



# The Flood Protection Authority-East

News of Your Flood Defense System

January 1, 2022



**IHNC-Lake Borgne Surge Barrier Crossing the IHNC and GIWW**

## *Message From Regional Director Kelli Chandler*

### **GOLD STANDARD**

Hurricane Katrina not only forever changed the lives of the people in this region including many of you, it also changed the standards by which the Corps of Engineers designed a flood defense system, the way Congress viewed funding of the system, and the very fundamental way this country thought about the value the New Orleans region brings to the nation. As a result, the Hurricane and Storm Damage Risk Reduction System (HSDRRS) became the FLAGSHIP model for a flood risk reduction system. The HSDRRS, and the FPA's operation and maintenance of this system, became the GOLD STANDARD!

It has been approximately four months since the landfall of Hurricane Ida, and many of the FPA's employees are still recovering from its impact. After the hurricane, I had the opportunity to attend conferences for the Association of Levee Boards of Louisiana and the Mississippi River Valley Flood Commission, and there was no question that the flood defense system operated and maintained by the PFA lived up to this standard! The HSDRRS was the topic of multiple presentations and conversations and is being used as a model for not only other areas of Louisiana, but also for other states. However, this system would not have performed so well if it didn't have the men and women of the FPA operating and maintaining it every single day. Every FPA employee plays an important role in protecting the people of the New Orleans region. I am honored to be a part of this organization and grateful for all of the hard work performed by the FPA's dedicated employees who work tirelessly to ensure the integrity of our flood defense system.

**Kelli Chandler**  
**Regional Director**



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**Flood Protection Authority**

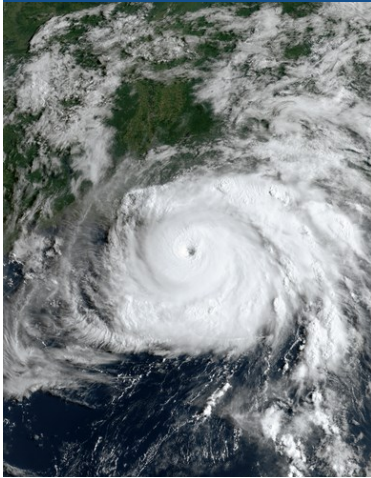
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## *The FPA Team Responds to Hurricane Ida*



**Hurricane Ida at peak intensity nearing landfall in Louisiana**

Hurricane Ida, a deadly and destructive Category 4 Atlantic hurricane, became the second-most damaging and intense hurricane to make landfall in the State of Louisiana, behind Hurricane Katrina in 2005. On August 29th, the 16th anniversary of Hurricane Katrina, Ida made landfall near Port Fourchon, LA., with sustained winds of 150 mph. Ida weakened to a Category 2 storm on Sunday night with maximum winds of 105 mph. On Sunday afternoon, Ida, moving northward, stalled west of New Orleans, causing 3 to 4 inches of rain to fall per hour. Ida left one million people, including the entire New Orleans Metropolitan area, without power and utilities as they began the long, slow process of recovery.

With memories of Hurricane Katrina not far away, the FPA-East team of experienced, professional, trained personnel stood ready for whatever Ida brought to the Greater New Orleans Metropolitan area and performed admirably.

The Hurricane and Storm Damage Risk Reduction System (HSDRRS) functioned as designed keeping the citizens within the FPA's jurisdiction safe from storm surge flooding.

In preparation for the storm, on Thursday, August 26th, FPA Maintenance and Operations personnel began the systematic floodgate closure process by closing 24 floodgates and closed an additional 27 floodgates on Friday.



**Floodgate L-13 at Lakeshore Drive west of Seabrook closed for Hurricane Ida**

The FPA Emergency Operations Center was activated at 6 a.m. on Saturday (August 28). Another 52 floodgates were closed on Saturday and one on Sunday. Also, by Sunday, 25 valves and nine complex structures were closed, completing the closure of the HSDRRS. The Permanent Canal Closure and Pumps (PCCP) pump stations were operating and pumping during the storm event.

