



Corps Hurricane Response

Task Force Hope Status Report

April 12, 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 main 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.

Time lines for Task Hope Missions

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

June 1, 2006—All levee repair work will be done.

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

September 1, 2007—All undamaged levees/floodwalls will be returned to original heights.

September 2007—Construction of new portions of projects will be completed.

By Sept. 2007 – Restore undamaged and subsided areas and complete previously unconstructed portions of authorized projects

By Dec. 2007 – Evaluate Higher levels of protection

2010 — Other improvements, such as reinforcing levees and flood proofing pumping stations, will be made to optimize performance of existing system.

2010 – Certify the 350-mile flood protection to meet 100-year protection level

FEMA releases New Orleans advisory flood data; Corps revises levee cost estimates

Actions To Spur Rebuilding Post-Katrina

NEW ORLEANS -- Federal Coordinator for Gulf Coast Rebuilding Donald Powell, along with U.S. Army Corps of Engineers Commander Lt. Gen. Carl Strock, FEMA Director of Mitigation and Administrator of the National Flood Insurance Program (NFIP) David Maurstad, and FEMA Deputy Director for Gulf Coast Recovery Gil Jamieson, today announced the release of advisory flood data for New Orleans and the majority of the surrounding area. The flood advisories will inform residents how to reduce or mitigate flood risks as they begin reconstruction, and will provide guidance to communities for better and stronger rebuilding.

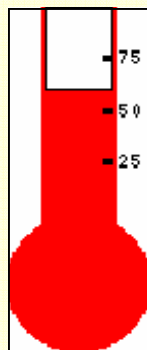
They also announced the release of U.S. Army Corps of Engineers revised estimates of costs to certify and further enhance the area's levees. Powell announced that the Administration plans to begin working with Congress immediately to request funding, estimated at \$2.5 billion, for work in all of the New Orleans area except for lower Plaquemines.

Continued on Page 4

Percent of Pre-Katrina Protection Restored

63 % Complete

20 of 59 contracts complete



In this issue:

- FEMA releases advisory flood data.....Page 1
- Corps revises levee cost estimates.....Page 1
- Hurricane protection schedule.....Page 2
- Tree-removal plan for levees, Phase 2 ..Page 3

Schedule

New Orleans and Southern Louisiana Hurricane Protection

\$770 million for repairs complete by June 1, 2006

- Congress appropriates \$770 million to the Corps to repair and rebuild levee system to pre-Katrina levels
- This funding repairs the levees and floodwalls to pre-Katrina levels and will be complete by June 1

Interim gates and pumping stations will be constructed at the three outfall canals to prevent storm surge from entering these vulnerable areas.

By Sept. 2007 – Restore undamaged and subsided areas and complete previously unconstructed portions of authorized projects

- \$1.3 billion to restore undamaged levees/floodwalls to authorized heights and to accelerate completion of unconstructed portions of existing projects.
- Entire system will be restored to authorized levels for protection by Sept. 2007

By Dec. 2007 – Evaluate higher levels of protection

- Corps will provide Congress a preliminary Louisiana Coast Protection and Restoration Report in June 2006 and a final technical report in December 2007
- Report will include conceptual plans for an increased level of protection based on existing data
- Final report will include an evaluation of alternatives based on community plans, modeling, public meetings, and economic, social environmental, and regional outputs for possible recommendations for Congressional authorization

