



US Army Corps
of Engineers
Mississippi Valley Division



Corps Hurricane Response

Task Force Hope Status Report

May 3, 2006

The US Army Corps of Engineers established Task Force Hope immediately after Hurricane Katrina hit the Louisiana and Mississippi coasts. Task Force Hope's mission is to manage the work on levees and floodwalls, debris removal and all emergency response efforts that Federal Emergency Management Agency requested the Corps to carry out. Task Force Hope oversees the efforts of Task Force Guardian and Recovery Field Offices in Louisiana and Mississippi. Task Force Guardian is repairing damages to the Greater New Orleans federal hurricane and flood protection system resulting from Hurricane Katrina, restoring the system to pre-storm levels of protection by June 1, 2006.

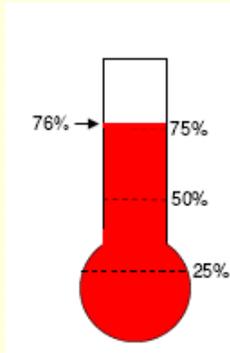
Hurricane Protection System Restoration

Percent of Pre-Katrina Protection Restored

76 % complete

24 of 59 contracts complete

The Hurricane Response
Web site is located at: <http://www.mvd.usace.army.mil/hurricane/>



Task Force Hope Mission Timeline:

Recovery:

May 31, 2006 (tentative) – Debris removal complete in Mississippi.

March 23, 2007 (tentative) – Debris removal mission completion in Louisiana.

Repair:

June 1, 2006 – Pre-Katrina level of protection restored.

Restore:

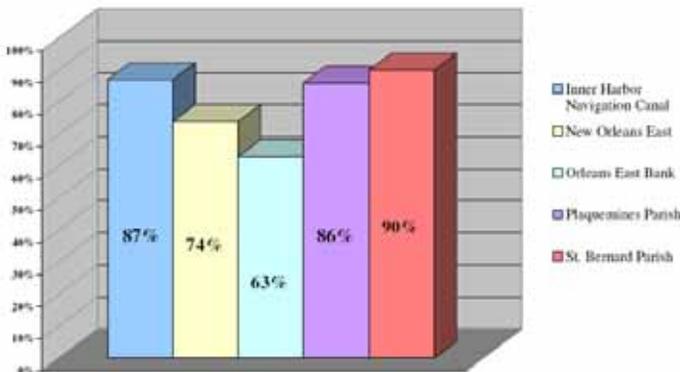
September 1, 2007 – All undamaged levees/floodwalls will be returned to original design heights (with the exception of the IHNC flood gate project areas, which will be protected once the flood gates are completed).

September 2007 – Construction of unfinished portions of projects will be completed.

Improve:

2010 – Other improvements, such as reinforcing levees, IHNC gates and flood proofing pumping stations will also be made to optimize performance of the existing system.

Hurricane Protection System Repair Status



The percent figures represent actual construction. The reason Orleans East Bank shows only 63% is that the construction there includes additional improvements (temporary gate closures and pumps).

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The Faces of Hope:

The power of Corps, contractors, and Katrina leave impact on departing Soldier

By **Melanie Ellis**

Task Force Hope - MS

It's been almost seven months since his arrival to the storm-ravaged area and reservist Maj. David Johnson is leaving Hattiesburg, MS.

He's been here since October when he received an email seeking a reservist to help in the Hurricane Katrina debris missions.

"I've met a lot of nice people and I've learned a lot from a lot of people," he said.

In his first hurricane deployment, Johnson has been assigned to the Corps of Engineers Emergency Field Office-North (EFO-North) where he served as the deputy resident engineer. "I help oversee the day-to-day operations of cleaning up 11 counties and eight cities within the counties," he said.

"We're down to two counties now and it's gone extremely well," he said.

Arriving in Hattiesburg shortly af-

ter Hurricane Katrina came through, Johnson was witness to a lot of the destruction caused by the storm.

"You don't appreciate the power of a hurricane until you're on the ground," he said. "Pictures don't do it justice."

