

STATE OF THE
LOWER MISSISSIPPI VALLEY

MISSISSIPPI RIVER COMMISSION
PUBLIC MEETINGS

April 2003

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by
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This is a report on the state of the Lower Mississippi Valley for the 365th session of the Mississippi River Commission. Meetings held during this session provide local interests an opportunity to express views to the Commission and provide the Commission opportunities to inspect Mississippi River and Tributaries (MR&T) projects along the river at or near high-water conditions.

Public meetings are scheduled in the lower valley at Cape Girardeau, Missouri; Memphis, Tennessee; Greenville, Mississippi; and New Orleans, Louisiana.

All Commission meetings are open to the public with advance notice of time and place. Notices are printed in the Federal Register and all known interested parties are sent a copy. In addition, the news media are sent press releases.

This report provides an update on current river and weather conditions, as well as summaries of the overall status of the MR&T project, including programs, funding, environmental initiatives of interest, and benefits of the project.

River and Weather Conditions

As we approach the spring flood season, the Middle Mississippi River stages are well below normal and the Lower Mississippi River stages are steadily falling after the recent crest and currently range from below normal in the upper reaches to near normal in the lower reaches. The ground conditions in the Mississippi Basin are generally normal to dry, the snow cover is not a major factor, and the Basin reservoirs have most of their flood control storage available.

The Middle Mississippi River stages have been below normal since November. Although the river typically experiences a significant rising trend from January through April, it has

experienced only a moderate rise through mid-March and remains well below normal for this time of year. On the Lower Mississippi River at Cairo, the stage has remained near normal since last June, but plummeted 21 feet in 3 weeks to a low of 10.4 feet on 30 January 2003, but quickly turned around, rising 36 feet during the next 4 weeks to a crest of 46.1 feet, which is about 2 feet above bankfull, on 27-28 February. Other than Cairo, the only locations exceeding bank-full were in the reach below Old River in Louisiana. The February rise on the Lower Mississippi River was a result of heavy rains in the Ohio Basin that increased the Ohio River flow from 88,000 cubic feet per second (cfs) to a peak of 928,000 cfs during that 4-week span. With the Lower Mississippi experiencing a steady recession after the crest, the stages currently range from several feet below normal in the upper reaches to near normal in the lower reaches.

Currently, snow cover in the Mississippi Basin is limited to higher elevations and is not a significant factor in the spring flood potential. The ground conditions are very dry in the Missouri and the Upper Mississippi Basins and normal elsewhere in the Basin. The Ohio Basin reservoirs have almost all of their flood control storage available. The Missouri main stem reservoirs are in a drought situation and have all of their flood control storages, as well as 37 percent of their carryover multiple use storages (conservation storages), vacant. The precipitation outlook through May is for below normal amounts over much of the Ohio and Upper Mississippi Basins and in the extreme upper portion of the Missouri Basin, and near normal amounts over the rest of the Mississippi Basin.

All in all, the flood-potential indicators appear to point towards an outlook where some flooding could reoccur in the valley through the spring months. Conditions are not presently set up for a disastrous flood situation as they were at this point in the year preceding the disastrous 1973, 1983, and 1997 flood peaks along the Mississippi River. However, it is early in the flood season and, as we have just seen with the 36-foot rise in four weeks at Cairo, the situation can change very quickly on this dynamic river if wet weather patterns were to develop during the next few months.

Overall Project Status

We are currently reporting the Mississippi River and Tributaries project as 87.5 percent physically complete.

To date, the nation has invested about \$11 billion for planning, design, construction, and operation and maintenance of the MR&T project. For this investment, the project has accumulated savings in flood damages of more than \$275 billion.

Additionally, the MR&T project provides approximately \$900 million in navigation savings to the region annually. Completion of the remaining 12.5 percent of the project is necessary for proper functioning of the project to handle the project design flood. Of the 2,059 miles of levees on the main stem of the Mississippi and Atchafalaya Rivers, 300 miles are not up to required grade and section. Some of the levees in Louisiana and Mississippi are 4 to 6 feet deficient in grade. There are 115 miles of seepage control measures such as berms or relief wells yet to be constructed to prevent levee failure from underseepage. Much still remains to be done on improvement works in the main channel in the form of revetment, dikes, and dredging to assure that the present alignment of the river remains stable for navigation and flood control. Much work remains in tributary basins. Of 1,668 miles of levee authorized in tributary basins, 1,203 miles are complete to required grade and section.

