

FRANCIS E. WALTER DAM & RESERVOIR RE-EVALUATION STUDY STAKEHOLDER BRIEFING



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FRANCIS E WALTER DAM PROJECT HISTORY

- Construction authorized in 1946 Flood Control Act, completed in 1961
- Dam has prevented more than \$295 million in flood damages (\$34 million from recent storm - Hurricane IDA in 2021)
- 1985 General Design Memorandum recommended 30-foot dam elevation to provide storage for low flow augmentation. Cost was prohibitive for implementation
- Recreation authorized in 1988 Water Resource Development Act
- 2009-2014 Water Quality Modeling - tower modification modeling scenarios showed operational flexibility
- 2014 Water Resource Development Act directed USACE enter into a Temporary Emergency Drought Storage Agreement with the DRBC

STUDY AUTHORIZATION

Section 216 of the Flood Control Act of 1970

*"The Secretary of the Army, acting through the Chief of Engineers, is authorized to review the operation of projects the construction of which has been completed and which were constructed by the Corps of Engineers in the interest of navigation, flood control, water supply, and related purposes, when found advisable due to **significantly changed physical or economic conditions**, and to report thereon to Congress with **recommendations** on the advisability of modifying the structures or their operation, and for improving the quality of the environment **in the overall public interest.**"*

FEASIBILITY STUDY ASSUMPTIONS

- Purpose - Determine if structural or operational modifications can be implemented without impacting authorized flood risk management and recreation purposes.
- Probable Maximum Flood elevation analysis determined dam sufficiently designed for flood risk management but allocation for other purposes was not available.
- Increasing dam elevation is cost prohibitive.
- Current operations plan at 1370-foot storage pool does not allow for low flow augmentation.
- Dam partially grouted to address seepage issues. Additional structural upgrades may be needed for long term or increased storage levels.

FEASIBILITY STUDY TIMELINE

- Initial Appraisal Report completed in 2015.
- FY 2019 Received Federal New Start Study Funding (50/50 cost share)
- Feasibility Cost Sharing Agreement executed on Sep 25, 2019.
- Study Scoping Oct/Nov 2019, Charette Dec 2019, Public Workshop January 2020
- May 2020 - Alternatives Milestone Meeting (Initial array of alternatives)
- February 2021 - Study recoping based on potential impacts of increased storage
- March 2021 - PA Senate Hearing Testimony
- September 29, 2021 - Policy Exception Request Package Submittal
(Division comments received November 10, 2021)

STUDY STATUS – COMPLETED/ONGOING TASKS

- Existing Conditions
- Probable Maximum Flood Analysis
- Data Collection (Geotechnical)
- Study Risk (potential impacts) Identification
- Initial Alternatives Screening
(Eliminated dam raising alternative)
- Reservoir and River Modeling
- Water Quality Modeling (includes tower mods)
- Non-Structural Analysis (Flood reduction measures)

CURRENT ALTERNATIVES

Alt 1 – No Action/Future Without Project

Alt 2 – Increased Storage with Structural Modifications*

Alt 3 – ~~Raise Dam (consider multiple elevations) with Tower Replacement*~~

Alt 4 – Modify Existing Tower for Selective Withdrawal*

Alt 5 – Operational Changes to Alter Releases*

Alt 6 – Build or Raise Levees, Add Dikes*

Alt 7 – Non-structural Downstream Flood Improvements*

Alt 8 –Combination Alt 2-7*

*** – Recreational Enhancements to be considered within all actionable alternatives**

STUDY STATUS - PATH FORWARD

REVISED STUDY SCOPING

- Geotechnical Investigation
 - Environmental/Cultural Resource Surveys
 - Water Quality Modeling
 - Reservoir and River Modeling
 - Non-Structural Analysis
 - Impact Assessment
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- Increased Cost and Time Request Package

SUGGESTED INCREASED STORAGE ELEVATIONS

Varying heights of current pool to store additional water under emergency drought conditions.

