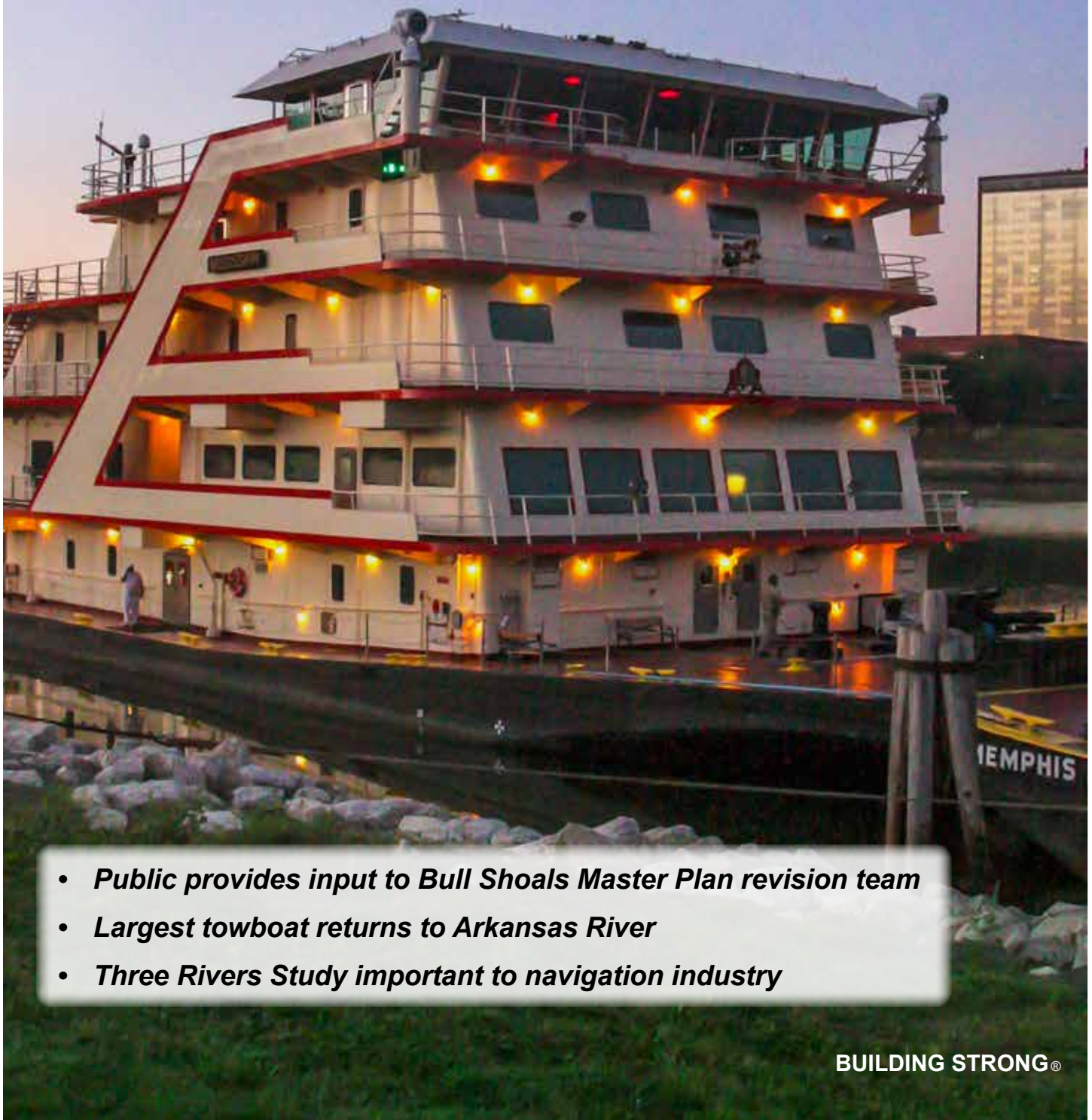




US Army Corps
of Engineers®
Little Rock District

Project Update

September 2014



- *Public provides input to Bull Shoals Master Plan revision team*
- *Largest towboat returns to Arkansas River*
- *Three Rivers Study important to navigation industry*

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Bull Shoals Master Plan Team begins revision process with public input

Little Rock District team gathers input from public during five workshops around Bull Shoals Lake.....Page 3



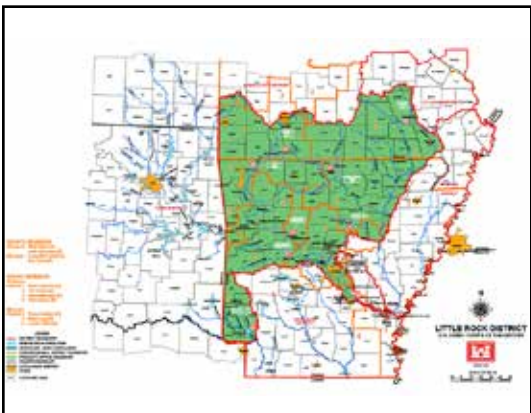
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Little Rock District map

Little Rock Key Projects

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Project Update

Project Update highlights top Little Rock District issues in Missouri and Arkansas. If you have questions, contact Randy Hathaway, Little Rock District Deputy District Engineer for Project Management, at (501) 324-5053. For more information, visit our web site at www.swl.usace.army.mil.

Bull Shoals Master Plan revision is underway



Acting Mountain Home Operations Manager Jon Hiser speaks to a workshop attendee.

Little Rock District is actively engaging the public in its effort to update the 1970s version of the Bull Shoals Lake Master Plan. The agency currently has a comment period open through Sept. 30, and anyone can submit comments by e-mail, fax or regular mail. We have also created a website with complete information about the revision process at <http://go.usa.gov/ynYk>.

The comment period follows a series of five public scoping workshops the Corps hosted Aug. 22 through 27 in communities around Bull Shoals Lake to collect comments and present details on the lake's master plan revision process. About 776 lake users and adjacent landowners attended.

"The scoping report captures all the public comments received during the scoping process," Project Manager Tony Porter said. "The report also provides an analysis of the comments and we'll use this information to draft the new master plan."

A master plan is the guidance document that describes how the resources of the lake will be managed in the future and provides the vision for how the lake should look in the future.

The current Bull Shoals Lake Master Plan was developed more than 30 years ago and is outdated. The master plan revision will classify public lands around the lake based on environmental and socioeconomic considerations, public input, and an evaluation of past, present, and future trends.

"At the heart of the draft master plan are the land and water classifications for Bull Shoals Lake. These classifications could

affect future recreational opportunities and natural resource management," Acting Deputy Chief of Operations Dana Coburn said. "A question the team members have been asking as they go through this process is, 'should areas stay in the current classification or should they be changed to another classification?'"

Classifications of public land and water around the lake are:

- Project operations - Includes land around Bull Shoals Dam.
- High density recreation - Examples are Lakeview Park, other campgrounds, marinas and large scale commercial operations.
- Environmentally sensitive areas - Examples are areas around the lake aimed to preserve the scenic, historical, archeological, scientific, or ecological value.
- Low density recreation - These areas are designed for general hunting and fishing access and are the only areas where private boat docks and mowing permits might be allowed through the shoreline management plan.
- Wildlife management - These areas are managed specifically for wildlife and fisheries habitat. An example is Jones Point Wildlife Management Area.
- Vegetative management - These areas are where vegetative management activities can occur such as timber management.
- Future/inactive recreation areas - Many campgrounds have been closed around the lake; some were never developed.

New Water Surface Classifications

- Restricted Areas could restrict boats near water intake structures.
- Designated No-Wake Areas could be designated near Corps swim beaches.
- Fish and Wildlife Sanctuary Areas could be areas that are considered 'sanctuary' to fish and wildlife species.
- Open Recreation Areas are the rest of the lake.

The planning process will include an analysis of potential effects on the natural and social environment, including fish and wildlife, recreation opportunities, economics, land use, cultural and historical resources, aesthetics, and public health and safety.

Once all public comments have been collected and the scoping report is made available to the public, the Corps will begin planning focus group meetings with

stakeholders, partners, concessionaires and local interest groups.

"We'll hold focus group meetings to see if the draft master plan captures the comments and opinions of the public, partners and stakeholders in conjunction with the missions, guidelines and regulations of the Corps," Porter said.

The draft master plan should be complete by the summer of 2015.

