Pump Stations

There are 78 pump stations (Federal and Non-Federal) in the 4-parish area. Following Hurricanes Katrina and Rita, the Corps received authorization and funding for 33 repair contracts. All contracts are now complete.

Pump Station repair projects included:

Jefferson Parish ($2.7 M):
- Eight repair contracts at 17 stations

Orleans Parish ($73.2 M):
- 14 repair contracts at 23 stations and the Carrollton Frequency Changer Building

St. Bernard Parish ($27.6 M):
- Six repair contracts at eight stations

Plaquemines Parish ($26.5 M):
- Five repair contracts at 13 stations

Storm Proofing of Pump Stations

There are 34 original Storm Proofing contracts in Jefferson and Orleans parishes. All contracts are now complete.

Jefferson Parish: 16 contracts, $136 M

There are 25 pump stations divided into 16 planned individual Storm Proofing construction contracts.

Orleans Parish: 18 contracts, $204 M

There are 24 pump stations divided into 18 planned individual Storm Proofing construction contracts.

Outfall Canals

Construction and installation of the interim closure structures and pump stations at the three outfall canals were performed before the start of the 2006 Hurricane Season. These interim structures provide 100-year level risk reduction and will remain in place until the new, permanent structures are built.

The total maximum pumping capacity today at the three outfall canal pumps is more than 16,000 cubic feet per second (cfs).

17th St. Canal	-	9,200 cfs total pumping capacity
Orleans Ave. Canal	-	2,200 cfs total pumping capacity
London Ave. Canal	-	5,200 cfs total pumping capacity

Supervisory Control and Data Acquisition (SCADA) equipment installed at the outfall canals gives the Corps a remote computerized control system to operate the pumps and gates while monitoring water levels in the canals. The pumps, gates and SCADA equipment performed successfully during Hurricanes Gustav and Ike in 2008, and Hurricane Isaac in 2012.

Permanent Canal Closures and Pumps

Major construction is complete on the Permanent Canal Closures and Pumps (PCCP), with punch list items to be completed in 2018. The total maximum pumping capacity at the three outfall canal pumps upon completion of the PCCP will be 24,300 cfs.

17th Street PCCP

The PCCP at 17th Street will consist of 15 generators (2.6 MW each), six 5,000 horsepower (hp) pump motors capable of pumping 1,800 cubic feet per second (cfs), two 2,500 hp pump motors capable of pumping 900 cfs—that is a total pumping capacity of 12,600 cfs.

Station Height: 43.9’ | Station Elevation: 52.9’

Orleans Avenue PCCP

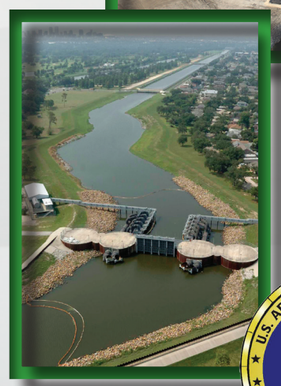
The PCCP at Orleans Avenue will consist of four generators (2.6 MW each) and three 2,500 hp pump motors capable of pumping 900 cfs—that is a total pumping capacity of 2,700 cfs.

Station Height: 40.9’ | Station Elevation: 49.9’

London Avenue PCCP

The PCCP at London Avenue will consist of 11 generators (2.6 MW each), four 5,000 hp pump motors capable of pumping 1,800 cfs, and two 2,500 hp pump motors capable of pumping 900 cfs—that is a total pumping capacity of 9,000 cfs.

Station Height: 43.9’ | Station Elevation: 52.9’



Greater New Orleans Hurricane and Storm Damage Risk Reduction System

Facts and Figures

Jan 2018

Following Hurricanes Katrina and Rita in 2005, the U.S. Army Corps of Engineers was authorized and funded to design and construct the Hurricane & Storm Damage Risk Reduction System (HSDRRS) for southeast Louisiana.

Over the past ten years, the Corps has strengthened the levees, floodwalls, gated structures and pump stations that form the 133–mile Greater New Orleans perimeter system, as well as improved approximately 70 miles of interior risk reduction structures. Among its technically-advanced engineering solutions, the HSDRRS now includes the world’s largest surge barrier of its kind, the IHNC-Lake Borgne Surge Barrier, and the largest drainage pump station in the world, the GIWW-West Closure Complex.

The HSDRRS is stronger and more resilient than it has ever been, and capable of defending against a 100–year level of storm surge, also known as a storm that has a one percent chance of occurring in any given year.

Shared responsibility with and commitment from our partners enabled successful completion of the 100-year system, which performed as designed in recent storms such as Hurricane Isaac.

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

MVN PAM 360-1-2

US Army Corps of Engineers
New Orleans District

BUILDING STRONG®

HSDRRS Construction Contracts

Total Program Budget:	~$14.6 B
Obligated To Date:	~$13.3 B
Total Construction Contracts:	469
Awarded To Date:	445
(as of Jan 2018)	

Armoring

There are 350 miles of levees/floodwalls in the HSDRRS, including interior levees and floodwalls.

Armoring

- Armoring adds resiliency to a levee and can reduce erosion and scouring of back slopes when wave overtopping occurs.
- After Katrina, the Corps undertook a concerted effort to improve armoring methods, and worked with academia to research various armoring materials. To date, eight armoring contracts are substantially complete, seven are under construction, and 11 contracts are not yet awarded.
- Approximately 420 transition spots (where a floodwall meets a levee) have already been armored.

