

East Branch Dam Safety Modification Project

PUBLIC INFORMATION MEETING
November 9, 2016

Johnsonburg, PA

*US Army Corps of Engineers,
Pittsburgh District*



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MEETING AGENDA

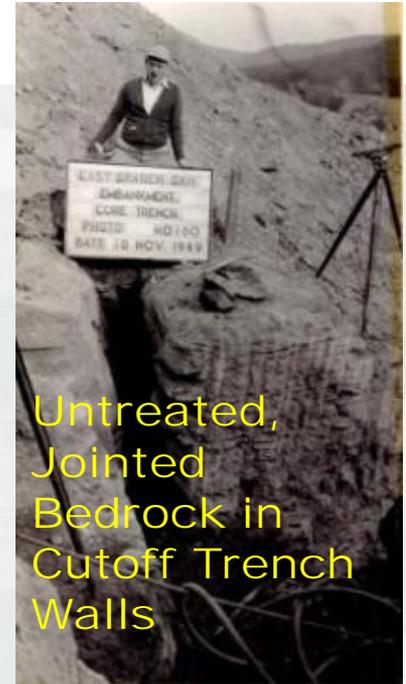
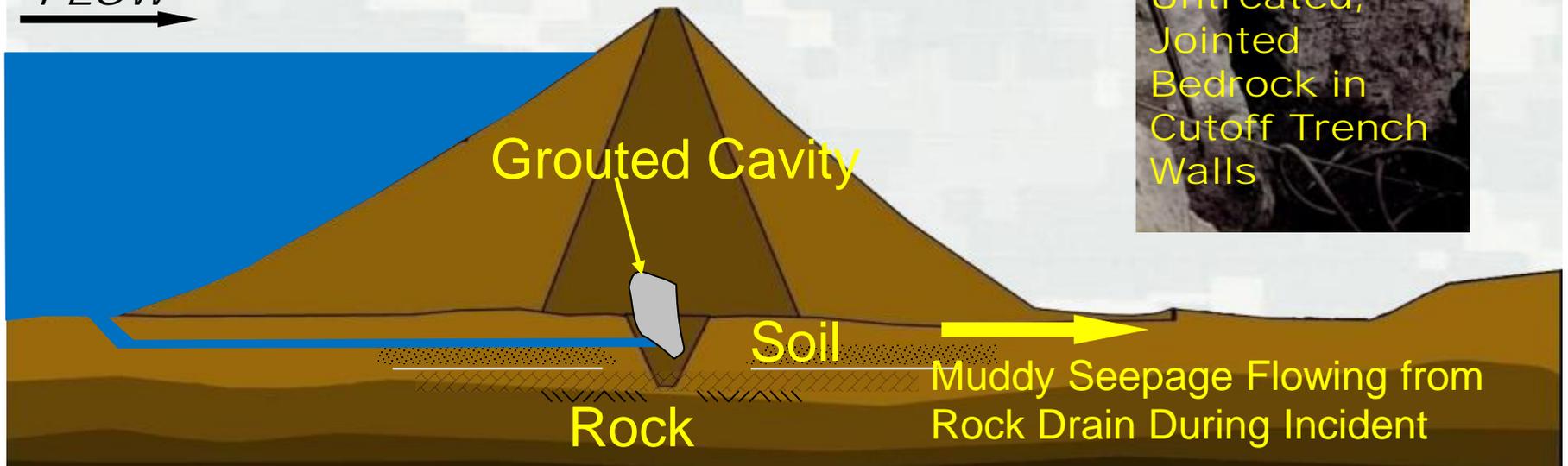
- **Opening Remarks** – District Commander, COL John Lloyd
- **Project History** – Jeff Fritz, Deputy Chief of Engr & Construction
- **Construction Update** – Kim Warner, Resident Engineer
- **Emergency Management** – Mike McAllister, Elk County Emergency Services Director & Jim Christ, Readiness Office
- **East Branch Lake Facilities** – Autumn Rodden, East Branch Lake Resource Manager
- **Water Management** – Lewis Kwett, Hydraulic Engineer
- **Questions**



PROJECT HISTORY 1957 Emergency Repair

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

FLOW
→



Untreated, Jointed Bedrock in Cutoff Trench Walls



PROJECT HISTORY

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



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PROJECT HISTORY

Site Development Construction Contracts

2011 - 2014



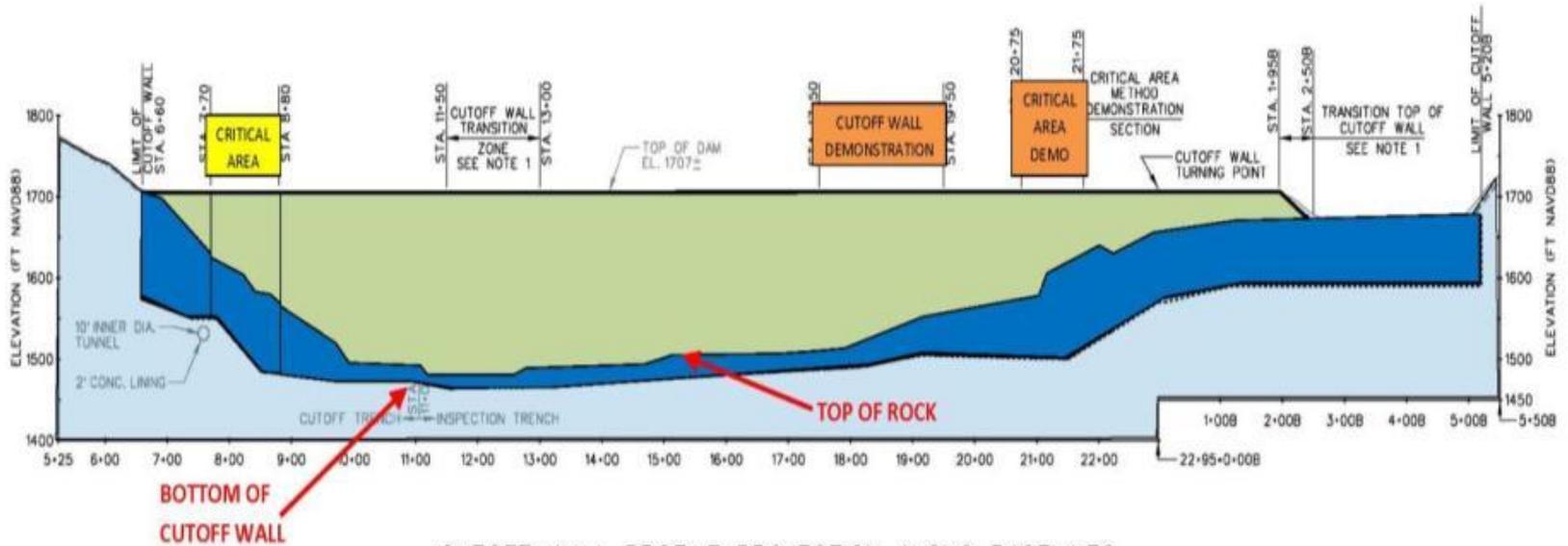
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PROJECT HISTORY Cutoff Wall Design



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

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PROJECT HISTORY 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
- **04 Feb 2016** – Contractor's Name Change to Bencor Global, Inc



Bencor Global Inc.

