



The Flood Protection Authority-East

News of Your Flood Defense System

April 1, 2023

MESSAGE FROM COMMISSIONER RICHARD G. DUPLANTIER, JR.



WHAT IS I-STORM AND WHY IT MATTERS TO THE FPA

Over the last few years, we have reported on visits by members of the I-STORM team to our facilities and have also discussed the FPA trips to various conferences conducted by the I-STORM Organization around the world. As we approach hurricane season, we thought a more detailed explanation of this group would be helpful in understanding the benefits we gain and the value the FPA adds as a member of I-STORM.

I-STORM is the only international network for those working in the flood protection and storm surge barrier industry. The core members of I-STORM are organizations that have developed and currently manage publicly owned storm surge barriers over the last seventy-five years, and include the Environment Agency of England, Rijkswaterstaat, the Netherlands, Venice Water Authority, Italy and the US Army Corps of Engineers. The FPA is what I-STORM refers to as a “Barrier” member of the organization, which includes all those groups who manage, maintain and operate functioning assets.

The key goal of I-STORM is the sharing of knowledge and expertise. This network provides an opportunity for storm surge barrier professionals from all around the world to exchange knowledge, resource development and collaboration. The FPA is able to understand and share our common challenges at an international level and enable the continuous improvement in design, management, maintenance and performance of our storm surge barriers. Being a member allows the FPA to seek out continuous improvements in storm surge barrier design, operation, maintenance and management.

There are many different types and styles of barriers around the world, each serving a similar goal: protecting the citizens and assets of their community from storm systems and flooding. Members are able to visit the other barrier systems to understand how that particular barrier works and to observe operations, review documents and interview their counterparts, to understand all aspects of barrier management.

Our own “Great Wall of Louisiana” barrier, the 1.8 mile-long Lake Borgne Storm Surge Barrier is featured at the Visitor and Training center in Rotterdam Netherlands, where the public is invited to tour their facility and learn about the barrier systems around the world.

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Message from Commissioner Richard G. Duplantier, Jr.



The Maeslantkering in the Netherlands is a movable storm surge barrier spanning the New Waterway, a canal that connects the river Rhine to the North Sea. The Maeslantkering acts as a final line of defense for Rotterdam against high levels of incoming seawater.

As we enter hurricane season and face the increasing challenges to improve our system, the information we gather from our relationship with I-STORM is invaluable. We are able to share knowledge and expertise about how operators manage and maintain their barriers. Through this exchange and jointly working on mutually beneficial projects, the FPA and community are greatly enhanced.

In the coming months we will have another visit from additional members of I-Storm. Collaboration is a key to our continued success.

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Because the FPA is a member, prior to my joining the Board I was given the opportunity to tour and meet with staff in the Netherlands, experiencing four different barriers over the course of three days. A Dutch contingent of I-STORM visited the area and spent several days with FPA-East team members touring parts of the Hurricane and Storm Damage Risk Reduction System and learning more about the FPA's operations. The purpose of these visits is to identify areas of best practices and areas for improvement. The knowledge and experience gained is invaluable, as it can stimulate new ways of thinking that can be applied at our system and organization. Furthermore, these visits help to build long lasting relationships with our international counterparts.



The Thames Barrier, London

PCCP Pump Status

The topic of severe corrosion discovered on one of the large pumps at the London Avenue Canal in New Orleans was in the news recently and a topic at our March Board meeting. As stated by Kelli Chandler, Flood Protection Authority East's Regional Director, "We noticed in our monthly maintenance, one of the larger pumps began reaching temperatures that exceeded the regular guidelines."

The Permanent Canal Closures and Pumps (PCCPs) were completed in 2018 by the U.S. Army Corps of Engineers as part of the Hurricane and Storm Damage Risk Reduction System (HSDRRS). The three outfall canals along the New Orleans lakefront have been maintained and operated by FPA-E for the past 5 years.



London Avenue Canal PCCP

"When the issue occurred, we immediately notified our partners, the Coastal Protection and Restoration Authority (CPRA) and the U.S. Army Corps of Engineers New Orleans District (USACE) and issued a Request for Technical Assistance (RTA)" said Chandler.

During the USACE investigations, it was identified that corrosion was present and determined to be the primary cause of the pump overheating. Repair is underway as the USACE has issued a repair contract to return the pump to full service.

