

**Hazard Mitigation Plan  
Annual Progress  
Report 2021**

Jefferson Parish											
Action ID	Old Action ID and Goals	Description	Hazard(s) Addressed	Priority	Responsible Coordinating Entity	Potential Funding Agency	(B/C) Benefit-Costs (TF) Technical Feasibility	Cost	Anticipated Year of Completion	Implementation Status Update 2020	Implementation Status Update 2021
Preventative											
P-1	F-5, SS-7, G4	Adopt freeboard	Flood, Storm Surge	7-High	JP FPHM	n/a	Provides a margin of safety against unknown flood depths while taking into account sea level rise and subsidence. Can ultimately reduce the amount of flooding a home would experience, lower flood insurance premiums, and provide the community with CRS points which in turn also lowers flood insurance premiums.		2025	New ordinance adopted in Nov. 2017. All new structures and substantial improvement in AE must be elevated above -3.5 ft. Depending on BFE, FRB is either 2.5 ft, 1.5 ft, or 0.5 ft. Outside levee must be +2 ft. In Zone X, must be 18 inches above centerline of the street for residential structures and 6 inches for non-residential structures. It is anticipated that a stricter standard may be adopted for freeboard going forward, so this action will remain in place.	Updating ordinance in August 2021. All new residential structures in AE/VE inside levee must meet BFE +1. For areas outside levee must be BFE +2 ft. For all residential substantial improvements in AE/VE must meet BFE +1. Non-residential structures outside the levee must meet BFE+2 for new construction and BFE+1 for substantial improvements.
P-2	F-9, H&TS-4, SS-6, G4	Issue fewer permits for building in vulnerable areas and/or adopt stronger bldg. codes "study"	Flood, Hurricane and Tropical Storms, Storm Surge	6-Medium	JP Planning, JP Code	n/a	Reduce the localized flooding problems that would occur with new development, keep neighborhoods safe from disasters, and fortify structures to better withstand flood and wind. Reduce the number of buildings susceptible to storm surge, thereby, keeping communities safe and damage cost low.		2025	The parish has made efforts to reduce the number of building permits issued in vulnerable areas and to try to ensure any construction that takes place in those areas is safe and minimizes risk. In general, permit issuance has trended downwards over the past several years (ex. 1,164 commercial permits in 2015 vs. 1,019 in 2018). However, efforts will need to continue going forward, so this action will remain in place.	The parish has made efforts to reduce the number of building permits issued in vulnerable areas and to try to ensure any construction that takes place in those areas is safe and minimizes risk. In general, permit issuance has trended downwards over the past several years. Efforts will continue going forward.
P-3	SS-2, G1	Maintain 100 Year levee protection to ensure continued protection	Storm Surge	7-High	SELFPA-E/W, USACE	n/a	Reduce surge damage and cost to homeowner, government, and NFIP.		2025	Ongoing. All of the gates and structures in the hurricane system are exercised by the local levee districts multiple times a year.	Ongoing. All of the gates and structures in the hurricane system are exercised by the local levee districts multiple times a year.
P-4		Update Comprehensive Plan	All Hazards	7-High	JP Planning	CDBG	Good planning is a key preventative measure and helps reduce the likelihood that new construction will be built in high risk areas without mitigative measures.		2020	New Action	Envision Jefferson 2040 adopted Ordinance No. 25916, November 6, 2019, See Chapter 25, Article VI of Jefferson parish Code of Ordinances. The adopted Comp Plan incorporates the HM Plan as part of the Natural Hazards & Resources element
P-5		Increase Open Space Areas	Flood	7-High	JP Planning	n/a	Open spaces such as parks can help provide additional pervious surface areas to allow for infiltration and reduce flooding		2025	New Action	No specific action at this time. Implementation of this may require amendment to subdivision regulations and/or coordination with Recreation Department.
P-6		Perform Regular Maintenance of Drainage System	Flood	6-Medium	JP Drainage	JP Drainage	Ensuring drainage systems are maintained can have major impacts as this allows water to be managed in a way that minimizes flooding.		2025	New Action	Drainage system is maintained by department crews all year long
P-7		Update Capital Improvements Plan	All Hazards	7-High	JP Capital Projects	JP Capital Projects	A capital improvements plan can help direct funding to the highest priority projects and ensure that projects that reduce risk are being identified		2025	New Action	Departments work annually with Jefferson Parish Capital Projects team to develop project ideas. FPHM and ECM will begin working with Capital Projects to encourage projects that reduce risk rise to the top.
P-8		Update the Repetitive Loss Area Analysis (RLAA) annually	Flood	7-High	JP FPHM	JP FPHM	RLAAs generate specific guidance on mitigation solutions for individual buildings or areas and help property owners reduce their risk of future flooding by providing an understanding of flood risk, flooding sources, and resources for mitigation.		2025	New Action	Annual report will be completed in summer 2021
P-9		Develop a local tree inventory and maintenance schedule for trees located in rights-of way	Hurricane and Tropical Storms, Tornadoes, Winter Storms	3-Low	JP Planning	JP Planning	If trees located within municipality owned rights-of-way fail and damage personal property or cause personal injury or death, there has been a legal trend that courts have placed a reasonable responsibility on the owner of the tree to maintain it.		2025	New Action	Planning has discussed starting an inventory based on our review of landscape plans/subdivisions, but that would be an inventory on private property and limited to commercial districts and very limited residential areas with tree preservation requirements where the department could gather data.

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Floodplain Management											
FP-1		Evaluate efficacy of future conditions mapping	Flood	5-Medium	JP FPHM, JP GIS	FEMA	Future conditions mapping identifies areas of future risk that may not be suitable for development and therefore can reduce future losses		2025	New Action	FPHM and ECM have worked through a Silver Jackets grant to Model the Catouache Basin and are now working to determine if areas are unable to be developed.
FP-2		Update Stormwater Management Regulations (ex. compensatory storage for new construction, drainage study with new development, program for rain garden/green infrastructure incentives, permeable surface requirements, sewer backup/overflow protection program)	Flood	5-Medium	JP Environmental, JP Code, JP Engineering, JP Public Works, JP FPHM, JP Sewerage, JP Planning	FEMA, CWSRLF	Stormwater management regulations can be extremely cost-effective and help manage water in a way that reduces localized flooding which is a major issue in many areas of the parish		2025	New Action	On-going, consultant led study expected to be complete by December 2021. Parish currently has Low Impact Development (LID) regulations in Landscape Regulations. LID requires a stormwater management plan that integrates Best Management Practices into other required plans for site. However, LID is voluntary, with the parish offering incentives for developers who submit applications utilizing LID techniques.
FP-3		Develop a Watershed Master Plan (WMP)	Flood	5-Medium	JP Environmental, JP Code, JP Engineering, JP Public Works, JP FPHM, JP Sewerage, JP Planning	FEMA, CWSRLF	The objective of watershed master planning is to provide the communities within a watershed with a tool they can use to make decisions that will reduce the increased flooding from development on a watershed-wide basis. A WMP is more comprehensive than a stormwater runoff plan and while creating a WMP may be difficult, the benefits are great.		2025	New Action	Watershed Master Plan still in development and expected to be finished by the end of 2021.
Property Protection											
PP-1	F-1, SS-3, G1	Elevate, Acquire, Reconstruct, Relocate or Floodproof private and public structures and infrastructure in flood-prone and surge-prone areas	Flood, Storm Surge	7-High	JP FPHM	FEMA, HUD, CPRA, DNR, DEQ	By removing structures from the floodplain and raising structures above the BFE, homeowners suffer less mental and physical stress, displacement days, and flood damage. Also, the drain on the NFIP is reduced by a decrease in flood claims.	\$1.5 B	2020	Ongoing. 498 elevation/recon properties and Rep Loss structures approved since 2015. Pending approval for elevation/recon/floodproof/and onsite green infrastructure for 154 properties.	Ongoing. For elevation/recon and onsite green infrastructure: FMA 2018 - 77 approved properties. FMA 2019 - 165 approved properties. FMA 2020 - 192 pending properties.
PP-2	H&TS-1, T-3, G1	Fortify critical infrastructure, including lift stations, with storm shutters, upgraded roofs, and generators	Hurricane and Tropical Storms, Tornadoes	6-Medium	JP Gen Services, Dept. Heads, JP Risk Mngt, JP FPHM	FEMA, HUD	Provide extra protection to critical infrastructure from potential wind damage, thus allowing operations to continue during hurricanes and tropical storms and improving the chance a community can thrive after a tornado.	\$100 M	2025	Ongoing. West Jeff Medical Center wind retrofit completed construction Aug 2015. Additional wind retrofit projects were approved Sept 2015 for multiple sites for JP, Gretna and Harahan: the Fire Station, General Government Building, Kenner Jail, and Town of Lafitte Town Hall. Applied for wind retrofit grant for City Hall in Kenner - Buildings A, B, and C in 2016. Created risk profiles for parish facilities as part of new plan update.	Engineering underway for automatic generator transfer switches at four gyms that serve as shelters during hurricanes. Pending funding for generators at the East Bank and West Bank Animal Shelters.
PP-3	T-1 G2	Construct Safe Rooms	Tornadoes	3-Low	JP FPHM JUMP	PDM, HMGP	Provides security and peace of mind, protects residents from tornadoes, and has the potential to increase the value of one's home.		2025	Few safe rooms have been constructed due to feasibility as these would often need to be built in high risk flood zones. However, the parish will continue to evaluate options to build safe rooms and further enhance structural integrity of buildings, especially residences, to reduce wind damage risk.	The saferoom at the Jefferson Parish Sewer building has been completed and should be protecting workers for the 2021 storm season
PP-4	T-2, G4	Harden structures for wind impact	Tornadoes	6-Medium	JP FPHM	PDM, HMGP	Better protect homes from strong winds that could speed recovery after a tornado.		2025	Some structures have been hardened as they have been refurbished in accordance with the building code, ICC and IBC, which currently require 150 mph loads. However, there is still a need for building hardening of additional structures, so this action will remain in place and addressed as needed/feasible.	FPHM and ECM will work with Capital Projects and General Services to identify structures that may need Wind Retrofitting
Natural Resource Protection											
NRP-1	SS-4, G1, G3	Increase coastal protection	Storm Surge	7-High	JP Coastal	CPRA, RESTORE Act, USACE	Better coastal protection could help to prolong the presence of the coastline and continue to provide protection against storms as well as economic gain from tourist destinations.	\$2 B	2025	Ongoing. Land Bridge in Lafitte is underway. Funding approved for Phase 2 design and permit is pending. Lower Lafitte Shoreline Stabilization complete in 2017.	JP created a Coastal Strategic Action Plan that identifies projects and funding strategies.
NRP-2	SS-5 G1, G3	Build back marsh	Storm Surge	7-High	JP Coastal	CPRA	Replenish the first lines of defense against hurricanes and surge. This will protect homes from catastrophic levels of damage.	\$2 B	2025	Ongoing. Land Bridge in Lafitte is underway. Funding approved for Phase 2 design and permit is pending. Lower Lafitte Shoreline Stabilization complete in 2017.	3 large scale projects are in design as well as 4 small projects that will create marsh and reduce storm surge. NOAA is constructing a large marsh creation project south of the Pen.

