

JANUARY 2005 HIGHWATER

The Mississippi River crested at 50.8' on January 25, 2005 at the Greenville Gage. This is the all-time recorded high for January. This is following the second highest recorded December of 45.0' only to 1982's 45.4'. According to the Corps of Engineers, the river was approximately 3' below the January, 1927 stages, but it was 8' above January, 1973 stages. The Mississippi Levee Board hosted a Phase I Organizational Meeting on January 14 in preparation of the forecast for above 49' at the Greenville Gage.

JANUARY, 2005 CREST DATA

Arkansas City	39.4	January 25
Greenville	50.8	January 25
Vicksburg	44.4	January 28

Phase I daily patrols started January 20 and ended January 27 when the River crested. Inspectors included Corps of Engineers employees and Yazoo-Mississippi Delta Joint Water Management District employees. "The Corps of Engineers and the YMD Joint Water Management District loans employees to the Levee Board to use as inspectors during a highwater event", said Chief Engineer Peter Nimrod. "This is a great help to us in allowing us to do our job at the critical areas of concern, while we have informed and educated inspectors watch the entire length of our levee system," continued Nimrod.



Phase I Meeting - Chief Engineer Peter Nimrod

Daily patrols of the 212 miles of levee were divided into four sectors - Rosedale, Greenville, Mayersville and Yazoo Backwater. Inspectors looked for wave wash and levee slides on the riverside of the levee and they looked for seepwater and sand boils on the landside of the levee. Daily sector reports were submitted to the Corps Coordinator, Paul Keene, who then compiled a daily Situation Report (SITREP). The SITREP was disseminated daily to the Corps of Engineers, Mississippi Levee Board, and the Yazoo-Mississippi Delta Levee Board.

The Yazoo Backwater area was flooded with water because the Steele Bayou Structure had to be closed January 13. The riverside of the Steele Bayou Structure crested at 92.8 on January 29, 2005. With normal rainfall, it was expected to crest at 92' landside. At stage 92', a total of 337,000 acres are flooded of which 164,000 are developed. If the Yazoo Backwater Pumps were in place, the landside would have only gotten to 88.5' which would have flooded 241,000 total acres of which 107,000 are developed. Very little rainfall occurred in the Mississippi Delta while the gates were closed, therefore the gates opened Feb. 7 and the landside crested at only 90.0 feet.

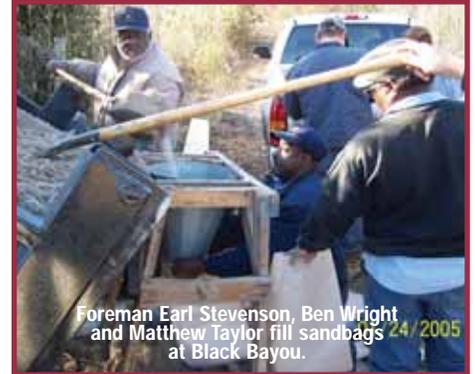


Lamar Jenkins, USACE, Greenwood Area Office and Mark Stiles, Yazoo-Mississippi Delta Joint Water Management District, participate in Phase I Meeting.

Even though the Mississippi River has crested in January, the Mississippi Levee Board anticipates the possibility of much more flooding in the next several months.

Mississippi Levee Board crews were dispatched to the Brunswick Circle Levee near Eagle Lake to close off the ditch and a culvert draining the protected area and preventing backwater from flooding the area when stages reach 91' at the Steele Bayou Drainage Structure landside gage.

Approximately 20 sandboils were discovered in Black Bayou just north of Greenville. Mississippi Levee Board crews constructed a sandbag weir in Black Bayou. The weir put 1.5' of head upstream of the weir to inhibit sandboils in Black Bayou from flowing material.



Foreman Earl Stevenson, Ben Wright and Matthew Taylor fill sandbags 24/2005 at Black Bayou.



Larry Dennis and Patrick Bolls, Maintenance Superintendent, fill sandbags for Black Bayou Weir.