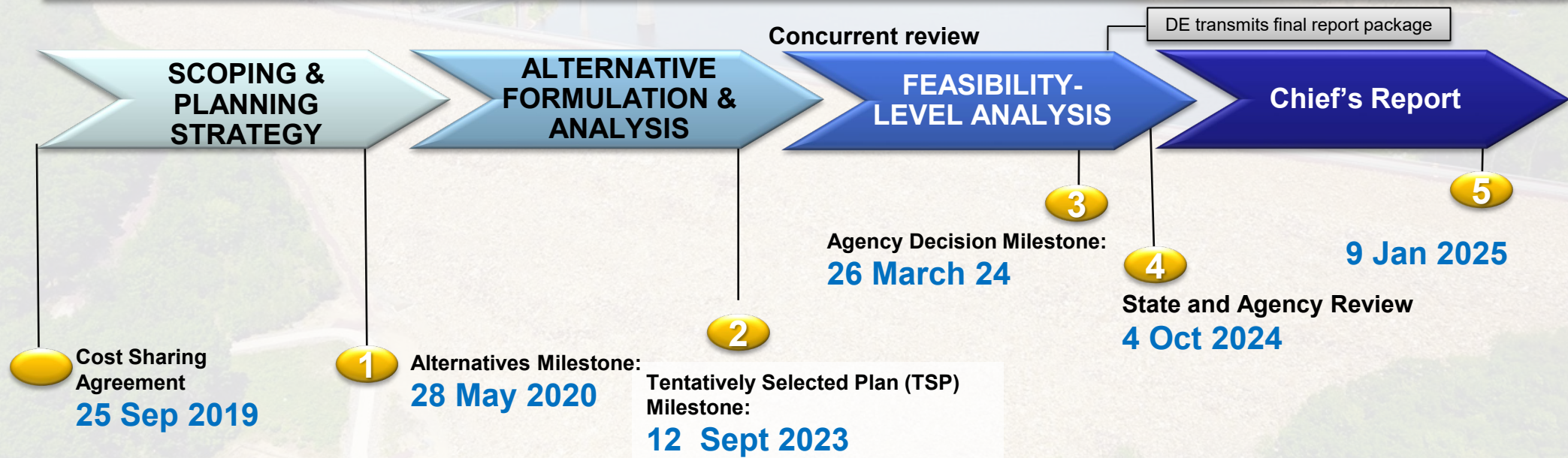
- Alternative 1 - Current flood storage pool at 1,370 feet (No Action). Operational plan considerations.
- Alternative 2 – Increased pool height at 1,392 feet during drought.
- Alternative 3 - Incremental storage at ~1,382 feet during drought.
- Alternative Matrix including structural and non-structural modifications.

INCREASED STORAGE ASSUMPTIONS

- Water would not remain at 1392 permanently, only during drought.
- Water level would fluctuate to a max of 1392. Goal is to have a higher water level in late summer/fall period where significant drought conditions have occurred in the past.
- Project to maintain current flood protection.
- Recreation may benefit during periods of drought.
- Increased storage requires Environmental Impact Statement due to cumulative impact and also requires Congressional authorization, if recommended.
- Still requires development of Alternatives 4, 5, 6, & 7.