Report is expected to address “Category 5 hurricane protection” – whether it is feasible, costs involved, time to complete, measures for flood control, coastal restoration

and hurricane protection and areas for authorization, as practical

\$1.46 requested for additions complete by 2010

- President Bush requests more money from Congress for additional work:
 - This amount of money is pending
 - Six measures included in the proposal:
 - ✦ Permanent Closure and Pumping Stations at the Outfall Canals;
 - ✦ Navigable Floodgates to Protect the Industrial Canal;
 - ✦ Storm Proofing of Existing Pump Stations;
 - ✦ Selective Armoring of Levees;
 - ✦ Incorporating a Portion of Non-Federal Levee in Plaquemines Parish, and
 - ✦ Ecosystem Restoration.
- What will this include?
 - Adding structures to the mouth of the three canals to keep surge out and allow continued pumping activity
 - AT IHNC (Inner Harbor Navigation Canal), two proposed navigable floodgates would keep storm surge waters from Lake Pontchartrain to the north and Lake Borgne to the east of to the Industrial Canal area.
 - Proposed measures would armor portions of area levees
 - Restore portions of southeast Louisiana's vast system of wetlands, marshes and natural ridges.
 - Measures to assure pump stations would operate during and after storms.
 - Some of these measures must be in place and are part of the overall protective system allowing for future certification of the system.
- If approved, these would be complete by 2010.



The announcement about FEMA flood maps and information about Corps work with hurricane protection drew national and local media at a news conference at a FEMA office in New Orleans April 12.

\$4.1 billion for certification complete by 2010

- Powell announces \$6 billion (\$5.7 billion) needed to raise protection level to 100-year flood level. Updated estimate is \$4.1 billion.
- To certify levees to meet hurricane protection to 100 year storm and surge
- All floodwalls – except 17th Street, London Avenue and Orleans Avenue drainage canals and Industrial Harbor Navigational Canal – may need to be replaced
- Money includes:
 - \$2.5 billion for, in worst case scenario, to replace all other floodwalls
 - \$1.6 billion for Plaquemines Parish

2010 – Certify the 350 mile flood protection to meet 100-year protection level (\$1.9 billion pending approval)

- Final certification of levees will not be completed until individual project certification is determined.

These additional certification requirements are based on engineering design, levee height and new storm data.

Chronology of work

June 1, 2006

- \$770 million for repairs

2007

- By September — Restore undamaged and subsided areas and complete previously unconstructed portions of authorized projects
- By December — Evaluate higher levels of protection

2010

- Completing \$1.46 billion requested for additions
- Certify the flood protection to meet 100-year protection level (\$1.9 billion pending approval)

Continued from Page 1

The \$2.5 billion can be broken out into two distinct tasks: it will allow the Corps to raise levee heights, in some cases as much as 7 feet, at a cost of \$0.8 billion; and it will allow the upgrade or replacement of existing flood I-walls with T-walls. The estimated cost of replacing I-walls outside of lower Plaquemines is \$1.6 billion.

Those improvements will take care of about 98% of the population in the New Orleans area. The certification and enhancement of lower Plaquemines, which was home to two-percent of the area's population, is estimated to cost \$1.6 billion. Therefore, before committing to the lower Plaquemines portion of the funding estimate, including replacement of the lower Plaquemines floodwalls or raising the levees to design height, the Administration will look to the results of further analysis, including the final Interagency Performance Evaluation Task Force (IPET) report, expected in June 2006, and other similar studies. For that reason, flood advisories from FEMA are currently being issued only for the Belle Chase levee-protected area of Plaquemines and for areas outside of levee protection in Plaquemines.

Powell said that the Administration will begin discussions with Congress this week regarding the timing of a formal request for additional authorization and funding to certify and further enhance the majority of the levee system, including the details of any local cost-share arrangement. This commitment to future improvements allows FEMA to provide flood advisories today for almost all of the communities protected by levees in Southeast Louisiana.

"President Bush remains steadfastly committed to rebuilding the Gulf Coast region," said Powell. "We know people are looking for guidance about where and how to rebuild

responsibly and we know these advisories will provide a greater degree of certainty and confidence to the citizens of New Orleans, who are anxious to rebuild their homes and businesses. These advisories give state and local leaders the tools they need to offer that guidance to their citizens, and to help them make sound rebuilding decisions."