The current estimate for programmed construction work remaining on the MR&T project after FY 2004 is \$4.9 billion. There are several ongoing planning studies that will likely result in authorization of additional project features. The current Federal cost of operating and maintaining the completed portions of the MR&T project is approximately \$142 million per year. The estimated completion date is 2031, based on current funding levels.

Funding

For FY 2003, the initial MR&T appropriation was \$342 million, \$61 million more than the budget request of \$281 million. The President's FY 2004 budget includes \$280 million for the MR&T project, a 18 percent decrease over the level appropriated for FY 2003. Funding status tables are attached at the end of this report.

Environmental Initiatives

Many of the projects in the Lower Mississippi River Valley are for flood control and navigation purposes, but environmental

aspects are given major consideration. Project impacts on the environment are identified, and a sustainable balance of environmental, economic, and engineering factors are attempted. This balanced decision process is further emphasized in the Environmental Operating Principles announced by General Flowers on March 26, 2002. These principles reaffirm the Corps' commitment to the environment and incorporation of environmental concerns in all decision-making and programs.

The Lower Mississippi River Environmental Program (LMREP), established in 1982, continues to provide environmental information to support the design, construction, and operation of the Mississippi River Levees and Channel Improvement features of the MR&T project. The LMREP is the foundation of MR&T environmental stewardship.

The goal of the LMREP is to develop general environmental inventory data for the Lower Mississippi River and floodplain and to improve environmental engineering design for levees, revetments, and channel training dike systems. To achieve these goals, system-wide habitat mapping and intensive vegetation, fish, invertebrate, and wildlife field investigations have been conducted. Information is stored and habitat spatial analyses are conducted in a geographic information system.

Aquatic habitat maps of the river channel for 1915 and for 10-year intervals from the 1930's to 1990's have been completed and are being used to assess historic habitat trends and to evaluate project effects on endangered species such as the interior least tern and the pallid sturgeon. We are currently studying the distribution of the pallid sturgeon in the Lower Mississippi. Terrestrial habitat and land cover maps have been prepared for 1982 and 1992 and have been used to delineate jurisdictional wetlands and plan levee construction work to avoid and minimize environmental impacts.

Information from the LMREP is used to modify MR&T designs to promote environmental sustainability. Today's borrow pits are designed to be more productive fish or wildlife habitat. Weir sections, or "notches," are now routinely incorporated into stone dike channel training structures to reduce sedimentation and improve habitat during low discharge periods and maintain flow in secondary channels. Articulated concrete mattress revetment, used to stabilize the banks of the Lower Mississippi River, is now grooved during the casting process, at no cost, to increase surface area and provide a favorable substrate for

growth of aquatic insect larvae, important components of the Lower Mississippi River aquatic food web.

An example of a large environmental program in the Lower Mississippi River is the Atchafalaya Basin Master Plan in New Orleans District. Signed on 22 August 2000, this plan provides a guide for the management, protection, and development of the environmental resources of lands over which the Corps has obtained real estate interests within the Atchafalaya Basin. Among the authorized features of the project are the acquisition of 338,000 acres of developmental control and environmental protection easements and the acquisition of 50,000 acres of public access lands in fee title from willing sellers. As of June 2002, approximately 47,300 acres in fee title have been acquired and over 143,700 acres in environmental protection easements have been negotiated. In addition, the Corps and the State of Louisiana are working expeditiously to implement recreation features and to improve water quality and circulation, thus enhancing the region's environmental values. New Orleans District is currently completing detailed design work on six public boat ramps throughout the basin, and recently completed the Lake End Park detailed design report at Morgan City.

