

YESTERYEAR PHOTOGRAPHS

From the YMDLB Archives



Technology and machinery to build and maintain levees have come a long way.



Waters almost flooded train tracks running through Helena, Arkansas.



Waters rose right up to the front door of the Haynes Motel.



Levee camp housing was found near Mississippi levees.

LINKS & PARTNERS

Yazoo-Mississippi Delta Levee District
www.leveeboard.org

U.S. Army Corps of Engineers — Vicksburg District
www.mvk.usace.army.mil

U.S. Army Corps of Engineers — Memphis District
www.mvm.usace.army.mil

U.S. Army Corps of Engineers — Five Day River Forecasts
www.mvm.usace.army.mil/hydraulics/docs/nws/msrv3.txt

Waterways Experiment Station
www.wes.army.mil

Mississippi Department of Wildlife, Fisheries and Parks
www.mdwfp.com

USGS National Mapping Information
www.nationalmap.gov

Mississippi Forestry Commission
www.mfc.state.ms.us



The River's Edge

The official publication of the Yazoo-Mississippi Delta Levee District SPRING 2006 *Volume 1, Number 1*

Funds Promised to Continue with Upper Yazoo Project

Congressional delegates believe \$22.5 million will be available in 2007

U.S. Senator Thad Cochran and U.S. Representative Roger Wicker indicated to Yazoo-Mississippi Delta Levee Board (YMDLB) representatives that \$22.5 million in funds would be allocated in 2007 to continue with the Upper Yazoo Project, which is focused on cleaning out and restoring channel capacity to the Yazoo River and its tributaries.

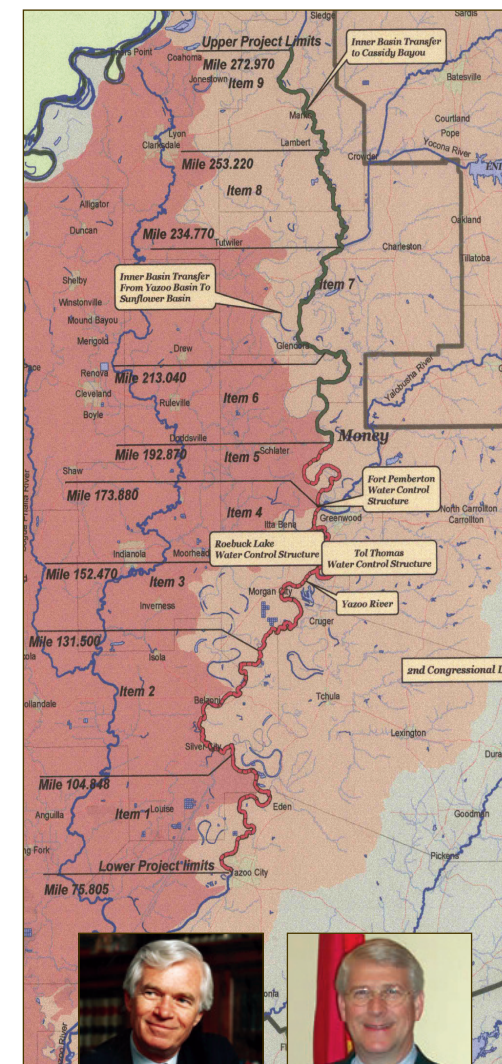
“We had a productive meeting with congressional delegates in Washington, D.C., and I have all the confidence that a portion of the project will be fully funded in 2007,” said Sykes Sturdivant, YMDLB president.

The Upper Yazoo Project is a federally funded Corps of Engineers project that was begun in 1976 near Yazoo City. As the project is completed, downstream channels will be able to handle the maximum levels of discharge from hillside reservoirs, keeping the reservoirs from flooding.

Work on the channels through Greenwood is complete, and the project is now focusing on the areas of Marks, Tutwiler and Glendora.

“We are working at a pace of enlarging 11 miles per year, and 143 miles have been covered so far,” Sturdivant said. “With this funding, we will be able to work towards completing the remaining 80 miles.”