Frisco, TX

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



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CONSTRUCTION UPDATE



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CONSTRUCTION UPDATE

DAM SAFETY MONITORING

- **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

Truck Traffic

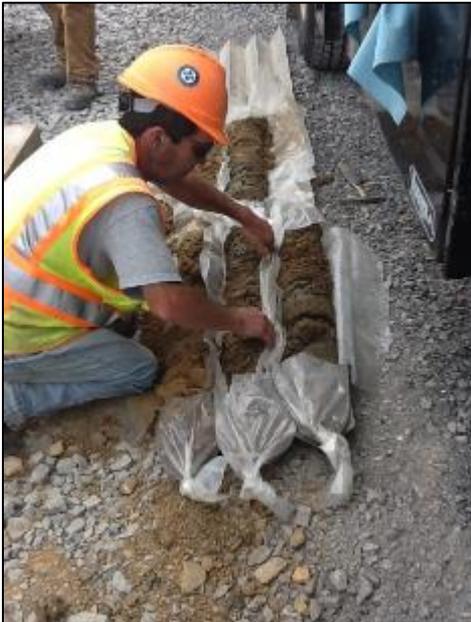
- Amount of traffic is dependent upon construction activity.
- Road Permits & Bonds will be in accordance with PennDOT and local requirements.
- Approximately 14,000 Trucks for a total of over 331,000 tons of stone delivered to the dam.



CONSTRUCTION UPDATE

Drilling & Grouting

- Soils
- Rock



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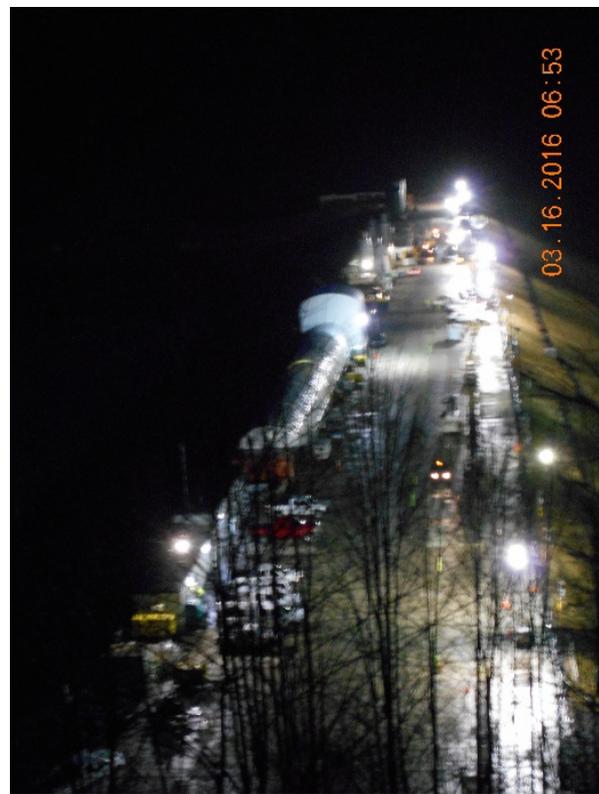


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CONSTRUCTION UPDATE

Platform Work



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**Bencor is working 2 shifts,
6 days per week.**



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CONSTRUCTION UPDATE

Platform Work



Winterizing the DeSanding Plant



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CONSTRUCTION UPDATE

What's Next?

- Complete drilling & grouting operations
- Begin cutoff wall test sections



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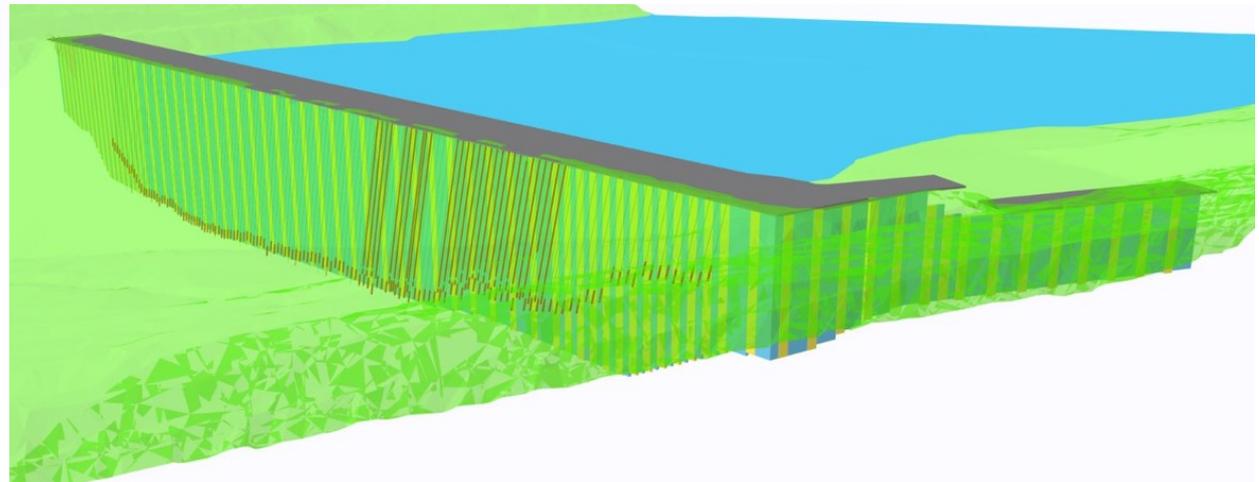
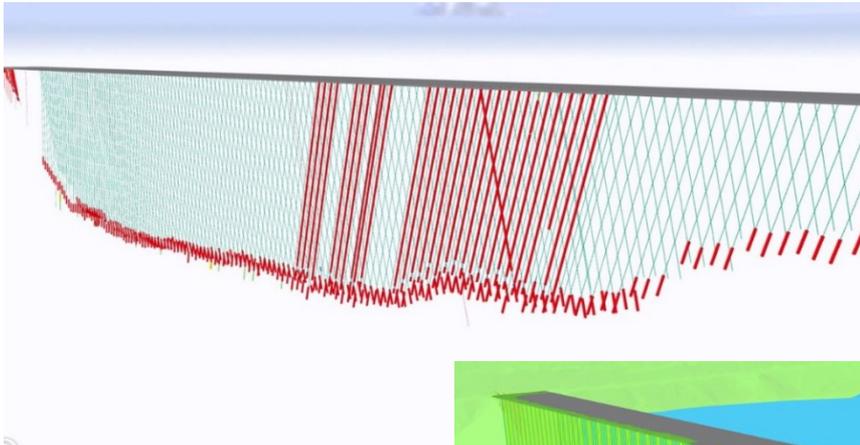


