



The Flood Protection Authority-East

News of Your Flood Defense System

April 2, 2019

Message from The Flood Protection Authority President Joe Hassinger

The email below was sent out about a week ago, from Earl Kugelman, Director of Maintenance, to over 20 of his colleagues, some in Maintenance and some in other departments. I asked his permission to share it with you, for two reasons. First, the underlying message: our team, Authority-wide, came together as a team, and enjoyed great success. That's what we have been striving for over the past few years. This project is just one example of how that's happening on a daily basis. Congratulations. Second, the fact that one of our leaders takes the time to express, to a large group, his appreciation for and recognition of the cooperation, collaboration and coordination demonstrated, is a key component of building and sustaining our one-organization mindset. We are most capable when we function as one strong team. Frequently recognize your colleagues for a job well done, and reward your supervisees who step up. Well done, Earl. Thank you all for allowing the Board of Commissioners to share in your success.

Joe

All,

With the last of the Annual USACE Inspections concluding today, 4-2-19, with the Metro Polder for Orleans, I want to thank you and all of your employees for the great job, effort put forth and dedication that was exhibited in making these inspections a great success. Both the Engineering and Operations Divisions with USACE, CPRA and our FPA-E team members that were on the inspections in all three Districts of our Region were quite impressed on how well all the areas looked and were being maintained. I as well as others within our Agency were told how many improvements we made from last year in all areas of the Region.

I attribute our success as a Region to the collaborative effort that was put forth by each area of the Region coming together to assist each other in preparation for these Annual USACE Inspections. I am sure that we would have passed these inspections if each area stood alone, but the teamwork of the areas pulling together truly made a great impact on the overall greater success.

We, as a team and functioning as one unit, were able to overcome many obstacles along the way. These obstacles include but are not limited to: inspections having to be rescheduled, some several times, due to weather delays; having to handle high river inspections and at various times having the Bayou Bienvenue structure activated due to high tides. With all of these other concerns, we were able to get all of the inspections completed with USACE in all three areas of the Region from between the middle of January to the first two days of April. This was and is a monumental accomplishment. I thank you as leaders and all of our employees in the various departments for pulling together to make this year's inspections a great success and look forward to how we can build from here going forward.

Earl

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 Flood Protection Authority

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EJLD Safe Room & Consolidated Facility Ribbon Cutting



On a bright, sunny Thursday, March 21st, the FPA welcomed numerous elected and public officials, representatives from various entities and citizens to the Ribbon Cutting Ceremony for the EJLD Safe Room and Consolidated Facility.

Guests were welcomed by Master of Ceremonies Rick Luettich, FPA Vice President, and Herb Miller, FPA Operations Chair, acknowledged special guests who were present. Speakers included Michael S. Yenni, President, Jefferson Parish, E. Ben Zahn, III, Mayor, City of Kenner, and Derek Boese, FPA Chief Administrative Officer.

Tours were offered after the ribbon cutting ceremony.



Speakers (above) Rick Luettich, (below) Herbert Miller, Jefferson Parish President Mike Yenni, Kenner Mayor Ben Zahn and Derek Boese.



Guests gathered for the ribbon cutting in the parking lot of the new facility with the Mississippi River Levee in the background.



The EJLD Safe Room and Consolidated Complex



The structure has a standby diesel generator capable of powering the entire building during storm events allowing emergency personnel to maintain operations well past 72 hours in the event of a power outage. Emergency operations at the new facility will be enhanced by new state-of-the-art communications and technology equipment and systems, including videoconferencing. The facility was constructed at a cost of \$10,532,525.00.

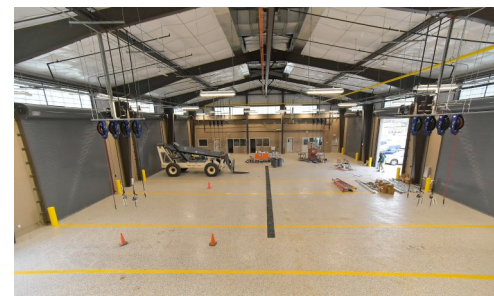
At the dedication of new facility Vice President Rick Luettich explained that, “the Flood Protection Authority is driven by the charge that the next time the water comes, and it will come again, every part of the system must perform. To meet this charge we must have a well-designed and well-constructed system, we have to keep it well maintained, and we must have it expertly operated. This new state-of-the-art facility is one of the final pieces to one of, if not, the most preminent, outstanding, capable flood protection systems in the world.” He also stressed three points to the public. First, if you live in this area, know your flood risk, know how vulnerable you are. Second, have an evacuation plan. An evacuation plan saves lives more than anything else. And, third, this new facility will make the Flood Protection Authority (FPA) even able better to meet the charge that the system must perform and will perform the next time the water comes.

