

# Lake Pontchartrain and Vicinity

### **U.S. ARMY CORPS OF ENGINEERS**

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Public safety is the Corps of Engineers' top priority. Congress has authorized and funded the Hurricane and Storm Damage Risk Reduction System (HSDRRS) for southeast Louisiana. The \$14.45 billion HSDRRS includes five parishes and consists of 350 miles of levees and floodwalls; 73 non-Federal pumping stations; 3 canal closure structures with pumps; and 4 gated outlets.

#### **Project Summary**

The Lake Pontchartrain and Vicinity (LPV) project includes work in four parishes (St. Charles, Jefferson, Orleans, and St. Bernard) located in the greater New Orleans area on the east bank of the Mississippi River. The structural features built by the Corps reduce the



risk associated with a storm surge that has a one percent chance of occurring in any given year, or a 100-year storm surge.

#### **Project Features**

This portion of the risk reduction system is broken into four parishes: St. Charles, Jefferson, Orleans, and St. Bernard.

#### St. Charles Parish

In St. Charles Parish, the Corps constructed 9.5 miles of levees, four drainage structures, four floodwalls, a vehicular access gate, a railroad gate and developed a bird abatement program which prevented birds from nesting near the project site and delaying construction. (St. Charles risk reduction projects are labeled in green on the map above.)

#### Jefferson Parish

In Jefferson Parish, the Corps constructed a 3.5 mile floodwall along the Jefferson-St. Charles Parish line, 10 miles of levees, floodwalls, floodgates, and fronting protection at the four large pump stations along the Jefferson Parish Lakefront. (Jefferson Parish risk reduction projects are labeled in yellow on the map above.)

#### Orleans Parish

In Orleans Parish, work was completed in the New Orleans Metro area, the New Orleans East area, the Outfall Canals, the Seabrook Floodgate Complex and the Inner Harbor Navigation Canal (IHNC) - Lake Borgne Surge Barrier. (Orleans Parish risk reduction projects are labeled in red on the map above.)

In New Orleans Metro, the Corps constructed new T-walls and vehicle floodgates; raised existing levees and roadway ramps; and modified and strengthened existing floodgates, floodwalls and the Bayou St. John sector gate.

In New Orleans East the Corps raised approximately 25 miles of levees and constructed approximately 2 miles of floodwalls around the perimeter of New Orleans East. Levee enlargement techniques in this area included wick drains and a sand drainage blanket to strengthen and consolidate the underlying soil and deep soil mixing.



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The Seabrook Floodgate Complex, located at the north end of the IHNC; also known locally as the Industrial Canal just south of Lake Pontchartrain and the Senator Ted Hickey Bridge, works in tandem with the IHNC-Lake Borgne Surge Barrier. This project consists of a 95 foot wide navigable sector gate and two 50 foot wide, non-navigable vertical lift gates with floodwall tie-ins on the east and west sides.

In Orleans Parish there are also three main drainage structures. These canals are a critical element of New Orleans' flood control system, serving as drainage conduits for much of the city. Levees line the sides of the canals and floodwalls are situated on the top of each levee. The canals run south-to-north near the Orleans Parish lakefront between the Jefferson Parish line and the IHNC. The 17th Street Canal extends 13,500 feet from Pump Station 6 to Lake Pontchartrain along the Jefferson Parish line. The Orleans Avenue Canalruns approximately 11,000 feet from Pump Station 7 to Lake Pontchartrain and the London Avenue Canal extends 15,000 feet north from Pump Station 3 to the lake.

Following Hurricane Katrina, the Corps constructed Interim Closure Structures at the mouths of the three outfall canals to block storm surge from entering the canals. These structures were completed prior to the 2006 hurricane season, the first full hurricane season after Hurricane Katrina. These interim closure structures will eventually be replaced with permanent structures

#### Orleans Parish and St. Bernard Parish

The IHNC-Lake Borgne Surge Barrier is the largest design-build civil works project in the history of the Corps. This project involved the construction of a concrete barrier wall stretching for 1.8 miles across the Mississippi River Gulf Outlet and marsh between St. Bernard and Orleans Parishes. It also consists of a bypass barge gate and a flood control sector gate (each 150 feet wide) at the GIWW and a 56-foot-wide vertical lift gate at Bayou Bienvenue. The Bayou Bienvenue gate allows recreational boats to pass to and from Lake Borgne, while the sector gate at the GIWW is the main passage route for shallow draft navigation. The barge gate was constructed to serve as the temporary passage route for shallow draft navigation on the GIWW during major rehabilitation of the sector gate. (The IHNC-Lake Borgne Surge Barrier risk reduction project is labeled in red and purple on the map above.)

#### St. Bernard Parish

In St. Bernard Parish, the Corps constructed a system which consists of approximately 23 miles of floodwalls, 3 roadway gates, 2 sector gates, and 12 access flood gates that extend from the existing Bayou Bienvenue sector gate in the northeast to the Mississippi River near Caernarvon in the southwest.

In addition to floodwalls, a sector gate was constructed where Bayou Dupre flows into the MRGO. This sector gate was constructed to an elevation of 32 feet above sea level; Further south, 2 vehicle gates were constructed where the alignment crosses Highway 46, a sector gate was constructed across the Caernarvon canal and floodgates were constructed at Highway 39 and the adjacent Norfolk Southern Railroad tracks. (St. Bernard risk reduction projects are labeled in purple on the map above.)

#### **Project Status**

All Lake Pontchartrain and Vicinity, HSDRRS projects have features in place to defend against the 100-year storm event; however, construction will continue through 2013.