



# The Flood Protection Authority-East

News of Your Flood Defense System

October 12, 2020



Bayou St. John Sector Gate

## *Message from CAO Derek Boese*

This has been one of the busiest times the Flood Protection Authority – East has ever faced, due to the historic nature of the 2020 hurricane season. New Orleans has been in the cone of six different tropical events – Cristobal, Marco, Laura, Sally, Beta and Delta. While the region was fortunate that none of these storms hit directly, FPA staff still had to prepare and take the necessary precautions.

The Hurricane and Storm Damage Risk Reduction System (HSDRRS) has 95 gates that need to be closed to protect the region up to the 100 year level of protection. We close gates in tiers, depending on the predictions of surge heights. The FPA successfully closed 53 gates for Cristobal, 69 for Marco/Laura, 94 for Sally, 7 for Beta and 59 for Delta, plus the large navigational floodgates. All of these closures were done in collaboration and partnership with numerous other agencies.

Post-storm, the FPA does three things to prepare for the next storm. First, we immediately check the system for any damage and make any needed repairs. We also inventory all food, supplies and equipment and restock. Finally, we hold an After Action Review with key leaders to discuss Lessons Learned on what we can improve upon for the next storm and what we did well.

While this storm season is not over yet, the FPA remains prepared for the rest of 2020 and to take care of greater New Orleans. I encourage everyone to sign up for text alerts on gate closures and other important FPA-East notices through our Everbridge public alerts system. You can find that information on our website [www.floodauthority.org](http://www.floodauthority.org)

Stay safe  
*Derek*

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Flood Protection Authority

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## *Lt. General Scott Spellmon Tours HSDRRS Components*



**Lt. Gen. Scott A. Spellmon**

Lieutenant General Scott A. Spellmon was confirmed by the U.S. Senate on July 20, 2020, as the Army's 55th Chief of Engineers and Commanding General of the U.S. Army Corps of Engineers (USACE), one of the most crucial infrastructure related positions in the Federal government. He assumed his duties as the Chief of Engineers and Commanding General of the USACE on September 10, 2020, after most recently serving as the USACE Deputy Commanding General for Civil and Emergency Operations.



**IHNC-Lake Borgne Surge Barrier**

Lt. Gen. Spellmon visited New Orleans on September 17th and along with representatives of the Coastal Protection and Restoration Authority (CPRA) toured three major components of the Hurricane and Storm Damage Risk Reduction System (HSDRRS): the IHNC-Lake Borgne Surge Barrier, the 17th Street Canal Permanent Canal Closures and Pumps, and New Orleans East Levee LPV 111, which was recently armored by the USACE.

The IHNC-Lake Borgne Surge Barrier is the largest continuous storm surge barrier in the world located at the confluence of the MRGO and GIWW and stretches 1.8 miles across the Golden Triangle Marsh.

The Permanent Canal Closures and Pumps (PCCP) were constructed at the mouths of the 17th Street Canal, Orleans Avenue Canal and London Avenue Canal and consists of permanent gated storm surge barriers that are closed in advance of a tropical storm when Lake Pontchartrain stages are elevated and pump stations to move rainwater out of the canals, past the gates and into the lake while the barriers are closed. The interior pump stations along the outfall canals operated by the New Orleans Sewerage & Water Board can continue pumping rainwater into the outfall canals while PCCP gates are closed.



**17th Street Canal PCCP**

The USACE increased the resiliency of the Hurricane and Storm Damage Risk Reduction System (HSDRRS) levees against severe wave overtopping caused by hurricane storm surges greater than a 100-year storm event through the use of armoring.



**Lt. Gen. Spellmon with staff member discussing operations**

High Performance Turf Reinforcement Matting (HPTRM) was applied to the LPV 111 levee, anchored in place and covered with sod and grass. The levee was also raised as part of the USACE's Armoring Contract with funding provided by the Orleans Levee District.



**Crew installing HPTRM on levee**

## FPA Partners with Pyxis to Produce Virtual Tours



Pictures of crew filming at the 17th Street Canal PCCP

The Flood Protection Authority has partnered with Pyxis, a New Orleans based virtual reality production company specializing in the creation of positive use VR content for educational purposes, to bring the FPA's tours to the public in a new and technologically advanced way. Pyxis uses high-end Virtual Reality (VR) camera rigs to capture full 360-degree, 3-D environments.