While in Washington, D.C., Sturdivant also met with other key congressional figures, including J.P. Woodley, Assistant Secretary of the Army for Civil Works. “We



Above Center: The Upper Yazoo Project is a federally funded project that began in Yazoo City and has progressed north to Money. Above Left: U.S. Senator Thad Cochran. Above Right: U.S. Representative Roger Wicker.

would also like to thank [U.S. Representative] Bennie Thompson and [U.S. Senator] Trent Lott for their continued support,” Sturdivant said.

The Upper Yazoo Project provides countless benefits to the citizens in the area, the greatest being flood protection.

“It is important that this project not be delayed,” Sturdivant said. “If we do not move forward, we could have a scenario like Lake Pontchartrain after Hurricane Katrina.”

Area lakes also benefit from the project, which allows water levels to remain stable at higher levels. “This makes the fishermen happy as well as the environmentalists,” Sturdivant said.

The Upper Yazoo Project has been very well-received, according to Sturdivant.

“Congressional funding is the only thing holding us up,” he said. “Any delay in this project could be disastrous for the citizens of these communities.”

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Yazoo-Mississippi Delta Levee District
P.O. Box 610
Clarksdale, MS 38614

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MAP OF
YAZOO - MISSISSIPPI DELTA
LEVEE DISTRICT

Composed of all of
Tunica, Coahoma, Quitman, Leflore
and Sunflower Counties
and parts of
DeSoto, Tallahatchie, Humphreys,
Yazoo and Holmes Counties
Mississippi

Office CLARKSDALE - MISSISSIPPI

SCALE OF MILES
0 5 10 15 20



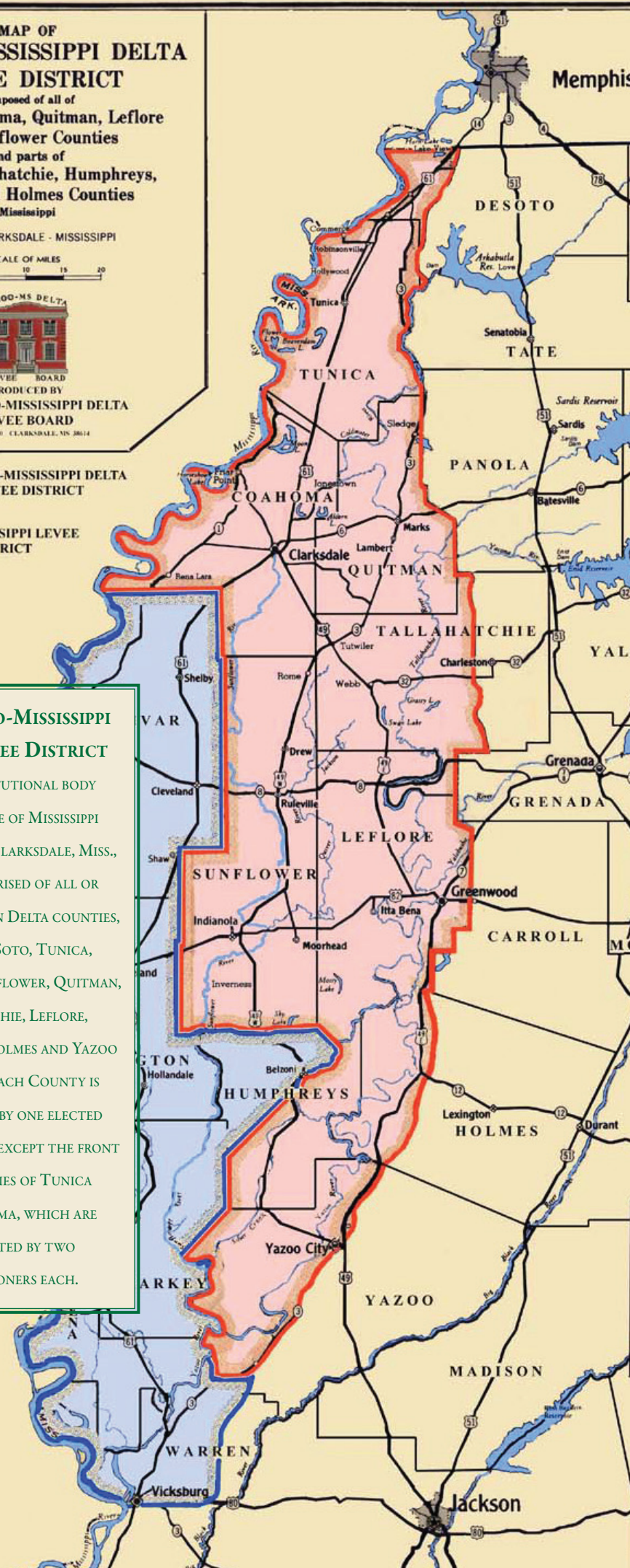
LEVEE BOARD
PRODUCED BY
THE YAZOO-MISSISSIPPI DELTA
LEVEE BOARD
P.O. BOX 610 CLARKSDALE, MS 38614