The level of destruction presented an enormous task for the EFO-North team and Johnson is pleased with the effort and progress the team has made. "There is progress being made but there's just a lot of work to be done and we've made steady progress," he said.

With 11 counties to clean up, the footprint of EFO-North was very extensive and required a great deal of coordination to execute the mission. Johnson said the progress can be attributed to the EFO-North team and its structure — EFO-North has the Hattiesburg office



Nick Heleg-Greza

Maj. David Johnson, an Army reservist from Fort Dix, N.J., spent seven life-changing months working on the Task Force Hope Mississippi's Corps Hurricane Response mission.

with three satellite offices.

In an effort to maintain progress in such a large area Johnson utilized face-to-face communication regularly.

"I've made regular site visits and learned about their issues and tried to help them solve their problems."

Regular interaction between the resident engineers and deputy resident engineers from the East, West, and Central offices allowed

See 'Faces,' continued on page 3

The mission of the **Status Report Newsletter** is to support the information program for Task Force Hope and its stakeholders. It also serves as one of the Task Force Hope's primary communication tools for accurately transmitting the work of not only Task Force Hope, but the efforts of Task Force Guardian and the Recovery Field Offices in Louisiana and Mississippi to the Gulf Coast community and its citizens. This is an online publication and open to public distribution. This issue and past issues can be found at: <http://www.mvd.usace.army.mil/hurricane>. Comments and questions may be sent to the Status Report Newsletter editor at: b2fwdpao@usace.army.mil.

The **Status Report Newsletter**
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Corps repairing river levee crown

Rock placement for 32 miles below New Orleans

By John Hall
New Orleans District

The U.S. Army Corps of Engineers is placing surfacing rock on the Mississippi River levee below New Orleans to repair Hurricane Katrina damage to the crown, the flat area on top.

The crushed limestone is being placed on 32 miles of east bank levee from the ferry landing below Braithwaite downriver to Pointe a la Hache. The two-month job will be

concluded by mid-May and cost \$2.2 million.

“This work is important to provide all-weather accessibility for vehicles to perform levee inspection and repair,” said Pierre Hingle, the Corps’ resident engineer for the project.

Crews from the Corps’ Memphis District will work seven days a week, daylight hours only. The rock will arrive by barge at two truck ramps: one, a mile above the

Pointe a la Hache ferry landing, and a second at Phoenix.

Work vessels will include several rock barges, a spud barge with a loading crane and the tug MV Goodwin. Additional floating plant is moored on the west bank, about one mile upriver from the West Pointe a la Hache ferry landing.

For more information on this work, please contact the Corps’ New Orleans District at 504-862-2201.

‘Faces,’ continued from page 2

Johnson the opportunity to visit coastal areas that were hit by Katrina as well.

“I was most surprised by Waveland, Mississippi. South of the train tracks it looked like a bomb went off,” he said. “You had miles and miles of houses that had been stripped from their foundations. The only reason you knew there was a house there is because of the concrete pad.”

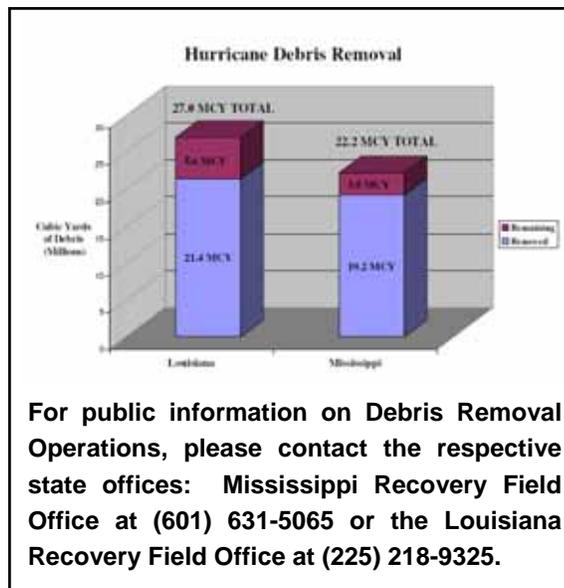
While simply cleaning up the debris has been an extensive and labor-intensive job, the debris itself presented challenges that required a great deal of team work to control.