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NRP-3	SS-8, G3	Fund more erosion mitigation projects (research alternative materials)	Storm Surge	7-High	JP Coastal	CPRA, GOMESA	Erosion projects will help establish a stronger coastline that protects people and property and reduces or prevents devastating damage from storm surge	\$2 B	2025	Ongoing. Fifi Island Restoration Rock Breakwater Extension has been completed. Plan for protective barrier known as the Gulfside and Bayside Shoreline Breakwaters in Grand Isle is in comment period. A study of Bucktown including Marsh creation in Lake Pontchartrain is underway.	Through the 2022 Capital Outlay bill additional funds were provided to complete the Grand Isle Back Bay Breakwaters. Also in late 2021 CPRA completed the beach nourishment and Gulf Side Breakwaters for a portion of Grand Isle.
NRP-4		Improve water quality	Flood, Storm Surge	5-Medium	JP Water, JP Environmental		Improving water quality has many beneficial consequences including better drinking water and ecosystem conservation as well as impacts to public health and well-being and recreational use		2025	New Action	Ongoing. Sample the canals regularly and do multiple drain marking events throughout the year to promote no dumping.
Structural Projects											
SP-1	F-2, G3	Increase storm water protection management including retention and detention basins	Flood	6-Medium	JP Drainage, JP Environ	FEMA, HUD, CAP OUTLAY, USACE, private entities	By improving drainage in flood prone areas, residents will suffer fewer flooded structures and therefore, less mental and physical stress, displacement days, and flood damage. Also, the drain on the NFIP is reduced by a decrease in flood claims.	\$20 M	2020	Ongoing. Manson Ditch Retention Pond-Phase 1 approved April 2015. Parish has established a Stormwater Mngt Committee to review applicable codes for potential amendment. In 2017, created implementation plan for stormwater Mngt on residential lots and passed legislation approving the use of permeable surfaces for off street parking. Installation of grass guard in Grand Isle. Approximately 194 properties were approved to install green infrastructure for storm water detention modifications and applied for an additional 79 sites in FMA 2018.	Ongoing. Clean and flush drains as part of regular maintenance.
SP-2	F-4, G1	Implement drainage improvement projects in flood-prone areas	Flood	7-High	JP Drainage	FEMA, HUD, MILLAGE, CAP OUTLAY	By improving drainage in flood prone areas, residents will suffer fewer flooded structures and therefore, less mental and physical stress, displacement days, and flood damage. Also, the drain on the NFIP is reduced by a decrease in flood claims.	\$500 M	2020	Ongoing. <b>Completed Projects:</b> B&C Canal and Orleans Village (Marrero); Mazoue Ditch Ph 6 (River Ridge); Bonnabel Canal Ph 1, Canal St Canal, and Taft Pump Station (Metairie); Upper Kraak Pump Station Upgrade (Jefferson); Terry Pkwy Ph 3 (Terrytown); Mt. Kennedy (Marrero); Waggaman (Waggaman). <b>Drainage Improvements Under Construction:</b> Manson Ditch Project Phase 1; Rivertown Drainage Project (Kenner); Ave D Ph 6 and Maplewood/Paillet (Harvey); Terry Pkwy Ph 4 (Terrytown); W. Metairie at Lester Culvert (Metairie); Westgate Pump Stations; Parish Line Pump Station Pump Addition; 17th street canal widening; Sena Drive Phase 3; Bonnabel Canal Improvements; Pump to Rive for Old Metairie.	Completed 2020: Breux Ditch, Goose Bayou Pump Station, Greg Court, Mounes Box Culvert Ph.1, Westwego 1 Pump Station pump addition Drainage Improvements Under Construction: Avron Drainage Improvements, Mounes Box Culvert Ph. 4, Bayou Segnette Bridge deck.
SP-3	F-7, G1	Install increased permanent pumps to alleviate flooding	Flood	5-Medium	JP Drainage	F, H, M, CAP, USACE	By improving drainage in flood prone areas, residents will suffer fewer flooded structures and therefore, less mental and physical stress, displacement days, and flood damage. Also, the drain on the NFIP is reduced by a decrease in flood claims.	\$100 M	2020	Ongoing. <b>Completed projects:</b> Capital Outlay pumps at the airport; Taft/Turnbull; Pump to the River project. <b>Approved projects:</b> Manson Ditch, Clearview, Maplewood, and Mounes.	New 60cfs Goose Bayou pump station was constructed south of the existing Goose Bayou station.
SP-4	F-10, G1	Implement failover systems as well as study and implement diversion projects for the Miss River	Flood	4-Low	JP Coastal	F, H, CPRA, Capital	Failover systems and diversions can help direct water in ways that prevent large volumes of water that cause flooding to build in certain areas.	\$200 M	2025	Ongoing. Land Bridge in Lafitte is underway. Funding approved for Phase 2 design and permit is pending. Lower Lafitte Shoreline Stabilization complete in 2017.	The State of Louisiana is leading the effort to create diversion for the Miss River. A draft EIS was released in 2021 and has finished public comment.
SP-5		Install reservoirs/storage tanks	Flood	5-Medium	JP Drainage	F, H, M, CAP	Reservoirs and storage tanks can provide a means of controlling water flow and volumes to reduce flood risk.		2025	New Action	Drainage has not constructed any reservoirs or installed any storage tanks.
SP-6		Channel modifications	Flood	5-Medium	JP Drainage	F, H, M, CAP	Channel modifications can help to control the flow and volume of water and reduce flooding in certain areas		2025	New Action	Waggaman Canal was rerouted around the landfill.
Emergency Services											
ES-1	H&TS-5, G1	Widen the bridges to expedite evacuation	Hurricane and Tropical Storms	5-Medium	JP Streets, Cap. Projects	DOTD, capital outlay	Allows for more efficient traffic flow during evacuation.	\$500 M	2025	Ongoing. Goose Bayou Bridge widening project is approximately 50% complete. Proposed intersection improvements are under review for the intersection of Clearview Parkway and Airline Highway (US 61) to help alleviate the congestion and facilitate transportation to various areas.	The Kerner Bridge from Lafitte to Barataria is going through the Solicitation of Views and Public Comment Period. The Causeway bridge over Airline Hwy is being refurbished.
ES-2		Install hazard warning systems	All Hazards	7-High	JP Emergency Management	JP EM	Hazard warning systems can save lives and can be installed for reasonable fees		2025	New Action	JPALERT system is used to send out warnings during severe weather events.

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ES-3		Carry out shelter operations planning	All Hazards	7-High	JP Emergency Management	JP EM	Shelters provide citizens with safe refuge before, during, and after hazard events and are critical to protecting life and safety		2025	New Action	Ongoing. There are at least 2 shelters (one for each side of the river) that could be used at any times for any hazard. Plans with parish departments and outside agencies are involved. Opened a shelter on the West Bank during 2020 hurricane season for residents in lower Jefferson. The shelter followed COVID-19 protocols.
ES-4		Implement emergency response training and exercises	All Hazards	7-High	JP Emergency Management	JP EM	Training and exercises help ensure responders are prepared and can take action to reduce loss of life and injury during a disaster.		2025	New Action	JPEM hosts one annual refresher training for our EOC activation teams followed by an annual Readiness Exercise before hurricane season. Also facilitate the Public Assisted Evacuation full-scale exercise that was at the East Bank location. JPEM is a participant in a Region 1 table-top and full-scale Mass Casualty Incident & Mass Rescue Operations exercise: attended initial planning meeting, future mid-term and final planning meeting.
Public Education and Awareness											
PEA-1	F-3, H&TS-3, G2	Encourage and educate public regarding small-scale flood mitigation projects and small-scale wind mitigation projects homeowners can employ	Flood, Hurricane and Tropical Storms	5-Medium	JP FPHM, JUMP	FEMA, HUD, PRIV. FUNDS, CPRA	Homeowners will be empowered to protect themselves with low-cost, DIY projects and suffer less flood and wind damage.	\$10 M	2025	Ongoing. Conducted numerous site visits from 2015 to 2018 and provided homeowner with flood proofing options and will continue doing so. Three of these visits resulted in recommendations for small scale mitigation options (2 in 2017 and 1 in 2018). Created residential stormwater handouts that were provided to 100 property owners participating in FMA in 2017.	Ongoing. Conduct site visits per request.
PEA-2	F-6, G2	Encourage the purchase of flood insurance	Flood	7-High	JP FPHM, JUMP	n/a	Enables homeowners to financially recover from the devastating effects of flooding as quickly as possible. Serves to educate area residents that any homeowner, regardless of location, can purchase flood insurance.		2025	Ongoing. Created specific flood insurance promotion outreach projects as part of the PPI; one of which is the creation of a video by Parish President Yenni. Presented before council in 2017 and 2018 and created a PSA with the State Insurance Commissioner's Office. Need to work towards more brochures and bilingual literature.	Ongoing. Created specific flood insurance promotion outreach projects as part of the PPI; one of which is the creation of a video by Parish President Lee Sheng. Planning to create more brochures and bilingual literature.
PEA-3	F-8, G2, G4	Educate public on not dumping and cleaning catch basins; enforce penalties for dumping	Flood	7-High	JP FPHM, JP Environ, JP Drainage	n/a	An informed public is better able to respond to and protect themselves from flooding.		2025	Ongoing. Labeled storm drains with "No Dumping" Markers at various locations and events including the Bunche Village on the WB; Terrytown (WB); and the Beach Sweep (EB) each year from 2015 to 2018. Updated drain marker to include 2nd message.	Ongoing. Label storm drains with educational markers at various locations and events. Educate the public at tabling events. Working on relaunching the Brooms to Basins interactive Adopt a Catch Basin site.
PEA-4	H&TS-2, SS-1, G2	Educate public on risks, preparedness measures, evacuation procedures, and generator safety	Hurricane and Tropical Storms, Storm Surge	6-Medium	JP EM, JP Fire, JP FPHM, JUMP	n/a	An informed public is better able to respond to and protect themselves from hurricanes and storm surge.		2025	Ongoing. Applied for EPA Education Grant Sept 2015. Implementing projects identified in the PPI including PrepareAthon Day. Added <i>Be Storm Ready</i> bus shelters and newsletter graphics in 2018.	JPEM hosts a press conference during the week of hurricane season to review these topics and prepare the public. Collaborate with the PIO to send out messages through our JPALERT system as well as on social media. Work with Timberlane Together: Safety First by giving out hurricane prep materials.
PEA-5		Implement school-based education program combined with environmental education program	All Hazards	5-Medium	JP FPHM, JP School Board	n/a	Beginning education programs at a young age will help build an informed populace that better understands how to mitigate risks		2025	New Action	Participating in two summer camps in 2021. Will feature the wave action model and floodplain model.
PEA-6		Develop public postings/displays and put on hazard expositions	All Hazards	5-Medium	JP FPHM, JP Coastal	n/a	Public displays can help push out key messages about what the public can do to reduce risk		2025	New Action	Ongoing. Provide press releases from the PIO office, messages in water bill, and communicate via the Parish Website and Social Media forums.

City of Gretna											
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Preventative											
P-1	F-5, G4	Adopt freeboard	Flood	6-Medium	Gretna Building and Regulatory Inspections	n/a	Provides a margin of safety against unknown flood depths while taking into account sea level rise and subsidence. Can ultimately reduce the amount of flooding a home would experience, lower flood insurance premiums, and provide the community with CRS points which in turn also lowers flood insurance premiums.		2025	Maintained Higher Regulatory Standard Base Flood Elevations (36 inches above Centerline of the Street) as the higher regulatory standard for new construction. It is anticipated that a stricter standard may be adopted for freeboard going forward, so this action will remain in place.	We continue to maintained a Higher Regulatory Standard Base Flood Elevations (36 inches above Centerline of the Street) as the higher regulatory standard for new construction. We are currently looking at option on how to adopt freeboard while keeping our higher regulatory standards. The City understands freeboard is a requirement and anticipates having it adopted within the next year.
P-2	F-9, G1	Technology redundancy	Flood	7-High	Gretna IT Manager	GCH Gretna	Backing up technology at multiple locations can reduce disruption in productivity and operations.		2025	Ongoing. Implemented server virtualization for faster recovery capabilities, relocated critical application servers to new hardened facility that is elevated and equipped with redundant/failover power and internet access. Maintain disaster recovery redundancy with primary financial software vendor. Servers have officially been moved.	Ongoing. Implemented server virtualization for faster recovery capabilities, relocated critical application servers to new hardened facility that is elevated and equipped with redundant/failover power and internet access. Maintain disaster recovery redundancy with primary financial software vendor. Servers have officially been moved.
P-3	SS-2, G1	Maintain 100 Year levee protection to ensure continued protection	Storm Surge	7-High	SELFPA-E/W, USACE	n/a	Reduce surge damage and cost to homeowner, government, and NFIP.		2025	Ongoing. All of the gates and structures in the hurricane system are exercised by the local levee districts multiple times a year.	Ongoing. All of the gates and structures in the hurricane system are exercised by the local levee districts multiple times a year.
P-4		Update Comprehensive Plan	All Hazards	7-High	Gretna Planning and Zoning	CDBG	Good planning is a key preventative measure and helps reduce the likelihood that new construction will be built in high risk areas without mitigative measures.		2020	New Action	Ongoing. Gretna Comprehensive Plan was adopted in 2019. The Unified Development Code (UDC) was subsequently adopted the same year. It is continuously being updated to align with development goals. That process includes Planning and Zoning Commission and City Council approvals.
P-5		Increase Open Space Areas	Flood	7-High	Gretna Planning and Zoning	n/a	Open spaces such as parks can help provide additional pervious surface areas to allow for infiltration and reduce flooding		2025	New Action	Ongoing. Gretna's UDC mandates in some cases and encourages greenspace wherever possible. This is an ongoing initiative through routine planning and zoning approvals. This includes residential and commercial development, as well as the best use of publicly owned property.
P-6		Perform Regular Maintenance of Drainage System	Flood	6-Medium	Gretna Public Works	JP Drainage	Ensuring drainage systems are maintained can have major impacts as this allows water to be managed in a way that minimizes flooding.		2025	New Action	Gretna Public Works performs drainage maintenance daily throughout the year on a scheduled program. Additionally they perform precautionary maintenance prior to any anticipated storm or weather event.
P-7		Update Capital Improvements Plan	All Hazards	7-High	Gretna Planning and Zoning, Gretna Administration	JP Capital Projects	A capital improvements plan can help direct funding to the highest priority projects and ensure that projects that reduce risk are being identified		2025	New Action	Ongoing. City of Gretna Streets CIP is updated annually based on status of damage, priorities and available funding. Other capital projects funded with grants are managed to maximize external funds and match to critical infrastructure priorities.
Floodplain Management											
FP-1		Evaluate efficacy of future conditions mapping	Flood	5-Medium	JP FPHM, JP GIS	FEMA	Future conditions mapping identifies areas of future risk that may not be suitable for development and therefore can reduce future losses		2025	New Action	Available land in Gretna has been fully developed; however, if a structure is demolished and property can be redeveloped the new construction would be held to the higher regulatory standard.
FP-2		Update Stormwater Management Regulations (ex. compensatory storage for new construction, drainage study with new development, program for rain garden/green infrastructure incentives, permeable surface requirements, sewer backup/overflow protection program)	Flood	5-Medium	Gretna Planning and Zoning	FEMA, CWSRLF	Stormwater management regulations can be extremely cost-effective and help manage water in a way that reduces localized flooding which is a major issue in many areas of the parish		2025	New Action	Ongoing. This is addressed by ordinance in the City's UDC in several sections - and continues to be implemented on a site planning basis. Examples include 50% greenspace requirement for residential front yards, 50% permeable coverage requirement for new commercial parking lots, and planted buffer and screening requirements for new commercial development.
Property Protection											
PP-1	F-1, G1	Elevate, Acquire, Reconstruct, Relocate or Flood proof private and public structures and infrastructure in flood-prone areas	Flood	7-High	JP FPHM	FEMA, HUD, CPRA, DNR, DEQ	By removing structures from the floodplain, homeowners suffer less mental and physical stress, displacement days, and flood damage. Also, the drain on the NFIP is reduced by a decrease in flood claims.	\$1 B	2020	Ongoing. 498 elevation/recon properties and Rep Loss structures approved since 2015. Pending approval for elevation/recon/floodproof/and onsite green infrastructure for 154 properties.	Ongoing. For elevation/recon and onsite green infrastructure: FMA 2018 - 77 approved properties. FMA 2019 - 165 approved properties. FMA 2020 - 192 pending properties.