THE YAZOO-MISSISSIPPI DELTA
LEVEE DISTRICT

THE MISSISSIPPI LEVEE
DISTRICT

THE YAZOO-MISSISSIPPI
DELTA LEVEE DISTRICT

IS A CONSTITUTIONAL BODY
OF THE STATE OF MISSISSIPPI
DOMICILED IN CLARKSDALE, MISS.,
AND IS COMPRISED OF ALL OR
PORTIONS OF TEN DELTA COUNTIES,
NAMELY DESOTO, TUNICA,
COAHOMA, SUNFLOWER, QUITMAN,
TALLAHATCHIE, LEFLORE,
HUMPHREYS, HOLMES AND YAZOO
COUNTIES. EACH COUNTY IS
REPRESENTED BY ONE ELECTED
COMMISSIONER, EXCEPT THE FRONT
LINE COUNTIES OF TUNICA
AND COAHOMA, WHICH ARE
REPRESENTED BY TWO
COMMISSIONERS EACH.



November. Initial aid came in the way of fuel and equipment, including seven dump trucks, three excavators, two loaders and numerous other vehicles and tools. The YMDLB team was quickly organized to aid in the clean-up of several areas, including cemeteries, beaches and public and recreational areas, and the team also helped to clear Buccaneer State Park and McLeod State Park in Hancock County to ready the area for FEMA's temporary housing. The most time-consuming portion of the recovery effort, however, focused on ditch clean-up.

"We helped remove debris from ditches in Waveland, Bay St. Louis and Diamondhead," Greenwood said. "We started at the Gulf and worked our way in all the way to I-10."

The team, who brought their own eating and drinking supplies, slept on the floor of temporary headquarters, used portable restrooms and showered with cold water in tents furnished by the National Guard. Greenwood received assignments at daily 6

p.m. meetings.

"It was pretty overwhelming, but you could see progress made everyday," Greenwood said. "Most of the state and county employees had lost everything, and equipment was damaged or destroyed. They were crippled."

Now Greenwood and the Board will look at plans to become first-responders in Mississippi to major disasters, such as ice storms, tornados or another hurricane. As first-responders, teams mobilize immediately and are completely self-sufficient, providing their own food, water, sleeping arrangements and fuel.

"It's a life-long commitment we want to have to the state," Greenwood said. "We want to be the guys going in and helping until an area struck by disaster gets back on its feet."

Greenwood says he was overwhelmed by the nationwide response to provide assistance.

"I'd have to say that every state in the union was represented down there," he said. "This country sure is ready to help its neighbors."



YMDLB equipment used for Hurricane Katrina relief efforts included dump trucks, excavators, loaders and other vehicles and tools.

COMMUNITY SPOTLIGHT

YMD Levee Board
Grows a Better Mississippi

When people think of Mississippi, they immediately picture its vast agricultural resources. From lengthy highways of wildflowers to vast forestry, the Magnolia state has always been bountiful with flora. However, with ice storms and tornadoes devastating the state for the past ten years, many townships were at a loss for the trees that shaded the residents and made their cities beautiful.

