traffic Control Measures/Install Barrier Float



1. **STOP SIGN:** top of hill intersection with access road
2. **YIELD SIGN:** near lower gate (traffic leaving the dam)
3. **CAUTION SIGN:** near upper gate
4. **10 MPH SIGN:** before horseshoe curve



EAST BRANCH LAKE FACILITIES

Alternatives to Closures:

- **Bendigo State Park Complex**

- **Allegheny National Forest**
 - ▶ **Twin Lakes Campground**
 - ▶ **Cook Forest**
 - ▶ **Private campgrounds in the area**

- **Other USACE facilities**
 - ▶ **Kinzua – Warren, PA**
 - ▶ **Tionesta – Tionesta, PA**



EAST BRANCH LAKE FACILITIES

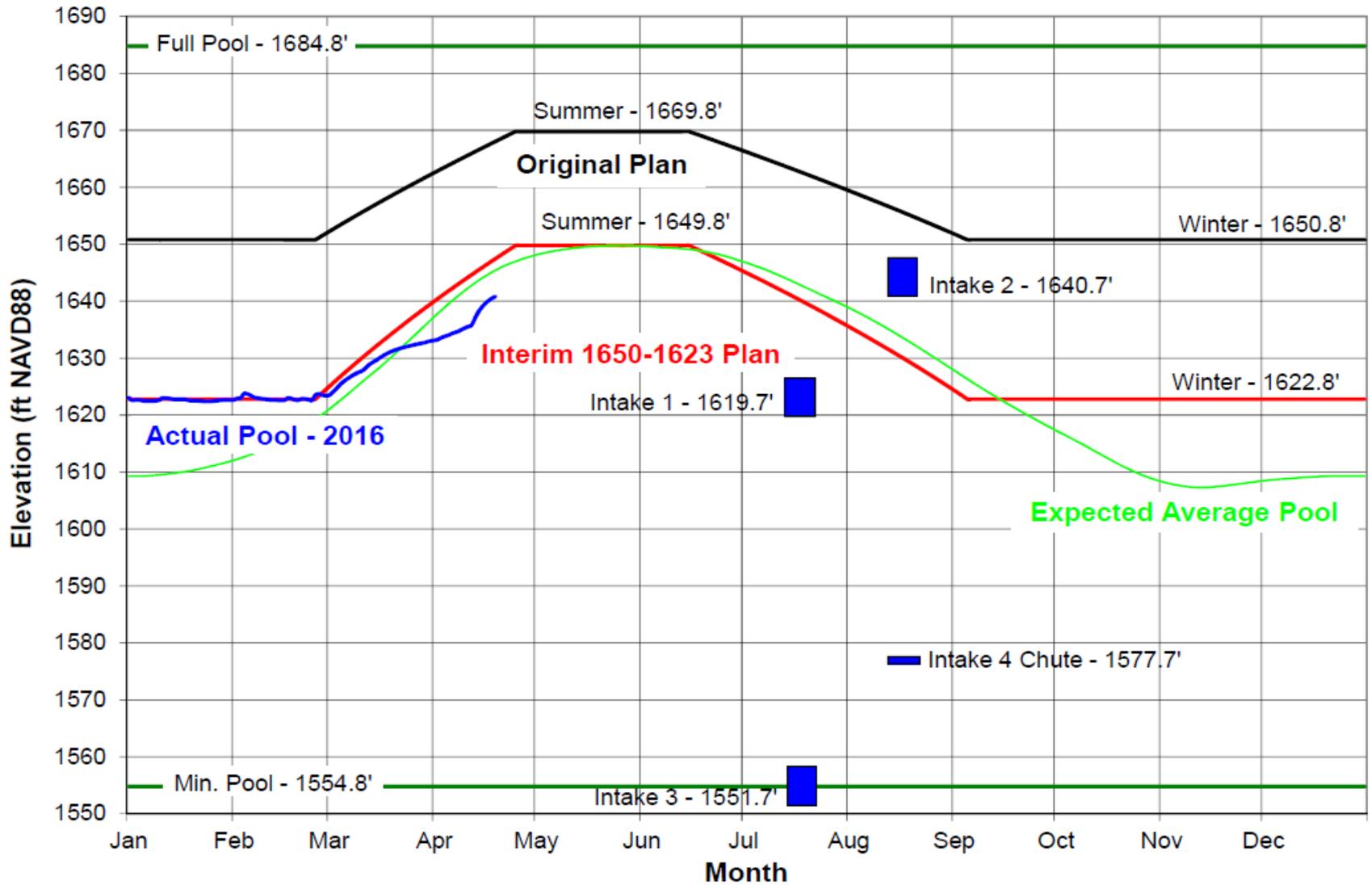
Authorized Project Purposes

- FLOOD RISK REDUCTION
- LOW-FLOW AUGMENTATION
- WATER QUALITY
- FISH & WILDLIFE MANAGEMENT
- RECREATION



18-Apr-16

East Branch Clarion River Lake 1650-1623 Interim Water Control Plan



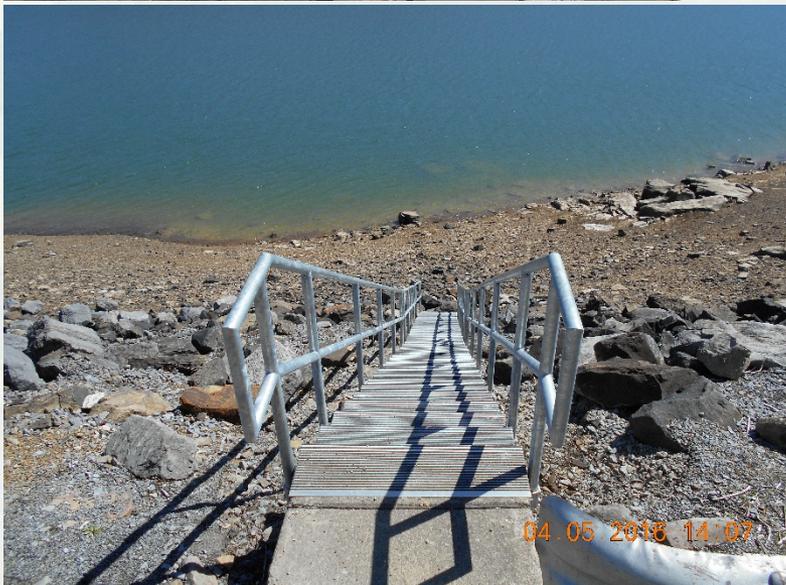
EAST BRANCH LAKE FACILITIES

old steps to the boat docks



EAST BRANCH LAKE FACILITIES

new steps to the boat docks



LIMESTONE SAND TREATMENTS benefit lake water quality



24/7 Dam Monitor spots a Spotted Salamander



MACROINVERTEBRATE SURVEYS



GILL NETTING SURVEYS



GILL NETTING SURVEYS

24 nets set; 195 fish captured

- **Northern Pike**