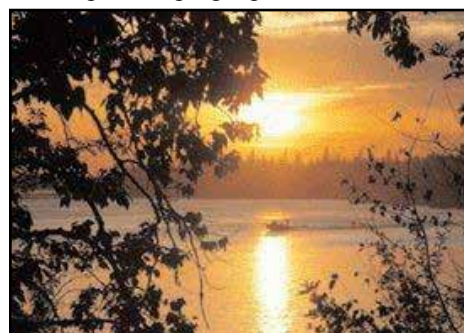
"Once the draft documents are complete, we'll hold public workshops around the lake to again let the public provide input," said Coburn. "We had tremendous interest from the public when we started this process and we hope that will continue throughout the process."

The first Bull Shoals Master Plan was published in 1951 after the lake was impounded and was revised in 1975. The master plan is considered a working document that can be supplemented to fit the projects needs and public access demands.

The master plan does not address the details of how and where shoreline use permits may be issued, however, it does set the stage for implementation of the shoreline management program.

After the master plan is revised, the operational management plan and shoreline management plan will be revised to be consistent with the goals identified in the master plan.

Comments can be e-mailed to ceswl-BSmasterplan@usace.army.mil or faxed to 501-324-5605. They can also be mailed to Dana Coburn, Chief, Environmental Branch, Planning and Environmental, USACE, Little Rock District, P.O. Box 867, Little Rock, AR 72203. Comments must be postmarked no later than Sept. 30 to be included in the master plan scoping report.



Bull Shoals Lake offers hundreds of miles of lake arms and coves perfect for boating, water sports, swimming, and fishing.

USA's largest towboat returns to Arkansas River



Motor Vessel Mississippi.

The Mississippi River Commission visited the McClellan-Kerr Arkansas River Navigation System Aug. 10 through 14 to perform a low-water inspection and meet with stakeholders onboard the Motor Vessel Mississippi, the largest towboat in the country and the official vessel of the MRC. The vessel is 241 feet long, 52 feet high and is an operational towboat 90 percent of the time.

The MV Mississippi was brought up the Arkansas River in early August and was positioned at the Port of Muskogee. Meanwhile, the commissioners flew into Tulsa and toured the Tulsa Port of Catoosa before traveling overland to link up with the MV Mississippi and begin the low water inspection as the vessel traveled downstream into and all the way across Arkansas.

The commission's purpose for the trip was to conduct its process of listening, inspecting, partnering and engineering by meeting face-to-face with stakeholders, federal agencies, non-governmental organizations, and local Army Corps of Engineers offices along the waterway.

The MRC, established in 1879, is composed of seven members, each nominated by the president of the United States and confirmed by the senate. Current members include three general officers from the Corps, one member from the National Oceanic and Atmospheric Administration, and three members from private sector, two of whom are civil engineers.

Although the commission has supervised the levee and revetment operations on the lower 92 miles of the Arkansas River for nearly 100 years, it has only completed a system-wide inspection of the Arkansas River system twice, the first in 2010.

The MKARNS is 445-miles long and includes portions of the White, Arkansas, and Verdigris Rivers. It has 18 locks and dams – 13 in Arkansas and five in Oklahoma, all of which are operated and maintained by the Corps' Tulsa and Little Rock Districts.

Stakeholders informed the commission that more than 12 million tons of cargo valued at more than \$4 billion are transported annually on the MKARNS.

Several of the MRC members told stakeholders they had no idea that the navigation system was so important to the success of the region and they were pleasantly surprised at how important tourism along river is to the state of Arkansas.

Commission member Sam Angel, an Arkansas resident, was instrumental in establishing the low water inspection of the MKARNS.

"The trip was incredible, and we learned a tremendous amount about the issues and concerns of the people who live along and depend on the Arkansas," he said.

During its time within Little Rock District boundaries, the commissioned was briefed on hydropower, flood risk management, levees, navigation, recreation, economic development and the

importance of environmental stewardship and restoration.

Gene Higginbotham, Arkansas Waterways Commission executive director, talked about the importance of navigation on the river and how the Three Rivers Study would benefit shippers and the region's economy.

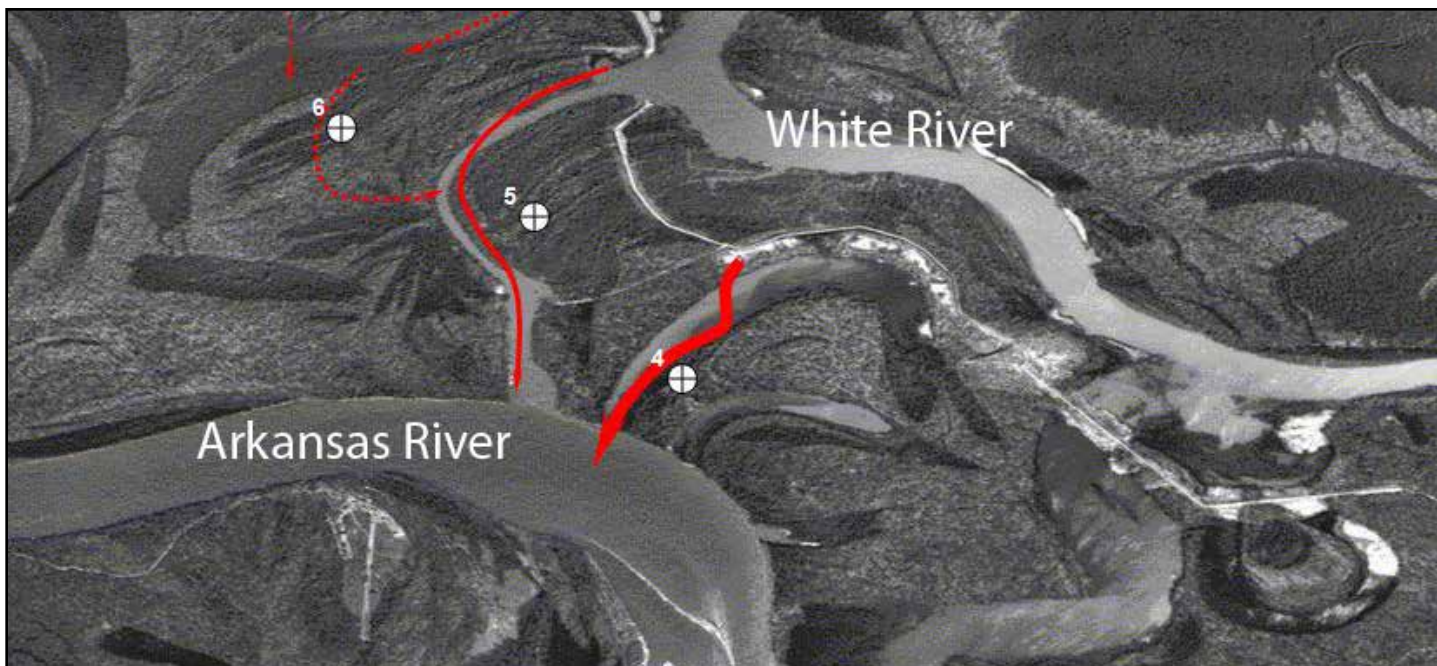
"There is a seven to 10 percent chance each year of a full breach between the Arkansas and White river," Higginbotham said. "A full breach would stop navigation on the MKARNS for more than 100 days, at an impact of nearly \$300 million and the loss of thousands of acres of wetlands and pristine hardwoods."

Higginbotham assured the commission and stakeholders that, "The Arkansas Waterways Commission has agreed to be the cost-share sponsor for the Three Rivers Study."

The commissioners will take all the information they gather and write a report that will include their recommendations for any improvements or changes to the navigation system. The report will be provided to the U.S. Army Chief of Engineers and the Assistant Secretary of the Army for Civil Works, who will then use the information to provide testimony during congressional hearings.



Mississippi River Commissioners listen to McClellan-Kerr Arkansas River Navigation System stakeholders and partners during low water inspection.



Three Rivers Study area.

Corps emphasizes need for Three Rivers Study

The district needs a “new start” and funding of \$300,000 to initiate a feasibility study of the water resource problems in southeast Arkansas where the Arkansas, Mississippi, and White Rivers converge. The study will determine scope and provide a comprehensive and sustainable solution to changing hydro-geomorphic shifts along the navigation system and surrounding watershed. The Arkansas Waterways Commission has agreed to be the cost-share sponsor. Section 216 of the Rivers and Harbors Act of 1970 is the study authority.