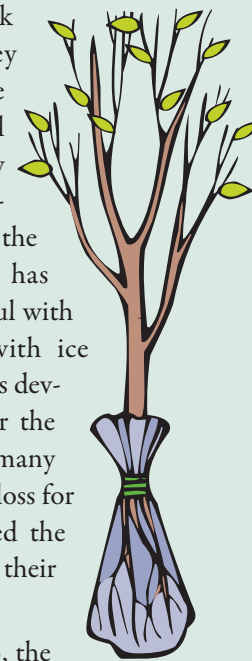
In February 2005, the YMDLB assisted Take Pride

Yazoo-Mississippi Delta Levee Board members gave away hardwood trees such as the one shown above at the Mississippi Fish and Wildlife Expo held in Canton in February 2005.

in Mississippi, a unit that aims to seek, support and recognize volunteers who work to improve our natural and cultural resources, in giving away hardwood trees at the Mississippi Fish and Wildlife Expo in Canton. The YMDLB operates a hardwood nursery for reforestation of its properties along the Mississippi River levee. They distribute excess seedlings to any resident who would like to assist in repopulating the state's plant life.

"Recent ice storms have played havoc with many trees along the majestic boulevards and main streets of this small-town state," Robbie Wilbur, state coordinator for Take Pride in Mississippi, said. "Hopefully some of these seedlings will become part of the historical beauty in which we all take much pride."

IF YOU WOULD LIKE TO GET INVOLVED WITH THE "GROW A BETTER MISSISSIPPI" PROJECT, CONTACT THE YMDLB AT (662) 624-4397.



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UPPER YAZOO PROJECT HITS HOME, CONTINUED



Johnny Kearney (above left) has been worried about his parents' graves (above), located on his family land. They are now only 15 feet from the eroding banks of the Tallahatchie River and could be in danger. Because of work done as part of the Upper Yazoo Project, he will not have to move the graves.

Kearney's parents' graves and his home, a bank-stabilization project will begin. The bank will be properly contoured, and rocks will be brought in and "wrapped" with wire to stabilize the bank and help prevent

erosion. The bank-stabilization effort will run approximately 625 feet in length.

"This is going to help me," said Kearney. "And the Upper Yazoo Project should be good for everyone. It's simple. No drainage, and there will be no Delta. Anyone who wants to see the importance of the Upper Yazoo Project just needs to look at the impact it will have on my land.

"It was just a matter of time before the erosion reached the gravesites and eventually my house. I'm feeling a lot better. The Corps has been good to work with."

The Upper Yazoo Project started at Yazoo City, and the work has progressed north to Money. Approximately 80 miles remain before the project is finished near Marks in Quitman County.

Sykes Sturdivant, president of the Yazoo-Mississippi Delta Levee Board, says that Kearney's situation illustrates the importance of the Upper Yazoo Project and explains why the board has worked diligently to secure federal funds to keep the program moving forward in a timely manner.

"There are numerous examples of the project and the positive results it will have on the Delta," Sturdivant said. "We want the project to continue to help residents in the area and prevent flooding."

The levee board president said, "The Upper Yazoo Delta Project not only helps farmers but everyone in the Delta – residents in the communities, business owners, farmers, as well as the wildlife, who enjoy the benefits of much-needed flood reduction."

Why are levees important?

Residents of any town should be safe. They should be able to lead their lives, enjoy times with their families and friends and not worry about the impending risk of danger or injury from nearby rivers. The YMDLB takes on this task, so the residents of their counties can live safe lives.

Flooding has been a problem for several counties in Mississippi since the 1800s. Through the use of levees, agriculture and families are made safe because levees keep the river from spilling into farmlands. Flooding can cause an economic shift that can destroy land and homes and cause disease to spread throughout communities.

The Yazoo-Mississippi Delta Levee Board of Commissioners is responsible for erecting and maintaining a system of levees. There are 98 miles of mainline Mississippi River levee, starting just south of Memphis to the Bolivar County line, 18 miles of back-water protection levee on the Yazoo River in Yazoo and Warren Counties and 320 miles of interior rivers and streams.

