2017

THE PONTCHARTRAIN LEVEE DISTRICT

PROGRESS REPORT

Federally Funded Projects

- LAKE PONTCHARTRAIN AND VICINITY(LPV), HURRICANE AND STORM DAMAGE RISK REDUCTION SYSTEM (HSDRRS) PROJECT, ST. CHARLES PARISH
- WEST SHORE LAKE PONTCHARTRAIN, HURRICANE AND STORM DAMAGE RISK REDUCTION SYSTEM (HSDRRS) PROJECT, ST. CHARLES, ST. JOHN THE BAPTIST, AND ST JAMES PARISHES

Locally Funded Projects

- LAUREL RIDGE LEVEE EXTENSION PROJECT, ASCENSION PARISH
- ST. JAMES-ASCENSION STORM SURGE FLOOD PROTECTION PROJECT
- BAYOU CONWAY AND PANAMA CANAL DRAINAGE IMPROVEMENT PROJECT, ASCENSION AND ST. JAMES PARISHES
- AMITE RIVER DIVERSION CANAL WEIR REHABILITATION PROJECT, ASCENSION PARISH
- EAST BANK URBAN FLOOD CONTROL FEASIBILITY STUDY, ST. CHARLES PARISH
- HURRICANE PROTECTION LEVEE SHORELINE ENHANCEMENT AND LABRANCHE WETLANDS RESTORATION PROJECT, ST. CHARLES PARISH
- LABRANCHE WETLANDS RESTORATION FRESH WATER DIVERSION PROJECT, ST. CHARLES PARISH
- LABRANCHE WETLANDS RESTORATION SALINITY CONTROL STRUCTURE PROJECT, ST. CHARLES PARISH

March, 2017

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Pontchartrain Levee District Board of Commissioners

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Steven C. Wilson, President
At-Large

Blaine J. Sheets., Vice President
Representing Canadian National Railroad

Henry N. Baptiste
Representing East Baton Rouge Parish

Allen J. St. Pierre, Sr.
Representing St. John the Baptist Parish

Percy Hebert, Jr.
Representing Iberville Parish

Ricky Bosco
Representing St. Charles Parish

Jerry Savoy
Representing Ascension Parish

Monica Salins Gorman
Executive Director

Leonard J. Wilson, Jr.
Representing Canadian National Railroad

Mel D. Bush
Board Secretary

Senecca D. Boudreaux
Representing St. James Parish

Dwight D. Poirrier
Special Counsel

Mission

- To maintain the existing levee systems in a condition that will ensure their integrity and capability to withstand river stages and hurricane tidal surges, as anticipated by their design and condition;
- To improve, by construction or supporting construction by others, of new or enhanced levels of protection as design parameters change or higher levels of protection are authorized; and
- To anticipate weaknesses in the system as and before they develop, and to respond actively with necessary emergency measures when the levees are being subjected to river stages or hurricane tidal surges that would cause flooding within the jurisdiction of the Pontchartrain Levee District.

Pontchartrain Levee District

History of the Pontchartrain Levee District

The Pontchartrain Levee District (PLD) was created by the legislature in 1895. At that time, it also included the Baton Rouge Front Levee, and until 1979, it encompassed what is now the East Jefferson Levee District. The PLD headquarters is located in Lutcher, La., and the maintenance shop is located at 9620 Highway 44, in the community of Union, La., two miles downstream from the Sunshine Bridge. Today, within the Pontchartrain Levee District's jurisdiction, are 115 miles of levee along the east bank of Mississippi River, and 10 miles of hurricane protection levee in St. Charles Parish. The Pontchartrain Levee District extends from Baton Rouge to Kenner, La., at the St. Charles Parish line, and runs north from the Mississippi River to reach the Amite River and Lakes Pontchartrain and Maurepas. Portions of six parishes on the east bank of the Mississippi River are included in the Pontchartrain Levee District including: East Baton Rouge, Iberville, Ascension, St. James, St. John the Baptist, and St. Charles Parishes.

The Board of Commissioners of the Pontchartrain Levee District is currently comprised of nine (9) board members, consisting of one member from each of the six parishes, two additional board members representing the Canadian National Railroad Council, and an at-large member.

The PLD works closely with the Louisiana Coastal Protection and Restoration Authority (CPRA), the U.S. Army Corps of Engineers (Corps) and formerly with Louisiana Department of Transportation and Development (DOTD) to promote and support industrial action and expansion through a program that grants a "no objection" statement to proposed operations that may have an effect on the integrity of the levee system and are compatible with flood control such as the construction of structures, roadways, and pipelines.

The Board of Commissioners is vested with the control and responsibility for assuring the proper monitoring of levees, structures, canals, and related improvements throughout the district. The Commissioners attend one regular monthly meeting, along with various special and committee meetings.

The PLD, under the direction of the CPRA and the Corps and acting as its local agent, is responsible for the performance of ordinary maintenance and repair of the levee system, policing to guard against damages to the levee and related structures, and to ensure the integrity of the levee system. The PLD keeps an accurate account of the finances, periodically examines and reviews financial transactions before approving expenditures, and adopts an operating budget. During all times, the PLD patrols the levee system and interrupts operations on or near levees which may be detrimental to the integrity of the flood protection levee.

The entire levee system within the Pontchartrain Levee District was designed and built by the U.S. Army Corps of Engineers. The PLD, in its authority to maintain the integrity of the levee, cannot allow any work, any activity, or any alteration to the design of said levees without the approval and consent from the CPRA, DOTD and the Corps. DOTD is consulted because of the highways that run along the levee and specific DOTD right-of-ways, and the Corps is consulted because as designers and constructors of the levees, they have the ultimate authority over such a system

Pontchartrain Levee District

Facts and Statistics

The Pontchartrain Levee District's current budget is derived principally from a 3.52 mils ad valorem tax on the six-parish area, and from a limited amount of interest and royalties. Of the Pontchartrain Levee District's (PLD) projected expenditures for FY 2016-2017, a total of 75% is spent on levee maintenance. There are 46 classified employees, an executive director, an executive assistant to the board, and a board secretary employed by the PLD.

The PLD conservatively estimates that its levees protect $1.2 to $1.5 billion in assessed taxable property and improvements, as well as highways, bridges, airports, schools, courthouses, and parks. The PLD protects an estimated 500,000 people within its six-parish jurisdiction, and incorporates the primary evacuation routes for 1.1 million people from the southeast (Greater New Orleans), and an additional 300,000 people from the southwest via routes U.S. 61, U.S. 90, and Interstates 10 and 310.

The Corps is responsible for levee construction and related works under the federal Mississippi River & Tributaries Flood Control Project (MR&T). The PLD, as a local assuring agency, works with the Corps to furnish rights-of-way and maintain levees, canals and caving banks. The New Orleans District of the Corps of Engineers continues to work toward completion of the MR&T Project by awarding contracts for levee enlargements. These projects are financed through federal appropriations and are completed as part of a total upgrading of the levee system. Bank caving is being solved by a sophisticated "revetment program." Completion of the MR&T Project, which began in 1928, depends solely on the availability of federal funds appropriated in the yearly federal budget.

The PLD is the local sponsor for the projects referenced herein. Currently, there are projects in each of the six parishes comprising the PLD's jurisdiction. As presented in more detail throughout this report, ongoing feasibility studies are underway for many projects, some of which are federally authorized, and many where the PLD has assumed full responsibility at the local level. Additionally, several projects are currently under construction, which when completed, will provide the East Bank communities of St. Charles Parish with increased protection from storm induced flooding and rainfall events.

The total cost of these projects is estimated to be in excess of $750,000,000. The PLD is confident that the findings and recommendations in the ongoing studies will establish the forward path for future construction of critical drainage, coastal restoration, hurricane protection and flood risk reduction projects. An integral part of several of the local studies includes the incorporation of recreational features which provide economic opportunities and a better quality of life for the citizens residing on the east side of the Mississippi River in the Parishes of St. Charles, St. John the Baptist, St. James, Ascension, Iberville and East Baton Rouge. The PLD appreciates the interest and support of the Congressional Delegation, the Corps, the CPRA, and various state and local government with regard to these projects.

Pontchartrain Levee District

Ongoing Feasibility Studies (Federal Participation)

- East Bank Urban Flood Control Feasibility Study, St. Charles Parish

Ongoing Feasibility Studies (Local Participation)

- Lake Pontchartrain Shoreline Enhancement and LaBranche Wetlands Restoration Project, St. Charles Parish

Projects Currently under Design or Construction (Local Participation)

- Laurel Ridge Levee Extension Project, Ascension Parish
- LaBranche Wetlands Restoration Salinity Control Structure Project, St. Charles Parish

Projects Currently under Design or Construction (Federally Authorized)

- Lake Pontchartrain and Vicinity (LPV) HSDRRS Project, St. Charles Parish
- West Shore Lake Pontchartrain HSDRRS Project, St. Charles, St. John the Baptist, and St. James Parishes
- St. Gabriel Levee Enlargement Project, Iberville Parish

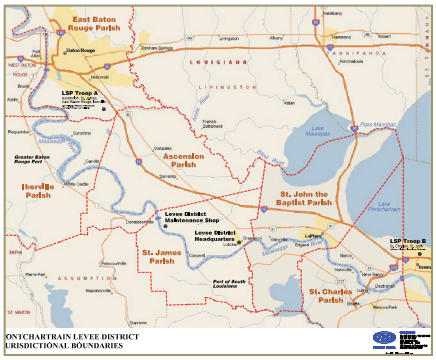
Project Construction Complete (Local Funds pending completion of the East Bank Urban Flood Control Study)

Cross Bayou Pump Station, St. Charles Parish

The Cross Bayou Pump Station is the 2nd of 4 or 5 pumps to be constructed with local funding while being evaluated in the East Bank Urban Flood Control Study. In 2004, construction of the Bayou Trepagnier Pump Station along the Lake Pontchartrain, LA and Vicinity Hurricane Protection Project in St. Charles Parish was completed at a cost of $8,500,000. The Cross Bayou Pump Station, at a cost of $18,800,000, was constructed with PLD, Shell Motiva, Shell Chemical and Statewide Flood Control Program funds. Following the feasibility study, the PLD will pursue federal authorization for this project along with Corps credit for the 2 pumps constructed with local funds.

While the PLD is embarking on projects totaling $750,000,000, there are continuous efforts associated with levee maintenance, levee drainage, borrow-pit drainage, and the maintenance and clearing of rights-of-way along the mainline Mississippi River levee and a ten-mile hurricane protection levee located on the East Bank of St. Charles Parish. All of the appurtenances within the St. Charles Parish Hurricane Protection Levee including flood control structures, floodwalls and the Bayou Trepagnier Pump Station are maintained and operated by St. Charles Parish. The PLD does not have the manpower or finances to assume this responsibility.

Pontchartrain Levee District



PLD supports the Corps FY 2017 appropriations request for Mississippi River and Tributaries (MR&T) and Operations and Maintenance (O&M) as outlined below.

MR&T (FY 2017) **Total $10,100,000** (Presidents budget $10,100,000, additional work plan amount $0).

Funding for PLD $750,000 (Construction of St. Gabriel Levee Lift).

LA Congressional Districts 1, 2, 3, 5 and 6

FY 2017 funding will be used for supervision, administration, and engineering during construction of the ongoing St. Gabriel Levee lift construction contract. In addition, FY 2017 funding will be used for engineering and design and environmental investigations for deficient levee sections within the PLD.

