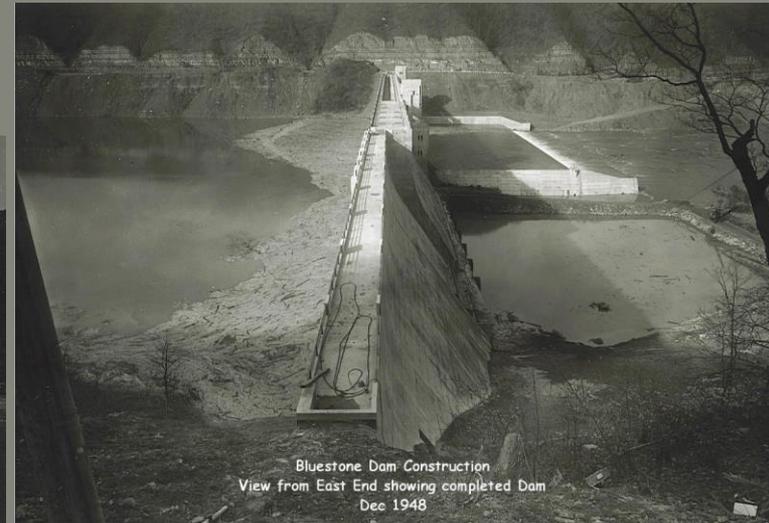


BLUESTONE DAM AN OVERVIEW

NATIONAL INVENTORY OF DAMS ID: WV08902

Updated 10 October 2017



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"The views, opinions and findings contained in this report are those of the author(s) and should not be construed as an official Department of the Army position, policy or decision, unless so designated by other official documentation."



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WHERE IN THE WORLD IS BLUESTONE?



Bluestone Dam



Kanawha Basin

- Bluestone Dam is on the New River, just upstream of the Greenbrier River.
- Bluestone Dam controls a watershed nearly the size of Connecticut
- The New River is renamed the Kanawha River at Gauley Bridge, WV.
- Bluestone works with Summersville & Sutton Dams to reduce flood risk along the New & Kanawha River valleys all the way to Point Pleasant and down the Ohio River.
- ½ the water that passes Charleston, WV comes through Bluestone Dam.

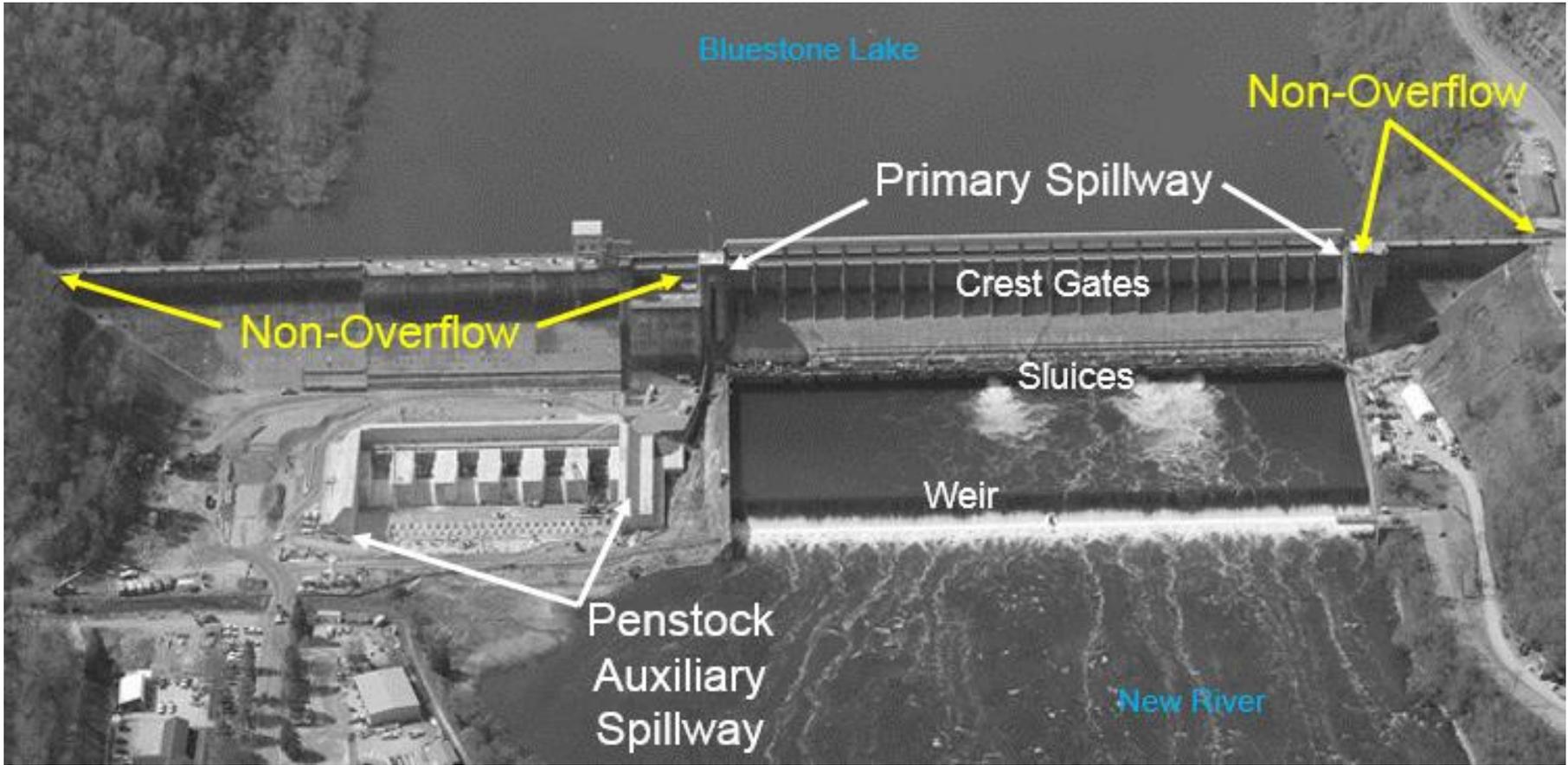
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WHAT IS BLUESTONE DAM?



