



US Army Corps of Engineers  
Little Rock District, Southwestern Division



# **LITTLE ROCK DISTRICT STUDIES AFFECTING FEDERAL HYDROPOWER**

**FEDERAL HYDROPOWER CONFERENCE – JUNE 2010**



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# ***Impaired Waterbody Listing 303 (d)***

***Dardanelle, Bull Shoals,  
Norfolk, Taneycomo***



## ***CURRENT ISSUES***

- **TMDL's completed for Bull Shoals and Norfolk (May 2009)**
- **TMDL's for Dardanelle and Lake Taneycomo are still being developed**



## ***DISTRICT POSITION***

- **Full understanding of the sources contributing to the low DO have not been identified.**
- **Options identified are costly.**
- **Consider re-evaluation of state standard or designated use of stream.**



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# ***WHITE RIVER MINIMUM FLOWS STUDY***



## ***FY2006 Energy & Water Act***

Directed the Corps of Engineers to Reallocate storage within Bull Shoals and Norfolk Lakes to be used to maintain minimum flows for the downstream trout fishery in the following amounts:

Bull Shoals Lake (BS-3)	5 feet
Norfolk Lake (NF-7)	3.5 feet

BS-3 is a flood pool reallocation, NF-7 has 1.75 feet reallocated from conservation pool and 1.75 feet from flood pool.

Beaver Lake, Table Rock Lake and Greers Ferry Lake were De-Authorized under Sect 132(C) of the 2006 Energy and Water Development Appropriation's Act.



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## ***CURRENT STATUS***

- Signing ceremony for Norfolk PPA in July 2010
- Contract for design of Bulkhead and Siphon at Norfolk to be awarded in Fall 2010.



## ***Steps to Implementation***

- Lakeside Facility PPA must be executed.
- Construction of Norfork Bulkhead and Siphon and modification to SCADA.
- Storage must be captured.



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# ***Arkansas River Navigation Project***



## ***Study Purpose/Background***

- Study is examining two opportunities:
  - ✓ I - Improve navigation by improving the efficiency and effectiveness of evacuating high flows out of Oklahoma reservoirs.
  - ✓ II - Improve navigation by deepening the channel on the entire system and widening the Verdigris River.



## ***Current Status***

- Construction Funds provided in FY05 and executed in FY06, FY07, FY08.
- \$300,000 to be used for structures in Pool 7.
- No additional funds received in FY10 or expected in FY11.
- \$40 million to continue dredging and training structures
- \$185 million in total cost broken down in increments between \$1 million to \$10 million



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# ***WHITE RIVER BASIN COMPREHENSIVE STUDY***



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## ***Project Origin***

**Secretary Westphal ASA (Civil Works) received several letters from the environmental community requesting a basin-wide comprehensive study of the White River.**



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## *WHITE RIVER BASIN, AR & MO*

LEGEND	
	EXISTING RESERVOIR OR LAKE
	WHITE RIVER NATIONAL WILDLIFE REFUGE
	CACHE RIVER WILDLIFE REFUGE
	WHITE RIVER BASIN



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- **Watershed Comprises**
  - **Approximately 27,765 square miles**
    - **Southern Missouri (10,622 square miles)**
    - **Northern and Eastern Arkansas ( 17,143 square miles)**
  - **Over 150 miles of flood control levees along the White River and its tributaries.**
  - **Significant migratory waterfowl wintering area.**
  - **Several Federal wildlife refuges and State wildlife management areas.**
  - **One of the largest remaining areas of bottomland hardwood forests in the Mississippi Valley.**
  - **Five Corps Multipurpose Lakes**
  
- **Interests within the basin includes**
  - **Flood control, water supply, hydropower, navigation, environmental restoration and protection, and recreation.**



## ***Why is the study needed?***

- To identify impacts from development in the upper basin & increased competition for water in the lower basin.
- To better forecast future conditions.
- Decisions concerning the basin need to be based on science and not speculation.
- Water resource decisions are key to the future of the basin.



# ***Study Product***

- **Watershed Resources Management Plan**
  - Identifies the combination of recommended actions to be undertaken
  - Identifies various partners and stakeholders responsible for recommended actions
  - May or may not identify further Corps studies or implementation projects.



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# ***WATER SUPPLY STORAGE REALLOCATIONS***



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## ***M&I Water Supply Reallocation Studies*** ***Greers Ferry Lake***

- Mid Arkansas Water Alliance (15 mgd, 18,751 AF)
- City of Heber Springs (3,538 AF) – On hold



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# ***M&I Water Supply Reallocation Studies Norfolk Lake***

- City of Mountain Home (5 mgd)
- Baxter County Water Association (5.8 mgd)



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## ***M&I Water Supply Reallocation Studies*** ***Bull Shoals Lake***

- **Ozark Mountain Water Alliance (7 mgd)**
  - **June 11 Public Comment period will conclude**
  - **Report and Water Storage Agreement to be completed August 2010**



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## ***M&I Water Supply Reallocation Studies Beaver Lake***

- Washington Regional Public Water Authority 2000 (8 mgd)
- Carroll-Boone Water District 2001 (6 mgd)
- Madison County Regional Water District 2006 (8 mgd)



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# ***M&I Water Supply Reallocation Studies Table Rock Lake***

- Tri-State Water Resource 2007 (50,000 AF)



## ***Greers Ferry Modified Seasonal Pool***

- **1998- Agreement Drafted Between Corps and SWPA**
  - **Hold Pool at El 463 from 1 April to 1 October**
- **1999- Draft Agreement Put On hold Due to White River Minimum Flow Study**
- **2000 thru 2006- Temporary Deviations Allowed to 462.5**
- **2007- No deviation allowed due to possible impact on tree damage litigation on the White River**



## ***Greers Ferry Modified Seasonal Pool (continued)***

- Once litigation is cleared, SWPA and the Corps may restart the re-allocation study
- Corps currently has no funds to resume re-allocation study



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## ***Pine Mountain Dam***

- Authorized in 1965 and reevaluated in 1980
- Authorized plan includes the construction of a dam on Lee Creek approximately 12 miles north of Van Buren



# ***Pine Mountain Dam***

## ***Study Purpose***

- Seeks to determine a sustainable and clean water resource for the River Valley Regional Water District
- General Reevaluation Report and EIS have been initiated



# ***Pine Mountain Dam Issues***

- Reauthorization will be required if GRR and EIS result in a recommendation different than the 1980 General Design Memorandum
- Lee Creek has been designated as an Extraordinary Resource Waters (ERW) stream
- Primary authorizing purpose cannot be water supply



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## ***Least Interior Tern***

- **Biological Opinion requires the building of habitat**



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*Questions?*