In south Louisiana, we are continuing environmental initiatives begun under the Coastal Wetlands Planning Protection and Restoration Act (CWPPRA). The 12th Project Priority List (PPL) under CWPPRA was adopted January 16, 2003. There are a total of five projects on the 12th Priority List. In FY 2003 the Corps, as the lead Federal agency, is initiating three of those 12th PPL projects: Lake Borgne-MRGO Shoreline Protection, South White Lake Shoreline Protection, and Avoca Island Diversion and Land Building. In concert with our sister Federal agencies on the CWPPRA Task Force, positive contributions to coastal restoration are being made. Approximately 126,533 acres of wetlands will benefit from 123 authorized projects. Fourteen projects are scheduled to begin construction in FY 2003 and 24 in FY 2004. The Corps will construct one CWPPRA project in FY 2003, the West Bay Sediment Diversion Project, and in FY 2004 will construct seven projects: Opportunistic Use of Bonnet Carre Spillway, Freshwater Bayou Canal-Belle Isle to Lock, Delta Building Diversion North of Fort St. Philip, Periodic Introduction of Sediment and Nutrients along the Mississippi River Demonstration, Benny's Bay 50,000 cfs Diversion, Grand Lake, and the Mississippi River Sediment Trap.

Another environmental initiative is the Louisiana Comprehensive Study, comparable in program size and scope to the Everglades restoration effort. This is a comprehensive watershed look at sustainable wetland restoration and creation projects covering approximately 30,000 square miles over 20 Louisiana coastal parishes. Three specific actions are currently in progress including the development of an overall comprehensive study, a marsh creation study, and a barrier island shoreline study. Additional delta studies and a reef study are scheduled in the near future.

Memphis District has instituted an aggressive program to insure environmental sustainability on existing and planned projects. While awaiting funding for the Lower Mississippi River Resource Assessment, river engineers and biologists are moving forward with interagency teaming to modify river improvement works to benefit fish and wildlife. The district meets annually with resource representatives from five states to go over current year and out-year work for the Mississippi River. This interagency teaming has received rave reviews from resource agencies and allowed for early coordination and clearance for new work, thus, having a positive impact on overall execution.

This summer, Memphis District will conduct an interagency meeting with both Arkansas and Missouri resource agencies to plan for comprehensive studies of the St. Francis Basin. This project is nearing completion, but sedimentation problems that affect the Corps' flood control mission for the basin are indicative of other problems related to landscape development. Water quality and a wide array of issues of interest to Federal and state agencies, as well as local interests who are concerned with watershed issues, will be discussed.

A sediment model has already been developed for the main stem St. Francis River. Areas of degradation and aggradation have been identified and stabilization measures have been formulated for critical degradation sites in the upper reaches of the basin. Channel stabilization at one of these sites is critical to the continued function of a Missouri state wildlife management unit. Construction of stabilization measures at this site will be completed this spring with plans being prepared for others to be constructed as soon as funds become available. These efforts are being coordinated with other maintenance activities in the basin and with programs of other agencies. This will enhance the Corps' ability to provide a flood control

project with reduced maintenance requirements, improved water quality, and improved fish and wildlife habitat expeditiously. The interagency meeting with Arkansas and Missouri resource agencies will provide an opportunity to refine these ongoing efforts and to develop other concepts for assuring the sustainability of a well-balanced project upon completion.

Memphis District is aggressively pursuing additional environmental measures in the St Johns Bayou-New Madrid Floodway, Missouri, Project. Although a very large mitigation plan has already been proposed for this planned work (e.g., 8,375 acres of acquisition and reforestation, shorebird management areas, and many avoid and minimize measures), the district has also developed a plan to buffer over 64 miles of streams and channels. This massive buffering and wildlife corridor plan will bring about a quantum improvement in the quality of fish and wildlife habitat and water quality in the highly developed New Madrid Floodway.

The three Lower Mississippi River districts have been very successful in land acquisition for mitigation on their major civil works projects. As of February 2003, Memphis District had acquired 34,950 acres; Vicksburg District had acquired 96,369 acres; and New Orleans District had acquired 9,531 acres. This represents 97 percent of their mitigation obligations for a total dollar amount of approximately \$94 million invested in environmental sustainability. Mitigation land acquisition has been very successful.

These are just a few of the environmental initiatives that the Corps is involved with in the Mississippi River Valley. There are many more projects and programs, both large and small, that are supported. The Corps is committed to environmental initiatives, seeking innovation, and achieving environmentally sustainable solutions.

