

Risk Reduction System works as designed during Hurricane Isaac Federal, state and local emergency operations teams work seamlessly to prevent disaster



I would like to take this opportunity to recognize the efforts of the men and women of the Corps of Engineers, our state and local stakeholders, and the many members of emergency management teams who came together during Hurricane Isaac in response to the storm's powerful winds, rains and surge.

The success of this response, as well as the positive performance of the Hurricane and Storm Damage Risk Reduction System, was a direct result of your commitment, dedication and preparation over the last seven years.

I do, however, recognize that many residents who lived outside the system continue to put their lives back together following Isaac. Fortunately, the communities of southeast Louisiana are as strong and resilient as you will find anywhere in our Nation. The stories of heroism and compassion told during the storm speak volumes about the men and women of Louisiana. The Corps is proud to be a part of this heroic community.

As you know, every storm is different. Although only listed as a Category 1,

Hurricane Isaac was a very large and slow moving storm, moving large amounts of surge and rainfall into the area. It was located near the mouth of the Mississippi River for more than a day. The counterclockwise winds pumped

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water into Breton Sound, Lake Pontchartrain and Lake Maurepas during this entire period of time. Hurricane Katrina and other recent storms moved through the area much more quickly.

There has been speculation that the recent flooding in areas outside the Hurricane and Storm Damage Risk Reduction System is a result of the presence of that system. The Corps conducted extensive preconstruction storm surge modeling and analysis when designing the Hurricane and

Storm Damage Risk Reduction System. This surge modeling was completed using best available science and engineering, and subjected to the rigors of Independent External Peer Review. The results of this analysis showed that the construction of the HSDRRS would cause minimal to no unintended consequences for the areas outside the system.

Elected leaders have asked us to perform additional modeling and post-storm evaluations to help better understand changes in surge behavior resulting from construction of the HSDRRS.

We will respond to their request by modeling Hurricane Isaac. Our results will be shared with the public and stakeholders via our website, presented at future public meetings and used by the Corps to become even better prepared for the next storm.

A timeline for completing this effort is under development.

- Col. Ed Fleming
Commander,
New Orleans District



Photos by Paul Floro/USACE

Federal, state, local agencies battle Isaac:

Assistant Secretary of the Army for Civil Works Jo-Ellen Darcy briefs members of the local press Sept. 1 at the U.S. Army Corps of Engineers New Orleans District Headquarters. Darcy, who saw the storms effects first hand, emphasized ongoing cooperation between federal, state and local emergency response agencies working to help those who have suffered as a result of Hurricane Isaac. She noted that the Hurricane and Storm Damage Risk Reduction System built around the greater New Orleans Area worked as designed, but that the corps will perform additional modeling as part of post-storm evaluations to better understand changes in surge behavior resulting from systematic changes in the system. Also pictured is USACE New Orleans District Commander Col. Ed Fleming, second from right; Sen. David Vitter, far right; USACE Commanding General Lt. Gen. Thomas Bostick, third from left; and Sen. Mary Landrieu, far left. At right: Darcy discusses emergency operations with Fleming and Bostick.



Surge kept in check by system

Hurricane Isaac first made landfall Aug. 28 at the mouth of the Mississippi River, then again Aug. 29 at Port Fourchon.

While a Category 1 storm on the Saffir-Simpson scale, Isaac's winds created substantial storm surges and deposited an enormous amount of rainfall on the region as it moved slowly inland. The path and

speed of Isaac tested all aspects of the greater New Orleans Hurricane and Storm Damage Risk Reduction System. The newly constructed, \$14.6 billion system operated as designed, and all closure structures in the system were closed — all associated pumps were operated.

For the first time, the IHNC Surge Barrier, West Closure Complex, Seabrook Floodgate Complex, and Bayou Segnette Complex were closed and operated in a tropical storm event.

The Corps has committed to perform additional modeling and post-storm evaluations to explore this matter further using data collected from Hurricane Isaac.

The IHNC Surge Barrier held back storm surges of 13.6 feet, preventing water from entering the interior canals of the city. Hurricane Katrina's peak surge at this location was 15.5 feet; this comparison alone shows that Hurricane Isaac was a true test for the system. The West Closure Complex held back storm surges of 5 feet and pumped out interior drainage water at an astounding rate.

The tried and true Outfall Canal Interim



Operation of the 17th St. Canal Flood Gate pumps during Hurricane Isaac.

Closure Structures also performed in the face of Hurricane Isaac's relentless rainfall. These structures not only held back the high water levels in Lake Pontchartrain, but pumped out vast amounts of interior drainage water allowing the Sewerage and Water Board of New Orleans to operate their pumping system full bore.