- Bluestone Dam is a Straight Concrete Gravity Dam
- Bluestone Dam is approximately 165 feet high
- Bluestone Dam is nearly ½ mile long
- Bluestone Dam impounds an 11 mile long lake on the New River

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WHAT IS BLUESTONE DAM'S PURPOSE?

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BLUESTONE DAM HAS MULTIPLE PURPOSES:

- 1936: Flood risk management = HELP REDUCE FLOOD RISKS
- 1938: Hydro-electric Power development = NOT YET INSTALLED
- 1944: Recreation = FISHING, BOATING, CAMPING
- 1958: Fish & wildlife enhancement added = GAME MANAGEMENT
- 1988: Enhanced recreation = WHITE WATER RAFTING
- 1996: Drift and debris removal = PASS FLOOD DEBRIS



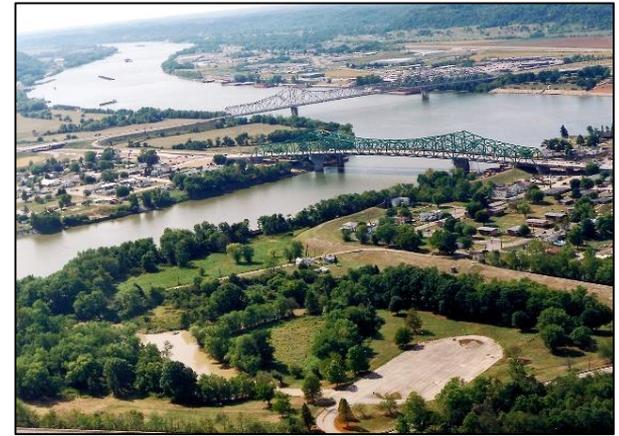
WHERE DOES BLUESTONE DAM REDUCE FLOOD RISK?

\$5.9B Cumulative Damages Prevented Throughout the New & Kanawha River Valleys

Hinton to Montgomery to Industry



Charleston to John Amos to Pt. Pleasant



And beyond on the Ohio River..