After Ida passed, the FPA confirmed that no levee breaches or overtopping had occurred within the HSDRRS and FPA inspection teams began their damage assessments.

## *Introducing the FPA's New Regional Finance Director*



Denise Businelle joined the FPA as the new Regional Finance Director on December 6th. Ms. Businelle was born and raised in Slidell, LA, and currently resides in Covington, LA. She has a Bachelor's Degree in Accounting from LSU and Masters Degree in Accounting from UNO.

Ms. Businelle has 21 years in Louisiana State Government experience and includes auditing, accounting, financial management, budget management and operations. She was the Chief Finance Officer of Southeast LA Hospital until its closure in 2013 and served as COO/CFO/Deputy Director of the LA State Board of Medical Examiners (5.5 years experience working with a state board). Ms. Businelle also has six years' experience in corporate accounting (four at Freeport McMoran and two at a private hospital).

Ms. Businelle has one daughter who is a freshman in college and one son who is serving in the US Army.

## *Introducing the FPA's New Human Resource Director*



Kenyetta Sewell joined the FPA on November 15 as its new Human Resource (HR) Director.

Ms. Sewell has worked in human resources for over 17 years. Most recently she served as HR Director for the LA Special School District, where she headed the HR function for the merger of school districts, and implemented numerous efficiency initiatives. As Human Resources Director for the Louisiana Lottery Corporation, her responsibilities included the development and implementation of policies, procedures, and strategic initiatives; and as Deputy Undersecretary for LA State Civil Service, she

directed the development of the budget and annual financial report, monitored revenues and expenditures, wrote agency contracts, participated in the development of the strategic plan, and provided oversight of the human resources function for State Civil Service, the Board of Ethics and the Division of Administrative Law.

In 2017, Ms. Sewell earned her Society for Resource Management (SHRM) Certified Professional credential, and currently serves on the East Baton Rouge Parish Personnel Board, and until recently, served on the Board of Directors for Greater Baton Rouge (GBR) SHRM as Chairperson for the Workforce Readiness Committee and served as committee member for Training and Development for the Baton Rouge Junior League.

## *Federal Funding Requested for Aviation Training Academy*

The Lakefront Management Authority is requesting funding from the U.S. Economic Development Administration under the Fiscal Year 2021 American Rescue Plan for the construction of an Aviation Training Academy at the New Orleans Lakefront Airport.

The estimated cost of the proposed facility, which will be named the Bessie Coleman Academy of Aviation, is \$2.520 million.



The facility, totaling approximately 15,828 sq. ft., will include an approximately 11,000 square foot hangar, three classrooms, a conference room, office space and support infrastructure and equipment for a Professional Pilot Bachelor of Science Program and an Aviation Maintenance Technician Program.

New Orleans Lakefront Airport will partner with the University of New Orleans (UNO) for the Professional Pilot Bachelor of Science Program, which will be fully accredited by the FAA. Students completing the program will meet FAA commercial and private pilot standards and be fully prepared for a career in the field of aviation. UNO will administer and offer the program with an on-site flight school for utilizing aircraft.

The Aviation Maintenance Technician Program will also be fully accredited by the FAA. New Orleans Lakefront Airport will partner with Delgado Community College, which will administer and offer the Aviation Maintenance Technician Program. Students completing the program will hold highly-transferable skills that could be used in a broad-range of industries and career opportunities in aviation.

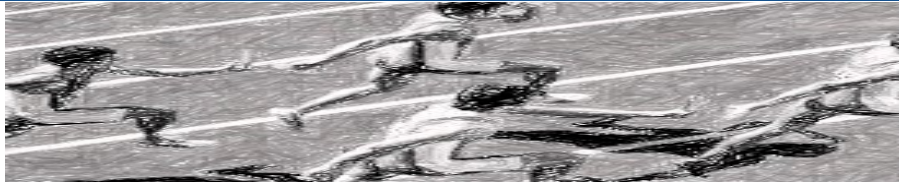
Graduates of these programs will help address the current shortage of professionals in these fields and the anticipated growth in aviation, as well as support New Orleans' tourist and recreational industries. The facility will also aid in the economic development and growth of New Orleans East.