The Flood Protection Authority-East is the first agency in the state to take on such an endeavor. The COVID-19 outbreak has brought public tours of the IHNC Surge Barrier and 17th Street Permanent Canal Closures and Pumps (PCCP) to a complete halt for an unknown period of time. Therefore, the FPA is implementing this new technology to continue and expand our important Public Outreach and Public Education efforts.

In recent years, virtual reality has become increasingly popular as a learning and training tool. The FPA is taking advantage of this technology to bring tours to the public in this time of masks and social distancing. The virtual tours will allow the FPA to send a link to individuals or groups along with a cardboard headset with special lenses. An individual just pops on the VR headset to take part in a virtual tour of the Surge Barrier or PCCP via the FPA's link. The video of each structure will be about 20 minutes in length. Public Information Officer Antwan Harris will guide the tours taking viewers through the structures and providing insights into their operations.

The VR project has garnered enthusiastic interest from the Coastal Protection and Restoration Authority and our I-STORM partners. The project is anticipated to be completed by November 1st of this year.



An important benefit is that the FPA's Middle School Science Curriculum, developed to enhance understanding of flood defense and the FPA's mission, requires a trip to the Surge Barrier. The virtual tour will allow classrooms to visit the site without physically being there. Schools in search of virtual educational opportunities due to COVID-19 restrictions can be afforded this unique experience so that students and staff can learn about these important components of our flood defense system.

FPA staff is tremendously excited about the opportunity provided through this innovative practical application of virtual reality to further the public's understanding of the Hurricane and Storm Damage Risk Reduction System and the mission of the FPA.

## FPA Levee Maintenance Departments Going the Extra Mile

We would like to take this opportunity to share a tribute written by one of our Flood Protection Authority employees about the men and women who diligently maintain the region's flood defense system (Hurricane and Storm Damage Risk Reduction System and Mississippi River Levee):



I want to take a minute to recognize all the unsung heroes of the Levee Maintenance departments. In the aftermath of Marco/Laura storm events it has reminded me of all the times I have seen the team of the Levee Maintenance crews in the heat, in the sun and even sometimes in the rain, doing amazing things.

With what seems to me, not *that* many people, they accomplish the huge task of maintaining the levees. Whether fixing imperfections in the structure of the levee, walking miles at a time picking up trash, walking more miles back to their trucks due to COVID-19, walking even more miles with weed eaters on their shoulders, carving away at their target, the grass, these guys don't seem to ever stop. The physical strength and strain required to do this job is mind bending (I have cut grass for a living, so I know first hand).



The people in or on the tractors don't have it any easier either. If you've ever watched them (tractor operators) operate on any given levee, you would know of the difficulties. Try leaning sideways while looking behind you, while watching carefully that you don't mow what you shouldn't, while keeping in mind that at any minute you might be sliding off the levee... sideways...and praying you don't turn over.

There is not an easy task in all the things they do. All they do isn't just levee maintenance either. They are constantly working in and around our facilities, always willing to give a hand at anything. This is by no means an all-inclusive list.

All of that is on a regular basis. Storm events are even more impressive to see these guys work together as a team within a bigger team that closes the region's Flood Protection System. Barricades, sand bags, and working with the gate crews to accomplish the amazing thing we are all here to do—protect life and property by maintaining, repairing and operating our Flood Control Systems.

These guys work together with great attitudes and enthusiasm through many very tough conditions and do an amazing job ...always!

***Hats Off To Ya'll***

Rick Witcher, HVAC/Refrigeration Master Mechanic



# Interim Closure Structures Demolition Completed

## 17th Street Canal



Top before with PCCP in foreground and ICS in background  
Bottom site after demolished ICS



## Orleans Avenue Canal



Top before picture with ICS      Bottom site after demolition of ICS



Following Hurricane Katrina, the Interim Closure Structures (ICS), consisting of gated closures and pumps, were constructed by the U.S. Army Corps of Engineers (USACE) to provide the 100-year level of risk reduction by preventing surge from Lake Pontchartrain from entering the canals. The ICS were replaced by the Permanent Canal Closures and Pumps (PCCP) pump stations, which were completed by the USACE in May of 2018.

