



## Task Force Hope Status Report

July 27, 2006

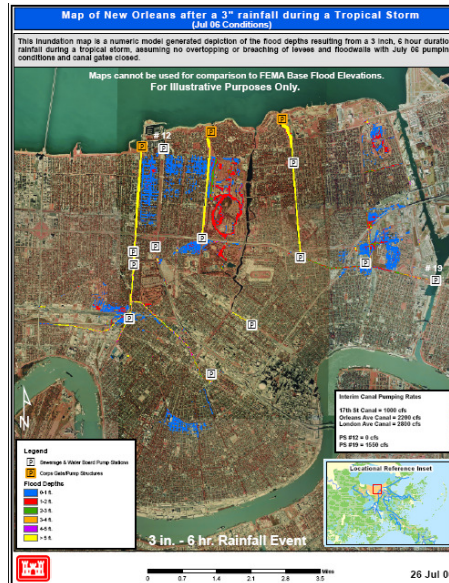
# Corps Releases New Inundation Maps, with Depths

## Computer Generated Maps Show Possible Flooding from 3", 6" and 9" Rainfalls When Canal Gates Are Closed

The U.S. Army Corps of Engineers has released tropical rainfall depth inundation maps showing potential flooding levels in New Orleans, La. Based on computer modeling, the maps compare possible flooding levels prior to Hurricane Katrina when no gates were installed at the outfall canals and potential levels after installation of the gates. The gates prevent storm surge from entering the canals.

Maps are based on 3-, 6- and 9-inch rainfall during a six-hour period when gates at the three outfall canals are closed at 17<sup>th</sup> Street, Orleans Avenue and London Avenue. They are also based on pump capacity at the outfall canal gate closures. Each map represents a point in time: pre-Katrina; July 2006; September 2006; and June 2007. Each of those dates represents increased pump capacity at the outfall gates. The June 2007 pumping capacity will return the inundation depth levels in the area to pre-Katrina conditions before the outfall gates were installed.


The Corps released computer-generated maps showing inundation areas with depths based on four scenarios:



Sample of Inundation Map with water depths indicated in legend at bottom left. (USACE Illustration)

1. Pre-Katrina without interim closures or pumps at the outfall canals and all pump stations operating at full capacity.
2. July 2006 with available pumping capacity at the closure gates of 1000 cfs at 17<sup>th</sup> Street; 2200 cfs at Orleans Avenue Canal; and 2800 cfs at London Avenue. The maps are adjusted for the current condition of pump station # 12 which is zero and pump station #19 which is 1550 c.f.s. A variation not shown in the maps is that the pumping capacity at 17<sup>th</sup> Street has increased from 1000 c.f.s. to 1400 c.f.s.

3. September 2006 with pumping capacity at the closure gates of 4000 cfs at 17<sup>th</sup> Street; 2200 cfs at Orleans Canal; 2800 cfs at London Avenue. The projected pump station capacity used in the model for #12 is 1000 c.f.s. and #19 is 3650 c.f.s.
4. June 2007 with gates and 7300 cubic-feet-per-second (cfs) pumping capacity at 17<sup>th</sup> Street; 2200 cfs at Orleans Avenue Canals; and 4800 cfs at London Avenue. These pumping capacities are expected to match the internal maximum capacity going into these drainage canals based on model results.

These computer-generated maps are for information and planning only. They should not be used in comparison or relationship to the Federal Emergency Management Agency's Base Flood Elevations. 

The link to the Depth Inundation Maps is: <http://www.mvn.usace.army.mil/tfg/>

Continued on page 2

### Also in this issue:

- Interior Drainage Study.....Page 2
- Faces of Hope.....Page 3
- MARGO Study.....Page 4
- LaCPR Report.....Page 5

## Corps of Engineers Conducting Interior Drainage Study

### All Viable Drainage Options Will Be Considered in Special Report

In early June, the Corps of Engineers awarded a contract to DMJM Harris, an engineering firm, to evaluate methods to reduce demand for capacity on the three outfall canals at Orleans Avenue, London Avenue and 17<sup>th</sup> Street. These three canals are presently the primary outlets to drain rainfall from city streets.

The Corps has directed DMJM Harris to work with officials from Jefferson Parish and the New Orleans Sewage & Water Board to explore all viable interior drainage options, including pumping rainwater to the Mississippi River, and developing temporary detention areas.

A report of the findings will be released in early August. 

## New Inundation Maps, with Depths: Frequently Asked Questions

### 1. What do these maps mean?

These maps show potential areas and depths of inundation after varying rates of rainfall when the interim closure structures at the 17<sup>th</sup> Street, London and Orleans canals are closed combined with current and future pumping capacity at those structures.

### 2. If they cause extra flooding from rainfall, why did the Corps install these gates?

Studies by the Corps and outside experts show that storm surge from Lake Pontchartrain overwhelmed the floodwalls of the London and 17<sup>th</sup> Street Canals. If another severe storm hits the area, the floodwalls are at risk of failure at high lake stages. The gated structures would prevent the storm surge from entering the city. When the gates are closed, rainwater cannot drain out of the canals and into the lake on its own. Pumps at the closure structures will pull that water out of the canals and into the lake; however, as these maps show, some additional inundation from rainfall will result. This flooding is a matter of inches of water that can be removed in hours once the gates are opened versus feet of water throughout the city that lasts for weeks after a catastrophic levee failure.