“There was a Temporary Debris Reduction Site in Tatum (Mississippi) where there was a huge fire threat. I was impressed at the crew that was brought in to isolate the hot spots and haul away the debris,” he said.

Over the course of his seven months in Hattiesburg, Johnson has seen a lot of Corps team members rotate in and out. He says continuity is key in emergency response

“There are key positions to keep continuity,” he said. “The resident engineer and deputy resident engineer should be assigned for 90-180 days just to keep the continuity.” Although many of the team members deployed for more than the initial 30 day time frame, Johnson would suggest an initial deployment of at least 60 days.

As he heads home, Johnson has a few parting words about his first hurricane response. “I’ve met a lot of nice people and everyone’s been fun to work with,” he said. “I never appreciated the power of a hurricane until I saw the devastation it could do.”



IPET releases results on London Avenue Canal breaches

— From IPET PIO

The Interagency Performance Evaluation Task Force (IPET) released on Tuesday the preliminary results of its analysis of the failure mechanisms of the two breaches that occurred on the London Avenue Canal in New Orleans, La., during Hurricane Katrina on Aug. 29, 2005.

The IPET results concerning the two breaches are available from the IPET public Web

site, <https://ipet.wes.army.mil>, entitled *Volume V – The Performance: Analysis of the London Avenue Canal I-wall Breaches*. This 40-plus-page document will be included in Volume V of IPET’s draft

final report, scheduled for release on June 1.

The London Avenue Canal south breach occurred on the east side of the canal near Mirabeau Avenue. The north breach occurred on the west side of the canal near Robert E. Lee Boulevard.

At both locations, the levees and I-walls were on top of a layer of marsh (peat) that was in turn on top of a sand layer (the north breach area also had a thin clay layer between the marsh and sand on the land side). The south breach was approximately 60 feet wide; the north breach was about 410 feet

wide.

The comprehensive IPET investigation included field observations and tests, a variety of laboratory soils tests, and physical modeling tests in research centrifuges.

These analyses showed common factors for the two failures, high water pressures within the sand layer under the levee and high water loads on the floodwalls. The London Avenue Canal breaches

IPET is still conducting comprehensive tests on the floodwalls themselves and reviewing construction documents. Apparently, the design forces on the wall were not exceeded, nor were the floodwalls overtopped. The soils at the floodwall area were weak and could not handle the forces that the water put on them. IPET has not seen this failure mechanism in other projects, but is still searching

literature for information on similar failures.

IPET is also testing the Orleans Canal floodwalls and levees that did not fail. We will compare the 17th Street and London Avenue findings to the Orleans tests to

see what lessons we can learn from these similar canals and why they behaved as they did.

From the construction document reviews to date, the presence of the sand layers was well known at London Avenue Canal, but considered safe as long as water did not have access to this material. The sand layer was not connected to the water in the canal due to a layer of silt on the canal side. In fact, design documents state that no dredging was to be allowed in the canal so as not to disturb this silt layer. The gap at the sheetpile

“The high water pressures in the sand uplifted the marsh layer on the land side, causing erosion that removed material and reduced support for the floodwall.”
 — IPET results on London Ave. Canal breach

had a key factor in common with the 17th Street Canal breach; the formation of a gap between the sheetpile wall and the levee material on the canal side. On both canals, the formation of the gap allowed high water pressures to move down the canal face of the sheetpile wall. However, at London Avenue the gap allowed water to flow down the sheetpile into the underlying porous sand. The high water pressures in the sand uplifted the marsh layer on the land side, causing erosion that removed material and reduced support for the floodwall.

See ‘IPET,’ continued on page 5



‘IPET,’ continued from page 4

that formed was the mechanism that allowed water under pressure into the sand layer. If water had not gotten into the sand layer, at this time IPET believes the London Avenue levee would have held.

