

YMDLB Home Office Then & Now



Top: Old Court House in Austin, Mississippi — the birth place of the Levee Board. Photograph is dated April 16, 1884. Above: Current home office in Clarksdale, Mississippi.



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

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.erdc.usace.army.mil

Mississippi Department of Wildlife, Fisheries, and Parks
www.home.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 **FALL 2009 Vol. 3, Number 1**

YMDLB Celebrates 125th Anniversary

Levee Protects and Improves Quality of Life

The responsibility of the Yazoo-Mississippi Delta Levee Board is to “erect, maintain, and operate a system of levees to protect the people and property of the Delta from damages of high 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.”

So what does that mean for the citizens of the 10 counties that the Board represents?

“The bottom line, truly, is that since a breach in 1897, the levees within the 10 counties that we protect and maintain have never had a break,” said Sykes Sturdivant, Yazoo-Mississippi Delta Levee Board president. “This year marks our 125th anniversary, and that alone is reason to celebrate.”

For the past 125 years, the staff, crew, and Board of the Yazoo-Mississippi Delta Levee District have kept people and property safe from flooding; increased quality of life by managing interior ditches, rivers, and streams; and given back to the community through scholarships, education programs, and beautification projects. The Board serves the State of Mississippi as a non-emergency agency



Above: Since a breach in 1897, levees maintained by the Yazoo Mississippi Delta Levee Board have never had a break.

first responder and has logged numerous hours of volunteer time, not only after Hurricane Katrina, but also through storm damage clean-up across the 10 counties.

“Relief from floods has made railroads and highways possible, providing access to markets, consolidation of school systems, and development of new industries,” said Kelly Greenwood, Yazoo-Mississippi Delta Levee Board CEO. “In addition, improved drainage has reduced sickness and improved agricultural production. 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. The Board of Levee Commissioners for the Yazoo-Mississippi Delta is committed to this goal.”

The Board protects some 250,000 citizens living in Holmes, Tallahatchie, Yazoo, Leflore, DeSoto, Tunica, Humphreys, Coahoma, Quitman, and Sunflower Counties. The Board is responsible for the first 98 miles of the mainline Mississippi River levee, 18 miles of backwater levees within the Mississippi Delta, and 330 miles of interior rivers and streams.

“The last levee breach in our district was in 1897, and maintenance and improvements on the levees will continue our excellent record,” said Greenwood, who also serves as chief engineer. “We will continue to work to ensure the safety of the residents in each of the counties that we serve and represent.”

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Kelly Greenwood
Chief Executive Officer
Chief Engineer