In August 2014, the Mississippi River Commission along with multiple state and federal agencies visited the area. If left unchecked, there is a seven to 10 percent chance each year of a full breach between the Arkansas and White rivers. A full breach would stop navigation on the McClellan-Kerr Arkansas River Navigation System for more than 100 days, at an impact of nearly \$300 million and the loss of thousands of acres of wetlands and pristine hardwoods. Permanent solutions include raising the existing containment structure (levees), construction of a passive weir, or an active weir in order to restore a more natural hydrology between the Arkansas and White rivers.

The visitors gained a better appreciation of the danger and complexity of the problem. The study will investigate serious hydrologic and hydraulic problems that threaten navigation, aquatic ecosystem habitat, Ark/White Cutoff Structure,

recreation, flood damage reduction and watershed protection. A previous study to address the navigation reliability problem determined we must continue maintaining existing structures with a “band aid” approach because proposed solutions were deemed incompatible with U.S. Fish and Wildlife purposes.



Sam Angel and Trish Anslow look at Three Rivers Study area map.

The study location is at the confluence of the Mississippi, White, and Arkansas Rivers in Desha and Arkansas counties, Ark. The study area is in three Corps districts (Little Rock, Memphis, and Vicksburg) and two Corps divisions (Southwestern and Mississippi Valley). The area is the starting point or “door way” for the McClellan-Kerr Arkansas River Navigation System, which begins at the mouth of the White River and runs 445 miles to Catoosa, Okla. Previous analysis and studies, such as the Draft Ark/White Cutoff Study confirmed that the problems and solutions are interconnected and interdependent throughout the entire

region. The Army Corps of Engineers’ Engineering and Research Development Center performed geomorphic analysis of the lower Arkansas River to predict further movement of the river system. The conclusion is that the river migration is slowing, but undercutting still threatens the navigation system. ERDC conducted hydrologic and hydraulic analysis of the Arkansas and White River watersheds to determine changing flow patterns of potential solutions. A new feasibility study would update that data based on the past 15 years and use of better geospatial information.

The watershed of these three rivers is home to the White River National Wildlife Refuge and more than 100,000 acres of critical bottomland hardwoods. This is the largest stand of bottomland hardwoods on any tributary to the Mississippi River. Significant erosion is causing the loss of large areas of bottomland hardwoods. The refuge and the surrounding area are habitat for numerous threatened and endangered species, including the Bald Eagle, Interior Least Tern and Pallid Sturgeon.

The state of Arkansas understands the cost-sharing requirements, and the Arkansas Waterways Commission would be the local cost share sponsor. Interested co-sponsors include the U.S. Fish and Wildlife Service, the Nature Conservancy, the Arkansas Game and Fish Commission, Arkansas Heritage Commission and the Arkansas Natural Resource Commission.

Little Rock District projects, issues

Arkansas River Basin

Fourche Bayou Basin

A December 2013 agreement between the Little Rock District and the City of Little Rock approved the acquisition of Fourche Bottomlands using the available federal funds of \$790,000 and \$194,200 of sponsor funds. The city has acquired about 1,000 acres of the 1,750 acres that are included in this effort. All acquisitions should be complete by the end of 2014 and all work for this project will be complete.

The Fourche bottomlands will be retained in public ownership for uses compatible with the project's authorized purposes of environmental preservation, flood risk management, and recreation.

During fiscal year 2009, Congress appropriated \$1.1 million for the Corps to work with our non-federal sponsor, the city of Little Rock, to acquire 1,750 acres of Fourche bottomlands and construct nature appreciation facilities. The project's estimated cost is \$7.49 million. Using the appropriated funds, the local cooperation agreement was amended in July 2012 to provide the sponsor Section 104 credit for \$160,000 of channel work they performed as approved by the Assistant Secretary of the Army for Civil Works in 1988.

In November 2012, the ASA (CW) agreed that the remaining appropriated funds could be used to acquire bottomlands. However, the Army did not intend to budget for additional land acquisition and no funds would be reprogrammed to the project.

Ozark Powerhouse Major Rehabilitation

The contract for the replacement of the five hydroelectric turbines is ongoing. The contractor has assembled the first and second units and they should be back in operation by October. The contractor plans to have the third unit re-assembled by the end of 2014 and is preparing to disassemble the fourth unit. The contractor will complete the fabrication of major components for all five units soon. Federal power customers and federal appropriations are funding the project. The \$125 million major rehabilitation project will improve the continual maintenance problems at Ozark Powerhouse. Maintenance issues caused more than \$9.3 million in lost power during FY13. All work is expected to be complete by 2017.



Montgomery Point hinge pin repair.

Montgomery Point Lock and Dam repairs

In December 2012, the Little Rock District completed repairs on two of the four lock gates at Montgomery Point Lock and Dam in Desha County, Ark. The gate hinge pins were damaged in fiscal year 2012. While the gates remained operational, they were left such that they could fail soon, and their failure would halt navigation at this critical entry point to the McClellan-Kerr Arkansas River Navigation system during low water

levels. Since December 2012, water levels have been high enough, most of the time, for navigation traffic to use the navigation pass. The district anticipates funding in FY15 to fix the remaining two gates.

McClellan-Kerr Arkansas River Navigation System Board of Governance

Within Southwestern Division a board of governance for the McClellan-Kerr Arkansas River Navigation System has been established to corporately manage the entire system. The executive director of the MKARNS Board of Governance is the Little Rock district commander. Historically, Little Rock and Tulsa districts have done very well in teaming to establish priorities and execute work that is critical to maintaining a reliable system.

The board has established working teams comprised of members of both districts to focus on seven areas for improvement.

- Composition and use of tow boats, crane barges and other equipment
- Workforce management and development
- Use of common business tools
- Review of maintenance standards
- Review of policies and processes
- Development and use of a five-year maintenance plan
- Budget development

The board has also initiated a third-party study of maintenance operations to identify areas for improvement and is budgeting for a detailed engineering assessment in fiscal year 2016 of the system's 225 tainter gates to improve long-range budgeting and prioritization.

White River Basin

White River Comprehensive Study

The Little Rock and Memphis districts are conducting the comprehensive study of the White River basin in Arkansas and Missouri. The FY14 President's budget included \$650,000 in funds for this project. The efforts in fiscal year 2014 for the study focused on the Cache River Basin Watershed Management Plan (a sub-basin to the White River), and this plan will be a platform to further initiate other sub-basin studies. A component of the WRBC, the Cache River Watershed Management Plan (under the WRBC effort) studies a 2,018 square mile sub-basin within the White River basin. The draft Cache River Basin Watershed Management plan is scheduled for completion in March 2015. The next potential sub-basin is the James River located in southwestern Missouri and efforts could initiate in FY15 pending receipt of funds.

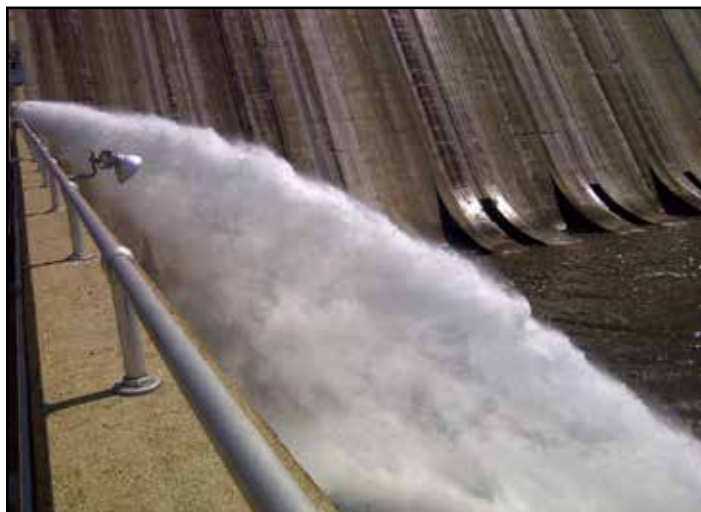
The Corps approved the reconnaissance phase study report, known as the 905(b) report, in January 2002 and involved parties signed a feasibility cost sharing agreement in May 2002. The Water Resources Development Act of 2007 reduced the cost sharing requirements of the study cost from 50 percent to 25 percent. Project sponsors include the Arkansas Game and Fish Commission, Arkansas Natural Heritage Commission, Arkansas Natural Resources Commission, Arkansas Waterways Commission, Missouri Department of Conservation, Missouri Department of Natural Resources, and the Nature Conservancy of Arkansas. The study will identify the critical resources, water-related problems and needs, and potential solutions.