Again, construction and maintenance documents are still being reviewed. At this time, IPET does not believe trees or any man-made structures contributed significantly to the levee failure. Final results will be presented in IPET’s June 1 report.

South Breach Mechanism

At the south breach, analyses showed that the subsequent erosion and piping of material on the land side of the levee probably played an essential role in the failure. Eventually enough material was eroded so that the floodwall lost support and collapsed. The IPET finding that the south breach failure started in a small zone of intense erosion and piping is consistent with the narrow (60 feet wide) breach that eventually developed.

PET is looking at the cold-rolled sheetpiles that were used at the south breach instead of hot-rolled sheetpiles. Cold-rolled sheetpiles have lower interlock strengths (interlocks are where the sheetpile sections join). Water seepage might have increased if the interlocks failed when the sheetpiles were originally driven. IPET findings on this will be presented in the draft final report on June 1.

North Breach Mechanism

At the north breach, analyses and field observations indicate that sliding instability was the primary mode of failure. A playhouse on the property adjacent to the breach was heaved upward, indicating upward movement of the ground inboard of the levee toe. High uplift water pressures likely resulted in erosion through the marsh layer and the thin layer of clay, similar to the south breach.

However, at the north breach area, the sand was loose with a lower strength or friction angle than at the south breach. The high uplift pressures within this less-dense sand were sufficient to cause instability without significant subsurface levee erosion. Basi-

cally, the whole section (410 feet) became unstable and moved landward and upward, causing the large failure.

IPET Findings

These results, coupled with the I-wall problems at the 17th Street Canal have led the Corps of Engineers to examine extensively all I-walls in the New Orleans protection system.

The breaching mechanisms discovered for these sites, along with investigations of geologically similar areas on the Orleans Canal that did not breach, are the basis for the criteria being used to examine sections of the hurricane protection system that appeared to be undamaged by Hurricane Katrina for potential future problems.

IPET will issue its final draft report on June 1. All IPET reports to date (Jan. 10 and March 10) are also available from the IPET public Web site at <https://ipet.wes.army.mil>, which also has hundreds of other documents related to the hurricane protection system design and construction, IPET data collection and IPET analyses

All IPET findings and reports are being reviewed and validated by an independent panel from the American Society of Civil Engineers (ASCE). The IPET and ASCE findings are in turn being reviewed and synthesized by an independent panel from the National Research Council (NRC), which should produce its final report in September 2006. IPET will address the final comments by the ASCE and NRC panels and finalize the IPET report in the fall.

The Corps’ Task Force Guardian that is repairing New Orleans levees to “pre-Katrina” levels by June 1 has been receiving IPET recommendations from the start of IPET’s investigation to ensure the ongoing repairs make optimum use of other IPET “lessons learned” so the system will be stronger than before. IPET findings will also be incorporated into future design guidance so that problems discovered by IPET will be corrected in future protection designs and projects.

Coastal Update

Louisiana Coastal Area (LCA), LA–Ecosystem Restoration Study

The Louisiana Coastal Area Ecosystem Restoration study effort was initiated in 2000 to address coastal erosion. The Corps and its partner, the state of Louisiana, identified the most critical ecological needs of the coastal area and identified and evaluated the cost effectiveness of the projects that best met those needs.

The plan will address the long-term scientific uncertainties and engineering challenges facing the effort to protect and restore Louisiana's coastal ecosystem. The final report, released in November 2004 with the Chief's Report signed in January 2005, is pending WRDA authorization. The Corps continues to advance resto-

ration utilizing the study authority to investigate details of the plan.

Currently, the Corps has completed the following three Project Management Plans and submitted them to the state of Louisiana for signature: 1) Beneficial Use of Dredged Material Program; 2) Science & Technology (S&T), Assessment of Damages to Coastal Louisiana from Hurricanes Katrina and Rita, and 3) S&T, Decision Support Tools and Process Development.

Once the PMPs and their associated cost sharing agreements are signed by the state of Louisiana we can begin the project implementation phase, the next critical step in the life of a project before construction can begin.

