



# THE FLOOD PROTECTION AUTHORITY

## The Permanent Canal Closures and Pumps (PCCP)

The 17th Street, Orleans and London Avenue Outfall Canals serve as drainage conduits for much of the City of New Orleans, with the 17th Street Canal also serving as a drainage conduit for portions of Jefferson Parish. Floodwall topped levees align the three outfall canals.

In the aftermath of Hurricane Katrina, the U.S. Army Corps of Engineers (Corps) constructed Interim Closures with temporary pumps at the mouths of the 17th Street, Orleans Avenue and London Avenue Outfall Canals to prevent storm surge from Lake Pontchartrain from entering the canals during a tropical event, thereby reducing the risk of a failure along the canals. The Corps' intent was to follow this temporary measure with the construction of a permanent, more sustainable solution.

As part of the Hurricane and Storm Damage Risk Reduction System (HSDRRS), the Corps completed the Permanent Canal Closures and Pumps (PCCP) to replace the Interim Closure structures and temporary pumps.



**17th Street Canal**



**London Avenue Canal**



**Orleans Avenue Canal**

The PCCP, located at or near the mouth of each outfall canal, consists of permanent gated storm surge barriers that are closed in advance of a tropical storm event when Lake Pontchartrain stages are elevated, and pump stations to move rainwater out of the canals, past the gates and into Lake Pontchartrain while the barriers are closed. The PCCP pumps cannot drain city streets directly, and only operate when the PCCP bypass gates are closed due to tropical events and the Sewerage and Water Board (S&WB) pump stations are pumping rainwater into the canals.

The notice to proceed with construction of the project was issued on May 6, 2013. Construction of the project was completed in December, 2017, at a total cost of \$615 million. The Corps issued the Notice of Contract Completion on May 1, 2018 to the Coastal Protection and Restoration Authority (CPRA), the Non-federal Sponsor for the HSDRRS. The CPRA, Flood Protection Authority and S&WB entered into a Cooperative Endeavor Agreement (CEA) on February 1, 2018, which designates the Flood Protection Authority as the entity responsible for the operation, maintenance, repair, replacement and rehabilitation (OMRRR) responsibilities for the PCCP. The CEA provides that the S&WB pay 50% of the OMRRR cost. The initial estimate of the annual OMRRR cost is \$4 million.

**17<sup>th</sup> Street Canal:**

Capacity – 12,600 CFS

(2) 900 CFS Pumps

(6) 1800 CFS Pumps

(15) 2.6 MW Generators

(11) Gates

Exceeds current S&WB capacity by 2,500 CFS

**London Avenue Canal:**

Capacity – 9,000 CFS

(2) 900 CFS Pumps

(4) 1800 CFS Pumps

(11) 2.6 MW Generators

(7) Gates

Exceeds S&WB capacity by 1,000 CFS

**Orleans Avenue Canal:**

Capacity – 2,700 CFS

(3) 900 CFS Pumps

(4) MW Generators

(3) Gates

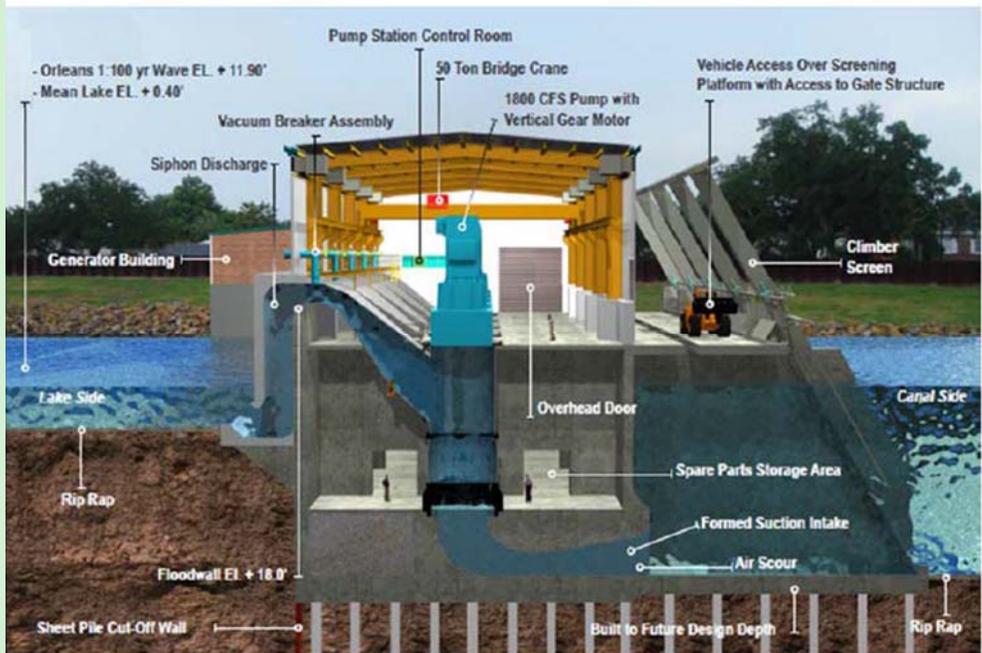
NOTE: Additional capacity built based on S&WB future expansion plans

During a tropical storm or high water event that requires the activation of the PCCP, constant and effective communication and collaboration will be maintained between the Flood Protection Authority and the S&WB for the operation of the PCCP and the S&WB’s interior pump stations.

The S&WB will share real time monitoring data for the pump stations that pump water into or through the outfall canals so that the Flood Protection Authority can monitor conditions in real time.

The PCCP facilities were constructed to withstand 200 mph winds at three second gusts and 155 mph sustained winds. Each site includes a control building with safe housing for support staff and onsite fuel storage capacity to run at full capacity for five days of continuous operation.

The PCCP pump stations have been described as the most complicated pump stations in Louisiana. The Flood Protection Authority has established an eight member team of professional, highly skilled individuals dedicated to the operation and maintenance of the PCCP Pump Stations. Six members will have a special skill set in electrical, mechanical or program controls (a senior and secondary for each discipline). One senior and one secondary position will be stationed at each location. Two members of the team will be mechanics with a focus on generator work. Additional personnel will be cross trained to provide assistance during emergencies.



**PCCP Pump Schematic**

**The Flood Protection Authority  
6920 Franklin Avenue  
New Orleans, LA 70122  
P 504-286-3100**

[www.floodauthority.org](http://www.floodauthority.org)

**Flood Protection Authority**