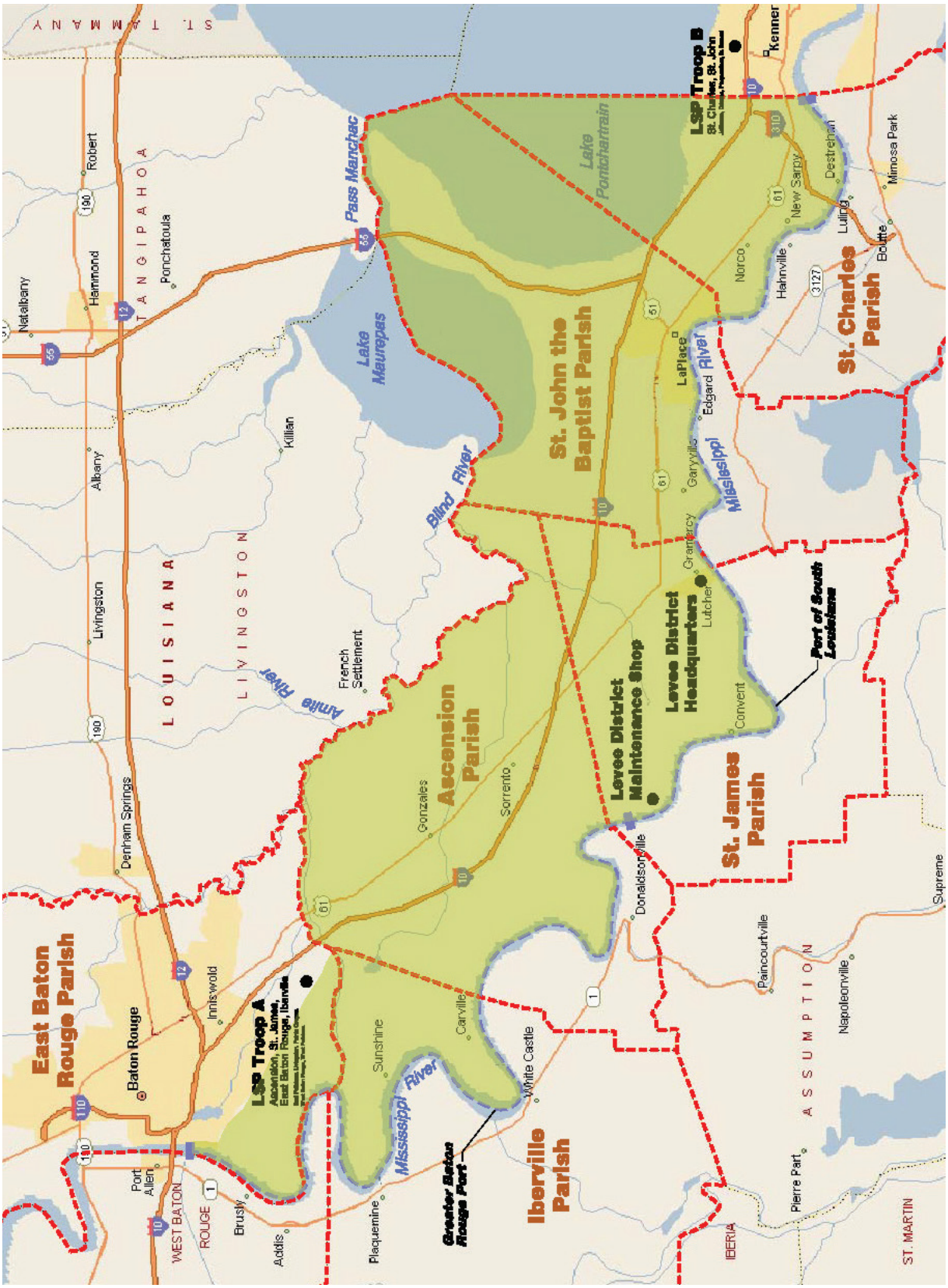
O&M (FY 2017)

ICW MR&T = $1,100,000

MRL Maintenance = $21,600,000

LA Congressional Districts 1, 2, 3, 4, 5, 6 and 7

Portions of this funding will be used for permit reviews, O&M levee inspections, Levee Safety Program and National Levee Datum support and instrumentation within PLD.



PLD Jurisdictional Boundaries

Lake Pontchartrain, Louisiana and Vicinity (LPV) Hurricane Protection Project
North of Airline Highway, St. Charles Parish
Approved and Pending Project Credits and PLD Cash Contributions
February 2017

Based on a 2016 interim accounting of the Lake Pontchartrain, Louisiana and Vicinity (LPV), Hurricane Protection Project as conducted by the Corps of Engineers (Corps), the Pontchartrain Levee District (PLD) has made excess cash contributions to the Corps of $6.7 million. Additionally, PLD has accumulated project credits (Corps approved and pending) of $17.1 million. PLD is seeking appropriations for excess cash contributions and accumulated project credits to be used as a funding source for other federal and local projects within PLD's six parish jurisdiction.

Description	Approved for Credit
Corps Approved Project Credits -Project Management and Lands, Easements,	
Rights of Way, Relocations and Disposal Areas (LERRD's)	$10,579,810.39
Project Credits Pending Corps Approval-Project Management, LERRD's and Construction	$6,529,682.37
Total Project Credits - Approved and Pending	$17,109,492.76
PLD's 30% Share of Project Costs	$20,855,479.05
PLD's Actual Cash Contributions to Corps	$29,081,131.16
Excess Cash Contributions made by PLD	$8,225,652.11
Corps Refund issued in 2016	$1,510,919.73
PLD Excess Contributions to Corps	$6,714,732.38
Total PLD Project Credits (Approved and Pending) and Excess Cash Contributions	$23,824,225.14

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Lake Pontchartrain and Vicinity (LPV), Hurricane and Storm Damage Risk Reduction System (HSDRRS), St. Charles Parish

Project Location:
The Lake Pontchartrain and Vicinity (LPV), Hurricane and Storm Damage Risk Reduction System (HSDRRS) improvements in St. Charles Parish are part of the Lake Pontchartrain and Vicinity (LPV) portion of the hurricane system. Located on the east bank of the Mississippi River, the boundary of the St. Charles Parish project area includes the Bonnet Carré Spillway Lower Guide Levee, which runs from the Mississippi River until slightly north of U.S. Highway 61 (Airline Highway) to the Jefferson-St. Charles Parish boundary near the Louis Armstrong New Orleans International Airport where it ties into the LPV Jefferson Parish project. The project is oriented in an east-west direction and separates the developed areas in St. Charles Parish from the approximately 26,000 acres of wetlands on the north, or flood side of the levee, known as the "LaBranche Wetlands."

Project Description:
The Lake Pontchartrain, Louisiana and Vicinity Hurricane Protection Project was authorized by Public Law 298, 89th Congress, 1st Session, approved on October 27, 1965. The St. Charles Parish portion of LPV was fully constructed to the original authorized design providing Standard Project Hurricane (SPH) protection from the Probable Maximum Hurricane (PMH) at that time. Following Hurricane Katrina, Congress authorized and funded the Hurricane and Storm Damage Risk Reduction System (HSDRRS) to reduce the risk associated with a storm surge event that has a one percent chance of occurring in any given year, or a 100-year storm surge. The project includes approximately 9.5 miles of earthen levees, four drainage structures, five floodwalls and a railroad gate. Two pre-cast concrete access bridges were also constructed for access during construction and operation and maintenance.

Project Status

All 100-year level risk reduction features in the LPV-St. Charles Parish project area were completed in May, 2011.

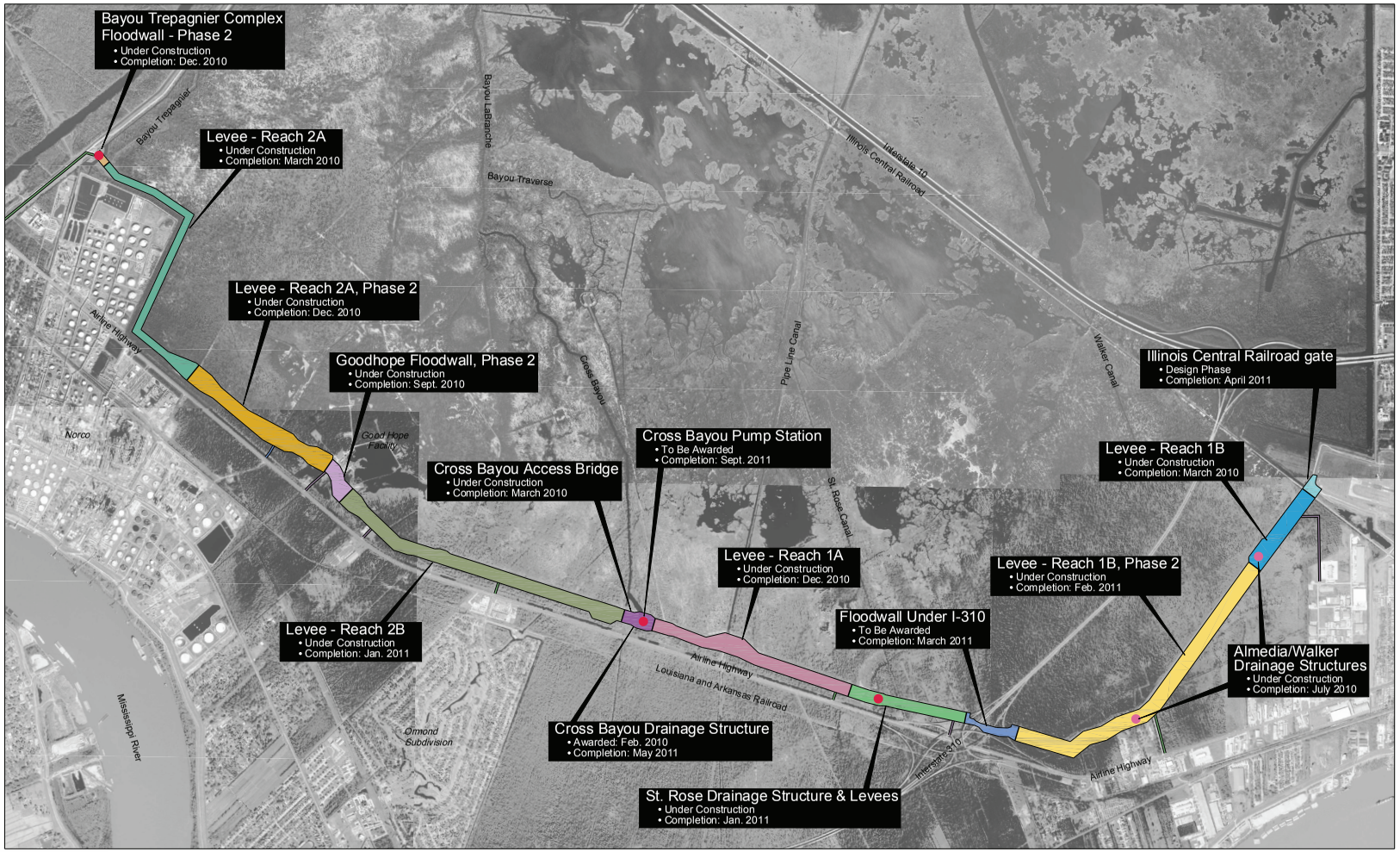
On December 15, 2014, the Corps of Engineers awarded a contract for the armoring of the LPV-05.2a and LPV-05.2b levee projects which are now fully constructed.

On September 29, 2016, the Corps of Engineers awarded a contract for the levee lifts and armoring of the LPV 04.2a and 04.2b levee projects. Construction of the levee lifts and armoring of these projects has just started.

Construction of Levee Lifts and Armoring for Existing Levee Reaches

St. Rose Drainage Structure and Floodwall

Illinois Central Railroad Swing Gate



Lake Pontchartrain and Vicinity (LPV), Hurricane and Storm Damage Risk Reduction System (HSDRRS), St. Charles Parish

West Shore Lake Pontchartrain, Hurricane and Storm Damage Risk Reduction System (HSDRRS) Project, St. Charles, St. John the Baptist, and St. James Parishes

Project Location:

The West Shore Lake Pontchartrain, Hurricane and Storm Damage Risk Reduction System (HSDRRS) Project study area is located in portions of St. Charles, St. John the Baptist, and St James Parishes. The project begins at the Upper Guide Levee of the Bonnet Carré Spillway and continues westward toward the Hope Canal. This alignment provides protection to the communities of Montz, LaPlace, Reserve, Garyville, Mount Airy, Gramercy, Lutcher, and Grand Point.

Project Authorization:

In September 1965, Hurricane Betsy struck the greater New Orleans area and caused severe flooding in the Lower 9th Ward of Orleans Parish and almost all of St. Bernard Parish. In October, 1965, Congress authorized the U.S. Army Corps of Engineers (Corps) to design and construct the Lake Pontchartrain and Vicinity, Louisiana Hurricane Protection Project in the Flood Control Act of 1965.