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CONSTRUCTION UPDATE

Cutoff Wall Panel Layouts/Grout Hole Layouts



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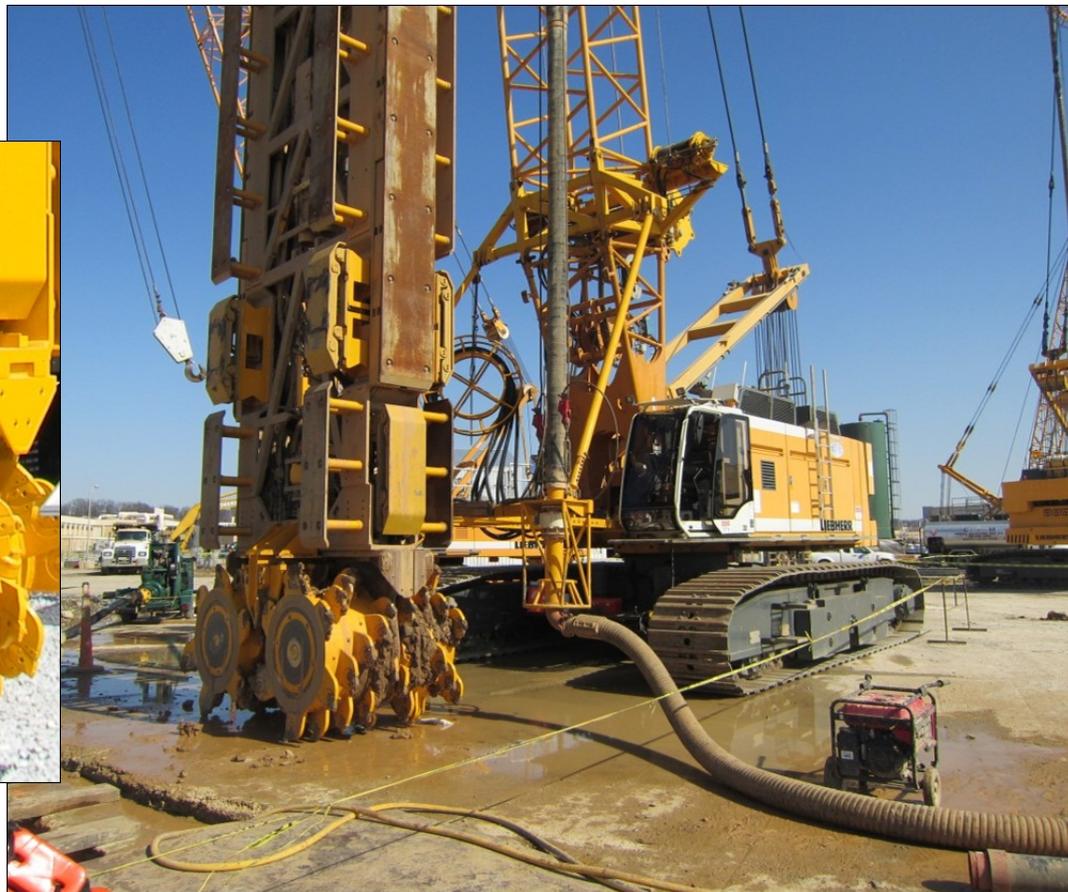


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CONSTRUCTION UPDATE

CUTOFF WALL TEST SECTIONS



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Hydromill



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CONSTRUCTION UPDATE

CUTOFF WALL TEST SECTIONS



Desander



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CONSTRUCTION UPDATE

CUTOFF WALL TEST SECTIONS



Panel Joint Verification



CONSTRUCTION UPDATE

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
09 Nov 2016 Public Meeting	39%	30-Jun-19	\$138,629,627

* Subject to change depending on weather, on-site conditions, geologic conditions, etc.



ECONOMIC POSITIVES

- Upgraded roads and 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.



EMERGENCY MANAGEMENT



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EMERGENCY MANAGEMENT

Activities since last public meeting:

- 30 June, Elk Co; Jones Twp., PEMA ; USACE Emergency Action Plan meeting
- 19 September Elk County Commissioners approved a contract for a Swift 911 warning system supporting initiatives East Branch Dam Safety



EMERGENCY MANAGEMENT

Future Activities:

- Swift 911 warning system implementation
- Planning meeting with Jones, Johnsonburg, and Ridgway Emergency Managers.
- Finalization of County and Twp. Emergency Action Plans for Dam Failure Emergency Notification and Evacuation.
- Exercising of above Emergency Action Plans.



EMERGENCY MANAGEMENT

WWW.ELKOES.COM



SWIFT 911 EMERGENCY NOTIFICATION SERVICES

Add your contact information to our emergency notification list so you can be contacted with important information and announcements.

[Add/Remove Yourself](#) ▶

VOICE TEXT EMAIL FAX

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 **Swift911 Public**

Text
SWIFT911
to
99538

Stay Informed!
During Emergency Situations, Important Events and More

*Ensure You KNOW
Manage Your Alerts
Customize Your Information*

 **SWIFTRREACH** www.swiftreach.com 1.800.794.3891

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EMERGENCY MANAGEMENT SWIFT 911 MOBILE APP



- ANDROID
- APPLE
- WINDOWS



EAST BRANCH LAKE FACILITIES



41 Site Campground

- Closed for Construction
- Electrical Upgrades coming soon!!

Overlook Day Use Area

- Closed for Construction



No public access across the dam.