On August 19, 2020, representatives from the USACE, the Flood Protection Authority, and the USACE's contractors conducted a final walkthrough of the three ICS Demolition sites. The work at the three sites at the 17<sup>th</sup> Street Canal, Orleans Avenue Canal, and London Avenue Canal were inspected for any issues and noted for the contractor to repair. All three temporary pump stations have been completely demolished and the canals and levees returned to their previous states with some improvements. These sites will soon be turned over to the Flood Protection Authority to continue maintenance.

By Ryan Hathaway, P.E.

## London Avenue Canal



Top demolition of ICS in progress as of March 2020  
Bottom site after demolition of ICS



# Lakeshore Drive Improvements Planned

In 2019, the Flood Protection Authority (FPA) selected the engineering consulting firm of AECOM to conduct a traffic and pedestrian study along Lakeshore Drive between Lake Marina Avenue and Canal Boulevard to determine whether improvements could be made to enhance pedestrian safety. AECOM recorded traffic volumes, speeds, and vehicular movements, while also observing pedestrian movements in the area.



Location of Lakeshore Drive Traffic Improvement Project

The study’s findings concluded that two travel lanes in each direction were not necessary for the number of vehicles that traveled this stretch of roadway and could be reduced to one travel lane in each direction.

AECOM also discovered that pedestrians did not use the currently designated crosswalks, thus causing safety issues for all users of the roadway.



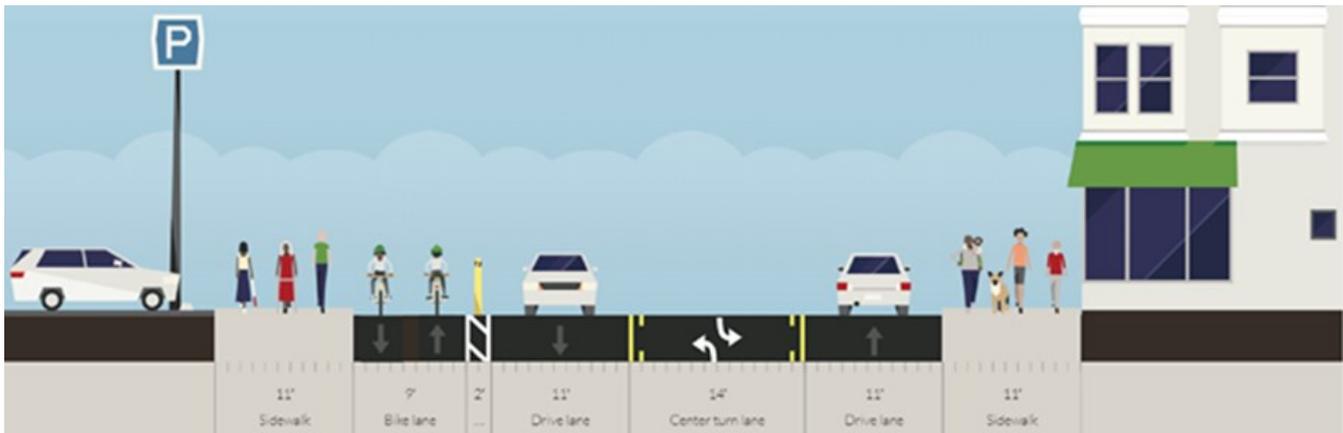
The FPA’s goal is to begin the project to reconfigure Lakeshore Drive from Lake Marina Avenue to Canal Boulevard to one vehicular travel lane in each direction with a vehicular turn lane in the center before the end of 2020. The asphalt pavement will be milled and overlaid with new asphalt for a smooth riding surface prior to the installation of the new improved pedestrian cross walks, medians and striping.



The improvements also include a protected bike lane. Enhanced crosswalks will be installed throughout this stretch of Lakeshore Drive with a raised crosswalk for pedestrians, a pedestrian refuge in the median, and pedestrian traffic signals to alert drivers. The enhanced crosswalks will deter speeding and provide a safer Lakeshore Drive for pedestrians. The project is scheduled to be completed by mid-2021.

By Ryan Hathaway, P.E.

Above example of crosswalk improvements. Below future Lakeshore Drive layout from Lake Marina Drive to Canal Blvd.