Due to site conditions sandbags were hauled to Weir location in a 4 wheel drive truck. Eddie Brimage carrying sandbags



Completed sandbag Weir at Black Bayou

CORPS OF ENGINEERS PRESENTS AWARD TO MISSISSIPPI LEVEE BOARD

The Board of Mississippi Levee Commissioners held their regularly scheduled meeting January 10, 2005 at which time the U.S. Army Corps of Engineers presented the Mississippi Levee Board the 2004 Outstanding Performance Award for Operation and Maintenance of Flood Control Projects. Colonel Anthony Vesay, District Engineer of the Vicksburg District, commended the Board on achieving this distinction for 46 consecutive years. The Board of Mississippi Levee Commissioners was organized shortly after the Civil War in November, 1865. The Constitution of the State of Mississippi requires the Board to protect the Delta from flooding. The Board currently operates and maintains 163 miles of Mainline Mississippi River Levee, the 13 mile Brunswick Extension Levee, the 28 mile Yazoo Backwater Levee and the 8 mile Greenville Harbor Dike. The Board also has the maintenance responsibility for 350 miles of interior streams located throughout the Delta.



**US Army Corps
of Engineers**®



Col. Anthony Vesay, District Engineer for the Vicksburg District of the U.S. Army Corps of Engineers, presents Fred Ballard, President of the Mississippi Levee Board, the 2004 Outstanding Performance Award for Operation and Maintenance of Flood Control Projects.

RESEARCH SEEKS SOLUTION TO BUILDING SANDBAG FLOOD WALL... FASTER

When the river is rising and it is forecast to flood out neighborhoods and other important developments, there is generally one question: How fast can the sandbag protection be put in place?

The Corps' Vicksburg District and Engineering Research and Development Center (ERDC) recently tested some new private-sector technology that could result in a faster process for getting that sandbag protection in place.

The experiments consisted of two operations: the filling of the sandbags and the placement of sandbags in the construction of the structure.

The two operations were conducted at different locations approximately 2 miles apart traveling over wet, muddy, and slippery terrain at the Vicksburg Harbor.

For the Vicksburg Harbor field test, 14 in. x 26 in., woven polypropylene (with tie string), anti-skid sandbags were used to provide the required 4-foot flood protection structure.

The sandbag structure was initially constructed to 3 feet high and then raised an additional 1-foot. The bags have a tensile strength of 105 lbs, for the field test the bags were filled to an average weight of approximately 40 lbs.

The Hogan automatic speed sandbagger was rented to perform the filling operation. This machine is capable of filling three sandbags in a continuous cyclic motion. The weather consisted of constant rain with mild to humid temperatures. The filling crew included workers from the Vicksburg District Emergency volunteers and members of the District's Mat Sinking Unit.

The filling of sandbags to build the structure took a total of 3 days. The sandbags were filled at a rate of 14 bags per minute. During the 3 days, the filling crew size varied daily, from a maximum of 20 to as few as 8 laborers.

The placement crew size also varied from a minimum of 6 to a maximum of 27 laborers.

Over 13,300 bags were required to construct the sandbag structure. The structure was u-shaped with an approximate 100 foot riverward face. A total of 132 cubic yards of sand was used during the filling operation. The 4-foot high sandbag structure took 30.5 hours and 453.1 man hours to construct.

The Engineer Research and Development Center will complete a final report on the testing and make it available to the public via the ERDC web site.

Summary:

For the field-testing at the Vicksburg Harbor, the sandbag structure performed well. The primary weakness of a sandbag structure is the time and manpower required to construct. The placement of bags, primarily overlapping of the bags and the staggering of the seams of adjacent rows is critical to the effectiveness of the structure. Care must be taken in placing the bags to minimize seepage. Some of the strengths of sandbag structures are their ability to conform to irregular terrain, their ability to be placed in wet, muddy conditions, their relative low seepage rates, and their low cost (due to the fact that they are typically constructed by free labor).



Unloading sandbags from flatbed truck.



Partially completed Riverward side of levee.



Completed sandbag structure.

