

**MINUTES OF
SOUTHEAST LOUISIANA FLOOD PROTECTION AUTHORITY-EAST
OPERATIONS COMMITTEE MEETING
HELD ON JUNE 12, 2014**

PRESENT: Louis Wittie, Chair
Stephen Estopinal, Committee Member
Paul Tilly, Committee Member

The Operations Committee of the Southeast Louisiana Flood Protection Authority-East (SLFPA-E or Authority) met on June 12, 2014, in Meeting Room 201, Orleans Levee District Franklin Administrative Complex, 6920 Franklin Avenue, New Orleans, Louisiana. Mr. Wittie called the meeting to order at 9:40 a.m.

Opening Comments: None.

Adoption of Agenda: The agenda was approved as presented.

Approval of Minutes: The minutes of the May 8, 2014 Operations Committee meeting were approved.

Public Comments:

Roy Arrigo advised that his comments were on behalf of Craig Berthold, a resident along the 17th Street Canal, relative to the issue of property owners along the canal not being able to fence the back of their property within the vegetation free zone. He distributed a copy of a photograph of two properties. One of the properties was purchased from the property owner and the buffer zone was fenced by the levee authority to protect itself from liability from the public accessing the property. The second photograph showed privately owned property where the owner was not able to fence the buffer zone. He asked that the Board look into this situation and resolve this issue.

Edward Feinman, a resident along the 17th Street Canal in Lakewood South, commented that grass in the area had not been cut in two months and that only the grass in a four foot strip is cut by the levee district and not the entire 15-ft. strip. He pointed out that measurements for the six-foot vegetation free zone were taken from the floodwall, which was aligned to intersect with Interstate-10, and not from the water line. He stated that if an honest analysis that included the history of the canal was done that the Authority would see that his property was not needed. He commented about the erosion taking place along the canal due to the pumping from the interior pump stations.

Old Business:

A. Discussion of a Cooperative Endeavor Agreement between the Lake Borgne Basin Levee District and St. Bernard Parish Government for permission to construct the Central Wetlands Assimilation - Riverbend Project. Project is funded through the Coastal Impact Assistance Program and is in conjunction with CPRA's Master Plan.

Nick Cali, Lake Borgne Basin Levee District (LBBLD) Executive Director, explained that the St. Bernard Parish (SBP) government received a grant from the Coastal Protection and Restoration Authority (CPRA) for the Central Wetlands Assimilation - Riverbend Project. When the project was discussed at last month's Committee meeting, the design had not been finalized to the satisfaction of the LBBLD Executive Director. Meetings were held and an alignment was developed that virtually has no impact on the non-federal levee and still allows the SBP government to construct the project. A Cooperative Endeavor Agreement is needed that will properly indemnify the LBBLD and allow the project to go forward. The aerial crossing will be done in accordance with U.S. Army Corps of Engineers (USACE) standards. Robert Turner, SLFPA-E Regional Director, recommended that the project be allowed to go forward.

The Committee recommended that the Cooperative Endeavor Agreement be forwarded to the Board for approval.

New Business:

A. Presentation on Outfall Canal Erosion Study - Evans-Graves Engineers, Inc.

Gerry Gillen, Orleans Levee District (O.L.D.) Executive Director, advised that Evans-Graves Engineers, Inc. was tasked under a SLFPA-E Indefinite Delivery-Indefinite Quantity (ID-IQ) Contract to look at alternatives to address the erosion problem along the outfall canals. Ben C. Gerwick, Inc. was previously tasked under an ID-IQ contract to measure and document the erosion rates.

Stephen Lundgren with Evans-Graves Engineers, Inc. distributed the Conceptual Design Report for the Mitigation of Outfall Canal Erosion – London Avenue, Orleans Avenue and 17th Street Canals, dated May, 2014. The project scope covers both banks of the London and Orleans Avenue Canals and the east bank of the 17th Street Canal from the lake to the interior pump stations. The USACE is placing rip-rap along the west bank of the 17th Street Canal, with the exception of some gaps, in order to mitigate the erosion.

Mr. Lundgren explained that Evans-Graves found that the velocities in the canals contribute largely to the erosion, in addition to nutria invasion, unstable slopes and other various causes. Since the causes of the erosion vary between the canals, different solutions may address different sections of the canals. The project was micro designed in terms of the particular causes of erosion and the best solution for each cause. The scope of the report covers the interior side of the canals and not the floodwall protected side.