The White River Basin comprises about 28,000 square miles in northeastern Arkansas and southern Missouri. The basin contains five large multi-purpose reservoirs and one reservoir primarily for flood control; more than 150 miles of flood control levees along the White River and its tributaries; two major national wildlife refuges; and the largest remaining concentration of seasonally flooded bottomland hardwoods in the Mississippi Valley. The study will identify water resources needs and opportunities.

White River Minimum Flow Siphon at Norfolk

The Norfolk siphon returned to service the first week of August following repairs to the cone valve hood. The unusually cold weather in early January damaged the knife valve and cracked the cone valve hood. During this outage, the Corps made minimum flows releases using spillway gate openings while pool elevations and water temperatures allowed or one turbine when water temperatures rose to near crucial levels.

Little Rock District and the Arkansas Game and Fish Commission are developing a plan to make the minimum flows releases should the siphon be taken out of service again in the future for maintenance or repairs.



Norfolk siphon during testing.

White River Water Control Plan

The district has received requests from stakeholders to initiate a study of the water control plan for the White River System of reservoirs. Little Rock District last implemented minor changes to the water control plan for the White River Lakes in December 1998. Initiating a review of the plan would require detailed engineering, environmental and economic analyses, extensive public coordination, and \$9 million in funding over three years. Since there are many competing and conflicting goals for water management in the White River Basin, any change to benefit one group or interest will impact other groups or interests.

Stakeholders have frequently engaged their elected officials to seek short-term changes to the White River Water Control Plan that benefit their specific interests. An extremely wet weather pattern in 2008 through summer 2011 resulted in high lake levels, as well as extended periods of high river stages, and renewed interest in a revision to the water control plan. Extreme drought conditions and sustained above average high temperatures in 2012 resulted in low lake levels and extremely low river levels generating additional interest in system operation. Atypical rainfall in the late summer 2013 generated even more interest in revising the water control plan.

Since the inception of the original plan in the 1950's, the water control plan has been a discussion topic for revision for specific interests. In response to requests for change in the 1980's and 1990's, the district formed a working group consisting of private concerns, state agencies and federal agencies that developed alternative plans and variations of plans.

The group unanimously endorsed a recommended plan realizing that there was no single plan that would satisfy all needs at all times. This 1998 plan "fine tuned" the existing 1963 plan by calling for seasonal adjustments to the regulating stage at Newport and Georgetown, Ark., when evacuating flood storage from the lakes. The 1998 plan's regulating stages were slightly lower than the 1963 plan during the agricultural season and slightly higher during the non-agricultural season. This group did not propose or consider changes to the authorized lake levels because a 1985 study had found reallocation of storage was not economically justified. The district continues to add budget requests to update this plan but none have been approved.

Water Supply

State Water Plans, Arkansas and Missouri

Arkansas - The Arkansas Natural Resources Commission is updating the Arkansas State Water Plan, which includes ongoing project scoping and refinements, resource assessments of surface and groundwater supplies, water demand assessments, identification of data needs, projection of future water needs and challenges, and identification of new or alternative water sources. The study also includes integration of input from the public, interested groups, and state and federal agencies in recommending management strategies and policy considerations. Currently, the executive summary is available for public review. The plan will be completed in November.

Under the Planning Assistance to States, Section 22 authority, the commission requested assistance from the Little Rock District to conduct a thorough analysis of the temporal trends in stream flow and reservoirs in Arkansas through 2012. The district is using \$140,000 to complete this analysis. The project applied a wide range of sophisticated statistical methods to evaluate temporal and spatial variability on trends for various flow characteristics of streams in Arkansas.

These flow characteristics include, but are not limited to: annual minimum flow; annual maximum flow; annual daily maximum flow; annual median flow; monthly mean flow; and, the 30-day moving average of daily flows for both active and inactive stream flow gauging stations that are or were operated by the U.S. Geological Survey and/or the Corps of Engineers in Arkansas.

We also identified statistical trends for reservoir pool elevation and water supply storage availability in Arkansas from the early- to mid- 1900's through the 2012 water year. This phase of the study was completed in January. Little Rock District is currently providing support for the Arkansas State Water Plan Update by participating in meetings and on committees, along with providing technical assistance on an as needed basis.

Missouri - Missouri's primary tool for water resource planning is the Our Missouri Waters Program. This initiative will create a coordinated, holistic approach to managing water resources at the watershed level. Little Rock District is working collaboratively with four other Corps districts in Missouri through our Planning Assistance to States Program to provide support to the state of Missouri for its Our Missouri Waters Program. The group met in February and will continue on-going efforts results in the production of timely, relevant, and technically sound water resource planning products that the state of Missouri needs to meet the goals of Our Missouri Waters.

Beaver Trout Production Center Water Supply Storage Reallocation

Little Rock District revised the reallocation report in accord with guidance from the Assistant Secretary of the Army for Civil Works to provide the Beaver Trout Production Center with water storage space and annual operation and maintenance costs at no charge to the Arkansas Game and Fish Commission, the non-federal sponsor. The report, prepared using federal operations and maintenance funds, is awaiting ASA (CW) approval.

Appropriated funds in the amount of \$600,000 could be used to prepare a project report as the basis to sign a Project Partnership Agreement with the Arkansas Game and Fish Commission for construction of the facilities. The document would include: coordination with Southwestern Power Administration for computation of the hydropower debt offset; items of local cooperation; and project design, plans, specifications, and National Environmental Policy Act considerations.

The facility would be located just below Beaver Dam in Carroll County. It would provide environmental mitigation for the reduced number of warm water fish in the White River and other Arkansas streams that resulted from the construction of Beaver Dam and other similar hydropower-producing Corps dams in Arkansas.

Water Supply Report Status Funded reports

Beaver Lake: Little Rock District continues work on a reallocation report that will analyze the available storage in Beaver Lake for water supply reallocation requests from three different users. We received \$250,000 in the fiscal year 2014 work plan to complete the study. The study is currently scheduled for completion in fall of 2015.



Water supply is available on a regional scale.

In July 2000, Benton-Washington Regional Public Water Authority (formerly Benton/Washington County Water Association) requested 8 million gallons per day. In July 2001, Carroll-Boone Water District requested 6 mgd, and Madison County Regional Water District requested 8 mgd. In total, they are requesting 22 mgd, which equals about 42,000 acre-feet of water.

After the water supply demand is confirmed, we will determine an array of alternatives that would supply the requested demand. We will address the impacts of each alternative before making a selection. Water supply will be reallocated from either the conservation pool or the flood pool. There are many competing demands for which pool this reallocation should be taken from. For example, U.S. Fish and Wildlife Service is opposed to a flood pool reallocation because it is concerned about adverse impacts to the Gray Bat and the Ozark Cave Fish, both endangered species.

Congressional approval is required for the reallocation if there will be serious impacts to authorized project purposes.

Greers Ferry Lake: Mid-Arkansas Water Alliance requested reallocation of additional water supply storage in Greers Ferry Lake that would supply users north of the Arkansas River 15.25 million gallons per day by the year 2020. The request was made May 2013 following a study of water needs for MAWA users. MAWA entities for this reallocation request are located in Cleburne, Faulkner, Lonoke, Pulaski, Stone and Van Buren counties.

A feasibility study for reallocation is underway and is scheduled for completion in fiscal year 2016. Funding in the amount of \$200,000 was received in late May to initiate the study. Efforts are underway to use these funds and issue a task order to an architect-engineer firm for a water demand Analysis and an Environmental Assessment. Results from the water demand analysis and Environmental Assessment are necessary for Army Corps of Engineers staff to confirm actual MAWA water needs, complete various hydrological, economic, engineering, dam safety and hydropower analyses, and to determine the feasibility of reallocation.

MAWA is a not-for-profit membership corporation organized for the purpose of requesting water allocations from Corps lakes. The MAWA initiative represents more than 25 percent of the state's population and seeks to secure future water supply for its customers for the next 50 years

Unfunded reports

Bull Shoals Lake: North Baxter County Water Distribution District requested 6 mgd for municipal and industrial water supply purposes. The district does not have any funds available to complete the study. No fiscal year 2014 funding was provided.

Norfolk Lake: In September 2000, the city of Mountain Home requested 5 mgd from Norfolk Lake. In September 2004, Baxter Counter Water Association requested 5.8 mgd from Norfolk Lake. Work will not be initiated until funding is provided. No fiscal year 2014 funding was provided.

Table Rock Lake: In July 2007, the Tri-State Water Resource Coalition requested 35 mgd for municipal water supply use. The district has not

yet received funding for the reallocation request, however, the district has worked with the Missouri Department of the Natural Resources and Tri-State through the Planning Assistance to States authority to provide a more detailed analysis and projection, through 2060, of the water supply and demand needs of the Southwest Missouri area. The district is currently working with MDNR and Tri-State to complete an analysis of the water distribution infrastructure for the Southwest Missouri area. The district is collaborating with Tri-State to look into alternative funding options for the water supply reallocation study, such as using the contributed funds authority.