LOUISIANA BLACK BEAR

YAZOO BACKWATER PROJECT WILL HELP THE ENDANGERED SPECIES

The U. S. Fish and Wildlife Service listed the Louisiana Black Bear as a Threatened Species in 1992. Today, biologists believe that there are fewer than 400 Louisiana Black Bears left in Louisiana and western Mississippi. The decline of this subspecies of the American Black Bear has been attributed to habitat loss and human influenced mortality. More than 80% of the species historical habitat has been modified or destroyed. Fortunately, the future of the Louisiana Black Bear is bright.

The key habitat requirements of black bears are food, water, cover, and denning sites that are spatially arranged across sufficiently large and remote blocks of land. Bottomland hardwood forests are preferred by the Louisiana Black Bear as they offer significant food resources (hard and soft mast) and denning trees (often bald-cypress). Forest size and remoteness are also important. Unlike other species, black bear need large expanses of land (primarily forested). Male black bears may claim up to 20 square miles as their home range. Remoteness can be naturally identified within large tracts of land or on smaller tracts more than one mile from a frequently traveled road.



Denning sites are especially important to the Louisiana Black Bear. The Louisiana Black Bear does not hibernate, but it does den each winter in a state of dormancy. Additionally, females give birth in the den and den with their cubs again the following year. Louisiana Black Bears most often den in large Bald-cypress trees. Other den sites include other large hardwood trees, stumps, brush piles, and cane thickets. These sites are often located over or near water. For this reason, flooding often disturbs denning bears and is a primary cause of cub mortality.

Despite the significant decline in bear habitat over the past 100 years, recent data from both Louisiana and Mississippi has indicated that the quality of bear habitat is beginning to improve. This can be attributed to the Conservation Reserve Program (CRP) and Wetlands Reserve Program (WRP). Over 350,000 acres of historical habitat has been reforested through CRP and a minimum of 120,000 acres through WRP. In addition, mitigation for water resource projects in the Mississippi Delta has restored or protected over 40,000 acres of additional habitat. These programs provide habitat for the species by first linking fragmented habitats and eventually building the bases for future habitat. Other reforestation programs and initiatives in the historical range of the Louisiana Black Bear will further benefit the species.

The Yazoo Backwater Project will significantly improve habitat for the Louisiana Black Bear by reforestation and flood water reduction.

Sources for this article include the U.S. Fish and Wildlife Service Louisiana Black Bear Recovery Plan and the Black Bear Conservation Committee Black Bear Management Handbook.

CORPS ANNUAL LEVEE INSPECTION

The Vicksburg District Corps of Engineers inspected the levee system maintained by the Mississippi Levee Board on October 13-14, 2004. Members of the inspection team included Corps of Engineers employees Ben Caldwell, Lamar Jenkins and Capt. John Henderson. Chief Engineer Peter Nimrod and Assistant Engineer Bobby Thompson were also in attendance. In the photo, Lamar Jenkins, Greenwood Area Office Assistant Engineer, documents the inspection trip.



Lamar Jenkins

OCTOBER BOARD MEETING RECAP

The Board of Mississippi Levee Commissioners held its Regular Board Meeting on October 4, 2004. The Board took the following action: accepted proposal of Joel Cunningham to perform the audit for the end of FY 2005 & 2006; authorized advertisement of bids for Workman's Compensation Insurance; concurred with permits issued to Nancy Jones LaPresto for a cabin at Terrene Landing and to Delta Telephone for a fiber optical cable line within Levee Board right-of-way; concurred with awarding helicopter application for applying aquatic herbicide to the privet and underbrush of 68 miles of interior streams to Holcomb Aerial Services; reviewed bids and awarded purchase of two (2) new SUV's to All-Star Chevrolet in Greenville; accepted proposals of Good Hope Timber to harvest timber on Levee Board property on the Greenville Harbor Dike and Fly Timber to harvest timber on Levee Board property on the Mainline Mississippi River Levee near the U.S. Hwy. 82 Bridge; entered into conservation easements with Archer Island Land Company on Levee Board property on the Greenville Harbor Dike and JJP, LLC on Levee Board property near Terrene Landing; and received status reports on all the ongoing projects in the Mississippi Levee District.