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Action ID	Old Action ID and Goals	Description	Hazard(s) Addressed	Priority	Responsible Coordinating Entity	Potential Funding Agency	(B/C) Benefit-Costs (TF) Technical Feasibility	Cost	Anticipated Year of Completion	Implementation Status Update 2020	Implementation Status Update 2021	
PP-2	H&TS-1 G1	Fortify critical infrastructure with storm shutters, upgraded roofs, and generators	Hurricane and Tropical Storms	6-Medium	Gretna Planning, Gretna Police Dept; Gretna Public Utilities	FEMA, HUD	Provide extra protection to critical infrastructure from potential wind damage, thus allowing operations to continue during hurricanes and tropical storms.	\$50 M	2025	Ongoing. The General Government Building wind retrofit project in Gretna was approved Sept 2015. New Police Department building has been completed designed to withstand wind and flood hazards and with backup generators. Mel Ott Multipurpose Center (a designated emergency operation location) has been retrofitted with backup power generation. FEMA, SHPO, and City of Gretna working through checklist for funds to harden City Hall for window retrofit grants. Police Department Project Phase 1 completed. Phase 2 includes upgrades to the old police department by raising floor to ABFE, lifting all electric and plumbing and applying flood resistant materials to building at grade and is near completion.	Ongoing. The General Government Building wind retrofit project in Gretna was approved Sept 2015. New Police Department building has been completed designed to withstand wind and flood hazards and with backup generators. Mel Ott Multipurpose Center (a designated emergency operation location) has been retrofitted with backup power generation. FEMA, SHPO. City Hall Wind Retrofit construction started and expected to complete Fall 2021.	
PP-3	T-1, G2	Construct Safe Rooms	Tornadoes	4-Low	JP FPHM	n/a	Provides security and peace of mind, protects residents from tornadoes, and has the potential to increase the value of one's home.		2025	Several buildings in Gretna have been built to act as safe rooms including the EOC, JP Government Building, and Gretna Police Department. The city will continue to evaluate the need for further safe rooms.	Several buildings in Gretna have been built to act as safe rooms including the EOC, JP Government Building, and Gretna Police Department. The 2nd floor of the water production plant has hardened control rooms and offices. The city will continue to evaluate the need for further safe rooms.	
PP-4	T-2, G4	Harden structures for wind impact	Tornadoes	6-Medium	JP FPHM	n/a	Better protect homes from strong winds that could speed recovery after a tornado.		2025	Many structures have been constructed in compliance with the current building codes and the city will continue to make sure that this takes place going forward.	Many structures have been constructed in compliance with the current building codes and the city will continue to make sure that this takes place going forward. Currently Gretna City Hall is being hardened by a wind retrofit project.	
Natural Resource Protection												
NRP-3		Improve water quality	Flood, Storm Surge	5-Medium	Gretna Planning and Zoning		Improving water quality has many beneficial consequences including better drinking water and ecosystem conservation as well as impacts to public health and well-being and recreational use		2025	New Action	Generally, Gretna's UDC Stormwater Requirements reduce non-point source pollution and improve water quality. Specifically the Gretna City Park LA-SAFE funded stormwater mitigation project will have a substantial impact on water quality ecosystem restoration. New city projects incorporate green infrastructure concepts such as bioswales and pervious surfaces which help to filtrate and clean runoff.	
Structural Projects												
SP-1	F-2, G3	Increase storm water protection management including retention and detention basins	Flood	7-High	Gretna Planning	FEMA, HUD, CAP OUTLAY, USACE	By improving drainage in flood prone areas, residents will suffer fewer flooded structures and therefore, less mental and physical stress, displacement days, and flood damage. Also, the drain on the NFIP is reduced by a decrease in flood claims.	\$20 M	2020	Ongoing. Completed Racetrack detention pond project in 2016. Hancock Canal Project enclosing canal and increasing drainage capacity completed in 2017. 4 <sup>th</sup> Street Extension project, including new drainage infrastructure, is underway. Improvement at the Virgil/Hancock intersection, drainage to Virgil Retention Pond, improvement on Hancock and Franklin Streets. Downtown Drainage Project – 1. Gretna City Park project – implementation of GI, habitat preservation; 2. 5 <sup>th</sup> Street Improvement project to include GI and drainage. Incorporating stormwater/GI BMPs in all major public infrastructure projects; updating codes to incentivize and mandate stormwater/GI BMPs for private development. 2019 Q2 construction start on first major GI demonstration that includes public plaza upgrades alongside GI in downtown. 25 <sup>th</sup> Street Resilience District (Gretna City Park and 25th Street Canal) - structural and nonstructural interventions to address concentrations of RL/SRL props (57 acre feet of storage). Developing partnership with USACE for more detailed flood vulnerability analysis.	Ongoing. - 4 <sup>th</sup> Street Extension project is complete. - Gretna City Park project – implementation of GI, habitat preservation is under construction. - 5 <sup>th</sup> Street Improvement project to include GI and drainage is currently in the design phase. - Downtown Drainage Project Phase 1 which includes public plaza upgrades and green infrastructure is complete. - 25th Street Resilience District (Gretna City Park and 25th Street Canal) - structural and nonstructural interventions to address concentrations of RL/SRL props (57 acre feet of storage) is pending funding. - Incorporating stormwater/GI BMPs in all major public infrastructure projects; updating codes to incentivize and mandate stormwater/GI BMPs for private development. 2019 Q2 construction start on first major GI demonstration that includes public plaza upgrades alongside GI in downtown. - Developing partnership with USACE for more detailed flood vulnerability analysis. USACE study expected to be completed in Fall 2021. Downtown Drainage Project Phase 1 is complete with subsurface storage for stormwater detention. Phase 2 work is planned for construction in 2022.	

City of Gretna											
Action ID	Old Action ID and Goals	Description	Hazard(s) Addressed	Priority	Responsible Coordinating Entity	Potential Funding Agency	(B/C) Benefit-Costs (TF) Technical Feasibility	Cost	Anticipated Year of Completion	Implementation Status Update 2020	Implementation Status Update 2021
SP-2	F-4, G1	Implement drainage improvement projects in flood-prone areas	Flood	6-Medium	Gretna Planning	FEMA, HUD, MILLAGE, CAP OUTLAY	By improving drainage in flood prone areas, residents will suffer fewer flooded structures and therefore, less mental and physical stress, displacement days, and flood damage. Also, the drain on the NFIP is reduced by a decrease in flood claims.	\$500 M	2020	Ongoing. Projects detailed in SP-1 above also impact flood prone areas and are equally applicable here.	Ongoing. Projects detailed in SP-1 above also impact flood prone areas and are equally applicable here. UPDATE: Gretna Resilience District projects ongoing - City Park project is under construction. 25Th Street Canal Improvements expected to commence in 2022 (currently in environmental review). Both of these projects address the most flood prone neighborhoods in the City, which are also one of the highest concentration of SRL properties in the state.
SP-3	F-7, G1	Install increased permanent pumps to alleviate flooding	Flood	6-Medium	Gretna Planning	F, H, M, CAP	By improving drainage in flood prone areas, residents will suffer fewer flooded structures and therefore, less mental and physical stress, displacement days, and flood damage. Also, the drain on the NFIP is reduced by a decrease in flood claims.	\$100 M	2020	Ongoing. In design, submitted for FMA 2017 but wasn't funded. Submitted again in FMA 2018. Pending approval.	Ongoing. In design, submitted for FMA 2017 but wasn't funded. Submitted again in FMA 2018. Pending approval. UPDATE: 25th Street Canal Improvements Project will include a new pump station, still in design and has not been officially awarded yet.
SP-4		Install reservoirs/storage tanks	Flood	5-Medium	Gretna Planning	F, H, M, CAP	Reservoirs and storage tanks can provide a means of controlling water flow and volumes to reduce flood risk.		2025	New Action	The Downtown Drainage project includes subsurface storage tanks designed to release water slowly into the drainage system and ground water.
SP-5		Channel modifications	Flood	5-Medium	Gretna Planning	F, H, M, CAP	Channel modifications can help to control the flow and volume of water and reduce flooding in certain areas		2025	New Action	New Action - 25th Street Canal Improvements expected to commence in 2022 - The channel is currently aged and the new canal improvement will increase capacity and will reduce flooding.
Emergency Services											
ES-1		Install hazard warning systems	All Hazards	7-High	City Administration	JP EM	Hazard warning systems can save lives and can be installed for reasonable fees		2025	New Action	JPALERT system is used to send out warnings during severe weather events.
ES-2		Carry out shelter operations planning	All Hazards	7-High	City Administration	JP EM	Shelters provide citizens with safe refuge before, during, and after hazard events and are critical to protecting life and safety		2025	New Action	Gretna offers evacuation assistance to all its citizens who request it and in concert with Jefferson Parish to get all citizens evacuated safely and to safety. Jefferson Parish operates a shelter on both sides of the Mississippi River.
ES-3		Implement emergency response training and exercises	All Hazards	7-High	JP Emergency Management, City and Police Administration	JP EM	Training and exercises help ensure responders are prepared and can take action to reduce loss of life and injury during a disaster.		2025	New Action	Gretna participates in all of JPEM emergency response and training exercises. This is scheduled through JPEM, JP and our Jefferson United Mitigation Professional (JUMP) CRS users group.
Public Education and Awareness											
PEA-1	F-3, H&TS-3, G2	Encourage and educate public regarding small-scale flood mitigation projects and small-scale wind mitigation projects homeowners can employ	Flood, Hurricane and Tropical Storms	6-Medium	JP FPHM, JUMP, Gretna Building	FEMA, HUD, PRIV. FUNDS, CPRA	Homeowners will be empowered to protect themselves with low-cost, DIY projects and suffer less flood and wind damage.	\$10 M	2025	Ongoing. City adopted generator safety ordinance in building codes in 2016. City enforces wind load regulations on all new construction. Ongoing outreach as part of PPI.	Ongoing. City adopted generator safety ordinance in building codes in 2016. City enforces wind load regulations on all new construction. Ongoing outreach as part of PPI.
PEA-2	F-6, G2	Encourage the purchase of flood insurance	Flood	7-High	JP FPHM, JUMP; Gretna Building	n/a	Enables homeowners to financially recover from the devastating effects of flooding as quickly as possible. Serves to educate area residents that any homeowner, regardless of location, can purchase flood insurance.		2025	Ongoing. Created specific flood insurance promotion outreach projects as part of the PPI. Implementing the PPI. Video produced featuring Mayor Constant to promote purchase of flood insurance published on web, social media, and shown at public meetings.	Ongoing. Created specific flood insurance promotion outreach projects as part of the PPI. Implementing the PPI. Video produced featuring Mayor Constant to promote purchase of flood insurance published on web, social media, and shown at public meetings.
PEA-3	F-8, G2	Educate public on not dumping and cleaning catch basins; enforce penalties for dumping	Flood	6-Medium	JP FPHM, JP Environ, JUMP; Gretna Building	n/a	An informed public is better able to respond to and protect themselves from flooding.		2025	Ongoing. Hosted several MS4 workshops targeted at contractors, builders, and building inspectors in 2016. Labeled storm drains with "No Dumping" Markers at various locations and events including the Spring Sweep in 2017 and 2018; updated drain marker to include 2 <sup>nd</sup> message.	Ongoing. Hosted several MS4 workshops targeted at contractors, builders, and building inspectors. Labeled storm drains with "No Dumping" Markers at various locations and events including the Pontchartrain Conservancy Storm Sweep in May 2021 and will host a drain cleanup event in October 2021 in the City of Gretna; updated drain markers to include 2 <sup>nd</sup> message.
PEA-4	H&TS-2, SS-1, G2	Educate public on risks, preparedness measures, evacuation procedures, and generator safety	Hurricane and Tropical Storms, Storm Surge	6-Medium	JP EM, JP Fire, JP FPHM, JUMP; Gretna Building	n/a	An informed public is better able to respond to and protect themselves from hurricanes and storm surge.		2025	Ongoing. Applied for EPA Education Grant Sept 2015. Implementing projects identified in the PPI. City also pre-registers at-risk populations for evacuation assistance.	Ongoing. Implementing projects identified in the PPI. Publish social media posts and website articles in advance of approaching tropical events promoting generator safety. City also pre-registers at-risk populations for evacuation assistance. We provide a checklist and guidelines to residents wishing to install a permanent generator.



**City of Gretna**

<b>Action ID</b>	<b>Old Action ID and Goals</b>	<b>Description</b>	<b>Hazard(s) Addressed</b>	<b>Priority</b>	<b>Responsible Coordinating Entity</b>	<b>Potential Funding Agency</b>	<b>(B/C) Benefit-Costs (TF) Technical Feasibility</b>	<b>Cost</b>	<b>Anticipated Year of Completion</b>	<b>Implementation Status Update 2020</b>	<b>Implementation Status Update 2021</b>
PEA-5		Implement school-based education program combined with environmental education program	All Hazards	5-Medium	JP FPHM, JP School Board; Gretna Planning and Zoning	n/a	Beginning education programs at a young age will help build an informed populace that better understands how to mitigate risks		2025	New Action	Litter abatement program ongoing with school outreach and student contests related to stormwater management and quality of life. Recently awarded cleanest city for the Cleanest City Campaign in Gretna's population division. Campaign focused on anti-litter and cleaning of storm drains.
PEA-6		Develop public postings/displays and put on hazard expositions	All Hazards	5-Medium	JP FPHM, JP Coastal	n/a	Public displays can help push out key messages about what the public can do to reduce risk		2025	New Action	Gretna provides press releases from the Mayor's office, messages on the message board at Mel Ott Park, messages in water bills, and communicate via the City Website and Social Media forums. We are developing a mobile app for communication with Gretna constituents.