General Investigations Program

Funds in the amount of \$6.4 million are requested for FY 2004 under the General Investigations category to provide for nine activities. These funds will provide for the continuation of seven surveys, collection and study of basic data, and one preconstruction engineering and design project.

The Alexandria, Louisiana, to the Gulf of Mexico study area encompasses about 1,700 square miles extending through nine parishes from Alexandria, Louisiana, to the Gulf of Mexico. Alexandria has experienced numerous floods in its metropolitan area and has had widespread flooding throughout the basin in the more rural and agricultural areas. The first phase of the feasibility study, which will address flooding problems in the Alexandria area, will be initiated in FY 2003 upon execution of the feasibility cost sharing agreement with the Rapides Parish Gravity Drainage District No. 1 scheduled in May 2003. FY 2004 funds will be used to continue the feasibility phase of the study.

The Donaldsonville, Louisiana, to the Gulf of Mexico study area is located in southeast Louisiana and the basin is subject to rainfall, tidal, and hurricane flooding resulting in structural, agricultural, and environmental damages. FY 2003 and 2004 funds will be used to continue the feasibility phase of the study.

The Fletcher Creek, Tennessee, study area is located in Shelby County, Tennessee, within the cities of Memphis, Bartlett and Cordova, Tennessee. The purpose of the Fletcher Creek study is to evaluate the need for improvements for flood control, ecosystem restoration, water quality, and related purposes associated with watershed management. The 100-year frequency flood elevation has increased two feet or more due to widespread development in the area. FY 2003 funds are being used to continue into the feasibility phase of the study. FY 2004 funds will be used to continue the study.

The Germantown, Tennessee, study area is located in the City of Germantown in Shelby County, Tennessee. The principal purpose of this study is to identify a feasible solution to the flooding, erosion, and water quality problems plaguing this area. FY 2003 and 2004 funds will be used to continue the feasibility phase of the study.

The Millington and Vicinity, Tennessee, study area is located in Shelby County, Tennessee. Reconnaissance phase studies were accomplished under a study resolution for the Memphis Metropolitan Area, Tennessee and Mississippi. The feasibility study will focus on Big Creek, a tributary to the Looshatchie River. Increased runoff and erosion is being experienced in the vicinity of Millington due to extensive development in adjacent cities and counties north and east

of the city. Locals have also indicated a need for environmental enhancement and recreational features to deter additional development in the Big Creek floodplain. A feasibility cost sharing agreement is scheduled to be signed with the City of Millington and Shelby County, Tennessee, in April 2003. FY 2003 funds are being used to continue into the feasibility phase of the study. FY 2004 funds will be used to continue the study.

The Spring Bayou, Louisiana, area encompasses at least 43 lakes and streams and includes two state wildlife management areas and two national wildlife refuges. This ecosystem is rapidly degrading from pollution of water, sedimentation, rampant growth of exotic aquatic plants and frequent, excessive flooding. FY 2003 funds are being used to continue the feasibility phase of the study. FY 2004 funds will be used to continue this study.

The Coldwater River Basin Below Arkabutla Lake, Mississippi, area is located in northwest Mississippi approximately 30 miles south of Memphis, Tennessee. Increased development within this segment of the Coldwater River Basin has created pressure on area streams to meet water quality standards while maintaining flood damage reduction goals. In particular, the potential sponsors want to implement specific projects and develop guidelines for future development that will improve the aquatic environment and conserve water resources for use in agricultural production and habitat restoration. FY 2003 funds are being used to continue into the feasibility phase of the study. FY 2004 funds will be used to continue the study.

The Tensas River Basin, Louisiana, study area is bounded by the Mississippi River on the east and the Macon Ridge on the west, and extends southward from near Lake Providence, Louisiana, to its confluence with the Ouachita River near Jonesville, Louisiana. Parts or all of Catahoula, Concordia, East Carroll, Franklin, Madison, and Tensas Parishes lie in the Tensas River Basin. Flooding, water use, and the decline in the environmental resources continue to be problems in the basin. The need to balance the competing demands is becoming more critical for this area to ensure the wise and efficient use of the basin's water resources. Assuming sufficient funds are provided in FY 2003, the reconnaissance study could be completed. Funding for this study has been excluded from the FY 2004 budget.

