MINUTES OF
SOUTHEAST LOUISIANA FLOOD PROTECTION AUTHORITY-EAST
OPERATIONS COMMITTEE MEETING
HELD ON MARCH 1, 2012

PRESENT: Louis Wittie, Chair
Dave Barnes, Committee Member
Timothy Doody, Committee Member
Stephen Estopinal, Committee Member

The Operations Committee of the Southeast Louisiana Flood Protection Authority-East (SLFPA-E or Authority) met on March 1, 2012, in Meeting Room 221, Orleans Levee District Franklin Administrative Complex, 6920 Franklin Avenue, New Orleans, Louisiana. Mr. Wittie called the meeting to order at 9:30 a.m.

Opening Comments: None

Adoption of Agenda: The agenda was approved.

Approval of Minutes: The minutes of the January 5, 2012 Operations Committee meeting were approved.

Public Comments: None.

New Business:

A Presentation by Michael Voich, PE, Corps of Engineers and Virgil Michael Stuart, Jr., Project Manager for Harahan Pump to River SELA Project.

Michael Voich with the U.S. Army Corps of Engineers (USACE) explained that the SELA Project is a large urban flood control partnership project that started in 1996 as a partnership between Jefferson Parish and the USACE. Katrina appropriations were received in 2009 so that the SELA Project could be moved significantly forward. At this point the Coastal Protection and Restoration Authority (CPRA) became the official non-federal sponsor for the project and Jefferson Parish continued as a local partner. The SLFPA-E has the opportunity today to be added to this partnership.

Mr. Voich advised that the Harahan Pump to the River Project is comprised of six separate construction contracts. The first contract for the installation of 700 linear feet of pipe has been completed. The second contract for a pump station is currently under construction. The third contract will be for the discharge structure located at the end of the system at River Road. Three parallel seven-foot diameter pipes will cross up and over the Mississippi River Levee (MRL), staying out of the theoretical levee section, cross the batture and discharge into the Mississippi River. The USACE wants to ensure that the SLFPA-E is comfortable with the project.

Mr. Voich introduced the project team members present: Rachael Calico, USACE Project Manager; Mark Woodward, USACE; Amy Powell, USACE Operations Division; Jennifer Wedge, USACE Structures Branch; and Mike Stuart, Jefferson Parish SELA Managing Partner. He explained that Jefferson Parish generally handles all of the work in the design phase of the SELA Project partnership effort. Jefferson Parish has contracted with Hartman Engineering, Inc. (Hartman) for this project. The USACE is intimately involved in the design phase to ensure that all of its standards are met. After the design has been completed, the USACE takes over the project and advertises, awards and manages the construction contract.

Scott Chahardy, Hartman Civil Project Engineer, explained that the Pump to the River Project is located in the Harahan area; however, the project will benefit all of East Jefferson Parish by lessening drainage loads in other parts of the parish. It is the first project to pump drainage water into the Mississippi River. The pump station under construction is located in the vicinity of the waste water treatment plant and Hickory Avenue. A buried suction canal will pass underneath the Harahan Playground and continue to the intersection of the Soniat Canal and the Mazoue Ditch. Three parallel 84-inch pipes will be installed down the future Hickory Avenue corridor. The pipes will be installed within the Department of Transportation and Development (DOTD) right-of-way for the majority of the project—the exception being south of Jefferson Highway. The pipes will continue approximately two miles to the Mississippi River.

Mr. Chahardy advised that the part of the project that affects the SLFPA-E is the portion from Jefferson Highway to the Mississippi River. The three 84-inch pipes south of Jefferson Highway will be buried approximately six to eight feet deep and will run under Powerline Drive and River Road, come above ground at the levee and continue over the levee, and then continue underground through the batture to the river. The pipes will be situated on concrete footings at the levee crossing and will have saddles and straps. The levee will be shifted 60-feet to the south in the area of the pipeline crossing so that the theoretical levee section will not be impacted. The new levee section when completed will generally look the same as the old levee section. The new levee section will be slightly raised to meet the 50-year design level in order to avoid any issues should the MRL be raised in the future. The crown of the new levee section will be curved and the inspection road will be routed to the protected side. The inspection road will have a slight dip and will be located slightly lower than the crown, but sufficiently high enough for drivers to view over the top of the levee except in the area of the pipeline crossing (a 40-ft. section). The one to four levee slopes were designed in accordance with input from the East Jefferson Levee District (EJLD).