The flood advisories, formally known as advisory base flood elevations or ABFEs, estimate the flooding risk to the New Orleans area and inform residents and local officials about how to reduce or mitigate those risks. The Louisiana Recovery Authority (LRA) has stated that in order for residents to be eligible for its State Homeowner Assistance plan, all reconstruction work must meet or exceed the latest available FEMA advisory base flood elevations and meet the legal requirements of the State Uniform Construction Code. FEMA has previously stated that these advisories must be used for any rebuilding projects using certain FEMA grant dollars thus the advisories apply to both public infrastructure projects as well as mitigation grants. More details about the flood advisories can be found at www.fema.gov.

The flood advisories are linked to the certification of the area's levees. Recently, the U.S. Army Corps of Engineers stated that the levees were not certifiable, meaning that they do not meet the standard for a 100-year flood, which represents a one-percent chance of flooding in any given year, based on updated analysis of new storm data. The 100-year flood standard is a requirement of FEMA's National Flood Insurance Program (NFIP).

Today's commitment by the Administration to work with Congress to request authorization and funds for this work allows FEMA to release the advisories, which recognizes the eventual protection that will be achieved once the Corps' work is completed. Later this year, FEMA will be-

Improvements: funded or unfunded

Repair: By June 1, the Corps of Engineers will repair all damaged floodwalls and levees to pre-Katrina protection levels. Includes interim gated structures at three canals on Lake Pontchartrain. This option is funded.

Restore: This includes raising levees and floodwalls that have subsided, restoring them to original design heights. Option is funded except for I-wall replacement beyond damaged I-walls.

Improve: This option is unfunded. The six improvements include:

- ✦ Permanent Closure and Pumping Stations at the Outfall Canals;
- ✦ Navigable Floodgates to Protect the Industrial Canal;
- ✦ Storm Proofing of Existing Pump Stations;
- ✦ Selective Armoring of Levees;
- ✦ Incorporating a Portion of Non-Federal Levee in Plaquemines Parish
- ✦ Ecosystem Restoration.

Raise: Levees and floodwalls will be raised where required to the 100-year level of protection. This option is unfunded.

gin its formal regulatory process, which ultimately ends in the release of final and binding flood maps that reflect 100-year protection.

According to today's Corps estimates, the total additional cost to certify and enhance the entire New Orleans levee system by replacing I-walls with T-walls and raising the levees to provide 100-year protection, would now be \$4.1 billion. The Corps' preliminary cost estimate, released last month, was \$5.9 billion. This kind of cost projection typically takes several years of analysis and refinement, and in this case, the effort has been significantly accelerated. The \$1.8 billion reduction in the estimates (from \$5.9 billion to \$4.1 billion) reflects two revisions:

Removes about \$700 million under the assumption that certain features included in the pending supplemental will be constructed. Constructing permanent floodgates and closure structures on the three drainage canals means that those new structures, and not the interior levees of the canals, will take the brunt of the surge and waves. Because of these structures, 20 miles of the 56 original

miles of floodwalls will no longer be at risk; therefore these costs were removed from the estimates.