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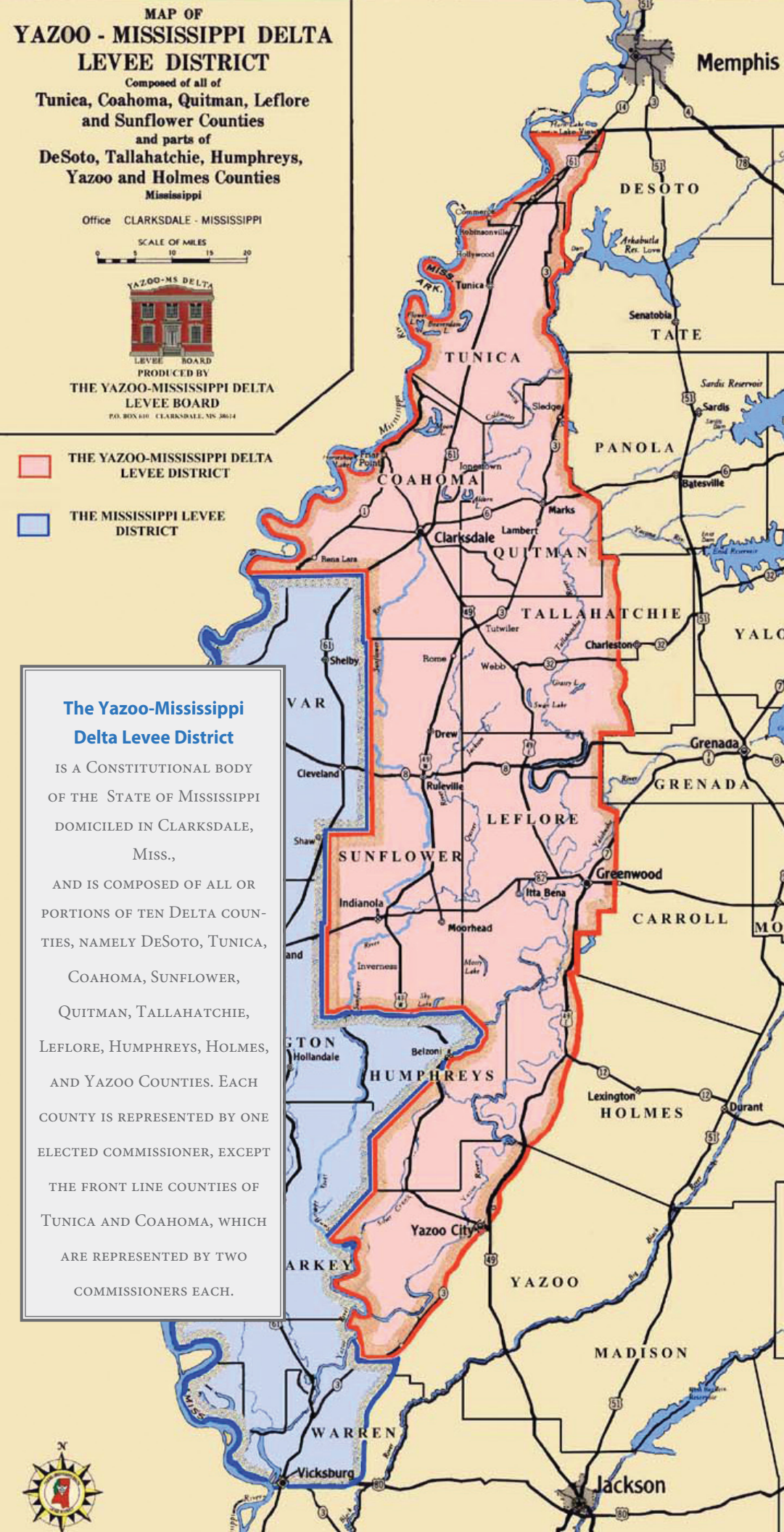
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The Yazoo-Mississippi Delta Levee District
IS A CONSTITUTIONAL BODY OF THE STATE OF MISSISSIPPI DOMICILED IN CLARKSDALE, MISS., AND IS COMPOSED OF ALL OR PORTIONS OF TEN DELTA COUNTIES, NAMELY DESOTO, TUNICA, COAHOMA, SUNFLOWER, QUITMAN, TALLAHATCHIE, 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.



Above: Indian Bayou



Above: Upper Yazoo Project



Above: Panther Swamp



Above: Dredging the upper Yazoo



"The Beast" and other machines were recently used to help clear the banks of the Sunflower River in Clarksdale.



Yazoo-Mississippi Delta Levee Board Projects

Looking Back: 50 Years of Award-Winning Maintenance

Every year since 1958, the Yazoo-Mississippi Delta Levee Board has received an Outstanding Maintenance Award from the Memphis District, U.S. Army Corps of Engineers. "The rating is a result of the programs and procedures that we have in place to assure that the levee remains in excellent, functional condition at all times," said Kelly Greenwood, Yazoo-Mississippi Delta Levee Board CEO. "As the Board celebrates our 125th anniversary, we also celebrate more than 50 years of extremely high quality maintenance."

Since the breach in 1897, the levees maintained by the Board have never broken. But maintaining the levees to protect citizens from flooding requires much more than one might think. Throughout the years, the Board has been involved in many major projects—all with the protection of lives, land, and livelihood of the some 250,000 citizens it represents.

In 1936, Congress adopted the Flood Control Act, which provided a comprehensive plan called the **Yazoo Headwater**

Project. The plan consisted of a combination of flood control reservoirs and channel maintenance on the Yazoo River from the Delta to the Mississippi. Work on the Arkabutla, Sardis, Enid, and Grenada reservoirs was completed in 1955. In 1962, the Whittington auxiliary channel and the Greenwood protection works were completed.

The **Big Sunflower River and Tributaries Project** was first initiated by the U.S. Army Corps of Engineers in the 1960s. Initiation of a major channel rehabilitation began on the lower half of the Big Sunflower River basin in 1999. Major rehabilitation and maintenance of these streams ultimately remains the responsibility of the Corps, but the Board provides minor maintenance to the streams. This project will assure an adequate drainage outlet for interior water within the Mississippi Delta. Board maintenance of the project continues today.