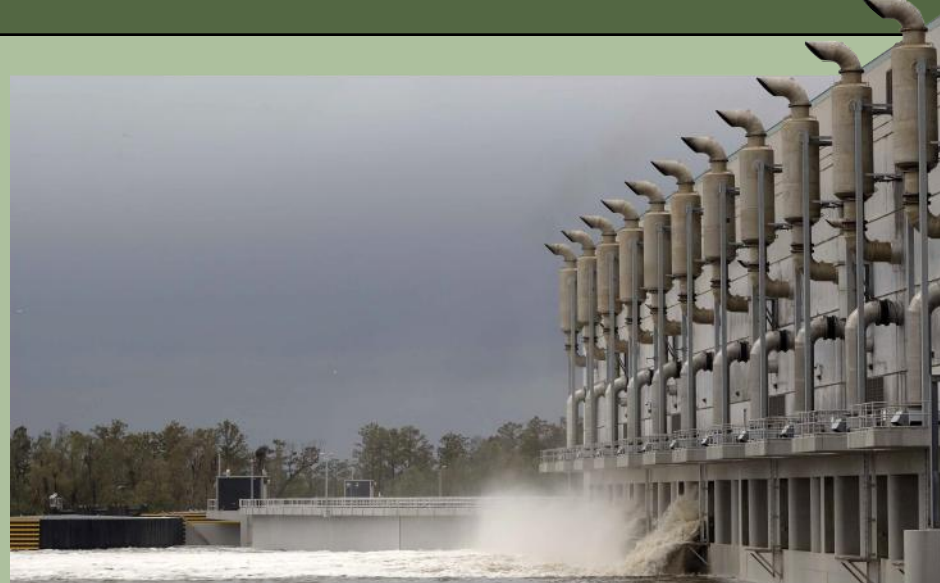
While the Hurricane and Storm Damage Risk Reduction System provided risk reduction for the greater New Orleans area within the perimeter system, low-lying communities outside the system experienced devastating storm surge and rainfall flooding. In areas west and north of the lake, storm surge flooded communities and rainfall overwhelmed streams and rivers. These issues were exasperated when high water levels in Lake Pontchartrain would not allow this water to drain naturally for several days after the storm.

While there is some speculation that HSDRRS caused this flooding, prior to construction the Corps conducted extensive modeling and analysis, which indicated that the system would have minimal to no impacts to areas outside the system.

The Corps has committed to perform additional modeling and post-storm evaluations to explore this matter further using data collected from Hurricane Isaac. As soon as this effort is complete, the Corps will share its findings with stakeholders and the public.

HSDRRS vs. Isaac:

Corps' risk reduction system passes first major test



At top: The \$1-billion West Closure Complex pumps during Hurricane Isaac. The WCC reduces risk for residences in three parishes on the west bank of the Mississippi River: Orleans, Jefferson and Plaquemines. Above: U.S. Army Corps of Engineers' Leeland Richard assesses effects Isaac had on the Hurricane and Storm Damage Risk Reduction System near the Highway 23 Floodgate. At left: Richard stands on the Harvey Canal Floodwall photographing the debris line left behind Hurricane Isaac's retreat from Louisiana. The \$14.6-billion HSDRRS worked as designed during Isaac.

Photos by Paul Floro/USACE

Corps awards first NOV/NFL contract to reduce risk to Plaquemines Parish south of Oakville

NEW ORLEANS -The U.S. Army Corps of Engineers, New Orleans District recently awarded an \$11.4 million contract to Aquaterra-CAYO to construct fronting protection at Ollie pump station which is located between Oakville and La Reussite.