The Southeast Arkansas study area includes the Boeuf-Tensas and Bayou Bartholomew areas of southeast Arkansas.

Counties included in the study area are Jefferson, Lincoln, Drew, Ashley, Chicot, and Desha. Flooding between November 1982 and January 1983 caused damages in excess of \$47 million to approximately 1,170,000 acres of primarily agricultural lands in the Boeuf-Tensas Basin. Extensive agricultural farming has heavily utilized groundwater resources in the area. The study will address current flooding, agricultural water supply, and ecosystem restoration problems and needs. FY 2003 funds are being used to continue the feasibility study. Funding for this study has been excluded from the FY 2004 budget.

The Morganza, Louisiana, to the Gulf of Mexico project will provide hurricane protection for Terrebonne and northwest Lafourche Parishes. The Houma Navigation Canal Lock (HNCL) was approved for initiation of preconstruction engineering and design (PED) prior to completing the feasibility study for the remaining portions of the study. FY 2003 funds are being used to continue PED for the HNCL and the remaining portion of the study. FY 2004 funds will be used to continue PED efforts.

The Bayou Meto Basin, Arkansas, project area is located in east-central Arkansas in the alluvial valley of the Mississippi River. The project is located in Lonoke, Prairie, Jefferson, Pulaski, and Arkansas Counties. The project includes water supply needs to sustain agriculture, improvements to reduce flooding and improve water management, and environmental restoration and enhancement features. FY 2003 funds are being used to complete the general reevaluation. A draft general reevaluation report is scheduled to be completed in May 2003. Funding for this project has been excluded from the FY 2004 budget.

The Memphis Harbor, Tennessee, project is located in Memphis, Tennessee, and serves a region covering eastern Arkansas, northwest Mississippi, and southwest Tennessee. Existing harbor facilities are nearly full and the Memphis and Shelby County Port Commission desires a reformulation of the authorized project that would result in a smaller, more affordable and environmentally sensitive project for the new harbor facility. FY 2003 funds are being used to initiate reformulation activities. Funding for this project has been excluded from the FY 2004 budget.

The Reelfoot Lake, Tennessee and Kentucky, project area is located in northwest Tennessee and southwest Kentucky. Authorized project features include a new spillway at Reelfoot

Lake, with associated water level management plan; inlet and outlet channel; bridge relocation and closure of the existing spillway; circulation channels within Reelfoot Lake; a sediment retention basin on Reelfoot Creek; waterfowl management units; and restoration of Shelby Lake. Average annual benefits are estimated to be in excess of 5,600 habitat unit values and over 4 million waterfowl use days. The spillway has been designed as the first item of construction. However, funding for this project as a new construction start has been excluded from the FY 2003 and 2004 budgets. The State of Tennessee and the Corps have met and discussed the transfer of engineering documents so the Tennessee Department of Transportation can consider building the new spillway, inlet and outlet channels, old spillway closure, and a new bridge.

Construction Program

For the Mississippi River and Tributaries construction program \$124.5 million is requested for FY 2004, a decrease of \$39.4 million over the amount allocated in FY 2003. These funds allow continuation of nine construction projects and completion of one project.

During the first six months of FY 2003, construction contracts for 18 items were awarded at a cost of about \$36.0 million which, when added to work underway at the beginning of FY 2003, amounts to 74 items under contract valued at \$198.0 million. During the remainder of FY 2003, we plan to complete designs and award an additional 61 contracts having a construction value of \$112.0 million. Thus, the total volume of construction underway in FY 2003 is expected to consist of 135 contracts valued at \$310.0 million. Our estimated construction expenditures for FY 2003 are approximately \$77.0 million.

The Mississippi River Levees project is a component of the main stem system for the control of floods on the Mississippi River. The levee system provides protection for 23,620 square miles and partial protection for an additional 3,780 square miles of land in the alluvial valley subject to flooding by the project flood. The value of lands and improvements protected by authorized works against the design flood is \$145.0 billion in 2002 dollars. FY 2003 funds are being used to initiate 13 items, initiate and complete two items, continue six items, and complete eight items. Funds requested for FY 2004 will be used to continue 19 items and complete four items.