The facility will be named in honor of Bessie Coleman, an early American civil aviator and the first African American woman and first Native American to hold a pilot license. Ms. Coleman earned her license from the *Fédération Aéronautique Internationale* on June 15, 1921, and was the first African American to earn an international pilot license.

The New Orleans Lakefront Airport is owned by the Orleans Levee District and operated and maintained by the Lakefront Management Authority.



## *It Takes a Team to Win A Race*



### A little about me

My early career as a Mechanical Engineer began with working for the Jefferson Parish Department of Drainage Pump Station in 1997. Fresh out of college, working as a Pump Station Engineer, I had no clue as to how valuable that experience would be now, much later in my life. While I worked for Jefferson Parish, I was fortunate to witness the installation of what was for me at the time, the largest drainage pumps I'd seen, 12 ft. diameter, 1000 cfs horizontal pumps. For a portion of that time I worked under our Board Member and past President, Mr. Herb Miller, who was Director of Public Works – this fact alone reminds me of what a very small world we live in. I also worked alongside a group of dedicated operators and trades that were entrusted with the infrastructure that was responsible for keeping the entire Jefferson Parish community dry.

### Drainage – how it works

It was during my time as a Pump Station Engineer that I began to realize that most of the public has no idea how our areas' drainage systems work. Drainage is like a relay race. It starts with rain falling on an area. The storm water (rain) collects on the land, and flows into the streets, into the sub-surface drainage system, into the ditches and canals, and ultimately into the large main drainage canals of the system. This all happens through gravity flow, much like when you pull the stopper on a full sink or bathtub – water is flowing to a lower point by gravity. It is the pumps of any drainage system that then takes the storm water out of the system and to the finish line - into the areas outside of the levees and floodwalls. On the East Bank of the river, this is more than likely Lake Pontchartrain.

### **EMPTYING THE BOWL**

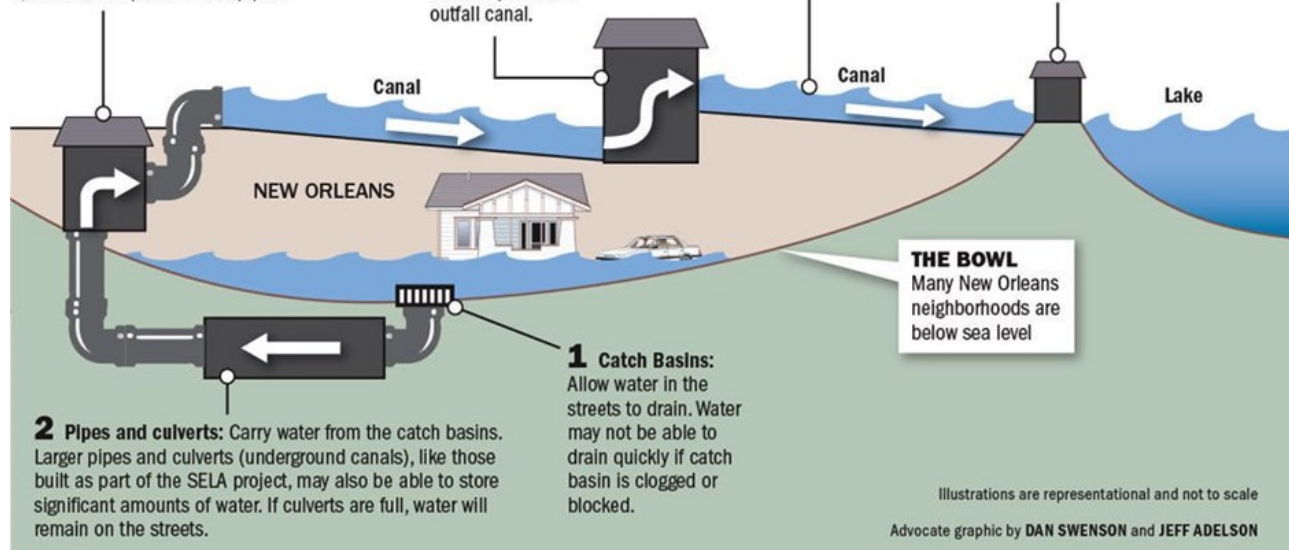
New Orleans sits below sea level and is shaped like a bowl. Rainwater can not drain out of the city because it can not defy gravity, so it must be pumped out. The system in New Orleans can only handle 1 inch of rain for the first hour and only 0.5 inches every hour after that. One location in New Orleans was inundated with 9.6 inches in 4 hours on Saturday, far more than the system can handle.