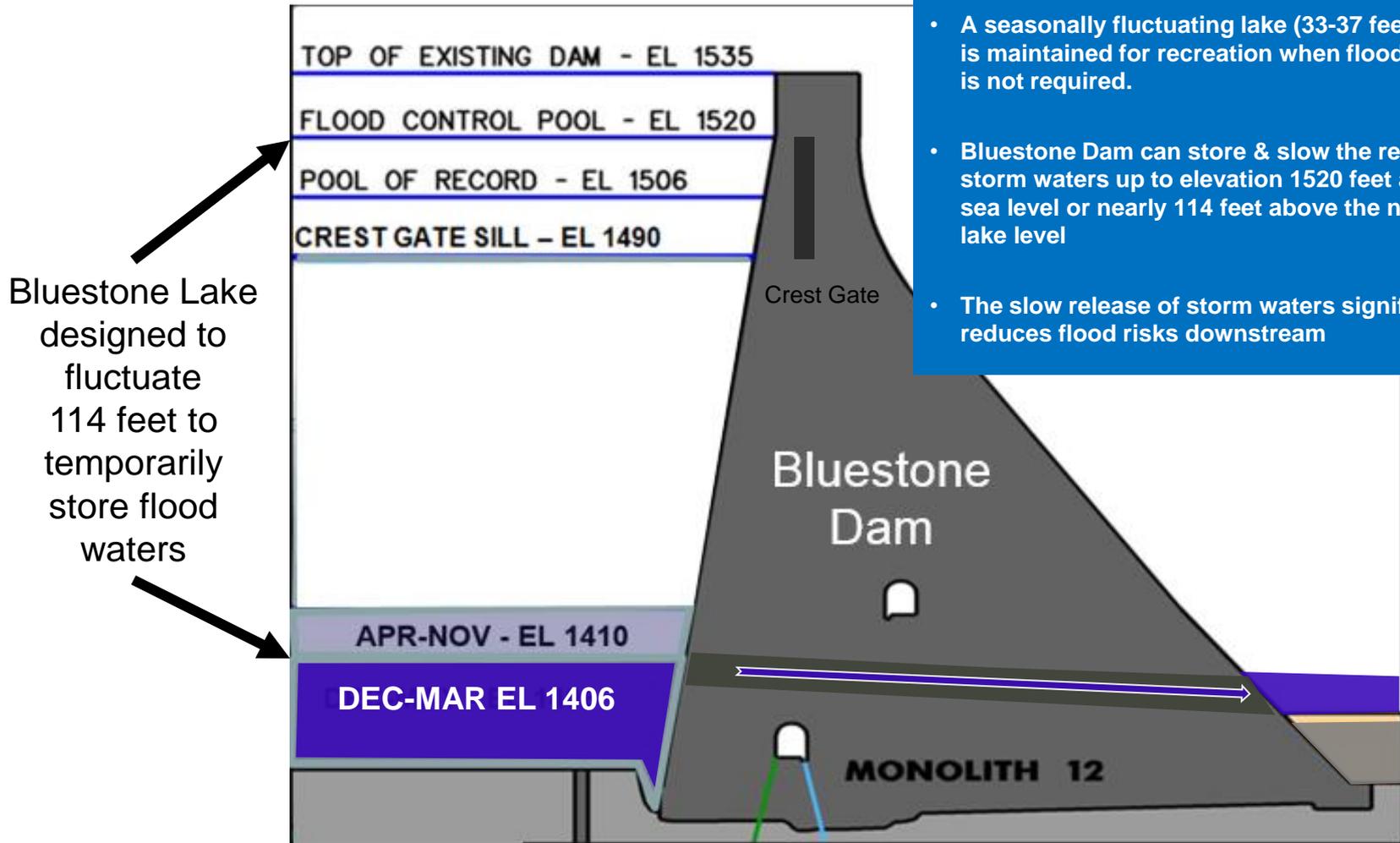
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