PRELIMINARY TIME AND COST INCREASE ESTIMATE

SMART Feasibility Study Process: FE Walter Study



DISCUSSION

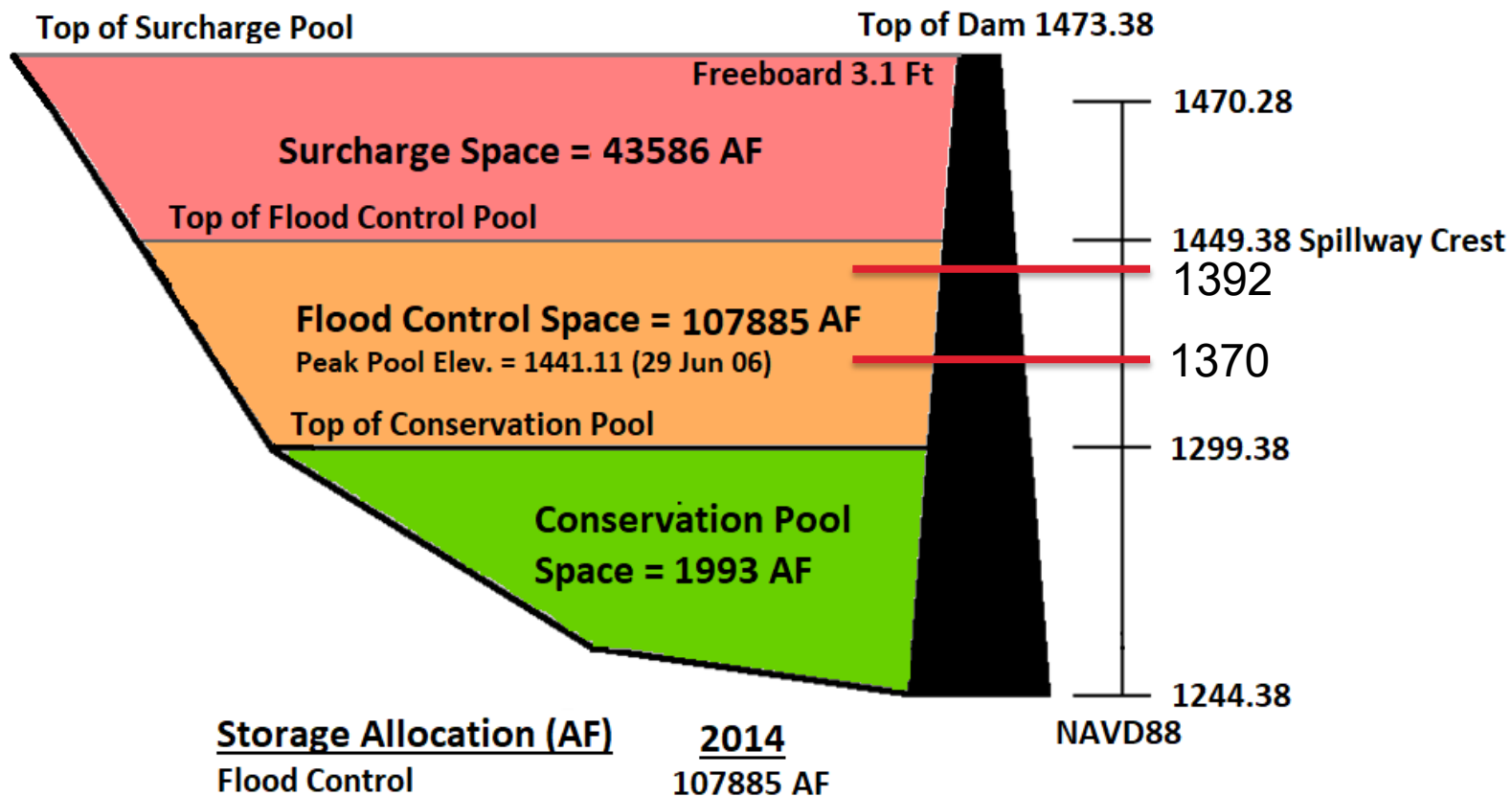


BACKUP SLIDES



CURRENT CONDITIONS OF FE WALTER

FRANCIS E. WALTER DAM STORAGE ALLOCATIONS



- Spring water storage April 1 to May 15 the pool reaches about 1370’;
- Recreational Releases from flood Control Space for fishing and whitewater rafting
- REC release end around Columbus Day weekend. Early Oct.
- October maintenance release for any excess water that may have accumulated.