Louisiana Coastal Protection and

Restoration (LaCPR) Report

The LaCPR Report team participated in a plan formulation working meeting with the state and other federal resource agencies, parish and levee board reps on Monday, May 1, to further identify alternative plans for detailed analysis.

The alternatives under consideration were derived from a Plan Formulation Workshop held back in February and from March Scoping Meetings. An executive-level management team, will review the results of Monday's meeting, approve the final selection of alternatives, and announce their decision May 5 on the inclusion of recommendations for the Preliminary Technical Report, which is due to Congress by June 30.

What's New!: *Your Levee & Floodwalls weekly progress report*

Progress is being made daily in repairing levees and floodwalls damaged by Hurricane Katrina to their pre-Katrina level of protection by the target date of 1 June 2006. The region has been divided into five areas: New Orleans East; Orleans East Bank; Inner Harbor Navigation Channel; St. Bernard Parish; and Plaquemines Parish. At least thirty-four construction contractors have been working on fifty-nine separate restoration projects. The first contracts were started in October 2005. Other contracts were awarded as recently as March 2006. Features of work throughout the area include 2.5 miles of new floodwall; 195 miles of scour repair; 23 miles of new levees; and 7 closure structures.

As of May 2, twenty-four projects have been completed, including two more in St. Bernard Parish this

past week. In a few cases, contracts have been modified to address conditions encountered in the field to ensure that restored sections of the protection system will perform satisfactorily. The remaining contracts are all being intensively managed with the objective of achieving "protection restored" status by 1 June.

Even as this restoration work is finished, future work is planned to complete previously unconstructed portions of authorized projects to their authorized design height. Of the \$465 million committed to construction contracts to date, \$350 million is required to restore protection at pre-Katrina levels, and the remainder will be used to achieve enhanced protection as previously authorized.

Levee and floodwall repair work continues

By Casondra Brewster

Task Force Hope

With the start of hurricane season less than a month away, and the Gulf coast still recovering from Hurricanes Katrina and Rita, all eyes are on the repair work the Army Corps of Engineers' Task Force Hope is conducting, especially the work in the greater New Orleans area.

All damaged sections will be repaired to pre-Katrina levels of protection or better.

Because repairs have taken into account lessons learned from last year, some of the areas being repaired will have even better levels of protection.

