

## Commander's Desk

### *Additional assessment performed on HSDRRS*

Following Hurricane Isaac, the U.S. Army Corps of Engineers performed an assessment to evaluate if the construction of the Hurricane and Storm Damage Risk Reduction System had any impacts on communities outside the 100-year system.

As this was the first major test of the System, some raised concerns that construction of the system resulted in unintended induced flooding to some of the unprotected areas.

The Corps evaluated the data available from Hurricane Isaac and as-

essed the impacts of the storm with the existing system in place, as well as with the "system" that was in place prior to construction of the HSDRRS. This effort was conducted by the best available engineers and scientists from the New Orleans

Because every storm has its own set of unique characteristics, water levels observed during Isaac do not indicate that an area will receive the same levels of water during the next storm.

District, Mississippi Valley Division, Engineering Research and Development Center, the National Weather Service, and was subject to two over-the-shoulder re-

views.

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Photo by G. A. Volb/USACE

John Snell, of WVUE-TV8, interviews New Orleans District Commander Col. Ed Fleming regarding results of the latest modeling assessment.



## District folks deploy to support NE after Sandy

By G. A. Volb  
USACE New Orleans

Since Hurricane Sandy's devastation of the northeast, some of the U.S. Army Corps of Engineers, New Orleans District have deployed to provide their insight to storm response --- a valued commodity if the region is to return to normal anytime soon.

Four New Orleans team members went to assist with the unwatering effort in New York City. "Two of the people we had go to support the unwatering were both heavily involved in unwatering New Orleans following Katrina," said Mike Stack, chief of the New Orleans District's emergency management office. "Mark Gonski is a structural engineer and Kevin Wagner is a senior project manager. The other two were Pub-

lic Affairs professionals Ken Holder and Rene Poche."

Elsewhere, Michael Krehely is supporting the North Atlantic Division EOC; Scott Turygan is deployed as a local government liaison to New Jersey, and Rick Tillman is providing his insight as a subject matter expert on debris removal.

Since their departure, the unwatering mission has been completed and those who were engaged in that effort have returned following a two-week deployment.

"Our LGL and EOC support guys are committed for 30 and 45 days respectively," said Stack. "The debris mission will last for a while, so our subject matter expert on the ground there may be up there longer than the rest."

The value added by sending New Orleans District experts includes several areas: 1) the district

has a tremendous amount of technical expertise developed through our work over the last several years; 2) we have people who have done it before so they can hit the ground running and respond quickly; 3) our previous experience also allows us to bring best practices and lessons learned to the table that others typically can't.

"For overall support, we have a lot of recent emergency operations experience that we can use to help with their operation," continued Stack. "On the debris side we have a few of the national Subject Matter Experts here at our district. We have a lot of on-the-ground experience from storms like Katrina, Rita, Gustav, Ike and Isaac, plus the flood of 2011 that we can bring to the response up there to help make operations more efficient and effective."



US Army Corps of Engineers  
New Orleans District

Stakeholder Update  
BUILDING STRONG®

# Corps opens Causeway ahead of schedule, traffic on the move



Photo Courtesy USACE

**NEW ORLEANS** –The U.S. Army Corps of Engineers, New Orleans District, opened the newly completed southbound section at the Lake Pontchartrain Causeway on Nov. 9.

The opening of all four southbound lanes comes about a month ahead of schedule. The Causeway project is part of the \$14.6 billion greater New Orleans Hurricane and Storm Damage Risk Reduction System.

“For the past two years, northbound and southbound travel lanes of Causeway Blvd. have been closed and detoured when necessary to accommodate ongoing construction,” said Justin Smith, project manager.

“Opening the new section should significantly improve the flow of traffic exiting the Causeway.”

The northbound lanes are expected to fully open the end of November or early December.

Boh Bros. Construction Co. began work in 2010 on the \$43-million risk reduction project which involved elevating the highly trafficked Causeway lanes over a

***The opening of all four southbound lanes comes about a month ahead of schedule.***

newly constructed floodwall built to an elevation of +15 feet. The new section stretches from the Causeway peninsula over the new floodwall to just north of 6th St.

Tie-ins link the new floodwall feature with the existing Jefferson Parish

lakefront levees. The floodwall defends against a storm surge event that has a one percent chance of occurring in any given year, or a 100-year storm surge event.

All construction on the Lake Pontchartrain Causeway is scheduled to be completed in early 2013 with the installation of a new canopy over the northbound Causeway entrance.

As construction of the Greater New Orleans Hurricane and Storm Damage Risk Reduction System continues, residents and commuters are urged to use caution near active construction sites.

If at any time there are questions about construction of the system, call the Corps’ toll free Construction Hotline at 877-427-0345.

For more information on the HSDRRS go to: [www.usace.army.mil](http://www.usace.army.mil).

## Modeling Hurricane Isaac with and without 2012 100-year HSDRRS National Weather Service Hurricane Isaac Storm Characterization



### General Storm Characteristics

- Hurricane Isaac Categorized as weak Category 1 hurricane, reaching maximum sustained winds of 80 mph
- Long duration of tropical storm winds, storm track, storm size, multiple high tides, and significant rainfall occurring at same time as maximum storm surge, resulted in large amounts of water being pushed into coastal Louisiana and Mississippi
- In many areas outside the 100-yr HSDRRS, water levels exceeded those from Hurricanes Katrina and Gustav

### Forward Motion and Track

- The forward motion of Hurricane Isaac was nearly 3 to 4 times slower than Hurricane Katrina
- Hurricane Isaac tracked to the west of metro New Orleans, putting study area on stronger side of storm

### Winds

- Sustained tropical storm force winds generally from the eastern direction experienced over southeast Louisiana and southern Mississippi for 45 hours from midday on 28 August through midday on 30 August

### Rainfall

- Storm total rainfall was generally 8 to 12 inches with some areas experiencing more than 20 inches

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The results of our assessment and analysis indicate Hurricane Isaac's impacts on areas outside the HSDRRS would have been similar with or without the 100-year system being in place. In general, the model simulations indicate a peak water level increase of generally one inch or less in communities outside the system with the HSDRRS in place. The greatest increase in water level near a community outside the system was approximately five inches near the town of Crown Point. In some areas, the water levels were actually less as a result of construction of the 100-year system.

Additionally, the information obtained from the effort further demonstrates that every storm is unique. Though only a Category I Hurricane, Isaac was a

large, slow-moving storm with a track west of the HSDRRS. Moving at a pace three to four times slower than Hurricane Katrina, the greater New Orleans areas was subjected to tropical force winds for nearly 45 hours. The storm's significant rainfall, averaging between eight and 12 inches throughout the area, occurred at the same time as the maximum storm surge. As a result, large amounts of water was pushed into coastal Louisiana and Mississippi over a long period of time. In some areas, Hurricane Isaac's water levels exceeded those of Hurricanes Katrina and Gustav.

Prior to construction of the HSDRRS, the Corps conducted extensive models that included a suite of 152 storms. While the results of the Post-Hurricane



Photo by G. A. Voib/USACE

**USACE New Orleans District Commander Col. Ed Fleming fields questions from the media Nov. 9 on system modeling recently completed.**

Isaac Assessment are overall consistent with the Corps modeling efforts done prior to construction of the HSDRRS, it is important to note that this recent effort was done strictly to determine the impacts of that storm.

Because every storm has its own set of unique characteristics, water levels observed during Isaac do not indicate that an area will receive the same levels of water during the next storm.

Currently, these results are undergoing an Independent External Peer Review by the Louisiana Water Resources Council and we anticipate completion in the spring of 2013. Once complete we will share their findings, as we have shared our results, with the public.



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