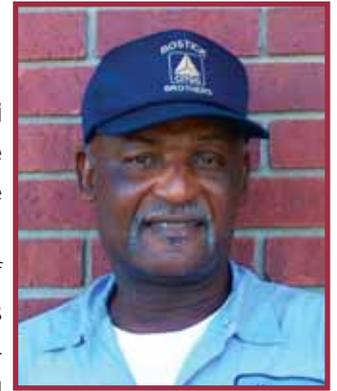
JANUARY BOARD MEETING RECAP

The Levee Board took the following action during its January 10, 2005 meeting: authorized advertisement of bids for Business Auto/ Public Officials & Employees/ Liability/ Contractors Equipment Insurance, chemicals, vehicles; concurred with permit issued to Carlos Bradshaw for a cabin within Levee Board r.o.w.; concurred with permit issued to Ken Hughes for a shallow water well within Levee Board r.o.w.; reviewed bids and awarded Workman's Compensation Insurance to Arthur J. Gallagher of Louisiana; reviewed bids and awarded fencing material to McCoys; reviewed bids and awarded treated wood posts to TWP, Inc.; reviewed bids and awarded high bid for 1994 Ford Dump Truck for sale to Mike Galster; authorized a delegation to the MVFCA Congressional Meetings April 10-13 in Washington, D.C. to discuss FY 2006 Appropriations for the Corps projects in Mississippi; and received status reports on all the ongoing projects in the Mississippi Levee District.

STAFF PROFILE

ARTHUR KIMBLE OPERATOR

Longtime Mississippi Levee Board employee Arthur "Nut" Kimble retired December 31, 2004, after 30 years of service. Kimble, who has served under three different Chief Engineers and five Board Presidents, said he plans to "fish and hunt a little" in retirement. Kimble, the father of 21 children, has served the Mississippi Levee Board well through the years and his expertise in operating all of the levee board equipment will be missed.



"Arthur Kimble has been one of the best operators and hardest workers that the Mississippi Levee Board has ever had," said Maintenance Superintendent Patrick Bolls. "We have worked together for 30 years," Bolls added. Chief Engineer Peter Nimrod said, "Arthur has a great personality and will be surely missed by all at the Levee Board. We wish him a long, happy and healthy retirement."



Mississippi Levee Board Commissioners and Attorney present Arthur Kimble a retirement resolution.

LEVEE & BERMS PROJECT UPDATE

ITEM 502L - 7.6 MILES - 100% COMPLETE

ITEM 496L - 10.5 MILES - 98% COMPLETE

ITEM 488L - 8.8 MILES - 24% COMPLETE

ITEM 477L - 5.1 MILES - 84% COMPLETE

HISTORY

HAROLD T. COUNCIL

MISSISSIPPI LEVEE BOARD COMMISSIONER 1942 - 1961
MISSISSIPPI RIVER COMMISSION 1961 - 1977



One constant of the Board of Mississippi Levee Commissioners has been the quality of those who have served as members. Perhaps none have served with greater distinction than Harold Thornton Council.

Mr. Council, born in 1899, was an Illinois native who moved to the Mississippi Delta with his family, driving the family car on the way when he was twelve. After graduating from Greenville High School

he attended the University of the South at Sewanee, Tennessee, where, along with his brother Kenneth, he was a leader on the grid iron as the quarterback for the football team. A landowner and planter for most of his adult life Mr. Council was actively involved in flood control work. During the 1927 flood, Council was section commander in charge of labor in the Greenville, Mississippi, area. Two years later he became a partner in a contracting firm that was heavily involved with constructing levees authorized under the Flood Control Act of 1928. During the 1937 flood, Council again played an important role in the flood fight by serving as chairman of civil defense for Washington, Sunflower, and Issaquena counties. As a contractor he performed the clearing and grubbing phase of the construction work on the existing U.S. Highway 82 Mississippi River bridge at Greenville.