**3 Interior pumps:** Pull water through the pipes and lift it to the outfall canals. When water is flowing into the pipes more quickly than the pumps can move it, it will back up and fill the pipes.

**4 Outfall canal pumps:** Stationed in the outfall canals, these pumps pull water from small or lower canals up into the outfall canal.

**5 Outfall canals:** Carry water to Lake Pontchartrain.

**6 Permanent canal closures and pumps:** These pump stations are only needed when the water level of the lake rises, such as during a tropical storm or hurricane, requiring the gates at the end of the outfall canals to be closed to prevent water from flowing from the lake into the city. Otherwise, these are typically not needed as gravity will carry the water to the lake.

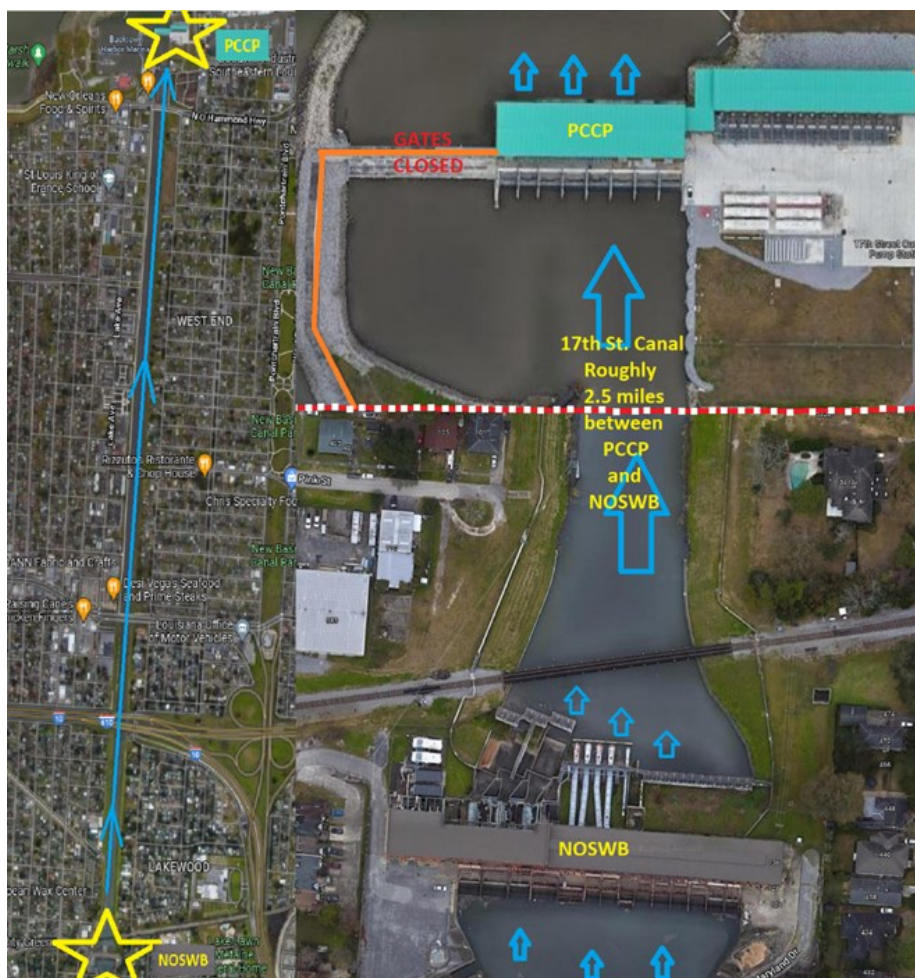


## *It Takes a Team to Win A Race (continued)*

### The FPA and PCCP

So what does all of this have to do with Flood Protection Authority (FPA) and the PCCP stations? Unlike most of the rest of our FPA Hurricane and Storm Damage Risk Reduction System (HSDRR) system, which closes and acts as a barrier to storm surge, the PCCP stations actually serve two roles. Like the FPA's other assets, the PCCP is part of the surge barrier. The gates we close and the station itself is part of the levees and floodwalls same as any other in our region – the “CC” in PCCP is for Canal Closure, the surge gates. The difference lies in the need to maintain storm water drainage pumping for any rainfall that inundates the City **when these gates are closed**.

Because of how the drainage system developed in New Orleans, the city's storm water drainage pumps are not located near the lake, rather they are located a couple of miles inland, at the edge of the city at the time the pump stations were built, and use an outfall canal system to get the storm water the rest of the way into the lake. The PCCP stations are like the last runner in the leg of that relay race, where our goal is to get the baton (storm water) from the New Orleans Sewerage and Water Board (NOSWB) and take it all the way to the finish line of the lake, the last “P” in PCCP is for PUMPS.



### Teamwork

Any employee that has worked during a tropical event for the FPA or one of its constituent Levee Districts, knows that typically most of the FPA's crews are closing gates and returning to Franklin to hunker down until the worst of the storm passes. This happens to be the busiest time for the PCCP group and any staff that is assigned to work with them.