Major Projects

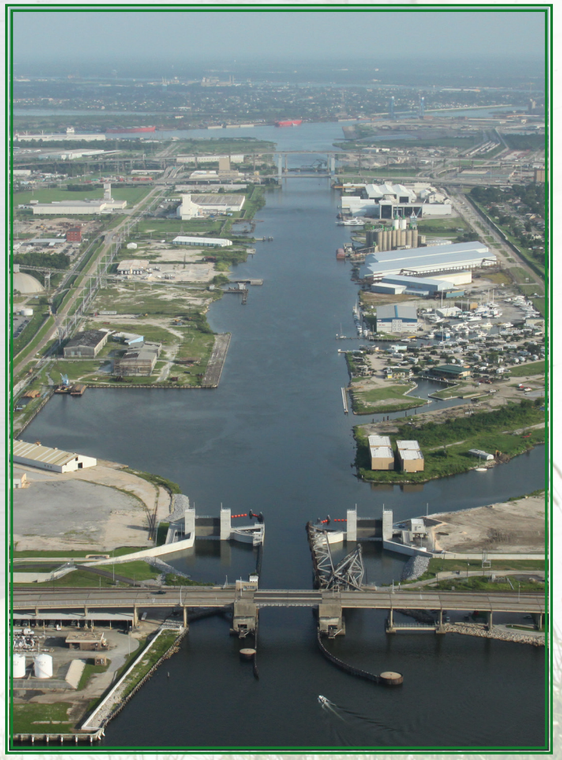
West Bank & Vicinity Project (WBV)

- Currently, there are 119 contracts that are substantially complete and five ongoing construction contracts throughout the WBV Project. There are 11 contracts not yet awarded, nine of which are for armoring and two for environmental mitigation.
- Approximately $3.7 B has been budgeted for construction of the 100-year system for WBV.
- The two major structures for WBV, West Closure Complex and Bayou Segnette Complex, are fully operational—operations and maintenance responsibility has been transferred to the non-Federal sponsor.
- **Gulf Intracoastal Waterway-West Closure Complex**
  - The GIWW-WCC is a major feature of the HSDRRS that provides the first line of defense from storm surge entering the Harvey and Algiers Canals. The WCC significantly reduces the risk to a large area of the West Bank by eliminating 25 miles of levees, floodwalls, floodgates and pumping stations along the canals from the direct impacts of storm surge. The nearly $1 B project consists of the nation's largest sector gate, the world's largest drainage pump station, floodwalls, sluice gates, foreshore protection and an earthen levee. The project also includes dredging of Algiers Canal, beneficial use of the dredge material and realignment of a portion of Bayou Road in Plaquemines Parish. Construction of this enormous project began in August 2009. The structure is fully operational and has provided the 100-year level of risk reduction since September 2011.

Lake Pontchartrain & Vicinity Project (LPV)

- Currently, there are 104 contracts that are substantially complete and seven ongoing construction contracts throughout the LPV Project. There are three contracts that have not yet been awarded, all of which are for armoring. Approximately $4 B has been budgeted for construction of the 100-year system for LPV.
- The two major structures for LPV, the IHNC Surge Barrier and Seabrook Floodgate Complex, are fully operational—operations and maintenance responsibility has been transferred to the non-Federal Sponsor.

- **Inner Harbor Navigation Canal Surge Barrier**
  - Construction of the massive IHNC Surge Barrier at Lake Borgne, the largest design-build civil works project in Corps history, began in May 2009. The project is a key feature of the HSDRRS, providing the 100-year level of risk reduction to a large portion of Orleans and St. Bernard parishes by reducing the risk of surge entering the GIWW/IHNC corridor from Lake Borgne and the Gulf of Mexico.
  - The 1.8 mile barrier, the largest of its kind in the world, includes three gated structures and a barrier wall with a top elevation of 26 feet. The barrier wall and all three gates are complete, and have been operated in a storm event.
- **Seabrook Floodgate Complex**
  - The Seabrook Floodgate Complex is located in the Inner Harbor Navigation Canal and reduces storm surge entering from Lake Pontchartrain. Seabrook works in tandem with the IHNC Lake Borgne Surge Barrier to provide 100-year level risk reduction to the entire IHNC corridor.



Southeast Louisiana Urban Flood Control Project (SELA)

- SELA reduces the risk of flood damages due to rainfall flooding in Orleans, Jefferson and St. Tammany parishes. The improvements generally support the parishes' master drainage plans and provide flood risk reduction up to a level associated with a 10-year rainfall event. The project includes over $2 B of improvements in Jefferson and Orleans parishes. All major SELA construction contracts have been awarded.
- In Orleans Parish, 16 projects are complete and four are under construction. In Jefferson Parish, 59 projects are substantially complete, with minor punchlist items remaining.
- All Orleans and Jefferson Parish contracts are scheduled to be substantially complete in 2021.

Plaquemines Parish

- The Corps of Engineers is engaged in two projects on a concurrent timeline that will reduce risk in Plaquemines Parish below Oakville where the 100–year HSDRRS ends.
  - The current Plaquemines Parish non-Federal Levee (NFL) project includes approximately 34 miles of levee replacements or modifications and a tie-in to New Orleans to Venice (NOV) levees at St. Jude. When completed in 2023, these levees will be incorporated into the NOV levee system.
  - The work currently proposed for the NOV project includes approximately 15 miles of back levee and Mississippi River levee modifications, two sector gates on the west bank (near the Empire Floodgate and Empire Lock), fronting protection at pumping stations, backflow prevention at two locations on the east bank (Bellevue and East Point a la Hache pumping stations). Scheduled for completion in 2020.
- Of the 28 NOV / NFL contracts, eight are in design, seven are under construction, and 13 are substantially complete.