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EAST BRANCH LAKE FACILITIES



Boat Launch

- Closed for the season
- Expected to reopen in mid-April

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EAST BRANCH LAKE FACILITIES



Instanter Boat Launch Elk State Park

- Expected to reopen in mid-April

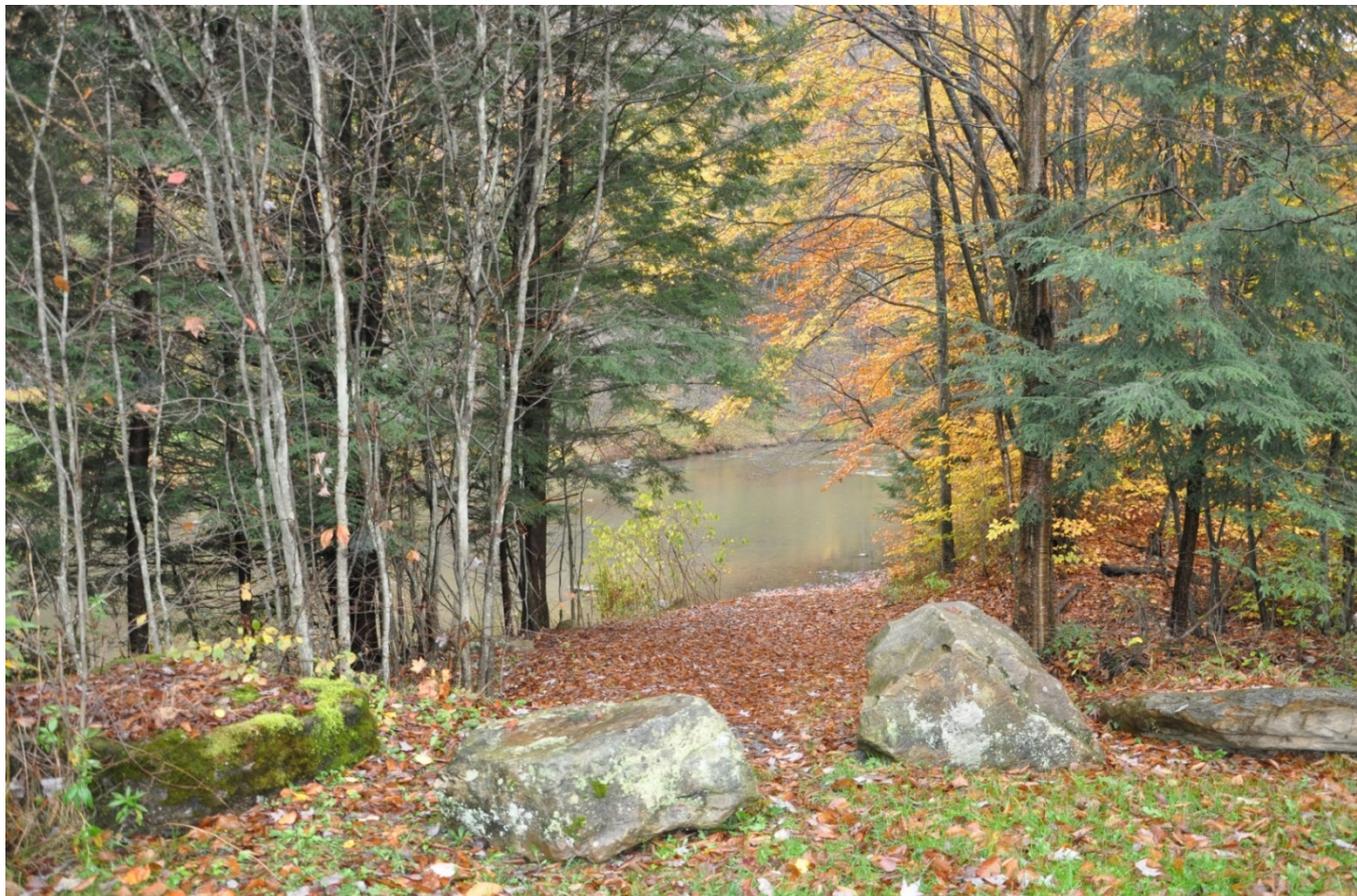
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ALTERNATIVE RECREATION OPPORTUNITIES



Kilgus Road Canoe/Kayak Launch

- Open year-round

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ALTERNATIVE RECREATION OPPORTUNITIES



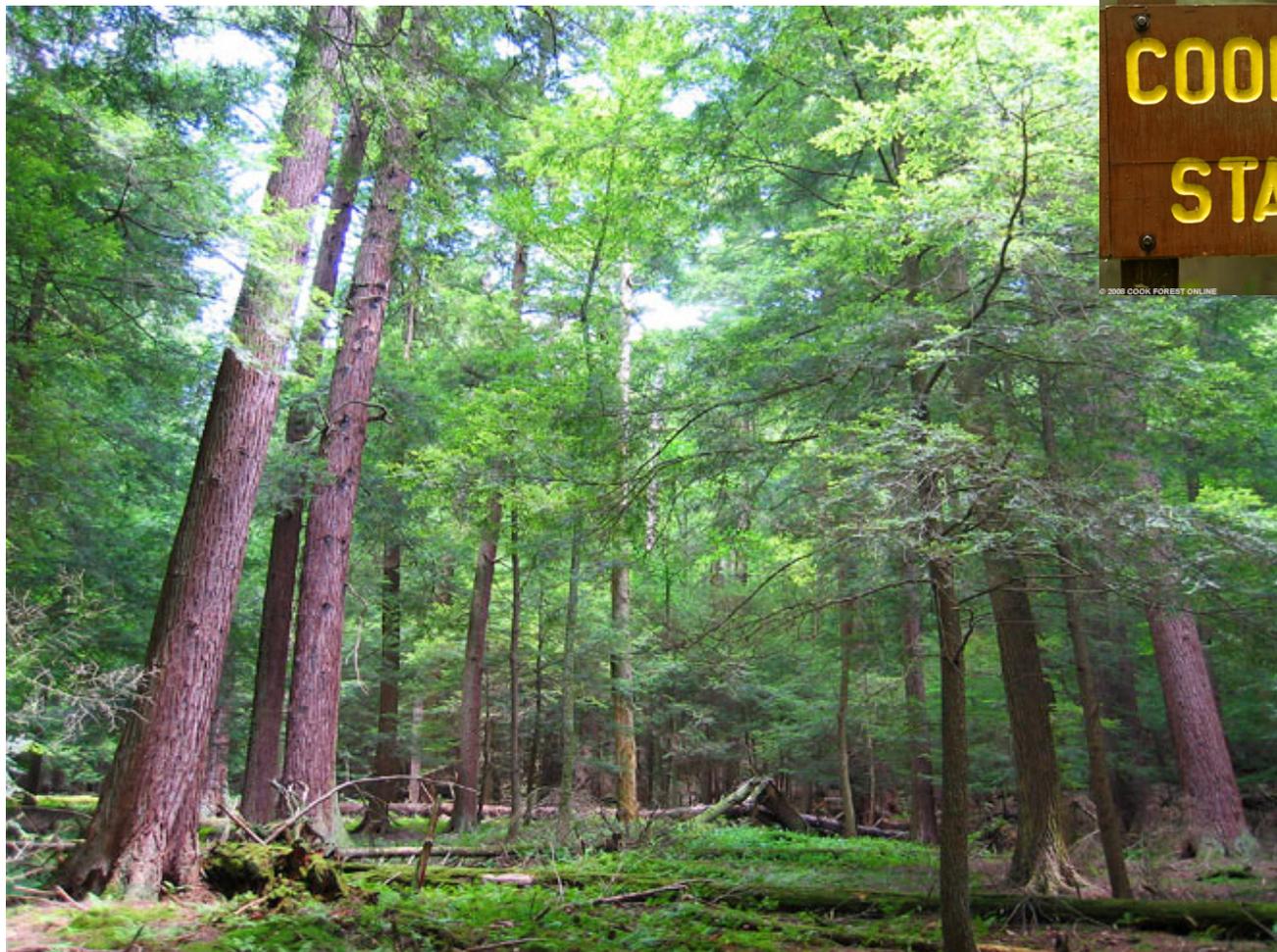
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ALTERNATIVE RECREATION OPPORTUNITIES