Mr. Lundgren reviewed the data for a section of the London Avenue Canal. The typical cross sectional area of 968 sq. ft. was determined using survey data. He explained that the pumping capacity of Sewerage & Water Board Pump Stations (S&WB PS) 3 and 4 (about 9,000 cfs) divided by the cross sectional area of 968 sq. ft. results in a 9.3 ft. per second flow velocity, which is excessive for an earthen canal bank. Flow velocities in an earthen canal should be kept between three and five feet per second. Mr. Estopinal pointed out that the cross section is based upon a water surface elevation of 0.0. However, it was his understanding that under certain conditions the water surface elevation could be as high as +4-ft., which considerably increases the cross sectional area. He requested that Evans-Graves look at the velocities involved with a full flow condition, which would result in a change in the water surface elevation. He noted that the velocities may still be unacceptably high, but it would influence the analysis of whether the erosion is purely a velocity driven erosion effect or the soil conditions cannot support the overburden and causing sloughing. Mr. Lundgren explained that when the water rises above elevation one it gets into the flat area of the slope; therefore, only a miniscule amount of flow area is gained with the rise in elevation because it is at the flat part of the slope at that point. Mr. Estopinal asked whether an analysis was done of the elevation of flows for certain quantity events in order to fully understand the velocities. Mr. Turner pointed out that the USACE has done the hydraulic analysis on the outfall canals and has established the hydraulic grade line for maximum pumping capacities at normal lake levels. He suggested that Evans-Graves may want to consider how this information impacts their analysis. Mr. Lundgren explained that the project is not a hydraulics study. Evans-Graves attempted to take a snap shot of what the velocity could be in the 10,000 ft. long canal. Mr. Estopinal pointed out that a more perfect analysis of the grade lines and velocities is needed in order to determine the cause of the erosion and the appropriate solution.

Mr. Lundgren reviewed a typical cross section for a section of the Orleans Avenue Canal. The pumping capacity of S&WB PS 7 is about 2,700 cfs. The flow velocity is calculated at a little over 3 ft. per second, which is more in line with what is expected in an earthen canal; therefore, the erosion is thought to be caused by another factor. He next reviewed a typical cross section for a section of the 17th Street Canal. The pumping capacity of the three S&WB pump stations that feed into the canal total about 12,600 cfs. The flow velocity is about 8 ft. per second, resulting in a velocity induced erosion issue.

Mr. Lundgren explained that eight options to mitigate the erosion were considered. The options are grouped into three categories: soft simple solutions involving vegetation and erosion control fabric, hard armoring solutions and heavy construction solutions. Focus was placed on the hard armoring solutions involving rip-rap or Geogrid. Evans-Graves favored the Geogrid solution in-filled with a small aggregate material. The report includes a spreadsheet for each canal reach with the existing condition and the proposed improvements. Filling the Geogrid with aggregate material would also solve the nutria problem. Geogrid is UV resistant and has a 30-year life.

Mr. Turner inquired about sections along the west side of the Orleans Avenue Canal where there is no earth left above the waterline on the floodside of the floodwall. Mr. Lundgren advised that Evans-Graves did not consider or recommend a solution for the area where the water meets the floodwall.

Mr. Lundgren noted that a rip-rap solution is proposed for a large failure area on the 17th Street Canal close to S&WB PS 6.

Mr. Estopinal recommended that the Committee not accept the Evans-Graves Report at this time. He stated that although the Geogrid solution will probably be the best solution, observational data (observed velocities and water elevations) is needed with particular analysis at the bridge crossings. Felton Suthon, O.L.D. Engineer, commented on the scour on the east bank around the bridges (both north and south sides) at the London and Orleans Avenue Canals. Mr. Turner suggested that the areas where the water meets the floodwall also be considered. He also suggested that the USACE's hydraulics study and observational data be considered.

Committee members concurred that the Evans-Graves report not be accepted at this time and that additional information be provided to address the concerns that were expressed.

Levee District Reports:

Hurricane and Storm Damage Risk Reduction System (HSDRRS) Status Report:

Mr. Turner reviewed the highlights of the HSDRRS Status Report (copy appended to minutes).

Report on Police Activities: Robert Garner, SLFPA-E Regional Police Superintendent, reported on police activities during the month of May: 173 dispatch calls and 331 items were generated, 84 tickets were issued, 49 misdemeanor arrests and one felony arrest were affected, the deployment of reserve officers on Lakeshore Drive is continuing on weekends and several hurricane preparedness meetings were held. A near drowning incident occurred west of the Bonnabel Boat Launch. One of the SLFPA-E's officers dove into the water and saved a 15 year old and 6 year old boy.

Lake Borgne Basin Levee District (LBBLD): Mr. Cali reviewed the highlights of the LBBLD Status Report (copy appended to minutes).

Orleans Levee District (O.L.D.): Mr. Gillen reviewed the highlights of the O.L.D. Status Report (copy appended to minutes).

East Jefferson Levee District (EJLD): Fran Campbell, EJLD Executive Director, reviewed the highlights of the EJLD Status Report (copy appended to minutes).

There was no further business; therefore, the meeting was adjourned at 11:10 a.m.