City of Harahan											
Action ID	Old Action ID and Goals	Description	Hazard(s) Addressed	Priority	Responsible Coordinating Entity	Potential Funding Agency	(B/C) Benefit-Costs (TF) Technical Feasibility	Cost	Anticipated Year of Completion	Implementation Status Update 2020	Implementation Status Update 2021
Preventative											
P-1	F-5, G4	Adopt freeboard	Flood	7-High	JP FPHM	n/a	Provides a margin of safety against unknown flood depths while taking into account sea level rise and subsidence. Can ultimately reduce the amount of flooding a home would experience, lower flood insurance premiums, and provide the community with CRS points which in turn also lowers flood insurance premiums.		2025	Ongoing. Most of the city is located in a zone X and the building code has feet above the CLS.	Ongoing. Most of the city is located in a zone X and the building code has feet above the CLS.
P-2	H&TS-4 G4	Issue fewer permits for building in vulnerable areas	Hurricane and Tropical Storms	6-Medium	JP Planning	n/a	Reduce the localized flooding and roofing problems that would occur with new development		2025	The city has been working to reduce the number of permits issued in vulnerable areas and will continue to do so with the new administration.	The city has been working to reduce the number of permits issued in vulnerable areas and will continue to do so.
P-3	SS-2, G1	Maintain 100 Year levee protection to ensure continued protection	Storm Surge	6-Medium	SELFPA-E/W, USACE	n/a	Reduce surge damage and cost to homeowner, government, and NFIP.		2025	Ongoing. All of the gates and structures in the hurricane system are exercised by the local levee districts multiple times a year. The pump to the river has been completed and the levee lift at the river.	Ongoing. All of the gates and structures in the hurricane system are exercised by the local levee districts multiple times a year.
P-4		Update Comprehensive Plan	All Hazards	7-High	JP Planning	CDBG	Good planning is a key preventative measure and helps reduce the likelihood that new construction will be built in high risk areas without mitigative measures.		2020	New Action	No comprehensive plan in place at this time.
P-5		Increase Open Space Areas	Flood	7-High	JP Planning	n/a	Open spaces such as parks can help provide additional pervious surface areas to allow for infiltration and reduce flooding		2025	New Action	Working to preserve and maintain open space along the batture
P-6		Perform Regular Maintenance of Drainage System	Flood	6-Medium	JP Drainage	JP Drainage	Ensuring drainage systems are maintained can have major impacts as this allows water to be managed in a way that minimizes flooding.		2025	New Action	Drainage system is maintained by department crews all year long for the City's roads. The State DOTD maintains Jefferson Hwy and Hickory.
P-7		Update Capital Improvements Plan	All Hazards	7-High	JP Capital Projects	JP Capital Projects	A capital improvements plan can help direct funding to the highest priority projects and ensure that projects that reduce risk are being identified		2025	New Action	Working on Sewer improvements due to high river infiltration. Received money from Capital Outlay and Colonial Development group to expedite Sewer improvements.
Floodplain Management											
FP-1		Evaluate efficacy of future conditions mapping	Flood	5-Medium	JP FPHM, JP GIS	FEMA	Future conditions mapping identifies areas of future risk that may not be suitable for development and therefore can reduce future losses		2025	New Action	As part of the Colonial Club development H&H work was done to see how future development would impact drainage and the development must mitigate that
FP-2		Update Stormwater Management Regulations (ex. compensatory storage for new construction, drainage study with new development, program for rain garden/green infrastructure incentives, permeable surface requirements, sewer backup/overflow protection program)	Flood	5-Medium	JP Environmental, JP Code, JP Engineering, JP Public Works, JP FPHM, JP Sewerage, JP Planning	FEMA, CWSRLF	Stormwater management regulations can be extremely cost-effective and help manage water in a way that reduces localized flooding which is a major issue in many areas of the parish		2025	New Action	Working on updating. Delayed by COVID.

City of Harahan											
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Property Protection											
PP-1	F-1, G1	Elevate, Acquire, Reconstruct, Relocate or Flood proof private and public structures and infrastructure in flood-prone areas	Flood	7-High	JP FPHM	FEMA, HUD, CPRA, DNR, DEQ	By removing structures from the floodplain, homeowners suffer less mental and physical stress, displacement days, and flood damage. Also, the drain on the NFIP is reduced by a decrease in flood claims.	\$1 B	2020	Ongoing. 498 elevation/recon properties and Rep Loss structures approved since 2015. Pending approval for elevation/recon/floodproof/and onsite green infrastructure for 154 properties.	Ongoing. For elevation/recon and onsite green infrastructure: FMA 2018 - 77 approved properties. FMA 2019 - 165 approved properties. FMA 2020 - 192 pending properties.
PP-2	H&TS-1 G1	Fortify critical infrastructure with storm shutters, upgraded roofs, and generators	Hurricane and Tropical Storms	6-Medium	JP Gen Services, JP Risk Mngt, JP FPHM	FEMA, HUD	Provide extra protection to critical infrastructure from potential wind damage, thus allowing operations to continue during hurricanes and tropical storms.	\$50 M	2025	Ongoing. Awaiting approval of wind retrofit projects for sites in Harahan. Developed risk profiles for city facilities as part of new plan update.	Wind retrofit projects for sites in Harahan has been approved.
PP-3	T-1, G2	Encourage the construction of safe rooms	Tornadoes	5-Medium	JP FPHM JUMP	n/a	Provides security and peace of mind, protects residents from tornadoes, and has the potential to increase the value of one's home.		2025	This process is still in progress as the city attempts to tie into hurricane protection initiatives and needs to do more outreach to encourage safe rooms.	The city is working to do more outreach to encourage safe rooms.
PP-4	T-2, G4	Harden structures for wind impact	Tornadoes	6-Medium	JP Planning	n/a	Better protect homes from strong winds that could speed recovery after a tornado.		2025	The city has been encouraging high wind protection in new construction and will continue to evaluate ways to ensure buildings are built to a high level of wind resistance.	The city has been encouraging high wind protection in new construction and will continue to evaluate ways to ensure buildings are built to a high level of wind resistance.
Natural Resource Protection											
NRP-1		Improve water quality	Flood, Storm Surge	5-Medium	JP Water, JP Environmental		Improving water quality has many beneficial consequences including better drinking water and ecosystem conservation as well as impacts to public health and well-being and recreational use		2025	New Action	Participates in MS4 program and conducts regular sampling. Also hosted a drain marking event in the city to promote no dumping.
Structural Projects											
SP-1	F-2, G3	Increase storm water protection management including retention and detention basins	Flood	7-High	JP Drainage	FEMA, HUD, CAP OUTLAY, USACE	By improving drainage in flood prone areas, residents will suffer fewer flooded structures and therefore, less mental and physical stress, displacement days, and flood damage. Also, the drain on the NFIP is reduced by a decrease in flood claims.	\$20 M	2020	The city has implemented some of these measures through regulatory means and encouraging detention for commercial development. Additional measures will be evaluated and implemented accordingly going forward.	Additional measures being evaluated. The Colonial Country Club has plans for water retention.
SP-2	F-4, G1	Implement drainage improvement projects in flood-prone areas	Flood	6-Medium	JP Drainage	FEMA, HUD, MILLAGE, CAP OUTLAY	By improving drainage in flood prone areas, residents will suffer fewer flooded structures and therefore, less mental and physical stress, displacement days, and flood damage. Also, the drain on the NFIP is reduced by a decrease in flood claims.	\$500 M	2025	Ongoing. Pump to the River is now online. A LOMR application is under review to potentially amend several map panels reflecting the project, additional needed. There is also a need for drainage under Jefferson Highway.	Pump to the River LOMR application is still under review to amend the map panel reflecting the project. There is also a need for a drainage under Jefferson Highway.
SP-3		Install reservoirs/storage tanks	Flood	5-Medium	JP Drainage	F, H, M, CAP	Reservoirs and storage tanks can provide a means of controlling water flow and volumes to reduce flood risk.		2025	New Action	The Colonial Country Club has plans for water retention

City of Harahan											
Action ID	Old Action ID and Goals	Description	Hazard(s) Addressed	Priority	Responsible Coordinating Entity	Potential Funding Agency	(B/C) Benefit-Costs (TF) Technical Feasibility	Cost	Anticipated Year of Completion	Implementation Status Update 2020	Implementation Status Update 2021
SP-4		Channel modifications	Flood	5-Medium	JP Drainage	F, H, M, CAP	Channel modifications can help to control the flow and volume of water and reduce flooding in certain areas		2025	New Action	Not feasible in the city
Emergency Services											
ES-1		Install hazard warning systems	All Hazards	7-High	JP Emergency Management	JP EM	Hazard warning systems can save lives and can be installed for reasonable fees		2025	New Action	JPALERT system is used to send out warnings during severe weather events.
ES-2		Carry out shelter operations planning	All Hazards	7-High	JP Emergency Management	JP EM	Shelters provide citizens with safe refuge before, during, and after hazard events and are critical to protecting life and safety		2025	New Action	Harahan offers evacuation assistance to all its citizens who request it and in concert with Jefferson Parish to get all citizens evacuated safely and to safety. Jefferson Parish operates a shelter on both sides of the Mississippi River.
ES-3		Implement emergency response training and exercises	All Hazards	7-High	JP Emergency Management	JP EM	Training and exercises help ensure responders are prepared and can take action to reduce loss of life and injury during a disaster.		2025	New Action	Harahan participates in all of JPEM emergency response and training exercises. The City met to discuss plans and perform drills.
Public Education and Awareness											
PEA-1	F-3, H&TS-3, G2	Encourage and educate public regarding small-scale flood mitigation projects and small-scale wind mitigation projects homeowners can employ	Flood, Hurricane and Tropical Storms	5-Medium	JP FPHM, JUMP	FEMA, HUD, PRIV. FUNDS, CPRA	Homeowners will be empowered to protect themselves with low-cost, DIY projects and suffer less flood and wind damage.	\$10 M	2025	Ongoing. Outreach takes place through PPI outreach. The city has developed a tie-in for outreach with its MS4 initiative and is developing additional materials to align with this.	Ongoing. Outreach takes place through PPI outreach. The city has developed a tie-in for outreach with its MS4 initiative and is developing additional materials to align with this.
PEA-2	F-6, G2	Encourage the purchase of flood insurance	Flood	7-High	JP FPHM, JUMP	n/a	Enables homeowners to financially recover from the devastating effects of flooding as quickly as possible. Serves to educate area residents that any homeowner, regardless of location, can purchase flood insurance.		2025	Ongoing. Created specific flood insurance promotion outreach projects as part of the PPI; one of which is the creation of a video by Mayor Miceli.	Ongoing. Created specific flood insurance promotion outreach projects as part of the PPI. Implementing the PPI. Video produced featuring the new mayor promoting the purchase of flood insurance will be filmed in the fall of 2021.
PEA-3	F-7, G2	Educate public on not dumping and cleaning catch basins	Flood	6-Medium	JP FPHM, JP Environ, JP Drainage	n/a	An informed public is better able to respond to and protect themselves from flooding.		2025	Ongoing. Created new drain markers to include 2nd message.	Ongoing. Labeled storm drains with "No Dumping" Markers at various locations in Harahan as part of the Pontchartrain Conservancy Storm Sweep in May 2021.
PEA-4	H&TS-2, SS-1 G2	Educate public on risks, preparedness measures, evacuation procedures, and generator safety	Hurricane and Tropical Storms, Storm Surge	6-Medium	JP EM, JP Fire, JP FPHM, JUMP	n/a	An informed public is better able to respond to and protect themselves from hurricanes and storm surge.		2025	Ongoing. Applied for EPA Education Grant Sept 2015. Implementing projects identified in the PPI.	Ongoing. Implementing projects identified in the PPI.
PEA-5		Implement school-based education program combined with environmental education program	All Hazards	5-Medium	JP FPHM, JP School Board	n/a	Beginning education programs at a young age will help build an informed populace that better understands how to mitigate risks		2025	New Action	Considering projects for schools within the City - Harahan Elementary, St. Rita, and Faith Lutheran
PEA-6		Develop public postings/displays and put on hazard expositions	All Hazards	5-Medium	JP FPHM, JP Coastal	n/a	Public displays can help push out key messages about what the public can do to reduce risk		2025	New Action	Implement projects as part of the PPI

City of Kenner											
Action ID	Old Action ID and Goals	Description	Hazard(s) Addressed	Priority	Responsible Coordinating Entity	Potential Funding Agency	(B/C) Benefit-Costs (TF) Technical Feasibility	Cost	Anticipated Year of Completion	Implementation Status Update 2020	Implementation Status Update 2021
Preventative											
P-1	F-5, G4	Adopt freeboard	Flood	7-High	Kenner Code, JP Code	n/a	Provides a margin of safety against unknown flood depths while taking into account sea level rise and subsidence. Can ultimately reduce the amount of flooding a home would experience, lower flood insurance premiums, and provide the community with CRS points which in turn also lowers flood insurance premiums.		2025	Complete. New ordinance adopted in Dec. 2017. All new structures and substantial improvement in AE must be elevated above -3.5. Depending on BFE, FRB is either 2.5 ft, 1.5 ft, or 0.5 ft. It is anticipated that a stricter standard may be adopted for freeboard going forward, so this action will remain in place.	Complete. New ordinance adopted in Dec. 2017. All new structures and substantial improvement in AE must be elevated above -3.5. Depending on BFE, FRB is either 2.5 ft, 1.5 ft, or 0.5 ft. It is anticipated that a stricter standard may be adopted for freeboard going forward, so this action will remain in place.
P-2	H&TS-4 G4	Adopt and Enforce Strict and uniform bldg. codes	Hurricane and Tropical Storms	6-Medium	Kenner Code, JP Code	n/a	Fortify structures to better withstand flood and wind.		2025	Ongoing. The city has adopted uniform building codes but will keep this action in place as updates may be required in the future.	Ongoing. The city has adopted uniform building codes but will keep this action in place as updates may be required in the future.
P-3	SS-2, G1	Maintain 100 Year levee protection to ensure continued protection	Storm Surge	6-Medium	SELFPA-E/W, USACE	n/a	Reduce surge damage and cost to homeowner, government, and NFIP.		2025	Ongoing. All of the gates and structures in the hurricane system are exercised by the local levee districts multiple times a year.	Ongoing. All of the gates and structures in the hurricane system are exercised by the local levee districts multiple times a year.
P-4		Update Comprehensive Plan	All Hazards	7-High	Kenner Code	CDBG	Good planning is a key preventative measure and helps reduce the likelihood that new construction will be built in high risk areas without mitigative measures.		2020	New Action	City's comprehensive plan requires updating every 5 years. Planning will begin working on the update soon.
P-5		Increase Open Space Areas	Flood	7-High	City of Kenner	n/a	Open spaces such as parks can help provide additional pervious surface areas to allow for infiltration and reduce flooding		2025	New Action	No Update
P-6		Perform Regular Maintenance of Drainage System	Flood	6-Medium	City of Kenner	JP Drainage	Ensuring drainage systems are maintained can have major impacts as this allows water to be managed in a way that minimizes flooding.		2025	New Action	Currently performing improvements to south Kenner ditches. Document maintenance schedule and proactive activities. Need to get Work Orders from Field Services. Also, should add that a comprehensive plan for televising of subsurface drainage is being developed.
P-7		Update Capital Improvements Plan	All Hazards	7-High	City of Kenner	JP Capital Projects	A capital improvements plan can help direct funding to the highest priority projects and ensure that projects that reduce risk are being identified		2025	New Action	The City has prioritized the present needs of the drainage system. These prioritizations will guide the City in its upgrades going forward. Recent funding from Capital Outlay was obtained for items of work identified in the prioritization.
Floodplain Management											
FP-1		Evaluate efficacy of future conditions mapping	Flood	5-Medium	JP FPHM, JP GIS	FEMA	Future conditions mapping identifies areas of future risk that may not be suitable for development and therefore can reduce future losses		2025	New Action	New Action -Coordinating with GIS consultant; ongoing
FP-2		Update Stormwater Management Regulations (ex. compensatory storage for new construction, drainage study with new development, program for rain garden/green infrastructure incentives, permeable surface requirements, sewer backup/overflow protection program)	Flood	5-Medium	City of Kenner	FEMA, CWSRLF	Stormwater management regulations can be extremely cost-effective and help manage water in a way that reduces localized flooding which is a major issue in many areas of the parish		2025	New Action	New Action. Review all stormwater mgmt. ords and establish incentives for those who implement BMPs and permeable surfaces during development/redevelopment. Draft and Implement additional amendments recommended in recent Green Infrastructure/Low Impact Development Program. More stringent detention requirements are being developed.