The rainfall associated with a tropical event is what keeps the PCCP staff engaged, making sure that we win the race by pumping out any water that NOSWB sends our way.

While I have been using the relay race example to describe how the drainage system works, and PCCP's role in that system, it is really also equally valid to use the relay race as an example of the kind of teamwork that takes place within the FPA.

From our Regional Director on down, every employee has a role, knows their role, and performs their role in a way that ensures we **always** win the race – that no one in this area floods due to storm surge. For my part, I came to the FPA with a desire to return to my early Engineering roots. However, it is FPA's mission that motivates me, and our teamwork that inspires me.

Darren Austin, P.E., Director of Operations



## *Inspection of the Flood Defense System - A Team Effort*

The entire Flood Protection Authority's efforts 365 days of the year ensures that ***"When the water comes every single component of the flood defense system will perform"*** for the East Bank of Jefferson and Orleans Parish as well as St. Bernard Parish. Our team inspects, maintains, and repairs the 192 miles of Levees and Floodwalls throughout the year to ensure that when a storm comes the entire system is prepared for the challenge.

Over 200 individuals make up the entirety of the Flood Protection Authority (FPA) Team. Over 50% of these individuals are Certified Levee Inspectors by the Louisiana Coastal Protection and Restoration Authority. The certification percentages for the Maintenance, Operations, and Engineering Departments are 67%, 72% and 87%, respectively. The East Jefferson Levee District Police as well as the Orleans Levee District Police forces are also approximately 50% certified as levee inspectors. These certifications throughout the FPA departments allow the FPA team to ensure that the flood defense system is ready to perform as designed to defend the New Orleans Metro Area.

Throughout the year and on a daily basis any issues are photographed and noted within our inspection software for reporting purposes. If an issue is found that poses an immediate threat to the integrity of the flood defense system, the appropriate person/department is notified so that repair can be coordinated immediately. Minor issues that may progress are reported and scheduled for repair. Any issues that are beyond the ability of our maintenance department are inventoried, designed for as needed, and a repair contract is coordinated.