There are two types of levees currently used to protect cities and their residents – artificial and natural. Artificial levees prevent flooding of the adjoining countryside and confine the flow of the river, which results in higher and faster water flow. The

surfaces of artificial levees must be protected from erosion, so they are planted with vegetation like Bermuda grass in order to bind the earth together. When a river floods over its banks, the water spreads out, slows down and deposits its load of sediment. Over time, the river's banks are built up above the level of the rest of the floodplain. The resulting ridges are called natural levees.

The use of both types of levees have benefited many parts of the YMDLB region. Through the use of sound knowledge and action by its committees, the YMDLB hopes to continue with preventive maintenance for its residents.

The purpose of flood control: Fact vs. Fiction

Aldo Leopold, who is considered the father of wildlife ecology, is quoted as saying, "The practice of conservation must spring from a conviction of what is ethically and aesthetically right, as well as what is economically expedient. A thing is right only when it tends to preserve the integrity, stability and beauty of the community, and the community includes the soil, waters, fauna and flora, as well as people."

The Yazoo-Mississippi Delta Levee Board Commissioners agree with Leopold. The group is responsible for erecting, maintaining and operating a system of levees to protect the people and property of the Delta from the damages caused by the elevated waters of the Mississippi River; to direct the necessary activities attendant to the threat of high water and flood damages from interior rivers and streams; and to furnish the local cooperation required for certain flood control and drainage projects of the U.S. Army Corps of Engineers.

According to Greg O'Brian in *Mississippi History Now*, the major reason that river control is needed is the high probability of flooding.

"Because of geological conditions, all points along the river south of St. Louis, Missouri, are particularly susceptible to periodic flooding," O'Brian writes. "On average, one flood occurs every three years. Some floods have lasted for months, such as the one from December 1734 to June 1735 that inundated New Orleans and other places on the lower river."

Many people see flood control and the various projects of the YMDLB as harmful to the region's wildlife and plants, but these



One of the major reasons that river control is needed is the high probability of flooding, such as this flood in Clarksdale in 2001.

are common misconceptions. Flood control projects do not destroy fisheries in the Delta's natural streams; to the contrary, the YMDLB has ignited many projects to enhance and accelerate fisheries habitat recovery.

"Because of the extremely gradual slope, Delta streams are slow moving and prone to silting," said Sykes Sturdivant, YMDLB president. "Historically, they are characterized by heavy sediment loads and do not produce high-quality fisheries habitat. As a result of flood-protection projects, substantial investments have been made to develop fish spawning structures and other structural improvements designed to enhance and accelerate fisheries habitat recovery."

The Delta is known for its beautiful flora. Another common misconception is that rising flood waters are good for timber; the YMDLB refutes this statement.

"Recent research by the National Biological Service concludes that trees are one of the hardest hit plant species, when floods of long duration occur," Sturdivant

added. "Private forestry consultants and representatives of the Forest Service-USDA say that ponding water is one of the primary killers of trees in the Mississippi Delta."

Finally, for those who believe that nature should take its course, and flood control should be set aside, consider this: without flood protection, there would not be a region to inhabit.

"The silting of Delta streams eventually causes most stream beds to change course, seeking alternative courses, as gravity draws the water to the lowest available point," Sturdivant said. "Without adequate flood protection, we can expect to renew problems associated with earlier flooding conditions: yellow fever, typhoid fever, malaria and unsanitary drinking-water supplies."

As the years pass, the YMDLB continues to update its tactics for dealing with the region's flooding issues. The board sees a bright outlook for the region and is anticipating great things to come for the wildlife and people of the Yazoo-Mississippi Delta area.

HOW DOES A LEVEE WORK?

TIMBER GROWING IN RIVERSIDE BORROW PITS



SOD

RIVERSIDE BERM

GRAVEL ROAD

ROADWAY ADDITION

LANDSIDE BERM

COLLECTOR DITCH

RIVERSIDE BORROW PITS are initially acquired as a source of material for building the levee and are subsequently used as a source of repair materials and a site for riverside timber stands.