At the dedication ceremony Mayor E. Ben Zahn, III, presented a proclamation by the City of Kenner recognizing the flood defense system maintained and operated by the FPA as one of the strongest and largest in the world, and the well trained, dedicated employees of the FPA who are prepared to respond immediately to hurricane, high river and other potential threats.



The new East Jefferson Levee District Safe Room and Consolidated Facility located at 1100 Rev. Richard Wilson Drive, Kenner, is designed and built to consolidate, house and support the district’s administrative, maintenance and police functions.

The new 27,000 square foot state-of-the-art complex includes a safe room, built to withstand 200 mph winds, office space, and an 11,000 square foot maintenance shop. The police will occupy the safe room during regular operating hours, preventing any space from being unoccupied.



Architect: Sizeler Thompson Brown
Contractor: Lamar Contractors, LLC
Hi-Tech Electrical, Inc.
Mayeux’s Air Conditioning & Heating, LLC
Lynch’s Construction, LLC
Acadian Fire Protection, Inc.

I-STORM Co-Founder Visits FPA Board



Above: Marc Walraven provides presentation to FPA Board.

Below: I-STORM Co-founders Marc Walraven and Andy Batchelor, Manager, Thames Barrier, London.



Pictured above top down: Maeslant Barrier, Haringvliet Sluices/ Barrier and Eastern Scheldt Barrier

Marc Walraven, M.Sc., Senior Advisor on storm surge barriers for the Ministry of Infrastructure and Environment, the Netherlands, and a co-founder of I-STORM, visited the Flood Protection Authority (FPA) and provided an informative presentation at the February 21st Board Meeting on the history of storm surge barriers in the Netherlands and on the I-STORM network. Board President Joe Hassinger introduced Mr. Walraven as one of the most recognized experts in the world on storm surge barriers and as a colleague and good friend of the FPA.

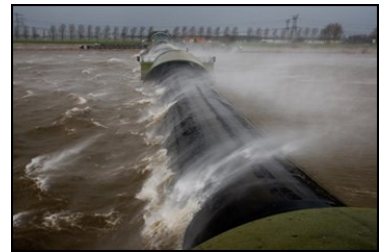
What Does the Netherlands, New Orleans, Galveston and London have in common? Each has been devastated by flooding and must learn to live with and defend itself against water. The Dutch have a long history of floods that have always led to new protective measures. About 45 percent of Dutch borders are coastal and over 55 percent of the country is in a floodplain (sea and river) with about one-half of the country below sea level. Three rivers flow through the Netherlands and discharge into the North Sea.

The Dutch faced three major floods during the Twentieth Century that presented significant challenges. The 1916 floods in the North resulted in the implementation of structural solutions with dams. Afsluitdijk Dam was constructed due to flooding from the South Sea resulting in the creation of IJssel Lake and an opportunity to create new lands within the lake. The 1953 flood in the South-West, in which 1,836 people died and 100,000 people lost their homes, resulted in the implementation of structural solutions with dams and storm surge barriers (Delta Works). River flooding in 1993 and 1995 in the middle of the Netherlands caused the evacuation of 200,000 people and brought the start of spatial solutions ("Room for the River" principle / Meuse Projects).

Six storm surge barriers have been constructed in the Netherlands to protect against flooding: Maeslant Barrier (1997), Haringvliet Sluices/ Barrier (1970), Eastern Scheldt Barrier (1985), Ramspol Barrier (2002), Hollandse IJssel Barrier (1958) and Hartel Barrier (1996). All six barriers are completely different and provide different solutions. Since all six barriers are different, staff with the required expertise, knowledge and training must be employed to manage, operate and maintain each structure.

With a rich history of flood remediation and storm surge barriers, the Dutch are happy to share their knowledge and experience with governmental officials and entities, as well as professionals, who are in need of assistance.

Mr. Walraven visited New Orleans while on his way to Galveston, Texas, to assist with their flood protection needs. Galveston is faced with the challenge of building storm surge barriers for Galveston Bay. Mr. Walraven's visit to Galveston was followed up with an I-STORM workshop in March.



Pictured above top down: Ramspol Barrier, Hollandse IJssel Barrier and Hartel Barrier

(continued on page 5)

I-STORM – An International Network for Knowledge Exchange

The Founding of I-STORM (the International Network of Storm Surge Barriers) - Mr. Walraven recounted how he and Andy Batchelor, Manager of the Thames Barrier in London, shared experiences on storm surge barriers during an informal meeting and realized the value their knowledge exchange, and in 2006 I-STORM was born. The I-STORM network grew to include not only surge barrier owners and managers, but professionals in the field from around the world. The purpose of the network is to share knowledge and experience to improve management, maintenance and operations of storm surge barriers, and to better protect people, places and property from flooding.