Completed but unexecuted agreements:

Officials approved this reallocation report in 2007, but the water supply agreement was not executed because of a dispute over costs for water storage. The city disputed the water supply agreement determination made by the Assistant Secretary of the Army for Civil Works, which included annual operation and maintenance costs. The city has recently expressed interest in executing this agreement and agreeing to pay annual operation and maintenance costs. The Little Rock District is currently reviewing the agreement to ensure compliance with Corps policy and execute by December.

Beaver Lake Master Plan Update

During the fall of 2014, Little Rock District will begin the process to revise the Beaver Lake Master Plan. The master plan guides the management of government-owned and leased lands around the lake. The master plan affects future management of natural resources and recreational opportunities to ensure the sustainability of Beaver Lake.

Similar to the Table Rock Lake and Bull Shoals Lake Master Plan process, public and agency scoping workshops will be conducted initially to collect input for a draft master plan and environmental assessment. The master plan revision sets the stage for a later update of the shoreline management plan.

Bull Shoals Lake Master Plan Update

In May 2014 Little Rock District began the process to revise the Bull Shoals Lake Master Plan. Public and agency scoping workshops were conducted in late August with 776 people attending. A draft master plan and Environmental Assessment is scheduled for public review by summer 2015. Release of the final master plan and Environmental Assessment is scheduled for fall 2015. The master plan revision will set the stage for a later update of the shoreline management plan.

The master plan guides the management of government-owned and leased lands around the lake. The master plan affects future management of natural resources and recreational opportunities to ensure the sustainability of Bull Shoals Lake.

Continuing Authorities Program Overview

The Continuing Authorities Program is an essential pathway for communities in the district to partner with the Corps on small water resource projects. In fiscal year 2014, we completed construction on two Section 14 Emergency Streambank Restoration Projects, one in Guion, Ark., and one in Augusta, Ark., both along the White River.

In the fourth quarter of FY14, we received additional funds to restart Shirey Bay, a Section 206, to determine if a feasibility cost sharing agreement will be required. Work is also continuing on a feasibility study for a Section 205 Small Flood Control Project along Prairie Creek in Russellville, Ark.

Work is currently suspended on the Russellville Slackwater Harbor, Section 107 project. In February, the City of Dardanelle sued the Department of Transportation alleging the final Environmental Impact Statement on the intermodal facility was not adequate. The federal judge dismissed us from the court case due to the fact we have not completed our agency decision and National Environmental Policy Act documentation. It is our intent to adopt the FEIS and supplement as needed prior to

completion of our Record of Decision, however all work is suspended until we receive federal funds to complete our decision.

The increasing number of suspended projects with sponsors anxious to complete adds to the burden of an unfortunate backlog of new projects needing funds and approval under many of these authorities.

Issues and Other Topics



Levee culvert inspection.

Levee Safety Program

Levees were recently discussed by several sponsors as part of the Mississippi River Commission inspection of the Arkansas River. Little Rock District was generally commended on how it communicates with levee sponsors. Still, several general concerns were also raised by this panel of levee sponsors. These concerns included the lack of an organized state entity to assist levee boards, discrepancies between levees receiving Mississippi River and Tributaries funds versus those that don't, and the ongoing financial challenges of keeping levees in compliance.

The district conducts annual inspections on these levee segments to determine their continued eligibility in the Corps Rehabilitation and Inspection Program. Maintaining an "active" status in this program allows a levee segment to be eligible for federal assistance under Public Law 84-99 in the event there is damage caused by a flood.

To remain active, a levee segment must receive a rating of at least "minimally acceptable" during the annual inspection conducted by the Corps. Unfortunately, many sponsors have neglected maintenance on their levee segments for many years, and as a result, currently fewer than half the district's 63 segments are active in the program. Among deficiencies found on the "inactive" levees are things such as unwanted vegetation, inadequate closure systems, damage caused by animals, and deteriorated drainage conduits, to name just a few.

Deteriorated conduits are a particularly significant issue as they often represent a large risk to a levee segment. Because of this, the levee standards being enforced by the Corps have recently been revised. All conduits must now have a thorough inspection conducted by the sponsor every five years. Failure to verify the condition of a conduit will result in an unacceptable rating of the segment. While this will undoubtedly be an additional financial burden to the district's levee sponsors, it is a prudent policy change intended to improve public safety.

With the primary goal of public safety, the Corps continually seeks ways to assist sponsors in better understanding their levees, the risks they pose, and the responsibilities they have as levee owners. In the past, inactive levees were ineligible for any assistance until they were repaired and restored to an active status. However, the Corps recently initiated a system-wide improvement framework that could assist inactive levees in regaining their active status. Details of this program have been communicated to the appropriate levee sponsors. Unfortunately, very few of the inactive levee sponsors have submitted a letter of intent to regain their active status.

Little Rock District will continue to assist sponsors in understanding

the recent policy changes, in evaluating their levees, and in helping to communicate the residual risks to those who live or work behind a levee.

There are about 421 miles of levees within the district that are divided into 63 separate levee segments. Each segment is owned by a local entity or sponsor that has on-going responsibilities for operations and maintenance. The majority of the levee segments are along the Arkansas River, though several are also located along the Black and White rivers

Operations and Maintenance Budget Trends, Operations and Maintenance Backlog

A continuing trend of flat-line budgets over the past several years in the Civil Works Operations and Maintenance Program has led to the prioritization and subsequent reduction of services the Corps provides. Costs have steadily risen for supplies, utilities, fuel, contracts and other resources needed to execute the O&M program. The rise in costs is limiting the quantity and diversity of services the district can provide

The district is focusing its recreational resources on strategically located facilities to offer the most efficient return on investment. The district is deferring applications for private exclusive use, such as private boat docks and mowing permits during the recreation season, so resources can be focused on providing service to the general public. The district has reduced the hours of operation at lock facilities for recreational users; however, all of the locks are operating 24 hours a day, seven days a week, for commercial vessels.

For the past several years, the district has been reducing overall maintenance of its aging infrastructure where the risk is determined acceptable. The district has decreased the frequency of dewaterings, inspections, and general maintenance which increases the response time to breakdowns. In fiscal year 2015, the district will be held to operating within specified (business line) funding amounts, such as navigation, hydropower, recreation, flood risk management, water supply, etc. Not being able to reprogram between business lines will reduce our flexibility to respond to certain public needs. For example, anticipated funding will not allow us to issue dock permits year-round or to respond to all requests for the use of government lands for recreational, commercial or municipal purposes.

Operations and maintenance funding in the President's budget for fiscal year 2012 was \$88.9 million, \$89.6 million in FY13 (\$86.2 million after sequestration) and \$101.2 million in FY14 (\$107.2 million after work plan additions). Funding in FY15 is projected at \$97.2 million. As the backlog of high priority maintenance items continues to grow as the infrastructure ages, the district is working to reallocate operations dollars to maintenance in an effort to preserve and repair the Nation's critical infrastructure. The district's annual work plan strategy includes an aggressive approach to use in-house resources to perform major maintenance. There is an overview of the top operation and maintenance unfunded items on pages 14 and 15.

Hydropower Board of Governance

A Regional Hydropower Governance Board has been established similar to the McClellan-Kerr Arkansas River Board of Governance described in this update, to provide oversight of the region's hydropower programs. The goal of the board is to seek the most effective and efficient processes to deliver power generation to South Western Power Administration; sustain the infrastructure; execute operations and maintenance at the hydropower projects; and sustain our technical competencies. Through innovative and critical thinking, use of lessons learned and best practices, and the region's diverse workforce, the governance board will drive the development and implementation of processes to provide consistency across the region.

The Southwestern Division RHGB is co-chaired by the commanders of Little Rock and Tulsa districts with the Tulsa commander serving as the executive director.

The RHGB is developing working groups to study specific facets of the hydropower program. The charge of the working groups will be to identify "best practices" across the region and nation and incorporate

“lessons learned” to develop viable and sustainable courses of action that will provide value and consistency to the region. These groups will provide recommendations to the RHGB for review and approval.

At this time there are eight standing working groups.