City of Kenner											
Action ID	Old Action ID and Goals	Description	Hazard(s) Addressed	Priority	Responsible Coordinating Entity	Potential Funding Agency	(B/C) Benefit-Costs (TF) Technical Feasibility	Cost	Anticipated Year of Completion	Implementation Status Update 2020	Implementation Status Update 2021
Property Protection											
PP-1	F-1, G1	Elevate, Acquire, Reconstruct, Relocate or Flood proof private and public structures and infrastructure in flood-prone areas	Flood	7-High	JP FPHM	FEMA, HUD, CPRA, DNR, DEQ	By removing structures from the floodplain, homeowners suffer less mental and physical stress, displacement days, and flood damage. Also, the drain on the NFIP is reduced by a decrease in flood claims.	\$1 B	2020	Ongoing. 498 elevation/recon properties and Rep Loss structures approved since 2015. Pending approval for elevation/recon/floodproof/and onsite green infrastructure for 154 properties.	Ongoing. 498 elevation/recon properties and Rep Loss structures approved since 2015. Pending approval for elevation/recon/floodproof/and onsite green infrastructure for 154 properties.
PP-2	H&TS-1 G1	Fortify critical infrastructure with storm shutters, upgraded roofs, and generators	Hurricane and Tropical Storms	6-Medium	City of Kenner, Kenner Police	FEMA, HUD	Provide extra protection to critical infrastructure from potential wind damage, thus allowing operations to continue during hurricanes and tropical storms.	\$50 M	2025	Ongoing. Kenner Jail wind retrofit project was approved Sept 2015. Storm shutters added to police complex and public works complex in 2016. Looking to add storm shutters to the city hall building as well. Created risk profiles for city facilities as part of new plan update.	Ongoing. Kenner Jail wind retrofit project was approved Sept 2015. Storm shutters added to police complex and public works complex in 2016. Looking to add storm shutters to the city hall building as well. Created risk profiles for city facilities as part of new plan update.
PP-3	T-1, G2	Construct Safe Rooms	Tornadoes	5-Medium	JP FPHM, JUMP, City of Kenner	n/a	Provides security and peace of mind, protects residents from tornadoes, and has the potential to increase the value of one's home.		2025	Few safe rooms have been constructed due to feasibility as these would often need to be built in high risk flood zones. However, the parish will continue to evaluate options to build safe rooms and further enhance structural integrity of buildings, especially residences, to reduce wind damage risk.	Few safe rooms have been constructed due to feasibility as these would often need to be built in high risk flood zones. However, the parish will continue to evaluate options to build safe rooms and further enhance structural integrity of buildings, especially residences, to reduce wind damage risk.
PP-4	T-2, G4	Harden structures for wind impact	Tornadoes	6-Medium	JP FPHM, JUMP, City of Kenner	n/a	Better protect homes from strong winds that could speed recovery after a tornado.		2025	Some structures have been hardened as they have been refurbished in accordance with the building code, ICC and IBC, which currently require 150 mph loads. However, there is still a need for building hardening of additional structures, so this action will remain in place and addressed as needed/feasible.	Some structures have been hardened as they have been refurbished in accordance with the building code, ICC and IBC, which currently require 150 mph loads. However, there is still a need for building hardening of additional structures, so this action will remain in place and addressed as needed/feasible.
Natural Resource Protection											
NRP-1		Improve water quality	Flood, Storm Surge	5-Medium	City of Kenner		Improving water quality has many beneficial consequences including better drinking water and ecosystem conservation as well as impacts to public health and well-being and recreational use		2025	New Action	STORMWATER BMPs/Green Infrastructure
Structural Projects											
SP-1	F-2, G3	Increase storm water protection management including retention and detention basins	Flood	7-High	City of Kenner	FEMA, HUD, CAP OUTLAY, USACE	By improving drainage in flood prone areas, residents will suffer fewer flooded structures and therefore, less mental and physical stress, displacement days, and flood damage. Also, the drain on the NFIP is reduced by a decrease in flood claims.	\$20 M	2020	Ongoing. Manson Ditch Retention Pond-Phase 1 approved April 2015. Parish has established a Stormwater Mngt Committee to review applicable codes for potential amendment. In 2017, created implementation plan for stormwater Mngt on residential lots and passed legislation approving the use of permeable surfaces for off street parking. Installation of grass guard in Grand Isle. Approximately 194 properties were approved to install green infrastructure for storm water detention modifications and applied for an additional 79 sites in FMA 2018.	Ongoing. Manson Ditch Retention Pond-Phase 1 approved April 2015. Parish has established a Stormwater Mngt Committee to review applicable codes for potential amendment. In 2017, created implementation plan for stormwater Mngt on residential lots and passed legislation approving the use of permeable surfaces for off street parking. Installation of grass guard in Grand Isle. Approximately 194 properties were approved to install green infrastructure for storm water detention modifications and applied for an additional 79 sites in FMA 2018.

City of Kenner											
Action ID	Old Action ID and Goals	Description	Hazard(s) Addressed	Priority	Responsible Coordinating Entity	Potential Funding Agency	(B/C) Benefit-Costs (TF) Technical Feasibility	Cost	Anticipated Year of Completion	Implementation Status Update 2020	Implementation Status Update 2021
SP-2	F-4, G1	Implement drainage improvement projects in flood-prone areas	Flood	6-Medium	City of Kenner	FEMA, HUD, MILLAGE, CAP OUTLAY	By improving drainage in flood prone areas, residents will suffer fewer flooded structures and therefore, less mental and physical stress, displacement days, and flood damage. Also, the drain on the NFIP is reduced by a decrease in flood claims.	\$500 M	2020	Ongoing. Rivertown Drainage Project completed in 2018.	Ongoing. Rivertown Drainage Project completed in 2018.
SP-3	F-7, G1	Install increased permanent pumps to alleviate flooding	Flood	4-Low	City of Kenner	F, H, M, CAP	By improving drainage in flood prone areas, residents will suffer fewer flooded structures and therefore, less mental and physical stress, displacement days, and flood damage. Also, the drain on the NFIP is reduced by a decrease in flood claims.	\$100 M	2020	Ongoing. Massive pumping station at new airport expansion facility completed in 2018.	Ongoing. Massive pumping station at new airport expansion facility completed in 2018.
SP-5		Install reservoirs/storage tanks	Flood	5-Medium	City of Kenner	F, H, M, CAP	Reservoirs and storage tanks can provide a means of controlling water flow and volumes to reduce flood risk.		2025	New Action	New Action
SP-6		Channel modifications	Flood	5-Medium	City of Kenner	F, H, M, CAP	Channel modifications can help to control the flow and volume of water and reduce flooding in certain areas		2025	New Action	New Action
Emergency Services											
ES-1		Install hazard warning systems	All Hazards	7-High	City of Kenner	JP EM	Hazard warning systems can save lives and can be installed for reasonable fees		2025	New Action	New Action
ES-2		Carry out shelter operations planning	All Hazards	7-High	City of Kenner	JP EM	Shelters provide citizens with safe refuge before, during, and after hazard events and are critical to protecting life and safety		2025	New Action	New Action
ES-3		Implement emergency response training and exercises	All Hazards	7-High	JP Emergency Management, Kenner Emergency Management, City and Police Administrations	JP EM	Training and exercises help ensure responders are prepared and can take action to reduce loss of life and injury during a disaster.		2025	New Action	New Action
Public Education and Awareness											
PEA-1	F-3, H&TS-3, G2	Encourage and educate public regarding small-scale flood mitigation projects and small-scale wind mitigation projects homeowners can employ	Flood, Hurricane and Tropical Storms	5-Medium	JP FPHM, JUMP, City of Kenner	FEMA, HUD, PRIV. FUNDS, CPRA	Homeowners will be empowered to protect themselves with low-cost, DIY projects and suffer less flood and wind damage.	\$10 M	2025	Ongoing. Conducted numerous site visits from 2015 to 2018 and provided homeowner with flood proofing options and will continue doing so. Three of these visits resulted in recommendations for small scale mitigation options (2 in 2017 and 1 in 2018). Created residential stormwater handouts that were provided to 100 property owners participating in FMA in 2017.	Ongoing. Conducted numerous site visits from 2015 to 2018 and provided homeowner with flood proofing options and will continue doing so. Three of these visits resulted in recommendations for small scale mitigation options (2 in 2017 and 1 in 2018). Created residential stormwater handouts that were provided to 100 property owners participating in FMA in 2017.
PEA-2	F-6, G2	Encourage the purchase of flood insurance	Flood	7-High	JP FPHM, JUMP, City of Kenner	n/a	Enables homeowners to financially recover from the devastating effects of flooding as quickly as possible. Serves to educate area residents that any homeowner, regardless of location, can purchase flood insurance.		2025	Ongoing. Created specific flood insurance promotion outreach projects as part of the PPI; one of which is the creation of a video by the newly elected Mayor - Ben Zahn. Kenner updated CRS webpage	Ongoing. Created specific flood insurance promotion outreach projects as part of the PPI; one of which is the creation of a video by Mayor Ben Zahn. Kenner updated CRS webpage. Annual article by City EM Director in community newspaper urges residents to acquire/check /update homeowners and flood insurance.

**City of Kenner**

Action ID	Old Action ID and Goals	Description	Hazard(s) Addressed	Priority	Responsible Coordinating Entity	Potential Funding Agency	(B/C) Benefit-Costs (TF) Technical Feasibility	Cost	Anticipated Year of Completion	Implementation Status Update 2020	Implementation Status Update 2021
PEA-3	F-8, G2	Educate public on not dumping and cleaning catch basins	Flood	6-Medium	JP FPHM, JP Environ, JUMP, City of Kenner	n/a	An informed public is better able to respond to and protect themselves from flooding.		2025	Ongoing. Labeled storm drains with "No Dumping" Markers at the Beach Sweep (EB) in 2015 and 2016. Created new drain markers to include 2nd message. Continual messaging during storm events to clean drains through social media and website.	Ongoing. Labeled storm drains with "No Dumping" Markers at the Beach Sweep (EB) in 2015 and 2016. Created new drain markers to include 2nd message. Continual messaging during storm events to clean drains through social media and website.
PEA-4	H&TS-2, SS-1 G2	Educate public on risks, preparedness measures, evacuation procedures, and generator safety	Hurricane and Tropical Storms, Storm Surge	6-Medium	JP EM, JP Fire, JP FPHM, JUMP, City of Kenner	n/a	An informed public is better able to respond to and protect themselves from hurricanes and storm surge.		2025	Ongoing. Applied for EPA Education Grant Sept 2015. Implementing projects identified in the PPI.	Ongoing. Applied for EPA Education Grant Sept 2015. Implementing projects identified in the PPI. City website and annual PowerPoint presentations updated with current evacuation guidance.
PEA-5	SS-3, G2	Awareness of climate change and environmental impacts	Storm Surge	6-Medium	JP FMHM, JP Ecosystem and Coastal Management, City of Kenner	n/a	An informed public is better able to respond to and protect themselves from climate change and disasters resulting from climate change.		2025	Ongoing. Requested funding through the NDRC Competition to create an educational component around environmental impacts. Beach Sweep twice a year – participated in Beach Sweep along Lake Pontchartrain. Participated in several outreach events including the NOLA Home and Garden Show to help raise public awareness.	Ongoing. Requested funding through the NDRC Competition to create an educational component around environmental impacts. Beach Sweep twice a year – participated in Beach Sweep along Lake Pontchartrain. Participated in several outreach events including the NOLA Home and Garden Show to help raise public awareness.
PEA-6		Implement school-based education program combined with environmental education program	All Hazards	5-Medium	JP FPHM, JP School Board, City of Kenner	n/a	Beginning education programs at a young age will help build an informed populace that better understands how to mitigate risks		2025	New Action	New Action
PEA-7		Develop public postings/displays and put on hazard expositions	All Hazards	5-Medium	JP FPHM, JP Coastal	n/a	Public displays can help push out key messages about what the public can do to reduce risk		2025	New Action	New Action