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PCCP Pump Status Continued

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The findings have spurred an inspection for the other 16 pumps from the three stations. These inspections require the use of stoplogs to block water from entering the area where the pumps are located so they can be dewatered and examined.

As Colonel Cullen Jones with U.S. Army Corps of Engineers New Orleans District shared in our March Board meeting, the short-term goal in working alongside Flood Protection Authority-East, CPRA, and the PCCP contractors is to ensure the system is ready and reliable for the upcoming 2023 hurricane season! Secondly, the USACE and all levels of their organization are committed to bringing these pumps to their specified 35-year design life by looking at long-term alternatives that will be worked on outside of hurricane season.



Diffuser section removal



Lower diffuser bearing housing with missing bolts

The PCCPs are fully activated during a tropical weather event when surge from Lake Pontchartrain threatens to enter the outfall canals. In anticipation of rising water levels to a predetermined amount in the canals, FPA-E lowers the gates at the PCCPs to stop additional water from entering the 17th Street, Orleans Avenue and London Avenue interior canals.

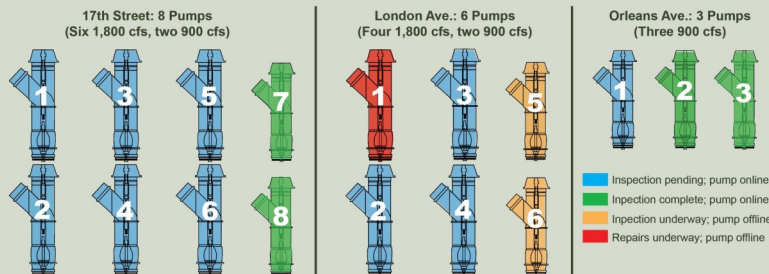
When the gates of the PCCPs are closed, FPA-E works closely with the New Orleans Sewerage and Water Board (S&WB) to remove rainwater from the inside the HSDRRS. With rainfall events the S&WB pumps handle rainwater.

We take our mission seriously to ensure the physical and operational integrity of the regional flood risk management in southern Louisiana as a defense against floods and storm surge from hurricanes. We know the community is counting on us! We will continue to provide status updates and you can follow the progress on our FPA website homepage and Facebook page.

Permanent Canal Closures and Pumps Inspection and Repair Status



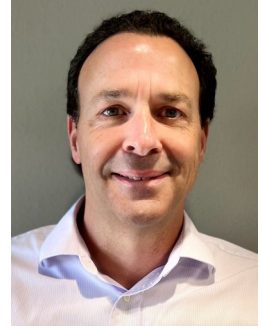
USACE and its partners are inspecting each of the 16 remaining PCCP pumps for corrosion and to ensure they will perform as designed during the 2023 hurricane season. Once visual inspection of each pump is complete, USACE will work with its partners to identify the best path forward. Concurrently, USACE has issued a contract to repair and restore London Ave. Pump #1 to service. Once the underlying cause of corrosion is known, measures to restore each pump to its 35-year design life specification will be undertaken.



USACE and its partners are inspecting and, if necessary, repairing each of the 17 pumps at the Permanent Canal Closures and Pumps (PCCP) facilities. These inspections are in response to our identification that corrosion is the cause of an overheating pump at the London Avenue PCCP. USACE is dedicated to ensuring that the PCCP are reliable and will perform as designed during the 2023 hurricane season. We will undertake additional measures to deliver pumps that meet the 35-year design specifications once the underlying cause of corrosion and appropriate path forward are identified. As part of our commitment to regularly provide up-to-date information regarding our efforts to inspect and repair the pumps of PCCP, the above status tracker will be posted every Thursday on USACE and FPA's Facebook pages and websites.

Introducing Kirk Ordoyne, Executive Counsel

After considering his impressive qualifications, the Board of Commissioners approved the hiring of Kirk Ordoyne as its new Executive Counsel at its meeting held on November 17, 2022, and Mr. Ordoyne joined the FPA on January 9, 2023.