RIVERSIDE BERMS are short, narrow fills at the base of the levee to stabilize the relatively long, steep riverside slopes of the levee and to minimize entrance of seepage at the levee toe.

PROTECTIVE SOD is a means of preventing loss of dirt from the levee and other features due to erosion

by rain, wind or river water. The sod is planted immediately after construction and carefully nurtured throughout the life of the levee structures.

GRAVEL ROADWAYS are a means of providing all-weather traffic for surveillance and flood fighting without damage to the levee crown, even during the wettest periods of time.

A ROADWAYS SECTION is a fill added to the landside crown to provide a 25-foot-wide area on top of the levee for traffic. This feature is not noticeable after it is built and appears to be part of the design levee.

LAND BERMS are low, wide fills to reinforce the base of the levee and provide weight to counteract the uplift pressure of seepage waters during times of high water.

COLLECTION DITCHES As a policy, landside areas are kept clear of brush and trees to permit ready observation of seep and boil areas during high water. Collection ditches along the outer edges of the cleared areas drain off excess rain and seepage water so that these areas can be mowed during the summer months to prevent re-growth of bushes and trees.

Yazoo-Mississippi Delta Levee Board Responds Post-Katrina

More than 26,000 man hours logged in effort

Hours after Hurricane Katrina blew through the State of Mississippi, members of the Yazoo-Mississippi Delta Levee Board (YMDLB) mobilized staff and equipment to the Coast to begin what would become an \$809,000 recovery effort.

“We knew immediately that we had to go,” said Kelly Greenwood, CEO, Yazoo-Mississippi Delta Levee Board. “We knew it was something we had to do to help our state in a time of great tragedy.”

YMDLB President Sykes Sturdivant said that the commissioners unanimously supported Greenwood’s decision to mobilize immediately.

“The commissioners wanted to help fellow Mississippians in a time of need,” Sturdivant said. “It is amazing how well-equipped for a disaster this team is, and we are extremely proud of their unselfish actions and tireless efforts to help citizens on the Coast recover.”

Almost 40 YMDLB employees, who maintain Yazoo-Mississippi Delta levees full-time, rotated in and out, logging more than 26,000 man hours from August 30 until late



YMDLB employees were quickly organized to aid in the clean-up of the Mississippi Gulf Coast after Hurricane Katrina made landfall.

COMMUNITY FEEDBACK POSITIVE POST-KATRINA

When Hurricane Katrina hit the Mississippi Gulf Coast, YMDLB assistant chief engineer Bruce Cook says there was no question that a team should mobilize immediately to assist with clean-up in Hancock County.

“It is not something that we normally do, but I knew that we could help them,” he said. “We had the right equipment and the man-power. Those folks needed our help – they were in bad shape.”

Cook, who has worked at the YMDLB for four years, traveled to the Coast two weeks after the hurricane and lived and worked in Hancock County for two months. Though the hours were long and the living arrangements less than desirable, Cook looks back on his time spent there as “a good thing.”

“Most everyone was appreciative,” he said. “We have up-to-date, extensive equipment. Many of the counties don’t have a third of the equipment we have; plus, their machines had been damaged by floods and water. They were very limited on their resources.”



Bruce Cook, YMDLB Assistant Chief Engineer

Cook slept on an air mattress on the concrete floor of the Alcan Cable Factory. For the first month, he took cold showers provided by the National Guard. By the second month, the facilities at the factory were usable.

Cook’s living arrangements paled in comparison to the damage he witnessed.

“The debris had been pushed to the side of the road,” he said. “It looked and smelled like we were driving through a landfill. I’ve never seen anything like it. I can’t even describe it. You’d have to see it to get a full understanding.”

Working long hours seven days a week, Cook said that he lost track of what day of the week it was.

“I got used to it after about a week or two – after we got the routine going and things got smoothed out,” he said.

So far, Cook says he has not heard any negative feedback from the community.

“Most everything we hear is positive,” he says.