The U.S. Army Corps of Engineers

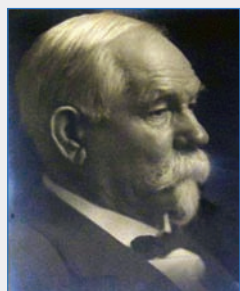
adopted the **Upper Yazoo Project** in 1974 which calls for enlarging the existing channel begun in 1976 near Yazoo City. The federally funded project focuses on cleaning out and restoring channel capacity to the Yazoo River and its tributaries at a rate of 10 to 11 miles per year. More than 140 miles have been completed, with 55 miles remaining.

Cleaning and maintaining drainage ditches have been major accomplishments of the Board over the years. One example took place in 2006 when Board crews completed the task of clearing debris that would open existing ditches near the Blue Cain community in Tallahatchie County, thus restoring the ditches to their original capacity and preventing flooding. Citizens were inundated annually by flooding, and before the project was complete, rains of only up to five inches caused roadways to be underwater. Three Board crews complete approximately 100 miles of ditch work per year, totaling at

Continued on Page 8

125 Years of YMDLB Chief Engineers

Seven individuals have served as Chief Engineer and guided the activities and fortunes of the Yazoo-Mississippi Delta Levee District for the past 125 years:



T.G. Dabney has been described as the "father" of the levee system in the Yazoo-Mississippi Levee District.

T.G. Dabney served the Yazoo-Mississippi Delta Levee District as Chief Engineer from 1884 to 1920 and had further service as Consulting Engineer.

W.L. Head served as Assistant Engineer and as Chief Engineer from 1920 to 1930.

N.E. Offenheiser served as Assistant Engineer and as Chief Engineer from 1930 to 1942.

W.T. McKie served as Assistant Engineer and as Chief Engineer from 1942 to 1964.

Joseph F. Mooney served as Chief Engineer from 1964 to 1991 and has had further service as Consulting Engineer from 1991 to 2000.

Kenneth Weiland served as Chief Engineer from 1991 to 2000.



Current Chief Engineer Kelly Greenwood has served as Chief Engineer and CEO from 2000 to present.

Historical Timeline for Mississippi Floods



Working on the Levee Then & Now

Technology, machinery, and knowledge may have changed since the Yazoo-Mississippi Delta Levee Board was formed in 1884, but the commitment to keep people and property safe from flooding remains the same. As the Board celebrates its 125th anniversary, take a look back at the history of the lands it protects.

Below: In the early years of the Yazoo-Mississippi Levee Board, man and horse powered most of the equipment used to maintain the levees.



Bottom Left and Right: Today, modern machinery, along with manpower, helps provide flood relief to residents of the 10 counties the Board represents.



The Yazoo-Mississippi Delta Levee District was formed by an act of the State Legislature in 1884.

1884

In 1927, the "flood of record" took place in the Mississippi Valley. President Herbert Hoover described this event as "the greatest peacetime disaster in the history of the United States." This flood brought about passage by Congress of The Flood Control Act of 1928, which recognized that Mississippi River flooding was of national concern and not just the concern of local or state authorities.

1927



The Mississippi Valley and the Yazoo-Mississippi Delta Levee District went from 1937 to 1972 without a flood event, which left a new generation with little or no personal knowledge of the devastation of Mississippi River floods.

1937-1972

1917

In 1917, the U.S. Congress adopted the first true Flood Control Act to relieve Mississippi River overflow by setting standards for higher and stronger levees and placing revetments to prevent loss of levees to caving riverbanks. The act called for local cost sharing, and the districts were charged with the responsibility of providing maintenance and right of way. But the Yazoo-Mississippi Delta Levee District's levees were already up to the newly enacted standards, and the district did not qualify for federal work under the act.

1937

In 1937, the second highest flood on record flowed safely through the Mississippi Valley without a single levee break. Evaluation of this flood led to new standards incorporated into the Flood Control Act of 1941.



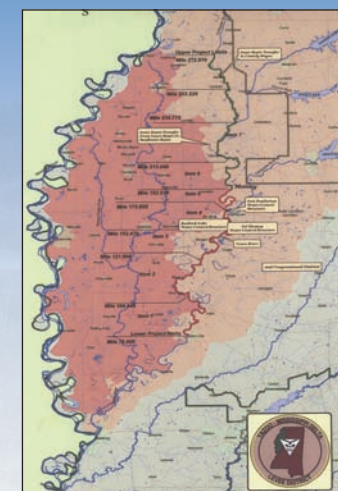
1973

The flood of 1973 proved once again that flood control must be given priority status for the protection of the Delta and the entire Mississippi Valley. Flood stages at St. Louis lasted 77 days and 89 days at Vicksburg. Although there was not a major levee failure in the Delta, the flood provided a continuous protracted fight to stabilize many weak points that developed.