## Update - Phase 4 Seawall Stabilization Project

Phase 4, the final phase of the multi-phased Lakeshore Drive Seawall Stabilization and Erosion Control Project stretching from West End to the Seabrook Bridge, is currently under construction and anticipated to be completed in early 2021.

Phase 4 is just under one mile of lake frontage and located in the Lake Terrace Drive area along Lake Pontchartrain between Bayou St. John and London Avenue Canal.



Location of Phase 4 of the Seawall Stabilization Project



Soil removed behind seawall steps in order to make joint repairs prior to back-filling and driving vinyl sheet piles

The Phase 4 Project is estimated to cost \$10.4 million, and includes driving vinyl sheets on the landside of the seawall to prevent seepage and reduce erosion, sealing seawall joints to prevent erosion of material from beneath the seawall, and installation of concrete slabs behind the seawall to resolve the continuous erosion problem.

The project is now well underway. Excavation and placement of flowable fill is completed for a majority of the seawall monoliths, along with the joint sealant repair. The contractor has driven most of vinyl sheet piles to prevent erosion, together with the sheet piles to protect trees.



Vinyl sheet pile driven to prevent erosion

The contractor has started the drainage work, which will result in a well-drained area for recreational use, as well as the installation of timber piling. Paving operations and utility work will follow next.

The project also includes a new staircase to allow pedestrians to access the bridge over Bayou St. John from the site, the addition of a dedicated turn lane from Lakeshore Drive, expansion of parking to approximately 49 spaces, including two handicap parking spaces, handicap ramps, new trash receptacles, park benches, picnic pavilions, new improved lighting, and new improved signage and striping.

By Donald Jerolleman



Installation of timber piles



Seawall overtopping caused by Hurricane Ivan

## FPA Public Information Alerts

sign-up



If we can't **REACH** you  
we can't **ALERT** you

The Flood Protection Authority-East (FPA) strives to provide timely information to the public regarding public safety issues, closures and events that impact people, businesses and communities in order to minimize disruptions and keep the public safe and informed. The FPA recently implemented the Everbridge Management Platform for providing alerts to the public.

Everbridge is the industry standard using the most up-to-date communication technology and is widely used throughout federal, state and local government agencies, organizations, commerce and industry.

The FPA offers subscriptions to the following Keywords:

**Floodgate** (Any information on floodgate opening, closing or maintenance)

**FPAEast** (Any general news about the Flood Protection Authority-East)

**River** (Any information about the High River or the Mississippi River)

**HighTide** (Information regarding gate openings and closures as they relate to high tide situations)

It's a simple process to register for these Emergency Alerts. Text the appropriate Keyword listed above to "333111" for the alerts you would like to receive. Should you wish to receive alerts offered under more than one Keyword, each Keyword must be texted to "333111".

## Serving Our Bilingual Communities

The Flood Protection Authority-East has teamed up with TNola Languages in an effort to serve our bilingual communities. Press releases from the FPA-East are now available in Spanish and Everbridge alerts will be available in Spanish beginning mid-October.

Antwan Harris, Public Information Director, said "We want to make sure all communities are served and represented in the work we do here. We have plans to incorporate more languages in the coming year."

To receive Everbridge Spanish alerts please text FPAEspanol to 333111

**Flood Protection Authority Monthly Board Meetings can be viewed via livestream by visiting the FPA website [www.floodauthority.org/](http://www.floodauthority.org/) and clicking on the Facebook icon located at the top right corner of the page or going to: [www.facebook.com/FloodProtectionAuthority/](https://www.facebook.com/FloodProtectionAuthority/).**

The Flood Protection Authority urges everyone to become informed about their flood defense system and encourages organizations and business and community groups to schedule a tour of the IHNC-Lake Borgne Surge Barrier and Permanent Canal Closure and Pumps (PCCP) Stations.

The Flood Protection Authority has postponed all tours of the IHNC Lake Borgne Surge Barrier and Permanent Closures and Pumps (PCCP) Stations at this time due to the COVID-19 Public Health Emergency. The FPA will resume the tours when conditions allow.

When tours resume, to schedule a tour of the IHNC Surge Barrier and/or PCCP, visit our website at [floodauthority.org](http://floodauthority.org) and click on "Schedule Facility Tours" at the bottom of our home page. Fill out the Tour Information Sheet and click on "submit" at the bottom of the sheet.

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