City of Westwego											
Action ID	Old Action ID and Goals	Description	Hazard(s) Addressed	Priority	Responsible Coordinating Entity	Potential Funding Agency	(B/C) Benefit-Costs (TF) Technical Feasibility	Cost	Anticipated Year of Completion	Implementation Status Update 2020	Implementation Status Update 2021
Preventative											
P-1	F-5, G4	Adopt freeboard	Flood	7-High	City of Westwego	n/a	Provides a margin of safety against unknown flood depths while taking into account sea level rise and subsidence. Can ultimately reduce the amount of flooding a home would experience, lower flood insurance premiums, and provide the community with CRS points which in turn also lowers flood insurance premiums.		2025	Ongoing. Not yet adopted. Still under consideration.	Still under consideration.
P-2	H&TS-4, SS-3, G4	Issue fewer permits for building in vulnerable areas	Hurricane and Tropical Storms, Storm Surge	6-Medium	City of Westwego	n/a	Reduce the localized flooding and roofing problems that would occur with new development. Reduce the number of buildings susceptible to storm surge, thereby, keeping communities safe and damage cost low.		2025	The city has made efforts to reduce the number of building permits issued in vulnerable areas and to try to ensure any construction that takes place in those areas is safe and minimizes risk. However, these efforts will need to continue going forward, so this action will remain in place.	The city has made efforts to reduce the number of building permits issued in vulnerable areas and to try to ensure any construction that takes place in those areas is safe and minimizes risk. However, these efforts will need to continue going forward, so this action will remain in place.
P-3	SS-2, G1	Maintain 100 Year levee protection to ensure continued protection	Storm Surge	6-Medium	SELFPA-E/W, USACE	n/a	Reduce surge damage and cost to homeowner, government, and NFIP.		2025	Ongoing. All of the gates and structures in the hurricane system are exercised by the local levee districts multiple times a year.	Ongoing. All of the gates and structures in the hurricane system are exercised by the local levee districts multiple times a year.
P-4		Update Comprehensive Plan	All Hazards	7-High	City of Westwego	CDBG	Good planning is a key preventative measure and helps reduce the likelihood that new construction will be built in high risk areas without mitigative measures.		2020	New Action	The city does not have a comprehensive plan in place at this time.
P-5		Increase Open Space Areas	Flood	7-High	City of Westwego	n/a	Open spaces such as parks can help provide additional pervious surface areas to allow for infiltration and reduce flooding		2025	New Action	Working on identifying new areas of open space.
P-6		Perform Regular Maintenance of Drainage System	Flood	6-Medium	City of Westwego	JP Drainage	Ensuring drainage systems are maintained can have major impacts as this allows water to be managed in a way that minimizes flooding.		2025	New Action	Ongoing. Maintenance on the canals and pump stations is performed throughout the year.
P-7		Update Capital Improvements Plan	All Hazards	7-High	City of Westwego	JP Capital Projects	A capital improvements plan can help direct funding to the highest priority projects and ensure that projects that reduce risk are being identified		2025	New Action	No update at this time.
Floodplain Management											
FP-1		Evaluate efficacy of future conditions mapping	Flood	5-Medium	JP FPHM, JP GIS	FEMA	Future conditions mapping identifies areas of future risk that may not be suitable for development and therefore can reduce future losses		2025	New Action	CPRA is in the process of updating the Coastal Master Plan which will look at Sea Level Rise and Subsidence to create risk profiles for Coastal Communities
FP-2		Update Stormwater Management Regulations (ex. compensatory storage for new construction, drainage study with new development, program for rain garden/green infrastructure incentives, permeable surface requirements, sewer backup/overflow protection program)	Flood	5-Medium	City of Westwego	FEMA, CWSRLF	Stormwater management regulations can be extremely cost-effective and help manage water in a way that reduces localized flooding which is a major issue in many areas of the parish		2025	New Action	No updates planned at this time.

City of Westwego											
Action ID	Old Action ID and Goals	Description	Hazard(s) Addressed	Priority	Responsible Coordinating Entity	Potential Funding Agency	(B/C) Benefit-Costs (TF) Technical Feasibility	Cost	Anticipated Year of Completion	Implementation Status Update 2020	Implementation Status Update 2021
Property Protection											
PP-1	F-1, G1	Elevate, Acquire, Reconstruct, Relocate or Flood proof private and public structures and infrastructure in flood-prone areas	Flood	7-High	JP FPHM	FEMA, HUD, CPRA, DNR, DEQ	By removing structures from the floodplain, homeowners suffer less mental and physical stress, displacement days, and flood damage. Also, the drain on the NFIP is reduced by a decrease in flood claims.	\$1 B	2020	Ongoing. 498 elevation/recon properties and Rep Loss structures approved since 2015. Pending approval for elevation/recon/floodproof/and onsite green infrastructure for 154 properties.	Ongoing. For elevation/recon and onsite green infrastructure: FMA 2018 - 77 approved properties. FMA 2019 - 165 approved properties. FMA 2020 - 192 pending properties.
PP-2	H&TS-1 G1	Fortify critical infrastructure with storm shutters, upgraded roofs, and generators	Hurricane and Tropical Storms	6-Medium	City of Westwego	FEMA, HUD	Provide extra protection to critical infrastructure from potential wind damage, thus allowing operations to continue during hurricanes and tropical storms.	\$50 M	2025	Ongoing. Created risk profiles for city facilities as part of new plan update.	Ongoing. Will work with the parish to identify structures in need of fortification.
PP-3	T-1, G2	Construct Safe Rooms	Tornadoes	5-Medium	JP FPHM, JUMP	n/a	Provides security and peace of mind, protects residents from tornadoes, and has the potential to increase the value of one's home.		2025	Few safe rooms have been constructed due to feasibility as these would often need to be built in high risk flood zones. However, the parish will continue to evaluate options to build safe rooms and further enhance structural integrity of buildings, especially residences, to reduce wind damage risk.	Finished new EOC building this year.
PP-4	T-2, G4	Harden structures for wind impact	Tornadoes	6-Medium	JP FPHM, JUMP	n/a	Better protect homes from strong winds that could speed recovery after a tornado.		2025	Some structures have been hardened as they have been refurbished in accordance with the building code, ICC and IBC, which currently require 150 mph loads. However, there is still a need for building hardening of additional structures, so this action will remain in place and addressed as needed/feasible.	The city has been encouraging high wind protection in new construction and will continue to evaluate ways to ensure buildings are built to a high level of wind resistance.
Natural Resource Protection											
NRP-1		Improve water quality	Flood, Storm Surge	5-Medium	City of Westwego		Improving water quality has many beneficial consequences including better drinking water and ecosystem conservation as well as impacts to public health and well-being and recreational use		2025	New Action	Participates in MS4 program and conducts regular water sampling.
Structural Projects											
SP-1	F-2, G3	Increase storm water protection management including retention and detention basins	Flood	7-High	City of Westwego	FEMA, HUD, CAP OUTLAY, USACE	By improving drainage in flood prone areas, residents will suffer fewer flooded structures and therefore, less mental and physical stress, displacement days, and flood damage. Also, the drain on the NFIP is reduced by a decrease in flood claims.	\$20 M	2020	Ongoing. Manson Ditch Retention Pond-Phase 1 approved April 2015. Parish has established a Stormwater Mngt Committee to review applicable codes for potential amendment. In 2017, created implementation plan for stormwater Mngt on residential lots and passed legislation approving the use of permeable surfaces for off street parking. Installation of grass guard in Grand Isle. Approximately 194 properties were approved to install green infrastructure for storm water detention modifications and applied for an additional 79 sites in FMA 2018.	No projects planned at this time.

City of Westwego											
Action ID	Old Action ID and Goals	Description	Hazard(s) Addressed	Priority	Responsible Coordinating Entity	Potential Funding Agency	(B/C) Benefit-Costs (TF) Technical Feasibility	Cost	Anticipated Year of Completion	Implementation Status Update 2020	Implementation Status Update 2021
SP-2	F-4, G1	Implement drainage improvement projects in flood-prone areas	Flood	6-Medium	City of Westwego	FEMA, HUD, MILLAGE, CAP OUTLAY	By improving drainage in flood prone areas, residents will suffer fewer flooded structures and therefore, less mental and physical stress, displacement days, and flood damage. Also, the drain on the NFIP is reduced by a decrease in flood claims.	\$500 M	2020	Ongoing. <b>Completed Projects:</b> B&C Canal and Orleans Village (Marrero); Mazoue Ditch Ph 6 (River Ridge); Bonnabel Canal Ph 1, Canal St Canal, and Taft Pump Station (Metairie); Upper Kraak Pump Station Upgrade (Jefferson); Terry Pkwy Ph 3 (Terrytown); Mt. Kennedy (Marrero); Waggaman (Waggaman). <b>Drainage Improvements Under Construction:</b> Manson Ditch Project Phase 1; Rivertown Drainage Project (Kenner); Ave D Ph 6 and Maplewood/Palet (Harvey); Terry Pkwy Ph 4 (Terrytown); W. Metairie at Lester Culvert (Metairie); Westgate Pump Stations; Parish Line Pump Station Pump Addition; 17th street canal widening; Sena Drive Phase 3; Bonnabel Canal Improvements; Pump to Rive for Old Metairie.	No projects planned at this time.
SP-3	F-7, G1	Install increased permanent pumps to alleviate flooding	Flood	4-Low	City of Westwego	F, H, M, CAP	By improving drainage in flood prone areas, residents will suffer fewer flooded structures and therefore, less mental and physical stress, displacement days, and flood damage. Also, the drain on the NFIP is reduced by a decrease in flood claims.	\$100 M	2020	Ongoing. <b>Completed projects:</b> Capital Outlay pumps at the airport; Taft/Turnbull; Pump to the River project. <b>Approved projects:</b> Manson Ditch, Clearview, Maplewood, and Mounes.	No projects planned at this time.
SP-4		Install reservoirs/storage tanks	Flood	5-Medium	City of Westwego	F, H, M, CAP	Reservoirs and storage tanks can provide a means of controlling water flow and volumes to reduce flood risk.		2025	New Action	No projects planned at this time.
SP-5		Channel modifications	Flood	5-Medium	City of Westwego	F, H, M, CAP	Channel modifications can help to control the flow and volume of water and reduce flooding in certain areas		2025	New Action	Not feasible in the city.
<b>Emergency Services</b>											
ES-1		Install hazard warning systems	All Hazards	7-High	City of Westwego	JP EM	Hazard warning systems can save lives and can be installed for reasonable fees		2025	New Action	Coordinate with JP Emergency Management utilizing JP Alert.
ES-2		Carry out shelter operations planning	All Hazards	7-High	City of Westwego	JP EM	Shelters provide citizens with safe refuge before, during, and after hazard events and are critical to protecting life and safety		2025	New Action	Westwego does not operate shelters directly; however, they assist at-risk citizens evacuate to designated shelters.
ES-3		Implement emergency response training and exercises	All Hazards	7-High	JP Emergency Management, City and Police Administrations	JP EM	Training and exercises help ensure responders are prepared and can take action to reduce loss of life and injury during a disaster.		2025	New Action	Participated in the parish annual evacuation exercise.
<b>Public Education and Awareness</b>											
PEA-1	F-3, H&TS-3, G2	Encourage and educate public regarding small-scale flood mitigation projects and small-scale wind mitigation projects homeowners can employ	Flood, Hurricane and Tropical Storms	5-Medium	JP FPHM, JUMP, City of Westwego	FEMA, HUD, PRIV. FUNDS, CPRA	Homeowners will be empowered to protect themselves with low-cost, DIY projects and suffer less flood and wind damage.	\$10 M	2025	Ongoing. Conducted numerous site visits from 2015 to 2018 and provided homeowner with flood proofing options and will continue doing so. Three of these visits resulted in recommendations for small scale mitigation options (2 in 2017 and 1 in 2018). Created residential stormwater handouts that were provided to 100 property owners participating in FMA in 2017.	Ongoing through PPI projects, website, and pamphlets and brochures at City Hall.

**City of Westwego**

Action ID	Old Action ID and Goals	Description	Hazard(s) Addressed	Priority	Responsible Coordinating Entity	Potential Funding Agency	(B/C) Benefit-Costs (TF) Technical Feasibility	Cost	Anticipated Year of Completion	Implementation Status Update 2020	Implementation Status Update 2021
PEA-2	F-6, G2	Encourage the purchase of flood insurance	Flood	7-High	JP FPHM, JUMP, City of Westwego	n/a	Enables homeowners to financially recover from the devastating effects of flooding as quickly as possible. Serves to educate area residents that any homeowner, regardless of location, can purchase flood insurance.		2025	Ongoing. Created specific flood insurance promotion outreach projects as part of the PPI; one of which is the creation of a video by Mayor Shaddinger.	Ongoing. Created specific flood insurance promotion outreach projects as part of the PPI. Implementing the PPI. Video produced featuring the new mayor promoting the purchase of flood insurance will be filmed in the fall of 2021.
PEA-3	F-8, G2	Educate public on not dumping and cleaning catch basins	Flood	6-Medium	JP FPHM, JP Environ, JUMP, City of Westwego	n/a	An informed public is better able to respond to and protect themselves from flooding.		2025	Ongoing. Ongoing through PPI projects.	Ongoing through PPI projects. Working on relaunching the Brooms to Basins interactive Adopt a Catch Basin site.
PEA-4	H&TS-2, SS-1, G2	Educate public on risks, preparedness measures, evacuation procedures, and generator safety	Hurricane and Tropical Storms, Storm Surge	6-Medium	JP EM, JP Fire, JP FPHM, JUMP, City of Westwego	n/a	An informed public is better able to respond to and protect themselves from hurricanes and storm surge.		2025	Ongoing. Applied for EPA Education Grant Sept 2015. Implementing projects identified in PPI.	Ongoing. Implement projects identified in the PPI. Collaborate with unincorporated Jefferson Parish to bus residents to the Alario Center.
PEA-5		Implement school-based education program combined with environmental education program	All Hazards	5-Medium	JP FPHM, JP School Board, City of Westwego	n/a	Beginning education programs at a young age will help build an informed populace that better understands how to mitigate risks		2025	New Action	The Westwego City Council works with local schools for storm drain clean up events.
PEA-6		Develop public postings/displays and put on hazard expositions	All Hazards	5-Medium	JP FPHM, JP Coastal	n/a	Public displays can help push out key messages about what the public can do to reduce risk		2025	New Action	Developing outreach material for distribution.