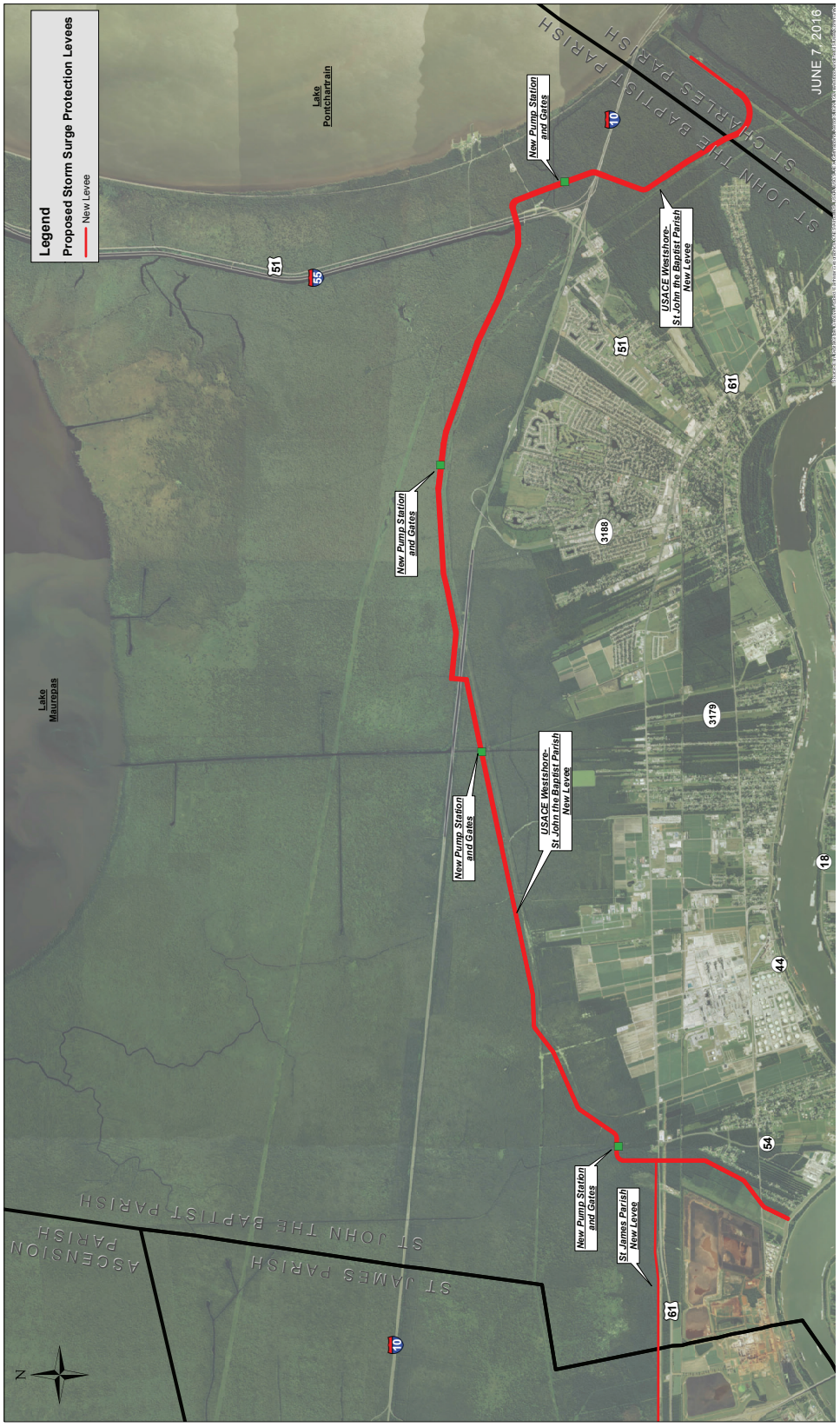
In 1970, St. John the Baptist Parish (St. John) raised objections to the Lake Pontchartrain and Vicinity, Louisiana Hurricane Protection Project based upon the lack of hurricane protection levees west of the Bonnet Carré Spillway. St. John argued that the development of hurricane protection levees from Orleans Parish to St. Charles Parish would funnel the storm surge to St. John, thus consequently sacrificing the area for the benefit of other parishes.

In July 1971, a resolution was passed by the House of Representatives Committee on Public Works authorizing the Corps to include the remaining portion of St. Charles Parish (from the Bonnet Carré Spillway Upper Guide Levee to the Parish line) and St. John the Baptist Parish in the design of the Lake Pontchartrain and Vicinity, Louisiana Hurricane Protection Project. In September of 1974, a resolution was passed by the Senate Committee on Public Works authorizing the Corps to include St. James Parish in the design of the Lake Pontchartrain and Vicinity, Louisiana Hurricane Protection Project.

Status of Work:

The cost of the Feasibility Study Report was 50/50 cost-share between the U.S. Army Corps of Engineers (Corps) and the Pontchartrain Levee District (PLD). The Feasibility Study was advanced to a final format stage. The following three alignments were reviewed; an alignment that follows the wet-dry interface with the wetlands from the Upper Guide Levee to Hope Canal (Environmentally Preferred Alignment); a second alignment that follows the petroleum pipeline right-of-way from the Upper Guide Levee to Hope Canal then turns south toward the Mississippi River (Pipeline Avoidance and Storage Capacity Alignment); and a third alignment that follows the Interstate-10 route from the Upper Guide Levee to the Marvin Braud Pump Station in Ascension Parish (Locally Preferred Alignment). The Environmentally Preferred and Pipeline Avoidance and Storage Capacity Alignments considers protection for the St. James Parish communities via non-structural methods such as ring levees and property elevations. The Pipeline Avoidance and Storage Capacity Alignment was recommended as the Tentatively Selected Plan in June 2013. The Pipeline Avoidance and Storage Capacity Alignment (Alignment C) was also approved as the Tentatively Selected Plan during the Agency Decision Milestone Meeting in November 2013.

The Corps and PLD finalized the Feasibility Study Report and Appendices and submitted the report for Division and Headquarters review in September 2014. The Feasibility Study Report was approved by the Civil Works Review Board in December 2014 and distributed to the State of Louisiana and Federal Agencies for review in January 2015. The Comment Resolution was completed in April 2015 and the approved Chief's Report was issued on June 12, 2015. Language for authorization was submitted for inclusion in the Water Infrastructure Improvements for the Nation (WIIN) Act which was signed into law on December 19, 2016.



West Shore Lake Pontchartrain, Hurricane and Storm Damage Risk Reduction System (HSDRRS) Project, St. Charles, St. John the Baptist, and St. James Parishes

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Laurel Ridge Levee Extension Project, Ascension Parish

Project Location:

The Laurel Ridge Levee Extension Project is located in northeast Ascension Parish along the Amite River.

Project Description:

The Laurel Ridge Levee Extension Project consists of extending the existing Laurel Ridge levee in order to protect additional properties along/within the Amite River floodplain against backwater flooding and high waters on the Amite River. The proposed levee extension will begin at the ending point of the existing Laurel Ridge levee and is currently designed to terminate at the eastern end of Wall Cemetery Road.

The Laurel Ridge Levee Extension Project will be approximately 4.5 miles long and constructed to an elevation of 15.0 NAVD. The construction requires approximately 430,000 cubic yards of fill material.

The proposed project will reduce flood stages by several feet and provide protection for a population of approximately 500 residents and 350 structures.

Project Status

The initial reconnaissance level investigation was completed during the summer of 2011. The Reconnaissance Study investigated the feasibility of the project and modeling results were utilized to identify project features and design criteria. In May of 2013, the project scope changed from a project of approximately 3.3 miles long to a total project length of approximately 4.5 miles in order to provide flood risk reduction to additional residents within the Amite River Flood Plain which is located along Louisiana Highway 431 (LA 431). This revision required additional surveying and preliminary engineering.

Three alignments were considered in the study. Alignments 1 and 3 were investigated to minimize environmental impacts to the jurisdictional wetlands. Because of the increased levee lengths and the necessity for multiple pump stations for both alignments, Alignments 1 and 3 were deemed too expensive ($32 and $35 million, respectively) to construct, compared to the benefits these alternatives would have provided.

Alignment 2 is the preferred alignment due to the reduced estimated cost ($24 million) for providing the same benefits and level of protection as Alignments 1 and 3. Alignment 2 will utilize the existing swamp as retention for the internal drainage while the Amite River is at flood stage. This alignment does not require the construction of pump stations and the gravity-driven internal drainage will be handled by a flood gate system. This will allow the swamp area on the protected side of the levee to be used as storm water storage until the Amite River floodwaters recede. The proposed levee is approximately 25,300 feet long with a crest elevation of 15.0. Because the gated system will be operated in an open condition, and only closed during a backwater flooding event from the Amite River, there will be minimal environmental impacts to the wetlands on the protected side, and it will allow for a shorter levee length.

Additionally, Alignment 2 has been evaluated with more detail and minor alignment modifications have been investigated resulting in fewer wetland impacts, which proves to be a more cost effective and environmentally sensitive alignment.

Project Breakdown

Phase I: Reconnaissance Study

This effort included an investigation into the general project concept. Engineering parameters, and project costs and benefits were investigated to determine whether the project warranted further consideration. The results proved to be favorable for the construction of Alternative Alignment #2. The Reconnaissance Study was completed during the summer of 2011.

Phase II: Preliminary Design and Permitting

This effort included data collection necessary to perform preliminary design services required to better define the project parameters and prior to the design and submittal of the permit application. Topographical survey services were required to better define the termination point of the proposed levee. The proposed project structures were more closely investigated for site requirements and alignments. A wetlands delineation was performed to determine the boundary of the areas impacted by the proposed improvements and to assist in the permit submittals. The preliminary design and permitting was completed during the summer of 2014.

Phase III: Permitting

Permitting is critical to the successful approval of this project. A joint permit application is required to facilitate the state and federal permitting process administered by the Louisiana Department of Natural Resources/Office of Coastal Management (OCM) and the U.S. Army Corps of Engineers for work within the Louisiana Coastal Zone. Project permitting requires submittal of the preliminary design documents and approval of the proposed plan. An operation plan for the flood gates will be

Laurel Ridge Levee Extension Project, Ascension Parish

developed and specify ownership and operational parameters. Also, the environmental impacts will need to be identified, and a wetlands mitigation and monitoring plan will have to be established for impacted areas. Once these concerns have been addressed, the various jurisdictional entities will need to accept and agree to the individual roles and responsibilities with respect to the operation plan, the wetlands mitigation and monitoring plan, and ownership of the land and improvements.

The permitting efforts are currently underway.

Phase IV: Final Plans and Specifications

Once the final design is completed, a revised construction cost estimate will be produced.

Phase V: Real Estate Services and Environmental

This phase will include the acquisition of the necessary real estate interests in the properties impacted by the alignment, wetland mitigation, completion of the final design documents, and bidding of the project. Wetland mitigation will be handled in accordance with the provisions outlined in the final permit.

Upon completion of the key phases described above and the availability of construction funds, the project can be advertised for competitive bidding.

Phase VI: Construction Administration and Inspection Services

Construction administration and inspection services will be performed to ensure that the contractor is constructing the proposed improvements according to the construction documents and to protect the interests of the owner. This effort will include the day-to-day management of the project, the inspection of the construction progress, the verification (geotechnical and survey) of the construction materials and quantities, progress meetings, approval of pay applications, processing of change orders, owner updates, and other construction administration services.