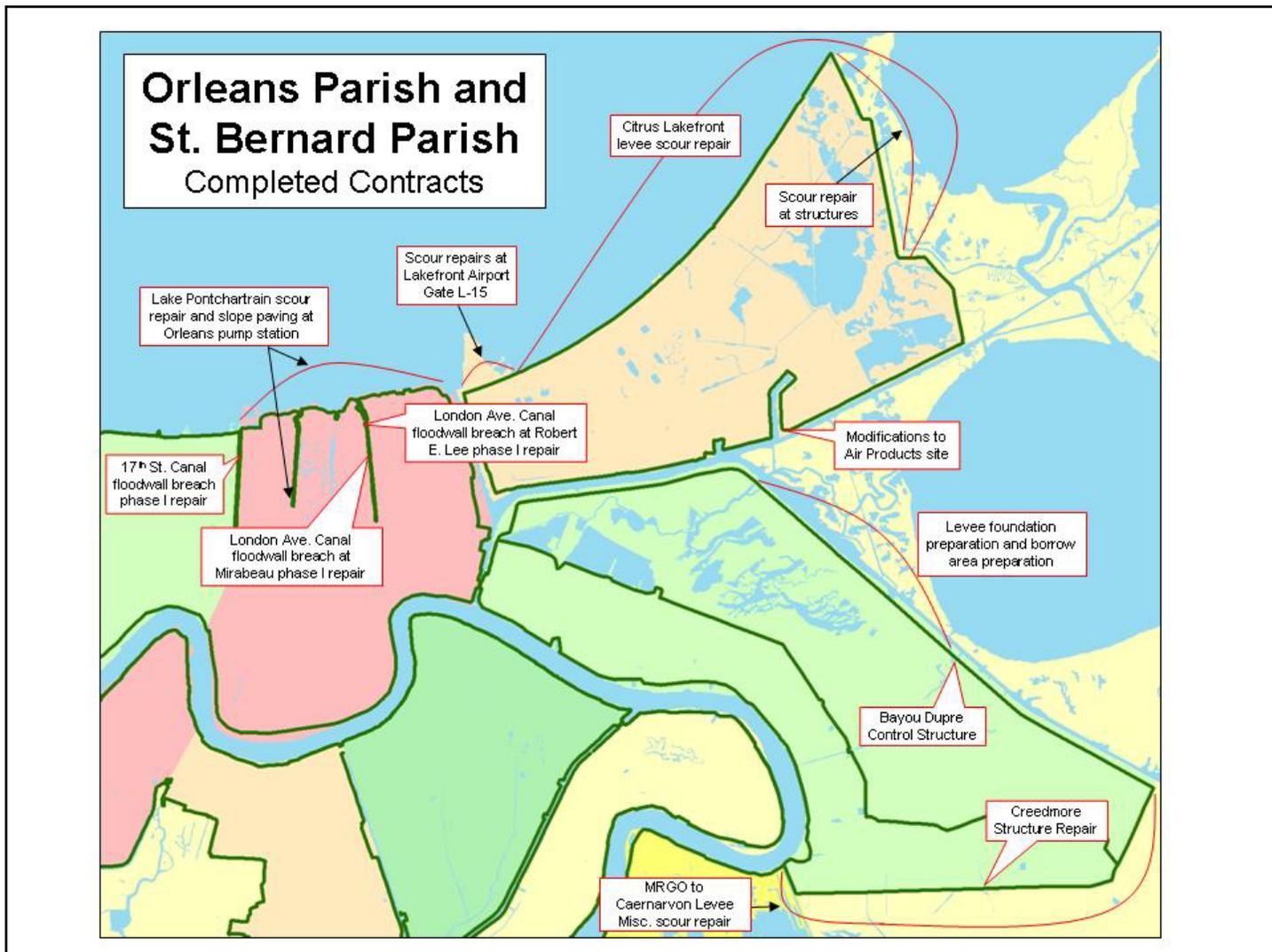
At the outfall canals, interim closure structures will

keep storm surge out of the outfall canals, preventing the possibility of wall failures which occurred on the London Avenue and 17th Street canals during Katrina.

At the IHNC, the failed walls have been replaced with new walls, which are much stronger than the old walls and are back up to full design height. In addition, all areas along the IHNC which experienced overtopping have had the scouring on the back side repaired and new scour protection has been added to help prevent the type of failure the walls experienced in this area.

For St. Bernard Parish, the damaged sections along the Mississippi River Gulf Outlet have been rebuilt to

See 'Levees,' continued on page 8



'Levees,' continued from page 7

design height with some overbuild to allow for settlement. Some areas of the levee system will be at 20 feet height.

In addition, damaged gates in floodwalls protecting St. Bernard Parish have been repaired and scour protection added to prevent failure. Navigable floodgates at Bayou Bienvenue and Bayou Dupree have been repaired and extensive scour protection added to them as well. Finally, the privately owned back levee has been raised to 10 feet to provide a second line

of protection to the area.