 - ▶ **33.8% of the total catch**
 - ▶ **54 of the 66 pike, were of legal size**
 - ▶ **Largest - 32 inches 7.9 lbs**



NORTHERN PIKE - 32 INCHES 7.9 LBS



GILL NETTING SURVEYS

24 nets set; 195 fish captured

- **White Sucker**
 - ▶ **27.7% of the total catch**
 - ▶ **Mostly in the shallows spawning**
 - ▶ **Provide important forage for the larger sport fish – Bass, Pike, Walleye**



GILL NETTING SURVEYS

24 nets set; 195 fish captured

- **Walleye 17.4% of the total catch**
 - ▶ **Total of 34 walleye sizes 17-25 inches**
 - ▶ **All legal size and in good health!**



FEMALE WALLEYE - 24 INCHES 4.6 LBS



GILL NETTING SURVEYS

24 nets set; 195 fish captured

- **Other species captured with gill nets:**
 - ▶ **Rock Bass – 24**
 - ▶ **Smallmouth bass – 10 (all greater than 12 inches)**
 - ▶ **Brook Trout – 5**
 - ▶ **Lake Trout – 2**
 - ▶ **Tiger Musky – 1**
 - ▶ **Yellow perch – 1**



SMALLMOUTH BASS – 17 INCHES 3 LBS



LAKE TROUT - 27 INCHES 6.5 LBS



TIGER MUSKY – 31 INCHES 5.9 LBS



CONTACT INFORMATION

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Community Information System

Websites:

www.lrp.usace.army.mil/Missions/Planning,ProgramsProjectManagement/HotProjects/EastBranchDamRepair

www.facebook.com/EastBranchLakeUSACE



QUESTIONS ?