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ALTERNATIVE RECREATION OPPORTUNITIES



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ALTERNATIVE RECREATION OPPORTUNITIES

 Kinzua Dam and Allegheny Reservoir
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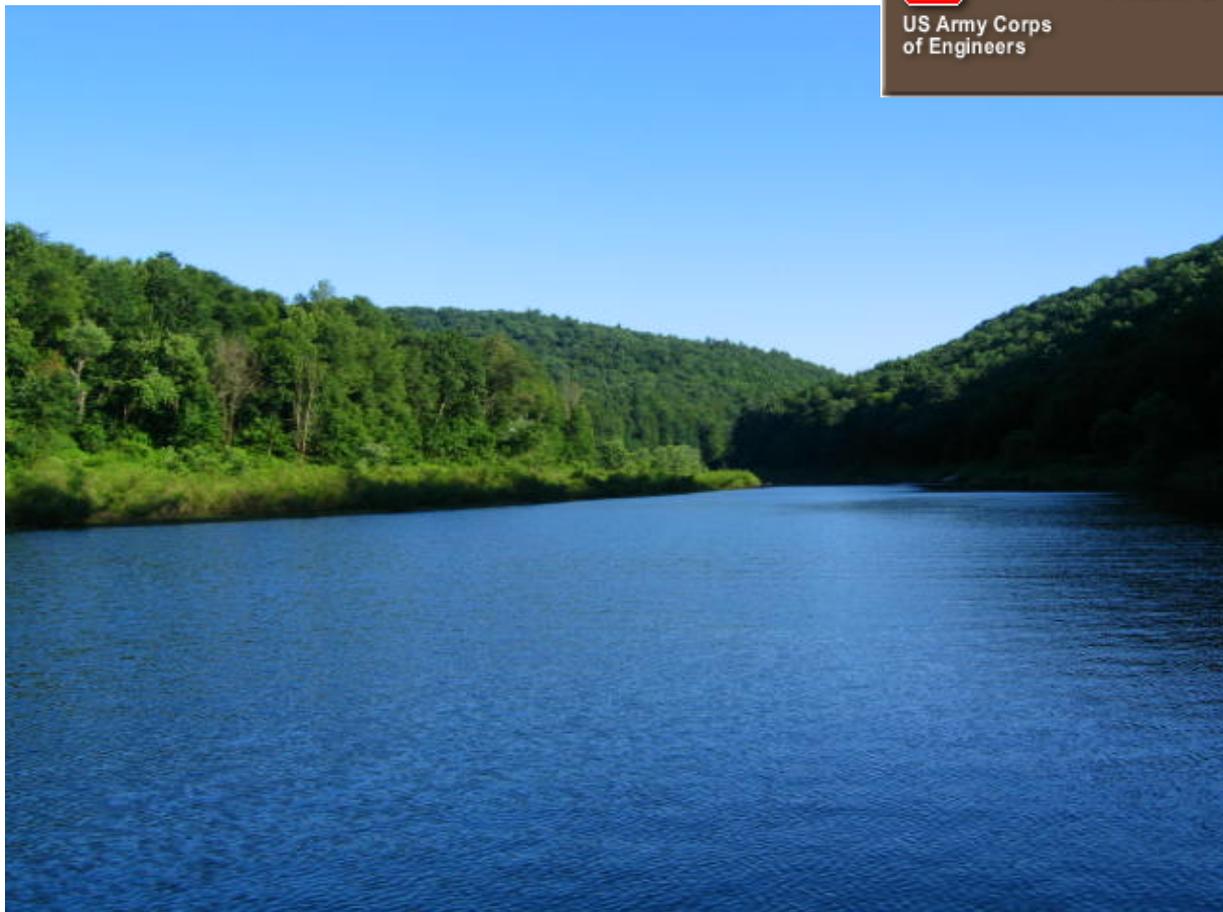


ALTERNATIVE RECREATION OPPORTUNITIES



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Tionesta Lake



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EAST BRANCH LAKE FACILITIES

Authorized Project Purposes

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



WIRE ROPE REPLACEMENT THIS FALL



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CULVERT REPLACEMENT THIS YEAR



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TO REDUCE THIS...



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2016 LIMESTONE SAND TREATMENTS: SPRING AND FALL

Bendigo State Park

- Seven Mile
- Borgardy Run

Elk State Forest

- Whittaker Run

Domtar Paper Company

- County Line
- Doe Run
- East Branch

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- Straight Creek



FISHERY

- NO OBSERVED ADVERSE IMPACTS TO THE EAST BRANCH LAKE FISHERY DUE TO LOW WATER LEVELS



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2000 TIGER MUSKELLUNGE RELEASED ON OCT. 25, 2016



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2000 TIGER MUSKELLUNGE RELEASED ON OCTOBER 25, 2016



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PA FISH AND BOAT FISH STOCKING AT EAST BRANCH LAKE TO CONTINUE...