Prior to joining FPA, Mr. Ordoyne served as Assistant General Counsel with the Dallas Independent School District (ISD), the second-largest public school district in the State of Texas, and one of the largest in the nation. Dallas ISD is a diverse urban school district with approximately 240 schools, 23,000 employees, and 141,000 students. Mr. Ordoyne was responsible for advising the Dallas ISD Construction Services Department on all legal matters on a combined \$5.1 billion in bond programs for the new construction of schools and renovation of existing schools. He has extensive legal experience working daily with five nationally recognized engineering firms providing program management services for the administration of construction at Dallas ISD. In addition, he served as lead attorney for the Real Estate, Purchasing and IT Departments, and provided legal advice to the Dallas board, superintendent, and c-suite executives on important District legal matters.

Prior to joining Dallas ISD, Mr. Ordoyne practiced with the Port of New Orleans, the Jefferson Parish District Attorney's Office as an Assistant District Attorney, RR Donnelley and Sons Company, and the U.S. Small Business Administration Disaster Area Office. In Texas, Mr. Ordoyne served as a member of the Texas Association of School Boards Council of School Attorneys Construction Contracts Committee which updated AIA construction related documents for use by school districts not only in Texas, but also nationwide. In addition, he was a member of the State Bar of Texas, School Law section. Mr. Ordoyne is licensed to practice law in Louisiana and Texas.

Introducing Stacy Gilmore, Public Information Director



Stacy Gilmore joins the Flood Protection Authority - East as the Director of Public Information. Stacy brings experience in creating, executing and managing \$30 million in marketing and public relations campaigns designed to engage the audience and positively increase awareness.

Her career began in account management of full-service advertising agencies where she was responsible for helping a casual restaurant chain increase their quarterly sales by 30%. Another highlight was the award-winning campaign that tripled the sales goal and acquired nearly \$760,000 in public relations for Popeyes.

After Hurricane Katrina, Stacy led a contract communications team imbedded at the U.S. Army Corps of Engineers (USACE) New Orleans District. She provided media relations as well as strategic counsel to a multidisciplinary team which included: colonels, engineers, attorneys and environmental managers. During this time, it was paramount to inform and receive public input on the proposed construction projects. Community outreach about the projects and their proposed alignment was a large initiative with 65 public outreach meetings in a two-year period. As a result of public buy-in the construction started of what is now known as the Hurricane Storm Damage Risk Reduction System (HSDRRS).



Stacy enjoys the ability of connecting the dots to help an organization communicate more clearly and reach its goal. Most recently she was working with an online leadership and career coach to help promote his programs, podcasts, YouTube channel and online community with digital marketing, social media, and community engagement.

Stacy lives in Covington with her husband Chris and dog Marley. Stacy enjoys traveling, boating, and fishing as well as spending time with her two adult step children and her granddaughter.

Construction Project Updates

Floodgate N-6 Slope Paving Repairs



Following Hurricane Ida, the engineering department conducted inspections of the entire flood protection system to ensure no major damage had occurred. Upon inspecting LPV-109, which is located along the eastern side of New Orleans, damage was discovered to the concrete slope paving and floodwall right-of-way at Floodgate N-6. Floodgate N-6 is a swing gate for CSX railroad tracks and is typically closed prior to storm events. Following discussions with CSX, it was determined they had caused the damage while trying to clear the railroad tracks of debris and would reimburse the FPA for all repairs. With designs from HNTB, Command Construction was the winning bidder and recently completed the repairs of the concrete pavement and regrading of the site.

E-13 Sill Raising Project



This project was needed to address ponding water and debris that routinely submerged the sill and collected in the floodgate storage bay hindering operation of the gate during a storm event.

The project raised the floodgate sill, storage bay and floodgate approximately 9 inches to create positive drainage away from the floodgate and into the city drainage system.



The floodwall connections had to be modified as well to accommodate the raised floodgate/sill and the asphalt approaches were adjusted. Pictured left is the gate before construction and pictured right after construction.