1983

The 1983 flood was signified by its duration with above-bank stages at many gauging stations almost continuously from December 1982 to June 1983. Emergencies occurred at numerous locations along the river. This flood again proved that constant attention must be paid to flood protection in order for the Delta and the entire Mississippi Valley to prosper.



In 1974, the Corps of Engineers, after presenting a number of plans to the affected population, adopted a new plan, the Upper Yazoo Project. The UYP, which calls for enlarging the existing channel, was begun in 1976 near Yazoo City. This extremely important project is not complete.

1974



In 1991, the town of Marks experienced a 100-year flood of record. Due to efforts of the YMDLB, the town was spared from extreme damage. After heavy storms in 2001, waters rose within 6 inches of the 1991 flood.

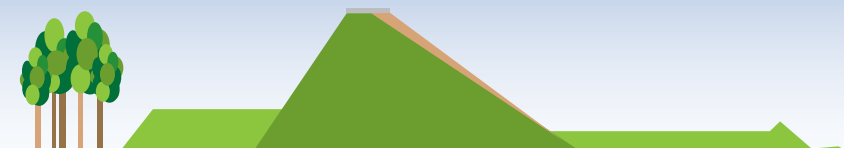
1991 to Present



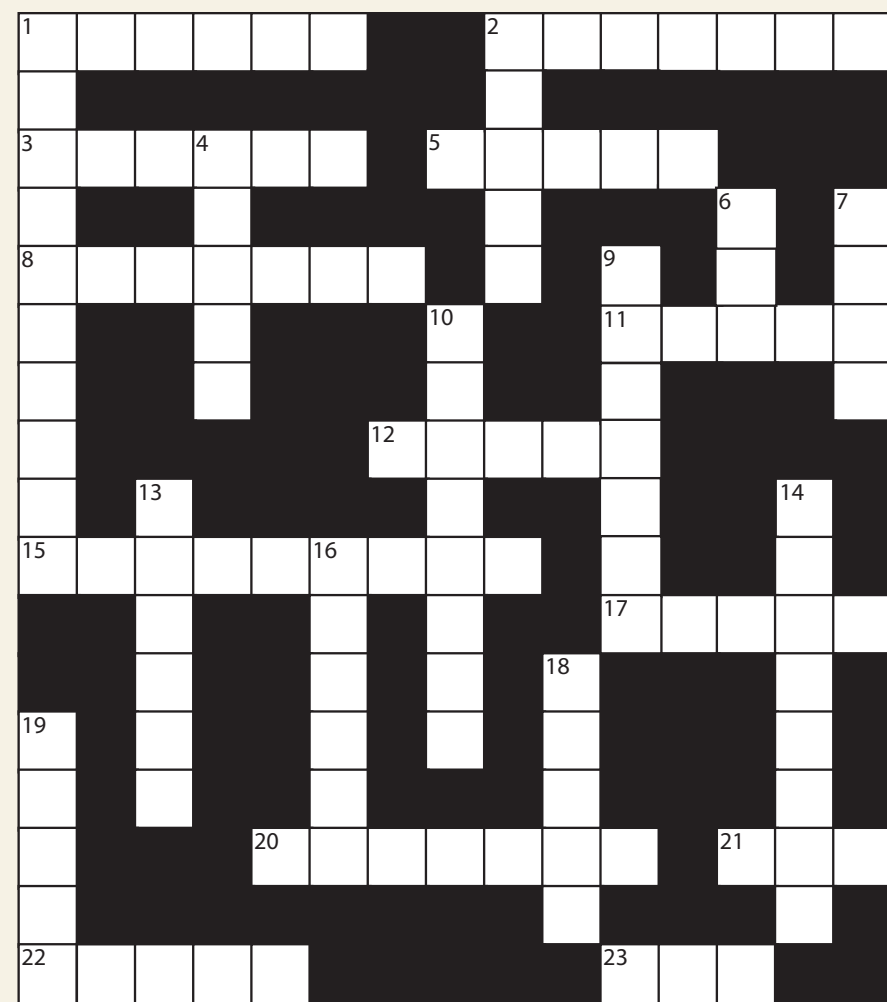
Top: Tunica RiverPark Museum. Bottom Left: Rock Quarry. Bottom Right: Seabrook Blue Hole.