Project Schedule

Phase I: Reconnaissance Study – COMPLETE

Began: 9/29/2008
Status: Completed - Spring 2011

Phase II: Prelim Design and Prelim Permitting – COMPLETE

Began: 7/5/2012
Status: Complete

Phase IIa: Additional Data Collection and Design Revision – COMPLETE

Began: September 2013
Status: Completed 2/2014

Future Phase III: Permitting

Estimated Duration: 30 Months
Projected Begin:10/2014
Projected Completion: 4/2017*
**Dependent on LADNR & USACE Review/Approval Schedule*

Future Phase IV: Final Design/Specifications (on-going simultaneous to Permitting)

Estimated Duration: 12 Months
Projected Begin: 4/2017
Projected Completion: 4/2018*
**Dependent on LADNR & USACE Review/Approval Schedule*

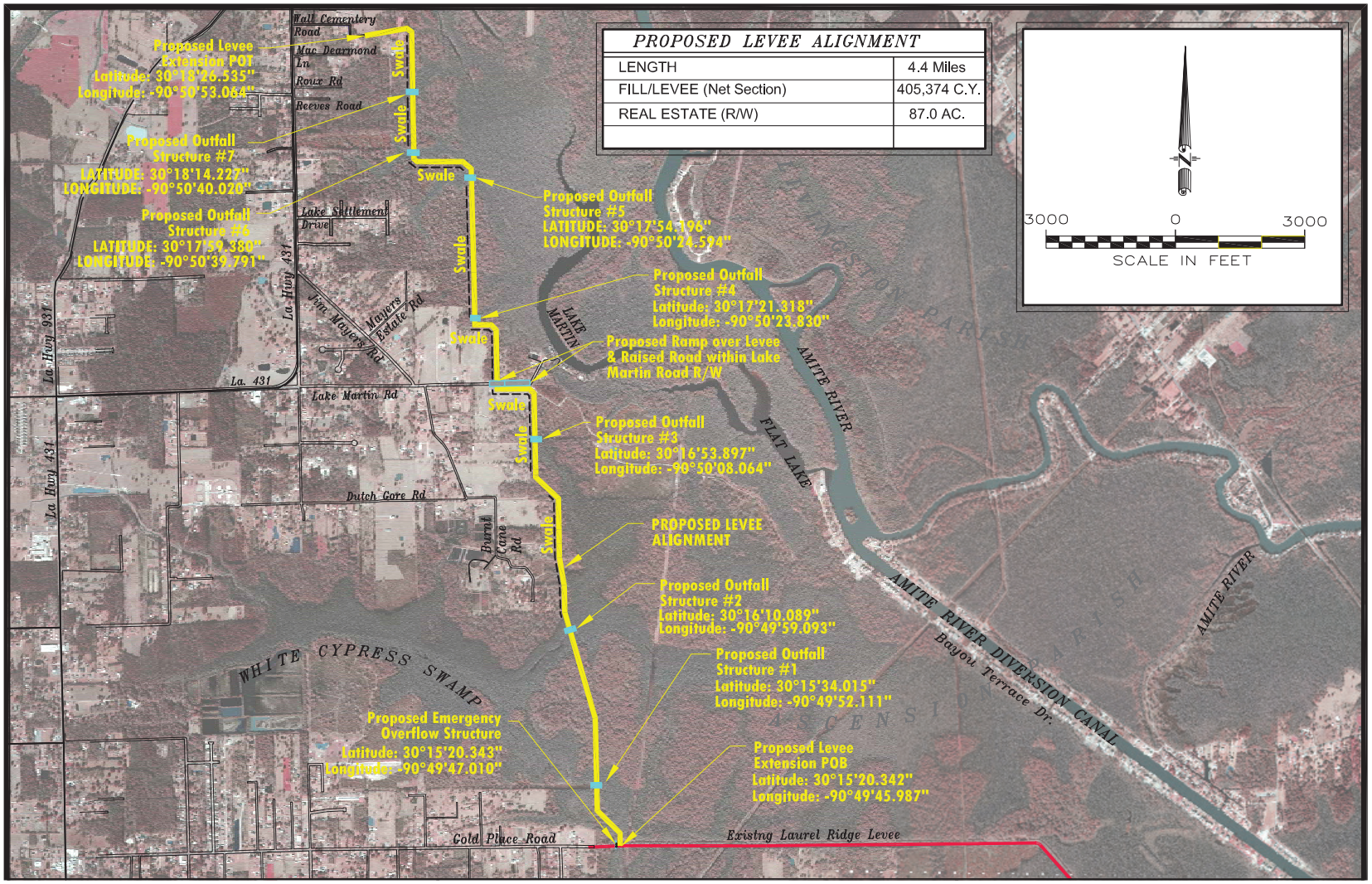
Future Phase V: Real Estate Services, Wetland Mitigation

Estimated Duration: 12 Months
Projected Begin: 10/2016
Projected Completion: 10/2017

Phase VI: Construction - Estimated Construction Cost $20M

Estimated Duration: 18 Months
Projected Begin: Summer 2018
Projected Completion: Winter 2019

Total Estimated Project Cost: $24M



Laurel Ridge Levee Extension Project, Ascension Parish

St. James -Ascension Storm Surge Flood Protection Project

Project Location:

The St. James-Ascension Storm Surge Flood Protection Project study area is located on the east bank of St. James Parish and a portion of the east bank of Ascension Parish. The project begins at the upper end of the West Shore Lake Pontchartrain, Hurricane Storm Damage Risk Reduction System (HSDRRS) Project near Mt. Airy, Louisiana and continues westward through St. James Parish and then northerly toward the New River Canal in Ascension Parish providing protection to the communities of Gramercy, Lutcher, Grand Point, Convent, Romeville, Union, Burnside, and Sorrento.

Project Purpose

The purpose of the St. James-Ascension Storm Surge Flood Protection Project is to provide long term flood protection for certain portions of St. James and Ascension Parishes. These portions of St. James and Ascension Parishes were eliminated from the West Shore Lake Pontchartrain, Hurricane Storm Damage Risk Reduction System (HSDRRS) Project due to limitations of the project scope, lower benefit to cost ratio calculations, and the Corps recommendation for non-structural (elevation, relocation, or buy-out) measures.

Project Goals

The Initial Phase of the project will provide storm damage risk reduction equivalent to the West Shore Lake Pontchartrain Hurricane Storm Damage Risk Reduction System (HSDRRS) Project. This will be accomplished by constructing levees, floodwalls, floodgates, gravity drainage gates, and storm water pumping stations to prevent extreme high tides or storm surges from flooding the developed areas within the Blind River, Bayou Conway, and Panama Canal basins. The levee will be constructed to the 2020 Design Year 0.01% Probability Storm surge levels and the structures will be built to the 2070 Design Year 0.01% Probability Storm surge levels. Where possible, existing infrastructure such as highways may be used to lower the initial construction costs. If the nominal raising of the level of roadways prove to be equivalent to the 2020 Design Year elevation, then the construction of floodgates and floodwalls may be delayed to the next phase.

The Intermediate Construction Phase will also be equivalent to the West Shore Lake Pontchartrain, Hurricane Storm Damage Risk Reduction (HSDRRS) System Project for the 2045 Design Year. If new levees are required due to the 2045 Design Year surge levels, then these levees will be constructed in lifts to the 2045 Design Year elevation. All existing levees will be lifted to the 2045 Design Year elevations. Floodgates and floodwalls will be constructed as required to meet the 2070 Design Year elevations.

The Future Construction Phase will also be equivalent to the West Shore Lake Pontchartrain, Hurricane Storm Damage Risk Reduction System (HSDRRS) Project for the 2070 Design Year. All existing levees will be lifted to the 2070 Design Year elevations.

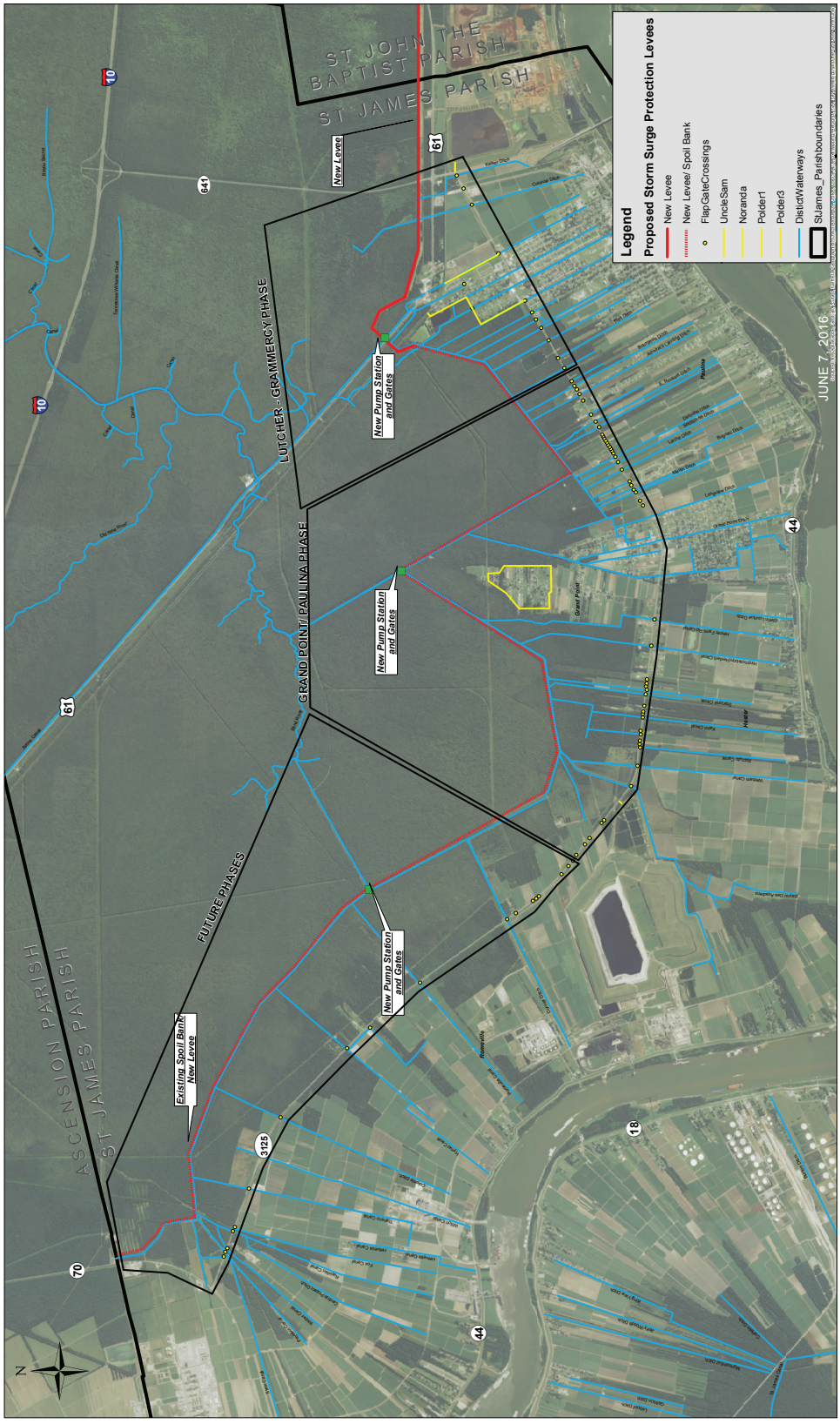
Status of Work

The levee alignment study of the Initial Phase for St. James Parish has been completed. Three alignment alternatives were evaluated for the St. James portion of the project and order of magnitude estimates were developed for all three alternatives. The levee alignment study recommended the alignment to follow existing spoil banks from the St. James Parish canal network. Conceptual design has begun for the St. James portion of the project, including conceptual geotechnical investigations and conceptual engineering design. The conceptual geotechnical investigations include deep borings spaced approximately 4,000 feet apart for the 21-mile section in St. James Parish. The borings and laboratory analysis have been completed and levee template analysis has begun. The conceptual engineering analysis includes the sizing for three (3) drainage pump stations, three (3) gravity drainage floodgates, and floodwalls for road, rail and pipeline utilities.