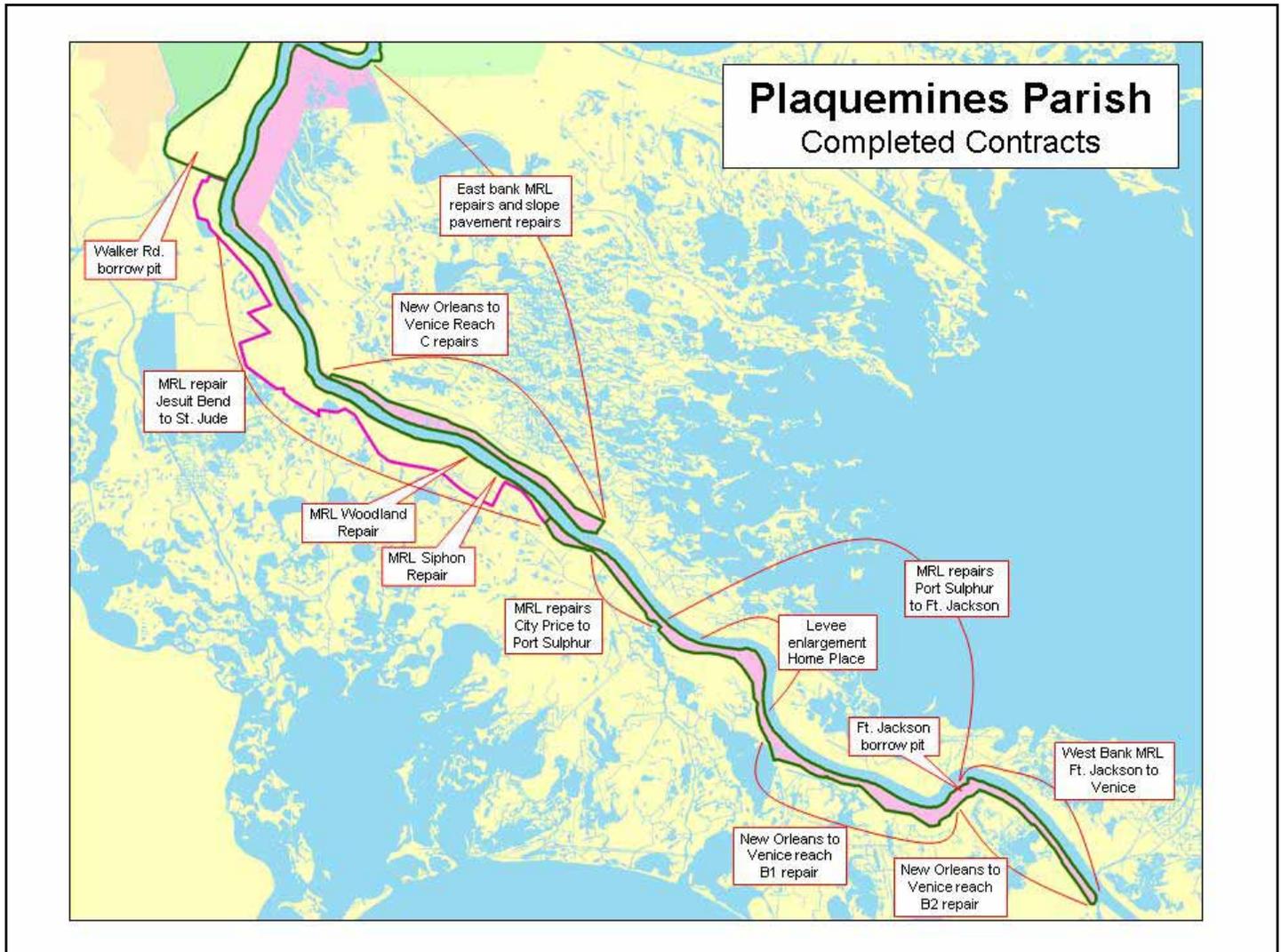
In New Orleans East, the damaged levees are being repaired to full design height. The flood gate at the CSX railroad crossing on the eastern end is being rebuilt to full design height with scour protection. Floodwalls at pump station 15 are being replaced with T-walls and scour protected I-walls, and scour protection is being added at the transition to the levee. The wall that was overtopped and damaged along the MRGO/ICWW west of Paris Road has been replaced with

scour protected L-walls. Repairs to the walls along the Michoud Canal have also provided a higher level of protection.

In Plaquemines Parish, all damaged levees have been repaired to design levels. Some floodwalls have been repaired with scour protection. Other walls have been replaced with setback levees to provide better protection.