### 3. What is the hypothetical storm?

The hypothetical storm is a tropical storm or hurricane that causes enough storm surge to raise the water levels of the canals at least five feet *and* drops nine inches of rain in six hours. Only a tropical storm or hurricane would pro-

Maps, continued on page 4

## Points of Contact for Information

Topic	Phone	Organization
Overall information about work being performed by the Corps of Engineers in the New Orleans District, or To be included on the Newsletter e-mail list	(504) 862-2201	New Orleans District Public Affairs
Overall Task Force Hope Information	(504) 862-1836	Task Force Hope Public Affairs
Debris Removal in Louisiana	(225) 218-9325	Louisiana Recovery Field Office
Debris Removal in Mississippi	(601) 631-5065	Mississippi Recovery Field Office

The **Status Report Newsletter** supports 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 hurricane recovery work. This is an online publication and open to public distribution. This issue and past issues can be found at: [www.mvn.usace.army.mil/hps](http://www.mvn.usace.army.mil/hps). Comments and questions may be sent to the Status Report Newsletter editor at: [b2fwdpao@usace.army.mil](mailto:b2fwdpao@usace.army.mil).

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## Faces of Hope

### Corps Engineer Quick to Volunteer Expertise in Disasters

*Thousands of houses are destroyed. There is no electricity or sanitation. The communication system is down. Families are separated. People are displaced and desperate.*

**T**hat is the scene that greeted Maria Garzino when she arrived in Baghdad, Iraq, in 2003.

And two years later, that's the same scene that greeted her in New Orleans.

Maria Garzino is a Mechanical Engineer with a master's degree in Environmental Engineering. She is a California native who has worked for the past eight years in the Construction Operations Division of the Los Angeles, California, U.S. Army Corps of Engineers.

When the United States military entered Iraq in 2003, Garzino was closely following the news reports. "They predicted that Iraqi cities would lose electricity and water treatment facilities, and the people would experience outbreaks of typhoid and cholera," she said. "They estimated that thousands of people would die."

Garzino figured that her background in mechanical and environmental engineering would come in handy in a situation like that, so she volunteered to help. "I actually worked on the temporary power in Baghdad for about a month," she said. "Then I switched over to the water treatment plant in Kirkuk, and then the sewage facilities throughout Baghdad." She was in Iraq for four months.

Coincidentally, Garzino was deployed to Iraq with many employees of the Mississippi Valley District Corps of Engineers. "So when Hurricane Katrina hit this area, I was on the phone trying to get down here to help," Garzino explained.



**Maria Garzino is assigned to the Los Angeles District Corps of Engineers, but she has volunteered all over the world for Corps work where her expertise in mechanical and environmental engineering is of value.** (USACE photo by Paul Floro)

"I know these people personally, and it hurt seeing them go through this disaster, losing their homes. And I wanted to help." Again, Garzino volunteered. And when she arrived in New Orleans, the scene was similar to what greeted her in Baghdad. But this time, her mission turned out to be a bit different.

"Shortly after I arrived, Hurricane Rita hit," she allowed, "and I was sent to Lake Charles where I was Team Leader on a Blue Roof tasker."

Not exactly what you would expect a Mechanical Engineer to be doing, but it didn't faze her a bit. "I felt it was important for us to be there," she said.


"I told my team that it's not just the Blue Roofs we're putting on...our real job is to talk to people. And to listen to them. We represent the Corps of Engineers and the federal government, to some extent.

"Yeah, putting on Blue Roofs wasn't exactly in alignment with my educational background, but it was important work," she said proudly.

Eventually, Garzino was sent back to New Orleans and made Pumping Systems Installation Team Leader. This is currently one of the most important jobs in the hurricane protection system with the New Orleans District Corps of Engineers.

Whether in Baghdad or New Orleans, Garzino is ready to help. She obviously cares about people. And she really cares about the Corps of Engineers.

"We represent the Corps wherever we are," she said.

"We make a difference in people's lives, and it's important that we communicate to them that we do care." 

## MRGO Deep Draft De-authorization Study Underway

*Final Technical Report To Be Integrated with LaCPR*



**A deep draft ship navigates MRGO near mile marker 53 which is near the Bayou Dupre Control Structure.** (USACE photo)


In June, 2006, the United States Congress directed the Corps of Engineers to “develop a comprehensive plan, at full federal expense, to de-authorize deep draft navigation on the Mississippi River-Gulf Outlet (MRGO) extending from the Gulf of Mexico to the Gulf Intercoastal Waterway.”

The Assistant Secretary of the Army for Civil Works is instructed to submit the Corps’ interim plan to Congress within six months after the date of enactment of the legislation, and is directed to further refine the interim plan (if necessary) to be fully consistent with and integrated into the Final Technical Report for the Louisiana Coastal Protection and Restoration Plan to be issued in December, 2007.