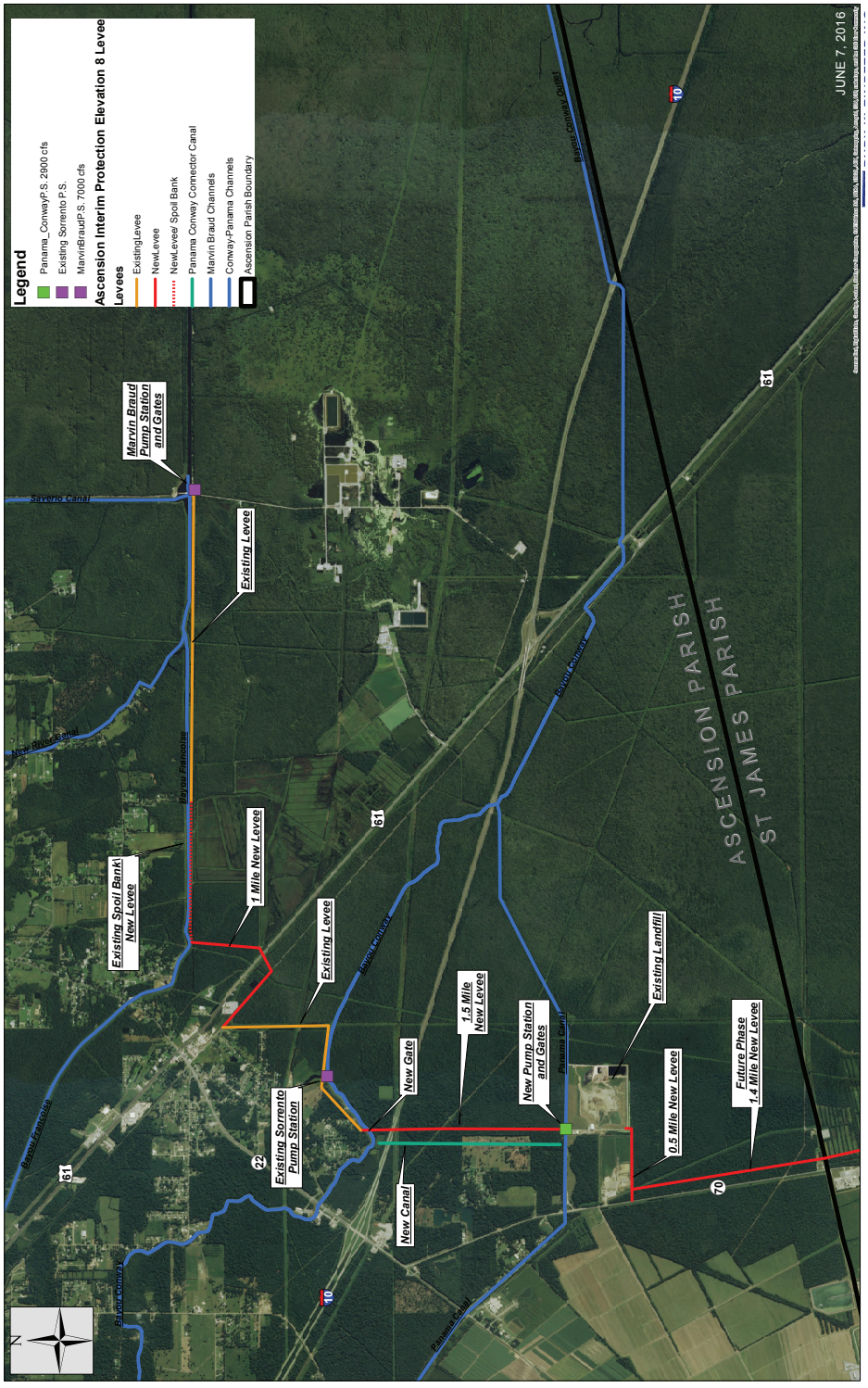
Reconnaissance analysis has been prepared for the Ascension Parish portion of the projects, utilizing existing aerial mapping and LIDAR data. Based upon the reconnaissance analysis, several alternative levee routes were identified. The Initial Phase levee alignment study for Ascension Parish has begun. Conceptual Design for the Ascension portion of the

St. James -Ascension Storm Surge Flood Protection Project (cont.)

project has started which includes common alignment segments, conceptual geotechnical investigations and conceptual engineering design. The conceptual geotechnical investigations include deep borings spaced approximately 4,000 feet apart for the 8-mile project section in Ascension Parish. The borings and laboratory analysis have been completed and levee template analysis has begun. Upon completion of the alignment study, additional borings will be obtained if necessary. The conceptual engineering analysis includes the sizing of one (1) drainage pump station, two (2) gravity drainage floodgates, and floodwalls for road, rail and pipeline utilities.



St. James -Ascension Storm Surge Flood Protection Project



St. James -Ascension Storm Surge Flood Protection Project

Bayou Conway and Panama Canal Drainage Improvement Project Ascension Parish and St. James Parish

Project Location:

Bayou Conway and the Panama Canal drainage basin is located in southern Ascension Parish and northern St. James Parish, along the proposed Ascension Parish alignments of the West Shore Lake Pontchartrain, Hurricane and Storm Damage Risk Reduction System (HSDRRS) Project.

Project Description:

The purpose of the Bayou Conway and Panama Canal Drainage Improvement Project is to provide a reduction in the risk of flooding for the drainage basin that includes the area near the boundary between Ascension and St. James Parishes.

The modeling component of the project was utilized in the West Shore Lake Pontchartrain, Hurricane and Storm Damage Risk Reduction System (HSDRRS) Project for the Bayou Conway crossing of the proposed Levee Alignment D. It now appears that Alignment D has effectively been removed as an alternative from consideration for the West Shore Lake Pontchartrain, Hurricane and Storm Damage Risk Reduction System (HSDRRS) Project. The modeling results are being utilized to make improvements to the gravity conveyance system (channel improvements) within the watershed, and to consider the potential for a forced drainage system (levees and pump stations) in the future.

The Bayou Conway watershed encompasses the Mississippi River Levee at the 81-mile point (mile marker 180) to its confluence with Blind River, and travels a distance of approximately 23.5 miles. The Panama Canal is an 8.3-mile diversion relief channel that cuts a more direct channel to the downstream end of Bayou Conway. The Conway/Panama system serves as the major conveyance channel for the southeastern portion of Ascension Parish and a portion of St. James Parish. The drainage basin encompasses an area of approximately 65 square miles, of which a large portion lies along the Mississippi River corridor. The entire drainage basin lies outside of the area served by the Marvin J. Braud Pump station located at McElroy, and its protection levees, which are located in Ascension Parish. The results of the Bayou Conway/Panama Canal Drainage Improvement Study are being utilized for proposed channel improvements, so that the risk of flooding can be reduced within the basin. The study and modeling efforts also form the basis for future basin planning and watershed management.

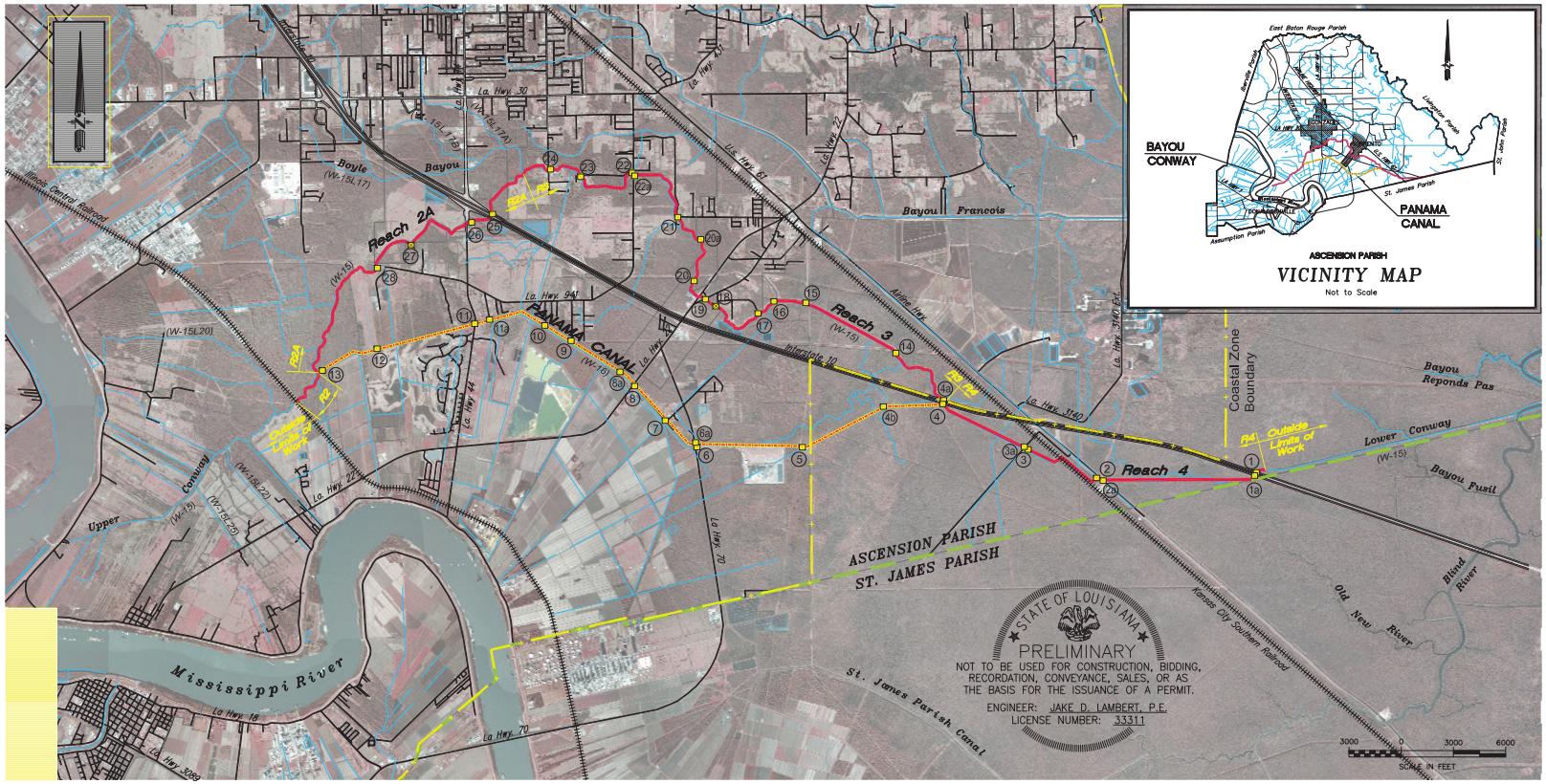
Project Status

The hydraulic analysis/study was completed in July 2011. The study determined the existing conditions within the basin based on varying downstream conditions and proposed necessary improvements to the channels to reduce the risk of flooding within the watershed. Downstream conditions were determined utilizing the existing data from existing gauge data, FEMA Studies, and data generated from the Amite River Tributaries and West Shore Lake Pontchartrain, Hurricane and Storm Damage Risk Reduction System (HSDRRS) Projects. As a result of this investigation, channel maintenance and a dredging regime is recommended to provide the needed channel capacity for the gravity conveyance improvements within the Bayou Conway and Panama Canal watershed.

Permits for the snagging and clearing of the channels were received in the summer of 2014 to facilitate the drainage improvements. The actual improvements were completed by the fall of 2014, resulting in over 1,500 "targets" (logs, snags, lay-downs, etc.) being removed from the channels.

The next phase of work will be the implementation of the proposed channel maintenance dredging. The proposed improvements consist of five phases of work that will open up the silted/clogged channels and provide needed capacity for the drainage system. The phases of work were divided by assessing the most urgent priorities determined in the modeling efforts.

Additionally, the potential for a forced drainage system including levees and pumps are being considered for future efforts.



LEGEND

- Bayou Conway
- Panama Canal
- Interstate Highway
- U.S. Highway
- Louisiana Highway
- Parish Road
- Parish Line
- Railroad
- Drainage Thruways
- Coastal Zone Boundary
- (W-# L-#) Ascension Parish Naming System
- ① Access/Landing Site & No.