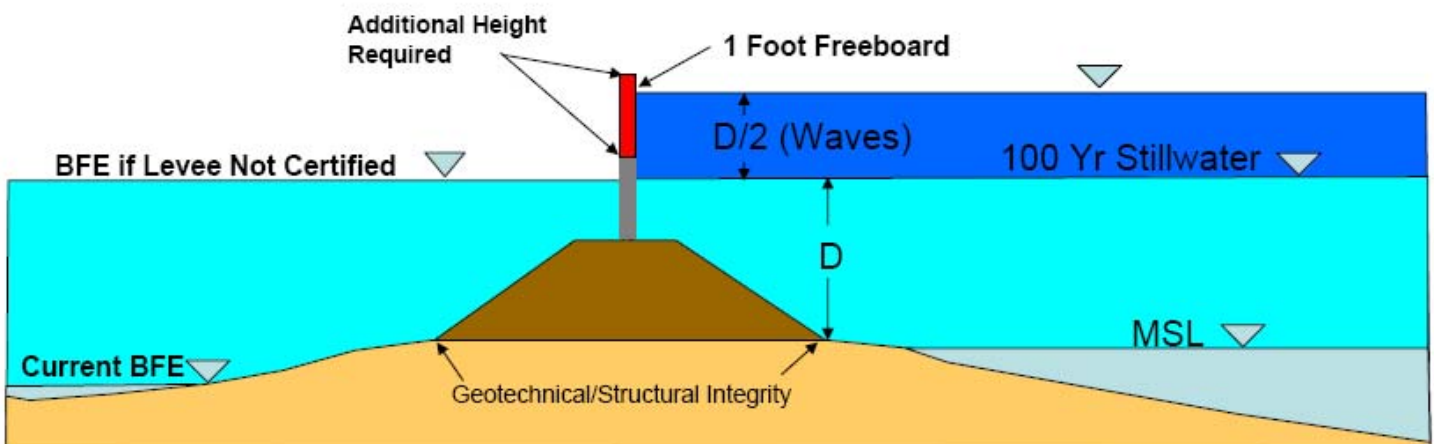
More refined analysis showed that the amount needed to raise levees and accompanying structures can be accomplished at about [two-thirds] of the original cost estimate (a reduction of \$1.1 billion).

This \$4.1 billion number represents an estimate for work across the entire New Orleans system. However, the funds needed to further enhance protection and certify the levees in lower Plaquemines Parish are significantly greater in relation to the population and housing to be protected than similar improvements to other parts of the New Orleans area. The \$1.6 billion needed for improvements in lower Plaquemines, home to two percent of the area's pre-storm population, represents about 40 percent of the total additional cost. This suggests that providing this additional protection to lower Plaquemines might not be economically justified.

Continued on Page 6

What lies ahead: addressing levee certification

Using Criteria from FEMA Regulations



This graphic, using criteria from FEMA regulations, shows the levee certification levels ranging from a depiction of current Base Flood Elevations, known as BFE, to the 100-year flood level. The left of the floodwall in the center of the diagram shows pre-certification levels of the base flood elevation. The right side of the diagram shows the depth of the water (shown as D) and the depth of the wave action (shown as $D/2$) connected to a 100-year storm level. The MSL, known as mean sea level, shows the ground level.

Continued from Page 5

Therefore, before any funding request can be considered, the Administration is awaiting the results of further analysis that will provide additional guidance as to whether it is technically feasible to protect such a narrow strip of land; whether certifying the levees there exacerbates an already challenging environmental situation (i.e., sinking and wetlands erosion); the economic justification for investing this level of resources; as well as the economic impact on Plaquemines residents over the long term, who would have to shoulder ongoing maintenance costs.

The plan to request an estimated \$2.5 billion will be in addition to the existing \$2.08 billion appropriation that the Corps is currently using to repair damage caused by Katrina and to raise the levees to their Congressionally-authorized design heights, and is also in addition to the Administration's pending supplemental request of \$1.46 billion for levee work, which includes \$100 million for wetlands restoration. For more information on the Corps' work that would be performed with the \$1.46 billion request in the pending supplemental, go to <http://www.usace.army.mil/hurricane.html>.

Once completed, all the improvements will provide a hurricane protection system for New Orleans that is significantly better and stronger than ever before.

The Corps of Engineers has also re-estimated the cost of work requested in the Administration's pending supplemental request to incorporate certain non-Federal levees into the existing Federal levee system. The Corps original \$60 million estimate of the cost of this work has been revised to \$215 million, an increase of \$155 million.