**Town of Grand Isle**

Action ID	Old Action ID and Goals	Description	Hazard(s) Addressed	Priority	Responsible Coordinating Entity	Potential Funding Agency	(B/C) Benefit-Costs (TF) Technical Feasibility	Cost	Anticipated Year of Completion	Implementation Status Update 2020	Implementation Status Update 2021
<b>Preventative</b>											
P-1	F-5, G4	Adopt freeboard	Flood	7-High	Town of Grand Isle	n/a	Provides a margin of safety against unknown flood depths while taking into account sea level rise and subsidence. Can ultimately reduce the amount of flooding a home would experience, lower flood insurance premiums, and provide the community with CRS points which in turn also lowers flood insurance premiums.		2025	Ongoing	Currently regulate that lowest horizontal member has to meet Base Flood Elevation
P-2		Update Comprehensive Plan	All Hazards	7-High	Town of Grand Isle	CDBG	Good planning is a key preventative measure and helps reduce the likelihood that new construction will be built in high risk areas without mitigative measures.		2020	New Action	Ongoing
P-3		Increase Open Space Areas	Flood	7-High	Town of Grand Isle	n/a	Open spaces such as parks can help provide additional pervious surface areas to allow for infiltration and reduce flooding		2025	New Action	New subdivisions with a total of 375,000 square feet or 60 lots must provide a park with a minimum of 5000 square feet
P-4		Perform Regular Maintenance of Drainage System	Flood	6-Medium	Town of Grand Isle	JP Drainage	Ensuring drainage systems are maintained can have major impacts as this allows water to be managed in a way that minimizes flooding.		2025	New Action	Town employees clean and maintain accessible ditches as needed
P-5		Update Capital Improvements Plan	All Hazards	7-High	Town of Grand Isle	JP Capital Projects	A capital improvements plan can help direct funding to the highest priority projects and ensure that projects that reduce risk are being identified		2025	New Action	No updates at this time.
<b>Floodplain Management</b>											
FP-1		Evaluate efficacy of future conditions mapping	Flood	5-Medium	JP FPHM, JP GIS	FEMA	Future conditions mapping identifies areas of future risk that may not be suitable for development and therefore can reduce future losses		2025	New Action	CPRA is in the process of updating the Coastal Master Plan which will look at Sea Level Rise and Subsidence to create risk profiles for Coastal Communities
FP-2		Update Stormwater Management Regulations (ex. compensatory storage for new construction, drainage study with new development, program for rain garden/green infrastructure incentives, permeable surface requirements, sewer backup/overflow protection program)	Flood	5-Medium	Town of Grand Isle	FEMA, CWSRLF	Stormwater management regulations can be extremely cost-effective and help manage water in a way that reduces localized flooding which is a major issue in many areas of the parish		2025	New Action	No updates at this time.
<b>Property Protection</b>											
PP-1	F-1, SS-3, G1	Elevate, Acquire, Reconstruct, Relocate or Floodproof private and public structures and infrastructure in flood-prone and surge-prone areas	Flood, Storm Surge	7-High	JP FPHM	FEMA, HUD, CPRA, DNR, DEQ	By removing structures from the floodplain and raising structures above the BFE, homeowners suffer less mental and physical stress, displacement days, and flood damage. Also, the drain on the NFIP is reduced by a decrease in flood claims.	\$1 B	2025	Ongoing. 498 elevation/recon properties and Rep Loss structures approved since 2015. Pending approval for elevation/recon/floodproof/and onsite green infrastructure for 154 properties.	Ongoing. For elevation/recon and onsite green infrastructure: FMA 2018 - 77 approved properties. FMA 2019 - 165 approved properties. FMA 2020 - 192 pending properties.

**Town of Grand Isle**

Action ID	Old Action ID and Goals	Description	Hazard(s) Addressed	Priority	Responsible Coordinating Entity	Potential Funding Agency	(B/C) Benefit-Costs (TF) Technical Feasibility	Cost	Anticipated Year of Completion	Implementation Status Update 2020	Implementation Status Update 2021
PP-2	H&TS-1 G1	Fortify critical infrastructure with storm shutters, upgraded roofs, and generators	Hurricane and Tropical Storm	6-Medium	Town of Grand Isle	FEMA, HUD	Provide extra protection to critical infrastructure from potential wind damage, thus allowing operations to continue during hurricanes and tropical storms.	\$50 M	2025	Ongoing. Created risk profiles for town facilities as part of new plan update.	The Town will continue to work with Jefferson Parish to identify structures that may need generators and additional wind protection.
PP-3	H&TS-5 G1	Upgrade and lower water lines to 20 ft below the water surface	Hurricane and Tropical Storm	5-Medium	JP Water	FEMA, HUD	This would allow uninterrupted water service for residents living in the Town.		2025	Ongoing. Requested funding to continue it through the NDRC Competition but NDRC did not get funded. Trying to secure funding.	Preparing to redo the Lafitte to Grand Isle water line; expecting new line from Lafourche
PP-4	T-1, G2	Construct Safe Rooms	Tornadoes	5-Medium	JP FPHM, Town of Grand Isle	n/a	Provides security and peace of mind, protects residents from tornadoes, and has the potential to increase the value of one's home.		2025	Few safe rooms have been constructed due to feasibility as these would often need to be built in high risk flood zones. However, the parish will continue to evaluate options to build safe rooms and further enhance structural integrity of buildings, especially residences, to reduce wind damage risk.	None planned at this time.
PP-5	T-2, G4	Harden structures for wind impact	Tornadoes	6-Medium	JP FPHM, Town of Grand Isle	n/a	Better protect homes from strong winds that could speed recovery after a tornado.		2025	Some structures have been hardened as they have been refurbished in accordance with the building code, ICC and IBC, which currently require 150 mph loads. However, there is still a need for building hardening of additional structures, so this action will remain in place and addressed as needed/feasible.	Ongoing. New construction and substantial improvements need to meet Code.
<b>Natural Resource Protection</b>											
NRP-1	H&TS-4 G3	Use debris (fallen trees) after a strong hurricane for coastal restoration (like Christmas tree project)	Hurricane and Tropical Storm	6-Medium	JP Coastal, Town of Grand Isle	CPRA, JP	Better coastal protection could help to prolong the presence of the coastline and continue to provide protection against storms as well as economic gain from tourist destinations.		2025	Ongoing. No hurricanes between 2015 to 2018 for debris.	Will plan logistics for this project in 2022.
NRP-2	SS-2, G1, G3	Increase coastal protection	Storm Surge	7-High	GIILD	CPRA, GOMESA, RESTORE	Better coastal protection could help to prolong the presence of the coastline and continue to provide protection against storms as well as economic gain from tourist destinations.		2025	Ongoing. Fifi Island Restoration Rock Breakwater Extension has been 60% completed. An additional \$10M is required to complete the project. Plan for protective barrier known as the Gulfside (50% funded at \$30M) and Bayside Shoreline Breakwaters (\$6.5M allocated from CPRA and the balance by GOMESA Bonds) in Grand Isle is in comment period. Caminada Marsh Creation Increment 2 completed. The Bayside Segmented Breakwater project is underway. Following the approval of the JP Multiyear Plan by the Dept. of Treasury, JP will apply for the first 2 rounds of RESTORE dollars and build 8 of the 16 breakwaters.	Through the 2022 Capital Outlay bill additional funds were provided to complete the Grand Isle Back Bay Breakwaters.
NRP-3	SS-4, G1, G3	Natural Shoreline/ Dune Restoration	Storm Surge	7-High	GIILD	CPRA, GOMESA, RESTORE	Better coastal protection could help to prolong the presence of the coastline and continue to provide protection against storms as well as economic gain from tourist destinations.		2025	Ongoing. Fifi Island Restoration Rock Breakwater Extension has been 60% completed. An additional \$10M is required to complete the project. Plan for protective barrier known as the Gulfside (50% funded at \$30M) and Bayside Shoreline Breakwaters (\$6.5M allocated from CPRA and the balance by GOMESA Bonds) in Grand Isle is in comment period. Caminada Marsh Creation Increment 2 completed. The Bayside Segmented Breakwater project is underway. Following the approval of the JP Multiyear Plan by the Dept. of Treasury, JP will apply for the first 2 rounds of RESTORE dollars and build 8 of the 16 breakwaters.	Also in late 2021 CPRA completed the beach nourishment and Gulf Side Breakwaters for a portion of Grand Isle.
NRP-4		Improve water quality	Flood, Storm Surge	5-Medium	JP Water, JP Environmental		Improving water quality has many beneficial consequences including better drinking water and ecosystem conservation as well as impacts to public health and well-being and recreational use		2025	New Action	Conservation activities delayed due to COVID.

Town of Grand Isle											
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Structural Projects											
SP-1	F-2, G3	Increase storm water protection management including retention and detention basins	Flood	7-High	Town of Grand Isle	FEMA, HUD, CAP OUTLAY, USACE	By improving drainage in flood prone areas, residents will suffer fewer flooded structures and therefore, less mental and physical stress, displacement days, and flood damage. Also, the drain on the NFIP is reduced by a decrease in flood claims.	\$20 M	2020	The town has taken several measures to protect against stormwater flooding. However, there is still action to take including the Queen Bess subdivision to Walnut pump station and adding a new pump station along the back side of the island.	The town has designed several back pump station and created a small Back Bay Levee in fall of 2021.
SP-2	F-4, G1	Implement drainage improvement projects in flood-prone areas	Flood	6-Medium	Town of Grand Isle	FEMA, HUD, MILLAGE, CAP OUTLAY	By improving drainage in flood prone areas, residents will suffer fewer flooded structures and therefore, less mental and physical stress, displacement days, and flood damage. Also, the drain on the NFIP is reduced by a decrease in flood claims.	\$500 M	2020	The town has taken several measures to protect against stormwater flooding. However, there is still action to take including the Queen Bess subdivision to Walnut pump station and adding a new pump station along the back side of the island.	The town is working to improve storm water drainage along the roadway and areas near the Bay.
SP-3		Install reservoirs/storage tanks	Flood	5-Medium	Town of Grand Isle	F, H, M, CAP	Reservoirs and storage tanks can provide a means of controlling water flow and volumes to reduce flood risk.		2025	New Action	Not feasible in the town
SP-4		Channel modifications	Flood	5-Medium	Town of Grand Isle	F, H, M, CAP	Channel modifications can help to control the flow and volume of water and reduce flooding in certain areas		2025	New Action	None planned at this time.
Emergency Services											
ES-1		Install hazard warning systems	All Hazards	7-High	JP Emergency Management	JP EM	Hazard warning systems can save lives and can be installed for reasonable fees		2025	New Action	No warning systems in place within the Town but help to get people out.
ES-2		Carry out shelter operations planning	All Hazards	7-High	JP Emergency Management	JP EM	Shelters provide citizens with safe refuge before, during, and after hazard events and are critical to protecting life and safety		2025	New Action	Too isolated to open shelters on the Island.
ES-3		Implement emergency response training and exercises	All Hazards	7-High	JP Emergency Management, Town and Police Administrations	JP EM	Training and exercises help ensure responders are prepared and can take action to reduce loss of life and injury during a disaster.		2025	New Action	The Town does not implement any training exercises at this time.
Public Education and Awareness											
PEA-1	F-3, H&TS-3, G2	Encourage and educate public regarding small-scale flood mitigation projects and small-scale wind mitigation projects homeowners can employ	Flood, Hurricane and Tropical Storm	5-Medium	JP FPHM, Town of Grand Isle	FEMA, HUD, PRIV. FUNDS, CPRA	Homeowners will be empowered to protect themselves with low-cost, DIY projects and suffer less flood and wind damage.	\$10 M	2025	Ongoing. Conducted numerous site visits from 2015 to 2018 and provided homeowner with flood proofing options and will continue doing so. Three of these visits resulted in recommendations for small scale mitigation options (2 in 2017 and 1 in 2018). Created residential stormwater handouts that were provided to 100 property owners participating in FMA in 2017.	Miss Marsha hazard reduction education materials will be dispersed in Grand Isle
PEA-2	F-6, G2	Encourage the purchase of flood insurance	Flood	7-High	JP FPHM, Town of Grand Isle	n/a	Enables homeowners to financially recover from the devastating effects of flooding as quickly as possible. Serves to educate area residents that any homeowner, regardless of location, can purchase flood insurance.		2025	Ongoing. Created specific flood insurance promotion outreach projects as part of the PPI.	Ongoing but too cost-prohibitive for many of the residents
PEA-3	H&TS-2, SS-1, G2	Educate public on risks, preparedness measures, evacuation procedures, and generator safety	Hurricane and Tropical Storm, Storm Surge	6-Medium	JP EM, JP Fire, JP FPHM, Town of Grand Isle	n/a	An informed public is better able to respond to and protect themselves from hurricanes and storm surge.		2025	Ongoing. Projects have been identified in the PPI. Applied for EPA Education Grant Sept 2015.	Miss Marsha hazard reduction education materials will be dispersed in Grand Isle

**Town of Grand Isle**

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PEA-4		Implement school-based education program combined with environmental education program	All Hazards	5-Medium	JP FPHM, JP School Board, Town of Grand Isle	n/a	Beginning education programs at a young age will help build an informed populace that better understands how to mitigate risks		2025	New Action	Grand Isle School received a Grant and hosted a Smithsonian Waterways display to educate visitors and residents about the importance of water for daily life and the hazard potential of water.
PEA-5		Develop public postings/displays and put on hazard expositions	All Hazards	5-Medium	JP FPHM, JP Ecosystem and Coastal Management	n/a	Public displays can help push out key messages about what the public can do to reduce risk		2025	New Action	JP ECM working with school system to consider postings and displays about natural hazards