In 1942, Council was elected to the Board of Mississippi Levee Commissioners and served as president of the board for four

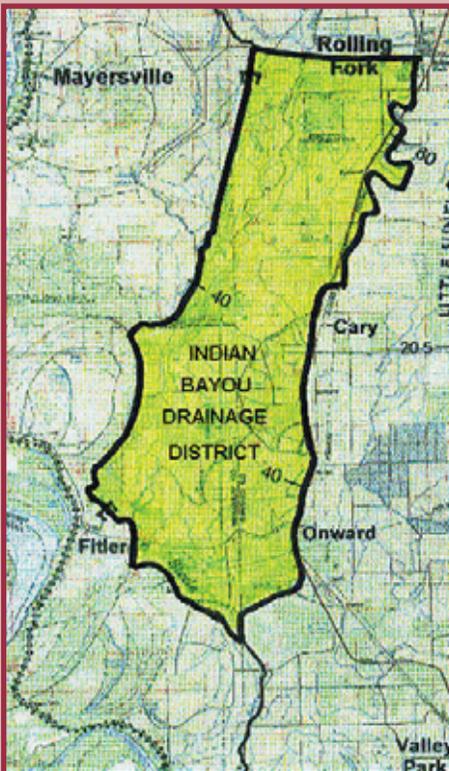
separate terms. Council was also named to the executive committee of the Lower Mississippi Valley Flood Control Association in 1945 and served as its chairman from 1956 through his appointment to the Mississippi River Commission (MRC) in 1961. President John F. Kennedy appointed Harold T. Council as a member of the MRC in recognition of his longtime association with flood control and development in the lower Mississippi Valley.

Mr. Council was a member of the MRC during the completion of the Old River Control Structures and during the 1973 flood. He was also a member while the MRC helped to devise a plan for the Old River Auxiliary Control Structure that was made necessary when a wing wall on the control structures collapsed from scour during the 1973 flood. Council was the first civilian member from the State of Mississippi to sit on the MRC since the death of Charles H. West (Levee Board Chief Engineer from 1898 to 1910) in 1933. Mr.

Council's service on the MRC continued until 1977. Harold Council passed away in 1983 after a lifetime of distinguished service to the Mississippi Delta in the flood control arena. He is survived by 2 daughters, including Mariamne Young of Oxford, Mississippi, and 3 grandchildren.



H.T. Council (bottom left) as shown as a member of the Mississippi Levee Board in 1960, just prior to his appointment to the MS River Commission.



Indian Bayou Master Water Management District of Sharkey and Issaquena Counties, Mississippi

The Indian Bayou Master Water Management District of Sharkey and Issaquena counties is located in the South Delta. It is bordered on the east by Highway 61, on the north by Highway 14 and on the west and south by Steele Bayou. The District is composed of 41 miles of ditches which drain approximately 65 square miles of land.

Commissioners are Mr. George R. Darden, President, Mr. Gipson Carter, Mr. Mike Lamensdorf, and Mr. Gary Sullivan.

Indian Bayou Drainage District provides drainage for the towns of Cary, Onward and part of Rolling Fork. Mr. Wayne Morrison, P.E., a consulting engineer who works closely with the District, applauded the Mississippi Levee Boards efforts in maintaining Steele Bayou which is the outlet for Indian Bayou.

2004 HELICOPTER APPLICATION

In 1950, the Mississippi Legislature authorized the two (2) Mississippi Delta levee boards to participate as local sponsors of Corps of Engineers projects within the Yazoo Basin. The Corps of Engineers began work on the Big Sunflower River & Tributaries Project in 1947. This project included channel improvements to over 700 miles of interior streams located within the Mississippi Delta. These streams provide the outlet for flood water in the Delta. The Mississippi Levee Board is responsible for minor maintenance for 350 miles of interior streams within the Mississippi Levee District.

To perform this much needed maintenance, the Mississippi Levee Board contracts with a helicopter applicator to spray approximately 60 miles of interior streams each year. A mixture of aquatic herbicides is sprayed on the underbrush and privet that are encroaching into the required clear width of the channel. The Mississippi Levee Board must maintain this required clear width to ensure the streams have adequate flood storage and passage capacity.