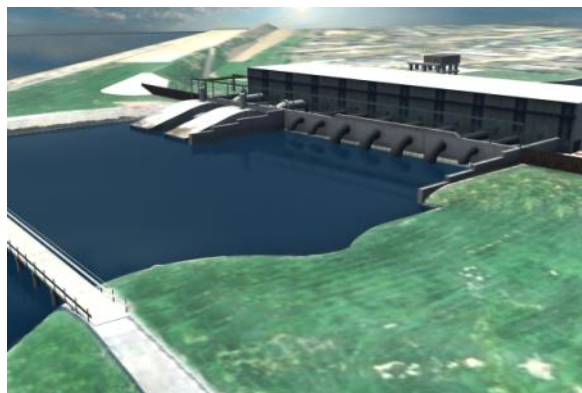
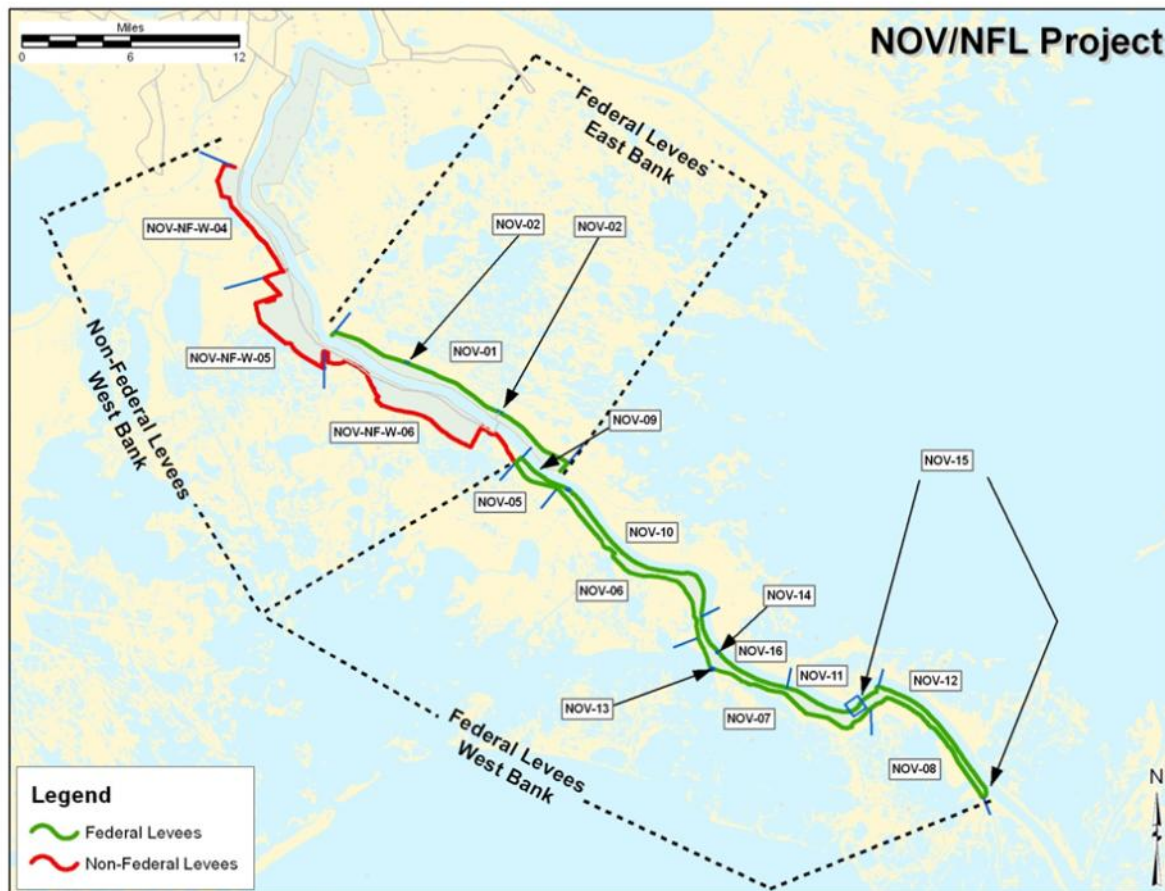
This is the first of 17 New Orleans to Venice (NOV) / Non-Federal Levee (NFL) contracts to be awarded that will reduce risk in Plaquemines Parish south of the Hurricane and Storm Damage Risk Reduction System.

“Fronting Protection consists of measures that reduce the effects of storm surge on the pump station and prevent water from reaching the pump stations and minimizing their function during a tropical event,” said Nicole Harris, senior project manager. “This feature will bring Ollie Pump Station into compliance with new standards and ensure residents near the pump station have a continuous line of risk reduction.”

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The 30-month contract includes construction of a concrete T-wall in front of the pump station and an extension of the pump discharge pipes through the floodwall. Valves or gates will also be incorporated into the discharge pipes to prevent backflow. The fronting protection will tie into existing levees on both sides of the pump station that are also scheduled for upgrades.

The NOV / NFL projects are two separate projects being constructed on a complementary timeline that will reduce risk in Plaquemines Parish and defend against a storm surge event that has a two percent chance of occurring in any given year. The NOV project includes approximately 37 miles of back levee modifications, fronting protection and two sector gates on the westbank; and floodwall fronting protection at two locations on the eastbank. The NFL project area is located on the westbank, where the Federally-authorized West Bank and Vicinity project ends in Oakville. The NFL project includes approximately 20 miles of back levee replacements or modifications and a tie-in to the Mississippi River Levees.



Typical Pump Station



Pump Station with Fronting Protection