Although many of the repairs and restorations have been complete and even more will be finished by

See 'Levees,' continued on page 10



Removing debris can be sensitive matter

By Shirley Smith
EFO-East

During the cleanup efforts of Task Force Hope, debris removal is a vital part of the process. The Federal Emergency Management Agency tasked the Corps with this mission, and as one might imagine, certain regulations and precautionary measures must be followed.

Debris is determined as either vegetative or construction and demolition. If the debris is demolition, it is inspected for asbestos.

Upon receipt of the notice to proceed to demolish a commercial, public or residential structure, the contractor shall verify the results of the asbestos inspection to ensure he uses the properly trained crews and demolition practices suitable for the required demolition.

"Crews take special precautions during demolition when it has been found that a building contains asbestos," stated Bob Sletten, safety officer for Jackson County. "Since I came here, there have been about 1 out of 10 demos containing asbestos," Sletten stated.

These special precautions include training, work crews must receive as a minimum the 2-hour asbestos awareness course; wear adequate equipment such as the tyvek protective suits, and protec-

tive respiratory.

"Unlike vegetative debris, the public must be alerted that this pile of demolition debris contains asbestos. Placards are placed on the vehicle carrying the debris containing asbestos, and are also placed at the entrance to the property. These protective measures are taken to prevent the spread of asbestos," Sletten said.

Being that this type demolition can be a hazard to anyone coming into contact with the debris, the strict protective measures must be addressed and enforced.

"I have observed the crews handling such debris and they have approached the site with professionalism and care," Sletten stated.

Besides the training required of the crew, and the wearing of protective suits, other precautionary measures enforced include assuring labeling on hauling vehicles is appropriate and visible during loading and unloading of vehicles, an exclusion zone is marked off with



Gerald Greener

Asbestos containing debris is being removed from property on Market Street in Pascagoula.

yellow tape, hauling vehicles are lined and tarped, the structure remains adequately wetted during the demolition process, from pre-demolition through demolition and loading of demolition debris. Wetting the debris is necessary to prevent the escape of dust during the handling.

"Although the inspection results might be negative for asbestos, the property is still considered suspect for containing asbestos for worker protection as well as that of the public," stated Alou Rice, mission liaison for Jackson and George counties.

According to Rice, the same safety procedures are followed for suspect asbestos containing properties, except for the tyvek suits and respiratory masks.



Gary Dil

Slowly But Surely...

Bayou LaCroix, Diamondhead-Mississippi – Wetland areas required special treatment by the Corps and its contractors due to their environmentally sensitive nature. Wooden mats were used throughout the site to give the track hoe and trucks support. Bayou LaCroix field is one of the largest in Hancock County containing approx. 18,000 cubic yards of debris.

'Levees,' continued from page 8

June 1, further improvements to the hurricane protection system will continue. While repaired sections have been restored to original design height, there are significant portions of the system that were undamaged by Katrina and remain below design height due to settlement and subsidence. These areas continue to be vulnerable in the

event of a significant storm hitting the area. Restoration of the undamaged areas will be completed in September 2007 and additional improvement projects are scheduled to be completed by 2010.

“People need to realize that the bulldozers and activity along the floodwalls and levees will not go away come June 2,” said Dan

Hitchings, Task Force Hope Director, who manages the work on the levees and floodwalls. “There’s lots more work to be done. But come hurricane season, they will have what they had pre-Katrina.

“Additionally, 2010 seems like a long way away, but we’re only 3 ½ years from that date. So, there is much to do in a short time.”

Points of Contact for Information

Topic	Phone	Organization
Overall information about work being performed by the Corps of Engineers in the New Orleans District	504-862-2126	New Orleans District Public Affairs
Levee construction being performed to restore the hurricane and flood protection system to pre-Katrina condition by June 1, 2006	504-862-2076	Task Force Guardian Public Affairs
Debris Removal in Louisiana	225-218-9325	Louisiana Recovery Field Office
Debris Removal in Mississippi	601-631-5065	Mississippi Recovery Field Office
Overall Task Force Hope Information	504-862-1836	Task Force Hope Public Affairs