	ACCESS/LANDING SITE				
	Site No.	Acres	Length	Width	Clearing Req'd
REACH 4	①	0.11	133'	36'	Minimal
	①a	0.11	133'	36'	Minimal
	②	0.09	204'	20'	Minimal
	②a	0.15	250'	26'	Minimal
	③	0.09	75'	50'	Minimal
	③a	0.04	43'	41'	None
	④	0.06	80'	35'	None
	④a	0.13	104'	54'	Minimal
PANAMA	④b	0.23	133'	36'	Minimal
	⑤	0.21	206'	45'	Minimal

	ACCESS/LANDING SITE				
	Site No.	Acres	Length	Width	Clearing Req'd
PANAMA	⑥	0.05	100'	22'	None
	⑥a	0.04	100'	16'	None
	⑦	0.14	200'	30'	Minimal
	⑧	0.17	205'	35'	None
	⑧a	0.32	200'	70'	Minimal
	⑨	0.11	160'	30'	Minimal
	⑩	0.18	200'	40'	Minimal
	⑪	0.10	80'	52'	Minimal
	⑪a	0.22	150'	65'	Minimal

	ACCESS/LANDING SITE				
	Site No.	Acres	Length	Width	Clearing Req'd
PANAMA	⑫	0.15	100'	65'	None
	⑬	0.11	100'	50'	Minimal
	⑭	0.15	165'	40'	Minimal
	⑮	0.27	155'	75'	None
	⑯	0.18	100'	80'	None
REACH 3	⑰	0.39	163'	105'	None
	~~⑱ ON M 0.24 0~~				
	⑲	0.43	116'	62'	Minimal
	~~⑳ ON M 0.19 0~~				

	ACCESS/LANDING SITE				
	Site No.	Acres	Length	Width	Clearing Req'd
REACH 3	⑳a	0.12	215'	25'	Minimal
	㉑	0.04	65'	25'	None
	㉒	0.09	80'	50'	Minimal
	㉒a	0.11	100'	50'	Minimal
	㉓	0.06	72' (1/2)	72'	Minimal
	㉔	0.11	100'	50'	Minimal
REACH 2	㉕	0.13	207'	44' (1/2)	None
	㉖	0.18	100'	78'	Minimal
	~~㉗ ON M 0.10 0~~				
	㉘	0.23	100'	100'	Minimal

TOTAL ACCESS/LANDING ACREAGE = 5.30 Acres

Bayou Conway and Panama Canal Drainage Improvement Project
Ascension Parish and St. James Parish

Amite River Diversion Canal Weir Rehabilitation Project
Ascension Parish

Project Location:
The project is located at the north head of the Amite Diversion Canal and the Amite River in Ascension Parish and adjacent to Livingston Parish.

Project Description:
The existing weir is proposed to be raised in order to reestablish the desired flow distribution between the Lower Amite River and the Amite River Diversion Canal. The current flows to the Lower Amite River have substantially been reduced by the degradation of the weir. This weir rehabilitation project will involve rebuilding the existing stone weir and reshaping the existing boat way in order to obtain a normal flow distribution of water into the Lower Amite River and Diversion Canal. This will assist in restoring the ecosystem balance, and slow the deposition of excess silt in the river.

Project History

Drainage improvements on the Amite River were authorized by the U.S. Army District, New Orleans entitled Survey of Amite River and Tributaries, Louisiana and approved by Public Law 274.84, 84th Congress, August 1955.

The U.S. Army Corps of Engineers (USACE), New Orleans District submitted to the Lower Mississippi Valley Division, Vicksburg, Mississippi, the Amite River and Tributaries, Louisiana Design Memorandum No. 1, General Design dated November 15, 1956. This document provided the design criteria for the Control Weir (Amite River Diversion Canal Weir). The General Design Memorandum describes a control weir with a total length of 1,500 feet at elevation 0.0 feet mean sea on the right bank of the Amite River at the head of the Diversion canal. The weir was then constructed on the ground prior to the Amite River Diversion Canal being dredged and completed at that location.

The Operation and Maintenance Manual for the Amite River and Tributaries, Louisiana, dated December 1963 states: the plan was modified at the request of the Ascension Parish Police Jury to add a boat way from Amite River to the Amite River Diversion Canal. This document shows the navigation opening (boat lane) as a trapezoid section with a 20-foot bottom width and a 1 vertical and 2 horizontal side slopes with an invert elevation of -5 feet.

In 2007 the U. S. Geological Survey (USGS) performed stream flow measurements on the Amite River upstream of the weir, lower Amite River Downstream of the weir and on the Amite River Diversion Canal. The USGS measured flow for high flow is 75% Amite River Diversion Canal (ARDC) and 23% Lower Amite River. The low measured flow distribution is 94% ARDC and -4% Lower Amite River. In March 2015, The Amite River Drainage and Water Conservation District contracted with the firm GEC to perform a hydraulic design of the weir and a hydraulic analysis of flood events. The USGS measurements and the GEC modeled HEC-RAS analysis shows the existing weir does not meet the design requirements to retain a greater percentage of normal and low flows in the natural outlet of the Amite River.

GEC's hydraulic analysis resulted in a recommended 10-foot wide weir with 3:1 slopes on the river side and 6:1 slopes on the canal side of the weir. GEC modeled different boat lane open sizes and shapes to obtain normal flow distribution into the Lower Amite River. The resulting model indicated that a 20 wide bottom with 3:1 side slopes and a -6-foot elevation will produce the normal flow distribution needed to restore flow to the Lower Amite River.

The Pontchartrain Levee District (PLD) then contracted with Volkert, Inc. to implement the recommendations of the hydraulic analysis performed by GEC.

Description of Current Plan

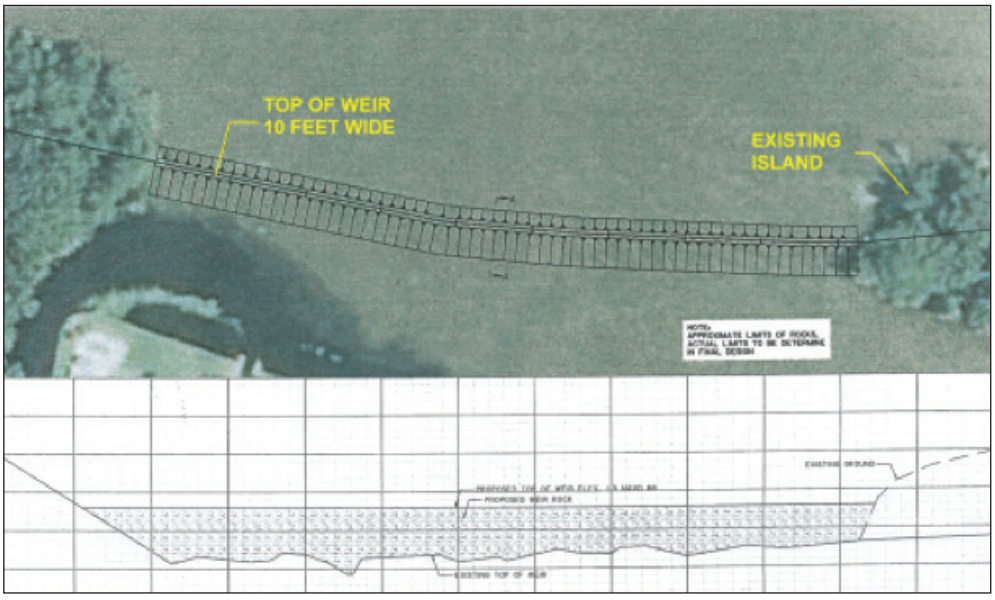
The current project plan is to leave the existing structure in place and construct the new weir over the remaining stone. The current stone will serve as the filter layer for the new rock weir.

The current project modifies the boat lane to -6 invert elevation with a 20 foot wide bottom and 1 vertical and 3 horizontal side slopes as recommended in the hydraulic analysis. The 1700-foot weir will be at elevation 1.5 feet, 10 wide at the top with 3:1 side slopes on the river side and 6:1 sides slopes on the canal sides. A large scour hole on the canal side of the boat lane was discovered and is being stabilized to prevent undermining of the new boat way and weir.

A geotechnical study of the weir area is to be performed by PSI, Inc., under contract to Ascension Parish, to provide a geotechnical opinion on the stability of the boat lane and proposed weir area. At the time of this report the geotechnical study has not been completed.

Existing Amite River Diversion Canal Weir

Weir Placement



East Bank Urban Flood Control Feasibility Study, St. Charles Parish

Project Description:
The St. Charles Parish East Bank Urban Flood Control Feasibility Study is the result of recommendations from earlier work by the U.S. Army Corps of Engineers (Corps) and others to evaluate the need and costs for flood control improvements in the area upstream of the Lake Pontchartrain and Vicinity (LPV), Hurricane and Storm Damage Risk Reduction System (HSDRRS) Project. Alternatives currently being evaluated during this study include increasing the effectiveness of existing storm water conveyance systems and the construction of a new storm water pump station along the existing hurricane protection levee.

Project Status

The Study Report was originally funded by the Corps and the Pontchartrain Levee District (PLD). The computer model for the existing and proposed conditions hydraulics and hydrology is complete. The results of the model are currently being reviewed by St. Charles Parish for use by FEMA to establish Base Flood Elevations throughout the East Bank.

Pump Stations

The PLD previously constructed the Bayou Trepagnier Pump Station and the Cross Bayou Pump Station. Both are fully operational and have performed well during several named tropical events and numerous local rainfall events. The total construction cost of the Bayou Trepagnier Pump Station Project was $8,500,000. The total construction cost of the Cross Bayou Pump Station was $18,800,000. The PLD has finalized detail design reports and construction documents for a needed additional pump station. The PLD is currently in the process of procuring construction funding for the Walker-Almedia Pump Station.

Project Schedule

The East Bank Urban Flood Control Feasibility Study is essentially complete. The Corps is currently working with FEMA in their efforts to develop risk assessment in the modeled area. The PLD has completed its financial commitment to the initial phase of the Feasibility Study. Some earmarked funds will be used for completion of specific improvements authorized by the Corps Study Team. Funding has been secured by the Corps to continue working with the Study, and work is currently underway to complete all remaining phases of the project. The cost share for construction of the East Bank Urban Flood Control Project features is 65% Federal and 35% Non-Federal.

CROSS BAYOU PUMP STATION

ST. CHARLES PARISH EAST BANK URBAN FLOOD CONTROL PROJECT

PROJECT DESCRIPTION

PURPOSE

The purpose of the project is to reduce localized flooding in the East Bank of St. Charles Parish.

DESIGN

The overall design capacity of the pump station is 1300 cfs (580,000 gpm).

The station will have five 250 cfs (112,000 gpm) and one 50 cfs (37,400 gpm) pumps.

The Airline Highway Borrow Canal will act as the conduit to feed the pumps. A canal will be built interconnecting the east and west sides of Interstate 310, its size depending on pumping capacities of Cross Bayou Pump Station and the future St. Rose Pump Station.

COST

Projected construction cost is $18.8M.