Mr. Walraven explained that knowledge, experience and expertise on storm surge barriers is a rare and valuable commodity, and is becoming increasingly valuable to governments and entities worldwide looking to construct barriers to protect against flooding, especially in light of climate change and changing weather patterns. Current storm surge barrier owners are faced with the challenge of adapting or reconstructing barriers to deal with future impacts of climate change and sea level rise.

I-STORM's three-tiered membership includes **Core Members** (Environment Agency, England; Rijkswaterstaat, the Netherlands; Venice Water Authority and Consorzio Venezia Nuova, Italy; and the U.S. Army Corps of Engineers (USACE), United States); **Barrier Members** (storm surge barrier owners); and **Associate Members** (individuals/entities involved in storm surge barrier management, maintenance and design).

I-STORM uses a variety of ways to accomplish its goals and objectives, such as annual conferences, peer reviews, site visits, workshops, website and social media. The FPA received invaluable information from the team of international professionals that conducted a peer review in May of 2018 of the IHNC Surge Barrier Sector and Barge Gates, Seabrook Complex and Bayou Bienvenue Lift Gate.

An important benefit of participating in I-STORM is the professional relationships established between colleagues who manage, operate and maintain these enormous, complex, critically important structures. A colleague who is able to share first-hand knowledge and a potential solution for a problem or issue may be half a world away, but can be immediately contacted by telephone or email.



I-STORM Peer Review Team reviewing results of their inspection of FPA's storm surge structures



Galveston Workshop participants pictured above

I-STORM Sponsored Galveston Workshop - FPA staff members Gerry Gillen, Operations Director, Darren Austin, Engineer 6, and Jacinta Gisclair, Engineer 4, participated in the Coastal Texas Gate Design Workshop. In the spirit of the I-STORM network, our staff was able to bring first hand knowledge and experience to the table, while gaining valuable information and insight from the other participants.

A quote from an email from Sharon Manzella Tirpak, Deputy Chief Project Management Branch, USACE Galveston District, sums up the value of such workshops, "I would like to express, on behalf of the Coastal Texas Study Team, our thanks to the I-STORM Network for sponsoring the Coastal Texas Gate Design Workshop this past week, especially Marc Walraven and Andy Batchelor. This was a new type of undertaking for the Network and I think we all agree that it

was a tremendous success. Also, we would like to thank the members of I-STORM (both near and far) who participated. Your expertise and knowledge on the design, construction, operations and maintenance of large coastal structures is invaluable to the study team as we move forward in completing our feasibility report. The team still has plenty of work to do to complete the study, but the discussions and recommendations from the group have provided us more clarity on the type or combination of types of structures that would be best for the Galveston Entrance Channel. We greatly appreciate everyone's contribution!"

FPA Uses Drone Technology to Advance Mission



In December twenty-three employees participated in a two-part drone training with instructor Malay Ghose Harja, Ph.D., an associate professor from the University of New Orleans. According to the Federal Aviation Administration (FAA) usage in the United States will reach more than 7 million people by 2020 with half of those being recreational users. Currently 8% of the population in America owns a drone and more than 20,000 of those are registered for commercial usage.

Leadership at the FPA plans to use drones as an innovative way to capture 3D models of structures and have better vantage points when inspecting levees or buildings. The FPA class consisted of employees from various departments including, Engineering, Maintenance, and Operations.



“The first step to using a drone for commercial use is to make sure our employees understand the fundamentals and core processes of a drone,” said CAO Derek Boese. “This is an excellent opportunity for the Flood Authority to use the latest technology to help us do our jobs more efficiently and provide accurate information to those involved with various projects.”

In order to become a licensed drone pilot, an individual must take and pass the test administered by the FAA. “A score of 70 is considered passing, though applicants should strive for the highest possible score. This shows how adequately they know the material and their knowledge of basic airport and airfield operations,” Harja added. If an applicant fails the test, it can be retaken 30 days after the initial test date. The multiple choice test will present a wide variety of challenges to the applicant as it will explore several areas of aviation. Public Information Director, Antwan Harris, said, “The most challenging and rewarding part was learning how to read an aviation map. I’d never seen anything like it before, but once you understand the material, it’s like reading any other map. The important thing is to constantly study the various materials and not get hung up on one section.”

Drones are now becoming common place for many businesses such as online retail giant Amazon. Field crews at Amazon are currently in the test phase with drone deliveries, but less than half of Americans (47 percent) say they’re interested in deliveries using the technology according to a new study by technology company ReportLinker. Consumer concerns over drone delivery stems from their privacy and security concerns. According to the report, if drone delivery becomes available, consumers will be most interested in using it to deliver clothes and apparel (27 percent) and electronics (14 percent).