Timeframe for repairs of the levee system

- June 1, 2006 - Completion of repairs to levees damaged by Katrina
- September 2007 - Completion of restoration of undamaged and subsided areas; completion of previously unconstructed portions of authorized projects
- December 2007 – Completion of final technical report that analyzes higher levels of protection (Louisiana Coastal Protection and Restoration Report)
- 2010 - Certify the levees' flood protection as meeting NFIP's 100-year protection level, as well as additional improvements such as permanent closure and pumping stations at the outfall canals; navigable floodgates to protect the Industrial Canal; storm proofing of existing pump stations; selective armoring of levees; incorporating a portion of non-federal levee in Plaquemines Parish; and ecosystem restoration.

The Office of the Federal Coordinator for Gulf Coast Rebuilding coordinates the long-term Federal rebuilding efforts by working with state and local officials to focus on a set of prioritized, integrated and long-term initiatives to rebuild the region such as restoring long-term safety and security, renewing economic activity, and revitalizing communities.



Representatives Marion Berry, Arkansas, and David Hobson, Ohio, receive information from Joseph Sullivan, City of New Orleans Sewerage and Water Board superintendent, at Pump Station No. 6. during a tour April 8.

Demolition mission: Corps, FEMA and NOPD team

The Louisiana demolition mission shows teamwork among the U.S. Army Corps of Engineers, Federal Emergency Management Agency, New Orleans Police Department and other local and state agencies.

How long will it take?

The critical path for a Louisiana demolition timeline is the demolition schedule for the Greater New Orleans area.

Assuming a sustained daily packet generation rate of 126 completed Rights of Entry packets clustered to be operationally efficient; the U.S. Army Corps of Engineers will mobilize approximately 50 demolition crews. The crews will demolish an estimated 126 structures in Orleans per day. It will take approximately 271 total days to complete the demolition mission expected to be completed in March 2007.

What is the demolition process?

1) Many of the demolition activities the Corps will perform are dependent on public notifications by the city, and receipt of the FEMA approved demolition packet. Corps does not demolish anything until direction is received from FEMA, after FEMA has worked out the details with local and State Officials.

2) Once the packets are approved, FEMA will notify the Corps. The FEMA notice to take down the first 100 or so structures in the right-of-way did not transpire until ten days after the first notice from the City is published in the paper.

3) The CORPS, FEMA and New Orleans Police Department continue to coordinate on security plans and will adjust plans according to changing needs.

4) Once the written permissions and work directions are received from FEMA, and when FEMA and the Corps have reached agreement on all aspects of the demolition packets, the Corps will work quickly with our contractors to begin the deliberate demolition process.

5) Upon notification from the Corps to begin work, the contractor will mobilize and work will begin in 2-3 days.

6) The first phase of demolition covered the most severely damaged structures, just over 100 structures in the rights of way. The next phase covers 2,177 severely damaged "red tagged" structures. There are another 5000 or so "red tagged" structures that may later be identified for demolition. The same procedures apply to them also.

Factors Limiting the Demolition Operation

- Local capabilities to assemble demolition packages
- Demolition decisions are controversial and have social and political implications.
- Lack of "master plan" for redevelopment that may include demolition proposals.
- EPA's strict adherence to asbestos, NESHAPs (National Emission Standard for Hazardous Air Pollutants) does not provide for flexibility
- Insufficient landfills permitted for asbestos in proximity to demolition activities,

Daily landfill acceptance capacity may be insufficient to meet production capabilities.

Demolition in Louisiana

- Estimated total demolition debris following Katrina and Rita = 13.6 million cubic yards (MCY)
- Estimated total debris from demolition in Orleans Parish = 12.5 MCY (25,000 structures)
- LA Recovery Field Office has demolished about 430 of the estimated 27,000 structures identified for demolition in Louisiana.
- LA Recovery Field Office has completed debris removal of the first 119 structures in New Orleans' 9th Ward and Lakeview areas. These are buildings that were demolished by the storm.
- Because there may still be human remains in some of the destroyed homes, canine search teams are searching the debris before it is removed.