There are 1,610 miles of authorized levees on the main stem of the Mississippi River. A total of 1,373 miles of these levees are in place to grade and section. For the levees not to grade, 37 miles are under construction, and an additional 20 miles are scheduled to be awarded during the remainder of FY 2003. After FY 2003, there will be approximately 173 miles of levee which require raising and approximately 7 miles (Obion Levee extension) of new levee which will complete the system.

Design studies indicate that approximately 652 miles of seepage control measure are required. There are 537 miles complete, leaving a balance to complete of 115 miles.

Some reaches of the mainline Mississippi River Levees are inadequate to safely convey project design flood flows. Correction of these inadequacies in levee grade and/or section is given a funding priority within the Mississippi River and Tributaries program. Critical levee enlargements are now underway in Louisiana and Mississippi. The status of the levee work is summarized on Tables 1 and 2 which are attached to this report.

Under the Channel Improvement project, another component of the main stem system, about 1,040 miles of the 1,085 miles of authorized bank protection have been completed.

During the 2002 channel improvement construction season, articulated concrete mattress (ACM) revetment was placed at four locations on the Mississippi River, three locations on the Atchafalaya River, and one location on the Red River. Dikes were constructed at eight locations and foreshore protection was constructed at one location on the main stem Mississippi River.

Work planned for the Mississippi River during the 2003 season includes ACM revetment at eight locations, stone dikes at 10 locations, foreshore protection at one location, and construction dredging at one location. ACM revetment is scheduled at one location on the Atchafalaya River. Annual maintenance and reinforcement work on these rivers will also be completed.

A total of 228,835 squares of ACM was placed during the 2002 revetment season. We estimate that approximately 215,200 squares will be placed during the 2003 revetment season.

Funds requested for FY 2004 will be used to place 2.6 miles of revetment and construct eight dikes.

There are 449 miles of authorized levees in the Atchafalaya Basin project. All of these levees are in place, about 386 miles are to design grade and section, and the remaining 63 miles require raising. FY 2003 funds are being used to initiate six levee items; initiate and complete one drainage structure; continue one pumping station contract and bank stabilization; and complete three levee items. FY 2004 funds will be used to continue six levee items, one pump station contract, and bank stabilization work.

On the Atchafalaya Basin Floodway System, Louisiana, project, programmed work provides for acquisition of 50,000 acres in fee for public access and easements on 338,000 acres for flowage, developmental control, and environmental protection. Approximately 47,298 acres of fee land have been acquired and 143,730 acres of easements have been negotiated. FY 2003 funds are being used to initiate Buffalo Cove Management Unit; continue Simmesport Boat Launch; and continue land acquisition efforts and engineering and design on other water management units and recreation features. FY 2004 funds will be used to continue land acquisition efforts, Buffalo Cove Management Unit, and engineering and design on management units and recreation features.

The Francis Bland Floodway Ditch (Eight Mile Creek), Arkansas, project includes channel improvements to provide 100-year flood protection to the urban area of Paragould, Arkansas, and maintain current 3-year protection levels in the downstream rural area. FY 2003 and 2004 funds will be used to continue railroad relocation contracts and urban channel enlargement efforts.

The Grand Prairie Region, Arkansas, project area is located in east-central Arkansas. The project addresses the problems of depletion of the alluvial aquifer with resulting losses to the agricultural-based economy and opportunities for environmental restoration and enhancement. Funding for this project has been excluded from the FY 2003 and 2004 budgets.

The Helena and Vicinity, Arkansas, project is an urban flood control project that will provide approximately a 25-year level of protection for the downtown business district of the City of Helena and for the adjacent residential area. FY 2003

funds are being used to continue the last item of channel enlargement work. FY 2004 funds will be used to complete the project.

The St. Francis Basin project provides protection against headwater floods of the St. Francis and Little Rivers to an area of over 1.4 million acres and against backwater floods of the Mississippi River to an area of over 500,000 acres. FY 2003 and 2004 funds will be used to continue project construction, planning, engineering and design for future construction items and land acquisition, including mitigation lands.

