USACE SAVANNAH DISTRICT WATER MANAGEMENT 101

Savannah Water Managers

Stan Simpson

Kat Feingold



US Army Corps of Engineers BUILDING STRONG®

Savannah

DISTRICT

AGENDA

- Current Basin Status
- Water Management Overview
- Questions





Past Year's Rainfall and Levels

Thurmond Reservoir Current Pool Elevation 323.95





J. STROM THURMOND PROJECT

- Completed in 1952
- 8th most-visited Corps project 5.0M Visitors/yr
- 71,100 acre water surface (330 ft-msl)
- Seven turbines capable of generating 364 MW
- 1,200 miles of shoreline
- 76 recreation sites







HARTWELL PROJECT

- Constructed in 1962
- 3rd most-visited Corps project 9.3 M Visitors/yr
- 56,000 acre water surface (660 ft-msl) 962-mile shoreline
- 5 Turbines with a 422 MW Generating capacity
- Largest shoreline management program in the Corps with 47,523 permitted activities







RICHARD B. RUSSELL PROJECT

- Completed in 1984
- Largest Corps power plant east of Mississippi River
- 26,653 acre water surface (475 ft-msl) 540-mile shoreline
- Four conventional turbines 328 MW Generating Capacity
- Four pump turbines 320 MW Generating Capacity
- 27 recreation sites
- 4 state parks







POOL SCHEMATIC



DRAINAGE BASINS

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Hartwell = 1294 Square Miles (Local Basin) 1 in. Runoff = 34,799 cfs-days = 1.2 ft. @ 660.0 Russell = 802 Square Miles (Local Basin) 1 in. Runoff = 21,566 cfs-days = 1.5 ft. @ 475.0 Thurmond = 2890 Square Miles (Local Basin) 1 in. Runoff = 87,502 cfs-days = 2.2 ft. @ 330.0





MANAGED AS SYSTEM OF PROJECTS



Total Drainage Basin Area -10,580 sq miles

WATER MANAGEMENT OBJECTIVES

- Minimize Flood Damages and Loss of Life
- Provide Maximum Benefit to the Public

Flood Risk Management

- Recreation
- Hydro-Production
- Fish and Wildlife Management
- Water Supply
- Water Quality
- Navigation
- Balance Drought impacts to Project Purposes
- Follow USACE Environmental Operating Principles
- Adaptively Manage within Corps Authorities
- Educate the Public





WHAT IS ???

Induced Surcharge Storage (7-9 feet per project) (Last used Dec 2015)

 Additional flood storage that can be gained when gates are lifted above their closed position.

Flood Storage (5 feet per project)

- Used to temporarily store inflows from flood events

Conservation Storage (625 - 660) (470-475) (312-330)

- Water Supply
- Recreation
- Hydropower
- Navigation
- Water Quality
- Fish and Wildlife

Inactive Storage (Bottom of Conservation Storage to streambed)

- All projects require some storage for the storage of sediment





POOL BALANCING PROCEDURE





Elevation Comparison FT-MSL



Data current as of 3 December 2019

US Army Corps of Engineers.

U.S.ARM

Data used to make our decisions







Stream Gage Networks







of Engineers.











Sty Collaborating AGENCIES











Protecting nature. Preserving life."























WATER MANAGEMENT WEB PAGE

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US Army Corps of Engineers

Savannah District Water Management





http://water.sas.usace.army.mil





MOBILE APPLICATION

USACE SAVANNAH

Lake Levels	Outflows	Rainfall	FORECAST Rainfall Forecast
Hartwell Data	Russell Data	Thurmond Data	FORECAST Streamflow Forecast
And	Mun	Mar	
Hartwell Projection	Russell Projection	Thurmond Projectio <u>n</u>	Savannah Gages
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Questions?