Demolition teams are using excavators to remove the homes in layers instead of "bulldozing" them to prevent any human remains from being lost.

Corps plans for Phase 2 of tree removal

Part 1 can be found in the Status Update Newsletter April 5 edition at <http://www.mvd.usace.army.mil/hurricane/>

Tree removal within the existing levee and floodwall right-of-way will ensure the integrity of the flood control structure is maintained.

Underseepage and piping represent a serious threat to the integrity of a levee. Trees have extensive root systems that can serve as preferred pathways for under-the-levee seepage.

Further, large root balls are removed when high winds topple trees, creating a critical situation for piping and heave at the levee toe.

Without the repairs, the project area would be subject to possible flooding resulting from failure of the various flood control structures. Repairs would consist of chopping the

tree down to one to two feet above ground level or fence level to avoid having the tree blow over, exposing the root ball and providing for a seepage pathway near the flood control structure. Additionally, trees that may blow over and onto floodwalls can possibly damage the floodwall.

Phase 2: What to expect

- Removal of tree stumps and root systems of trees cut down during Phase 1
- Grading of ground and filling of holes that result from completing the removal of tree stumps and root systems
- Confirmation/redefinition of criteria regarding root-free and vegetation-free zones
- Identification of required additional right-of-way needed to establish the required root-free and vegetation-free zones
- Efforts to address other encroachments: power poles, structures, swimming pools, fences and fence poles, etc.

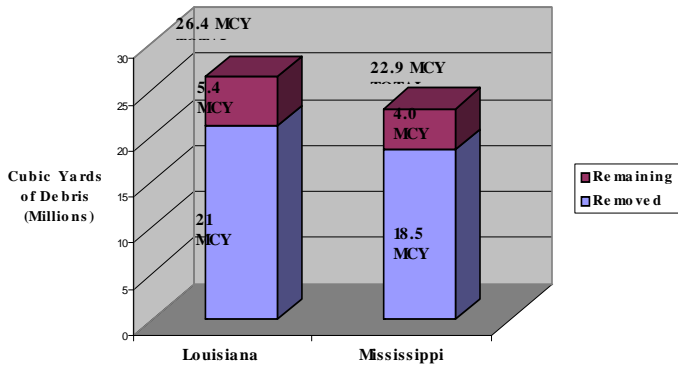


This tree stands within the levee toe.

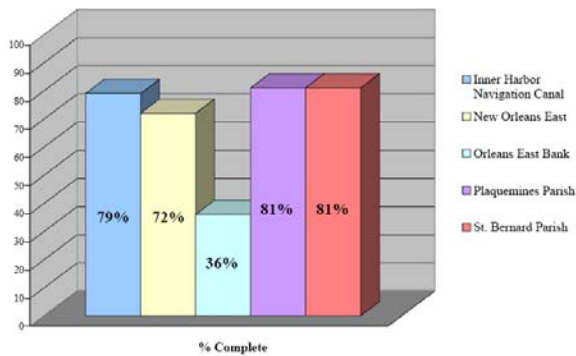
These trees in the two above photographs are located within 15 feet of the levee toe and will be removed.

Updates at a glance

Hurricane Debris Removal



Hurricane Protection System Restoration Status



The percent figures represent actual construction. The reason Orleans East Bank shows only 36% is that the construction there includes additional improvements (temporary gate closures and pumps).

Where can you find the latest information about the Corps' Hurricane Katrina work?

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



Keeping communication lines open

Dan Hitchings, director of Task Force Hope, has a microphone attached to his lapel prior to an interview with Shauna Sanford Channel 4 News. Hitchings works with several media outlets to update the Corps work on the levees, debris removal and other Corps missions.



Contact us with your comments and questions:

b2fwdpao@usace.army.mil

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 | 601-631-5052 | Mississippi Recovery Field Office |
| Overall Task Force Hope Information | 504-862-1836 | Task Force Hope Public Affairs |