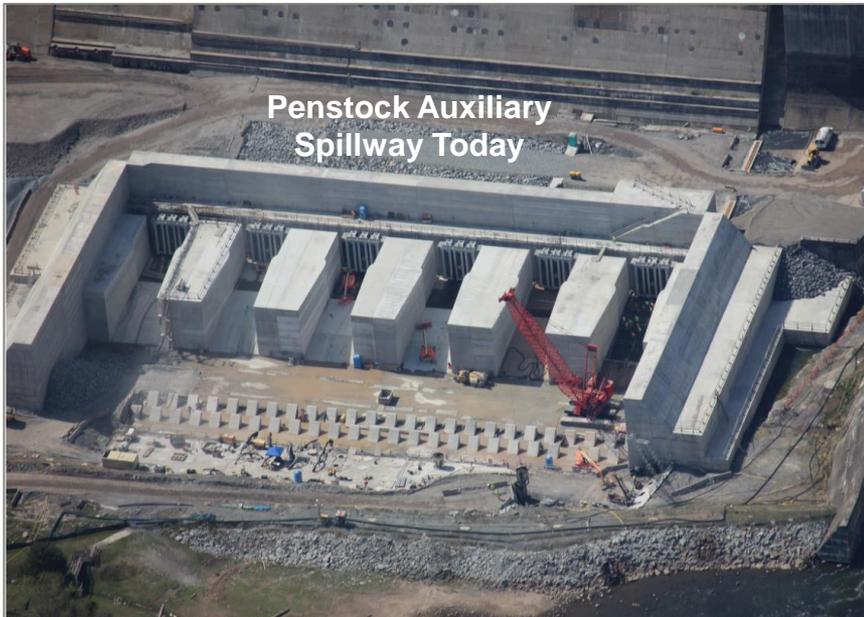
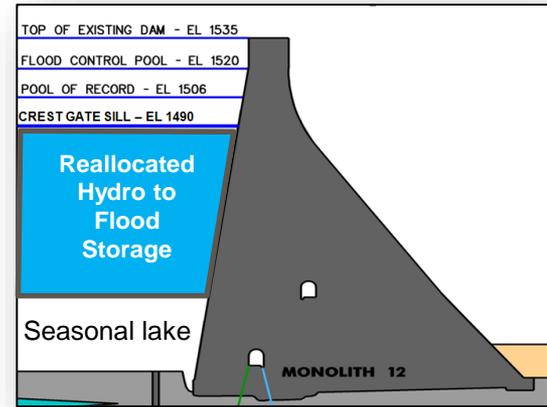
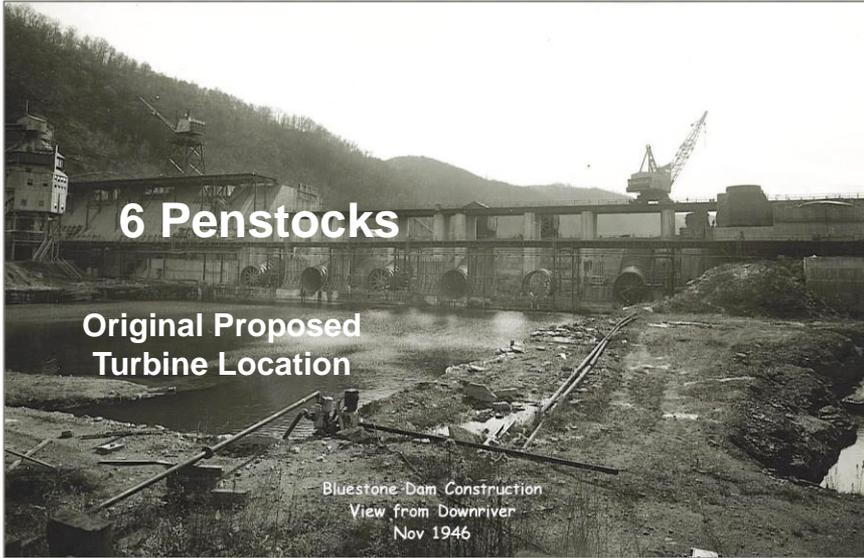