INTERESTING FACTS

- The first levees were constructed over 3,000 years ago in ancient Egypt, where a system of levees was built along the left bank of the River Nile for more than 600 miles.
- The Mississippi levees represent one of the largest such systems found anywhere in the world. They comprise over 3,500 miles of levees, extending some 1,000 miles along the Mississippi, stretching from Cape Girardeau, Missouri, to the Mississippi Delta.
- Some Mississippi levees are as high as 50 feet. The Mississippi levees also include some of the longest, continuous individual levees in the world. One such levee extends southwards from Pine Bluff, Arkansas, for a distance of some 380 miles.
- The Great Mississippi Flood occurred in 1927, when the Mississippi River breached levees and flooded 27,000 square miles, killing 246 people in seven states and displacing 700,000 more.

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More About the Upper Yazoo Project

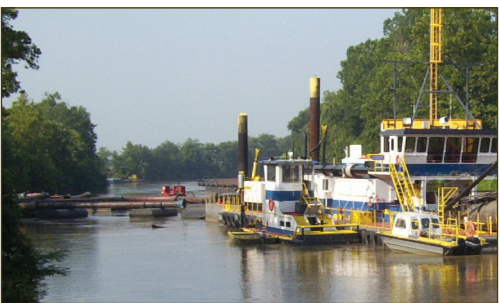
The disastrous flood of 1973 had dire consequences on the Mississippi Delta. Although there was not a major levee failure in the Delta, flood stages lasted for 77 days in St. Louis and 89 days in Vicksburg, proving once again that flood control must be given priority status for the protection of the Delta and the entire Mississippi Valley.

In 1974, the Corps of Engineers adopted a new plan, the Upper Yazoo Project, which involves dredging the Yazoo, Tallahatchie and Coldwater Rivers and restoring them back to their original channels. Thus, the river is able to handle the increased flow coming out of reservoirs. Sediment build-up on the bottom of the river reduces flow; dredging will take this sediment out, allowing the river to handle

more flow and to keep it from flooding. The project, 100% federally funded and managed by the Corps of Engineers, was begun in 1976 near Yazoo City.

The region is divided into nine items and sub-items, and each sub-item takes just over a year to complete, making the estimated year for completion 2010, at the earliest, contingent upon funding.

“The economic progress of the Delta is based on the principle that flood control and proper water management are basic keys to prosperity and quality of life in the Delta,” Sturdivant said. “The Yazoo-Mississippi Delta Levee Board is committed to this goal.”



Dredging the Yazoo, Tallahatchie and Coldwater rivers will allow increased flow out of reservoirs, which will decrease the chances of the waterways flooding. This dredging is part of the Upper Yazoo Project.

UPPER YAZOO PROJECT HITS HOME FOR LEFLORE COUNTY MAN



Johnny Kearney is concerned. And rightfully so.

The Tallahatchie River is slowly eating away at the front yard of the Leflore County home- stead that has been in his family since 1884.

The river’s strong current eroded an estimated ten feet off his land in 2005, with large trees and flower beds falling into the river, which is now roughly 200 feet wide there. Over the past few years, he has lost an estimated 30 cottonwood and oak trees, as well as day lilies and irises, to the river’s force, that has also produced dangerous slides and cave-ins.

Especially worrisome to Kearney is that his parents’ graves, located on the family land, are now only 15 feet from the eroding river’s banks and could be in peril within a year or two.

Johnny Kearney’s front yard in Leflore County is being eroded by the Tallahatchie River. The problem will soon be resolved, as work continues on the Upper Yazoo Project. U.S. Army Corps of Engineers Vicksburg District and Yazoo-Mississippi Delta Levee Board officials met with Kearney on March 13 to analyze the situation.

“I don’t want to move them,” said Kearney, pointing to the red brick-lined gravesite with the two headstones.

He won’t have to.

The U.S. Army Corps of Engineers Vicksburg District, working in conjunction with the Yazoo-Mississippi Delta Levee Board, will soon begin a dredging and bank-stabilization project along Kearney’s land as part of the Upper Yazoo Project flood-control program.

This comes after Corps and Levee Board officials met with Kearney March 13, analyzed the situation and devised a plan that will both address his problems and minimize environmental impacts.

To address the danger in the area near

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