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FOSSIL FIND AT EAST BRANCH



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ON SITE GEOLOGISTS BELIEVE IT TO BE *LEPIDENDRON*



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BEAR RELEASE AT EAST BRANCH



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WATER MANAGEMENT



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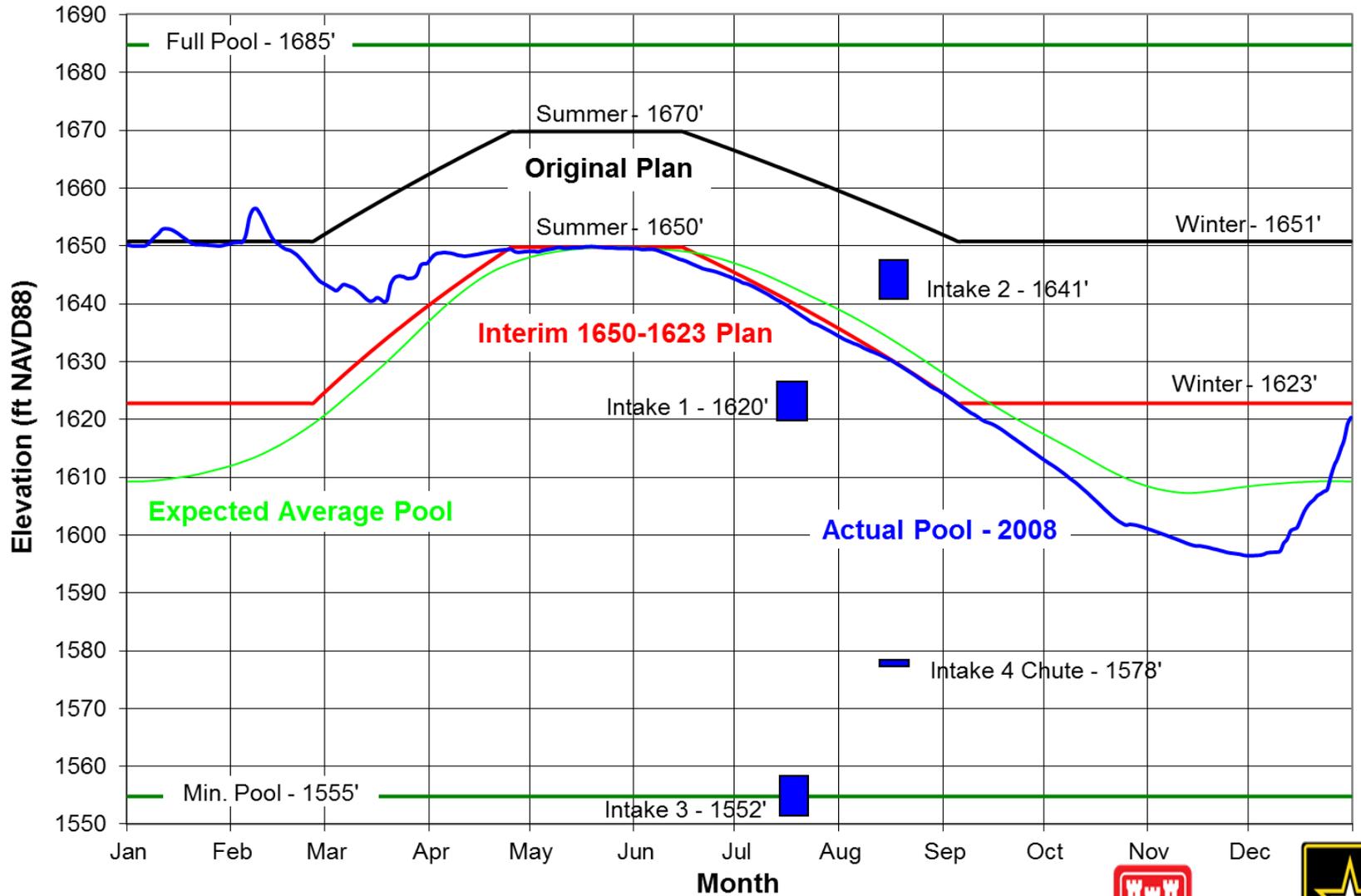


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East Branch Clarion River Lake 1650-1623 Interim Water Control Plan

31 December 2008



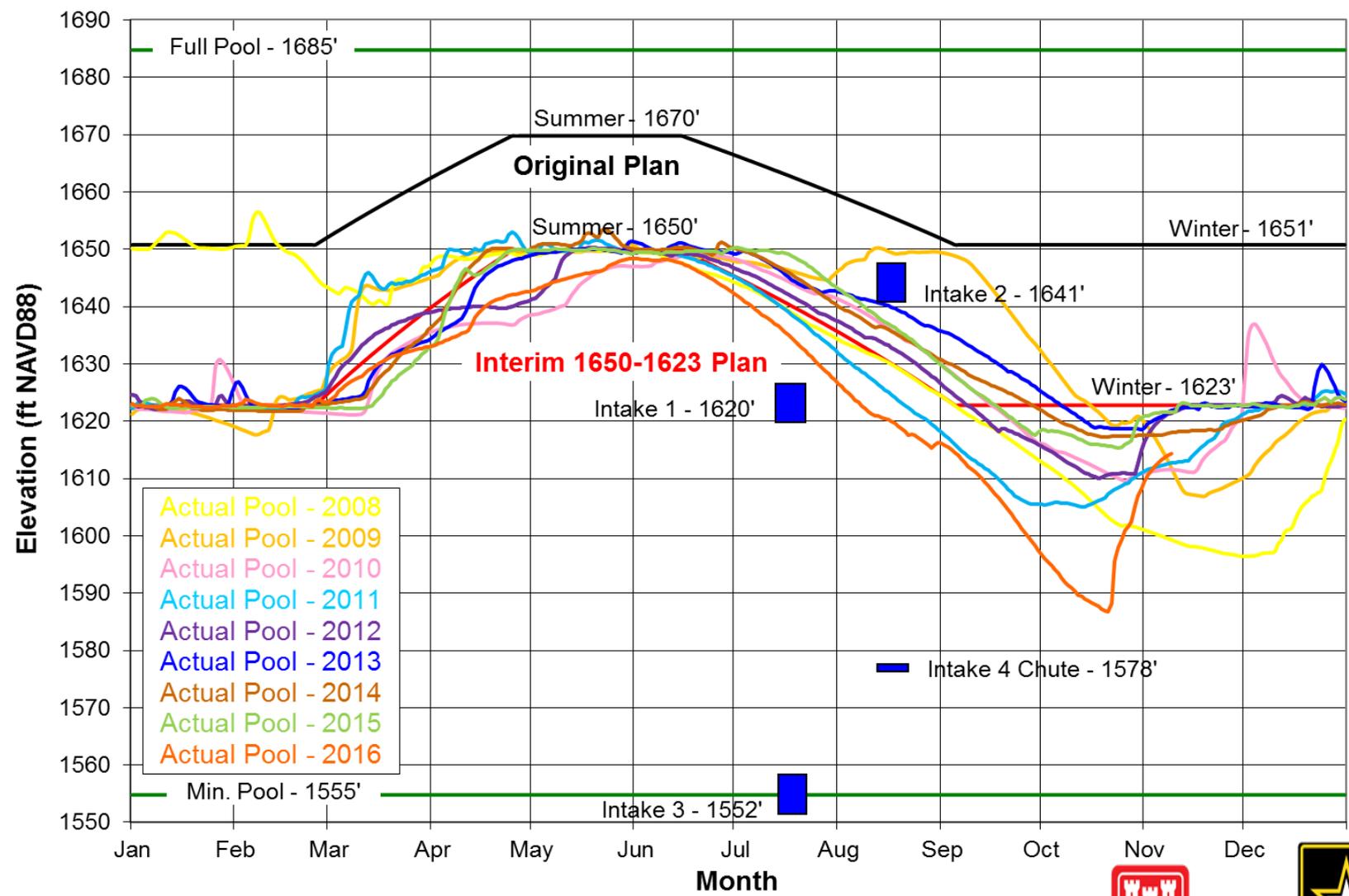
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East Branch Clarion River Lake 1650-1623 Interim Water Control Plan