Current activities on the Tensas Basin, Arkansas and Louisiana, project are in the Sicily Island portion of the Red River Backwater area. The Sicily Island area consists of about 100,000 acres of land and rural development in Catahoula and Franklin Parishes in east-central Louisiana. This area is subject to frequent flooding caused by backwater from the Mississippi and Red Rivers and floods from the Ouachita and Tensas Rivers. The project will provide 100-year protection to the Sicily Island area. FY 2003 funds are being used to complete construction of the Sicily Island project.

The Louisiana State Penitentiary Levee, Louisiana, project is located near Angola, Louisiana, approximately 40 miles northwest of Baton Rouge, Louisiana. The project provides for improving about 12 miles of existing levees along the Mississippi River, which currently provide flood protection to the penitentiary. By improving the existing levees to Federal standards, risk of flooding with its attendant property damage and threat to the lives of up to 5,100 inmates, 1,750 employees, and 527 residents will be reduced. FY 2003 funds are being used to complete the remaining levee contract downstream of Camp C and complete project construction.

The Mississippi Delta Region, Louisiana, project consists of two freshwater diversion structures designed to divert freshwater from the Mississippi River into coastal bays and marshes for fish and wildlife habitat enhancement. The completed Caernarvon structure on the east bank of the Mississippi River is preserving about 16,000 acres of wetlands in the Breton Sound estuary. The Davis Pond diversion structure on the west bank of the Mississippi River that became operational in July 2002 will preserve an estimated 33,000 acres of wetlands. Additionally, 777,000 acres of marshes and bays in the Barataria estuary will be benefited by the project. FY 2003 funds are being used to

initiate the site operations building, continue monitoring, and make modifications to the ponding area to improve flow conditions. Funds requested in FY 2004 will be used to continue monitoring procedures and complete the site operations building.

The completed Horn Lake Creek, Mississippi and Tennessee, project provides a 25-year level of protection to existing residential development along Cow Pen Creek, but only a 1-year level of protection to existing developments along Horn Lake and Rocky Creeks. The Water Resources Development Act (WRDA) of 2000 included authorization to perform a reevaluation to determine the feasibility of modifying the project to provide additional urban flood protection along Horn Lake Creek. If found justified, the project modification can be constructed in accordance with the approved report. Extensive flooding has occurred in the last two years resulting in damages to businesses, homes and two deaths. FY 2003 funds are being used to continue the reevaluation. Funding for this project has been excluded from the FY 2004 budget.

On the Yazoo Basin, Mississippi, project work on the reformulation study is continuing. This study involves four portions of the Yazoo Basin project and is estimated to cost \$32.4 million. Based on results of completed reformulations for the Upper Steele Bayou and Upper Yazoo Projects portions, the reformulation effort has, to date, been completely successful in that project costs have been reduced by \$75 million, environmental impacts have been reduced, and environmental and local interests are satisfied. FY 2003 funds are being used to finalize the reformulation report on the Yazoo Backwater Area; continue construction of channel improvement items and the purchase of project mitigation lands on Upper Yazoo Projects; continue purchase and reforestation of mitigation lands and complete Swan Lake Levee Item 66A/B on the Big Sunflower project; and complete the Mississippi Delta Headwaters (formerly Demonstration Erosion Control) program work on bank stabilization, grade control structures, levees, floodwater retarding structures, and channel improvement. FY 2004 funds will be used to continue channel improvement items and the purchase of mitigation lands on Upper Yazoo Projects; and continue purchase and reforestation of mitigation lands on the Big Sunflower River project. Funding for the Mississippi Delta Headwaters project has been excluded from the FY 2004 budget.

The St. Johns Bayou-New Madrid Floodway project in Missouri consists of 137 miles of rural channel improvement, 6.7 miles of

urban channel improvement, two pumping stations, and mitigation. The first phase consists of 27.6 miles of channel improvement in the St. Johns Basin, and the two pumping stations, one in the New Madrid Floodway Basin and one in the St. Johns Basin. The Missouri Department of Natural Resources (MDNR) denied water quality certification on 18 November 2002. An appeal for this denial was filed on 9 December 2002. A Hearings Officer was appointed on 18 February 2003 and hearings are scheduled for 3, 4, and 5 June 2003. In the meantime, efforts are continuing toward a negotiated settlement. Funding for this project has been excluded from the FY 2004 budget.