Mr. Chahardy explained that a discharge structure will be constructed at the river. The system will be designed to operate at low and high river levels. Eighteen-inch vacuum valves will prevent reverse flow during high river levels. The vacuum valves are closed pneumatically and are spring loaded fail-open in the event of a power loss. A hand wheel will also be located on the valve for manually operating the valve. The valves and compressors will be located in an enclosed, fenced building on a platform above the pipes. Measures for levee maintenance will be taken in accordance with

discussions with EJLD personnel. The construction of the project will take approximately three years. A temporary levee will be required for several months during construction while River Road is open cut. Two new access roads will be installed on either side of the pipeline crossing.

Mr. Chahardy explained that there will be three pumps each with 400 cubic feet per second (cfs) capacity. The intention is for the pumps to operate several times each year during extreme weather events. A sufficient amount of water is required in the Mazoue Ditch and the Soniat Canal for the Soniat Canal to reverse flow and bring water into the suction canal. The cost of this phase of the project is estimated at $25 million to $30 million. The total project cost is estimated at $150 million. A permit will be required from the SLFPA-E for the construction of the project and for the operation and maintenance of the proposed access roads. In accordance with recent discussions, Jefferson Parish is anticipated to be the permittee. Jefferson Parish is working with the EJLD on real estate acquisition issues. This phase of the project is expected to be advertised in the next several months. Emergency procedures will be included in the contract specifications.

Robert Turner, SLFPA-E Regional Director, stated that representatives from the SLFPA-E and USACE met last week on the project. The USACE provided a set of specifications and drawings to the SLFPA-E about a week prior to the meeting. The SLFPA-E submitted comments and questions to the USACE and is awaiting their response. Action may be required by the SLFPA-E on the appropriation of some additional right-of-way.

B. Discussion of investigation of the possibility of implementing a Real-Time Network (RTN) for all levee districts.

Mr. Estopinal advised that there is a difference of about 4-½ inches between the height of the St. Bernard floodwall and the elevation of the surge protection levee. This difference in height has generated concern about the benchmarks used by the USACE during the construction process. The SLFPA-E attempted to obtain information from the USACE about how they arrived at the value for their benchmarks. The USACE supplied RTK field book references and a datasheet for the control benchmark, but not observational data. The datasheet for the control benchmark had a 95 percent confidence level deviation of over a decimeter, which is over 4-½ inches and may explain the height differential between the St. Bernard floodwall and the surge barrier. The SLFPA-E does not know the direction of the deviation since it does not know whether the surge barrier is at the correct height or 4-½ inches too high or too low. Mr. Estopinal suggested that a team of surveyors observe the benchmarks to determine the reason for the discrepancy.

Mr. Estopinal explained how a Real Time Network (RTN) operates. The National Geodetic Survey (NGS) is the Federal agency that defines zero datum. Measurements should be from this defined datum. The NGS decided to utilize a system of geodetic observations using positioning satellites in a continually operational system to develop

this datum. A series of continually operating receiver stations (CORS) are put in place. Through the continuous collection of data from the positional satellites and by multiple observations and long term observations the NGS can very closely determine the elevations of the receivers within several millimeters. An agency can set up CORS in the RTN that are linked to other receiver networks and are continually updated as elevations are defined or adjusted as subsidence takes place. The operating agency has rover network receivers that can connect to the base station through a modem. This allows a satellite receiver to be placed at a point and the differential elevation between the receiver and the home base receiver can be calculated to plus or minus two centimeters. Utilizing the RTN would be beneficial in determining floodwall and levee elevations and for mapping any vertical movement. Using the RTN is relatively inexpensive compared to other methods that are used to obtain this information and some training would be required. An agency purchasing a receiver network can associate itself with the Louisiana Spatial Reference System or Smartnet. The total cost of the RTN put in place by Ascension Parish was about $300,000; however, about forty deep rod marks were installed to track movement.