In 2004, the Mississippi Levee Board treated 68 miles of its interior streams. Holcomb Aerial Services sprayed on October 6, 7 and 12, 2004. Streams treated this year included portions of the Big Sunflower River above Hwy. 12, the lower half of the Bogue Phalia, Ditchlow Bayou, Twin Lakes Bayou and Dowling Bayou.



Applying herbicides to privet and underbrush.



Loading aquatic herbicides on helicopter.



Loading gravel from stockpile.



Unloading gravel on top of levee.

2004 GRAVEL JOB

Each year the Corps of Engineers allocates funding for maintenance gravel for the various levee boards within the Vicksburg District. This year, \$100,000 was allocated to the Mississippi Levee District. A gravel supply contract is awarded to a contractor who delivers the gravel to the levee where Mississippi Levee Board personnel and equipment spread the gravel on top of the levee. Two separate gravel supply contracts were awarded for two stretches on the levee. One contract was awarded to Gravel Hill Construction for Station 1188 to 1250 near Terrene Landing in Bolivar County. The other contract was awarded to Appalachian Pipeline for Station 105 to 212 on the Brunswick Extension Levee near Eagle Lake in Warren County. Both contracts were started and completed in August, 2004.



Corps Inspector David Bell observes Levee Board crew and equipment spreading gravel.

STATION MARKERS

The Mississippi Levee Board uses station markers to determine the location on the levee. Concrete station markers are constructed in the shop and delivered to the levee. These concrete markers are 6"x6" by 4' long. They are placed upright just off to the riverside edge at the top of the levee. The concrete markers are spaced every 1000' on the levee. An aluminum cap with the station number stamped on top is placed on the top of the concrete station marker to ensure that if the paint wears off, observers can look at the cap to see what station they are near. In 2000, the Mississippi Levee Board began using wooden station markers. These wooden station markers are placed at every 5000' intervals in conjunction with the concrete station markers. These treated 4"x4" by 8' tall wooden station markers have the numbers routed into the wood, thus ensuring that they can be read from a great distance. The height of the wooden station markers makes it easy to determine ones location during the growing season.

Cattle constantly rub against the station markers and stomp out the dirt around the station markers. Levee Board crews periodically straighten, re-paint and re-number the concrete station markers. Levee Board crews also periodically paint the wooden station markers. Dirt is added around station markers to maintain the integrity of the levee.

Station markers are very vital to the Mississippi Levee Board. During a high-water event inspectors who are not familiar with our levee system can spot problems and note the station number so that Levee Board crews and personnel know exactly where the situation is located.



Maintenance Superintendent Patrick Bolls levels station marker.



Washington County Supervisor Mark Seard, Jimmy Dick Carter, and Ruby Johnson listen to Corps employee explain the Mat Sinking operation.

MAT SINKING TOUR

The Vicksburg District Corps of Engineers hosted a Mat Sinking Tour of its revetment operations on October 6, 2004. The Mississippi Levee Board and guests attended this educational and fascinating look at the taming of the Great Mississippi River.

GREAT BEAR AFFAIR

The Great Bear Affair was held October 22, 2004, in Rolling Fork, MS. Approximately 700 fourth graders from around the South Delta were on hand to hear Assistant Engineer Bobby Thompson explain some of the on-going flood control projects and activities in the Mississippi Levee District.



MISSISSIPPI VALLEY FLOOD CONTROL ASSOCIATION ANNUAL FALL CONGRESSIONAL MEETING ON SEPT. 14, 2004

Assistant Engineer Bobby Thompson, Chief Engineer Peter Nimrod, and Board President Fred Ballard pose during a break between congressional visits on Sept. 14, 2004 with Senators Cochran and Lott and Congressman Bennie Thompson. The Mississippi Levee Board gave the congressional delegation an update on FY 2005 Appropriations and WRDA 2004.



2004 Annual Levee Inspection

On November 9, 2004, the Mississippi Levee Board hosted its Annual Levee Inspection. This year's trip started on the Yazoo Backwater Levee at Highway 61 and proceeded upstream through the Levee enlargement jobs to the Lake Washington area. Lunch was served at "Linden on the Lake" in Glen Allan.

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