London Avenue Canal North Erosion Mitigation



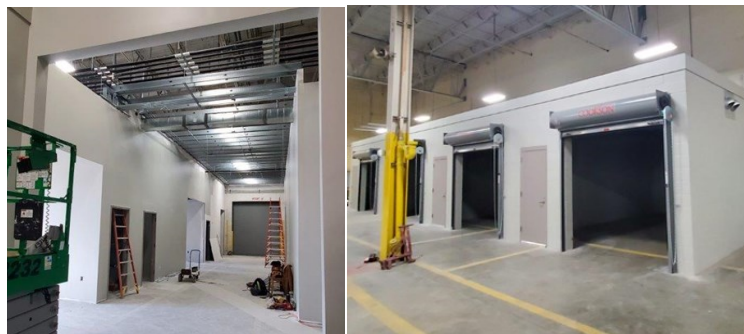
The London Avenue Canal erosion mitigation project is now wrapping-up. The project included the removal of disintegrating metal sheet pile then re-grading the shore-line and installing geo-synthetic textile and limestone rip-rap.

With the completion of this project the foreshore of this area is well protected from future storm surge and erosion from lake wave action. Pictured left is the shoreline before construction and pictured right is after construction.



Franklin Avenue Warehouse Office Buildout

The Franklin warehouse office improvement project is progressing nicely. This project will give our maintenance and operations workers dedicated offices instead of working out of trailers. The project also provides additional bathrooms, showers, meeting/training halls, storage and ventilated storage units for equipment and materials, fire marshal upgrades to the warehouse fire protection system, and a workout room that will also be utilized by FPA police and personnel.



Looking Back in History at the New Basin Canal



Above: Looking down the New Basin Canal. Below: Lake entrance of the canal after construction of locks circa 1932



Since its establishment in 1718 on a narrow strip of land along the east bank of the Mississippi River, the City of New Orleans was enabled through the use of levees, ditches, canals and later pumps to expand on lands reclaimed from the former marshes and swamps that stretched to Lake Pontchartrain. Waterways, both natural and man-made, served as primary commercial corridors for timber and other construction materials and commodities from the Pontchartrain Estuary and the Gulf Coast to build and support the early expansions of the city.

Under Francisco Luis Hector, baron de Carondelet, governor of the Spanish colonies of Louisiana and West Florida (1791 -1797), the Carondelet Canal was excavated in 1794 as an extension from Bayou St. John to what is now Basin Street, the location of the canal's turning basin. Through the years the Carondelet or Old Basin Canal served as the shipping conduit from the lake to the then-expanding lower half of the city (French/Creole Sector). Although the secondary purpose of the canal was drainage, it became a source of frequent flooding by allowing water from the lake to enter the city during storms.

In 1831 the Louisiana Legislature passed Act 18 granting a charter to the New Orleans Canal and Banking Company for the purpose of building a canal starting at a point above Poydras Street and extending to Lake Pontchartrain to serve the growing upper faubourghs. The company had \$4 million of capital and its charter continued until 1870.

Act 18 of 1831 stipulated that the New Orleans Canal and Banking Company construct a levee on the upper-side of the canal to protect against overflow, a road not less than 25-feet wide along the entire length of the canal, and suitable drawbridges where the canal intersected any streets in the suburbs of New Orleans. The company was authorized to collect 37-1/2 cents per ton for cargo on vessels and tolls ranging from 6-1/4 cents to 25 cents for use of the roadway. Under Section 26 of Act 18, after the expiration of 35 years (1866), the property in the canal and road, together with the land acquired up to 120 feet on each side of the canal, would be vested in the State of Louisiana, along with the rights to receive tolls, and in consideration the stock of New Orleans Canal and Banking Company was exempt from taxation by the state, or by any parish or body politic, under the authority of the state, for the whole term of the charter.

The dangerous work of digging the New Basin Canal through the alligator, snake and mosquito invested swampland took place using pickaxes and shovels along with wheelbarrows to haul the sludge out on inclined planks. During the 1930's impoverished Irish immigrants were arriving in New Orleans by the boatloads. Desperate for work these immigrants were willing to work for \$1 a day as canal diggers. Sick workers continued digging under harsh conditions fearing the loss of their jobs.

Historic best guesses of 8,000 to 20,000 immigrants died from cholera, malaria, yellow fever and construction accidents while digging the canal and many were buried in shallow graves along the canal levee and roadway fill without grave markers. The true number of workers who died digging the canal will never be known.

By 1838 the New Basin Canal, which began at the turning basin on South Rampart Street and at that time joined with Lake Pontchartrain around the intersection of Allen Toussaint and West End Boulevards, measured 60-feet wide, 7 feet deep and 3.17 miles long and was opened to small vessels drafting 6 feet. Over the next decade the canal was enlarged to 12 feet deep and 100 feet wide. Jetties were added extending the waterway into the lake. In time, the improved New Basin Canal would make its aging competitor, the Carondelet Canal, obsolete.