The Nonconnah Creek project is located within the Memphis, Tennessee, metropolitan area. The project includes three separable elements authorized in WRDA 1986--flood control, environmental enhancement, and recreation--along 18.2 miles of stream. WRDA 2000 conditionally authorized the extension of the flood control element for an additional 5 miles upstream and the hiking/biking trails included in the recreational element for an additional 18.2 miles, if the Secretary determines them to be feasible. FY 2003 funds are being used to address emergency bank protection needs, continue channel improvement work and the reevaluation of the conditionally authorized extensions of the flood control and recreation elements. FY 2004 funds will be used to complete one channel improvement item and continue the reevaluation studies.

The West Tennessee Tributaries, Tennessee, project is located on the Obion and Forked Deer Rivers and their major tributaries. Ninety-three miles of the authorized 225 miles of channel enlargement have been completed, and 13,527 acres of the authorized 32,000 acres of the mitigation lands have been acquired. Local interests would like to conduct a reevaluation study for an alternative demonstration project and resume construction for two of the remaining four drop structures on tributaries. FY 2003 funds are being used to continue coordination activities with the sponsor and the State of Tennessee. Funding for this project has been excluded from the FY 2004 budget.

The Wolf River, Memphis, Tennessee, Basin was authorized for construction by Section 101(b) of WRDA 2000. The project is located on the Wolf River in the vicinity of Collierville, Tennessee. The primary purpose is ecosystem restoration. The project sponsors are the Chickasaw Basin Authority and Shelby County, Tennessee. FY 2003 funds are being used to

develop and execute a project cooperation agreement. Funding for this project has been excluded from the FY 2004 budget.

Maintenance Program

Funds available in FY 2003 are being used on 35 completed projects for operation of projects and repairs of levee slides, repairs to revetments, harbor dredging, and dredging of the Mississippi River. The FY 2004 request for Mississippi River and Tributaries maintenance is \$162.4 million, which is a decrease of \$7.6 million from the funds allocated in FY 2003. This request will allow continuation of necessary operations and maintenance activities on 35 completed projects. Of the \$162.4 million request, \$103.7 million, or 64 percent, will be used for operation and maintenance of main stem levees, channels, and harbors. This work consists of Mississippi River main stem channel and harbor dredging, and repairs of levee slides, banks, dikes, and revetments. Another \$55.8 million, or 34 percent, is for operation and maintenance of tributary river basin projects; and \$2.9 million, or 2 percent, is for mapping and inspection of completed works.

Currently in the Yazoo Basin, Mississippi, Big Sunflower River maintenance project, there are no ongoing maintenance contracts and only design and real estate activities are proceeding. The Big Sunflower River Channel Maintenance Draft Environmental Assessment was distributed for public review on 25 February 2002. Based on comments received on the Draft Environmental Assessment, a Supplemental Environmental Impact Statement (SEIS) is being prepared. Completion of the Draft SEIS is scheduled for November 2003. The Mississippi State Water Quality Certificate was vacated by Mississippi State Supreme Court in April 2001. On 9 May 2002, the court remanded the case back to Hinds Chancery Court with orders to further remand to Mississippi Commission of Environmental Quality to address the court's comments. Design of Items 2 and 4 has been completed and these maintenance items could be advertised once NEPA documentation is completed, water quality certification is reinstated, and funding is made available.

Benefits of the Mississippi River and Tributaries Project

Flood damages prevented by the MR&T project for FY 2002 were \$16.9 billion (\$1.9 billion for the Vicksburg District,

\$945.0 million for the Memphis District, and \$14.1 billion for the New Orleans District).

Navigation tonnage moving on the Mississippi River from Minneapolis, Minnesota, to the mouth in 2001, the last year for which we have records, was 504,165,000 tons. That amounts to 207,125,933,000 ton-miles of traffic. Transportation benefits for the MR&T project are \$884,704,000 annually.