Examples of issues noted are animal rutting damage, spalls or cracks in floodwalls (See Photos), trash/debris near the floodwalls or levees as well as many others that are checked for to ensure the integrity of the flood defense system.

Jacinta Gisclair, P.E.  
Levee Safety Engineer



**Noted/tagged issue in need of repair.**



**Repair in progress.**



**Repair completed**

### **The FPA-East Operates and Maintains**

- **192 Miles of Federal and Non-Federal Levees and Floodwalls (Hurricane Flood Protection and Riverine)**
- **246 Land Based Floodgates**
- **102 Valves**
- **5.4 Miles of Seawall**
- **3 Permanent Canal Closures and Pumps (PCCP) Pump Stations**
- **8 Navigation Flood Control Structures (IHNC Surge Barrier Sector and Barge Gates; Bayou Bienvenue Vertical Lift Gate and Sector Gate; Seabrook Complex; and Bayou Dupre, Bayou St. John and Caernarvon Sector Gates.)**
- **IHNC-Lake Borgne Surge Barrier located at the confluence of the MRGO and GIWW and stretching 1.8 miles across the Golden Triangle Marsh**

## *Mitigation of Outfall Canal Erosion - Orleans Avenue Canal*

The Orleans Outfall Canal sits between Orleans Avenue and Marconi Drive, running north-south along the west side of City Park. The canal begins at the discharge location of Sewerage & Water Board Pump Station No. 7 (near Interstate 610 overpass) and terminates at the Orleans Canal PCCP Pump Station at Lake Pontchartrain. The canal and associated floodwall / levees aid in the drainage of rainwater run-off as well as function as part of the flood protection network for the surrounding area.

In February 2011, the US Army Corps of Engineers (USACE) awarded the contract for the Orleans Canal Remediation project. This project involved installing sheet piles to mitigate seepage as well as building stability berms and using deep soil mixing to strengthen the canal floodwalls. These upgrades were meant to help the walls better withstand the pressure from extreme high water situations such as hurricanes or historic rain events.

Ten years following the USACE project; in February 2021, the Flood Protection Authority awarded the Mitigation of Outfall Canal Erosion project for the Orleans Canal. The project's goal is to further repair and fortify the east side of the Orleans Canal banks along the floodwall. The east side banks had been badly damaged over the years by scouring and erosion due to swift currents, as well as animals rooting or burrowing through the soil.



Preconstruction condition examples



Phase 1 Construction



Phase 2 Construction



Phase 3 Construction

This project will rebuild the banks with clay, followed by the placement of a geotextile layer beneath a geocell system filled with crushed stone in order to protect the banks from future damage. The project is being constructed in phases with phase 1 being the section from I-610 to the Harrison Avenue overpass. Phase 1 is nearly complete while phase 2 (from Harrison Avenue to Filmore Avenue) is in progress. The final phase, phase 3 is from Filmore Avenue to Robert E Lee Boulevard and is still in the very early stages of construction.

Brittany Roberts, Engineer



## *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** (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".

## *New Enhanced FPA-East Website*

The Flood Protection Authority-East officially rolled out its new website on July 1st. The website has been enhanced to make it more user friendly and better serve the public.

The 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](http://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](http://www.floodauthority.org) and selecting Business - Board Meeting Videos. Click on live stream.**

The Flood Protection Authority-East (FPA) is currently offering both in-person and virtual tours of the \$4 Billion Hurricane Storm Damage Risk Reduction System (HSDRRS), which spans East Jefferson, Orleans and St. Bernard Parishes. In-person tour groups have the option of visiting the 17th St Canal Pump Station or the Lake Borgne-IHNC Surge Barrier. Groups may sign up for both tours but may not be able to see both on the same day.

For additional information go to the FPA's website [www.floodauthority.org](http://www.floodauthority.org) and select "Facility Tours". Both in-person and virtual tours can be scheduled by clicking on "Schedule a Tour".

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