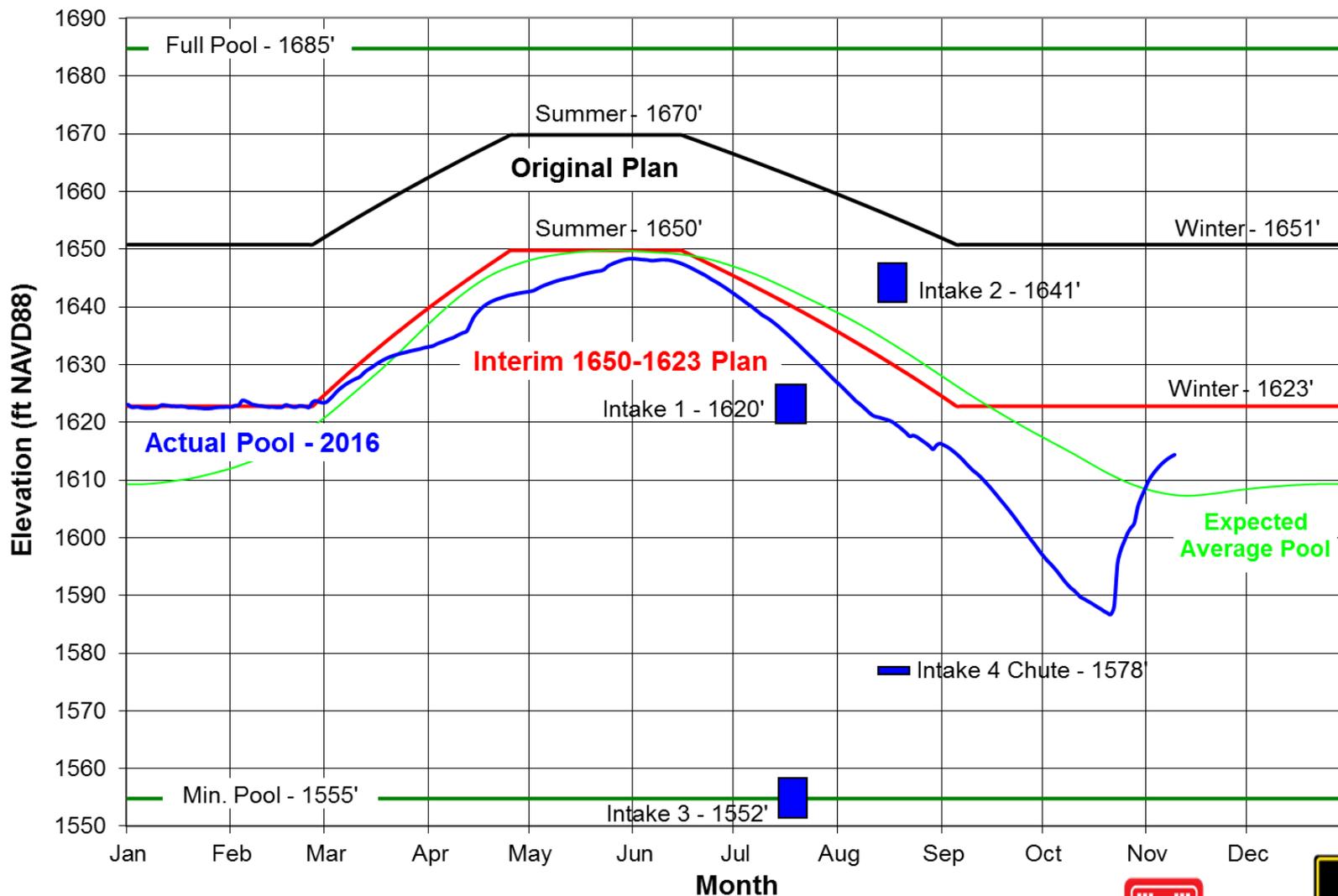


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East Branch Clarion River Lake 1650-1623 Interim Water Control Plan