- LaDOTD (7.3m)
- Pontchartrain Levee District (6.5m)
- Donation from Shell (2.5m)
- Donation from Motiva (2.5m)

PROJECT SPONSORS

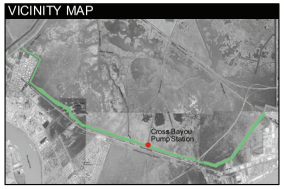
LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

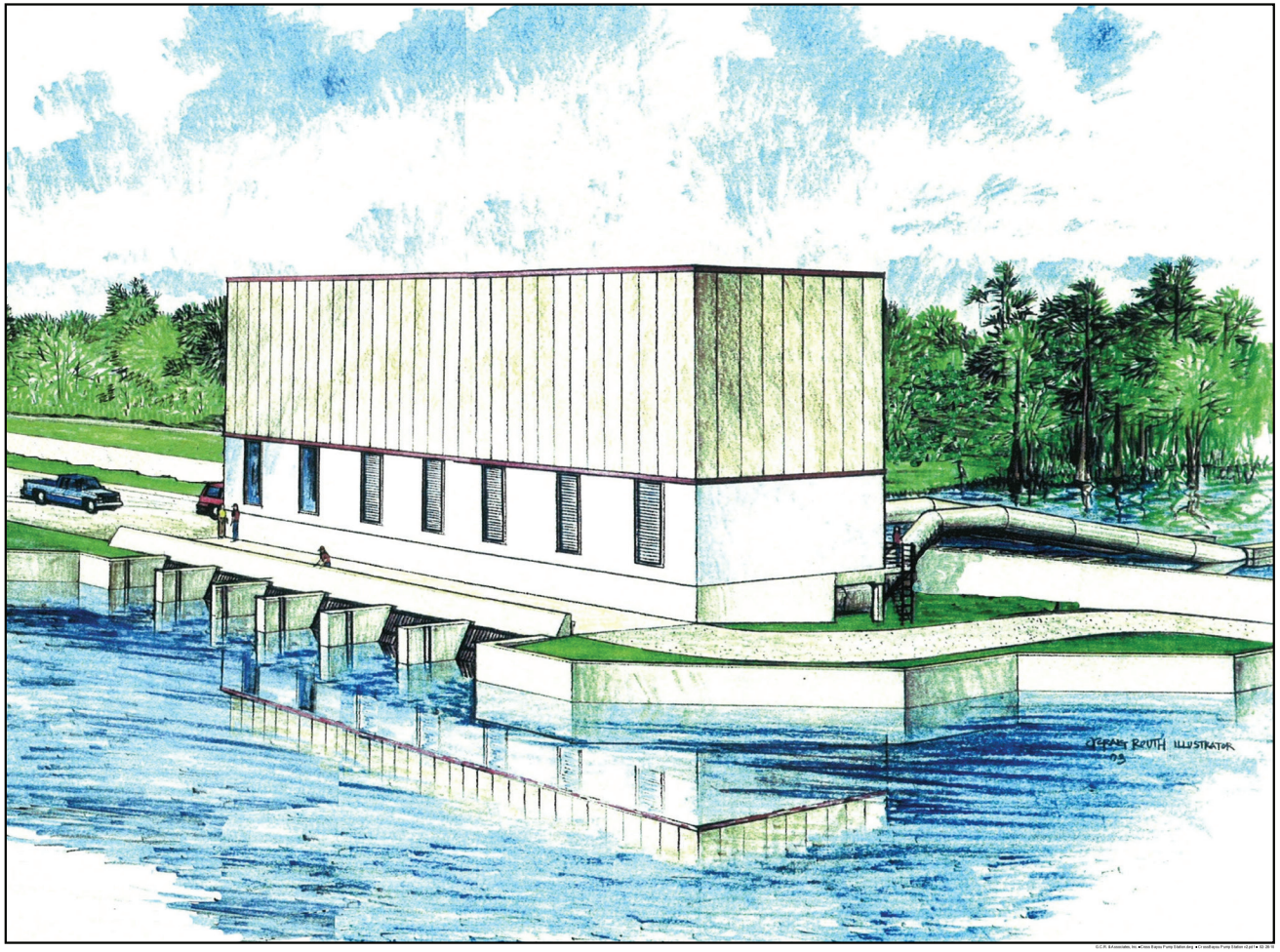
PONTCHARTRAIN LEVEE DISTRICT

MOTIVA ENTERPRISES LLC

SHELL

VICINITY MAP





East Bank Urban Flood Control Feasibility Study, St. Charles Parish

Hurricane Protection Levee Shoreline Enhancement and LaBranche Wetlands Restoration, St. Charles Parish

Project Location:
The project is located along the unprotected sections of Lake Pontchartrain shoreline in St. Charles Parish.

Project Description:
The project's overall objective is to protect northern St. Charles Parish by stabilizing the Lake Pontchartrain shoreline from further erosion, enhancing the shoreline where possible, and restoring the LaBranche Wetlands to provide an integrated system of multiple lines of defense. The shoreline protection measures are integrated with interior marsh restoration for a comprehensive restoration strategy for the LaBranche Wetlands. Previous efforts have protected approximately 14,000 feet of shoreline. This leaves approximately 18,500 feet of shoreline which is not protected. The Coastal Impact Assistance Program (CIAP) constructed approximately 3,400 feet of shoreline with the East LaBranche Shoreline Protection project PO-43. Approximately 15,000 feet of shoreline remains unprotected.

Project Status

Recent activity:

West LaBranche Shoreline Protection Project, PO-42

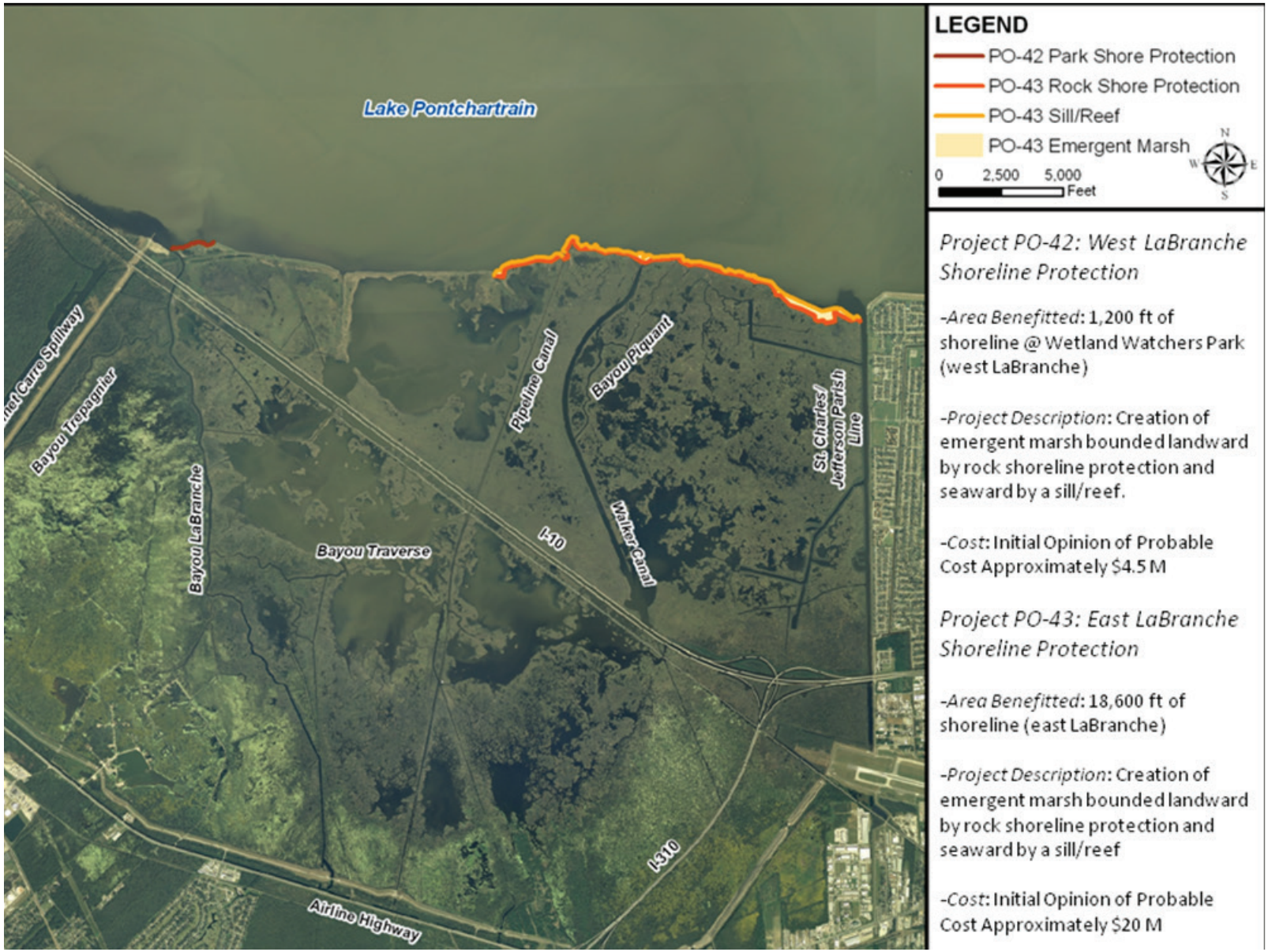
Project construction was completed in June 2013. The project stabilized approximately 2,000 feet of shoreline.

East LaBranche Shoreline, PO-43

Project construction was completed in July 2015. The project stabilized approximately 3,400 feet of shoreline.

There is approximately 15,000 lf of shoreline which has not been protected and is eroding at a rate of 9 feet per year. The permits and designs have been completed on the unprotected section of shoreline. This is a shovel ready project if funds can be allocated.

The unprotected section extends from Walker Canal east to Parish Line Canal.



Project PO-42: West LaBranche Shoreline Protection

-*Area Benefitted*: 1,200 ft of shoreline @ Wetland Watchers Park (west LaBranche)

-*Project Description*: Creation of emergent marsh bounded landward by rock shoreline protection and seaward by a sill/reef.

-*Cost*: Initial Opinion of Probable Cost Approximately $4.5 M

Project PO-43: East LaBranche Shoreline Protection

-*Area Benefitted*: 18,600 ft of shoreline (east LaBranche)

-*Project Description*: Creation of emergent marsh bounded landward by rock shoreline protection and seaward by a sill/reef

-*Cost*: Initial Opinion of Probable Cost Approximately $20 M

Hurricane Protection Levee Shoreline Enhancement and LaBranche Wetlands Restoration, St. Charles Parish

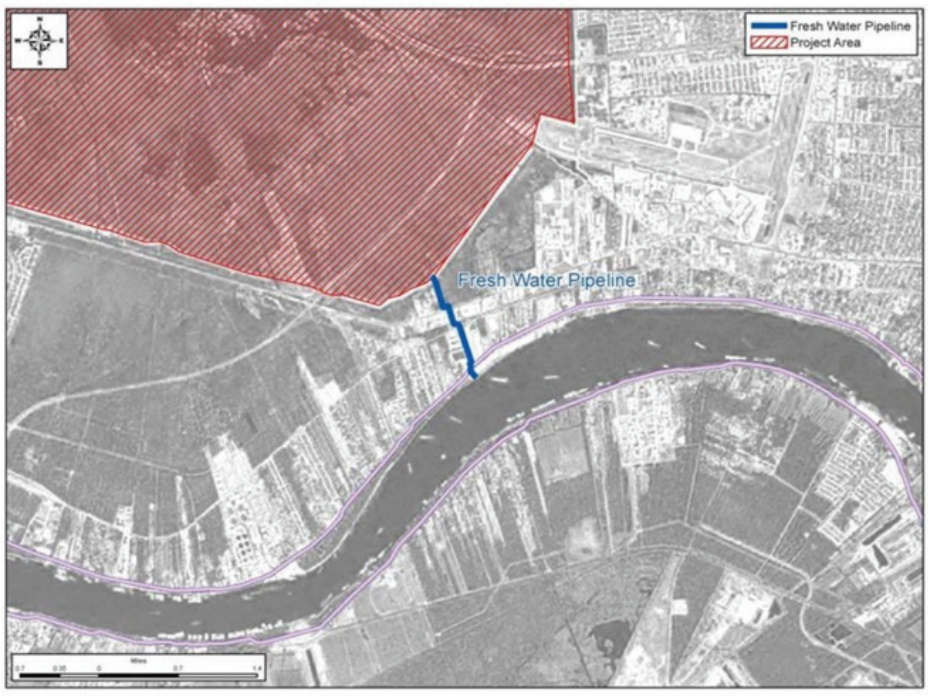
LaBranche Wetlands Restoration
Fresh Water Diversion, St. Charles Parish

Project Location:
The project is located in St. Charles Parish and involves the Mississippi River and the LaBranche Wetlands.

Project Description
The project would include the construction of ~750-cfs hybrid pump-siphon structure on the Mississippi River, with a conveyance structure aligned along an existing parish owned servitude from the Mississippi River to the Airline Canal. The water would then be pumped over the Lake Pontchartrain and Vicinity (LPV) St. Charles Parish Hurricane Protection Levee (SCPHPL) into the LaBranche wetlands. The Pontchartrain Levee District (PLD), St. Charles Parish and the U.S. Army Corps of Engineers (Corps) are currently modifying the current permits to the (SCPHPL) pump stations in order to officially dedicate at least 50% of available pumping capacity at each location for coastal restoration purposes. Ultimately the pump stations located along the SCPHPL will be owned and operated by the PLD. The hybrid pump-siphon approach would operate as a siphon conveyance by default, with the structure reverting to a pumped conveyance during low river stages.