- Technical Center
- Construction Management
- Training and Staff Development
- Staffing and Succession Planning
- Hazardous Energy
- Operation and Maintenance Practices
- Contracting Practices
- Supervisory Control and Data Acquisition

Shoreline Management

It is the Corps’ policy to protect and manage shorelines of all civil works water resource development projects under Corps jurisdiction in a manner to promote safe and healthful use by the public while maintaining environmental safeguards to ensure a quality resource. The district manages seven lakes with shoreline management programs. These programs encompass more than 3,000 miles of public shoreline and include management responsibilities for more than 5,100 private and community boat docks on these public shores.

In 2009, the district spent \$1.6 million to execute the shoreline management program. The appropriation in 2009 was \$940,000; the remaining balance of \$610,000 was funded from other business lines that have been discontinued. In fiscal years 2012, 13 and 14 these costs were reduced to \$1.3, \$1.4, and \$1 million, respectively. Therefore, many applications for docks and mowing permits were not accepted or processed. This was in response to the district’s Recreation Adjustment Plan and is a part of an effort to focus limited resources on public use areas versus private use of public lands, and will continue again this year.

Shoreline management is one of the few programs that continue to grow, increasing the Corps footprint and operating expenses. Since the program is not sustainable long term, the district is evaluating it to assess the impact of maintaining this program within the appropriated funding.



Public community dock on Table Rock Lake.

Table Rock Lake Shoreline Management Plan Update

The shoreline management plan is the document that follows the policy of the Chief of Engineers to, “...protect and manage shorelines of all Civil Works water resource development projects under Corps jurisdiction in a manner which will promote the safe and healthful use of these shorelines by the public while maintaining environmental safeguards to ensure a quality resource for use by the public.” Under the SMP, objectives include achieving a balance between permitted private uses and resource protection for general public use. Public pedestrian access to and exit from these shorelines will be preserved.

With completion of the Table Rock Lake Master Plan, the district will initiate the SMP update process in fiscal year 2015 pending receipt of funds. Similar to the master plan revision process, a series of scoping

workshops will be held initially to gain agency and public input on how to proceed with the SMP.

Science, Technology, Engineering, Mathematics

For years, personnel throughout the Little Rock District have assisted local schools and organizations with education in the fields of science, technology, engineering and mathematics, commonly referred to as STEM. Recently, the Army Corps of Engineers has placed greater emphasis on this support, and district employees have responded by voluntarily participating in after hours events.

From January through July, employees participated in more than 55 different activities, ranging from the Army’s eCYBERMISSION and other science fairs and career discussions to nature days, scouting badges and robotics competitions. District employees also held a Take Your Kids to Work Day in April, which included several STEM-themed activities and a tour of a local lock and dam

Water Resource Reform and Development Act 2014

The Jordan Creek Flood Risk Management Project was authorized for construction with a limit of federal cost share of \$13,560,000 and \$20,860,000 in total project costs in the Water Resource Reform and Development Act 2014.

The recently passed WRRDA 14 contains a number of provisions of interest to public and private sector partners and stakeholders in Little Rock District.

Corps headquarters is in the process of developing effective implementation guidance for numerous sections of WRRDA 14 that improve collaboration, water resource planning effectiveness, and 34 newly authorized construction projects. Written implementation guidance is required prior to adoption of the law.

The Corps established a series of listening session webinars in August and September to obtain input from partners and stakeholders throughout the country in the development of implementation guidance for these and other WRRDA 14 provisions. Each listening session covered a different collection of the important general program policy provisions. The goal of the listening sessions was to provide an opportunity for stakeholders to provide input and context that can be used to assist the Corps in developing final implementation guidance for the specific WRRDA 14 provisions.

For a summary of comments received during webinars, visit: <http://www.usace.army.mil/Missions/CivilWorks/ProjectPlanning/LegislativeLinks/wrrda2014.aspx>.

International and Interagency Support

Department of Veterans Affairs

Little Rock District provides planning, design, and construction management for renovation and new construction of Veteran Affairs medical facilities in the Veterans Integrated System Network 17 in central and south central Texas. The total VA program executed during the past three years consists of 60 projects at seven medical facilities with a combined value of about \$127 million. This includes three ongoing projects at the Dallas Medical Center with a total architectural engineering services value of about \$2 million. The district awarded these three architectural and engineering design service contracts in September 2013 with completion expected in second quarter 2015.

The VA has contacted Corps headquarters to possibly act as its agent for two large construction projects. One of the projects is a \$250 million spinal cord clinic at the Dallas VA Medical Center, which is within the footprint of the Corps’ Southwestern Division. Little Rock District is SWD’s VA support office and would take the lead on this military construction like project if it comes to fruition. Our understanding is VA will be submitting this project to Congress for authorization/funding.

Customer Funding for Hydropower Projects

Little Rock District is executing 23 projects totaling \$57 million funded through a memorandum of agreement between the Corps, Southwestern

Power Administration, the city of Jonesboro, Ark., and Southwest Preference Customer Trust. This agreement allows for funding of capital improvements to the seven hydroelectric generating plants in Little Rock District. Current projects include a replacement and upgrade of the plant Supervisory Control and Data Acquisition systems, which provides for secure and efficient operation of all plants from one central location. The federal power customers have committed to a multi-year program to rehabilitate the Corps-owned facilities in the Southwestern Power Administration system and to preserve the resource for future generations.

Currently customer funding is financing modernization and uprate studies for Bull Shoals, Norfolk and Table Rock powerplants which will form the basis for future rehabilitation projects. This type of funding arrangement effectively supplements the limited federal spending and allows the customer more input into the capital investment priorities. It also has been an effective tool in completing backlog maintenance at the district's hydropower facilities. This maintenance is extremely critical as these plants approach the later stages of their economic lives.



Personnel removes silt from the bottom of Montgomery.

Military Program

Air Force Medical Mission

Little Rock District is working 21 contract actions in fiscal year 2014 totaling over \$161 million for the Air Force Medical Service's Medical Sustainment, Restoration, and Modernization Program. The FY15 program is still under development. In FY13, the district awarded 33 contracts totaling \$226 million. Little Rock District provides 'one door to the Corps' support to this program at Air Force medical clinics and hospitals worldwide.

An example of a project executed as part of this mission is the \$97 million hospital modernization project at Nellis Air Force Base, Nev. The project is currently under contract and is 45 percent complete. The Nellis AFB realignment project will renovate and modernize select departments located on all four floors within the Mike O'Callaghan Federal Medical Center. The work resolves requirements because of mission changes and deficiencies within the existing infrastructure in addition to right-sizing and relocating multiple inpatient/outpatient units, diagnostic, and educational departments. This work will allow the Air Force to expand into areas that previously housed Department of Veteran Affairs. Little Rock District awarded the design-build construction contract for this project in September 2012 and completed the design phase of the project in October 2013. Construction is underway with seven of the 34 phases completed. The current completion date is December 2016.

Other Department of Defense Medical Missions

"Initial Outfitting" provides for planning, purchasing, and installation of new and reused furnishings and equipment required prior to occupancy of new and renovated/restored facilities. The initial outfitting program grows stronger each year and is a worldwide program. Current customers

include the Navy, Army and Defense Contract Audit Agency.

Current ongoing projects locations are Okinawa, Japan; Guam; Vilseck, Germany; Gulfport, Miss.; Camp Pendleton, Calif.; and multiple locations for the Defense Contract Audit Agency.

Projects awarded in fiscal year 2014 include a Drug Testing Lab, Naval Station Great Lakes, Chicago, Ill.; Naval Academy Clinic, Annapolis, Md.; Naval Hospital Okinawa Preventative Medicine Facility and Multipurpose Facility; and the Norfolk Naval Base Vet Clinic Replacement, Norfolk, VA.

Other awards planned by the end of September include a Satellite Clinic for Philadelphia, Pa., and the Portsmouth Hospital Vertical Storage, Norfolk, Va. Total awards for FY14 are about \$9 million.

Projects planned for FY15 include an indefinite quantity contract for the DCAA and Kaiserslautern Army Depot, Germany, Initial Outfitting.



Airman inspects the aging Little Rock Air Force Base runway for damage. Replacement of the runway will begin this fall.

Little Rock Air Force Base

Little Rock District manages the design and construction program at Little Rock Air Force Base. LRAFB is the premiere C-130 operational and training facility for the United States.

We have a new \$26 million C-130J fuels maintenance hangar under construction, and it is projected to be completed in August 2015.

Two fiscal year 2014 projects have been fully designed and are planned for construction contract award by the end of September. These projects consist of a \$103 million repair primary runway project, and a new \$4.1 million C-130J flight simulator training facility addition.