Town of Jean Lafitte											
Action ID	Old Action ID and Goals	Description	Hazard(s) Addressed	Priority	Responsible Coordinating Entity	Potential Funding Agency	(B/C) Benefit-Costs (TF) Technical Feasibility	Cost	Anticipated Year of Completion	Implementation Status Update 2020	Implementation Status Update 2021
Preventative											
P-1	F-5, G4	Adopt freeboard	Flood	7-High	Town of Jean Lafitte	n/a	Provides a margin of safety against unknown flood depths while taking into account sea level rise and subsidence. Can ultimately reduce the amount of flooding a home would experience, lower flood insurance premiums, and provide the community with CRS points which in turn also lowers flood insurance premiums.		2025	Complete. Adopted 2 ft freeboard. It is anticipated that a stricter standard may be adopted for freeboard going forward, so this action will remain in place.	Complete. Adopted 2 ft freeboard. It is anticipated that a stricter standard may be adopted for freeboard going forward, so this action will remain in place.
P-2		Update Comprehensive Plan	All Hazards	7-High	Town of Jean Lafitte	CDBG	Good planning is a key preventative measure and helps reduce the likelihood that new construction will be built in high risk areas without mitigative measures.		2020	New Action	Completion of 2 CPEX Annual Reports: 1. Resilient Jean Lafitte: Flood Preparedness Toolkit 2. Resilient Jean Lafitte: Flood Emergency Preparedness Plan Available at: <a href="https://www.cpex.org/resources">https://www.cpex.org/resources</a>
P-3		Increase Open Space Areas	Flood	7-High	Town of Jean Lafitte	n/a	Open spaces such as parks can help provide additional pervious surface areas to allow for infiltration and reduce flooding		2025	New Action	Incorporating GIS to analyze availability of open space areas.
P-4		Perform Regular Maintenance of Drainage System	Flood	6-Medium	Town of Jean Lafitte	JP Drainage	Ensuring drainage systems are maintained can have major impacts as this allows water to be managed in a way that minimizes flooding.		2025	New Action	Pumps are maintained on a weekly basis.
P-5		Update Capital Improvements Plan	All Hazards	7-High	Town of Jean Lafitte	JP Capital Projects	A capital improvements plan can help direct funding to the highest priority projects and ensure that projects that reduce risk are being identified		2025	New Action	No update at this time.
Floodplain Management											
FP-1		Evaluate efficacy of future conditions mapping	Flood	5-Medium	JP FPHM, JP GIS	FEMA	Future conditions mapping identifies areas of future risk that may not be suitable for development and therefore can reduce future losses		2025	New Action	CPRA is in the process of updating the Coastal Master Plan which will look at Sea Level Rise and Subsidence to create risk profiles for Coastal Communities
FP-2		Update Stormwater Management Regulations (ex. compensatory storage for new construction, drainage study with new development, program for rain garden/green infrastructure incentives, permeable surface requirements, sewer backup/overflow protection program)	Flood	5-Medium	Town of Jean Lafitte	FEMA, CWSRLF	Stormwater management regulations can be extremely cost-effective and help manage water in a way that reduces localized flooding which is a major issue in many areas of the parish		2025	New Action	Under consideration.

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Property Protection											
PP-1	F-1, SS-3, G1	Elevate, Acquire, Reconstruct, Relocate or Floodproof private and public structures and infrastructure in flood-prone and surge-prone areas	Flood, Storm Surge	7-High	JP FPHM	FEMA, HUD, CPRA, DNR, DEQ	By removing structures from the floodplain and raising structures above the BFE, homeowners suffer less mental and physical stress, displacement days, and flood damage. Also, the drain on the NFIP is reduced by a decrease in flood claims.	\$1 B	2025	Ongoing. 498 elevation/recon properties and Rep Loss structures approved since 2015. Pending approval for elevation/recon/floodproof/and onsite green infrastructure for 154 properties.	Ongoing. For elevation/recon and onsite green infrastructure: FMA 2018 - 77 approved properties. FMA 2019 - 165 approved properties. FMA 2020 - 192 pending properties.
PP-2	H&TS-1 G1	Fortify critical infrastructure with storm shutters, upgraded roofs, and generators	Hurricane and Tropical Storms	6-Medium	Town of Jean Lafitte	FEMA, HUD	Provide extra protection to critical infrastructure from potential wind damage, thus allowing operations to continue during hurricanes and tropical storms.	\$50 M	2025	Ongoing. Town of Lafitte Town Hall wind retrofit project was approved Sept 2015 and is underway. Created risk profiles for town facilities as part of new plan update.	Wind retrofit project is complete
PP-3	H&TS-6 G1	Emergency generators at sewer treatment plants and lift stations	Hurricane and Tropical Storms	5-Medium	Town of Jean Lafitte, JP Sewer	FEMA, HUD	Provide continuous source of power during power outages to keep homes protected from flood waters and sewer backup.		2025	Ongoing. Rosethorn Sewer Project proposed in NDRC Competition, but NDRC did not get funded. Seeking other funds.	Ongoing. Rosethorn Sewer Project is out for bid.
PP-4	T-1, G2	Construct Safe Rooms	Tornadoes	5-Medium	JP FPHM, JUMP, Town of Jean Lafitte	n/a	Provides security and peace of mind, protects residents from tornadoes, and has the potential to increase the value of one's home.		2025	Few safe rooms have been constructed due to feasibility as these would often need to be built in high risk flood zones. However, the parish will continue to evaluate options to build safe rooms and further enhance structural integrity of buildings, especially residences, to reduce wind damage risk.	Current safe rooms include the EOC, JP Government Building, and the Multipurpose Center.
PP-5	T-2, G4	Harden structures for wind impact	Tornadoes	6-Medium	JP FPMHM, JUMP, Town of Jean Lafitte	n/a	Better protect homes from strong winds that could speed recovery after a tornado.		2025	Some structures have been hardened as they have been refurbished in accordance with the building code, ICC and IBC, which currently require 150 mph loads. However, there is still a need for building hardening of additional structures, so this action will remain in place and addressed as needed/feasible.	Many structures have been constructed in compliance with the current building codes and the town will continue to make sure that this takes place going forward.
Natural Resource Protection											
NRP-1	H&TS-4 G1	Barrier construction along bayous to prevent erosion	Hurricane and Tropical Storms	4-Low	JP FPHM, USACE	USACE	Better coastal protection could help to prolong the presence of the coastline and continue to provide protection against storms as well as economic gain from tourist destinations.		2025	Ongoing. Implementing 7 to 8 foot of tidal surge levees – 10 total levees. Fisher Basin Phase I is complete and Phase II will go out for bids in Fall 2018. Rosethorne Basin will go out for bids early 2019. The other 8 tidal surge levees are all under design. Design will be complete on some in early 2019 and construction will follow.	Ongoing. Implementing 7 to 8 foot of tidal surge levees – 10 total levees. Fisher Basin Phase 1 & 2 is complete. Rosethorne bid has been accepted and construction will begin in August. Goose Bayou will go out for bid in late 2021. The other 8 tidal surge levees are all under design.
NRP-2	SS-2, G1, G3	Build back marsh	Storm Surge	6-Medium	JP Coastal, JP FPHM	FHWA, FWS	Replenish the first lines of defense against hurricanes and surge. This will protect homes from catastrophic levels of damage.		2025	Ongoing. Land Bridge in Lafitte is underway. Funding approved for Phase 2 design and permit is pending. Lower Lafitte Shoreline Stabilization complete in 2017.	Permit is complete. Construction begins June 2022.
NRP-3		Improve water quality	Flood, Storm Surge	5-Medium	JP Water, JP Environmental		Improving water quality has many beneficial consequences including better drinking water and ecosystem conservation as well as impacts to public health and well-being and recreational use		2025	New Action	Planning on conducting a storm drain marking event in the fall 2021. Multiple plantings in 2020 and 2021 that prevent soil erosion resulting in less turbidity in the water which improves water quality.

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<b>Structural Projects</b>											
SP-1	F-2, G3	Increase storm water protection management including retention and detention basins	Flood	7-High	Town of Jean Lafitte	FEMA, HUD, CAP OUTLAY, USACE	By improving drainage in flood prone areas, residents will suffer fewer flooded structures and therefore, less mental and physical stress, displacement days, and flood damage. Also, the drain on the NFIP is reduced by a decrease in flood claims.	\$20 M	2025	Ongoing. Implementing 7 to 8 foot of tidal surge levees – 10 total levees. Fisher Basin Phase I is complete and Phase II will go out for bids in Fall 2018. Rosethorne Basin will go out for bids early 2019. The other 8 tidal surge levees are all under design. Design will be complete on some in early 2019 and construction will follow.	Ongoing. Implementing 7 to 8 foot of tidal surge levees – 10 total levees. Fisher Basin Phase 1 & 2 is complete. Rosethorne bid has been accepted and construction will begin in August. Goose Bayou will go out for bid in late 2021. The other 8 tidal surge levees are all under design.
SP-2	F-4, G1	Implement drainage improvement projects in flood-prone areas	Flood	6-Medium	Town of Jean Lafitte	FEMA, HUD, MILLAGE, CAP OUTLAY	By improving drainage in flood prone areas, residents will suffer fewer flooded structures and therefore, less mental and physical stress, displacement days, and flood damage. Also, the drain on the NFIP is reduced by a decrease in flood claims.	\$500 M	2020	Ongoing. The Town implemented over 7 million dollars in 2015. The Town implemented \$3 million of additional drainage projects during 2017. An additional \$2.5 million will be implemented in 2018.	Jean Lafitte, Oak Drive, and Church Street drainage projects complete. Four projects under design in the town.
SP-3	F-7, G1	Install increased permanent pumps to alleviate flooding	Flood	4-Low	Town of Jean Lafitte	F, H, M, CAP	By improving drainage in flood prone areas, residents will suffer fewer flooded structures and therefore, less mental and physical stress, displacement days, and flood damage. Also, the drain on the NFIP is reduced by a decrease in flood claims.	\$100 M	2020	Ongoing. Completed projects: Capital Outlay pumps at the airport; Taft/Turnbull; Pump to the River project. Approved projects: Manson Ditch, Clearview, Maplewood, and Mounes.	Ongoing, no update at this time.
<b>Emergency Services</b>											
ES-1	H&TS-5 G1	Elevate evacuation routes	Hurricane and Tropical Storms	5-Medium	Town of Jean Lafitte	DOTD	Alleviates the need to close evacuation routes due to road flooding and helps homeowners seek safety quicker.		2025	Ongoing. Plans are being discussed.	Ongoing. Plans are being discussed.
ES-2		Install hazard warning systems	All Hazards	7-High	Town of Jean Lafitte, JP Emergency Management	JP EM	Hazard warning systems can save lives and can be installed for reasonable fees		2025	New Action	Coordinate with JP Emergency Management utilizing JP Alert.
ES-3		Carry out shelter operations planning	All Hazards	7-High	Town of Jean Lafitte, JP Emergency Management	JP EM	Shelters provide citizens with safe refuge before, during, and after hazard events and are critical to protecting life and safety		2025	New Action	Jean Lafitte does not operate shelters directly; however, they assist at-risk citizens evacuate to designated shelters.
ES-4		Implement emergency response training and exercises	All Hazards	7-High	JP Emergency Management, Town and Police Administrations	JP EM	Training and exercises help ensure responders are prepared and can take action to reduce loss of life and injury during a disaster.		2025	New Action	Participate in both parish and town exercises annually.
<b>Public Education and Awareness</b>											
PEA-1	F-3, H&TS-3, G2	Encourage and educate public regarding small-scale flood mitigation projects and small-scale wind mitigation projects homeowners can employ	Flood, Hurricane and Tropical Storms	5-Medium	JP FPHM, JUMP, Town of Jean Lafitte	FEMA, HUD, PRIV. FUNDS, CPRA	Homeowners will be empowered to protect themselves with low-cost, DIY projects and suffer less flood and wind damage.	\$10 M	2025	Ongoing. Presented enviroscape program to 3 <sup>rd</sup> grade classes in Lafitte on 9/18/15.	Ongoing. Town enforces wind load regulations on all new construction. Ongoing outreach as part of the multijurisdictional Program for Public Information (PPI).

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PEA-2	F-6, G2	Encourage the purchase of flood insurance	Flood	7-High	JP FPHM, JUMP, Town of Jean Lafitte	n/a	Enables homeowners to financially recover from the devastating effects of flooding as quickly as possible. Serves to educate area residents that any homeowner, regardless of location, can purchase flood insurance.		2025	Ongoing. Created specific flood insurance promotion outreach projects as part of the PPI; one of which is the creation of a video by Mayor Kerner.	Ongoing. Created specific flood insurance promotion outreach projects as part of the PPI. Implementing the PPI. Video produced featuring the town mayor promoting the purchase of flood insurance was published on the town website.
PEA-3	H&TS-2, SS-1, G2	Educate public on risks, preparedness measures, evacuation procedures, and generator safety	Hurricane and Tropical Storms, storm Surge	6-Medium	JP EM, JP Fire, JP FPHM, JUMP, Town of Jean Lafitte	n/a	An informed public is better able to respond to and protect themselves from hurricanes and storm surge.		2025	Ongoing. Applied for EPA Education Grant Sept 2015. Implementing projects identified in PPI.	Ongoing. Implement projects identified in the PPI. Collaborate with unincorporated Jefferson Parish to bus residents to evacuation shelters.
PEA-4		Implement school-based education program combined with environmental education program	All Hazards	5-Medium	JP FPHM, JP School Board, Town of Jean Lafitte	n/a	Beginning education programs at a young age will help build an informed populace that better understands how to mitigate risks		2025	New Action	Winner of district and state 2021 Cleanest City Contest. Implement projects identified in the multijurisdictional Program for Public Information (PPI). Ongoing gardening project with schools.
PEA-5		Develop public postings/displays and put on hazard expositions	All Hazards	5-Medium	JP FPHM, JP Coastal	n/a	Public displays can help push out key messages about what the public can do to reduce risk		2025	New Action	Developing outreach materials for distribution.