HOW DOES BLUESTONE DAM WORK?



- Bluestone Dam normally sits almost empty.
- A seasonally fluctuating lake (33-37 feet deep) is maintained for recreation when flood storage is not required.
- Bluestone Dam can store & slow the release of storm waters up to elevation 1520 feet above sea level or nearly 114 feet above the normal lake level
- The slow release of storm waters significantly reduces flood risks downstream

BLUESTONE DAM HYDRO POWER



- 6 tunnels called penstocks installed for hydro-electric power.
- Power generating plant was never installed.
- Seasonal lake lowered by 90 feet: reallocation of storage to flood storage.
- 2010-2016: six tunnels converted into an Penstock auxiliary spillway.
- Penstock auxiliary spillway can discharge extreme storms waters & reduce the probability of the dam being overtopped & breaching.

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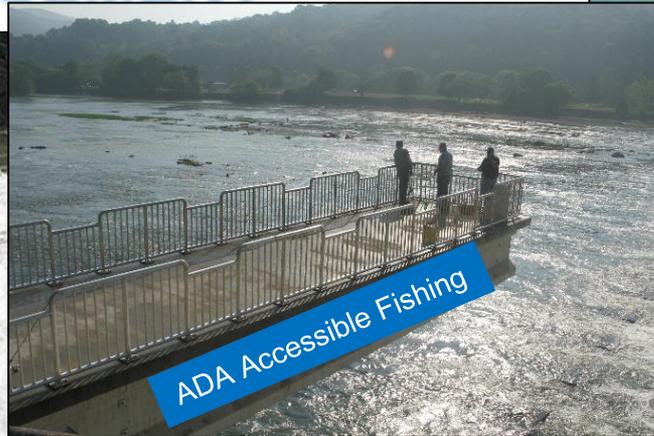


BLUESTONE DAM RECREATION FISH & WILDLIFE ENHANCEMENT

Aquatic Habitat



Whitewater downstream



ADA Accessible Fishing



Terrestrial Habitat



Bluestone Lake



Boat Races

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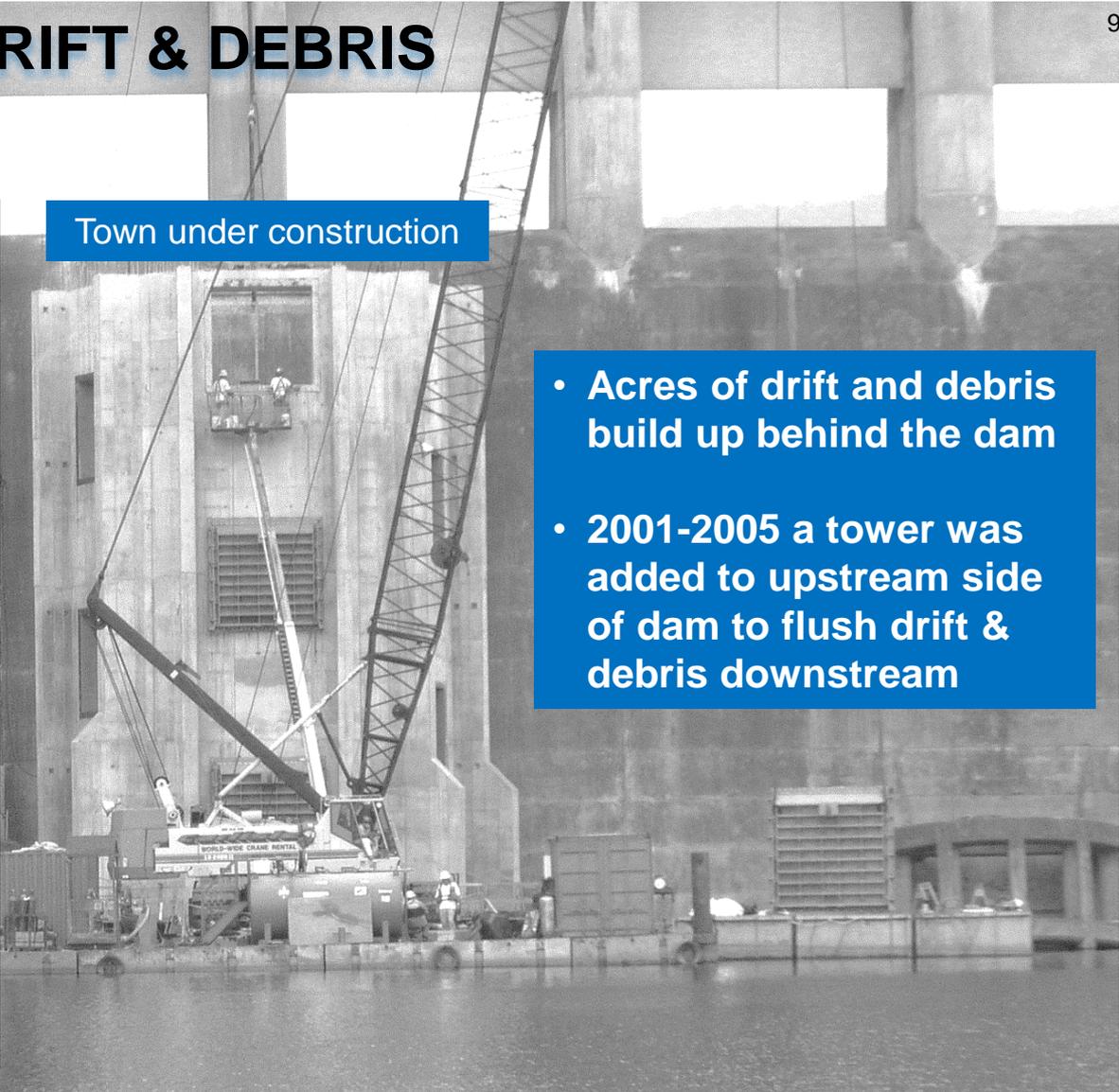
BLUESTONE DAM DRIFT & DEBRIS