Award of a design contract for a \$57 million repair apron/taxiway foxtrot project will be completed by the end of September. A construction contract for this project is being planned near the end of construction of the repair primary runway project.

Pine Bluff Arsenal

Little Rock District manages the design and construction program at Pine Bluff Arsenal, Ark. There are no active projects at this installation..

63rd Regional Support Command

Little Rock District's fiscal year 2014 program with the 63rd Regional Support Command includes six projects at various locations and is valued at about \$5 million. Construction contract awards for the FY14 projects will be complete by the end of September. The FY13 program exceeds \$4 million, and all projects are in construction.

The district has a relationship with the 63rd dating back to the early 2000's when it was formerly designated the 90th Readiness Reserve Center at Camp Pike in North Little Rock, Ark. Projects are funded with Army Reserve operation and maintenance funds.

Continued Authorities Program Roll-Up

■ Green means the project is funded.
 ■ Yellow means the project is funded but has issues.
 ■ Red means the project has been terminated, suspended or there are no funds to start.

Project Name	District	FY 14 Funds*	FY15	Status / Issues
* Includes FY12 carryover funds. ** CAP funds are not appropriated to specific projects in the President's budget. Includes FY13 carryover funds. Section 14 – Emergency Streambank and Shoreline Protection of Public Works Projects – Annual Statutory Limit \$20 Million				
Highway 58, Guion, AR	AR-01	\$0	\$0	Project partnership agreement signed July 9, 2012. Construction award was Jan. 24. Construction underway.
White River, Augusta, AR	AR-01	\$0	\$0	Project partnership agreement signed Sept. 7, 2012. Contract award was Aug. 6, 2013.
Section 107 Small Navigation Improvement Projects – Annual Statutory Limit \$35 Million				
Northwest AR Port, Arkansas River, AR	AR-03	\$25,000	\$100,000	Draft feasibility study completed October 2013; general navigation feature federal share exceeded \$10 million. After further review, some items of the GNF needed to be moved to the local service facilities feature. This with the federal limit increase to \$10 million with Water Resources Reform and Development Act 2014 allows project to proceed to report approval.
Russellville Slack Water Harbor, Russellville, AR	AR-03	\$12,000	\$50,000	Design is being updated. Lawsuit filed in February against the Federal Highways Administration for failure to comply with the National Environmental Policy Act. Future of this project unknown until lawsuit is resolved. Corps dismissed from lawsuit.
Section 205 – Flood Damage Reduction Projects – Annual Statutory Limit \$55 Million				
Prairie Creek, Russellville, AR	AR-02	\$25,000	\$100,000	National economic development plan selected May 2014. Draft report and project partnership agreement scheduled for submittal in December.
Little Black River Watershed, Naylor, MO	MO-08	\$0	\$0	Backlog/new start. Awaiting federal funds to initiate feasibility study. Site visit and analysis in October 2005 indicated no economically justified project. Additional flooding in 2008 and 2009 warranted re-evaluation. Request – January 10; Reaffirmed August.
White River, Oil Trough, AR	AR-01	\$0	\$0	Sponsor was contacted with possible new start: never received word back. This project will be removed from new start lists.
Crooked Creek, Alexander, AR	AR-02	\$0	\$0	Backlog/new start. Awaiting federal funds. Request 2009.
Section 206 Aquatic Ecosystem Restoration Projects – Annual Statutory Limit \$50 Million				
Shirey Bay/Rainey Brake WMA	AR-1	\$3	\$0	Suspended because of funds revocation. Feasibility phase restarted July. Will update the milestone report. Arkansas Game and Fish Commission is local sponsor.
Little Black Ditch, Naylor, AR	MO-08	\$0	\$0	Backlog/new start. Awaiting federal funds. Request - FY2006
Maumelle River, Maumelle Lake	AR-02	\$0	\$0	Backlog/new start. Awaiting federal funds. Request - FY2012
Section 1135 Project Modification for Improvements to the Environment – Annual Statutory Limit \$40 Million				
Rock Creek, Boyle Park, Little Rock, AR	AR-02	\$0	\$0	Suspended because of funds revocation. Feasibility phase. Federal funds of \$25,900 are needed to complete milestone report, and an additional \$100,000 is needed to complete the cost-share portion of the feasibility report.
Arkansas River Environmental Restoration	AR-02 AR-03 AR-04	\$0	\$0	Suspended because of funds revoked. Feasibility phase. Federal funds of \$87,100 are needed to complete milestone report and determine feasibility of a solution.
Rockaway Beach, Rockaway, MO	MO-07	\$0	\$0	Backlog, re-start. City of Rockaway Beach wants to re-evaluate the completed project because project is not functioning.
Section 204 – Regional Sediment Management – Annual Statutory Limit \$50 Million				
Little Rock Slackwater Harbor, AR	AR-02	\$0	\$0	New start. No Federal funds request ed. WRDA 2007 gave it programmatic funding priority. Port authority has met with DE.

Investigations Program Roll-Up

Green means the project is funded.
 Yellow means the project is funded but has issues.
 Red means the project has been terminated, suspended or there are no funds to start.

Project Name	Purpose	District	FY 14 Funds	FY 15 President's Budget	Status / Issues
Tri-State Water Coalition	To study regional water demands/ supply through year 2060.	MO-07 MO-08	\$100,000	\$0	Phase 2 was completed in June with carryover funds. This includes a water supply gap analysis and a basic formulation of alternatives that address deficiencies between demand and supply through 2060. Phase 3 was initiated in September to finish transmission plans. The Tri-State Water Coalition has an interest to now investigate water reallocations at Table Rock Lake. There is no funding available for the next step.
White River Comprehensive Study	Basin-wide comprehensive watershed study. Conducted by Little Rock and Memphis districts under Section 729, WRDA 1986.	MO-07 MO-08 AR-01 AR-03	\$650,000	\$0	In FY15 project funds will be used to complete Cache River Sub-basin Water Management Plan. Additional funds of \$650,000 are needed to move into the next priority, James River sub-basin.
Springfield	Flood risk reduction management	MO-07	\$0	\$0	The Chief's Report was signed in August 2013 and transmitted to ASA (CW). Project was authorized in WRRDA 2014. Funds are needed in FY15 to start the detailed design for construction of project.
Southwest Arkansas	Develop comprehensive watershed plan to include ecosystem restoration, water supply and recreation opportunities.	AR-04	\$0	\$0	No sponsor; study was terminated.
Fourche Creek and Tributaries	Ecosystem restoration & flood reduction	AR-02	\$0	\$0	Funding of \$100,000 is required to initiate study.
May Branch	Flood risk reduction management	AR-04	\$0	\$0	Completing 90 percent design using accelerated use of sponsor's cash share under terms of amended design agreement. \$440,000 could be used in FY15 to complete plans. Sponsor desires credit to construct a portion of the project. Construction estimate is \$30.8 million.
Three Rivers	Navigation and ecosystem restoration	AR-01 AR-04	\$0	\$0	A "new start" and \$300,000 is required to initiate a feasibility study. Need to add ecosystem restoration as part of project purpose to MKARNS.
Beaver Dam Trout Production Facility	Mitigation for reduced number of warm water fish that resulted from construction of Arkansas dams	AR-03	\$0	\$0	Water Supply Storage Reallocation Report awaiting ASA(CW) approval. O&M funds were used to complete the report. \$600,000 could be used for the project design and NEPA considerations.
Missouri State-wide Water Planning (Our Missouri Waters)	To develop a scope of work that evaluates integrating the sub-basin 'Our Missouri Waters' efforts in to state priorities. Using Planning Assistance to States Authority, Section 22, WRDA 1974	MO-01 MO-02 MO-03 MO-04 MO-05 MO-06 MO-07 MO-08	\$0	\$0	Preparing a partnership agreement under the Planning Assistance to States Authority. All 5 Army Corps of Engineers districts will work under single Agreement with Kansas City District as lead.

Construction General Program Roll-Up

■ Green means the project is funded.
 ■ Yellow means the project is funded but has issues.
 ■ Red means the project has been terminated, suspended or there are no funds to start.