CROSSWORD PUZZLE CONTEST!

Qualify to win a \$100 gift card from Walmart



Complete the crossword and qualify to win a \$100 gift card from Walmart. To be entered in the drawing, all answers on the puzzle must be correct and be received by October 31, 2009. The winner will be notified on November 5, 2009. The contest is open to the general public with the exception of those employed directly by the YMDLB.



Name: _____
 Address: _____
 Phone: _____
 Email: _____

Mail to: YMDLB Anniversary Contest
 Attention: M. Johnson
 P.O. Box 531
 Jackson, MS 39205-0531

Most answers related to YMDLB can be found in previous newsletters and on the website — www.leveeboard.org.

ACROSS

- Greenwood is known as the _____ capital of the world.
- The catfish capital of the world is _____.
- Federal Emergency Management _____.
- Indian _____ Clean Out Project.
- YMDLB assisted with cleanup after Hurricane _____.
- Students love the YMDLB fishing _____.
- The first levees were constructed 3,000 years ago in _____.
- Levee _____ workshops for teachers.
- The _____ bear was named after President Roosevelt during a hunt in Sharkey County, Mississippi.
- _____ Swamp is located in Humphreys County.
- YMDLB serves _____ counties.
- Clarence Cariker Horse _____ is located in Tunica County.
- Tunica Cut- _____.

DOWN

- Levee Board headquarters is located in _____, Mississippi.
- The _____ is the nickname of the machine YMDLB uses to turn trees into mulch.
- YMDLB donated the _____ Mississippi Fish Hatchery.
- Protective _____ is planted to prevent loss of dirt from levees.
- YMDLB “_____ A Better Mississippi.”
- Levees _____ people and property from high waters and flood damage.
- The state flower of Mississippi: _____.
- Mardi Gras colors: _____, green and gold.
- Father of the Levee Board: _____.
- In April 2008, the Mississippi River passed the ten-year flood marker in _____ County.
- The _____ Yazoo project received \$22.5 million in congressional funds in 2007.
- The _____ Flood occurred in 1927.

Departments of the Yazoo Mississippi Delta Levee Board

Several Yazoo-Mississippi Delta Levee Board departments are in place to ensure the safety, prosperity, and quality of life of its citizens.

The **Operations and Maintenance Department** performs a wide range of physical tasks associated with flood emergencies, maintenance, and protection of the 98 miles of mainline levee and 330 miles of interior rivers and streams.

The **Engineering Department** provides for full-time technical guidance and leadership for flood and natural emergencies as well as the day to day operations of the mainline levee and interior drainage systems.

The **Survey Department** employs a full-time Registered Professional Land Surveyor and survey crew to provide critical

technical data during flood and natural emergencies as well as to perform day to day boundary and topographical work associated with the establishment and protection of rights-of-way and flood control works.

The **Forestry Department** includes a full-time Licensed Forester for the proper oversight and management of the timber on the Board right-of-way riverside of the mainline levee.

The Yazoo-Mississippi Delta Levee Board also employs trained and certified **Law Enforcement** officers. They patrol the levee structure and adjacent right-of-way, observe and report problems, enforce laws and regulations, and facilitate access during periods of high water.

The Yazoo-Mississippi Delta Levee



Above: Construction of a levee berm.

Board Commission is made up of 12 popularly elected **Commissioners** from the 10 Delta Counties within the district. The Commissioners, as a whole, elect a President and a Vice President to oversee the implementation of policies set by the Board. The **Chief Executive Officer** serves as Chief Engineer and oversees execution of Board policies and day to day activities.

YMDLB Projects, continued from page 3

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least \$2.5 million worth of work done annually to prevent flooding by keeping ditches clean. In 2008, the Board provided drainage for several homes and agricultural land in Humphreys County, southwest of Louise. The Big Sunflower Rivers and Tributaries crew also completed extensive work southeast of Silver City and Carter.

In 2006, **Trotter’s Berm** near Flowers Lake, five miles west of Clayton in Tunica County, was extended on almost 44½ acres of newly aquired real estate by the Board. Failures to earthen levees are often caused by increased seepage in a dirt levee, and the extended berm will reduce the hydraulic pressure so the water seeps at a safe level, keeping it from boiling up like a spring, which can ultimately cause levee breaches. The Memphis District, U.S. Army Corps of Engineers was in charge of the project to reduce seepage on the land owned by the Board, which involved filling in low spots in the berm

up to an elevation of approximately 180 feet. Another project completed to reduce seepage was the **Farrell Relief Well Project** in 2008. The Board, together with the Corps, strengthened a one-mile section of the Mississippi River levee system with the addition of 47 relief wells near Farrell in Coahoma County.