Pre-tower drift field



Town under construction

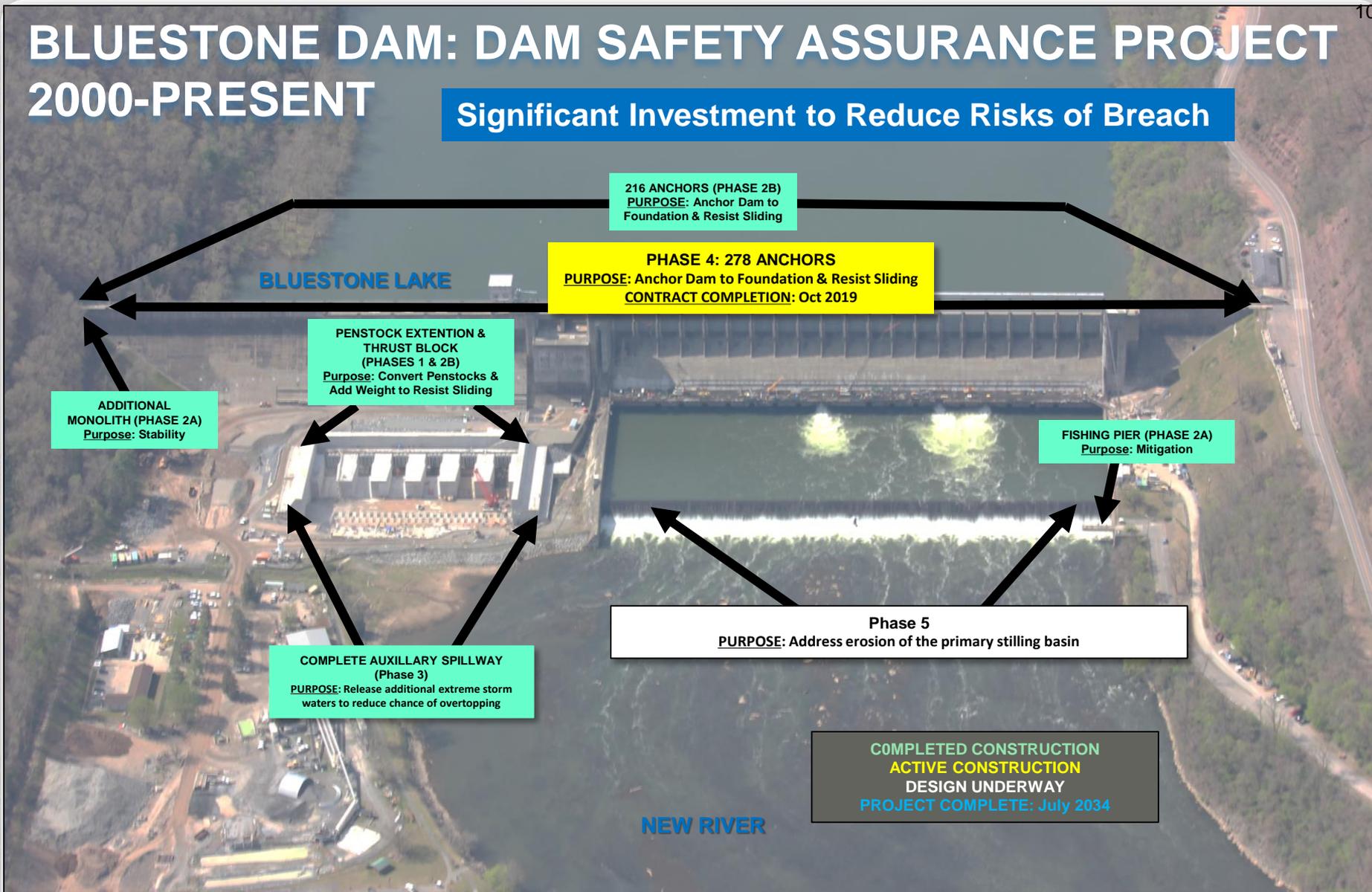


- Acres of drift and debris build up behind the dam
- 2001-2005 a tower was added to upstream side of dam to flush drift & debris downstream



BLUESTONE DAM: DAM SAFETY ASSURANCE PROJECT 2000-PRESENT

Significant Investment to Reduce Risks of Breach





SEND QUESTIONS TO

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