Looking Back in History at the New Basin Canal Continued

Between 1926 and 1930, the Orleans Levee District relocated the shoreline of Lake Pontchartrain by pumping 36 million cubic yards of hydraulic fill into the marshland between the old shoreline at Allen Toussaint Boulevard and the new shoreline (seawall). The project created 2,000 acres of reclaimed land from lake bottom between Allen Toussaint Boulevard and the lake and between the New Basin and the Industrial Canals. The 5-1/2 mile sloped stepped seawall was completed in 1932 and served as flood protection becoming the City's front line of protection. In conjunction with the reclamation project, between 1930 and 1932 the Orleans Levee District constructed locks at the entrances of the New Basin Canal and Bayou St. John to prevent high tides from the lake from entering the two waterways and flooding the city.



Looking W. from London Ave. Canal
257
6-7-28
New Orleans shoreline looking west from the London Avenue Canal June 7, 1928



Construction of New Basin Canal Locks (1930-1932).
Locks pictured below



Advances in shipping, railway and road transportation, and the construction of the Industrial Canal in 1923, decreased the economic viability of the New Basin Canal and over time the levees along the canal were degraded and the canal filled in.

The Legislature passed Act No. 405 in 1946 to amend the 1921 Louisiana Constitution to authorize the State Board of Control of the New Basin Canal and Shell Road, or its successor agencies, to enter into contracts with the City of New Orleans and the Department of Highways for the purpose of closing and filling the canal for construction of the Union Railroad Passenger Terminal and highway construction. Act 405 also provided authorization to sell and dispose of other portions of NBC and Shell Road not required by the City or Department of Highways. In 1954 the City of New Orleans opened the Union Passenger Terminal, which was built over what was the turning basin for the canal. Construction of the Pontchartrain Expressway began in the 1950s and was later incorporated into the I-10 system.

In 1985 the Louisiana Legislature by Act 130 authorized the Orleans Levee District to acquire through an act of exchange with private lands owners and the Louisiana Department of Transportation and Development the remaining portion of the filled-in canal between West End and Pontchartrain Boulevards and between Polk and Walker Streets for a passive nature park (New Basin Canal Park).

In 1990 a Celtic Cross memorial was placed at the lake end of the New Basin Canal Park, which reads, "In memory of the Irish immigrants who dug the New Basin Canal, 1832-1838, this Celtic cross carved in Ireland has been erected by the Irish Culture Society of New Orleans".

Today, only the newest portion of the New Basin Canal channel added as a result of the Orleans Levee District's Lakefront Development (reclamation) project extending from Lake Marina Drive to the lake, remains open.



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 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 (Information on floodgate opening, closing or maintenance)

FPAAEast (General news about the Flood Protection Authority-East)

River (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. In order to receive alerts offered under more than one Keyword, each Keyword must be texted to "333111".

FPA-East Website

The Flood Protection Authority-East website contains a wealth of information about our flood defense system (Hurricane and Storm Damage Risk Reduction System and Mississippi River Levee), the FPA's mission and the team of professionals that govern, manage, maintain and operate the critical flood defense system, as well as services offered by the FPA.

The website also includes Teacher Resources and the middle School Lesson Plans developed by the FPA for Science and Social Studies: "Keeping Your Head Above Water—Know Your Flood Protection System" and "Flood Fight Along the Mississippi River—Mississippi River Lesson Plan."

Visit our website today - www.floodauthority.org

Southeast Louisiana Flood Protection Authority-East Board and Committee Meetings can be viewed via livestream by visiting the FPA website www.floodauthority.org and selecting Business - Board Meeting Videos. Click on live stream.

Flood Protection Authority-East (FPA) Tours Offered to the Public:

- Virtual tour of the \$4 Billion Hurricane Storm Damage Risk Reduction System (HSDRRS) spanning East Jefferson, Orleans and St. Bernard Parishes.
- In-person group tours of the Lake Borgne-IHNC Surge Barrier.

For additional information on both virtual and in-person tours go to the FPA's website www.floodauthority.org and select "Facility Tours".

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