Mr. Estopinal suggested that the SLFPA-E investigate the possibility of purchasing CORS for each of the three levee districts, or two mobile receiver stations for the Authority, and tying the receivers into one of the reference networks. He explained some of the benefits of using the RTN. The use of RTN would mitigate future problems with differential heights, such as the height differential between the St. Bernard Floodwall and the surge barrier, and could be used for determining subsidence. The data developed could be used in mapping the flood protection system and the information fed into the G.I.S. He requested that SLFPA-E staff investigate the cost of implementing an RTN system for the levee districts. Failing this option, he requested that staff investigate approaching the Sewerage and Water Board of New Orleans or the Jefferson Parish Department of Public Works to determine whether they would be interested in housing the CORS. In this event, the SLFPA-E could purchase a license or franchise.

Mr. Wittie commented on the ease of using the RTN and on the SLFPA-E's need to be able to determine the exact elevation of its flood protection structures and track any future settlement and subsidence. Mr. Turner added that State law requires that levee profiles be run every three years. Mr. Doody suggested that other public agencies may be interested in the RTN. The Committee discussed the potential use of the RTN in coastal restoration.

LEVEE DISTRICT REPORTS: (copy of status reports appended to minutes)

East Jefferson Levee District (EJLD): Fran Campbell, EJLD Executive Director, reviewed the highlights of the EJLD status report.

Orleans Levee District (O.L.D.): Stevan Spencer, SLFPA-E Regional Chief Engineer, reviewed the O.L.D. status report. Additional comments were as follows:

- LPV 101.02 - The contractor is re-doing the tracks and vertical columns to ensure that Floodgates L1A and L5 close properly.
- LPV 103.01A2 – The attenuator will be relocated within the next month.
- LPV 111 – The contractor will be testing a spike vibrating drum to flatten rills. If this procedure works, it may be used in other areas where rills are a problem.
- LPV 109 – The State is considering taking over and monitoring some of the 23 monitoring cross sections with instrumentation after the project is closed out.
- IHNC Sector Gate – The USACE is trying to determine how to level the gate to eliminate the gap at the bottom below the seal. There is an issue relative to the fender system sticking out past the concrete walls of the structure. The USACE has a plan for adjusting the cylinder.
- IHNC Surge Barrier – Feature inspections are being conducted. Staff has walked the wall looking at concrete problems that are to be addressed in a white paper.

Mr. Doody commented that the USACE recommended that levee district personnel closely observe the operation of the storm surge system navigation gates this year. He wanted to ensure that the USACE's Operation and Maintenance (O&M) Manuals are developed with the levee districts' resources in mind. Several options are being considered for the long term operation of the structures. Mr. Spencer commented that SLFPA-E personnel have attended numerous O&M meetings on the IHNC Surge Barrier. The SLFPA-E issued a request for qualifications for the development of a comprehensive O&M plan for the IHNC Surge Barrier and Gates, Seabrook Complex and Gates, Bayou St. John Sector Gate, Bayou Bienvenue Sector Gate, Bayou Dupre Sector Gate and Caernarvon Sector Gate. Interviews will be conducted tomorrow with the firms on the short list.

Lake Borgne Basin Levee District (LBBLD): Stuart Williamson, LBBLD Executive Director, reviewed the status report. Additional comments were as follows:

- MRL – There are some cracks in the area of the Domino Sugar Factory that are not causing any major issues; however, this repair work needs to be done.
- The USACE's contractor, Atlantic Aerial Technologies, is setting up a GPS control network with control points on the back levee. This Lidar system will be used to determine elevations. The Committee discussed the tracking of vertical movement and faults. Ricky Brouillette advised that some test bases are being done in the State's I-Levee program for NSAR, which is satellite based. This procedure coupled with the SLFPA-E's proposed RTN efforts could potentially be used in tracking faults regionally.
- The Hazard Mitigation Grant Program (HMGP) list that is being provided by St. Bernard Parish to the State includes the following LBBLD items: the replacement of three pump stations engines at $1.5 million each, telemetry ($400,000), safe rooms, outreach to communicate risks to the public, valve replacement at Pump Stations 6 and 7, and some preliminary work needed at the shrimp factory.

There was no further business; therefore, the meeting was adjourned.