Project Status

The Mississippi River is in close proximity to the LaBranche Wetlands at a couple of locations and could provide a fresh water source throughout the year if pumped from the river. Planning efforts to date conducted by PLD indicate that the amount of freshwater required to flush a storm surge salinity event or maintain the isohalines would not require a large conveyance from the river. Planning efforts to date (M&N 2014) determined the required flow rates to freshen the LaBranche wetlands can be achieved with a flow rate of the order of 600-cfs, an order of magnitude less than the original PO-26 project. The diverted water would need to be conveyed over two (2) levees, the Mississippi River and Tributaries (MR&T) levee and SCPHPL. The conveyance of water over the SCPHPL could be accomplished by utilizing existing storm water pump stations. This can be achieved by employing just one of the pumps at the Bayou Trepagnier, Cross Bayou and potentially the upgraded Walker Canal pump stations.



Project Layout

LaBranche Wetlands Restoration Salinity Control Structure, St. Charles Parish

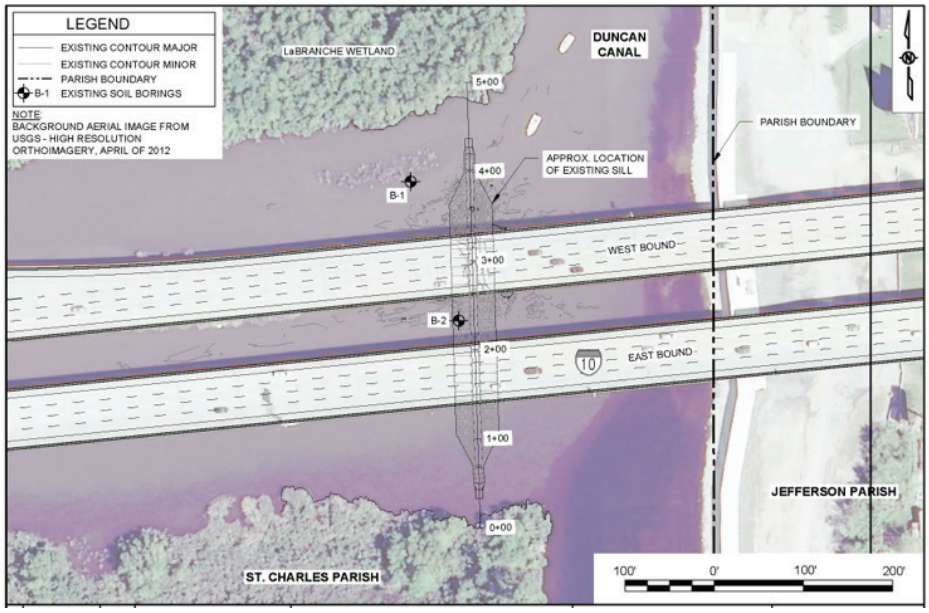
Project Location:
The project is located in St. Charles Parish in the LaBranche Wetlands where I-10 intersects the Parish Line Canal.

Project Description
The project involves the construction of a 635 ft. barrier to limit water entering the wetlands at the location shown below. The proposed barrier would be positioned on top of an existing barrier placed in 1987 as part of mitigation for the I-310 split. The existing barrier settled and is no longer serving it purpose.

Project Status

The project was approved as part of the State of Louisiana Coastal Protection and Restoration Authority (CPRA) Community Partnership funds. The Pontchartrain Levee District (PLD) applied for and was granted $250,000 to administer, design and construct this project. The PLD has provided in kind services and also funded a portion of the design and data collection. St. Charles Parish has allocated $100,000 for construction of this project.

The project design phase is complete and all permits have been acquired. The project has been advertised and a contractor selected, with construction to begin in the spring of 2017.



Project location and layout

2017

THE PONTCHARTRAIN LEVEE DISTRICT

PROGRESS REPORT

PROJECT FUNDING

Pontchartrain Levee District
2204 Albert Street
P.O. Box 426
Lutcher, LA 70071
225-869-9721 fax 225-869-9723
www.leveedistrict.org

Prepared by GCR Inc.
2021 Lakeshore Drive, Suite 500
New Orleans, LA 70122
504-304-2500 fax 504-304-2525
www.GCRincorporated.com

Lake Pontchartrain and Vicinity (LPV), Hurricane and Storm Damage Risk Reduction System (HSDRRS) Project, St. Charles Parish

Project Funding:

The Lake Pontchartrain and Vicinity (LPV), Hurricane and Storm Damage Risk Reduction System (HSDRRS) Project is a cost-shared between the U.S. Army Corps of Engineers (Corps) and the Pontchartrain Levee District (PLD), the local Non-Federal sponsor. For construction of the earthen levee sections, the Corps is responsible for 65% of the project costs and the PLD is responsible for 35% of the project costs. The project costs for the drainage structures, floodwalls and pre-cast access bridges are 100% federally funded. Due to the Corps credited amounts accumulated by the PLD over a 25-year period, the financial impact to the PLD for this new construction is expected to be minimal.

West Shore Lake Pontchartrain, Hurricane and Storm Damage Risk Reduction System (HSDRRS) Project, St. Charles, St. John the Baptist, and St. James Parishes

Project Funding:

Funding Requirements for FY 2018

In 2011, the PLD secured $2,830,000 in Priority 2 and $8,500,000 in Priority 5 funds through the Louisiana Capital Outlay Program for this project. The State requires a $3,610,000 Agency Match for a total project funding of $14,440,000. PLD has executed contractual agreements with the affected Parishes to provide the Agency Match/Local Match for this project. The USACE needs funding to start Preliminary Engineering Design (PED) after the Chief's Report and authorization of the project. The FY2018 Federal Funding Request is based upon normal PED funding of newly authorized projects.

FY 2018 Federal Funding Requested for PED: $1,500,000

Bayou Conway and Panama Canal Drainage Improvement Project Ascension Parish and St. James Parish

Project Funding:

The Pontchartrain Levee District and the East Ascension Gravity Drainage District (EAGDD) have entered into an intergovernmental agreement that split the funding of the Drainage Study between each entity. Funding for the implementation of the recommendations will be funded by the EAGDD and PLD.

Estimated Project Construction Costs:

The preliminary project cost estimates for the snagging and dredging of the selected channels was divided into several phases. The priority phase of work is approximately $2.0M and consists of targeted areas that will have the greatest flood risk reduction and the least environmental impact. Subsequent phases could occur over a period of time, as funds become available. Costs range from $5-8M depending on the project permitting and material disposal methods.

Amite River Diversion Canal Weir Rehabilitation
Ascension and Livingston Parishes, LA

Project Funding:

The Amite River Drainage and Water Conservation District (ARDWCD) will be administering the construction contract for the weir rehabilitation project. The engineer's current estimate of construction cost is considerably higher than initially anticipated by the PLD or ARDWCD. Upon review of the geotechnical report, alternate designs may be considered. Ascension Parish, ARDWCD and other agencies are willing to participate in funding, however a shortage remains in order meet the estimated construction costs.

Laurel Ridge Levee Extension
Ascension Parish

Project Funding:

Ascension Parish has previously funded several Master Drainage Plans which included this levee extension project in the overall plan. Also, some preliminary geotechnical investigations were performed at the expense of the East Ascension Gravity Drainage District (EAGDD), an entity of Ascension Parish.

The Pontchartrain Levee District (PLD) has funded the Laurel Ridge Levee Extension Reconnaissance Study permitting, engineering, design and real estate acquisitions.

A Memorandum of Understanding has been executed between the PLD and EAGDD, which states that the PLD will be responsible for the funds required to complete the engineering, design, and permitting phases of the proposed project, and the EAGDD will provide the funds for the environmental impacts and construction phases.

Project Estimated Costs:

Alignment Option 2- The total preliminary estimated project cost for this alignment option is $24,000,000.

East Bank Urban Flood Control Feasibility Study, St. Charles Parish

Project Funding History:

The cost sharing for the original Feasibility Study was 50% Federal and 50% Non-Federal. Total funding to date for the Study is $5,400,000 ($2,700,000 Federal and $2,700,000 Non-Federal). In the aftermath of Hurricane Katrina, large portions of funding for the Feasibility Study were used on other projects, most notably by the Interagency Performance Evaluation Taskforce (IPET), with additional federal funding being allocated to support those projects. Currently, the Feasibility Study is serving as the basis for an updated assessment of the area by FEMA for use in determining risk for their rate maps.

At this time, no Federal funding has been authorized for the construction of the proposed East Bank pump stations.

Funding Requirements for FY 2017:

The expected cost sharing for the design and construction of two major pump stations, Bayou Trepagnier and Cross Bayou Pump Stations, is 65% Federal and 35% Non-Federal; however, at this time, no Federal authorization is in place for the construction of any of the East Bank pump stations. To date, the Pontchartrain Levee District (PLD) has allocated $32,000,000 for the design and construction of the Lake Pontchartrain and Vicinity (LPV) Hurricane Protection Levee Pump Stations. The Bayou Trepagnier Pump Station construction was completed in FY 2004 and the Cross Bayou Pump Station construction was completed in FY 2011. Both pump stations have been credited with significant reductions in protected-side flooding during numerous storm events since 2004, including Hurricane Katrina.

The third critical primary hurricane protection pump station, the Walker-Almedia Pump Station, has been fully designed and is awaiting construction funding. This pump station is the third of four stations cited and recommended in the Corps Design Memorandum No. 18, the basis for the East Bank Urban Study.

The Non-Federal funding for the original East Bank Urban Flood Control Study Project has been allocated and expended by the Pontchartrain Levee District for their portion of the effort including the Feasibility Study. The Feasibility Study consists of developing an alternative conditions hydraulics and hydrology model and developing, modeling, and evaluating various alternative mitigation efforts. The remainder of the PLD commitment was utilized on improvements cited in the Feasibility Study.

Funding Requirements Outside the East Bank Urban Flood Control Study:

During FY 2017, the Corps should release its recommendations for the alternative mitigation analyses portion of the East Bank Study. The Non-Federal funds associated with the design portion of this effort have already been allocated and expended, and much of the permitting and preliminary design work has already been undertaken. Upon completion of the analyses and design, funding will be required for construction of the mitigation projects. The expected total cost of the mitigation construction is $40,000,000 over five years. Additionally, the expected cost for the design and construction of the remaining two Lake Pontchartrain Hurricane Protection Levee Pump Stations is $50,000,000, to be cost shared 65% Federal and 35% Non-Federal. The total cost of all portions of this project not currently authorized for Federal funding is $122,000,000 over the next five years.

Hurricane Protection Levee Shoreline Enhancement and LaBranche Wetlands Restoration, St. Charles Parish

Project Costs:

Once this East LaBranche Shoreline Protection Project is complete, approximately 15,000 feet of shoreline will remain unprotected. The opinion of probable cost to complete the shoreline protection is approximately $18 Million.

Project Design Funding:

In January 2010, the Pontchartrain Levee District (PLD) Board authorized $598,301 for the design of approximately 20,500 feet of shoreline protection and enhancement.

Project Construction Funding:

The Coastal Impact Assistance Program (CIAP) is partially funding these projects. In total CIAP has $6,530,916.99 allocated to these two projects. As mentioned previously the West LaBranche project has been constructed. The amount of funds allocated to the East LaBranche project is $1,753,816. In addition, the State elected to appropriate $2 million of CIAP funds to the East LaBranche Project. Thus, a total of $3,753,816 was allocated to the East LaBranche Shoreline Project. It is anticipated $18 million is needed to protect the remaining shoreline. The permits and designs have been completed on the unprotected section of shoreline. This is a shovel ready project if funds can be allocated.

LaBranche Wetlands Restoration Fresh Water Diversion, St. Charles Parish

Project Costs:

The preliminary opinion of probable cost based on the schematic design of the diversion piping and canal work is approximately $21 Million.

Project Design and Construction Funding:

Project funds have not been allocated. Project has been submitted to the Coastal Protection and Restoration Authority of Louisiana (CPRA) for consideration in the 2017 Master Plan.

LaBranche Wetlands Restoration Salinity Control Structure, St. Charles Parish

Project Costs:

The total cost of the project to administer, design, permit and construct is estimated at $350,000.

Project Design:

Project administration, design and permitting is fully funded ($130,000).

Construction Funding:

All construction funds have been allocated for this project.