Project Name	Purpose	District	FY 14 Funds	FY 15 President's Budget	Status / Issues
Clearwater Dam Safety/Major Rehabilitation, MO	Construct cutoff wall for dam safety	MO-08	\$0	\$0	The contractor completed the cutoff wall construction in December 2011. Remaining work includes contract fiscal closeout, which is scheduled for September 2015.
White River Minimum Flows, AR	To provide adequate trout habitat downstream of Norfolk and Bull Shoals dams	AR-01 AR-03	\$0	\$0	All work at Bull Shoals and Norfolk is complete and water storage has been captured. Remaining work includes completion of punch list items, final payment and contract fiscal closeout, which is scheduled for December 2014.
Fourche Bayou Basin, AR	Environmental preservation, flood control, and recreation	AR-02	\$0	\$0	The district executed the final agreement with the City of Little Rock in December 2013 to use remaining federal funding and the sponsor's credit to acquire bottomlands. September 2014 is the scheduled project completion date.
McClellan-Kerr/Arkansas River Navigation System, 12-foot channel, AR & OK	To deepen navigation channel to 12-foot minimum depth	AR-01 AR-02 AR-03 AR-04	\$0	\$0	Work on this project has ceased. The project will not resume until the project receives: (1) a "new start" decision, (2) construction funds, and (3) cost-shared funding (50/50) from the Inland Waterways Trust Fund.
Ozark Powerhouse Major Rehabilitation, AR	Rehabilitation of five turbines	AR-04	\$10,100,000	\$0	The contract for the replacement of the five hydroelectric turbines is ongoing. The contractor has assembled the first and second units and is preparing them for return to service in the fourth quarter FY14. The SWPA customers provided \$12.8 million for rehabilitation of the third unit and \$8 million for rehabilitation of the fourth unit. The district received completion federal funding in FY14.

Operation and Maintenance Unfunded Priorities

Project	Purpose	District	Status / Issues
Dardanelle- Seal leaking monolith joints and back-up pump system	Prevent flooding of dam gallery and loss of either navigation pool or dam structure	AR-03 AR-04	Additional \$2 million needed to seal leaking of monolith joints into service and purchase backup dam gallery pump system. Leakage is increasing and there is no room for additional pumps. Flooding of gallery results in loss of power to spillway gates and possible loss of navigation west of Dardanelle.
Dardanelle – Replace 5kV lock service feeder, dam gallery lighting and receptacles	Maintain power at lock and dam and Russellville Project Office and prevent unscheduled loss of navigation	AR-03 AR-04	\$750,000 needed to replace current 30 year old feeder system. Failure would result in loss of power to lock and dam and project office, halts navigation, flooding of dam /powerhouse, and loss of data communication. Failure could result in loss of life if insulation fails/breaches.
MKARNS – Structural rehabilitation and paint tainter gates at Mills Dam	Prevent loss of ability to maintain navigation pools	AR-01 AR-02 AR-03 AR-04	\$5.5 million needed for structural and skin plate repairs, including replacement of severely corroded members, side seals and cathodic protection. Expect replacement of gates will be required if rehabilitation deferred. Current leakage estimated at 3,000 cubic feet per second.
MKARNS – Montgomery Point Lock & Dam study to remove debris from lock chamber	Prevent damage to equipment and structural components that results in loss of navigation	AR-01 AR-02 AR-03 AR-04	\$400,000 needed to develop cost-effective methods for reducing and removing sediment/debris. Repairs to the lock's miter gate gudgeon pins were triggered by sediment and debris levels in and around the locks. These repairs have interrupted navigation during low water conditions and cost about \$3.7 million to repair.
Bull Shoals – Repair/replace tainter gate side seal assemblies and spot paint gates	Prevent gates from binding and becoming inoperative due to failing side seals	AR-01 AR-03	\$13.3 million needed to repair or replace side seal assemblies on remaining 14 of 17 gates, as well as spot paint gates. Seal assemblies are currently failing and could cause gates to bind and become unusable.

Operation and Maintenance Unfunded Priorities continued

Project	Purpose	District	Status / Issues
MKARNS – Additional downstream bulkhead closure and repair embedded sills at Toad Suck Lock & Dam	Prevent loss of ability to maintain navigation pools	AR-01 AR-02 AR-03 AR-04	\$4.3 million needed to fabricate closure structure to isolate tainter gate and embedded spillway sills to perform critical repairs. Bulkhead closure structure is reusable and can reduce significantly reduce costs for future embedded sill repairs.
MKARNS – Repair tainter gate embedded sills at Murray Lock & Dam	Prevent loss of ability to maintain navigation pools	AR-01 AR-02 AR-03 AR-04	\$1.7 million needed to repair and replace eroded concrete and metal sealing surfaces for the dam's 14 tainter gates. This erosion allows water to pass under the gates when they are fully closed, and the water's scouring effect worsens the problem with time.
Ozark – Structural rehabilitation and repair tainter gates	Prevent loss of ability to maintain navigation and hydropower pools	AR-03 AR-04	\$13.8 million to replace corroded members, sand blast and paint steel, replace anodes and side seals. Currently strut arm braces and skin plate vertical rib-to-girder connections require replacement at 25 to 50 percent of all locations.
Table Rock – Upgrade power tunnel cooling system	Prevent overheating of cable system and subsequent derating of generation capacity because of high temperatures	MO-7	\$500,000 needed to alleviate heat issues within the power tunnel. The power tunnel houses the 15kV generator feeder system which has experienced heat problems for many years. As the cabling system ages we are exposed to increased risk of failure due to high temperatures. A single failure could take out all generators for many months if not years. Need to revise cooling system in order to keep the 15kV generator feeders cooler.
MKARNS & Dardanelle – Replacement of hydraulic, air and water piping	Prevent failure of equipment and unscheduled loss of navigation	AR-01 AR-02 AR-03 AR-04	\$1.5 million to complete the replacement of 40-year-old piping that is corroded and failing. Piping is currently having minor failures and will not be able to be repaired with continued corrosion.
Dardanelle – Replace governor electronic controllers	Prevent increased forced outages of generation units and overtime costs because of frequent call-outs	AR-03 AR-04	\$400,000 needed for the replacement of the governor electronic components which are about 15 years old and have reached the end of their life cycle. Replacement parts are very difficult to find. Forced outages have progressively increased and numerous false alarms occur on a regular basis. Maintenance costs have increased and complete failure of a controller could occur at any time which would result in a several month forced outage.
Ozark/Dardanelle – Replace lock overhead lighting	Ensure reliable and energy-efficient safety and security lighting for lock operators and boat crews	AR-01 AR-02 AR-03 AR-04	\$180,000 needed to replace aging and deteriorated light fixtures for the lock chamber and approaches, lock/guard/guide walls and parking area. Original lighting from 1960s to be replaced with energy efficient LEDs.
MKARNS, Toad Suck Ferry Lock & Dam – Bridge maintenance	Prevent downgrade of the load rating for this major highway bridge	AR-01 AR-02 AR-03 AR-04	\$400,000 needed to apply corrosion inhibitor, patch the beams, replace elastomeric pads and replace expansion joint materials. The pre-stress tendons are exposed and corroding. If the anchors continue to erode, they will eventually break. Without the pre-stress tendons, the ability of the girders to carry tension loads goes to zero.
MKARNS, Dardanelle & Ozark – Replacement of lock and dam power wiring	Prevent accident or injury to employees or users of the locks and dams, loss of ability to maintain pool or lock boats	AR-01 AR-02 AR-03 AR-04	\$13 million to replace power wiring that is beyond its service life. All of these systems are currently experiencing intermediate failures and will not be able to be maintained in the future.
Bull Shoals – Replace Station Service Draft Tube Gates and Operators	Currently gates are not functional and station service units cannot be completely dewatered for inspection and repairs.	AR-01 AR-03	\$600,000 needed for restoring the station service draft tube gates, operators and feeders at Bull Shoals power plant. These components are the original equipment installed in the plant in about 1952. Equipment is 63 years old. Motor controls have failed. Both gates are not operational. Gate operator shaft in SS A has broken. Both gates need rehabilitation/paint/alignment. Gate transition flanges show weld separation. Maintenance costs are going up significantly and spare parts are obsolete. Manufacture of a secondary isolation gate/bulkhead to allow work on gates to be performed safely. This prevents annual maintenance to turbine, and poses a safety hazard in generator over speed or loss of brake condition or failure of governing system to maintain system pressure
Norfolk – Replace Station Service Draft Tube Gates and Operators	Currently gates are not functional and station service units cannot be completely dewatered for inspection and repairs.	AR-01 AR-03	\$300,000 needed for restoring the station service draft tube gates, operators and feeders at Norfolk power plant. These components are the original equipment installed in the plant in about 1940. Inspections indicate the need for rehabilitation of station service draft tube gates. These gates are original equipment installed about 70 years old and are non functional. This prevents annual maintenance to turbine, and poses a safety hazard in generator over speed or loss of brake condition or failure of governing system to maintain system pressure.



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