The Board assisted with the massive cleanup effort of **Indian Bayou** in Sunflower County in 2008. Using machinery supplied by the Board, officials removed huge masses of alligator weed from the south fork of Indian Bayou between Westside Drive and the Alexander Avenue bridge. The short-term plan was to remove as much vegetation as possible from the troubled stream and then mount an aggressive control plan in the future. Indian Bayou is part of the Yazoo River Basin.

Also in 2008, the Board assisted the U.S. Fish and Wildlife Service by installing culverts at the portion of **Panther Swamp**, located in Humphreys County. Panther Swamp National Wildlife Refuge is one of

seven refuges in the Theodore Roosevelt National Wildlife Refuge Complex. Established in 1978, Panther Swamp National Wildlife Refuge encompasses 38,697 acres in Yazoo and Humphreys Counties. In addition to providing resting and feeding areas for over 100,000 wintering waterfowl annually, the refuge also provides habitat for 200 species of neotropical migratory songbirds.

In the summer of 2009, the Board cleared the banks of the **Sunflower River** between Second Street and State Street in Clarksdale. To take care of the fallen trees and brush piles, crews used **The Beast**, the specialized wood chipping machine that the board purchased in 2005. The Beast was first used to assist with Hurricane Katrina cleanup on the Coast and again in May in Northern Coahoma County after a tornado and straight line winds left downed trees and limbs. The Beast left piles of wood chips reaching nearly 20 feet in height along the banks of the Sunflower River.

First Responder “The Beast” Put To Work



Left: The Beast, a specialized wood chipping machine owned by the Yazoo-Mississippi Delta Levee Board, was used on the Mississippi Gulf Coast following Hurricane Katrina in 2005. The Board was named as a supporting agency to MEMA as a result of the manpower logged during the months following the disaster. The Board continues to use it today for clean-up across the state.

After its outstanding work in Hurricane Katrina recovery, the Yazoo-Mississippi Delta Levee Board was named as a supporting agency for the Mississippi Emergency Management Agency (MEMA). This high honor means that equipment and manpower can be summoned by MEMA to assist with cleanup in times of major disasters such as hurricanes, tornados, and ice storms.

“This is a life-long commitment we have to the state,” said Kelly Greenwood, Yazoo Mississippi Levee Board CEO. “We want the guys to be going in and helping out until an area struck by disaster gets back on its feet.”

Jamie Roberson, Board emergency management director, said the Board’s goal is to mobilize immediately after a disaster and be completely self-sufficient, providing its own food, water, sleeping arrangements, and fuel for team members.

Hours after Hurricane Katrina blew through the state in 2005, members of the Board 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 Greenwood. “We knew it was something we had to do to help our state in a time of great tragedy.”

Yazoo Mississippi Delta Levee Board 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 selfless actions and tireless efforts to help citizens on the Coast recover.”

Almost 40 Board 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 November of that year. 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 Board team was quickly organized to aid in the clean-up of several areas, including cemeteries, beaches, and public and recreational areas, and also helped 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 a.m. meetings.

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

The Beast Used for Cleanup of Tornado-Damaged Land

This year, the Board had the opportunity to serve again after a tornado and straight line winds hit the northern portion of Coahoma County on Saturday, May 10. By the following Thursday afternoon, workers with the Yazoo-Mississippi Delta Levee Board and Coahoma County road department were virtually through breaking down the majority of fallen trees and limbs.

The task was so quickly completed with the help of “The Beast”, a specialized wood chipping machine able to convert trees up to 30 inches in diameter into mulch with ease. Owned by the Board, The Beast was purchased in 2005 and assisted with Hurricane Katrina cleanup. Its primary mission on the Coast during the months following the disaster was helping clear state parks in Hancock County, where the Federal Emergency Management Agency located trailers for temporary housing.

The Board is the only public entity in the state to own and operate this piece of equipment—and it is the only one in the state with such a capacity to support the Mississippi Emergency Management Agency.

Jamie Roberson, Board emergency management director, mobilized 28 staff members, and in only one and a half days, debris removal in the town of Coahoma was completed, followed by work at Friars Point.

The Beast is housed in Rena Laura and requires an 18-wheeler truck to transport it to the work site.