Congress was not specific in its definition of deep draft navigation or the anticipated end-state of the “de-authorized” channel. The report accompanying the legislation does direct the Corps to:

1. **Include recommended modifications to the existing authorized navigation uses of the MRGO and any navigation uses that should be maintained,**
2. **Identify measures for hurricane and storm protection, and**
3. **Coordinate with St. Bernard Parish and affected federal agencies.**

The study will be executed by a technical team from the Galveston District with local coordination out of the New Orleans District.

The point of contact within the New Orleans District Corps of Engineers is Greg Miller, 504-862-2310. 

## New Inundation Maps, with Depths: FAQs

Continued from page 2

duce these conditions, and not every tropical storm or hurricane would raise the water levels of the canals enough that the gates would have to be closed.


In the past 45 years, the lake level, which drives elevated water levels in the canals, exceeded five feet three times.

*4. Why doesn't this include Eastern New Orleans or the Lower Ninth Ward?*

These maps were meant to show most of the areas that would be potentially impacted by the closure structures at the 17<sup>th</sup> Street, Orleans and London Avenue canals. Eastern New Orleans and the Lower Ninth Ward are on the other side of the IHNC and so their drainage is not impacted by changes to these canals.

*5. How do recent (July 2006) rainfall events compare to what is portrayed on these maps?*

Recent rainfalls were normal summer events which were not associated with a tropical storm. The National Weather Service (NWS) reported 2 inches of rain in a short period of time fell in parts of New Orleans on July 19. NWS reported 3 to 4 inches of rain fell in about 1.5 hours in portions of Metairie on July 23. Street flooding was reported in both cases.

The gates at the outfall canals will only be closed when a tropical storm threatening the south shore Gulf coast is forecast to raise water levels in Lake Pontchartrain to five feet or more. 

**For more information on Depth Inundation Maps, go to:**

<http://www.mvn.usace.army.mil/>

[hps/](#)



## Woodley Sends Corps of Engineers' Report on Louisiana Coastal Protection and Restoration To Congress

The **PURPOSE** of the project is to identify risk reduction measures that can be integrated to form a system that will provide enhanced protection of coastal communities and infrastructure, as well as for restoration of coastal ecosystems.

The **SCOPE** of the project is to address the full range of flood control, coastal restoration, and hurricane protection measures available, including those needed to provide comprehensive "Category 5" protection.



LaCPR General Project Area

**O**n July 10, the Assistant Secretary of the Army for Civil Works, Honorable John Paul Woodley, Jr., forwarded the U.S. Army Corps of Engineers' Preliminary Technical Report on Louisiana Coastal Protection and Restoration (LACPR) to Congress. The report meets the first of two report requirements of the Energy and Water Development Appropriations Act of 2006, passed in November 2005, and amended by the Department of Defense, Emergency Supplemental Appropriations to Address Hurricanes in the Gulf of Mexico, and Pandemic Influenza Act, 2006, passed on December 30, 2005. This legislation directed the Secretary of the Army, working through the Chief of Engineers, to produce a preliminary technical report for comprehensive "Category 5" protection within six months of the enactment of the DOD supplemental legislation and a final technical report within two years.

Under these acts, the Secretary of the Army, acting through the Chief of Engineers is to:

- Conduct a comprehensive hurricane protection analysis and design at full Federal expense to develop and present a full range of flood control,


coastal restoration, and hurricane protection measures exclusive of normal policy considerations for South Louisiana.

- Submit a preliminary technical report for comprehensive "Category 5" protection within 6 months of enactment of the Act.
- Submit a final technical report for "Category 5" protection within 24 months.
- Consider providing protection for a storm surge equivalent to a "Category 5" hurricane within the area.
- Submit reports on component areas of the larger protection program for authorization as soon as practicable.

The legislation also directs the Corps to conduct these studies exclusive of normal policy considerations for risk reduction measures. In addition to traditional identification of the costs and benefits of particular measures, for example, the final report will present information on the assets at risk in each area and the number of people now living there, and propose factors or measures to evaluate

options for reducing the risk from damaging storms with different magnitudes and different trajectories. The analysis will focus on options that are also compatible with restoring the natural wetlands ecosystem of South Louisiana.

The Preliminary Technical Report provides information that will guide the work necessary to complete the Final Technical Report. It does not contain the level of technical information required to support further authorizations for feasibility studies or construction. The Final Technical Report will assist decision makers in making decisions as to the appropriate and practical locations, levels and types of risk reduction measures.

Interim reports are anticipated, and may include information on component parts of the system that is suitable to support the authorization of feasibility-level engineering studies or construction decisions in some instances. Interim reports may also correct or update any information provided in the preliminary report. 

*The Preliminary Technical Report on Louisiana Coastal Protection and Restoration is available on the web at :*

[http://www.usace.army.mil/inet/functions/cw/hot\\_topics/ht\\_2006/LCPR\\_2006.pdf](http://www.usace.army.mil/inet/functions/cw/hot_topics/ht_2006/LCPR_2006.pdf).