8 November 2016



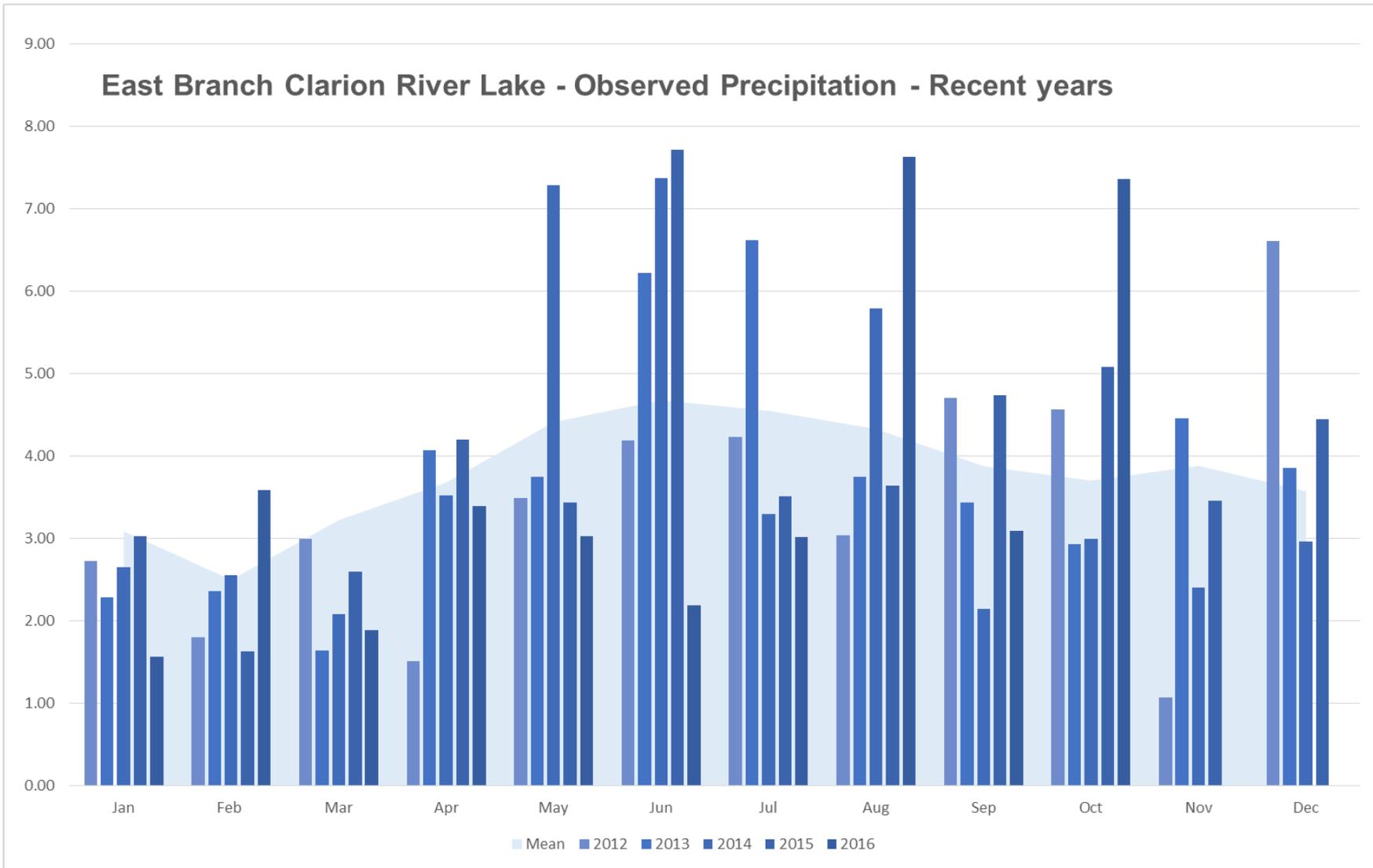
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East Branch Clarion River Lake - Observed Precipitation - Recent years



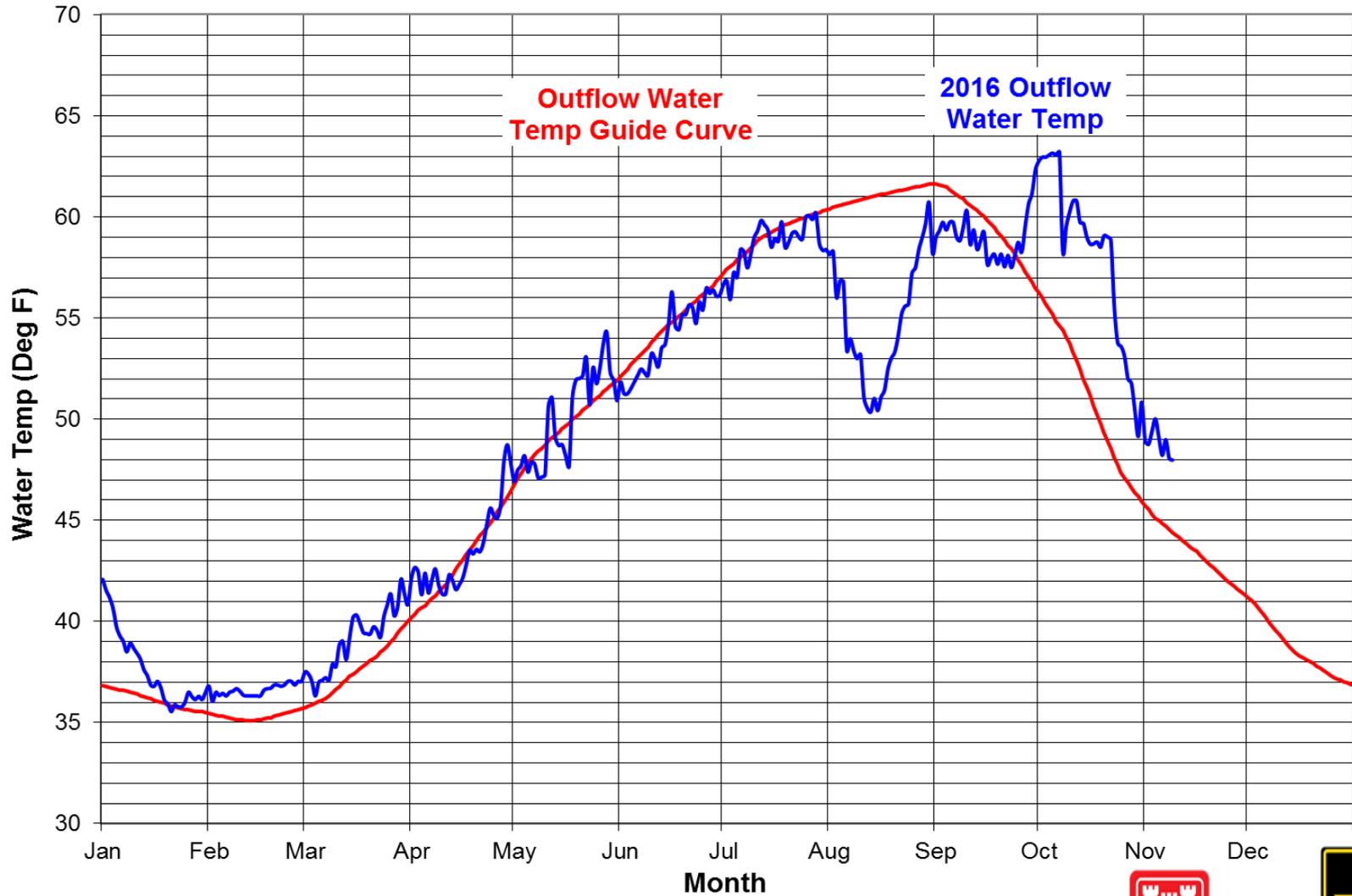
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East Branch Clarion River Lake 1650-1623 Interim Water Control Plan



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WATER MANAGEMENT



Low Pool: 1586.7 ft
= Storage: 7400 ac-ft



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WATER MANAGEMENT



Low Pool: 1586.7 ft
= Storage: 7400 ac-ft

Rainfall: 3.9 in in 5 days

Elevation: 1599.5 ft
= Storage: 12,200 ac-ft



CONTACT INFORMATION

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Websites:

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

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QUESTIONS?



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