Several survey companies have now been using drones as a means for inspections by the use of thermo-infrared cameras. This technology allows for a drone pilot to see issues such as seepage, property damage from water, and various problems that may be missed by the human eye. The drone industry is currently a \$13B industry and is expected to reach \$90B by 2025 according to Consumer Reports.

Submitted by Antwan Harris

Mt. Carmel Junior Class Tours PCCP/Surge Barrier



The FPA encourages everyone to become better informed about their flood defense system and offers tours of the IHNC-Lake Borgne Surge Barrier and Permanent Canal Closures and Pumps (PCCP) to further their understanding of the critical flood defense system protecting our community.

Mt. Carmel Academy's junior physics class recently took advantage of our open invitation and toured the PCCP and Surge Barrier. The FPA's Education Consultant, Anne Rheams, took part in the tour providing information to the girls about the FPA's flood defense system.

Anne Rheams and Gena Asevad, St. Bernard Parish Schools Science Curriculum Director, developed the FPA's Middle School Science Curriculum, *"Keepin' Your Head Above Water"* (on-line version at floodauthority.org/teacher-resources).

The FPA's public outreach program is an important part of our mission and includes teaching the next generation about the critically important Hurricane and Storm Damage Risk Reduction System.



The IHNC Surge Barrier (pictured left) is located at the confluence of the Mississippi River Gulf-Outlet (MRGO) and the Gulf Intracoastal Waterway (GIWW) and is the largest continuous surge barrier in the world, stretching 1.8 miles across the MRGO and the Golden Triangle Marsh.

The Permanent Canal Closures and Pumps (PCCP), located at or near the mouth of the 17th Street, London Avenue and Orleans Avenue Outfall Canals, include 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 Lake Pontchartrain when the barriers are closed.



To schedule a tour of the IHNC Surge Barrier and/or PCCP, visit our website at 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.

Partnering Agencies in Flood Protection Remain Vigilant Due to High River

The Mississippi River has been over 11-ft. at the Carrollton Gage since late October, 2018, dropping and then rising again as a result of heavy rainfall and melting snow in the upper Mississippi Valley. The river crested at 16.97 feet on March 18th.

The official flood stage set by the U.S. Army Corps of Engineers at New Orleans is 17-feet; however, floodwalls and levees protect the greater New Orleans area to 20 feet of river height, which allows three feet of freeboard. In addition, the Bonnet Carre Spillway is designed to ensure that a maximum river flow of 1.25 million cubic feet per second is passed through the Mississippi River and Tributaries (MR&T) system at New Orleans (17 feet is a conservative approximation of how high 1.25 million cfs would be). To keep the river level at or below 17-feet, the U.S. Army Corps of Engineers began opening bays in the Bonnet Carre Spillway on February 27th. The Corps of Engineers will start closing the bays when the river height begins dropping and based on the long range forecast and river conditions.



The Flood Protection Authority, Coastal Protection and Restoration Authority and U.S. Army Corps of Engineers work closely together and coordinate efforts during high river stages.

The U.S. Army Corps of Engineers (USACE) implements Phase I of its Flood Fight procedures when the river reaches 11.0 feet and rising at the Carrollton Gage. In Phase I, USACE staff performs inspections of the Mississippi River Levee (MRL) twice each week. At 15 feet with a predicted rise to 17 feet, the USACE implements Phase II, triggering daily inspections by USACE staff.

Flood Protection Authority-East (FPA) inspections of the MRL mirror the USACE's procedures. At 11.0+ feet FPA Engineering and Operations staff inspects the MRL at least twice each week. At 15.0 feet, and depending on a forecasted rise to 17.0 feet, the FPA Engineering and Operations staff increases its inspections to daily. In addition to the inspections performed by FPA Engineering and Operations staff, levee district police perform daily inspections of the MRL when the river reaches 11-ft. All FPA Engineering, Operations and Police staff performing inspections are trained and certified as levee inspectors.

All work that may impact the MRL, which includes transport of heavy loads over the levee, disturbance of grass cover, or subsurface work, within 1,500 feet of the levee is prohibited when the Mississippi River elevation reaches 11 feet and rising at the Carrollton Gage. Waivers are considered on a case-by-case basis and are dependent on many circumstances, including surrounding subsurface ground conditions. When the river reaches 15 feet at the Carrollton Gage all work is stopped.

FPA Board Meetings Livestreamed

Flood Protection Authority-East Board meetings can be viewed via livestream. To access the livestream, visit the FPA website www.floodauthority.org/ and click on the Facebook icon located at the top right corner of the page or go to:

www.facebook.com/FloodProtectionAuthority/.



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